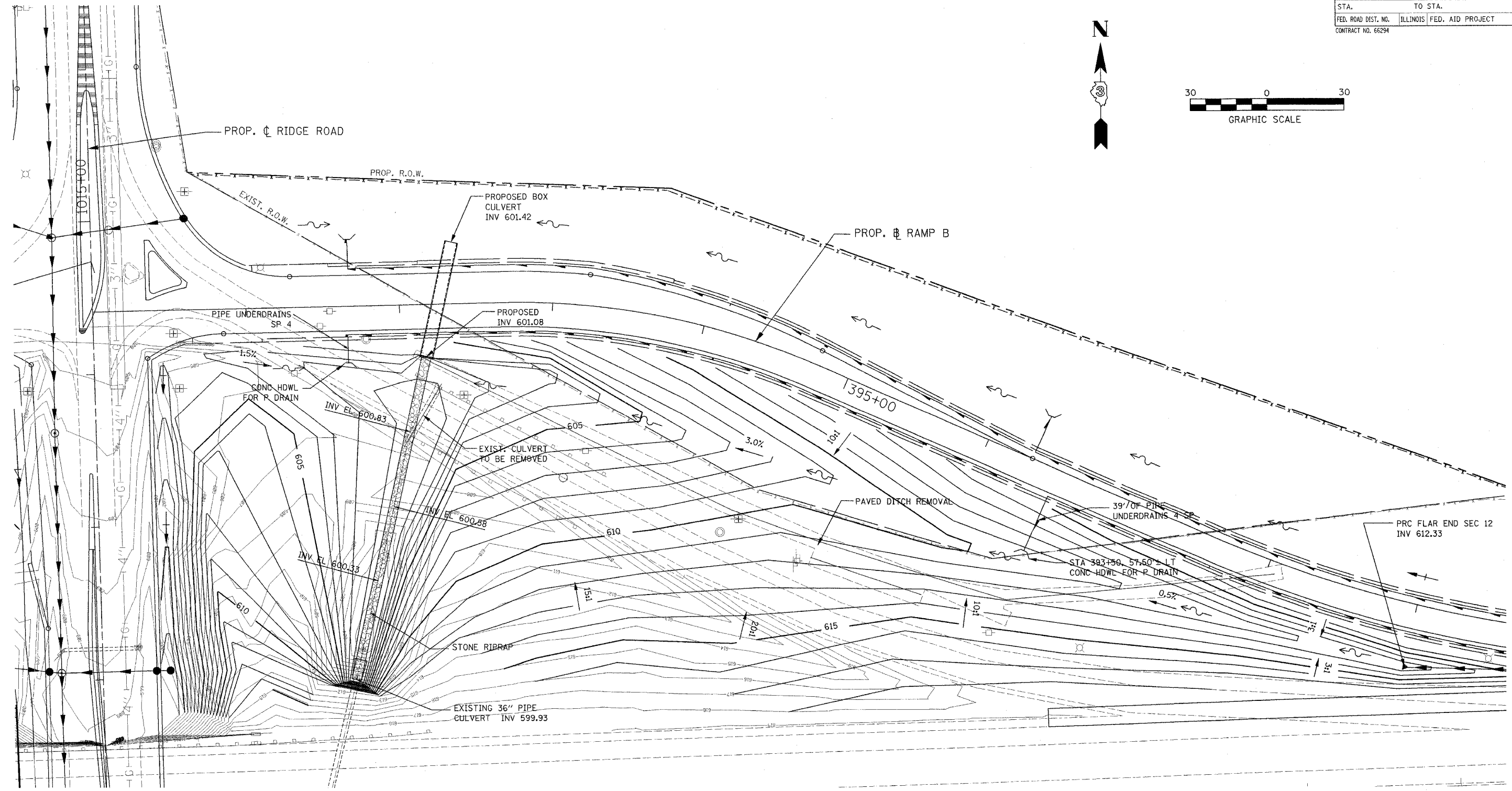
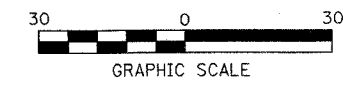


F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	132, 47-41K	KENDALL/GRUNDY	243	101
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

REVISIONS	
NAME	DATE

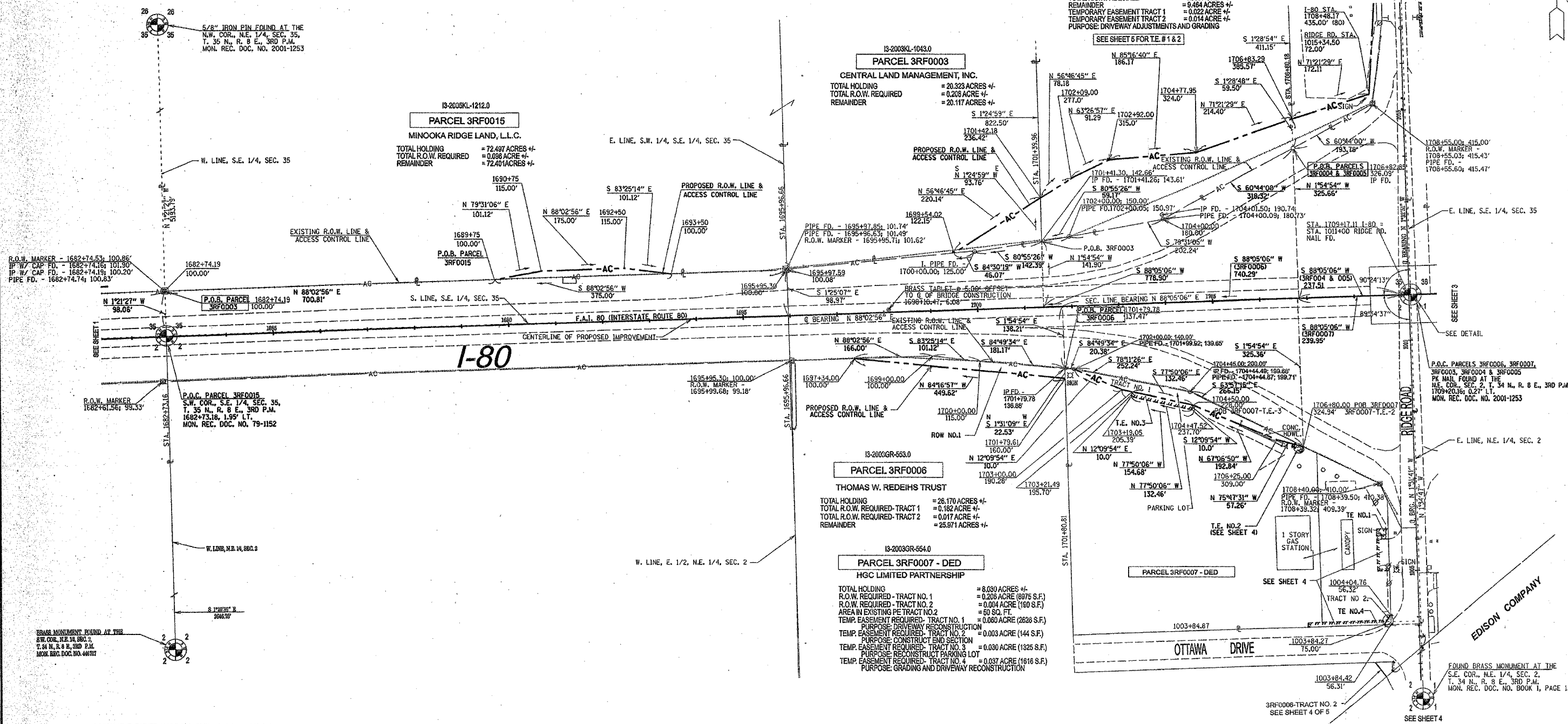
ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

PROPOSED GRADING PLAN
RAMP B INFIELD

SCALE: 1"=30'
DATE: 2/10/06

DRAWN BY: SRL
CHECKED BY: TKL

S.E. 1/4, SEC. 35, T. 35 N., R. 8 E., 3RD P.M.
KENDALL COUNTY



I, MICHAEL E. RAPIER, HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF PROPOSED F.A.I. 80 (INTERSTATE ROUTE 80) WAS MADE BY MICHAEL E. RAPIER SURVEYING, INC. UNDER MY DIRECTION, AND THAT THIS PLAN IS A CORRECT REPRESENTATION OF SAID SURVEY TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.

Michael E. Rapier
 ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2917

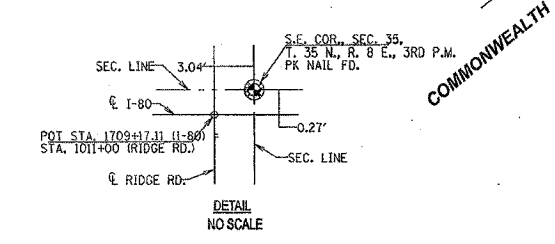


REVISED R.O.W. LIMITS TO PARCEL 3RF0004 & 5
 ADDED NEW T.E. 2, 3 & 4 TO PARCEL 3RF0007
 ADDED NEW R.O.W. TO PARCEL 3RF0007

DATED: 10-04-05
Robert K. Pounds
 ROBERT KRIS POUNDSTONE
 ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2105

GRUNDY COUNTY

N.E. 1/4, SEC. 2, T. 34 N., R. 8 E., 3RD P.M.



RIGHT OF WAY PLANS	
ROUTE:	F.A.I. 80 (INTERSTATE ROUTE 80)
SECTION:	(32,47-4)K
PROJECT:	
COUNTY:	GRUNDY & KENDALL
JOB NO.:	R-93-021-01
STA. 1882+73.16	TO STA. 1709+20.16
SCALE:	1" = 100'
SHEET 2 OF 5	

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY

KENDALL COUNTY
S.W. 1/4, SEC. 36, T. 35 N., R. 8 E., 3RD P.M.

GRUNDY COUNTY
N.W. 1/4, SEC. 1, T. 34 N., R. 8 E., 3RD P.M.

13-2003KL-1048.0
PARCEL 3RF0008
FIRST MIDWEST TRUST
COMPANY TRUST #77
TOTAL HOLDING = 23.380 ACRES +/-
TOTAL R.O.W. REQUIRED = 2.091 ACRES +/-
REMAINDER = 21.289 ACRES +/-
TEMPORARY EASEMENT = 0.091 ACRE +/- (3,973 sq. ft.)
PURPOSE: DRIVEWAY ADJUSTMENT AND GRADING
TEMPORARY EASEMENT INFO. IS SHOWN ON SHEET 5

NOT ACQUIRED
13-2003GR-658.0
PARCEL 3RF0012
GEORGE COMERFORD ET UX.
TOTAL HOLDING = 45.800 ACRES +/-
TOTAL R.O.W. REQUIRED = 0.208 ACRE +/-
REMAINDER = 45.592 ACRES +/-

NOT ACQUIRED
13-2003GR-658.0
PARCEL 3RF0009
E.J. & E. RAILROAD
PERMANENT EASEMENT = 0.019 ACRE +/- (817 sq. ft.)
TEMPORARY EASEMENT TRACT NO. 1 = 5.137 ACRES +/-
TEMPORARY EASEMENT TRACT NO. 2 = 3.926 ACRES +/-
PURPOSE: PROPOSED DITCH

NOTE:
PARCELS 3RF0009, 11 PE & 12
NOT ACQUIRED.
PARCEL 3RF0011 TE IS ACQUIRED

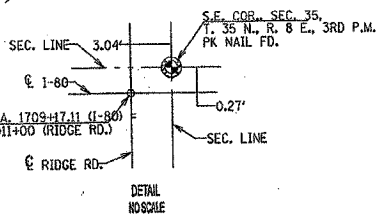
13-2003KL-1048.0
PARCEL 3RF0008 TE
SEE SHEET 5

P.O.C. - PARCELS 3RF0009 PE, 3RF0009 ITE, 3RF0010 TRACT 1, 3RF0011 & 3RF0012, 3RF0009 & 3RF0009 TRACT 2ITE, PK NAIL FOUND AT THE S.W. COR. SEC. 36, T. 35 N., R. 8 E., 3RD P.M. 1709+20.16; 0.27' LT. MON. REC. DOC. NO. 2001-1253

13-2003GR-658.0
PARCEL 3RF0010 - DED
LAWRENCE S. SIMOTES
TOTAL HOLDING = 2.730 ACRES +/-
R.O.W. REQUIRED TRACT 1 = 0.090 ACRE +/- (DEDICATION)
R.O.W. REQUIRED TRACT 2 = 0.117 ACRE +/- (DEDICATION)
TEMPORARY EASEMENT = 0.109 ACRE +/-
PURPOSE: DRIVEWAY ADJUSTMENT AND GRADING
PARCEL 3RF0010 TRACT 2 & TEMPORARY EASEMENT INFO. IS SHOWN ON SHEET 4

PARCEL 3RF0010 TRACT 2
SEE SHEET 4

BRASS MONUMENT FOUND AT THE S.W. COR., N.W. 1/4, SEC. 1, T. 34 N., R. 8 E., 3RD P.M. MON. REC. DOC. NO. BOOK 1, PAGE 131



1/2" IRON PIN WITH CAP 3337 FOUND AT THE N.E. COR., N.W. 1/4, SEC. 36, T. 35 N., R. 8 E., 3RD P.M. MON. REC. DOC. NO. 79-1152

TEMPORARY EASEMENT LINE

TEMPORARY EASEMENT TRACT NO. 2

TEMPORARY EASEMENT TRACT NO. 1

TEMPORARY EASEMENT TRACT NO. 1

TEMPORARY EASEMENT TRACT NO. 2

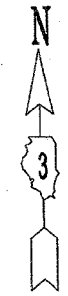


ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2917

"THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY"

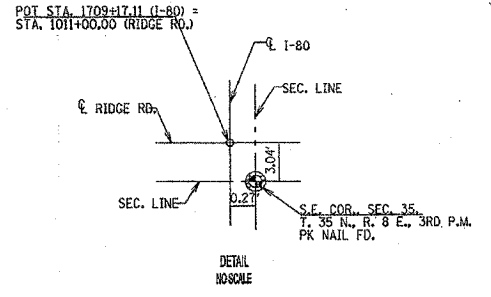
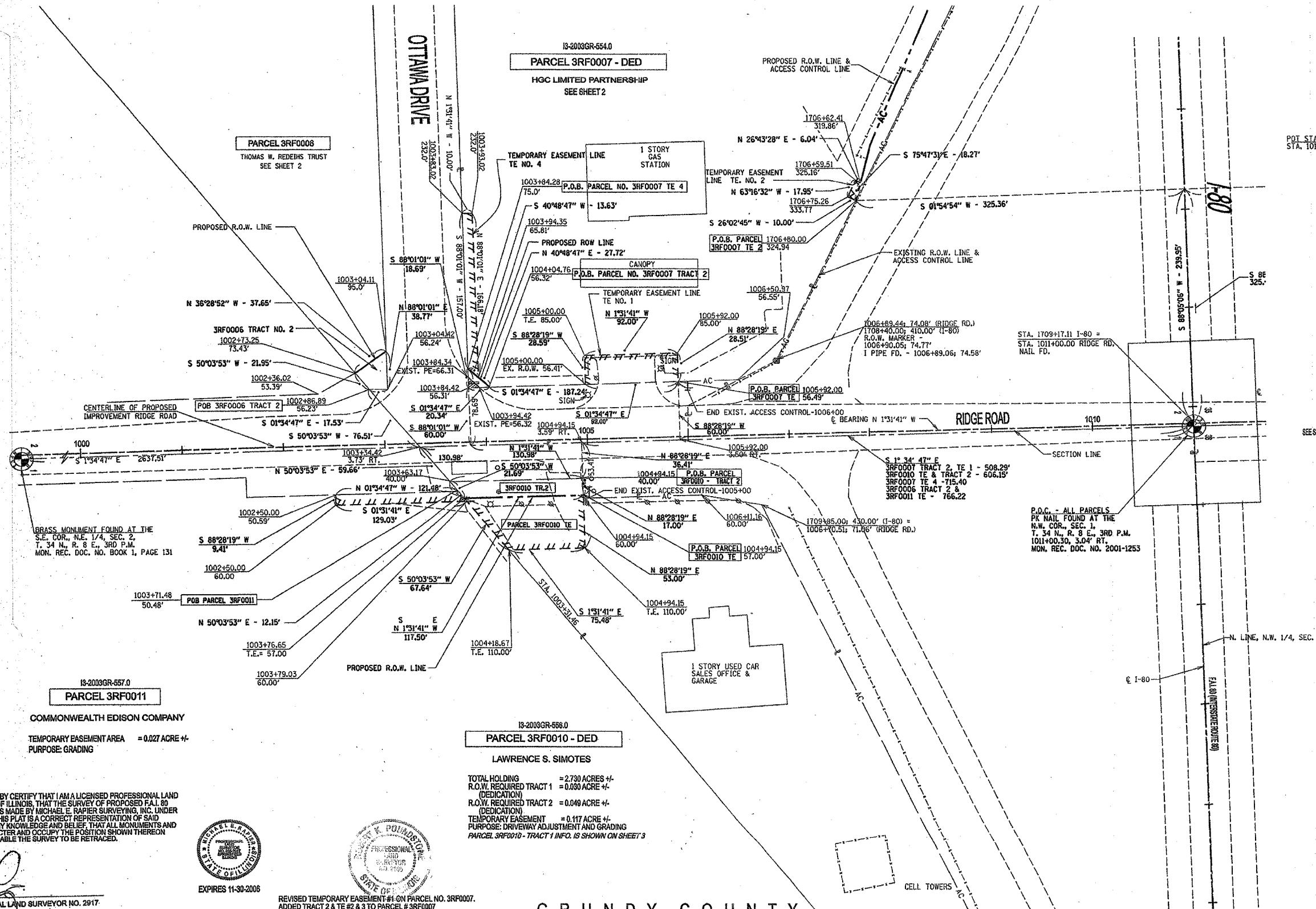
RIGHT OF WAY PLANS
ROUTE: F.A.I. 80 (INTERSTATE ROUTE 80)
SECTION: (32,47-4)K
PROJECT:
COUNTY: GRUNDY & KENDALL
JOB NO.: R-83-021-01
STA. 1709+20.16 TO STA. 1735+75.15
SCALE: 1" = 100'
SHEET 3 OF 5

BEARINGS ARE BASED ON ILLINOIS STATE PLANE COORDINATES, EAST ZONE, NAD 83



N.E. 1/4, SEC. 2, T. 34 N., R. 8 E., 3RD P.M.

SEE SHEET 2



PARCEL 3RF0008
 THOMAS W. REDEHNS TRUST
 SEE SHEET 2

13-2003GR-554.0
PARCEL 3RF0007 - DED
 HGC LIMITED PARTNERSHIP
 SEE SHEET 2

13-2003GR-557.0
PARCEL 3RF0011
 COMMONWEALTH EDISON COMPANY
 TEMPORARY EASEMENT AREA = 0.027 ACRE +/-
 PURPOSE: GRADING

13-2003GR-556.0
PARCEL 3RF0010 - DED
 LAWRENCE S. SIMOTES

TOTAL HOLDING = 2.730 ACRES +/-
 R.O.W. REQUIRED TRACT 1 = 0.030 ACRE +/-
 (DEDICATION)
 R.O.W. REQUIRED TRACT 2 = 0.049 ACRE +/-
 (DEDICATION)
 TEMPORARY EASEMENT = 0.117 ACRE +/-
 PURPOSE: DRIVEWAY ADJUSTMENT AND GRADING
 PARCEL 3RF0010 - TRACT 1 INFO. IS SHOWN ON SHEET 3

I, MICHAEL E. RAPIER, HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF PROPOSED F.A.I. 80 (INTERSTATE ROUTE 80) WAS MADE BY MICHAEL E. RAPIER SURVEYING, INC. UNDER MY DIRECTION, AND THAT THIS PLAT IS A CORRECT REPRESENTATION OF SAID SURVEY TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.

Michael E. Rapier
 ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2917



REVISED TEMPORARY EASEMENT #1 ON PARCEL NO. 3RF0007.
 ADDED TRACT 2 & TE #2 & 3 TO PARCEL # 3RF0007
 ADDED TRACT 2 TO PARCEL 3RF0008. ADDED T.E. TO
 PARCEL 3RF0011.

DATED 9-02-05
Robert Kris Poundstone
 ROBERT KRIS POUNDSTONE
 ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2105

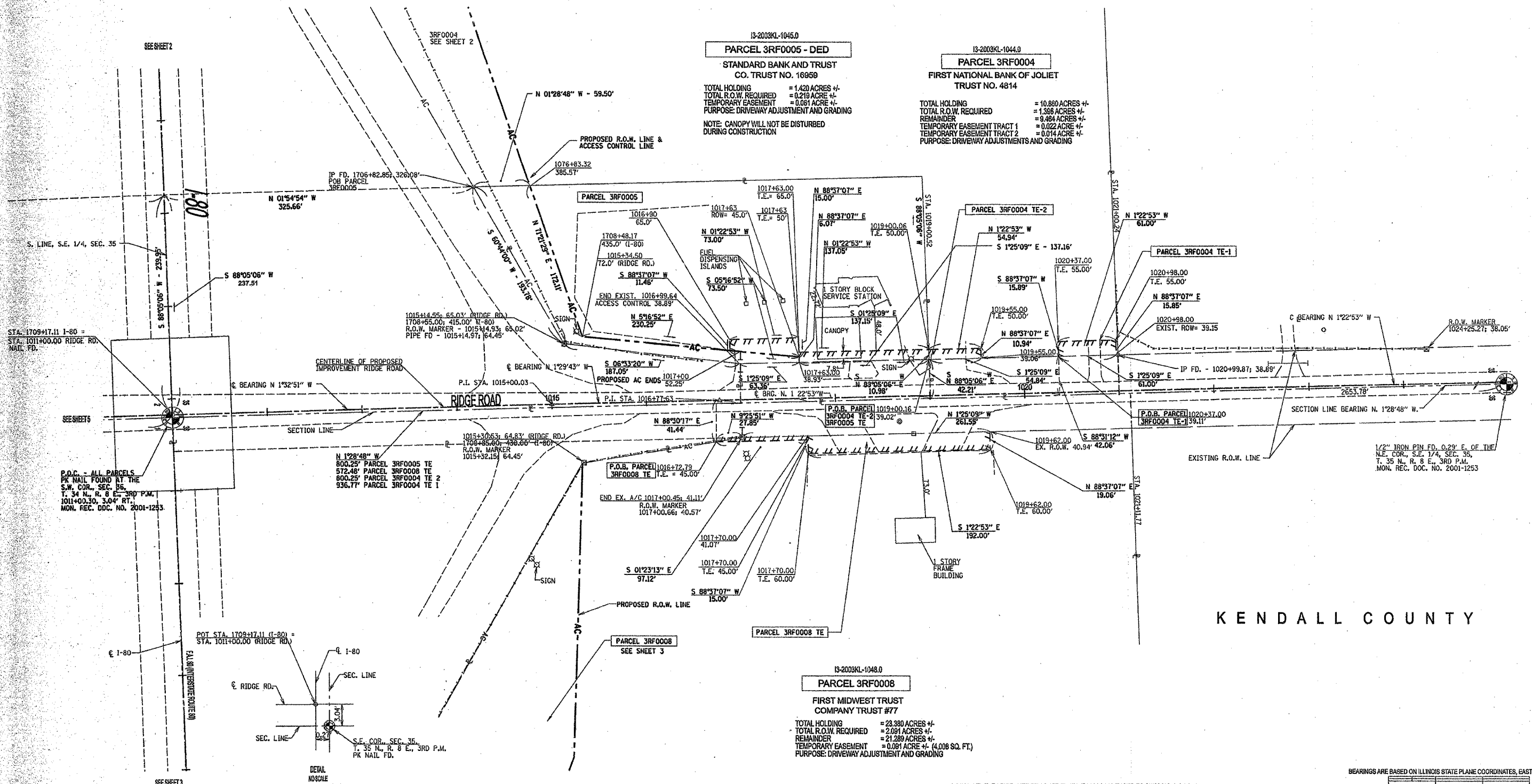
GRUNDY COUNTY
 N.W. 1/4, SEC. 1, T. 34 N., R. 8 E., 3RD P.M.

BEARINGS ARE BASED ON ILLINOIS STATE PLANE COORDINATES, EAST ZONE, NAD 83

RIGHT OF WAY PLANS
 ROUTE: F.A.I. 80 (INTERSTATE ROUTE 80)
 SECTION: (32,47-4)K
 PROJECT:
 COUNTY: GRUNDY & KENDALL
 JOB NO.: R-93-021-01
 RIDGE RD. STA. 1000+00.00 TO STA. 1011+00.00
 SCALE: 1" = 50'
 SHEET 4 OF 5

*THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY

S.E. 1/4, SEC. 35, T. 35 N., R. 8 E., 3RD P.M.



KENDALL COUNTY

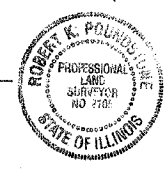
BEARINGS ARE BASED ON ILLINOIS STATE PLANE COORDINATES, EAST ZONE, NAD 83

RIGHT OF WAY PLANS

ROUTE: F.A.I. 80 (INTERSTATE ROUTE 80)
 SECTION: (32,47-4)K
 PROJECT:
 COUNTY: GRUNDY & KENDALL
 JOB NO.: R-93-021-01
 RIDGE RD. STA. 1011+00.00 TO STA. 1023+00.00
 SCALE: 1" = 50'
 SHEET 5 OF 5

REVISED RIGHT OF WAY LIMITS & TEMPORARY EASEMENT LIMITS ON PARCELS 4 AND 5 ADDED ADDITIONAL TEMPORARY EASEMENT TO PARCEL 3RF0008
 DATED: 9-02-05
 Robert Kris Poundstone
 PROFESSIONAL LAND SURVEYOR
 ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2105

S.W. 1/4, SEC. 36, T. 35 N., R. 8 E., 3RD P.M.

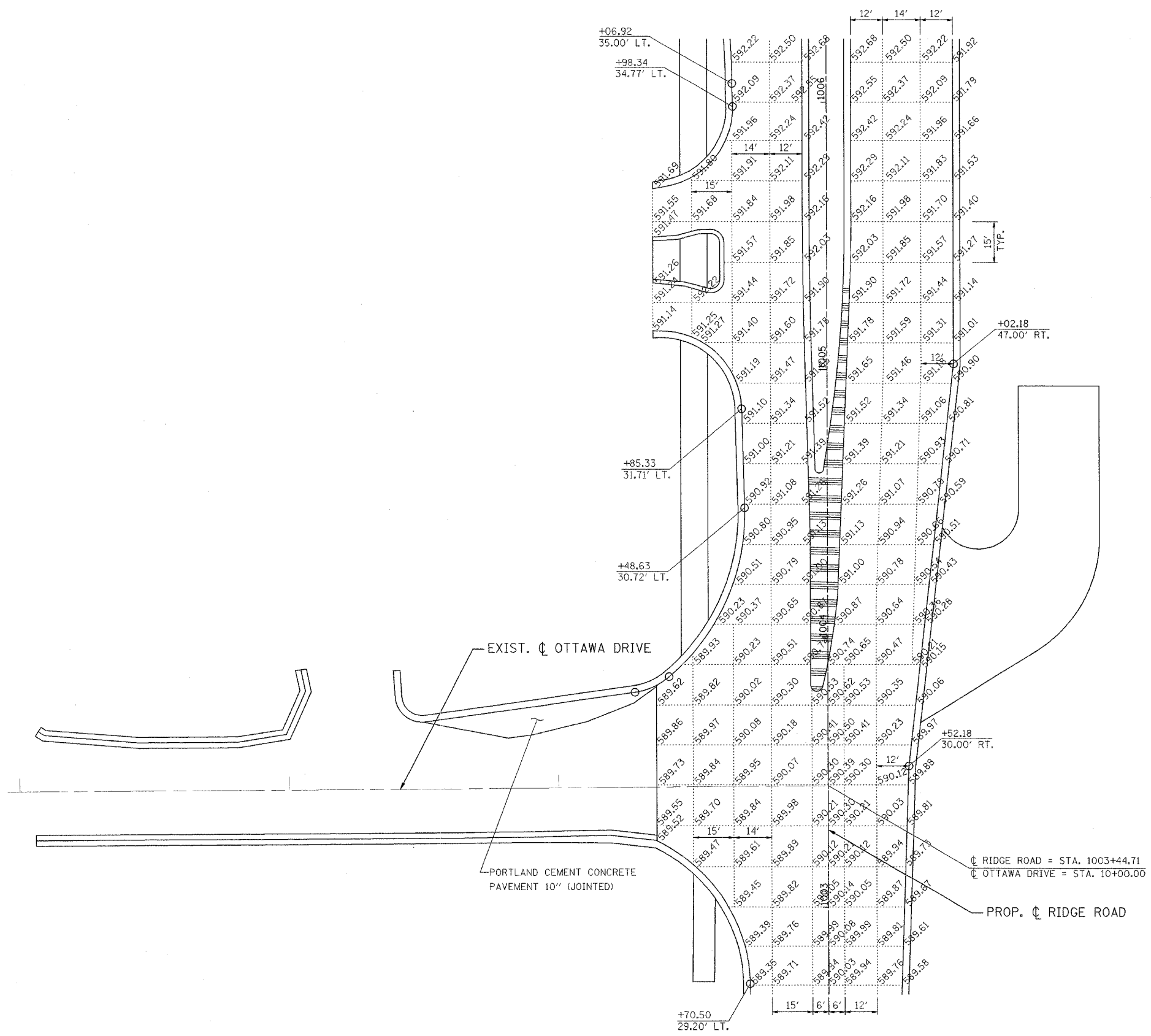


Michael E. Rapier
 PROFESSIONAL LAND SURVEYOR NO. 2917
 EXPIRES 11-30-2006



THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	106
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



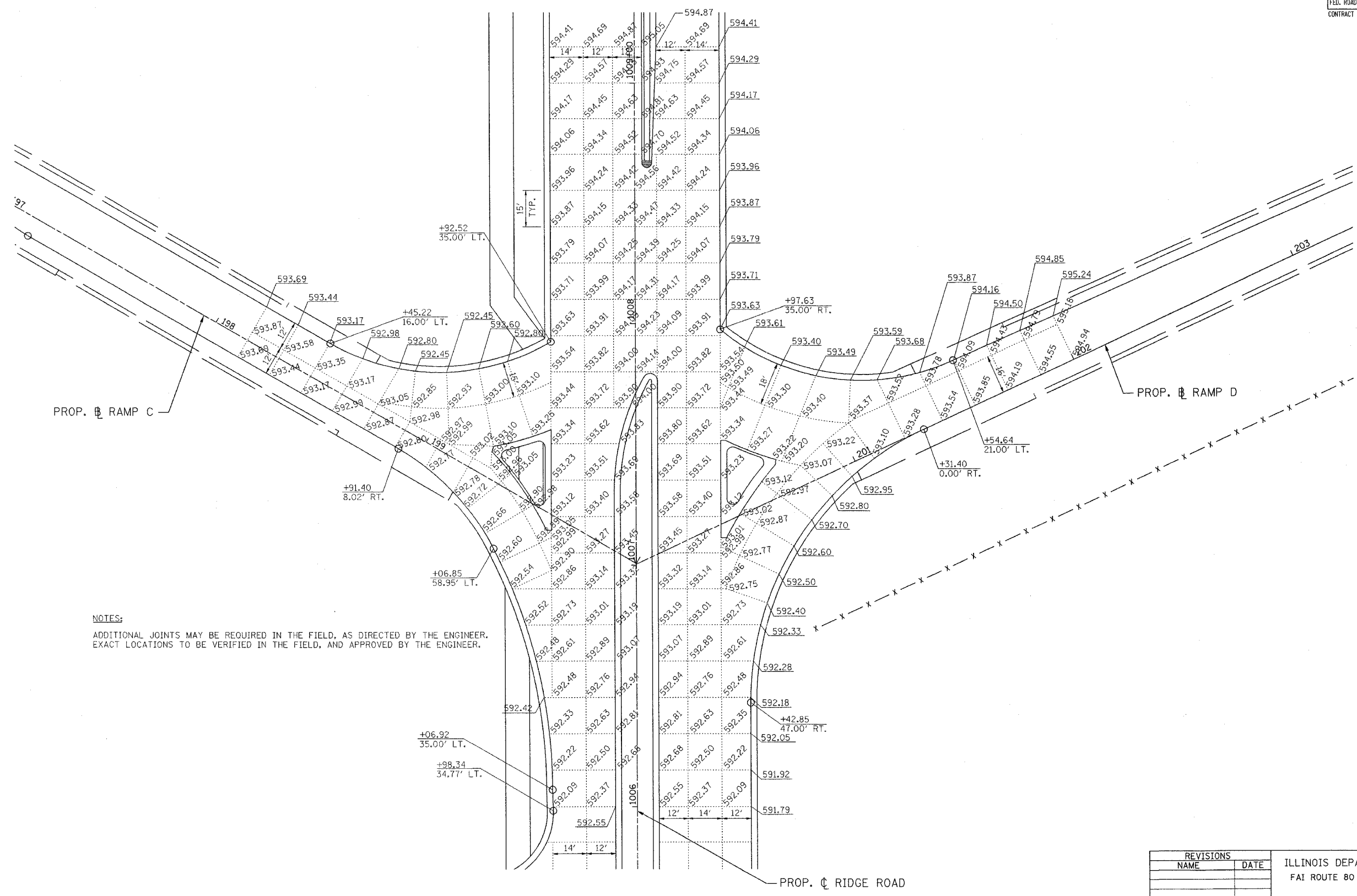
NOTES:
 ADDITIONAL JOINTS MAY BE REQUIRED IN THE FIELD, AS DIRECTED BY THE ENGINEER.
 EXACT LOCATIONS TO BE VERIFIED IN THE FIELD, AND APPROVED BY THE ENGINEER.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE) PAVEMENT JOINT & ELEVATION PLAN
NAME	DATE	

SCALE: 1:20
 DATE: 2/10/06
 DRAWN BY: TCK
 CHECKED BY: JJC

PATRICK
 ENGINEERING INC.
 LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	RENDALL/GRUNDY	243	107
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



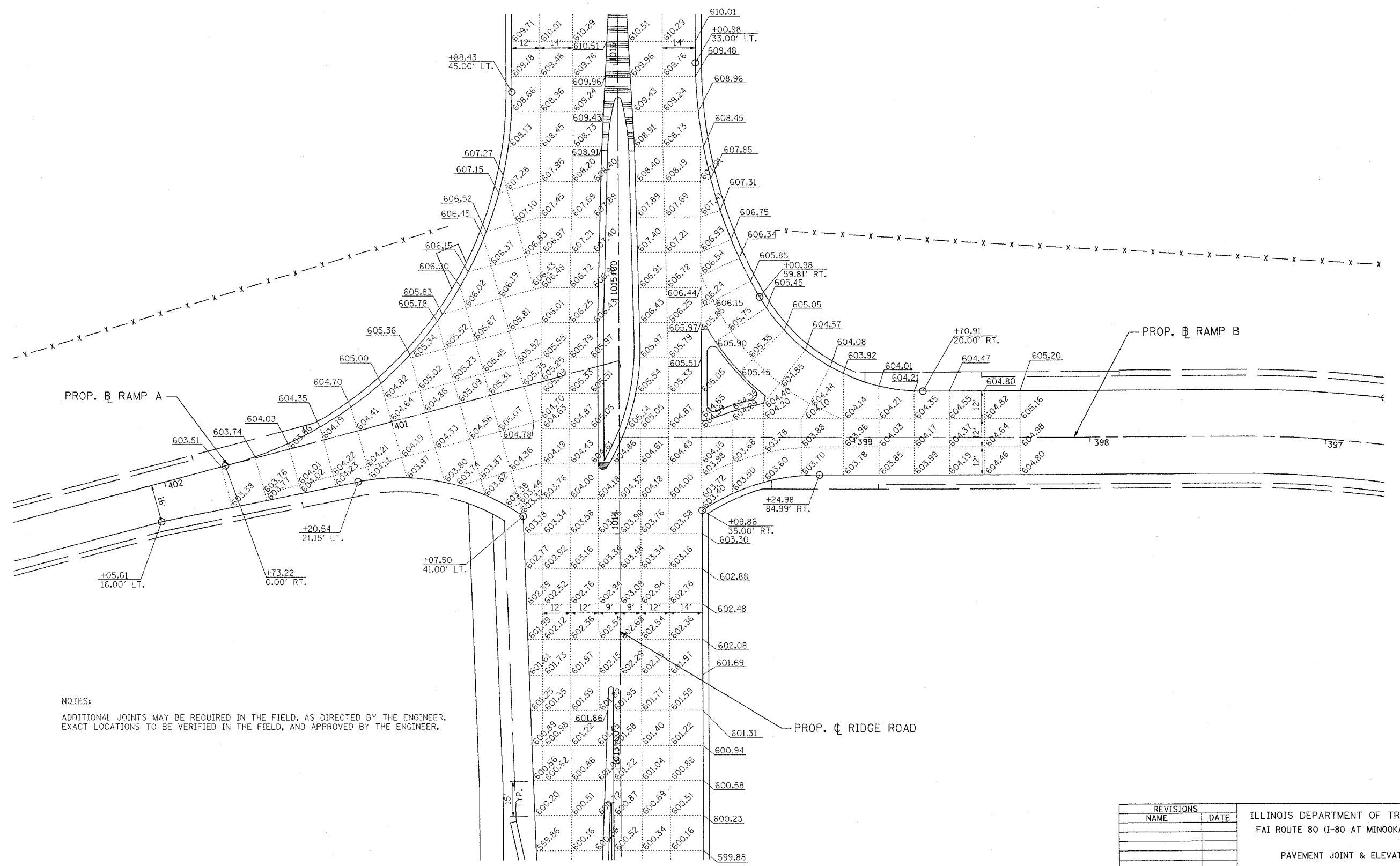
NOTES:
 ADDITIONAL JOINTS MAY BE REQUIRED IN THE FIELD, AS DIRECTED BY THE ENGINEER.
 EXACT LOCATIONS TO BE VERIFIED IN THE FIELD, AND APPROVED BY THE ENGINEER.

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
 PAVEMENT JOINT & ELEVATION PLAN
 SCALE: 1:20
 DATE: 2/10/06
 DRAWN BY: TCK
 CHECKED BY: JJC



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	108
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



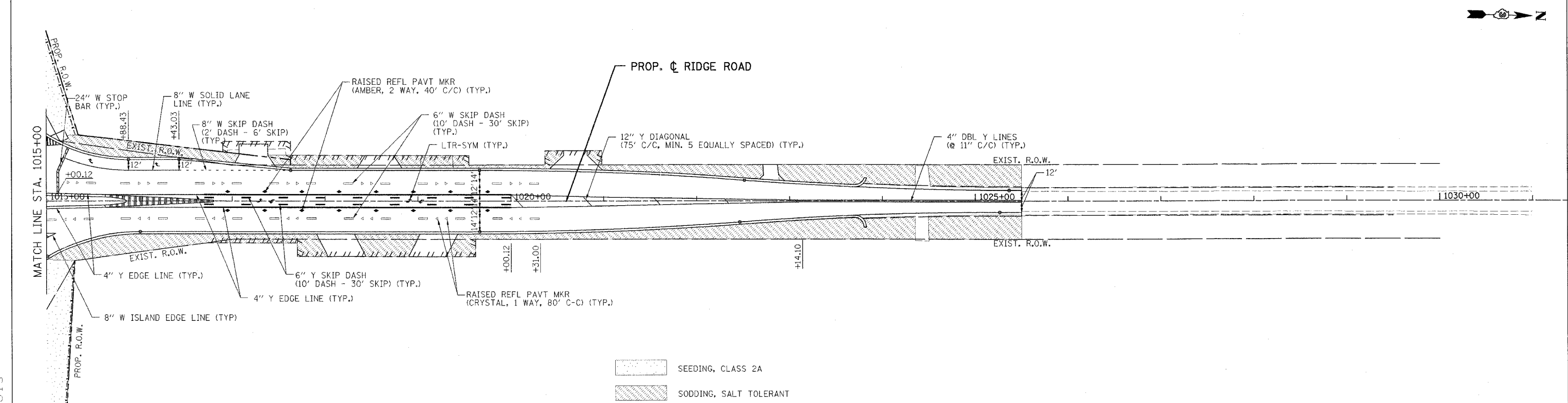
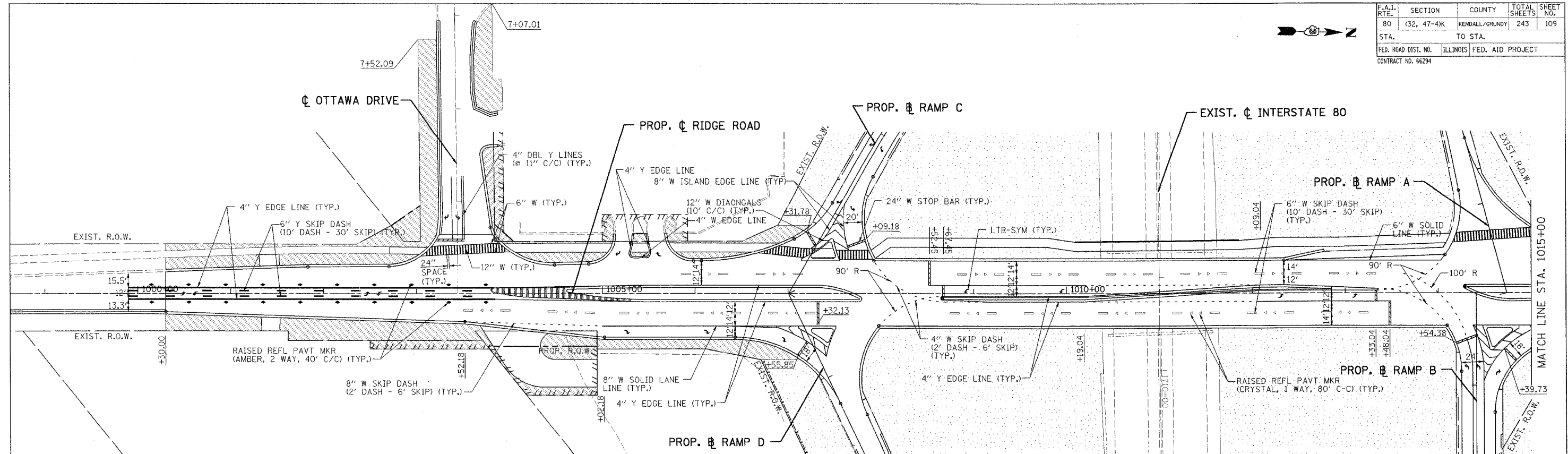
NOTES:
 ADDITIONAL JOINTS MAY BE REQUIRED IN THE FIELD, AS DIRECTED BY THE ENGINEER.
 EXACT LOCATIONS TO BE VERIFIED IN THE FIELD, AND APPROVED BY THE ENGINEER.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE) PAVEMENT JOINT & ELEVATION PLAN
NAME	DATE	

SCALE: 1:20
 DATE: 2/10/06
 DRAWN BY: TCK
 CHECKED BY: JJC



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GROUNDY	243	109
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				



- SEEDING, CLASS 2A
- SODDING, SALT TOLERANT

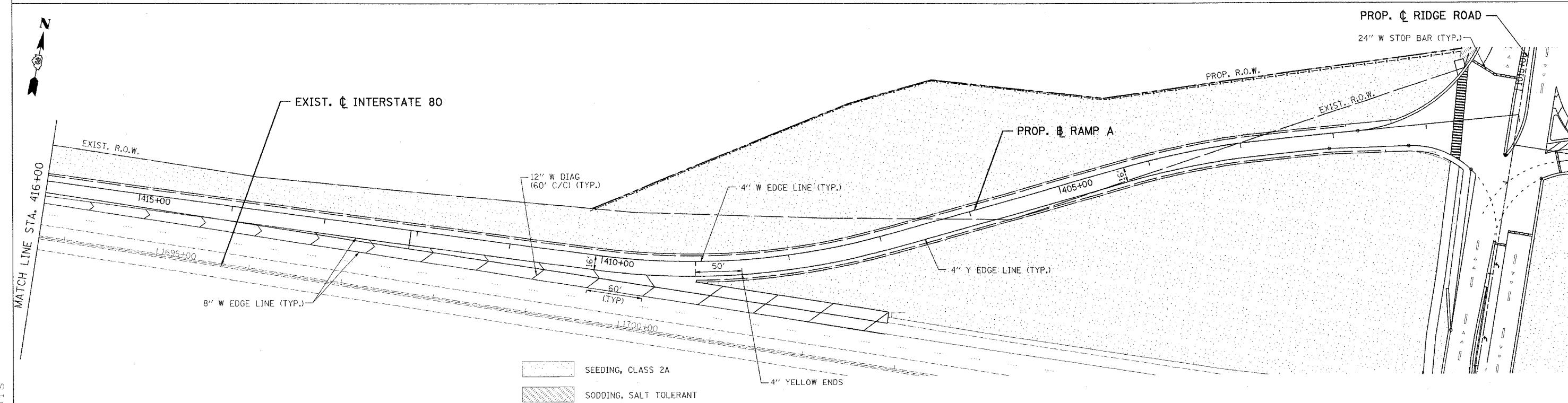
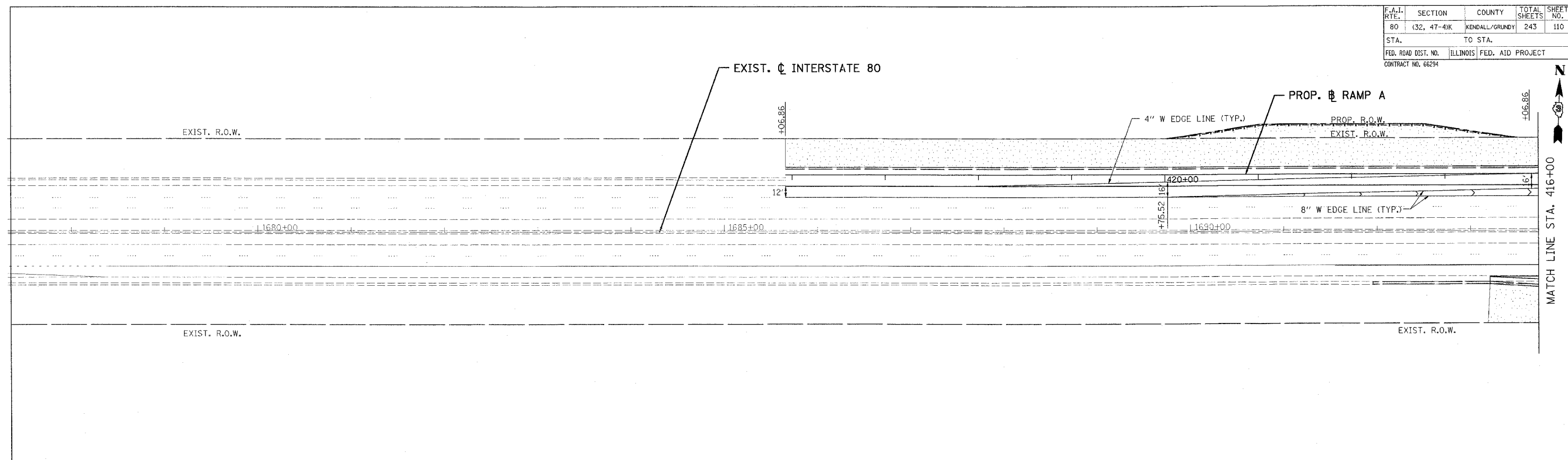
- NOTES:
- ALL PAVEMENT SHALL BE PROVIDED WITH POLYUREA PAVEMENT MARKINGS.
 - A 3 FOOT STRIP OF EROSION CONTROL BLANKET WILL BE APPLIED NEXT TO CURB & GUTTER AND NEXT TO ANY OUTSIDE SHOULDER IN AREAS THAT ARE SEEDED. IT WILL ALSO BE APPLIED TO AREAS WITH 3:1 OR STEEPER SIDE SLOPES.
 - ALL AREAS THAT ARE SEEDED AND DO NOT REQUIRE EROSION CONTROL BLANKET WILL USE MULCH, METHOD 2.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE) PAVEMENT MARKING & LANDSCAPING PLAN RIDGE ROAD STA. 1000+00 TO STA. 1030+00
NAME	DATE	

SCALE: 1:50
DATE: 2/10/06
DRAWN BY: TCK
CHECKED BY: JJC

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-41K)	KENDALL/GRUNDY	243	110
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



- SEEDING, CLASS 2A
- SODDING, SALT TOLERANT

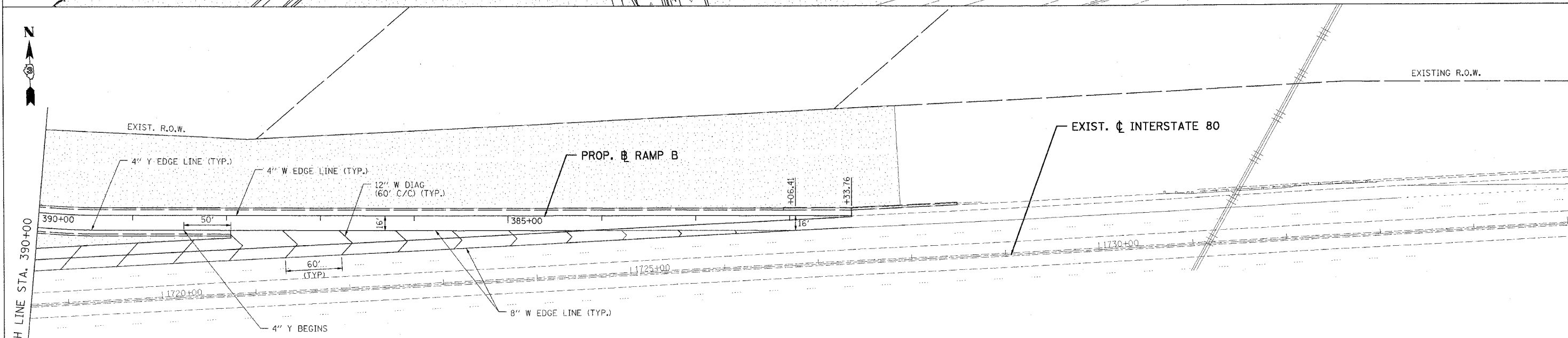
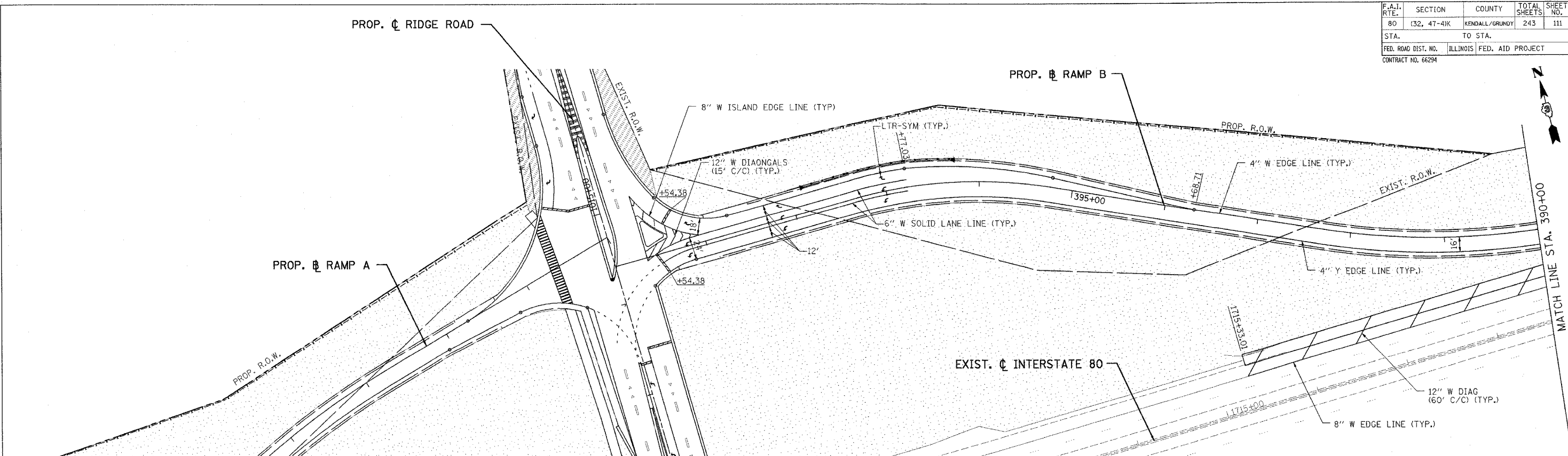
- NOTES:
1. ALL PAVEMENT SHALL BE PROVIDED WITH POLYUREA PAVEMENT MARKINGS.
 2. A 3 FOOT STRIP OF EROSION CONTROL BLANKET WILL BE APPLIED NEXT TO CURB & GUTTER AND NEXT TO ANY OUTSIDE SHOULDER IN AREAS THAT ARE SEED. IT WILL ALSO BE APPLIED TO AREAS WITH 3:1 OR STEEPER SIDE SLOPES.
 3. ALL AREAS THAT ARE SEEDD AND DO NOT REQUIRE EROSION CONTROL BLANKET WILL USE MULCH, METHOD 2.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE) PAVEMENT MARKING & LANDSCAPING PLAN RAMP A STA. 400+00 TO STA. 424+07
NAME	DATE	

SCALE: 1:50
DATE: 2/10/06
DRAWN BY: TCK
CHECKED BY: JJC

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	111
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



- SEEDING, CLASS 2A
- SODDING, SALT TOLERANT

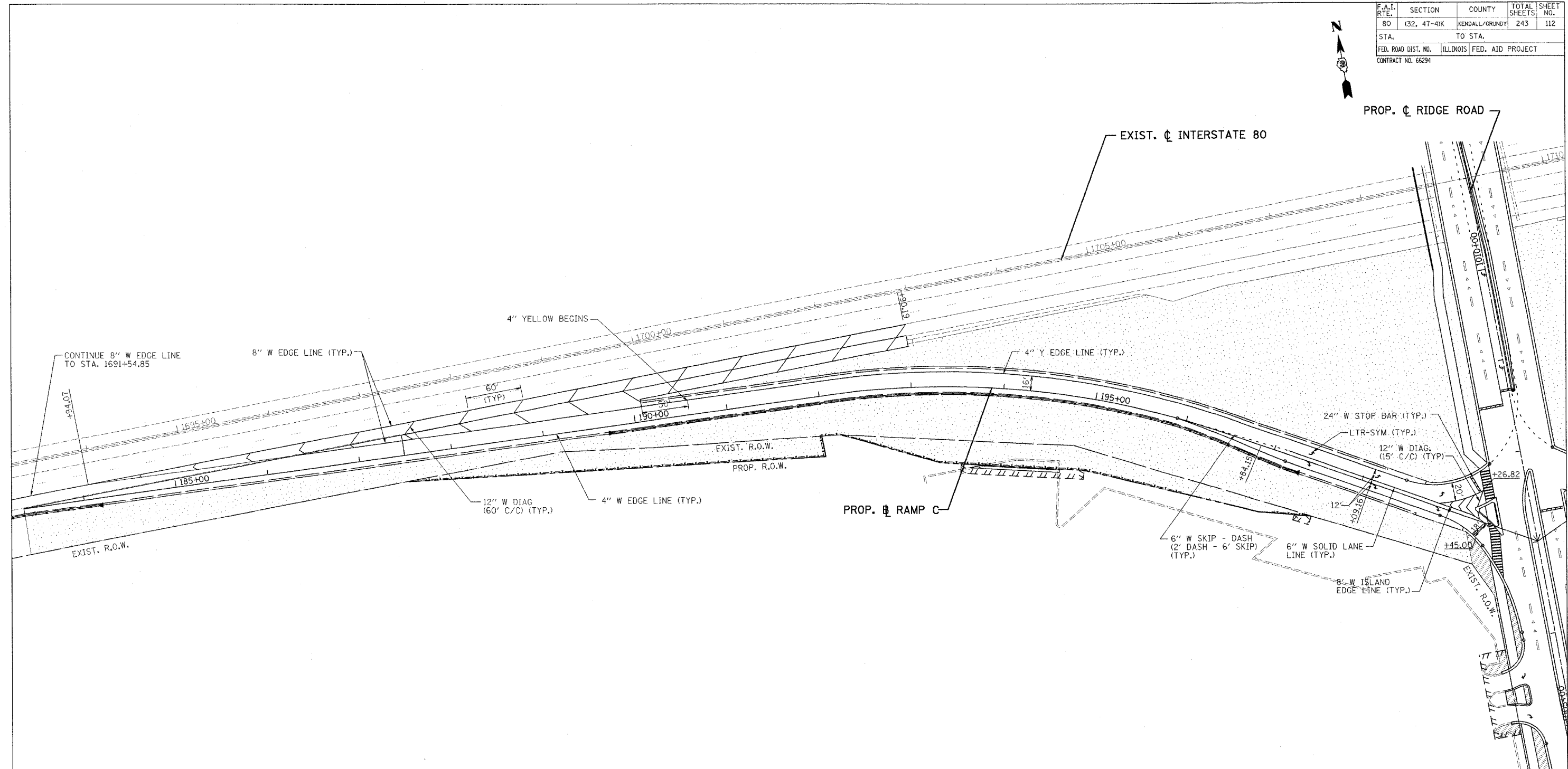
- NOTES:
- ALL PAVEMENT SHALL BE PROVIDED WITH POLYUREA PAVEMENT MARKINGS.
 - A 3 FOOT STRIP OF EROSION CONTROL BLANKET WILL BE APPLIED NEXT TO CURB & GUTTER AND NEXT TO ANY OUTSIDE SHOULDER IN AREAS THAT ARE SEEDDED. IT WILL ALSO BE APPLIED TO AREAS WITH 3:1 OR STEEPER SIDE SLOPES.
 - ALL AREAS THAT ARE SEEDDED AND DO NOT REQUIRE EROSION CONTROL BLANKET WILL USE MULCH, METHOD 2.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
 PAVEMENT MARKING & LANDSCAPING PLAN
 RAMP B STA. 400+00 TO STA. 381+00
 SCALE: 1:50
 DATE: 2/10/06
 DRAWN BY: TCK
 CHECKED BY: JJC

PATRICK
 ENGINEERING INC.
 LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	112
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				



- SEEDING, CLASS 2A
- SODDING, SALT TOLERANT

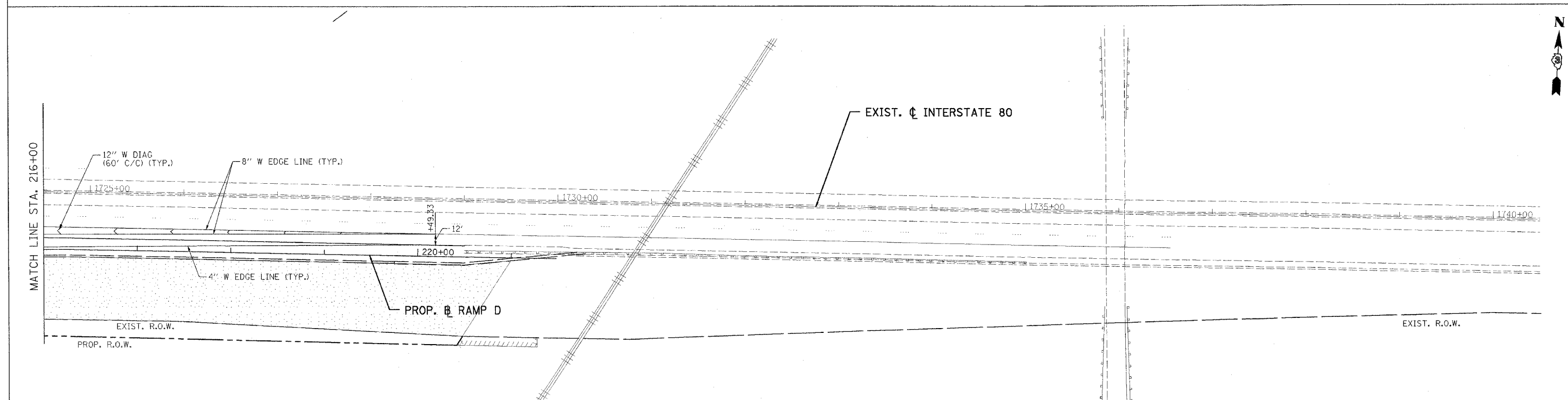
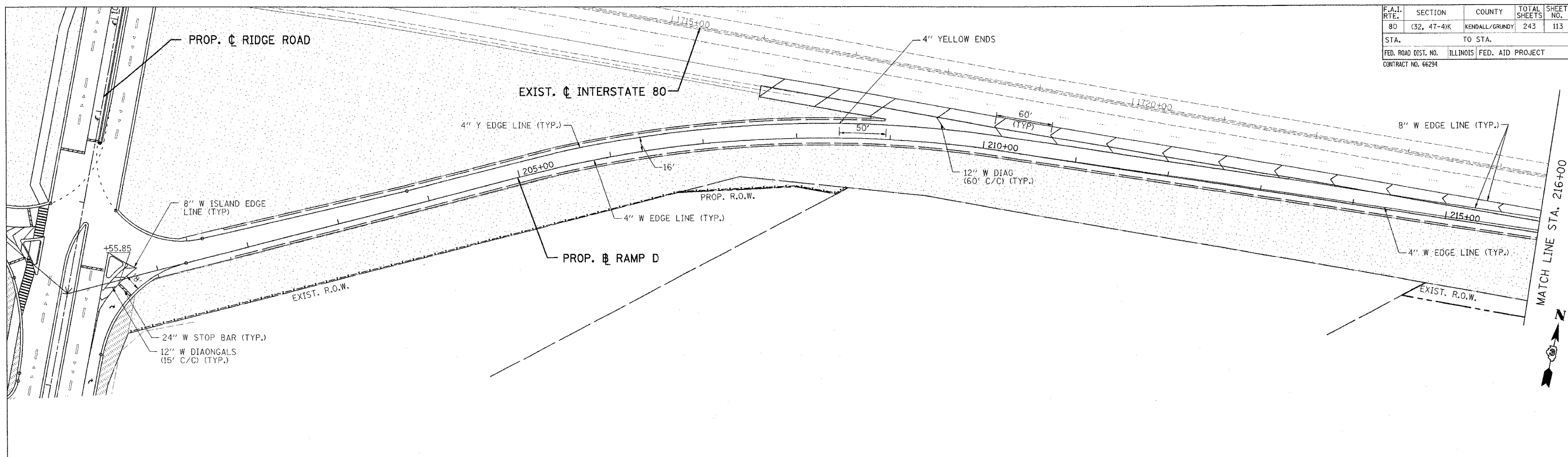
- NOTES:
1. ALL PAVEMENT SHALL BE PROVIDED WITH POLYUREA PAVEMENT MARKINGS.
 2. A 3 FOOT STRIP OF EROSION CONTROL BLANKET WILL BE APPLIED NEXT TO CURB & GUTTER AND NEXT TO ANY OUTSIDE SHOULDER IN AREAS THAT ARE SEEDED. IT WILL ALSO BE APPLIED TO AREAS WITH 3:1 OR STEEPER SIDE SLOPES.
 3. ALL AREAS THAT ARE SEEDED AND DO NOT REQUIRE EROSION CONTROL BLANKET WILL USE MULCH, METHOD 2.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
 PAVEMENT MARKING & LANDSCAPING PLAN
 RAMP C STA. 184+00 TO STA. 200+00
 SCALE: 1:50
 DATE: 2/10/06
 DRAWN BY: TCK
 CHECKED BY: JJC

PATRICK
 ENGINEERING INC.
 LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	113
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				



- NOTES:
- ALL PAVEMENT SHALL BE PROVIDED WITH POLYUREA PAVEMENT MARKINGS.
 - A 3 FOOT STRIP OF EROSION CONTROL BLANKET WILL BE APPLIED NEXT TO CURB & GUTTER AND NEXT TO ANY OUTSIDE SHOULDER IN AREAS THAT ARE SEEDDED. IT WILL ALSO BE APPLIED TO AREAS WITH 3:1 OR STEEPER SIDE SLOPES.
 - ALL AREAS THAT ARE SEEDDED AND DO NOT REQUIRE EROSION CONTROL BLANKET WILL USE MULCH, METHOD 2.

- SEEDING, CLASS 2A
- SODDING, SALT TOLERANT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
 PAVEMENT MARKING & LANDSCAPING PLAN
 RAMP D STA. 200+00 TO STA. 220+50
 SCALE: 1:50
 DATE: 2/10/06
 DRAWN BY: TCK
 CHECKED BY: JJC



SUMMARY OF QUANTITIES

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	132, 47-41K	KENDALL/GRUNDY	243	114
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 66294				

CODE NO.	ITEM	UNIT	TOTAL	GRUNDY COUNTY			KENDALL COUNTY	
				RIDGE ROAD @ OTTAWA DRIVE	RIDGE ROAD @ RAMPS "C" & "D"	INTERCONNECT	RIDGE ROAD @ RAMPS "A" & "B"	INTERCONNECT
72000100	SIGN PANEL - TYPE 1	SQ FT	23	-	14	-	9	-
81012400	CONDUIT IN TRENCH, 1 1/4" DIA., PVC	FOOT	293	-	145	-	148	-
81012600	CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	1777	-	915	-	862	-
81012700	CONDUIT IN TRENCH, 2 1/2" DIA., PVC	FOOT	315	-	196	-	119	-
-	CONDUIT IN TRENCH, 2 1/2" DIA., PVC, SCHEDULE 80	FOOT	558	-	73	-	485	-
-	CONDUIT IN TRENCH, 3" DIA., PVC, SCHEDULE 80	FOOT	56	-	-	-	56	-
-	CONDUIT IN TRENCH, 4" DIA., PVC, SCHEDULE 80	FOOT	20	-	10	-	10	-
-	CONDUIT PUSHED, 3" DIA., PVC, SCHEDULE 80	FOOT	352	-	88	-	264	-
-	CONDUIT PUSHED, 4" DIA., PVC, SCHEDULE 80	FOOT	408	-	231	-	177	-
81400400	CONCRETE HANDHOLE	EACH	20	-	11	-	9	-
81400500	CONCRETE HEAVY-DUTY HANDHOLE	EACH	1	-	-	-	1	-
81400600	CONCRETE DOUBLE HANDHOLE	EACH	2	-	1	-	1	-
81500200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	2775	-	1255	-	1520	-
85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	2	-	1	-	1	-
86000100	MASTER CONTROLLER	EACH	1	-	-	0.5	-	0.5
86400100	TRANSCEIVER-FIBER OPTIC	EACH	2	-	1	-	1	-
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	891	-	397	-	494	-
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1510	-	772	-	738	-
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	3745	-	2016	-	1729	-
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1520	-	543	-	977	-
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	5591	-	3088	-	2503	-
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	76	-	37	-	39	-
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	1	-	1	-	0	-
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	11	-	5	-	6	-
87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	2	-	1	-	1	-
87702980	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 50 FT.	EACH	1	-	-	-	1	-
87703000	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 55 FT.	EACH	1	-	1	-	-	-
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	56	-	28	-	28	-
87800200	CONCRETE FOUNDATION, TYPE D	FOOT	8	-	4	-	4	-
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	28	-	15	-	13	-
88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	28	-	14	-	14	-
88500100	INDUCTIVE LOOP DETECTOR	EACH	20	-	10	-	10	-
88600100	DETECTOR LOOP, TYPE 1	FOOT	2778	-	1370	-	1408	-
* 88700200	LIGHT DETECTOR	EACH	4	-	2	-	2	-
* 88700300	LIGHT DETECTOR AMPLIFIER	EACH	2	-	1	-	1	-
88800100	PEDESTRIAN PUSH-BUTTON	EACH	4	-	2	-	2	-
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	3	1	1	-	1	-
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	-	-	-	1	-
89502380	REMOVE EXISTING HANDHOLE	EACH	2	-	-	-	2	-
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	1	-	-	-	1	-
X0300739	UNINTERRUPTABLE POWER SUPPLY	EACH	2	-	1	-	1	-
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C	FOOT	1958	-	-	979	-	979
X0325096	OPTIMIZE TRAFFIC SIGNAL SYSTEM	L SUM	1	-	-	1	-	-
X8050015	SERVICE INSTALLATION, POLE MOUNT	EACH	2	-	1	-	1	-
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	1982	-	-	991	-	991
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	1353	-	672	-	681	-
* X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	585	-	359	-	226	-
X8801300	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	15	-	8	-	7	-
X8801310	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4	-	2	-	2	-
X8801345	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	1	-	-	-	1	-
X8801395	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	7	-	3	-	4	-
X8801400	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	1	-	1	-	-	-
X8810610	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED	EACH	4	-	2	-	2	-

* 100% COST TO VILLAGE OF MINOOKA


REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

SUMMARY OF QUANTITIES
RIDGE ROAD
RAMPS "A" & "B" TO OTTAWA DRIVE

SCALE: NONE
DATE: 2/10/06

DRAWN BY: SA/KGP
CHECKED BY: PKG

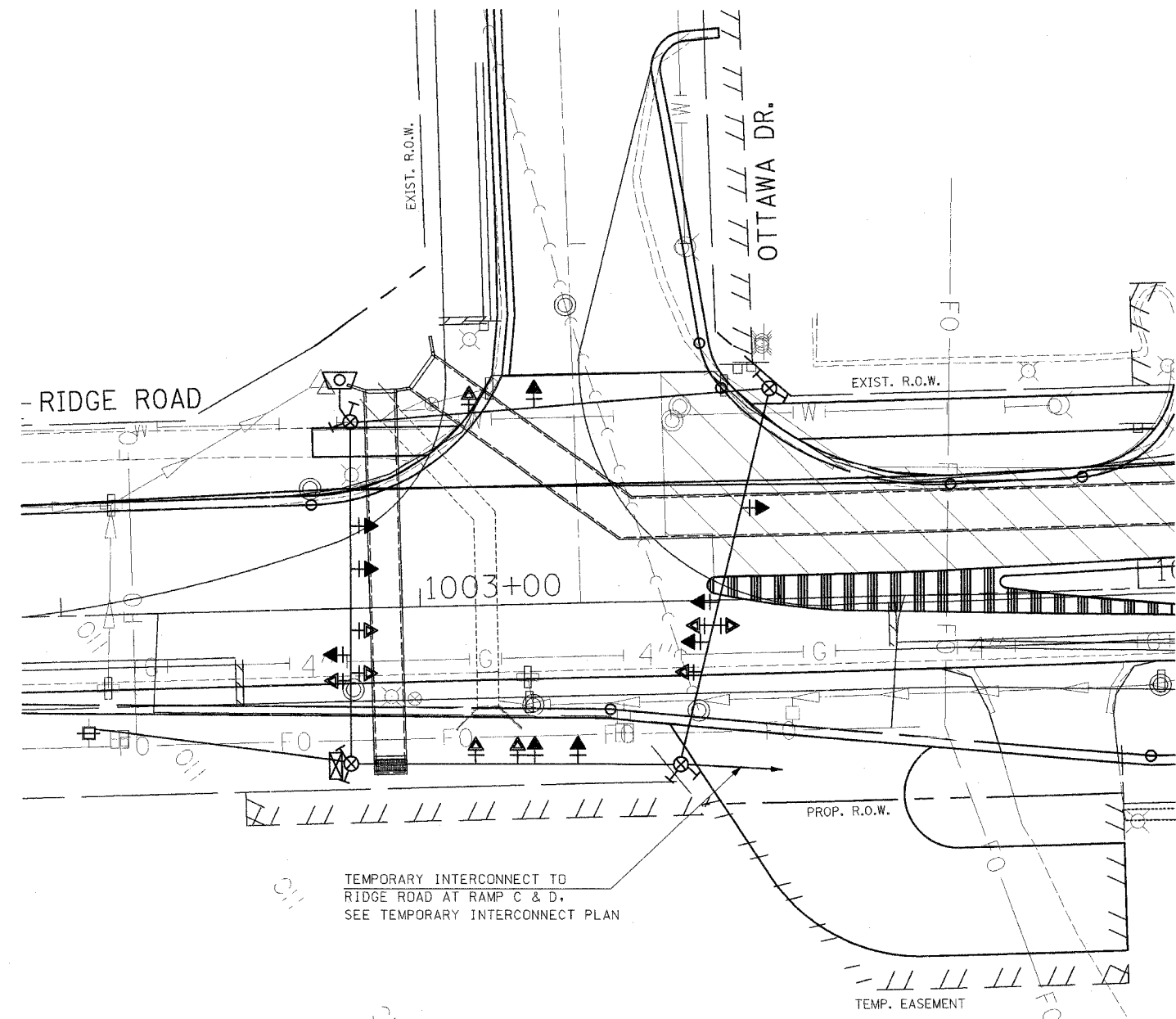


GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5990

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	132, 47-4JK	KENDALL/GRUNDY	243	115
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION. CALL J.U.L.I.E. AT 800-892-0123. THE CONTRACTOR SHALL ALSO VERIFY THAT NO CONFLICTS WITH PROPOSED STORM SEWER, CONDUITS, ETC. AND THE TEMPORARY WOOD POLES WILL EXIST.
2. THE TRAFFIC SIGNAL SECTION AT THE ILLINOIS DEPARTMENT OF TRANSPORTATION SHALL BE NOTIFIED AT 815-434-8506 AT LEAST 72 HOURS PRIOR TO TURNING ON ANY FLASHER OR CONTROLLER UNITS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATIONS FOR THE DURATION OF THE SIGNAL WORK.
4. ALL TRAFFIC SIGNAL HEADS SHALL BE 12 INCHES.
5. TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PROPERLY COVERED PRIOR TO INTERSECTION TURN-ON AND AS DIRECTED BY THE ENGINEER DURING OPERATION OF THE TEMPORARY SIGNALS. THIS COST SHALL BE INCLUDED WITH THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.
6. THE CONTRACTOR SHALL ARRANGE FOR A FACTORY OR SUPPLIER REPRESENTATIVE TO BE PRESENT AT THE INTERSECTION WHEN THE TEMPORARY SIGNALS ARE TURNED ON. COST TO BE INCLUDED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.
7. THE ELECTRICAL CONDUCTORS FOR ALL TRAFFIC SIGNAL HEADS SHALL BE SOLID, SOFT COPPER.
8. THE CONTRACTOR IS RESPONSIBLE FOR UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THE COST OF THIS WORK IS TO BE INCLUDED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.
9. ALL TEMPORARY WOOD POLES SHALL BE LOCATED A MINIMUM OF 1.8M (6FT) FROM THE EDGE OF THE PAVEMENT UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
10. THE PROPOSED TEMPORARY TRAFFIC SIGNAL CONTROL CABINET SHALL BE FURNISHED WITH A MANUAL CONTROL SWITCH AND MANUAL CONTROL CORD WITHIN THE POLICE DOOR COMPARTMENT AS INCIDENTAL TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ELECTRICAL SERVICE FOR THE TEMPORARY TRAFFIC SIGNALS. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY PRIOR TO BEGINNING WORK TO OBTAIN THE UTILITY COMPANY REQUIREMENTS FOR THE SERVICE INSTALLATION.
12. ALL TEMPORARY WOOD SUPPORT POLES SHALL BE INSTALLED SO THAT A MINIMUM OF 9.1M (30 FT) OF POLE IS ABOVE THE EXISTING PAVEMENT ELEVATION ADJACENT TO THE POLE. A SUFFICIENT LENGTH OF POLE SHALL BE BURIED AND GUYED TO ALLOW THE INSTALLATION TO WITHSTAND 80 K.P.H. SUSTAINED WIND LOADING.
13. THE CABINET OF SUFFICIENT SIZE SHALL BE INSTALLED BY THE CONTRACTOR AT A LOCATION ACCEPTABLE TO THE ENGINEER. THE CABINET SHALL NOT BE LOCATED ON A SPAN WIRE POLE. IT SHALL BE EITHER GROUND MOUNTED ON A WOODEN FOUNDATION OR POST MOUNTED ON A SEPARATE POST. ALL CABLE WITHIN 3M (10 FT) OF THE GROUND SHALL BE IN CONDUIT. IT IS ACCEPTABLE FOR 4M (13.2 FT) OR LESS LENGTHS OF CONDUIT TO BE LAID ALONG THE GROUND IN AREAS ACCEPTABLE TO THE ENGINEER.
14. A MINIMUM OF 8M (26 FT) OF CABLE SLACK SHALL BE PROVIDED FOR EACH SIGNAL HEAD. NEED ENOUGH SLACK TO BE ABLE TO ADJUST RIDGE ROAD SIGNAL HEADS FROM PRE-STAGE TO STAGE III LOCATIONS.
15. REINSTALL EXISTING STREET NAME SIGNS TO TEMPORARY SPAN WIRE POLES AS DIRECTED BY THE ENGINEER.
16. REINSTALL THE EXISTING OR PROVIDE NEW R-10-12 (LEFT TURN YIELD ON GREEN). 600MM X 750MM SIGNS IMMEDIATELY RIGHT OF THE 5-SECTION SPAN-WIRE SIGNAL HEADS & BETWEEN THE 3-SECTION SPAN WIRE SIGNAL HEADS ON THE FAR SPAN WIRES AT RAMP WHERE PROTECTED/PERMITTED LEFT TURN MOVEMENT EXISTS.
17. INSTALL BRACKET MOUNTED SIGNALS WITH BOTTOM OF SIGNAL 4.5M (15 FT) ABOVE GROUND.
18. THE MICROWAVE DETECTORS SHALL BE MODEL TC 26B AND SHALL BE MOUNTED ON SPAN WIRE OR MOUNTED ON TEMPORARY WOOD POLE IN LIEU OF SPAN WIRE. THE DETECTOR SHALL CALL TO THE ASSOCIATE PHASE. THE DETECTOR AND ANY EQUIPMENT ASSOCIATED WITH THE MICROWAVE DETECTOR AND TO PLACE CALLS INTO THE CONTROL SHALL BE INCLUDED IN THE "INSTALL TEMPORARY TRAFFIC SIGNAL" PAY ITEM.
19. THE CONTROLLER SHALL BE SET TO A MINIMUM RECALL RIDGE ROAD.
20. PLEASE CALL DAN DEVINE AT 815-434-8505 ON DISCONNECTING THE YELLOW LEFT TURN ARROW DURING CONSTRUCTION STAGES AT RIDGE ROAD WITH OTTAWA DRIVE.
21. A SELF ADHERE PHASING DIAGRAM SHALL BE PLACED INSIDE THE CABINET DOOR.



TEMPORARY TRAFFIC SIGNAL LEGEND

- ▲ TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- ▲ TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- ⊗ TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM
- ⊠ TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- ⊕ TEMPORARY SERVICE INSTALLATION
- ⊕ TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- ⊕ PEDESTRIAN PUSHBUTTON DETECTOR
- ⊕ EMERGENCY VEHICLE LIGHT DETECTOR
- ⊕ CONFIRMATION BEACON
- ⊕ VEHICLE DETECTOR, INDUCTION LOOP COMMON TRENCH
- ⊕ UNIT DUCT
- ⊕ G.S. CONDUIT IN GROUND
- ⊕ HANDHOLE
- ⊕ HEAVY DUTY HANDHOLE
- ⊕ NO TURN ON RED (R10-12) SIGN
- ⊕ MICROWAVE DETECTOR, TC 26B

NOTE 1: THE ORIGINAL SIGNAL HEAD PLACEMENT LOCATIONS SHOWN IN THE TEMPORARY TRAFFIC SIGNAL PLAN ARE FOR PRE-STAGE CONSTRUCTION ONLY.

NOTE 2: THE SECONDARY SIGNAL HEAD PLACEMENT LOCATIONS SHOWN IN THE TEMPORARY TRAFFIC SIGNAL PLAN ARE FOR CONSTRUCTION STAGE 1A ONLY. FOR OTHER CONSTRUCTION STAGES, THE SIGNAL HEAD PLACEMENTS SHALL BE AS DIRECTED BY THE ENGINEER.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING TRAFFIC SIGNAL CONTROLLER IN THE VILLAGE OF MINOOKA.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

TEMPORARY TRAFFIC SIGNAL PLAN
RIDGE ROAD
AT OTTAWA DRIVE

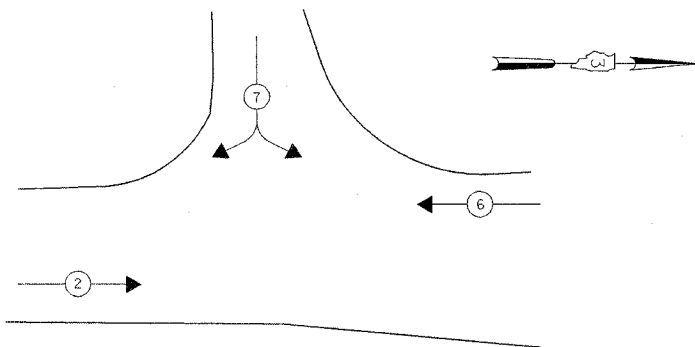
SCALE: 1"=20'
DATE: 2/10/06
DRAWN BY: SA/KGP
CHECKED BY: PKG

GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL: (773) 774-5910

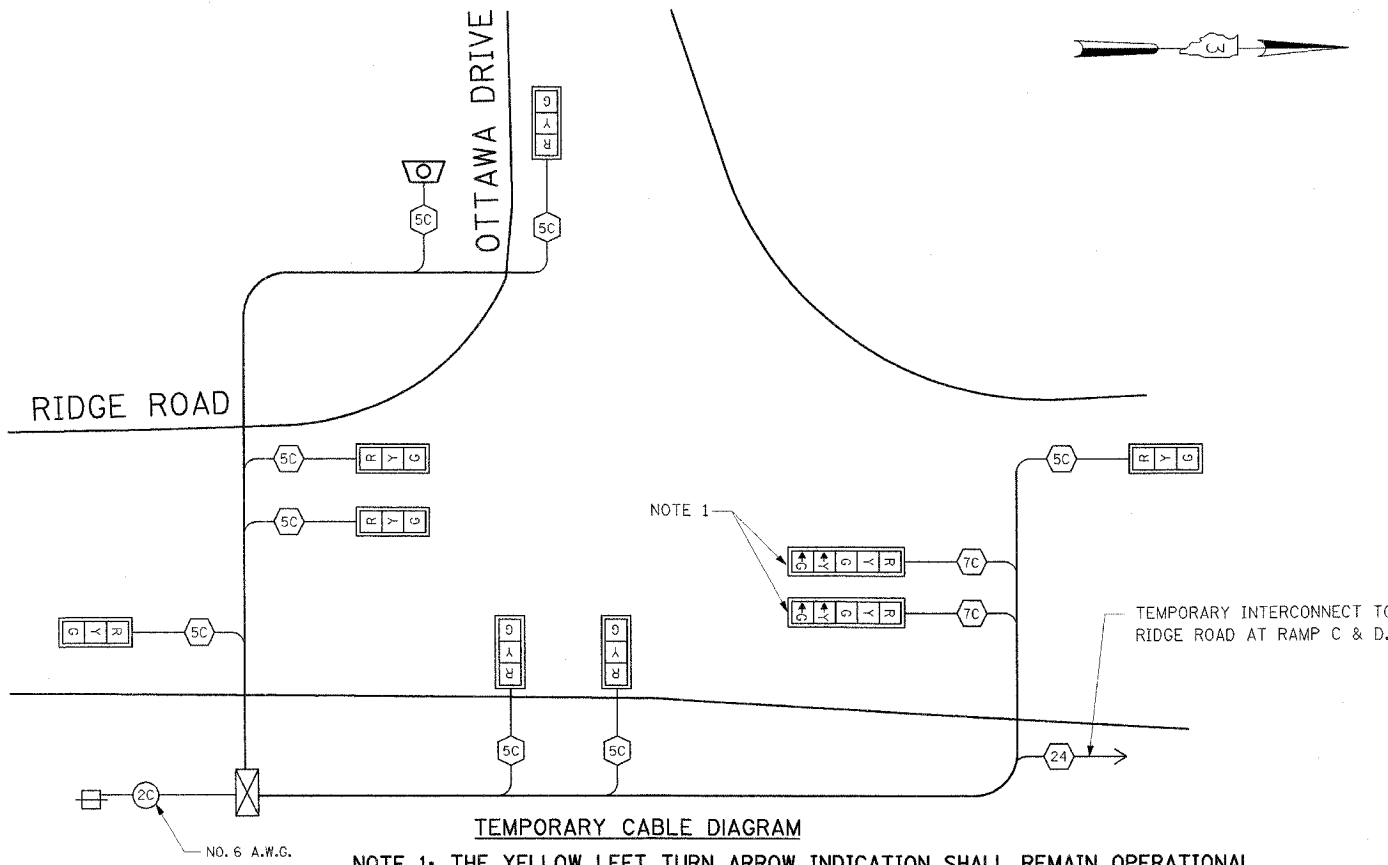
CONTROLLER SEQUENCE

NAME OF INTERSECTION: RIDGE ROAD AT OTTAWA DRIVE
 CONTROLLER SPECIFIED: FULL ACTUATED CONTROLLER,
STANDARD SEQUENCE II, 3 PHASES IN TYPE IV CABINET

REFERRING TO STANDARD 857001, THE VEHICULAR AND PEDESTRIAN PHASES USED ARE DESIGNATED BELOW.
 (SHOW MOVEMENTS AND PHASE NUMBERS)



PHASE DESIGNATION DIAGRAM FOR CONSTRUCTION STAGES 1, 1A, 1B, 2, 2A, AND 3

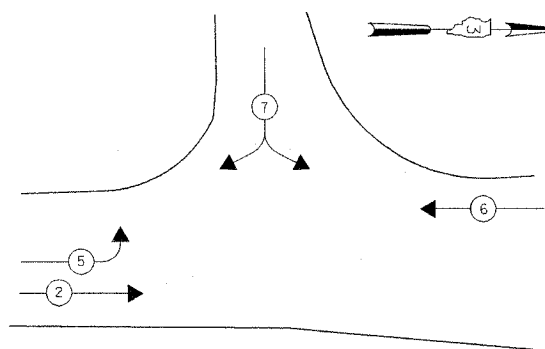


TEMPORARY CABLE DIAGRAM LEGEND

- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- NUMBER OF CONDUCTORS
- PROPOSED CABLE NUMBER
- CABLE NUMBER
- YELLOW TURN ARROW
- GREEN TURN ARROW
- 8" SIGNAL
- 12" SIGNAL
- VEHICLE PEDESTRIAN MOVEMENT TERMINATOR
- WALK / DON'T WALK SECTION
- TRAFFIC SIGNAL BACKPLATE
- PUSHBUTTON DETECTOR
- VEHICLE DETECTOR, INDUCTION LOOP
- OPTICAL DETECTOR
- MICROWAVE DETECTOR, TC 26B

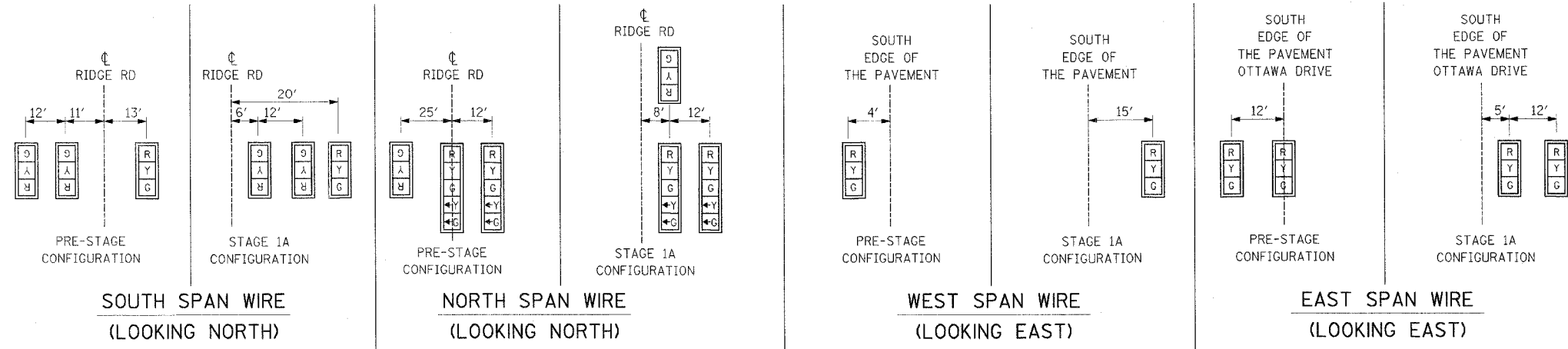
NOTE 1: THE YELLOW LEFT TURN ARROW INDICATION SHALL REMAIN OPERATIONAL DURING PRE-STAGE OF CONSTRUCTION AND SHALL BE DISCONNECTED AND BAGGED DURING CONSTRUCTION STAGES 1, 1A, 1B, 2, 2A, AND 3.

NOTE 2: PLEASE CALL DAN DEVINE AT 815-434-8505 ON DISCONNECTING THE YELLOW LEFT TURN ARROW DURING CONSTRUCTION STAGES AT RIDGE ROAD WITH OTTAWA DRIVE.



PHASE DESIGNATION DIAGRAM FOR CONSTRUCTION PRE-STAGE ONLY

- ### LEGEND
- DUAL ENTRY PHASE
 - O.L. OVERLAP
 - PEDESTRIAN PHASE
 - NUMBER REFERS TO ASSOCIATED PHASE

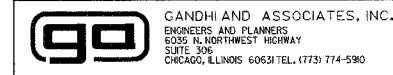


SCHEDULE OF TEMPORARY SIGNAL HEADS

(FOR INFORMATION ONLY, ALL TEMPORARY SIGNALS INCLUDED IN COST OF ITEM: TEMPORARY TRAFFIC SIGNAL INSTALLATION)

ITEM	UNIT	QUANTITY
SIGNAL HEAD, 1-FACE, 3 SECTION, SPAN WIRE MOUNTED	EACH	7
SIGNAL HEAD, 1-FACE, 5 SECTION, SPAN WIRE MOUNTED	EACH	2

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING TRAFFIC SIGNAL CONTROLLER IN THE VILLAGE OF MINOOKA.



