

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

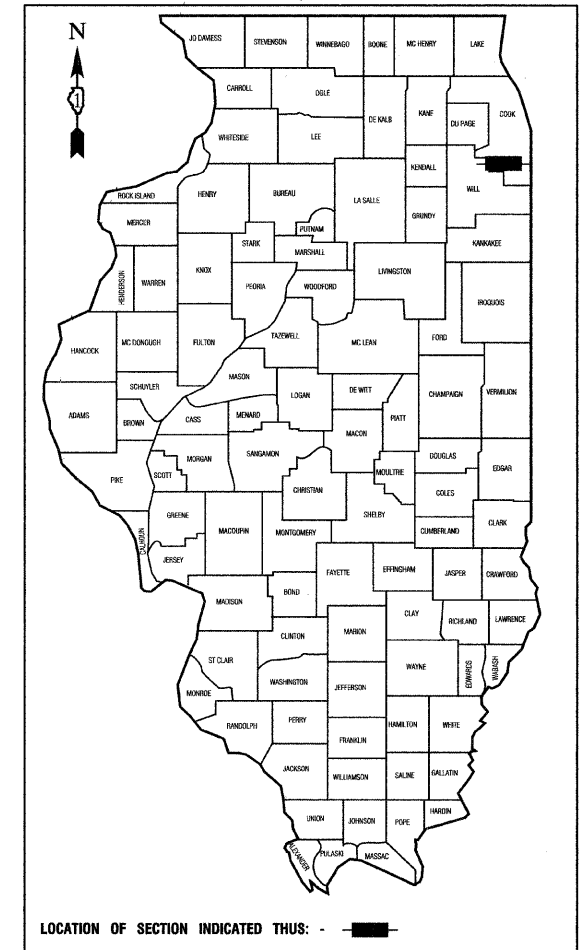
FAP 348(ILL Route 43) @ 70TH STREET
PAVEMENT WIDENING
SECTION NO.: 09-00059-00-CH
PROJECT NO.: ARA-9003(340)
JOB NO. C-91-656-09
VILLAGE of BRIDGEVIEW
COOK COUNTY

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	001
STA.	TO STA.		5-51	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269

INDEX OF SHEETS
SEE SHEET NO. 2

HIGHWAY STANDARDS
SEE SHEET NO. 2



STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

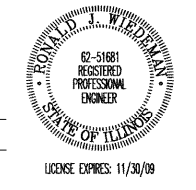
Approved: _____
[Signature]
President, Village of Bridgeview

Passed: SEPTEMBER 1, 2009
[Signature] CHRISTOPHER HOLT
District 1 Engineer of Local Roads & Streets

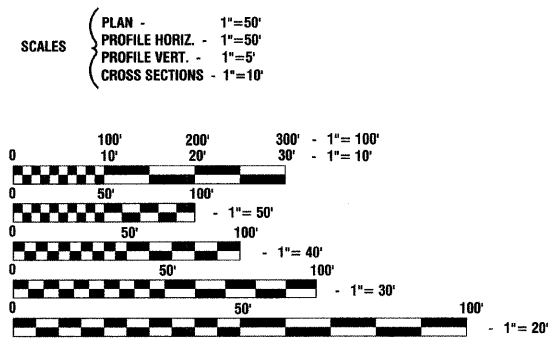
Released for Bid Based on Limited Review: SEPTEMBER 1, 2009
[Signature] Diana M. O'Keefe
Deputy Director of Highways, Region 7 Engineer

PRINTED BY THE AUTHORITY OF
THE STATE OF ILLINOIS

PREPARED BY OR UNDER THE
DIRECT SUPERVISION OF:
[Signature]
8/26/09



LOCATION MAP
GROSS LENGTH=2,160 FEET=0.41 MILES
NET LENGTH=2,160 FEET=0.41 MILES



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J. U. L. I. E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123 or 811

CONTRACT NO. 63269

I.D.O.T. FEDERAL AID DESIGN ENGINEER: MELCHOR MANGOBA (847) 705-4408
CONSULTANTS: ROBINSON ENGINEERING, LTD. 708-331-6700

SECTION 24, TOWNSHIP 38, RANGE 12
SECTION 19, TOWNSHIP 38, RANGE 13

P. A. P. SHEET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	048	002
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT ARA-9003(340)		

CONTRACT #63269

INDEX OF SHEETS

- 1. COVER SHEET
- 2. INDEX OF SHEETS, STATE STANDARDS, & GENERAL NOTES
- 3.-4. SUMMARY OF QUANTITIES
- 5. TYPICAL CROSS SECTIONS
- 6.-7. SUGGESTED CONSTRUCTION STAGING
- 8.-11. PLAN SHEETS
- 12. HARLEM AVENUE EOP PROFILES
- 13.-15. DRAINAGE & UTILITIES
- 16.-23. STREET LIGHTING
- 24.-25. PAVEMENT MARKING & SIGNING
- 26. LANDSCAPING & EROSION CONTROL PLAN
- 27.-32E. DETAILS
- 33.-46. CROSS SECTIONS

GENERAL NOTES

1. THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2007 BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION, SHALL GOVERN THIS WORK.
2. BEFORE ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 1-800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED)
3. 10 FOOT TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER AND MEDIANS TO EXISTING CURBS AND GUTTERS AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.
4. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, IDOT, AND THE VILLAGE OF BRIDGEVIEW AND THE CONTRACTOR FOR CONTRACT NO. 63106.
5. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON VILLAGE OR STATE PROPERTY WITHOUT WRITTEN PERMISSION.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIAL.
7. THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT 1-847-705-4470 A MINIMUM OF 72 HOURS PRIOR TO THE PLACEMENT OF ANY TEMPORARY TRAFFIC CONTROL DEVICES.
8. TWO WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKING THE ENGINEER SHALL CONTACT PATRICE HARRIS, AREA TRAFFIC FIELD TECHNICIAN AT (708)597-9800

STATE STANDARDS

- 280001-04 TEMPORARY EROSION CONTROL SYSTEMS
- 420001-07 PAVEMENT JOINTS
- 420111-02 PCC PAVEMENT ROUNDOUTS
- 420701-02 PAVEMENT FABRIC
- 602001-01 CATCH BASIN, TYPE A
- 602011-01 CATCH BASIN, TYPE C
- 604001-03 FRAME AND LIDS TYPE 1
- 604086-02 FRAME AND GRATE TYPE 23
- 604091-02 FRAME AND GRATE TYPE 24
- 606001-04 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
- 606301-04 PC CONCRETE ISLANDS AND MEDIANS
- 701101-02 OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24' FROM PAVEMENT EDGE
- 701108-02 OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
- 701426-03 LANE CLOSURE, MULTILANE, INTERMITTANT OR MOVING OPERATION FOR SPEEDS >45 MPH
- 701606-06 URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
- 701701-06 URBAN LANE CLOSURE, MULTILANE, INTERSECTION
- 701801-04 LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
- 701901-01 TRAFFIC CONTROL DEVICES
- 720001-01 SIGN PANEL MOUNTING DETAILS
- 720006-02 SIGN PANEL ERECTION DETAILS
- 814001-02 HANDHOLES

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
INDEX OF SHEETS, STATE STANDARDS,
AND GENERAL NOTES

SCALE: VERT. NA
 HORIZ. NA

DATE: 08-14-09

DRAWN BY PS
CHECKED BY RJW

P. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	003
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT ARA-9003(340)	

CONTRACT #63269

SUMMARY OF QUANTITIES					PAVEMENT	LIGHTING
S.I.	CODE NO.	PAY ITEM	UNIT	QUAN	CONSTRUCTION TYPE CODE	
					J000-2A	Y030-1E
	20200100	EARTH EXCAVATION	CU YD	3765	3765	
	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	790	790	
	20800150	TRENCH BACKFILL	CU YD	141	141	
	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	1675	1675	
	21101685	TOPSOIL FURNISH AND PLACE, 24"	SQ YD	845	845	
	21300010	EXPLORATION TRENCH, SPECIAL	FOOT	200		200
	25000210	SEEDING, CLASS 2A	ACRE	0.5	0.5	
	25000400	NITROGEN NUTRIENT	POUND	45	45	
	25000500	PHOSPHORUS NUTRIENT	POUND	45	45	
	25000600	POTASSIUM NUTRIENT	POUND	45	45	
	25100630	EROSION CONTROL BLANKET	SQ YD	2600	2600	
	28000400	PERIMETER EROSION BARRIER	FOOT	1000	1000	
	28000510	INLET FILTERS	EACH	18	18	
	31101200	SUB-BASE GRANULAR MATERIAL, TYPE B, 4"	SQ YD	4603	4603	
	31200100	STABILIZED SUB-BASE 4"	SQ YD	4603	4603	
	42000500	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SQ YD	3756	3756	
	42001200	PAVEMENT FABRIC	SQ YD	3756	3756	
	42001300	PROTECTIVE COAT	SQ YD	4862	4862	
	42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVMENT, 8 INCH	SQ YD	62	62	
	44000100	PAVEMENT REMOVAL	SQ YD	138	138	
	44000200	DRIVEWAY PAVMENT REMOVAL	SQ YD	232	232	
	44000300	CURB REMOVAL	FOOT	127	127	
	44000500	COMBINATION CURB AND GUTTER REMOVAL	FT	2974	2974	
	550A0050	STORM SEWER, CLASS A, TYPE 1, 12"	FOOT	116	116	
	550A0320	STORM SEWER, CLASS A, TYPE 2, 8"	FOOT	4	4	
	550A0330	STORM SEWER, CLASS A, TYPE 2, 10"	FOOT	10	10	
	550A0340	STORM SEWER, CLASS A, TYPE 2, 12"	FOOT	417	417	
	55100500	STORM SEWER REMOVAL, 12"	FOOT	158	158	
*	56400500	FIRE HYDRANT TO BE REMOVED	EACH	1	1	
*	56400820	FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX	EACH	1	1	
	60201330	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 23 FRAME AND GRATE	EACH	3	3	
	60201340	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 24 FRAME AND GRATE	EACH	11	11	
	60208240	CATCH BASINS, TYPE C, TYPE 24 FRAME AND GRATE	EACH	3	3	
	60250200	CATCH BASINS TO BE ADJUSTED	EACH	1	1	
	60250400	CATCH BASINS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, OPEN LID	EACH	1	1	
	60251730	CATCH BASIN TO BE ADJUSTED WITH NEW TYPE 23 FRAME AND GRATE	EACH	1	1	
	60251740	CATCH BASINS TO BE ADJUSTED WITH NEW TYPE 24 FRAME AND GRATE	EACH	1	1	
	60255500	MANHOLES TO BE ADJUSTED	EACH	4	4	
	60255800	MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID	EACH	1	1	
	60265700	VALVE VAULTS TO BE ADJUSTED	EACH	1	1	
	60500050	REMOVING CATCH BASINS	EACH	6	6	
	60500205	FILLING CATCH BASINS	EACH	1	1	
	60500705	CATCH BASINS TO BE FILLED TO MAINTAIN FLOW	EACH	5	5	
	60600095	CLASS SI CONCRETE (OUTLET)	CU YD	1.5	1.5	
	60600605	CONCRETE CURB, TYPE B	FOOT	55	55	
	60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE-B6.12	FOOT	831	831	
	60604200	COMBINATION CONCRETE CURB AND GUTTER, TYPE-B6.12, (SPECIAL)	FOOT	40	40	
	60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE-B6.24	FOOT	2550	2550	
	67100100	MOBILIZATION	L. SUM	1	1	

* - INDICATES SPECIALTY ITEMS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
SUMMARY OF QUANTITIES

SCALE: VERT. NA
HORIZ. NA
DATE 08-14-09

DRAWN BY PS
CHECKED BY RJW

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	004
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT ARA-9003(340)	

CONTRACT #63269

SUMMARY OF QUANTITIES					PAVEMENT	LIGHTING	
S.I.	CODE NO.	PAY ITEM	UNIT	QUAN	CONSTRUCTION TYPE CODE		
					J000-2A	Y030-1E	
	70101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L. SUM	1	1		
	72000100	SIGN PANEL, TYPE 1	SQ FT	53	53		
	72000200	SIGN PANEL, TYPE 2	SQ FT	12	12		
	73000100	WOOD SIGN SUPPORT	FOOT	154	154		
*	78003100	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B- LETTERS AND SYMBOLS	SQ FT	110	110		
*	78003110	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B- LINE 4"	FOOT	379	379		
*	78003130	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B- LINE 6"	FOOT	1416	1416		
*	78003140	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B- LINE 8"	FOOT	619	619		
*	78003150	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 12"	FOOT	255	255		
*	78003180	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 24"	FOOT	90	90		
	81018500	CONDUIT PUSHED, 2" DIA GALVANIZED STEEL	FOOT	260		260	
	81018700	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	575		575	
	81400100	HANDHOLE	EACH	1		1	
	81603210	UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (EPR-TYPE RHW), 1 1/4" DIA. POLYETHYLENE	FOOT	2925		2925	
	81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	2250		2250	
	83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	80		80	
	83600215	LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET	FOOT	10		10	
	83800205	BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	9		9	
	84200700	LIGHTING FOUNDATION REMOVAL	EACH	9		9	
	84400105	RELOCATE EXISTING LIGHTING UNIT	EACH	9		9	
	88600100	DETECTOR LOOP, TYPE 1	FOOT	90		90	
	87900200	DRILL EXISTING HANDHOLE	EACH	1		1	
	89502350	REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	260		260	
	89502380	REMOVING EXISTING HANDHOLE	EACH	1		1	
	X0322256	TEMPORARY INFORMATION SIGNS	SQ FT	52	52		
	XX006937	GROUND ROD, 5/8" DIA. X 10 FT.	EACH	9		9	
	Z0022800	FENCE REMOVAL	FOOT	625	625		
	XX008191	REPLACE DAMAGED LUMINAIRE, HPS, 400 WATT	EACH	2		2	
	83050810	REPLACE DAMAGED LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 15 FT. MAST ARM	EACH	2		2	
*	XX007907	STAMPED CONCRETE MEDIAN SURFACE, 5"	SQ FT	382	382		
*	XX007908	COLORED SURFACE	SQ FT	382	382		

* - INDICATES SPECIALTY ITEMS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

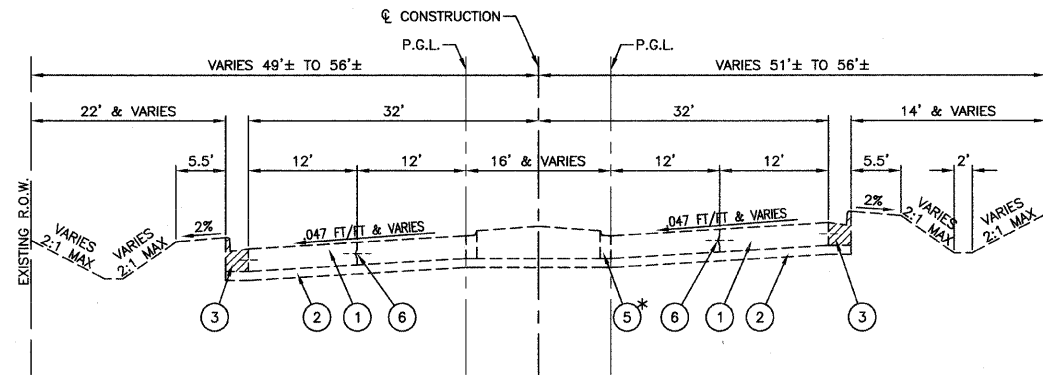
FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
SUMMARY OF QUANTITIES

SCALE: VERT. NA
HORIZ. NA
DATE: 08-14-09

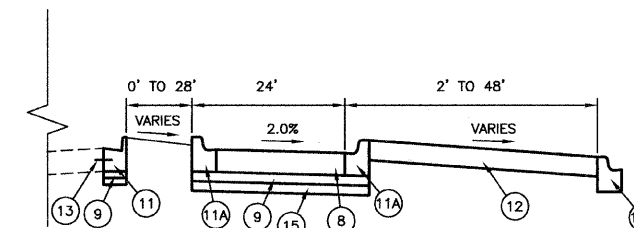
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CHECKED BY RJW

F.A.P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	005
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

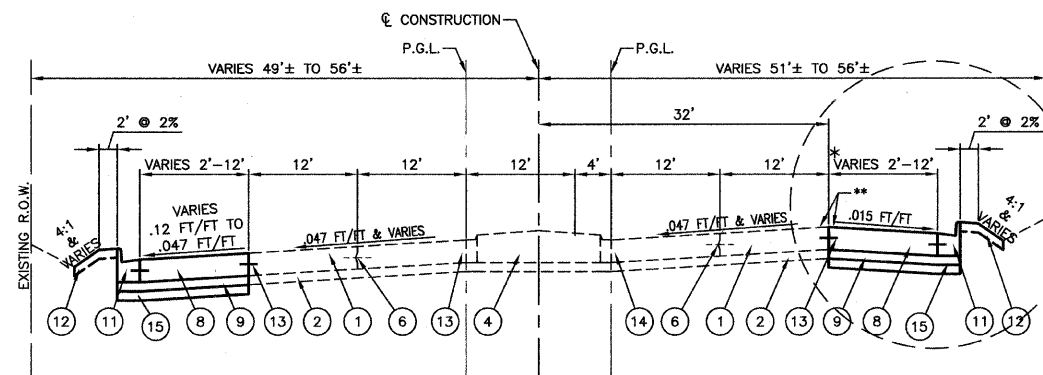
CONTRACT #63269



EXISTING TYPICAL CROSS SECTION
HARLEM AVENUE



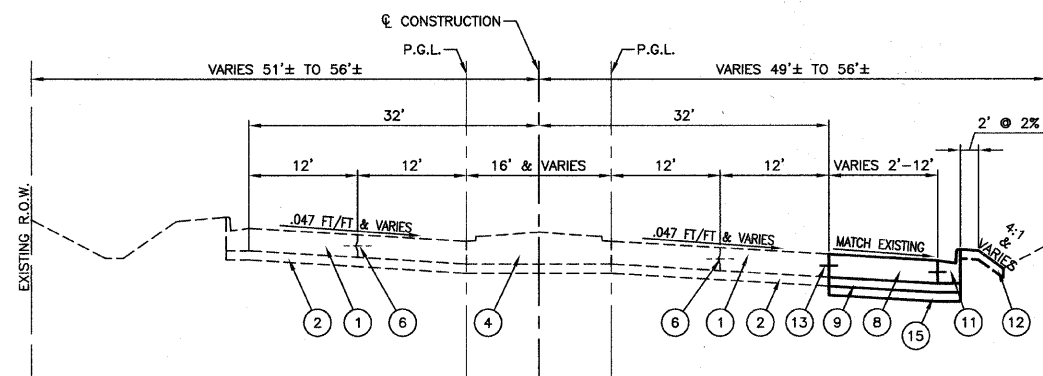
DETAIL "A"
STA. 113+18 TO STA. 115+19



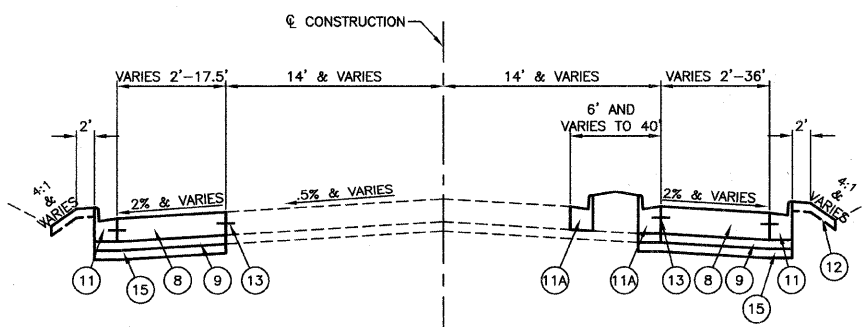
PROPOSED TYPICAL CROSS SECTION
HARLEM AVENUE STA. 102+43 TO STA. 116+00

* STA. 107+00 TO STA. 113+18
** MAX ROLLOVER = 5% FROM STA. 107+00 TO STA. 113+18

SEE DETAIL "A" FOR STA. 113+18 TO STA. 115+19



PROPOSED TYPICAL CROSS SECTION
HARLEM AVENUE STA. 116+00 TO STA. 119+80



PROPOSED TYPICAL CROSS SECTION
ACCESS ROAD WEST OF HARLEM AVENUE
LOOKING EAST

LEGEND

- ① EXISTING PORTLAND CEMENT CONCRETE PAVEMENT, 10"
- ② EXISTING STABILIZED SUB-BASE, 4"
- ③ EXISTING COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (SEE PLAN SHEET FOR LOCATIONS)
- ④ EXISTING CONCRETE MEDIAN, TYPE SB-9.12
- ⑤ EXISTING COMBINATION CONCRETE CURB AND GUTTER, TYPE M-2.12
- ⑥ SAWED LONGITUDINAL JOINT
- ⑦ STABILIZED MEDIAN SURFACE
- ⑧ PROPOSED PORTLAND CEMENT CONCRETE PAVEMENT, 10" W/ PAVEMENT FABRIC
- ⑨ PROPOSED STABILIZED SUB-BASE, 4"
- ⑩ PROPOSED CONCRETE MEDIAN, TYPE SB-9.12
- ⑪ PROPOSED COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- ⑪A PROPOSED COMBINATION CONCRETE CURB AND GUTTER TYPE B6.12
- ⑫ PROPOSED 4" TOPSOIL, SEEDING CLASS 2A, EROSION CONTROL BLANKET AND NUTRIENTS
- ⑬ PROPOSED DRILL AND GROUT NO.8 EPOXY COATED TIE BARS @ 24" C AND 24" IN LENGTH
- ⑭ PROPOSED DRILL AND GROUT NO.6 EPOXY COATED TIE BARS @ 24" C AND 24" IN LENGTH
- ⑮ PROPOSED SUB-BASE GRANULAR MATERIAL TYPE B, 4"
- ▨ REMOVAL

NOTE:

1. PROPOSED DRILL AND GROUT EPOXY COATED TIE BARS @ 24" C AND 24" IN LENGTH. THE COST OF THE EPOXY COATED TIE BARS AND THE INSTALLATION OF THEM WILL BE INCLUDED IN THE COST OF PORTLAND CONCRETE PAVEMENT, 10", OR CONCRETE MEDIAN, TYPE SB-9.12
2. LONGITUDINAL JOINT TIE BARS SHALL BE NO. 6 AT 24" CENTERS IN ACCORDANCE WITH DETAILS FOR LONGITUDINAL CON-STRUCTION JOINT SHOWN ON DETAIL 420001.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

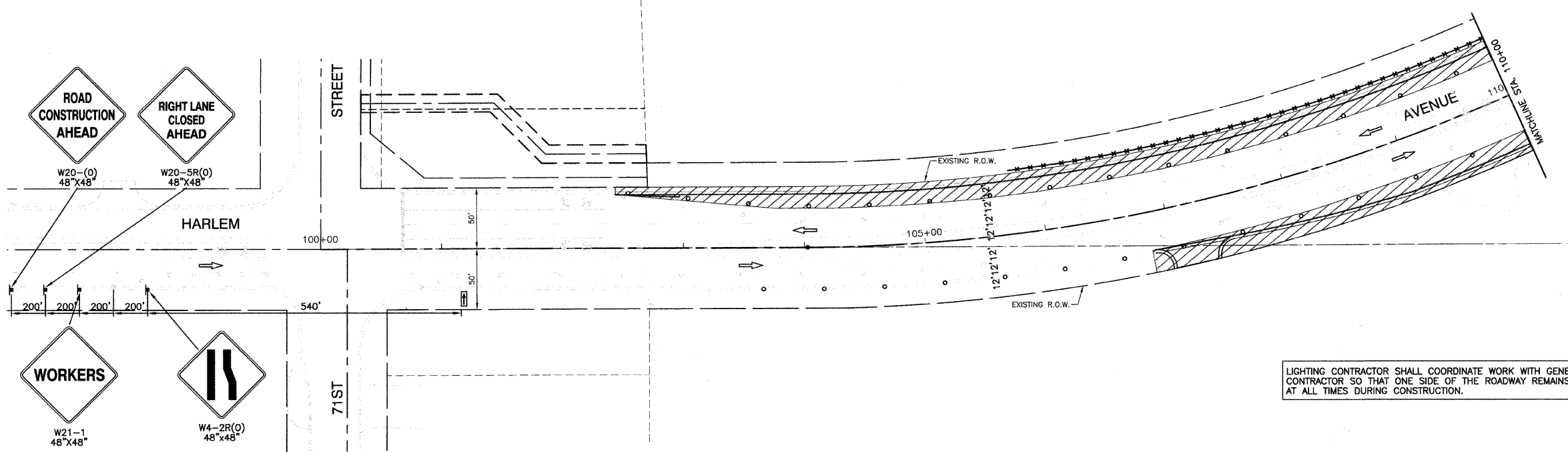
FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
TYPICAL CROSS SECTIONS

SCALE: VERT. NA
HORIZ. NA
DATE: 08-14-09
DRAWN BY: PS
CHECKED BY: RJW

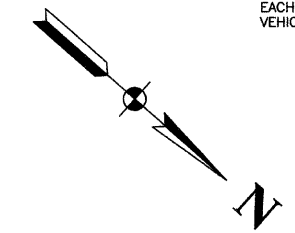
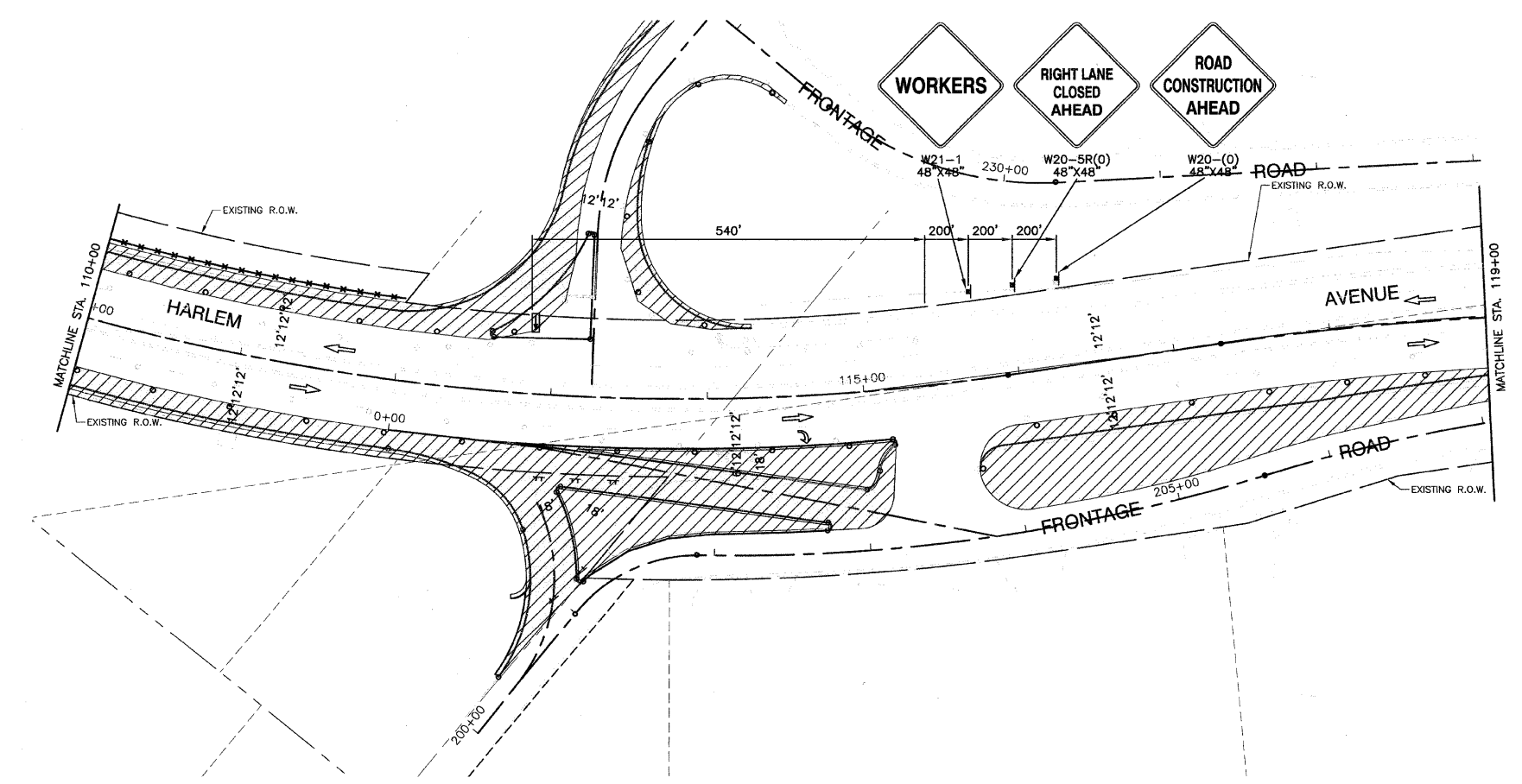
SECTION 24, TOWNSHIP 38, RANGE 12
SECTION 19, TOWNSHIP 38, RANGE 13

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	006
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FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT ARA-9003(340)	

CONTRACT #63269



LIGHTING CONTRACTOR SHALL COORDINATE WORK WITH GENERAL CONTRACTOR SO THAT ONE SIDE OF THE ROADWAY REMAINS LIT AT ALL TIMES DURING CONSTRUCTION.



- STAGING NOTES:**
1. THE WORKING AND NON-WORKING HOURS ARE DEFINED BY THE SPECIAL PROVISIONS "CONSTRUCTION RESTRICTIONS FOR LANE CLOSURES"
 2. A FLAGGER WITH TRAFFIC CONTROL SIGN IS REQUIRED FOR EACH DIRECTION IN ORDER TO ALLOW CONSTRUCTION VEHICLES TO ENTER AND LEAVE THE WORK SITE.

LEGEND

- PAVEMENT WIDENING
- WORK AREA
- TYPE I OR II BARRICADE OR DRUM WITH STEADY BURNING LIGHT (50' C-C) DURING WORKING HOURS
- SIGN
- TYPE I OR II BARRICADE OR DRUM WITH STEADY BURNING LIGHT (50' C-C) DURING NON-WORKING HOURS
- TYPE III BARRICADE WITH STEADY BURNING LIGHT
- ARROW BOARD

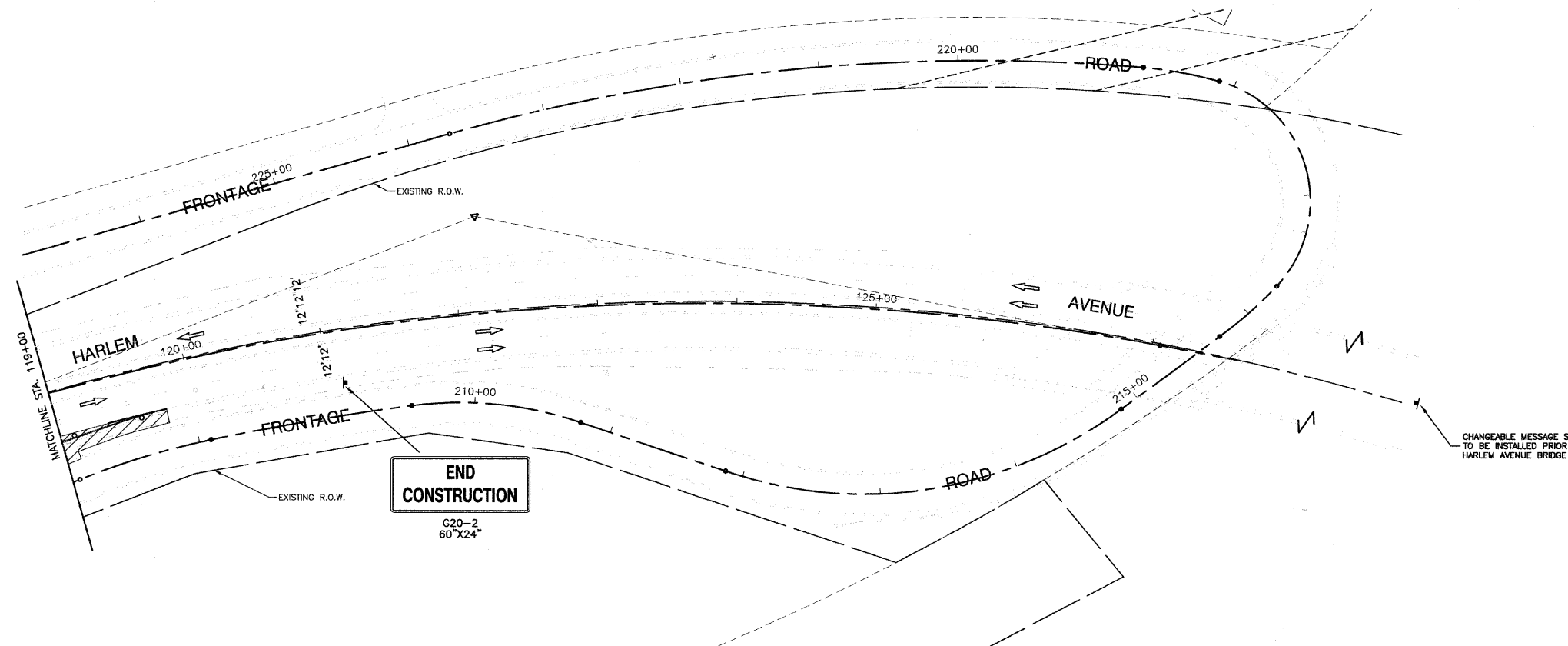
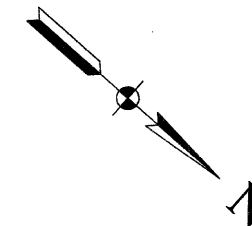
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
SUGGESTED CONSTRUCTION STAGING
71ST STREET TO STA 119+00**

SCALE: VERT. NA
HORIZ. 1"=50'
DATE: 08-14-09
DRAWN BY: PS
CHECKED BY: RJW

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	007
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



CHANGEABLE MESSAGE SIGN TO BE INSTALLED PRIOR TO HARLEM AVENUE BRIDGE

- STAGING NOTES:**
1. THE WORKING AND NON-WORKING HOURS ARE DEFINED BY THE SPECIAL PROVISIONS "CONSTRUCTION RESTRICTIONS FOR LANE CLOSURES"
 2. A FLAGGER WITH TRAFFIC CONTROL SIGN IS REQUIRED FOR EACH DIRECTION IN ORDER TO ALLOW CONSTRUCTION VEHICLES TO ENTER AND LEAVE THE WORK SITE.

LIGHTING CONTRACTOR SHALL COORDINATE WORK WITH GENERAL CONTRACTOR SO THAT ONE SIDE OF THE ROADWAY REMAINS LIT AT ALL TIMES DURING CONSTRUCTION.

LEGEND

- PAVEMENT WIDENING
- WORK AREA
- TYPE I OR II BARRICADE OR DRUM WITH STEADY BURNING LIGHT (50' C-C) DURING WORKING HOURS
- SIGN
- TYPE I OR II BARRICADE OR DRUM WITH STEADY BURNING LIGHT (50' C-C) DURING NON-WORKING HOURS
- TYPE III BARRICADE WITH STEADY BURNING LIGHT
- ARROW BOARD

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
SUGGESTED CONSTRUCTION STAGING
STA 119+00 TO END OF IMPROVEMENTS**

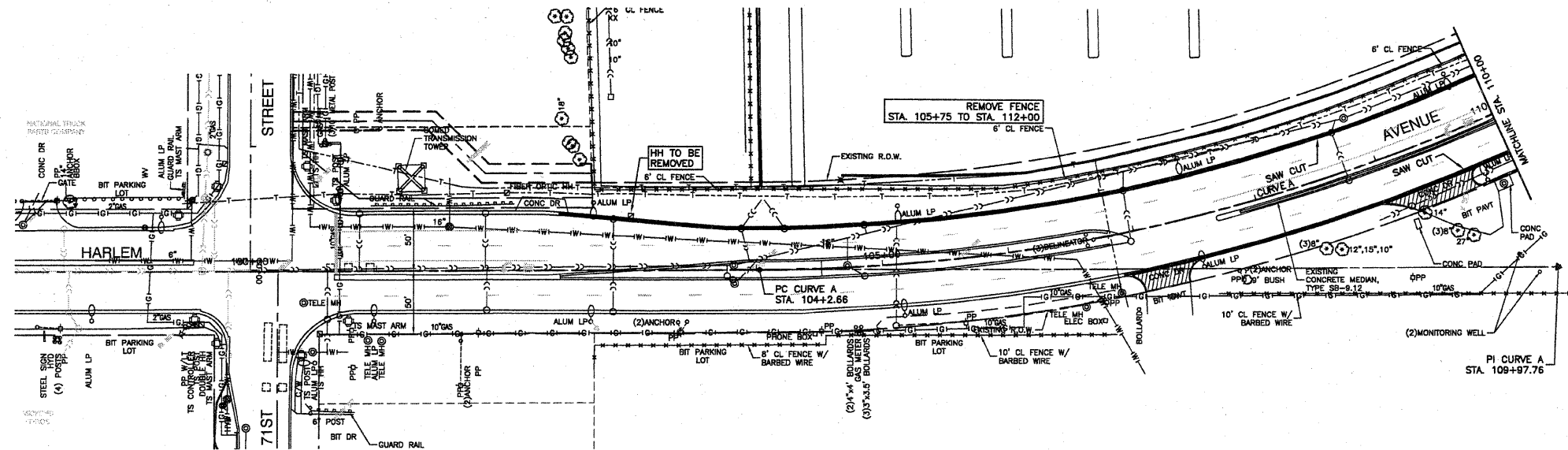
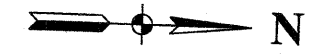
SCALE: VERT. NA
HORIZ. 1"=50'

DATE 08-14-09 DRAWN BY PS
CHECKED BY RJW

SECTION 24, TOWNSHIP 38, RANGE 12
SECTION 19, TOWNSHIP 38, RANGE 13

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00058-00-CH	COOK	046	008
STA.	TO STA.			
FED. ROAD DIST. NO.	ALUMINUM	FED. RD PROJECT ARA-9003(340)		

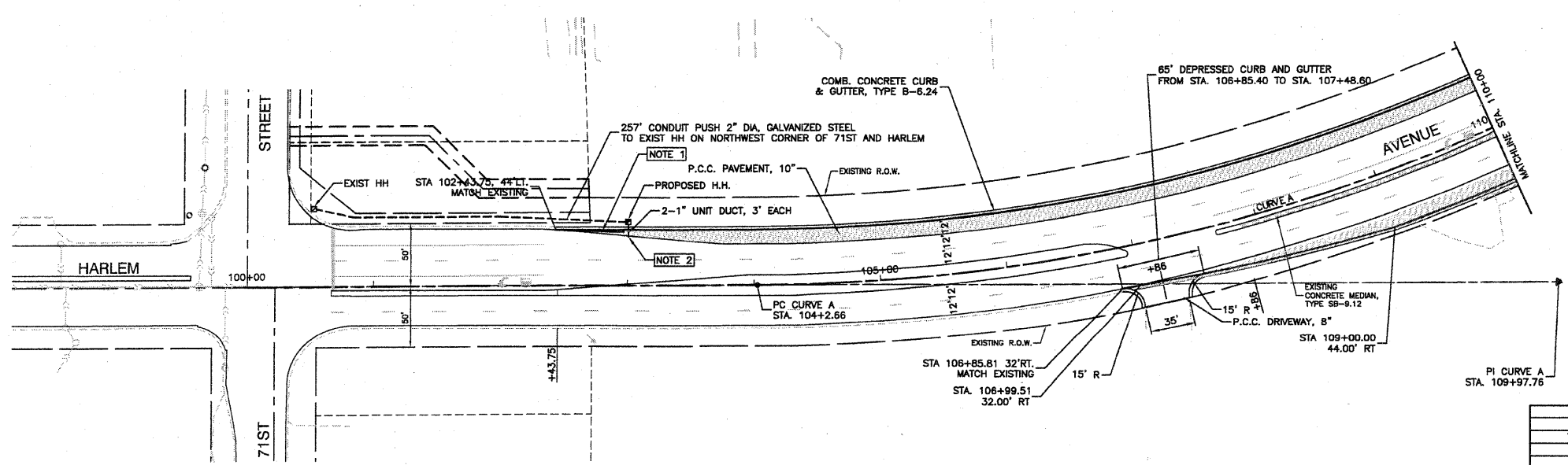
CONTRACT #63269



EXISTING CONDITIONS

NOTES:
1. WIDENING LESS THAN OR EQUAL TO 2' WILL BE POURED MONOLITHIC WITH PROPOSED COMBINATION CURB AND GUTTER, TYPE B-5.24. THE WIDENING WILL STILL BE PAID AS PORTLAND CEMENT PAVEMENT, 10".
2. 1" UNIT DUCT WILL NOT BE PAID FOR, BUT WILL BE INCIDENTAL TO THE EAST OF THE NEW HANDHOLE.

Location	1	2	3	4	5
	Earth Excavation	Earth Excavation adjusted to Shrinkage	Embarkment	Earthwork Balance	Waste(+) or Shortage (-)
	Cubic Yard	Cubic Yard	Cubic Yard	Cubic Yard	Cubic Yard
Sta 102+43.75 to Sta. 119+80	3764.3	2823.2	679.8	2143.4	
Total				2143.4	



PROPOSED IMPROVEMENT

- LEGEND**
- PAVEMENT REMOVAL
 - MEDIAN REMOVAL
 - DRIVEWAY REMOVAL
 - CURB AND GUTTER REMOVAL
 - PAVEMENT WIDENING

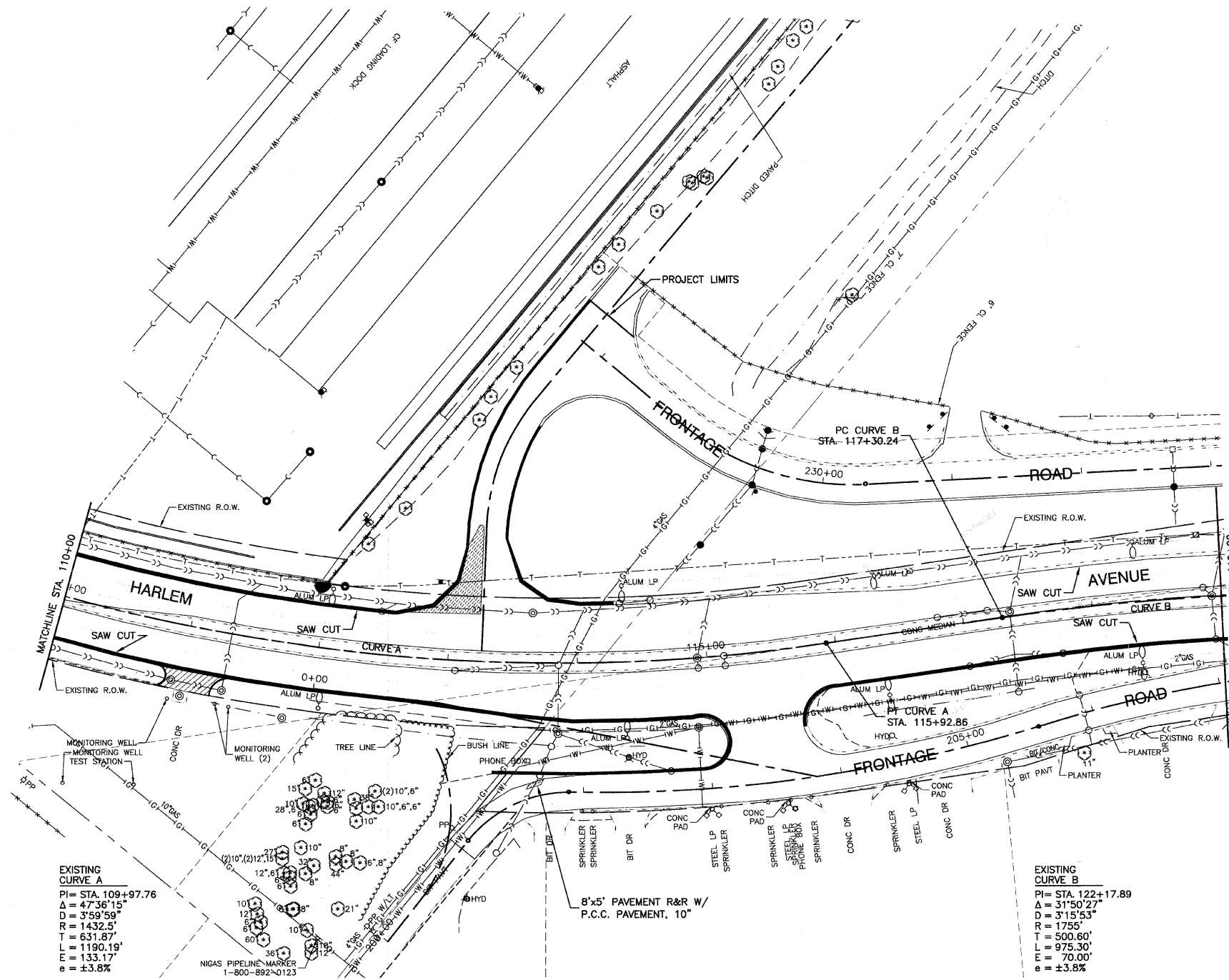
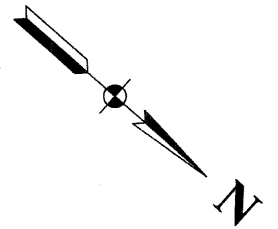
NAME	DATE
TRAFFIC	09/25/09

ILLINOIS DEPARTMENT OF TRANSPORTATION
**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
EXISTING AND PROPOSED PLAN
71ST STREET TO STA 110+00**

SCALE: VERT. NA
HORIZ. 1"=50'
DATE 08-14-09
DRAWN BY PS
CHECKED BY RJW
ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
708-351-8000 FAX 708-351-8885
ILLINOIS DESIGN FIRM REGISTRATION NO. 146001128 04517-PLAN-01 - P01

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	009
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT ARA-9003(340)	

CONTRACT #63269



EXISTING CURVE A
 PI= STA. 109+97.76
 $\Delta = 47^{\circ}36'15''$
 $D = 3^{\circ}59'59''$
 $R = 1432.5'$
 $T = 631.87'$
 $L = 1190.19'$
 $E = 133.17'$
 $e = \pm 3.8\%$

EXISTING CURVE B
 PI= STA. 122+17.89
 $\Delta = 31^{\circ}50'27''$
 $D = 3^{\circ}15'53''$
 $R = 1755'$
 $T = 500.60'$
 $L = 975.30'$
 $E = 70.00'$
 $e = \pm 3.8\%$

NOTES:
 1. WIDENING LESS THAN OR EQUAL TO 2' WILL BE POURED MONOLITHIC WITH PROPOSED COMBINATION CURB AND GUTTER, TYPE B-6.24. THE WIDENING WILL STILL BE PAID AS PORTLAND CEMENT PAVEMENT, 10".

