CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	601
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

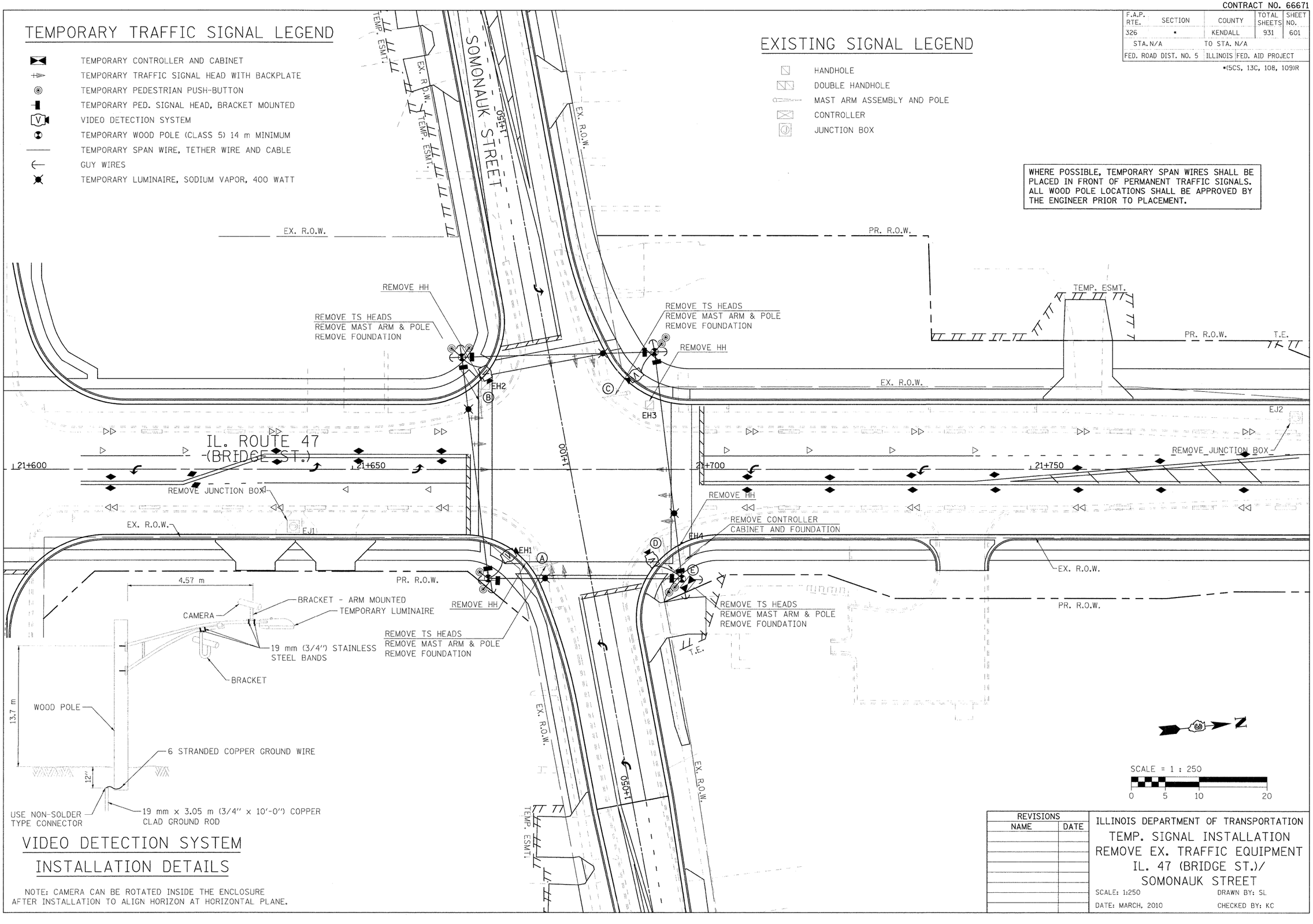
TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY CONTROLLER AND CABINET
- TEMPORARY TRAFFIC SIGNAL HEAD WITH BACKPLATE
- TEMPORARY PEDESTRIAN PUSH-BUTTON
- TEMPORARY PED. SIGNAL HEAD, BRACKET MOUNTED
- VIDEO DETECTION SYSTEM
- TEMPORARY WOOD POLE (CLASS 5) 14 m MINIMUM
- TEMPORARY SPAN WIRE, TETHER WIRE AND CABLE
- GUY WIRES
- TEMPORARY LUMINAIRE, SODIUM VAPOR, 400 WATT

EXISTING SIGNAL LEGEND

- HANDHOLE
- DOUBLE HANDHOLE
- MAST ARM ASSEMBLY AND POLE
- CONTROLLER
- JUNCTION BOX

WHERE POSSIBLE, TEMPORARY SPAN WIRES SHALL BE PLACED IN FRONT OF PERMANENT TRAFFIC SIGNALS. ALL WOOD POLE LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.



VIDEO DETECTION SYSTEM INSTALLATION DETAILS

NOTE: CAMERA CAN BE ROTATED INSIDE THE ENCLOSURE AFTER INSTALLATION TO ALIGN HORIZON AT HORIZONTAL PLANE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMP. SIGNAL INSTALLATION
REMOVE EX. TRAFFIC EQUIPMENT
IL. 47 (BRIDGE ST.)/
SOMONAUK STREET

SCALE: 1:250 DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 6/11/2011
FILE NAME = h:\5122\design\601-602somonauk_ren.dgn
PLOT SCALE = 6.3500 ' / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

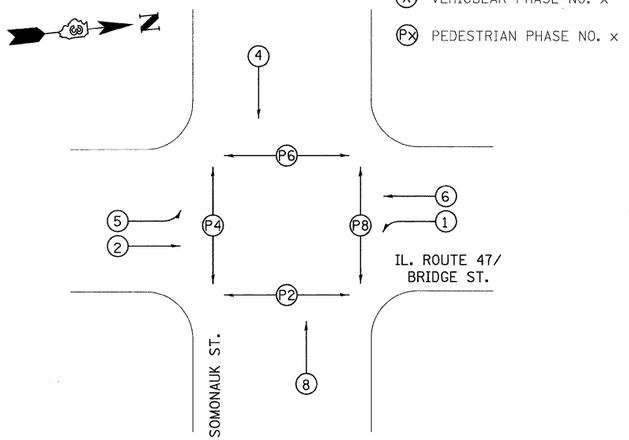
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	602
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

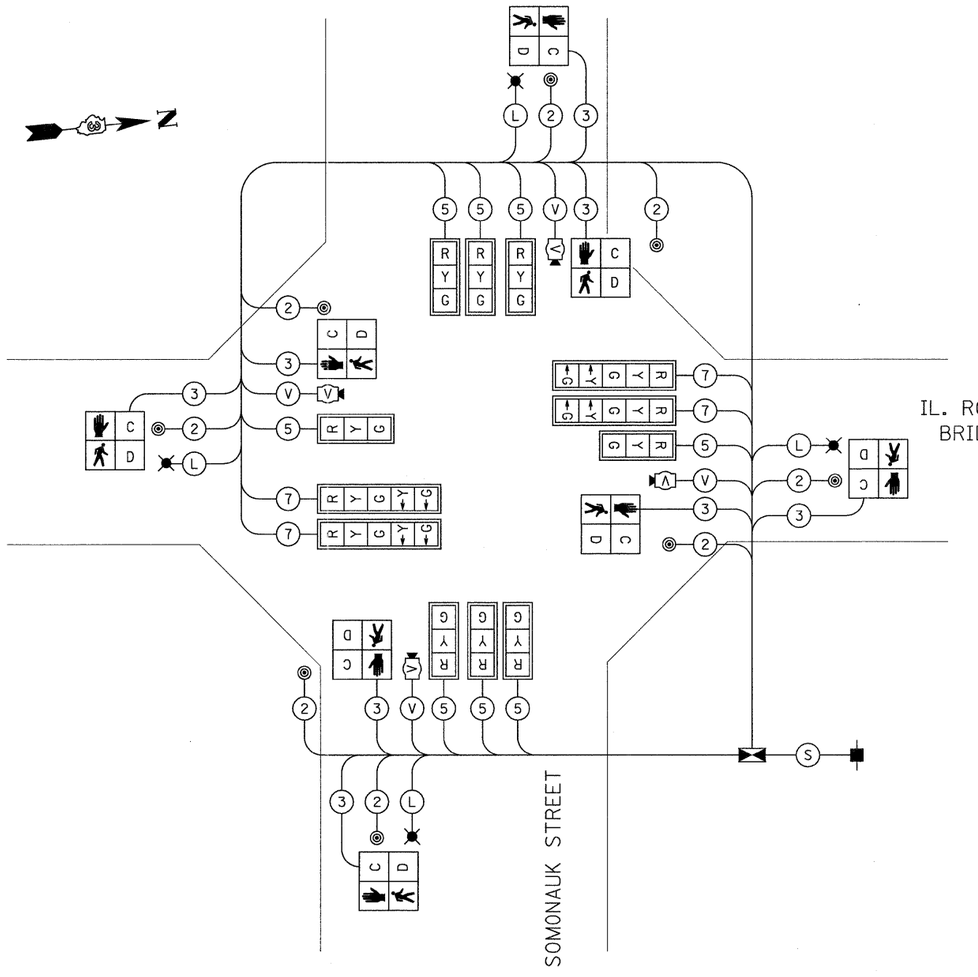
LEGEND

(X) VEHICULAR PHASE NO. x

(Px) PEDESTRIAN PHASE NO. x



PHASE DESIGNATION DIAGRAM



TEMPORARY CABLE DIAGRAM LEGEND

- TEMPORARY CONTROLLER
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY TRAFFIC SIGNAL HEAD W/ BACKPLATE
- DENOTES NUMBER OF CONDUCTORS
- VIDEO DETECTION SYSTEM
- TEMPORARY PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN DISPLAY
- TEMPORARY PEDESTRIAN PUSH BUTTON
- TEMPORARY LUMINAIRE, SODIUM VAPOR, 400 WATT

(V) VIDEO CAMERA CABLE

6 PAIRS, TWISTED REQUIRED

- 3 PAIRS CONDUCTOR FOR POWER - 24V AC (AC+, AC-, GND)
- 1 PAIR DATA
- 1 PAIR COMPOSITE VIDEO
- 1 PAIR DETECTOR DATA

OVERALL SHIELD
MINIMUM 16AWG (PAIRS)
(TO BE INCLUDED IN THE BID PRICE FOR VEHICLE VIDEO DETECTION SYSTEM)

(S) SERVICE CABLE

ELECTRIC CABLE IN CONDUIT,

SERVICE, NO.6 2C

(L) LIGHTING CABLE

600V (XLP-TYPE USE) 3 - 1/C NO.10

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT 1 EACH

THE FOLLOWING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED AND REMAIN THE PROPERTY OF THE CONTRACTOR, IF IT IS NOT BEING USED FOR THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

4 EACH MAST ARM ASSEMBLY AND POLE
9 EACH SIGNAL HEAD
ALL PEDESTRIAN SIGNAL HEADS AND NON-CONFORMING PUSH-BUTTONS

ALL REMAINING REMOVAL ITEMS EXCEPT AS SPECIFIED BELOW SHALL BE REMOVED AND DELIVERED BY THE CONTRACTOR TO THE CITY OF YORKVILLE, 610 TOWER LANE, YORKVILLE, IL.

THE FOLLOWING ITEMS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR OFF THE RIGHT-OF-WAY. THE SALVAGE VALUE OF THIS EQUIPMENT SHALL BE REFLECTED IN THE UNIT BID PRICE OF REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT.

1 EACH SERVICE INSTALLATION
ALL WIRES

SCHEDULE OF REMOVAL ITEMS

ITEM	LOCATION	UNIT	QUANTITIES
REMOVE EXISTING CONCRETE FOUNDATION	A, B, C, D, E	EACH	5
REMOVE EXISTING HANDHOLE	EH1, EH2, EH3, EH4	EACH	4
REMOVE EXISTING JUNCTION BOX	EJ1, EJ2	EACH	2

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED TEMPORARY CABLE DIAGRAM IL. 47 (BRIDGE ST.)/ SOMONAUK STREET

SCALE: NONE DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\601-602somonauk_rem.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	603
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

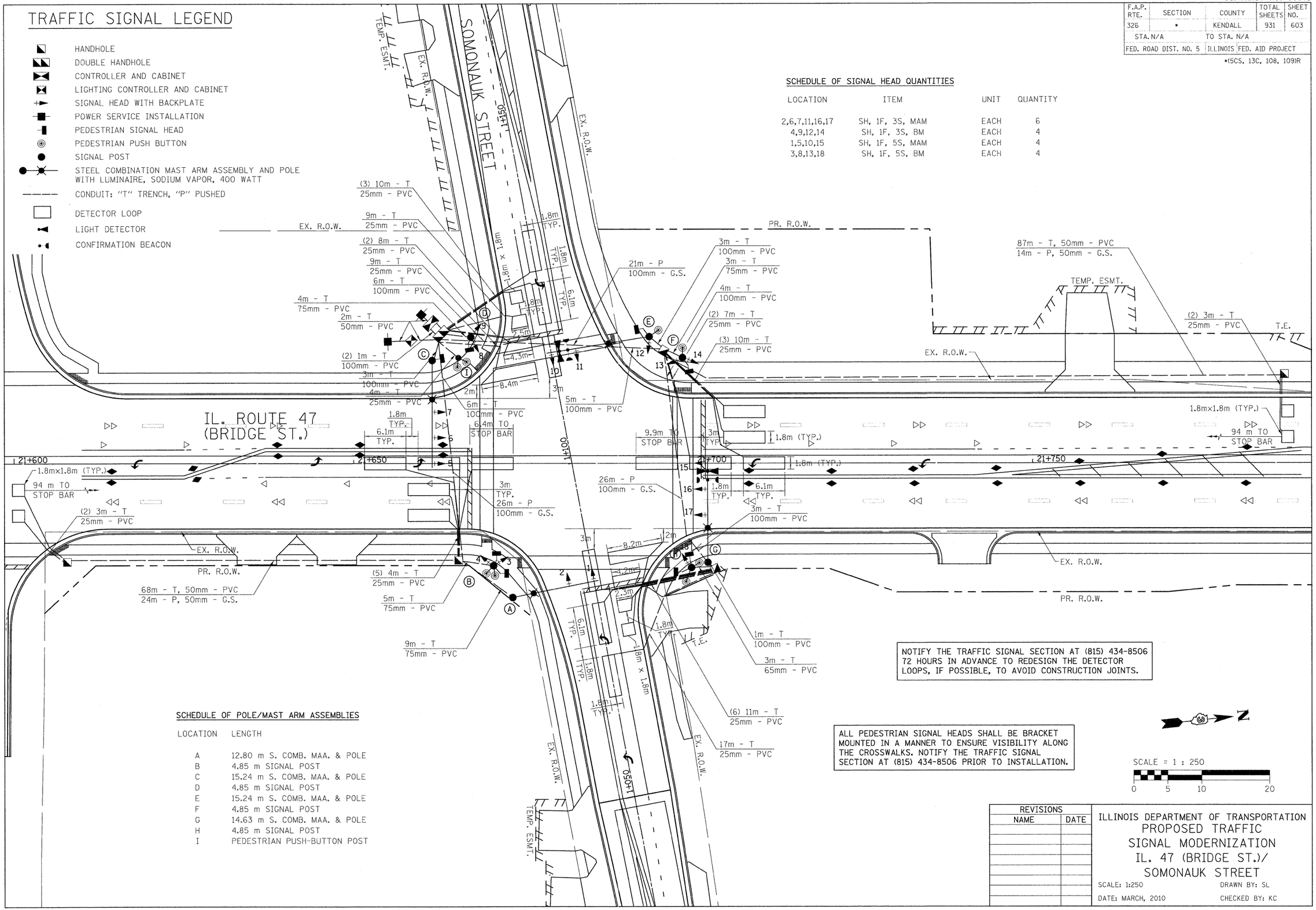
*(5CS, 13C, 108, 109)R

TRAFFIC SIGNAL LEGEND

- HANDHOLE
- DOUBLE HANDHOLE
- CONTROLLER AND CABINET
- LIGHTING CONTROLLER AND CABINET
- SIGNAL HEAD WITH BACKPLATE
- POWER SERVICE INSTALLATION
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- SIGNAL POST
- STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE, SODIUM VAPOR, 400 WATT
- CONDUIT: "T" TRENCH, "P" PUSHED
- DETECTOR LOOP
- LIGHT DETECTOR
- CONFIRMATION BEACON

SCHEDULE OF SIGNAL HEAD QUANTITIES

LOCATION	ITEM	UNIT	QUANTITY
2,6,7,11,16,17	SH, 1F, 3S, MAM	EACH	6
4,9,12,14	SH, 1F, 3S, BM	EACH	4
1,5,10,15	SH, 1F, 5S, MAM	EACH	4
3,8,13,18	SH, 1F, 5S, BM	EACH	4



SCHEDULE OF POLE/MAST ARM ASSEMBLIES

LOCATION	LENGTH
A	12.80 m S. COMB. MAA. & POLE
B	4.85 m SIGNAL POST
C	15.24 m S. COMB. MAA. & POLE
D	4.85 m SIGNAL POST
E	15.24 m S. COMB. MAA. & POLE
F	4.85 m SIGNAL POST
G	14.63 m S. COMB. MAA. & POLE
H	4.85 m SIGNAL POST
I	PEDESTRIAN PUSH-BUTTON POST

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

ALL PEDESTRIAN SIGNAL HEADS SHALL BE BRACKET MOUNTED IN A MANNER TO ENSURE VISIBILITY ALONG THE CROSSWALKS. NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 PRIOR TO INSTALLATION.

SCALE = 1 : 250

0 5 10 20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED TRAFFIC SIGNAL MODERNIZATION IL. 47 (BRIDGE ST.)/ SOMONAUK STREET

SCALE: 1:250 DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
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PLOT SCALE = 6.3500 ' / IN.
USER NAME = USERDESCR.

CONTRACT NO. 66671

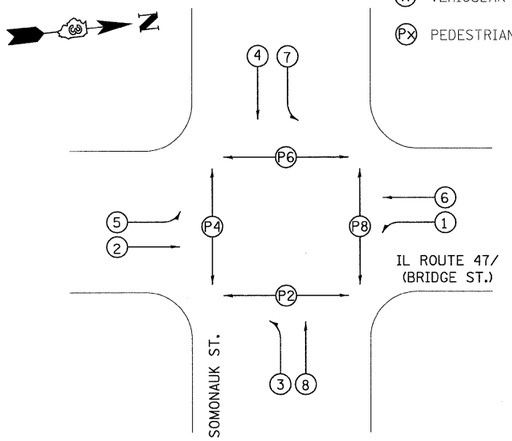
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	604
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

LEGEND

(X) VEHICULAR PHASE NO. x

(Px) PEDESTRIAN PHASE NO. x



PHASE DESIGNATION DIAGRAM

SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	QUANTITY
SERVICE INSTALLATION - GROUND MOUNTED	EACH	2
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	5
DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1
LUMINAIRE, SODIUM VAPOR, HOR. MOUNT, 400 WATT	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	18
INDUCTIVE LOOP DETECTOR	EACH	12
LIGHT DETECTOR	EACH	4
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	4
REMOVE EXISTING CONCRETE FOUNDATION	EACH	5
SIGN PANEL - TYPE 1	SQ M	1.8
SIGN PANEL - TYPE 2	SQ M	5.4
CONDUIT IN TRENCH 25mm DIA., PVC	METER	227
CONDUIT IN TRENCH 50mm DIA., PVC	METER	159
CONDUIT IN TRENCH 65mm DIA., PVC	METER	3
CONDUIT IN TRENCH 75mm DIA., PVC	METER	21
CONDUIT IN TRENCH 100mm DIA., PVC	METER	33
CONDUIT PUSHED, 50mm DIA., GALVANIZED STEEL	METER	38
CONDUIT PUSHED, 100mm DIA., GALVANIZED STEEL	METER	73
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	METER	543
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	METER	821
TRENCH AND BACKFILL FOR ELECTRICAL WORK	METER	443
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	METER	376
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	METER	391
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	METER	520
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	METER	457
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14, 1-PAIR	METER	1745
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	METER	10
TRAFFIC SIGNAL POST, GALVANIZED STEEL 4.85 METER	EACH	4
PEDESTRIAN PUSH-BUTTON POST, GALVANIZED STEEL, TYPE I	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 12.80 METER	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 14.63 METER	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 15.24 METER	EACH	2
CONCRETE FOUNDATION, TYPE A	METER	5.0
CONCRETE FOUNDATION, TYPE C (SPECIAL)	METER	1.1
CONCRETE FOUNDATION, TYPE E 900mm DIAMETER	METER	17.2
DETECTOR LOOP, TYPE 1	METER	517
ELECTRIC CABLE IN CONDUIT NO. 20, 3/C, TWISTED, SHIELDED	METER	640
REMOVE EXISTING JUNCTION BOX	EACH	2
LIGHTING CONTROLLER, SPECIAL	EACH	1

PROPOSED CABLE DIAGRAM LEGEND

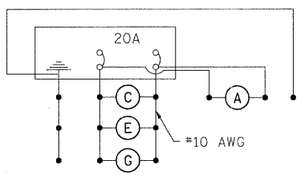
- CONTROLLER AND CABINET
- LIGHTING CONTROLLER AND CABINET
- SERVICE INSTALLATION
- TRAFFIC SIGNAL HEAD WITH BACKPLATE
- DENOTES NUMBER OF CONDUCTORS
- LUMINAIRE, SODIUM VAPOR, 400 WATT
- PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN DISPLAY
- PEDESTRIAN PUSH BUTTON
- DETECTOR LOOP
- DETECTOR LOOP SYSTEM
- H — GROUND ROD AT HANDHOLE OR DOUBLE HANDHOLE
- P/MA — GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
- S, C — GROUND ROD AT ELECTRIC SERVICE INSTALLATION
- GROUND ROD AT CONTROLLER
- LIGHT DETECTOR
- CONFIRMATION BEACON

(S) SERVICE CABLE

ELECTRIC CABLE IN CONDUIT, SERVICE, NO.6 2C

(L) LIGHTING CABLE

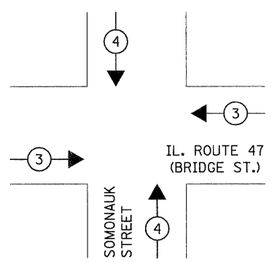
600V (XLP-TYPE USE) 3 - 1/C NO.10



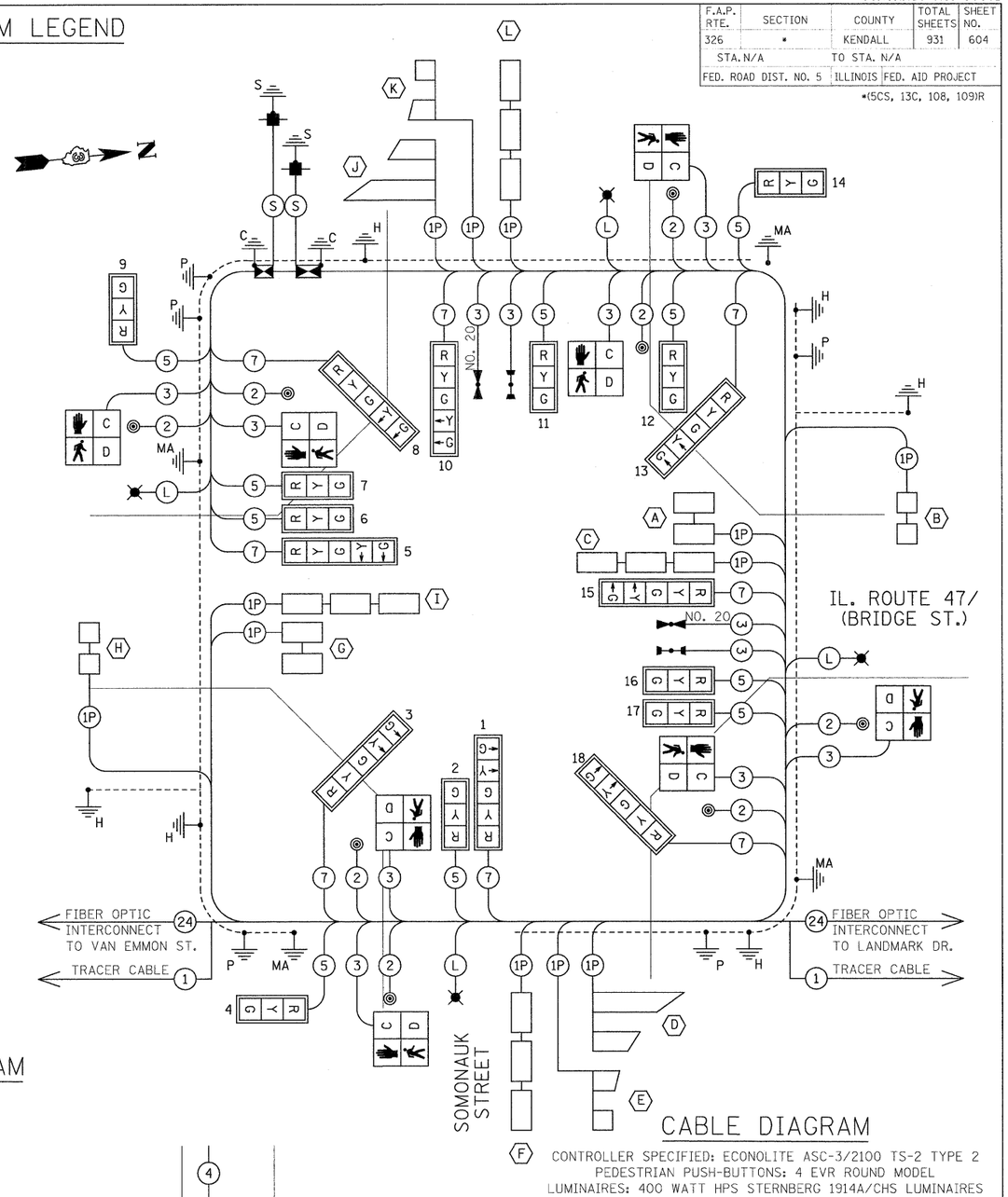
LIGHTING CIRCUIT DIAGRAM

AGENCY RESPONSIBLE FOR ENERGY CHARGES:
CITY OF YORKVILLE
CONTRACTOR PAYS ALL ENERGY CHARGES
UNTIL PROJECT IS ACCEPTED

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



EMERGENCY VEHICLE PREEMPTION SEQUENCE



CABLE DIAGRAM

(F) CONTROLLER SPECIFIED: ECONOLITE ASC-3/2100 TS-2 TYPE 2
PEDESTRIAN PUSH-BUTTONS: 4 EVR ROUND MODEL
LUMINAIRES: 400 WATT HPS STERNBERG 1914A/CHS LUMINAIRES

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PHASE DIAGRAM, CABLE DIAGRAM
SCHEDULE OF QUANTITIES
IL. 47 (BRIDGE ST.)/
SOMONAUK STREET

SCALE: NONE — DRAWN BY: SL

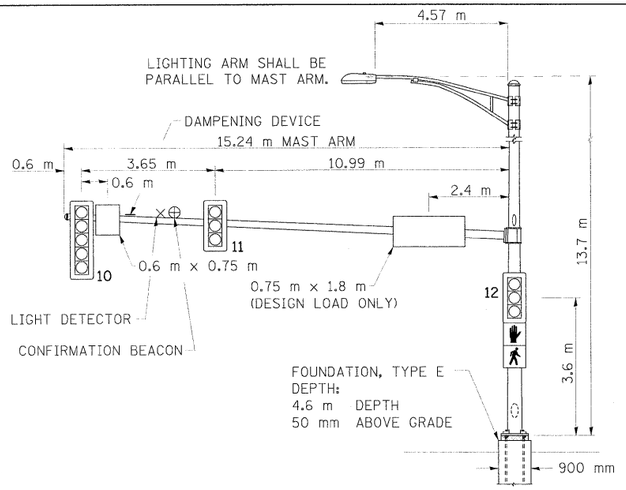
DATE: MARCH, 2010 — CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\604somonauk_cable.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

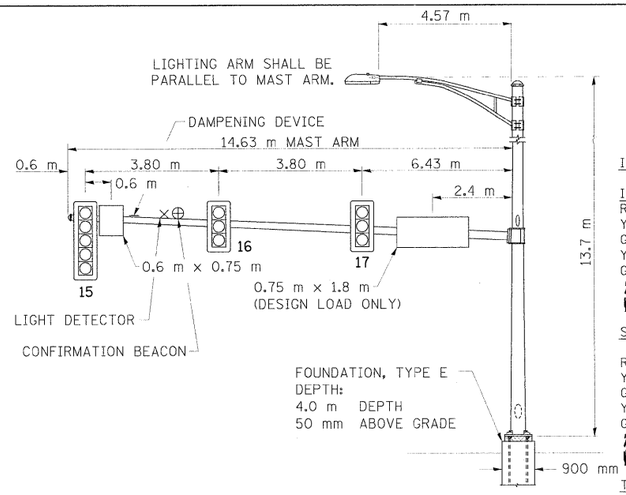
CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	605
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

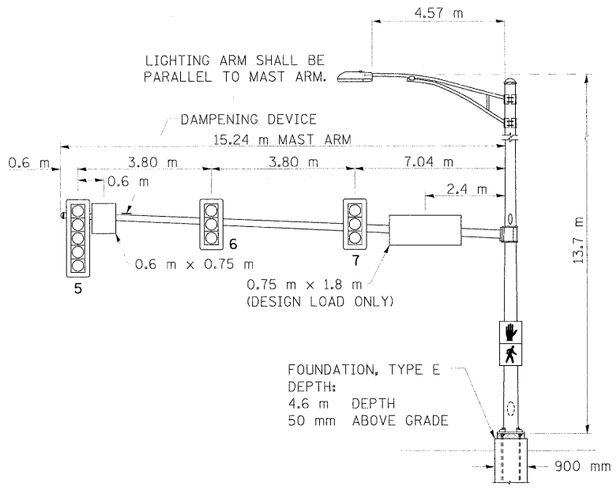
*(5CS, 13C, 108, 109)R



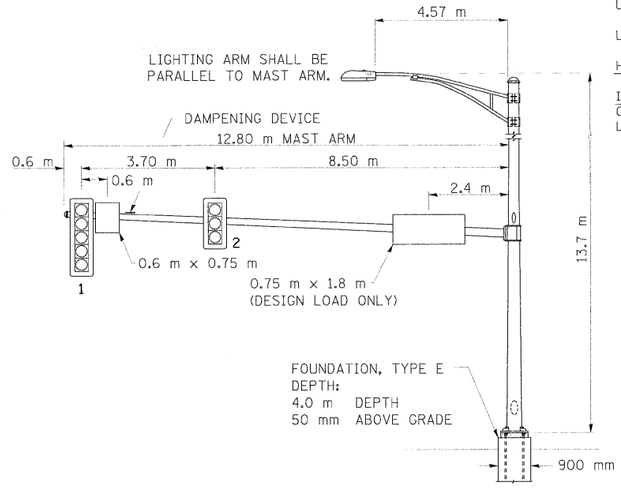
MAST ARM NORTHWEST QUADRANT (E)



MAST ARM NORTHEAST QUADRANT (G)



MAST ARM SOUTHWEST QUADRANT (C)



MAST ARM SOUTHEAST QUADRANT (A)

ELECTRICAL LOAD CHART

IL ROUTE 47

INDICATION	NUMBER	WATTAGE EACH	BURN TIME (%)
RED	10	12	60
YELLOW	10	32	5
GREEN	10	12	35
YELLOW ARROW	4	12	5
GREEN ARROW	4	11	10
	4	7	5
	4	7	95

SOMONAUK STREET

RED	8	12	70
YELLOW	8	32	5
GREEN	8	12	25
YELLOW ARROW	4	12	5
GREEN ARROW	4	11	10
	4	7	5
	4	7	95

TRAFFIC SIGNAL CABINET

ITEM	NUMBER	WATTAGE EACH	BURN TIME (%)
CONTROLLER	1	6	100
INDUCTIVE LOOP DETECTOR	12	1.5	100
UNINTERRUPTABLE POWER SUPPLY	1	50	100
LIGHT DETECTOR AMPLIFIER	1	1.5	100

HIGHWAY LIGHTING

ITEM	NUMBER	WATTAGE EACH	BURN TIME (%)
CONTROLLER	1	6	100
LUMINAIRE	4	400	45

DETECTOR LOOP INDUCTANCE CHART

DETECTOR LOOP SYSTEM	TURNS PER LOOP	INDUCTANCE READING (MICROHENRIES)	FREQUENCY (HERTZ)	J PIN STATUS
A	4	551	25,983	OFF
B	6	603	24,855	ON
C	4	809	21,443	ON
D	4	553	25,964	ON
E	5	428	29,516	ON
F	4	836	21,097	ON
G	4	547	26,078	OFF
H	6	596	25,000	ON
I	4	807	21,470	ON
J	4	516	26,856	ON
K	5	387	31,017	ON
L	4	788	21,727	ON

GRANULAR SOILS ARE EXPECTED TO BE ENCOUNTERED AT THIS INTERSECTION.

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

NOTES:

1. WORD "GRADE" IS TO BE INTERPRETED AS TOP OF CURB. TOP OF FOUNDATION SHALL NOT BE EXPOSED MORE THAN 100 mm ABOVE THE SURROUNDING GROUND.
2. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
3. FOUNDATION SHOULD BE 50mm ABOVE GROUND OR 0.35m ABOVE CENTERLINE OF ROADWAY, WHICHEVER IS HIGHER.

PEDESTRIAN CROSSING SIGN DETAIL

COUNT-DOWN PEDESTRIAN SIGN R10-3e TO BE USED.

8 REQUIRED.

DIMENSIONS: 230mm x 380mm (TYP.)
LEGEND AND BORDER: NON-REFLECTORIZED BLACK
BACKGROUND: RETROREFLECTIVE WHITE
NUMBERS AND SYMBOLS: RETROREFLECTIVE ORANGE

ONE SIGN SHALL BE PROVIDED FOR EACH PUSH-BUTTON. ORIENTATION OF DIRECTIONAL ARROWS TO BE DETERMINED BY PUSH-BUTTON LOCATION.

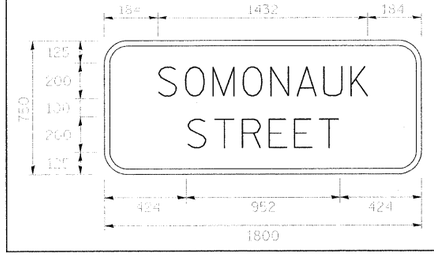
ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL CONSTRUCTION. ALL MOUNTING BOLTS SHALL BE HEX HEAD.

MATERIALS AND INSTALLATION OF THIS SIGN SHALL BE INCLUDED IN THE COST OF PEDESTRIAN PUSH-BUTTON.

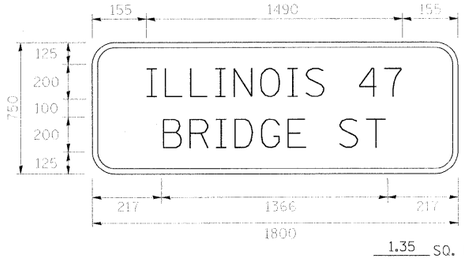
STREET SIGN DETAIL

THESE STREET NAME SIGNS SHALL BE PLACED ON THE MAST ARMS PARALLEL TO THE RESPECTIVE ROUTE AS DIRECTED BY THE ENGINEER.

STREET NAME SIGNS:
1. TYPE ZZ SHEETING REQUIRED
2. WHITE/GREEN BACKGROUND
3. STYLE (d)-15 mm BORDER
4. 200 mm SERIES D LETTERS
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



1.35 SQ. M. EACH
2 REQUIRED

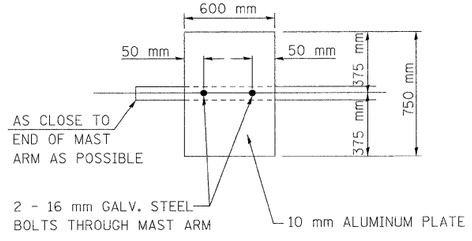


1.35 SQ. M. EACH
2 REQUIRED

R10-12

0.45 SQ. M. EACH
4 REQUIRED

NOTE:
DAMPENING DEVICE SHALL CONSIST OF A 600mm X 750mm TYPE 1, UNPAINTED ALUMINUM SIGN STOCK MOUNTED HORIZONTALLY ON TOP OF MAST ARM WITH THE 750mm LENGTH PERPENDICULAR TO THE ARM. COST OF THE DAMPENING DEVICE IS INCLUDED IN THE MAST ARM PAY ITEM.



DAMPENING PLATE DETAIL

(TOP VIEW) INCIDENTAL TO MAST ARM QUANTITY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MAST ARM LOADING DIAGRAM
ELECTRICAL LOAD CHART
SIGN DETAILS
IL. 47 (BRIDGE ST.)/
SOMONAUK STREET

SCALE: NONE DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

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USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	606
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

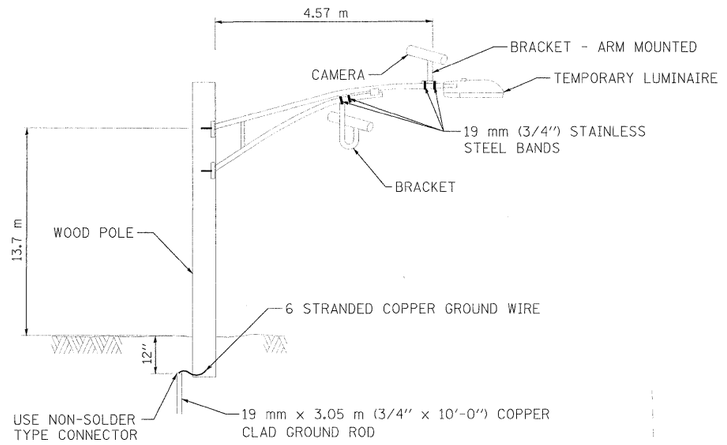
*(5CS, 13C, 108, 109)R

EXISTING SIGNAL LEGEND

- HANDHOLE
- DOUBLE HANDHOLE
- MAST ARM ASSEMBLY AND POLE
- CONTROLLER
- JUNCTION BOX
- SIGNAL POST

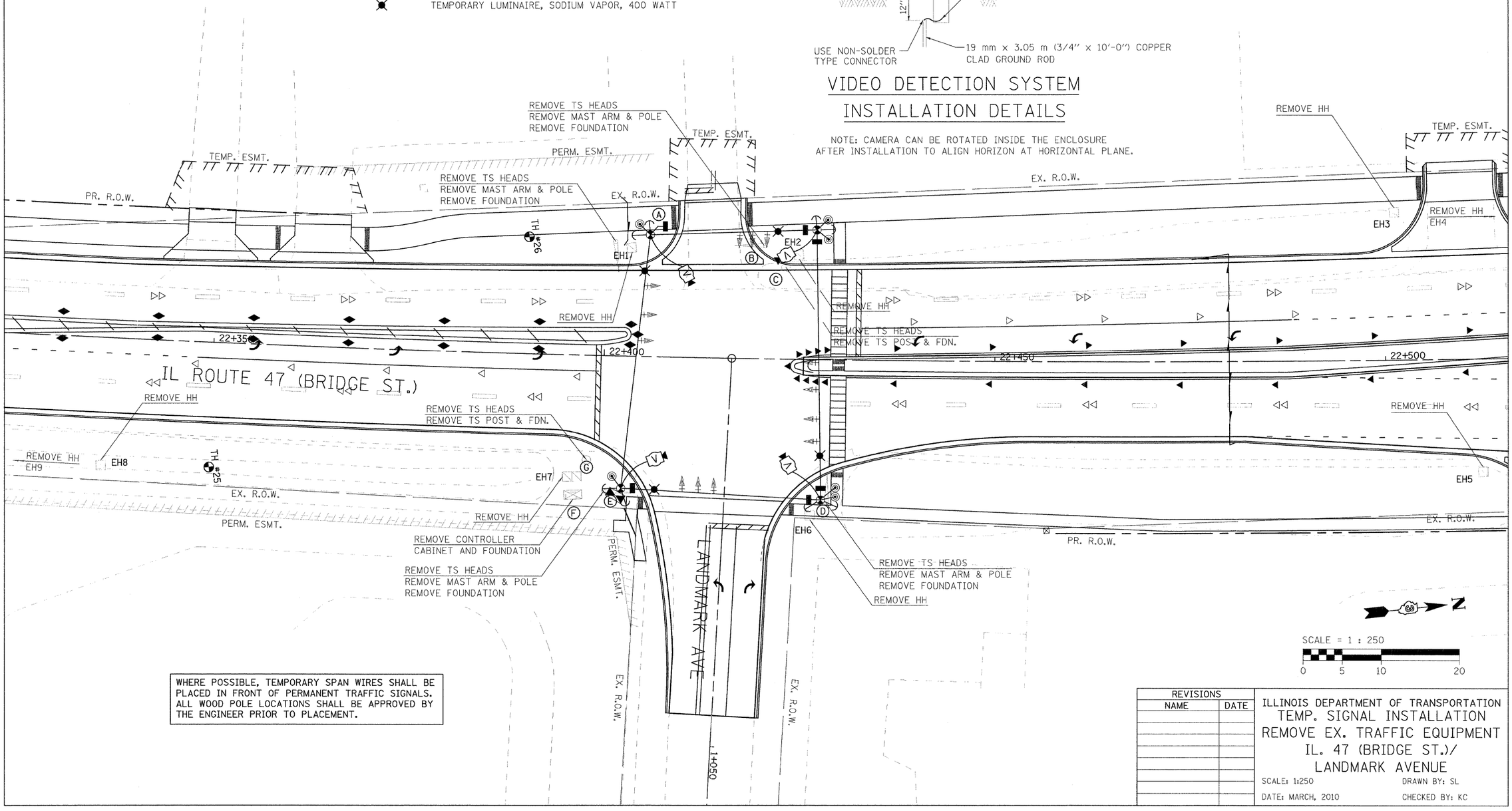
TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY CONTROLLER AND CABINET
- TEMPORARY TRAFFIC SIGNAL HEAD WITH BACKPLATE
- TEMPORARY PEDESTRIAN PUSH-BUTTON
- TEMPORARY PED. SIGNAL HEAD, BRACKET MOUNTED
- VIDEO DETECTION SYSTEM
- TEMPORARY WOOD POLE (CLASS 5) 14 m MINIMUM
- TEMPORARY SPAN WIRE, TETHER WIRE AND CABLE
- GUY WIRES
- TEMPORARY LUMINAIRE, SODIUM VAPOR, 400 WATT



VIDEO DETECTION SYSTEM INSTALLATION DETAILS

NOTE: CAMERA CAN BE ROTATED INSIDE THE ENCLOSURE AFTER INSTALLATION TO ALIGN HORIZON AT HORIZONTAL PLANE.



WHERE POSSIBLE, TEMPORARY SPAN WIRES SHALL BE PLACED IN FRONT OF PERMANENT TRAFFIC SIGNALS. ALL WOOD POLE LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMP. SIGNAL INSTALLATION
REMOVE EX. TRAFFIC EQUIPMENT
IL. 47 (BRIDGE ST.)/
LANDMARK AVENUE

SCALE: 1:250 DRAWN BY: SL

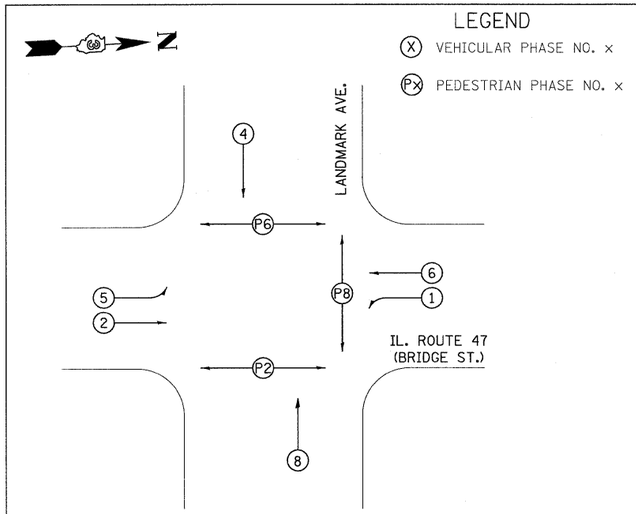
DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\606-607landmark_rem.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	607
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R



PHASE DESIGNATION DIAGRAM

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT 1 EACH

THE FOLLOWING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED AND REMAIN THE PROPERTY OF THE CONTRACTOR, IF IT IS NOT BEING USED FOR THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

4 EACH MAST ARM ASSEMBLY AND POLE
2 EACH SIGNAL POST

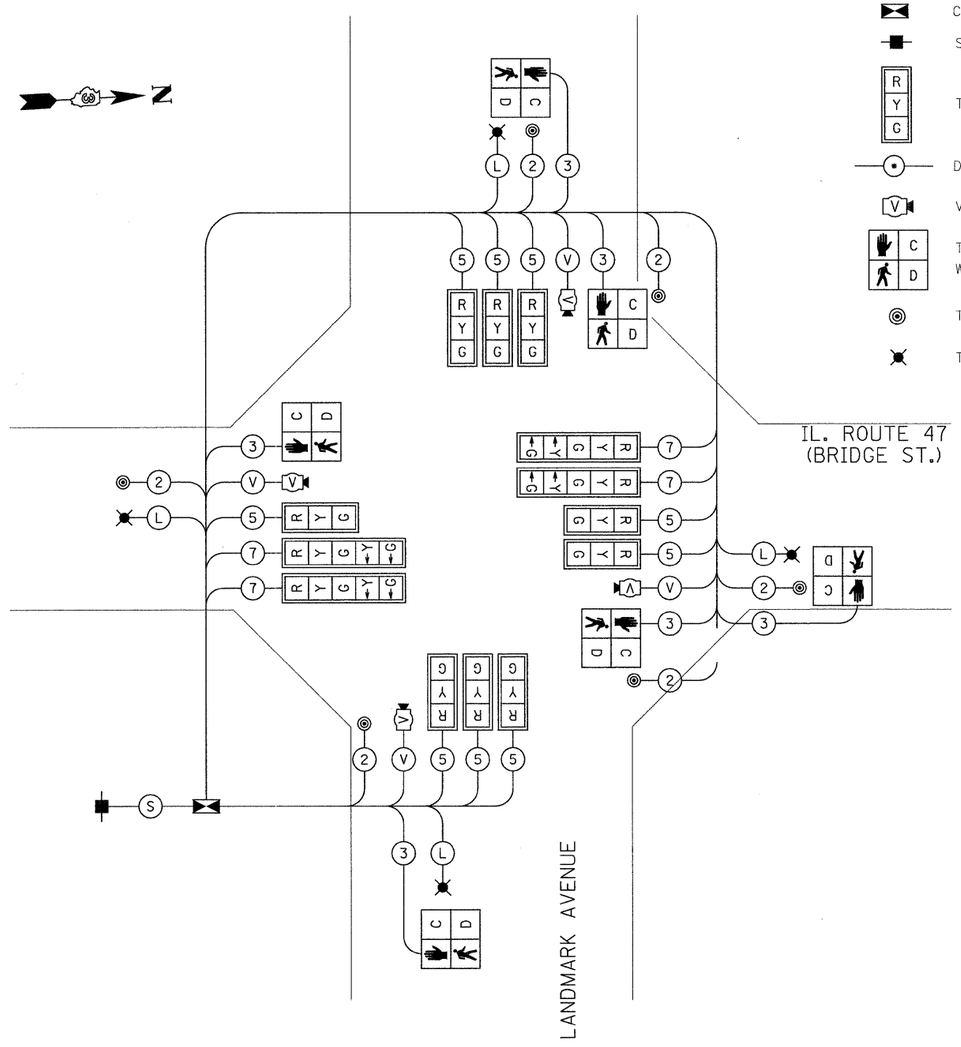
ALL REMAINING REMOVAL ITEMS EXCEPT AS SPECIFIED BELOW SHALL BE REMOVED AND DELIVERED BY THE CONTRACTOR TO THE CITY OF YORKVILLE, 610 TOWER LANE, YORKVILLE, IL.

THE FOLLOWING ITEMS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR OFF THE RIGHT-OF-WAY. THE SALVAGE VALUE OF THIS EQUIPMENT SHALL BE REFLECTED IN THE UNIT BID PRICE OF REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT.

1 EACH SERVICE INSTALLATION
ALL WIRES

SCHEDULE OF REMOVAL ITEMS

ITEM	LOCATION	UNIT	QUANTITIES
REMOVE EXISTING CONCRETE FOUNDATION	A, B, C, D E, F, G	EACH	7
REMOVE EXISTING HANDHOLE	EH1, EH2, EH3, EH4, EH5, EH6, EH7, EH8, EH9	EACH	9



TEMPORARY CABLE DIAGRAM

TEMPORARY CABLE DIAGRAM LEGEND

- CONTROLLER
- SERVICE INSTALLATION
- TEMPORARY TRAFFIC SIGNAL HEAD W/ BACKPLATE
- DENOTES NUMBER OF CONDUCTORS
- VIDEO DETECTION SYSTEM
- TEMPORARY PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN DISPLAY
- TEMPORARY PEDESTRIAN PUSH BUTTON
- TEMPORARY LUMINAIRE, SODIUM VAPOR, 400 WATT

(V) VIDEO CAMERA CABLE

6 PAIRS, TWISTED REQUIRED

- 3 PAIRS CONDUCTOR FOR POWER - 24V AC (AC+, AC-, GND)
- 1 PAIR DATA
- 1 PAIR COMPOSITE VIDEO
- 1 PAIR DETECTOR DATA

OVERALL SHIELD
MINIMUM 16AWG (PAIRS)
(TO BE INCLUDED IN THE BID PRICE FOR VEHICLE VIDEO DETECTION SYSTEM)

(S) SERVICE CABLE

ELECTRIC CABLE IN CONDUIT,
SERVICE, NO.6 2C

(L) LIGHTING CABLE

600V (XLP-TYPE USE) 3 - 1/C NO.10

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED TEMPORARY CABLE DIAGRAM IL. 47 (BRIDGE ST.)/ LANDMARK AVENUE

SCALE: NONE — DRAWN BY: SL
DATE: MARCH, 2010 — CHECKED BY: KC

PLOT DATE = 8/11/2011
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PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESGR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	608
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

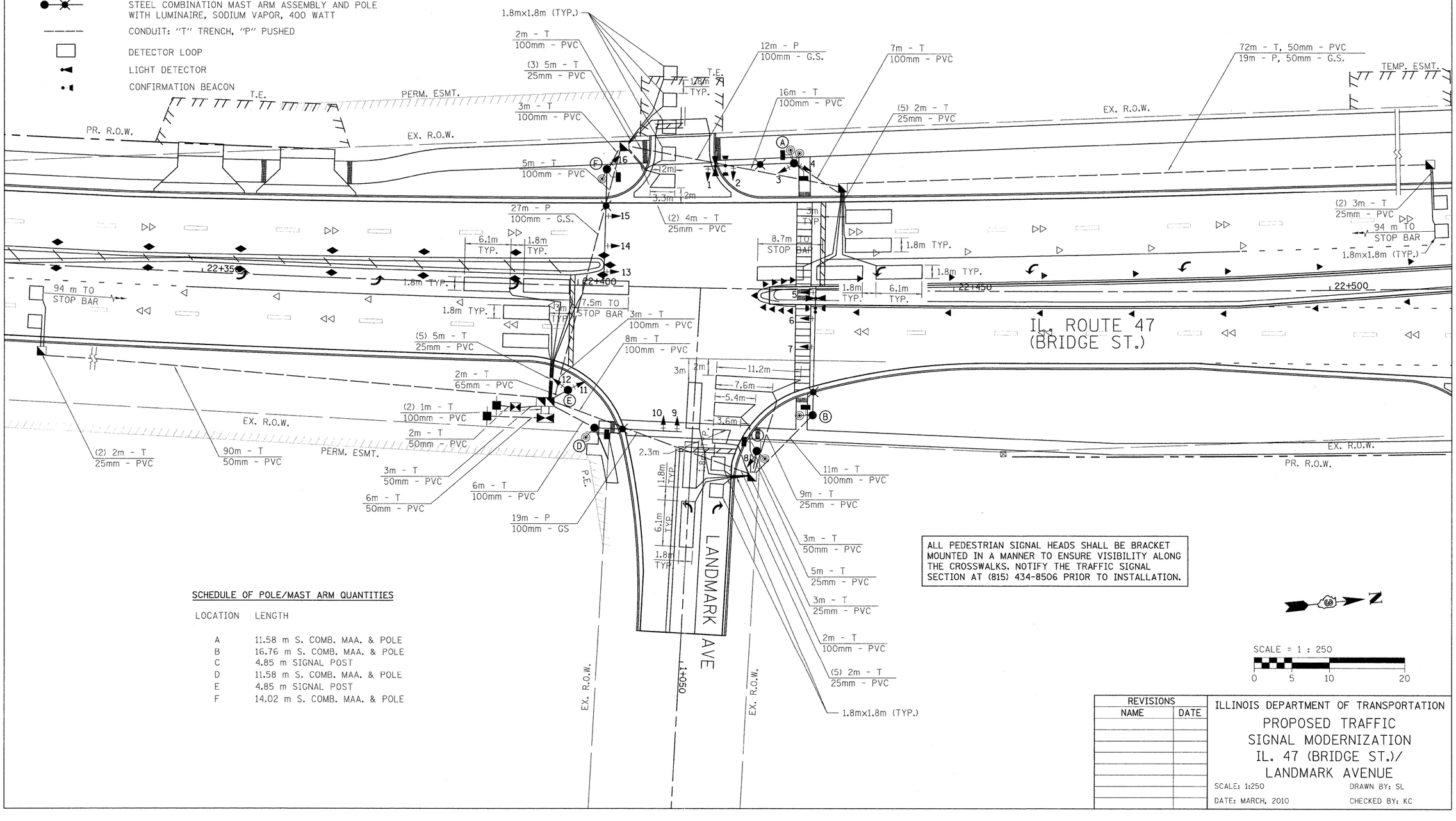
TRAFFIC SIGNAL LEGEND

- HANDHOLE
- DOUBLE HANDHOLE
- CONTROLLER AND CABINET
- LIGHTING CONTROLLER AND CABINET
- SIGNAL HEAD WITH BACKPLATE
- POWER SERVICE INSTALLATION
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- SIGNAL POST
- STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE, SODIUM VAPOR, 400 WATT
- CONDUIT: "T" TRENCH, "P" PUSHED
- DETECTOR LOOP
- LIGHT DETECTOR
- CONFIRMATION BEACON

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

SCHEDULE OF SIGNAL HEAD QUANTITIES

LOCATION	ITEM	UNIT	QUANTITY
1,2,6,7,9,10,14,15	SH, 1F, 3S, MAM	EACH	8
4,8,12,16	SH, 1F, 3S, BM	EACH	4
5,13	SH, 1F, 5S, MAM	EACH	2
3,11	SH, 1F, 5S, BM	EACH	2



SCHEDULE OF POLE/MAST ARM QUANTITIES

LOCATION	LENGTH
A	11.58 m S. COMB. MAA. & POLE
B	16.76 m S. COMB. MAA. & POLE
C	4.85 m SIGNAL POST
D	11.58 m S. COMB. MAA. & POLE
E	4.85 m SIGNAL POST
F	14.02 m S. COMB. MAA. & POLE

ALL PEDESTRIAN SIGNAL HEADS SHALL BE BRACKET MOUNTED IN A MANNER TO ENSURE VISIBILITY ALONG THE CROSSWALKS. NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 PRIOR TO INSTALLATION.

N

SCALE = 1 : 250

0 5 10 20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED TRAFFIC SIGNAL MODERNIZATION
IL. 47 (BRIDGE ST.)/
LANDMARK AVENUE

SCALE: 1:250 DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
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PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

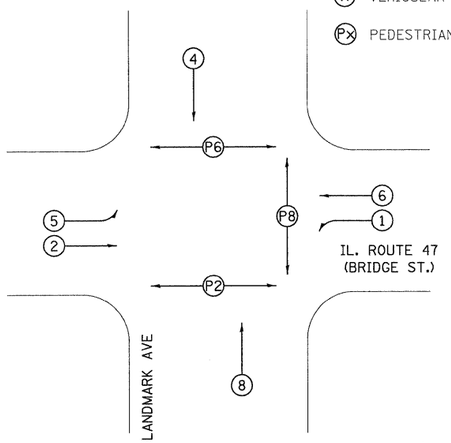
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	609
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

LEGEND

(X) VEHICULAR PHASE NO. x

(Px) PEDESTRIAN PHASE NO. x



PHASE DESIGNATION DIAGRAM

SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	QUANTITY
SERVICE INSTALLATION - GROUND MOUNTED	EACH	2
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	5
DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1
LUMINAIRE, SODIUM VAPOR, HOR. MOUNT, 400 WATT	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	8
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	6
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	16
INDUCTIVE LOOP DETECTOR	EACH	11
LIGHT DETECTOR	EACH	4
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	6
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	9
REMOVE EXISTING CONCRETE FOUNDATION	EACH	7
SIGN PANEL - TYPE 1	SQ M	0.9
SIGN PANEL - TYPE 2	SQ M	5.4
CONDUIT IN TRENCH 25mm DIA., PVC	METER	95
CONDUIT IN TRENCH 50mm DIA., PVC	METER	170
CONDUIT IN TRENCH 65mm DIA., PVC	METER	2
CONDUIT IN TRENCH 100mm DIA., PVC	METER	65
CONDUIT PUSHED, 50mm DIA., GALVANIZED STEEL	METER	19
CONDUIT PUSHED, 100mm DIA., GALVANIZED STEEL	METER	58
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	METER	576
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	METER	682
TRENCH AND BACKFILL FOR ELECTRICAL WORK	METER	332
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	METER	328
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	METER	340
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	METER	703
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	METER	237
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14, 1-PAIR	METER	1535
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	METER	11
TRAFFIC SIGNAL POST, GALVANIZED STEEL 4.85 METER	EACH	2
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 11.58 METER	EACH	2
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 14.02 METER	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 16.76 METER	EACH	1
CONCRETE FOUNDATION, TYPE A	METER	2.0
CONCRETE FOUNDATION, TYPE C (SPECIAL)	METER	1.1
CONCRETE FOUNDATION, TYPE E 900mm DIAMETER	METER	15.4
DETECTOR LOOP, TYPE 1	METER	465
ELECTRIC CABLE IN CONDUIT NO. 20, 3/C, TWISTED, SHIELDED	METER	680
LIGHTING CONTROLLER, SPECIAL	EACH	1

PROPOSED CABLE DIAGRAM LEGEND

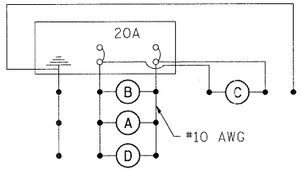
- CONTROLLER AND CABINET
- LIGHTING CONTROLLER AND CABINET
- SERVICE INSTALLATION
- TRAFFIC SIGNAL HEAD WITH BACKPLATE
- DENOTES NUMBER OF CONDUCTORS
- LUMINAIRE, SODIUM VAPOR, 400 WATT
- PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN DISPLAY
- PEDESTRIAN PUSH BUTTON
- DETECTOR LOOP
- DETECTOR LOOP SYSTEM
- H — GROUND ROD AT HANDHOLE OR DOUBLE HANDHOLE
- P/MA — GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
- S — GROUND ROD AT ELECTRIC SERVICE INSTALLATION
- C — GROUND ROD AT CONTROLLER
- LIGHT DETECTOR
- CONFIRMATION BEACON

(S) SERVICE CABLE

ELECTRIC CABLE IN CONDUIT, SERVICE, NO.6 2C

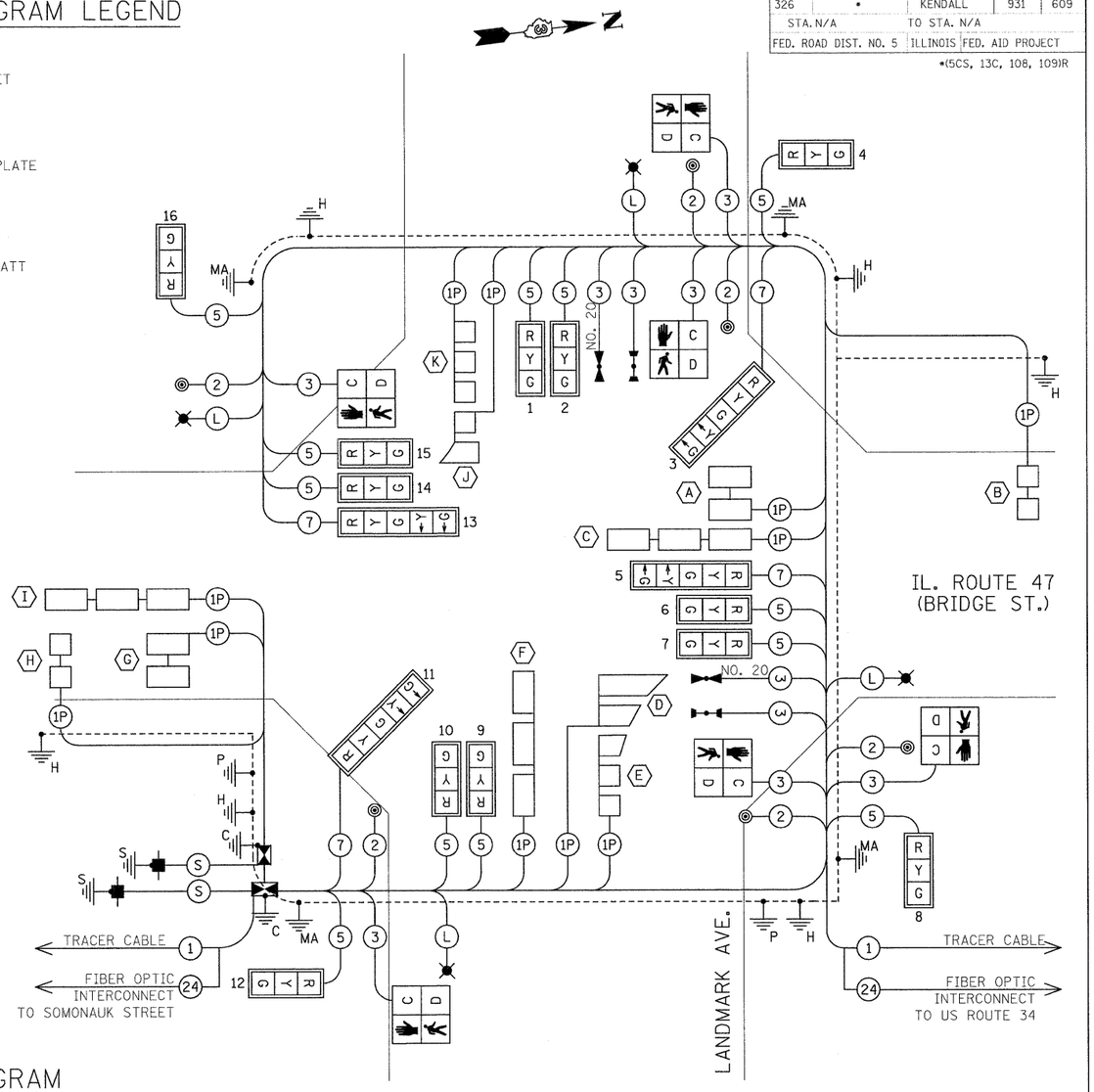
(L) LIGHTING CABLE

600V (XLP-TYPE USE) 3 - 1/C NO.10



LIGHTING CIRCUIT DIAGRAM

AGENCY RESPONSIBLE FOR ENERGY CHARGES:
CITY OF YORKVILLE
CONTRACTOR PAYS ALL ENERGY CHARGES
UNTIL PROJECT IS ACCEPTED

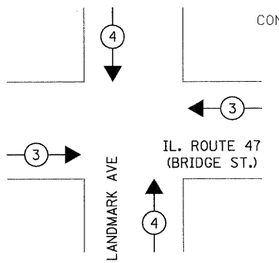


CABLE DIAGRAM

CONTROLLER SPECIFIED: ECONOLITE ASC-3/2100 TS-2 TYPE 2

PEDESTRIAN PUSH-BUTTONS: 4 EVR ROUND MODEL

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



EMERGENCY VEHICLE PREEMPTION SEQUENCE

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PHASE DIAGRAM, CABLE DIAGRAM
SCHEDULE OF QUANTITIES
IL. 47 (BRIDGE ST.)/
LANDMARK AVENUE

SCALE: NONE — DRAWN BY: SL

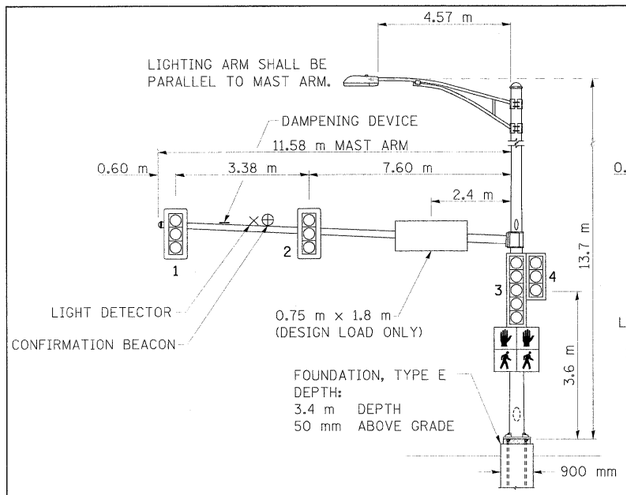
DATE: MARCH, 2010 — CHECKED BY: KC

PLOT DATE = 8/1/2011
FILE NAME = h:\5122\design\609landmark_cable.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

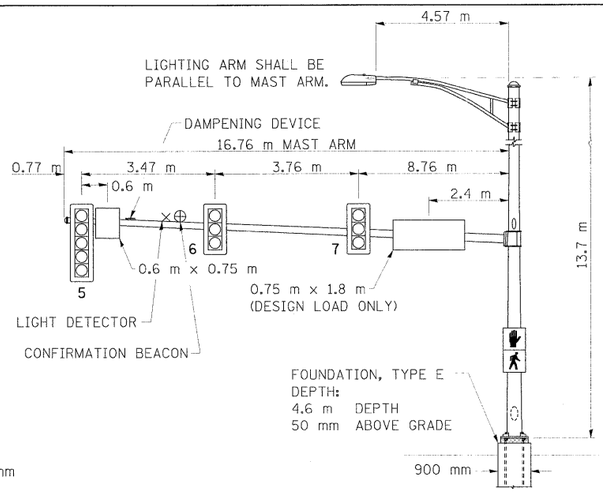
CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	610
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

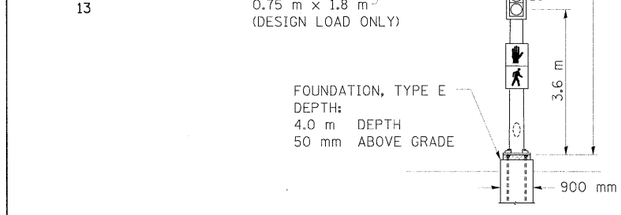
*(5CS, 13C, 108, 109)R



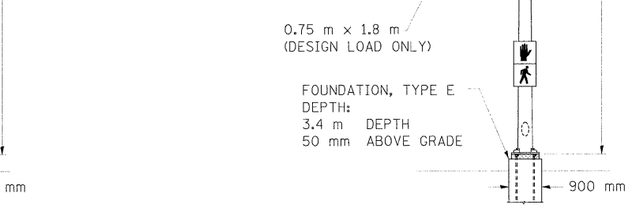
MAST ARM NORTHWEST QUADRANT (A)



MAST ARM NORTHEAST QUADRANT (B)



MAST ARM SOUTHWEST QUADRANT (F)



MAST ARM SOUTHEAST QUADRANT (D)

ELECTRICAL LOAD CHART

IL ROUTE 47

INDICATION	NUMBER	WATTAGE EACH	BURN TIME (%)
RED	10	12	60
YELLOW	10	32	5
GREEN	10	12	35
YELLOW ARROW	4	12	5
GREEN ARROW	4	11	10
🚶	2	7	5
✋	2	7	95

LANDMARK AVENUE

RED	6	12	70
YELLOW	6	32	5
GREEN	6	12	25
🚶	4	7	5
✋	4	7	95

TRAFFIC SIGNAL CABINET

ITEM	NUMBER	WATTAGE EACH	BURN TIME (%)
CONTROLLER	1	6	100
INDUCTIVE LOOP DETECTOR	11	1.5	100
UNINTERRUPTABLE POWER SUPPLY	1	50	100
LIGHT DETECTOR AMPLIFIER	1	1.5	100

HIGHWAY LIGHTING

ITEM	NUMBER	WATTAGE EACH	BURN TIME (%)
CONTROLLER	1	6	100
LUMINAIRE	4	400	45

NOTES:

1. WORD "GRADE" IS TO BE INTERPRETED AS TOP OF CURB. TOP OF FOUNDATION SHALL NOT BE EXPOSED MORE THAN 100 mm ABOVE THE SURROUNDING GROUND.
2. THREE ROUTE SIGNS WILL BE FURNISHED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.
3. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
4. FOUNDATION SHOULD BE 50mm ABOVE GRADE OR 0.35m ABOVE CENTERLINE OF ROADWAY, WHICHEVER IS HIGHER.

DETECTOR LOOP INDUCTANCE CHART

DETECTOR LOOP SYSTEM	TURNS PER LOOP	INDUCTANCE READING (MICROHENRIES)	FREQUENCY (HERTZ)	J PIN STATUS
A	4	569	25,569	OFF
B	6	620	24,511	ON
C	4	829	21,189	ON
D	4	658	23,793	OFF
E	5	563	25,721	ON
F	4	803	21,523	ON
G	4	524	26,662	OFF
H	5	427	29,536	ON
I	4	784	21,798	ON
J	5	438	29,163	ON
K	5	569	25,575	ON

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

PEDESTRIAN CROSSING SIGN DETAIL

COUNT-DOWN PEDESTRIAN SIGN R10-3e TO BE USED.

8 REQUIRED.

DIMENSIONS: 230mm x 380mm (TYP.)
LEGEND AND BORDER: NON-REFLECTORIZED BLACK
BACKGROUND: RETROREFLECTIVE WHITE
NUMBERS AND SYMBOLS: RETROREFLECTIVE ORANGE

ONE SIGN SHALL BE PROVIDED FOR EACH PUSH-BUTTON. ORIENTATION OF DIRECTIONAL ARROWS TO BE DETERMINED BY PUSH-BUTTON LOCATION.

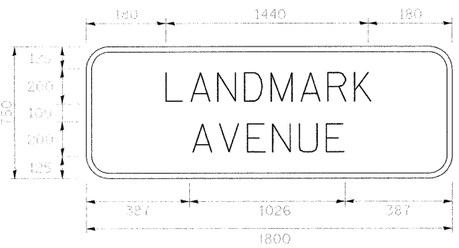
ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL CONSTRUCTION. ALL MOUNTING BOLTS SHALL BE HEX HEAD.

MATERIALS AND INSTALLATION OF THIS SIGN SHALL BE INCLUDED IN THE COST OF PEDESTRIAN PUSH-BUTTON.

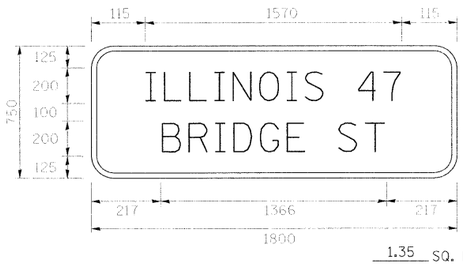
STREET SIGN DETAIL

THESE STREET NAME SIGNS SHALL BE PLACED ON THE MAST ARMS PARALLEL TO THE RESPECTIVE ROUTE AS DIRECTED BY THE ENGINEER.

STREET NAME SIGNS:
1. TYPE ZZ SHEETING REQUIRED
2. WHITE/GREEN BACKGROUND
3. STYLE (d)-15 mm BORDER
4. 200 mm SERIES D LETTERS
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



1.35 SQ. M. EACH
2 REQUIRED

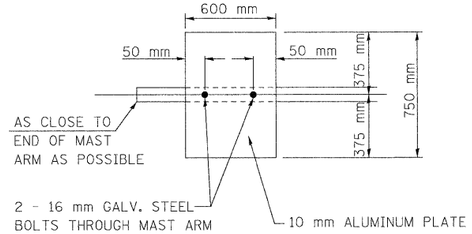


1.35 SQ. M. EACH
2 REQUIRED

R10-12

0.45 SQ. M. EACH
2 REQUIRED

NOTE:
DAMPENING DEVICE SHALL CONSIST OF A 600mm X 750mm TYPE 1, UNPAINTED ALUMINUM SIGN STOCK MOUNTED HORIZONTALLY ON TOP OF MAST ARM WITH THE 750mm LENGTH PERPENDICULAR TO THE ARM. COST OF THE DAMPENING DEVICE IS INCLUDED IN THE MAST ARM PAY ITEM.



