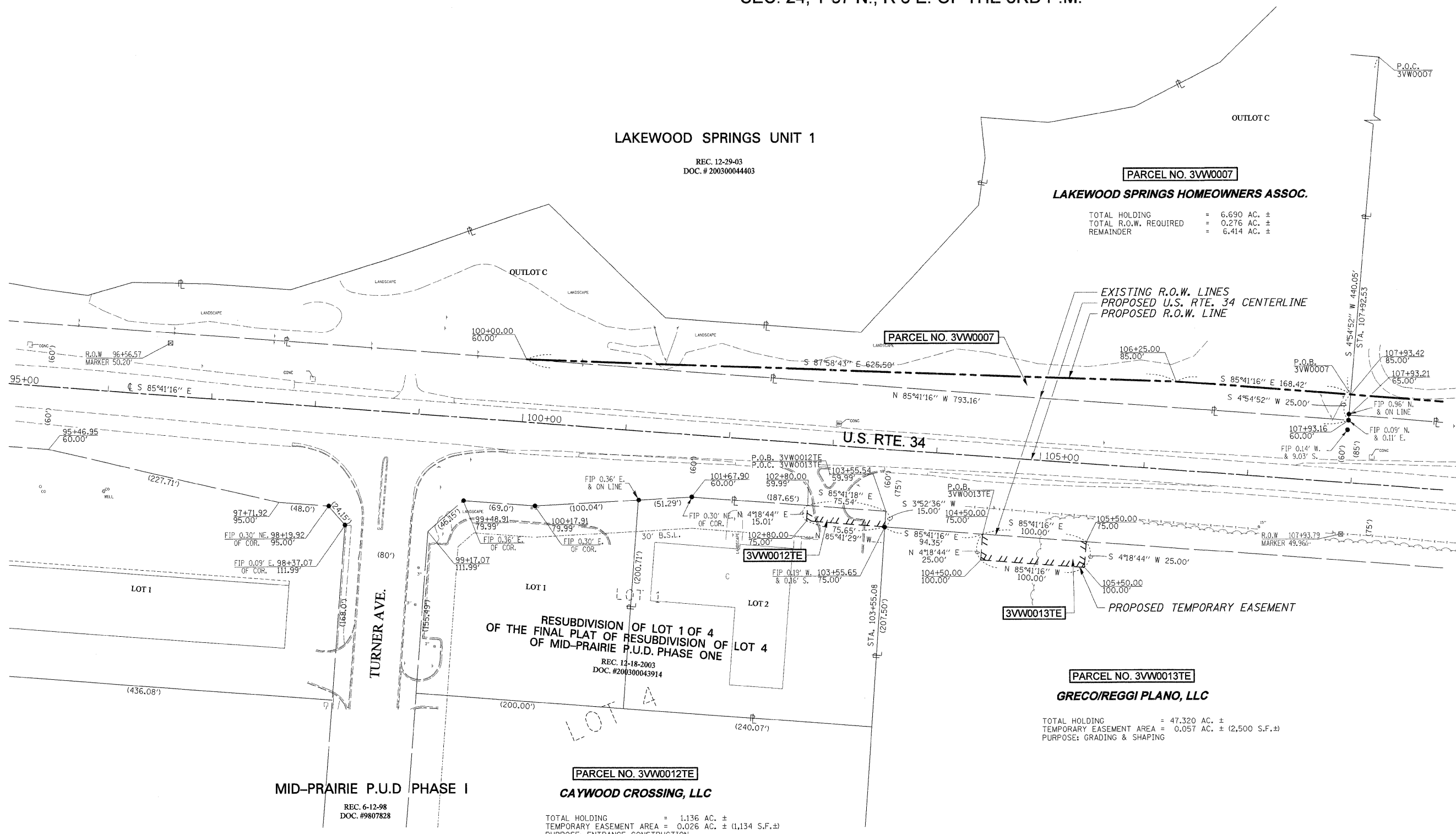


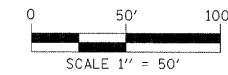
SEC. 24, T 37 N., R 6 E. OF THE 3RD P.M.



AMERICAN
SURVEYING & ENGINEERING, P.C.
841 N. Galena Ave. Dixon, IL 61021
815-288-6231

ILLINOIS PROFESSIONAL DESIGN
FIRM NO. 184-003192

NOTE: GRID DISTANCES AND BEARINGS SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83(97))
ALL AREAS BASED ON GROUND DISTANCES
GRID TO GROUND FACTOR = 1.00004933
GROUND TO GRID FACTOR = 0.99995068



RIGHT OF WAY PLANS

ROUTE FAP 591 (US 34)
SECTION 14R-1
COUNTY KENDALL
JOB NUMBER R-93-003-10
STATION 96+00.00 TO 108+00.00
SCALE 1"=50' TOTAL SHEETS 201 SHEET NO. 429

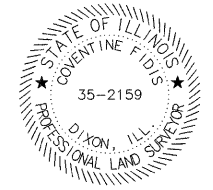
SHEET NO. 8 OF 9 SHEETS

CERTIFICATE OF SURVEY

STATE OF ILLINOIS)
COUNTY OF LEE) S.S

I, COVENTINE FIDIS, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF PROPOSED FAP 591 WAS MADE BY ME OR UNDER MY DIRECTION AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN 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.

DATED THIS ____ DAY OF _____, 2010



COVENTINE FIDIS - ILLINOIS PROFESSIONAL LAND SURVEYOR NUMBER 35-2159 MY LICENSE EXPIRES 11/30/10

SEC. 24, T 37 N., R 6 E. OF THE 3RD P.M.



LAKEWOOD SPRINGS UNIT 1

REC. 12-29-03
DOC. # 200300044403

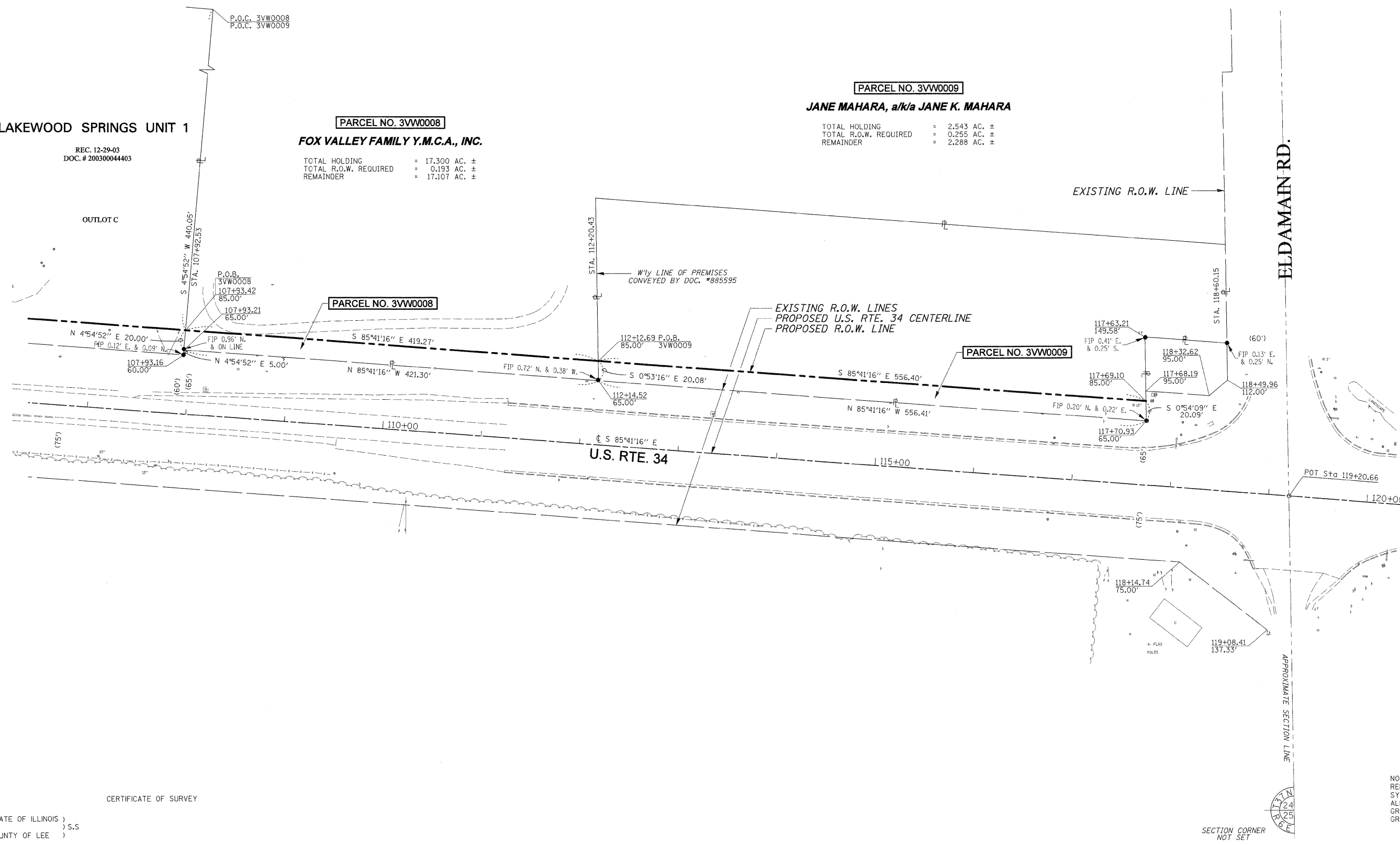
OUTLOT C

PARCEL NO. 3VW0008
FOX VALLEY FAMILY Y.M.C.A., INC.

TOTAL HOLDING = 17.300 AC. ±
TOTAL R.O.W. REQUIRED = 0.193 AC. ±
REMAINDER = 17.107 AC. ±

PARCEL NO. 3VW0009
JANE MAHARA, a/k/a JANE K. MAHARA

TOTAL HOLDING = 2.543 AC. ±
TOTAL R.O.W. REQUIRED = 0.255 AC. ±
REMAINDER = 2.288 AC. ±



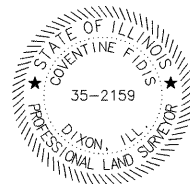
CERTIFICATE OF SURVEY

STATE OF ILLINOIS)
) S.S
COUNTY OF LEE)

I, COVENTINE FIDIS, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF PROPOSED FAP 591 WAS MADE BY ME OR UNDER MY DIRECTION AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN 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.

DATED THIS ____ DAY OF _____, 2010

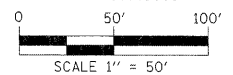
COVENTINE FIDIS - ILLINOIS PROFESSIONAL
LAND SURVEYOR NUMBER 35-2159
MY LICENSE EXPIRES 11/30/10



AMERICAN
SURVEYING & ENGINEERING, P.C.
841 N. Galena Ave. Dixon, IL 61021
815-288-6231

ILLINOIS PROFESSIONAL DESIGN
FIRM NO. 184-003192

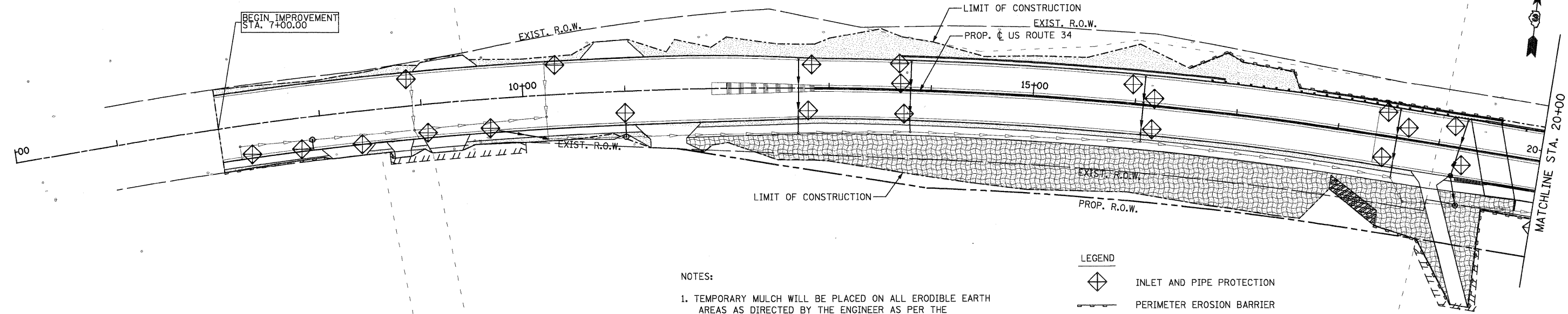
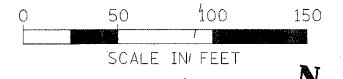
NOTE: GRID DISTANCES AND BEARINGS SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83(97))
ALL AREAS BASED ON GROUND DISTANCES
GRID TO GROUND FACTOR = 1.00004933
GROUND TO GRID FACTOR = 0.99995068



RIGHT OF WAY PLANS

ROUTE FAP 591 (US 34)
SECTION 14R-1
COUNTY KENDALL
JOB NUMBER R-93-003-10
STATION 108+00.00 TO 118+00.00
SCALE 1"=50' TOTAL SHEETS SHEET NO. 202 429

SHEET NO. 9 OF 9 SHEETS

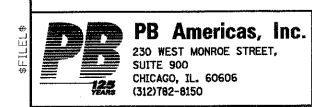
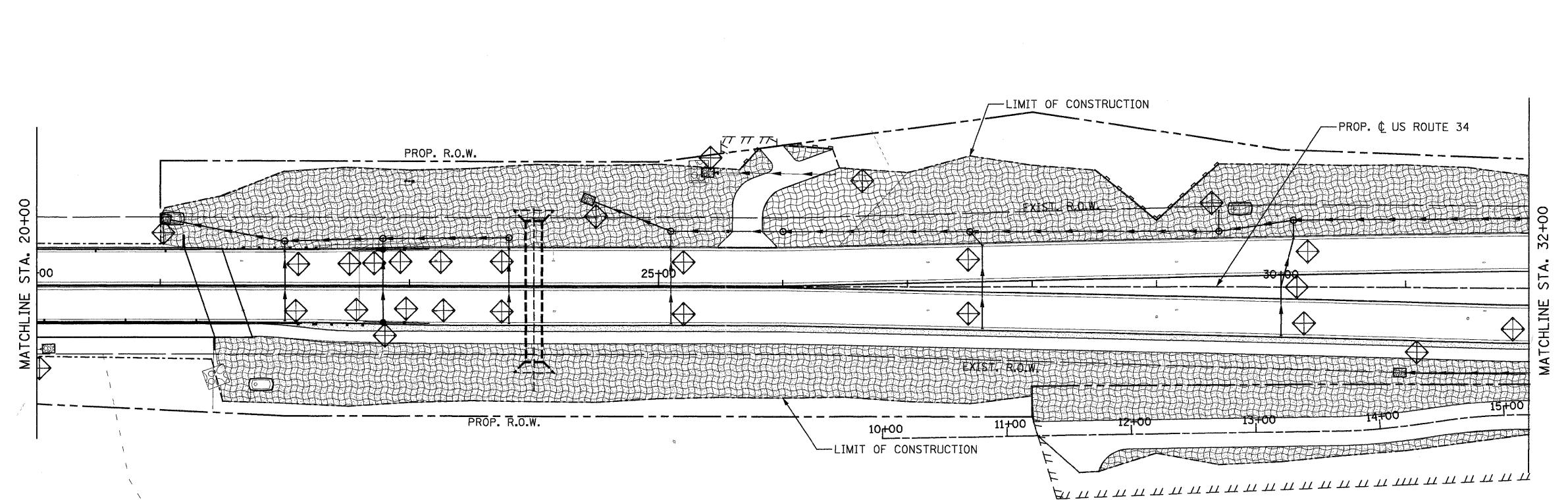


NOTES:

1. TEMPORARY MULCH WILL BE PLACED ON ALL ERODIBLE EARTH AREAS AS DIRECTED BY THE ENGINEER AS PER THE SPECIFICATIONS.
2. TEMPORARY MULCH WILL MEET REQUIREMENTS OF AND BE PAID FOR AS "MULCH, METHOD 2".
3. ALL UNPAVED AREAS TO BE COVERED WITH CLASS 2 SEEDING EXCEPT WHERE CLASS 4B SEEDING IS SHOWN

LEGEND

- INLET AND PIPE PROTECTION
- PERIMETER EROSION BARRIER
- EROSION CONTROL BLANKET/CLASS 2 SEEDING
- SEDIMENTATION BASIN
- RIP RAP
- CLASS 2 SEEDING



FILE NAME = 0366985-eros01.dgn	DESIGNED - RJD	REVISED -
PLOT SCALE = 5/8"	DRAWN - RJD	REVISED -
PLOT DATE = 19-AUG-2011 08:22	CHECKED - PMK	REVISED -
	DATE - 08-18-2011	REVISED -







**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL & LANDSCAPING PLANS
US ROUTE 34**

SCALE: 1" = 50' EROS - 1 OF 5 STA. 7+00 TO STA. 32+00

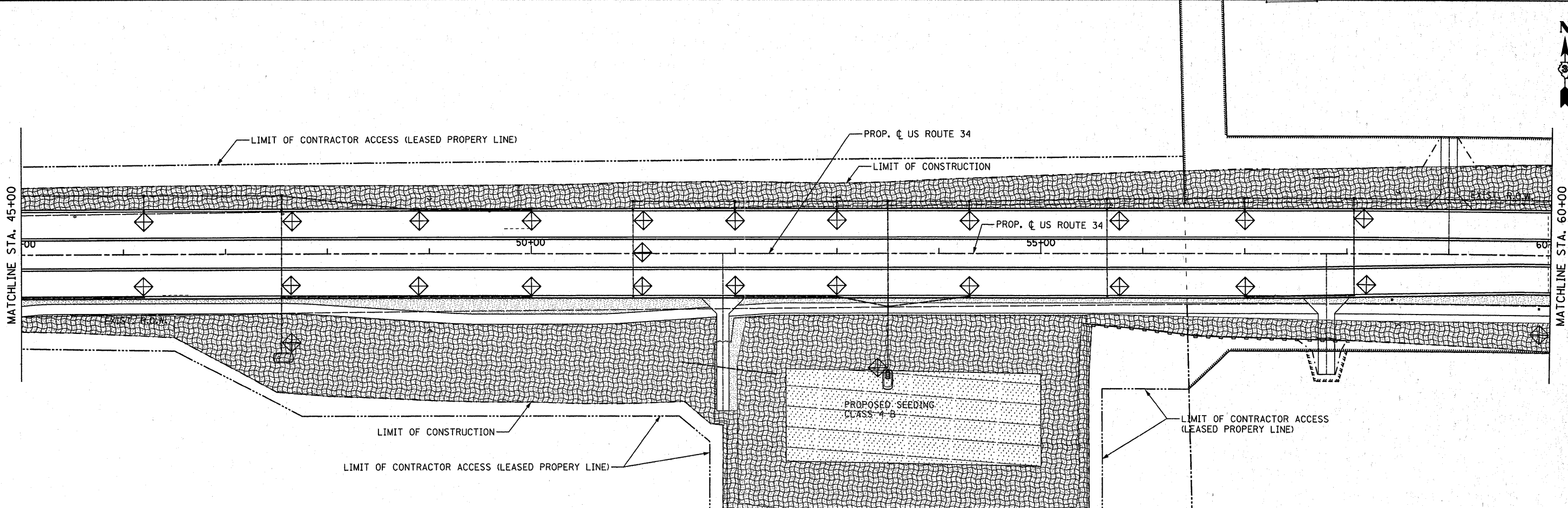
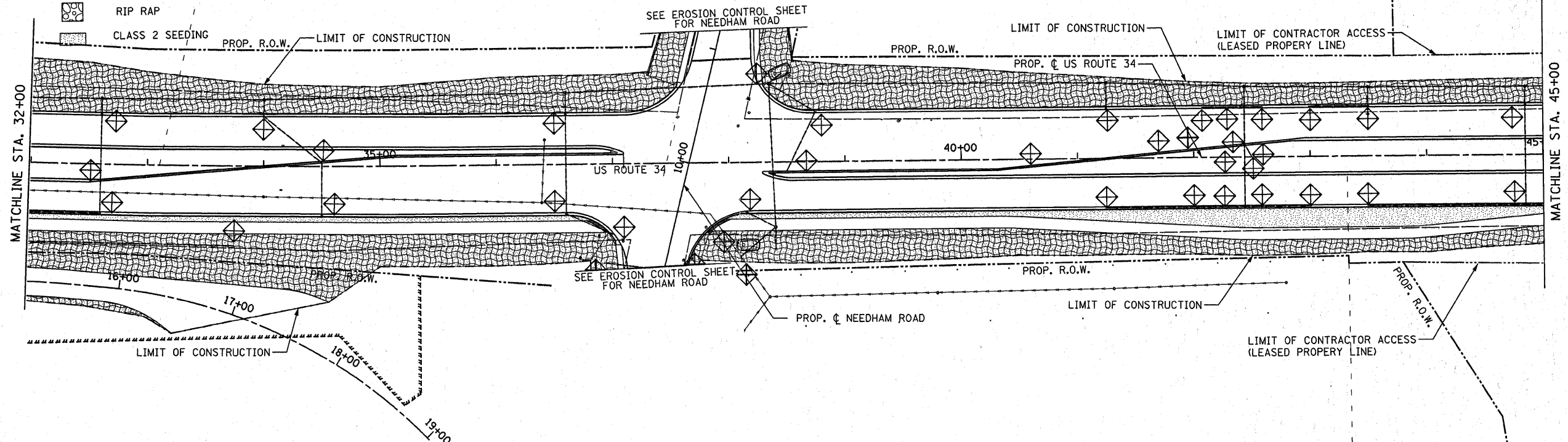
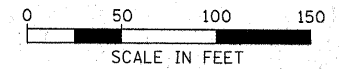
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	203
FINAL SUBMITTAL			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

LEGEND

-  INLET AND PIPE PROTECTION
-  PERIMETER EROSION BARRIER
-  EROSION CONTROL BLANKET/CLASS 2 SEEDING
-  SEDIMENTATION BASIN
-  RIP RAP
-  CLASS 2 SEEDING

NOTES:

1. TEMPORARY MULCH WILL BE PLACED ON ALL ERODIBLE EARTH AREAS AS DIRECTED BY THE ENGINEER AS PER THE SPECIFICATIONS.
2. TEMPORARY MULCH WILL MEET REQUIREMENTS OF AND BE PAID FOR AS "MULCH, METHOD 2".
3. ALL UNPAVED AREAS TO BE COVERED WITH CLASS 2 SEEDING EXCEPT WHERE CLASS 4B SEEDING IS SHOWN.



PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL 60606
 (312) 782-8150

FILE NAME = dunoenbd
 PLOT SCALE = 50.0000' / 1" = 50'
 PLOT DATE = 11/22/2011

DESIGNED - RJD
 DRAWN - RJD
 CHECKED - PMK
 DATE - 08-18-2011

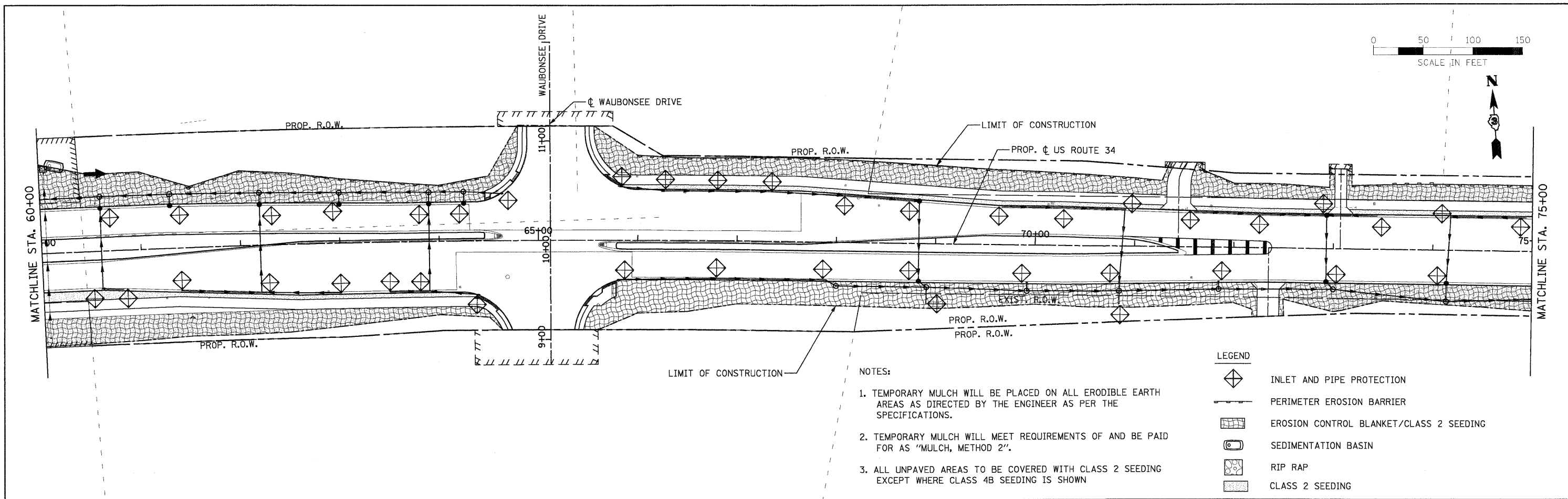
REVISED - BDD 11/22/2011
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL & LANDSCAPING
 US ROUTE 34**

SCALE: 1" = 50' EROS - 2 OF 5 STA. 32+00 TO STA. 60+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	204
FINAL SUBMITTAL			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

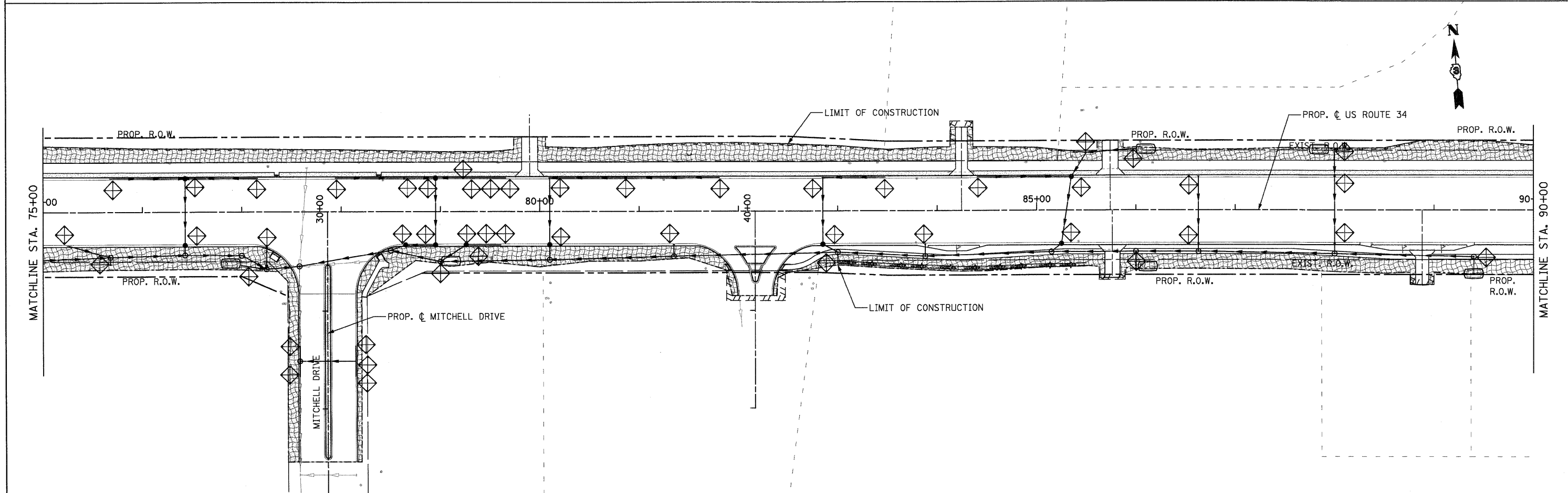


NOTES:

1. TEMPORARY MULCH WILL BE PLACED ON ALL ERODIBLE EARTH AREAS AS DIRECTED BY THE ENGINEER AS PER THE SPECIFICATIONS.
2. TEMPORARY MULCH WILL MEET REQUIREMENTS OF AND BE PAID FOR AS "MULCH, METHOD 2".
3. ALL UNPAVED AREAS TO BE COVERED WITH CLASS 2 SEEDING EXCEPT WHERE CLASS 4B SEEDING IS SHOWN

LEGEND

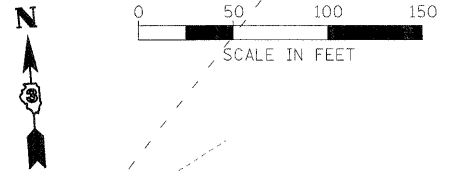
- INLET AND PIPE PROTECTION
- PERIMETER EROSION BARRIER
- EROSION CONTROL BLANKET/CLASS 2 SEEDING
- SEDIMENTATION BASIN
- RIP RAP
- CLASS 2 SEEDING



PB Americas, Inc. 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL. 60606 (312)782-8150	FILE NAME = D366985-eros#3.dgn	DESIGNED - RJD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EROSION CONTROL & LANDSCAPING PLANS US ROUTE 34		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 50	DRAWN - RJD	REVISED -		591	13R-214R-1 & BR-1(1)15R-1	KENDALL	429	205			
	PLOT DATE = 19-AUG-2011 08:23	CHECKED - PMK	REVISED -		SCALE: 1" = 50'		EROS - 3 OF 5	STA. 60+00 TO STA. 90+00	FINAL SUBMITTAL		CONTRACT NO. 66985	
		DATE - 08-18-2011	REVISED -		ILLINOIS FED. AID PROJECT							

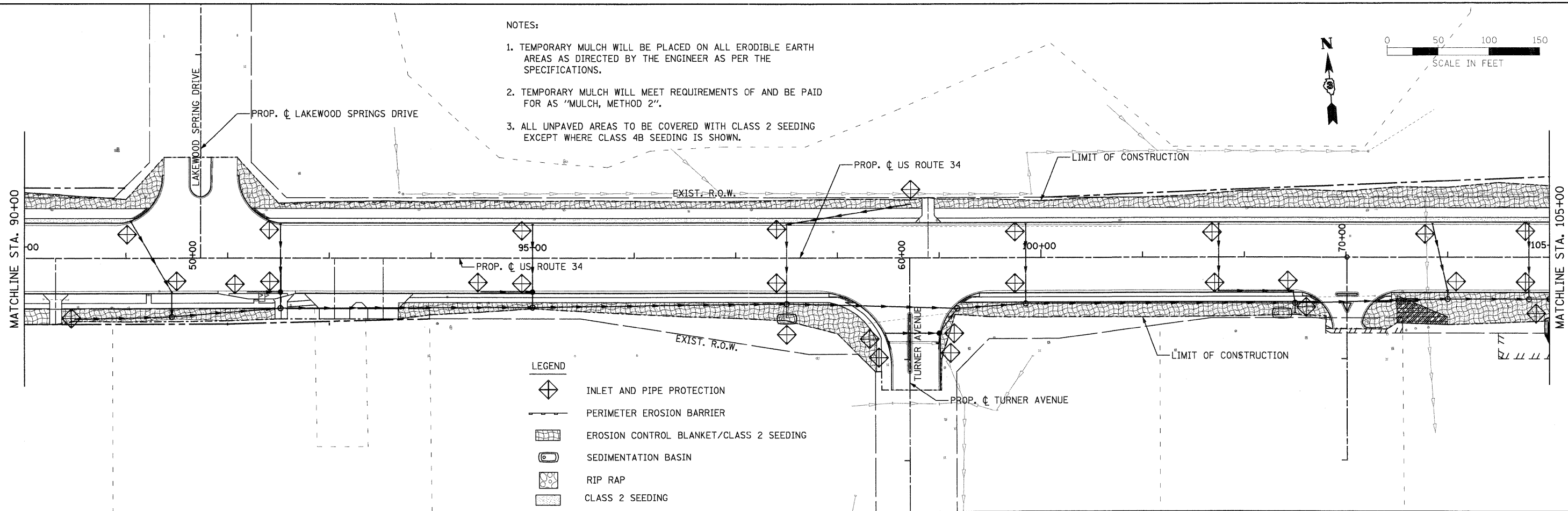
NOTES:

1. TEMPORARY MULCH WILL BE PLACED ON ALL ERODIBLE EARTH AREAS AS DIRECTED BY THE ENGINEER AS PER THE SPECIFICATIONS.
2. TEMPORARY MULCH WILL MEET REQUIREMENTS OF AND BE PAID FOR AS "MULCH, METHOD 2".
3. ALL UNPAVED AREAS TO BE COVERED WITH CLASS 2 SEEDING EXCEPT WHERE CLASS 4B SEEDING IS SHOWN.



MATCHLINE STA. 90+00

MATCHLINE STA. 105+00

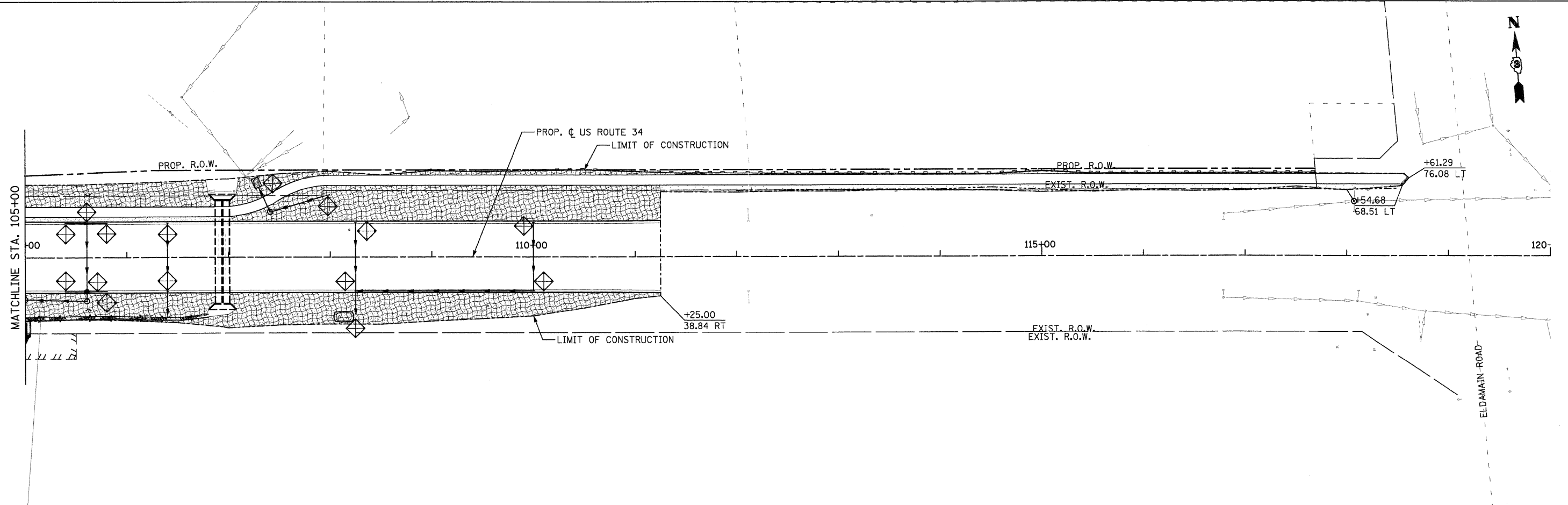


LEGEND

- INLET AND PIPE PROTECTION
- PERIMETER EROSION BARRIER
- EROSION CONTROL BLANKET/CLASS 2 SEEDING
- SEDIMENTATION BASIN
- RIP RAP
- CLASS 2 SEEDING

MATCHLINE STA. 105+00

120+



PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL 60606
 (312)782-8150

FILE NAME = D366985-eros24.dgn
PLOT SCALE = 50
PLOT DATE = 19-AUG-2011 08:24

DESIGNED - RJD	REVISED -
DRAWN - RJD	REVISED -
CHECKED - PMK	REVISED -
DATE - 08-18-2011	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**







**EROSION CONTROL & LANDSCAPING PLANS
 US ROUTE 34**

SCALE: 1" = 50' EROS - 4 OF 5 STA. 90+00 TO STA. 120+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	206
FINAL SUBMITTAL			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

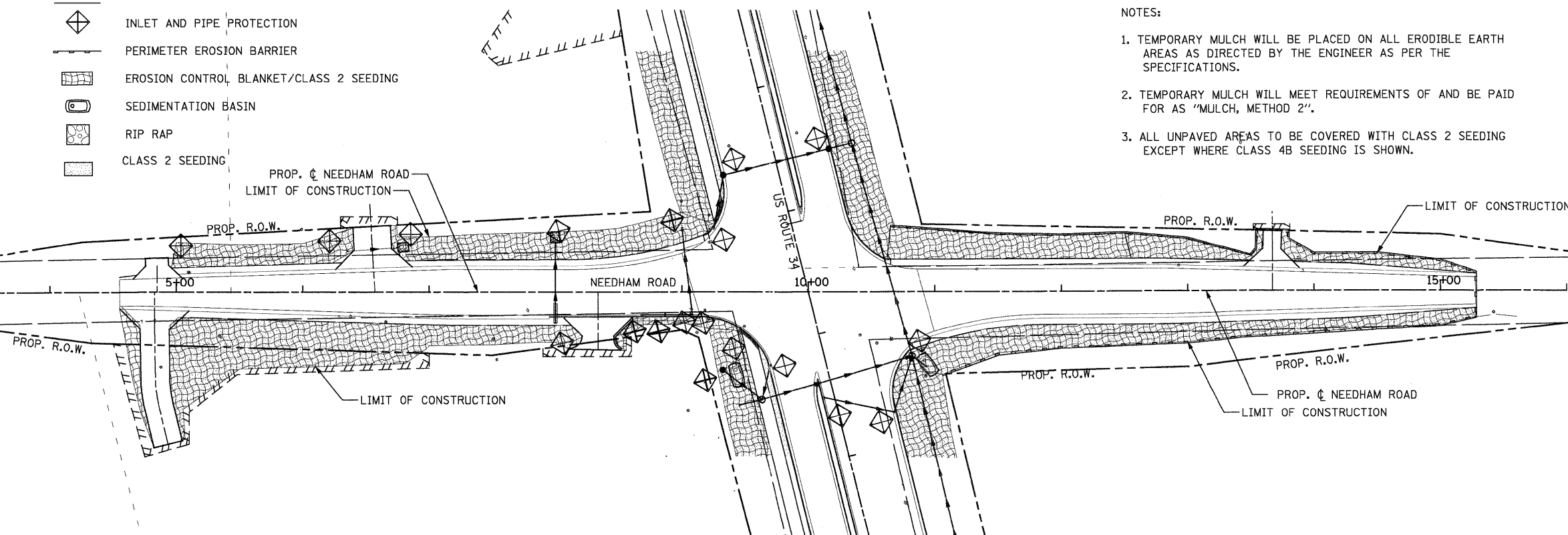


LEGEND

-  INLET AND PIPE PROTECTION
-  PERIMETER EROSION BARRIER
-  EROSION CONTROL BLANKET/CLASS 2 SEEDING
-  SEDIMENTATION BASIN
-  RIP RAP
-  CLASS 2 SEEDING

NOTES:

1. TEMPORARY MULCH WILL BE PLACED ON ALL ERODIBLE EARTH AREAS AS DIRECTED BY THE ENGINEER AS PER THE SPECIFICATIONS.
2. TEMPORARY MULCH WILL MEET REQUIREMENTS OF AND BE PAID FOR AS "MULCH, METHOD 2".
3. ALL UNPAVED AREAS TO BE COVERED WITH CLASS 2 SEEDING EXCEPT WHERE CLASS 4B SEEDING IS SHOWN.



**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

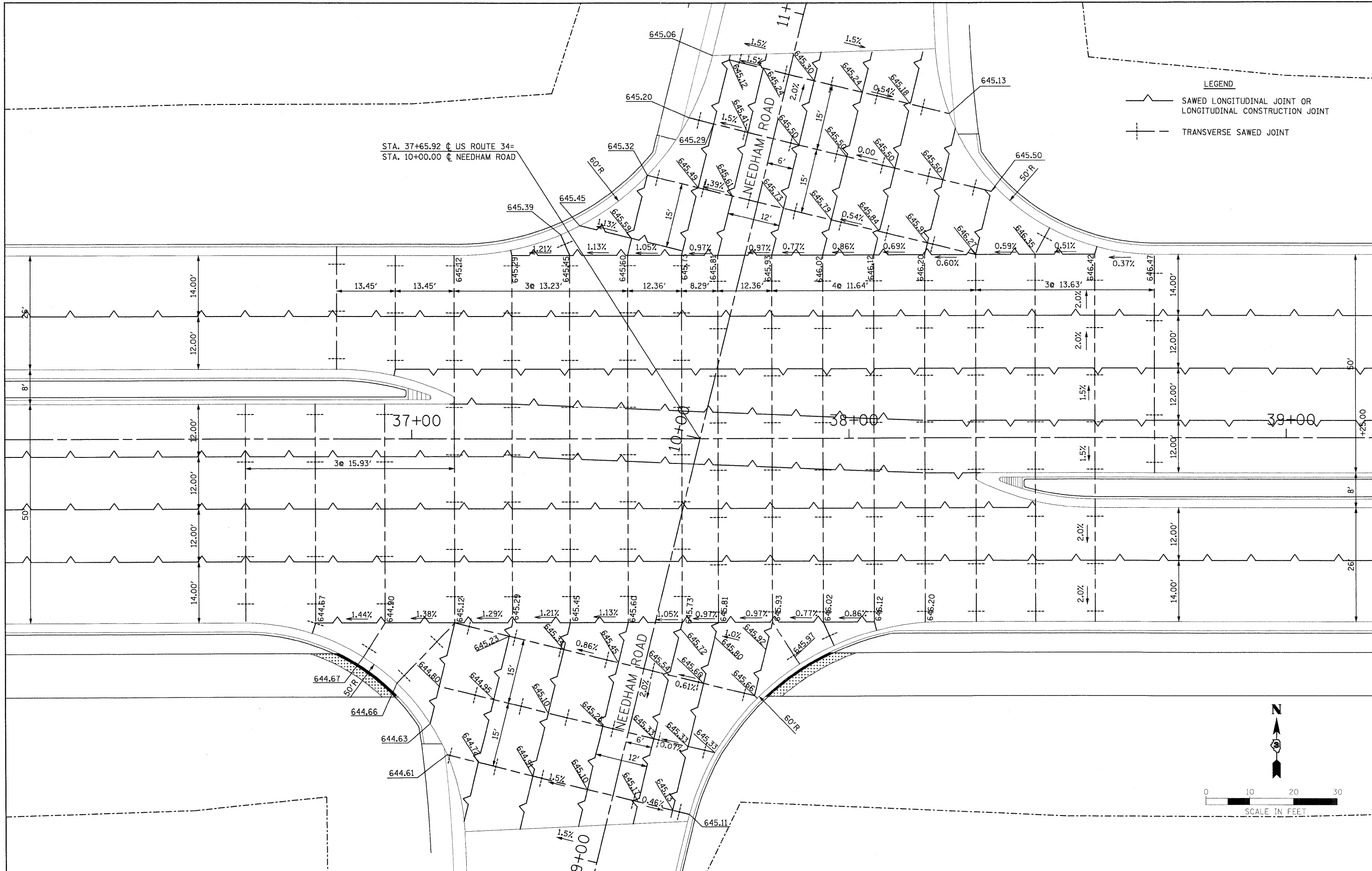
**EROSION CONTROL & LANDSCAPING PLANS
NEEDHAM ROAD**

SCALE: 1" = 50' EROS - 5 OF 5 STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	207
FINAL SUBMITTAL		CONTRACT NO. 66985		
ILLINOIS FED. AID PROJECT				

PB Americas, Inc.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL, 60606
312/782-8150

FILE NAME = D366985-eros05.dgn	DESIGNED - RJD	REVISED -
	DRAWN - RJD	REVISED -
PLOT SCALE = 50	CHECKED - PMK	REVISED -
PLOT DATE = 19-AUG-2011 08:24	DATE - 08-18-2011	REVISED -



STA. 37+65.92 @ US ROUTE 34=
 STA. 10+00.00 @ NEEDHAM ROAD

LEGEND
 — SAWED LONGITUDINAL JOINT OR
 LONGITUDINAL CONSTRUCTION JOINT
 — TRANSVERSE SAWED JOINT

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERSECTION DETAIL
 NEEDHAM ROAD**

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL, 60606
 (312)782-8150



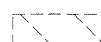
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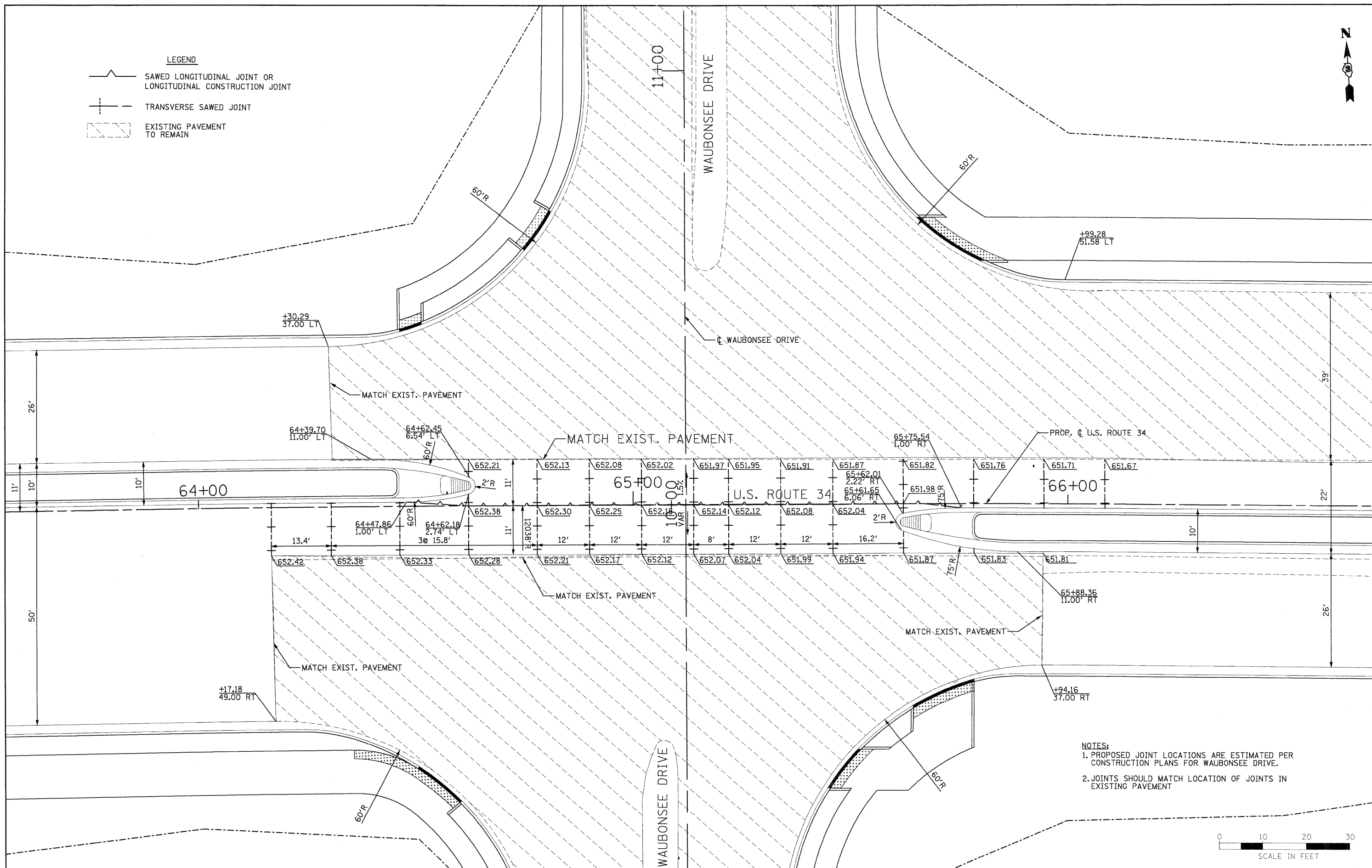
REVISED -
 REVISED -
 REVISED -
 REVISED -

SCALE: AS SHOWN INT - 1 OF 7 STA. TO STA.