LEGEND

- PAVEMENT REMOVAL
- MEDIAN REMOVAL
- DRIVEWAY REMOVAL
- CURB AND GUTTER REMOVAL

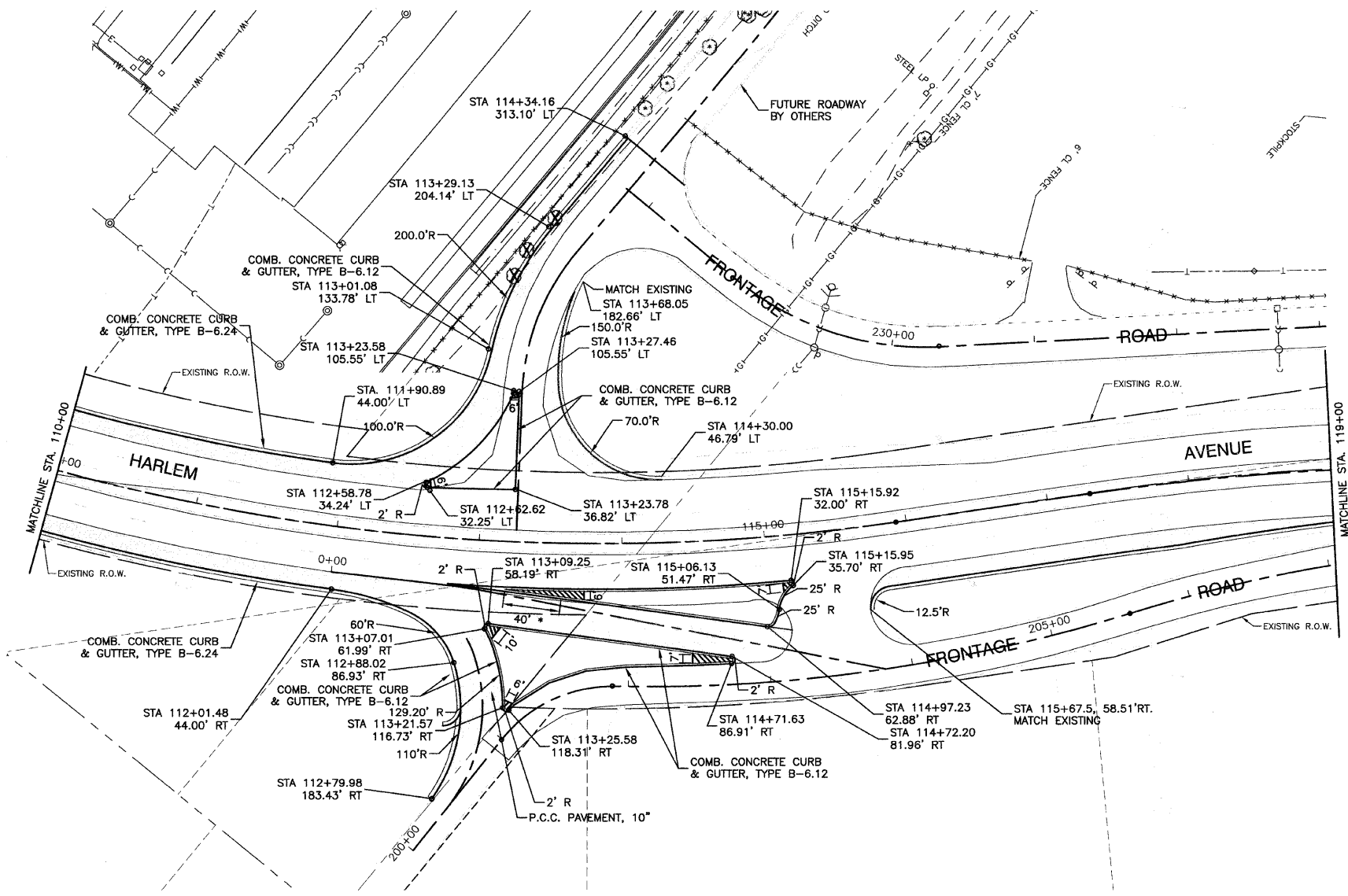
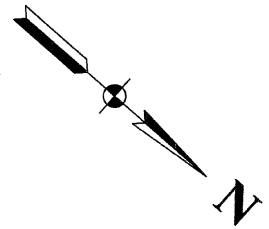
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
EXISTING PLAN
STA 110+00 TO STA 119+00

SCALE: VERT. NA
 HORIZ. 1"=50'
 DATE: 08-14-09
 DRAWN BY: PS
 CHECKED BY: RJW

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	010
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

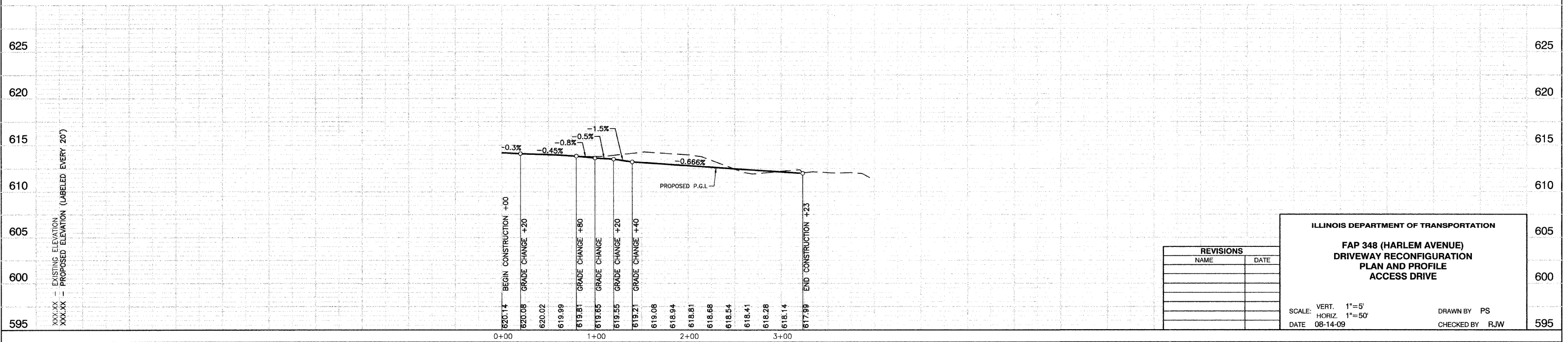
CONTRACT #63269



NOTES:
 1. WIDENING LESS THAN OR EQUAL TO 2' WILL BE POURED MONOLITHIC WITH PROPOSED COMBINATION CURB AND GUTTER, TYPE B-6.24. THE WIDENING WILL STILL BE PAID AS PORTLAND CEMENT PAVEMENT, 10\"

LEGEND

- PAVEMENT WIDENING
- STAMPED CONCRETE MEDIAN SURFACE, 5" AND COLORED SURFACE
- * - COMBINATION CONCRETE CURB AND GUTTER, B-6.12, (SPECIAL) (9" MAX TO 6" MIN)



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

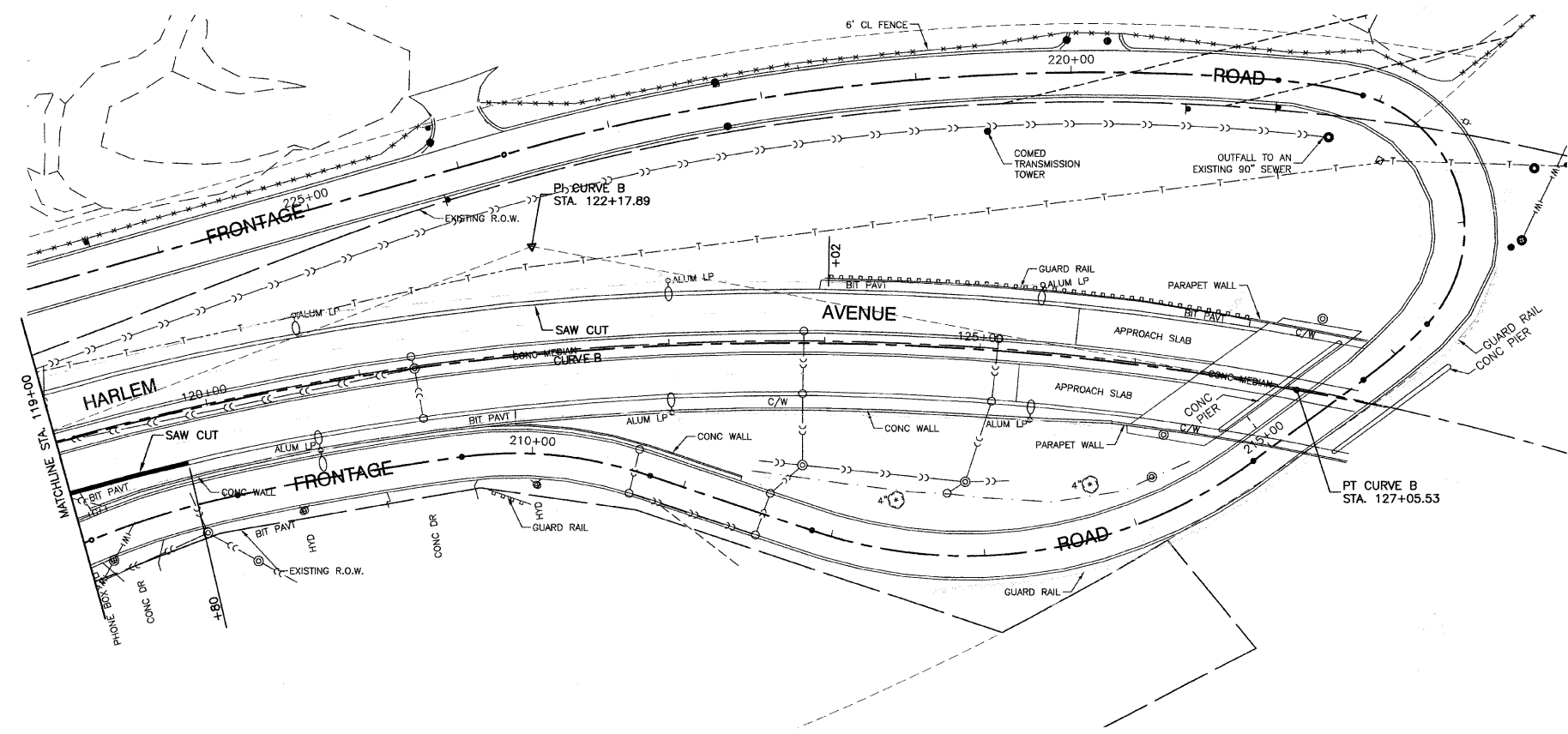
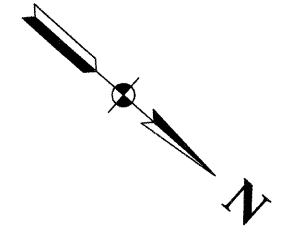
**FAP 348 (HARLEM AVENUE)
 DRIVEWAY RECONFIGURATION
 PLAN AND PROFILE
 ACCESS DRIVE**

SCALE: VERT. 1"=5'
 HORIZ. 1"=50'
 DATE 08-14-09

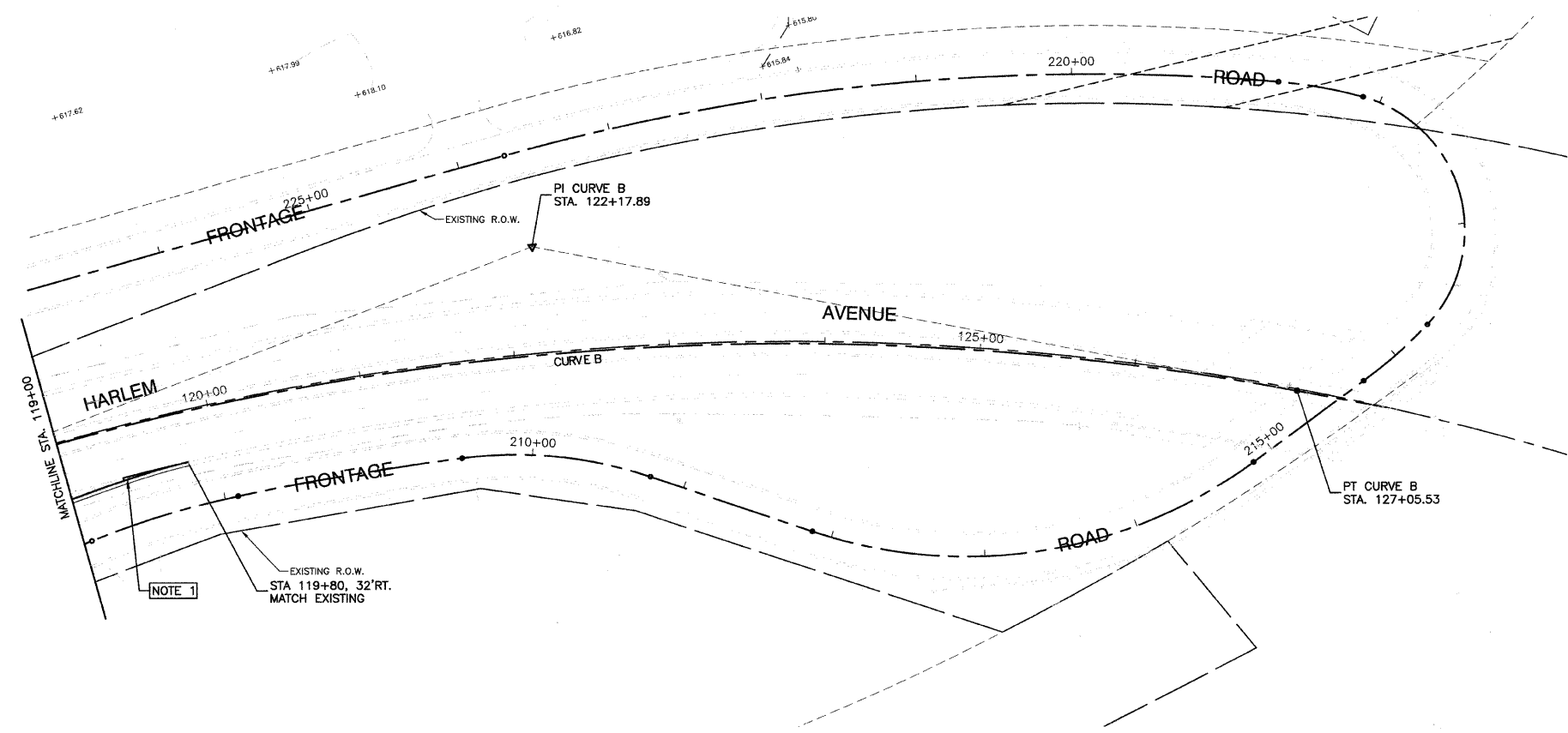
DRAWN BY PS
 CHECKED BY RJW

F. A. P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	011
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



EXISTING CONDITIONS



PROPOSED IMPROVEMENT

NOTES:
 1. WIDENING LESS THAN OR EQUAL TO 2' WILL BE POURED MONOLITHIC WITH PROPOSED COMBINATION CURB AND GUTTER, TYPE B-6.24. THE WIDENING WILL STILL BE PAID AS PORTLAND CEMENT PAVEMENT, 10".

LEGEND

- PAVEMENT REMOVAL
- MEDIAN REMOVAL
- DRIVEWAY REMOVAL
- CURB AND GUTTER REMOVAL
- PAVEMENT WIDENING

REVISIONS	
NAME	DATE

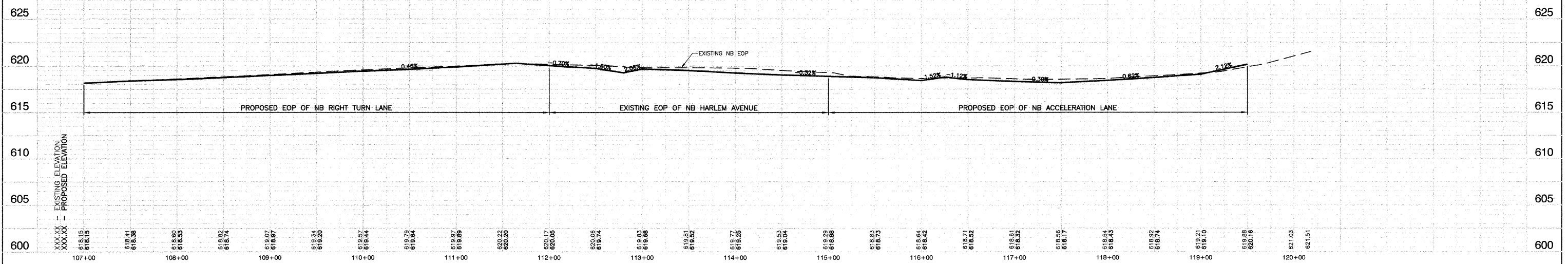
ILLINOIS DEPARTMENT OF TRANSPORTATION
**FAP 348 (HARLEM AVENUE)
 DRIVEWAY RECONFIGURATION
 EXISTING AND PROPOSED PLAN
 STA 119+00 TO END OF IMPROVEMENTS**

SCALE: VERT. NA
 HORIZ 1"=50'
 DATE 08-14-09
 DRAWN BY PS
 CHECKED BY RJW

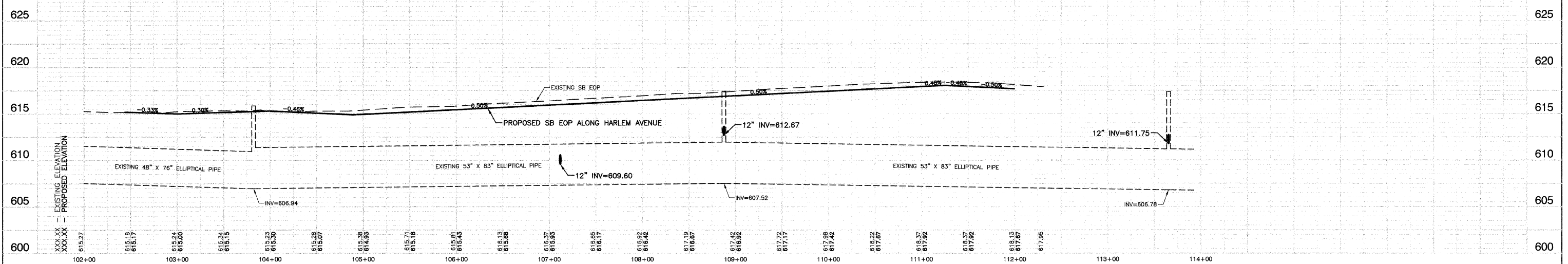
P. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	012
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT ARA-9003(340)	

CONTRACT #63269

NORTHBOUND HARLEM EOP



SOUTHBOUND HARLEM EOP



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
EDGE OF PAVEMENT PROFILES

SCALE: VERT. 1"=5'
HORIZ. 1"=50'

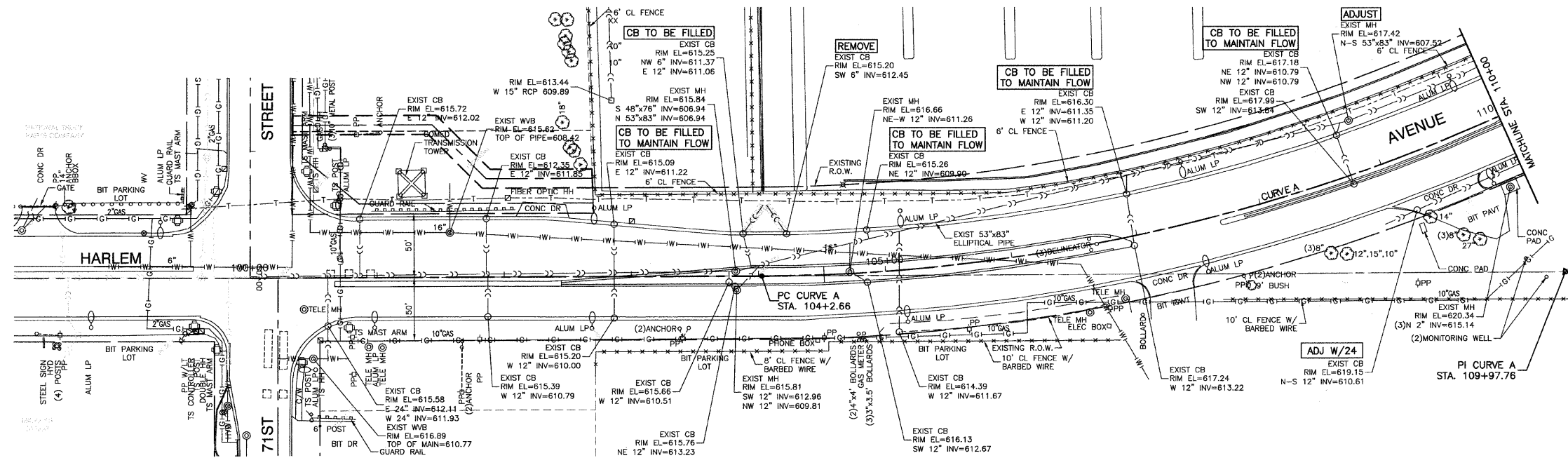
DATE 08-14-09

DRAWN BY PS
CHECKED BY RJW

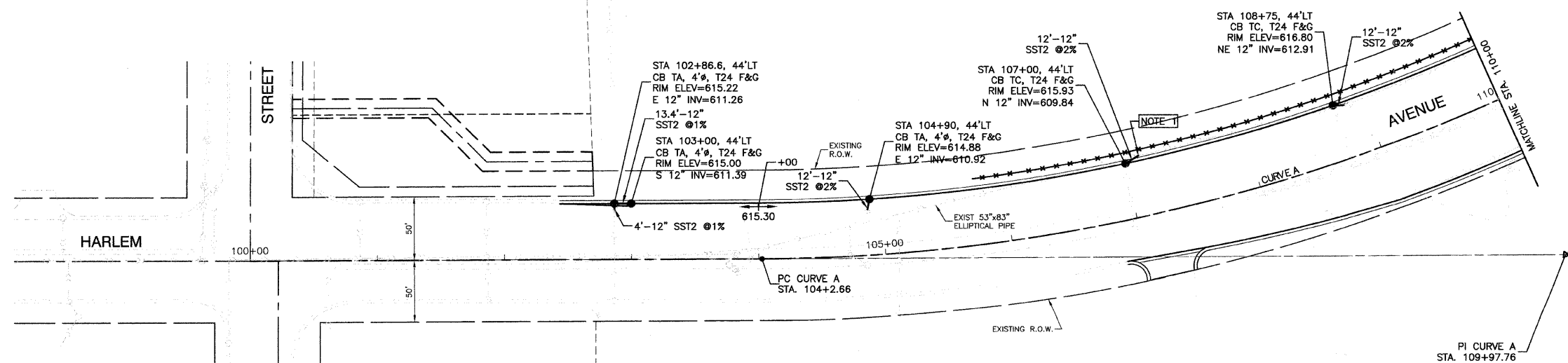
ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60570 04517-PLAN-01 - PLPR02
708-321-8700 FAX 708-321-8880
ILLINOIS DESIGN FIRM REGISTRATION NO. 194001291

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	013
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



EXISTING CONDITIONS



PROPOSED IMPROVEMENT

NOTES:
1. CONNECTION TO THE EXISTING STORM SEWER SHALL BE MADE WITH A 12" STORM SEWER. THE COST OF THE CONNECTION WILL BE INCIDENTAL TO STORM SEWER, CLASS A, 12".

LEGEND

- EXISTING CATCH BASIN
- ⊙ EXISTING MANHOLE
- PROPOSED CATCH BASIN
- ⊙ PROPOSED MANHOLE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- STORM SEWER REMOVAL
- [ADJUST] CB, MH OR WW TO BE ADJUSTED
- [ADJ W/71 OL] CB TO BE ADJUSTED WITH A NEW TYPE 1 FRAME, O.L.
- [ADJ W/71 CL] CB TO BE ADJUSTED WITH A NEW TYPE 1 FRAME, C.L.
- [ADJ W/23] CB TO BE ADJUSTED WITH A NEW TYPE 23 F&G
- [ADJ W/24] CB TO BE ADJUSTED WITH A NEW TYPE 24 F&G

BENCH MARKS:

- X CUT ON TOP OF 8TH BOLT UP ON THE SE LEG OF COMED TOWER NORTH OF 71ST STREET 4TH TOWER WEST OF HARLEM AVENUE ELEVATION = 617.036
- X CUT ON TOP OF 7TH BOLT UP ON THE SW LEG OF COMED TOWER NORTH OF 71ST STREET 3RD TOWER WEST OF HARLEM AVENUE ELEVATION = 617.377
- X CUT ON TOP OF 8TH BOLT UP ON THE SE LEG OF COMED TOWER NORTH OF 71ST STREET 2ND TOWER WEST OF HARLEM AVENUE ELEVATION = 617.768

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
DRAINAGE & UTILITIES
71ST STREET TO STA 110+00**

SCALE: VERT. NA
HORIZ. 1"=50'

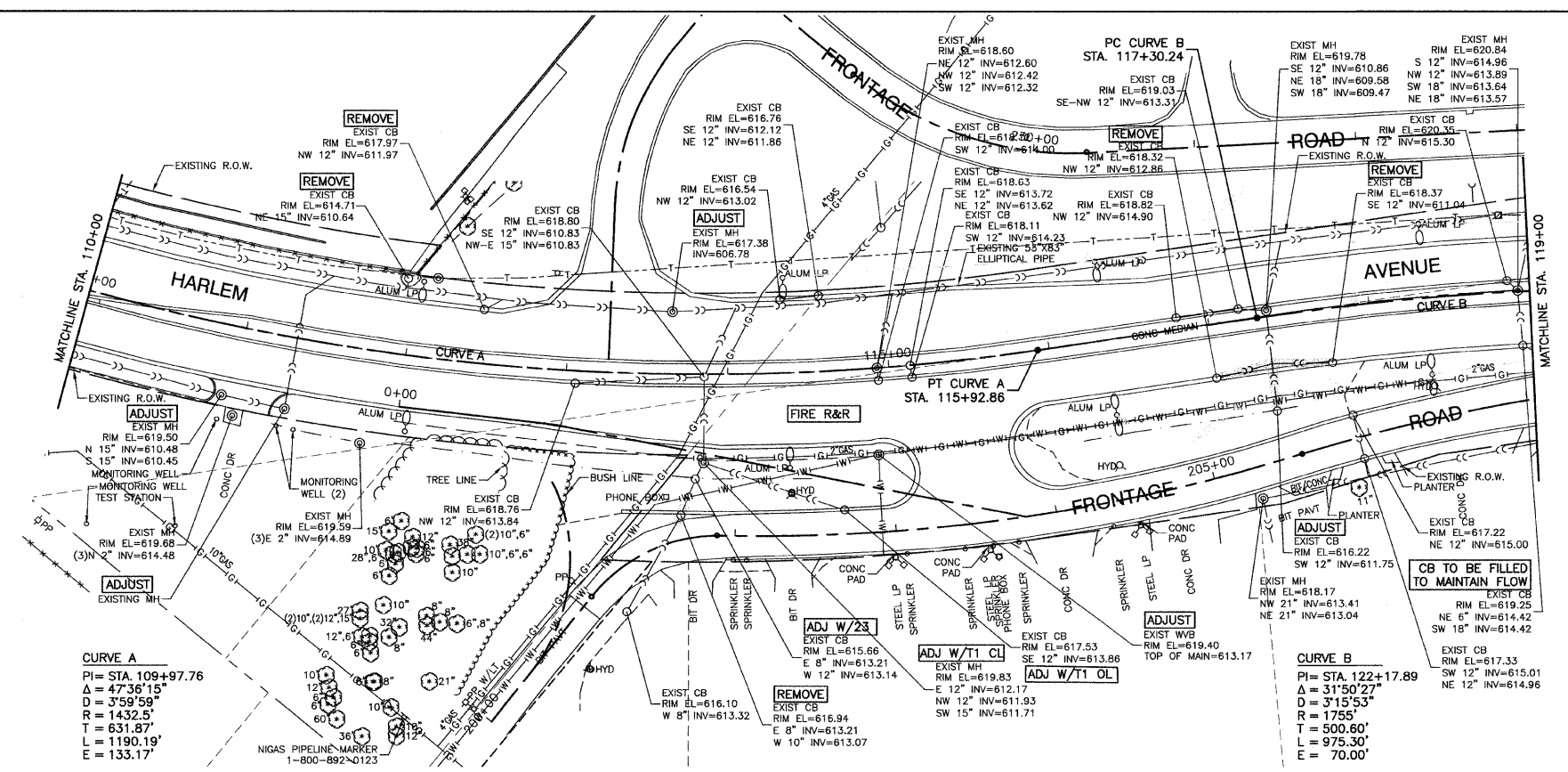
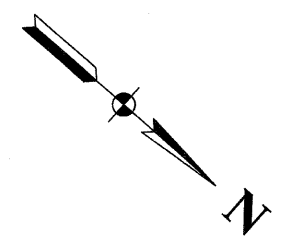
DATE: 08-14-09

DRAWN BY: PS
CHECKED BY: RJW

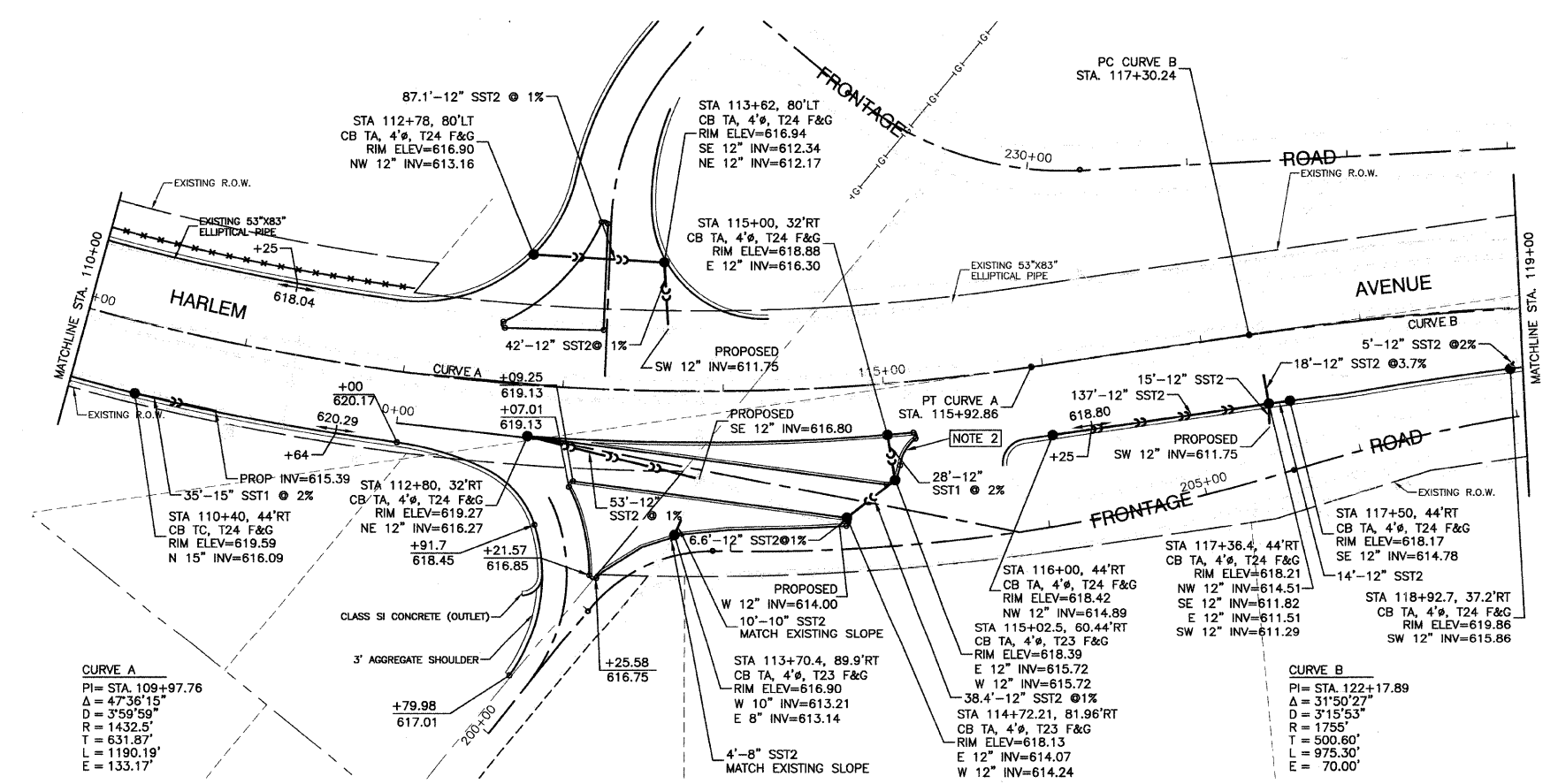
SECTION 24, TOWNSHIP 38, RANGE 12
SECTION 19, TOWNSHIP 38, RANGE 13

F.A.P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	014
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



EXISTING CONDITIONS



PROPOSED IMPROVEMENT

- NOTES:**
- CONNECTION TO THE EXISTING STORM SEWER SHALL BE MADE WITH A 12" STORM SEWER. THE COST OF THE CONNECTION WILL BE INCIDENTAL TO STORM SEWER, CLASS A, 12".
 - 10' TRANSITION SHALL BE USED TO GO FROM B-6.24 TO B-6.12 CURB AND GUTTER. THE TRANSITION SHALL BE PAID AS THE CONTRACT UNIT PRICE FOR COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24

LEGEND

- EXISTING CATCH BASIN
- ⊙ EXISTING MANHOLE
- PROPOSED CATCH BASIN
- ⊙ PROPOSED MANHOLE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- STORM SEWER REMOVAL
- CB, MH OR WV TO BE ADJUSTED
- ADJ W/T1 OL CB TO BE ADJUSTED WITH A NEW TYPE 1 FRAME, O.L.
- ADJ W/T1 CL CB TO BE ADJUSTED WITH A NEW TYPE 1 FRAME, C.L.
- ADJ W/23 CB TO BE ADJUSTED WITH A NEW TYPE 23 F&G
- FIRE R&R FIRE HYDRANT TO BE REMOVED AND RELOCATED

BENCH MARKS:

- X CUT ON TOP OF 8TH BOLT UP ON THE SE LEG OF COMED TOWER NORTH OF 71ST STREET 4TH TOWER WEST OF HARLEM AVENUE ELEVATION = 617.036
- X CUT ON TOP OF 7TH BOLT UP ON THE SW LEG OF COMED TOWER NORTH OF 71ST STREET 3RD TOWER WEST OF HARLEM AVENUE ELEVATION = 617.377
- X CUT ON TOP OF 8TH BOLT UP ON THE SE LEG OF COMED TOWER NORTH OF 71ST STREET 2ND TOWER WEST OF HARLEM AVENUE ELEVATION = 617.768

REVISIONS	
NAME	DATE
NICOR REV	8-28-09

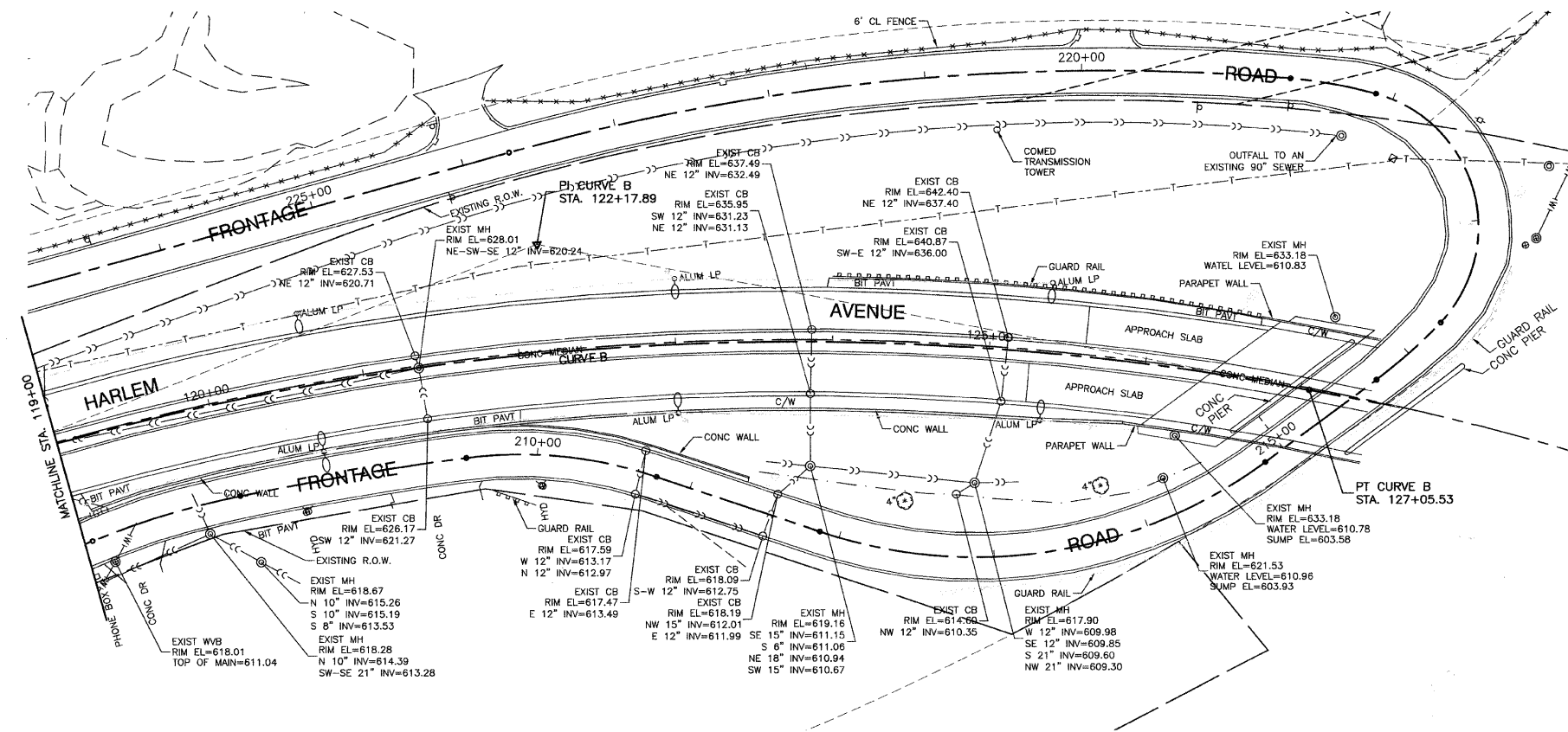
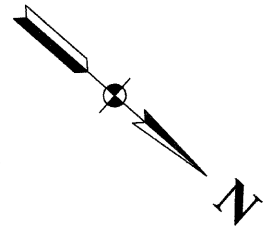
ILLINOIS DEPARTMENT OF TRANSPORTATION
**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
DRAINAGE & UTILITIES
STA 110+00 TO STA 119+00**

SCALE: VERT. NA
HORIZ. 1"=50'
DATE: 08-14-09
DRAWN BY: PS
CHECKED BY: RJW

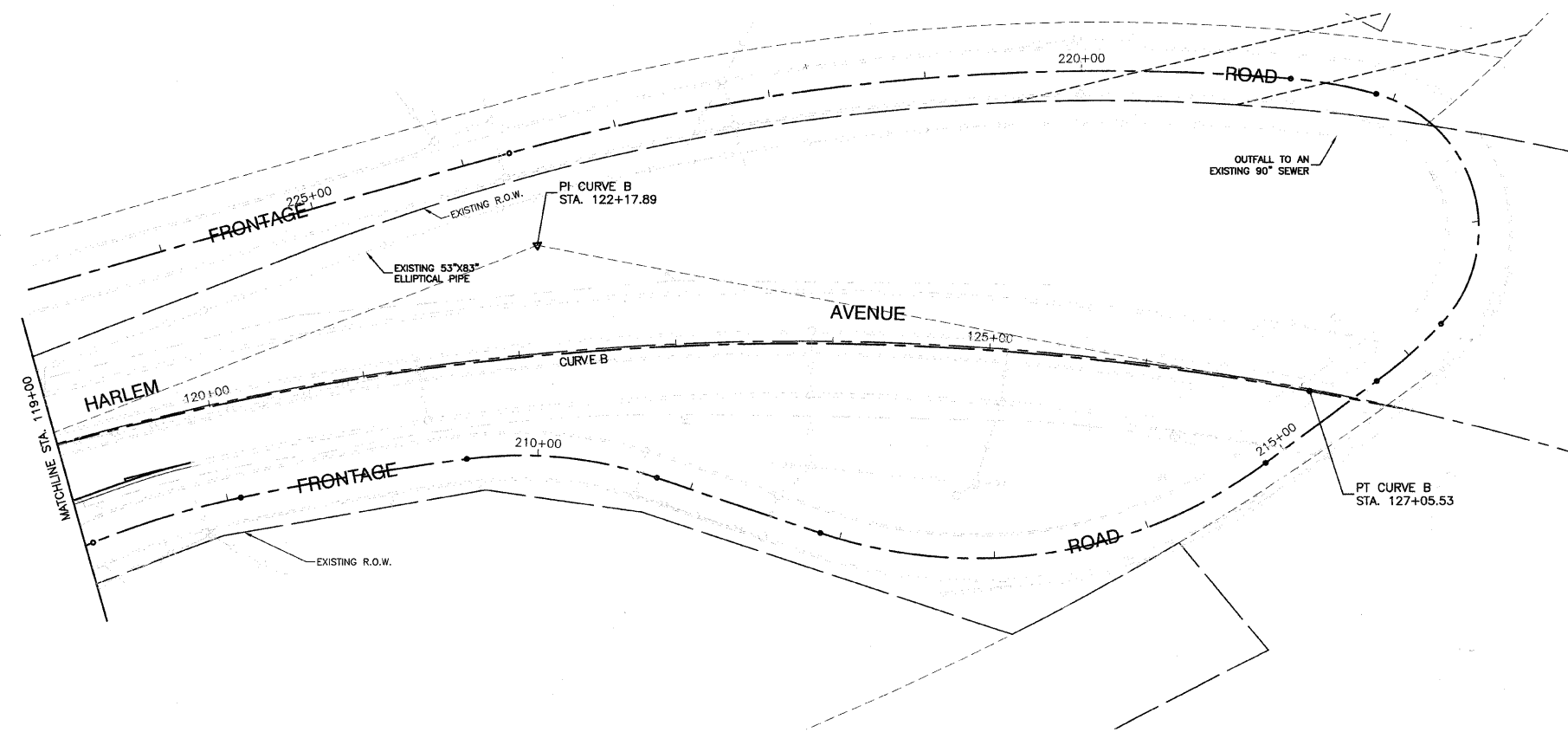
SECTION 24, TOWNSHIP 38, RANGE 12
SECTION 19, TOWNSHIP 38, RANGE 13

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	015
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



EXISTING CONDITIONS



PROPOSED IMPROVEMENT

LEGEND

- EXISTING CATCH BASIN
- ⊙ EXISTING MANHOLE
- PROPOSED CATCH BASIN
- ⊙ PROPOSED MANHOLE
- - - EXISTING STORM SEWER
- PROPOSED STORM SEWER
- STORM SEWER REMOVAL

BENCH MARKS:

- X CUT ON TOP OF 8TH BOLT UP ON THE SE LEG OF COMED TOWER NORTH OF 71ST STREET 4TH TOWER WEST OF HARLEM AVENUE ELEVATION = 617.036
- X CUT ON TOP OF 7TH BOLT UP ON THE SW LEG OF COMED TOWER NORTH OF 71ST STREET 3RD TOWER WEST OF HARLEM AVENUE ELEVATION = 617.377
- X CUT ON TOP OF 8TH BOLT UP ON THE SE LEG OF COMED TOWER NORTH OF 71ST STREET 2ND TOWER WEST OF HARLEM AVENUE ELEVATION = 617.768

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
DRAINAGE & UTILITIES
STA 119+00 TO END OF IMPROVEMENTS**

SCALE: VERT. NA
HORIZ. 1"=50'
DATE 08-14-09
DRAWN BY PS
CHECKED BY RJW

PREPARED BY OR UNDER THE
DIRECT SUPERVISION OF:

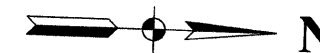
[Signature]
8/23/09



I certify that to the best of my knowledge, information, and belief, this lighting design is visually adequate for the roadway classification and geometry shown on the plans. The design is an economical one and complies with requirements of Chapter 56 of the BDE Manual.