DAMPENING PLATE DETAIL

(TOP VIEW) INCIDENTAL TO MAST ARM QUANTITY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MAST ARM LOADING DIAGRAM
ELECTRICAL LOAD CHART
SIGN DETAILS
IL. 47 (BRIDGE ST.)/
LANDMARK AVENUE

SCALE: NONE — DRAWN BY: SL
DATE: MARCH, 2010 — CHECKED BY: KC

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CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	611
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

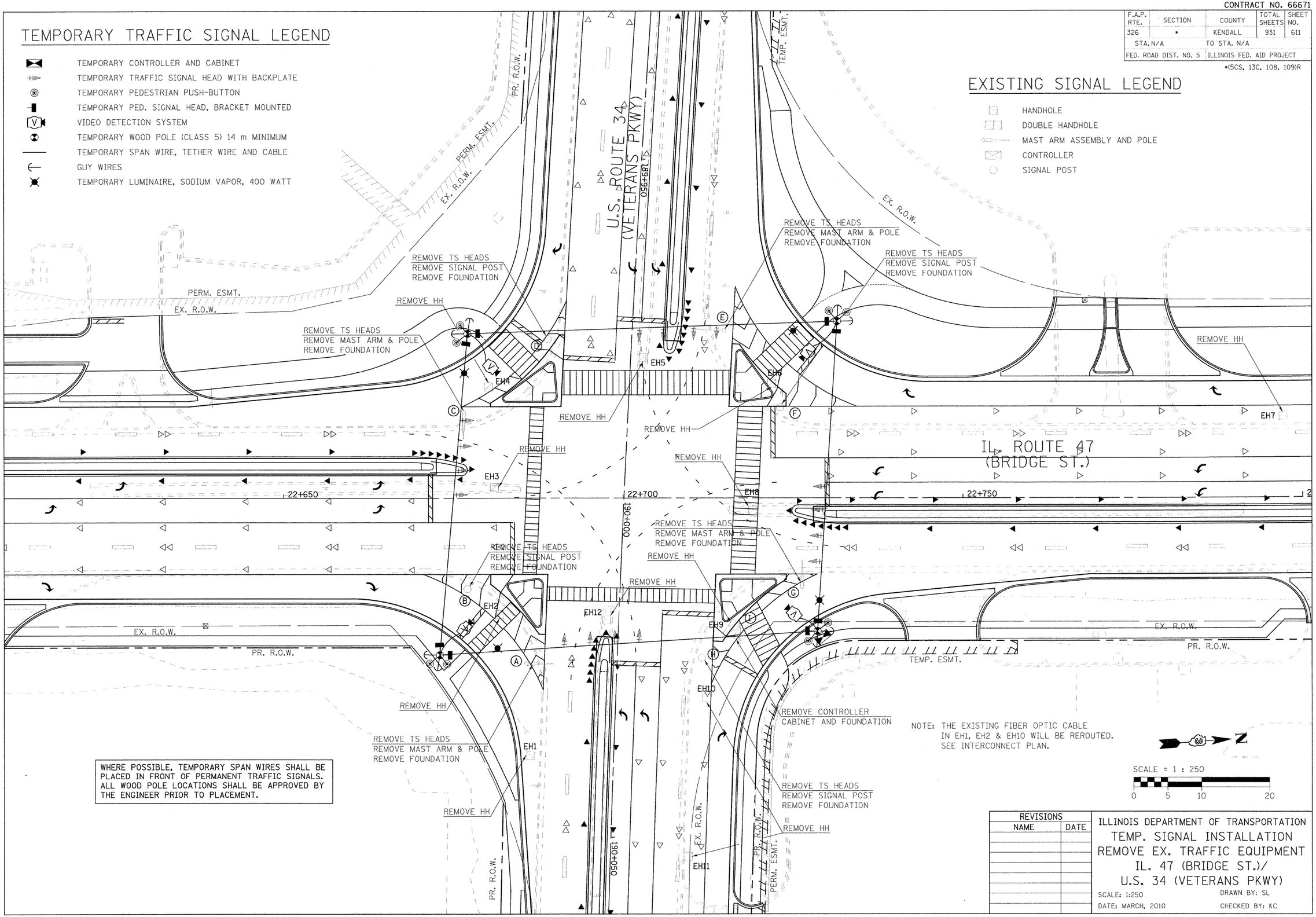
*(5CS, 13C, 108, 109)R

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY CONTROLLER AND CABINET
- TEMPORARY TRAFFIC SIGNAL HEAD WITH BACKPLATE
- TEMPORARY PEDESTRIAN PUSH-BUTTON
- TEMPORARY PED. SIGNAL HEAD, BRACKET MOUNTED
- VIDEO DETECTION SYSTEM
- TEMPORARY WOOD POLE (CLASS 5) 14 m MINIMUM
- TEMPORARY SPAN WIRE, TETHER WIRE AND CABLE
- GUY WIRES
- TEMPORARY LUMINAIRE, SODIUM VAPOR, 400 WATT

EXISTING SIGNAL LEGEND

- HANDHOLE
- DOUBLE HANDHOLE
- MAST ARM ASSEMBLY AND POLE
- CONTROLLER
- SIGNAL POST



WHERE POSSIBLE, TEMPORARY SPAN WIRES SHALL BE PLACED IN FRONT OF PERMANENT TRAFFIC SIGNALS. ALL WOOD POLE LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.

NOTE: THE EXISTING FIBER OPTIC CABLE IN EH1, EH2 & EH10 WILL BE REROUTED. SEE INTERCONNECT PLAN.

SCALE = 1 : 250

0 5 10 20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMP. SIGNAL INSTALLATION REMOVE EX. TRAFFIC EQUIPMENT IL. 47 (BRIDGE ST.)/ U.S. 34 (VETERANS PKWY)

SCALE: 1:250 DRAWN BY: SL

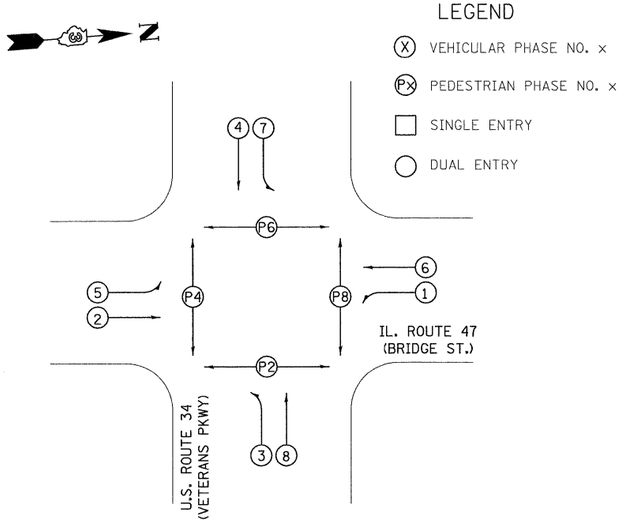
DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\611-613\134_rem.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	612
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R



STAGE I

PHASE DESIGNATION DIAGRAM

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT 1 EACH

THE FOLLOWING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED AND REMAIN THE PROPERTY OF THE CONTRACTOR, IF IT IS NOT BEING USED FOR THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

4 EACH MAST ARM ASSEMBLY AND POLE
15 EACH SIGNAL HEAD (NOTE: THE EXISTING IN-BOARD EASTBOUND 5-SECTION SIGNAL HEAD SHALL BE DELIVERED TO THE CITY)
4 EACH SIGNAL POST
ALL PEDESTRIAN SIGNAL HEADS AND NON-CONFORMING PUSH-BUTTONS

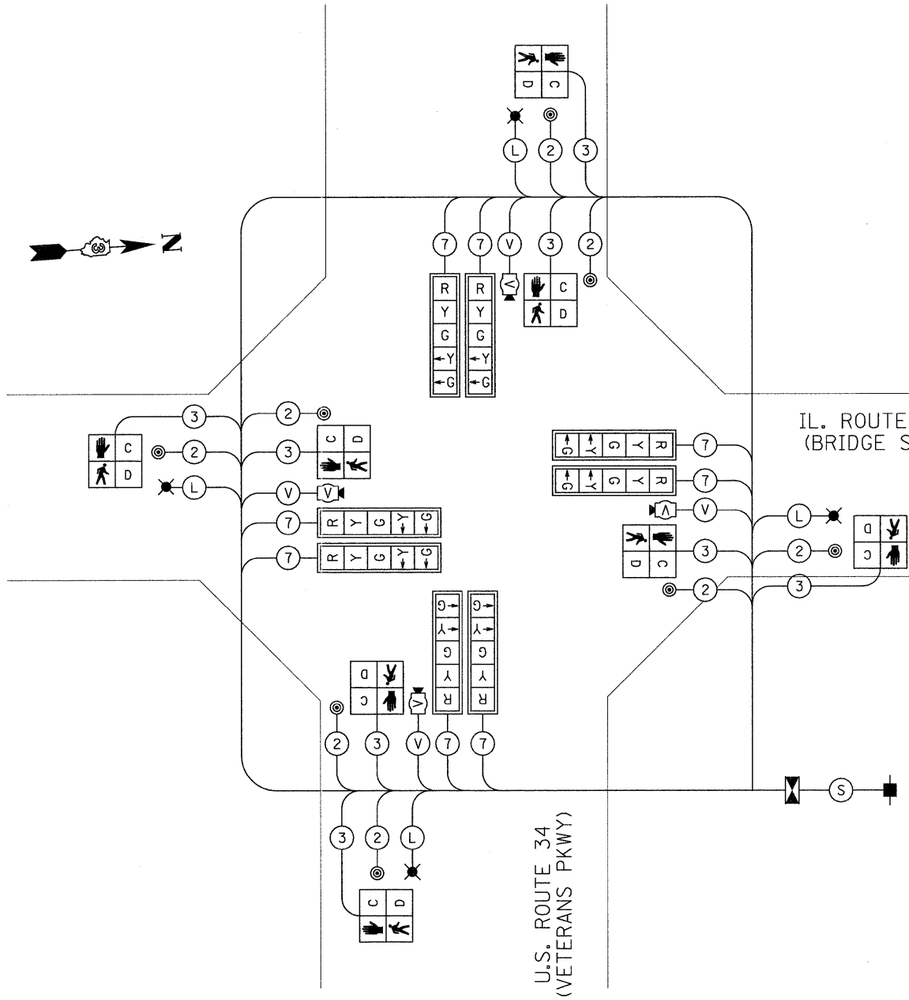
ALL REMAINING REMOVAL ITEMS EXCEPT AS SPECIFIED BELOW SHALL BE REMOVED AND DELIVERED BY THE CONTRACTOR TO THE CITY OF YORKVILLE, 610 TOWER LANE, YORKVILLE, IL.

THE FOLLOWING ITEMS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR OFF THE RIGHT-OF-WAY. THE SALVAGE VALUE OF THIS EQUIPMENT SHALL BE REFLECTED IN THE UNIT BID PRICE OF REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT.

1 EACH SERVICE INSTALLATION
ALL WIRES

SCHEDULE OF REMOVAL ITEMS

ITEM	LOCATION	UNIT	QUANTITIES
REMOVE EXISTING CONCRETE FOUNDATION	A, B, C, D E, F, G, H, I	EACH	9
REMOVE EXISTING HANDHOLE	EH1,EH2,EH3,EH4,EH5,EH6 EH7,EH8,EH9,EH10,EH11,EH12	EACH	12



STAGE I

TEMPORARY CABLE DIAGRAM

TEMPORARY CABLE DIAGRAM LEGEND

- TEMPORARY CONTROLLER
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY TRAFFIC SIGNAL HEAD W/ BACKPLATE
- DENOTES NUMBER OF CONDUCTORS
- (V) VIDEO DETECTION SYSTEM
- TEMPORARY PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN DISPLAY
- TEMPORARY PEDESTRIAN PUSH BUTTON
- TEMPORARY LUMINAIRE, SODIUM VAPOR, 400 WATT

(V) **VIDEO CAMERA CABLE**

6 PAIRS, TWISTED REQUIRED

- 3 PAIRS CONDUCTOR FOR POWER - 24V AC (AC+, AC-, GND)
- 1 PAIR DATA
- 1 PAIR COMPOSITE VIDEO
- 1 PAIR DETECTOR DATA

OVERALL SHIELD
MINIMUM 16AWG (PAIRS)
(TO BE INCLUDED IN THE BID PRICE FOR TEMPORARY TRAFFIC SIGNAL INSTALLATION)

(S) **SERVICE CABLE**

ELECTRIC CABLE IN CONDUIT,
SERVICE, NO.6 2C

(L) **LIGHTING CABLE**

600V (XLP-TYPE USE) 3 - 1/C NO.10

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED TEMPORARY CABLE DIAGRAM, STAGE I
IL. 47 (BRIDGE ST.)/
U.S. 34 (VETERANS PKWY)

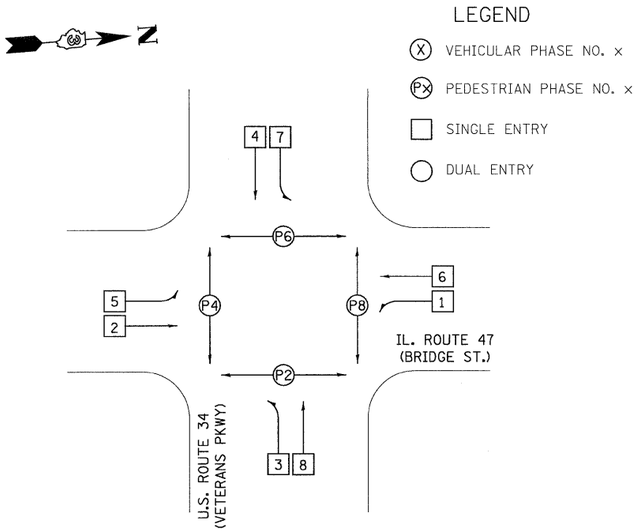
SCALE: NONE — DRAWN BY: SL
DATE: MARCH, 2010 — CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\611-613\134_rem.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

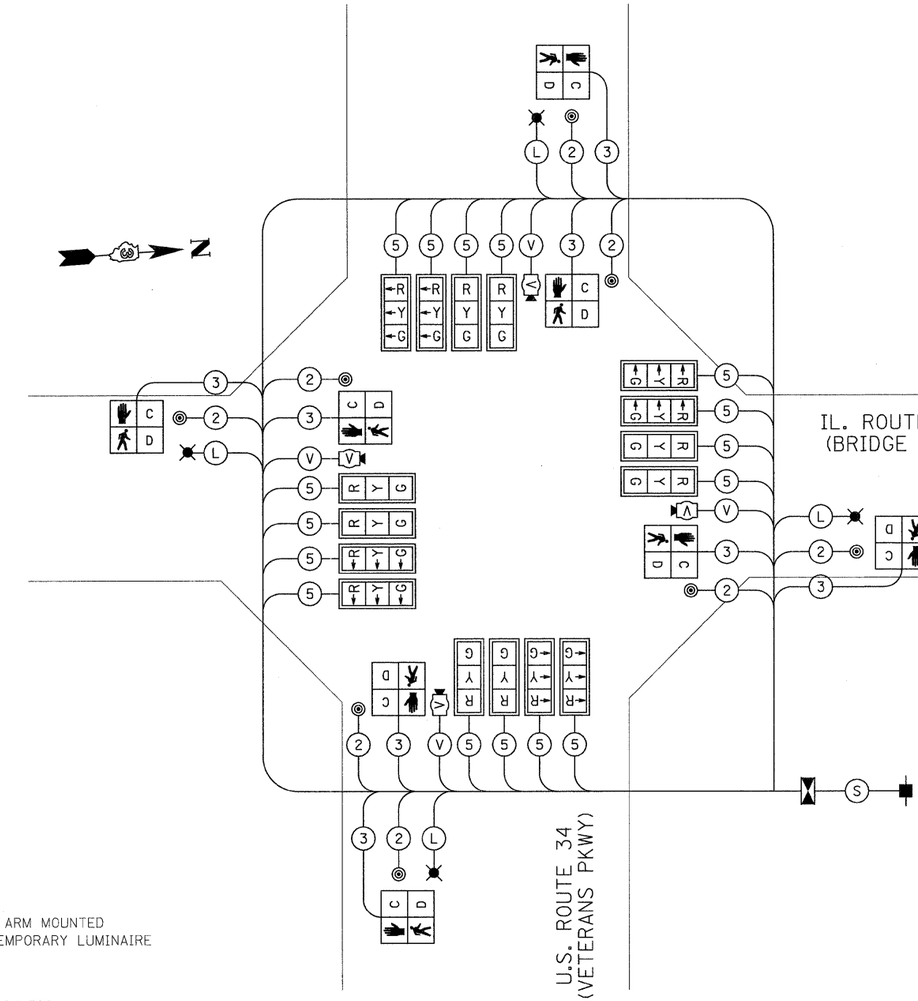
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	613
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

*(5CS, 13C, 108, 109)R



STAGE II

PHASE DESIGNATION DIAGRAM

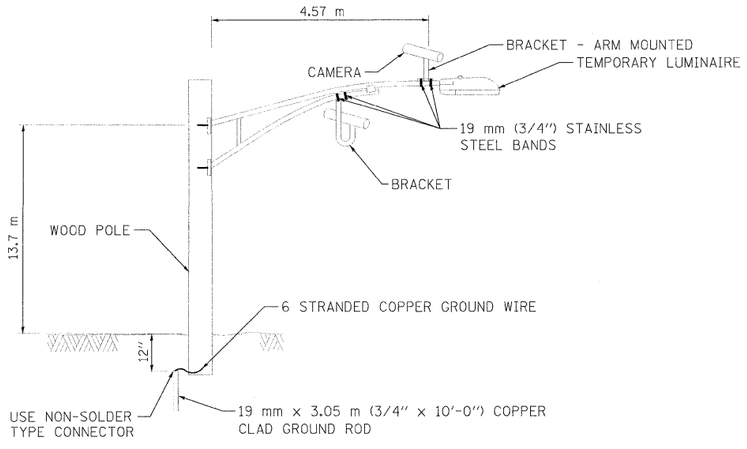


STAGE II

TEMPORARY CABLE DIAGRAM

TEMPORARY CABLE DIAGRAM LEGEND

- TEMPORARY CONTROLLER
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY TRAFFIC SIGNAL HEAD W/ BACKPLATE
- DENOTES NUMBER OF CONDUCTORS
- VIDEO DETECTION SYSTEM
- TEMPORARY PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN DISPLAY
- TEMPORARY PEDESTRIAN PUSH BUTTON
- TEMPORARY LUMINAIRE, SODIUM VAPOR, 400 WATT



VIDEO DETECTION SYSTEM INSTALLATION DETAILS

NOTE: CAMERA CAN BE ROTATED INSIDE THE ENCLOSURE AFTER INSTALLATION TO ALIGN HORIZON AT HORIZONTAL PLANE.

(V) VIDEO CAMERA CABLE

6 PAIRS, TWISTED REQUIRED

- 3 PAIRS CONDUCTOR FOR POWER - 24V AC (AC+, AC-, GND)
- 1 PAIR DATA
- 1 PAIR COMPOSITE VIDEO
- 1 PAIR DETECTOR DATA

OVERALL SHIELD
MINIMUM 16AWG (PAIRS)
(TO BE INCLUDED IN THE BID PRICE FOR VEHICLE VIDEO DETECTION SYSTEM)

(S) SERVICE CABLE

ELECTRIC CABLE IN CONDUIT,
SERVICE, NO.6 2C

(L) LIGHTING CABLE

600V (XLP-TYPE USE) 3 - 1/C NO.10

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED TEMPORARY CABLE DIAGRAM, STAGE II
IL. 47 (BRIDGE ST.)/
U.S. 34 (VETERANS PKWY)

SCALE: NONE — DRAWN BY: SL
DATE: MARCH, 2010 — CHECKED BY: KC

PLOT DATE = 8/1/2011
FILE NAME = h:\5122\design\611-613\134_rem.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	614
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

TRAFFIC SIGNAL LEGEND

- HANDHOLE
- DOUBLE HANDHOLE
- CONTROLLER AND CABINET
- LIGHTING CONTROLLER AND CABINET
- SIGNAL HEAD WITH BACKPLATE
- POWER SERVICE INSTALLATION
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- SIGNAL POST
- STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE, SODIUM VAPOR, 400 WATT
- CONDUIT: "T" TRENCH, "P" PUSHED
- DETECTOR LOOP
- LIGHT DETECTOR
- CONFIRMATION BEACON

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

SCHEDULE OF SIGNAL HEAD QUANTITIES

LOCATION	ITEM	UNIT	QUANTITY
1,2,3,4,8,9,10,11 15,16,17,18,22,23,24,25	SH, 1F, 3S, MAM	EACH	16
5,12,19,26	SH, 1F, 3S, BM	EACH	4
6,7,13,14,20,21,27,28	SH, 1F, 5S, BM	EACH	8

SCHEDULE OF POLE/MAST ARM ASSEMBLIES

LOCATION	LENGTH
A	22.86 m S. COMB. MAA. & POLE
B	4.85 m SIGNAL POST
C	21.34 m S. COMB. MAA. & POLE
D	4.85 m SIGNAL POST
E	22.86 m S. COMB. MAA. & POLE
F	4.85 m SIGNAL POST
G	22.86 m S. COMB. MAA. & POLE
H	4.85 m SIGNAL POST
I	4.85 m SIGNAL POST
J	PEDESTRIAN PUSH-BUTTON POST
K	PEDESTRIAN PUSH-BUTTON POST
L	PEDESTRIAN PUSH-BUTTON POST

ALL PEDESTRIAN SIGNAL HEADS SHALL BE BRACKET MOUNTED IN A MANNER TO ENSURE VISIBILITY ALONG THE CROSSWALKS. NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 PRIOR TO INSTALLATION.

SCALE = 1 : 250

0 5 10 20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED TRAFFIC SIGNAL MODERNIZATION IL. 47 (BRIDGE ST.)/ U.S. 34 (VETERANS PKWY)

SCALE: 1:250 DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\614134-pr-op.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	615
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

PROPOSED CABLE DIAGRAM LEGEND

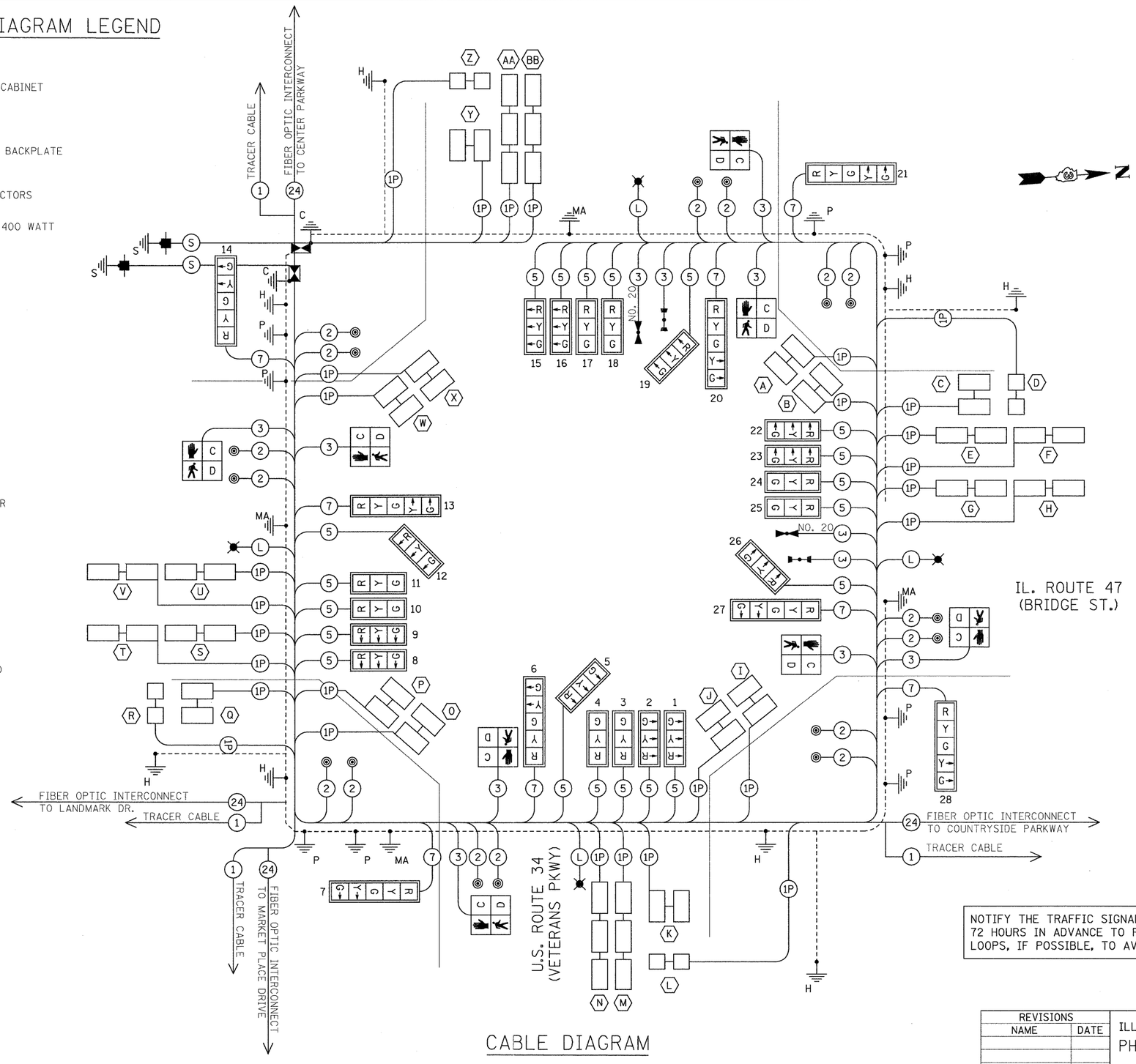
- CONTROLLER AND CABINET
- LIGHTING CONTROLLER AND CABINET
- SERVICE INSTALLATION
- TRAFFIC SIGNAL HEAD WITH BACKPLATE (R, Y, G)
- DENOTES NUMBER OF CONDUCTORS
- LUMINAIRE, SODIUM VAPOR, 400 WATT
- PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN DISPLAY (C, D)
- PEDESTRIAN PUSH BUTTON
- DETECTOR LOOP
- DETECTOR LOOP SYSTEM
- H — GROUND ROD AT HANDHOLE OR DOUBLE HANDHOLE
- P/MA — GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
- S — GROUND ROD AT ELECTRIC SERVICE INSTALLATION
- C — GROUND ROD AT CONTROLLER
- LIGHT DETECTOR
- CONFIRMATION BEACON

(S) **SERVICE CABLE**

ELECTRIC CABLE IN CONDUIT,
SERVICE, NO.6 2C

(L) **LIGHTING CABLE**

600V (XLP-TYPE USE) 3 - 1/C NO.10



NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

CABLE DIAGRAM

CONTROLLER SPECIFIED: ECONOLITE ASC-3/2100 TS-2 TYPE 2
MASTER CONTROLLER SPECIFIED: ECONOLITE ASC 2M-1000
PEDESTRIAN PUSH-BUTTONS: 4 EVR ROUND MODEL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PHASE DIAGRAM, CABLE DIAGRAM
SCHEDULE OF QUANTITIES
IL. 47 (BRIDGE ST.)/
U.S. 34 (VETERANS PKWY)

SCALE: NONE — DRAWN BY: SL
DATE: MARCH, 2010 — CHECKED BY: KC

PLOT DATE = 8/11/2011
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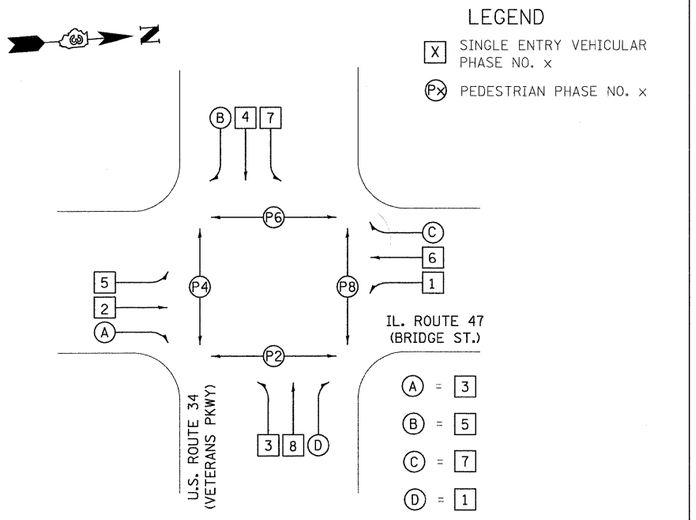
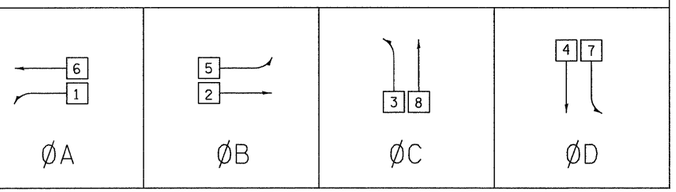
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

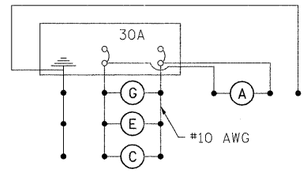
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	616
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R





PHASE DESIGNATION DIAGRAM



LIGHTING CIRCUIT DIAGRAM

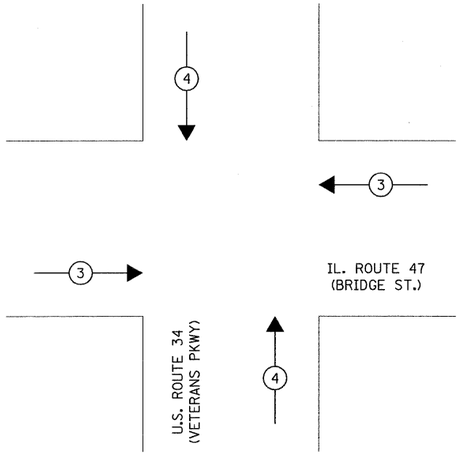
AGENCY RESPONSIBLE FOR ENERGY CHARGES:
CITY OF YORKVILLE
CONTRACTOR PAYS ALL ENERGY CHARGES
UNTIL PROJECT IS ACCEPTED

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

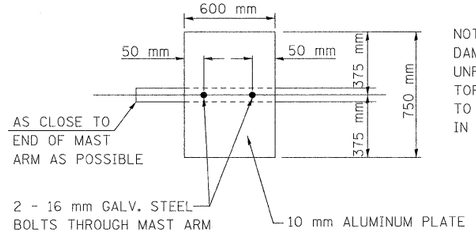
SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	QUANTITY
SERVICE INSTALLATION - GROUND MOUNTED	EACH	2
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	7
DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1
LUMINAIRE, SODIUM VAPOR, HOR. MOUNT, 400 WATT	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	16
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	8
PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	28
INDUCTIVE LOOP DETECTOR	EACH	28
LIGHT DETECTOR	EACH	4
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	16
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	12
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
SIGN PANEL - TYPE 1	SQ M	1.1
SIGN PANEL - TYPE 2	SQ M	5.4
CONDUIT IN TRENCH 25mm DIA., PVC	METER	374
CONDUIT IN TRENCH 30mm DIA., PVC	METER	29
CONDUIT IN TRENCH 50mm DIA., PVC	METER	232
CONDUIT IN TRENCH 65mm DIA., PVC	METER	3
CONDUIT IN TRENCH 75mm DIA., PVC	METER	9
CONDUIT IN TRENCH 100mm DIA., PVC	METER	80
CONDUIT PUSHED, 50mm DIA., GALVANIZED STEEL	METER	82
CONDUIT PUSHED, 75mm DIA., GALVANIZED STEEL	METER	57
CONDUIT PUSHED, 100mm DIA., GALVANIZED STEEL	METER	138
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	METER	906
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	METER	1731
TRENCH AND BACKFILL FOR ELECTRICAL WORK	METER	727
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	METER	1220
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	METER	660
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	METER	1894
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	METER	644
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14, 1-PAIR	METER	4522
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	METER	12
TRAFFIC SIGNAL POST, GALVANIZED STEEL 4.85 METER	EACH	5
PEDESTRIAN PUSH-BUTTON POST, GALVANIZED STEEL, TYPE I	EACH	3
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 21.34 METER	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 22.86 METER	EACH	3
CONCRETE FOUNDATION, TYPE A	METER	8.0
CONCRETE FOUNDATION, TYPE C (SPECIAL)	METER	1.1
CONCRETE FOUNDATION, TYPE E 1060mm DIAMETER	METER	30.4
DETECTOR LOOP, TYPE 1	METER	1627
ELECTRIC CABLE IN CONDUIT NO. 20, 3/C, TWISTED, SHIELDED	METER	1060
LIGHTING CONTROLLER, SPECIAL	EACH	1

EMERGENCY VEHICLE PREEMPTION SEQUENCE



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



DAMPENING PLATE DETAIL

(TOP VIEW) INCIDENTAL TO MAST ARM QUANTITY

NOTE:
DAMPENING DEVICE SHALL CONSIST OF A 600mm X 750mm TYPE 1, UNPAINTED ALUMINUM SIGN STOCK MOUNTED HORIZONTALLY ON TOP OF MAST ARM WITH THE 750mm LENGTH PERPENDICULAR TO THE ARM. COST OF THE DAMPENING DEVICE IS INCLUDED IN THE MAST ARM PAY ITEM.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PHASE DIAGRAM, CABLE DIAGRAM
SCHEDULE OF QUANTITIES
IL. 47 (BRIDGE ST.)/
U.S. 34 (VETERANS PKWY)

SCALE: NONE — DRAWN BY: SL

DATE: MARCH, 2010 — CHECKED BY: KC

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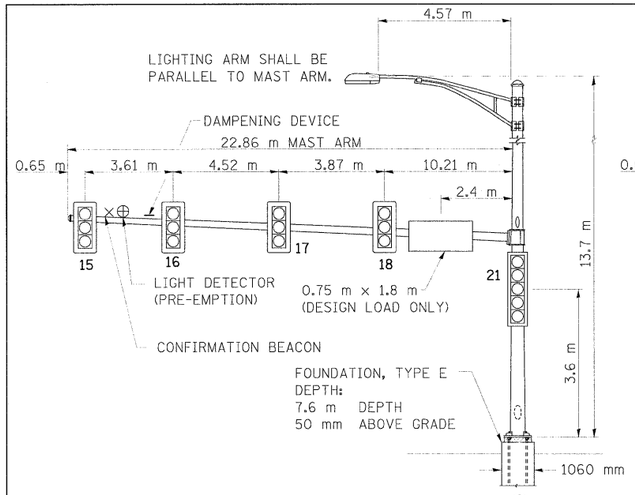
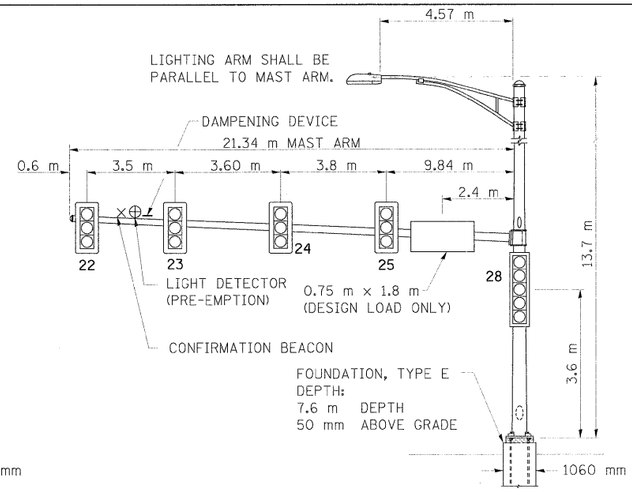
CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	617
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

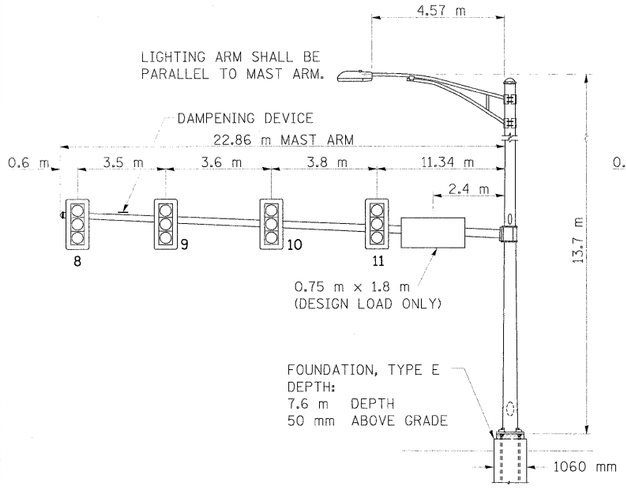
*(5CS, 13C, 108, 109)R



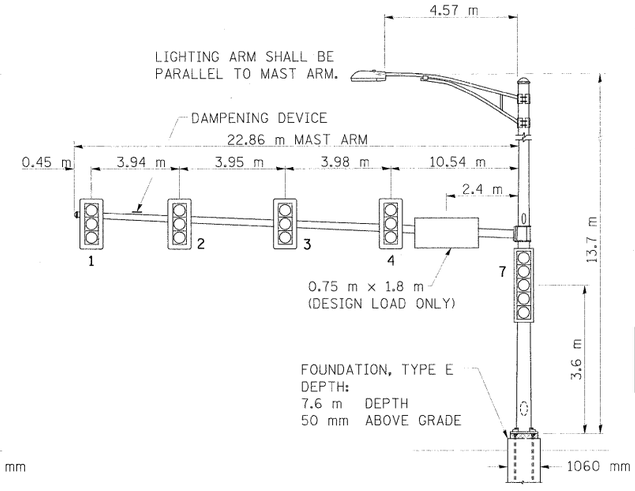
MAST ARM NORTHWEST QUADRANT (A)



MAST ARM NORTHEAST QUADRANT (C)



MAST ARM SOUTHWEST QUADRANT (G)



MAST ARM SOUTHEAST QUADRANT (E)

ELECTRICAL LOAD CHART

IL ROUTE 47

INDICATION	NUMBER	WATTAGE EACH	BURN TIME (%)
RED	8	12	60
YELLOW	8	32	5
GREEN	8	12	35
RED ARROW	6	12	60
YELLOW ARROW	10	12	5
GREEN ARROW	10	11	10
	4	7	5
	4	7	95

US ROUTE 34

RED	8	12	60
YELLOW	8	32	5
GREEN	8	12	35
RED ARROW	6	12	60
YELLOW ARROW	10	12	5
GREEN ARROW	10	11	10
	4	7	5
	4	7	95

TRAFFIC SIGNAL CABINET

ITEM	NUMBER	WATTAGE EACH	BURN TIME (%)
MASTER CONTROLLER	1	6	100
INDUCTIVE LOOP DETECTOR	28	1.5	100
UNINTERRUPTABLE POWER SUPPLY	1	50	100
LIGHT DETECTOR AMPLIFIER	1	1.5	100

HIGHWAY LIGHTING

ITEM	NUMBER	WATTAGE EACH	BURN TIME (%)
CONTROLLER	1	6	100
LUMINAIRE	4	400	45

SEE CABLE DIAGRAM FOR DAMPENING PLATE DETAIL.

GRANULAR SOILS ARE EXPECTED TO BE ENCOUNTERED AT THIS INTERSECTION.

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

NOTES:

1. WORD "GRADE" IS TO BE INTERPRETED AS TOP OF CURB. TOP OF FOUNDATION SHALL NOT BE EXPOSED MORE THAN 100 mm ABOVE THE SURROUNDING GROUND.
2. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.

DETECTOR LOOP INDUCTANCE CHART

DETECTOR LOOP SYSTEM	TURNS PER LOOP	INDUCTANCE READING (MICROHENRIES)	FREQUENCY (HERTZ)	J PIN STATUS
A	4	468	28,194	OFF
B	4	464	28,315	ON
C	4	566	25,637	OFF
D	6	602	24,875	ON
E	4	566	25,637	ON
F	4	569	25,569	ON
G	4	566	25,637	ON
H	4	569	25,569	ON
I	4	502	27,222	OFF
J	4	498	27,331	ON
K	4	601	24,879	OFF
L	6	643	24,069	ON
M	4	861	20,786	ON
N	4	861	20,786	ON
O	4	466	28,254	OFF
P	4	461	28,407	ON
Q	4	558	25,820	OFF
R	6	598	24,958	ON
S	4	558	25,820	ON
T	4	559	25,797	ON
U	4	558	25,820	ON
V	4	559	25,797	ON
W	4	427	29,516	OFF
X	4	427	29,516	ON
Y	4	529	26,518	OFF
Z	5	416	29,924	ON
AA	4	790	21,700	ON
BB	4	790	21,700	ON

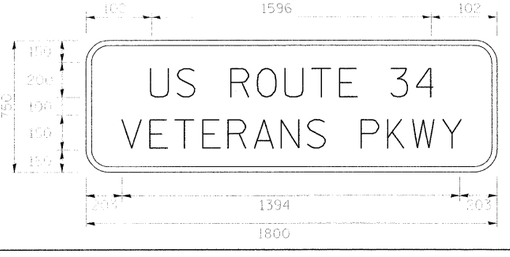
NOTES CONT.:

3. FOUNDATION SHOULB BE 50mm ABOVE GRADE OR 0.35mm ABOVE CENTERLINE OF ROADWAY, WHICHEVER IS HIGHER.
4. FOUR ROUTE SIGNS WILL BE FURNISHED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

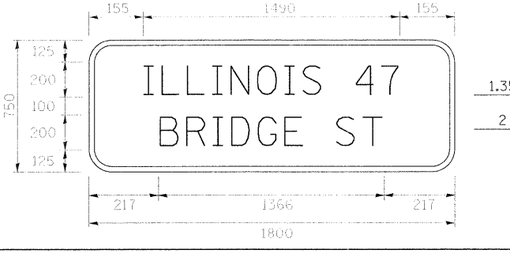
STREET SIGN DETAIL

STREET NAME SIGNS SHALL BE PLACED ON THE MAST ARMS PARALLEL TO THE RESPECTIVE ROUTE AS DIRECTED BY THE ENGINEER.

STREET NAME SIGNS:
1. TYPE ZZ SHEETING REQUIRED
2. WHITE/GREEN BACKGROUND
3. STYLE (d)-15 mm BORDER
4. 200 mm SERIES D LETTERS EXCEPT "VETERANS PKWY" USE SERIES C 150 mm
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



1.35 SQ. M. EACH
2 REQUIRED



1.35 SQ. M. EACH
2 REQUIRED

NOTE: TRAILBLAZER SIGNS AS SHOWN SHALL BE PLACED ON MAST ARM POSTS AS DIRECTED BY THE ENGINEER.

M3-4 SIGN
600 x 300

0.18 SQ. M. EACH
1 REQUIRED

M3-4 SIGN
600 x 300

0.18 SQ. M. EACH
1 REQUIRED

M1-4 SIGN
600 x 600

0.36 SQ. M. EACH
2 REQUIRED

PEDESTRIAN CROSSING SIGN DETAIL

COUNT-DOWN PEDESTRIAN SIGN R10-3e TO BE USED.

16 REQUIRED.

DIMENSIONS: 230mm x 380mm (TYP.)
LEGEND AND BORDER: NON-REFLECTORIZED BLACK
BACKGROUND: RETROREFLECTIVE WHITE
NUMBERS AND SYMBOLS: RETROREFLECTIVE ORANGE

ONE SIGN SHALL BE PROVIDED FOR EACH PUSH-BUTTON. ORIENTATION OF DIRECTIONAL ARROWS TO BE DETERMINED BY PUSH-BUTTON LOCATION.

ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL CONSTRUCTION. ALL MOUNTING BOLTS SHALL BE HEX HEAD.

MATERIALS AND INSTALLATION OF THIS SIGN SHALL BE INCLUDED IN THE COST OF PEDESTRIAN PUSH-BUTTON.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MAST ARM LOADING DIAGRAM
ELECTRICAL LOAD CHART
SIGN DETAILS
IL. 47 (BRIDGE ST.)/
U.S. 34 (VETERANS PKWY)

SCALE: NONE
DRAWN BY: SL
DATE: MARCH, 2010
CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\GI\i134_mast.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	618
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

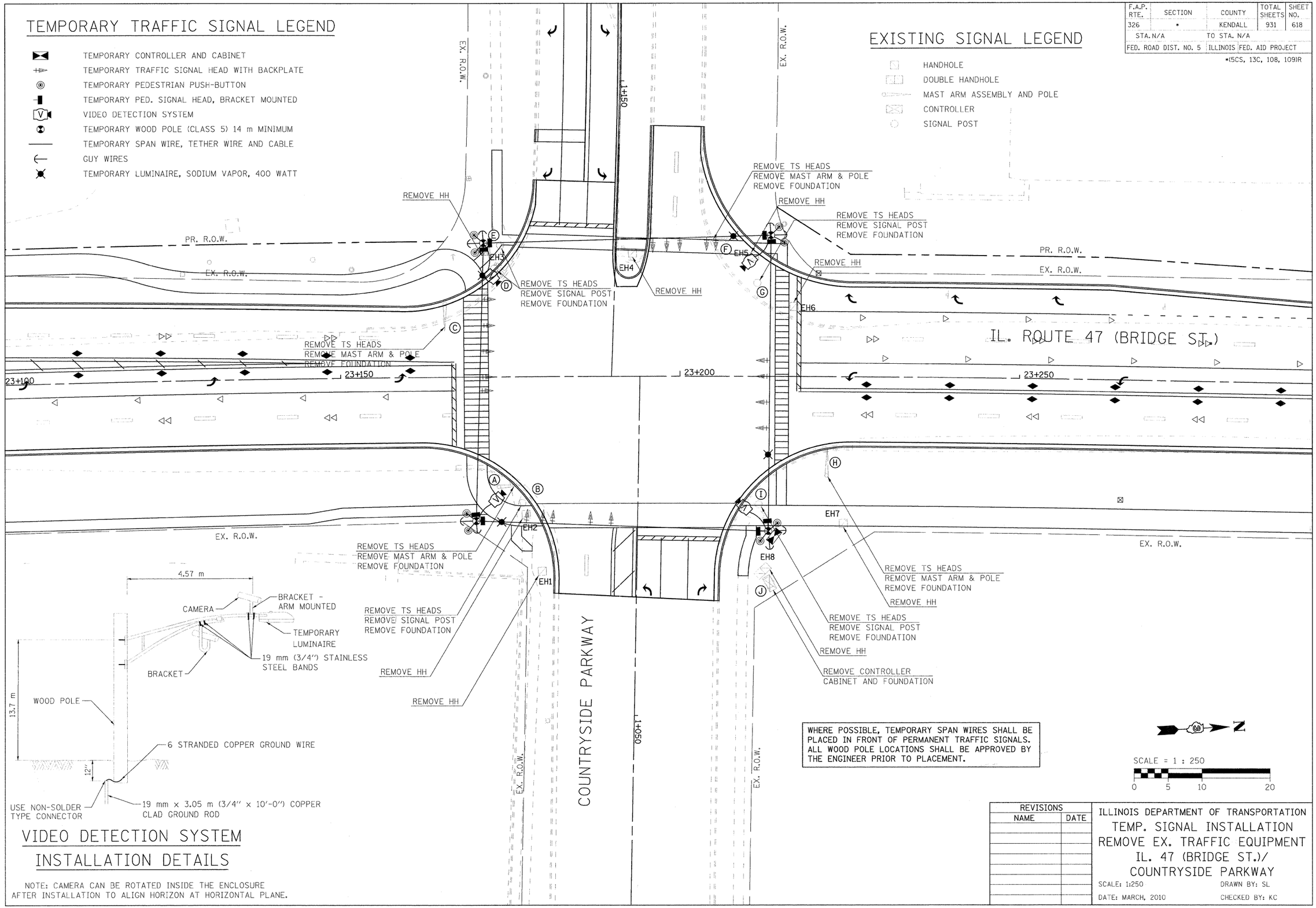
*(5CS, 13C, 108, 109)R

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY CONTROLLER AND CABINET
- TEMPORARY TRAFFIC SIGNAL HEAD WITH BACKPLATE
- TEMPORARY PEDESTRIAN PUSH-BUTTON
- TEMPORARY PED. SIGNAL HEAD, BRACKET MOUNTED
- VIDEO DETECTION SYSTEM
- TEMPORARY WOOD POLE (CLASS 5) 14 m MINIMUM
- TEMPORARY SPAN WIRE, TETHER WIRE AND CABLE
- GUY WIRES
- TEMPORARY LUMINAIRE, SODIUM VAPOR, 400 WATT

EXISTING SIGNAL LEGEND

- HANDHOLE
- DOUBLE HANDHOLE
- MAST ARM ASSEMBLY AND POLE
- CONTROLLER
- SIGNAL POST



VIDEO DETECTION SYSTEM INSTALLATION DETAILS

NOTE: CAMERA CAN BE ROTATED INSIDE THE ENCLOSURE AFTER INSTALLATION TO ALIGN HORIZON AT HORIZONTAL PLANE.

WHERE POSSIBLE, TEMPORARY SPAN WIRES SHALL BE PLACED IN FRONT OF PERMANENT TRAFFIC SIGNALS. ALL WOOD POLE LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.

SCALE = 1 : 250

0 5 10 20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMP. SIGNAL INSTALLATION
REMOVE EX. TRAFFIC EQUIPMENT
IL. 47 (BRIDGE ST.)/
COUNTRYSIDE PARKWAY

SCALE: 1:250 DRAWN BY: SL

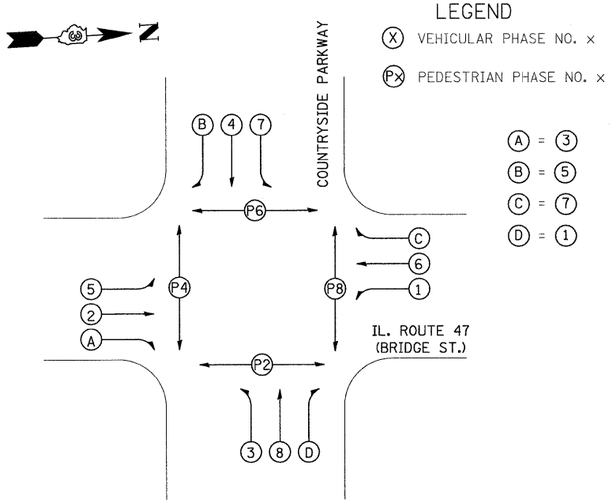
DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\618-619op_rem.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	619
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

*(5CS, 13C, 108, 109)R



PHASE DESIGNATION DIAGRAM

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT 1 EACH

THE FOLLOWING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED AND REMAIN THE PROPERTY OF THE CONTRACTOR, IF IT IS NOT BEING USED FOR THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

4 EACH MAST ARM ASSEMBLY AND POLE
5 EACH SIGNAL POST

ALL REMAINING REMOVAL ITEMS EXCEPT AS SPECIFIED BELOW SHALL BE REMOVED AND DELIVERED BY THE CONTRACTOR TO THE CITY OF YORKVILLE, 610 TOWER LANE, YORKVILLE, IL.

THE FOLLOWING ITEMS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR OFF THE RIGHT-OF-WAY. THE SALVAGE VALUE OF THIS EQUIPMENT SHALL BE REFLECTED IN THE UNIT BID PRICE OF REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT.

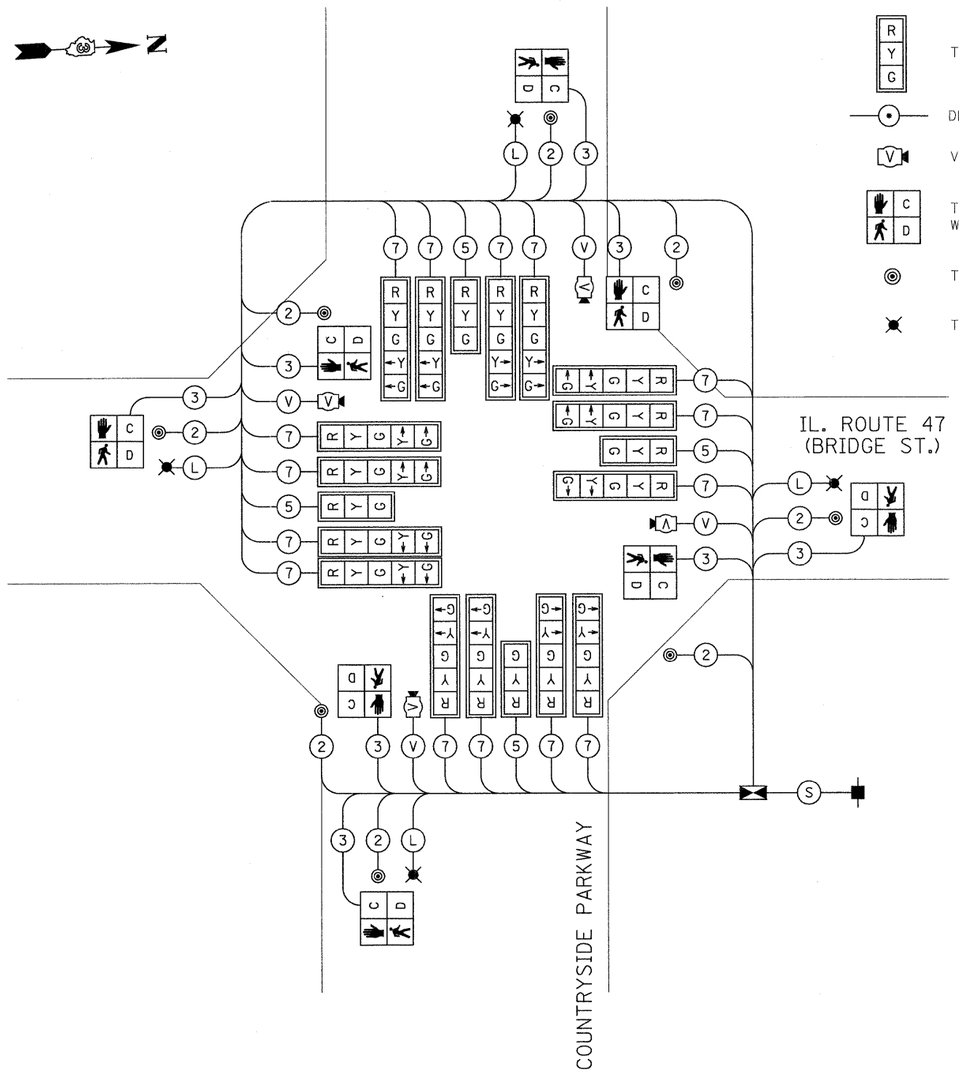
1 EACH SERVICE INSTALLATION
ALL WIRES

SCHEDULE OF REMOVAL ITEMS

ITEM	LOCATION	UNIT	QUANTITIES
REMOVE EXISTING CONCRETE FOUNDATION	A, B, C, D, E, F, G, H, I, J	EACH	10
REMOVE EXISTING HANDHOLE	EH1, EH2, EH3, EH4 EH5, EH6, EH7, EH8	EACH	8

TEMPORARY CABLE DIAGRAM LEGEND

- TEMPORARY CONTROLLER
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY TRAFFIC SIGNAL HEAD W/ BACKPLATE (R, Y, G)
- DENOTES NUMBER OF CONDUCTORS
- VIDEO DETECTION SYSTEM
- TEMPORARY PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN DISPLAY (C, D)
- TEMPORARY PEDESTRIAN PUSH BUTTON
- TEMPORARY LUMINAIRE, SODIUM VAPOR, 400 WATT



TEMPORARY CABLE DIAGRAM

(V) VIDEO CAMERA CABLE

6 PAIRS, TWISTED REQUIRED

3 PAIRS CONDUCTOR FOR POWER - 24V AC (AC+, AC-, GND)
1 PAIR DATA
1 PAIR COMPOSITE VIDEO
1 PAIR DETECTOR DATA

OVERALL SHIELD
MINIMUM 16AWG (PAIRS)
(TO BE INCLUDED IN THE BID PRICE FOR VEHICLE VIDEO DETECTION SYSTEM)

(S) SERVICE CABLE

ELECTRIC CABLE IN CONDUIT,
SERVICE, NO.6 2C

(L) LIGHTING CABLE

600V (XLP-TYPE USE) 3 - 1/C NO.10

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED TEMPORARY CABLE DIAGRAM IL. 47 (BRIDGE ST.)/ COUNTRYSIDE PARKWAY

SCALE: NONE DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\618-619cp_rem.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

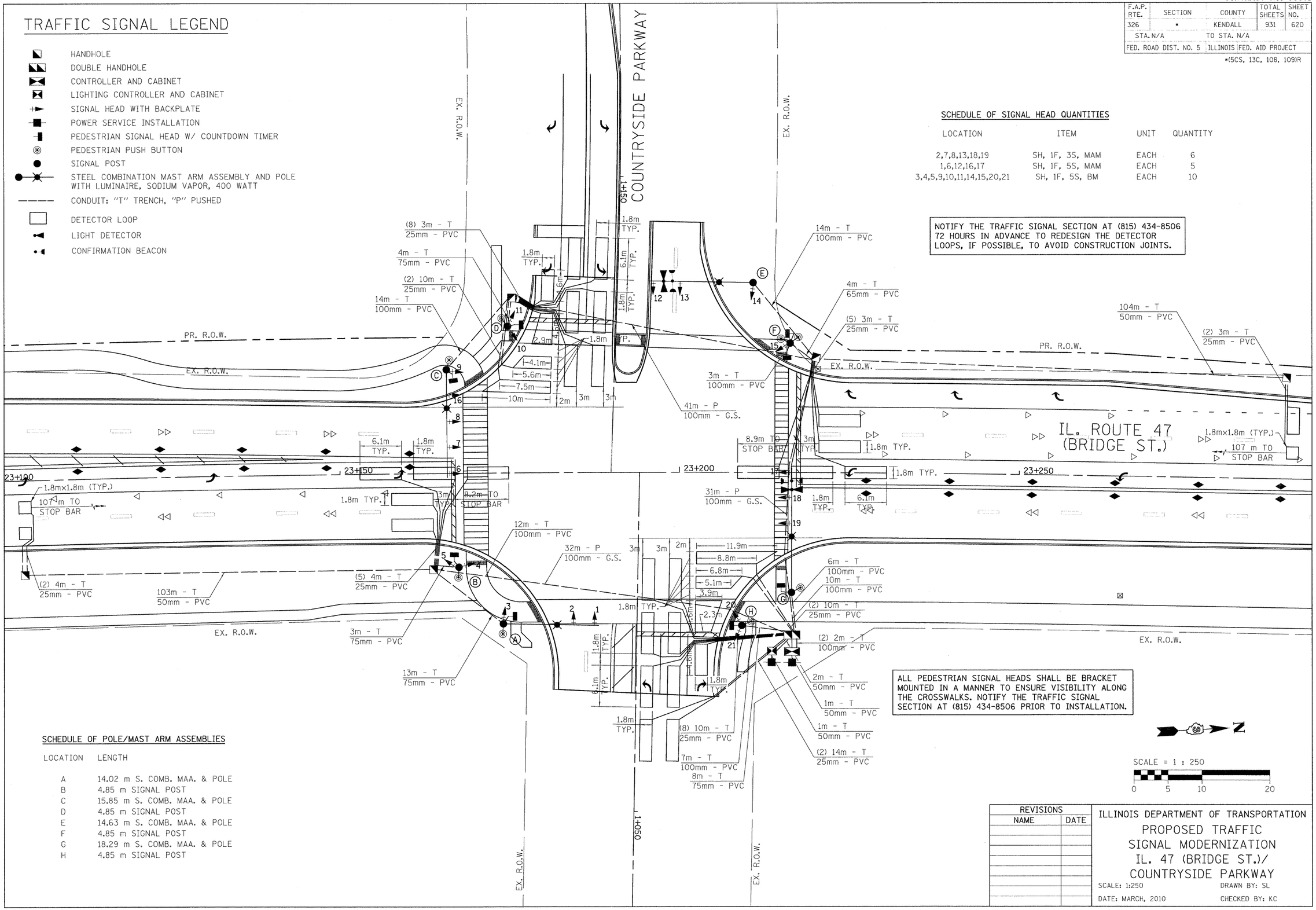
CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	620
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

TRAFFIC SIGNAL LEGEND

- HANDHOLE
- DOUBLE HANDHOLE
- CONTROLLER AND CABINET
- LIGHTING CONTROLLER AND CABINET
- SIGNAL HEAD WITH BACKPLATE
- POWER SERVICE INSTALLATION
- PEDESTRIAN SIGNAL HEAD W/ COUNTDOWN TIMER
- PEDESTRIAN PUSH BUTTON
- SIGNAL POST
- STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE, SODIUM VAPOR, 400 WATT
- CONDUIT: "T" TRENCH, "P" PUSHED
- DETECTOR LOOP
- LIGHT DETECTOR
- CONFIRMATION BEACON



SCHEDULE OF SIGNAL HEAD QUANTITIES

LOCATION	ITEM	UNIT	QUANTITY
2,7,8,13,18,19	SH, 1F, 3S, MAM	EACH	6
1,6,12,16,17	SH, 1F, 5S, MAM	EACH	5
3,4,5,9,10,11,14,15,20,21	SH, 1F, 5S, BM	EACH	10

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

ALL PEDESTRIAN SIGNAL HEADS SHALL BE BRACKET MOUNTED IN A MANNER TO ENSURE VISIBILITY ALONG THE CROSSWALKS. NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 PRIOR TO INSTALLATION.

SCHEDULE OF POLE/MAST ARM ASSEMBLIES

LOCATION	LENGTH
A	14.02 m S. COMB. MAA. & POLE
B	4.85 m SIGNAL POST
C	15.85 m S. COMB. MAA. & POLE
D	4.85 m SIGNAL POST
E	14.63 m S. COMB. MAA. & POLE
F	4.85 m SIGNAL POST
G	18.29 m S. COMB. MAA. & POLE
H	4.85 m SIGNAL POST

SCALE = 1 : 250

0 5 10 20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED TRAFFIC SIGNAL MODERNIZATION IL. 47 (BRIDGE ST.)/ COUNTRYSIDE PARKWAY

SCALE: 1:250 DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
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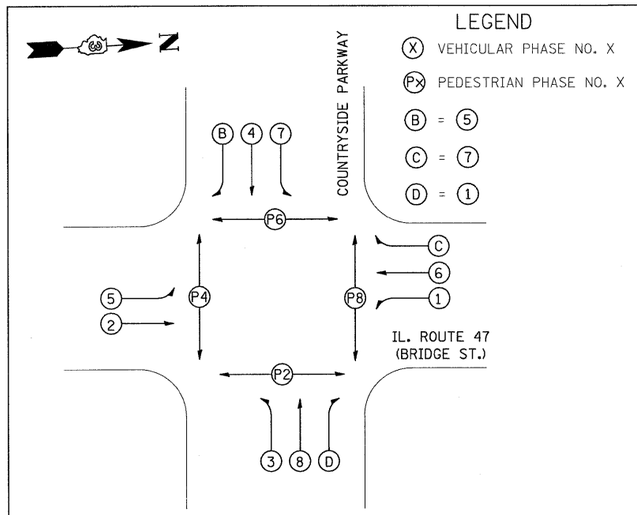
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	621
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R



PHASE DESIGNATION DIAGRAM

SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	QUANTITY
SERVICE INSTALLATION - GROUND MOUNTED	EACH	2
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	5
DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1
LUMINAIRE, SODIUM VAPOR, HOR. MOUNT, 400 WATT	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	10
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	5
PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	21
INDUCTIVE LOOP DETECTOR	EACH	16
LIGHT DETECTOR	EACH	4
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	8
REMOVE EXISTING CONCRETE FOUNDATION	EACH	10
SIGN PANEL - TYPE 1	SQ M	1.8
SIGN PANEL - TYPE 2	SQ M	5.4
CONDUIT IN TRENCH 25mm DIA., PVC	METER	221
CONDUIT IN TRENCH 50mm DIA., PVC	METER	210
CONDUIT IN TRENCH 65mm DIA., PVC	METER	4
CONDUIT IN TRENCH 75mm DIA., PVC	METER	28
CONDUIT IN TRENCH 100mm DIA., PVC	METER	70
CONDUIT PUSHED, 100mm DIA., GALVANIZED STEEL	METER	104
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	METER	792
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	METER	1044
TRENCH AND BACKFILL FOR ELECTRICAL WORK	METER	533
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	METER	516
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	METER	522
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	METER	479
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	METER	1177
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14, 1-PAIR	METER	2457
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	METER	8
TRAFFIC SIGNAL POST, GALVANIZED STEEL 4.85 METER	EACH	4
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 14.02 METER	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 14.63 METER	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 15.85 METER	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 18.29 METER	EACH	1
CONCRETE FOUNDATION, TYPE A	METER	4.0
CONCRETE FOUNDATION, TYPE C (SPECIAL)	METER	1.1
CONCRETE FOUNDATION, TYPE E 1060mm DIAMETER	METER	19.8
DETECTOR LOOP, TYPE 1	METER	813
ELECTRIC CABLE IN CONDUIT NO. 20, 3/C, TWISTED, SHIELDED	METER	480
LIGHTING CONTROLLER, SPECIAL	EACH	1

PROPOSED CABLE DIAGRAM LEGEND

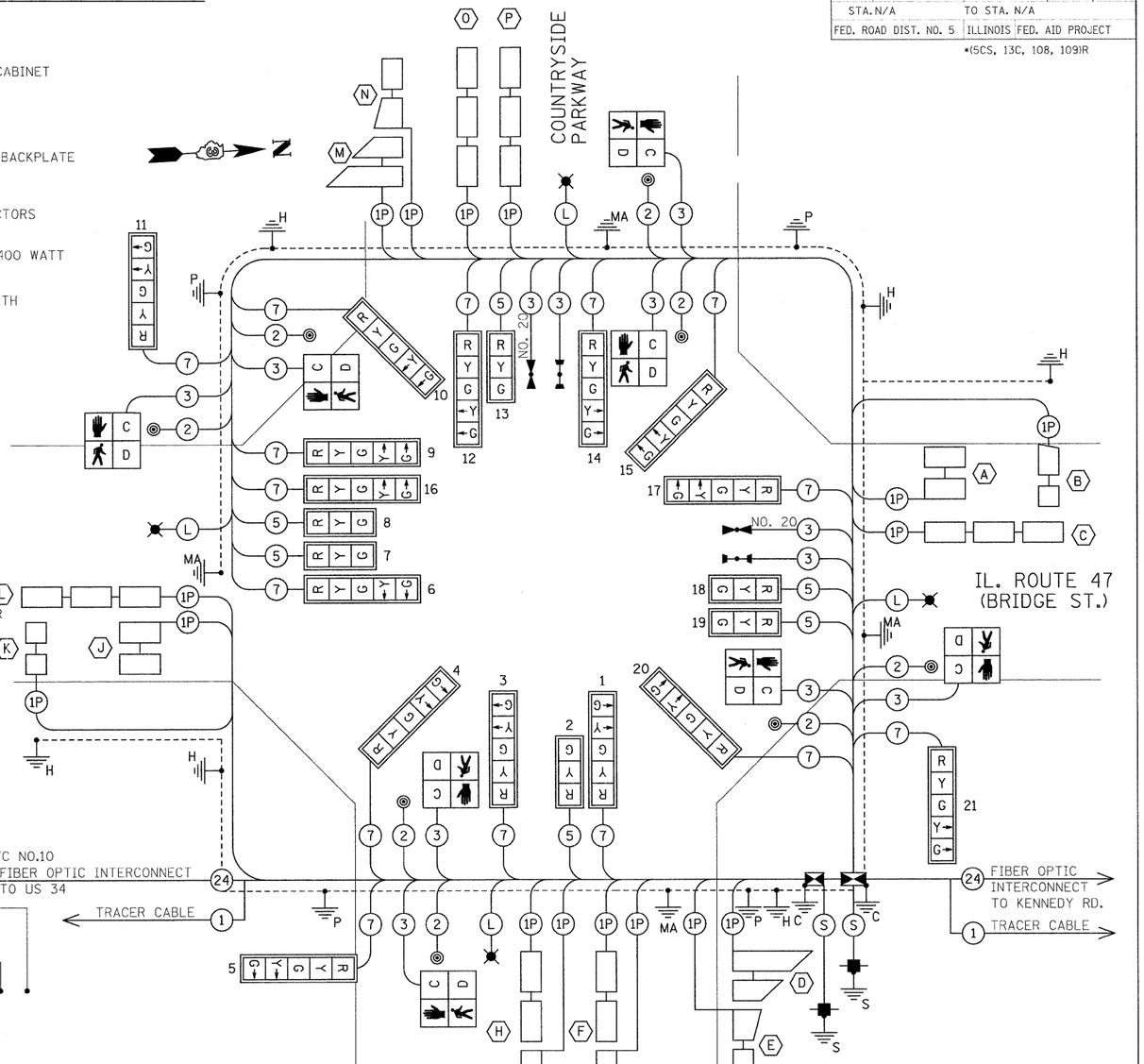
- CONTROLLER AND CABINET
- LIGHTING CONTROLLER AND CABINET
- SERVICE INSTALLATION
- TRAFFIC SIGNAL HEAD WITH BACKPLATE (R Y G)
- DENOTES NUMBER OF CONDUCTORS
- LUMINAIRE, SODIUM VAPOR, 400 WATT
- PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN DISPLAY (C D)
- PEDESTRIAN PUSH BUTTON
- DETECTOR LOOP
- (L) DETECTOR LOOP SYSTEM
- H GROUND ROD AT HANDHOLE OR DOUBLE HANDHOLE
- P/MA GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
- S GROUND ROD AT ELECTRIC SERVICE INSTALLATION
- C GROUND ROD AT CONTROLLER
- LIGHT DETECTOR
- CONFIRMATION BEACON

(S) **SERVICE CABLE**

ELECTRIC CABLE IN CONDUIT, SERVICE, NO.6 2C

(L) **LIGHTING CABLE**

600V (XLP-TYPE USE) 3 - 1/C NO.10



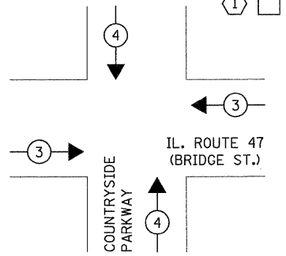
LIGHTING CIRCUIT DIAGRAM

AGENCY RESPONSIBLE FOR ENERGY CHARGES:
CITY OF YORKVILLE
CONTRACTOR PAYS ALL ENERGY CHARGES
UNTIL PROJECT IS ACCEPTED

CABLE DIAGRAM

CONTROLLER SPECIFIED: ECONOLITE ASC-3/2100 TS-2 TYPE 2
PEDESTRIAN PUSH-BUTTON: 4 EVR ROUND MODEL

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



EMERGENCY VEHICLE PREEMPTION SEQUENCE

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PHASE DIAGRAM, CABLE DIAGRAM SCHEDULE OF QUANTITIES IL. 47 (BRIDGE ST.)/ COUNTRYSIDE PARKWAY

SCALE: NONE — DRAWN BY: SL

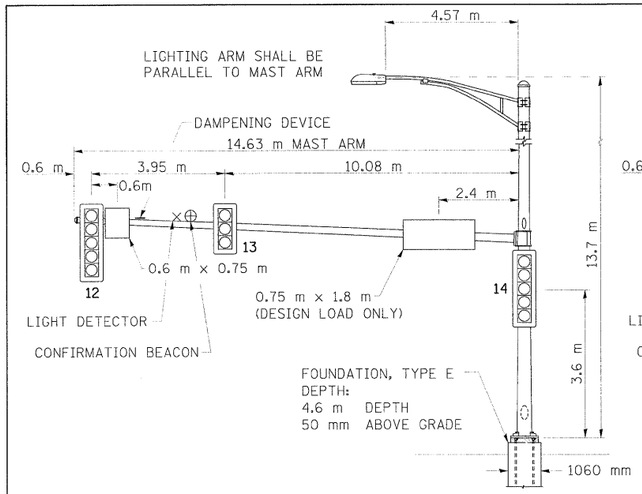
DATE: MARCH, 2010 — CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\621cp_cable.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESGN_

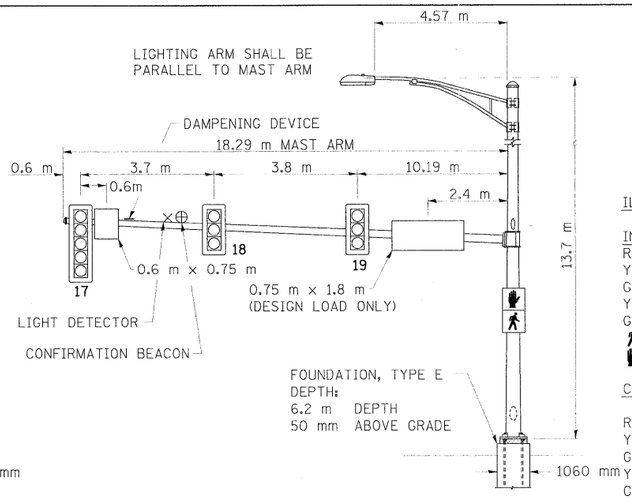
CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	622
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

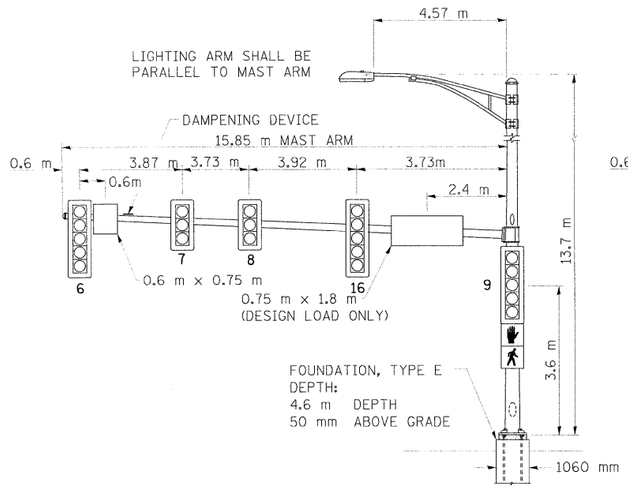
*(5CS, 13C, 108, 109)R



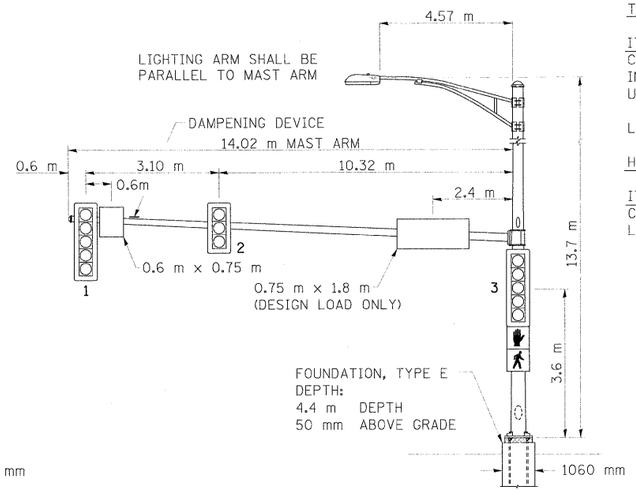
MAST ARM NORTHWEST QUADRANT (E)



MAST ARM NORTHEAST QUADRANT (G)



MAST ARM SOUTHWEST QUADRANT (C)



MAST ARM SOUTHEAST QUADRANT (A)

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

ELECTRICAL LOAD CHART

IL ROUTE 47

INDICATION	NUMBER	WATTAGE EACH	BURN TIME (%)
RED	11	12	60
YELLOW	11	32	5
GREEN	11	12	35
YELLOW ARROW	7	12	5
GREEN ARROW	7	11	10
	4	7	5
	4	7	95

COUNTRYSIDE PARKWAY

RED	10	12	70
YELLOW	10	32	5
GREEN	10	12	25
YELLOW ARROW	8	12	5
GREEN ARROW	8	11	10
	4	7	5
	4	7	95

TRAFFIC SIGNAL CABINET

ITEM	NUMBER	WATTAGE EACH	BURN TIME (%)
CONTROLLER	1	6	100
INDUCTIVE LOOP DETECTOR	16	1.5	100
UNINTERUPTABLE POWER SUPPLY	1	50	100
LIGHT DETECTOR AMPLIFIER	1	1.5	100

HIGHWAY LIGHTING

ITEM	NUMBER	WATTAGE EACH	BURN TIME (%)
CONTROLLER	1	6	100
LUMINAIRE	4	400	45

DETECTOR LOOP INDUCTANCE CHART

DETECTOR LOOP SYSTEM	TURNS PER LOOP	INDUCTANCE READING (MICROHENRIES)	FREQUENCY (HERTZ)	J PIN STATUS
A	4	553	25,936	OFF
B	6	619	24,531	ON
C	4	813	21,391	ON
D	4	710	22,905	OFF
E	4	479	27,887	ON
F	4	529	26,518	ON
G	4	529	26,518	ON
H	4	529	26,518	ON
I	4	529	26,518	ON
J	4	562	25,728	OFF
K	6	620	24,511	ON
L	4	822	21,273	ON
M	4	669	23,597	OFF
N	4	509	27,052	ON
O	4	843	21,007	ON
P	4	843	21,007	ON

GRANULAR SOILS ARE EXPECTED TO BE ENCOUNTERED AT THIS INTERSECTION.

