8-3-07 Letting, Item 040

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	1
TITLE SHEET				
ILLINOIS				

INDEX OF SHEETS

FEDERAL AID DESIGN ENGINEER: ABIGAIL WILGREEN (847)705-4233

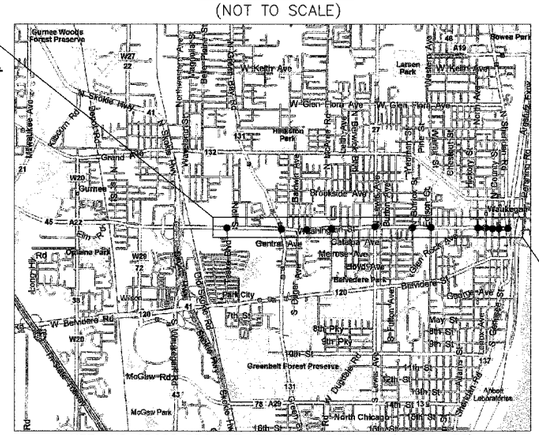
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

WASHINGTON STREET (FAU 1223)
TESKE BOULEVARD TO SHERIDAN ROAD (FAU 2736)
FIBER OPTICS COMMUNICATIONS NETWORK
SECTION 04-00272-00-TL
PROJECT NO. CMM-8003(508)
LAKE COUNTY DIVISION OF TRANSPORTATION
C-91-189-05

BEGIN IMPROVEMENT
STA. 22+00
TESKE BOULEVARD

LOCATION MAP
(NOT TO SCALE)

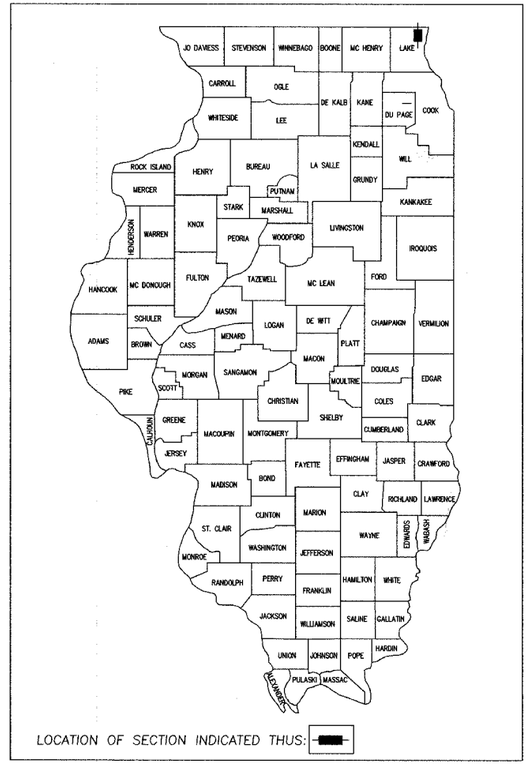


N

SECTION 19 TOWNSHIP 45 RANGE 12
SECTION 20 TOWNSHIP 45 RANGE 12
SECTION 21 TOWNSHIP 45 RANGE 12

END IMPROVEMENT
STA. 179+00
SHERIDAN ROAD (FAU 2736)

NET AND GROSS PROJECT LENGTH: 15,700 FT (2.97 MILES)



LOCATION OF SECTION INDICATED THUS: ■

PLANS PREPARED BY:

GEWALT HAMILTON ASSOCIATES, INC.

Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
847-478-9700
FAX 847-478-9701

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED: April 30 2007
LAKE COUNTY DIVISION OF TRANSPORTATION
DIRECTOR OF TRANSPORTATION/COUNTY ENGINEER

APPROVED: May 29 2007
CHRISTOPHER HOLT
DISTRICT 1 ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW May 29 2007
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS
J.U.L.I.E. TOLL FREE 1-800-892-0123
Call 48 hours before you dig (Excluding Sat., Sun., & Holidays)
1-800-892-0123

CONTRACT NO: 83932

EXISTING POSTED SPEED LIMIT ON WASHINGTON ST.
35 M.P.H. (WEST OF LEWIS AVE.)
30 M.P.H. (EAST OF LEWIS AVE.)

DESIGN SPEED LIMIT ON WASHINGTON ST.
40 M.P.H. (WEST OF LEWIS AVE.)
35 M.P.H. (EAST OF LEWIS AVE.)

TRAFFIC DATA ON WASHINGTON ST.
CURRENT 2006 A.D.T.= 31,700 (AT TESKE BLVD)
CURRENT 2006 A.D.T.= 16,500 (AT LEWIS AVE)
CURRENT 2006 A.D.T.= 4,800 (AT GENESEE ST)
DESIGN YEAR 2016 A.D.T.= 36,510 (AT TESKE BLVD)
DESIGN YEAR 2016 A.D.T.= 18,150 (AT LEWIS AVE)
DESIGN YEAR 2016 A.D.T.= 5,525 (AT GENESEE ST)

EXISTING UTILITIES: WHEN THE PLANS OR SPECIAL PROVISIONS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION REPRESENTS ONLY THE OPINION OF THE ENGINEER AS TO THE LOCATION OF SUCH UTILITIES AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATEVER IN RESPECT TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS RELATIVE TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES OR THE MANNER IN WHICH THEY ARE TO BE REMOVED OR ADJUSTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES. HE SHALL ALSO OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES, DETAILED INFORMATION RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULES OF THE UTILITY COMPANIES FOR REMOVING OR ADJUSTING THEM.

CONTRACTOR IS RESPONSIBLE FOR CONTACTING J.U.L.I.E. AT 1-800-892-0123 AND MUST ACQUIRE A DIG NUMBER A MINIMUM OF 72 HOURS PRIOR TO ANY WORK BEING DONE.

TRAFFIC SIGNAL MODIFICATION PLAN
GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

INTERCONNECT PLAN
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

IDOT STANDARDS

000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
424001-04	CURB RAMPS FOR SIDEWALKS
701006-02	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-01	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701101-01	OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701301-02	LANE CLOSURE 2L, 2W, SHORT TIME OPERATIONS
701501-03	URBAN LANE CLOSURE 2L, 2W UNDIVIDED
701502-01	URBAN LANE CLOSURE 2L, 2W WITH BI-DIRECTIONAL LEFT TURN LANE
701606-04	URBAN LANE CLOSURE MULTILANE 2W WITH MOUNTABLE MEDIAN
701701-04	URBAN LANE CLOSURE MULTILANE INTERSECTION
701801-03	LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
702001-06	TRAFFIC CONTROL DEVICES
814001-01	HANDHOLE
814006-01	DOUBLE HANDHOLE
857001	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
862001	UNINTERRUPTABLE POWER SUPPLY (UPS)
873001-01	TRAFFIC SIGNAL GROUNDING
877001-02	STEEL MAST ARM ASSEMBLY AND POLE
877011-02	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE
878001-05	CONCRETE FOUNDATION DETAILS
880001	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
880006	TRAFFIC SIGNAL MOUNTING DETAILS
886001	DETECTOR LOOP INSTALLATIONS

BRUCE L. SHRAKE 39905 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

REVISIONS	
NAME	DATE
GHA, INC.	4/6/07
GHA, INC.	5/1/07

3744-LCDOT-ALL-PPR.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET. NO.
1223	04-00272-00-TL	LAKE	72	2
SUMMARY OF QUANTITIES				
	ILLINOIS			

SPECIAL CONDITIONS FOR CONSTRUCTION WITHIN A LAKE COUNTY HIGHWAY RIGHT-OF-WAY

Work Notification

Prior to starting construction, the Maintenance Section, 847-362-3960, and the Permit Section, 847-362-3950, shall be called and given the construction start date.

Specifications

The construction and restoration methods and procedures, materials used and construction signing and traffic control shall, when applicable, conform or meet the standards and requirements set forth in the current "Manual on Uniform Traffic Control Devices for Street and Highways", "Standard Specifications for Road and Bridge Construction", "Standard Specification for Traffic Control Items", and the "Highway Standards" manual as published or adopted by the Illinois Department of Transportation.

Field Changes for Watermain or Sewer Location

No changes to the depth or location of the watermain or sewer as shown on these plans due to unforeseen field conditions or conflicts can be made unless prior approval has been obtained from the Permit Section of the Lake County Division of Transportation.

Additions, Extensions or Deletions for the Watermain or Sewer

No additions, extensions or deletions can be made to the watermain or sewer as shown on these plans unless prior approval has been obtained from the Permit Section of the Lake County Division of Transportation.

Hazards to the Public

Measures shall be taken to prevent or protect the public from hazards caused by the construction operations.

Parking of Vehicles, Equipment and Storage of Materials

Construction worker's vehicles and construction equipment shall be parked in areas outside of the County Highway right-of-way or in areas where there will be no interference with the normal use of the highway or vehicle sight distance. Construction materials shall be located at least 12 feet from a through traffic lane or outside of the County Highway right-of-way.

Maintaining Existing Traffic Control Devices

Existing traffic control devices that are removed shall be re-erected as soon as possible. Damaged or lost traffic control signs shall be reported to the Sign Shop 847-362-3962 of the Lake County Division of Transportation for replacement.

Regulatory and warning traffic signs shall be kept in view of the highway traffic.

Existing Drainage and Access

Disturbed highway drainage facilities shall be re-established at the close of each workday. Occupants of adjacent properties having access to the County Highway shall be notified prior to being blocked and suitable arrangements made with the occupants. Adjacent property access shall be re-established as soon as possible.

Highway Pavements

Care shall be taken not the break, crack or damage the highway pavement with equipment operating on it. Also, any dirt of debris tracked onto the highway pavement shall be removed. Equipment with grozzer pads, cleats or studs are not permitted to operate on the highway pavement.

If, due to construction operations, the highway pavement becomes damaged or undermined, all construction work in that area shall be stopped and the highway pavement repaired as directed by the Lake County Division of Transportation. Alternate construction measures shall then be used to prevent further highway pavement damage.

Excavations, Trenches and Bore Pits

Excavated material shall, when practical, be piled on the near traffic side of the excavation, trench or bore pit. Open excavations, trenches or bore pits remaining after working hours shall not exceed 50 feet in length and shall be properly protected (fencing, covered, etc.) and marked (Type I or II barricades). If barricades are used in series, only steady burning lights shall be used. Bore pits shall be located no closer than 10 feet to the highway pavement, back of curb or gutter, or shoulder break line, whichever is further. If casing pipes are used, the voids in the casing pipe shall be filled and/or the ends sealed so there will be no siltation into the casing pipe.

Manholes, Valves, Valve Vaults and Appurtenances

The top of the frame and lid or cover of a manhole, valve, or valve vault shall be flush and contoured to the surrounding ground. If this is not possible due to an excessive slope, the surrounding ground shall be regraded or the frame and lid or cover partially buried to provide for a gradual transition slope so the area can be safely mowed and no hazard to the public will result. The top of the frame and lid or cover that is located within the gravel shoulder shall have a asphalt apron installed around the frame or cover as directed by the Lake County Division of Transportation. Any frame and lid or cover located in a paved area shall be contoured and ¼ inch below the surface of the surrounding pavement. The top of frame and lid or cover shall not be located within the area of 27.5 feet to 30.5 feet from the highway pavement centerline.

Surface appurtenances that extend above the surrounding ground surface shall be located within two feet of the County Highway right-of-way.

Tile Lines and Storm Sewers

Existing tile lines and storm sewers that are encountered during construction operations shall be replaced if broken with like size and kind of material. Tile line and storm sewer crossings of the excavation shall be bridged with rigid materials such as wood or steel. The location and depth of any encountered tile lines and storm sewers shall be recorded and a copy given to the Lake County Division of Transportation.

Winter Construction Work

Snow and ice removal operations of the Lake County Division of Transportation shall have precedence over the construction operations. A 12 foot wide (minimum) clear area from the highway pavement edge shall be maintained for the roadside storage of snow and ice. No construction equipment or materials shall be stored in this 12 foot wide (minimum) clear are nor shall any piles of dirt or excavated, materials be left in this area.

Restoration and Clean-Up

The area of the County Highway right-of-way disturbed by construction operations shall be kept to a minimum and shall be restored as promptly as weather and soil conditions permit. If restoration is not accomplished voluntarily, the Lake County Division of Transportation may set a final date for the completion of the restoration work.

Turf areas of the right-of-way disturbed by construction operations shall be compacted and regraded to an equal or better condition than existed before construction. Sod shall be used in high erosion areas. This restoration work will not be considered completed until the turf cover is established.

Gravel and paved shoulders that are damaged shall be replaced as directed by the Lake County Division of Transportation. Driveways, side roads and other accesses, which are damaged, shall be restored with similar materials and thickness. The edges of excavated paved surfaces shall be sawcut prior to repair. Culverts, storm sewer systems and other drainage facilities including ditches lines shall be cleaned of siltation and debris due to the construction operations. Other areas of the right-of-way that have been disturbed such as curb and gutters shall be restored with similar materials.

Any damaged property of the County of Lake, its Division of Transportation, or of others (including utility companies) shall be repaired or replaced or the owner of the damaged property reimbursed for the costs of repairing the damaged property by the owner.

Restoration Guarantee

Any restoration work that fails within one year of completion shall be redone. Also, any settlement that occurs within one year of completion of the surface restoration work shall be filled and the surface area restored.

Keeping Roads Open to Traffic

All roads shall remain open to traffic. The Contractor may close one lane because of construction only between the hours of 9:00 A.M. and 3:00 P.M. The Contractor shall maintain traffic during these restricted hours as shown on the Traffic Control Standards. Two lanes of traffic will be maintained between 3:00 P.M. and 9:00 A.M. and when no construction activities are being carried out. Traffic routed around construction areas shall be over paved surfaces and not over gravel shoulders.

I.D.O.T. GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES (48 HOUR NOTIFICATION IS REQUIRED).

10 FEET (3 METER) TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURBS & GUTTERS AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE CITY OF WAUKEGAN.

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.

BARRICADES: THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SANDBAGS ON EACH TYPE II BARRICADE USED-ONE (1) WEIGHTED SANDBAG ACROSS EACH BOTTOM RAIL.

ALL STORM SEWER CONNECTIONS WITH PIPES 27 INCHES (675 MM) DIAMETER AND SMALLER SHALL BE MADE WITH PRECAST "TEE" OR "WYE" PIPES. FOR PROPOSED STORM SEWER PIPES LARGER THAN 27 INCHES (675 MM) DIAMETER, OPENINGS OF THE SPECIFIED DIAMETER SHALL BE MADE IN THE PIPE AT THE TIME IT IS MANUFACTURED. PRECAST "TEE" AND "WYE" PIPE CONNECTIONS FOR PROPOSED STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST FOR THE STORM SEWERS.

BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847)705-4470 A MINIMUM OF 72 HOURS PRIOR TO THE PLACEMENT OF ANY TEMPORARY TRAFFIC CONTROL DEVICES.

GENERAL NOTES

A-1. THE ILLINOIS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION, THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" LATEST EDITION, PROJECT SPECIFICATIONS, ALL APPLICABLE REQUIREMENTS OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, THE CITY OF WAUKEGAN, LAKE COUNTY DIVISION OF TRANSPORATION, ALL APPLICABLE REQUIREMENTS OF THE ORDINANCES OF AUTHORITIES HAVING JURISDICTION AND ALL ADDENDA THERETO SHALL GOVERN THIS WORK.

A-2. THE STANDARD SPECIFICATIONS, PROJECT SPECIFICATIONS, CONSTRUCTION PLANS AND SUBSEQUENT DETAILS ARE ALL TO BE CONSIDERED AS PART OF THE CONTRACT. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED BUT ARE TO BE CONSIDERED A PART OF THE CONTRACT.

A-3. NO CONSTRUCTION PLANS SHALL BE USED FOR CONSTRUCTION UNLESS SPECIFICALLY MARKED 'FOR CONSTRUCTION'. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THEIR WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION, THE CONTRACTOR MUST VERIFY THE ENGINEER'S LINE AND GRADES. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSION OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.

A-4. BEFORE ACCEPTANCE BY THE OWNER AND FINAL PAYMENT, ALL WORK SHALL BE INSPECTED AND APPROVED BY THE OWNER OR HIS REPRESENTATIVES. FINAL PAYMENT WILL BE MADE AFTER ALL OF THE CONTRACTOR'S WORK HAS BEEN APPROVED AND ACCEPTED.

A-5. WHENEVER, DURING CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF GUTTERS, DRAINAGE STRUCTURES, DITCHES, ETC. SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, THE LOOSE MATERIAL WILL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT, THE CONTRACTOR'S FAILURE TO PROVIDE THE ABOVE WILL PRECLUDE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF.

A-6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS, TRAFFIC CONTROL DEVICES, AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC DURING ALL PHASES OF CONSTRUCTION.

A-7. DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHALL ENSURE POSITIVE SITE DRAINAGE AT THE CONCLUSION OF EACH DAY. SITE DRAINAGE MAY BE ACHIEVED BY DITCHING, PUMPING OR ANY OTHER METHOD ACCEPTABLE TO THE ENGINEER AND THE VILLAGE.

A-8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE FROM THE SITE ANY AND ALL MATERIALS AND DEBRIS WHICH RESULT FROM HIS CONSTRUCTION OPERATIONS AT NO ADDITIONAL EXPENSE TO THE OWNER.

A-9. CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL AREAS AFFECTED BY EQUIPMENT OR LABORERS TO EXISTING CONDITIONS. CONTRACTOR IS ALSO RESPONSIBLE FOR PROTECTING ALL NEW WORK UNTIL COMPLETION OF THIS CONTRACT.

A-10. EXISTING UTILITIES: WHEN THE PLANS OR SPECIAL PROVISIONS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION REPRESENTS ONLY THE OPINION OF THE ENGINEER AS TO THE LOCATION OF SUCH UTILITIES AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER IN RESPECT TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS RELATIVE TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES OR THE MANNER IN WHICH THEY ARE TO BE REMOVED OR ADJUSTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES. HE SHALL ALSO OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES, J.U.L.I.E., DETAILED INFORMATION RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULES OF THE UTILITY COMPANIES FOR REMOVING OR ADJUSTING THEM.

A-11. THE CITY OF WAUKEGAN SHOULD BE CONTACTED 48 HOURS PRIOR TO THE START OF ANY EXCAVATION. (847-625-6827)

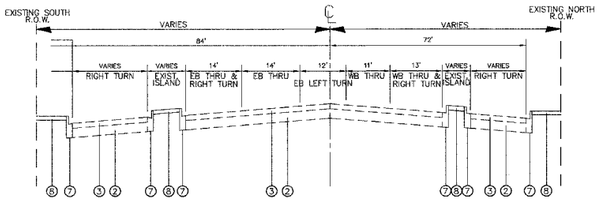
A-12. AGGREGATE SPECIFIED ON THESE PLANS SHALL BE CONSIDERED CRUSHED STONE MEETING THE GRADATION SPECIFIED. CRUSHED CONCRETE MAY NOT BE SUBSTITUTED FOR CRUSHED STONE, UNLESS APPROVED BY THE ENGINEER.

A-13. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION IN THE FIELD OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.

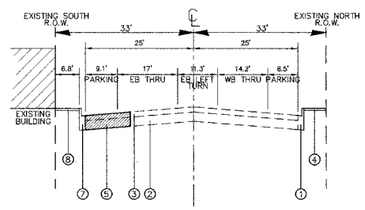
A-14. REMOVED PAVEMENT, SIDEWALK, CURB AND GUTTER, ETC. SHALL BE DISPOSED OF OFFSITE AT LOCATIONS PROVIDED BY THE CONTRACTOR AT HIS EXPENSE.

A-15. ALL PROPOSED SIDEWALK REMOVAL, COMBINATION CURB AND GUTTER REMOVAL, PCC SIDEWALK, 5" AND COMBINATION CONCRETE CURB AND GUTTER B6.12 OR B6.24 IDENTIFIED ON THE TEMPORARY TRAFFIC SIGNAL INSTALLATION OR THE TRAFFIC SIGNAL MODERNIZATION PLANS SHALL BE MARKED IN THE FIELD BY THE RESIDENT ENGINEER.

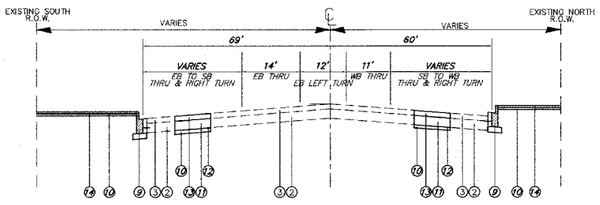
IMPORTANT NOTE:
ALL CROSS SECTIONS ARE LOOKING WEST.



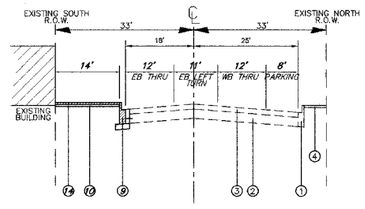
EXISTING CROSS SECTION (WASHINGTON STREET)
STA. 104+00 TO 107+00



EXISTING CROSS SECTION (WASHINGTON STREET)
STA. 124+50 TO 126+50



PROPOSED CROSS SECTION (WASHINGTON STREET)
STA. 104+00 TO 107+00



PROPOSED CROSS SECTION (WASHINGTON STREET)
STA. 124+50 TO 126+50

WASHINGTON STREET AT LEWIS AVENUE

WASHINGTON STREET AT BUTRICK STREET

LEGEND

1. EXISTING COMBINATION CURB & GUTTER
2. EXISTING P.C.C. BASE COURSE
3. EXISTING BITUMINOUS OVERLAY
4. EXISTING P.C.C. SIDEWALK
5. PAVEMENT REMOVAL
6. DRIVEWAY PAVEMENT REMOVAL
7. COMBINATION CURB AND GUTTER REMOVAL
8. SIDEWALK REMOVAL
9. COMBINATION CONCRETE CURB AND GUTTER, B6.12
10. AGGREGATE BASE COURSE, TYPE A, 4"
11. PORTLAND CONCRETE CEMENT BASE COURSE, 8"
12. BITUMINOUS MATERIALS (PRIME COAT)
13. HOT-MIX SURFACE COURSE, MIX "D" N70
14. PORTLAND CEMENT CONCRETE SIDEWALK, 5"

[ ] DENOTES A REFERENCE TO A PAY ITEM INCIDENTAL TO THE CONTRACT OR ANOTHER PAY ITEM WITHIN THE CONTRACT.

PAVING AND GRADING NOTES

C-1. ALL PAVEMENT DIMENSIONS ARE TO THE EDGE OF PAVEMENT, UNLESS OTHERWISE INDICATED.

C-2. PAVING WORK SHALL INCLUDE FINAL SUB-GRADE SHAPING AND PREPARATION, FORMING, PLACEMENT OF BASE COURSE MATERIALS, AND SUBSEQUENT BINDER AND/OR SURFACE COURSES, FINISHING AND CURING OF CONCRETE, FINAL CLEAN-UP AND ALL RELATED WORK.

C-3. PAVEMENT DESIGN SHALL BE AS DETAILED. PRIOR TO THE PLACEMENT OF ANY STONE BASE ALL SUBBASE SHALL BE COMPACTED WITH A SELF-PROPELLED SHEEPSFOOT COMPACTOR (CAT 815 OR LARGER) TO A MINIMUM DENSITY OF 95% MODIFIED PROCTOR. TESTING SHALL BE BY NUCLEAR DENSITY TEST AND PROOF ROLLING. THE CONTRACTOR SHALL PROOF ROLL THE SUBGRADE BEFORE PAVEMENT CONSTRUCTION PROCEEDS. THE PROOF ROLL MUST BE WITNESSED BY THE ENGINEER AND A REPRESENTATIVE OF THE VILLAGE. THE SUBGRADE WILL NOT BE APPROVED AND ACCEPTED WITHOUT PROOF ROLLING. THE PROOF ROLLING SHALL BE DONE BY A FULLY LOADED THREE-AXLE DUMP TRUCK TOGETHER WITH LOAD WEIGHING AT LEAST TWENTY-FIVE (25) TONS. IF THE SUBGRADE OR BASE HAS FAILURE OR PUMPING AS INDICATED BY PROOF ROLLING, THE AREA OF FAILURE OR PUMPING SHALL BE SCARIFIED AND RECOMPACTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, SUBSEQUENT PROOF ROLL WILL BE CONDUCTED UNTIL THE SUBGRADE IS FOUND TO BE ACCEPTABLE TO THE ENGINEER.

C-4. ALL DISTURBED NON-PAVEMENT AREAS SHALL BE ROUGH GRADED. THE CONTRACTOR IS RESPONSIBLE FOR ALL EROSION PREVENTION AND REPAIR.

C-5. PRIME COAT FOR THE SURFACE COURSE SHALL BE APPLIED TO THE BINDER AT A RATE OF 0.07 GAL/SY (SS-1). PRIME COAT FOR THE BINDER COURSE SHALL BE APPLIED TO THE SUBBASE AT A RATE OF 0.25 GAL/SY (P.E.P.).

C-6. ALL CURB AND SIDEWALK SHALL BE REINFORCED WITH TWO #4 REBARS (THREE EQUALLY SPACED REBAR FOR SIDEWALK) WHENEVER THE CURB OR SIDEWALK CROSSES A UTILITY TRENCH. EXTEND THE REBAR TEN FEET BEYOND THE TRENCH ON BOTH SIDES.

C-7. EXTRA CARE SHALL BE EXERCISED WHEN OPERATING EQUIPMENT AROUND TREES AND SHRUBS. INJURED BRANCHES OR ROOTS SHALL BE PRUNED IN A MANNER SATISFACTORY TO THE ENGINEER AND SHALL BE PAINTED WHERE THE CUT WAS MADE. ROOTS EXPOSED DURING EXCAVATING OPERATIONS SHALL BE NEATLY PRUNED AND COVERED WITH TOPSOIL. THIS WORK SHALL BE DONE AS SOON AS POSSIBLE AND SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

HMA MIXTURE REQUIREMENTS

ITEM	AC TYPE	VOIDS
HOT MIX ASPHALT SURFACE COURSE, MIX "D", N70, 2"	PG 64-22	4% @ 70 GYR.

NOTES:
* THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ.YD./IN.
* WHEN RAP EXCEEDS 20% THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22

PLANS PREPARED BY:
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Consulting Engineers & Surveyors
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Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

GENERAL NOTES AND TYPICAL CROSS-SECTIONS
WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

SCALE: NONE
DATE: MAY 1, 2007
DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-L0001-ALL-PPP.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	3

SUMMARY OF QUANTITIES

ILLINOIS

LAKE COUNTY
STA. 22+00 TO STA. 179+00
TRAFFIC SIGNALS

SUMMARY OF QUANTITIES

	CODE NUMBER	ITEM	UNIT	TOTAL	WASHINGTON STREET AT TESKE BOULEVARD		WASHINGTON STREET AT IL RTE 131 (GREEN BAY ROAD)		WASHINGTON STREET AT WASHINGTON TERRACE / ST. THERESA BOULEVARD		WASHINGTON STREET AT McAREE ROAD / KELLER AVENUE		WASHINGTON STREET AT LEWIS AVENUE		WASHINGTON STREET AT BUTRICK STREET		WASHINGTON STREET AT JACKSON STREET		WASHINGTON STREET AT WEST STREET		WASHINGTON STREET AT MARTIN LUTHER KING JR. AVENUE		WASHINGTON STREET AT COUNTY STREET		WASHINGTON STREET AT GENESEE STREET		WASHINGTON STREET AT IL RTE 137 (SHERIDAN ROAD)		INTERCONNECT FROM TESKE BOULEVARD TO IL RTE 137 (SHERIDAN ROAD)		PEDESTRIAN CROSSING AT ROBERT McCLORY BIKE PATH		PACE NORTH DIVISION
					CONSTRUCTION CODES																																			
					I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	Y031-1F
*	20200100	EARTH EXCAVATION	CU.YD.	52					7						30				15																				
*	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ.YD.	1,200									200																				1,000					
*	25200110	SODDING, SALT TOLERANT	SQ.YD.	1,200									200																				1,000					
*	25200200	SUPPLEMENTAL WATERING	UNIT	10																													10					
*	35100300	AGGREGATE BASE COURSE, TYPE A, 4"	SQ.YD.	775									675		100																							
*	35300300	PORTLAND CONCRETE CEMENT BASE COURSE, 8"	SQ.YD.	775									675		100																							
*	40300100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	30									25		5																							
*	40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D" N70	TON	85									80		5																							
*	42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8"	SQ.YD.	40									40																									
*	42400200	PORTLAND CEMENT CONCRETE SIDEWALK, 5"	SQ.FT.	20,510			130		670		1,135		3,700		1,815		2,260		2,000		2,250		2,500		3,050						800		200					
*	42400800	DETECTABLE WARNING	SQ.FT.	896					96		96		96		96		96		96		96		96		96								32					
*	44000100	PAVEMENT REMOVAL	SQ.YD.	610									510		100																							
*	44000200	DRIVEWAY PAVEMENT REMOVAL	SQ.YD.	110							20		40						50																				
*	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	2,845					110		195		950		200		280		275		250		275		270								40					
*	44000600	SIDEWALK REMOVAL	SQ.FT.	19,325			130		595		1,025		3,350		1,315		2,260		1,850		2,250		2,500		3,050						800		200					
*	550B0050	STORM SEWERS, CLASS B, TYPE 1 12"	FOOT	40									30		10																							
*	60300305	FRAMES AND LIDS TO BE ADJUSTED	EACH	13							3		3										5		2													
*	60406000	FRAME AND LIDS, TYPE 1, OPEN LID	EACH	21					2		4				3		2				3		1		6													
*	60234700	INLETS, TYPE A, TYPE 1 FRAME, OPEN LID (30" DEPTH)	EACH	5									4		1																							
*	60603800	COMBINATION CONCRETE CURB AND GUTTER, B6.12	FOOT	2,590					60		140		750		250		280		275		250		275		270								40					
*	60605000	COMBINATION CONCRETE CURB AND GUTTER, B6.24	FOOT	105					50		55																											
	67100100	MOBILIZATION	LSUM	1																																		
	70101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	LSUM	1																																		
*	78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ.FT.	563.9					135.5		210.0				218.4																							
*	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	2,180											2,180																							
*	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	530											530																							
*	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	4,555					476		372		768		739		372		378		450		456		408								136					
*	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	650					100		100		195		105		100		20		30																	
*	78300100	PAVEMENT MARKING REMOVAL	SQ.FT.	4,200					320		450		930		1,180		250		300		300		250		220													
	81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	4,519				98		105		105		20				11															4,180					
	81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	387						47		62		46		5		45		60		34		43		45												
	81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	435						54		27		77		47		47		49		33		44		57												
	81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	112				22		10		10		10		10		10		10		10		10		10												
	81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	11,286								105		63		59				86		197		230		336							10,210					
	81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	2,341				127		232		212		368		198		223		230		249		253		249												
	81400100	HANDHOLE	EACH	38						2		2		2		2		2		2		3		2		3							18					
	81400300	DOUBLE HANDHOLE	EACH	18						2		2		2		2		2		2		2		2		2												
	81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	5,314				103		204		209		121		57		124		105		22		82		107							4,180					
	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	3		1		1																							1							
	85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, (SPECIAL)	EACH	9						1		1		1		1		1		1		1		1		1												
	86400100	TRANSCEIVER - FIBER OPTIC	EACH	9						1		1		1		1		1		1		1		1		1												
	87301215	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	16,451						1,725		1,639		2,318		1,553		1,789		1,789		1,897		1,856		1,885												
	87301225	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	13,614				208		1,535		1,484		1,914		1,318		2,140		1,544		1,389		1,526		1,556												
	87301245	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	6,446						710		645		926		478		722		710		735		757		763												
	87301255	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	11,790						1248		1,197		1,641		1,128		1,282		1,286		1,304		1,350		1,354												
	87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	1,537				104		123		245		81		77		29		104		178		248		348												
	87701180	STEEL MAST ARM ASSEMBLY AND POLE 28 FT. (SPECIAL)	EACH	1												1																						
	87704050	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 24 FT. (SPECIAL)	EACH	1								1																										
	87704060	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 26 FT. (SPECIAL)	EACH	1								1																										
	87704070	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 28 FT. (SPECIAL)	EACH	5								2				1		2																				
	87704080	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 30 FT. (SPECIAL)	EACH	5						1								1		2						1												
	87704090	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 32 FT. (SPECIAL)	EACH	4						1						1										2												
	87704100	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT. (SPECIAL)	EACH	7						1				1		1				2		1				1												
	87704110	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT. (SPECIAL)	EACH	7														1				2		4														
	87704120	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT. (SPECIAL)	EACH	3										2								1																
	87704140	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 42 FT. (SPECIAL)	EACH	1										1																								
	87704150	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT. (SPECIAL)	EACH	1						1																												

* SPECIALTY ITEM

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REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

SUMMARY OF QUANTITIES

WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-(QSD)-ALL-PAVE.dwg

CONTRACT NO: 83932

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	4
SUMMARY OF QUANTITIES				
	ILLINOIS			

LAKE COUNTY
STA. 22+00 TO STA. 179+00

TRAFFIC SIGNALS

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM	UNIT	TOTAL	WASHINGTON STREET AT TESKE BOULEVARD		WASHINGTON STREET AT IL RTE 131 (GREEN BAY ROAD)		WASHINGTON STREET AT WASHINGTON TERRACE / ST. THERESA BOULEVARD		WASHINGTON STREET AT McAREE ROAD / KELLER AVENUE		WASHINGTON STREET AT LEWIS AVENUE		WASHINGTON STREET AT BUTRICK STREET		WASHINGTON STREET AT JACKSON STREET		WASHINGTON STREET AT WEST STREET		WASHINGTON STREET AT MARTIN LUTHER KING JR. AVENUE		WASHINGTON STREET AT COUNTY STREET		WASHINGTON STREET AT GENESEE STREET		WASHINGTON STREET AT IL RTE 137 (SHERIDAN ROAD)		INTERCONNECT FROM TESKE BOULEVARD TO IL RTE 137 (SHERIDAN ROAD)		PEDESTRIAN CROSSING AT ROBERT McCLORY BIKE PATH		PACE NORTH DIVISION
				CONSTRUCTION CODES																														
				I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	I000-2A	Y031-1F	Y031-1F
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	140						16		16		16		4		16		16		16		16		16								8	
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	36						4		4		4		4		4		4		4		4		4									
87800200	CONCRETE FOUNDATION, TYPE D	FOOT	4				4																											
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	15												15																			
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	525						60		60		60		45		60		60		60		60		60									
87900200	DRILL EXISTING HANDHOLE	EACH	8				3														1										4			
88030020	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	54						6		4		4		6		6		6		7		7		8									
88030050	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	18						2						2		2		2		3		3		4									
88030100	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	18						2		4		4		2		2		2		1		1											
88030110	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	18						2		4		4		2		2		2		1		1											
88102717	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	66						8		8		8		2		8		8		8		8		8									
88102747	PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	3												3																			
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	72						8		8		8		8		8		8		8		8		8									
88700200	LIGHT DETECTOR	EACH	18						2		2		2		2		2		2		2		2		2									
88700300	LIGHT DETECTOR AMPLIFIER	EACH	9						1		1		1		1		1		1		1		1		1									
88800100	PEDESTRIAN PUSH-BUTTON	EACH	74						8		8		8		8		8		8		8		8		8								2	
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	9						1		1		1		1		1		1		1		1		1									
89100400	ILLUMINATED SIGN, L.E.D.	EACH	4														4																	
89502200	MODIFY EXISTING CONTROLLER	EACH	2				1																					1						
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	9						1		1		1		1		1		1		1		1		1									
89502380	REMOVE EXISTING HANDHOLE	EACH	81						8		7		13		9		11		6		10		8		9									
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	72						9		9		13		8		9		9		5		5		5									
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C	FOOT	16,202																												16,202			
X0322929	CAMERA MOUNTING ASSEMBLY	EACH	1				1																											
X0324007	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1																												1			
X0329851	FIBER OPTIC PATCH PANEL	EACH	1				1																											
X6700405	ENGINEER'S FIELD OFFICE, TYPE A (MODIFIED)	CAL MO	6																															
X8050015	SERVICE INSTALLATION, POLE MOUNT	EACH	10				1		1		1		1		1		1		1		1		1		1									
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	4,614						471		582		602		350		382		472		556		600		599									
X8730250	ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED	FOOT	3,696				208		439		418		453		340		356		396		369		355		362									
XX003661	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	1,260				208		182		158		111		81		95		153		89		87		96									
XX005723	VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION)	EACH	9						1		1		1		1		1		1		1		1		1									
XX005922	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 16, 5 1/2 PAIR	FOOT	6,951						756		772		954		598		772		772		737		785		805									
XX005931	TRAFFIC SIGNAL POST 16 FT. (SPECIAL)	EACH	33						4		4		4		1		2		4		4		4		4								2	
XX005932	TRAFFIC SIGNAL POST 18 FT. (SPECIAL)	EACH	2														2																	
XX005937	L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	36						4		4		4		4		4		4		4		4		4									
XX005940	REMOTE-CONTROLLED VIDEO SYSTEM	EACH	10				1		1		1		1		1		1		1		1		1		1									
XX006390	VIDEO COMMUNICATIONS SYSTEM AND CABINET	EACH	1				1																											
XX006654	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F SM24F	FOOT	16,202																												16,202			
XX006655	LAYER II (DATA LINK) SWITCH	EACH	9						1		1		1		1		1		1		1		1		1									
XX006661	UNINTERRUPTABLE POWER SUPPLY	EACH	9						1		1		1		1		1		1		1		1		1									
△ Z0076600	TRAINEES	HOUR	1,000																															
XX007017	TERMINATE FIBER IN CABINET	EACH	30				12																					18						
XX007018	LAYER III (NETWORK) SWITCH	EACH	1				1																											
XX007019	TRANSIT PRIORITY EMITTER	EACH	40																															40
XX007020	GARAGE MOUNTED TEST EQUIPMENT	EACH	1																															1
XX007021	PEDESTRIAN ACTIVATED CROSSWALK WARNING SYSTEM	EACH	2																														2	

* SPECIALTY ITEM

△ Y080

PLANS PREPARED BY:

GEWALT HAMILTON ASSOCIATES, INC.

Consulting Engineers & Surveyors
650 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

SUMMARY OF QUANTITIES

WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

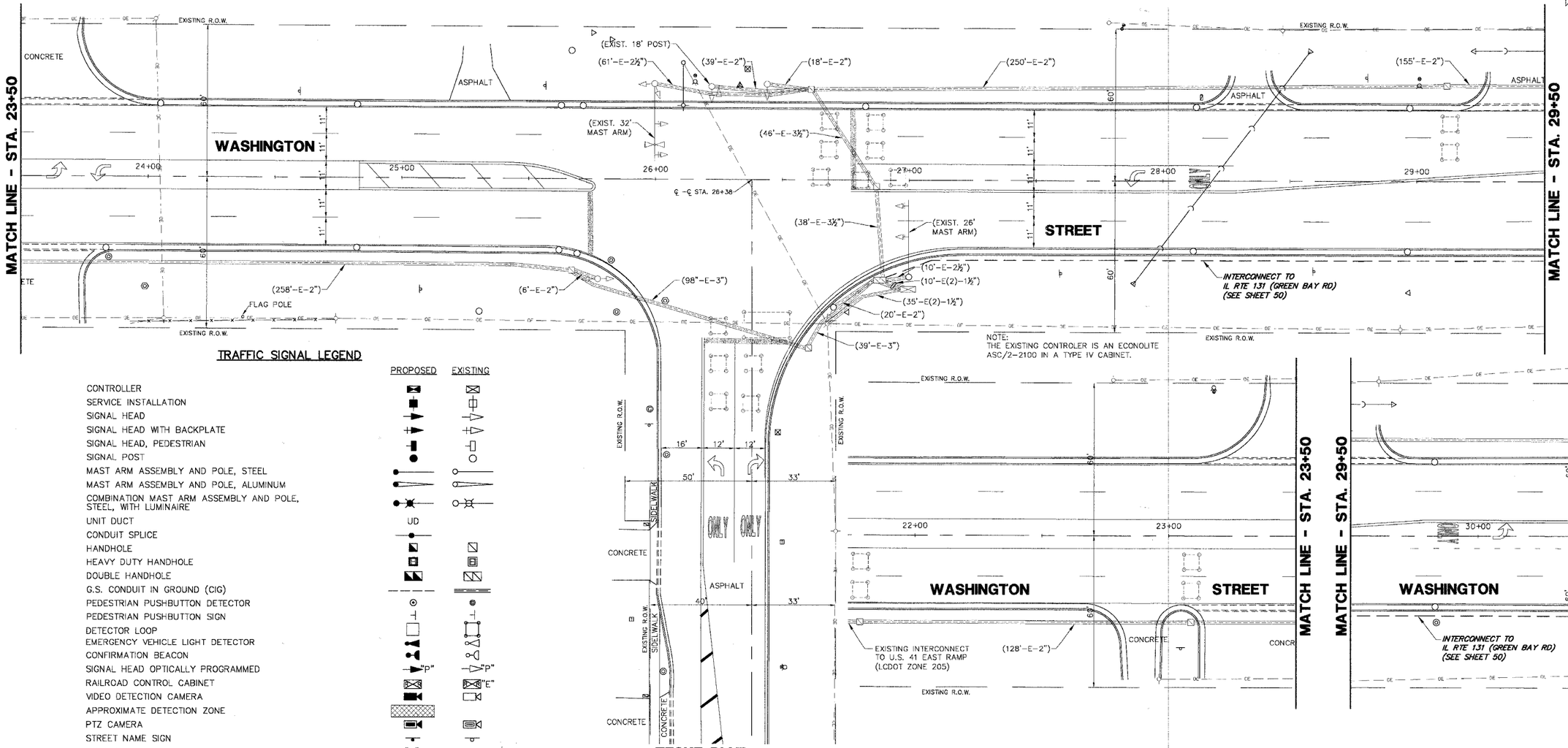
3744-0001-ALL-PKL.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	5
TRAFFIC SIGNAL MODERNIZATION PLAN				
	ILLINOIS			

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.

N



TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL, WITH LUMINAIRE		
UNIT DUCT	UD	
CONDUIT SPLICE		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND (CIG)		
PEDESTRIAN PUSHBUTTON DETECTOR		
PEDESTRIAN PUSHBUTTON SIGN		
DETECTOR LOOP		
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
RAILROAD CONTROL CABINET		"E"
VIDEO DETECTION CAMERA		
APPROXIMATE DETECTION ZONE		
PTZ CAMERA		
STREET NAME SIGN		
ABANDON	"A"	
COMBINATION CURB AND GUTTER REMOVAL		
COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 OR TYPE B-6.24		
SIDEWALK REMOVAL		
PORTLAND CEMENT CONCRETE SIDEWALK, 5"		
DRIVEWAY PAVEMENT REMOVAL		
PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8"		
VIDEO COMMUNICATIONS CABINET		"E"
TELEPHONE DROP		
DETECTABLE WARNING		

Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

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

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
1500 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN

WASHINGTON STREET AND TESKE BOULEVARD

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-LCDOT-ALL-INFO.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	6

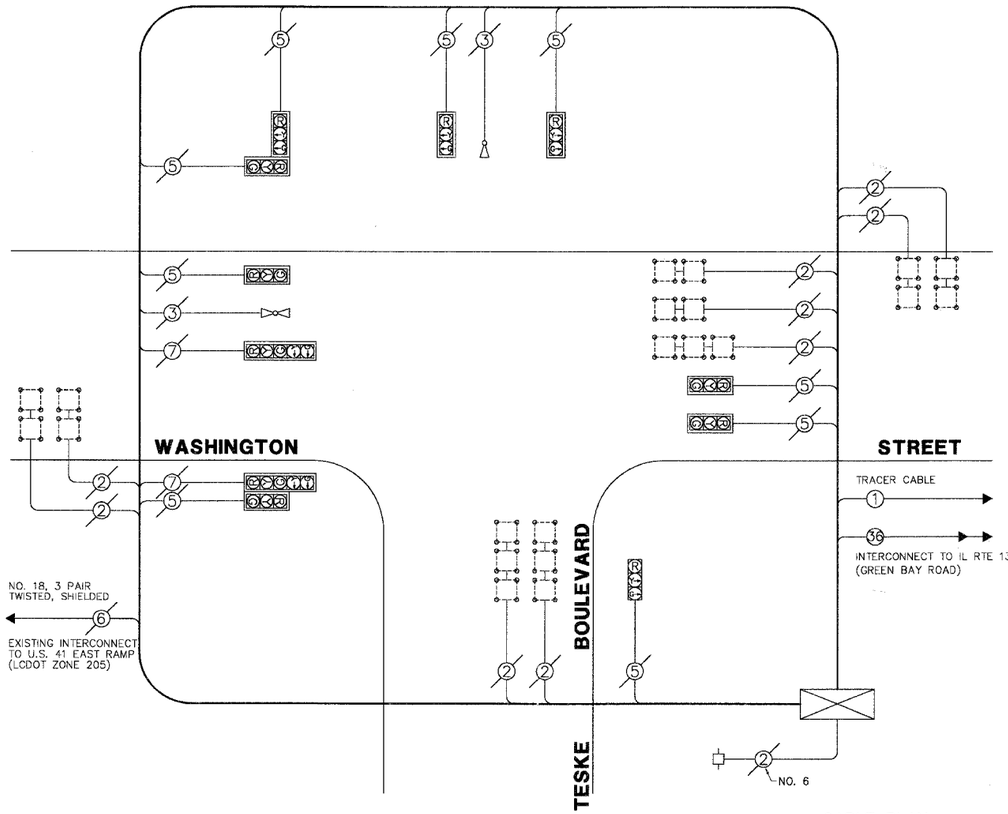
CABLE PLAN, PHASE DESIGNATION DIAGRAM

ILLINOIS

SCHEDULE OF QUANTITIES

WASHINGTON STREET AND TESKE BOULEVARD

	QUANT.	UNIT	ITEM
			TRAFFIC SIGNAL IMPROVEMENTS
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION



CABLE PLAN

CABLE PLAN LEGEND

EXISTING	PROPOSED	
		12" TRAFFIC SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
	T	TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
1	1	GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN)
36	36	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F SM24F
		SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "NO RIGHT TURN"
H/C		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLER (C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
"E"(#)	(#)	BELDEN 8281 COAXIAL CABLE
	I	ISDN LINE
		LUMINAIRE
		VIDEO DETECTION CAMERA
		PTZ CAMERA
"E"		VIDEO COMMUNICATIONS CABINET
	1st AV	L.E.D. STREET NAME SIGN
	UPS	UNINTERRUPTIBLE POWER SUPPLY

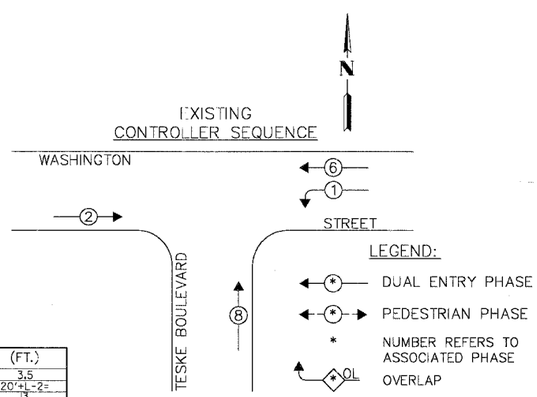
L.C.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE L.E.D.	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	11	135	10	0.50	742.5
SIGNAL (YELLOW)	7	135	19	0.10	94.5
SIGNAL (GREEN)	7	135	11	0.40	378.0
ARROW	12	135	9	0.10	162.0
PED.SIGNAL	-	90	9	1.00	-
CONTROLLER	1	100	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	-	-	25	1.00	-
			TOTAL =		1477.0

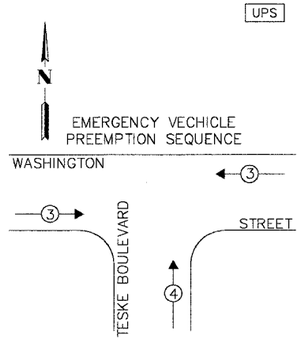
ENERGY COSTS – BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY – CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED – LIBERTYVILLE

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

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



PHASE DESIGNATION DIAGRAM



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	—	|

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES

WASHINGTON STREET AND TESKE BOULEVARD

SCALE: NONE
DATE: MAY 1, 2007

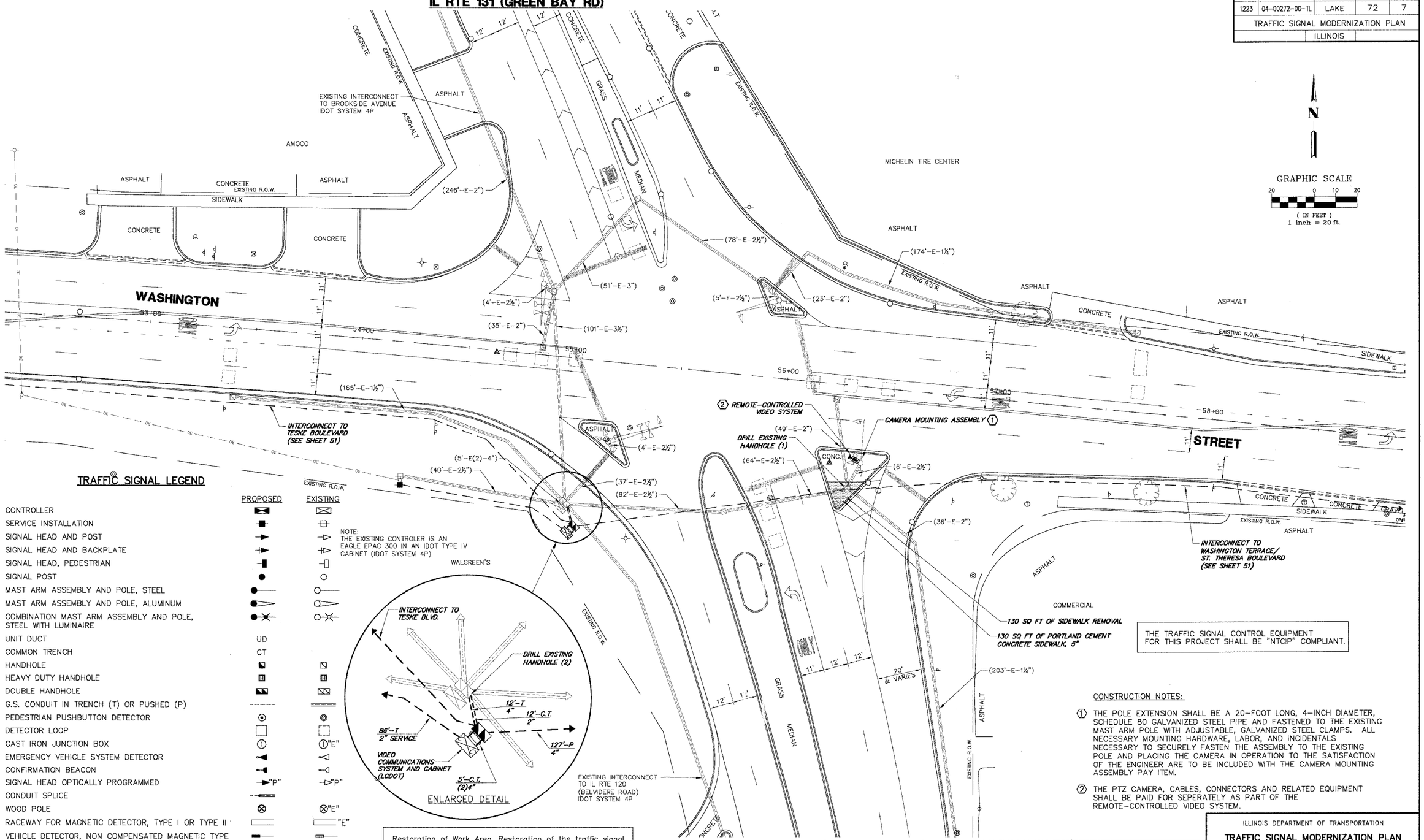
DRAWN BY: ZCW
DESIGNED BY: JRD
CHECKED BY: BLS

3744-LCDOT-ALL-PHS.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	7
TRAFFIC SIGNAL MODERNIZATION PLAN				
	ILLINOIS			

IL RTE 131 (GREEN BAY RD)



TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD AND POST		
SIGNAL HEAD AND BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		"E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		"E"
TELEPHONE CONNECTION		
ILLUMINATED SIGN "NO LEFT TURN"		"E"
ILLUMINATED SIGN "NO RIGHT TURN"		"E"

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

CONSTRUCTION NOTES:

1. THE POLE EXTENSION SHALL BE A 20-FOOT LONG, 4-INCH DIAMETER, SCHEDULE 80 GALVANIZED STEEL PIPE AND FASTENED TO THE EXISTING MAST ARM POLE WITH ADJUSTABLE, GALVANIZED STEEL CLAMPS. ALL NECESSARY MOUNTING HARDWARE, LABOR, AND INCIDENTALS NECESSARY TO SECURELY FASTEN THE ASSEMBLY TO THE EXISTING POLE AND PLACING THE CAMERA IN OPERATION TO THE SATISFACTION OF THE ENGINEER ARE TO BE INCLUDED WITH THE CAMERA MOUNTING ASSEMBLY PAY ITEM.
2. THE PTZ CAMERA, CABLES, CONNECTORS AND RELATED EQUIPMENT SHALL BE PAID FOR SEPERATELY AS PART OF THE REMOTE-CONTROLLED VIDEO SYSTEM.

Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

IL RTE 131 (GREEN BAY RD)

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN

WASHINGTON STREET AND IL ROUTE 131 (GREEN BAY ROAD)

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-D007-ALL-R1.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	8

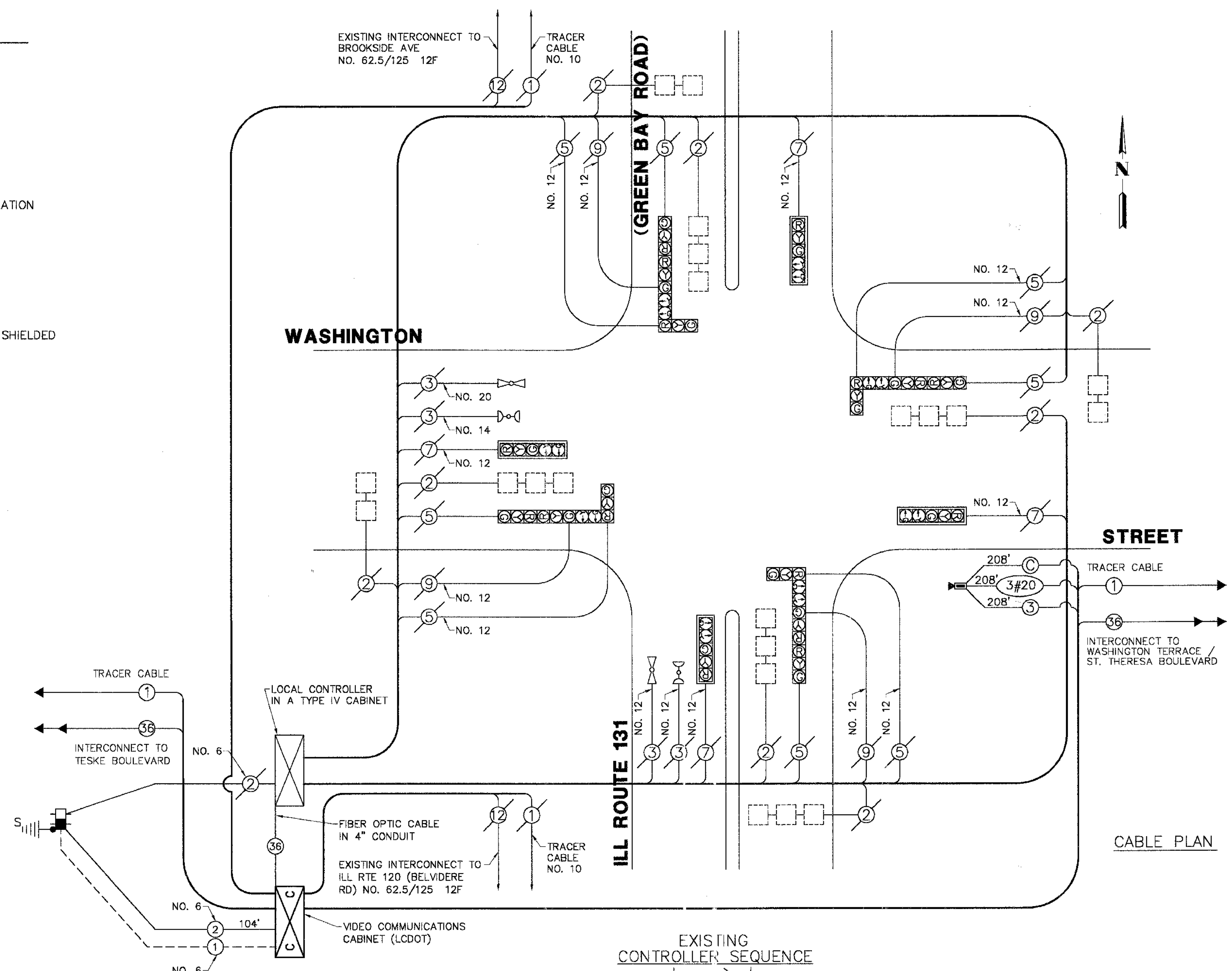
CABLE PLAN, PHASE DESIGNATION DIAGRAM

ILLINOIS

SCHEDULE OF QUANTITIES

WASHINGTON STREET AND IL RTE 131 (GREEN BAY ROAD)

	QUANT.	UNIT	ITEM
			ROADWAY IMPROVEMENTS
1.	130	SQ.FT.	PORTLAND CEMENT CONCRETE SIDEWALK, 5"
2.	130	SQ.FT.	SIDEWALK REMOVAL
			TRAFFIC SIGNAL IMPROVEMENTS
3.	98	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
4.	22	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
5.	127	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
6.	103	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
7.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
8.	208	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 3C
9.	104	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE NO.6 2C
10.	4	FOOT	CONCRETE FOUNDATION, TYPE D
11.	3	EACH	DRILL EXISTING HANDHOLE
12.	1	EACH	MODIFY EXISTING CONTROLLER
13.	1	EACH	REMOTE-CONTROLLED VIDEO SYSTEM
14.	208	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED
15.	12	EACH	TERMINATE FIBER IN CABINET
16.	1	EACH	LAYER III (NETWORK) SWITCH
17.	1	EACH	VIDEO COMMUNICATIONS SYSTEM AND CABINET
18.	1	EACH	CAMERA MOUNTING ASSEMBLY
19.	208	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
20.	1	EACH	SERVICE INSTALLATION, POLE MOUNT
21.	1	EACH	FIBER OPTIC PATCH PANEL



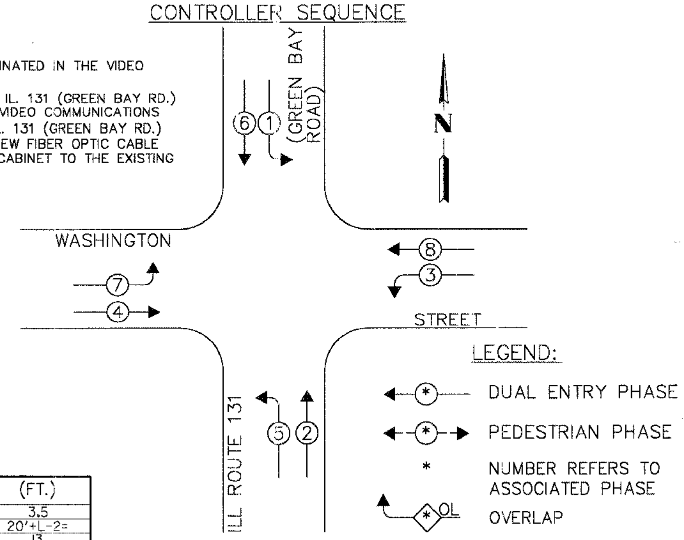
CABLE PLAN

NOTE: MULTI MODE FIBERS SHALL BE TERMINATED IN THE VIDEO COMMUNICATIONS CABINET.
EXISTING FIBER OPTIC CABLE ALONG IL. 131 (GREEN BAY RD.) SHALL BE RELOCATED TO THE NEW VIDEO COMMUNICATIONS CABINET. COMMUNICATIONS ALONG IL. 131 (GREEN BAY RD.) SHALL BE RE-ESTABLISHED USING NEW FIBER OPTIC CABLE FROM NEW VIDEO COMMUNICATIONS CABINET TO THE EXISTING CONTROLLER CABINET.

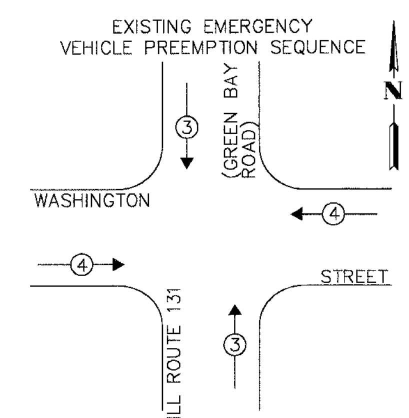
CABLE PLAN LEGEND

EXISTING / PROPOSED

- 8" (200mm) TRAFFIC SIGNAL SECTION
- 12" (300mm) TRAFFIC SIGNAL SECTION
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- CONTROLLER CABINET
- SERVICE INSTALLATION
- TELEPHONE
- VEHICLE DETECTOR, INDUCTION LOOP
- MAGNETIC DETECTOR
- 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 NO. 62.5/125 MM12F SM24F
- 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 CONTROLLER (C)
- GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
- GROUND ROD AT ELECTRIC SERVICE INSTALLATION
- PTZ CAMERA
- VIDEO COMMUNICATIONS CABINET



EXISTING PHASE DESIGNATION DIAGRAM



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE L.E.D.	% OPERATION	
SIGNAL (RED)	16	135	10	0.50	1080.0
SIGNAL (YELLOW)	16	135	19	0.10	216.0
SIGNAL (GREEN)	16	135	11	0.40	864.0
ARROW	16	135	9	0.10	216.0
PED.SIGNAL	-	90	9	1.00	-
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN	-	252	-	0.05	
FLASHER				0.50	
				TOTAL =	2476.0

ENERGY COSTS – BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY – CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED – LIBERTYVILLE

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

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		SIGNAL POST	2	BRACKET MOUNTED	13
30" (16'-30')	10	CONTROLLER CAB.	1	PED. PUSHBUTTON	4
30" (30'-40')	13'-6"	FIBER OPTIC	13	ELECTRIC SERVICE	13.5
36" (40'-48)	13	ELECTRIC SERVICE	1	SERVICE TO GROUND	13.5
36" (50'-55')	15	GROUND CABLE	1	POST MOUNTED	6

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES

WASHINGTON STREET AND IL ROUTE 131 (GREEN BAY ROAD)

SCALE: NONE
DATE: MAY 1, 2007
DRAWN BY: ZCW
DESIGNED BY: JRD
CHECKED BY: BLS

CONTRACT NO: 83932

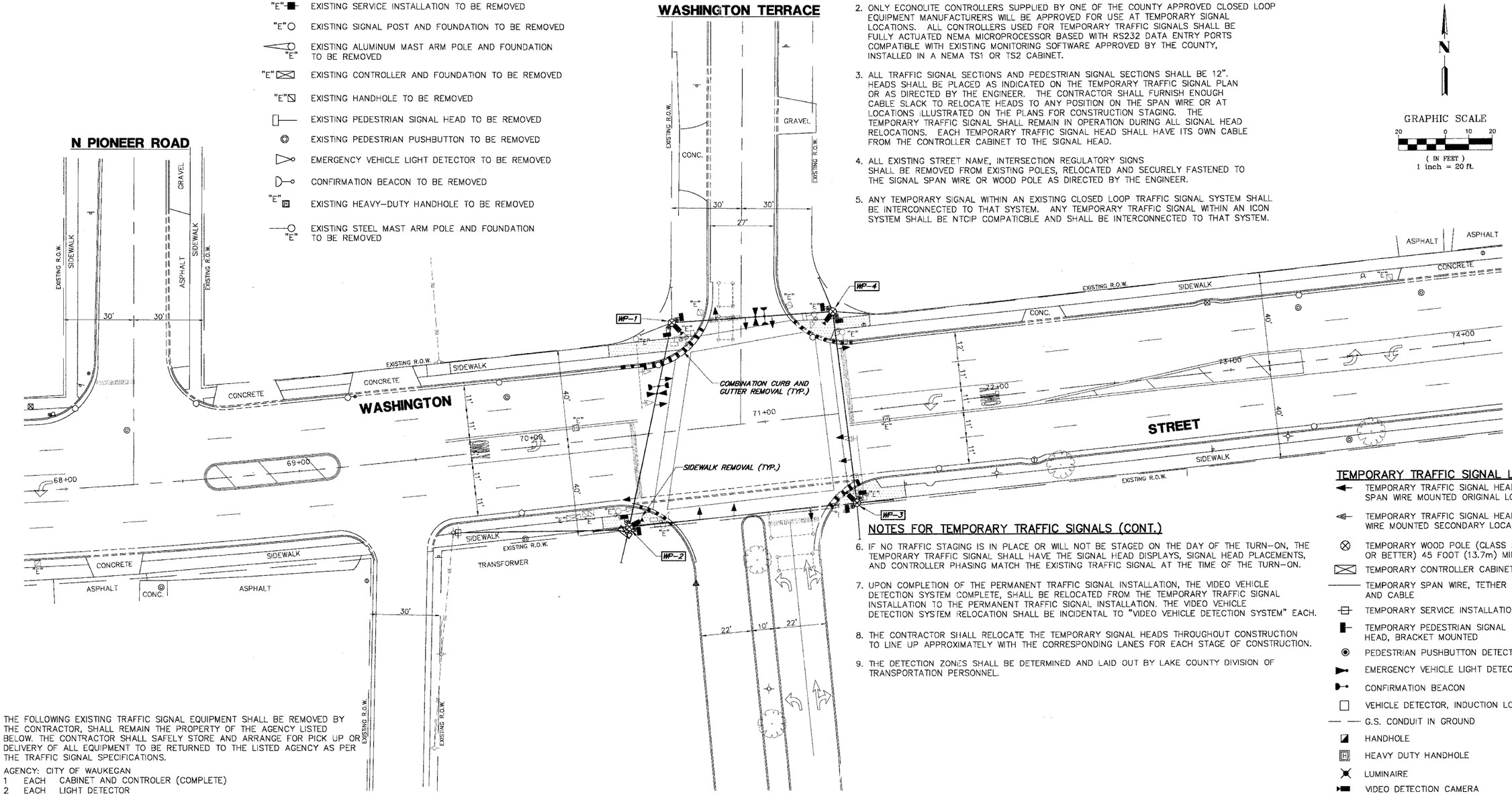
F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	9
TEMP. TRAFFIC SIGNAL INSTALLATION PLAN				
	ILLINOIS			

EXISTING EQUIPMENT TO BE REMOVED

- EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- "E" EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- "E" EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- "E" EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- "E" EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY, INSTALLED IN A NEMA TS1 OR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME, INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY TRAFFIC SIGNAL WITHIN AN ICON SYSTEM SHALL BE NTCIP COMPATICBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.



GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

NOTES FOR TEMPORARY TRAFFIC SIGNALS (CONT.)

6. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN-ON, THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS, AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL AT THE TIME OF THE TURN-ON.
7. UPON COMPLETION OF THE PERMANENT TRAFFIC SIGNAL INSTALLATION, THE VIDEO VEHICLE DETECTION SYSTEM COMPLETE, SHALL BE RELOCATED FROM THE TEMPORARY TRAFFIC SIGNAL INSTALLATION TO THE PERMANENT TRAFFIC SIGNAL INSTALLATION. THE VIDEO VEHICLE DETECTION SYSTEM RELOCATION SHALL BE INCIDENTAL TO "VIDEO VEHICLE DETECTION SYSTEM" EACH.
8. THE CONTRACTOR SHALL RELOCATE THE TEMPORARY SIGNAL HEADS THROUGHOUT CONSTRUCTION TO LINE UP APPROXIMATELY WITH THE CORRESPONDING LANES FOR EACH STAGE OF CONSTRUCTION.
9. THE DETECTION ZONES SHALL BE DETERMINED AND LAID OUT BY LAKE COUNTY DIVISION OF TRANSPORTATION PERSONNEL.

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN GROUND
- HANDHOLE
- HEAVY DUTY HANDHOLE
- LUMINAIRE
- VIDEO DETECTION CAMERA
- DOME PAN/TILT/ZOOM (PTZ) CAMERA

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: CITY OF WAUKEGAN

1	EACH	CABINET AND CONTROLER (COMPLETE)
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

6	EACH	SIGNAL HEAD, 3-SECTION
4	EACH	SIGNAL HEAD, 5-SECTION
8	EACH	PEDESTRIAN SIGNAL HEAD
8	EACH	PEDESTRIAN PUSH-BUTTON
2	EACH	STEEL MAST ARM ASSEMBLEY AND POLE
6	EACH	TRAFFIC SIGNAL POST
1	EACH	SERVICE INSTALLATION

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
WP-1	70+65.0	46.5' LT	X
WP-2	70+37.5	38.5' RT	X
WP-3	71+35.0	38.5' RT	X
WP-4	71+33.5	44.0' LT	X

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL OF EXISTING EQUIPMENT

WASHINGTON STREET AND WASHINGTON TERRACE / ST. THERESA BOULEVARD

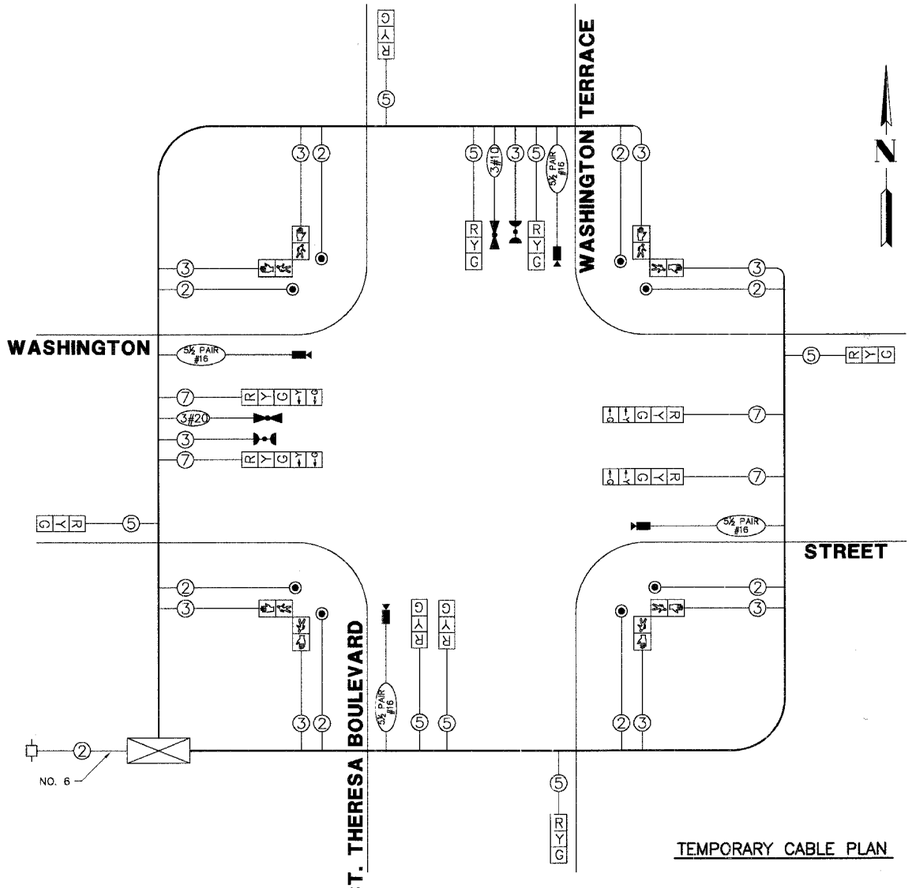
SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-CONST-TL-TRE.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	10
TEMPORARY CABLE PLAN				
ILLINOIS				



TEMPORARY CABLE PLAN

TEMPORARY CABLE PLAN LEGEND

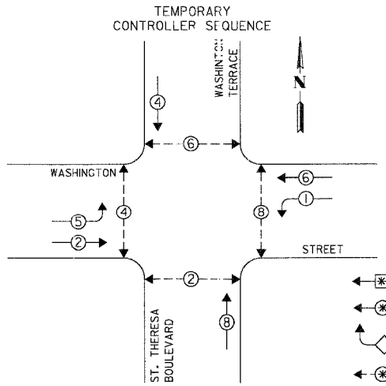
- R — TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12"
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- (5) — INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- PEDESTRIAN PUSHBUTTON DETECTOR
- PEDESTRIAN SIGNAL HEAD
- VIDEO DETECTION CAMERA
- PTZ CAMERA
- LUMINAIRE
- T — TELEPHONE DROP
- MICROWAVE DETECTOR

L.C.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE L.E.D.	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	10	0.50	810.0
SIGNAL (YELLOW)	12	135	19	0.10	405.0
SIGNAL (GREEN)	12	135	11	0.40	405.0
ARROW	8	135	9	0.10	108.0
PED.SIGNAL	8	90	9	1.00	720.0
CONTROLLER	1	100	100	1.00	100.0
LUMINAIRE	-	150	250	0.50	75.0
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	150	150	1.00	150.0
BATTERY BACKUP	-	-	25	-	-
				TOTAL =	2773.0

ENERGY COSTS – BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY – CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED – LIBERTYVILLE

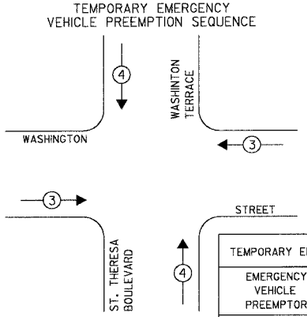
TEMPORARY CONTROLLER SEQUENCE



LEGEND
- SINGLE ENTRY PHASE
- DUAL ENTRY PHASE
- OL — OVERLAP
- PEDESTRIAN PHASE
- * — NUMBER REFERS TO ASSOCIATED PHASE

TEMPORARY PHASE DESIGNATION DIAGRAM

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM

WASHINGTON STREET AND WASHINGTON TERRACE / ST. THERESA BOULEVARD

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

1244-CD01-ALL.dgn

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	11
TRAFFIC SIGNAL MODERNIZATION PLAN				
ILLINOIS				

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL, WITH LUMINAIRE		
UNIT DUCT	UD	
CONDUIT SPLICE		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND (CIG)		
PEDESTRIAN PUSHBUTTON DETECTOR		
PEDESTRIAN PUSHBUTTON SIGN		
DETECTOR LOOP		

TRAFFIC SIGNAL LEGEND (CONT.)

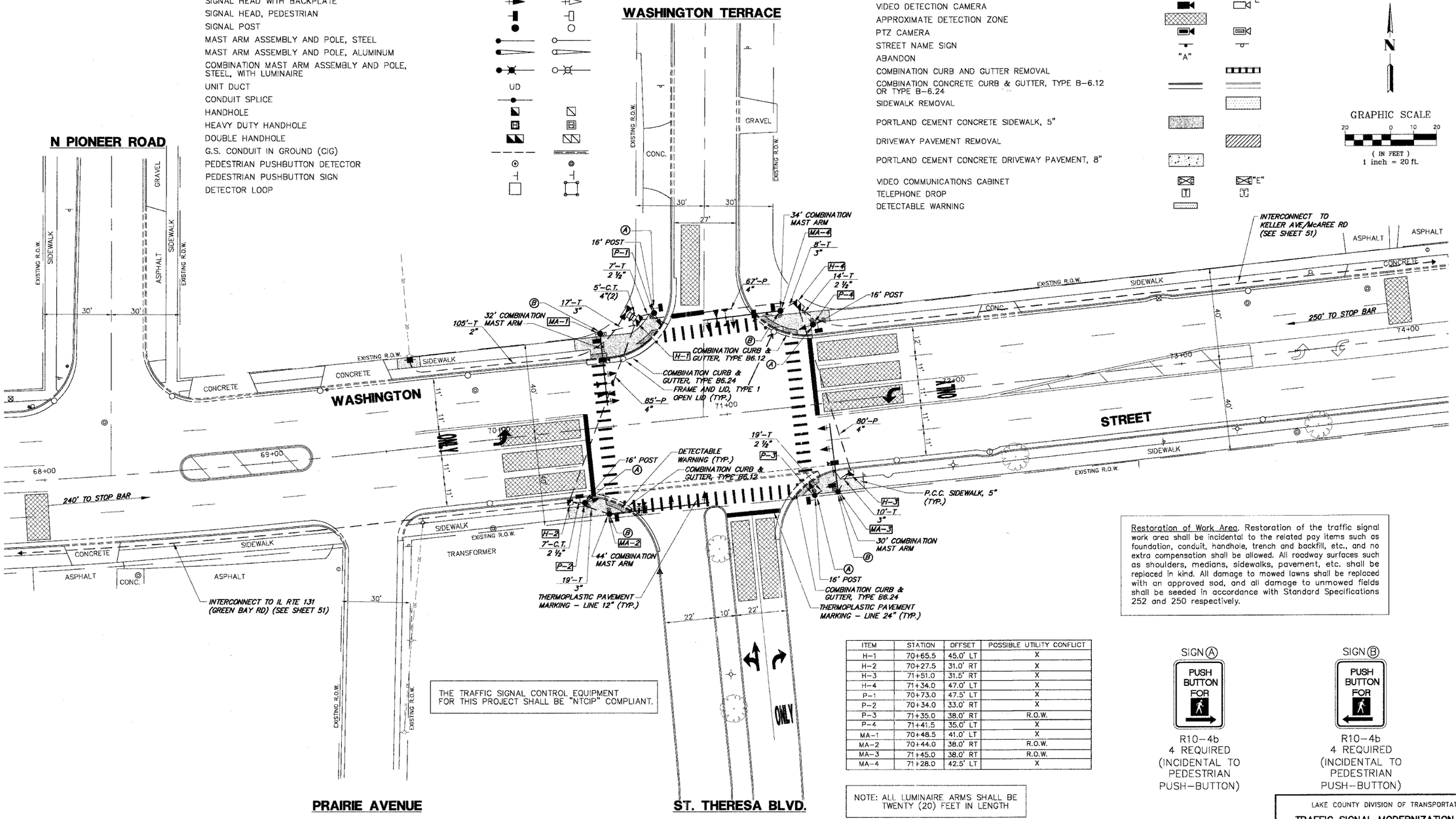
	PROPOSED	EXISTING
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
RAILROAD CONTROL CABINET		"E"
VIDEO DETECTION CAMERA		
APPROXIMATE DETECTION ZONE		
PTZ CAMERA		
STREET NAME SIGN		
ABANDON	"A"	
COMBINATION CURB AND GUTTER REMOVAL		
COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 OR TYPE B-6.24		
SIDEWALK REMOVAL		
PORTLAND CEMENT CONCRETE SIDEWALK, 5"		
DRIVEWAY PAVEMENT REMOVAL		
PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8"		
VIDEO COMMUNICATIONS CABINET		"E"
TELEPHONE DROP		
DETECTABLE WARNING		

N

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.



Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
H-1	70+65.5	45.0' LT	X
H-2	70+27.5	31.0' RT	X
H-3	71+51.0	31.5' RT	X
H-4	71+34.0	47.0' LT	X
P-1	70+73.0	47.5' LT	X
P-2	70+34.0	33.0' RT	X
P-3	71+35.0	38.0' RT	R.O.W.
P-4	71+41.5	35.0' LT	X
MA-1	70+48.5	41.0' LT	X
MA-2	70+44.0	38.0' RT	R.O.W.
MA-3	71+45.0	38.0' RT	R.O.W.
MA-4	71+28.0	42.5' LT	X

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

NOTE: ALL LUMINAIRE ARMS SHALL BE TWENTY (20) FEET IN LENGTH

SIGN (A)

R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

SIGN (B)

R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN

WASHINGTON STREET AND WASHINGTON TERRACE / ST. THERESA BOULEVARD

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

S:\14-02001-ALL.DWG.dwg

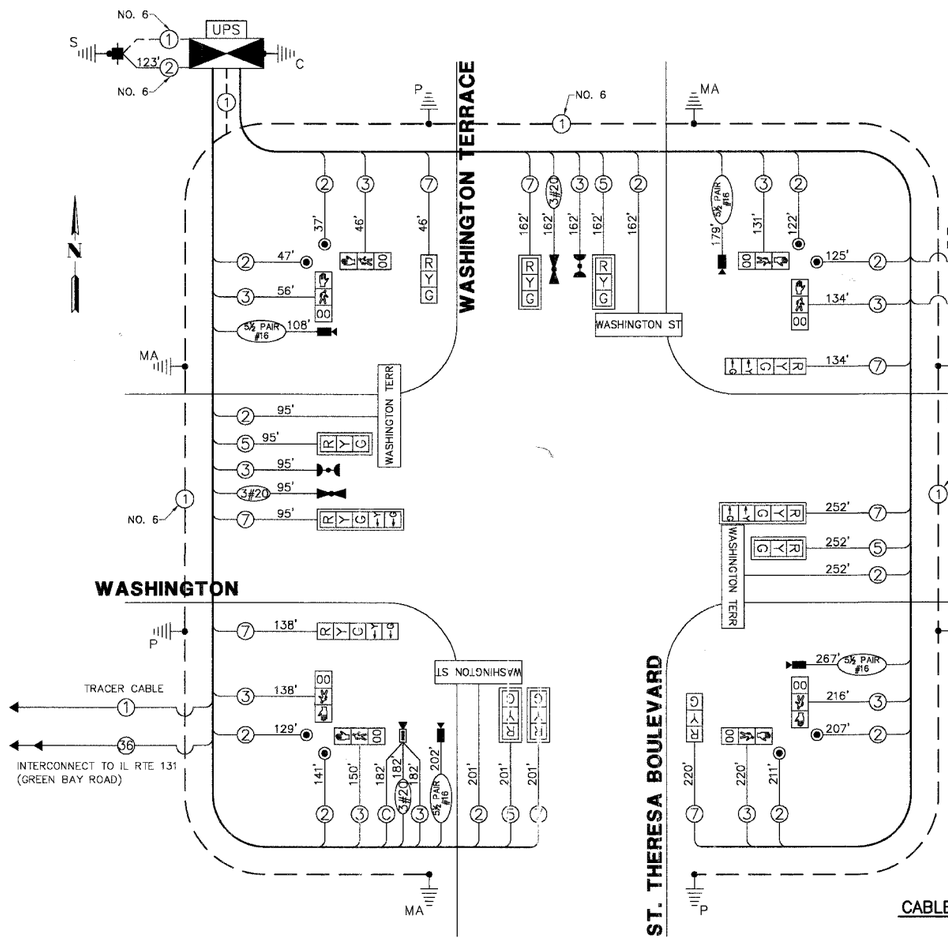
CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	12
CABLE PLAN, PHASE DESIGNATION DIAGRAM				
	ILLINOIS			

SCHEDULE OF QUANTITIES

WASHINGTON STREET AND WASHINGTON TER / ST. THERESA BLVD

	QUANT.	UNIT	ITEM
			ROADWAY IMPROVEMENTS
1.	7	CU.YD.	EARTH EXCAVATION
2.	670	SQ.FT.	PORTLAND CEMENT CONCRETE SIDEWALK, 5"
3.	96	SQ.FT.	DETECTABLE WARNING
4.	110	FOOT	COMBINATION CURB & GUTTER REMOVAL
5.	595	SQ.FT.	SIDEWALK REMOVAL
6.	2	EACH	FRAME AND LIDS, TYPE 1, OPEN LID
7.	60	FOOT	COMBINATION CURB & GUTTER, TYPE B6.12
8.	50	FOOT	COMBINATION CURB & GUTTER, TYPE B6.24
9.	135.5	SQ.FT.	THERMOPLASTIC PAVEMENT MARKING-LETTERS AND SYMBOLS
10.	476	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 12"
11.	100	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 24"
12.	320	SQ.FT.	PAVEMENT MARKING REMOVAL
			TRAFFIC SIGNAL IMPROVEMENTS
13.	105	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
14.	47	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
15.	54	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
16.	10	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
17.	232	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
18.	2	EACH	HANDHOLE
19.	2	EACH	DOUBLE HANDHOLE
20.	204	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
21.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
22.	1	EACH	TRANSCEIVER - FIBER OPTIC
23.	1,725	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 2C
24.	1,535	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 3C
25.	710	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 5C
26.	1,248	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 7C
27.	123	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO.6 2C
28.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 30 FT. (SPECIAL)
29.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 32 FT. (SPECIAL)
30.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT. (SPECIAL)
31.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT. (SPECIAL)
32.	16	FOOT	CONCRETE FOUNDATION, TYPE A
33.	4	FOOT	CONCRETE FOUNDATION, TYPE C
34.	60	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
35.	8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM
36.	2	EACH	LIGHT DETECTOR
37.	1	EACH	LIGHT DETECTOR AMPLIFIER
38.	8	EACH	PEDESTRIAN PUSH-BUTTON
39.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
40.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
41.	8	EACH	REMOVE EXISTING HANDHOLE
42.	9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
43.	8	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
44.	4	EACH	L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN
45.	1	EACH	VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION)
46.	1	EACH	REMOTE-CONTROLLED VIDEO SYSTEM
47.	756	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 16, 5 1/2 PAIR
48.	4	EACH	TRAFFIC SIGNAL POST, 16 FT. (SPECIAL)
49.	1	EACH	LAYER II (DATA LINK) SWITCH
50.	1	EACH	UNINTERRUPTABLE POWER SUPPLY
51.	471	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
52.	439	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED
53.	6	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED
54.	2	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED
55.	2	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED
56.	2	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
57.	182	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
58.	1	EACH	SERVICE INSTALLATION, POLE MOUNT

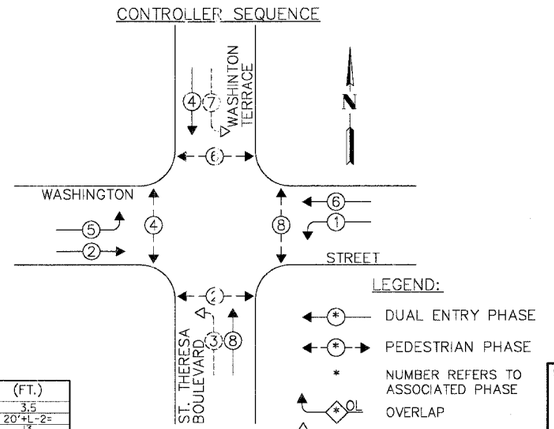


CABLE PLAN

CABLE PLAN LEGEND

EXISTING	PROPOSED	
		12" TRAFFIC SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		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 NO. 62.5/125 MM12F SM24F
		SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
		RAILROAD CONTROL CABINET
		ILLUMINATED SIGN "NO LEFT TURN"
		ILLUMINATED SIGN "NO RIGHT TURN"
H/C		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLER (C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
"E"(#)	(#)	BELDEN 8281 COAXIAL CABLE
		ISDN LINE
		LUMINAIRE
		VIDEO DETECTION CAMERA
		PTZ CAMERA
"E"		VIDEO COMMUNICATIONS CABINET
	1st AV	L.E.D. STREET NAME SIGN
	UPS	UNINTERRUPTIBLE POWER SUPPLY

CONTROLLER SEQUENCE

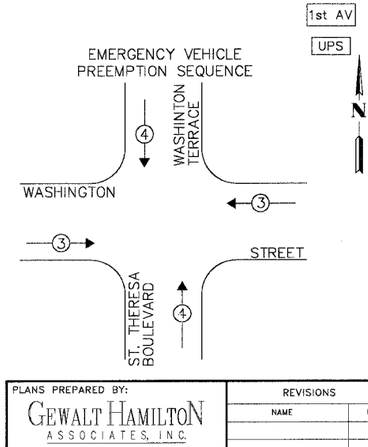


LEGEND:

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE
- OL OVERLAP
- FUTURE PHASE

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)	12	135	10	0.50	60.0
SIGNAL (YELLOW)	12	135	19	0.10	22.8
SIGNAL (GREEN)	12	135	11	0.40	52.8
ARROW	8	135	9	0.10	7.2
PED.SIGNAL	8	90	9	1.00	72.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	4	-	250	0.50	500.0
L.E.D. ST. NAME SIGN	4	-	64	0.50	128.0
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
				TOTAL =	1117.8

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

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY - CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED - 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	1.3
		CONTROLLER CAB.	1	PED. PUSHBUTTON	4
		FIBER OPTIC	1.3	ELECTRIC SERVICE	13.5
		ELECTRIC SERVICE	1	SERVICE TO GROUND	13.5
		GROUND CABLE	1	POST MOUNTED	6

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES

WASHINGTON STREET AND WASHINGTON TERRACE / ST. THERESA BOULEVARD

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: ZCW
DESIGNED BY: JRD
CHECKED BY: BLS

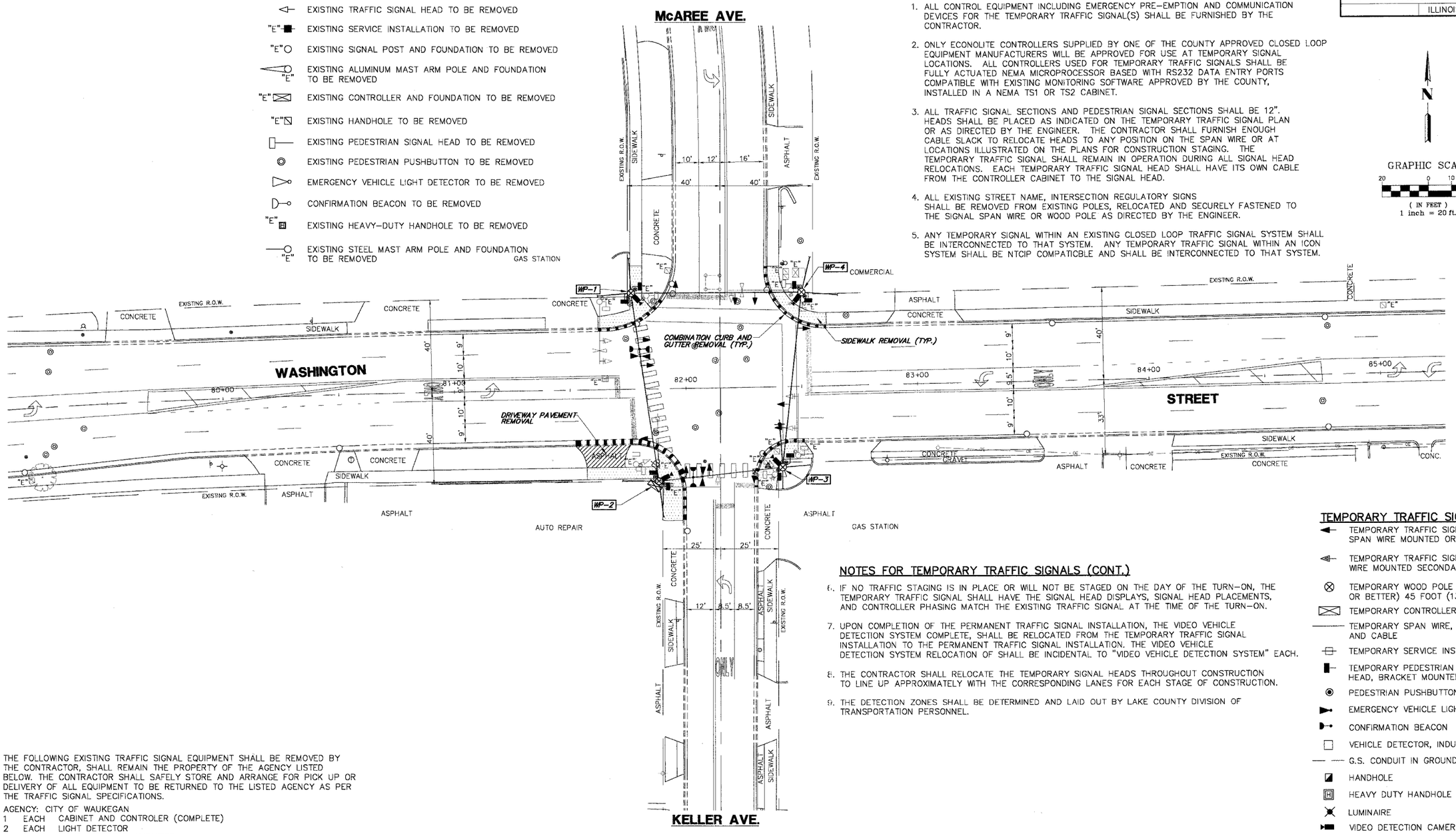
J:\44-LCDOT-ALL-361.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	13
TEMP. TRAFFIC SIGNAL INSTALLATION PLAN				
	ILLINOIS			

EXISTING EQUIPMENT TO BE REMOVED

- EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- "E" EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- "E" EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- EXISTING EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- EXISTING CONFIRMATION BEACON TO BE REMOVED
- "E" EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- "E" EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED



NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY, INSTALLED IN A NEMA TS1 OR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME, INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY TRAFFIC SIGNAL WITHIN AN ICON SYSTEM SHALL BE NTCIP COMPATICBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.

N

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: CITY OF WAUKEGAN

1	EACH	CABINET AND CONTROLER (COMPLETE)
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

6	EACH	SIGNAL HEAD, 3-SECTION
4	EACH	SIGNAL HEAD, 5-SECTION
8	EACH	PEDESTRIAN SIGNAL HEAD
8	EACH	PEDESTRIAN PUSH-BUTTON
2	EACH	STEEL MAST ARM ASSEMBLEY AND POLE
6	EACH	TRAFFIC SIGNAL POST
1	EACH	SERVICE INSTALLATION

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
WP-1	81+77.0	41.5' LT	X
WP-2	81+87.5	40.0' RT	R.O.W.
WP-3	82+41.0	35.0' RT	R.O.W.
WP-4	82+51.0	41.0' LT	X

NOTES FOR TEMPORARY TRAFFIC SIGNALS (CONT.)

6. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN-ON, THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS, AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL AT THE TIME OF THE TURN-ON.
7. UPON COMPLETION OF THE PERMANENT TRAFFIC SIGNAL INSTALLATION, THE VIDEO VEHICLE DETECTION SYSTEM COMPLETE, SHALL BE RELOCATED FROM THE TEMPORARY TRAFFIC SIGNAL INSTALLATION TO THE PERMANENT TRAFFIC SIGNAL INSTALLATION. THE VIDEO VEHICLE DETECTION SYSTEM RELOCATION OF SHALL BE INCIDENTAL TO "VIDEO VEHICLE DETECTION SYSTEM" EACH.
8. THE CONTRACTOR SHALL RELOCATE THE TEMPORARY SIGNAL HEADS THROUGHOUT CONSTRUCTION TO LINE UP APPROXIMATELY WITH THE CORRESPONDING LANES FOR EACH STAGE OF CONSTRUCTION.
9. THE DETECTION ZONES SHALL BE DETERMINED AND LAID OUT BY LAKE COUNTY DIVISION OF TRANSPORTATION PERSONNEL.

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN GROUND
- HANDHOLE
- HEAVY DUTY HANDHOLE
- LUMINAIRE
- VIDEO DETECTION CAMERA
- DOME PAN/TILT/ZOOM (PTZ) CAMERA

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL OF EXISTING EQUIPMENT

WASHINGTON STREET AND McAREE AVENUE / KELLER ROAD

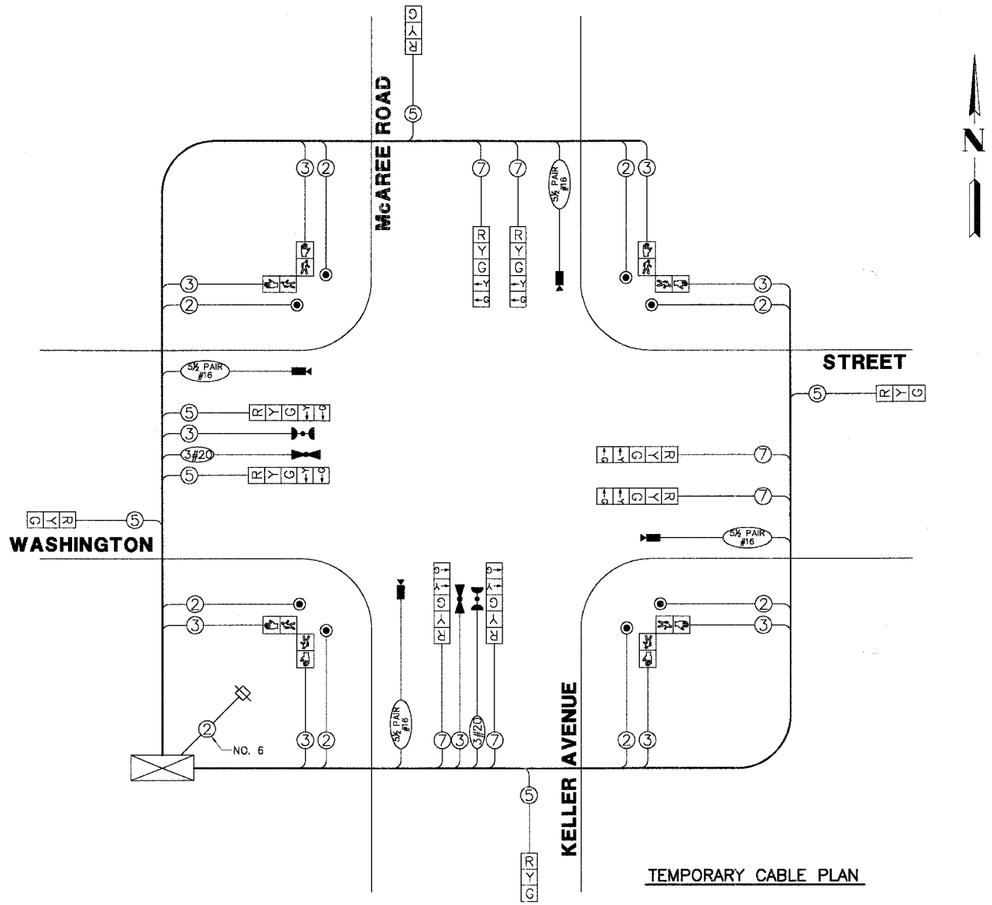
SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3244-10001-ALL-PRT.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	14
TEMPORARY CABLE PLAN				
ILLINOIS				



TEMPORARY CABLE PLAN

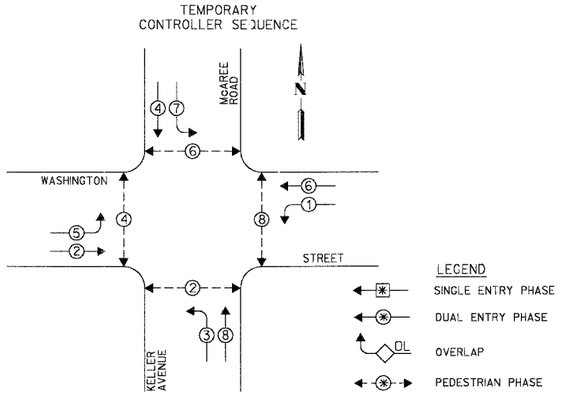
TEMPORARY CABLE PLAN LEGEND

- R — TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12"
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- (5) — INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- PEDESTRIAN PUSHBUTTON DETECTOR
- PEDESTRIAN SIGNAL HEAD
- VIDEO DETECTION CAMERA
- PTZ CAMERA
- LUMINAIRE
- T — TELEPHONE DROP
- MICROWAVE DETECTOR

L.C.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

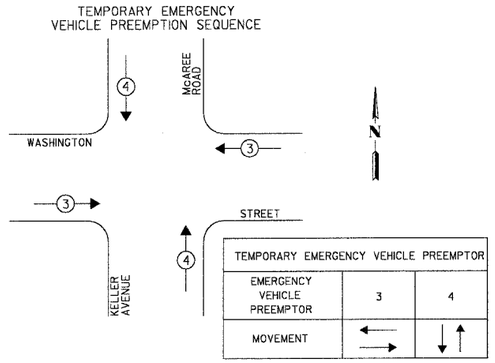
TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE L.E.D.	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	10	0.50	810.0
SIGNAL (YELLOW)	12	135	19	0.10	162.0
SIGNAL (GREEN)	12	135	11	0.40	648.0
ARROW	16	135	9	0.10	216.0
PED.SIGNAL	8	90	9	1.00	720.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE		-	250	0.50	
L.E.D. ST. NAME SIGN		-	64	0.50	
VIDEO SYSTEM		-	150	1.00	
BATTERY BACKUP		-	25	1.00	
				TOTAL =	2656.0

ENERGY COSTS – BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY – CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED – LIBERTYVILLE



TEMPORARY PHASE DESIGNATION DIAGRAM

LEGEND
- SINGLE ENTRY PHASE
- DUAL ENTRY PHASE
- OL — OVERLAP
- PEDESTRIAN PHASE
- * — NUMBER REFERS TO ASSOCIATED PHASE



TEMPORARY EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM

WASHINGTON STREET AND
McAREE ROAD / KELLER AVENUE

SCALE: NONE
DATE: MAY 1, 2007
DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

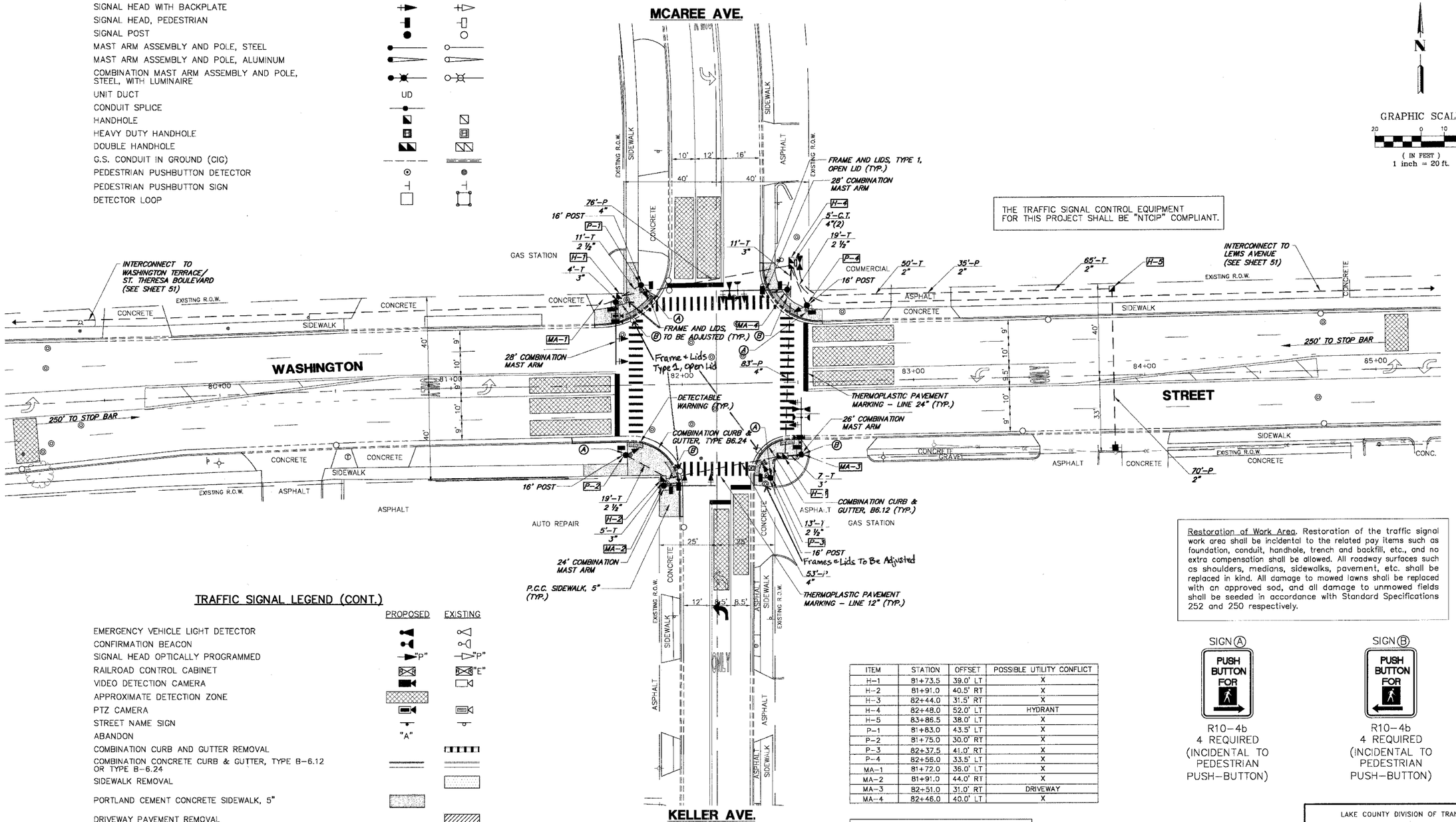
3444-00001-ALL-PKG.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	15
TRAFFIC SIGNAL MODERNIZATION PLAN				
ILLINOIS				

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	■	⊠
SERVICE INSTALLATION	■	⊟
SIGNAL HEAD	→	▷
SIGNAL HEAD WITH BACKPLATE	→	▷
SIGNAL HEAD, PEDESTRIAN	▮	▯
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●—	○—
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●—	○—
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL, WITH LUMINAIRE	●—✱	○—✱
UNIT DUCT	UD	
CONDUIT SPLICE	●	
HANDHOLE	◪	◪
HEAVY DUTY HANDHOLE	◪	◪
DOUBLE HANDHOLE	◪	◪
G.S. CONDUIT IN GROUND (CIG)	———	———
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	⊙
PEDESTRIAN PUSHBUTTON SIGN	⊥	⊥
DETECTOR LOOP	□	□



TRAFFIC SIGNAL LEGEND (CONT.)