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	016
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



NOTES:

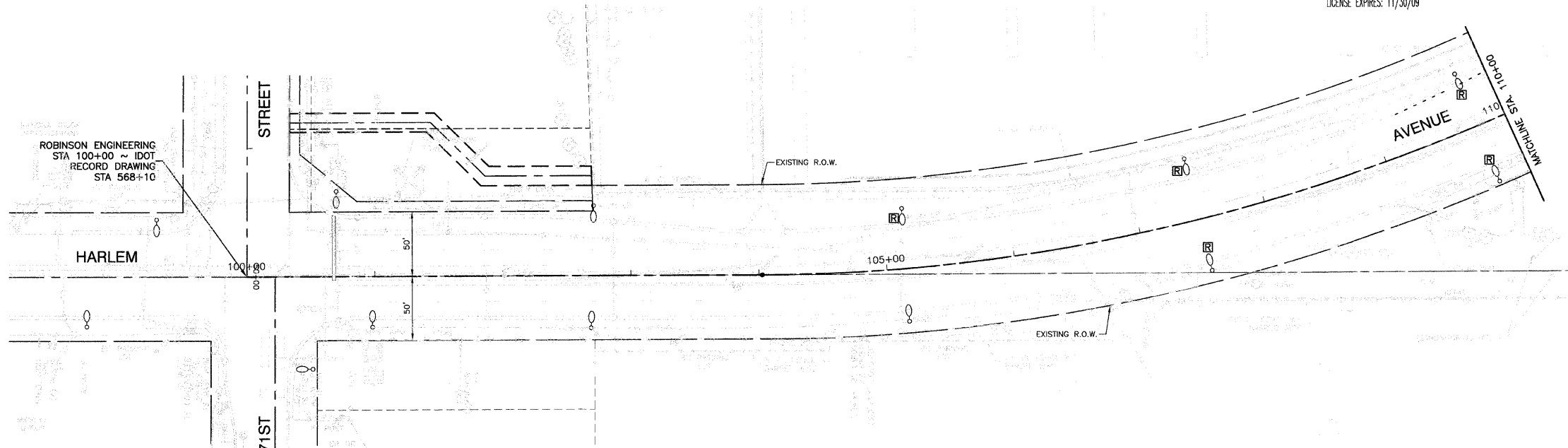
- ALL SPLICES SHALL BE MADE IN THE POLE HANDHOLE. NO UNDERGROUND SPLICES WILL BE ALLOWED.
- COMPLETE LIGHTING UNIT TO BE RELOCATED INCLUDING LUMINAIRE, POLE, ARM, POLE WIRE, FUSES, CONNECTIONS, HARDWARE AND ALL APPURTANCES.
- CONTRACTOR SHALL COORDINATE WITH IDOT ELECTRICAL MAINTENANCE DEPARTMENT BEFORE AND DURING CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE RECORD DRAWINGS TO IDOT AFTER CONSTRUCTION.
- LIGHTING CONTRACTOR SHALL COORDINATE STAGING WITH GENERAL CONTRACTOR SO THAT THE SIDE OF THE ROADWAY OPEN TO TRAFFIC REMAINS FULLY LIT AT ALL TIMES DURING CONSTRUCTION.
- EQUIPMENT GROUND SHALL BE CONTINUOUS FROM THE LIGHTING CONTROLLER TO THE LAST POLE OF EACH CIRCUIT, AND SHALL HAVE RESISTANCE CONFORMING TO IDOT SPECIFICATIONS.
- BEFORE BEGINNING WORK, LIGHTING CONTRACTOR AND ENGINEER SHALL INSPECT EXISTING POLES, MAST ARMS, AND LUMINAIRES FOR DAMAGE. EQUIPMENT THAT IS DETERMINED UNSUITABLE FOR RELOCATION SHALL BE REMOVED AND REPLACED, AND PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH ITEM.
- EQUIPMENT THAT IS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

LEGEND:

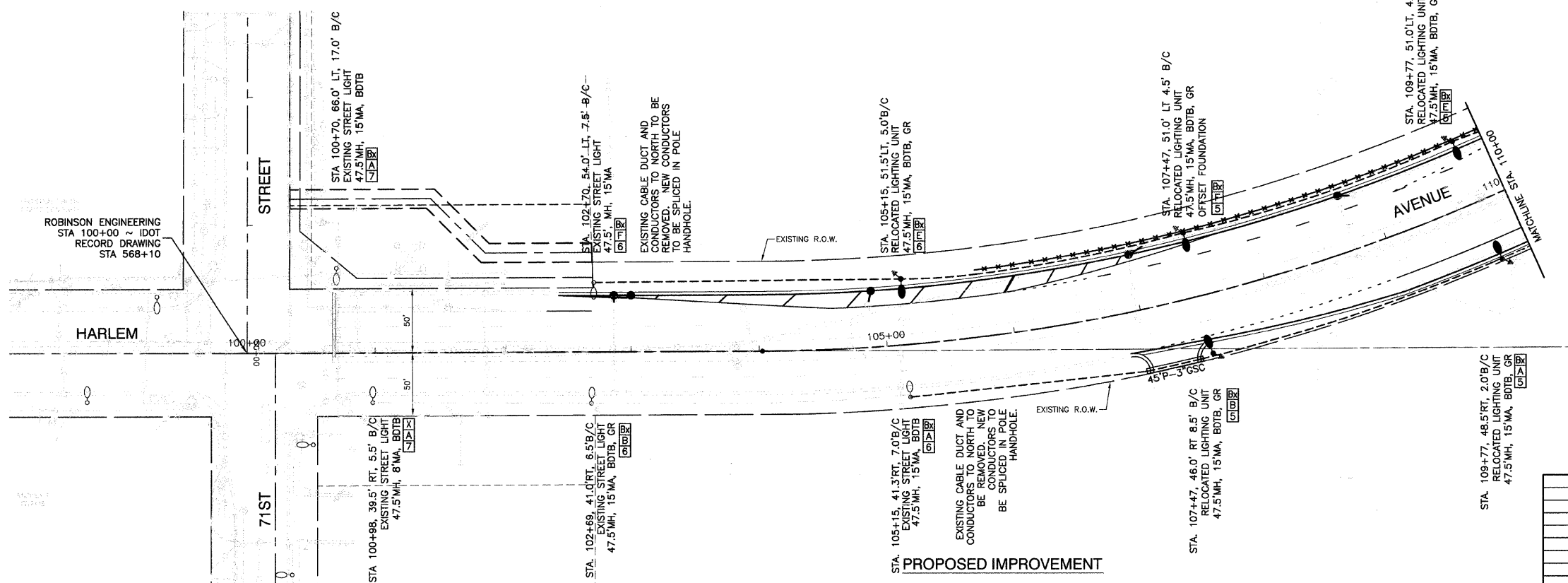
- EXISTING STREET LIGHTING UNIT, 400W HPS, 240V
- RELOCATED STREET LIGHTING UNIT, 400W HPS, 240V
- CONDUIT, PUSHED, GALVANIZED STEEL
- NEW UNIT DUCT, 3-1/2" NO.4 AWG AND NO.6 GROUND, (EPR TYPE RHW) 600V IN 1-1/4" POLYETHYLENE
- EXISTING UNIT DUCT, 3-1/2" NO.4, 600V, TYPE XHHW IN 1-1/4" DUCT W/ EXTERNAL BARE NO.6 GROUND (LOCATION APPROXIMATE PER RECORD DRAWINGS)
- GR GROUND ROD, 5/8" x 10'
- (R) REMOVAL OF EXISTING STREET LIGHT
- (RL) RELOCATE EXISTING LIGHTING UNIT
- LT LEFT
- RT RIGHT
- MH MOUNTING HEIGHT
- MA MAST ARM
- B/C BACK OF CURB
- BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE

IDOT POLE IDENTIFICATION

- CB CABINET NUMBER
- CI CIRCUIT
- PP POLE POSITION



EXISTING CONDITIONS



PROPOSED IMPROVEMENT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
STREET LIGHTING
71ST STREET TO STA 110+00**

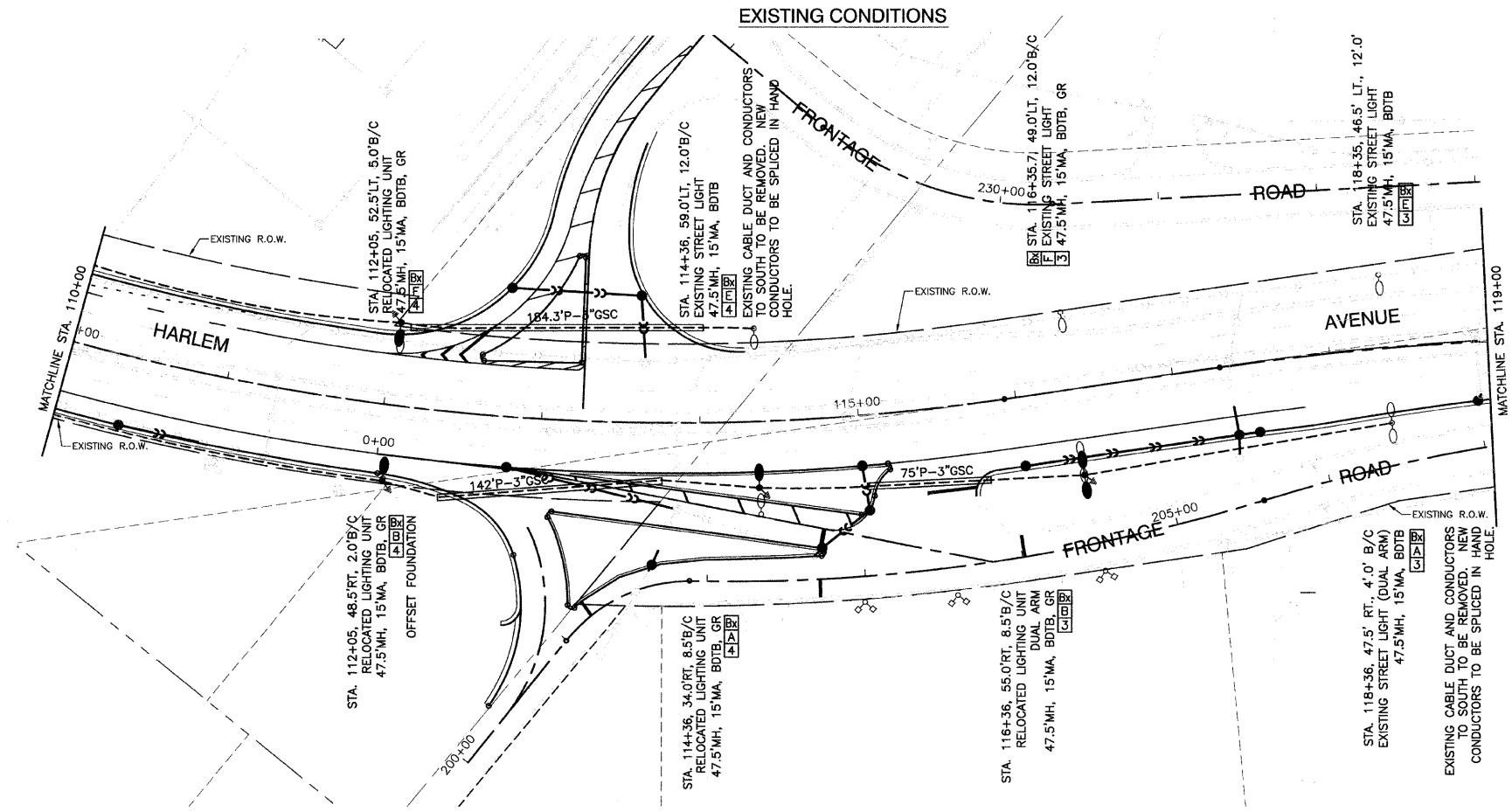
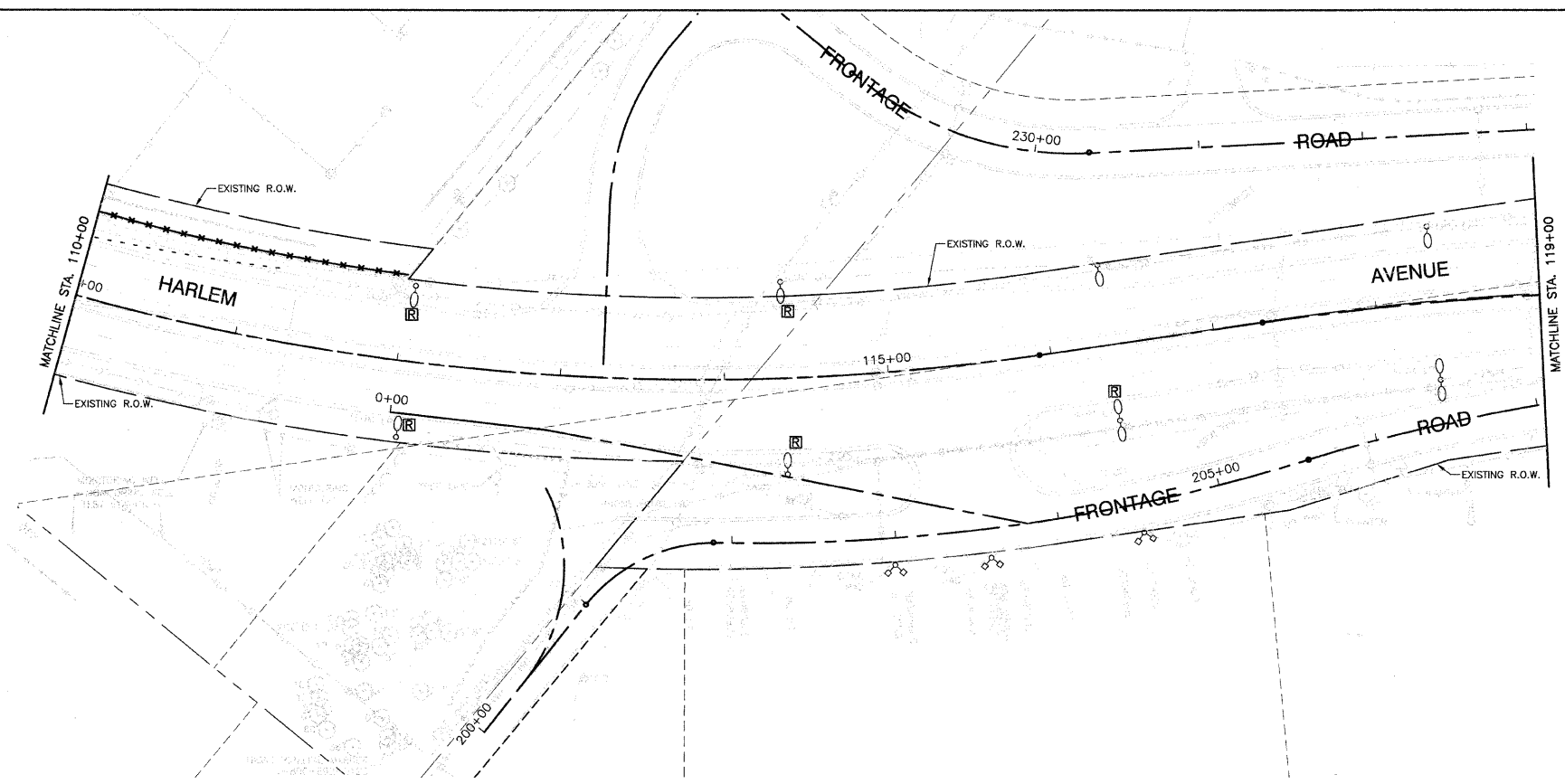
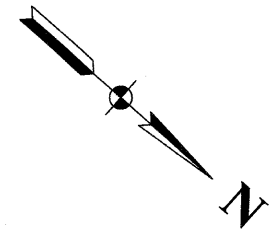
SCALE: VERT. NA
HORIZ. 1"=50'

DATE: 08-14-09

DRAWN BY: PS
CHECKED BY: RJW / PAP

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	017
STA.	TO STA.			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT ARA-9003(340)	

CONTRACT #63269



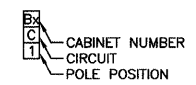
NOTES:

1. ALL SPLICES SHALL BE MADE IN THE POLE HANDHOLE. NO UNDERGROUND SPLICES WILL BE ALLOWED.
2. COMPLETE LIGHTING UNIT TO BE RELOCATED INCLUDING LUMINAIRE, POLE, ARM, POLE WIRE, FUSES, CONNECTIONS, HARDWARE AND ALL APPURTANCES.
3. CONTRACTOR SHALL COORDINATE WITH IDOT ELECTRICAL MAINTENANCE DEPARTMENT BEFORE AND DURING CONSTRUCTION.
4. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS TO IDOT AFTER CONSTRUCTION.
5. LIGHTING CONTRACTOR SHALL COORDINATE STAGING WITH GENERAL CONTRACTOR SO THAT THE SIDE OF THE ROADWAY OPEN TO TRAFFIC REMAINS FULLY LIT AT ALL TIMES DURING CONSTRUCTION.
6. EQUIPMENT GROUND SHALL BE CONTINUOUS FROM THE LIGHTING CONTROLLER TO THE LAST POLE OF EACH CIRCUIT, AND SHALL HAVE RESISTANCE CONFORMING TO IDOT SPECIFICATIONS.
7. BEFORE BEGINNING WORK, LIGHTING CONTRACTOR AND ENGINEER SHALL INSPECT EXISTING POLES, MAST ARMS, AND LUMINAIRES FOR DAMAGE. EQUIPMENT THAT IS DETERMINED UNSUITABLE FOR RELOCATION SHALL BE REMOVED AND REPLACED, AND PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH ITEM.
8. EQUIPMENT THAT IS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

LEGEND:

- EXISTING STREET LIGHTING UNIT, 400W HPS, 240V
- RELOCATED STREET LIGHTING UNIT, 400W HPS, 240V
- CONDUIT, PUSHED, GALVANIZED STEEL
- NEW UNIT DUCT, 3-1/2" NO.4 AWG AND NO.6 GROUND, (EPR TYPE RHW) 600V IN 1-1/4" POLYETHYLENE
- EXISTING UNIT DUCT, 3-1/2" NO.4, 600V, TYPE XHHW IN 1-1/4" DUCT W/ EXTERNAL BARE NO.6 GROUND (LOCATION APPROXIMATE PER RECORD DRAWINGS)
- GR GROUND ROD, 5/8" x 10'
- (R) REMOVAL OF EXISTING STREET LIGHT
- RELOCATE EXISTING LIGHTING UNIT
- LT LEFT
- RT RIGHT
- MH MOUNTING HEIGHT
- MA MAST ARM
- B/C BACK OF CURB
- BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE

IDOT POLE IDENTIFICATION



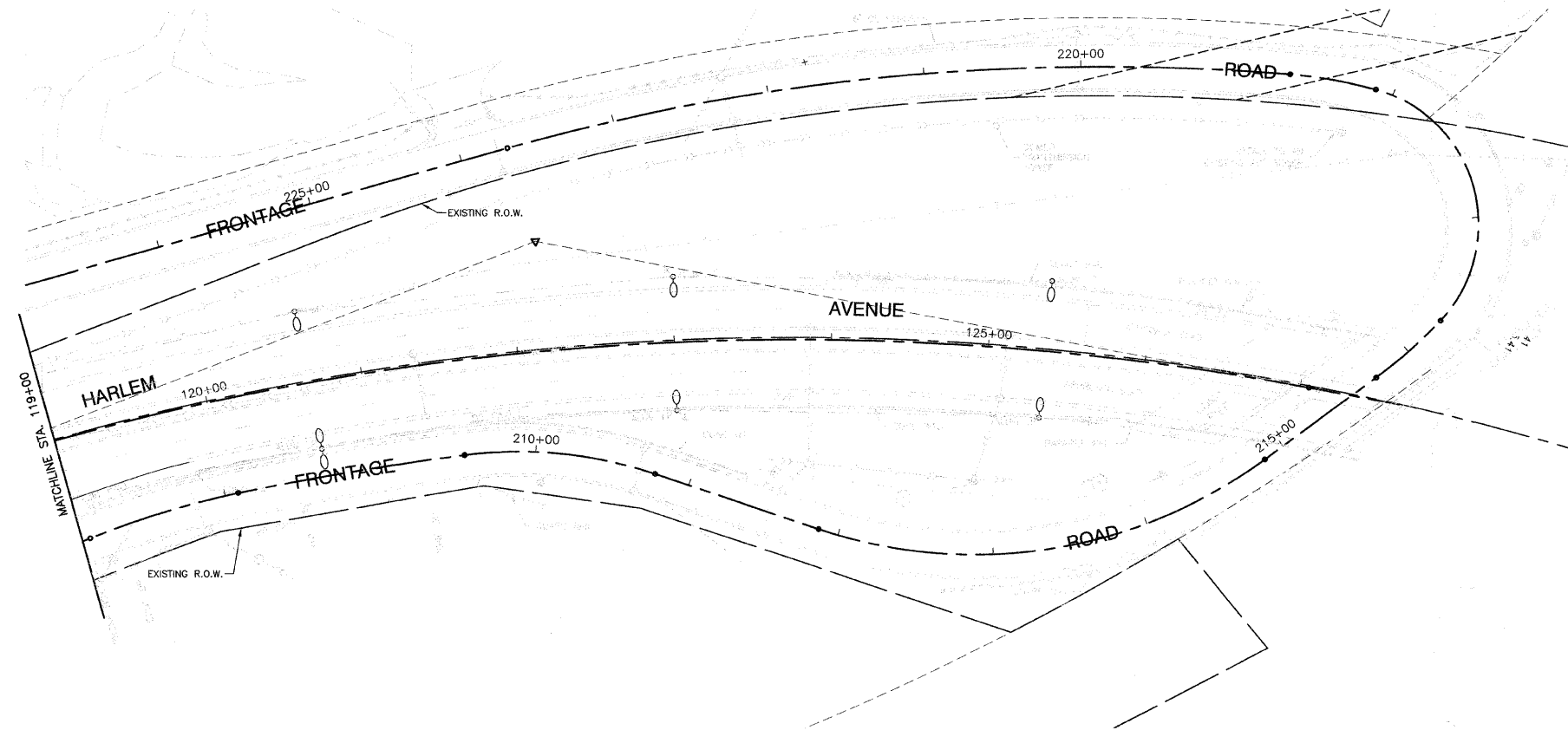
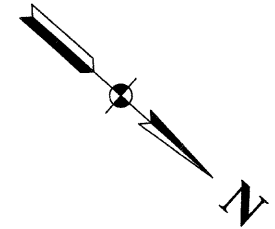
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**FAP 348 (HARLEM AVENUE)
 DRIVEWAY RECONFIGURATION
 STREET LIGHTING
 STA 110+00 TO STA 119+00**

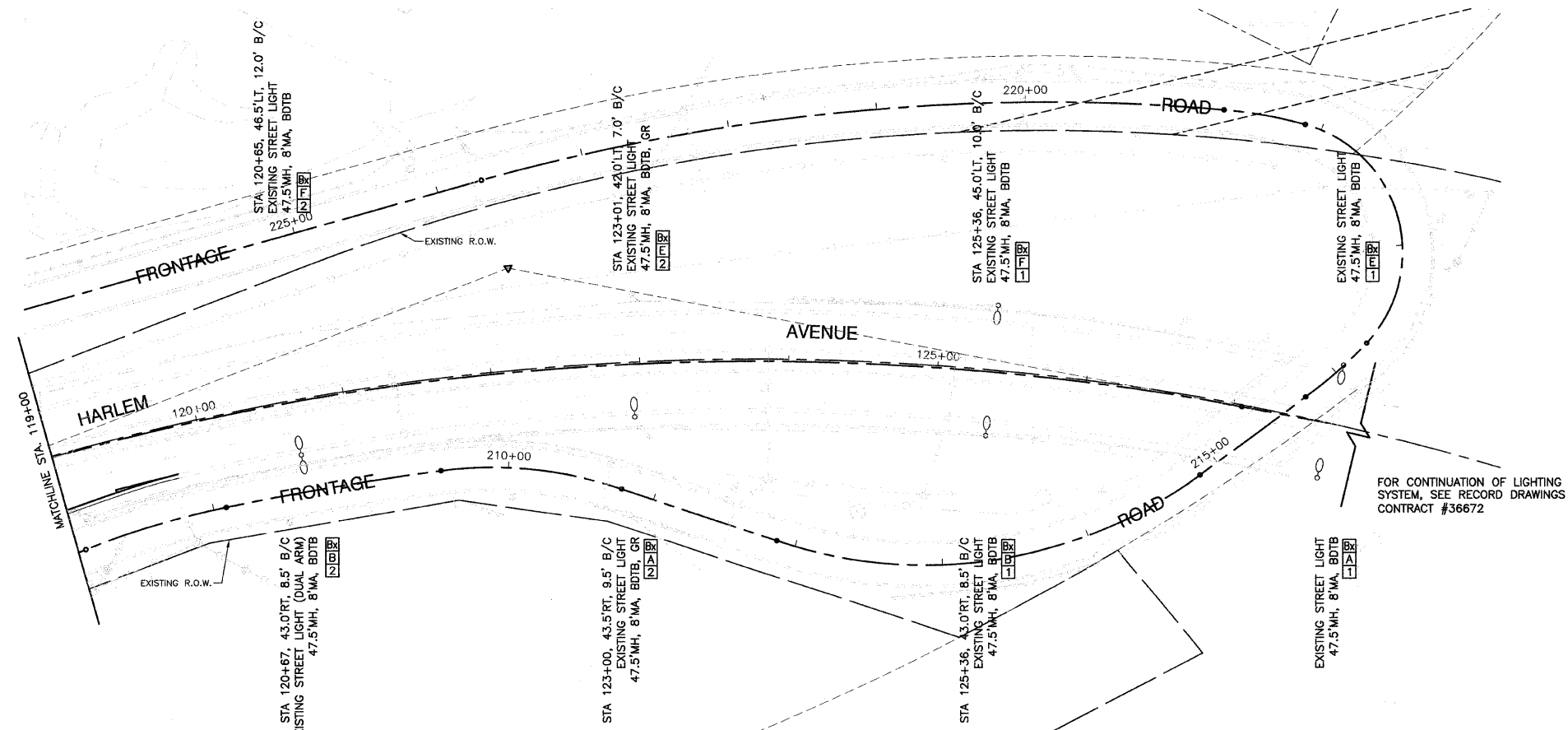
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 HORIZ. 1"=50'
 DATE: 08-14-09
 DRAWN BY: PS
 CHECKED BY: RJW / PAP

F. A. P. REC.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	018
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT ARA-9003(340)	

CONTRACT #63269



EXISTING CONDITIONS



PROPOSED IMPROVEMENT

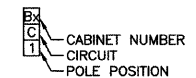
NOTES:

- ALL SPLICES SHALL BE MADE IN THE POLE HANDHOLE. NO UNDERGROUND SPLICES WILL BE ALLOWED.
- COMPLETE LIGHTING UNIT TO BE RELOCATED INCLUDING LUMINAIRE, POLE, ARM, POLE WIRE, FUSES, CONNECTIONS, HARDWARE AND ALL APPURTANCES.
- CONTRACTOR SHALL COORDINATE WITH IDOT ELECTRICAL MAINTENANCE DEPARTMENT BEFORE AND DURING CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE RECORD DRAWINGS TO IDOT AFTER CONSTRUCTION.
- LIGHTING CONTRACTOR SHALL COORDINATE STAGING WITH GENERAL CONTRACTOR SO THAT THE SIDE OF THE ROADWAY OPEN TO TRAFFIC REMAINS FULLY LIT AT ALL TIMES DURING CONSTRUCTION.
- EQUIPMENT GROUND SHALL BE CONTINUOUS FROM THE LIGHTING CONTROLLER TO THE LAST POLE OF EACH CIRCUIT, AND SHALL HAVE RESISTANCE CONFORMING TO IDOT SPECIFICATIONS.
- BEFORE BEGINNING WORK, LIGHTING CONTRACTOR AND ENGINEER SHALL INSPECT EXISTING POLES, MAST ARMS, AND LUMINAIRES FOR DAMAGE. EQUIPMENT THAT IS DETERMINED UNSUITABLE FOR RELOCATION SHALL BE REMOVED AND REPLACED, AND PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH ITEM.
- EQUIPMENT THAT IS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

LEGEND:

- EXISTING STREET LIGHTING UNIT, 400W HPS, 240V
- RELOCATED STREET LIGHTING UNIT, 400W HPS, 240V
- CONDUIT, PUSHED, GALVANIZED STEEL
- NEW UNIT DUCT, 3-1/2", NO.4 AWG AND NO.6 GROUND, (EPR TYPE RHW) 600V IN 1-1/4" POLYETHYLENE
- EXISTING UNIT DUCT, 3-1/2" NO.4, 600V, TYPE XHHW IN 1-1/4" DUCT W/ EXTERNAL BARE NO.6 GROUND (LOCATION APPROXIMATE PER RECORD DRAWINGS)
- GR GROUND ROD, 5/8" x 10'
- (R) REMOVAL OF EXISTING STREET LIGHT
- RELOCATE EXISTING LIGHTING UNIT
- LT LEFT
- RT RIGHT
- MH MOUNTING HEIGHT
- MA MAST ARM
- B/C BACK OF CURB
- BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE

IDOT POLE IDENTIFICATION



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
STREET LIGHTING
STA 119+00 TO END OF IMPROVEMENTS

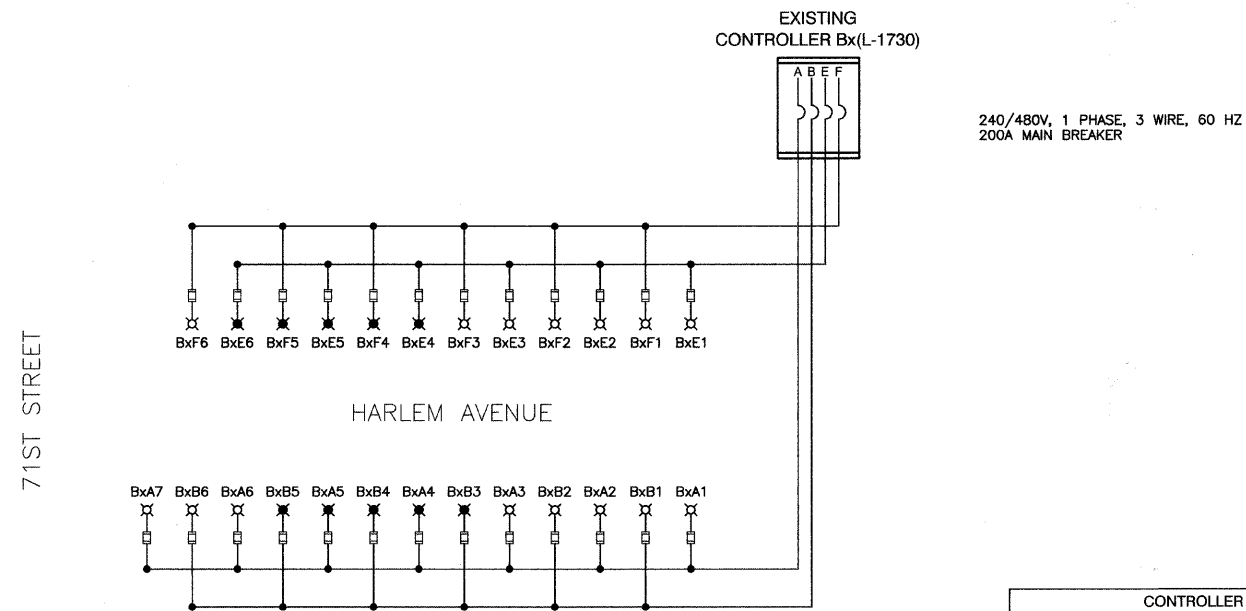
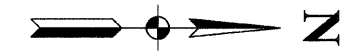
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HORIZ. 1"=50'

DATE: 08-14-09

DRAWN BY: PS
CHECKED BY: RJW / PAP

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	019
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT ARA-9003(340)		

CONTRACT #63269



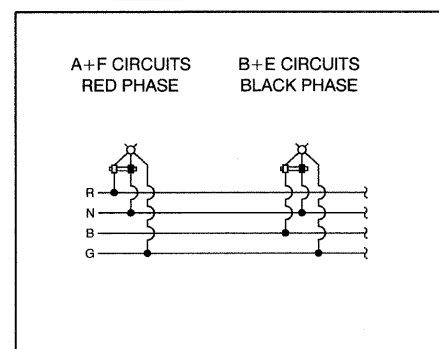
NOTES:
1. FOR EXISTING CONTROLLER DETAILS SEE RECORD DRAWINGS FOR CONTRACT # 36672

SINGLE LINE LEGEND

- ⊗ LUMINAIRE, 400W HPS, 240V, EXISTING STREET LIGHT
- ⊗ LUMINAIRE, 400W HPS, 240V, RELOCATED STREET LIGHT
- FUSE, 5.0 AMP
- FUSE HOLDER WITH SLUG
- } CIRCUIT BREAKER, 50A (PER RECORD DRAWINGS)
- CONNECTION

CONTROLLER Bx		
CIRCUIT	WATTS	AMPS
A	3164	14.00
B	2712	12.00
E	2712	12.00
F	2712	12.00
TOTAL LOAD	11,300	50.00

TYPICAL POLE WIRING



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

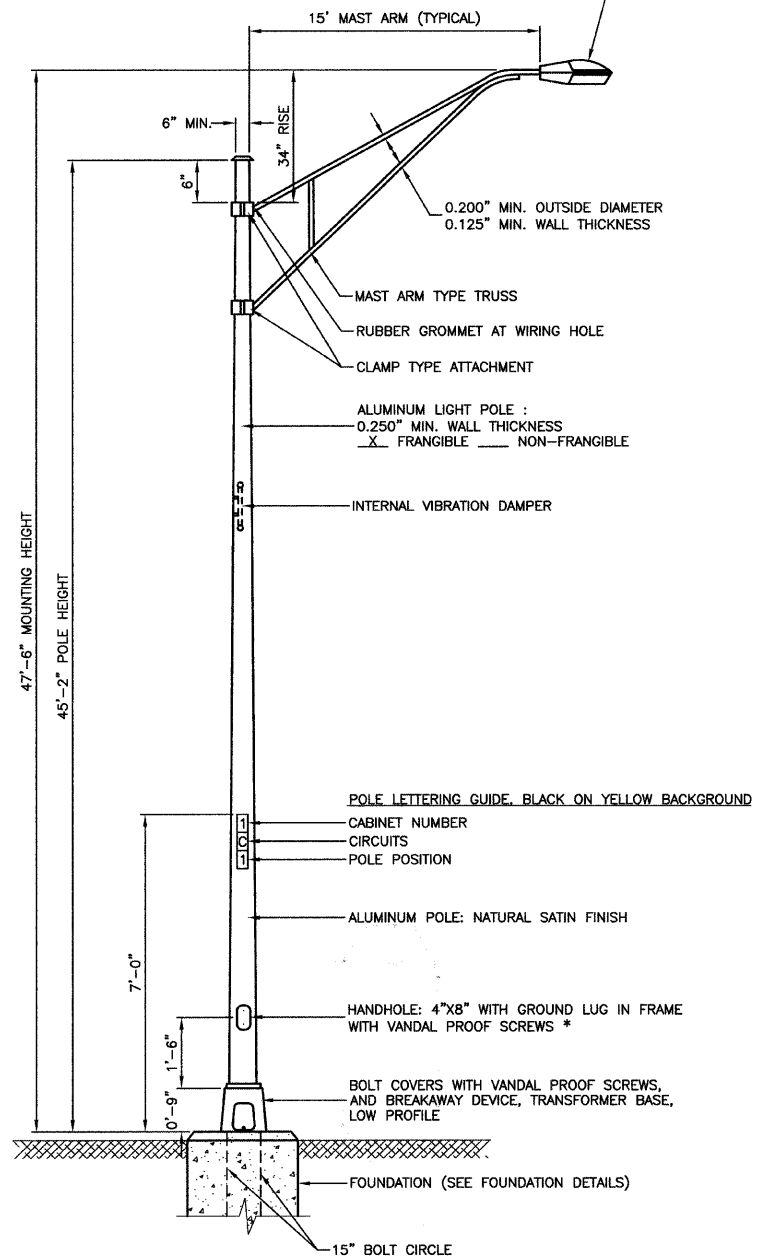
FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
STREET LIGHTING
SINGLE LINE WIRING DIAGRAM

SCALE: VERT. NA
HORIZ. 1"=50'
DATE 08-14-09
DRAWN BY PS
CHECKED BY RJW / PAP

F. A. P. SHEET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	020
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269

LUMINAIRE:
 400 WATT HIGH PRESSURE SODIUM LAMP
 240 VOLT BALLAST
 I.E.S. TYPE: MC III LIGHT DISTRIBUTION
 LENS TYPE: FLAT
 CUTOFF TYPE: FULL
 INITIAL LAMP LUMENS: 51,000
 LAMP LIFE: 24,000 HOURS



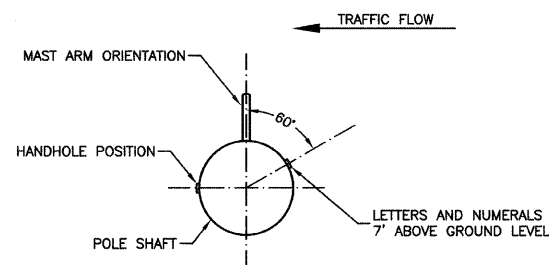
NOTES:

- THE LIGHTING UNITS SHALL MEET AASHTO DESIGN CRITERIA. DESIGN FOR 90 M.P.H. WIND WITH 30% GUST AND 75 POUND LUMINAIRE HAVING AN E.P.A. OF 1.6 SQ. FT. AND PROPER ICE LOADING.
- ALUMINUM ALLOY 6063-T6 SHALL BE USED.

TYPICAL POLE INSTALLATION (47'-6" MH)

FOR RELOCATED EXISTING POLES
 FOR DETAILS SEE RECORD DRAWINGS OF CONTRACT # 36672

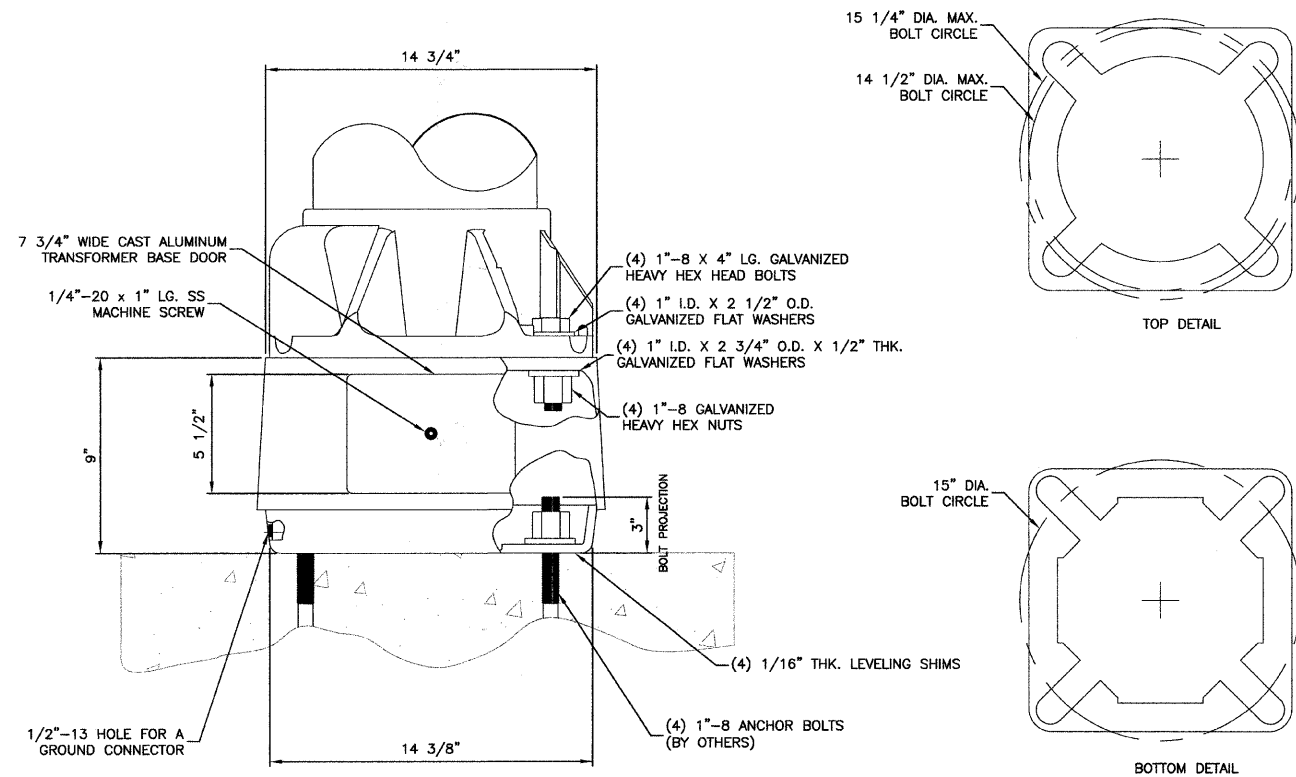
* - BUTTON HEAD SOCKET SET SCREW TYPE OF SCREWS PREFERRED FOR THIS APPLICATION



POSITION OF HANDHOLE AND NUMERALS ON POLE

IMPORTANT NOTE:

TRANSFORMER BASE AND LIGHTPOLE TO BE LEVELED AS ONE UNIT. USING LEVELING SHIMS IF REQUIRED.



BREAKAWAY TRANSFORMER BASE DETAIL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

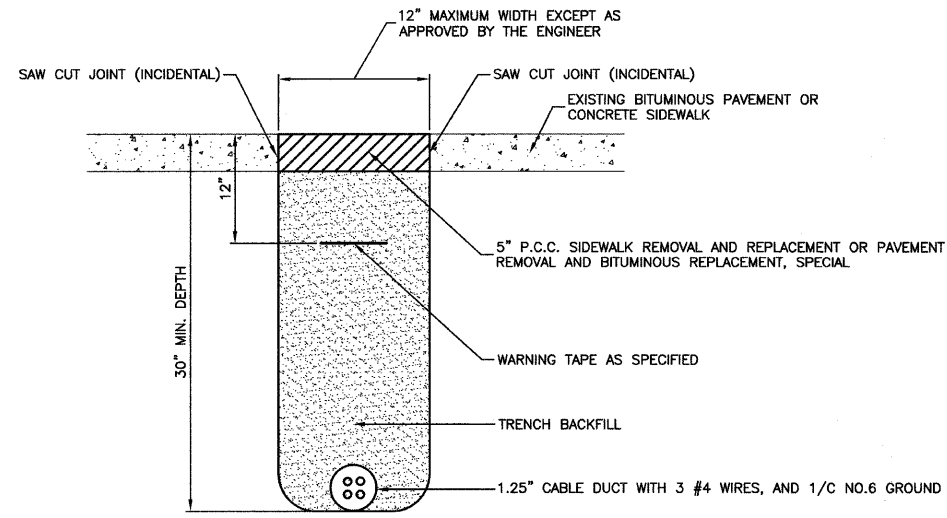
FAP 348 (HARLEM AVENUE)
 DRIVEWAY RECONFIGURATION
 STREET LIGHTING
 LIGHTING DETAILS

SCALE: VERT. NA
 HORIZ. NA
 DATE 08-14-09
 DRAWN BY PS
 CHECKED BY RJW / PAP

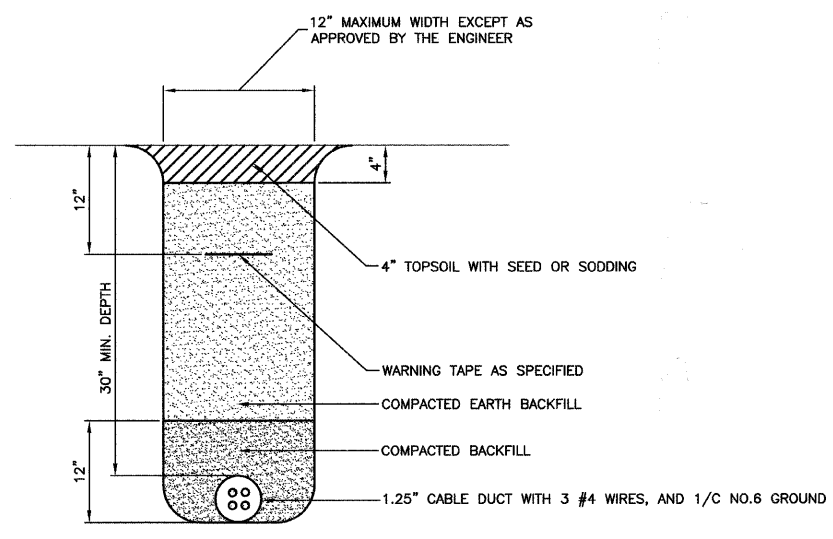
ROBINSON ENGINEERING, LTD.
 17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
 (708) 551-8700 FAX (708) 581-1882 04517-LIGHT-05 - P.01
 ILLINOIS DESIGN FIRM REGISTRATION NO. 104601120

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	021
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

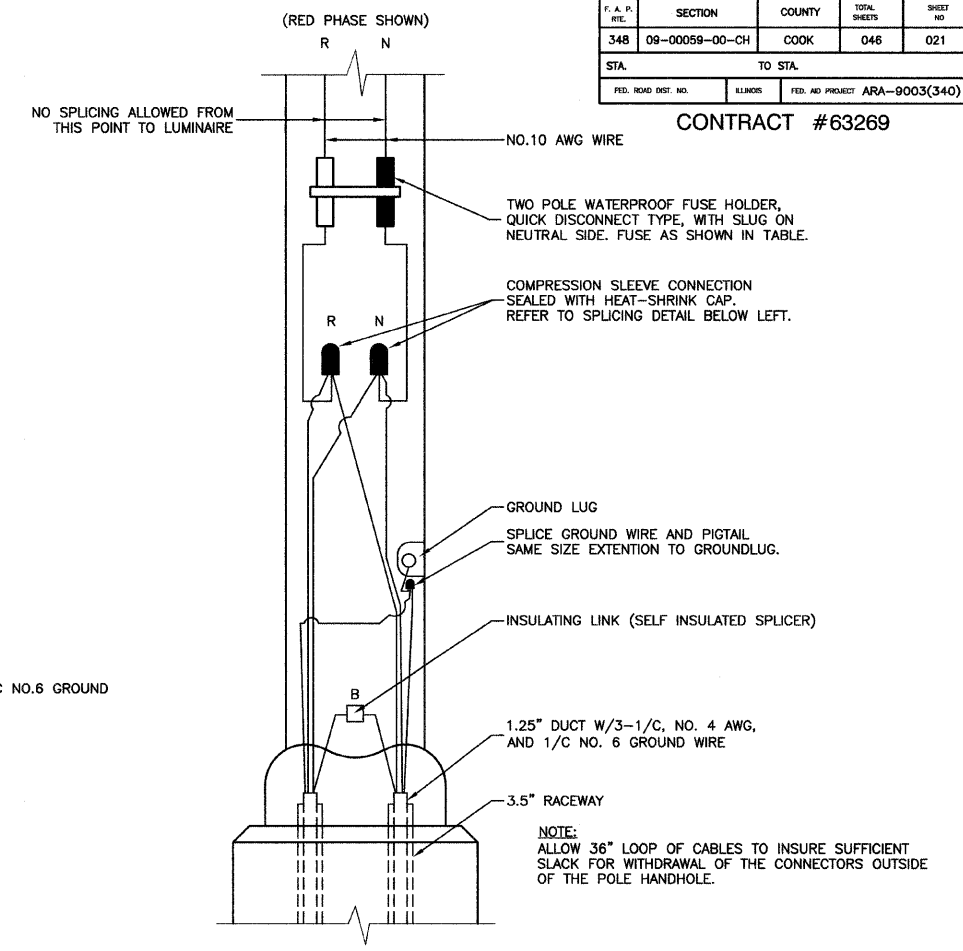
CONTRACT #63269



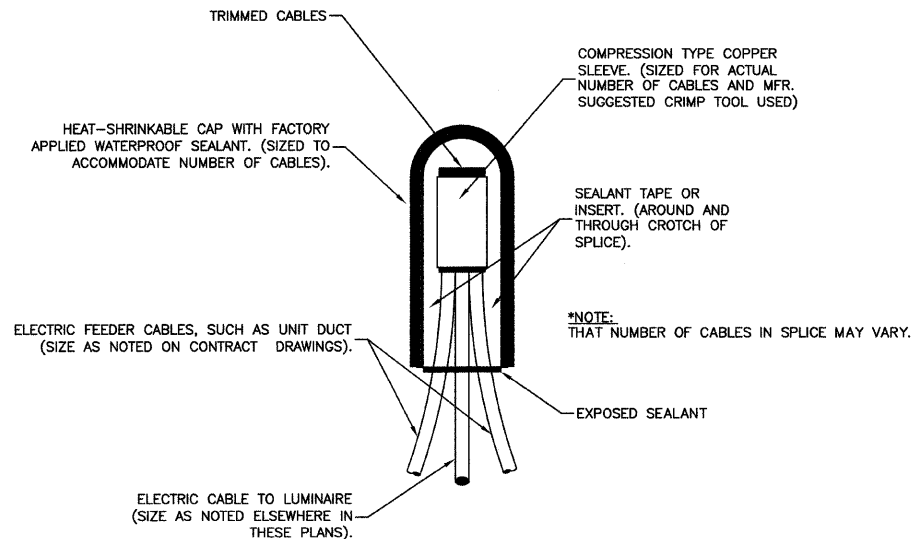
BITUMINOUS PAVEMENT OR CONCRETE SIDEWALK REMOVAL AND REPLACEMENT



TRENCH DETAIL



POLE HANDHOLE WIRING DIAGRAM
(TYPICAL FOR SINGLE LUMINAIRE INSTALLATION)



SPLICING ELECTRIC CABLES
BASIC MATERIALS AND METHODS

LIGHTING GENERAL NOTES

1. ALL WORK TO CONFORM TO THE NATIONAL ELECTRICAL CODE AND ANY APPLICABLE LOCAL CODES.
2. CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES BEFORE TRENCHING OR AUGERING.
3. BEFORE INSTALLING STANDARDS NEAR OVERHEAD FACILITIES CALL C.E. Co. FOR APPROVAL OF LOCATION.
4. FOR LOCATION OF EXISTING UNDERGROUND ELECTRICAL CABLE CALL C.E. Co.
5. SIZE ALL CONDUIT AS SPECIFIED ON DRAWINGS.
6. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO RESTORE ANY SPECIALIZED LANDSCAPING, (I.e. DECORATIVE ROCKS, SHRUBS, PLANTS, ECT.) OR SHALL REPLACE IT, THE COST OF WHICH SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

NOMINAL WATTAGE	FUSE SIZE
400	5.0 AMP

LUMINAIRE FUSE SIZE TABLE

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
STREET LIGHTING
LIGHTING DETAILS

SCALE: VERT. NA
HORIZ. NA
DATE: 08-14-09

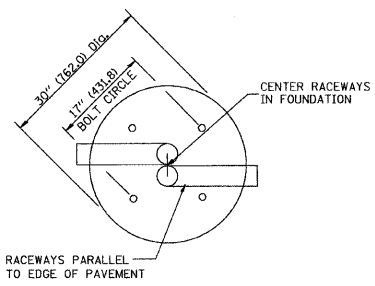
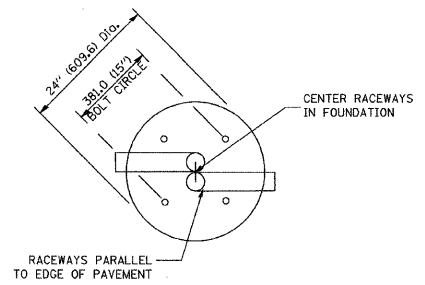
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CHECKED BY: RJW / PAP

P. A. P. ITC	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
348	09-00059-00-CH	COOK	046	022
STA	TO STA.			
FED. ROAD DIST. NO.	ALLOWS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269

LIGHT POLE FOUNDATION DEPTH TABLE
40 FT. (12.192 m) TO 47.5 FT. (14.478 m) MOUNTING HEIGHT

SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-6" (2.93 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND φ = 34°	9'-0" (2.74 m)	10'-0" (3.05 m)
MEDIUM SAND φ = 37.5°	8'-3" (2.52 m)	9'-0" (2.74 m)
DENSE SAND φ = 40°	7'-9" (2.36 m)	9'-0" (2.74 m)

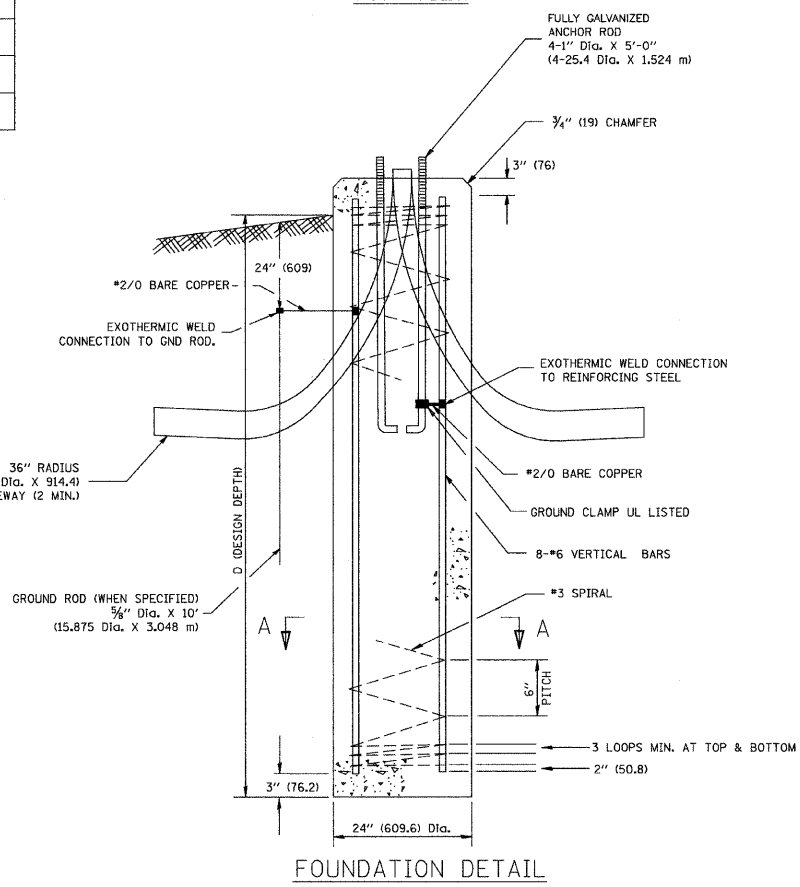


TOP VIEW

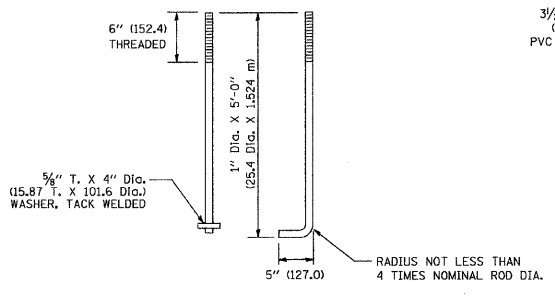
TOP VIEW

NOTES

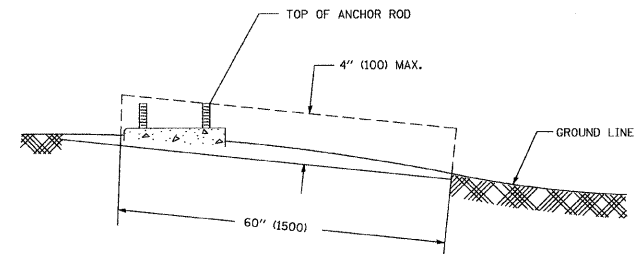
- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED.
- THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
- THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
- THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN. (20 mm).
- THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UM(G MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- ANCHOR RODS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
- THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.