NOTES:

1. WORD "GRADE" IS TO BE INTERPRETED AS TOP OF CURB. TOP OF FOUNDATION SHALL NOT BE EXPOSED MORE THAN 100 mm ABOVE THE SURROUNDING GROUND.
2. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
3. FOUNDATION SHOULD BE 50mm ABOVE GRADE OR 0.35m ABOVE CENTERLINE OF ROADWAY, WHICHEVER IS HIGHER.

PEDESTRIAN CROSSING SIGN DETAIL

COUNT-DOWN PEDESTRIAN SIGN R10-3e TO BE USED.

8 REQUIRED.

DIMENSIONS: 230mm x 380mm (TYP.)
LEGEND AND BORDER: NON-REFLECTORIZED BLACK
BACKGROUND: RETROREFLECTIVE WHITE
NUMBERS AND SYMBOLS: RETROREFLECTIVE ORANGE

ONE SIGN SHALL BE PROVIDED FOR EACH PUSH-BUTTON. ORIENTATION OF DIRECTIONAL ARROWS TO BE DETERMINED BY PUSH-BUTTON LOCATION.

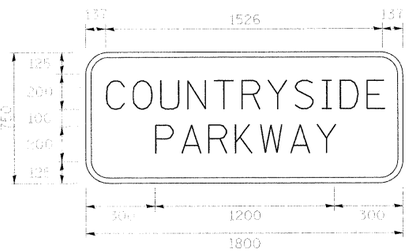
ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL CONSTRUCTION. ALL MOUNTING BOLTS SHALL BE HEX HEAD.

MATERIALS AND INSTALLATION OF THIS SIGN SHALL BE INCLUDED IN THE COST OF PEDESTRIAN PUSH-BUTTON.

STREET SIGN DETAIL

THESE STREET NAME SIGNS SHALL BE PLACED ON THE MAST ARMS PARALLEL TO THE RESPECTIVE ROUTE AS DIRECTED BY THE ENGINEER.

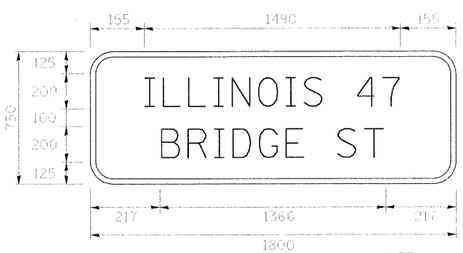
STREET NAME SIGNS:
1. TYPE ZZ SHEETING REQUIRED
2. WHITE/GREEN BACKGROUND
3. STYLE (d)-15 mm BORDER
4. 200 mm SERIES D LETTERS REQUIRED UNLESS OTHERWISE SHOWN
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



200 mm C LETTERS

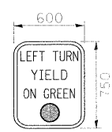
1.35 SQ. M. EACH

2 REQUIRED



1.35 SQ. M. EACH

2 REQUIRED

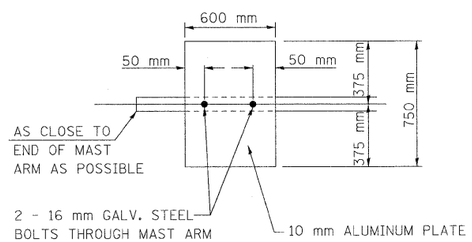


R10-12

0.45 SQ. M. EACH

4 REQUIRED

NOTE:
DAMPENING DEVICE SHALL CONSIST OF A 600mm X 750mm TYPE 1, UNPAINTED ALUMINUM SIGN STOCK MOUNTED HORIZONTALLY ON TOP OF MAST ARM WITH THE 750mm LENGTH PERPENDICULAR TO THE ARM. COST OF THE DAMPENING DEVICE IS INCLUDED IN THE MAST ARM PAY ITEM.



DAMPENING PLATE DETAIL

(TOP VIEW) INCIDENTAL TO MAST ARM QUANTITY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MAST ARM LOADING DIAGRAM
ELECTRICAL LOAD CHART
SIGN DETAILS
IL. 47 (BRIDGE ST.)/
COUNTRYSIDE PARKWAY

SCALE: NONE DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\3122\design\622sp_mast.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	623
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

*(5CS, 13C, 108, 109)R

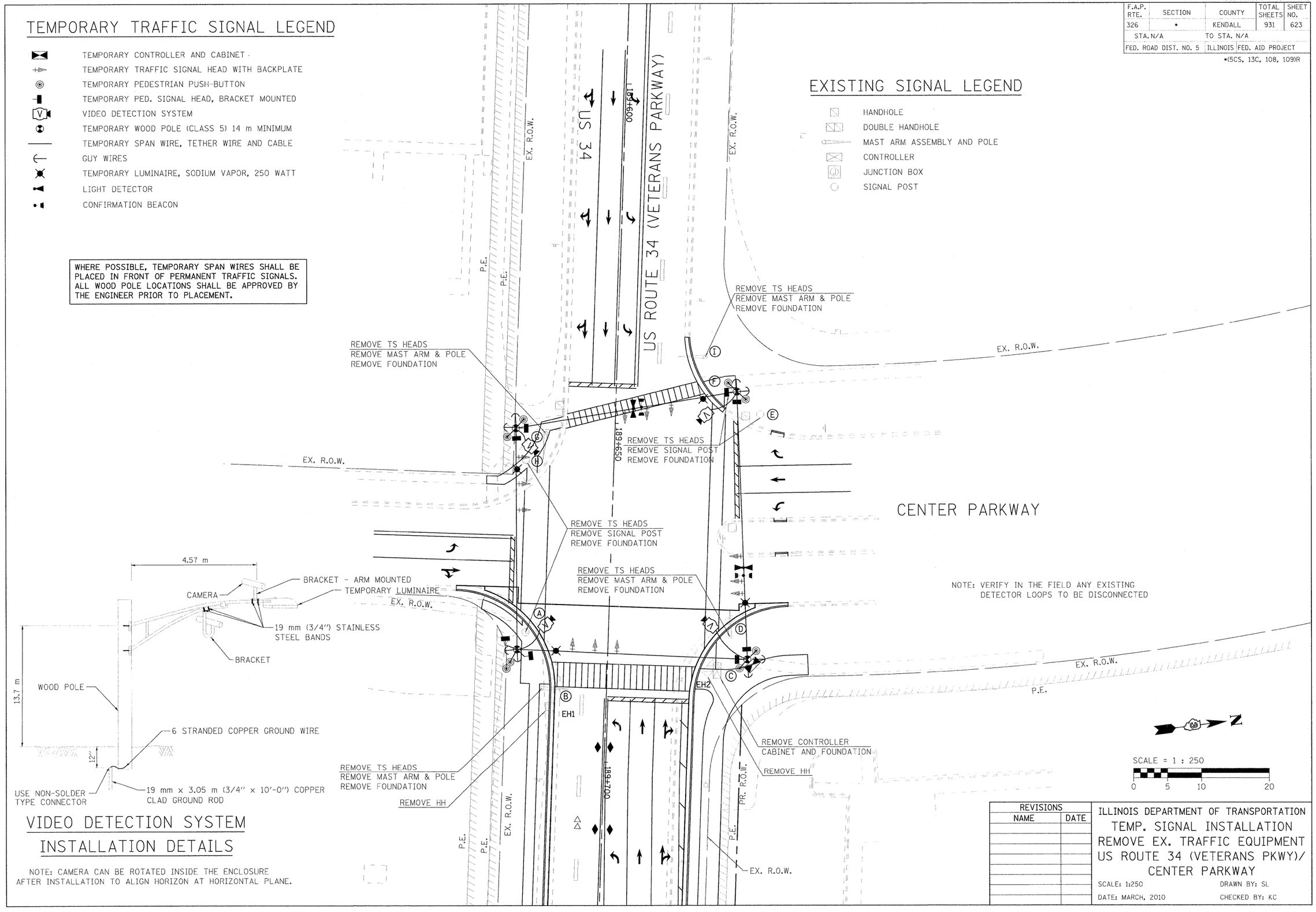
TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY CONTROLLER AND CABINET
- TEMPORARY TRAFFIC SIGNAL HEAD WITH BACKPLATE
- TEMPORARY PEDESTRIAN PUSH-BUTTON
- TEMPORARY PED. SIGNAL HEAD, BRACKET MOUNTED
- VIDEO DETECTION SYSTEM
- TEMPORARY WOOD POLE (CLASS 5) 14 m MINIMUM
- TEMPORARY SPAN WIRE, TETHER WIRE AND CABLE
- GUY WIRES
- TEMPORARY LUMINAIRE, SODIUM VAPOR, 250 WATT
- LIGHT DETECTOR
- CONFIRMATION BEACON

WHERE POSSIBLE, TEMPORARY SPAN WIRES SHALL BE PLACED IN FRONT OF PERMANENT TRAFFIC SIGNALS. ALL WOOD POLE LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.

EXISTING SIGNAL LEGEND

- HANDHOLE
- DOUBLE HANDHOLE
- MAST ARM ASSEMBLY AND POLE
- CONTROLLER
- JUNCTION BOX
- SIGNAL POST



VIDEO DETECTION SYSTEM INSTALLATION DETAILS

NOTE: CAMERA CAN BE ROTATED INSIDE THE ENCLOSURE AFTER INSTALLATION TO ALIGN HORIZON AT HORIZONTAL PLANE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMP. SIGNAL INSTALLATION
REMOVE EX. TRAFFIC EQUIPMENT
US ROUTE 34 (VETERANS PKWY)/
CENTER PARKWAY

SCALE: 1:250 DRAWN BY: SL

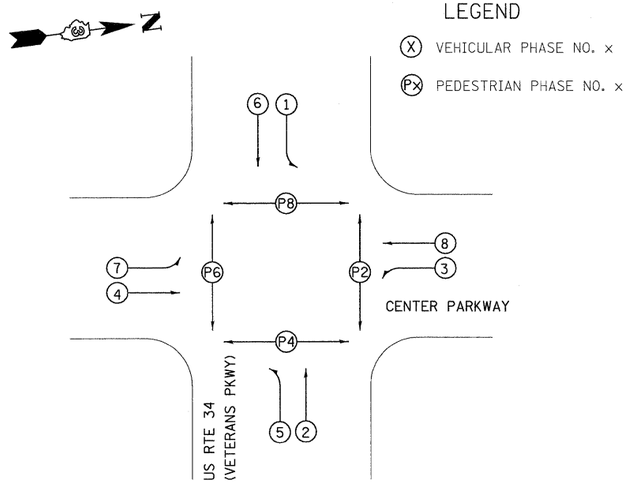
DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\623-624center parkway_rem.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	624
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R



PHASE DESIGNATION DIAGRAM

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT 1 EACH

THE FOLLOWING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED AND REMAIN THE PROPERTY OF THE CONTRACTOR, IF IT IS NOT BEING USED FOR THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

4 EACH MAST ARM ASSEMBLY AND POLE
4 EACH SIGNAL POST
12 EACH SIGNAL HEAD
ALL PEDESTRIAN SIGNAL HEADS AND NON-CONFORMING PUSH-BUTTONS

ALL REMAINING REMOVAL ITEMS EXCEPT AS SPECIFIED BELOW SHALL BE REMOVED AND DELIVERED BY THE CONTRACTOR TO THE CITY OF YORKVILLE, 610 TOWER LANE, YORKVILLE, IL.

THE FOLLOWING ITEMS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR OFF THE RIGHT-OF-WAY. THE SALVAGE VALUE OF THIS EQUIPMENT SHALL BE REFLECTED IN THE UNIT BID PRICE OF REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT.

1 EACH SERVICE INSTALLATION
ALL WIRES

SCHEDULE OF REMOVAL ITEMS

ITEM	LOCATION	UNIT	QUANTITIES
REMOVE EXISTING CONCRETE FOUNDATION	A, B, C, D, E, F, G, H, I	EACH	9
REMOVE EXISTING HANDHOLE	EH1, EH2	EACH	2

TEMPORARY CABLE DIAGRAM LEGEND

- TEMPORARY CONTROLLER
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY TRAFFIC SIGNAL HEAD W/ BACKPLATE (R Y G)
- DENOTES NUMBER OF CONDUCTORS
- (V) VIDEO DETECTION SYSTEM
- TEMPORARY PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN DISPLAY (C D)
- TEMPORARY PEDESTRIAN PUSH BUTTON
- TEMPORARY LUMINAIRE, SODIUM VAPOR, 250 WATT
- LIGHT DETECTOR
- CONFIRMATION BEACON

(V) **VIDEO CAMERA CABLE**

6 PAIRS, TWISTED REQUIRED

3 PAIRS CONDUCTOR FOR POWER - 24V AC (AC+, AC-, GND)
1 PAIR DATA
1 PAIR COMPOSITE VIDEO
1 PAIR DETECTOR DATA

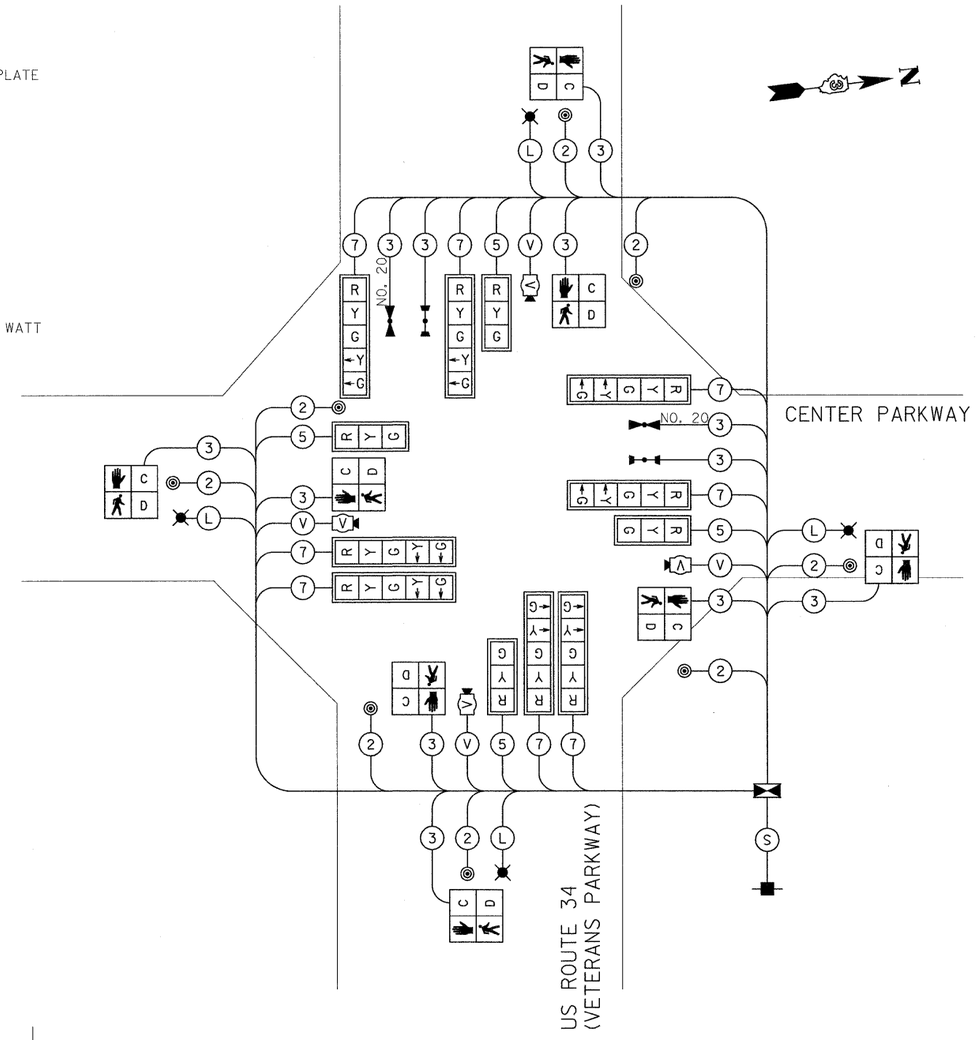
OVERALL SHIELD
MINIMUM 16AWG (PAIRS)
(TO BE INCLUDED IN THE BID PRICE FOR VEHICLE VIDEO DETECTION SYSTEM)

(S) **SERVICE CABLE**

ELECTRIC CABLE IN CONDUIT,
SERVICE, NO.6 2C

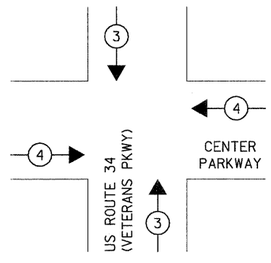
(L) **LIGHTING CABLE**

600V (XLP-TYPE USE) 3 - 1/C NO.10



TEMPORARY CABLE DIAGRAM

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



EMERGENCY VEHICLE PREEMPTION SEQUENCE

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PROPOSED TEMPORARY CABLE DIAGRAM
US ROUTE 34 (VETERANS PKWY)/ CENTER PARKWAY

SCALE: NONE — DRAWN BY: SL
DATE: MARCH, 2010 — CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\623-624center parkway_rem.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	625
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

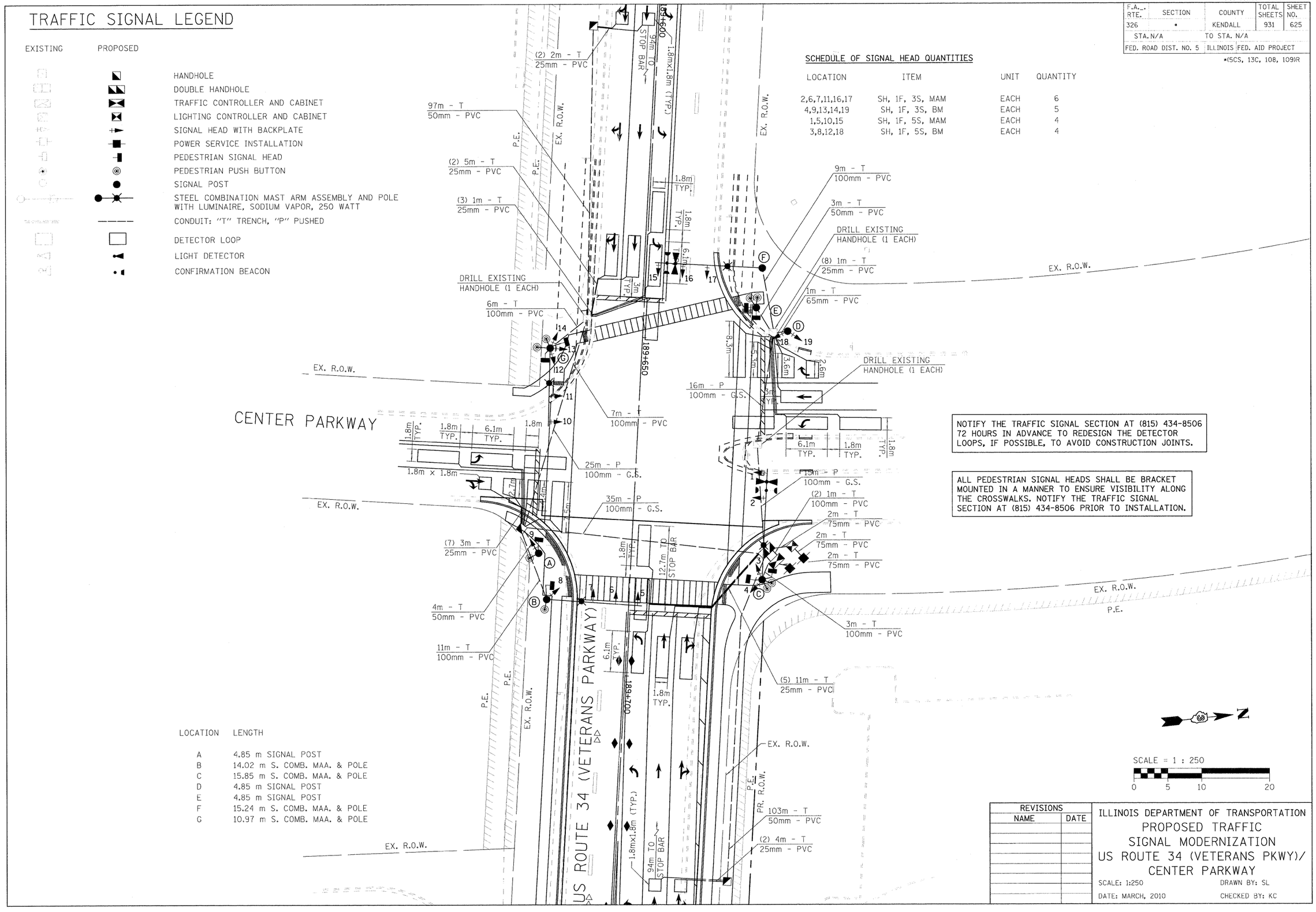
*(5CS, 13C, 108, 109)R

TRAFFIC SIGNAL LEGEND

EXISTING	PROPOSED	
		HANDHOLE
		DOUBLE HANDHOLE
		TRAFFIC CONTROLLER AND CABINET
		LIGHTING CONTROLLER AND CABINET
		SIGNAL HEAD WITH BACKPLATE
		POWER SERVICE INSTALLATION
		PEDESTRIAN SIGNAL HEAD
		PEDESTRIAN PUSH BUTTON
		SIGNAL POST
		STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE, SODIUM VAPOR, 250 WATT
		CONDUIT: "T" TRENCH, "P" PUSHED
		DETECTOR LOOP
		LIGHT DETECTOR
		CONFIRMATION BEACON

SCHEDULE OF SIGNAL HEAD QUANTITIES

LOCATION	ITEM	UNIT	QUANTITY
2,6,7,11,16,17	SH, 1F, 3S, MAM	EACH	6
4,9,13,14,19	SH, 1F, 3S, BM	EACH	5
1,5,10,15	SH, 1F, 5S, MAM	EACH	4
3,8,12,18	SH, 1F, 5S, BM	EACH	4



LOCATION	LENGTH
A	4.85 m SIGNAL POST
B	14.02 m S. COMB. MAA. & POLE
C	15.85 m S. COMB. MAA. & POLE
D	4.85 m SIGNAL POST
E	4.85 m SIGNAL POST
F	15.24 m S. COMB. MAA. & POLE
G	10.97 m S. COMB. MAA. & POLE

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

ALL PEDESTRIAN SIGNAL HEADS SHALL BE BRACKET MOUNTED IN A MANNER TO ENSURE VISIBILITY ALONG THE CROSSWALKS. NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 PRIOR TO INSTALLATION.

N

SCALE = 1 : 250

0 5 10 20

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED TRAFFIC SIGNAL MODERNIZATION

US ROUTE 34 (VETERANS PKWY)/ CENTER PARKWAY

SCALE: 1:250 DRAWN BY: SL

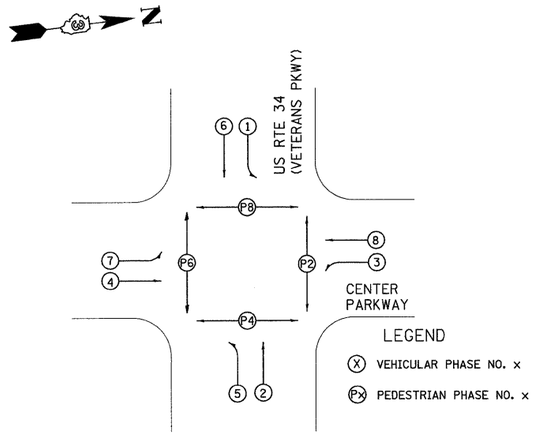
DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\625center parkway_prop.dgn
PLOT SCALE = 6.3500 m / in.
USER NAME = USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	626
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R



PHASE DESIGNATION DIAGRAM

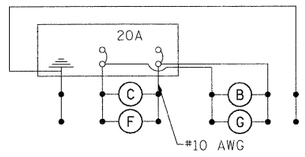
SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	QUANTITY
SERVICE INSTALLATION - GROUND MOUNTED	EACH	2
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	3
DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1
LUMINAIRE, SODIUM VAPOR, HOR. MOUNT, 250 WATT	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
DRILL EXISTING HANDHOLE	EACH	3
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	5
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	19
INDUCTIVE LOOP DETECTOR	EACH	13
LIGHT DETECTOR	EACH	4
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	2
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
SIGN PANEL - TYPE 1	SQ M	4.0
SIGN PANEL - TYPE 2	SQ M	5.2
CONDUIT IN TRENCH 25mm DIA., PVC	METER	109
CONDUIT IN TRENCH 50mm DIA., PVC	METER	207
CONDUIT IN TRENCH 65mm DIA., PVC	METER	1
CONDUIT IN TRENCH 75mm DIA., PVC	METER	6
CONDUIT IN TRENCH 100mm DIA., PVC	METER	38
CONDUIT PUSHED, 100mm DIA., GALVANIZED STEEL	METER	91
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	METER	600
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	METER	683
TRENCH AND BACKFILL FOR ELECTRICAL WORK	METER	359
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	METER	397
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	METER	413
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	METER	685
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	METER	486
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14, 1-PAIR	METER	1727
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	METER	10
TRAFFIC SIGNAL POST, GALVANIZED STEEL 4.85 METER	EACH	3
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 10.97 METER	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 14.02 METER	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 15.24 METER	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 15.85 METER	EACH	1
CONCRETE FOUNDATION, TYPE A	METER	3.0
CONCRETE FOUNDATION, TYPE C (SPECIAL)	METER	1.1
CONCRETE FOUNDATION, TYPE E 900mm DIAMETER	METER	16.6
DETECTOR LOOP, TYPE 1	METER	555
ELECTRIC CABLE IN CONDUIT NO. 20, 3/C, TWISTED, SHIELDED	METER	404
LIGHTING CONTROLLER, SPECIAL	EACH	1

PROPOSED CABLE DIAGRAM LEGEND

PROPOSED

- TRAFFIC CONTROLLER AND CABINET
- LIGHTING CONTROLLER AND CABINET
- SERVICE INSTALLATION
- TRAFFIC SIGNAL HEAD WITH BACKPLATE
- DENOTES NUMBER OF CONDUCTORS
- LUMINAIRE, SODIUM VAPOR, 250 WATT
- PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN DISPLAY
- PEDESTRIAN PUSH BUTTON
- DETECTOR LOOP
- DETECTOR LOOP SYSTEM
- GROUND ROD AT HANDHOLE OR DOUBLE HANDHOLE
- GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
- GROUND ROD AT ELECTRIC SERVICE INSTALLATION
- GROUND ROD AT CONTROLLER
- LIGHT DETECTOR
- CONFIRMATION BEACON



LIGHTING CIRCUIT DIAGRAM

AGENCY RESPONSIBLE FOR ENERGY CHARGES:
CITY OF YORKVILLE
CONTRACTOR PAYS ALL ENERGY CHARGES
UNTIL PROJECT IS ACCEPTED

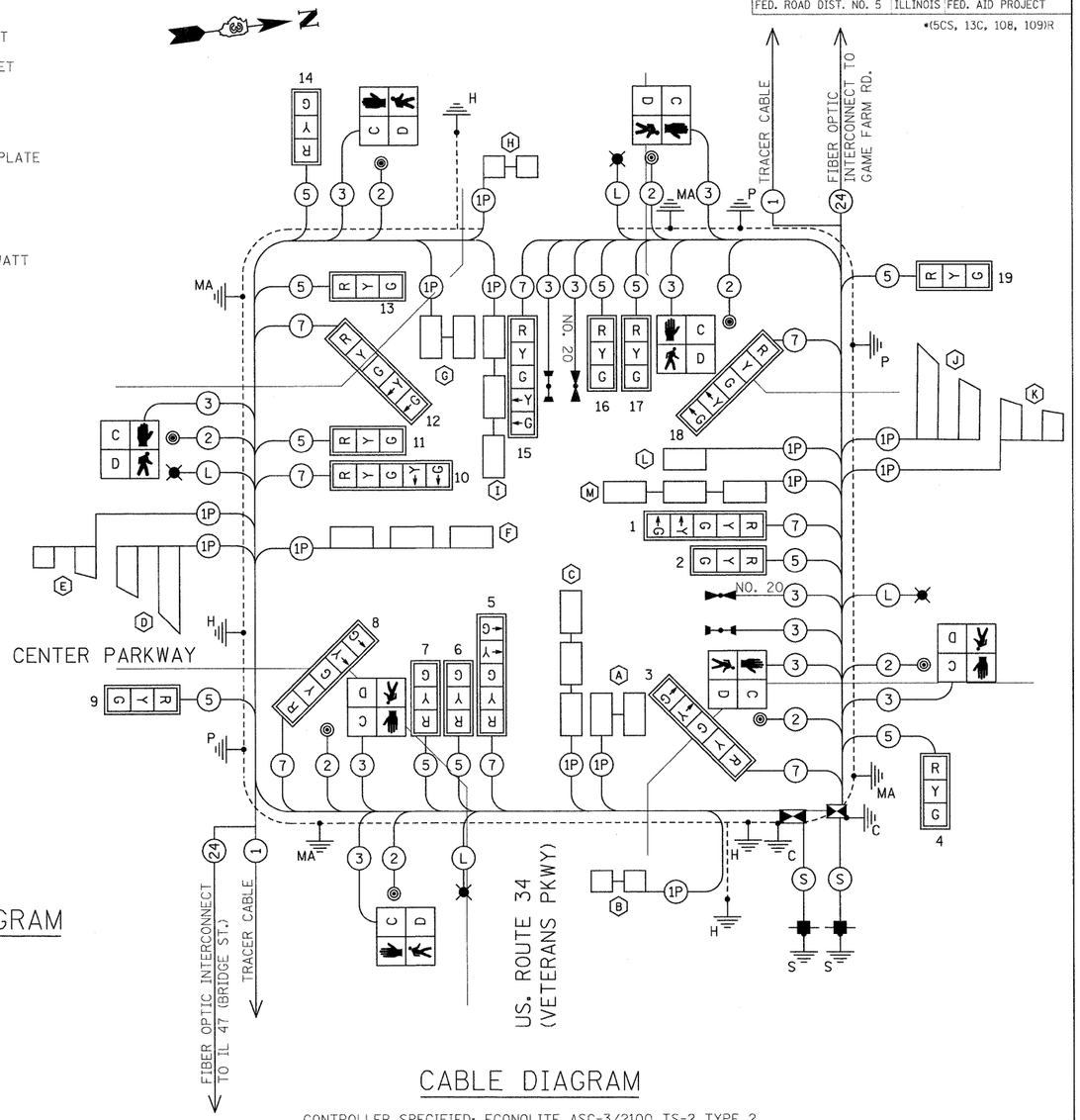
(S) SERVICE CABLE

ELECTRIC CABLE IN CONDUIT,
SERVICE, NO.6 2C

(L) LIGHTING CABLE

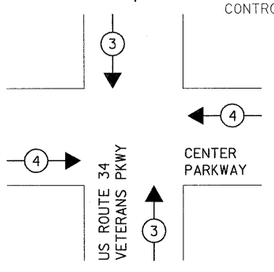
600V (XLP-TYPE USE) 3 - 1/C NO.10

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



CABLE DIAGRAM

CONTROLLER SPECIFIED: ECONOLITE ASC-3/2100 TS-2 TYPE 2
PEDESTRIAN PUSH-BUTTON: 4 EVR ROUND MODEL



EMERGENCY VEHICLE PREEMPTION SEQUENCE

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PHASE DIAGRAM, CABLE DIAGRAM
SCHEDULE OF QUANTITIES
US ROUTE 34 (VETERANS PKWY)/
CENTER PARKWAY

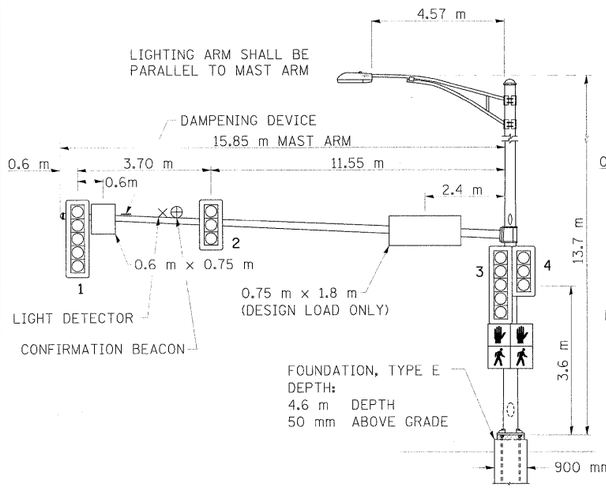
SCALE: NONE — DRAWN BY: SL
DATE: MARCH, 2010 — CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\626center parkway_cable.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

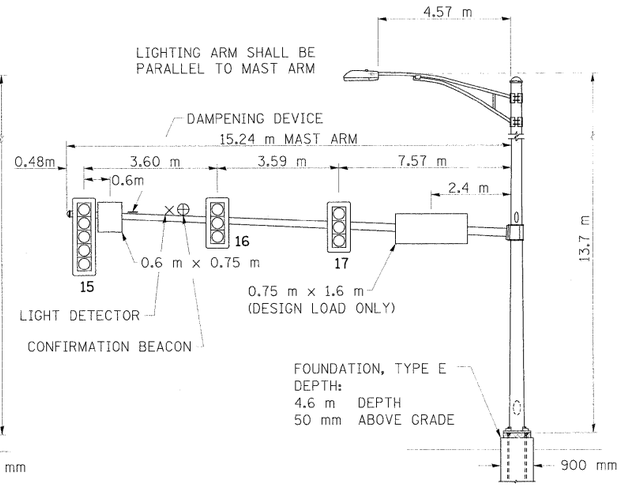
CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	627
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

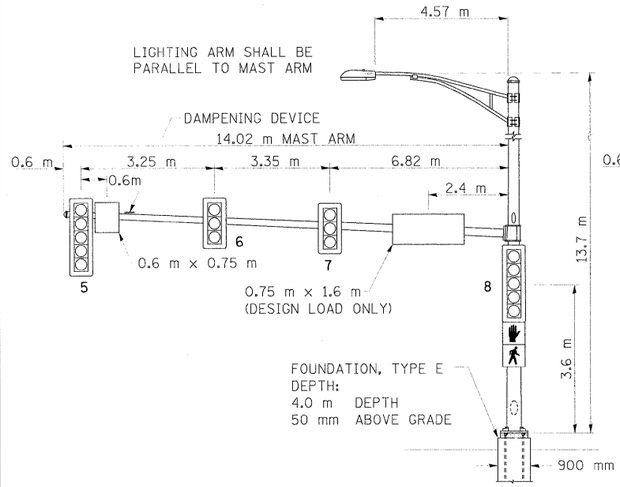
*(5CS, 13C, 108, 109)R



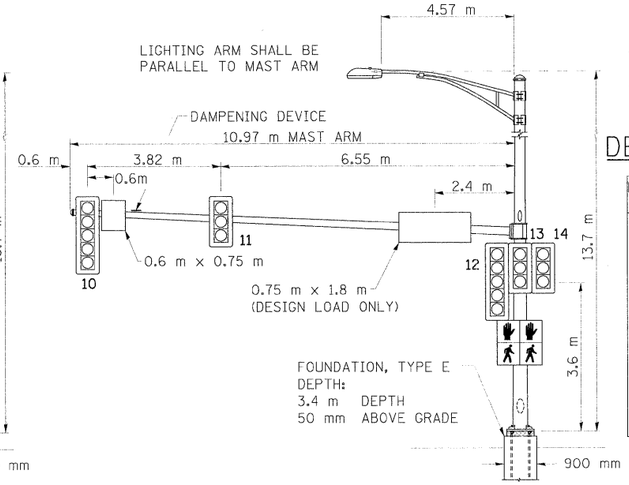
MAST ARM NORTHEAST QUADRANT Ⓒ



MAST ARM NORTHWEST QUADRANT Ⓕ



MAST ARM SOUTHEAST QUADRANT Ⓑ



MAST ARM SOUTHWEST QUADRANT Ⓖ

ELECTRICAL LOAD CHART

US ROUTE 34

INDICATION	NUMBER	WATTAGE EACH	BURN TIME (%)
RED	10	12	60
YELLOW	10	32	5
GREEN	10	12	35
YELLOW ARROW	4	12	5
GREEN ARROW	4	11	10
	4	7	5
	4	7	95

CENTER PARKWAY

RED	9	12	60
YELLOW	9	32	5
GREEN	9	12	35
YELLOW ARROW	4	12	5
GREEN ARROW	4	11	10
	4	7	5
	4	7	95

TRAFFIC SIGNAL CABINET

ITEM	NUMBER	WATTAGE EACH	BURN TIME (%)
CONTROLLER	1	6	100
INDUCTIVE LOOP DETECTOR	13	1.5	100
UNINTERUPTABLE POWER SUPPLY	1	50	100
LIGHT DETECTOR AMPLIFIER	1	1.5	100

HIGHWAY LIGHTING

ITEM	NUMBER	WATTAGE EACH	BURN TIME (%)
CONTROLLER	1	6	100
LUMINAIRE	4	250	45

DETECTOR LOOP INDUCTANCE CHART

DETECTOR LOOP SYSTEM	TURNS PER LOOP	INDUCTANCE READING (MICROHENRIES)	FREQUENCY (HERTZ)	J PIN STATUS
A	4	529	26,518	OFF
B	5	438	29,163	ON
C	4	789	21,714	ON
D	4	514	26,920	OFF
E	5	431	29,399	ON
F	4	808	21,457	ON
G	4	573	25,480	OFF
H	6	624	24,433	ON
I	4	833	21,132	ON
J	4	569	25,586	OFF
K	4	341	33,051	ON
L	4	284	36,192	ON
M	4	804	21,510	ON

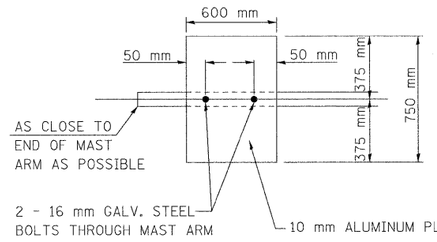
GRANULAR SOILS ARE EXPECTED TO BE ENCOUNTERED AT THIS INTERSECTION.

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

NOTES:

1. WORD "GRADE" IS TO BE INTERPRETED AS TOP OF CURB. TOP OF FOUNDATION SHALL NOT BE EXPOSED MORE THAN 100 mm ABOVE THE SURROUNDING GROUND.
2. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
3. FOUNDATION SHOULD BE 50mm ABOVE GRADE OR 0.35m ABOVE CENTERLINE OF ROADWAY, WHICHEVER IS HIGHER.

NOTE:
DAMPENING DEVICE SHALL CONSIST OF A 600mm X 750mm TYPE 1, UNPAINTED ALUMINUM SIGN STOCK MOUNTED HORIZONTALLY ON TOP OF MAST ARM WITH THE 750mm LENGTH PERPENDICULAR TO THE ARM. COST OF THE DAMPENING DEVICE IS INCLUDED IN THE MAST ARM PAY ITEM.



DAMPENING PLATE DETAIL

(TOP VIEW) INCIDENTAL TO MAST ARM QUANTITY

PEDESTRIAN CROSSING SIGN DETAIL

COUNT-DOWN PEDESTRIAN SIGN R10-3e TO BE USED.

8 REQUIRED.

DIMENSIONS: 230mm x 380mm (TYP.)
LEGEND AND BORDER: NON-REFLECTORIZED BLACK
BACKGROUND: RETROREFLECTIVE WHITE
NUMBERS AND SYMBOLS: RETROREFLECTIVE ORANGE

ONE SIGN SHALL BE PROVIDED FOR EACH PUSH-BUTTON. ORIENTATION OF DIRECTIONAL ARROWS TO BE DETERMINED BY PUSH-BUTTON LOCATION.

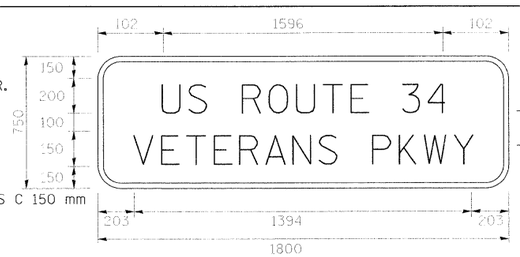
ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL CONSTRUCTION. ALL MOUNTING BOLTS SHALL BE HEX HEAD.

MATERIALS AND INSTALLATION OF THIS SIGN SHALL BE INCLUDED IN THE COST OF PEDESTRIAN PUSH-BUTTON.

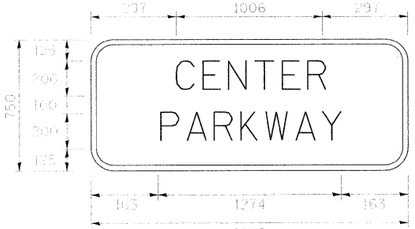
STREET SIGN DETAIL

THESE STREET NAME SIGNS SHALL BE PLACED ON THE MAST ARMS PARALLEL TO THE RESPECTIVE ROUTE AS DIRECTED BY THE ENGINEER.

STREET NAME SIGNS:
1. TYPE ZZ SHEETING REQUIRED
2. WHITE/GREEN BACKGROUND
3. STYLE (d)-15 mm BORDER
4. 200 mm SERIES D LETTERS EXCEPT "VETERANS PKWY" USE SERIES C 150 mm
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN



1.35 SQ. M. EACH
2 REQUIRED



1.24 SQ. M. EACH
2 REQUIRED

R10-12

0.45 SQ. M. EACH
4 REQUIRED

NOTE: TRAILBLAZER SIGNS AS SHOWN SHALL BE PLACED ON MAST ARM POSTS AS DIRECTED BY THE ENGINEER.

M3-4 SIGN
600 x 300

0.18 SQ. M. EACH
1 REQUIRED

M1-4 SIGN
600 x 600

0.36 SQ. M. EACH
1 REQUIRED

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MAST ARM LOADING DIAGRAM
ELECTRICAL LOAD CHART
SIGN DETAILS
US ROUTE 34 (VETERANS PKWY)/ CENTER PARKWAY

SCALE: NONE — DRAWN BY: SL
DATE: MARCH, 2010 — CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\627center parkway_mast.dgn
PLOT SCALE = 6.3500 m / IN.
USER NAME = _USERDESCR_

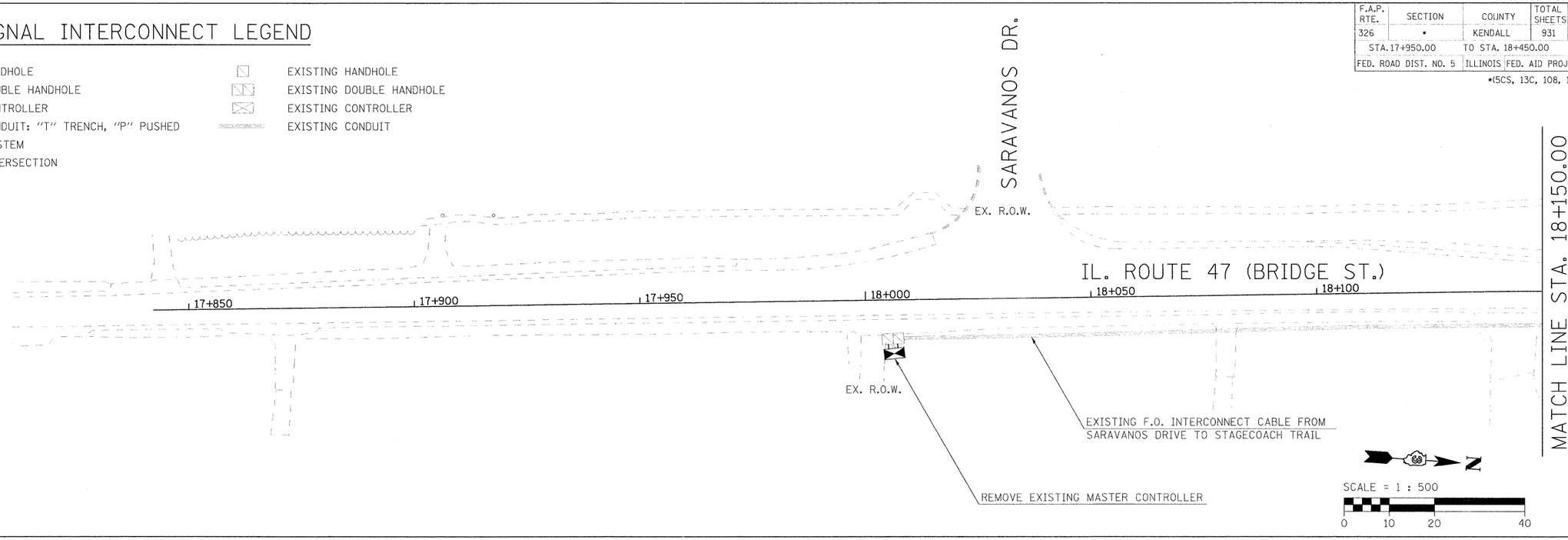
CONTRACT NO. 66671

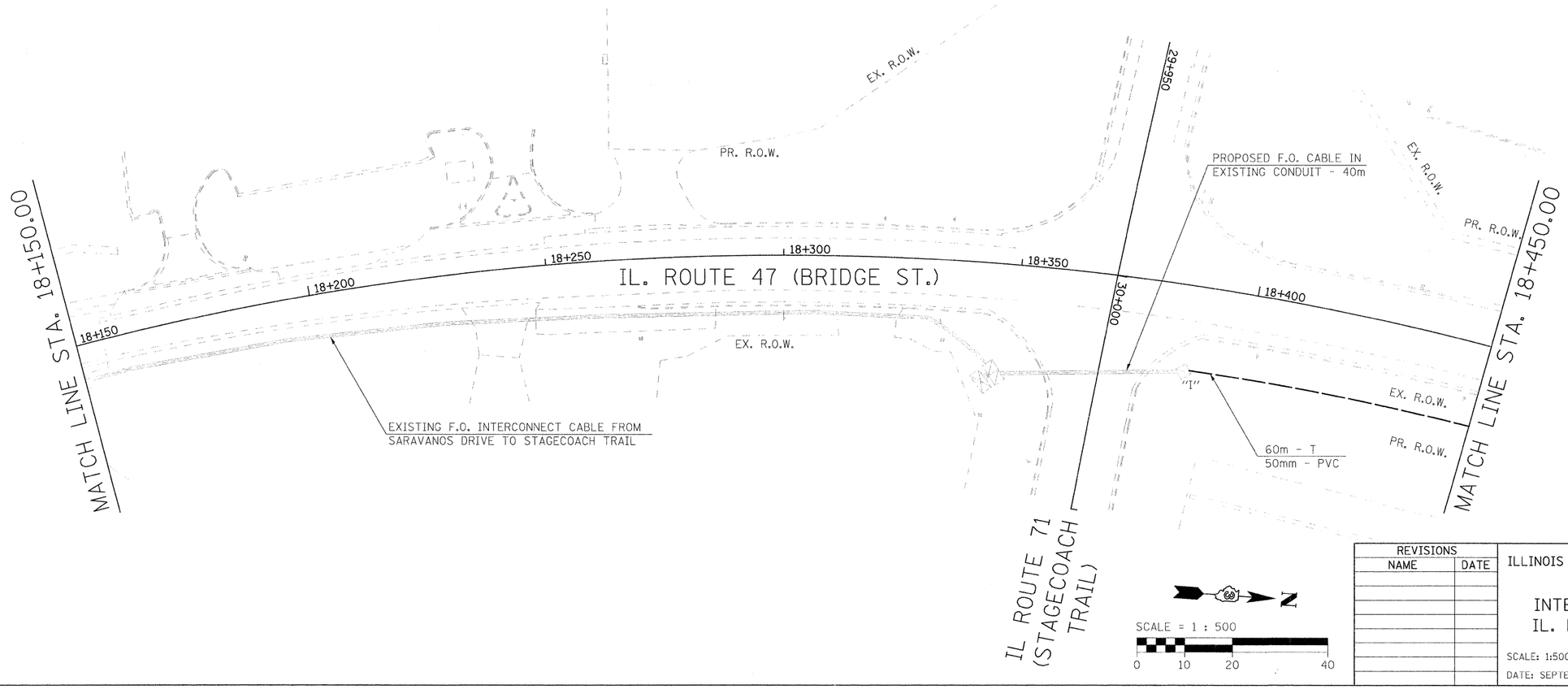
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	628
STA. 17+950.00		TO STA. 18+450.00		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

SIGNAL INTERCONNECT LEGEND

- PR. HANDHOLE
- PR. DOUBLE HANDHOLE
- PR. CONTROLLER
- PR. CONDUIT: "T" TRENCH, "P" PUSHED
- "S" "S" SYSTEM
- "I" "I" INTERSECTION
- EXISTING HANDHOLE
- EXISTING DOUBLE HANDHOLE
- EXISTING CONTROLLER
- EXISTING CONDUIT





REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECTION DETAILS
IL. ROUTE 47 (BRIDGE ST.)

SCALE: 1:500 DRAWN BY: JH

DATE: SEPTEMBER, 2005 CHECKED BY: KC

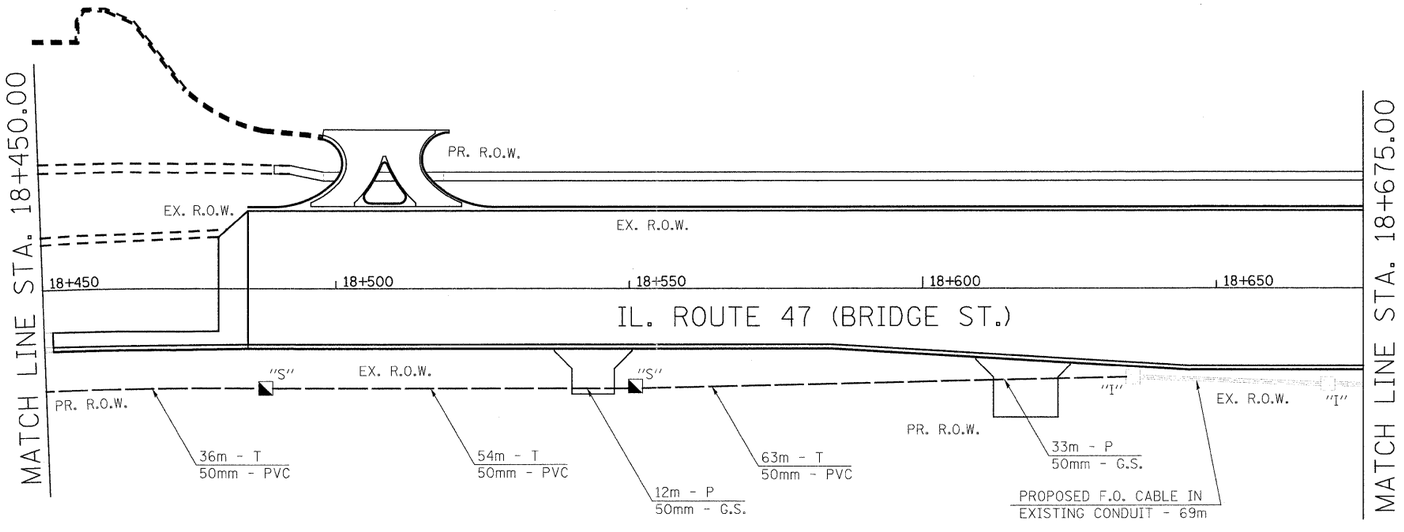
CONTRACT NO. 66671

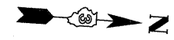
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	629
STA. 18+450.00		TO STA. 19+025.00		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

SIGNAL INTERCONNECT LEGEND

- PR. HANDHOLE
- PR. DOUBLE HANDHOLE
- PR. CONTROLLER
- PR. CONDUIT: "T" TRENCH, "P" PUSHED
- "S" "S" SYSTEM
- "I" "I" INTERSECTION
- EXISTING HANDHOLE
- EXISTING DOUBLE HANDHOLE
- EXISTING CONTROLLER
- EXISTING CONDUIT





SCALE = 1 : 500

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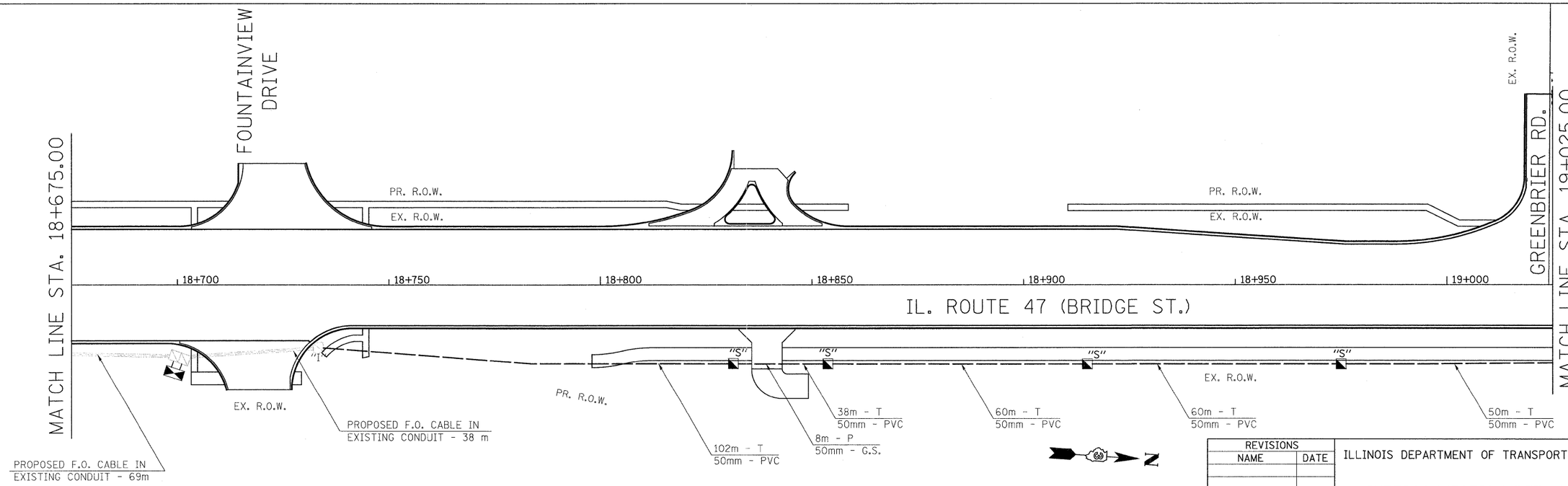


SCALE = 1 : 500

0 10 20 40

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECTION DETAILS
IL. ROUTE 47 (BRIDGE ST.)

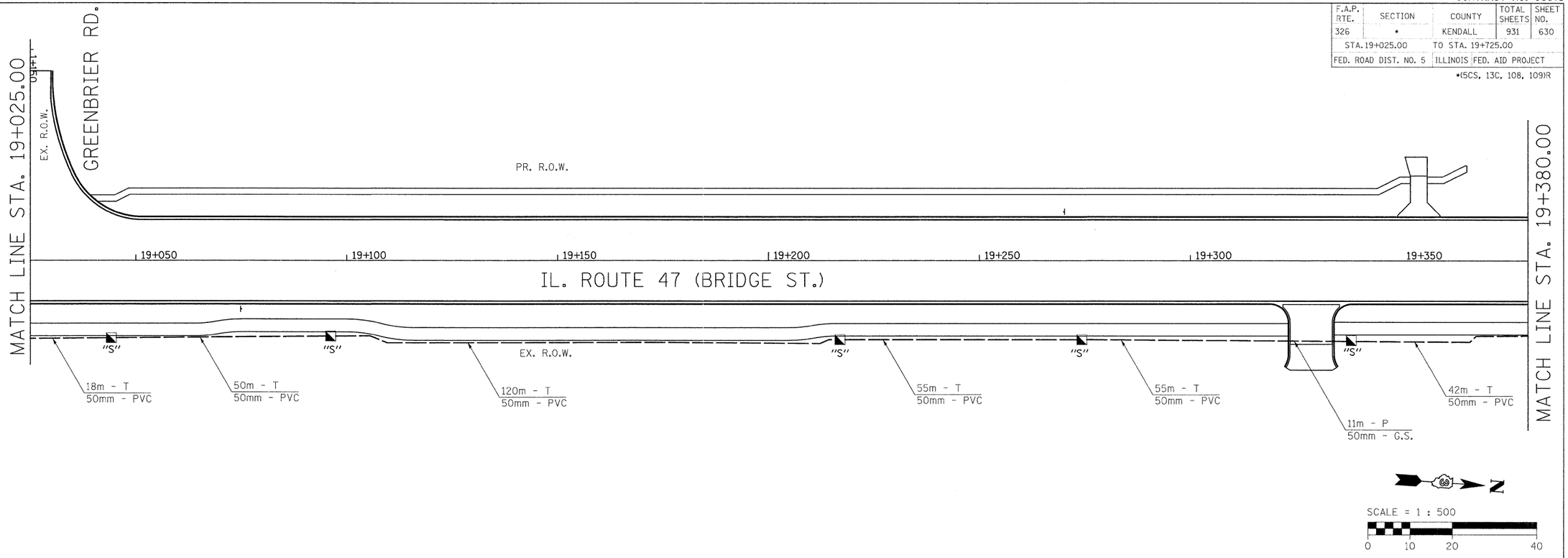
SCALE: 1:500 DRAWN BY: JH

DATE: SEPTEMBER, 2005 CHECKED BY: KC

CONTRACT NO. 66671

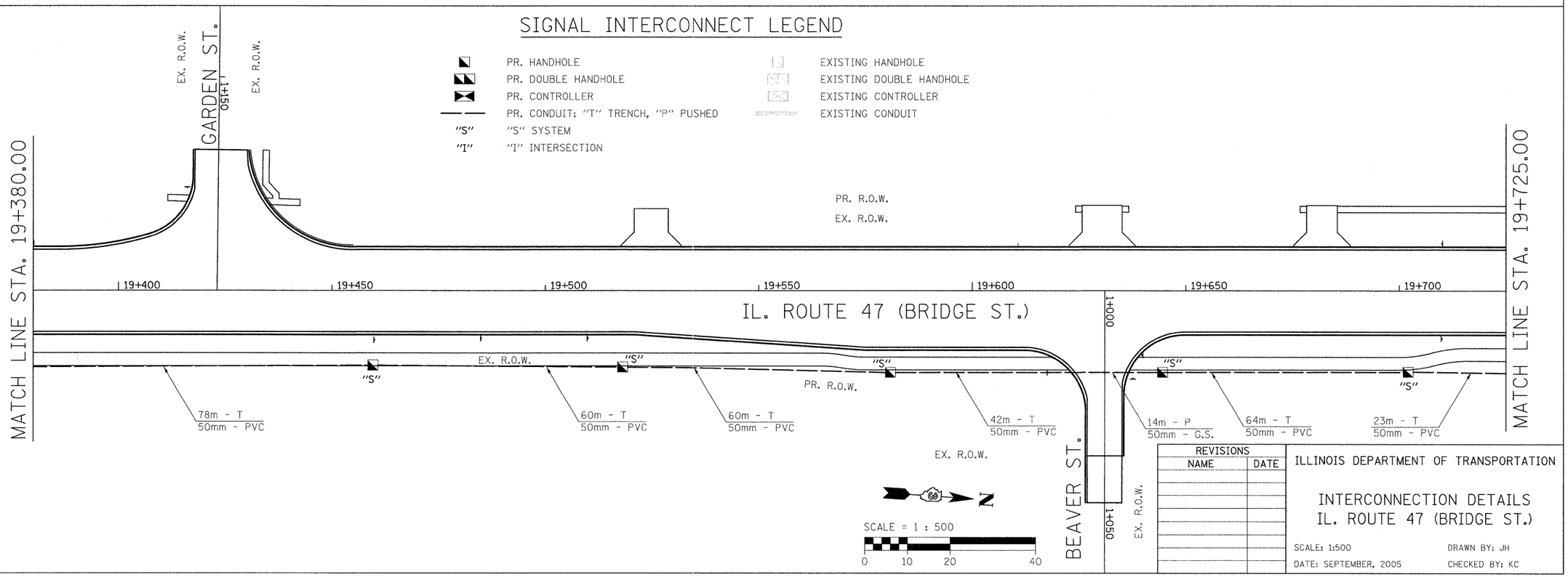
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	630
STA. 19+025.00		TO STA. 19+725.00		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R



SIGNAL INTERCONNECT LEGEND

- PR. HANDHOLE
- PR. DOUBLE HANDHOLE
- PR. CONTROLLER
- PR. CONDUIT: "T" TRENCH, "P" PUSHED
- "S" "S" SYSTEM
- "I" "I" INTERSECTION
- EXISTING HANDHOLE
- EXISTING DOUBLE HANDHOLE
- EXISTING CONTROLLER
- EXISTING CONDUIT



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECTION DETAILS
IL. ROUTE 47 (BRIDGE ST.)

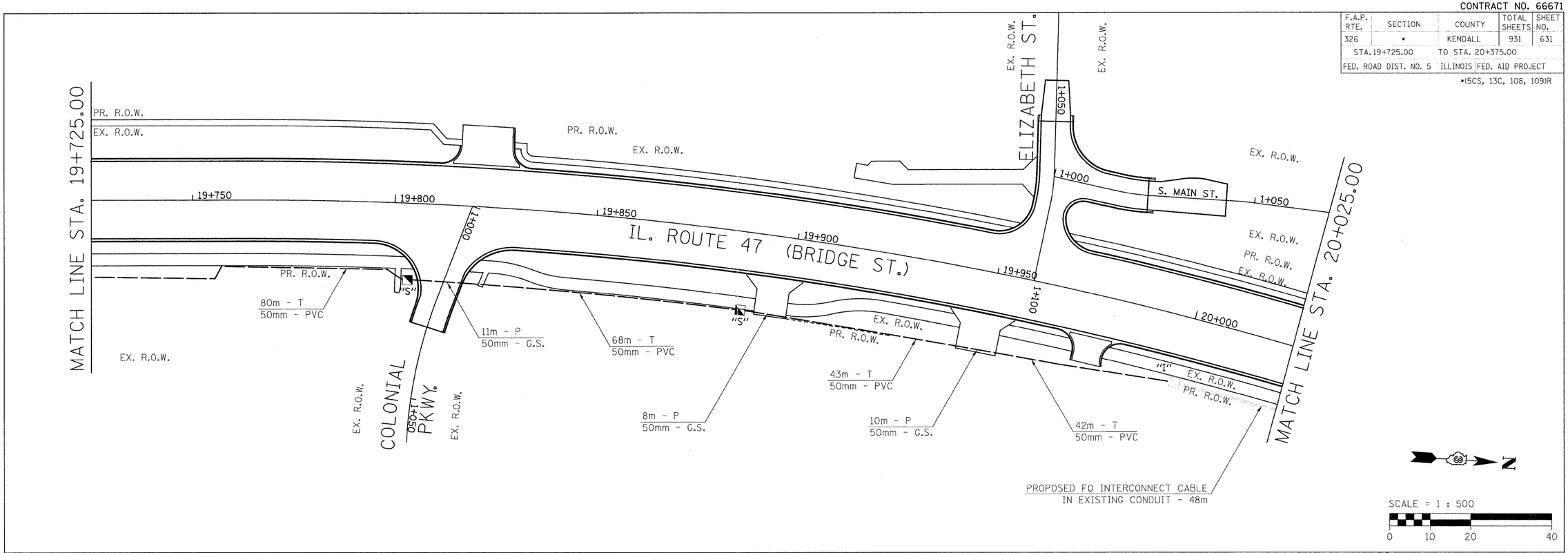
SCALE: 1:500 DRAWN BY: JH

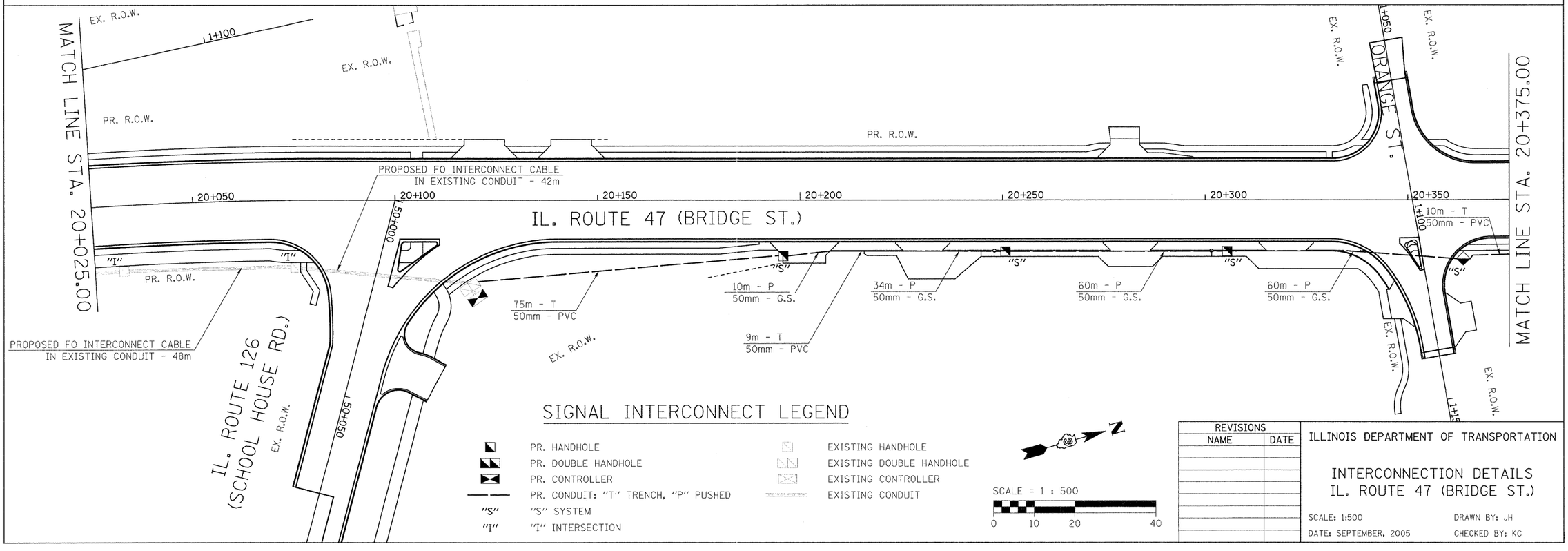
DATE: SEPTEMBER, 2005 CHECKED BY: KC

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	631
STA. 19+725.00		TO STA. 20+375.00		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R





SIGNAL INTERCONNECT LEGEND

- PR. HANDHOLE
- PR. DOUBLE HANDHOLE
- PR. CONTROLLER
- PR. CONDUIT: "T" TRENCH, "P" PUSHED
- "S" "S" SYSTEM
- "T" "T" INTERSECTION
- EXISTING HANDHOLE
- EXISTING DOUBLE HANDHOLE
- EXISTING CONTROLLER
- EXISTING CONDUIT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECTION DETAILS
IL. ROUTE 47 (BRIDGE ST.)

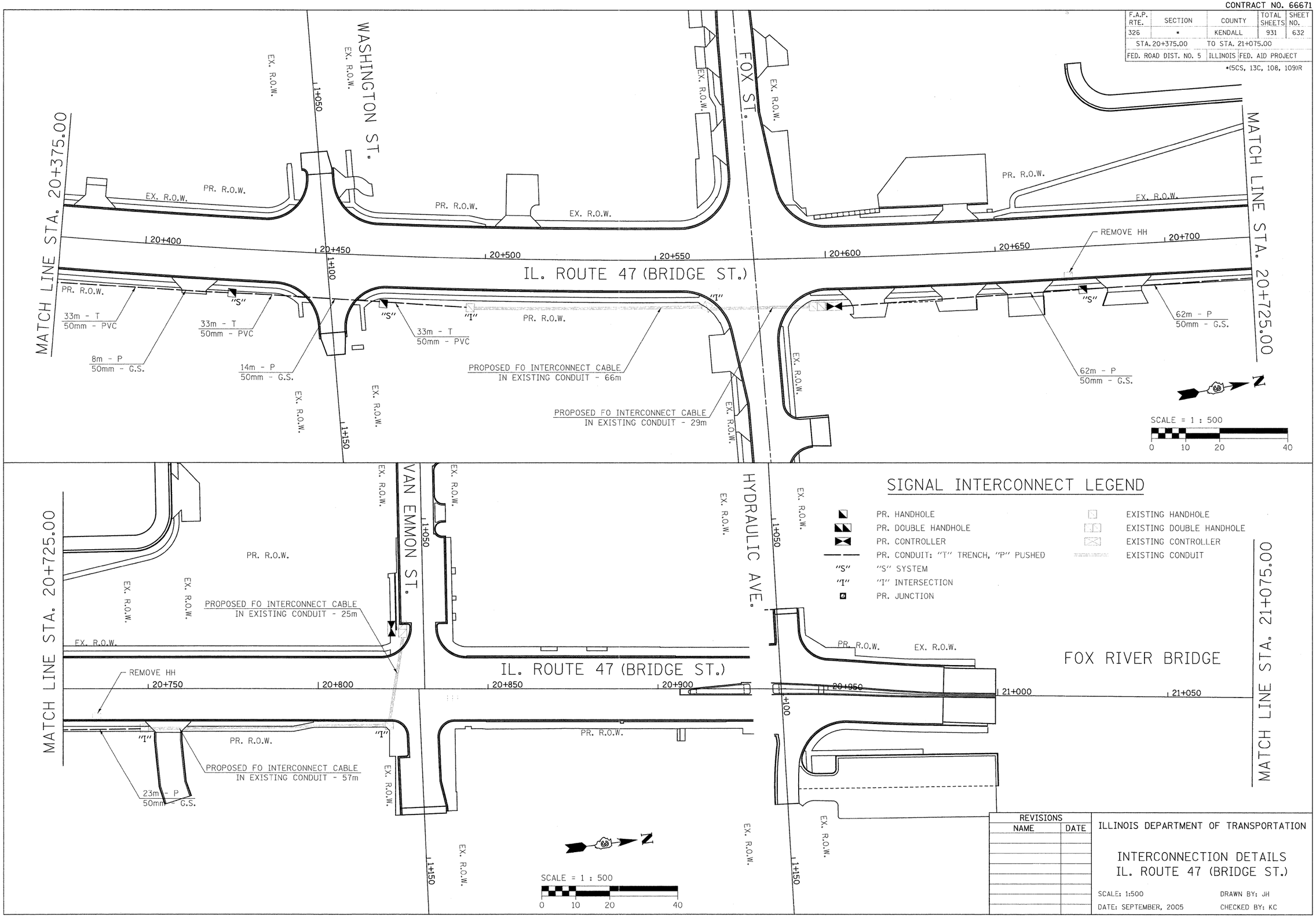
SCALE: 1:500 DRAWN BY: JH

DATE: SEPTEMBER, 2005 CHECKED BY: KC

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	632
STA. 20+375.00		TO STA. 21+075.00		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R



SIGNAL INTERCONNECT LEGEND

- PR. HANDHOLE
- PR. DOUBLE HANDHOLE
- PR. CONTROLLER
- PR. CONDUIT: "T" TRENCH, "P" PUSHED
- "S" "S" SYSTEM
- "I" "I" INTERSECTION
- PR. JUNCTION
- EXISTING HANDHOLE
- EXISTING DOUBLE HANDHOLE
- EXISTING CONTROLLER
- EXISTING CONDUIT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECTION DETAILS
IL. ROUTE 47 (BRIDGE ST.)

SCALE: 1:500 DRAWN BY: JH

DATE: SEPTEMBER, 2005 CHECKED BY: KC

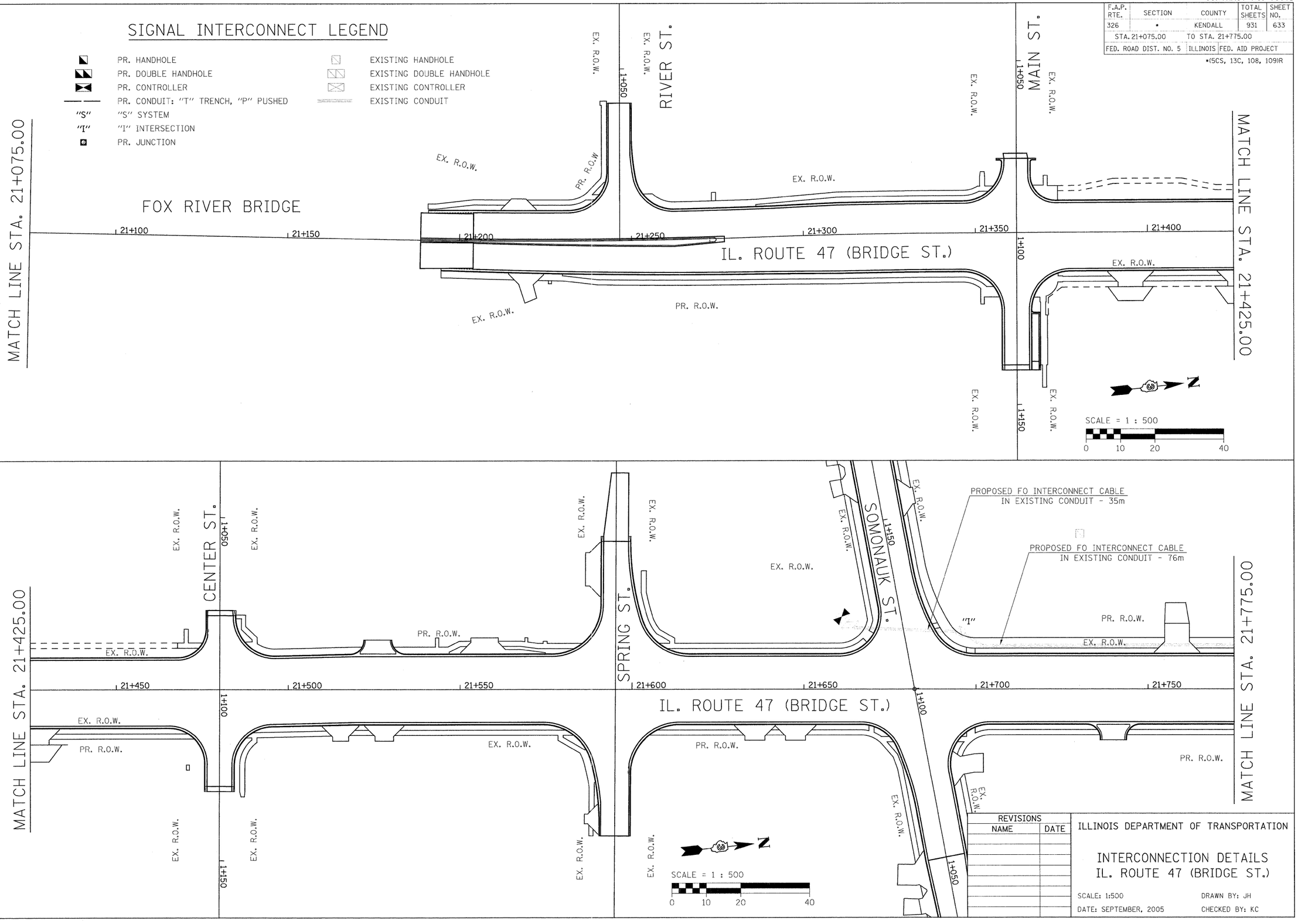
CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	633
STA. 21+075.00		TO STA. 21+775.00		
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

*(5CS, 13C, 108, 109)R

SIGNAL INTERCONNECT LEGEND

- PR. HANDHOLE
- PR. DOUBLE HANDHOLE
- PR. CONTROLLER
- PR. CONDUIT: "T" TRENCH, "P" PUSHED
- "S" "S" SYSTEM
- "I" "I" INTERSECTION
- PR. JUNCTION
- EXISTING HANDHOLE
- EXISTING DOUBLE HANDHOLE
- EXISTING CONTROLLER
- EXISTING CONDUIT



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECTION DETAILS
IL. ROUTE 47 (BRIDGE ST.)