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	208
FINAL SUBMITTAL			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

LEGEND

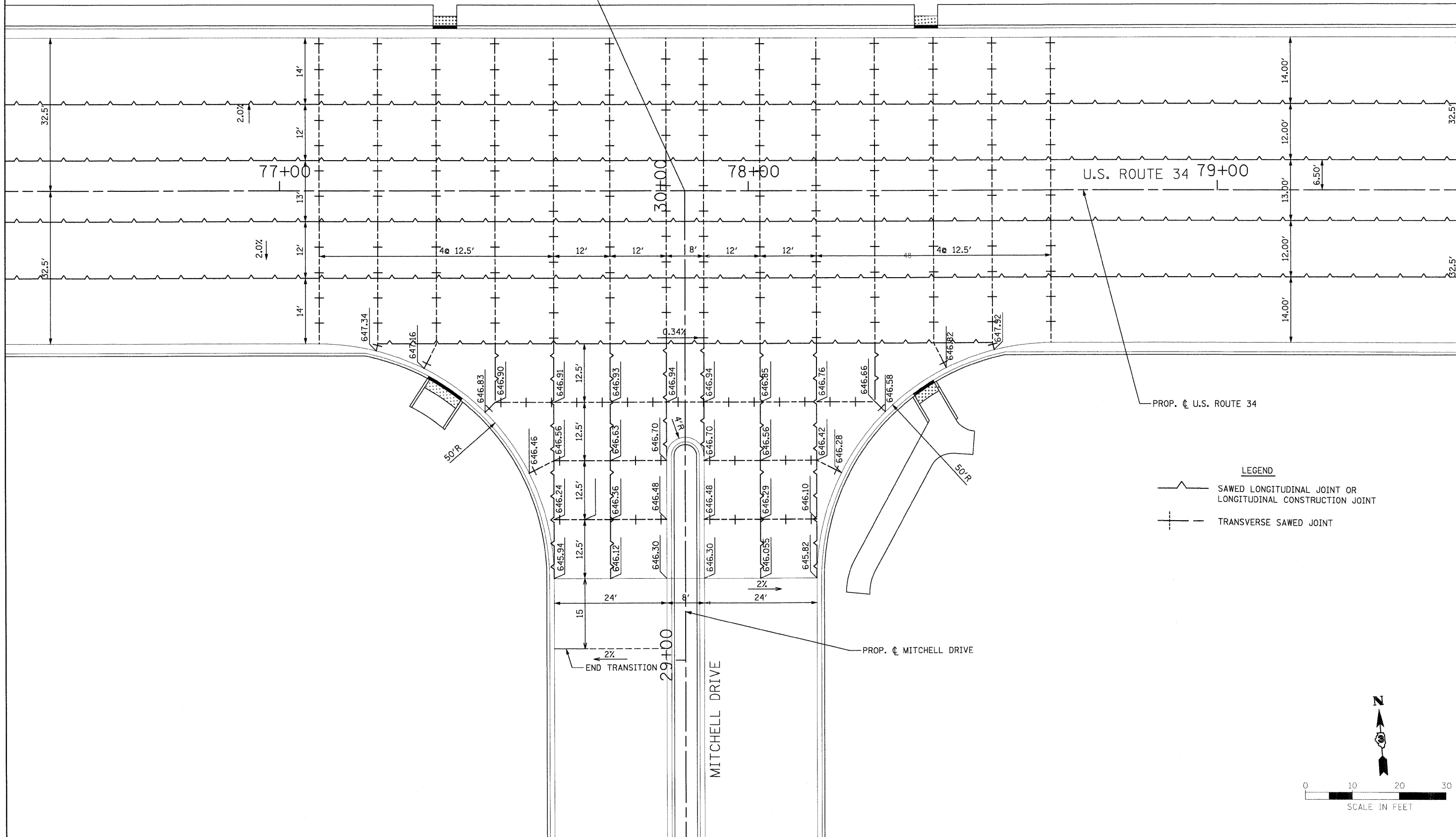
	SAWED LONGITUDINAL JOINT OR LONGITUDINAL CONSTRUCTION JOINT
	TRANSVERSE SAWED JOINT
	EXISTING PAVEMENT TO REMAIN



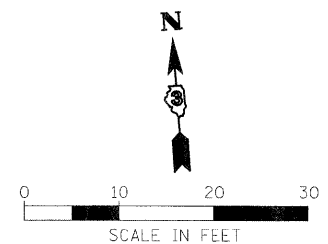
NOTES:
 1. PROPOSED JOINT LOCATIONS ARE ESTIMATED PER CONSTRUCTION PLANS FOR WAUBONSEE DRIVE.
 2. JOINTS SHOULD MATCH LOCATION OF JOINTS IN EXISTING PAVEMENT

 PB Americas, Inc. 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL 60606 (312)782-8150	FILE NAME = D366985-sht-2Waubensee.dgn PLOT SCALE = PLOT DATE = 19-AUG-2011 08:25	DESIGNED - MGM DRAWN - MCM CHECKED - MMS DATE - 08-18-2011	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INTERSECTION DETAIL WAUBONSEE DRIVE	SCALE: AS SHOWN INT - 2 OF 7 STA. TO STA.	F.A.P. RTE. 591 13R-2;14R-1 & BR-1(1);15R-1 FINAL SUBMITTAL	SECTION COUNTY KENDALL CONTRACT NO. 66985	TOTAL SHEETS 429	SHEET NO. 209	ILLINOIS FED. AID PROJECT
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STA. 77+86.46 \dot{C} US ROUTE 34=
 STA. 30+00.00 \dot{C} MITCHELL DRIVE



LEGEND
 SAWED LONGITUDINAL JOINT OR LONGITUDINAL CONSTRUCTION JOINT
 TRANSVERSE SAWED JOINT



**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERSECTION DETAIL
 MITCHELL DRIVE**

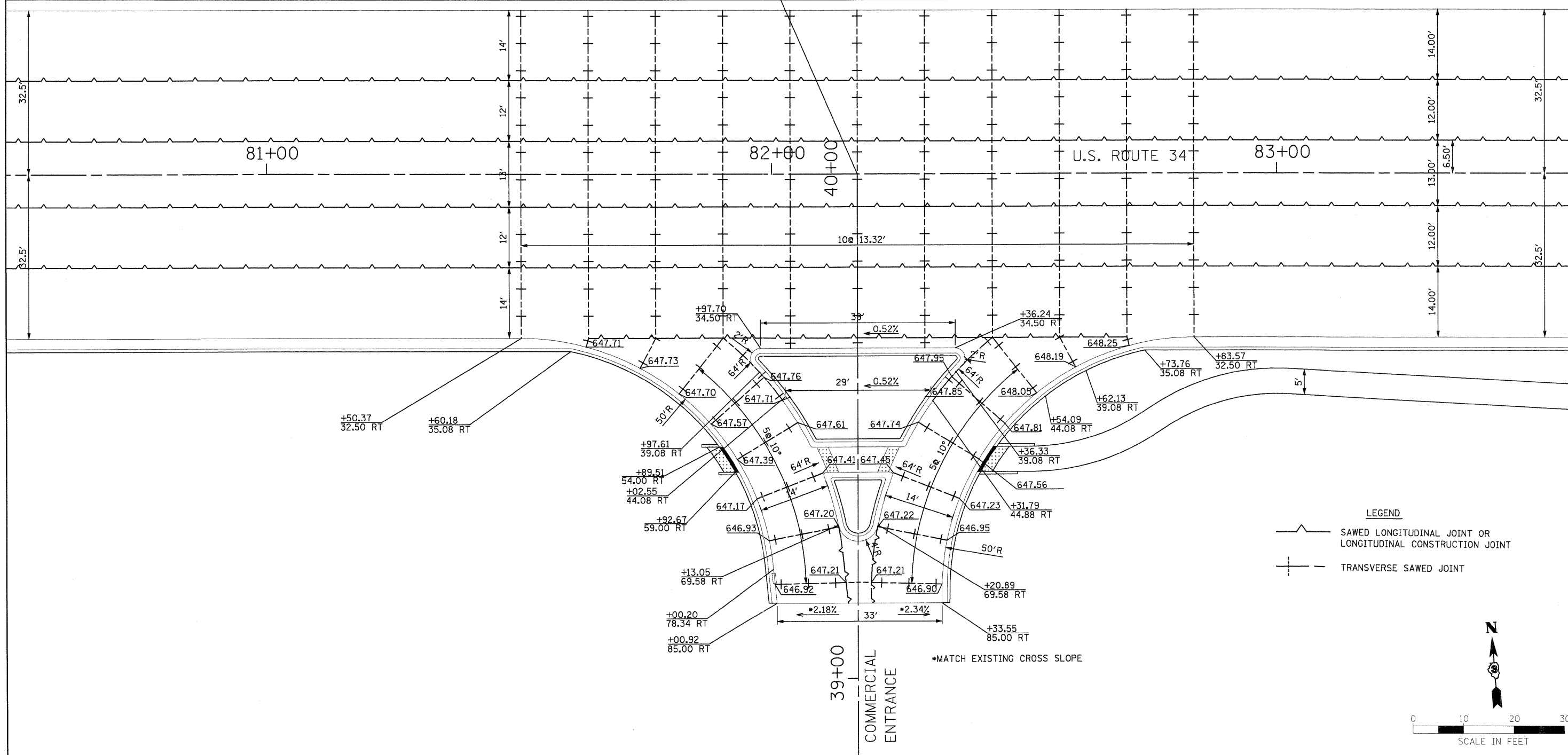
SCALE: AS SHOWN INT - 3 OF 7 STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	210
FINAL SUBMITTAL		CONTRACT NO. 66985		
ILLINOIS FED. AID PROJECT				

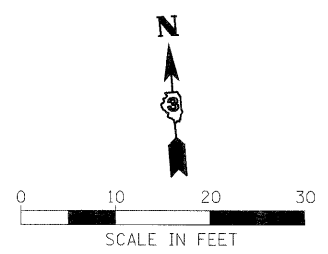
PB Americas, Inc.
 250 WEST MONROE STREET,
 SUITE 300
 CHICAGO, IL, 60606
 (312)782-8150

FILE NAME = D366985-sht-3Mitchell.dgn	DESIGNED - MGM	REVISED -
PLOT SCALE =	DRAWN - MGM	REVISED -
PLOT DATE = 19-AUG-2011 08:25	CHECKED - MMS	REVISED -
	DATE - 08-18-2011	REVISED -

STA. 82+16.94 U.S. ROUTE 34=
 STA. 40+00.00 COMMERCIAL ENTRANCE



LEGEND
 — SAWED LONGITUDINAL JOINT OR LONGITUDINAL CONSTRUCTION JOINT
 + — TRANSVERSE SAWED JOINT

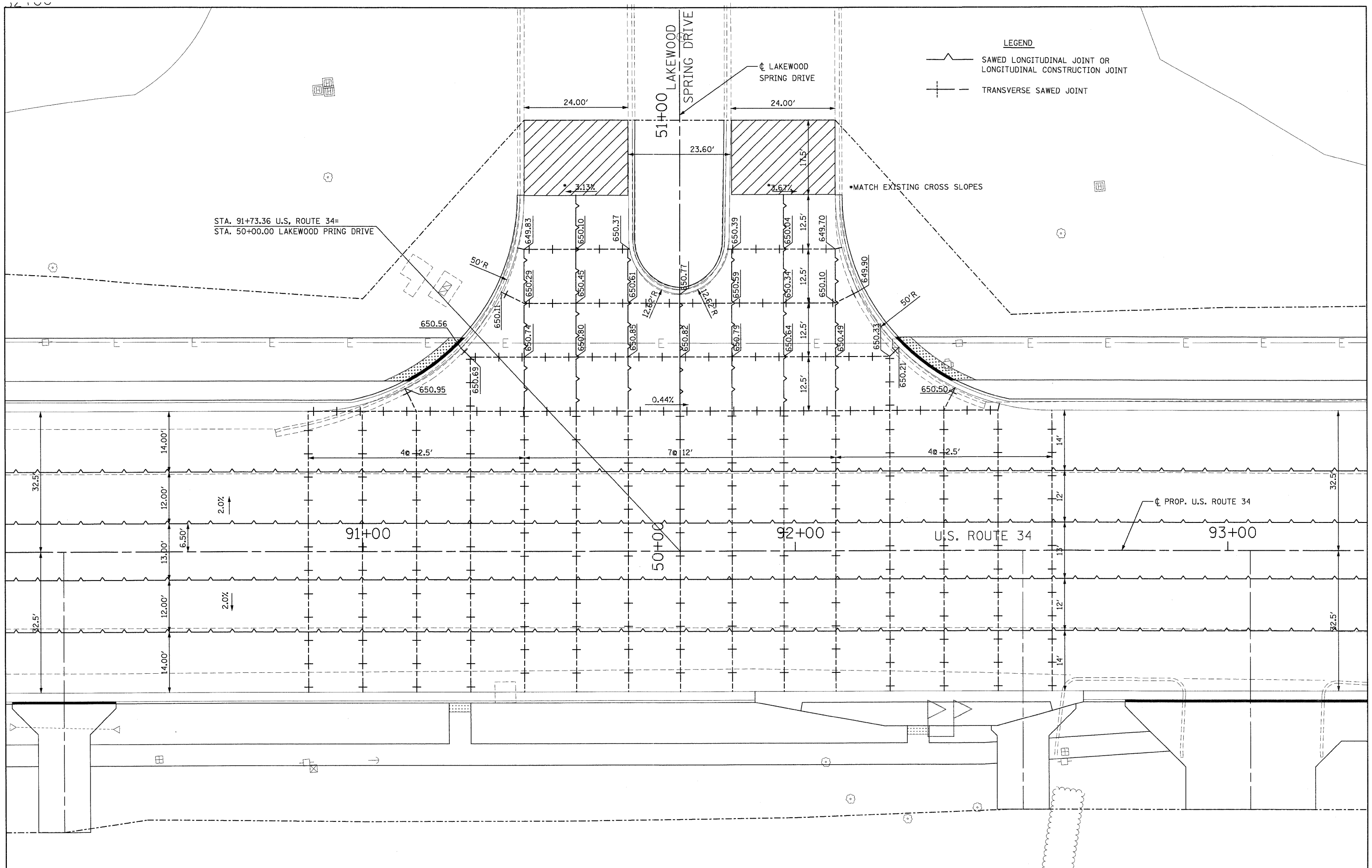


PB Americas, Inc. 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL, 60606 (312)782-8150	FILE NAME = D366985-sh1-4CommEntrance1.dwg	DESIGNED - MGM	REVISED -
	PLOT SCALE =	DRAWN - MGM	REVISED -
	PLOT DATE = 19-AUG-2011 08:25	CHECKED - MMS	REVISED -
		DATE - 08-18-2011	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

INTERSECTION DETAIL COMMERCIAL ENTRANCE		
SCALE: AS SHOWN	INT - 4 OF 7	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2+14R-1 & BR-1(1);15R-1	KENDALL	429	211
FINAL SUBMITTAL			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				



PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL, 60606
 (312)782-8150

FILE NAME = 03667985-sh1-5LakewoodSpring.dwg	DESIGNED - MGM	REVISED -
DRAWN - MGM	CHECKED - MMS	REVISED -
DATE - 08-18-2011		REVISED -

DESIGNED - MGM	REVISED -
DRAWN - MGM	REVISED -
CHECKED - MMS	REVISED -
DATE - 08-18-2011	REVISED -

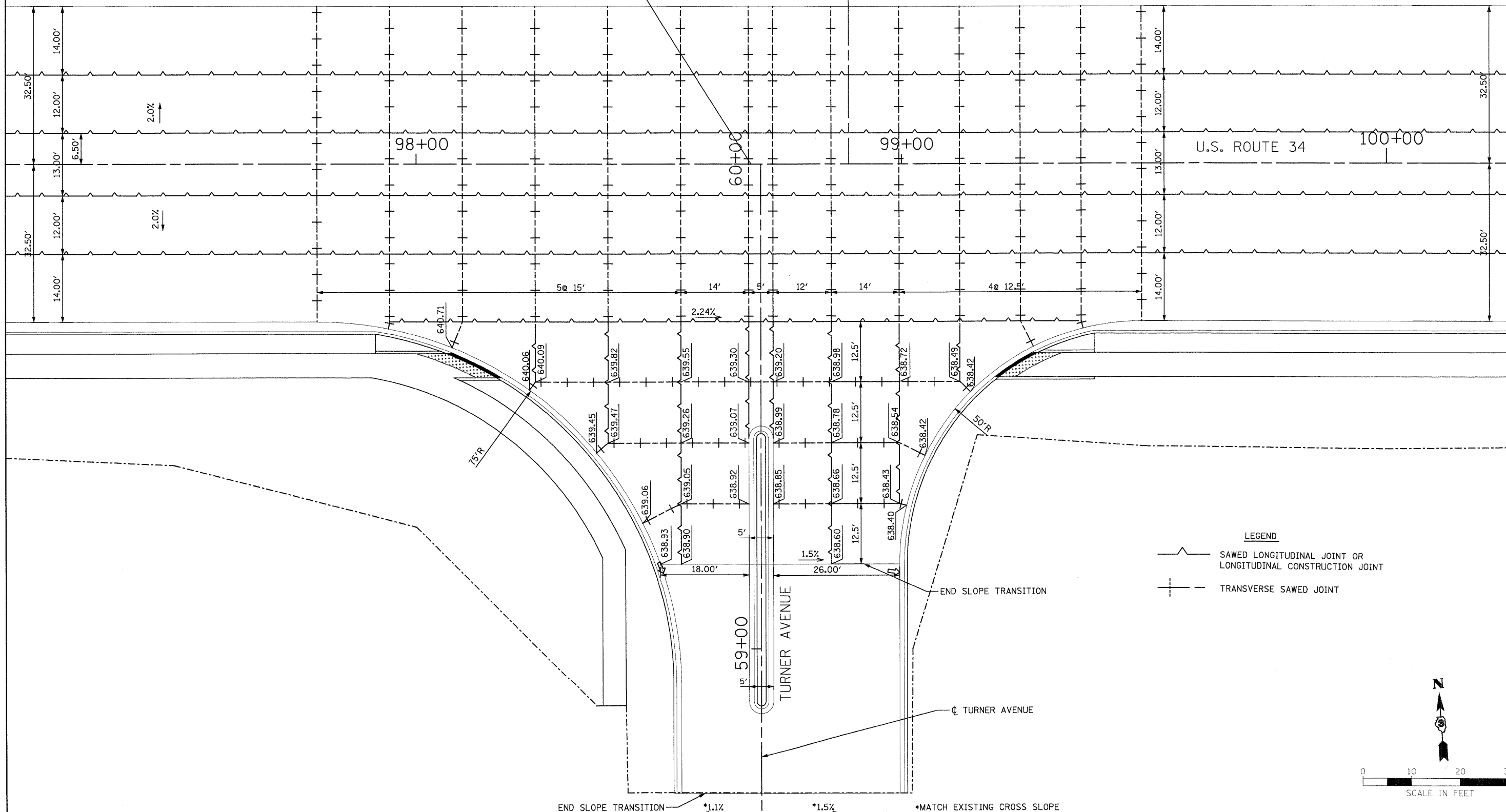
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERSECTION DETAIL
 LAKEWOOD SPRINGS**

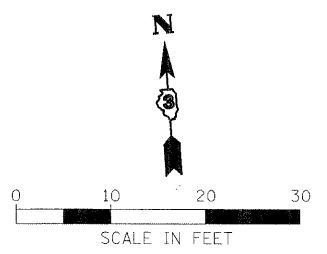
SCALE: AS SHOWN INT - 5 OF 7 STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	212
FINAL SUBMITTAL			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

STA. 98+71.01 U.S. ROUTE 34=
 STA. 60+00.00 TURNER AVENUE



LEGEND
 ——— SAWED LONGITUDINAL JOINT OR LONGITUDINAL CONSTRUCTION JOINT
 +—— TRANSVERSE SAWED JOINT



END SLOPE TRANSITION *1.1% *1.5% *MATCH EXISTING CROSS SLOPE

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERSECTION DETAIL
 TURNER AVE**

SCALE: AS SHOWN INT - 6 OF 7 STA. TO STA.

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606
 (312)782-8150

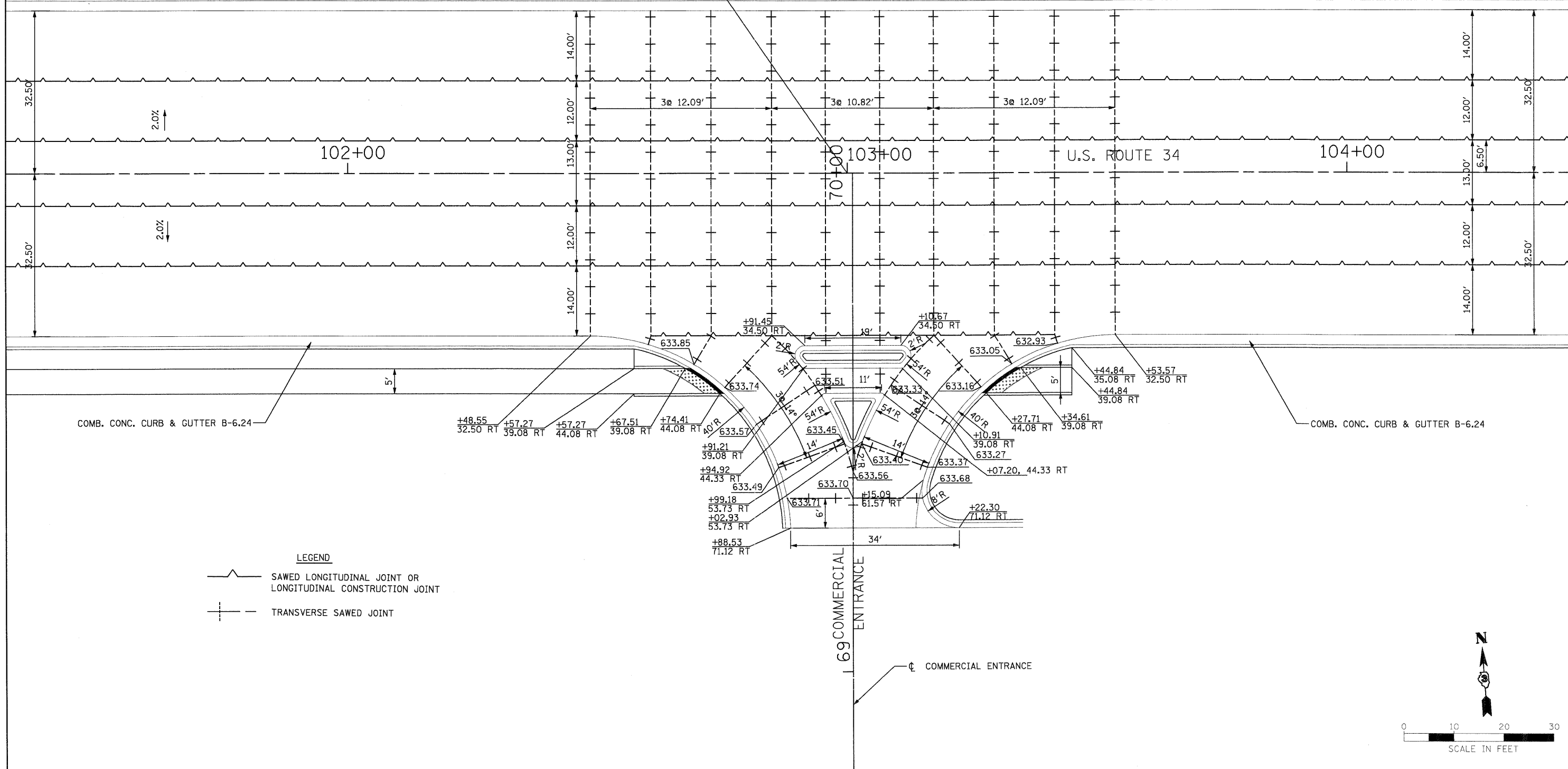
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 PLOT DATE = 19-AUG-2011 08:25

DESIGNED - MGM
 DRAWN - MGM
 CHECKED - MMS
 DATE - 08-18-2011

REVISED -
 REVISED -
 REVISED -
 REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	213
FINAL SUBMITTAL			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

STA. 103+00.00 U.S. ROUTE 34=
 STA. 70+00.00 COMMERCIAL ENTRANCE



LEGEND
 ——— SAWED LONGITUDINAL JOINT OR LONGITUDINAL CONSTRUCTION JOINT
 - - - - - TRANSVERSE SAWED JOINT

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

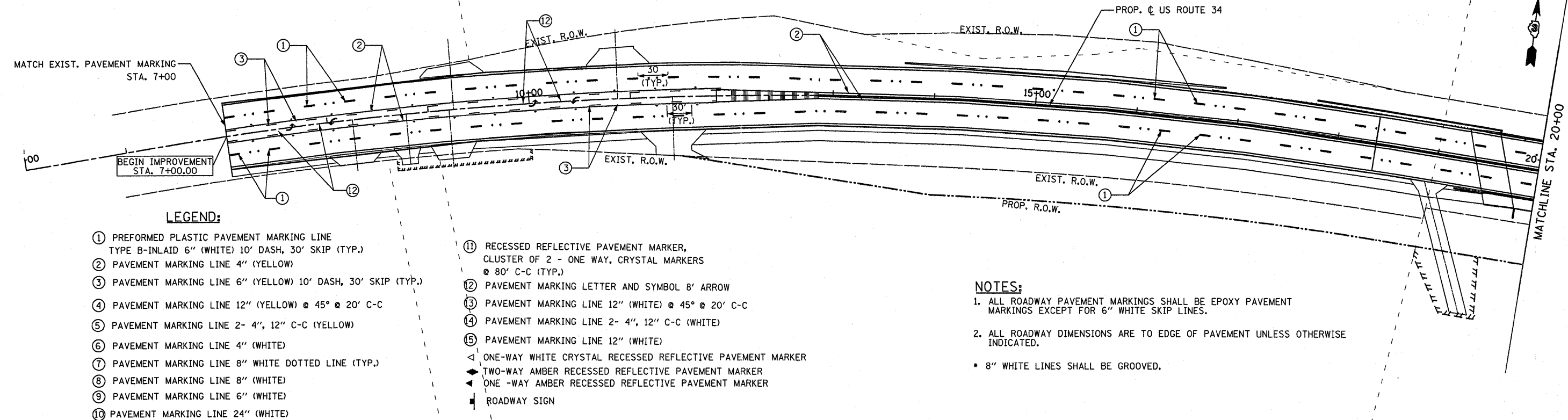
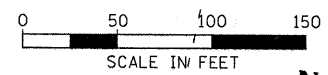
**INTERSECTION DETAIL
 COMMERCIAL ENTRANCE2**

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL, 60606
 (312)782-8150

FILE NAME = D366985-sh1-7CommEntrance2.dwg	DESIGNED - MGM	REVISED -
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PLOT DATE = 19-AUG-2011 08:25	CHECKED - MMS	REVISED -
	DATE - 08-18-2011	REVISED -

SCALE: AS SHOWN INT - 7 OF 7 STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	214
FINAL SUBMITTAL			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

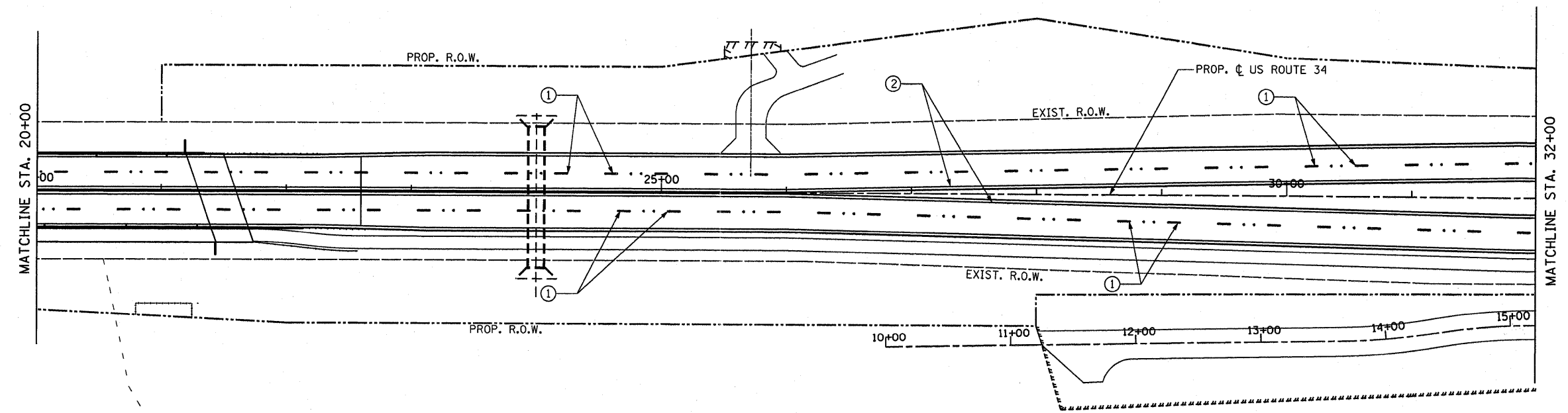


LEGEND:

- ① PREFORMED PLASTIC PAVEMENT MARKING LINE
TYPE B-INLAID 6" (WHITE) 10' DASH, 30' SKIP (TYP.)
- ② PAVEMENT MARKING LINE 4" (YELLOW)
- ③ PAVEMENT MARKING LINE 6" (YELLOW) 10' DASH, 30' SKIP (TYP.)
- ④ PAVEMENT MARKING LINE 12" (YELLOW) @ 45° @ 20' C-C
- ⑤ PAVEMENT MARKING LINE 2- 4", 12" C-C (YELLOW)
- ⑥ PAVEMENT MARKING LINE 4" (WHITE)
- ⑦ PAVEMENT MARKING LINE 8" WHITE DOTTED LINE (TYP.)
- ⑧ PAVEMENT MARKING LINE 8" (WHITE)
- ⑨ PAVEMENT MARKING LINE 6" (WHITE)
- ⑩ PAVEMENT MARKING LINE 24" (WHITE)
- ⑪ RECESSED REFLECTIVE PAVEMENT MARKER,
CLUSTER OF 2 - ONE WAY, CRYSTAL MARKERS
@ 80' C-C (TYP.)
- ⑫ PAVEMENT MARKING LETTER AND SYMBOL 8' ARROW
- ⑬ PAVEMENT MARKING LINE 12" (WHITE) @ 45° @ 20' C-C
- ⑭ PAVEMENT MARKING LINE 2- 4", 12" C-C (WHITE)
- ⑮ PAVEMENT MARKING LINE 12" (WHITE)
- ◁ ONE-WAY WHITE CRYSTAL RECESSED REFLECTIVE PAVEMENT MARKER
- ◄ TWO-WAY AMBER RECESSED REFLECTIVE PAVEMENT MARKER
- ◄ ONE-WAY AMBER RECESSED REFLECTIVE PAVEMENT MARKER
- ROADWAY SIGN

NOTES:

1. ALL ROADWAY PAVEMENT MARKINGS SHALL BE EPOXY PAVEMENT MARKINGS EXCEPT FOR 6" WHITE SKIP LINES.
 2. ALL ROADWAY DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE INDICATED.
- 8" WHITE LINES SHALL BE GROOVED.



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PB Americas, Inc.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL, 60606
(312)782-8150

FILE NAME = duncenbd
PLOT SCALE = 50.0000' / 1" = 100.0000'
PLOT DATE = 11/3/2011

DESIGNED - MMS
DRAWN - MMS
CHECKED - KLB
DATE - 08-18-2011

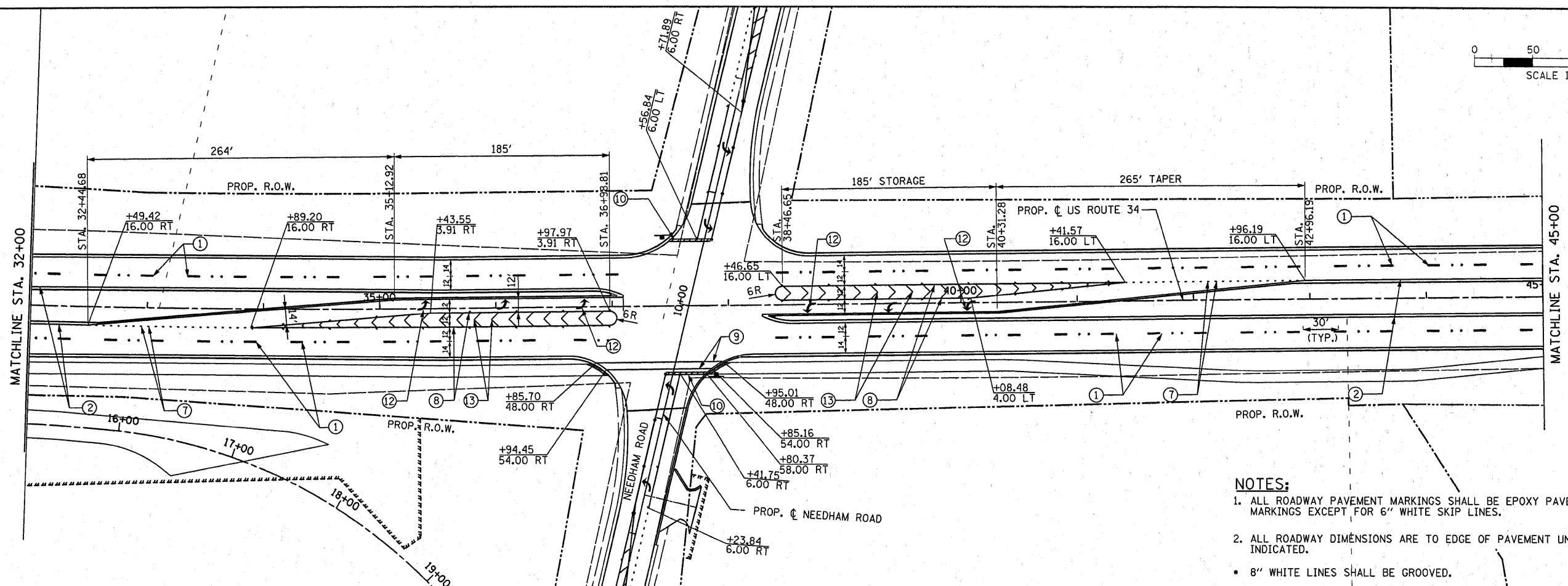
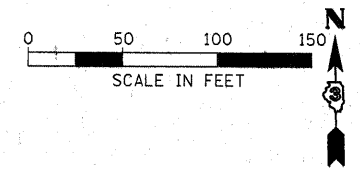
REVISED - BDD 11/03/2011
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLANS
US ROUTE 34**

SCALE: 1" = 50'
PMK - 1 OF 5
STA. 5+00 TO STA. 32+00

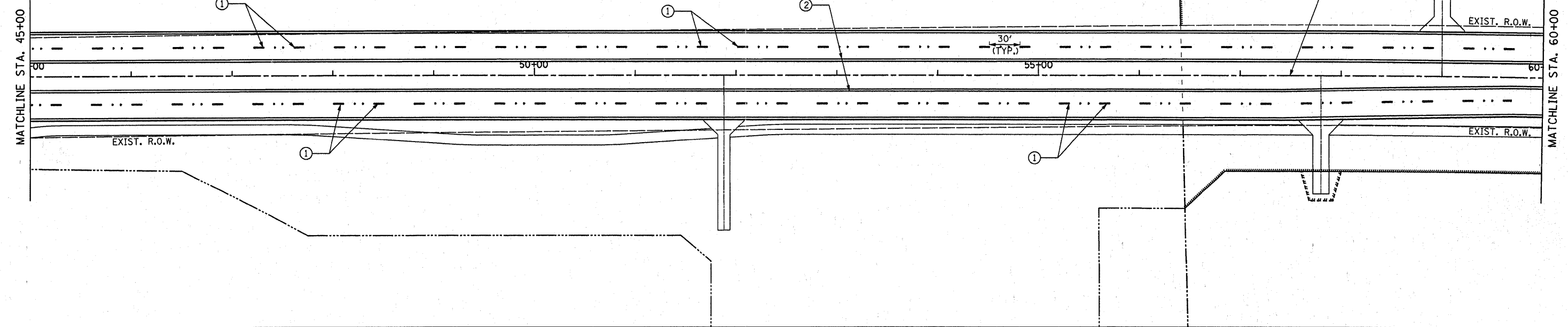
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	215
FINAL SUBMITTAL			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				



- NOTES:**
- ALL ROADWAY PAVEMENT MARKINGS SHALL BE EPOXY PAVEMENT MARKINGS EXCEPT FOR 6" WHITE SKIP LINES.
 - ALL ROADWAY DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE INDICATED.
- 8" WHITE LINES SHALL BE GROOVED.

LEGEND:

- | | | |
|--|---|---|
| ① PREFORMED PLASTIC PAVEMENT MARKING LINE-TYPE B-INLAID 6" (WHITE) 10' DASH, 30' SKIP (TYP.) | ⑧ PAVEMENT MARKING LINE 8" (WHITE) | ⑮ PAVEMENT MARKING LINE 12" (WHITE) |
| ② PAVEMENT MARKING LINE 4" (YELLOW) | ⑨ PAVEMENT MARKING LINE 6" (WHITE) | ◁ ONE-WAY WHITE CRYSTAL RECESSED REFLECTIVE PAVEMENT MARKER |
| ③ PAVEMENT MARKING LINE 6" (YELLOW) 10' DASH, 30' SKIP (TYP.) | ⑩ PAVEMENT MARKING LINE 24" (WHITE) | ◄ TWO-WAY AMBER RECESSED REFLECTIVE PAVEMENT MARKER |
| ④ PAVEMENT MARKING LINE 12" (YELLOW) @ 45° @ 20' C-C | ⑪ RECESSED REFLECTIVE PAVEMENT MARKER, CLUSTER OF 2 - ONE WAY, CRYSTAL MARKERS @ 80' C-C (TYP.) | ◄ ONE-WAY AMBER RECESSED REFLECTIVE PAVEMENT MARKER |
| ⑤ PAVEMENT MARKING LINE 2- 4", 12" C-C (YELLOW) | ⑫ PAVEMENT MARKING LETTER AND SYMBOL 8' ARROW | ⊠ ROADWAY SIGN |
| ⑥ PAVEMENT MARKING LINE 4" (WHITE) | ⑬ PAVEMENT MARKING LINE 12" (WHITE) @ 45° @ 20' C-C | |
| ⑦ PAVEMENT MARKING LINE 8" WHITE DOTTED LINE (TYP.) | ⑭ PAVEMENT MARKING LINE 2- 4", 12" C-C (WHITE) | |



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PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL, 60606
 (312)782-8150

FILE NAME = duncanbd
 DESIGNED - MMS
 DRAWN - MMS
 PLOT SCALE = 50.0000' / 1" in.
 CHECKED - KJB
 PLOT DATE = 11/22/2011

REVISOR - BDD 11/03/2011
 REVISOR - BDD 11/22/2011
 CHECKED - KJB
 DATE - 08-18-2011

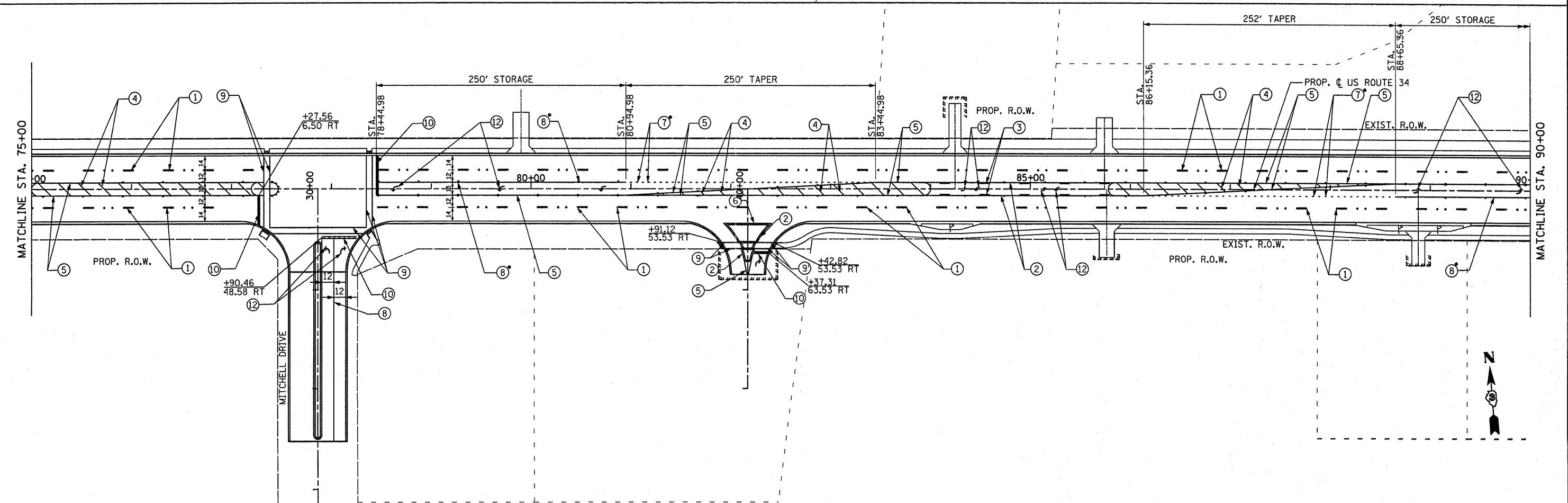
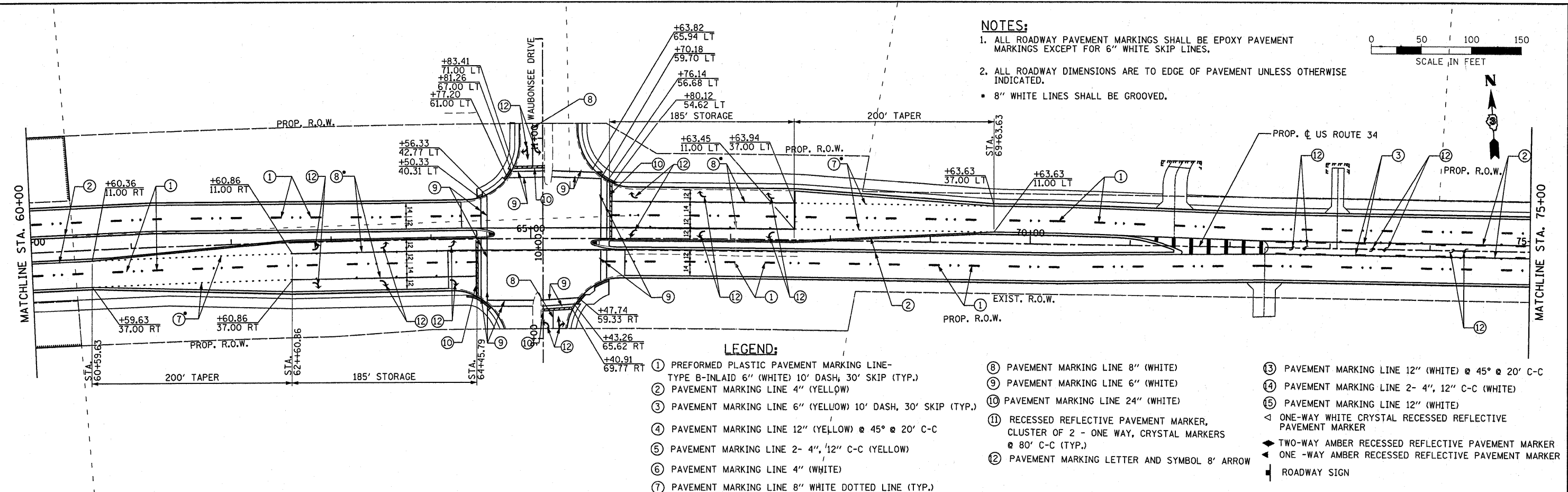
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 CHECKED - KJB
 DATE - 08-18-2011

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLANS
 US ROUTE 34**

SCALE: 1" = 50' PMK - 2 OF 5 STA. 32+00 TO STA. 60+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	216
FINAL SUBMITTAL			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

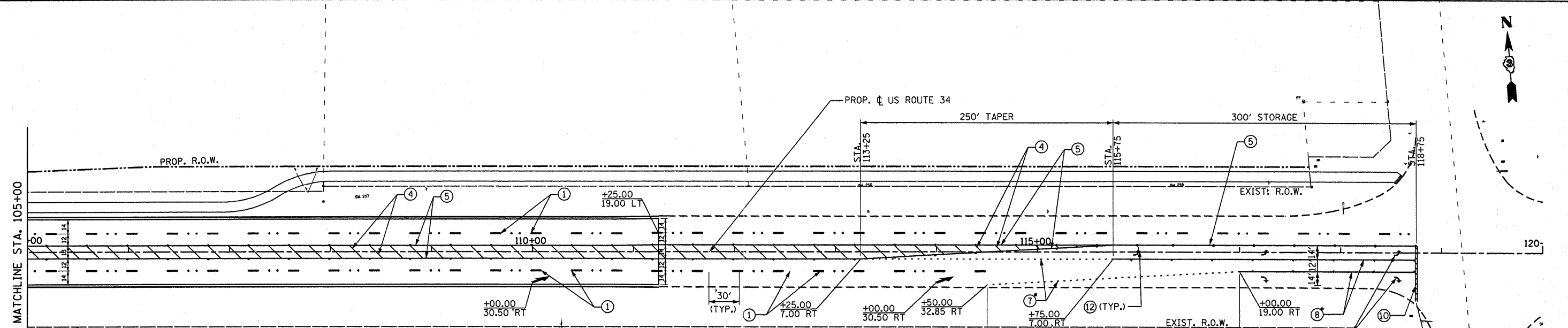
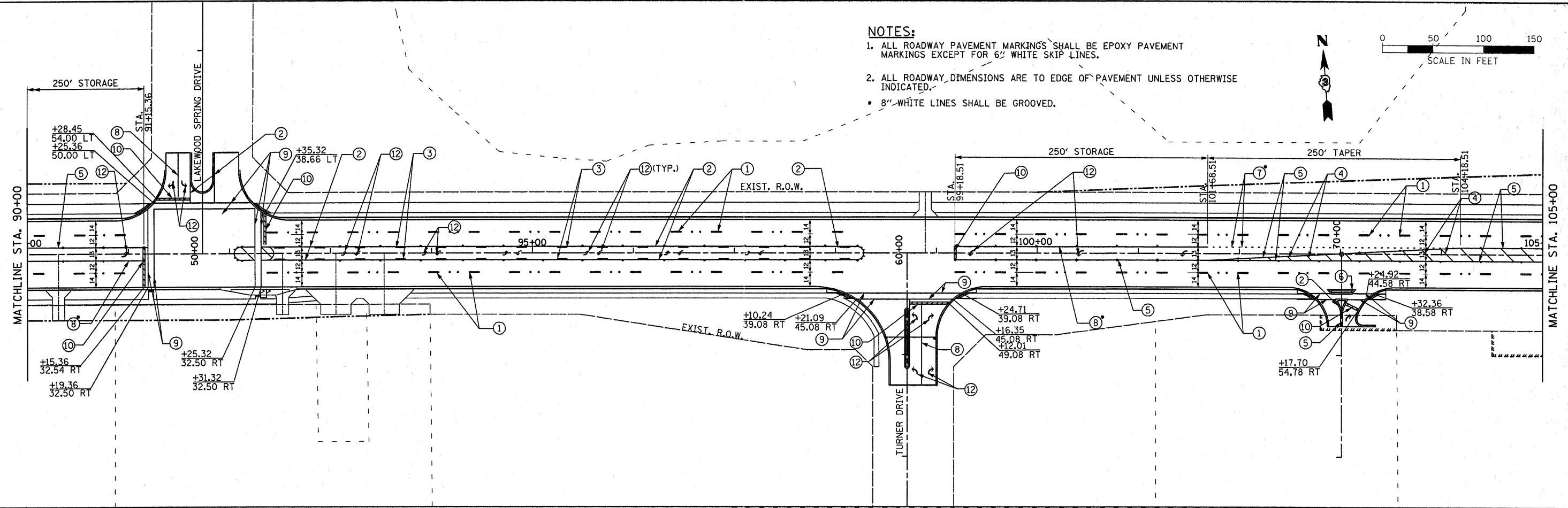
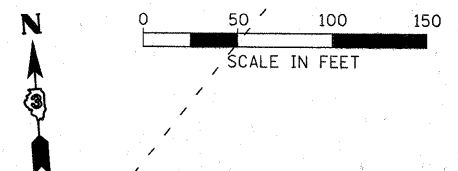


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PB Americas, Inc. 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL 60606 (312)782-8150	FILE NAME = duncanbd	DESIGNED - MMS	REVISED - BDD 11/03/2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING PLANS US ROUTE 34		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0000' / in.	DRAWN - MMS	REVISED -		SCALE: 1" = 50'	PMK - 3 OF 5	STA. 60+00 TO STA. 90+00	591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429
PLOT DATE = 11/3/2011	CHECKED - KJB	REVISED -	REVISED -			FINAL SUBMITTAL		CONTRACT NO. 66985		[ILLINOIS] FED. AID PROJECT	
	DATE - 08-18-2011	REVISED -	REVISED -								

NOTES:

- ALL ROADWAY PAVEMENT MARKINGS SHALL BE EPOXY PAVEMENT MARKINGS EXCEPT FOR 6" WHITE SKIP LINES.
- ALL ROADWAY DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE INDICATED.
 - 8" WHITE LINES SHALL BE GROOVED.



- LEGEND:**
- ① PREFORMED PLASTIC PAVEMENT MARKING LINE-TYPE B-INLAID 6" (WHITE) 10' DASH, 30' SKIP (TYP.)
 - ② PAVEMENT MARKING LINE 4" (YELLOW)
 - ③ PAVEMENT MARKING LINE 6" (YELLOW) 10' DASH, 30' SKIP (TYP.)
 - ④ PAVEMENT MARKING LINE 12" (YELLOW) @ 45° @ 20' C-C
 - ⑤ PAVEMENT MARKING LINE 2- 4", 12" C-C (YELLOW)
 - ⑥ PAVEMENT MARKING LINE 4" (WHITE)
 - ⑦ PAVEMENT MARKING LINE 8" WHITE DOTTED LINE (TYP.)
 - ⑧ PAVEMENT MARKING LINE 8" (WHITE)
 - ⑨ PAVEMENT MARKING LINE 6" (WHITE)
 - ⑩ PAVEMENT MARKING LINE 24" (WHITE)
 - ⑪ RECESSED REFLECTIVE PAVEMENT MARKER, CLUSTER OF 2 - ONE WAY, CRYSTAL MARKERS @ 80' C-C (TYP.)
 - ⑫ PAVEMENT MARKING LETTER AND SYMBOL 8" ARROW
 - ⑬ PAVEMENT MARKING LINE 12" (WHITE) @ 45° @ 20' C-C
 - ⑭ PAVEMENT MARKING LINE 2- 4", 12" C-C (WHITE)
 - ⑮ PAVEMENT MARKING LINE 12" (WHITE)
 - ◁ ONE-WAY WHITE CRYSTAL RECESSED REFLECTIVE PAVEMENT MARKER
 - ◀ TWO-WAY AMBER RECESSED REFLECTIVE PAVEMENT MARKER
 - ▶ ONE-WAY AMBER RECESSED REFLECTIVE PAVEMENT MARKER
 - ⊥ ROADWAY SIGN
 - LARGE MERGE ARROW

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 800
 CHICAGO, IL 60606
 (312) 782-8150

FILE NAME = duncanbd
 DESIGNED - MMS
 DRAWN - MMS
 CHECKED - MMS
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 PLOT DATE = 11/4/2011

DESIGNED - MMS
 DRAWN - MMS
 CHECKED - MMS
 DATE - 08-18-2011

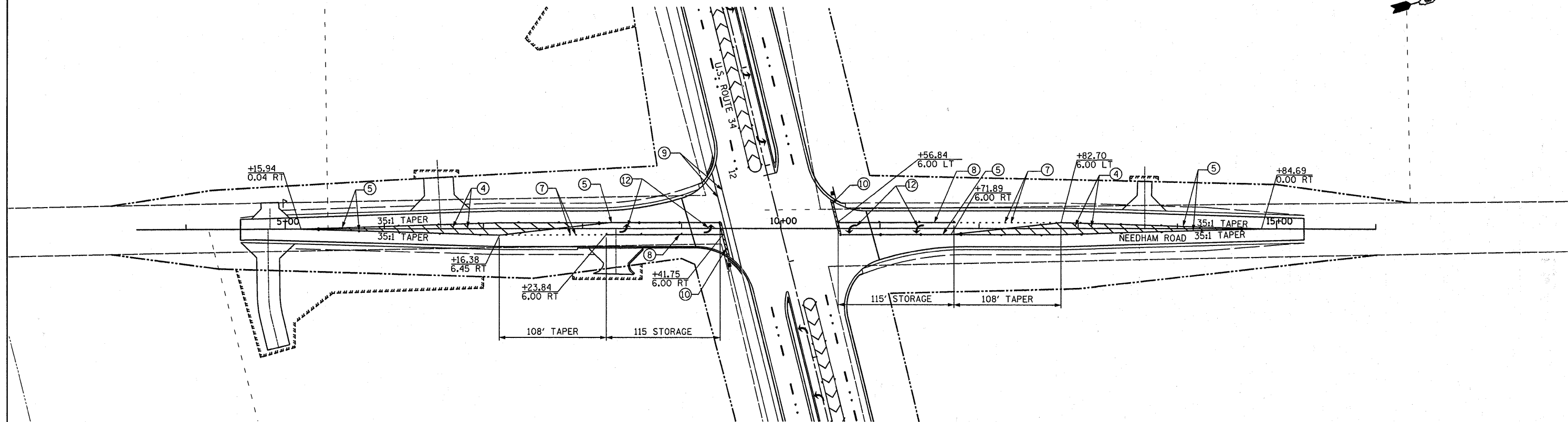
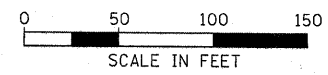
REVISED - BDD 11/03/2011
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 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLANS
 US ROUTE 34**

SCALE: 1" = 50' PMK - 4 OF 5 STA. 90+00 TO STA. 120+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-(1);15R-1	KENDALL	429	218
FINAL SUBMITTAL			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				



LEGEND:

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> ① PREFORMED PLASTIC PAVEMENT MARKING LINE TYPE B-INLAID 6" (WHITE) 10' DASH, 30' SKIP (TYP.) ② PAVEMENT MARKING LINE 4" (YELLOW) ③ PAVEMENT MARKING LINE 6" (YELLOW) 10' DASH, 30' SKIP (TYP.) ④ PAVEMENT MARKING LINE 12" (YELLOW) @ 45° @ 20' C-C ⑤ PAVEMENT MARKING LINE 2- 4", 12" C-C (YELLOW) ⑥ PAVEMENT MARKING LINE 4" (WHITE) ⑦ PAVEMENT MARKING LINE 8" WHITE DOTTED LINE (TYP.) ⑧ PAVEMENT MARKING LINE 8" (WHITE) ⑨ PAVEMENT MARKING LINE 6" (WHITE) | <ul style="list-style-type: none"> ⑩ PAVEMENT MARKING LINE 24" (WHITE) ⑪ RECESSED REFLECTIVE PAVEMENT MARKER, CLUSTER OF 2 - ONE WAY, CRYSTAL MARKERS @ 80' C-C (TYP.) ⑫ PAVEMENT MARKING LETTER AND SYMBOL 8' ARROW ⑬ PAVEMENT MARKING LINE 12" (WHITE) @ 45° @ 20' C-C ⑭ PAVEMENT MARKING LINE 2- 4", 12" C-C (WHITE) ⑮ PAVEMENT MARKING LINE 12" (WHITE) | <ul style="list-style-type: none"> ◁ ONE-WAY WHITE CRYSTAL RECESSED REFLECTIVE PAVEMENT MARKER ◆ TWO-WAY AMBER RECESSED REFLECTIVE PAVEMENT MARKER ◀ ONE-WAY AMBER RECESSED REFLECTIVE PAVEMENT MARKER ■ ROADWAY SIGN |
|--|---|---|

NOTES:

1. ALL ROADWAY PAVEMENT MARKINGS SHALL BE EPOXY PAVEMENT MARKINGS EXCEPT FOR 6" WHITE SKIP LINES.
2. ALL ROADWAY DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE INDICATED.