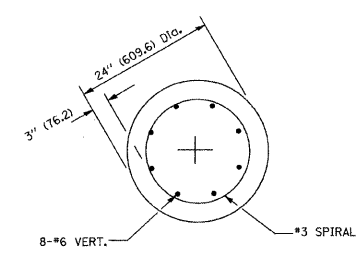
FOUNDATION DETAIL



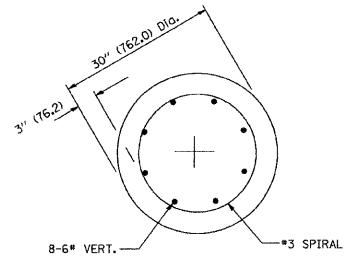
ANCHOR ROD DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SECTION A-A

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
STREET LIGHTING
LIGHTING DETAILS**

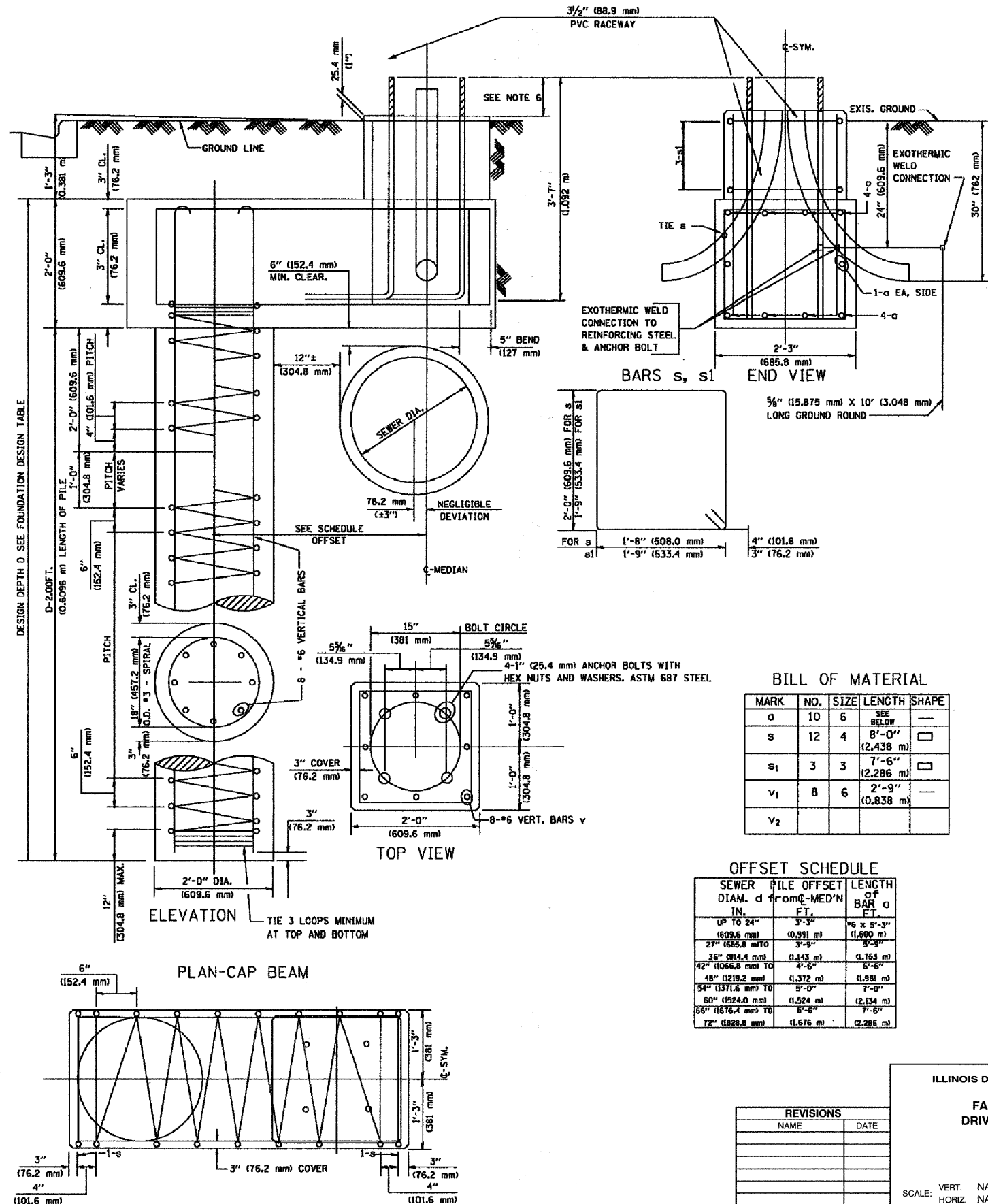
SCALE: VERT. NA
HORIZ. NA
DATE 08-14-09
DRAWN BY PS
CHECKED BY RJW / PAP

FOUNDATION DESIGN TABLE

TYPE OF SOIL	DESIGN DEPTH OF FOUNDATION		REINFORCEMENT IN FOUNDATION			
	SINGLE ARM D	TWIN ARM D	SINGLE ARM		TWIN ARM	
			VERT BARS	SPIRAL	VERT BARS	SPIRAL
SOFT CLAY	13'-0" (3,962 m)	15'-0" (4,572 m)	8-#6X12'-6" (3,810 m)	*3X122' (37,186 m)	8-#6X14'-3" (4,343 m)	*3X141' (42,977 m)
MEDIUM CLAY	9'-6" (2,896 m)	10'-9" (3,277 m)	8-#6X9'-0" (2,743 m)	*3X90' (27,432 m)	8-#6X10'-0" (3,048 m)	*3X100' (30,480 m)
STIFF CLAY	7'-0" (2,134 m)	8'-0" (2,438 m)	8-#6X6'-6" (1,981 m)	*3X66' (20,112 m)	8-#6X7'-6" (2,286 m)	*3X76' (23,165 m)
LOOSE SAND	9'-0" (2,743 m)	10'-0" (3,048 m)	8-#6X8'-6" (2,591 m)	*3X85' (25,908 m)	8-#6X9'-6" (2,896 m)	*3X94' (28,651 m)
MEDIUM SAND	8'-3" (2,515 m)	9'-0" (2,743 m)	8-#6X8'-0" (2,438 m)	*3X78' (23,774 m)	8-#6X8'-6" (2,591 m)	*3X85' (25,908 m)
DENSE SAND	7'-9" (2,362 m)	9'-0" (2,743 m)	8-#6X7'-6" (2,286 m)	*3X73' (22,250 m)	8-#6X8'-6" (2,591 m)	*3X85' (25,908 m)
ROCK OR SOLIDIFIED SLAG	5'-0" (1,524 m)	5'-0" (1,524 m)	NONE	NONE	NONE	NONE

NOTES

- THE ENGINEER SHALL DETERMINE THE CLASS OF SOIL DURING EXCAVATION AND SELECT THE DESIGN DEPTH OF FOUNDATION FROM THE DESIGN TABLE.
- EXCAVATION OF THE POLE FOUNDATION SHALL BE MADE WITH AN AUGER, 24" (609.6 mm) OR 30" (762.0 mm) IN DIAMETER.
- THE ANCHOR SHALL BE A TACK WELDED TYPE BOLT OR HOOK TYPE BOLT. COLD BENDING OF THE HOOK BOLT WILL NOT BE ALLOWED.
- THE ANCHOR BOLTS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN THE FORM.
- THE ENTIRE LENGTH OF THE ANCHOR BOLTS AS WELL AS THE NUTS AND WASHERS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM DESIGNATION A 153.
- THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF FOUNDATION WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS. IF LIGHT POLE IS MOUNTED WITHOUT BREAKAWAY DEVICE, ANCHOR BOLTS SHALL PROJECT 3" (76.2 mm) ABOVE TOP OF THE FOUNDATION. THE CONTRACTOR SHALL CONFIRM ANCHOR BOLT EXTENTION WITH ENGINEER.
- RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.
- CONCRETE SHALL BE CLASS "X". CONCRETE FOUNDATION MUST BE CURED FOR TEN (10) DAYS BEFORE THE LIGHT STANDARD IS ERECTED.
- THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE LIGHT IS ERECTED.



BILL OF MATERIAL

MARK	NO.	SIZE	LENGTH	SHAPE
a	10	6	SEE BELOW	—
s	12	4	8'-0" (2,438 m)	□
s1	3	3	7'-6" (2,286 m)	□
v1	8	6	2'-9" (0,838 m)	—
v2				

OFFSET SCHEDULE

SEWER PILE DIAM. d	PILE OFFSET from C-MED'N	LENGTH OF BAR a
IN.	FT.	FT.
UP TO 24" (609.6 mm)	3'-3"	6 x 5'-3" (1,600 m)
27" (686.8 mm) TO 35" (891.4 mm)	3'-9"	5'-9"
36" (914.4 mm) TO 42" (1066.8 mm)	4'-3"	5'-5"
48" (1219.2 mm) TO 54" (1371.6 mm)	4'-9"	5'-0"
60" (1524.0 mm) TO 66" (1676.4 mm)	5'-3"	4'-6"
72" (1828.8 mm)	6'-0"	4'-0"

ILLINOIS DEPARTMENT OF TRANSPORTATION

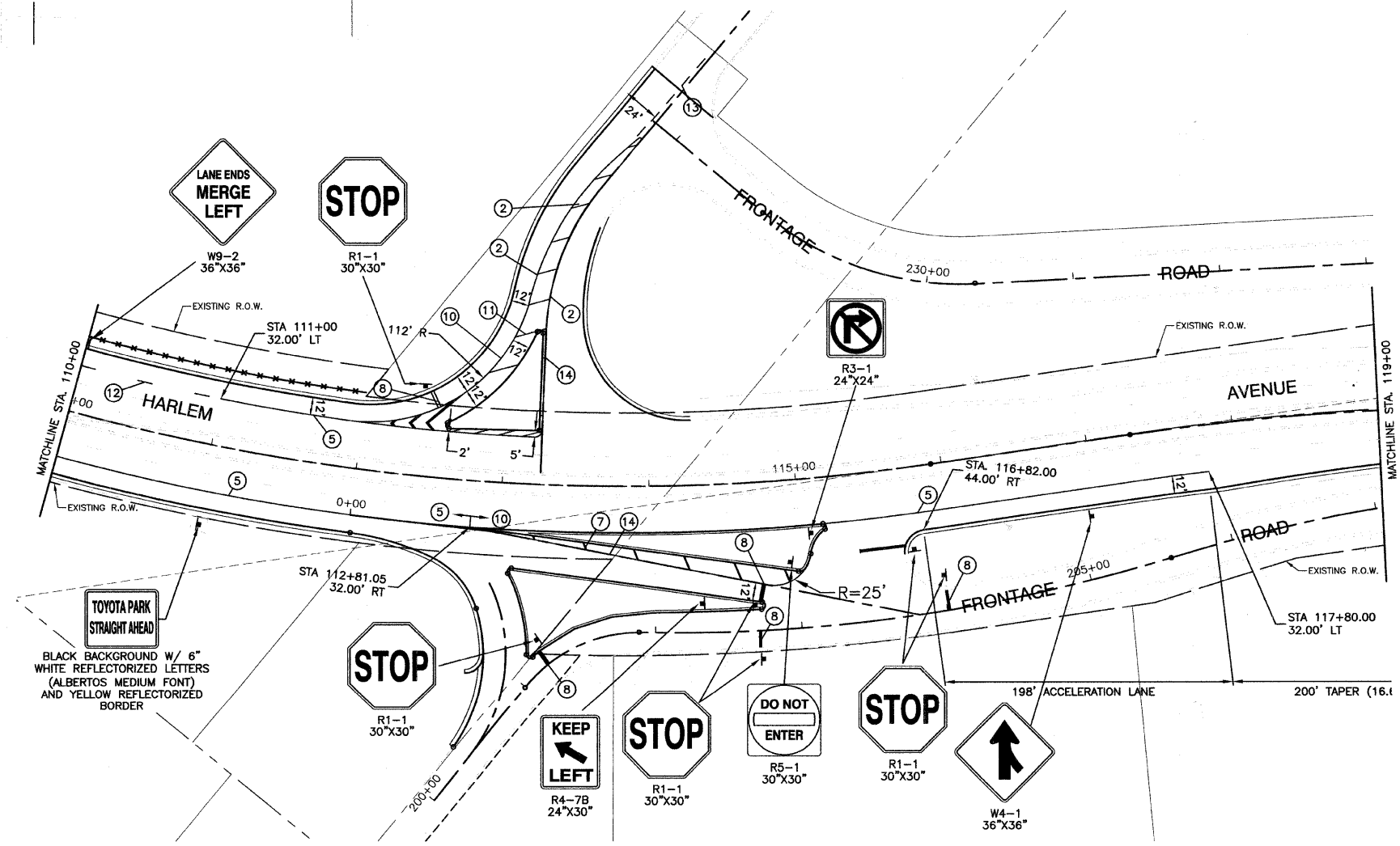
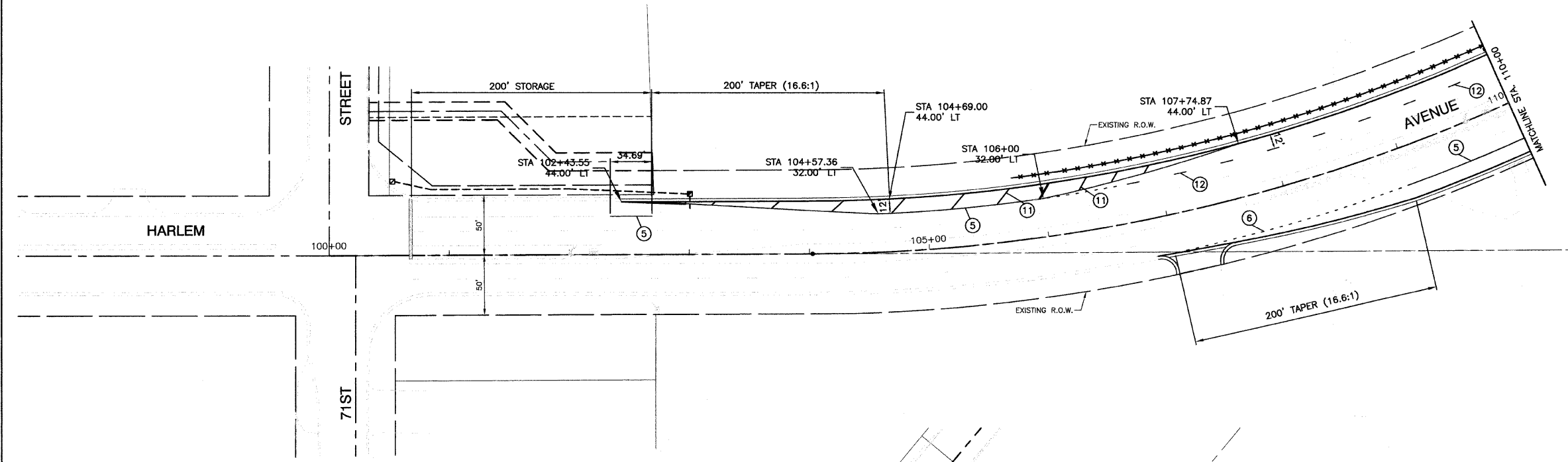
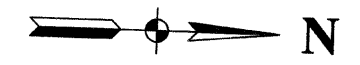
FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
STREET LIGHTING
LIGHTING DETAILS

SCALE: VERT. NA
HORIZ. NA
DATE 08-14-09

DRAWN BY PS
CHECKED BY RJW / JAP

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	024
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



PAVEMENT MARKING LEGEND

- ① WHITE LETTERS & SYMBOLS
- ② DOUBLE 4" YELLOW CENTERLINE (11" C/C)
- ③ DOUBLE YELLOW MEDIUM OUTLINE (11" C/C)
- ④ 4" WHITE EDGE LINE
- ⑤ 6" WHITE LANE LINE
- ⑥ 6" WHITE SKIP-DASH LINE (2' LINE - 6' SPACE)
- ⑦ 12" YELLOW DIAGONAL LINE (20' C/C)
- ⑧ 24" WHITE STOP BAR
- ⑨ 6" WHITE CROSSWALK (6' C/C)
- ⑩ 8" WHITE SOLID LINE
- ⑪ 12" WHITE LINE (45° ANGLE, 50' C/C)
- ⑫ 4" WHITE SKIP - DASH LINE (10' LINE - 30' SPACE)
- ⑬ 4" YELLOW SKIP - DASH LINE (10' LINE - 30' SPACE)
- ⑭ 4" YELLOW
- ◀ ONE-WAY AMBER MARKER
40' C/C UNLESS OTHERWISE INDICATED
- ◀ ONE-WAY CRYSTAL MARKER
80' C/C UNLESS OTHERWISE INDICATED
- ↔ TWO-WAY AMBER MARKER
40' C/C UNLESS OTHERWISE INDICATED
- ⊠ TRAFFIC SIGN

TOYOTA PARK STRAIGHT AHEAD
BLACK BACKGROUND W/ 6" WHITE REFLECTORIZED LETTERS (ALBERTOS MEDIUM FONT) AND YELLOW REFLECTORIZED BORDER

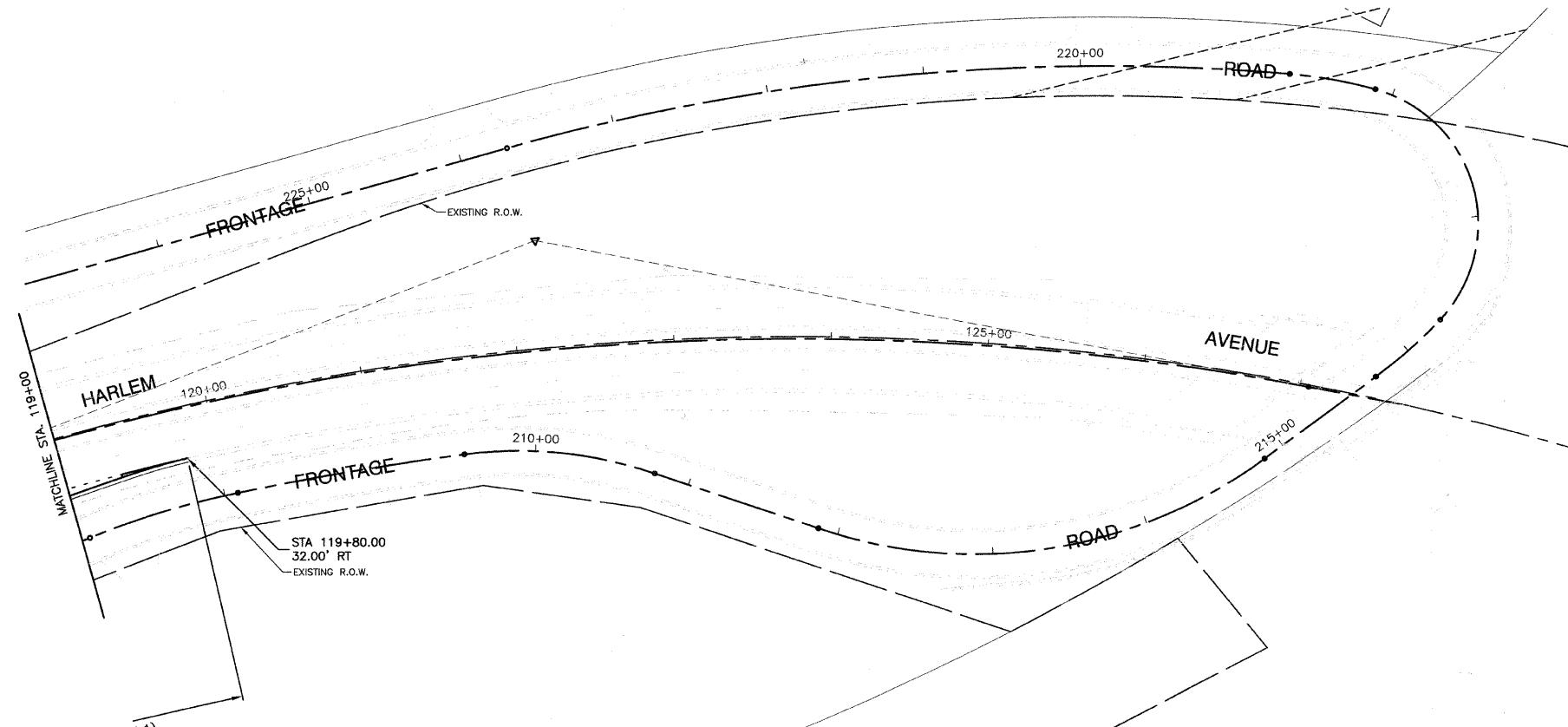
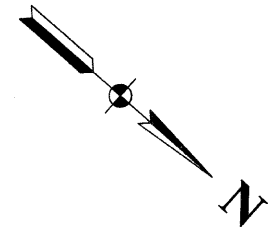
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
PAVEMENT MARKING & SIGNING
71ST STREET TO STA 119+00**

SCALE: VERT. NA
HORIZ. 1"=50'
DATE: 08-14-09
DRAWN BY: PS
CHECKED BY: RJW

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	025
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT ARA-9003(340)		

CONTRACT #63269



PAVEMENT MARKING LEGEND

- ① WHITE LETTERS & SYMBOLS
- ② DOUBLE 4" YELLOW CENTERLINE (11" C/C)
- ③ DOUBLE YELLOW MEDIAN OUTLINE (11" C/C)
- ④ 4" WHITE EDGE LINE
- ⑤ 6" WHITE LANE LINE
- ⑥ 6" WHITE SKIP-DASH LINE (2' LINE - 6' SPACE)
- ⑦ 12" YELLOW DIAGONAL LINE (20' C/C)
- ⑧ 24" WHITE STOP BAR
- ⑨ 6" WHITE CROSSWALK (6' C/C)
- ⑩ 6" WHITE CROSSWALK (10' C/C)
- ⑪ 12" WHITE LINE (45° ANGLE, 20' C/C)
- ⑫ 4" WHITE SKIP - DASH LINE (10' LINE - 30' SPACE)
- ⑬ 4" YELLOW SKIP - DASH LINE (10' LINE - 30' SPACE)
- ◀ ONE-WAY AMBER MARKER
40' C/C UNLESS OTHERWISE INDICATED
- ◄ ONE-WAY CRYSTAL MARKER
80' C/C UNLESS OTHERWISE INDICATED
- ◆ TWO-WAY AMBER MARKER
40' C/C UNLESS OTHERWISE INDICATED
- ⊠ TRAFFIC SIGN

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
PAVEMENT MARKING & SIGNING
STA 119+00 TO END OF IMPROVEMENT

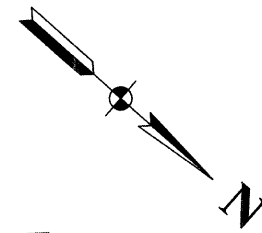
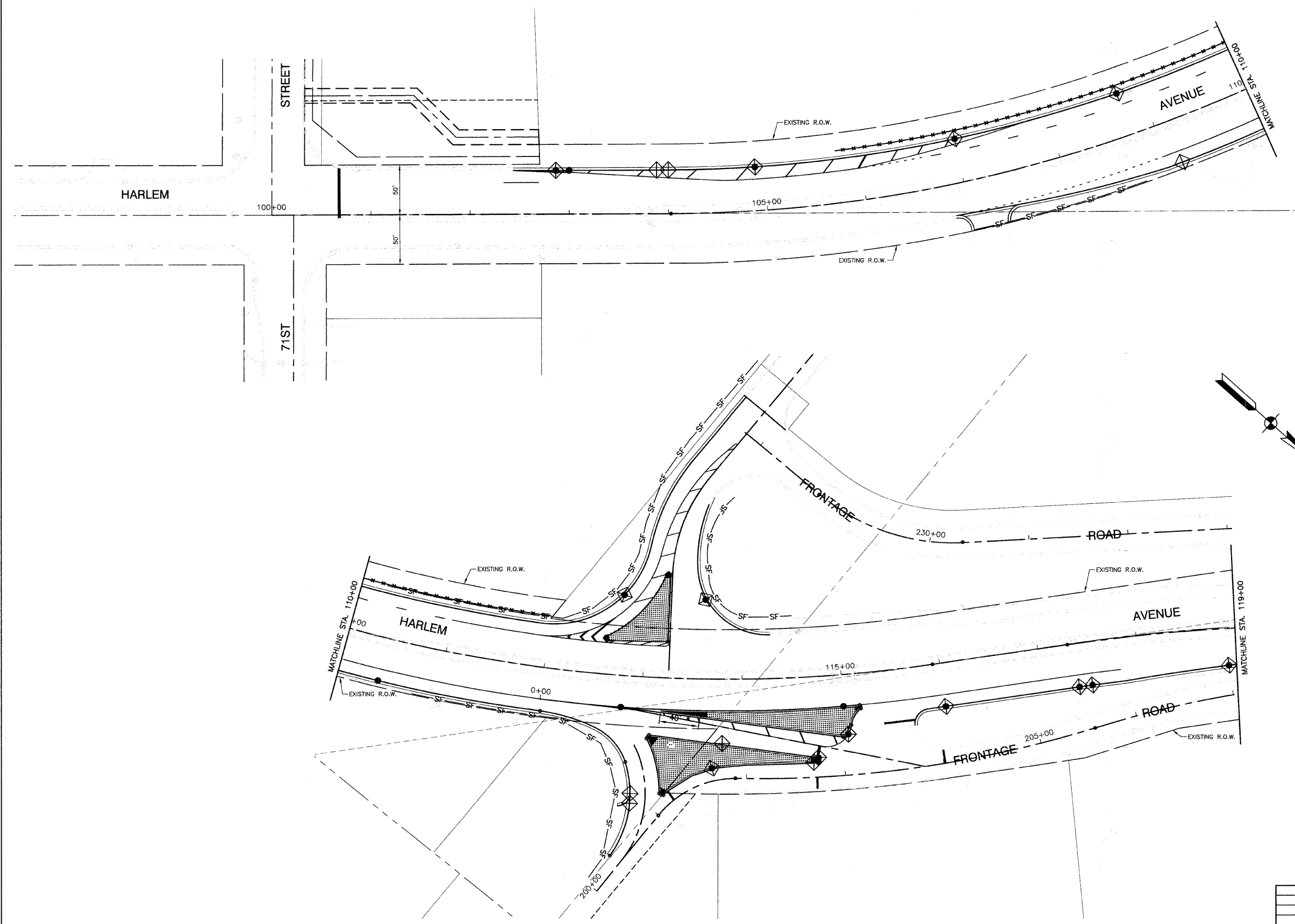
SCALE: VERT. NA
 HORIZ. 1"=50'
 DATE 08-14-09

DRAWN BY PS
 CHECKED BY RJW

SECTION 24, TOWNSHIP 38, RANGE 12
SECTION 19, TOWNSHIP 38, RANGE 13

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	026
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



LEGEND

- PROPOSED CATCH BASIN
- ⊙ PROPOSED MANHOLE
- SF- PERIMETER EROSION BARRIER
- ◊ INLET FILTER
- ▨ FURNISH AND PLACE TOPSOIL, 24"

EROSION NOTES:
1. NO SLOPE SHALL BE LEFT UNDISTURBED WITHOUT THE PLACEMENT OF TEMPORARY OR PERMANENT SEEDING AND EROSION CONTROL BLANKET.
2. ANY AREA WHERE THERE IS NO PROPOSED GRADING THE EXISTING GROUND COVER SHALL REMAIN.

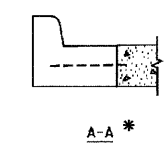
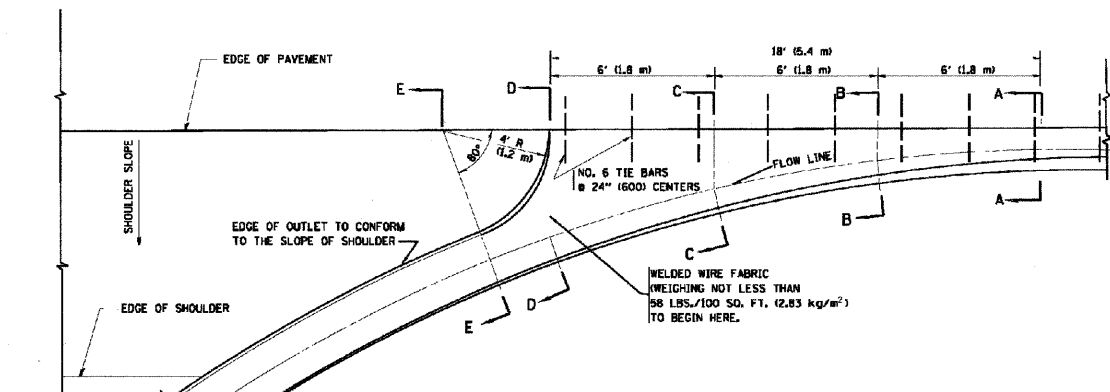
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
LANDSCAPING & EROSION CONTROL
71ST STREET TO STA 119+00**

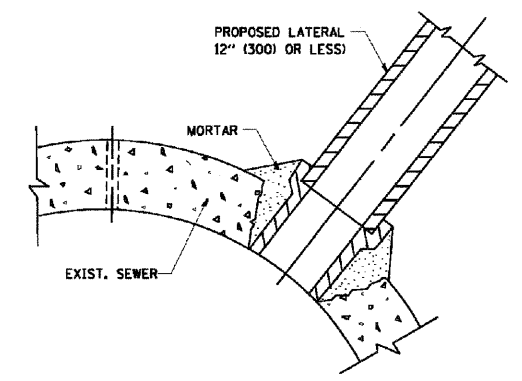
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HORIZ. 1"=50'
DATE 08-14-09
DRAWN BY PS
CHECKED BY RJW

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	027
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

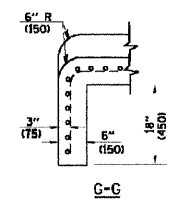
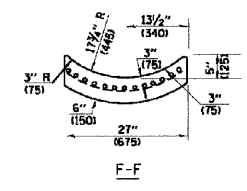
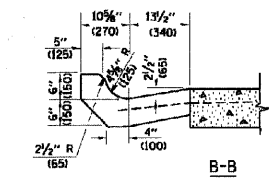
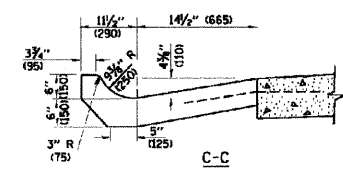
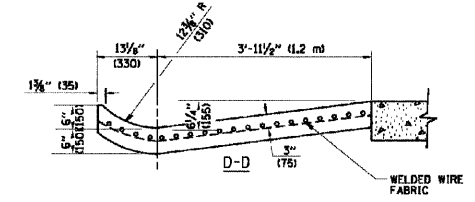
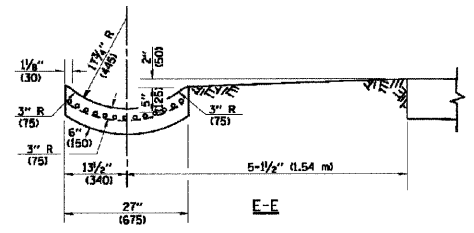
CONTRACT #63269



* DIMENSIONS OF THE CURB & GUTTER AT SECTION A-A ARE SHOWN ON STATE STANDARD 60600. FOR DETAILS OF OUTLET FOR CONCRETE CURB & GUTTER, TYPE B-6.24 (B-15.6D) SEE STATE STANDARD 606006.



DETAIL "C"
PROPOSED LATERAL SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER



GENERAL NOTES

GUTTER OUTLET SHALL BE TIED TO THE PAVEMENT IN ACCORDANCE WITH DETAILS FOR LONGITUDINAL CONSTRUCTION JOINT SHOWN ON STANDARD 420001.

TIE BARS SHALL BE NO. 20 (NO.6) AT 24" (600) CENTERS UNLESS OTHERWISE SHOWN.

IF THE AVERAGE GRADE OF PAVEMENT FOR THE DISTANCE FROM SECTION A-A TO D-D EXCEEDS 2%, THIS DISTANCE SHALL BE INCREASED 6' (1.8 m) FOR EACH 1% INCREASE IN GRADE.

QUANTITIES

FOR SECTION A-A TO E-E AND CURTAIN WALL:
1.25 CU. YDS. (0.96 m³) CLASS SI CONCRETE (OUTLET) FOR 9" (225) PAV'T.
1.27 CU. YDS. (0.96 m³) CLASS SI CONCRETE (OUTLET) FOR 10" (250) PAV'T.
FOR SECTION F-F:
0.045 CU. YDS. (0.03 m³) CLASS SI CONCRETE PER FT. (M).

OUTLET FOR CONCRETE CURB AND GUTTER

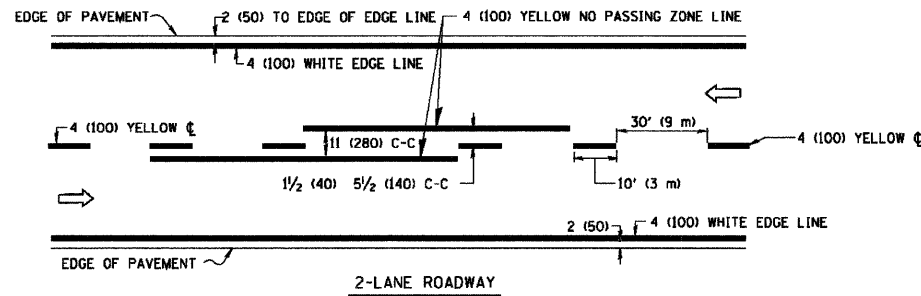
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CONSTRUCTION DETAILS**

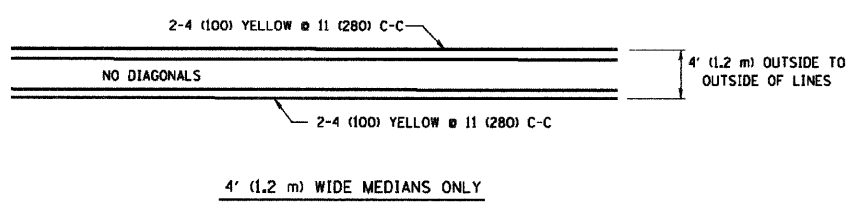
SCALE: VERT. NA
HORIZ. NA
DATE: 08-14-09
DRAWN BY: PS
CHECKED BY: RJW

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 501-6700 FAX (708) 581-0899
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

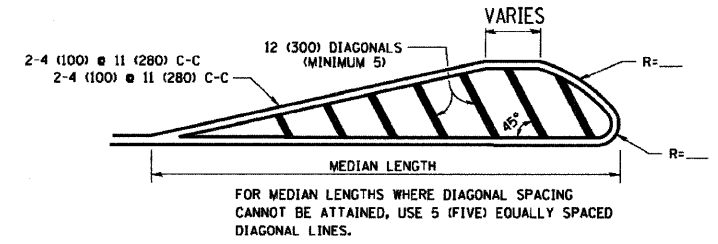
CONTRACT #63269



2-LANE ROADWAY



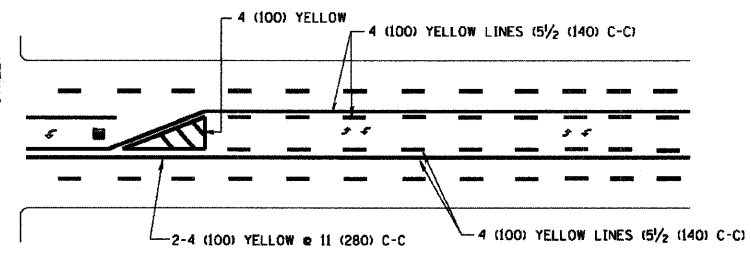
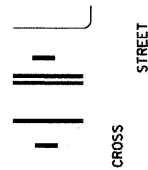
4' (1.2 m) WIDE MEDIANS ONLY



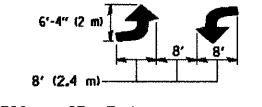
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)
 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

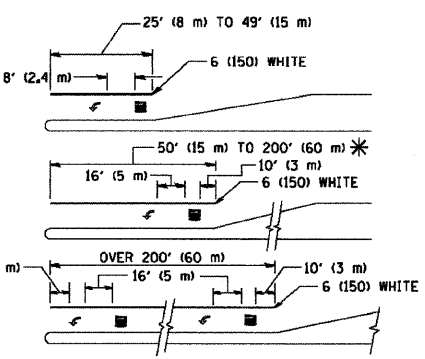


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

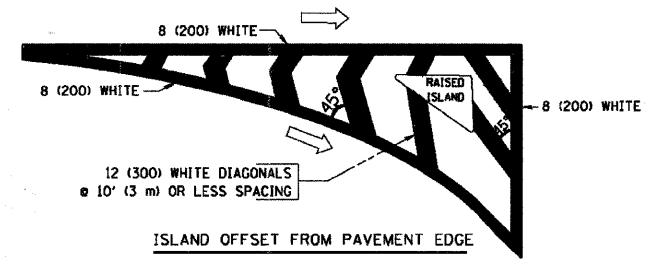


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
 AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

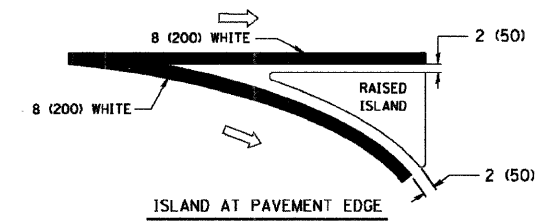
* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



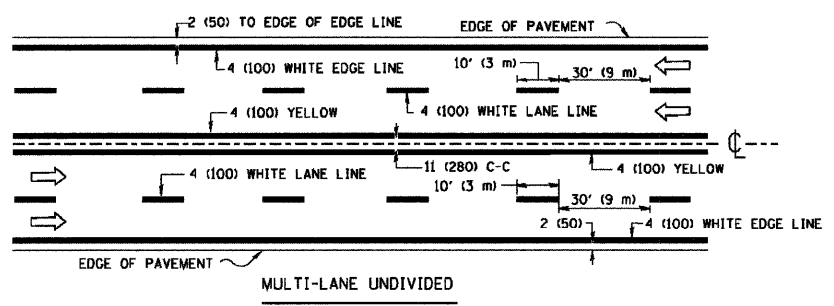
ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

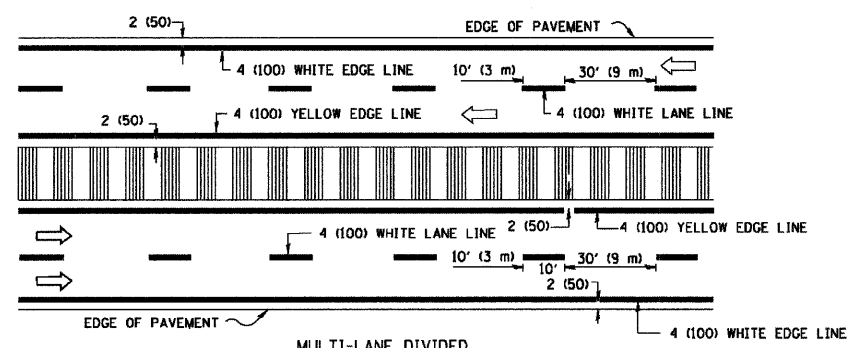
TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURBS
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT, OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

All dimensions are in inches (millimeters) unless otherwise shown.

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.



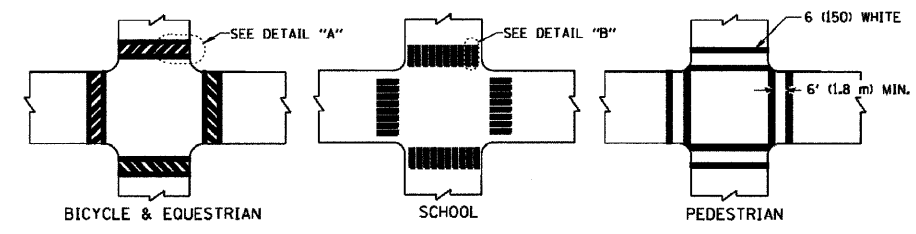
MULTI-LANE UNDIVIDED



MULTI-LANE DIVIDED WITH MOUNTABLE MEDIAN

NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

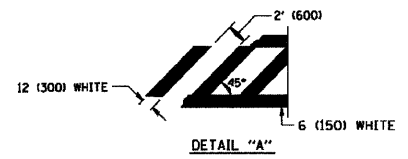
TYPICAL LANE AND EDGE LINE MARKING



BICYCLE & EQUESTRIAN

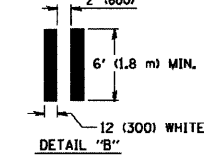
SCHOOL

PEDESTRIAN



DETAIL "A"

TYPICAL CROSSWALK MARKING



DETAIL "B"

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

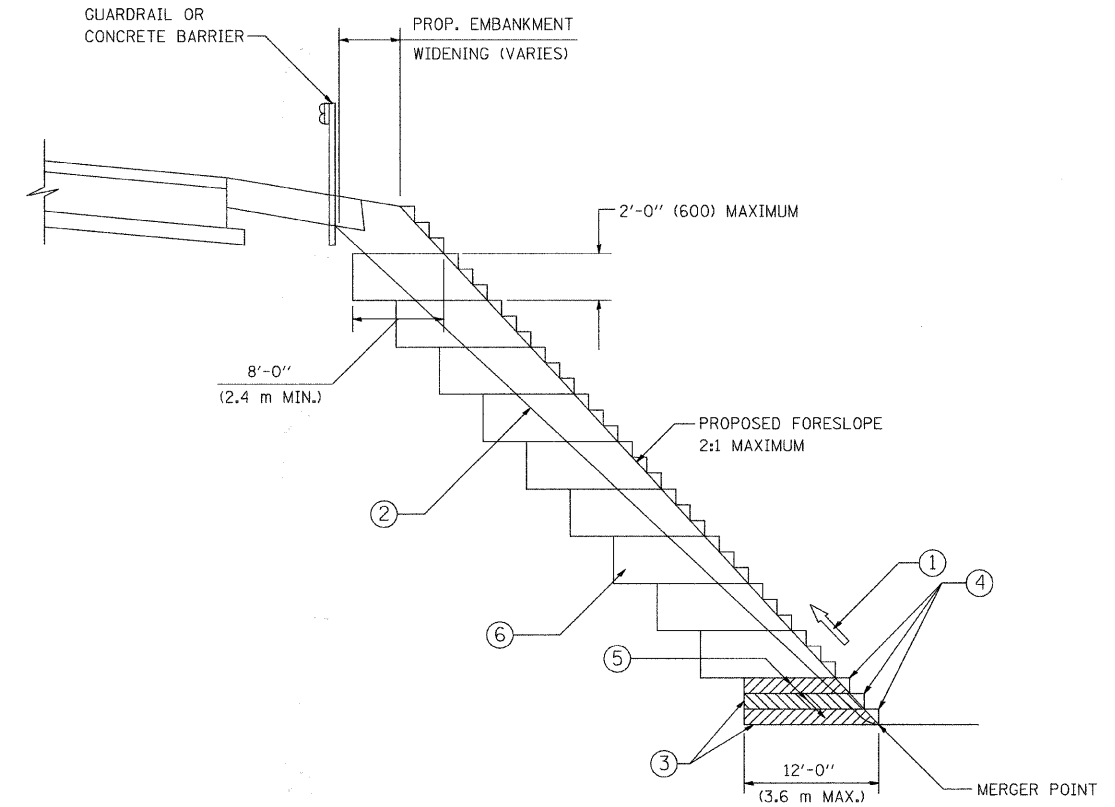
FAP 348 (HARLEM AVENUE)
 DRIVEWAY RECONFIGURATION
 CONSTRUCTION DETAILS

SCALE: VERT. NA
 HORIZ. NA
 DATE: 08-14-09

DRAWN BY: PS
 CHECKED BY: RJW

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	029
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



TYPICAL BENCHING DETAIL
FOR EMBANKMENT

NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

REVISIONS	
NAME	DATE

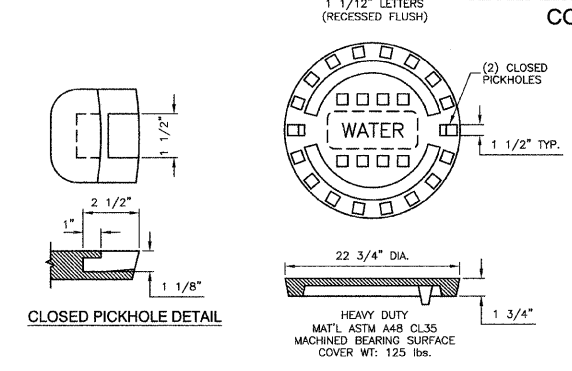
ILLINOIS DEPARTMENT OF TRANSPORTATION

FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CONSTRUCTION DETAILS

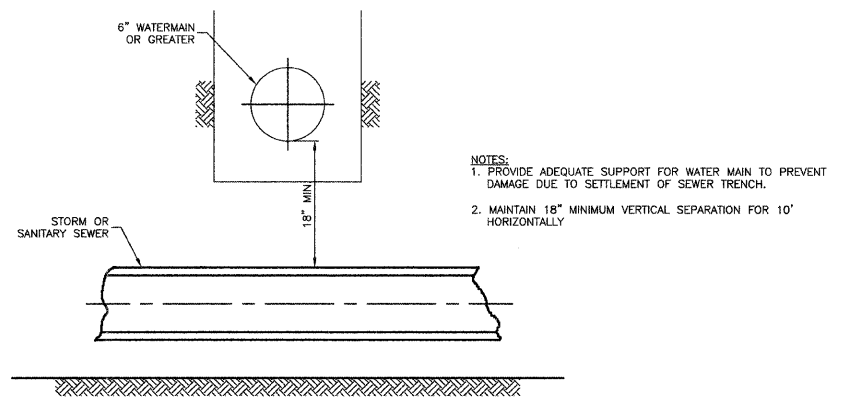
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HORIZ. NA
DATE 08-14-09

DRAWN BY PS
CHECKED BY RJW

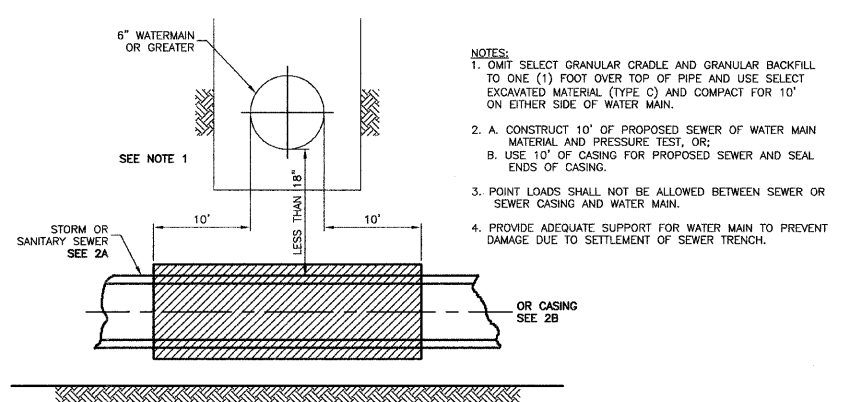
CONTRACT #63269



SPECIAL LETTERED WATER VALVE VAULT LID



PROPOSED SEWER LINE BELOW EXISTING WATER MAIN WITH 18" MINIMUM SEPARATION



PROPOSED SEWER LINE BELOW EXISTING WATER MAIN WITH LESS THAN 18" MINIMUM SEPARATION

NOTE: TYPE C MATERIAL TO BE COMPACTED TO 90% OF MODIFIED PROCTOR MAXIMUM DENSITY

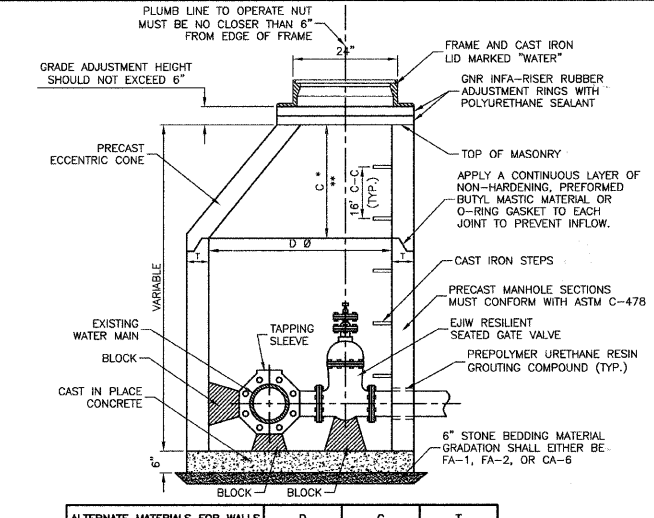
WATER AND SEWER SEPARATION REQUIREMENTS

ILLINOIS DEPARTMENT OF TRANSPORTATION

FAP 348 (HARLEM AVENUE) DRIVEWAY RECONFIGURATION CONSTRUCTION DETAILS

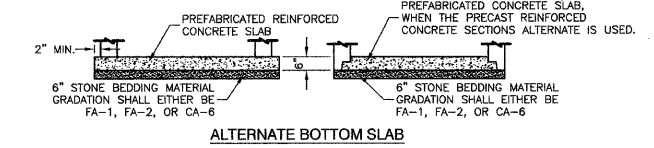
REVISIONS	
NAME	DATE

SCALE: VERT. NA
 HORIZ. NA
 DATE: 08-14-09
 DRAWN BY: PS
 CHECKED BY: RJW



ALTERNATE MATERIALS FOR WALLS	D	C	T
PRECAST REINFORCED CONCRETE SECTION	5'-0"	3'-9"	5'-8"
CAST-IN-PLACE CONCRETE	5'-0"	3'-9"	6'-0"

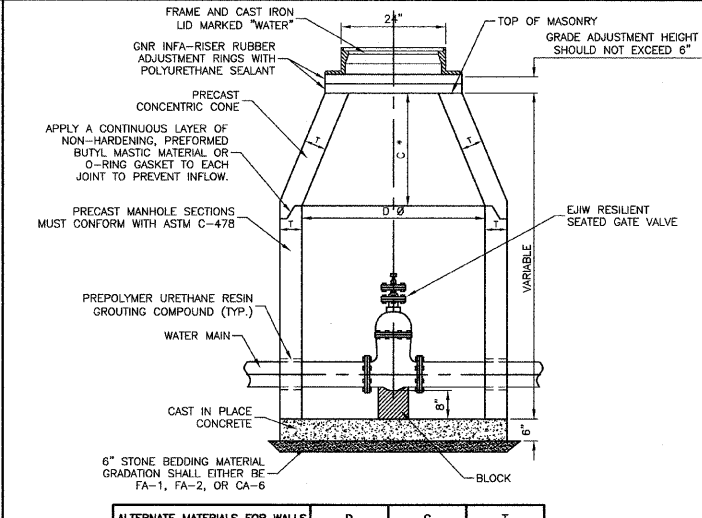
* DIMENSION "C" FOR PRECAST REINFORCED CONCRETE SECTION MAY VARY FROM THE DIMENSION GIVEN ±6"
 ** SEE DETAIL FOR PRECAST REINFORCED CONCRETE FLAT SLAB TOP.