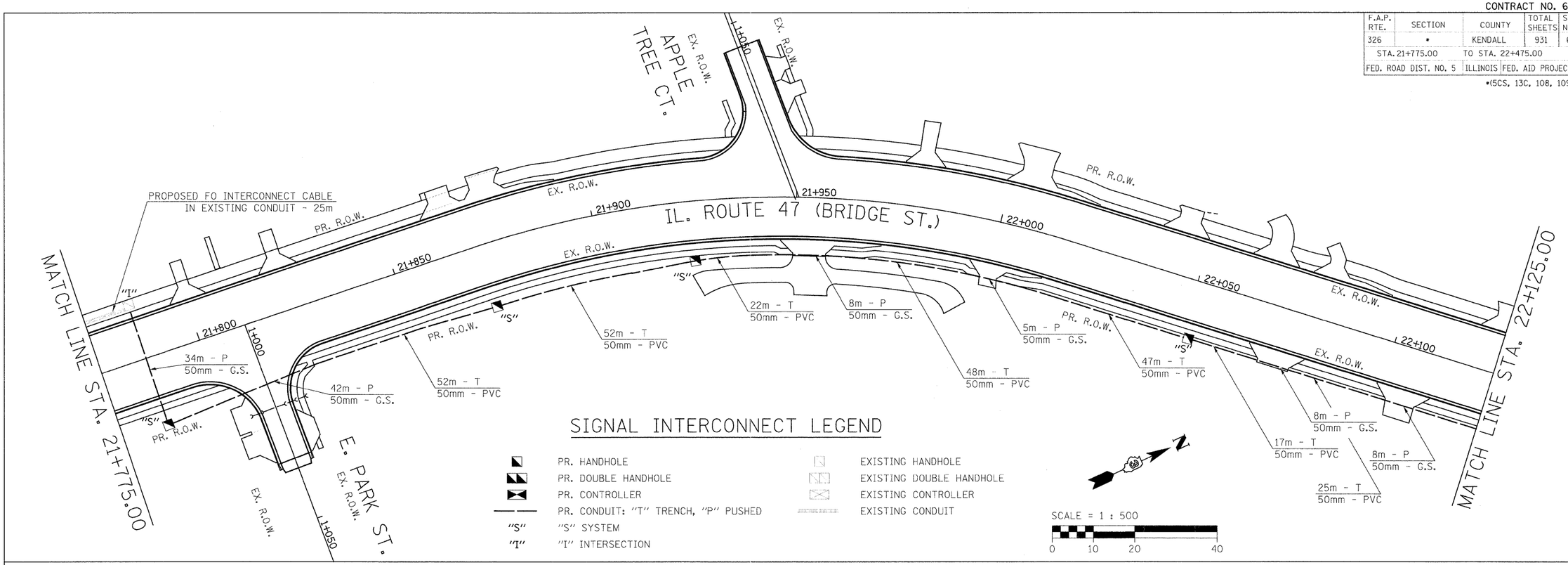
SCALE: 1:500 DRAWN BY: JH

DATE: SEPTEMBER, 2005 CHECKED BY: KC

CONTRACT NO. 66671

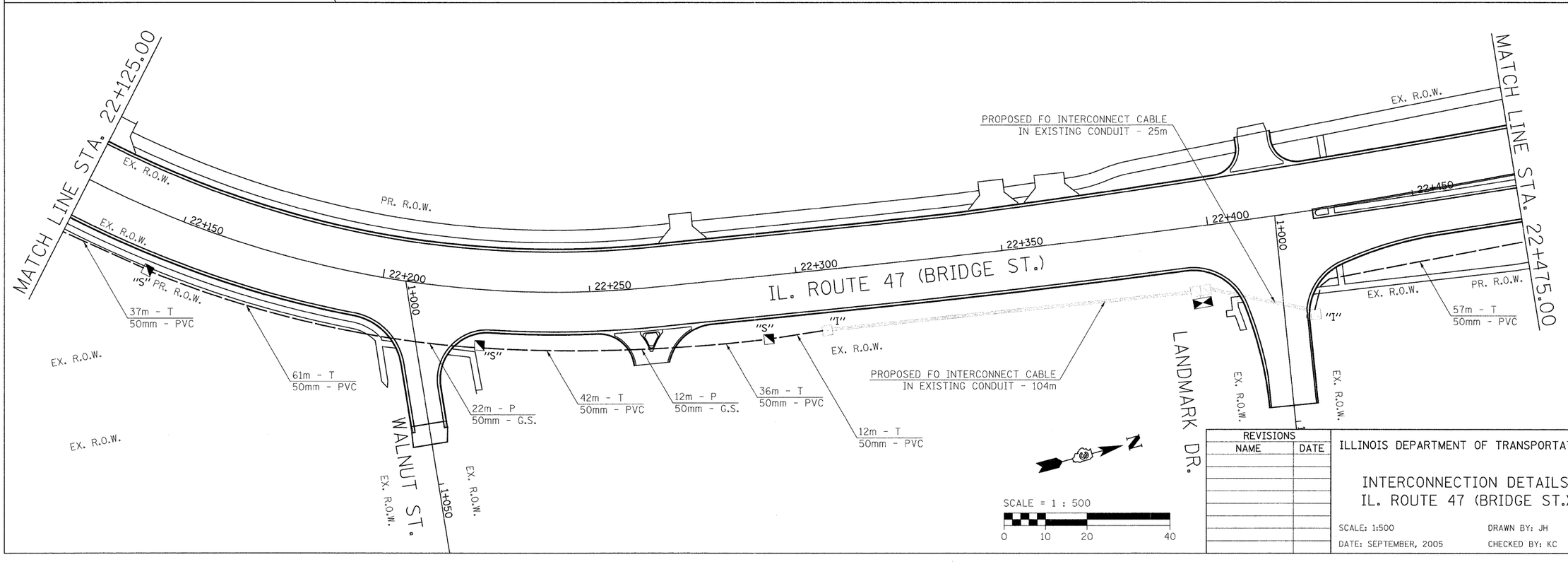
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	634
STA. 21+775.00		TO STA. 22+475.00		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R



SIGNAL INTERCONNECT LEGEND

PR. HANDHOLE	EXISTING HANDHOLE
PR. DOUBLE HANDHOLE	EXISTING DOUBLE HANDHOLE
PR. CONTROLLER	EXISTING CONTROLLER
PR. CONDUIT: "T" TRENCH, "P" PUSHED	EXISTING CONDUIT
"S" SYSTEM	
"I" INTERSECTION	



REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECTION DETAILS
IL. ROUTE 47 (BRIDGE ST.)

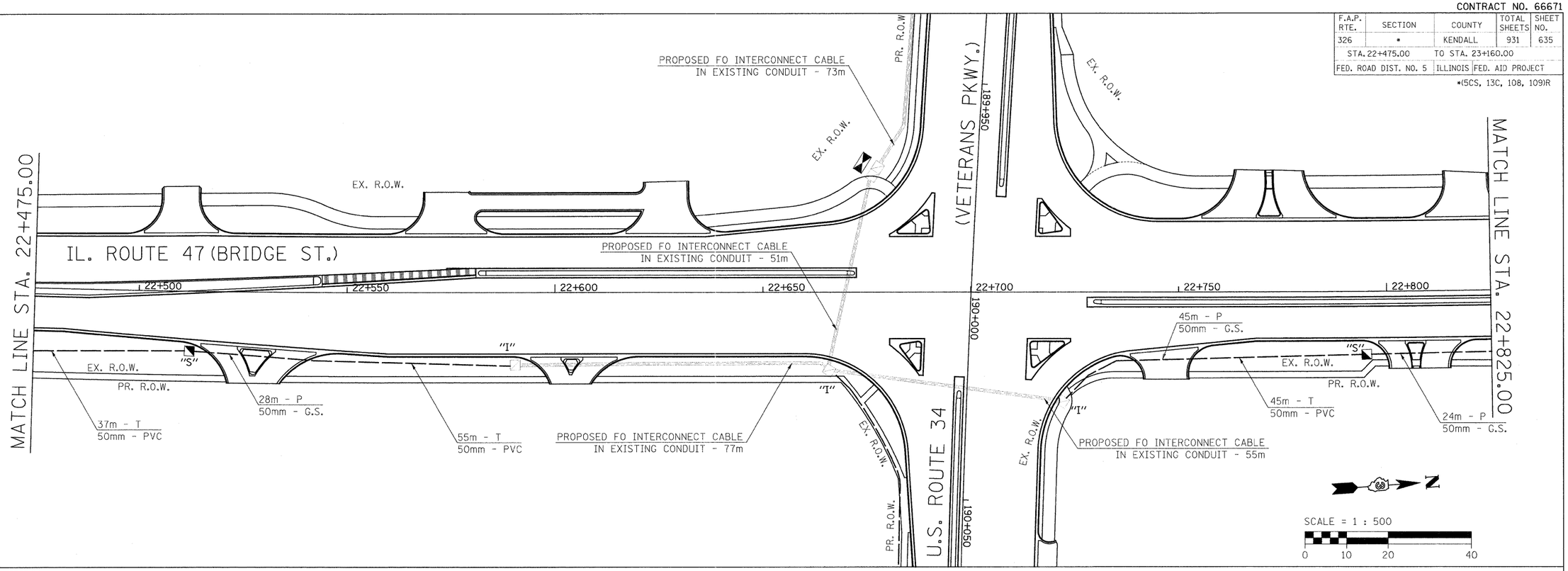
SCALE: 1:500 DRAWN BY: JH

DATE: SEPTEMBER, 2005 CHECKED BY: KC

CONTRACT NO. 66671

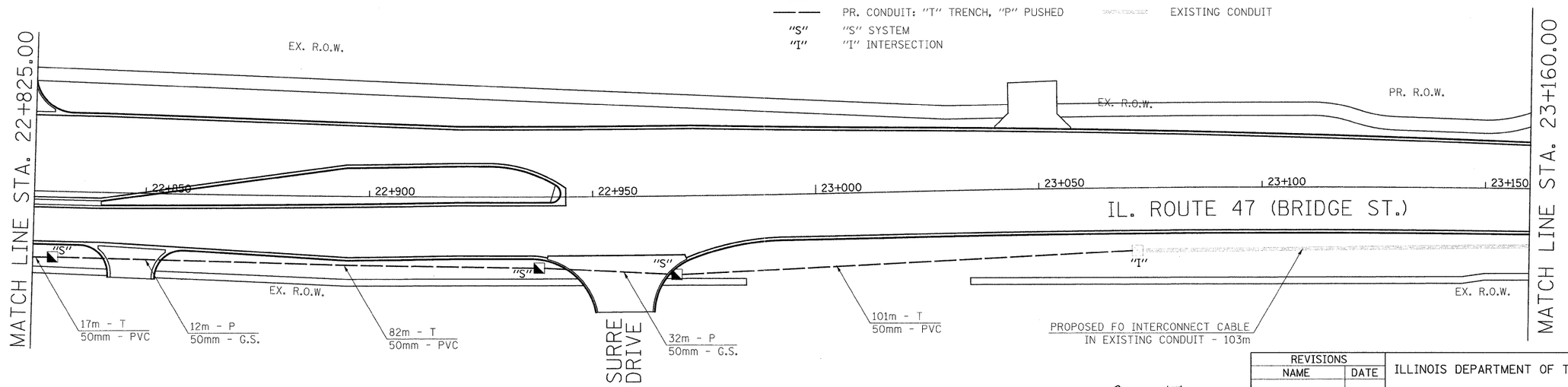
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	635
STA. 22+475.00		TO STA. 23+160.00		
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

*(5CS, 13C, 108, 109)R



SIGNAL INTERCONNECT LEGEND

PR. HANDHOLE	EXISTING HANDHOLE
PR. DOUBLE HANDHOLE	EXISTING DOUBLE HANDHOLE
PR. CONTROLLER	EXISTING CONTROLLER
PR. CONDUIT: "T" TRENCH, "P" PUSHED	EXISTING CONDUIT
"S" "S" SYSTEM	
"I" "I" INTERSECTION	



REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECTION DETAILS
IL. ROUTE 47 (BRIDGE ST.)

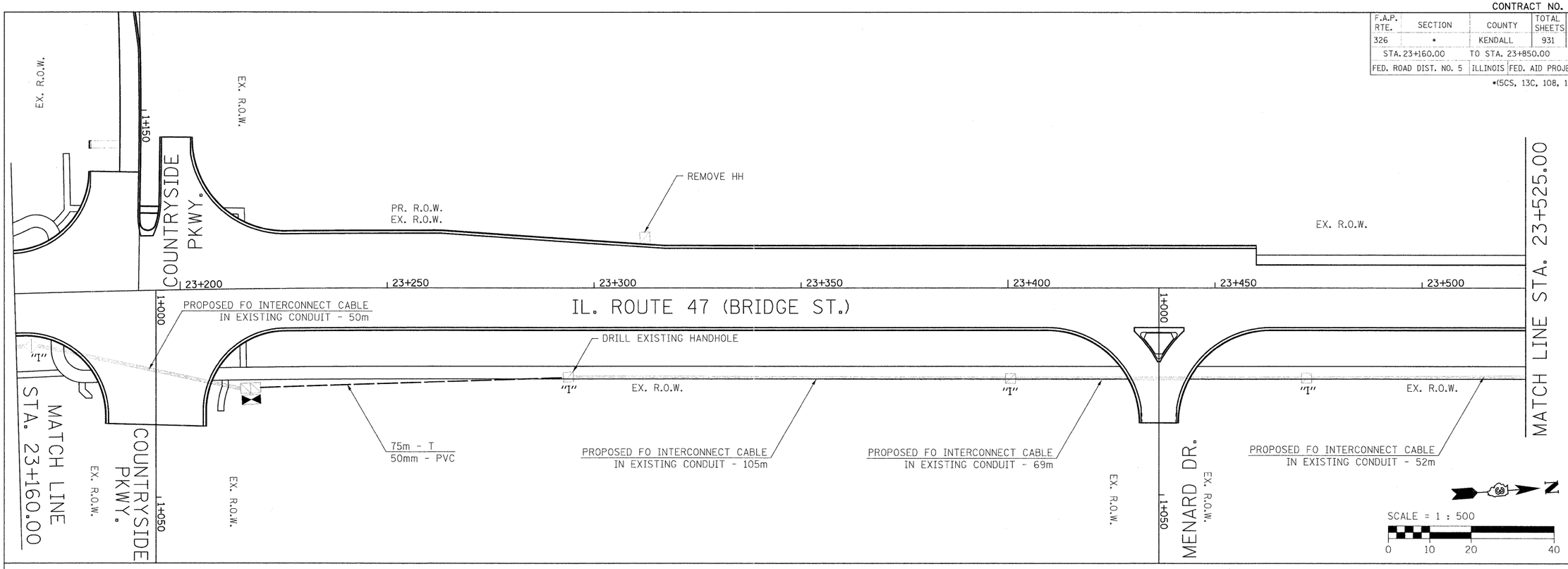
SCALE: 1:500 DRAWN BY: JH

DATE: SEPTEMBER, 2005 CHECKED BY: KC

CONTRACT NO. 66671

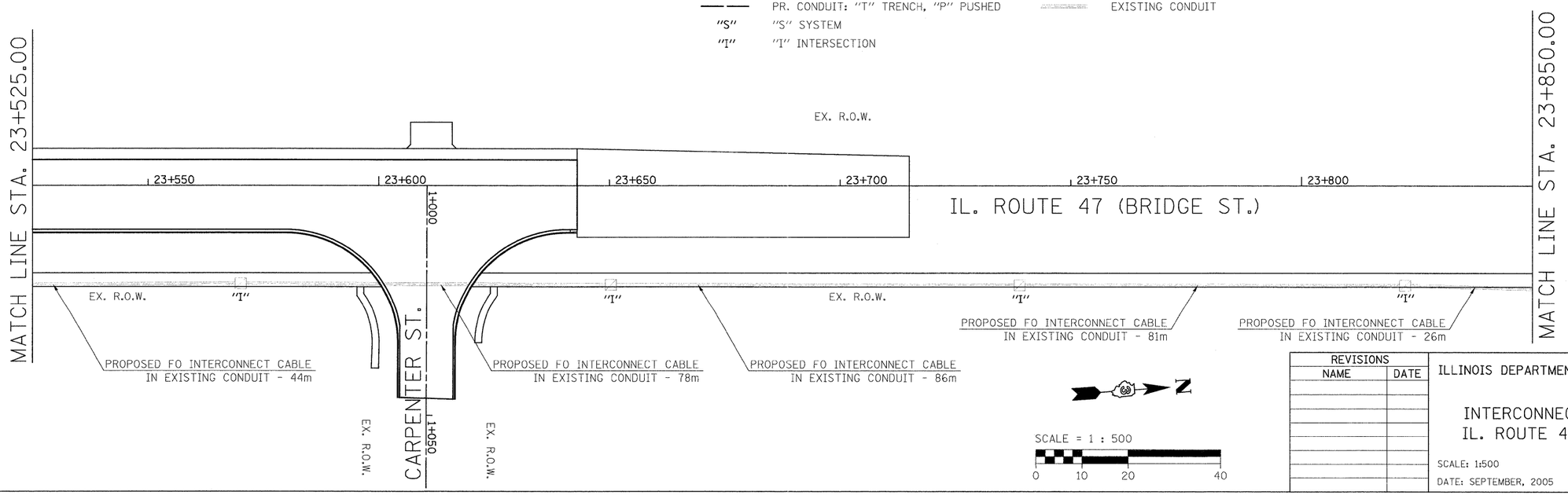
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	636
STA. 23+160.00		TO STA. 23+850.00		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R



SIGNAL INTERCONNECT LEGEND

	PR. HANDHOLE		EXISTING HANDHOLE
	PR. DOUBLE HANDHOLE		EXISTING DOUBLE HANDHOLE
	PR. CONTROLLER		EXISTING CONTROLLER
	PR. CONDUIT: "T" TRENCH, "P" PUSHED		EXISTING CONDUIT
"S"	"S" SYSTEM		
"I"	"I" INTERSECTION		



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECTION DETAILS
IL. ROUTE 47 (BRIDGE ST.)

SCALE: 1:500 DRAWN BY: JH

DATE: SEPTEMBER, 2005 CHECKED BY: KC

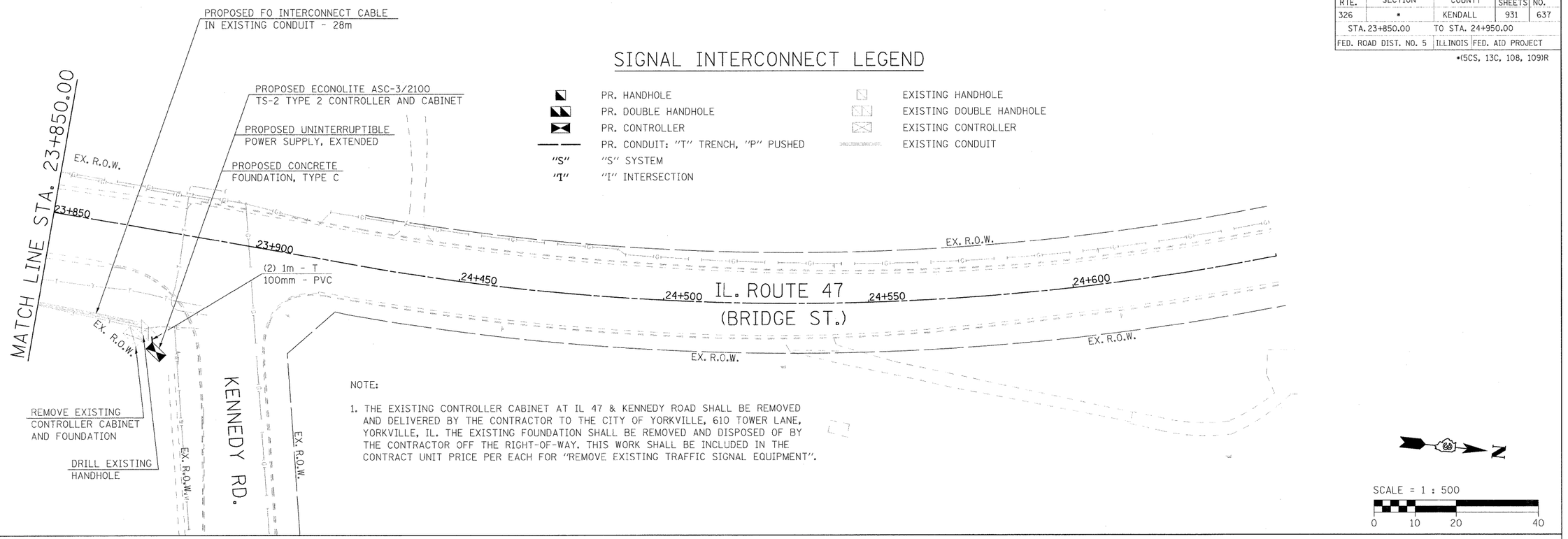
CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	637
STA. 23+850.00		TO STA. 24+950.00		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

SIGNAL INTERCONNECT LEGEND

	PR. HANDHOLE		EXISTING HANDHOLE
	PR. DOUBLE HANDHOLE		EXISTING DOUBLE HANDHOLE
	PR. CONTROLLER		EXISTING CONTROLLER
	PR. CONDUIT: "T" TRENCH, "P" PUSHED		EXISTING CONDUIT
"S"	"S" SYSTEM		
"I"	"I" INTERSECTION		



NOTE:

1. THE EXISTING CONTROLLER CABINET AT IL 47 & KENNEDY ROAD SHALL BE REMOVED AND DELIVERED BY THE CONTRACTOR TO THE CITY OF YORKVILLE, 610 TOWER LANE, YORKVILLE, IL. THE EXISTING FOUNDATION SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR OFF THE RIGHT-OF-WAY. THIS WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER EACH FOR "REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT".

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECTION DETAILS
IL. ROUTE 47 (BRIDGE ST.)

SCALE: 1:500 DRAWN BY: JH

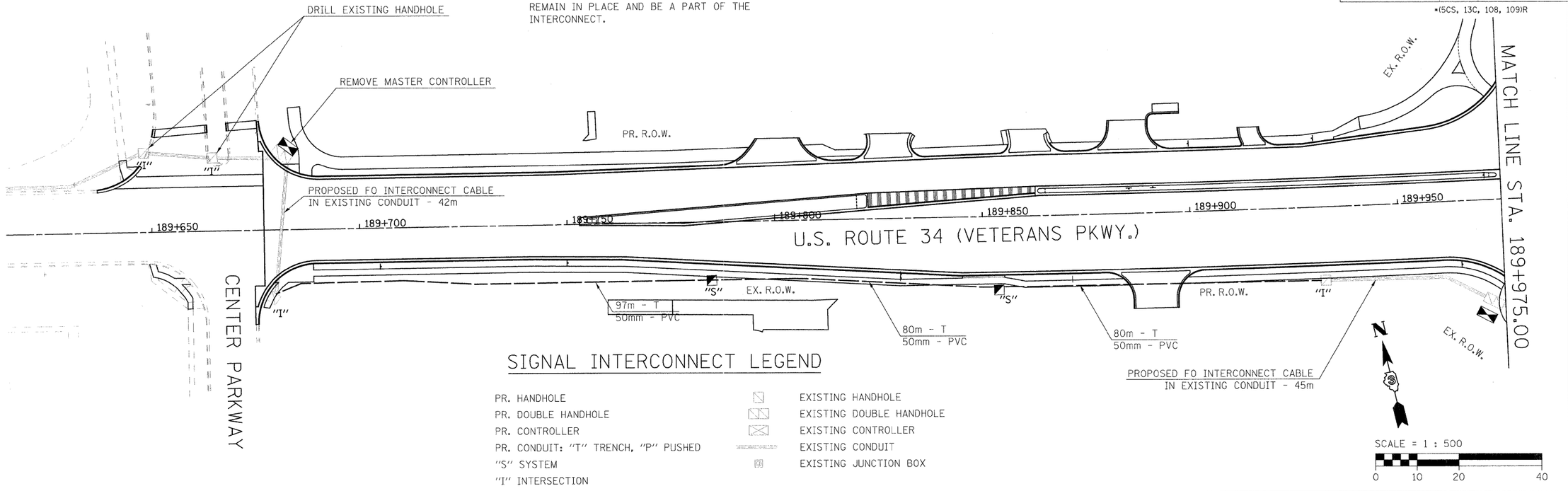
DATE: SEPTEMBER, 2005 CHECKED BY: KC

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	638
STA. 189+250.00		TO STA. 189+975.00		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

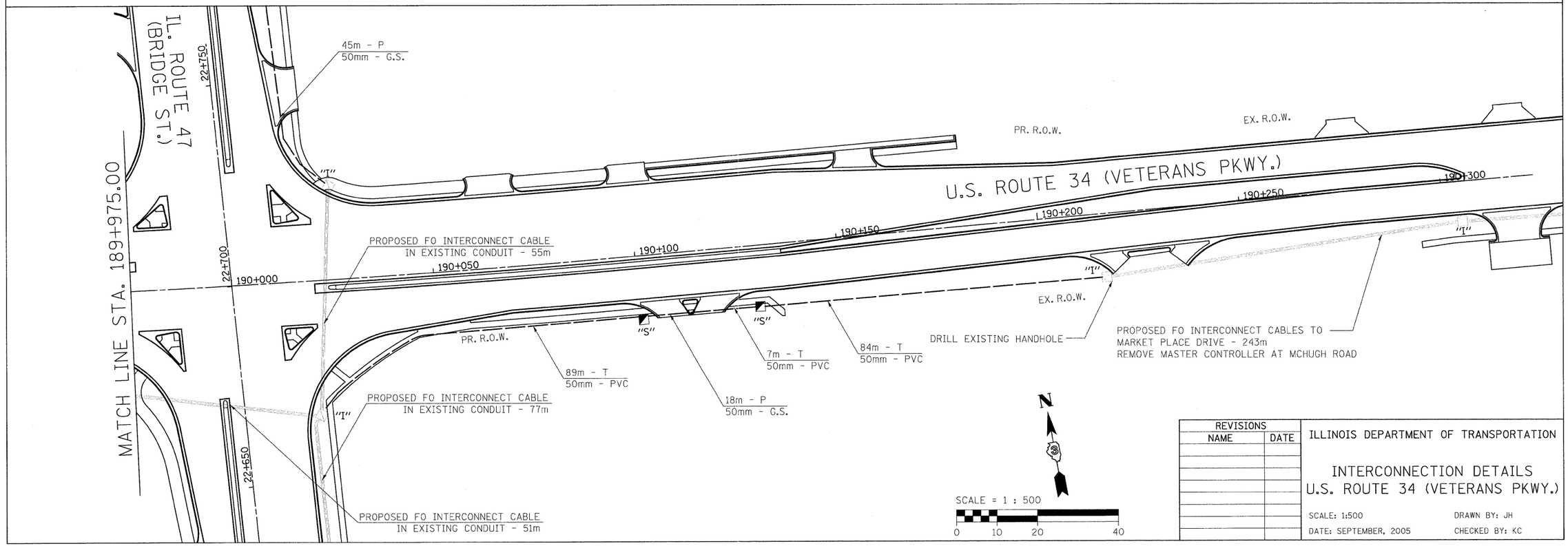
*(5CS, 13C, 108, 109)R

NOTE: FIBER OPTIC CABLE IN CONDUIT BETWEEN GAME FARM RD. AND CENTER PARKWAY SHALL REMAIN IN PLACE AND BE A PART OF THE INTERCONNECT.



SIGNAL INTERCONNECT LEGEND

PR. HANDHOLE	EXISTING HANDHOLE
PR. DOUBLE HANDHOLE	EXISTING DOUBLE HANDHOLE
PR. CONTROLLER	EXISTING CONTROLLER
PR. CONDUIT: "T" TRENCH, "P" PUSHED	EXISTING CONDUIT
"S" SYSTEM	EXISTING JUNCTION BOX
"I" INTERSECTION	



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECTION DETAILS
U.S. ROUTE 34 (VETERANS PKWY.)

SCALE: 1:500 DRAWN BY: JH

DATE: SEPTEMBER, 2005 CHECKED BY: KC

CONTRACT NO. 66671

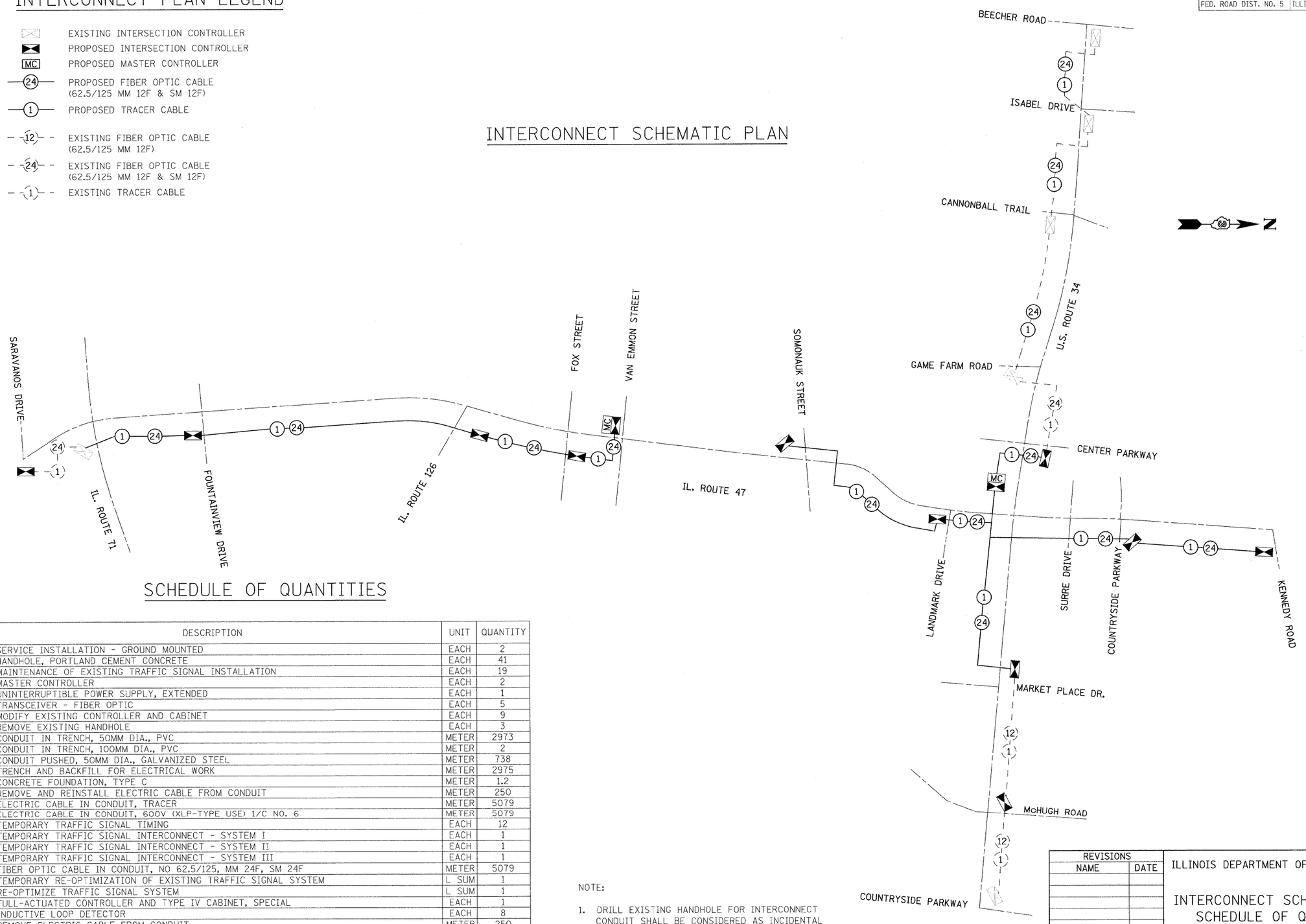
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	639
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

INTERCONNECT PLAN LEGEND

- EXISTING INTERSECTION CONTROLLER
- PROPOSED INTERSECTION CONTROLLER
- MC — PROPOSED MASTER CONTROLLER
- (24) — PROPOSED FIBER OPTIC CABLE (62.5/125 MM 12F & SM 12F)
- (1) — PROPOSED TRACER CABLE
- (12) — EXISTING FIBER OPTIC CABLE (62.5/125 MM 12F)
- (24) — EXISTING FIBER OPTIC CABLE (62.5/125 MM 12F & SM 12F)
- (1) — EXISTING TRACER CABLE

INTERCONNECT SCHEMATIC PLAN



SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	QUANTITY
SERVICE INSTALLATION - GROUND MOUNTED	EACH	2
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	41
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	19
MASTER CONTROLLER	EACH	2
UNINTERRUPTIBLE POWER SUPPLY, EXTENDED	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	5
MODIFY EXISTING CONTROLLER AND CABINET	EACH	9
REMOVE EXISTING HANDHOLE	EACH	3
CONDUIT IN TRENCH, 50MM DIA., PVC	METER	2973
CONDUIT IN TRENCH, 100MM DIA., PVC	METER	2
CONDUIT PUSHED, 50MM DIA., GALVANIZED STEEL	METER	738
TRENCH AND BACKFILL FOR ELECTRICAL WORK	METER	2975
CONCRETE FOUNDATION, TYPE C	METER	1.2
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	METER	250
ELECTRIC CABLE IN CONDUIT, TRACER	METER	5079
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	METER	5079
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	12
TEMPORARY TRAFFIC SIGNAL INTERCONNECT - SYSTEM I	EACH	1
TEMPORARY TRAFFIC SIGNAL INTERCONNECT - SYSTEM II	EACH	1
TEMPORARY TRAFFIC SIGNAL INTERCONNECT - SYSTEM III	EACH	1
FIBER OPTIC CABLE IN CONDUIT, NO 62.5/125, MM 24F, SM 24F	METER	5079
TEMPORARY RE-OPTIMIZATION OF EXISTING TRAFFIC SIGNAL SYSTEM	L SUM	1
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM	L SUM	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
INDUCTIVE LOOP DETECTOR	EACH	8
REMOVE ELECTRIC CABLE FROM CONDUIT	METER	250
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1

NOTE:

1. DRILL EXISTING HANDHOLE FOR INTERCONNECT CONDUIT SHALL BE CONSIDERED AS INCIDENTAL TO THE PAY ITEM FOR CONDUIT.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC PLAN SCHEDULE OF QUANTITIES

SCALE: 1:500 DRAWN BY: JH

DATE: SEPTEMBER, 2005 CHECKED BY: KC

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	640
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

Date 4/6/02

ROUTE FAP 326(IL47) DESCRIPTION MAST ARM FOUNDATION AT IL 47 & IL 71 SOUTH OF YORKVILLE LOGGED BY L.M.

SECTION (5CS,13C,108,109)R LOCATION SE 1/4, SEC. 5, TWP. 36N, RNG. 7E, 3rd PM

COUNTY KENDALL DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. _____
Station _____

BORING NO. 01 NW QUAD
Station _____
Offset _____
Ground Surface Elev. _____ m

Surface Water Elev. _____ m
Stream Bed Elev. _____ m

Groundwater Elev.:
First Encounter _____ m
Upon Completion _____ m
After ____ Hrs. _____ m

	DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
AUGERED Brown SILTY CLAY LOAM				
Very Stiff Brown SILTY CLAY LOAM TILL		3		
		6	278	13.0
		8	B	
	-1.5			
		4		
		7	259	14.0
		9	B	
Hard Brown SILTY LOAM TILL				
		5		
		8	450	14.0
		11	S	
	-3.0			
		5		
		7	699	14.0
		11	S	
Very Stiff Gray SILTY CLAY LOAM TILL				
	-4.5			
		4		
		7	297	14.0
		8	B	
		4		
		7	268	15.0
		10	S	
	-6.0			

	DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Very Stiff Gray SILTY CLAY LOAM TILL *(continued)*		4		
		7	335	12.0
		10	P	
	-7.5			
		4		
		7	240	12.0
		9	B	
End of Boring				
	-9.0			
	-10.5			
	-12.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

Date 6/6/02

ROUTE FAP 326(IL47) DESCRIPTION MAST ARM FOUNDATION AT IL 47 & IL 71 SOUTH OF YORKVILLE LOGGED BY L.M.

SECTION (5CS,13C,108,109)R LOCATION SE 1/4, SEC. 5, TWP. 36N, RNG. 7E, 3rd PM

COUNTY KENDALL DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. _____
Station _____

BORING NO. 02 NE QUAD
Station _____
Offset _____
Ground Surface Elev. _____ m

Surface Water Elev. _____ m
Stream Bed Elev. _____ m

Groundwater Elev.:
First Encounter _____ m
Upon Completion _____ m
After ____ Hrs. _____ m

	DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
AUGERED Brown SILTY CLAY LOAM				
Stiff Brown SILTY CLAY LOAM		3		
		3	192	16.0
		2	P	
Hard Brown & Gray SILTY CLAY TILL	-1.5			
		5		
		8	661	16.0
		9	S	
		6		
		9	680	14.0
		12	S	
	-3.0			
		6		
		8	719	14.0
		11	S	
Very Ssstiff Brown & Gray SILTY CLAY TILL				
		5		
		7	297	14.0
		10	S	
	-4.5			
		7		
		7	240	14.0
		11	P	
Very Stiff Gray SILTY CLAY LOAM TILL				
		5		
		5	259	14.0
		9	B	
	-6.0			

	DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Very Stiff Gray SILTY CLAY LOAM TILL *(continued)*		5		
		6	278	14.0
		9	B	
	-7.5			
		4		
		5	240	13.0
		8	B	
End of Boring				
	-9.0			
	-10.5			
	-12.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG FOR
MAST ARM FOUNDATION
IL. 47 (BRIDGE ST.)/
IL. 71 (STAGECOACH TRAIL)

SCALE: NONE DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\648-647Boring Logs.dgn
PLOT SCALE = 20.8333 ' / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	641
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Date 6/18/02

ROUTE FAP 326(IL47) DESCRIPTION MAST ARM FOUNDATION AT IL 47 & IL 126 SOUTH OF YORKVILLE LOGGED BY L.M.

SECTION (5CS,13C,108,109)R LOCATION SE 1/4, SEC. 32, TWP. 37N, RNG. 7E, 3rd PM

COUNTY KENDALL DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. _____
Station _____

BORING NO. 03 NE QUAD
Station _____
Offset _____
Ground Surface Elev. _____ m

Surface Water Elev. _____ m
Stream Bed Elev. _____ m

Groundwater Elev.:
First Encounter _____ m
Upon Completion _____ m
After ____ Hrs. _____ m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
AUGERED Brown SILTY CLAY LOAM			
	2		
Medium Brown SILTY CLAY LOAM	1	-	19.0
	2	-	
-1.5			
	4		
Very Stiff Brown SILTY CLAY LOAM TILL	5	297	14.0
	7	S	
	6		
	6	259	14.0
	7	B	
Hard Gray SILTY CLAY LOAM TILL -3.0			
	4		
	6	469	12.0
	8	B	
	5		
	6	431	12.0
	8	B	
Very Stiff Gray SILTY CLAY LOAM TILL -4.5			
	4		
	5	345	12.0
	8	B	
Hard Gray SILTY CLAY LOAM TILL			
	4		
	5	431	10.0
	8	B	
-6.0			

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Very Stiff Gray SILTY CLAY LOAM TILL *(continued)*			
	4		
	5	364	10.0
	6	B	
Very Stiff Gray SILTY CLAY TILL			
-7.5			
	1		
	4	383	19.0
	8	B	
End of Boring			
-9.0			
-10.5			
-12.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Date 6/18/02

ROUTE FAP 326(IL47) DESCRIPTION MAST ARM FOUNDATION AT IL 47 & IL 126 SOUTH OF YORKVILLE LOGGED BY L.M.

SECTION (5CS,13C,108,109)R LOCATION SE 1/4, SEC. 32, TWP. 37N, RNG. 7E, 3rd PM

COUNTY KENDALL DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. _____
Station _____

BORING NO. 04 SW QUAD
Station _____
Offset _____
Ground Surface Elev. _____ m

Surface Water Elev. _____ m
Stream Bed Elev. _____ m

Groundwater Elev.:
First Encounter _____ m
Upon Completion _____ m
After ____ Hrs. _____ m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
AUGERED SHOULDER STONE Over Brown SILTY CLAY LOAM			
	3		
Stiff Brown SILTY CLAY LOAM (FILL)	3	182	25.0
	7	B	
Very Stif Brown & Gray SILTY CLAY LOAM TILL -1.5			
	4		
	5	297	19.0
	7	B	
	3		
	4	240	14.0
	6	B	
Hard Gray SILTY CLAY LOAM TILL -3.0			
	3		
	7	575	12.0
	9	S	
Very Stiff Gray SILTY CLAY LOAM TILL			
	4		
	6	345	13.0
	8	B	
-4.5			
	3		
	4	345	11.0
	7	B	
	5		
	7	259	10.0
	5	B	
-6.0			

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Very Stiff Gray SILTY CLAY LOAM TILL *(continued)*			
	3		
	4	278	10.0
	5	B	
Loose Rounded SAND & GRAVEL			
-7.5			
	6		
	6	-	13.0
Very Stiff Gray SILTY CLAY LOAM TILL	5	192	20.0
End of Boring			
-9.0			
-10.5			
-12.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Date 6/6/02

ROUTE FAP 326(IL47) DESCRIPTION MAST ARM FOUNDATION AT IL 47 & IL 126 SOUTH OF YORKVILLE LOGGED BY L.M.

SECTION (5CS,13C,108,109)R LOCATION SE 1/4, SEC. 32, TWP. 37N, RNG. 7E, 3rd PM

COUNTY KENDALL DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. _____
Station _____

BORING NO. 05 SE QUAD
Station _____
Offset _____
Ground Surface Elev. _____ m

Surface Water Elev. _____ m
Stream Bed Elev. _____ m

Groundwater Elev.:
First Encounter _____ m
Upon Completion _____ m
After ____ Hrs. _____ m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
AUGERED Brown SILTY CLAY LOAM			
	6		
Hard Brown SILTY CLAY LOAM TILL (FILL)	8	-	-
	9	-	
-1.5			
	9		
	11	450	15.0
	14	S	
Very Stiff Gray SILTY CLAY LOAM TILL	5		
	6	259	14.0
	8	B	
-3.0			
	3		
	4	287	14.0
	7	B	
	3		
	5	278	14.0
	6	B	
-4.5			
	4		
	5	297	14.0
	7	B	
	4		
	6	316	13.0
	7	B	
-6.0			

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Very Stiff Gray SILTY CLAY LOAM TILL *(continued)*			
	4		
	6	316	14.0
	8	B	
-7.5			
	4		
	6	259	14.0
	8	B	
End of Boring			
-9.0			
-10.5			
-12.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG FOR
MAST ARM FOUNDATION
IL. 47 (BRIDGE ST.)/
IL. 126 (SCHOOL HOUSE RD.)

SCALE: NONE DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 6/11/2011
FILE NAME = h:\5122\design\6400-6478borings.dgn
PLOT SCALE = 20.8333 ' / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	642
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

MAST ARM FOUNDATION AT IL 47 & COUNTRYSIDE PARKWAY NORTH OF YORKVILLE

Date 4/13/98

ROUTE FAP 326(IL47) DESCRIPTION LOGGED BY K.W.

SECTION (5CS,13C,108,109)R LOCATION NW 1/4, SEC. 28, TWP. 37N, RNG. 7E, 3rd PM

COUNTY KENDALL DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.
Station
BORING NO. 06 SE QUAD
Station
Offset
Ground Surface Elev. m

Surface Water Elev. m
Stream Bed Elev. m
Groundwater Elev.:
First Encounter m
Upon Completion m
After Hrs. m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
AUGERED Brown SILTY CLAY			
	2		
Medium Brown SILTY CLAY	3	115	29.0
	3	P	
-1.5			
	2		
	3 -		6.0
Medium Brown SAND to Coarse (1") GRAVEL	8 -		
	8		
	8 -		6.0
	11 -		
-3.0			
	5		
	9 -		5.0
	10 -		
	6		
	6 -		12.0
	3 -		
-4.5			
	4		
	6 -		14.0
	8 -		
	4		
	6 -		22.0
	7 -		
-6.0			

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
	3		
Medium Brown SAND to Coarse (1") GRAVEL *(continued)*	3 -		13.0
	9 -		
-7.5			
	9		
Medium Gray SILTY LOAM TILL	5 -		9.0
	6	67	11.0
End of Boring			
-9.0			
-10.5			
-12.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

MAST ARM FOUNDATION AT IL 47 & COUNTRYSIDE PARKWAY NORTH OF YORKVILLE

Date 4/14/98

ROUTE FAP 326(IL47) DESCRIPTION LOGGED BY K.W.

SECTION (5CS,13C,108,109)R LOCATION NW 1/4, SEC. 28, TWP. 37N, RNG. 7E, 3rd PM

COUNTY KENDALL DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.
Station
BORING NO. 07 NW QUAD
Station
Offset
Ground Surface Elev. m

Surface Water Elev. m
Stream Bed Elev. m
Groundwater Elev.:
First Encounter m
Upon Completion m
After Hrs. m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
AUGERED BITUMINOIS Over Black SILTY CLAY			
	3		
Medium Dark Brown SILTY CLAY	4	67	16.0
	6	P	
-1.5			
	2		
	3	48	17.0
Soft Brown CLAY LOAM with GRAVEL Pebbles	3	P	
Soft Brown SILTY CLAY			
	2		
	2	29	15.0
	2	P	
-3.0			
Soft Brown SILTY LOAM	2		
	2 -		1.0
Loose Brown SAND & GRAVEL	4 -		
	6		
	9 -		5.0
	9 -		
-4.6			
	7		
	7 -		13.0
	7 -		
	5		
	3 -		18.0
	4 -		
-6.0			

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
	6		
Loose Brown SAND & GRAVEL *(continued)*	11 -		11.0
	9 -		
-7.5			
Dense Brown SAND & Very Coarse GRAVEL			
	13		
	21 -		14.0
	22 -		
End of Boring			
-9.0			
-10.5			
-12.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG FOR MAST ARM FOUNDATION IL. 47 (BRIDGE ST.)/ COUNTRYSIDE PARKWAY

SCALE: NONE DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\640-647Boringlogs.dgn
PLOT SCALE = 20.8333 ' / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	643
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

MAST ARM FOUNDATION AT IL 47 & COUNTRYSIDE PARKWAY NORTH OF YORKVILLE

Date 4/14/98

ROUTE FAP 326(IL47) DESCRIPTION LOGGED BY K.W.

SECTION (5CS,13C,108,109)R LOCATION NW 1/4, SEC. 28, TWP. 37N, RNG. 7E, 3rd PM

COUNTY KENDALL DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. _____
Station _____

BORING NO. 08 SW QUAD
Station _____
Offset _____
Ground Surface Elev. _____ m

Surface Water Elev. _____ m
Stream Bed Elev. _____ m

Groundwater Elev.:
First Encounter _____ m
Upon Completion _____ m
After ____ Hrs. _____ m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)	DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
AUGERED SHOULDER STONE Over Black SILTY CLAY				Loose Brown SAND & GRAVEL to Very Coarse GRAVEL (Past 22') *(continued)*	3		
					7 -		12.0
					13 -		
Medium Brown SILTY CLAY	2			Dense Brown SAND & Coarse GRAVEL			
	1 3	67	17.0 P				
-1.5				Hard Gray SILTY LOAM TILL			
	1			-7.5	10		
	2	48	14.0		16	431	2.0
Loose Brown LOAMY GRAVEL	3 -		8.0		19	P	
Soft Brown & Black SILTY CLAY				End of Boring			
	5	29	12.0				
Loose Brown SAND & GRAVEL to Very Coarse GRAVEL (Past 22')	7						
	10 -		1.0				
-3.0				-9.0			
	7						
	12 -		1.0				
	14 -						
	4						
	5 -		6.0				
	5 -						
-4.5				-10.5			
	3						
	4 -		15.0				
	6 -						
	3						
	6 -		15.0				
	14 -						
-6.0				-12.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

MAST ARM FOUNDATION AT IL 47 & COUNTRYSIDE PARKWAY NORTH OF YORKVILLE

Date 4/15/98

ROUTE FAP 326(IL47) DESCRIPTION LOGGED BY K.W.

SECTION (5CS,13C,108,109)R LOCATION NW 1/4, SEC. 28, TWP. 37N, RNG. 7E, 3rd PM

COUNTY KENDALL DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. _____
Station _____

BORING NO. 09 NE QUAD
Station _____
Offset _____
Ground Surface Elev. _____ m

Surface Water Elev. _____ m
Stream Bed Elev. _____ m

Groundwater Elev.:
First Encounter _____ m
Upon Completion _____ m
After ____ Hrs. _____ m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)	DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
AUGERED Black SILTY CLAY & CLAY LOAM				Medium SAND & Coase GRAVEL *(continued)*	4		
					10 -		15.0
					13 -		
Medium to Stiff Brown SILTY CLAY	2						
	3 4	86	26.0 P				
-1.5				-7.5			
	2				6		
	3	67	25.0		9 -		17.0
	4		P		12 -		
Loose Brown SAND & GRAVEL				End of Boring			
	5						
	6 -		5.0				
	6 -						
-3.0				-9.0			
	4						
	8 -		7.0				
	10 -						
	4						
	6 -		17.0				
	7 -						
-4.5				-10.5			
	3						
	5 -		16.0				
	7 -						
	5						
	5 -		23.0				
	8 -						
-6.0				-12.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG FOR MAST ARM FOUNDATION IL. 47 (BRIDGE ST.)/ COUNTRYSIDE PARKWAY

SCALE: NONE DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\6478BoringLogs.dgn
PLOT SCALE = 20.8333 ' / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	644
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

*(5CS, 13C, 108, 109)R

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

Date 5/11/92

ROUTE FAP 326(IL47) DESCRIPTION MAST ARM FOUNDATION AT IL 47 & US 34 IN YORKVILLE LOGGED BY K.W.

SECTION (5CS,13C,108,109)R LOCATION NW 1/4, SEC. 28, TWP. 37N, RNG. 7E, 3rd PM

COUNTY KENDALL DRILLING METHOD Push HAMMER TYPE

STRUCT. NO.
Station

BORING NO. 10 SE QUAD
Station
Offset
Ground Surface Elev. m

Surface Water Elev. m
Stream Bed Elev. m

Groundwater Elev.:
First Encounter m
Upon Completion m
After Hrs. m

	DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Medium Dark Brown SILTY LOAM			48 P	22.0
Stiff Brown SILTY CLAY			96 P	24.0
Brown LOAM with GRAVEL Pieces	-1.5		67 P	18.0
Brown SAND & Coarse (1") GRAVEL	-3.0	4.0		
End of Boring	-4.5			
	-6.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

Date 5/11/92

ROUTE FAP 326(IL47) DESCRIPTION MAST ARM FOUNDATION AT IL 47 & US 34 IN YORKVILLE LOGGED BY K.W.

SECTION (5CS,13C,108,109)R LOCATION NW 1/4, SEC. 28, TWP. 37N, RNG. 7E, 3rd PM

COUNTY KENDALL DRILLING METHOD Push HAMMER TYPE

STRUCT. NO.
Station

BORING NO. 11 NE QUAD
Station
Offset
Ground Surface Elev. m

Surface Water Elev. m
Stream Bed Elev. m

Groundwater Elev.:
First Encounter m
Upon Completion m
After Hrs. m

	DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Brown LOAM with GRAVEL				
Stiff Brown SILTY CLAY			115 P	27.0
Brown SAND & GRAVEL	-1.5	6.0		
End of Boring	-3.0			
	-4.5			
	-6.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG FOR
MAST ARM FOUNDATION
IL. 47 (BRIDGE ST.)/
US. 34 (VETERANS PARKWAY)

SCALE: NONE DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\640-647BoringLogs.dgn
PLOT SCALE = 20.8333 ' / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	645
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

Date 5/11/92

ROUTE FAP 326(IL47) DESCRIPTION MAST ARM FOUNDATION AT IL 47 & US 34 IN YORKVILLE LOGGED BY K.W.

SECTION (5CS,13C,108,109)R LOCATION NW 1/4, SEC. 28, TWP. 37N, RNG. 7E, 3rd PM

COUNTY KENDALL DRILLING METHOD Push HAMMER TYPE

STRUCT. NO. _____
Station _____

BORING NO. 12 NW QUAD
Station _____
Offset _____
Ground Surface Elev. _____ m

Surface Water Elev. _____ m
Stream Bed Elev. _____ m

Groundwater Elev.:
First Encounter _____ m
Upon Completion _____ m
After ____ Hrs. _____ m

	DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Stiff Brown SILTY LOAM			144 P	17.0
Stiff Brown SILTY CLAY			144 P	25.0
Brown LOAMY GRAVEL	-1.5			16.0
Brown SAND & GRAVEL	-3.0			11.0
End of Boring	-4.6 ▼			
	-6.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

Date 5/11/92

ROUTE FAP 326(IL47) DESCRIPTION MAST ARM FOUNDATION AT IL 47 & US 34 IN YORKVILLE LOGGED BY K.W.

SECTION (5CS,13C,108,109)R LOCATION NW 1/4, SEC. 28, TWP. 37N, RNG. 7E, 3rd PM

COUNTY KENDALL DRILLING METHOD Push HAMMER TYPE

STRUCT. NO. _____
Station _____

BORING NO. 13 SW QUAD
Station _____
Offset _____
Ground Surface Elev. _____ m

Surface Water Elev. _____ m
Stream Bed Elev. _____ m

Groundwater Elev.:
First Encounter _____ m
Upon Completion _____ m
After ____ Hrs. _____ m

	DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Black SILTY LOAM				
Brown SILTY CLAY	-1.5			
Brown SANDY LOAM				
Brown SAND & GRAVEL	-3.0			
End of Boring	-4.6 ▼			
	-6.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG FOR
MAST ARM FOUNDATION
IL. 47 (BRIDGE ST.)/
US. 34 (VETERANS PARKWAY)

SCALE: NONE DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
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PLOT SCALE = 20.8333 ' / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	646
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Date 8/20/02

ROUTE FAP 326(IL47) DESCRIPTION MAST ARM FOUNDATION AT IL 47 & FOX STREET IN YORKVILLE LOGGED BY L.M.

SECTION (5CS,13C,108,109)R LOCATION NE 1/4, SEC. 32, TWP. 37N, RNG. 2E, 3rd PM

COUNTY KENDALL DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.
Station

BORING NO. 14 SW QUAD
Station 20+453
Offset
Ground Surface Elev. m

Surface Water Elev. m
Stream Bed Elev. m

Groundwater Elev.:
First Encounter m
Upon Completion NONE m
After Hrs. m

	DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
AUGERED Brown CLAY LOAM with PEA GRAVEL				
		4		
Loose White CA 13 BACK FILL		2	- 6.0	
		3	-	
	-1.5			
		2		
		1	- 5.0	
		1	-	
		1		
Soft Brown SILTY LOAM		1	48	18.0
		1	P	
	-3.0			
		1		
		2	48	26.0
Hard Brown CLAY LOAM TILL		5	469	12.0
		4		
		8	623	20.0
		12	S	
	-4.5			
		9		
Medium Brown & Gray SILT		16	- 22.0	
		16	-	
		7		
		6	- 27.0	
Medium Brown Fine SAND		4	- 18.0	
	-6.0			

	DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Medium Brown Fine to Medium SAND with Fine GRAVEL *(continued)*		7		
		15	- 14.0	
Medium Brown Fine SAND & SILT		20	- 20.0	
		8		
Hard Brown to Gray SANDY LOAM TILL		14	431	11.0
		20	P	
	-7.5			
		2		
		25	527	8.0
		21	S	
End of Boring				
	-9.0			
	-10.5			
	-12.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-93)

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Date 8/19/02

ROUTE FAP 326(IL47) DESCRIPTION MAST ARM FOUNDATION AT IL 47 & VAN EMMON STREET IN YORKVILLE LOGGED BY L.M.

SECTION (5CS,13C,108,109)R LOCATION NE 1/4, SEC. 32, TWP. 37N, RNG. 7E, 3rd PM

COUNTY KENDALL DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.
Station

BORING NO. 15 NW QUAD
Station 20+830
Offset
Ground Surface Elev. 181.64 m

Surface Water Elev. m
Stream Bed Elev. m

Groundwater Elev.:
First Encounter m
Upon Completion 178.9 m ▽
After Hrs. m

	DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
AUGERED BITUMINOUS PAVEMENT OVER Brown SAND & Brown CLAY LOAM				
180.88		3		
Very Stiff Brown CLAY		3	249	24.0
		5	B	
	-1.5			
179.97		3		
Stiff Gray CLAY LOAM TILL		6	144	19.0
		9	S	
179.51				
Soft Gray SILTY LOAM		1		
		2	48	23.0
▽		5	B	
	-3.0			
178.44		3		
Loose Brown 25mm LOAMY GRAVEL Over Fine Brown SILT & SAND		4	-	23.0
		3	-	
177.83				
Stiff Gray Highly Weathered & Reworked MAQUOKETA SHALE		3		
		3	192	20.0
		5	S	
177.07	-4.5			
AUGER REFUSAL on Dark Gray to Black LIMESTONE LAYER		100/50mm		13.0
176.77		REFUSAL		
End of Boring				
	-6.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG FOR
MAST ARM FOUNDATION
IL. 47 (BRIDGE ST.)/
VAN EMMON ST. & FOX ST.

SCALE: NONE DRAWN BY: SL

DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
FILE NAME = h:\5122\design\640-647Boring\Logs.dgn
PLOT SCALE = 20.8333 ' / IN.
USER NAME = _USERDESCR_

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	*	KENDALL	931	647
STA. N/A		TO STA. N/A		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

*(5CS, 13C, 108, 109)R

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

Date 8/20/02

ROUTE FAP 326(IL47) DESCRIPTION MAST ARM FOUNDATION AT IL 47 & SPRING STREET IN YORKVILLE LOGGED BY L.M.

SECTION (5CS,13C,108,109)R LOCATION SW 1/4, SEC. 28, TWP. 37N, RNG. 7E, 3RD PM

COUNTY KENDALL DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. ____
Station ____
BORING NO. 16 NE QUAD
Station 21+592
Offset ____
Ground Surface Elev. ____ m

Surface Water Elev. ____ m
Stream Bed Elev. ____ m
Groundwater Elev.:
First Encounter ____ m
Upon Completion ____ m ▽
After ____ Hrs. ____ m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
AUGERED Brown SILTY LOAM			
	2		
Very Stiff Brown & Gray CLAY LOAM	3	211	22.0
	3	S	
-1.6			
	2	240	23.0
Loose Brown & Gray LOAMY SAND & GRAVEL	3		
	4	-	13.0
▽ Stiff Brown SILTY CLAY LOAM	4	96	23.0
	4	-	19.0
Medium Brown Fine to Coarse SAND	7		
-3.0			
	3		
	7	-	17.0
	5	-	
Medium Gray Fine to Medium SAND with 25 to 50 mm SILT LAYERS Interbedded	4		
	9	-	18.0
	9	-	
-4.6			
	WOH		
	5	-	22.0
	7	-	
	9		
	10	-	20.0
	12	-	
-6.0			

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Loose to Medium Gray Fine SAND & SILT with an Interbedded 150mm layer of SANDY LOAM TILL *(continued)*	3		
	3	-	20.0
	3	-	
	7		
	9	-	23.0
	8	-	
-7.6			
Medium Gray SILTY LOAM TILL	6	96	12.0
	6	-	14.0
Gray Clean Fine SAND & Medium GRAVEL	18	431	10.0
Hard Gray SILTY LOAM TILL			
End of Boring			
-9.0			
-10.5			
-12.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

Date 8/21/02

ROUTE FAP 326(IL47) DESCRIPTION MAST ARM FOUNDATION AT IL 47 & SOMONAUK STREET IN YORKVILLE LOGGED BY L.M.

SECTION (5CS,13C,108,109)R LOCATION SW 1/4, SEC. 28, TWP. 37N, RNG. 7E, 3RD PM

COUNTY KENDALL DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. ____
Station ____
BORING NO. 17 SW QUAD
Station 21+682
Offset ____
Ground Surface Elev. ____ m

Surface Water Elev. ____ m
Stream Bed Elev. ____ m
Groundwater Elev.:
First Encounter ____ m
Upon Completion ____ m ▽
After ____ Hrs. ____ m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
AUGERED Brown SILTY CLAY & SAND & GRAVEL			
	5		
Medium Brown SAND & GRAVEL	8	-	5.0
	6	-	
-1.5			
	5		
	7	-	-
	9	-	
Medium Brown Fine SAND & Coarse GRAVEL	5		
	6	-	6.0
▽	6	-	
-3.0			
	6		
	6	-	17.0
	9	-	
Medium Brown Fine SAND & Medium GRAVEL with a 150mm Layer of SANDY LOAM TILL Interbedded	6		
	6	-	18.0
	9	-	
-4.6			
	7		
	7	-	19.0
	9	-	
-6.0			

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Medium Brown Fine SAND & Medium GRAVEL with a 150mm Layer of SANDY LOAM TILL Interbedded *(continued)*	16		
	11	-	17.0
	17	-	
-7.6			
	7		
Medium Gray Fine SAND with SILT & TILL Pieces	5	-	18.0
	9	-	
End of Boring			
-9.0			
-10.5			
-12.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG FOR
MAST ARM FOUNDATION
IL. 47 (BRIDGE ST.)/
SOMONAUK ST. & SPRING ST.

SCALE: NONE DRAWN BY: SL
DATE: MARCH, 2010 CHECKED BY: KC

PLOT DATE = 8/11/2011
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PLOT SCALE = 20.8333 ' / IN.
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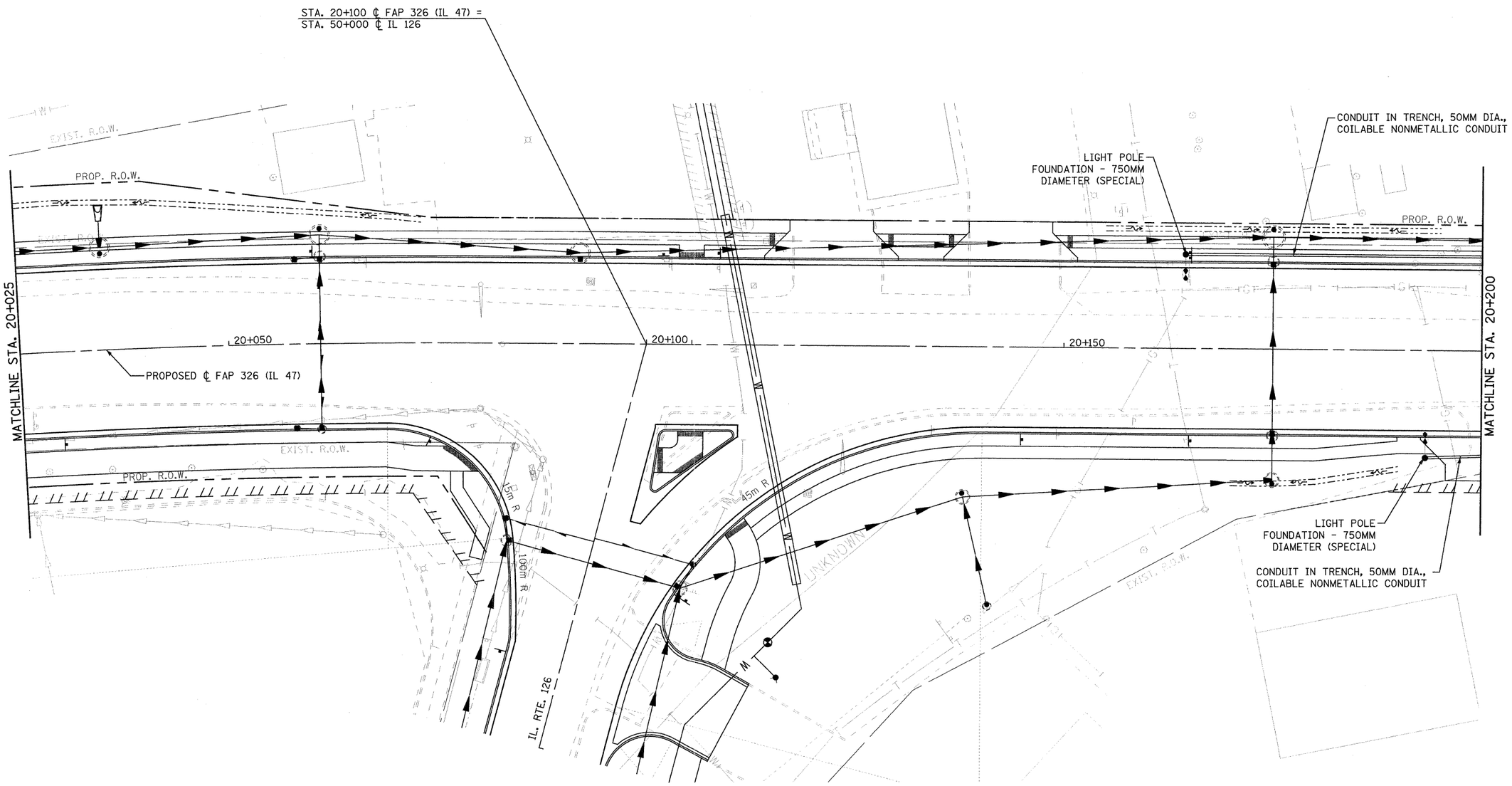
CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	648
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



NOTES:

1. DECORATIVE LIGHT POLES/FIXTURES, CONTROLLERS, AND WIRING TO BE INSTALLED BY THE CITY OF YORKVILLE AT A LATER DATE
2. SEE SIGNAL PLANS FOR LIGHTING AT SIGNALIZED INTERSECTIONS

SCALE IN METERS
0 5 10 15

HMG JOB NO. 5122

FILE: 648lightingl3.dgn
PLOTTED: 8/11/2011

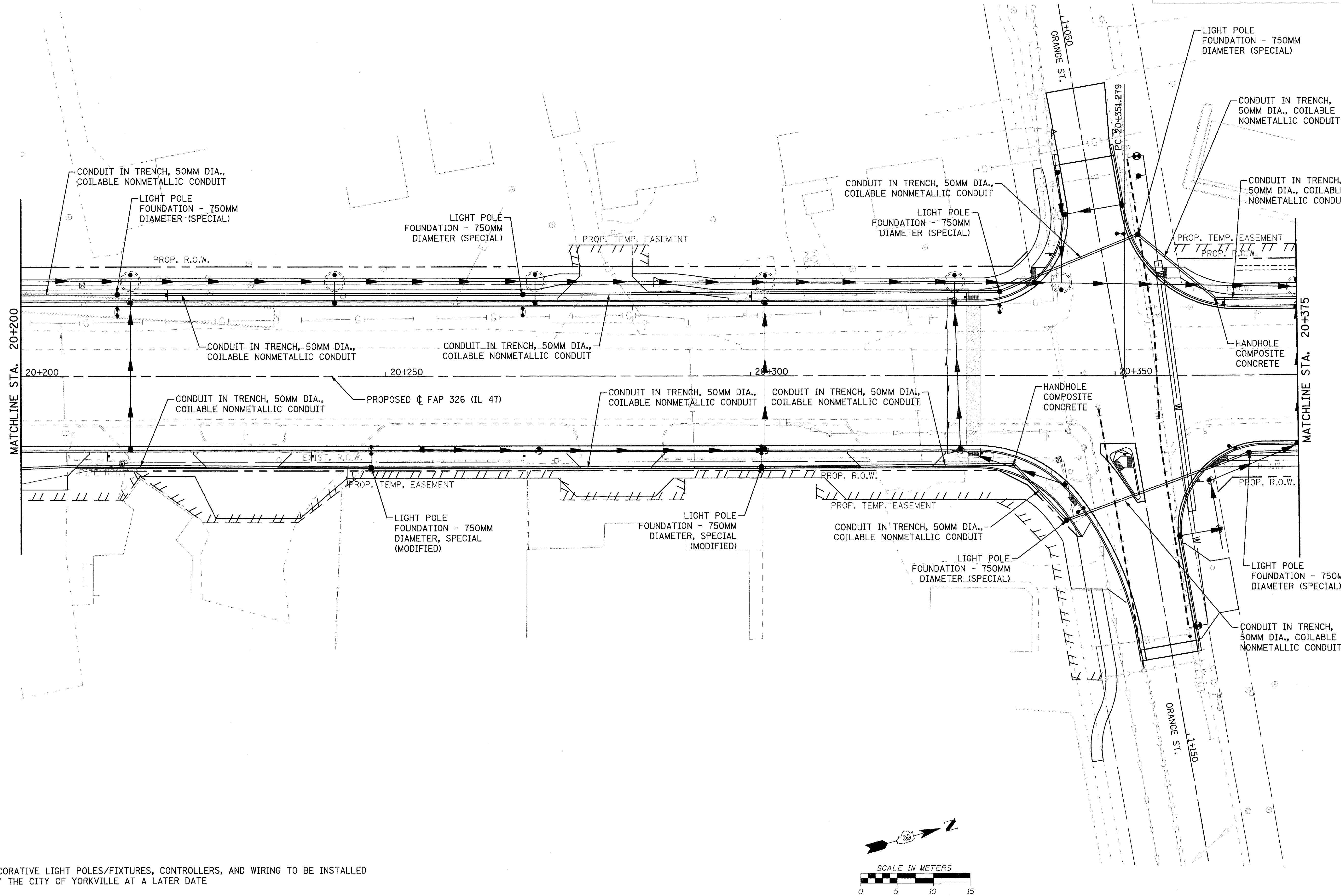
Sheet: 13
Angle: 74.7702
Chains: 1.147

HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

LIGHTING PLAN

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	649
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



NOTES:

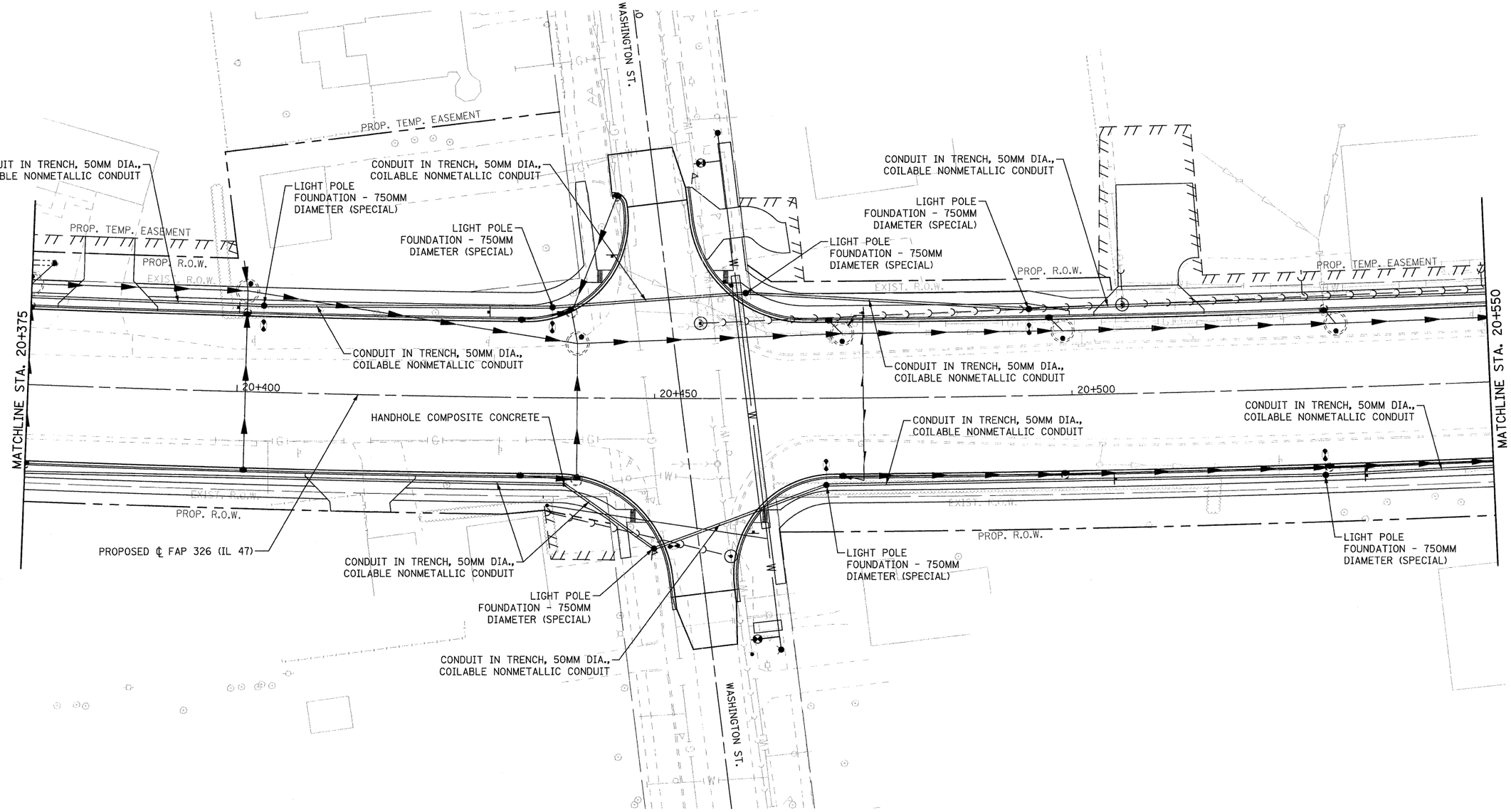
1. DECORATIVE LIGHT POLES/FIXTURES, CONTROLLERS, AND WIRING TO BE INSTALLED BY THE CITY OF YORKVILLE AT A LATER DATE
2. SEE SIGNAL PLANS FOR LIGHTING AT SIGNALIZED INTERSECTIONS

FILE: 649lighting14.dgn
PLOTTED: 8/11/2011

HMG JOB NO. 5122

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	650
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



NOTES:

1. DECORATIVE LIGHT POLES/FIXTURES, CONTROLLERS, AND WIRING TO BE INSTALLED BY THE CITY OF YORKVILLE AT A LATER DATE
2. SEE SIGNAL PLANS FOR LIGHTING AT SIGNALIZED INTERSECTIONS

SCALE IN METERS
0 5 10 15

HMG JOB NO. 522

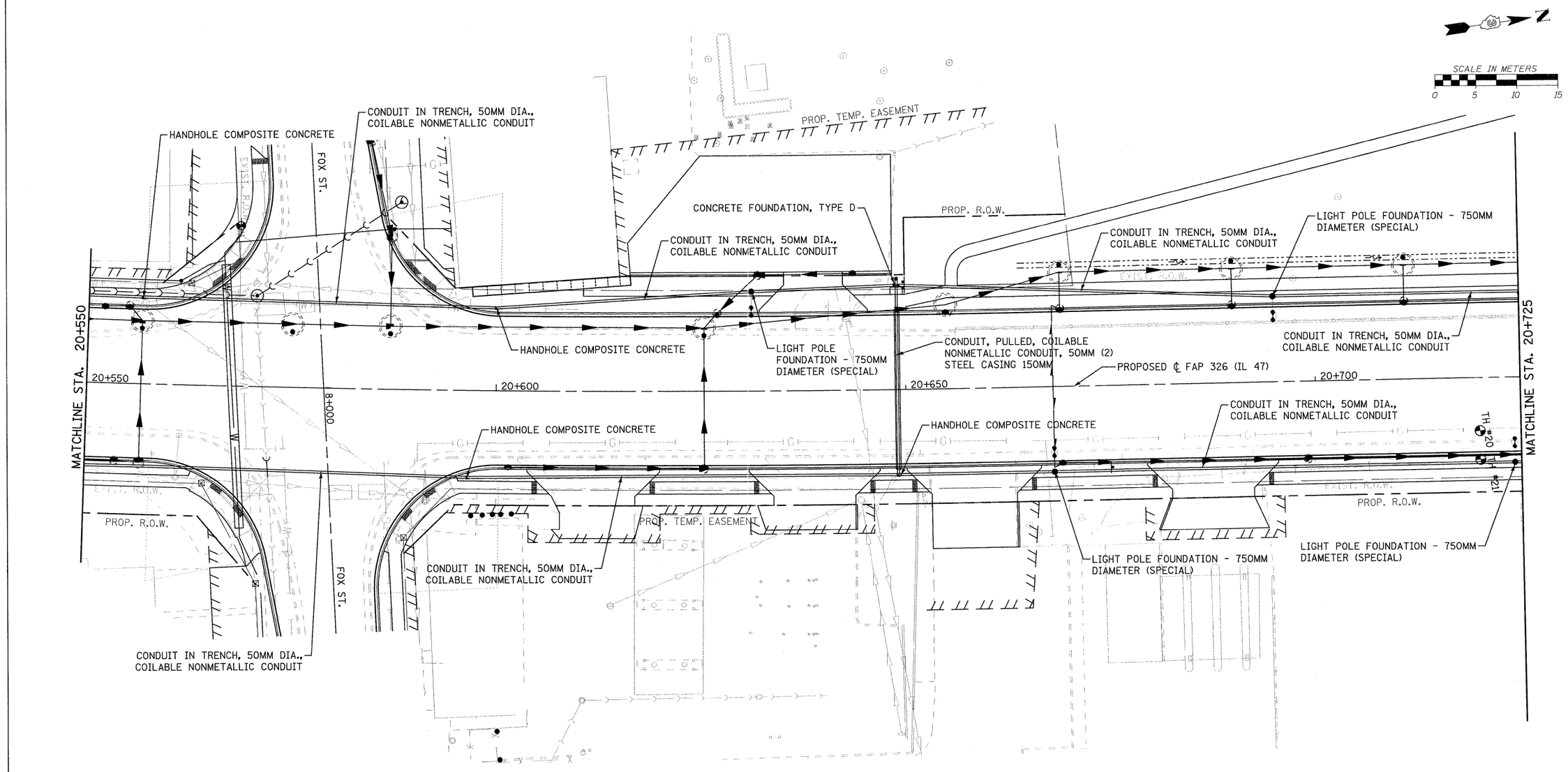
FILE: 650lighting15.dgn
PLOTTED: 8/11/2011

HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

LIGHTING PLAN

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	651
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

1. DECORATIVE LIGHT POLES/FIXTURES, CONTROLLERS, AND WIRING TO BE INSTALLED BY THE CITY OF YORKVILLE AT A LATER DATE
2. SEE SIGNAL PLANS FOR LIGHTING AT SIGNALIZED INTERSECTIONS
3. AT IL 47 CROSSING, TWO (2) 50MM CONDUITS SHALL BE INSTALLED IN 150MM CASING . CASING SHALL BE GROUTED AFTER INSTALLATION OF CONDUIT. LENGTH OF CONDUIT IN CASING SHALL BE PAID FOR AS CONDUIT, PULLED 50MM DIA., COILABLE NONMETALLIC CONDUIT. GROUTING OF CASING SHALL BE INCLUDED IN THE COST OF THE CASING.