	PROPOSED	EXISTING
EMERGENCY VEHICLE LIGHT DETECTOR	◀	◁
CONFIRMATION BEACON	●	○
SIGNAL HEAD OPTICALLY PROGRAMMED	→"P"	▷"P"
RAILROAD CONTROL CABINET	⊠	⊠"E"
VIDEO DETECTION CAMERA	■	□
APPROXIMATE DETECTION ZONE	▭	
PTZ CAMERA	■	▭
STREET NAME SIGN	⊢	⊢
ABANDON	"A"	
COMBINATION CURB AND GUTTER REMOVAL		▭▭▭
COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 OR TYPE B-6.24	———	———
SIDEWALK REMOVAL		▭
PORTLAND CEMENT CONCRETE SIDEWALK, 5"	▭	
DRIVEWAY PAVEMENT REMOVAL		▨
PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8"	▭	
VIDEO COMMUNICATIONS CABINET	⊠	⊠"E"
TELEPHONE DROP	T	T
DETECTABLE WARNING	▭	

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
H-1	81+73.5	39.0' LT	X
H-2	81+91.0	40.5' RT	X
H-3	82+44.0	31.5' RT	X
H-4	82+48.0	52.0' LT	HYDRANT
H-5	83+86.5	38.0' LT	X
P-1	81+83.0	43.5' LT	X
P-2	81+75.0	30.0' RT	X
P-3	82+37.5	41.0' RT	X
P-4	82+56.0	33.5' LT	X
MA-1	81+72.0	36.0' LT	X
MA-2	81+91.0	44.0' RT	X
MA-3	82+51.0	31.0' RT	DRIVEWAY
MA-4	82+46.0	40.0' LT	X

NOTE: ALL LUMINAIRE ARMS SHALL BE TWENTY (20) FEET IN LENGTH

Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

SIGN (A)

R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

SIGN (B)

R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
650 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN

WASHINGTON STREET AND McAREE AVENUE / KELLER AVENUE

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-0001-ALL-PRT.dwg

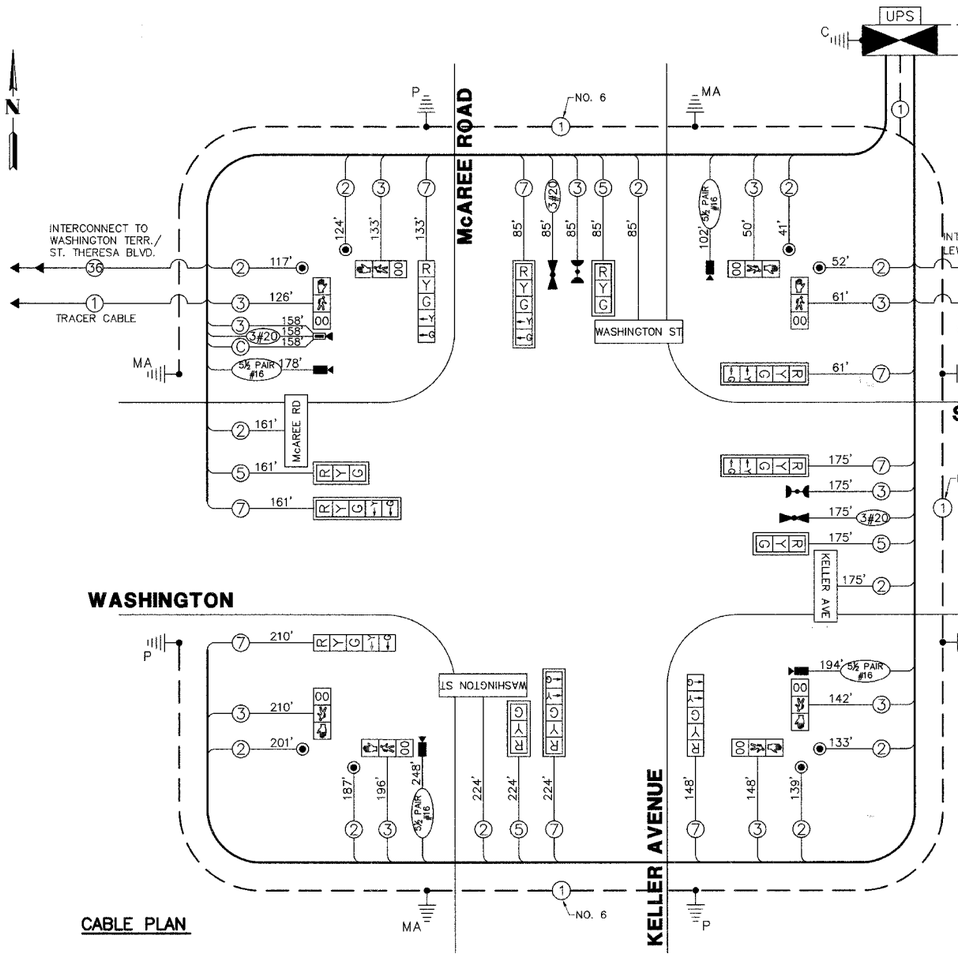
CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	16
CABLE PLAN, PHASE DESIGNATION DIAGRAM				
	ILLINOIS			

SCHEDULE OF QUANTITIES

WASHINGTON STREET AND KELLER AVENUE

	QUANT.	UNIT	ITEM
			ROADWAY IMPROVEMENTS
1.	1,135	SQ.FT.	PORTLAND CEMENT CONCRETE SIDEWALK, 5"
2.	96	SQ.FT.	DETECTABLE WARNING
3.	20	SQ.YD.	DRIVEWAY PAVEMENT REMOVAL
4.	195	FOOT	COMBINATION CURB & GUTTER REMOVAL
5.	1,025	SQ.FT.	SIDEWALK REMOVAL
6.	3	EACH	FRAMES AND LIDS TO BE ADJUSTED
7.	4	EACH	FRAME AND LIDS, TYPE 1, OPEN LID
8.	140	FOOT	COMBINATION CURB & GUTTER, TYPE B6.12
9.	55	FOOT	COMBINATION CURB & GUTTER, TYPE B6.24
10.	210	SQ.FT.	THERMOPLASTIC PAVEMENT MARKING-LETTERS AND SYMBOLS
11.	372	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 12"
12.	100	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 24"
13.	450	SQ.FT.	PAVEMENT MARKING REMOVAL
			TRAFFIC SIGNAL IMPROVEMENTS
14.	105	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
15.	62	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
16.	27	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
17.	10	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
18.	105	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
19.	212	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
20.	2	EACH	HANDHOLE
21.	2	EACH	DOUBLE HANDHOLE
22.	209	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
23.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, (SPECIAL)
24.	1	EACH	TRANSCEIVER - FIBER OPTIC
25.	1,639	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 2C
26.	1,484	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 3C
27.	645	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 5C
28.	1,197	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 7C
29.	245	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO.6 2C
30.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 24 FT. (SPECIAL)
31.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 26 FT. (SPECIAL)
32.	2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 28 FT. (SPECIAL)
33.	16	FOOT	CONCRETE FOUNDATION, TYPE A
34.	4	FOOT	CONCRETE FOUNDATION, TYPE C
35.	60	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
36.	8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM
37.	2	EACH	LIGHT DETECTOR
38.	1	EACH	LIGHT DETECTOR AMPLIFIER
39.	8	EACH	PEDESTRIAN PUSH-BUTTON
40.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
41.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
42.	7	EACH	REMOVE EXISTING HANDHOLE
43.	9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
44.	8	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
45.	4	EACH	L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN
46.	1	EACH	VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION)
47.	1	EACH	REMOTE-CONTROLLED VIDEO SYSTEM
48.	772	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 16, 5 1/2 PAIR
49.	4	EACH	TRAFFIC SIGNAL POST, 16 FT. (SPECIAL)
50.	1	EACH	LAYER II (DATA LINK) SWITCH
51.	1	EACH	UNINTERRUPTABLE POWER SUPPLY
52.	582	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
53.	418	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED
54.	4	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED
55.	4	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED
56.	4	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
57.	158	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
58.	1	EACH	SERVICE INSTALLATION, POLE MOUNT

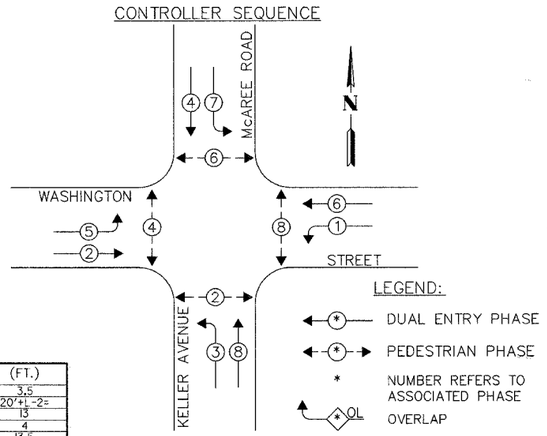


CABLE PLAN

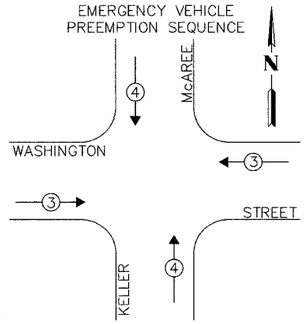
CABLE PLAN LEGEND

EXISTING	PROPOSED	
R	R	12" TRAFFIC SIGNAL SECTION
R 00	R 00	12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
②	②	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
①	①	GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN)
36	36	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM24F
R Y G	R Y G	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "NO RIGHT TURN"
H/C		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLER (C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
"E"(#)	(#)	BELDEN 8281 COAXIAL CABLE
		ISDN LINE
		LUMINAIRE
		VIDEO DETECTION CAMERA
		PTZ CAMERA
"E"		VIDEO COMMUNICATIONS CABINET
	1st AV	L.E.D. STREET NAME SIGN
	UPS	UNINTERRUPTIBLE POWER SUPPLY

CONTROLLER SEQUENCE



EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↓↑

LEGEND:

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE
- *OL OVERLAP

PHASE DESIGNATION DIAGRAM

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)	12	135	10	0.50	60.0
SIGNAL (YELLOW)	12	135	19	0.10	22.8
SIGNAL (GREEN)	12	135	11	0.40	52.8
ARROW	16	135	9	0.10	14.4
PED.SIGNAL	8	90	9	1.00	72.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	4	-	250	0.50	500.0
L.E.D. ST. NAME SIGN	4	-	64	0.50	128.0
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
				TOTAL =	1125.0

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY - CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED - LIBERTYVILLE

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

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

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
650 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES

WASHINGTON STREET AND McAREE ROAD / KELLER AVENUE

SCALE: NONE
DATE: MAY 1, 2007
DRAWN BY: ZCW
DESIGNED BY: JRD
CHECKED BY: BLS

3744-12007-ALL-PPI.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	17
TEMP. TRAFFIC SIGNAL INSTALLATION PLAN				
	ILLINOIS			

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN GROUND
- HANDHOLE
- HEAVY DUTY HANDHOLE
- LUMINAIRE
- VIDEO DETECTION CAMERA
- DOME PAN/TILT/ZOOM (PTZ) CAMERA

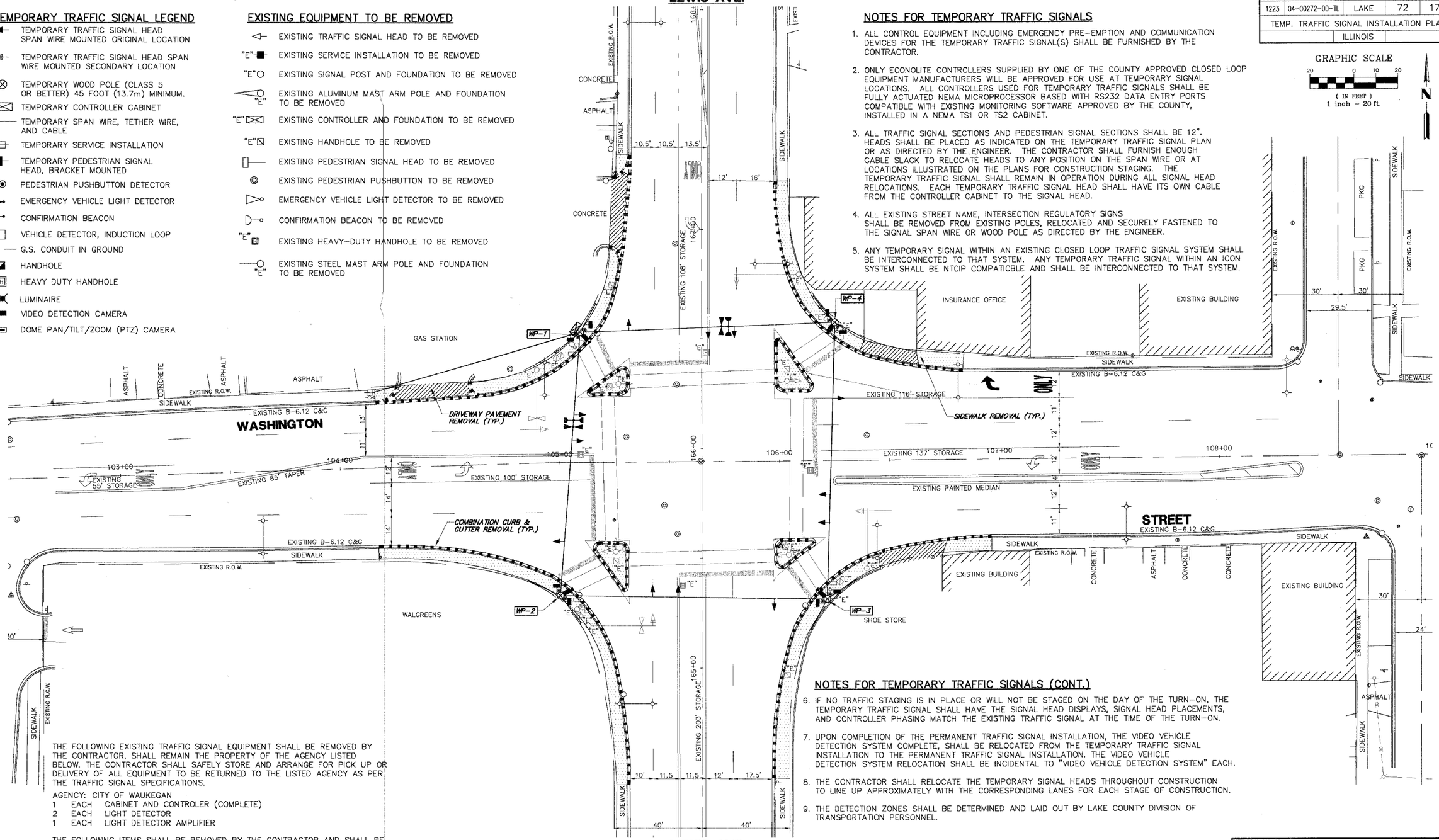
EXISTING EQUIPMENT TO BE REMOVED

- EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- "E" EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- "E" EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- EXISTING EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- EXISTING CONFIRMATION BEACON TO BE REMOVED
- "E" EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- "E" EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY, INSTALLED IN A NEMA TS1 OR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME, INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY TRAFFIC SIGNAL WITHIN AN ICON SYSTEM SHALL BE NTCIP COMPATICBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.



THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: CITY OF WAUKEGAN

1	EACH	CABINET AND CONTROLER (COMPLETE)
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

6	EACH	SIGNAL HEAD, 3-SECTION
4	EACH	SIGNAL HEAD, 5-SECTION
8	EACH	PEDESTRIAN SIGNAL HEAD
8	EACH	PEDESTRIAN PUSH-BUTTON
2	EACH	STEEL MAST ARM ASSEMBLEY AND POLE
6	EACH	TRAFFIC SIGNAL POST
1	EACH	SERVICE INSTALLATION

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
WP-1	105+10.0	59.5' LT	X
WP-2	104+99.0	60.5' RT	X
WP-3	106+21.0	63.0' RT	X
WP-4	106+25.5	63.0' LT	X

NOTES FOR TEMPORARY TRAFFIC SIGNALS (CONT.)

6. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN-ON, THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS, AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL AT THE TIME OF THE TURN-ON.
7. UPON COMPLETION OF THE PERMANENT TRAFFIC SIGNAL INSTALLATION, THE VIDEO VEHICLE DETECTION SYSTEM COMPLETE, SHALL BE RELOCATED FROM THE TEMPORARY TRAFFIC SIGNAL INSTALLATION TO THE PERMANENT TRAFFIC SIGNAL INSTALLATION. THE VIDEO VEHICLE DETECTION SYSTEM RELOCATION SHALL BE INCIDENTAL TO "VIDEO VEHICLE DETECTION SYSTEM" EACH.
8. THE CONTRACTOR SHALL RELOCATE THE TEMPORARY SIGNAL HEADS THROUGHOUT CONSTRUCTION TO LINE UP APPROXIMATELY WITH THE CORRESPONDING LANES FOR EACH STAGE OF CONSTRUCTION.
9. THE DETECTION ZONES SHALL BE DETERMINED AND LAID OUT BY LAKE COUNTY DIVISION OF TRANSPORTATION PERSONNEL.

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL OF EXISTING EQUIPMENT

WASHINGTON STREET AND LEWIS AVENUE

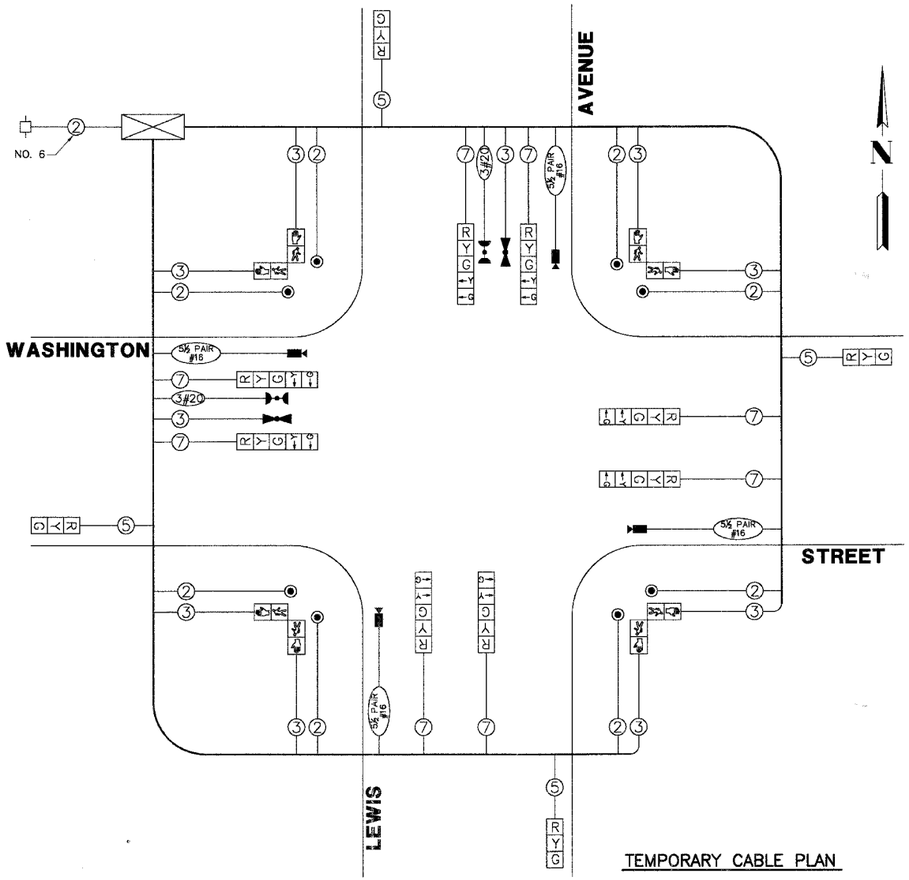
SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3144-ESDT-ALL-INST.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	18
TEMPORARY CABLE PLAN				
ILLINOIS				



TEMPORARY CABLE PLAN

TEMPORARY CABLE PLAN LEGEND

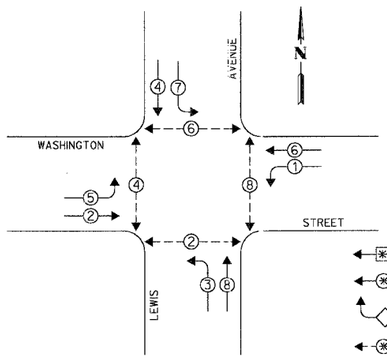
- R — TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12"
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- (5) — INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- PEDESTRIAN PUSHBUTTON DETECTOR
- PEDESTRIAN SIGNAL HEAD
- VIDEO DETECTION CAMERA
- PTZ CAMERA
- LUMINAIRE
- TELEPHONE DROP
- MICROWAVE DETECTOR

L.C.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE L.E.D.	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	10	0.50	810.0
SIGNAL (YELLOW)	12	135	19	0.10	162.0
SIGNAL (GREEN)	12	135	11	0.40	648.0
ARROW	16	135	9	0.10	216.0
PED.SIGNAL	8	90	9	1.00	720.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	4	-	250	0.50	500.0
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	-	-	25	1.00	-
			TOTAL =		2436.0

ENERGY COSTS – BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY – CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED – LIBERTYVILLE

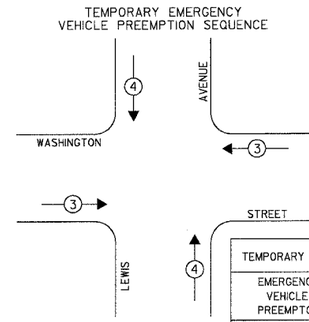
TEMPORARY CONTROLLER SEQUENCE



LEGEND
- SINGLE ENTRY PHASE
- DUAL ENTRY PHASE
- OL — OVERLAP
- PEDESTRIAN PHASE
- * — NUMBER REFERS TO ASSOCIATED PHASE

TEMPORARY PHASE DESIGNATION DIAGRAM

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

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REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM

WASHINGTON STREET
AND LEWIS AVENUE

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

5744-CSM1-ALL-TRF.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	19
GEOMETRIC PLAN				
ILLINOIS				

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.

N

LEWIS AVE.

EXISTING R.O.W.
CONCRETE
ASPHALT
SIDEWALK
10.5' 10.5' 13.5'
10'R
52'
EXISTING 108' STORAGE
164+00
12' 16'
SIDEWALK
10'R
AGGREGATE BASE COURSE, TYPE A, 4"
PORTLAND CEMENT CONCRETE BASE COURSE, 8"
BITUMINOUS MATERIALS (PRIME COAT)
HOT-MIX ASPHALT SURFACE COURSE, MIX "D" N70 (TYP.)
PORTLAND CEMENT CONCRETE
DRIVEWAY PAVEMENT, 8" (TYP.)
GAS STATION
GRASS
60'R
5'R
10'R
ASPHALT
CONCRETE
ASPHALT
EXISTING R.O.W.
SIDEWALK
EXISTING B-6.12 C&G
48'
WASHINGTON
STREET
13'
11'
103+00
104+00
105+00
EXISTING
55' STORAGE
EXISTING 85' TAPER
EXISTING 100' STORAGE
14'
14'
TYPICAL CROSS-SECTION
(SEE SHEET 2)
STA. 105+64.5 WASHINGTON ST.
STA. 165+94 LEWIS AVE.
90°26"
89°34"
166+00
89°34"
90°26"
106+00
EXISTING 137' STORAGE
107+00
108+00
109+
EXISTING PAINTED MEDIAN
12'
11'
THERMOPLASTIC PAVEMENT MARKING-
LINE 24" (TYP.)
COMBINATION CURB AND GUTTER
TYPE B6.12 (TYP.)
EXISTING B-6.12 C&G
SIDEWALK
EXISTING R.O.W.
THERMOPLASTIC PAVEMENT MARKING-
LINE 12"
18'
60'R
GRASS
WALGREENS
DETECTABLE WARNING (TYP.)
TOPSOIL, FURNISH AND PLACE 4"
SODDING, SALT TOLERANT (TYP.)
10'
SIDEWALK
EXISTING R.O.W.
5'
EXISTING 203' STORAGE
165+00
5'
6.5'
10' 11.5 11.5 12' 17.5'
SIDEWALK
SIDEWALK
40' 40'
EXISTING R.O.W.
164+00
LEWIS AVE.
PORTLAND CEMENT CONCRETE
SIDEWALK, 5" (TYP.)
INSURANCE OFFICE
EXISTING BUILDING
60'R
18'
30'
EXISTING 116' STORAGE
EXISTING R.O.W.
SIDEWALK
EXISTING B-6.12 C&G
ONLY
EXISTING R.O.W.
PKG
PKG
SIDEWALK
EXISTING R.O.W.
30'
30'
29.5'
SIDEWALK
SIDEWALK
30'
EXISTING B-6.12 C&G
SIDEWALK
EXISTING R.O.W.
EXISTING BUILDING
CONCRETE
ASPHALT
CONCRETE
CONCRETE
EXISTING BUILDING
SHOE STORE
60'R
GRASS
10'
30'
24'
EXISTING R.O.W.
ASPHALT
SIDEWALK

PLANS PREPARED BY:
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REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

GEOMETRIC PLAN

WASHINGTON STREET
AND LEWIS AVENUE

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3144-L0001-ALL-PKT.dwg

CONTRACT NO: 83932

F.A.U. R.T.C.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	20
TRAFFIC SIGNAL MODERIZATION PLAN				
ILLINOIS				

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL, WITH LUMINAIRE		
UNIT DUCT	UD	
CONDUIT SPLICE		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN GROUND (CIG)		
PEDESTRIAN PUSHBUTTON DETECTOR		
PEDESTRIAN PUSHBUTTON SIGN		
DETECTOR LOOP		

SIGN (A)

PUSH BUTTON FOR

R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

SIGN (B)

PUSH BUTTON FOR

R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

N

LEWIS AVE.

MATCH LINE (STA.167+50) - SEE SHEET 21

Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

SERVICE INSTALLATION POLE MOUNT

63'-P 2"

63'-P 2" STUB & CAPPED (FOR FUTURE INTERCONNECT)

5'-C.T. 4"(2)

H-1

7'-C.T. 2 ½"

P-1

40'-T 3"

MA-1

38' COMBINATION MAST ARM

INTERCONNECT TO McAREE AVE./ KELLER AVE. (SEE SHEET 52)

GAS STATION

16' POST

P.C.C. SIDEWALK, 5" (TYP.)

104'-P 4"

123'-P 4"

141'-P 4"

42' COMBINATION MAST ARM

MA-4

12'-T 3"

H-4

13'-T 2 ½"

P-4

16' POST

INSURANCE OFFICE

INTERCONNECT TO BUTRICK STREET (SEE SHEET 52)

EXISTING BUILDING

EXISTING R.O.W.

SIDEWALK

PKG

30'

29.5'

WASHINGTON STREET

COMBINATION CURB & GUTTER, TYPE B6.12 (TYP.)

190' TO STOP BAR

220' TO STOP BAR

103+00 104+00 105+00 106+00 107+00 108+00

DETECTABLE WARNING (TYP.)

16' POST

P-2

13'-T 2 ½"

H-2

10' C.T. 2" STUB & CAPPED (FOR FUTURE INTERCONNECT)

MA-2

34' COMBINATION MAST ARM

WALGREENS

14'-T 3"

P.C.C. DRIVEWAY PAVEMENT, 8" (TYP.)

MA-3

11'-T 3"

38' COMBINATION MAST ARM

SHOE STORE

H-3

13'-T 2 ½"

P-3

16' POST

7 LF OF STORM SEWER, CLASS B, TYPE 1, 12" (TYP.)

INLET, TYPE A, TYPE 1 FRAME, OPEN LID (30" DEPTH)(TYP.) (shown on this sheet as *)

FRAME AND LID TO BE ADJUSTED (TYP.) (shown on this sheet as **)

10' 11.5 11.5 12' 17.5'

40' 40'

24'

MATCH LINE (STA.164+23) - SEE SHEET 21

LEWIS AVE.

TRAFFIC SIGNAL LEGEND (CONT.)

	PROPOSED	EXISTING
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
RAILROAD CONTROL CABINET		"E"
VIDEO DETECTION CAMERA		
APPROXIMATE DETECTION ZONE		
PTZ CAMERA		
STREET NAME SIGN		
ABANDON	"A"	
COMBINATION CURB AND GUTTER REMOVAL		
COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 OR TYPE B-6.24		
SIDEWALK PAVEMENT REMOVAL		
PORTLAND CEMENT CONCRETE SIDEWALK, 5"		
DRIVEWAY PAVEMENT REMOVAL		
PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8"		
VIDEO COMMUNICATIONS CABINET		"E"
TELEPHONE DROP	T	
DETECTABLE WARNING		

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

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
H-1	105+21.0	77.0' LT	X
H-2	105+04.0	63.5' RT	X
H-3	106+23.5	60.0' RT	X
H-4	106+24.0	63.0' LT	X
P-1	105+20.5	69.5' LT	X
P-2	104+97.0	52.0' RT	X
P-3	106+13.0	68.5' RT	STORM MANHOLE
P-4	106+34.0	55.0' LT	X
MA-1	104+95.5	44.5' LT	X
MA-2	105+15.5	71.0' RT	X
MA-3	106+30.0	51.0' RT	X
MA-4	106+16.5	71.5' LT	B-BOX

NOTE: ALL LUMINAIRE ARMS SHALL BE TWENTY (20) FEET IN LENGTH

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
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REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN

WASHINGTON STREET AND LEWIS AVENUE

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

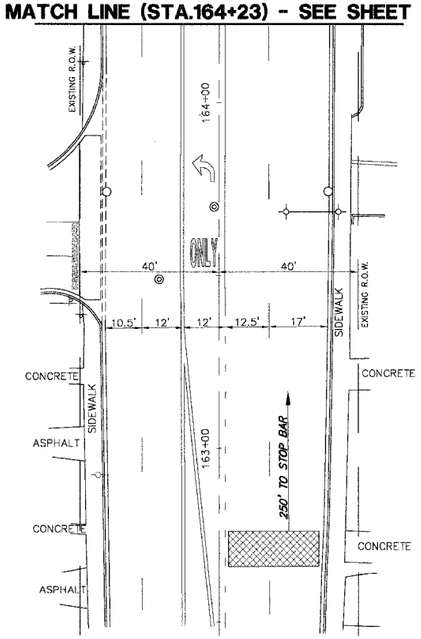
S:\14-LCDOT-ALL-PW\.dwg

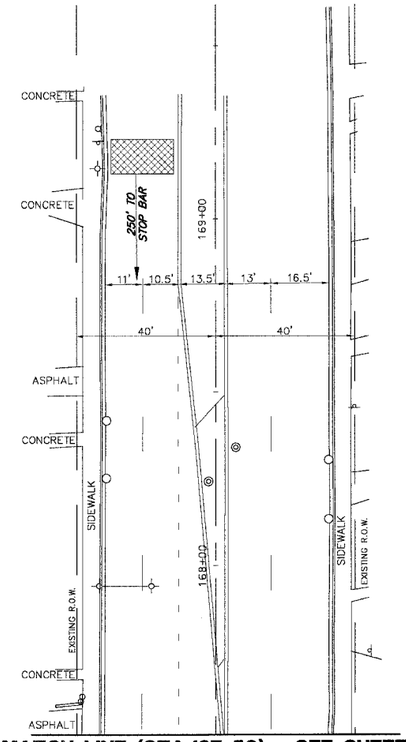
CONTRACT NO: 83932

F.A.U. R.T.C.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	21
TRAFFIC SIGNAL MODERNIZATION PLAN				
ILLINOIS				

LEWIS AVE.

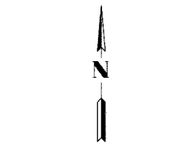
MATCH LINE (STA.164+23) - SEE SHEET 20





MATCH LINE (STA.167+50) - SEE SHEET 20

LEWIS AVE.



GRAPHIC SCALE

20 0 10 20

(IN FEET)

1 inch = 20 ft.

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	⊠	⊠
SERVICE INSTALLATION	■	□
SIGNAL HEAD	►	▷
SIGNAL HEAD WITH BACKPLATE	+►	+▷
SIGNAL HEAD, PEDESTRIAN	▮	▯
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●—	○—
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●—	○—
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL, WITH LUMINAIRE	●—✱	○—✱
UNIT DUCT	UD	
CONDUIT SPLICE	—●	
HANDHOLE	◥	◥
HEAVY DUTY HANDHOLE	◧	◧
DOUBLE HANDHOLE	◧◧	◧◧
G.S. CONDUIT IN GROUND (CIG)	———	———
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	⊙
PEDESTRIAN PUSHBUTTON SIGN	⊣	⊣
DETECTOR LOOP	□	□
EMERGENCY VEHICLE LIGHT DETECTOR	◄	◁
CONFIRMATION BEACON	●◄	○◁
SIGNAL HEAD OPTICALLY PROGRAMMED	►"P"	▷"P"
RAILROAD CONTROL CABINET	⊠	⊠"E"
VIDEO DETECTION CAMERA	■	□
APPROXIMATE DETECTION ZONE	▨	
PTZ CAMERA	◧	◧
STREET NAME SIGN	—●	—●
ABANDON	"A"	
COMBINATION CURB AND GUTTER REMOVAL		▭
COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 OR TYPE B-6.24	═══	═══
SIDEWALK REMOVAL		▭
PORTLAND CEMENT CONCRETE SIDEWALK, 5"	▭	
DRIVEWAY PAVEMENT REMOVAL		▨
PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8"	▭	
VIDEO COMMUNICATIONS CABINET	⊠	⊠"E"
TELEPHONE DROP	T	T
DETECTABLE WARNING	▭	

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

Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

NOTE: ALL LUMINAIRE ARMS SHALL BE TWENTY (20) FEET IN LENGTH

PLANS PREPARED BY:

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REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN

WASHINGTON STREET AND LEWIS AVENUE

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

D:\04-00001-ALL-PSR\.dgn

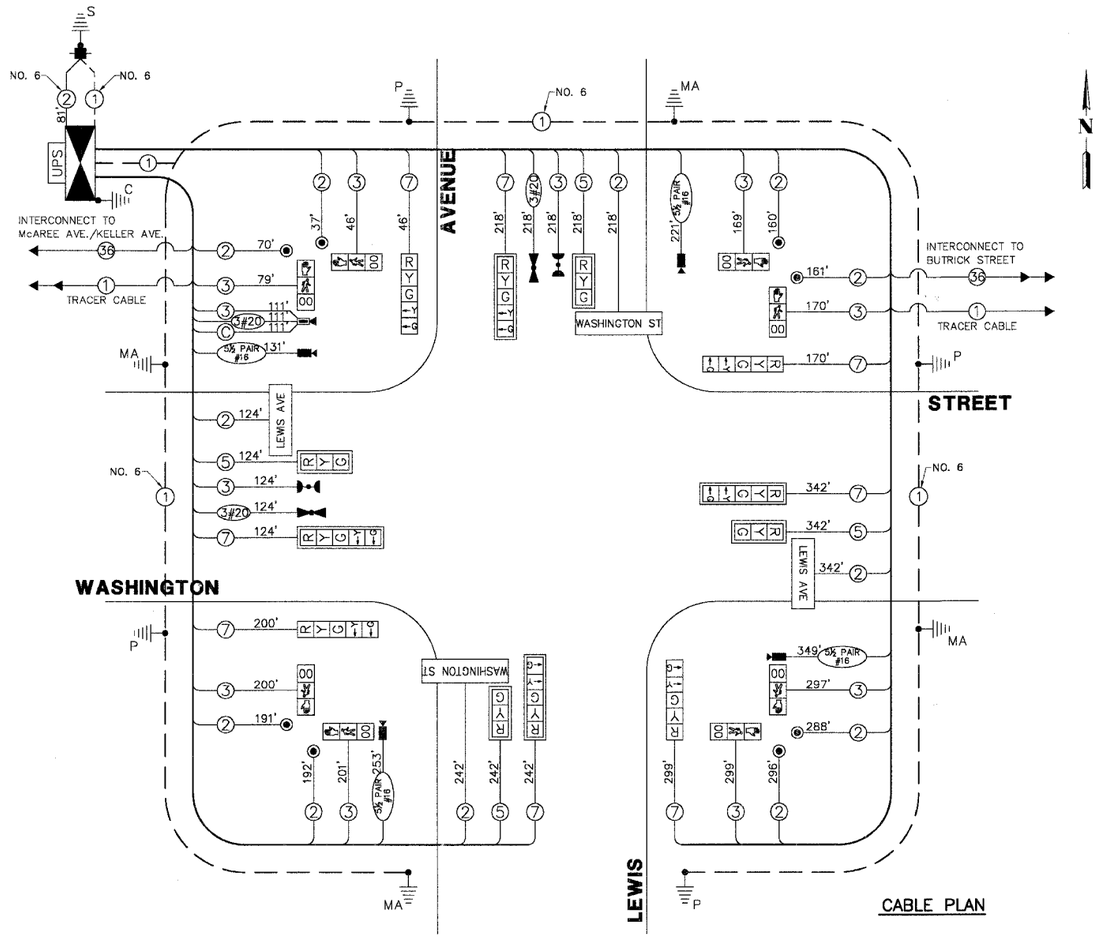
CONTRACT NO: 83932

F.A.U. R.T.C.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	22
CABLE PLAN, PHASE DESIGNATION DIAGRAM				
	ILLINOIS			

SCHEDULE OF QUANTITIES

WASHINGTON STREET AND LEWIS AVENUE

	QUANT.	UNIT	ITEM
			ROADWAY IMPROVEMENTS
1.	200	SQ.YD.	TOPSOIL FURNISH AND PLACE, 4"
2.	200	SQ.YD.	SODDING, SALT TOLERANT
3.	675	SQ.YD.	AGGREGATE BASE COURSE, TYPE A, 4"
4.	675	SQ.YD.	PORTLAND CEMENT CONCRETE BASE COURSE, 8"
5.	25	GAL	BITUMINOUS MATERIALS (PRIME COAT)
6.	80	TON	HOT-MIX ASPHALT SURFACE COURSE, MIX "D" N70
7.	40	SQ.YD.	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8"
8.	3,700	SQ.FT.	PORTLAND CEMENT CONCRETE SIDEWALK, 5"
9.	96	SQ.FT.	DETECTABLE WARNING
10.	510	SQ.YD.	PAVEMENT REMOVAL
11.	40	SQ.YD.	DRIVEWAY PAVEMENT REMOVAL
12.	950	FOOT	COMBINATION CURB & GUTTER REMOVAL
13.	3,350	SQ.FT.	SIDEWALK REMOVAL
14.	30	FOOT	STORM SEWER, CLASS B, TYPE 1 12"
15.	3	EACH	FRAME AND LIDS TO BE ADJUSTED
16.	4	EACH	INLET, TYPE A, TYPE 1 FRAME, OPEN LID (30" DEPTH)
17.	750	FOOT	COMBINATION CURB & GUTTER, TYPE B6.12
18.	768	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 12"
19.	195	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 24"
20.	930	SQ.FT.	PAVEMENT MARKING REMOVAL
			TRAFFIC SIGNAL IMPROVEMENTS
21.	20	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
22.	46	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
23.	77	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
24.	10	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
25.	63	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
26.	368	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
27.	2	EACH	HANDHOLE
28.	2	EACH	DOUBLE HANDHOLE
29.	121	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
30.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, (SPECIAL)
31.	1	EACH	TRANSCEIVER - FIBER OPTIC
32.	2,318	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 2C
33.	1,914	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 3C
34.	926	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 5C
35.	1,641	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 7C
36.	81	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO.6 2C
37.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT. (SPECIAL)
38.	2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT. (SPECIAL)
39.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 42 FT. (SPECIAL)
40.	16	FOOT	CONCRETE FOUNDATION, TYPE A
41.	4	FOOT	CONCRETE FOUNDATION, TYPE C
42.	60	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
43.	8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM
44.	2	EACH	LIGHT DETECTOR
45.	1	EACH	LIGHT DETECTOR AMPLIFIER
46.	8	EACH	PEDESTRIAN PUSH-BUTTON
47.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
48.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
49.	13	EACH	REMOVE EXISTING HANDHOLE
50.	13	EACH	REMOVE EXISTING CONCRETE FOUNDATION
51.	8	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
52.	4	EACH	L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN
53.	1	EACH	VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION)
54.	1	EACH	REMOTE-CONTROLLED VIDEO SYSTEM
55.	954	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 16, 5 1/2 PAIR
56.	4	EACH	TRAFFIC SIGNAL POST, 16 FT. (SPECIAL)
57.	1	EACH	LAYER II (DATA LINK) SWITCH
58.	1	EACH	UNINTERRUPTABLE POWER SUPPLY
59.	602	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
60.	453	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED
61.	4	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED
62.	4	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED
63.	4	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
64.	111	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
65.	1	EACH	SERVICE INSTALLATION, POLE MOUNT

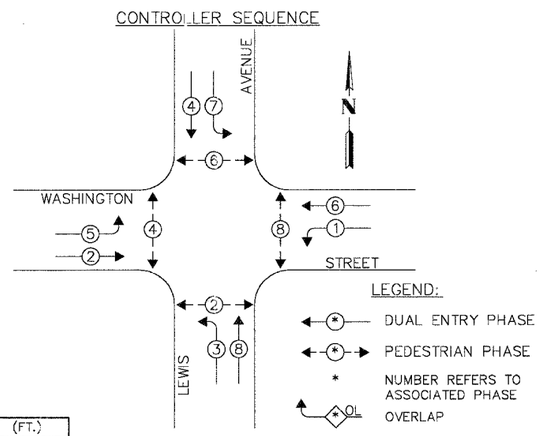


CABLE PLAN

CABLE PLAN LEGEND

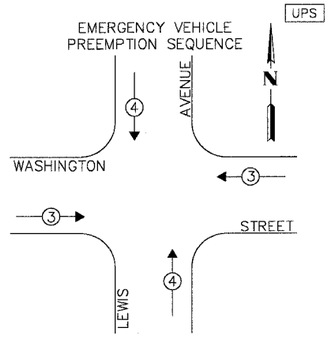
EXISTING	PROPOSED	
R	R	12" TRAFFIC SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
②	②	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
①	①	GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN)
36	36	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM24F
		SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
"E"	"E"	RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "NO RIGHT TURN"
H/C		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLER (C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
"E"(#)	(#)	BELDEN 8281 COAXIAL CABLE
		ISDN LINE
		LUMINAIRE
		VIDEO DETECTION CAMERA
		PTZ CAMERA
"E"		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)	12	135	10	0.50	60.0
SIGNAL (YELLOW)	12	135	19	0.10	22.8
SIGNAL (GREEN)	12	135	11	0.40	52.8
ARROW	16	135	9	0.10	14.4
PED.SIGNAL	8	90	9	1.00	72.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	4	-	250	0.50	500.0
L.E.D. ST. NAME SIGN	4	-	64	0.50	128.0
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
			TOTAL =		1125.0

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY - CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED - LIBERTYVILLE

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

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

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES

WASHINGTON STREET AND LEWIS AVENUE

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: ZCW
DESIGNED BY: JRD
CHECKED BY: BLS

3744-LCDOT-ALL-SHT.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	23
TEMP. TRAFFIC SIGNAL INSTALLATION PLAN				
	ILLINOIS			

EXISTING EQUIPMENT TO BE REMOVED

- EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- "E" EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- "E" EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- EXISTING EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- EXISTING CONFIRMATION BEACON TO BE REMOVED
- "E" EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- "E" EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED

TEMPORARY TRAFFIC SIGNAL LEGEND

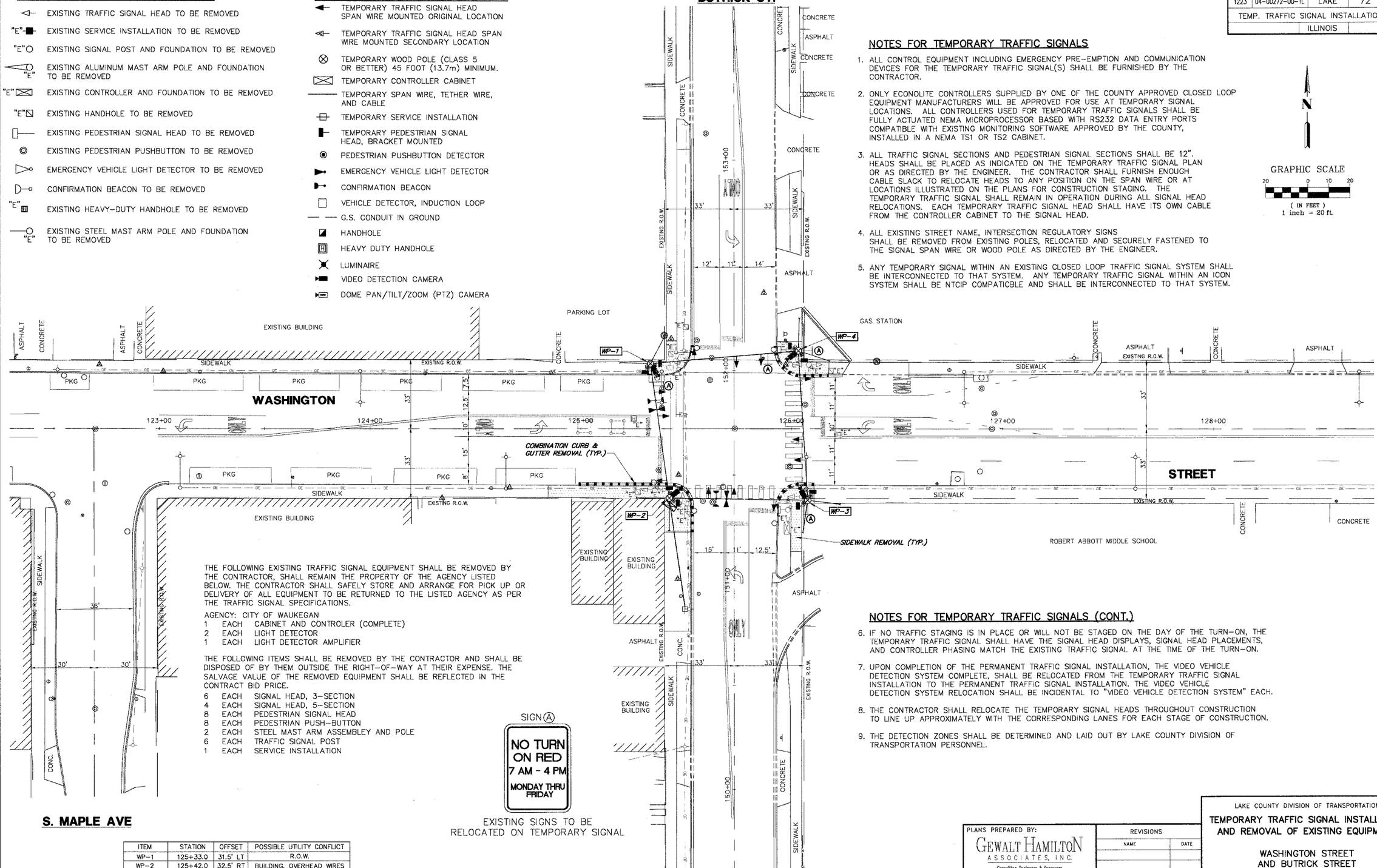
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN GROUND
- HANDHOLE
- HEAVY DUTY HANDHOLE
- LUMINAIRE
- VIDEO DETECTION CAMERA
- DOME PAN/TILT/ZOOM (PTZ) CAMERA

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY, INSTALLED IN A NEMA TS1 OR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME, INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY TRAFFIC SIGNAL WITHIN AN ICON SYSTEM SHALL BE NTCIP COMPATICBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.

N

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.



THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: CITY OF WAUKEGAN

1	EACH	CABINET AND CONTROLER (COMPLETE)
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

6	EACH	SIGNAL HEAD, 3-SECTION
4	EACH	SIGNAL HEAD, 5-SECTION
8	EACH	PEDESTRIAN SIGNAL HEAD
8	EACH	PEDESTRIAN PUSH-BUTTON
2	EACH	STEEL MAST ARM ASSEMBLEY AND POLE
6	EACH	TRAFFIC SIGNAL POST
1	EACH	SERVICE INSTALLATION

SIGN (A)

EXISTING SIGNS TO BE RELOCATED ON TEMPORARY SIGNAL

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
WP-1	125+33.0	31.5' LT	R.O.W.
WP-2	125+42.0	32.5' RT	BUILDING, OVERHEAD WIRES
WP-3	126+07.5	33.5' RT	R.O.W.
WP-4	126+03.0	37.5' LT	WALL

NOTES FOR TEMPORARY TRAFFIC SIGNALS (CONT.)

6. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN-ON, THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS, AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL AT THE TIME OF THE TURN-ON.
7. UPON COMPLETION OF THE PERMANENT TRAFFIC SIGNAL INSTALLATION, THE VIDEO VEHICLE DETECTION SYSTEM COMPLETE, SHALL BE RELOCATED FROM THE TEMPORARY TRAFFIC SIGNAL INSTALLATION TO THE PERMANENT TRAFFIC SIGNAL INSTALLATION. THE VIDEO VEHICLE DETECTION SYSTEM RELOCATION SHALL BE INCIDENTAL TO "VIDEO VEHICLE DETECTION SYSTEM" EACH.
8. THE CONTRACTOR SHALL RELOCATE THE TEMPORARY SIGNAL HEADS THROUGHOUT CONSTRUCTION TO LINE UP APPROXIMATELY WITH THE CORRESPONDING LANES FOR EACH STAGE OF CONSTRUCTION.
9. THE DETECTION ZONES SHALL BE DETERMINED AND LAID OUT BY LAKE COUNTY DIVISION OF TRANSPORTATION PERSONNEL.

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL OF EXISTING EQUIPMENT

WASHINGTON STREET AND BUTRICK STREET

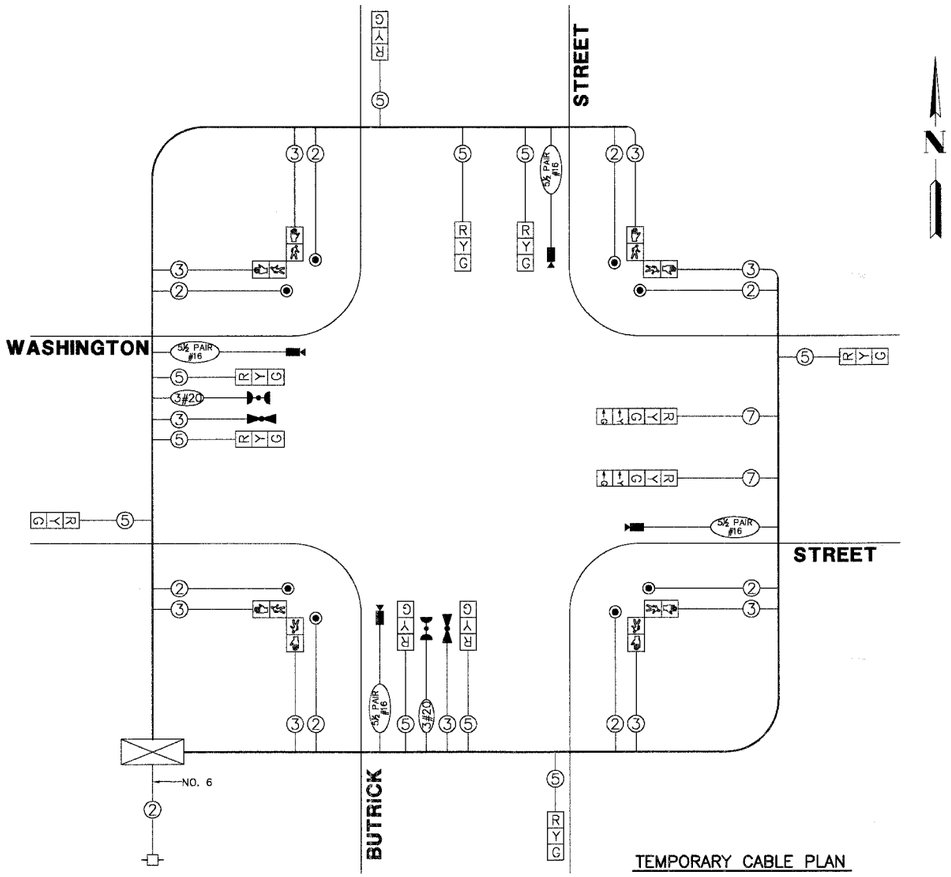
SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-12007-ALL-TRF1.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	24
TEMPORARY CABLE PLAN				
ILLINOIS				



TEMPORARY CABLE PLAN

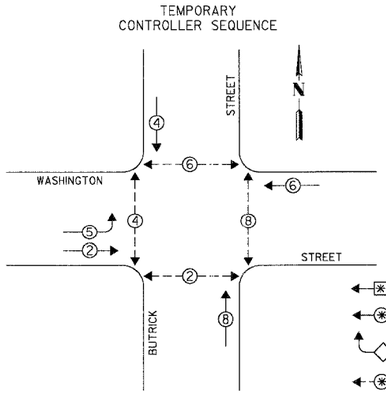
TEMPORARY CABLE PLAN LEGEND

- R — TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12"
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- (5) — INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- PEDESTRIAN PUSHBUTTON DETECTOR
- PEDESTRIAN SIGNAL HEAD
- VIDEO DETECTION CAMERA
- PTZ CAMERA
- LUMINAIRE
- TELEPHONE DROP
- MICROWAVE DETECTOR

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)	12	135	10	0.50	810.0
SIGNAL (YELLOW)	12	135	19	0.10	162.0
SIGNAL (GREEN)	12	135	11	0.40	648.0
ARROW	4	135	9	0.10	54.0
PED.SIGNAL	8	90	9	1.00	720.0
CONTROLLER	1	100	100	1.00	100.0
LUMINAIRE		-	250	0.50	
L.E.D. ST. NAME SIGN		-	64	0.50	
VIDEO SYSTEM		-	150	1.00	
BATTERY BACKUP		-	25	1.00	
				TOTAL =	2494.0

ENERGY COSTS – BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY – CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED – LIBERTYVILLE

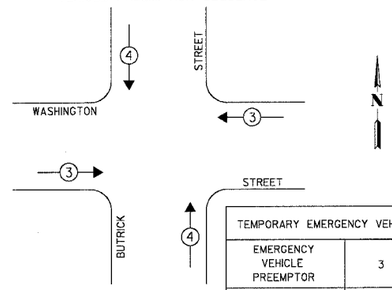
TEMPORARY CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

LEGEND
- SINGLE ENTRY PHASE
- DUAL ENTRY PHASE
- OL — OVERLAP
- PEDESTRIAN PHASE
- * — NUMBER REFERS TO ASSOCIATED PHASE

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM

WASHINGTON STREET AND BUTRICK STREET

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3144-LDOT-ALL-TRT.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	25
GEOMETRIC PLAN				
ILLINOIS				

N

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

BUTRICK ST.

WASHINGTON STREET

S MAPLE AVE

BUTRICK ST.

STA. 125+72.5 WASHINGTON ST.
STA. 151+82.0 BUTRICK ST.

THERMOPLASTIC PAVEMENT MARKING – LETTERS AND SYMBOLS (TYP.)

THERMOPLASTIC PAVEMENT MARKING – LINE 24" (TYP.)

THERMOPLASTIC PAVEMENT MARKING – LINE 12" (TYP.)

THERMOPLASTIC PAVEMENT MARKING – LINE 6" (TYP.)

THERMOPLASTIC PAVEMENT MARKING – LINE 4" (TYP.)

THERMOPLASTIC PAVEMENT MARKING – LINE 12" (TYP.)

THERMOPLASTIC PAVEMENT MARKING – LINE 4" (TYP.)

PORTLAND CEMENT CONCRETE SIDEWALK, 5" (TYP.)

DETECTABLE WARNING (TYP.)

COMBINATION CURB AND GUTTER, TYPE B6.12 (TYP.)

TYPICAL CROSS-SECTION (SEE SHEET 2)

PARKING LOT

GAS STATION

ROBERT ABBOTT MIDDLE SCHOOL

EXISTING BUILDING

SIDEWALK

EXISTING R.O.W.

ASPHALT

CONCRETE

CONC.

123+00

124+00

125+00

126+00

127+00

128+00

150+00

151+00

153+00

18' TYP.

8' TYP.

33'

12'

11'

10'

5.5'

15'

16'

25'R

20'R

11'R

12'R

90° 00"

90° 00"

90° 14"

89° 46"

90' STORAGE

70' STORAGE

60' STORAGE

80' STORAGE

100' TAPER

60' TAPER

130' TAPER

ONLY

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

GEOMETRIC PLAN

WASHINGTON STREET
AND BUTRICK STREET

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-LCDOT-ALL-PRFL.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	26
TRAFFIC SIGNAL MODERNIZATION PLAN				
	ILLINOIS			

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	■	⊠
SERVICE INSTALLATION	■	⊟
SIGNAL HEAD	→	⇢
SIGNAL HEAD WITH BACKPLATE	→	⇢
SIGNAL HEAD, PEDESTRIAN	■	□
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●	○
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●	○
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL, WITH LUMINAIRE	●	○
UNIT DUCT	UD	
CONDUIT SPLICE	●	
HANDHOLE	◪	◪
HEAVY DUTY HANDHOLE	◪	◪
DOUBLE HANDHOLE	◪	◪
G.S. CONDUIT IN GROUND (CIG)		
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	⊙
PEDESTRIAN PUSHBUTTON SIGN	⊥	⊥
DETECTOR LOOP	□	□
EMERGENCY VEHICLE LIGHT DETECTOR	◪	◪
CONFIRMATION BEACON	●	⊥

SIGN (A)

R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

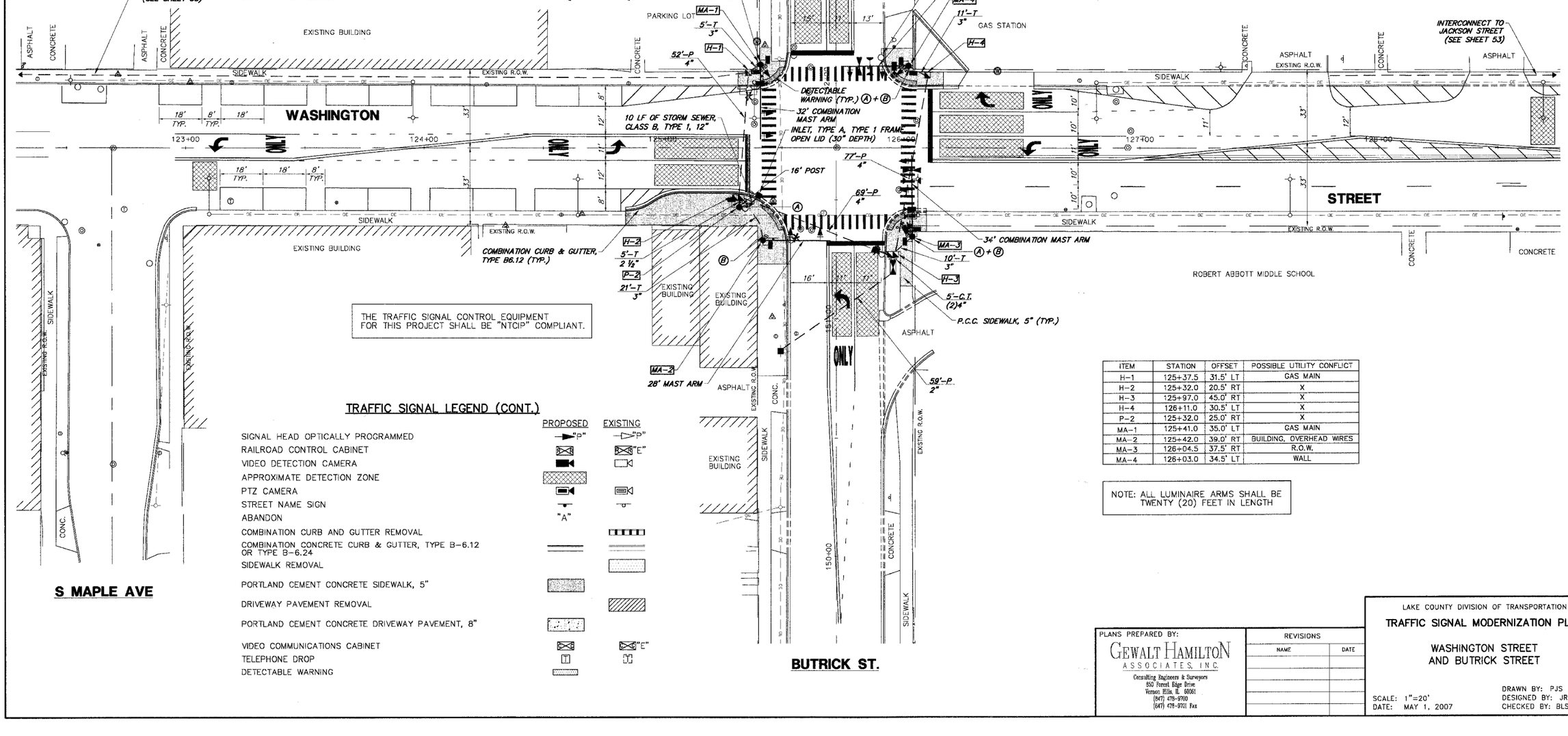
SIGN (B)

R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

N

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.



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

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
H-1	125+37.5	31.5' LT	GAS MAIN
H-2	125+32.0	20.5' RT	X
H-3	125+97.0	45.0' RT	X
H-4	126+11.0	30.5' LT	X
P-2	125+32.0	25.0' RT	X
MA-1	125+41.0	35.0' LT	GAS MAIN
MA-2	125+42.0	39.0' RT	BUILDING, OVERHEAD WIRES
MA-3	126+04.5	37.5' RT	R.O.W.
MA-4	126+03.0	34.5' LT	WALL

NOTE: ALL LUMINAIRE ARMS SHALL BE TWENTY (20) FEET IN LENGTH

TRAFFIC SIGNAL LEGEND (CONT.)