ALTERNATE BOTTOM SLAB

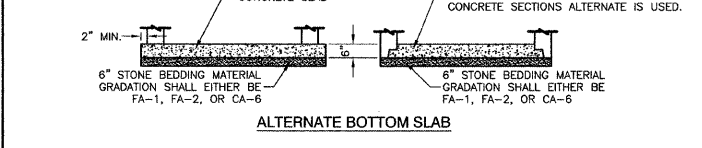
- NOTES:
1. VALVE TO ALIGN W/ CENTER OF FRAME OPENING.
 2. USE 5'-0" FOR WATER MAIN SIZES 8" AND UNDER. 6'-0" FOR SIZES 10" AND ABOVE.
 3. VALVE VAULT TO CONFORM TO ASTM C-478.
 4. ALL VALVES SHALL BE EAST JORDAN IRON WORKS RESILIENT SEATED GATE VALVES.
 5. ALL VALVES SHALL OPEN COUNTER CLOCKWISE AND CLOSE CLOCKWISE WITH NON-RISING STEM.
 6. PROVIDE CA-6 AGGREGATE BACKFILL MATERIAL AROUND VAULT TO SUB-GRADE ELEVATION; IN PAVED AREAS.

VALVE IN VAULT DETAIL FOR PRESSURE CONNECTION



ALTERNATE MATERIALS FOR WALLS	D	C	T
PRECAST REINFORCED CONCRETE SECTION	4'-0"	2'-8"	4'-4"
CAST-IN-PLACE CONCRETE	4'-0"	2'-8"	5'-0"

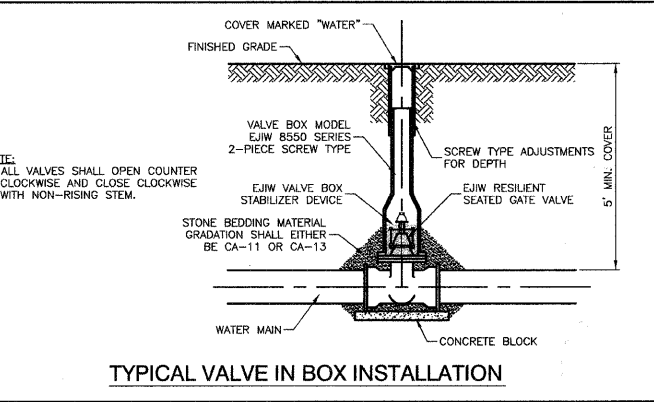
* DIMENSION "C" FOR PRECAST REINFORCED CONCRETE SECTION MAY VARY FROM THE DIMENSION GIVEN ±6"



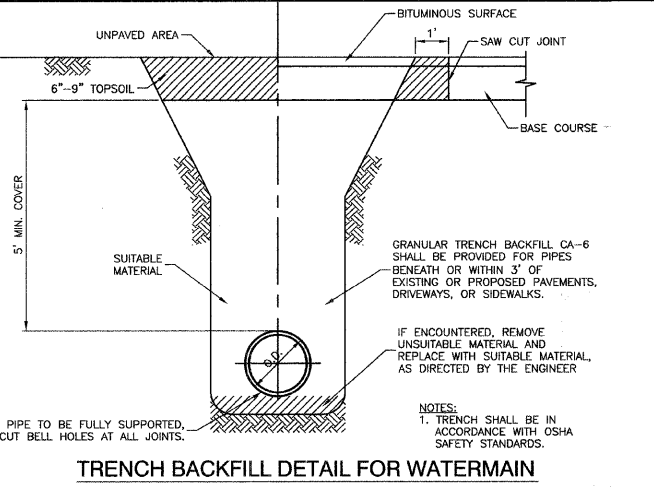
ALTERNATE BOTTOM SLAB

- NOTES:
1. CONCENTRIC CONE REQUIRED (VALVE TO ALIGN W/ CENTER OF FRAME OPENING).
 2. USE 4'-0" FOR WATER MAIN SIZES 8" AND UNDER. 5'-0" FOR SIZES 10" AND ABOVE.
 3. VALVE VAULT TO CONFORM TO ASTM C-478.
 4. ALL VALVES SHALL BE EAST JORDAN IRON WORKS RESILIENT SEATED GATE VALVES.
 5. ALL VALVES SHALL OPEN COUNTER CLOCKWISE AND CLOSE CLOCKWISE WITH NON-RISING STEM.
 6. PROVIDE CA-6 AGGREGATE BACKFILL MATERIAL AROUND VAULT TO SUB-GRADE ELEVATION; IN PAVED AREAS.

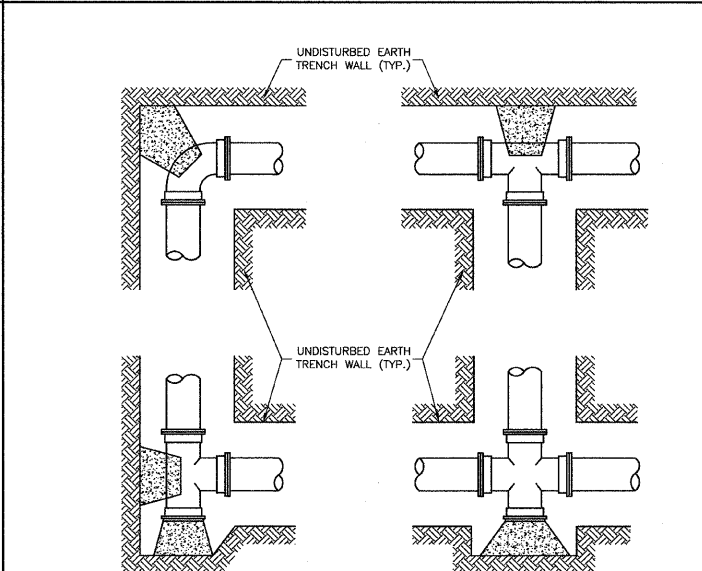
VALVE IN VAULT DETAIL



TYPICAL VALVE IN BOX INSTALLATION



TRENCH BACKFILL DETAIL FOR WATERMAIN

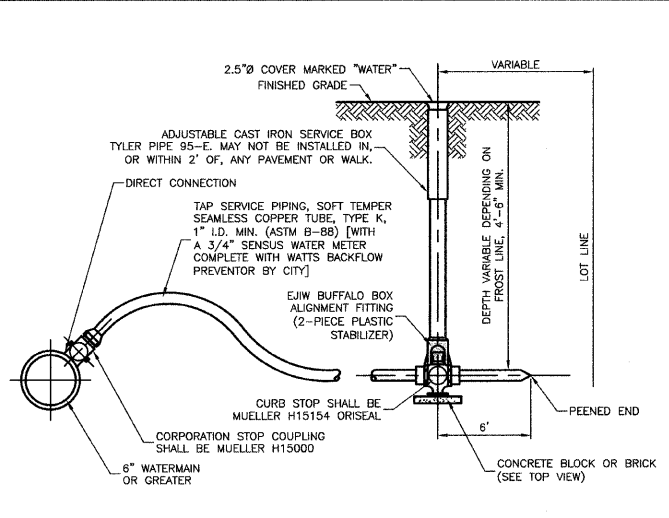


PLANS

- NOTES:
1. PROVIDE PRECAST OR CAST-IN-PLACE CONCRETE THRUST BLOCKS OF ADEQUATE SIZE AND THRUST BEARING SURFACE TO PREVENT MOVEMENT OF PIPELINE UNDER PRESSURE.
 2. PLACE THE BASE AND THE THRUST BEARING SIDES OF THRUST BLOCK DIRECTLY AGAINST UNDISTURBED EARTH.
 3. PLACE THRUST BLOCKING SO THE FITTING JOINTS WILL BE ACCESSIBLE FOR REPAIR.

SECTION

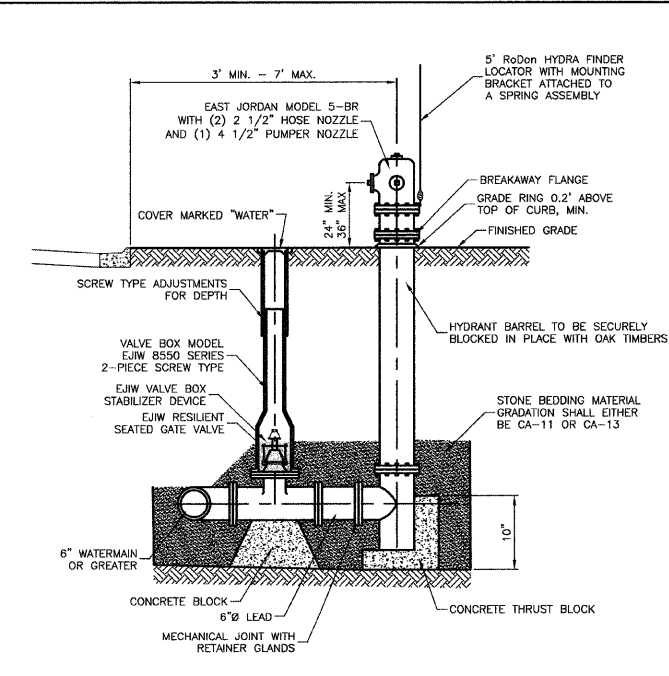
TYPICAL THRUST BLOCK INSTALLATIONS



SERVICE PIPE	CORB STOP	CURB STOP	SERVICE BOX
1"	1"	1"	2 1/2"
1 1/4"	1 1/4"	1 1/4"	3"
1 1/2"	1 1/4" x 1 1/2"	1 1/2"	3"
2"	1 1/2" x 2"	2"	3"

- NOTE:
1. BUFFALO BOX ON WATER SERVICE LINES SHALL BE INSTALLED IN THE CENTER OF THE LOT, IN THE PARKWAY, AND NEVER IN SIDEWALK OR DRIVEWAY.

TYPICAL WATER SERVICE INSTALLATION

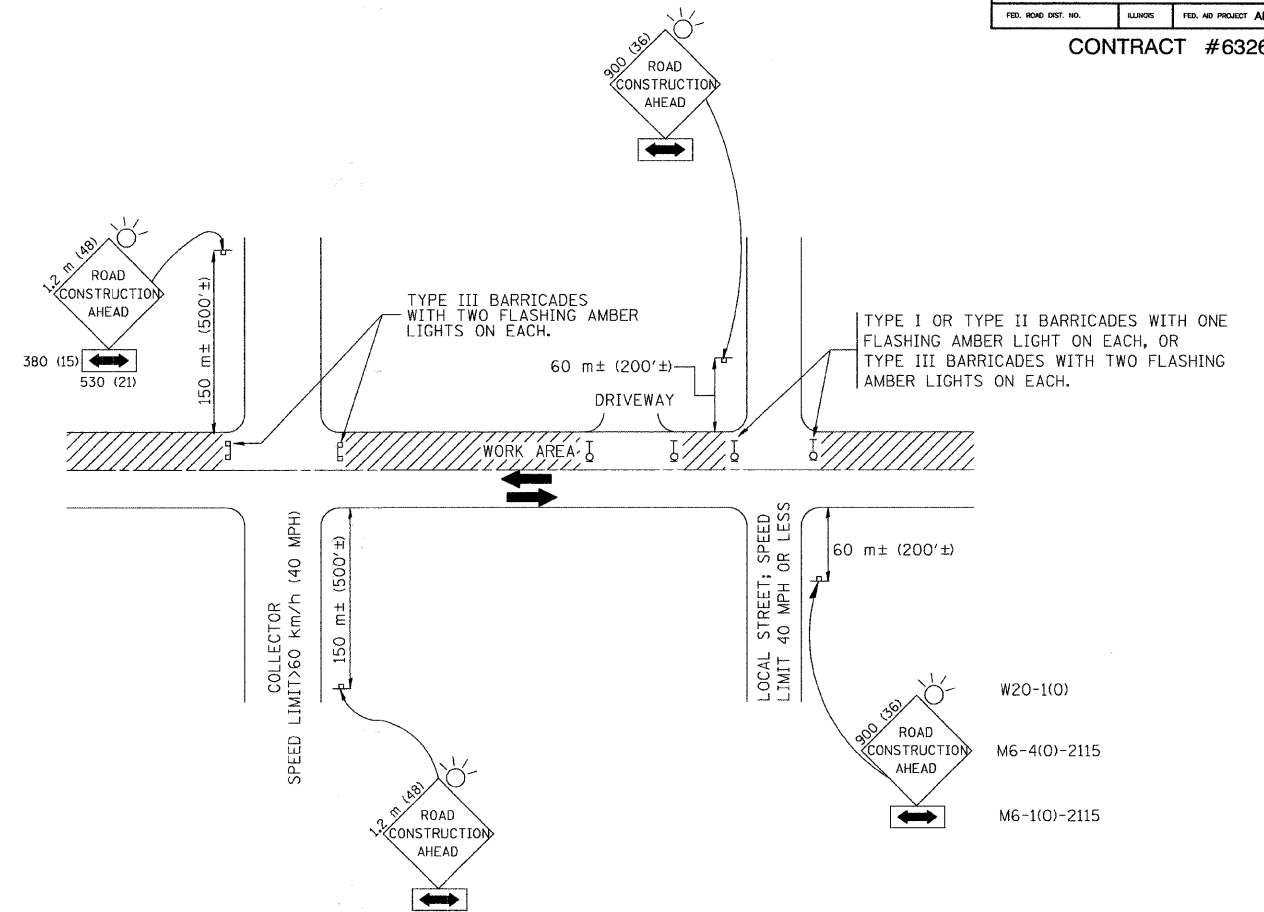


FIRE HYDRANT INSTALLATION

- NOTES:
1. HYDRANTS SHALL BE INSTALLED FACING TOWARD THE CURB. NO HYDRANT SHALL BE INSTALLED WITHIN 48" OF ANY OBSTRUCTION NOR SHALL ANY OBSTRUCTION BE PLACED WITHIN 48" OF A HYDRANT. ALL HYDRANTS SHALL BE PAINTED SAFETY RED BY THE MANUFACTURER.
 2. ALL VALVES SHALL OPEN COUNTER CLOCKWISE AND CLOSE CLOCKWISE WITH NON-RISING STEM.
 3. HYDRANT DRAIN HOLE SHALL BE FREE OF CONCRETE.

F. A. P. SHEET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	031
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

- SIDE ROAD WITH A SPEED LIMIT OF 60 km/h (40 MPH) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE **ROAD CONSTRUCTION AHEAD** SIGN 900x360 (36x36) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 60 m (200') IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- SIDE ROAD WITH A SPEED LIMIT GREATER THAN 60 km/h (40 MPH) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE **ROAD CONSTRUCTION AHEAD** SIGN 1.2 m x 1.2 m (48x48) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 150 m (500') IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. OBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

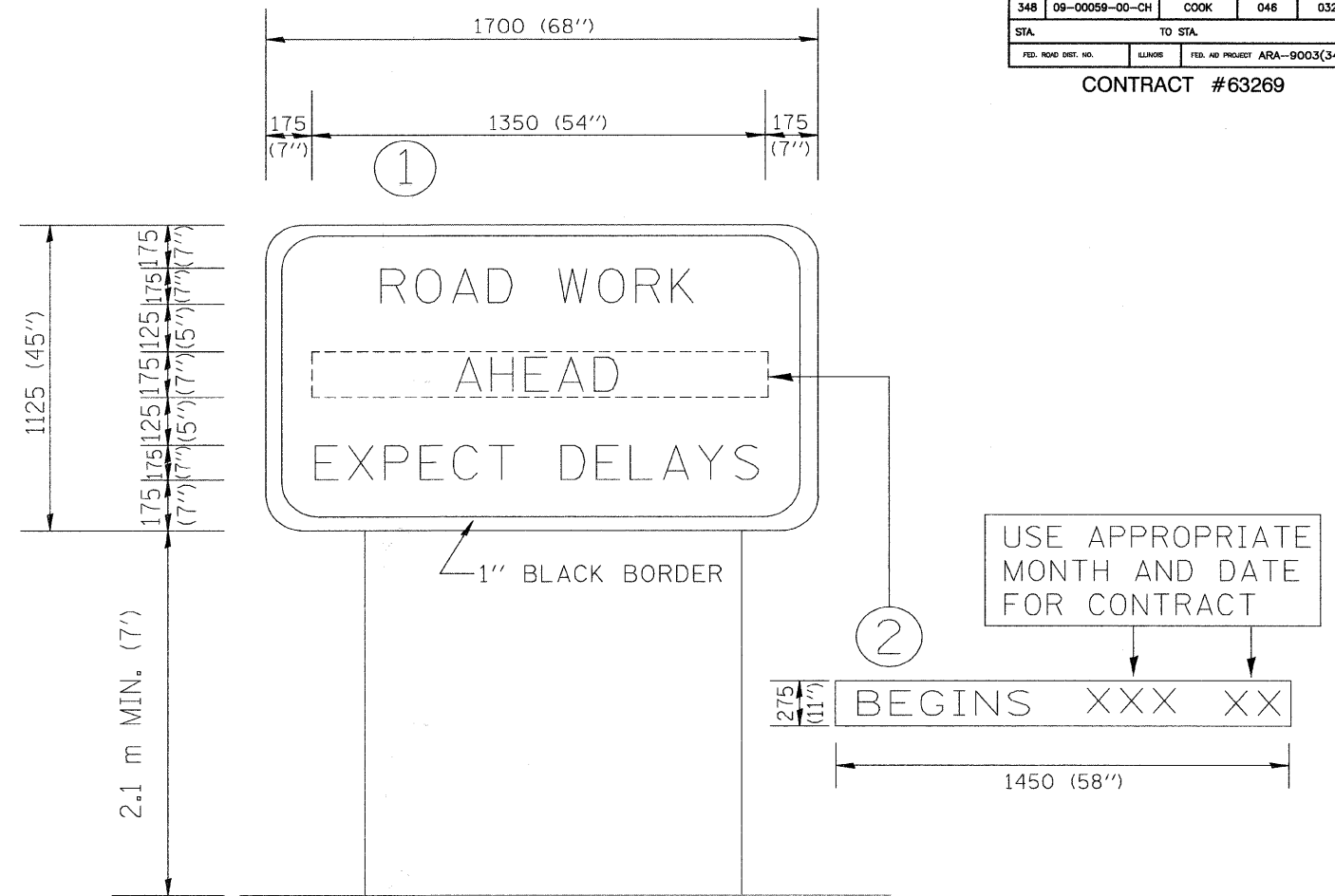
ILLINOIS DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL AND PROTECTION
 FOR
 SIDE ROADS, INTERSECTIONS, AND
 DRIVEWAYS**

SCALE: VERT.
 DATE 10/18/2002

DRAWN BY
 CHECKED BY

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	032
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 2.3 SQ. M. (25.70 SQ. FT.)

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

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION TEMPORARY INFORMATION SIGNING
NAME	DATE	
R. MIRS	9-15-97	
R. MIRS	12-11-97	
T. RAMMACHER	2-2-99	

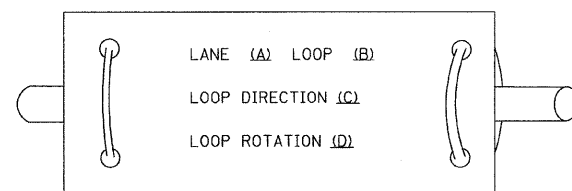
SCALE: DATE 10/18/2002 DRAWN BY: BUR. OF DESIGN CHECKED BY:

CONTRACT #63269

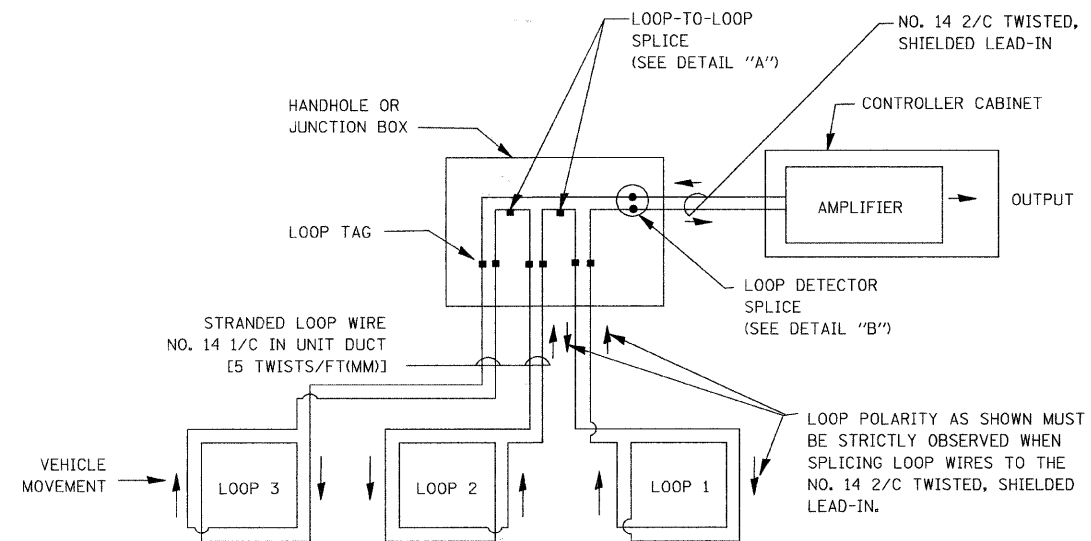
LOOP DETECTOR NOTES

- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
- EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY "LANE" AND "LOOP" NUMBER. SEE DETAIL BELOW.
- ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
- LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

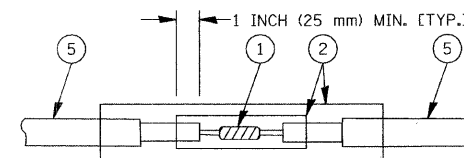


- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

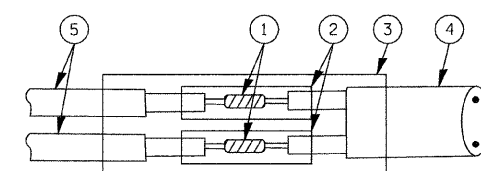


DETECTOR LOOP WIRING SCHEMATIC

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



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- NO. 14 2/C TWISTED, SHIELDED CABLE.
- LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

REVISIONS	
NAME	DATE
CADD	5/30/00
ADD NOTE NO. 8	11/12/01
BUREAU OF TRAFFIC	1-01-02

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

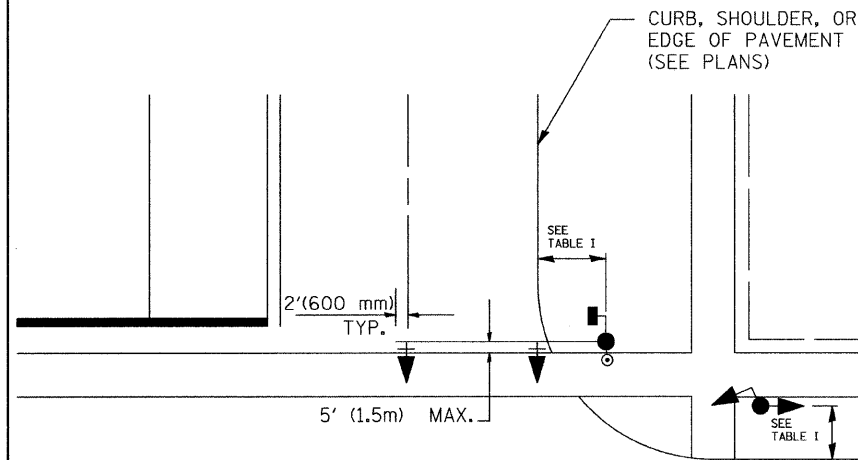
SCALE: NONE

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

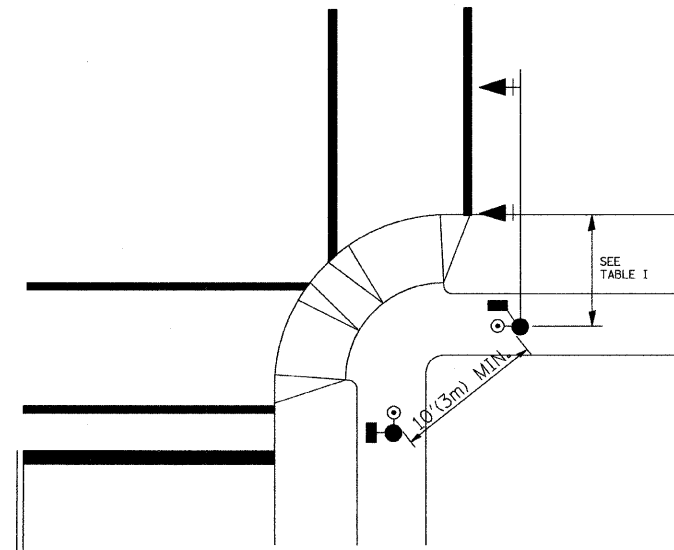
CONTRACT #63269

TRAFFIC SIGNAL MAST ARM AND POST

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



PEDESTRIAN SIGNAL PUSHBUTTON



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

NOTES:

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

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

PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:
 - A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.
 - B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.
 - C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
 - D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).
 - E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK
- PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

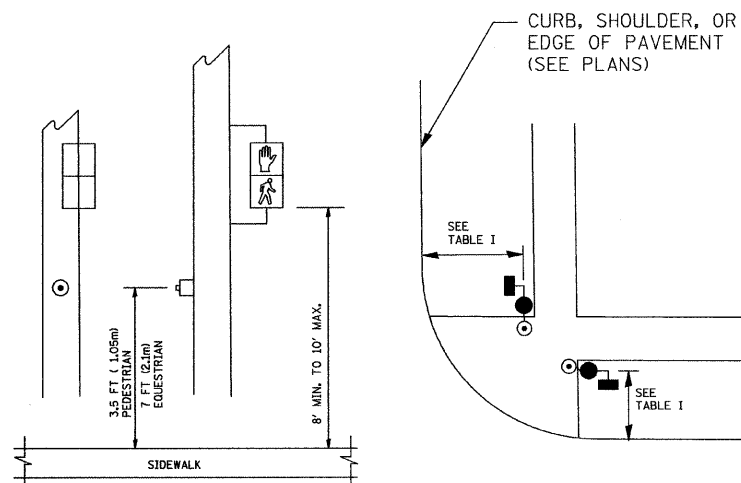


TABLE I

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

REVISIONS	
NAME	DATE
BUREAU OF TRAFFIC	1/01/02

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: NONE

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

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	032C
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269

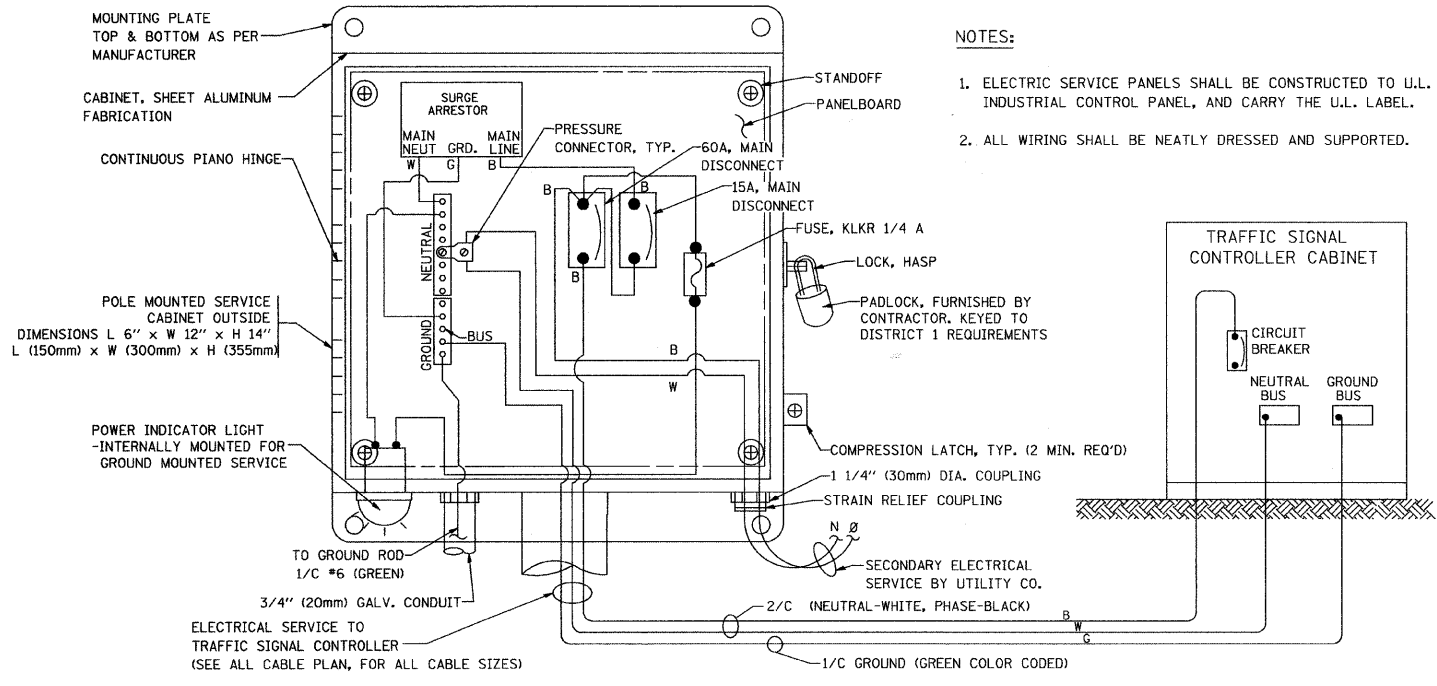
NOTES:

GROUNDING SYSTEM

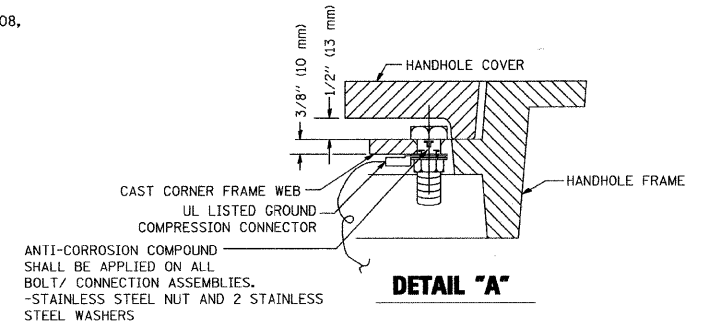
1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE,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

NOTES:

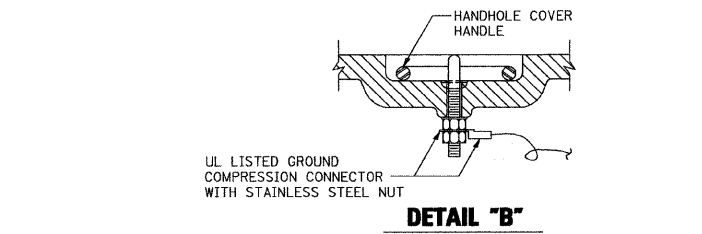
1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.



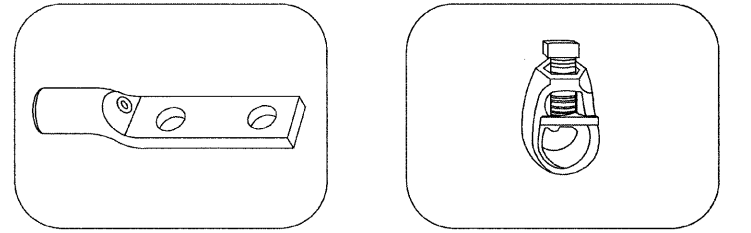
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE) SERVICE INSTALLATION POLE MOUNT (SHOWN) (NOT TO SCALE)



DETAIL "A"



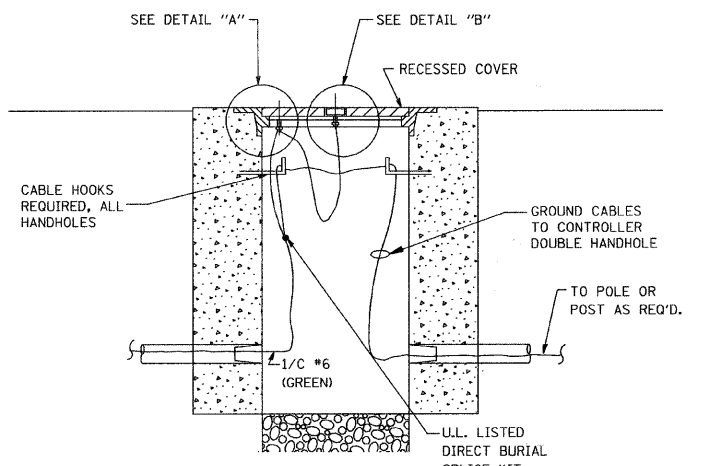
DETAIL "B"



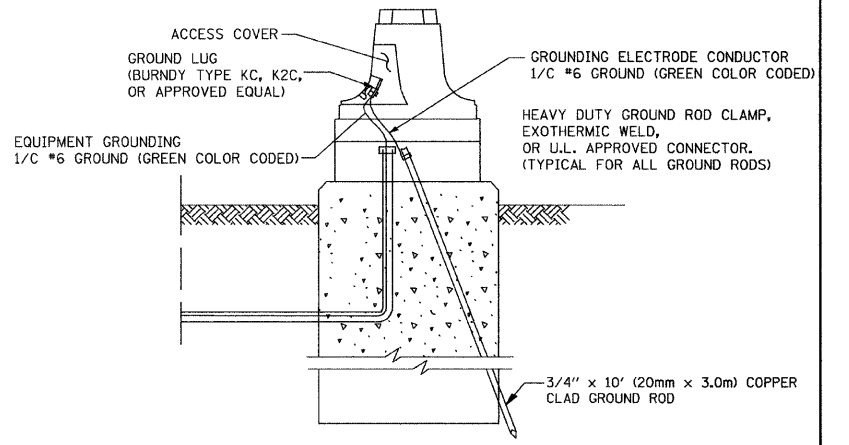
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL) 3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

NOTES:

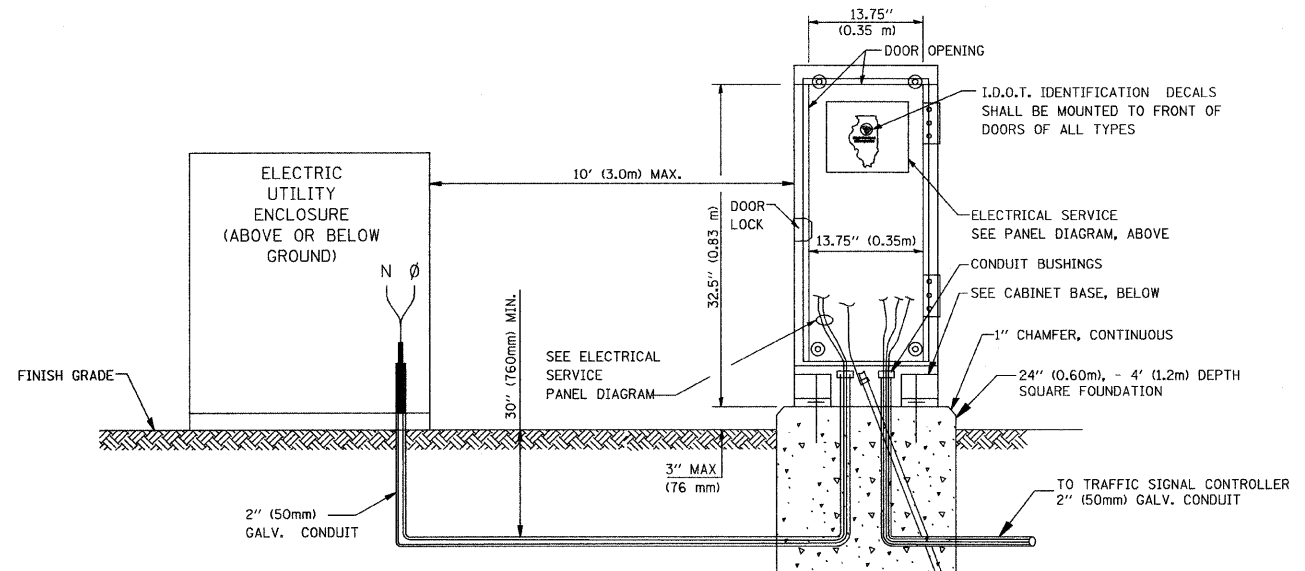
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



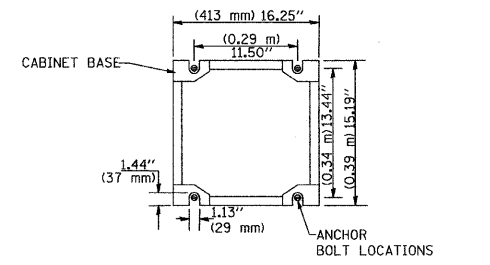
HANDHOLE COVER & FRAME - GROUNDING DETAIL (NOT TO SCALE)



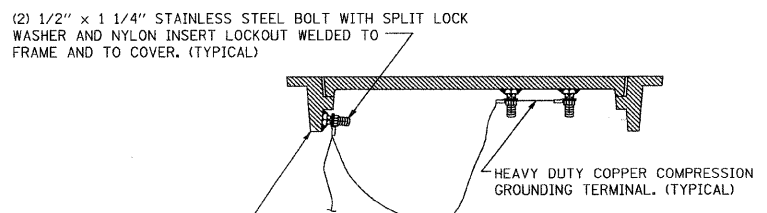
MAST ARM POLE / POST-GROUNDING DETAIL (NOT TO SCALE)



SERVICE INSTALLATION GROUND MOUNT (NOT TO SCALE)



CABINET - BASE BOLT PATTERN (NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL (NOT TO SCALE)

REVISIONS	
NAME	DATE
CADD	5/30/00
CADD	3/15/01
BUREAU OF TRAFFIC	1/01/02

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: NONE

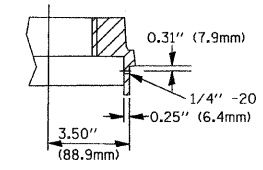
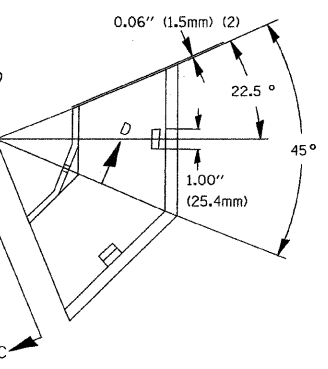
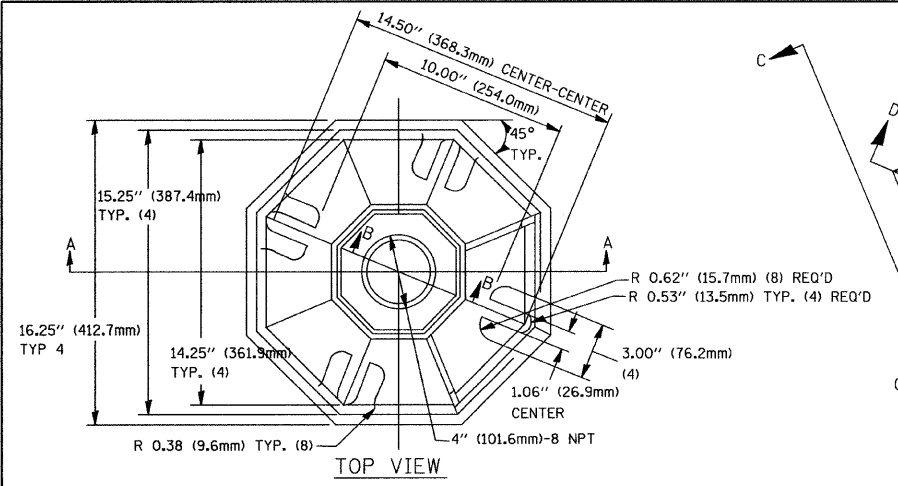
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 3 OF 4

TS05

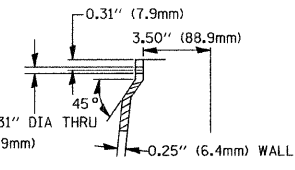
P. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	032D
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269

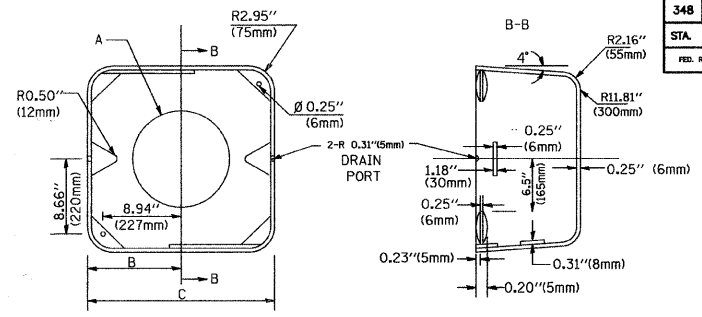
MATERIAL:
 - ASTM A48 CLASS 30 GREY IRON
 - ASTM A123 HOT DIPPED GALVANIZED



SECTION B-B

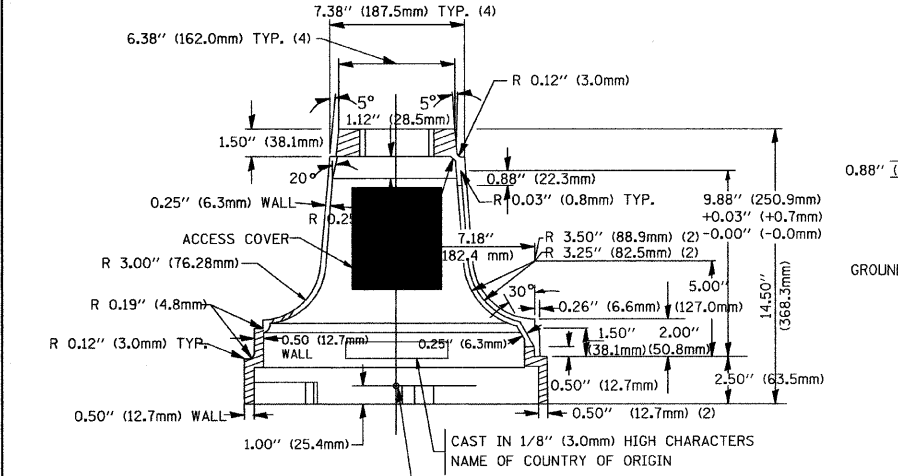


SECTION D-D

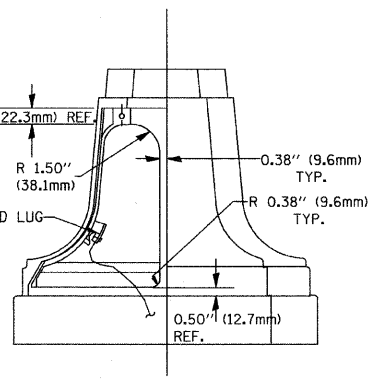


TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125\"(257mm)	9.5\"(241mm)	19\"(483mm)	12\"(300mm)	24kg
II	Ø 11.125\"(283mm)	10.75\"(273mm)	21.5\"(546mm)	12\"(300mm)	26kg

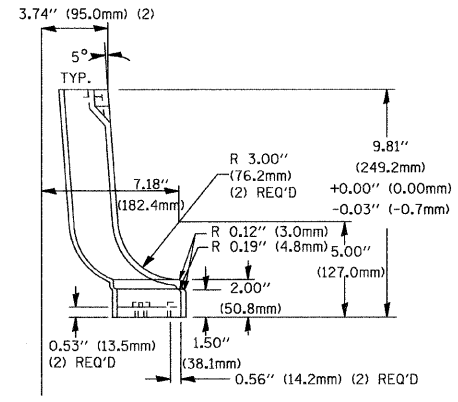
SHROUD DETAIL



SECTION A-A

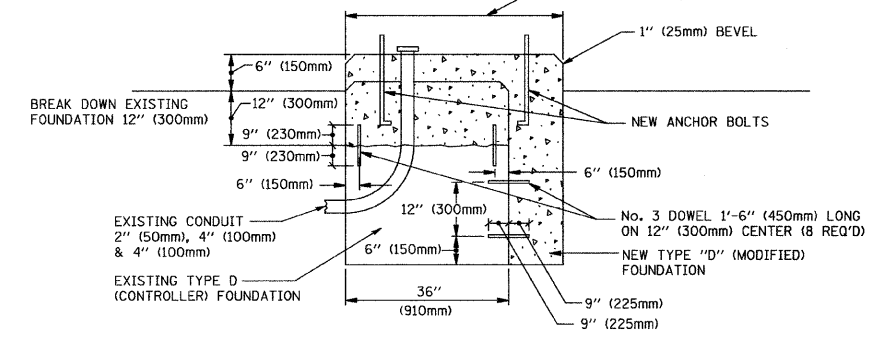


VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A

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



MODIFY EXISTING TYPE "D" FOUNDATION

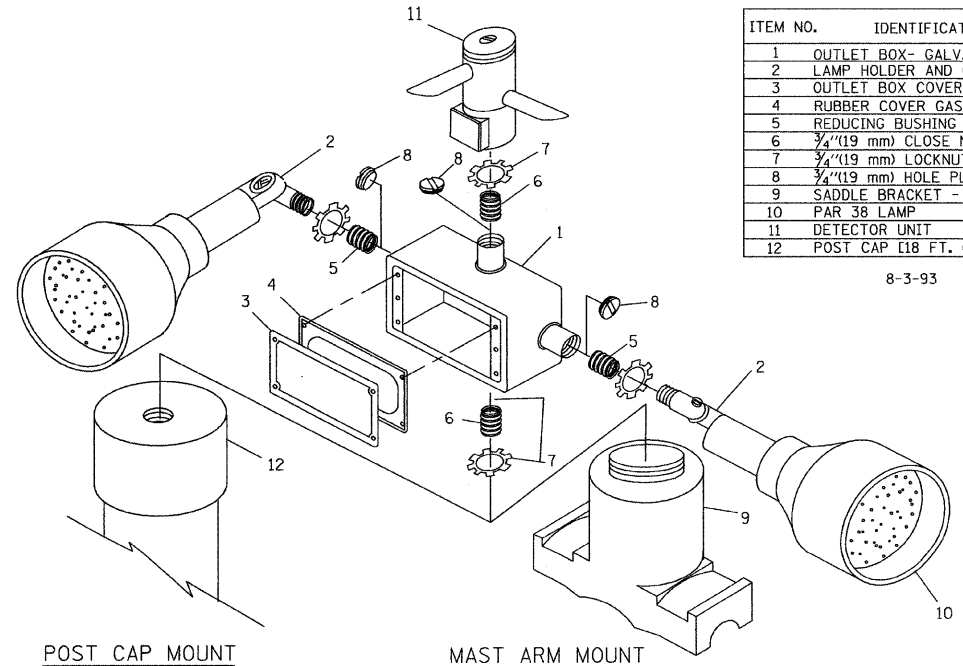
(NOT TO SCALE)

NOTES:

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

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

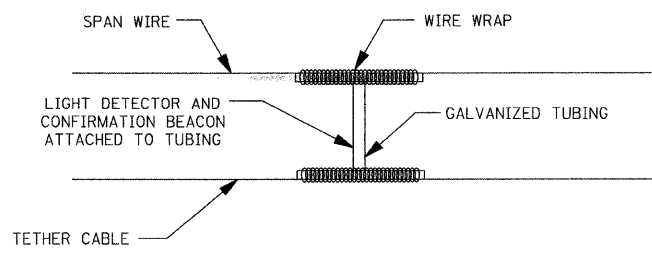
8-3-93



POST CAP MOUNT

MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

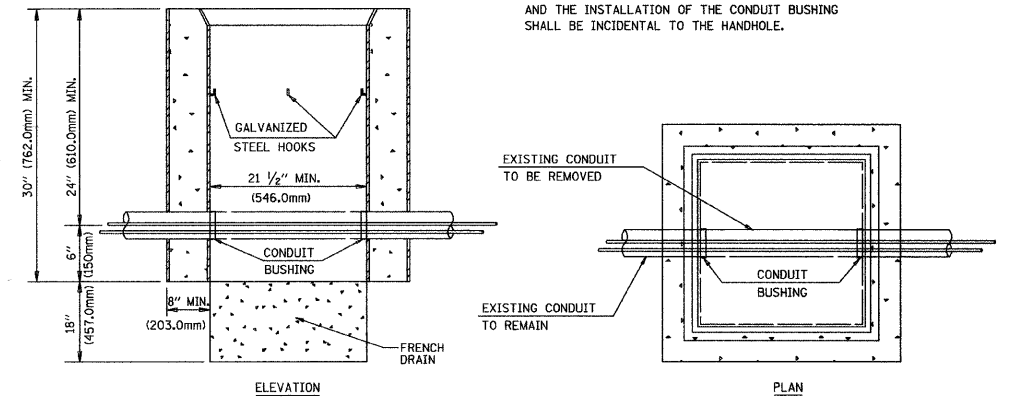


LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS

(NOT TO SCALE)

NOTES:

- REMOVAL OF EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHING SHALL BE INCIDENTAL TO THE HANDHOLE.