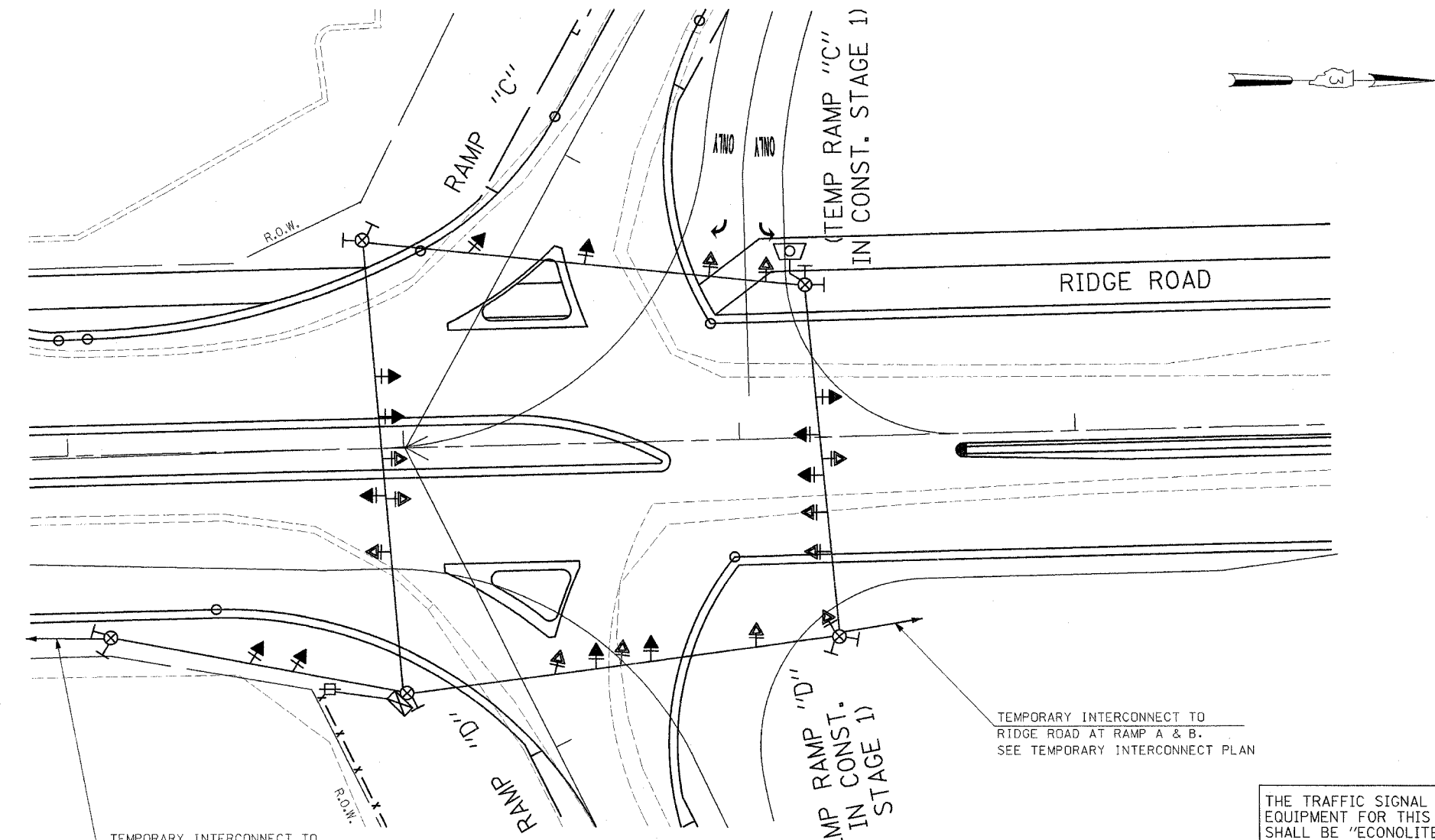
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

TEMPORARY CABLE DIAGRAM AND PHASE DESIGNATION DIAGRAM RIDGE ROAD AT OTTAWA DRIVE

SCALE: NONE
 DATE: 2/10/06
 DRAWN BY: SA/KGP
 CHECKED BY: PKG

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-41K)	KENDALL/GRUNDY	243	117
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 66294				



NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION. CALL J.U.L.I.E. AT 800-892-0123. THE CONTRACTOR SHALL ALSO VERIFY THAT NO CONFLICTS WITH PROPOSED STORM SEWER, CONDUITS, ETC. AND THE TEMPORARY WOOD POLES WILL EXIST.
2. THE TRAFFIC SIGNAL SECTION AT THE ILLINOIS DEPARTMENT OF TRANSPORTATION SHALL BE NOTIFIED AT 815-434-8506 AT LEAST 72 HOURS PRIOR TO TURNING ON ANY FLASHER OR CONTROLLER UNITS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATIONS FOR THE DURATION OF THE SIGNAL WORK.
4. ALL TRAFFIC SIGNAL HEADS SHALL BE 12 INCHES.
5. TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PROPERLY COVERED PRIOR TO INTERSECTION TURN-ON AND AS DIRECTED BY THE ENGINEER DURING OPERATION OF THE TEMPORARY SIGNALS. THIS COST SHALL BE INCLUDED WITH THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.
6. THE CONTRACTOR SHALL ARRANGE FOR A FACTORY OR SUPPLIER REPRESENTATIVE TO BE PRESENT AT THE INTERSECTION WHEN THE TEMPORARY SIGNALS ARE TURNED ON. COST TO BE INCLUDED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.
7. THE ELECTRICAL CONDUCTORS FOR ALL TRAFFIC SIGNAL HEADS SHALL BE SOLID, SOFT COPPER.
8. THE CONTRACTOR IS RESPONSIBLE FOR UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THE COST OF THIS WORK IS TO BE INCLUDED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.
9. ALL TEMPORARY WOOD POLES SHALL BE LOCATED A MINIMUM OF 1.8M (6FT) FROM THE EDGE OF THE PAVEMENT UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
10. THE PROPOSED TEMPORARY TRAFFIC SIGNAL CONTROL CABINET SHALL BE FURNISHED WITH A MANUAL CONTROL SWITCH AND MANUAL CONTROL CORD WITHIN THE POLICE DOOR COMPARTMENT AS INCIDENTAL TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ELECTRICAL SERVICE FOR THE TEMPORARY TRAFFIC SIGNALS. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY PRIOR TO BEGINNING WORK TO OBTAIN THE UTILITY COMPANY REQUIREMENTS FOR THE SERVICE INSTALLATION.
12. ALL TEMPORARY WOOD SUPPORT POLES SHALL BE INSTALLED SO THAT A MINIMUM OF 9.1M (30 FT) OF POLE IS ABOVE THE EXISTING PAVEMENT ELEVATION ADJACENT TO THE POLE. A SUFFICIENT LENGTH OF POLE SHALL BE BURIED AND GUYED TO ALLOW THE INSTALLATION TO WITHSTAND 80 K.P.H. SUSTAINED WIND LOADING.
13. THE CABINET OF SUFFICIENT SIZE SHALL BE INSTALLED BY THE CONTRACTOR AT A LOCATION ACCEPTABLE TO THE ENGINEER. THE CABINET SHALL NOT BE LOCATED ON A SPAN WIRE POLE. IT SHALL BE EITHER GROUND MOUNTED ON A WOODEN FOUNDATION OR POST MOUNTED ON A SEPARATE POST. ALL CABLE WITHIN 3M (10 FT) OF THE GROUND SHALL BE IN CONDUIT. IT IS ACCEPTABLE FOR 4M (13.2 FT) OR LESS LENGTHS OF CONDUIT TO BE LAID ALONG THE GROUND IN AREAS ACCEPTABLE TO THE ENGINEER.
14. A MINIMUM OF 8M (26 FT) OF CABLE SLACK SHALL BE PROVIDED FOR EACH SIGNAL HEAD. NEED ENOUGH SLACK TO BE ABLE TO ADJUST RIDGE ROAD SIGNAL HEADS FROM PRE-STAGE TO STAGE III LOCATIONS.
15. REINSTALL EXISTING STREET NAME SIGNS TO TEMPORARY SPAN WIRE POLES AS DIRECTED BY THE ENGINEER.
16. REINSTALL THE EXISTING OR PROVIDE NEW R-10-12 (LEFT TURN YIELD ON GREEN). 600MM X 750MM SIGNS IMMEDIATELY RIGHT OF THE 5-SECTION SPAN-WIRE SIGNAL HEADS & BETWEEN THE 3-SECTION SPAN WIRE SIGNAL HEADS ON THE FAR SPAN WIRES AT RAMPS WHERE PROTECTED/PERMITTED LEFT TURN MOVEMENT EXISTS.
17. INSTALL BRACKET MOUNTED SIGNALS WITH BOTTOM OF SIGNAL 4.5M (15 FT) ABOVE GROUND.
18. THE MICROWAVE DETECTORS SHALL BE MODEL TC 26B AND SHALL BE MOUNTED ON SPAN WIRE OR MOUNTED ON TEMPORARY WOOD POLE IN LIEU OF SPAN WIRE. THE DETECTOR SHALL CALL TO THE ASSOCIATE PHASE. THE DETECTOR AND ANY EQUIPMENT ASSOCIATED WITH THE MICROWAVE DETECTOR AND TO PLACE CALLS INTO THE CONTROL SHALL BE INCLUDED IN THE "INSTALL TEMPORARY TRAFFIC SIGNAL" PAY ITEM.
19. THE CONTROLLER SHALL BE SET TO A MINIMUM RECALL RIDGE ROAD.
20. A SELF ADHERE PHASING DIAGRAM SHALL BE PLACED INSIDE THE CABINET DOOR.

TEMPORARY INTERCONNECT TO RIDGE ROAD AT OTTAWA DRIVE, SEE TEMPORARY INTERCONNECT PLAN

TEMPORARY INTERCONNECT TO RIDGE ROAD AT RAMP A & B. SEE TEMPORARY INTERCONNECT PLAN

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING TRAFFIC SIGNAL CONTROLLER IN THE VILLAGE OF MINOOKA.

TEMPORARY TRAFFIC SIGNAL INSTALLATION
SCALE 1"=20'

- NOTE 1:** THE ORIGINAL SIGNAL HEAD PLACEMENT LOCATIONS SHOWN IN THE TEMPORARY TRAFFIC SIGNAL PLAN ARE FOR PRE-STAGE CONSTRUCTION ONLY.
- NOTE 2:** THE SECONDARY SIGNAL HEAD PLACEMENT LOCATIONS SHOWN IN THE TEMPORARY TRAFFIC SIGNAL PLAN ARE FOR CONSTRUCTION STAGE 1 ONLY. FOR OTHER CONSTRUCTION STAGES, THE SIGNAL HEAD PLACEMENTS SHALL BE AS DIRECTED BY THE ENGINEER.
- NOTE 3:** THE MICROWAVE DETECTOR LOCATION SHOWN IN THE TEMPORARY SIGNAL PLAN FOR RAMP "C" IS FOR PROPOSED CONSTRUCTION STAGE 1. FOR OTHER CONSTRUCTION STAGES THE MICROWAVE DETECTOR SHALL BE RELOCATED, IF REQUIRED, AS DIRECTED BY THE ENGINEER.

TEMPORARY TRAFFIC SIGNAL LEGEND

- ▲ TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- ▲ TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- ⊗ TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM
- ⊠ TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- ⊕ TEMPORARY SERVICE INSTALLATION
- ⊥ TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- ⊙ PEDESTRIAN PUSHBUTTON DETECTOR
- ⊙ EMERGENCY VEHICLE LIGHT DETECTOR
- ⊙ CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- CT COMMON TRENCH
- UD UNIT DUCT
- G.S. CONDUIT IN GROUND
- HANDHOLE
- ⊠ HEAVY DUTY HANDHOLE
- ⊙ MICROWAVE DETECTOR, TC 26B

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

TEMPORARY TRAFFIC SIGNAL INSTALLATION,
RIDGE ROAD AT RAMPS "C" AND "D"

SCALE: 1"=20'
DATE: 2/10/06

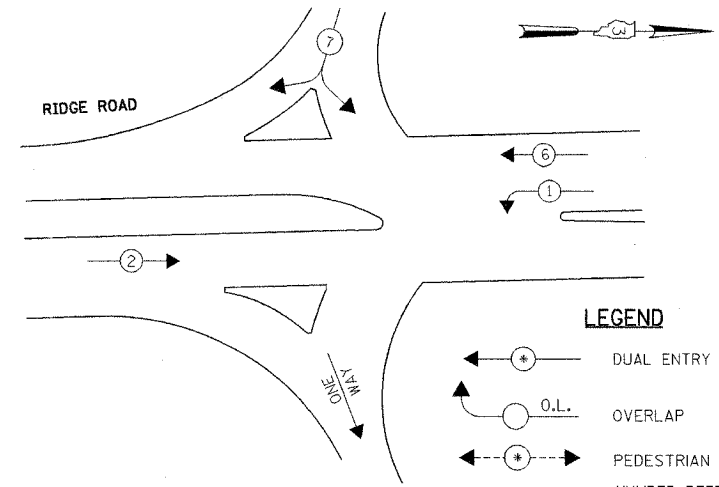
DRAWN BY: SA/KGP
CHECKED BY: PKG

GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5930

CONTROLLER SEQUENCE

NAME OF INTERSECTION: RIDGE ROAD AT RAMP "C" AND "D"
 CONTROLLER SPECIFIED: FULL ACTUATED CONTROLLER,
STANDARD SEQUENCE II, 3 PHASES IN TYPE IV CABINET

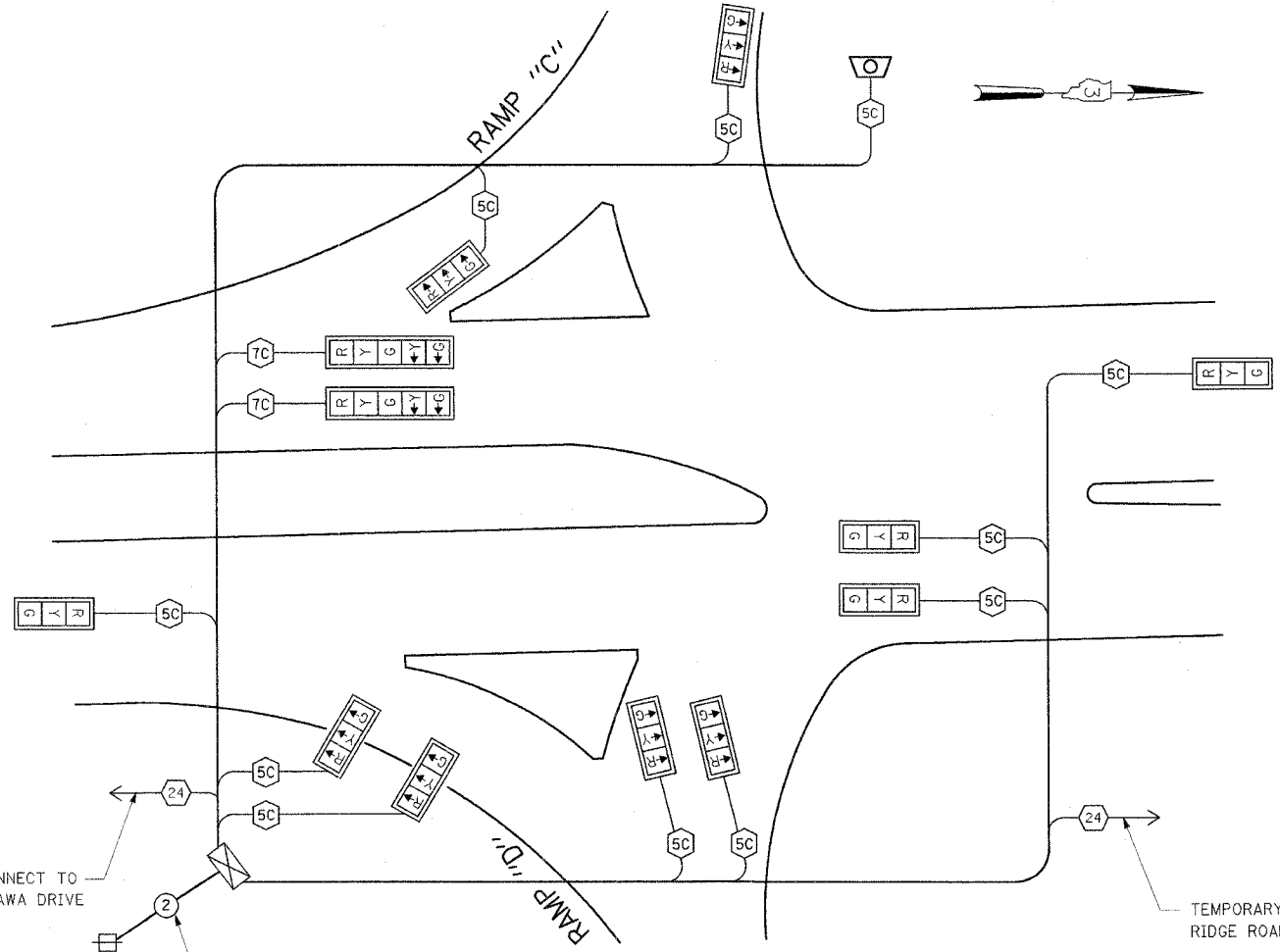
REFERRING TO STANDARD 857001, THE VEHICULAR AND PEDESTRIAN PHASES USED ARE DESIGNATED BELOW.
 (SHOW MOVEMENTS AND PHASE NUMBERS)



LEGEND

- DUAL ENTRY PHASE
- O.L. OVERLAP
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE

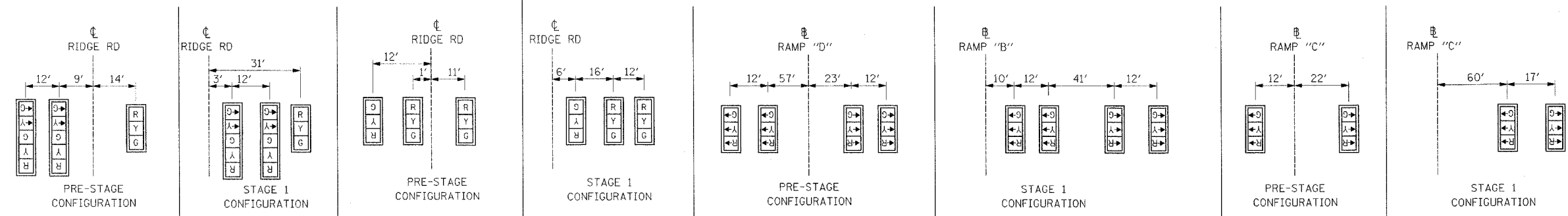
PHASE DESIGNATION DIAGRAM



CABLE DIAGRAM
N.T.S.

TEMPORARY CABLE DIAGRAM LEGEND

- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- NUMBER OF CONDUCTORS
- YELLOW TURN ARROW
- GREEN TURN ARROW
- 8" SIGNAL
- 12" SIGNAL
- VEHICLE PEDESTRIAN MOVEMENT TERMINATOR
- WALK / DON'T WALK SECTION
- TRAFFIC SIGNAL BACKPLATE
- PUSHBUTTON DETECTOR
- VEHICLE DETECTOR, INDUCTION LOOP
- OPTICAL DETECTOR
- MICROWAVE DETECTOR, TC 26B



SOUTH SPAN WIRE
(LOOKING NORTH)

NORTH SPAN WIRE
(LOOKING NORTH)

EAST SPAN WIRE
(LOOKING WEST)

WEST SPAN WIRE
(LOOKING WEST)

SCHEDULE OF TEMPORARY SIGNAL HEADS

(FOR INFORMATION ONLY, ALL TEMPORARY SIGNALS INCLUDED IN COST OF ITEM: TEMPORARY TRAFFIC SIGNAL INSTALLATION)

ITEM	UNIT	QUANTITY
SIGNAL HEAD, 1-FACE, 3 SECTION, SPAN WIRE MOUNTED	EACH	10
SIGNAL HEAD, 1-FACE, 5 SECTION, SPAN WIRE MOUNTED	EACH	2

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING TRAFFIC SIGNAL CONTROLLER IN THE VILLAGE OF MINOOKA.

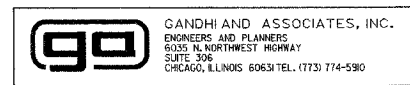
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

TEMPORARY CABLE DIAGRAM AND PHASE DESIGNATION DIAGRAM RIDGE ROAD AT RAMP "C" AND "D"

SCALE: NONE
DATE: 2/10/06

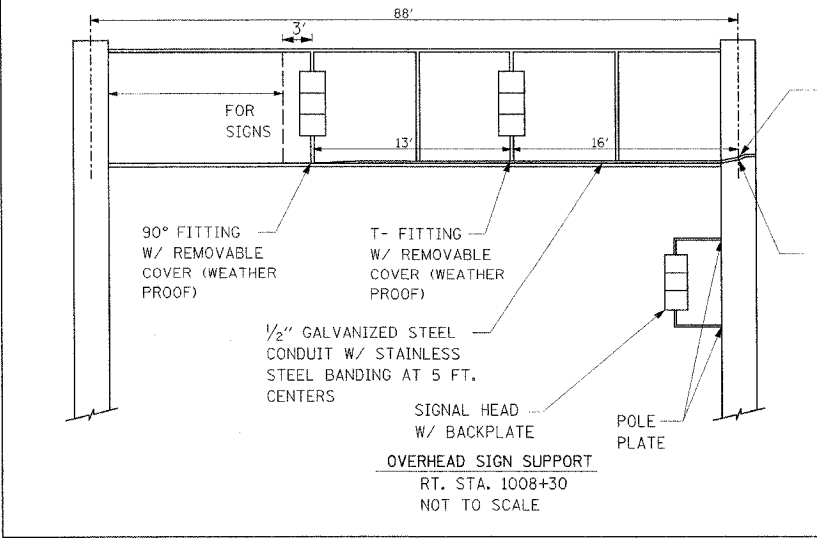
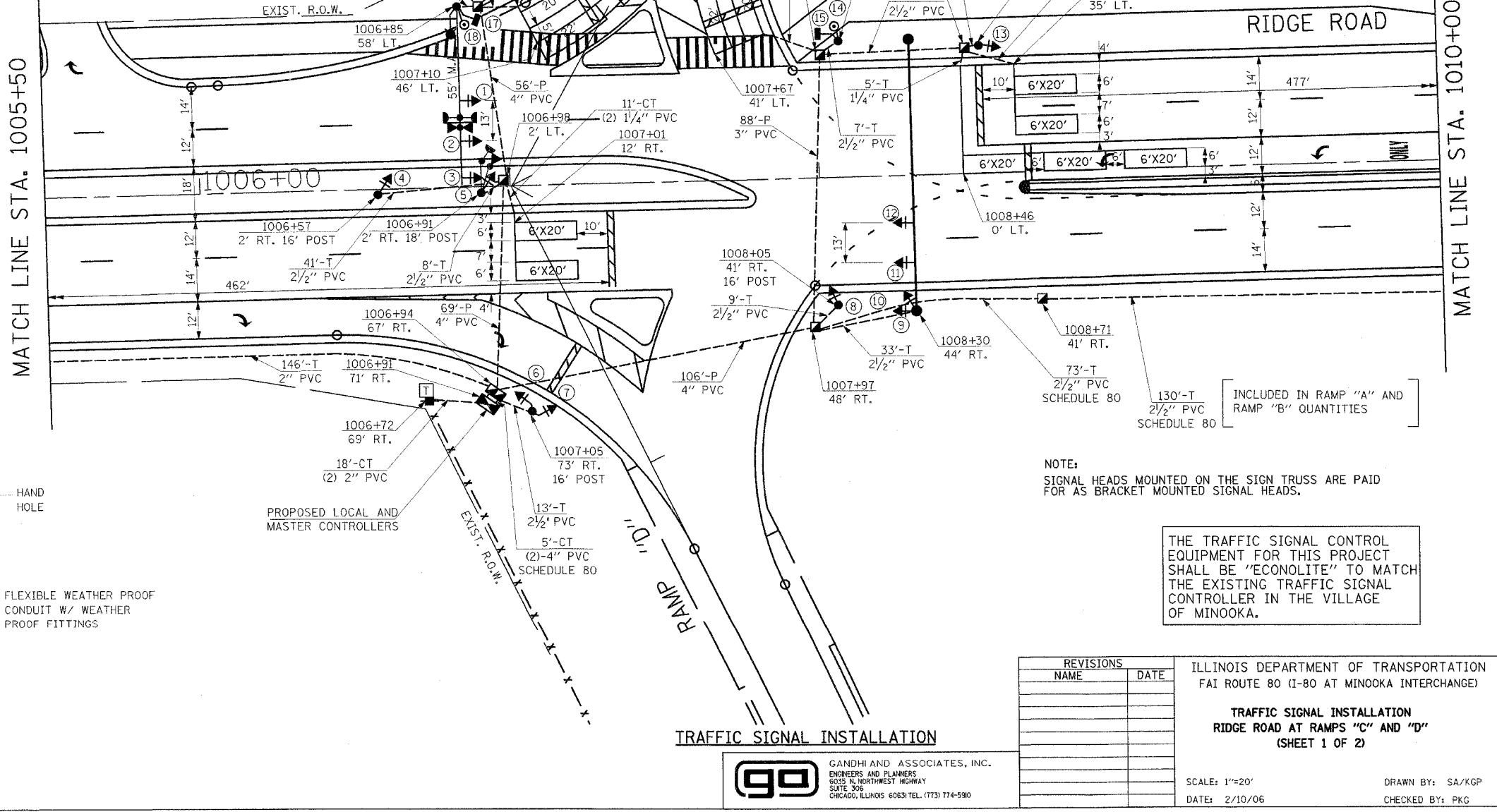
DRAWN BY: SA/KGP
CHECKED BY: PKG



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	119
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				

- GENERAL NOTES**
FOR TRAFFIC CONTROL SIGNALS
- ALL DETECTOR-LOOPS SHALL CONSIST OF THE NUMBER OF TURNS REQUIRED AND SHALL BE INSTALLED IN STRICT CONFORMITY WITH THE LOOP DETECTOR AMPLIFIER MANUFACTURER'S RECOMMENDATIONS. THE DETECTOR-LOOP SHALL BE MEASURED AS SPECIFIED IN SECTION 1421.04 OF THE "STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS".
 - THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY COMPONENTS OF THE TRAFFIC SIGNAL SYSTEM. FOR LOCATION OF UTILITIES CALL J.U.L.I.E. 1-800-892-0123. FOR LOCATION OF STATE-OWNED UTILITIES CALL I.D.O.T. 815-434-8462.
 - ALL SIGNAL HEADS SHALL HAVE 12" LENSES AND POLYCARBONATE BACKPLATES WITH DEEP BACK FLANGE
 - ALL MAST ARM MOUNTED SIGNAL HEADS SHALL BE MOUNTED WITH THE RED INDICATIONS LEVEL & THE BOTTOM EDGE OF THE BACKPLATE 16'-6" (MIN) ABOVE THE CROWN OF THE ROADWAY.
 - THE EXACT LOCATION OF DETECTOR-LOOP TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
 - A 1/4" DIAMETER CONTINUOUS NYLON ROPE SHALL BE FURNISHED AND LEFT IN PLACE IN ALL CONDUITS BETWEEN JUNCTION BOXES AND FOUNDATIONS OR CONTROLLER AS INCIDENTAL TO RESPECTIVE ELECTRIC CABLE PAY ITEM.
 - THE PROPOSED TRAFFIC SIGNAL CONTROL CABINET SHALL BE FURNISHED WITH MANUAL CONTROL SWITCH AND MANUAL CORD WITHIN THE POLICE DOOR COMPARTMENT AS INCIDENTAL TO THE CONTROLLER PAY ITEM.
 - THE CONTRACTOR SHALL ARRANGE FOR A FACTORY OR SUPPLIER REPRESENTATIVE TO BE PRESENT AT THE INTERSECTION WHEN THE SIGNAL IS TURNED ON AS INCIDENTAL TO THE CONTROLLER PAY ITEM. HE SHALL BE CAPABLE OF MAKING CERTAIN THAT THE CONTROL EQUIPMENT IS WORKING TO THE SATISFACTION OF THE ENGINEER.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ELECTRICAL SERVICE FOR THE TRAFFIC SIGNALS. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY PRIOR TO BEGINNING WORK TO OBTAIN THE UTILITY COMPANY REQUIREMENTS FOR THE SERVICE INSTALLATION.
 - THE SIGN TRUSS IS PROVIDED WITH TWO ADDITIONAL VERTICAL SIGN BRACKETS TO BE USED FOR THE INSTALLATION OF THE SIGNAL HEADS TO THE TRUSS. THE LOCATION OF THESE TWO BRACKETS IS APPROXIMATELY 16 FEET AND 29 FEET FROM THE CENTER OF THE EAST SUPPORT. ANY AND ALL MOUNTING HARDWARE REQUIRED TO INSTALL THE SIGNALS ON THE TRUSS SIGN BRACKETS SHALL BE INCIDENTAL TO THE SIGNAL HEAD PAY ITEM.
 - ALL THREADS OF BOLTS USED IN TRAFFIC POLE ASSEMBLIES SHALL BE COATED WITH A NON-LEAD BASE ANTI-SIEZE COMPOUND SIMILAR TO LEAD PLATE PRIOR TO ASSEMBLING.
 - ALL CONDUIT IN TRENCH SHALL BE P.V.C. ALL CONDUIT PUSHED SHALL BE P.V.C. SCHEDULE 80. ALL CONDUIT ATTACHED TO STRUCTURES SHALL BE GALVANIZED STEEL.
 - THE DEPARTMENT OF TRANSPORTATION (815-434-8506) SHALL BE NOTIFIED AT LEAST 72 HOURS PRIOR TO THE TURNING ON OF THE CONTROLLER UNIT.
 - NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PLACING CONDUIT AT GREATER THAN 2 FEET MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.
 - THE ELECTRICAL CONDUCTORS FOR ALL TRAFFIC SIGNAL HEADS SHALL BE SOLID, SOFT COPPER.
 - THE CONTROLLER CABINET SHALL BE PLACED SO THAT A TECHNICIAN MAY SEE THE INTERSECTION OVER THE TOP OF THE CABINET WHILE WATCHING THE COMPONENTS IN THE CABINET.
 - THE CONTRACTOR SHALL PROVIDE 3 FEET SLACK CABLE IN EACH TRAFFIC SIGNAL STRUCTURE; MAST ARM, POST, CONTROLLER. THE SLACK, WHICH IS IN ADDITION TO THE VERTICAL LENGTH OF CABLE DEFINED IN THE SPECIFICATIONS, SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH CABLE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING THE NEW ELECTRICAL LOADS FOR THE UNMETERED SERVICES ON THIS IMPROVEMENT TO THE UTILITY COMPANY AND AGENCY RESPONSIBLE FOR ENERGY CHARGES.
 - ALL LED ARROW SECTIONS SHALL HAVE 3 ROWS.
 - THE LENGTH OF DETECTOR LOOP CABLE FROM THE CURB TO THE JUNCTION BOX OR HANDHOLE IS INCIDENTAL TO THE DETECTOR LOOP PAY ITEM.
 - THE DOUBLE HANDHOLE SHALL BE FURNISHED WITH RECESSED, INTEGRAL, HINGED LIDS.
 - THE CONTRACTOR SHALL PROVIDE A SELF-ADHERED PHASE DIAGRAM ON THE INSIDE OF THE CONTROLLER CABINET DOOR.
 - THE CONTRACTOR SHALL VERIFY THAT THE GRADE IS NOT LOWERED MUCH BY THE TRAFFIC POST SO NO HEIGHT IS LOST.
 - PRIOR TO INSTALLATION THE CONTRACTOR SHALL STAKE THE SERVICE, MAST ARM AND SIGNAL POLE LOCATIONS, PAINT THE DETECTOR LOOP LOCATIONS AND CALL THE DEPARTMENT OF TRANSPORTATION (815-434-8506) FOR INSPECTION OF PLACEMENT.
 - THE CONTRACTOR SHALL LABEL THE FIBER OPTIC WITH DIRECTION AND ASSIGNMENT NUMBER. ALSO ALL FIBERS SHALL BE TERMINATED INCIDENTAL TO FIBER PAY ITEM.
 - CONTRACTOR SHALL VERIFY WITH MINOOKA FIRE PROTECTION DISTRICT (815-467-5637) FOR THE BRAND OF EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT TO BE INSTALLED PRIOR TO THE CONTRACT BIDDING.

- LEGEND**
- [Symbol] -- SIGNAL HEAD, 1-FACE, 3 SECTION
 - [Symbol] -- SIGNAL HEAD, 1-FACE, 4 SECTION
 - [Symbol] -- SIGNAL HEAD WITH BACKPLATE
 - [Symbol] -- JUNCTION BOX
 - [Symbol] -- HANDHOLE
 - [Symbol] -- DOUBLE HANDHOLE
 - [Symbol] -- HEAVY DUTY HANDHOLE
 - [Symbol] -- SERVICE INSTALLATION
 - [Symbol] -- PROPOSED COMBINATION MAST ARM ASSEMBLY & LIGHT
 - [Symbol] -- EXISTING LIGHT
 - [Symbol] -- NUMBER OF CONDUCTORS (7 CONDUCTORS)
 - [Symbol] -- SIGNAL HEAD NUMBER
 - [Symbol] -- CONTROLLER
 - [Symbol] -- SIGNAL POST
 - [Symbol] -- MAST ARM ASSEMBLY AND POLE
 - [Symbol] -- SIGNAL HEAD
 - [Symbol] -- SIGNAL HEAD W/ BACKPLATE
 - [Symbol] -- CONDUIT IN TRENCH OR PUSHED
 - [Symbol] -- SIGNAL HEAD, PEDESTRIAN
 - [Symbol] -- PEDESTRIAN PUSHBUTTON DETECTOR
 - [Symbol] -- EMERGENCY VEHICLE SYSTEM DETECTOR
 - [Symbol] -- CONFIRMATION BEACON
 - [Symbol] -- TELEPHONE CONNECTION



NOTE:
SIGNAL HEADS MOUNTED ON THE SIGN TRUSS ARE PAID FOR AS BRACKET MOUNTED SIGNAL HEADS.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING TRAFFIC SIGNAL CONTROLLER IN THE VILLAGE OF MINOOKA.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

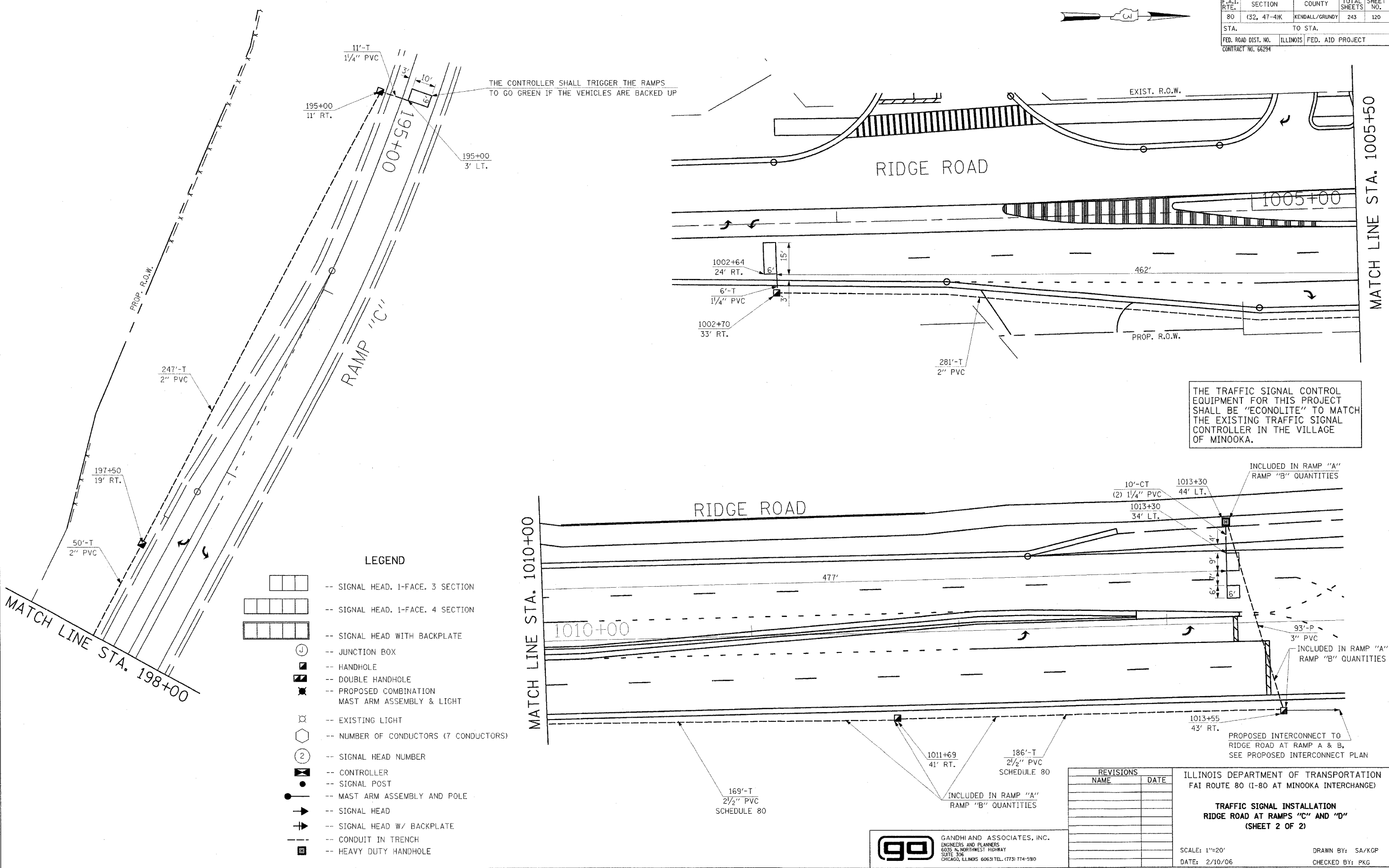
TRAFFIC SIGNAL INSTALLATION
RIDGE ROAD AT RAMP "C" AND "D"
(SHEET 1 OF 2)

SCALE: 1"=20'
DATE: 2/10/06

DRAWN BY: SA/KGP
CHECKED BY: PKG

GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5900

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	120
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 66294				



THE CONTROLLER SHALL TRIGGER THE RAMP
TO GO GREEN IF THE VEHICLES ARE BACKED UP

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING TRAFFIC SIGNAL CONTROLLER IN THE VILLAGE OF MINOOKA.

- LEGEND**
- SIGNAL HEAD, 1-FACE, 3 SECTION
 - SIGNAL HEAD, 1-FACE, 4 SECTION
 - SIGNAL HEAD WITH BACKPLATE
 - JUNCTION BOX
 - HANDHOLE
 - DOUBLE HANDHOLE
 - PROPOSED COMBINATION MAST ARM ASSEMBLY & LIGHT
 - EXISTING LIGHT
 - NUMBER OF CONDUCTORS (7 CONDUCTORS)
 - SIGNAL HEAD NUMBER
 - CONTROLLER
 - SIGNAL POST
 - MAST ARM ASSEMBLY AND POLE
 - SIGNAL HEAD
 - SIGNAL HEAD W/ BACKPLATE
 - CONDUIT IN TRENCH
 - HEAVY DUTY HANDHOLE

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

TRAFFIC SIGNAL INSTALLATION
RIDGE ROAD AT RAMP "C" AND "D"
(SHEET 2 OF 2)

SCALE: 1"=20'
DATE: 2/10/06

DRAWN BY: SA/KGP
CHECKED BY: PKG

GO GANDHI AND ASSOCIATES, INC.
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6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

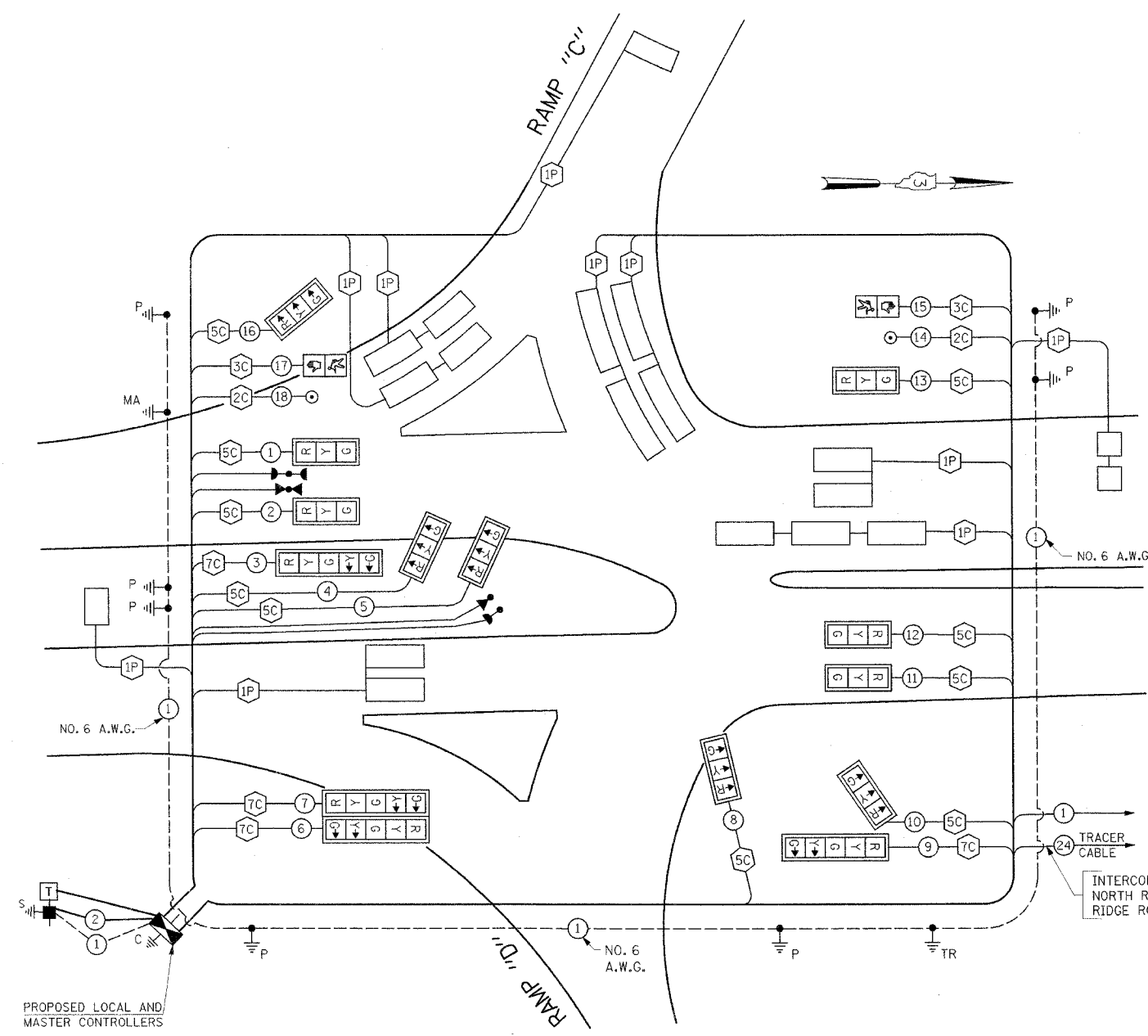
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	121
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				

QUANTITY	UNIT	ITEM
14	SQ FT	SIGN PANEL - TYPE 1
145	FOOT	CONDUIT IN TRENCH, 1 1/4" DIA., PVC
915	FOOT	CONDUIT IN TRENCH, 2" DIA., PVC
196	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., PVC
73	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., PVC, SCHEDULE 80
10	FOOT	CONDUIT IN TRENCH, 4" DIA., PVC, SCHEDULE 80
88	FOOT	CONDUIT PUSHED, 3" DIA., PVC, SCHEDULE 80
231	FOOT	CONDUIT PUSHED, 4" DIA., PVC, SCHEDULE 80
11	EACH	CONCRETE HANDHOLE
1	EACH	CONCRETE DOUBLE HANDHOLE
1255	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
1	EACH	TRANSCEIVER-FIBER OPTIC
397	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
772	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
2016	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
543	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
3088	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
37	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.
5	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 55 FT.
28	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE D
15	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
14	FOOT	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC
10	EACH	INDUCTIVE LOOP DETECTOR
1370	FOOT	DETECTOR LOOP, TYPE 1
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER
2	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	UNINTERRUPTED POWER SUPPLY
1	EACH	SERVICE INSTALLATION, POLE MOUNT
672	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
359	FOOT	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED
8	EACH	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
2	EACH	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
3	EACH	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
2	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED

* 100% COST TO VILLAGE OF MINOOKA

CABLE PLAN LEGEND

- ⊕ NUMBER OF CONDUCTORS
- PROPOSED CABLE NUMBER
- .. CABLE NUMBER
- YELLOW TURN ARROW
- GREEN TURN ARROW
- 8" SIGNAL
- 12" SIGNAL
- VEHICLE PEDESTRIAN MOVEMENT TERMINATOR
- 12' (300mm) PEDESTRIAN SIGNAL SECTION
- ☐ TRAFFIC SIGNAL BACKPLATE
- ☐ CONTROLLER CABINET
- SERVICE INSTALLATION
- ☐ VEHICLE DETECTOR, INDUCTION LOOP
- PUSH-BUTTON DETECTOR
- MAGNETIC DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- ☐ TELEPHONE INSTALLATION

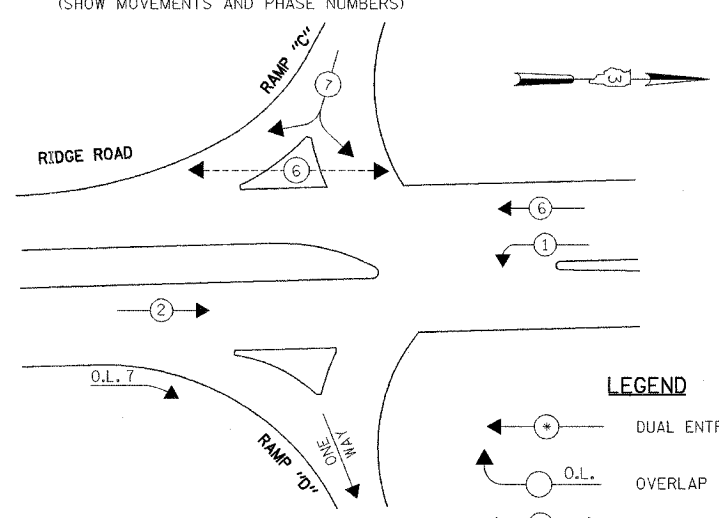


CABLE PLAN

CONTROLLER SEQUENCE

NAME OF INTERSECTION: RIDGE ROAD AT RAMPS "C" AND "D"
 CONTROLLER SPECIFIED: FULL ACTUATED CONTROLLER,
STANDARD SEQUENCE II, 3 PHASES IN TYPE IV CABINET

REFERRING TO STANDARD 857001, THE VEHICULAR AND PEDESTRIAN PHASES USED ARE DESIGNATED BELOW.
 (SHOW MOVEMENTS AND PHASE NUMBERS)



PHASE DESIGNATION DIAGRAM

LEGEND

- DUAL ENTRY PHASE
- O.L. OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

THE END OF THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET.

INTERCONNECT TO NORTH RAMPS INTERSECTION RIDGE ROAD AT RAMPS "A" AND "B"

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING TRAFFIC SIGNAL CONTROLLER IN THE VILLAGE OF MINOOKA.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

**CABLE DIAGRAM AND PHASE DESIGNATION DIAGRAM
 RIDGE ROAD AT RAMPS "C" AND "D"**

SCALE: NONE
 DATE: 2/10/06
 DRAWN BY: SA/KGP
 CHECKED BY: PKG

GO GANDHI AND ASSOCIATES, INC.
 ENGINEERS AND PLANNERS
 6035 N. NORTHWEST HIGHWAY
 SUITE 306
 CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

NOTES FOR TEMPORARY TRAFFIC SIGNALS

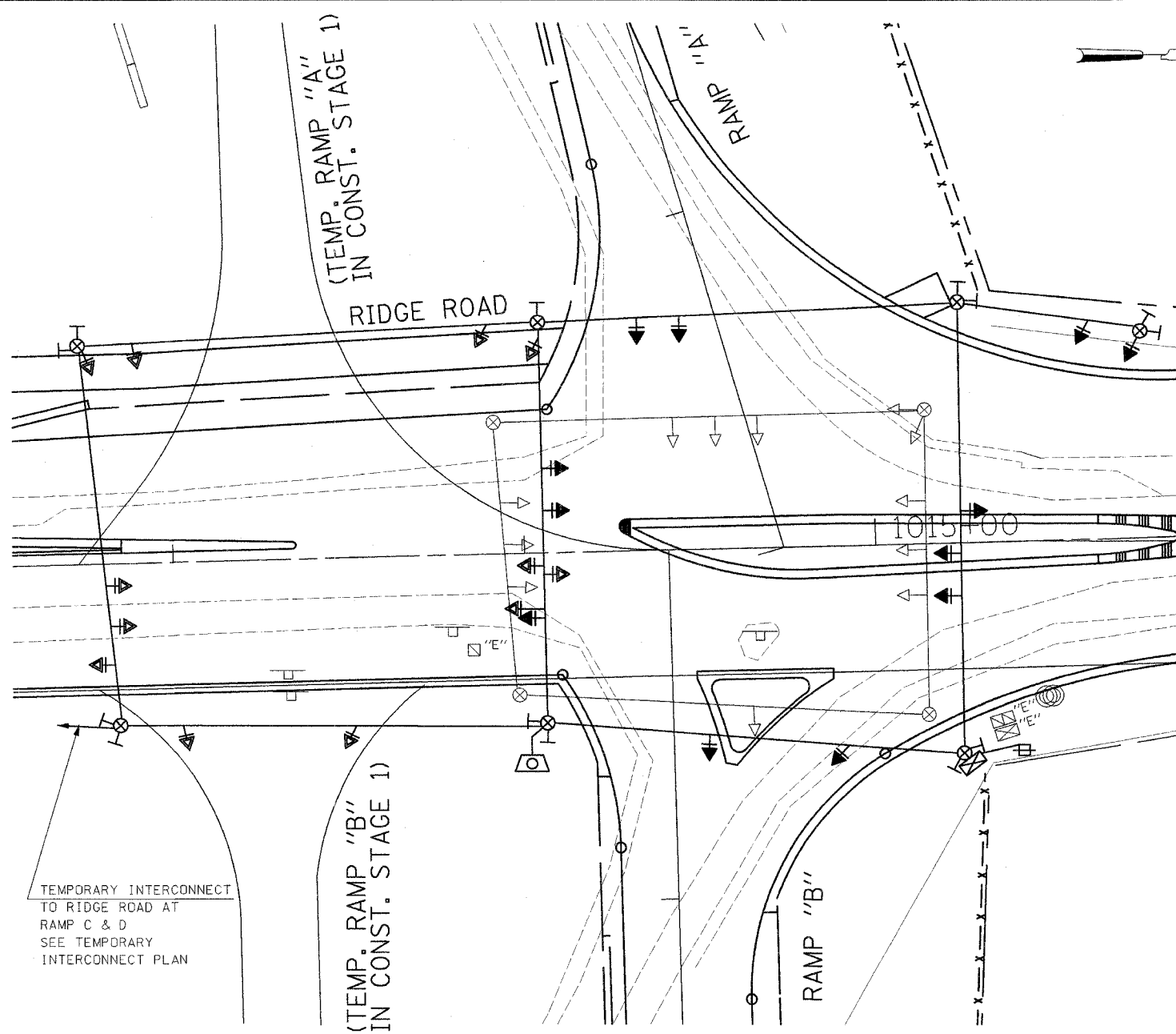
1. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION. CALL J.U.L.I.E. AT 800-892-0123. THE CONTRACTOR SHALL ALSO VERIFY THAT NO CONFLICTS WITH PROPOSED STORM SEWER, CONDUITS, ETC. AND THE TEMPORARY WOOD POLES WILL EXIST.
2. THE TRAFFIC SIGNAL SECTION AT THE ILLINOIS DEPARTMENT OF TRANSPORTATION SHALL BE NOTIFIED AT 815-434-8506 AT LEAST 72 HOURS PRIOR TO TURNING ON ANY FLASHER OR CONTROLLER UNITS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATIONS FOR THE DURATION OF THE SIGNAL WORK.
4. ALL TRAFFIC SIGNAL HEADS SHALL BE 12 INCHES.
5. TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PROPERLY COVERED PRIOR TO INTERSECTION TURN-ON AND AS DIRECTED BY THE ENGINEER DURING OPERATION OF THE TEMPORARY SIGNALS. THIS COST SHALL BE INCLUDED WITH THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.
6. THE CONTRACTOR SHALL ARRANGE FOR A FACTORY OR SUPPLIER REPRESENTATIVE TO BE PRESENT AT THE INTERSECTION WHEN THE TEMPORARY SIGNALS ARE TURNED ON. COST TO BE INCLUDED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.
7. THE ELECTRICAL CONDUCTORS FOR ALL TRAFFIC SIGNAL HEADS SHALL BE SOLID, SOFT COPPER.
8. THE CONTRACTOR IS RESPONSIBLE FOR UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THE COST OF THIS WORK IS TO BE INCLUDED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.
9. ALL TEMPORARY WOOD POLES SHALL BE LOCATED A MINIMUM OF 1.8M (6FT) FROM THE EDGE OF THE PAVEMENT UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
10. THE PROPOSED TEMPORARY TRAFFIC SIGNAL CONTROL CABINET SHALL BE FURNISHED WITH A MANUAL CONTROL SWITCH AND MANUAL CONTROL CORD WITHIN THE POLICE DOOR COMPARTMENT AS INCIDENTAL TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ELECTRICAL SERVICE FOR THE TEMPORARY TRAFFIC SIGNALS. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY PRIOR TO BEGINNING WORK TO OBTAIN THE UTILITY COMPANY REQUIREMENTS FOR THE SERVICE INSTALLATION.
12. ALL TEMPORARY WOOD SUPPORT POLES SHALL BE INSTALLED SO THAT A MINIMUM OF 9.1M (30 FT) OF POLE IS ABOVE THE EXISTING PAVEMENT ELEVATION ADJACENT TO THE POLE. A SUFFICIENT LENGTH OF POLE SHALL BE BURIED AND GUYED TO ALLOW THE INSTALLATION TO WITHSTAND 80 K.P.H. SUSTAINED WIND LOADING.
13. THE CABINET OF SUFFICIENT SIZE SHALL BE INSTALLED BY THE CONTRACTOR AT A LOCATION ACCEPTABLE TO THE ENGINEER. THE CABINET SHALL NOT BE LOCATED ON A SPAN WIRE POLE. IT SHALL BE EITHER GROUND MOUNTED ON A WOODEN FOUNDATION OR POST MOUNTED ON A SEPARATE POST. ALL CABLE WITHIN 3M (10 FT) OF THE GROUND SHALL BE IN CONDUIT. IT IS ACCEPTABLE FOR 4M (13.2 FT) OR LESS LENGTHS OF CONDUIT TO BE LAID ALONG THE GROUND IN AREAS ACCEPTABLE TO THE ENGINEER.
14. A MINIMUM OF 8M (26 FT) OF CABLE SLACK SHALL BE PROVIDED FOR EACH SIGNAL HEAD. NEED ENOUGH SLACK TO BE ABLE TO ADJUST RIDGE ROAD SIGNAL HEADS FROM PRE-STAGE TO STAGE III LOCATIONS.
15. REINSTALL EXISTING STREET NAME SIGNS TO TEMPORARY SPAN WIRE POLES AS DIRECTED BY THE ENGINEER.
16. REINSTALL THE EXISTING OR PROVIDE NEW R-10-12 (LEFT TURN YIELD ON GREEN). 600MM X 750MM SIGNS IMMEDIATELY RIGHT OF THE 5-SECTION SPAN-WIRE SIGNAL HEADS & BETWEEN THE 3-SECTION SPAN WIRE SIGNAL HEADS ON THE FAR SPAN WIRES AT RAMP WHERE PROTECTED/PERMITTED LEFT TURN MOVEMENT EXISTS.
17. INSTALL BRACKET MOUNTED SIGNALS WITH BOTTOM OF SIGNAL 4.5M (15 FT) ABOVE GROUND.
18. TEMPORARY SIGNALS TO BE IN OPERATION BEFORE EXISTING SIGNALS ARE REMOVED.
19. THE MICROWAVE DETECTORS SHALL BE MODEL TC 268 AND SHALL BE MOUNTED ON SPAN WIRE OR MOUNTED ON TEMPORARY WOOD POLE IN LIEU OF SPAN WIRE. THE DETECTOR SHALL CALL TO THE ASSOCIATE PHASE. THE DETECTOR AND ANY EQUIPMENT ASSOCIATED WITH THE MICROWAVE DETECTOR AND TO PLACE CALLS INTO THE CONTROL SHALL BE INCLUDED IN THE "INSTALL TEMPORARY TRAFFIC SIGNAL" PAY ITEM.
20. THE CONTROLLER SHALL BE SET TO A MINIMUM RECALL RIDGE ROAD.
21. A SELF ADHERE PHASING DIAGRAM SHALL BE PLACED INSIDE THE CABINET DOOR.

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH CONTROLLER AND CABINET COMPLETE

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

4 EACH WOOD POLES
 7 EACH SIGNAL HEAD, 1-FACE, 3-SECTION, SPAN WIRE MOUNTED
 3 EACH SIGNAL HEAD, 1-FACE, 5-SECTION, SPAN WIRE MOUNTED
 2 EACH SIGNAL HEAD, 1-FACE, 5-SECTION, BRACKET MOUNTED
 1 EACH SERVICE INSTALLATION
 1 L SUM SPAN WIRE AND TETHER WIRE



TEMPORARY TRAFFIC SIGNAL INSTALLATION

NOTE 1: THE ORIGINAL SIGNAL HEAD PLACEMENT LOCATIONS SHOWN IN THE TEMPORARY TRAFFIC SIGNAL PLAN ARE FOR PRE-STAGE CONSTRUCTION ONLY.

NOTE 2: THE SECONDARY SIGNAL HEAD PLACEMENT LOCATIONS SHOWN IN THE TEMPORARY TRAFFIC SIGNAL PLAN ARE FOR CONSTRUCTION STAGE 1 ONLY. FOR OTHER CONSTRUCTION STAGES, THE SIGNAL HEAD PLACEMENTS SHALL BE AS DIRECTED BY THE ENGINEER.

NOTE 3: TEMPORARY TRAFFIC SIGNAL INSTALLATION FOR RIDGE ROAD AT RAMP "A" AND "B" INTERSECTION SHALL BE PAID AS TEMPORARY TRAFFIC SIGNAL INSTALLATION, ONE EACH FOR ALL PROPOSED CONSTRUCTION STAGES, INCLUDING TEMPORARY RAMP "A" AND TEMPORARY RAMP "B".

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4K)	KENDALL/GRUNDY	243	122
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 66294				

TEMPORARY TRAFFIC SIGNAL LEGEND

- ▲ TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- ▲ TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- ⊗ TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM
- ⊠ TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- ⊕ TEMPORARY SERVICE INSTALLATION
- ⊔ TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- ⊙ PEDESTRIAN PUSHBUTTON DETECTOR
- ⊙ EMERGENCY VEHICLE LIGHT DETECTOR
- ⊙ CONFIRMATION BEACON
- ⊙ VEHICLE DETECTOR, INDUCTION LOOP
- COMMON TRENCH
- UNIT DUCT
- G.S. CONDUIT IN GROUND
- HANDHOLE
- HEAVY DUTY HANDHOLE
- ⊙ MICROWAVE DETECTOR, TC 268

EXISTING EQUIPMENT TO BE REMOVED LEGEND

- ← EXISTING SIGNAL TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING MAST ARM POLE AND FOUNDATION TO BE REMOVED
- ⊠ "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- ⊠ "E" EXISTING HANDHOLE TO BE REMOVED
- ⊠ "E" EXISTING DOUBLE HANDHOLE TO BE REMOVED
- ⊔ PEDESTRIAN SIGNAL TO BE REMOVED
- ⊙ EXISTING PEDESTRIAN PUSH-BUTTON TO BE REMOVED
- ⊙ EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- ⊙ CONFIRMATION BEACON TO BE REMOVED
- ⊠ "E" EXISTING HEAVY DUTY HANDHOLE TO BE REMOVED
- EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED
- ⊗ EXISTING WOOD POLE TO BE REMOVED

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING TRAFFIC SIGNAL CONTROLLER IN THE VILLAGE OF MINOOKA.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

**TEMPORARY TRAFFIC SIGNAL INSTALLATION
 RIDGE ROAD AT RAMP "A" AND "B"**

SCALE: 1"=20'
 DATE: 2/10/06

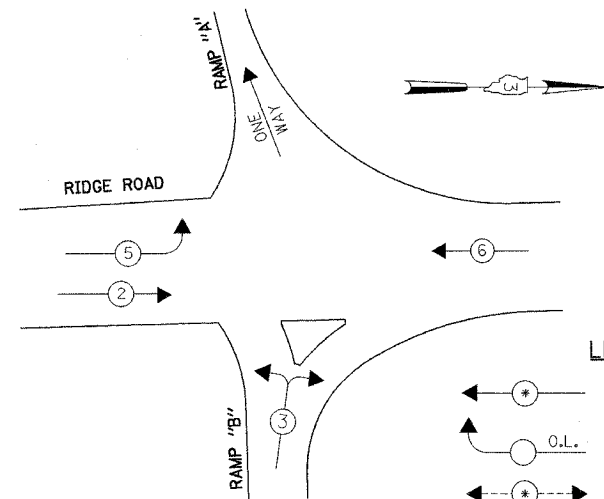
DRAWN BY: SA/KGP
 CHECKED BY: PKG



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-41K)	KENDALL/GRUNDY	243	123
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				

CONTROLLER SEQUENCE

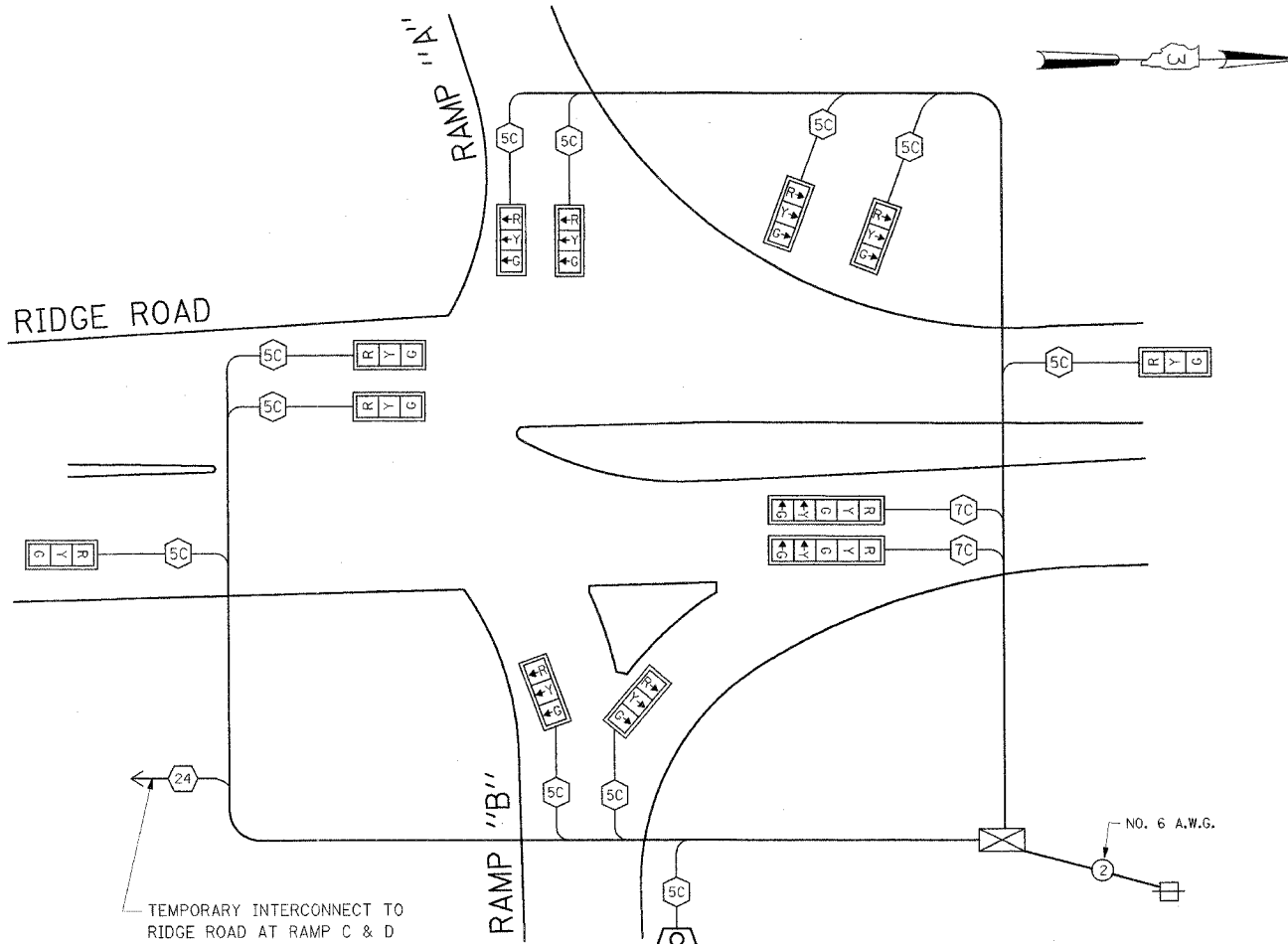
NAME OF INTERSECTION: RIDGE ROAD AT RAMPS "A" AND "B"
 CONTROLLER SPECIFIED: FULL ACTUATED CONTROLLER,
STANDARD SEQUENCE II, 3 PHASES IN TYPE IV CABINET
 REFERRING TO STANDARD 857001, THE VEHICULAR AND PEDESTRIAN PHASES USED ARE DESIGNATED BELOW.
 (SHOW MOVEMENTS AND PHASE NUMBERS)



LEGEND

- ← (1) → DUAL ENTRY PHASE
- ← (O.L.) → OVERLAP
- ← (P) → PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

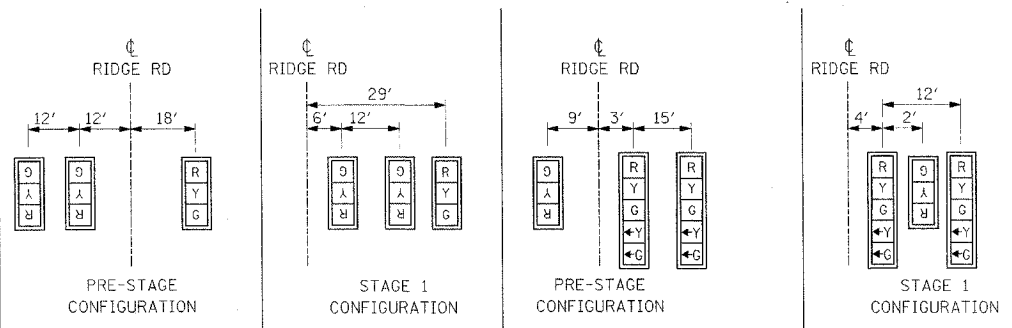
PHASE DESIGNATION DIAGRAM



TEMPORARY CABLE DIAGRAM

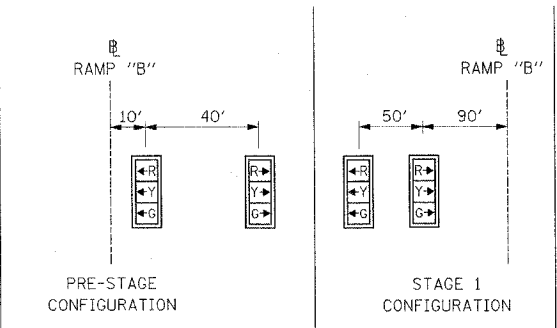
TEMPORARY CABLE DIAGRAM LEGEND

- ⊠ TEMPORARY CONTROLLER CABINET
- ⊞ TEMPORARY SERVICE INSTALLATION
- NUMBER OF CONDUCTORS
- ⬆ YELLOW TURN ARROW
- ⬆ GREEN TURN ARROW
- ⊞ 8" SIGNAL
- ⊞ 12" SIGNAL
- ⬆ VEHICLE PEDESTRIAN MOVEMENT TERMINATOR
- DW W WALK / DON'T WALK SECTION
- ⊞ TRAFFIC SIGNAL BACKPLATE
- ⊞ PUSHBUTTON DETECTOR
- ⊞ VEHICLE DETECTOR, INDUCTION LOOP
- ⊞ OPTICAL DETECTOR
- ⊞ MICROWAVE DETECTOR, TC 26B



SOUTH SPAN WIRE (LOOKING NORTH)

NORTH SPAN WIRE (LOOKING NORTH)



EAST SPAN WIRE (LOOKING WEST)

WEST SPAN WIRE (LOOKING WEST)

SCHEDULE OF TEMPORARY SIGNAL HEADS

(FOR INFORMATION ONLY, ALL TEMPORARY SIGNALS INCLUDED IN COST OF ITEM: TEMPORARY TRAFFIC SIGNAL INSTALLATION)

ITEM	UNIT	QUANTITY
SIGNAL HEAD, 1-FACE, 3 SECTION, SPAN WIRE MOUNTED	EACH	10
SIGNAL HEAD, 1-FACE, 5 SECTION, SPAN WIRE MOUNTED	EACH	2

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING TRAFFIC SIGNAL CONTROLLER IN THE VILLAGE OF MINOOKA.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

**TEMPORARY CABLE DIAGRAM AND PHASE DESIGNATION DIAGRAM
 RIDGE ROAD AT RAMPS "A" AND "B"**

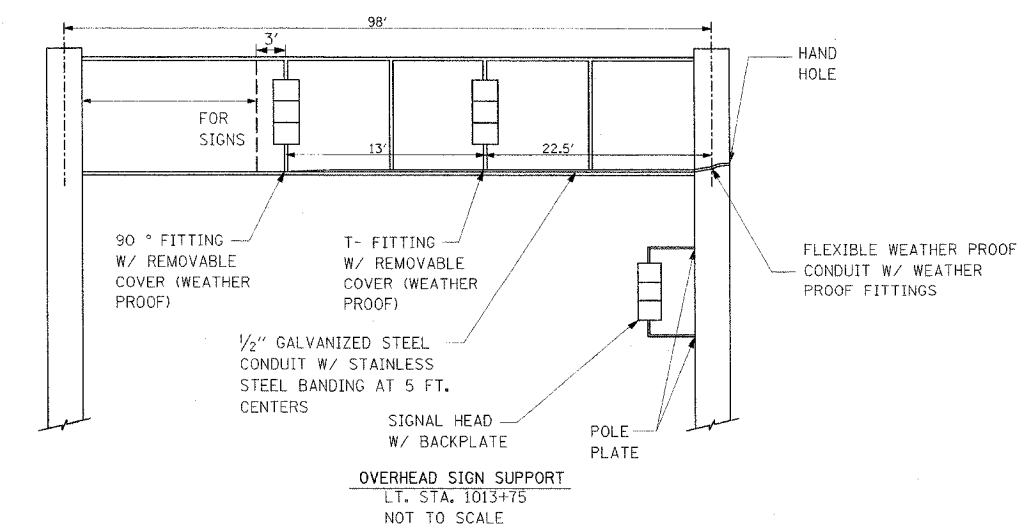
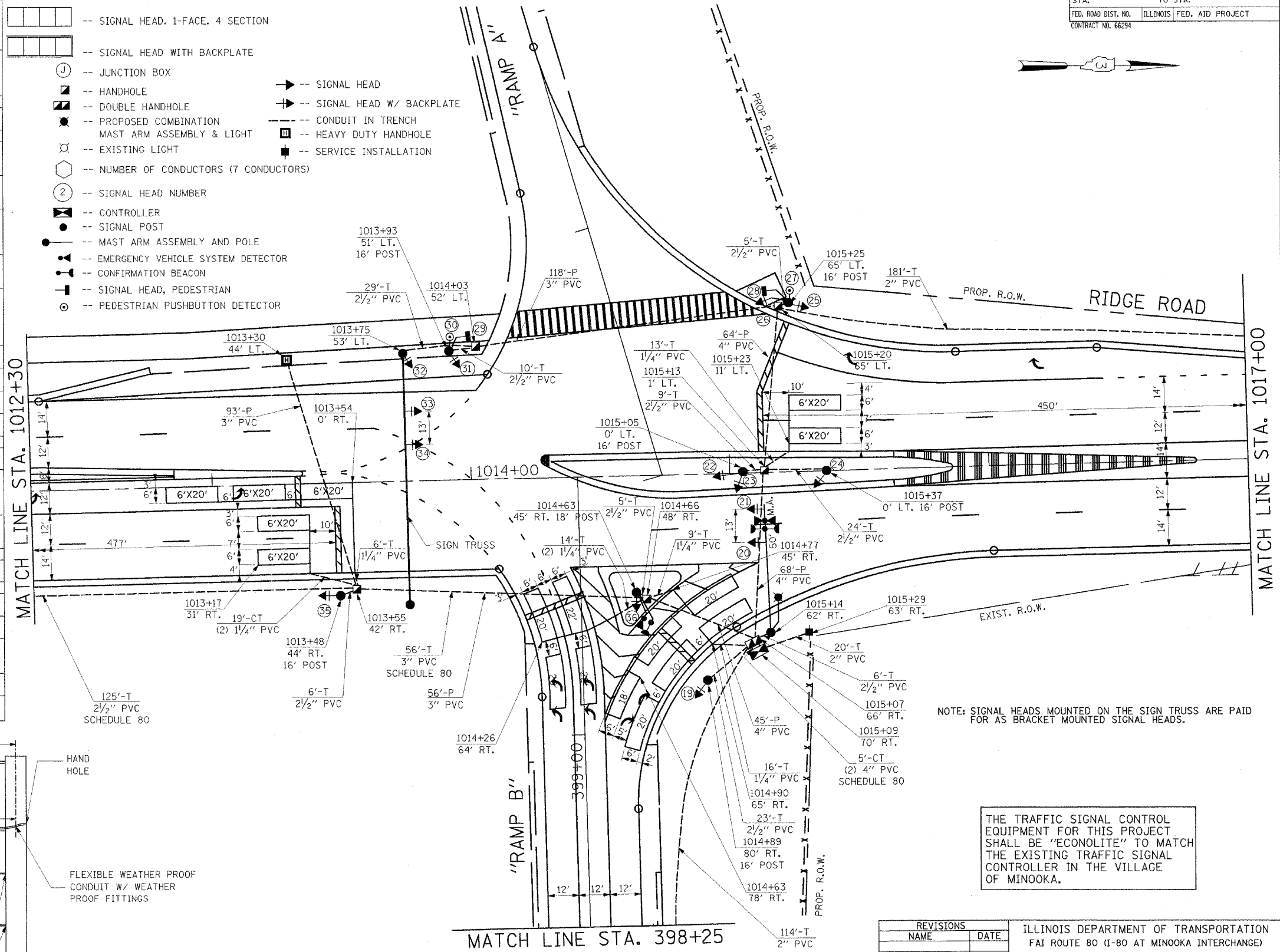
SCALE: NONE
 DATE: 2/10/06
 DRAWN BY: SA/KGP
 CHECKED BY: PKG

GO GANDHI AND ASSOCIATES, INC.
 ENGINEERS AND PLANNERS
 6035 N. NORTHWEST HIGHWAY
 SUITE 306
 CHICAGO, ILLINOIS 60631 TEL. (773) 774-5990

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-41K)	KENDALL/GRUNDY	243	124
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				

- GENERAL NOTES**
FOR TRAFFIC CONTROL SIGNALS
- ALL DETECTOR-LOOPS SHALL CONSIST OF THE NUMBER OF TURNS REQUIRED AND SHALL BE INSTALLED IN STRICT CONFORMITY WITH THE LOOP DETECTOR AMPLIFIER MANUFACTURER'S RECOMMENDATIONS. THE DETECTOR-LOOP SHALL BE MEASURED AS SPECIFIED IN SECTION T421.04 OF THE "STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS".
 - THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY COMPONENTS OF THE TRAFFIC SIGNAL SYSTEM. FOR LOCATION OF UTILITIES CALL J.U.L.I.E. 1-800-892-0123. FOR LOCATION OF STATE-OWNED UTILITIES CALL I.D.O.T. 815-434-8462.
 - ALL SIGNAL HEADS SHALL HAVE 12" LENSES AND POLYCARBONATE BACKPLATES WITH DEEP BACK FLANGE
 - ALL MAST ARM MOUNTED SIGNAL HEADS SHALL BE MOUNTED WITH THE RED INDICATIONS LEVEL & THE BOTTOM EDGE OF THE BACKPLATE 16"-6" (MIN) ABOVE THE CROWN OF THE ROADWAY.
 - THE EXACT LOCATION OF DETECTOR-LOOP TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
 - A 1/4" DIAMETER CONTINUOUS NYLON ROPE SHALL BE FURNISHED AND LEFT IN PLACE IN ALL CONDUITS BETWEEN JUNCTION BOXES AND FOUNDATIONS OR CONTROLLER AS INCIDENTAL TO RESPECTIVE ELECTRICAL CABLE PAY ITEM.
 - THE PROPOSED TRAFFIC SIGNAL CONTROL CABINET SHALL BE FURNISHED WITH MANUAL CONTROL SWITCH AND MANUAL CORD WITHIN THE POLICE DOOR COMPARTMENT AS INCIDENTAL TO THE CONTROLLER PAY ITEM.
 - THE CONTRACTOR SHALL ARRANGE FOR A FACTORY OR SUPPLIER REPRESENTATIVE TO BE PRESENT AT THE INTERSECTION WHEN THE SIGNAL IS TURNED ON AS INCIDENTAL TO THE CONTROLLER PAY ITEM. HE SHALL BE CAPABLE OF MAKING CERTAIN THAT THE CONTROL EQUIPMENT IS WORKING TO THE SATISFACTION OF THE ENGINEER.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ELECTRICAL SERVICE FOR THE TRAFFIC SIGNALS. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY PRIOR TO BEGINNING WORK TO OBTAIN THE UTILITY COMPANY REQUIREMENTS FOR THE SERVICE INSTALLATION.
 - THE SIGN TRUSS IS PROVIDED WITH TWO ADDITIONAL VERTICAL SIGN BRACKETS TO BE USED FOR THE INSTALLATION OF THE SIGNAL HEADS TO THE TRUSS. THE LOCATION OF THESE TWO BRACKETS IS APPROXIMATELY 22.5 FEET AND 35.5 FEET FROM THE CENTER OF THE WEST SUPPORT, ANY AND ALL MOUNTING HARDWARE REQUIRED TO INSTALL THE SIGNALS ON THE TRUSS SIGN BRACKETS SHALL BE INCIDENTAL TO THE SIGNAL HEAD PAY ITEM.
 - ALL THREADS OF BOLTS USED IN TRAFFIC POLE ASSEMBLIES SHALL BE COATED WITH A NON-LEAD BASE ANTI-SIEZE COMPOUND SIMILAR TO LEAD PLATE PRIOR TO ASSEMBLING.
 - ALL CONDUIT IN TRENCH SHALL BE P.V.C. ALL CONDUIT PUSHED SHALL BE P.V.C. SCHEDULE 80 ALL CONDUIT ATTACHED TO STRUCTURES SHALL BE GALVANIZED STEEL.
 - THE DEPARTMENT OF TRANSPORTATION (815-434-8506) SHALL BE NOTIFIED AT LEAST 72 HOURS PRIOR TO THE TURNING ON OF THE CONTROLLER UNIT.
 - NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PLACING CONDUIT AT GREATER THAN 2 FEET MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.
 - THE ELECTRICAL CONDUCTORS FOR ALL TRAFFIC SIGNAL HEADS SHALL BE SOLID, SOFT COPPER.
 - THE CONTROLLER CABINET SHALL BE PLACED SO THAT A TECHNICIAN MAY SEE THE INTERSECTION OVER THE TOP OF THE CABINET WHILE WATCHING THE COMPONENTS IN THE CABINET.
 - THE CONTRACTOR SHALL PROVIDE 3 FEET SLACK CABLE IN EACH TRAFFIC SIGNAL STRUCTURE; MAST ARM, POST, CONTROLLER. THE SLACK, WHICH IS IN ADDITION TO THE VERTICAL LENGTH OF CABLE DEFINED IN THE SPECIFICATIONS, SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH CABLE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING THE NEW ELECTRICAL LOADS FOR THE UNMETERED SERVICES ON THIS IMPROVEMENT TO THE UTILITY COMPANY AND AGENCY RESPONSIBLE FOR ENERGY CHARGES.
 - ALL LED ARROW SECTIONS SHALL HAVE 3 ROWS.
 - THE LENGTH OF DETECTOR LOOP CABLE FROM THE CURB TO THE JUNCTION BOX OR HANDHOLE IS INCIDENTAL TO THE DETECTOR LOOP PAY ITEM.
 - THE DOUBLE HANDHOLE SHALL BE FURNISHED WITH RECESSED, INTEGRAL, HINGED LIDS.
 - THE CONTRACTOR SHALL PROVIDE A SELF-ADHERED PHASE DIAGRAM ON THE INSIDE OF THE CONTROLLER CABINET DOOR.
 - THE CONTRACTOR SHALL VERIFY THAT THE GRADE IS NOT LOWERED MUCH BY THE TRAFFIC POST SO NO HEIGHT IS LOST.
 - PRIOR TO INSTALLATION THE CONTRACTOR SHALL STAKE THE SERVICE, MAST ARM AND SIGNAL POLE LOCATIONS, PAINT THE DETECTOR LOOP LOCATIONS AND CALL THE DEPARTMENT OF TRANSPORTATION (815-434-8506) FOR INSPECTION OF PLACEMENT.
 - THE CONTRACTOR SHALL LABEL THE FIBER OPTIC WITH DIRECTION AND ASSIGNMENT NUMBER. ALSO ALL FIBERS SHALL BE TERMINATED INCIDENTAL TO FIBER PAY ITEM.
 - CONTRACTOR SHALL VERIFY WITH MINOOKA FIRE PROTECTION DISTRICT (815-467-5637) FOR THE BRAND OF EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT TO BE INSTALLED PRIOR TO THE CONTRACT BIDDING.

- LEGEND**
- SIGNAL HEAD, 1-FACE, 3 SECTION
 - SIGNAL HEAD, 1-FACE, 4 SECTION
 - SIGNAL HEAD WITH BACKPLATE
 - JUNCTION BOX
 - HANDHOLE
 - DOUBLE HANDHOLE
 - PROPOSED COMBINATION MAST ARM ASSEMBLY & LIGHT
 - EXISTING LIGHT
 - NUMBER OF CONDUCTORS (7 CONDUCTORS)
 - SIGNAL HEAD NUMBER
 - CONTROLLER
 - SIGNAL POST
 - MAST ARM ASSEMBLY AND POLE
 - EMERGENCY VEHICLE SYSTEM DETECTOR
 - CONFIRMATION BEACON
 - SIGNAL HEAD, PEDESTRIAN
 - PEDESTRIAN PUSHBUTTON DETECTOR
 - SIGNAL HEAD
 - SIGNAL HEAD W/ BACKPLATE
 - CONDUIT IN TRENCH
 - HEAVY DUTY HANDHOLE
 - SERVICE INSTALLATION



NOTE: SIGNAL HEADS MOUNTED ON THE SIGN TRUSS ARE PAID FOR AS BRACKET MOUNTED SIGNAL HEADS.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING TRAFFIC SIGNAL CONTROLLER IN THE VILLAGE OF MINOOKA.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

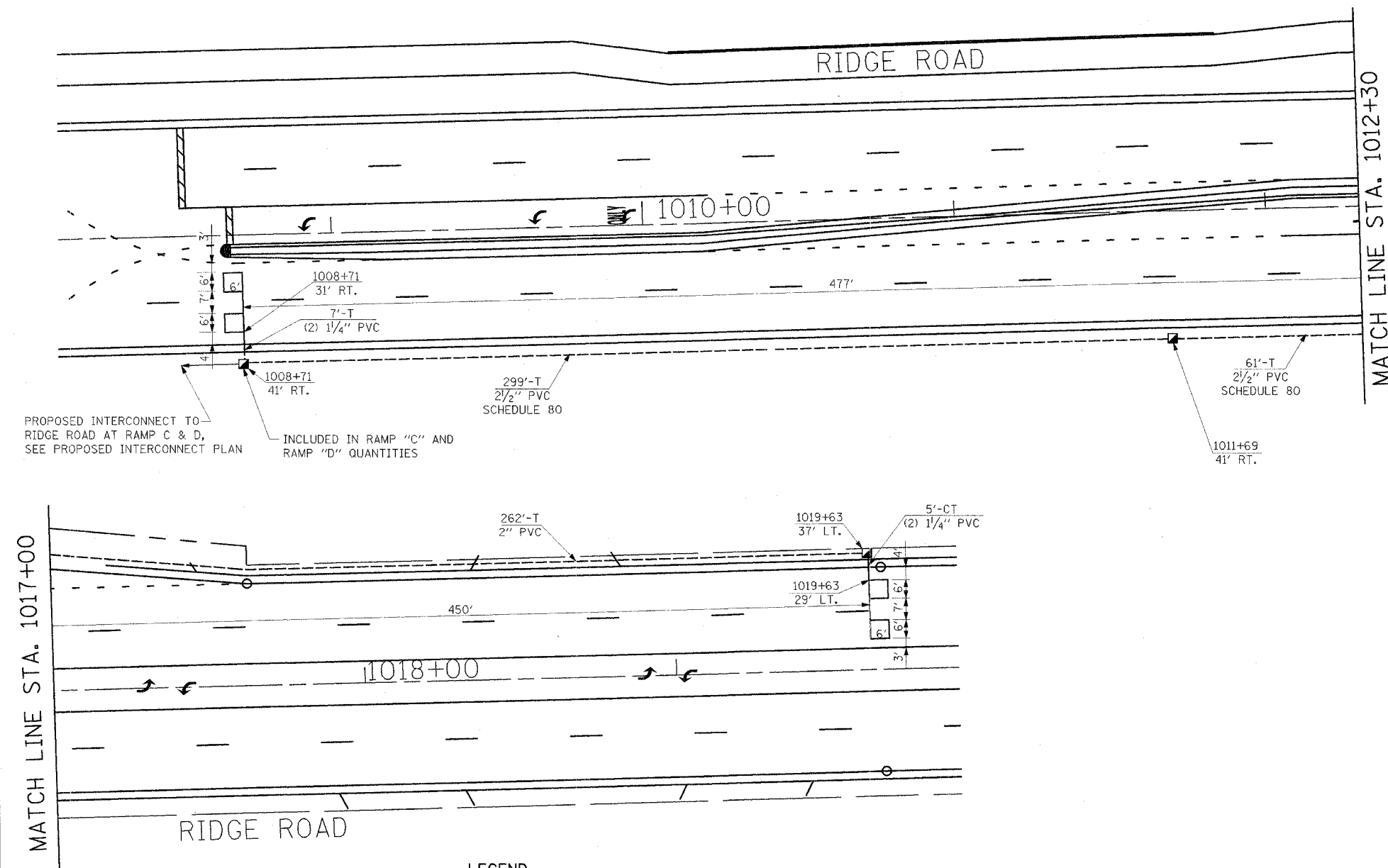
TRAFFIC SIGNAL INSTALLATION
RIDGE ROAD AT RAMPS "A" AND "B"
(SHEET 1 OF 2)

SCALE: 1"=20'
DATE: 2/10/06

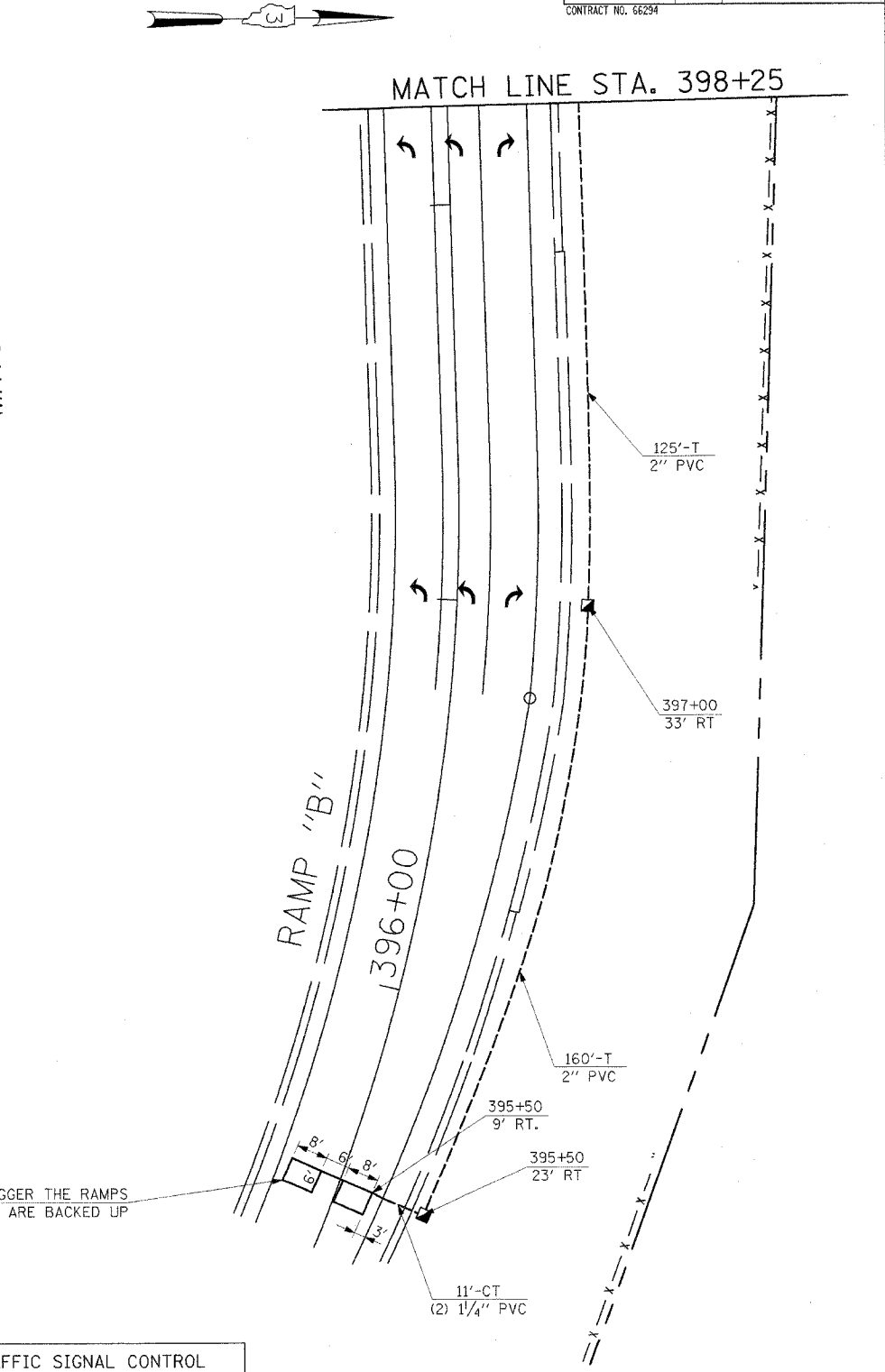
DRAWN BY: SA/KGP
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GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
8035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-590

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	125
STA. TO STA.		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO.		CONTRACT NO. 66294		



- LEGEND**
- SIGNAL HEAD, 1-FACE, 3 SECTION
 - SIGNAL HEAD, 1-FACE, 4 SECTION
 - SIGNAL HEAD WITH BACKPLATE
 - JUNCTION BOX
 - HANDHOLE
 - DOUBLE HANDHOLE
 - PROPOSED COMBINATION MAST ARM ASSEMBLY & LIGHT
 - EXISTING LIGHT
 - NUMBER OF CONDUCTORS (7 CONDUCTORS)
 - SIGNAL HEAD NUMBER
 - CONTROLLER
 - SIGNAL POST
 - MAST ARM ASSEMBLY AND POLE
 - SIGNAL HEAD
 - SIGNAL HEAD W/ BACKPLATE
 - CONDUIT IN TRENCH



THE CONTROLLER SHALL TRIGGER THE RAMP TO GO GREEN IF THE VEHICLES ARE BACKED UP

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING TRAFFIC SIGNAL CONTROLLER IN THE VILLAGE OF MINOOKA.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

**TRAFFIC SIGNAL INSTALLATION
RIDGE ROAD AT RAMP "A" AND "B"
(SHEET 2 OF 2)**

SCALE: 1"=20'
DATE: 2/10/06

DRAWN BY: SA/KGP
CHECKED BY: PKG



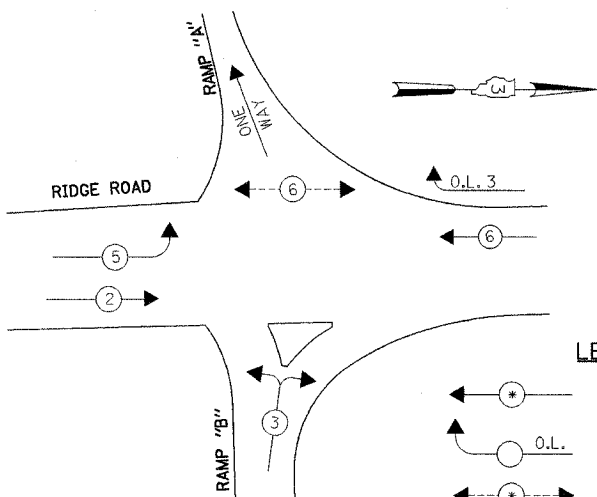
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-49K)	KENDALL/GRUNDY	243	126
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 66294				

QUANTITY	UNIT	ITEM
9	SO FT	SIGN PANEL - TYPE 1
148	FOOT	CONDUIT IN TRENCH, 1/4" DIA., PVC
862	FOOT	CONDUIT IN TRENCH, 2" DIA., PVC
119	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., PVC
485	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., PVC, SCHEDULE 80
56	FOOT	CONDUIT IN TRENCH, 3" DIA., PVC, SCHEDULE 80
10	FOOT	CONDUIT IN TRENCH, 4" DIA., PVC, SCHEDULE 80
264	FOOT	CONDUIT PUSHED, 3" DIA., PVC, SCHEDULE 80
177	FOOT	CONDUIT PUSHED, 4" DIA., PVC, SCHEDULE 80
9	EACH	CONCRETE HANDHOLE
1	EACH	CONCRETE HEAVY-DUTY HANDHOLE
1	EACH	CONCRETE DOUBLE HANDHOLE
1520	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
1	EACH	TRANSCEIVER-FIBER OPTIC
494	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
738	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
1729	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
977	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
2503	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
39	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
6	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 50 FT.
28	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE D
13	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
14	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC
10	EACH	INDUCTIVE LOOP DETECTOR
1408	FOOT	DETECTOR LOOP, TYPE 1
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER
2	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
2	EACH	REMOVE EXISTING HANDHOLE
1	EACH	REMOVE EXISTING CONCRETE FOUNDATION
1	EACH	UNINTERRUPTED POWER SUPPLY
1	EACH	SERVICE INSTALLATION, POLE MOUNT
681	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
226	FOOT	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED
7	EACH	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
2	EACH	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
1	EACH	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED
4	EACH	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
2	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED

* 100% COST TO VILLAGE OF MINOOKA

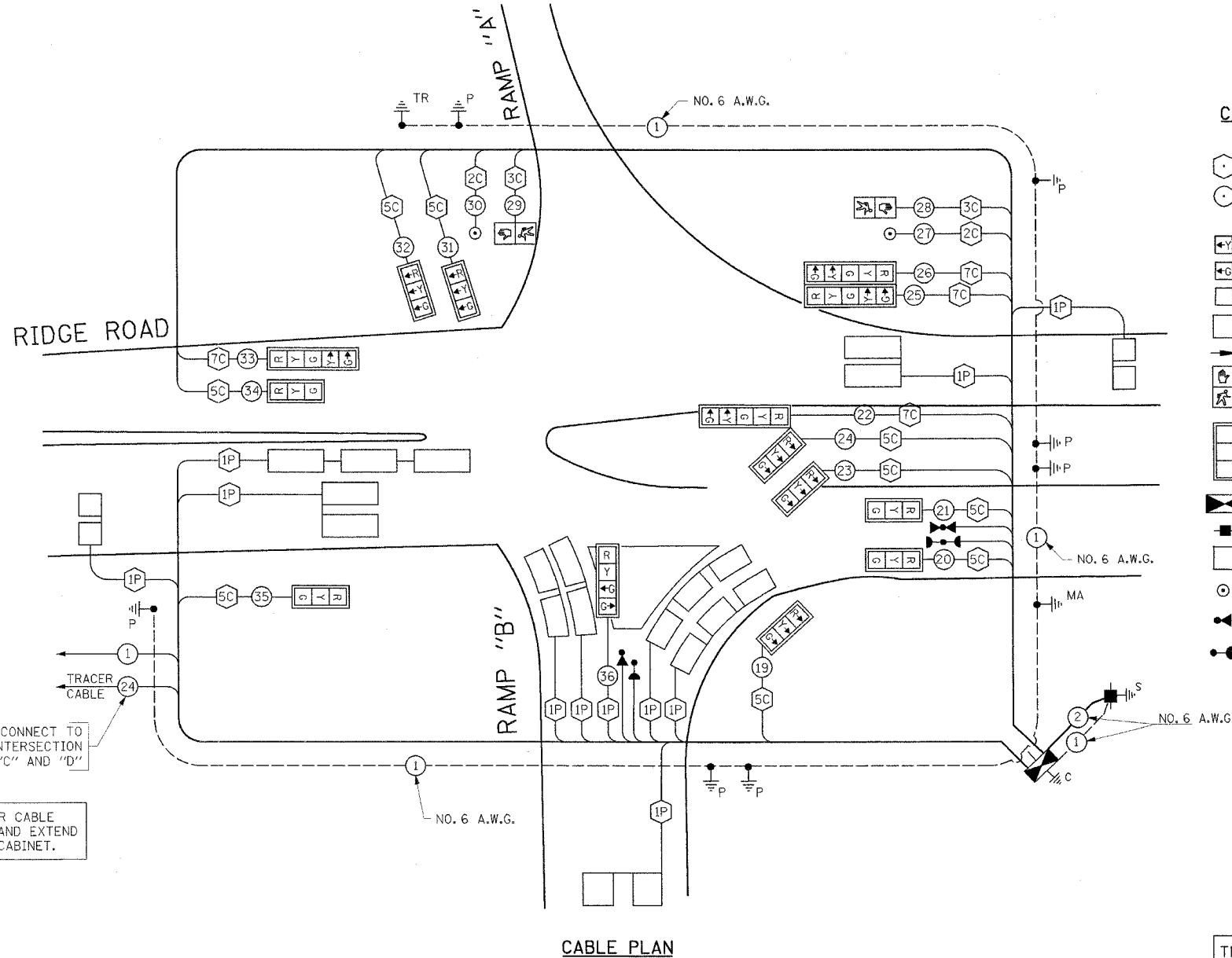
CONTROLLER SEQUENCE

NAME OF INTERSECTION: RIDGE ROAD AT RAMPS "A" AND "B"
 CONTROLLER SPECIFIED: FULL ACTUATED CONTROLLER,
 STANDARD SEQUENCE II, 3 PHASES IN TYPE IV CABINET
 REFERRING TO STANDARD 857001, THE VEHICULAR AND PEDESTRIAN
 PHASES USED ARE DESIGNATED BELOW.
 (SHOW MOVEMENTS AND PHASE NUMBERS)



LEGEND

← * →	DUAL ENTRY PHASE
← O.L. →	OVERLAP
← * →	PEDESTRIAN PHASE
*	NUMBER REFERS TO ASSOCIATED PHASE



CABLE PLAN LEGEND

- ⬡ NUMBER OF CONDUCTORS
- PROPOSED CABLE NUMBER
- .. CABLE NUMBER
- ➡ YELLOW TURN ARROW
- ➡ GREEN TURN ARROW
- ⬜ 8" SIGNAL
- ⬜ 12" SIGNAL
- ➡ VEHICLE PEDESTRIAN MOVEMENT TERMINATOR
- ⬜ 12' (300mm) PEDESTRIAN SIGNAL SECTION
- ⬜ TRAFFIC SIGNAL BACKPLATE
- ⬜ CONTROLLER CABINET
- ⬜ SERVICE INSTALLATION
- ⬜ VEHICLE DETECTOR, INDUCTION LOOP
- ⊙ PUSH-BUTTON DETECTOR
- ⬜ EMERGENCY VEHICLE LIGHT DETECTOR
- ⬜ CONFIRMATION BEACON

INTERCONNECT TO SOUTH RAMPS INTERSECTION
 RIDGE ROAD AT RAMPS "C" AND "D"
 THE END OF THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING TRAFFIC SIGNAL CONTROLLER IN THE VILLAGE OF MINOOKA.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

**CABLE PLAN AND PHASE DESIGNATION DIAGRAM
 RIDGE ROAD AT RAMPS "A" AND "B"**

SCALE: NONE
 DATE: 2/10/06
 DRAWN BY: SA/KGP
 CHECKED BY: PKG

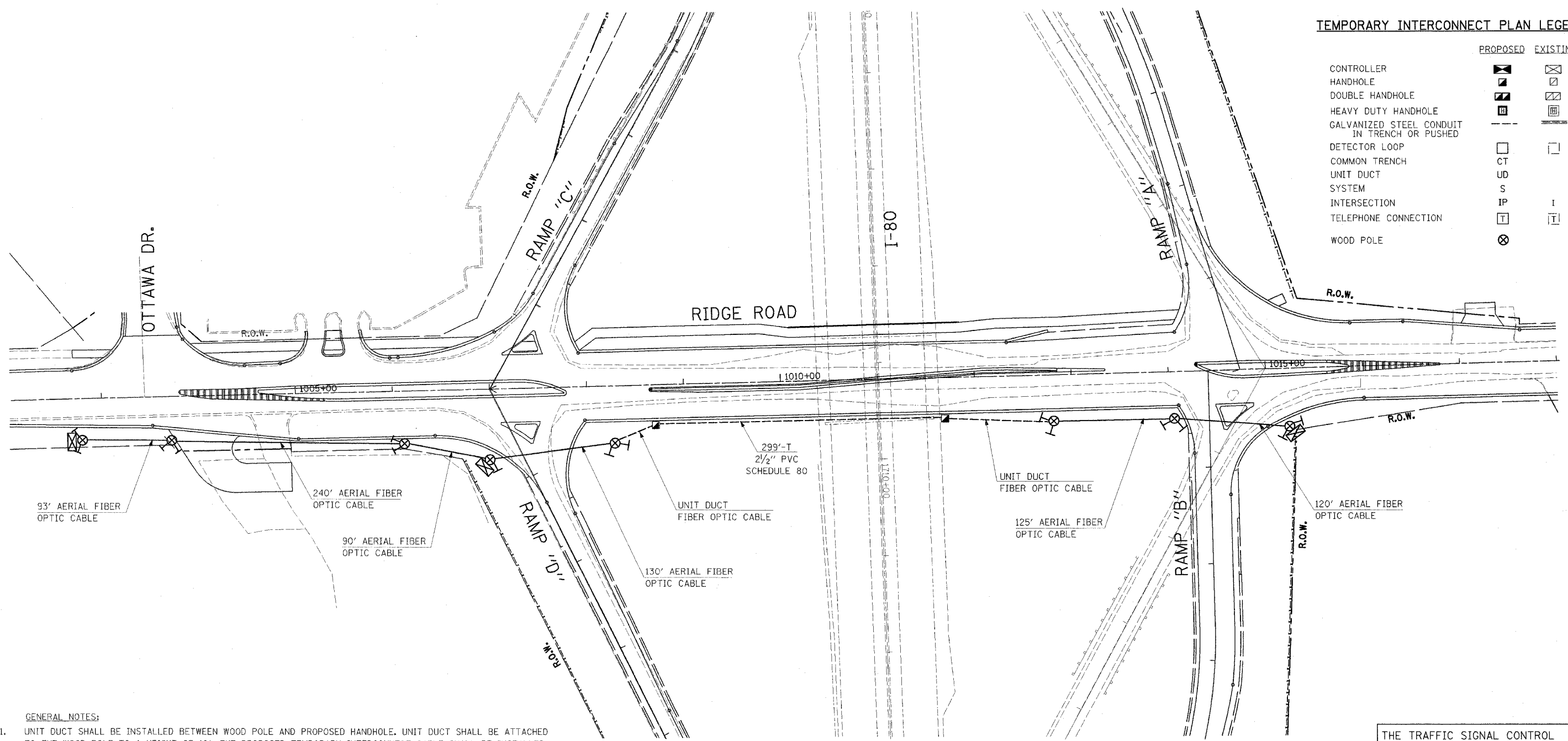
GO GANDHI AND ASSOCIATES, INC.
 ENGINEERS AND PLANNERS
 6035 N. NORTHWEST HIGHWAY
 SUITE 306
 CHICAGO, ILLINOIS 60631 TEL. (773) 774-590

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	128
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				



TEMPORARY INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER		
HANDHOLE		
DOUBLE HANDHOLE		
HEAVY DUTY HANDHOLE		
GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED		
DETECTOR LOOP		
COMMON TRENCH	CT	
UNIT DUCT SYSTEM	UD S	
INTERSECTION	IP	I
TELEPHONE CONNECTION		
WOOD POLE		



TRAFFIC SIGNAL INTERCONNECT

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING TRAFFIC SIGNAL CONTROLLER IN THE VILLAGE OF MINOOKA.