	PROPOSED	EXISTING
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
RAILROAD CONTROL CABINET	⊠	⊠ "E"
VIDEO DETECTION CAMERA	■	□
APPROXIMATE DETECTION ZONE	▭	
PTZ CAMERA	■	⊟
STREET NAME SIGN		d
ABANDON	"A"	
COMBINATION CURB AND GUTTER REMOVAL		
COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 OR TYPE B-6.24		
SIDEWALK REMOVAL		
PORTLAND CEMENT CONCRETE SIDEWALK, 5"		
DRIVEWAY PAVEMENT REMOVAL		
PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8"		
VIDEO COMMUNICATIONS CABINET	⊠	⊠ "E"
TELEPHONE DROP	T	T
DETECTABLE WARNING		

PLANS PREPARED BY:
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Consulting Engineers & Surveyors
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(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN

WASHINGTON STREET AND BUTRICK STREET

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-CDOT-ALL-PRT.dwg

CONTRACT NO: 83932

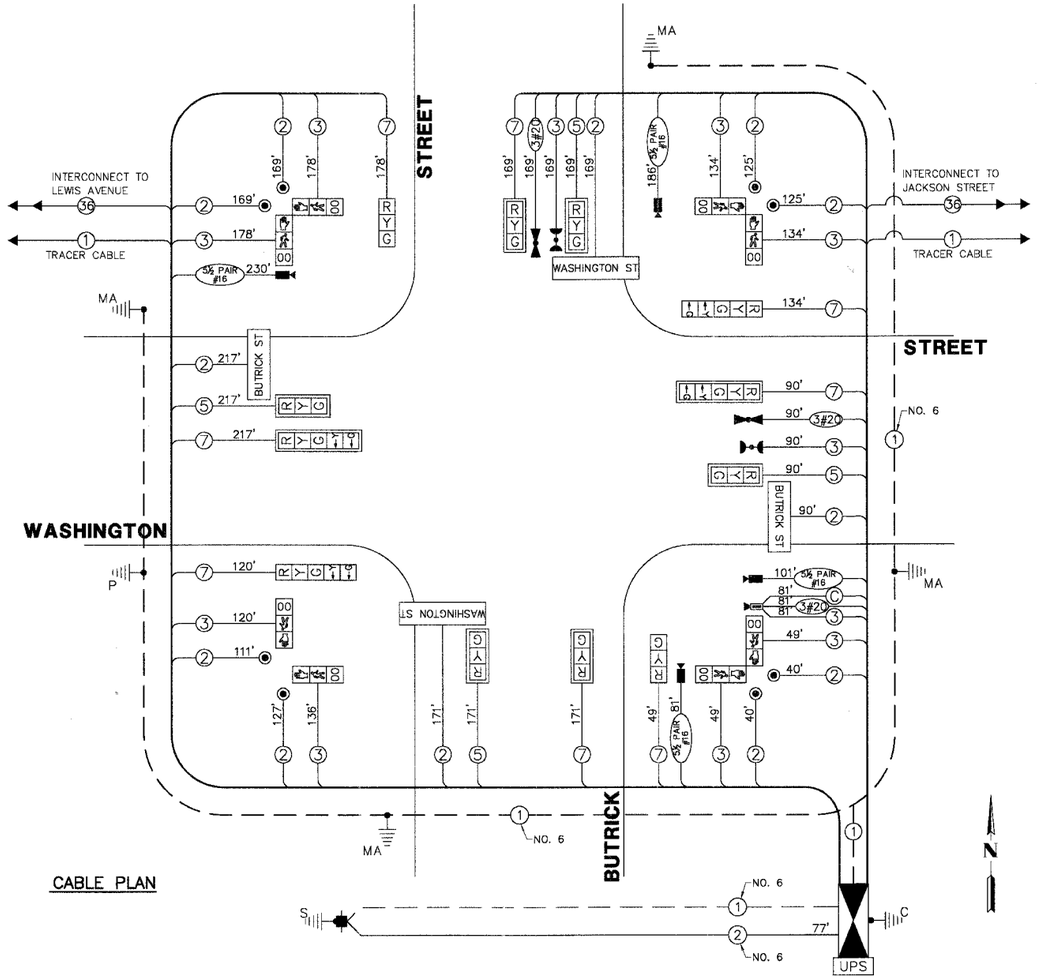
F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	27
CABLE PLAN, PHASE DESIGNATION DIAGRAM				
	ILLINOIS			

SCHEDULE OF QUANTITIES

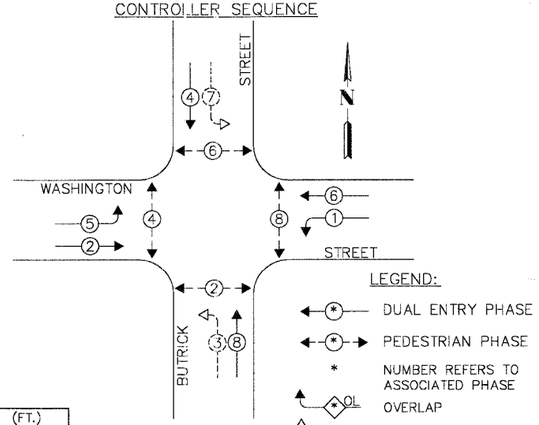
WASHINGTON STREET AND BUTRICK STREET

	QUANT.	UNIT	ITEM
			ROADWAY IMPROVEMENTS
1.	30	CU.YD.	EARTH EXCAVATION
2.	100	SQ.YD.	AGGREGATE BASE COURSE, TYPE A, 4"
3.	100	SQ.YD.	PORTLAND CEMENT CONCRETE BASE COURSE, 8"
4.	5	GAL	BITUMINOUS MATERIALS (PRIME COAT)
5.	5	TON	HOT-MIX ASPHALT SURFACE COURSE, MIX "D" N70
6.	1,815	SQ.FT.	PORTLAND CEMENT CONCRETE SIDEWALK, 5"
7.	96	SQ.FT.	DETECTABLE WARNING
8.	100	SQ.YD.	PAVEMENT REMOVAL
9.	200	FOOT	COMBINATION CURB & GUTTER REMOVAL
10.	1,315	SQ.FT.	SIDEWALK REMOVAL
11.	10	FOOT	STORM SEWER, CLASS B, TYPE 1 12"
12.	3	EACH	FRAME AND LIDS, TYPE 1, OPEN LID
13.	1	EACH	INLET, TYPE A, TYPE 1 FRAME, OPEN LID (30" DEPTH)
14.	250	FOOT	COMBINATION CURB & GUTTER, TYPE B6.12
15.	218.4	SQ.FT.	THERMOPLASTIC PAVEMENT MARKING-LETTERS AND SYMBOLS
16.	2,180	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 4"
17.	530	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 6"
18.	739	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 12"
19.	105	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 24"
20.	1,180	SQ.FT.	PAVEMENT MARKING REMOVAL
			TRAFFIC SIGNAL IMPROVEMENTS
21.	5	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
22.	47	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
23.	10	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
24.	59	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
25.	198	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
26.	2	EACH	HANDHOLE
27.	2	EACH	DOUBLE HANDHOLE
28.	57	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
29.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, (SPECIAL)
30.	1	EACH	TRANSCEIVER - FIBER OPTIC
31.	1,553	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 2C
32.	1,318	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 3C
33.	478	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 5C
34.	1,128	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 7C
35.	77	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO.6 2C
36.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 28 FT. (SPECIAL)
37.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 32 FT. (SPECIAL)
38.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT. (SPECIAL)
39.	1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 28 FT. (SPECIAL)
40.	4	FOOT	CONCRETE FOUNDATION, TYPE A
41.	4	FOOT	CONCRETE FOUNDATION, TYPE C
42.	15	FOOT	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
43.	45	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
44.	8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM
45.	2	EACH	LIGHT DETECTOR
46.	1	EACH	LIGHT DETECTOR AMPLIFIER
47.	8	EACH	PEDESTRIAN PUSH-BUTTON
48.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
49.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
50.	9	EACH	REMOVE EXISTING HANDHOLE
51.	8	EACH	REMOVE EXISTING CONCRETE FOUNDATION
52.	2	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
53.	3	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
54.	4	EACH	L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN
55.	1	EACH	VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION)
56.	1	EACH	REMOTE-CONTROLLED VIDEO SYSTEM
57.	598	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 16, 5 1/2 PAIR
58.	1	EACH	TRAFFIC SIGNAL POST, 16 FT. (SPECIAL)
59.	1	EACH	LAYER II (DATA LINK) SWITCH
60.	1	EACH	UNINTERRUPTABLE POWER SUPPLY
61.	350	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
62.	340	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED
63.	2	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED
64.	6	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED
65.	2	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED
66.	2	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
67.	81	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
68.	1	EACH	SERVICE INSTALLATION, POLE MOUNT

CABLE PLAN

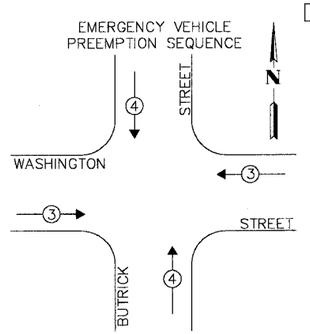


CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	—	↓↑

CABLE PLAN LEGEND

EXISTING	PROPOSED	
R	R	12" TRAFFIC SIGNAL SECTION
R 00	R 00	12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
②	②	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
①	①	GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN)
36	36	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM24F
R Y G "P"	R Y G "P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "NO RIGHT TURN"
H/C		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLER (C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
"E" #	#	BELDEN 8281 COAXIAL CABLE
	I	ISDN LINE
		LUMINAIRE
		VIDEO DETECTION CAMERA
		PTZ CAMERA
"E"		VIDEO COMMUNICATIONS CABINET
	1st AV	L.E.D. STREET NAME SIGN
	UPS	UNINTERRUPTIBLE POWER SUPPLY

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)	12	135	10	0.50	60.0
SIGNAL (YELLOW)	12	135	19	0.10	22.8
SIGNAL (GREEN)	12	135	11	0.40	52.8
ARROW	8	135	9	0.10	7.2
PED.SIGNAL	8	90	9	1.00	72.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	4	-	250	0.50	500.0
L.E.D. ST. NAME SIGN	4	-	64	0.50	128.0
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
				TOTAL =	1117.8

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY - CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED - LIBERTYVILLE

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

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

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES

WASHINGTON STREET AND BUTRICK STREET

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: ZCW
DESIGNED BY: JRD
CHECKED BY: BLS

3744-CD01-ALL-PRI.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	28

TEMP. TRAFFIC SIGNAL INSTALLATION PLAN

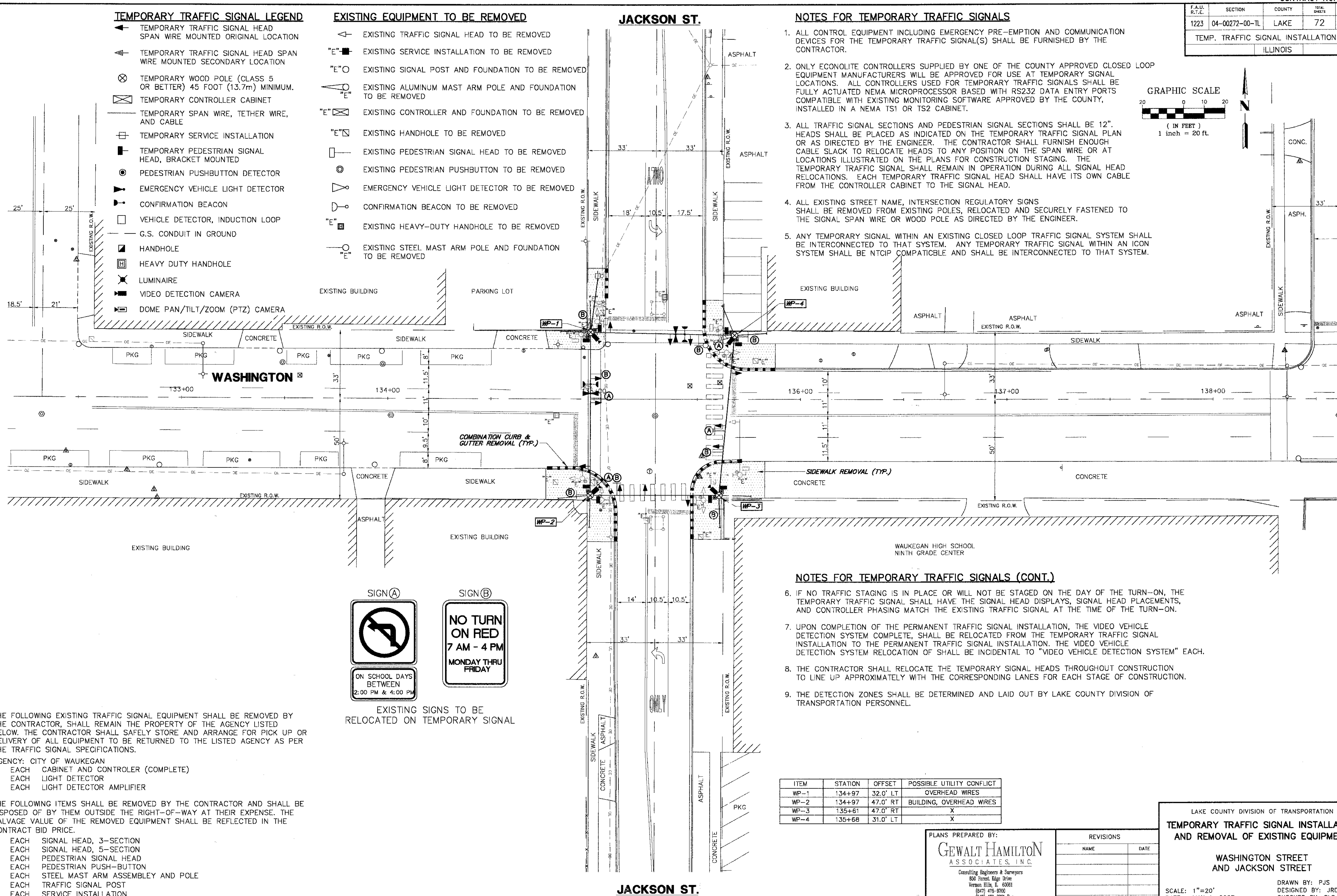
ILLINOIS

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN GROUND
- HANDHOLE
- HEAVY DUTY HANDHOLE
- LUMINAIRE
- VIDEO DETECTION CAMERA
- DOME PAN/TILT/ZOOM (PTZ) CAMERA

EXISTING EQUIPMENT TO BE REMOVED

- EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- "E" EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- "E" EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- "E" EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- "E" EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED



NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY, INSTALLED IN A NEMA TS1 OR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME, INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY SIGNAL WITHIN AN ICON SYSTEM SHALL BE NTCIP COMPATICBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.

NOTES FOR TEMPORARY TRAFFIC SIGNALS (CONT.)

6. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN-ON, THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS, AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL AT THE TIME OF THE TURN-ON.
7. UPON COMPLETION OF THE PERMANENT TRAFFIC SIGNAL INSTALLATION, THE VIDEO VEHICLE DETECTION SYSTEM COMPLETE, SHALL BE RELOCATED FROM THE TEMPORARY TRAFFIC SIGNAL INSTALLATION TO THE PERMANENT TRAFFIC SIGNAL INSTALLATION. THE VIDEO VEHICLE DETECTION SYSTEM RELOCATION OF SHALL BE INCIDENTAL TO "VIDEO VEHICLE DETECTION SYSTEM" EACH.
8. THE CONTRACTOR SHALL RELOCATE THE TEMPORARY SIGNAL HEADS THROUGHOUT CONSTRUCTION TO LINE UP APPROXIMATELY WITH THE CORRESPONDING LANES FOR EACH STAGE OF CONSTRUCTION.
9. THE DETECTION ZONES SHALL BE DETERMINED AND LAID OUT BY LAKE COUNTY DIVISION OF TRANSPORTATION PERSONNEL.

SIGN Ⓐ — ON SCHOOL DAYS BETWEEN 2:00 PM & 4:00 PM

SIGN Ⓑ — NO TURN ON RED 7 AM - 4 PM MONDAY THRU FRIDAY

EXISTING SIGNS TO BE RELOCATED ON TEMPORARY SIGNAL

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: CITY OF WAUKEGAN

1 EACH CABINET AND CONTROLER (COMPLETE)
2 EACH LIGHT DETECTOR
1 EACH LIGHT DETECTOR AMPLIFIER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

6 EACH SIGNAL HEAD, 3-SECTION
4 EACH SIGNAL HEAD, 5-SECTION
8 EACH PEDESTRIAN SIGNAL HEAD
8 EACH PEDESTRIAN PUSH-BUTTON
2 EACH STEEL MAST ARM ASSEMBLEY AND POLE
6 EACH TRAFFIC SIGNAL POST
1 EACH SERVICE INSTALLATION

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
WP-1	134+97	32.0' LT	OVERHEAD WIRES
WP-2	134+97	47.0' RT	BUILDING, OVERHEAD WIRES
WP-3	135+61	47.0' RT	X
WP-4	135+68	31.0' LT	X

PLANS PREPARED BY:

GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS

NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL OF EXISTING EQUIPMENT

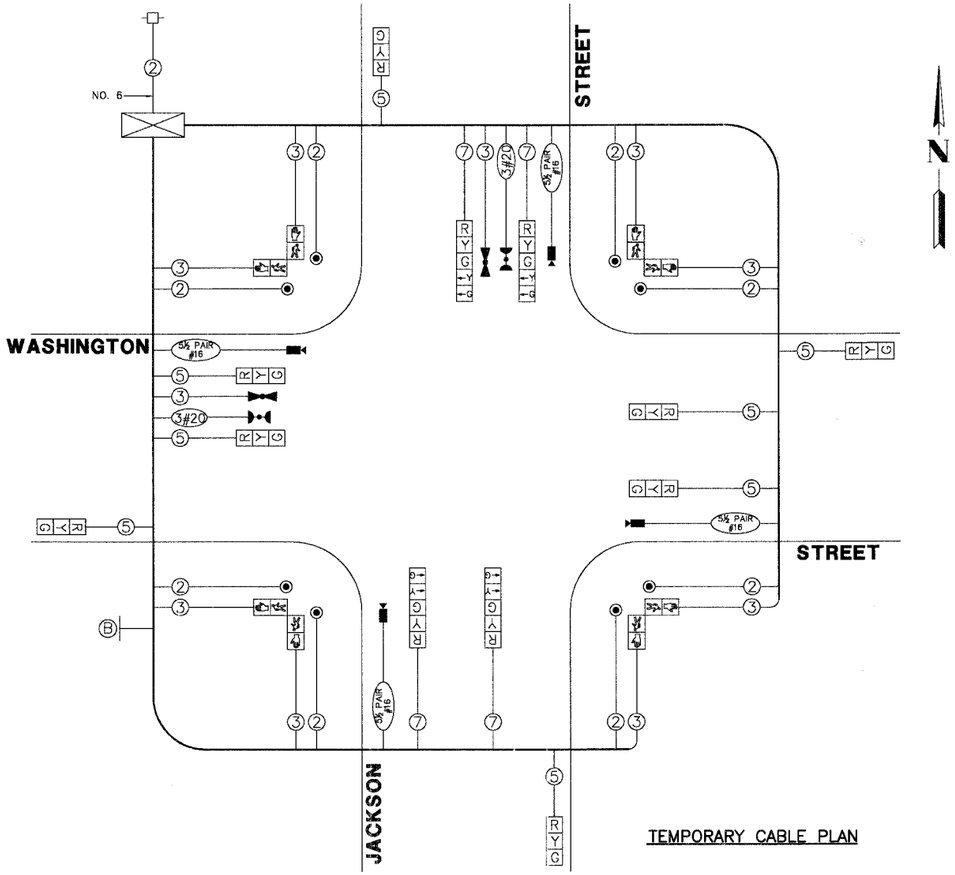
WASHINGTON STREET AND JACKSON STREET

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	29
TEMPORARY CABLE PLAN				
ILLINOIS				



TEMPORARY CABLE PLAN

TEMPORARY CABLE PLAN LEGEND

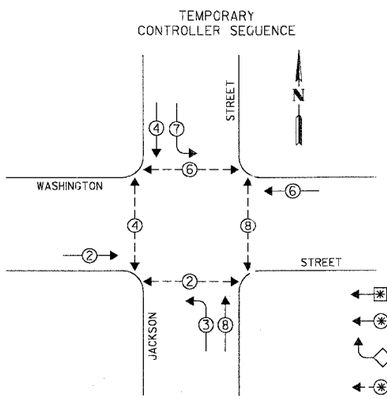
- R — TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12"
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- (5) — INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- PEDESTRIAN PUSHBUTTON DETECTOR
- PEDESTRIAN SIGNAL HEAD
- VIDEO DETECTION CAMERA
- PTZ CAMERA
- LUMINAIRE
- T — TELEPHONE DROP
- MICROWAVE DETECTOR

L.C.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE L.E.D.	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	10	0.50	810.0
SIGNAL (YELLOW)	12	135	19	0.10	162.0
SIGNAL (GREEN)	12	135	11	0.40	648.0
ARROW	8	135	9	0.10	108.0
PED.SIGNAL	8	90	9	1.00	720.0
CONTROLLER	1	100	100	1.00	100.0
LUMINAIRE		-	250	0.50	
L.E.D. ST. NAME SIGN		-	64	0.50	
VIDEO SYSTEM		-	150	1.00	
BATTERY BACKUP		-	25	1.00	
				TOTAL =	2548.0

ENERGY COSTS – BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY – CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED – LIBERTYVILLE

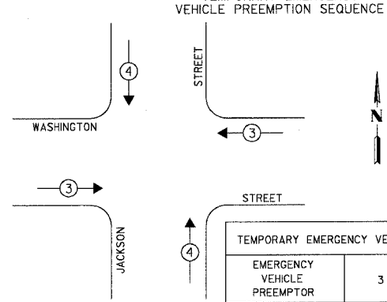
TEMPORARY CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

LEGEND
- SINGLE ENTRY PHASE
- DUAL ENTRY PHASE
- OL — OVERLAP
- PEDESTRIAN PHASE
- * — NUMBER REFERS TO ASSOCIATED PHASE

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM

WASHINGTON STREET
AND JACKSON STREET

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3144-DOT-ALL-PRI.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	30
TRAFFIC SIGNAL MODERNIZATION PLAN				
	ILLINOIS			

JACKSON ST.

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	⊠	⊠
SERVICE INSTALLATION	■	□
SIGNAL HEAD	▶	▷
SIGNAL HEAD WITH BACKPLATE	▶	▷
SIGNAL HEAD, PEDESTRIAN	■	□
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●	○
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●	○
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL, WITH LUMINAIRE	●	○
UNIT DUCT	UD	
CONDUIT SPLICE	●	
HANDHOLE	◪	◪
HEAVY DUTY HANDHOLE	◪	◪
DOUBLE HANDHOLE	◪	◪
G.S. CONDUIT IN GROUND (CIG)		
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	⊙

SIGN (A)

R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

SIGN (B)

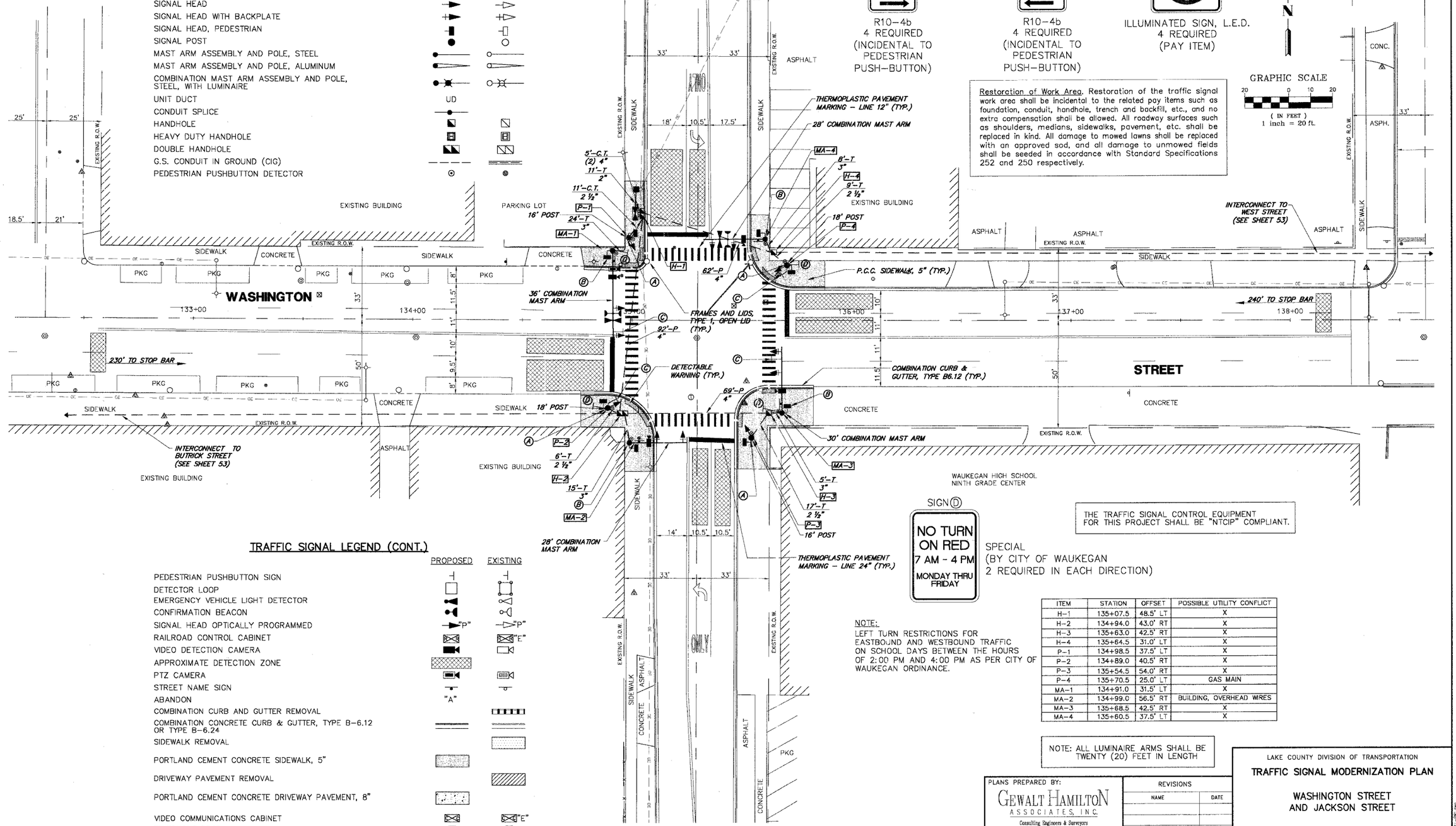
R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

SIGN (C)

ILLUMINATED SIGN, L.E.D.
4 REQUIRED
(PAY ITEM)

Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.



TRAFFIC SIGNAL LEGEND (CONT.)

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON SIGN	⊣	⊣
DETECTOR LOOP	□	□
EMERGENCY VEHICLE LIGHT DETECTOR	◢	◢
CONFIRMATION BEACON	●	○
SIGNAL HEAD OPTICALLY PROGRAMMED	▶ "P"	▷ "P"
RAILROAD CONTROL CABINET	⊠	⊠ "E"
VIDEO DETECTION CAMERA	■	□
APPROXIMATE DETECTION ZONE	▨	
PTZ CAMERA	■	□
STREET NAME SIGN	⊸	⊸
ABANDON	"A"	
COMBINATION CURB AND GUTTER REMOVAL		
COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 OR TYPE B-6.24		
SIDEWALK REMOVAL		
PORTLAND CEMENT CONCRETE SIDEWALK, 5"		
DRIVEWAY PAVEMENT REMOVAL		
PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8"		
VIDEO COMMUNICATIONS CABINET	⊠	⊠ "E"
TELEPHONE DROP	T	T
DETECTABLE WARNING		

SIGN (D)

SPECIAL
(BY CITY OF WAUKEGAN
2 REQUIRED IN EACH DIRECTION)

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

NOTE:
LEFT TURN RESTRICTIONS FOR EASTBOUND AND WESTBOUND TRAFFIC ON SCHOOL DAYS BETWEEN THE HOURS OF 2:00 PM AND 4:00 PM AS PER CITY OF WAUKEGAN ORDINANCE.

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
H-1	135+07.5	48.5' LT	X
H-2	134+94.0	43.0' RT	X
H-3	135+63.0	42.5' RT	X
H-4	135+64.5	31.0' LT	X
P-1	134+98.5	37.5' LT	X
P-2	134+89.0	40.5' RT	X
P-3	135+54.5	54.0' RT	X
P-4	135+70.5	25.0' LT	GAS MAIN
MA-1	134+91.0	31.5' LT	X
MA-2	134+99.0	56.5' RT	BUILDING, OVERHEAD WIRES
MA-3	135+68.5	42.5' RT	X
MA-4	135+60.5	37.5' LT	X

NOTE: ALL LUMINAIRE ARMS SHALL BE TWENTY (20) FEET IN LENGTH

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
860 Forest Ridge Drive
Vernon Hills IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN

WASHINGTON STREET AND JACKSON STREET

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

S144-L0001-ALL-PM.dwg

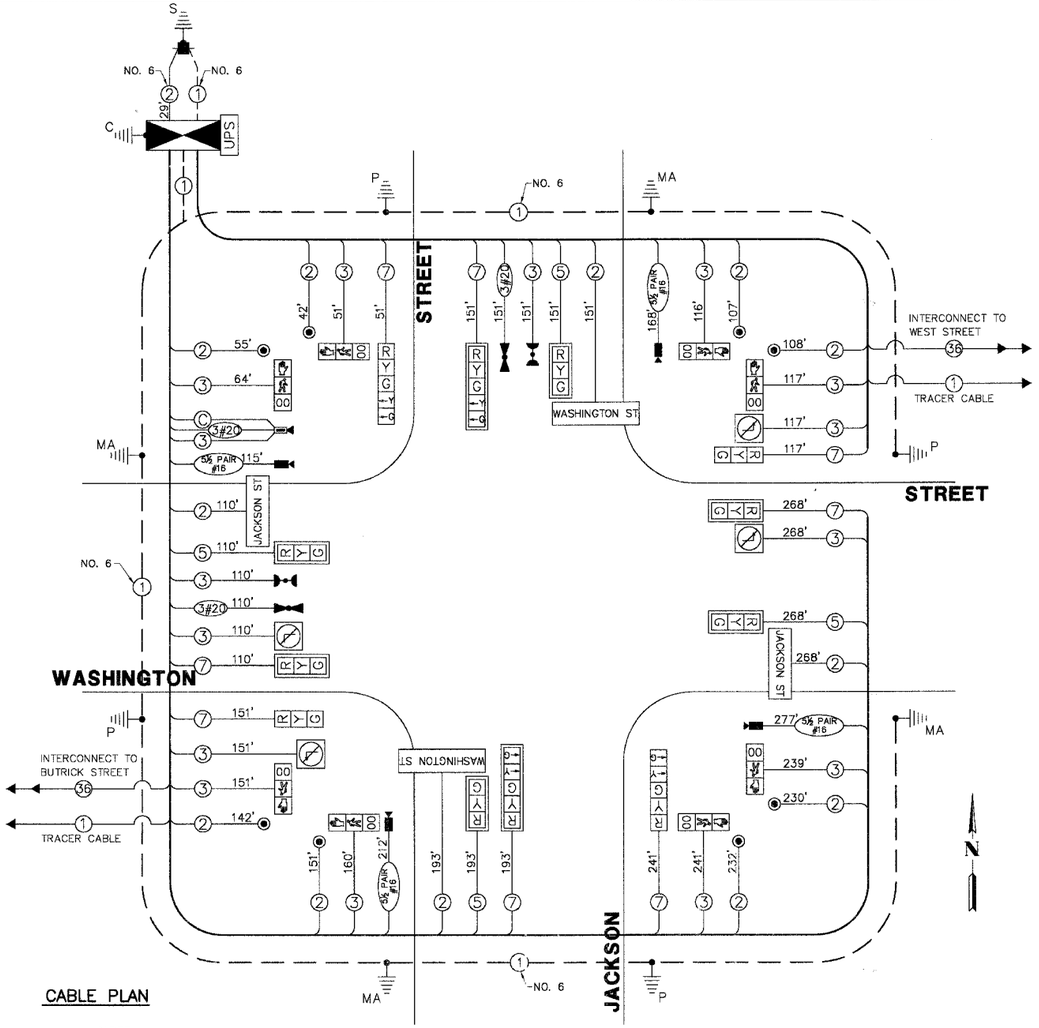
CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	31
CABLE PLAN, PHASE DESIGNATION DIAGRAM				
	ILLINOIS			

SCHEDULE OF QUANTITIES

WASHINGTON STREET AND JACKSON STREET

	QUANT.	UNIT	ITEM
			ROADWAY IMPROVEMENTS
1.	2,260	SQ.FT.	PORTLAND CEMENT CONCRETE SIDEWALK, 5"
2.	96	SQ.FT.	DETECTABLE WARNING
3.	280	FOOT	COMBINATION CURB & GUTTER REMOVAL
4.	2,260	SQ.FT.	SIDEWALK REMOVAL
5.	2	EACH	FRAME AND LIDS, TYPE 1, OPEN LID
6.	280	FOOT	COMBINATION CURB & GUTTER, TYPE B6.12
7.	372	FOOT	THERMOPLASTIC PAVEMENT MARKING–LINE 12"
8.	100	FOOT	THERMOPLASTIC PAVEMENT MARKING–LINE 24"
9.	250	SQ.FT.	PAVEMENT MARKING REMOVAL
			TRAFFIC SIGNAL IMPROVEMENTS
10.	11	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
11.	45	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
12.	47	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
13.	10	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
14.	223	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
15.	2	EACH	HANDHOLE
16.	2	EACH	DOUBLE HANDHOLE
17.	124	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
18.	1	EACH	FULL–ACTUATED CONTROLLER AND TYPE IV CABINET, (SPECIAL)
19.	1	EACH	TRANSCEIVER – FIBER OPTIC
20.	1,789	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 2C
21.	2,140	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 3C
22.	722	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 5C
23.	1,282	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 7C
24.	29	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO.6 2C
25.	2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 28 FT. (SPECIAL)
26.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 30 FT. (SPECIAL)
27.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT. (SPECIAL)
28.	16	FOOT	CONCRETE FOUNDATION, TYPE A
29.	4	FOOT	CONCRETE FOUNDATION, TYPE C
30.	60	FOOT	CONCRETE FOUNDATION, TYPE E 36–INCH DIAMETER
31.	8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM
32.	2	EACH	LIGHT DETECTOR
33.	1	EACH	LIGHT DETECTOR AMPLIFIER
34.	8	EACH	PEDESTRIAN PUSH–BUTTON
35.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
36.	4	EACH	ILLUMINATED SIGN, L.E.D.
37.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
38.	11	EACH	REMOVE EXISTING HANDHOLE
39.	9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
40.	8	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1–FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
41.	4	EACH	L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN
42.	1	EACH	VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION)
43.	1	EACH	REMOTE–CONTROLLED VIDEO SYSTEM
44.	772	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 16, 5 1/2 PAIR
45.	2	EACH	TRAFFIC SIGNAL POST, 16 FT. (SPECIAL)
46.	2	EACH	TRAFFIC SIGNAL POST, 18 FT. (SPECIAL)
47.	1	EACH	LAYER II (DATA LINK) SWITCH
48.	1	EACH	UNINTERRUPTABLE POWER SUPPLY
49.	382	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
50.	356	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED
51.	2	EACH	SIGNAL HEAD, L.E.D., 1–FACE, 3–SECTION, BRACKET MOUNTED
52.	6	EACH	SIGNAL HEAD, L.E.D., 1–FACE, 3–SECTION, MAST ARM MOUNTED
53.	2	EACH	SIGNAL HEAD, L.E.D., 1–FACE, 5–SECTION, BRACKET MOUNTED
54.	2	EACH	SIGNAL HEAD, L.E.D., 1–FACE, 5–SECTION, MAST ARM MOUNTED
55.	95	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
56.	1	EACH	SERVICE INSTALLATION, POLE MOUNT



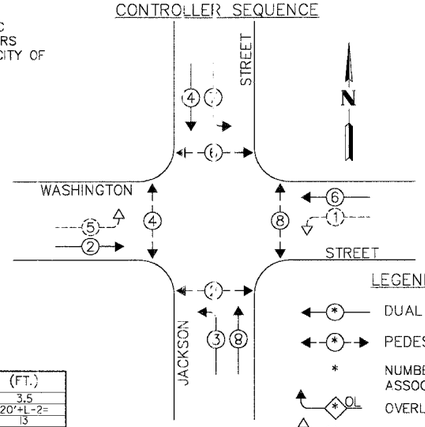
CABLE PLAN

NOTE:
LEFT TURN RESTRICTIONS FOR EASTBOUND AND WESTBOUND TRAFFIC ON SCHOOL DAYS BETWEEN THE HOURS OF 2:00 PM AND 4:00 PM AS PER CITY OF WAUKEGAN ORDINANCE.

CABLE PLAN LEGEND

EXISTING	PROPOSED	
R	R	12" TRAFFIC SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
1	1	GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN)
36	36	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM24F
		SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "NO RIGHT TURN"
H/C		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLER (C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
"E"(#)	(#)	BELDEN 8281 COAXIAL CABLE
		ISDN LINE
		LUMINAIRE
		VIDEO DETECTION CAMERA
		PTZ CAMERA
"E"		VIDEO COMMUNICATIONS CABINET
1st AV		L.E.D. STREET NAME SIGN
UPS		UNINTERRUPTIBLE POWER SUPPLY

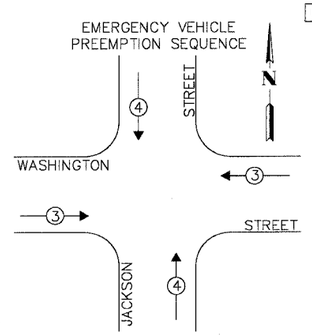
CONTROLLER SEQUENCE



LEGEND:
- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE
- OL OVERLAP
- FUTURE PHASE

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)	12	135	10	0.50	60.0
SIGNAL (YELLOW)	12	135	19	0.10	22.8
SIGNAL (GREEN)	12	135	11	0.40	52.8
ARROW	8	135	9	0.10	7.2
PED.SIGNAL	8	90	9	1.00	72.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	4	-	250	0.50	500.0
L.E.D. ST. NAME SIGN	4	-	64	0.50	128.0
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	4	-	84	0.10	33.6
				TOTAL =	1151.4

ENERGY COSTS – BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY – CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED – LIBERTYVILLE

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

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

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
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Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES

WASHINGTON STREET AND JACKSON STREET

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: ZCW
DESIGNED BY: JRD
CHECKED BY: BLS

3444-EDOT-ALL-PHT.dwg

CONTRACT NO: 83932

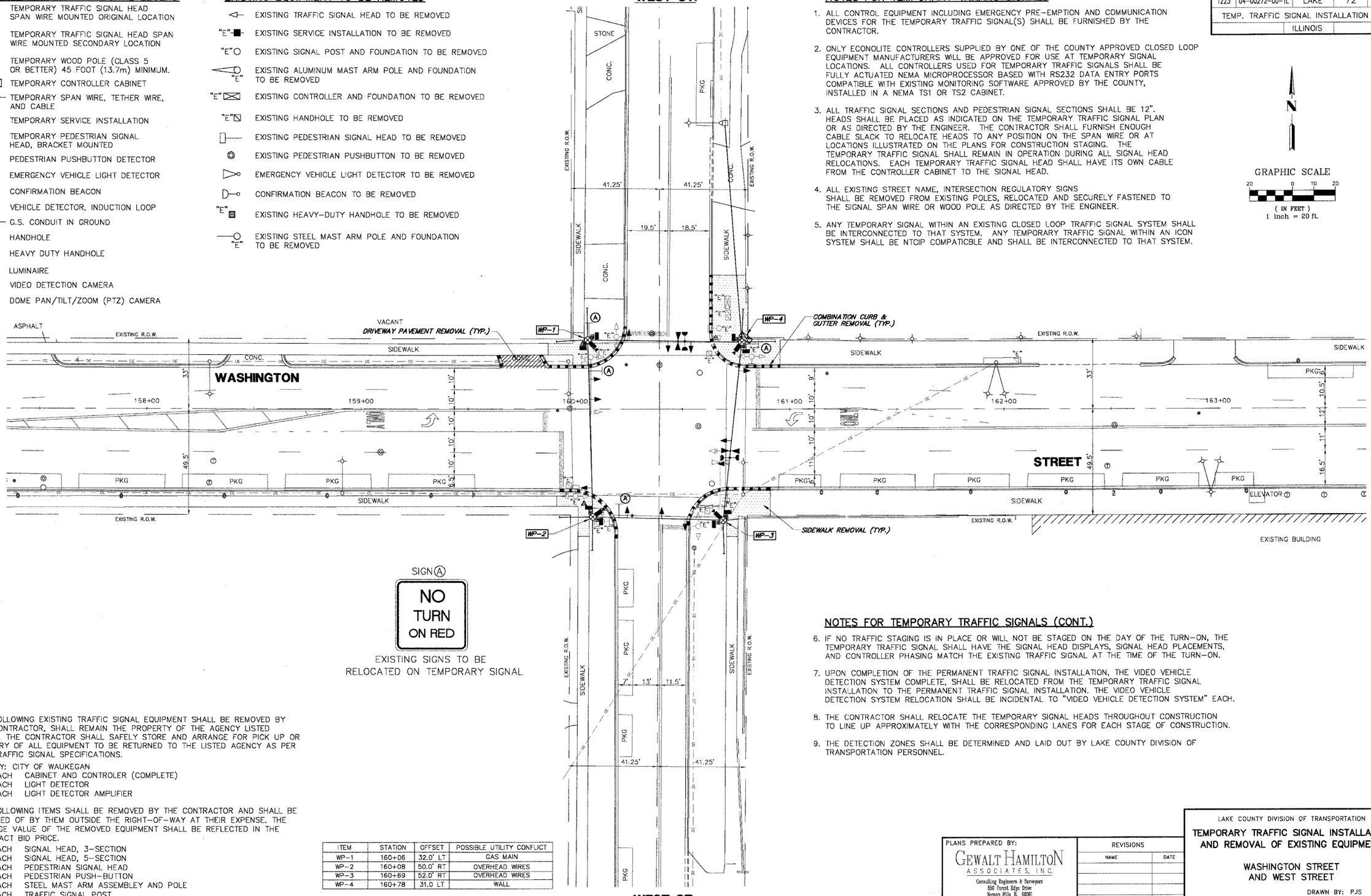
F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	32
TEMP. TRAFFIC SIGNAL INSTALLATION PLAN				
	ILLINOIS			

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN GROUND
- HANDHOLE
- HEAVY DUTY HANDHOLE
- LUMINAIRE
- VIDEO DETECTION CAMERA
- DOME PAN/TILT/ZOOM (PTZ) CAMERA

EXISTING EQUIPMENT TO BE REMOVED

- EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- "E" EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- "E" EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- "E" EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- "E" EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED



SIGN Ⓐ

NO TURN ON RED

EXISTING SIGNS TO BE RELOCATED ON TEMPORARY SIGNAL

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: CITY OF WAUKEGAN

1	EACH	CABINET AND CONTROLER (COMPLETE)
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

6	EACH	SIGNAL HEAD, 3-SECTION
4	EACH	SIGNAL HEAD, 5-SECTION
8	EACH	PEDESTRIAN SIGNAL HEAD
8	EACH	PEDESTRIAN PUSH-BUTTON
2	EACH	STEEL MAST ARM ASSEMBLEY AND POLE
6	EACH	TRAFFIC SIGNAL POST
1	EACH	SERVICE INSTALLATION

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
WP-1	160+06	32.0' LT	GAS MAIN
WP-2	160+08	50.0' RT	OVERHEAD WIRES
WP-3	160+69	52.0' RT	OVERHEAD WIRES
WP-4	160+78	31.0 LT	WALL

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY, INSTALLED IN A NEMA TS1 OR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME, INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY TRAFFIC SIGNAL WITHIN AN ICON SYSTEM SHALL BE NTCIP COMPATICBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

NOTES FOR TEMPORARY TRAFFIC SIGNALS (CONT.)

6. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN-ON, THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS, AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL AT THE TIME OF THE TURN-ON.
7. UPON COMPLETION OF THE PERMANENT TRAFFIC SIGNAL INSTALLATION, THE VIDEO VEHICLE DETECTION SYSTEM COMPLETE, SHALL BE RELOCATED FROM THE TEMPORARY TRAFFIC SIGNAL INSTALLATION TO THE PERMANENT TRAFFIC SIGNAL INSTALLATION. THE VIDEO VEHICLE DETECTION SYSTEM RELOCATION SHALL BE INCIDENTAL TO "VIDEO VEHICLE DETECTION SYSTEM" EACH.
8. THE CONTRACTOR SHALL RELOCATE THE TEMPORARY SIGNAL HEADS THROUGHOUT CONSTRUCTION TO LINE UP APPROXIMATELY WITH THE CORRESPONDING LANES FOR EACH STAGE OF CONSTRUCTION.
9. THE DETECTION ZONES SHALL BE DETERMINED AND LAID OUT BY LAKE COUNTY DIVISION OF TRANSPORTATION PERSONNEL.

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL OF EXISTING EQUIPMENT

WASHINGTON STREET AND WEST STREET

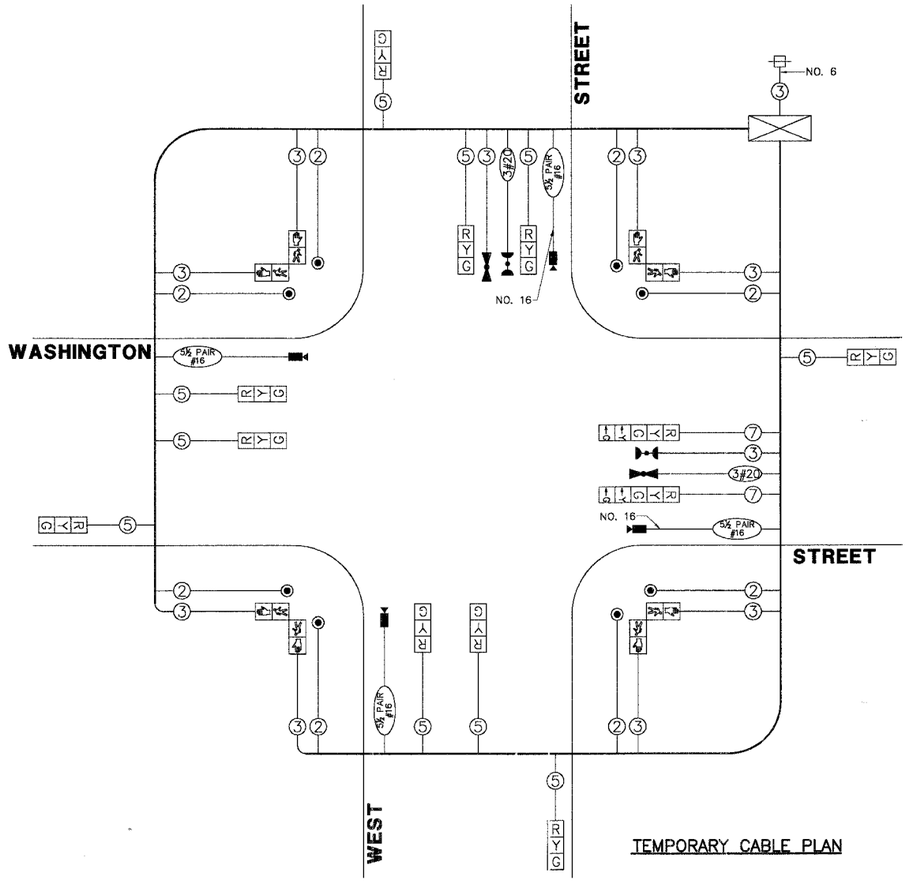
SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-(2007-ALL-PRL).dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	33
TEMPORARY CABLE PLAN				
ILLINOIS				



TEMPORARY CABLE PLAN

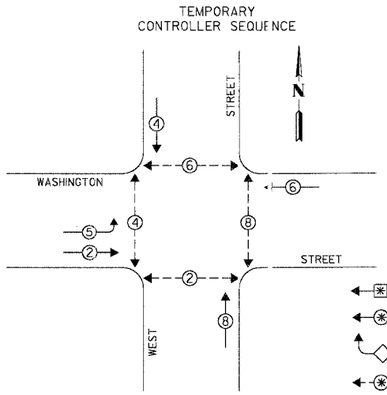
TEMPORARY CABLE PLAN LEGEND

- R — TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12"
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- (5) — INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- PEDESTRIAN PUSHBUTTON DETECTOR
- PEDESTRIAN SIGNAL HEAD
- VIDEO DETECTION CAMERA
- PTZ CAMERA
- LUMINAIRE
- T — TELEPHONE DROP
- MICROWAVE DETECTOR

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)	12	135	10	0.50	810.0
SIGNAL (YELLOW)	12	135	19	0.10	162.0
SIGNAL (GREEN)	12	135	11	0.40	648.0
ARROW	4	135	9	0.10	54.0
PED.SIGNAL	8	90	9	1.00	720.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE		-	250	0.50	
L.E.D. ST. NAME SIGN		-	64	0.50	
VIDEO SYSTEM		-	150	1.00	
BATTERY BACKUP		-	25	1.00	
				TOTAL =	2494.0

ENERGY COSTS – BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY – CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED – LIBERTYVILLE

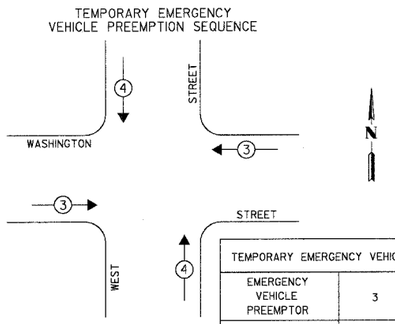
TEMPORARY CONTROLLER SEQUENCE



LEGEND
- SINGLE ENTRY PHASE
- DUAL ENTRY PHASE
- OL — OVERLAP
- PEDESTRIAN PHASE
- * — NUMBER REFERS TO ASSOCIATED PHASE

TEMPORARY PHASE DESIGNATION DIAGRAM

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
860 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM

WASHINGTON STREET AND WEST STREET

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

5744-CDOT-ALL-TRT.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	34
TRAFFIC SIGNAL MODERNIZATION PLAN				
ILLINOIS				

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	⊠	⊠
SERVICE INSTALLATION	■	⊟
SIGNAL HEAD	▶	▷
SIGNAL HEAD WITH BACKPLATE	▶	▷
SIGNAL HEAD, PEDESTRIAN	▮	▯
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●———	○———
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●———	○———
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL, WITH LUMINAIRE	●—✱	○—✱
UNIT DUCT	UD	
CONDUIT SPLICE	●—	
HANDHOLE	◥	◹
HEAVY DUTY HANDHOLE	⊞	⊡
DOUBLE HANDHOLE	◥◤	◹◿
G.S. CONDUIT IN GROUND (CIG)	————	————
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	⊙

SIGN (A)

R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

SIGN (B)

R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

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

N

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.

TRAFFIC SIGNAL LEGEND (CONT.)