DETAIL HANDHOLE TO INTERCEPT EXISTING CONDUIT

N.T.S.

REVISIONS	
NAME	DATE
BUREAU OF TRAFFIC	5/30/00
BUREAU OF TRAFFIC	3/15/01
BUREAU OF TRAFFIC	11/12/01
BUREAU OF TRAFFIC	1-01-02

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS

SCALE: NONE

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

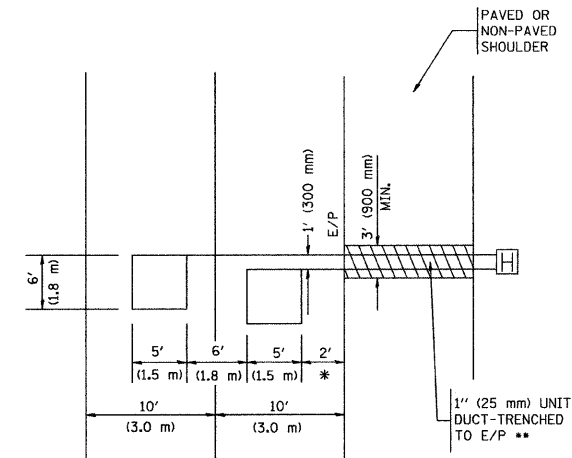
TS05

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	032E
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269

LOOPS NEXT TO SHOULDERS

PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.

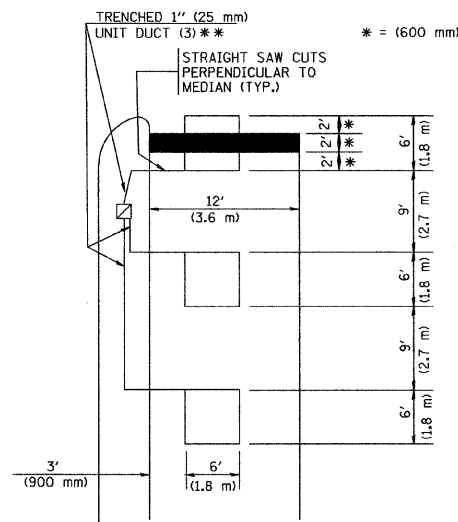


* = (600 mm)

** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

LEFT TURN LANES WITH MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION)
ON SAME APPROACH
(PROTECTED / PERMITTED LEFT TURN PHASING)

HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD 814001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.

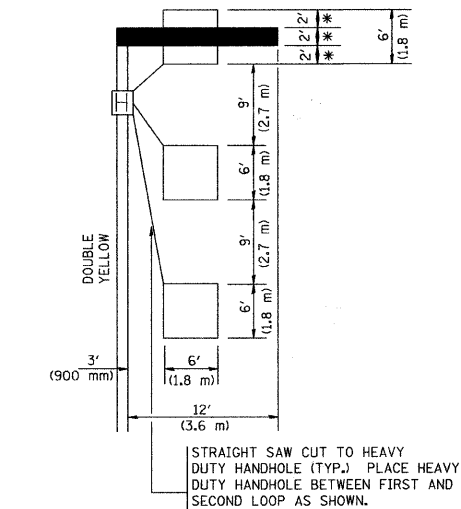


** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

LEFT TURN LANES WITHOUT MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION)
ON SAME APPROACH
(PROTECTED / PERMITTED LEFT TURN PHASING)

* = (600 mm)



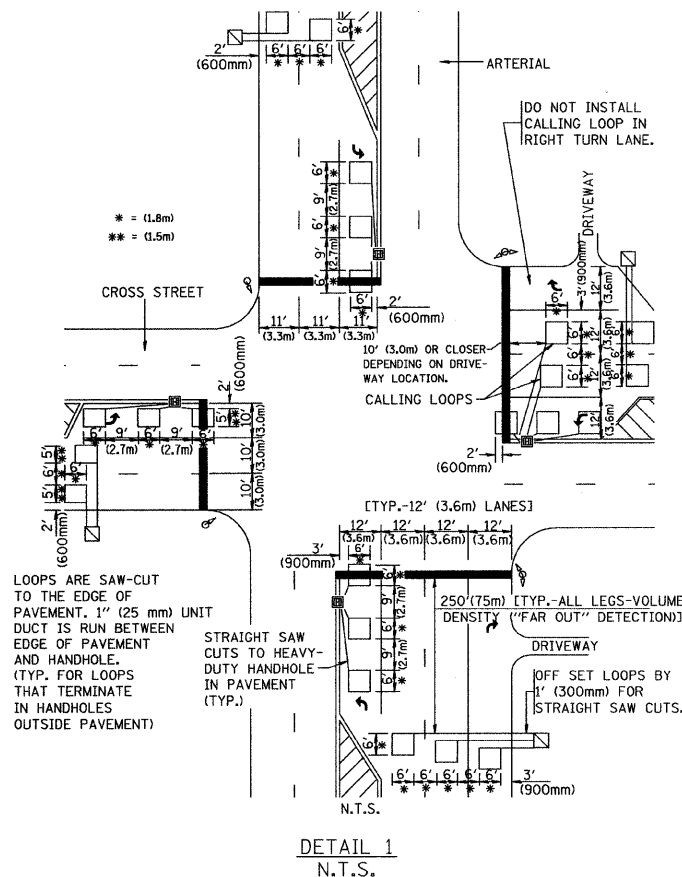
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

NOTES:

VEHICLES LOOP DETECTORS

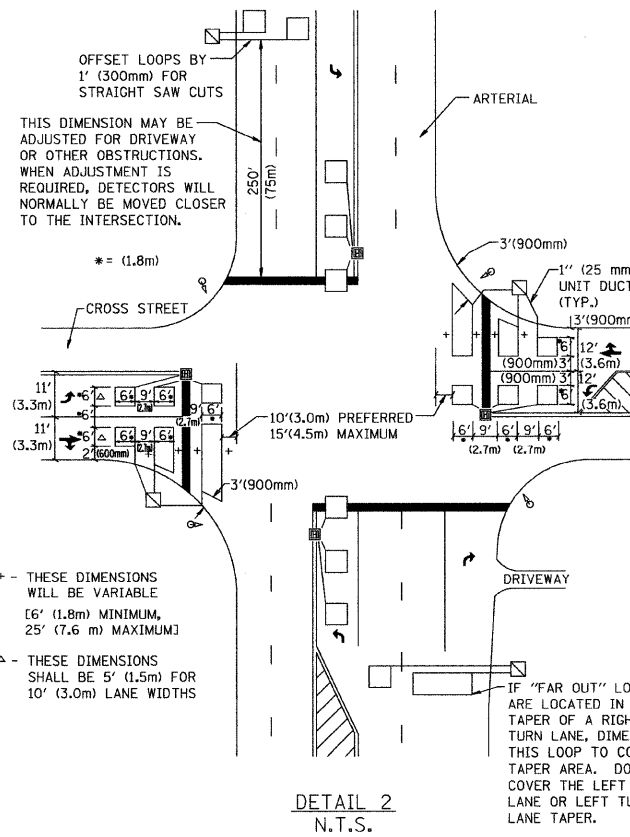
- * ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- * EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
- * EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATELY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
- * ONE DIMENSION OF ALL DETECTOR LOOPS SHALL BE SIX FEET (1.8 m)
- * EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
- * WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR (i.e. 1-1/2, 1-3/4, 2).
- * WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
CROSS STREET-VOLUME DENSITY ("FAR OUT" DETECTION)



DETAIL 1
N.T.S.

ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)



DETAIL 2
N.T.S.

PLACEMENT OF DETECTORS

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES. ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DEMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON ALL SIGNAL LAYOUT PLAN SHEETS.

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

NOTE:

ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1 TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

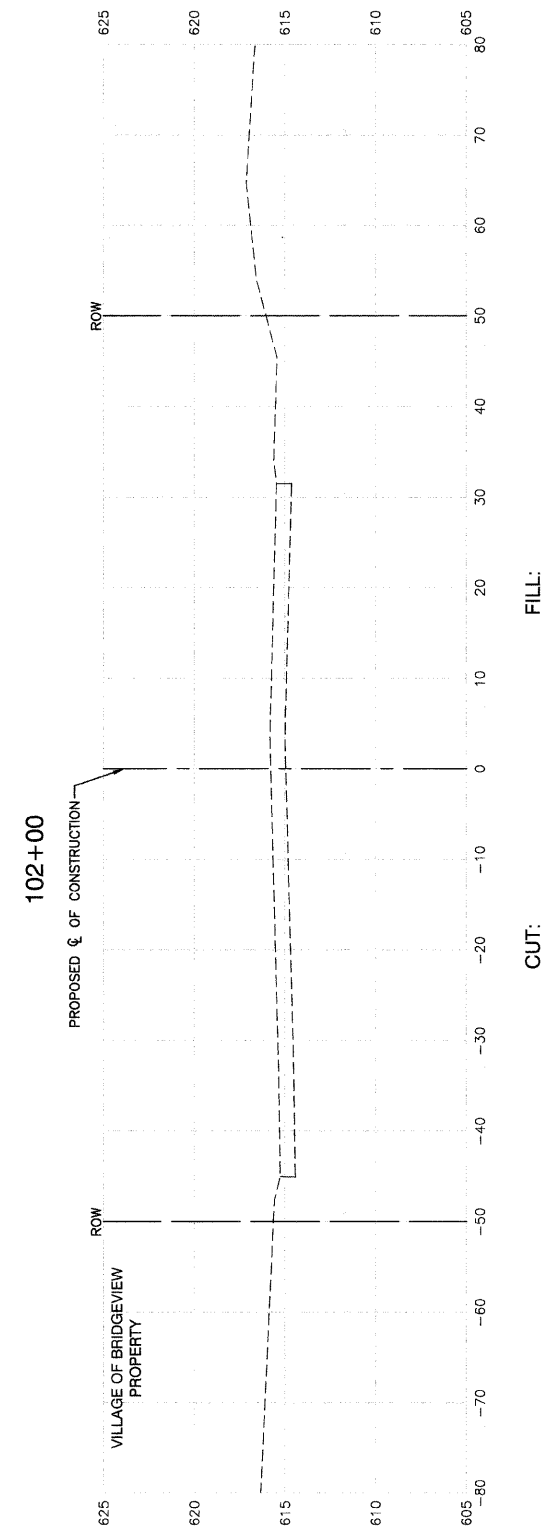
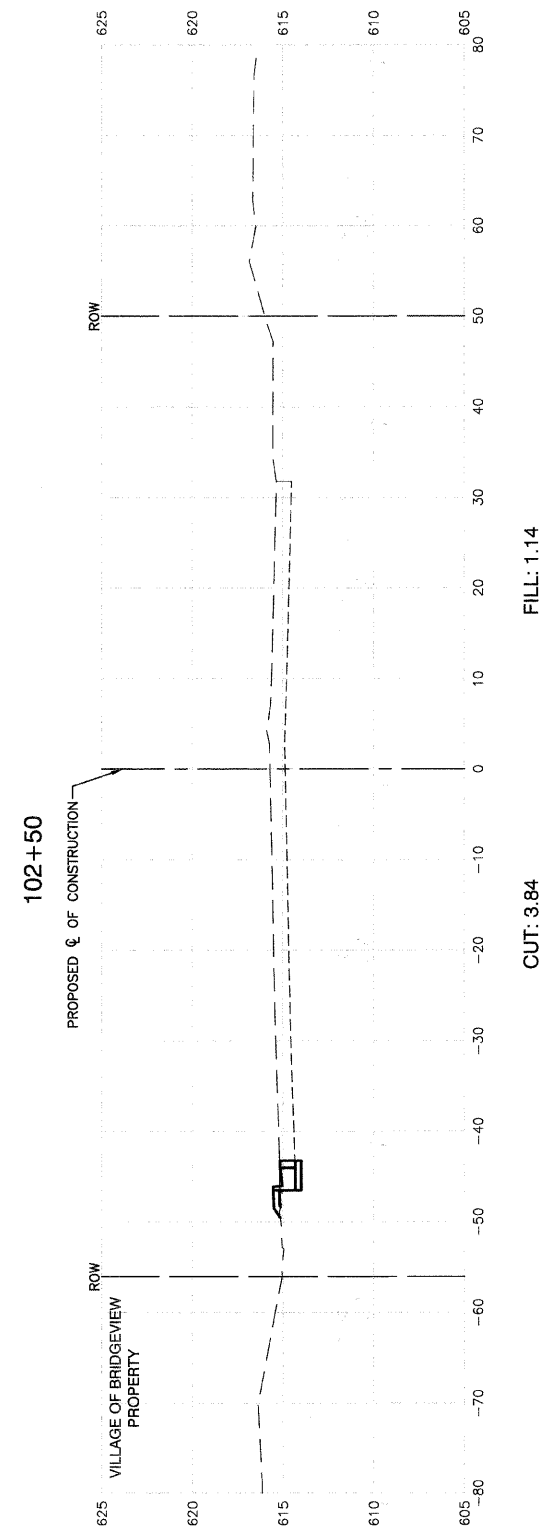
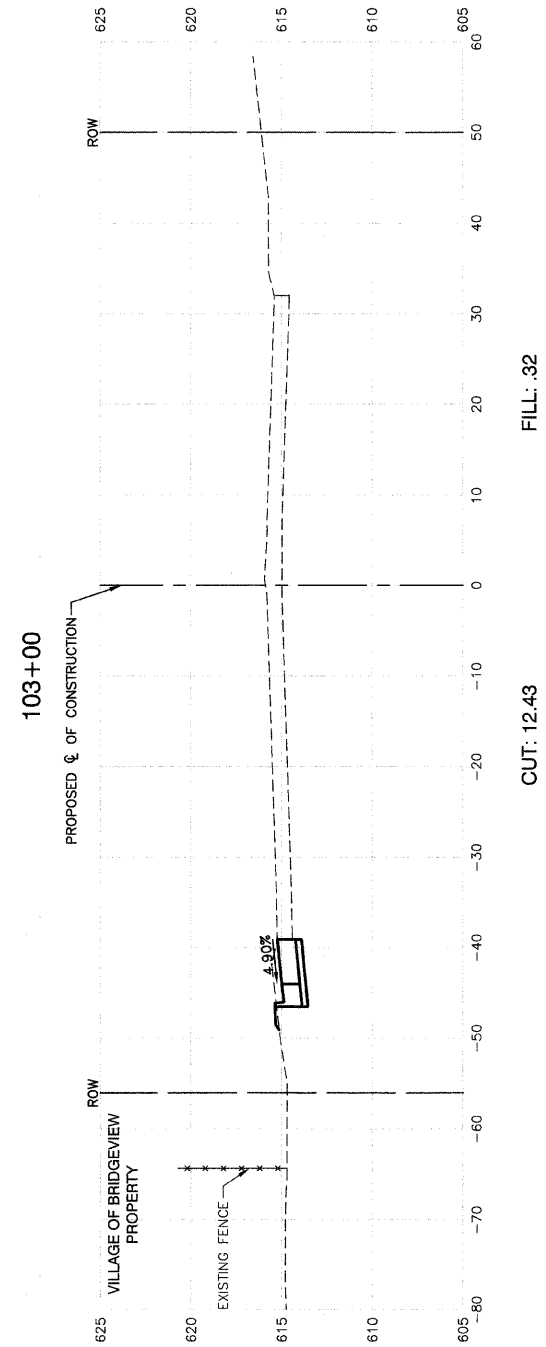
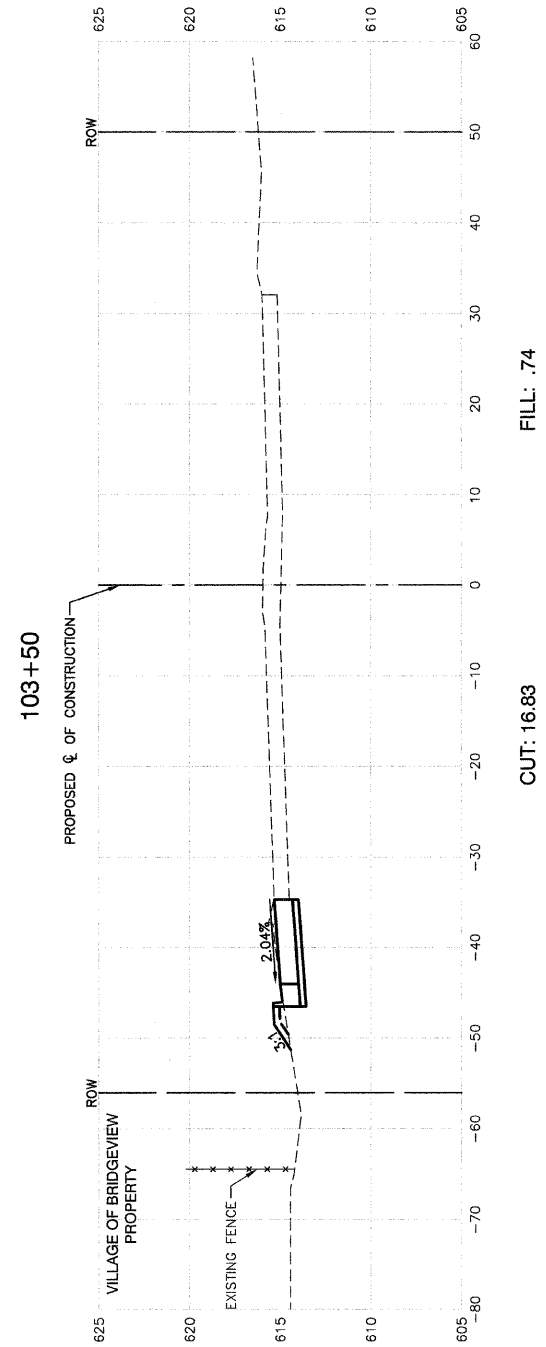
THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 1
DETECTOR LOOP
INSTALLATION DETAILS
FOR ROADWAY RESURFACING
DESIGNED BY
DRAWN BY CADD
CHECKED BY R.K.F.
TS07

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	033
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



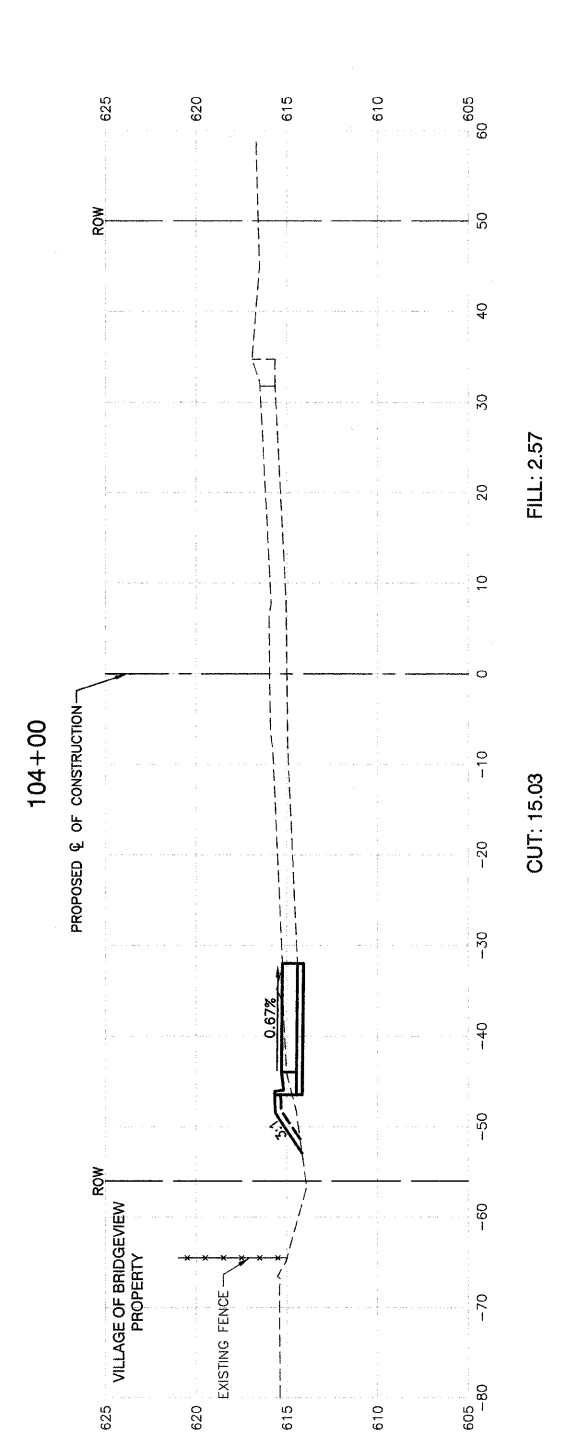
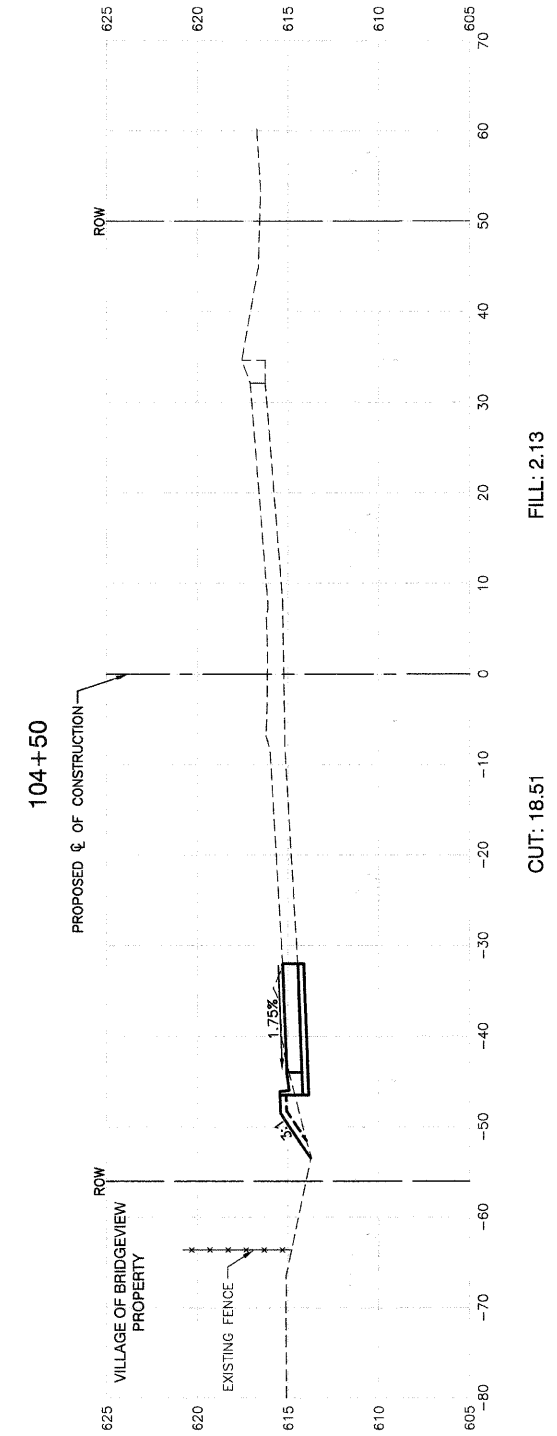
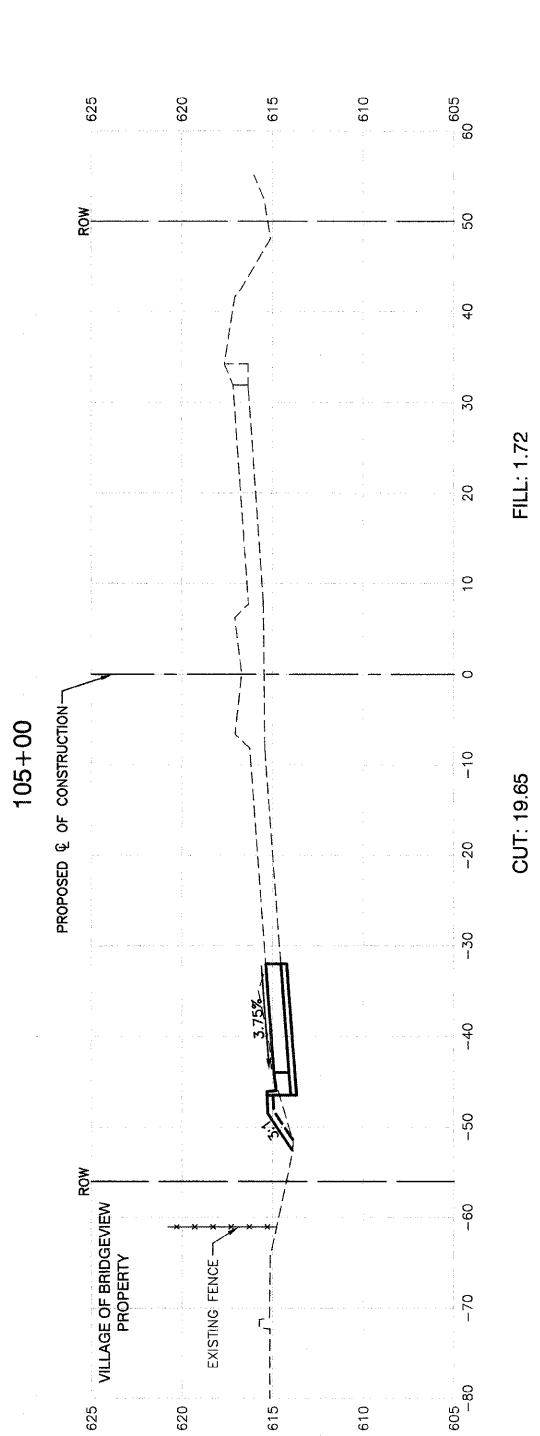
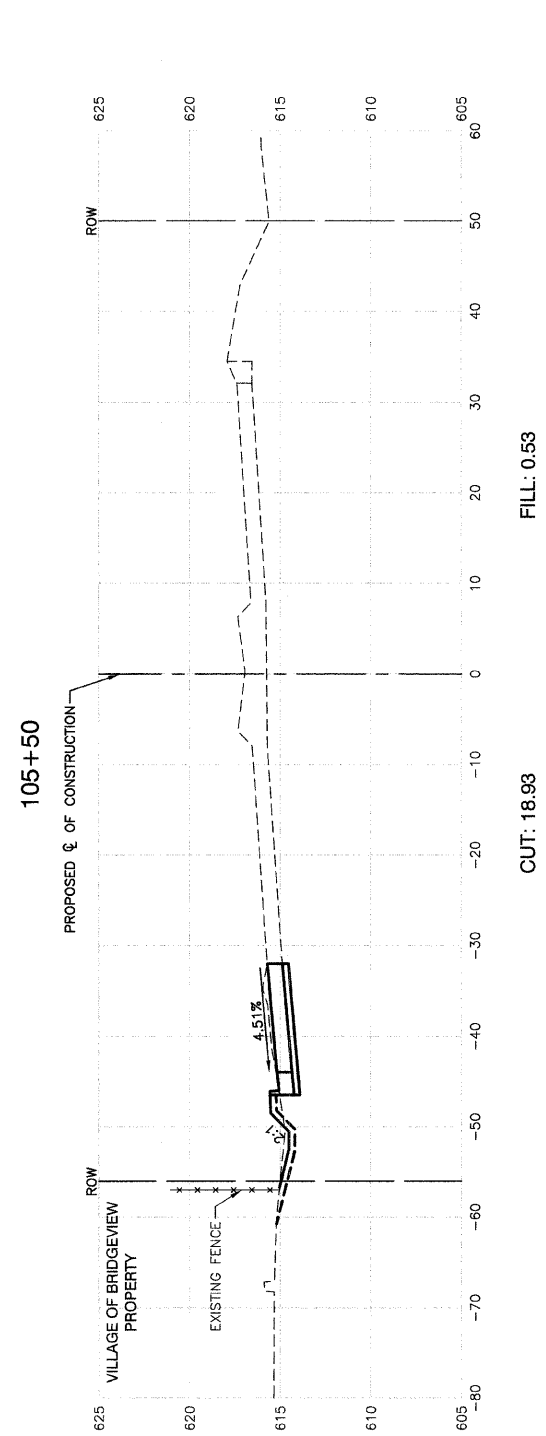
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CROSS SECTIONS
STA. 102+00 TO STA. 103+50**

SCALE: VERT. 1"=5'
HORIZ. 1"=10'
DATE 08-14-09
DRAWN BY PS
CHECKED BY RJW

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	034
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT ARA-9003(340)	

CONTRACT #63269



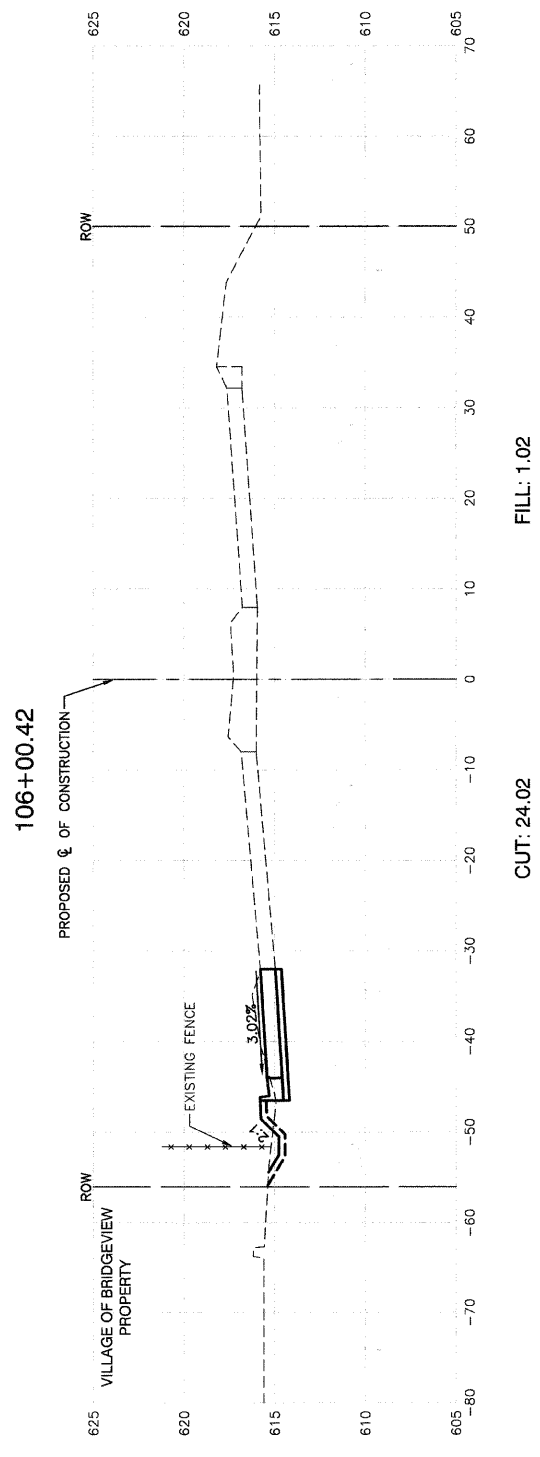
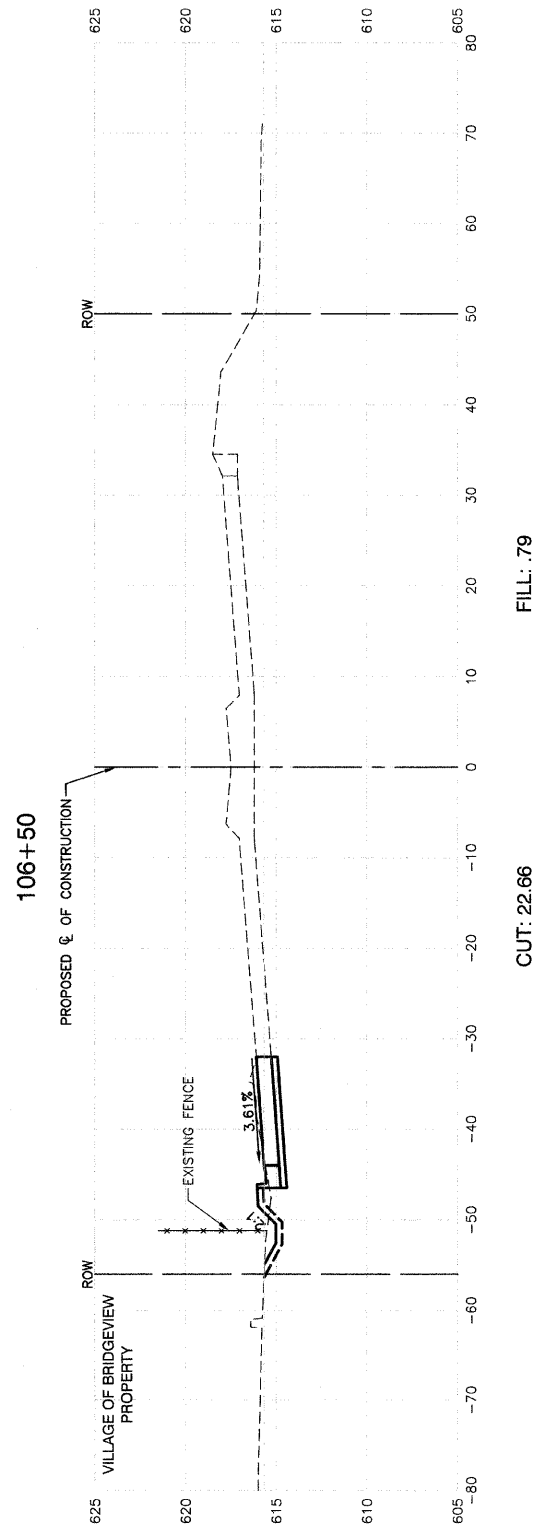
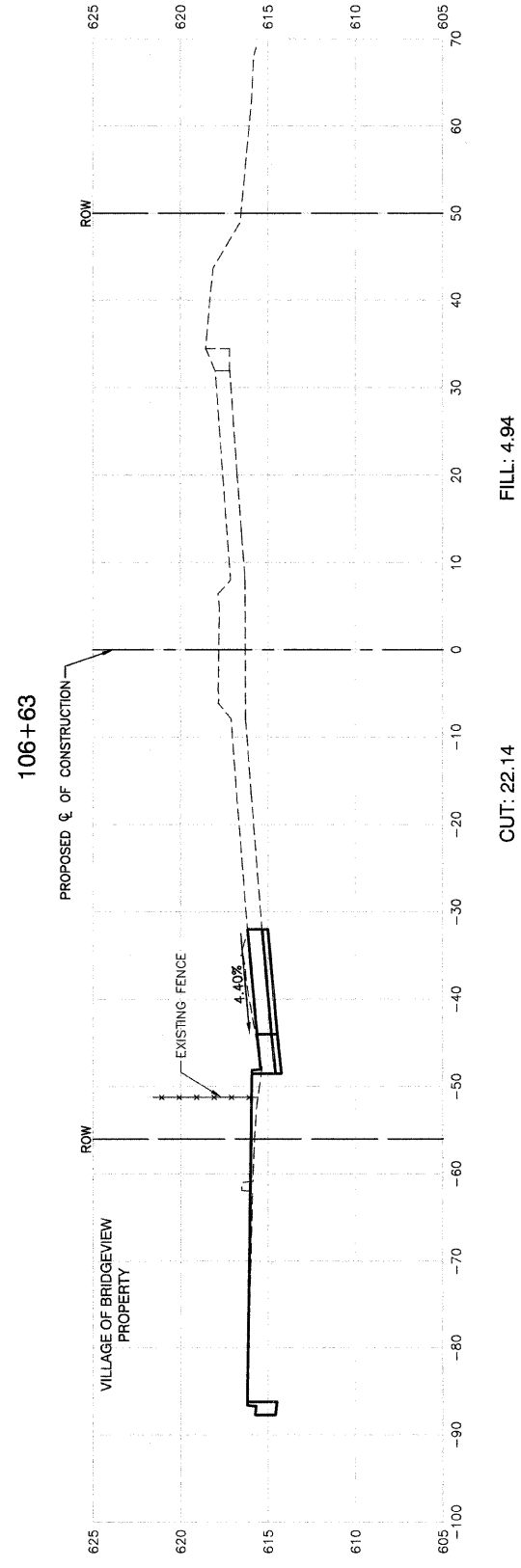
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CROSS SECTIONS
STA. 104+00 TO STA. 105+50

SCALE: VERT. 1"=5'
HORIZ. 1"=10'
DATE 08-14-09
DRAWN BY PS
CHECKED BY RJW

F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	035
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT ARA-9003(340)		

CONTRACT #63269



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CROSS SECTIONS
STA. 106+00.42 TO STA. 106+63

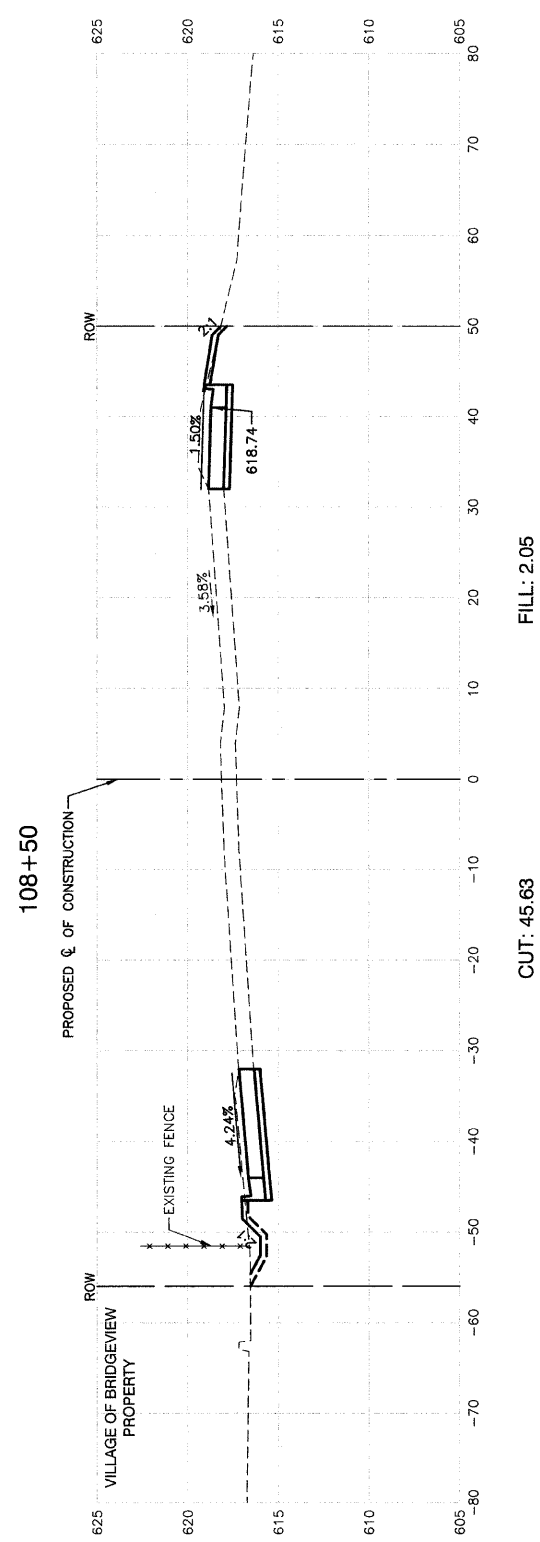
SCALE: VERT. 1"=5'
HORIZ. 1"=10'

DATE 08-14-09 DRAWN BY PS
CHECKED BY RJW

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 591-6700 FAX (708) 591-9828
ILLINOIS DESIGN FIRM REGISTRATION NO. 124601128 04517-XSEC-01 - X04

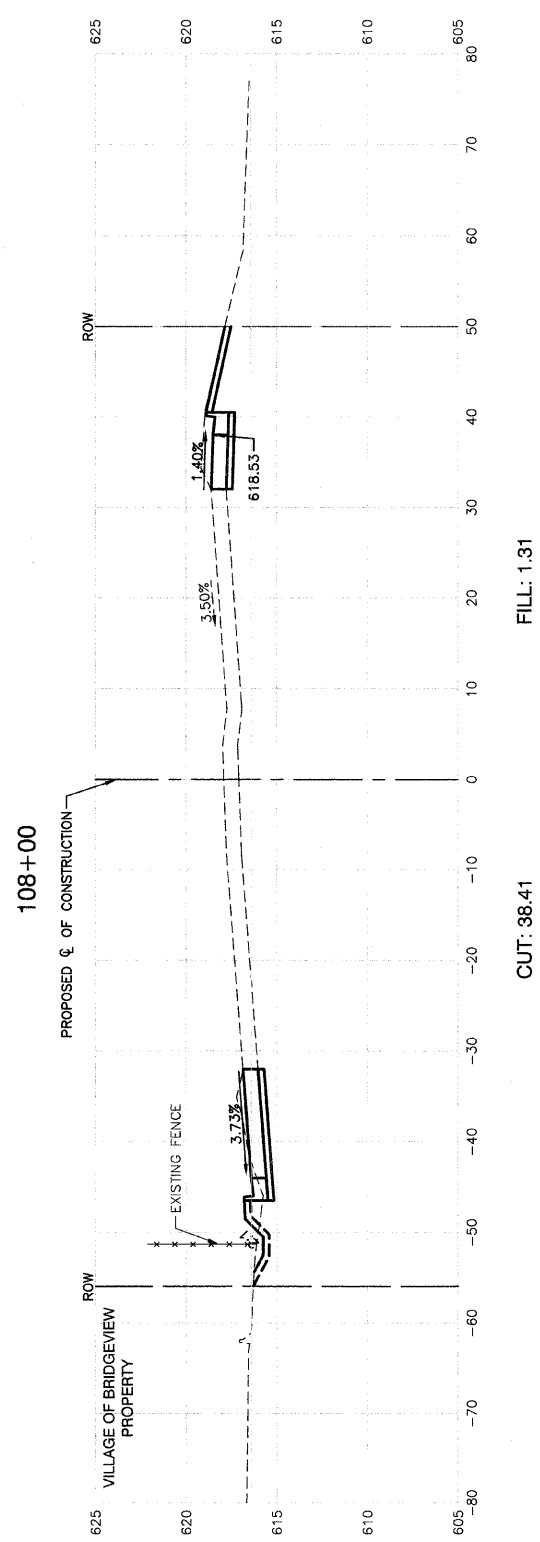
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348	09-00059-00-CH	COOK	046	036
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT ARA-9003(340)	