GENERAL NOTES:

- UNIT DUCT SHALL BE INSTALLED BETWEEN WOOD POLE AND PROPOSED HANDHOLE. UNIT DUCT SHALL BE ATTACHED TO THE WOOD POLE TO A HEIGHT OF 10'. THE PROPOSED TEMPORARY INTERCONNECT CABLE SHALL BE INSTALLED IN THE PROPOSED PVC CONDUIT BETWEEN THE PROPOSED HANDHOLES AND THE UNIT DUCTS BETWEEN THE PROPOSED HANDHOLES AND WOOD POLES. THE COST OF THE TEMPORARY INTERCONNECT SYSTEM, INCLUDING THE UNIT DUCTS, SHALL BE INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNALS.
- THE CONDUIT AND HANDHOLE QUANTITIES FOR "TEMPORARY TRAFFIC SIGNAL INTERCONNECT" SHOWN IN THIS PLAN ARE EITHER INCLUDED IN THE RIDGE ROAD AT RAMPS "A" & "B" OR RIDGE ROAD AT RAMPS "C" & "D" TRAFFIC SIGNAL QUANTITIES AND SHALL BE PAID FOR AT THE APPROPRIATE UNIT PRICE UNDER THE TRAFFIC SIGNAL QUANTITIES.
- THE TEMPORARY TRAFFIC SIGNAL SYSTEM SHALL BE OPTIMIZED AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AS "OPTIMIZE TRAFFIC SIGNAL SYSTEM" AND IS INCLUDED UNDER TRAFFIC SIGNAL INTERCONNECT QUANTITIES.

REVISIONS	
NAME	DATE

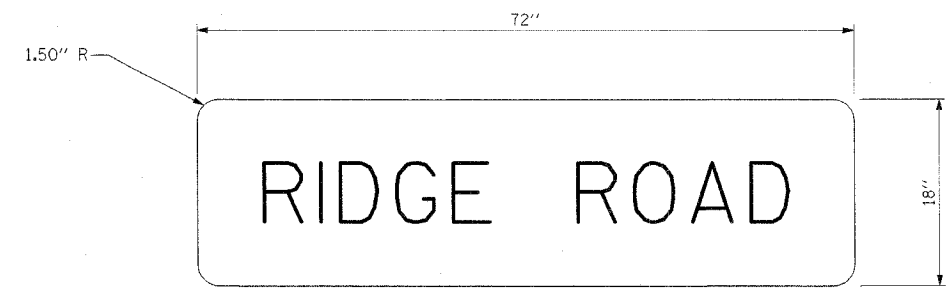
ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
TEMPORARY TRAFFIC SIGNAL INTERCONNECT
 RIDGE ROAD FROM
 NORTH RAMPS "A" AND "B"
 TO OTTAWA DRIVE

SCALE: 1"=50'
 DATE: 2/10/06

DRAWN BY: SA/KGP
 CHECKED BY: PKG

GO GANDHI AND ASSOCIATES, INC.
 ENGINEERS AND PLANNERS
 6035 N. NORTHWEST HIGHWAY
 SUITE 306
 CHICAGO, ILLINOIS 60631 TEL: (773) 774-5910

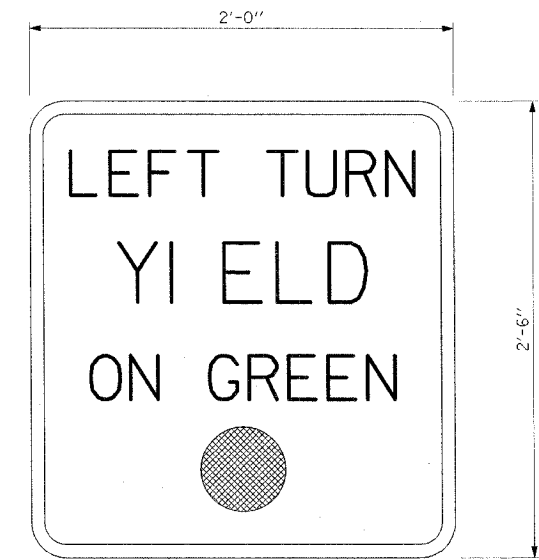
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	129
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



RIDGE ROAD

FRACTIONS SHOWN ARE SIXTEENTHS
 0.6" BORDER
 8" D SERIES LETTERS
 TYPE A SHEETING
 2 SIGN REQUIRED
 9.0 SQ FT EACH

STREET NAME SIGN DETAILS

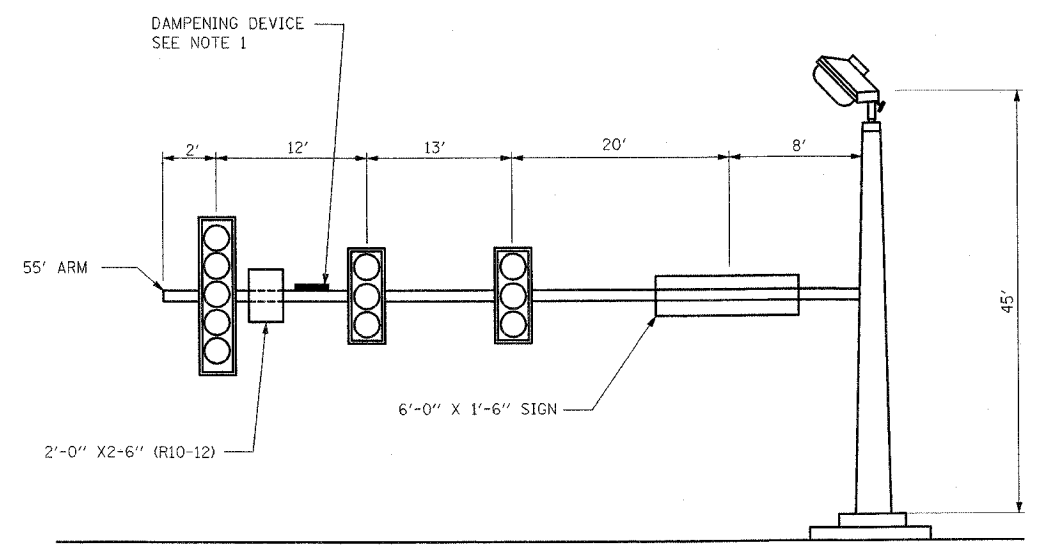


R10-12

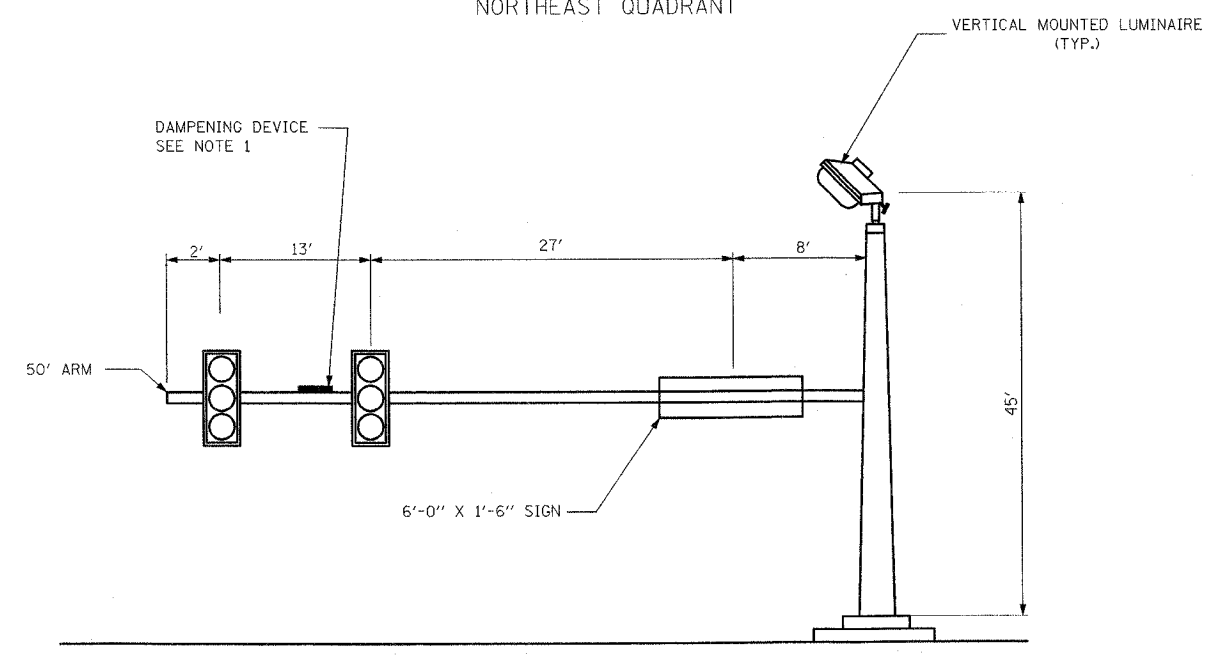
1 SIGN REQUIRED; 5 SQ FT EACH
 THIS SIGN SHALL BE LOCATED
 0'-9" TO THE RIGHT OF EACH
 5' SECTION MAST ARM MOUNTED
 LEFT TURN SIGNAL

NOTE:

- THIS NOTE APPLIES TO ALL MAST ARM LOADING DIAGRAMS. DAMPENING DEVICES SHALL CONSIST OF 24"X36" TYPE 1 UNPAINTED ALUMINUM SIGN STOCK MOUNTED HORIZONTALLY ON TOP OF MAST ARM AND STREET LIGHTING ARM WITH 36" LENGTH PERPENDICULAR TO THE MAST ARM. COST OF DAMPENING DEVICE IS INCLUDED IN THE MAST ARM PAY ITEM.



RIDGE ROAD AT RAMPS "C" AND "D"
 MAST ARM LOADING DIAGRAM
 NORTHEAST QUADRANT



RIDGE ROAD AT RAMPS "A" AND "B"
 MAST ARM LOADING DIAGRAM
 NORTHEAST QUADRANT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)


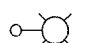
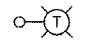
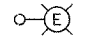
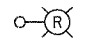
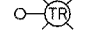

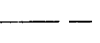
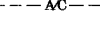



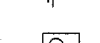


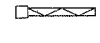
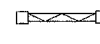
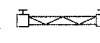
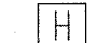
SCHEDULE OF QUANTITIES AND
 MAST ARM MOUNTED STREET NAME SIGNS
 RIDGE ROAD AT RAMPS "C" AND "D", AND
 RIDGE ROAD AT RAMPS "A" AND "B"

SCALE: NONE
 DATE: 2/10/06
 DRAWN BY: SA/KGP
 CHECKED BY: PKG

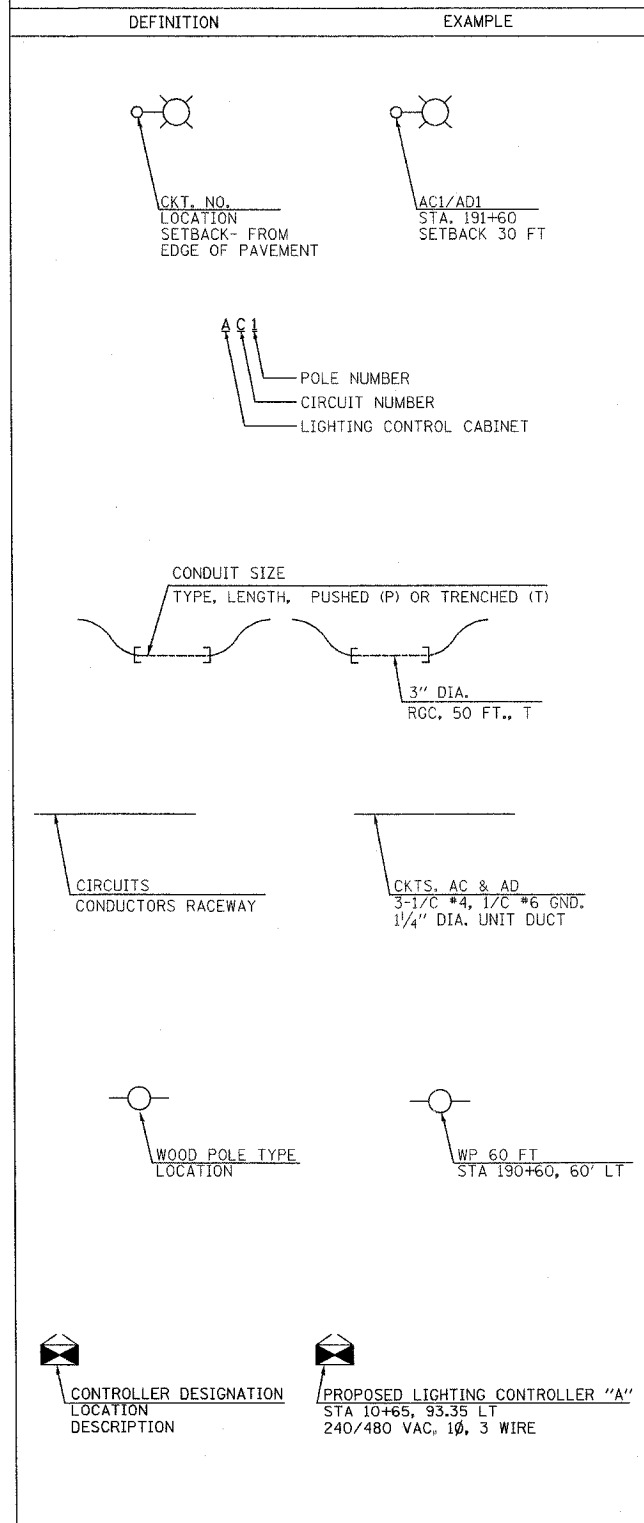
GO GANDHI AND ASSOCIATES, INC.
 ENGINEERS AND PLANNERS
 6035 N. NORTHWEST HIGHWAY
 SUITE 306
 CHICAGO, ILLINOIS 60631 TEL. (773) 774-590

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEET SHEETS	NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	130
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				

LEGEND

-  PROPOSED COMBINATION LIGHTING UNIT
45' M.H., TENON MOUNTED, 250W, 240V HPS LUMINAIRE
-  PROPOSED IDOT LIGHTING UNIT
45' M.H., TENON MOUNTED, 250W, 240V HPS LUMINAIRES
-  TEMPORARY LIGHTING UNIT,
45' M.H., TENON MOUNTED, 250W, 240V HPS LUMINAIRE
-  EXISTING LIGHTING UNIT TO REMAIN
-  EXISTING LIGHTING UNIT TO BE REMOVED
-  TEMPORARY LIGHTING UNIT TO BE REMOVED
-  RIGID GALVANIZED STEEL CONDUIT (RGC)
PUSHED (P), OR TRENCHED (T)
SIZE AS INDICATED
-  UNIT DUCT, AS SPECIFIED IN PLANS
-  AERIAL ELECTRIC CABLE
-  PROPOSED LIGHTING CONTROLLER
-  EXISTING LIGHTING CONTROLLER
-  ELECTRIC UTILITY POLE
-  ELECTRIC GROUND ROD
-  UNDERPASS LUMINAIRE
-  PROPOSED ELECTRIC JUNCTION BOX
-  CANTILEVER SIGN STRUCTURE WITH
HIGH PRESSURE SODIUM LUMINAIRES,
OR AS SPECIFIED IN THE PLANS
-  OVERHEAD, TRUSS TYPE SIGN STRUCTURE
HIGH PRESSURE SODIUM LUMINAIRES,
OR AS SPECIFIED IN THE PLANS
-  BRIDGE MOUNTED SIGN STRUCTURE
HIGH PRESSURE SODIUM LUMINAIRES,
OR AS SPECIFIED IN THE PLANS
-  PROPOSED LIGHT DUTY IN GROUND CONCRETE
JUNCTION BOX, STANDARD 813001

CALL-OUT SAMPLES



ABBREVIATIONS

SYMBOL	DESCRIPTION
AC	ALTERNATING CURRENT
A/C	AERIAL CABLE
AFG	ABOVE FINISHED GRADE
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CM	CENTIMETER
CNC	COILABLE NONMETALLIC CONDUIT
CT	CURRENT TRANSFORMER
CP	CONTROL PANEL
DA	DAVIT ARM
DC	DIRECT CURRENT
DIA	DIAMETER
DP	DISTRIBUTION PANEL
E	EXISTING UNIT TO REMAIN
ECA	ELECTRIC CABLE ASSEMBLY
EM	EXISTING UNIT TO BE MODIFIED (e.g. NEW LUMINAIRE, BALLAST OR MAST ARM)
ER	EXISTING RELOCATED UNIT
ET	EXISTING TEMPORARY UNIT TO REMAIN
ETR	EXISTING TEMPORARY RELOCATED UNIT
FT	FEET OR FOOT
FND BW	FOUNDATION BARRIER WALL
FND BW OS	FOUNDATION BARRIER WALL OFFSET
FND CON	FOUNDATION CONCRETE
FND CON OS	FOUNDATION CONCRETE OFFSET
FND MET	FOUNDATION METAL
FND PW	FOUNDATION PARAPET WALL
FU	FUSE
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
JB	JUNCTION BOX
KVA	KILOVOLT-AMPERE
KW	KILOWATTS
M	METER
MA	MAST ARM
MM	MILLIMETER
MH	MOUNTING HEIGHT
NO. #	NUMBER
P	PROPOSED
PB	PUSH BUTTON
PNL	PANEL
PVCC RGC	PVC COATED RIGID GALVANIZED CONDUIT
PT	POTENTIAL TRANSFORMER
R	EXISTING UNIT TO BE REMOVED (OWNER SALVAGED U.N.O.)
RR	EXISTING UNIT TO BE REMOVED AND REINSTALLED
RECP	RECEPTACLE
RGC	RIGID GALVANIZED CONDUIT
SEL SW	SELECTOR SWITCH
SPARE	SPARE
SPACE	SPACE
SS	STAINLESS STEEL
STA	STATION
T	TEMPORARY LIGHTING UNIT
TB	TRANSFORMER BASE
TMP	TEMPORARY
TR	TEMPORARY UNIT TO BE REMOVED, SALVAGE EQUIPMENT AS SPECIFIED
TRR	TEMPORARY UNIT TO BE REMOVED AND RELOCATED
TUR	TEMPORARY UNIT ON UTILITY POLE TO BE REMOVED
UD	UNIT DUCT
U.N.O.	UNLESS NOTED OTHERWISE
WP	WOOD POLE
XFMR	TRANSFORMER

GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL OF THE INFORMATION SHOWN ON THE CONTRACT DRAWINGS, WHICH WOULD AFFECT THE WORK UNDER THIS CONTRACT.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS PROJECT, SPECIFICALLY AS THEY RELATE TO LUMP SUM ITEMS AND UNIT PRICE ITEMS.
3. ALL NEW CONDUIT, UNIT DUCTS, DIRECT BURIAL CABLE, AND APPURTENANCES ARE INDICATED DIAGRAMMATICALLY ON THE DRAWINGS. THE ACTUAL LOCATIONS IN THE FIELD SHALL MEET WITH APPROVAL OF THE ENGINEER.
4. THE ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ASSOCIATED SUPPLEMENTAL CONDITIONS.
5. THE SCALE SHOWN ON PLAN DRAWINGS APPLIES ONLY TO THE FULL SIZE PLANS AND NOT TO REDUCED SIZE PLANS.
6. THE CONTRACTOR SHALL FURNISH AND INSTALL LUMINAIRE LAMPS IN ACCORDANCE WITH THE SUPPLIER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE SPECIFICATIONS. THE COST OF THIS WORK AND MATERIAL SHALL BE INCLUDED IN THE APPLICABLE LUMINAIRE PAY ITEM. SEPARATE PAYMENT WILL NOT BE MADE.
7. ALL LUMINAIRES SHALL BE ORIENTED WITH THE OPTICS PERPENDICULAR TO THE ROADWAY UNLESS OTHERWISE INDICATED OR DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE APPLICABLE LUMINAIRE PAY ITEMS. SEPARATE PAYMENT WILL NOT BE MADE.
8. FOR THE EXISTING LIGHT POLE AND FOUNDATIONS THAT ARE TO BE REMOVED, THE ASSOCIATED UNDERGROUND CONDUITS AND CABLE SHALL BE SEPARATED FROM RESPECTIVE FOUNDATIONS AT 760 MM (2.5 FEET) BELOW GRADE AND SHALL BE ABANDONED EXCEPT WHERE INDICATED ON THE LIGHT POLE RELOCATION PLAN FOR RIDGE ROAD. THERE THE FOUNDATIONS SHALL BE COMPLETELY REMOVED AS INDICATED.
9. ALL LIGHTING EQUIPMENT REMOVED AS PART OF THIS CONTRACT SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED TO THE STATE MAINTENANCE FACILITY.
10. CONDUITS AND UNIT DUCTS SHALL BE INSTALLED AT A MINIMUM 760 MM (30 INCHES) DEPTH BELOW GRADE AND POSITIONED IN THE FIELD TO AVOID CONFLICT WITH ROADWAY UNDER DRAINS AND OTHER EXISTING AND PROPOSED UTILITIES. THE CONTRACTOR SHALL INCREASE DEPTH OF UNIT DUCT AND CONDUIT AS REQUIRED AT NO ADDITIONAL COST TO THE STATE/VILLAGE. THE CONTRACTOR SHALL COORDINATE RACEWAY DEPTH WITH THE ELECTRICAL DETAILS AND THE ENGINEER.
11. WHERE MULTIPLE CONDUITS ADJACENT TO EACH OTHER ARE INSTALLED IN A COMMON TRENCH, TRENCH AND BACKFILL WILL NOT BE PAID FOR EACH CONDUIT, BUT WILL BE PAID FOR THE LENGTH OF THE COMMON TRENCH ONLY.
12. WHERE THE CONTRACTOR'S EXCAVATION MEETS AN OBSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR DIRECTION IN WRITING PRIOR TO EXCAVATION. THE CONTRACTOR SHALL RESTORE ANY DAMAGE TO EXISTING SYSTEMS OR UTILITIES AND REMOVE EXISTING OBSTRUCTIONS AND FOUNDATIONS TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE PAY ITEM.
13. WHEREVER THE TEMPORARY AERIAL CABLE IS REQUIRED TO CROSS AN EXISTING AND/OR PROPOSED ROADWAY, THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 6 METER (20 FEET) OF VERTICAL CLEARANCE OVER THE ROADWAY AT ALL TIMES.
14. THE POLES SHALL BE KEPT OUT OF DITCH AREA AND PLACED AS FAR AS 40', IF NEEDED, TO GET OUT OF FLOW LINE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

LEGEND AND NOTES

SCALE: NONE
DATE: 2/10/06

DRAWN BY: KGP/MAE
CHECKED BY: MAE/PGK

GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL: (773) 774-5910

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	131
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				

SUMMARY OF QUANTITIES		CONSTRUCTION TYPE CODE			
IDOT PAY ITEM NO.	DESIGNATION	UNIT	CONTRACT TOTAL	Y030-1E (KENDALL)	Y030-1E (GRUNDY)
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1	0.5	0.5
81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	500	180	320
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	30	30	0
81018700	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	192	90	102
81300210	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 6" X 4" X 4"	EACH	4	2	2
81300420	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 10" X 8" X 6"	EACH	1	1	0
81300730	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 16" X 14" X 6"	EACH	1	1	0
81306100	JUNCTION BOX (SPECIAL)	EACH	2	1	1
81500200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	10470	5630	4840
81601020	UNIT DUCT, WITH 3-1/C NO. 4 AND 1/C NO. 6 GROUND, 600 V (XLP-TYPE USE), 1 1/4" DIA., POLYETHYLENE	FOOT	12345	6570	5775
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1105	745	360
81701385	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C 350MCM	FOOT	150	150	0
81800820	AERIAL CABLE, 4-1/C NO. 4 AWG, ALUMINUM, WITH MESSENGER WIRE	FOOT	9350	4850	4500
82103600	LUMINAIRE, SODIUM VAPOR, VERTICAL MOUNT, 250 WATT	EACH	40	20	20
82107100	UNDERPASS LUMINAIRE, 70 WATT, HIGH PRESSURE SODIUM	EACH	4	2	2
82109100	SIGN LIGHTING (HIGH PRESSURE SODIUM)	FOOT	97.5	55	42.5
82500560	LIGHTING CONTROLLER TYPE CB-RCS 200AMP - 480VOLT	EACH	1	1	0
83034400	LIGHT POLE, STEEL, 45 FT. M.H., TENON MOUNT	EACH	38	19	19
83600355	LIGHT POLE FOUNDATION METAL, 15" BOLT CIRCLE, 8" X 6'	EACH	38	19	19
83800650	BREAKAWAY DEVICE, COUPLING, WITH STAINLESS STEEL SCREEN	EACH	38	19	19
84200500	REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE	EACH	34	16	18
84500110	REMOVAL OF LIGHTING CONTROLLER	EACH	1	1	0
84500130	REMOVAL OF LIGHTING CONTROLLER FOUNDATION	EACH	1	1	0
XX005430	MAINTENANCE OF EXISTING HIGHWAY LIGHTING	L SUM	1	0.5	0.5
X0502600	TEMPORARY LIGHTING	L SUM	1	0.5	0.5
X8040400	ELECTRIC UTILITY SERVICE CONNECTION	EACH	1	1	0
X8110110	CONDUIT ATTACHED TO STRUCTURE, 1" DIA. GALVANIZED STEEL, PVC COATED	FOOT	190	140	50
X8110121	CONDUIT ATTACHED TO STRUCTURE, 3" DIA., GALVANIZED STEEL, PVC COATED	FOOT	30	30	0
X8410113	REMOVE TEMPORARY LIGHTING UNITS AND SALVAGE	EACH	46	23	23

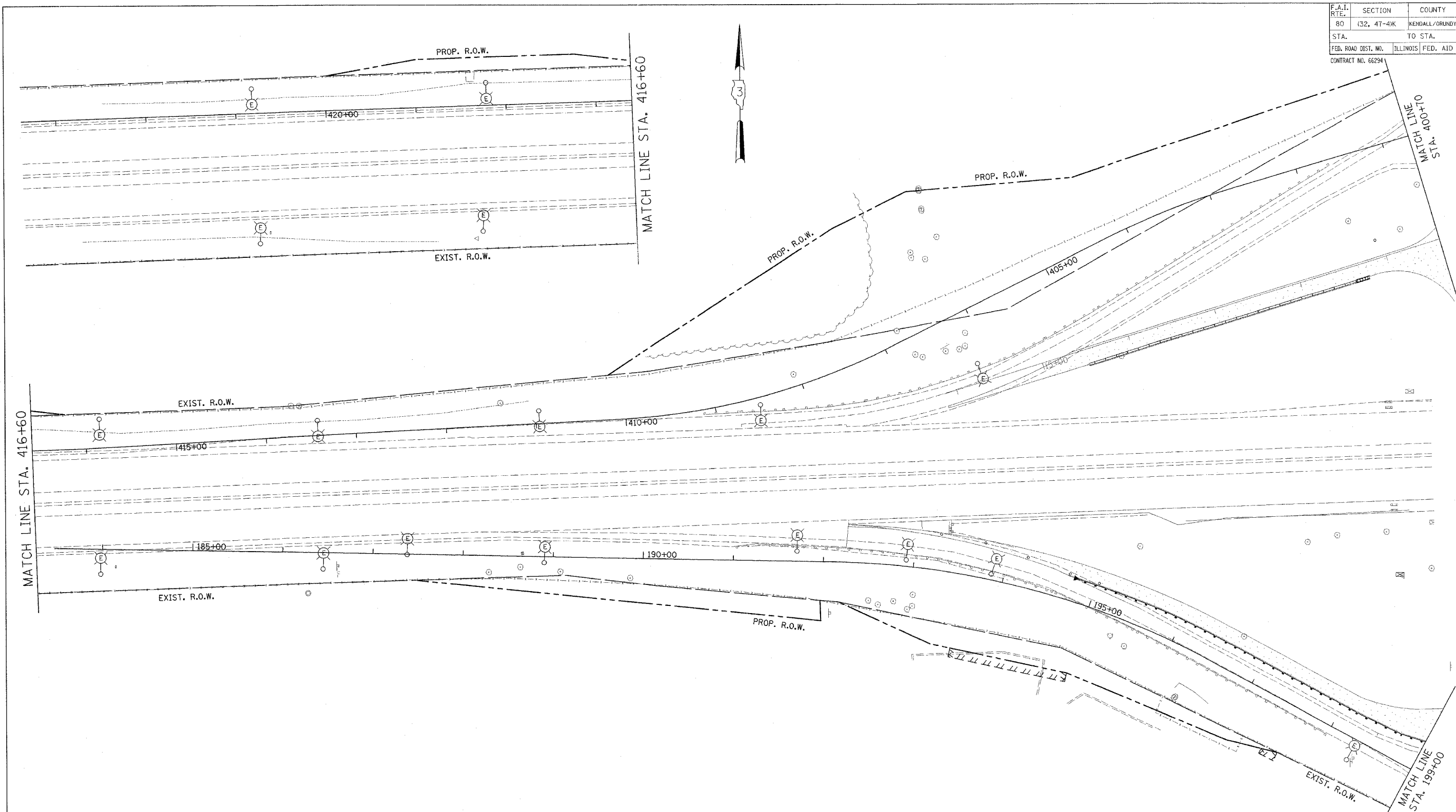
PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
SUMMARY OF QUANTITIES
SCALE: NONE
DATE: 2/10/06
DRAWN BY: KGP/MAE
CHECKED BY: MAE/PKG

ga GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 500
CHICAGO, ILLINOIS 60630 TEL: (773) 774-5900

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GROUNDY	243	132
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



NOTE:
ALL EXISTING LIGHT POLES TO REMAIN FULLY OPERATIONAL IN THIS STAGE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
TEMPORARY LIGHTING
RAMP "A" AND RAMP "C"
SHEET 1 OF 2
PRE-STAGE

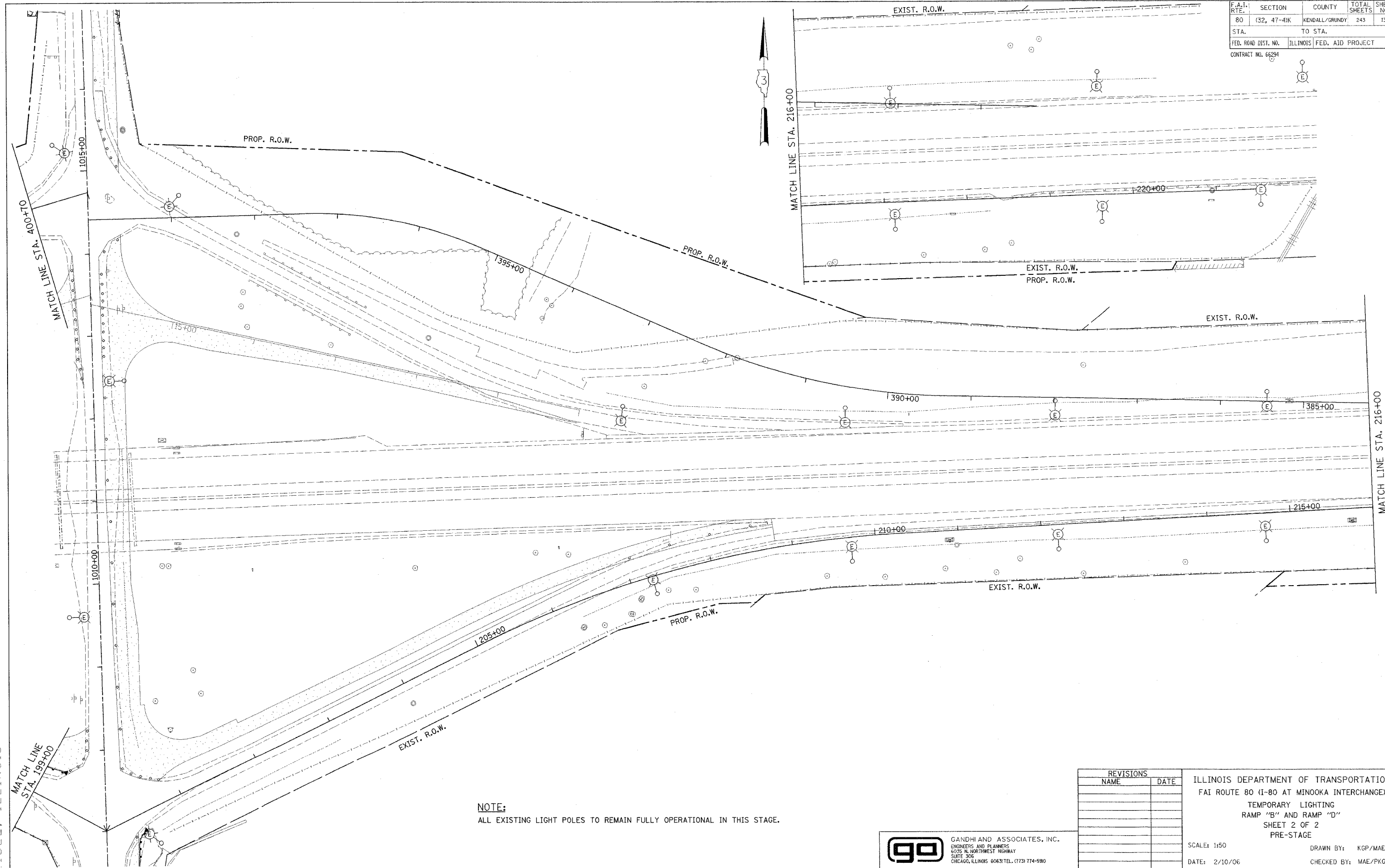
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DATE: 2/10/06

DRAWN BY: KGP/MAE
CHECKED BY: MAE/PKG

99 GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 200
CHICAGO, ILLINOIS 60631 TEL: (773) 774-5910

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	133
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



NOTE:
ALL EXISTING LIGHT POLES TO REMAIN FULLY OPERATIONAL IN THIS STAGE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
TEMPORARY LIGHTING
RAMP "B" AND RAMP "D"
SHEET 2 OF 2
PRE-STAGE

SCALE: 1:50
DATE: 2/10/06

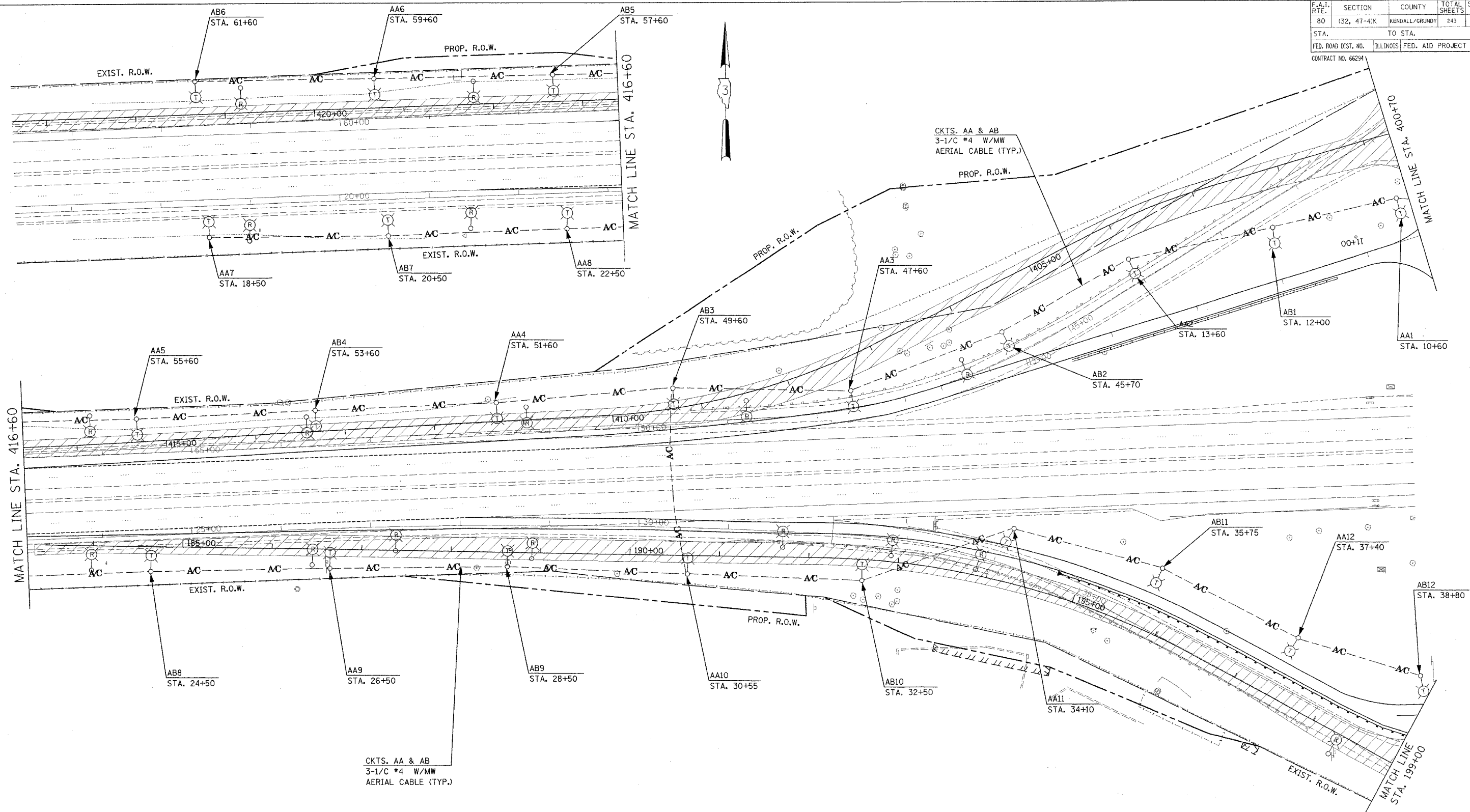
DRAWN BY: KGP/MAE
CHECKED BY: MAE/PKG

GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL: (773) 774-590

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	134
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66294



CKTS. AA & AB
3-1/C #4 W/MW
AERIAL CABLE (TYP.)

NOTES:

1. ALL LIGHTING WORK SHOWN IN THIS PLAN SHALL BE INSTALLED, TESTED, AND MADE FULLY OPERATIONAL PRIOR TO COMMENCEMENT OF STAGE 1 CONSTRUCTION.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
TEMPORARY LIGHTING
RAMP "A" AND RAMP "C"
SHEET 1 OF 2
STAGE 1

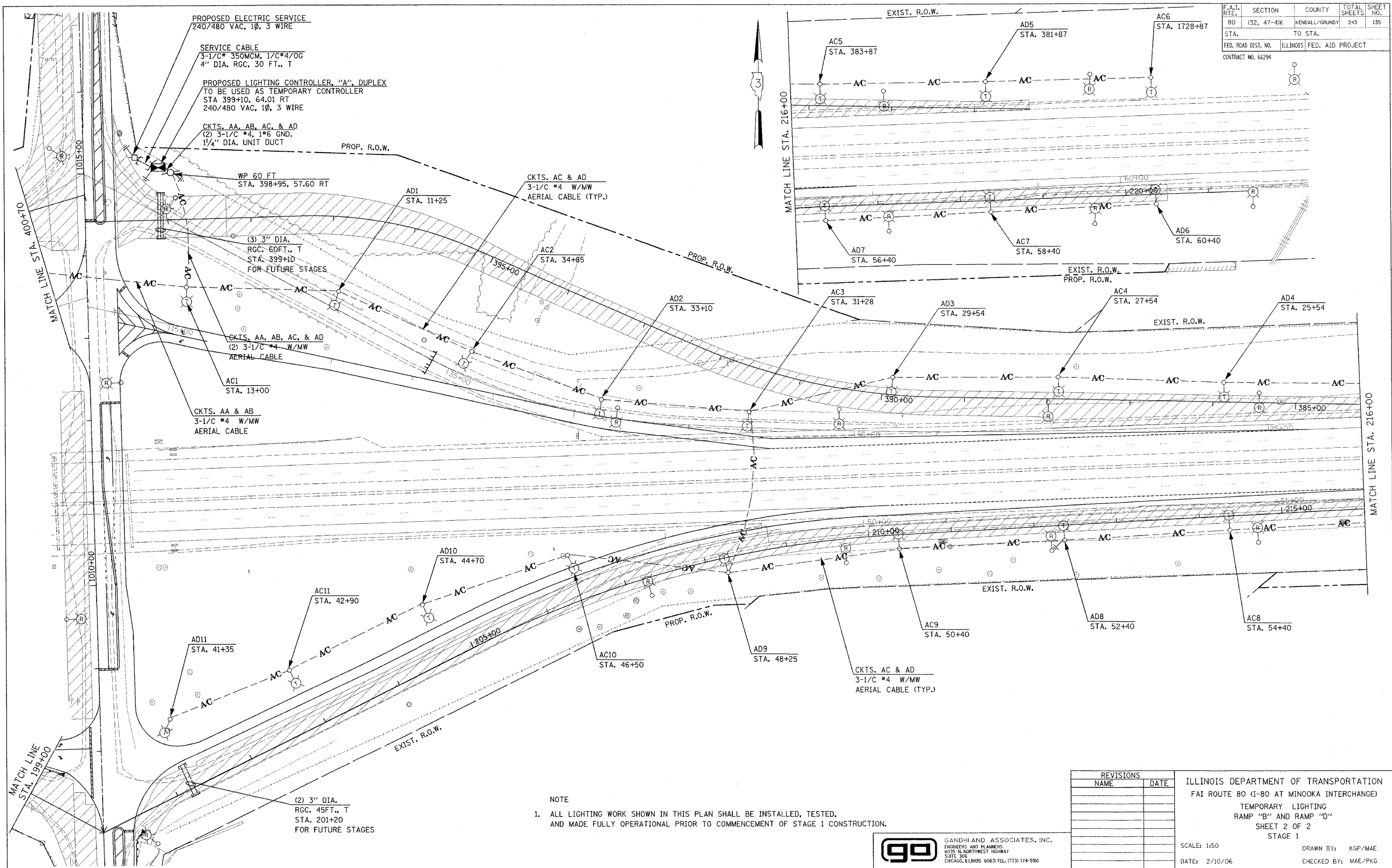
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DATE: 2/10/06

DRAWN BY: KGP/MAE
CHECKED BY: MAE/PKG

GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5900

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	135
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				



NOTE
 1. ALL LIGHTING WORK SHOWN IN THIS PLAN SHALL BE INSTALLED, TESTED, AND MADE FULLY OPERATIONAL PRIOR TO COMMENCEMENT OF STAGE 1 CONSTRUCTION.

REVISIONS	
NAME	DATE

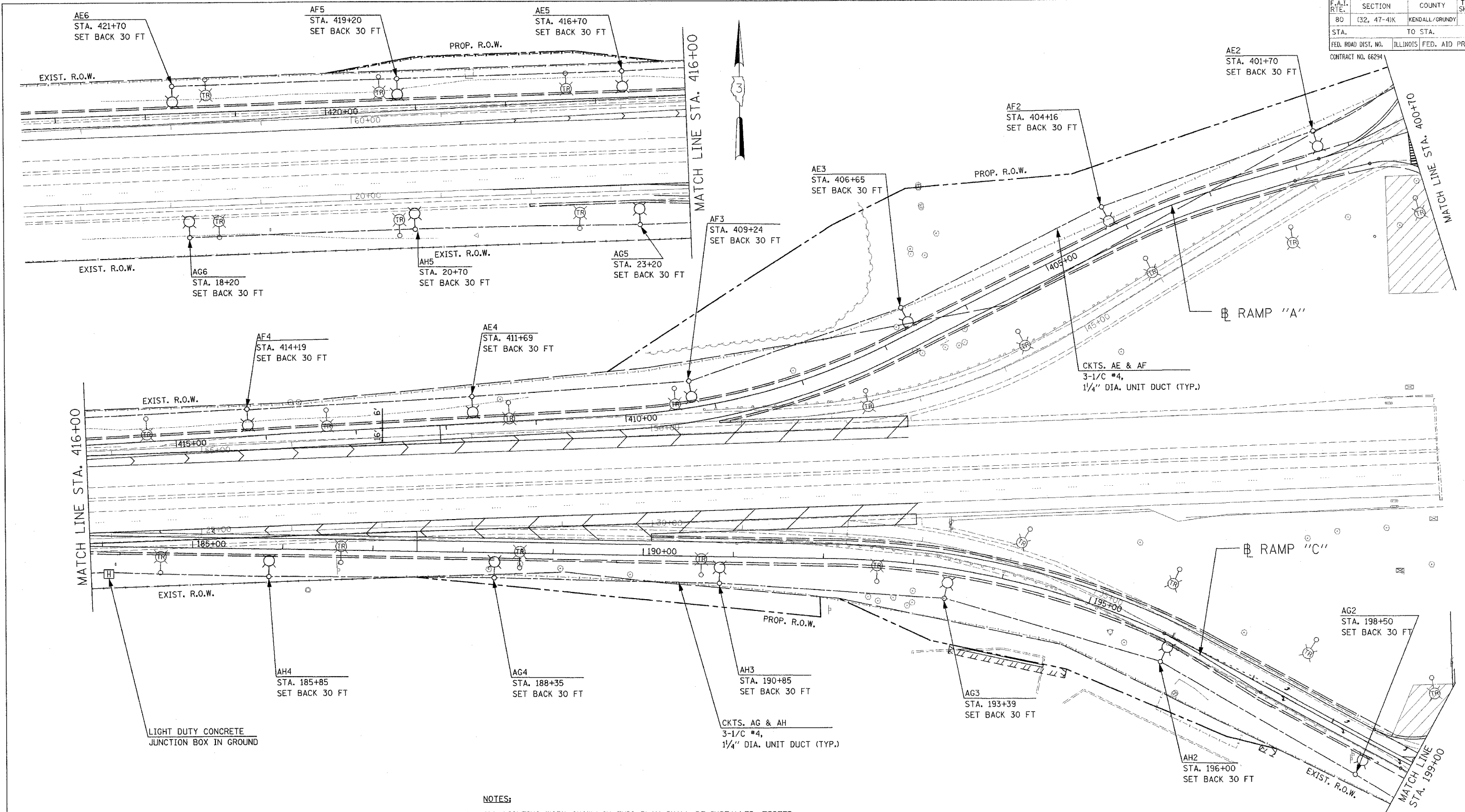
ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
 TEMPORARY LIGHTING
 RAMP "B" AND RAMP "D"
 SHEET 2 OF 2
 STAGE 1

SCALE: 1:50
 DATE: 2/10/06
 DRAWN BY: KGP/MAE
 CHECKED BY: MAE/PKG

GO GANDHI AND ASSOCIATES, INC.
 ENGINEERS AND PLANNERS
 6035 N. NORTHWEST HIGHWAY
 SUITE 308
 CHICAGO, ILLINOIS 60631 TEL. (773) 774-5900

PATRICK
 ENGINEERING INC.
 LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	136
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				



LIGHT DUTY CONCRETE
JUNCTION BOX IN GROUND

NOTES:

1. ALL LIGHTING WORK SHOWN IN THIS PLAN SHALL BE INSTALLED, TESTED, AND MADE FULLY OPERATIONAL PRIOR TO COMMENCEMENT OF STAGE 1A CONSTRUCTION.
2. THE POLES SHALL BE KEPT OUT OF DITCH AREA AND PLACED AS FAR AS 40', IF NEEDED, TO GET OUT OF FLOW LINE.
3. ALL LUMINAIRES SHALL BE INSTALLED AT A 35° TILT ANGLE.

REVISIONS	
NAME	DATE

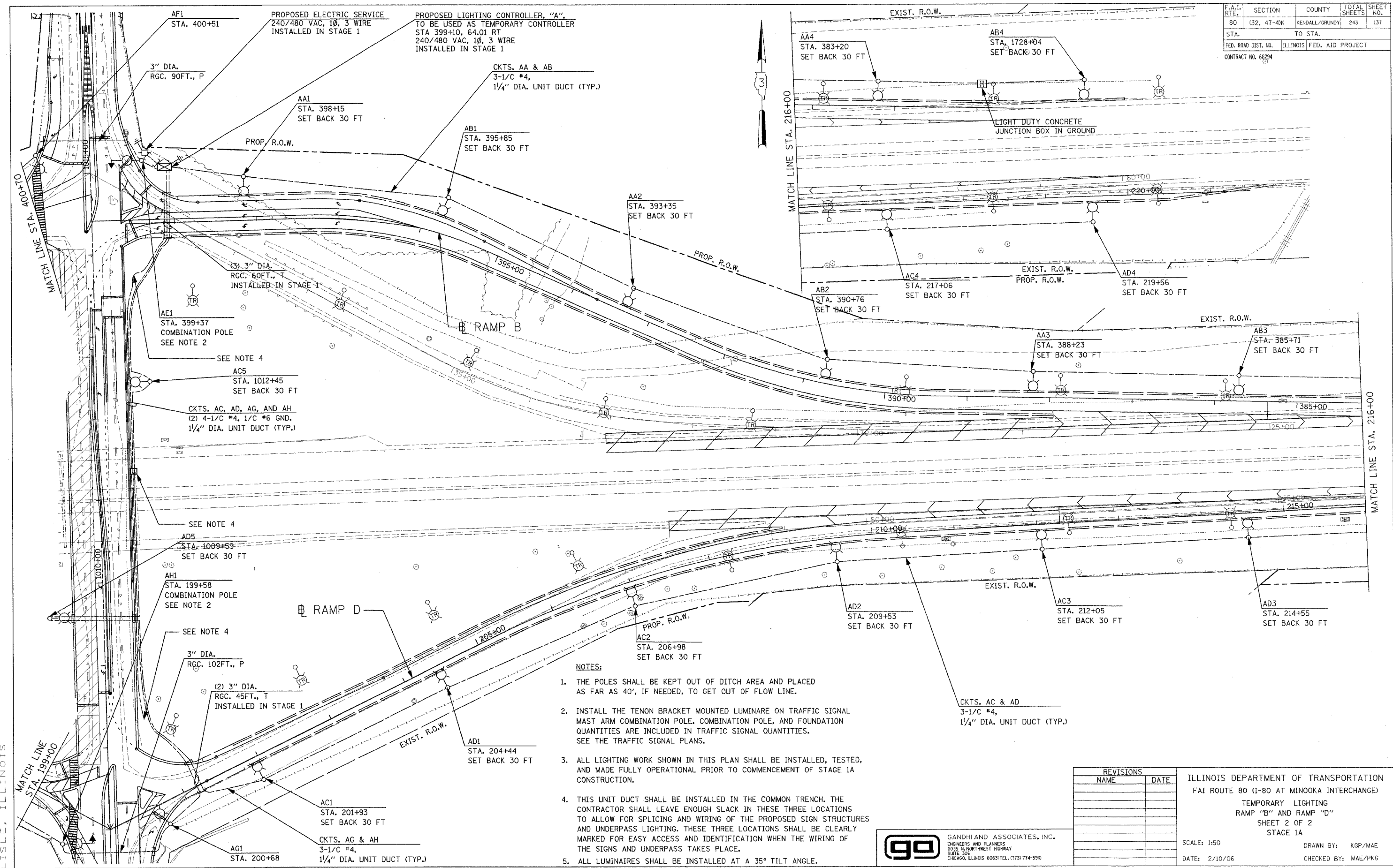
ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
TEMPORARY LIGHTING
RAMP "A" AND RAMP "C"
SHEET 1 OF 2
STAGE 1A

SCALE: 1:50
DATE: 2/10/06
DRAWN BY: KGP/MAE
CHECKED BY: MAE/PKG

GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 300
CHICAGO, ILLINOIS 60631 TEL: (773) 774-5910

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	137
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				



PROPOSED ELECTRIC SERVICE
240/480 VAC, 1Ø, 3 WIRE
INSTALLED IN STAGE 1

PROPOSED LIGHTING CONTROLLER, "A",
TO BE USED AS TEMPORARY CONTROLLER
STA 399+10, 64.01 FT
240/480 VAC, 1Ø, 3 WIRE
INSTALLED IN STAGE 1

3" DIA.
RGC. 90FT., P

AA1
STA. 398+15
SET BACK 30 FT

CKTS. AA & AB
3-1/2" #4,
1/4" DIA. UNIT DUCT (TYP.)

AB1
STA. 395+85
SET BACK 30 FT

PROP. R.O.W.

EXIST. R.O.W.

MATCH LINE STA. 216+00

AA4
STA. 383+20
SET BACK 30 FT

AB4
STA. 1728+04
SET BACK 30 FT

LIGHT DUTY CONCRETE
JUNCTION BOX IN GROUND

AE1
STA. 399+37
COMBINATION POLE
SEE NOTE 2

SEE NOTE 4

AC5
STA. 1012+45
SET BACK 30 FT

CKTS. AC, AD, AG, AND AH
(2) 4-1/2" #4, 1/2" #6 GND.
1/4" DIA. UNIT DUCT (TYP.)

(3) 3" DIA.
RGC. 60FT., T
INSTALLED IN STAGE 1

RAMP B

AA2
STA. 393+35
SET BACK 30 FT

AB2
STA. 390+76
SET BACK 30 FT

AC4
STA. 217+06
SET BACK 30 FT

AD4
STA. 219+56
SET BACK 30 FT

EXIST. R.O.W.

PROP. R.O.W.

EXIST. R.O.W.

AA3
STA. 388+23
SET BACK 30 FT

AB3
STA. 385+71
SET BACK 30 FT

SEE NOTE 4

AD5
STA. 1009+59
SET BACK 30 FT

AH1
STA. 199+58
COMBINATION POLE
SEE NOTE 2

SEE NOTE 4

3" DIA.
RGC. 102FT., P

(2) 3" DIA.
RGC. 45FT., T
INSTALLED IN STAGE 1

RAMP D

AD2
STA. 209+53
SET BACK 30 FT

AC3
STA. 212+05
SET BACK 30 FT

AD3
STA. 214+55
SET BACK 30 FT

EXIST. R.O.W.

PROP. R.O.W.

EXIST. R.O.W.

AC2
STA. 206+98
SET BACK 30 FT

CKTS. AC & AD
3-1/2" #4,
1/4" DIA. UNIT DUCT (TYP.)

AD1
STA. 204+44
SET BACK 30 FT

AC1
STA. 201+93
SET BACK 30 FT

CKTS. AG & AH
3-1/2" #4,
1/4" DIA. UNIT DUCT (TYP.)

AG1
STA. 200+68

NOTES:

1. THE POLES SHALL BE KEPT OUT OF DITCH AREA AND PLACED AS FAR AS 40', IF NEEDED, TO GET OUT OF FLOW LINE.
2. INSTALL THE TENON BRACKET MOUNTED LUMINAIRE ON TRAFFIC SIGNAL MAST ARM COMBINATION POLE. COMBINATION POLE, AND FOUNDATION QUANTITIES ARE INCLUDED IN TRAFFIC SIGNAL QUANTITIES. SEE THE TRAFFIC SIGNAL PLANS.
3. ALL LIGHTING WORK SHOWN IN THIS PLAN SHALL BE INSTALLED, TESTED, AND MADE FULLY OPERATIONAL PRIOR TO COMMENCEMENT OF STAGE 1A CONSTRUCTION.
4. THIS UNIT DUCT SHALL BE INSTALLED IN THE COMMON TRENCH. THE CONTRACTOR SHALL LEAVE ENOUGH SLACK IN THESE THREE LOCATIONS TO ALLOW FOR SPLICING AND WIRING OF THE PROPOSED SIGN STRUCTURES AND UNDERPASS LIGHTING. THESE THREE LOCATIONS SHALL BE CLEARLY MARKED FOR EASY ACCESS AND IDENTIFICATION WHEN THE WIRING OF THE SIGNS AND UNDERPASS TAKES PLACE.
5. ALL LUMINAIRES SHALL BE INSTALLED AT A 35° TILT ANGLE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
TEMPORARY LIGHTING
RAMP "B" AND RAMP "D"
SHEET 2 OF 2
STAGE 1A

SCALE: 1:50
DATE: 2/10/06

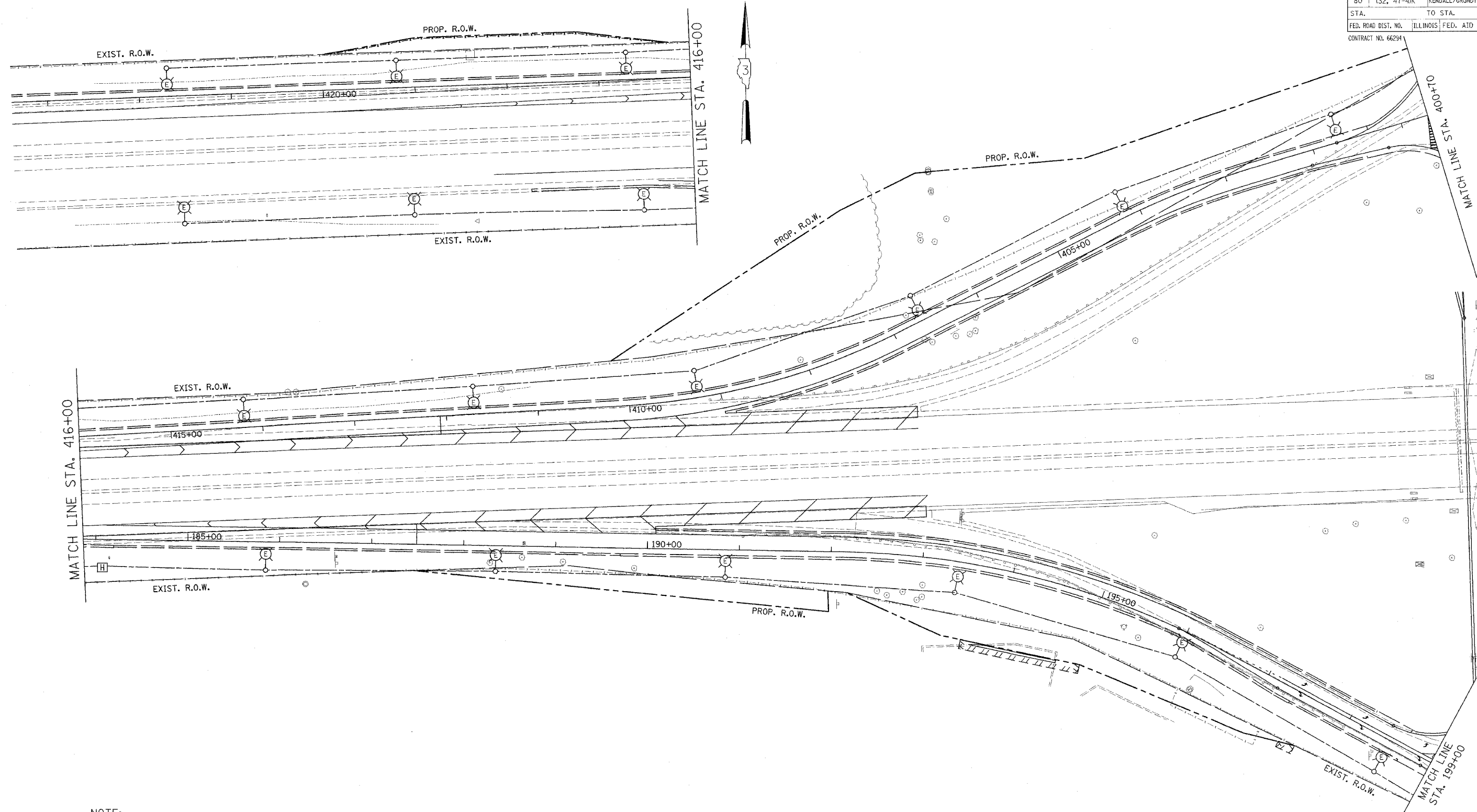
DRAWN BY: KGP/MAE
CHECKED BY: MAE/PGK

GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 300
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	138
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

CONTRACT NO. 66294



NOTE:
 ALL EXISTING LIGHT POLES SHOWN ON THIS DRAWING WERE INSTALLED IN PRIOR CONSTRUCTION STAGES. SEE THE OTHER TEMPORARY LIGHTING PLAN SHEETS FOR MORE INFORMATION.

REVISIONS	
NAME	DATE

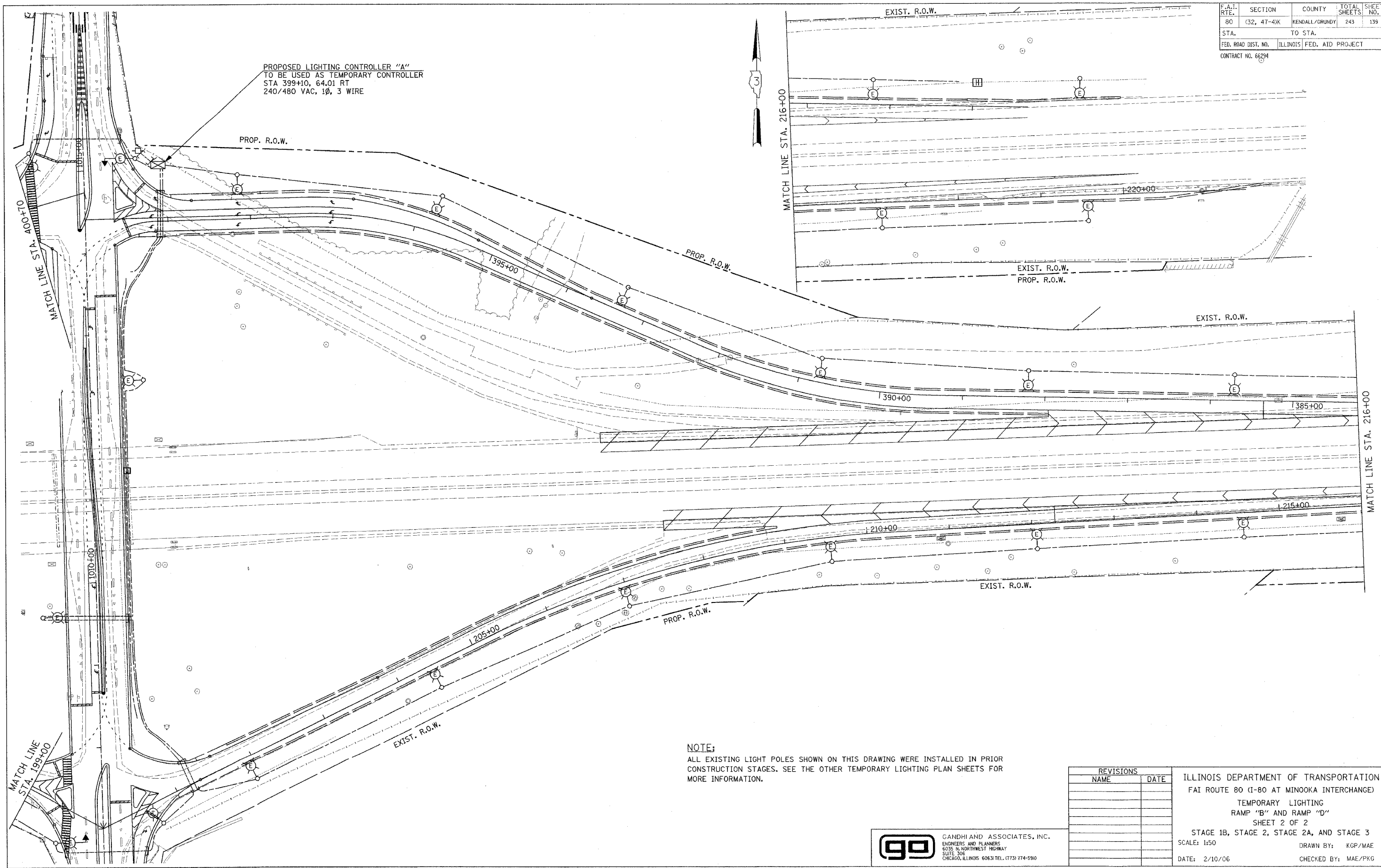
ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
 TEMPORARY LIGHTING
 RAMP "A" AND RAMP "C"
 SHEET 1 OF 2
 STAGE 1B, STAGE 2, STAGE 2B, AND STAGE 3
 SCALE: 1:50
 DATE: 2/10/06
 DRAWN BY: KGP/MAE
 CHECKED BY: MAE/PKG

GO GANDHI AND ASSOCIATES, INC.
 ENGINEERS AND PLANNERS
 6035 N. NORTHWEST HIGHWAY
 SUITE 300
 CHICAGO, ILLINOIS 60631 TEL: (773) 774-5910

PATRICK
 ENGINEERING INC.
 LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	138
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				

PROPOSED LIGHTING CONTROLLER "A"
 TO BE USED AS TEMPORARY CONTROLLER
 STA 399+10, 64.01 RT
 240/480 VAC, 1Ø, 3 WIRE



NOTE:
 ALL EXISTING LIGHT POLES SHOWN ON THIS DRAWING WERE INSTALLED IN PRIOR CONSTRUCTION STAGES. SEE THE OTHER TEMPORARY LIGHTING PLAN SHEETS FOR MORE INFORMATION.

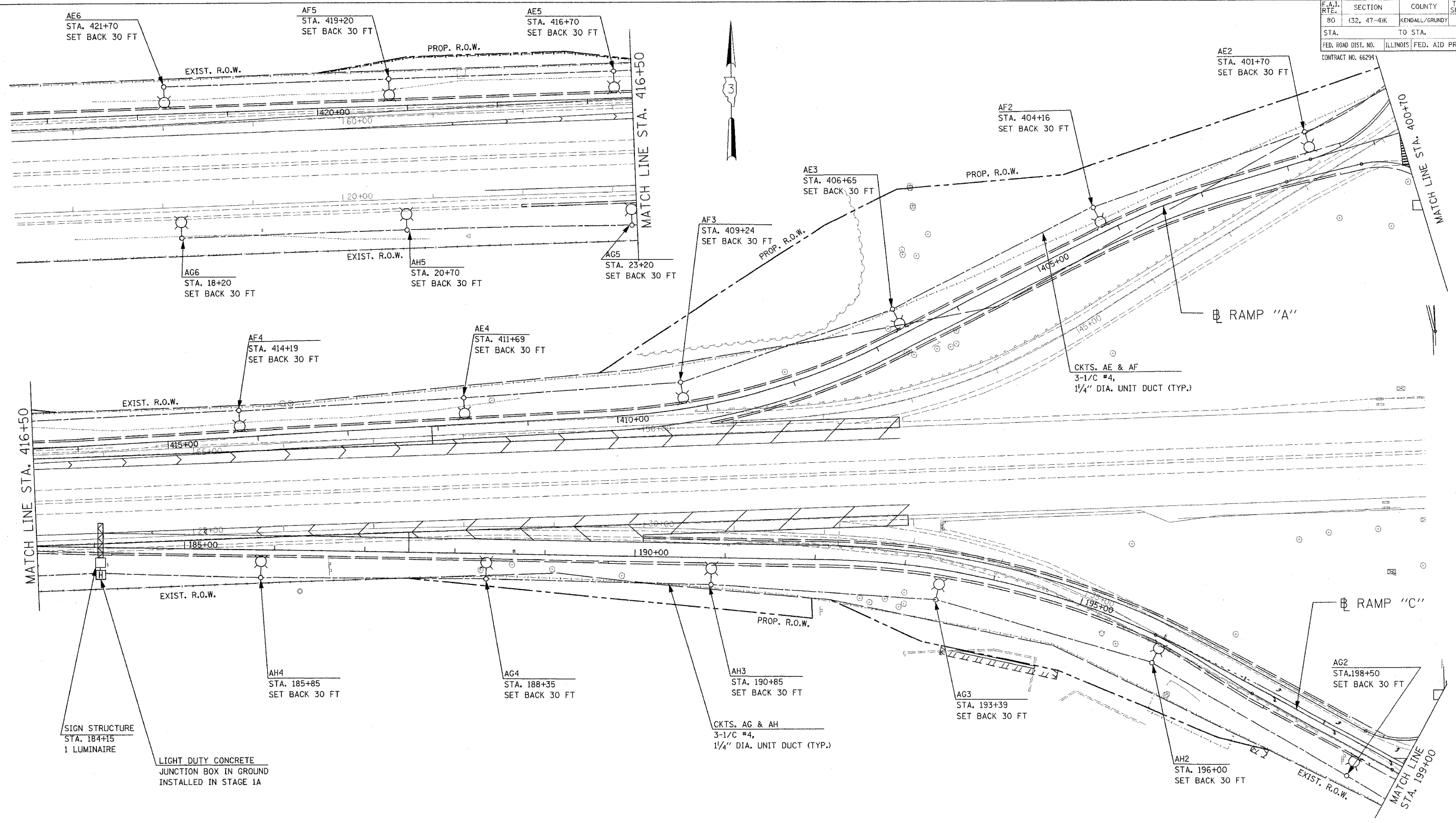
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
 TEMPORARY LIGHTING
 RAMP "B" AND RAMP "D"
 SHEET 2 OF 2
 STAGE 1B, STAGE 2, STAGE 2A, AND STAGE 3
 SCALE: 1:50
 DATE: 2/10/06
 DRAWN BY: KGP/MAE
 CHECKED BY: MAE/PKG

GO GANDHI AND ASSOCIATES, INC.
 ENGINEERS AND PLANNERS
 6035 N. NORTHWEST HIGHWAY
 SUITE 306
 CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

PATRICK
 ENGINEERING INC.
 LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GROUNY	243	140
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



NOTES:

1. THE POLES SHALL BE KEPT OUT OF DITCH AREA AND PLACED AS FAR AS 40' IF NEEDED TO GET OUT OF FLOW LINE.
2. ALL LUMINAIRES SHALL BE INSTALLED AT A 35° TILT ANGLE.

REVISIONS	
NAME	DATE

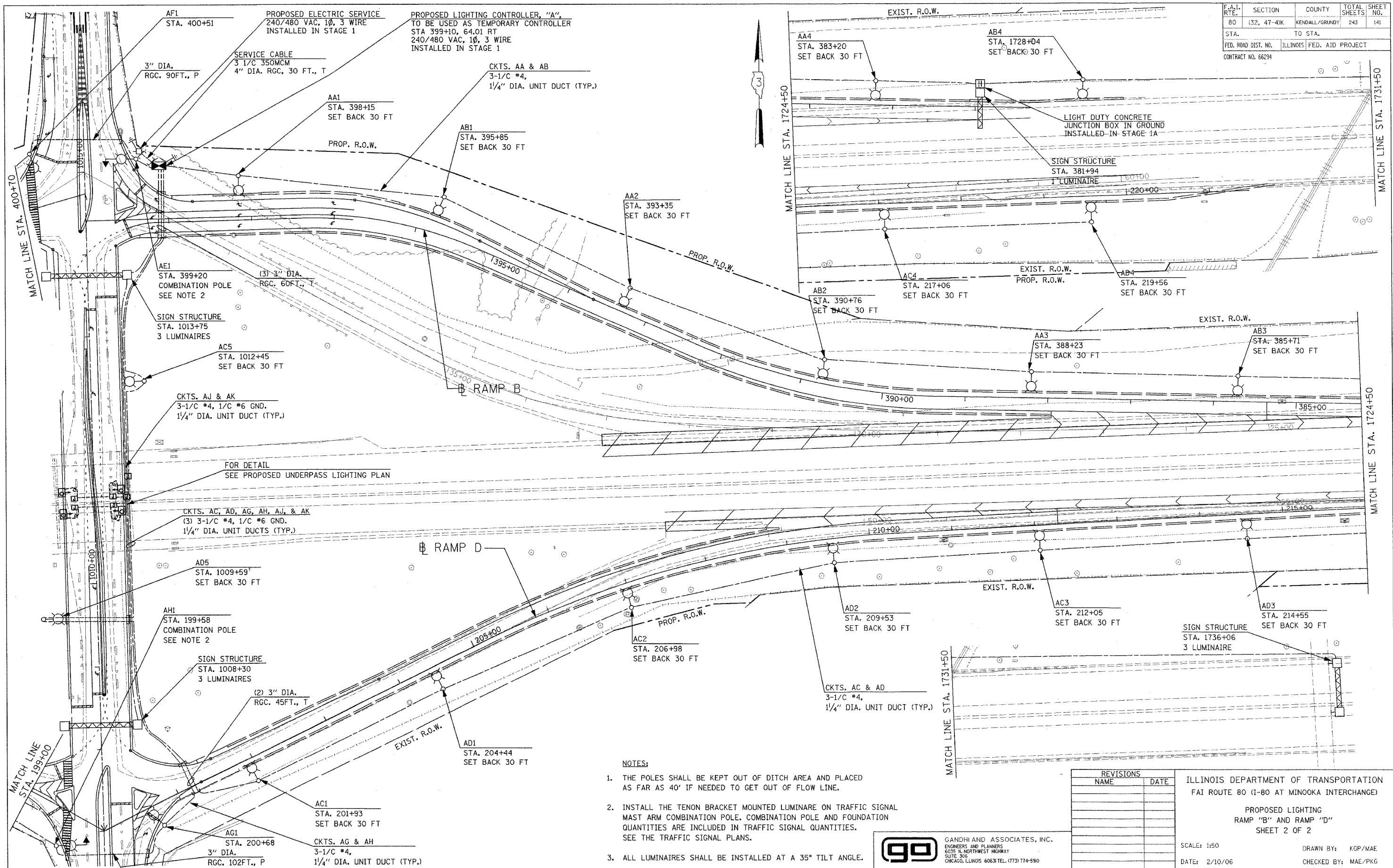
ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
 PROPOSED LIGHTING
 RAMP "A" AND RAMP "C"
 SHEET 1 OF 2

SCALE: 1:50
 DATE: 2/10/06
 DRAWN BY: KGP/MAE
 CHECKED BY: MAE/PKG

GO GANDHI AND ASSOCIATES, INC.
 ENGINEERS AND PLANNERS
 6035 N. NORTHWEST HIGHWAY
 SUITE 306
 CHICAGO, ILLINOIS 60630 TEL: (773) 774-5900

PATRICK
 ENGINEERING INC.
 LISLE, ILLINOIS

F.A.I. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80 (32, 47-4)K	KENDALL/GROUNDT	243	141
STA.	TO STA.		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294			



- NOTES:
1. THE POLES SHALL BE KEPT OUT OF DITCH AREA AND PLACED AS FAR AS 40' IF NEEDED TO GET OUT OF FLOW LINE.
 2. INSTALL THE TENON BRACKET MOUNTED LUMINAIRE ON TRAFFIC SIGNAL MAST ARM COMBINATION POLE. COMBINATION POLE AND FOUNDATION QUANTITIES ARE INCLUDED IN TRAFFIC SIGNAL PLANS. SEE THE TRAFFIC SIGNAL PLANS.
 3. ALL LUMINAIRES SHALL BE INSTALLED AT A 35° TILT ANGLE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
 PROPOSED LIGHTING
 RAMP "B" AND RAMP "D"
 SHEET 2 OF 2

SCALE: 1/50
 DATE: 2/10/06

DRAWN BY: KGP/MAE
 CHECKED BY: MAE/PKG

GO GANDHI AND ASSOCIATES, INC.
 ENGINEERS AND PLANNERS
 6035 N. NORTHWEST HIGHWAY
 SUITE 306
 CHICAGO, ILLINOIS 60631 TEL. (773) 774-5900

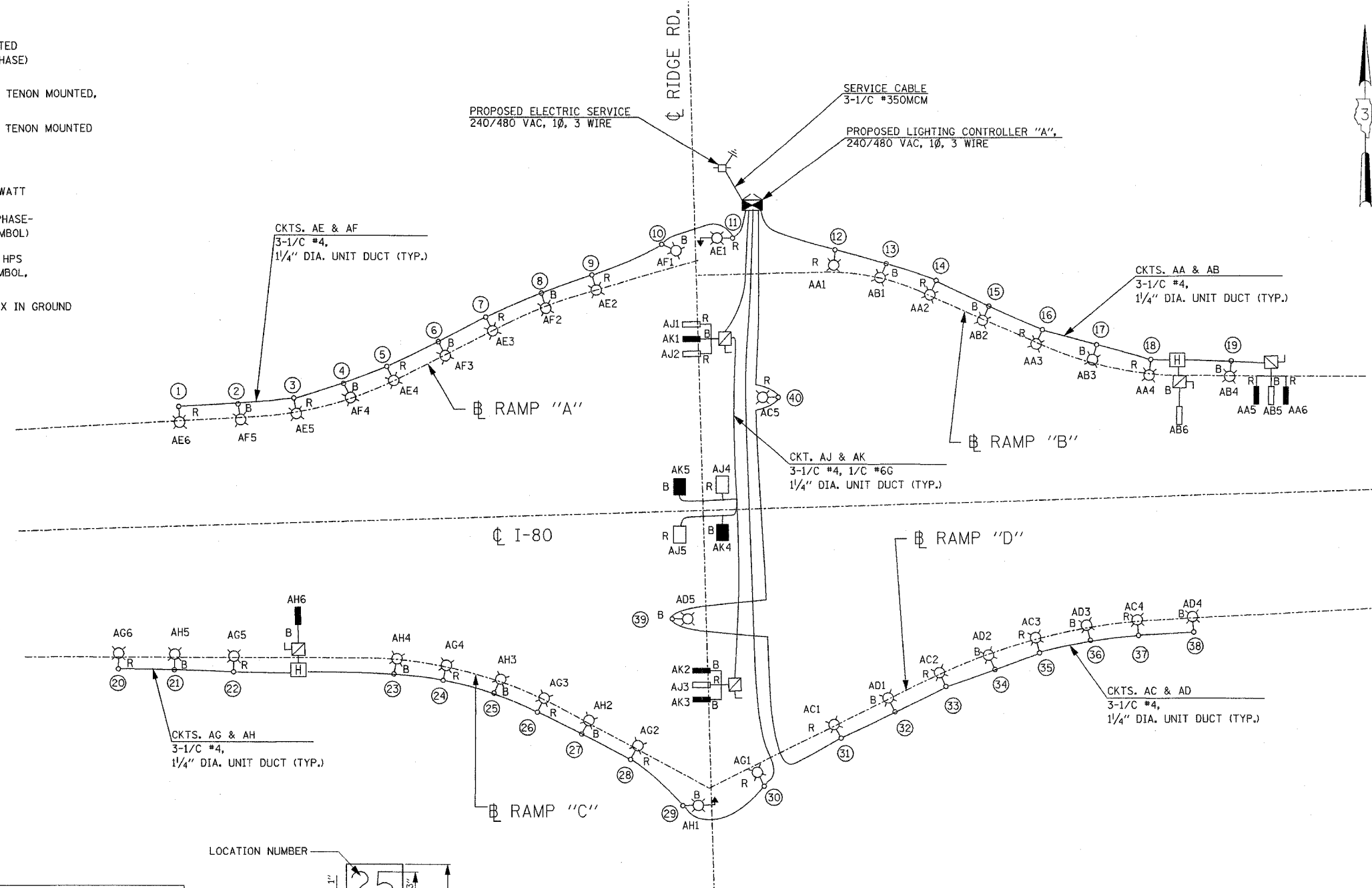
PATRICK
 ENGINEERING INC.
 LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-48)	KENDALL/GRUNDY	243	142
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



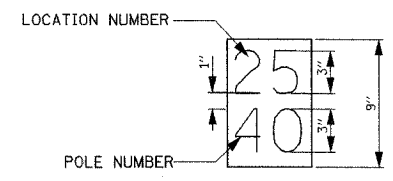
LEGEND

- LIGHT POLE, 45FT MH, TENON MOUNTED
250W HPS, 240V (RED AND BLACK PHASE)
- COMBINATION LIGHT POLE, 45FT MH, TENON MOUNTED,
250W HPS, 240V (RED PHASE)
- COMBINATION LIGHT POLE, 40FT MH, TENON MOUNTED
250W HPS, 240V (BLACK PHASE)
- PROPOSED LIGHTING CONTROLLER
- LIGHTED SIGN STRUCTURE WITH 250WATT
HPS LUMINAIRES, QUANTITY OF
LUMINAIRES AS SPECIFIED, (BLACK PHASE-
SOLID SYMBOL, RED PHASE-OPEN SYMBOL)
- UNDERPASS LIGHTING UNIT, 70WATT HPS
LUMINAIRE, (BLACK PHASE-SOLID SYMBOL,
RED PHASE-OPEN SYMBOL)
- LIGHT DUTY CONCRETE JUNCTION BOX IN GROUND



**LOAD TABLE
PROPOSED LIGHTING CONTROLLER "A"**

CIRCUIT	RED PHASE		BLACK PHASE		
	AMPS	WATTS	AMPS	WATTS	
A	8.4	2016	B	8.4	2016
C	7.0	1680	D	7.0	1680
E	8.4	2016	F	7.0	1680
G	8.4	2016	H	8.4	2016
J	5.0	1200	K	5.0	1200
TOTAL	37.2	8928	TOTAL	35.8	8592



THE CONTRACTOR SHALL FURNISH AND INSTALL A LIGHT POLE IDENTIFICATION ON EACH NEW LIGHT POLE, AS SHOWN ABOVE INCIDENTAL TO THE RESPECTIVE LIGHT POLE PAY ITEM. THE NUMERALS SHALL BE 3" SERIES "D", BLACK, SCREENED ON SILVER WHITE TYPE B PRESSURE SENSITIVE REFLECTIVE SHEETING CONFORMING TO THE REQUIREMENTS OF SECTION 1069.02 OF THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS. THE NUMERALS SHALL CONFORM TO THE FHWA "STANDARD ALPHABETS FOR HIGHWAY SIGNS"

THE LIGHT POLE IDENTIFICATION SHALL BE APPLIED TO SIGN BASE MATERIAL, APPROXIMATELY 7' ABOVE THE ADJACENT PAVEMENT GRADE VISIBLE TO THE APPROACHING TRAFFIC IN ACCORDANCE WITH HIGHWAY STANDARD.