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON SIGN	⊣	⊣
DETECTOR LOOP	□	□
EMERGENCY VEHICLE LIGHT DETECTOR	◀	◁
CONFIRMATION BEACON	●	○
SIGNAL HEAD OPTICALLY PROGRAMMED	▶ "P"	▷ "P"
RAILROAD CONTROL CABINET	⊠ "E"	⊠ "E"
VIDEO DETECTION CAMERA	■	□
APPROXIMATE DETECTION ZONE	▨	
PTZ CAMERA	■	⊟
STREET NAME SIGN	⊣	⊣
ABANDON	"A"	
COMBINATION CURB AND GUTTER REMOVAL		▭▭▭
COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 OR TYPE B-6.24	———	———
SIDEWALK REMOVAL		▭
PORTLAND CEMENT CONCRETE SIDEWALK, 5"	▭	
DRIVEWAY PAVEMENT REMOVAL		▨
PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8"	▭	
VIDEO COMMUNICATIONS CABINET	⊠	⊠ "E"
TELEPHONE DROP	⊡	⊡
DETECTABLE WARNING	▭	

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
H-1	160+05.5	40.5' LT	X
H-2	160+08.0	57.5' RT	X
H-3	160+69.5	55.0' RT	X
H-4	160+65.5	45.5' LT	X
P-1	160+12.5	34.5' LT	GAS MAIN
P-2	159+95.0	46.5' RT	X
P-3	160+66.5	51.0' RT	X
P-4	160+85.5	25.5' LT	GAS MAIN
MA-1	159+95.5	31.5' LT	GAS MAIN
MA-2	160+12.0	52.0' RT	X
MA-3	160+84.0	48.0' RT	WALL
MA-4	160+70.5	36.0 LT	GAS MAIN

NOTE: ALL LUMINAIRE ARMS SHALL BE TWENTY (20) FEET IN LENGTH

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN

WASHINGTON STREET AND WEST STREET

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3144-CD01-ALL-PRT.dwg

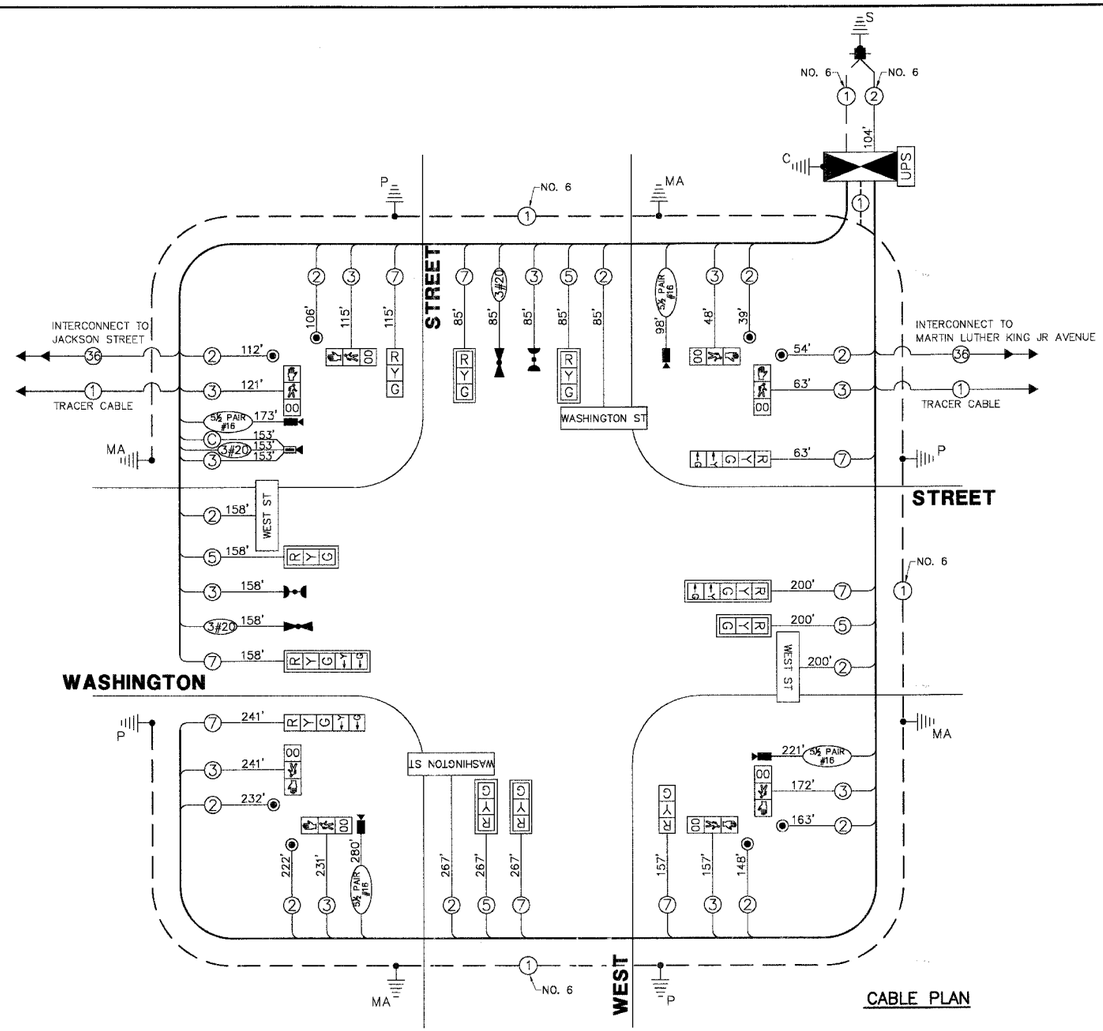
CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	35
CABLE PLAN, PHASE DESIGNATION DIAGRAM				
ILLINOIS				

SCHEDULE OF QUANTITIES

WASHINGTON STREET AND WEST STREET

	QUANT.	UNIT	ITEM
			ROADWAY IMPROVEMENTS
1.	15	CU.YD.	EARTH EXCAVATION
2.	2,000	SQ.FT.	PORTLAND CEMENT CONCRETE SIDEWALK, 5"
3.	96	SQ.FT.	DETECTABLE WARNING
4.	50	SQ.YD.	DRIVEWAY PAVEMENT REMOVAL
5.	275	FOOT	COMBINATION CURB & GUTTER REMOVAL
6.	1,850	SQ.FT.	SIDEWALK REMOVAL
7.	275	FOOT	COMBINATION CURB & GUTTER, TYPE B6.12
8.	378	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 12"
9.	20	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 24"
10.	300	SQ.FT.	PAVEMENT MARKING REMOVAL
			TRAFFIC SIGNAL IMPROVEMENTS
11.	60	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
12.	49	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
13.	10	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
14.	86	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
15.	230	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
16.	2	EACH	HANDHOLE
17.	2	EACH	DOUBLE HANDHOLE
18.	105	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
19.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, (SPECIAL)
20.	1	EACH	TRANSCEIVER - FIBER OPTIC
21.	1,789	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 2C
22.	1,544	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 3C
23.	710	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 5C
24.	1,286	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 7C
25.	104	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO.6 2C
26.	2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 30 FT. (SPECIAL)
27.	2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT. (SPECIAL)
28.	16	FOOT	CONCRETE FOUNDATION, TYPE A
29.	4	FOOT	CONCRETE FOUNDATION, TYPE C
30.	60	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
31.	8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM
32.	2	EACH	LIGHT DETECTOR
33.	1	EACH	LIGHT DETECTOR AMPLIFIER
34.	8	EACH	PEDESTRIAN PUSH-BUTTON
35.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
36.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
37.	6	EACH	REMOVE EXISTING HANDHOLE
38.	9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
39.	8	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
40.	4	EACH	L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN
41.	1	EACH	VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION)
42.	1	EACH	REMOTE-CONTROLLED VIDEO SYSTEM
43.	772	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 16, 5 1/2 PAIR
44.	4	EACH	TRAFFIC SIGNAL POST, 16 FT. (SPECIAL)
45.	1	EACH	LAYER II (DATA LINK) SWITCH
46.	1	EACH	UNINTERRUPTABLE POWER SUPPLY
47.	472	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
48.	396	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED
49.	2	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED
50.	6	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED
51.	2	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED
52.	2	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
53.	153	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
54.	1	EACH	SERVICE INSTALLATION, POLE MOUNT

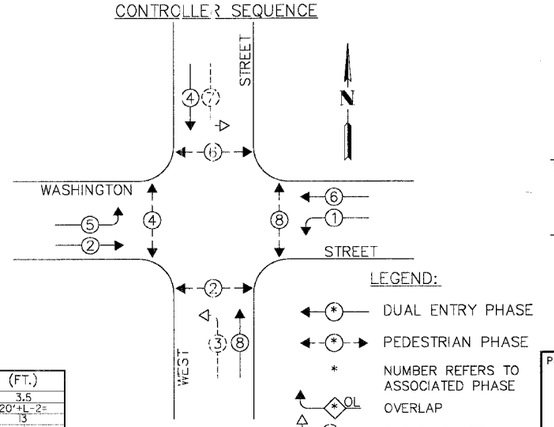


CABLE PLAN

CABLE PLAN LEGEND

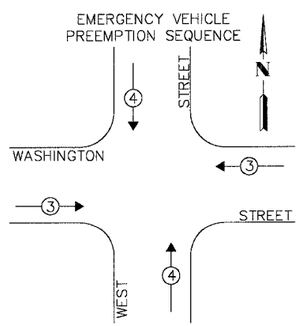
EXISTING	PROPOSED	
R	R	12" TRAFFIC SIGNAL SECTION
R Y G 00	R Y G 00	12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
1	1	GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN)
36	36	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM24F
R Y G 11 "P"	R Y G 11 "P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "NO RIGHT TURN"
H/C		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLER (C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
"E"(#)	(#)	BELDEN 8281 COAXIAL CABLE
		ISDN LINE
		LUMINAIRE
		VIDEO DETECTION CAMERA
		PTZ CAMERA
"E"		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)	12	135	10	0.50	60.0
SIGNAL (YELLOW)	12	135	19	0.10	22.8
SIGNAL (GREEN)	12	135	11	0.40	52.8
ARROW	16	135	9	0.10	7.2
PED.SIGNAL	8	90	9	1.00	72.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	4	-	250	0.50	500.0
L.E.D. ST. NAME SIGN	4	-	64	0.50	128.0
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
				TOTAL =	1117.8

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY - CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED - LIBERTYVILLE

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

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

PLANS PREPARED BY:
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Consulting Engineers & Surveyors
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Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES

WASHINGTON STREET AND WEST STREET

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: ZCW
DESIGNED BY: JRD
CHECKED BY: BLS

12446-(2007-ALL-PH).dwg

CONTRACT NO: 83932

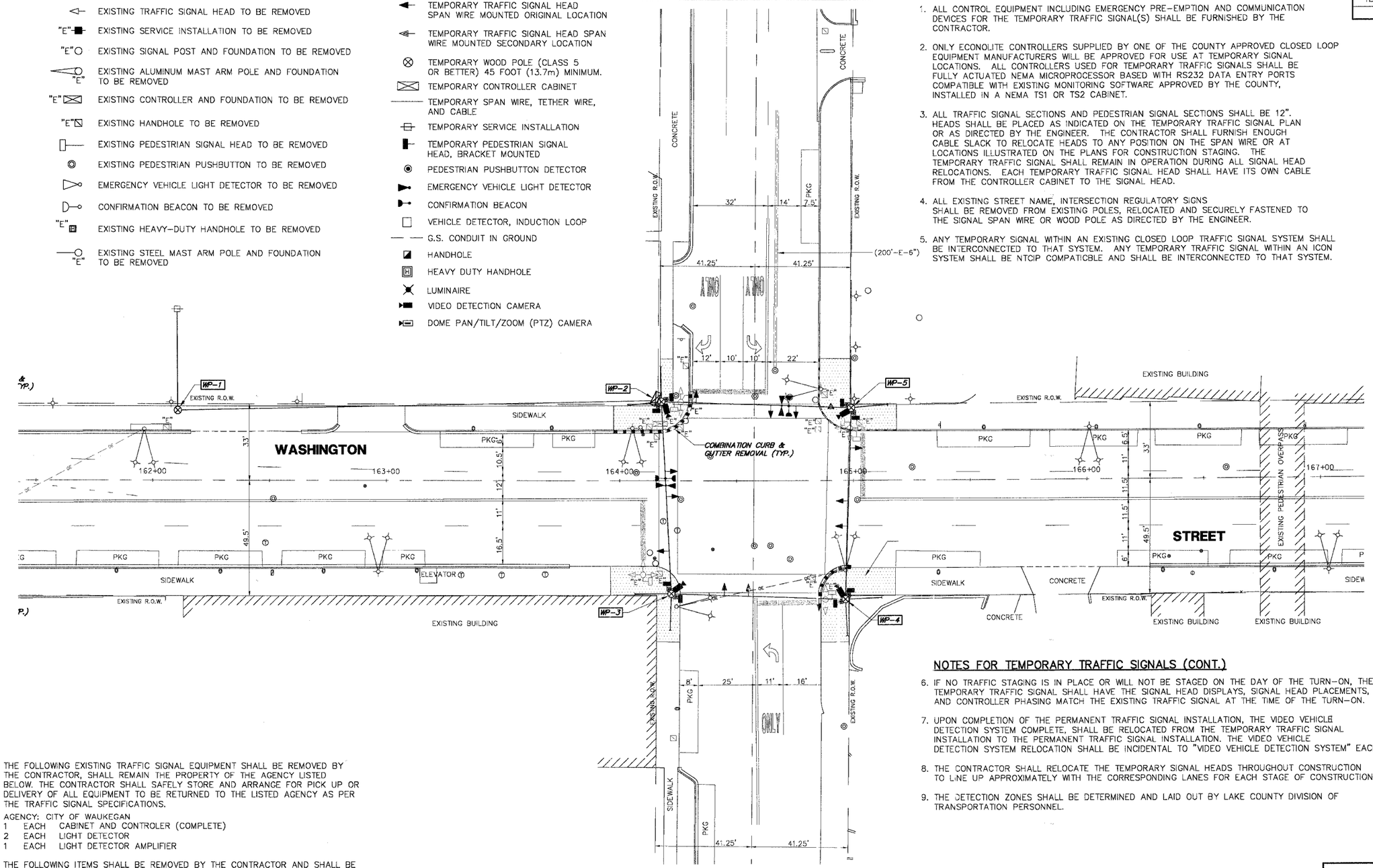
F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	36
TEMP. TRAFFIC SIGNAL INSTALLATION PLAN				
	ILLINOIS			

EXISTING EQUIPMENT TO BE REMOVED

- EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- "E" EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- "E" EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- "E" EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- "E" EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN GROUND
- HANDHOLE
- H HEAVY DUTY HANDHOLE
- LUMINAIRE
- VIDEO DETECTION CAMERA
- DOME PAN/TILT/ZOOM (PTZ) CAMERA



NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY, INSTALLED IN A NEMA TS1 OR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME, INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY TRAFFIC SIGNAL WITHIN AN ICON SYSTEM SHALL BE NTCIP COMPATICBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.

N

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

NOTES FOR TEMPORARY TRAFFIC SIGNALS (CONT.)

6. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN-ON, THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS, AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL AT THE TIME OF THE TURN-ON.
7. UPON COMPLETION OF THE PERMANENT TRAFFIC SIGNAL INSTALLATION, THE VIDEO VEHICLE DETECTION SYSTEM COMPLETE, SHALL BE RELOCATED FROM THE TEMPORARY TRAFFIC SIGNAL INSTALLATION TO THE PERMANENT TRAFFIC SIGNAL INSTALLATION. THE VIDEO VEHICLE DETECTION SYSTEM RELOCATION SHALL BE INCIDENTAL TO "VIDEO VEHICLE DETECTION SYSTEM" EACH.
8. THE CONTRACTOR SHALL RELOCATE THE TEMPORARY SIGNAL HEADS THROUGHOUT CONSTRUCTION TO LINE UP APPROXIMATELY WITH THE CORRESPONDING LANES FOR EACH STAGE OF CONSTRUCTION.
9. THE DETECTION ZONES SHALL BE DETERMINED AND LAID OUT BY LAKE COUNTY DIVISION OF TRANSPORTATION PERSONNEL.

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: CITY OF WAUKEGAN

1	EACH	CABINET AND CONTROLER (COMPLETE)
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

6	EACH	SIGNAL HEAD, 3-SECTION
4	EACH	SIGNAL HEAD, 5-SECTION
8	EACH	PEDESTRIAN SIGNAL HEAD
8	EACH	PEDESTRIAN PUSH-BUTTON
2	EACH	STEEL MAST ARM ASSEMBLEY AND POLE
6	EACH	TRAFFIC SIGNAL POST
1	EACH	SERVICE INSTALLATION

MARTIN LUTHER KING JR. AVEUNUE

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
WP-1	162+11	30.0' LT	X
WP-2	164+18	34.0' LT	X
WP-3	164+22	49.0' RT	BUILDING
WP-4	164+96	51.0' RT	OVERHEAD WIRES, STREET LIGHT
WP-5	164+99	31.0' LT	LIGHT POLE

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL OF EXISTING EQUIPMENT

WASHINGTON STREET AND MARTIN LUTHER KING JR. AVENUE

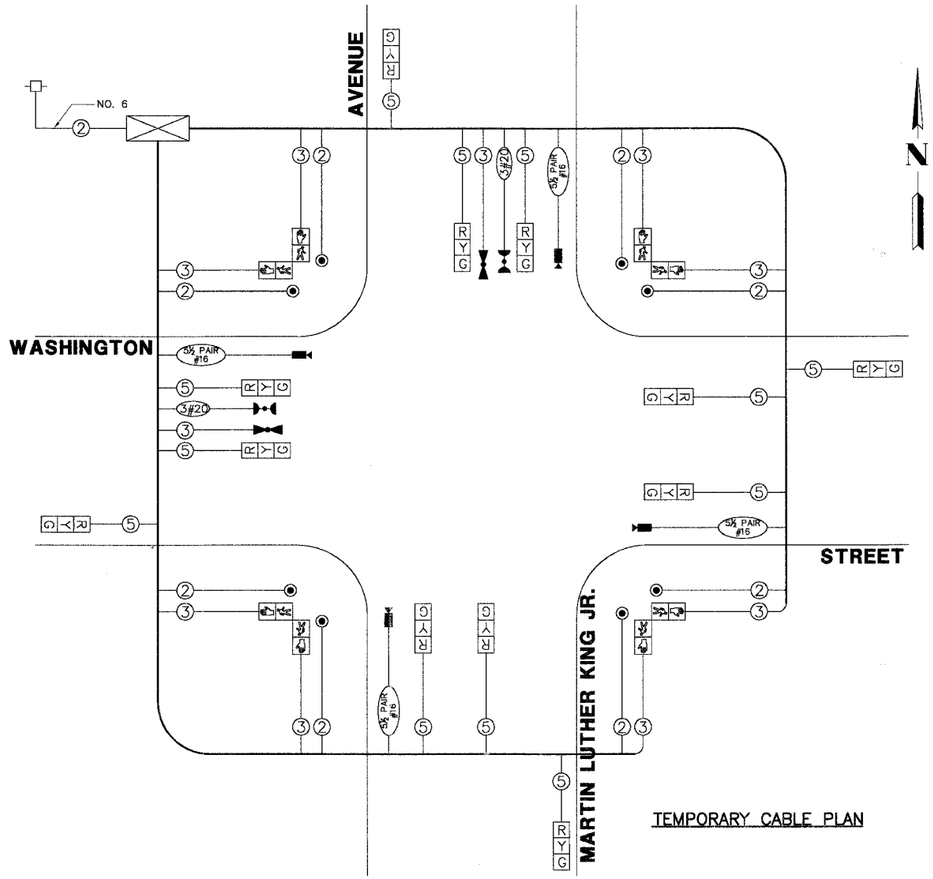
SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3748-CONT-ALL-PRT.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	37
TEMPORARY CABLE PLAN				
ILLINOIS				



TEMPORARY CABLE PLAN

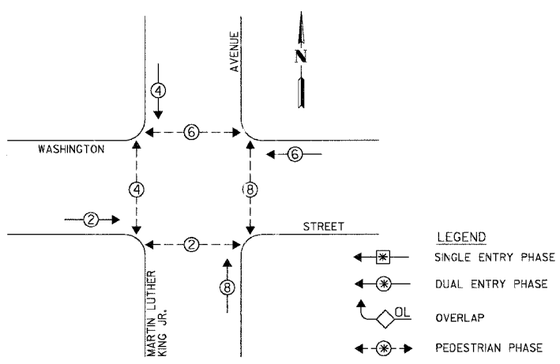
TEMPORARY CABLE PLAN LEGEND

- R — TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12"
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- (5) — INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- PEDESTRIAN PUSHBUTTON DETECTOR
- PEDESTRIAN SIGNAL HEAD
- VIDEO DETECTION CAMERA
- PTZ CAMERA
- LUMINAIRE
- T — TELEPHONE DROP
- MICROWAVE DETECTOR

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)	12	135	10	0.50	810.0
SIGNAL (YELLOW)	12	135	19	0.10	162.0
SIGNAL (GREEN)	12	135	11	0.40	648.0
ARROW		135	9	0.10	
PED.SIGNAL	8	90	9	1.00	720.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE		-	250	0.50	
L.E.D. ST. NAME SIGN		-	64	0.50	
VIDEO SYSTEM		-	150	1.00	
BATTERY BACKUP		-	25	1.00	
				TOTAL =	2340.0

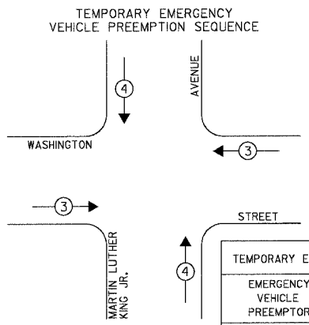
ENERGY COSTS – BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY – CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED – LIBERTYVILLE

TEMPORARY CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM

WASHINGTON STREET AND MARTIN LUTHER KING JR. AVENUE

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

5744-CD01-TM-1

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	38
TRAFFIC SIGNAL MODERNIZATION PLAN				
	ILLINOIS			

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	■	⊠
SERVICE INSTALLATION	■	⊞
SIGNAL HEAD	►	▷
SIGNAL HEAD WITH BACKPLATE	►	▷
SIGNAL HEAD, PEDESTRIAN	■	□
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●	○
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●	○
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL, WITH LUMINAIRE	●	○
UNIT DUCT	UD	
CONDUIT SPLICE	●	
HANDHOLE	◪	◪
HEAVY DUTY HANDHOLE	◧	◧
DOUBLE HANDHOLE	◪◪	◪◪
G.S. CONDUIT IN GROUND (CIG)	———	———
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	⊙

SIGN (A)

R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

SIGN (B)

R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

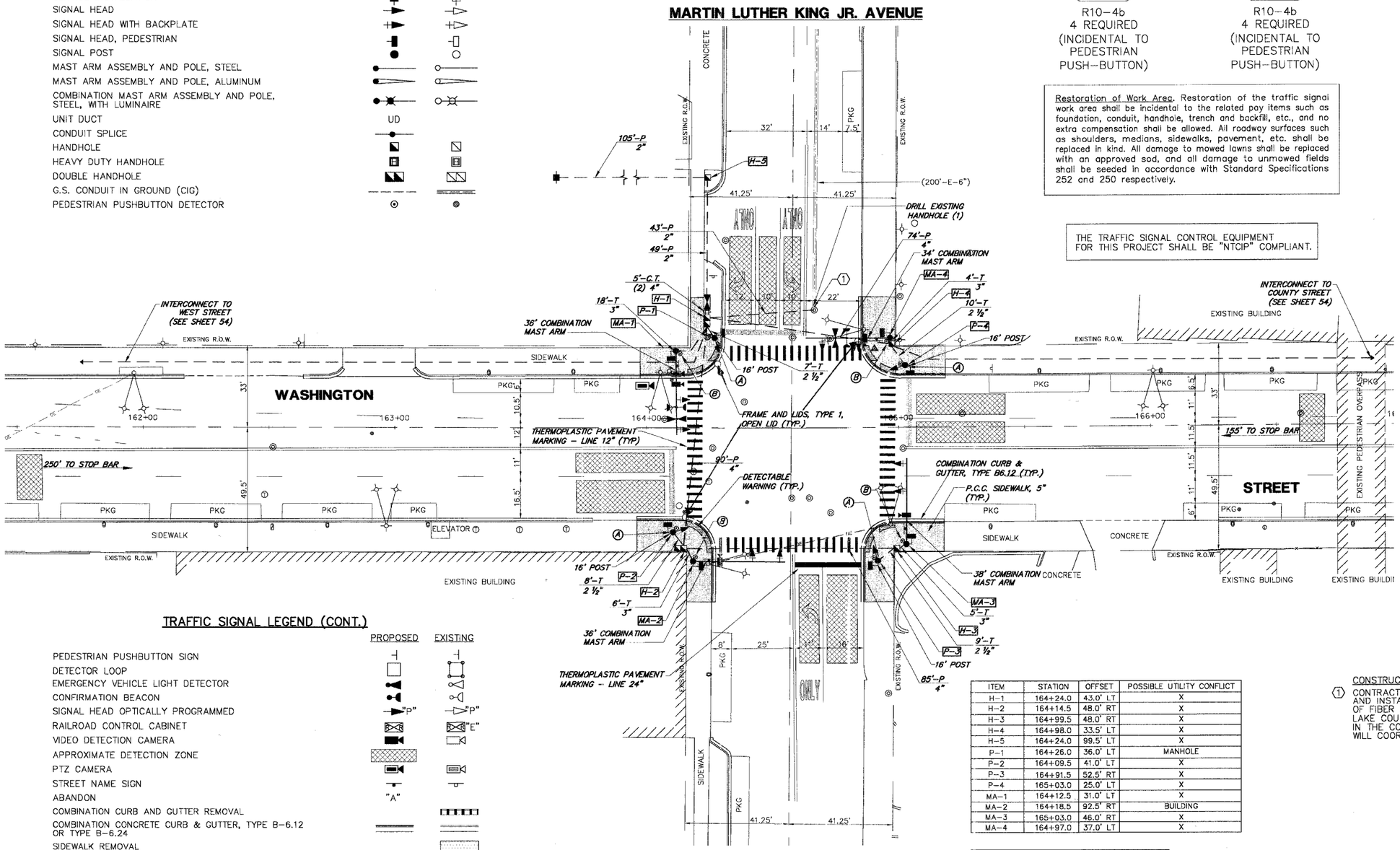
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT.

N

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.



TRAFFIC SIGNAL LEGEND (CONT.)

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON SIGN	⊣	⊣
DETECTOR LOOP	□	□
EMERGENCY VEHICLE LIGHT DETECTOR	◄	◁
CONFIRMATION BEACON	●	○
SIGNAL HEAD OPTICALLY PROGRAMMED	►"P"	▷"P"
RAILROAD CONTROL CABINET	⊠	⊠"E"
VIDEO DETECTION CAMERA	■	□
APPROXIMATE DETECTION ZONE	▭	
PTZ CAMERA	■	□
STREET NAME SIGN	⊣	⊣
ABANDON	"A"	
COMBINATION CURB AND GUTTER REMOVAL		▭▭▭
COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 OR TYPE B-6.24	═══	═══
SIDEWALK REMOVAL		▭
PORTLAND CEMENT CONCRETE SIDEWALK, 5"	▭	
DRIVEWAY PAVEMENT REMOVAL		▨
PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8"	▭	
VIDEO COMMUNICATIONS CABINET	⊠	⊠"E"
TELEPHONE DROP	T	T
DETECTABLE WARNING	▭	

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
H-1	164+24.0	43.0' LT	X
H-2	164+14.5	48.0' RT	X
H-3	164+99.5	48.0' RT	X
H-4	164+98.0	33.5' LT	X
H-5	164+24.0	99.5' LT	X
P-1	164+26.0	36.0' LT	MANHOLE
P-2	164+09.5	41.0' LT	X
P-3	164+91.5	52.5' RT	X
P-4	165+03.0	25.0' LT	X
MA-1	164+12.5	31.0' LT	X
MA-2	164+18.5	92.5' RT	BUILDING
MA-3	165+03.0	46.0' RT	X
MA-4	164+97.0	37.0' LT	X

NOTE: ALL LUMINAIRE ARMS SHALL BE TWENTY (20) FEET IN LENGTH

CONSTRUCTION NOTE:

(1) CONTRACTOR TO DRILL INTO EXISTING MANHOLE AND INSTALL 2" G.S. CONDUIT FOR INSTALLATION OF FIBER OPTIC AND TRACER CABLES TO LAKE COUNTY COMMUNICATIONS CENTER LOCATED IN THE COUNTY BUILDING. RESIDENT ENGINEER WILL COORDINATE WITH LCDOT STAFF.

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REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN

WASHINGTON STREET AND MARTIN LUTHER KING JR. AVENUE

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-LDOT-ALL-TSM1.dwg

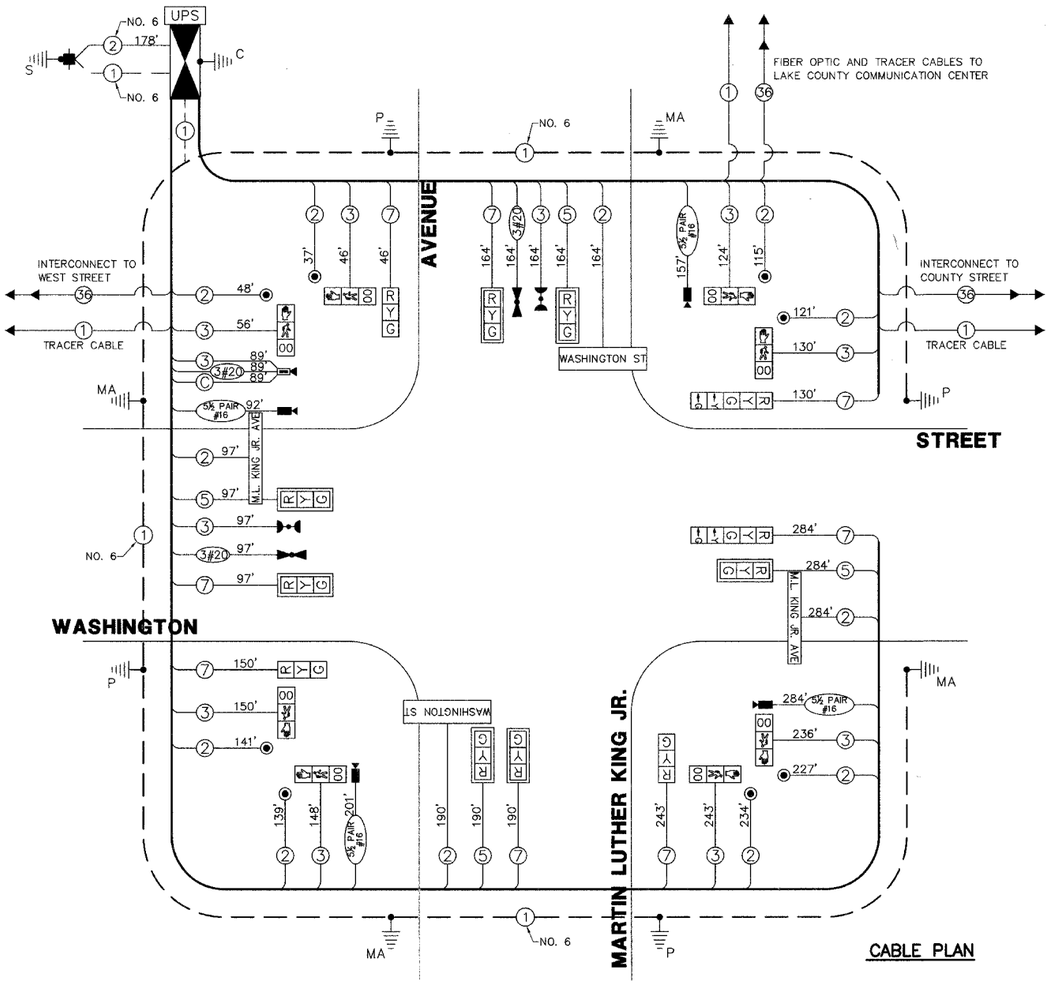
CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	39
CABLE PLAN, PHASE DESIGNATION DIAGRAM				
	ILLINOIS			

SCHEDULE OF QUANTITIES

WASHINGTON STREET AND MARTIN LUTHER KING JR. AVENUE

	QUANT.	UNIT	ITEM
			ROADWAY IMPROVEMENTS
1.	2,250	SQ.FT.	PORTLAND CEMENT CONCRETE SIDEWALK, 5"
2.	96	SQ.FT.	DETECTABLE WARNING
3.	250	FOOT	COMBINATION CURB & GUTTER REMOVAL
4.	2,250	SQ.FT.	SIDEWALK REMOVAL
5.	3	EACH	FRAME AND LIDS, TYPE 1, OPEN LID
6.	250	FOOT	COMBINATION CURB & GUTTER, TYPE B6.12
7.	450	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 12"
8.	30	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 24"
9.	300	SQ.FT.	PAVEMENT MARKING REMOVAL
			TRAFFIC SIGNAL IMPROVEMENTS
10.	34	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
11.	33	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
12.	10	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
13.	197	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
14.	249	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
15.	3	EACH	HANDHOLE
16.	2	EACH	DOUBLE HANDHOLE
17.	22	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
18.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, (SPECIAL)
19.	1	EACH	TRANSCEIVER - FIBER OPTIC
20.	1,897	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 2C
21.	1389	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 3C
22.	735	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 5C
23.	1,304	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 7C
24.	178	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO.6 2C
25.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT. (SPECIAL)
26.	2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT. (SPECIAL)
27.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT. (SPECIAL)
28.	16	FOOT	CONCRETE FOUNDATION, TYPE A
29.	4	FOOT	CONCRETE FOUNDATION, TYPE C
30.	60	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
31.	1	EACH	DRILL EXISTING HANDHOLE
32.	8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM
33.	2	EACH	LIGHT DETECTOR
34.	1	EACH	LIGHT DETECTOR AMPLIFIER
35.	8	EACH	PEDESTRIAN PUSH-BUTTON
36.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
37.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
38.	10	EACH	REMOVE EXISTING HANDHOLE
39.	5	EACH	REMOVE EXISTING CONCRETE FOUNDATION
40.	8	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
41.	4	EACH	L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN
42.	1	EACH	VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION)
43.	1	EACH	REMOTE-CONTROLLED VIDEO SYSTEM
44.	737	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 16, 5 1/2 PAIR
45.	4	EACH	TRAFFIC SIGNAL POST, 16 FT. (SPECIAL)
46.	1	EACH	LAYER II (DATA LINK) SWITCH
47.	1	EACH	UNINTERRUPTABLE POWER SUPPLY
48.	556	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
49.	369	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED
50.	3	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED
51.	7	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED
52.	1	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED
53.	1	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
54.	89	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
55.	1	EACH	SERVICE INSTALLATION, POLE MOUNT

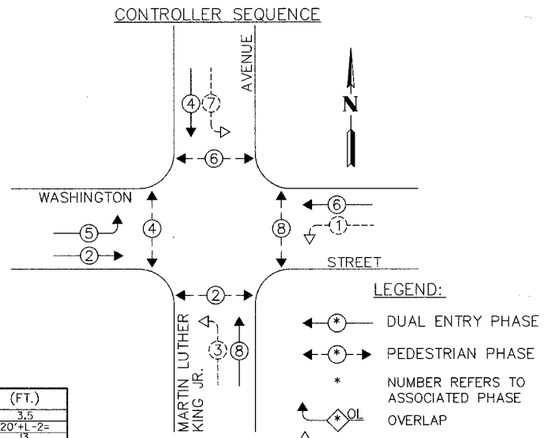


CABLE PLAN

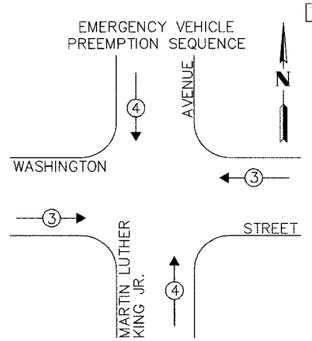
CABLE PLAN LEGEND

EXISTING	PROPOSED	
R	R	12" TRAFFIC SIGNAL SECTION
R Y G 00	R Y G 00	12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
②	②	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
①	①	GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN)
36	36	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM24F
R Y G "P"	R Y G "P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "NO RIGHT TURN"
H/C		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLER (C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
"E"(#)	(#)	BELDEN 8281 COAXIAL CABLE
	I	ISDN LINE
		LUMINAIRE
		VIDEO DETECTION CAMERA
		PTZ CAMERA
"E"		VIDEO COMMUNICATIONS CABINET
	1st AV	L.E.D. STREET NAME SIGN
	UPS	UNINTERRUPTIBLE POWER SUPPLY

CONTROLLER SEQUENCE



EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND:

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE
- OL OVERLAP
- FUTURE PHASE

PHASE DESIGNATION DIAGRAM

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)	12	135	10	0.50	60.0
SIGNAL (YELLOW)	12	135	19	0.40	22.8
SIGNAL (GREEN)	12	135	11	0.40	52.8
ARROW	4	135	9	0.40	3.6
PED.SIGNAL	8	90	9	1.00	72.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	4	-	250	0.50	500.0
L.E.D. ST. NAME SIGN	4	-	64	0.50	128.0
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
				TOTAL =	117.8

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY - CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED - LIBERTYVILLE

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

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

PLANS PREPARED BY:
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REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES

WASHINGTON STREET AND MARTIN LUTHER KING JR. AVENUE

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: ZCW
DESIGNED BY: JRD
CHECKED BY: BLS

3744-CDEOT-ALL-REV.dwg

CONTRACT NO: 83932

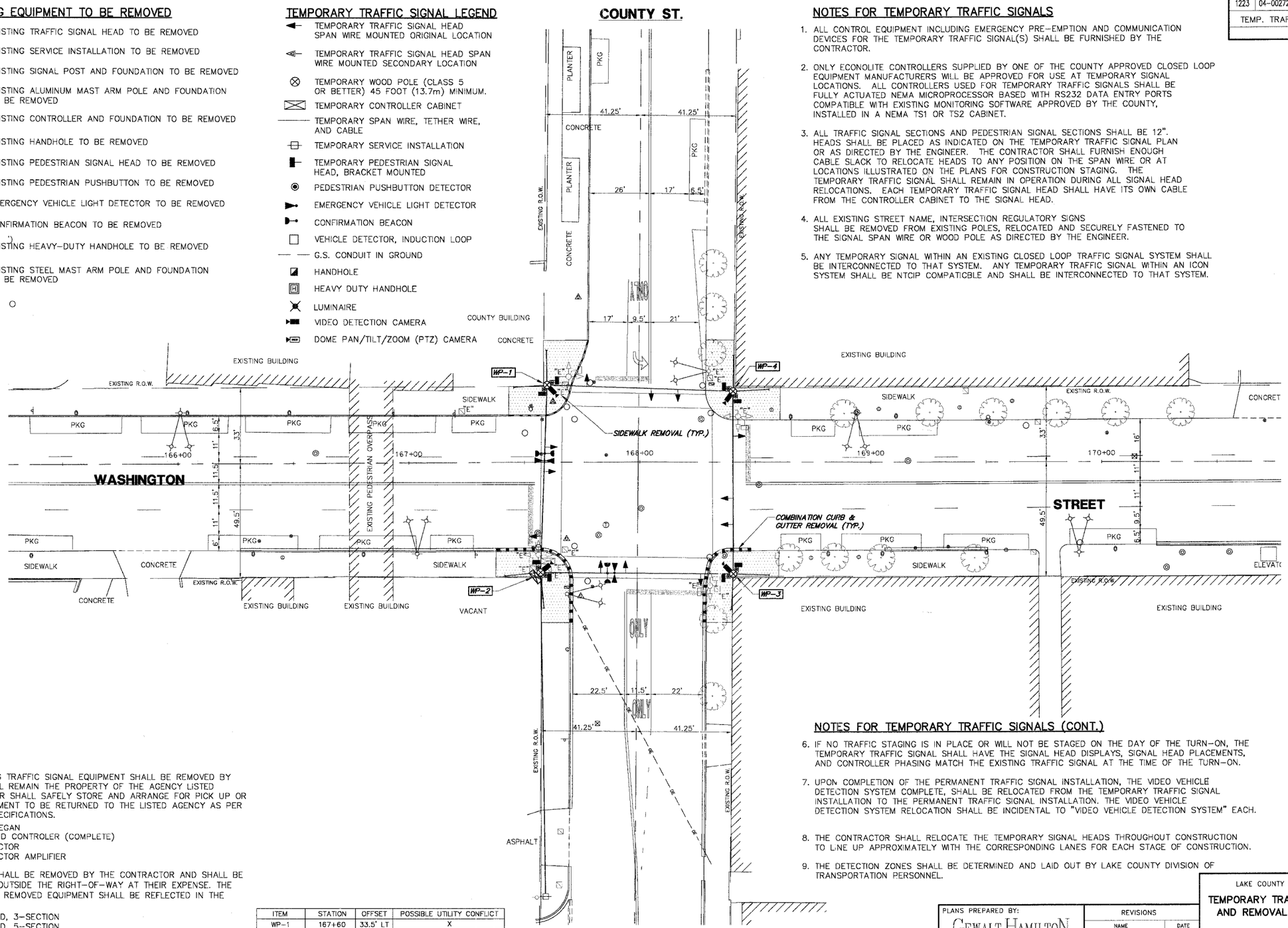
F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	40
TEMP. TRAFFIC SIGNAL INSTALLATION PLAN				
	ILLINOIS			

EXISTING EQUIPMENT TO BE REMOVED

- EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- "E" EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- "E" EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- "E" EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- "E" EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN GROUND
- HANDHOLE
- H HEAVY DUTY HANDHOLE
- LUMINAIRE
- VIDEO DETECTION CAMERA
- DOME PAN/TILT/ZOOM (PTZ) CAMERA



NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY, INSTALLED IN A NEMA TS1 OR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME, INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY TRAFFIC SIGNAL WITHIN AN ICON SYSTEM SHALL BE NTCIP COMPATICBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.

N

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: CITY OF WAUKEGAN

1	EACH	CABINET AND CONTROLER (COMPLETE)
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

6	EACH	SIGNAL HEAD, 3-SECTION
4	EACH	SIGNAL HEAD, 5-SECTION
8	EACH	PEDESTRIAN SIGNAL HEAD
8	EACH	PEDESTRIAN PUSH-BUTTON
2	EACH	STEEL MAST ARM ASSEMBLEY AND POLE
6	EACH	TRAFFIC SIGNAL POST
1	EACH	SERVICE INSTALLATION

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
WP-1	167+60	33.5' LT	X
WP-2	167+57	48.0' RT	X
WP-3	168+41	48.0' RT	BUILDING
WP-4	168+40	30.5' LT	BUILDING

NOTES FOR TEMPORARY TRAFFIC SIGNALS (CONT.)

6. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN-ON, THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS, AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL AT THE TIME OF THE TURN-ON.
7. UPON COMPLETION OF THE PERMANENT TRAFFIC SIGNAL INSTALLATION, THE VIDEO VEHICLE DETECTION SYSTEM COMPLETE, SHALL BE RELOCATED FROM THE TEMPORARY TRAFFIC SIGNAL INSTALLATION TO THE PERMANENT TRAFFIC SIGNAL INSTALLATION. THE VIDEO VEHICLE DETECTION SYSTEM RELOCATION SHALL BE INCIDENTAL TO "VIDEO VEHICLE DETECTION SYSTEM" EACH.
8. THE CONTRACTOR SHALL RELOCATE THE TEMPORARY SIGNAL HEADS THROUGHOUT CONSTRUCTION TO LINE UP APPROXIMATELY WITH THE CORRESPONDING LANES FOR EACH STAGE OF CONSTRUCTION.
9. THE DETECTION ZONES SHALL BE DETERMINED AND LAID OUT BY LAKE COUNTY DIVISION OF TRANSPORTATION PERSONNEL.

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REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL OF EXISTING EQUIPMENT

WASHINGTON STREET AND COUNTY STREET

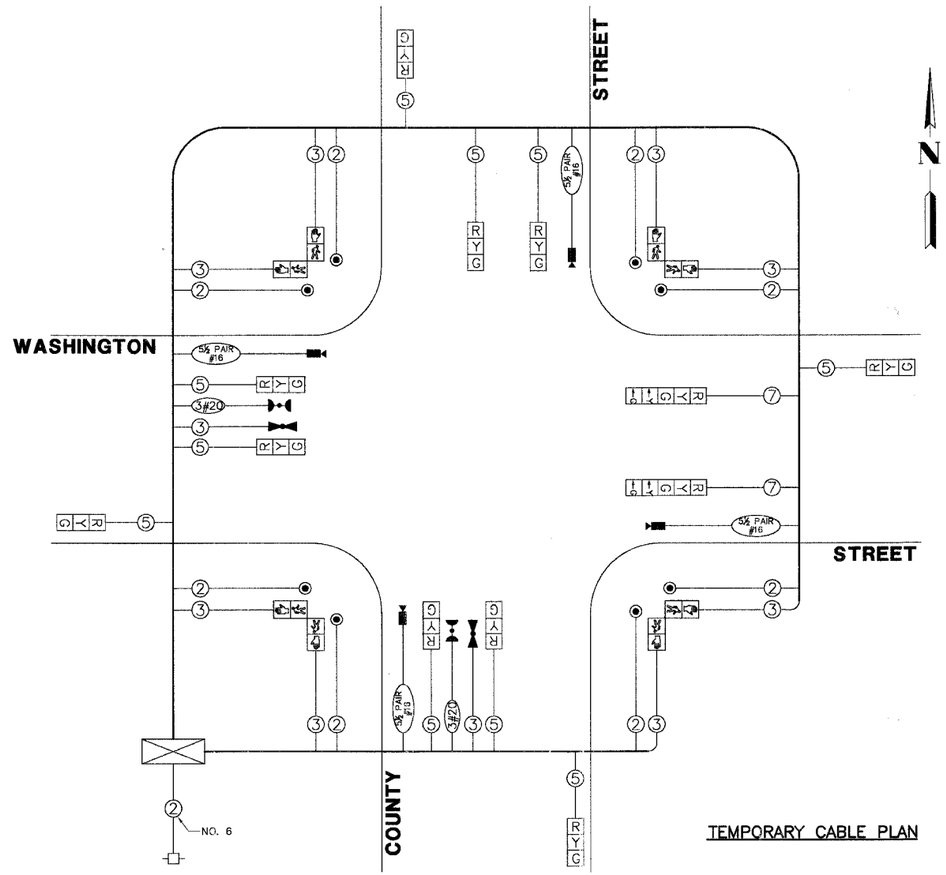
SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-1200F-ALL-PRI.dgn

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	41
TEMPORARY CABLE PLAN				
ILLINOIS				



TEMPORARY CABLE PLAN

TEMPORARY CABLE PLAN LEGEND

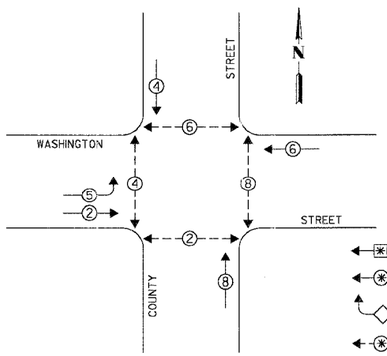
- R — TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12"
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- (5) — INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- PEDESTRIAN PUSHBUTTON DETECTOR
- PEDESTRIAN SIGNAL HEAD
- VIDEO DETECTION CAMERA
- PTZ CAMERA
- LUMINAIRE
- T — TELEPHONE DROP
- MICROWAVE DETECTOR

L.C.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE L.E.D.	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	10	0.50	810.0
SIGNAL (YELLOW)	12	135	19	0.10	162.0
SIGNAL (GREEN)	12	135	11	0.40	648.0
ARROW	4	135	9	0.10	54.0
PED.SIGNAL	8	90	9	1.00	720.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE		-	250	0.50	
L.E.D. ST. NAME SIGN		-	64	0.50	
VIDEO SYSTEM		-	150	1.00	
BATTERY BACKUP		-	25	1.00	
				TOTAL =	2494.0

ENERGY COSTS – BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY – CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED – LIBERTYVILLE

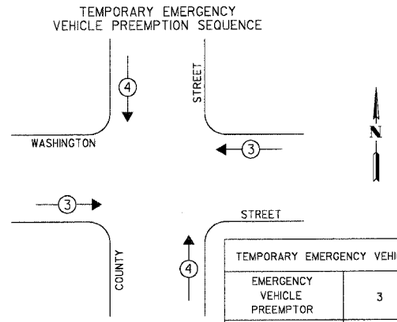
TEMPORARY CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

LEGEND
- SINGLE ENTRY PHASE
- DUAL ENTRY PHASE
- OL — OVERLAP
- PEDESTRIAN PHASE
- * — NUMBER REFERS TO ASSOCIATED PHASE

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
860 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM

WASHINGTON STREET AND COUNTY STREET

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

CONTRACT NO: 83932

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	42
TRAFFIC SIGNAL MODERNIZATION PLAN				
ILLINOIS				

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	■	⊠
SERVICE INSTALLATION	■	⊞
SIGNAL HEAD	→	▷
SIGNAL HEAD WITH BACKPLATE	→	▷
SIGNAL HEAD, PEDESTRIAN	▮	□
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●—	○—
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●—	○—
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL, WITH LUMINAIRE	●✱—	○✱—
UNIT DUCT	UD	
(200'-CONT) CONDUIT SPLICE	●—	
HANDHOLE	◥	◹
HEAVY DUTY HANDHOLE	◧	◨
DOUBLE HANDHOLE	◪	◫
G.S. CONDUIT IN GROUND (CIG)	----	----
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	⊙

SIGN (A)

R10-4b
4 REQUIRED
(INCIDENTAL TO
PEDESTRIAN
PUSH-BUTTON)

SIGN (B)

R10-4b
4 REQUIRED
(INCIDENTAL TO
PEDESTRIAN
PUSH-BUTTON)

Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

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

N

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

* = Frames & Lids to be Adjusted
** = Frames & Lids, Type 1, Open Lid

TRAFFIC SIGNAL LEGEND (CONT.)

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON SIGN	⊣	⊣
DETECTOR LOOP	□	□
EMERGENCY VEHICLE LIGHT DETECTOR	◀	◁
CONFIRMATION BEACON	●	○
SIGNAL HEAD OPTICALLY PROGRAMMED	→"P"	▷"P"
RAILROAD CONTROL CABINET	⊠"E"	⊠"E"
VIDEO DETECTION CAMERA	■	▭
APPROXIMATE DETECTION ZONE	▨	
PTZ CAMERA	■	▭
STREET NAME SIGN	●	○
ABANDON	"A"	
COMBINATION CURB AND GUTTER REMOVAL		▬▬
COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 OR TYPE B-6.24	═══	═══
SIDEWALK REMOVAL		▨
PORTLAND CEMENT CONCRETE SIDEWALK, 5"	▭	
DRIVEWAY PAVEMENT REMOVAL		▨
PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8"	▭	
VIDEO COMMUNICATIONS CABINET	⊠"E"	⊠"E"
TELEPHONE DROP	☐	☐
DETECTABLE WARNING	▭	

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
H-1	167+69.0	44.0' LT	X
H-2	167+58.5	50.5' RT	X
H-3	168+39.0	50.5' RT	BUILDING
H-4	168+39.0	34.0' LT	BUILDING
P-1	167+65.5	34.0' LT	X
P-2	167+52.0	43.0' RT	X
P-3	168+33.0	57.0' RT	X
P-4	168+44.5	23.0' LT	X
MA-1	167+55.0	30.0' LT	X
MA-2	167+59.5	54.5' RT	X
MA-3	168+44.0	43.0' RT	BUILDING
MA-4	168+39.0	36.5' LT	BUILDING

NOTE: ALL LUMINAIRE ARMS SHALL BE TWENTY (20) FEET IN LENGTH

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN

WASHINGTON STREET
AND COUNTY STREET

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-LOD07-ALL-PRP.dwg

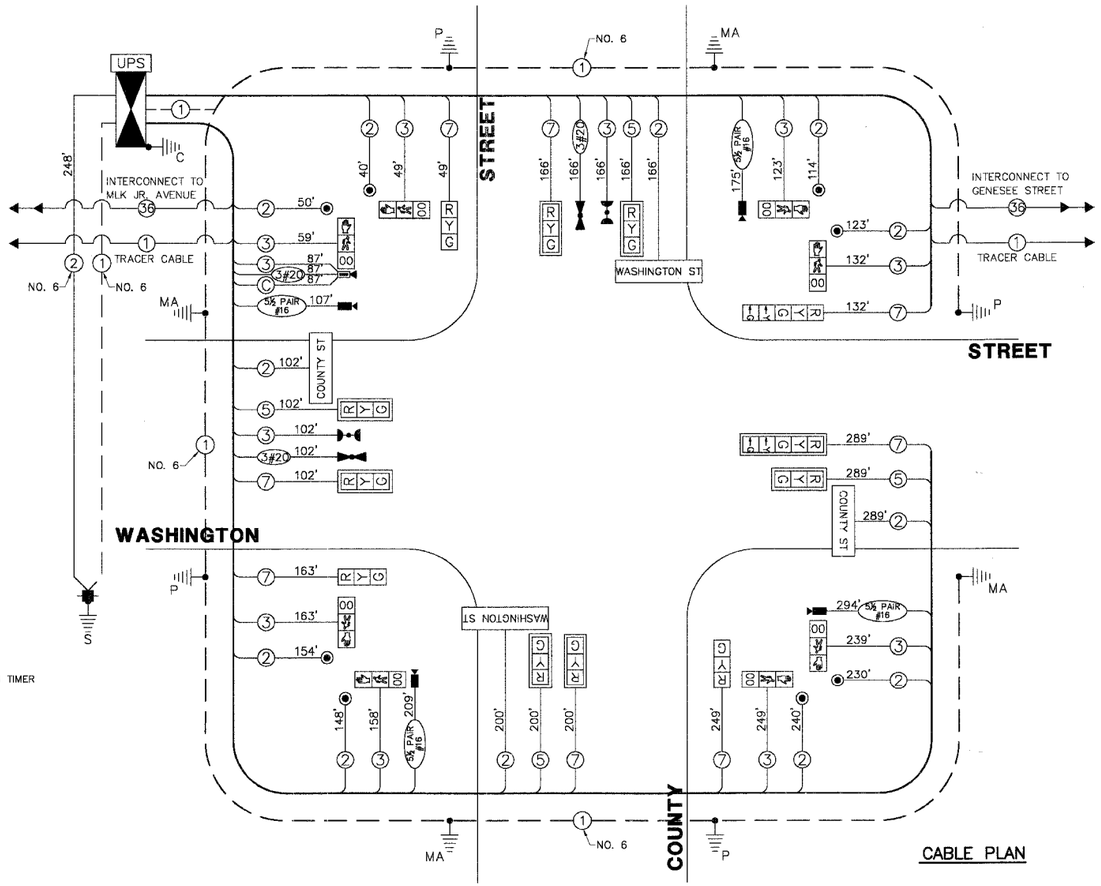
CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	43
CABLE PLAN, PHASE DESIGNATION DIAGRAM				
	ILLINOIS			

SCHEDULE OF QUANTITIES

WASHINGTON STREET AND COUNTY STREET

	QUANT.	UNIT	ITEM
			ROADWAY IMPROVEMENTS
1.	2,500	SQ.FT.	PORTLAND CEMENT CONCRETE SIDEWALK, 5"
2.	96	SQ.FT.	DETECTABLE WARNING
3.	275	FOOT	COMBINATION CURB & GUTTER REMOVAL
4.	2,500	SQ.FT.	SIDEWALK REMOVAL
5.	5	EACH	FRAMES AND LIDS TO BE ADJUSTED
6.	1	EACH	FRAME AND LIDS, TYPE 1, OPEN LID
7.	275	FOOT	COMBINATION CURB & GUTTER, TYPE B6.12
8.	456	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 12"
9.	250	SQ.FT.	PAVEMENT MARKING REMOVAL
			TRAFFIC SIGNAL IMPROVEMENTS
10.	43	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
11.	44	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
12.	10	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
13.	230	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
14.	253	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
15.	2	EACH	HANDHOLE
16.	2	EACH	DOUBLE HANDHOLE
17.	82	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
18.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, (SPECIAL)
19.	1	EACH	TRANSCEIVER - FIBER OPTIC
20.	1,856	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 2C
21.	1,528	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 3C
22.	757	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 5C
23.	1,350	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 7C
24.	248	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO.6 2C
25.	4	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT. (SPECIAL)
26.	16	FOOT	CONCRETE FOUNDATION, TYPE A
27.	4	FOOT	CONCRETE FOUNDATION, TYPE C
28.	60	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
29.	8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM
30.	2	EACH	LIGHT DETECTOR
31.	1	EACH	LIGHT DETECTOR AMPLIFIER
32.	8	EACH	PEDESTRIAN PUSH-BUTTON
33.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
34.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
35.	8	EACH	REMOVE EXISTING HANDHOLE
36.	5	EACH	REMOVE EXISTING CONCRETE FOUNDATION
37.	8	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
38.	4	EACH	L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN
39.	1	EACH	VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION)
40.	1	EACH	REMOTE-CONTROLLED VIDEO SYSTEM
41.	785	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 16, 5 1/2 PAIR
42.	4	EACH	TRAFFIC SIGNAL POST, 16 FT. (SPECIAL)
43.	36	EACH	TERMINATE FIBER IN CABINET
44.	1	EACH	UNINTERRUPTABLE POWER SUPPLY
45.	600	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
46.	355	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED
47.	3	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED
48.	7	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED
49.	1	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED
50.	1	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
51.	87	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
52.	1	EACH	SERVICE INSTALLATION, POLE MOUNT

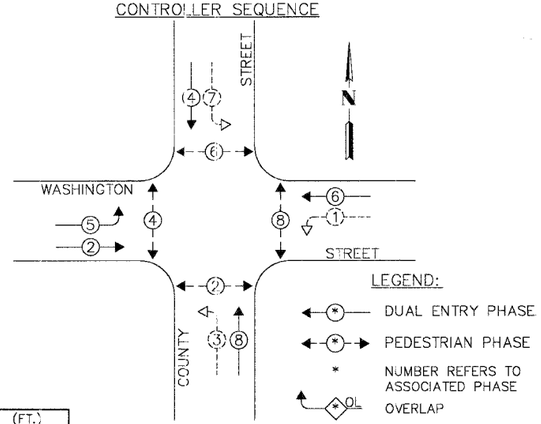


CABLE PLAN

CABLE PLAN LEGEND

EXISTING	PROPOSED	
R	R	12" TRAFFIC SIGNAL SECTION
R Y G 00	R Y G 00	12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
②	②	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
①	①	GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN)
36	36	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM24F
R Y G 00 "P"	R Y G LT Y G "P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "NO RIGHT TURN"
H/C		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLER (C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
"E"(#)	(#)	BELDEN 8281 COAXIAL CABLE
		ISDN LINE
		LUMINAIRE
		VIDEO DETECTION CAMERA
		PTZ CAMERA
"E"		VIDEO COMMUNICATIONS CABINET
	1st AV	L.E.D. STREET NAME SIGN
	UPS	UNINTERRUPTIBLE POWER SUPPLY

CONTROLLER SEQUENCE

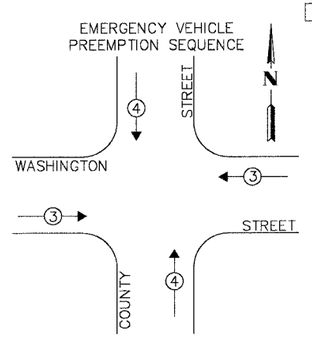


LEGEND:

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE
- OVERLAP
- FUTURE PHASE

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)	12	135	10	0.50	60.0
SIGNAL (YELLOW)	12	135	19	0.10	22.8
SIGNAL (GREEN)	12	135	11	0.40	52.8
ARROW	4	135	9	0.10	3.6
PED.SIGNAL	8	90	9	1.00	72.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	4	-	250	0.50	500.0
L.E.D. ST. NAME SIGN	4	-	64	0.50	125.0
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
				TOTAL =	1117.8

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY - CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED - LIBERTYVILLE

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

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'+1-2=
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

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES

WASHINGTON STREET AND COUNTY STREET

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: ZCW
DESIGNED BY: JRD
CHECKED BY: BLS

3444-I2007-ALL-PH1.dwg

CONTRACT NO: 83932

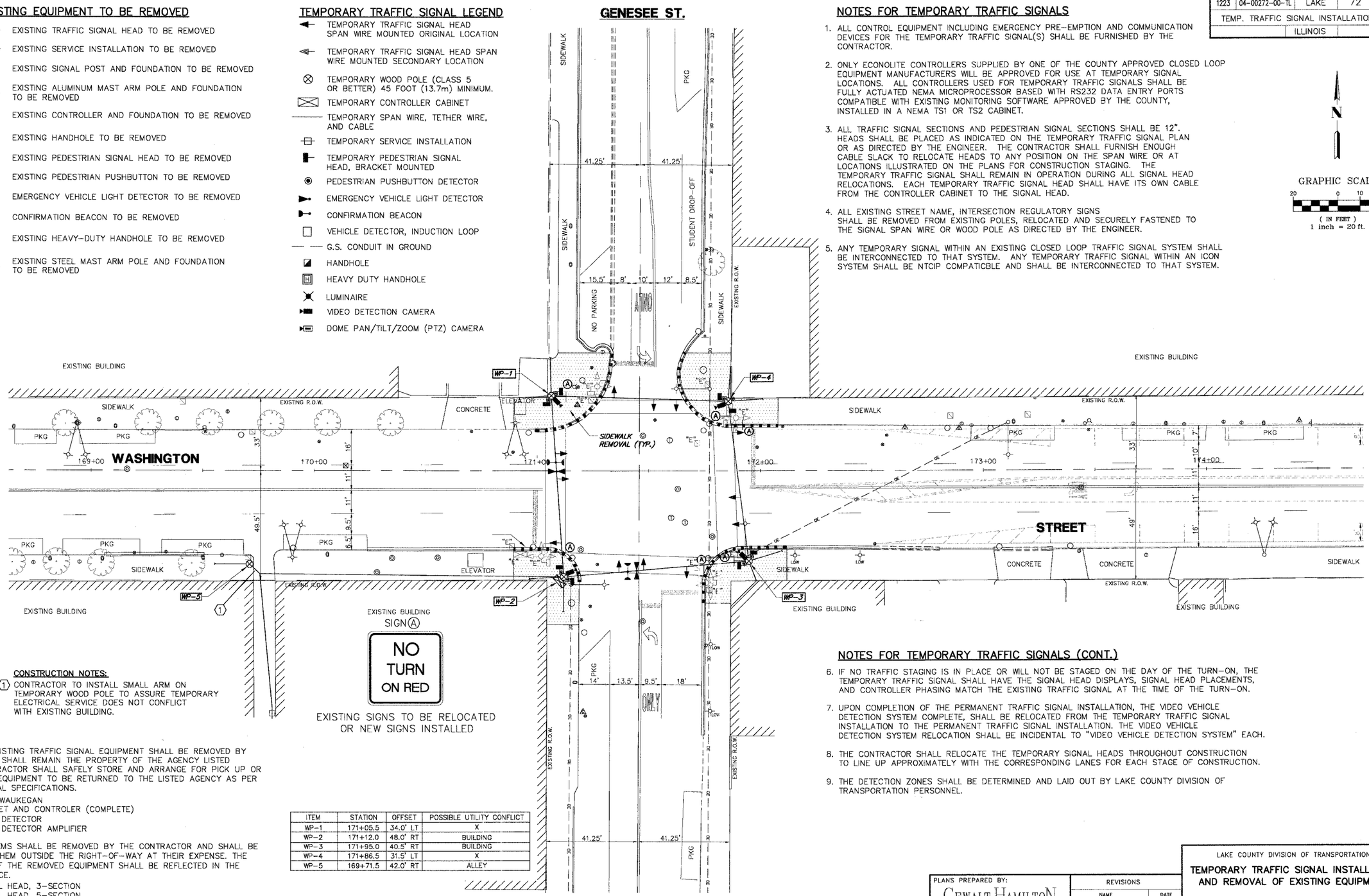
F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	44
TEMP. TRAFFIC SIGNAL INSTALLATION PLAN				
	ILLINOIS			

EXISTING EQUIPMENT TO BE REMOVED

- EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- "E" EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- "E" EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- "E" EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- "E" EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN GROUND
- HANDHOLE
- H HEAVY DUTY HANDHOLE
- LUMINAIRE
- VIDEO DETECTION CAMERA
- DOME PAN/TILT/ZOOM (PTZ) CAMERA



CONSTRUCTION NOTES:

(1) CONTRACTOR TO INSTALL SMALL ARM ON TEMPORARY WOOD POLE TO ASSURE TEMPORARY ELECTRICAL SERVICE DOES NOT CONFLICT WITH EXISTING BUILDING.