FILE: 65lightung16.dgn
PLOTTED: 8/11/2011

HMG JOB NO. 5122

CONTRACT NO. 66671

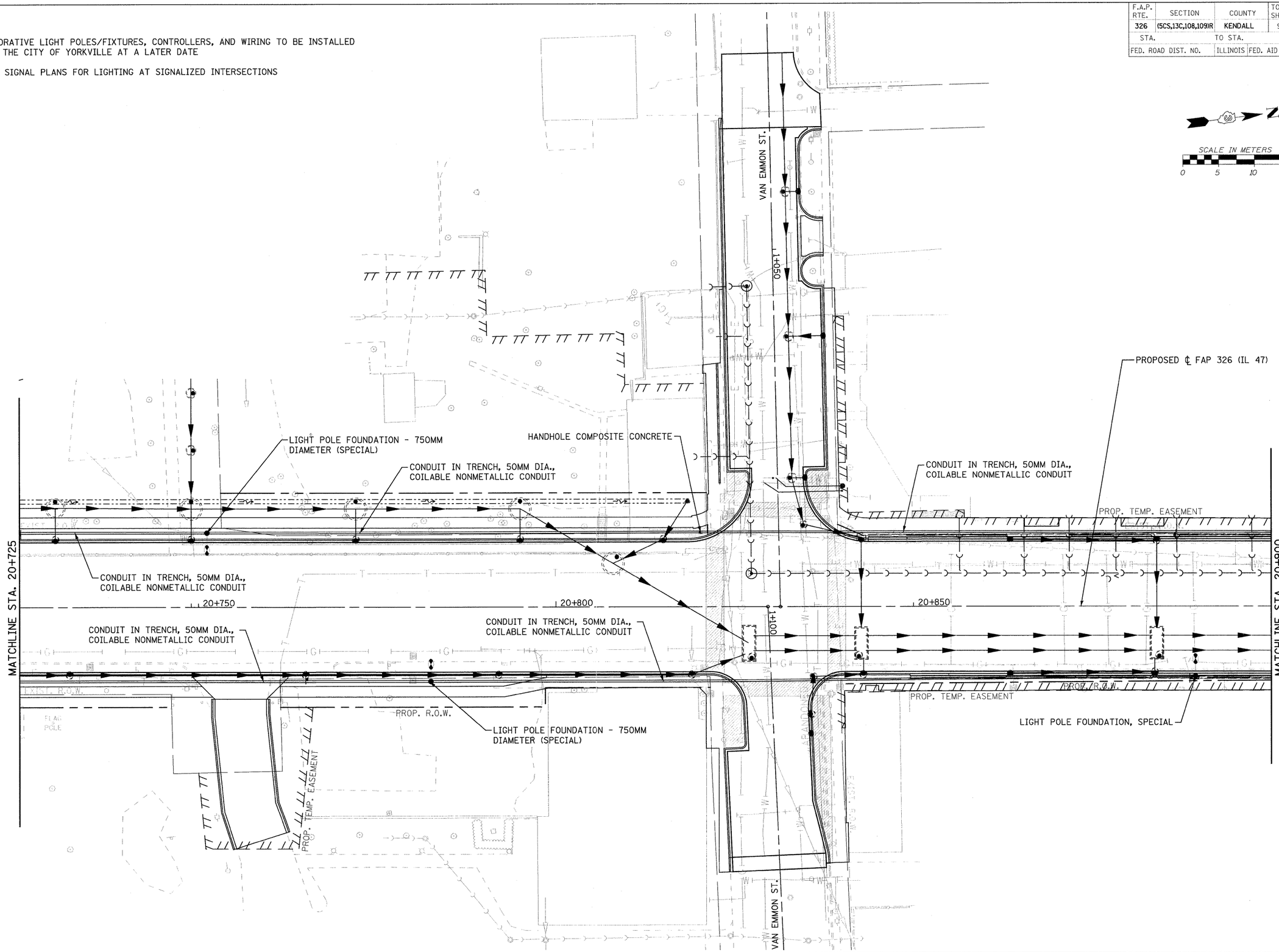
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	652
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

NOTES:

1. DECORATIVE LIGHT POLES/FIXTURES, CONTROLLERS, AND WIRING TO BE INSTALLED BY THE CITY OF YORKVILLE AT A LATER DATE
2. SEE SIGNAL PLANS FOR LIGHTING AT SIGNALIZED INTERSECTIONS

N

SCALE IN METERS
0 5 10 15



FILE: 6521sghtngl7.dgn
PLOTTED: 8/11/2011

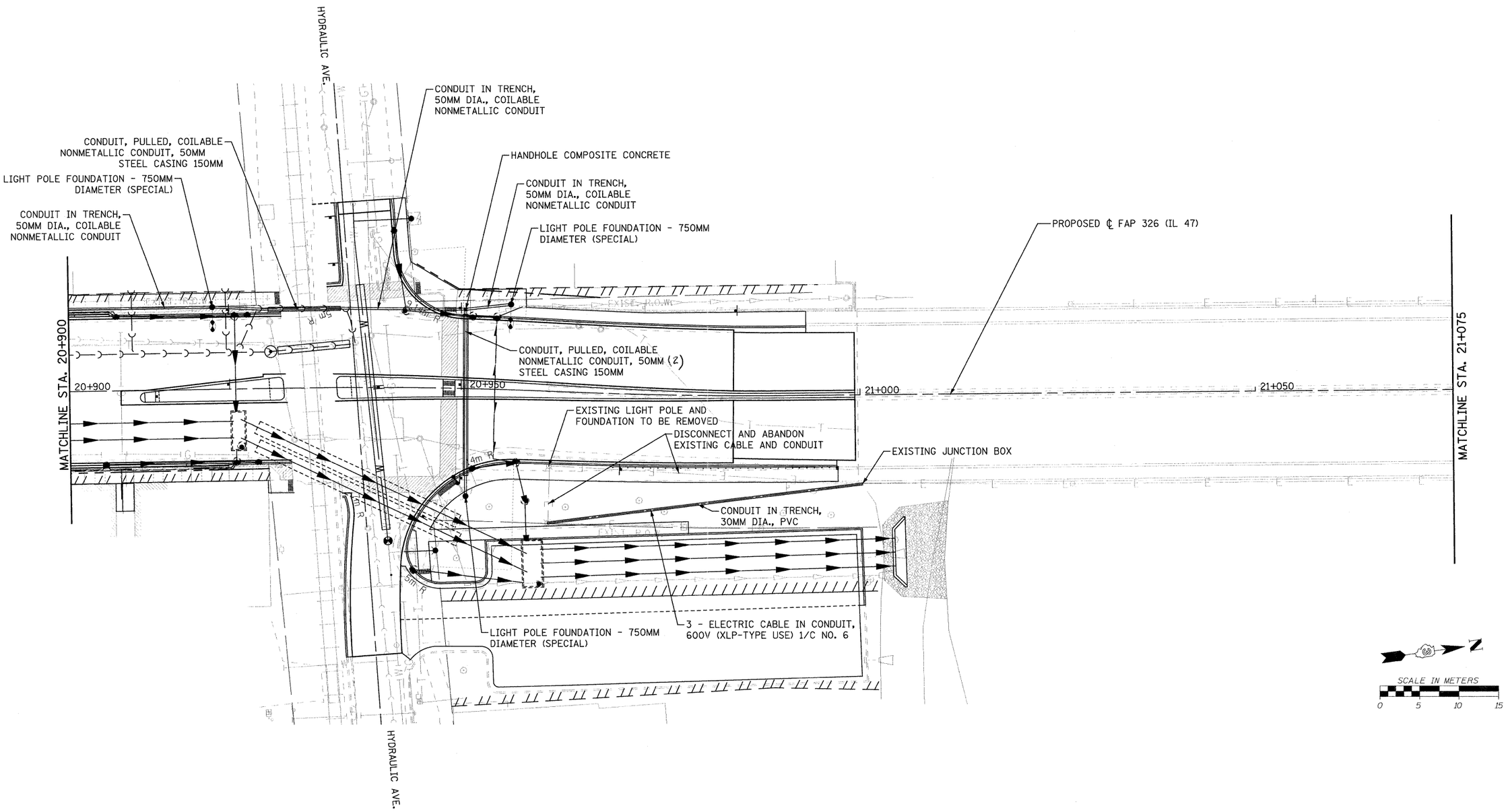
HMG JOB NO. 5122

LIGHTING PLAN

Sheet: 17
Index: 20726
Count: 21647

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	653
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



NOTES:

1. DECORATIVE LIGHT POLES/FIXTURES, CONTROLLERS, AND WIRING TO BE INSTALLED BY THE CITY OF YORKVILLE AT A LATER DATE

2. SEE SIGNAL PLANS FOR LIGHTING AT SIGNALIZED INTERSECTIONS

3. AT RAILROAD CROSSING, CONDUIT SHALL BE INSTALLED IN 150MM CASING CONSTRUCTED FOR SEWER BYPASS PUMPING. AT IL 47 CROSSING, TWO (2) 50MM CONDUITS SHALL BE INSTALLED IN 150MM CASING. CASING SHALL BE GROUTED AFTER INSTALLATION OF CONDUIT. LENGTH OF CONDUIT IN CASING SHALL BE PAID FOR AS CONDUIT, PULLED 50MM DIA., COILABLE NONMETALLIC CONDUIT. GROUTING OF CASING SHALL BE INCLUDED IN THE COST OF THE CASING.

FILE: 653lighting18.dgn
PLOTTED: 8/11/2011

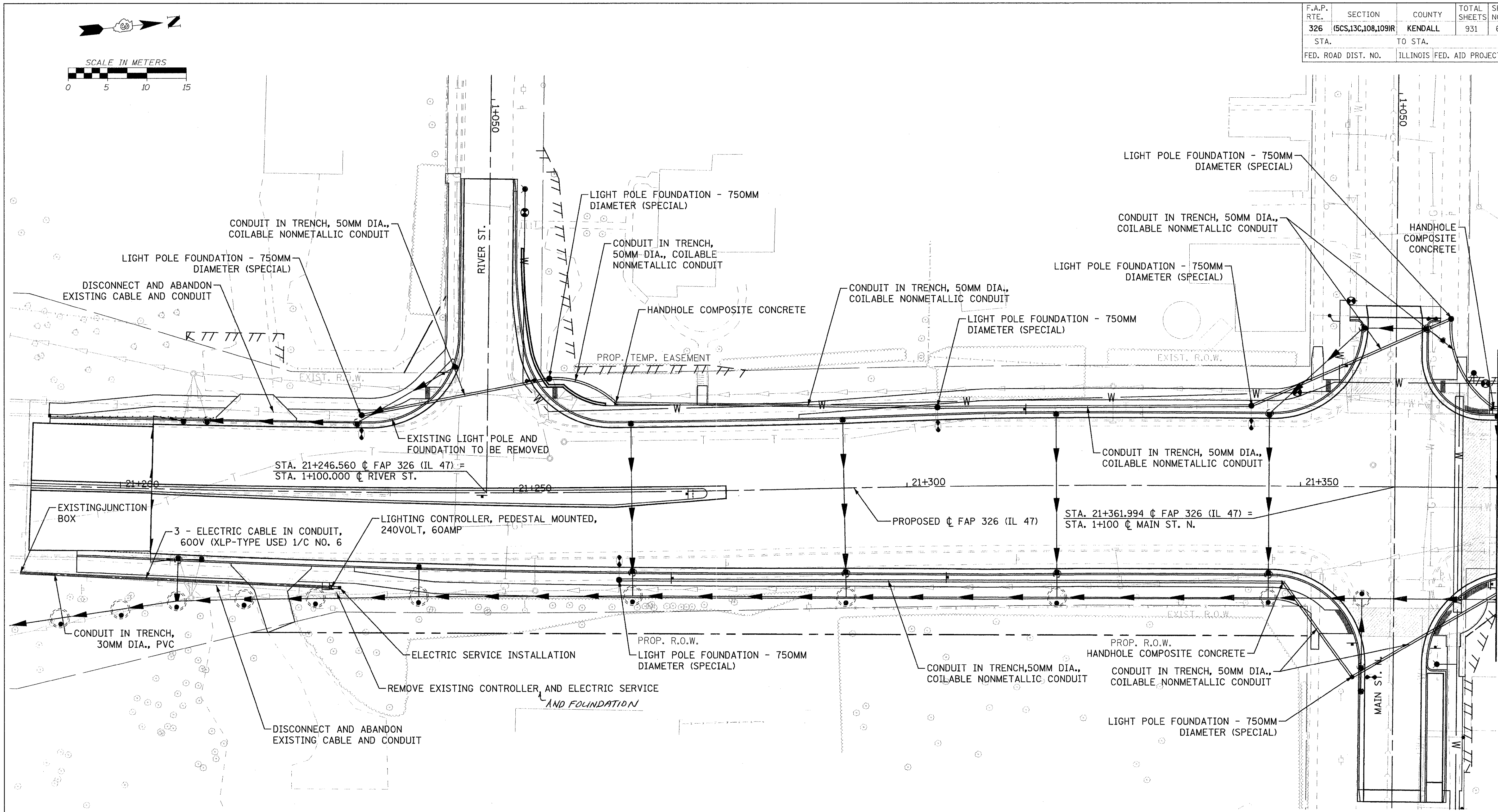
HMG JOB NO. 5122

Rev.

LIGHTING PLAN

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	654
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



N
SCALE IN METERS
0 5 10 15
RIVER ST.
1+050
MAIN ST. N.
CONDUIT IN TRENCH, 50MM DIA., COILABLE NONMETALLIC CONDUIT
LIGHT POLE FOUNDATION - 750MM DIAMETER (SPECIAL)
DISCONNECT AND ABANDON EXISTING CABLE AND CONDUIT
CONDUIT IN TRENCH, 50MM DIA., COILABLE NONMETALLIC CONDUIT
HANDHOLE COMPOSITE CONCRETE
PROP. TEMP. EASEMENT
EXIST. R.O.W.
EXISTING LIGHT POLE AND FOUNDATION TO BE REMOVED
STA. 21+246.560 ℄ FAP 326 (IL 47) =
STA. 1+100.000 ℄ RIVER ST.
21+200
21+250
21+300
21+350
PROPOSED ℄ FAP 326 (IL 47)
STA. 21+361.994 ℄ FAP 326 (IL 47) =
STA. 1+100 ℄ MAIN ST. N.
MATCHLINE STA. 21+375
EXISTINGJUNCTION BOX
3 - ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6
LIGHTING CONTROLLER, PEDESTAL MOUNTED, 240VOLT, 60AMP
CONDUIT IN TRENCH, 30MM DIA., PVC
ELECTRIC SERVICE INSTALLATION
REMOVE EXISTING CONTROLLER AND ELECTRIC SERVICE
AND FOUNDATION
DISCONNECT AND ABANDON EXISTING CABLE AND CONDUIT
PROP. R.O.W.
LIGHT POLE FOUNDATION - 750MM DIAMETER (SPECIAL)
CONDUIT IN TRENCH,50MM DIA., COILABLE NONMETALLIC CONDUIT
HANDHOLE COMPOSITE CONCRETE
CONDUIT IN TRENCH, 50MM DIA., COILABLE NONMETALLIC CONDUIT
LIGHT POLE FOUNDATION - 750MM DIAMETER (SPECIAL)
HANDHOLE COMPOSITE CONCRETE
W

NOTES:

1. DECORATIVE LIGHT POLES/FIXTURES, CONTROLLERS, AND WIRING TO BE INSTALLED BY THE CITY OF YORKVILLE AT A LATER DATE
2. SEE SIGNAL PLANS FOR LIGHTING AT SIGNALIZED INTERSECTIONS

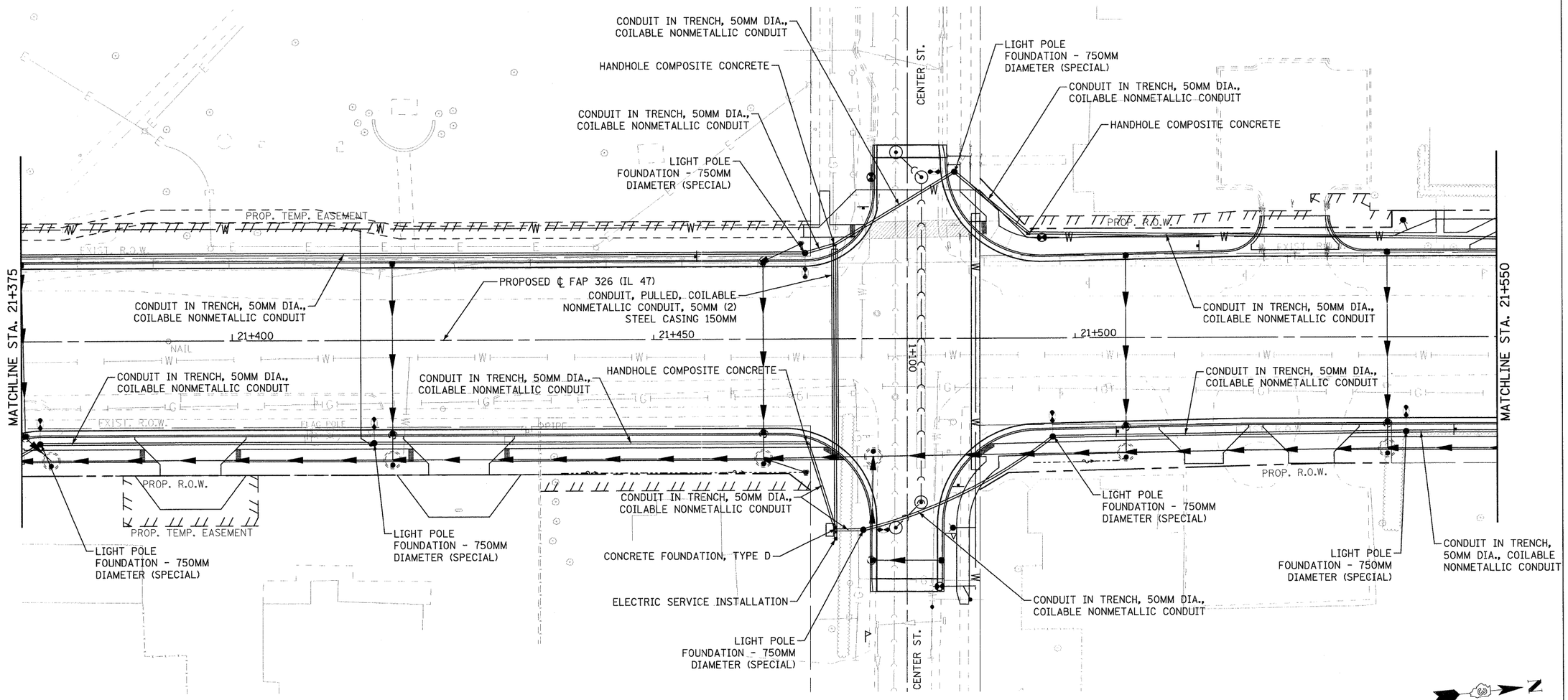
FILE: 654lighting19-20.dgn
PLOTTED: 8/11/2011

HMG JOB NO. 5122

Rev.

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	655
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



NOTES:

1. DECORATIVE LIGHT POLES/FIXTURES, CONTROLLERS, AND WIRING TO BE INSTALLED BY THE CITY OF YORKVILLE AT A LATER DATE
2. SEE SIGNAL PLANS FOR LIGHTING AT SIGNALIZED INTERSECTIONS
3. AT IL 47 CROSSING, TWO (2) 50MM CONDUITS SHALL BE INSTALLED IN 150MM CASING . CASING SHALL BE GROUTED AFTER INSTALLATION OF CONDUIT. LENGTH OF CONDUIT IN CASING SHALL BE PAID FOR AS CONDUIT, PULLED 50MM DIA., COILABLE NONMETALLIC CONDUIT. GROUTING OF CASING SHALL BE INCLUDED IN THE COST OF THE CASING.

FILE: 655lightng21.dgn
PLOTTED: 8/11/2011

HMG JOB NO. 5122

HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

LIGHTING PLAN

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	656
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SCALE IN METERS
0 5 10 15

N

EXIST. R.O.W.

CONDUIT IN TRENCH, 50MM DIA., COILABLE NONMETALLIC CONDUIT

CONDUIT IN TRENCH, 50MM DIA., COILABLE NONMETALLIC CONDUIT

LIGHT POLE FOUNDATION - 750MM DIAMETER (SPECIAL)

PROP. R.O.W.

SPRING ST.

LIGHT POLE FOUNDATION - 750MM DIAMETER (SPECIAL)

PROPOSED ℄ FAP 326 (IL 47)

SOMONAUK ST.

EXIST. R.O.W.

MATCHLINE STA. 21+550

21+550

21+600

21+650

21+700

HANDHOLE COMPOSITE CONCRETE

EXIST. R.O.W.

PROP. R.O.W.

LIGHT POLE FOUNDATION - 750MM DIAMETER (SPECIAL)

CONDUIT IN TRENCH, 50MM DIA., COILABLE NONMETALLIC CONDUIT

CONDUIT IN TRENCH, 50MM DIA., COILABLE NONMETALLIC CONDUIT

LIGHT POLE FOUNDATION - 750MM DIAMETER (SPECIAL)

HANDHOLE COMPOSITE CONCRETE

CONDUIT IN TRENCH, 50MM DIA., COILABLE NONMETALLIC CONDUIT

SPRING ST.

SOMONAUK ST.

PROP. R.O.W.

FLAG POLE

NOTES:

1. DECORATIVE LIGHT POLES/FIXTURES, CONTROLLERS, AND WIRING TO BE INSTALLED BY THE CITY OF YORKVILLE AT A LATER DATE

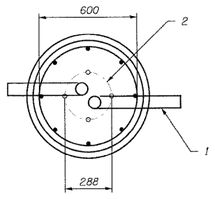
2. SEE SIGNAL PLANS FOR LIGHTING AT SIGNALIZED INTERSECTIONS

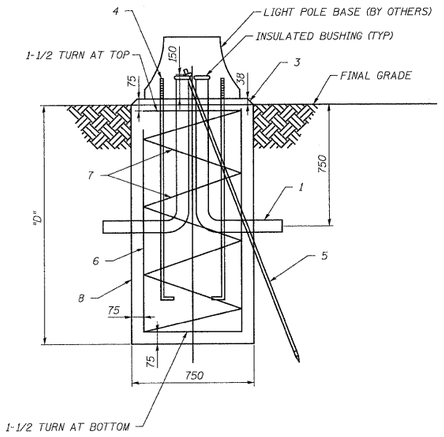
FILE: 6561lighting22.dgn
PLOTTED: 8/11/2011

HMG JOB NO. 5122

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	657
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



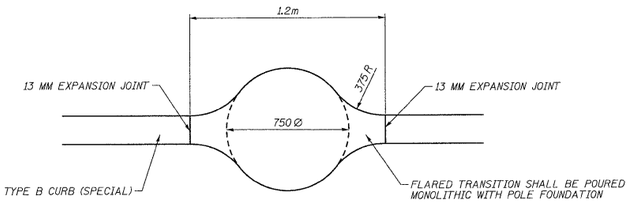


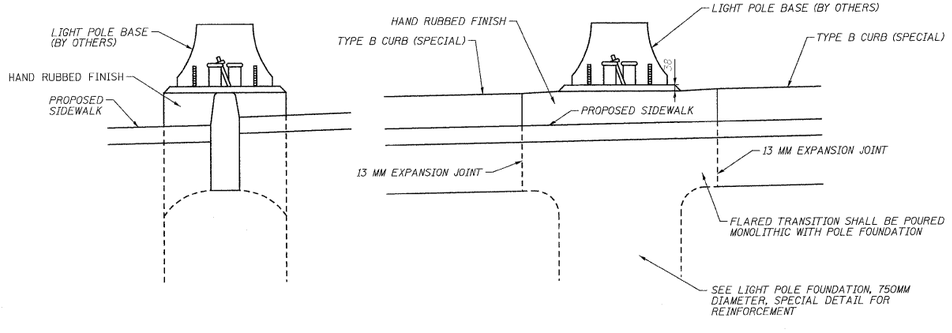
1. DUAL 100 MM P.V.C. ELBOW RACEWAYS WITH INSULATED BUSHINGS.
2. TEMPLATE DRAWING FOR SETTING OF ANCHOR BOLTS WILL BE FURNISHED BY THE CITY OF YORKVILLE.
3. 38 MM CHAMFER.
4. 25 MM DIA. GALVANIZED STEEL ANCHOR BOLTS, AS PER POLE MANUFACTURER REQUIREMENTS AND IN ACCORDANCE WITH SECTION 1070.02OF THE STANDARD SPECIFICATIONS.
5. 16 MM X 3.05 M COPPER CLAD GROUND ROD WITH CAD WELDED CONNECTION INSIDE THE LIGHT POLE BASE.
6. REINFORCING BARS (AS PER SECTION 1006.10) EQUALLY SPACED ALONG A 600 MM DIA. CIRCLE, FOR NUMBER AND SIZE, SEE FOUNDATION DESIGN CHART.
7. #13(#4) SPIRAL TIE BARS WITH 150 MM PITCH.
8. CLASS SI CONCRETE.
9. 13 MM EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN POLE FOUNDATIONS AND CONCRETE SIDEWALKS OR PAVEMENT.

FOUNDATION DESIGN CHART			
TYPE OF SOIL	DESIGN DEPTH OF FOUNDATION "D" (M)	REINFORCEMENT IN FOUNDATION	
		VERTICAL BARS	SPIRAL
SOFT CLAY	3.3	8-#19 X 3.200 M	#13 X 3.536 M
MEDIUM CLAY	2.7	8-#19 X 2.591 M	#13 X 2.957 M
STIFF CLAY	2.25	8-#19 X 2.134 M	#13 X 2.499 M
LOOSE SAND	2.85	8-#19 X 2.743 M	#13 X 3.109 M
MEDIUM SAND	2.775	8-#19 X 2.667 M	#13 X 3.018 M
DENSE SAND	2.4	8-#19 X 2.286	#13 X 2.652 M
ROCK OR SOLIDIFIED SLAG	1.5	NONE	NONE

NOTE: 3.0 M DEPTH ASSUMED FOR EACH FOUNDATION. ACTUAL DEPTH MAY BE ADJUSTED TO FIT SOIL CONDITIONS AT EACH LOCATION. THE ENGINEER SHALL EXAMINE EACH EXCAVATION IN PROGRESS AND MAKE A DEPTH DETERMINATION.

LIGHT POLE FOUNDATION, 750MM DIAMETER, SPECIAL



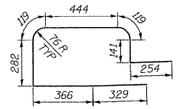


LIGHT POLE FOUNDATION, 750MM DIAMETER, SPECIAL (MODIFIED)

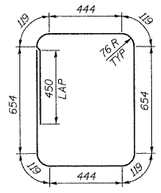
BAR LIST

Bar	Size	Length	Shape
$d_5(E)$	#16	2.054m	
$d_6(E)$	#16	3.122m	
$d_7(E)$	#16	1.872m	

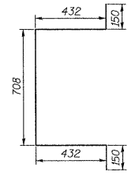
*Bars shown are those modified for light pole foundation. See barrier detail for standard barrier reinforcement.



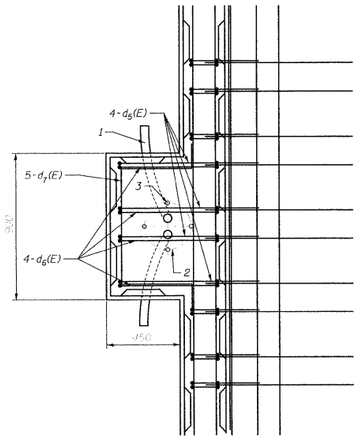
BAR $d_5(E)$

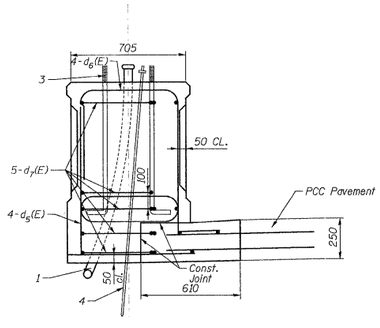


BAR $d_6(E)$



BAR $d_7(E)$





LIGHT POLE FOUNDATION, SPECIAL

1. DUAL 100 MM P.V.C. ELBOW RACEWAYS WITH INSULATED BUSHINGS.
2. TEMPLATE DRAWING FOR SETTING OF ANCHOR BOLTS WILL BE FURNISHED BY THE CITY OF YORKVILLE.
3. 25 MM DIA. GALVANIZED STEEL ANCHOR BOLTS, AS PER POLE MANUFACTURER REQUIREMENTS AND IN ACCORDANCE WITH SECTION 1070.02OF THE STANDARD SPECIFICATIONS.
4. 16 MM X 3.05 M COPPER CLAD GROUND ROD WITH CAD WELDED CONNECTION INSIDE THE LIGHT POLE BASE.

REVISIONS	
NAME	DATE
Rev.	

ILLINOIS DEPARTMENT OF TRANSPORTATION

LIGHTING DETAILS

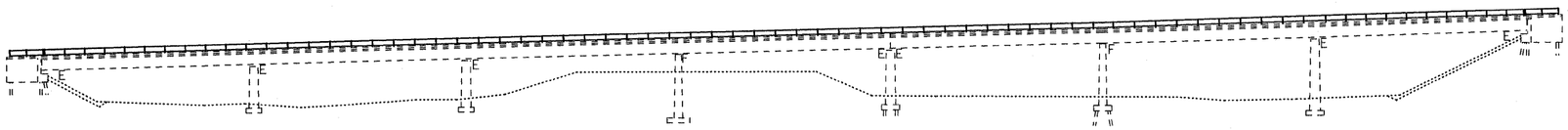
DRAWN BY

DATE CHECKED BY

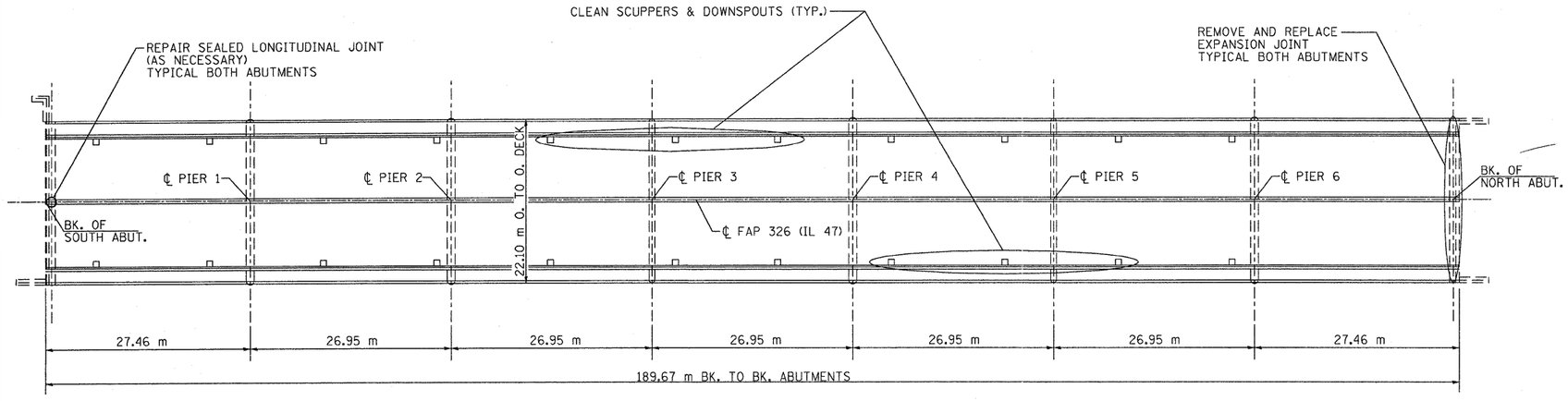
HMG JOB NO. 5122

FILE: 6571lighting details.dgn
PLOTTED: 8/11/2011

Existing Structure: *Structure No. 047-0048, built under Section 13D-BR in 1984 along F.A. Route 100, is 189.67m back to back abutments and 22.10m out to out deck. The superstructure consists of 7 spans of 1.37m PPC I-beams supporting 190mm deck. The substructure consists of split thru abutments on piles and solid concrete piers keyed into rock, except Piers 4 and 5 which are supported on steel H piles. The existing structure deck shall be repaired utilizing Stage Construction.*



ELEVATION



PLAN

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

All dimensions are in millimeters (mm) except as noted.

Reinforcement bars designated (E) shall be epoxy coated.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

The Contractor shall use extreme care during concrete removal so as not to damage the PPC Deck planks.

The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructures.

Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on As-built Plans.

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

All work shall be performed during the applicable construction stage in which both northbound or both southbound lanes are closed. See roadway construction staging sheets.

Reinforcement bars shall conform to the requirements of ASSHTO M 31M, M 42M or M 53M Grade 400.

All structural steel shall be AASHTO M 270M Grade 345 except expansion joint plates and attached bars which shall be AASHTO M 270M Grade 250.

TOTAL BILL OF MATERIAL

ITEM	*UNIT*	*SUPER*	*SUB*	*TOTAL*
DECK SLAB REPAIR (FULL DEPTH) TYPE I	SQ M	22		22
DECK SLAB REPAIR (FULL DEPTH) TYPE II	SQ M	37		37
CONCRETE REMOVAL	CU M	11.0		11.0
CONCRETE SUPERSTRUCTURE	CU M	11.1		11.1
REINFORCEMENT BARS EPOXY COATED	KG	970		970
PREFORMED JOINT STRIP SEAL	METER	45		45
SILICONE JOINT SEALER, 25mm	METER	2		2
CLEANING BRIDGE SCUPPERS & DOWNSPOUTS	EACH	22		22

10/11/11
Expires 11/30/12

FILE NAME = c:\pw_work\pwidot\duncanbd\d0170917\P304192-structure repair.dgn	USER NAME = duncanbd	DESIGNED - BDD	REVISED - BDD 04/18/11	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**GENERAL PLAN AND ELEVATION STRUCTURE NO 047-0048**
	PLOT SCALE = 50.0000 ' / in.	DRAWN - BDD	REVISED - -		
	PLOT DATE = 8/16/2011	CHECKED - IJL	REVISED -		SCALE: SHEET NO. 1 OF 7 SHEETS STA. TO STA.
		DATE - 02/23/11	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	658
		CONTRACT NO. 66671		
	ILLINOIS	FED. AID PROJECT		

DECK PATCHING SCHEDULE

PATCH NO.		DECK SLAB REPAIR (PD)	DECK SLAB REPAIR (FD TY 1)	DECK SLAB REPAIR (FD TY 2)
	SQ FT	SQ M	SQ M	SQ M
1	1		0.09	
2	1		0.09	
3	6			0.56
4	3		0.28	
5	6			0.56
6	1		0.09	
7	1		0.09	
8	28			2.60
9	2		0.19	
10	1		0.09	
11	1		0.09	
12	1		0.09	
13	5		0.46	
14	6			0.56
15	3		0.28	
16	2		0.19	
17	2		0.19	
18	1		0.09	
19	2		0.19	
20	24			2.23
21	4		0.37	
22	4		0.37	
23	4		0.37	
24	6			0.56
25	6			0.56
26	1		0.09	
27	6			0.56
28	2		0.19	
29	2		0.19	
30	2		0.19	
31	4		0.37	
32	4		0.37	
33	8			0.74
34	1		0.09	
35	1		0.09	
36	1		0.09	
37	1		0.09	
38	1		0.09	
39	6			0.56
40	6			0.56
41	6			0.56

(CONTINUED)

42	3		0.28	
43	1		0.09	
44	1		0.09	
45	2		0.19	
46	1		0.09	
47	2		0.19	
48	3		0.28	
49	4		0.37	
50	34			3.16
51	3		0.28	
52	33			3.07
53	2		0.19	
54	3		0.28	
55	3		0.28	
56	2		0.19	
57	4		0.37	
58	1		0.09	
59	4		0.37	
60	1		0.09	
61	2		0.19	
62	16			1.49
63	1		0.09	
64	8			0.74
65	23			2.14
66	2		0.19	
67	9			0.84
68	1		0.09	
69	6			0.56
70	6			0.56
71	3		0.28	
72	10			0.93
73	3		0.28	
74	1		0.09	
75	2		0.19	
76	4		0.37	
77	2		0.19	
78	5		0.46	
79	6			0.56
80	1		0.09	
81	1		0.09	
82	6			0.56
83	12			1.11
84	9			0.84
85	4		0.37	
86	2		0.19	
87	2		0.19	
88	4		0.37	

(CONTINUED)

89	5		0.46	
90	3		0.28	
91	5		0.46	
92	10			0.93
93	1		0.09	
94	12			1.11
95	3		0.28	
96	1		0.09	
97	7			0.65
98	4		0.37	
99	2		0.19	
100	1		0.09	
101	3		0.28	
102	4		0.37	
103	2		0.19	
104	4		0.37	
105	2		0.19	
106	1		0.09	
107	6			0.56
108	3		0.28	
109	4		0.37	
110	25			2.32
111	3		0.28	
112	6			0.56
113	12			1.11
114	4		0.37	
115	1		0.09	
116	4		0.37	
117	1		0.09	
118	1		0.09	
119	2		0.19	
120	2		0.19	
121	3		0.28	
122	1		0.09	
123	1		0.09	
124	30			2.79
125	2		0.19	
126	4		0.37	
127	3		0.28	
128	1		0.09	
129	1		0.09	
130	2		0.19	
131	4		0.37	
132	7			0.65
TOTALS	634	0	22	37

1.8% OF THE TOTAL DECK AREA TO BE REPAIRED (NOT INCLUDING SIDEWALKS)

NOTE:
All deck slab repair in the deck area over the planks shall be paid for as Deck Slab Repair (Full Depth). However, the removal of the existing concrete shall only be to the existing PPC plank. This area shall then be cleaned and the plank inspected for deterioration. If deterioration is found, the entire plank shall be removed and replaced with a full depth patched area with the proper reinforcement detailed, as shown on sheets 2A and 2B of 7. This work will be paid for as Deck Slab Repair (Full Depth, Type II). The Contractor shall take all necessary precautions to protect the PCC planks from getting damaged during deck slab repair. Should the planks be damaged, the entire plank area shall be removed and replaced with proper reinforcement as approved by the Engineer, at the expense of the Contractor.

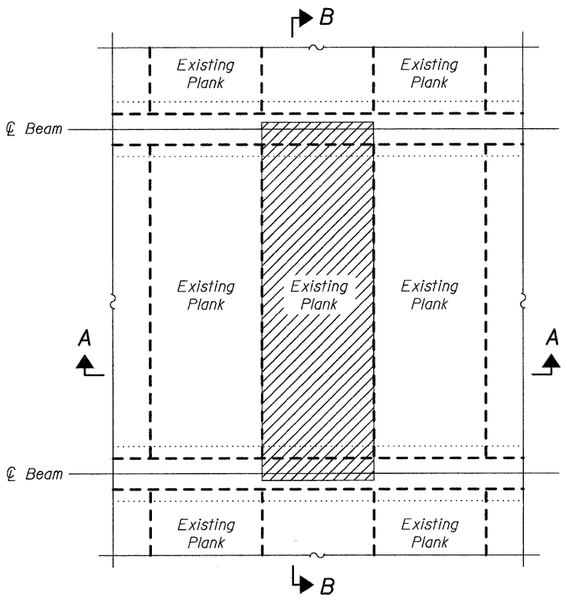
FILE NAME = c:\pw_work\pwidot\duncanbd\d0170917\P304192-structure repair.dgn	USER NAME = duncanbd	DESIGNED - BDD	REVISED -
		DRAWN - BDD	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED - IJL	REVISED -
	PLOT DATE = 8/16/2011	DATE - 02/23/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK SLAB REPAIR
STUCTURE NO 047-0048

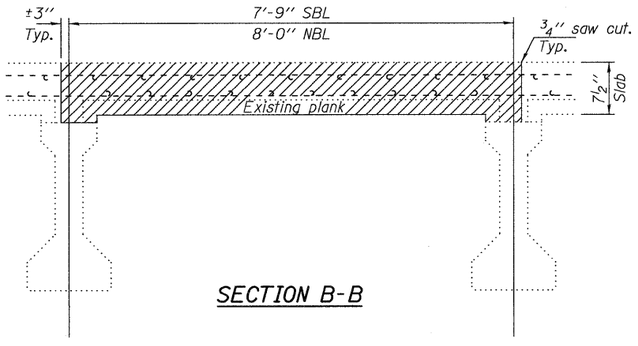
SCALE: | SHEET NO. 2 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	659
		CONTRACT NO. 66671		
	ILLINOIS FED. AID PROJECT			

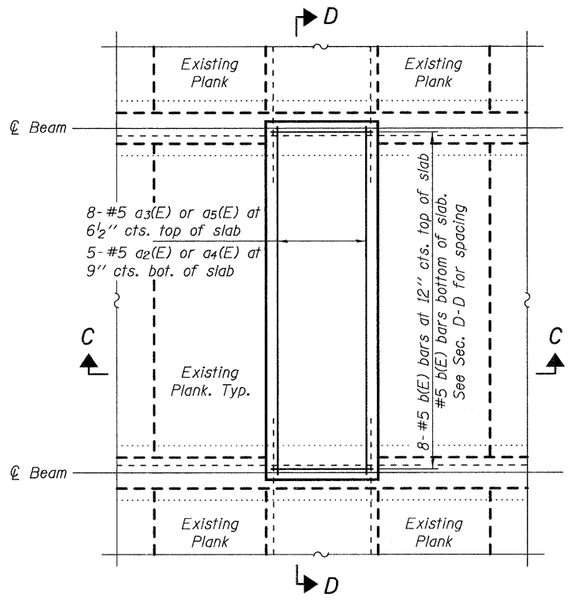


PLAN

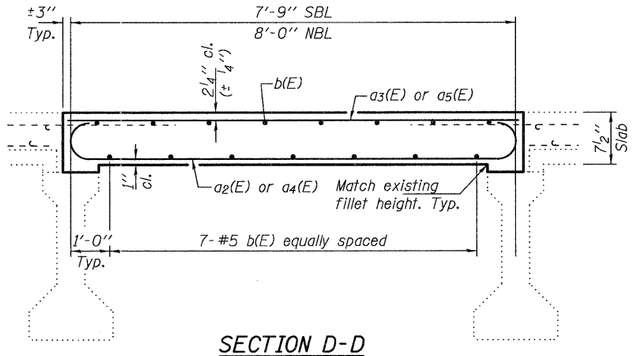
Hatched areas indicate removal.



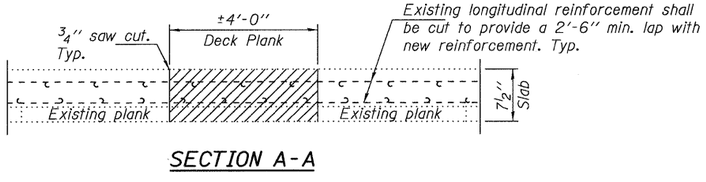
SECTION B-B



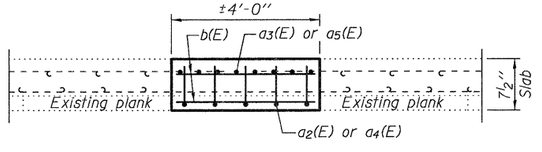
PLAN



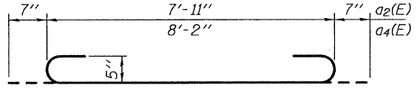
SECTION D-D



SECTION A-A



SECTION C-C



BARS a2(E) & a4(E)

MINIMUM BAR LAP

#5 bar = 2′-6″

NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

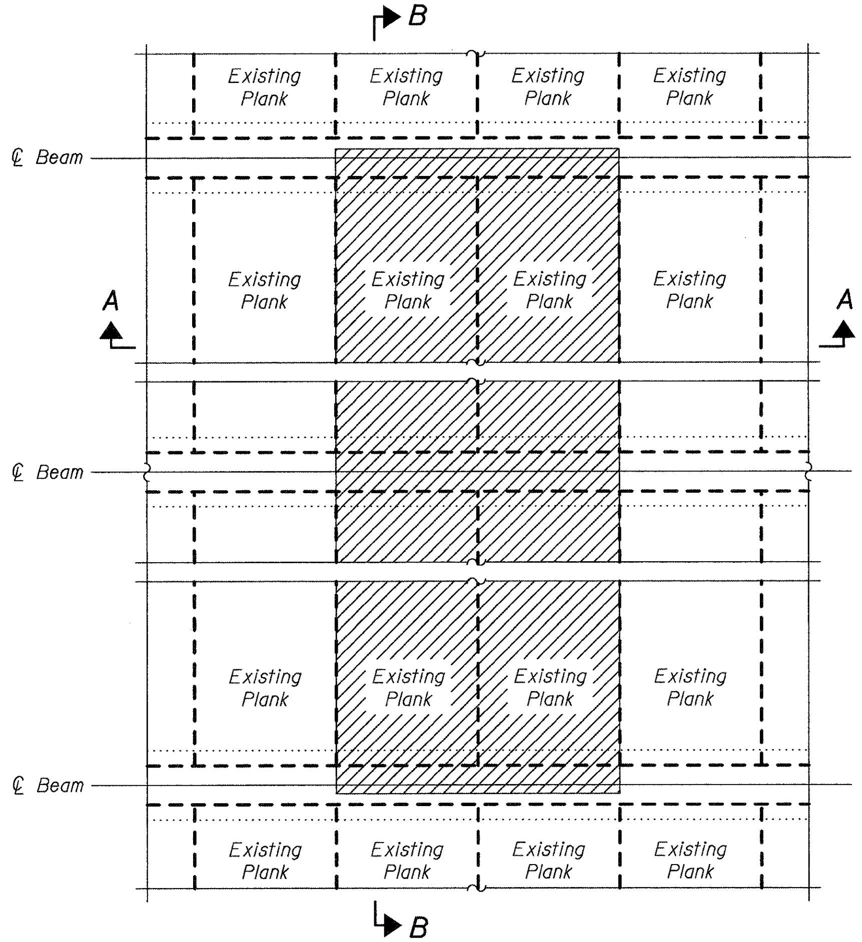
The Contractor shall use extreme care during concrete removal so as not to damage the PPC I-Beam.

The Contractor shall locate and verify the exact location of the boundaries of the existing PCC plank being removed prior to saw cutting and removal.

BILL OF MATERIAL

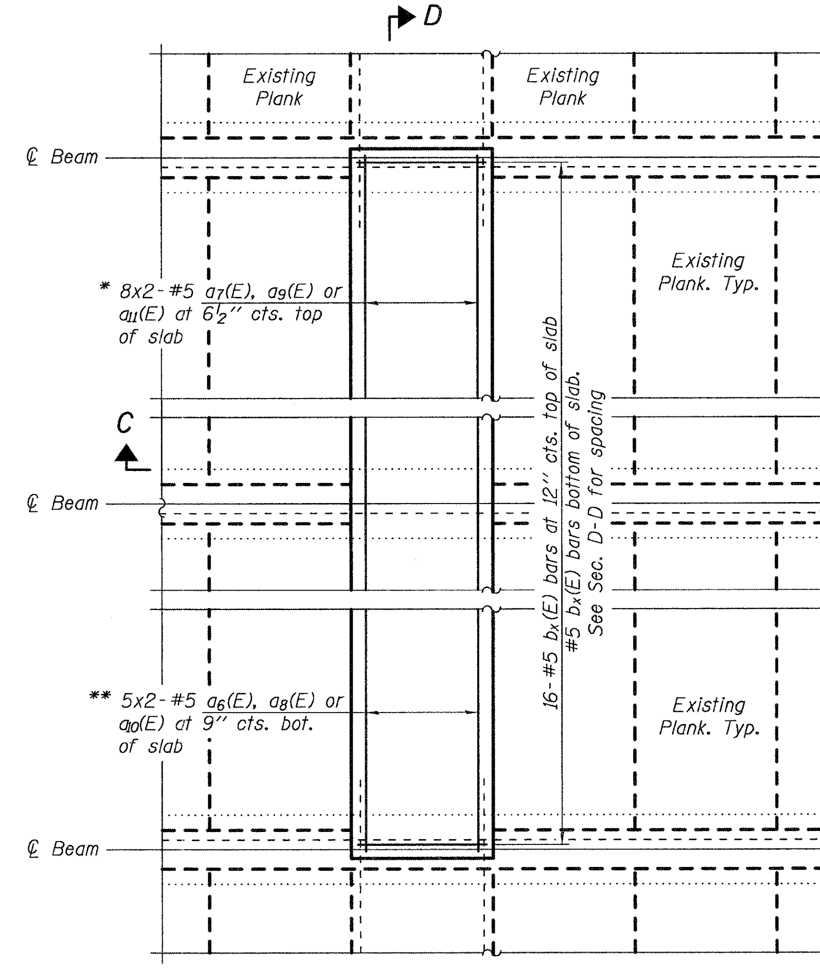
Bar	No.	Size	Length	Shape
a2(E)	5	#5	9′-1″	
a3(E)	8	#5	7′-11″	
a4(E)	5	#5	9′-4″	
a5(E)	8	#5	8′-2″	
b(E)	15	#5	3′-8″	

DESIGNED IJL	EXAMINED		DATE - OCTOBER 7, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SINGLE PLANK REMOVAL AND REPLACEMENT SN 047-0048	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED VHV	PASSED	ACTING ENGINEER OF STRUCTURAL SERVICES	REVISED		SHEET NO. 2A OF 7 SHEETS	326	(5CS, 13C, 108, 109)R	KENDALL	931	659A
DRAWN baliva		ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED					CONTRACT NO. 66671		
CHECKED IJL VHV								ILLINOIS FED. AID PROJECT		

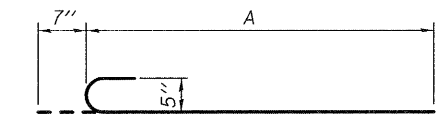


PLAN

Hatched areas indicate removal.



PLAN



BARS $a_6(E)$, $a_8(E)$ & $a_{10}(E)$

Bar	A
$a_6(E)$	5'-4"
$a_8(E)$	9'-4"
$a_{10}(E)$	13'-4"

MINIMUM BAR LAP

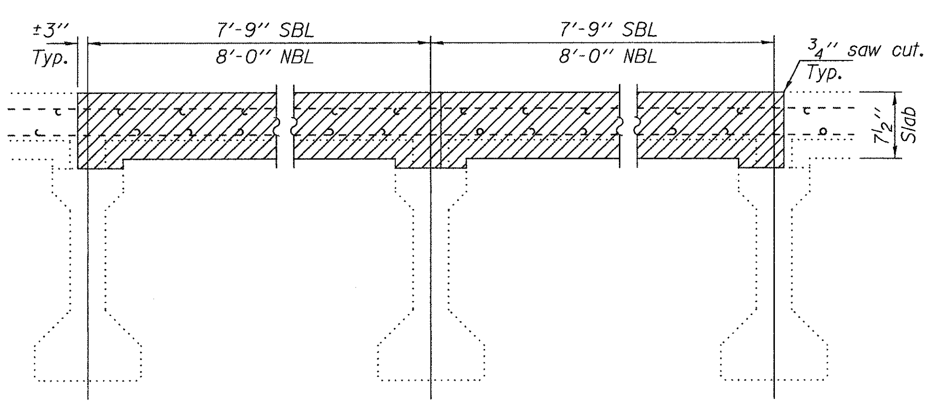
#5 bar = 2'-6"

No. Planks	x
1	1
2	2
3	3

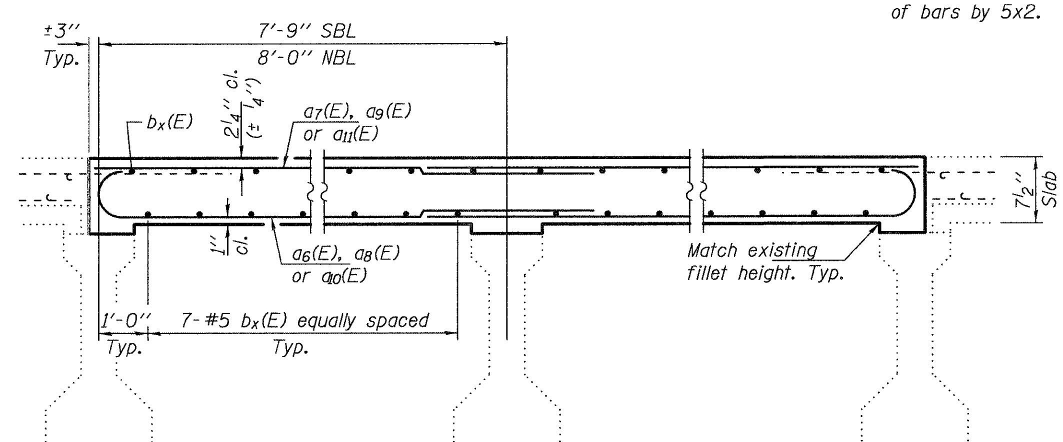
No. of planks to be replaced along the length of the bridge

* The number of $a_7(E)$, $a_9(E)$ & $a_{11}(E)$ bars shown is for one 4'-0" plank replacement. For each consecutive plank replaced, increase the number of bars by 8x2.

** The number of $a_6(E)$, $a_8(E)$ & $a_{10}(E)$ bars shown is for one 4'-0" plank replacement. For each consecutive plank replaced, increase the number of bars by 5x2.



SECTION B-B



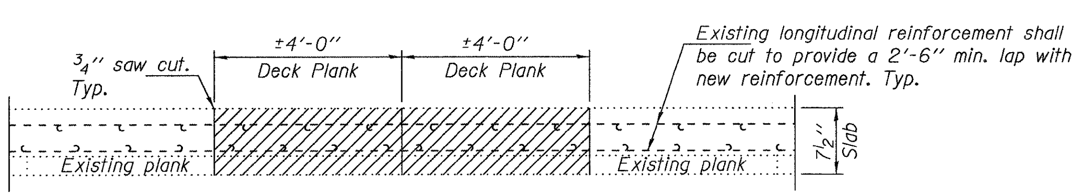
SECTION D-D

For notes, see sheet 659A.

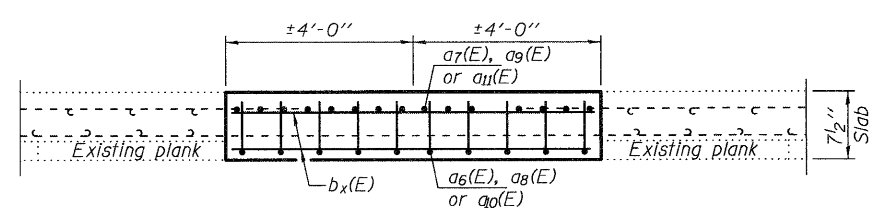
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_6(E)$	10	#5	5'-11"	⊂——
$a_7(E)$	16	#5	5'-4"	——
$a_8(E)$	10	#5	9'-11"	⊂——
$a_9(E)$	16	#5	9'-4"	——
$a_{10}(E)$	10	#5	13'-11"	⊂——
$a_{11}(E)$	16	#5	13'-4"	——
$b_1(E)$	30	#5	3'-8"	——
$b_2(E)$	30	#5	7'-8"	——
$b_3(E)$	30	#5	11'-8"	——

Bars indicated thus 8 x 2-#5 etc. indicates 8 lines of bars with 2 lengths per line.



SECTION A-A



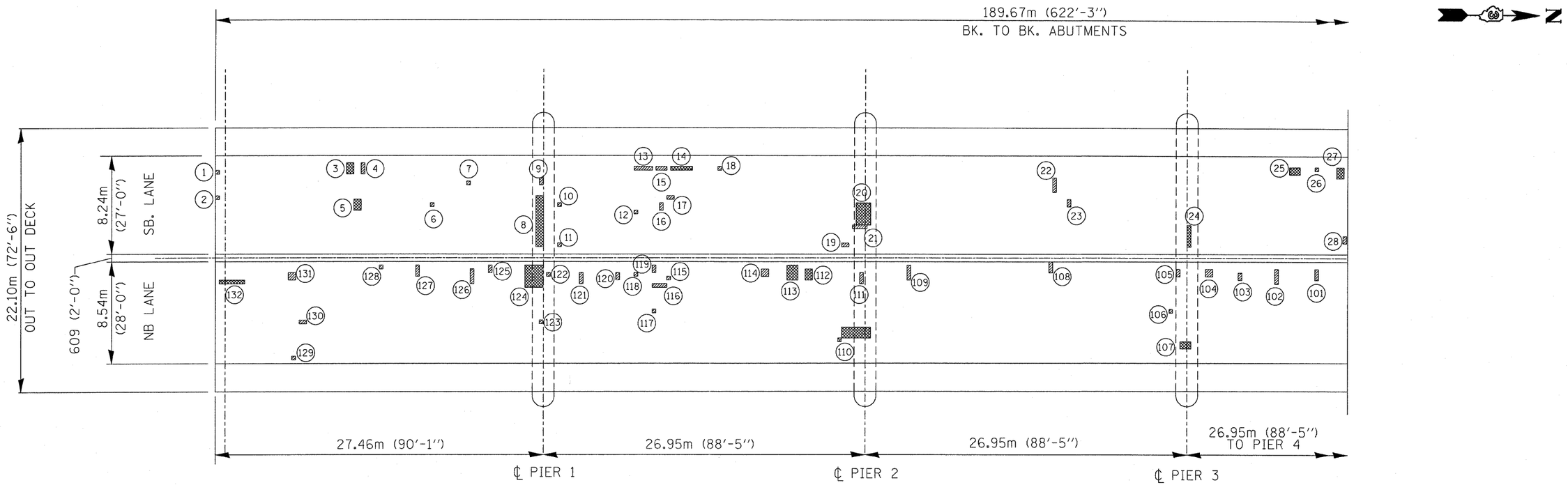
SECTION C-C

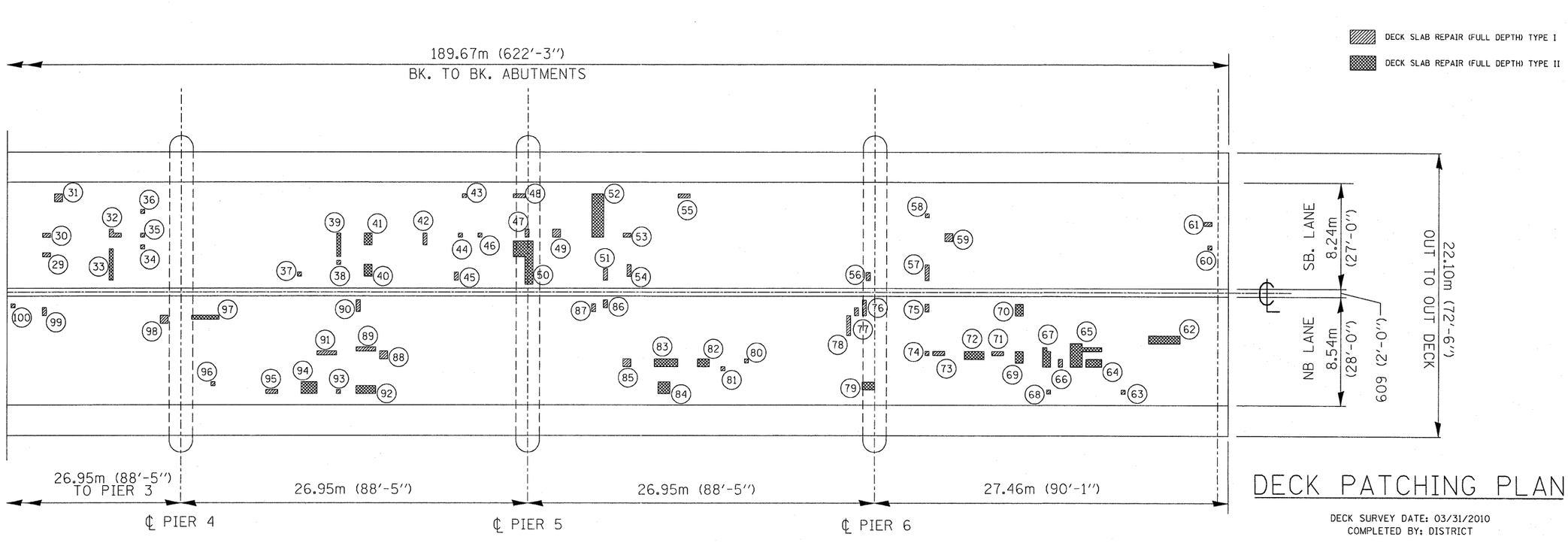
DESIGNED IJL	EXAMINED [signature] ACTING ENGINEER OF STRUCTURAL SERVICES	DATE - OCTOBER 7, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED VHV			
DRAWN baliva	PASSED [signature] ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED	
CHECKED IJL VHV		REVISED	

MULTIPLE PLANK REMOVAL AND REPLACEMENT
SN 047-0048

SHEET NO. 2B OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS, 13C, 108, 109)R	KENDALL	931	659B
		CONTRACT NO. 66671		
		ILLINOIS FED. AID PROJECT		





DECK PATCHING PLAN

DECK SURVEY DATE: 03/31/2010
COMPLETED BY: DISTRICT

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		DRAWN - BDD	REVISED - -
	PLOT SCALE = 50.0000 ' / in.	CHECKED - IJL	REVISED -
	PLOT DATE = 8/16/2011	DATE - 02/23/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK SLAB REPAIR
STRUCTURE NO 047-0048

SCALE: | SHEET NO. 3 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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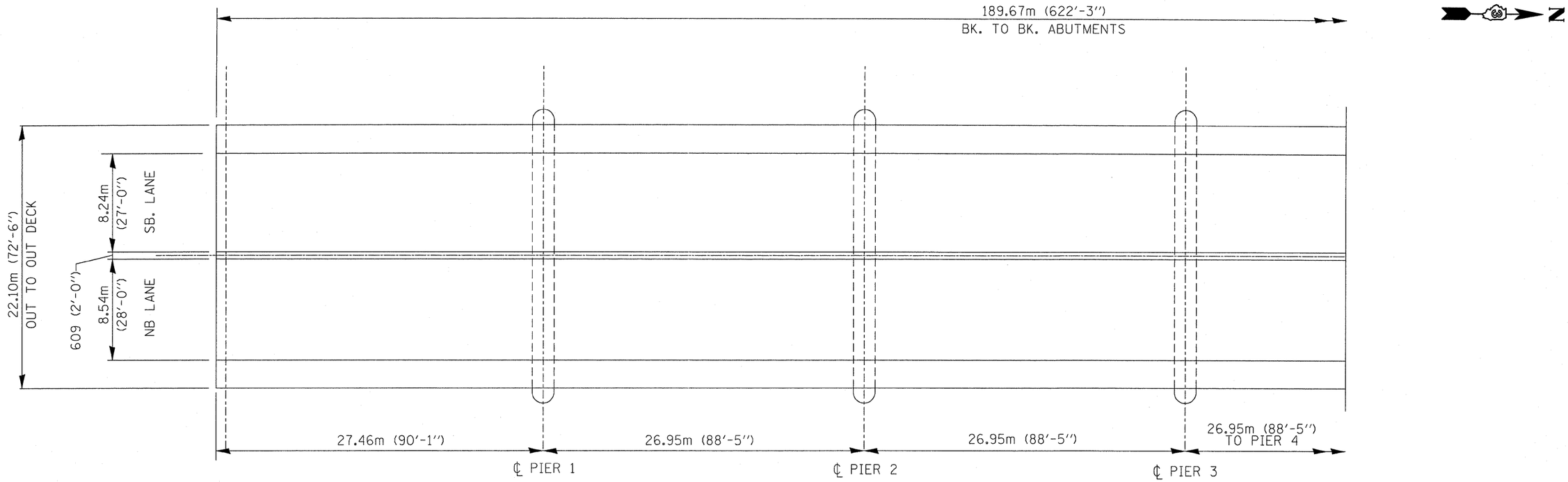
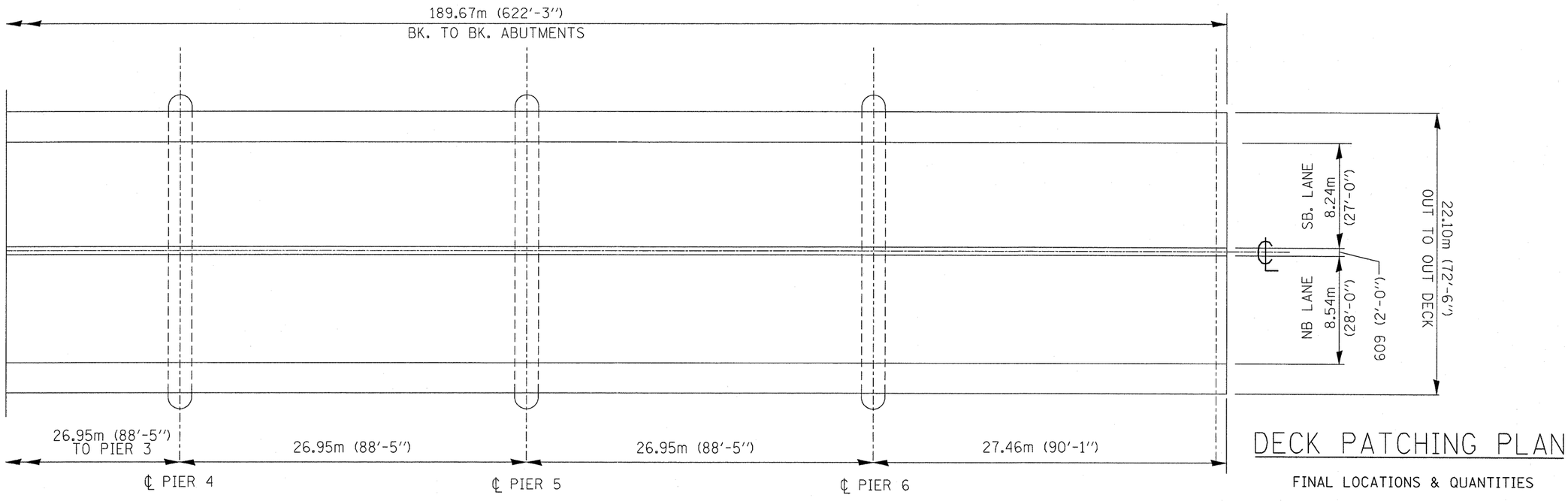
		CONTRACT NO. 66671		
	ILLINOIS FED. AID PROJECT			





DECK PATCHING PLAN

FINAL LOCATIONS & QUANTITIES

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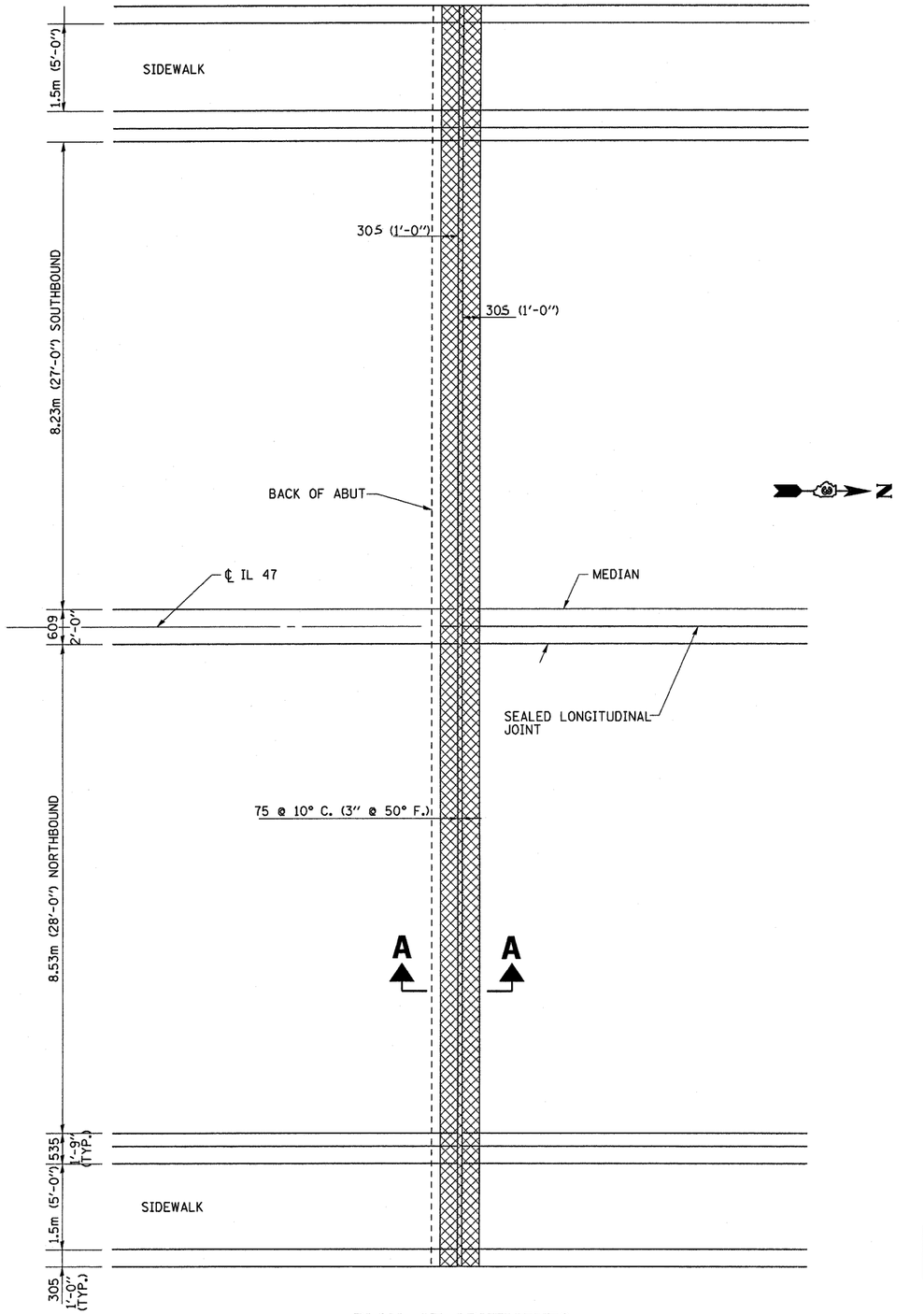
	PLOT SCALE = 50.0000 ' / in.	CHECKED - IJL	REVISED -
	PLOT DATE = 8/16/2011	DATE - 02/23/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK SLAB REPAIR (AS BUILTS)
STRUCTURE NO 047-0048

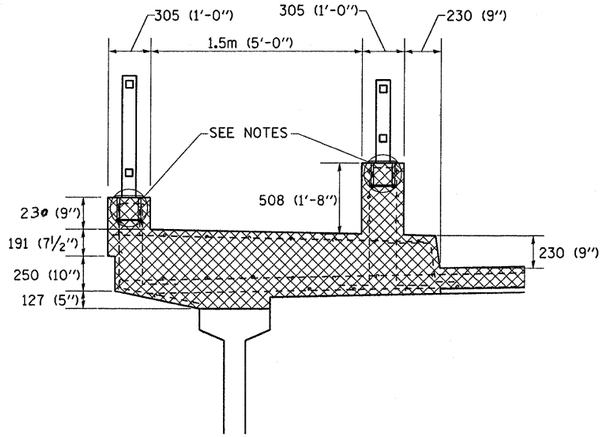
SCALE: | SHEET NO. 4 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	661
		CONTRACT NO. 66671		
	ILLINOIS FED. AID PROJECT			



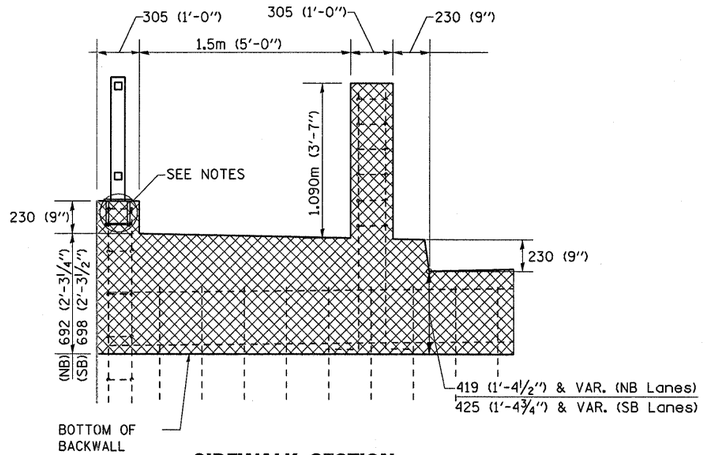
PLAN AT ABUTMENTS

NORTH & SOUTH ABUTMENTS TYPICAL



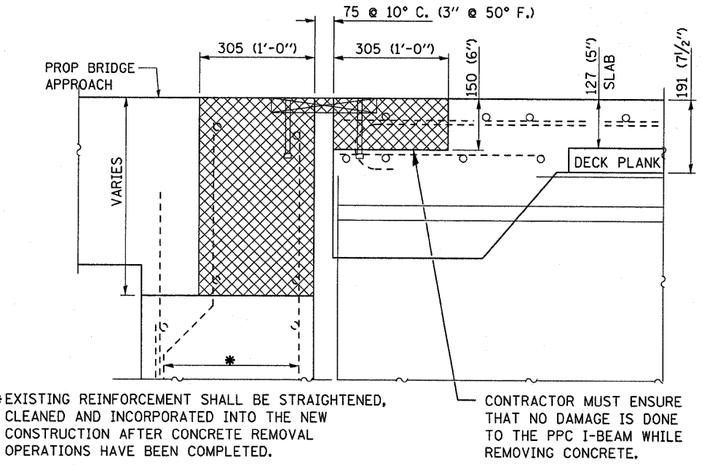
SIDEWALK SECTION

(DECK SIDE)



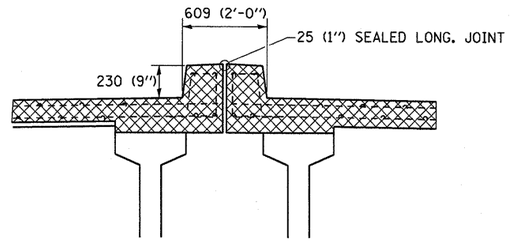
SIDEWALK SECTION

(ABUTMENT SIDE)



SECTION A–A

AT RT. ℄'S



MEDIAN SECTION

NOTE:

CROSSED HATCHED AREA REPRESENTS CONCRETE REMOVAL AND REPLACEMENT AREAS.