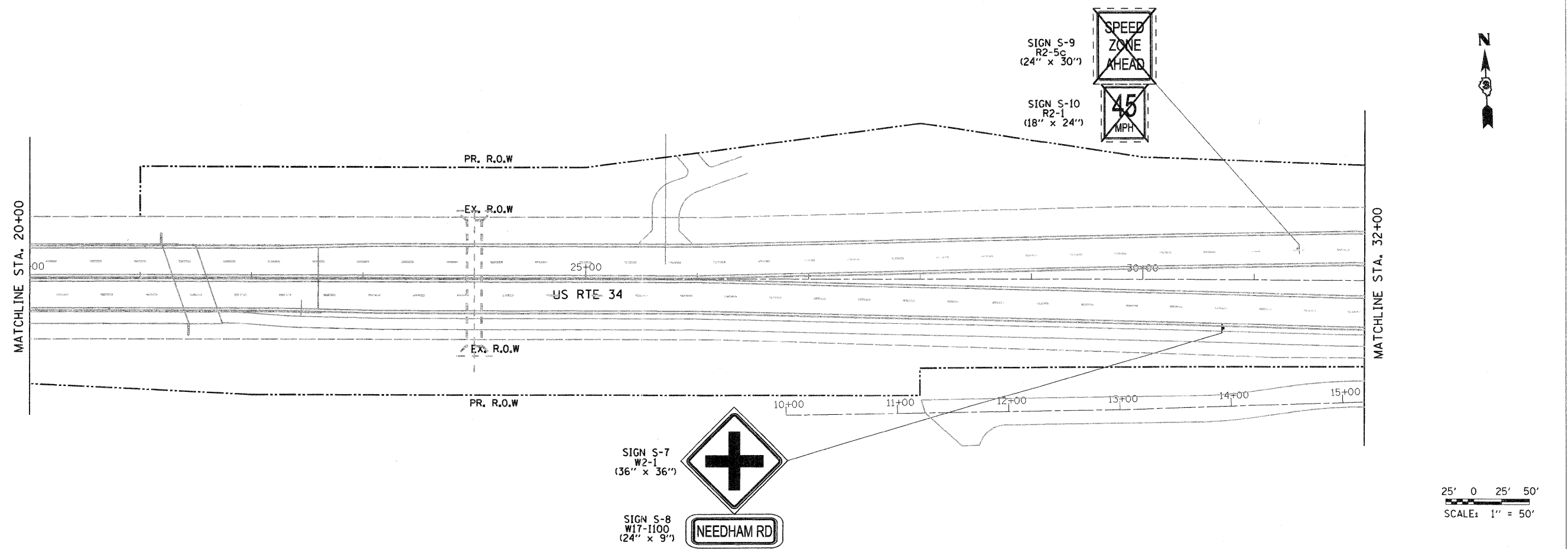
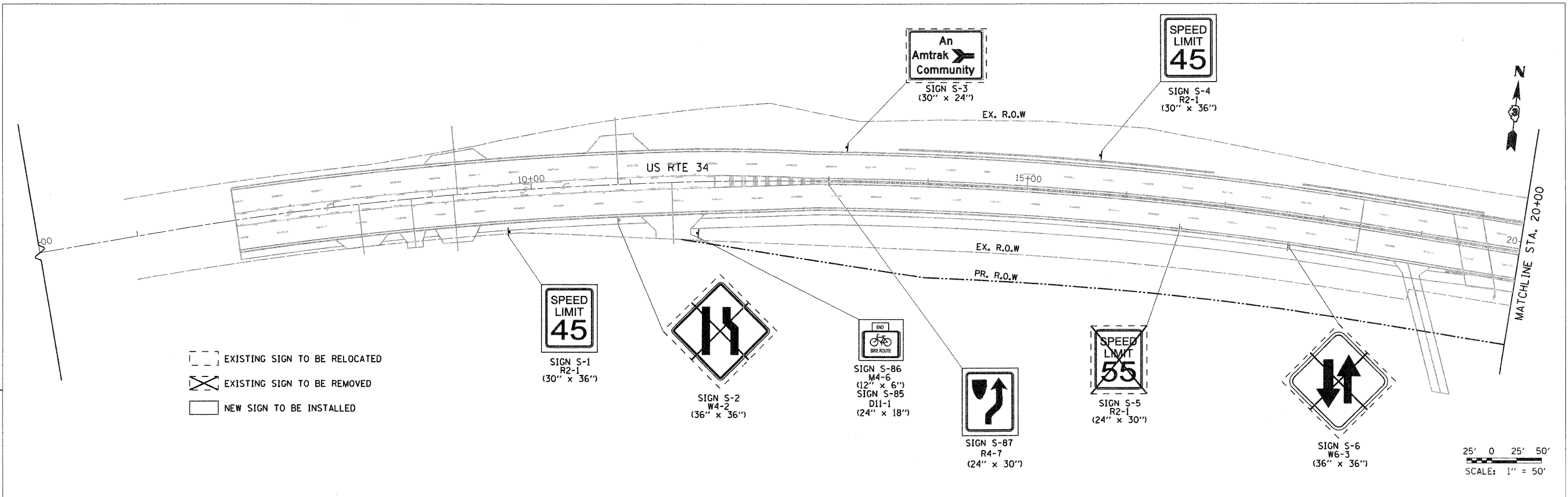
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	SCALE: 1" = 50'				PMK - 5 OF 5	STA. 4+00 TO STA. 16+00		
	ILLINOIS FED. AID PROJECT							

EJM ENGINEERING, INC.
 411 South Wells Street Suite 800
 Chicago, Illinois 60607



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PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 300
 CHICAGO, IL. 60606
 (312)782-8150

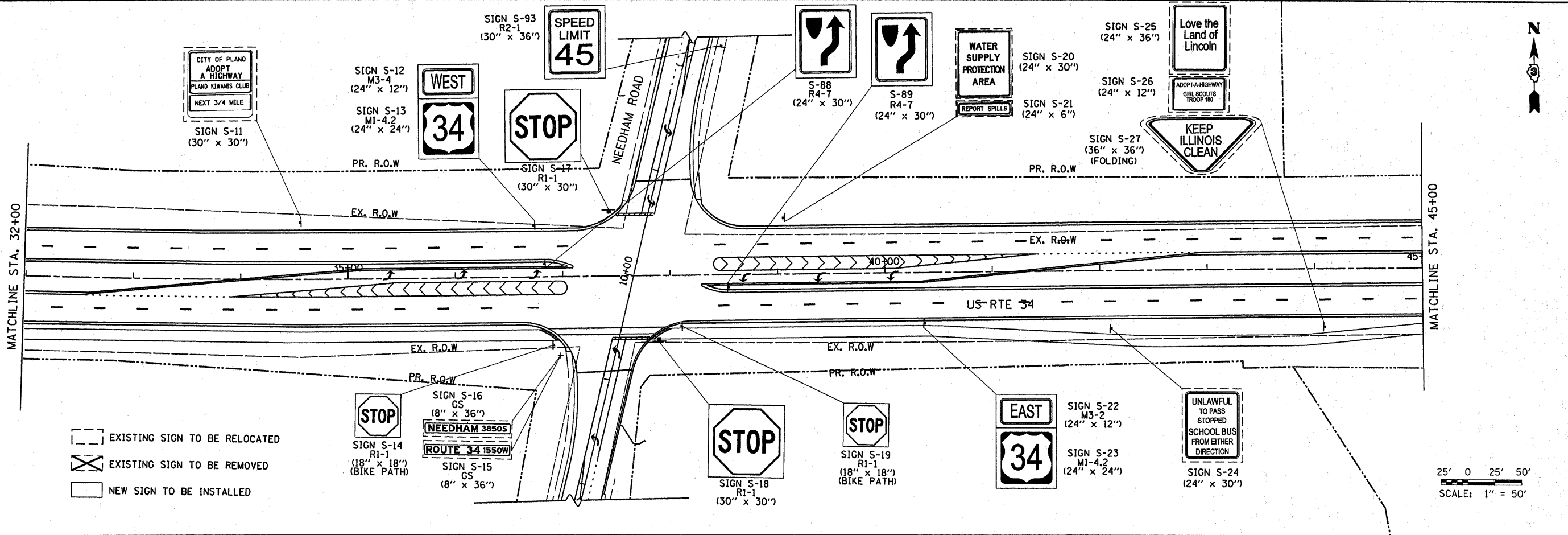
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PLOT DATE = 5/20/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SIGNING PLAN
 US RTE 34**
 SCALE: 1"=50' SIGN 1 OF 6 SHEETS STA. 00+00 TO STA. 32+00

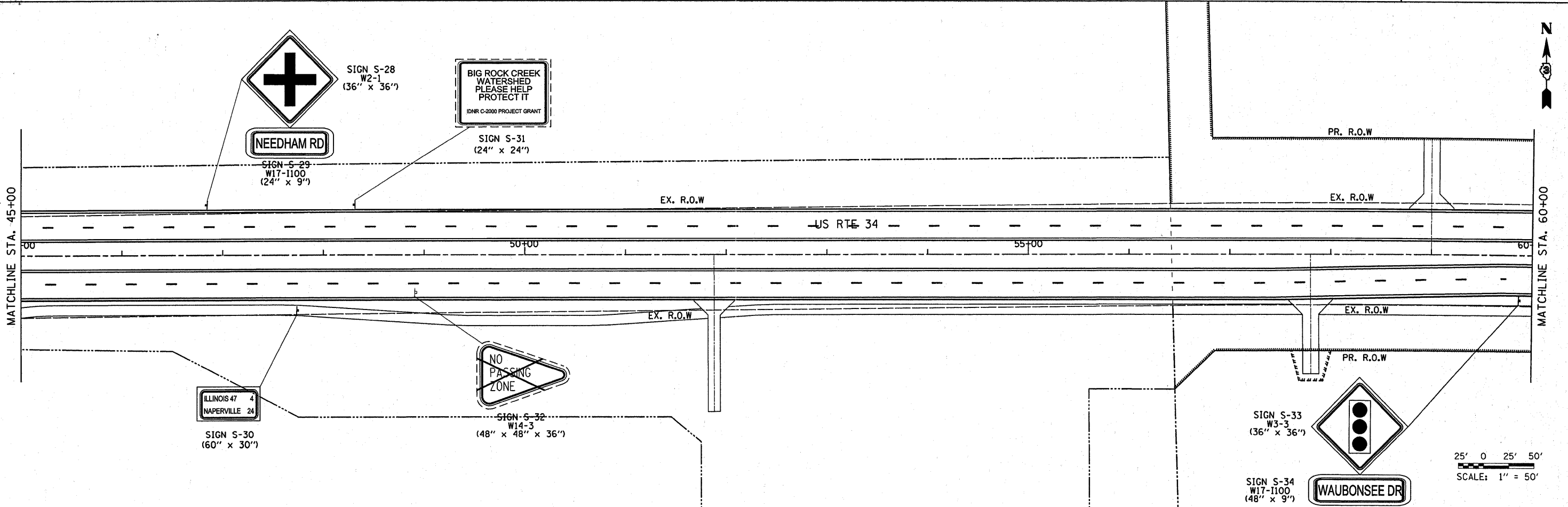
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	220
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				

FINAL SUBMITTAL



- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO BE REMOVED
- NEW SIGN TO BE INSTALLED

25' 0 25' 50'
 SCALE: 1" = 50'



25' 0 25' 50'
 SCALE: 1" = 50'

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL 60606
 (312) 782-8150

FILE NAME = duncanbd
 PLOT SCALE = 50.0000 ' / in.
 PLOT DATE = 11/22/2011

DESIGNED - GR	REVISED - BDD 11/22/2011
DRAWN - GR	REVISED -
CHECKED - BS	REVISED -
DATE - 4/8/2011	REVISED -

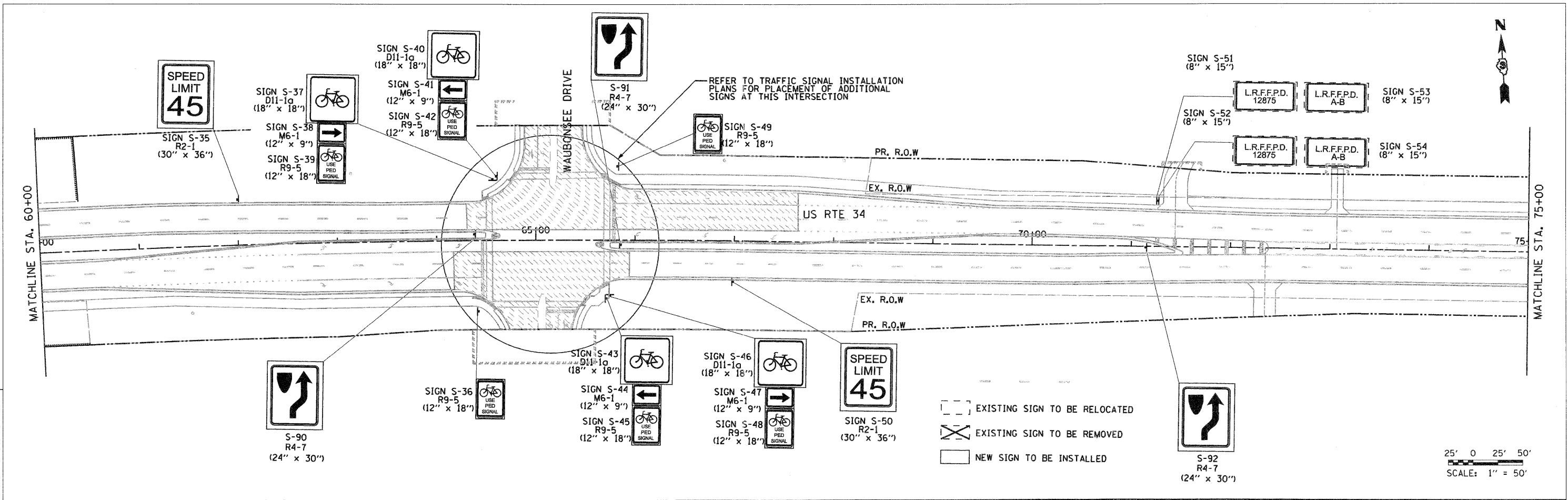
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SIGNING PLAN
 US RTE 34**

SCALE: 1"=50' SIGN 2 OF 6 SHEETS STA. 32+00 TO STA. 60+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	221
FINAL SUBMITTAL			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

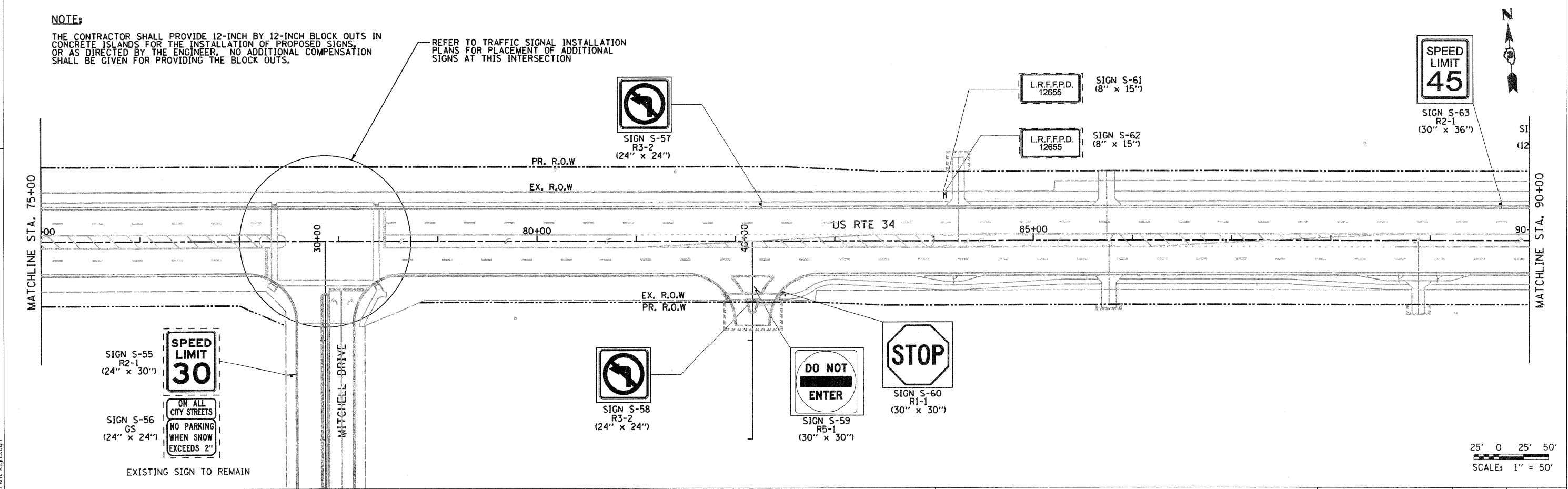
EJM ENGINEERING, INC.
 411 South Wells Street Suite 800
 Chicago, Illinois 60607



NOTE:

THE CONTRACTOR SHALL PROVIDE 12-INCH BY 12-INCH BLOCK OUTS IN CONCRETE ISLANDS FOR THE INSTALLATION OF PROPOSED SIGNS, OR AS DIRECTED BY THE ENGINEER. NO ADDITIONAL COMPENSATION SHALL BE GIVEN FOR PROVIDING THE BLOCK OUTS.

REFER TO TRAFFIC SIGNAL INSTALLATION PLANS FOR PLACEMENT OF ADDITIONAL SIGNS AT THIS INTERSECTION



PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL 60606
 (312)782-8150

FILE NAME =	DESIGNED - GR	REVISED -
PLOT SCALE = 1/8"	DRAWN - GR	REVISED -
PLOT DATE = 5/20/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

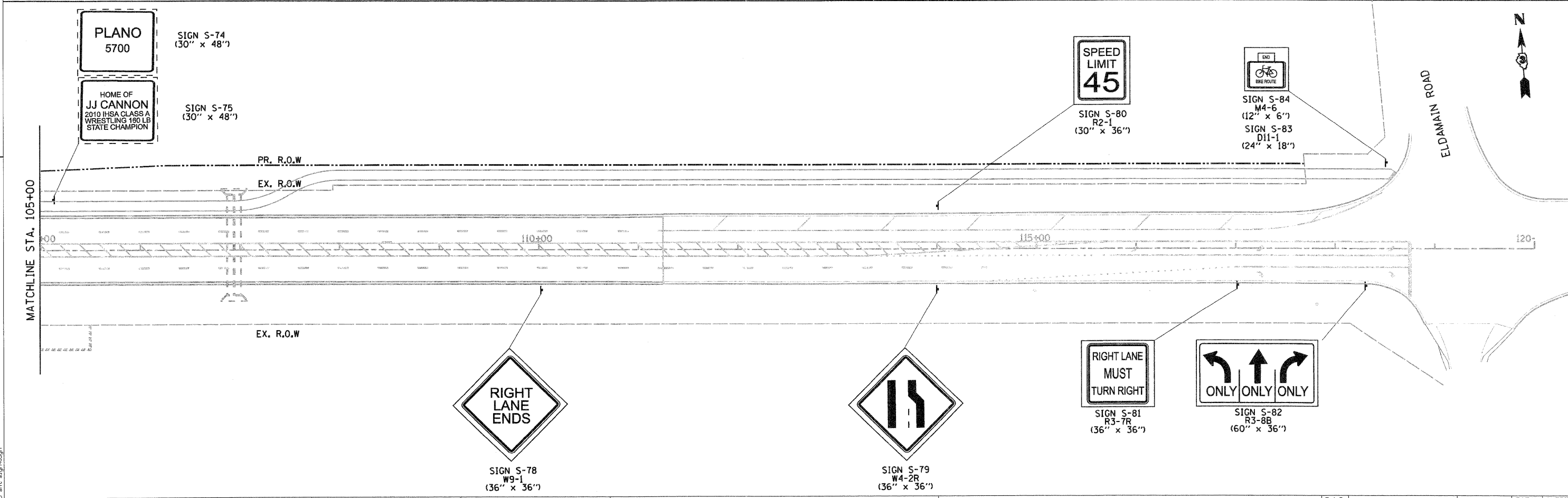
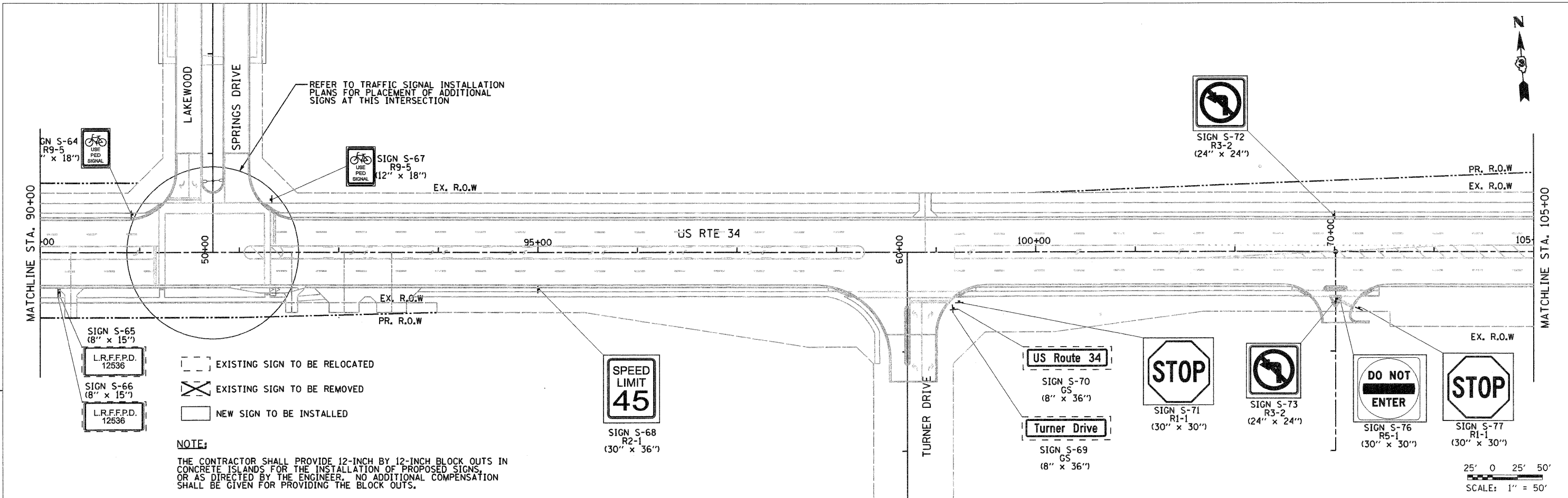
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SIGNING PLAN
 US RTE 34**

SCALE: 1"=50' SIGN 3 OF 6 SHEETS STA. 60+00 TO STA. 90+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	222
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				

EJM ENGINEERING, INC.
 411 South Wells Street Suite 800
 Chicago, Illinois 60607



PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL 60606
 (312)782-8150

FILE NAME =	DESIGNED - GR	REVISED -
PLOT SCALE = 1/50'	DRAWN - GR	REVISED -
PLOT DATE = 5/20/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

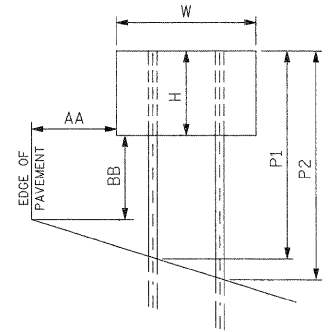
**SIGNING PLAN
 US RTE 34**

SCALE: 1"=50' SIGN 4 OF 6 SHEETS STA. 90+00 TO STA. 120+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	223
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				

SIGN SCHEDULE

SIGN NO.	STATION	LT/RT	SIGN PANELS							TELESCOPING STEEL SIGN SUPPORT				METAL POST - TYPE A				WOOD SIGN SUPPORT									
			"AA" (L.F.)	"BB" (L.F.)	WIDTH (L.F.)	DEPTH (L.F.)	EXIST TO REMAIN (SQ. FT.)	REMOVE SIGN PANEL TYPE 1 (SQ. FT.)	REMOVE SIGN PANEL TYPE 2 (SQ. FT.)	INSTALL SIGN PANEL TYPE 1 (SQ. FT.)	INSTALL SIGN PANEL TYPE 2 (SQ. FT.)	RELOCATE SIGN PANEL TYPE 1 (SQ. FT.)	RELOCATE SIGN PANEL TYPE 2 (SQ. FT.)	P1 (L.F.)	P2 (L.F.)	P3 (L.F.)	PAY LENGTH (L.F.)	P1 (L.F.)	P2 (L.F.)	P3 (L.F.)	PAY LENGTH (L.F.)	P1 (L.F.)	P2 (L.F.)	P3 (L.F.)	PAY LENGTH (L.F.)		
S-1	9+75	RT	10.00	7.3	2.50	3.00				7.50														10.3			15.3
S-2	10+86	RT			3.00	3.00		9.00																			
S-3	13+17	LT	6.20	8.1	2.50	2.00					5.00														14.0		14.0
S-4	15+71	LT	11.00	9.7	2.50	3.00		5.00		7.50																	15.3
S-5	16+58	RT			2.00	2.50		5.00																			
S-6	17+69	RT			3.00	3.00		9.00																			
S-7	30+72	RT			3.00	3.00		6.25		9.00																	
S-8	30+72	RT	3.75	7.3	2.00	0.67		1.33		1.33														16.9			16.9
S-9	31+39	LT			2.00	2.50		5.00																			
S-10	31+39	LT			1.50	2.00		3.00																			
S-11	34+55	LT	9.18	7.0	2.50	2.50					6.25														16.5		16.5
S-12	36+73	LT			2.00	1.00		2.00		2.00																	
S-13	36+73	LT	4.50	7.5	2.00	2.00		4.00		4.00														15.0			15.0
S-14	36+91	RT	11.96	7.2	1.50	1.50				2.25														14.1			14.1
S-15	36+97	RT			3.00	0.67					2.00																
S-16	36+97	RT	16.09	7.0	3.00	0.67				2.00				9.7													14.7
S-17	37+44	LT	8.97	7.1	2.50	2.50		6.25		6.25														12.3			12.3
S-18	37+95	RT	9.10	7.2	2.50	2.50		6.25		6.25														12.3			12.3
S-19	38+10	RT	4.09	7.4	1.50	1.50				2.25														13.5			13.5
S-20	39+06	LT			2.00	2.50					5.00																
S-21	39+06	LT	8.85	7.0	2.00	0.50					1.00													15.9			15.9
S-22	40+37	RT			2.00	1.00		2.00		2.00																	
S-23	40+37	RT	3.85	7.3	2.00	2.00		4.00		4.00														15.0			15.0
S-24	42+10	RT	10.50	7.2	2.00	2.50					5.00													14.5			14.5
S-25	44+09	RT			2.00	3.00					6.00																
S-26	44+09	RT			2.00	1.00					2.00																
S-27	44+09	RT	11.42	7.2	3.00	3.00					9.00														19.0		19.0
S-28	46+84	LT			3.00	3.00		9.00		9.00															17.3		17.3
S-29	46+84	LT	6.40	7.0	2.00	0.67		1.33		1.33																	
S-30	47+75	RT	11.80	7.2	5.00	2.50			12.50		12.50												19.9	20.0		39.9	
S-31	48+30	LT	6.40	7.0	2.50	2.00					5.00													15.4			15.4
S-32	48+90	RT			4.00	3.00		5.60																			
S-33	50+90	RT			3.00	3.00		6.25		9.00																	
S-34	50+90	RT	6.86	7.3	4.00	0.67		2.68		2.68														15.7			15.7
S-35	62+00	LT	5.56	7.0	2.50	3.00				7.50																	
S-36	64+41	RT	17.39	7.0	1.00	1.50				1.50							12.4							12.4			
S-37	64+50	LT			1.50	1.50				2.25																	
S-38	64+50	LT			1.00	0.75				0.75																	
S-39	64+50	LT	18.41	7.0	1.00	1.50				1.50							14.6							14.6			
S-40	64+50	LT			1.50	1.50				2.25																	
S-41	64+50	LT			1.00	0.75				0.75																	
S-42	64+50	LT	19.42	7.0	1.00	1.50				1.50							14.6							14.6			
S-43	65+71	RT			1.50	1.50				2.25																	
S-44	65+71	RT			1.00	0.75				0.75																	
S-45	65+71	RT	16.96	7.1	1.00	1.50				1.50							14.3							14.3			
S-46	65+75	RT			1.50	1.50				2.25																	
S-47	65+75	RT			1.00	0.75				0.75																	
S-48	65+75	RT	15.39	7.1	1.00	1.50				1.50							14.3							14.3			
S-49	65+83	LT	20.05	7.3	1.00	1.50				1.50							12.0							12.0			
S-50	66+98	RT	4.08	7.3	2.50	3.00				7.50													15.0			15.0	
S-51	71+26	LT			1.25	0.67		0.83		0.83																	
S-52	71+26	LT			1.25	0.67		0.83		0.83							7.3							7.3			
S-53	71+26	LT			1.25	0.67		0.83		0.83																	
S-54	71+26	LT	11.27	7.6	1.25	0.67		0.83		0.83							7.3							7.3			
S-55	28+64	LT	5.00	7.7	2.00	2.50	5.00																				
Sheet 5 Sub Totals								96.27	12.50	115.67	12.50	48.25	0.00				14.70							96.80			312.90



SIGN POST INSTALLATION

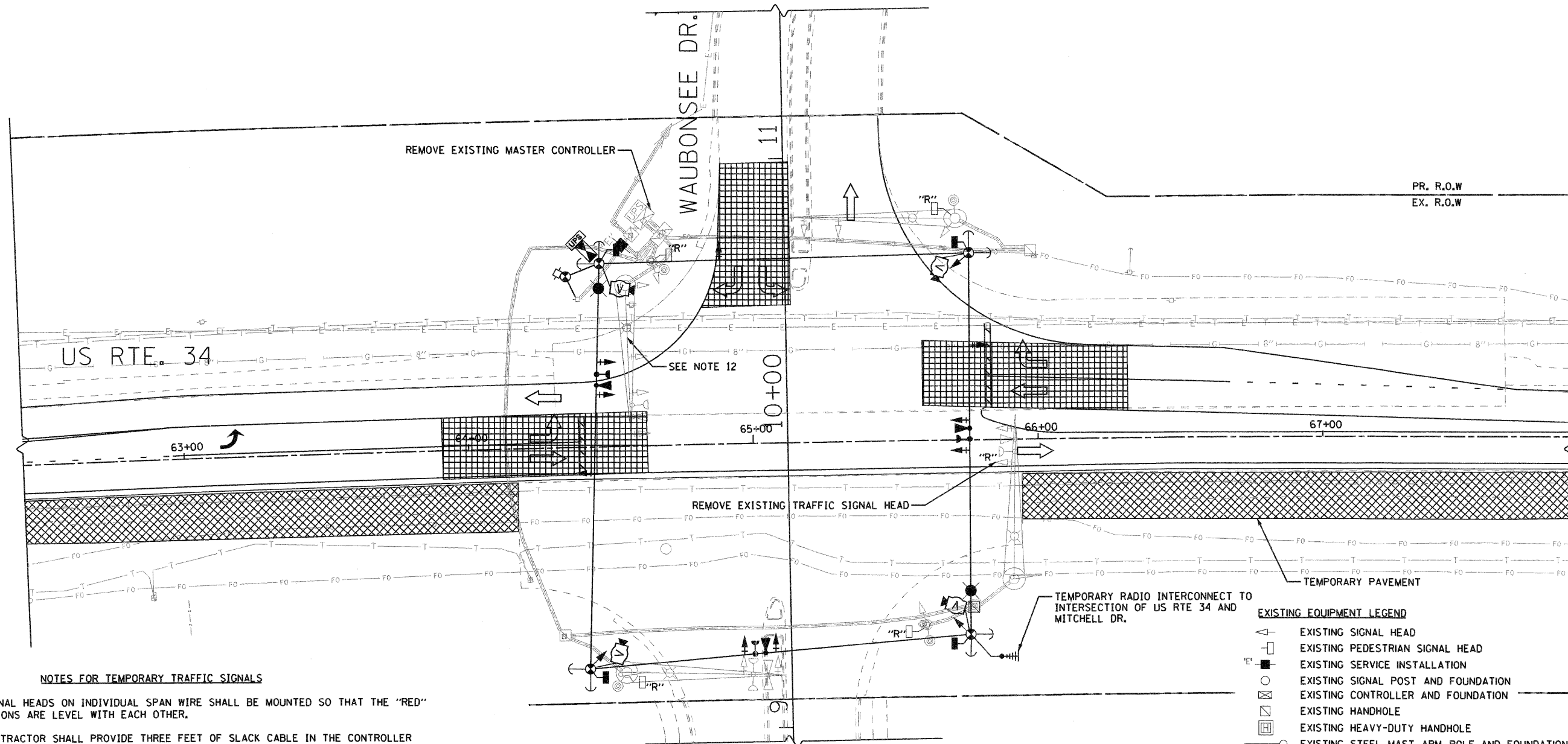
EJM ENGINEERING, INC.
 411 South Wells Street Suite 800
 Chicago, Illinois 60607



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PB Americas, Inc. 230 WEST MONROE STREET, SUITE 200 CHICAGO, IL 60606 (312)782-8150	FILE NAME =	DESIGNED - GR	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN SCHEDULE		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 1/8"	DRAWN - GR	REVISED -		591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	224		
PLOT DATE = 5/20/2011	CHECKED - BS	REVISED -	SCALE: NTS SHEET NO. 5 OF 6 SHEETS		CONTRACT NO. 66985						
DATE = 4/8/2011	REVISED -	ILLINOIS FED. AID PROJECT									

EJM ENGINEERING, INC.
411 South Wells Street Suite 800
Chicago, Illinois 60607



NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL SIGNAL HEADS ON INDIVIDUAL SPAN WIRE SHALL BE MOUNTED SO THAT THE "RED" INDICATIONS ARE LEVEL WITH EACH OTHER.
2. THE CONTRACTOR SHALL PROVIDE THREE FEET OF SLACK CABLE IN THE CONTROLLER AND ON THE WOOD POLES. THE SLACK IS IN ADDITION TO THE VERTICAL LENGTH OF CABLE DEFINED IN THE STANDARD SPECIFICATIONS AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR ELECTRIC CABLE OF THE TYPE SPECIFIED.
3. TEMPORARY WOOD POLES SHALL BE LOCATED A MINIMUM OF 6' FROM THE FACE OF CURB OR A MINIMUM OF 18' FROM THE EDGE OF PAVEMENT WHERE THERE IS NO CURB, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE WOOD POLE LOCATIONS BEFORE ORDERING TO DETERMINE IF LONGER POLES ARE REQUIRED.
5. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
6. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" POLYCARBONATE (300mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD. RELOCATION OF ANY SIGNAL HEAD FOR TEMPORARY SIGNAL IS INCIDENTAL TO PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION".
7. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
8. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.

9. SPAN WIRE SIGNAL HEADS FOR TRAFFIC FROM WAUBONSEE DRIVE SHALL BE RELOCATED TO ALIGN WITH THE LOCATION OF NORTHBOUND AND SOUTHBOUND LANES DURING CONSTRUCTION.
10. TEMPORARY UNINTERRUPTIBLE POWER SUPPLY SHALL BE IN ACCORDANCE TO SUPPLEMENTAL SPECIFICATION SECTION 862 AND SHALL BE "EXTENDED" RANGE FOR SIX HOURS OF FULL RUN-TIME OPERATION. THE TEMPORARY UNINTERRUPTIBLE POWER SUPPLY SHALL BE INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.
11. TEMPORARY WOOD POLES SHALL BE LOCATED 6' FROM FACE OF CURB OR A MINIMUM OF 18' FROM THE EDGE OF PAVEMENT WHERE THERE IS NO CURB, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ALL TEMPORARY WOOD POLES SHALL BE INSTALLED SO THAT A MINIMUM OF 30' OF POLE IS ABOVE THE PAVEMENT ELEVATION ADJACENT TO THE POLE. SUFFICIENT LENGTH SHALL BE BURIED AND BACK GUYED TO WITHSTAND 70 MPH WIND. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING TEMPORARY WOOD POLE LOCATIONS BEFORE ORDERING TO DETERMINE IF LONGER POLES ARE REQUIRED.
12. CONTRACTOR SHALL REMOVE EXISTING COMBINATION MAST ARM ASSEMBLY AND POLE. ALL EXISTING TRAFFIC SIGNAL AND LIGHTING EQUIPMENT SHALL BE RELOCATED TO NEW COMBINATION MAST ARM ASSEMBLY AND POLE.

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR. THE CONTRACTOR SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE.

1	EACH	SIGNAL HEAD, 1-FACE, 3 SECTION, MAST ARM MOUNTED
4	EACH	PEDESTRIAN SIGNAL HEAD, 1-FACE, 2 SECTION
1	EACH	MASTER CONTROLLER
1	EACH	COMBINATION MAST ARM ASSEMBLY AND POLE

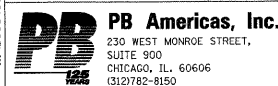
EXISTING EQUIPMENT LEGEND

- EXISTING SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING SERVICE INSTALLATION
- EXISTING SIGNAL POST AND FOUNDATION
- EXISTING CONTROLLER AND FOUNDATION
- EXISTING HANDHOLE
- EXISTING HEAVY-DUTY HANDHOLE
- EXISTING STEEL MAST ARM POLE AND FOUNDATION
- EXISTING COMBINATION STEEL MAST ARM POLE AND FOUNDATION
- EXISTING EMERGENCY VEHICLE LIGHT DETECTOR
- EXISTING CONFIRMATION BEACON
- EXISTING CONFIRMATION BEACON
- EXISTING EQUIPMENT TO BE REMOVED

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD
- TEMPORARY TRAFFIC SIGNAL HEAD
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FT MIN.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY UNINTERRUPTIBLE POWER SUPPLY, EXTENDED
- TEMPORARY SPAN WIRE, TETHER WIRE AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY LUMINAIRE 250W HPS WITH 15' MAST ARM
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- GUY WIRE
- VIDEO CAMERA
- RADIO INTERCONNECT ANTENNA
- VIDEO DETECTION ZONE
- TEMPORARY PAVEMENT
- WORK ZONE

10' 0" 10' 20"
SCALE: 1" = 20'



FILE NAME =	DESIGNED - GR	REVISED -
PLOT SCALE = 1:20	DRAWN - GR	REVISED -
PLOT DATE = 4/9/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING SIGNAL REMOVAL AND TEMPORARY TRAFFIC
SIGNAL INSTALLATION PLAN
US RTE 34 AND WAUBONSEE DR. - STAGE 1A**

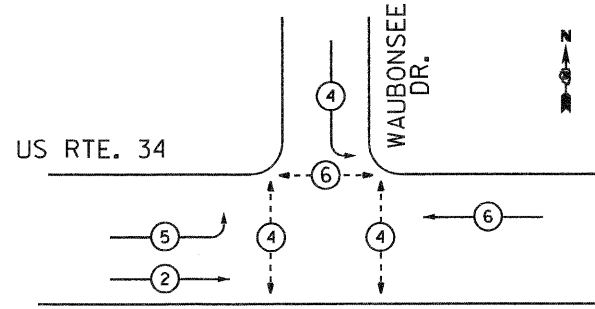
SCALE: 1"=20' SHEET NO. 1 OF 9 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	226
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	

EJM ENGINEERING, INC.
411 South Wells Street Suite 800
Chicago, Illinois 60607

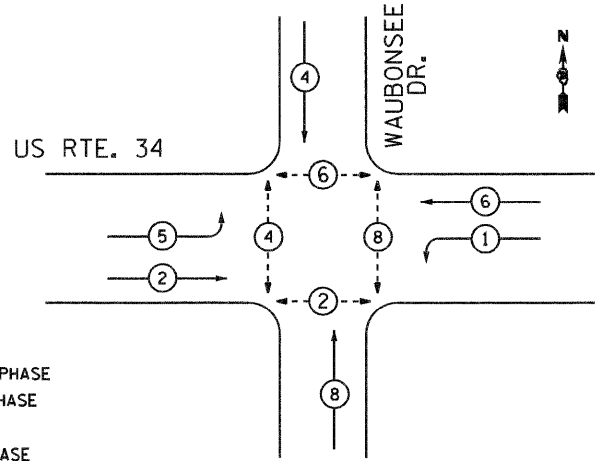


TEMPORARY PHASE DESIGNATION DIAGRAM
STAGES 1A, 1, AND 2

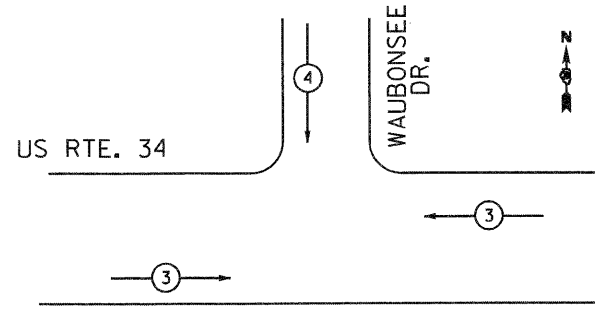


- LEGEND**
- SINGLE ENTRY PHASE
 - DUAL ENTRY PHASE
 - OVERLAP
 - PEDESTRIAN PHASE
 - NUMBER REFERS TO ASSOCIATED PHASE

TEMPORARY PHASE DESIGNATION DIAGRAM
STAGE 3

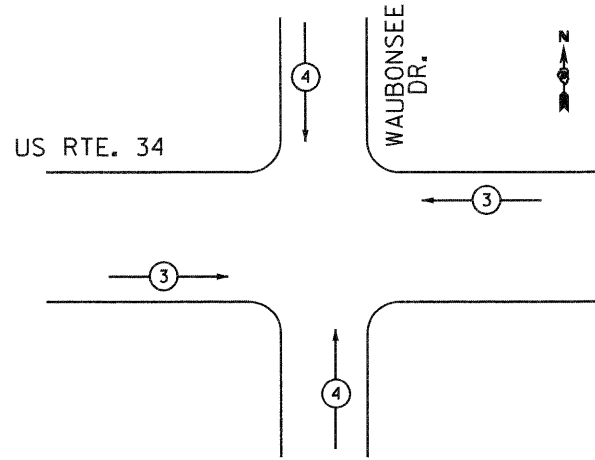


EMERGENCY VEHICLE PRE-EMPTION SEQUENCE
STAGES 1A, 1, AND 2



TEMPORARY EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↔	↑

EMERGENCY VEHICLE PRE-EMPTION SEQUENCE
STAGE 3



TEMPORARY EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↔	↕

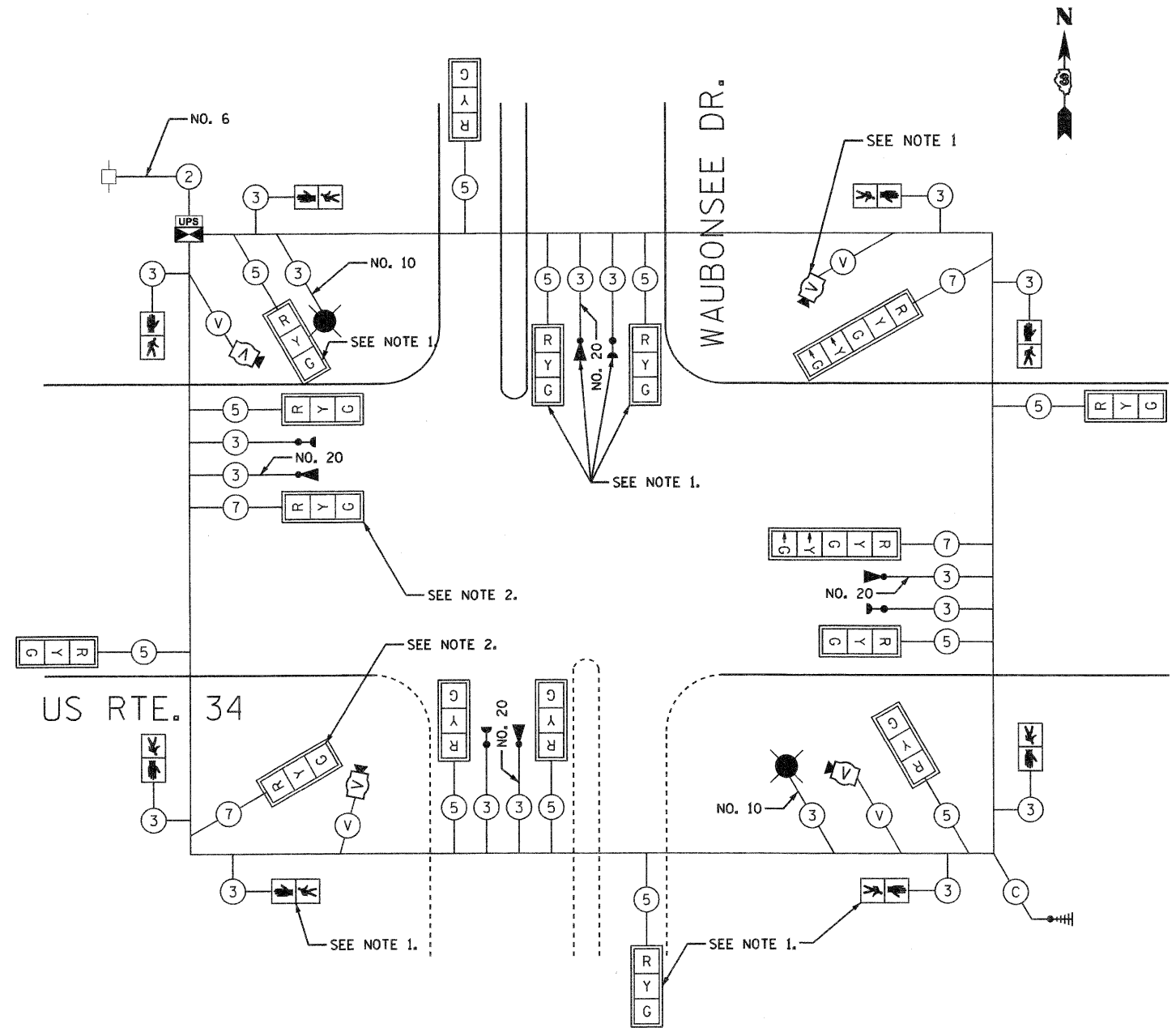
CABLE PLAN LEGEND

EXISTING PROPOSED

- 8" (200mm) TRAFFIC SIGNAL SECTION
- 12" (300mm) TRAFFIC SIGNAL SECTION
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- CONTROLLER CABINET
- SERVICE INSTALLATION
- TELEPHONE CONNECTION
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- UNINTERRUPTIBLE POWER SUPPLY
- LUMINAIRE

EXISTING PROPOSED

- SIGNAL FACE WITH BACKPLATE
- FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 2-MM12F & SMI2F
- PUSHBUTTON DETECTOR
- VEHICLE DETECTOR, INDUCTION LOOP
- DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. "V" INDICATES VENDOR CABLE FOR VIDEO CAMERA. "C" INDICATES COAXIAL CABLE. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
- VIDEO CAMERA
- RADIO INTERCONNECT ANTENNA



TEMPORARY CABLE PLAN

NOTES:

1. DURING STAGE 3 OPERATIONS, ADD SIGNAL HEADS, VIDEO DETECTION, AND EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT FOR THE NORTHBOUND APPROACH.
2. DURING STAGE 3 OPERATIONS, REPLACE 3-SECTION SIGNAL HEAD WITH 5-SECTION SIGNAL HEAD. UNUSED CONDUCTORS SHALL BE SEALED AND PROTECTED WHEN NOT IN USE DURING OTHER STAGES.
3. MODIFY CONTROLLER PHASING PER STAGE 3 PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PRE-EMPTION SEQUENCE.

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FILE NAME =	DESIGNED - GR	REVISED -
PLOT SCALE = 1:20	DRAWN - GR	REVISED -
PLOT DATE = 4/9/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN
US RTE. 34 AND WAUBONSEE DR.