EXISTING SIGNS TO BE RELOCATED OR NEW SIGNS INSTALLED

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
WP-1	171+05.5	34.0' LT	X
WP-2	171+12.0	48.0' RT	BUILDING
WP-3	171+95.0	40.5' RT	BUILDING
WP-4	171+86.5	31.5' LT	X
WP-5	169+71.5	42.0' RT	ALLEY

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OR DELIVERY OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: CITY OF WAUKEGAN

1 EACH CABINET AND CONTROLER (COMPLETE)
2 EACH LIGHT DETECTOR
1 EACH LIGHT DETECTOR AMPLIFIER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

6 EACH SIGNAL HEAD, 3-SECTION
4 EACH SIGNAL HEAD, 5-SECTION
8 EACH PEDESTRIAN SIGNAL HEAD
8 EACH PEDESTRIAN PUSH-BUTTON
2 EACH STEEL MAST ARM ASSEMBLEY AND POLE
6 EACH TRAFFIC SIGNAL POST
1 EACH SERVICE INSTALLATION

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY ECONOLITE CONTROLLERS SUPPLIED BY ONE OF THE COUNTY APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY THE COUNTY, INSTALLED IN A NEMA TS1 OR TS2 CABINET.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME, INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM. ANY TEMPORARY TRAFFIC SIGNAL WITHIN AN ICON SYSTEM SHALL BE NTCIP COMPATICBLE AND SHALL BE INTERCONNECTED TO THAT SYSTEM.

N

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

NOTES FOR TEMPORARY TRAFFIC SIGNALS (CONT.)

6. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN-ON, THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS, AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL AT THE TIME OF THE TURN-ON.
7. UPON COMPLETION OF THE PERMANENT TRAFFIC SIGNAL INSTALLATION, THE VIDEO VEHICLE DETECTION SYSTEM COMPLETE, SHALL BE RELOCATED FROM THE TEMPORARY TRAFFIC SIGNAL INSTALLATION TO THE PERMANENT TRAFFIC SIGNAL INSTALLATION. THE VIDEO VEHICLE DETECTION SYSTEM RELOCATION SHALL BE INCIDENTAL TO "VIDEO VEHICLE DETECTION SYSTEM" EACH.
8. THE CONTRACTOR SHALL RELOCATE THE TEMPORARY SIGNAL HEADS THROUGHOUT CONSTRUCTION TO LINE UP APPROXIMATELY WITH THE CORRESPONDING LANES FOR EACH STAGE OF CONSTRUCTION.
9. THE DETECTION ZONES SHALL BE DETERMINED AND LAID OUT BY LAKE COUNTY DIVISION OF TRANSPORTATION PERSONNEL.

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL OF EXISTING EQUIPMENT

WASHINGTON STREET AND GENESEE STREET

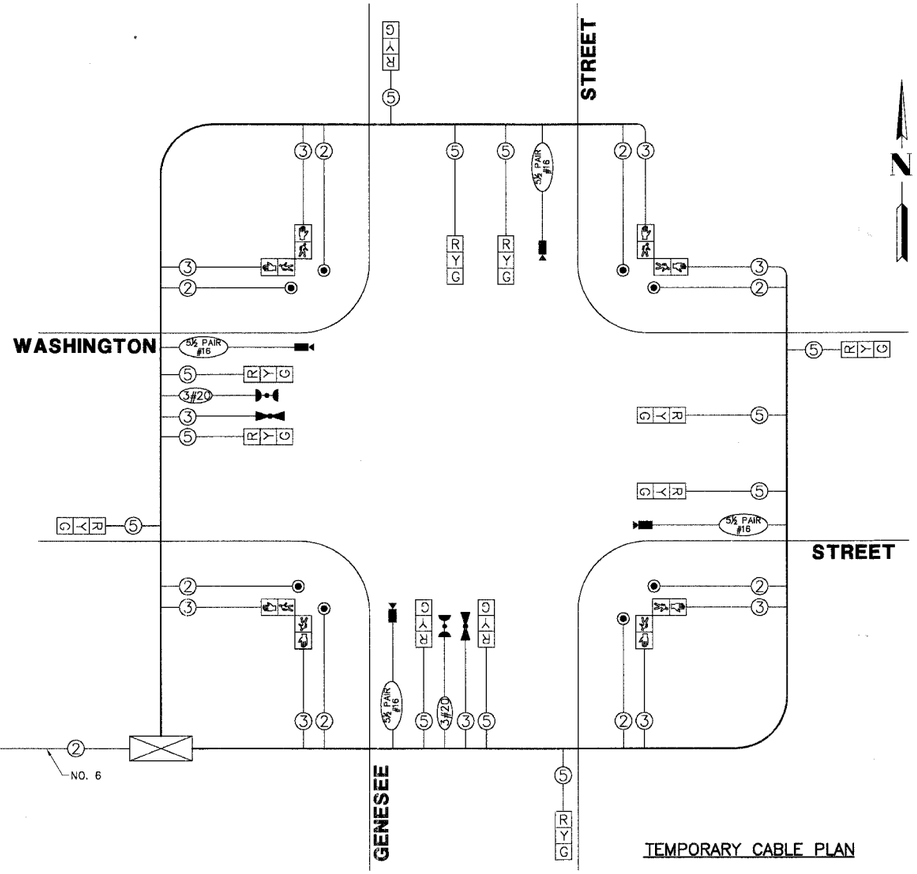
SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-1(001)-ALL-TSP1.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	45
TEMPORARY CABLE PLAN				
ILLINOIS				



TEMPORARY CABLE PLAN

TEMPORARY CABLE PLAN LEGEND

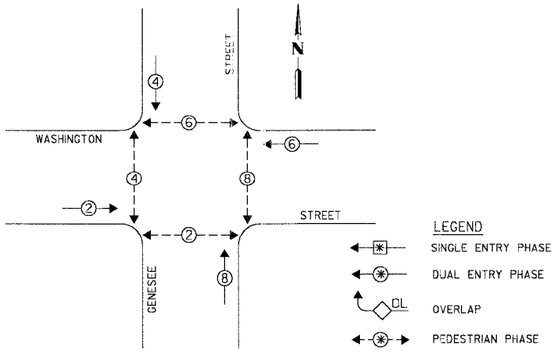
- TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12"
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- (5) INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- PEDESTRIAN PUSHBUTTON DETECTOR
- PEDESTRIAN SIGNAL HEAD
- VIDEO DETECTION CAMERA
- PTZ CAMERA
- LUMINAIRE
- TELEPHONE DROP
- MICROWAVE DETECTOR

L.C.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE L.E.D.	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	10	0.50	810.0
SIGNAL (YELLOW)	12	135	19	0.10	162.0
SIGNAL (GREEN)	12	135	11	0.40	648.0
ARROW	-	135	9	0.10	-
PED.SIGNAL	8	90	9	1.00	720.0
CONTROLLER	1	10	-	1.00	100.0
LUMINAIRE	4	250	-	0.50	-
L.E.D. ST. NAME SIGN	-	64	64	0.50	-
VIDEO SYSTEM	-	150	150	1.00	-
BATTERY BACKUP	-	25	25	1.00	-
			TOTAL =		2440.0

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY - CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED - LIBERTYVILLE

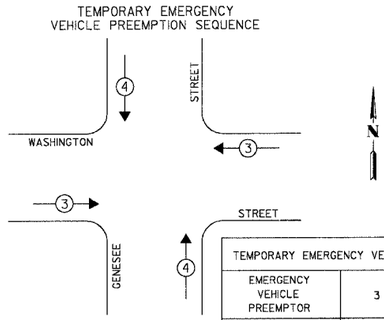
TEMPORARY CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

LEGEND
- SINGLE ENTRY PHASE
- DUAL ENTRY PHASE
- OL OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM

WASHINGTON STREET
AND GENESEE STREET

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-0007-ALL-PRI.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	46
TRAFFIC SIGNAL MODERNIZATION PLAN				
ILLINOIS				

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	⊠	⊠
SERVICE INSTALLATION	■	⊟
SIGNAL HEAD	→	▷
SIGNAL HEAD WITH BACKPLATE	+→	+▷
SIGNAL HEAD, PEDESTRIAN	▮	□
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●———	○———
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●———	○———
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL, WITH LUMINAIRE	●—✱	○—✱
UNIT DUCT	UD	
CONDUIT SPLICE	●—	
HANDHOLE	◪	◪
HEAVY DUTY HANDHOLE	⊞	⊞
DOUBLE HANDHOLE	◪◪	◪◪
G.S. CONDUIT IN GROUND (CIG)	———	———
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	⊙
PEDESTRIAN PUSHBUTTON SIGN	⊥	⊥
DETECTOR LOOP	□	⊡
EMERGENCY VEHICLE LIGHT DETECTOR	◤	◤

SIGN (A)

PUSH BUTTON FOR

R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

SIGN (B)

PUSH BUTTON FOR

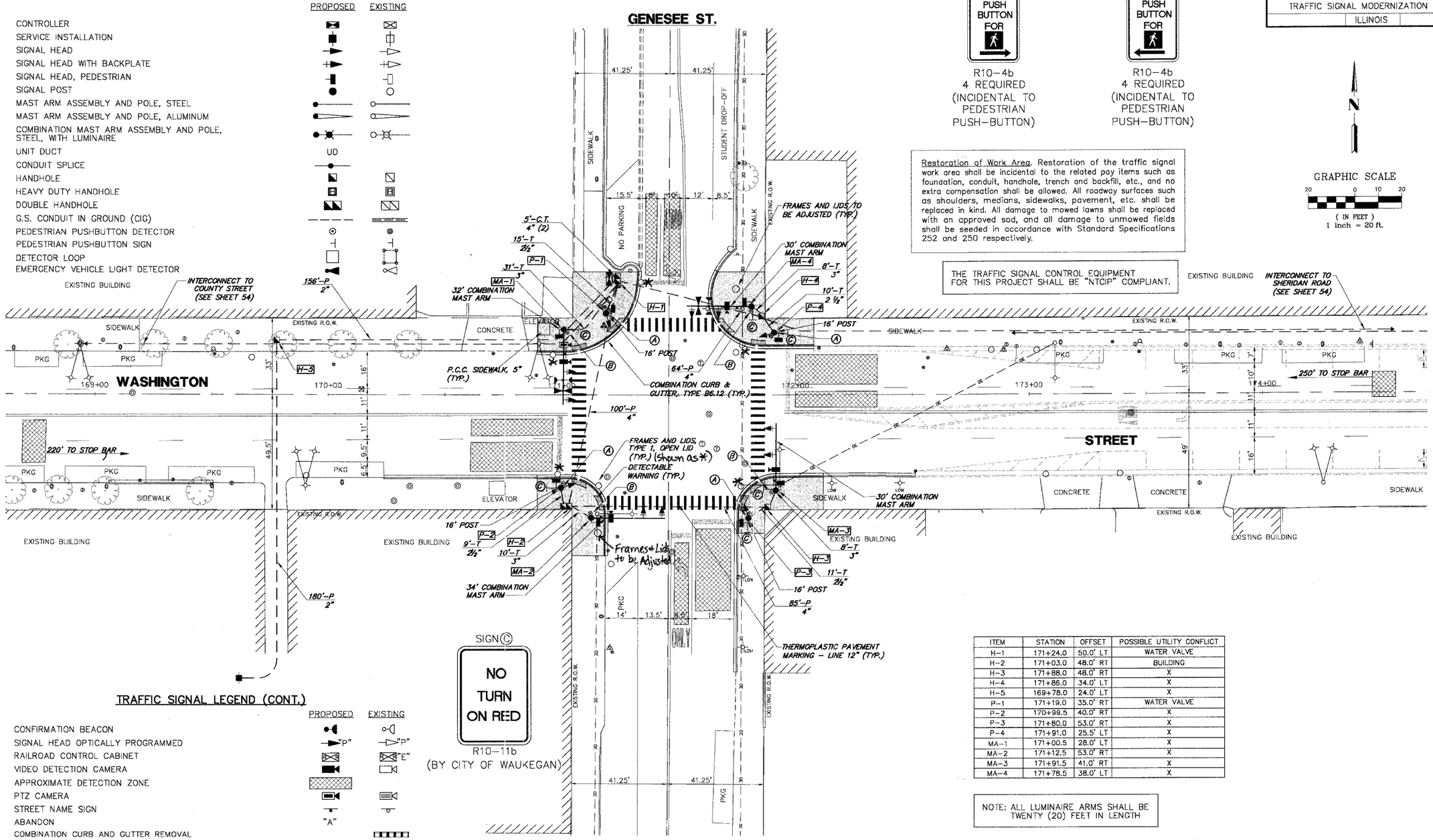
R10-4b
4 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

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

N

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.



SIGN (C)

NO TURN ON RED

R10-11b
(BY CITY OF WAUKEGAN)

TRAFFIC SIGNAL LEGEND (CONT.)

	PROPOSED	EXISTING
CONFIRMATION BEACON	●◁	○◁
SIGNAL HEAD OPTICALLY PROGRAMMED	→"P"	▷"P"
RAILROAD CONTROL CABINET	⊠"E"	⊠"E"
VIDEO DETECTION CAMERA	■	□
APPROXIMATE DETECTION ZONE	▭	
PTZ CAMERA	■	▭
STREET NAME SIGN	——o	——o
ABANDON	"A"	
COMBINATION CURB AND GUTTER REMOVAL		▭▭▭
COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 OR TYPE B-6.24	———	———
SIDEWALK REMOVAL		▭
PORTLAND CEMENT CONCRETE SIDEWALK, 5"	▭	
DRIVEWAY PAVEMENT REMOVAL		▨
PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8"	▭	
VIDEO COMMUNICATIONS CABINET	⊠"E"	⊠"E"
TELEPHONE DROP	T	T
DETECTABLE WARNING	▭	

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
H-1	171+24.0	50.0' LT	WATER VALVE
H-2	171+03.0	48.0' RT	BUILDING
H-3	171+88.0	48.0' RT	X
H-4	171+86.0	34.0' LT	X
H-5	169+78.0	24.0' LT	X
P-1	171+19.0	35.0' RT	WATER VALVE
P-2	170+99.5	40.0' RT	X
P-3	171+80.0	53.0' RT	X
P-4	171+91.0	25.5' LT	X
MA-1	171+00.5	28.0' LT	X
MA-2	171+12.5	53.0' RT	X
MA-3	171+91.5	41.0' RT	X
MA-4	171+78.5	38.0' LT	X

NOTE: ALL LUMINAIRE ARMS SHALL BE TWENTY (20) FEET IN LENGTH

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN

WASHINGTON STREET AND GENESEE STREET

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

S:\64xx\2007\ALL SHEETS.dwg

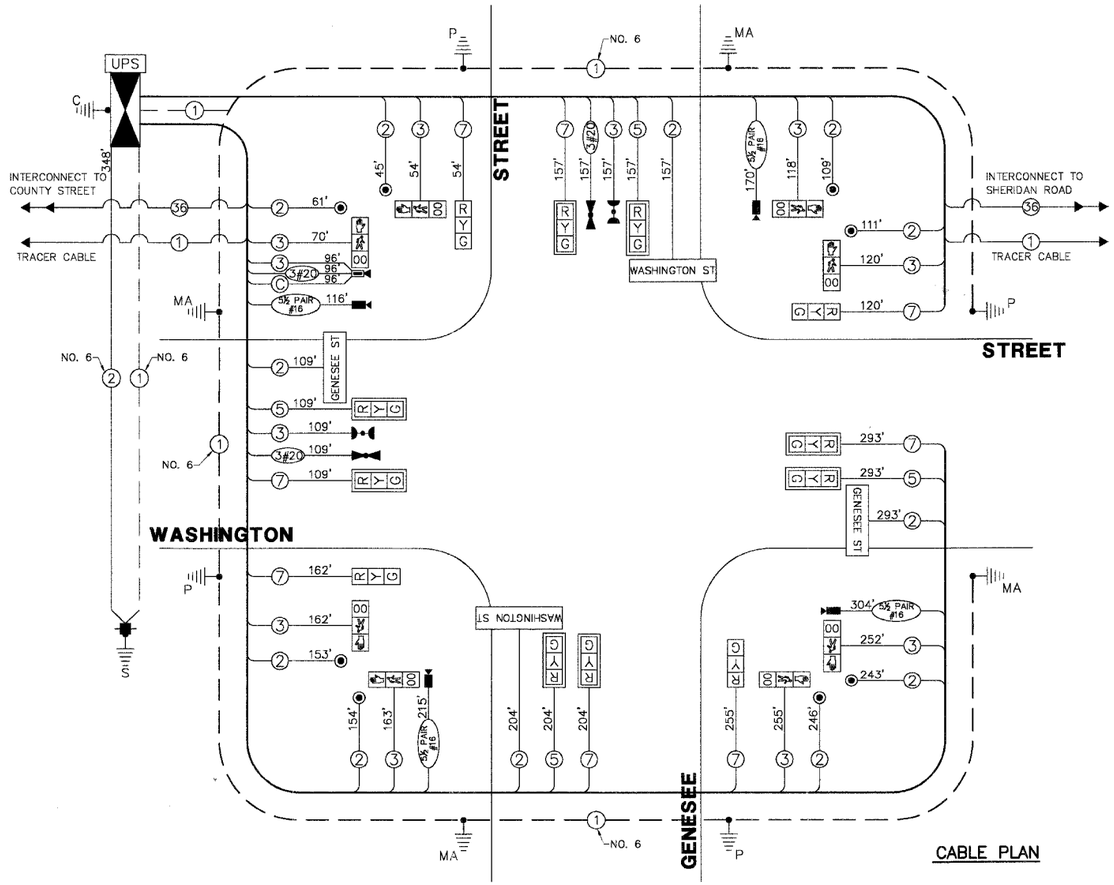
CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	47
CABLE PLAN, PHASE DESIGNATION DIAGRAM				
	ILLINOIS			

SCHEDULE OF QUANTITIES

WASHINGTON STREET AND GENESEE STREET

	QUANT.	UNIT	ITEM
			ROADWAY IMPROVEMENTS
1.	3,050	SQ.FT.	PORTLAND CEMENT CONCRETE SIDEWALK, 5"
2.	96	SQ.FT.	DETECTABLE WARNING
3.	270	FOOT	COMBINATION CURB & GUTTER REMOVAL
4.	3,050	SQ.FT.	SIDEWALK REMOVAL
5.	2	EACH	FRAME AND LIDS TO BE ADJUSTED
6.	6	EACH	FRAME AND LIDS, TYPE 1, OPEN LID
7.	270	FOOT	COMBINATION CURB & GUTTER, TYPE B6.12
8.	408	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 12"
9.	220	SQ.FT.	PAVEMENT MARKING REMOVAL
			TRAFFIC SIGNAL IMPROVEMENTS
10.	45	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
11.	57	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
12.	10	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
13.	336	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
14.	249	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
15.	3	EACH	HANDHOLE
16.	2	EACH	DOUBLE HANDHOLE
17.	107	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
18.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, (SPECIAL)
19.	1	EACH	TRANSCEIVER - FIBER OPTIC
20.	1,885	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 2C
21.	1,556	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 3C
22.	763	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 5C
23.	1,354	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO.14 7C
24.	348	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO.6 2C
25.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 30 FT. (SPECIAL)
26.	2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 32 FT. (SPECIAL)
27.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT. (SPECIAL)
28.	16	FOOT	CONCRETE FOUNDATION, TYPE A
29.	4	FOOT	CONCRETE FOUNDATION, TYPE C
30.	60	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
31.	8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM
32.	2	EACH	LIGHT DETECTOR
33.	1	EACH	LIGHT DETECTOR AMPLIFIER
34.	8	EACH	PEDESTRIAN PUSH-BUTTON
35.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
36.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
37.	9	EACH	REMOVE EXISTING HANDHOLE
38.	5	EACH	REMOVE EXISTING CONCRETE FOUNDATION
39.	8	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
40.	4	EACH	L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN
41.	1	EACH	VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION)
42.	1	EACH	REMOTE-CONTROLLED VIDEO SYSTEM
43.	805	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 16, 5 1/2 PAIR
44.	4	EACH	TRAFFIC SIGNAL POST, 16 FT. (SPECIAL)
45.	1	EACH	LAYER II (DATA LINK) SWITCH
46.	1	EACH	UNINTERRUPTABLE POWER SUPPLY
47.	599	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
48.	362	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, SHIELDED
49.	4	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED
50.	8	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
51.	96	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
52.	1	EACH	SERVICE INSTALLATION, POLE MOUNT

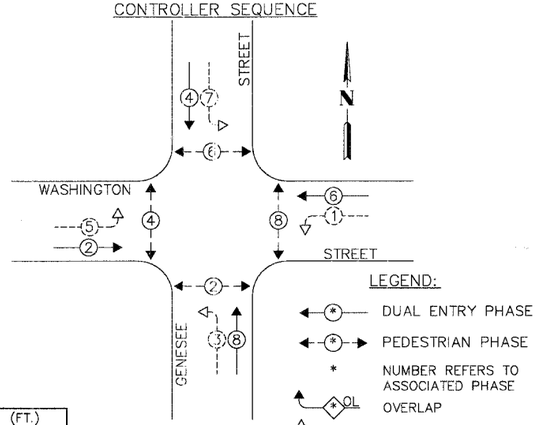


CABLE PLAN LEGEND

EXISTING	PROPOSED	
R	R	12" TRAFFIC SIGNAL SECTION
R, 00	R, 00	12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
1	1	GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN)
36	36	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM24F
R Y G, "P"	R Y G, "P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
"E"	"E"	RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "NO RIGHT TURN"
H/C		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLER (C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
"E" (#)	(#)	BELDEN 8281 COAXIAL CABLE
I	I	ISDN LINE
		LUMINAIRE
		VIDEO DETECTION CAMERA
		PTZ CAMERA
"E"		VIDEO COMMUNICATIONS CABINET
1st AV	1st AV	L.E.D. STREET NAME SIGN
UPS	UPS	UNINTERRUPTIBLE POWER SUPPLY

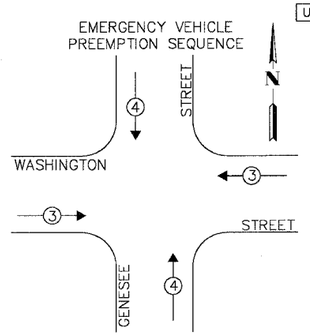
CABLE PLAN

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

TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE L.E.D.	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	10	0.50	60.0
SIGNAL (YELLOW)	12	135	19	0.10	22.8
SIGNAL (GREEN)	12	135	11	0.40	52.8
ARROW		135	9	0.10	-
PED.SIGNAL	8	90	9	1.00	72.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	4	-	250	0.50	500.0
L.E.D. ST. NAME SIGN	4	-	64	0.50	128.0
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
				TOTAL =	1110.6

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY - CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED - LIBERTYVILLE

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

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

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES

WASHINGTON STREET AND GENESEE STREET

SCALE: NONE
DATE: MAY 1, 2007
DRAWN BY: ZCW
DESIGNED BY: JRD
CHECKED BY: BLS

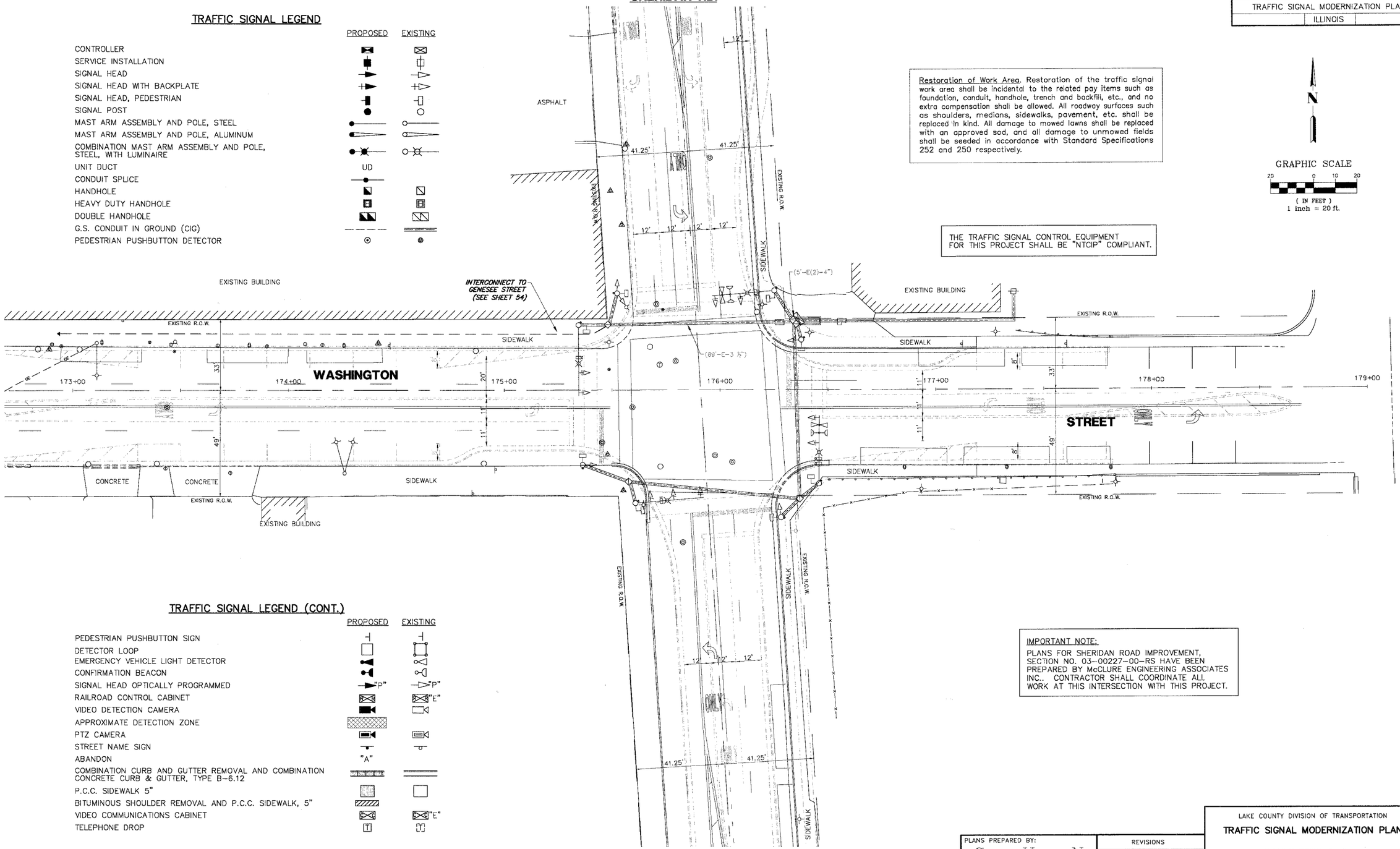
3744-0207-ALL-PPL.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	48
TRAFFIC SIGNAL MODERNIZATION PLAN				
	ILLINOIS			

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	■	⊠
SERVICE INSTALLATION	■	⊞
SIGNAL HEAD	▶	▷
SIGNAL HEAD WITH BACKPLATE	▶	▷
SIGNAL HEAD, PEDESTRIAN	▮	▯
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●	○
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●	○
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL, WITH LUMINAIRE	●	○
UNIT DUCT	UD	
CONDUIT SPLICE	●	
HANDHOLE	◪	◪
HEAVY DUTY HANDHOLE	◪	◪
DOUBLE HANDHOLE	◪	◪
G.S. CONDUIT IN GROUND (CIG)	----	═══
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	◎



Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay items such as foundation, conduit, handhole, trench and backfill, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

N

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 ft.

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

TRAFFIC SIGNAL LEGEND (CONT.)

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON SIGN	⊣	⊣
DETECTOR LOOP	□	□
EMERGENCY VEHICLE LIGHT DETECTOR	◀	◁
CONFIRMATION BEACON	●	○
SIGNAL HEAD OPTICALLY PROGRAMMED	▶ "P"	▷ "P"
RAILROAD CONTROL CABINET	⊠	⊠ "E"
VIDEO DETECTION CAMERA	■	□
APPROXIMATE DETECTION ZONE	▨	
PTZ CAMERA	■	□
STREET NAME SIGN	⊣	⊣
ABANDON	"A"	
COMBINATION CURB AND GUTTER REMOVAL AND COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12	▭	═══
P.C.C. SIDEWALK 5"	▨	□
BITUMINOUS SHOULDER REMOVAL AND P.C.C. SIDEWALK, 5"	▨	
VIDEO COMMUNICATIONS CABINET	⊠	⊠ "E"
TELEPHONE DROP	T	T

IMPORTANT NOTE:

PLANS FOR SHERIDAN ROAD IMPROVEMENT, SECTION NO. 03-00227-00-RS HAVE BEEN PREPARED BY McCLURE ENGINEERING ASSOCIATES INC.. CONTRACTOR SHALL COORDINATE ALL WORK AT THIS INTERSECTION WITH THIS PROJECT.

PLANS PREPARED BY:

GEWALT HAMILTON ASSOCIATES, INC.

Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN

WASHINGTON STREET AND SHERIDAN ROAD

SCALE: 1"=20'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

S:\94-LCDOT\ALL\PW\dwg

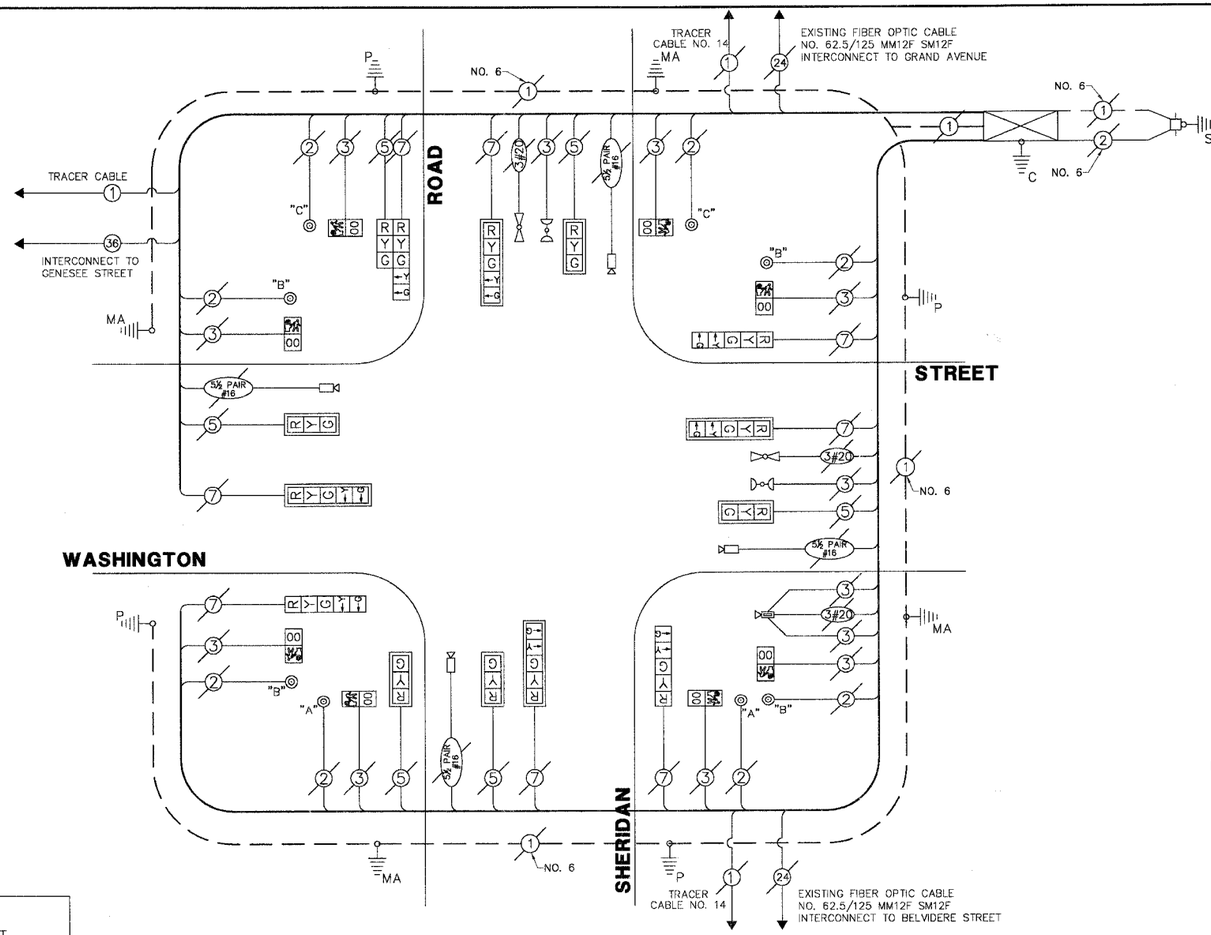
CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	49
CABLE PLAN, PHASE DESIGNATION DIAGRAM				
ILLINOIS				

SCHEDULE OF QUANTITIES

WASHINGTON STREET AND SHERIDAN ROAD

	QUANT.	UNIT	ITEM
			TRAFFIC SIGNAL IMPROVEMENTS
1.	1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2.	1	EACH	MODIFY EXISTING CONTROLLER
3.	18	EACH	TERMINATE FIBER IN CABINET



EXISTING CABLE PLAN

CABLE PLAN LEGEND

EXISTING	PROPOSED	
R	R	12" TRAFFIC SIGNAL SECTION
		12" PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
②	②	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
①	①	GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN)
36	36	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM24F
		SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
		RAILROAD CONTROL CABINET
		ILLUMINATED SIGN "NO LEFT TURN"
		ILLUMINATED SIGN "NO RIGHT TURN"
H/C		GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLER (C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
"E"#	#	BELDEN 8281 COAXIAL CABLE
	1	ISDN LINE
		LUMINAIRE
		VIDEO DETECTION CAMERA
		PTZ CAMERA
"E"		VIDEO COMMUNICATIONS CABINET
	1st AV	L.E.D. STREET NAME SIGN
	UPS	UNINTERRUPTIBLE POWER SUPPLY

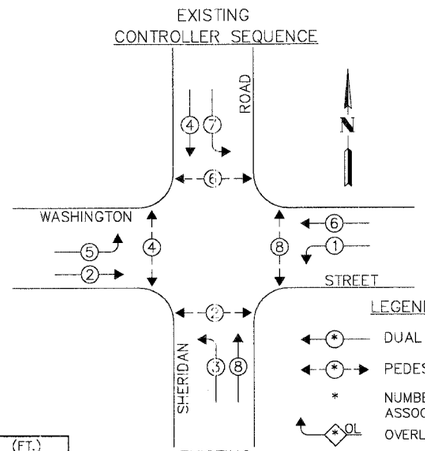
IMPORTANT NOTE:

PLANS FOR SHERIDAN ROAD IMPROVEMENT, SECTION NO. 03-00227-00-RS HAVE BEEN PREPARED BY McCLURE ENGINEERING ASSOCIATES INC.. CONTRACTOR SHALL COORDINATE ALL WORK AT THIS INTERSECTION WITH THIS PROJECT.

NOTES:

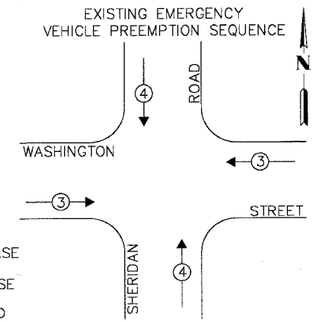
PUSH BUTTON "A" SHALL PLACE A CALL IN PHASE 2 ONLY.
PUSH BUTTON "B" SHALL PLACE A CALL IN PHASE 8 ONLY.
PUSH BUTTON "C" SHALL PLACE A CALL IN PHASE 6 ONLY.
PUSH BUTTON "D" SHALL PLACE A CALL IN PHASE 4 ONLY.

EXISTING CONTROLLER SEQUENCE



EXISTING PHASE DESIGNATION DIAGRAM

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING 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)	14	135	10	0.50	119.0
SIGNAL (YELLOW)	14	135	19	0.10	87.5
SIGNAL (GREEN)	14	135	11	0.40	52.5
ARROW	16	135	9	0.10	19.2
PED.SIGNAL	8	90	9	1.00	200.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	6	84	250	0.50	252.0
L.E.D. ST. NAME SIGN		-	64	0.50	
VIDEO SYSTEM		-	150	1.00	
BATTERY BACKUP		-	25	1.00	
				TOTAL =	814.2

ENERGY COSTS – BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY – CONTACT: MS. ALICE TAYLOR
PHONE: (847) 816-5323
COMPANY: COMED – LIBERTYVILLE

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

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

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES

WASHINGTON STREET AND SHERIDAN ROAD

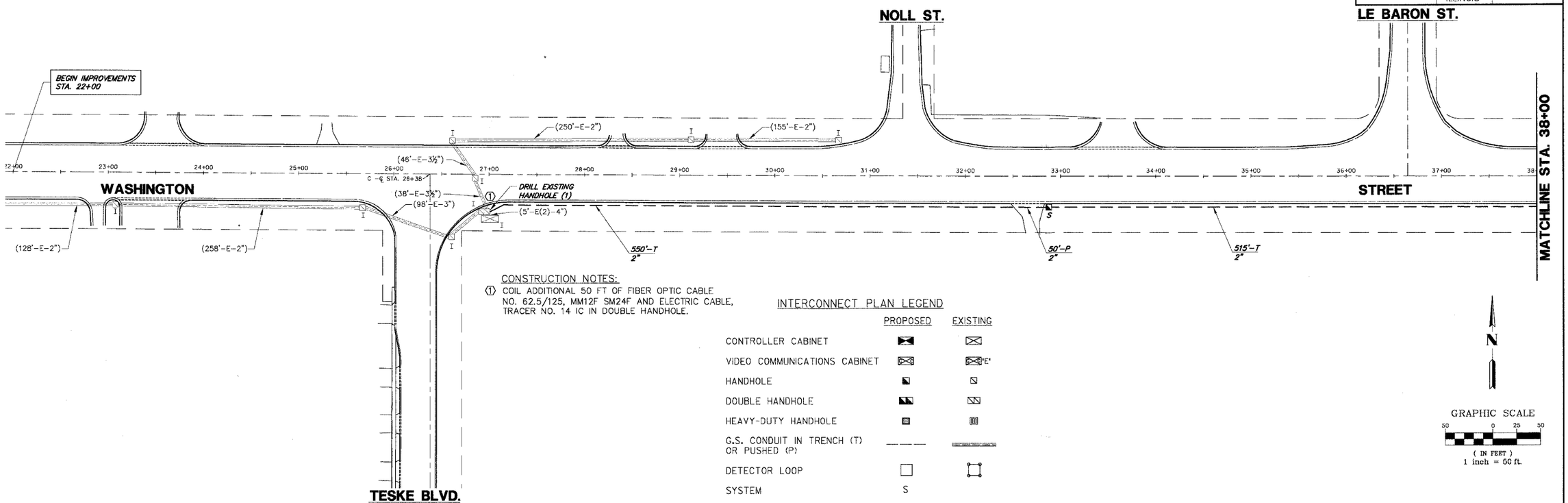
SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: ZCW
DESIGNED BY: JRD
CHECKED BY: BLS

3144-03001-ALL-PW1.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	50
INTERCONNECT PLAN				
ILLINOIS				



PLANS PREPARED BY:
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Vernon Hills, IL 60061
(847) 478-9700
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REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

INTERCONNECT PLAN
(SHEET 1 OF 5)
WASHINGTON STREET FROM TESKE BOULEVARD TO SHERIDAN ROAD

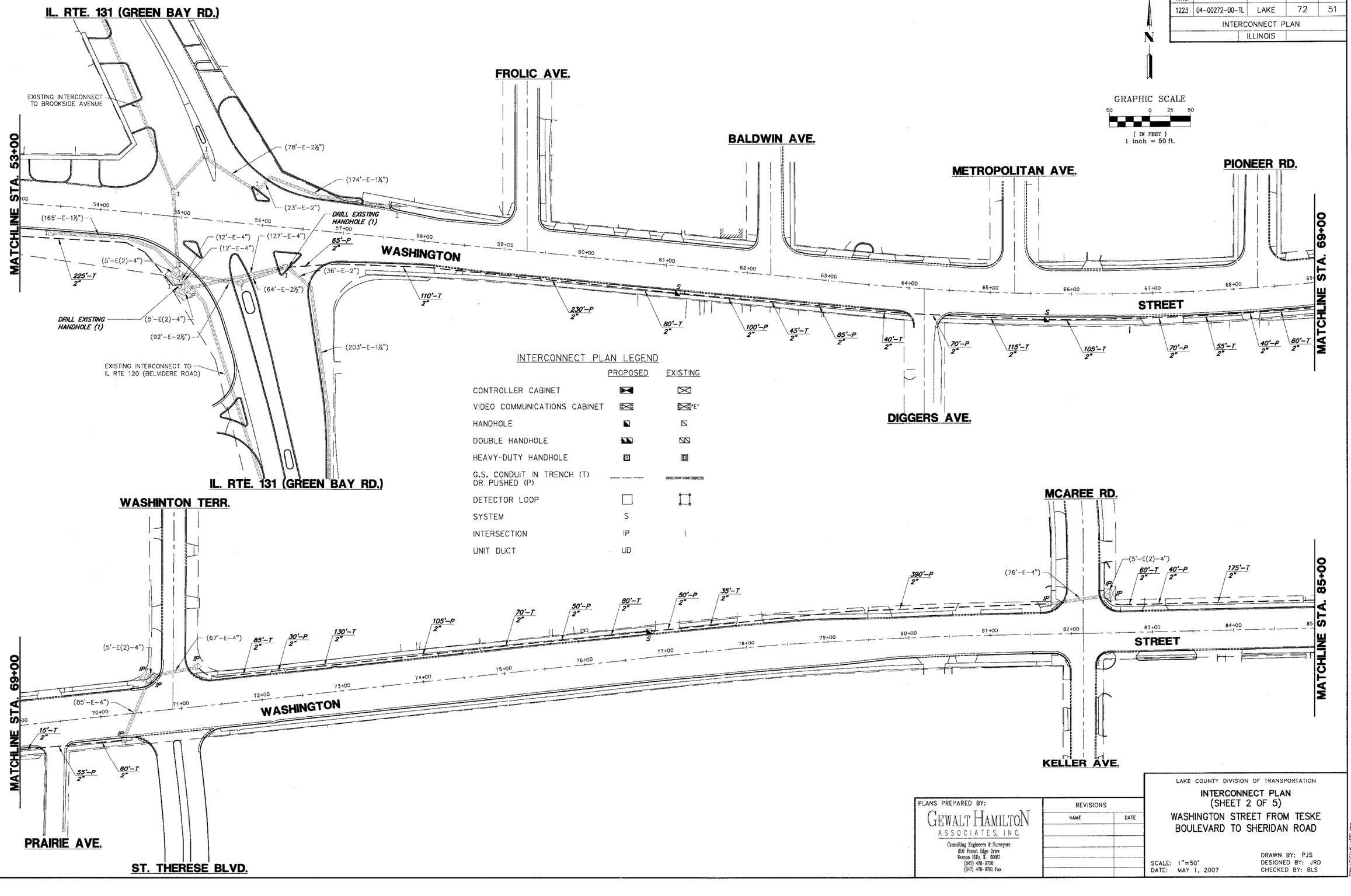
SCALE: 1"=50'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-I2OOT-ALL-PRT.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	51
INTERCONNECT PLAN				
ILLINOIS				



PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
650 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

INTERCONNECT PLAN (SHEET 2 OF 5)

WASHINGTON STREET FROM TESKE BOULEVARD TO SHERIDAN ROAD

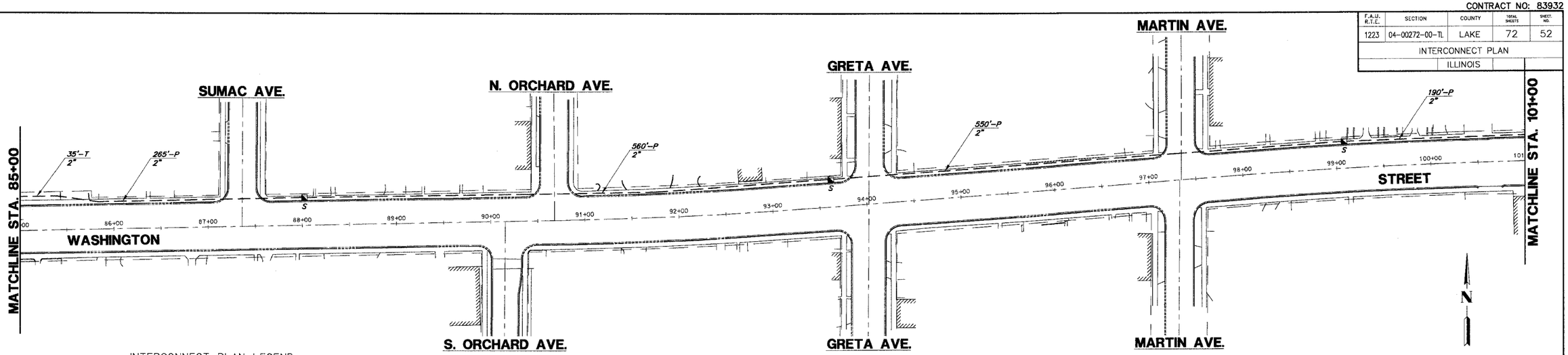
SCALE: 1"=50'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

D744-CDOT-ALL-PRE.dwg

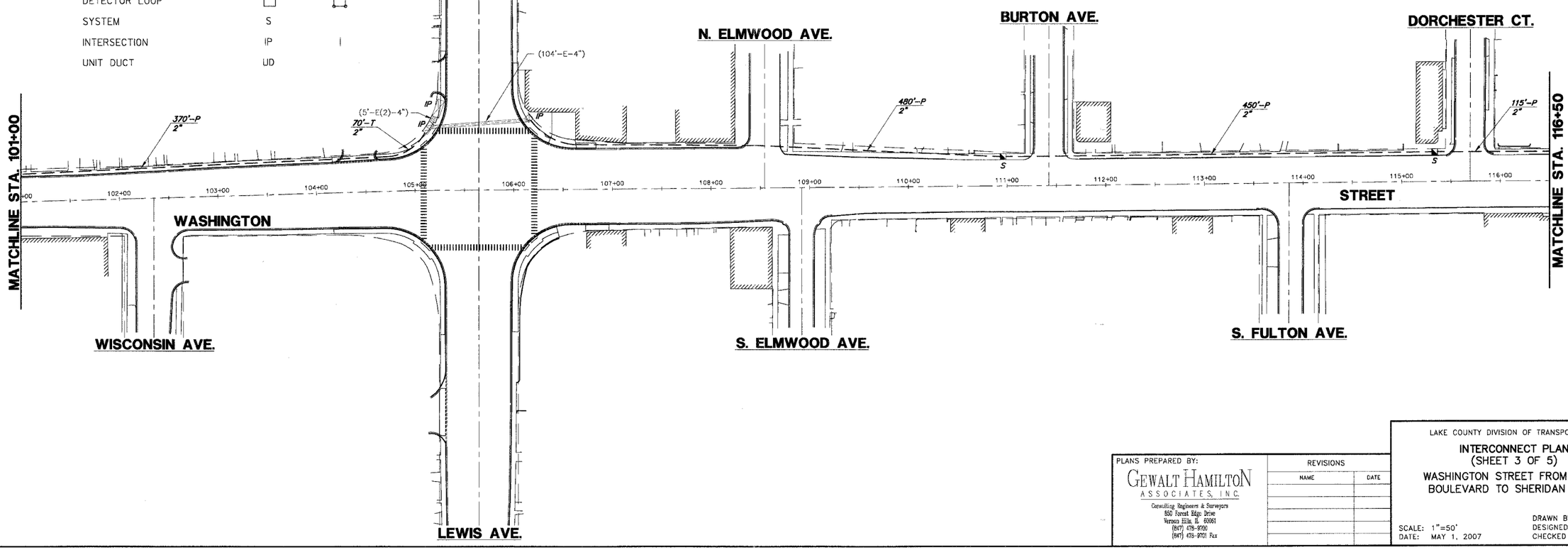
CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	52
INTERCONNECT PLAN				
ILLINOIS				



INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER CABINET	■	⊠
VIDEO COMMUNICATIONS CABINET	⊠	⊠ 'E'
HANDHOLE	◪	◪
DOUBLE HANDHOLE	◪	◪
HEAVY-DUTY HANDHOLE	▣	▣
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	———	———
DETECTOR LOOP	□	⊡
SYSTEM	S	
INTERSECTION	IP	I
UNIT DUCT	UD	



PLANS PREPARED BY:

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Consulting Engineers & Surveyors
850 Forest Edge Drive
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(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

INTERCONNECT PLAN
(SHEET 3 OF 5)
WASHINGTON STREET FROM TESKE BOULEVARD TO SHERIDAN ROAD

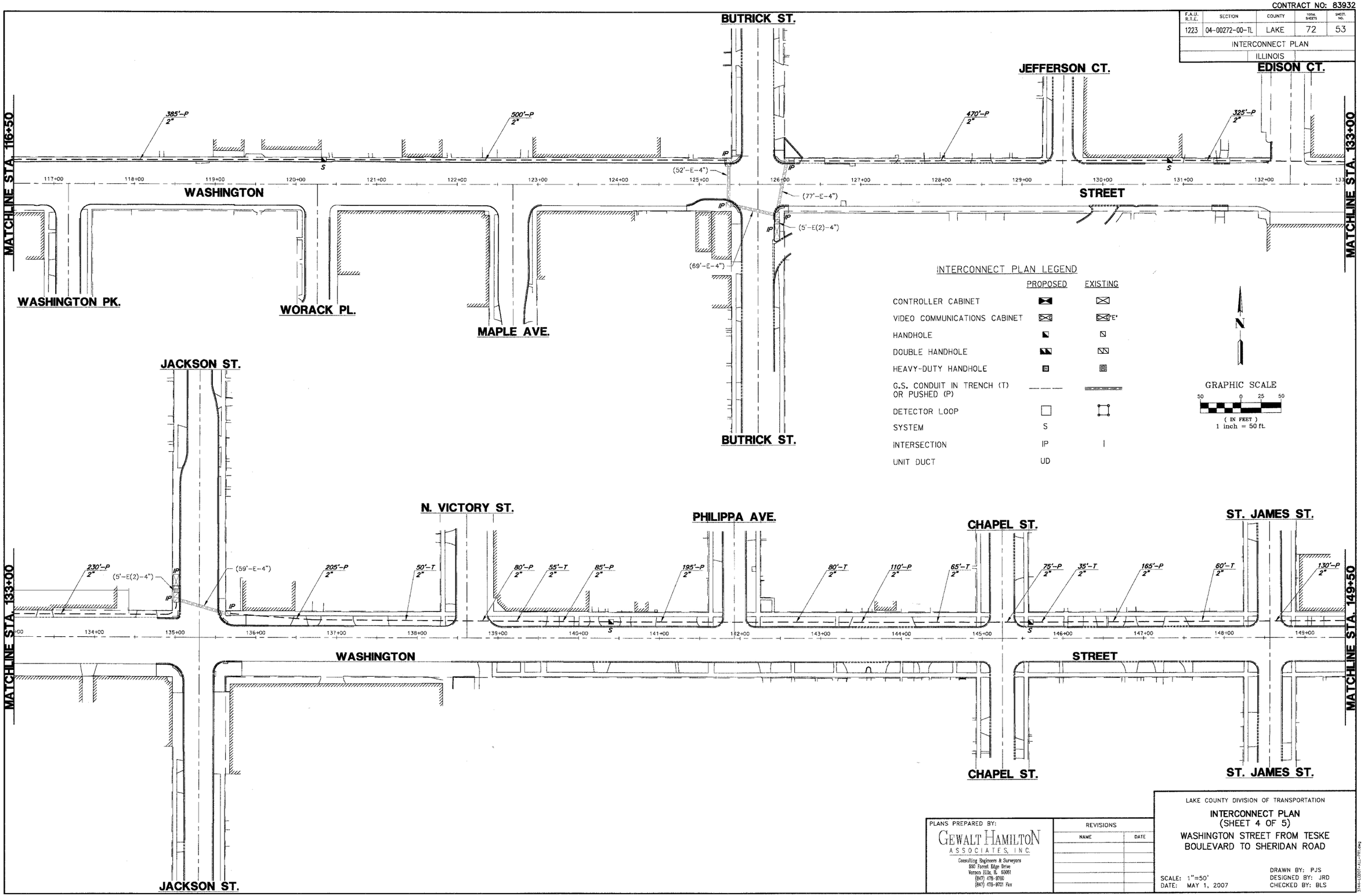
SCALE: 1"=50'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3344-I3007-ALL-PRI.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	53
INTERCONNECT PLAN				
ILLINOIS				



INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER CABINET	⊠	⊠
VIDEO COMMUNICATIONS CABINET	⊠	⊠ "E"
HANDHOLE	◪	◪
DOUBLE HANDHOLE	◪	◪
HEAVY-DUTY HANDHOLE	⊞	⊞
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	———	———
DETECTOR LOOP	□	□
SYSTEM	S	
INTERSECTION	IP	I
UNIT DUCT	UD	

N

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
880 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
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REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

INTERCONNECT PLAN
(SHEET 4 OF 5)
WASHINGTON STREET FROM TESKE BOULEVARD TO SHERIDAN ROAD

SCALE: 1"=50'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

13441-1300T-ALL-TRF.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	54
INTERCONNECT PLAN				
ILLINOIS				

INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER CABINET		
VIDEO COMMUNICATIONS CABINET		"E"
HANDHOLE		
DOUBLE HANDHOLE		
HEAVY-DUTY HANDHOLE		
C.S. CONDUIT IN TRENCH (T) OR PUSHED (P)		
DETECTOR LOOP		
SYSTEM	S	
INTERSECTION	IP	I
UNIT DUCT	UD	

N

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

MARTIN LUTHER KING JR. DR.

WEST ST.

PARK AVE.

MATCHLINE STA. 149+50

125'-P 2"
80'-T 2"
420'-P 2"
445'-P 2"
(62'-E-4")
(5'-E(2)-4")
390'-P 2"
(43'-E-2")
(5'-E(2)-4")
65'-P 2"
(135'-E-6")
LAKE COUNTY STAFF PARKING GARAGE
(200'-E-6")
(74'-E-4")

150+00 151+00 152+00 153+00 154+00 155+00 156+00 157+00 158+00 159+00 160+00 161+00 162+00 163+00 164+00 165+00

MATCHLINE STA. 165+50

WASHINGTON STREET

GLEN ROCK AVE.