THE CONTRACTOR SHALL EXERCISE EXTREME CARE WHEN REMOVING AND REPLACING CONCRETE SO THAT THE EXISTING PPC DECK PLANKS ARE NOT DAMAGED. IF THE EXISTING DECK PLANKS ARE DAMAGED DUE THE CONTRACTOR'S OPERATION, THE DAMAGED PLANK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

COST FOR REMOVAL OF EXISTING EXPANSION JOINT MATERIALS SHALL BE INCLUDED WITH "CONCRETE REMOVAL"

EXISTING PLATES AND STUDS FOR THE BICYCLE RAILING SHALL REMAIN IN PLACE WHEN PRESENT. IF THE BICYCLE RAIL ASSEMBLY IS DAMAGED DUE TO THE CONTRACTOR'S REMOVAL OPERATIONS, THE ASSEMBLY SHALL BE REPLACE AT THE CONTRACTOR'S EXPENSE. THE EXISTING ASSEMBLY SHALL BE CLEANED AND INCORPORATED INTO THE NEW CONSTRUCTION.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
CONCRETE REMOVAL	CU M	11.0

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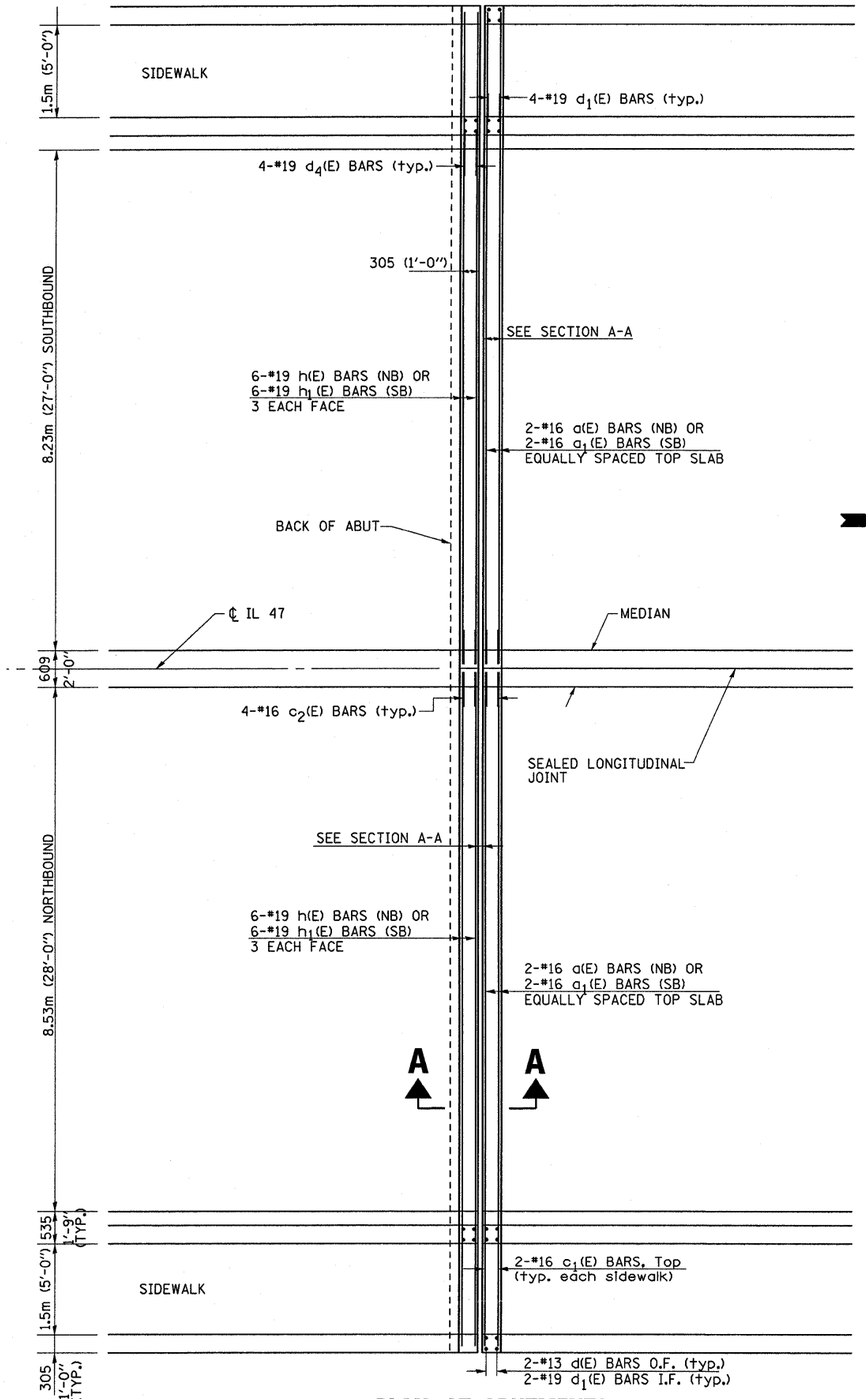
	PLOT SCALE = 50.0000 ' / in.	CHECKED - IJL	REVISED -
	PLOT DATE = 8/16/2011	DATE - 02/23/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT REMOVAL
STRUCTURE NO 047-0048

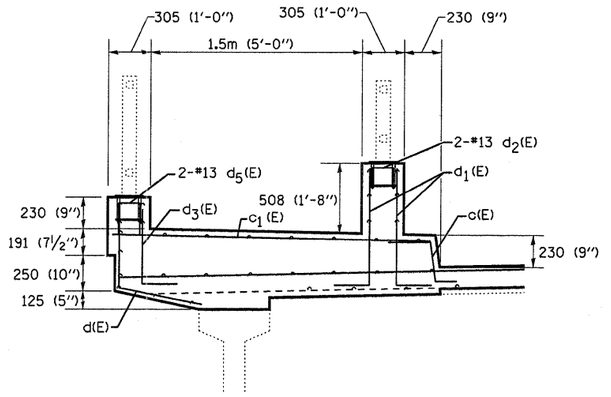
SCALE: | SHEET NO. 5 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	662
		CONTRACT NO. 66671		
	ILLINOIS FED. AID PROJECT			



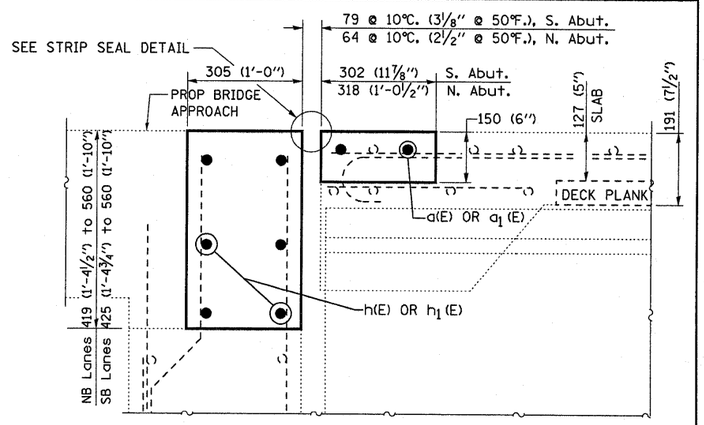
PLAN AT ABUTMENTS

NORTH & SOUTH ABUTMENTS TYPICAL



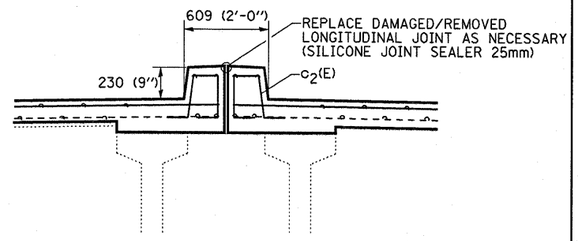
SIDEWALK SECTION

(DECK SIDE)

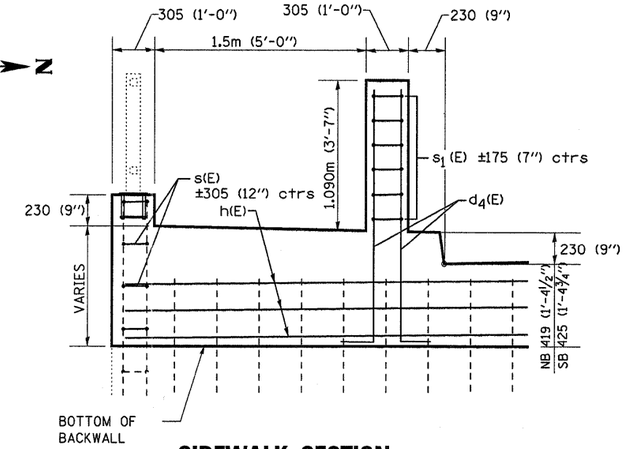


SECTION A-A

AT RT. ℄'S

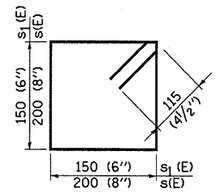


MEDIAN SECTION

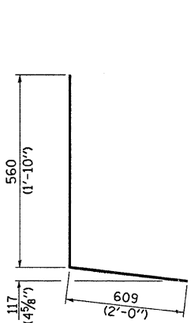


SIDEWALK SECTION

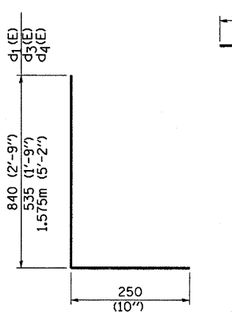
(ABUTMENT SIDE)



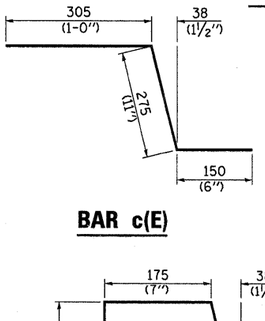
BAR s(E) & s1(E)



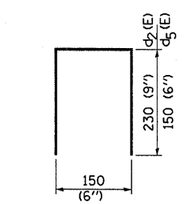
BAR d(E)



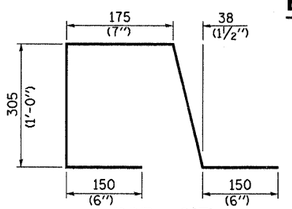
BAR d1(E),d3(E),d4(E)



BAR c(E)



BAR d2(E) & d5(E)



BAR c2(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	4	#16	11.075m	
a1(E)	4	#16	10.770m	
c(E)	8	#16	0.740m	
c1(E)	8	#16	2.235m	
c2(E)	16	#16	1.090m	
d(E)	8	#13	1.170m	
d1(E)	16	#19	1.090m	
d2(E)	8	#13	0.610m	
d3(E)	8	#19	0.790m	
d4(E)	16	#19	1.800m	
d5(E)	8	#13	0.460m	
h(E)	12	#19	11.075m	
h1(E)	12	#19	10.770m	
s(E)	16	#13	1.040m	
s1(E)	28	#13	0.740m	
Reinforcement Bars, Epoxy Coated		Kg	970	
Concrete Superstructure		Cu. M.	11.1	

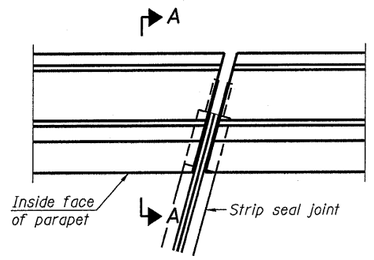
FILE NAME = c:\pw_work\pwidot\duncanbd\d0170917\P304192-structure repair.dgn	USER NAME = duncanbd	DESIGNED - BDD	REVISED - BDD 04/19/11
		DRAWN - BDD	REVISED -
	PLOT SCALE = 50.0000 '/ in.	CHECKED - IJL	REVISED -
	PLOT DATE = 8/16/2011	DATE - 02/23/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

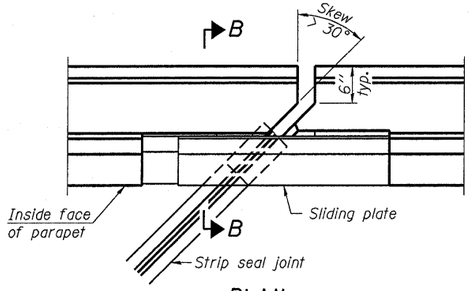
EXPANSION JOINT REPLACEMENT
STRUCTURE NO 047-0048

SCALE: | SHEET NO. 6 OF 7 SHEETS | STA. | TO STA.

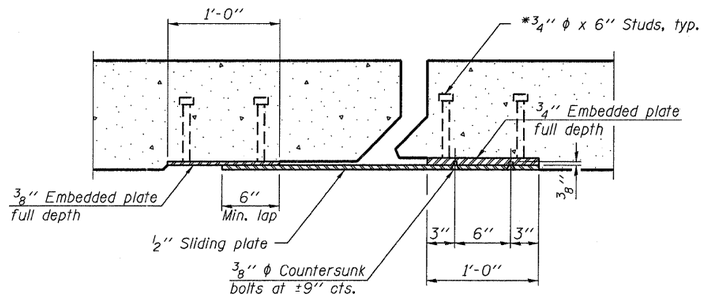
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	663
		CONTRACT NO. 66671		
	ILLINOIS FED. AID PROJECT			



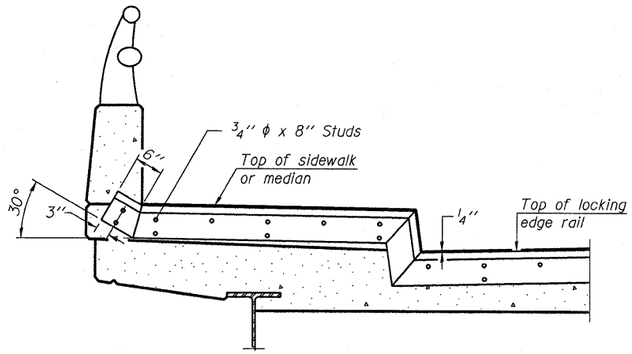
PLAN
(For skews ≤ 30°)



PLAN
(For skews > 30°)
Showing point block

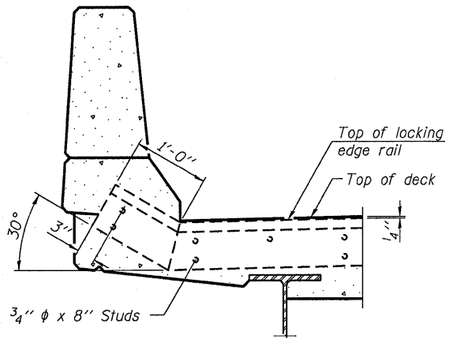


SECTION C-C

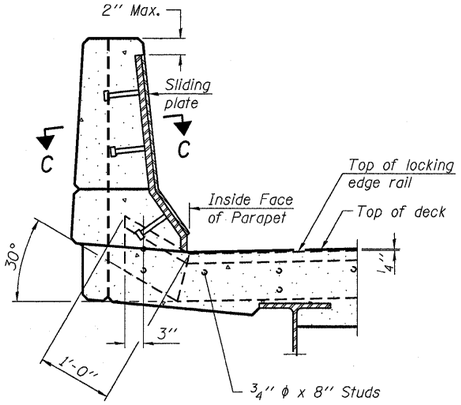


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

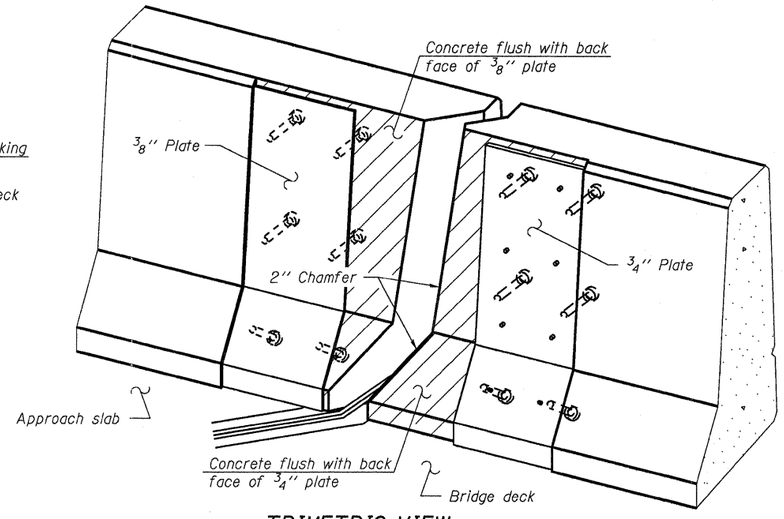
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



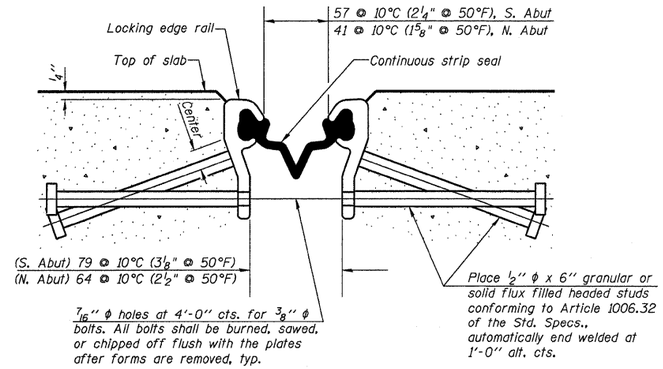
SECTION A-A



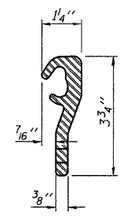
SECTION B-B



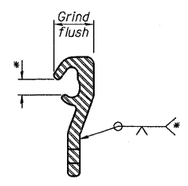
TRIMETRIC VIEW
(Showing back plates only)



SECTION THRU STRIP SEAL JOINT



LOCKING EDGE RAIL



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Meter	45

LOCKING EDGE RAILS

FILE NAME = c:\pw_work\pwidot\duncanbd\d0170917\P304-192-structure repair.dgn	USER NAME = duncanbd	DESIGNED - BDD	REVISED - BDD 04/19/11
		DRAWN - BDD	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED - IJL	REVISED -
	PLOT DATE = 8/16/2011	DATE - 02/23/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

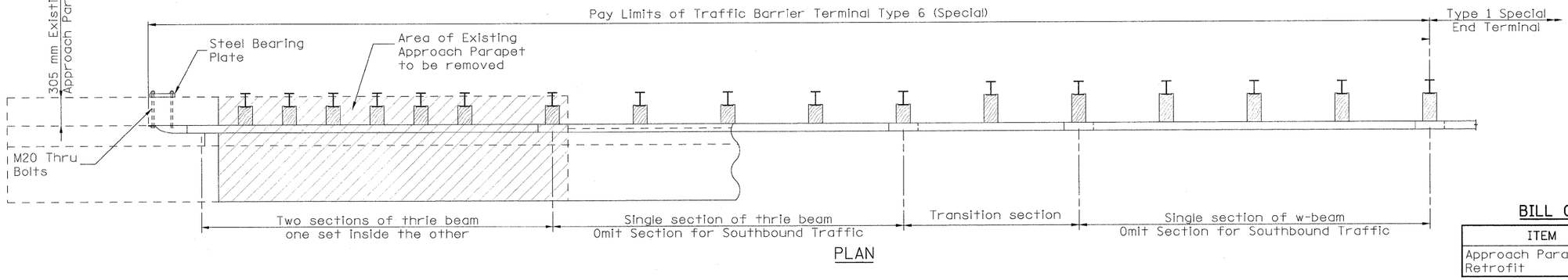
PREFORMED JOINT STRIP SEAL
STRUCTURE NO 047-0048

SCALE: | SHEET NO. 7 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	664
		CONTRACT NO. 66671		
	ILLINOIS FED. AID PROJECT			

CONTRACT NO. 66671

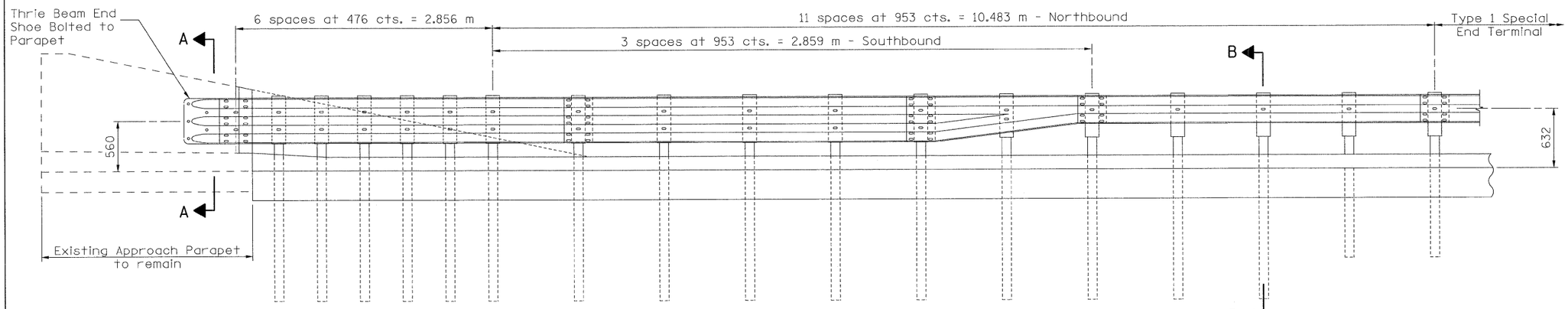
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	665
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



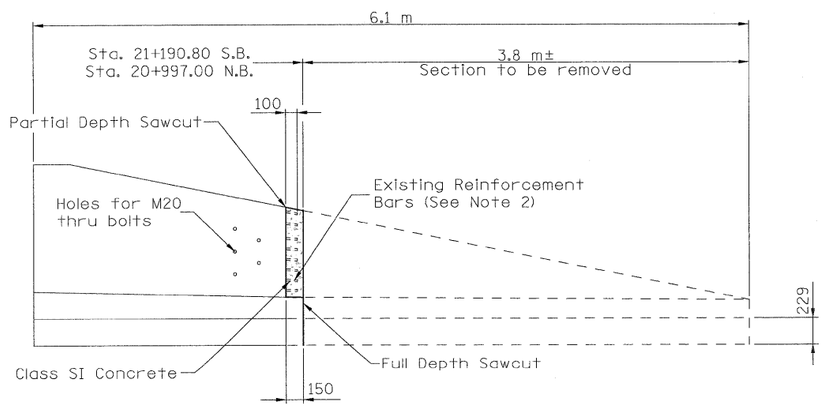
PLAN

BILL OF MATERIAL

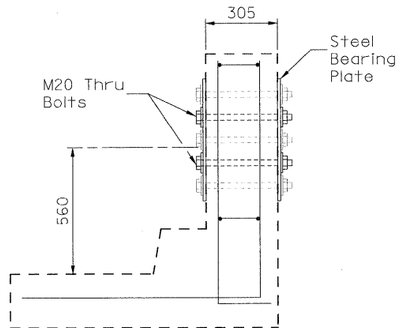
ITEM	UNIT	QUANTITY
Approach Parapet Retrofit	Each	2



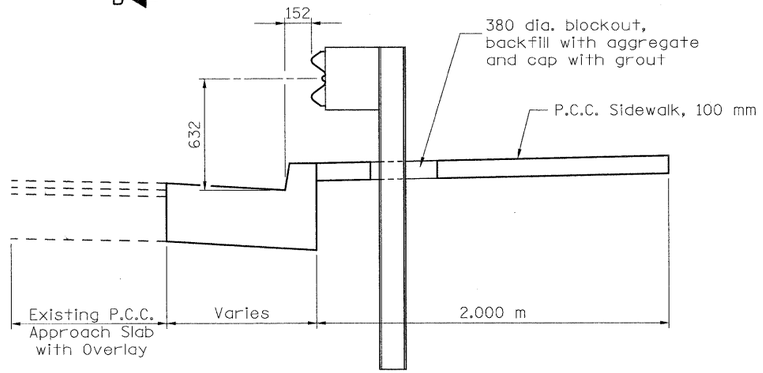
ELEVATION



WINGWALL ELEVATION



SECTION A-A



SECTION B-B

Notes:

1. See Standard 631031-08 for details of guardrail not shown.
2. The contractor shall use care in the salvage of existing reinforcement bars. Existing bars shall be cleaned, straightened, and incorporated into new construction.
3. The cost of sawcutting, concrete removal, Class SI Concrete and salvaging reinforcement shall be included in the cost of Approach Parapet Retrofit. See Special Provisions.
4. Thrie beam rail shall be bolted to block-out at all posts.
5. All dimensions are in millimeters unless otherwise noted:

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROACH PARAPET RETROFIT AND GUARDRAIL DETAILS

DRAWN BY

DATE CHECKED BY

HMG JOB NO. 5122

FILE: 665bridge end section det_sht.dgn
PLOTTED: 8/11/2011

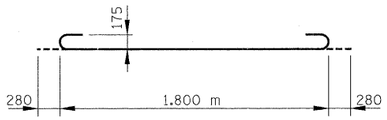
HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	666
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

Notes:

1. Junction Box walls shall be constructed of precast or cast-in-place concrete in accordance with Section 602 of the Standard Specifications and Special Provisions.
2. Steps shall be required for all Junction Boxes. Steps shall be spaced at 300 to 400 cts. and in accordance with Standard 602701 and Article 602.08 of the Standard Specifications.
3. Reinforcement Bars shall conform to the requirements of ASTM A 706M, Gr. 420.
4. All Reinforcement Bars for Junction Boxes shall be epoxy coated.
5. Material List is shown for informational purposes only. Quantities of "Concrete Structures" and "Reinforcement Bars, Epoxy Coated" shall be included in the cost of Junction Box No. 1. See Special Provisions.
6. All dimensions are in millimeters unless otherwise shown.



a 91 (E) BARS

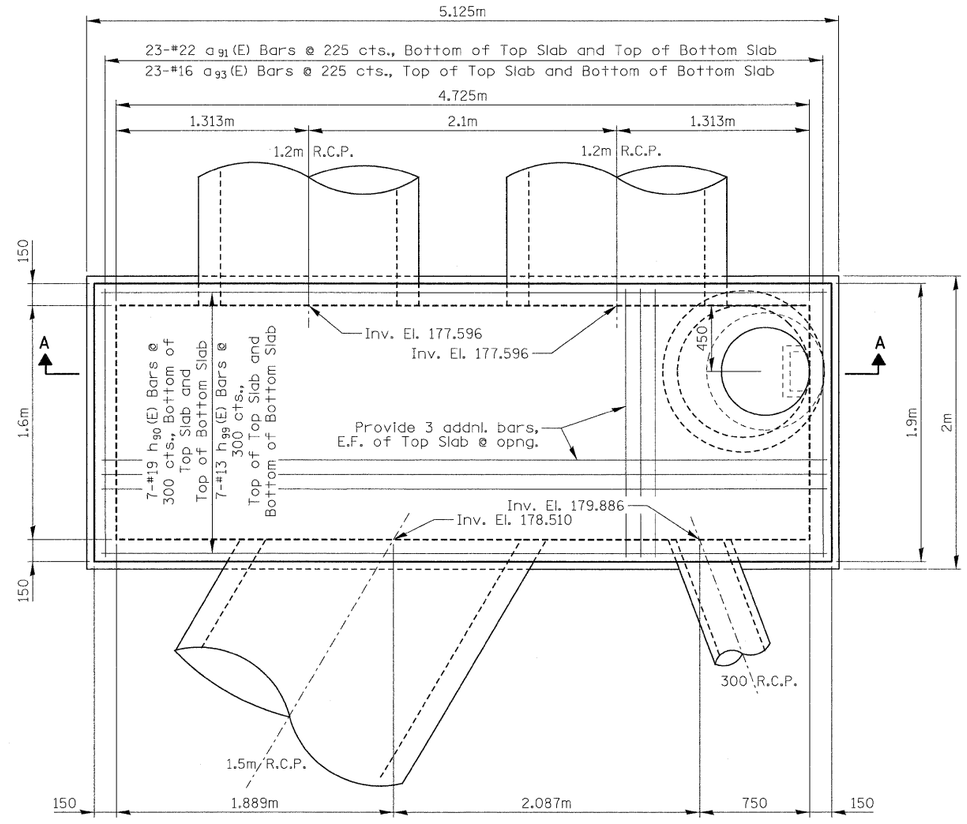
MATERIAL LIST
JUNCTION BOX NO. 1
(For Information Only)

BAR	NO.	SIZE	LENGTH (m)	SHAPE
a_{91} (E)	49	#22	2.36	
a_{93} (E)	49	#16	1.80	
h_{90} (E)	17	#19	4.93	
h_{99} (E)	17	#13	4.93	
Concrete Structures			m^3	4.1
Reinforcement Bars, Epoxy Coated			kg	760

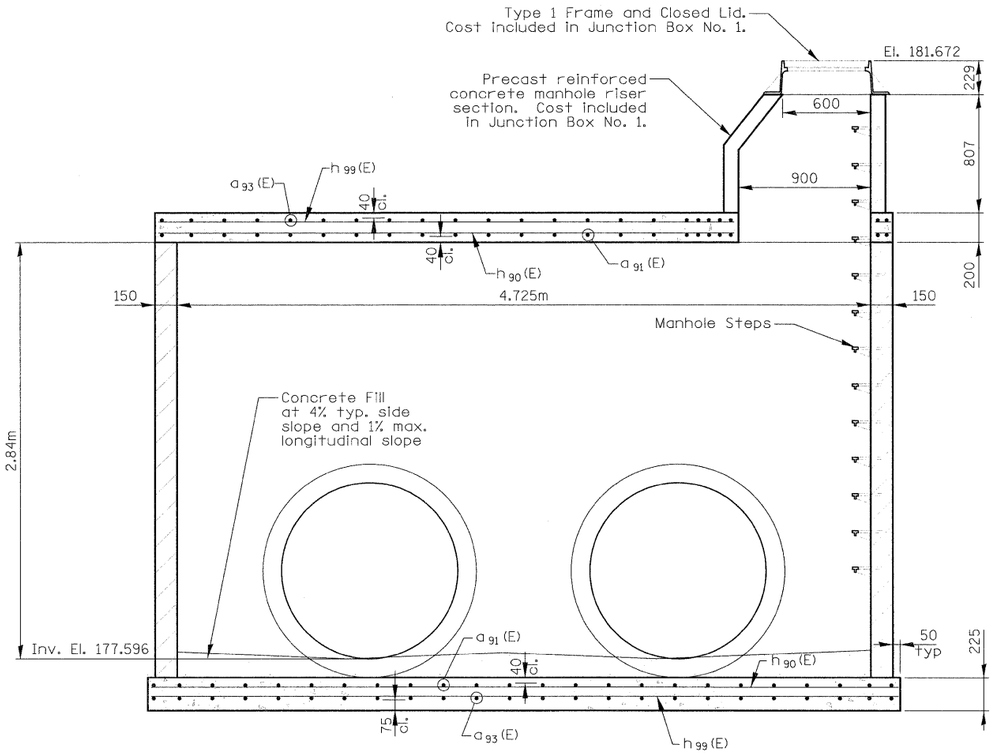
Cut a_{91} (E), a_{93} (E), h_{90} (E), and h_{99} (E) bars in the field to miss the MH opening in the top slab.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Junction Box No. 1	L. Sum	1



PLAN - JUNCTION BOX NO. 1



SECTION A-A

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS

JUNCTION BOX NO. 1

DRAWN BY

DATE CHECKED BY

HMG JOB NO. 5122

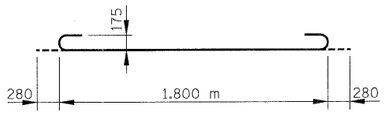
FILE: 666junctbx1_sht.dgn
PLOTTED: 8/11/2011

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	667
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

Notes:

1. Junction Box walls shall be constructed of precast or cast-in-place concrete in accordance with Section 602 of the Standard Specifications and Special Provisions.
2. Steps shall be required for all Junction Boxes. Steps shall be spaced at 300 to 400 cts. and in accordance with Standard 602701 and Article 602.08 of the Standard Specifications.
3. Reinforcement Bars shall conform to the requirements of ASTM A 706M, Gr. 420.
4. All Reinforcement Bars for Junction Boxes shall be epoxy coated.
5. Material List is shown for informational purposes only. Quantities of "Concrete Structures" and "Reinforcement Bars, Epoxy Coated" shall be included in the cost of Junction Box No. 2. See Special Provisions.
6. All dimensions are in millimeters unless otherwise shown.



a_{101}(E) BARS

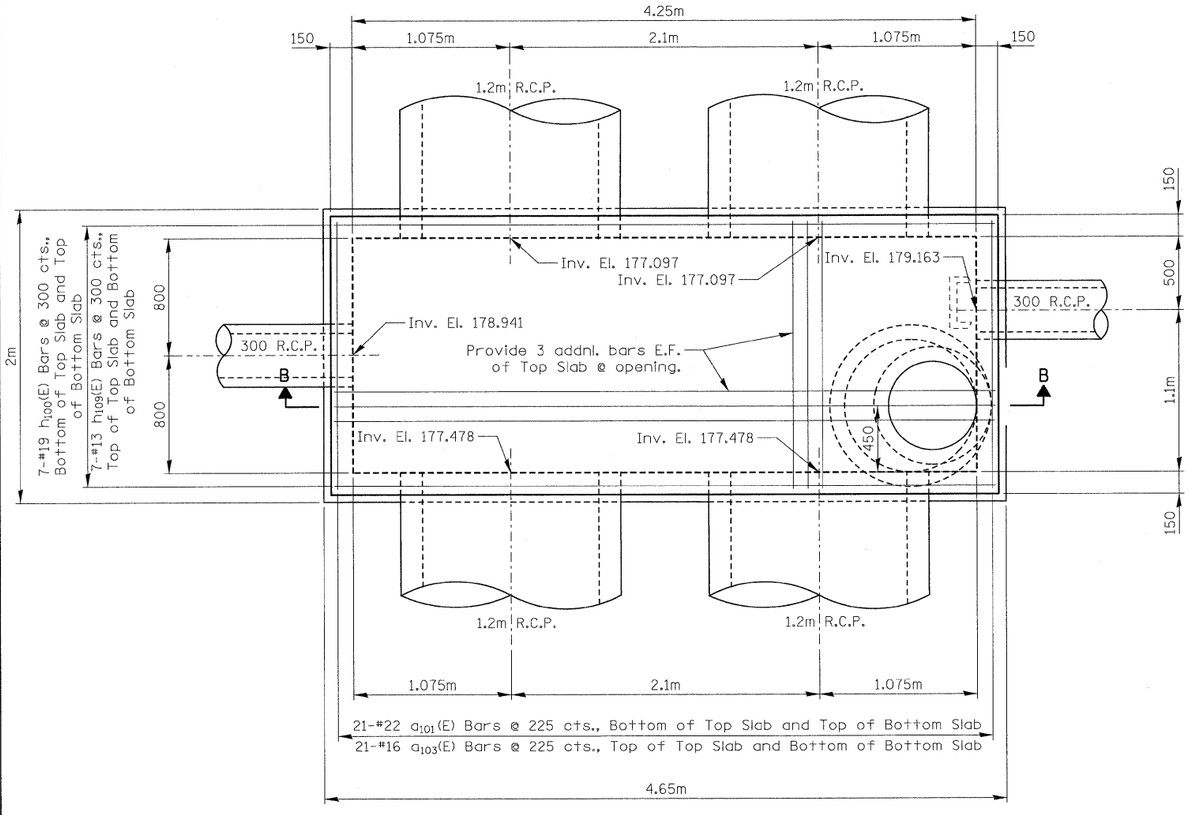
MATERIAL LIST
JUNCTION BOX NO. 2
(For Information Only)

BAR	NO.	SIZE	LENGTH (m)	SHAPE
a_{101}(E)	45	#22	2.36	
a_{103}(E)	45	#16	1.80	
h_{100}(E)	17	#19	4.50	
h_{109}(E)	17	#13	4.50	
Concrete Structures		m^3	3.7	
Reinforcement Bars, Epoxy Coated		kg	700	

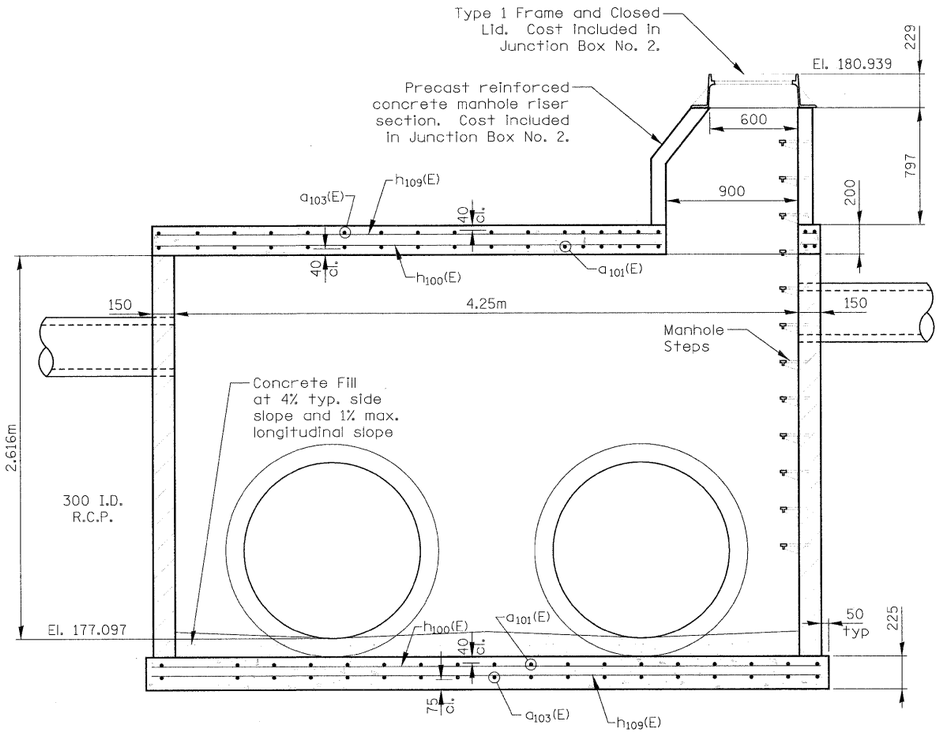
Cut a_{101}(E), a_{103}(E), h_{100}(E), and h_{109}(E) bars in the field to miss the MH opening in the top slab.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Junction Box No. 2	L. Sum	1



PLAN - JUNCTION BOX NO. 2



SECTION B-B

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS

JUNCTION BOX NO. 2

DRAWN BY

DATE CHECKED BY

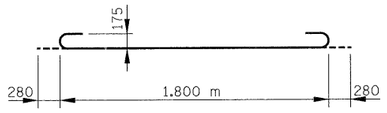
HMG JOB NO. 5122

FILE: 667_junctbx2_sht.dgn
PLOTTED: 8/11/2011

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	668
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

Notes:
1. Junction Box walls shall be constructed of precast or cast-in-place concrete in accordance with Section 602 of the Standard Specifications and Special Provisions.
2. Steps shall be required for all Junction Boxes. Steps shall be spaced at 300 to 400 cts. and in accordance with Standard 602701 and Article 602.08 of the Standard Specifications.
3. Reinforcement Bars shall conform to the requirements of ASTM A 706M, Gr. 420.
4. All Reinforcement Bars for Junction Boxes shall be epoxy coated.
5. Material List is shown for informational purposes only. Quantities of "Concrete Structures" and "Reinforcement Bars, Epoxy Coated" shall be included in the cost of Junction Box No. 3. See Special Provisions.
6. All dimensions are in millimeters unless otherwise shown.



a_{101}(E) BARS

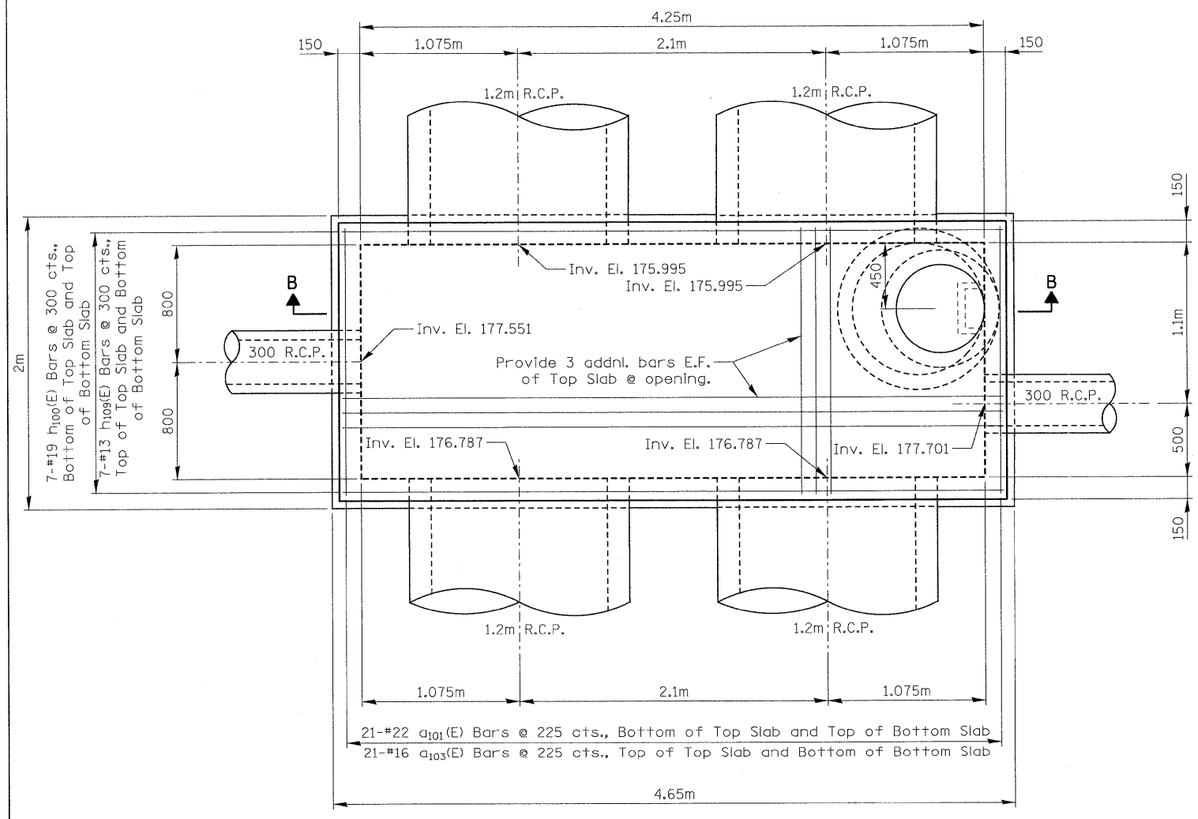
MATERIAL LIST
JUNCTION BOX NO. 3
(For Information Only)

BAR	NO.	SIZE	LENGTH (m)	SHAPE
a_{101}(E)	45	#22	2.36	
a_{103}(E)	45	#16	1.80	
h_{100}(E)	17	#19	4.50	
h_{109}(E)	17	#13	4.50	
Concrete Structures			m^3	3.7
Reinforcement Bars, Epoxy Coated			kg	700

Cut a_{101}(E), a_{103}(E), h_{100}(E), and h_{109}(E) bars in the field to miss the MH opening in the top slab.

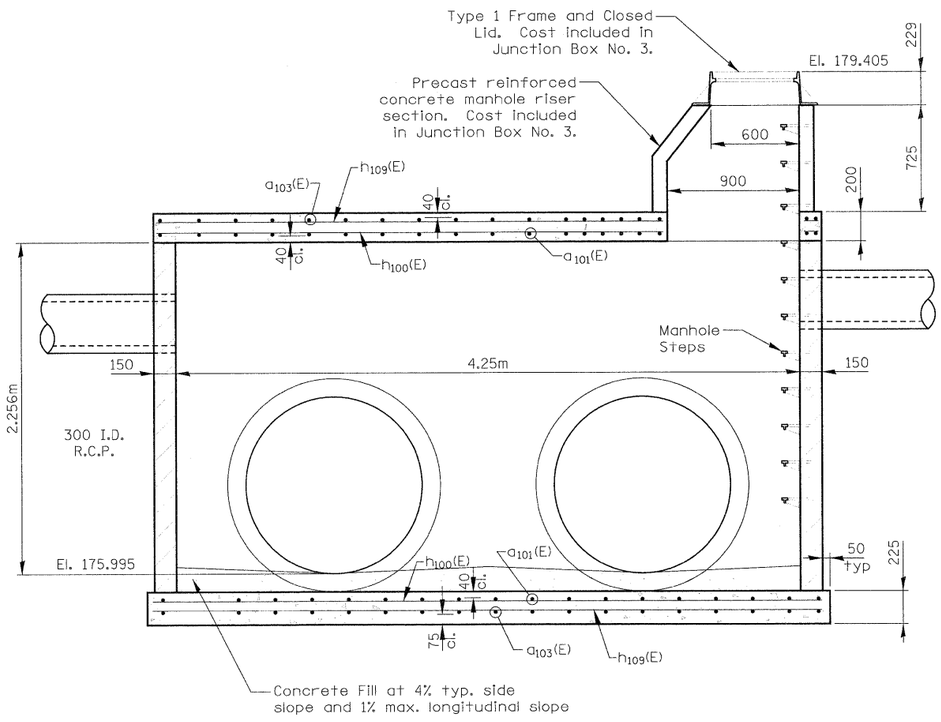
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Junction Box No. 3	L. Sum	1



PLAN - JUNCTION BOX NO. 3

N



SECTION B-B

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS
JUNCTION BOX NO. 3

DRAWN BY
DATE CHECKED BY

HMG JOB NO. 5122

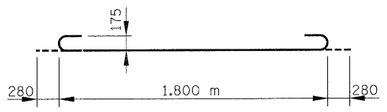
FILE: 668_juncbx3_sht.dgn
PLOTTED: 8/11/2011

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	669
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

Notes:

1. Junction Box walls shall be constructed of precast or cast-in-place concrete in accordance with Section 602 of the Standard Specifications and Special Provisions.
2. Steps shall be required for all Junction Boxes. Steps shall be spaced at 300 to 400 cts. and in accordance with Standard 602701 and Article 602.08 of the Standard Specifications.
3. Reinforcement Bars shall conform to the requirements of ASTM A 706M, Gr. 420.
4. All Reinforcement Bars for Junction Boxes shall be epoxy coated.
5. Material List is shown for informational purposes only. Quantities of "Concrete Structures" and "Reinforcement Bars, Epoxy Coated" shall be included in the cost of Junction Box No. 4. See Special Provisions.
6. All dimensions are in millimeters unless otherwise shown.



a_{111}(E) BARS

MATERIAL LIST
JUNCTION BOX NO. 4

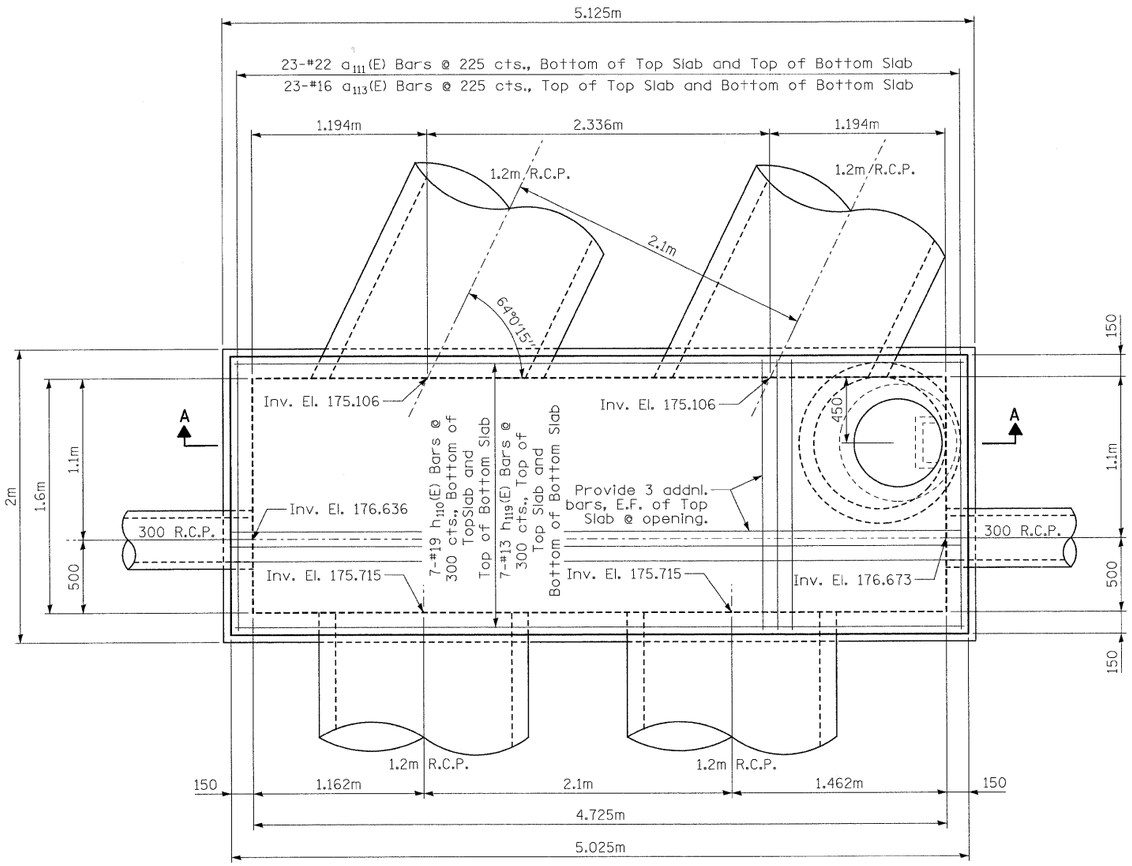
(For Information Only)

BAR	NO.	SIZE	LENGTH (m)	SHAPE
a_{111}(E)	49	#22	2.36	
a_{113}(E)	49	#16	1.80	
h_{110}(E)	17	#19	4.93	
h_{119}(E)	17	#13	4.93	
Concrete Structures			m^3	4.1
Reinforcement Bars, Epoxy Coated			kg	760

Cut a_{111}(E), a_{113}(E), h_{110}(E), and h_{119}(E) bars in the field to miss the MH opening in the top slab.

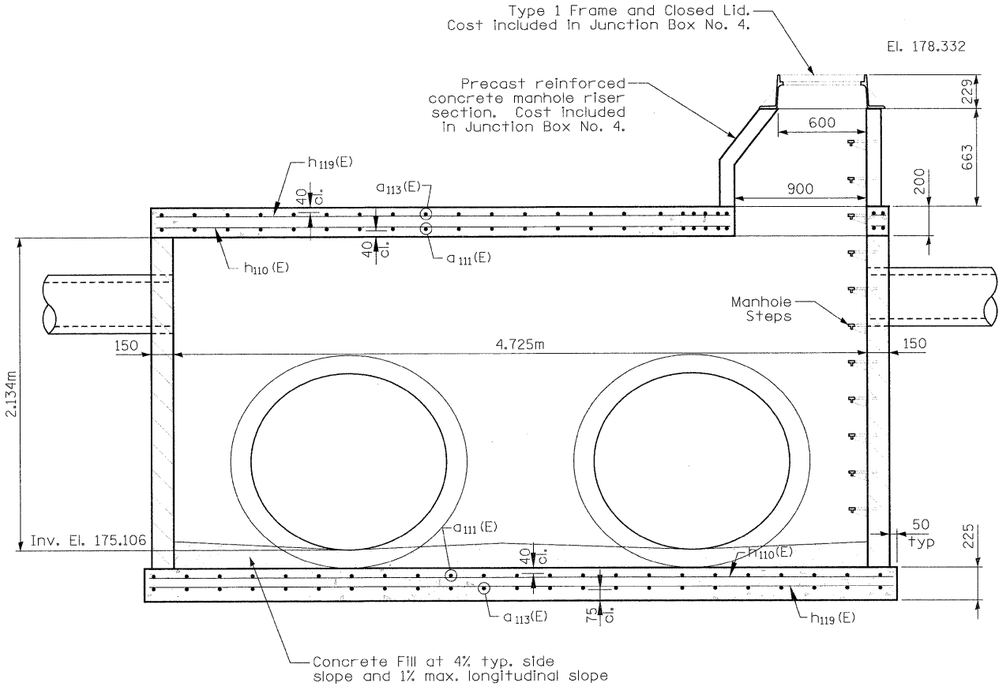
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Junction Box No. 4	L. Sum	1



PLAN - JUNCTION BOX NO. 4

N



SECTION A-A

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS
JUNCTION BOX NO. 4

DRAWN BY
DATE CHECKED BY

HMG JOB NO. 5122

FILE: 669_Juncbx4_sht.dgn
PLOTTED: 8/11/2011

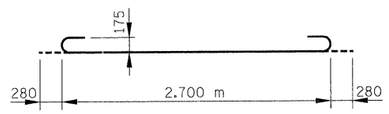
HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	670
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

Notes:

1. Junction Box walls shall be constructed of precast or cast-in-place concrete in accordance with Section 602 of the Standard Specifications and Special Provisions.
2. Steps shall be required for all Junction Boxes. Steps shall be spaced at 300 to 400 cts. and in accordance with Standard 602701 and Article 602.08 of the Standard Specifications.
3. Reinforcement Bars shall conform to the requirements of ASTM A 706M, Gr. 420.
4. All Reinforcement Bars for Junction Boxes shall be epoxy coated.
5. Material List is shown for informational purposes only. Quantities of "Concrete Structures" and "Reinforcement Bars, Epoxy Coated" shall be included in the cost of Junction Box No. 5. See Special Provisions.
6. All dimensions are in millimeters unless otherwise shown.



a_{121}(E) BARS

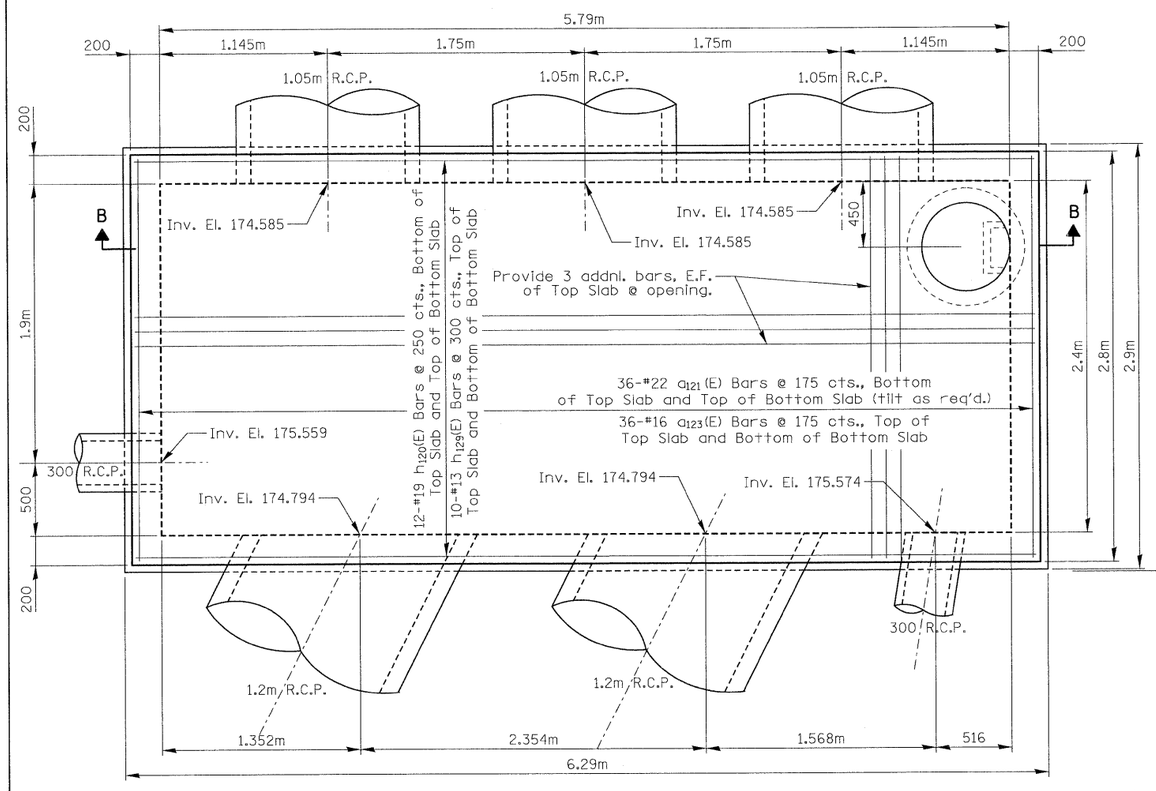
MATERIAL LIST
JUNCTION BOX NO. 5
(For Information Only)

BAR	NO.	SIZE	LENGTH (m)	SHAPE
a_{121}(E)	75	#22	3.26	⊂⊃
a_{123}(E)	75	#16	2.70	—
h_{120}(E)	27	#19	6.09	—
h_{129}(E)	23	#13	6.09	—
Concrete Structures			m^3	8.3
Reinforcement Bars, Epoxy Coated			kg	1,570

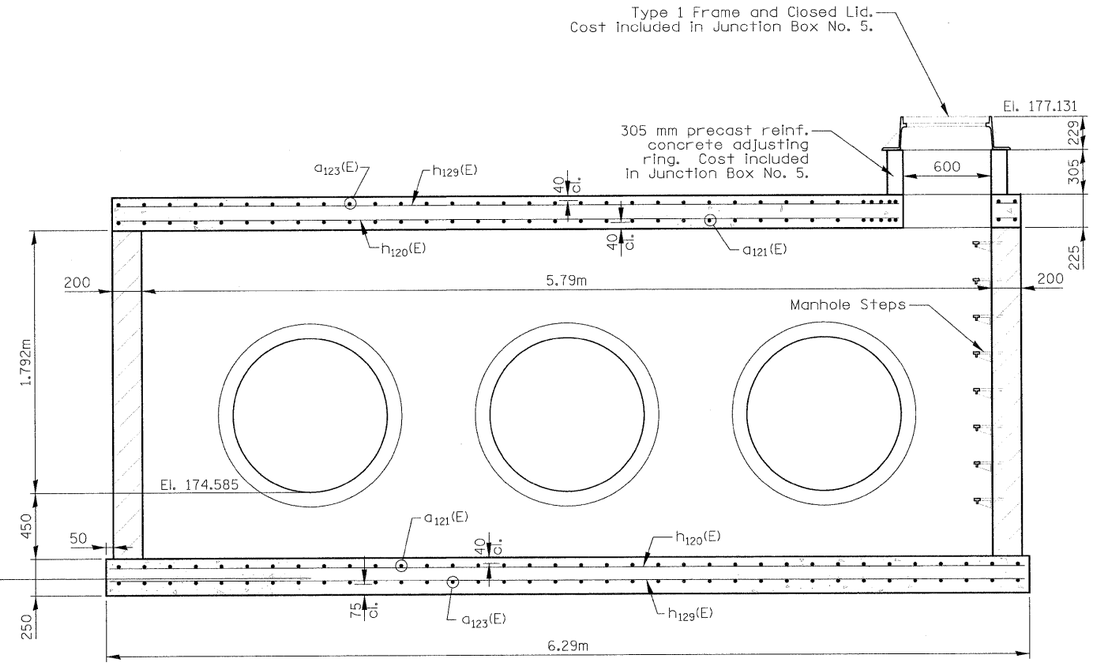
Cut a_{121}(E), a_{123}(E), h_{120}(E) and h_{129}(E) bars in the field to miss the MH opening in the top slab.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Junction Box No. 5	L. Sum	1



PLAN - JUNCTION BOX NO. 5



SECTION B-B

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS
JUNCTION BOX NO. 5

DRAWN BY

DATE CHECKED BY

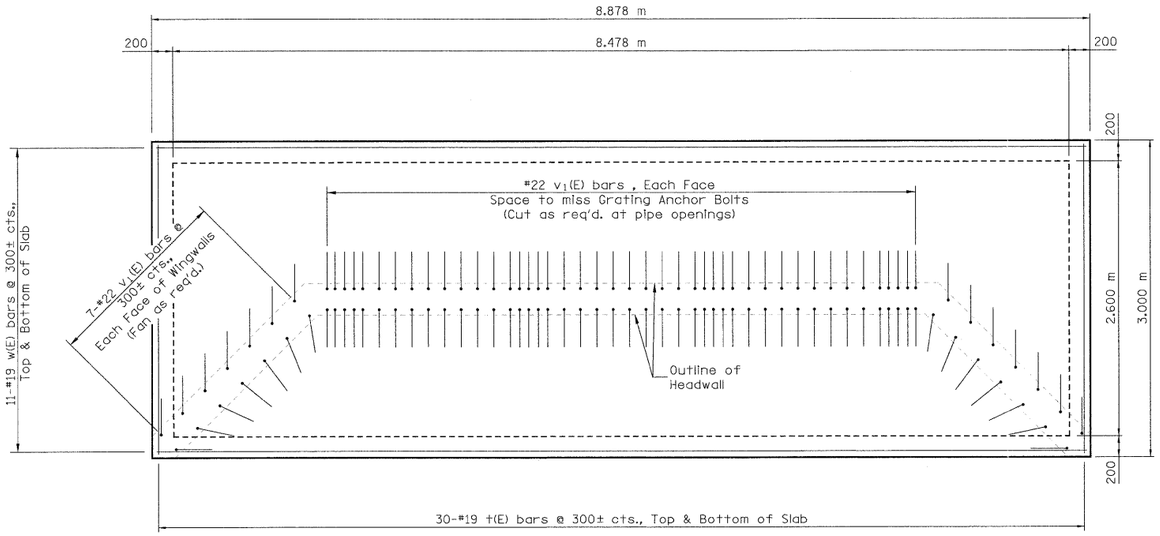
HMG JOB NO. 5122

FILE: 670_Juncbx5_sht.dgn
PLOTTED: 8/11/2011

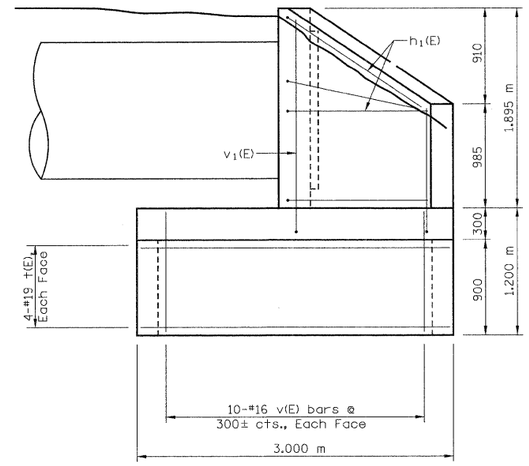
HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

CONTRACT NO. 66671

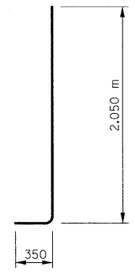
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	671
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



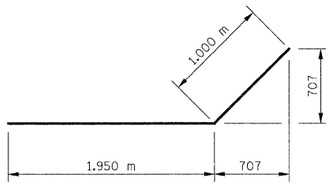
APRON SLAB PLAN



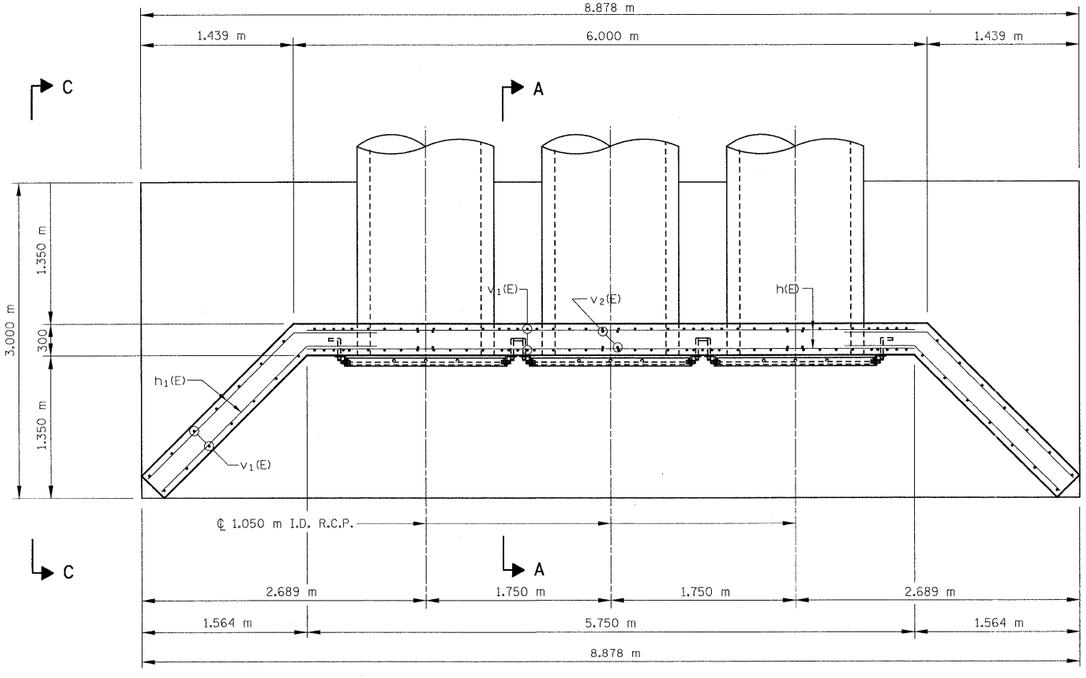
VIEW C-C



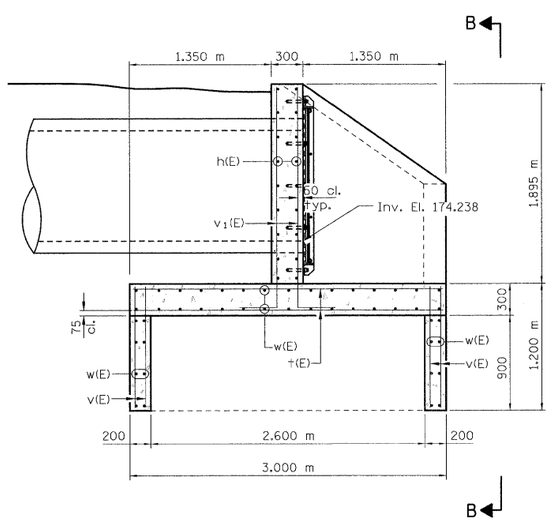
BAR $V_1(E)$



BAR $h_1(E)$



TOP PLAN



SECTION A-A

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Outlet Structure	L. Sum	1
Stone Riprap, Class A5	m^2	69.0
Filter Fabric	m^2	69.0

MATERIAL LIST

(For Information Only)

BAR	NO.	SIZE	LENGTH (m)	SHAPE
h(E)	22	#16	5.75	——
$h_1(E)$	28	#16	2.95	⟋
t(E)	76	#19	2.85	——
v(E)	160	#16	1.07	——
$v_1(E)$	116	#22	2.40	L
$v_2(E)$	24	#16	1.40	——
w(E)	38	#19	8.75	——
Concrete Structures		m^3		17.1
Reinforcement Bars, Epoxy Coated		kg		2,717

Notes:
1. Reinforcement Bars shall conform to the requirements of ASTM A 706M, Gr. 420.
2. All Reinforcement Bars for Outlet Structure shall be epoxy coated.
3. Material List is shown for informational purposes only. Quantities of "Concrete Structures" and "Reinforcement Bars, Epoxy Coated" shall be included in the cost of Outlet Structure. See Special Provisions.
4. All dimensions are in millimeters unless otherwise shown.
5. See storm sewer plans for riprap limits. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STORM SEWER
OUTLET STRUCTURE DETAILS
(1 OF 2)

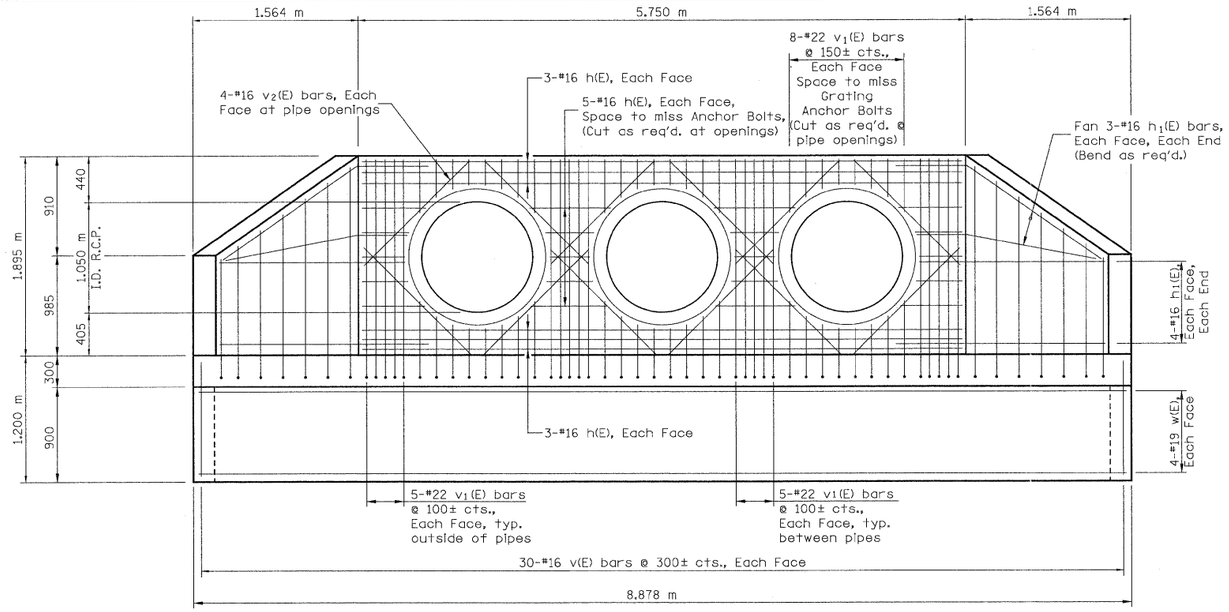
DRAWN BY
DATE CHECKED BY

HMG JOB NO. 5122

FILE: 671-672outlet struct_sht.dgn
PLOTTED: 8/11/2011

CONTRACT NO. 66671

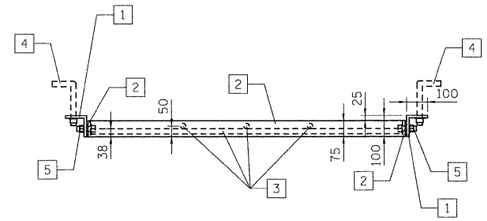
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	672
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



FRONT ELEVATION

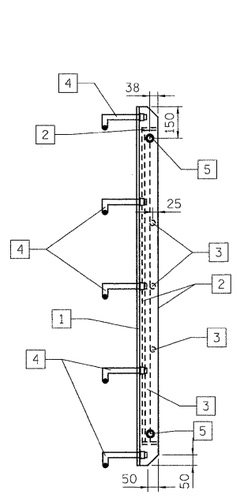
Notes:

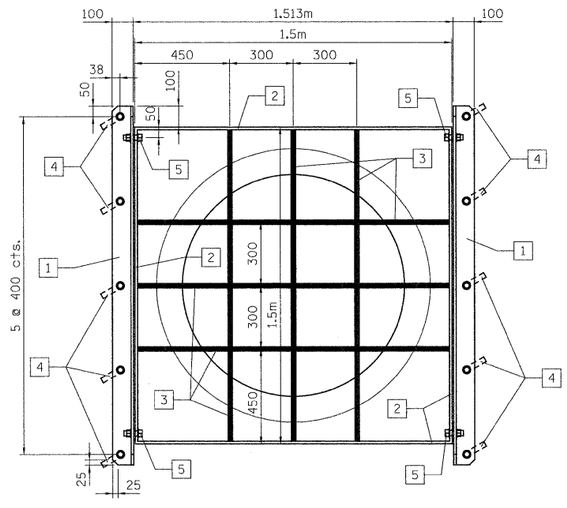
1. Materials, fabrication, and installation of the grate shall be in acordance with Article 542.07 (b)(2).
2. Shop drawings shall be submitted for approval prior to fabrication.
3. Grate assemblies shall be on site prior to casting headwall to verify anchor bolt locations.
4. Mounting holes drilled in angle shall be 28mm. Assembly holes in angle and grate shall be oversized to 31mm to facilitate removal for maintenance.