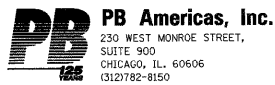
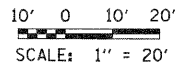
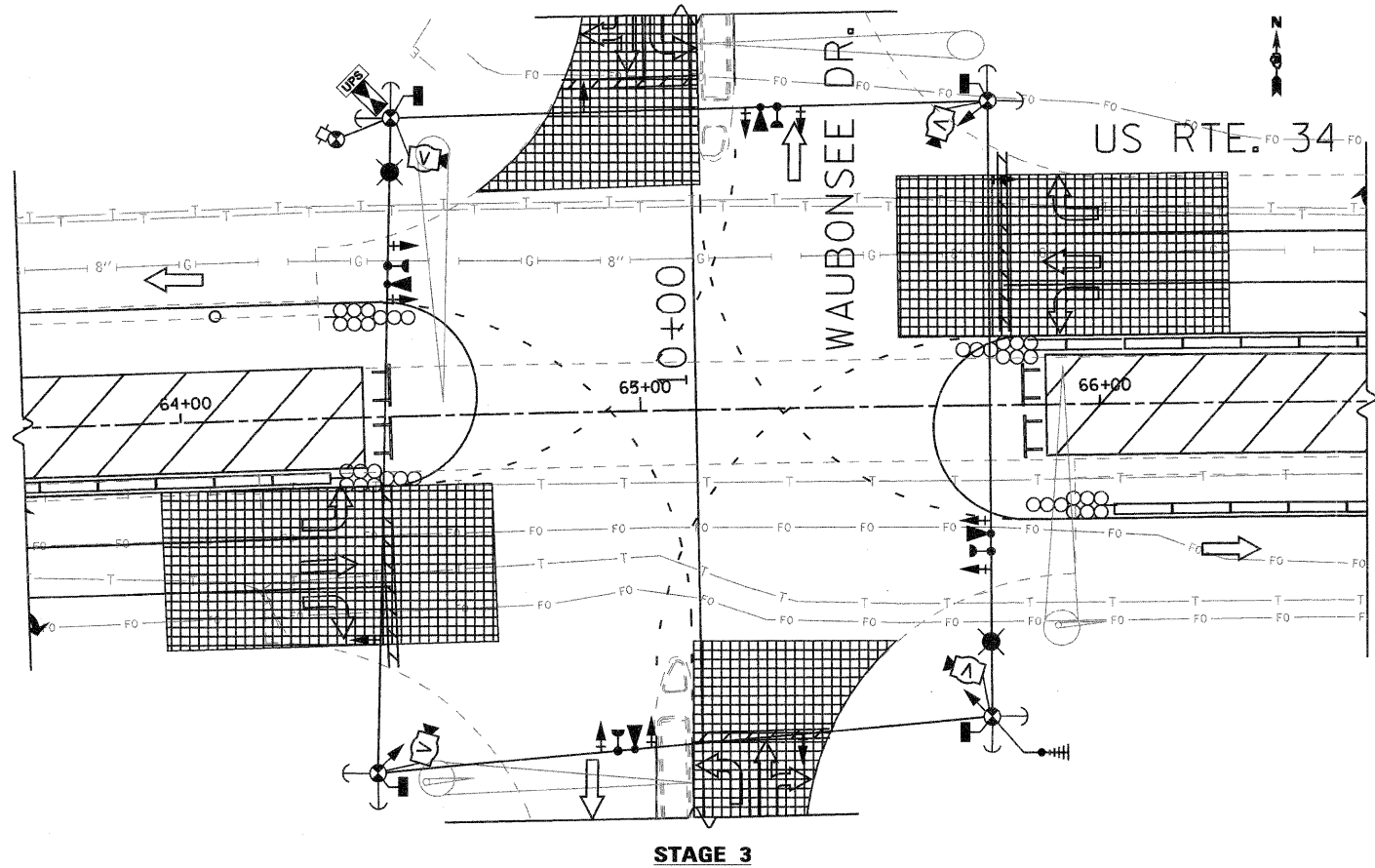
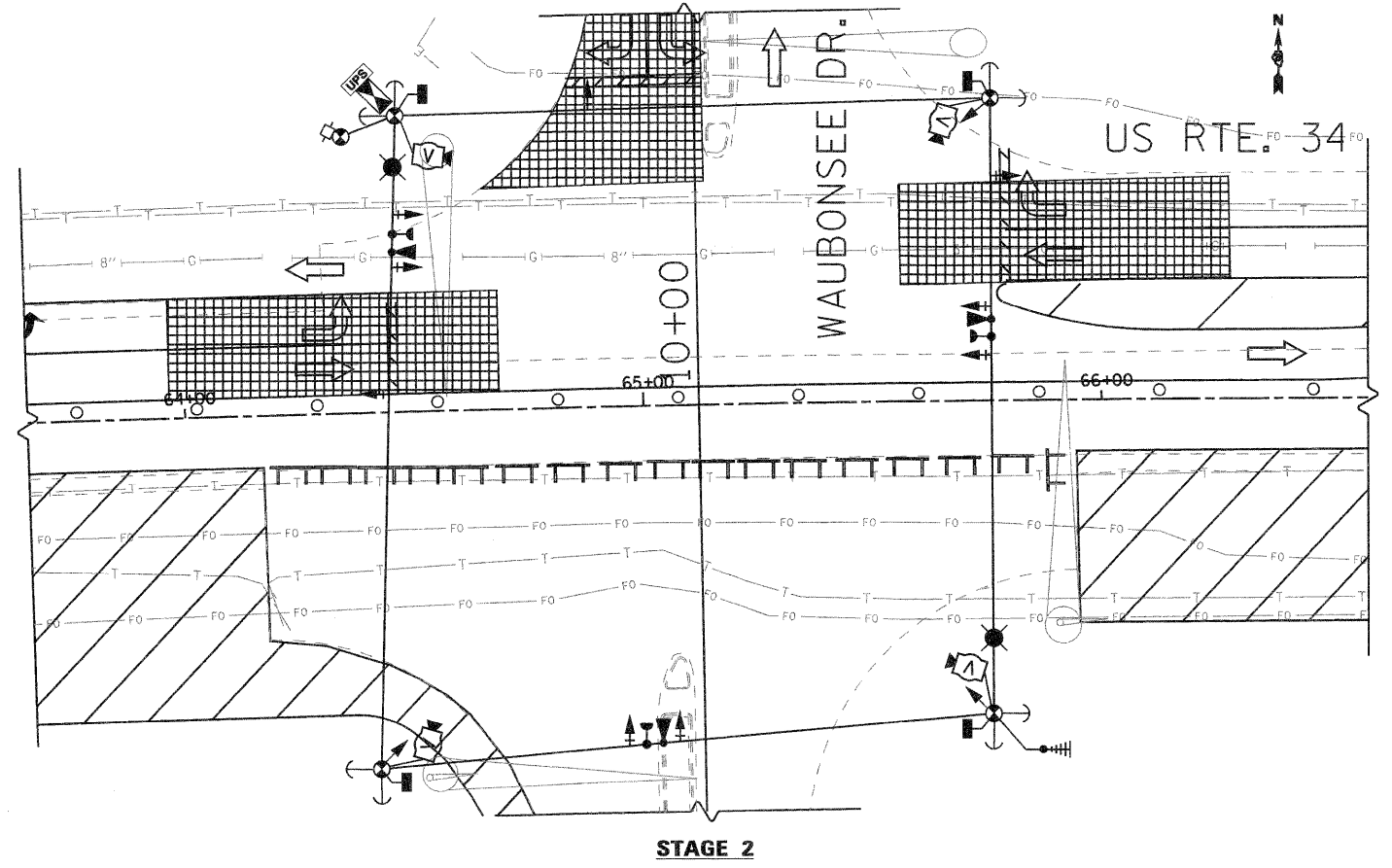
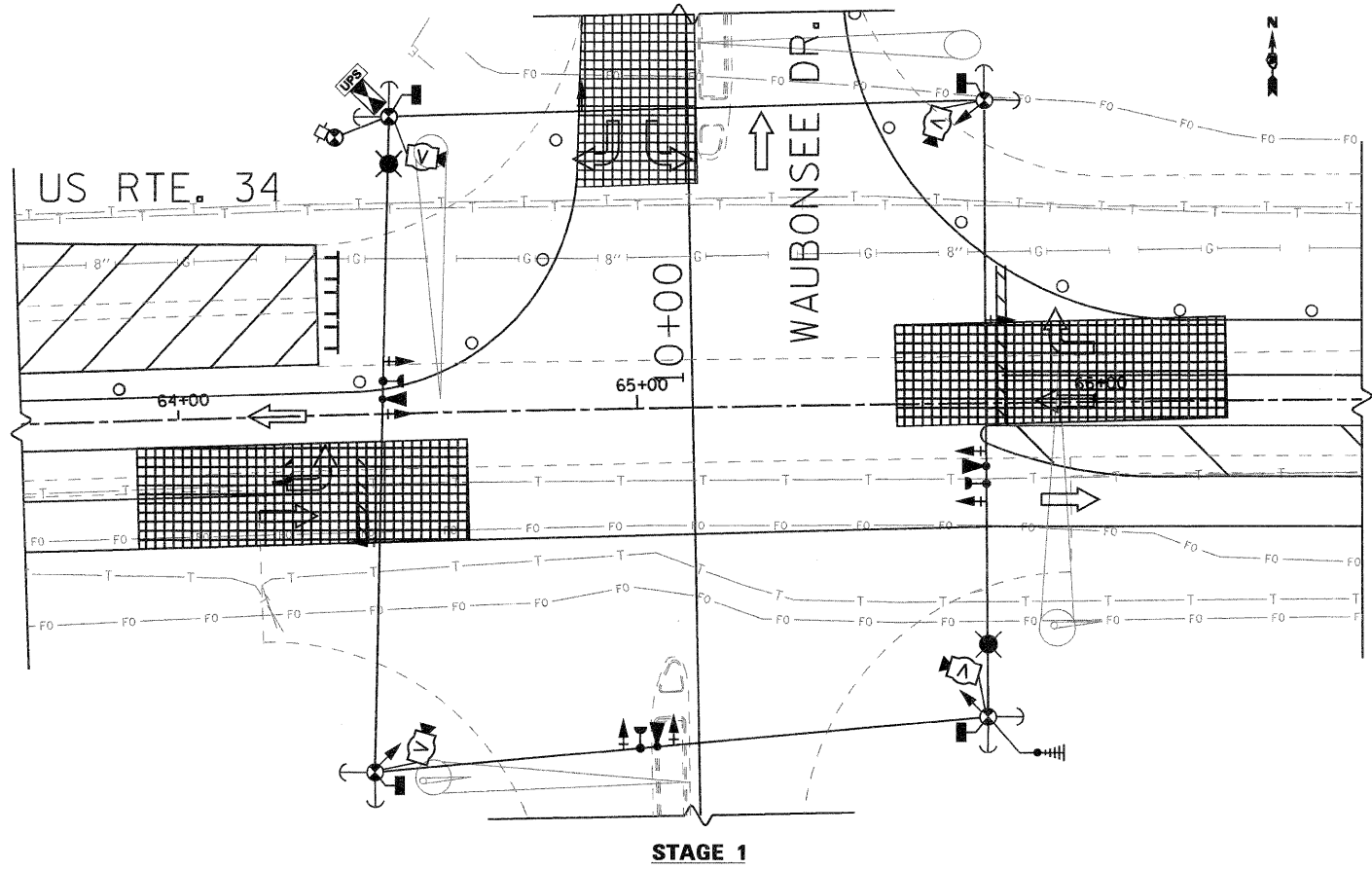
SCALE: N.T.S. SHEET NO. 2 OF 9 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	227
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				

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 Chicago, Illinois 60607



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FILE NAME =	DESIGNED - GR	REVISED -
PLOT SCALE = 1/20	DRAWN - GR	REVISED -
PLOT DATE = 4/9/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

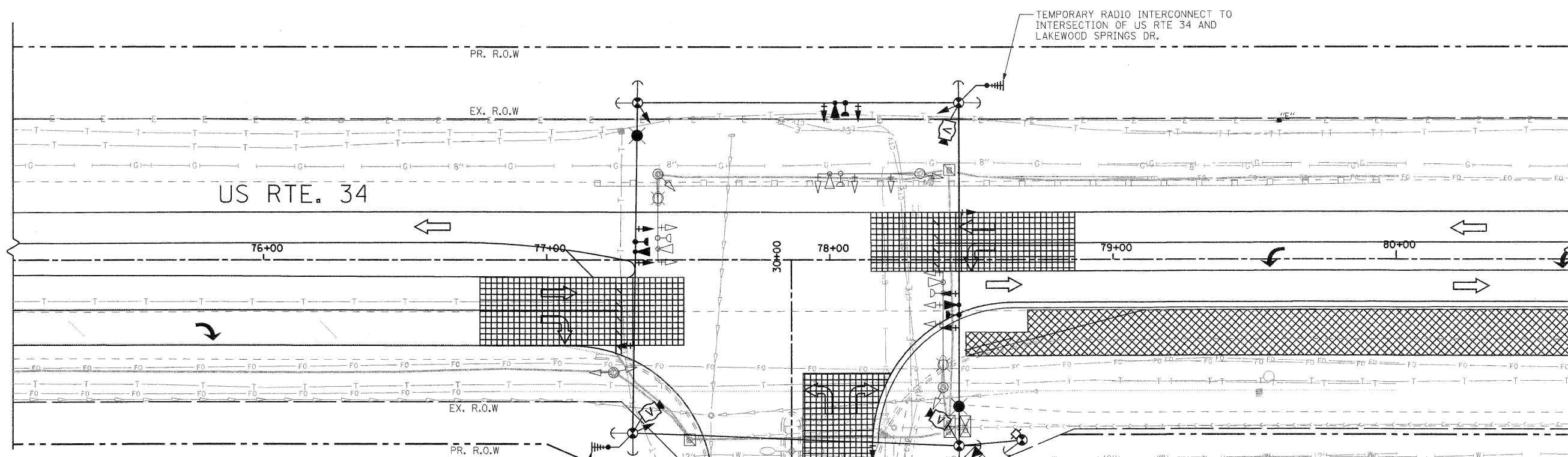
TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN
 US RTE. 34 AND WAUBONSEE DR.
 STAGES 1, 2A, 2, AND 3

SCALE: 1"=20' SHEET NO. 3 OF 9 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	228
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				

FINAL SUBMITTAL
 TTS-03

EJM ENGINEERING, INC.
411 South Wells Street Suite 800
Chicago, Illinois 60607



NOTES FOR TEMPORARY TRAFFIC SIGNALS

- ALL SIGNAL HEADS ON INDIVIDUAL SPAN WIRE SHALL BE MOUNTED SO THAT THE "RED" INDICATIONS ARE LEVEL WITH EACH OTHER.
- THE CONTRACTOR SHALL PROVIDE THREE FEET OF SLACK CABLE IN THE CONTROLLER AND ON THE WOOD POLES. THE SLACK IS IN ADDITION TO THE VERTICAL LENGTH OF CABLE DEFINED IN THE STANDARD SPECIFICATIONS AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR ELECTRIC CABLE OF THE TYPE SPECIFIED.
- TEMPORARY WOOD POLES SHALL BE LOCATED A MINIMUM OF 6' FROM THE FACE OF CURB OR A MINIMUM OF 18' FROM THE EDGE OF PAVEMENT WHERE THERE IS NO CURB, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE WOOD POLE LOCATIONS BEFORE ORDERING TO DETERMINE IF LONGER POLES ARE REQUIRED.
- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" POLYCARBONATE (300mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD. RELOCATION OF ANY SIGNAL HEAD FOR TEMPORARY SIGNAL IS INCIDENTAL TO PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION".
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
- SPAN WIRE SIGNAL HEADS FOR TRAFFIC FROM WAUBONSEE DRIVE SHALL BE RELOCATED TO ALIGN WITH THE LOCATION OF NORTHBOUND AND SOUTHBOUND LANES DURING CONSTRUCTION.
- TEMPORARY UNINTERRUPTIBLE POWER SUPPLY SHALL BE IN ACCORDANCE TO SUPPLEMENTAL SPECIFICATION SECTION 862 AND SHALL BE "EXTENDED" RANGE FOR SIX HOURS OF FULL RUN-TIME OPERATION. THE TEMPORARY UNINTERRUPTIBLE POWER SUPPLY SHALL BE INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.
- TEMPORARY WOOD POLES SHALL BE LOCATED 6' FROM FACE OF CURB OR A MINIMUM OF 18' FROM THE EDGE OF PAVEMENT WHERE THERE IS NO CURB, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ALL TEMPORARY WOOD POLES SHALL BE INSTALLED SO THAT A MINIMUM OF 30' OF POLE IS ABOVE THE PAVEMENT ELEVATION ADJACENT TO THE POLE. SUFFICIENT LENGTH SHALL BE BURIED AND BACK GUYED TO WITHSTAND 70 MPH WIND. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING TEMPORARY WOOD POLE LOCATIONS BEFORE ORDERING TO DETERMINE IF LONGER POLES ARE REQUIRED.

TEMPORARY RADIO INTERCONNECT TO INTERSECTION OF US RTE 34 AND WAUBONSEE DR.

MITCHELL DR.

STAGE 1A

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.

- 1 EACH CONTROLLER AND CABINET AND CONTENTS
- 3 EACH SIGNAL HEAD, 1-FACE, 3 SECTION, BRACKET MOUNTED
- 2 EACH SIGNAL HEAD, 1-FACE, 5 SECTION, BRACKET MOUNTED
- 5 EACH SIGNAL HEAD, 1-FACE, 3 SECTION, MAST ARM MOUNTED
- 3 EACH SIGNAL HEAD, 1-FACE, 5 SECTION, MAST ARM MOUNTED

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE CITY OF PLANO AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE CITY.

- 3 EACH EMERGENCY VEHICLE LIGHT DETECTOR
- 3 EACH CONFIRMATION BEACON

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

- 1 EACH TRAFFIC SIGNAL POST
- 2 EACH COMBINATION STEEL MAST ARM ASSEMBLY AND POLE
- 1 EACH STEEL MAST ARM ASSEMBLY AND POLE
- 13 EACH TRAFFIC SIGNAL BACKPLATE
- 2 EACH LUMINAIRE, 250 WATT, HPS
- 1 EACH SERVICE INSTALLATION

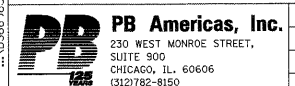
EXISTING EQUIPMENT TO BE REMOVED

- EXISTING SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING SERVICE INSTALLATION
- EXISTING SIGNAL POST AND FOUNDATION
- EXISTING CONTROLLER AND FOUNDATION
- EXISTING HANDHOLE
- EXISTING HEAVY-DUTY HANDHOLE
- EXISTING STEEL MAST ARM POLE AND FOUNDATION
- EXISTING COMBINATION STEEL MAST ARM POLE AND FOUNDATION
- EXISTING EMERGENCY VEHICLE LIGHT DETECTOR
- EXISTING CONFIRMATION BEACON
- EXISTING CONFIRMATION BEACON

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD
- TEMPORARY TRAFFIC SIGNAL HEAD
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FT MIN.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY UNINTERRUPTIBLE POWER SUPPLY, EXTENDED
- TEMPORARY SPAN WIRE, TETHER WIRE AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY LUMINAIRE 250W HPS WITH 15' MAST ARM
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- GUY WIRE
- VIDEO CAMERA
- RADIO INTERCONNECT ANTENNA
- VIDEO DETECTION ZONE
- TEMPORARY PAVEMENT
- WORK ZONE

10' 0 10' 20'
SCALE: 1" = 20'



FILE NAME =	DESIGNED - GR	REVISED -
PLOT SCALE = 1/20	DRAWN - GR	REVISED -
PLOT DATE = 4/9/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

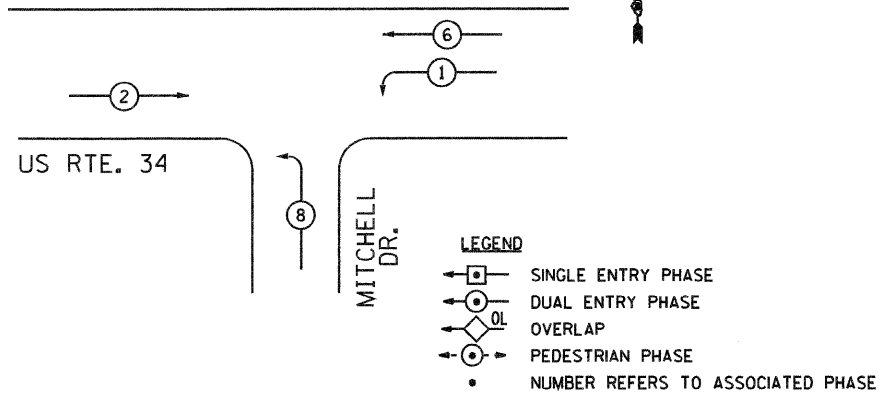
**EXISTING SIGNAL REMOVAL AND TEMPORARY TRAFFIC
SIGNAL INSTALLATION PLAN
US RTE. 34 AND MITCHELL DR. - STAGE 1A**

SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

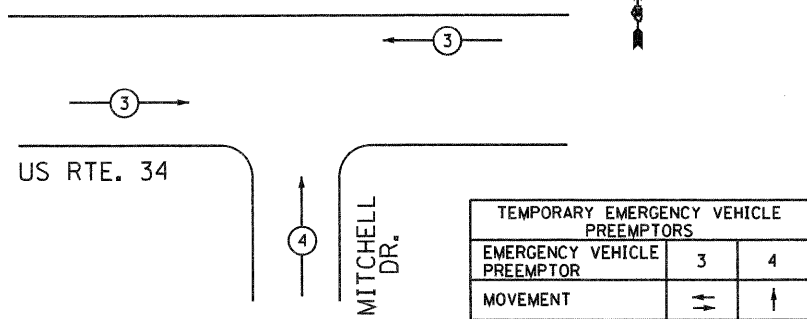
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	229
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				

EJM ENGINEERING, INC.
 411 South Wells Street Suite 800
 Chicago, Illinois 60607

TEMPORARY PHASE DESIGNATION DIAGRAM
 ALL STAGES



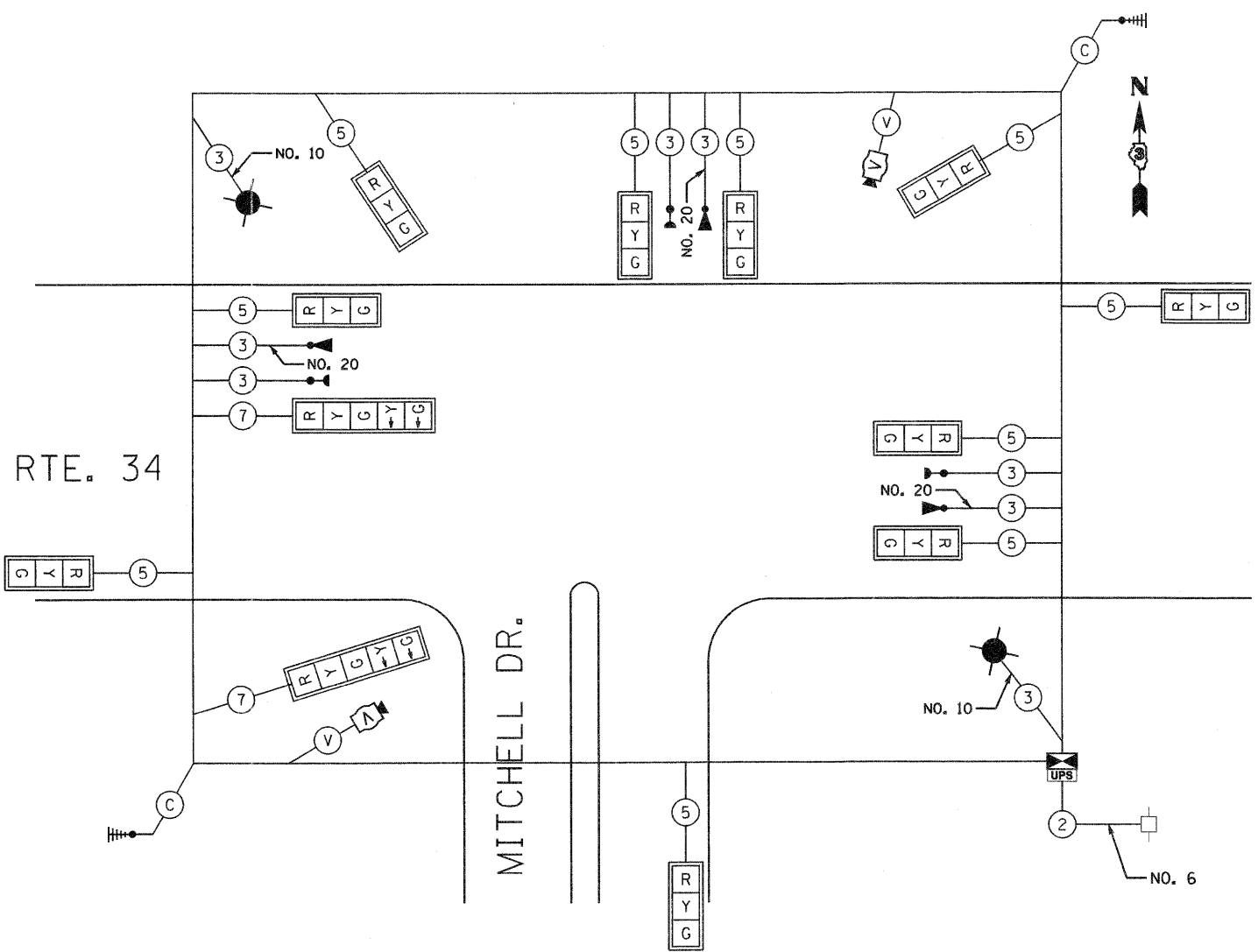
EMERGENCY VEHICLE PRE-EMPTION SEQUENCE
 ALL STAGES



US RTE. 34

MITCHELL DR.

TEMPORARY CABLE PLAN



CABLE PLAN LEGEND

EXISTING		PROPOSED		EXISTING		PROPOSED	
		8" (200mm) TRAFFIC SIGNAL SECTION				SIGNAL FACE WITH BACKPLATE	
		12" (300mm) TRAFFIC SIGNAL SECTION				FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 2-MM12F & SM12F	
		12" (300mm) PEDESTRIAN SIGNAL SECTION				PUSHBUTTON DETECTOR	
		12" (300mm) PEDESTRIAN SIGNAL SECTION				VEHICLE DETECTOR, INDUCTION LOOP	
		CONTROLLER CABINET				DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. "V" INDICATES VENDOR CABLE FOR VIDEO CAMERA. "C" INDICATES COAXIAL CABLE. ALL LOOP DETECTOR CABLE TO BE SHIELDED.	
		SERVICE INSTALLATION				VIDEO CAMERA	
		TELEPHONE CONNECTION				RADIO INTERCONNECT ANTENNA	
		EMERGENCY VEHICLE LIGHT DETECTOR					
		CONFIRMATION BEACON					
		UNINTERRUPTIBLE POWER SUPPLY					
		LUMINAIRE					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN
US RTE. 34 AND MITCHELL DR.

SCALE: N.T.S. SHEET NO. 5 OF 9 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	230
				CONTRACT NO. 66985

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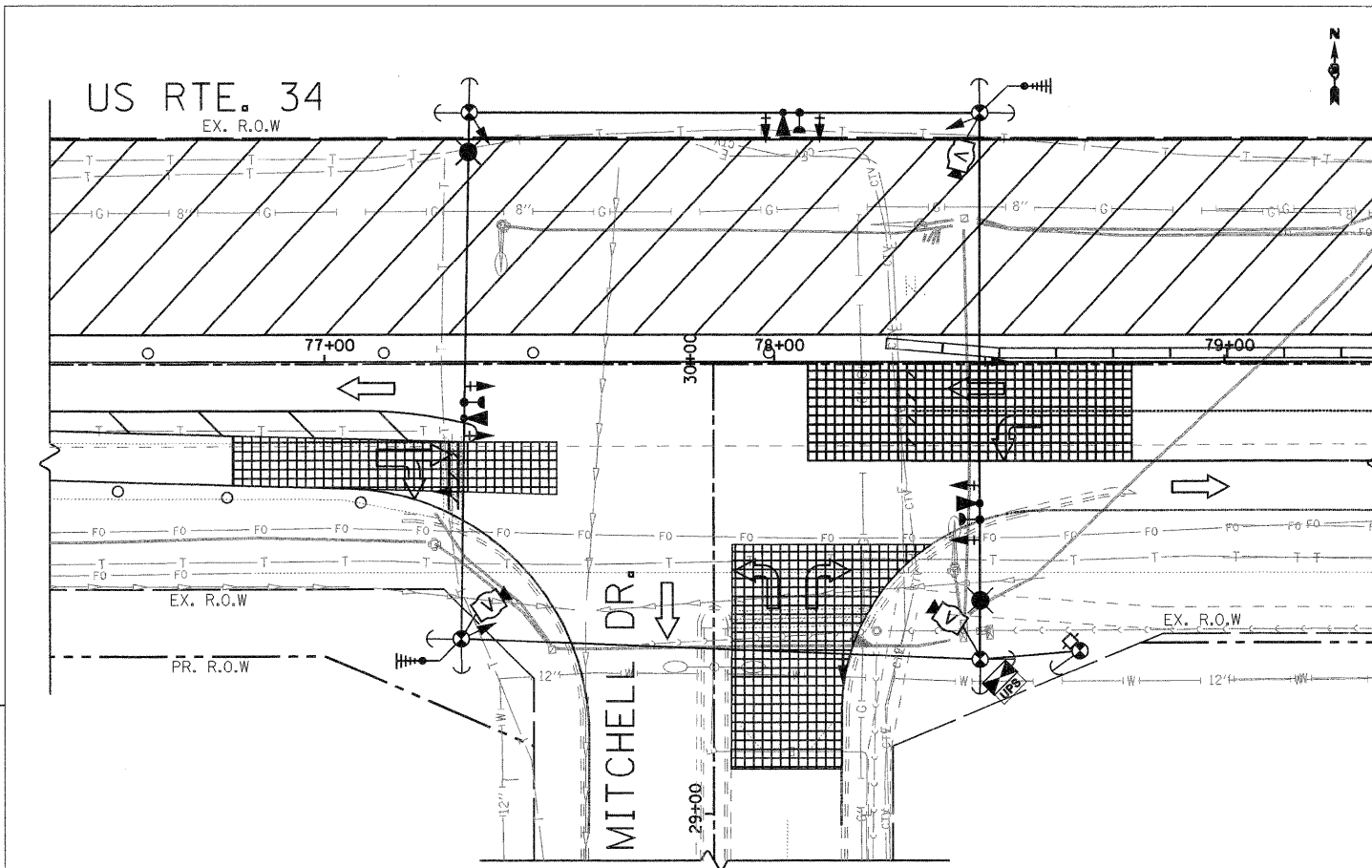
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 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL 60606
 (312)782-8150

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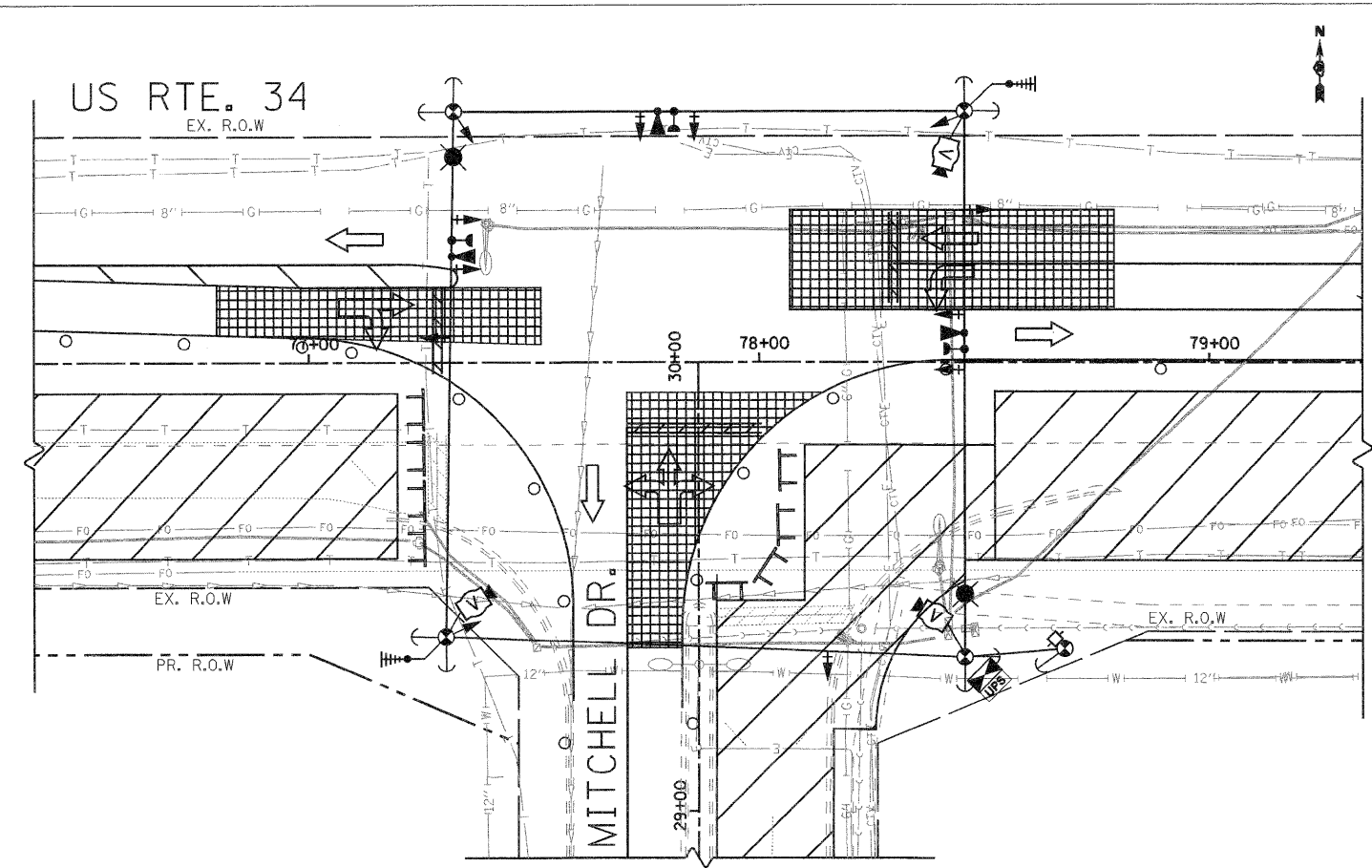
EJM ENGINEERING, INC.
 411 South Wells Street Suite 800
 Chicago, Illinois 60607



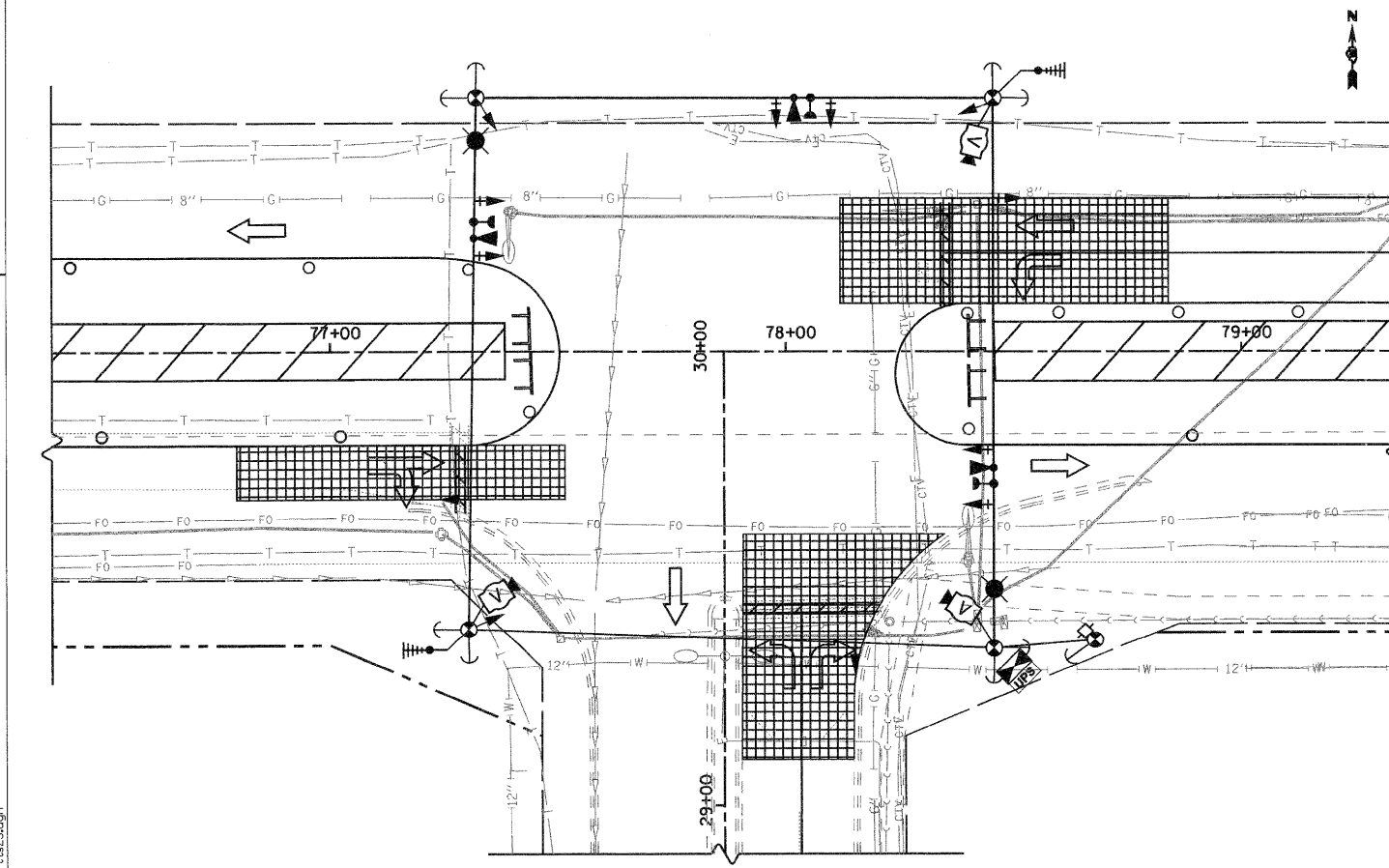
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STAGE 1



STAGE 2



STAGE 3

10' 0 10' 20'
 SCALE: 1" = 20'

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 (312)782-8150

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PLOT DATE = 4/9/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN
 US RTE. 34 AND MITCHELL DR.
 STAGES 1, 2A, 2, AND 3
 SCALE: 1"=20' SHEET NO. 6 OF 9 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	231
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				

FINAL SUBMITTAL
 TTS-06

NOTES FOR TEMPORARY TRAFFIC SIGNALS

- ALL SIGNAL HEADS ON INDIVIDUAL SPAN WIRE SHALL BE MOUNTED SO THAT THE "RED" INDICATIONS ARE LEVEL WITH EACH OTHER.
- THE CONTRACTOR SHALL PROVIDE THREE FEET OF SLACK CABLE IN THE CONTROLLER AND ON THE WOOD POLES. THE SLACK IS IN ADDITION TO THE VERTICAL LENGTH OF CABLE DEFINED IN THE STANDARD SPECIFICATIONS AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR ELECTRIC CABLE OF THE TYPE SPECIFIED.
- TEMPORARY WOOD POLES SHALL BE LOCATED A MINIMUM OF 6' FROM THE FACE OF CURB OR A MINIMUM OF 18' FROM THE EDGE OF PAVEMENT WHERE THERE IS NO CURB, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE WOOD POLE LOCATIONS BEFORE ORDERING TO DETERMINE IF LONGER POLES ARE REQUIRED.
- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" POLYCARBONATE (300mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD. RELOCATION OF ANY SIGNAL HEAD FOR TEMPORARY SIGNAL IS INCIDENTAL TO PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION".
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
- SPAN WIRE SIGNAL HEADS FOR TRAFFIC FROM WAUBONSEE DRIVE SHALL BE RELOCATED TO ALIGN WITH THE LOCATION OF NORTHBOUND AND SOUTHBOUND LANES DURING CONSTRUCTION.
- TEMPORARY UNINTERRUPTIBLE POWER SUPPLY SHALL BE IN ACCORDANCE TO SUPPLEMENTAL SPECIFICATION SECTION 862 AND SHALL BE "EXTENDED" RANGE FOR SIX HOURS OF FULL RUN-TIME OPERATION. THE TEMPORARY UNINTERRUPTIBLE POWER SUPPLY SHALL BE INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.
- TEMPORARY WOOD POLES SHALL BE LOCATED 6' FROM FACE OF CURB OR A MINIMUM OF 18' FROM THE EDGE OF PAVEMENT WHERE THERE IS NO CURB, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ALL TEMPORARY WOOD POLES SHALL BE INSTALLED SO THAT A MINIMUM OF 30' OF POLE IS ABOVE THE PAVEMENT ELEVATION ADJACENT TO THE POLE. SUFFICIENT LENGTH SHALL BE BURIED AND BACK GUYED TO WITHSTAND 70 MPH WIND. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING TEMPORARY WOOD POLE LOCATIONS BEFORE ORDERING TO DETERMINE IF LONGER POLES ARE REQUIRED.

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.

- 1 EACH CONTROLLER AND CABINET AND CONTENTS
- 2 EACH SIGNAL HEAD, 1-FACE, 3 SECTION, BRACKET MOUNTED
- 3 EACH SIGNAL HEAD, 1-FACE, 5 SECTION, BRACKET MOUNTED
- 5 EACH SIGNAL HEAD, 1-FACE, 3 SECTION, MAST ARM MOUNTED
- 2 EACH SIGNAL HEAD, 1-FACE, 5 SECTION, MAST ARM MOUNTED

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE CITY OF PLANO AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE CITY.

- 3 EACH EMERGENCY VEHICLE LIGHT DETECTOR
- 3 EACH CONFIRMATION BEACON

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

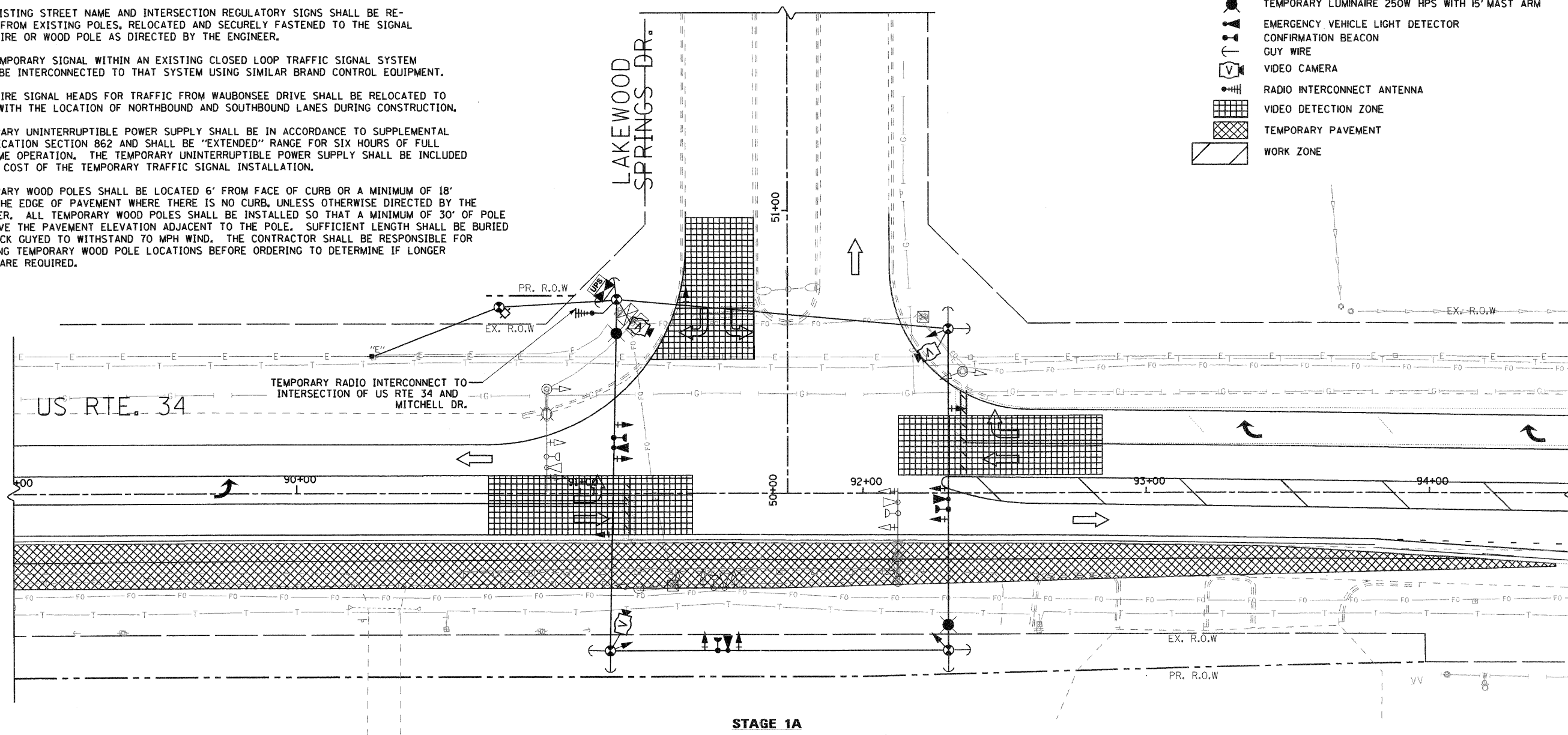
- 2 EACH LUMINAIRE, 250 WATT, HPS
- 12 EACH TRAFFIC SIGNAL BACKPLATE
- 1 EACH TRAFFIC SIGNAL POST
- 2 EACH COMBINATION STEEL MAST ARM ASSEMBLY AND POLE
- 1 EACH STEEL MAST ARM ASSEMBLY AND POLE
- 1 EACH SERVICE INSTALLATION

EXISTING EQUIPMENT TO BE REMOVED

- EXISTING SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING SERVICE INSTALLATION
- EXISTING SIGNAL POST AND FOUNDATION
- EXISTING CONTROLLER AND FOUNDATION
- EXISTING HANDHOLE
- EXISTING HEAVY-DUTY HANDHOLE
- EXISTING STEEL MAST ARM POLE AND FOUNDATION
- EXISTING COMBINATION STEEL MAST ARM POLE AND FOUNDATION
- EXISTING EMERGENCY VEHICLE LIGHT DETECTOR
- EXISTING CONFIRMATION BEACON
- EXISTING CONFIRMATION BEACON

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD
- TEMPORARY TRAFFIC SIGNAL HEAD
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FT MIN.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY UNINTERRUPTIBLE POWER SUPPLY, EXTENDED
- TEMPORARY SPAN WIRE, TETHER WIRE AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY LUMINAIRE 250W HPS WITH 15' MAST ARM
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- GUY WIRE
- VIDEO CAMERA
- RADIO INTERCONNECT ANTENNA
- VIDEO DETECTION ZONE
- TEMPORARY PAVEMENT
- WORK ZONE



STAGE 1A

10' 0" 10' 20"
SCALE: 1" = 20'

EJM ENGINEERING, INC.
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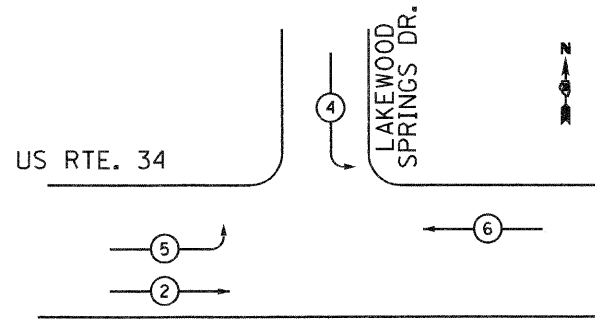
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PLOT DATE = 4/9/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING SIGNAL REMOVAL AND TEMPORARY TRAFFIC
SIGNAL INSTALLATION PLAN
US RTE. 34 AND LAKEWOOD SPRINGS DR. - STAGE 1A
SCALE: 1"=20' SHEET NO. 7 OF 9 SHEETS STA. TO STA.

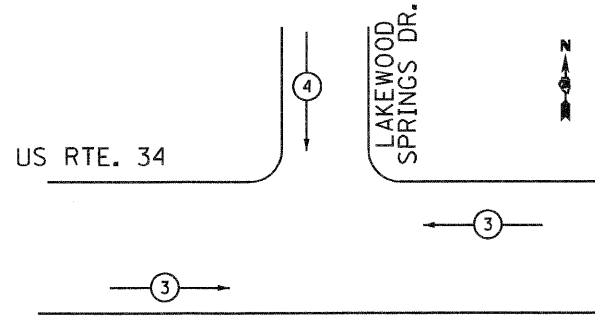
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	232
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66985	

TEMPORARY PHASE DESIGNATION DIAGRAM
 ALL STAGES



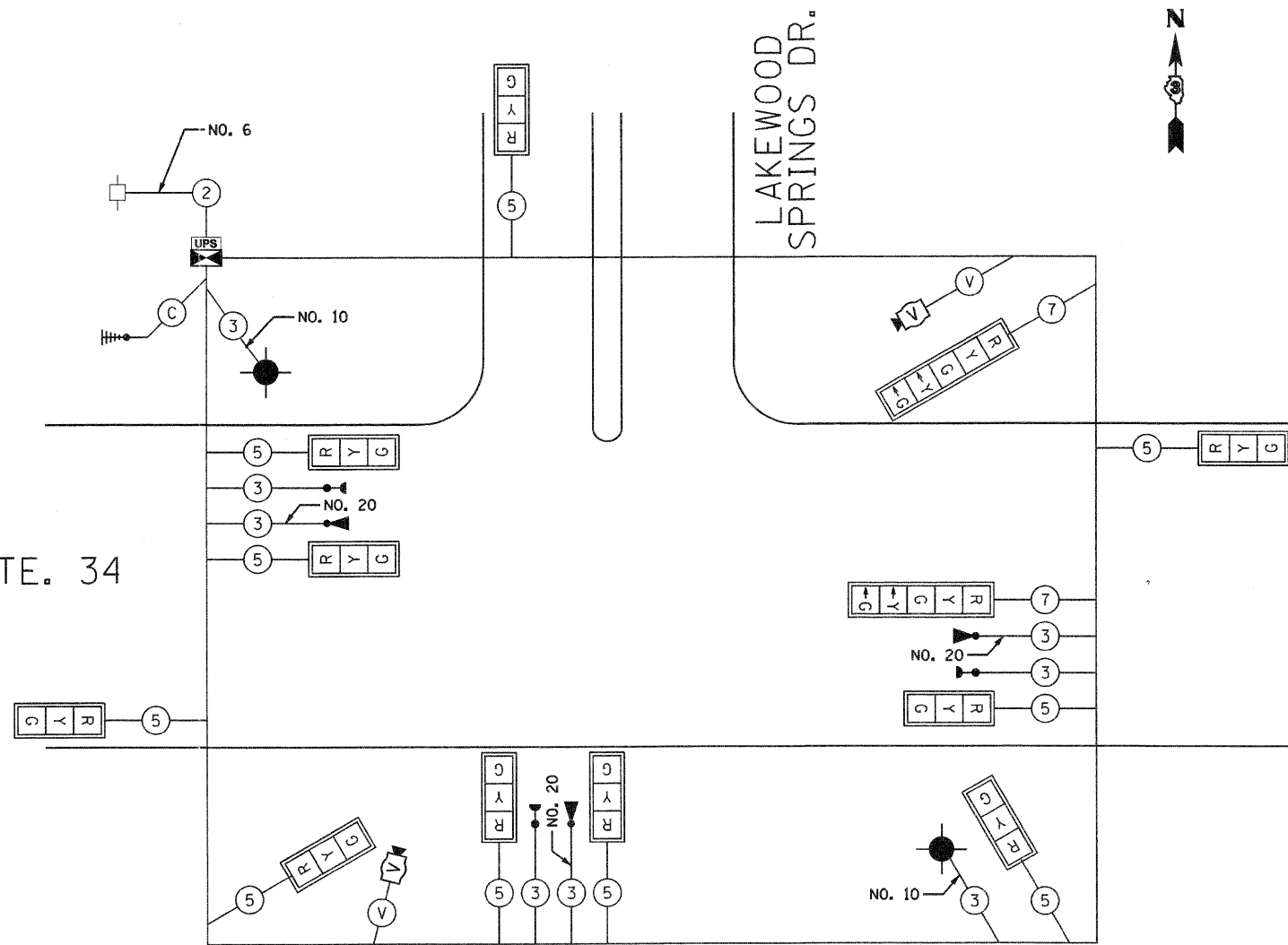
- LEGEND**
- SINGLE ENTRY PHASE
 - DUAL ENTRY PHASE
 - OVERLAP
 - PEDESTRIAN PHASE
 - NUMBER REFERS TO ASSOCIATED PHASE