I-80 & RIDGE RD LOCATION NUMBER 25, POLE NUMBERS 1-40

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
PROPOSED LIGHTING
SINGLE LINE DIAGRAM
LIGHTING CONTROLLER "A"

SCALE: NONE
DATE: 2/10/06

DRAWN BY: KGP/MAE
CHECKED BY: MAE/PKG

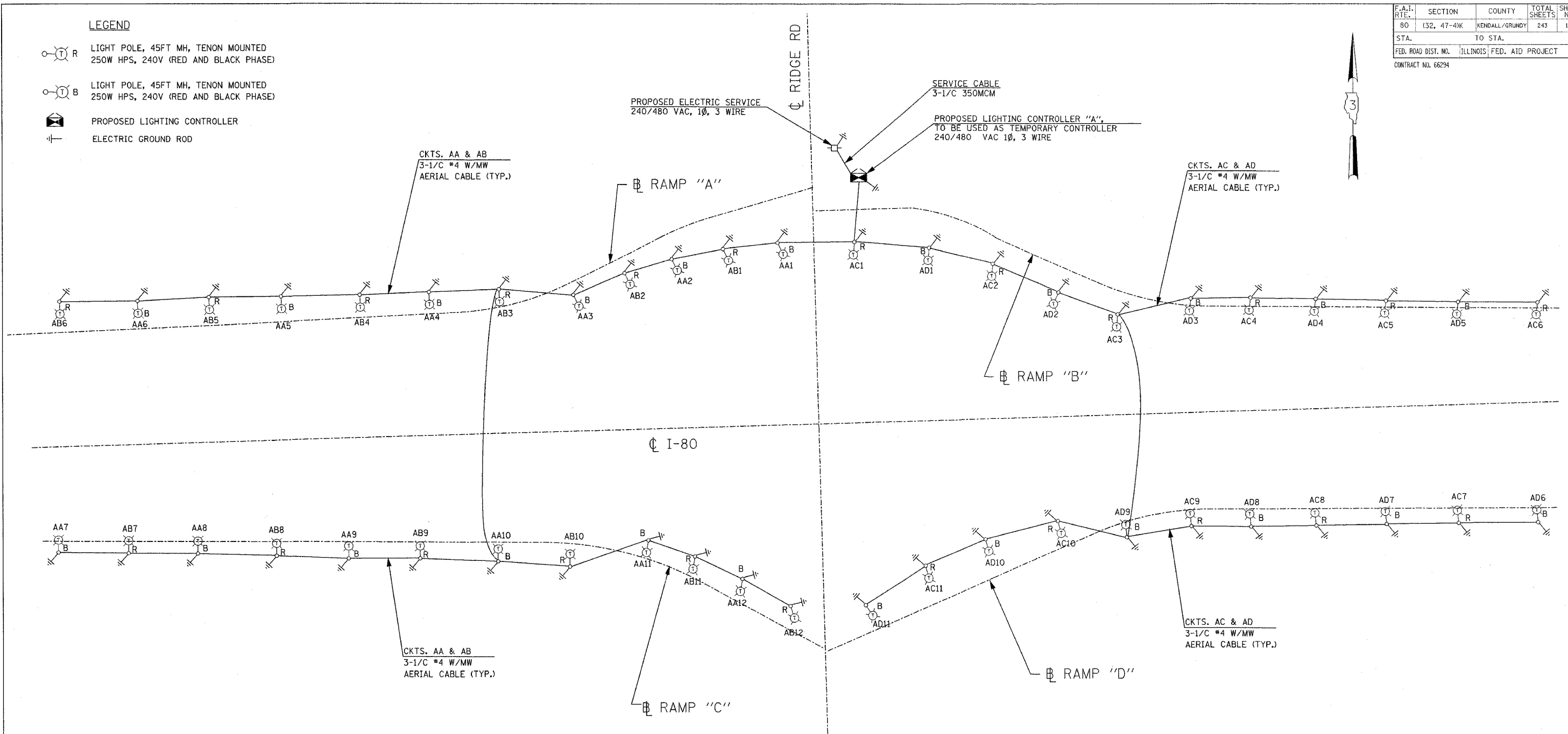


PATRICK ENGINEERING INC.
LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	143
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				

LEGEND

- LIGHT POLE, 45FT MH, TENON MOUNTED
250W HPS, 240V (RED AND BLACK PHASE)
- LIGHT POLE, 45FT MH, TENON MOUNTED
250W HPS, 240V (RED AND BLACK PHASE)
- PROPOSED LIGHTING CONTROLLER
- ELECTRIC GROUND ROD



CIRCUIT	RED PHASE		CIRCUIT	BLACK PHASE	
	AMPS	WATTS		AMPS	WATTS
B	16.8	4032	A	16.8	4032
C	15.4	3696	D	15.4	3696
TOTAL	32.2	7728	TOTAL	32.2	7728

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
TEMPORARY LIGHTING
SINGLE LINE DIAGRAM
LIGHTING CONTROLLER "A"
SCALE: NONE
DATE: 2/10/06
DRAWN BY: KGP/MAE
CHECKED BY: MAE/PKG

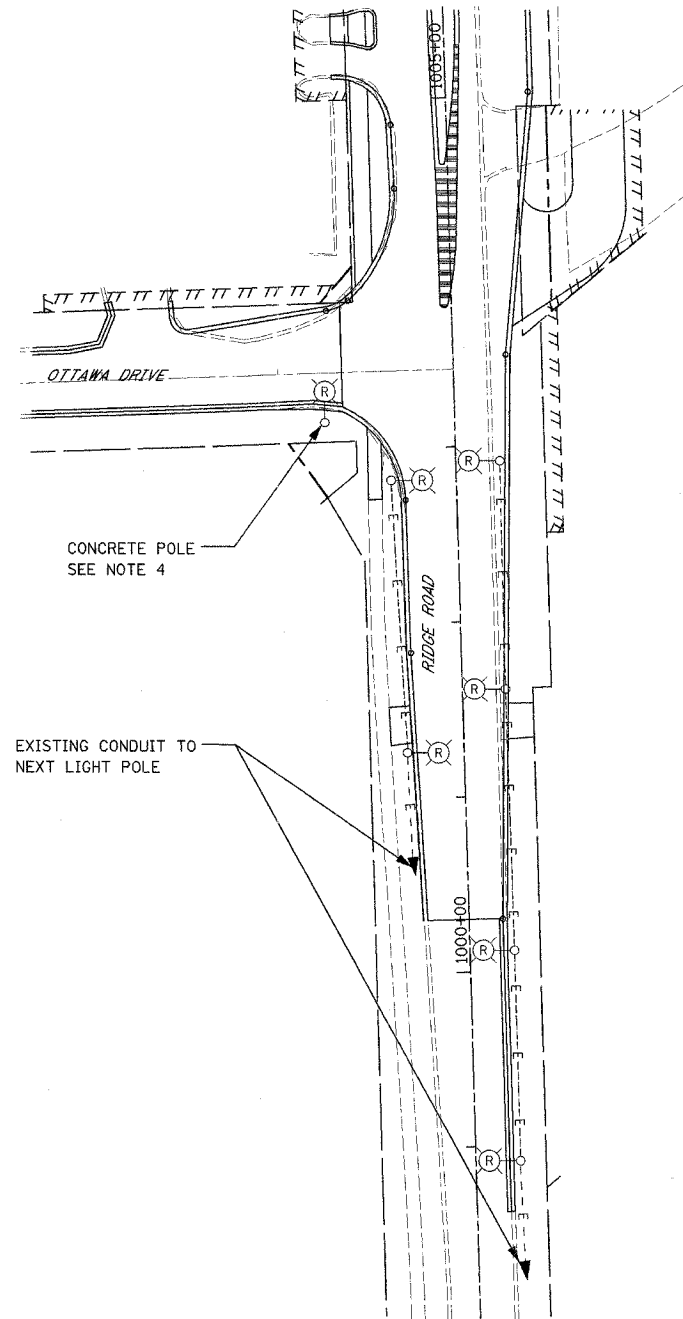
GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6036 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-590

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

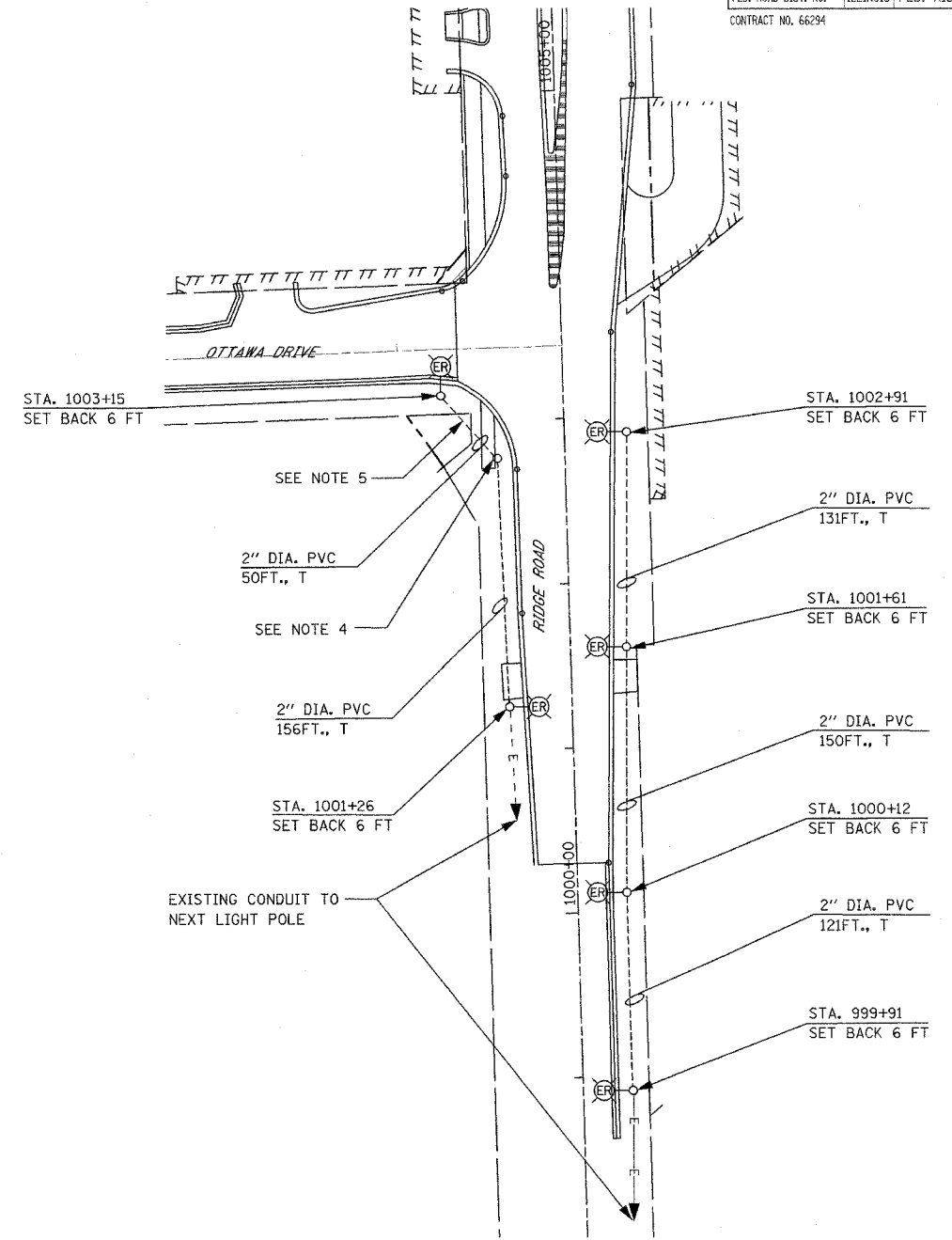
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	144
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				

NOTES:

1. THE EXISTING LIGHT POLES ON RIDGE ROAD AT OTTAWA DRIVE TO BE REMOVED, AND RELOCATED ARE SHOWN ON THIS PLAN. SIX LIGHT POLES AND ONE LIGHT POLE FOUNDATION ARE AFFECTED. ALL OF THE POLES SHALL BE REMOVED BEFORE CONSTRUCTION BEGINS. THERE SHALL BE NO INTERRUPTION OF POWER TO ANY OTHER LIGHT POLE THAT IS NOT IMPACTED BY THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AS NECESSARY.
2. THE CONTRACTOR SHALL REMOVE, STORE, AND REINSTALL THE RELOCATED LIGHT POLES IN THE LOCATIONS SPECIFIED ON THIS PLAN. ANY DAMAGE TO THE LIGHT POLES, LUMINAIRES, CONDUITS, CABLES, ETC., IS THE RESPONSIBILITY OF THE CONTRACTOR, AND MUST BE REPLACED IN-KIND. NO COMPENSATION WILL BE CONSIDERED OR AWARDED FOR REPLACEMENT OF ANY DAMAGED ITEMS AS A RESULT OF THIS REMOVAL, STORAGE, AND REINSTALLATION PROCESS.
3. EXISTING FOUNDATIONS OF THE REMOVED LIGHT POLES SHALL BE COMPLETELY REMOVED. SPECIAL CARE MUST BE TAKEN WHEN REMOVING THE FOUNDATIONS SO THAT THE EXISTING CONDUITS BETWEEN LIGHT POLES CONNECTED TO THE ELBOWS IN THE FOUNDATIONS ARE NOT DAMAGED. THE EXISTING CONDUITS THAT ARE SHOWN TO REMAIN ARE TO BE REUSED WHEN THE LIGHT POLES ARE REINSTALLED.
4. A NEW FOUNDATION SHALL BE INSTALLED AT THIS LOCATION TO MATCH THE EXISTING FOUNDATION.
5. THIS EXISTING CONCRETE POLE AND CONDUIT IS NOT SHOWN ON ANY EXISTING OR AS-BUILT DRAWING, THEREFORE THE DESIGNER ASSUMES THAT IT IS CONNECTED TO THE NEAREST POLE ON RIDGE ROAD. THE PROPOSED CONNECTION IS SHOWN ON THE RELOCATED POLE LAYOUT. THE CONTRACTOR SHALL VERIFY THE EXISTING CONNECTION AND POWER TO THIS POLE, AND SHALL CONNECT IT THE SAME WAY AS IT IS CURRENTLY CONNECTED.
6. LIGHT POLES SHALL BE SETBACK MINIMUM 6 FEET FROM THE BACK OF CURB TO THE FACE OF THE POLE.
7. THE CONTRACTOR SHALL VERIFY THE LIGHT POLE WIRING SHOWN ON THIS DRAWING. THE CABLE SIZE AND QUANTITY WAS TAKEN FROM THE EXISTING LIGHTING PLANS, AND MUST BE FIELD VERIFIED BY THE CONTRACTOR TO MAKE SURE THAT THE POLES ARE WIRED CORRECTLY.



EXISTING LOCATIONS OF LIGHT POLES TO BE REMOVED



PROPOSED RELOCATED LIGHT POLE LOCATIONS

LEGEND

- EXISTING LIGHT POLE TO BE REMOVED, AND RELOCATED
- NEW LOCATION OF RELOCATED LIGHT POLES
- EXISTING UNDERGROUND CONDUITS
- PROPOSED UNDERGROUND CONDUIT, 2" PVC WITH 2 @ 3-1/2 #4, WITH 2 @ 3-1/2 #6 & 2 @ 1/2 #6 GROUND, 600V, XLP-TYPE USE.

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
RELOCATION OF EXISTING LIGHTING
ON RIDGE ROAD AT
OTTAWA DRIVE

SCALE: 1:50

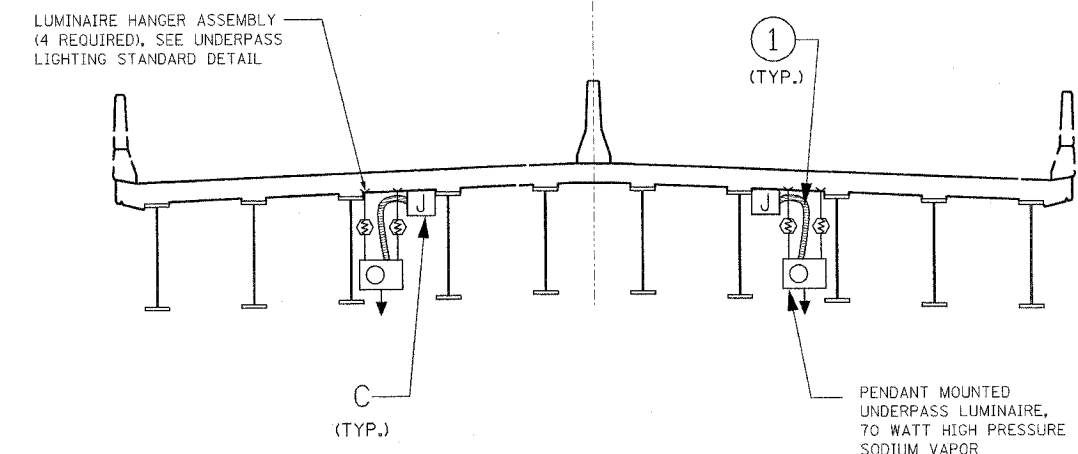
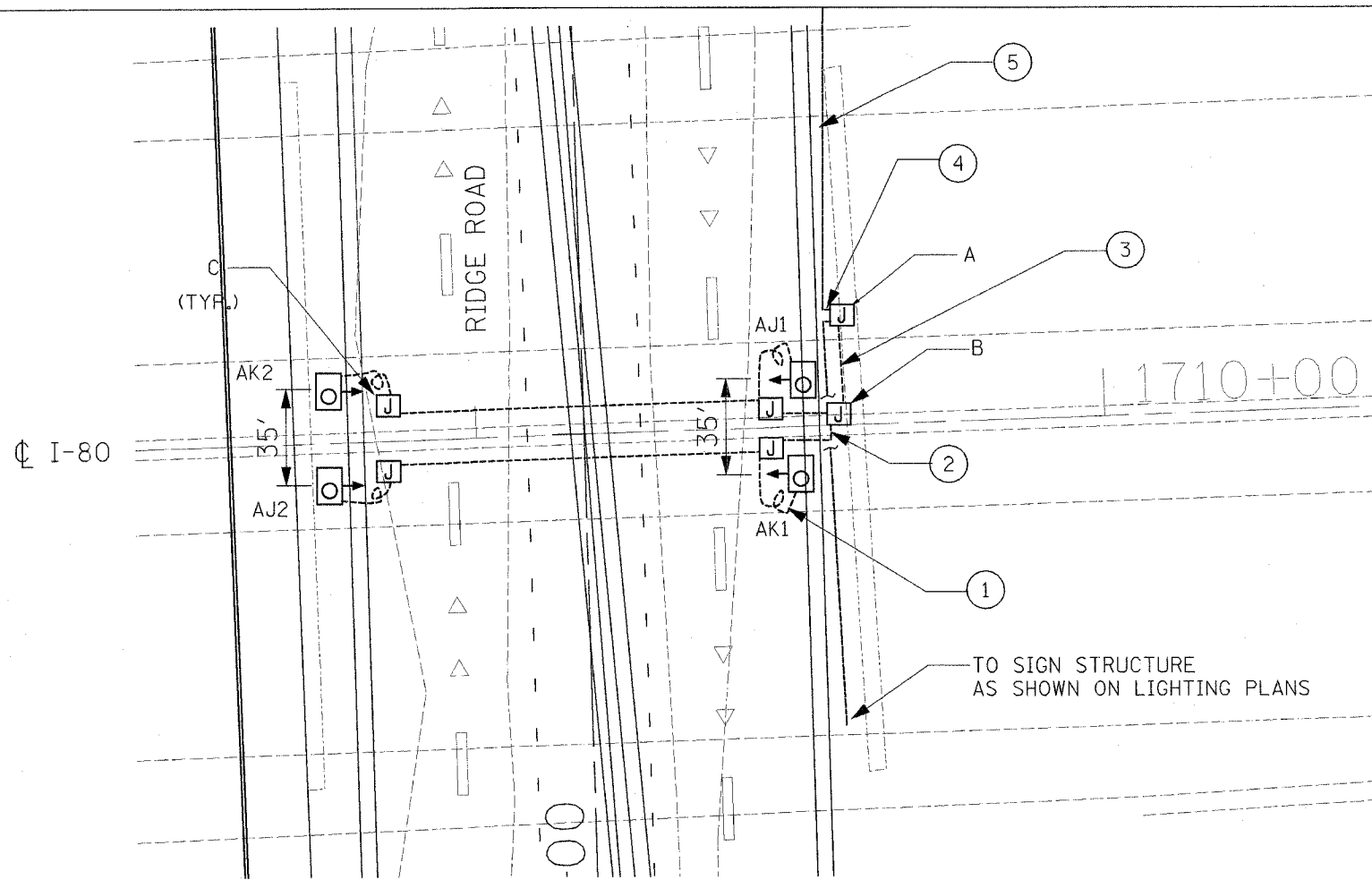
DATE: 2/10/06

DRAWN BY: KGP/MAE

CHECKED BY: MAE/PKG

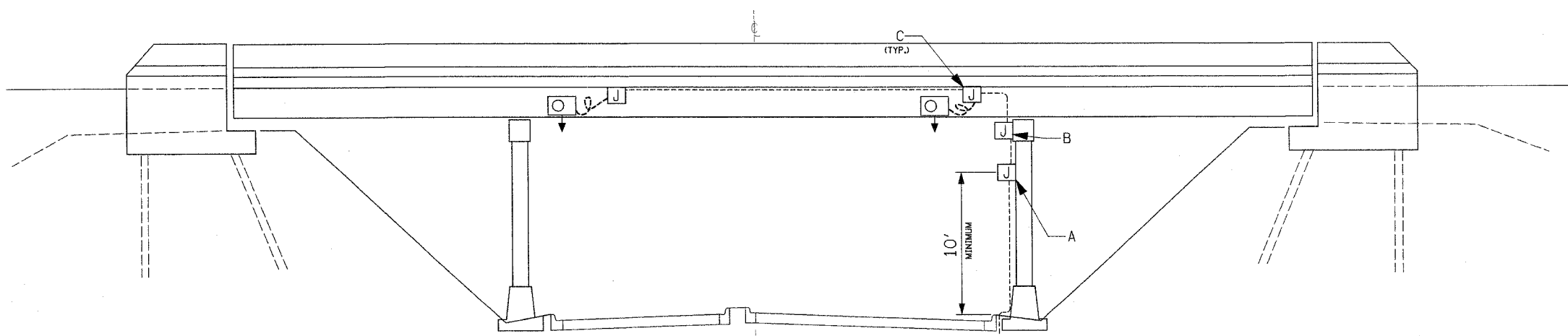
GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 308
CHICAGO, ILLINOIS 60631 TEL: (773) 774-590

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4K)	KENDALL/GRUNDY	243	145
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



- NOTES:
1. UNDERPASS LUMINAIRES SHALL BE SET BACK 2 FEET FROM THE EDGE OF PAVEMENT.
 2. THE SPACING BETWEEN EACH TWO LUMINAIRES ON ONE SIDE OF THE BRIDGE SHALL BE 35 FEET AS SHOWN ON THIS PLAN.
 3. THE MAXIMUM WEIGHT LIMIT OF EACH UNDERPASS LUMINAIRE SHALL NOT EXCEED 60 LBS. FOR LUMINAIRES MOUNTED TO THE UNDERSIDE OF THE BRIDGE DECK.
 4. THE UNDERPASS LUMINAIRES SHALL BE INSTALLED CENTERED UNDER THE DECK AND HAVE EQUAL DISTANCE ON BOTH SIDES FROM THE EDGE OF THE BRIDGE DECK.

- LEGEND
- UNDERPASS LUMINAIRE, 70 WATT, HIGH PRESSURE SODIUM
 - A JUNCTION BOX, ATTACHED TO STRUCTURE, 16" X 14" X 6"
 - B JUNCTION BOX, ATTACHED TO STRUCTURE, 10" X 8" X 6"
 - C JUNCTION BOX, ATTACHED TO STRUCTURE, 6" X 4" X 4"
 - 1 2/C*10, 1/C*10 GND. IN LIQUID TIGHT FLEXIBLE METALLIC CONDUIT, 1 INCH
 - 2 3/C*10, 1/C*10 GND. IN CONDUIT ATTACHED TO STRUCTURE, 1" DIA. GALVANIZED STEEL, PVC COATED
 - 3 3/C*10, 1/C*10 GND. IN CONDUIT ATTACHED TO STRUCTURE, 1" DIA. GALVANIZED STEEL, PVC COATED
 - 4 UNIT DUCT 3-1/4" #4, 1/C #6 GND. 600V (XLP-TYPE-USE), 1/4" DIA. IN CONDUIT ATTACHED TO STRUCTURE, 3" DIA. GALVANIZED STEEL, PVC COATED
 - 5 UNIT DUCT 3-1/4" #4, 1/C #6 GND. 600V (XLP-TYPE-USE), 1/4" DIA. IN TRENCH.



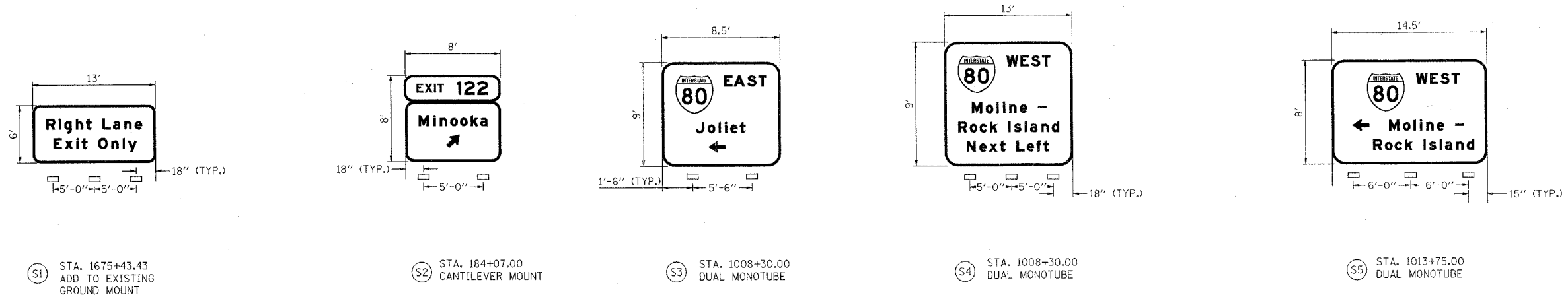
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE) I-80 OVER RIDGE ROAD PROPOSED UNDERPASS LIGHTING PLAN
NAME	DATE	

SCALE: NONE
DATE: 2/10/06
DRAWN BY: KGP/MAE
CHECKED BY: MAE/PKG

GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6030 N. NORTHWEST HIGHWAY
SUITE 206
CHICAGO, ILLINOIS 60631 TEL. (773) 774-590

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	146
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



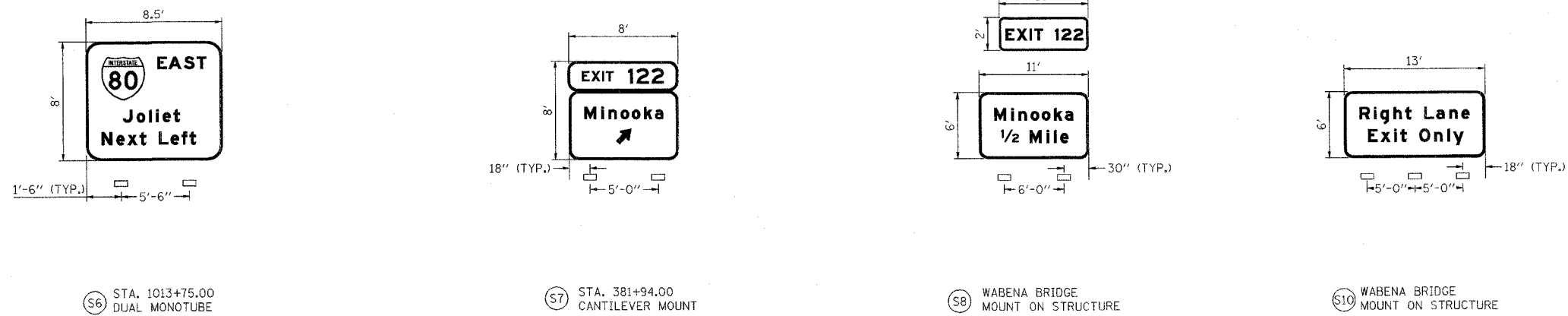
S1 STA. 1675+43.43
ADD TO EXISTING
GROUND MOUNT

S2 STA. 184+07.00
CANTILEVER MOUNT

S3 STA. 1008+30.00
DUAL MONOTUBE

S4 STA. 1008+30.00
DUAL MONOTUBE

S5 STA. 1013+75.00
DUAL MONOTUBE



S6 STA. 1013+75.00
DUAL MONOTUBE

S7 STA. 381+94.00
CANTILEVER MOUNT

S8 WABENA BRIDGE
MOUNT ON STRUCTURE

S9 WABENA BRIDGE
MOUNT ON STRUCTURE
ON TOP OF SIGN S8

S10 WABENA BRIDGE
MOUNT ON STRUCTURE

□ SIGN LIGHTING LUMINAIRE MOUNTED ON THE SIGN WALKWAY STRUCTURE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

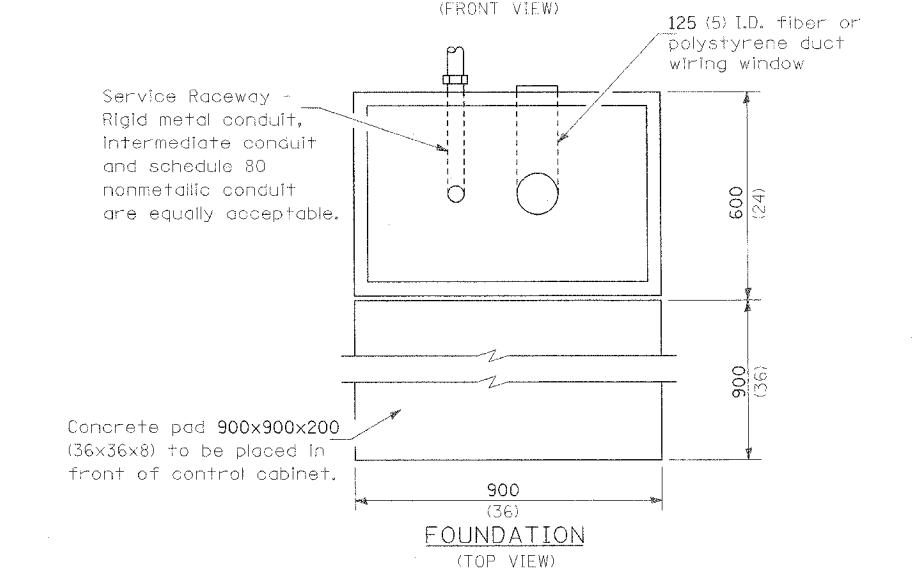
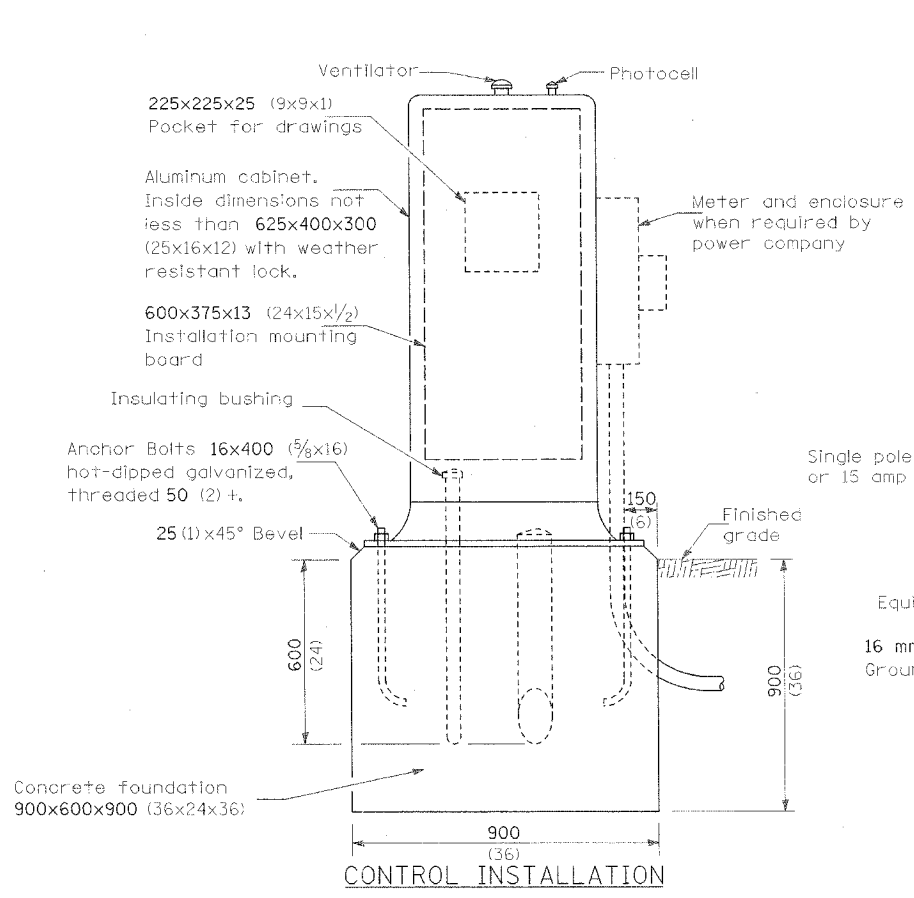
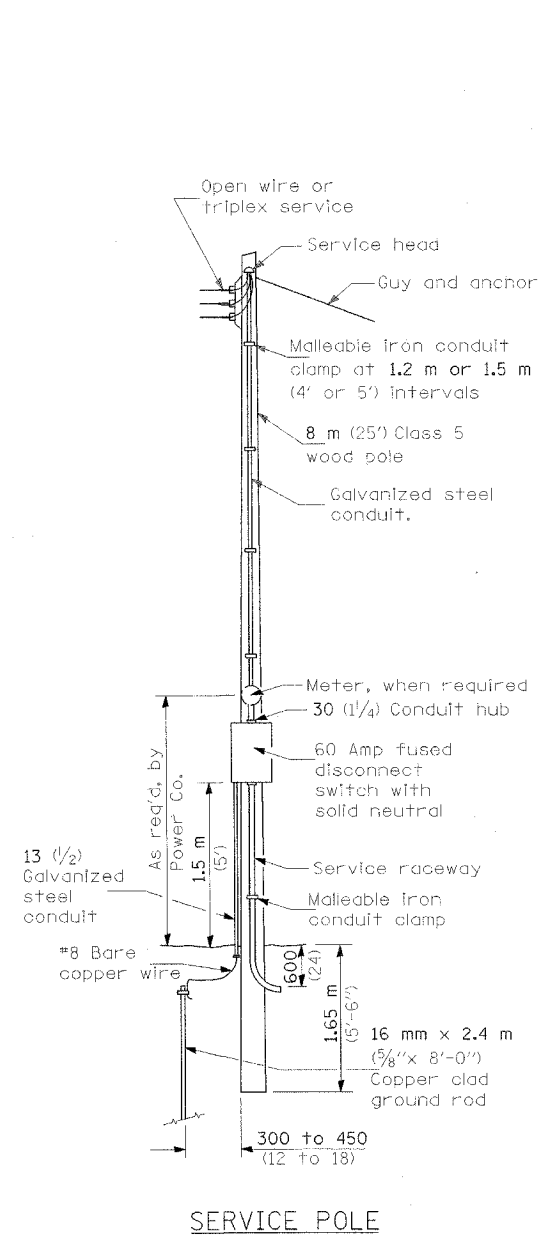
PROPOSED SIGN LIGHTING PLAN

SCALE: NONE
DATE: 2/10/06
DRAWN BY: KGP/MAE
CHECKED BY: MAE/PKG

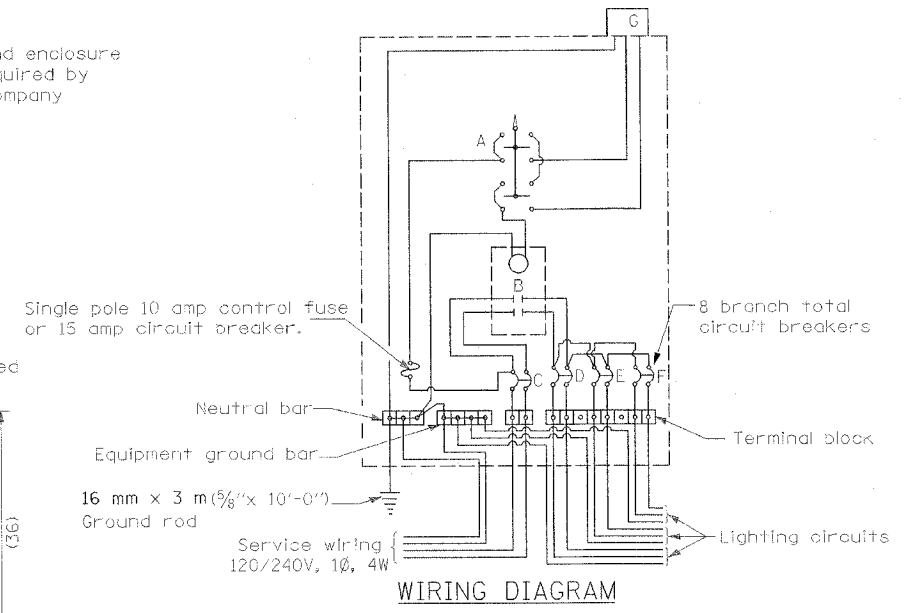
GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-6900

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	132, 47-4)K	KENDALL/GRUNDY	243	147
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



- A Selector switch
- B 2 Pole 100 amp contactor
- C 2 Pole 200 amp service disconnect
- D,E,F,... 2 Pole 30 amp breakers (8 branch breakers total)
- G Photocell w/integral surge arrester



GENERAL NOTES

Locate service pole and control installation adjacent to R.O.W. line with a minimum distance of 9 m (30') from the edge of pavement. Exact location shall be established by the Engineer.

The underground service entrance wiring shall not exceed 46 m (150'). Total aerial and underground service between the control installation and primary transformer shall not exceed 76 m (250').

Raceways shall terminate 75 (3) above top of concrete foundation.

For 480 V. systems, a 480/120 V. control transformer will be required.

All dimensions are in millimeters unless otherwise shown.

- 240 V. SERVICE
- 480 V. SERVICE

**CONTROL INSTALLATION
TYPE CB-RCS-200**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

LIGHTING STANDARDS
LIGHTING CONTROLLER DETAIL

SCALE: NONE
DATE: 2/10/06

DRAWN BY: KGP/MAE
CHECKED BY: MAE/PKG

LGT005.M32

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5900

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

LIGHT POLE MOUNTING HEIGHT	BOLT CIRCLE DIAMETER	STEEL FOUNDATION		CONCRETE FOUNDATION		
		SHAFT DIAMETER	SHAFT DEPTH	SHAFT DIAMETER	SHAFT DEPTH	ANCHOR ROD LENGTH *
9.1 m (30')	292 mm (11 1/2")	220 mm (8 5/8")	1.83 m (6'-0")	610mm (24")	1.52 m (5'-0")	1.45 m (4'-9")
9.4 m - 10.7 m (31'-35')	292 mm (11 1/2")	220 mm (8 5/8")	1.83 m (6'-0")	610mm (24")	1.67 m (5'-6")	1.60 m (5'-3")
10.9 m - 12.2 m (36'-40')	381 mm (15")	220 mm (8 5/8")	1.83 m ** (6'-0")	610mm (24")	1.83 m (6'-0")	1.75 m (5'-9")
12.5 m - 13.7 m (41'-45')	381 mm (15")	220 mm (8 5/8")	1.83 m ** (6'-0")	610mm (24")	1.98 m (6'-6")	1.90 m (6'-3")
14.0 m - 15.2 m (46'-50')	381 mm (15")	220 mm (8 5/8")	2.44 m (8'-0")	610mm (24")	2.13m (7'-0")	2.00 m (6'-9")

* Length does not include 100 (4)hook
 ** 220 mm x 2.44 m (8 5/8" x 8'-0") for Twin luminaires

Notes:

All foundations are designed to be located on slopes not exceeding 2:1 where soils have an unconfined compressive strength of at least 1.0 TSF. The contractor shall verify the soil strength during drilling for concrete foundations or by monitoring installation resistance on steel foundations and notify the engineer if other conditions are encountered.

Notes:

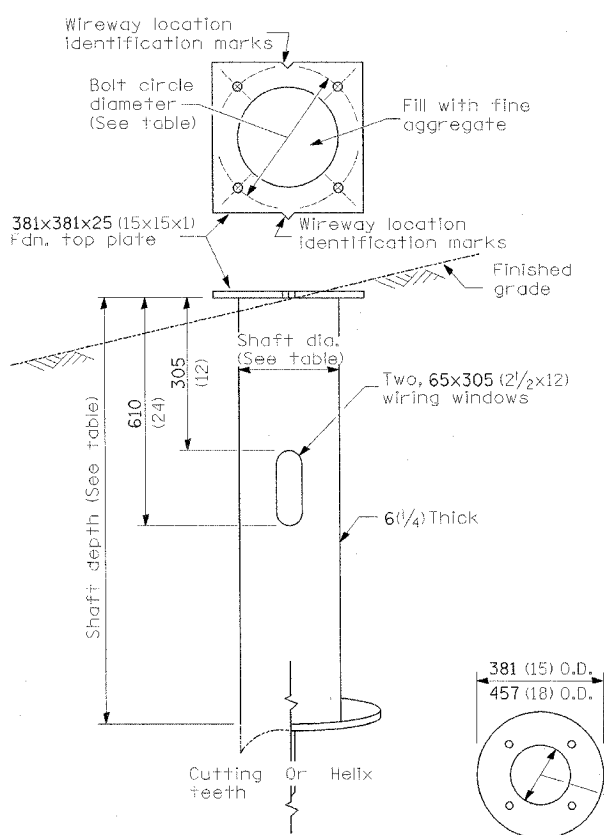
Wireway may be on front, back, or side of foundation as required by the trenching. Place door of transformer base on wireway side to minimize the number of unit duct bends.

Top of schedule 40 PVC 125 (5) I.D. PVC wiring window, shall be flush with the top of foundation for drainage.

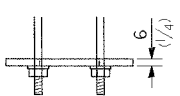
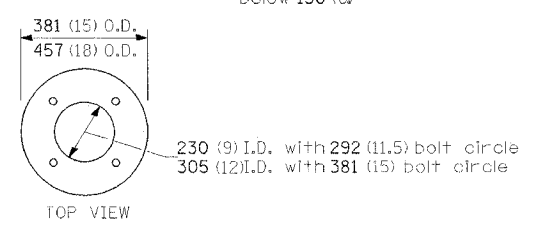
75 (3) Min. concrete cover on all steel

25 (1) Ø Steel anchor rod with 230 (9) of threads. See table for the required bolt circle diameter.

19 (3/4) - 45° Bevel

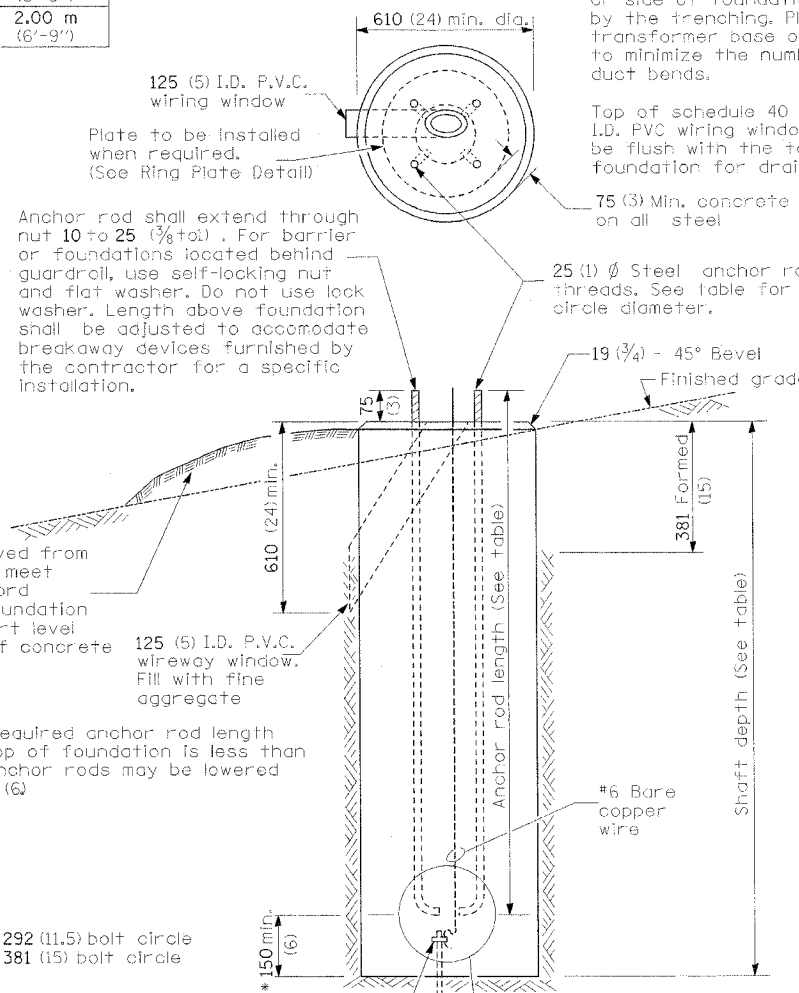


STEEL FOUNDATION

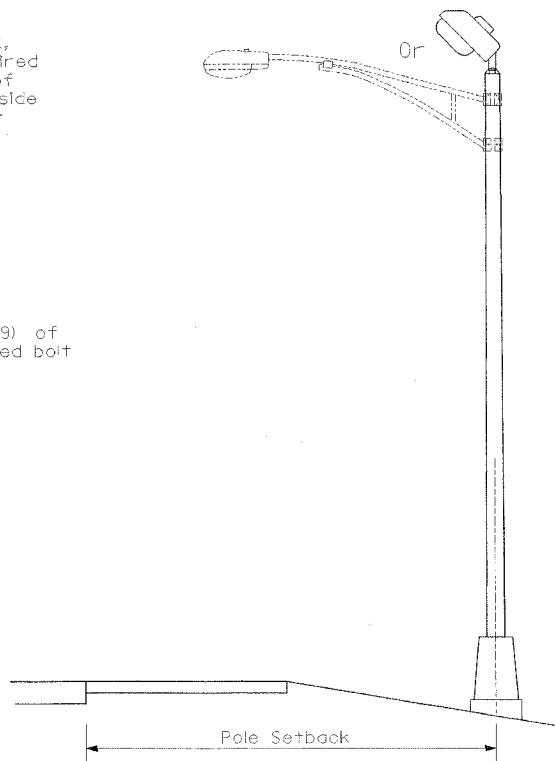


RING PLATE DETAIL

(When rock is encountered and foundation is shallower)



CONCRETE FOUNDATION



Pole Foundation Setback:

For horizontal mounted luminaires, setback shall be a minimum of 6.1 m (20') from edge of pavement.

For vertical mount luminaires, setback shall be a minimum of 9 m (30') from edge of pavement. Poles shall be located 1.5 m (5') behind guardrail or other protective barriers, or as directed by the Engineer.

LIGHT POLE FOUNDATION

REVISIONS	
NAME	DATE
Bridge Office	10/7/02
depth calc.	

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

LIGHTING STANDARDS
 LIGHT POLE FOUNDATION

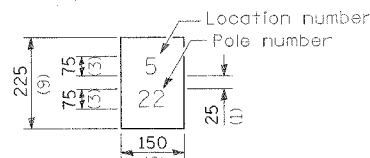
SCALE: NONE
 DATE: 2/10/06

DRAWN BY: KGP/MAE
 CHECKED BY: MAE/PGK

LGT007-836

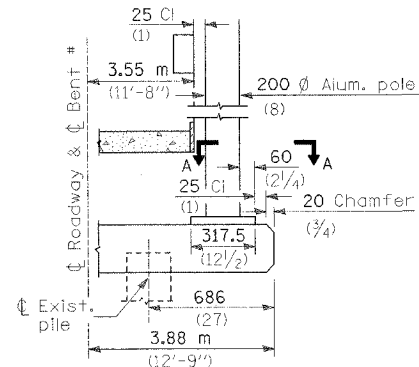
"Install and orient arm bracket over pole tenon and firmly hand tighten the two set screws. Use third hole in arm bracket as a guide to drill a 8.3 (3/4) diameter hole through tenon. Install and tighten self-tapping screw. Tighten set screws on additional (1/4 to 3/8) turn with hex key (not provided). Install locknuts on set screws if threaded projection allows."

Pole shall meet AASHTO Standard Specifications for 128.72 km (80 mph) wind loading and 40.82 kg (90 lb.), .37 m² (4.0 sq. ft.) E.P.A. luminaire.

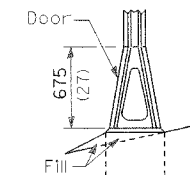


The contractor shall furnish and install a light pole identification of each new light pole, as shown above, incidental to the respective light pole pay item. The numerals shall be 75 (3) series "D", black, screened on silver-white type B pressure sensitive reflective sheeting conforming to the requirements of section T602.01 of the Standard Specifications for Traffic Control Items. The numerals shall conform to the FHWA "Standard Alphabets for Highway Signs".

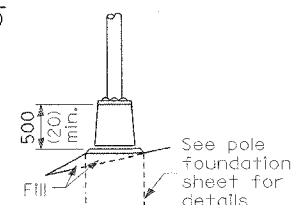
The light pole identification shall be applied to sign base material as specified in section 1085.05 of the Standard Specifications, approximately 180 (7) above the adjacent pavement grade visible to approaching traffic in accordance with Highway Standard 2319.



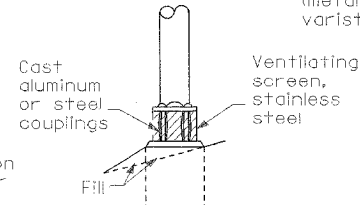
BENT #
(Looking)



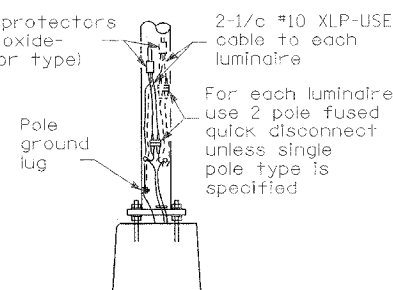
STAINLESS STEEL FLAIR BASE



TRANSFORMER BASE



BREAKAWAY COUPLING

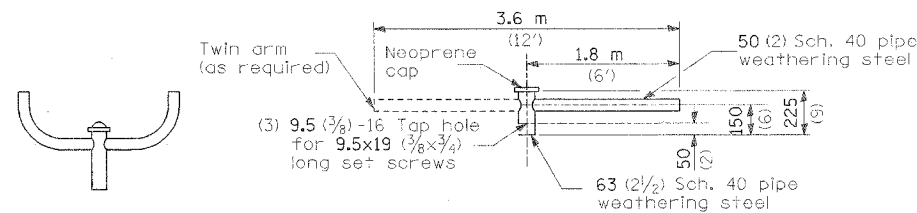


ANCHOR

FRANGIBLE

METAL OR CONCRETE

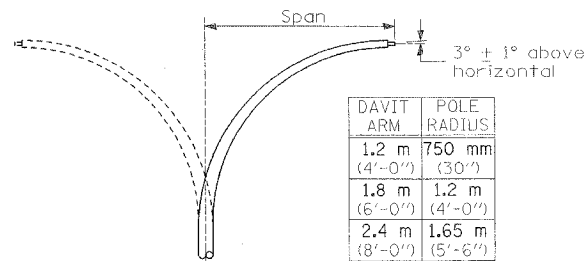
Details for underground distribution if required



TWIN TENON

TENON MOUNT BRACKET ARM

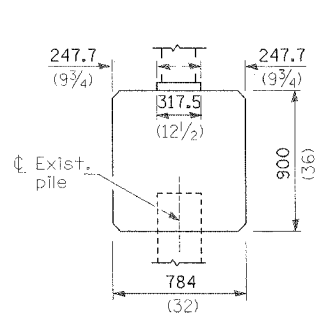
NOTE: Single or twin arm assembly shall be tilted 3° above horizontal.



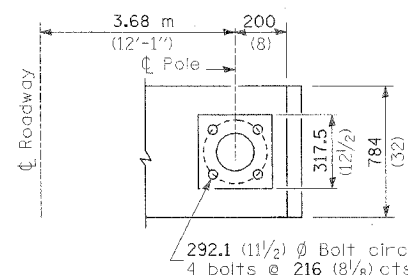
DAVIT ARM

DAVIT ARM-TWIN

DAVIT ARM	POLE RADIUS
1.2 m (4'-0")	750 mm (30")
1.8 m (6'-0")	1.2 m (4'-0")
2.4 m (8'-0")	1.65 m (5'-6")
3.6 m (12'-0")	1.65 m (5'-6")



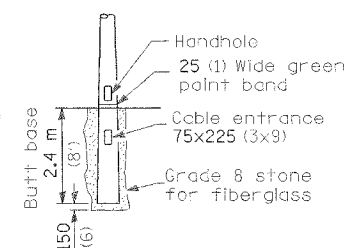
BRIDGE PIER MOUNT



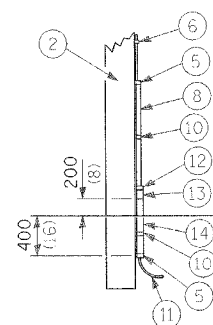
SECTION A-A

- ① Luminaire
- ② Wood pole, class 3 or better
- ③ 63 (2 1/2) Galv. steel conduit
- ④ Single offset pole band
- ⑤ Conduit bushing
- ⑥ Cable clamps on 600 (24) centers
- ⑦ 2/c #12 Type use cable
- ⑧ 25 (1) Galv. steel conduit 3.0 m (10') in length

- ⑨ 16 (5/8) Ø hot dipped galvanized bolt with flat washer & locknut (3 req'd)
- ⑩ Conduit clamps on 900 (36) centers
- ⑪ Unit duct
- ⑫ Threaded reducer
- ⑬ "C" Condulet, threaded
- ⑭ 40 (1 1/2) Galv. steel conduit for 1 unit duct or 75 (3) galv. steel conduit for 2 or 3 unit ducts.



BUTT BASE



POLE, WOOD

POLE LENGTH	DEPTH IN GROUND
19.8 m (65')	3.6 m (12')
18.0 m (60')	3.0 m (10')
16.8 m (55')	2.7 m (9')
16.0 m (50')	2.4 m (8')
13.7 m (45')	2.1 m (7')
12.0 m (40')	2.0 m (6.5')
10.7 m (35')	1.8 m (6')
9.0 m (30')	1.7 m (5.5')

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

POLE STANDARDS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
LIGHTING STANDARDS
LIGHT POLE DETAIL

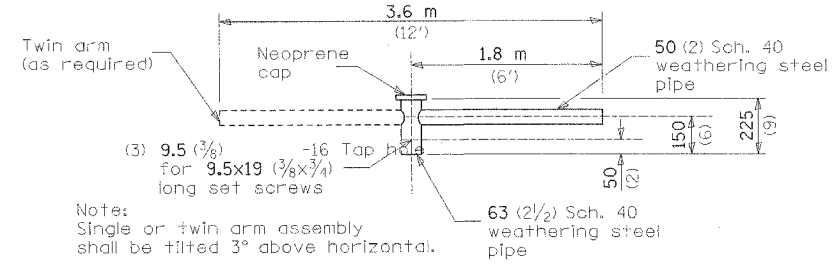
SCALE: NONE
DATE: 2/10/06

DRAWN BY: KGP/MAE
CHECKED BY: MAE/PGK

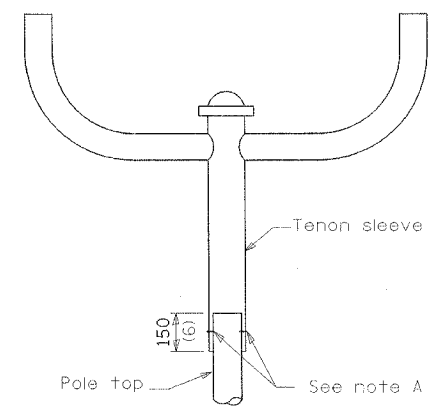
LGTO08.M32
GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-590

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	132, 47-41K	KENDALL/GRUNDY	243	150
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				

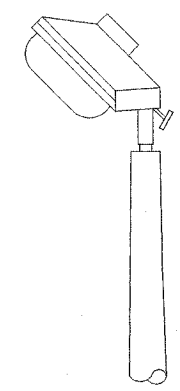
Note A:
 Install and orient arm bracket over pole tenon and firmly hand tighten the two set screws. Use third hole in arm bracket as a guide to drill a 8.3 (5/8) diameter hole through tenon. Install and tighten self-tapping screw. Tighten set screws an additional (1/4 to 3/8) turn with hex key (not provided). Install locknuts on set screws if threaded projection allows.



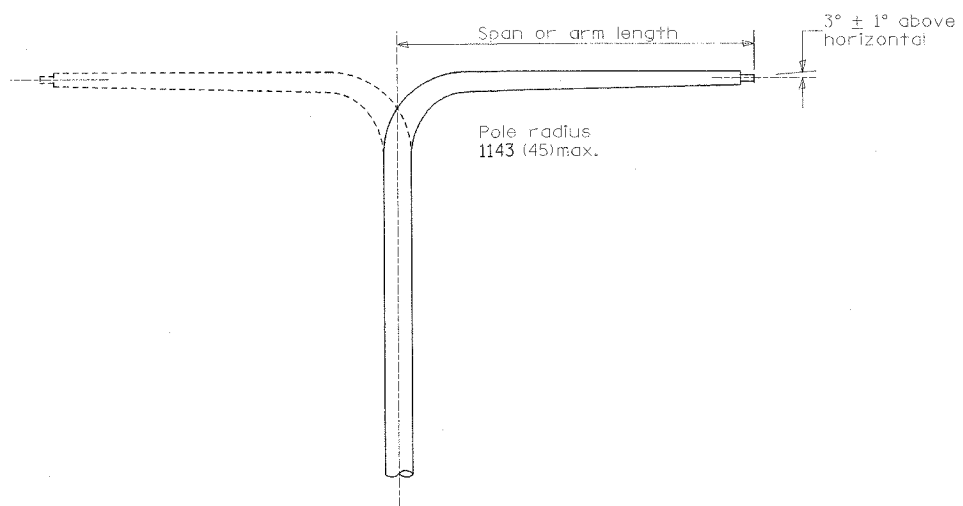
TENON MOUNT BRACKET ARM STEEL



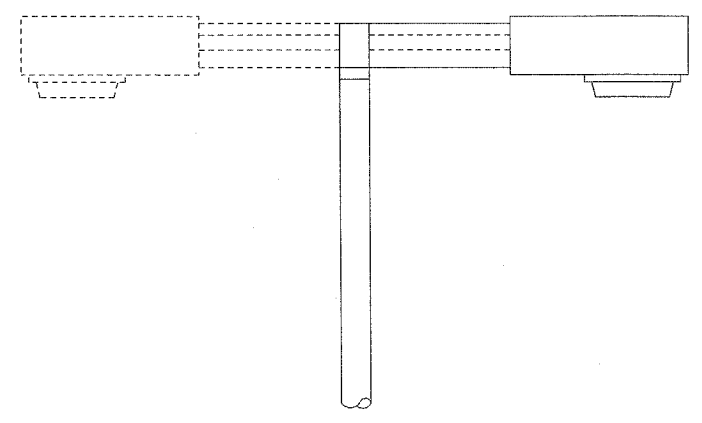
STEEL TWIN TENON



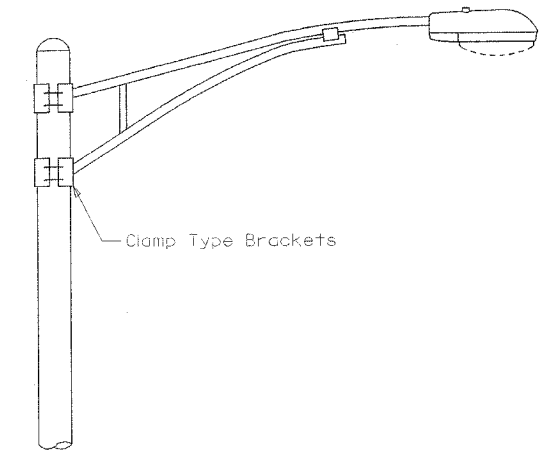
TENON



DAVIT ARM/ARMS



SHORT BRACKET/BRACKETS



TRUSS ARM

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

PATRICK
 ENGINEERING
 LITTLE, ILLINOIS

LIGHT BRACKET ARMS & TENONS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
 LIGHTING STANDARDS
 LUMINAIRE BRACKET ARMS & TENONS

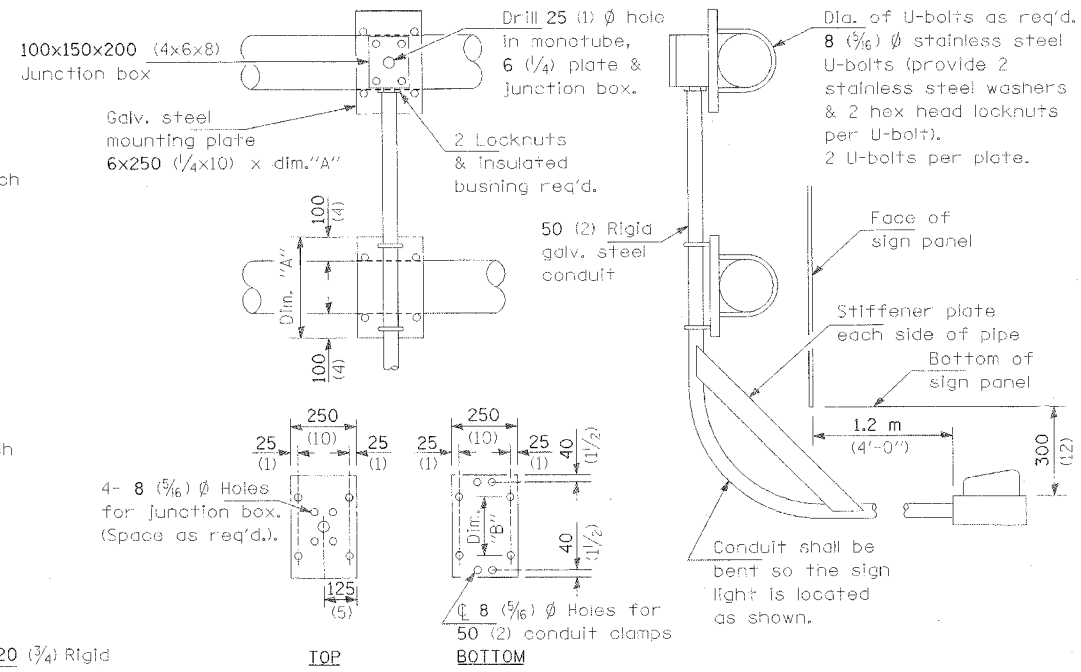
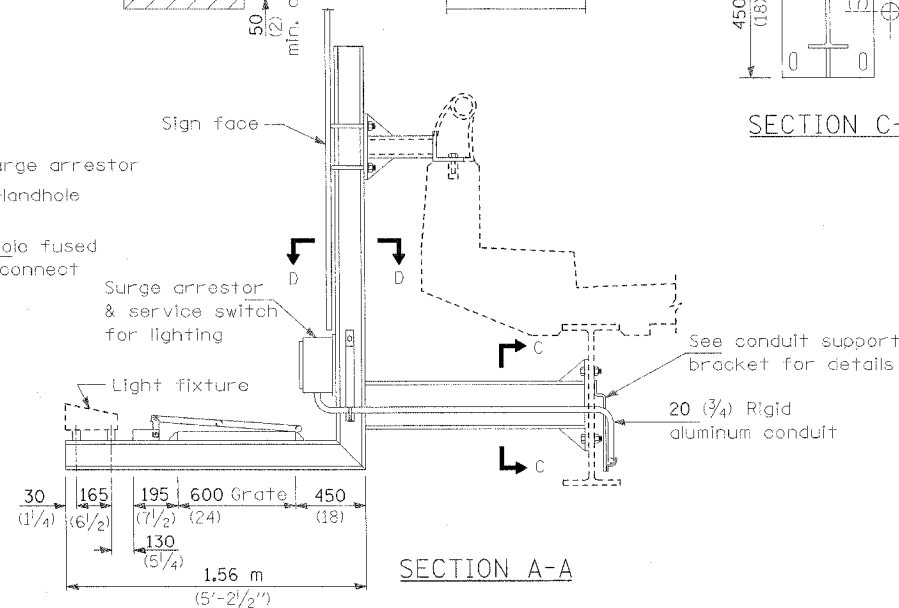
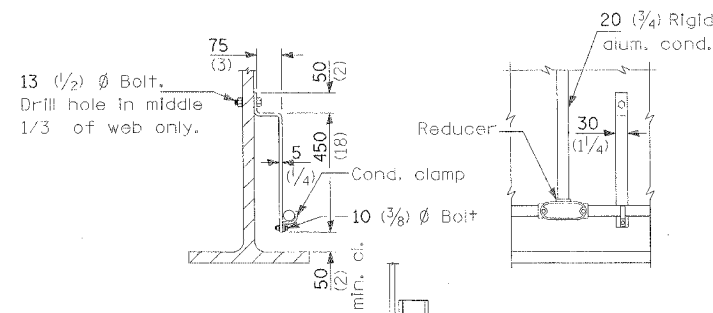
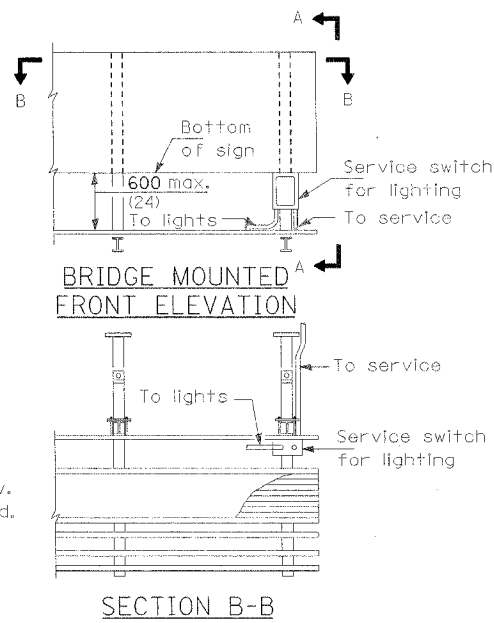
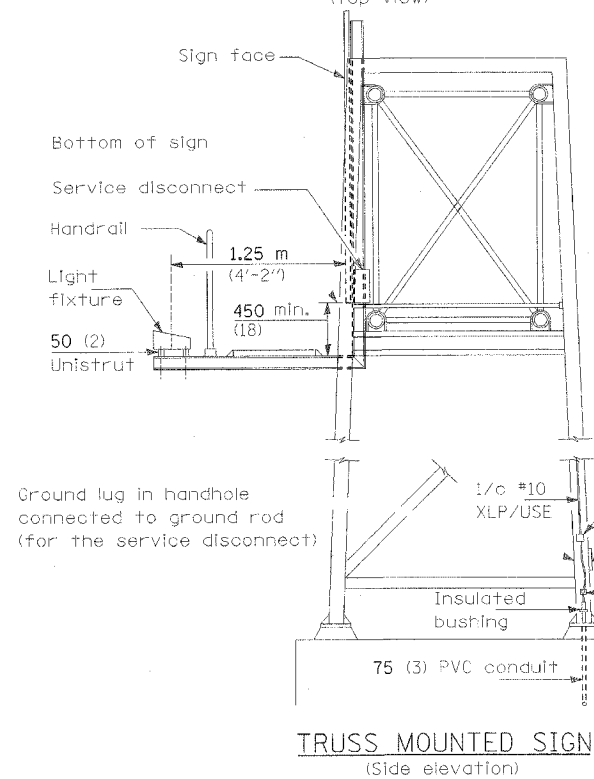
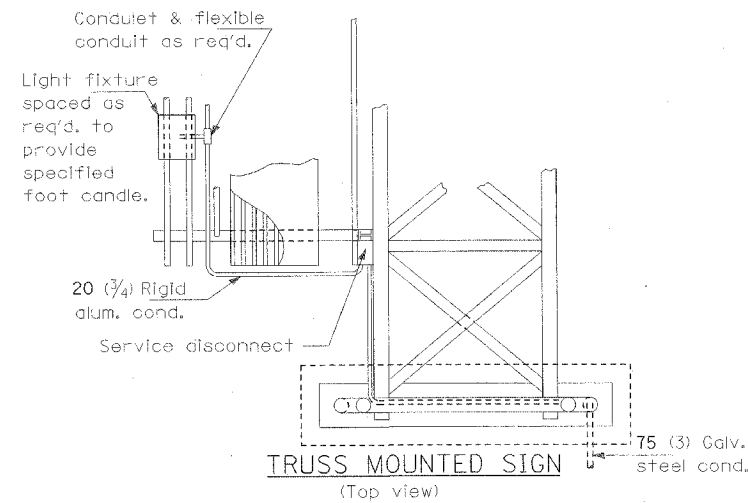
SCALE: NONE
 DATE: 2/10/06

DRAWN BY: KGP/MAE
 CHECKED BY: MAE/PKG

LGT108 Sheet 1 of 2

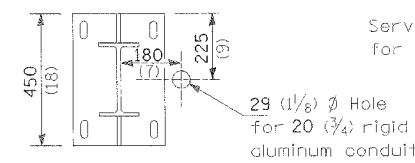
GA GANDHI AND ASSOCIATES, INC.
 ENGINEERS AND PLANNERS
 6035 N. NORTHWEST HIGHWAY
 SUITE 205
 CHICAGO, ILLINOIS 60631 TEL. (773) 774-5990

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	151
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				

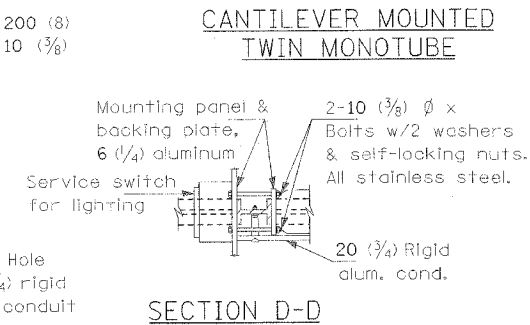


Dimension "A" = monotube dia. + 200 (8)
Dimension "B" = monotube dia. + 10 (3/8)

MOUNTING PLATES



SECTION C-C



SECTION D-D

GENERAL NOTES

All sign lighting fixtures shall have a minimum of 3 mounting points.

All mounting hardware shall be stainless steel.

All dimensions are in millimeters unless otherwise shown.

SIGN LIGHTING DETAILS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
LIGHTING STANDARDS
SIGN LIGHTING DETAILS

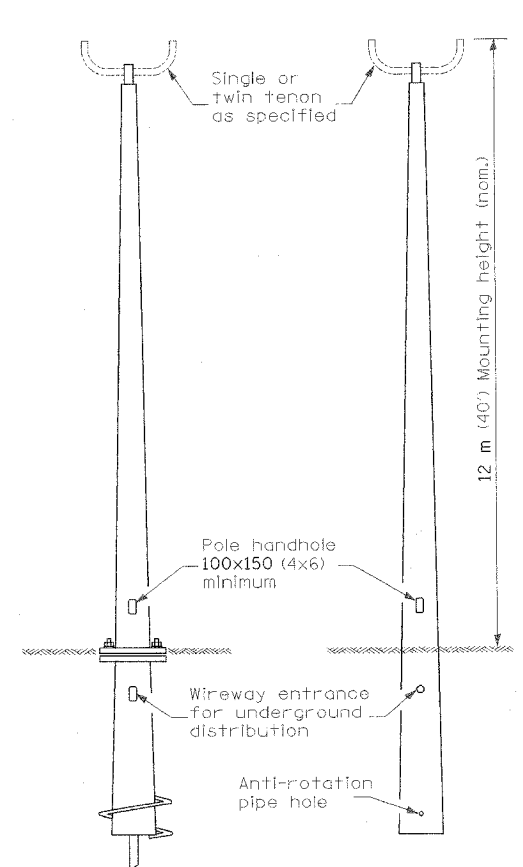
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DATE: 2/10/06

DRAWN BY: KGP/MAE
CHECKED BY: MAE/PKG

LGT013.M32

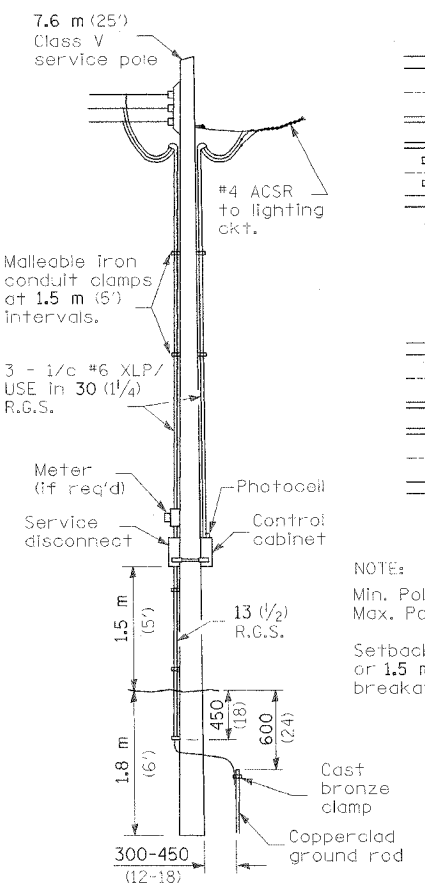


GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6075 N. NORTHWEST HIGHWAY
SUITE 100
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5900

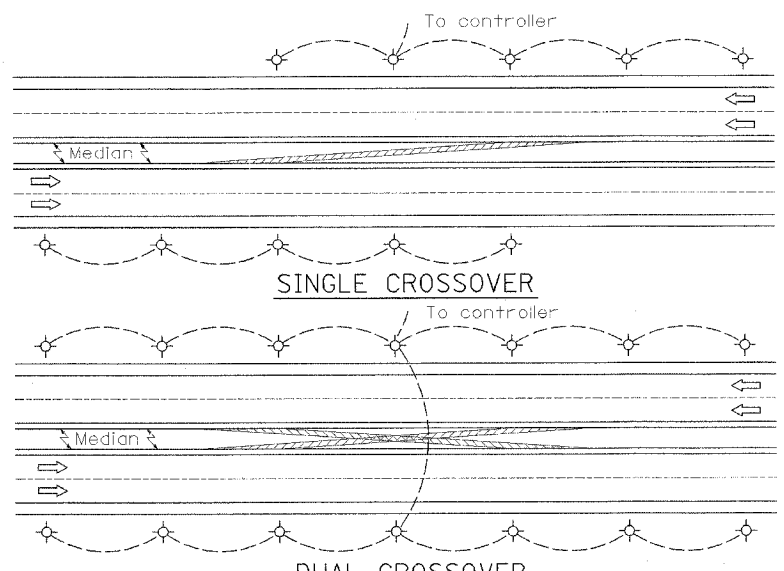


**ANCHOR BASE W/
METAL FOUNDATION** **BUTT BASE**

**POLE, FIBERGLASS
BREAKAWAY TYPE**



**SERVICE
INSTALLATION**



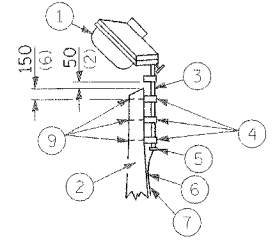
SINGLE CROSSOVER

DUAL CROSSOVER

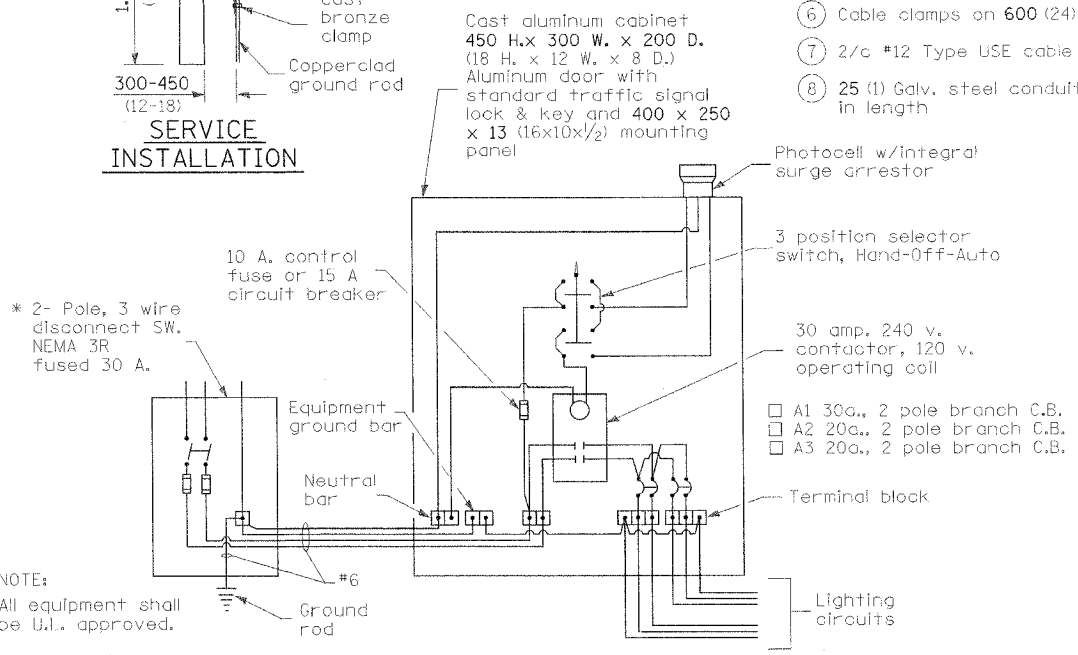
NOTE:
Min. Pole spacing 60 m (200')
Max. Pole spacing 75 m (250')
Setback shall be min. 9 m (30')
or 1.5 m (5') back of ditch, unless
breakaway type pole is used.

- ① Luminaire 250w HPS
- ② Wood pole, class 3 or better
- ③ 63 (2 1/2) Galv. steel conduit
- ④ Single offset pole band
- ⑤ Conduit bushing
- ⑥ Cable clamps on 600 (24) centers
- ⑦ 2/c #12 Type USE cable
- ⑧ 25 (1) Galv. steel conduit 3.0 m (10') in length

NOTE:
Luminaire(s) shall have a 2-pole inline weatherproof quick disconnect fuse holder.
Luminaires shall be oriented and the mounting angle adjusted as recommended by the Engineer.
Connect luminaire equipment ground to ACSR messenger.

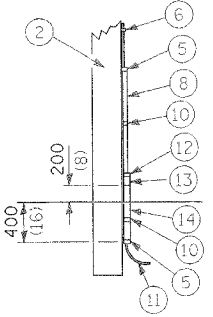


- ⑨ 16 (5/8) Ø hot dipped galvanized bolt with flat washer & locknut (3 req'd)
- ⑩ Conduit clamps on 900 (36) centers
- ⑪ Unit duct
- ⑫ Threaded reducer
- ⑬ "C" Condulet, threaded
- ⑭ 40 (1 1/2) Galv. steel conduit for 1 unit duct or 75 (3) galv. steel conduit for 2 or 3 unit ducts.



WIRING DIAGRAM

NOTE:
All equipment shall be U.I. approved.
* 30 A. or 60 A., dependent upon utility co. rules.



POLE, WOOD

POLE LENGTH	DEPTH IN GROUND
19.8 m (65')	3.6 m (12')
18.0 m (60')	3.0 m (10')
16.8 m (55')	2.7 m (9')
16.0 m (50')	2.4 m (8')
13.7 m (45')	2.1 m (7')
12.0 m (40')	2.0 m (6.5')
10.7 m (35')	1.8 m (6')
9.0 m (30')	1.7 m (5.5')

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

**TEMPORARY
ROADWAY LIGHTING**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

LIGHTING STANDARDS
TEMPORARY LIGHTING DETAILS

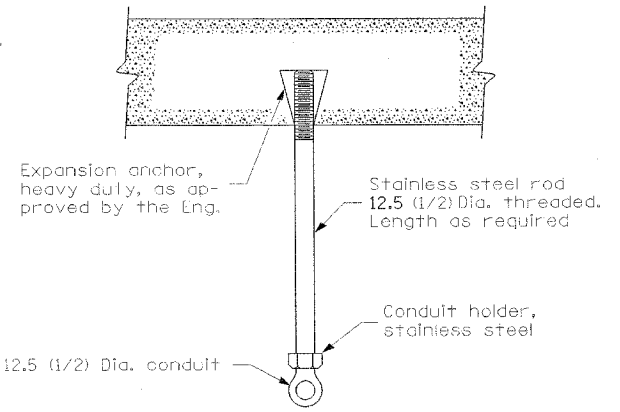
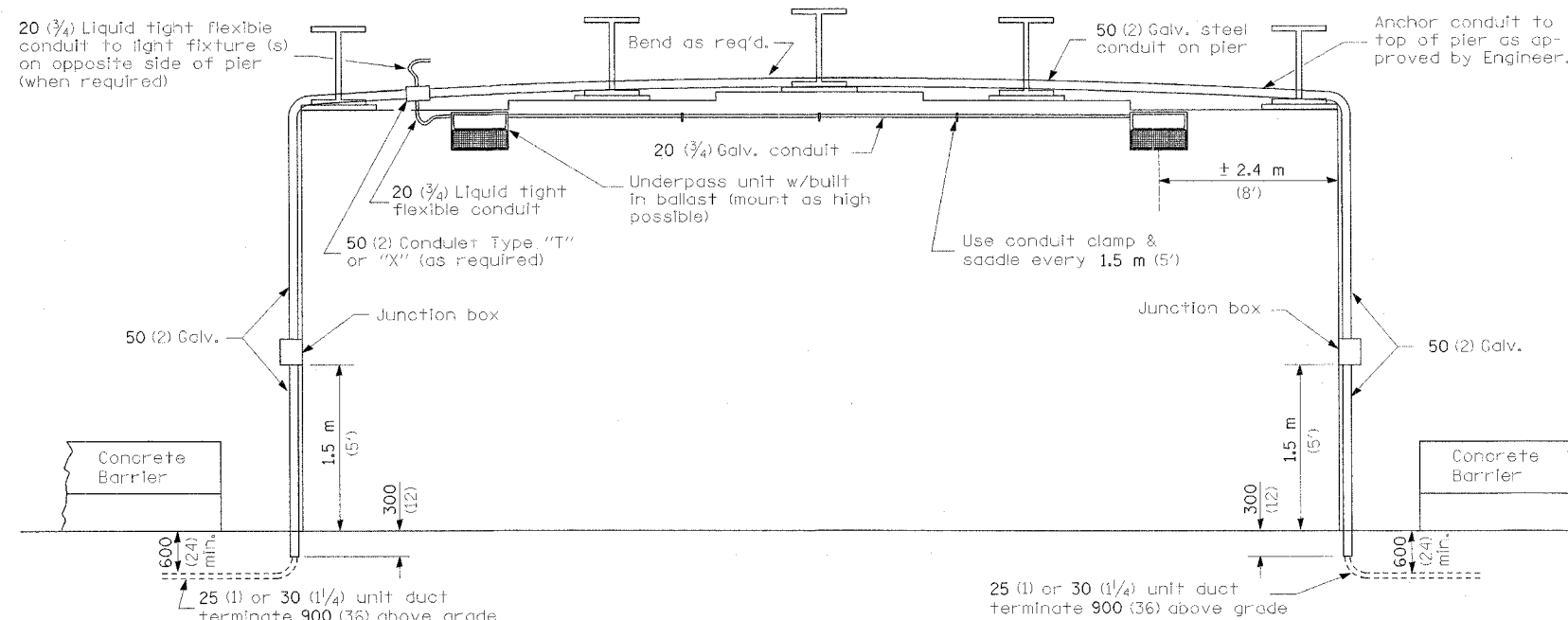
SCALE: NONE
DATE: 2/10/06

DRAWN BY: KGP/MAE
CHECKED BY: MAE/PKG

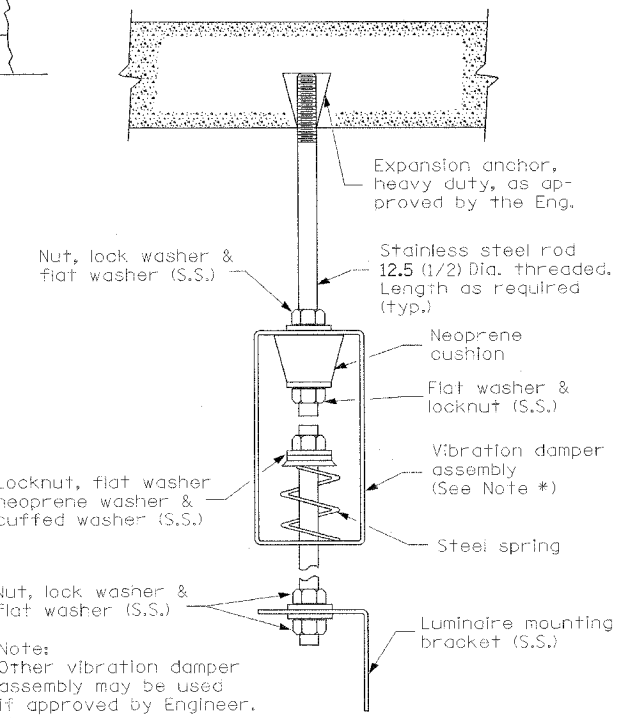
LGTO14.M32

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 205
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	153
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



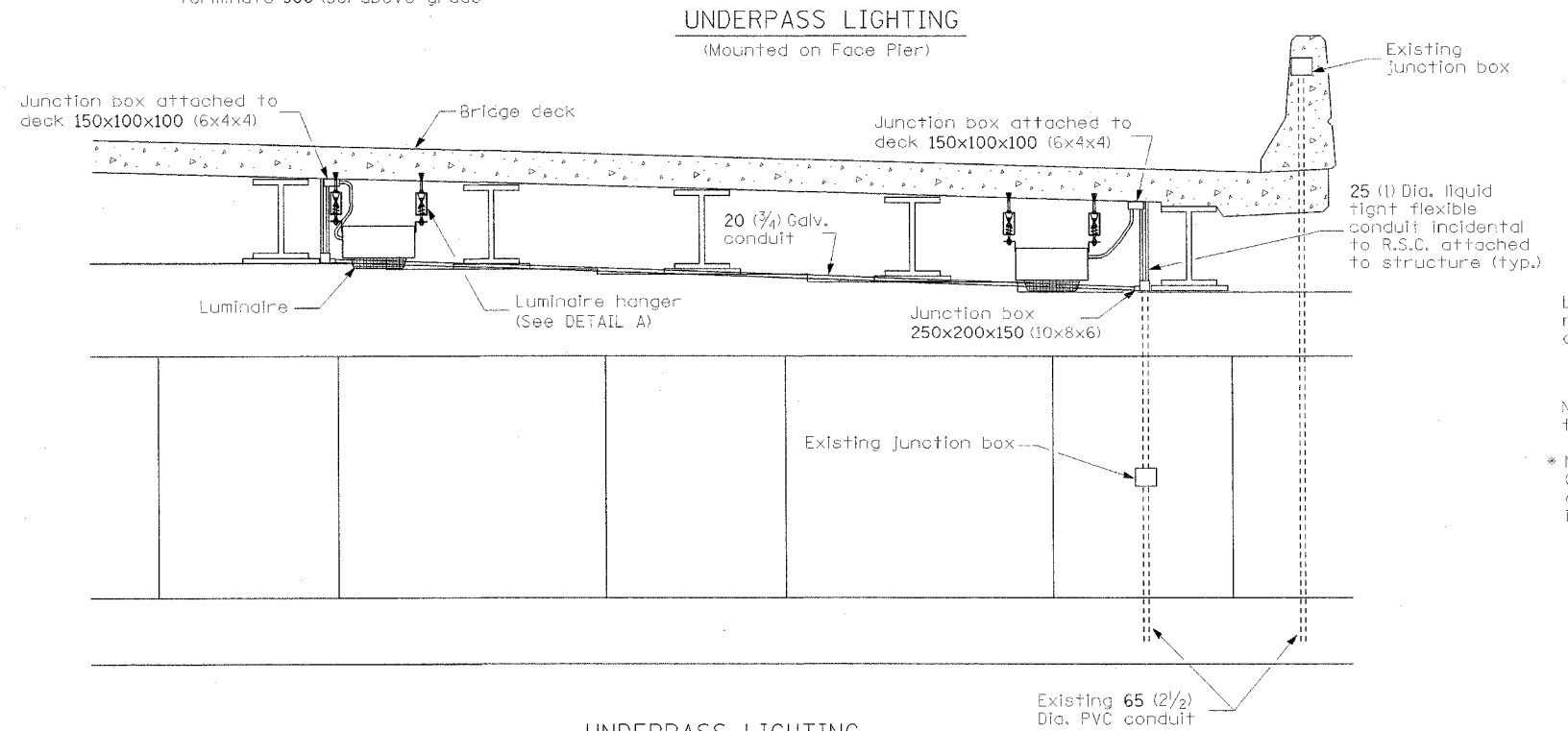
CONDUIT HANGER



* Note: Other vibration damper assembly may be used if approved by Engineer.