PARK AVE.

MARTIN LUTHER KING JR. DR.

CONSTRUCTION NOTE:

(1) CONTRACTOR SHALL INSTALL FIBER OPTIC AND TRACER CABLES FROM NEW CONTROLLER CABINET TO EXISTING MANHOLES THRU EXISTING 6" CONDUIT AND INTO LAKE COUNTY COMMUNICATION CENTER. THE RESIDENT ENGINEER SHALL COORDINATE THIS OPERATION WITH LAKE COUNTY DIVISION OF TRANSPORTATION STAFF.

WEST ST.

COUNTY ST.

GENESEE ST.

SHERIDAN RD.

EXISTING INTERCONNECT TO IL RTE 132 (GRAND)

245'-P 2"
(5'-E(2)-4")
(73'-E-4")
315'-P 2"
(5'-E(2)-4")
(64'-E-4")
375'-P 2"
DRILL EXISTING HANDHOLE (1)
(89'-E-3½")
(5'-E(2)-4")
END IMPROVEMENTS STA. 179+00
(81'-E-5")

166+00 167+00 168+00 169+00 170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00

MATCHLINE STA. 165+50

WASHINGTON STREET

COUNTY ST.

GENESEE ST.

SHERIDAN RD.

EXISTING INTERCONNECT TO BELVIDERE ROAD

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

INTERCONNECT PLAN (SHEET 5 OF 5)

WASHINGTON STREET FROM TESKE BOULEVARD TO SHERIDAN ROAD

SCALE: 1"=50'
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

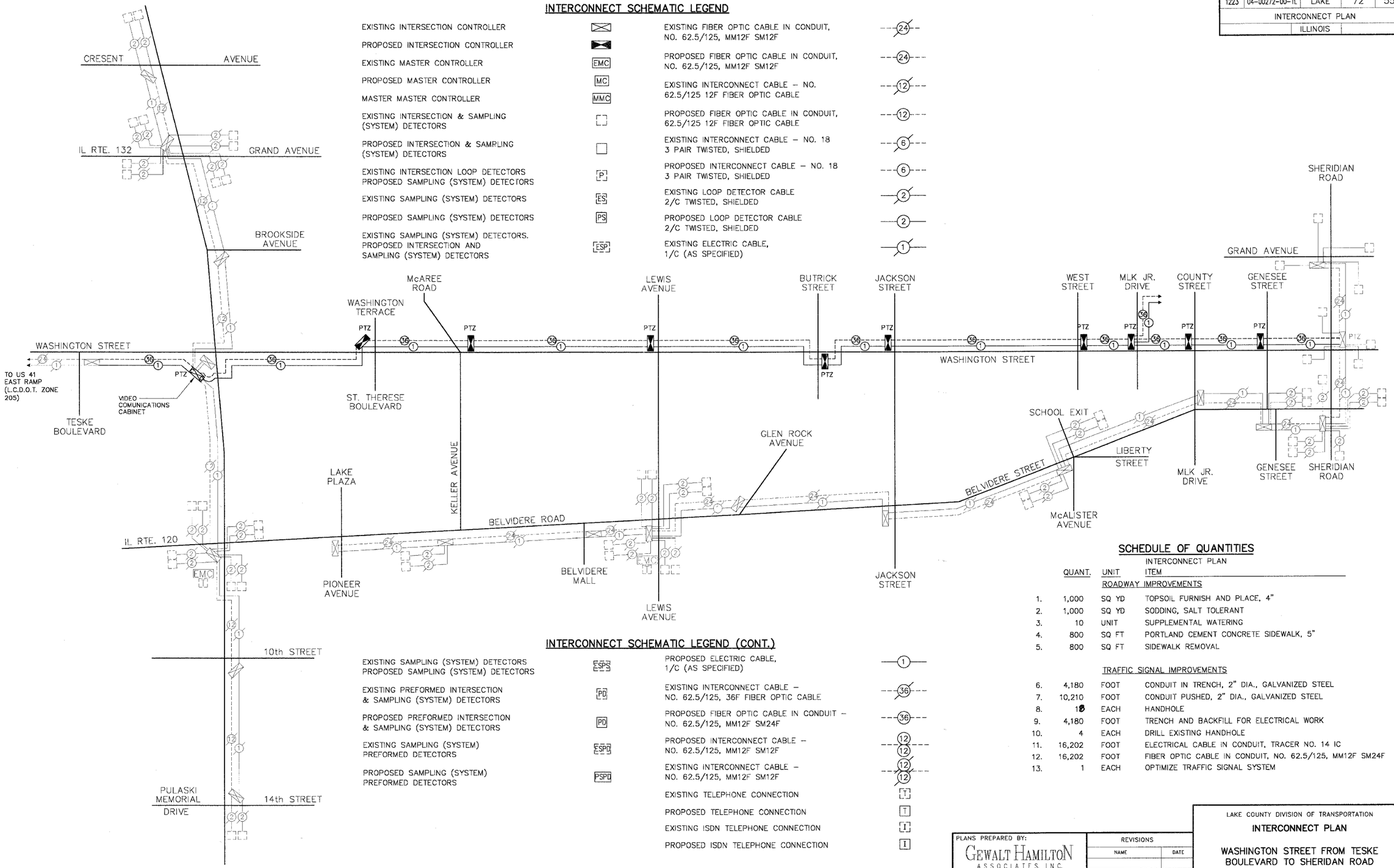
3744-CCOP-ALL-FRI.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	55
INTERCONNECT PLAN				
ILLINOIS				

INTERCONNECT SCHEMATIC LEGEND

EXISTING INTERSECTION CONTROLLER	⊠	EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	—24—
PROPOSED INTERSECTION CONTROLLER	⊠	PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	—24—
EXISTING MASTER CONTROLLER	EMC	EXISTING INTERCONNECT CABLE – NO. 62.5/125 12F FIBER OPTIC CABLE	—12—
PROPOSED MASTER CONTROLLER	MC	PROPOSED FIBER OPTIC CABLE IN CONDUIT, 62.5/125 12F FIBER OPTIC CABLE	—12—
MASTER MASTER CONTROLLER	MMC	EXISTING INTERCONNECT CABLE – NO. 18 3 PAIR TWISTED, SHIELDED	—6—
EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS	⬚	PROPOSED INTERCONNECT CABLE – NO. 18 3 PAIR TWISTED, SHIELDED	—6—
PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS	⬚	EXISTING LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED	—2—
EXISTING INTERSECTION LOOP DETECTORS PROPOSED SAMPLING (SYSTEM) DETECTORS	P	PROPOSED LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED	—2—
EXISTING SAMPLING (SYSTEM) DETECTORS	ES	EXISTING ELECTRIC CABLE, 1/C (AS SPECIFIED)	—1—
PROPOSED SAMPLING (SYSTEM) DETECTORS	PS		
EXISTING SAMPLING (SYSTEM) DETECTORS. PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS	ESP		



INTERCONNECT SCHEMATIC LEGEND (CONT.)

EXISTING SAMPLING (SYSTEM) DETECTORS PROPOSED SAMPLING (SYSTEM) DETECTORS	ESPS	PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED)	—1—
EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS	PD	EXISTING INTERCONNECT CABLE – NO. 62.5/125, 36F FIBER OPTIC CABLE	—36—
PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS	PD	PROPOSED FIBER OPTIC CABLE IN CONDUIT – NO. 62.5/125, MM12F SM24F	—36—
EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS	ESPD	PROPOSED INTERCONNECT CABLE – NO. 62.5/125, MM12F SM12F	—12— —12—
PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS	PSPD	EXISTING INTERCONNECT CABLE – NO. 62.5/125, MM12F SM12F	—12— —12—
		EXISTING TELEPHONE CONNECTION	T
		PROPOSED TELEPHONE CONNECTION	T
		EXISTING ISDN TELEPHONE CONNECTION	I
		PROPOSED ISDN TELEPHONE CONNECTION	I

SCHEDULE OF QUANTITIES

INTERCONNECT PLAN

	QUANT.	UNIT	ITEM
			ROADWAY IMPROVEMENTS
1.	1,000	SQ YD	TOPSOIL FURNISH AND PLACE, 4"
2.	1,000	SQ YD	SODDING, SALT TOLERANT
3.	10	UNIT	SUPPLEMENTAL WATERING
4.	800	SQ FT	PORTLAND CEMENT CONCRETE SIDEWALK, 5"
5.	800	SQ FT	SIDEWALK REMOVAL
			TRAFFIC SIGNAL IMPROVEMENTS
6.	4,180	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
7.	10,210	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
8.	18	EACH	HANDHOLE
9.	4,180	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
10.	4	EACH	DRILL EXISTING HANDHOLE
11.	16,202	FOOT	ELECTRICAL CABLE IN CONDUIT, TRACER NO. 14 IC
12.	16,202	FOOT	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F
13.	1	EACH	OPTIMIZE TRAFFIC SIGNAL SYSTEM

PLANS PREPARED BY:
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Consulting Engineers & Surveyors
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Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS

NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

INTERCONNECT PLAN

WASHINGTON STREET FROM TESKE BOULEVARD TO SHERIDAN ROAD

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

5744-LCDOT-ALL-PRO.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	56
MID-BLOCK PEDESTRIAN CROSSING				
ILLINOIS				

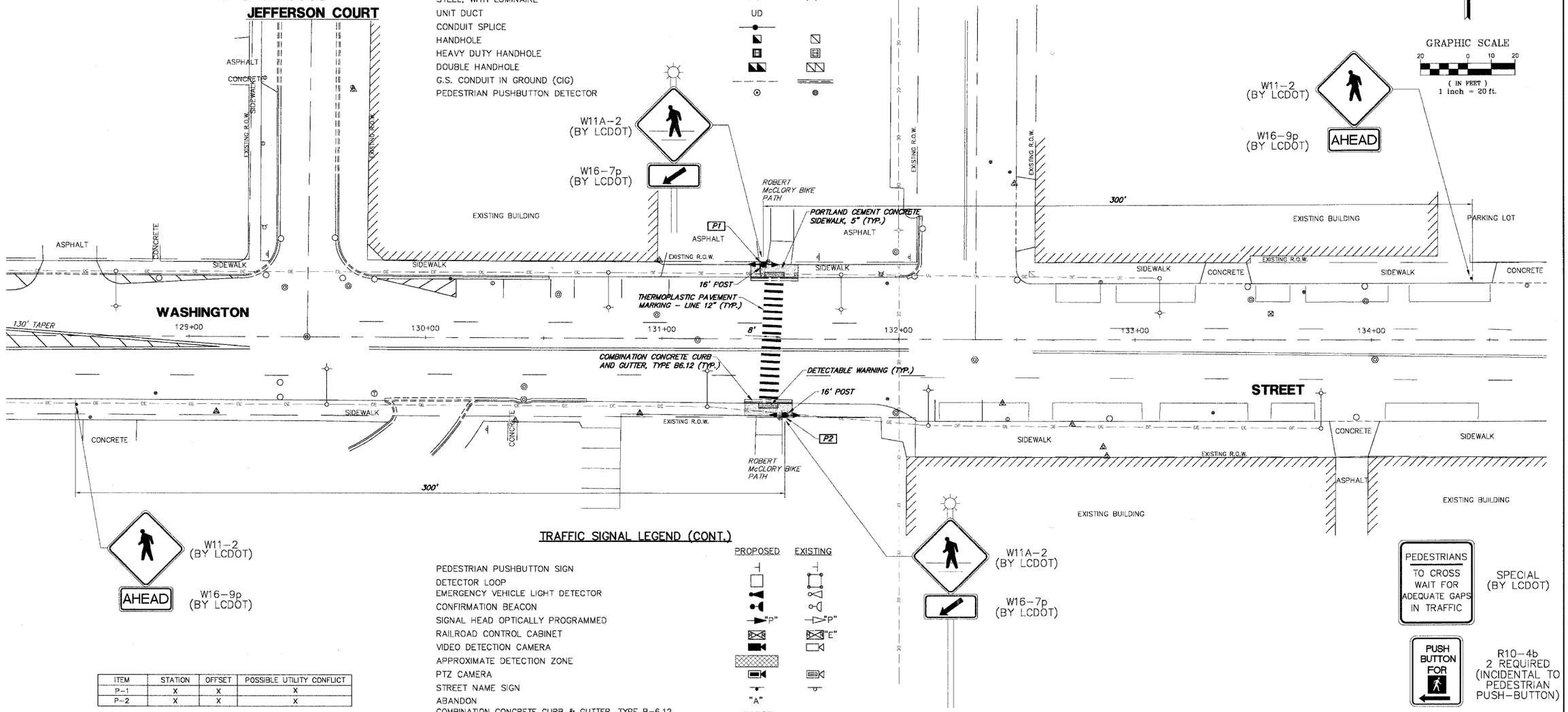
SCHEDULE OF QUANTITIES

WASHINGTON STREET AND ROBERT McCLORY BIKE PATH

	QUANT.	UNIT	ITEM
1.	200	SQ.FT.	PORTLAND CEMENT CONCRETE SIDEWALK, 5"
2.	32	SQ.FT.	DETECTABLE WARNING
3.	40	FOOT	COMBINATION CURB AND GUTTER REMOVAL
4.	200	SQ.FT.	SIDEWALK REMOVAL
5.	40	FOOT	COMBINATION CONCRETE CURB AND GUTTER, B6.12
6.	136	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 12"
7.	8	FOOT	CONCRETE FOUNDATION, TYPE A
8.	2	EACH	PEDESTRIAN PUSH-BUTTON
9.	2	EACH	TRAFFIC SIGNAL POST, 16 FT (SPECIAL)
10.	2	EACH	PEDESTRIAN ACTIVATED CROSSWALK WARNING SYSTEM

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	⊠	⊠
SERVICE INSTALLATION	■	⊟
SIGNAL HEAD	→	→
SIGNAL HEAD WITH BACKPLATE	+→	+→
SIGNAL HEAD, PEDESTRIAN	▮	▯
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●—	○—
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●—	○—
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL, WITH LUMINAIRE	●—✶	○—✶
UNIT DUCT	UD	
CONDUIT SPLICE	●—	
HANDHOLE	◪	◪
HEAVY DUTY HANDHOLE	⊟	⊟
DOUBLE HANDHOLE	◪◪	◪◪
G.S. CONDUIT IN GROUND (CIG)		
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	⊙



TRAFFIC SIGNAL LEGEND (CONT.)

	PROPOSED	EXISTING
PEDESTRIAN PUSHBUTTON SIGN	⊣	⊣
DETECTOR LOOP	□	□
EMERGENCY VEHICLE LIGHT DETECTOR	◢	◢
CONFIRMATION BEACON	●◢	○◢
SIGNAL HEAD OPTICALLY PROGRAMMED	→"P"	→"P"
RAILROAD CONTROL CABINET	⊠	⊠"E"
VIDEO DETECTION CAMERA	■	◻
APPROXIMATE DETECTION ZONE	▨	
PTZ CAMERA	▣	▣
STREET NAME SIGN	⊸	⊸
ABANDON	"A"	
COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 OR TYPE B-6.24		
SIDEWALK REMOVAL		
PORTLAND CEMENT CONCRETE SIDEWALK, 5"		
DRIVEWAY REMOVAL		
PORTLAND CEMENT CONCRETE DRIVEWAY, 8"		
VIDEO COMMUNICATIONS CABINET	⊠	⊠"E"
TELEPHONE DROP	T	T
DETECTABLE WARNING	▭	

ITEM	STATION	OFFSET	POSSIBLE UTILITY CONFLICT
P-1	X	X	X
P-2	X	X	X

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

SPECIAL (BY LCDOT)

R10-4b
2 REQUIRED
(INCIDENTAL TO PEDESTRIAN PUSH-BUTTON)

PLANS PREPARED BY:

GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

MID-BLOCK PEDESTRIAN CROSSING

WASHINGTON STREET AND ROBERT McCLORY BIKE PATH

SCALE: 1"=20'
DATE: MAY 1, 2007

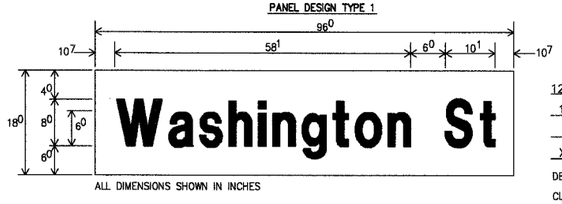
DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-LSD7-ALL-TRI.dwg

CONTRACT NO: 83932

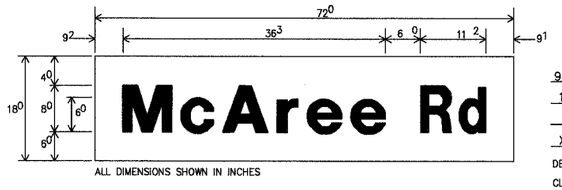
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	57
STA.	TO STA.			
	ILLINOIS			

PANEL DESIGN TYPE 1



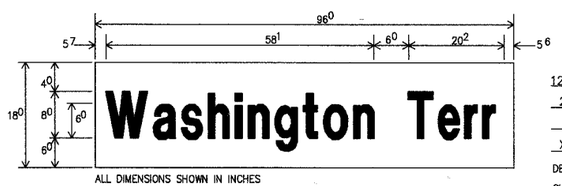
ALL DIMENSIONS SHOWN IN INCHES

12.0 SQ. FT. EACH
18 REQUIRED
____ SINGLE SIDED REQUIRED
X DOUBLE SIDED REQUIRED
DESIGN SERIES D
CLEARVIEW FONT



ALL DIMENSIONS SHOWN IN INCHES

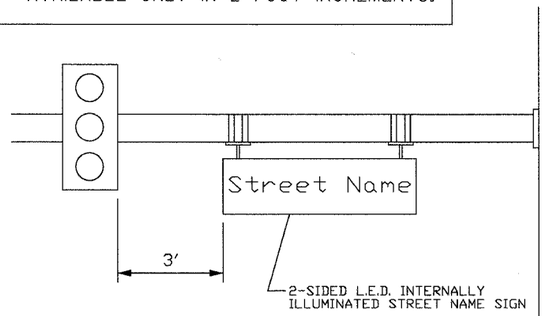
9.0 SQ. FT. EACH
1 REQUIRED
____ SINGLE SIDED REQUIRED
X DOUBLE SIDED REQUIRED
DESIGN SERIES D
CLEARVIEW FONT



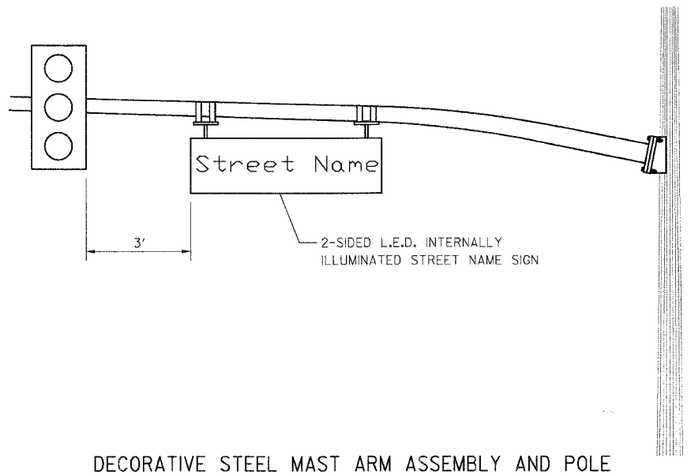
ALL DIMENSIONS SHOWN IN INCHES

12.0 SQ. FT. EACH
2 REQUIRED
____ SINGLE SIDED REQUIRED
X DOUBLE SIDED REQUIRED
DESIGN SERIES D
CLEARVIEW FONT

NOTE: L.E.D. ILLUMINATED STREET NAME SIGNS AVAILABLE ONLY IN 2 FOOT INCREMENTS.



REGULAR STEEL MAST ARM ASSEMBLY AND POLE



DECORATIVE STEEL MAST ARM ASSEMBLY AND POLE

REVISIONS	
NAME	DATE
COMBINED SHEETS	2/1/07

LakeCounty Division of Transportation

MAST ARM MOUNTED STREET NAME SIGNS

SCALE: NONE SHEET 1 OF 3 DESIGNED BY: JPS
DATE: 7/26/06 CHECKED BY: ANK

3744-SIGNF-ALL-PRT.dwg

TRAFFIC SIGNAL MODERNIZATIONS
WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

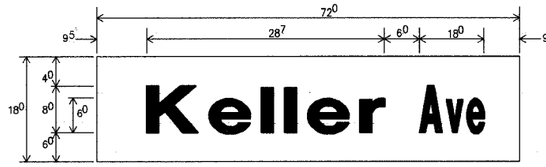
PROJ. # 3744.000
DATE MAY 1, 2007

SHEET 57 OF 72

CONTRACT NO: 83932

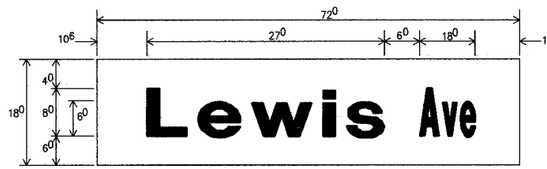
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	58
STA.		TO STA.		
		ILLINOIS		

PANEL DESIGN TYPE 1



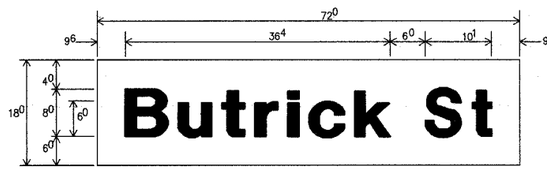
ALL DIMENSIONS SHOWN IN INCHES

9.0 SQ. FT. EACH
1 REQUIRED
___ SINGLE SIDED REQUIRED
X DOUBLE SIDED REQUIRED
DESIGN SERIES D
CLEARVIEW FONT



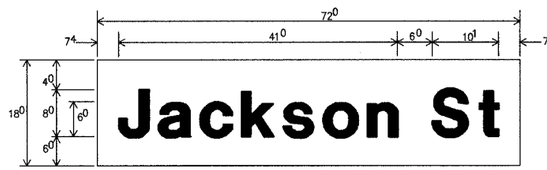
ALL DIMENSIONS SHOWN IN INCHES

9.0 SQ. FT. EACH
2 REQUIRED
___ SINGLE SIDED REQUIRED
X DOUBLE SIDED REQUIRED
DESIGN SERIES D
CLEARVIEW FONT



ALL DIMENSIONS SHOWN IN INCHES

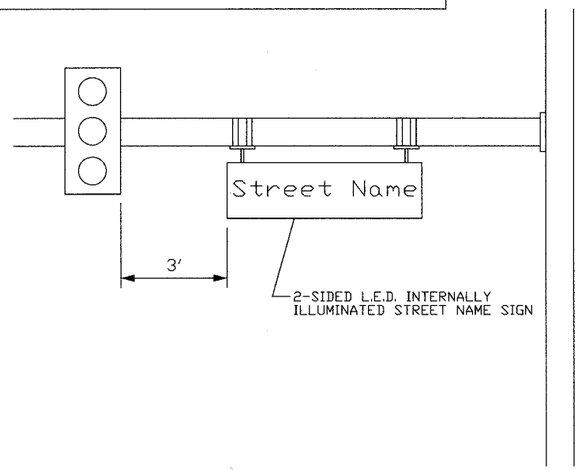
9.0 SQ. FT. EACH
2 REQUIRED
___ SINGLE SIDED REQUIRED
X DOUBLE SIDED REQUIRED
DESIGN SERIES D
CLEARVIEW FONT



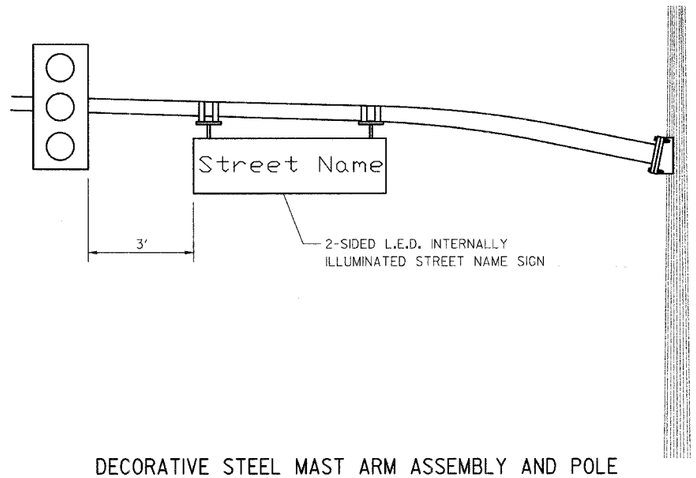
ALL DIMENSIONS SHOWN IN INCHES

9.0 SQ. FT. EACH
2 REQUIRED
___ SINGLE SIDED REQUIRED
X DOUBLE SIDED REQUIRED
DESIGN SERIES D
CLEARVIEW FONT

NOTE: L.E.D. ILLUMINATED STREET NAME SIGNS AVAILABLE ONLY IN 2 FOOT INCREMENTS.



REGULAR STEEL MAST ARM ASSEMBLY AND POLE



DECORATIVE STEEL MAST ARM ASSEMBLY AND POLE

REVISIONS	
NAME	DATE
COMBINED SHEETS	2/1/07

LakeCounty Division of Transportation

MAST ARM MOUNTED STREET NAME SIGNS

SCALE: NONE SHEET 2 OF 3 DESIGNED BY: JPS
DATE: 7/26/06 CHECKED BY: ANK

3744-(001)-ALL-PRI.dwg

TRAFFIC SIGNAL MODERNIZATIONS
WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

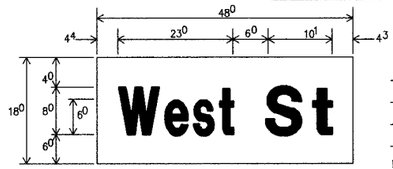
PROJ. # 3744.000
DATE MAY 1, 2007

SHEET 58 OF 72

CONTRACT NO: 83932

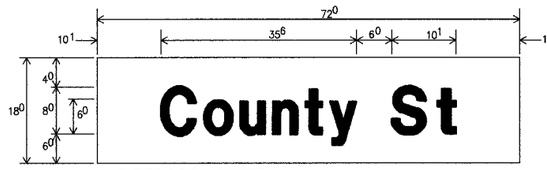
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	59
STA.	TO STA.			
	ILLINOIS			

PANEL DESIGN TYPE 1



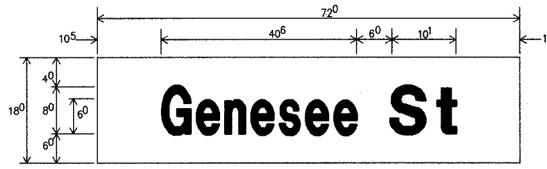
ALL DIMENSIONS SHOWN IN INCHES

6.0 SQ. FT. EACH
2 REQUIRED
___ SINGLE SIDED REQUIRED
X DOUBLE SIDED REQUIRED
DESIGN SERIES D
CLEARVIEW FONT



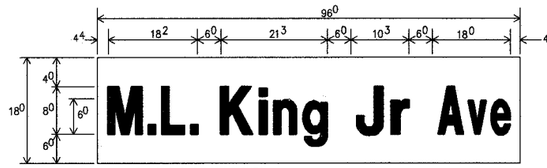
ALL DIMENSIONS SHOWN IN INCHES

9.0 SQ. FT. EACH
2 REQUIRED
___ SINGLE SIDED REQUIRED
X DOUBLE SIDED REQUIRED
DESIGN SERIES D
CLEARVIEW FONT



ALL DIMENSIONS SHOWN IN INCHES

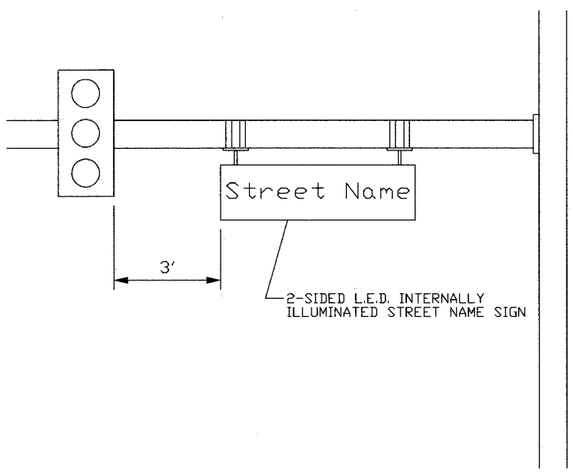
9.0 SQ. FT. EACH
2 REQUIRED
___ SINGLE SIDED REQUIRED
X DOUBLE SIDED REQUIRED
DESIGN SERIES D
CLEARVIEW FONT



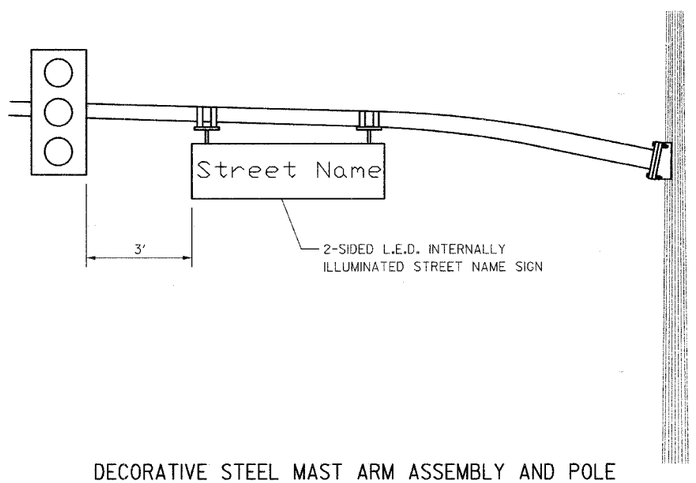
ALL DIMENSIONS SHOWN IN INCHES

12.0 SQ. FT. EACH
2 REQUIRED
___ SINGLE SIDED REQUIRED
X DOUBLE SIDED REQUIRED
DESIGN SERIES D
CLEARVIEW FONT

NOTE: L.E.D. ILLUMINATED STREET NAME SIGNS AVAILABLE ONLY IN 2 FOOT INCREMENTS.



REGULAR STEEL MAST ARM ASSEMBLY AND POLE



DECORATIVE STEEL MAST ARM ASSEMBLY AND POLE

REVISIONS.	
NAME	DATE
COMBINED SHEETS	2/1/07

LakeCounty Division of Transportation

MAST ARM MOUNTED STREET NAME SIGNS

SCALE: NONE SHEET 3 OF 3 DESIGNED BY: JPS
DATE: 7/26/06 CHECKED BY: ANK

3744-(DOT-ALL-PR1.dwg

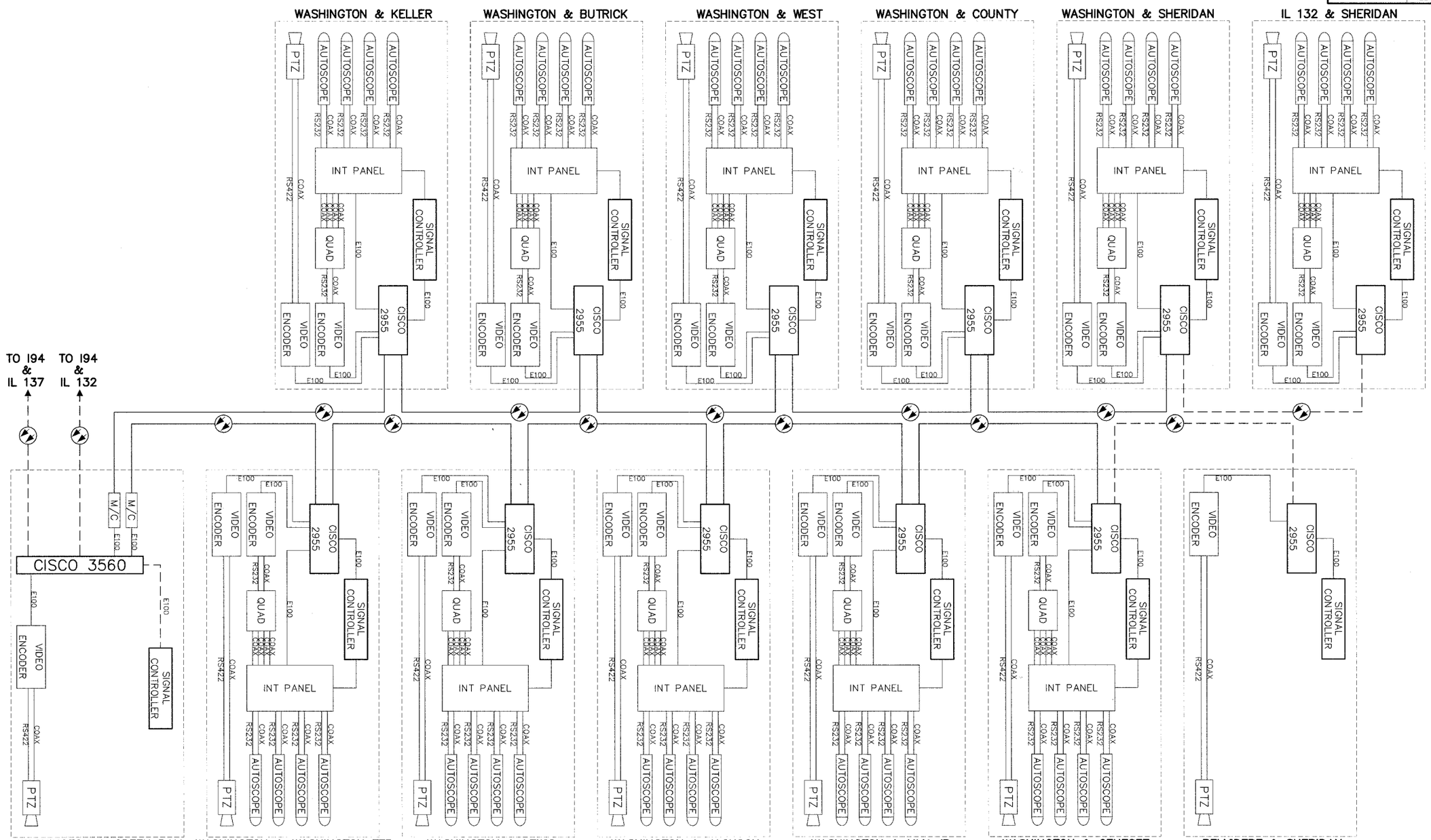
TRAFFIC SIGNAL MODERNIZATIONS
WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

PROJ. # 3744.000
DATE: MAY 1, 2007

SHEET 59 OF 72

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	60
VIDEO SYSTEM SCHEMATIC				
ILLINOIS				



Delcan

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

VIDEO SYSTEM SCHEMATIC (SHEET 1 OF 2)

WASHINGTON STREET FROM TESKE BOULEVARD TO SHERIDAN ROAD

SCALE: NONE
DATE: MAY 1, 2007

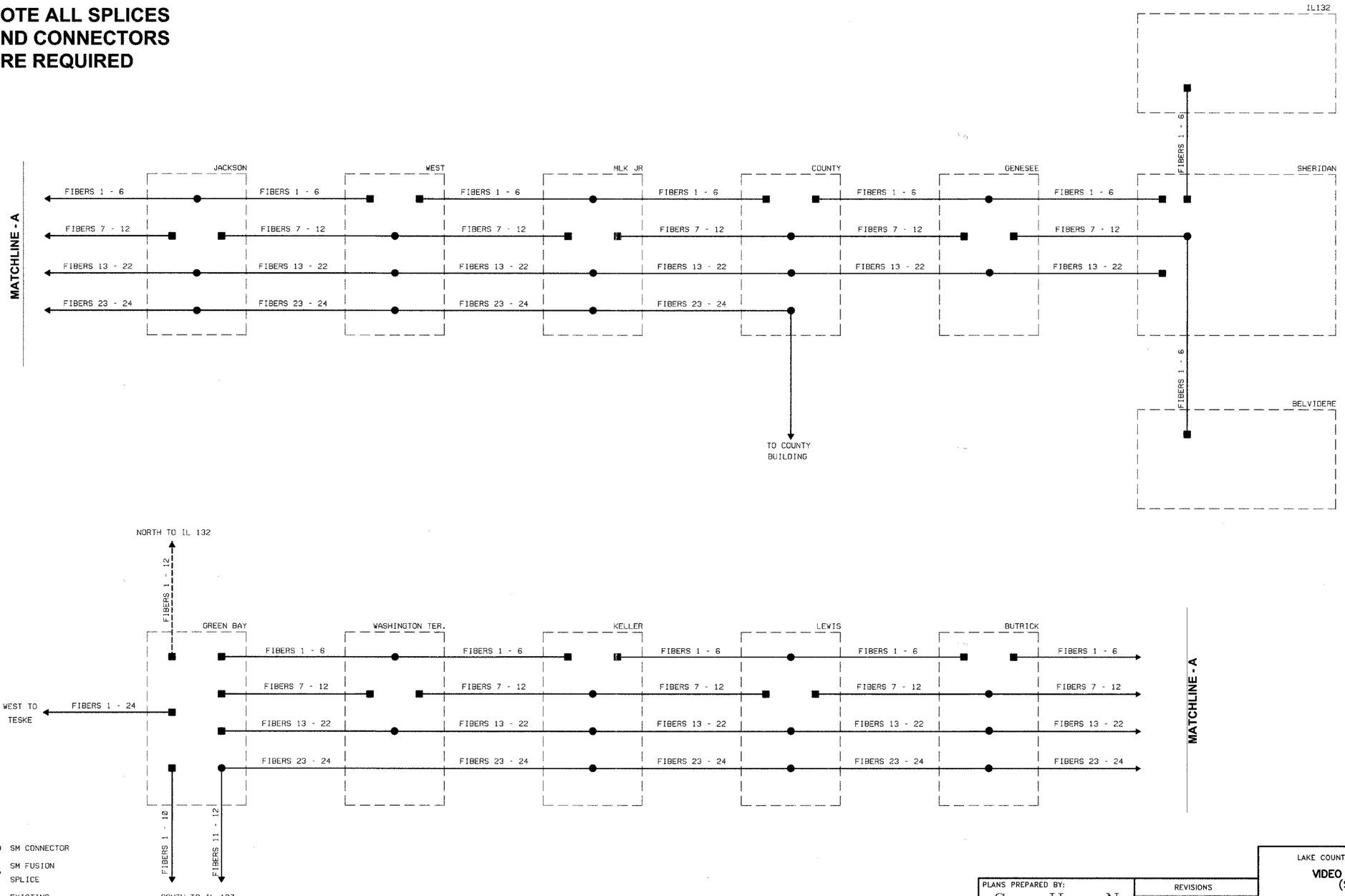
DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

T:\14-02017-ALL-PRP.dwg

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	61
VIDEO SYSTEM SCHEMATIC				
	ILLINOIS			

NOTE ALL SPLICES AND CONNECTORS ARE REQUIRED



Delcan

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

VIDEO SYSTEM SCHEMATIC (SHEET 2 OF 2)

WASHINGTON STREET FROM TESKE BOULEVARD TO SHERIDAN ROAD

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

3744-LDOT-ALL-PRI.dwg

CONTRACT NO: 83932

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	62
LCDOT TS DESIGN DETAILS SHT 1 OF 2				
ILLINOIS				

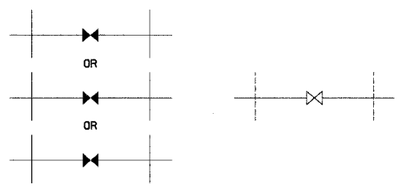
VIDEO SYSTEM SCHEMATIC LEGEND

	PROPOSED	EXISTING
CABINET		
VIDEO EQUIPMENT	3 VDC 1 PTZ 1 LAYER 2 SWITCH	3 VDC 1 PTZ 1 LAYER 2 SWITCH
FIBER OPTIC CABLE	12 (OR 24) TOTAL SM FIBERS SPLICE 6 (OR 12, 18, 24), TERMINATE 6 (OR 12, 18, 24)	12 (OR 24) TOTAL SM FIBERS 6 (OR 12, 18, 24) SPLICED, 6 (OR 12, 18, 24) TERMINATED

VDC = VIDEO DETECTION CAMERA

PTZ = PAN/TILT/ZOOM CAMERA

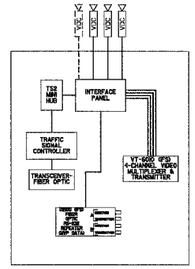
FIBER OPTIC FUSION SPLICE



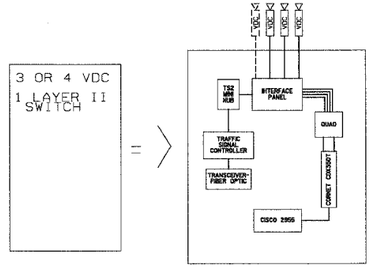
FIBER OPTIC TERMINATION

CABINET CONFIGURATIONS

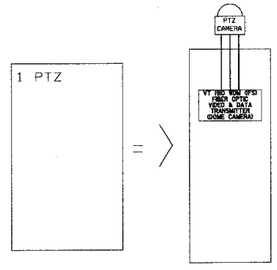
3 OR 4 VDC =



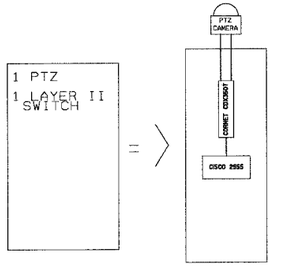
3 OR 4 VDC
1 LAYER II SWITCH =



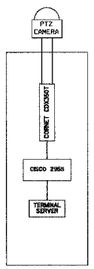
1 PTZ =



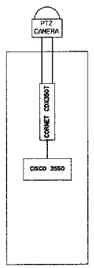
1 PTZ
1 LAYER II SWITCH =



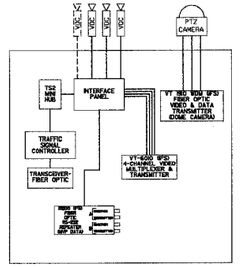
1 PTZ
1 LAYER II SWITCH
1 TERMINAL SERVER =



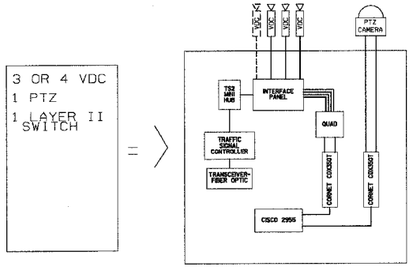
1 PTZ
1 LAYER III SWITCH =



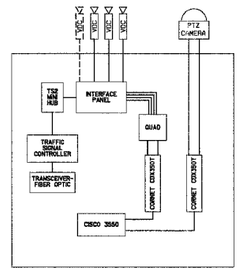
3 OR 4 VDC
1 PTZ =



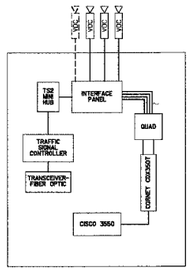
3 OR 4 VDC
1 PTZ
1 LAYER II SWITCH =



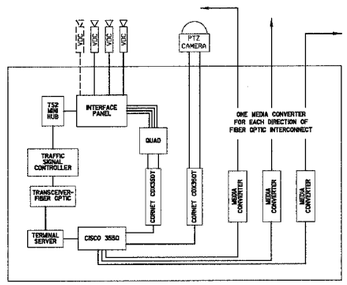
3 OR 4 VDC
1 PTZ
1 LAYER III SWITCH =



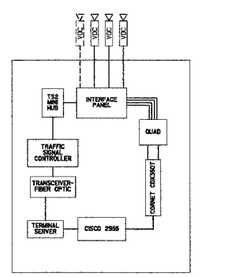
3 OR 4 VDC
1 LAYER III SWITCH =



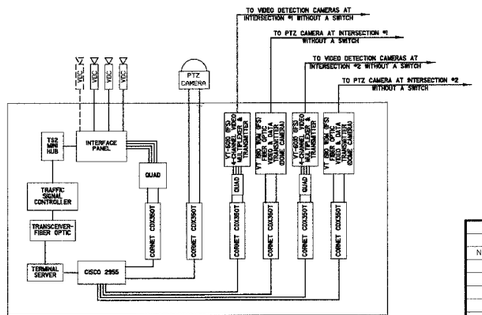
3 OR 4 VDC
1 PTZ
1 LAYER III SWITCH
1 TERMINAL SERVER
X MEDIA CONVERTERS =



3 OR 4 VDC
1 LAYER II SWITCH
1 TERMINAL SERVER =



3 OR 4 VDC
1 PTZ
1 LAYER II SWITCH
1 TERMINAL SERVER
X ADDT'L ENCODERS =



REVISIONS	
NAME	DATE
NEW TITLE BLOCKS-JPS	2/1/07

LakeCounty Division of Transportation

STANDARD TRAFFIC SIGNAL DESIGN DETAILS SHEET 1 OF 2

SCALE: N.T.S. DESIGNED BY: JPS

DATE: 05/20/05 CHECKED BY: ANK

3744-LCDOT-ALL-PRI.dwg

TRAFFIC SIGNAL MODERNIZATIONS
WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

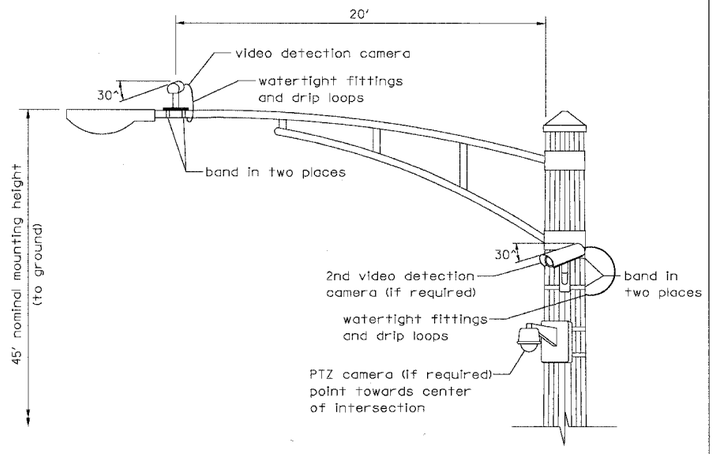
PROJ # 3744.000

DATE: MAY 1, 2007

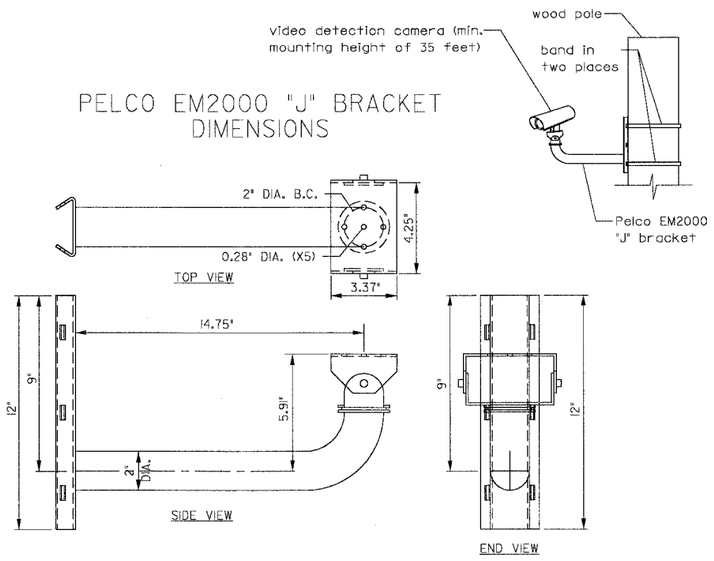
SHEET 62 OF 72

CONTRACT NO: 83932

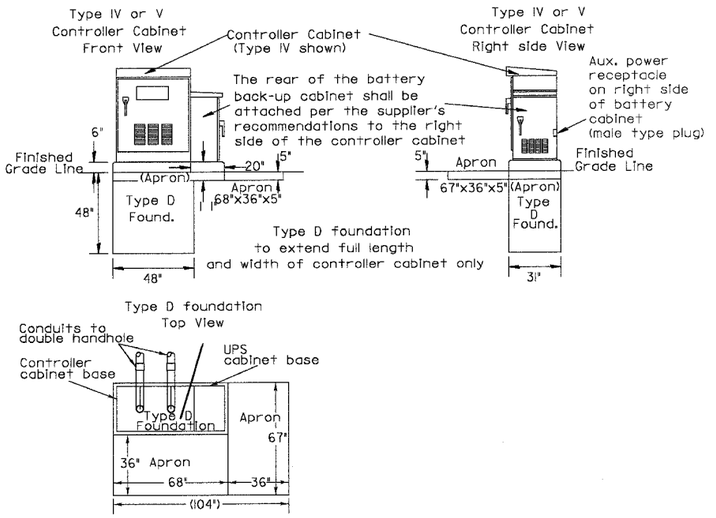
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	63
LCDOT TS DESIGN DETAILS SHT 2 OF 2				
	ILLINOIS			



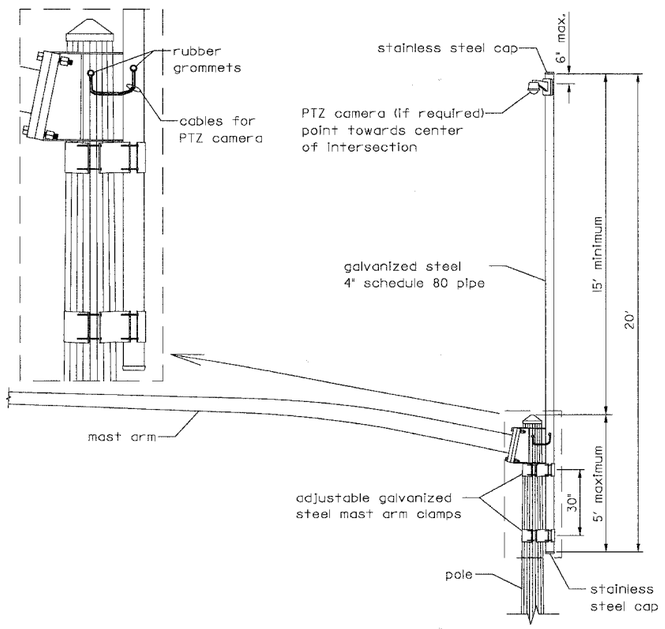
VIDEO DETECTION CAMERA(S) AND PTZ CAMERA MOUNTING DETAIL
(NOT TO SCALE)



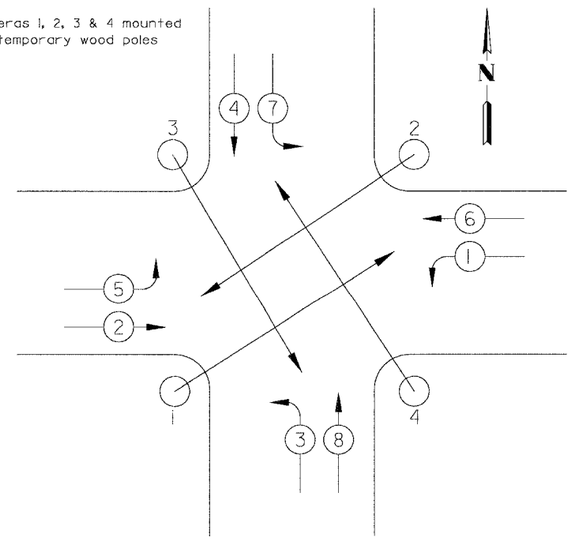
VIDEO DETECTION CAMERA MOUNTING DETAIL FOR TEMPORARY TRAFFIC SIGNALS
(NOT TO SCALE)



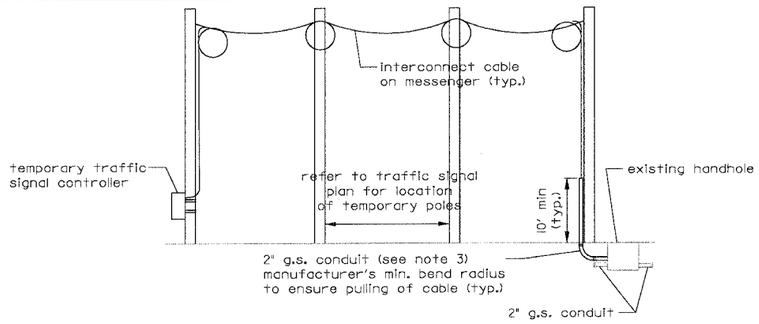
UNINTERRUPTABLE POWER SUPPLY (UPS) CABINET INSTALLATION DETAIL
(NOT TO SCALE)



CAMERA MOUNTING ASSEMBLY DETAIL FOR NON-COMBINATION MAST ARMS
(NOT TO SCALE)



VIDEO DETECTION CAMERA ASSIGNMENT FOR TEMPORARY TRAFFIC SIGNALS
(NOT TO SCALE)



1) Transfer of existing to temporary interconnect cable must be completed in one working day during non-peak hours or as directed by the Engineer.

2) The existing interconnect cable shall be removed after the proposed interconnect is turned on.

3) The 2" conduit used for the temporary interconnect cable shall be removed to below the ground level and capped at the time the temporary traffic signal is removed. The conduit shall be incidental to the cost of the Temporary Traffic Signal Installation.

4) The Contractor must notify the County Traffic Engineer a minimum of seven working days prior to the start of any work on the traffic signal interconnect system.

AERIALLY SUPPORTED INTERCONNECT CABLE
(NOT TO SCALE)

REVISIONS	
NAME	DATE
UPS SCHEMATIC REVISED	2/1/07

LakeCounty Division of Transportation

STANDARD TRAFFIC SIGNAL DESIGN DETAILS SHEET 2 OF 2

SCALE: N.T.S. DESIGNED BY: JPS
DATE: 05/20/05 CHECKED BY: ANK

3744-LD01-ALL-PRE.dwg

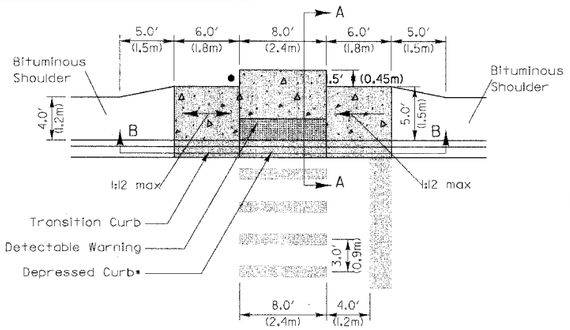
TRAFFIC SIGNAL MODERNIZATIONS
WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

PROJ # 3744.000
DATE MAY 1, 2007

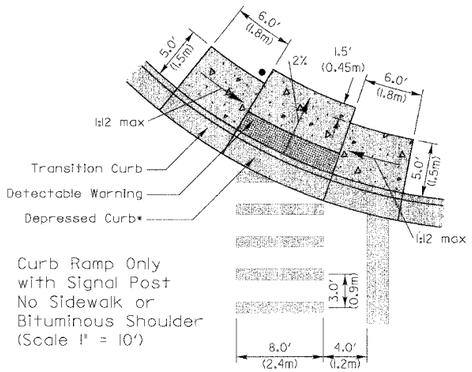
SHEET 63 OF 72

CONTRACT NO: 83932

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	64
LCDOT CURB RAMPS FOR TS POSTS & MAST ARMS				
	ILLINOIS			

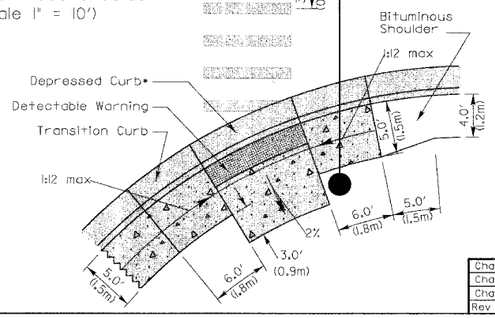


Curb Ramp with Signal Post & Transitions to Bituminous Shoulders
(Scale 1" = 10')



Curb Ramp Only with Signal Post No Sidewalk or Bituminous Shoulder
(Scale 1" = 10')

Curb Ramp with Mast Arm, Concrete Sidewalk & Bituminous Shoulder
(Scale 1" = 10')



*GENERAL NOTES:

1. The gutter slope for the DEPRESSED CURB adjacent to the curb ramp is a maximum of 5% (standard curb and gutter is 6%). The back of curb rise is ⅜" (standard depressed curb is ½"). See Section A-A (LC6013B) and IDOT standard 606001 for the different curb dimensions.