EMERGENCY VEHICLE PRE-EMPTION SEQUENCE
 ALL STAGES



TEMPORARY EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↔	↓

US RTE. 34

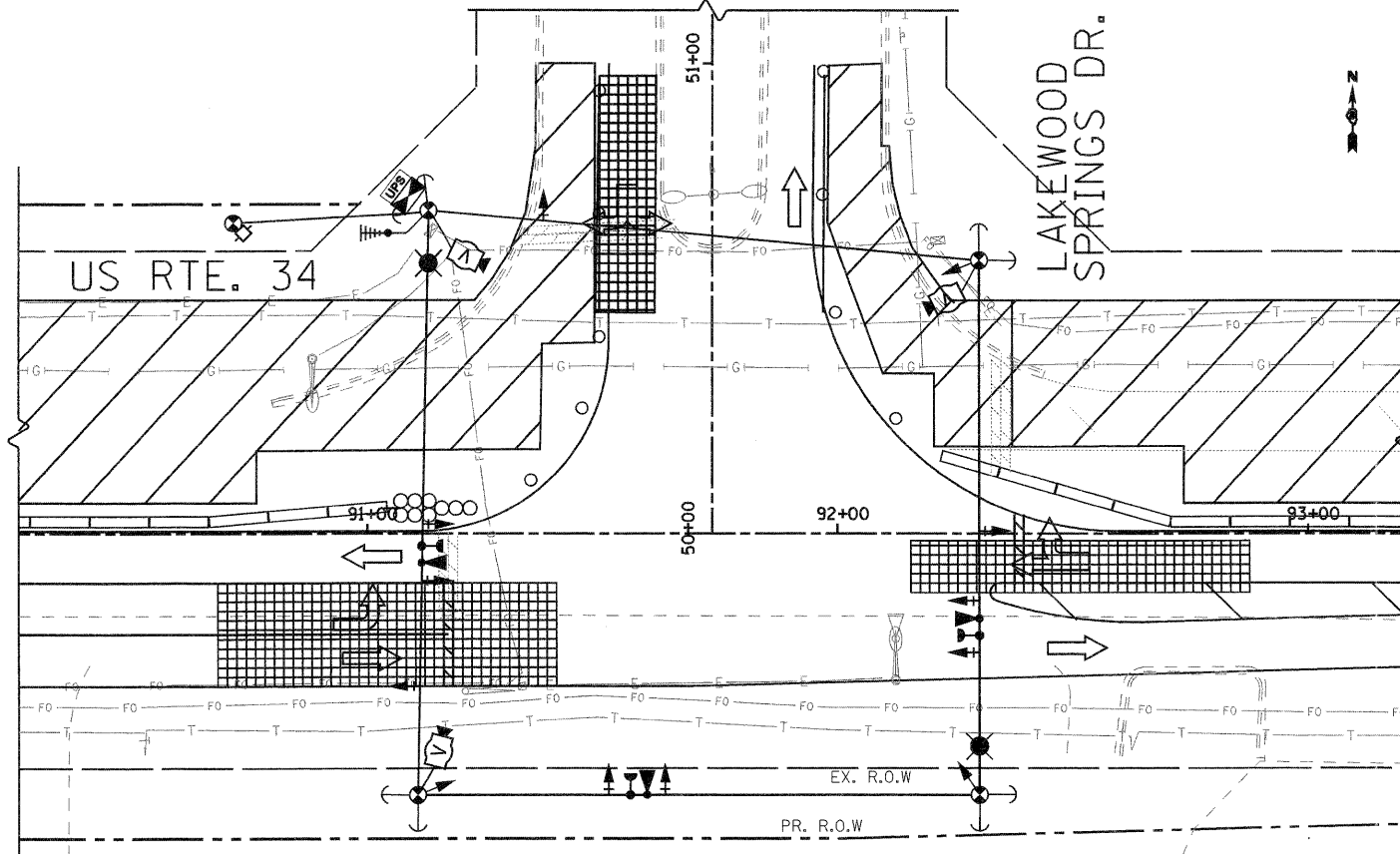


TEMPORARY CABLE PLAN

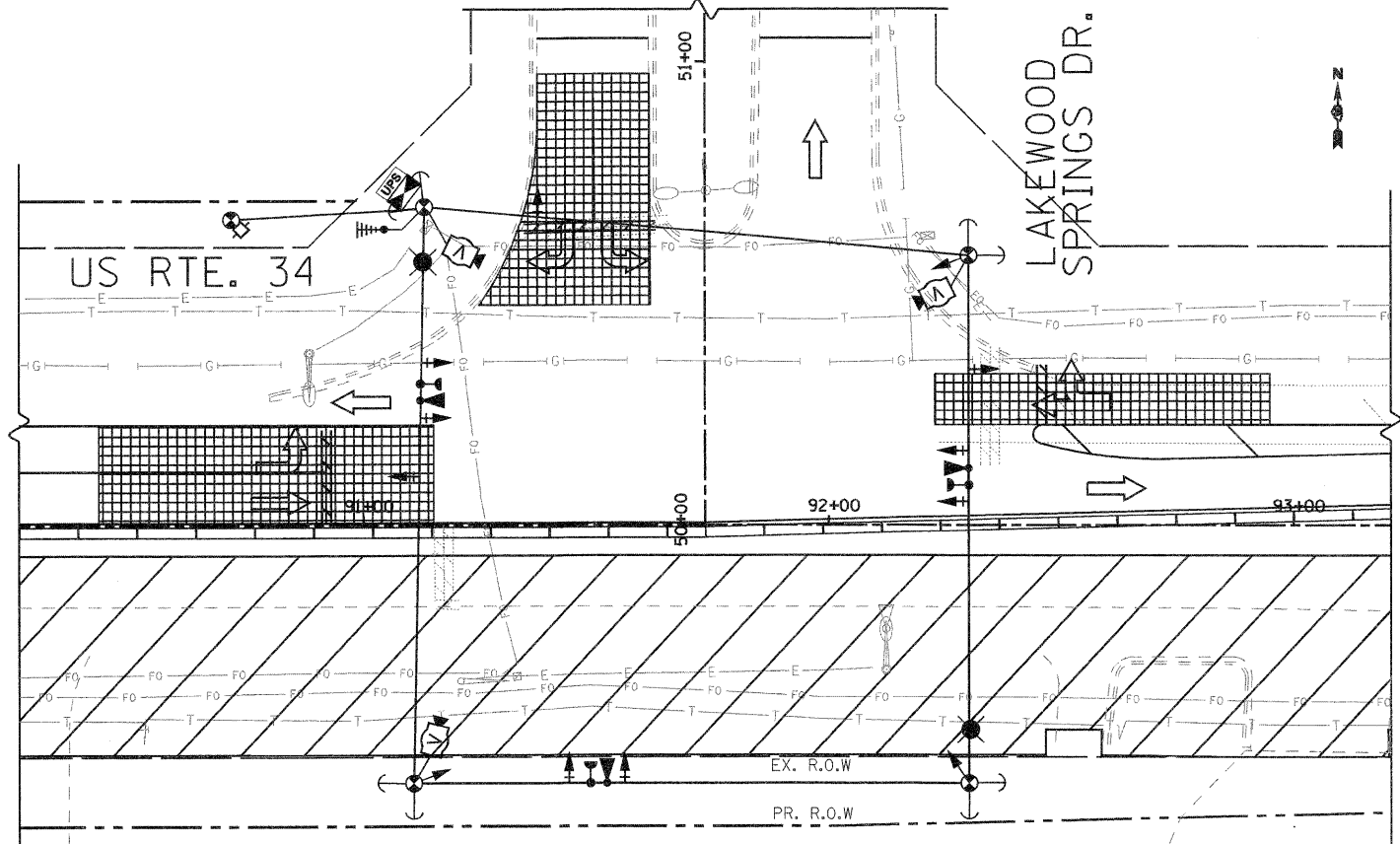
CABLE PLAN LEGEND

- | EXISTING | | PROPOSED | | EXISTING | | PROPOSED | |
|----------|--|---------------------------------------|--|----------|--|---|--|
| | | 8" (200mm) TRAFFIC SIGNAL SECTION | | | | SIGNAL FACE WITH BACKPLATE | |
| | | 12" (300mm) TRAFFIC SIGNAL SECTION | | | | FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 2-MM12F & SM12F | |
| | | 12" (300mm) PEDESTRIAN SIGNAL SECTION | | | | PUSHBUTTON DETECTOR | |
| | | 12" (300mm) PEDESTRIAN SIGNAL SECTION | | | | VEHICLE DETECTOR, INDUCTION LOOP | |
| | | CONTROLLER CABINET | | | | DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. "V" INDICATES VENDOR CABLE FOR VIDEO CAMERA. "C" INDICATES COAXIAL CABLE. ALL LOOP DETECTOR CABLE TO BE SHIELDED. | |
| | | SERVICE INSTALLATION | | | | VIDEO CAMERA | |
| | | TELEPHONE CONNECTION | | | | RADIO INTERCONNECT ANTENNA | |
| | | EMERGENCY VEHICLE LIGHT DETECTOR | | | | | |
| | | CONFIRMATION BEACON | | | | | |
| | | UNINTERRUPTIBLE POWER SUPPLY | | | | | |
| | | LUMINAIRE | | | | | |

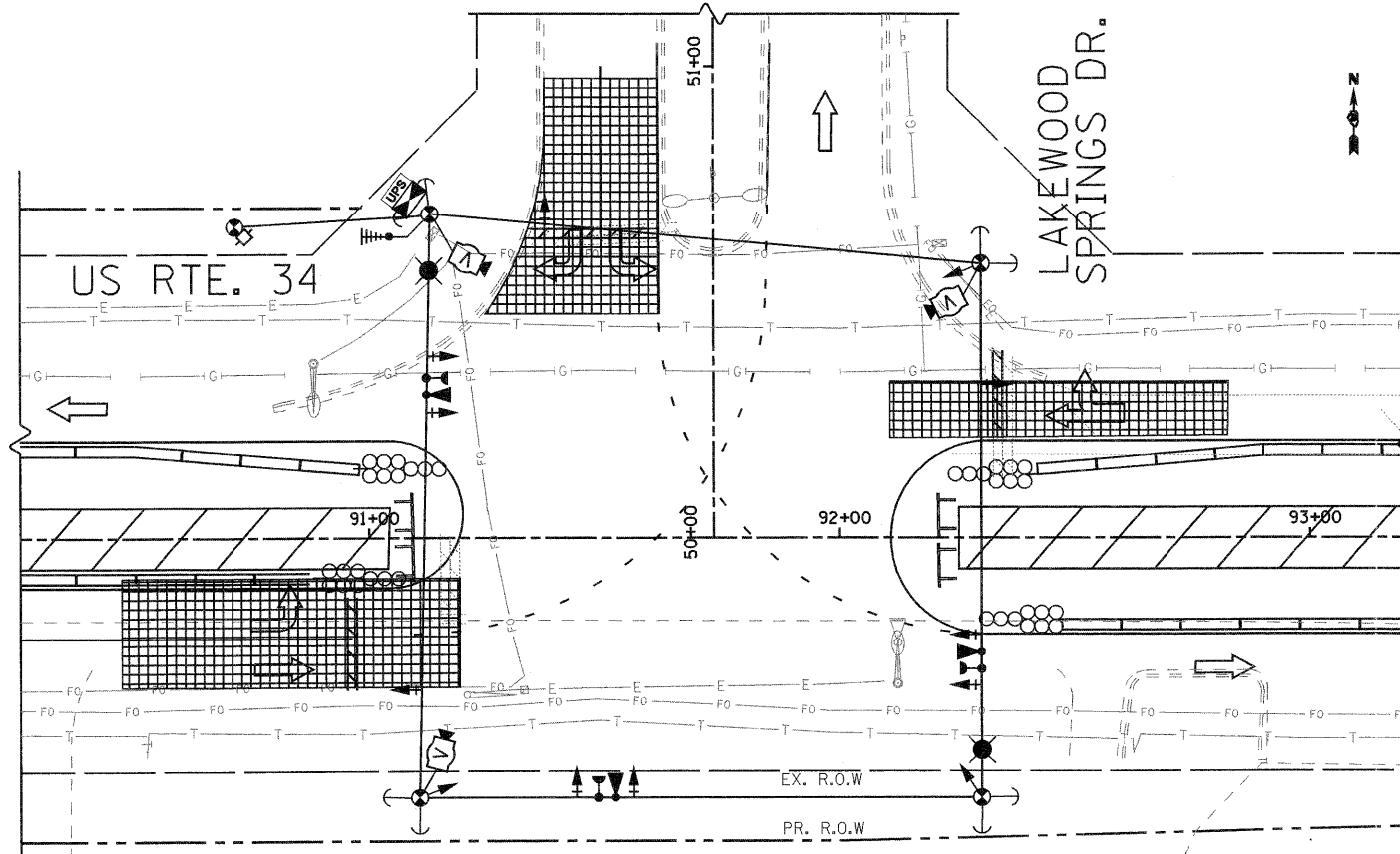
EJM ENGINEERING, INC.
411 South Wells Street Suite 800
Chicago, Illinois 60607



STAGE 1



STAGE 2



STAGE 3

10' 0 10' 20'
SCALE: 1" = 20'

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230 WEST MONROE STREET,
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CHICAGO, IL. 60606
(312)782-8150

FILE NAME =	DESIGNED - GR	REVISED -
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	DATE - 4/8/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN
US RTE. 34 AND LAKEWOOD SPRINGS DR.
STAGES 1, 2A, 2, AND 3

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	234
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				

SCALE: 1"=20' SHEET NO. 9 OF 9 SHEETS STA. TO STA.

TRAFFIC SIGNAL LEGEND

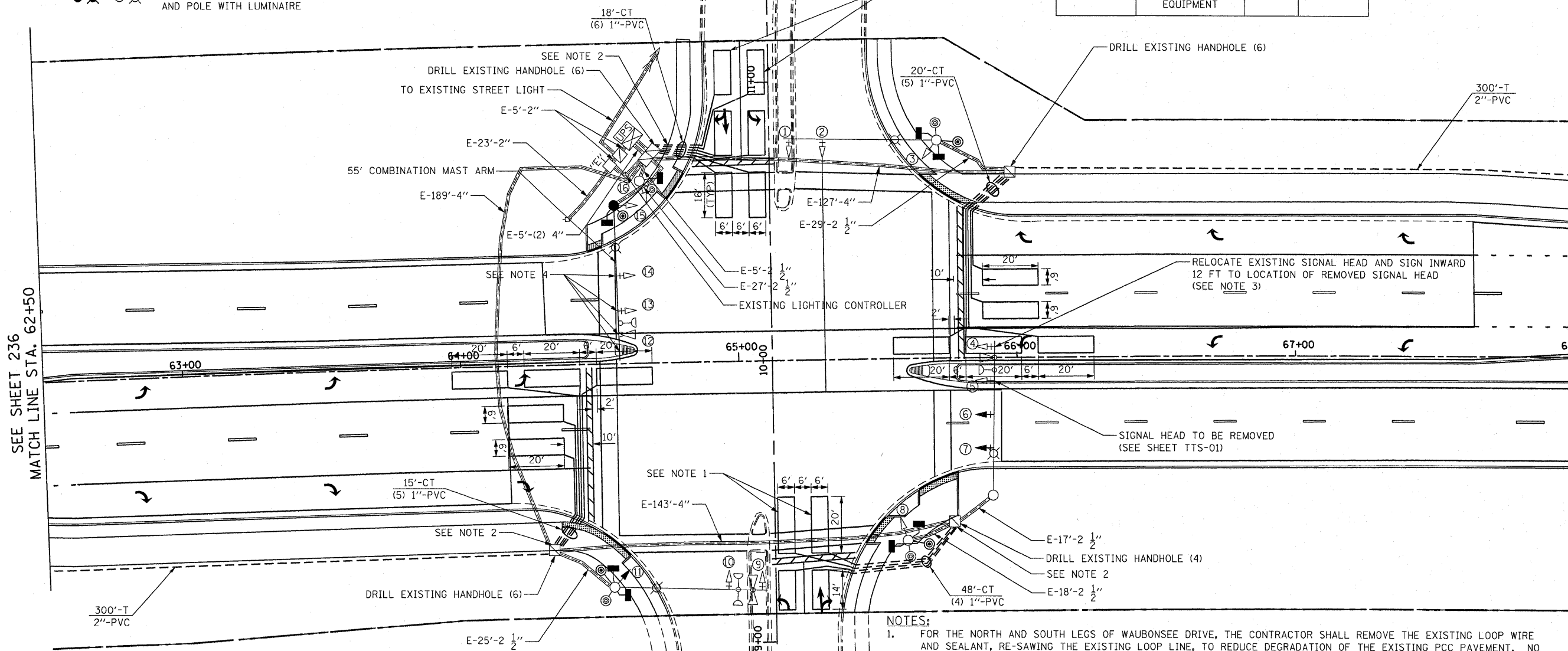
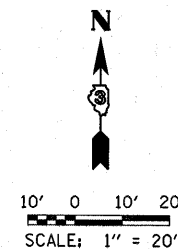
PROPOSED	EXISTING	
		CONTROLLER
		UNINTERRUPTIBLE POWER SUPPLY
		SERVICE INSTALLATION
		SIGNAL HEAD WITH BACKPLATE
		SIGNAL HEAD, PEDESTRIAN
		SIGNAL POST
		MAST ARM ASSEMBLY AND POLE, STEEL
		STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE

PROPOSED	EXISTING	
		HANDHOLE
		DOUBLE HANDHOLE
		PEDESTRIAN PUSH-BUTTON DETECTOR
		CONDUIT: "T" TRENCH, "P" PUSHED, "CT" COMMON TRENCH
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		LOOP DETECTOR

THE INSTALLATION METHODS FOR THE PROPOSED CONDUIT ON THIS SHEET AND THE FOLLOWING SHEET ARE SUGGESTED. THE CONTRACTOR HAS THE OPTION WHEN INSTALLING THE PROPOSED CONDUIT IN ACCORDANCE TO SECTION 810 OF THE STANDARD SPECIFICATIONS.

SCHEDULE OF SIGNAL HEAD QUANTITIES

LOCATION	ITEM	UNIT	QUANTITY
1,2,3,8,9,10,16	EXISTING SIGNAL HEAD TO REMAIN	--	--
4,12,13,14,15	RELOCATE EXISTING SIGNAL HEAD	EACH	5
6,7	SH, 1F, 3S, MAM	EACH	2
11	SH, 1F, 5S, BM	EACH	1
5	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	L SUM	1



SEE SHEET 236
MATCH LINE STA. 62+50

MATCH LINE STA. 68+00
SEE SHEET 236

PEDESTRIAN PUSH-BUTTON DETECTOR SHALL BE 4EVER BRAND EQUIPMENT OR APPROVED EQUAL

NOTES:

- FOR THE NORTH AND SOUTH LEGS OF WAUBONSEE DRIVE, THE CONTRACTOR SHALL REMOVE THE EXISTING LOOP WIRE AND SEALANT, RE-SAWING THE EXISTING LOOP LINE, TO REDUCE DEGRADATION OF THE EXISTING PCC PAVEMENT. NO ADDITIONAL COMPENSATION SHALL BE GIVEN FOR REMOVAL OF THE EXISTING LOOP WIRE AND SEALANT, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE NEW LOOP.
- WHEN DRILLING THE EXISTING HANDHOLE FOR DETECTOR LOOP CONDUIT, THE CONTRACTOR SHALL UTILIZE THE EXISTING LOOP CONDUIT ENTRIES WHERE EVER POSSIBLE TO MAINTAIN INTEGRITY OF THE EXISTING HANDHOLE. NO ADDITIONAL COMPENSATION SHALL BE GIVEN FOR REMOVAL OF THE EXISTING LOOP CONDUIT OR WIRING, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF DRILLING THE HANDHOLE.
- RELOCATION OF THE EXISTING SIGN SHALL MEET ALL APPLICABLE PORTIONS OF SECTION 704 AND SHALL BE CONSIDERED INCIDENTAL TO RELOCATION OF THE TRAFFIC SIGNAL HEAD.
- RELOCATE ALL EXISTING TRAFFIC SIGNAL EQUIPMENT, LIGHTING EQUIPMENT, AND SIGNING FROM EXISTING MAST ARM ASSEMBLY AND POLE TO THE PROPOSED MAST ARM ASSEMBLY AND POLE. THE CONTRACTOR SHALL REMOVE EXISTING CABLES AND REPLACE IN KIND. CABLE REMOVAL SHALL BE INCIDENTAL TO REMOVAL OF THE EXISTING MAST ARM. RELOCATION OF THE EXISTING SIGNING SHALL BE INCIDENTAL TO THE COST OF THE PROPOSED COMBINATION MAST ARM ASSEMBLY AND POLE.

SEE SHEET TS-04 FOR TRAFFIC SIGNAL GENERAL NOTES

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FILE NAME = duncanbd	DESIGNED - GR	REVISED - BDD 09/26/2011
PLOT SCALE = 20.0000' / 1"	DRAWN - GR	REVISED -
PLOT DATE = 9/27/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION
US 34 AND WAUBONSEE DRIVE

SCALE: 1"=20' SHEET NO. 1 OF 14 SHEETS STA. TO STA.

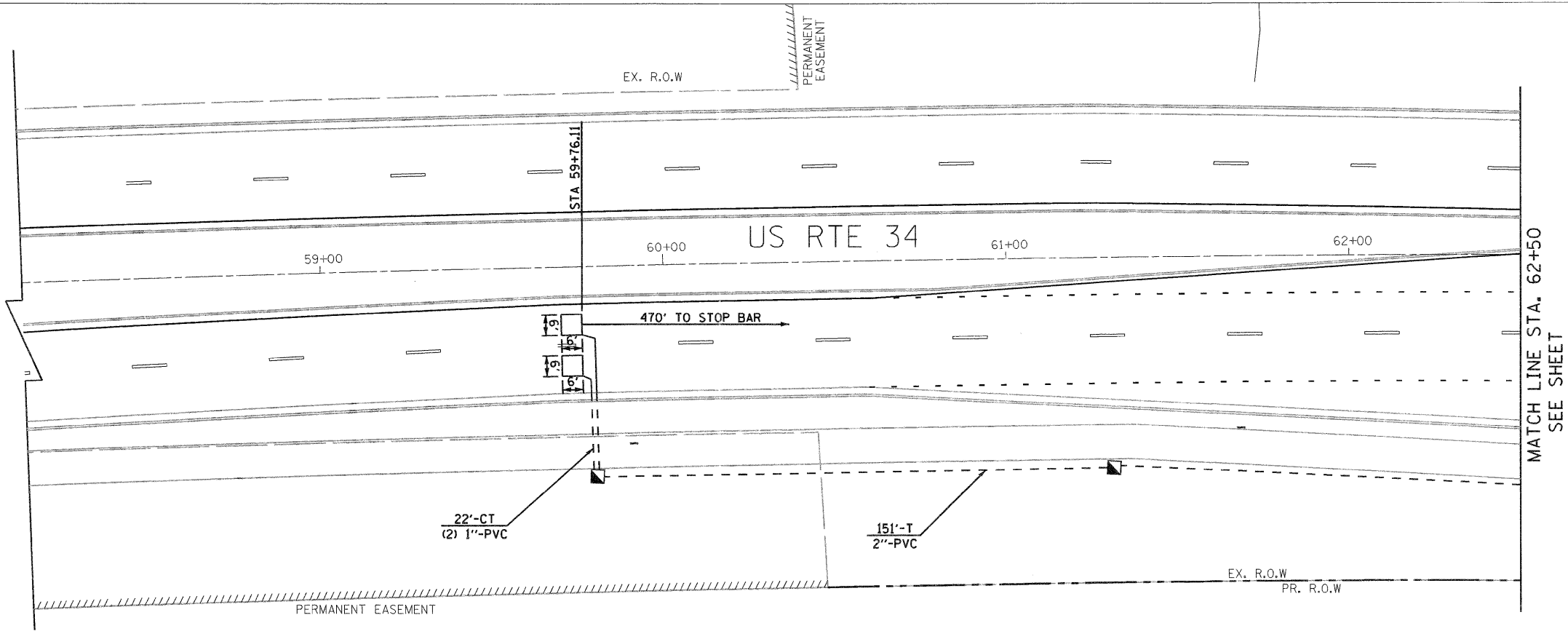
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	235
				CONTRACT NO. 66985

ILLINOIS FED. AID PROJECT
FINAL SUBMITTAL

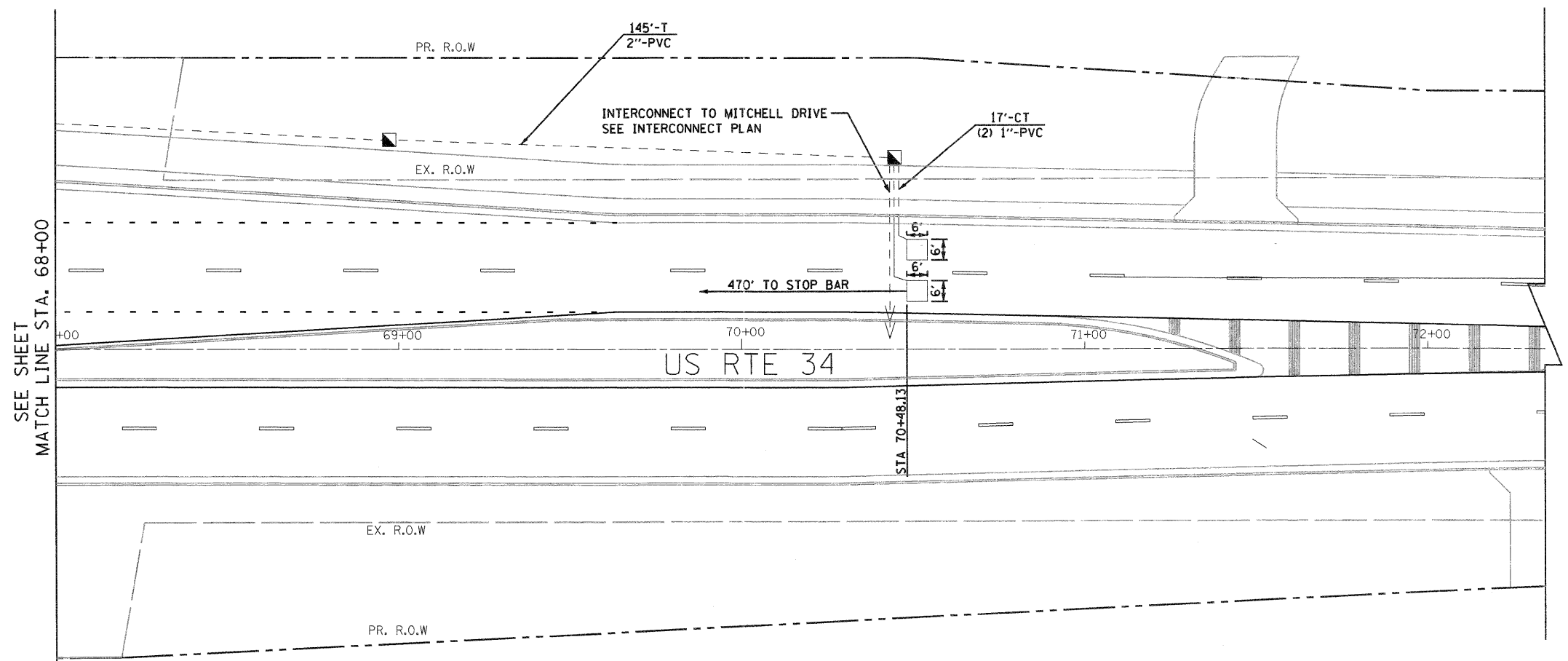
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 411 South Wells Street Suite 800
 Chicago, Illinois 60607



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10' 0 10' 20'
 SCALE: 1" = 20'



10' 0 10' 20'
 SCALE: 1" = 20'



FILE NAME =	DESIGNED - GR	REVISED -
PLOT SCALE = 1:20	DRAWN - GR	REVISED -
PLOT DATE = 4/9/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

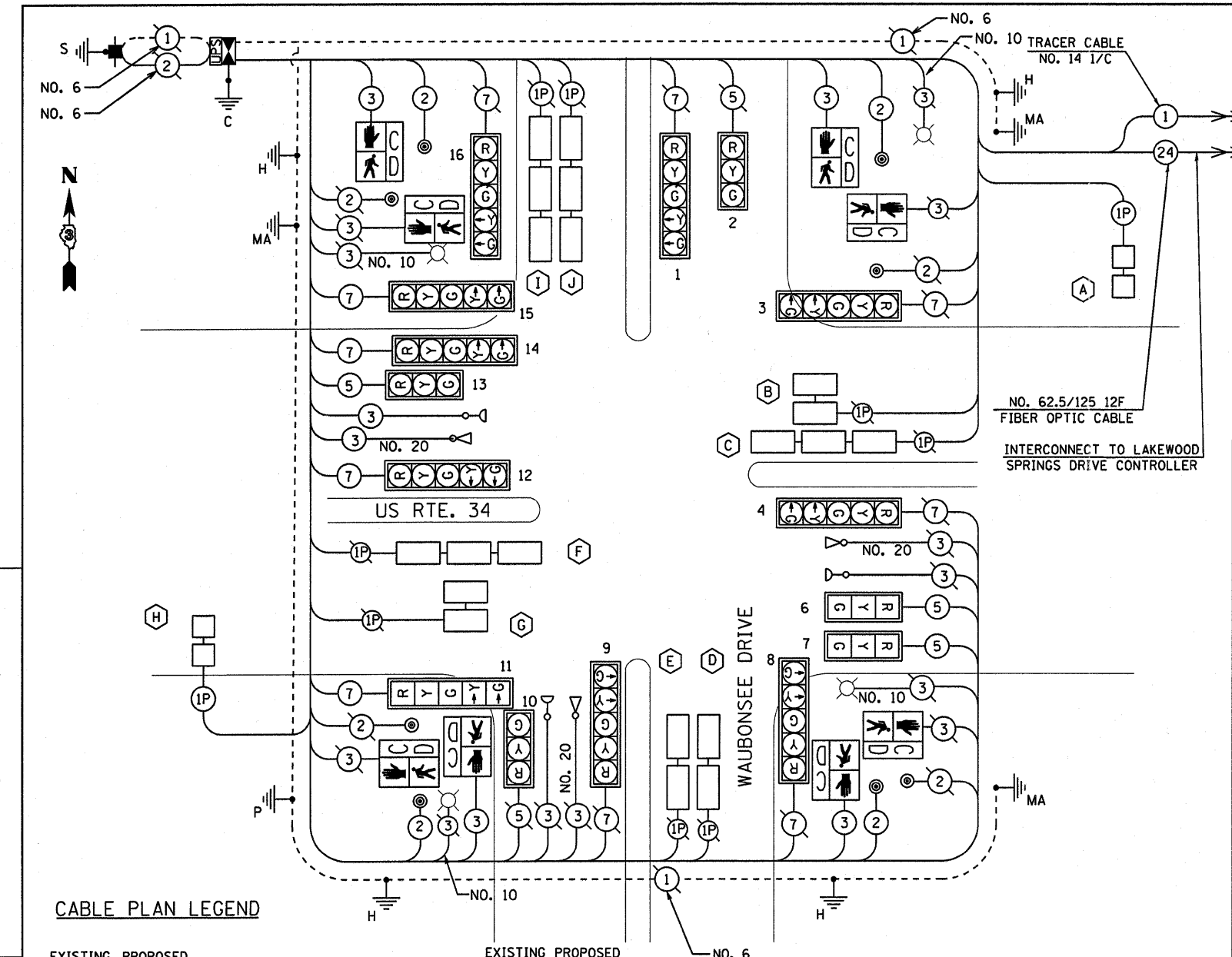
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL INSTALLATION PLAN
 US RTE 34 AND WAUBONSEE DRIVE**

SCALE: 1"=20' SHEET NO. 2 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	236
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				

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411 South Wells Street Suite 800
Chicago, Illinois 60607



DETECTOR LOOP INDUCTANCE CHART

LOOP SYSTEM	LABEL	NUMBER OF TURNS	INDUCTANCE (MH)	FREQUENCY (HERTZ)	J PIN STATUS
A	PHASE 6 WB FAR	3	293	36,123	ON
B	PHASE 6 WB STBR	3	468	30,510	OFF
C	PHASE 1 WB STBR LL	3	468	21,496	ON
D	PHASE 8 NB STBR	3	104	24,111	ON
E	PHASE 3 NB STBR LL	3	104	24,090	ON
F	PHASE 5 EB STBR LL	3	156	30,352	ON
G	PHASE 2 EB STBR	3	156	35,902	OFF
H	PHASE 2 EB FAR	3	48	24,090	ON
I	PHASE 4 SB STBR	3	132	30,352	ON
J	PHASE 7 EB STBR LL	3	132	35,902	ON

J PIN STATUS:
"ON" MEANS STANDARD DETECTOR SETUP.
"OFF" MEANS THE J WIRE HAS BEEN DISCONNECTED BUT INTACT AT THE HARNESS PANEL WITH THE NECESSARY SPADE CONNECTION ATTACHED, MARKED, AND INSULATED.

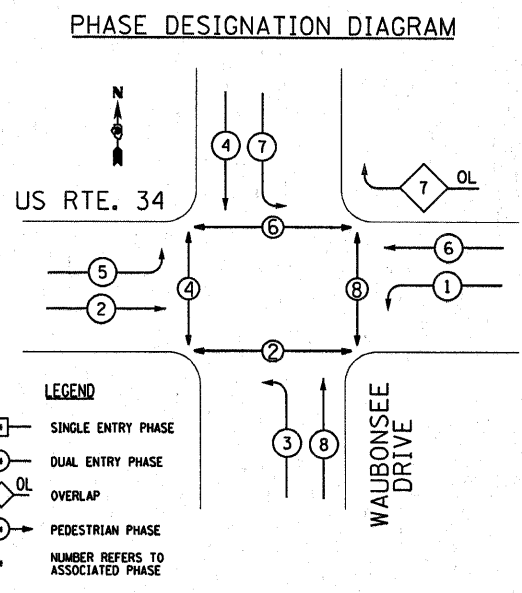
ELECTRICAL LOAD CHART

US RTE. 34			
SIGNAL SECTION	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
RED	9	17	20
YELLOW	9	25	5
GREEN	9	15	75
YELLOW ARROW	6	12	5
GREEN ARROW	6	12	5
WALK (SYMBOL)	4	12.5	50
HAND (SYMBOL)	4	12.5	50

WAUBONSEE DRIVE			
SIGNAL SECTION	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
RED	6	17	75
YELLOW	6	25	5
GREEN	6	15	20
YELLOW ARROW	4	12	20
GREEN ARROW	4	12	20
WALK (SYMBOL)	4	12.5	50
HAND (SYMBOL)	4	12.5	50

TRAFFIC SIGNAL CABINET			
ITEM	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
CONTROLLER	1	100	100
LOOP DETECTORS	10	4	100

LIGHTING			
ITEM	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
LUMINAIRE	4	250	50



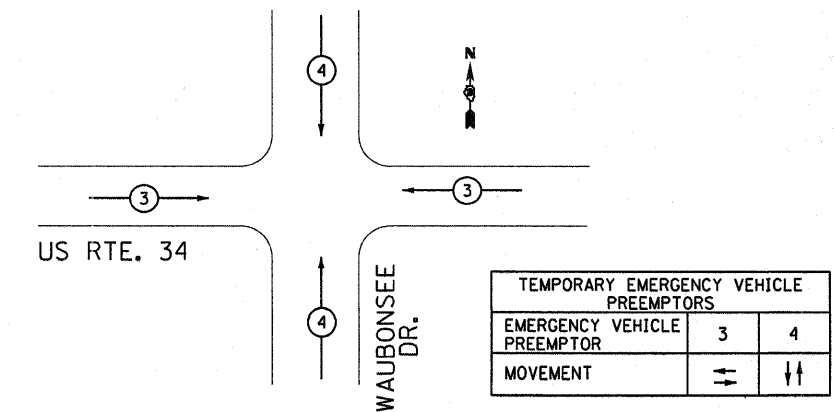
SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	QUANTITY
UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	553
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	896
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	4
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 10	FOOT	107
RELOCATE EXISTING LIGHTING UNIT	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1046
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1102
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	973
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	645
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1360
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 55 FT.	EACH	1
DRILL EXISTING HAND HOLE	EACH	21
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	2
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	3
INDUCTIVE LOOP DETECTOR	EACH	2
DETECTOR LOOP, TYPE 1	FOOT	1721
PEDESTRIAN PUSH-BUTTON	EACH	4
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
RELOCATE EXISTING SIGNAL HEAD	EACH	3
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	3
ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	161
RELOCATE LIGHT DETECTOR	EACH	1

CABLE PLAN LEGEND

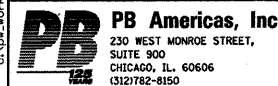
- | | | | | |
|--|------------|---|--|---|
| | G | 8" (200mm) TRAFFIC SIGNAL SECTION | | SIGNAL FACE WITH BACKPLATE |
| | R | 12" (300mm) TRAFFIC SIGNAL SECTION | | H/C GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER |
| | W | 12" (300mm) PEDESTRIAN SIGNAL SECTION | | MA/P GROUND ROD AT POST OR MAST ARM POLE |
| | W | 12" (300mm) PEDESTRIAN SIGNAL SECTION | | S GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| | C | CONTROLLER CABINET | | 1 GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN) |
| | UPS | UNINTERRUPTIBLE POWER SUPPLY | | 24 FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F & SM12F |
| | S | SERVICE INSTALLATION | | PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER |
| | T | TELEPHONE CONNECTION | | |
| | E | EMERGENCY VEHICLE LIGHT DETECTOR | | |
| | C | CONFIRMATION BEACON | | |
| | P | PUSHBUTTON DETECTOR | | |
| | V | VEHICLE DETECTOR, INDUCTION LOOP | | |
| | 2 | DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. | | |
| | L | LUMINAIRE | | |

EMERGENCY VEHICLE PRE-EMPTION SEQUENCE



RESTORATION OF WORK AREA; RESTORATION OF THE TRAFFIC SIGNAL WORK SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEED IN ACCORDANCE WITH STANDARD SPECIFICATION 252 AND 250 RESPECTIVELY.

ALL SIGNAL INDICATIONS SHALL BE L.E.D



FILE NAME = dunoanbd	DESIGNED - GR	REVISED - BDD 09/26/2011
PLLOT SCALE = 28.0000' / 1" =	DRAWN - GR	REVISED -
PLLOT DATE = 9/27/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

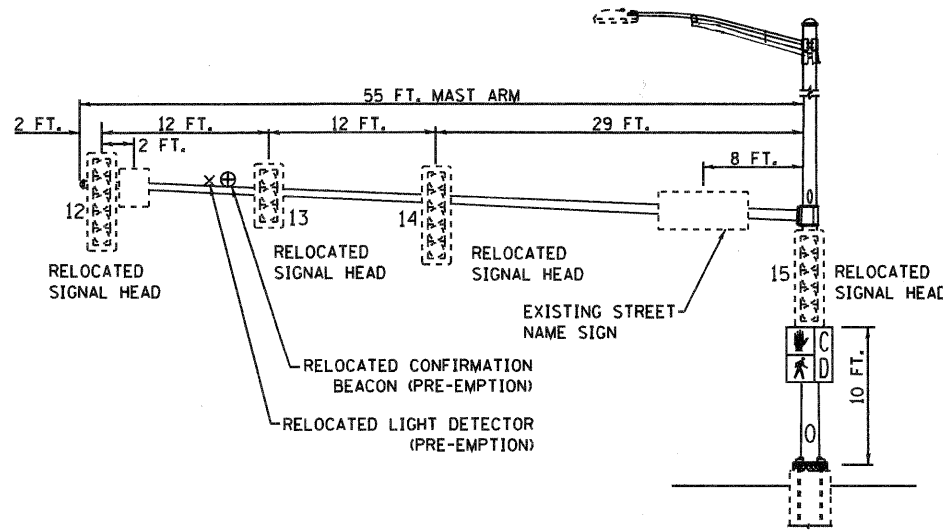
CABLE PLAN AND SCHEDULE OF QUANTITIES
US RTE 34 AND WAUBONSEE DRIVE

SCALE: N.T.S. SHEET NO. 3 OF 14 SHEETS STA. TO STA.

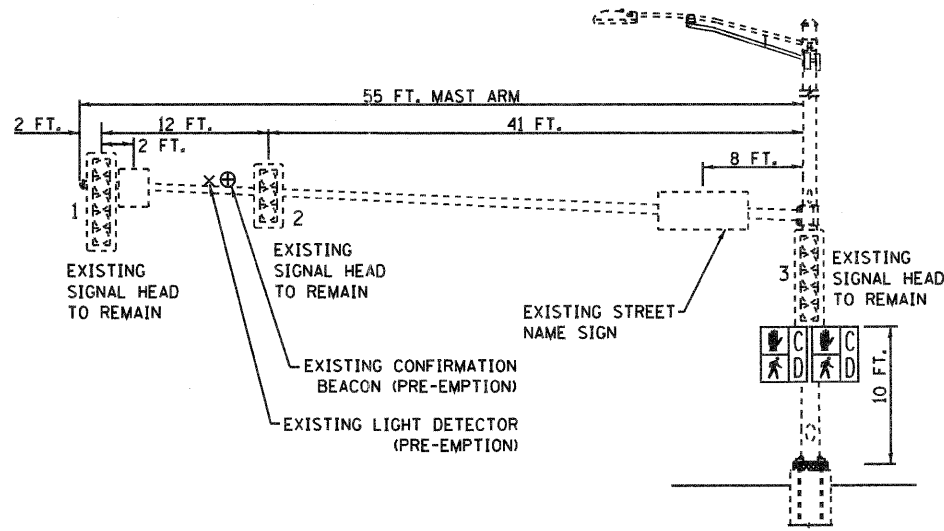
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	237
				CONTRACT NO. 66985

ILLINOIS FED. AID PROJECT FINAL SUBMITTAL

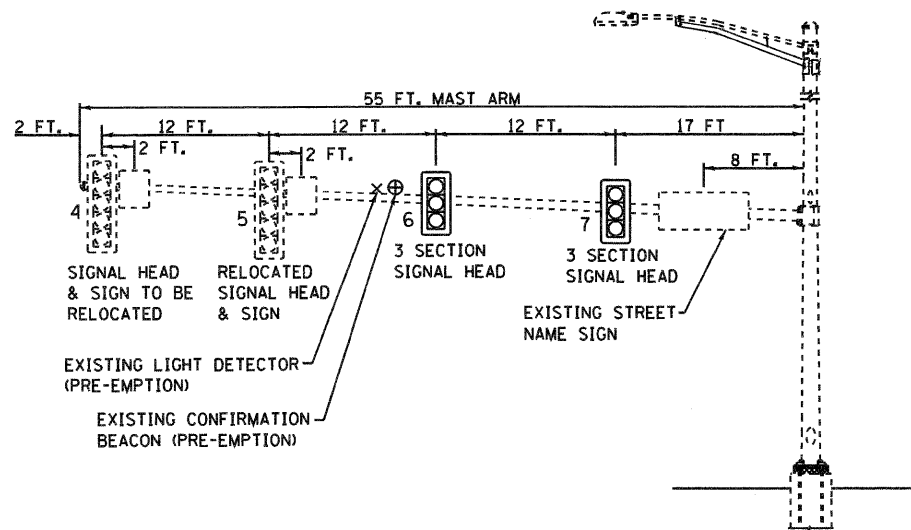
EJM ENGINEERING, INC.
411 South Wells Street Suite 800
Chicago, Illinois 60607



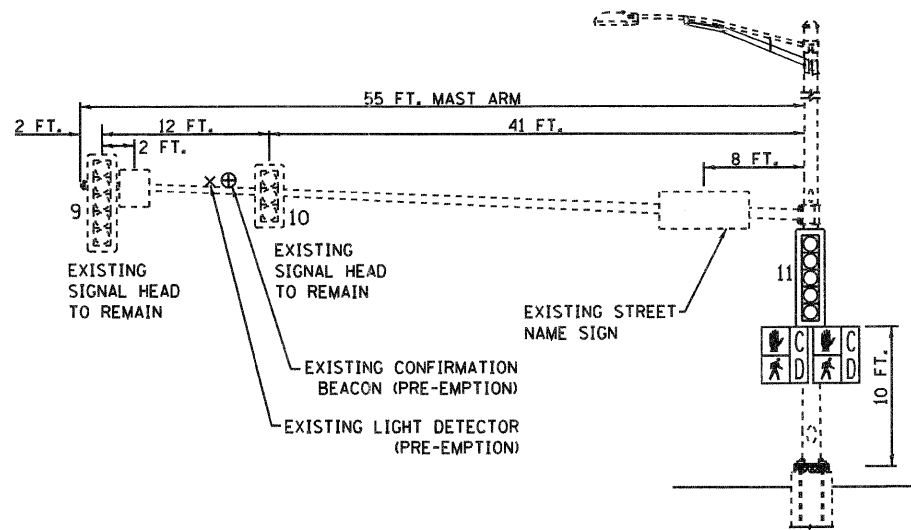
MAST ARM NORTHWEST QUADRANT (A)



MAST ARM NORTHEAST QUADRANT (B)



MAST ARM SOUTHEAST QUADRANT (C)



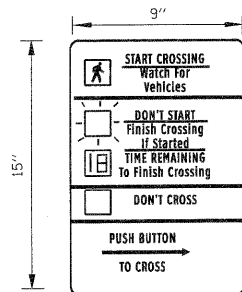
MAST ARM SOUTHWEST QUADRANT (D)

GENERAL NOTES:

1. THE TRAFFIC SIGNAL SECTION AT THE ILLINOIS DEPARTMENT OF TRANSPORTATION, DISTRICT 3, SHALL BE NOTIFIED AT 815-434-8506 AT LEAST 72 HOURS PRIOR TO TURNING ON ANY FLASHER OR CONTROLLER UNITS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCED NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123.
3. ALL TRAFFIC CONTROL AND OTHER ADVISORY SIGNS NEEDED FOR CONSTRUCTION ARE TO BE FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 701 OF THE STANDARD SPECIFICATIONS.
4. ALL TRAFFIC SIGNAL HEADS SHALL BE 12-INCH POLYCARBONATE.
5. TRAFFIC SIGNAL HEADS SHALL BE PROPERLY COVERED PRIOR TO INTERSECTION TURN-ON OR AS DIRECTED BY THE ENGINEER. THIS COST SHALL BE INCLUDED WITH THE COST OF THE ASSOCIATED TRAFFIC SIGNAL PAY ITEMS.
6. A 1/4-INCH DIAMETER CONTINUOUS RODENT RESISTENT NYLON ROPE SHALL BE FURNISHED AND LEFT IN PLACE IN ALL CONDUITS BETWEEN HANDHOLES AND FOUNDATIONS OF CONTROLLERS. THIS COST SHALL BE INCLUDED IN THE COST OF CONDUIT PAY ITEMS.
7. THE CONTRACTOR SHALL ARRANGE FOR A FACTORY OR SUPPLIER REPRESENTATIVE TO BE PRESENT AT THE INTERSECTION WHEN THE SIGNAL IS TURNED ON. COST TO BE INCLUDED WITH THE TRAFFIC SIGNAL CONTROLLER PAY ITEM.
8. ALL CONDUIT IN TRENCH SHALL BE PVC. ALL PUSHED CONDUIT MAY BE PVC OR GALVANIZED STEEL. CONDUIT ATTACHED TO STRUCTURES SHALL BE GALVANIZED STEEL.
9. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PLACING CONDUIT AT A GREATER THAN 2-FOOT MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.
10. THE ELECTRICAL CONDUCTORS FOR ALL TRAFFIC SIGNAL HEADS SHALL BE SOLID, SOFT COPPER.
11. ALL THREADS OF BOLTS USED IN THE ASSEMBLY OF TRAFFIC SIGNAL COMPONENTS SHALL BE COATED WITH A NON-LEAD BASED ANTI-SIEZE COMPOUND, SIMILAR TO LEAD PLATE, PRIOR TO ASSEMBLY.
12. ALL HARDWARE SHALL BE TIGHTENED AND WELL SECURED, CABLES SHALL BE NEATLY WOUND IN HANDHOLES. CABLES SHALL BE NEATLY TRAINED IN THE CONTROLLER CABINET.
13. ALL TRAFFIC SIGNAL WIRING SHALL EXTEND FROM CONTROLLER TO SIGNAL. SPLICES IN JUNCTION BOXES WILL NOT BE ALLOWED.
14. 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.
15. THE PROPOSED TRAFFIC SIGNAL CONTROLLER CABINET SHALL BE FURNISHED WITH A MANUAL CONTROL SWITCH AND MANUAL CONTROL CHORD WITHIN THE POLICE DOOR COMPARTMENT. THIS WORK SHALL BE INCLUDED IN THE CONTROLLER CABINET PAY ITEM.
16. THE CONTRACTOR SHALL PROVIDE A SELF-ADHERED PHASE DIAGRAM ON THE INSIDE OF THE CONTROLLER CABINET DOOR.
17. 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.
18. THE ELEVATION OF THE TOP OF THE DOUBLE HANDHOLE SHALL BE LESS THAN THE ELEVATION OF THE TOP OF THE CONTROLLER FOUNDATION.
19. ALL UNINTERRUPTIBLE POWER SUPPLIES SHALL BE EQUIPPED WITH BATTERY EQUALIZATION MONITORS.
20. ALL GROUNDING MATERIALS FOR CONCRETE FOUNDATIONS SHALL REFER TO SECTION 806 OF THE STANDARD SPECIFICATIONS.
21. ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED WITH SEED OR SOD TO THE SATISFACTION OF THE ENGINEER. SEEDING OR SODDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTELLABLE CONDITION.
22. THE FIBER OPTIC CABLE SHALL BE LABELED WITH DIRECTION AND ASSIGNMENT NUMBER.
23. THE SURGE PROTECTOR IN THE CONTROLLER CABINET SHALL HAVE AN INDICATOR LIGHT.
24. THE MAST ARM FOUNDATIONS SHALL BE LOCATED A MINIMUM 6 FEET FROM THE FACE OF CURB OR A MINIMUM 18 FEET FROM THE EDGE OF PAVEMENT TO THE FACE OF FOUNDATION WHERE THERE IS NO CURB, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IN CURB AREA, GET MORE THAN 6 FEET IF POSSIBLE IF THE SIGNAL HEAD STILL LINES UP IN CENTER OF LANE.
25. IF THERE IS A PAY ITEM, CHANGEABLE MESSAGE BOARDS AREA REQUIRED FOR BOTH/ALL DIRECTIONS, ONE WEEK PRIOR TO SIGNAL TURN-ON, THE MESSAGE SHOULD READ "NEW SIGNAL AHEAD/TURN ON DATE". FOR THREE WEEKS AFTER, THE MESSAGE SHOULD READ "NEW SIGNAL AHEAD/BE PREPARED TO STOP".
26. LOCATIONS OF TRAFFIC SIGNAL POSTS AND MAST ARM ASSEMBLIES MAY BE CHANGED IN THE FIELD AS NECESSARY TO AVOID UTILITIES. THE NEW LOCATIONS SHALL BE COORDINATED WITH THE ENGINEER AND APPROVED BY THE DISTRICT TRAFFIC SIGNAL SECTION TO ENSURE THE NEW LOCATIONS MEET OPERATIONAL OFFSET/CLEAR ZONE REQUIREMENTS AND MAINTAIN PROPER POSITION OF SIGNAL HEADS IN RELATION TO THE TRAVELED LANES.

PEDESTRIAN SIGN DETAIL

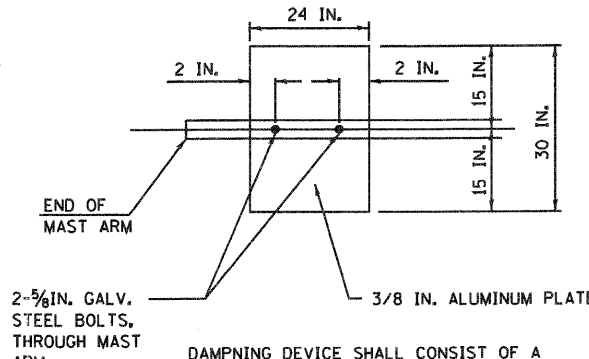
PEDESTRIAN PUSH BUTTON SIGN



R10-3e

PEDESTRIAN PUSH BUTTON SIGN NOTES:

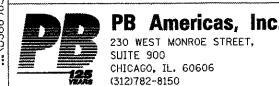
1. ORIENTATION OF DIRECTIONAL ARROWS TO BE DETERMINED BY PUSH-BUTTON LOCATION.
2. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL CONSTRUCTION. ALL MOUNTING BOLTS SHALL BE HEX HEAD.
3. MATERIALS AND INSTALLATION OF THIS SIGN SHALL BE INCLUDED IN THE COST OF PEDESTRIAN PUSH-BUTTON.
4. THE CONTRACTOR SHALL SUPPLY AND MOUNT ONE SIGN WITH EACH PEDESTRIAN PUSH-BUTTON AND SHALL BE INCLUDED IN THE COST OF PEDESTRIAN PUSH-BUTTON PAY ITEM.



DAMPENING DEVICE SHALL CONSIST OF A 24"x30" TYPE I, UNPAINTED ALUMINUM SIGN STOCK MOUNTED HORIZONTALLY ON TOP OF MAST ARM WITH THE 30" LENGTH PERPENDICULAR TO THE ARM. COST OF THE DAMPENING DEVICE IS INCLUDED IN THE MAST ARM PAY ITEM.

DAMPENING PLATE DETAIL (TOP VIEW)

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PLOT SCALE = 1/20	DRAWN - GR	REVISED -
PLOT DATE = 4/12/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

**TRAFFIC SIGNAL INSTALLATION PLAN
US RTE 34 AND WAUBONSEE DRIVE**

SCALE: 1"=20' SHEET NO. 4 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-214R-1 & BR-1(1)15R-1	KENDALL	429	238
			CONTRACT NO. 66985	
[ILLINOIS] FED. AID PROJECT				



10' 0 10' 20'
SCALE: 1" = 20'

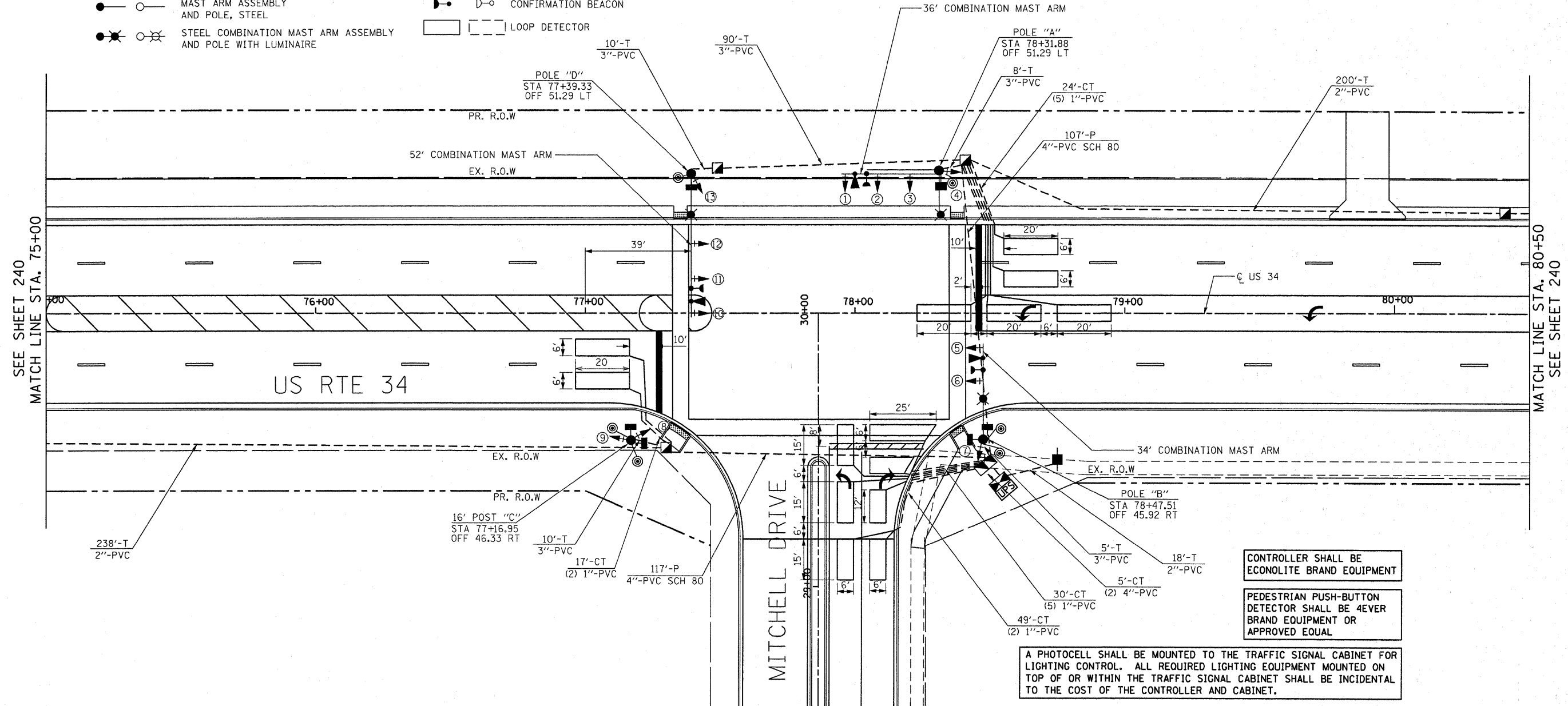
THE INSTALLATION METHODS FOR THE PROPOSED CONDUIT ON THIS SHEET AND THE FOLLOWING SHEET ARE SUGGESTED. THE CONTRACTOR HAS THE OPTION WHEN INSTALLING THE PROPOSED CONDUIT IN ACCORDANCE TO SECTION 810 OF THE STANDARD SPECIFICATIONS.