LUMINAIRE HANGER ASSEMBLY DETAIL A

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



UNDERPASS LIGHTING (Mounted to Bridge Deck)

UNDERPASS LIGHTING

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
LIGHTING STANDARDS
UNDERPASS LIGHTING DETAILS

SCALE: NONE
DATE: 2/10/06
DRAWN BY: KGP/MAE
CHECKED BY: MAE/PKG

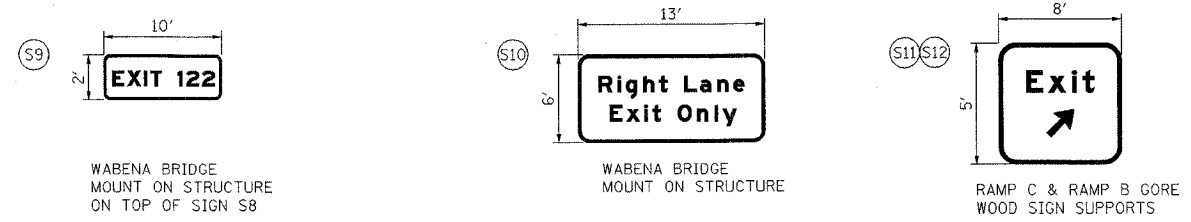
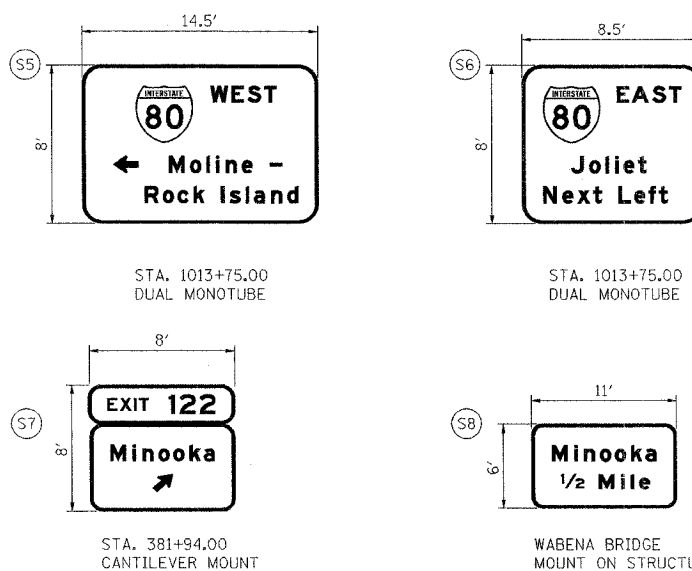
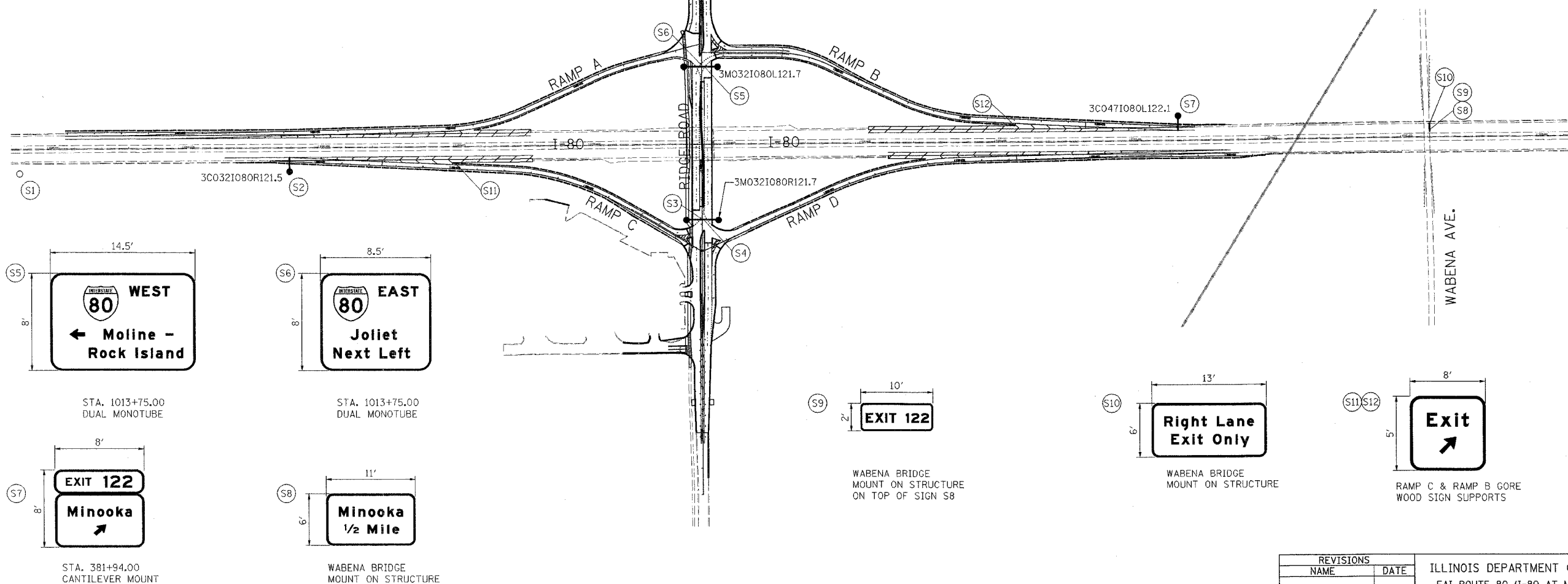
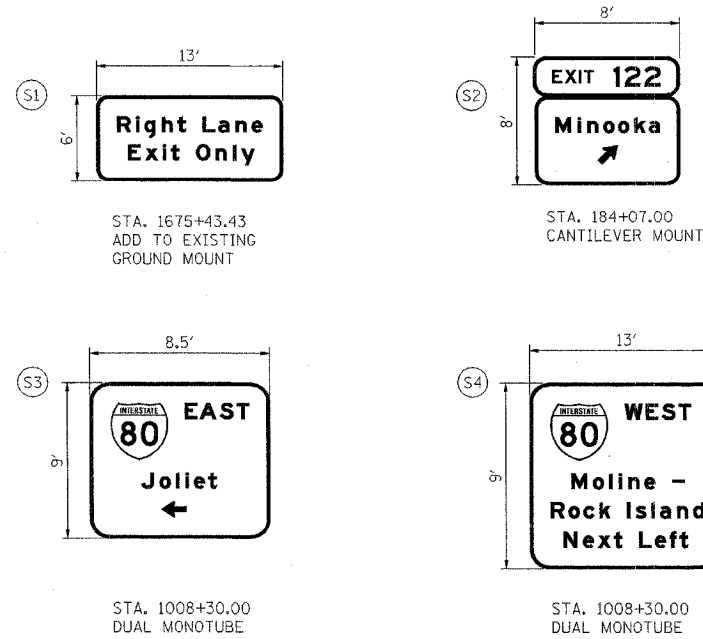
LGT019.M32

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HERWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-590

PATRICK ENGINEERING INC. LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	154
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				

SIGN NO.	LOCATION	SIGN DIMENSION	MOUNT TYPE	SIGN PANEL TYPE 2 (SQ FT)	SIGN PANEL TYPE 3 (SQ FT)
S1	1675+43.43	I-80	ADD TO EXISTING GROUND		78.0
S2	184+07.00	RAMP C	CANTILEVER		64.0
S3	1008+30.00	RIDGE	DUAL MONOTUBE		76.5
S4	1008+30.00	RIDGE	DUAL MONOTUBE		117.0
S5	1013+75.00	RIDGE	DUAL MONOTUBE		116.0
S6	1013+75.00	RIDGE	DUAL MONOTUBE		68.0
S7	381+94.00	RAMP B	CANTILEVER		64.0
S8	WABENA BRIDGE	11.0 X 6.0	BRIDGE		66.0
S9	WABENA BRIDGE	10.0 X 2.0	BRIDGE	20.0	
S10	WABENA BRIDGE	13.0 X 6.0	BRIDGE		78.0
S11	RAMP C GORE	5.0 X 8.0	WOOD POST		40.0
S12	RAMP B GORE	5.0 X 8.0	WOOD POST		40.0
TOTALS				20.0	807.5



NOTE: EXISTING SIGN PANEL ON WABENA BRIDGE WILL BE REMOVED AND PAID FOR AS "REMOVE SIGN PANEL - TYPE 3"

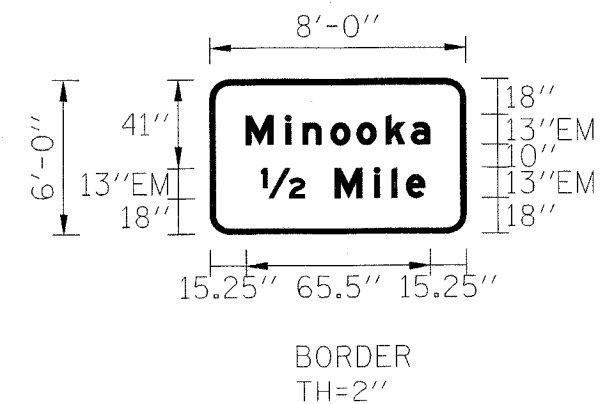
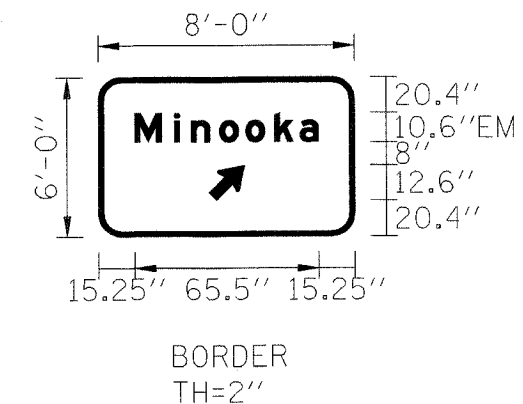
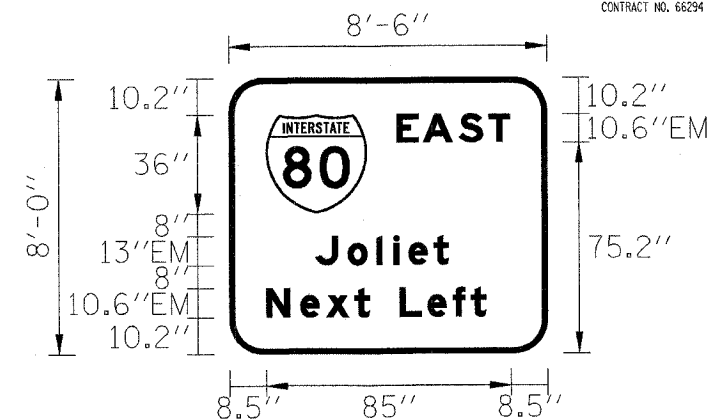
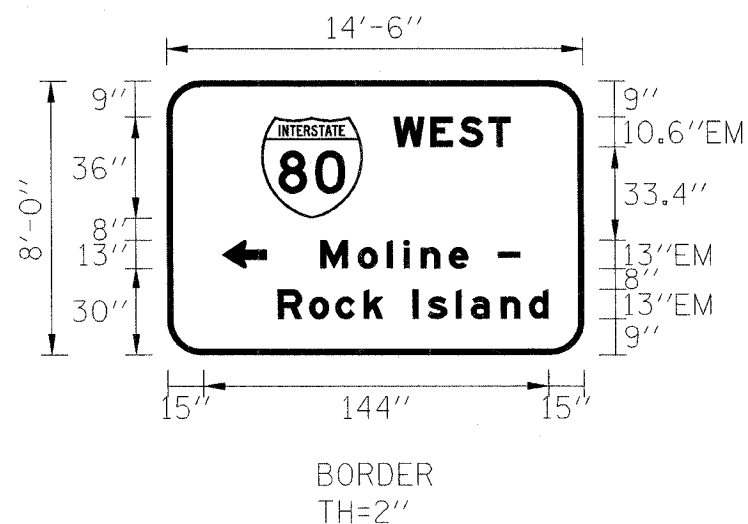
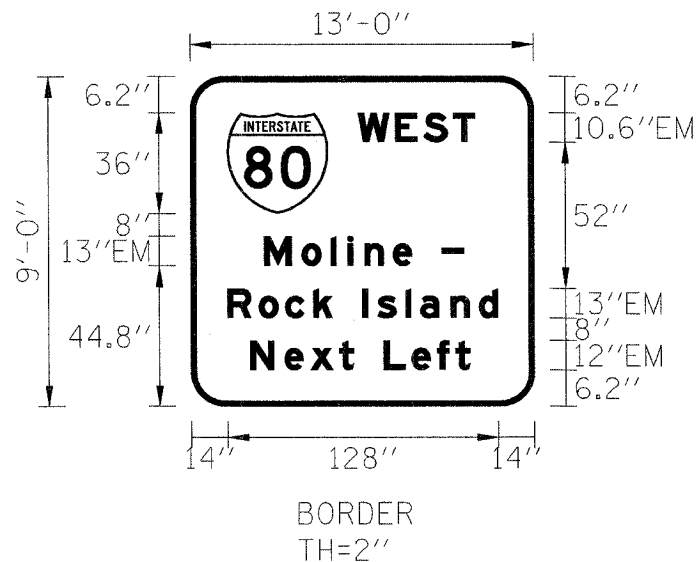
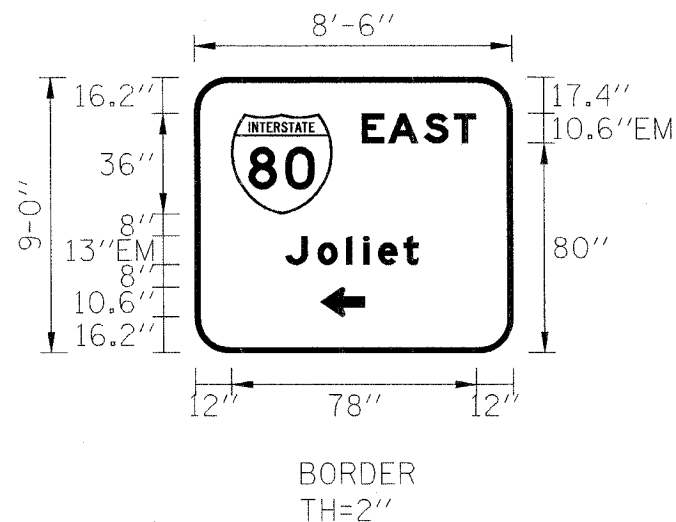
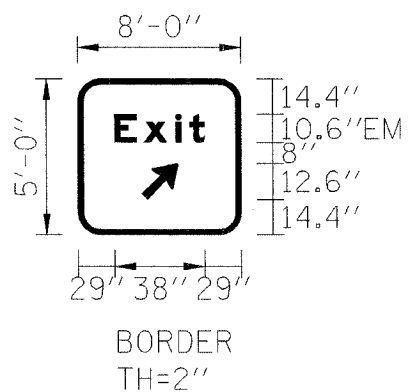
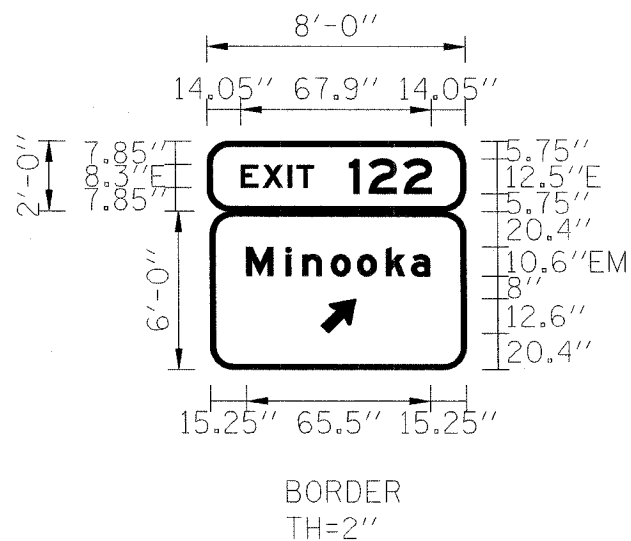
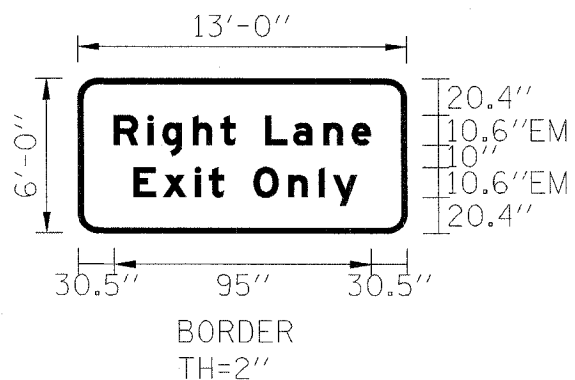
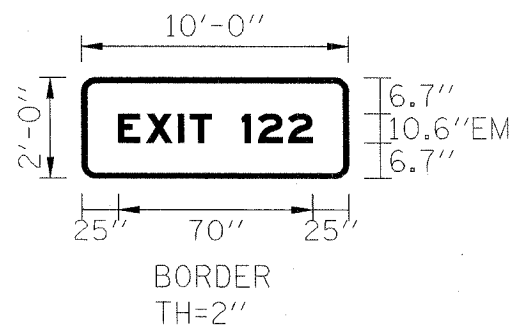


PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
SIGNING DETAILS
SCALE: NONE
DATE: 2/10/06
DRAWN BY: NJS
CHECKED BY: JJC

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRANDY	243	155
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



REVISIONS	
NAME	DATE

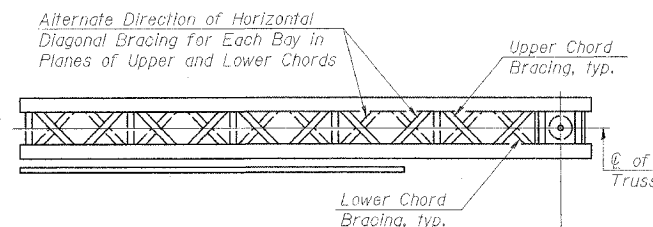
ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

SIGNING DETAILS

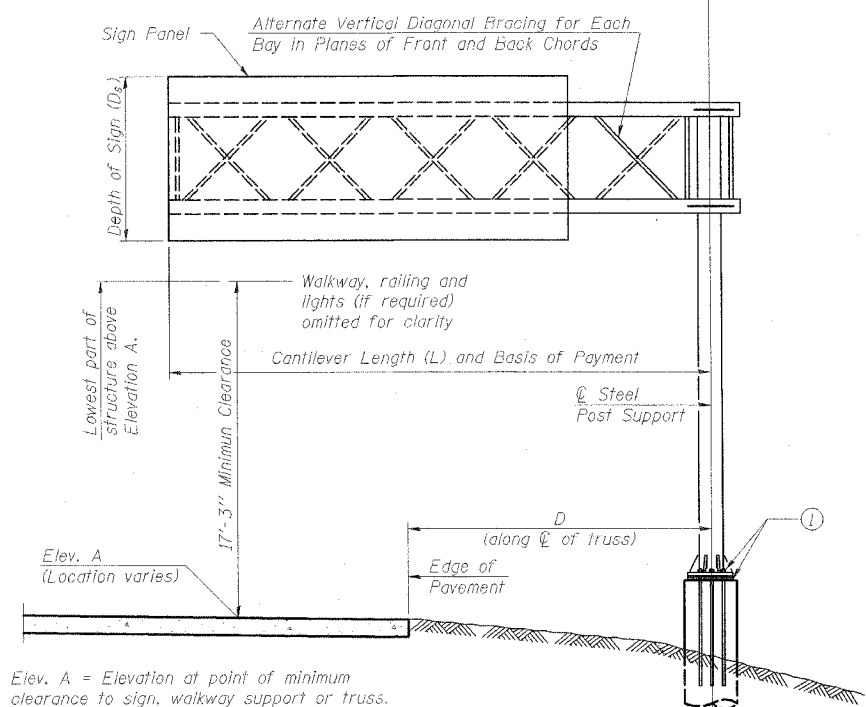
SCALE: NONE
DATE: 2/10/06

DRAWN BY: NJS
CHECKED BY: JJC

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	156
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



TYPICAL PLAN
(Walkway not shown)

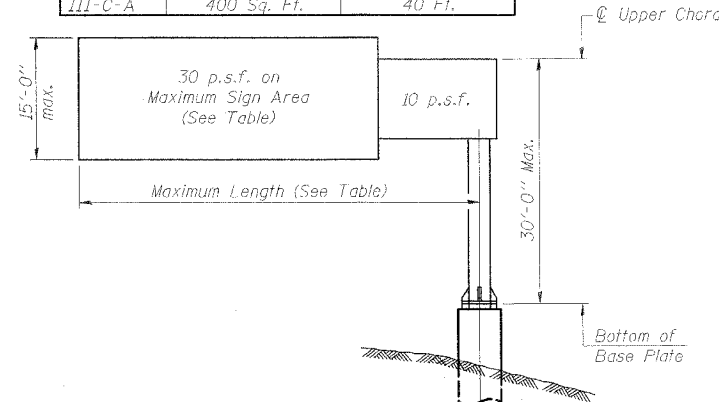


TYPICAL ELEVATION
Looking in Direction of Traffic

Sign support structures may be subject to damaging vibrations and oscillations when sign panels are not in place during erection or maintenance of the structure. To avoid these vibrations and oscillations, consideration should be given to attaching temporary blank sign panels to the structure.

Structure Number	Station	Design Truss Type	Cantilever Length (L)	Elev. A	Dim. D	D _s	Total Sign Area
3C0321080R121.5	184+07.00	II-C-A	30'	599.79	21.75'	8'	64 SQ. FT.
3C0471080L122.1	381+94.00	II-C-A	30'	611.77	17'	8'	64 SQ. FT.

Truss Type	Maximum Sign Area	Maximum Length
I-C-A	170 Sq. Ft.	25 Ft.
II-C-A	340 Sq. Ft.	30 Ft.
III-C-A	400 Sq. Ft.	40 Ft.



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards. Installations not within dimensional limits shown require special analysis for all components.

- ① After adjustments to level truss and insure adequate vertical clearance, all top and leveling nuts shall be tightened against the base plate with a minimum torque of 200 lb.-ft. Stainless steel mesh shall then be placed around the perimeter of the base plate. Secure to base plate with stainless steel banding.

Note:
Trusses shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The contractor is responsible for maintaining the configuration and protection of the trusses.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE I-C-A	Foot	
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE II-C-A	Foot	60.0
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE III-C-A	Foot	
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	Foot	54.0
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	12.2

NUMBER	REVISION	DATE

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
Field Units
F_c = 3,500 p.s.i.
f_y = 60,000 p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.

All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer. The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2) of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to AASHTO M314 Gr. 55 with a minimum Charpy V-Notch (CVN) energy of 15 lb.-ft. at 10° F.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Bridge Seat Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

**CANTILEVER SIGN STRUCTURES
GENERAL PLAN & ELEVATION
ALUMINUM TRUSS & STEEL POST**

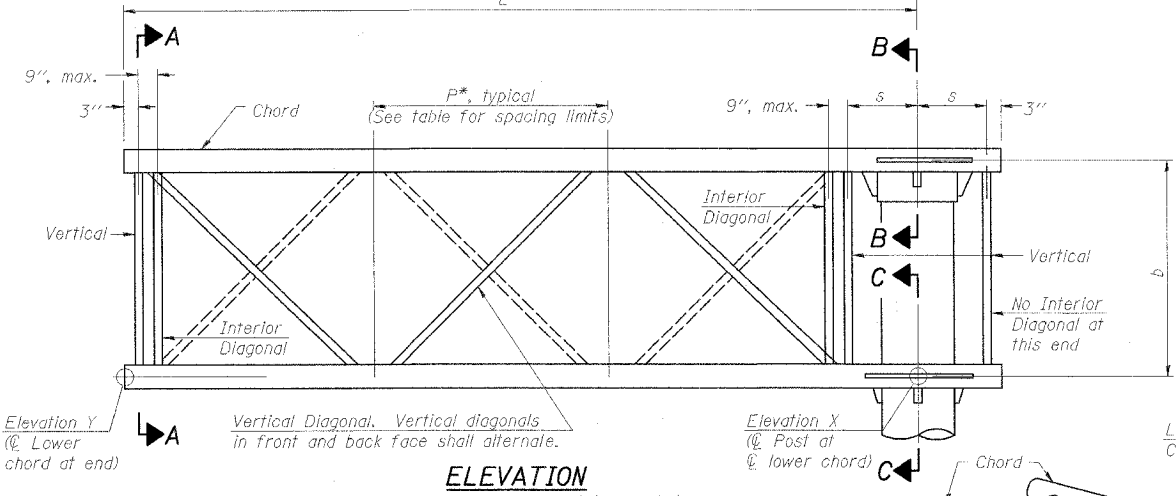
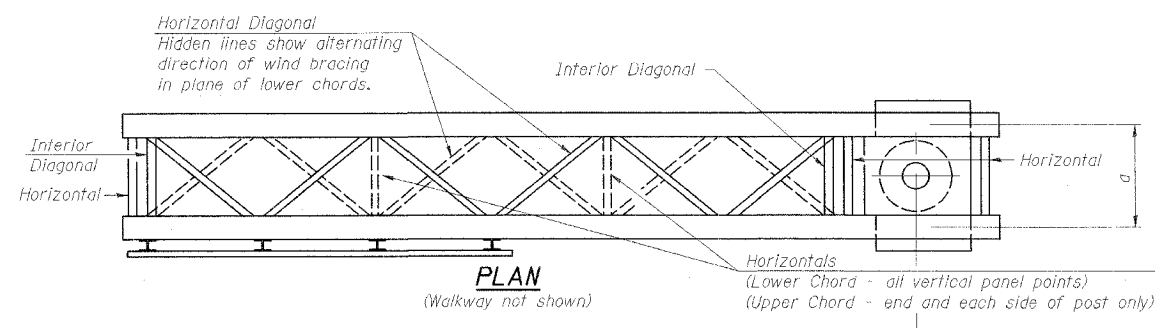
ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

SCALE: NONE
DATE: 2/10/06
DRAWN BY: NJS
CHECKED BY: JJC

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

OSC-A-1 1-7-05

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4K)	KENDALL/GRUNDY	243	157
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				

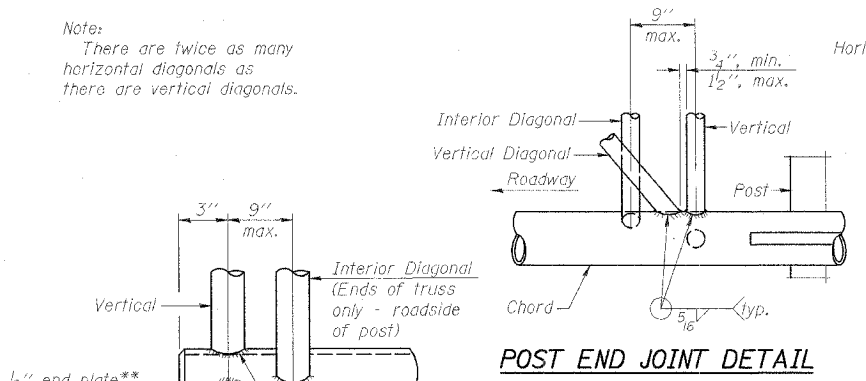


ELEVATION
(Sign and walkway omitted for clarity)

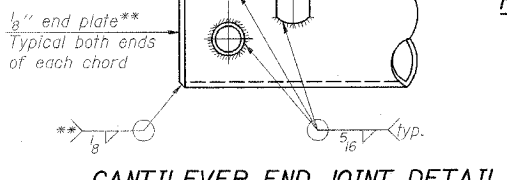
TYPICAL TRUSS UNIT

For Section B-B and Section C-C, see Base Sheet OSC-A-3.

Note: There are twice as many horizontal diagonals as there are vertical diagonals.



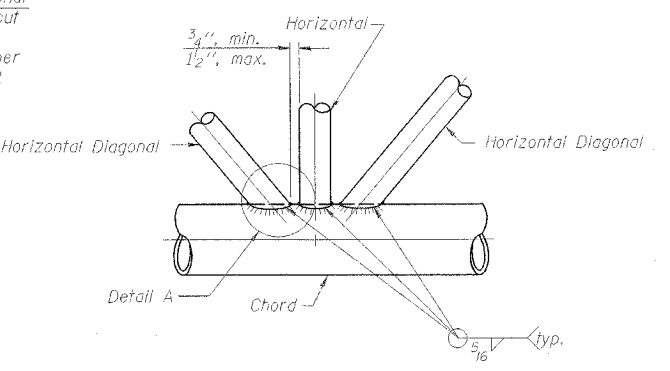
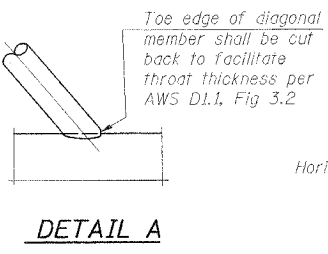
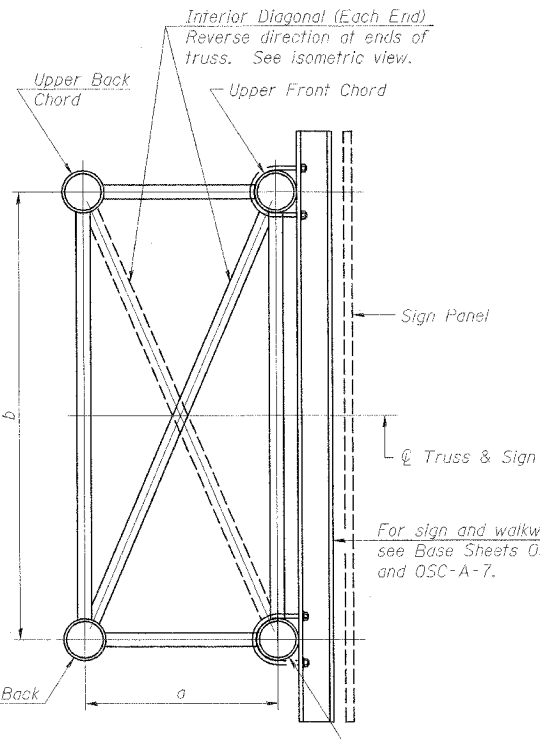
POST END JOINT DETAIL



CANTILEVER END JOINT DETAIL

** Contractor may alternatively use standard aluminum drive-fit cap to close ends.

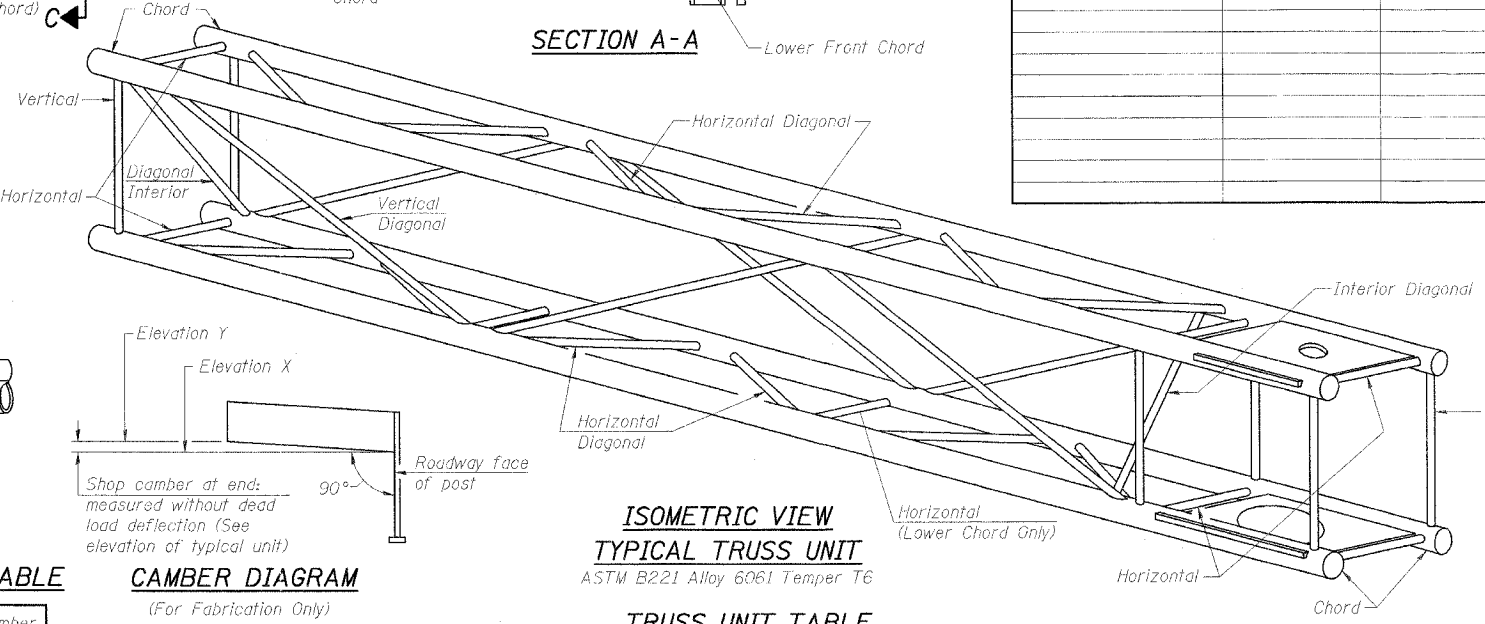
OSC-A-2 1-7-05



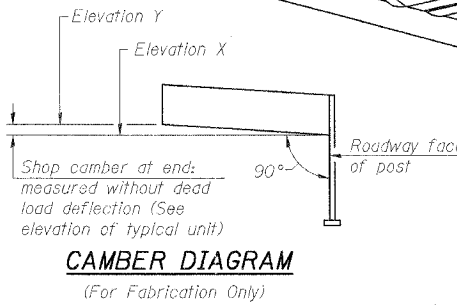
TRUSS INTERIOR JOINT DETAIL

For sign and walkway brackets, see Base Sheets OSC-A-6 and OSC-A-7.

Structure Number	Station	Truss Type	Design Length (L)	Number of Panels Per Unit	Panel Length (P)*
3C0321080R121.5	184+07.00	II-C-A	30'	7	4.0'
3C0471080L122.1	381+94.00	II-C-A	30'	7	4.0'



ISOMETRIC VIEW
TYPICAL TRUSS UNIT
ASTM B221 Alloy 6061 Temper T6



CAMBER DIAGRAM
(For Fabrication Only)

SHOP CAMBER TABLE

Unit Length (L)	Shop Camber at End
15'	1 1/2"
16'-17'	1 3/4"
18'-20'	2"
21'-22'	2 1/4"
23'-25'	2 1/2"
26'-27'	2 3/4"
28'-30'	3"
31'-32'	3 1/4"
33'-35'	3 1/2"
36'-37'	4"
38'-40'	4 1/2"

Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord O.D. Wall			Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals O.D. Wall		
					5"	5/16"	2 1/2"	3/8"	3/2"	3/8"
I-C-A	24"	54"	16"	36" min. to 48" max.	5"	5/16"	2 1/2"	3/8"	3/2"	3/8"
II-C-A	36"	66"	21"	42" min. to 54" max.	6 1/2"	5/16"	3 1/4"	3/8"	3/2"	3/8"
III-C-A (35' Max.)	36"	84"	21"	48" min. to 66" max.	7"	3/8"	3 1/2"	3/8"	3/2"	3/8"
III-C-A (>35' to 40')	36"	84"	21"	48" min. to 66" max.	8"	3/8"	3 1/2"	3/8"	3/2"	3/8"

*P = $\frac{L-s-3"}{\# \text{ Panels}}$

NUMBER	REVISION	DATE

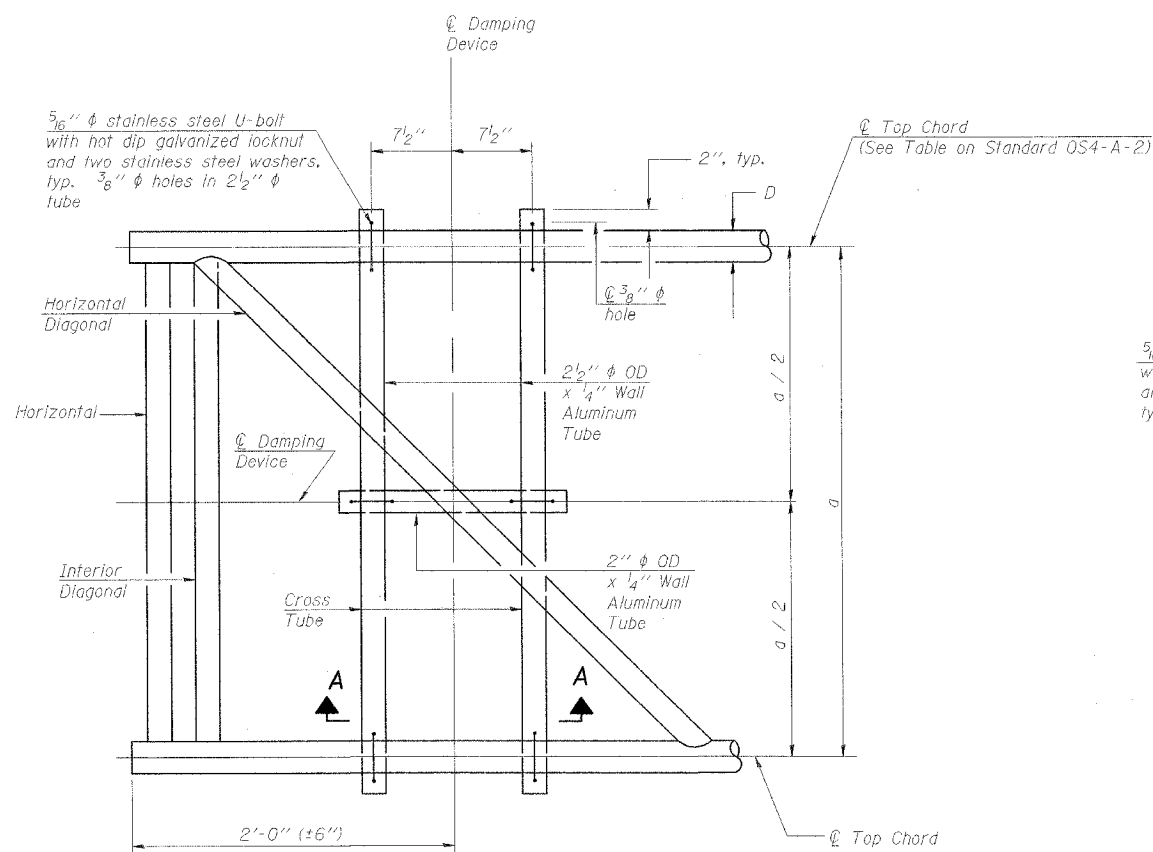
CANTILEVER SIGN STRUCTURES TRUSS DETAILS ALUMINUM TRUSS & STEEL POST

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

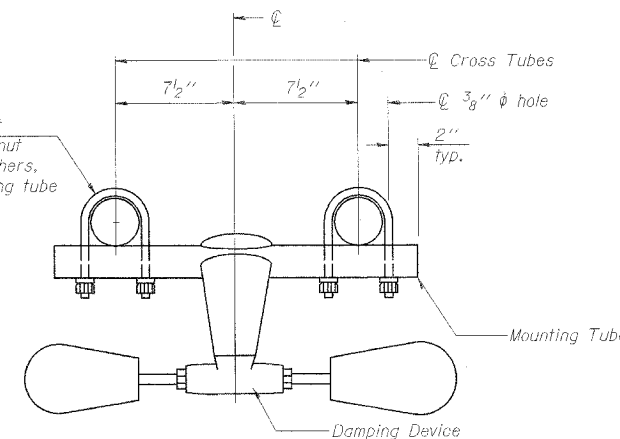
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DATE: 2/10/06 CHECKED BY: JJC

PATRICK ENGINEERING INC.
LISLE, ILLINOIS

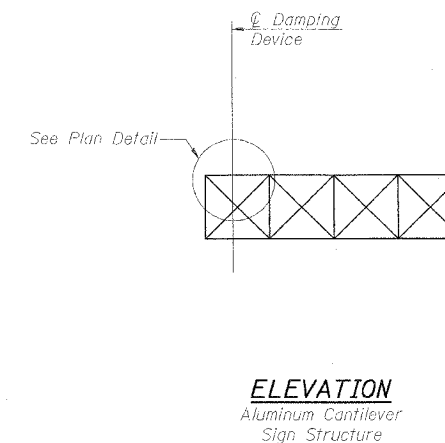
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	RENOILL/GRUNDY	243	158
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				



PLAN DETAIL

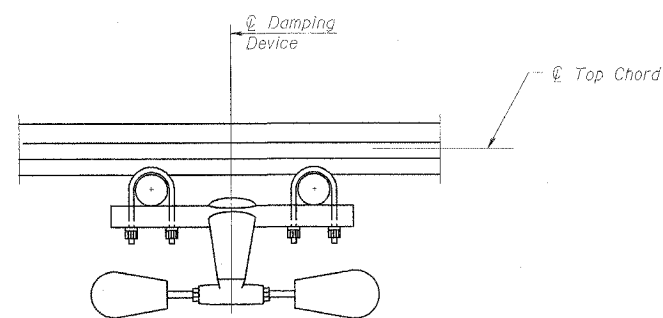


TRUSS DAMPING DEVICE CONNECTION DETAIL

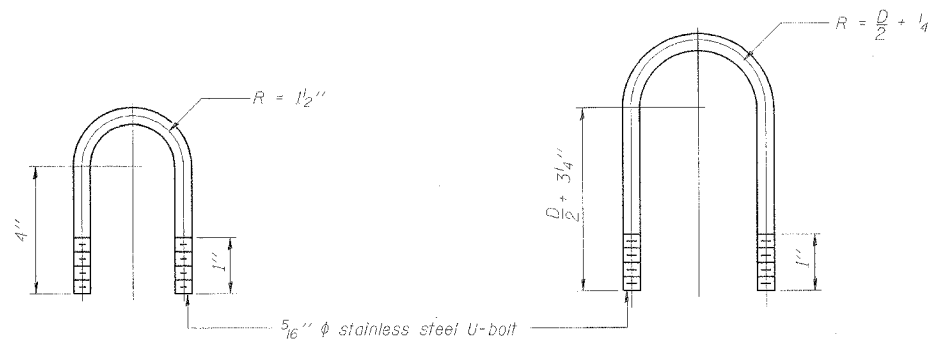


GENERAL NOTES

- Damper: One damper per truss. (31 lbs. Stockbridge-Type Aluminum)
- Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6



SECTION A-A



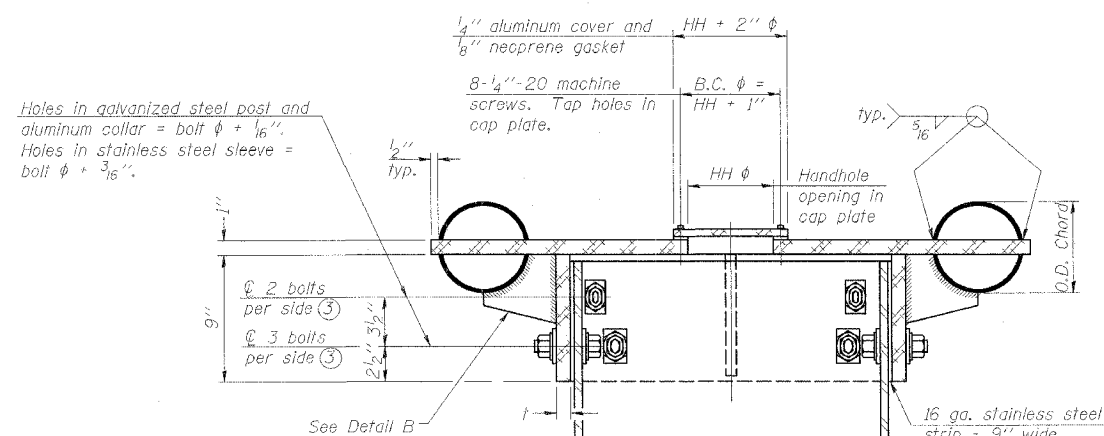
DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)

TOP CHORD TO CROSS TUBE U-BOLT DETAIL
(Typical)

CANTILEVER SIGN STRUCTURE DAMPING DEVICE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

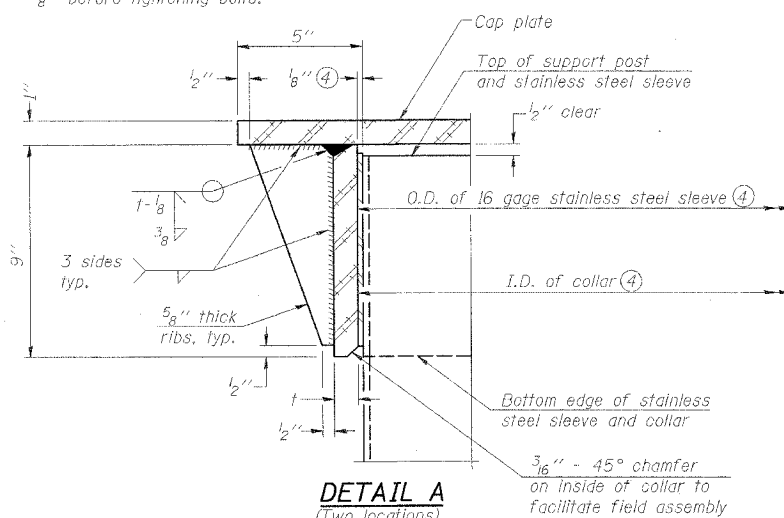
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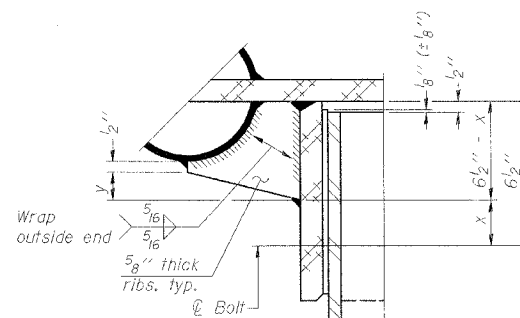
Holes in galvanized steel post and aluminum collar = bolt $\phi + 1/16$ ".
Holes in stainless steel sleeve = bolt $\phi + 3/16$ ".

④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus $1/8$ " ($\pm 1/16$ "). Maximum gap between post and collar at any location equals $1/8$ " before tightening bolts.

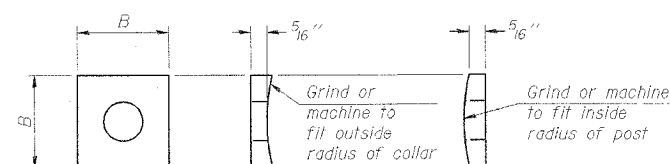
SECTION B-B
Bolts, washers (including contoured washers), and locknuts shall be stainless steel.



DETAIL A
(Two locations)



DETAIL B
Two locations
(For details not shown, see Detail C)



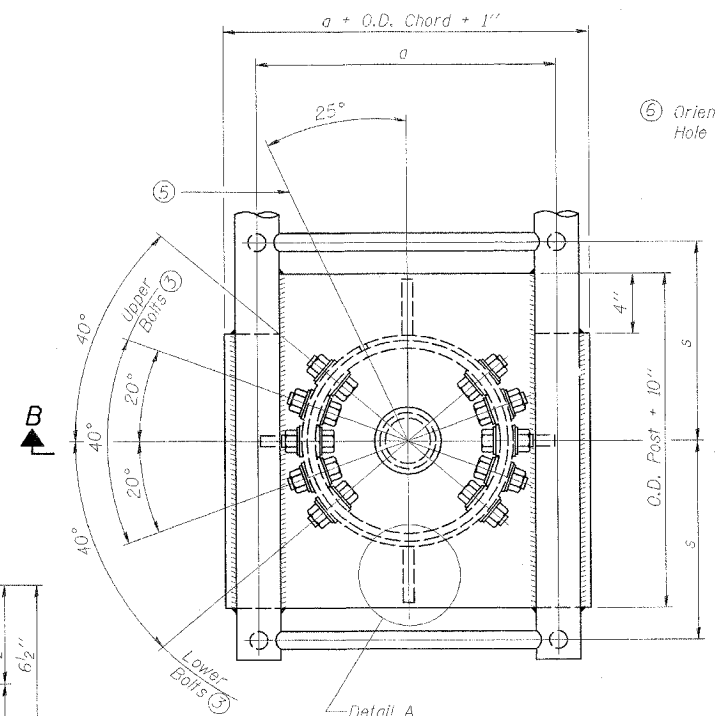
CONTOURED WASHERS

Bolt Size	Contoured Washers	
	Hole Dia.	B
7/8"	1"	2 1/2"
1"	1 1/8"	3"
1 1/4"	1 3/8"	3 1/4"

DETAIL OF STAINLESS STEEL SLEEVE

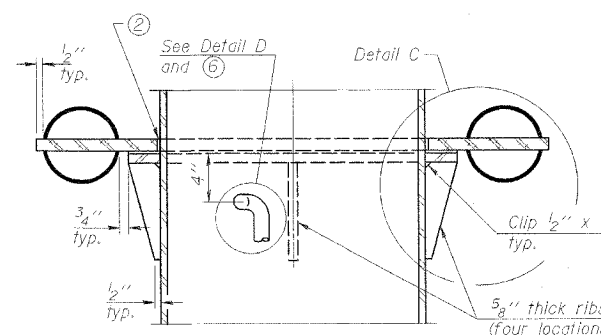
Weld to post after galvanizing.
(Prepare post surface to insure tight, uniform fit and allow welding.)
Welds to be 1/2" long at 6" cts. along top edge and at 1/4" opening.

NUMBER	REVISION	DATE

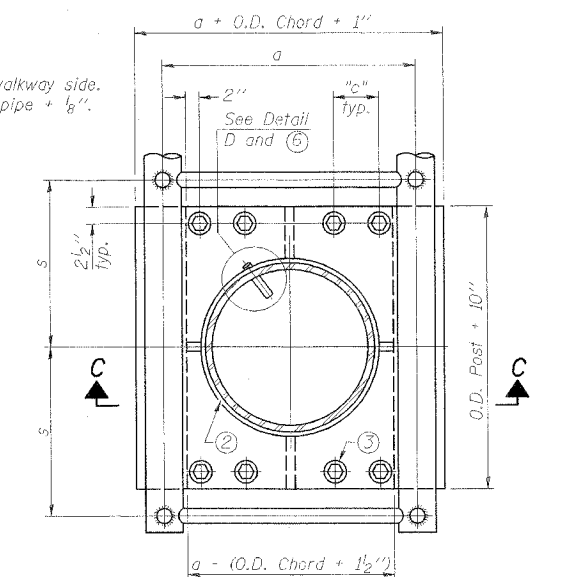


PLAN VIEW - TOP OF COLUMN

⑤ Optional full penetration weld in collar.
(Two locations maximum....(180° apart)....X-ray or UT 100%)

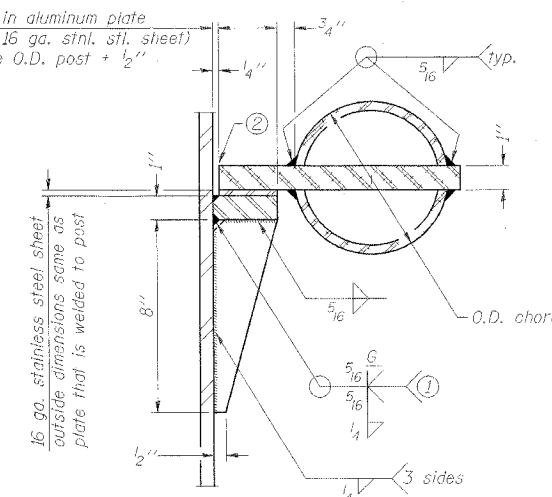


SECTION C-C



SECTION THRU POST ABOVE LOWER CHORDS

Note in aluminum plate (and 16 ga. stnl. stl. sheet) to be O.D. post + 1/2".



DETAIL C

- ① Grind top if required to fully seat aluminum plate and stainless steel sheet.
- ② After tightening lower connection bolts, fill gap with non-hardening, silicone caulk suitable for exterior exposure and acceptable to the Engineer. Cost is included in Overhead Sign Structure Cantilever.

Truss Type	Post Size	Upper & Lower Connection Bolt Diameter ③	Lower Juncture Bolt Spacing Dimension "c" ③	Opening in Cap Plate "HH"	Collar Thickness (t)	Side Ribs	
						x	y
I-C-A	16" ϕ (83#/')	7/8"	3 1/4"	8"	5/8"	1 3/4"	2 1/4"
II-C-A	24" ϕ (125#/')	1"	3 1/2"	12"	7/8"	2"	1 1/4"
III-C-A (35' max.)	24" ϕ (125#/')	1 1/4"	3 1/2"	12"	7/8"	2"	1"
III-C-A (>35' to 40')	24" ϕ (171#/')	1 1/4"	3 1/2"	12"	7/8"	2"	1"

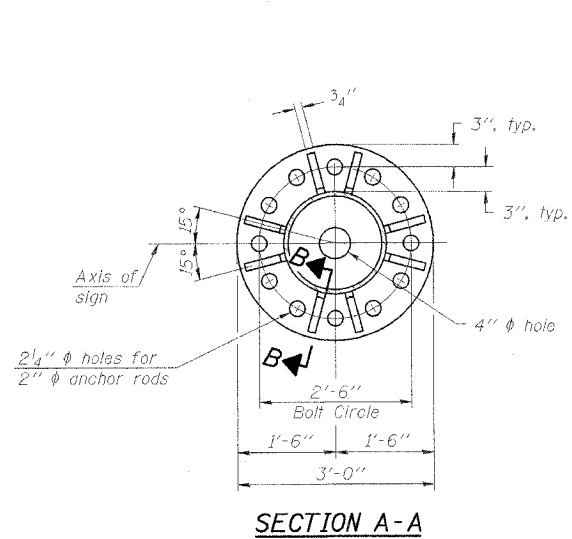
③ Upper and lower connection bolts in collar and bolts at lower chord connection shall be high strength with matching locknuts. Connection bolts shall have 2 stainless steel flat washers each.

**CANTILEVER SIGN STRUCTURES
JUNCTURE DETAILS
ALUMINUM TRUSS & STEEL POST**

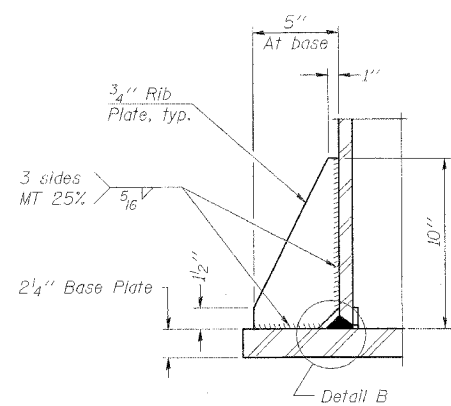
ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

SCALE: NONE
DATE: 2/10/06
DRAWN BY: NJS
CHECKED BY: JJC

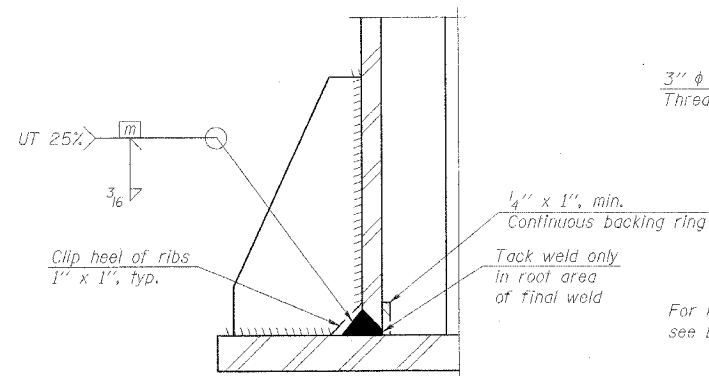
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	160
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



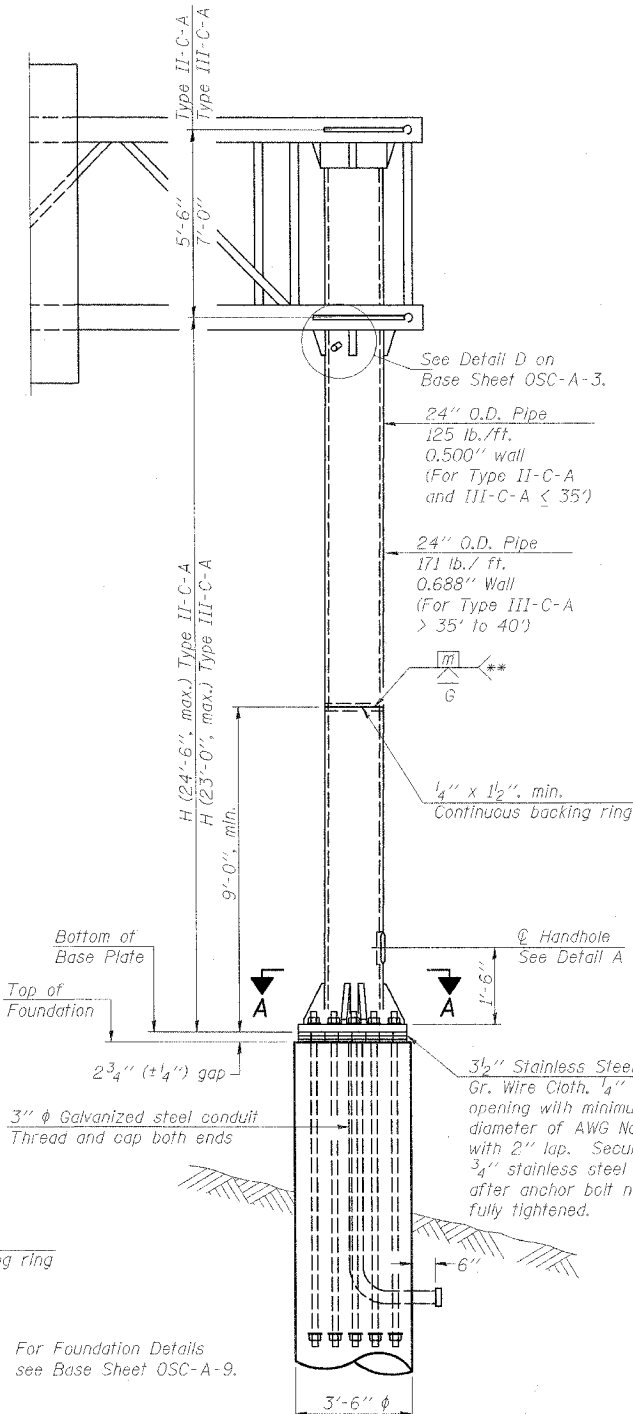
SECTION A-A



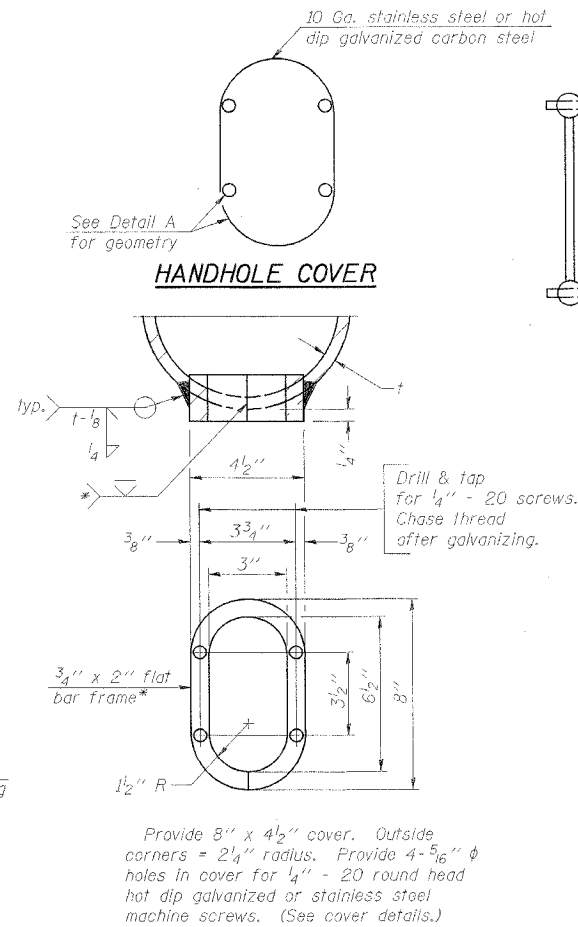
SECTION B-B



DETAIL B
(Typical rib)



FRONT ELEVATION

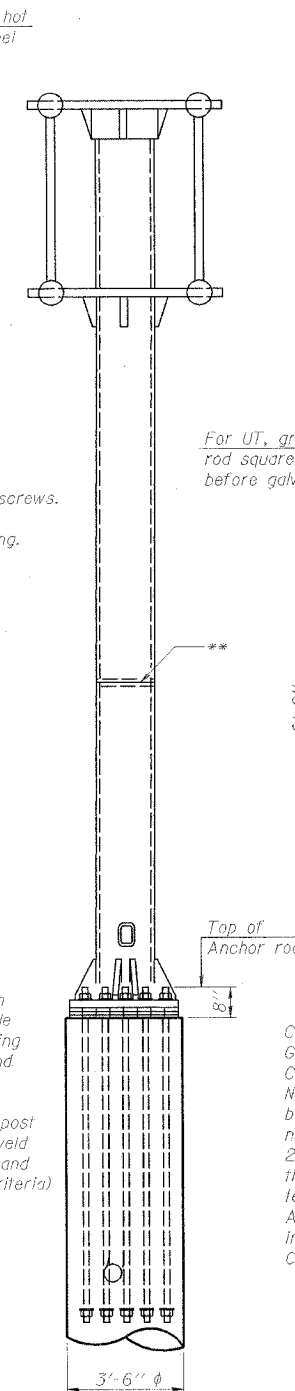


DETAIL A

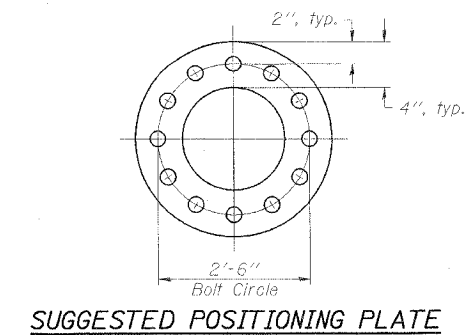
* Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μ in or less.

** Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

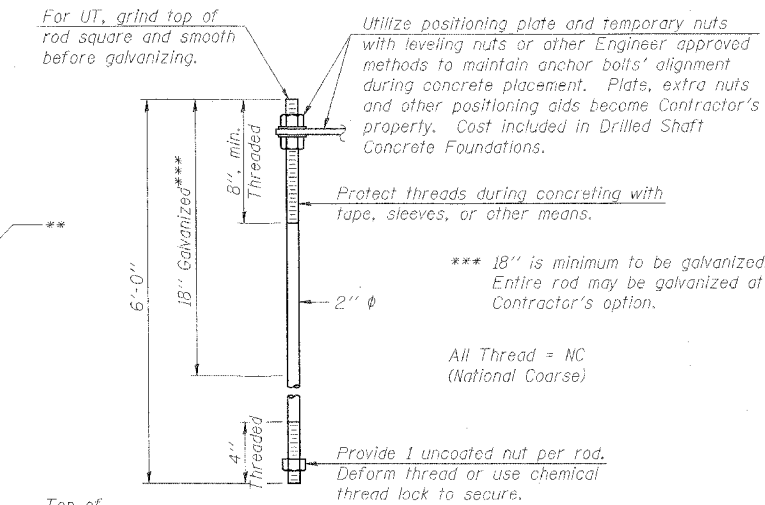
Structure Number	Station	H
3C0321080R121.5	184+07.00	23'
3C0471080L122.1	381+94.00	22'



SIDE ELEVATION



SUGGESTED POSITIONING PLATE



ANCHOR ROD DETAIL

Anchor rods shall conform to AASHTO M314 Grade 55 and meet Charpy V-Notch (CVN) energy of 15 lb.-ft. at 10° F. before galvanizing. Galvanize the upper 18" (minimum) and associated M291, Grade A, C or DH heavy hex nuts and hardened washers per AASHTO M232. No welding shall be permitted on rods. Provide an unfinished nut at bottom, a hexagon locknut and washer above base plate and a leveling nut and washer below base plate. Nuts shall each be tightened with 200 lb.-ft. minimum torque against base plate. Before or after threading, but before galvanizing, each anchor rod shall be ultrasonically tested (UT) by a Level II or III inspector, qualified in accord with ANSI guidelines, using a straight beam, 1/2" ϕ 3.5 mhz. transducer, to insure no rejectable flaws exist in the upper 18" (tension criteria). Cost of testing included in Drilled Shaft Concrete Foundations.

**CANTILEVER SIGN STRUCTURES
TYPE II-C-A & III-C-A TRUSS SUPPORT POST
ALUMINUM TRUSS & STEEL POST**

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

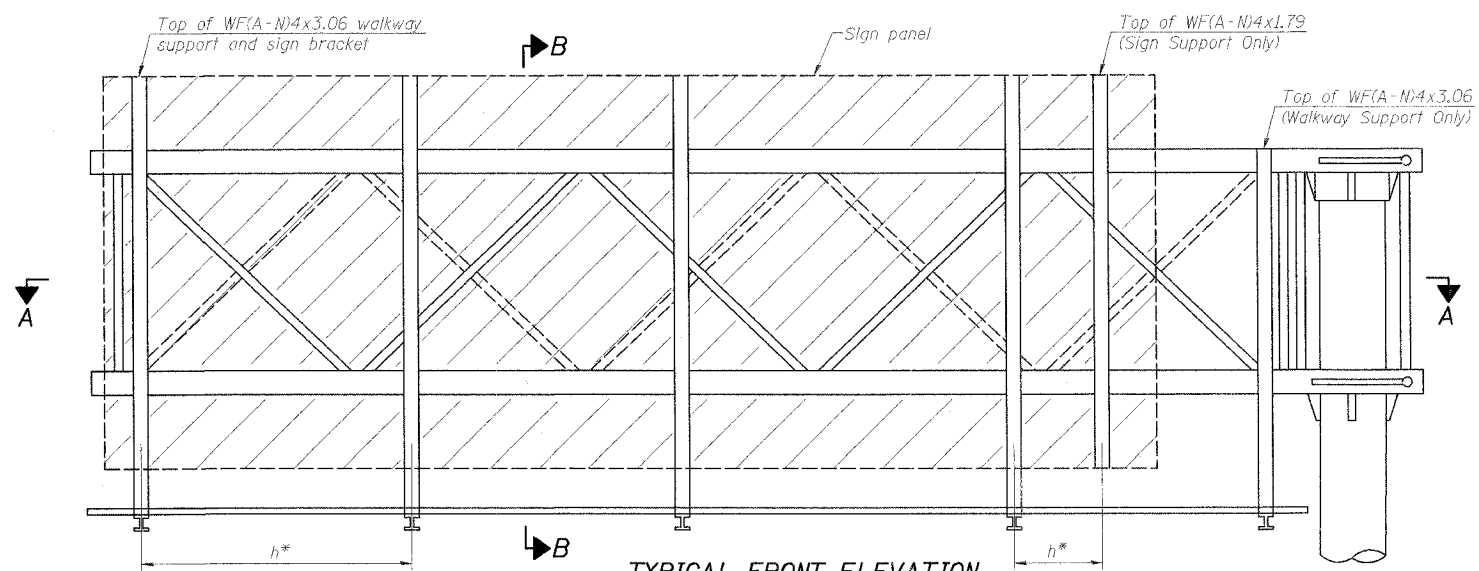
SCALE: NONE
DATE: 2/10/06
DRAWN BY: NJS
CHECKED BY: JJC

NUMBER	REVISION	DATE

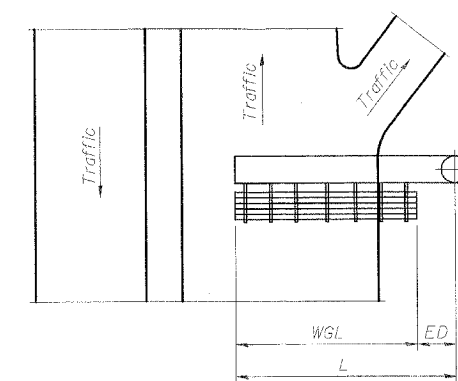
OSC-A-5 1-7-05

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	161
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				

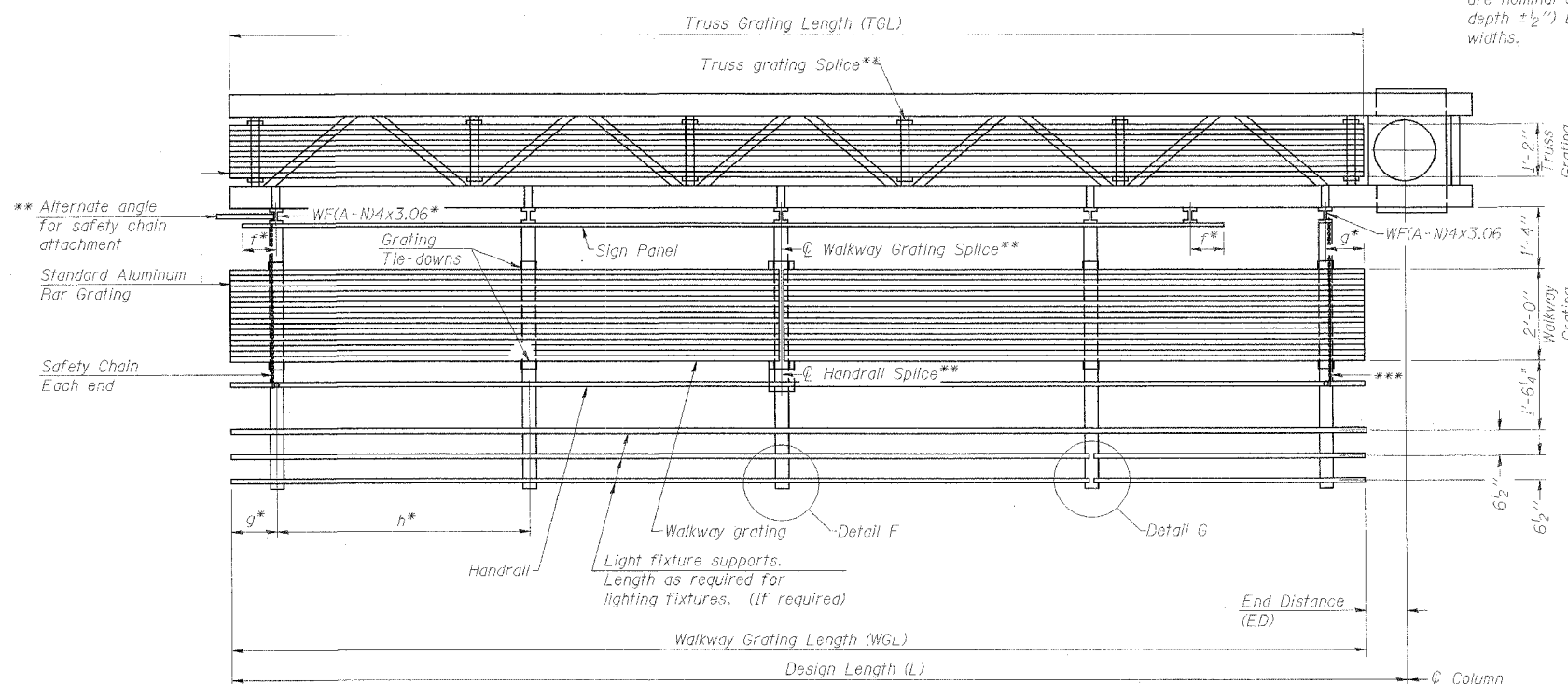


TYPICAL FRONT ELEVATION
With lights and handrail omitted for clarity.



PLAN WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)

Walkway and truss grating dimensions are nominal and may vary (width ±1/2", depth ±1/2") based on available standard widths.



SECTION A-A

Truss grating to facilitate inspection shall run full length of cantilevers. Cost of truss grating is included in Overhead Sign Structure Cantilever.

Handrail and walkway grating shall span a minimum of three brackets between splices. ** Use and location of handrail or grating splices are optional, based on lengths needed and material availability.

$$TGL = L - \left(\frac{\text{Post O.D.}}{2} + 6'' \right)$$

NUMBER	REVISION	DATE

Structure Number	Station	WGL	ED	TGL
3C0321080R121.5	184+07.00	27'	18"	29.5'
3C0471080L122.1	381+94.00	27'	18"	29.5'

- Notes:
- * Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:
 - f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
 - g = 12" maximum, 4" minimum (End of walkway to center of nearest bracket)
 - h = 6'-0" maximum (center to center sign and/or walkway support brackets. WF(A-N)4x1.79 or WF(A-N)4x3.06)
 - *** If walkway bracket at safety chain location is behind sign, add angle to bracket.
- For details of sign placement, sign/walkway brackets, truss and walkway gratings, grating splices and Section B-B, see Base Sheet OSC-A-7.
For details of handrail, handrail splice, safety chain and Details F and G, see Base Sheet OSC-A-8.

BRACKET TABLE

Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
8'-0"	8'-0"	2
14'-0"	14'-0"	3
20'-0"	20'-0"	4
26'-0"	26'-0"	5
32'-0"	32'-0"	6

**CANTILEVER SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS
ALUMINUM TRUSS & STEEL POST**

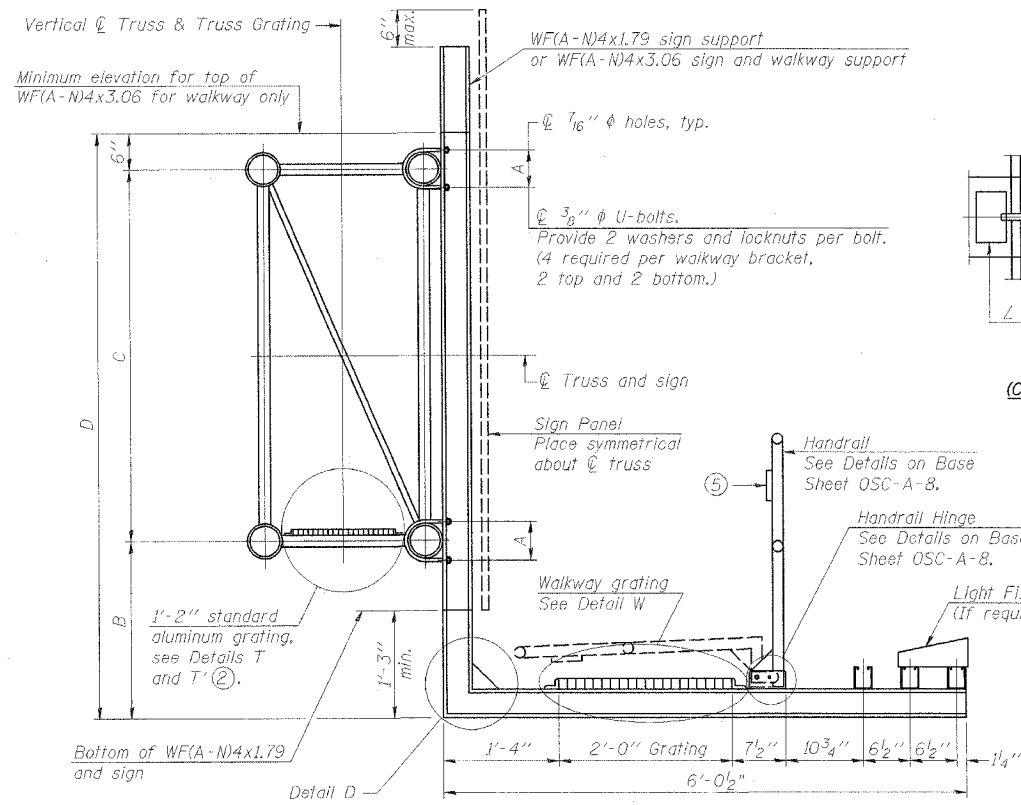
ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

SCALE: NONE
DATE: 2/10/06
DRAWN BY: NJS
CHECKED BY: JJC

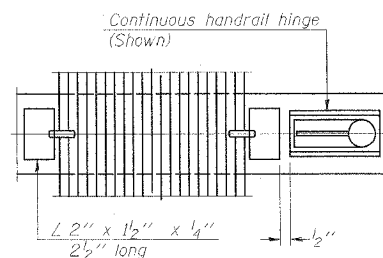
PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

OSC-A-6 1-7-05

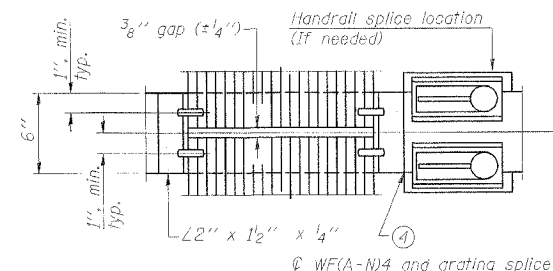
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	32, 47-41K	KENDALL/GRUNDY	243	162
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



SECTION B-B

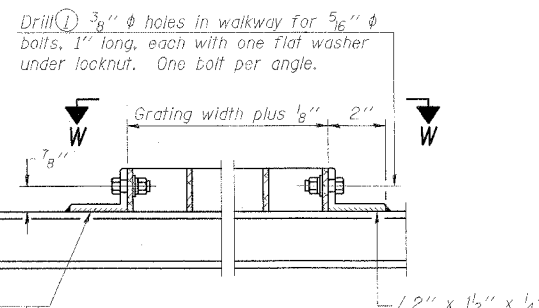


(CONTINUOUS WALKWAY GRATING)

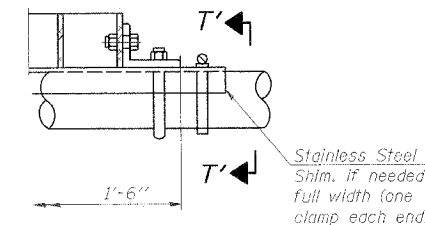


SECTION W-W

(AT WALKWAY GRATING SPLICE)

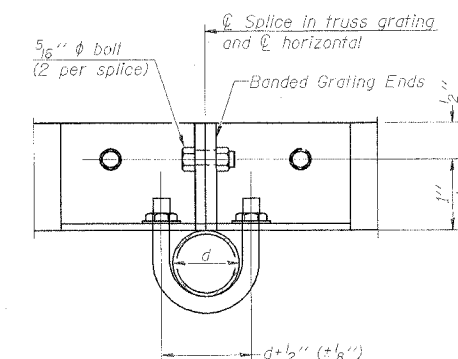


DETAIL W
(Walkway grating)

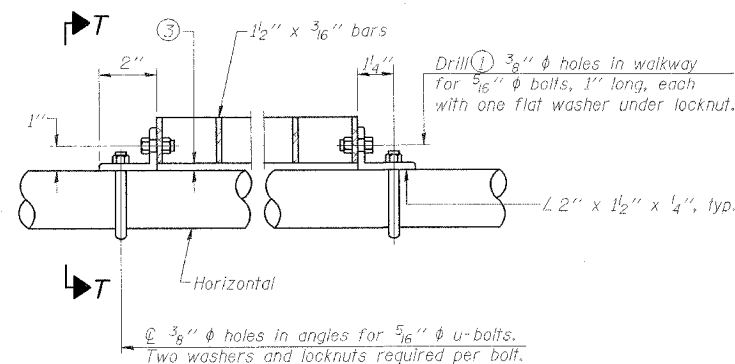


DETAIL T'

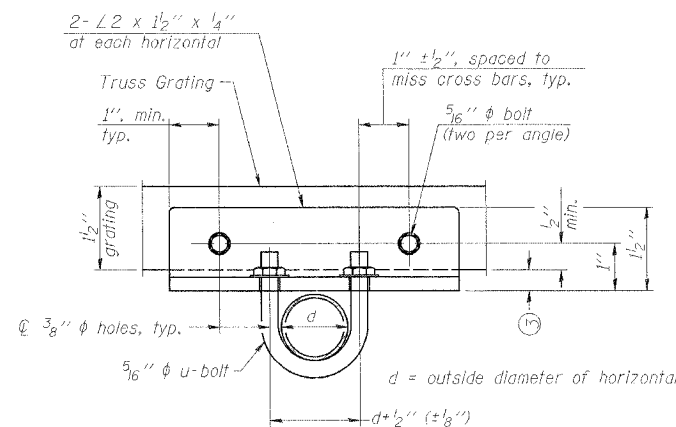
(Truss grating splice)
Details not shown same as Detail T.
Alternate materials may be used subject to the Engineer's review and approval.



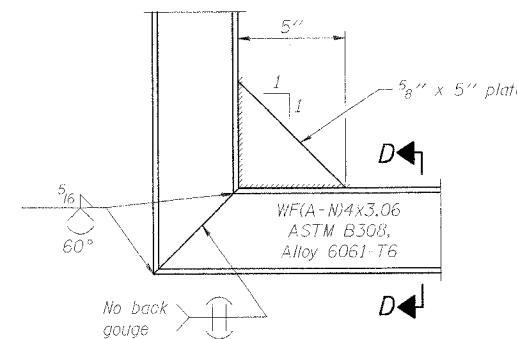
SECTION T'-T'



DETAIL T
(Truss grating at horizontal)

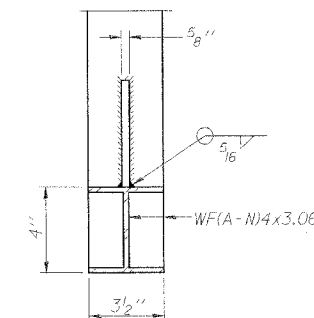


SECTION T-T'



DETAIL D

(See Detail P, Base Sheet OSC-A-8.)



SECTION D-D

NUMBER	REVISION	DATE

- Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- When truss grating must be spliced, use suggested detail or other methods subject to the Engineer's review and approval. Locate splice to avoid interference between cross bars and bolt locations.
- Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
- If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OSC-A-8)
- 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.

Structure Number	Station	A	B	C	D
3C0321080R121.5	184+07.00	7"	1'-6"	5.5'	7'-6"
3C0471080L122.1	381+94.00	7"	1'-6"	5.5'	7'-6"

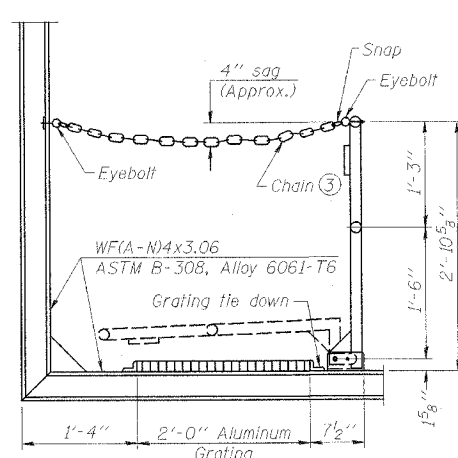
**CANTILEVER SIGN STRUCTURES
WALKWAY DETAILS
ALUMINUM TRUSS & STEEL POST**

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

SCALE: NONE
DATE: 2/10/06
DRAWN BY: NJS
CHECKED BY: JJC

OSC-A-7

1-7-05

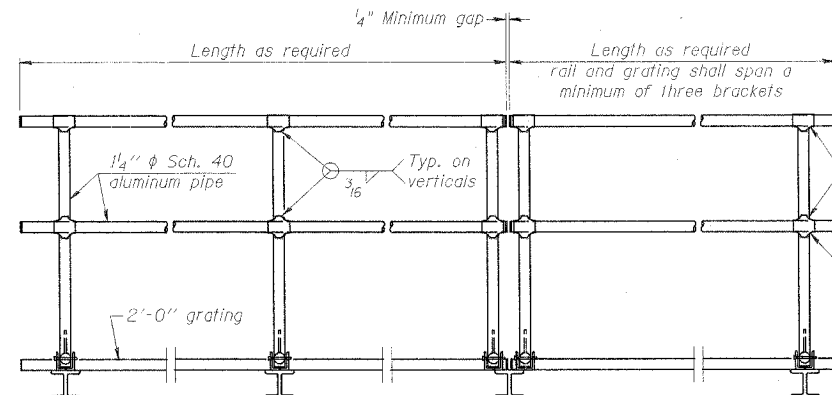


SIDE ELEVATION

(Showing Safety Chain W/O Sign)

HANDRAIL DETAILS

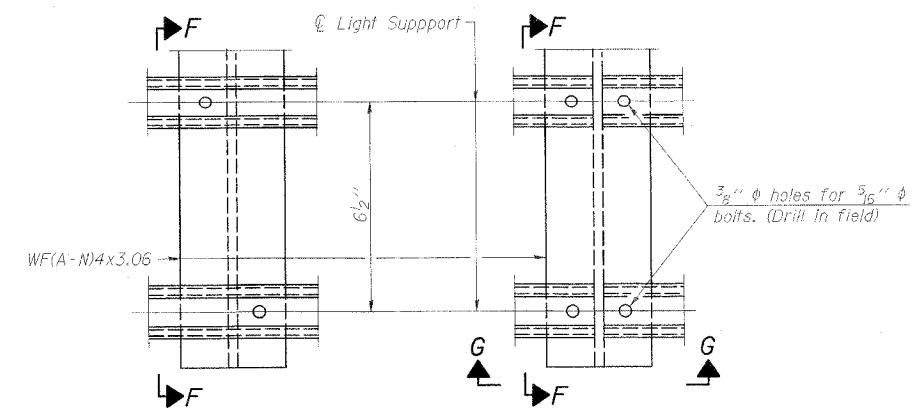
Handrail pipe shall be ASTM B241, Alloy 6063-T6 or Alloy 6061-T6.



FRONT ELEVATION

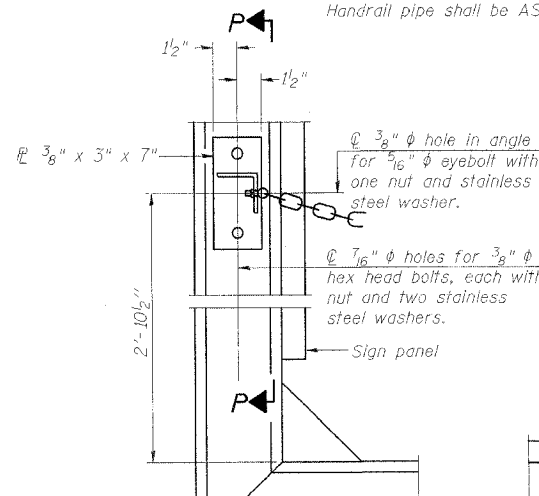
① Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)

② Horizontal handrail member shall be continuous thru fitting. Provide 1/16" φ hole in fitting for 3/8" φ bolt. Field drill 1/16" φ hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" eyebolts in 1/16" φ holes on top rail at ends only.)



DETAIL F

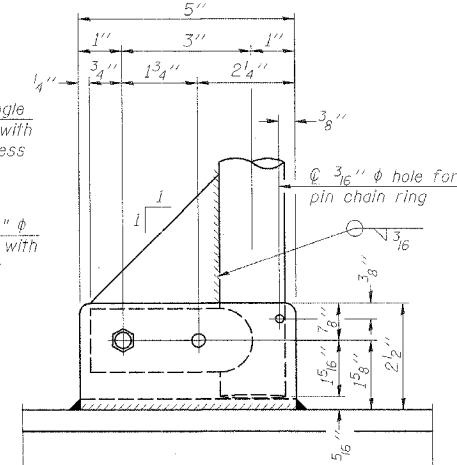
DETAIL G



ALTERNATE SAFETY CHAIN ATTACHMENT

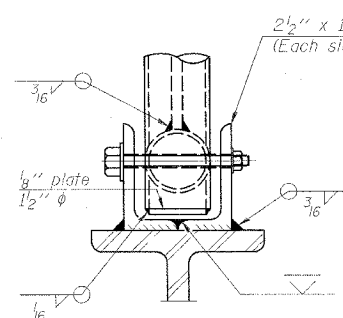
(With Sign Present)

Items not shown same as "Side Elevation" of "Handrail Details"



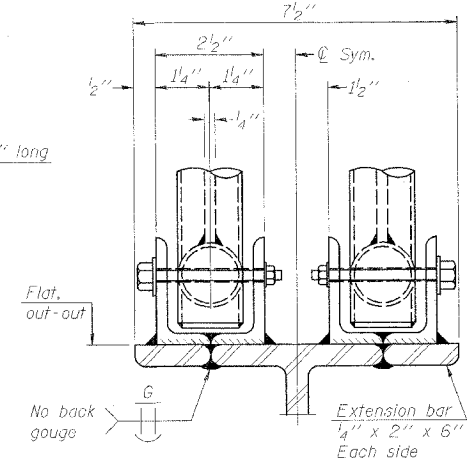
SIDE ELEVATION

Drill and ream for 3/8" φ bolt with two hexagon locknuts and two stainless steel washers.



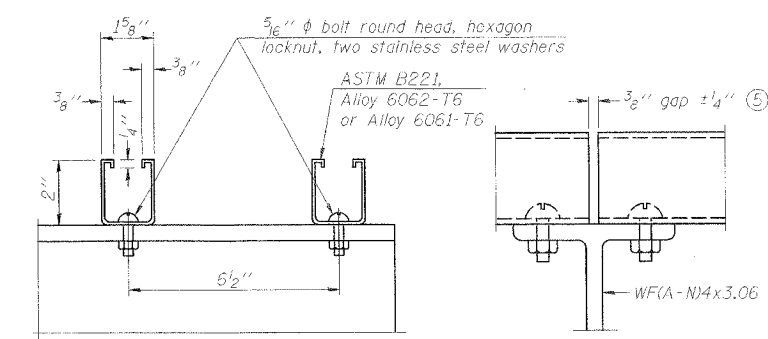
FRONT ELEVATION

Details not shown same as "ELEVATION" at right.



ELEVATION AT HANDRAIL JOINT ④

Details not shown same as "FRONT ELEVATION"

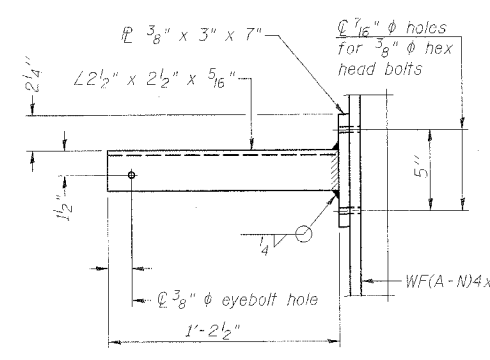


SECTION F-F

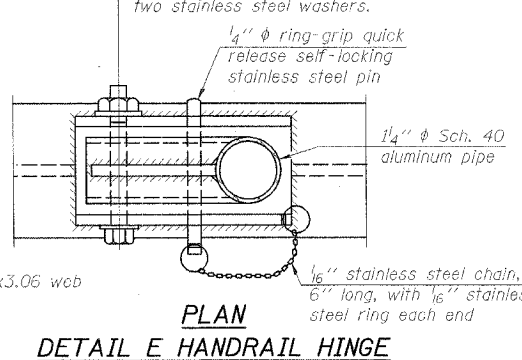
SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

⑤ Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

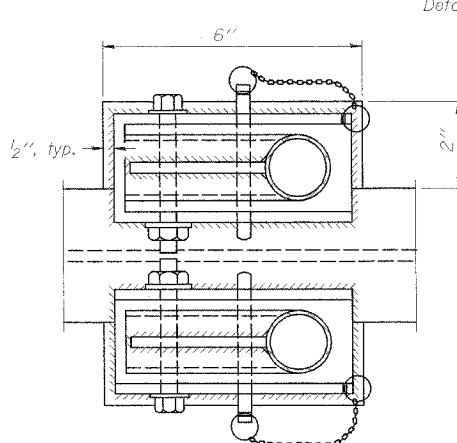


SECTION P-P



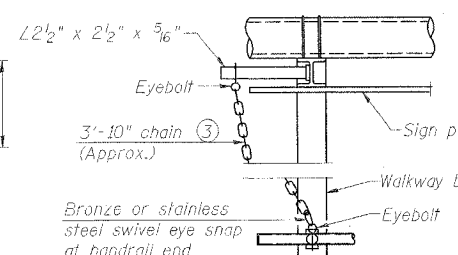
PLAN

DETAIL E HANDRAIL HINGE



PLAN AT HANDRAIL JOINT

Details not shown same as "PLAN"

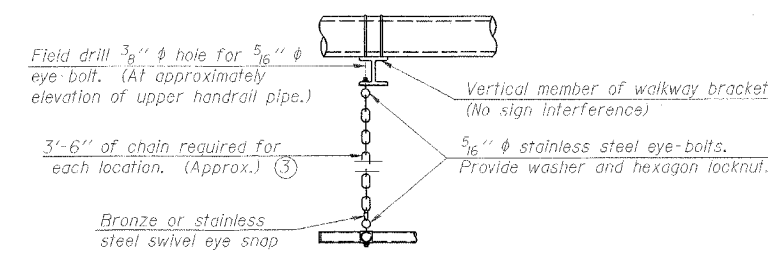


ALTERNATE SAFETY CHAIN ATTACHMENT

Details not shown similar to "Safety Chain" Details (Walkway omitted for clarity)

③ 3/16" galvanized steel chain, approximately 12 links per foot. Chain to be hot dip galvanized after manufacture and suitable for prolonged exterior exposure. Alternate materials may be substituted with the Engineer's approval.

④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.



SAFETY CHAIN

One required for each end of each walkway.

**CANTILEVER SIGN STRUCTURES
HANDRAIL DETAILS
ALUMINUM TRUSS & STEEL POST**

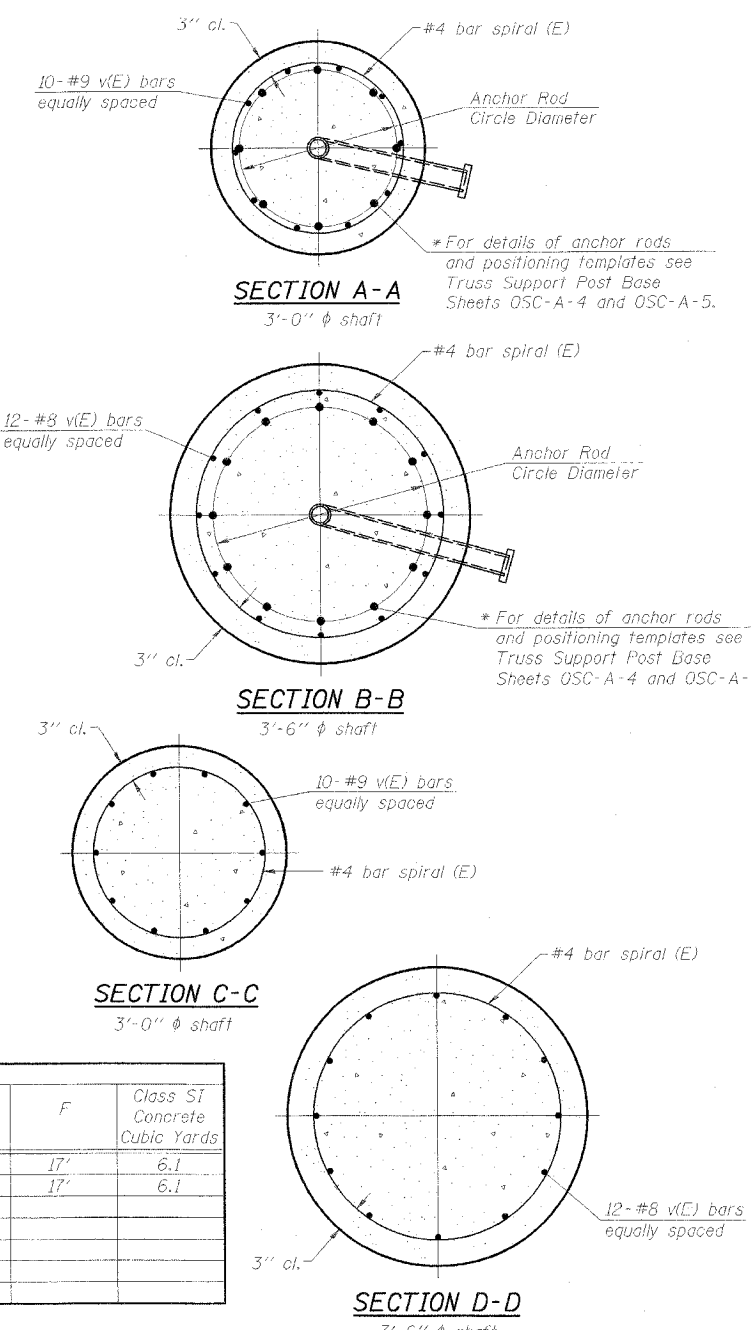
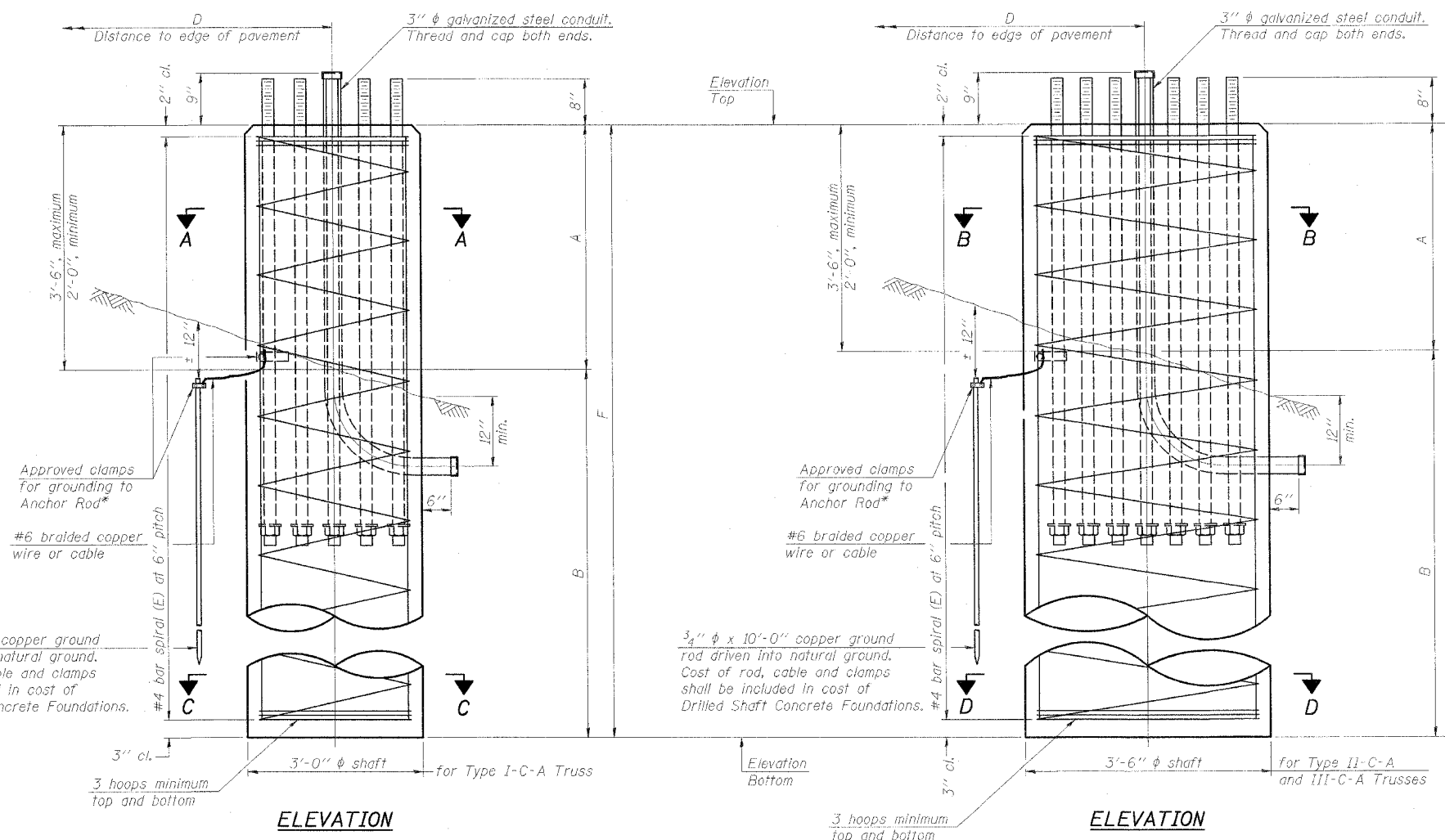
ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

SCALE: NONE
DATE: 2/10/06
DRAWN BY: NJS
CHECKED BY: JJC

NUMBER	REVISION	DATE

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	132, 47-4IK	KENDALL/GRUNDY	243	164
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				

* Grind anchor rod to bright finish of ground clamp location before installing clamp.



NOTES:
 The foundation dimensions shown in the Foundation Design Table are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Q_u) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown in the Foundation Data Table will be the result of site specific designs.
 If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.
 No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.
 Concrete shall be placed monolithically, without construction joints.
 Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.
 A normal surface finish followed by a Bridge Seal Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in "Drilled Shaft Concrete Foundation".

Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	Q_u	A	B	F	Class Sl Concrete Cubic Yards
3C0321080R121.5	184+07.00	II-C-A	3.5'	598.28	581.28	>1.25	2.0'	15'	17'	6.1
3C0471080L122.1	381+94.00	II-C-A	3.5'	611.64	594.64	>1.25	2.0'	15'	17'	6.1

Truss Type	Post Base Sheet	Maximum Cantilever Length (ft)	Maximum Total Sign Area (sq ft)	Shaft Diameter (ft)	"B" Depth (ft)	Anchor Rods No.	Anchor Rod Diameter (in)	Anchor Rod Circle Diameter (in)
I-C-A	OSC-A-4	25	170	3.0	16.0	8	2	22
II-C-A	OSC-A-5	30	170	3.5	17.0	12	2	30
II-C-A	OSC-A-5	30	340	3.5	21.5	12	2	30
III-C-A	OSC-A-5	35	170	3.5	19.0	12	2	30
III-C-A	OSC-A-5	35	250	3.5	22.5	12	2	30
III-C-A	OSC-A-5	35	400	3.5	26.5	12	2	30
III-C-A	OSC-A-5	40	400	3.5	32.0	12	2	30

NUMBER	REVISION	DATE

**CANTILEVER SIGN STRUCTURES
 DRILLED SHAFT
 ALUMINUM TRUSS & STEEL POST**

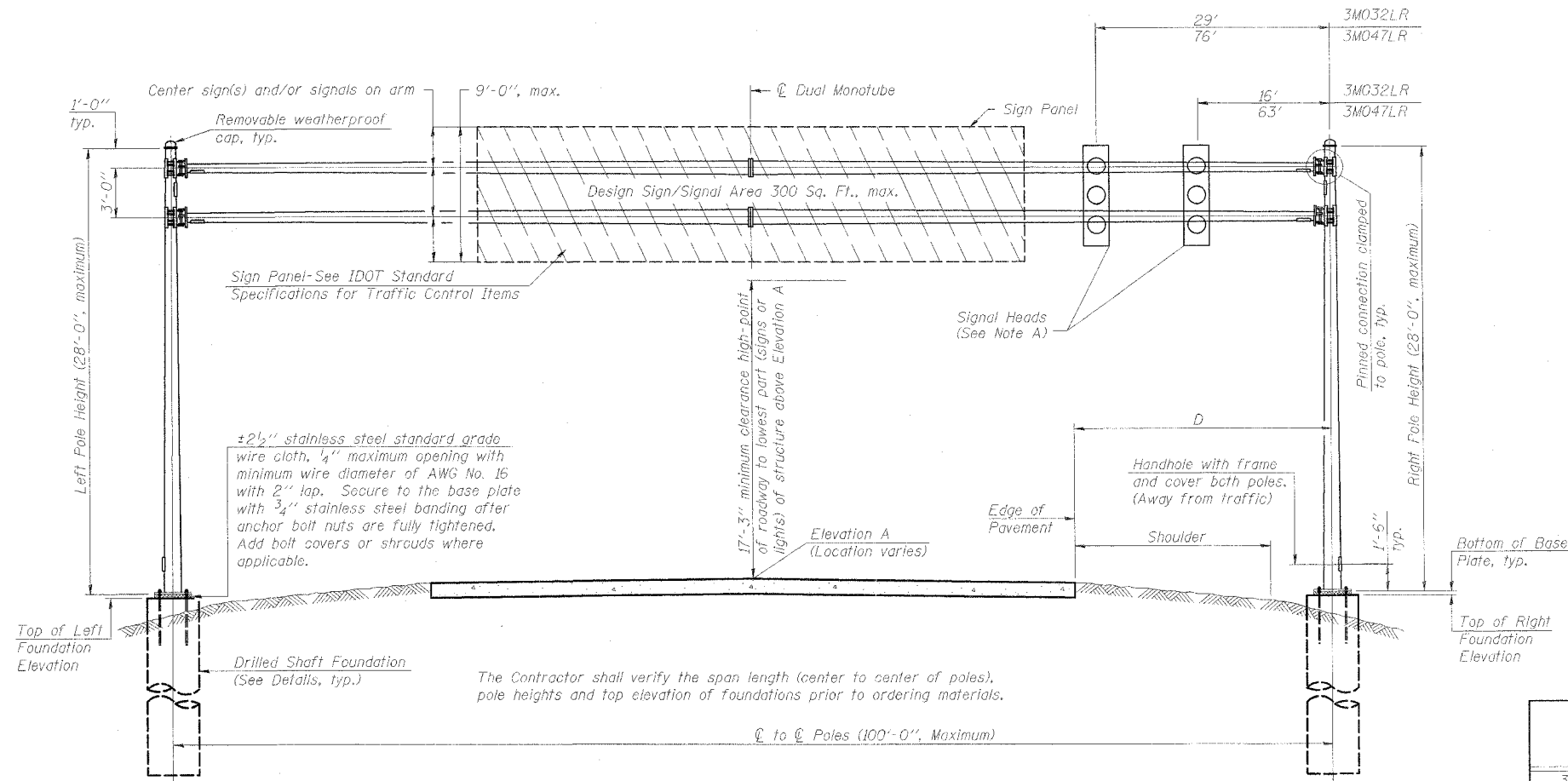
ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

SCALE: NONE
 DATE: 2/10/06
 DRAWN BY: NJS
 CHECKED BY: JJC

PATRICK
 ENGINEERING INC.
 LISLE, ILLINOIS

OSC-A-9 1-7-05

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	132, 47-4IK	KENDALL/GRUNDY	243	165
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



GENERAL NOTES

DESIGN: Current (at time of letting) AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Recurring Special Provisions. ("Standard Specifications") All references to "Mast Arm Assembly and Pole" are applicable, unless otherwise noted.

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code and the Standard Specifications.

ANCHOR RODS: Shall meet Charpy V-notch (CVN) energy of 15 ft-lb at 40° F. No welding shall be permitted on rods.

FASTENERS: All connection bolts shall be High Strength Bolts M164, Galvanize M232 (A153), Type 3, or stainless steel heavy hex conforming to ASTM A193, Grade B8 or B8M, Class 1. U-bolts shall be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished, or an equivalent material acceptable to the Engineer. Nuts for stainless steel bolts shall be stainless steel conforming to ASTM A194, Grade 8 (AISI Type 304) or Grade 8F (AISI Type 303). All nuts shall be "locknuts" with nylon or steel inserts and semifinished hexagonal heads equivalent to the finished heavy hex series of the American National Standard. Washers for stainless steel bolts shall be stainless steel conforming to ASTM A240, Type 302 or 304.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

Structure Number	Left Pole Height	Right Pole Height
3M0321080R121.7	25.25'	24.90'
3M0321080L121.7	25.16'	23.61'

ELEVATION
Looking at face of signs.
Looking upstation for structures with signs both sides.

SIGN STRUCTURE DATA TABLE

Structure Number	Station	℄ to ℄ Poles	Elevation A	Dimension D	Actual Sign/Signal Area	Left Foundation			Right Foundation			Class SI Concrete (Cu. Yds.)				
						Elevation Top	Elev. Bottom	A	B	F	Elevation Top		Elev. Bottom	A	B	F
3M0321080R121.7	1008+30.00	88'	594.42	9'	135 Sq Ft	594.17	580.17	1'	14'	15'	594.52	580.53	1'	14'	15'	7.9
3M0321080L121.7	1013+75.00	98'	603.21	10.15' LT 13' RT	134 Sq Ft	603.05	599.05	1'	14'	15'	604.60	590.60	1.5'	14'	15.5'	8.0

Note A:

The dual monotubes shall be provided with two additional vertical sign brackets to be used for the installation of the signal heads to the monotube structure. The location of these two brackets is approximately shown. The exact location to be verified by the contractor before placement of brackets. Any and all mounting hardware required to install the signal heads on the sign structure shall be incidental to this pay item.

NUMBER	REVISION	DATE

BILL OF MATERIAL

ITEM	UNIT	TOTAL
DUAL MONOTUBE OVERHEAD SIGN STRUCTURE SPAN	Foot	186
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	15.9

DUAL MONOTUBE SIGN STRUCTURE

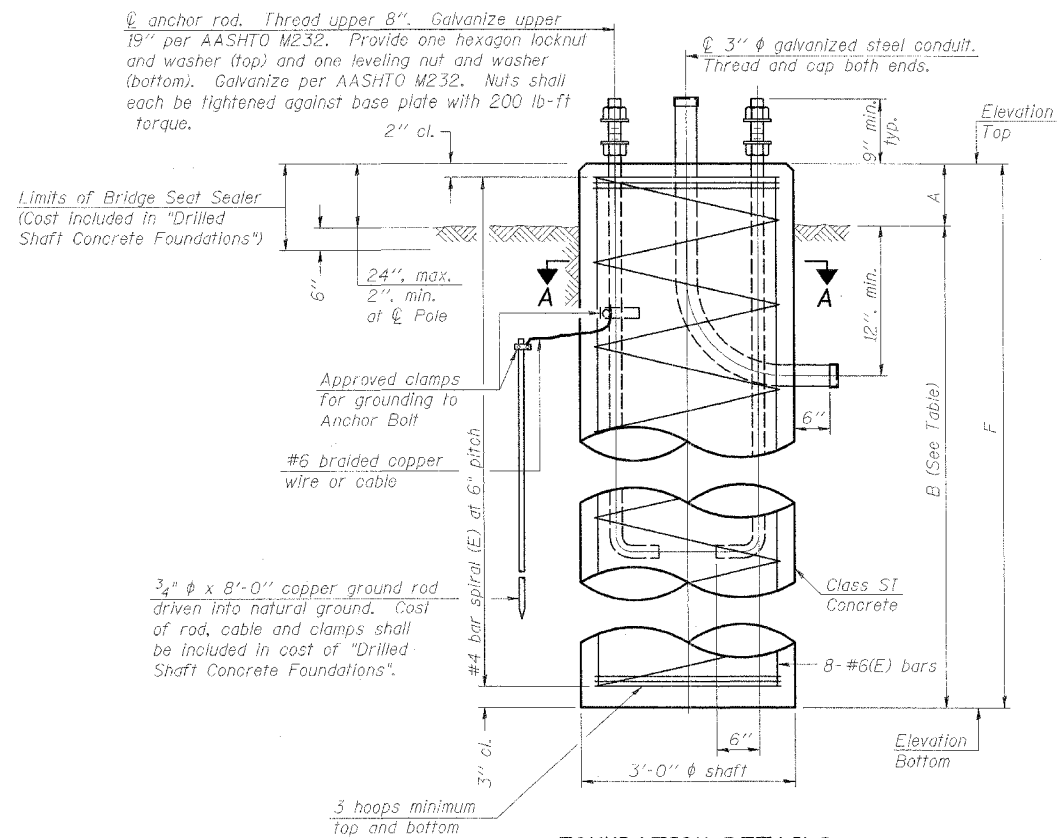
ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

SCALE: NONE
DATE: 2/10/06

DRAWN BY: NJS
CHECKED BY: JJC

DUAL TUBE - 1 1-21-05

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS

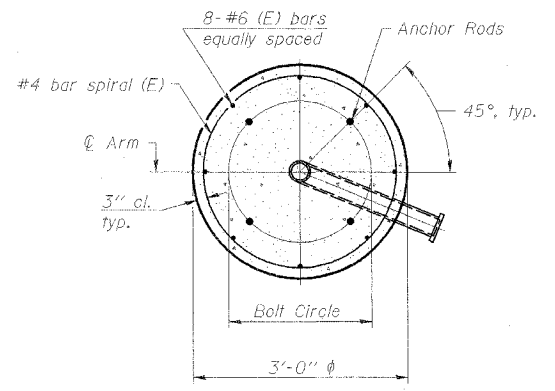


Span (Ft.)	B (Ft.)
Span \leq 65	12
65 < Span \leq 85	13
85 < Span \leq 100	14

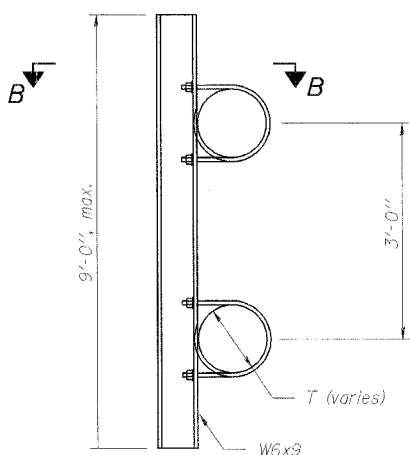
FOUNDATIONS:
 The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Q_u) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.
 If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.
 No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.
 Concrete shall be placed monolithically, without construction joints.
 Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.
 A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in "Drilled Shaft Concrete Foundation".

FOUNDATION DETAILS

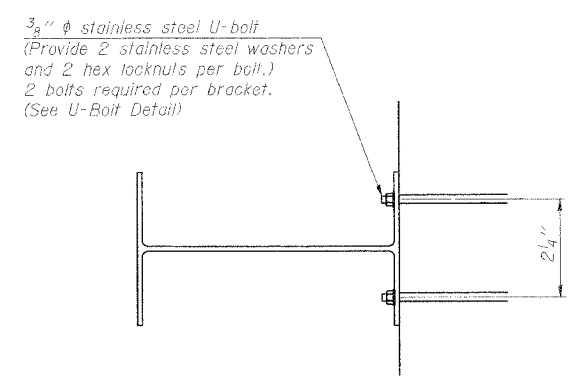
Typical, except conduit may only be required at one foundation. Provide conduit openings both poles.



SECTION A-A

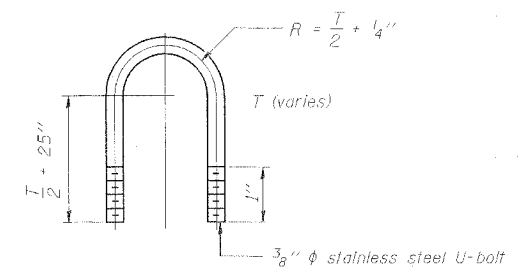


SIGN MOUNTING BRACKET



SECTION B-B

6'-0" maximum spacing.
 2'-0" maximum sign overhang beyond end bracket.



U-BOLT DETAIL
(Typical)

DUAL MONOTUBE SIGN STRUCTURE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

SCALE: NONE
 DATE: 2/10/06
 DRAWN BY: NJS
 CHECKED BY: JJC

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	132, 47-4K	KENDALL/GRUNDY	243	167
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				

GENERAL NOTES

SPECIFICATIONS:

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications") (2)

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

MINIMUM CLEARANCE: 3" greater than bridge members at all locations. (All Obstructions)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code (Steel) and the Standard Specifications.

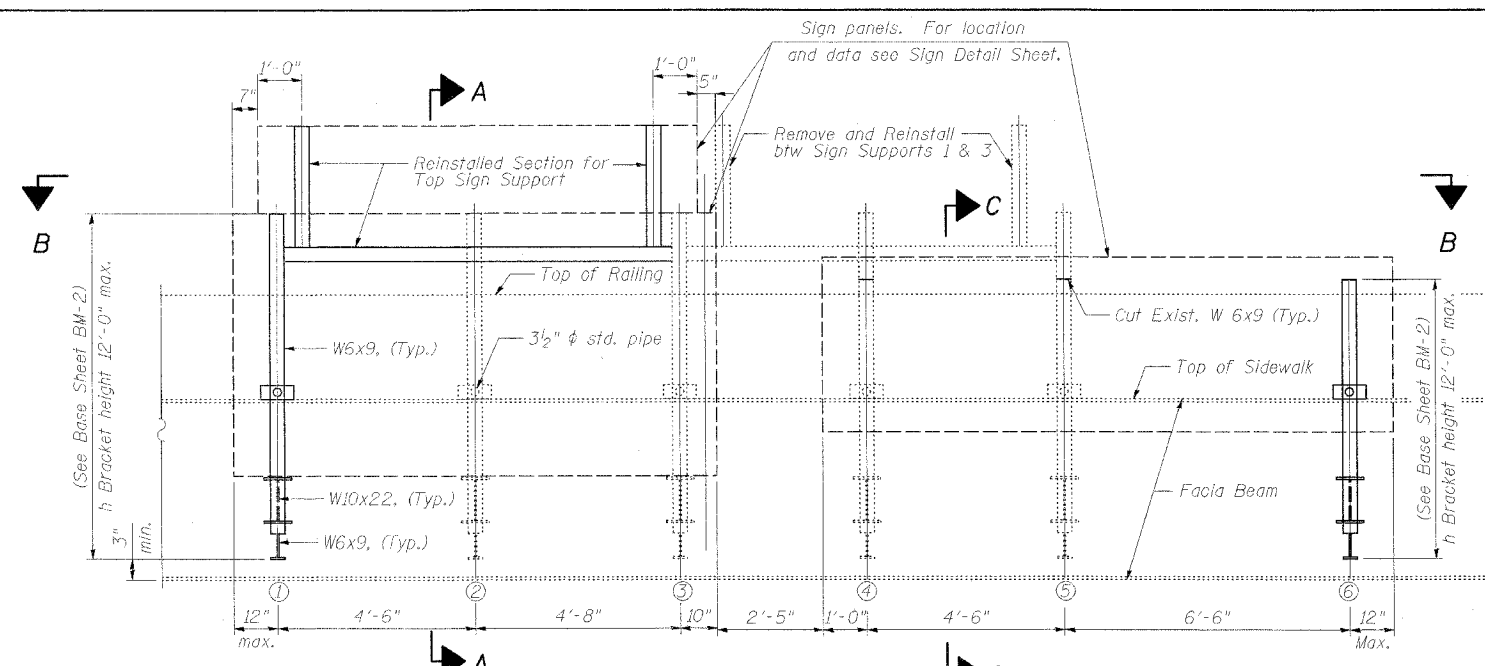
MATERIALS: All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.

All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 (M183, M223 Gr. 50).

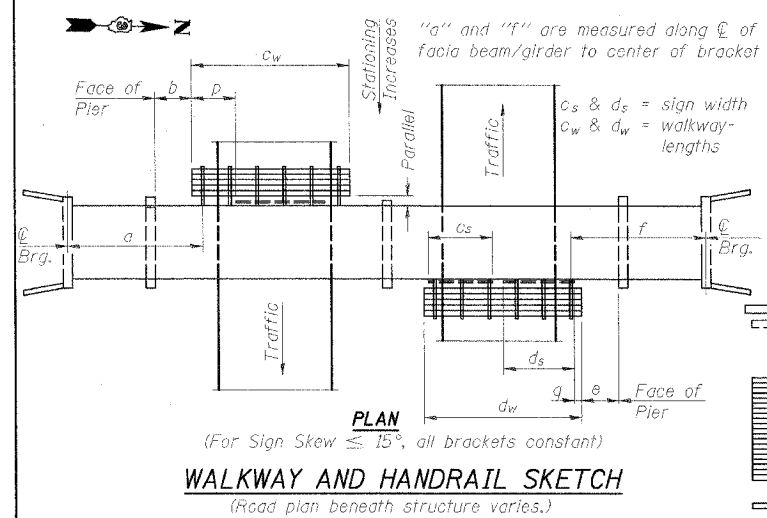
HIGH STRENGTH BOLTS: All bolts, washers, nuts and locknuts shall satisfy the requirements of ASTM designation A307 unless noted as "H.S." which shall require AASHTO M164 (A325), ASTM A449, or approved alternate. All fasteners shall be hot dip galvanized per AASHTO M232 unless otherwise specified.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

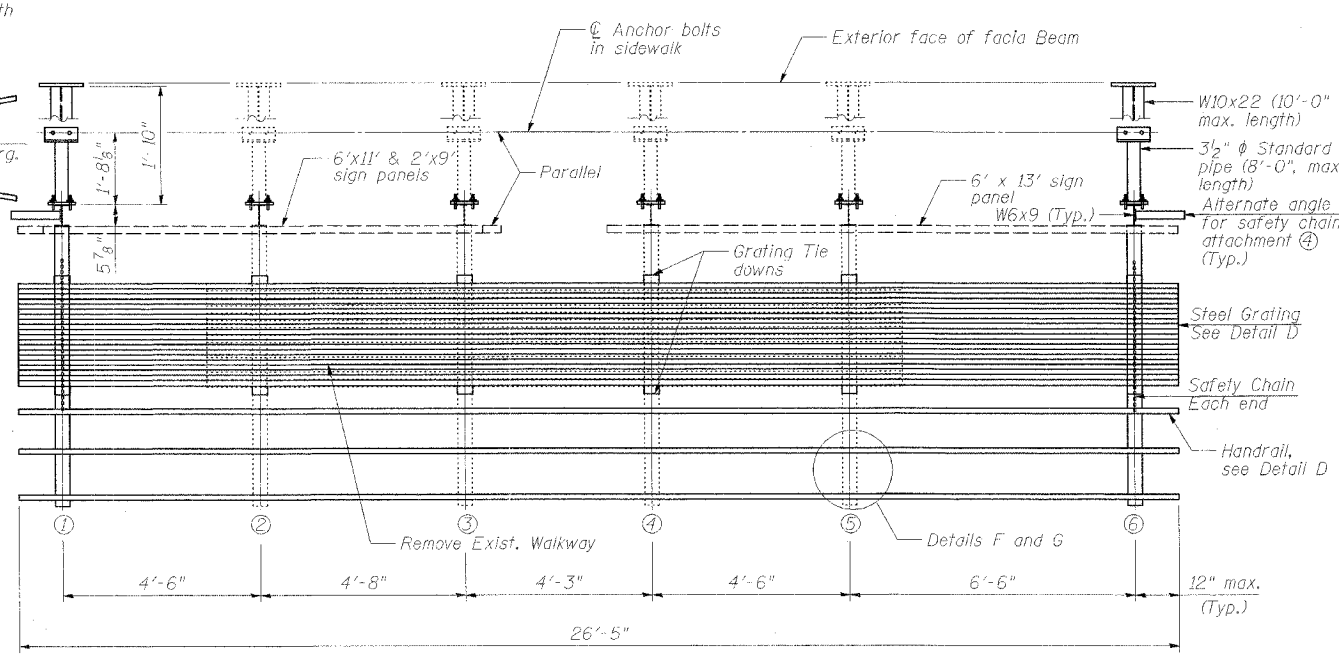
ANCHOR RODS: All-threaded rod conforming to ASTM A307, 3/4" ϕ x 12" long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be either cast into the concrete or epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 9".



TYPICAL FRONT ELEVATION
(with lights, safety chain, and handrail omitted for clarity)



WALKWAY AND HANDRAIL SKETCH
(Road plan beneath structure varies.)



SECTION B-B

Structure Number	Sign Skew Angle (L) or (R)	Bridge Station	Bridge Structure Number	Contract Route Designation	a	b	c _s	c _w	d _s	d _w	e	f	g	No. of Brackets (Total)	p	q	Total Grating/Hndrl. Lengths
3B047I080L122.3	0	1735+95.90	032-0065	Interstate	N/A	N/A	11'-0"	N/A	13'-0"	26'-5"	13'-11"	57'-4 1/2"	*	6***	N/A	N/A	26'-5"

Dimensions a, b, e, f & g may vary as approved by the Engineer, see (1).
When c_w < c_s and/or d_w < d_s, use alternate brackets without walkway supports where applicable, see (3).
* See Section B-B
*** 4 Existing Brackets and 2 Proposed Brackets

Contractor shall field check all bridge dimensions shown on plans before submitting shop drawings

Engineer shall verify minimum distances between sign supports & bridge railing post supports prior to erection of sign support.

The cost for removal and reinstallation of members of the existing Sign Support shall be incidental to Modify Existing Overhead Sign Structure, Bridge Mounted.

- Bracket spacing g \leq 6'-0", max. Spacing shall be uniform if possible but may vary \pm 6" to miss existing obstruction (rail post, light poles, web stiffeners, splice plates, etc.). Adjust bracket lengths accordingly on skewed structures.
- Any design modifications shall be based on the current version of applicable specifications and submitted for the Engineer's approval.
- Basis of Payment: This work will be paid for at the contract unit price per Each for Modify Existing Overhead Sign Structure, Bridge Mounted that includes grating, handrail, brackets, supports, anchor bolts, fasteners, fabrication, delivery, erection, field drilling and other necessary items. For Safety Chain Details and Details D, F and G, see Base Sheet BM-4.
- If walkway bracket at safety chain location is behind sign, add angle to bracket. See detail on Base Sheet BM-4.

NUMBER	REVISION	DATE

TOTAL BILL OF MATERIAL

** Modify Existing Overhead Sign Structure, Bridge Mounted	Each	1
--	------	---

** See Special Provisions

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80
(I-80 AT MINOOKA INTERCHANGE)

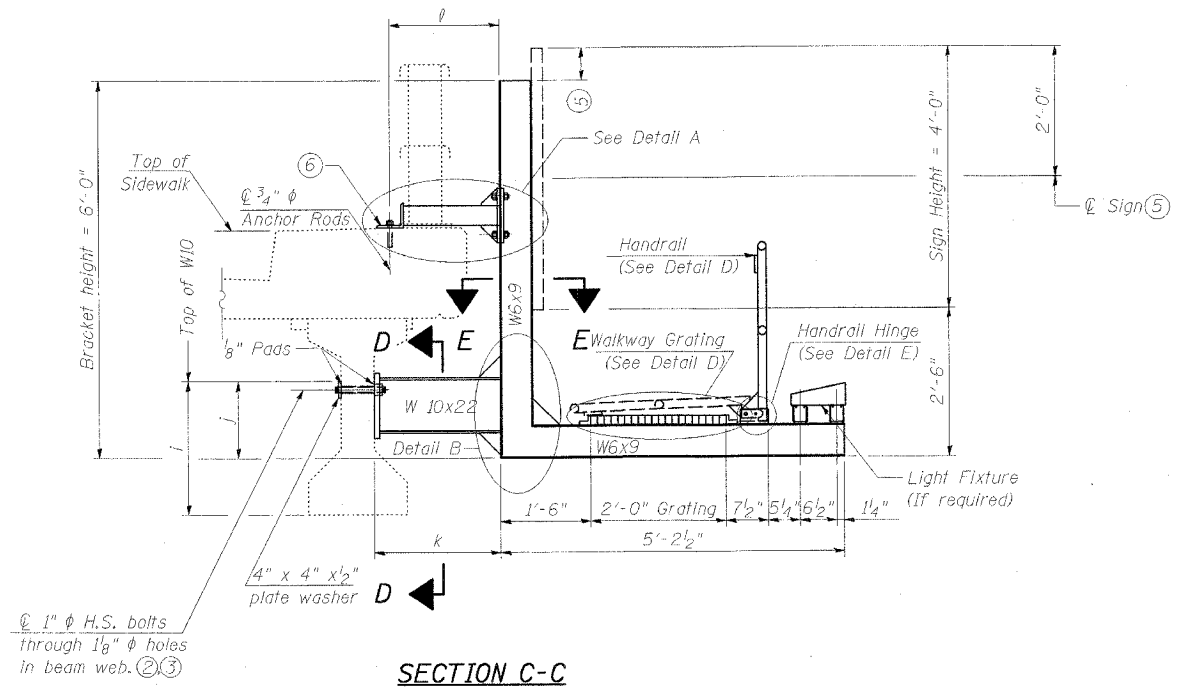
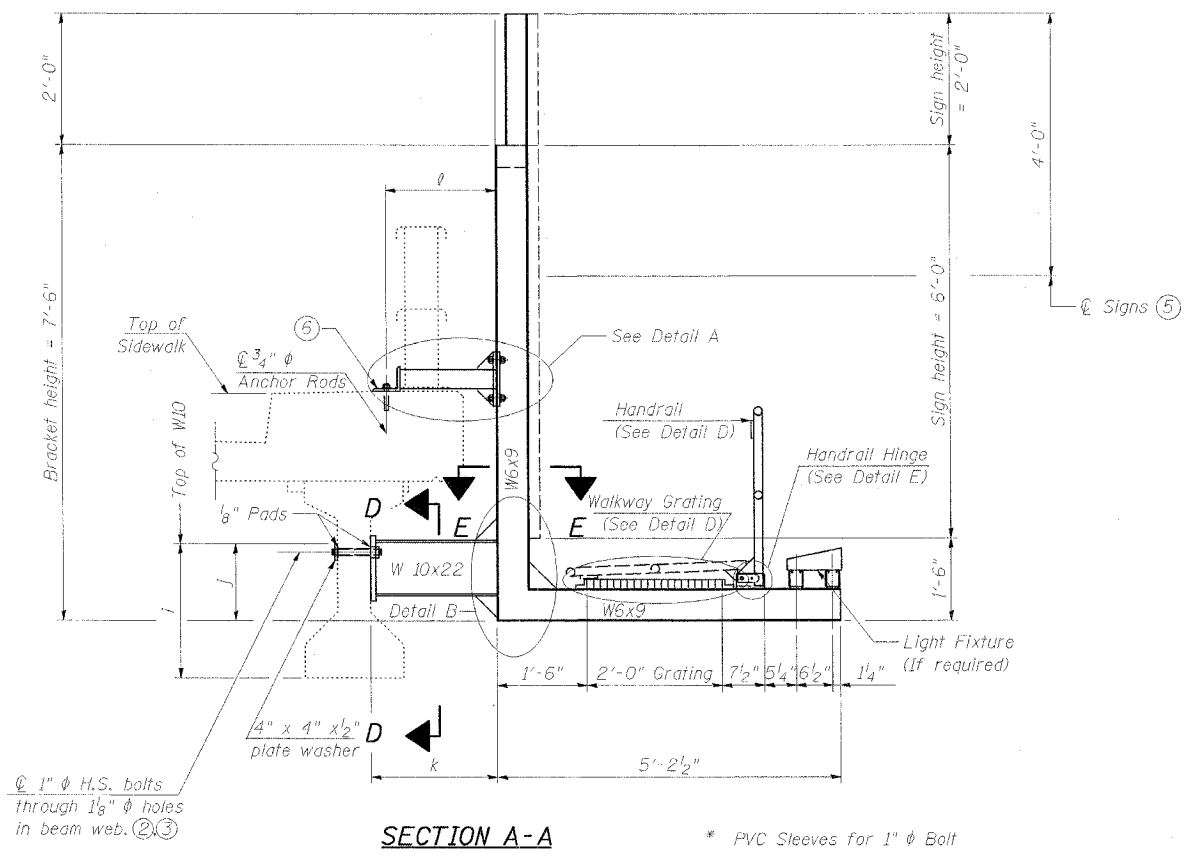
**BRIDGE MOUNT SIGN STRUCTURES
GENERAL PLAN AND ELEVATION**

SCALE: None
DATE: 2/10/06
DRAWN BY: M. Tryon
CHECKED BY: A. Yargicoglu

BM-1 1-7-05



D:\Projects\3B047I080L122.3\3B047I080L122.3.dwg 2/10/06 10:53 AM



SECTION A-A

* PVC Sleeves for 1" ϕ Bolt
 ** Drill & grout $\frac{3}{4}$ " threaded rods or drill & install $\frac{3}{4}$ " expansion anchor

SECTION C-C

Structure Number	Station	h (12'-0" max.)	i	j	k max. (10'-0" max.)	l max. (8'-0" max.)	m (11'-0" max.)
3B0471080L122.3	1735+95.90	***	2'-1"	1'-5 $\frac{1}{2}$ "	1'-11"	1'-8"	***

For Details A & B, Sections C-C, D-D and E-E, see Base Sheet BM-3.
 For Details D & E, see Base Sheet BM-4.
 *** See Section A-A and Section C-C

- Holes in new steel members may be drilled in the fabrication shop or in the field. Field drill existing members.
- For new PPC I beams, holes shall be formed during casting. For existing PPC I beams, prestressing strand locations shall be determined and spaced to miss strands by 6", min. Minimize spalling during field drilling of existing beams.
- For new construction, form holes. For existing RC beams, locate primary reinforcement and space holes to miss by 6", min. Minimize spalling and concrete fracturing damage during field drilling of existing concrete. Spalls over $\frac{1}{4}$ " deep or beyond the coverage of the 4x4 plate washer shall be repaired with epoxy mortar before installing washer.

NUMBER	REVISION	DATE

Notes:
 Installations not within dimensional limits shown require special analysis for all components and must be submitted to the Bureau of Bridges and Structures for approval.
 Contractor shall field check all pertinent existing bridge dimensions shown on plans before submitting shop drawings.
 All holes in bridge beams or girders should be located in the middle half of the member. There shall be no holes drilled in the lower quarter of the member's depth. (For R.C. girder, depth = bottom of deck to bottom of the girder.) Proposed exceptions must be approved by the Bureau of Bridges and Structures.
 The Engineer may adjust dimension "i" to meet the above condition and to keep the sign level.

- Sign shall not extend more than 6" above top of bracket, and this dimension may vary to keep sign level if bridge is on grade or vertical curve. Multiple signs of various heights shall share a common horizontal centerline and use equal bracket heights. If no sign is attached to a W6x9 vertical (bracket only supporting walkway), dimension h shall be the same as an adjacent bracket with a sign attached, unless Engineer specifically directs shorter brackets due to locational restraints on future uses. (See Detail A for minimum bracket height.)
- For bridge mounted sign structures installed on new bridges with railing, during design, bracket spacing must be coordinated with railing post spacing and the Contractor must install upper brackets prior to railing installation. For bridge mounted sign structures installed on existing bridges with railing, during design, brackets spacing must be coordinated with railing post spacing and the Contractor must temporarily remove sections of railing to facilitate upper bracket installation. If it is determined during design that existing railings can't be removed, alternate upper connection details must be developed for the contract plans and approved by the Bureau of Bridges and Structures.

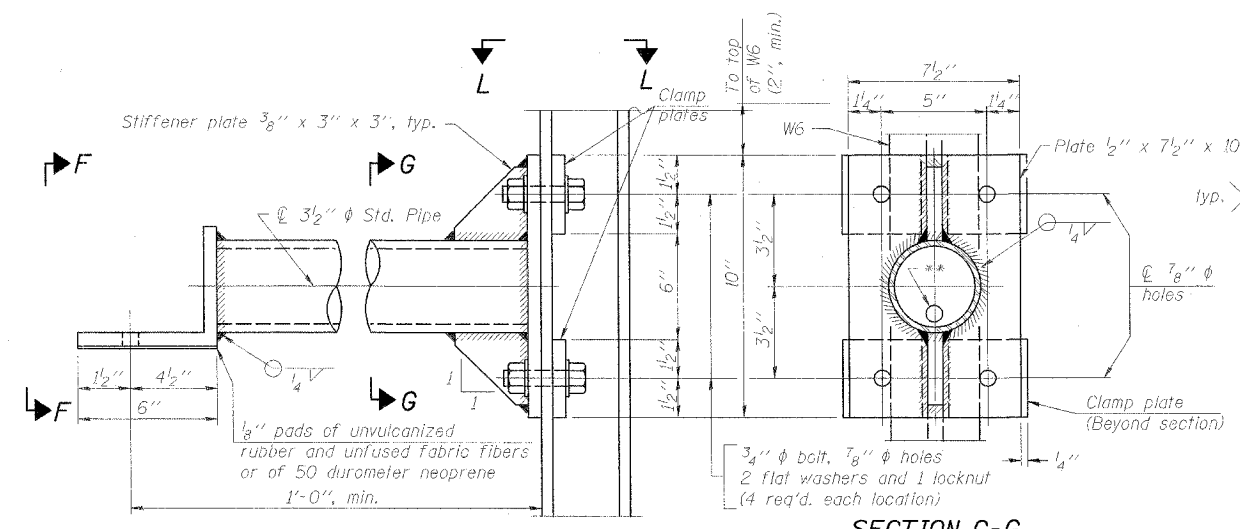
BM-2 1-7-05

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80
 (I-80 AT MINOOKA INTERCHANGE)

**BRIDGE MOUNT SIGN STRUCTURES
 WALKWAY AND CONNECTION DETAILS**

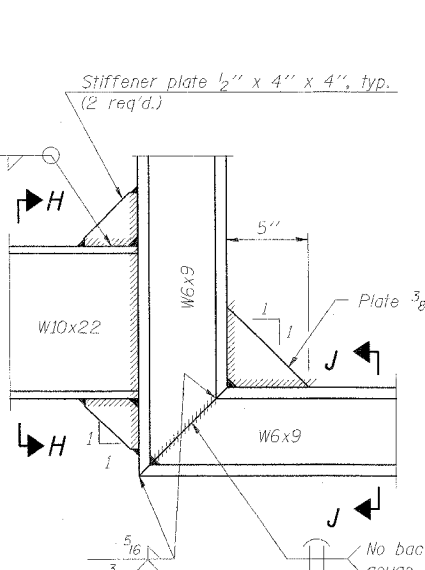
REVISIONS	
NAME	DATE

SCALE: None DRAWN BY: M. Tryon
 DATE: 2/10/06 CHECKED BY: A. Yargicoglu

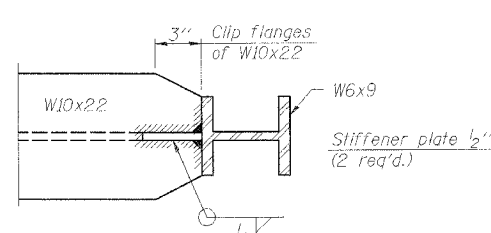


DETAIL A

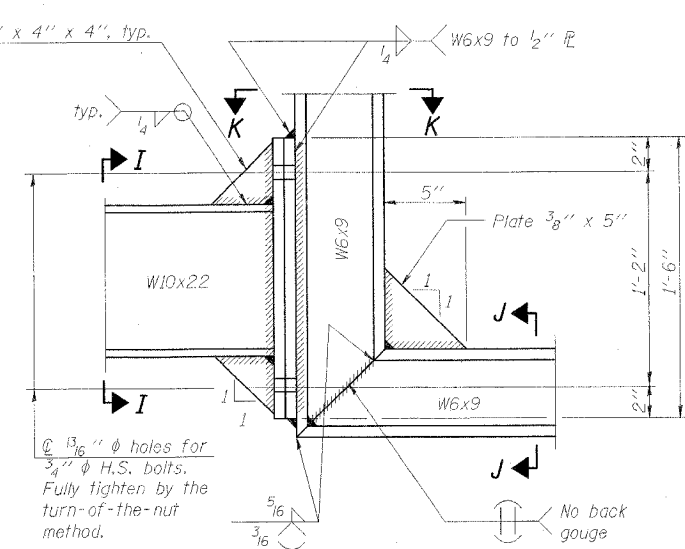
SECTION G-G



DETAIL B - WELDED W10x22 TO W6x9 CONNECTION

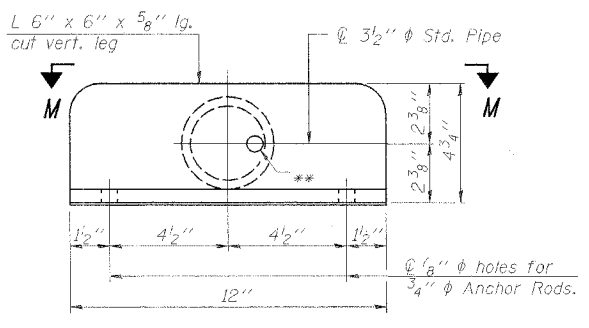


SECTION E-E



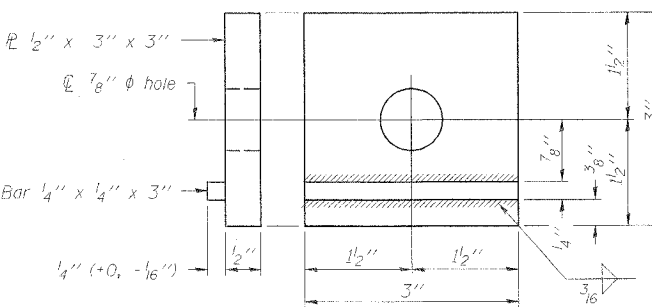
DETAIL B - ALTERNATE BOLTED W10x22 TO W6x9 CONNECTION

Alternate may be substituted by contractor to facilitate construction or galvanizing, especially on long struts for skewed bridges.

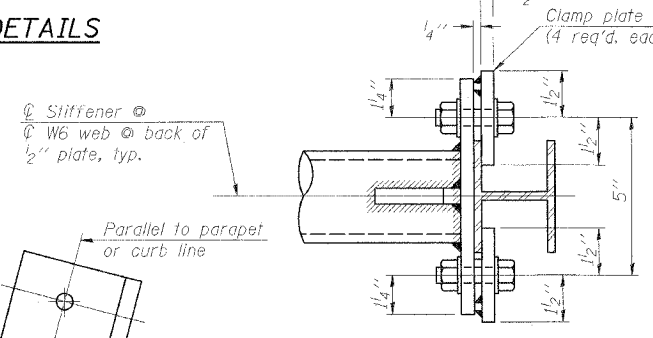


VIEW F-F

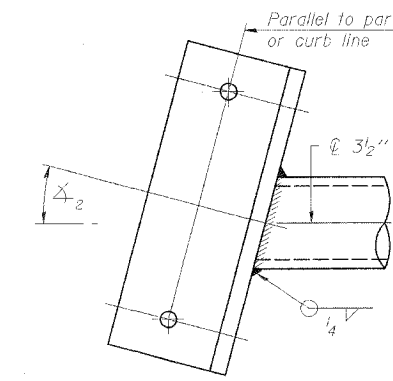
** 13/16" phi holes for galvanizing. After galvanizing, install 7/8" phi A307 hot-dip galvanized bolt to close hole in angle. (No bolt required in 1/2" plate.)



CLAMP PLATE DETAILS

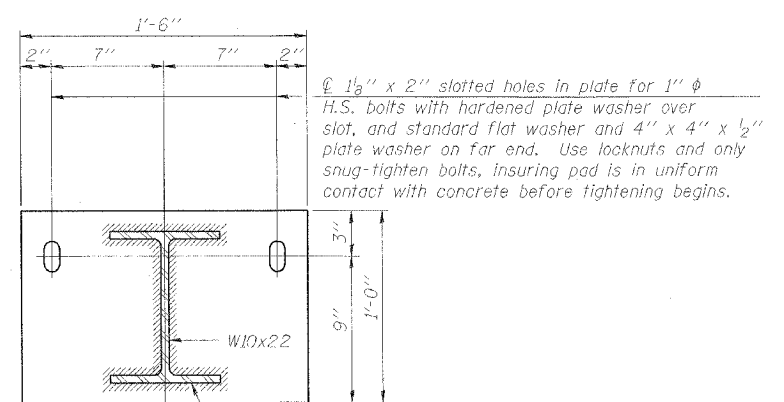


SECTION L-L

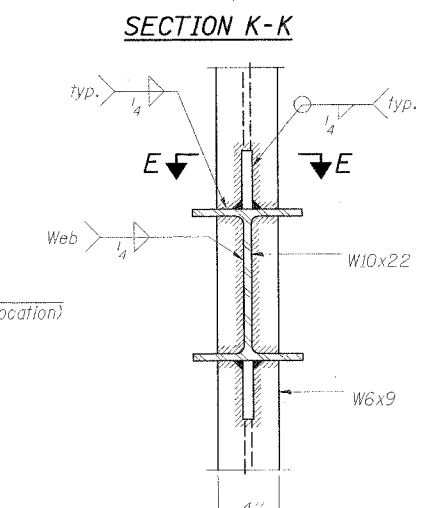


SECTION M-M

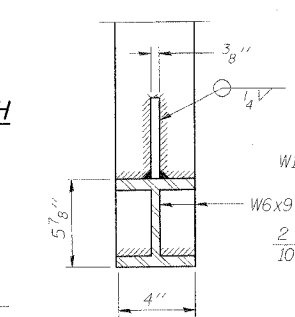
Note: For constant slab overhang at fascia beam, $\Delta_1 = \Delta_2$ = sign angle. For flared beams or other special cases where $\Delta_1 \neq \Delta_2$, Δ_1 = sign angle.



SECTION D-D



SECTION H-H



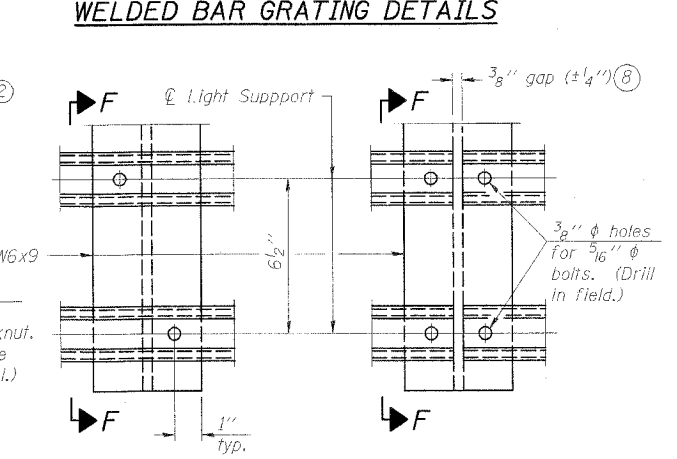
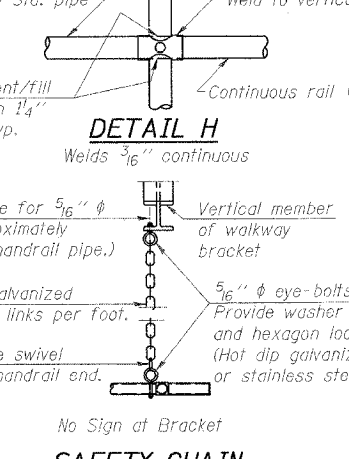
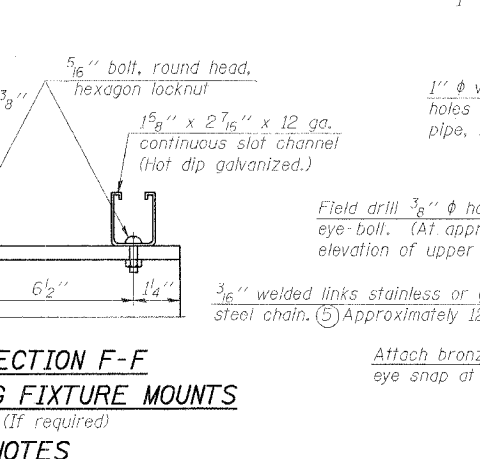
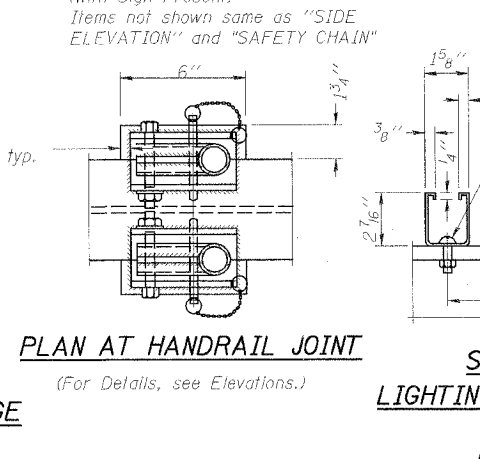
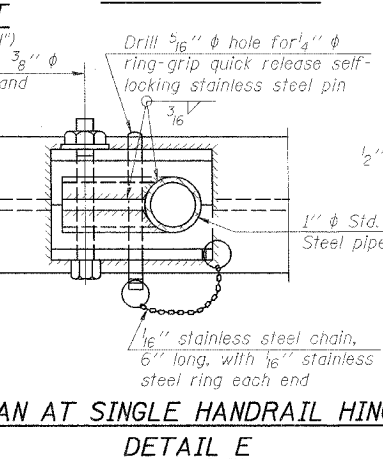
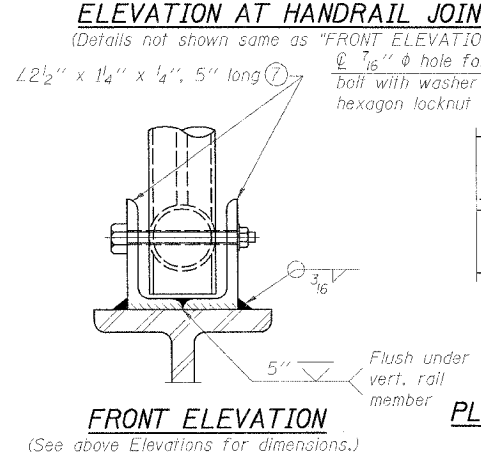
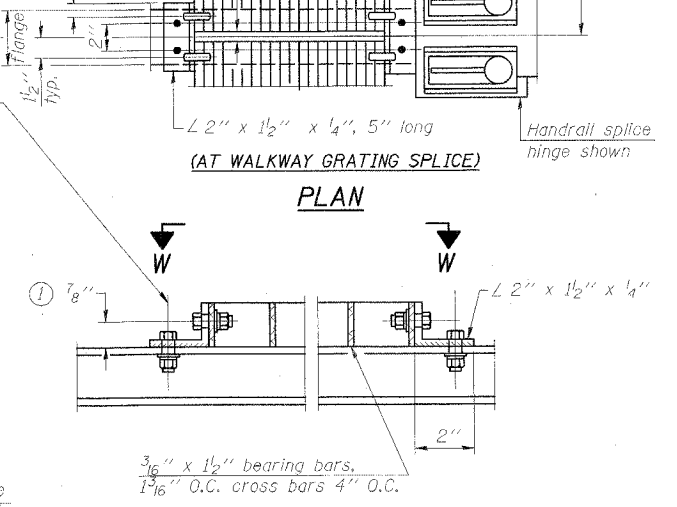
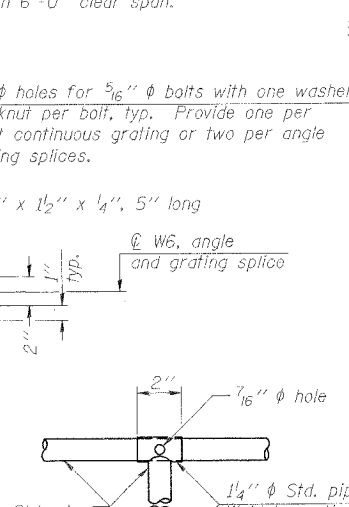
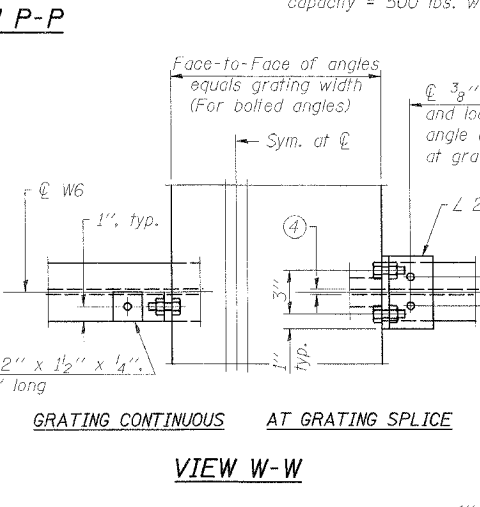
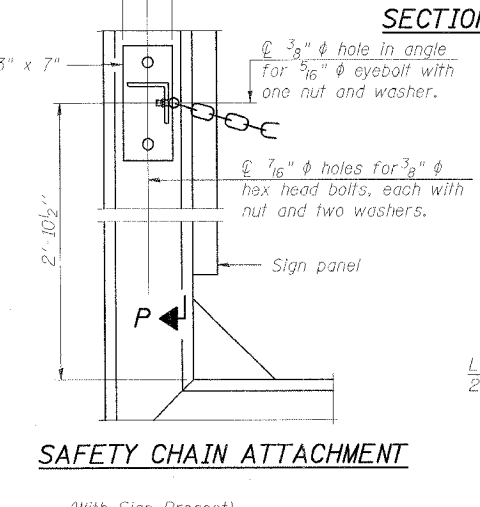
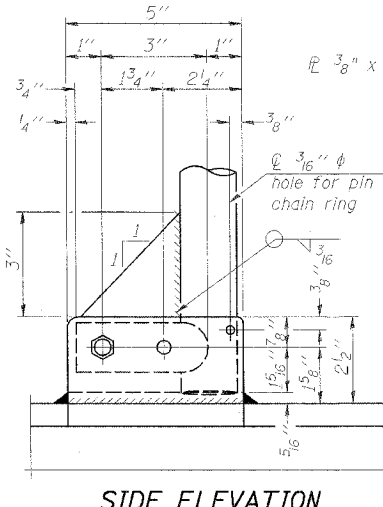
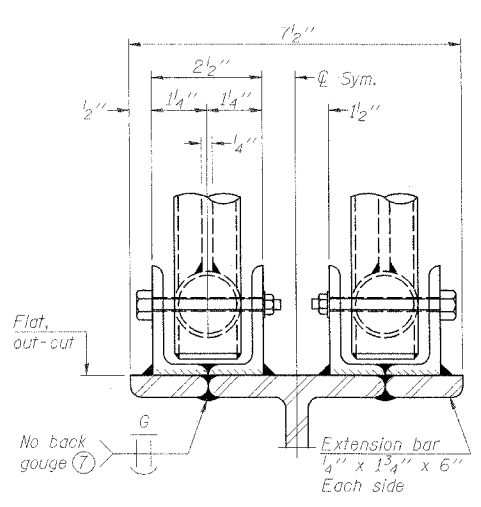
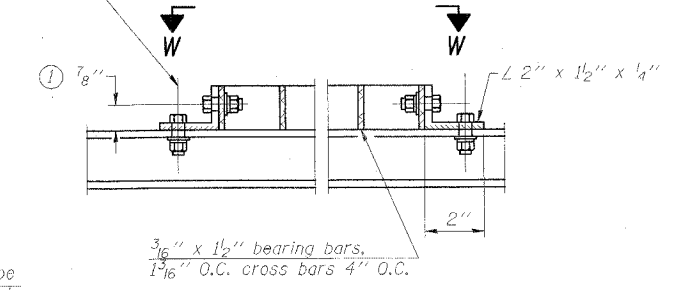
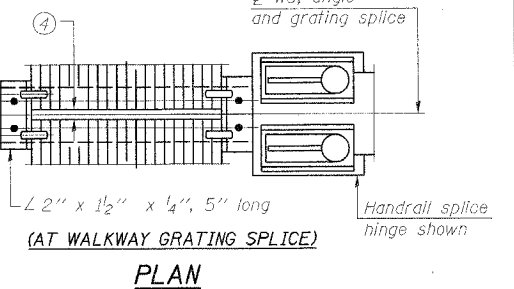
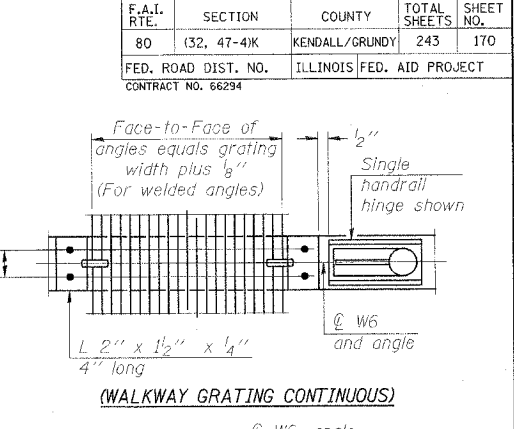
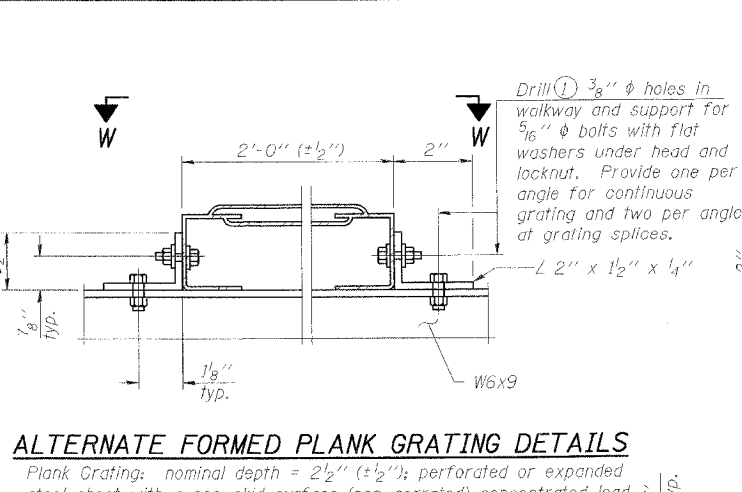
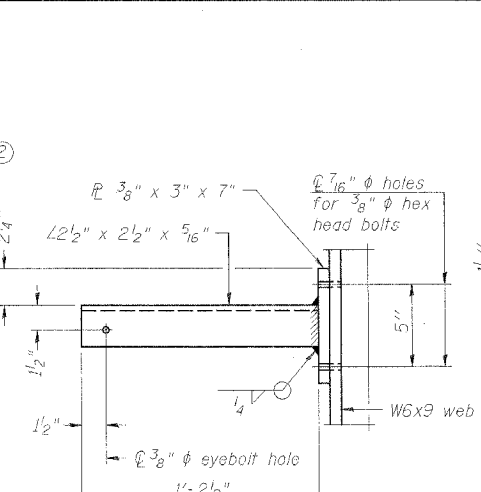
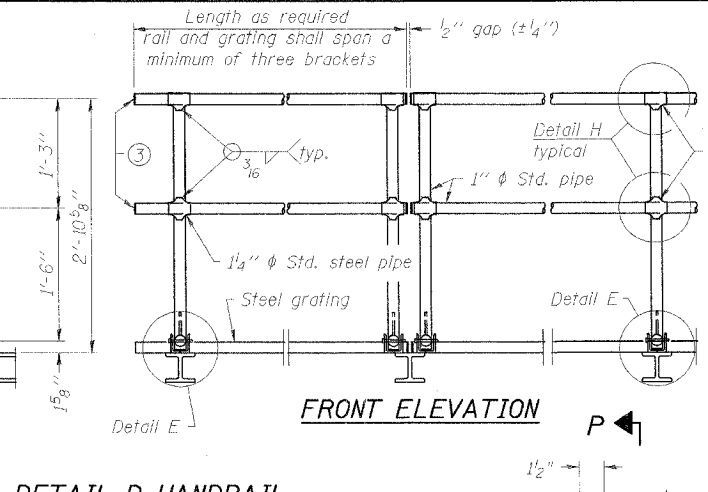
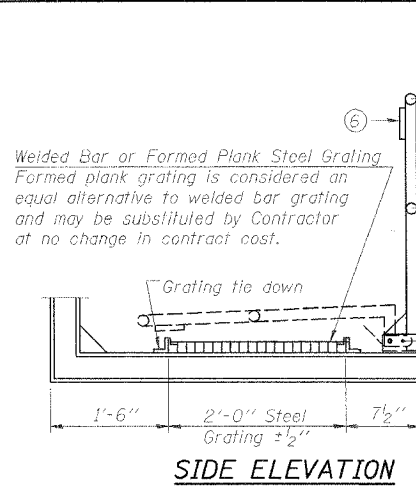
SECTION I-I

NUMBER	REVISION	DATE

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80
(I-80 AT MINOOKA INTERCHANGE)
BRIDGE MOUNT SIGN STRUCTURES
CONNECTION DETAILS

SCALE: None
DATE: 2/10/06
DRAWN BY: M. Tryon
CHECKED BY: A. Yargioolgu



NUMBER	REVISION	DATE

- ① Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment. Field drilled holes must be touched up with galvanized paint.
- ② Horizontal rail member shall be continuous thru 1 1/4" pipe. Provide 7/16" hole in fitting for 3/8" bolt. Field drill 1/16" hole in horizontal rail member. Provide washer and locknut for bolt. *Use 5/16" eyebolts in 7/16" holes on top rail at ends only.*
- ③ Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. *All rail ends.*
- ④ 3/8" gap between grating panels at splice.
- ⑤ Chain to be hot dip galvanized after manufacture or stainless steel suitable for prolonged exterior exposure. Approximately 3'-6" long chain per location. Maximum sag with handrail erected = 4".
- ⑥ 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- ⑦ Extrusions may be used in lieu of details shown, with approval by Engineer.
- ⑧ Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80
(I-80 AT MINOOKA INTERCHANGE)

BRIDGE MOUNT SIGN STRUCTURE
WALKWAY DETAILS

SCALE: None
 DATE: 2/10/06
 DRAWN BY: M. Tryon
 CHECKED BY: A. Yargoolou

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4K)	KENDALL/GRUNDY	243	171
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 66294				

Bench Mark:

BM 1703 Chiseled "X" on light pole foundation bolt, Sta. 192+94.19, 6.41' Rt. El. 608.228

Existing Structure

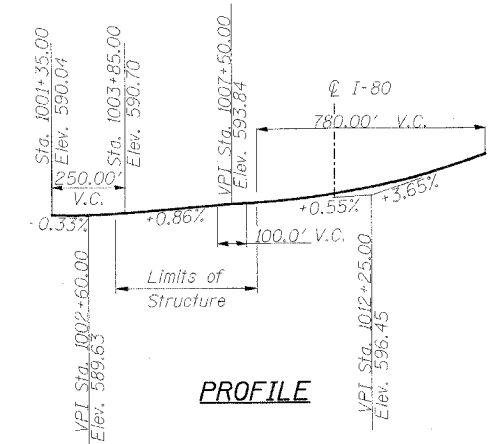
The 11'x4' cast in place reinforced concrete box culvert is replacing a side ditch 36" ϕ reinforced concrete culvert drainage system along the east side of Ridge Road due to road widening and lack of R.O.W. The existing 36" Reinforced Concrete Culvert is to be used as temporary drainage until it is filled and abandoned. The proposed 11'x4' cast in place reinforced concrete box culvert to be constructed utilizing staged construction.

WATERWAY INFORMATION

Proposed Low Grade Elev. = 593.0 @ Sta. 200+75
Existing Low Grade Elev. = 593.6 @ Sta. 200+00

Drainage Area = 0.23 Sq. Mi.

Flood	Freq. Yr.	Q (C.F.S.)	Opening (Sq. Ft.)		Nat. H.W.E.	Head (Ft.)		Headwater Elev.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	187	----	7.3	588.46	----	1.36	----	589.22
	50	336	----	9.9	589.11	----	2.29	----	591.40
Overtop	100	423	----	11.1	589.41	----	2.95	----	592.36



DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges
LOADING HS20-44 & ALT.

Allowance for Future Wearing Surface=50 lb/ft

DESIGN STRESSES

$f'_c=3500$ psi
 $f_y=60,000$ psi (Reinf.)

SEISMIC DATA

Seismic Performance Category (SPC)=A
Bedrock Acceleration Coefficient (A)=0.035g
Site Coefficient (S)=1.0

INDEX OF SHEETS

- S-1 - General Plan & Elevation
- S-2 - Plan & Elevation Details
- S-3 - Details
- S-4 - Temporary Sheet Piling Details
- S-10 - Bar Splicer Details

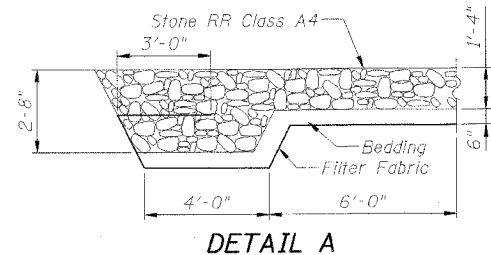
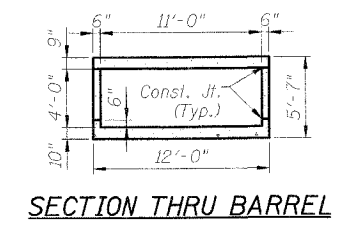
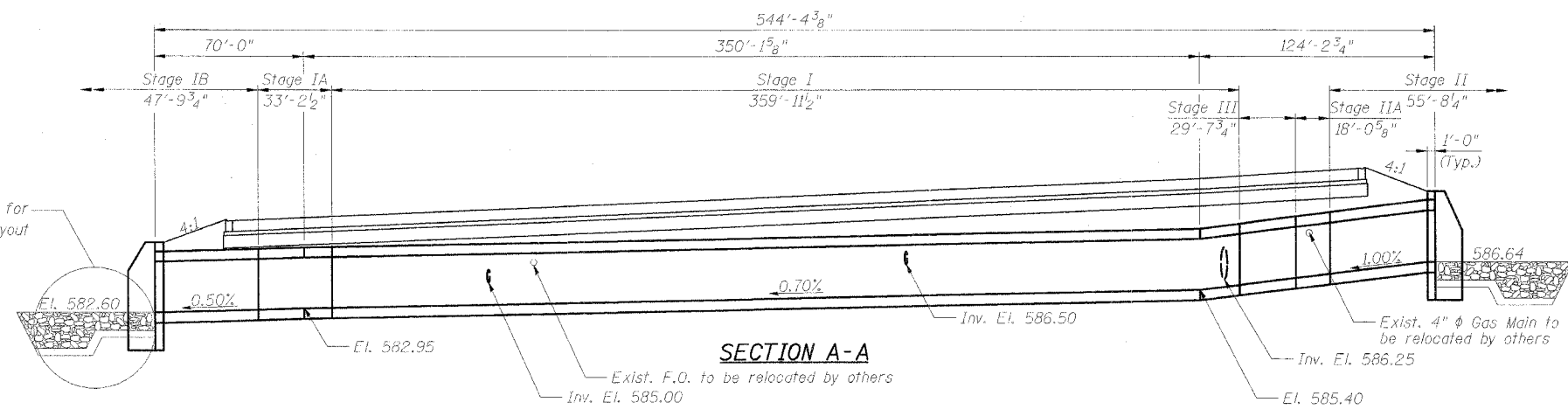
TOTAL BILL OF MATERIAL

Item	Unit	Quantity
Porous Granular Backfill	Cu. Yd.	590
RipRap	Sq. Yd.	25
Filter Fabric	Sq. Yd.	25
Structure Excavation	Cu. Yd.	2,358
Reinforcement Bars	Pound	118,100
Temporary Sheet Piling	Sq. Ft.	3,480
Concrete Box Culverts	Cu. Yd.	484.7
Bar Splicers	Each	215

* See Special Provisions

NOTES:

- Traffic to be maintained utilizing stage construction
- See Sheet S-4 for Temporary Sheet Piling Details
- All longitudinal dimensions measured along ϕ culvert.
- See Drainage and Utilities Ridge Road Sta. 1000+00 to Sta. 1013+00 sheet for details and quantities for Abandon Existing Culvert.



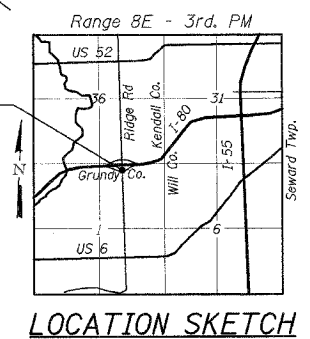
PATRICK ENGINEERING, INC.
GREGORY J. HATLESTAD, S.E.



GREGORY J. HATLESTAD, S.E.
081-005562

EXP _____

DATE _____



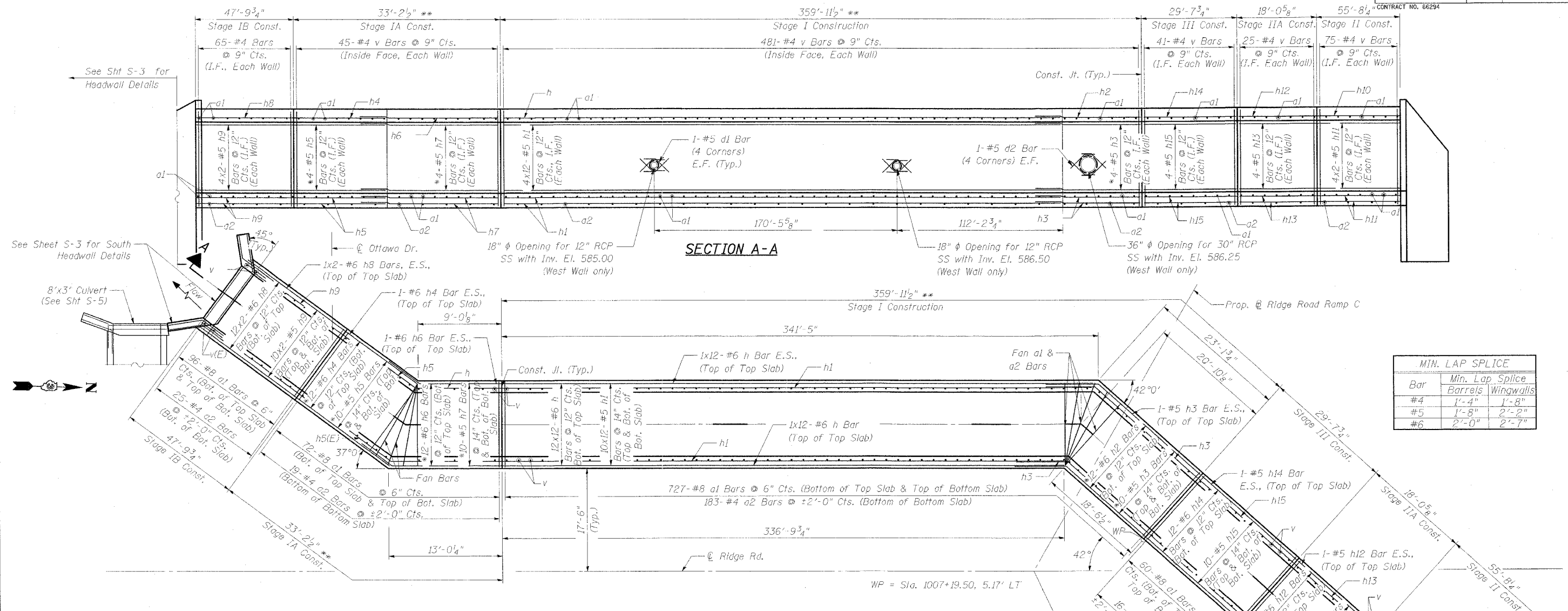
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80
(I-80 AT MINOOKA INTERCHANGE)
CULVERT NO. 1
11'X4' BOX CULVERT
GENERAL PLAN & ELEVATION

SCALE: None
DATE: 2/10/06
DRAWN BY: M. Tryon
CHECKED BY: A. Yargicoglu



G:\Projects\1005\1005.dwg
 2/10/06 10:00 AM
 G:\Projects\1005\1005.dwg
 2/10/06 10:00 AM
 G:\Projects\1005\1005.dwg
 2/10/06 10:00 AM



MIN. LAP SPLICE		
Bar	Min. Lap Splice	Barrels Wingwalls
#4	1'-4"	1'-8"
#5	1'-8"	2'-2"
#6	2'-0"	2'-7"

See Sht S-3 for Headwall Details

See Sheet S-3 for South Headwall Details



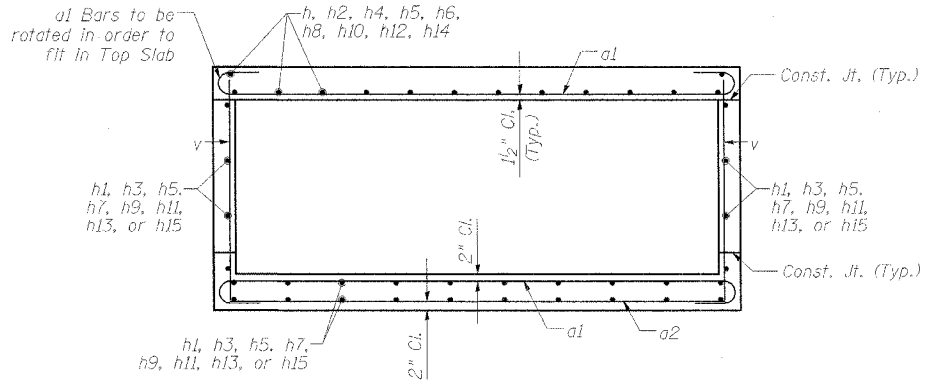
SECTION A-A

PLAN

* Cut bars to fit
 ** Measured along C of Culvert

NOTES:

- All dimensions are in feet (ft) except as noted.
- A distance of 6 ft of the barrel shall be poured monolithically with the horizontal cantilever wingwalls on the North end, and Outlet Headwall Structure on the South end.
- See sheet S-3 for Box Culvert details and Bill of Material.
- All Construction Joints shall be bonded.
- E.F. = Each Face, E.S. = Each Side, I.F. = Inside Face, O.F. = Outside Face
- See Sheet S-4 for Temporary Sheet Piling Details due to staging of construction.
- 10x12-#5 etc. indicates 10 lines of bars with 12 lengths per line.



SECTION THRU BARREL
 (Showing Reinforcement)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80
 (I-80 AT MINOOKA INTERCHANGE)
 CULVERT NO. 1
 11'x4' CULVERT PLAN & ELEVATION DETAILS

SCALE: None DRAWN BY: M. Tryon
 DATE: 2/10/06 CHECKED BY: A. Yargiooglu

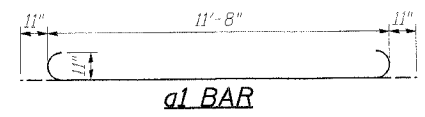
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	173
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 66294				

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1	2,208	#8	13'-6"	
a2	282	#4	11'-3"	
d	26	#4	4'-6"	
d1	16	#5	2'-8"	
d2	8	#5	4'-3"	
h	168	#6	32'-6"	
h1	336	#5	32'-2"	
h2	14	#6	25'-5"	
h3	28	#5	25'-0"	
h4	14	#6	26'-0"	
h5	28	#5	26'-0"	
h6	14	#6	17'-4"	
h7	28	#5	16'-11"	
h8	28	#6	25'-2"	
h9	56	#5	24'-11"	
h10	28	#6	23'-0"	
h11	56	#5	28'-9"	
h12	14	#6	17'-9"	
h13	28	#5	17'-9"	
h14	14	#6	29'-4"	
h15	28	#5	29'-4"	
h16	8	#4	11'-8"	
h17	24	#4	8'-0"	
h18	21	#4	8'-1"	
h19	7	#4	6'-10"	
v	1,464	#4	5'-3"	
v1	16	#4	8'-2"	
Reinforcement Bars			Pound	118,100
Concrete Box Culverts			Cu. Yd.	484.7
Bar Splicers			Each	215

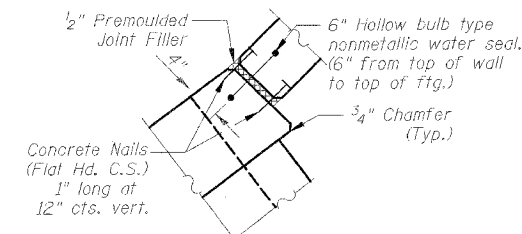
d1, d2, h2, h3, h6, h7, h17, h18, h19 BARS
(For 11'x4' Box Culvert)

Bar	A	B	C
d1	11"	1'-9"	7 ³ / ₄ "
d2	1'-8"	2'-7"	1'-2 ¹ / ₈ "
h2	2'-7"	22'-10"	1'-11"
h3	2'-2"	22'-10"	1'-7 ¹ / ₄ "
h6	2'-7"	14'-9"	2'-8 ³ / ₄ "
h7	2'-2"	14'-9"	2'-0 ³ / ₄ "
h17	3'-0"	5'-0"	2'-2 ¹ / ₈ "
h18	3'-0"	5'-1"	2'-2 ¹ / ₈ "
h19	3'-0"	3'-10"	2'-2 ¹ / ₈ "



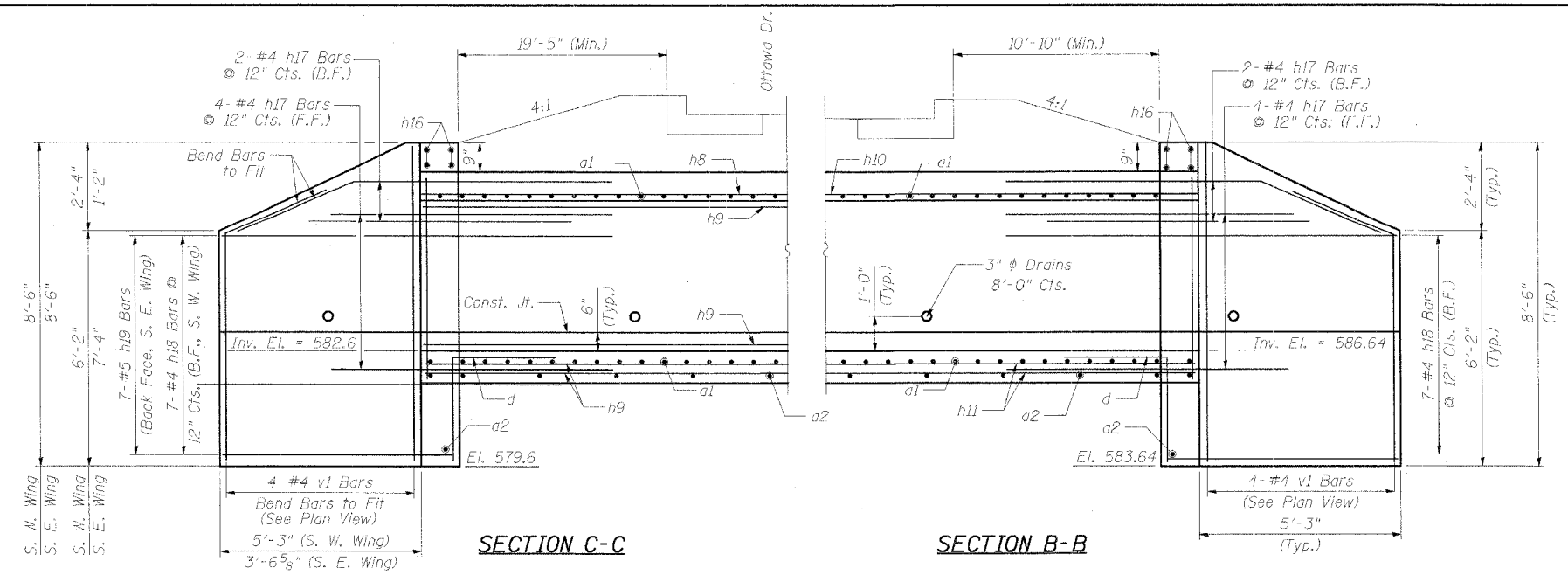
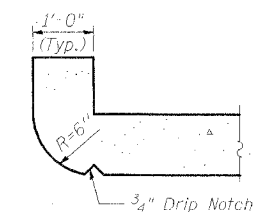
d BAR

a1 BAR



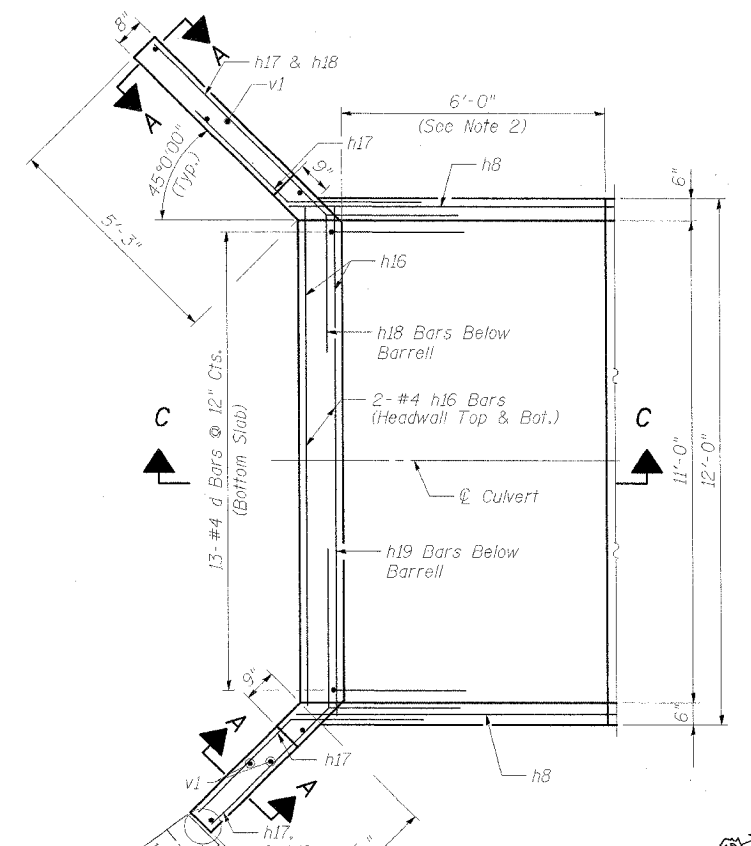
EXPANSION JOINT DETAIL

SECTION THRU HEADWALL

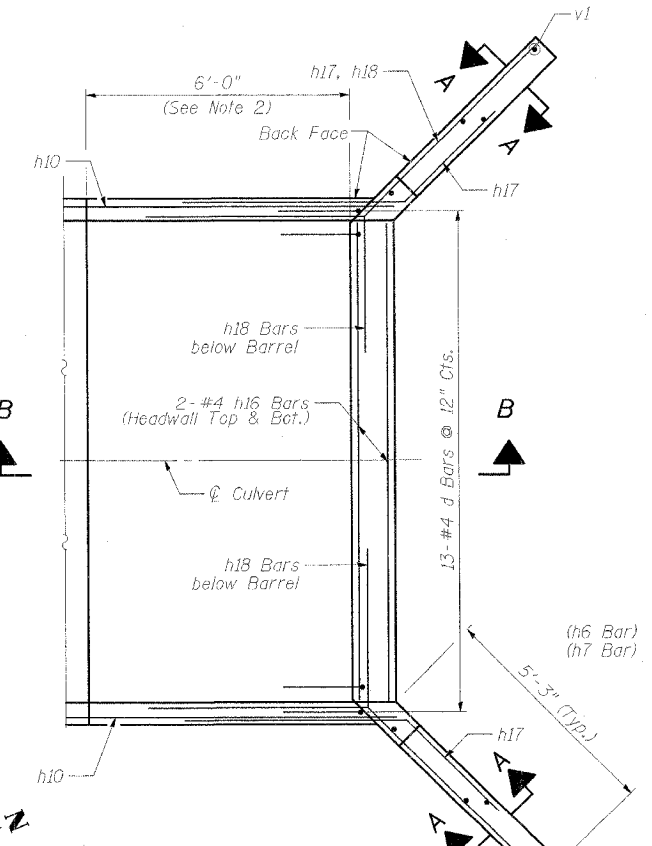


SECTION C-C

SECTION B-B

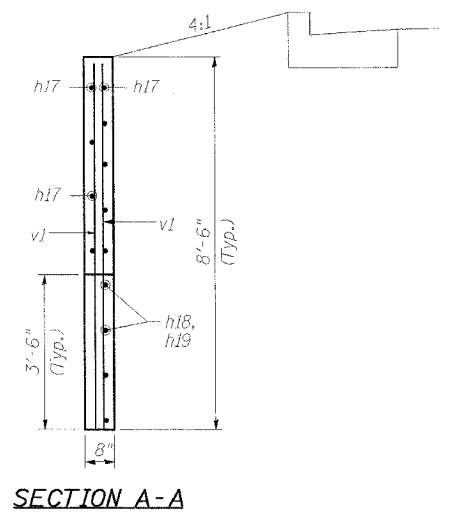


OUTLET PLAN

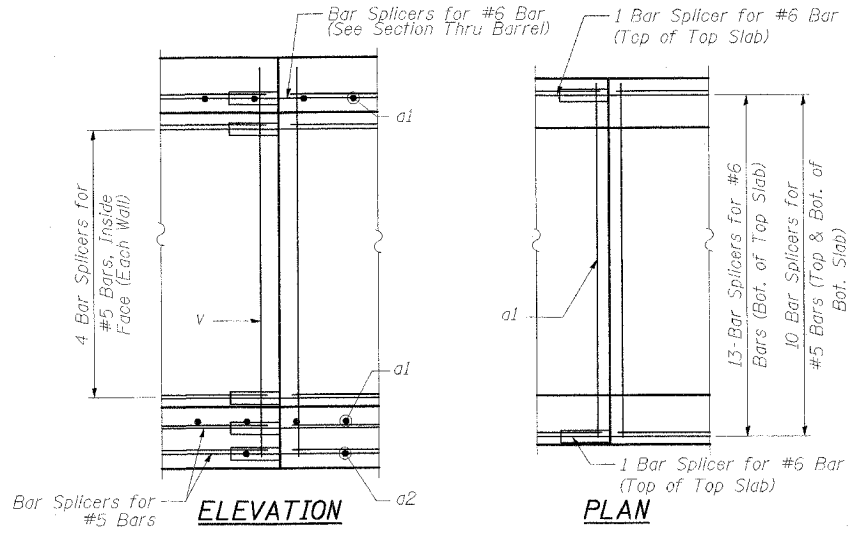


INLET PLAN

- NOTES:**
- All dimensions are in feet (ft) except as noted.
 - A distance of 6 ft of the barrel shall be poured monolithically with the horizontal cantilever wingwalls at each end.
 - Work this sheet with S-6 for Outlet Headwall Details.



SECTION A-A



ELEVATION

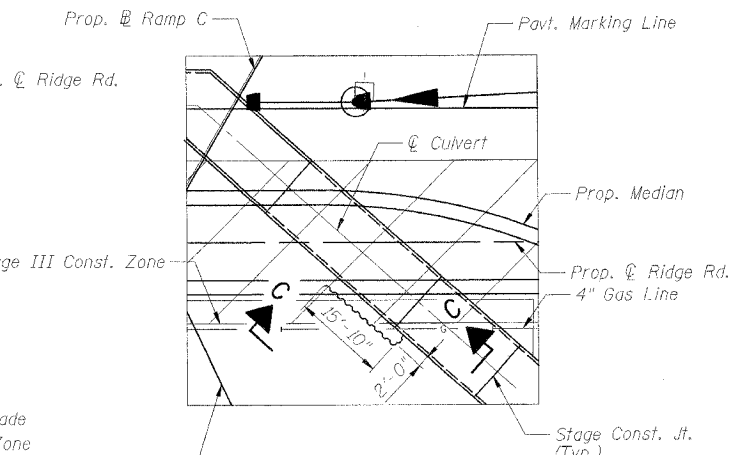
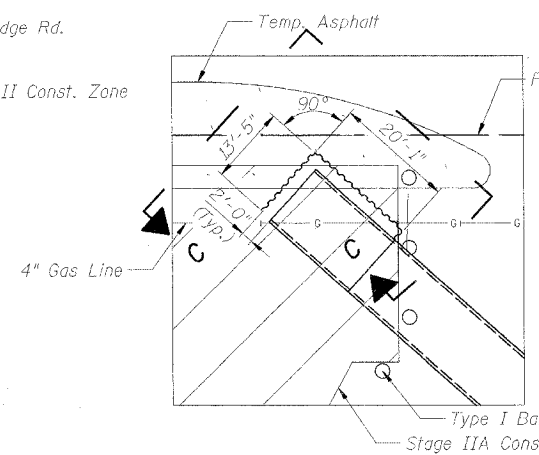
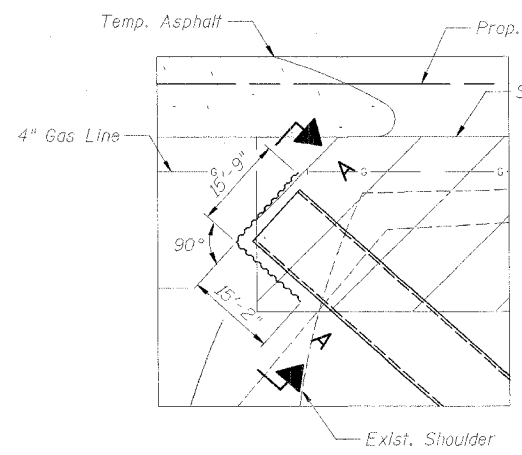
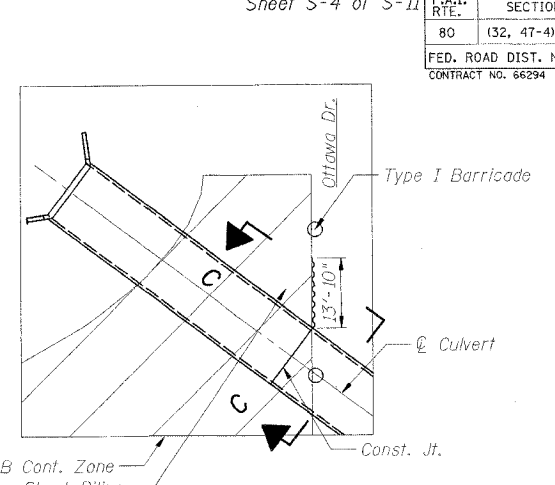
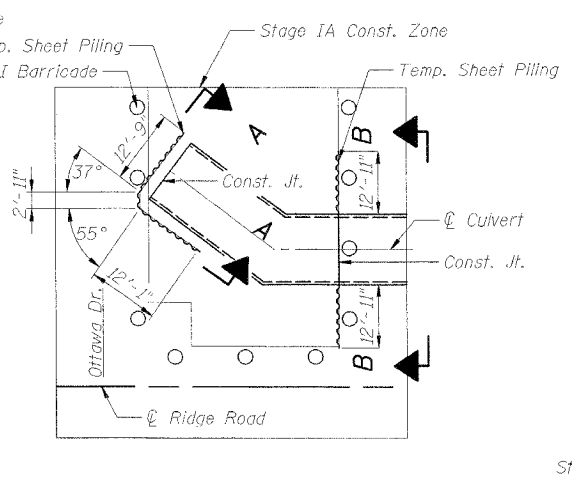
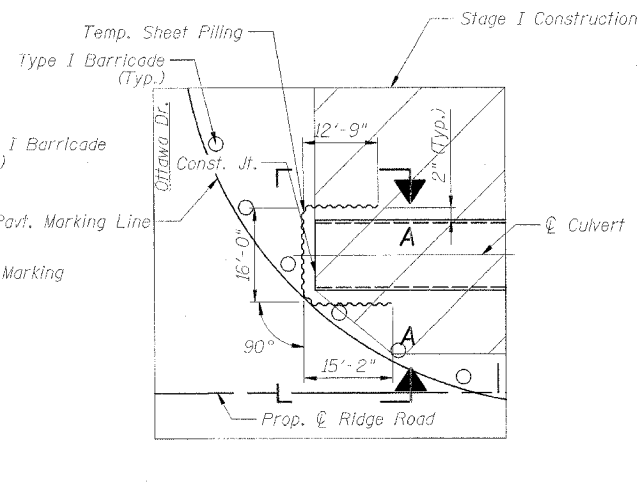
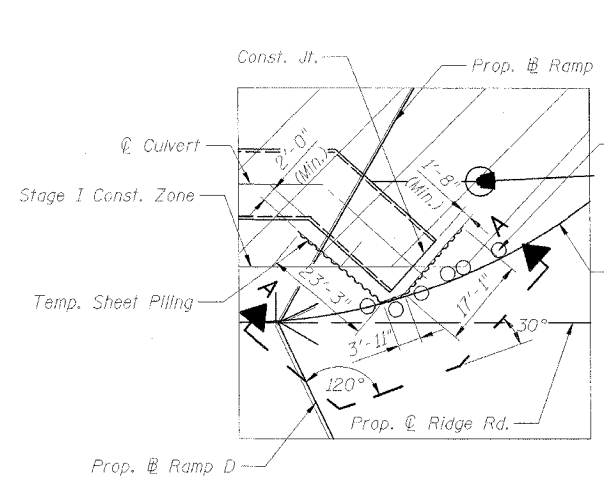
PLAN

BAR SPLICER DETAIL
(See Bar Splicer Detail Sheet S-10 of S-10)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80
(I-80 AT MINOOKA INTERCHANGE)
CULVERT NO. 1
**11' x 4' BOX CULVERT
DETAILS 1**

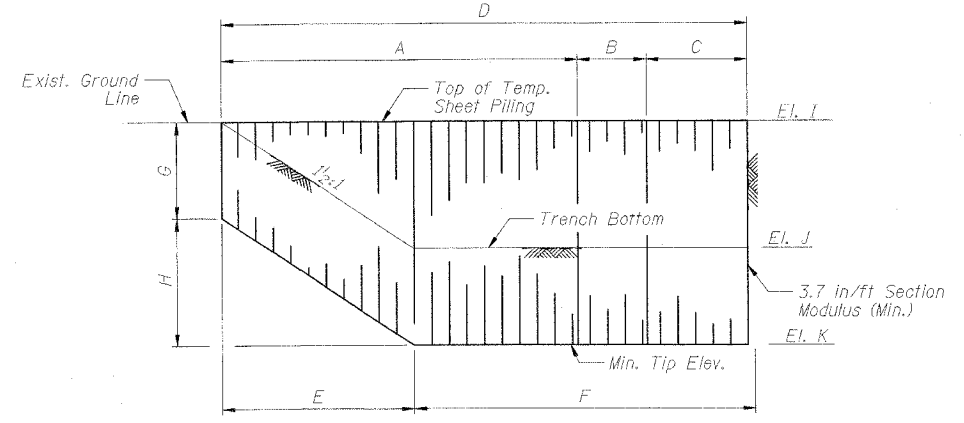
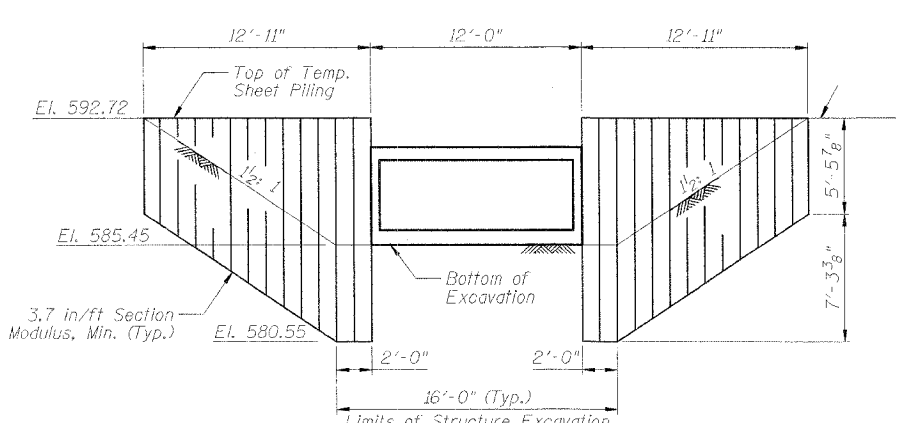
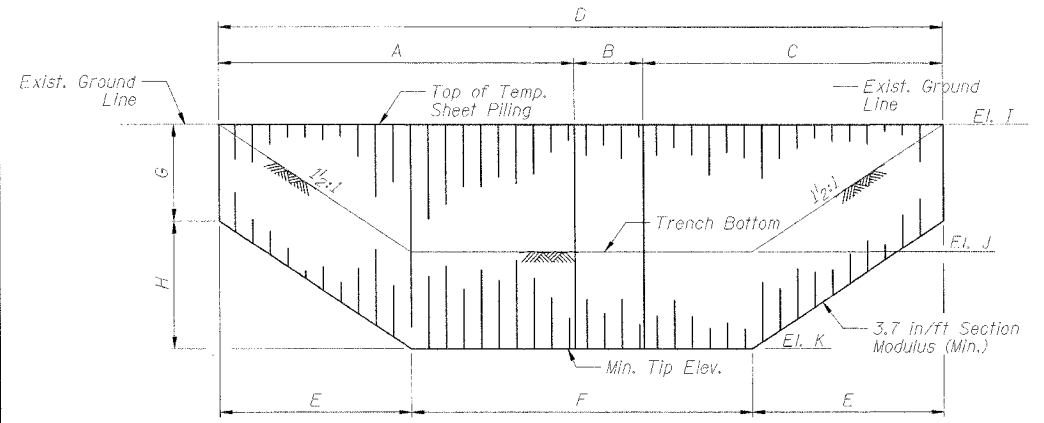
SCALE: None
DATE: 2/10/06
DRAWN BY: M. Tryon
CHECKED BY: A. Yargicodlu



BILL OF MATERIAL

Item	Unit	Quantity
* Temporary Sheet Piling	Sq. Ft.	3,480

* See Special Provisions



SECTION A-A & SECTION C-C DIMENSIONS & ELEVATIONS

Stage	A	B	C	D	E	F	G	H	Elev. I	Elev. J	Elev. K
Upstream Stage I	23'-3"	3'-11"	17'-1"	44'-3"	8'-10 1/2"	35'-4 1/2"	8'-0"	5'-11"	592.70	584.77	578.77
Downstream Stage I	12'-9"	16'-0"	15'-2"	43'-11"	9'-0"	34'-11"	7'-2"	6'-0"	589.35	582.19	576.19
Stage IA	12'-9"	2'-11"	12'-1"	27'-9"	9'-0"	18'-9"	6'-10"	6'-0"	588.86	582.01	576.01
Stage IB	11'-10"	2'-0"		13'-10"	9'-0"	4'-10"	6'-10"	6'-0"	588.84	582.01	576.01
Stage II	15'-9"		15'-2"	30'-11"	9'-0"	21'-11"	7'-9"	6'-0"	592.98	585.25	579.25
Upstream Stage IIA	13'-5"	20'-1"	2'-0"	35'-6"	8'-10 1/2"	26'-7 1/2"	7'-10"	5'-11"	592.85	585.07	579.07
Stage III	15'-10"	2'-0"		17'-10"	8'-10 1/2"	8'-11 1/2"	8'-0"	5'-11"	592.72	584.77	578.77

REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80
 (I-80 AT MINOOKA INTERCHANGE)
 CULVERT NO. 1
 11'x4' BOX CULVERT
 TEMPORARY SHEET PILING
 DETAILS

SCALE: None
 DATE: 2/10/06
 DRAWN BY: M. Tryon
 CHECKED BY: A. Yargicoglu

Bench Mark:

BM 1703 Chiseled "X" on light pole foundation bolt. Sta. 192+94.19, 6.41' Rf. El. 608.23

Existing Structure

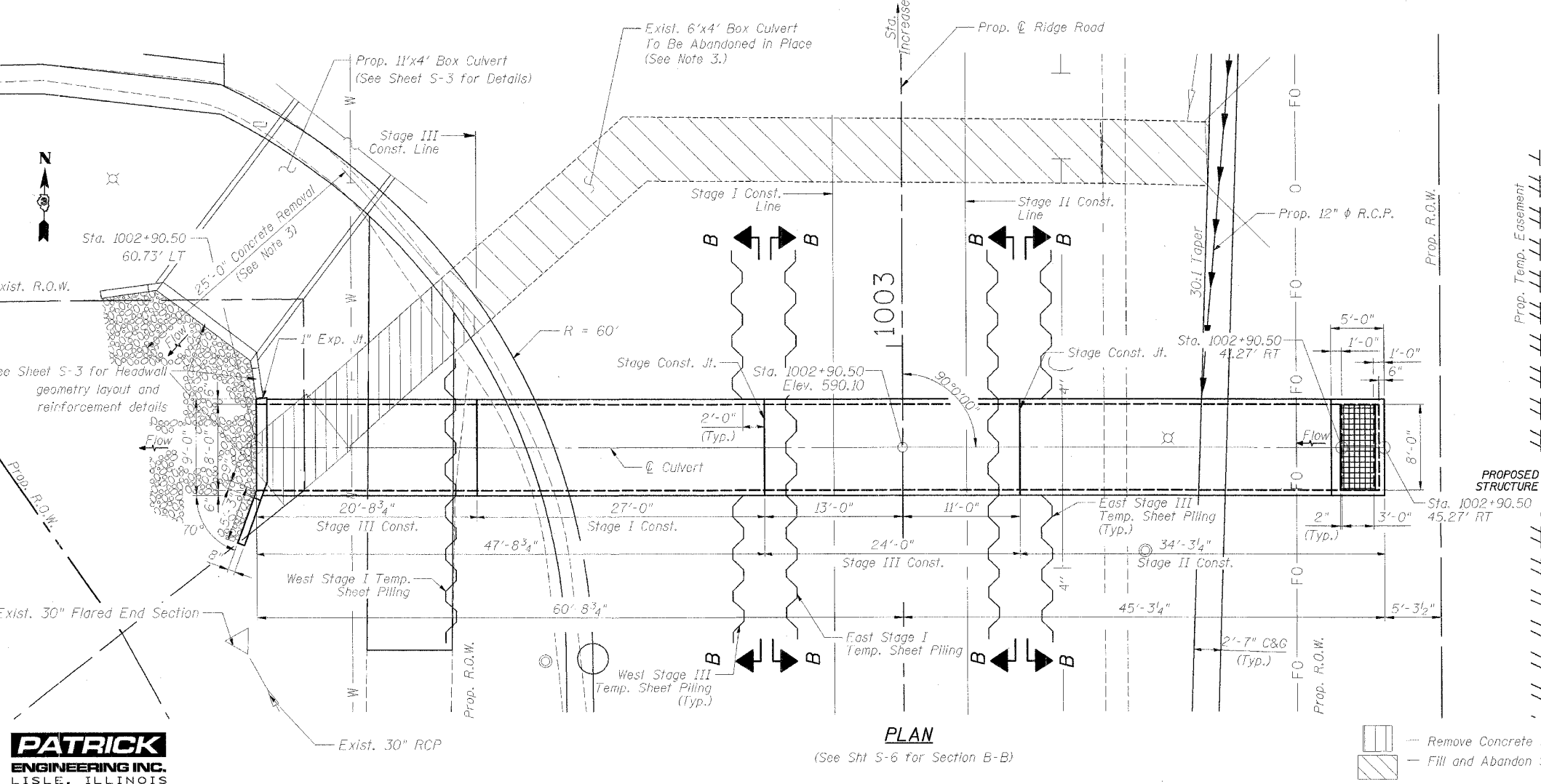
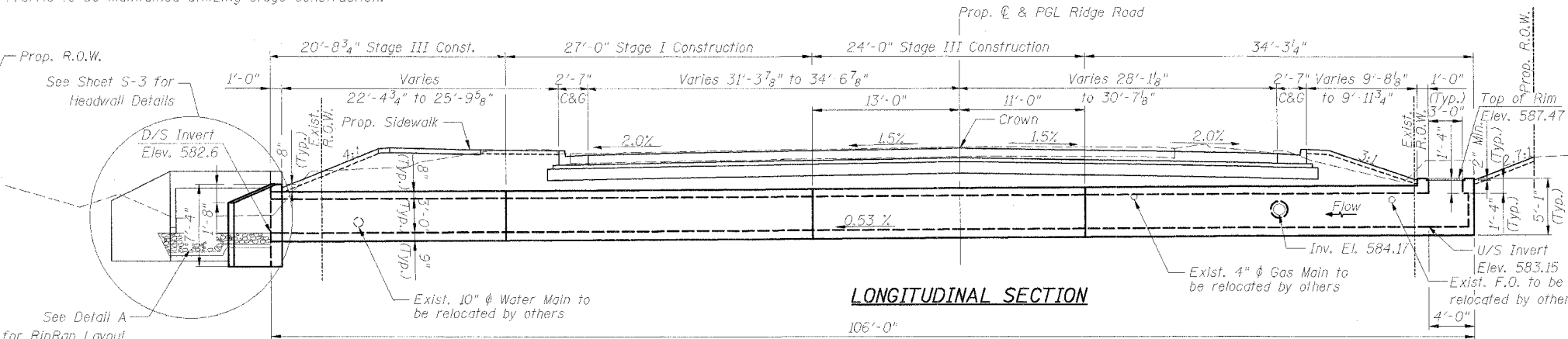
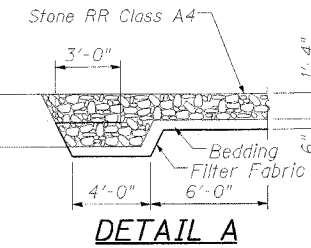
The existing structure is a 6'x4' cast in place reinforced concrete box culvert last modified with an extension to the East built in 2000. The existing structure is to remain in place as temporary drainage during stages of construction. It will then be filled and abandoned with the proposed 8'x3' cast in place culvert being constructed utilizing staged construction replacing it across Ridge Rd. No Salvage.