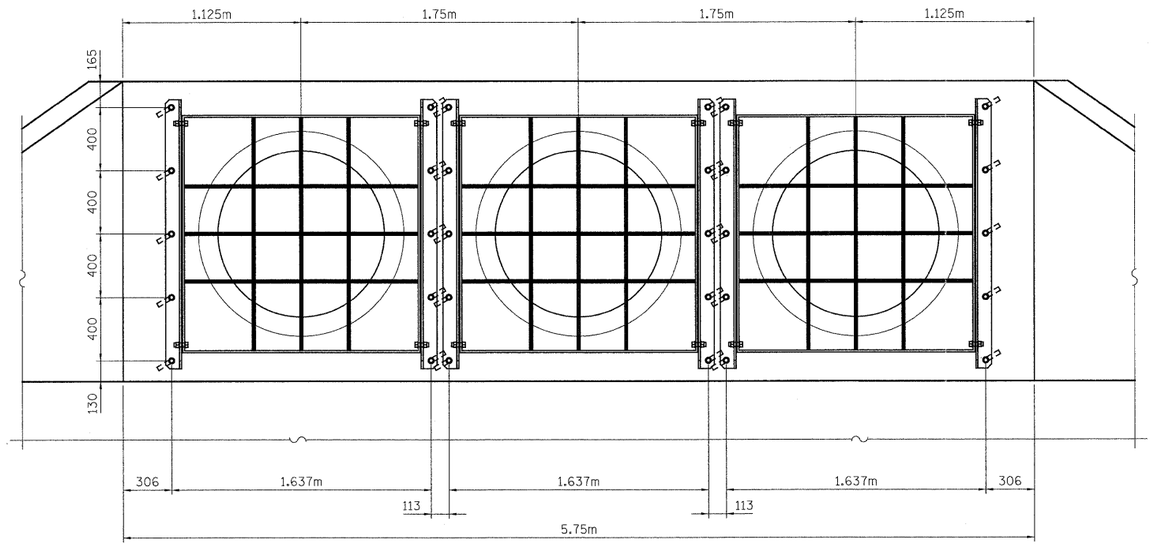
MATERIAL LIST

1	100 x 100 x 13 angle
2	75 x 13 solid flat
3	25 solid round
4	25 x 150 anchor bolts
5	25 x 125 hex bolt w/ nut and washers





GRATE DETAIL



VIEW B-B

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STORM SEWER
OUTLET STRUCTURE DETAILS
(2 OF 2)

DRAWN BY

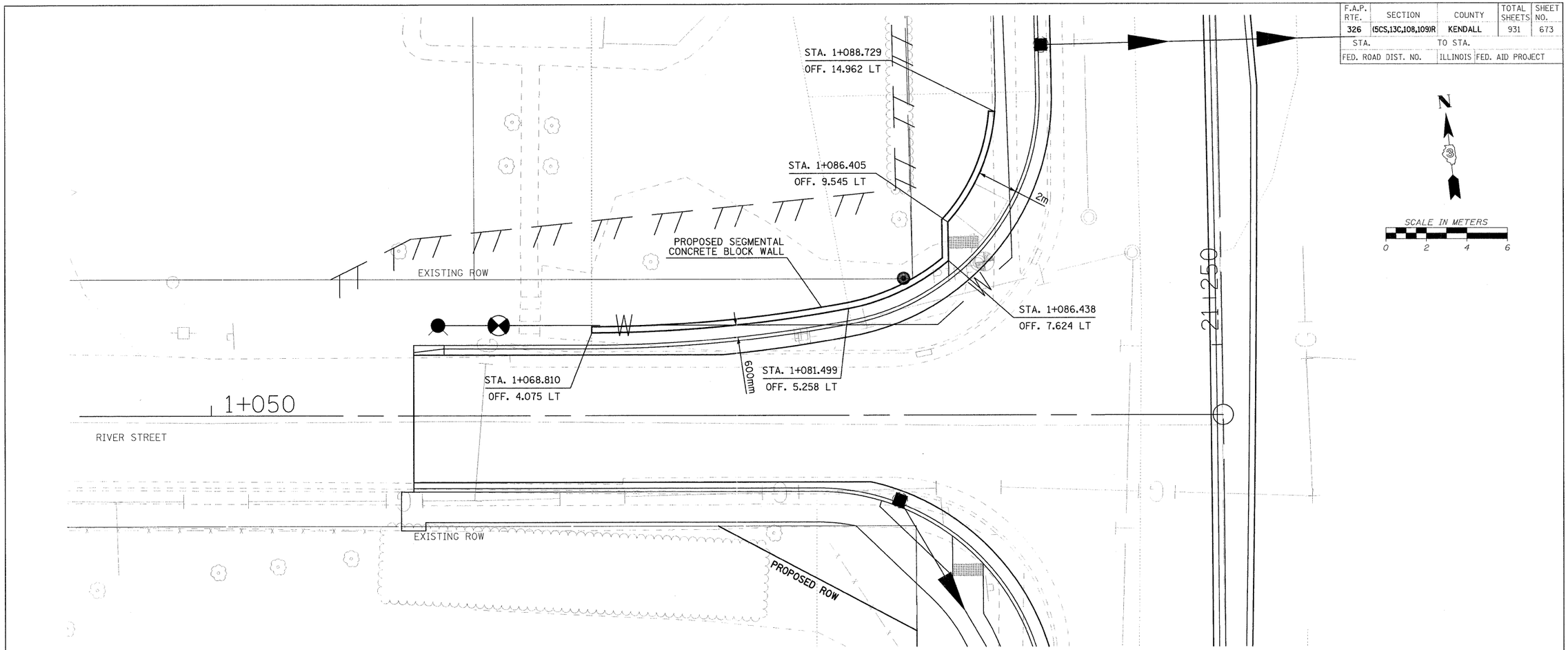
DATE CHECKED BY

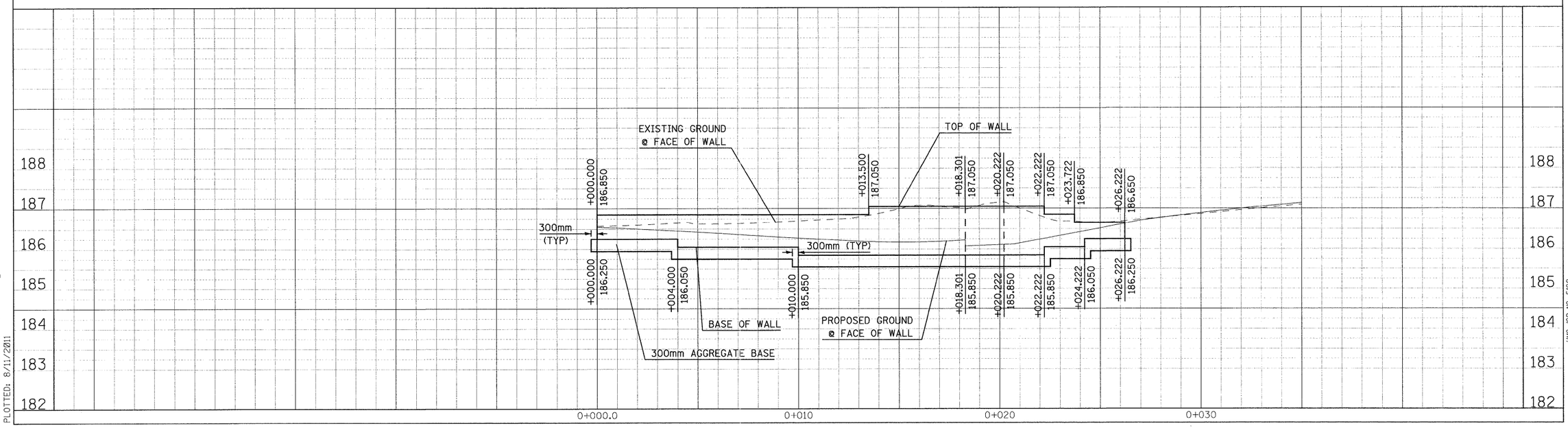
HMG JOB NO. 5122

FILE: 671-672outlet struct_sht.dgn
PLOTTED: 8/11/2011

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	673
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	





FILE: 673DET_SHT_RIVERWALL.dgn
PLOTTED: 8/11/2011

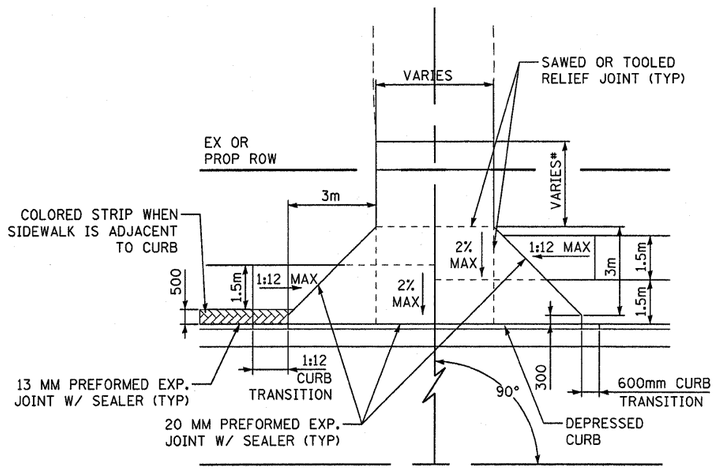
HMG JOB NO. 5122

HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

RETAINING WALL AT RIVER STREET

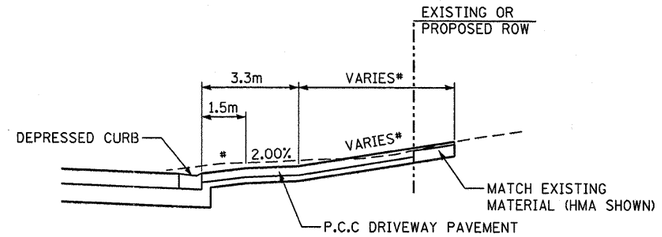
CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	674
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

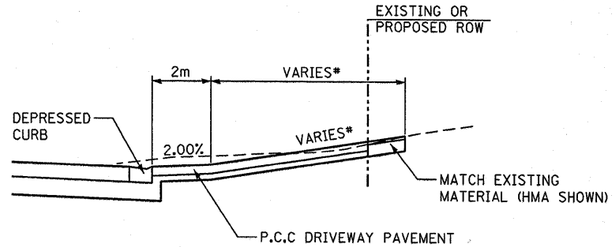


FIELD AND PRIVATE ENTRANCE

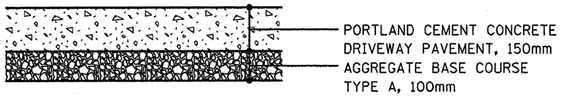
* SEE CROSS SECTIONS FOR ENTRANCE LIMITS AND SLOPES
SEE PLAN FOR ENTRANCE WIDTHS



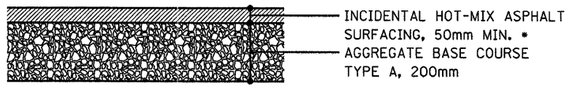
FIELD AND PRIVATE ENTRANCE
(W/ OFFSET SIDEWALK)



FIELD AND PRIVATE ENTRANCE
(W/ SIDEWALK AGAINST CURB)

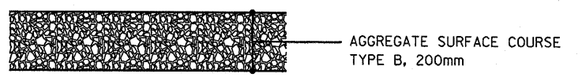


FIELD AND PRIVATE ENTRANCE
P.C.C. PAVEMENT



FIELD AND PRIVATE ENTRANCE
HOT-MIX ASPHALT PAVMENT

* MATCH EXISTING PAVEMENT THICKNESSS. TOTAL THICKNESS (HMA & AGG.) SHALL BE 250mm.



FIELD AND PRIVATE ENTRANCE
AGGREGATE

REVISIONS	
NAME	DATE
BDD	9/1/11

ILLINOIS DEPARTMENT OF TRANSPORTATION

FIELD AND PRIVATE ENTRANCE DETAILS

DRAWN BY

DATE CHECKED BY

HMG JOB NO. 5122

FILE: $FILE$
PLOTTED: 9/2/2011

HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

CONTRACT NO. 66671

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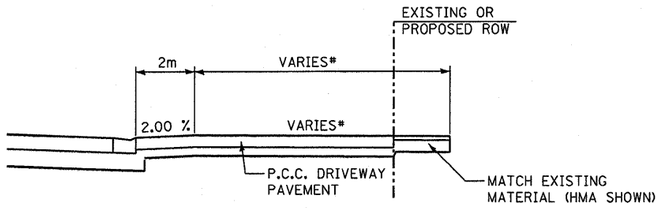
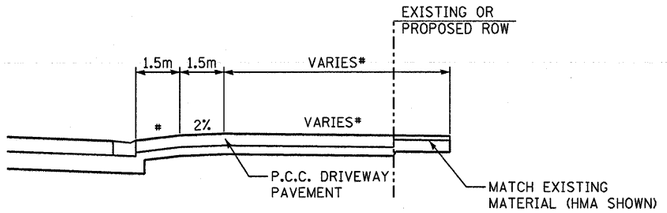
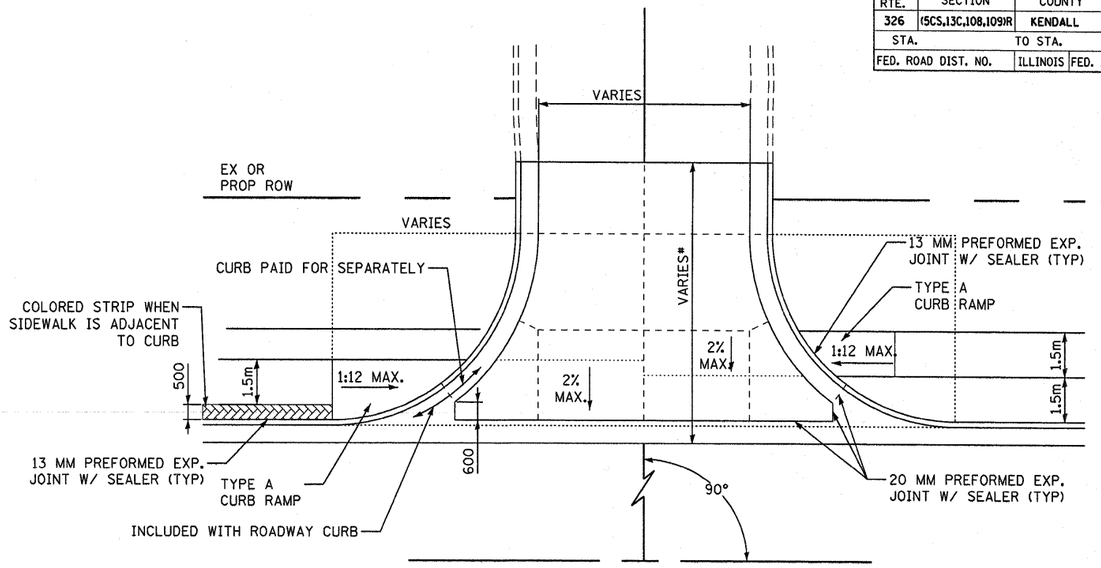
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



COMMERCIAL ENTRANCE
(W/ CURB ROUNDINGS AND SIDEWALK AGAINST CURB)

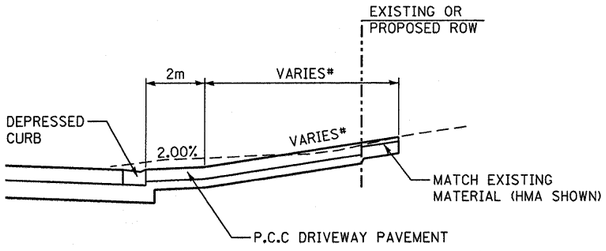


COMMERCIAL ENTRANCE
(W/ CURB ROUNDINGS AND OFFSET SIDEWALK)

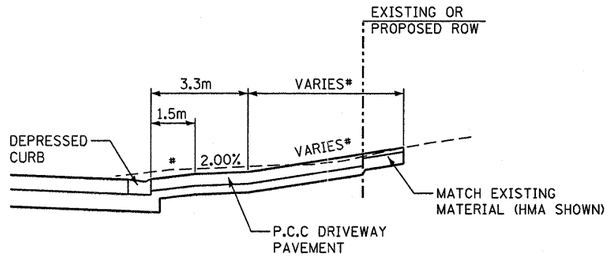


COMMERCIAL ENTRANCE
(W/ CURB ROUNDINGS)

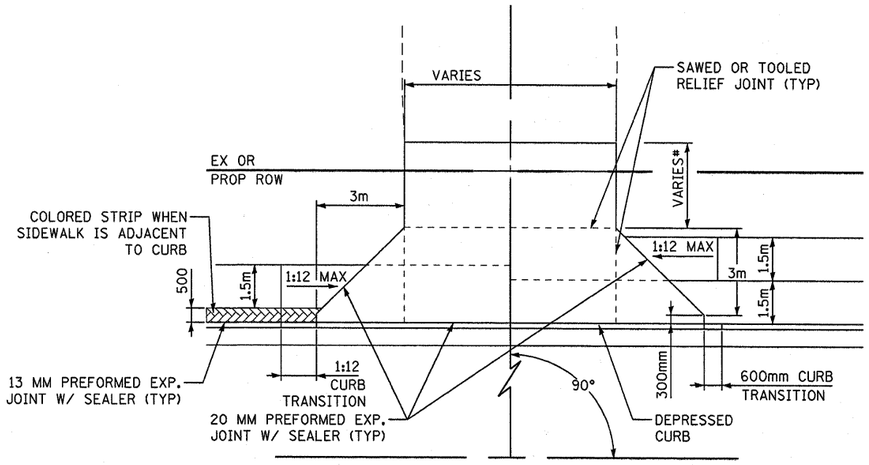
* SEE CROSS SECTIONS FOR ENTRANCE LIMITS AND SLOPES
SEE PLAN FOR ENTRANCE RADII AND WIDTHS



COMMERCIAL ENTRANCE
(W/ FLARES AND SIDEWALK AGAINST CURB)

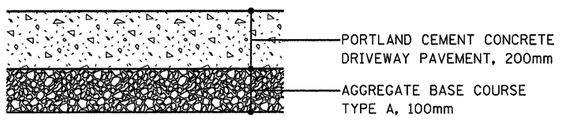


COMMERCIAL ENTRANCE
(W/ FLARES AND OFFSET SIDEWALK)

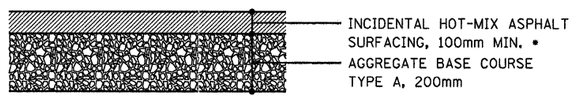


COMMERCIAL ENTRANCE
(W/ FLARES)

* SEE CROSS SECTIONS FOR ENTRANCE LIMITS AND SLOPES
SEE PLAN FOR ENTRANCE WIDTHS



COMMERCIAL ENTRANCE
P.C.C. PAVEMENT



COMMERCIAL ENTRANCE
HOT-MIX ASPHALT PAVEMENT

• MATCH EXISTING PAVEMENT THICKNESSS. TOTAL
THICKNESS (HMA & AGG.) SHALL BE 250mm.

REVISIONS	
NAME	DATE
BDD	9/1/11

ILLINOIS DEPARTMENT OF TRANSPORTATION

COMMERCIAL
ENTRANCE DETAILS

DRAWN BY

DATE CHECKED BY

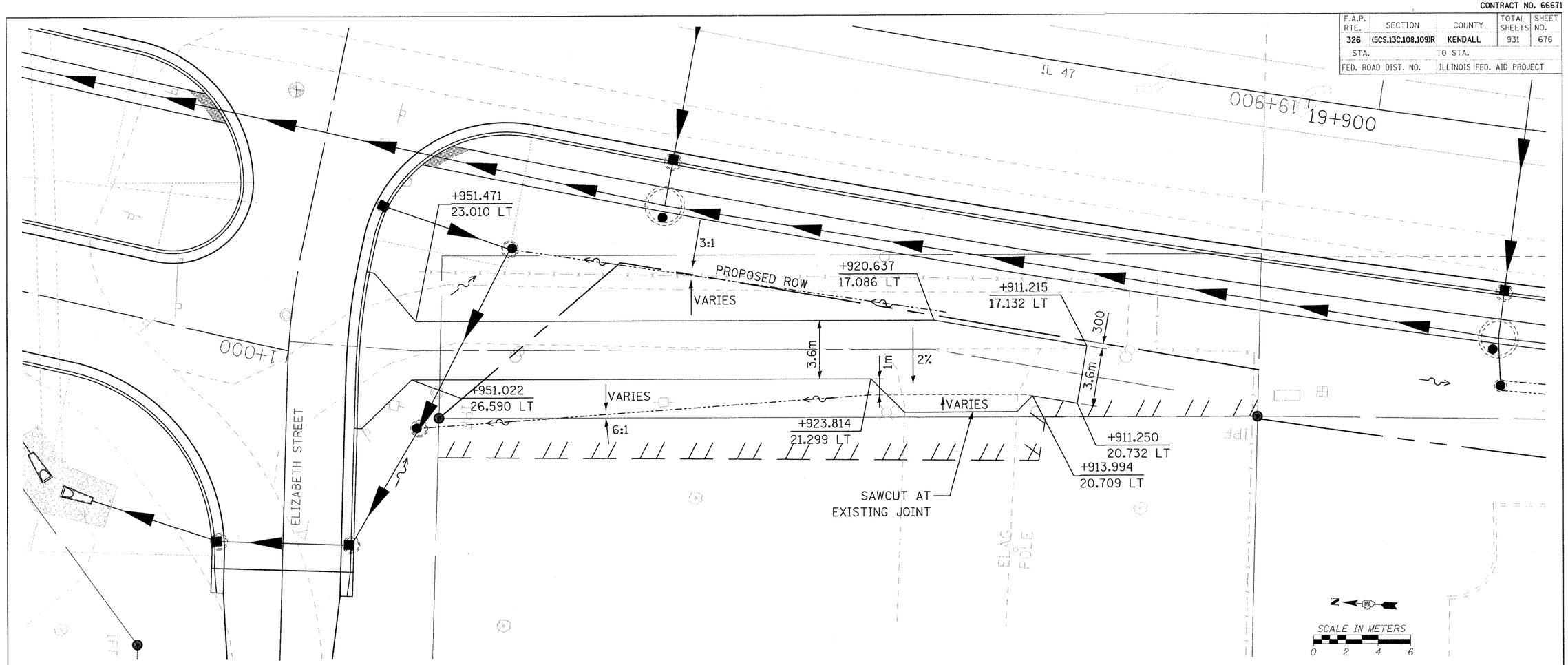
HMG JOB NO. 5122

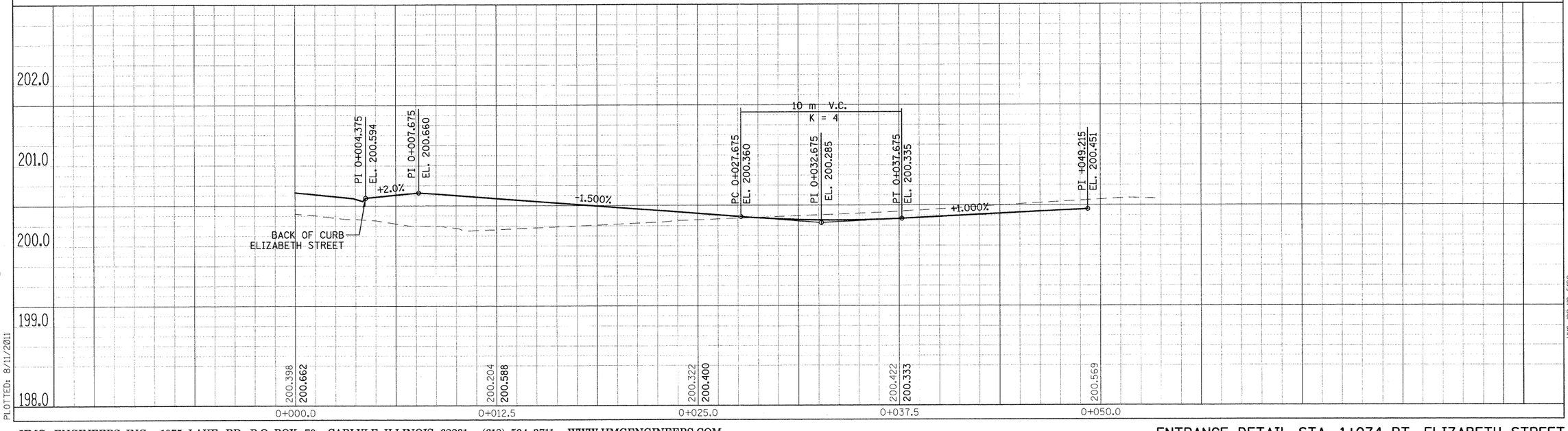
FILE: $FILE$
PLOTTED: 9/2/2011

HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	676
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			





FILE: 676DET_SHT_STA19+950.dgn
PLOTTED: 8/11/2011

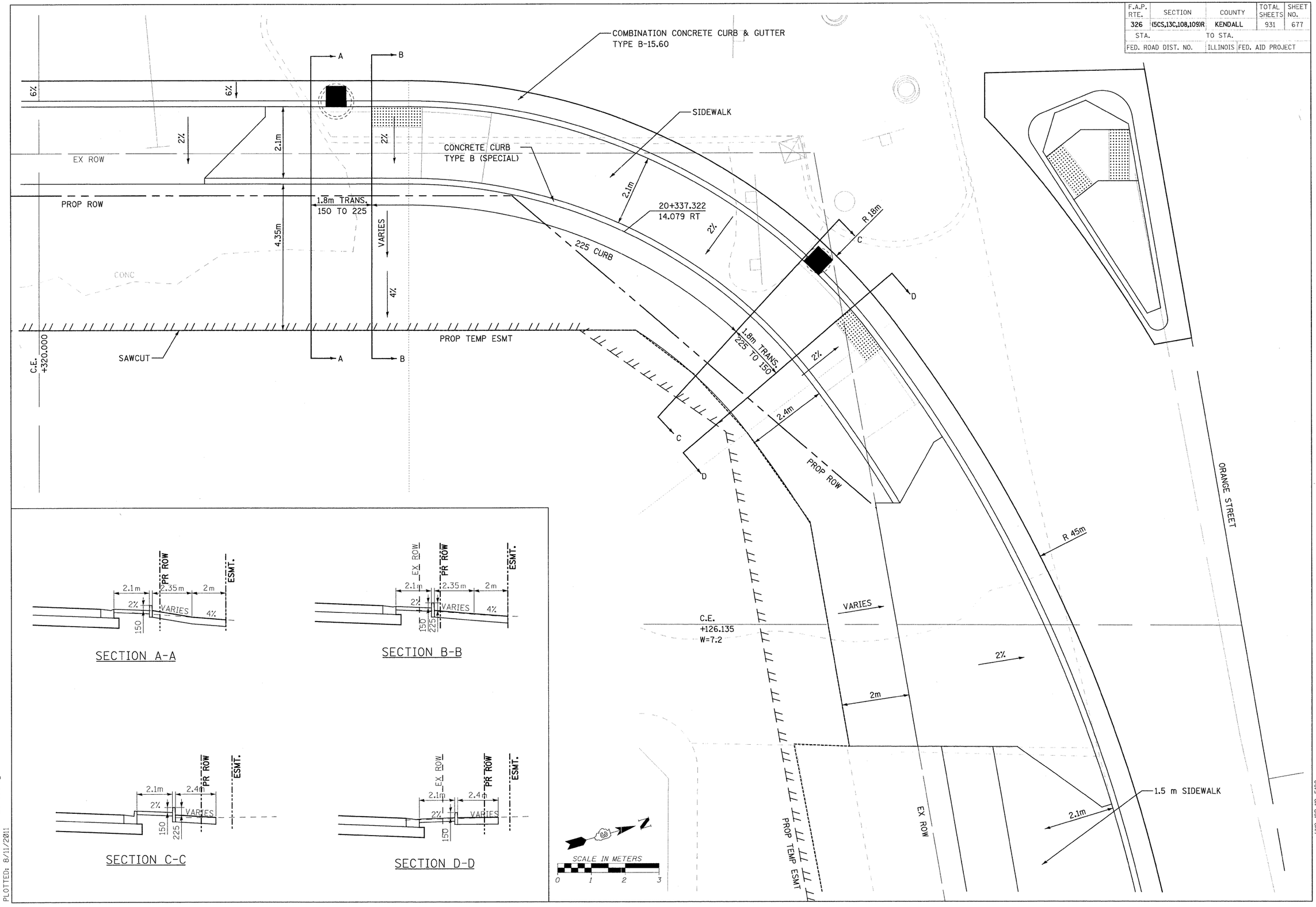
HMG JOB NO. 5122

HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

ENTRANCE DETAIL STA. 1+074 RT. ELIZABETH STREET

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	677
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

FILE: 677DET_SHT_STA20+330.dgn
PLOTTED: 8/11/2011

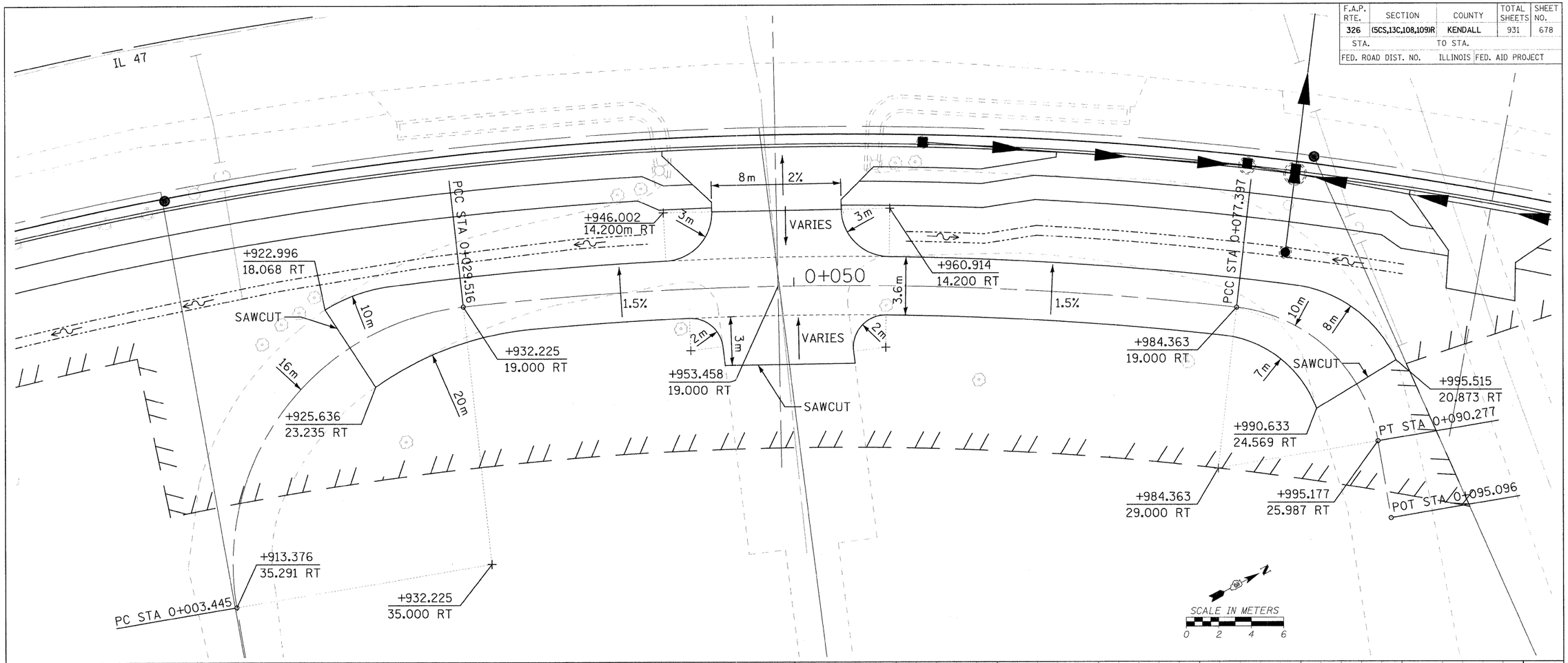
HMG JOB NO. 5122

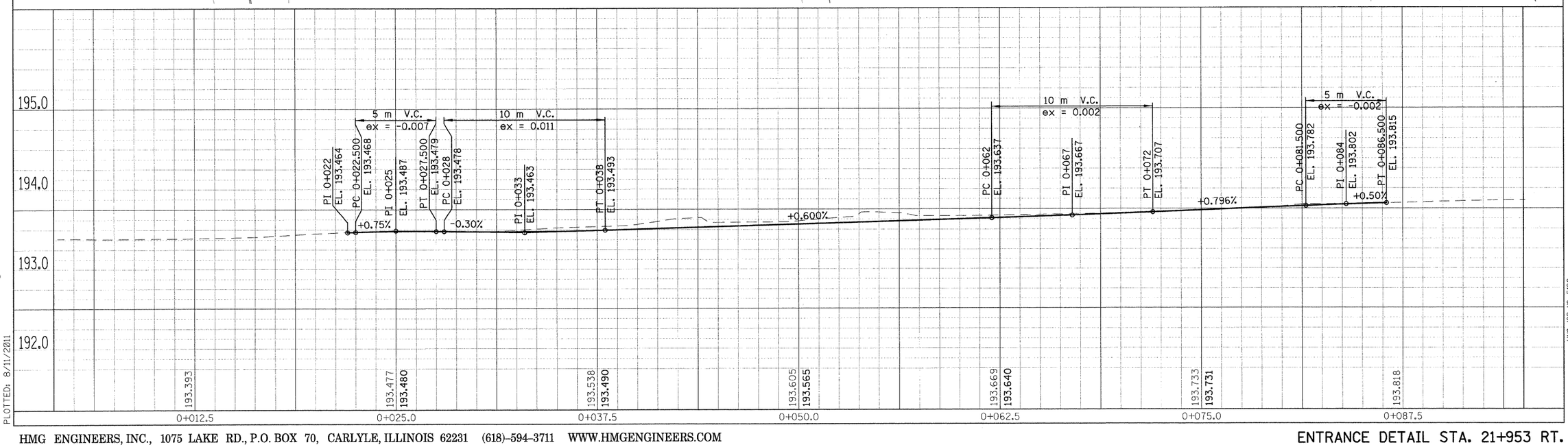
HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

DETAIL SE CORNER ORANGE STREET AND IL 47

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	678
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





FILE: 678DET_SHT_STA21+950.dgn
PLOTTED: 8/11/2011

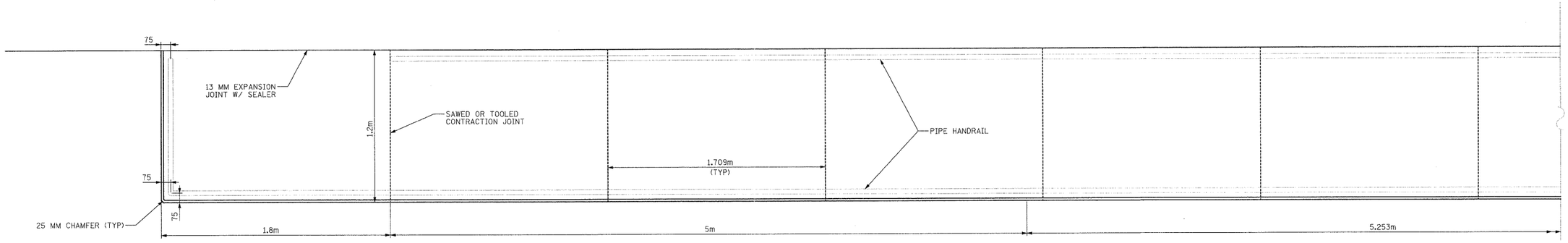
HMG JOB NO. 5122

HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

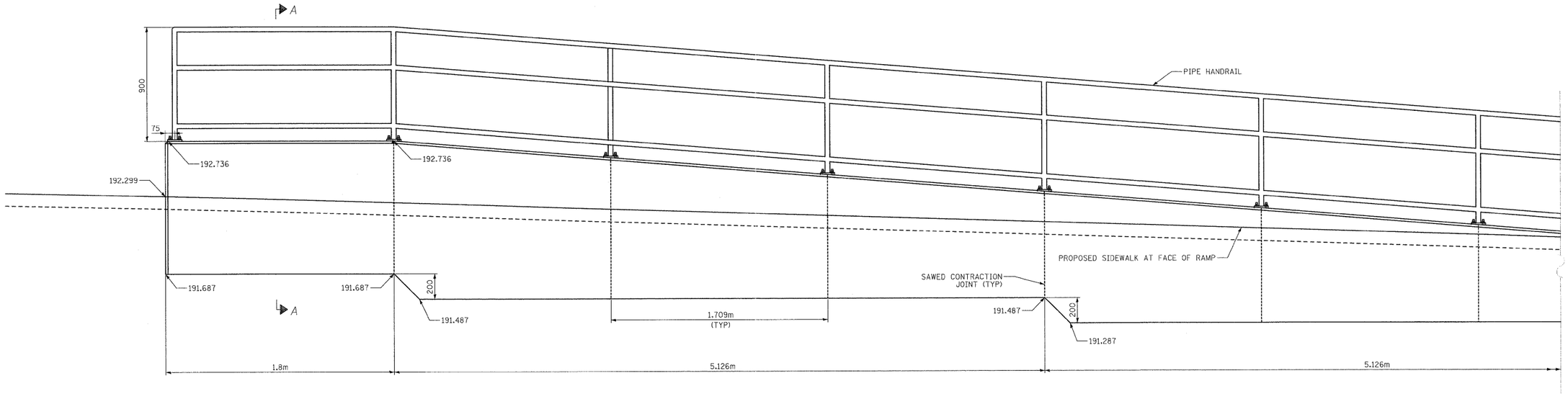
ENTRANCE DETAIL STA. 21+953 RT.

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	679
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



PLAN



ELEVATION

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ACCESS RAMP #1
PLAN AND ELEVATION
(1 OF 2)

DRAWN BY
DATE CHECKED BY

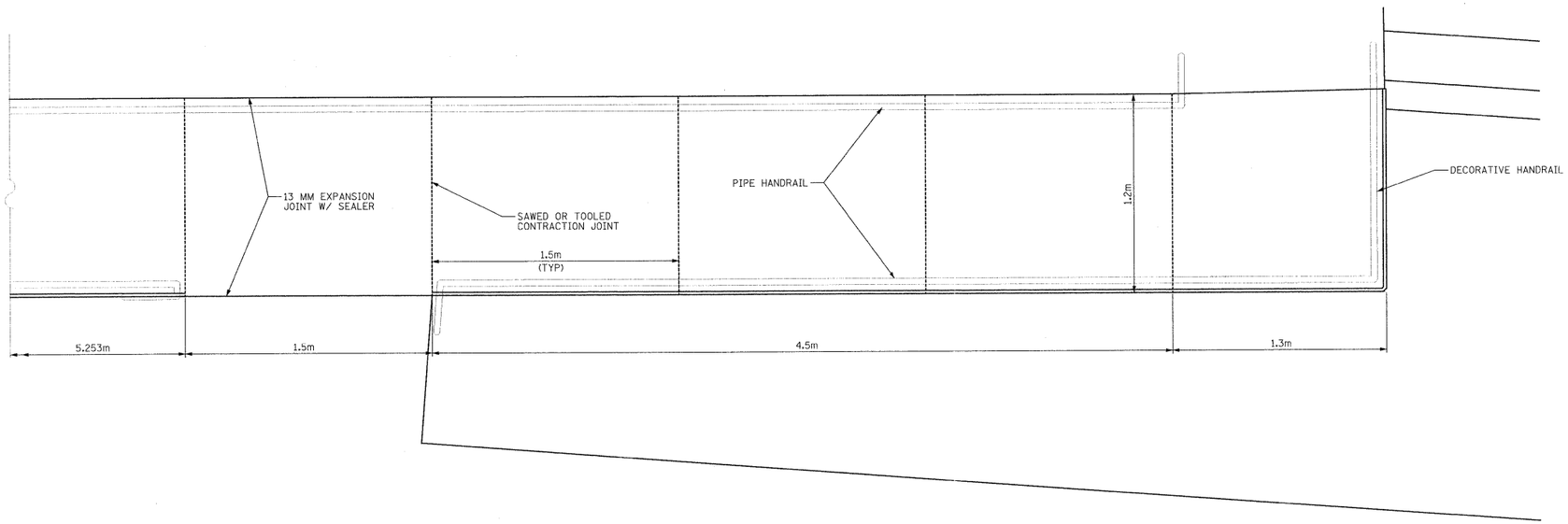
HMG JOB NO. 5122

FILE: 679-688DET_SHT_downtown details.dgn
PLOTTED: 8/11/2011

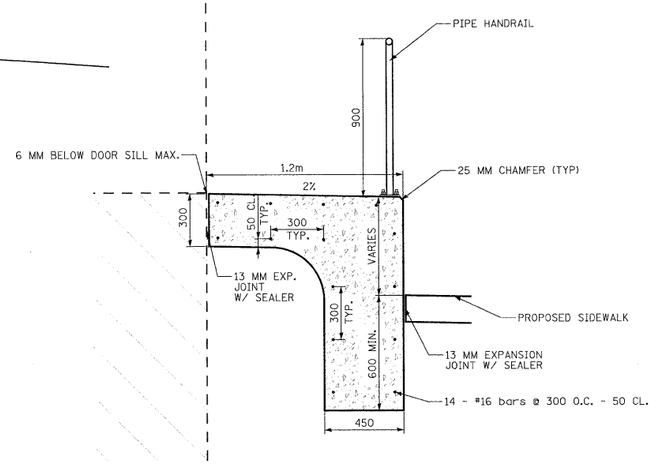
HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

CONTRACT NO. 66671

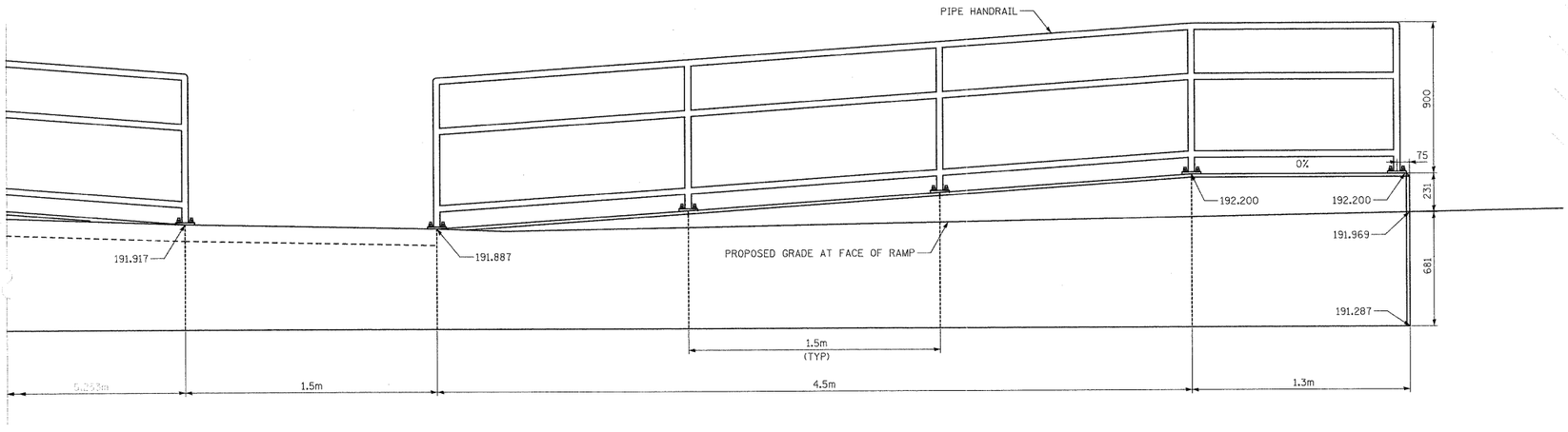
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	680
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



PLAN



SECTION A-A



ELEVATION

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ACCESS RAMP #1
PLAN, ELEVATION AND SECTION
(2 OF 2)

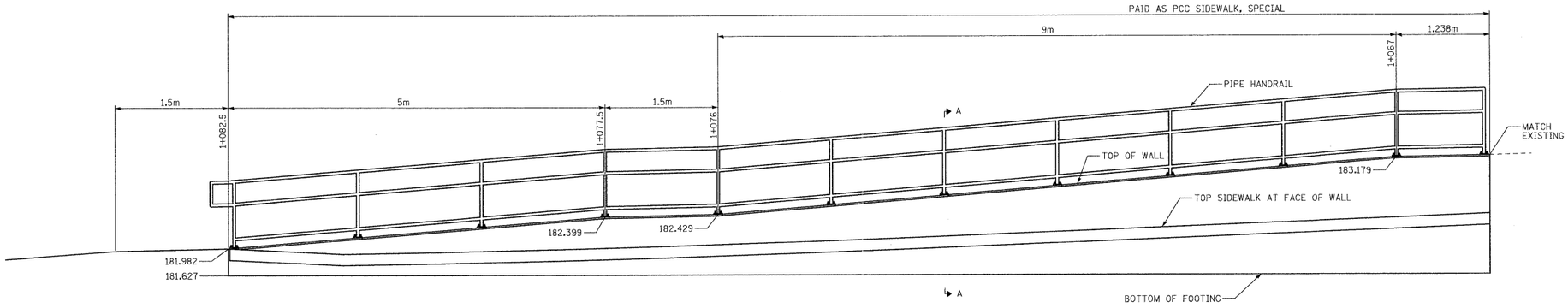
DRAWN BY
DATE CHECKED BY

HMG JOB NO. 5122

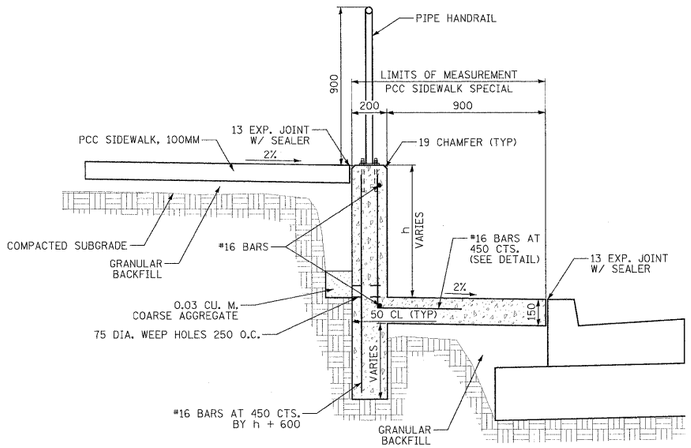
FILE: 679-688DET_SHT_downtown details.dgn
PLOTTED: 8/11/2011

CONTRACT NO. 66671

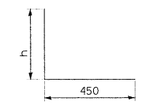
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	681
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



ELEVATION



SECTION A-A



BENT BAR DETAIL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

VAN EMMON STREET
ELEVATED SIDEWALK DETAILS

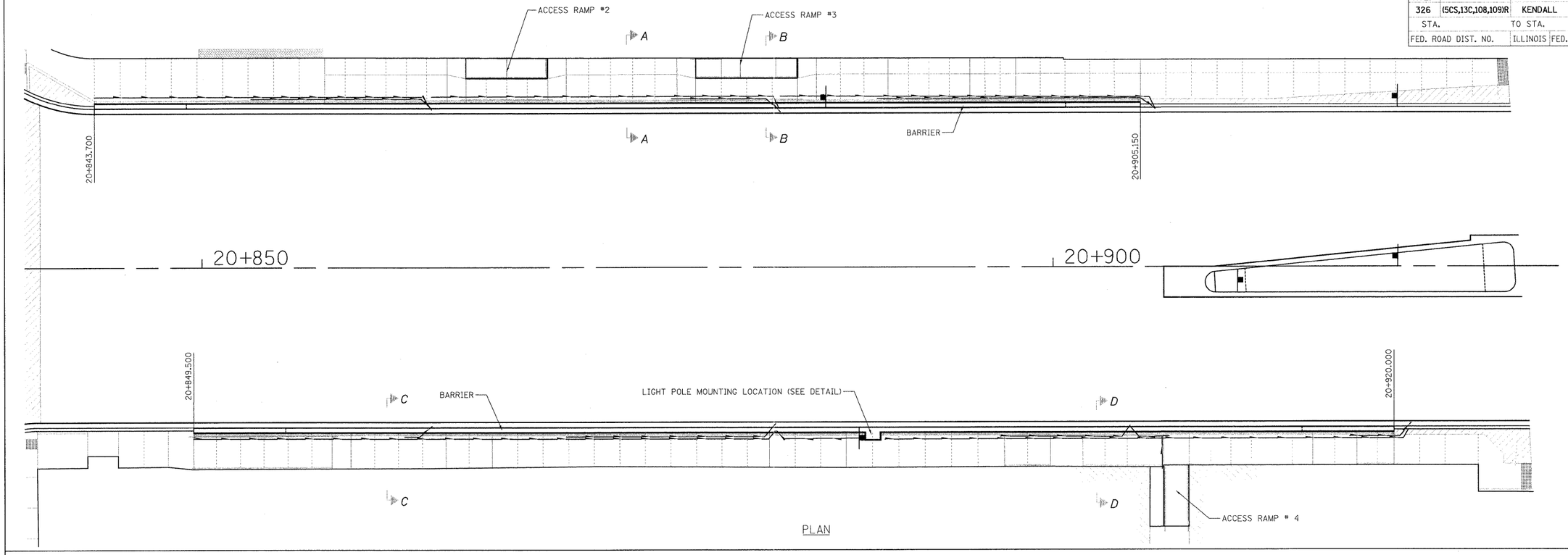
DRAWN BY
DATE CHECKED BY

HMG JOB NO. 5122

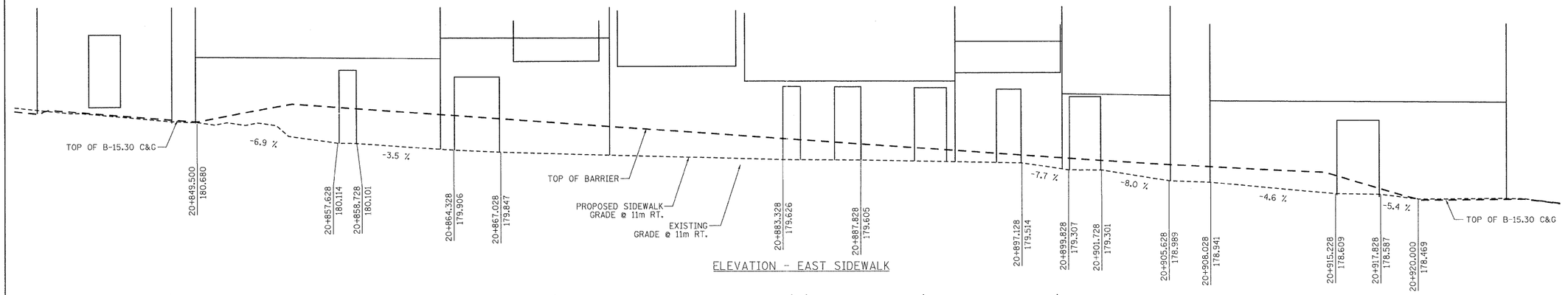
FILE: 679-688DET_SHT_downtown details.dgn
PLOTTED: 8/11/2011

CONTRACT NO. 66671

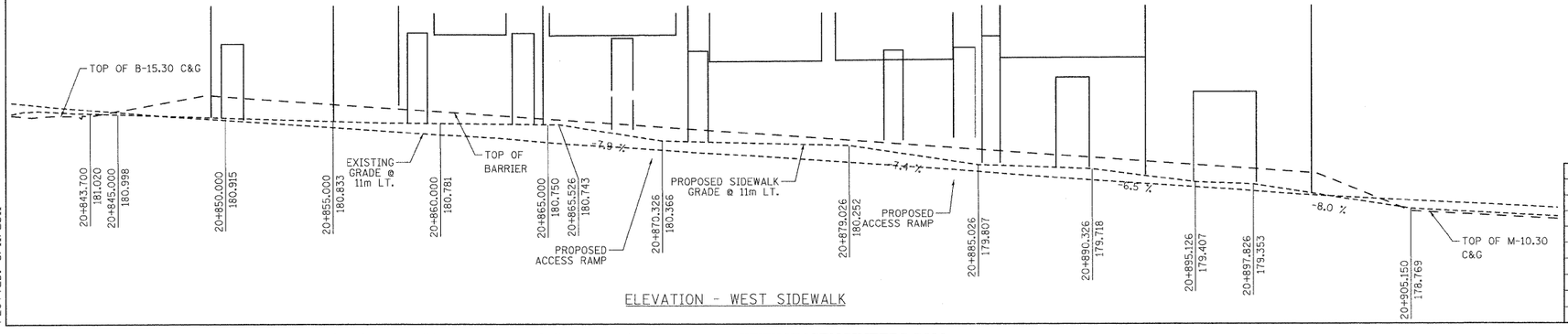
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	682
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



PLAN



ELEVATION - EAST SIDEWALK



ELEVATION - WEST SIDEWALK

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DOWNTOWN DETAILS

PLAN AND ELEVATIONS

DRAWN BY

DATE CHECKED BY

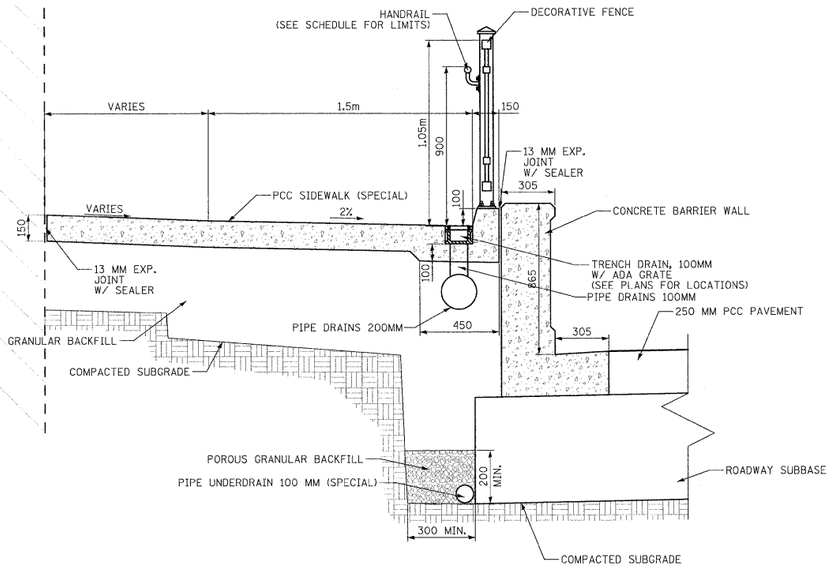
HMG JOB NO. 5122

FILE: 679-689DET_SHT_downtown details.dgn
PLOTTED: 8/11/2011

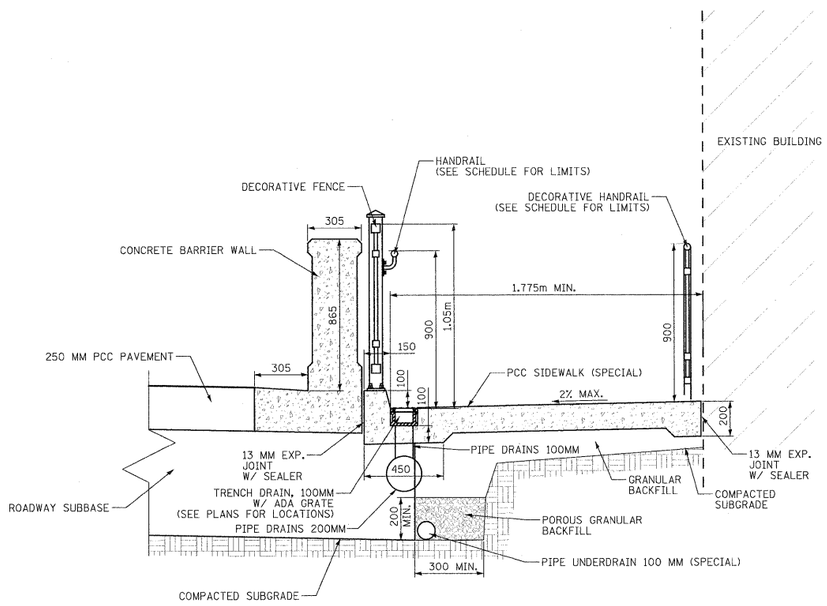
HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

CONTRACT NO. 66671

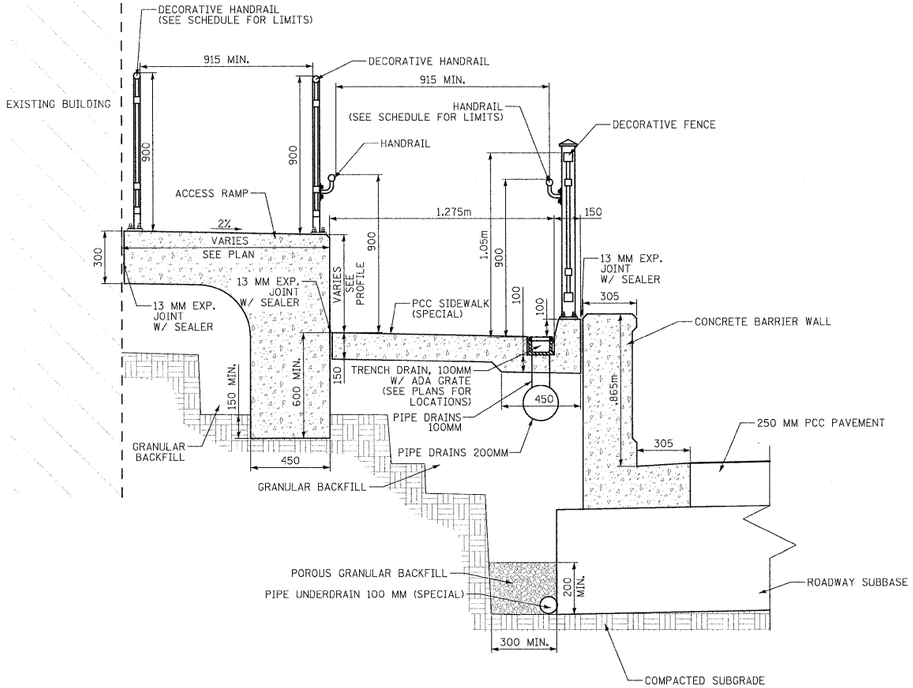
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	683
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



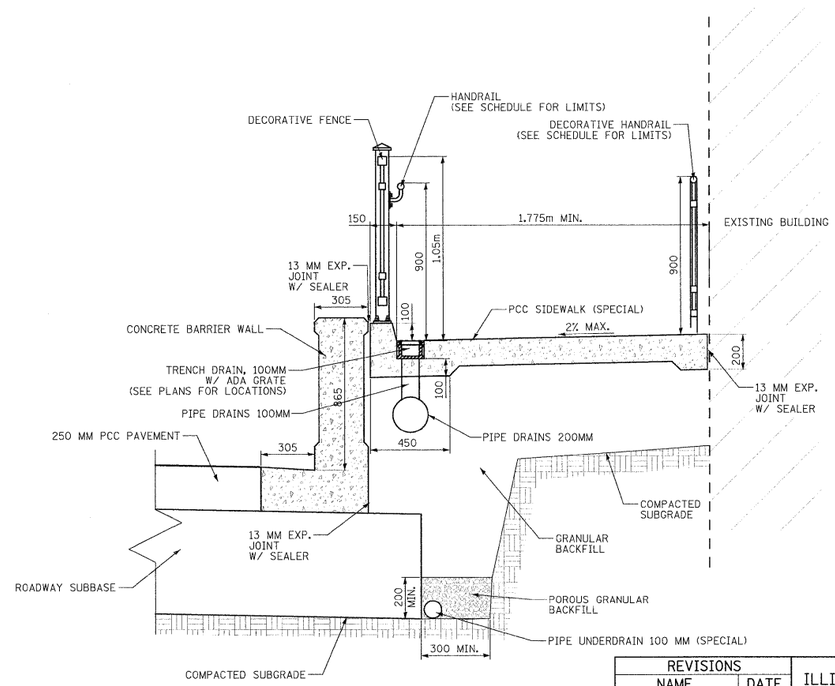
SECTION A-A



SECTION C-C



SECTION B-B



SECTION D-D

PIPE DRAINS SHALL BE INSTALLED AT A MINIMUM 2% SLOPE TO THE NEAREST DRAINAGE STRUCTURE. ALL FITTINGS REQUIRED TO COMPLETE INSTALLATION SHALL BE INCLUDED IN THE COST OF PIPE DRAINS.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DOWNTOWN DETAILS
SECTIONS

DRAWN BY

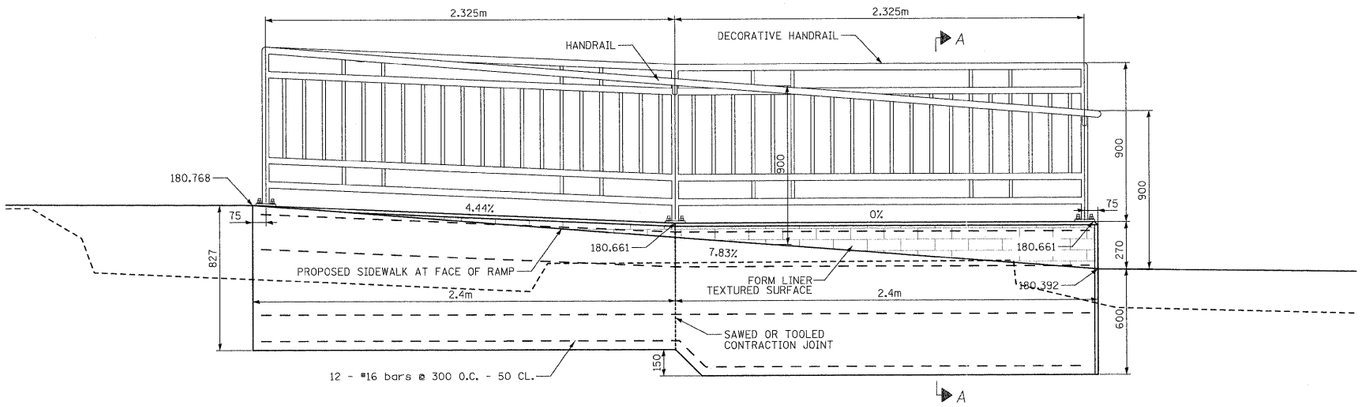
DATE CHECKED BY

HMG JOB NO. 5122

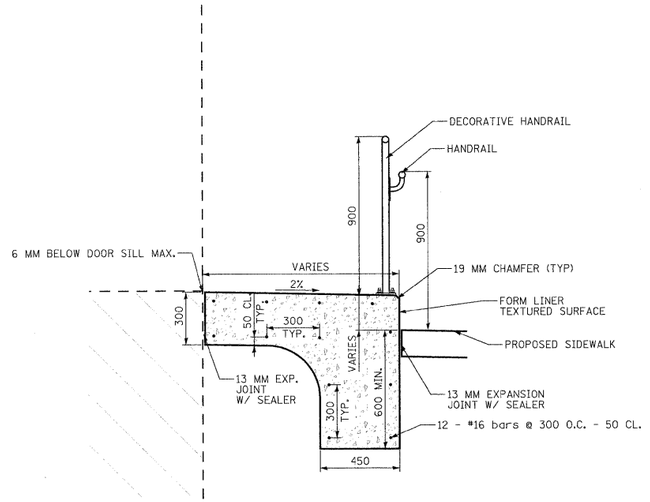
FILE: 679-688DET_SHT_downtown details.dgn
PLOTTED: 8/11/2011

CONTRACT NO. 66671

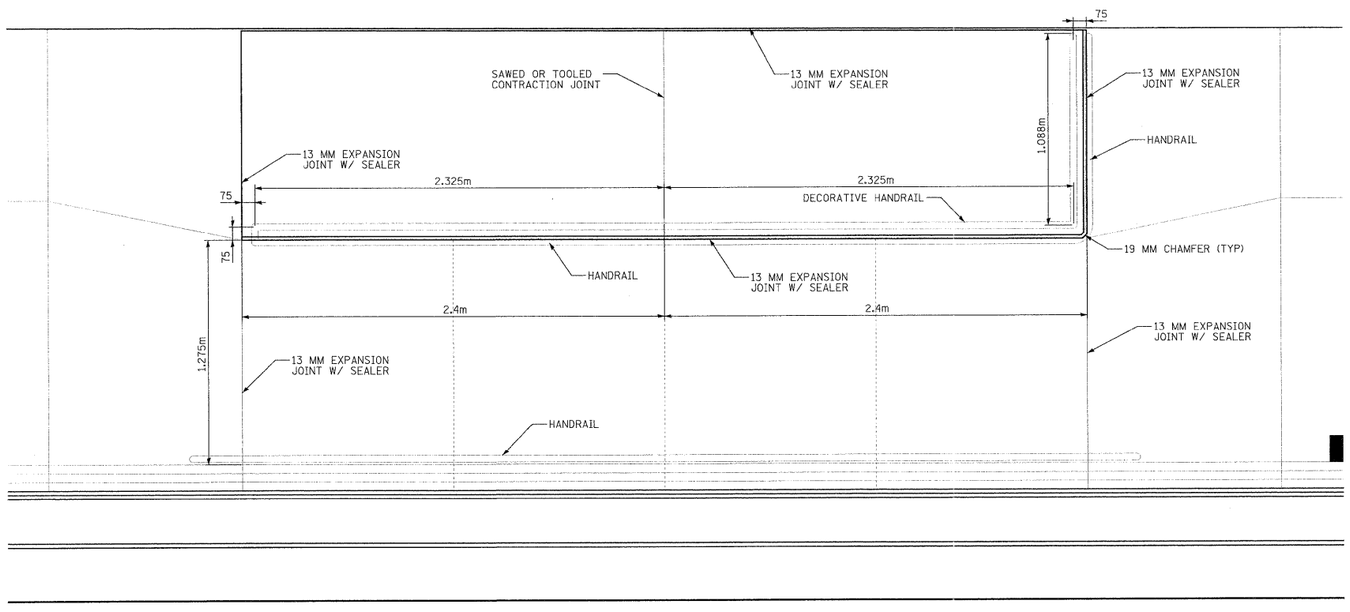
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	684
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



ELEVATION



SECTION A-A



PLAN

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ACCESS RAMP #2
DETAILS

DRAWN BY

DATE CHECKED BY

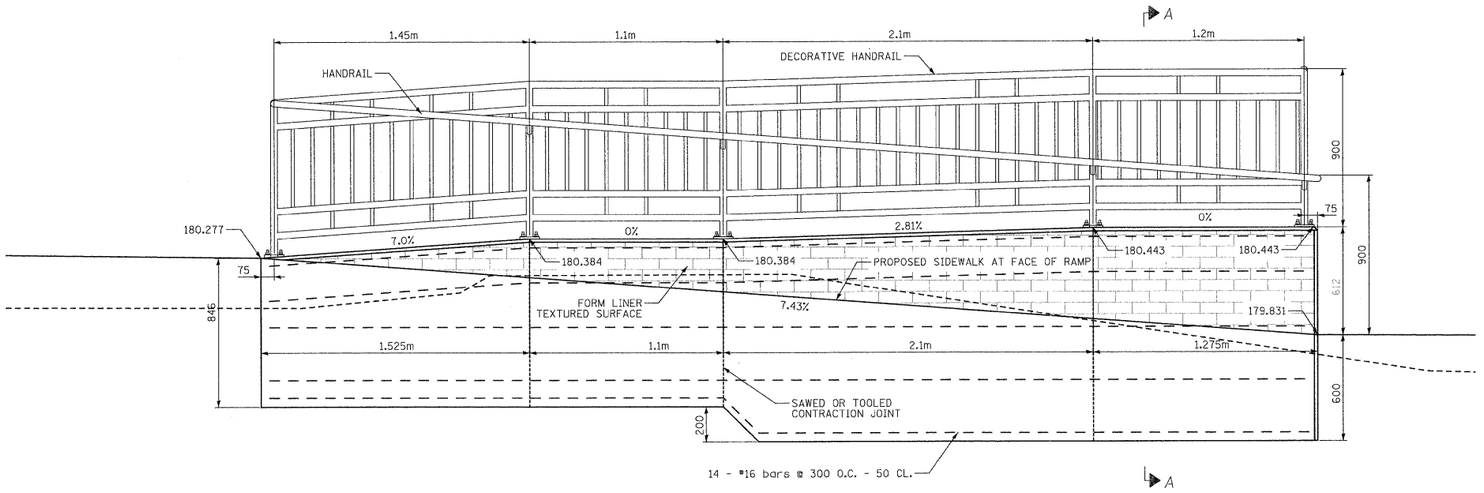
HMG JOB NO. 5122

FILE: 679-688DET_SHT_downtown details.dgn
PLOTTED: 8/11/2011

HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	685
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



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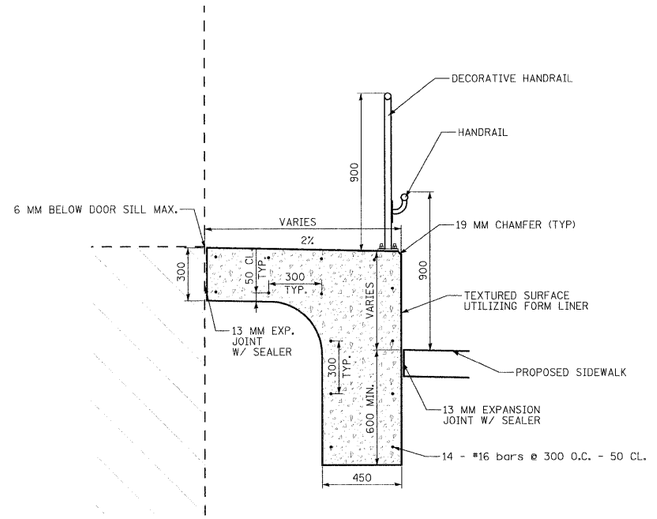
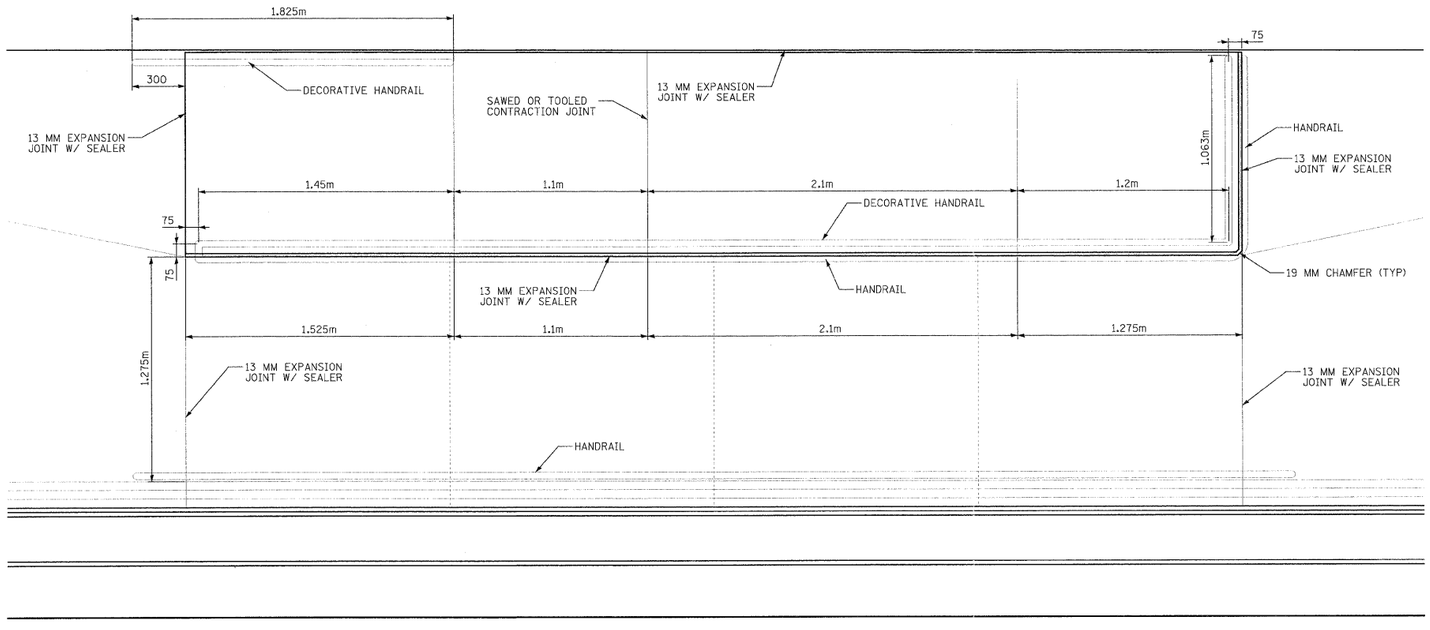


SECTION A-A



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ACCESS RAMP #3
DETAILS

DRAWN BY

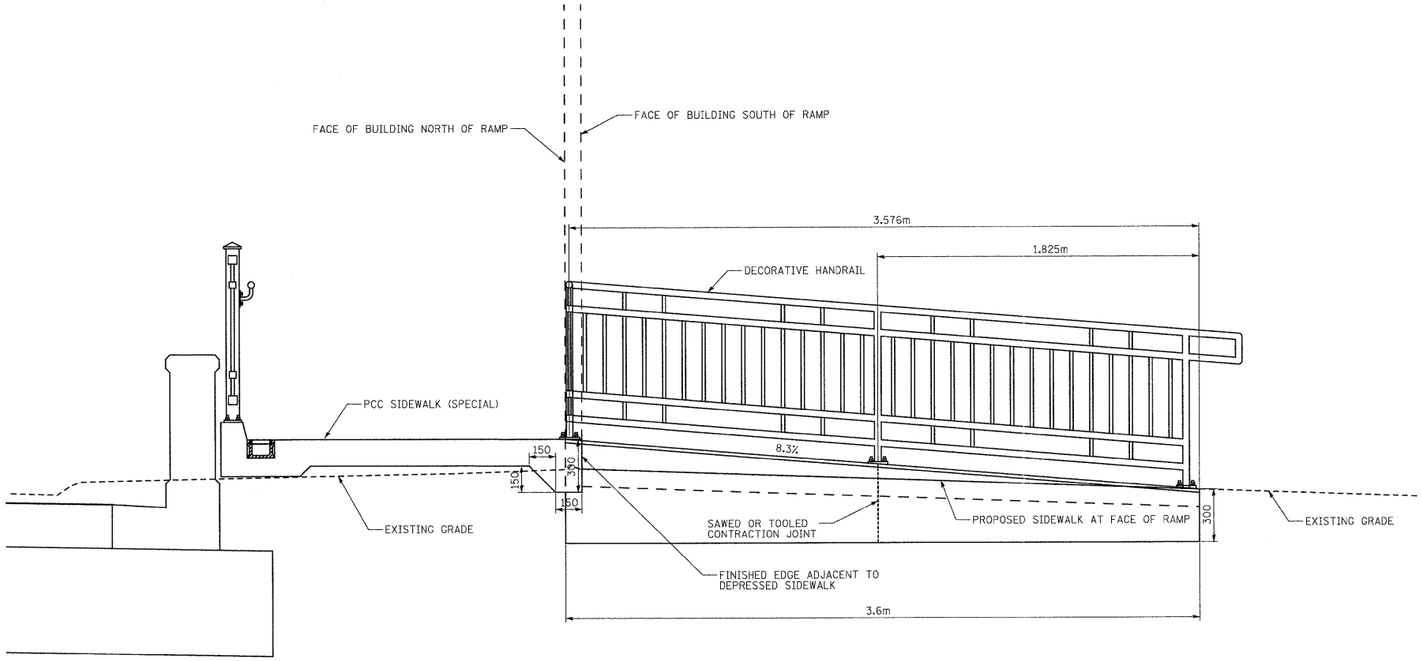
DATE CHECKED BY

HMG JOB NO. 5122

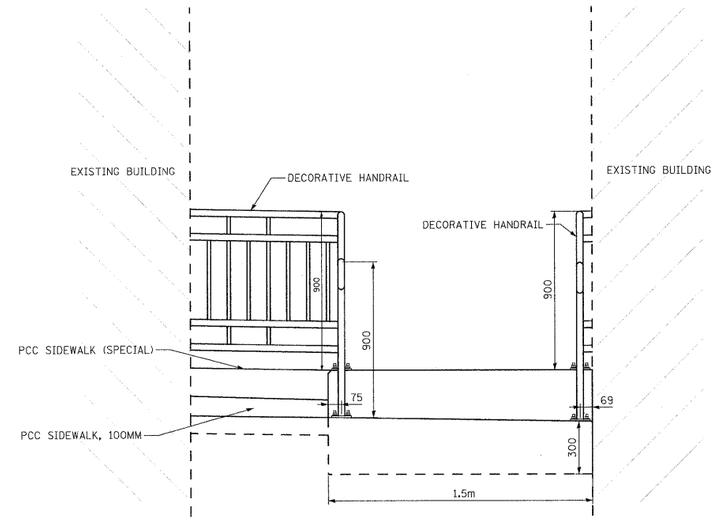
FILE: 679-688DET_SHT_downtown details.dgn
PLOTTED: 8/11/2011

CONTRACT NO. 66671

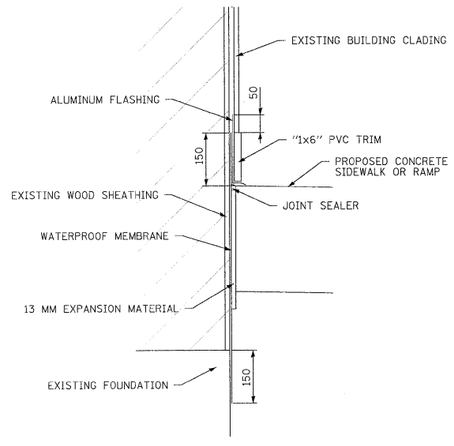
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	686
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



SIDE ELEVATION



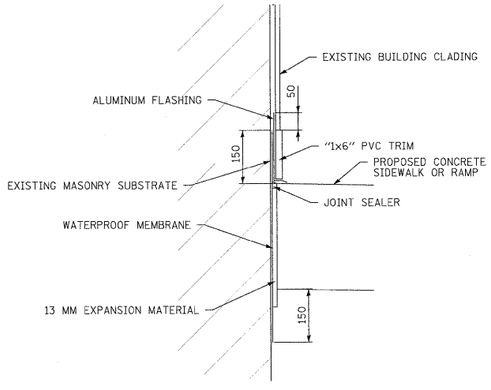
FRONT ELEVATION



FRAME CONSTRUCTION

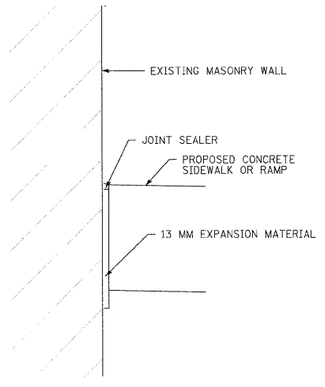
NOTES:

1. CUT AND REMOVE EXISTING CLADDING AS NEEDED TO INSTALL FLASHING AND TRIM.
2. JOINT BETWEEN EXISTING CLADDING AND NEW TRIM SHALL BE SEALED WITH A PAINTABLE, ACRYLIC CAULK DESIGNED FOR EXTERIOR APPLICATIONS.
3. SEE SPECIAL PROVISIONS FOR MORE DETAILED INFORMATION ON ACCEPTABLE MATERIALS.