TRAFFIC SIGNAL LEGEND

PROPOSED	EXISTING	DESCRIPTION
		CONTROLLER
		UNINTERRUPTIBLE POWER SUPPLY
		SERVICE INSTALLATION
		SIGNAL HEAD WITH BACKPLATE
		SIGNAL HEAD, PEDESTRIAN
		SIGNAL POST
		MAST ARM ASSEMBLY AND POLE, STEEL
		STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE
		HANDHOLE
		DOUBLE HANDHOLE
		PEDESTRIAN PUSH-BUTTON DETECTOR
		CONDUIT: "T" TRENCH, "P" PUSHED, "CT" COMMON TRENCH
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		LOOP DETECTOR

SCHEDULE OF SIGNAL HEAD QUANTITIES

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



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PB Americas, Inc. 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL. 60606 312782-8150	FILE NAME = duncanbd	DESIGNED - GR	REVISED - BDD 09/26/2011
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		DATE - 4/8/2011	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

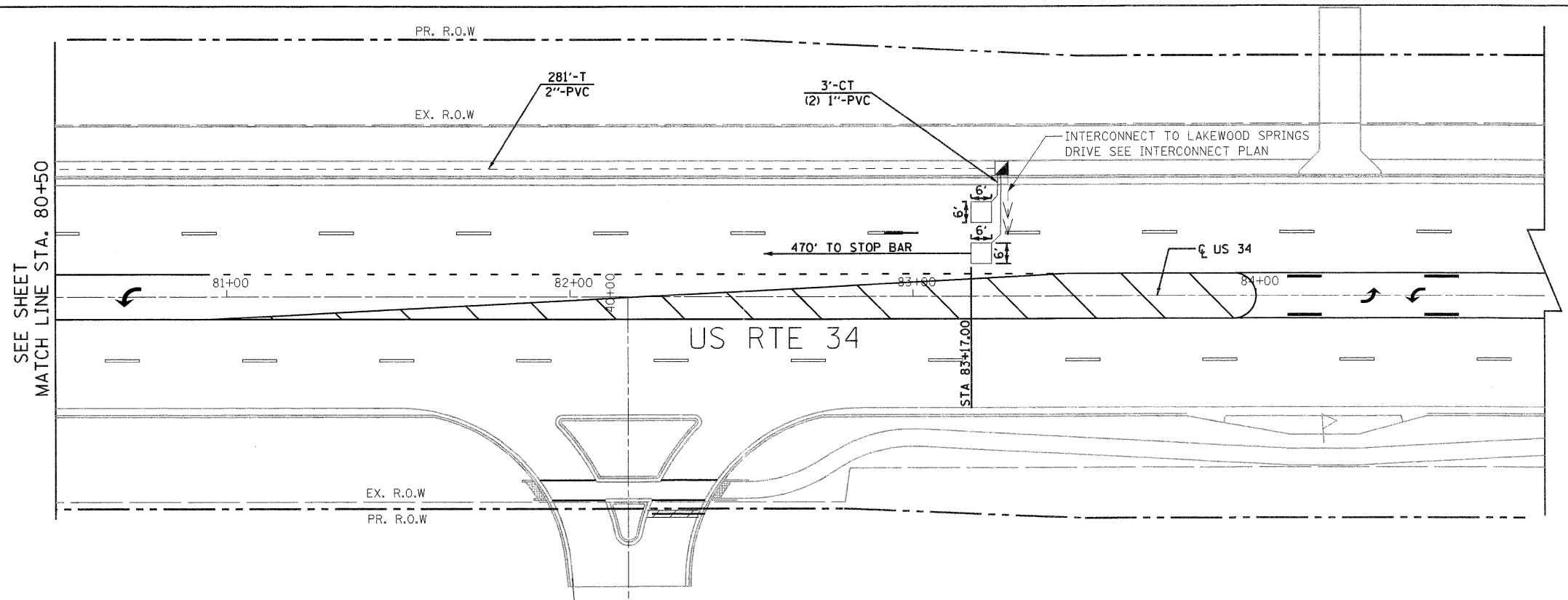
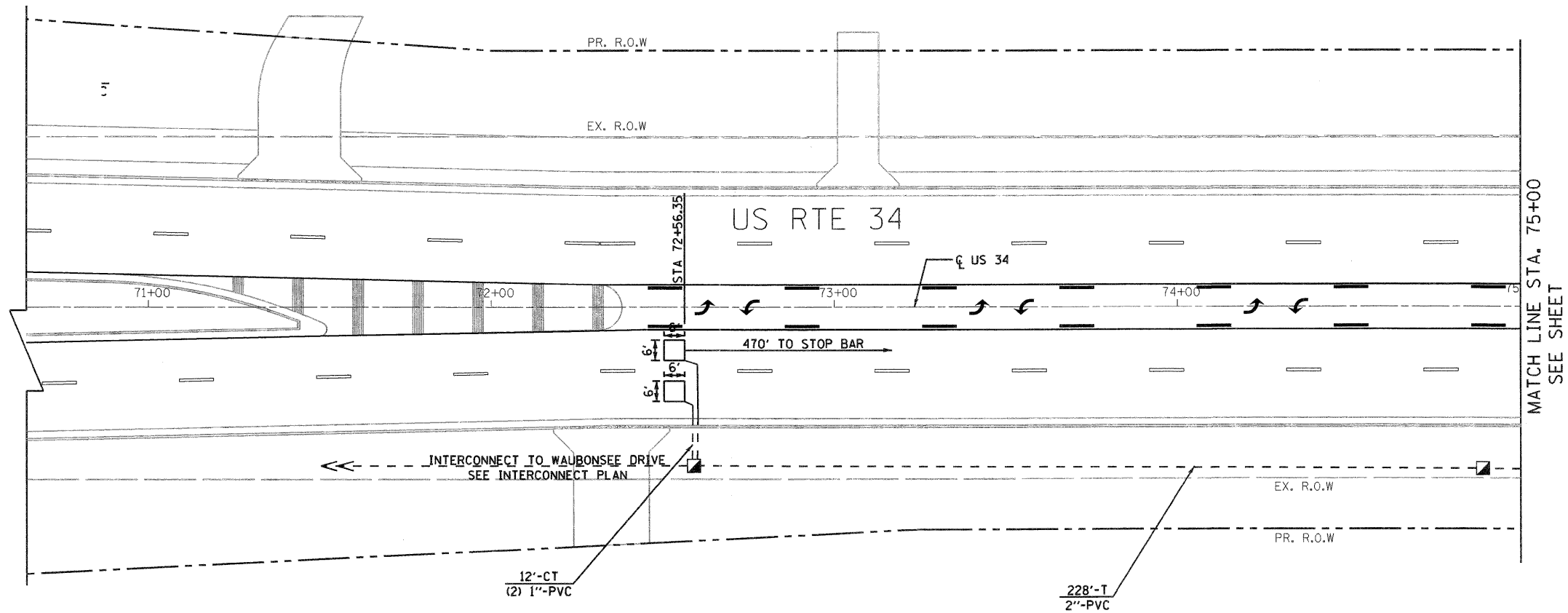
**TRAFFIC SIGNAL INSTALLATION
US 34 AND MITCHELL DRIVE**
SCALE: 1"=20' SHEET NO. 5 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	239
CONTRACT NO. 66985				

SEE SHEET TS-08 FOR TRAFFIC SIGNAL GENERAL NOTES

ILLINOIS FED. AID PROJECT FINAL SUBMITTAL

EJM ENGINEERING, INC.
 411 South Wells Street Suite 800
 Chicago, Illinois 60607



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PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL, 60606
 (312)782-8150

FILE NAME =	DESIGNED - GR	REVISED -
PLOT SCALE = 1:20	DRAWN - GR	REVISED -
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	DATE - 4/8/2011	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

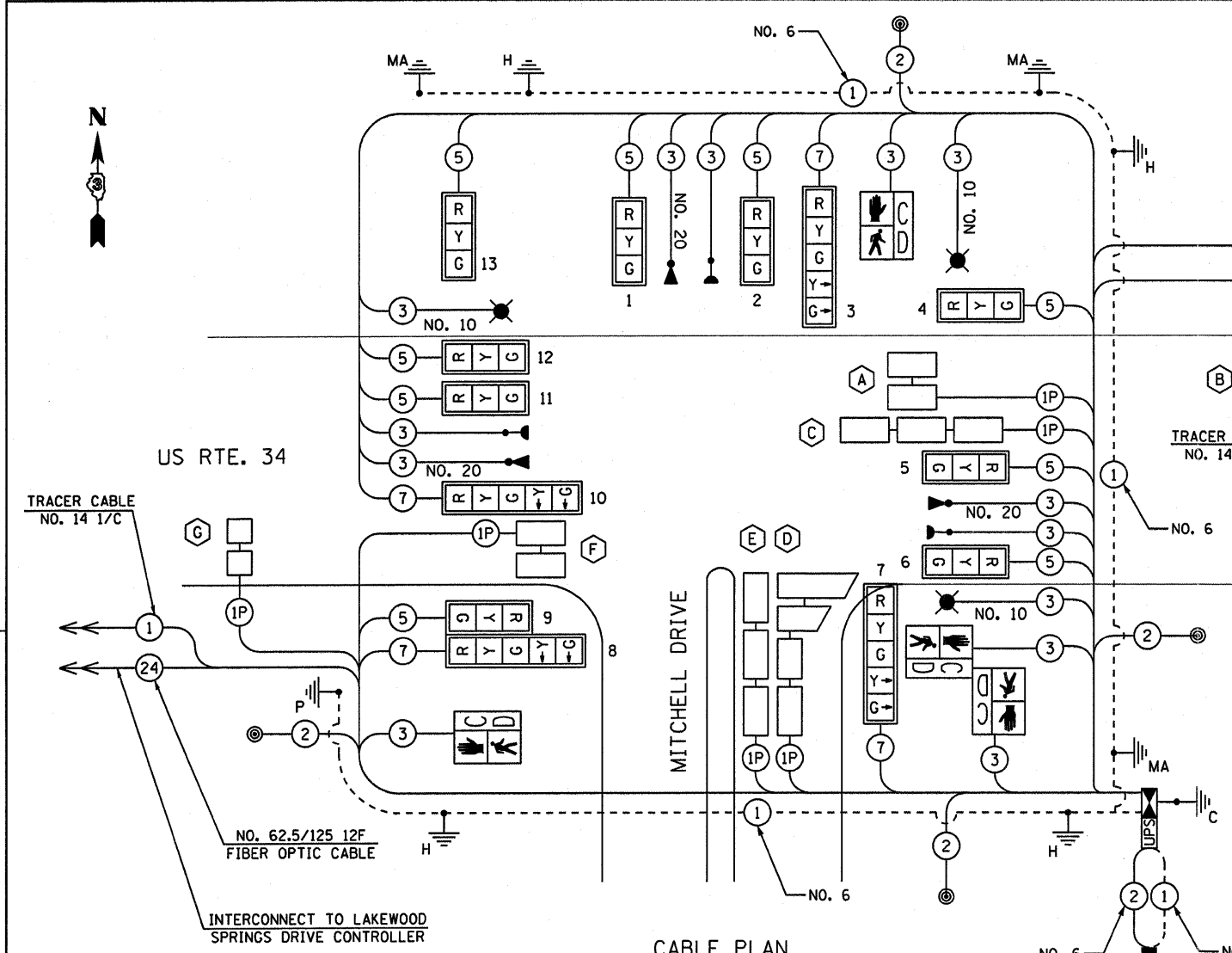
**TRAFFIC SIGNAL INSTALLATION PLAN
 US RTE 34 AND MITCHELL DRIVE**

SCALE: 1"=20' SHEET NO. 6 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	240
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				

FINAL SUBMITTAL
 TS-06

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CABLE PLAN LEGEND

- EXISTING PROPOSED**
- 8" (200mm) TRAFFIC SIGNAL SECTION
 - 12" (300mm) TRAFFIC SIGNAL SECTION
 - 12" (300mm) PEDESTRIAN SIGNAL SECTION
 - CONTROLLER CABINET
 - UNINTERRUPTIBLE POWER SUPPLY
 - SERVICE INSTALLATION
 - TELEPHONE CONNECTION
 - EMERGENCY VEHICLE LIGHT DETECTOR
 - CONFIRMATION BEACON
 - PUSHBUTTON DETECTOR
 - VEHICLE DETECTOR, INDUCTION LOOP
 - DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
 - LUMINAIRE

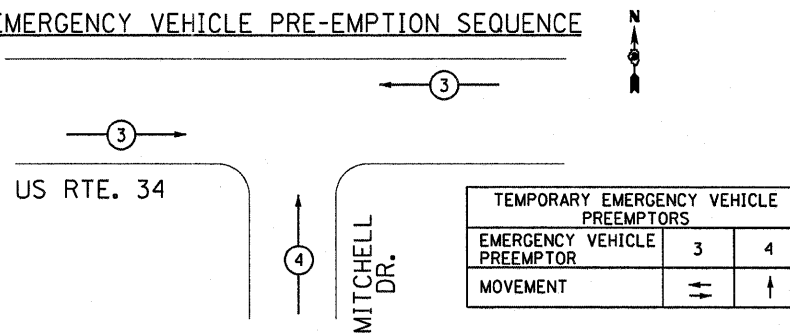
- EXISTING PROPOSED**
- SIGNAL FACE WITH BACKPLATE
 - GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
 - GROUND ROD AT POST OR MAST ARM POLE
 - GROUND ROD AT ELECTRIC SERVICE INSTALLATION
 - GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN)
 - FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F & SM12F
 - PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER

THE INDUCTION LOOP DETECTORS SHALL BE RACK MOUNTED AND THE REVISION NUMBER SHOULD BE 34 OR HIGHER.

THE GROUNDING SYSTEM SHALL INCLUDE GROUND RODS AND CONNECTIONS IN HANDHOLES. ALL GROUND ROD CONNECTIONS SHALL BE AN IRREVERSIBLE COMPRESSION GROUND TAP INSTALLED WITH A HYDRAULIC 12 TON PRESS TOOL OR EQUAL.

ALL SIGNAL INDICATIONS SHALL BE L.E.D.

EMERGENCY VEHICLE PRE-EMPTION SEQUENCE



DETECTOR LOOP INDUCTANCE CHART

LOOP SYSTEM	LABEL	NUMBER OF TURNS	INDUCTANCE (MH)	FREQUENCY (HERTZ)	J PIN STATUS
A	PHASE 6 WB STBR	3	343	36,123	OFF
B	PHASE 6 WB FAR	3	281	30,510	ON
C	PHASE 1 WB STBR LL	3	499	21,496	ON
D	PHASE 8 NB STBR RL	3	555	24,111	ON
E	PHASE 8 NB STBR LL	3	390	24,090	ON
F	PHASE 2 EB STBR	3	344	30,352	OFF
G	PHASE 2 EB FAR	3	284	35,902	ON

J PIN STATUS:
"ON" MEANS STANDARD DETECTOR SETUP.
"OFF" MEANS THE J WIRE HAS BEEN DISCONNECTED BUT INTACT AT THE HARNESS PANEL WITH THE NECESSARY SPADE CONNECTION ATTACHED, MARKED, AND INSULATED.

INTERCONNECT TO LAKEWOOD SPRINGS DRIVE CONTROLLER
NO. 62.5/125 12F FIBER OPTIC CABLE

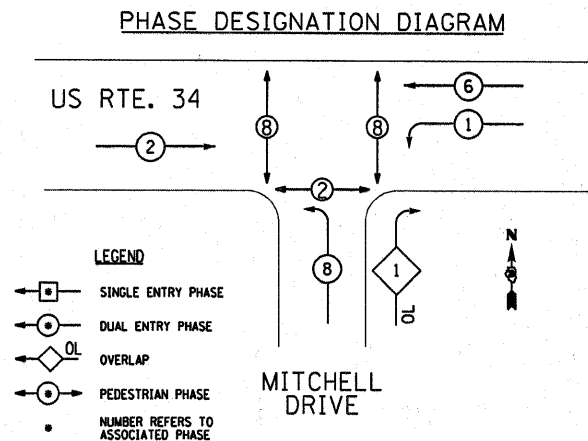
ELECTRICAL LOAD CHART

US RTE. 34			
SIGNAL SECTION	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
RED	8	17	20
YELLOW	8	25	5
GREEN	8	15	75
YELLOW ARROW	2	12	5
GREEN ARROW	2	12	5
WALK (SYMBOL)	2	25	50
HAND (SYMBOL)	2	25	50

MITCHELL DRIVE			
SIGNAL SECTION	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
RED	5	17	75
YELLOW	3	25	5
GREEN	3	15	20
YELLOW ARROW	5	12	5
GREEN ARROW	5	12	20
WALK (SYMBOL)	2	25	50
HAND (SYMBOL)	2	25	50

TRAFFIC SIGNAL CABINET			
ITEM	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
CONTROLLER	1	100	100
LOOP DETECTORS	8	4	100

LIGHTING			
ITEM	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
LUMINAIRE	3	250	50

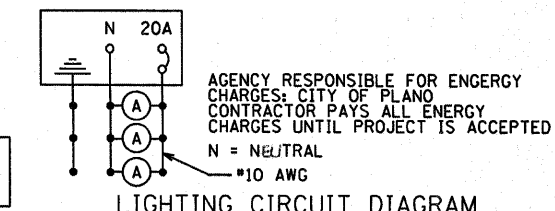


SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	QUANTITY
SIGN PANEL - TYPE 1	SQ FT	21.5
SIGN PANEL - TYPE 2	SQ FT	20
SERVICE INSTALLATION - GROUND MOUNTED	EACH	1
UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	432
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	965
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	123
UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	234
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	7
DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 10	FOOT	579
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	3
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTIBLE POWER SUPPLY, EXTENDED	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	808
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	850
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1708
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	698
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1847
ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 2C	FOOT	26
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUND CONDUCTOR, NO. 6 1C	FOOT	416
TRAFFIC SIGNAL POST, 16FT	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 52 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	8
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	33
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	6
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	13
INDUCTIVE LOOP DETECTOR	EACH	7
DETECTOR LOOP, TYPE 1	FOOT	1070
LIGHT DETECTOR	EACH	3
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	6
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	3
REMOVE EXISTING CONCRETE FOUNDATION	EACH	5
ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	584

CONTROLLER SHALL BE ECONOLITE BRAND EQUIPMENT

PEDESTRIAN PUSH-BUTTON DETECTOR SHALL BE 4EVER BRAND EQUIPMENT OR APPROVED EQUAL



LIGHTING CIRCUIT DIAGRAM

PB Americas, Inc. 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL 60606 312782-8150	FILE NAME = duncanbd	DESIGNED - GR	REVISED - BDD 09/26/2011
	PLOT SCALE = 20.0000' / 1"	DRAWN - GR	REVISED -
	PLOT DATE = 9/27/2011	CHECKED - BS	REVISED -
		DATE - 4/8/2011	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CABLE PLAN AND SCHEDULE OF QUANTITIES
US RTE 34 AND MITCHELL DRIVE**

SCALE: N.T.S. SHEET NO. 7 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	241

CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT

FINAL SUBMITTAL

EJM ENGINEERING, INC.
411 South Wells Street Suite 800
Chicago, Illinois 60607



PEDESTRIAN PUSH BUTTON SIGN NOTES:

1. ORIENTATION OF DIRECTIONAL ARROWS TO BE DETERMINED BY PUSH-BUTTON LOCATION.
2. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL CONSTRUCTION. ALL MOUNTING BOLTS SHALL BE HEX HEAD.
3. MATERIALS AND INSTALLATION OF THIS SIGN SHALL BE INCLUDED IN THE COST OF PEDESTRIAN PUSH-BUTTON.
4. THE CONTRACTOR SHALL SUPPLY AND MOUNT ONE SIGN WITH EACH PEDESTRIAN PUSH-BUTTON AND SHALL BE INCLUDED IN THE COST OF PEDESTRIAN PUSH-BUTTON PAY ITEM.

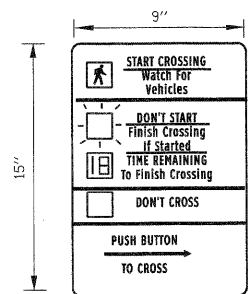
SIGN DETAIL

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

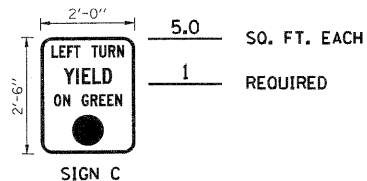
STREET NAME SIGNS:

1. TYPE ZZ SHEETING REQUIRED
2. WHITE/GREEN BACKGROUND
3. STYLE (d) - 5/8 IN. BORDER
4. 8 IN. SERIES D LETTERS
5. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN

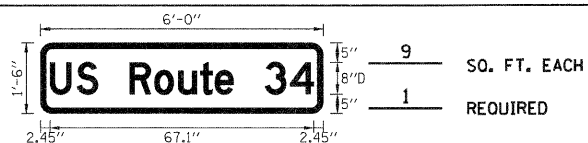
PEDESTRIAN PUSH BUTTON SIGN



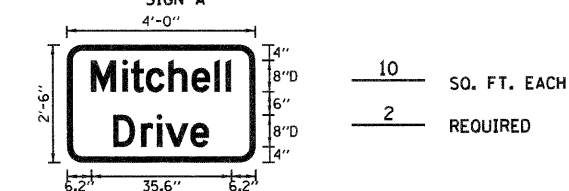
R10-3e



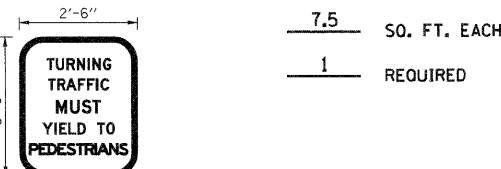
SIGN C



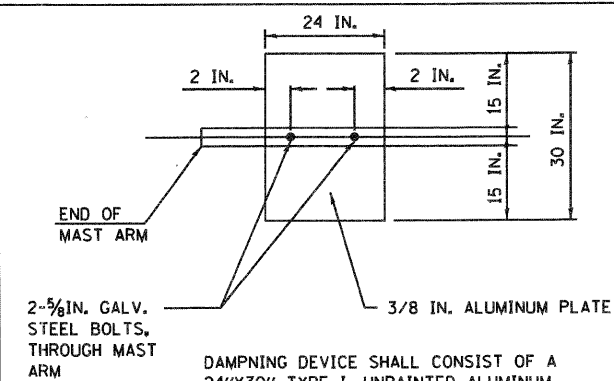
SIGN A



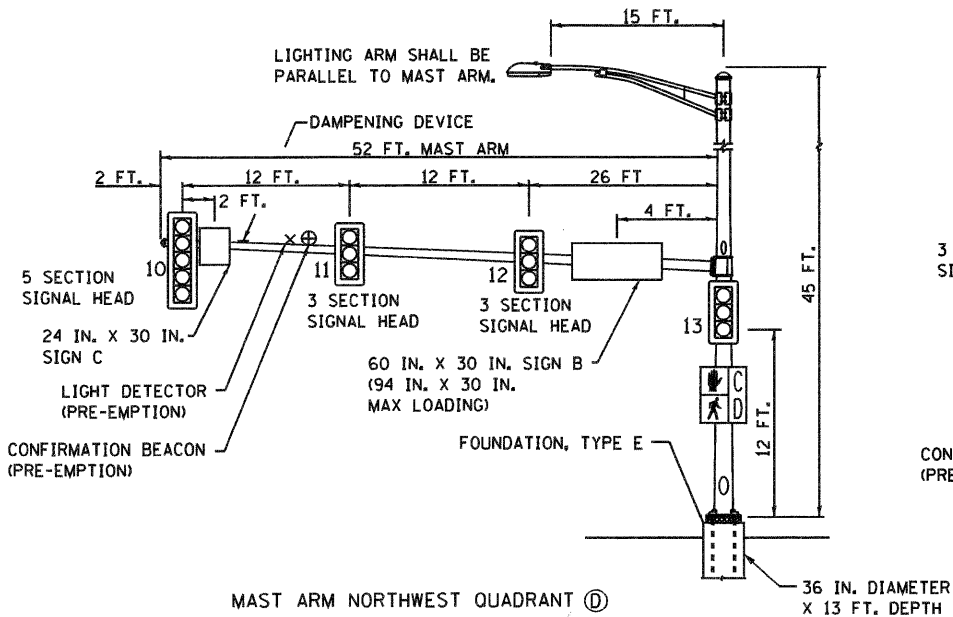
SIGN B



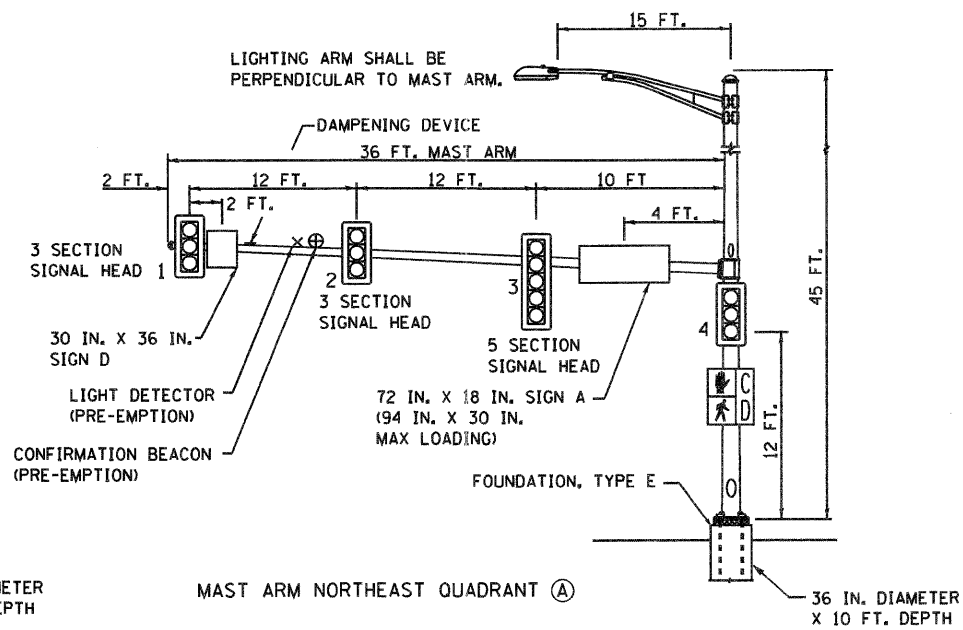
SIGN D



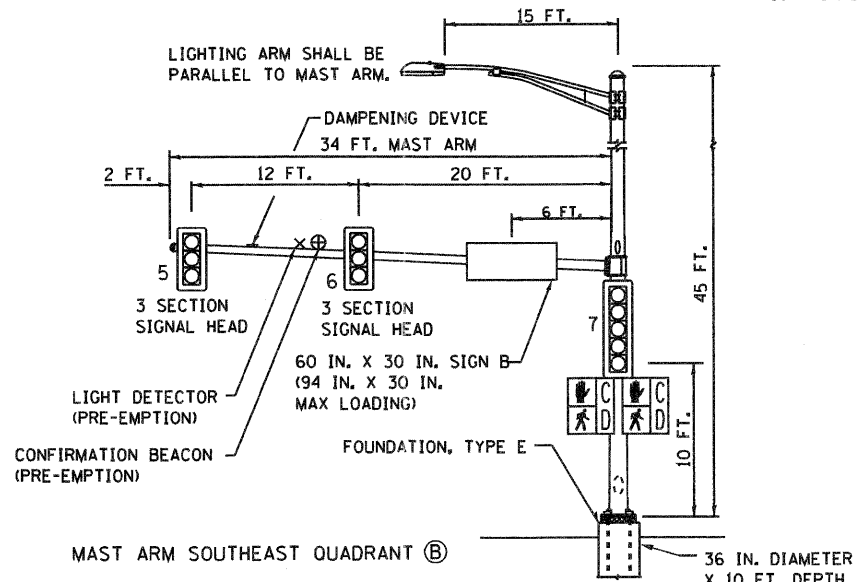
DAMPENING PLATE DETAIL
(TOP VIEW)



MAST ARM NORTHWEST QUADRANT (D)



MAST ARM NORTHEAST QUADRANT (A)



MAST ARM SOUTHEAST QUADRANT (B)

GENERAL NOTES:

1. THE TRAFFIC SIGNAL SECTION AT THE ILLINOIS DEPARTMENT OF TRANSPORTATION, DISTRICT 3, SHALL BE NOTIFIED AT 815-434-8506 AT LEAST 72 HOURS PRIOR TO TURNING ON ANY FLASHER OR CONTROLLER UNITS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCED NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123.
3. ALL TRAFFIC CONTROL AND OTHER ADVISORY SIGNS NEEDED FOR CONSTRUCTION ARE TO BE FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 701 OF THE STANDARD SPECIFICATIONS.
4. ALL TRAFFIC SIGNAL HEADS SHALL BE 12-INCH POLYCARBONATE.
5. TRAFFIC SIGNAL HEADS SHALL BE PROPERLY COVERED PRIOR TO INTERSECTION TURN-ON OR AS DIRECTED BY THE ENGINEER. THIS COST SHALL BE INCLUDED WITH THE COST OF THE ASSOCIATED TRAFFIC SIGNAL PAY ITEMS.
6. A 1/4-INCH DIAMETER CONTINUOUS RODENT RESISTENT NYLON ROPE SHALL BE FURNISHED AND LEFT IN PLACE IN ALL CONDUITS BETWEEN HANDHOLES AND FOUNDATIONS OF CONTROLLERS. THIS COST SHALL BE INCLUDED IN THE COST OF CONDUIT PAY ITEMS.
7. THE CONTRACTOR SHALL ARRANGE FOR A FACTORY OR SUPPLIER REPRESENTATIVE TO BE PRESENT AT THE INTERSECTION WHEN THE SIGNAL IS TURNED ON. COST TO BE INCLUDED WITH THE TRAFFIC SIGNAL CONTROLLER PAY ITEM.
8. ALL CONDUIT IN TRENCH SHALL BE PVC. ALL PUSHED CONDUIT MAY BE PVC OR GALVANIZED STEEL. CONDUIT ATTACHED TO STRUCTURES SHALL BE GALVANIZED STEEL.
9. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PLACING CONDUIT AT A GREATER THAN 2-FOOT MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.
10. THE ELECTRICAL CONDUCTORS FOR ALL TRAFFIC SIGNAL HEADS SHALL BE SOLID, SOFT COPPER.
11. ALL THREADS OF BOLTS USED IN THE ASSEMBLY OF TRAFFIC SIGNAL COMPONENTS SHALL BE COATED WITH A NON-LEAD BASED ANTI-SIEZE COMPOUND, SIMILAR TO LEAD PLATE, PRIOR TO ASSEMBLY.
12. ALL HARDWARE SHALL BE TIGHTENED AND WELL SECURED. CABLES SHALL BE NEATLY WOUND IN HANDHOLES. CABLES SHALL BE NEATLY TRAINED IN THE CONTROLLER CABINET.
13. ALL TRAFFIC SIGNAL WIRING SHALL EXTEND FROM CONTROLLER TO SIGNAL. SPLICES IN JUNCTION BOXES WILL NOT BE ALLOWED.
14. 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.
15. THE PROPOSED TRAFFIC SIGNAL CONTROLLER CABINET SHALL BE FURNISHED WITH A MANUAL CONTROL SWITCH AND MANUAL CONTROL CHORD WITHIN THE POLICE DOOR COMPARTMENT. THIS WORK SHALL BE INCLUDED IN THE CONTROLLER CABINET PAY ITEM.
16. THE CONTRACTOR SHALL PROVIDE A SELF-ADHERED PHASE DIAGRAM ON THE INSIDE OF THE CONTROLLER CABINET DOOR.
17. 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.
18. THE ELEVATION OF THE TOP OF THE DOUBLE HANDHOLE SHALL BE LESS THAN THE ELEVATION OF THE TOP OF THE CONTROLLER FOUNDATION.
19. ALL UNINTERRUPTIBLE POWER SUPPLIES SHALL BE EQUIPPED WITH BATTERY EQUILIZATION MONITORS.
20. ALL GROUNDING MATERIALS FOR CONCRETE FOUNDATIONS SHALL REFER TO SECTION 806 OF THE STANDARD SPECIFICATIONS.
21. ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED WITH SEED OR SOD TO THE SATISFACTION OF THE ENGINEER. SEEDING OR SODDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTELLABLE CONDITION.
22. THE FIBER OPTIC CABLE SHALL BE LABELED WITH DIRECTION AND ASSIGNMENT NUMBER.
23. THE SURGE PROTECTOR IN THE CONTROLLER CABINET SHALL HAVE AN INDICATOR LIGHT.
24. THE MAST ARM FOUNDATIONS SHALL BE LOCATED A MINIMUM 6 FEET FROM THE FACE OF CURB OR A MINIMUM 18 FEET FROM THE EDGE OF PAVEMENT TO THE FACE OF FOUNDATION WHERE THERE IS NO CURB, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IN CURB AREA, GET MORE THAN 6 FEET IF POSSIBLE IF THE SIGNAL HEAD STILL LINES UP IN CENTER OF LANE.
25. IF THERE IS A PAY ITEM, CHANGEABLE MESSAGE BOARDS AREA REQUIRED FOR BOTH/ALL DIRECTIONS. ONE WEEK PRIOR TO SIGNAL TURN-ON, THE MESSAGE SHOULD READ "NEW SIGNAL AHEAD/TURN ON DATE". FOR THREE WEEKS AFTER, THE MESSAGE SHOULD READ "NEW SIGNAL AHEAD/BE PREPARED TO STOP".
26. LOCATIONS OF TRAFFIC SIGNAL POSTS AND MAST ARM ASSEMBLIES MAY BE CHANGED IN THE FIELD AS NECESSARY TO AVOID UTILITIES. THE NEW LOCATIONS SHALL BE COORDINATED WITH THE ENGINEER AND APPROVED BY THE DISTRICT TRAFFIC SIGNAL SECTION TO ENSURE THE NEW LOCATIONS MEET OPERATIONAL OFFSET/CLEAR ZONE REQUIREMENTS AND MAINTAIN PROPER POSITION OF SIGNAL HEADS IN RELATION TO THE TRAVELED LANES.

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FILE NAME =	DESIGNED - GR	REVISED -
PLOT SCALE = 1/20	DRAWN - GR	REVISED -
PLOT DATE = 4/9/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL INSTALLATION PLAN
US RTE 34 AND MITCHELL DRIVE**

SCALE: 1"=20' SHEET NO. 8 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-214R-1 & BR-11115R-1	KENDALL	429	242
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				

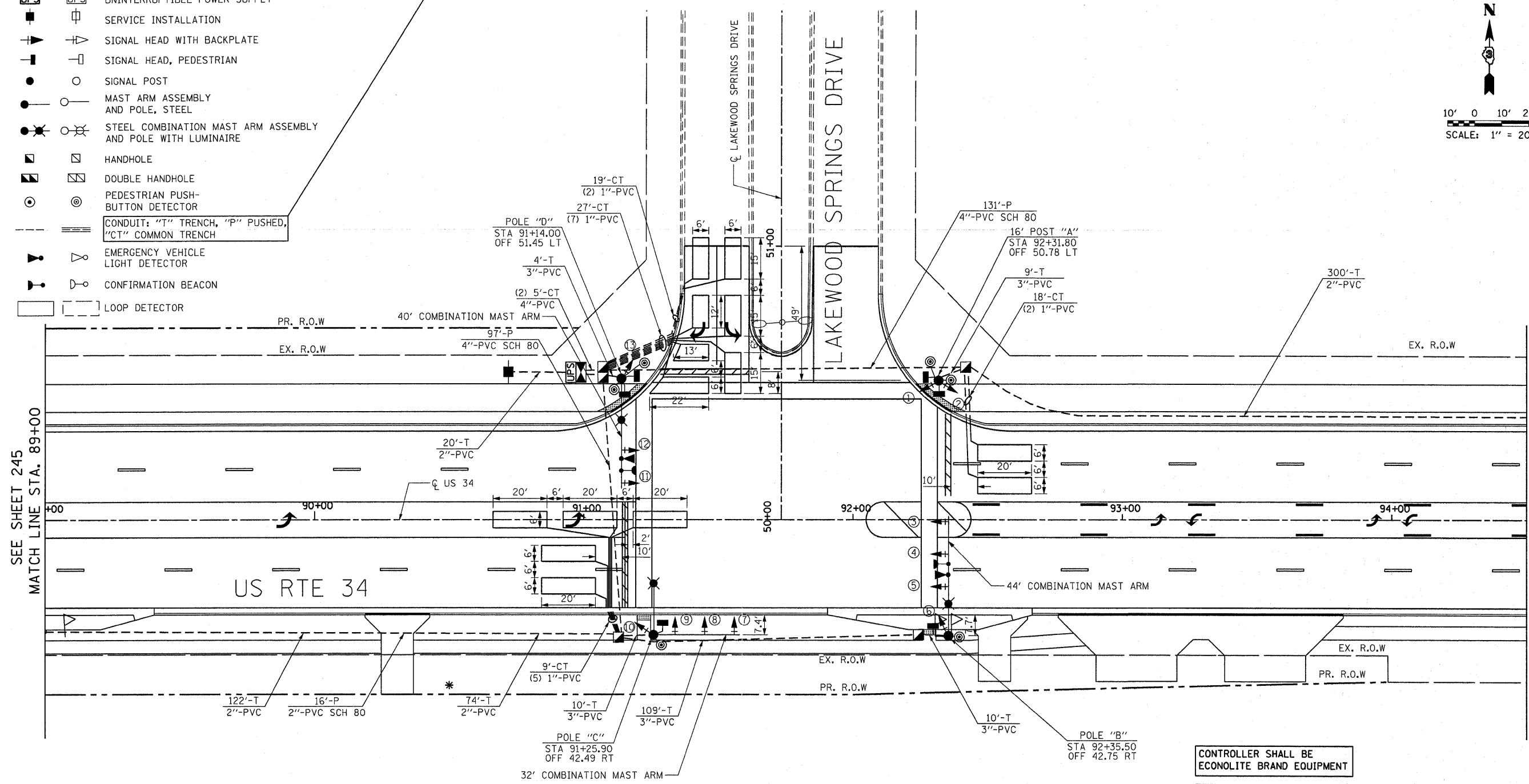
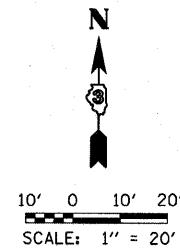
FINAL SUBMITTAL

TS-08

TRAFFIC SIGNAL LEGEND

- | | | |
|----------|----------|---|
| PROPOSED | EXISTING | |
| | | CONTROLLER |
| | | UPS "E" UNINTERRUPTIBLE POWER SUPPLY |
| | | SERVICE INSTALLATION |
| | | SIGNAL HEAD WITH BACKPLATE |
| | | SIGNAL HEAD, PEDESTRIAN |
| | | SIGNAL POST |
| | | MAST ARM ASSEMBLY AND POLE, STEEL |
| | | STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE |
| | | HANDHOLE |
| | | DOUBLE HANDHOLE |
| | | PEDESTRIAN PUSH-BUTTON DETECTOR |
| | | CONDUIT: "T" TRENCH, "P" PUSHED, "CT" COMMON TRENCH |
| | | EMERGENCY VEHICLE LIGHT DETECTOR |
| | | CONFIRMATION BEACON |
| | | LOOP DETECTOR |

THE INSTALLATION METHODS FOR THE PROPOSED CONDUIT ON THIS SHEET AND THE FOLLOWING SHEET ARE SUGGESTED. THE CONTRACTOR HAS THE OPTION WHEN INSTALLING THE PROPOSED CONDUIT IN ACCORDANCE TO SECTION 810 OF THE STANDARD SPECIFICATIONS.



SCHEDULE OF TRAFFIC SIGNAL HEAD QUANTITIES

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

CONTROLLER SHALL BE ECONOLITE BRAND EQUIPMENT

PEDESTRIAN PUSH-BUTTON DETECTOR SHALL BE 4EVER BRAND EQUIPMENT OR APPROVED EQUAL

A PHOTOCELL SHALL BE MOUNTED TO THE TRAFFIC SIGNAL CABINET FOR LIGHTING CONTROL. ALL REQUIRED LIGHTING EQUIPMENT MOUNTED ON TOP OF OR WITHIN THE TRAFFIC SIGNAL CABINET SHALL BE INCIDENTAL TO THE COST OF THE CONTROLLER AND CABINET.

EJM ENGINEERING, INC.
411 South Wells Street Suite 800
Chicago, Illinois 60607

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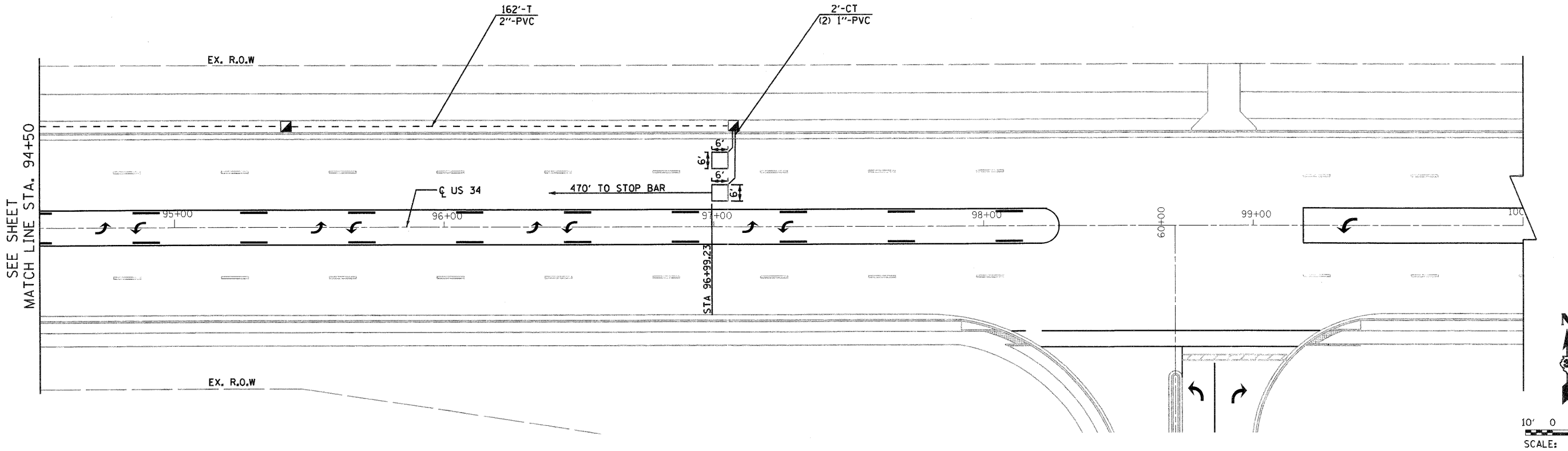
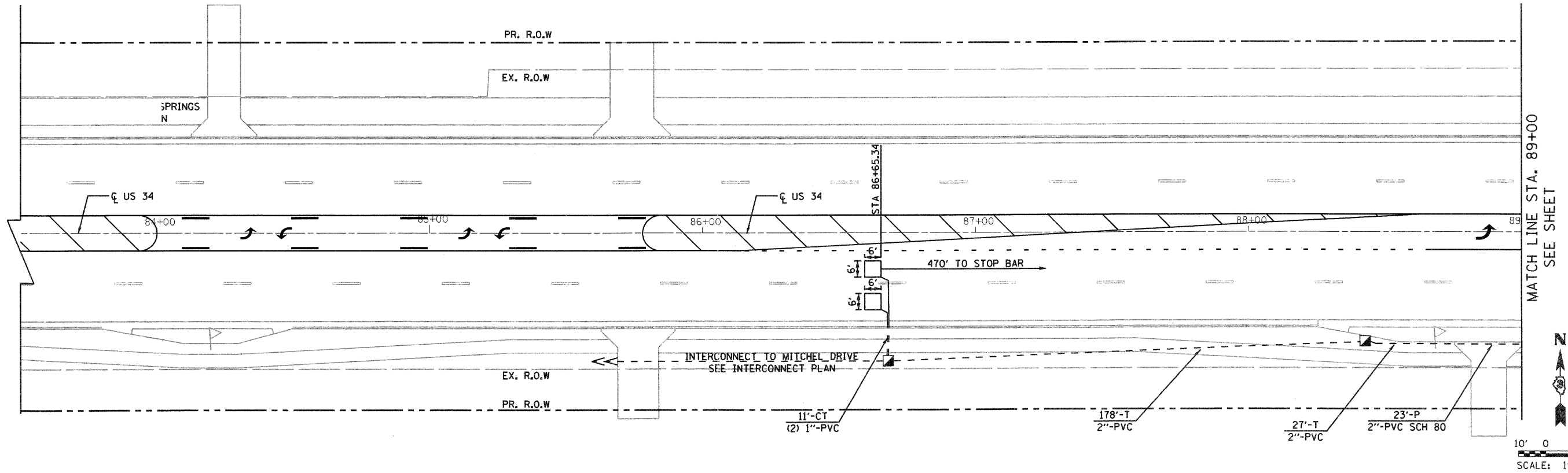
PB Americas, Inc. 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL 60606 (312)782-8150	FILE NAME = duncenbd	DESIGNED - GR	REVISED - BDD 09/26/2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED TRAFFIC SIGNAL INSTALLATION US 34 AND LAKEWOOD SPRINGS DRIVE	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 20.0000' / in.	DRAWN - GR	REVISED -			591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	244	
	CHECKED - BS	REVISIED -		SCALE: 1"=20' SHEET NO. 10 OF 14 SHEETS STA. TO STA.		CONTRACT NO. 66985					
	DATE - 4/8/2011	REVISIED -		ILLINOIS FED. AID PROJECT							FINAL SUBMITTAL

SEE SHEET TS-13 FOR TRAFFIC SIGNAL GENERAL NOTES.