Traffic to be maintained utilizing stage construction.

WATERWAY INFORMATION

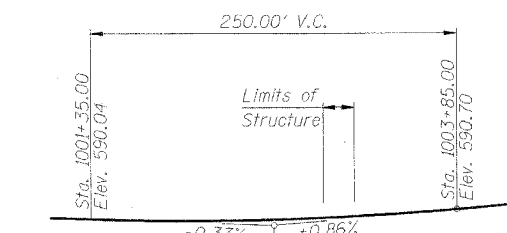
Proposed Low Grade Elev. = 589.81 @ Sta. 1002+04
Existing Low Grade Elev. = 589.81 @ Sta. 1002+04
Drainage Area = 0.34 Sq. Mi.

Flood	Freq. Yr.	Q (C.F.S.)	Opening (Sq. Ft.)		Nat. H.W.E.	Head (Ft.)		Headwater Elev.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	107	8.04	10.72	584.49	2.25	1.65	587.11	586.14
Base	50	232	12.24	16.32	585.19	4.45	4.06	590.01	589.25
Base	100	311	14.28	19.12	585.54	4.36	4.75	590.26	590.29
Overtop	500	586	19.5	26.0	586.40	3.86	4.16	590.63	590.56



Sheet S-5 of S-11

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	132, 47-4K	KENDALL/GRUNDY	243	175
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 66294				



PROFILE GRADE - RIDGE ROAD
(Along P.G.L.)

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

LOADING HS20-44

Allowance for Future Wearing Surface=50 lb/ft²

DESIGN STRESSES

f'c=3500 psi
fy=60,000 psi (Reinf.)

SEISMIC DATA

Seismic Performance Category (SPC)=A
Bedrock Acceleration Coefficient (A)=0.035g
Site Coefficient (S)=1.0

TOTAL BILL OF MATERIAL

Item	Unit	Quantity
Porous Granular Backfill	Cu. Yd.	112
Structure Excavation	Cu. Yd.	364
Reinforcement Bars	Pound	13,750
* Temporary Sheet Piling	Sq. Ft.	1,280
Concrete Box Culverts	Cu. Yd.	63.1
Bar Splicers	Each	90

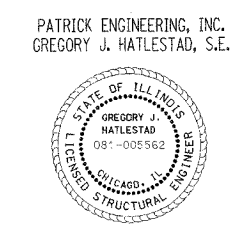
*See Special Provisions

INDEX OF SHEETS

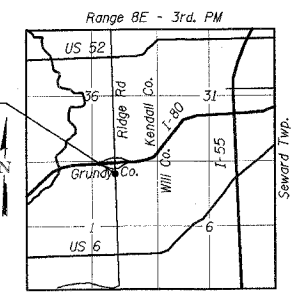
- S-5 - General Plan & Elevation
- S-6 - Plan & Elevation Details I
- S-7 - Plan & Elevation Details II

NOTES:

- For Temporary Sheet Piling Details, see Sheet S-7 of S-11.
- For Section B-B, see Sheet S-7 of S-11.
- See Drainage and Utilities Ridge Road Sta. 1000+00 to Sta. 1013+00 sheet for details and quantities for Abandon Existing Culvert and Concrete Removal.



GREGORY J. HATLESTAD, S.E.
081-005562



LOCATION SKETCH

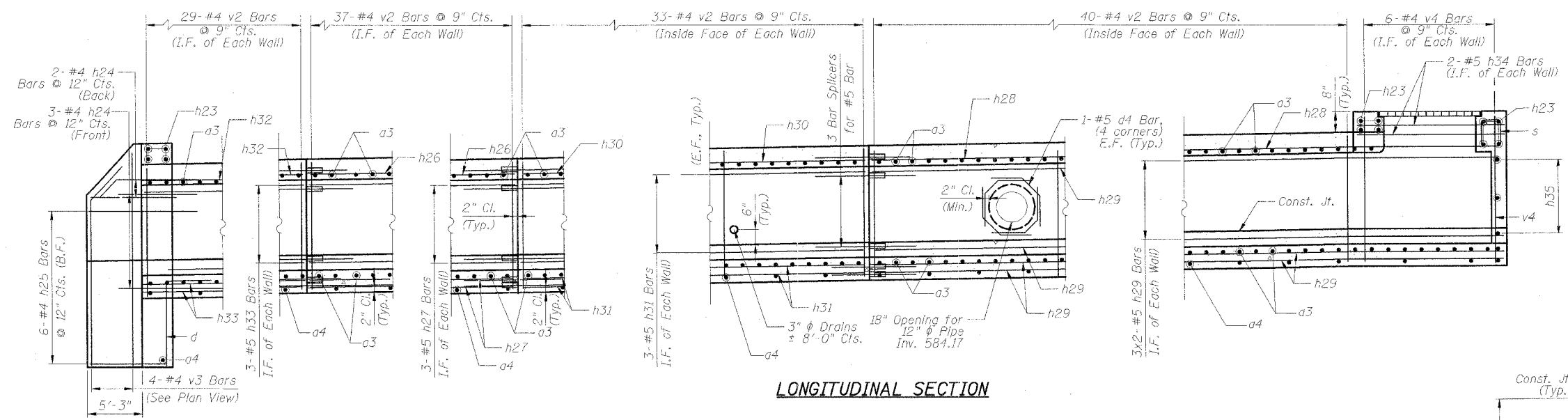
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80
(I-80 AT MINOOKA INTERCHANGE)
CULVERT NO. 2
GENERAL PLAN AND ELEVATION
8'X3' BOX CULVERT

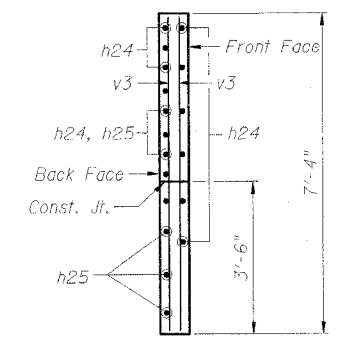
SCALE: None
DATE: 2/10/06
DRAWN BY: M. Tryon
CHECKED BY: A. Yorgiooglu



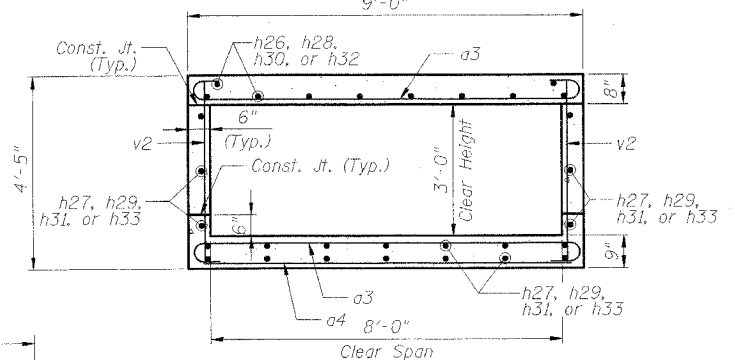
F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	176
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 66294				



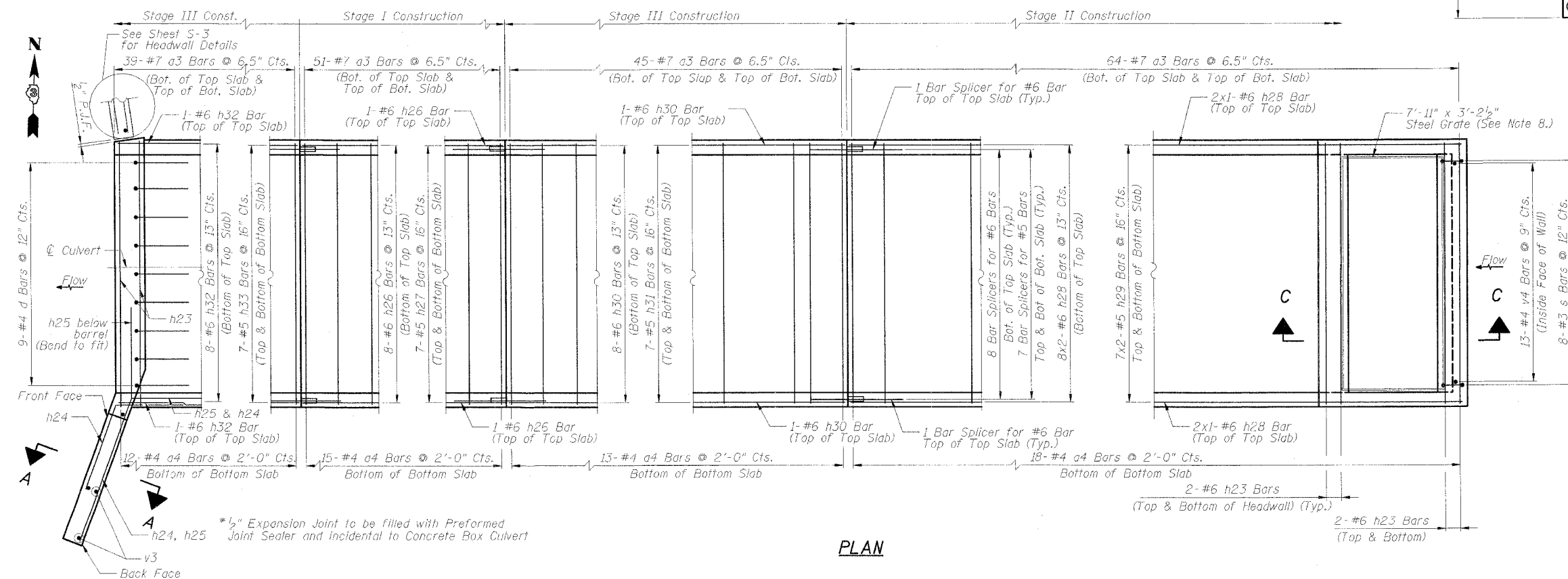
LONGITUDINAL SECTION



SECTION A-A



SECTION THRU BARREL



PLAN

NOTES:

1. Work this Sheet with S-3 and S-5 for Adjacent Outlet Headwall and Wingwall Details of 11'x4' Box Culvert.
2. Tilt a3 hook bars if necessary for 1/2" minimum clearance.
3. A distance of half the length of the wingwall but not less than six-feet of the barrel shall be poured monolithically with the wingwalls.
4. Reinforcement Bars shall conform to the requirements of AASHTO M-31, or M-322, Grade 60.
5. Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
6. All construction joints shall be bonded.
7. All Structure Excavation and Embankment Fill costs shall be included with Concrete Box Culverts cost.
8. For Steel Grating details, see Sheet S-7 of S-11.
9. For Section C-C, see Sheet S-7 of S-11.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80
 (I-80 AT MINOOKA INTERCHANGE)
 CULVERT NO. 2
 8'x3' BOX CULVERT
 PLAN & ELEVATION DETAILS I

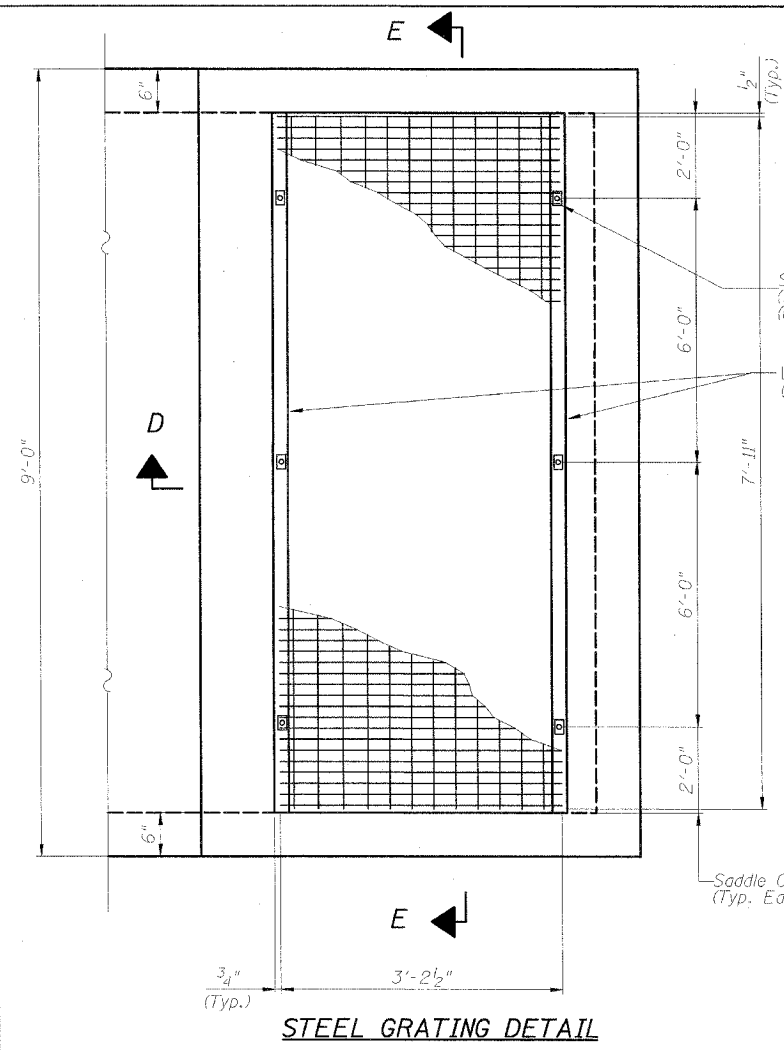
SCALE: None
 DATE: 2/10/06
 DRAWN BY: M. Tryon
 CHECKED BY: A. Yargicoglu



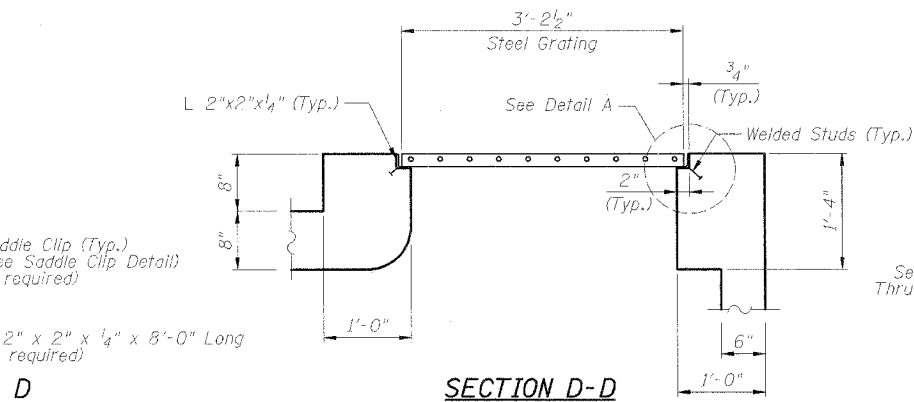
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	177
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 66294		

BILL OF MATERIAL

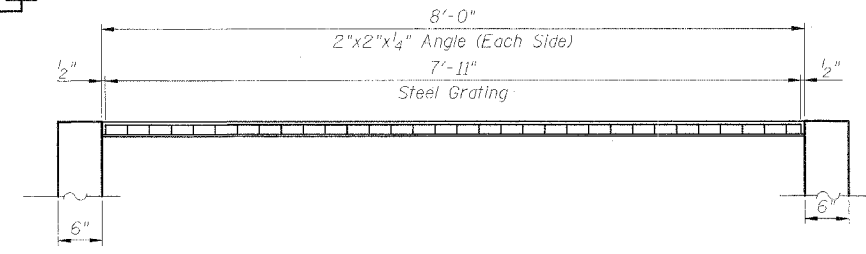
Bar	No.	Size	Length	Shape
a3	398	#7	10'-4"	
a4	58	#4	8'-3"	
d	18	#4	4'-6"	
d4	8	#5	2'-10"	
h23	8	#6	8'-8"	
h24	5	#4	8'-0"	
h25	5	#4	8'-1"	
h26	10	#6	26'-8"	
h27	20	#5	26'-8"	
h28	20	#6	17'-11"	
h29	40	#5	17'-9"	
h30	10	#6	23'-8"	
h31	20	#5	23'-8"	
h32	10	#6	20'-4"	
h33	20	#5	20'-4"	
h34	4	#5	4'-8"	
h35	3	#5	8'-8"	
s	8	#4	3'-8"	
v2	278	#4	4'-1"	
v3	12	#4	7'-0"	
v4	25	#4	4'-9"	
Reinforcement Bars			Pound	13,150
Concrete Box Culverts			Cu. Yd.	63.1
Bar Splicers			Each	90



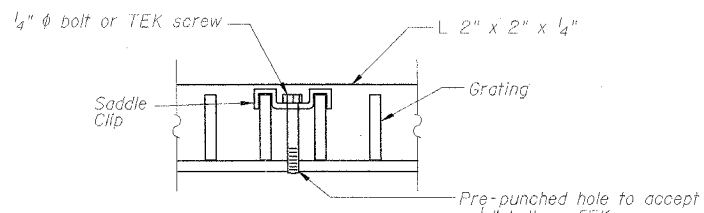
STEEL GRATING DETAIL



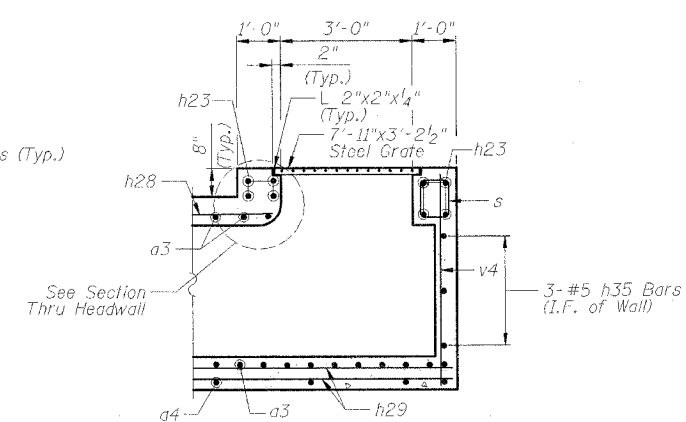
SECTION D-D



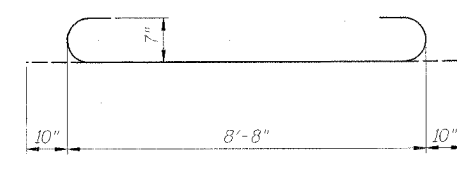
SECTION E-E



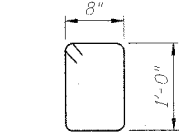
SADDLE CLIP DETAIL



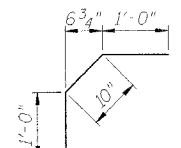
SECTION C-C



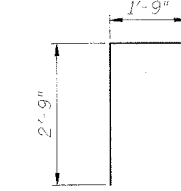
a3 BAR



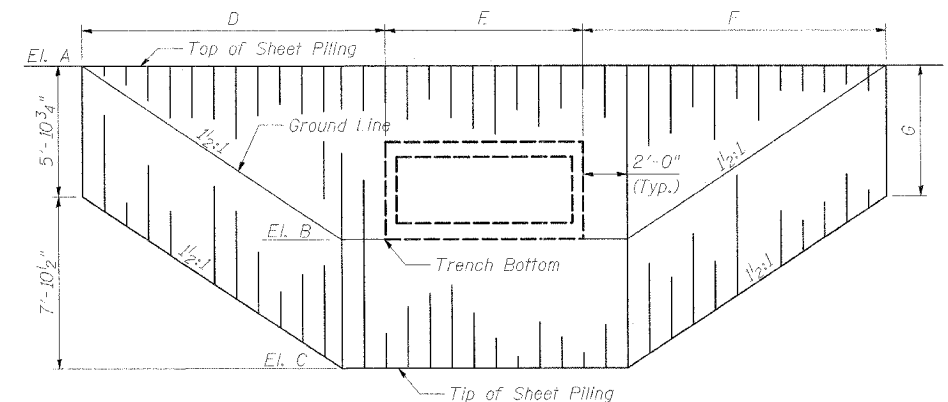
s BAR



d4 BAR

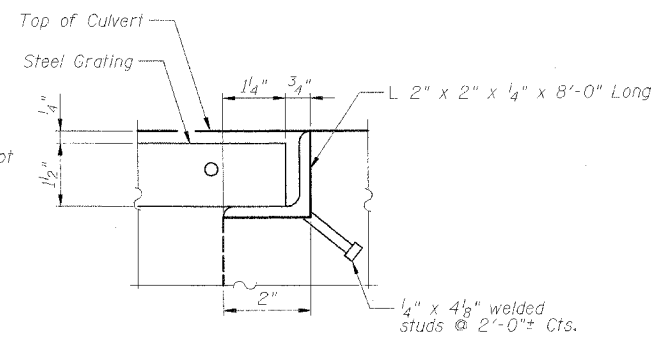


d BAR

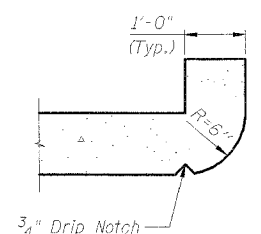


SECTION B-B

Stage	El. A	El. B	El. C	D	E	F	G
Stage I W.	590.05	581.78	576.28	13'-10"	9'-0"	3'-10"	12'-6 3/4"
Stage I E.	590.39	582.12	576.62	13'-10"	9'-0"	13'-10"	5'-10 3/4"
Stage II	590.49	582.22	576.72	13'-10"	9'-0"	13'-10"	5'-10 3/4"
Stage III W.	590.36	582.09	576.59	13'-10"		13'-10"	5'-10 3/4"
Stage III E.	590.51	582.24	576.74	13'-10"		13'-10"	5'-10 3/4"



DETAIL A



SECTION THRU HEADWALL

NOTES:

1. Work this Sheet with S-3 and S-4 for Adjacent Outlet Headwall and Wingwall Details of 11'x4' Box Culvert.
2. Tilt a3 hook bars if necessary for 1/2" minimum clearance.
3. A distance of half the length of the wingwall but not less than six-feet of the barrel shall be poured monolithically with the wingwalls.
4. Reinforcement Bars shall conform to the requirements of AASHTO M-31, or M-322, Grade 60.
5. Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
6. All construction joints shall be bonded.
7. All Structure Excavation and Embankment Fill costs shall be included with Concrete Box Culverts cost.
8. Steel Grating shall be 1/2" x 3/8" Type 19-W4 or equivalent.
9. Steel Plates and shapes shall conform to AASHTO M270, Grade 36.
10. All steel grating, anchoring devices, plates, and shapes shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.
11. Cost of steel grating, anchoring devices, plates, shapes, and welded studs shall be included with Concrete Box Culverts cost.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80
(I-80 AT MINOOKA INTERCHANGE)
CULVERT NO. 2
8'x3' BOX CULVERT
PLAN & ELEVATION DETAILS II

SCALE: None
 DATE: 2/10/06
 DRAWN BY: M. Tryon
 CHECKED BY: A. Yorgioclu

Bench Mark:
 BM 1703 Chiseled "X" on light pole foundation bolt. Sta. 192+94.19.
 6.41' Rt. El. 608.23

WATERWAY INFORMATION

Proposed Low Grade Elev. 602.24 @ Sta. 403+00
 Existing Low Grade Elev. 606.24 @ Sta. 402+00
 Drainage Area = 419.9 Acres

Flood	Freq. Yr.	Q (C.F.S.)	Opening (Sq. Ft.)		Nat. H.W.E.	Head (Ft.)		Headwater Elev.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	206	16.2	15.3	587.18/588.21	2.6	2.71	589.78	590.92
Base	100	585	34.7	33.4	588.65/589.66	5.22	5.34	593.87	595.00

Existing Structure:
 The existing structure is a 8'x5' cast in place reinforced concrete box culvert originally built in 1959. The existing structure is to remain and be extended.
 Traffic is to be maintained on the existing ramp during construction.

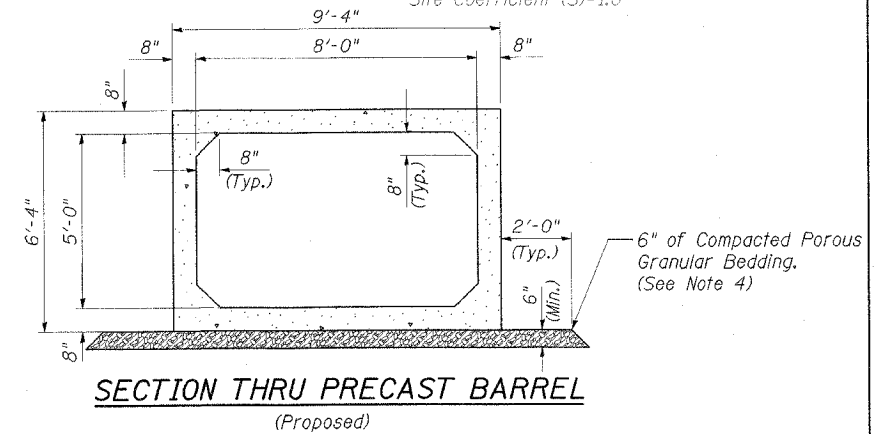
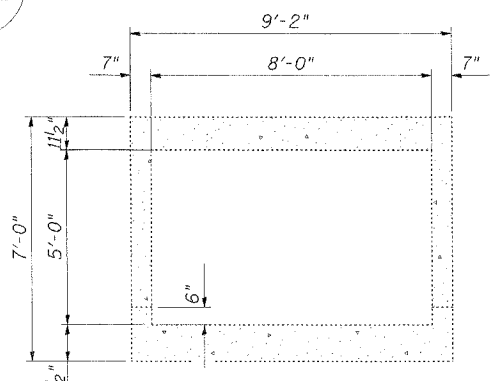
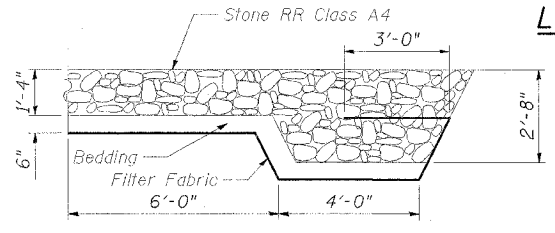
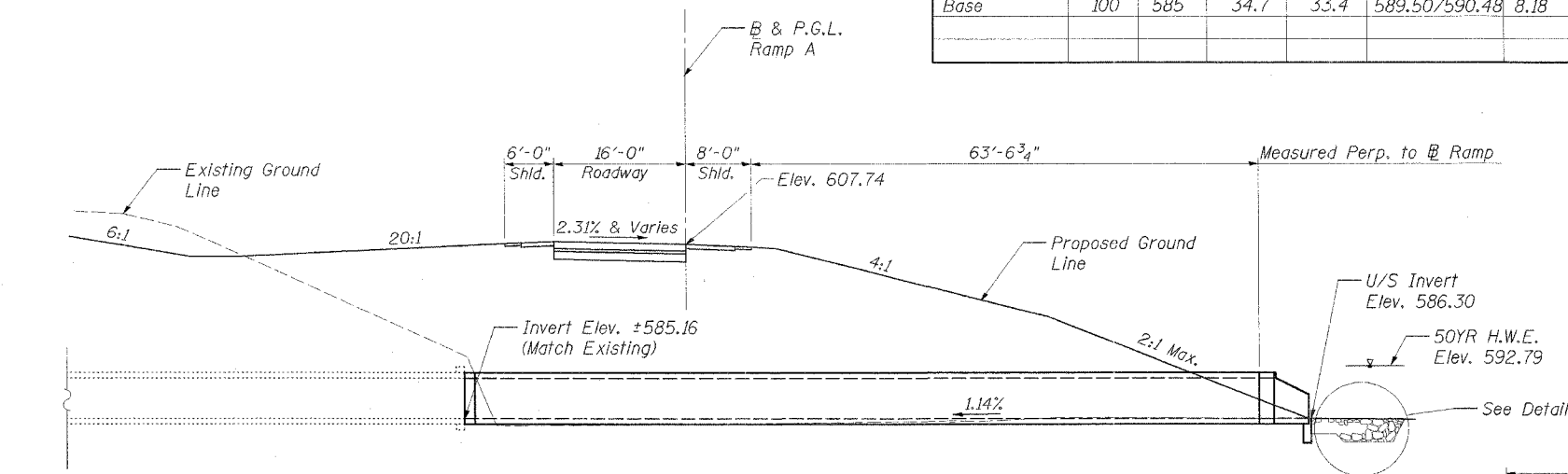
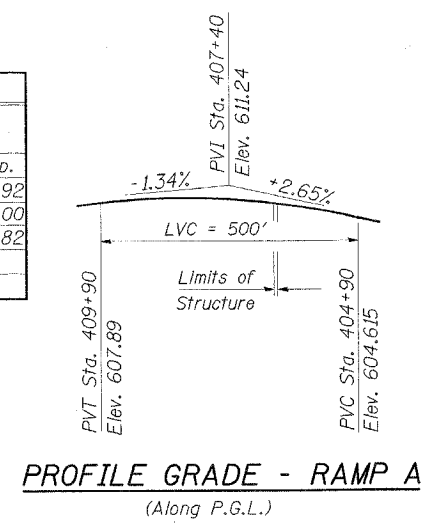
DESIGN SPECIFICATIONS
 AASHTO Standard Specifications for Highway Bridges 2002 and All Subsequent Interims
LOADING HS20-44 & ALT.
 Allow 50 psf for future wearing surface.

DESIGN STRESSES

Precast Units
 f'c=5000 psi
 fy=65,000 psi (Welded Wire Fabric)
Field Units
 f'c=3500 psi
 fy=60,000 psi (Reinf.)

SEISMIC DATA

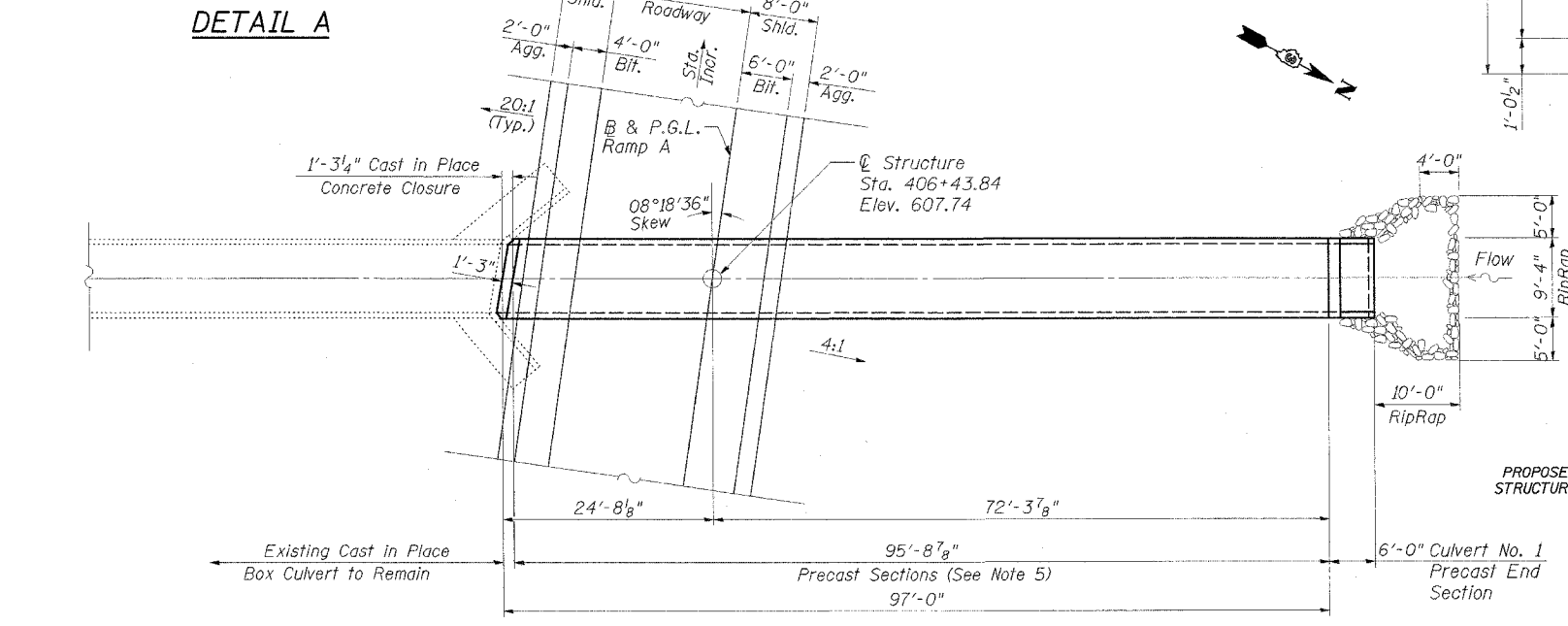
Seismic Performance Category (SPC)=A
 Bedrock Acceleration Coefficient (A)=0.035g
 Site Coefficient (S)=1.0



TOTAL BILL OF MATERIAL

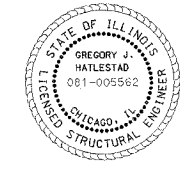
ITEM	UNIT	TOTAL
Riprap	Sq. Yd.	20
Filter Fabric	Sq. Yd.	20
Concrete Structures	Cu. Yd.	1.2
Reinforcement Bars	Lbs.	170
Expansion Bolts	Each	16
Precast Concrete Box Culverts 8' x 5'	Foot	96
Box Culvert End Section, Culvert No. 3	Each	1

- NOTES:**
- The Precast Concrete Box Culvert shall conform to the requirements of AASHTO M-259M.
 - Precast toewalls and headwalls are incidental to "Precast Box Culvert End Sections."
 - For backfill and embankment see Standard Specifications.
 - The porous granular bedding material shall be gradation CA-7, CA-11, or CA-18 and shall be compacted to the satisfaction of the Engineer by mechanical means. Cost for porous granular bedding shall be included with cost for "Precast Box Culverts 8' x 5'."
 - Precast Sections consist of 11 - 8' 0" precast sections and 1 - tapered section fabricated to match existing skew of culvert.

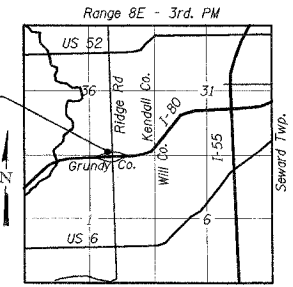


SECTION THRU BARREL (Existing)

PATRICK ENGINEERING, INC.
 GREGORY J. HATLESTAD, S.E.



GREGORY J. HATLESTAD, S.E.
 # 081-005562

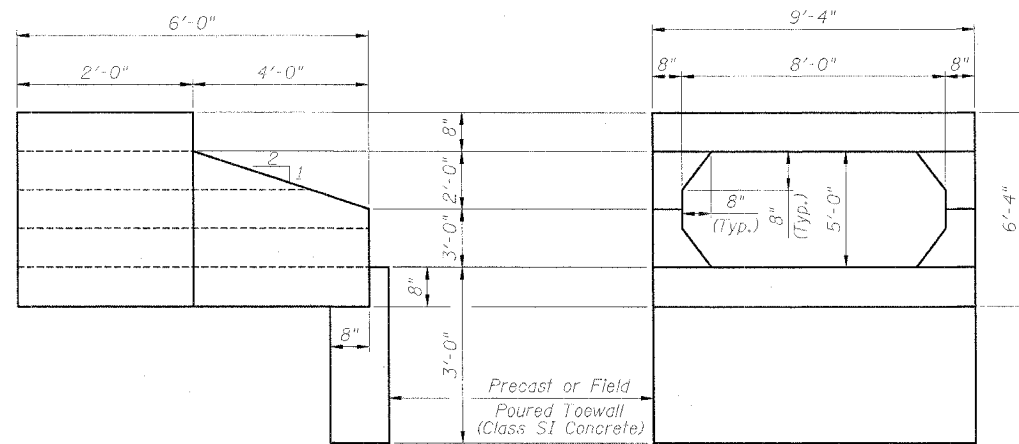


EXP _____
 DATE _____

REVISIONS	
NAME	DATE

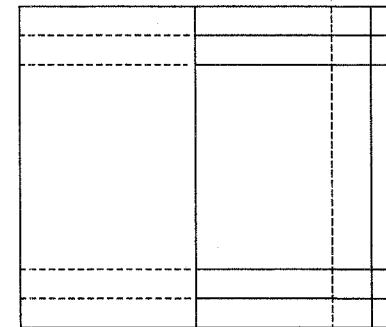
ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80
 (I-80 AT MINOOKA INTERCHANGE)
 CULVERT NO. 3
8'X5' BOX CULVERT - RAMP A
 GENERAL PLAN AND ELEVATION
 STATION 406+43.84
 SCALE: NONE
 DATE: 2/10/06
 DRAWN BY: M. TRYON
 CHECKED BY: A. YARGICOGLU

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	132, 47-41K	KENDALL/GRUNDY	243	179
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 66294				

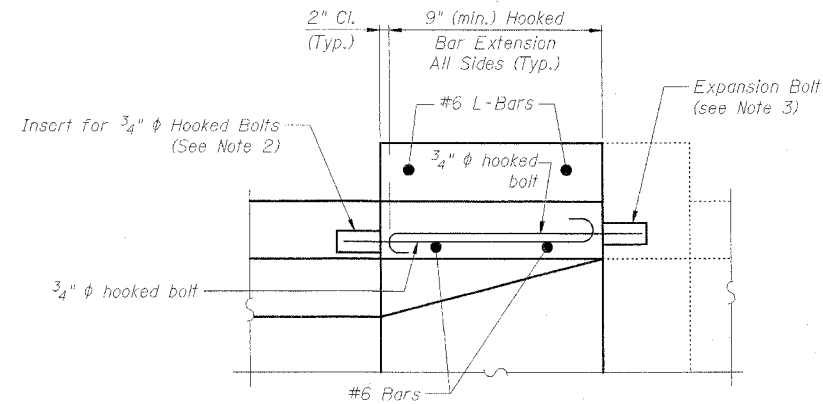


SIDE VIEW

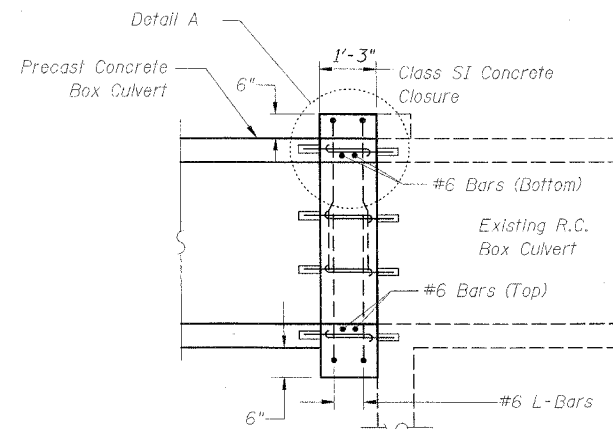
END VIEW



PLAN



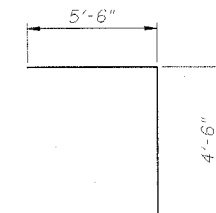
DETAIL A



SECTION A-A

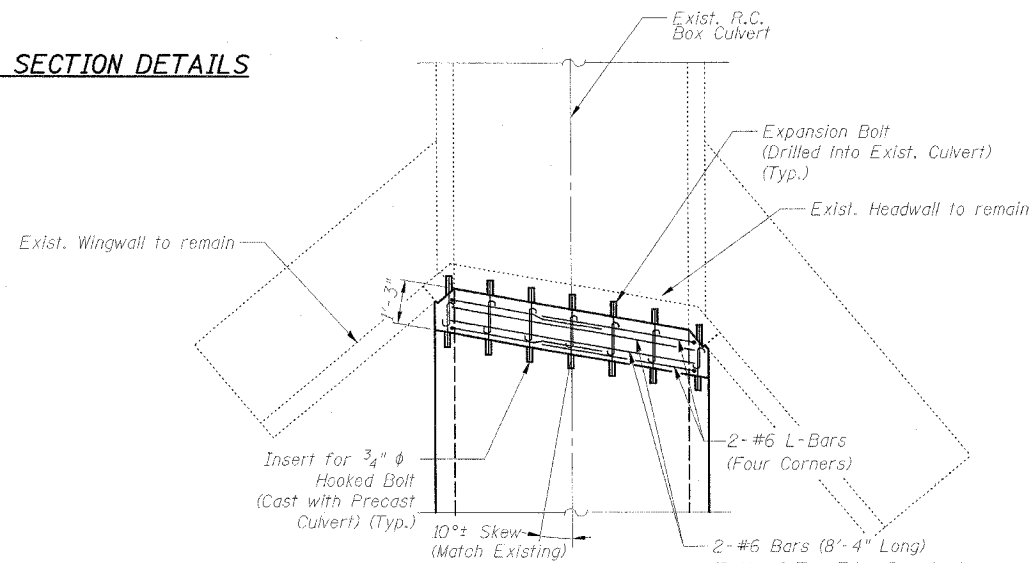
NOTES:

1. Class SI Concrete shall be used throughout. The inside dimensions of the Class SI Concrete Closure shall be the same as the New Precast Concrete Box Culvert.
2. Inserts for 3/4" hooked bolts shall be flared loop type with a minimum certified proof loading of 4,080 lbs. Hooked bolts shall extend a minimum of 9" into new concrete as shown in Detail A. Inserts shall be placed as shown in End View. Cost of the inserts and hooked bolts shall be included with the cost of Precast Box Culverts, 8' x 5'.
3. Expansion Bolts shall consist of self drilling expansion shields and 3/4" hooked bolts with a min. certified proof loading of 4,080 lbs. Hooked bolts shall extend a minimum of 9" into new concrete as shown in Detail A. Bolts shall be placed in exist. culvert in close proximity of the inserts cast at the end of the Precast Culvert.

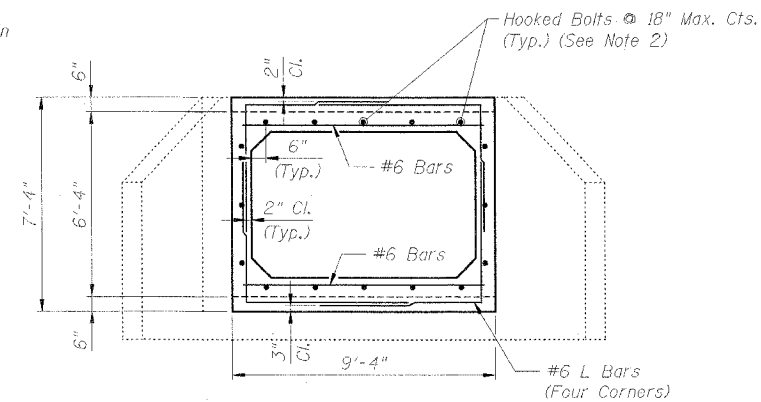


#6 L-BAR
(8 Required)

END SECTION DETAILS



CLOSURE DETAIL (PRECAST BOX CULVERT EXTENSION OF BOX CULVERT)



END VIEW

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Structures	Cu. Yd.	1.2
Reinforcement Bars	Lbs.	170
Expansion Bolts	Each	16
Box Culvert End Section, Culvert No. 3	Each	1

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80
 (I-80 AT MINOOKA INTERCHANGE)
 CULVERT NO. 3
 8'X5' BOX CULVERT - RAMP A
 EXTENSION DETAILS

SCALE: None
 DATE: 2/10/06
 DRAWN BY: M. Tryon
 CHECKED BY: A. Yargicoglu

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4K)	KENDALL/GRUNDY	243	180
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
	CONTRACT NO. 66294			

GENERAL NOTES

1. The Precast Concrete Box Culvert shall conform to the requirements of AASHTO M-259M.
2. Precast toewalls and headwalls are incidental to "Precast Box Culvert End Sections."
3. For backfill and embankment see Standard Specifications.
4. The porous granular bedding material shall be gradation CA-7, CA-11, or CA-18 and shall be compacted to the satisfaction of the engineer by mechanical means. The cost of porous granular bedding material shall be included with cost of "Precast Concrete Box Culverts 7.5' x 2'."

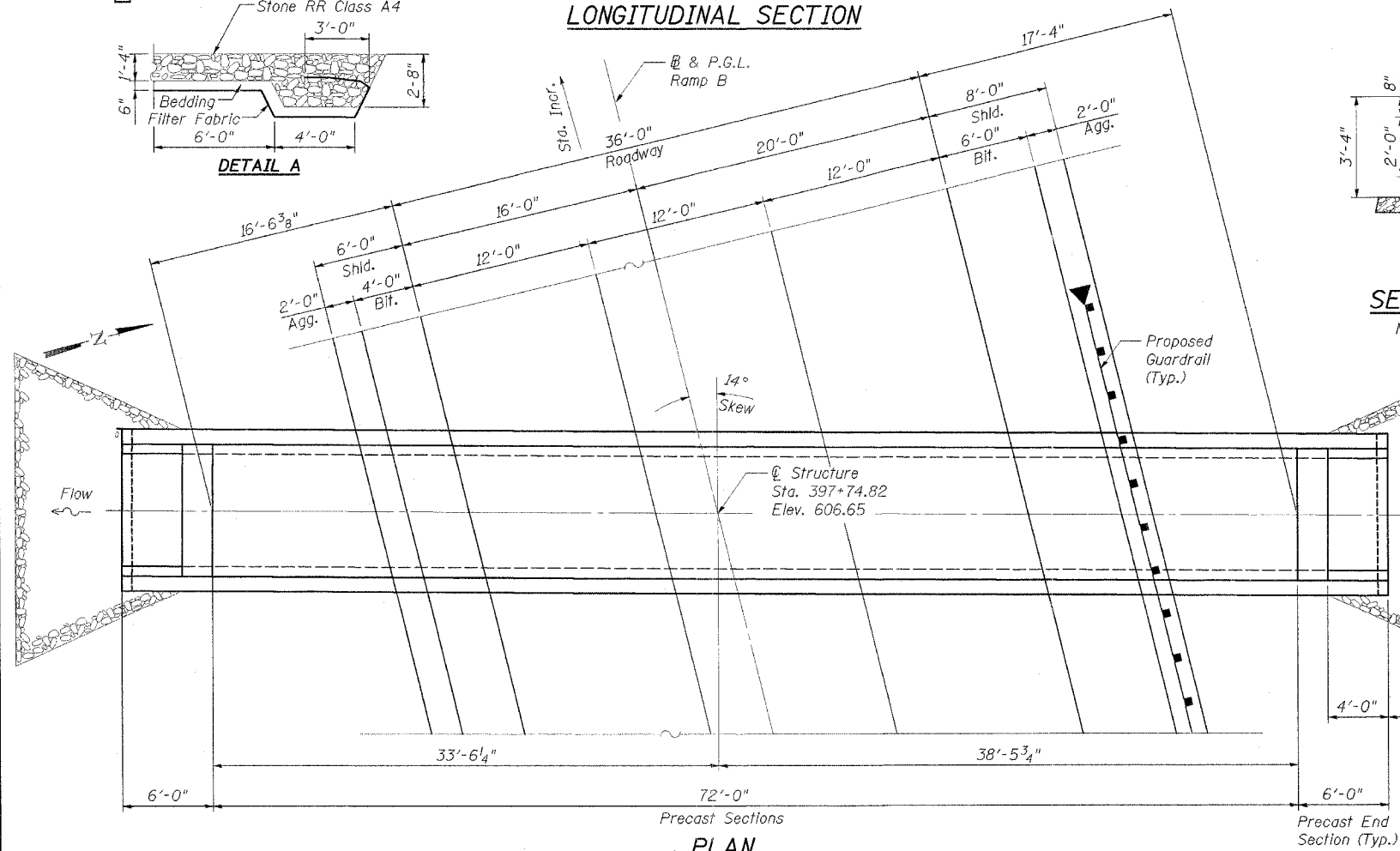
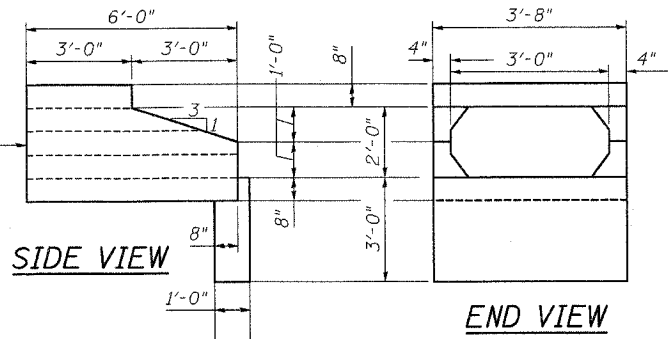
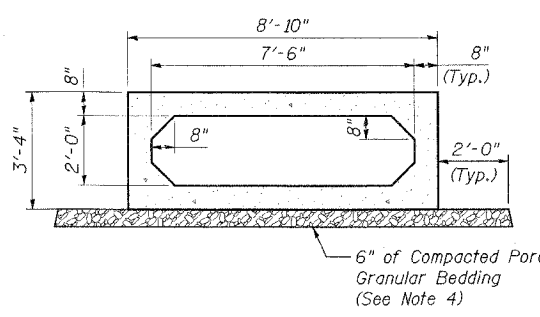
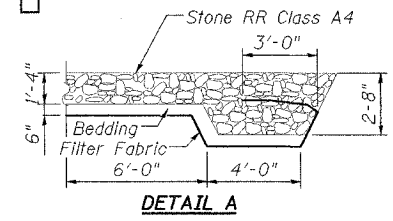
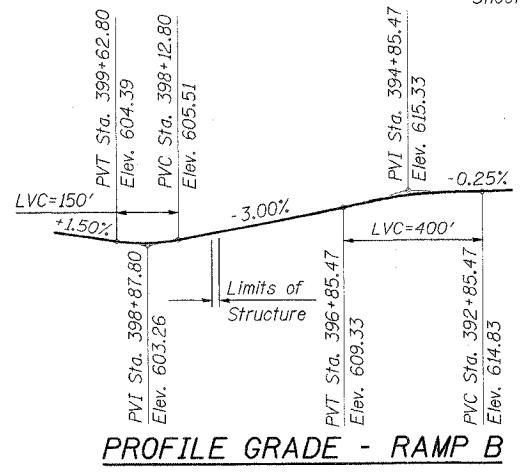
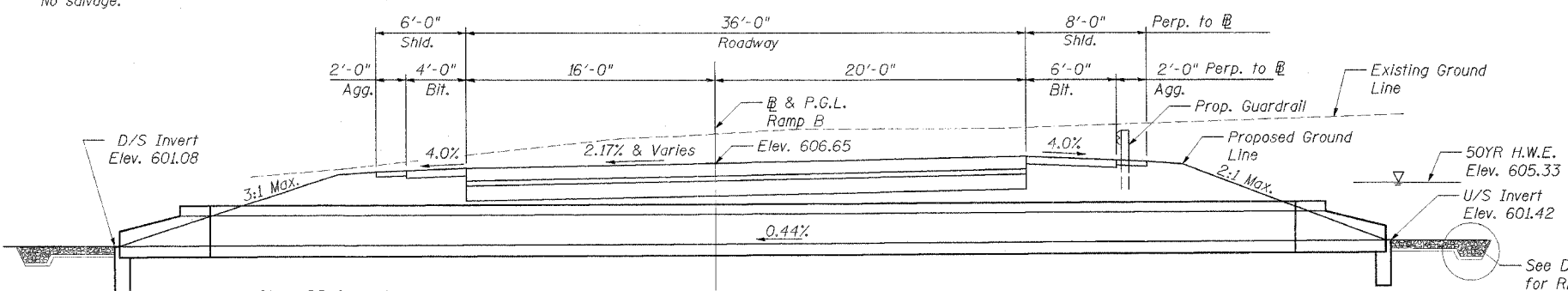
Bench Mark:

BM 1703 Chiseled "X" on light pole foundation bolt, Sta. 192+94.19, 6.41' Rt. El. 608.23

Existing Structure:

The existing structure is a 4'x2' cast in place reinforced concrete box culvert originally built in 1959. The existing structure is to be removed and replaced. Traffic is to be maintained on the existing ramp during construction.

No salvage.



SECTION THRU PRECAST BARREL
Note: Max. applied soil bearing pressure = 980 psf

DESIGN SPECIFICATIONS

AASHTO Standard Specifications for Highway Bridges 2002 and All Subsequent Interims

LOADING HS20-44 & ALT.

Allow 50 psf for future wearing surface.

DESIGN STRESSES

Precast Units
f'c=5000 psi
fy=65,000 psi (welded wire fabric)

SEISMIC DATA

Seismic Performance Category (SPC)=A
Bedrock Acceleration Coefficient (A)=0.035g
Site Coefficient (S)=1.0

PLAN PRECAST END SECTION DETAILS

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
* RipRap	Sq. Yd.	36
Filter Fabric	Sq. Yd.	36
* Remove Existing Culverts	Each	1
Precast Concrete Box Culverts 7.5' x 2'	Foot	72
Box Culvert End Section, Culvert No. 4	Each	2

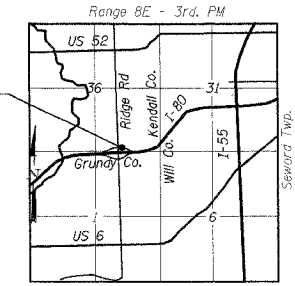
* See Special Provisions.

WATERWAY INFORMATION

Existing Low Grade Elev. 607.23 @ Sta. 399+00
Proposed Low Grade Elev. 604.0 @ Sta. 399+25

Flood	Freq. Yr.	Q (C.F.S.)	Opening (Sq. Ft.)		*Nat. H.W.E.	Head (Ft.)		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	16	2.2	3.4	604.33/601.87	0.78	0.44	605.11	602.31
	50	38	4.2	5.5	604.82/602.15	1.39	0.84	606.21	602.99
Base	100	53	5.2	7.6	605.08/602.43	1.89	0.95	606.97	603.38

* upstream face of culvert



PATRICK ENGINEERING, INC.
GREGORY J. HATLESTAD, S.E.



GREGORY J. HATLESTAD, S.E.
081-005562

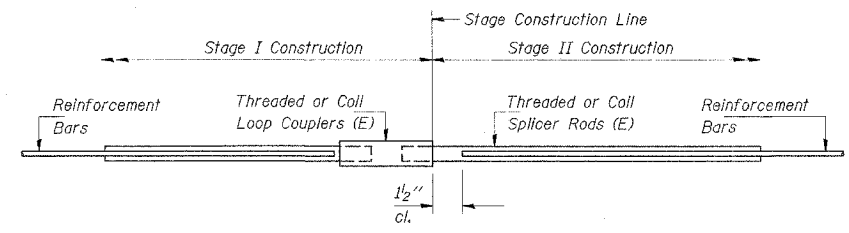
EXP _____
DATE _____

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80
(I-80 AT MINOOKA INTERCHANGE)
CULVERT NO. 4
7.5'X2' BOX CULVERT- RAMP B
GENERAL PLAN AND ELEVATION
STA. 397+74.82
SCALE: NONE DRAWN BY: M. TRYON / A.Y.
DATE: 2/10/06 CHECKED BY: R. KAYE / A.Y.



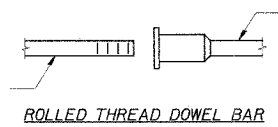
FAI-RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	181
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 66294				



SPLICER DETAIL

Bar Size	No. Assemblies Required	Location
#4	0	11' x 4' Box Culvert
#4	0	8' x 3' Box Culvert
#4	0	8' x 5' Box Culvert
#4	0	7.5' x 2' Box Culvert
#5	140	11' x 4' Box Culvert
#5	60	8' x 3' Box Culvert
#5	0	8' x 5' Box Culvert
#5	0	7.5' x 2' Box Culvert
#6	75	11' x 4' Box Culvert
#6	30	8' x 3' Box Culvert
#6	0	8' x 5' Box Culvert
#6	0	7.5' x 2' Box Culvert

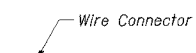
The diameter of this part is the same as the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



**** ONE PIECE**



WELDED SECTIONS

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.

NOTES

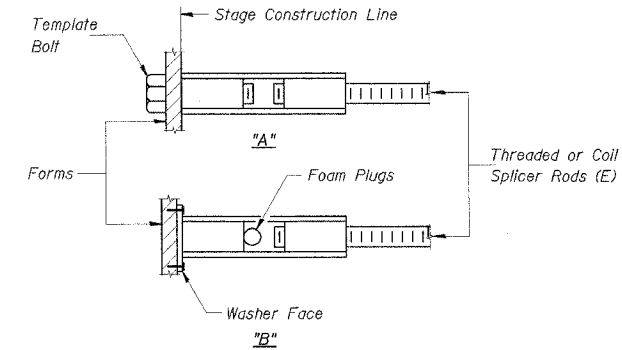
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- Minimum Capacity = $1.25 \times f_y \times A_f$
(Tension in kips)
- Minimum *Pull-out Strength = $1.25 \times f_s \text{ allow} \times A_f$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_s \text{ allow}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_f = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



INSTALLATION AND SETTING METHODS

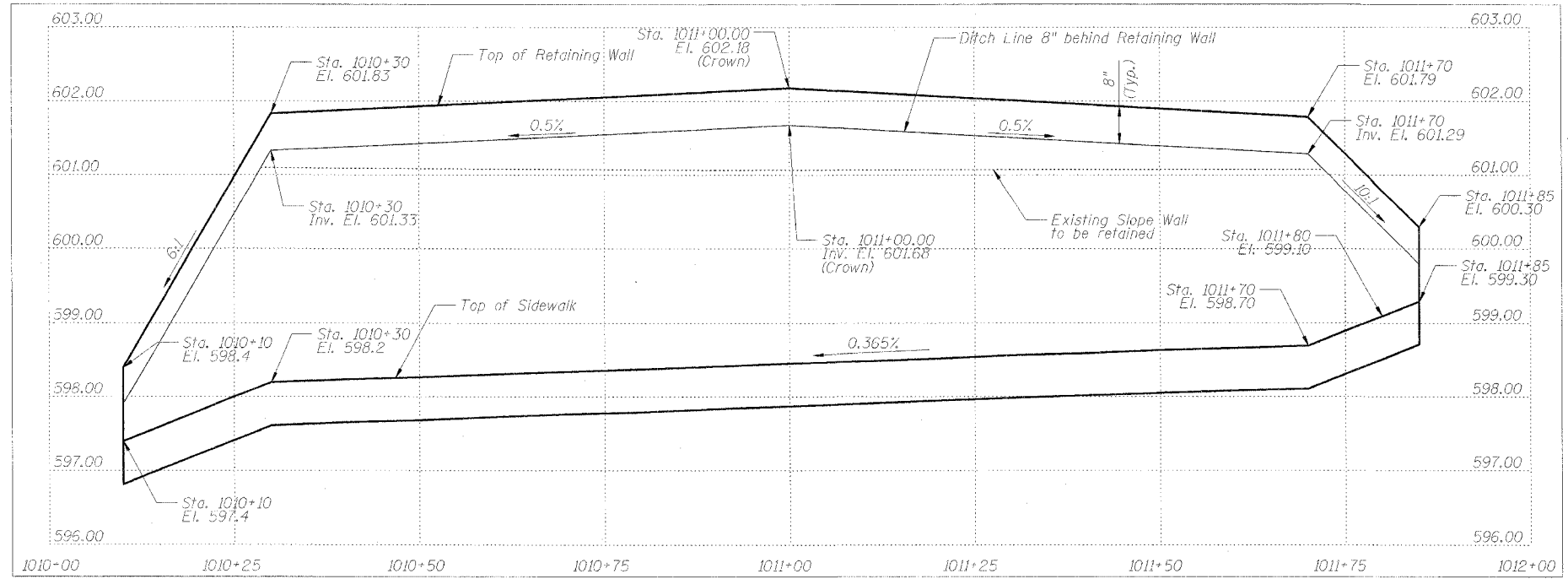
"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

REVISIONS	
NAME	DATE

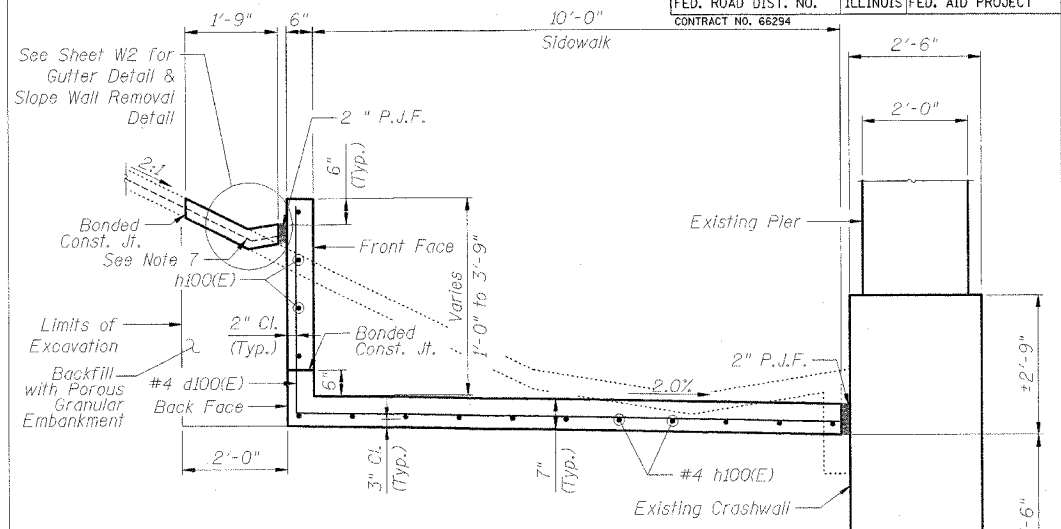
ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80
 (I-80 AT MINOOKA INTERCHANGE)

BAR SPLICER DETAILS

SCALE: NONE
 DATE: 2/10/06
 DRAWN BY: M. Tryon
 CHECKED BY: A. Yargicoglu



ELEVATION



SECTION A-A

TOTAL BILL OF MATERIAL

Item	Unit	Quantity
Porous Granular Embankment	Cu. Yd.	39
Concrete Structures	Cu. Yd.	48.3
Structure Excavation	Cu. Yd.	153
Reinforcement Bars	Pound	3,410
Slope Wall Removal	Sq. Yd.	204
Concrete Gutter, Type B	Ft.	39

INDEX OF SHEETS

W1 - General Plan & Elevation
 W2 - Plan & Elevation Details

DESIGN STRESSES

$f'_c = 3500$ psi
 $f_y = 60,000$ psi (Reinf.)

SEISMIC DATA

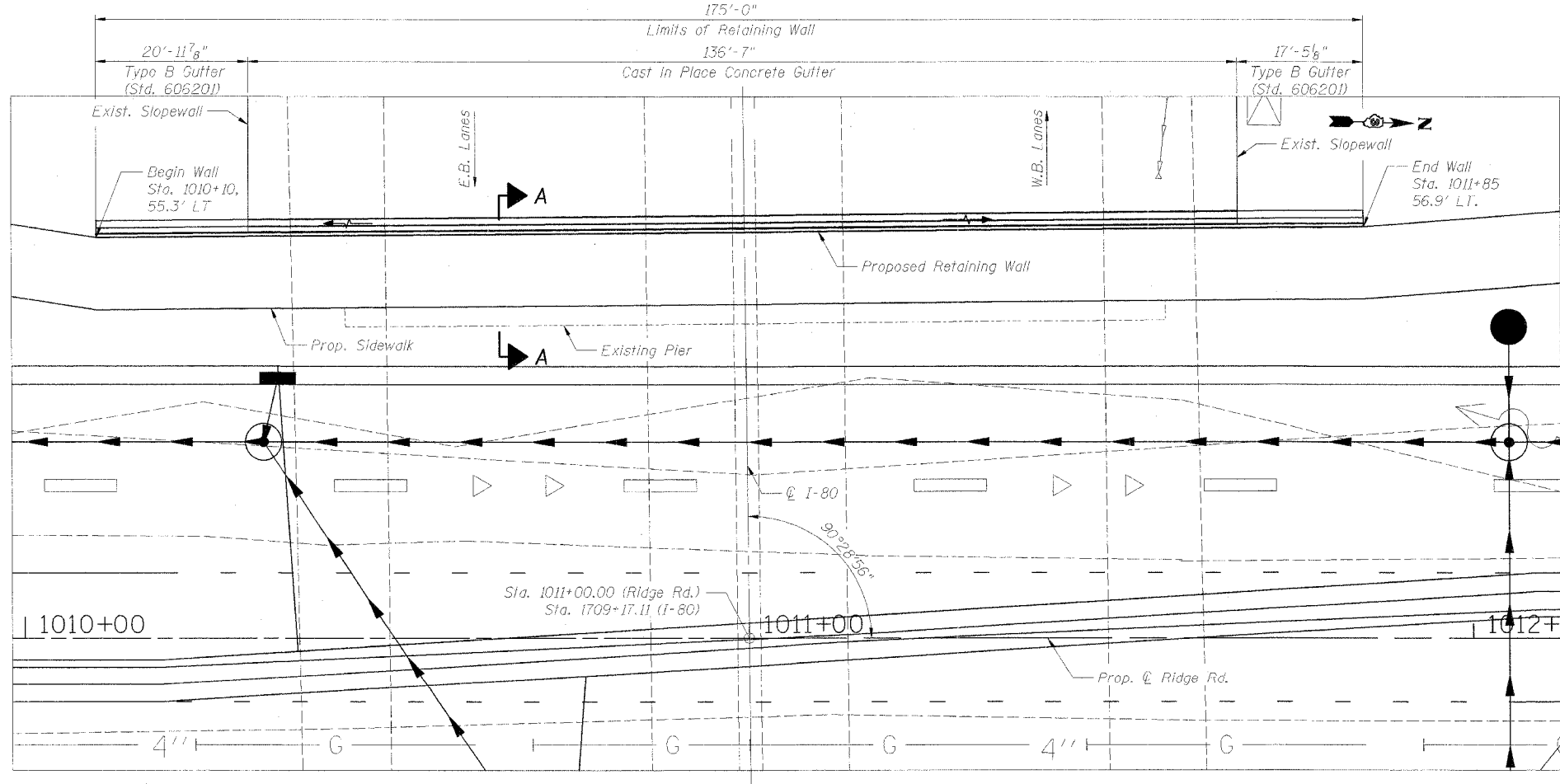
Seismic Performance Category (SPC)=A
 Bedrock Acceleration Coefficient (A)=0.035g
 Site Coefficient (S)=1.0

DESIGN SPECIFICATIONS

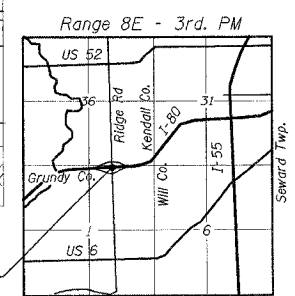
2002 AASHTO Standard Specifications for Highway Bridges

NOTES:

- Bars designated (E) shall be epoxy coated.
- Reinforcement Bars shall conform to the requirements of AASHTO M-31, or M-322, Grade 60.
- Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
- All Construction joints shall be bonded.
- Work this sheet with W2 of W2.
- The Contractor shall provide adequate bracing for temporary support of the slope wall during construction. The cost of the bracing is included with the cost of Structure Excavation.
- Existing welded wire fabric shall be sand blasted clean and incorporated into new construction. Cost shall be included with the cost of Concrete Removal. See Sheet W2 for Slope Wall Removal Detail.



PLAN



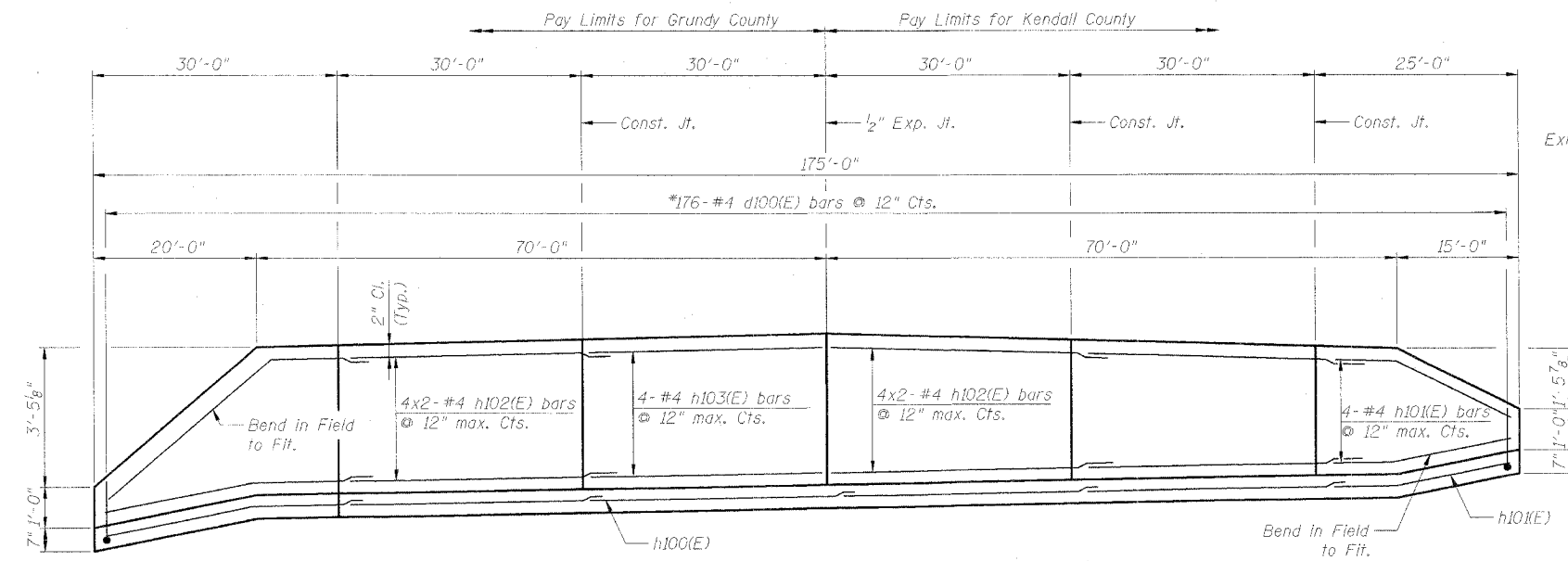
LOCATION SKETCH

REVISIONS	
NAME	DATE

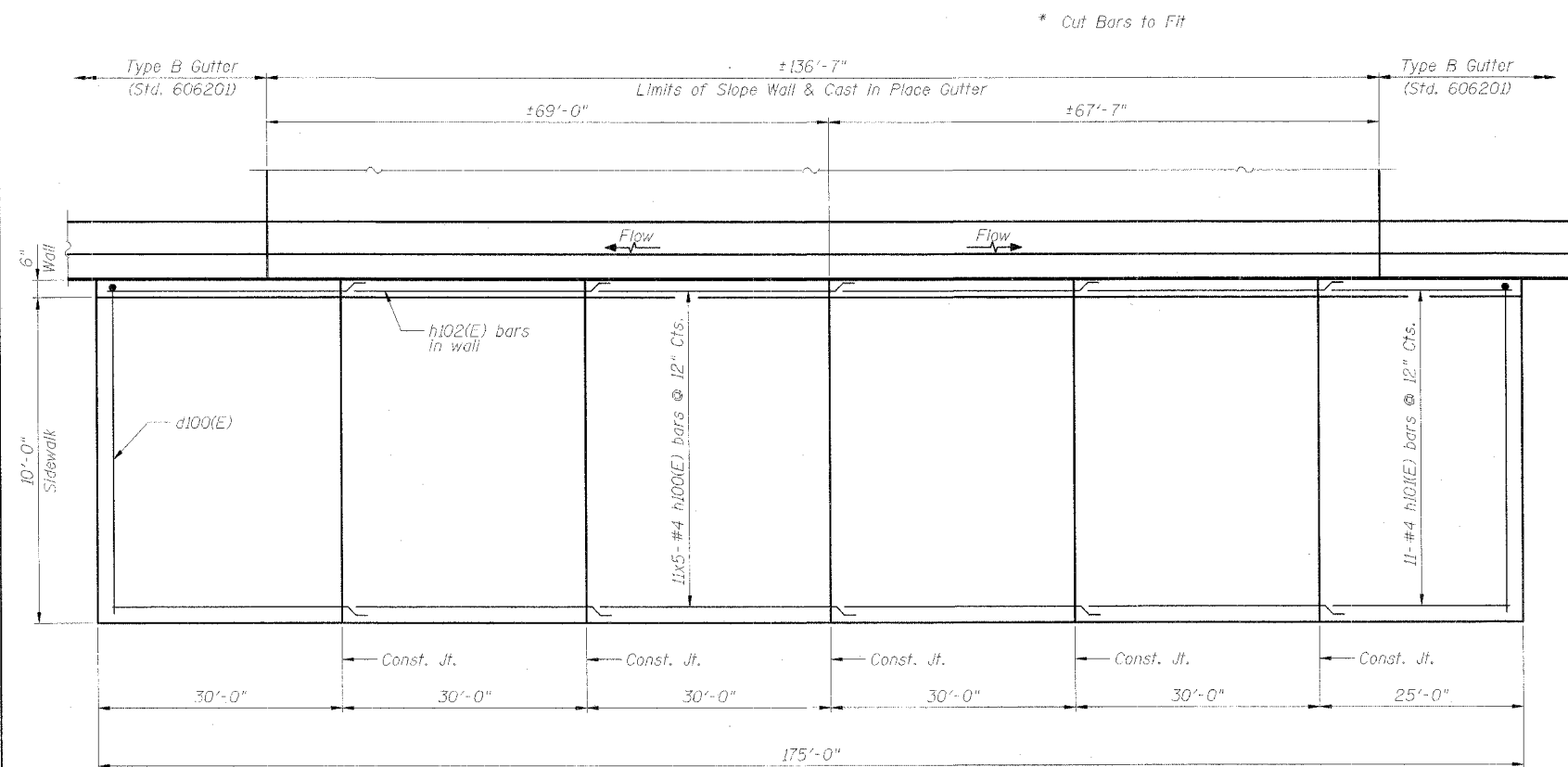
ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 80
 (I-80 AT MINOOKA INTERCHANGE)
 RETAINING WALL GENERAL PLAN & ELEVATION

SCALE: None DRAWN BY: M. Tryon
 DATE: 2/10/06 CHECKED BY: A. Yargocglu

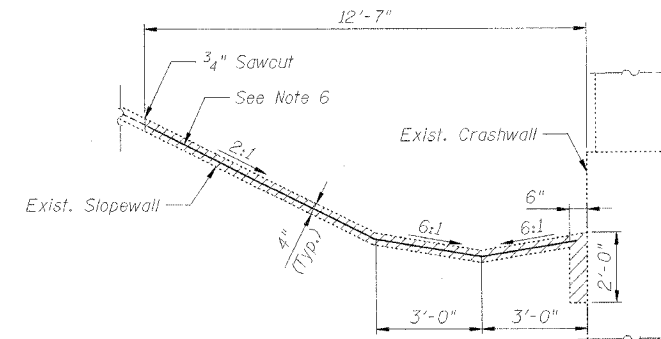
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	183
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 66294				



ELEVATION

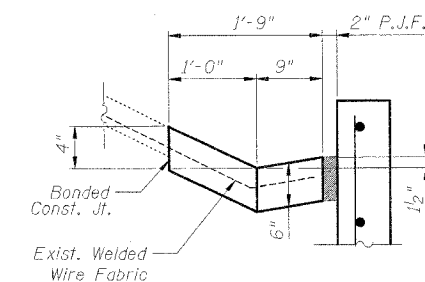


PLAN

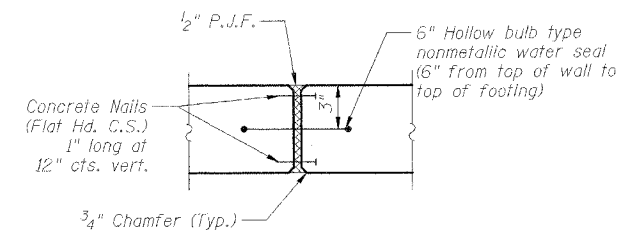


SLOPE WALL REMOVAL DETAIL

Concrete Removal



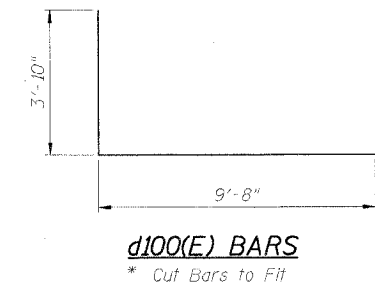
GUTTER DETAIL



EXPANSION JOINT DETAIL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d100(E)	126	#4	14'-4"	—
h100(E)	55	#4	31'-4"	—
h10(E)	15	#4	24'-8"	—
h102(E)	16	#4	31'-11"	—
h103(E)	4	#4	29'-8"	—
Item	Unit	Quantity		
Porous Granular Embankment	Cu. Yd.	39		
Concrete Structures	Cu. Yd.	48.3		
Structure Excavation	Cu. Yd.	153		
Reinforcement Bars	Pound	3,410		
Slope Wall Removal	Sq. Yd.	204		
Concrete Gutter, Type B	Ft.	39		



d100(E) BARS

* Cut Bars to Fit

NOTES:

1. Bars designated (E) shall be epoxy coated.
2. Reinforcement Bars shall conform to the requirements of AASHTO M-31, or M-322, Grade 60.
3. Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
4. All Construction joints shall be bonded.
5. Work this sheet with W1 of W2.
6. Existing welded wire fabric shall be sand blasted clean and incorporated into new gutter construction. Cost shall be included with the cost of Slope Wall Removal.

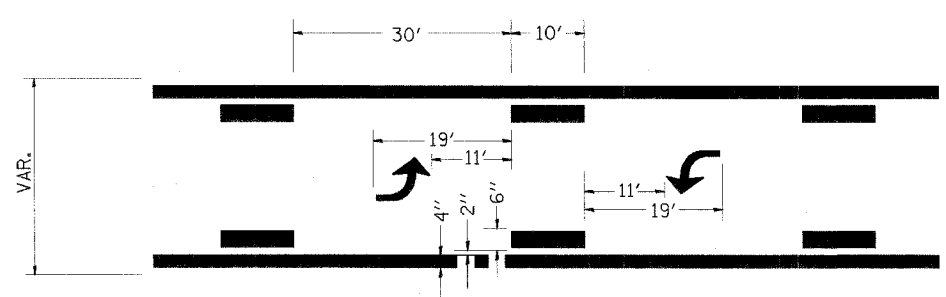
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80
(I-80 AT MINOOKA INTERCHANGE)

RETAINING WALL DETAILS

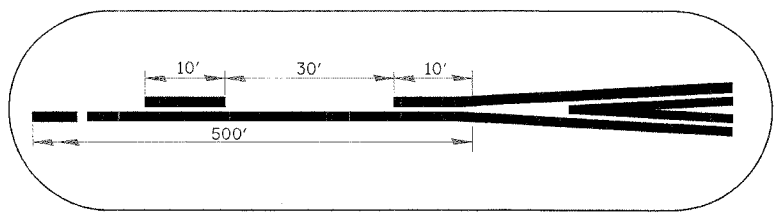
SCALE: None
DATE: 2/10/06
DRAWN BY: M. Tryon
CHECKED BY: A. Yargicoglu

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	184
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				

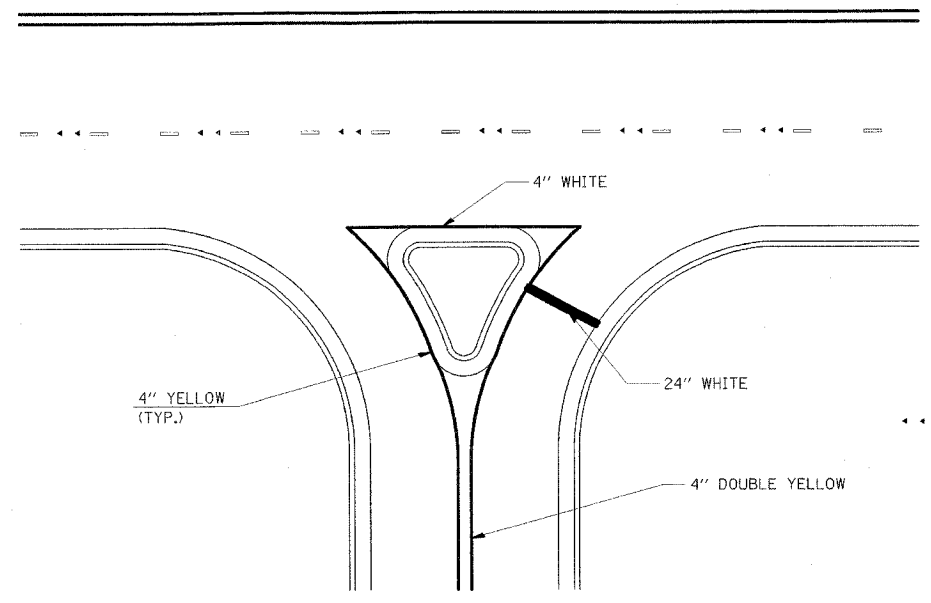


**TYPICAL APPLICATION @
BI-DIRECTIONAL TURN LANE**

780-2

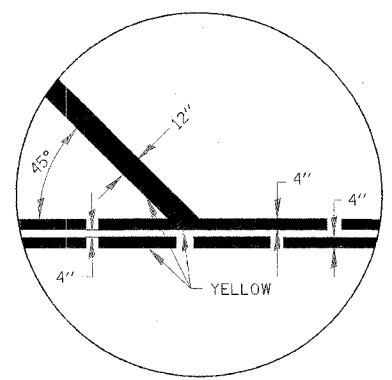


780-7

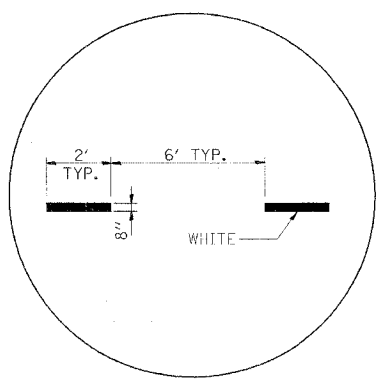


RIGHT IN RIGHT OUT ACCESS PAVEMENT MARKING

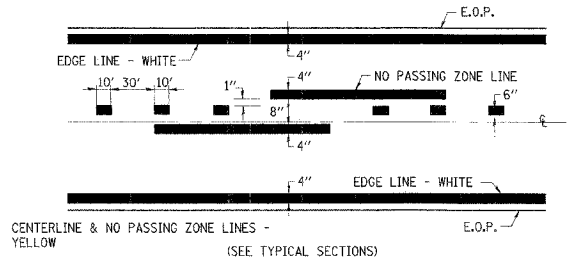
780-16



780-4

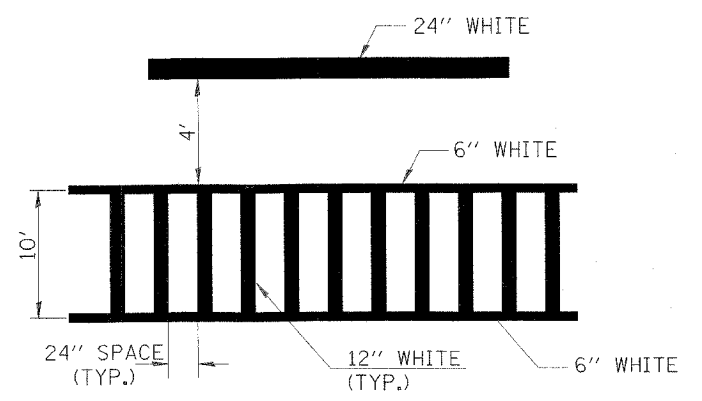


780-5



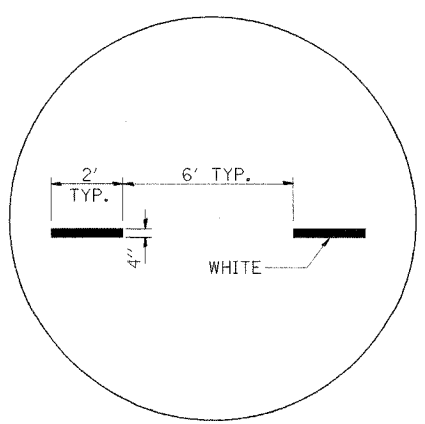
PAVEMENT MARKING

780-8

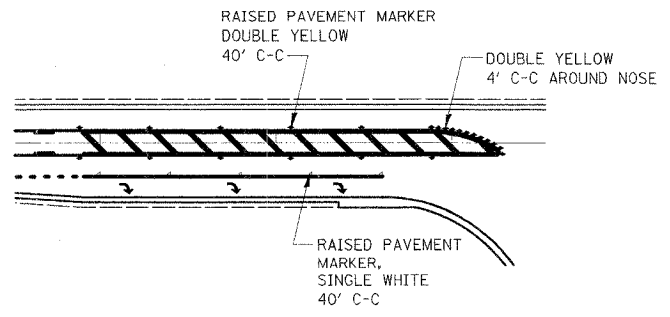


**TYPICAL SPACING DETAIL FOR
CROSSWALKS AND STOP BARS**

780-3



780-6



**RAISED REFLECTIVE PAVEMENT MARKERS
@ RIGHT TURN LANE**

781-1

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

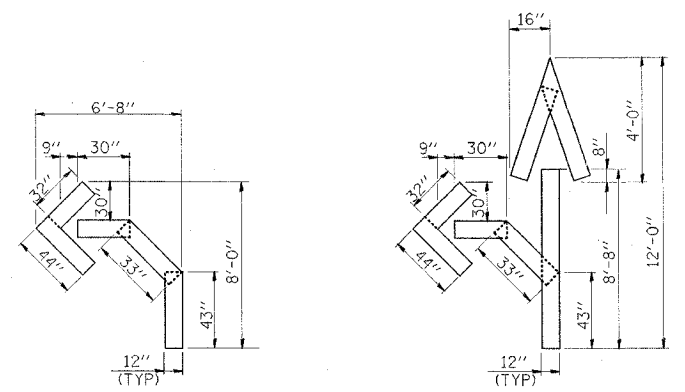
PAVEMENT MARKING DETAILS

SCALE: NONE
DATE: 2/10/06

DRAWN BY: TCK
CHECKED BY: JJC

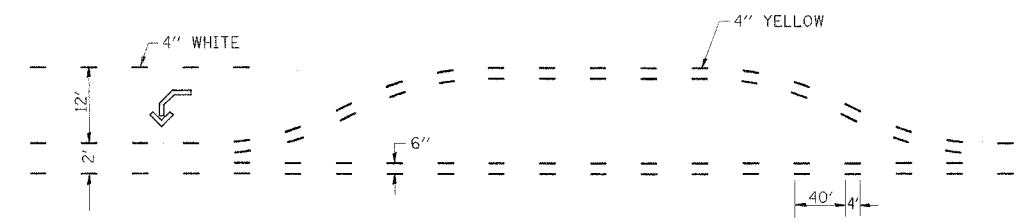
AUG 13 2006 10:07:59 AM
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	185
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 66294				



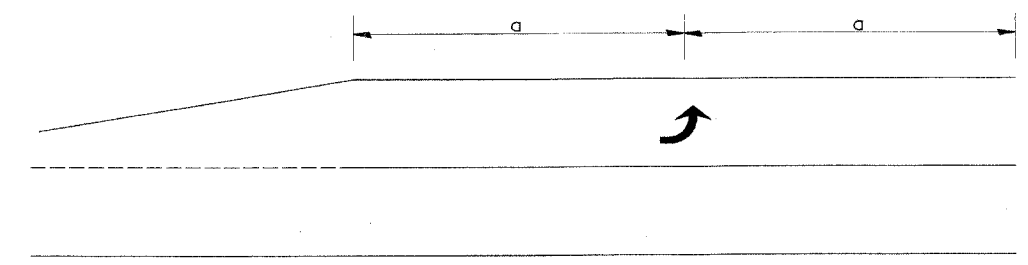
QUANTITY
12" LINE = 16 LIN. FT.
OR 4" LINE = 48 LIN. FT.