2. The Depressed Curb and the Transition Curb will be paid for as COMBINATION CONCRETE CURB AND GUTTER of the type adjacent to the curb ramp.

3. The concrete area consisting of the landing (2% slope) and the side ramps (behind the transition curb) along with the continuation of the 5' (1.5m) concrete between adjacent ramps (if any) will be measured in square feet and paid for as PORTLAND CEMENT CONCRETE SIDEWALK of the thickness specified.

4. The detectable warnings shall be installed inaccordance with BDE specification 80146 DETECTABLE WARNINGS and shall be measured and paid for per square foot.

5. Since the width of the flag doesn't affect the construction of the ramp, both B-6.12 and B-6.24 Curb & Gutter are portrayed in this standard.

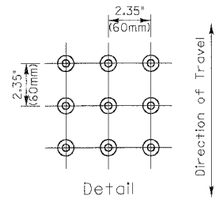
REVISIONS	DATE
Changed General Notes	6/15/05
Changed General Notes	12/7/05
Changed General Notes	1/17/06
Rev Det Warng Location	6/6/06

LakeCounty Division of Transportation

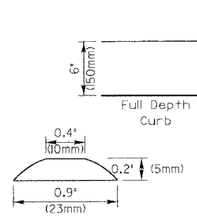
APPROVED BY: G. N. Wiesner
DATE: 5/10/05

CURB RAMPS WITH TRAFFIC SIGNAL POSTS & MAST ARMS
(SHEET 1 OF 2)

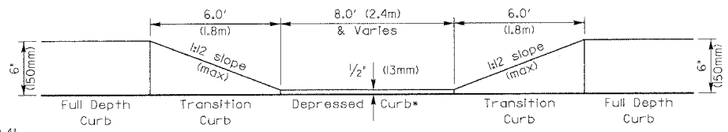
LC6013 A



Detail
Detectable Warnings
Square Pattern
(Scale 1" = 6")

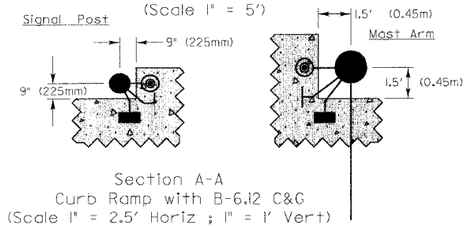


Detail
Truncated Dome
(Scale 1" = 1")

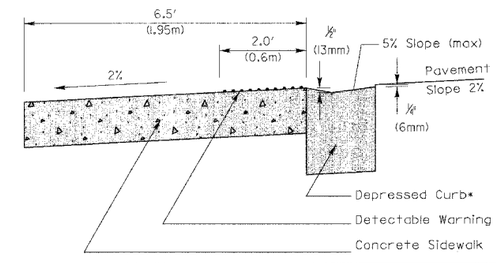


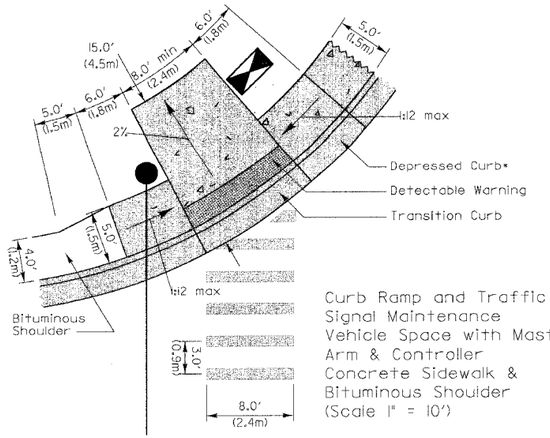
Section B-B
Curb Ramp - Face of Curb
(Scale 1" = 2.5' Horiz ; 1" = 1' Vert)

Location Details
Signal Post & Mast Arm
(Scale 1" = 5')



Section A-A
Curb Ramp with B-6.12 C&G
(Scale 1" = 2.5' Horiz ; 1" = 1' Vert)





Curb Ramp and Traffic Signal Maintenance Vehicle Space with Mast Arm & Controller Concrete Sidewalk & Bituminous Shoulder
(Scale 1" = 10')

REVISIONS	DATE
Rev Det Warng Location	6/6/06

LakeCounty Division of Transportation

APPROVED BY: G. N. Wiesner
DATE: 5/10/05

CURB RAMPS WITH TRAFFIC SIGNAL POSTS & MAST ARMS
(SHEET 2 OF 2)

LC6013 B

PLANS PREPARED BY:

GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
550 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS	
NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

CURB RAMPS WITH TRAFFIC SIGNAL POSTS & MAST ARMS

WASHINGTON STREET FROM TESKE BOULEVARD TO SHERIDAN ROAD

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

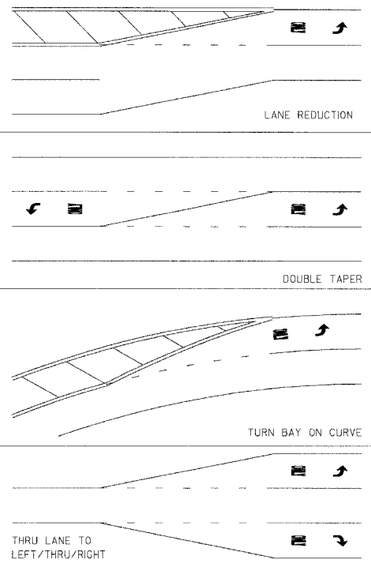
3744-LCDOT-ALL-PRT.dwg

CONTRACT NO: 83932

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	65
TYPICAL PAVEMENT MARKINGS				
ILLINOIS				

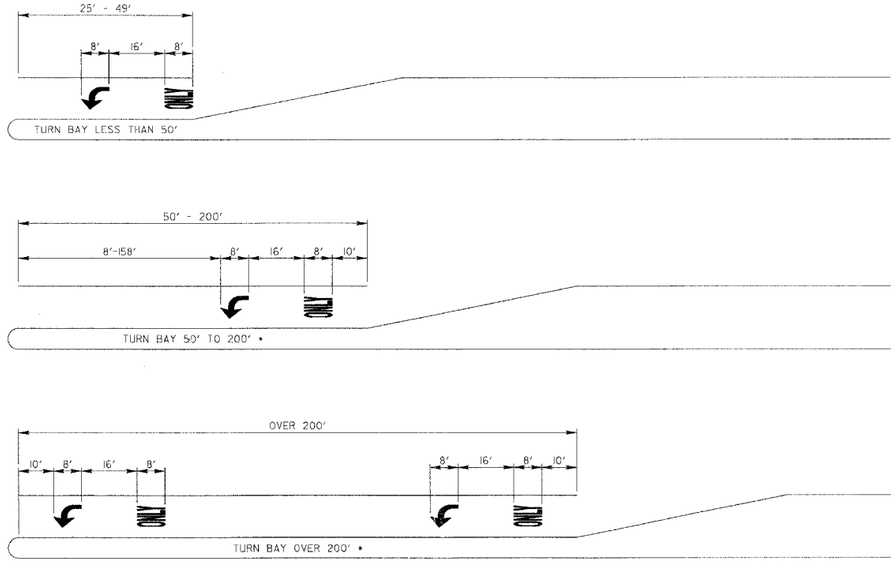
TYPICAL PAVEMENT MARKINGS

TYPICAL MINI-SKIP PAVEMENT MARKINGS



MINI-SKIPS ARE 2 FEET WHITE LINE WITH 6 FEET SPACING. THE MINI-SKIP IS THE SAME WIDTH AS THE PAVEMENT MARKING LINE, IT EXTENDS.

TYPCIAL TURN BAY PAVEMENT MARKINGS



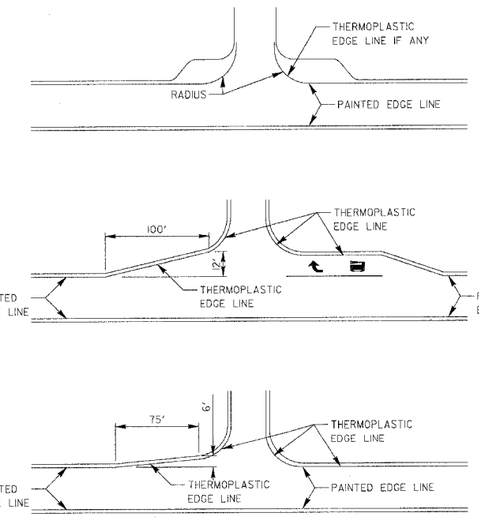
AREA = 15.6 SQ. FT.

AREA = 20.8 SQ FT.

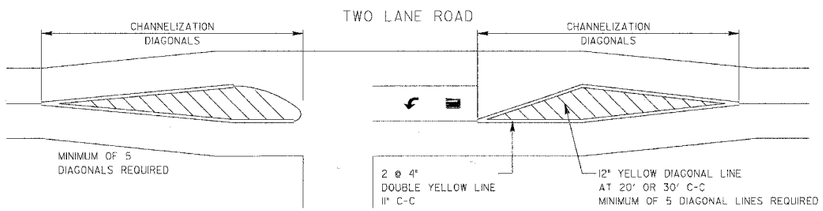
• AT INTERSECTIONS WITH VIDEO DETECTION, THE ARROW AND ONLY PAVEMENT MARKINGS SHALL BE A MINIMUM OF 30' BEHIND THE STOP BAR.

FULL SIZE LETTERS (8') AND ARROWS SHALL BE USED. TURN LANES IN EXCESS OF 400' IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW W/ "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW W/ "ONLY".

EDGE LINE RADII AT SIDE STREETS

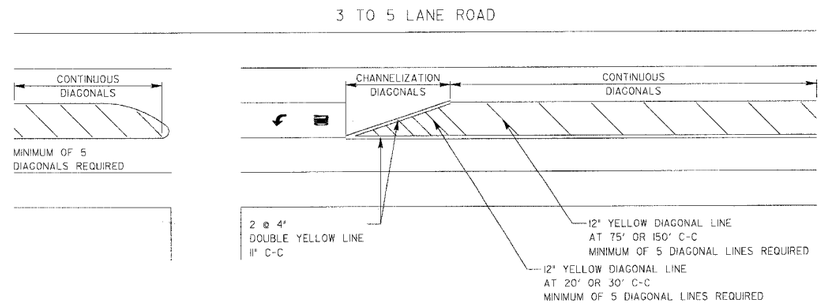


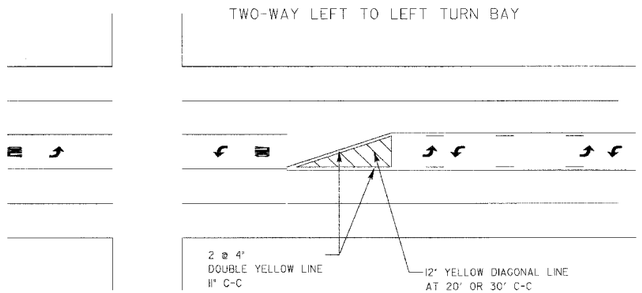
TYPICAL DIAGONAL SPACING



DIAGONAL SPACING

SPEED LIMIT RANGE	CONTINUOUS	INTERSECTION CHANNELIZATION
30-45 MPH	75 FT.	20 FT.
OVER 45 MPH	150 FT.	30 FT.





DUAL LEFT TURN ARROWS

31.2 SQ. FT. MINIMUM OF 2 SETS REQUIRED

A MINIMUM OF TWO PAIRS OF DUAL LEFT TURN ARROWS SHALL BE USED. THE DUAL LEFT TURN ARROWS SHALL BE WHITE IN COLOR. THE INTERVAL BETWEEN SETS OF DUAL LEFT TURN ARROWS SHOULD BE 200' AND 300'.

REVISIONS	
NAME	DATE
JOHN SAUTER	7/7/99
JOHN SAUTER	11/01/01
JOHN SAUTER	5/4/05

LakeCounty Division of Transportation

TYPICAL PAVEMENT MARKINGS FOR COUNTY HIGHWAYS

SCALE: N.T.S. SHEET 1 OF 3 DESIGNED BY: JPS

DATE: 1/12/98 CHECKED BY: ANK

3744-0001-ALL-PAVE.dwg

TRAFFIC SIGNAL MODERNIZATIONS
WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

PROJ. # 3744.000

DATE MAY 1, 2007

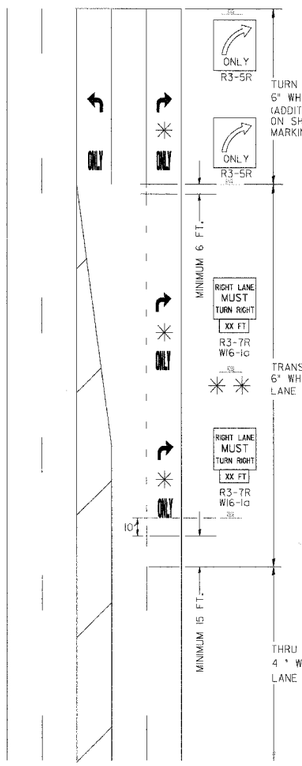
SHEET 65 OF 72

CONTRACT NO: 83932

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	66
TYPICAL PAVEMENT MARKINGS AND MARKERS				
ILLINOIS				

TYPICAL PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS

THRU LANE TO TURN LANE CONVERSION



TURN BAY
6" WHITE LINE
(ADDITIONAL PAV'T MARKINGS AS SHOWN ON SHEET ONE OF THE I.C.D.O.T PAV'T MARKINGS DETAIL SHEETS)

TRANSITION ZONE
6" WHITE 3'/12' SKIP DASH LANE LINE

THRU LANE
4 " WHITE 10'/30' SKIP DASH LANE LINE

✳✳ FOR POSTED SPEEDS 40 M.P.H. OR GREATER A SECOND R3-7/W16-1a SIGN INSTALLATION SHALL BE LOCATED HALFWAY BETWEEN THE BEGINNING OF THE TRANSITION ZONE AND THE BEGINNING OF THE TURN LANE

MINIMUM TRANSITION ZONE LENGTH

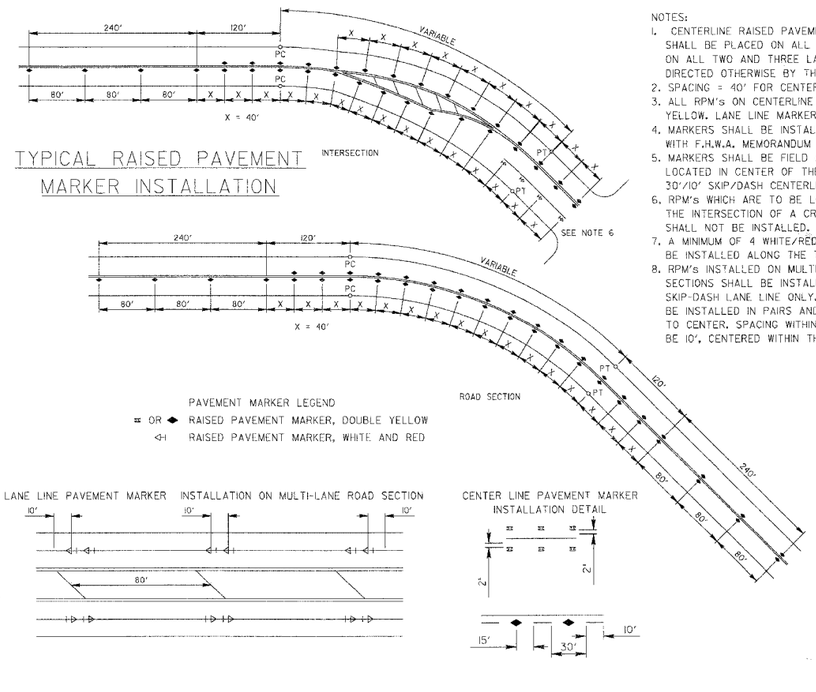
POSTED SPEED	LENGTH
25 M.P.H.	255 FT.
30 M.P.H.	330 FT.
35 M.P.H.	405 FT.
40 M.P.H.	480 FT.
45 M.P.H.	555 FT.
50 M.P.H.	630 FT.
55 M.P.H.	705 FT.

✳ LOCATION OF PAV'T MARKINGS

(MEASURED FROM BEGINNING OF TRANSITION ZONE)

POSTED SPEED	LOCATION OF PAV'T MARKINGS
25 M.P.H.	10 FT., 260 FT.
30 M.P.H.	10 FT., 170 FT., 340 FT.
35 M.P.H.	10 FT., 210 FT., 410 FT.
40 M.P.H.	10 FT., 170FT., 330 FT., 490 FT.
45 M.P.H.	10 FT., 190 FT., 370 FT., 560 FT.
50 M.P.H.	10 FT., 170 FT., 330 FT., 490 FT., 640 FT.
55 M.P.H.	10 FT., 180 FT., 350 FT., 520 FT., 710 FT.

TYPICAL RAISED PAVEMENT MARKER INSTALLATION



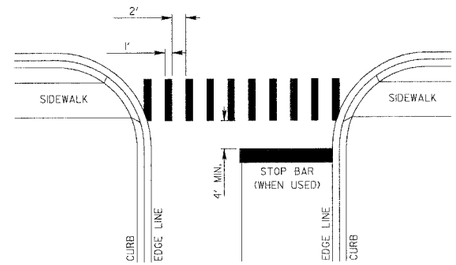
PAVEMENT MARKER LEGEND
✳ OR ◆ RAISED PAVEMENT MARKER, DOUBLE YELLOW
◁H RAISED PAVEMENT MARKER, WHITE AND RED

LANE LINE PAVEMENT MARKER INSTALLATION ON MULTI-LANE ROAD SECTION

CENTER LINE PAVEMENT MARKER INSTALLATION DETAIL

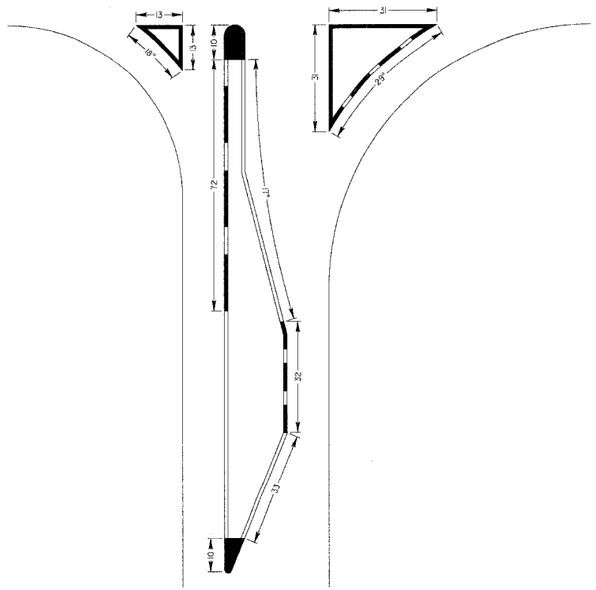
NOTES:
1. CENTERLINE RAISED PAVEMENT MARKERS (RPM's) SHALL BE PLACED ON ALL CURVES OVER 3 1/2 DEGREES ON ALL TWO AND THREE LANE HIGHWAYS, UNLESS DIRECTED OTHERWISE BY THE ENGINEER..
2. SPACING = 40' FOR CENTERLINE MARKERS.
3. ALL RPM's ON CENTERLINE ARE 2-WAY YELLOW. LANE LINE MARKERS ARE WHITE/RED.
4. MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH F.H.W.A. MEMORANDUM HIO-21.
5. MARKERS SHALL BE FIELD ADJUSTED TO BE LOCATED IN CENTER OF THE 30' GAP OF A 30'/10' SKIP/DASH CENTERLINE.
6. RPM's WHICH ARE TO BE LOCATED WITHIN THE INTERSECTION OF A CROSS STREET, SHALL NOT BE INSTALLED.
7. A MINIMUM OF 4 WHITE/RED MARKERS SHALL BE INSTALLED ALONG THE TURN LANE LINE.
8. RPM's INSTALLED ON MULTI-LANE ROAD SECTIONS SHALL BE INSTALLED ON THE WHITE SKIP-DASH LANE LINE ONLY. THESE RPM's SHALL BE INSTALLED IN PAIRS AND SHALL BE 80' CENTER TO CENTER. SPACING WITHIN EACH PAIR SHALL BE 10', CENTERED WITHIN THE 30' SKIP.

CROSSWALKS



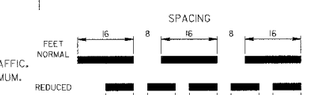
1. WIDTH OF THE CROSSWALK IS GENERALLY 6' EXCEPT AT SCHOOL CROSSINGS AND BICYCLE CROSSINGS, WHICH CAN BE 8' .
2. THE STOP BAR SHOULD BE INSTALLED A MINIMUM OF 4' IN ADVANCE OF THE CROSSWALK.

CURB MARKING



NOTES:
1. PAINT CURB AND NOSE SOLID FOR 10' OR RADIUS OF NOSE, WHICHEVER IS GREATER.
2. PAINT MINIMUM OF 3 STRIPES IN DIRECTION OF TRAFFIC.
3. REDUCED SPACING USED TO OBTAIN 3 STRIPE MINIMUM.
4. STRIPING RECOMMENDED ONLY WHERE OPERATIONAL PROBLEMS DICTATE.
5. PAINT SOLID WHERE A MINIMUM OF 3 STRIPES CANNOT BE PLACED.

SPACING

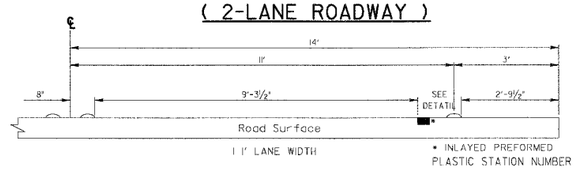


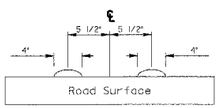
PAVEMENT MARKING GUIDELINES - ENGLISH MEASUREMENTS

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE OF 2 LANE PAVEMENT	4 IN.	SKIP-DASH	YELLOW	10 FT. LINE WITH 30 FT. SPACE
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 IN. 2 ø 4 IN.	SOLID SOLID	YELLOW YELLOW	5 1/2 IN. C-C FROM SKIP-DASH CENTERLINE 11 IN. C-C (OMIT SKIP-DASH CENTERLINE BETWEEN)
CENTERLINE ON MULTI-LANE UNDIVIDED	2 ø 4 IN.	SOLID	YELLOW	11 IN. C-C
LANE LINES	4 IN.	SKIP-DASH	WHITE	10 FT. LINE WITH 30 FT. SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2 FT. LINE WITH 6 FT. SPACE
EDGE LINES	5 IN. WHITE 4 IN. YELLOW	SOLID	WHITE - RIGHT YELLOW - LEFT	OUTLINE RAISED MEDIANS IN YELLOW
TURN LANE MARKINGS	6 IN. LINE FULL SIZE LETTERS AND SYMBOLS (8 FT.)	SOLID	WHITE	TURN ARROW 15.6 SQ. FT. STRAIGHT ARROW 11.15 SQ. FT. ONLY 20.8 SQ. FT. COMB. ARROW 28.0 SQ. FT.
TWO WAY LEFT TURN MARKING	2 ø 4 IN. EACH DIRECTION 8 FT. LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10 FT. LINE WITH 30 FT. SPACE FOR SKIP-DASH 5 1/2 IN. C-C BETWEEN SKIP-DASH LINE AND SOLID LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK	12 IN. ø 90°	SOLID	WHITE	12 IN. LONGITUDINAL BAR WITH 24 IN. SPACE 6 FT. TO 12 FT. WIDE SEE TYPICAL CROSSWALK MARKING DETAIL
STOP BARS	24 IN.	SOLID	WHITE	PLACE 4 FT. IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT, OTHERWISE PLACE AT DESIRED STOPPING POINT.
PAINTED MEDIANS	2 ø 4 IN. WITH 11 IN. DIAGONALS ø 45° NO DIAGONALS USED FOR 4 FT. WIDE MEDIAN	SOLID	YELLOW - 2-WAY TRAFFIC WHITE - 1-WAY TRAFFIC	11 IN. C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING DETAIL MINIMUM OF 5 DIAGONALS
GORE MARKING AND CHANNELIZING LINES	8 IN. WITH 12 IN. DIAGONALS ø 45°	SOLID	WHITE	DIAGONALS 15 FT. C-C (LESS THAN 30 M.P.H.) 20 FT. C-C (30 TO 45 M.P.H.) 30 FT. C-C (OVER 45 M.P.H.) MINIMUM OF 5 DIAGONALS
R.R. CROSSING	24 IN. TRANSVERSE LINES RR IS 6 FT. LETTER 16 IN. LINE FOR "X"	SOLID	WHITE	SEE I.D.O.T. STD. 780001 SQ. FT. AREA OF: "R" = 36 SQ. FT. / "R" "X" = 54.0 SQ. FT.
SHOULDER DIAGONALS	12 IN. ø 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50 FT. C-C (LESS THAN 30 M.P.H.) 75 FT. C-C (30 TO 45 M.P.H.) 150 FT. C-C (OVER 45 M.P.H.) MINIMUM OF 5 DIAGONALS

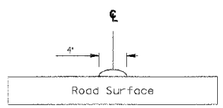
FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO PART III "MARKINGS" IN THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND I.D.O.T. HIGHWAY STANDARD 780001 EFFECTIVE JAN. 9, 1998.

PAVEMENT CROSS SECTION SHOWING TYPICAL PAVEMENT MARKINGS (2-LANE ROADWAY)





DOUBLE STRIPE CENTERLINE DETAIL



SINGLE STRIPE CENTERLINE DETAIL

Note:
Centerline markings are 4" lines at 11" centers.

STATIONING DETAIL

REVISIONS	
NAME	DATE
JOHN SAUTER	7/7/99
JOHN SAUTER	11/01/01
JOHN SAUTER	1/01/05
JOHN SAUTER	5/4/05
JOHN SAUTER	5/24/05

LakeCounty Division of Transportation

TYPICAL PAVEMENT MARKINGS FOR COUNTY HIGHWAYS

SCALE: N.T.S. SHEET 2 OF 3 DESIGNED BY: JPS
DATE: JAN. 12, 1998 CHECKED BY: ANK

3744-LDOT-ALL-PRI.dwg

TRAFFIC SIGNAL MODERNIZATIONS
WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

PROJ.# 3744.000
DATE MAY 1, 2007

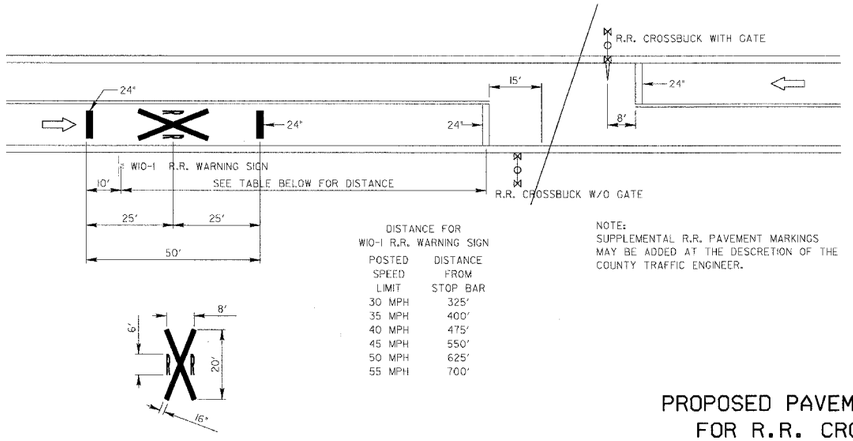
SHEET 66 OF 72

CONTRACT NO: 83932

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	67
PAVEMENT MARKINGS FOR RAILROAD CROSSINGS				
	ILLINOIS			

TYPICAL RAIL ROAD RELATED PAVEMENT MARKINGS

TYPICAL PLACEMENT OF R.R. WARNING SIGNS AND PAVEMENT MARKINGS ON COUNTY HIGHWAYS

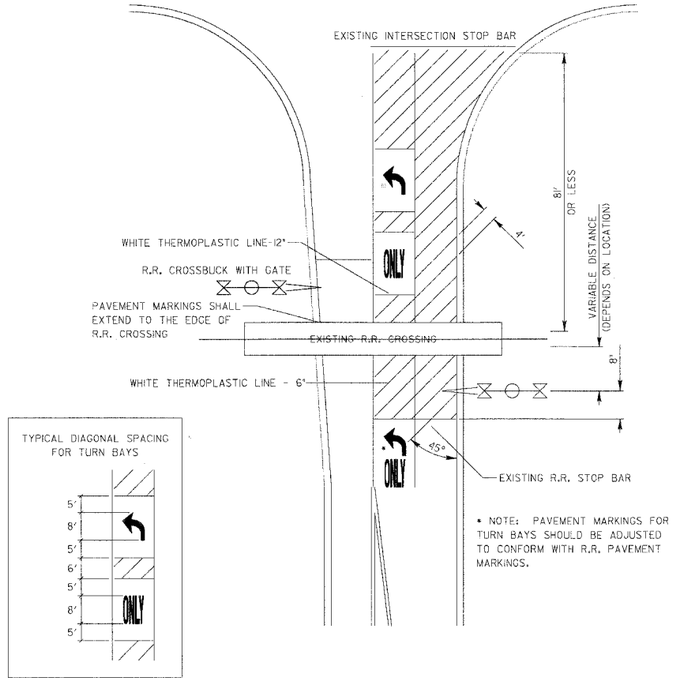


DISTANCE FOR W10-1 R.R. WARNING SIGN

POSTED SPEED LIMIT	DISTANCE FROM STOP BAR
30 MPH	325'
35 MPH	400'
40 MPH	475'
45 MPH	550'
50 MPH	625'
55 MPH	700'

NOTE:
SUPPLEMENTAL R.R. PAVEMENT MARKINGS MAY BE ADDED AT THE DESCRETION OF THE COUNTY TRAFFIC ENGINEER.

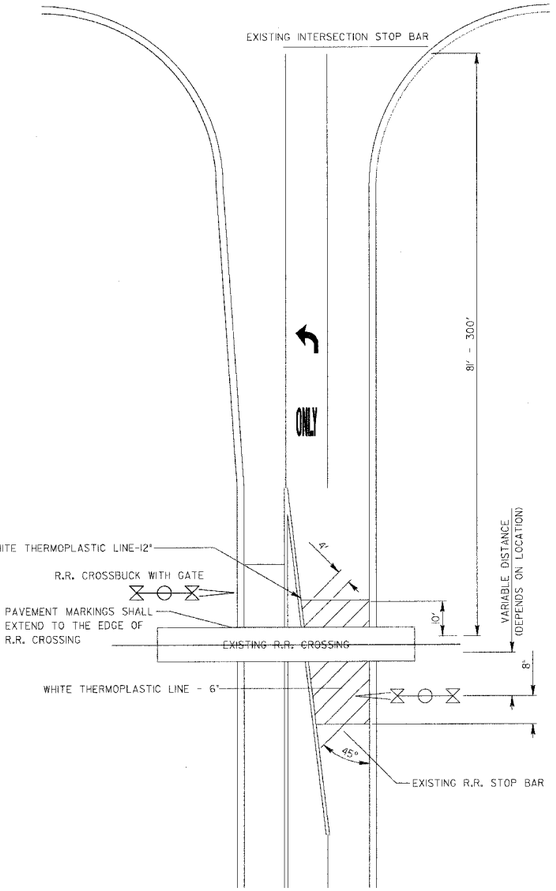
PROPOSED PAVEMENT MARKINGS FOR R.R. CROSSINGS AT SIGNALIZED INTERSECTIONS 81 FEET OR LESS



* NOTE: PAVEMENT MARKINGS FOR TURN BAYS SHOULD BE ADJUSTED TO CONFORM WITH R.R. PAVEMENT MARKINGS.

TYPICAL DIAGONAL SPACING FOR TURN BAYS

PROPOSED PAVEMENT MARKINGS FOR R.R. CROSSINGS AT SIGNALIZED INTERSECTIONS 81 FEET - 300 FEET



REVISIONS	
NAME	DATE
JOHN SAUTER	9/25/98
JOHN SAUTER	7/7/99

LakeCounty Division of Transportation

TYPICAL PAVEMENT MARKINGS FOR COUNTY HIGHWAYS

SCALE: N.T.S. SHEET 3 OF 3 DESIGNED BY: JPS
DATE: JAN. 12, 1998 CHECKED BY: ANK

3744-LDOT-ALL-PM1.dwg

TRAFFIC SIGNAL MODERNIZATIONS
WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

PROJ. # 3744.000
DATE: MAY 1, 2007

SHEET 67 OF 72

CONTRACT NO: 83932

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	68
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

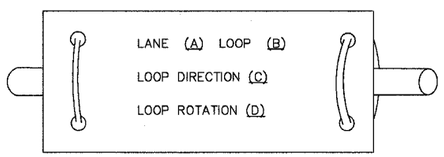
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

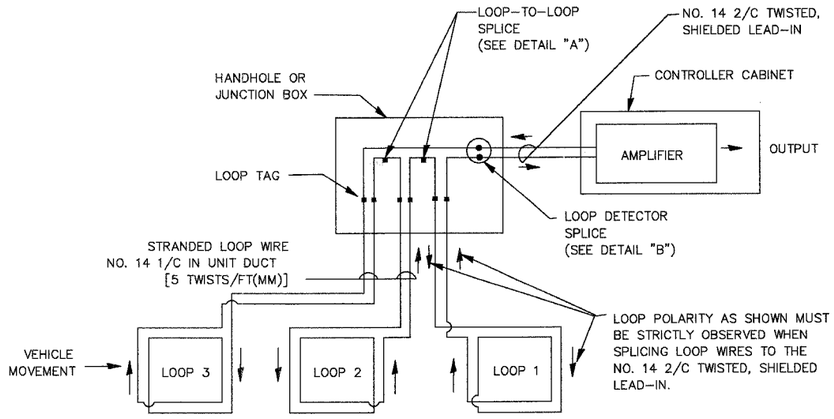


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

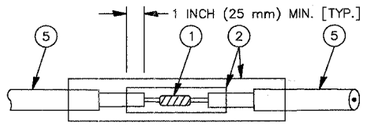
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

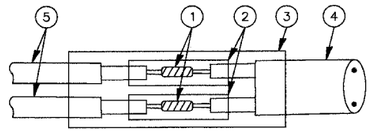


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

(1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.

(2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.

(3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE
HORIZ.
DATE 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

TRAFFIC SIGNAL MODERNIZATIONS
WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

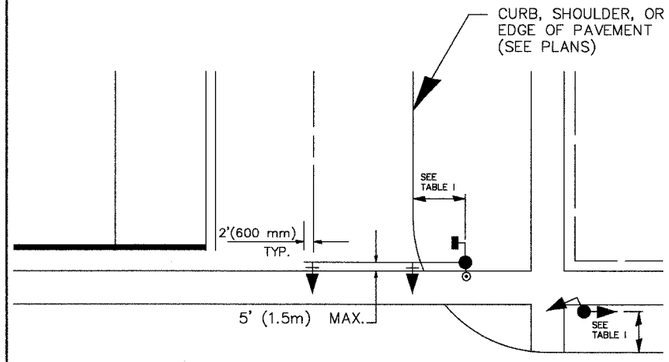
PROJ.# 3744.000
DATE MAY 1, 2007

CONTRACT NO: 83932

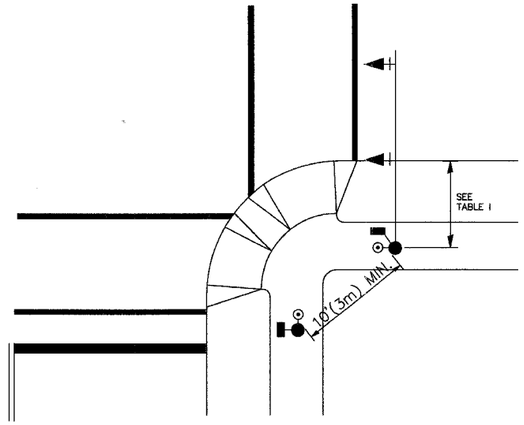
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	69
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

1. AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION. EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.

   AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.

   PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:

   A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.

   B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.

   C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

   D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).

   E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK

2. PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.

3. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.

4. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

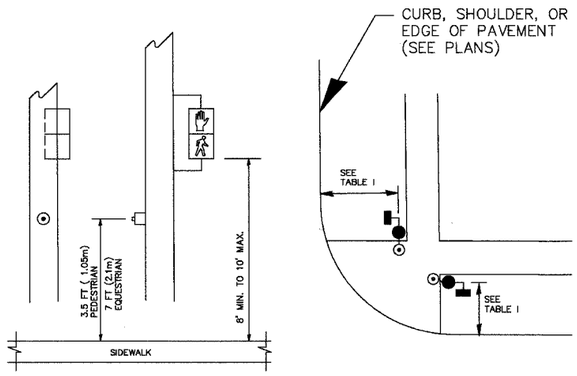


TABLE I

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE
HORIZ.
DATE 1-01-02

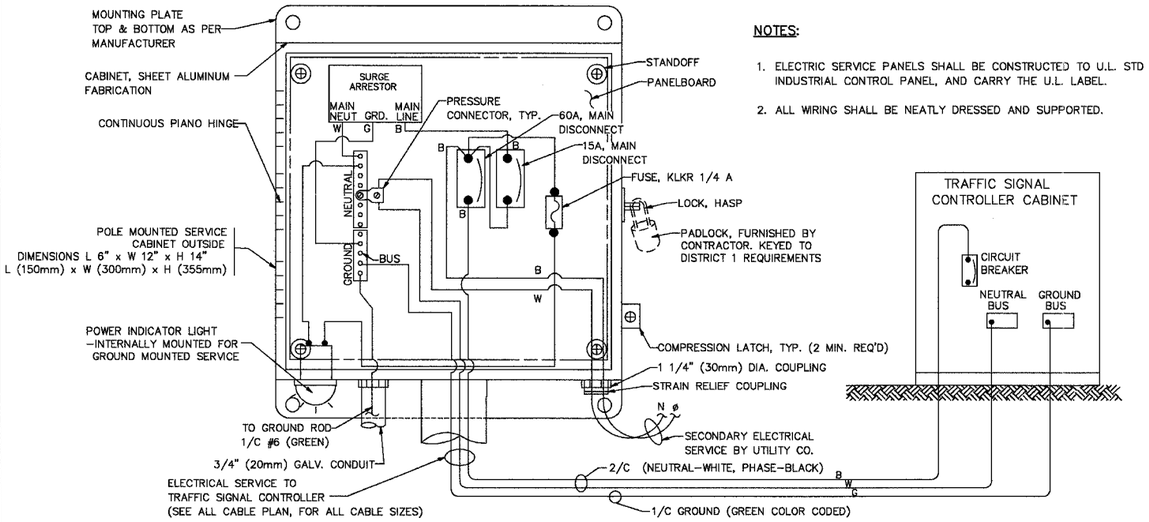
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 2 OF 4

TRAFFIC SIGNAL MODERNIZATIONS
WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

PROJ # 3744.000
DATE MAY 1, 2007

SHEET 69 OF 72

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	70
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



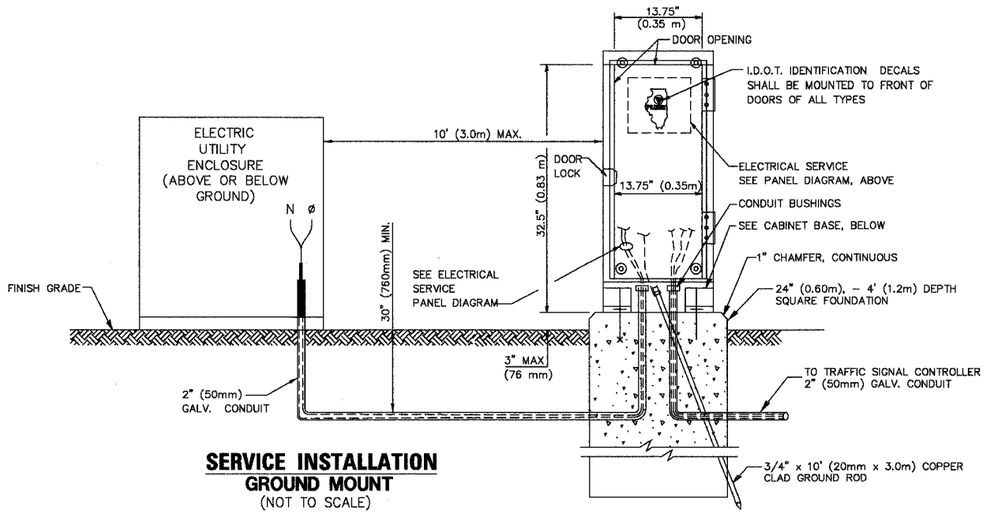
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

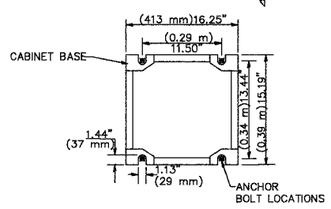
SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)



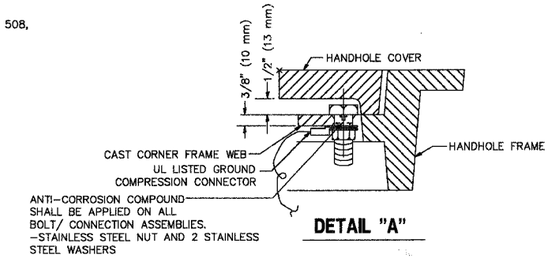
SERVICE INSTALLATION GROUND MOUNT

(NOT TO SCALE)

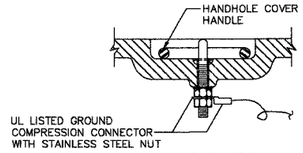


CABINET - BASE BOLT PATTERN

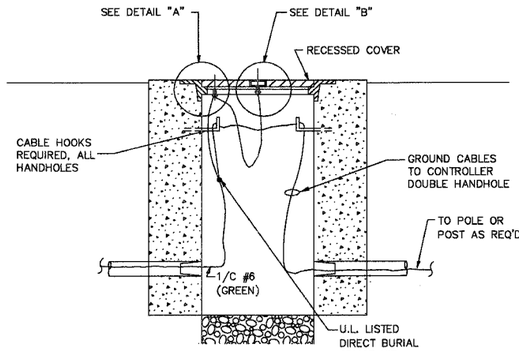
(NOT TO SCALE)



DETAIL "A"

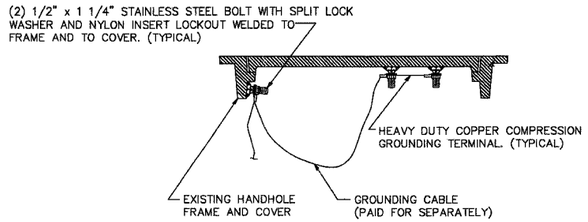


DETAIL "B"



HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)



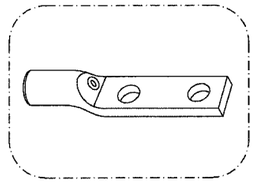
EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

NOTES:

GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC,). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, LAKE COUNTY DIVISION OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.

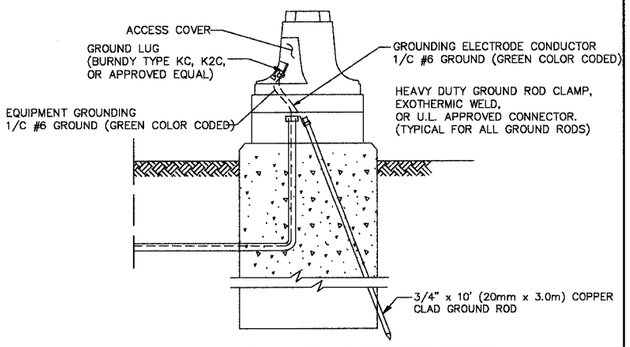


HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)

3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EUAL)

NOTES:

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES
  6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES
  13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
  5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



MAST ARM POLE / POST-GROUNDING DETAIL

(NOT TO SCALE)

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE HORIZ.
DATE 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 3 OF 4

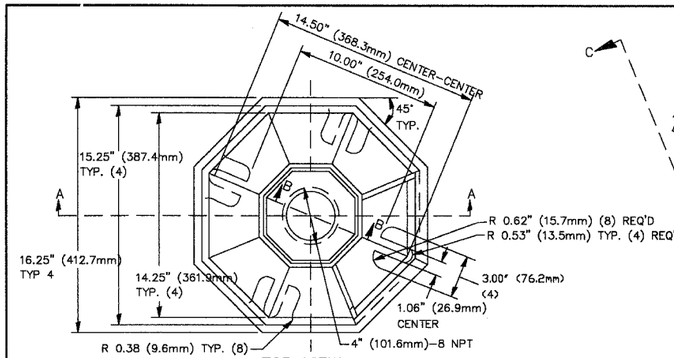
TRAFFIC SIGNAL MODERNIZATIONS
WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

PROJ. # 3744.000
DATE: MAY 1, 2007

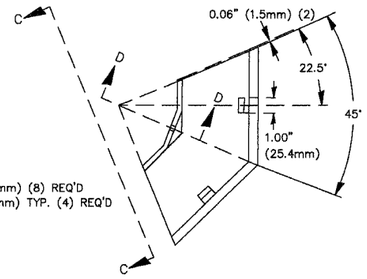
SHEET 70 OF 72

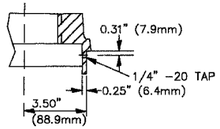
CONTRACT NO: 83932

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	71
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

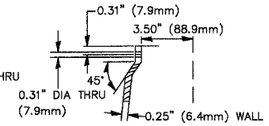


TOP VIEW

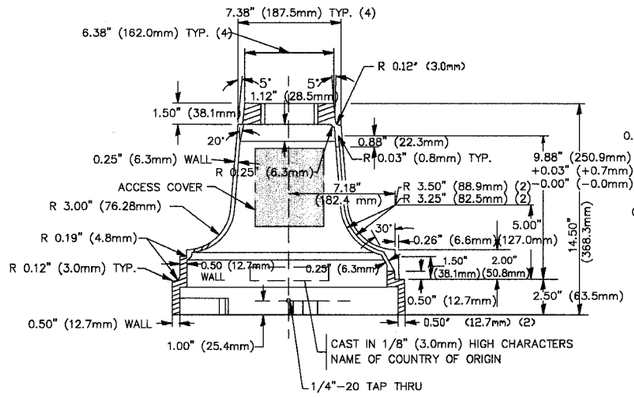




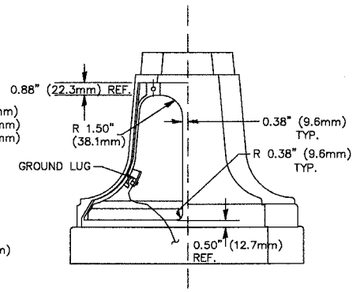
SECTION B-B



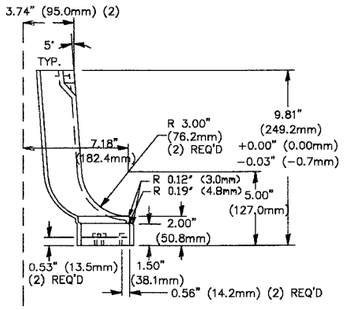
SECTION D-D



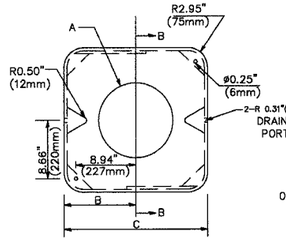
SECTION A-A

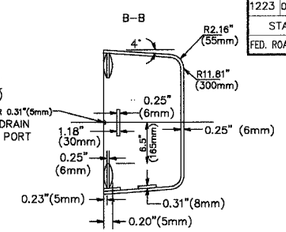


VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



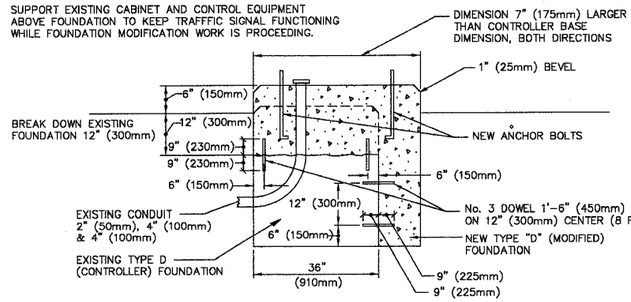


MATERIAL:
- ASTM A48 CLASS 30 GREY IRON
- ASTM A123 HOT DIPPED GALVANIZED

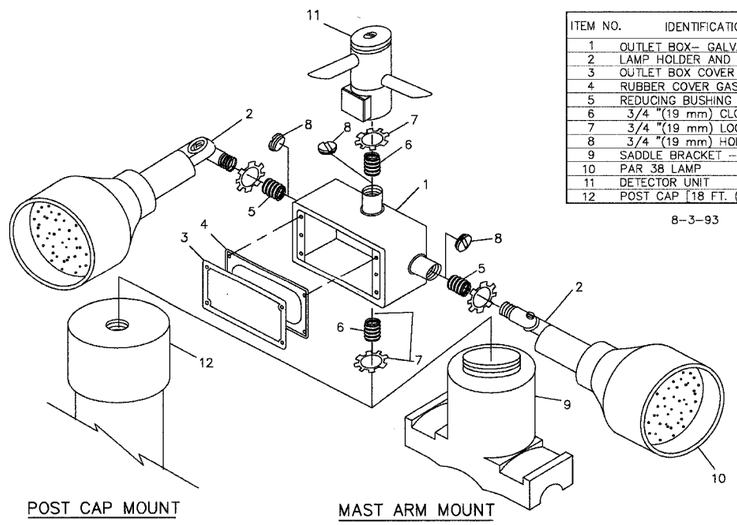
TYPE	A	B	C	HEIGHT	WEIGHT
I	ø 10.125"(257mm)	9.5"(241mm)	19"(483mm)	12" (300mm)	24kg
II	ø 11.125"(283mm)	10.75"(273mm)	21.5"(546mm)	12" (300mm)	26kg

SHROUD DETAIL

NOTE:
SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION
(NOT TO SCALE)



ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4 "(19 mm) CLOSE NIPPLE
7	3/4 "(19 mm) LOCKNUT
8	3/4 "(19 mm) HOLE PLUG
9	SADDLE BRACKET -- GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

8-3-93

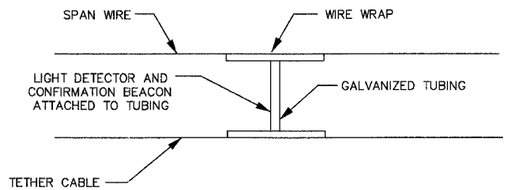
POST CAP MOUNT

MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

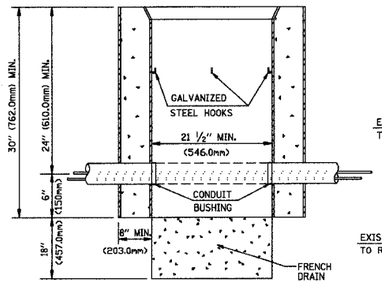
NOTES:

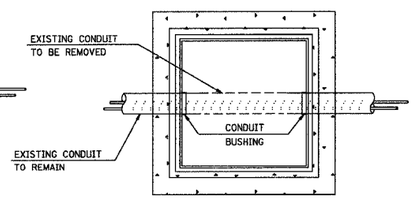
1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4 "(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS
(NOT TO SCALE)

NOTES:
1. REMOVAL OF EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHING SHALL BE INCIDENTAL TO THE HANDHOLE.





DETAIL
HANDHOLE TO INTERCEPT EXISTING CONDUIT
N.T.S.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE
HORIZ.
DATE 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 4 OF 4

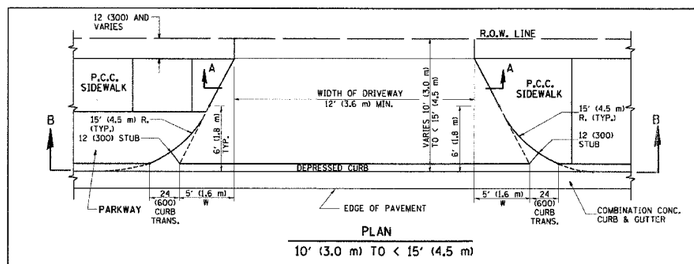
TRAFFIC SIGNAL MODERNIZATIONS
WASHINGTON STREET
TESKE BOULEVARD TO SHERIDAN ROAD

PROJ # 3744.000
DATE: MAY 1, 2007

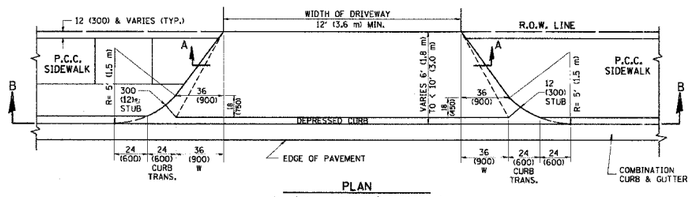
SHEET 71 OF 72

CONTRACT NO: 83932

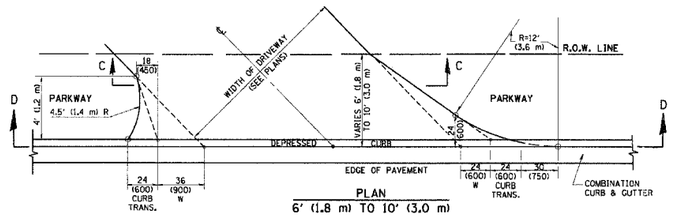
F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1223	04-00272-00-TL	LAKE	72	72
DRIVEWAY DETAILS				
	ILLINOIS			



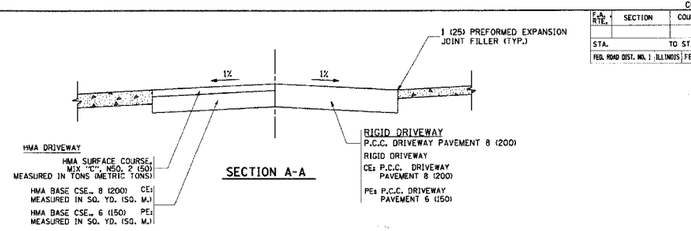
PLAN
10' (3.0 m) TO < 15' (4.5 m)



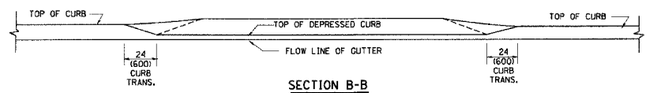
PLAN
6' (1.8 m) TO < 10' (3.0 m)



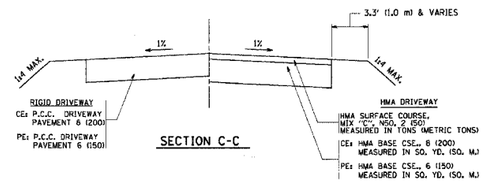
PLAN
6' (1.8 m) TO 10' (3.0 m)



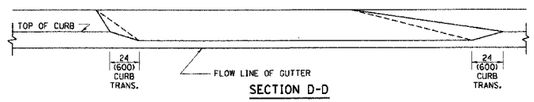
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

GENERAL NOTES

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT (847) 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

"W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED.

REVISIONS	
NAME	DATE
R. SHAH	11/06/95
J. POLLASTRINI	08/12/96
J. POLLASTRINI	12/14/98
A. ABBAS	03/21/02
T. HOLTZ	04/08/13
M. GOMEZ	04/05/02
P. LAFLEUR	04/15/03
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)

SCALE: VERT.
HORIZ.
DRAWN BY
DATE PLOTTED: 11/1/2006
CHECKED BY

80400-02 (BD-02)
REVISION DATE: 01/01/07

CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO. 1 ILLINOIS	FED. AID PROJECT			

PLOT DATE = 11/1/2006
FILE NAME = c:\projects\drwydet.dgn
PLOT SCALE = 1.0000 '/ In.
USER NAME = tapia

PLANS PREPARED BY:

GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS

NAME	DATE

LAKE COUNTY DIVISION OF TRANSPORTATION

DRIVEWAY DETAILS
DISTANCE BETWEEN ROW AND F.O.C. <15'

WASHINGTON STREET FROM TESKE BOULEVARD TO SHERIDAN ROAD

SCALE: NONE
DATE: MAY 1, 2007

DRAWN BY: PJS
DESIGNED BY: JRD
CHECKED BY: BLS

1244-DD01-ALL-PRP.dwg