EJM ENGINEERING, INC.
 411 South Wells Street Suite 800
 Chicago, Illinois 60607



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PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL, 60606
 (312) 782-8150

FILE NAME =	DESIGNED - GR	REVISED -
PLOT SCALE = 1:20	DRAWN - GR	REVISED -
PLOT DATE = 4/9/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL INSTALLATION PLAN
 US RTE 34 AND LAKEWOOD SPRINGS DRIVE**

SCALE: 1"=20' SHEET NO. 11 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	245
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				

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411 South Wells Street Suite 800
Chicago, Illinois 60607



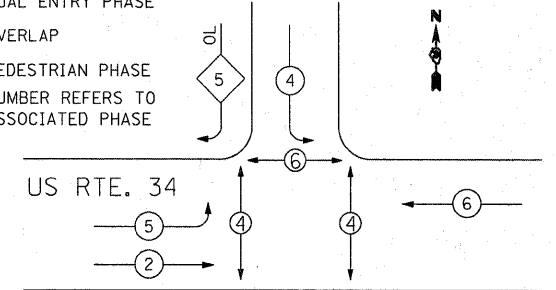
DETECTOR LOOP INDUCTANCE CHART

LOOP SYSTEM	LABEL	NUMBER OF TURNS	INDUCTANCE (MH)	FREQUENCY (HERTZ)	J PIN STATUS
A	PHASE 6 WB STBR	3	347	35,672	OFF
B	PHASE 6 WB FAR	3	282	30,031	ON
C	PHASE 2 EB STBR	3	340	35,612	OFF
D	PHASE 2 EB FAR	3	271	30,031	ON
E	PHASE 5 EB STBR LL	3	496	21,329	ON
F	PHASE 7 SB STBR RL	3	513	24,037	ON
G	PHASE 7 SB STBR LL	3	390	23,975	ON

LEGEND

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

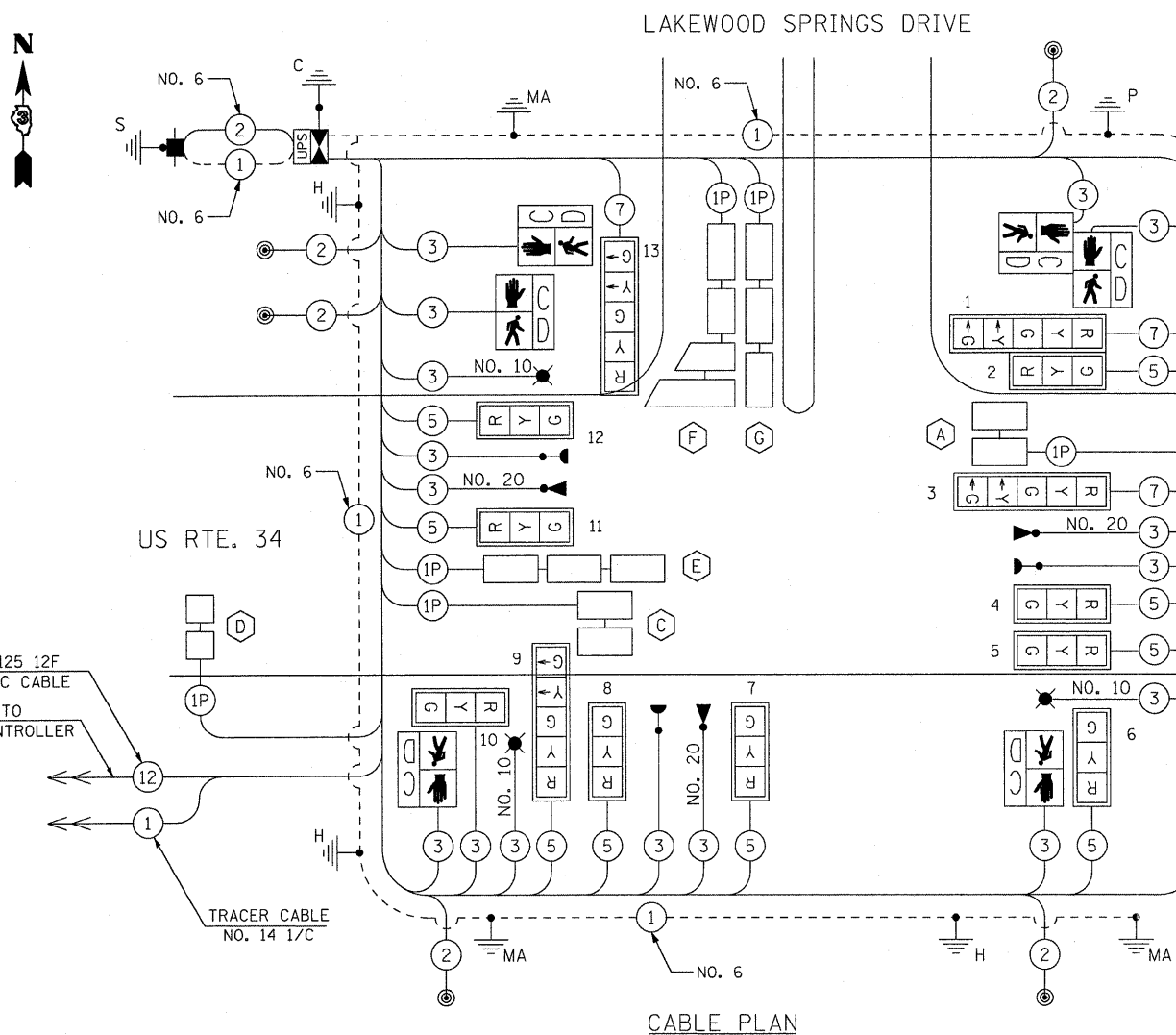
LAKESWOOD SPRINGS DRIVE



PHASE DESIGNATION DIAGRAM

SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	QUANTITY
SIGN PANEL - TYPE 1	SQ FT	21.5
SIGN PANEL - TYPE 2	SQ FT	30
SERVICE INSTALLATION - GROUND MOUNTED	EACH	1
UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	334
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	922
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	142
UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	238
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	7
DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 10	FOOT	587
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	3
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTIBLE POWER SUPPLY, EXTENDED	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	849
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	891
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1732
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	717
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1778
ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 2C	FOOT	28
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUND CONDUCTOR, NO. 6 1C	FOOT	436
TRAFFIC SIGNAL POST, 16FT	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 32 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 40 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	8
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	43
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	6
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	13
INDUCTIVE LOOP DETECTOR	EACH	7
DETECTOR LOOP, TYPE 1	FOOT	1062
LIGHT DETECTOR	EACH	3
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	6
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	12
REMOVE EXISTING CONCRETE FOUNDATION	EACH	5
ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	586



CABLE PLAN

CABLE PLAN LEGEND

- | | | |
|----------|----------|---|
| EXISTING | PROPOSED | DESCRIPTION |
| ◻ | ◻ | 8" (200mm) TRAFFIC SIGNAL SECTION |
| ◻ | ◻ | 12" (300mm) TRAFFIC SIGNAL SECTION |
| ◻ | ◻ | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| ◻ | ◻ | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| ◻ | ◻ | CONTROLLER CABINET |
| UPS | UPS | UNINTERRUPTIBLE POWER SUPPLY |
| ◻ | ◻ | SERVICE INSTALLATION |
| ◻ | ◻ | TELEPHONE CONNECTION |
| ◻ | ◻ | EMERGENCY VEHICLE LIGHT DETECTOR |
| ◻ | ◻ | CONFIRMATION BEACON |
| ◻ | ◻ | PUSHBUTTON DETECTOR |
| ◻ | ◻ | VEHICLE DETECTOR, INDUCTION LOOP |
| ② | ② | DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| ◻ | ◻ | LUMINAIRE |
-
- | | | |
|----------|----------|--|
| EXISTING | PROPOSED | DESCRIPTION |
| ◻ | ◻ | SIGNAL FACE WITH BACKPLATE |
| H/C | H/C | GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER |
| MA/P | MA/P | GROUND ROD AT POST OR MAST ARM POLE |
| S | S | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| ① | ① | GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN) |
| ②④ | ②④ | FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F & SM12F |
| ◻ | ◻ | PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER |

ELECTRICAL LOAD CHART

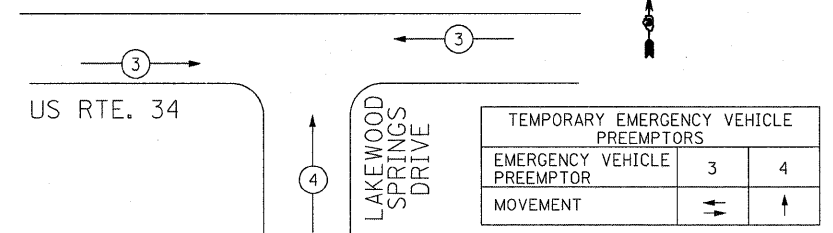
US RTE. 34			
SIGNAL SECTION	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
RED	7	17	27
YELLOW	7	25	7
GREEN	7	15	66
YELLOW ARROW	2	12	7
GREEN ARROW	2	12	7
WALK (SYMBOL)	2	25	50
HAND (SYMBOL)	2	25	50

LAKESWOOD DRIVE			
SIGNAL SECTION	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
RED	5	17	77
YELLOW	5	25	4
GREEN	5	15	19
YELLOW ARROW	2	12	19
GREEN ARROW	2	12	19
WALK (SYMBOL)	2	25	50
HAND (SYMBOL)	2	25	50

TRAFFIC SIGNAL CABINET			
ITEM	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
CONTROLLER	1	100	100
LOOP DETECTORS	10	4	100

LIGHTING			
ITEM	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
LUMINAIRE	3	250	50

EMERGENCY VEHICLE PRE-EMPTION SEQUENCE



THE INDUCTION LOOP DETECTORS SHALL BE RACK MOUNTED AND THE REVISION NUMBER SHOULD BE 34 OR HIGHER.

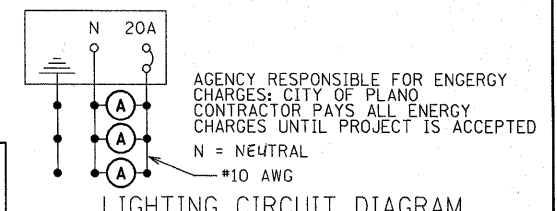
THE GROUNDING SYSTEM SHALL INCLUDE GROUND RODS AND CONNECTIONS IN HANDHOLES. ALL GROUND ROD CONNECTIONS SHALL BE AN IRREVERSIBLE COMPRESSION GROUND TAP INSTALLED WITH A HYDRAULIC 12 TON PRESS TOOL OR EQUAL.

ALL SIGNAL INDICATIONS SHALL BE L.E.D.

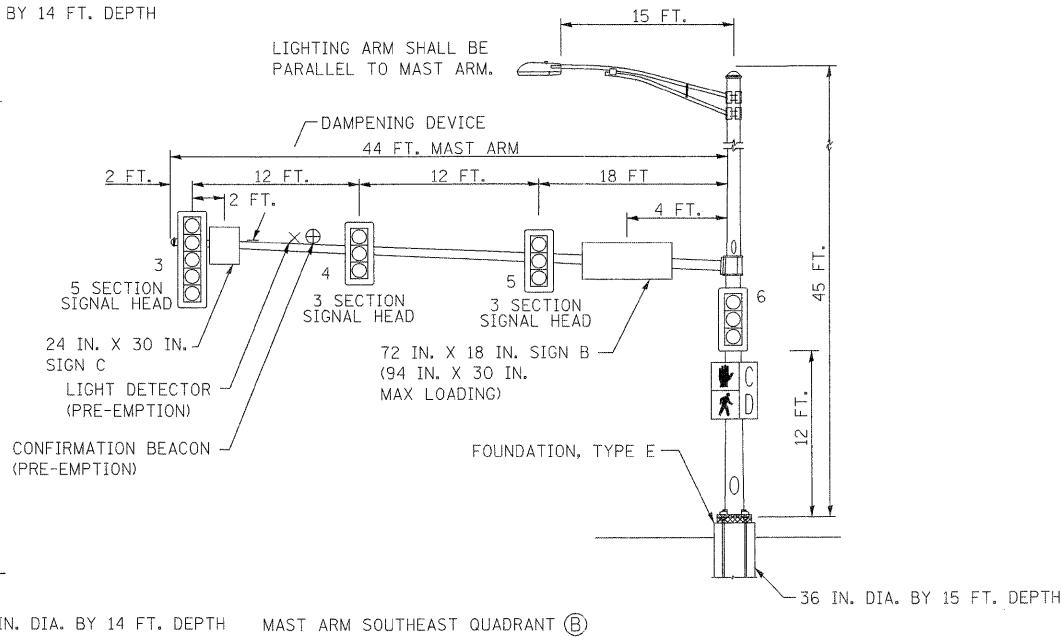
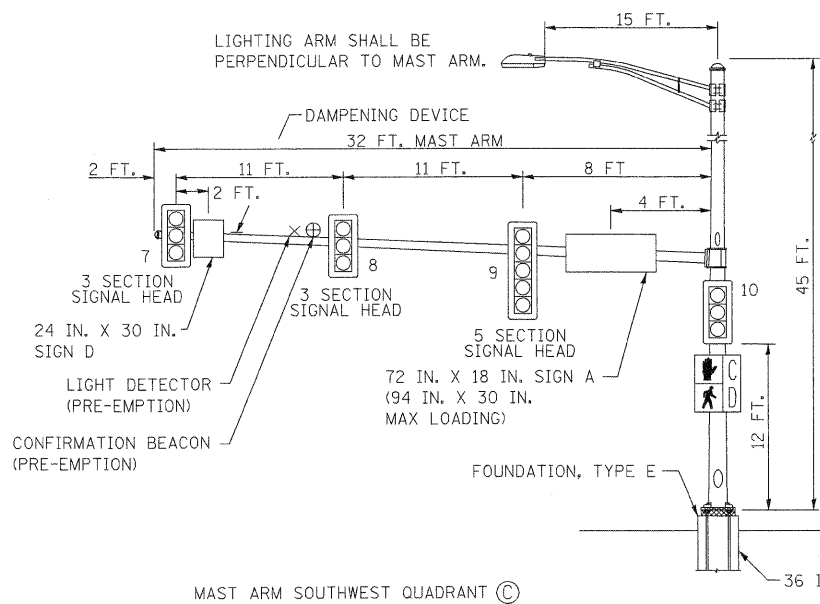
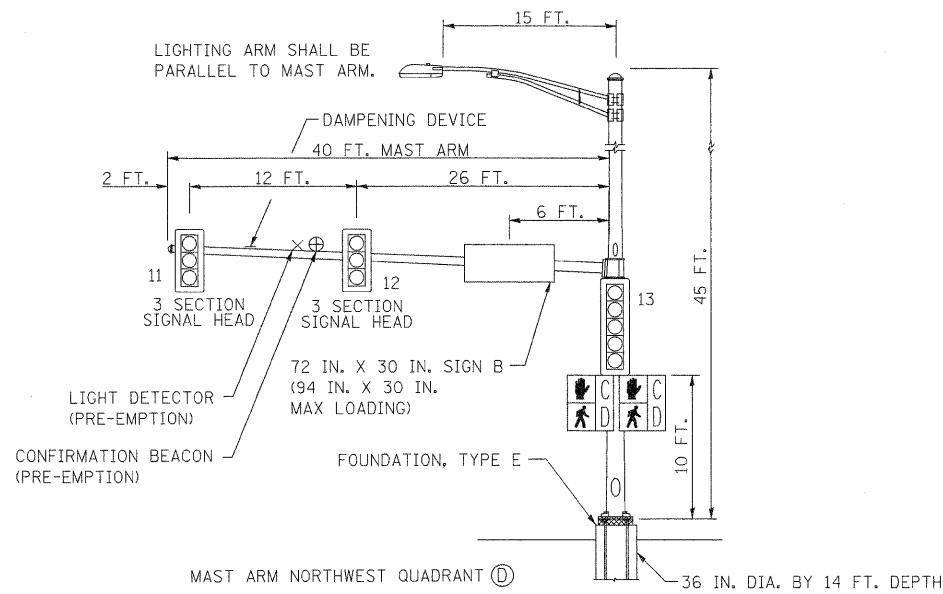
RESTORATION OF WORK AREA: RESTORATION OF THE TRAFFIC SIGNAL WORK SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATION 252 AND 250 RESPECTIVELY

CONTROLLER SHALL BE ECONOLITE BRAND EQUIPMENT

PEDESTRIAN PUSH-BUTTON DETECTOR SHALL BE 4EVER BRAND EQUIPMENT OR APPROVED EQUAL



LIGHTING CIRCUIT DIAGRAM



PEDESTRIAN PUSH BUTTON SIGN NOTES:

1. ORIENTATION OF DIRECTIONAL ARROWS TO BE DETERMINED BY PUSH-BUTTON LOCATION.
2. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL CONSTRUCTION. ALL MOUNTING BOLTS SHALL BE HEX HEAD.
3. MATERIALS AND INSTALLATION OF THIS SIGN SHALL BE INCLUDED IN THE COST OF PEDESTRIAN PUSH-BUTTON.
4. THE CONTRACTOR SHALL SUPPLY AND MOUNT ONE SIGN WITH EACH PEDESTRIAN PUSH-BUTTON AND SHALL BE INCLUDED IN THE COST OF PEDESTRIAN PUSH-BUTTON PAY ITEM.

GENERAL NOTES:

1. THE TRAFFIC SIGNAL SECTION AT THE ILLINOIS DEPARTMENT OF TRANSPORTATION, DISTRICT 3, SHALL BE NOTIFIED AT 815-434-8506 AT LEAST 72 HOURS PRIOR TO TURNING ON ANY FLASHER OR CONTROLLER UNITS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCED NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123.
3. ALL TRAFFIC CONTROL AND OTHER ADVISORY SIGNS NEEDED FOR CONSTRUCTION ARE TO BE FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 701 OF THE STANDARD SPECIFICATIONS.
4. ALL TRAFFIC SIGNAL HEADS SHALL BE 12-INCH POLYCARBONATE.
5. TRAFFIC SIGNAL HEADS SHALL BE PROPERLY COVERED PRIOR TO INTERSECTION TURN-ON OR AS DIRECTED BY THE ENGINEER. THIS COST SHALL BE INCLUDED WITH THE COST OF THE ASSOCIATED TRAFFIC SIGNAL PAY ITEMS.
6. A 1/4-INCH DIAMETER CONTINUOUS RODENT RESISTENT NYLON ROPE SHALL BE FURNISHED AND LEFT IN PLACE IN ALL CONDUITS BETWEEN HANDHOLES AND FOUNDATIONS OF CONTROLLERS. THIS COST SHALL BE INCLUDED IN THE COST OF CONDUIT PAY ITEMS.
7. THE CONTRACTOR SHALL ARRANGE FOR A FACTORY OR SUPPLIER REPRESENTATIVE TO BE PRESENT AT THE INTERSECTION WHEN THE SIGNAL IS TURNED ON. COST TO BE INCLUDED WITH THE TRAFFIC SIGNAL CONTROLLER PAY ITEM.
8. ALL CONDUIT IN TRENCH SHALL BE PVC. ALL PUSHED CONDUIT MAY BE PVC OR GALVANIZED STEEL. CONDUIT ATTACHED TO STRUCTURES SHALL BE GALVANIZED STEEL.
9. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PLACING CONDUIT AT A GREATER THAN 2-FOOT MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.
10. THE ELECTRICAL CONDUCTORS FOR ALL TRAFFIC SIGNAL HEADS SHALL BE SOLID, SOFT COPPER.
11. ALL THREADS OF BOLTS USED IN THE ASSEMBLY OF TRAFFIC SIGNAL COMPONENTS SHALL BE COATED WITH A NON-LEAD BASED ANTI-SIEZE COMPOUND, SIMILAR TO LEAD PLATE, PRIOR TO ASSEMBLY.
12. ALL HARDWARE SHALL BE TIGHTENED AND WELL SECURED, CABLES SHALL BE NEATLY WOUND IN HANDHOLES. CABLES SHALL BE NEATLY TRAINED IN THE CONTROLLER CABINET.
13. ALL TRAFFIC SIGNAL WIRING SHALL EXTEND FROM CONTROLLER TO SIGNAL. SPLICES IN JUNCTION BOXES WILL NOT BE ALLOWED.
14. 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.
15. THE PROPOSED TRAFFIC SIGNAL CONTROLLER CABINET SHALL BE FURNISHED WITH A MANUAL CONTROL SWITCH AND MANUAL CONTROL CHORD WITHIN THE POLICE DOOR COMPARTMENT. THIS WORK SHALL BE INCLUDED IN THE CONTROLLER CABINET PAY ITEM.
16. THE CONTRACTOR SHALL PROVIDE A SELF-ADHERED PHASE DIAGRAM ON THE INSIDE OF THE CONTROLLER CABINET DOOR.
17. 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.
18. THE ELEVATION OF THE TOP OF THE DOUBLE HANDHOLE SHALL BE LESS THAN THE ELEVATION OF THE TOP OF THE CONTROLLER FOUNDATION.

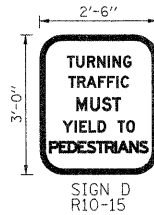
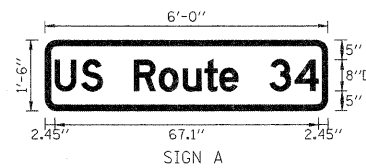
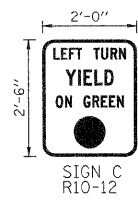
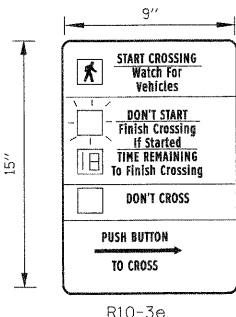
19. ALL UNINTERRUPTIBLE POWER SUPPLIES SHALL BE EQUIPPED WITH BATTERY EQUILIZATION MONITORS.
20. ALL GROUNDING MATERIALS FOR CONCRETE FOUNDATIONS SHALL REFER TO SECTION 806 OF THE STANDARD SPECIFICATIONS.
21. ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED WITH SEED OR SOD TO THE SATISFACTION OF THE ENGINEER. SEEDING OR SODDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTELLABLE CONDITION.
22. THE FIBER OPTIC CABLE SHALL BE LABELED WITH DIRECTION AND ASSIGNMENT NUMBER.
23. THE SURGE PROTECTOR IN THE CONTROLLER CABINET SHALL HAVE AN INDICATOR LIGHT.
24. THE MAST ARM FOUNDATIONS SHALL BE LOCATED A MINIMUM 6 FEET FROM THE FACE OF CURB OR A MINIMUM 18 FEET FROM THE EDGE OF PAVEMENT TO THE FACE OF FOUNDATION WHERE THERE IS NO CURB, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IN CURB AREA, GET MORE THAN 6 FEET IF POSSIBLE IF THE SIGNAL HEAD STILL LINES UP IN CENTER OF LANE.
25. IF THERE IS A PAY ITEM, CHANGEABLE MESSAGE BOARDS AREA REQUIRED FOR BOTH/ALL DIRECTIONS. ONE WEEK PRIOR TO SIGNAL TURN-ON, THE MESSAGE SHOULD READ "NEW SIGNAL AHEAD/TURN ON DATE". FOR THREE WEEKS AFTER, THE MESSAGE SHOULD READ "NEW SIGNAL AHEAD/BE PREPARED TO STOP".
26. LOCATIONS OF TRAFFIC SIGNAL POSTS AND MAST ARM ASSEMBLIES MAY BE CHANGED IN THE FIELD AS NECESSARY TO AVOID UTILITIES. THE NEW LOCATIONS SHALL BE COORDINATED WITH THE ENGINEER AND APPROVED BY THE DISTRICT TRAFFIC SIGNAL SECTION TO ENSURE THE NEW LOCATIONS MEET OPERATIONAL OFFSET/CLEAR ZONE REQUIREMENTS AND MAINTAIN PROPER POSITION OF SIGNAL HEADS IN RELATION TO THE TRAVELED LANES.

SIGN DETAIL

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

1. TYPE ZZ SHEETING REQUIRED
2. WHITE/GREEN BACKGROUND
3. STYLE (d) - 5/8 IN. BORDER
4. 8 IN. SERIES D LETTERS
5. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN

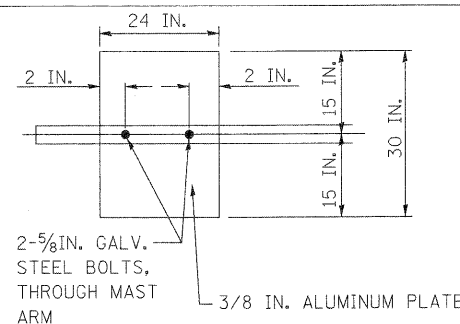
PEDESTRIAN PUSH BUTTON SIGN



9 SQ. FT. EACH
1 REQUIRED

15 SQ. FT. EACH
2 REQUIRED

7.5 SQ. FT. EACH
1 REQUIRED



DAMPENING DEVICE SHALL CONSIST OF A 24"X30" TYPE I, UNPAINTED ALUMINUM SIGN STOCK MOUNTED HORIZONTALLY ON TOP OF MAST ARM WITH THE 30" LENGTH PERPENDICULAR TO THE ARM. COST OF THE DAMPENING DEVICE IS INCLUDED IN THE MAST ARM PAY ITEM.

DAMPENING PLATE DETAIL (TOP VIEW)

FILE NAME =	DESIGNED - GR	REVISED -
PLOT SCALE = 1:20	DRAWN - GR	REVISED -
PLOT DATE = 4/9/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2+14R-1 & BR-1(1)+15R-1	KENDALL	429	247
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				



Illinois Department of Transportation
Division of Highways
District #3, Ottawa

SOIL BORING LOG

Date 9/3/10

ROUTE US 34 (FAP 591) DESCRIPTION Intersection of US 34 at Lakewood Springs Dr., Plano LOGGED BY Larry Myers

SECTION 13R-2;14R-1 & BR-1(1);15R-1 LOCATION SW 1/4, SEC. 24, TWP. 37N, RNG. 6E

COUNTY Kendall DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.	Station	D E P T H ft	B L O S S Qu T ft	U C S Qu T ft	M O I S T ure %	Surface Water Elev. ft	Stream Bed Elev. ft	Groundwater Elev.: First Encounter ft Upon Completion ft After Hrs.	D E P T H ft	B L O S S Qu T ft	U C S Qu T ft	M O I S T ure %

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

EJM ENGINEERING, INC.
411 South Wells Street Suite 800
Chicago, Illinois 60607



Illinois Department of Transportation
Division of Highways
District #3, Ottawa

SOIL BORING LOG

Date 9/3/10

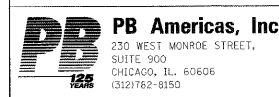
ROUTE US 34 (FAP 591) DESCRIPTION Intersection of US 34 at Lakewood Springs Dr., Plano LOGGED BY Larry Myers

SECTION 13R-2;14R-1 & BR-1(1);15R-1 LOCATION SW 1/4, SEC. 24, TWP. 37N, RNG. 6E

COUNTY Kendall DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.	Station	D E P T H ft	B L O S S Qu T ft	U C S Qu T ft	M O I S T ure %	Surface Water Elev. ft	Stream Bed Elev. ft	Groundwater Elev.: First Encounter ft Upon Completion ft After Hrs.	D E P T H ft	B L O S S Qu T ft	U C S Qu T ft	M O I S T ure %

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



FILE NAME =	DESIGNED - BKS	REVISED -
DRAWN - BKS	REVISED -	
PLOT SCALE = N.T.S.	CHECKED - BKS	REVISED -
PLOT DATE =	DATE - 4-7-11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

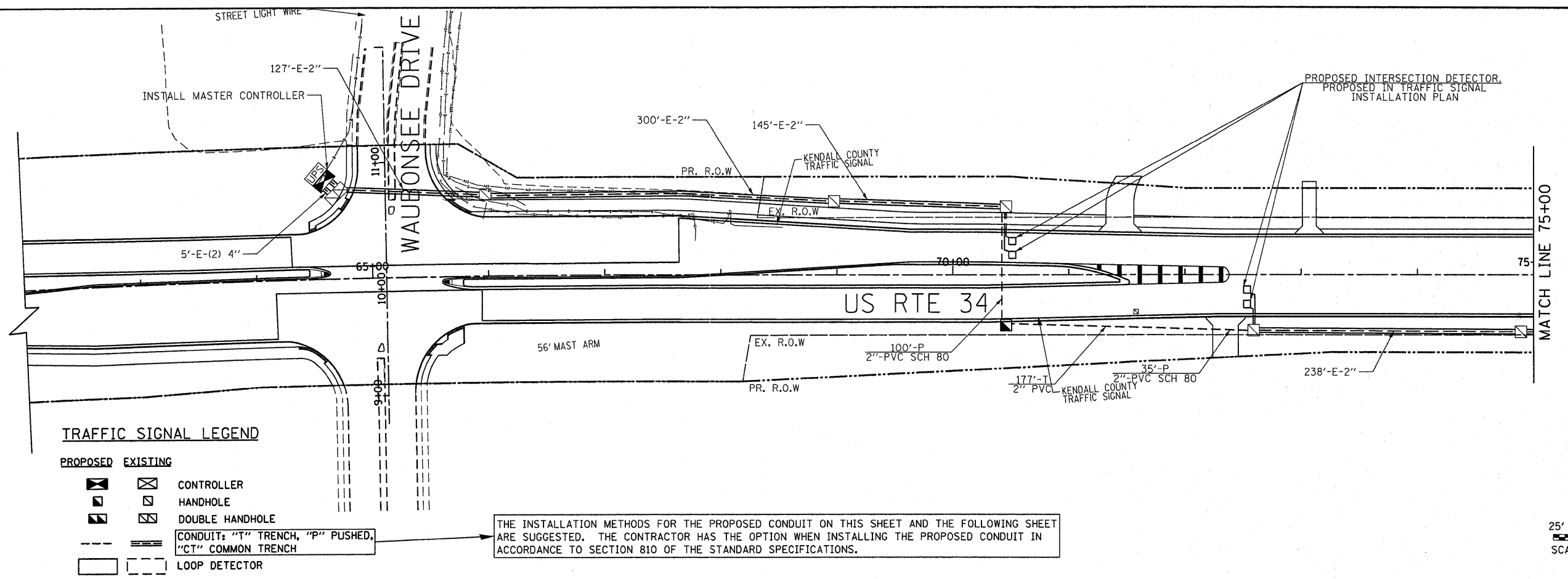
**SOIL BORINGS
US RTE 34 AND LAKEWOOD SPRINGS DRIVE**

F.A.B. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	248
CONTRACT NO. 66985			FINAL SUBMITTAL	
ILLINOIS FED. AID PROJECT				

EJM ENGINEERING, INC.
 411 South Wells Street Suite 800
 Chicago, Illinois 60607



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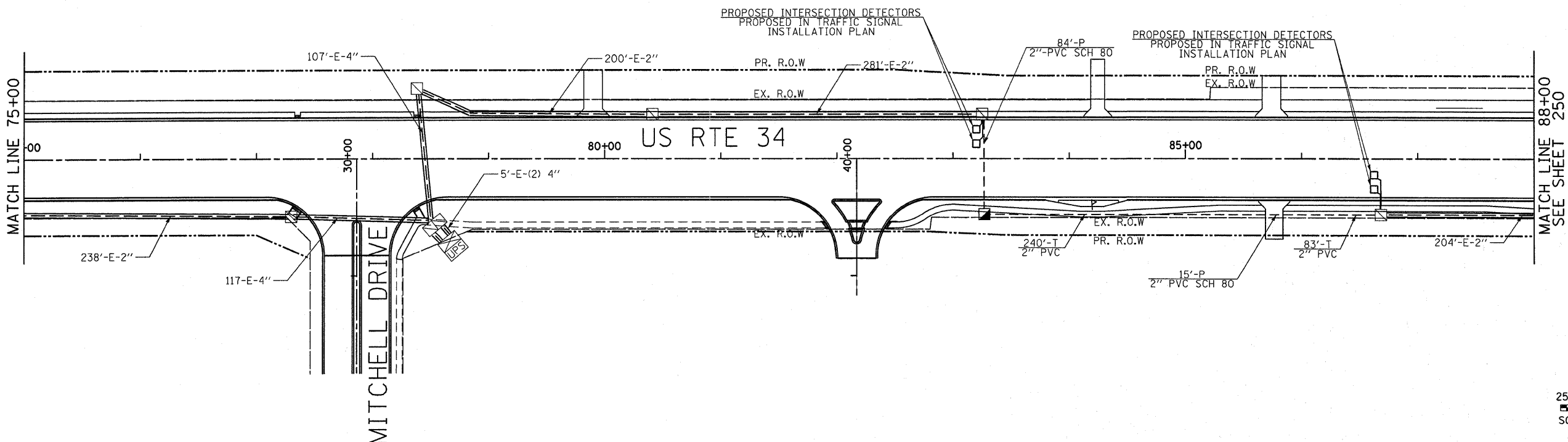
TRAFFIC SIGNAL LEGEND

PROPOSED EXISTING

- CONTROLLER
- HANDHOLE
- DOUBLE HANDHOLE
- CONDUIT: "T" TRENCH, "P" PUSHED, "CT" COMMON TRENCH
- LOOP DETECTOR

THE INSTALLATION METHODS FOR THE PROPOSED CONDUIT ON THIS SHEET AND THE FOLLOWING SHEET ARE SUGGESTED. THE CONTRACTOR HAS THE OPTION WHEN INSTALLING THE PROPOSED CONDUIT IN ACCORDANCE TO SECTION 810 OF THE STANDARD SPECIFICATIONS.

25' 0 25' 50'
 SCALE: 1" = 50'



25' 0 25' 50'
 SCALE: 1" = 50'

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL 60606
 (312) 782-8150

FILE NAME = duncanbd	DESIGNED - GR	REVISED - BDD 09/26/2011
PLOT SCALE = 50.0000' / 1" = 50'	DRAWN - GR	REVISED -
PLOT DATE = 9/27/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED TRAFFIC SIGNAL INTERCONNECT PLAN
 US 34**

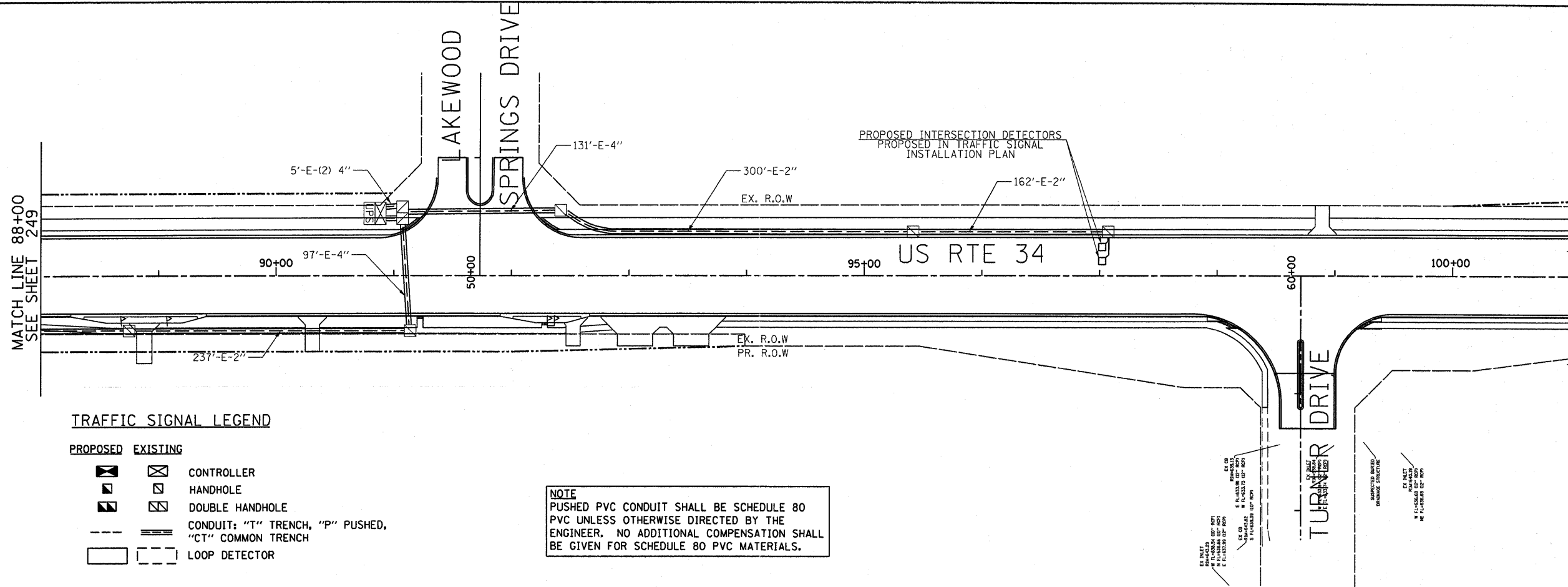
SCALE: 1"=50' SHEET NO. 1 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	249
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	

EJM ENGINEERING, INC.
 411 South Wells Street Suite 800
 Chicago, Illinois 60607



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TRAFFIC SIGNAL LEGEND

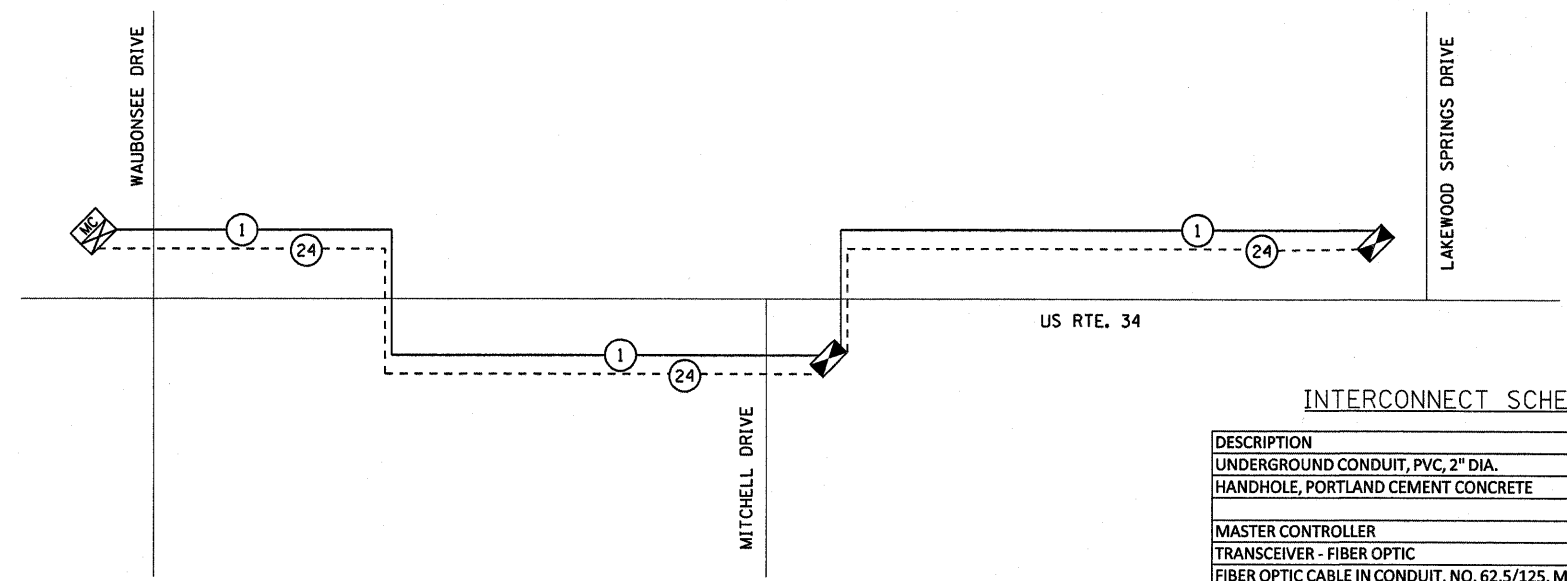
- | | | |
|--|--|---|
| | | CONTROLLER |
| | | HANDHOLE |
| | | DOUBLE HANDHOLE |
| | | CONDUIT: "T" TRENCH, "P" PUSHED, "CT" COMMON TRENCH |
| | | LOOP DETECTOR |

NOTE
 PUSHED PVC CONDUIT SHALL BE SCHEDULE 80 PVC UNLESS OTHERWISE DIRECTED BY THE ENGINEER. NO ADDITIONAL COMPENSATION SHALL BE GIVEN FOR SCHEDULE 80 PVC MATERIALS.

25' 0 25' 50'
 SCALE: 1" = 50'

CABLE PLAN LEGEND

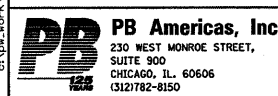
- | | | |
|--|--|---|
| | | MASTER CONTROLLER |
| | | CONTROLLER CABINET |
| | | VEHICLE DETECTOR, INDUCTION LOOP |
| | | DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED, ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| | | TRACER CABLE, NO. 14 1C |
| | | FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F & SM12F |



INTERCONNECT SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	QUANTITY
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	734
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	2
MASTER CONTROLLER	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	2
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	EACH	3253
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 1C	FOOT	3189
OPTIMIZE TRAFFIC SIGNAL SYSTEM	FOOT	1
TEMPORARY WIRELESS INTERCONNECT, COMPLETE	FOOT	1
RE-OPTIMIZE TEMPORARY TRAFFIC SIGNAL SYSTEM	FOOT	1

NOT TO SCALE



FILE NAME = dunoenbd	DESIGNED - GR	REVISED - BDD 09/26/2011
PLOT SCALE = 50.0000' / 1"	DRAWN - GR	REVISED -
PLOT DATE = 9/27/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED TRAFFIC SIGNAL INTERCONNECT & SCHEMATIC
 US 34**

SCALE: 1"=50' SHEET NO. 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	250
CONTRACT NO. 66985				
ILLINOIS FED. AID PROJECT				

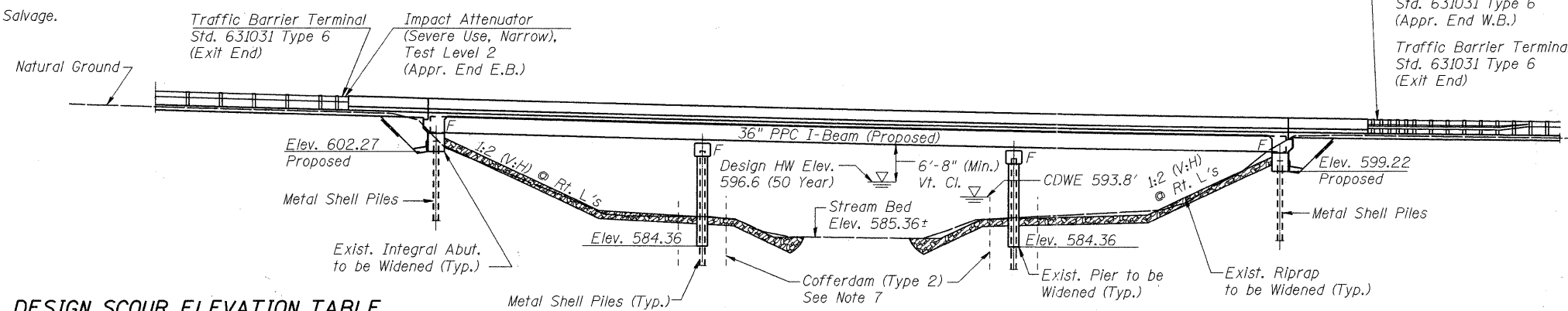
FINAL SUBMITTAL

Bench Mark (BM#299): Railroad spike in power pole, North side of center line US 34
Sta. 59+72.36, Offset 49.27' Lt., Elev. 646.929

Bench Mark 2 (#511): Found chiseled "□" on Southeasterly wing wall
of US Route 34 Bridge over Big Rock Creek.
Northing 1819849.8740; Easting 932197.7414;
Elev. 606.99. Sta. 21+36.9 Offset 22.5' RT.

Existing Structure: The existing bridge S.N. 047-0051 was built in 1990 under Section 14BR-1, Contract 86105, Fed. Aid #EF-591(7) by IDOT. The bridge has three spans with 36" PPC I-Beams on integral abutments and pile bent piers. It has a roadway width of 40'-0" (43'-2" Out to Out) and a total length of 162'-15". The existing bridge is to be widened in kind. Traffic is to be maintained by utilizing stage construction.

No Salvage.



DESIGN SCOUR ELEVATION TABLE

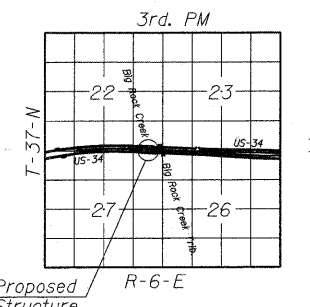
Design Scour Elevation (ft)	W. Abut.	Pier 1	Pier 2	E. Abut.
	602.27	577.52	577.52	599.22

ELEVATION

STATION 20+48.83
RE-BUILT 201 BY
STATE OF ILLINOIS
F.A.P. RT. 591 SEC 14BR-1
LOADING HS-20
STRUCTURE NO. 047-0051

NAME PLATE
See Std. 515001

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.



LOCATION SKETCH

LOADING HS20-44

Allow 25#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS (Prop. & Exist.)

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS (Prop.)

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f'_s = 270,000$ psi ($1/2$ " low lax. strands)
 $f_{si} = 201,960$ psi ($1/2$ " low lax. strands)

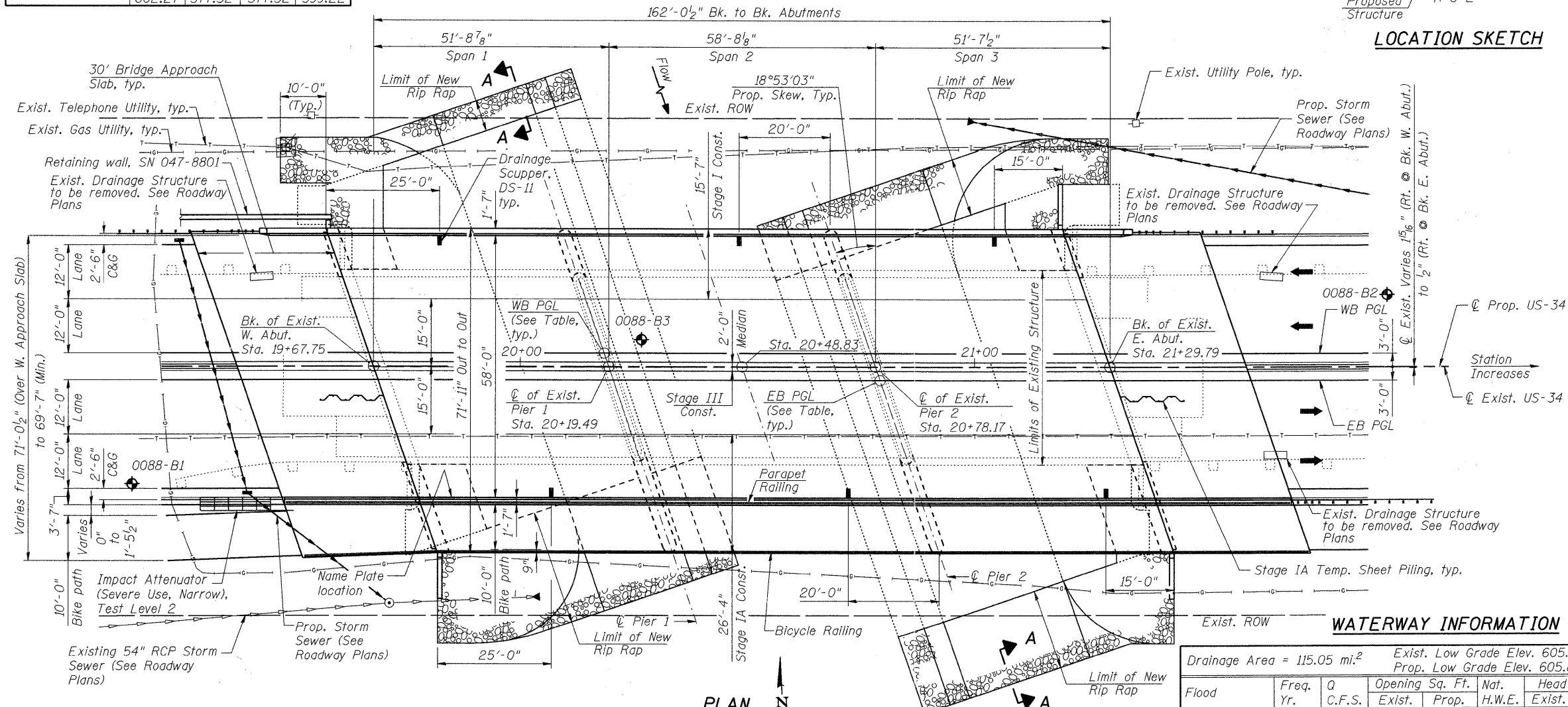
PRECAST PRESTRESSED UNITS (Exist.)

$f'_c = 6,000$ psi
 $f'_{ci} = 4,300$ psi (Spans 1 & 3)
 $f'_{ci} = 4,600$ psi (Span 2)
 $f'_s = 270,000$ psi ($1/2$ " strands)
 $f_{si} = 189,000$ psi ($1/2$ " strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

	Station	Survey Elevation at PGL's
Bk. West Abut. at WB PGL	19+66.72	610.64
Bk. West Abut. at EB PGL	19+68.78	610.59
CL Pier 1 at WB PGL	20+18.46	609.27
CL Pier 1 at EB PGL	20+20.52	609.22
CL Pier 2 at WB PGL	20+77.14	608.06
CL Pier 2 at EB PGL	20+79.20	608.02
Bk. East Abut. at WB PGL	21+28.76	607.27
Bk. East Abut. at EB PGL	21+30.82	607.24



WATERWAY INFORMATION

Drainage Area = 115.05 mi.² Exist. Low Grade Elev. 605.46 @ Sta. 23+50
Prop. Low Grade Elev. 605.84 @ Sta. 23+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.		
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	
Design	10	3651	572	572	595.2	0.5	0.6	595.7	595.8
Base	50	5306	743	743	596.6	0.6	0.9	597.1	597.5
Max. Calc.	100	5949	808	808	597.1	0.7	1.0	597.8	598.1
Overtopping	500	7502	940	940	598.1	1.0	1.3	599.1	599.4

APPROVED FOR STRUCTURAL ADEQUACY ONLY
[Signature]
ENGINEER OF BRIDGES AND STRUCTURES



GENERAL PLAN
F.A.P. 591 (US-34)
OVER BIG ROCK CREEK
SECTION 14BR-1
KENDALL COUNTY
STATION 20+48.83
S.N. 047-0051

Note:
1. Measurement Tolerances to Existing :
±1 inch for Length
and ±0°25' for Angle

LEGEND

Indicates Boring Location

COMPANY NAME: SEC GROUP, INC.
PROJECT CONTACT: ROBERT G. DAVIES
CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE PLOTTED: 10/14/2011 11:08:03 AM
FILE NAME: 0470051-Gen.dgn
PLOT DRIVER: pcfplot
PEN TABLE: Struct 22x34.tbl

SEC Group, Inc.
230 West Monroe Street,
Suite 900
Chicago, IL 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
DESIGNED - MGH	CHECKED - SSM	REVISED -
PLOT SCALE =	DRAWN - WJH	REVISED -
PLOT DATE = 10/14/2011	CHECKED - RGD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 047-0051
SHEET NO. S-1 OF S-43 SHEETS

F.A.P. RTE. 591	SECTION 14BR-1	COUNTY KENDALL	TOTAL SHEETS 429	SHEET NO. 251
CONTRACT NO. 66985				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.
- Reinforcement bars designated (E) shall be epoxy coated.
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
- The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
- The calculated Seal Coat thickness is 4.0' based on the Cofferdam Design Water Elevation (CDWE), streambed elevation, bottom of footing elevation, and estimated sheeting lip elevation. Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.