CONTRACT #63269



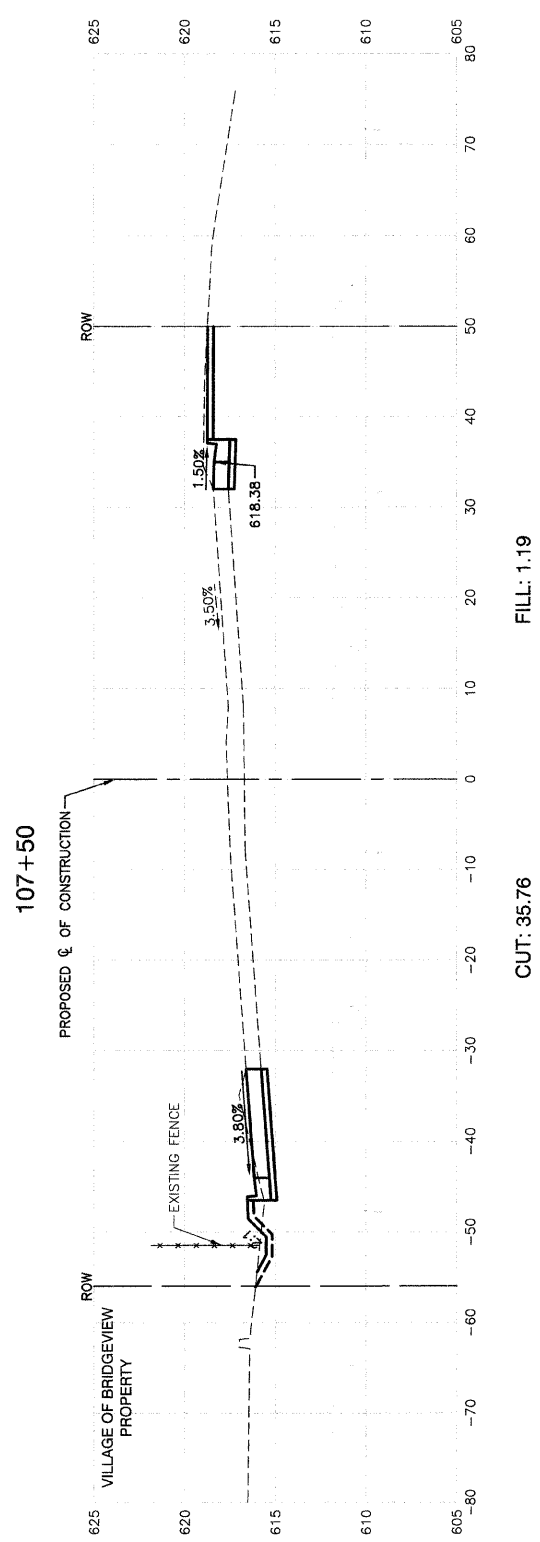
FILL: 2.05

CUT: 45.63



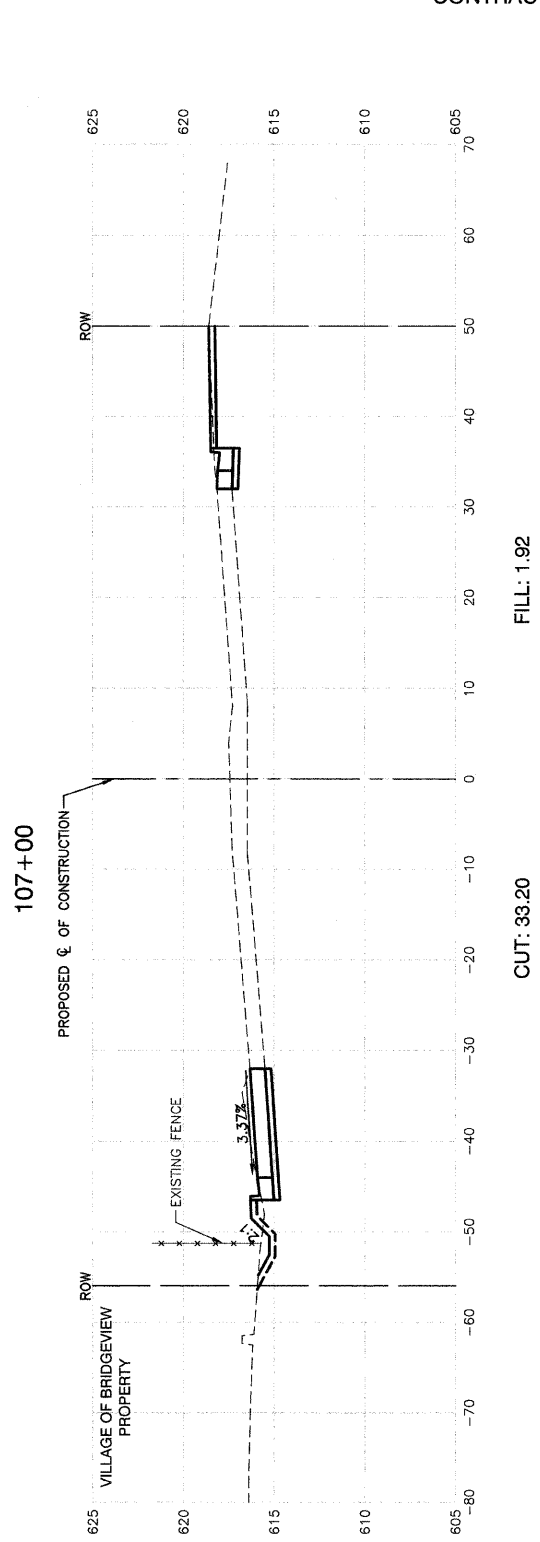
FILL: 1.31

CUT: 38.41



FILL: 1.19

CUT: 35.76



FILL: 1.92

CUT: 33.20

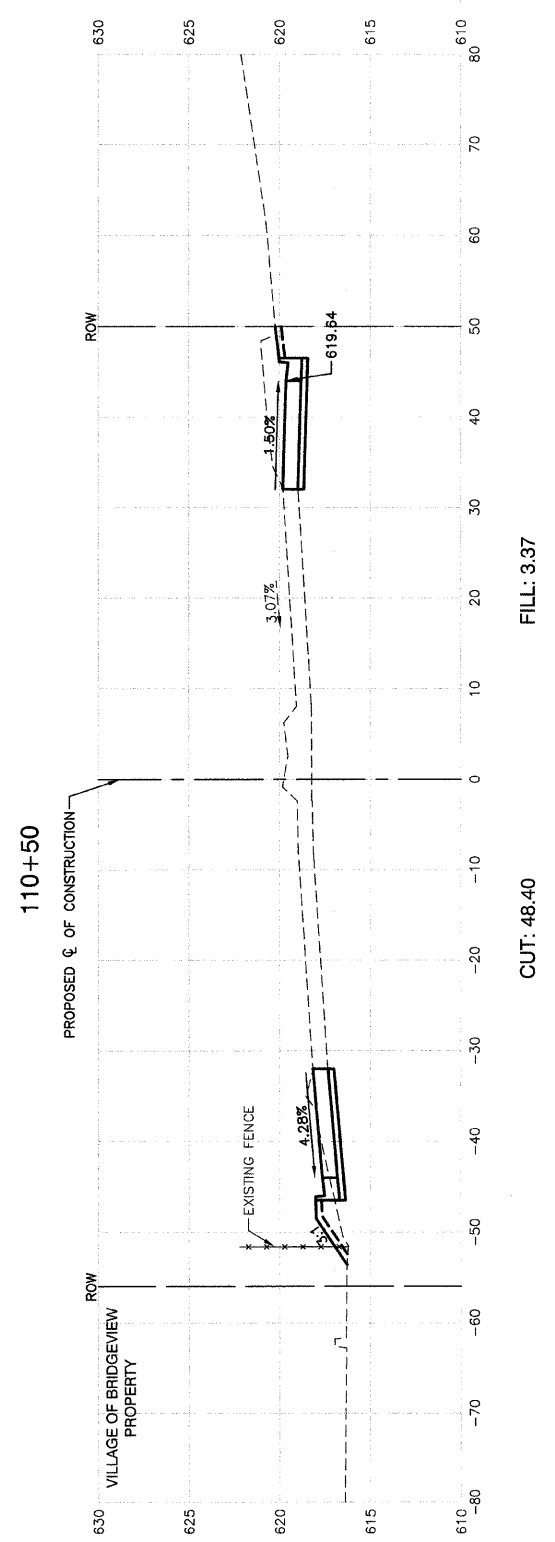
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CROSS SECTIONS
STA. 107+00 TO STA. 108+50

SCALE: VERT. 1"=5'
HORIZ. 1"=10'
DATE: 08-14-09
DRAWN BY: PS
CHECKED BY: RJW

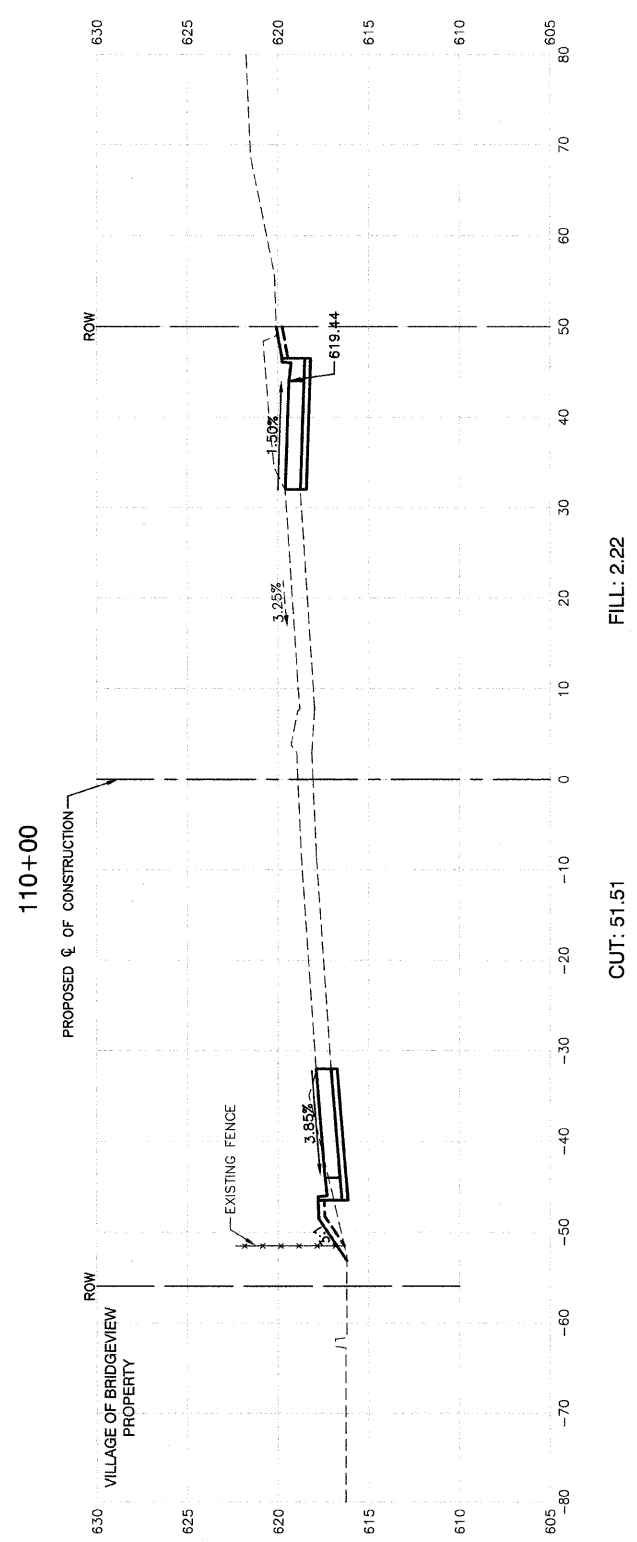
F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	037
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



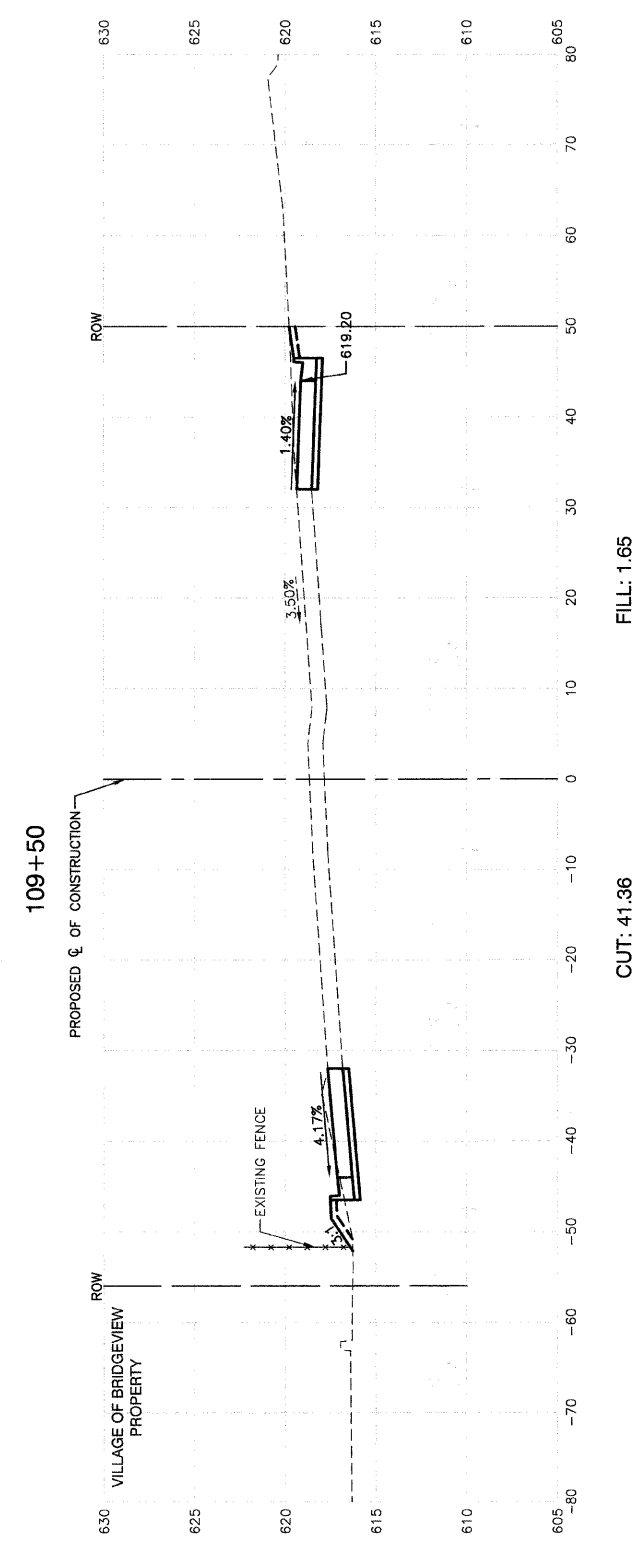
FILL: 3.37

CUT: 48.40



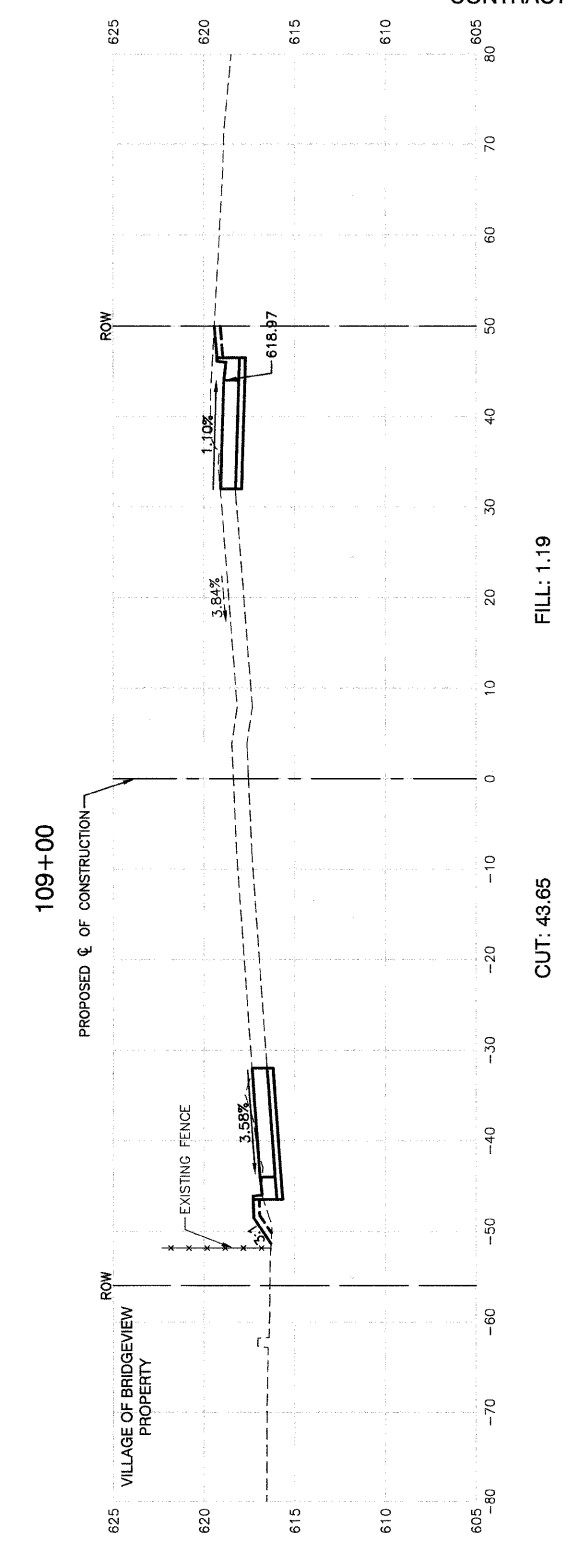
FILL: 2.22

CUT: 51.51



FILL: 1.65

CUT: 41.36



FILL: 1.19

CUT: 43.66

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

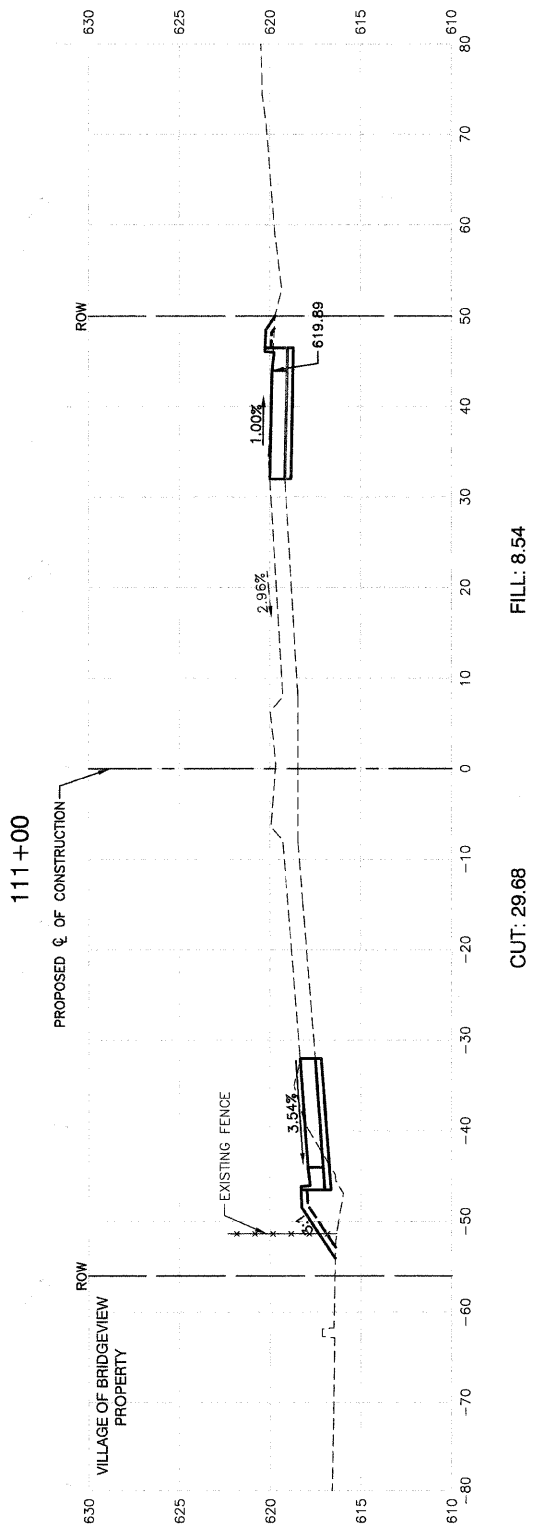
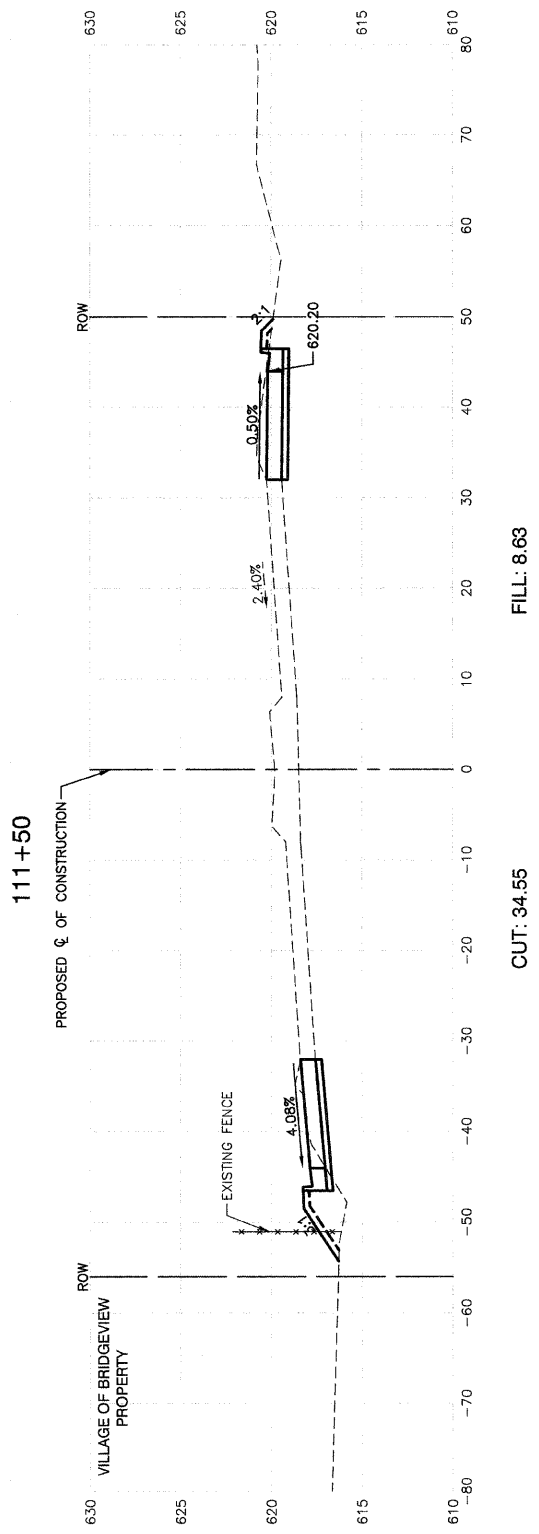
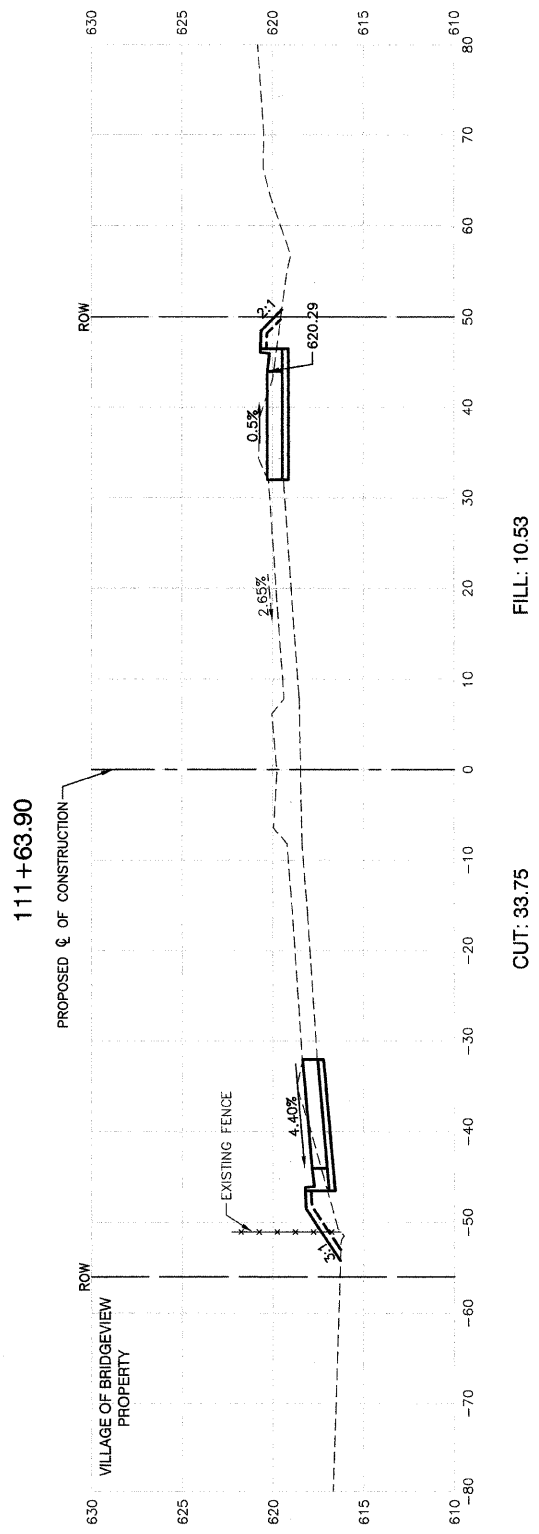
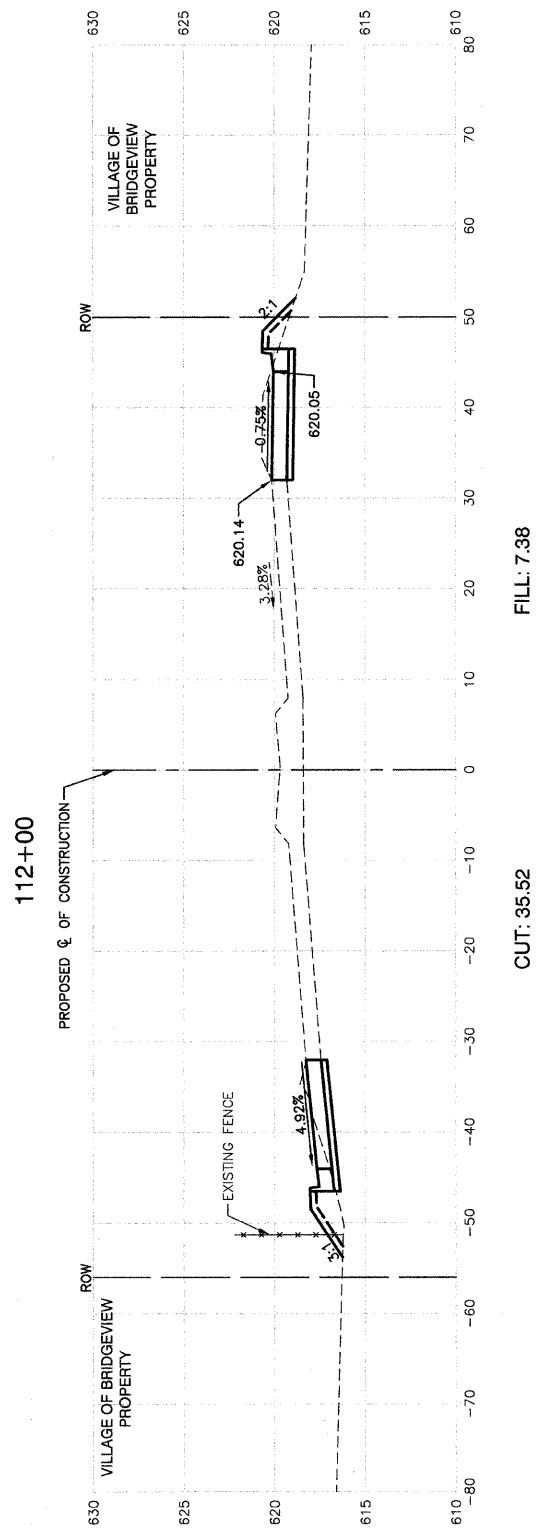
FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CROSS SECTIONS
STA. 109+00 TO STA. 110+50

SCALE: VERT. 1"=5'
HORIZ. 1"=10'

DRAWN BY PS
CHECKED BY RJW

DATE 08-14-09

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE, SOUTH HOLLAND, ILLINOIS 60473
(708) 951-8700 FAX (708) 951-8888
ILLINOIS DESIGN FIRM REGISTRATION NO. 184601128 04517-XSEC-01 - X06



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CROSS SECTIONS
STA. 111+00 TO STA. 112+00**

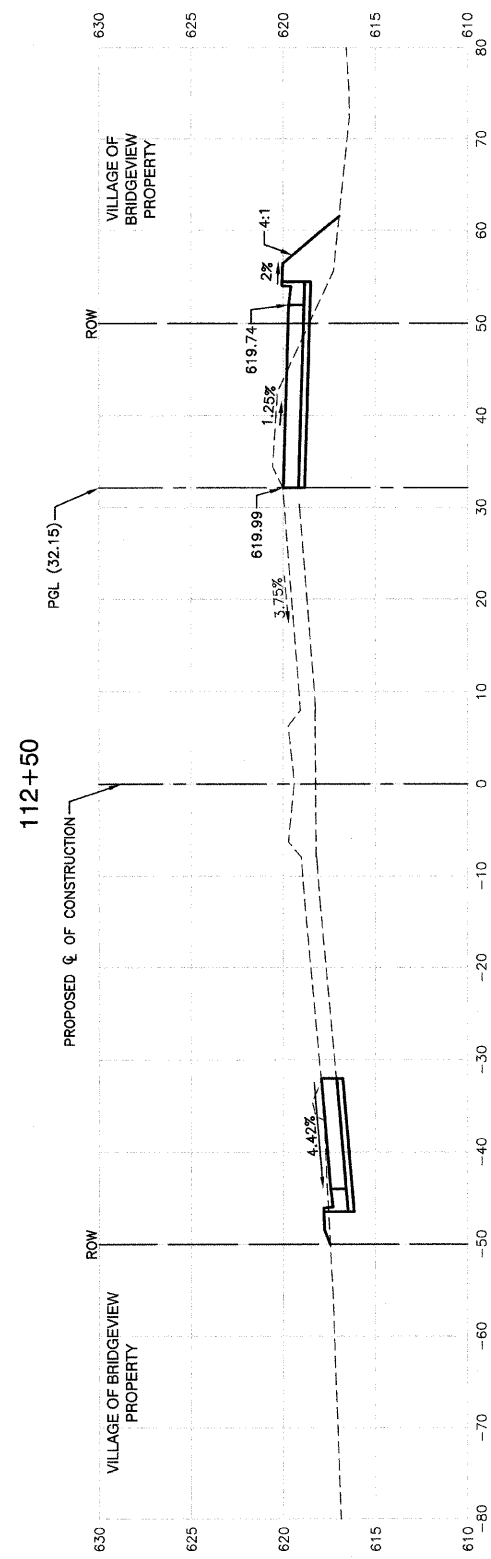
SCALE: VERT. 1"=5'
HORIZ. 1"=10'

DATE 08-14-09 DRAWN BY PS
CHECKED BY RJW

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 551-6700 FAX (708) 551-0808
ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128 04517-XSEC-01 - X07

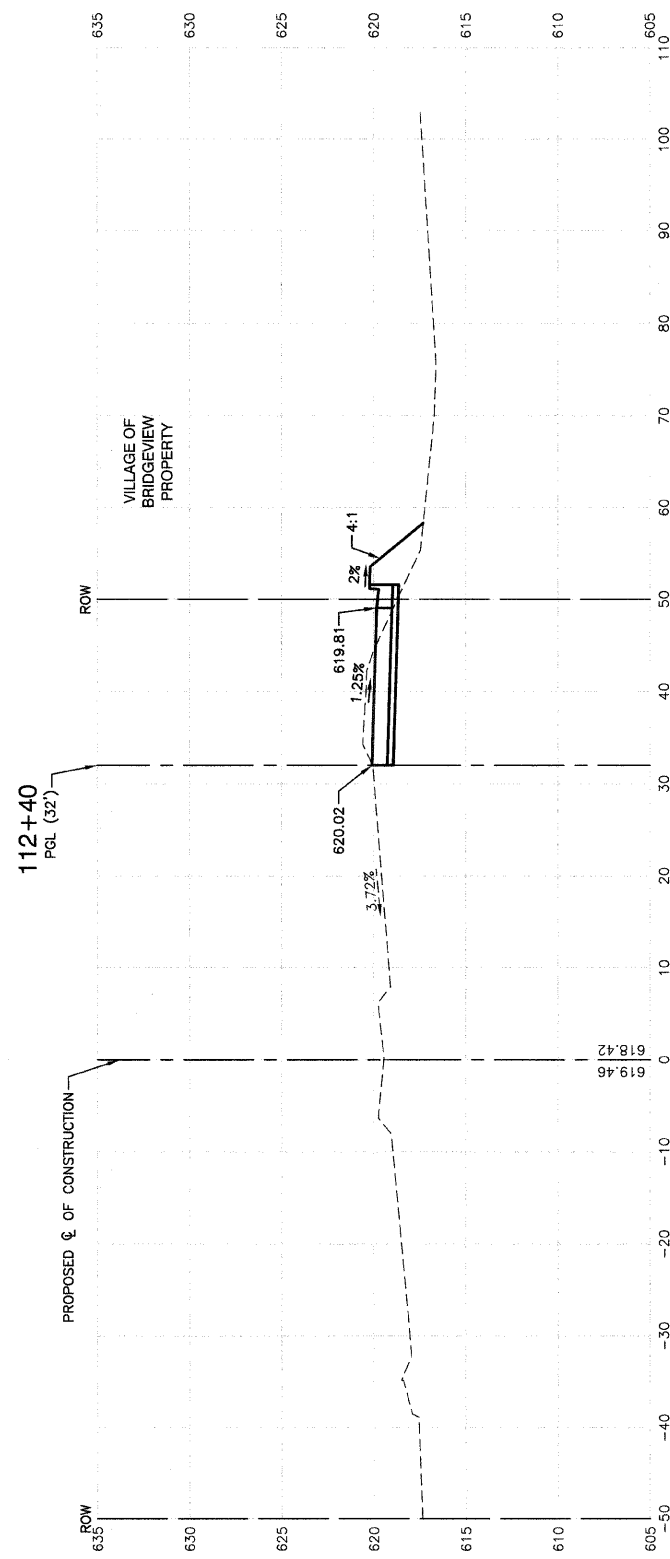
F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	039
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT ARA-9003(340)	

CONTRACT #63269



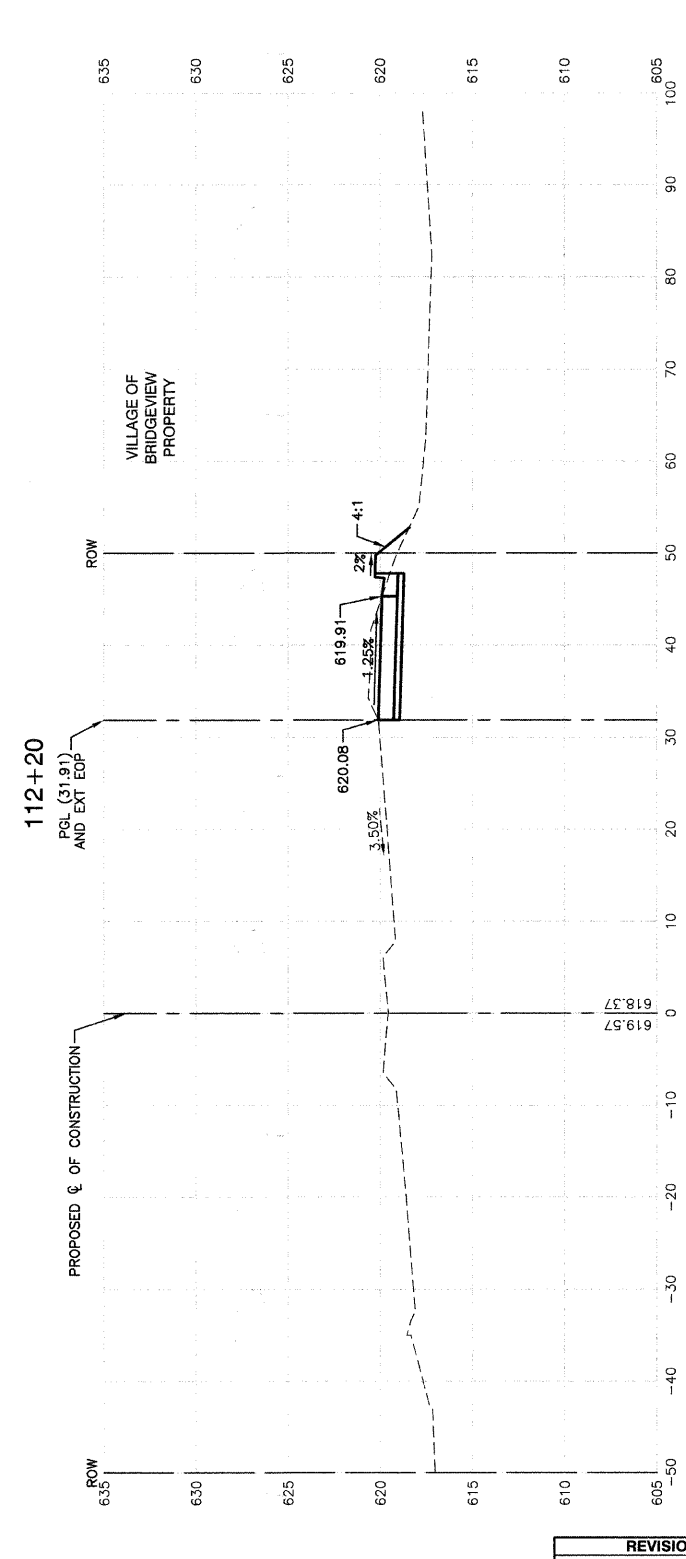
FILL: 15.42

CUT: 45.38



FILL: 15.12

CUT: 24.03



FILL: 1.62

CUT: 24.84

REVISIONS	
NAME	DATE

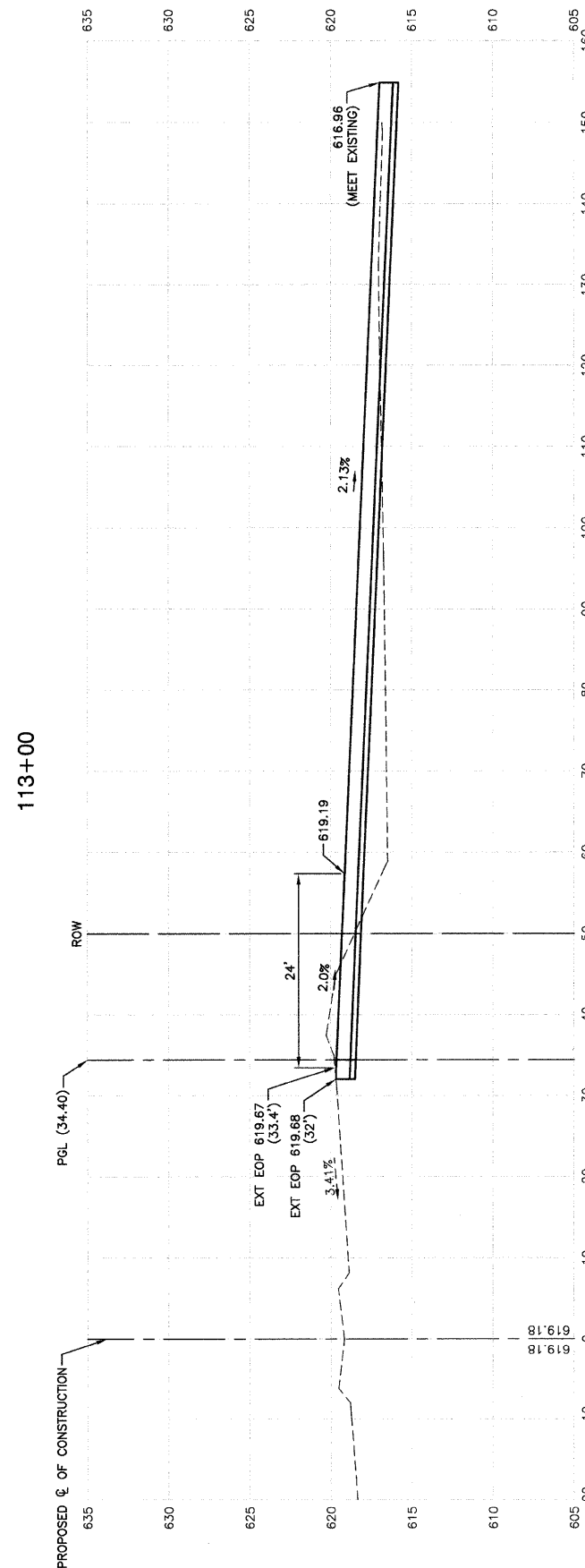
ILLINOIS DEPARTMENT OF TRANSPORTATION
**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CROSS SECTIONS
STA. 112+20 TO STA. 112+50**

SCALE: VERT. 1"=5'
HORIZ. 1"=10'
DATE 08-14-09
DRAWN BY PS
CHECKED BY RJW

SECTION 24, TOWNSHIP 38, RANGE 12
SECTION 19, TOWNSHIP 38, RANGE 13

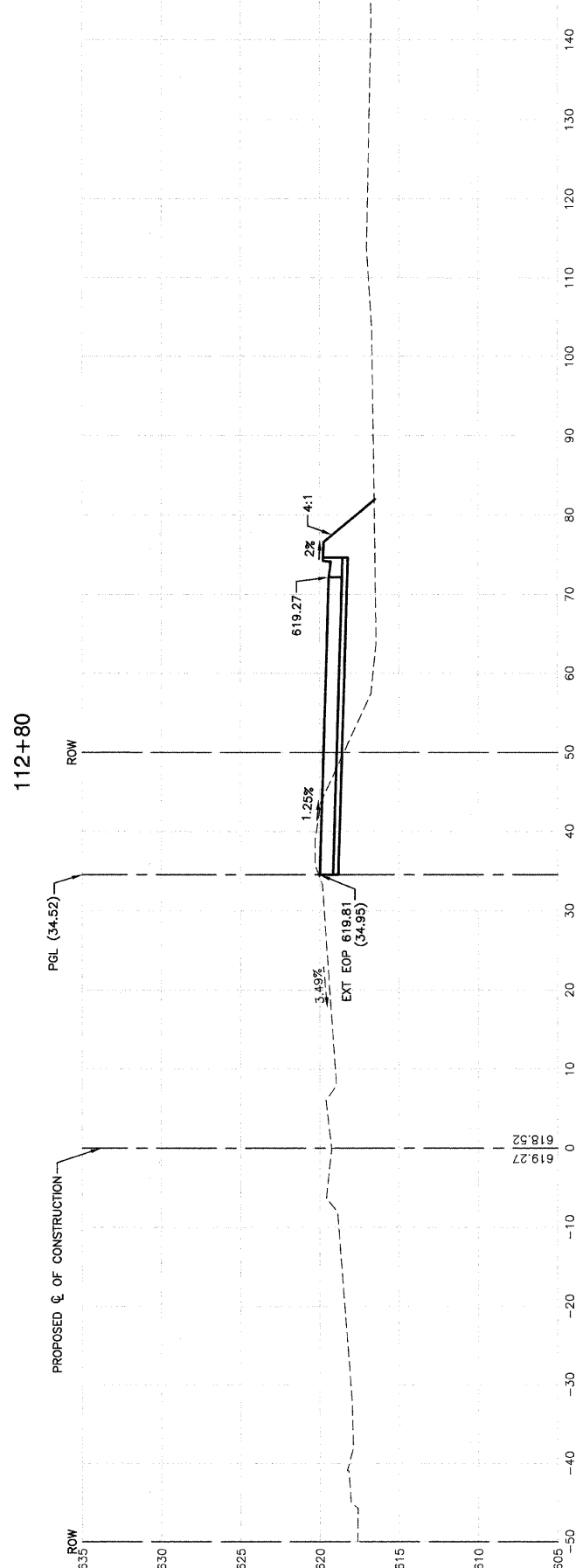
F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	040
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



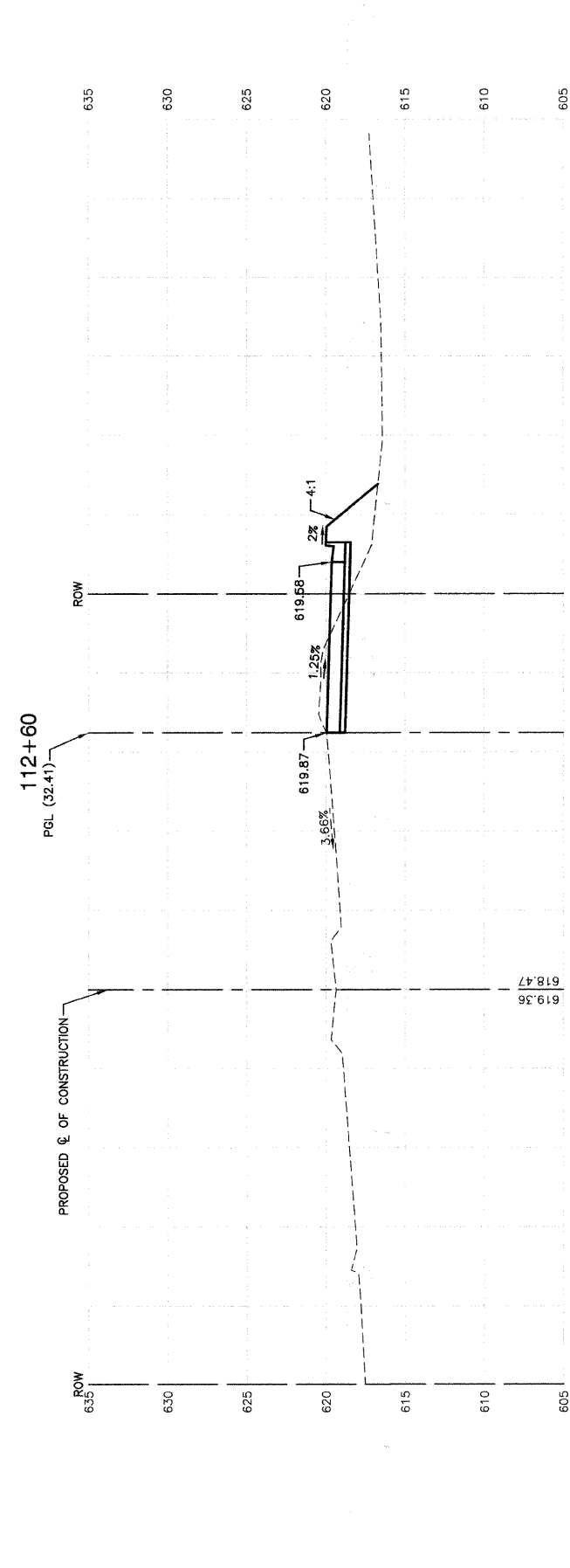
FILL: 42.12

CUT: 52.92



FILL: 20.79

CUT: 36.18



FILL: 19.71

CUT: 26.19

REVISIONS	
NAME	DATE

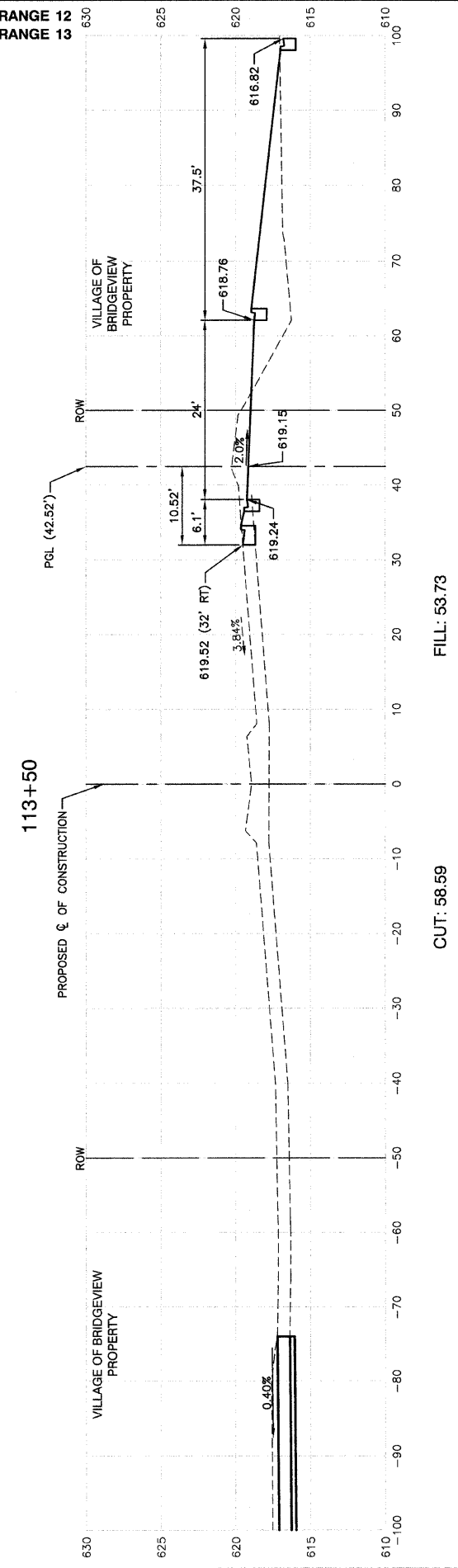
ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CROSS SECTIONS
STA. 112+60 TO STA. 113+00