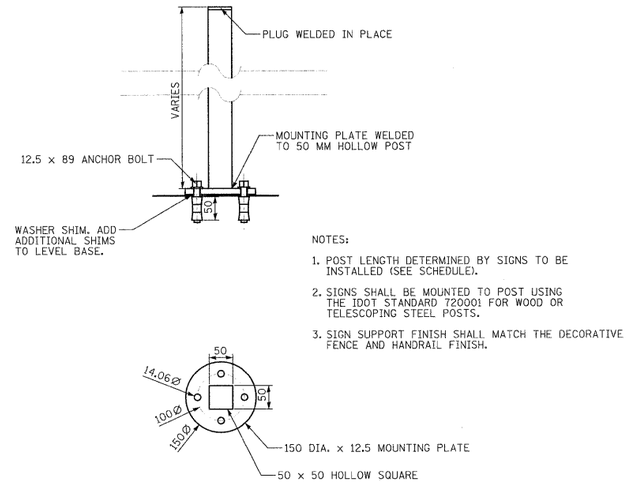


MASONRY CONSTRUCTION
W/ CLADDING

FLASHING DETAIL FOR PROPOSED CONCRETE IN CONTACT WITH BUILDING FACE
(INCUDED IN COST OF THE CONCRETE ITEM)



MASONRY CONSTRUCTION



NOTES:

1. POST LENGTH DETERMINED BY SIGNS TO BE INSTALLED (SEE SCHEDULE).
2. SIGNS SHALL BE MOUNTED TO POST USING THE IDOT STANDARD 720001 FOR WOOD OR TELESCOPING STEEL POSTS.
3. SIGN SUPPORT FINISH SHALL MATCH THE DECORATIVE FENCE AND HANDRAIL FINISH.

STEEL SIGN SUPPORT, SPECIAL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ACCESS RAMP #4
BUILDING FLASHING AND
STEEL SIGN SUPPORT, SPECIAL
DETAILS

DRAWN BY

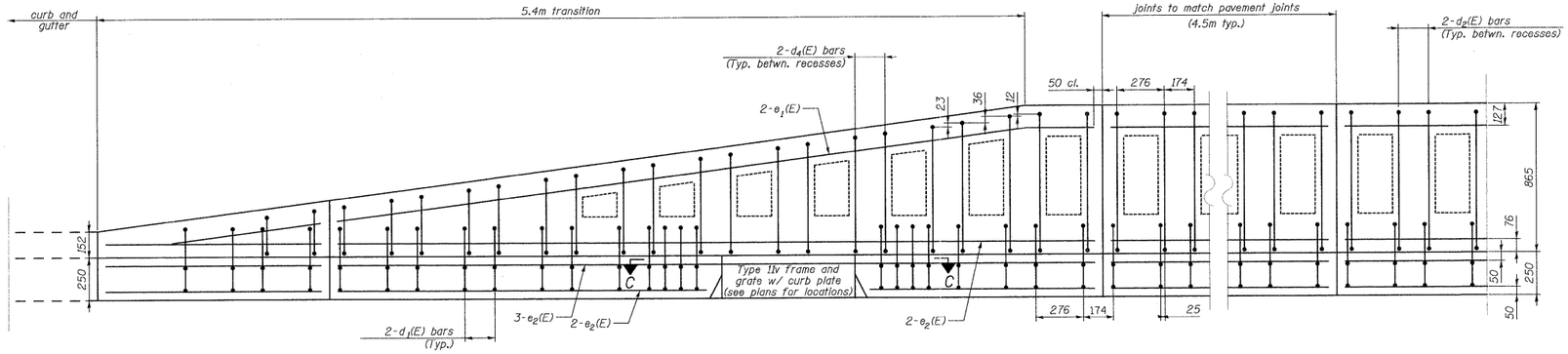
DATE CHECKED BY

HMG JOB NO. 5122

FILE: 679-688DET_SHT_downtown details.dgn
PLOTTED: 8/11/2011

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	687
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL REINFORCEMENT PLACEMENT

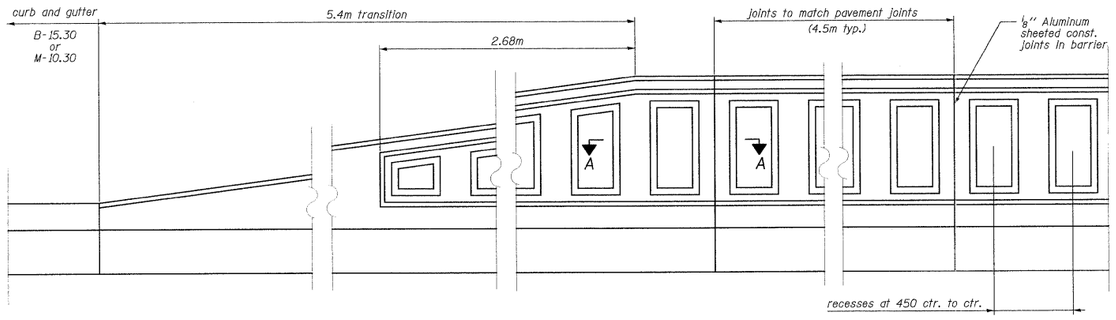
Notes:

All concrete for barrier wall shall be Class BS according to Article 1020.04 of the Standard Specifications. Surface of barrier shall receive a rubbed finish according to Article 503.15(b) of the Standard Specifications.

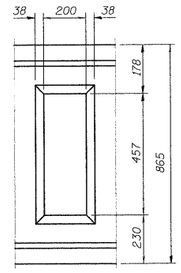
All parts of the barrier including concrete and reinforcing will be paid for at the contract unit price per foot for Concrete Barrier Wall (Special).

Holes and recesses must be formed or cored. Drilling is not permitted.

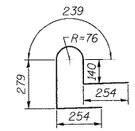
Aluminum sheets shall be according to ASTM B209 alloy 3003-H14.



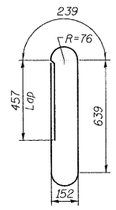
ELEVATION



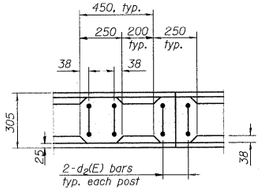
RECESS DETAIL



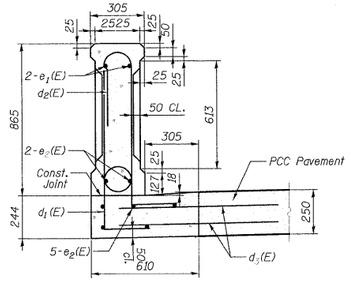
BAR $d_1(E)$



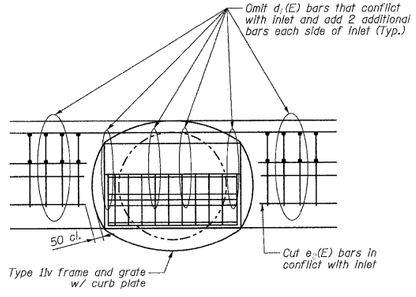
BAR $d_2(E)$



SECTION A-A



SECTION B-B



SECTION C-C

Reinforcement modifications at inlets

BAR LIST

Bar	Size	Length	Shape
$d_1(E)$	#16	1.166m	
$d_2(E)$	#16	2.213m	
$d_3(E)$	#19	750	
$d_4(E)$	#16	varies	
$e_1(E)$	#22	4.4m	
$e_2(E)$	#16	4.4m	

*Length of bar $d_3(E)$ varies as shown on the plan.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DOWNTOWN DETAILS
CONCRETE BARRIER WALL

DRAWN BY
DATE CHECKED BY

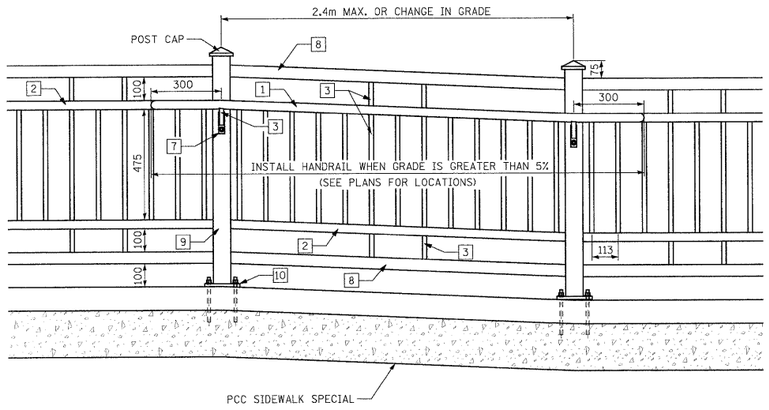
HMG JOB NO. 5122

FILE: 679-688DET_SHT_downtown details.dgn
PLOTTED: 8/11/2011

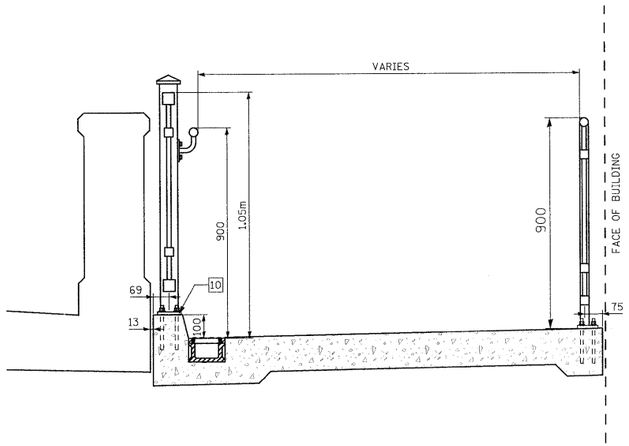
HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

CONTRACT NO. 66671

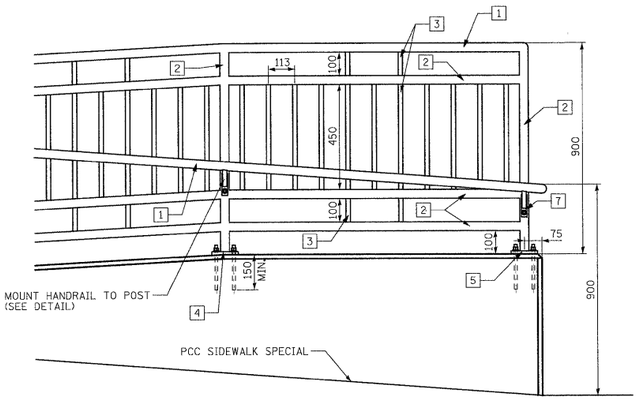
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	688
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



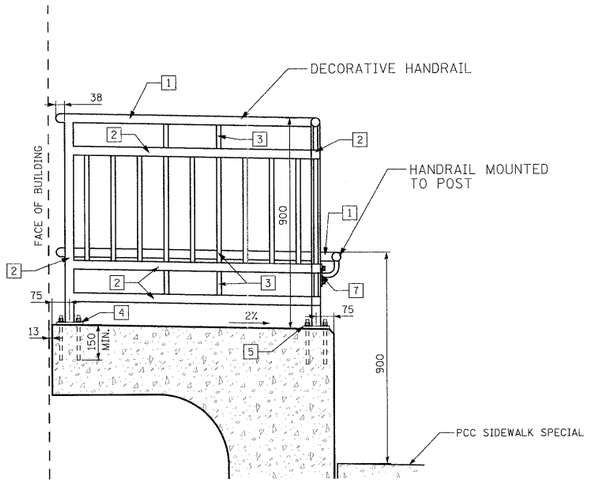
ELEVATION
DECORATIVE FENCE



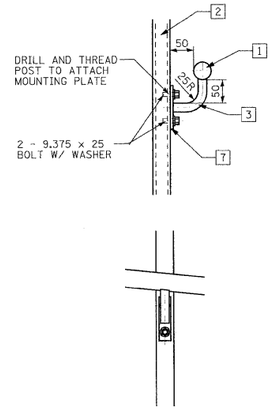
SECTION
DECORATIVE FENCE AND HANDRAIL

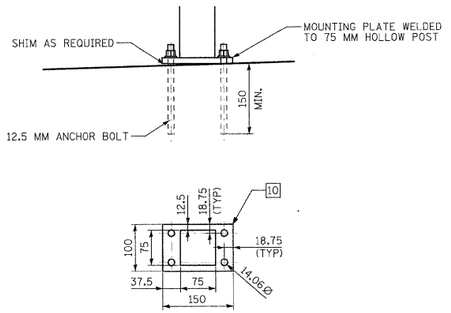


FRONT ELEVATION
DECORATIVE HANDRAIL

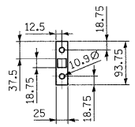


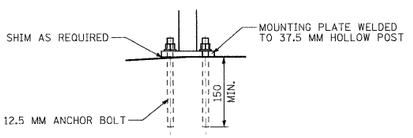
SIDE ELVATION
DECORATIVE HANDRAIL



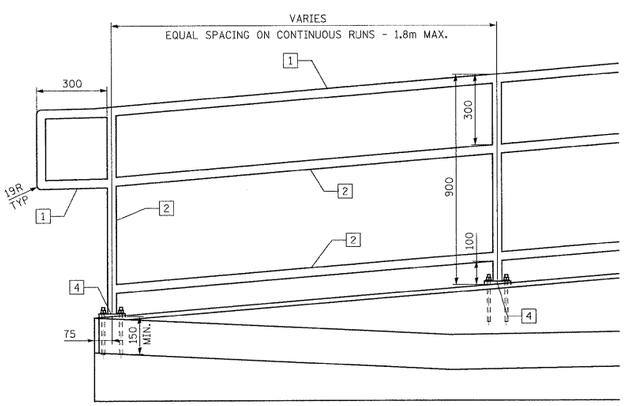


FENCE POST MOUNTING DETAIL

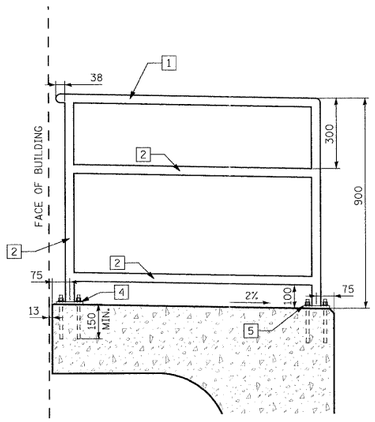




HANDRAIL BRACKET DETAILS

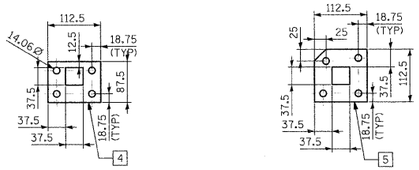


PIPE HANDRAIL



SIDE ELVATION
PIPE HANDRAIL

1	37.5 MM HOLLOW ROUND
2	37.5 MM HOLLOW SQUARE
3	18.75 x 18.75 SOLID SQUARE
4	112.5 x 87.5 x 12.5 MOUNTING PLATE
5	112.5 x 112.5 x 12.5 MOUNTING PLATE
7	93.75 x 25 x 6.25 MOUNTING PLATE
8	50 MM HOLLOW SQUARE
9	75 MM HOLLOW SQUARE
10	150 x 100 x 12.5 MOUNTING PLATE



HANDRAIL POST MOUNTING DETAILS

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DECORATIVE
FENCE AND HANDRAIL
DETAILS

DRAWN BY

DATE CHECKED BY

HMG JOB NO. 5122

FILE: 679-688DET_SHT_downtown details.dgn
PLOTTED: 8/11/2011

HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

CONTRACT NO. 66671

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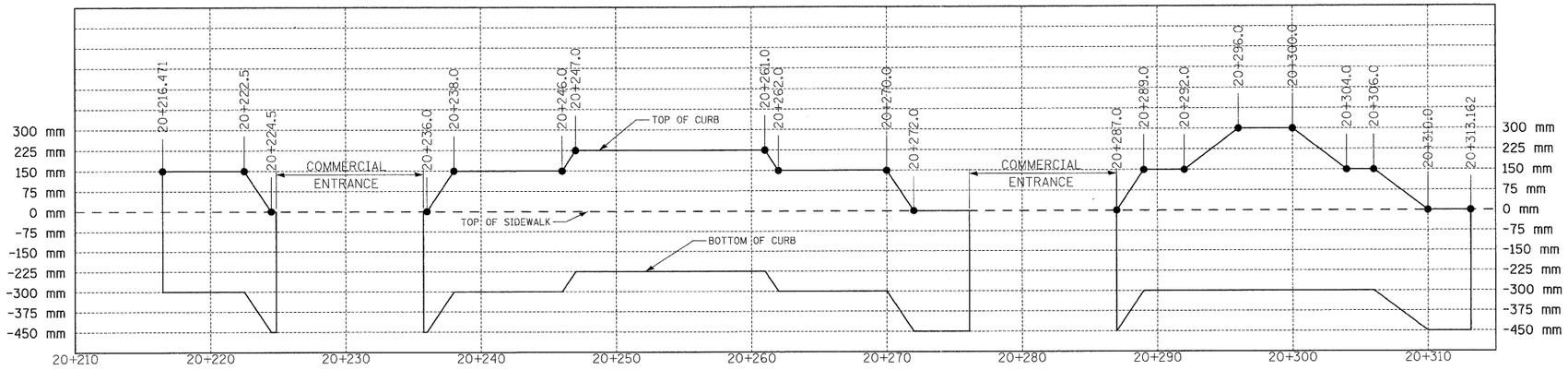
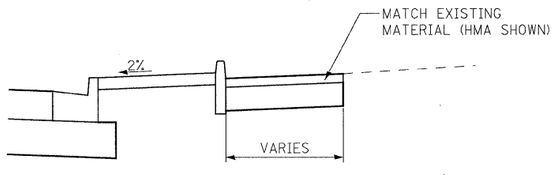
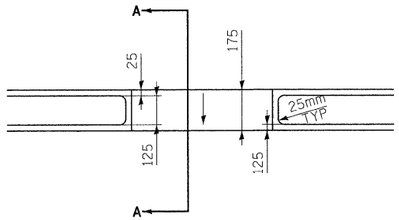
326	(5CS,13C,108,109)R	KENDALL	931	689
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



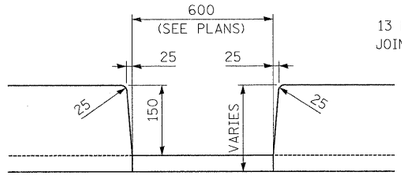
TYPE B CURB HEIGHT ABOVE BACK OF SIDEWALK



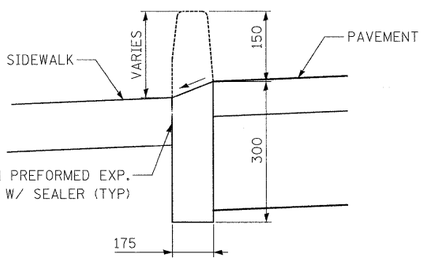
TYPE B CURB (SPECIAL)
STATION 20+216.471 TO 20+313.162



PLAN

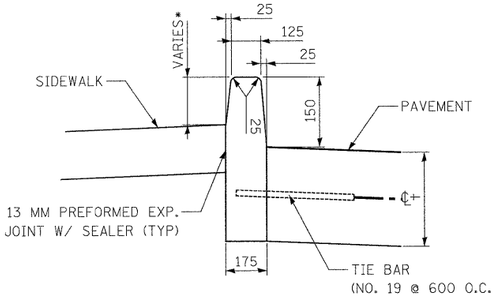


PROFILE



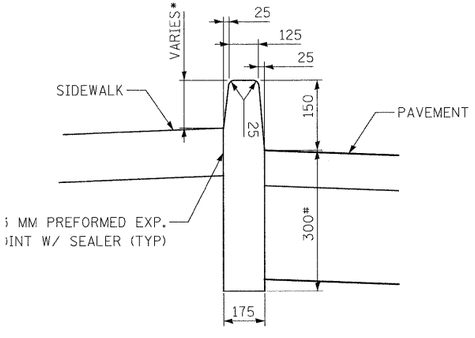
SECTION A-A

TYPE B CURB (SPECIAL)
CUT-OUT FOR DRAINAGE
STA. 20+246 RT. STA. 20+292 RT.
STA. 20+303 RT.



TYPE B CURB (SPECIAL)
ADJACENT TO P.C.C. PAVEMENT

* SEE PROFILE FOR CURB HEIGHT



TYPE B CURB (SPECIAL)
ADJACENT TO HOT-MIX ASPHALT PAVEMENT

* FOR EXPOSED HEIGHT OVER 225mm
INCREASE BURIED LENGTH TO 450mm
* SEE PROFILE FOR CURB HEIGHT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPE B CURB DETAILS

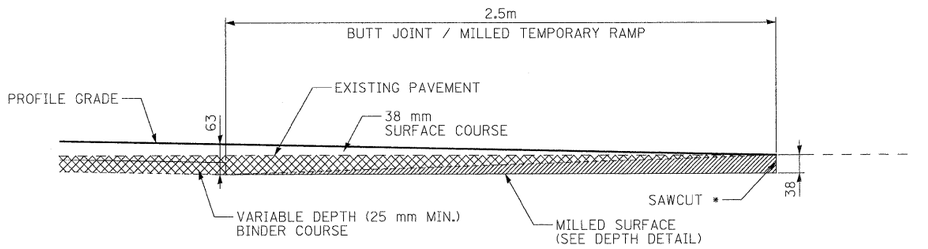
DRAWN BY
DATE CHECKED BY

HMG JOB NO. 5122

FILE: 689 DET_SHT_TYPE_B_CURB.dgn
PLOTTED: 8/11/2011

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	690
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

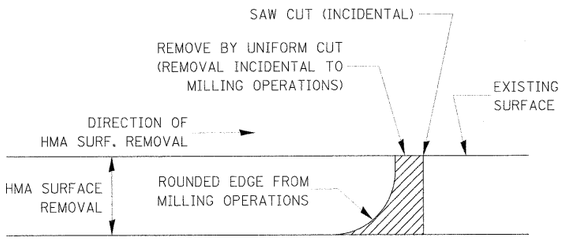


* INCLUDED IN COST OF BUTT JOINT

PAVEMENT REMOVED AS HMA SURFACE REMOVAL - VARIABLE DEPTH

PAVEMENT REMOVED AS HMA SURFACE REMOVAL - BUTT JOINT

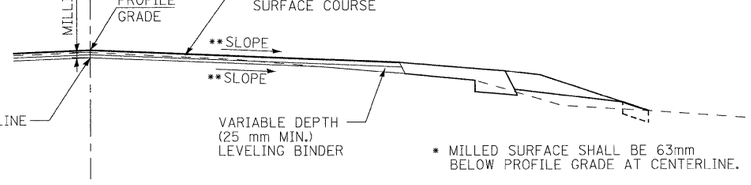
BUTT JOINT / MILLED TEMPORARY RAMP DETAIL



NOTE:

WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL

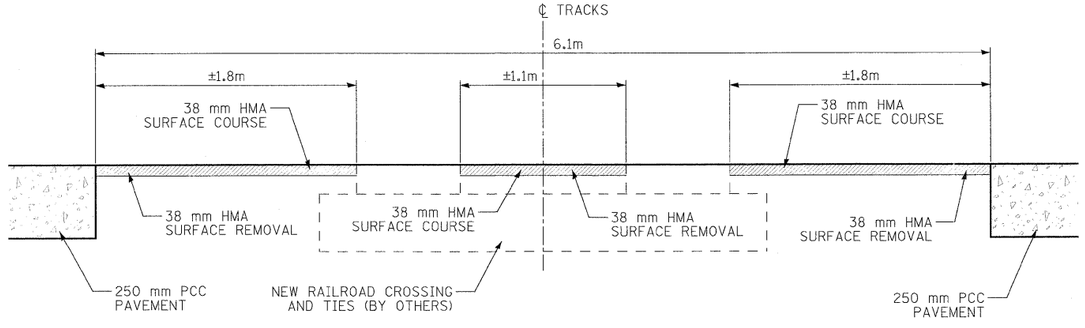
HMA DETAIL AT BUTT JOINTS



* MILLED SURFACE SHALL BE 63mm BELOW PROFILE GRADE AT CENTERLINE.

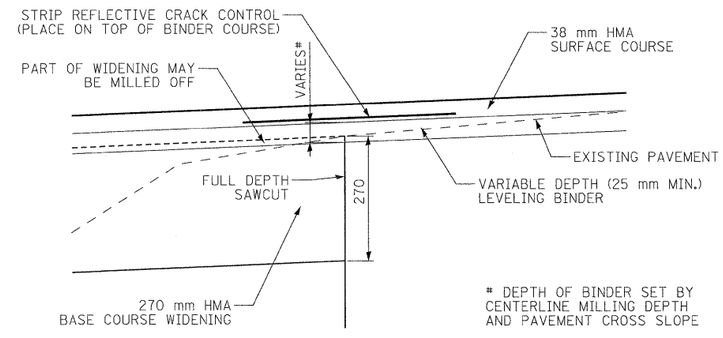
** SEE TYPICAL SECTIONS FOR SLOPE

HMA SURFACE REMOVAL AND OVERLAY DETAIL



HMA SURFACE REMOVAL AND OVERLAY AT RAILROAD CROSSING

SURFACE REMOVAL AT RAILROAD CROSSING SHALL BE PAID FOR AS HMA SURFACE REMOVAL - BUTT JOINT



DEPTH OF BINDER SET BY CENTERLINE MILLING DEPTH AND PAVEMENT CROSS SLOPE

HMA SURFACE REMOVAL AND OVERLAY DETAIL AT BASE COURSE WIDENING

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT DETAILS

DRAWN BY

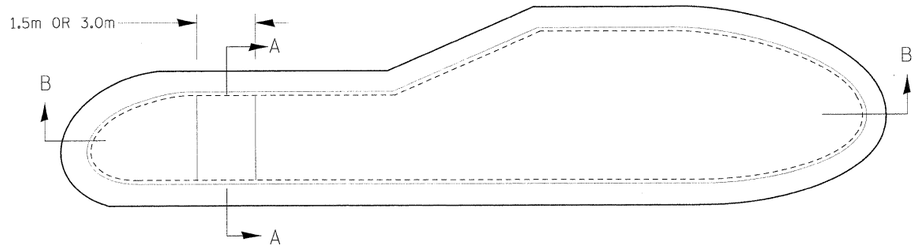
DATE CHECKED BY

HMG JOB NO. 5122

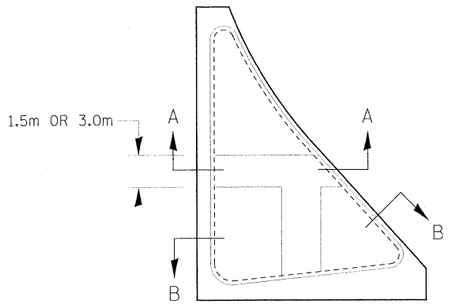
FILE: 690-691DET_SHT_pavement.dgn
PLOTTED: 8/11/2011

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	691
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



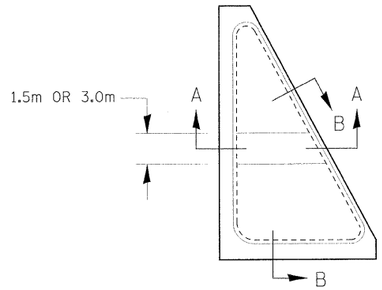
CONCRETE MEDIAN



INTERMEDIATE ISLAND

(FOR RIGHT TURN LANE DESIGN)

PAID AS CONCRETE ISLAND (SPECIAL)



SMALL ISLAND

(FOR TYPICAL DESIGN)

PAID AS CONCRETE ISLAND (SPECIAL)

GENERAL NOTES

ALL DIMENSIONS ARE MILLIMETERS UNLESS OTHERWISE NOTED.

SEE STANDARD 606301 AND PLAN SHEETS FOR STATION, OFFSETS, RADII, DIMENSIONS, AND DETAILS NOT SHOWN.

THE SIDEWALK SHOULD DRAIN TO THE LOW SIDE OF THE ISLAND. IF NECESSARY THE SIDEWALK SHALL BE SLOPED TO DRAIN AT A MAXIMUM 2% GRADE.

SEE THE PLAN GENERAL NOTES FOR THE TYPE OF CURB AND GUTTER TO BE USED ON ISLANDS.

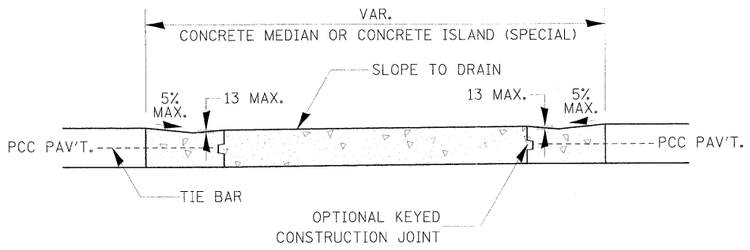
THE SIDEWALK SHOULD NOT BE CLOSER THAN 900 FROM THE CORNER OF THE ISLAND.

300 x 300 SIGN BLOCKOUTS SHALL BE PROVIDED IN ISLANDS AND MEDIAN AS REQUIRED.

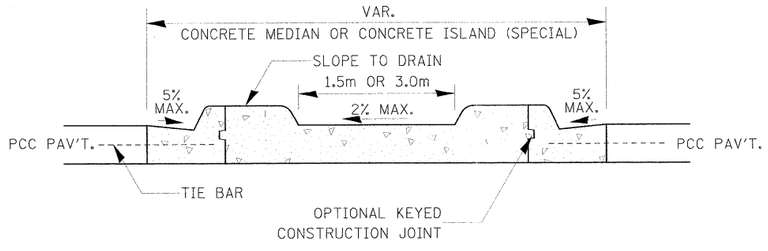
KEYED LONGITUDINAL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED WITHOUT TIE BARS.

LOCATIONS, LAYOUTS, AND WIDTHS OF THE FLUSH SIDEWALK AREA, SHALL BE DETERMINED BY THE DESIGNER AND SHOWN ON THE PLANS.

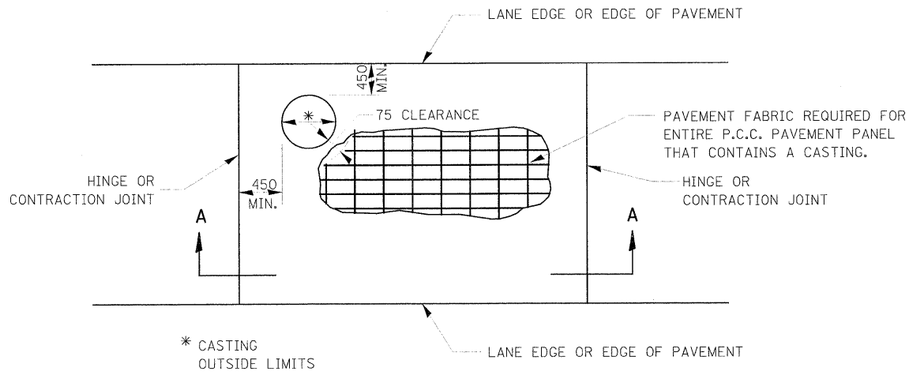
THE SOLID CONCRETE MEDIANS AND INTERMEDIATE AND SMALL ISLANDS WILL BE MEASURED FOR PAYMENT FROM E.O.P. TO E.O.P. , AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQ. YD. FOR CONCRETE MEDIAN OF THE TYPE SPECIFIED OR CONCRETE ISLAND (SPECIAL).

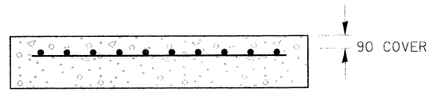


SECTION A-A



SECTION B-B





SECTION A-A

GENERAL NOTES

THE CASTING SHALL BE SET TO GRADE, ANCHORED, AND INCORPORATED INTO THE P.C.C. PAVEMENT CONSTRUCTION. SEPARATE PAVEMENT BLOCKOUTS WILL NOT BE ALLOWED.

SEE STD. 420701 FOR ADDITIONAL PAVEMENT FABRIC DETAILS.

PAVEMENT FABRIC WILL BE PAID FOR SEPARATELY. THE QUANTITY OF PAVEMENT FABRIC WILL BE THE COMPUTED SURFACE AREA OF THE P.C.C. PAVEMENT PANEL IN WHICH THE PAVEMENT FABRIC IS INSTALLED. NO DEDUCTION WILL BE MADE FOR THE CASTING AREA.

CASTINGS IN P.C.C. PAVEMENT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT DETAILS

DRAWN BY

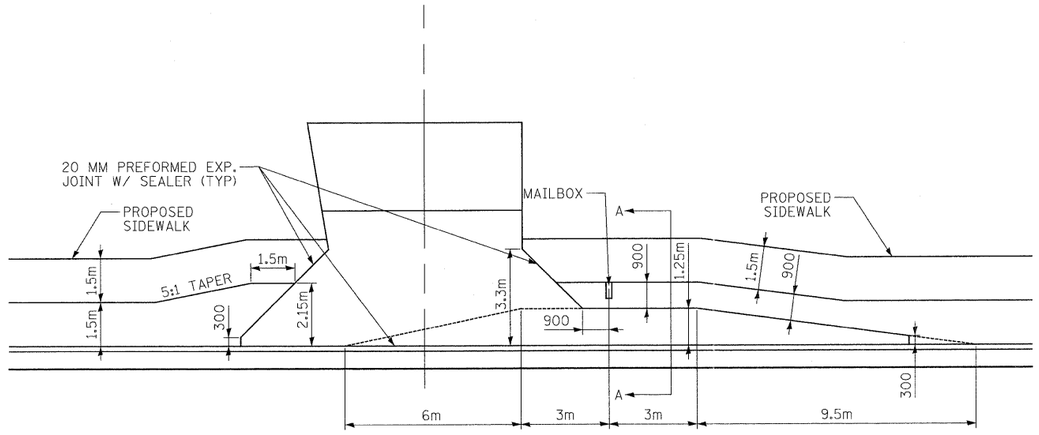
DATE CHECKED BY

HMG JOB NO. 5122

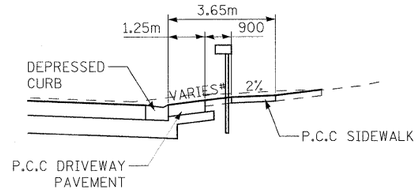
FILE: 630-691DET_SHT_pavement.dgn
PLOTTED: 8/11/2011

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	692
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



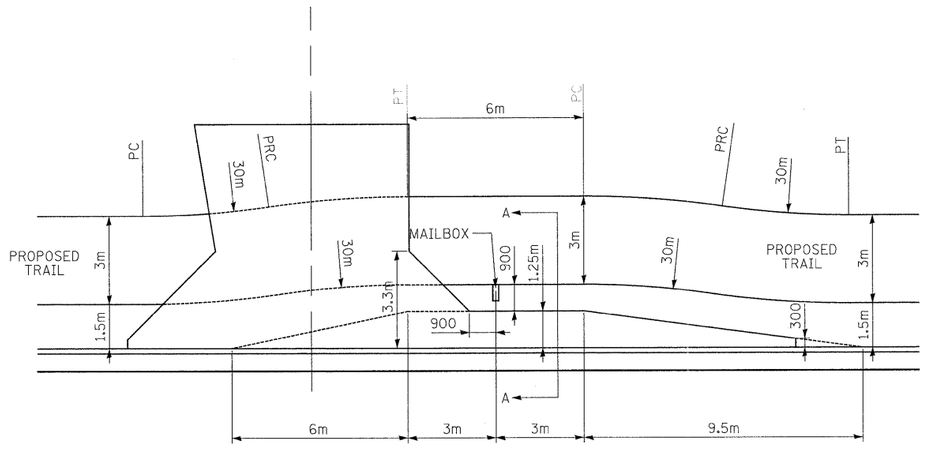
PLAN



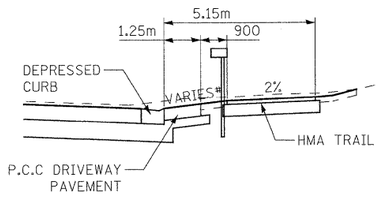
SECTION A-A

* MATCH ENTRANCE SLOPE

MAILBOX TURNOUT W/ SIDEWALK



PLAN



SECTION A-A

* MATCH ENTRANCE SLOPE

MAILBOX TURNOUT W/ TRAIL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MAILBOX TURNOUT DETAILS

DRAWN BY

DATE CHECKED BY

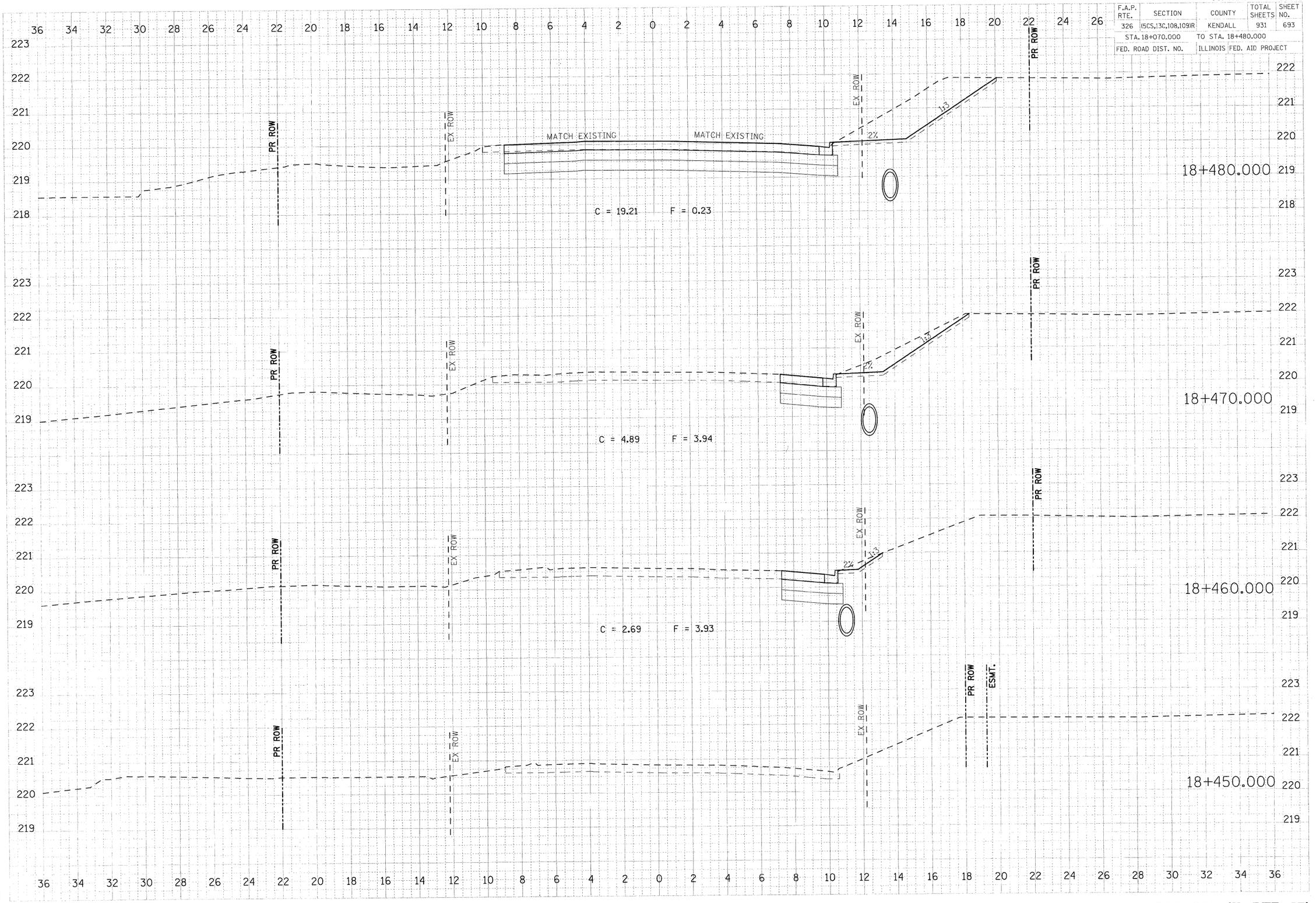
HMG JOB NO. 5122

FILE: 692DET_SHT_MAILBOX_TURNOUT.dgn
PLOTTED: 8/11/2011

HMG ENGINEERS, INC., 1075 LAKE RD., P.O. BOX 70, CARLYLE, ILLINOIS 62231 (618)-594-3711 WWW.HMGENGINEERS.COM

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	693
STA. 18+070.000		TO STA. 18+480.000		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



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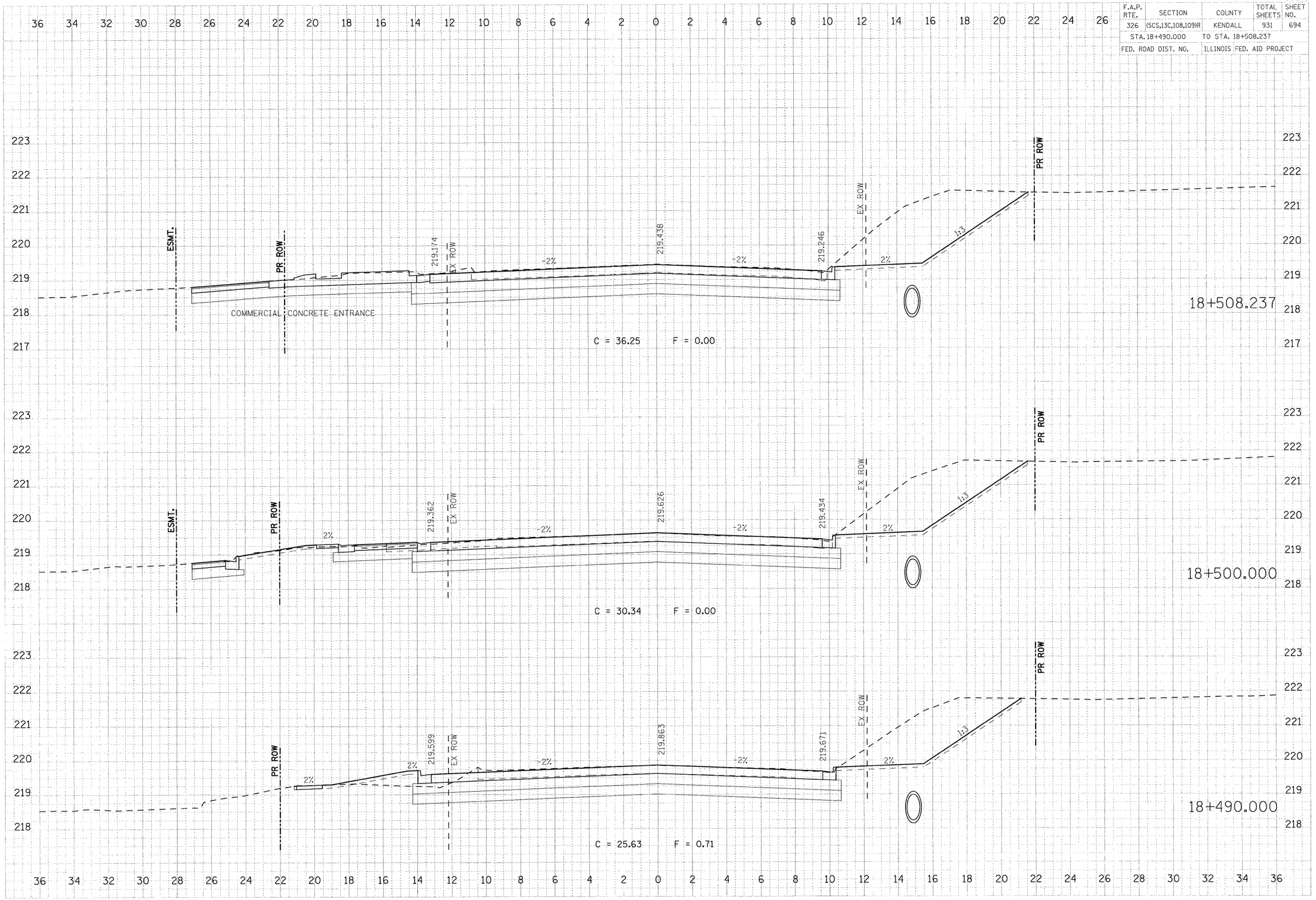
FAP 326 (IL RTE 47)

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	694
STA. 18+490.000	TO STA. 18+508.237			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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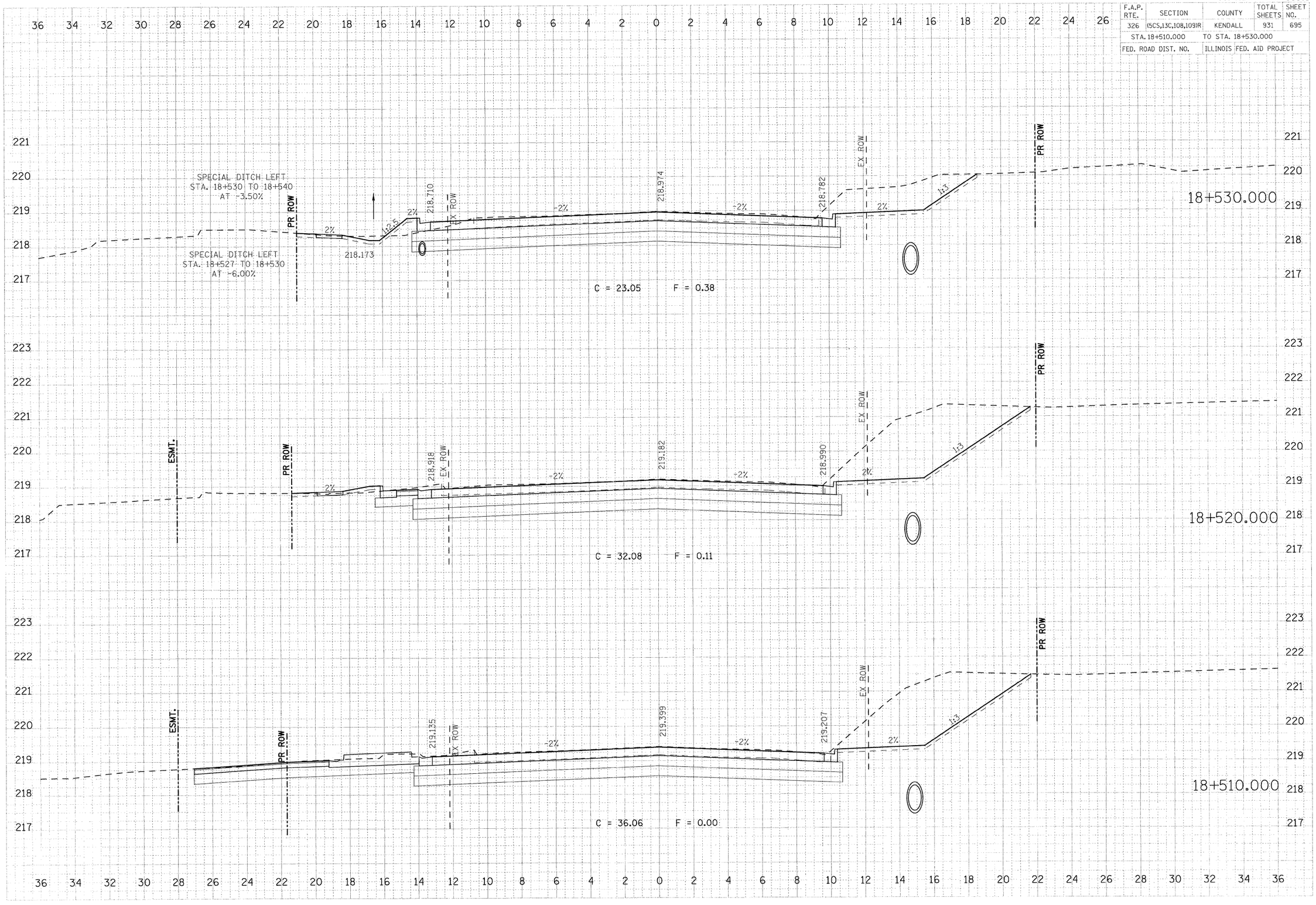
FAP 326 (IL RTE 47)

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	695
STA. 18+510.000	TO STA. 18+530.000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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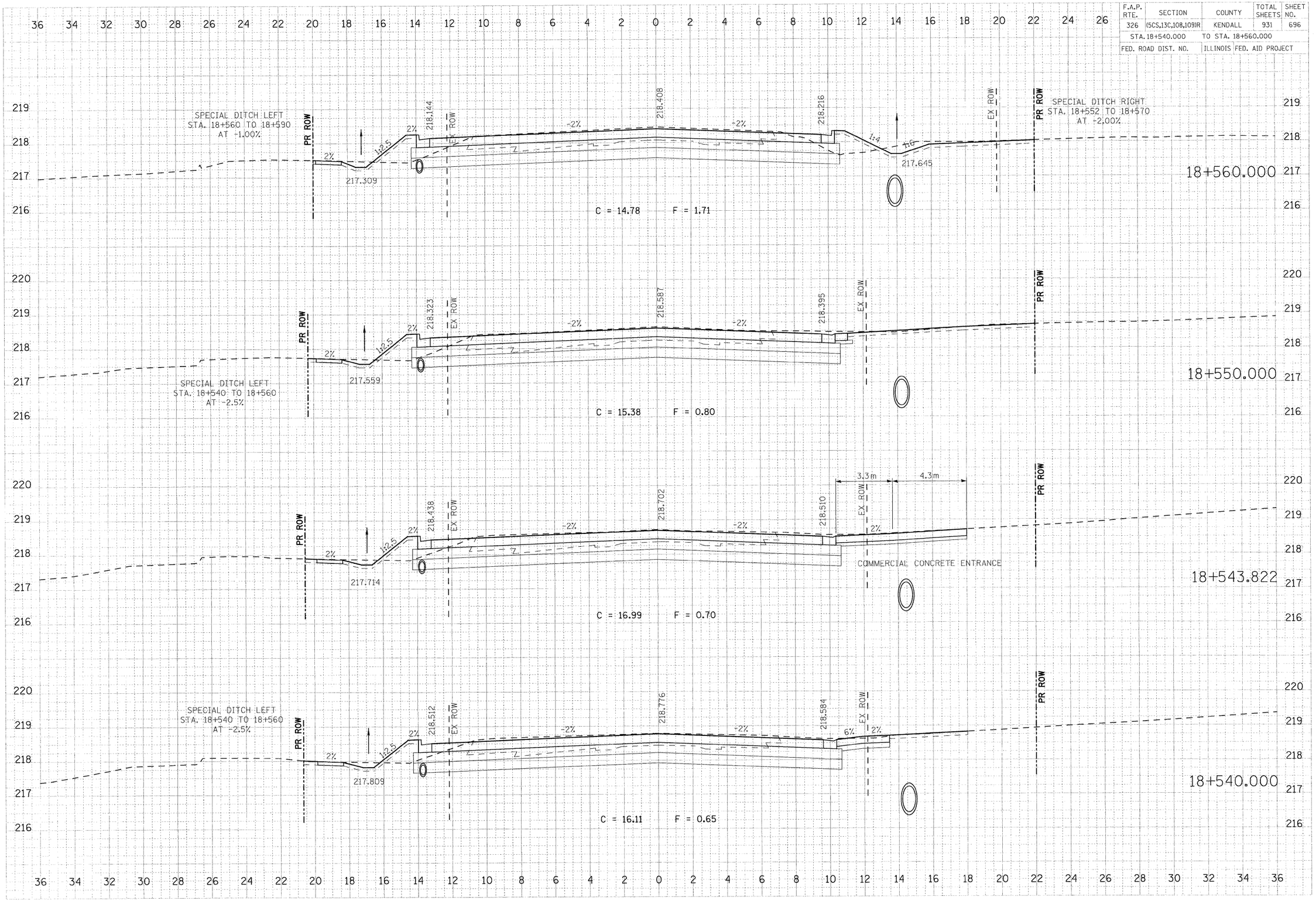
FAP 326 (IL RTE 47)

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	696
STA. 18+540.000	TO STA. 18+560.000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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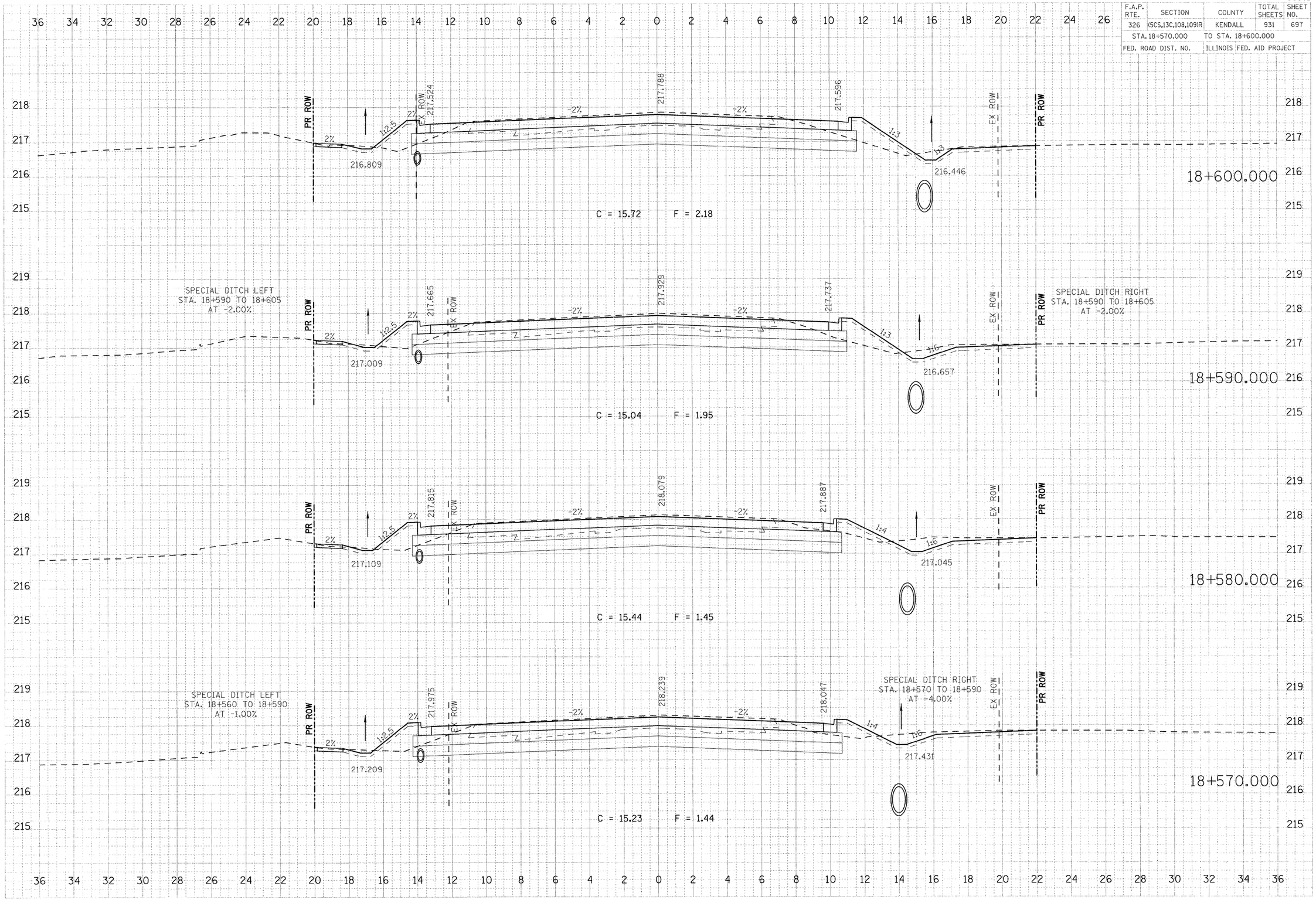
FAP 326 (IL RTE 47)

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	697
STA. 18+570.000	TO STA. 18+600.000			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



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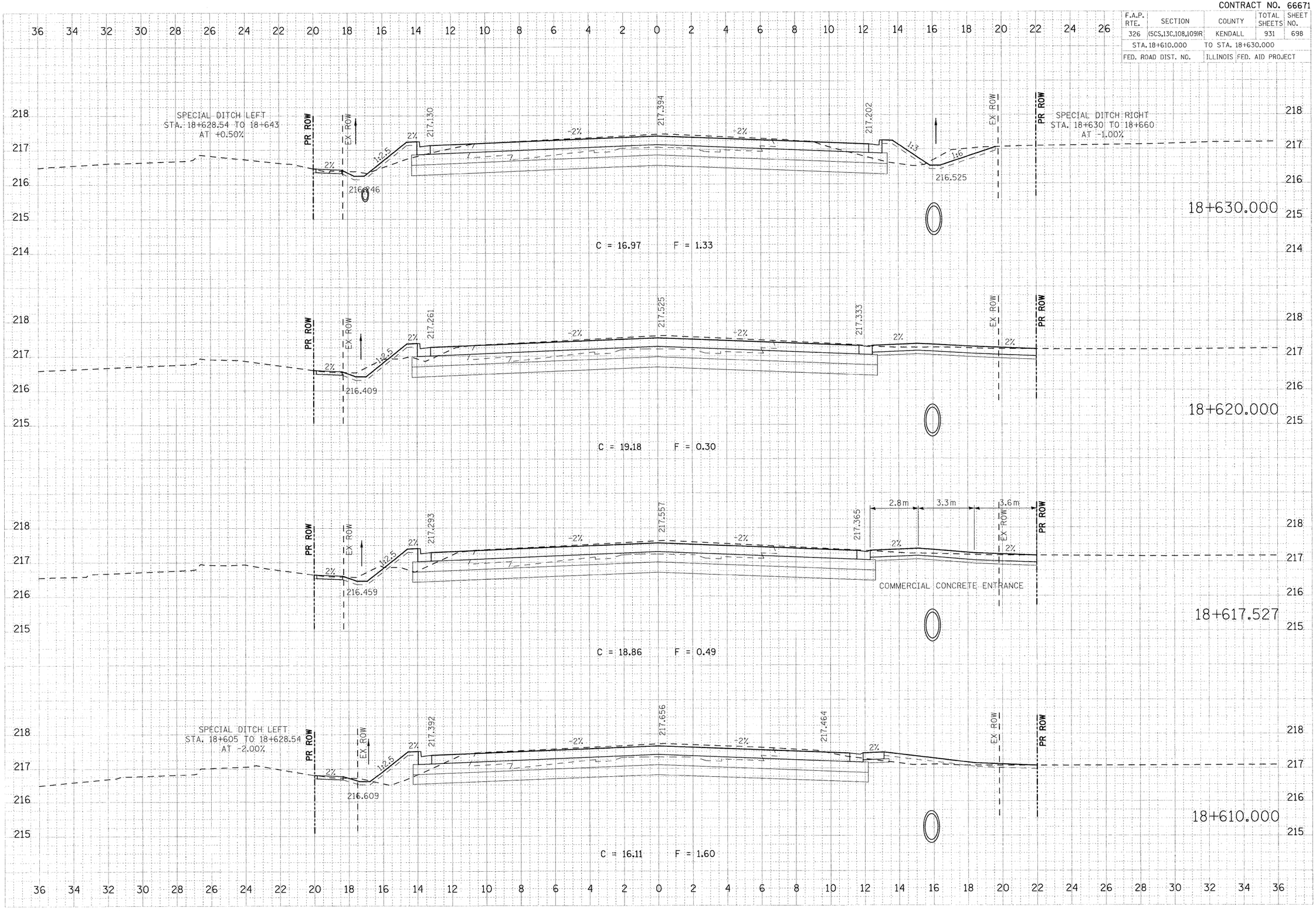
FAP 326 (IL RTE 47)

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	698
STA. 18+610.000	TO STA. 18+630.000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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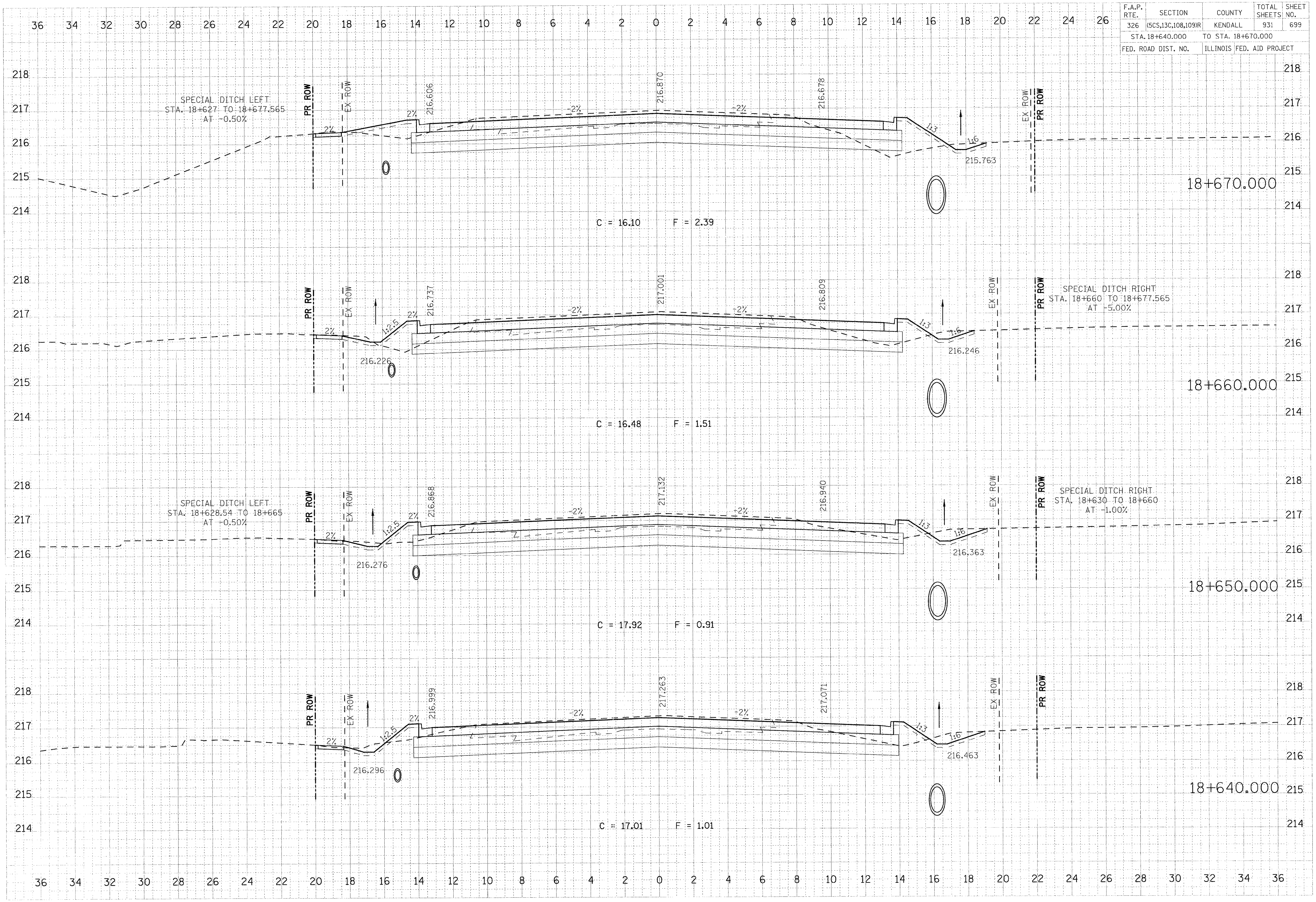
FAP 326 (IL RTE 47)

CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	699
STA. 18+640.000 TO STA. 18+670.000				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



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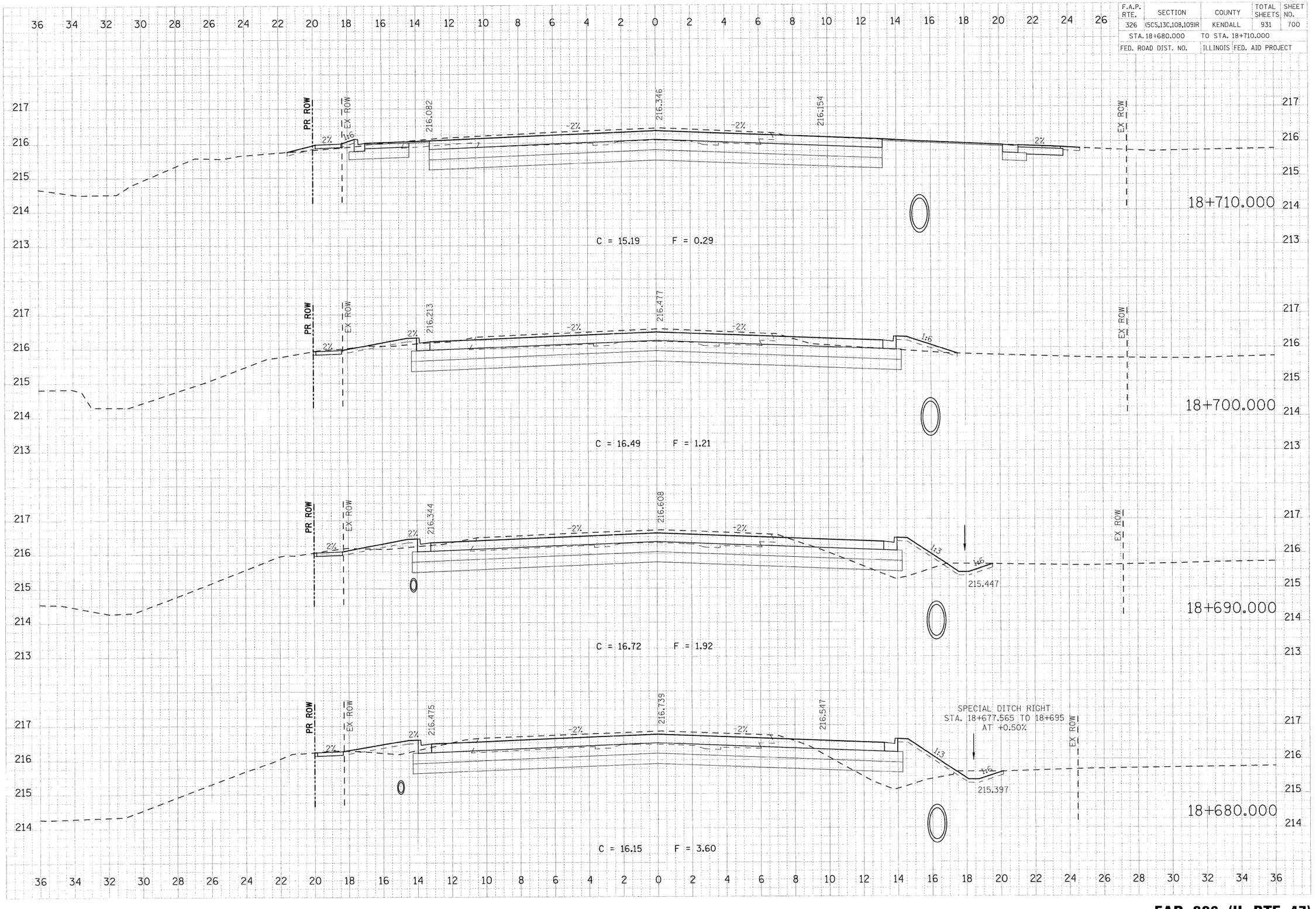
CONTRACT NO. 66671

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(5CS,13C,108,109)R	KENDALL	931	700
STA. 18+680.000	TO STA. 18+710.000			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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FAP 326 (IL RTE 47)