QUANTITY
12" LINE = 29 LIN. FT.
OR 4" LINE = 87 LIN. FT.

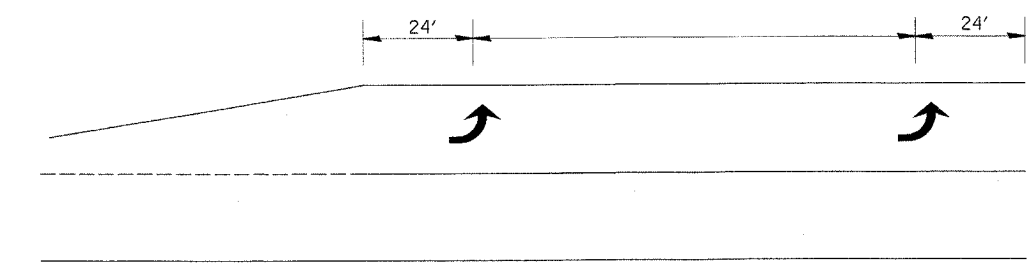


SHORT-TERM PAVEMENT MARKING FOR MEDIANS AND ARROWS

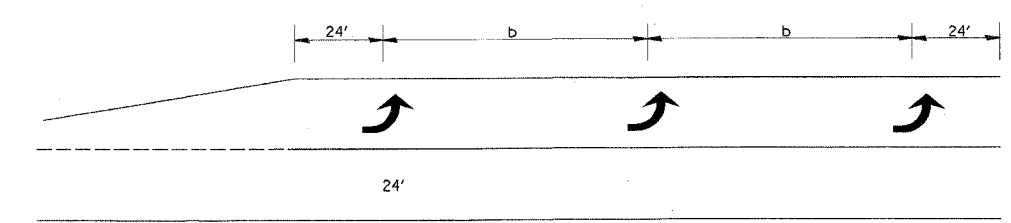
703-1



99' AND UNDER



100' TO 149'



150' AND LONGER

TYPICAL PLACEMENT OF ARROWS
IN TURN LANES

780-10

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

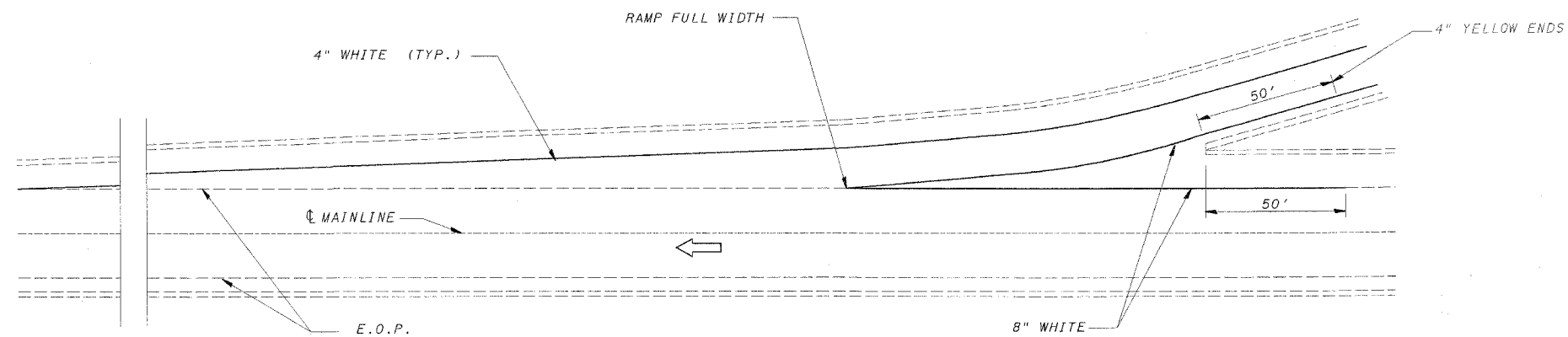
PAVEMENT MARKING DETAILS

SCALE: NONE
DATE: 2/10/06

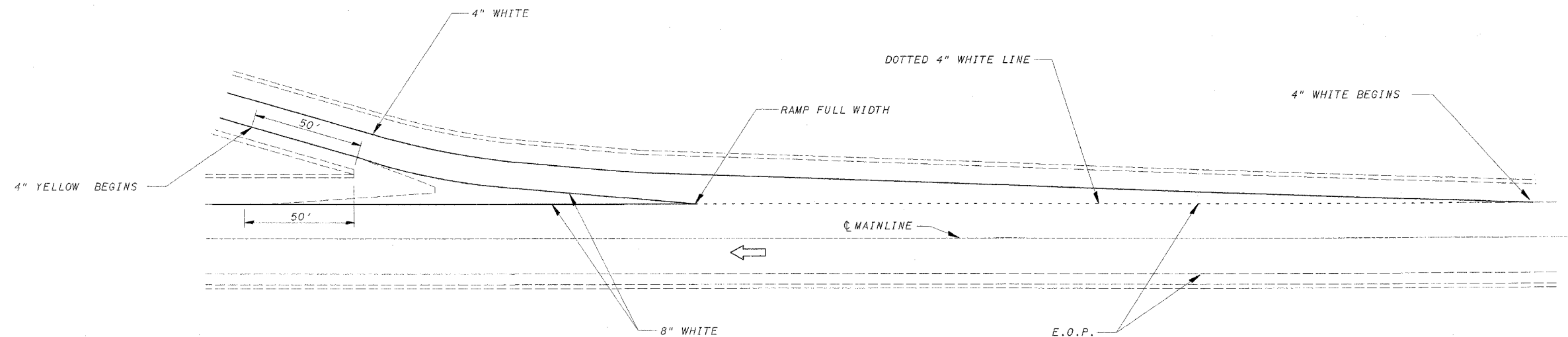
DRAWN BY: TCK
CHECKED BY: JJC

AUG 1999
V057A1253700799.DGN
780-10

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	132, 47-41K	KENDALL/GRUNDY	243	186
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				



TYPICAL PAVEMENT MARKING FOR ENTRANCE RAMP TERMINALS



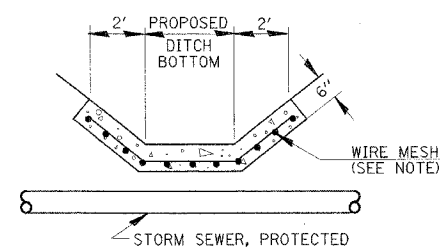
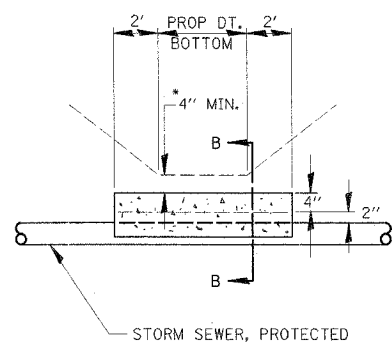
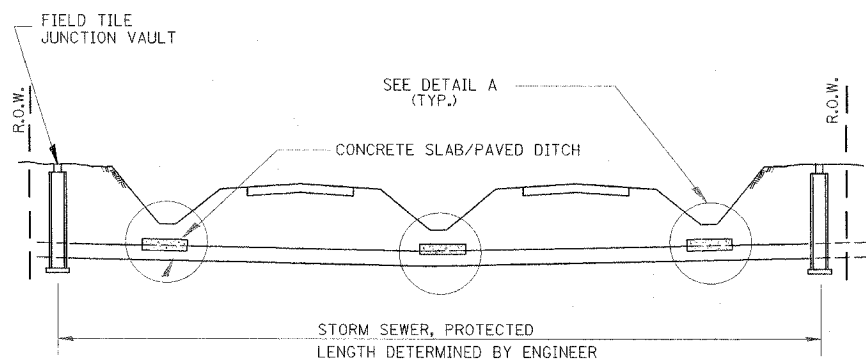
TYPICAL PAVEMENT MARKINGS FOR EXIT RAMP TERMINALS

780-12

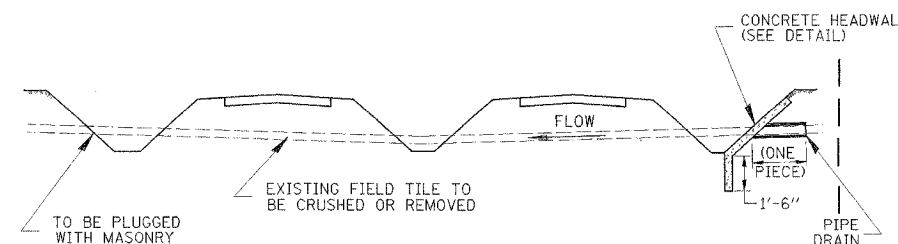
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE) PAVEMENT MARKING DETAILS
NAME	DATE	
SCALE: NONE		DRAWN BY: TCK
DATE: 2/10/06		CHECKED BY: JJC

AUC: 1989
V:\DETAILS\780-12\780-12.dgn

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	187
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				



DETAIL C
NO SCALE

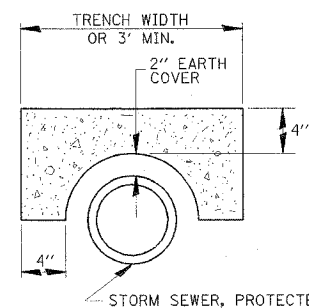


DETAIL A
NO SCALE

* IF A 4" COVER CAN NOT BE PROVIDED A PAVED DITCH SHALL BE CONSTRUCTED AS SHOWN IN DETAIL C.

NOTES

1. WIDTH OF CONCRETE SLAB SHALL BE THE SAME AS THE TRENCH WIDTH IN ACCORDANCE WITH SECTION 550 OF THE STD. SPECIFICATIONS, OR 3' MIN.
2. CONCRETE FOR SLAB, HEADWALL AND PAVED DITCH SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR MISCELLANEOUS CONCRETE."
3. COST OF FURNISHING AND INSTALLING WIRE MESH SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR MISCELLANEOUS CONCRETE. WIRE MESH TO WEIGH NOT LESS THAN 58# PER 100 SQ. FT.

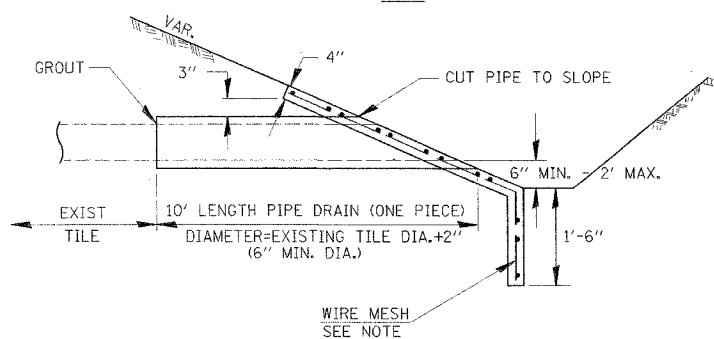
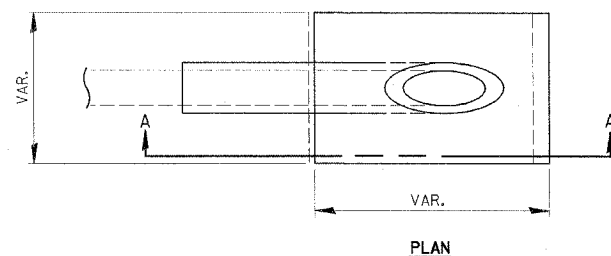


ALTERNATE MATERIALS FOR WALLS	T
PRECAST REINFORCED CONCRETE RISERS	4"
CONCRETE MASONRY UNIT	5"
MONOLITHIC CONCRETE	6"
BUILDING BRICK, GRADE SW FROM CLAY OR SHALE	8"
CONCRETE BUILDING BRICK, GRADE A	8"

NOTES

1. THE CONTRACT UNIT PRICE FOR FIELD TILE JUNCTION VAULT SHALL INCLUDE THE COST OF FURNISHING AND PLACING THE FRAME AND GRATE OR PRECAST CONCRETE LID AND WHEN REQUIRED, THE SAND CUSHION.
2. ALL FIELD TILE JUNCTION VAULTS SHALL BE 2'-0" IN DIAMETER UNLESS OTHERWISE NOTED ON THE PLANS.

FIELD TILE REPLACEMENT

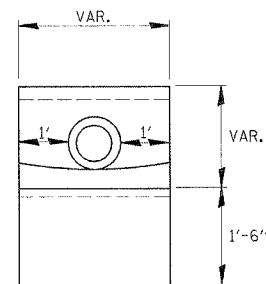


SECTION A-A

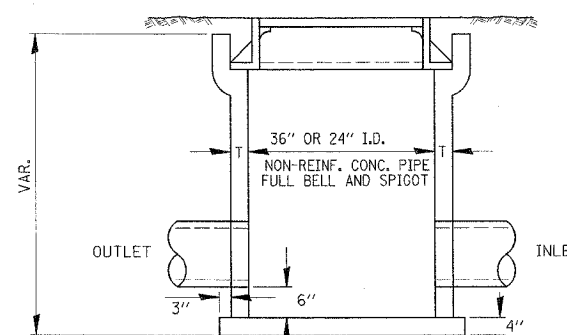
CLASS SI CONCRETE HEADWALLS

NOTES

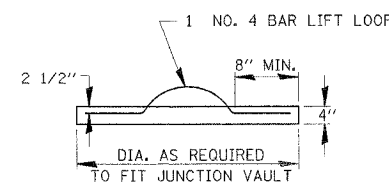
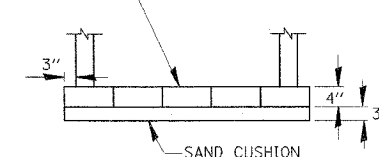
1. ANY STORM SEWER SPECIAL OR BACKSLOPE DRAIN OUTLET INTO A DITCH SHALL HAVE A HEADWALL BUILT IN ACCORDANCE WITH THIS DETAIL.
2. COST OF FURNISHING AND INSTALLING WIRE MESH SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR MISCELLANEOUS CONCRETE. WIRE MESH TO WEIGH NOT LESS THAN 58# PER 100 SQ. FT.



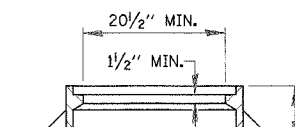
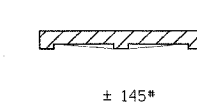
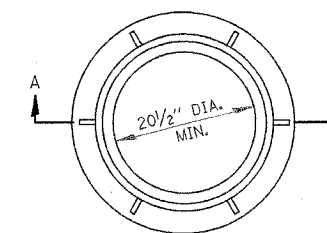
END VIEW



CLASS SI CONCRETE OR PRECAST REINFORCED CONCRETE SLABS NOT LESS THAN 12" WIDE



FIELD TILE JUNCTION VAULT



SECTION A-A

611-1

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE) FIELD TILE DETAILS
NAME	DATE	
		SCALE: NONE DATE: 2/10/06 DRAWN BY: TCK CHECKED BY: JUC

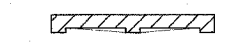
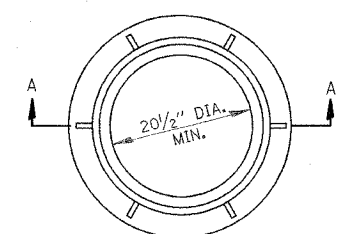
DEC. 2000
\\DETAILS\600699.DGN
611-1

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	188
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 66294				

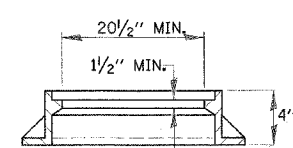
ALTERNATE MATERIALS FOR WALLS	T
PRECAST REINFORCED CONCRETE RISERS	4"
CONCRETE MASONRY UNIT	5"
MONOLITHIC CONCRETE	6"
BUILDING BRICK, GRADE SW FROM CLAY OR SHALE	8"
CONCRETE BUILDING BRICK, GRADE A	8"

NOTES

1. THE CONTRACT UNIT PRICE FOR FIELD TILE JUNCTION VAULT SHALL INCLUDE THE COST OF FURNISHING AND PLACING THE FRAME AND GRATE OR PRECAST CONCRETE LID AND WHEN REQUIRED, THE SAND CUSHION.
2. ALL FIELD TILE JUNCTION VAULTS SHALL BE 2'-0" IN DIAMETER UNLESS OTHERWISE NOTED ON THE PLANS.



± 145#



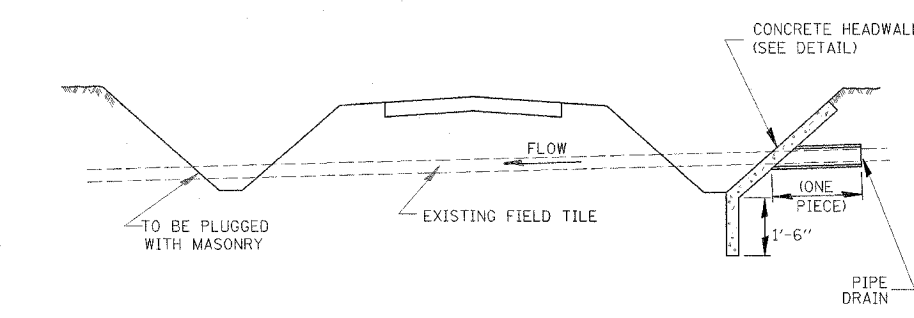
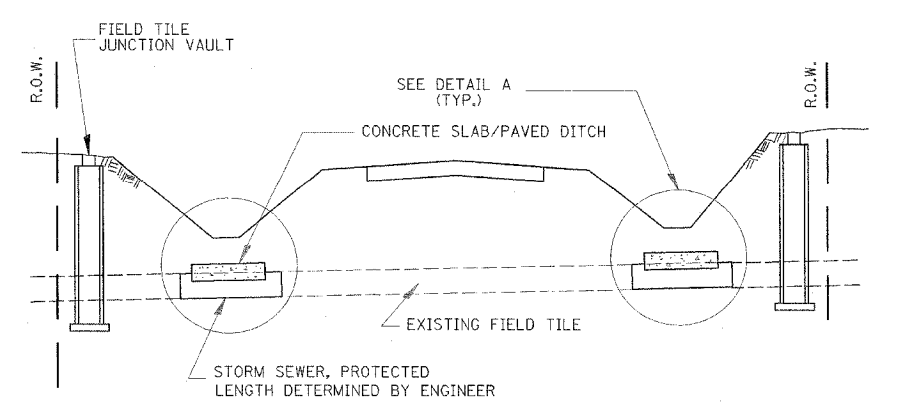
SECTION A-A

611-2

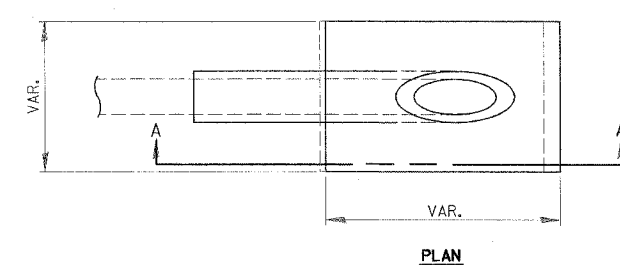
REVISIONS		DATE
NAME		

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)
FIELD TILE DETAILS

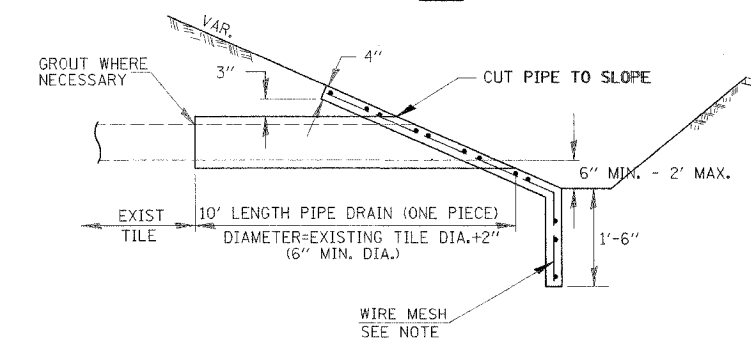
SCALE: NONE
DATE: 2/10/06
DRAWN BY: TCK
CHECKED BY: JUC



FIELD TILE REPLACEMENT

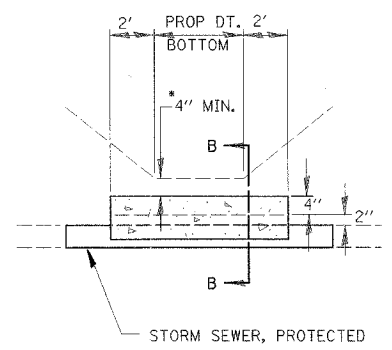


PLAN



SECTION A-A

CLASS SI CONCRETE HEADWALLS



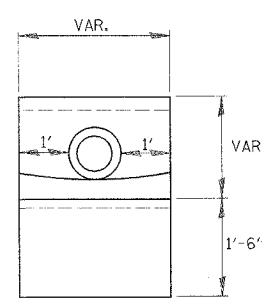
DETAIL A

NO SCALE

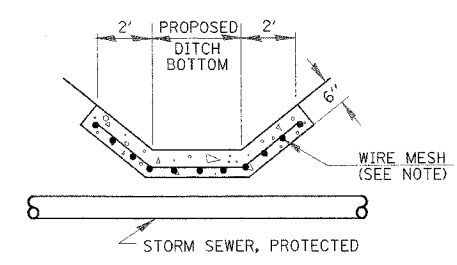
- * IF A 4" COVER CAN NOT BE PROVIDED A PAVED DITCH SHALL BE CONSTRUCTED AS SHOWN IN DETAIL C.
- NOTES**
1. WIDTH OF CONCRETE SLAB SHALL BE THE SAME AS THE TRENCH WIDTH IN ACCORDANCE WITH SECTION 550 OF THE STD. SPECIFICATIONS, OR 3' MIN.
 2. CONCRETE FOR SLAB, HEADWALL AND PAVED DITCH SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR MISCELLANEOUS CONCRETE."
 3. COST OF FURNISHING AND INSTALLING WIRE MESH SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR MISCELLANEOUS CONCRETE. WIRE MESH TO WEIGH NOT LESS THAN 58# PER 100 SQ. FT.

NOTES

1. ANY STORM SEWER OR FIELD TILE OUTLET INTO A DITCH SHALL HAVE A HEADWALL BUILT IN ACCORDANCE WITH THIS DETAIL.
2. COST OF FURNISHING AND INSTALLING WIRE MESH SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR MISCELLANEOUS CONCRETE. WIRE MESH TO WEIGH NOT LESS THAN 58# PER 100 SQ. FT.

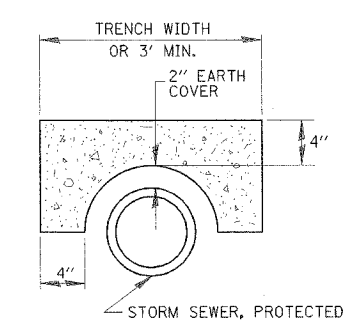


END VIEW

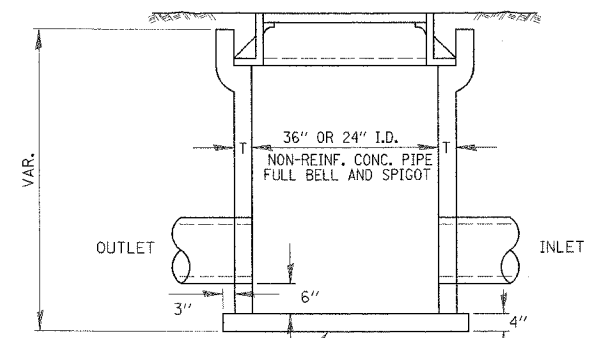


DETAIL C

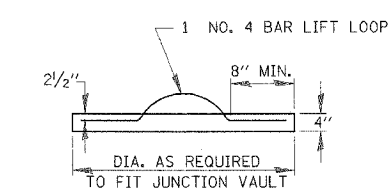
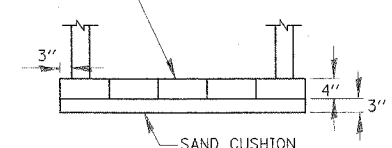
NO SCALE



SECTION B-B



CLASS SI CONCRETE OR PRECAST REINFORCED CONCRETE SLABS NOT LESS THAN 12" WIDE



FIELD TILE JUNCTION VAULT

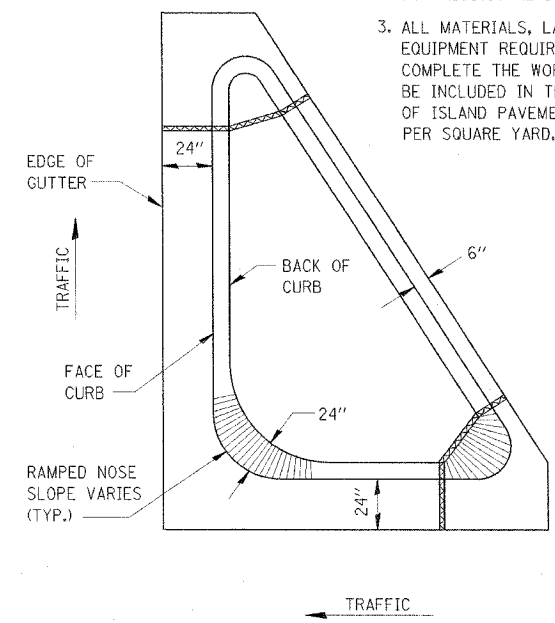
DEC. 2000
\\DETAILS\600693.DGN
611-2

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	189
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

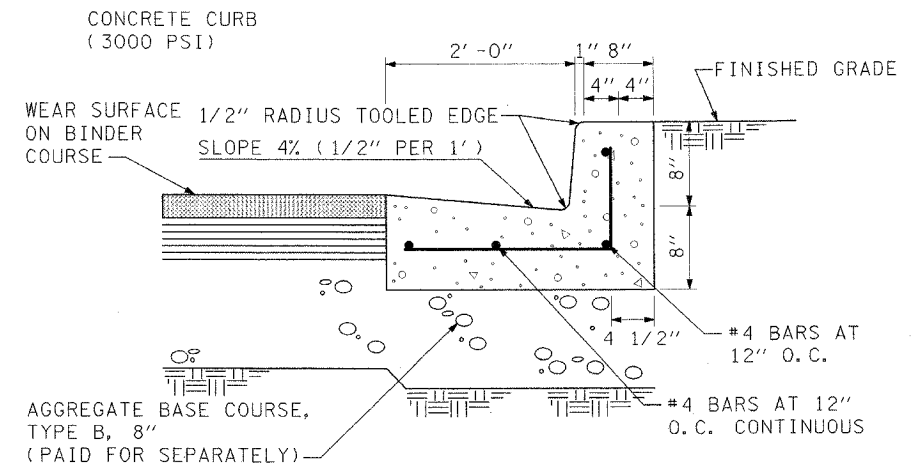
CONTRACT NO. 66294

GENERAL NOTES:

1. THE CURB AND GUTTER CONFIGURATION SHALL BE M-6.06 & M-6.24
2. SEE STD. 606001 & AND 606301 FOR ADDITIONAL DETAILS.
3. ALL MATERIALS, LABOR, AND EQUIPMENT REQUIRED TO COMPLETE THE WORK SHALL BE INCLUDED IN THE COST OF ISLAND PAVEMENT (SPECIAL) PER SQUARE YARD.



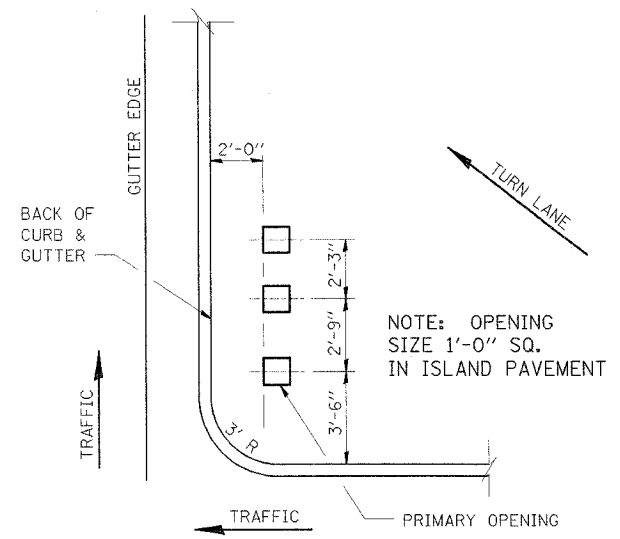
606-1



NOTE: PROVIDE CONTROL JOINTS AT 20'-0" OC
PROVIDE EXPANSION JOINTS AT 60'-0" OC

REINFORCEMENT SHALL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR CC&G, (SPCL).

COMBINATION CONCRETE CURB AND GUTTER, (SPECIAL)



NOTE: OPENING SIZE 1'-0" SQ. IN ISLAND PAVEMENT

ISLAND SIGN POST SPACING DETAIL

NOTE: THE ENGINEER SHALL DETERMINE THE NUMBER OF OPENINGS REQUIRED.

606-2

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

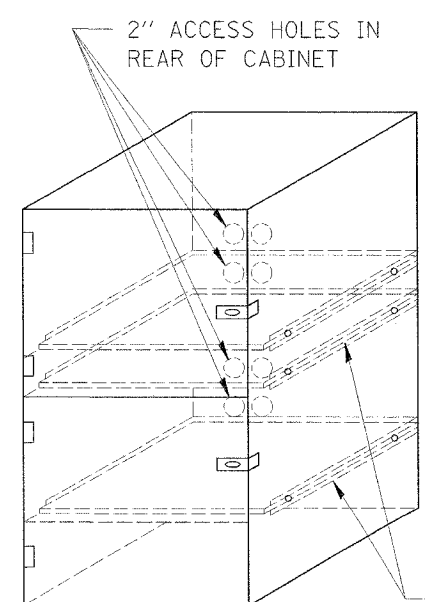
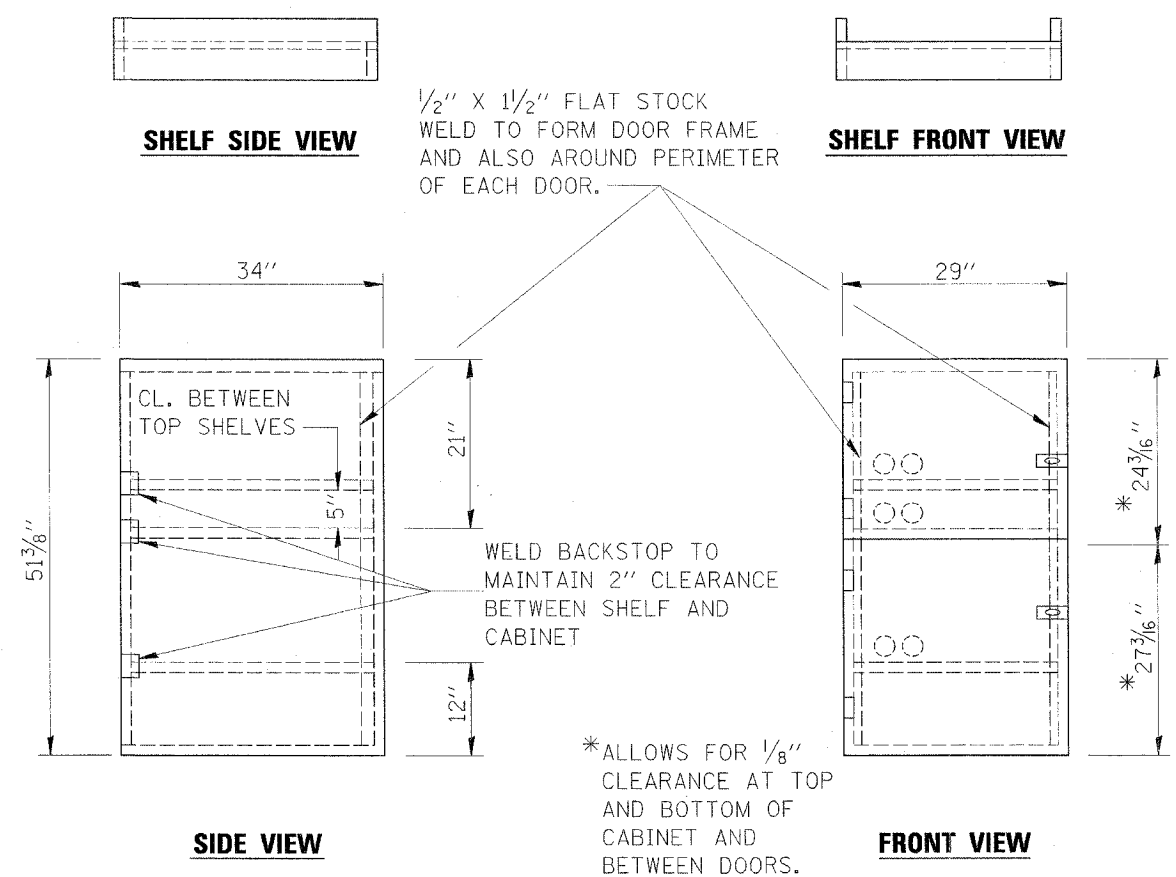
CURB AND GUTTER AND ISLAND DETAILS

SCALE: NONE
DATE: 2/10/06

DRAWN BY: TCK
CHECKED BY: JJC

DEC. 2000
DETAILS\6060699.dgn
6/1/01

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	190
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 66294				

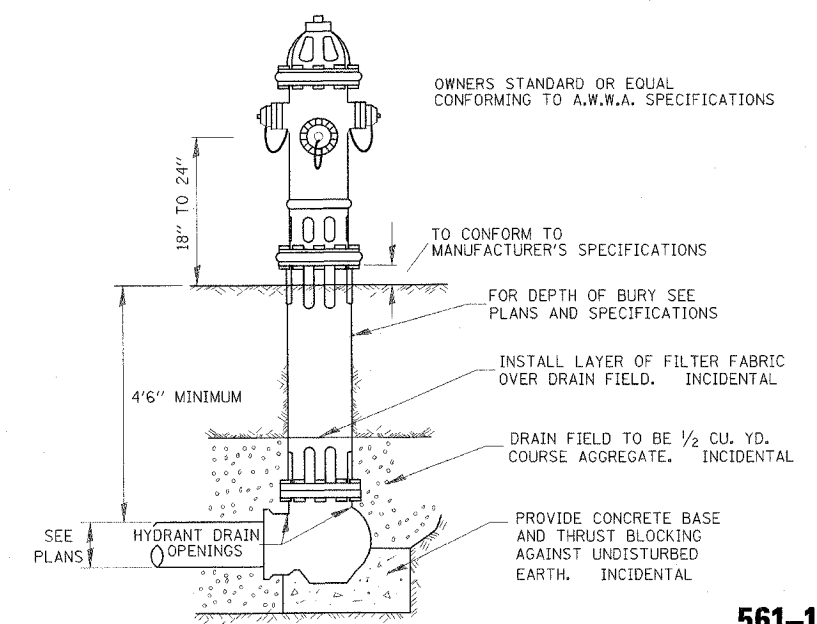


- NOTES:
1. USE 16 GAUGE STEEL FOR CABINET.
 2. THE TOP SHELF SHALL SLIDE IN OR OUT WITH THE TOP DOOR OPEN.
 3. ALL HINGES AND HASPS WILL BE WELDED TO THE CABINET.
 4. ALL EDGES SHALL BE GROUND SMOOTH.
 5. TWO (2" DIA.) ACCESS HOLES WILL BE REQUIRED FOR EACH SHELF.
 6. CABINET SHALL BE PAINTED WITH TWO COATS OF FLAT PAINT.
 7. 2 EACH MATCHING KEY PADLOCKS, WITH 3 KEYS PROVIDED, MASTER MODEL 3 T OR EQUIVALENT.
 8. 4 EACH PLAIN STEEL, NON-REMOVABLE PIN, NO HOLE 4"X4" SQUARE CORNER HINGES TO BE WELDED ON.
 9. 2 EACH EXTRA HEAVY, PLAIN STEEL, FIXED STAPLE, NO HOLE, 7 1/4 " HASPS TO BE WELDED ON.

FLAT STOCK DIMENSIONS VARY DEPENDING ON TYPE OF ROLLER ASSEMBLY.

LOCKABLE COMPUTER CABINET

670-1



NOTE: CONCRETE BASE AND BLOCKING MATERIAL SHALL NOT BLOCK NOR OBSTRUCT HYDRANT DRAIN.

561-1

TYPICAL HYDRANT INSTALLATION

REVISIONS	
NAME	DATE

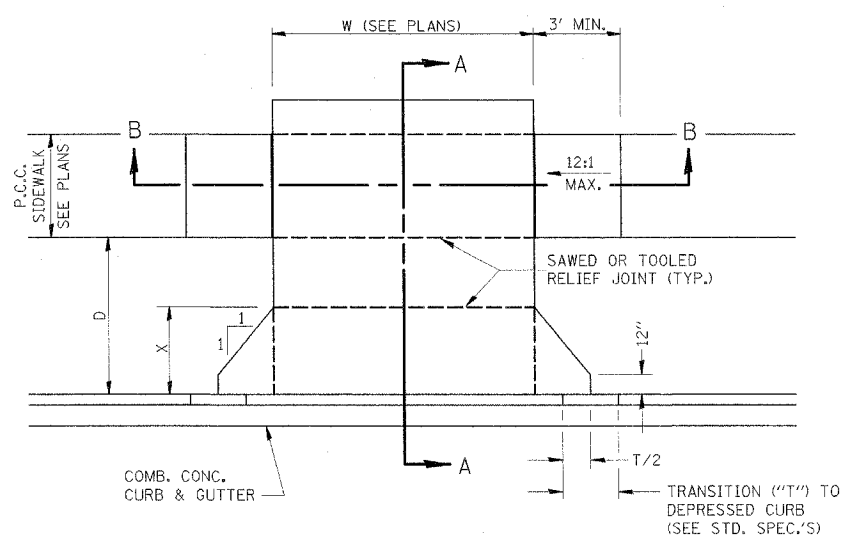
ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

LOCKABLE COMPUTER CABINET & HYDRANT INSTALLATION

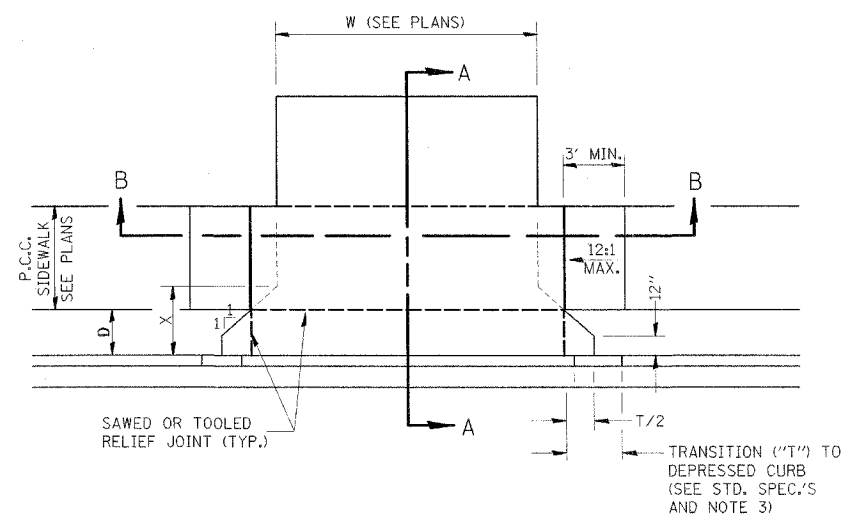
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 DATE: 2/10/06

DRAWN BY: TCK
 CHECKED BY: JJC

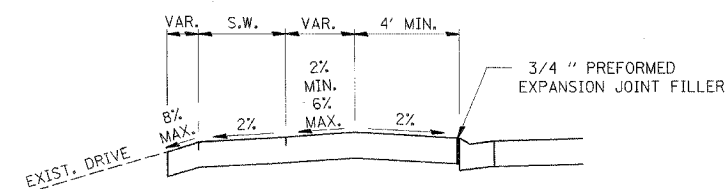
DEC. 2000
 \DETAILS\600699.dgn
 611-1



CASE I (D ≥ X)

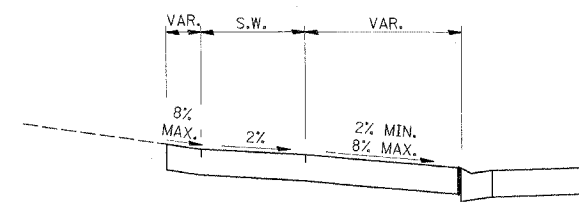


CASE I (D < X)

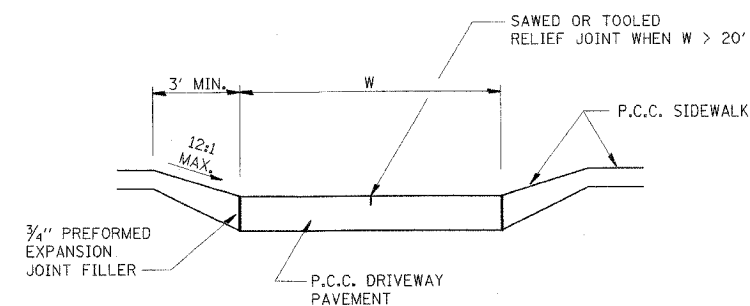


DEPRESSED ENTRANCE*
SECTION A-A

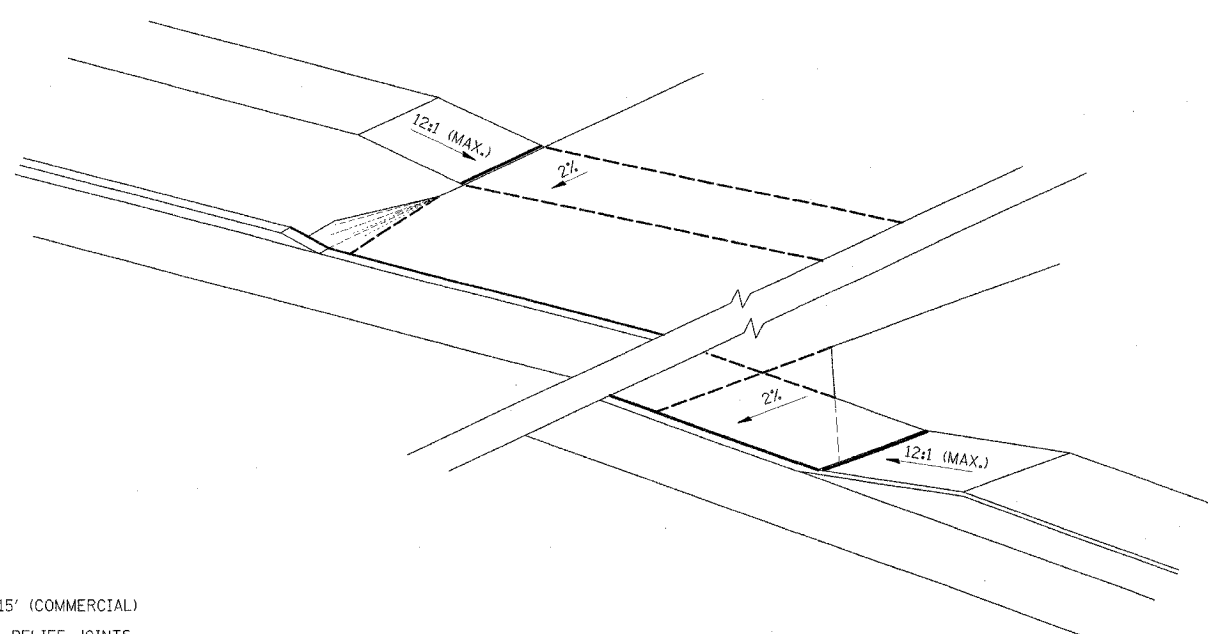
*(SEE X-SECTIONS FOR
ENTRANCE PROFILE.)



ELEVATED ENTRANCE*
SECTION A-A



SECTION B-B



GENERAL NOTES:

1. X = 7' (NON-COMMERCIAL) X = 15' (COMMERCIAL)
2. COST OF EXPANSION JOINTS AND RELIEF JOINTS SHALL BE INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT.
3. AS THE DIMENSION "D" APPROACHES ZERO, THE TRANSITION TO DEPRESSED CURB SHALL BE NO STEEPER THAN 12:1

PCC URBAN ENTRANCES

423-1

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

DRIVEWAY DETAILS

SCALE: NONE
DATE: 2/10/06

DRAWN BY: TCK
CHECKED BY: JJC

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	KENDALL/GRUNDY	243	192
STA.	TO STA.			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 66294				

GENERAL NOTES

ALTERNATE MATERIAL FOR THE WALLS MAY BE CONCRETE MASONRY UNITS, PRECAST REINFORCED CONCRETE SECTIONS OR CAST-IN-PLACE CONCRETE. THE CAST IRON STEPS AS DETAILED HEREON ARE TYPICAL. STEPS OF OTHER DESIGN AND MATERIAL THAT CONFORM TO THE MINIMUM REQUIREMENTS OF THE STEPS SHOWN MAY BE USED WHEN APPROVED BY THE ENGINEER.

CAST IRON STEPS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF ARTICLE 1006.14 OF THE STANDARD SPECIFICATIONS.

STEPS SHALL BE EMBEDDED INTO THE WALL A MINIMUM OF THREE(3) INCHES. STEPS SHALL NOT BE EXTENDED ON THE OUTSIDE.

STEPS SHALL BE OMITTED FOR WORK IN COOK COUNTY WHEN THE DEPTH OF THE MANHOLE IS TEN(10') OR LESS.

IN ADDITION TO THE REQUIREMENTS OF ARTICLE 612.13 OF THE STANDARD SPECIFICATIONS, THE CONTRACT UNIT PRICE FOR MANHOLES, TYPE A, 7'-DIAMETER SHALL INCLUDE THE SAND CUSHION WHEN REQUIRED, FURNISHING AND INSTALLING STEPS WHEN REQUIRED, FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL, AND FURNISHING AND INSTALLING FLAT SLAB TOP.

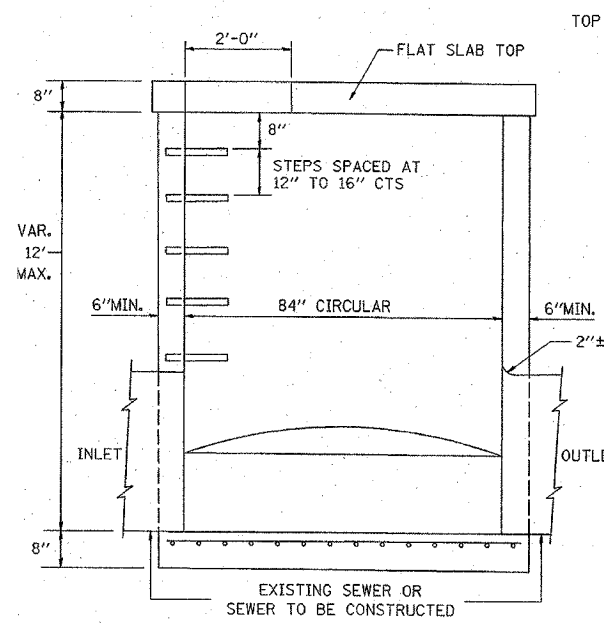
PRECAST FLAT SLAB TOP SHALL CONFORM TO ARTICLES 505.01 THRU 505.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE CONCRETE STRENGTH SHALL BE 4,000 PSI AFTER 28 DAYS. REINFORCEMENT BARS AND WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 1006.10. ONLY GRADE 60 REINFORCEMENT BARS WILL BE PERMITTED.

BOTTOM SLAB SHALL BE REINFORCED BY EITHER REINFORCEMENT BARS OR WELDED WIRE FABRIC. THE MINIMUM REINFORCEMENT SHALL BE 0.46 SQUARE INCH PER LINEAR FOOT IN BOTH DIRECTIONS.

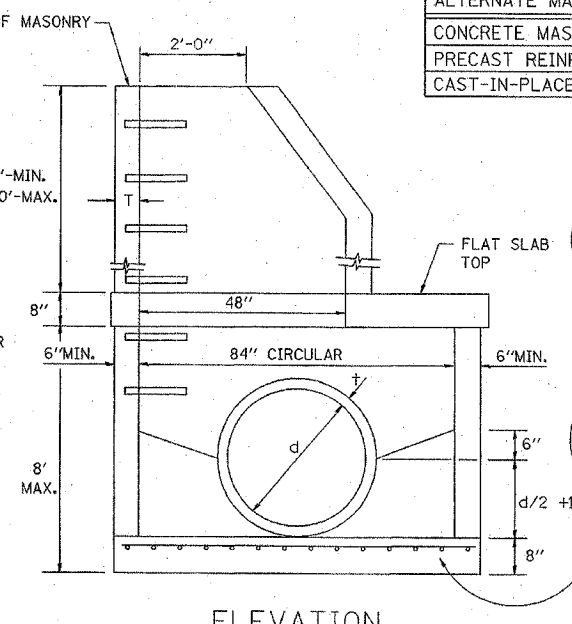
JOINT CONFIGURATION AND DIMENSIONS OF FLAT SLAB TOP SHALL MATCH AND FIT THE RISER JOINT DETAIL.

LIFTING DEVICES SHALL BE APPROVED BY THE ENGINEER.

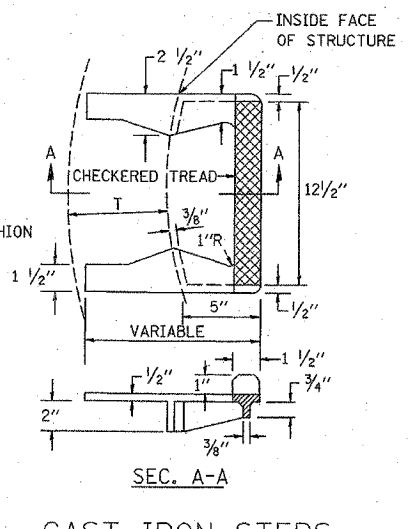
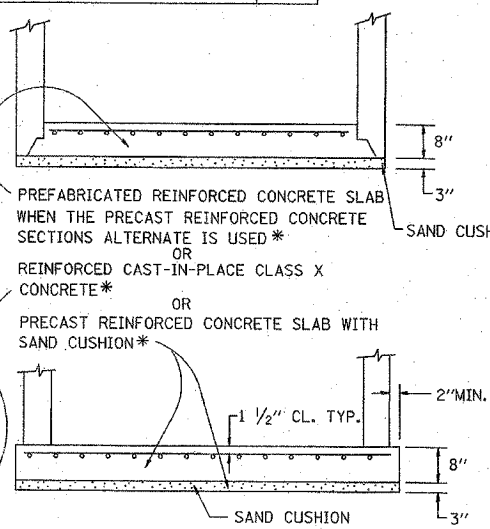
ALTERNATE MATERIALS FOR RISERS	(MIN.)
CONCRETE MASONRY UNITS	5"
PRECAST REINFORCED CONCRETE SECTIONS	4"
CAST-IN-PLACE CONCRETE	6"



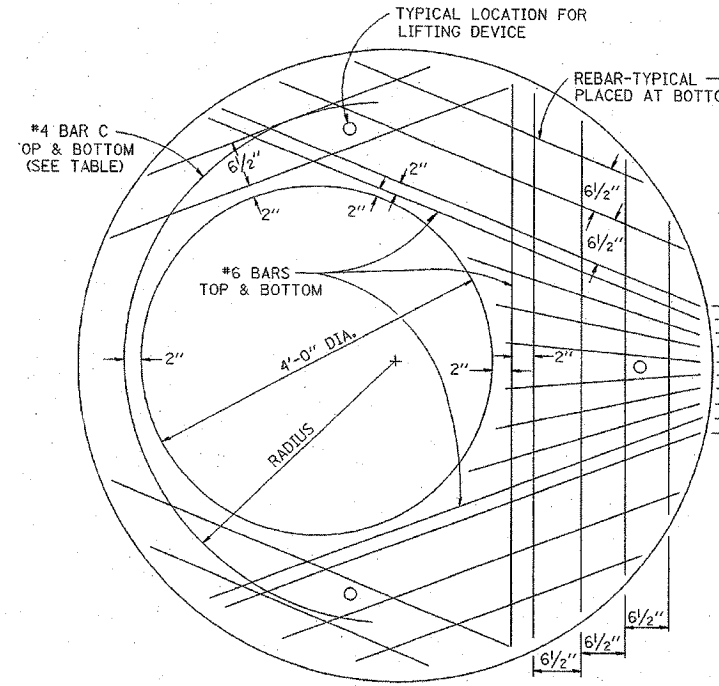
ELEVATION



ELEVATION

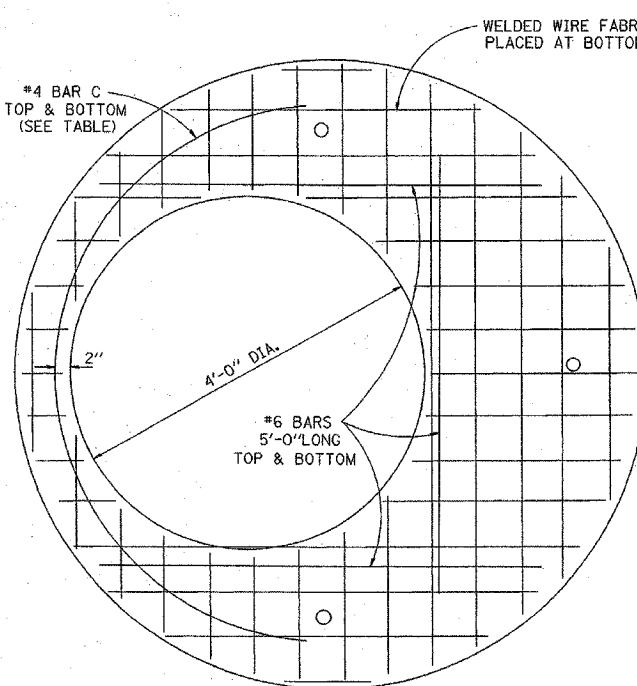
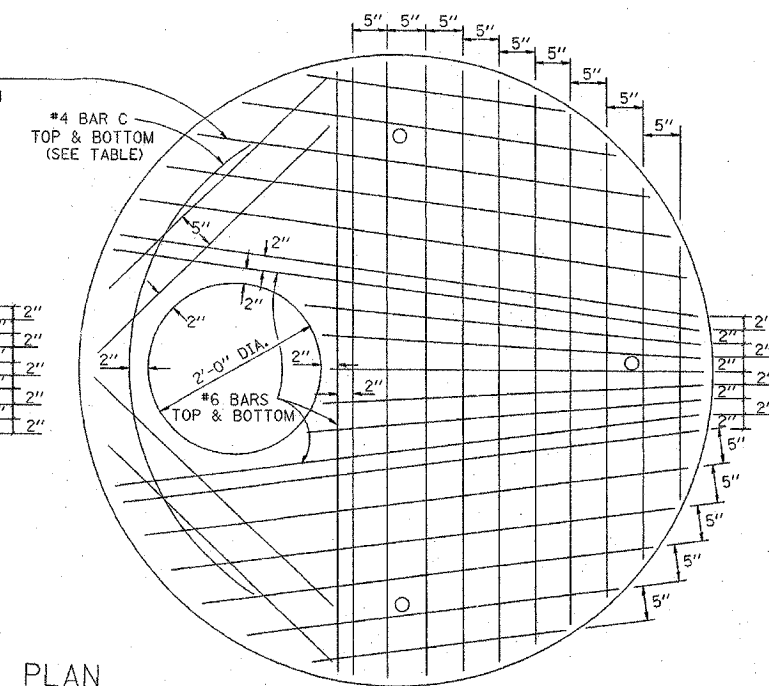


CAST IRON STEPS



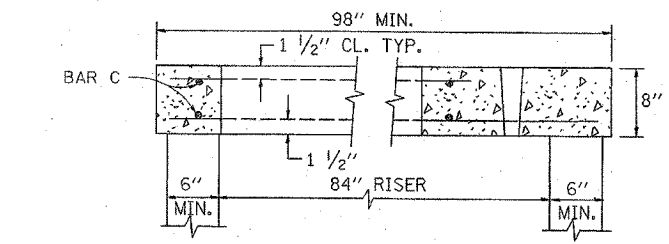
PLAN

SHOWING REBAR REINFORCEMENT



PLAN

SHOWING WELDED WIRE FABRIC REINFORCEMENT



SECTION B-B

TABLE

DIAMETER OF OPENING	REINFORCEMENT "A" S' WWF EACH DIRECTION	BAR C			
		OR BAR SIZE	SIZE	LENGTH	RADIUS
2'-0"	1.06 SQ.IN./LIN.FT.	#6	#4	6'-0"	38"
4'-0"	0.82 SQ.IN./LIN.FT.	#6	#4	9'-0"	38"

NOTE: THIS STRUCTURE SHOULD BE USED WITH PIPES SIZE 54" DIA. OR SMALLER.

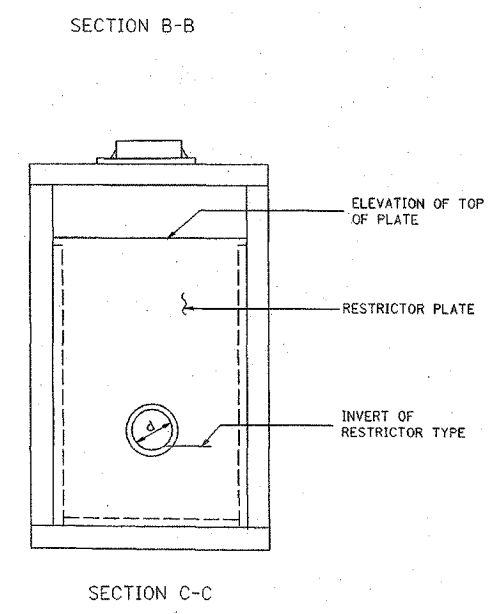
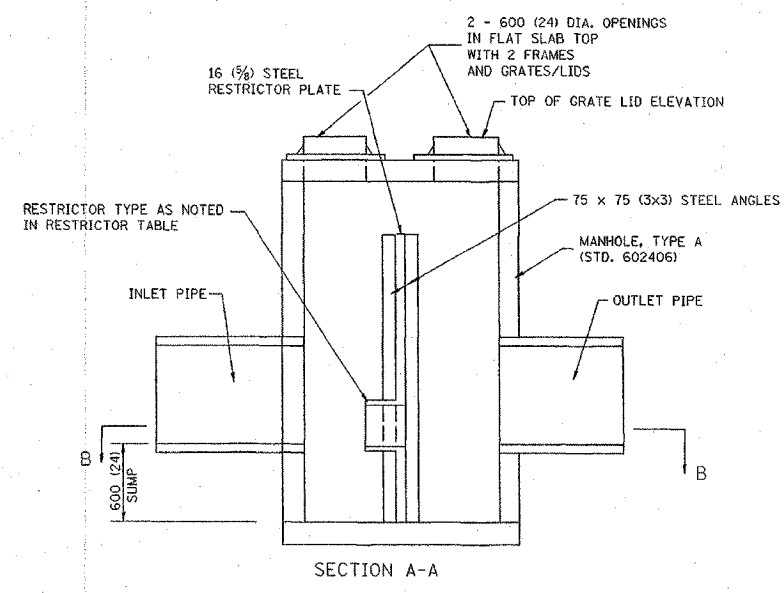
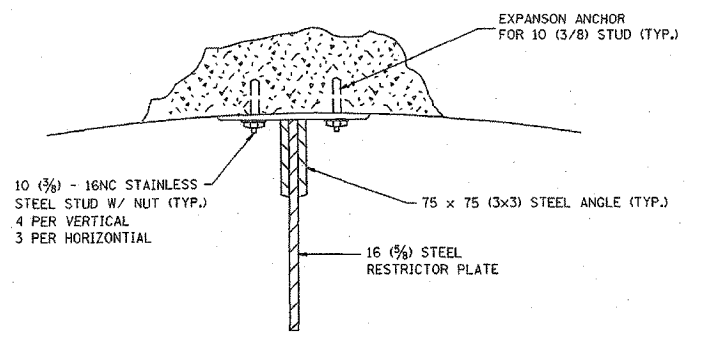
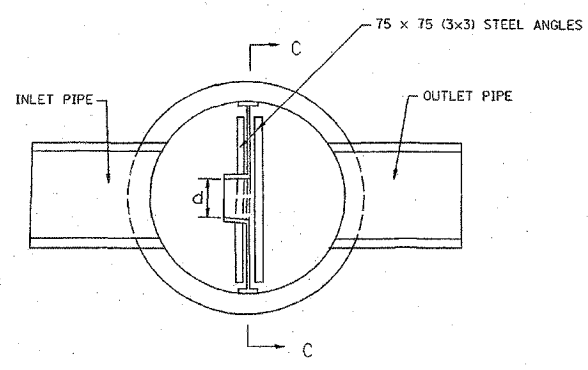
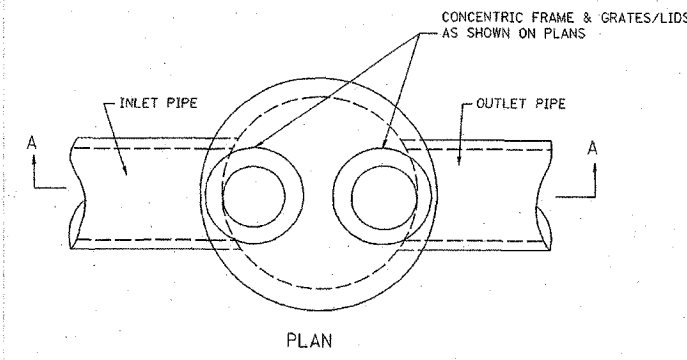
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

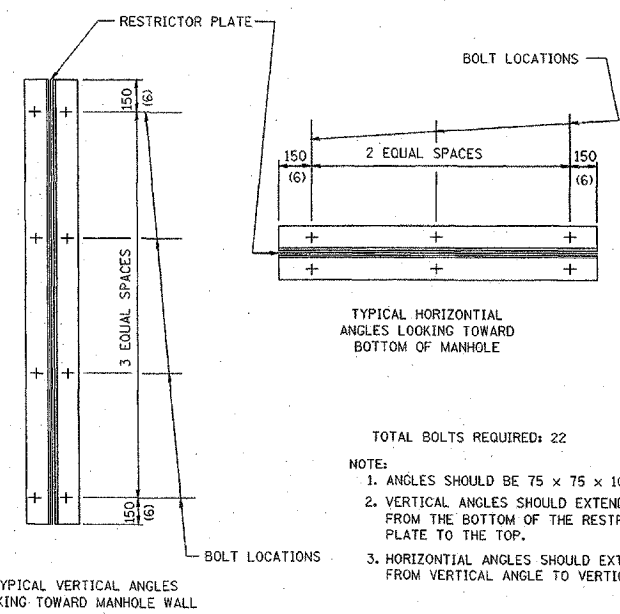
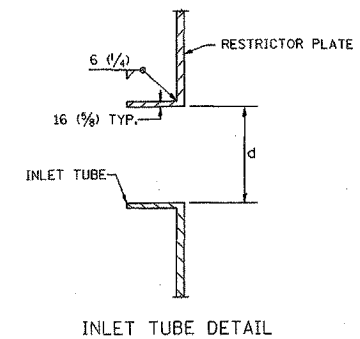
MANHOLE TYPE A
7 FOOT DIAMETER

SCALE: NONE
DATE: 2/10/06
DRAWN BY: TCK
CHECKED BY: JJC

PATRICK
ENGINEERING INC.
LISLE, ILLINOIS



- NOTES:
1. ALL STEEL ANGLES AND PLATES TO BE GALVANIZED AFTER FABRICATION.
 2. ALL RESTRICTOR PLATES, ANGLES AND HARDWARE TO BE INCLUDED IN THE COST OF THE MANHOLE.
 3. BASIS OF PAYMENT: "MANHOLES, TYPE A, 1.8m (6FT.)-DIAMETER, TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE" EACH



- TOTAL BOLTS REQUIRED: 22
- NOTE:
1. ANGLES SHOULD BE 75 x 75 x 10 (3x3x3/8)
 2. VERTICAL ANGLES SHOULD EXTEND FROM THE BOTTOM OF THE RESTRICTOR PLATE TO THE TOP.
 3. HORIZONTAL ANGLES SHOULD EXTEND FROM VERTICAL ANGLE TO VERTICAL ANGLE.

RESTRICTOR TYPE					
1	2	3	4	5	6
RE-ENFRANT TUBE	SHARP EDGED	SQUARE EDGED	RE-ENFRANT TUBE	SQUARE EDGED	ROUNDED
LENGTH: 1/2 TO 1 DIA.		STREAM CLEARS SIDES	LENGTH: 2-1/2 DIA.	LENGTH: 2-1/2 DIA.	
C=.52	C=.61	C=.61	C=.73	C=.82	C=.98

VALUES OF "C" FOR CIRCULAR AND SQUARE ORIFICES

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

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 80 (I-80 AT MINOOKA INTERCHANGE)

MANHOLE WITH RESTRICTOR PLATE

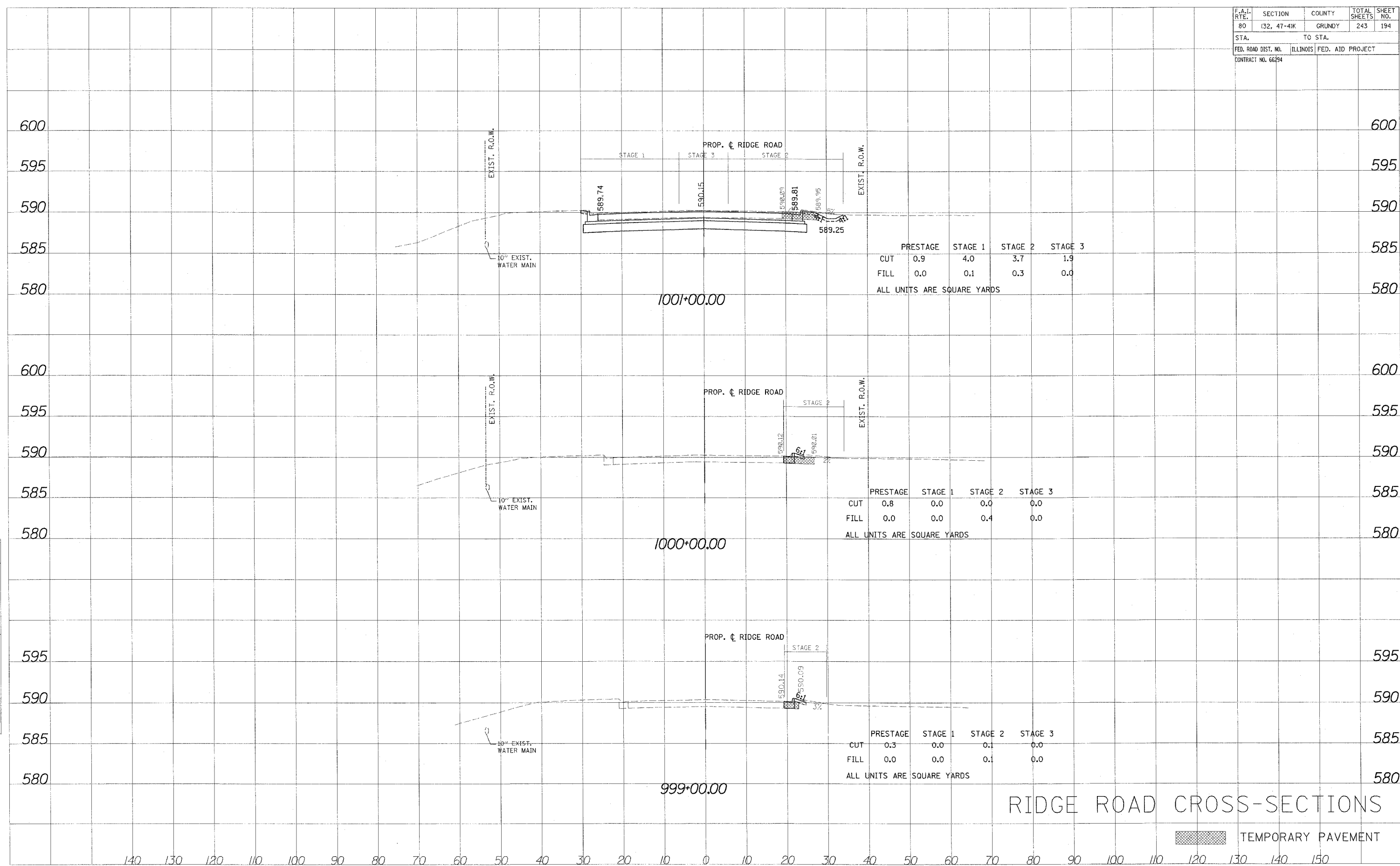
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DATE: 2/10/06

DRAWN BY: TCK
CHECKED BY: JJC

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4K)	GRUNDY	243	194
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 66294				

FINAL SURVEY	DATE
SURVEY	BY
NOTE BOOK	
AREAS CHECKED	

ORIGINAL SURVEY	DATE
FLOW PLAN	BY
NOTE BOOK	
AREAS CHECKED	

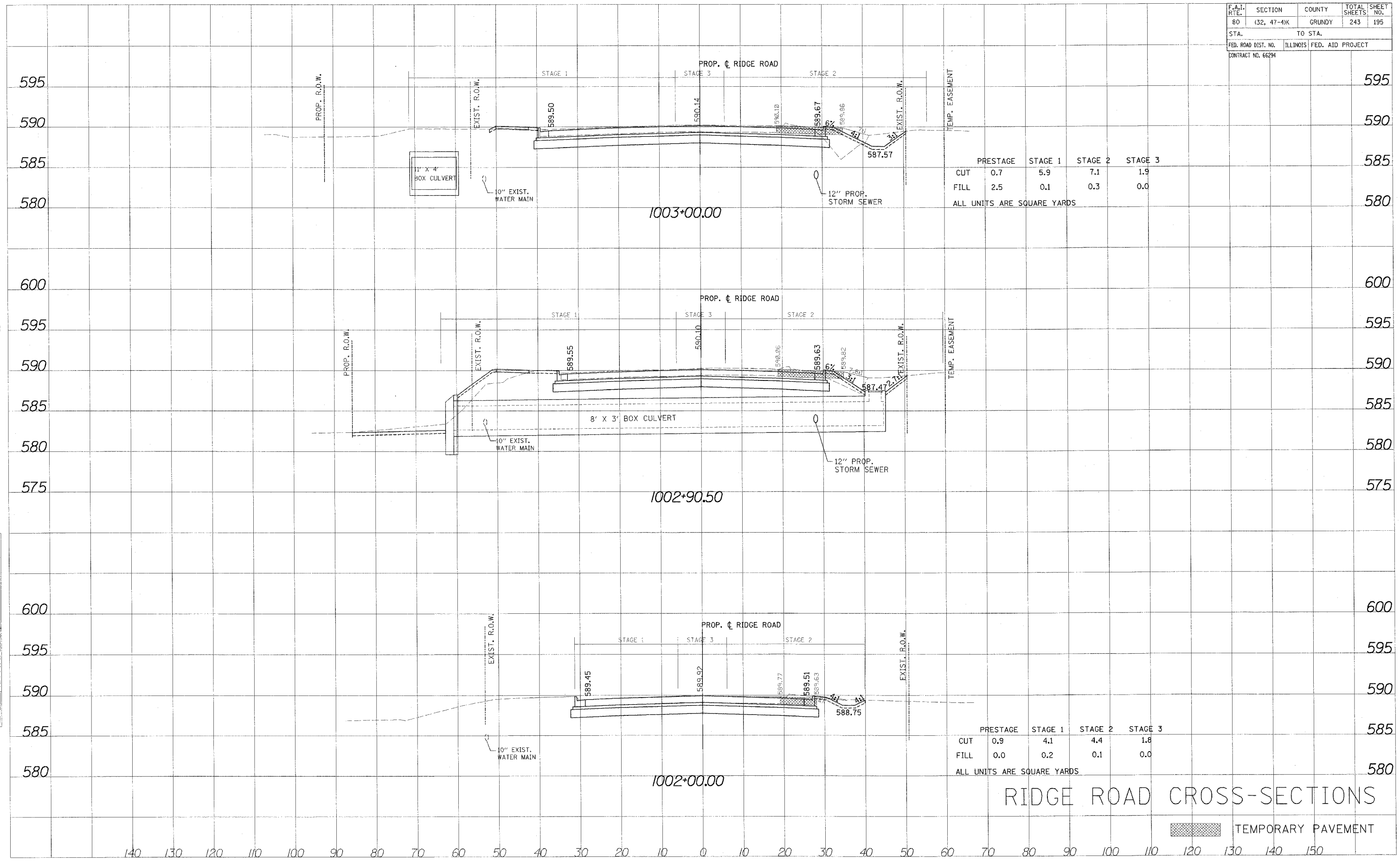


RIDGE ROAD CROSS-SECTIONS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	GRUNDY	243	195
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 66294				

BY	DATE

BY	DATE



	PRESTAGE	STAGE 1	STAGE 2	STAGE 3
CUT	0.7	5.9	7.1	1.9
FILL	2.5	0.1	0.3	0.0
ALL UNITS ARE SQUARE YARDS				

	PRESTAGE	STAGE 1	STAGE 2	STAGE 3
CUT	0.9	4.1	4.4	1.8
FILL	0.0	0.2	0.1	0.0
ALL UNITS ARE SQUARE YARDS				

RIDGE ROAD CROSS-SECTIONS

TEMPORARY PAVEMENT

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

BY	DATE
DESIGNED	
DRAWN	
CHECKED	
IN CHARGE	
APPROVED	

BY	DATE
DESIGNED	
DRAWN	
CHECKED	
IN CHARGE	
APPROVED	



	PRESTAGE	STAGE 1	STAGE 2	STAGE 3
CUT	3.0	5.4	9.9	1.4
FILL	0.0	0.3	0.1	0.8

ALL UNITS ARE SQUARE YARDS

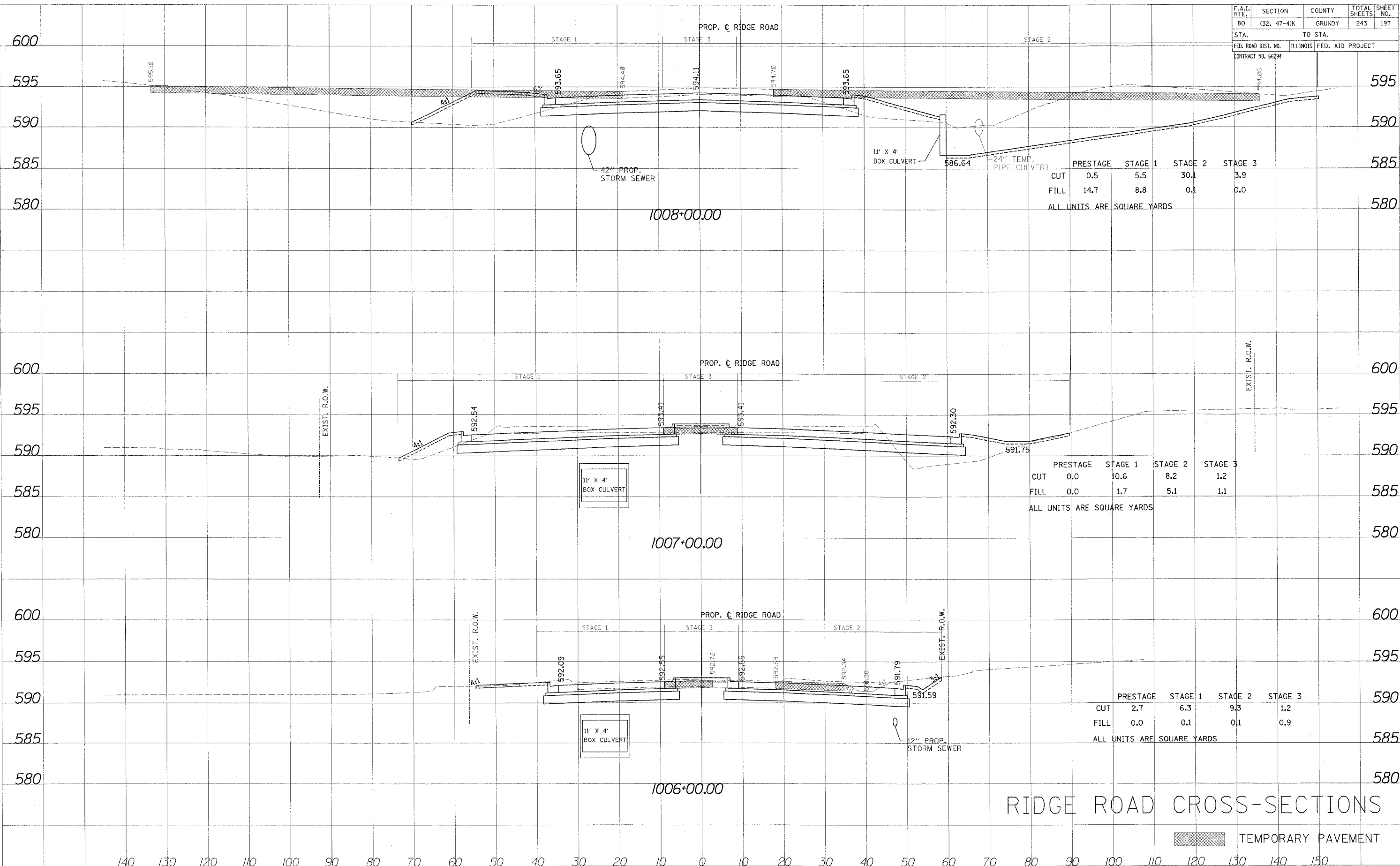
	PRESTAGE	STAGE 1	STAGE 2	STAGE 3
CUT	2.4	5.9	12.2	1.7
FILL	0.0	0.1	0.0	0.0

ALL UNITS ARE SQUARE YARDS

TEMPORARY PAVEMENT

RIDGE ROAD CROSS-SECTIONS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	(32, 47-4)K	GRUNDY	243	197
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 66294				



	PRESTAGE	STAGE 1	STAGE 2	STAGE 3
CUT	0.5	5.5	30.1	3.9
FILL	14.7	8.8	0.1	0.0
ALL UNITS ARE SQUARE YARDS				

	PRESTAGE	STAGE 1	STAGE 2	STAGE 3
CUT	0.0	10.6	8.2	1.2
FILL	0.0	1.7	5.1	1.1
ALL UNITS ARE SQUARE YARDS				

	PRESTAGE	STAGE 1	STAGE 2	STAGE 3
CUT	2.7	6.3	9.3	1.2
FILL	0.0	0.1	0.1	0.9
ALL UNITS ARE SQUARE YARDS				

RIDGE ROAD CROSS-SECTIONS

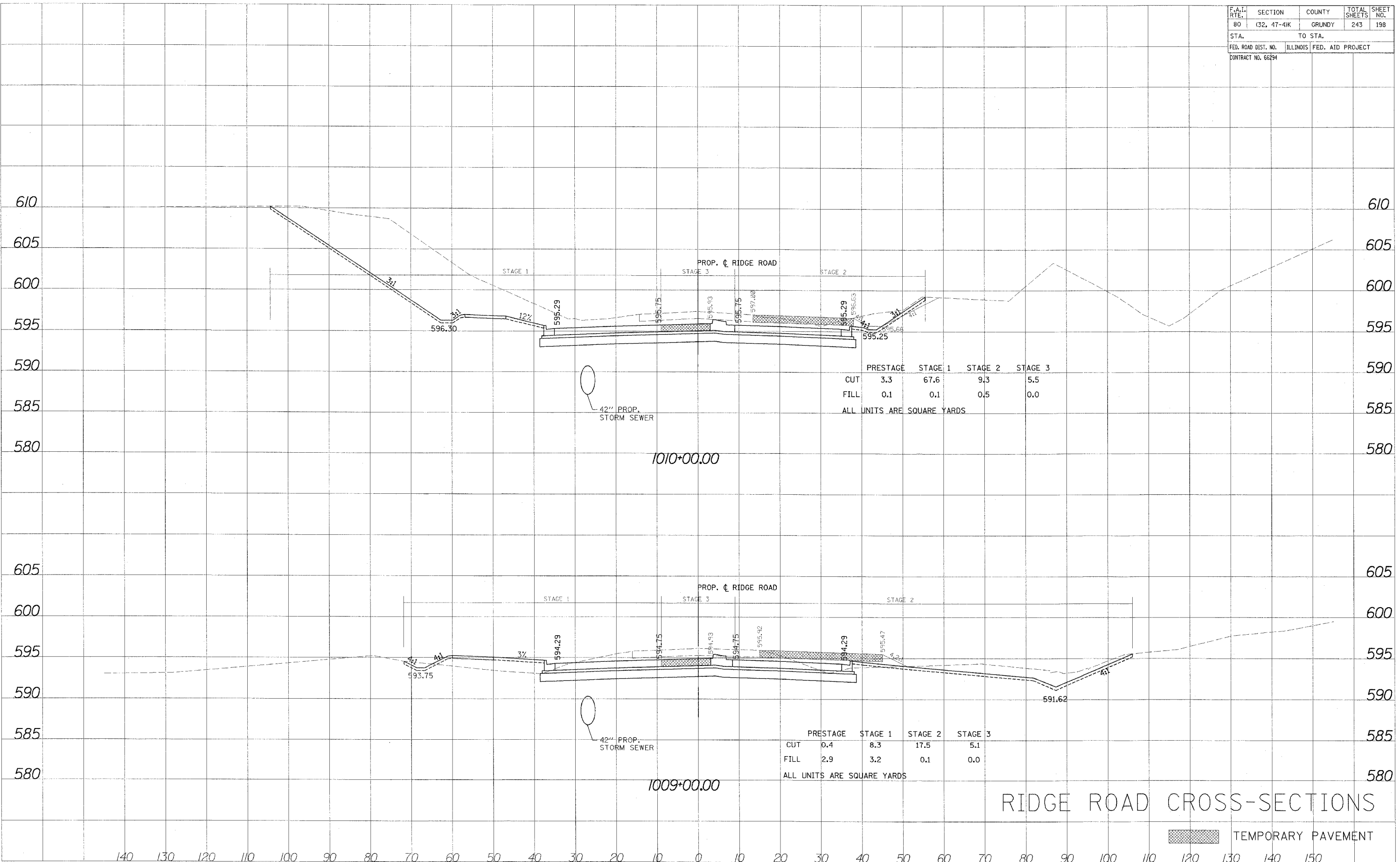
TEMPORARY PAVEMENT

FINAL SURVEY DATE
BY
NO. AREAS CHECKED

ORIGINAL SURVEY DATE
BY
NO. AREAS CHECKED

DATE
BY
SURVEYED
SURVEY
PLOTTED
NOTE BOOK
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BY
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NOTE BOOK
AREAS CHECKED

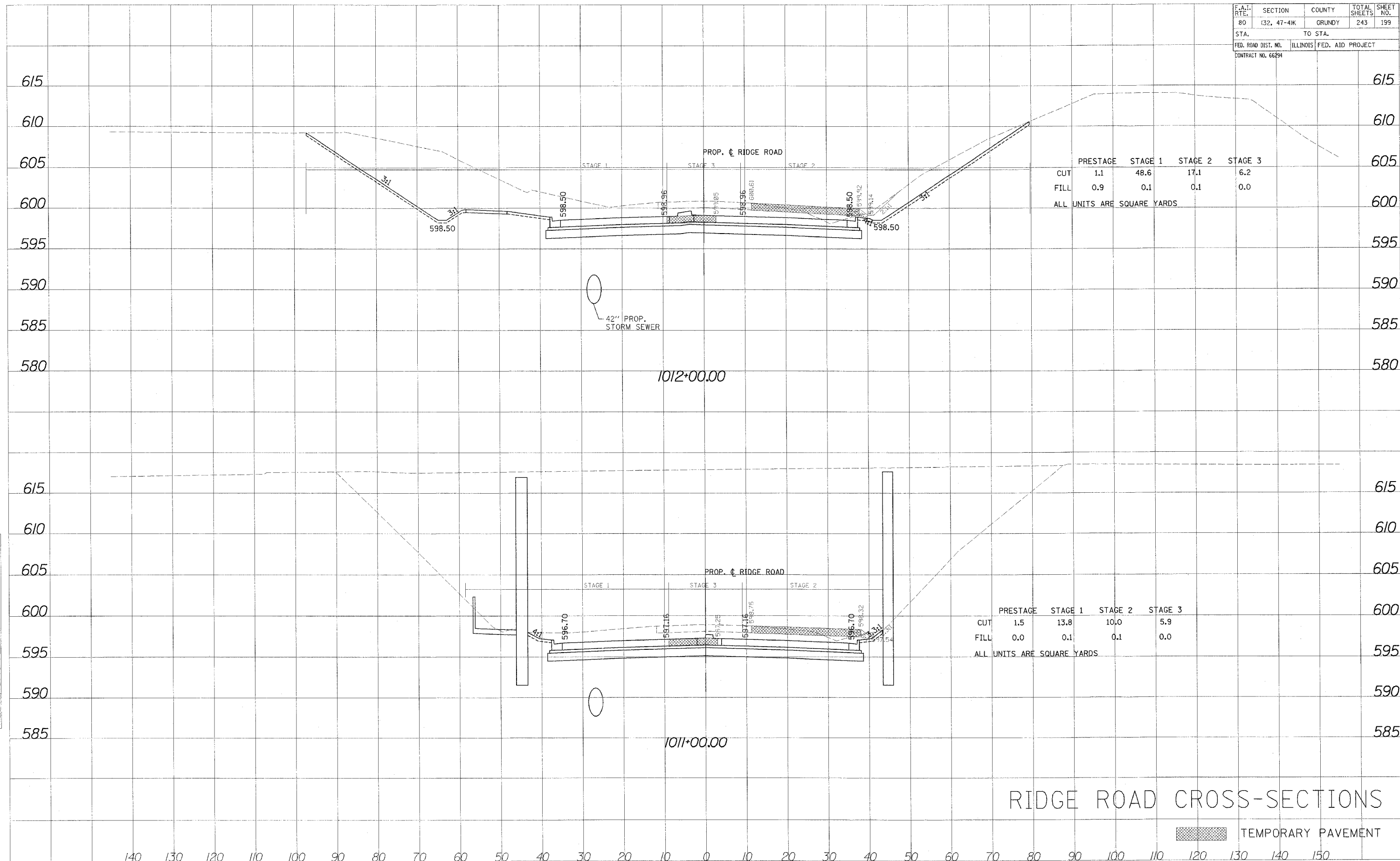


RIDGE ROAD CROSS-SECTIONS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	132, 47-4K	GRUNDY	243	199
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 66294				

BY	DATE
FIN.	
SURVEY	
NOTE BOOK	
AREAS CHECKED	

BY	DATE
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	



	PRESTAGE	STAGE 1	STAGE 2	STAGE 3
CUT	1.1	48.6	17.1	6.2
FILL	0.9	0.1	0.1	0.0
ALL UNITS ARE SQUARE YARDS				

	PRESTAGE	STAGE 1	STAGE 2	STAGE 3
CUT	1.5	13.8	10.0	5.9
FILL	0.0	0.1	0.1	0.0
ALL UNITS ARE SQUARE YARDS				

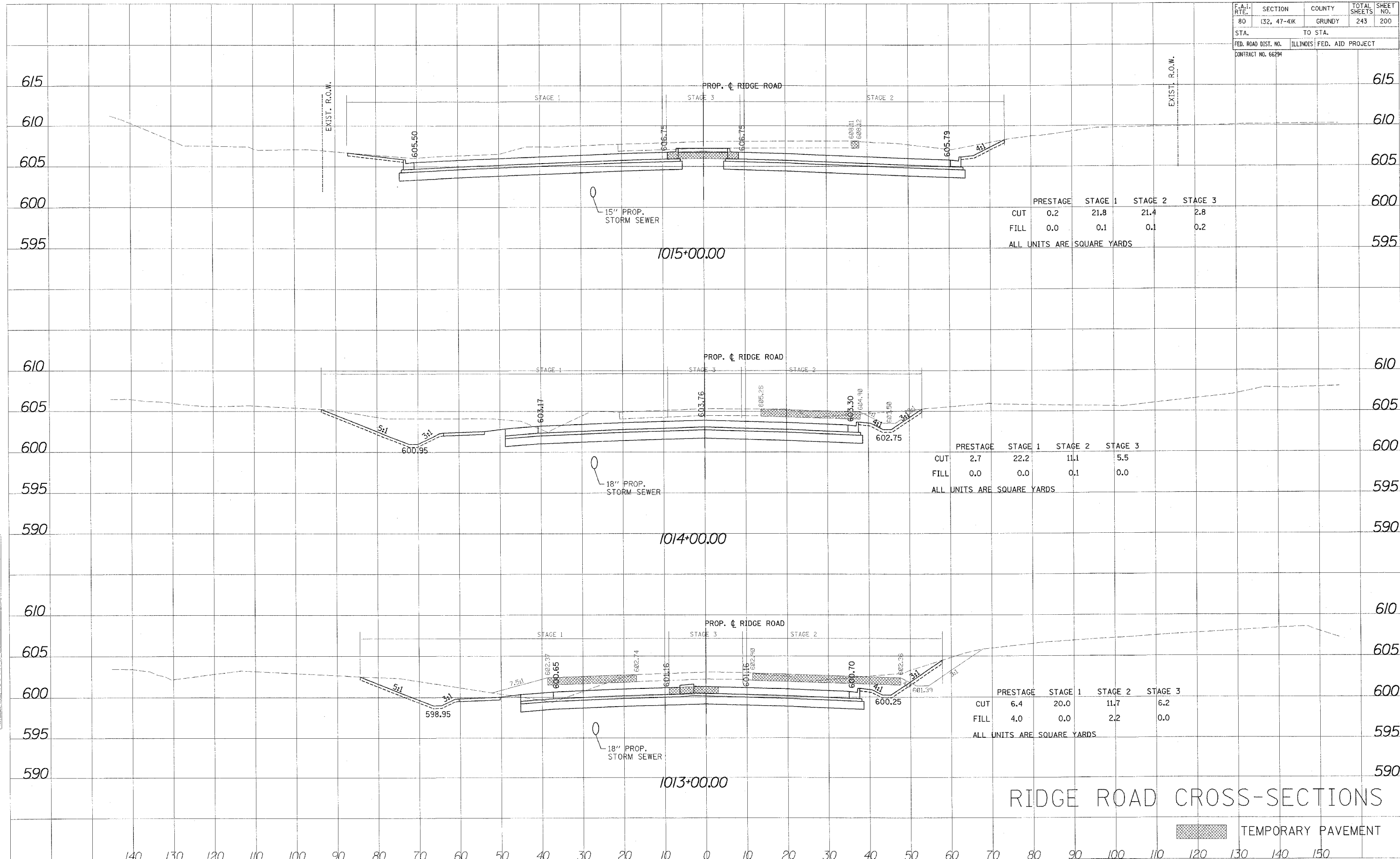
RIDGE ROAD CROSS-SECTIONS

TEMPORARY PAVEMENT

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	132, 47-4K	GRUNDY	243	200
STA. TO STA.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 66294				

DATE	BY
SURVISED	
FLUTED	
NOTE BOOK	
AREAS CHECKED	

DATE	BY
SURVISED	
FLUTED	
NOTE BOOK	
AREAS CHECKED	



RIDGE ROAD CROSS-SECTIONS

TEMPORARY PAVEMENT