SCALE: VERT. 1"=5'
HORIZ. 1"=10'
DATE 08-14-09 DRAWN BY PS
CHECKED BY RJW

SECTION 24, TOWNSHIP 38, RANGE 12
SECTION 19, TOWNSHIP 38, RANGE 13

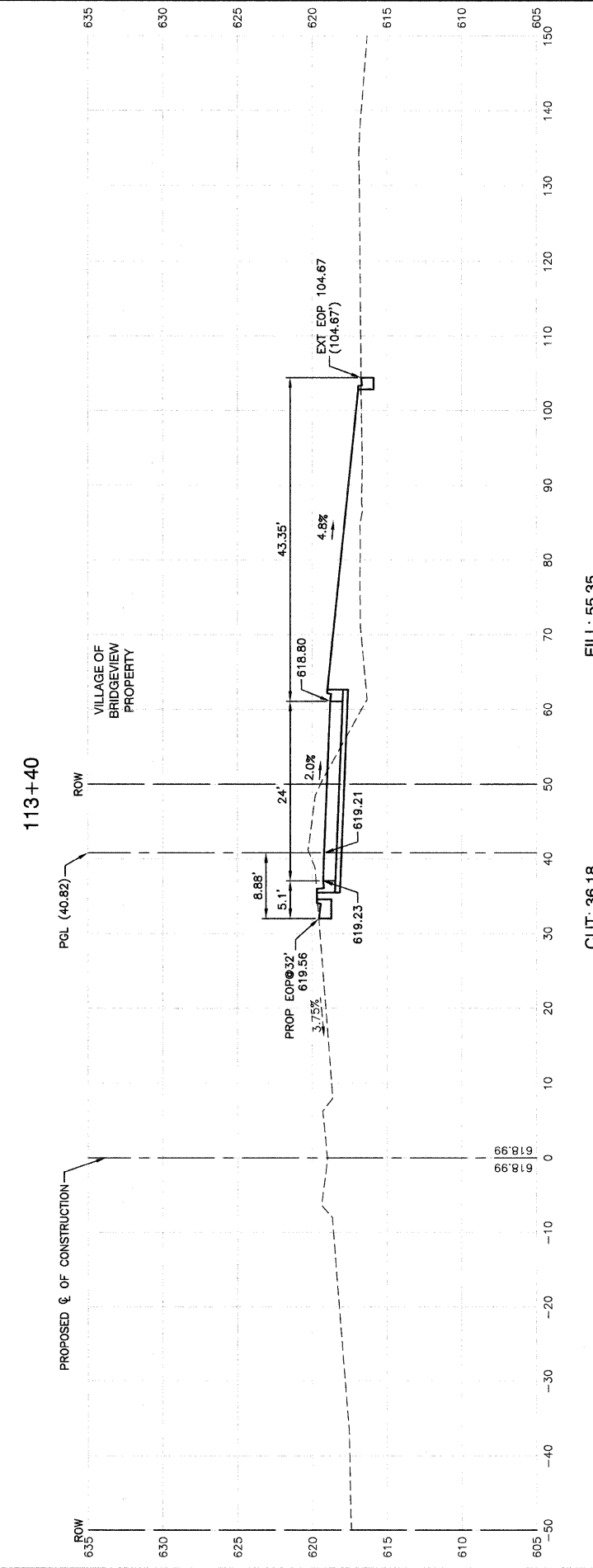
P. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	041
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT ARA-9003(340)	

CONTRACT #63269



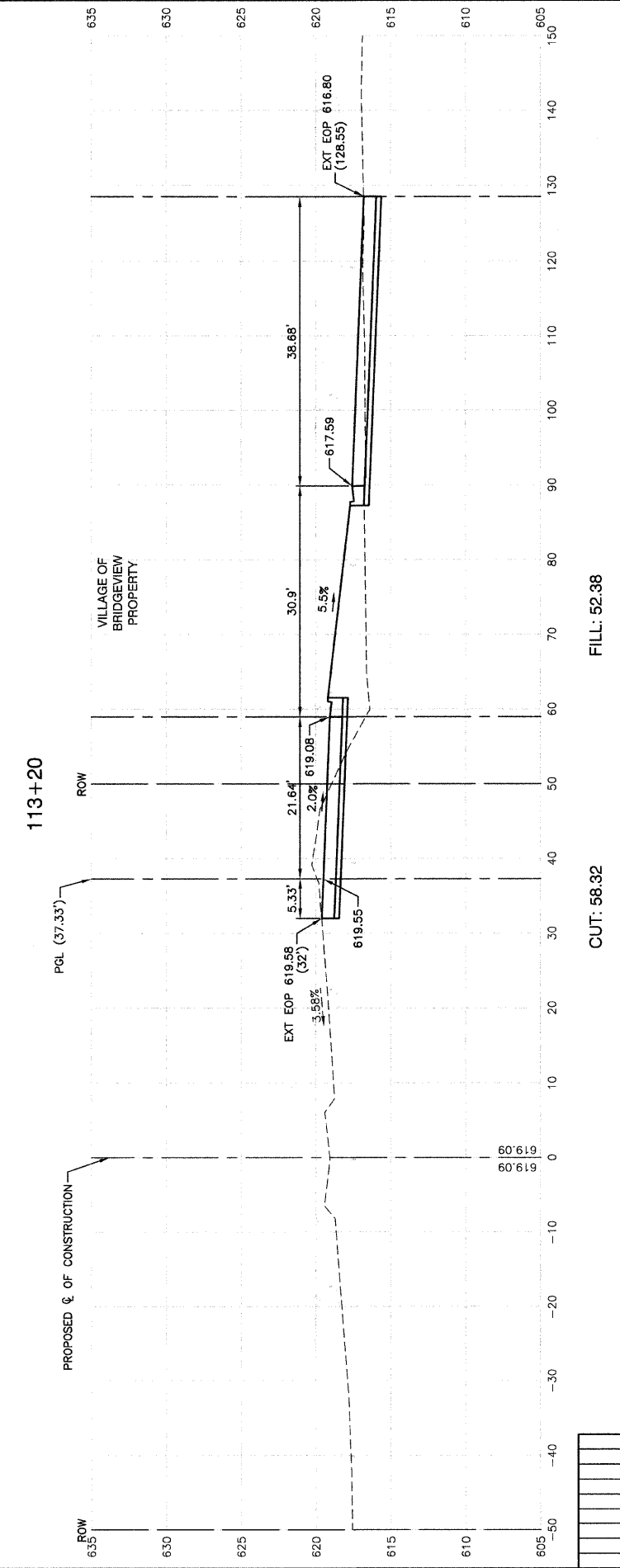
FILL: 53.73

CUT: 58.59



FILL: 55.35

CUT: 36.18



FILL: 52.38

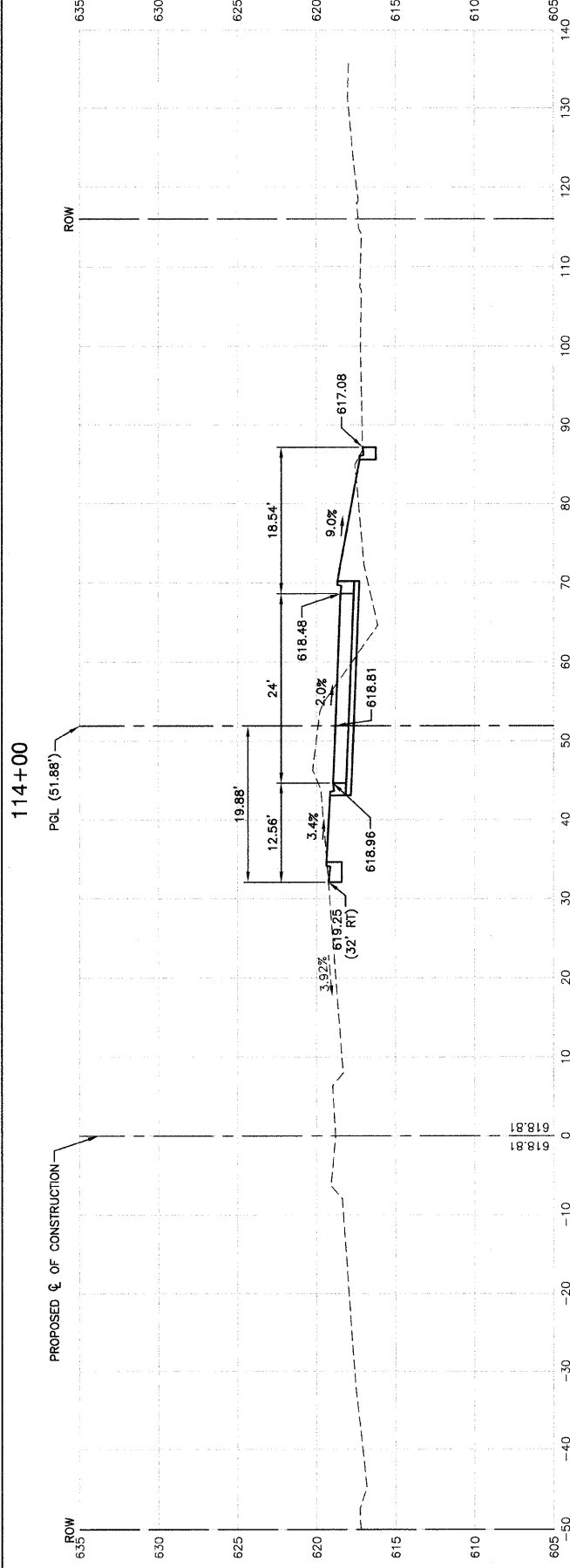
CUT: 58.32

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CROSS SECTIONS
STA. 113+20.60 TO STA. 113+50

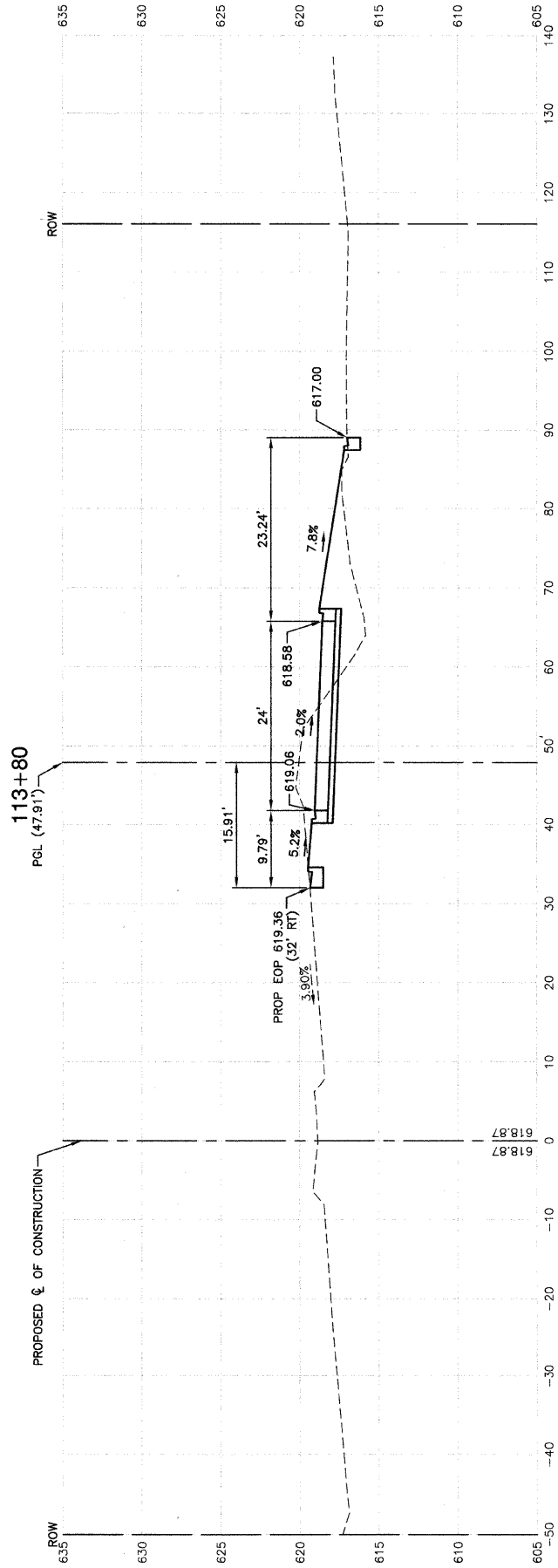
SCALE: VERT. 1"=5'
HORIZ. 1"=10'
DATE 08-14-09
DRAWN BY PS
CHECKED BY RJW

SECTION 24, TOWNSHIP 38, RANGE 12
SECTION 19, TOWNSHIP 38, RANGE 13



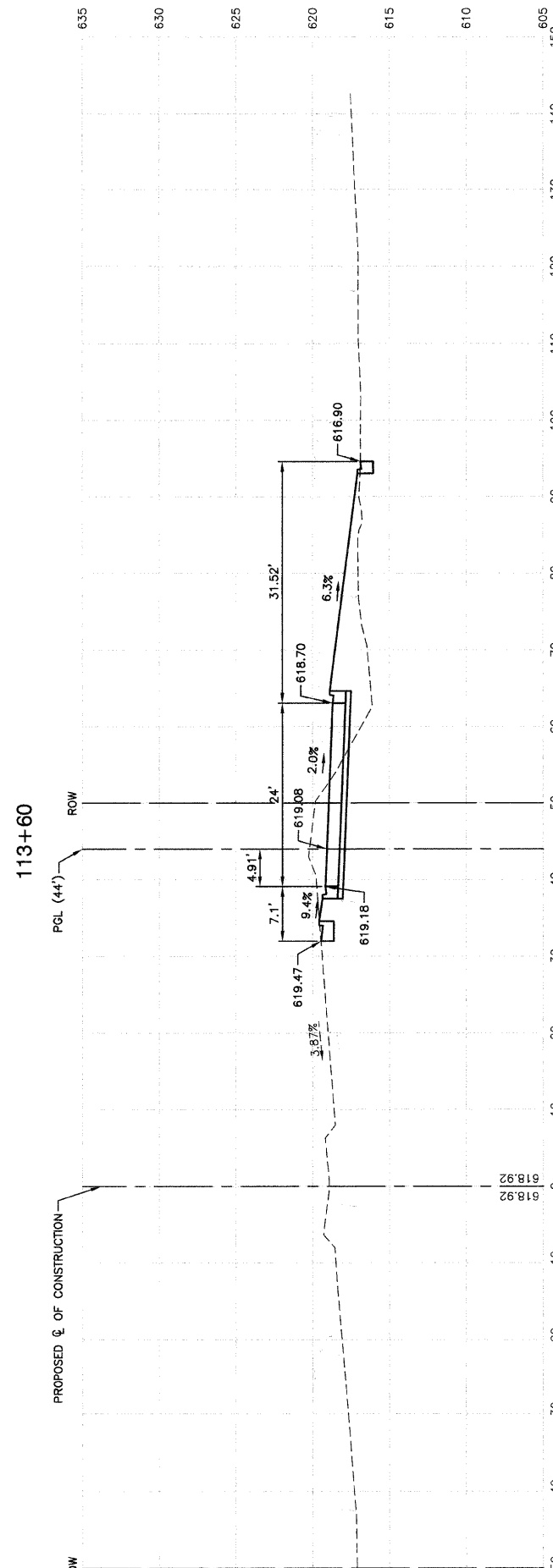
FILL: 19.17

CUT: 38.61



FILL: 30.51

CUT: 37.53



FILL: 39.96

CUT: 36.72

P. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	042
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CROSS SECTIONS
STA. 113+60 TO STA. 114+00**

SCALE: VERT. 1"=5'
HORIZ. 1"=10'

DATE: 08-14-09

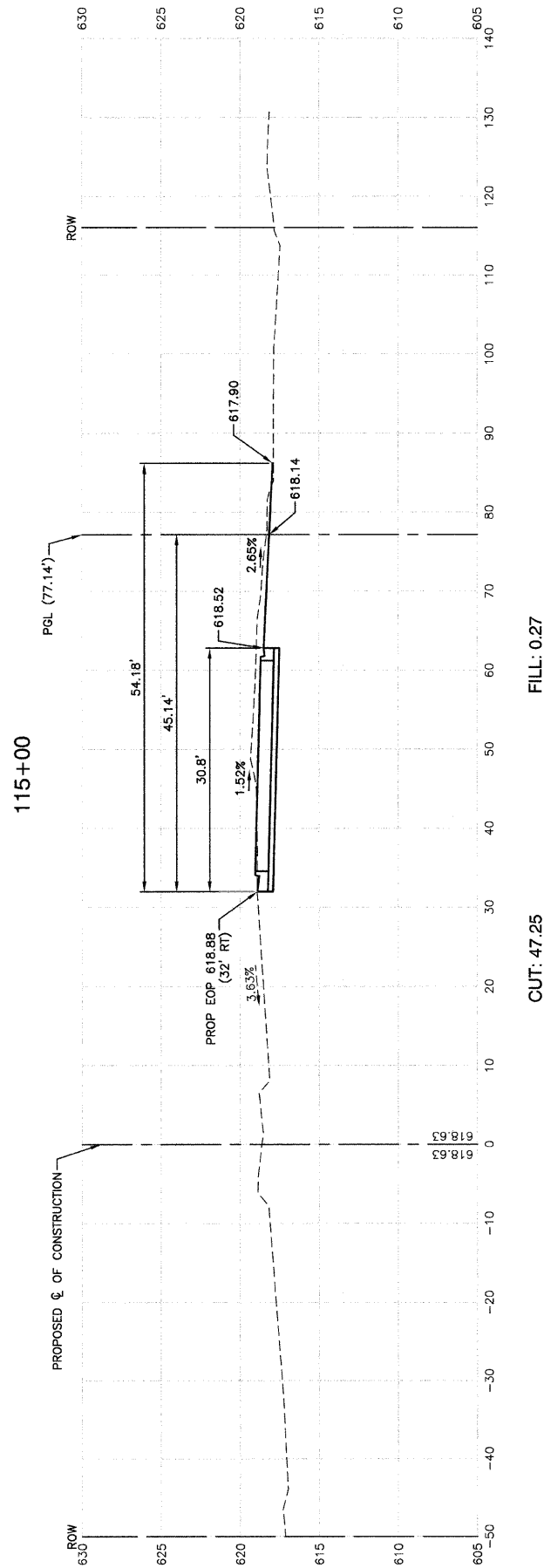
DRAWN BY: PS
CHECKED BY: RJW

ROBINSON ENGINEERING, LTD.
17000 SOUTH PARK AVENUE, SOUTH HOLLAND, ILLINOIS 60470
(708) 301-8700 FAX (708) 301-0800
ILLINOIS DESIGN FIRM REGISTRATION NO. 184601125 04517-XSEC-01 - X11

SECTION 24, TOWNSHIP 38, RANGE 12
SECTION 19, TOWNSHIP 38, RANGE 13

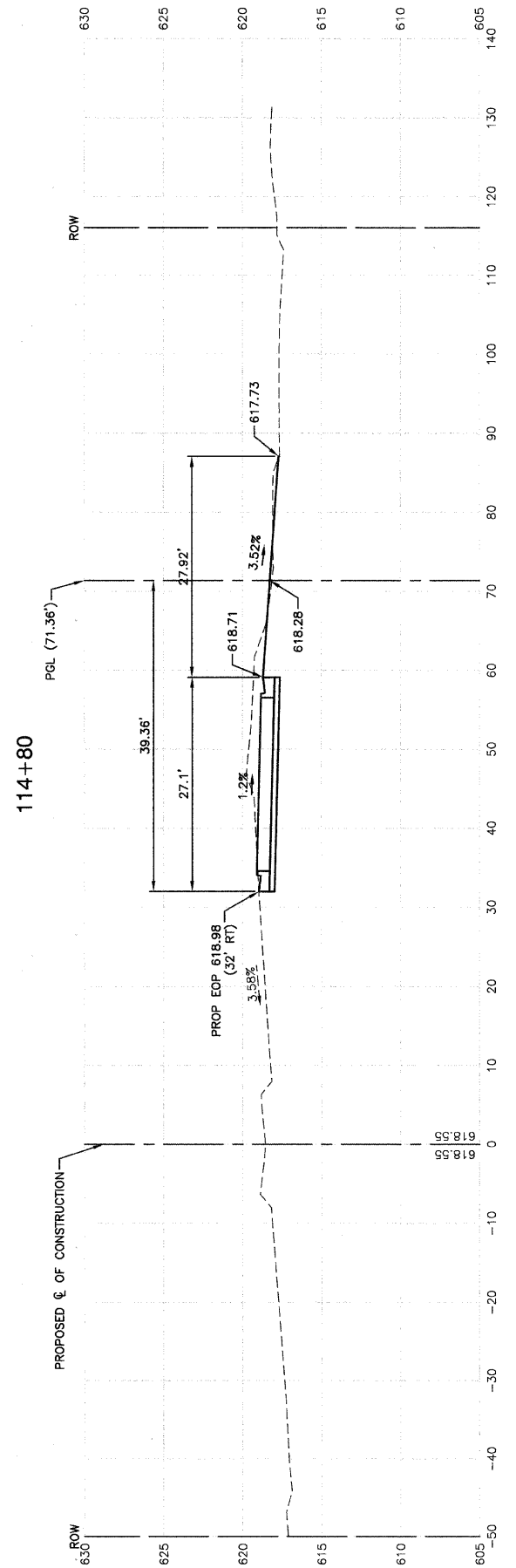
F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	044
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



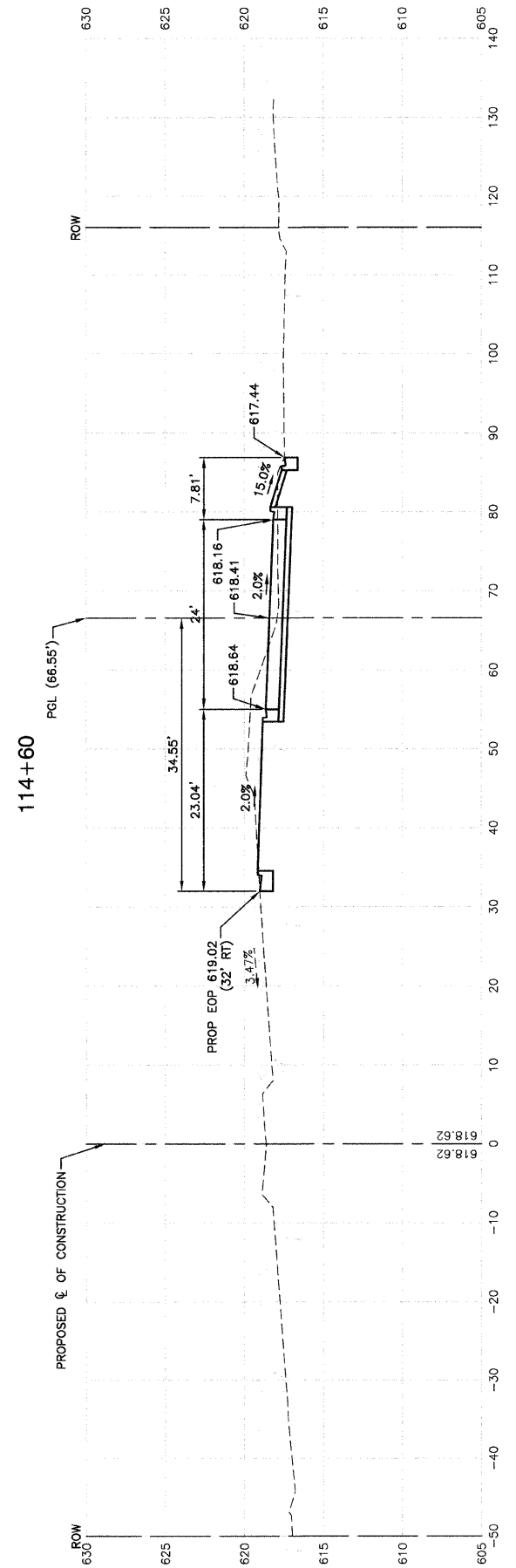
FILL: 0.27

CUT: 47.25



FILL: 0.81

CUT: 45.90



FILL: 0.27

CUT: 44.55

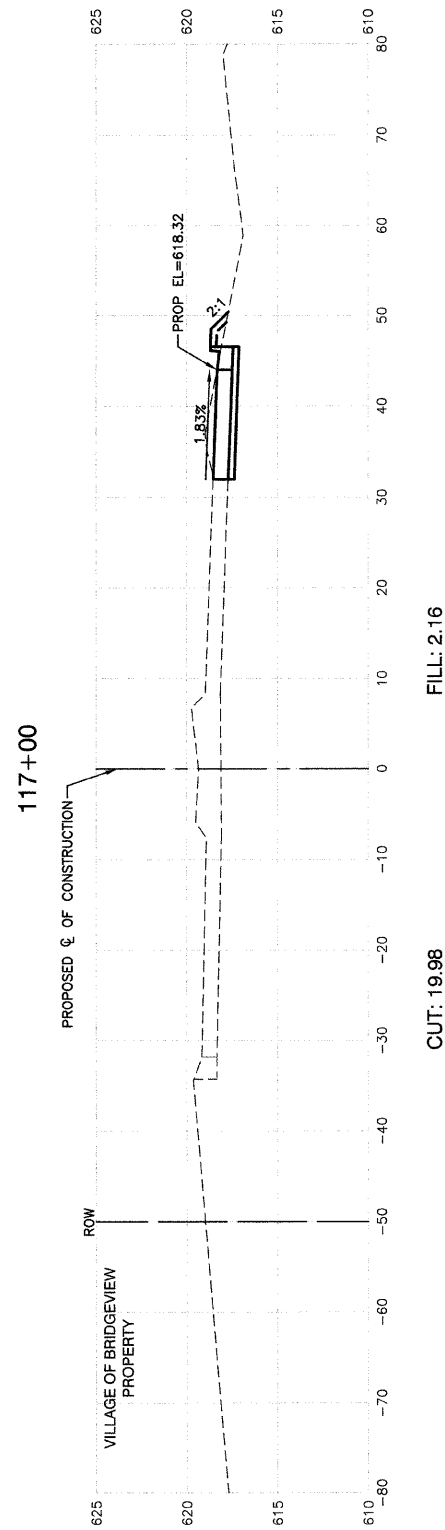
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CROSS SECTIONS
STA. 114+60 TO STA. 115+00

SCALE: VERT. 1"=5'
HORIZ. 1"=10'
DATE 08-14-09
DRAWN BY PS
CHECKED BY RJW

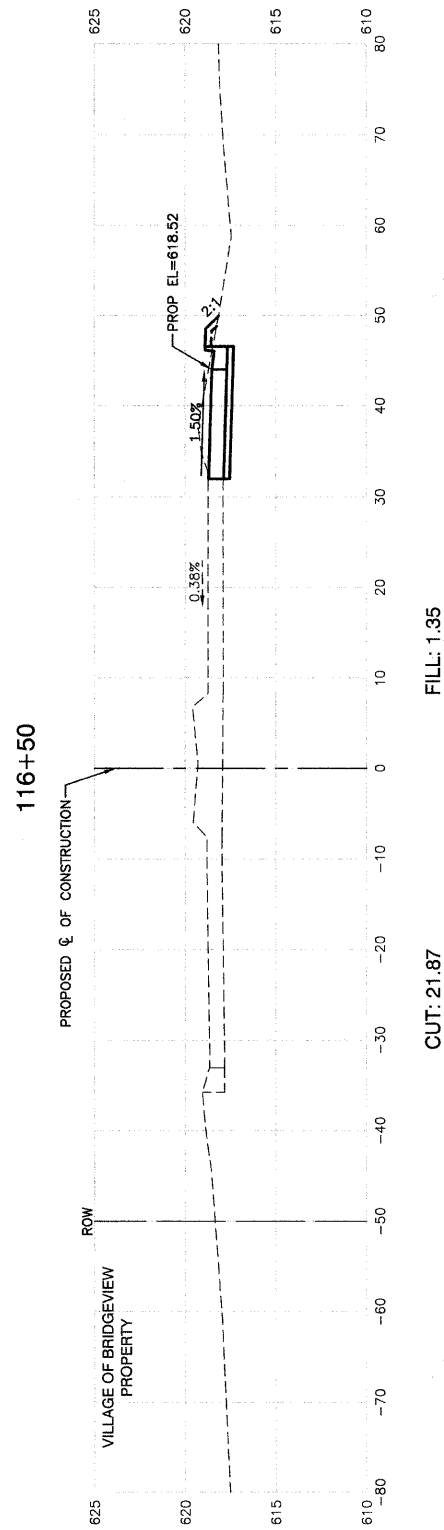
F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	045
STA.		TO STA.		
FED. ROAD DIST. NO.	ALIGNED	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



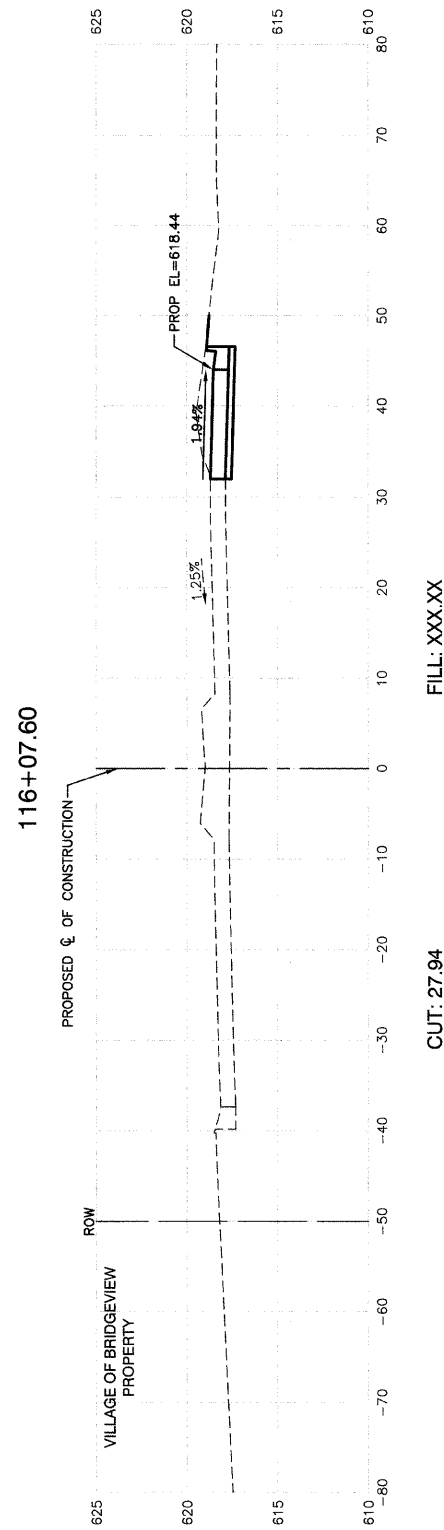
FILL: 2.16

CUT: 19.98



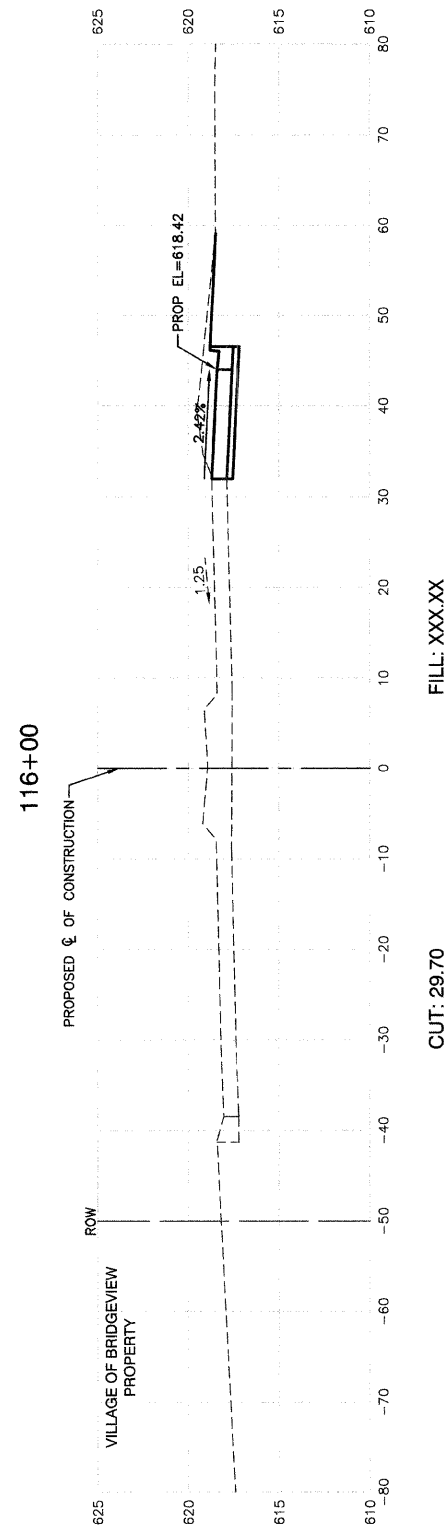
FILL: 1.35

CUT: 21.87



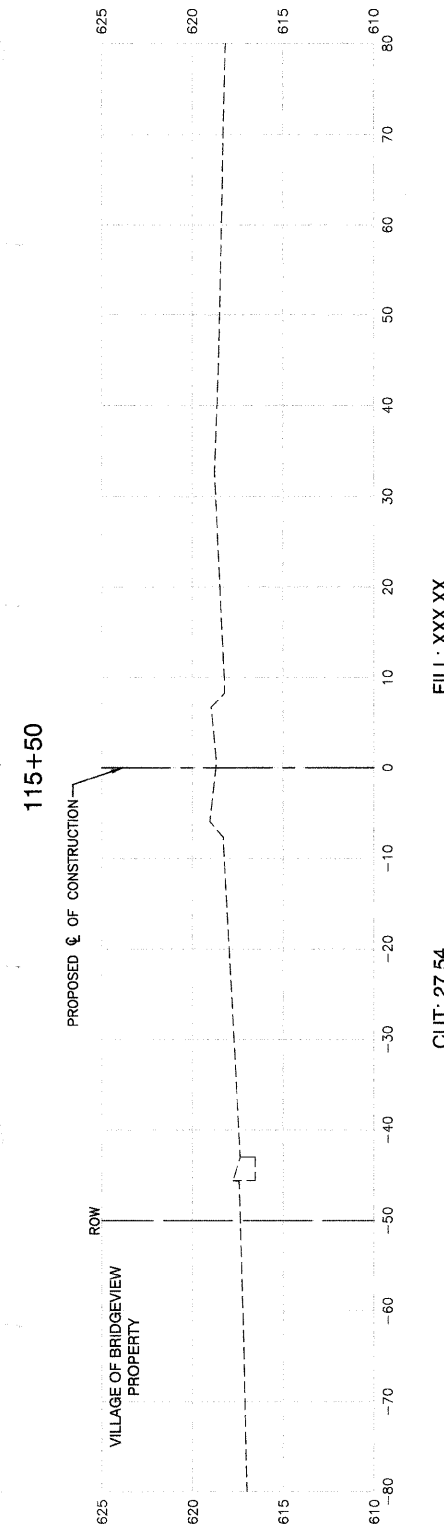
FILL: XXX.XX

CUT: 27.94



FILL: XXX.XX

CUT: 29.70



FILL: XXX.XX

CUT: 27.54

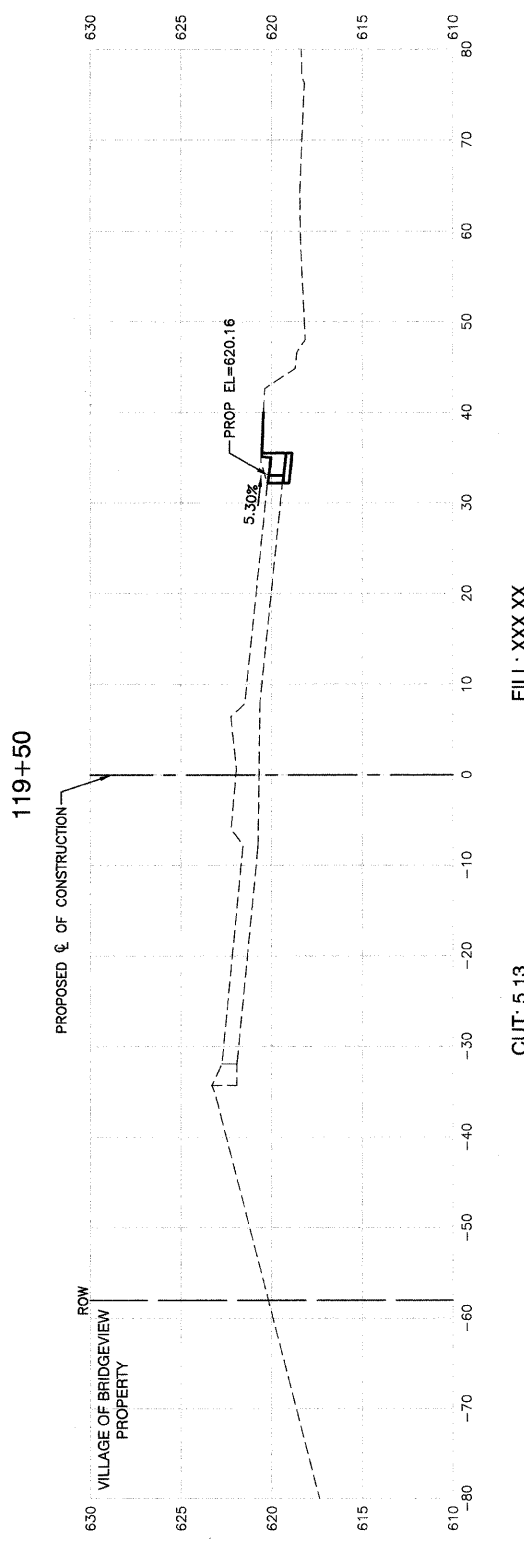
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CROSS SECTIONS
STA. 115+50 TO STA. 117+00

SCALE: VERT. 1"=5'
HORIZ. 1"=10'
DATE: 08-14-09
DRAWN BY: PS
CHECKED BY: RJW

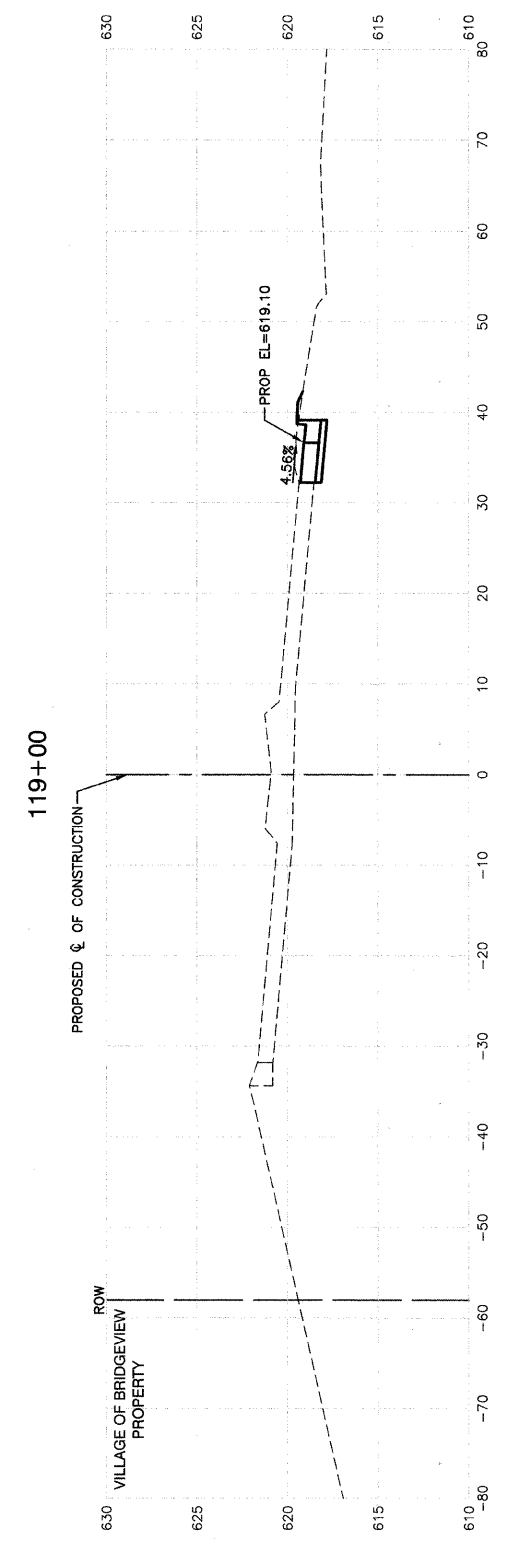
F. A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00059-00-CH	COOK	046	046
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	ARA-9003(340)	

CONTRACT #63269



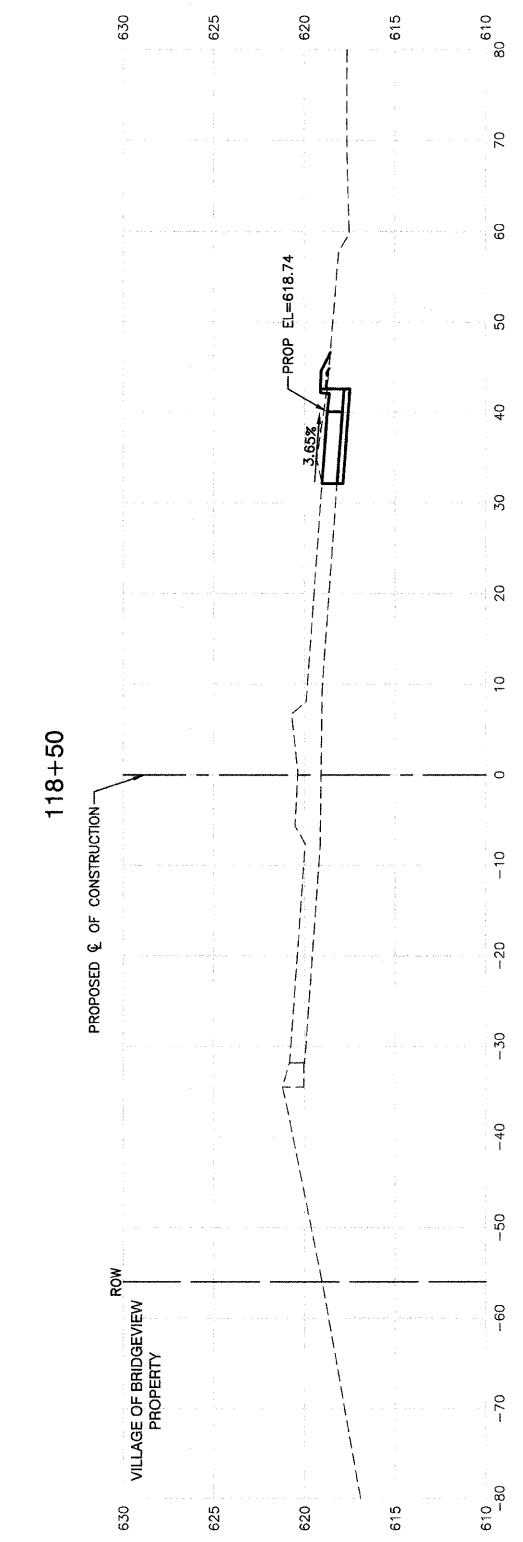
FILL: XXX.XX

CUT: 5.13



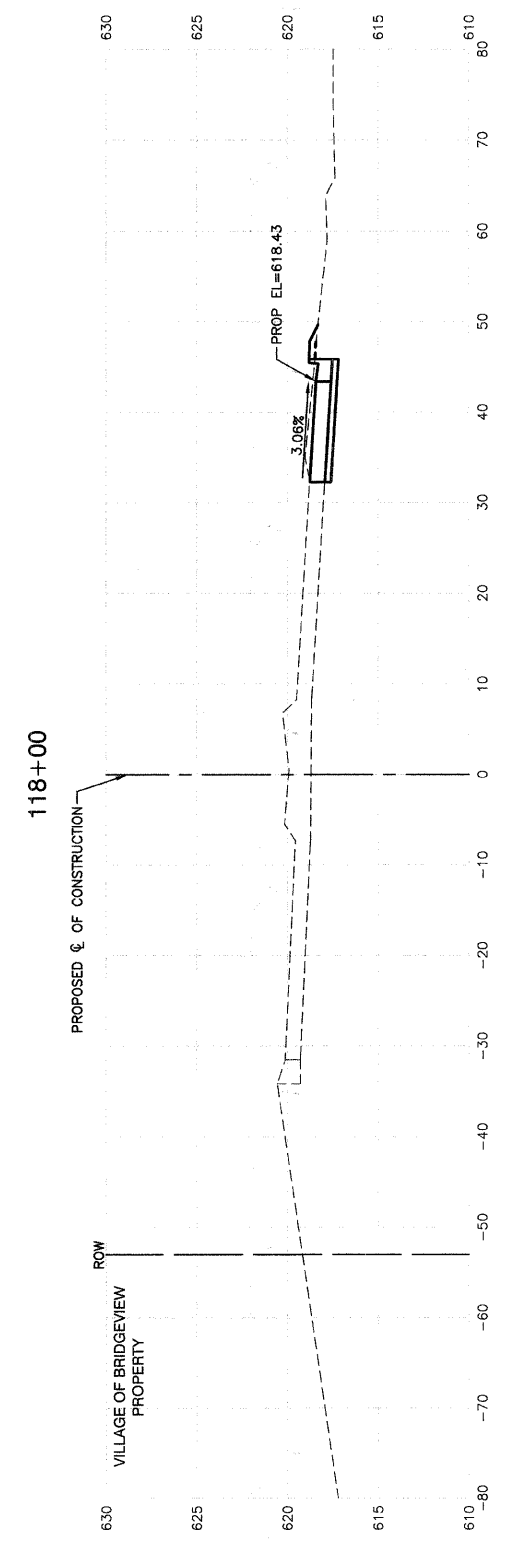
FILL: 0.27

CUT: 27.40



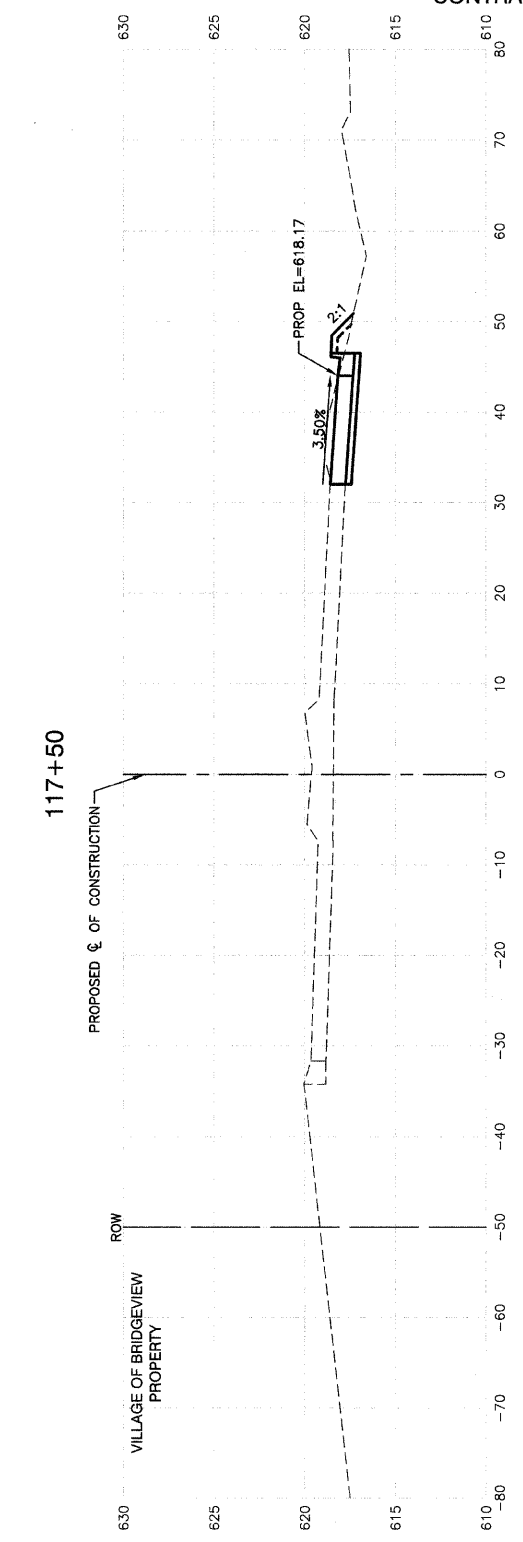
FILL: 1.35

CUT: 14.58



FILL: 1.08

CUT: 18.90



FILL: 2.97

CUT: 19.98

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

FAP 348 (HARLEM AVENUE)
DRIVEWAY RECONFIGURATION
CROSS SECTIONS
STA 17+50 TO STA 119+00

SCALE: VERT. 1"=5'
HORIZ. 1"=10'

DRAWN BY PS
CHECKED BY RJW