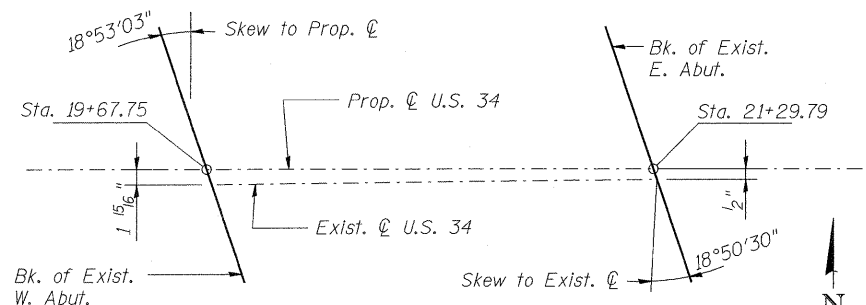
Cofferdam (Type 2) (Location - 1)	Pier 1	US end
Cofferdam (Type 2) (Location - 2)	Pier 1	DS end
Cofferdam (Type 2) (Location - 3)	Pier 2	US end
Cofferdam (Type 2) (Location - 4)	Pier 2	DS end

TOTAL BILL OF MATERIAL

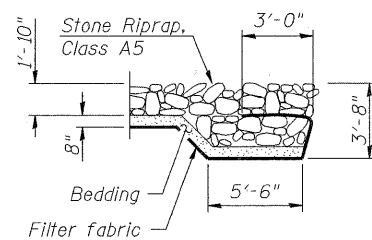
Item	Unit	Super	Sub	Total
Stone Riprap, Class A5	Sq. Yd.		597	597
Filter Fabric	Sq. Yd.		805	805
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu.Yd.		19.3	19.3
Structure Excavation	Cu.Yd.		200	200
Cofferdam Excavation	Cu.Yd.		176	176
Cofferdam (Type 2) (Location - 1)	Each		1	1
Cofferdam (Type 2) (Location - 2)	Each		1	1
Cofferdam (Type 2) (Location - 3)	Each		1	1
Cofferdam (Type 2) (Location - 4)	Each		1	1
Concrete Structures	Cu.Yd.		183.0	183.0
Concrete Superstructure	Cu.Yd.	508.2		508.2
Bridge Deck Grooving	Sq. Yd.		989	989
Seal Coat Concrete	Cu. Yd.		144	144
Protective Coat	Sq. Yd.		13661	13661
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36 in.	Foot		1113	1113
Reinforcement Bars, Epoxy Coated	Pound	109440	20430	129870
Bar Splicers	Each		532	532
Bicycle Railing	Foot		222	222
Parapet Railing	Foot		222	222
Furnishing Metal Shell Piles, 14"x0.312"	Foot		630	630
Driving Piles	Foot		630	630
Test Pile Metal Shells	Each		4	4
Name Plates	Each		1	1
Epoxy Crack Injection	Foot		180	180
Geocomposite Wall Drain	Sq. Yd.		94	94
Porous Granular Embankment, Special	Cu.Yd.		150	150
Mechanical Splicers	Each		16	16
Deck Slab Repair (Partial)	Sq. Yd.		2	2
Drainage Scuppers, DS-11	Each		6	6
Temporary Sheet Piling	Sq. Ft.		540	540
Pipe Underdrains for Structures, 4"	Foot		144	144

INDEX OF SHEETS

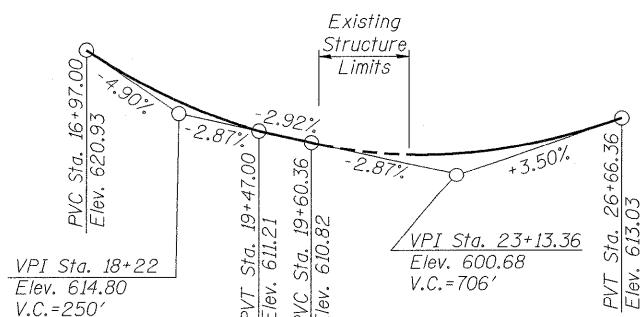
- S-1 General Plan and Elevation
- S-2 General Data
- S-3 Stage Construction Details
- S-4 Temporary Concrete Barrier for Stage Construction
- S-5 Removal and Repair Plan
- S-6 Removal and Repair Plan
- S-7 Top of Slab Elevations
- S-8 Top of Slab Elevations
- S-9 Top of Slab Elevations
- S-10 Top of Approach Slab Elevations
- S-11 Top of Approach Slab Elevations
- S-12 Stage IA Deck Plan and Cross Section
- S-13 Stage I Deck Plan and Cross Section
- S-14 Superstructure Details
- S-15 Superstructure Details
- S-16 Superstructure Details
- S-17 Superstructure Details
- S-18 Bicycle Railing
- S-19 Drainage Scupper, DS-11
- S-20 Bridge Approach Slab Details
- S-21 Bridge Approach Slab Details
- S-22 Framing Plan - Prestressed Beam
- S-23 Prestressed Beam Details
- S-24 Prestressed Beam Details
- S-25 Prestressed Beam Details
- S-26 Prestressed Beam Details
- S-27 West Abutment
- S-28 West Abutment
- S-29 West Abutment Details
- S-30 East Abutment
- S-31 East Abutment
- S-32 East Abutment Details
- S-33 Pier 1
- S-34 Pier 1
- S-35 Pier 1 Details
- S-36 Pier 2
- S-37 Pier 2
- S-38 Pier 2 Details
- S-39 Metal Shell Piles
- S-40 Bar Splicer Assembly and Mechanical Splicer Details
- S-41 Concrete Parapet Slipforming Option
- S-42 Soil Boring Logs
- S-43 Soil Boring Logs



LAYOUT OF PROPOSED C AND EXISTING C

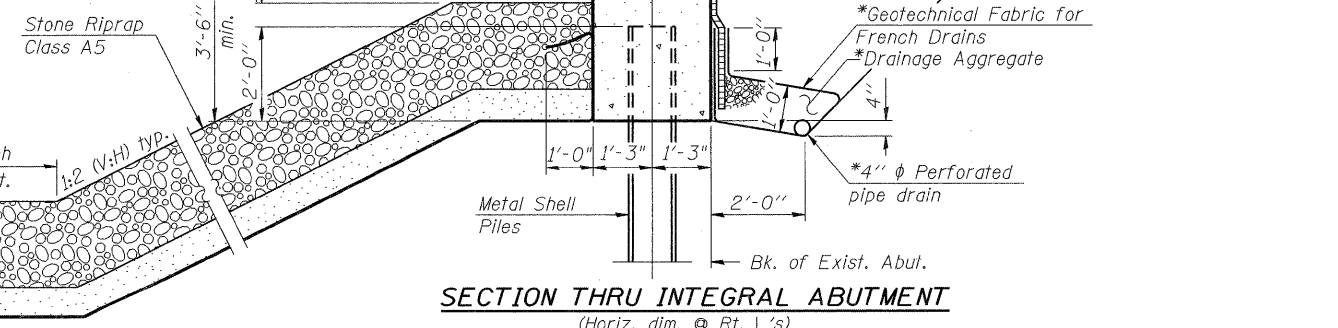


SECTION A-A



PROFILE GRADE

(Along Prop. US-34 EB & WB)



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures.
Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes, except for the northwest wingwall (see Sheet S-27 for details). The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

SEC GROUP, INC.
1100 N. WASHINGTON ST.
CHICAGO, IL 60610
TEL: 312.467.1000
FAX: 312.467.1001
WWW.SECGROUP.COM

SEC Group, Inc.
An IBM System Company
420 N. Front Street
Maitland, IL 60052-2138
TEL: 312.467.1000
FAX: 312.467.1001
WWW.SECGROUP.COM

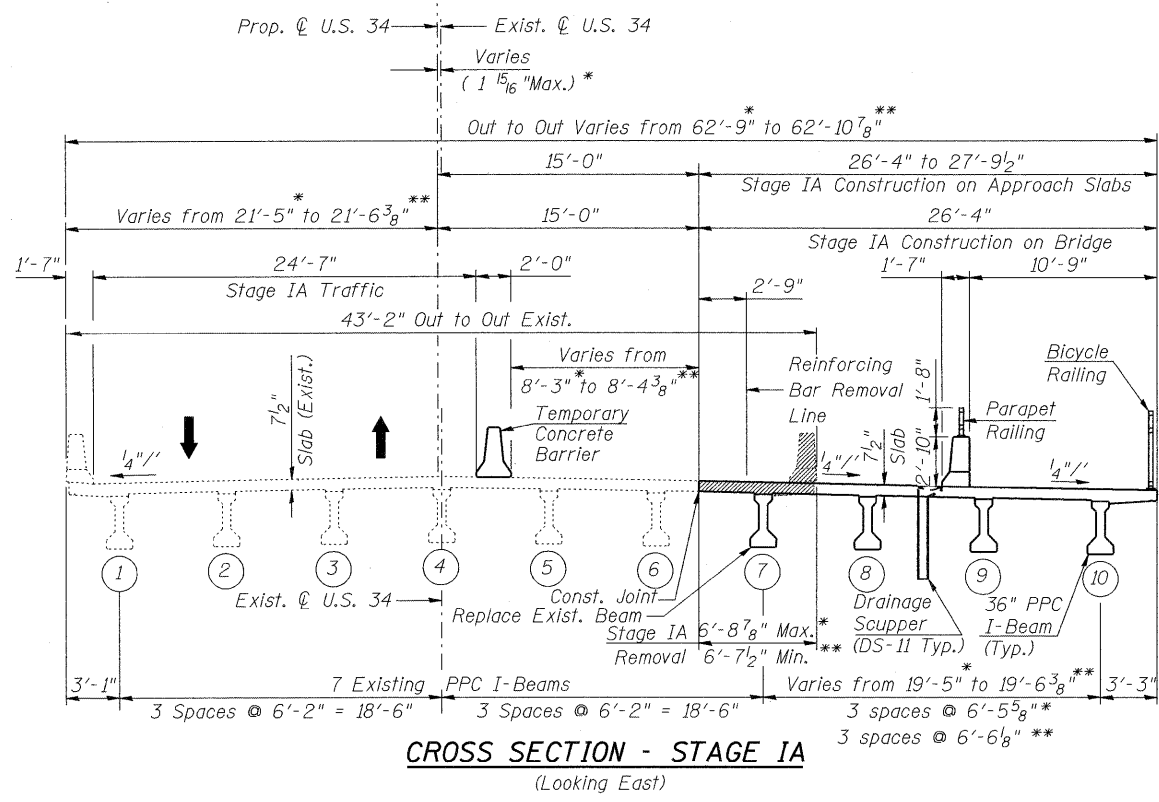
PB Americas, Inc.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL 60606

USER NAME = whoold	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

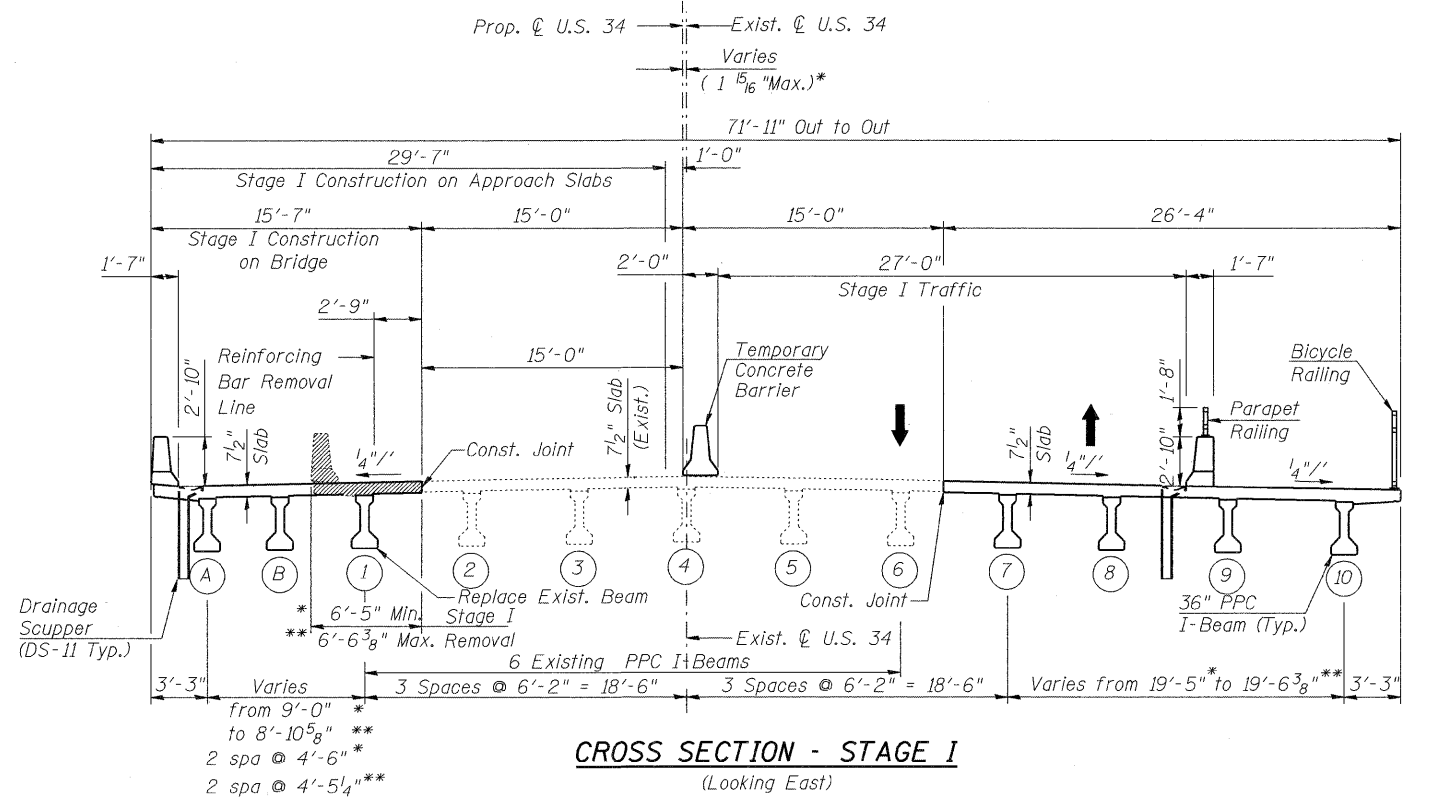
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 047-0051
SHEET NO. S-2 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	252
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	

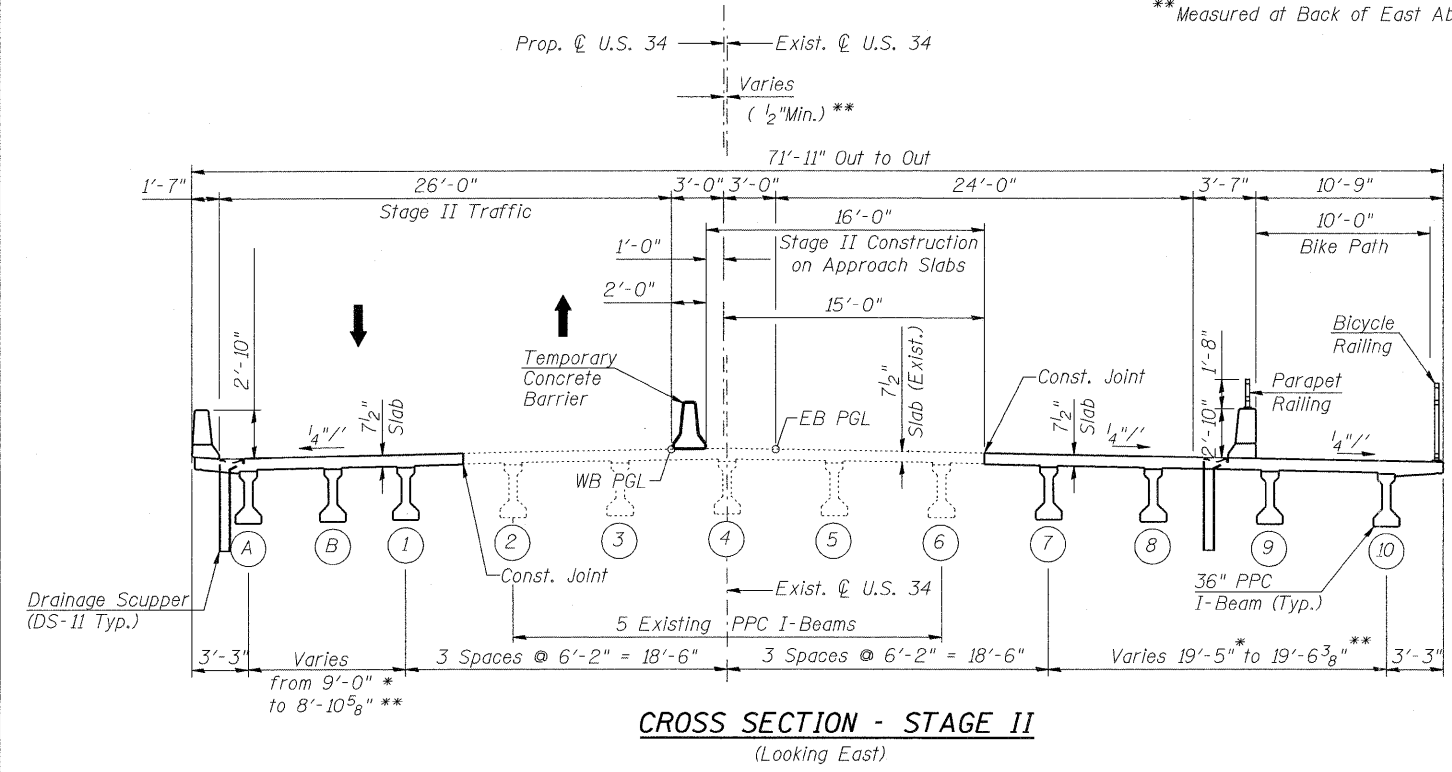


CROSS SECTION - STAGE IA
(Looking East)

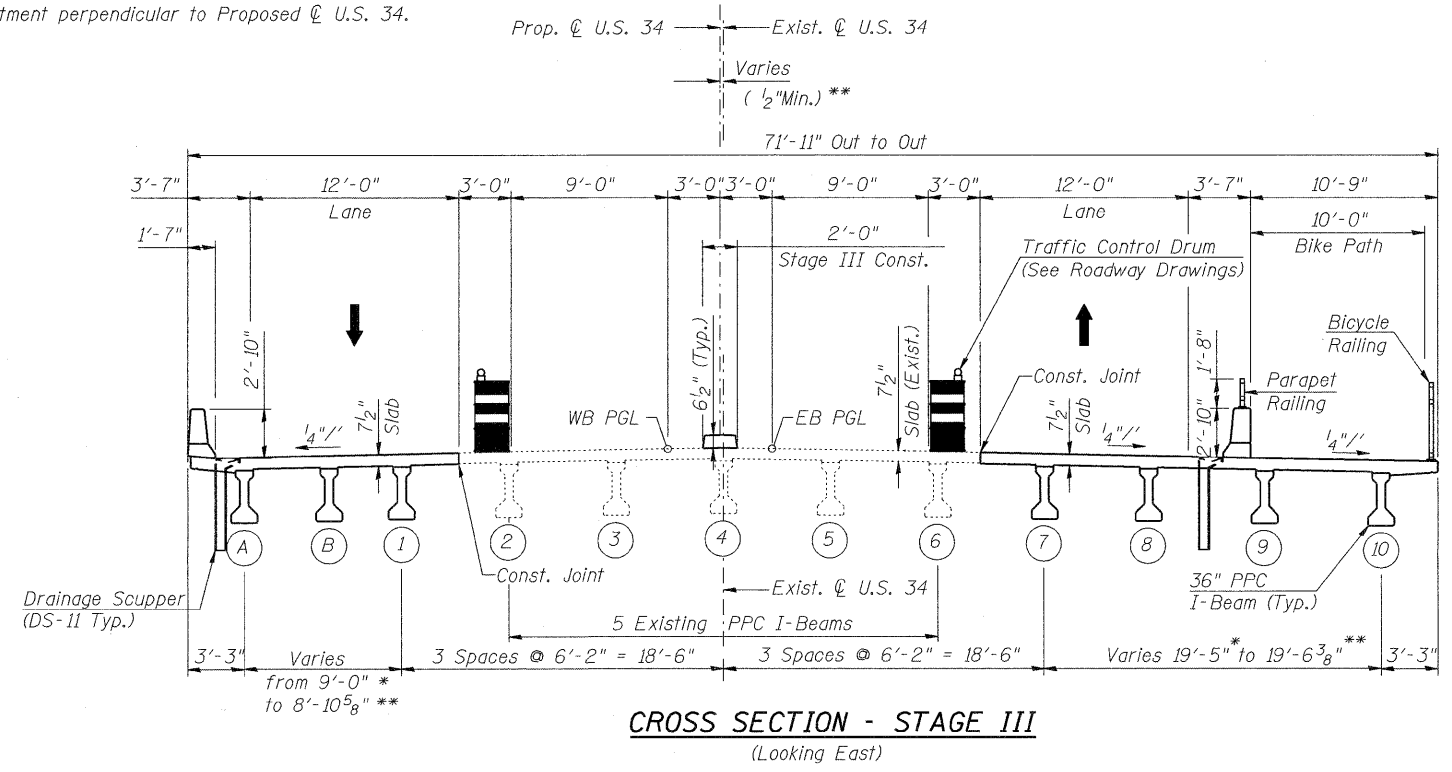


CROSS SECTION - STAGE I
(Looking East)

* Measured at Back of West Abutment perpendicular to Proposed C U.S. 34 .
 ** Measured at Back of East Abutment perpendicular to Proposed C U.S. 34 .



CROSS SECTION - STAGE II
(Looking East)



CROSS SECTION - STAGE III
(Looking East)

Stage II construction consists of work on the roadway and approach slabs. See Roadway Plans and Approach Slab Details.

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 FILE NUMBER: 071000110018 AM
 PLOT DATE: 10/14/2011
 PLOT DRIVERS: pcf, gph
 PEN TABLE: Struct 22, 34, 7b



PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

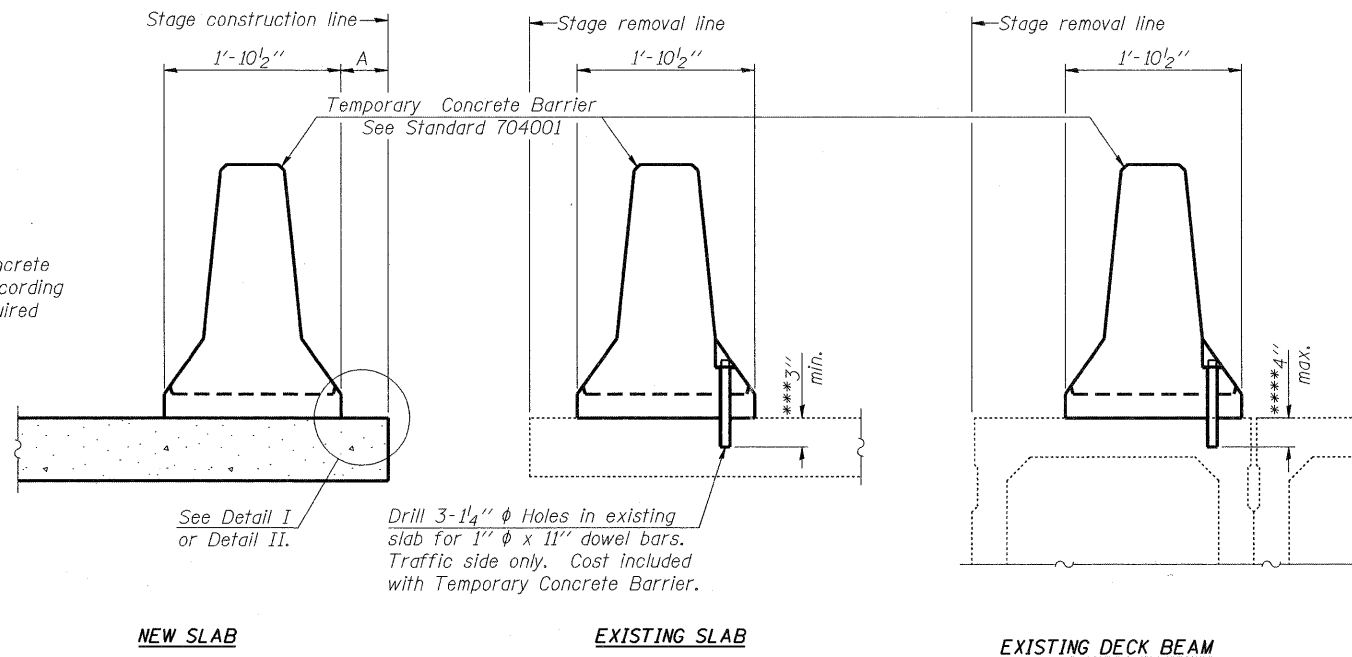
USER NAME =	wood	DESIGNED -	MGH	REVISED -	
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PLOT DATE =	10/14/2011	DRAWN -	WJH	REVISED -	
		CHECKED -	RGD	REVISED -	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS
 STRUCTURE NO. 047-0051**
 SHEET NO. S-3 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	253
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

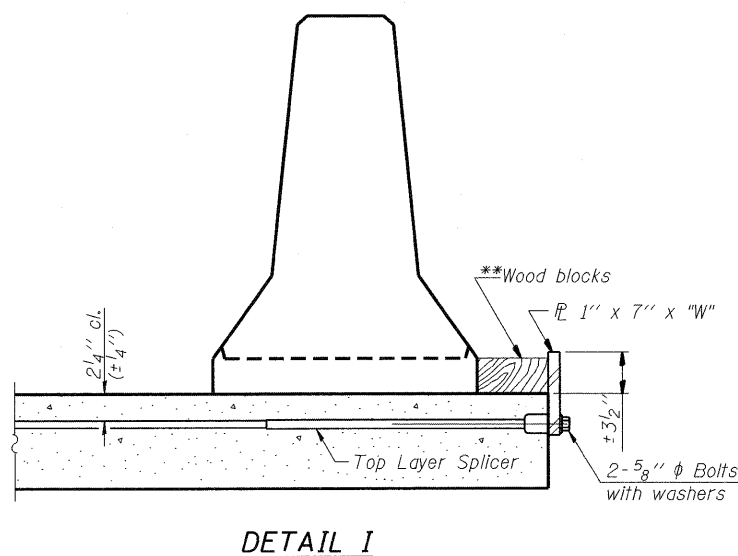
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel \bar{P} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel \bar{P} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

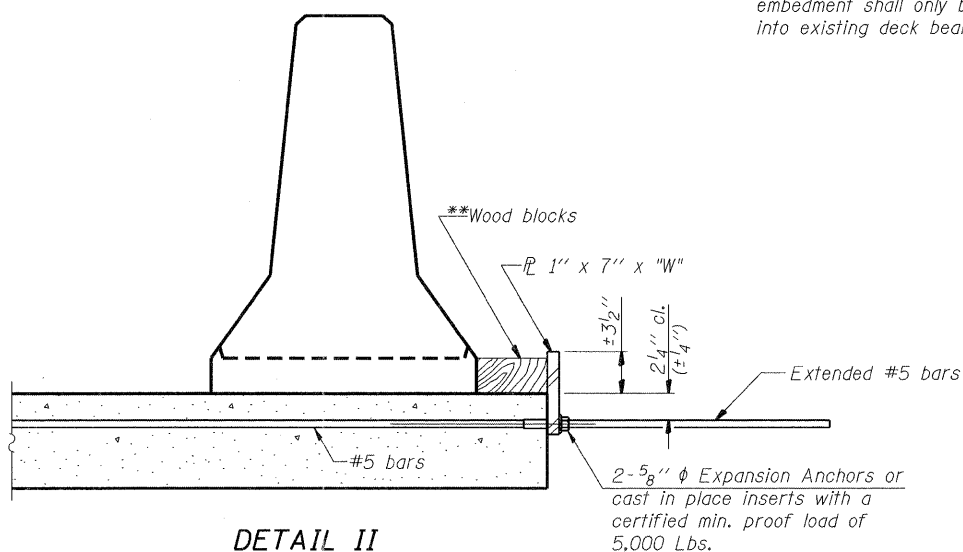
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

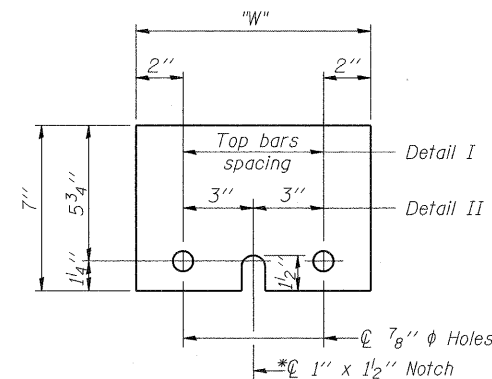
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER \bar{P} 1" x 7" x "W"

* Required only with Detail II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert C. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 11:08:22 AM
 FILE NAME: 070051-1cb.dgn
 PLOT DRIVER: pdr.dft
 PEN TABLE: Struct 20x34.tbl

R-27 7-1-10

SEC Group, Inc.
 An NRI Group Company
 400 N. First Street,
 Naperville, IL 60563-2008
 T 616.385.1778 F 616.385.1781
 www.secgroupinc.com
 *McHenry, IL *Rock Falls, IL *Near Leokan, IL *Chicago, IL

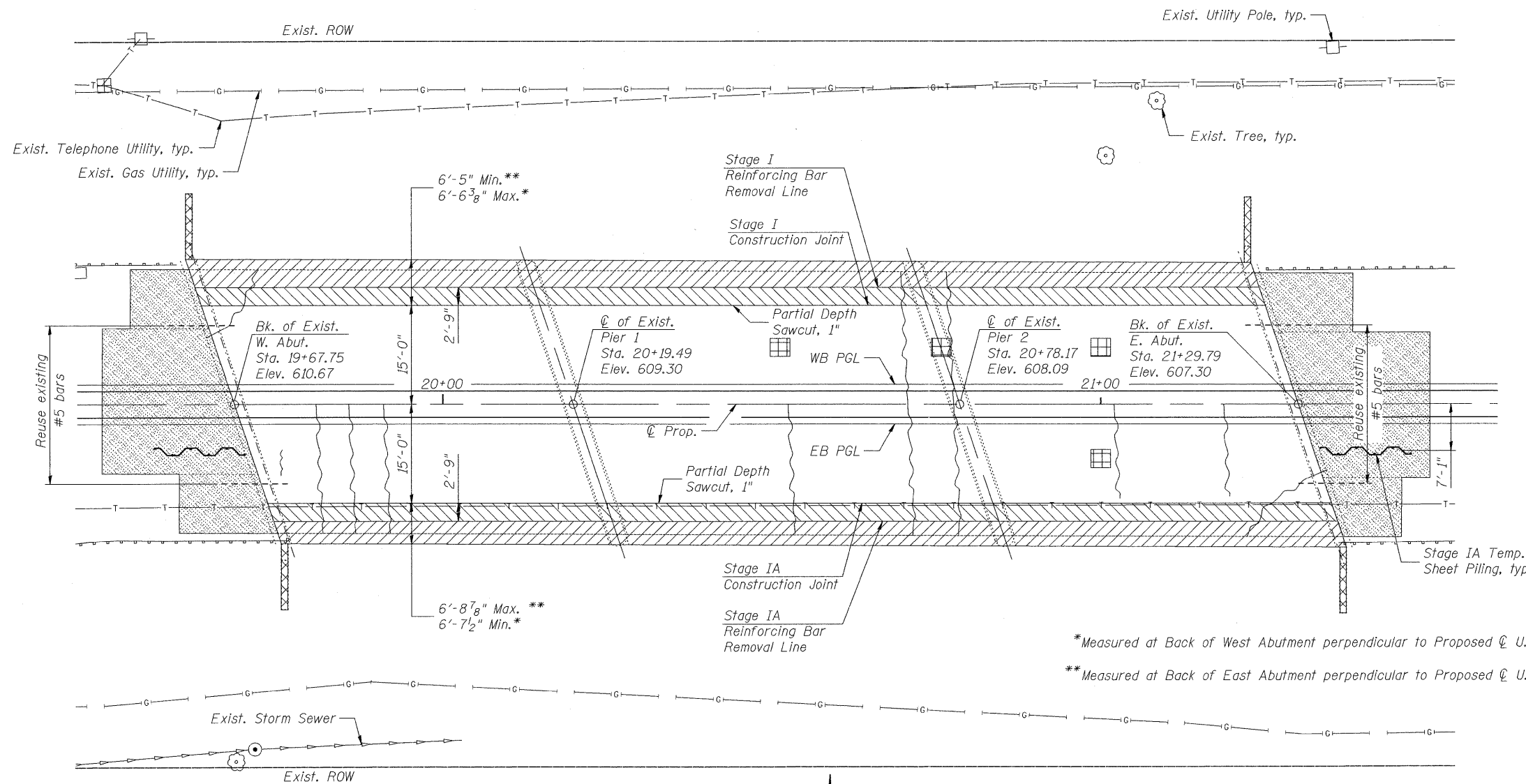
PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 18/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 047-0051**

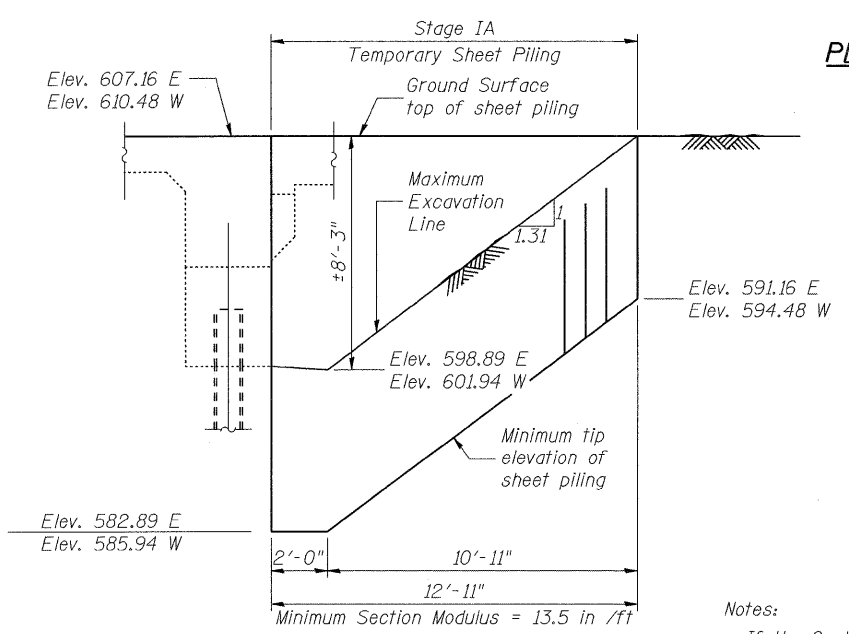
F.A.P. RTE. 591	SECTION 14BR-1	COUNTY KENDALL	TOTAL SHEETS 429	SHEET NO. 254
SHEET NO. S-4 OF S-43 SHEETS			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				



- Notes:
- Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included in pay item Removal Of Existing Superstructures.
 - Exist. Reinforcement and Piles extending into removal area shall be cleaned, straightened, and incorporated into the new construction. Cost included in pay item Concrete Removal.
 - Removal of the existing beam shall be included in the cost for Removal of Existing Superstructures.
 - Quantities of Deck Slab Repair (Partial) and Epoxy Crack Injection are approximate. Locations will be determined by the Resident Engineer. Actual repair locations shall be shown on the as-built plans. Contractor will be paid for the quantities furnished.
 - Cost for Partial Depth Sawcut, 1" included in Removal of Existing Superstructure.
 - Approach Slab Removal is included in the roadway plans.

- LEGEND:**
- Indicates area of Approach Slab Removal.
 - Preserve and reuse existing bars between deck and approach slab.
 - Indicates area of Concrete Removal.
 - Indicates area of Removal of Existing Superstructures.
 - Indicates area of Deck Removal for Reinforcement Splicing. Cost included in Removal of Existing Superstructures.
 - Indicates area for Deck Slab Repair (Partial).
 - Indicates location for Epoxy Crack Injection.

*Measured at Back of West Abutment perpendicular to Proposed C.L. U.S. 34.
 **Measured at Back of East Abutment perpendicular to Proposed C.L. U.S. 34.



TEMPORARY SHEET PILING

Notes:
 If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal of Exist. Superstructures	Ea.	1
Deck Slab Repair (Partial)	Sq. Yd.	2
Epoxy Crack Injection	Ft.	180
Temporary Sheet Piling	Sq. Ft.	540

COMPANY NAME: SEC GROUP INC.
 PROJECT CONTACT: Robert G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 10:08:29 AM
 FILE NAME: 0470051-Rem.dgn
 PLOT DRIVER: pcfplot
 PEN TABLE: Struct_202.ctb

SEC Group, Inc.
 An HBI Group Company
 420 N. Front Street
 Mokena, IL 60450-2138
 L 815.385.1779 F 815.385.1781
 www.secgroup.com

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL 60606

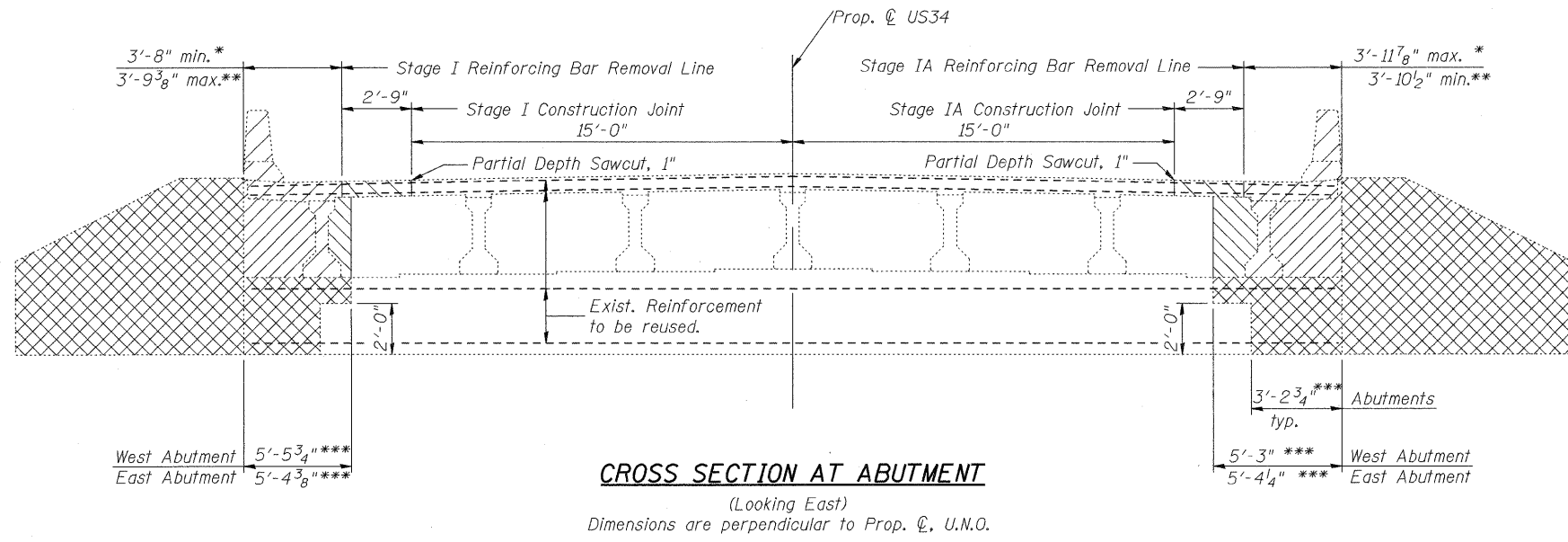
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	CHECKED - SSM	REVISED -
PLOT SCALE =	DRAWN - WJH	REVISED -
PLOT DATE = 10/14/2011	CHECKED - RGD	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**REMOVAL AND REPAIR PLAN
 STRUCTURE NO. 047-0051**

F.A.P. RTE. 591	SECTION 14BR-1	COUNTY KENDALL	TOTAL SHEETS 429	SHEET NO. 255
			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

SHEET NO. S-5 OF S-43 SHEETS



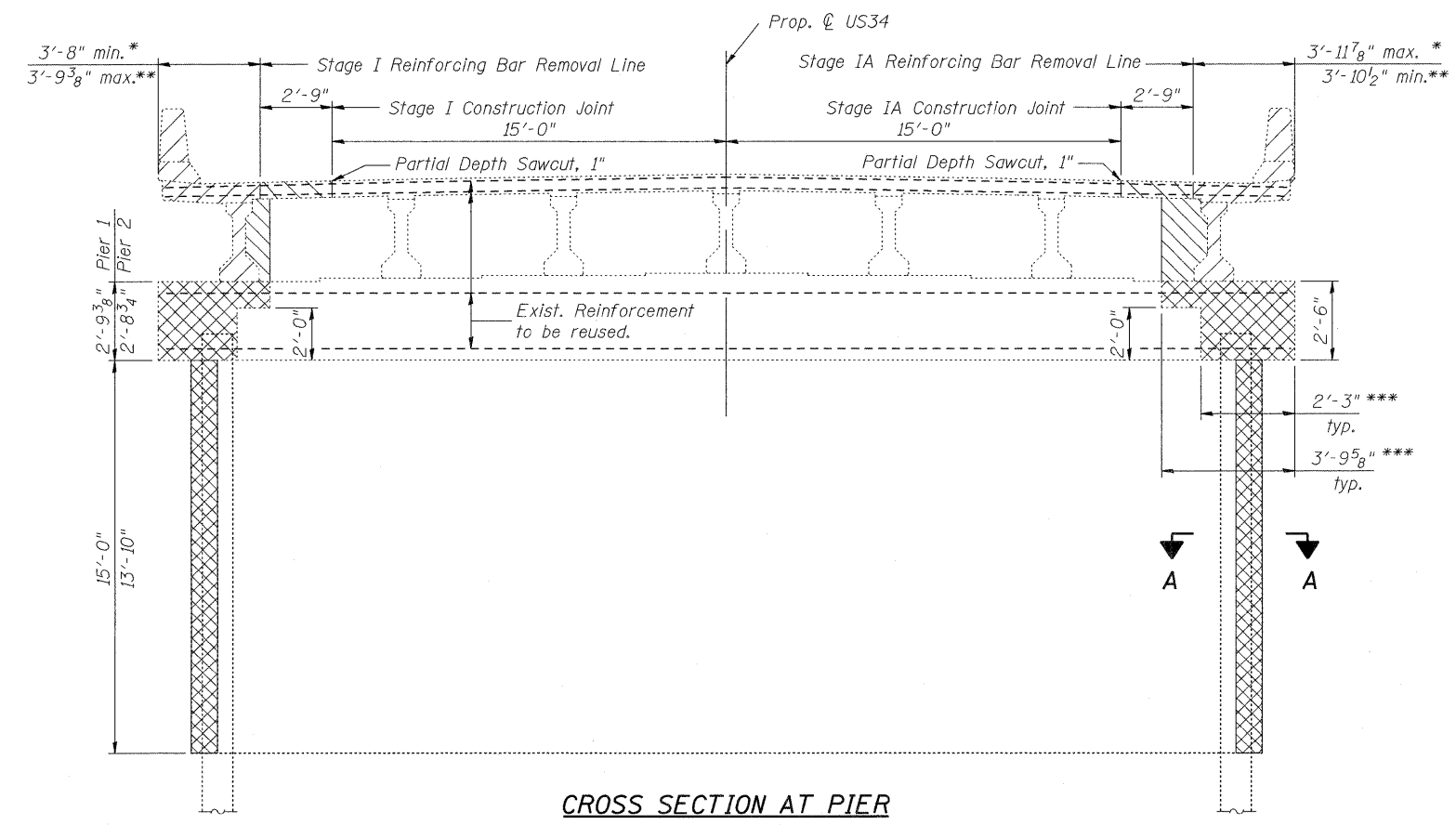
CROSS SECTION AT ABUTMENT
(Looking East)
Dimensions are perpendicular to Prop. C, U.N.O.

* Measured at Back of West Abutment perpendicular to Proposed C, U.S. 34.
** Measured at Back of East Abutment perpendicular to Proposed C, U.S. 34.
*** Measured along C of substructure unit.

- Notes:
1. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included in pay item Removal Of Existing Superstructures.
 2. Exist. Reinforcement and Piles extending into removal area shall be cleaned, straightened, and incorporated into the new construction. Cost included in pay item Concrete Removal.
 3. Removal of the existing beam shall be included in the cost for Removal of Existing Superstructures.
 4. Cost for Partial Depth Sawcut, 1" included in Removal of Existing Superstructure.
 5. Cost for 2" sawcut included in Concrete Removal.

LEGEND:

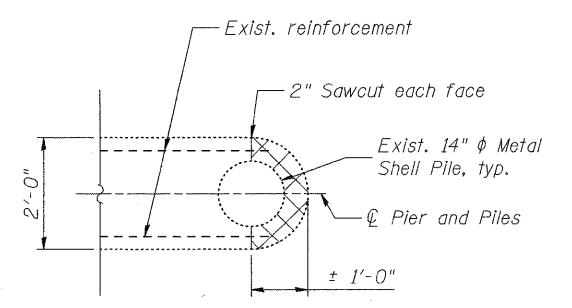
- Indicates area of Concrete Removal.
- Indicates area of Removal of Existing Superstructures.



CROSS SECTION AT PIER
(Looking East)
Dimensions are perpendicular to Prop. C, U.N.O.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	19.3



SECTION A-A

North end similar, but opposite hand

COMPANY NAME: SEC GROUP, INC.
PROJECT CONTACT: Robert G. Davies
CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE PLOTTED: 10/14/2011 11:08:36 AM
FILE NAME: 0470051-Hem2.dgn
PLOT DRIVER: PLOT
PEN TABLE: Struct 25x34.tbl

SEC Group, Inc.
An NEI Group Company
420 N. First Street,
Moline, IL 62450-2108
1.815.385.1778 F. 815.385.1781
www.secgroup.com
4400 Legum, Chicago, IL • New Lenox, IL • Chicago, IL

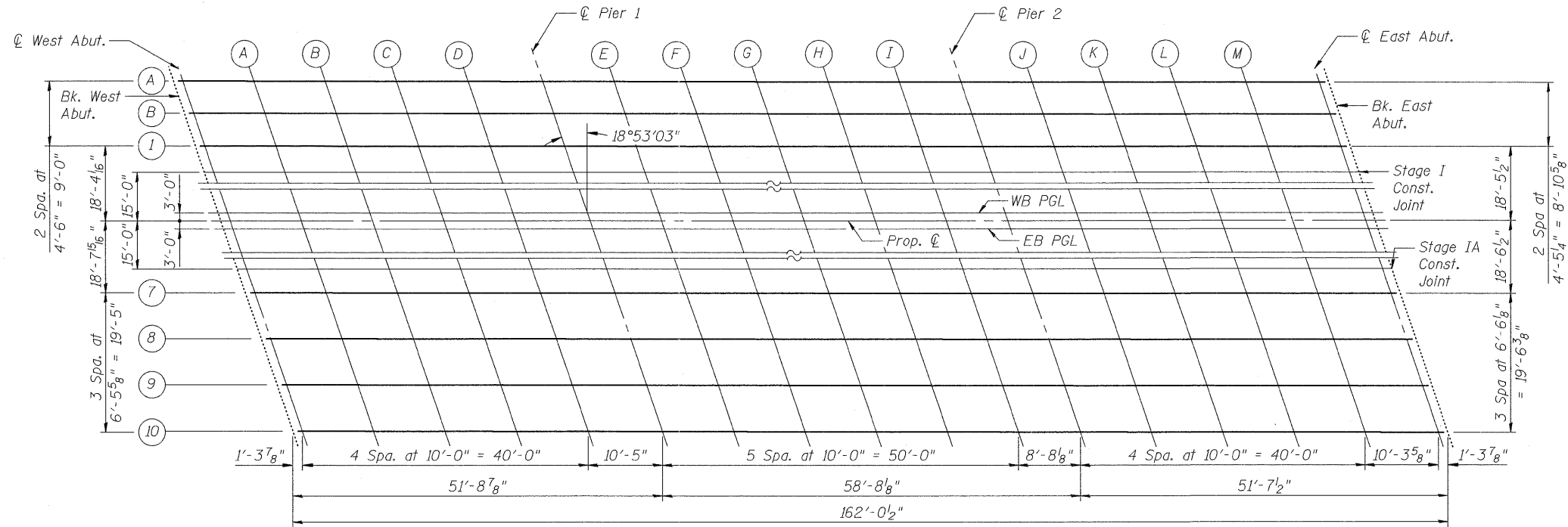
PB Americas, Inc.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL AND REPAIR PLAN
STRUCTURE NO. 047-0051
SHEET NO. S-6 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	256
			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				



PLAN



BEAM A

Location	Station	Offset from Centerline	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	19+58.40	-27.333	610.41	610.38	610.38
W. Abut.	19+59.72	-27.333	610.37	610.34	610.34
A	19+69.72	-27.333	610.09	610.06	610.08
B	19+79.72	-27.333	609.82	609.79	609.83
C	19+89.72	-27.333	609.55	609.52	609.56
D	19+99.72	-27.333	609.29	609.25	609.27
Pier 1	20+10.14	-27.333	609.04	609.01	609.01
E	20+20.14	-27.333	608.80	608.78	608.79
F	20+30.14	-27.333	608.57	608.56	608.59
G	20+40.14	-27.333	608.35	608.33	608.38
H	20+50.14	-27.333	608.14	608.13	608.15
I	20+60.14	-27.333	607.94	607.95	607.96
Pier 2	20+68.82	-27.333	607.77	607.77	607.77
J	20+78.82	-27.333	607.59	607.59	607.61
K	20+88.82	-27.333	607.41	607.44	607.48
L	20+98.82	-27.333	607.24	607.27	607.31
M	21+08.82	-27.333	607.08	607.12	607.14
E. Abut.	21+19.12	-27.333	606.93	606.98	606.98
Bk. E. Abut.	21+20.44	-27.333	606.91	606.96	606.96

BEAM B

Location	Station	Offset from Centerline	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	19+59.94	-22.839	610.46	610.43	610.43
W. Abut.	19+61.26	-22.839	610.42	610.39	610.39
A	19+71.26	-22.843	610.14	610.11	610.13
B	19+81.26	-22.846	609.87	609.84	609.88
C	19+91.25	-22.850	609.60	609.57	609.61
D	20+01.25	-22.853	609.35	609.31	609.33
Pier 1	20+11.67	-22.857	609.09	609.06	609.06
E	20+21.67	-22.860	608.86	608.84	608.85
F	20+31.67	-22.864	608.63	608.62	608.65
G	20+41.67	-22.867	608.41	608.39	608.44
H	20+51.67	-22.871	608.20	608.19	608.21
I	20+61.67	-22.875	608.00	608.01	608.02
Pier 2	20+70.34	-22.878	607.83	607.83	607.83
J	20+80.34	-22.881	607.65	607.65	607.67
K	20+90.34	-22.885	607.48	607.51	607.55
L	21+00.34	-22.888	607.31	607.34	607.38
M	21+10.34	-22.892	607.15	607.19	607.21
E. Abut.	21+20.64	-22.895	607.00	607.05	607.05
Bk. E. Abut.	21+21.96	-22.896	606.98	607.03	607.03

BEAM I

Location	Station	Offset from Centerline	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	19+61.48	-18.339	610.51	610.48	610.48
W. Abut.	19+62.80	-18.339	610.47	610.44	610.44
A	19+72.79	-18.347	610.19	610.16	610.18
B	19+82.79	-18.354	609.92	609.89	609.93
C	19+92.79	-18.362	609.66	609.63	609.67
D	20+02.79	-18.369	609.40	609.36	609.38
Pier 1	20+13.20	-18.377	609.15	609.12	609.12
E	20+23.20	-18.384	608.91	608.89	608.90
F	20+33.20	-18.392	608.69	608.68	608.71
G	20+43.20	-18.399	608.47	608.45	608.50
H	20+53.19	-18.406	608.26	608.25	608.27
I	20+63.19	-18.414	608.06	608.07	608.08
Pier 2	20+71.87	-18.420	607.90	607.90	607.90
J	20+81.87	-18.428	607.72	607.72	607.74
K	20+91.86	-18.435	607.54	607.57	607.61
L	21+01.86	-18.442	607.38	607.41	607.45
M	21+11.86	-18.450	607.22	607.26	607.28
E. Abut.	21+22.16	-18.457	607.07	607.12	607.12
Bk. E. Abut.	21+23.48	-18.458	607.05	607.10	607.10

Notes:
 (1) From Roadway PGL
 (2) Adjusted to approximate "as built" deck elevations based on deck as surveyed 10/7/2010.

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert G. Daviss
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 11:08:59 AM
 FILE NAME: 0470057-1603.dgn
 PLOT NUMBER: 0470057
 PEN TABLE: Structure_22x34.tbl

SEC Group, Inc.
 An HR Green Company
 430 N. Front Street
 Melrose Park, IL 60160-2136
 L 630.365.1778 F 630.365.1781
 www.secgroup.com

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
 STRUCTURE NO. 047-0051
 SHEET NO. S-7 OF S-43 SHEETS

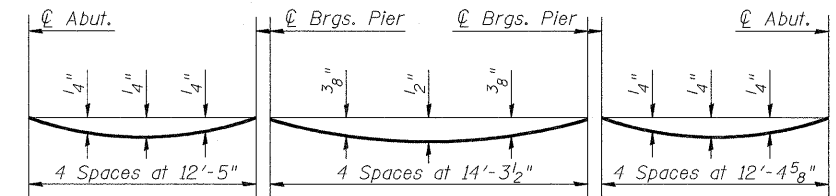
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	257
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	

STAGE I CONSTRUCTION JOINT

Location	Station	Offset from Centerline	Theoretical Grade Elevations (1)	Elevations as Surveyed	Adjusted Theoretical Grade Elevations (2)
Bk. W. Abut.	19+62.62	-15.000	610.55	610.52	610.52
☉ W. Abut.	19+63.94	-15.000	610.51		610.48
A	19+73.94	-15.000	610.23		610.20
B	19+83.94	-15.000	609.96	609.94	609.93
C	19+93.94	-15.000	609.70		609.67
D	20+03.94	-15.000	609.45	609.41	609.41
Pier 1	20+14.36	-15.000	609.19	609.16	609.16
E	20+24.36	-15.000	608.96		608.94
F	20+34.36	-15.000	608.73	608.72	608.72
G	20+44.36	-15.000	608.52		608.50
H	20+54.36	-15.000	608.31	608.31	608.30
I	20+64.36	-15.000	608.11		608.12
Pier 2	20+73.04	-15.000	607.95	607.95	607.95
J	20+83.04	-15.000	607.77		607.77
K	20+93.04	-15.000	607.59	607.62	607.62
L	21+03.04	-15.000	607.43		607.46
M	21+13.04	-15.000	607.28	607.33	607.32
☉ E. Abut.	21+23.34	-15.000	607.13		607.18
Bk. E. Abut.	21+24.66	-15.000	607.11	607.16	607.16

WESTBOUND PGL

Location	Station	Offset from Centerline	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)
Bk. W. Abut.	19+66.72	-3.000	610.64	610.64
☉ W. Abut.	19+68.04	-3.000	610.60	610.60
A	19+78.04	-3.000	610.33	610.35
B	19+88.04	-3.000	610.06	610.10
C	19+98.04	-3.000	609.80	609.84
D	20+08.04	-3.000	609.55	609.57
Pier 1	20+18.46	-3.000	609.30	609.30
E	20+28.46	-3.000	609.07	609.08
F	20+38.46	-3.000	608.85	608.88
G	20+48.46	-3.000	608.64	608.69
H	20+58.46	-3.000	608.44	608.46
I	20+68.46	-3.000	608.24	608.25
Pier 2	20+77.14	-3.000	608.08	608.08
J	20+87.14	-3.000	607.90	607.92
K	20+97.14	-3.000	607.74	607.78
L	21+07.14	-3.000	607.58	607.62
M	21+17.14	-3.000	607.43	607.45
☉ E. Abut.	21+27.44	-3.000	607.28	607.28
Bk. E. Abut.	21+28.76	-3.000	607.26	607.26

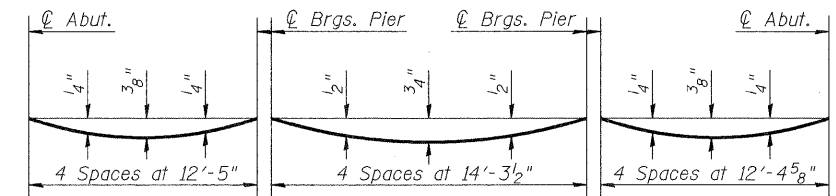


STAGE I DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete, excluding beams).

Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.



STAGE IA DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete, excluding beams).

Note:

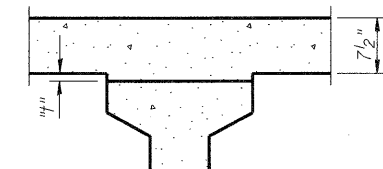
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.

CENTERLINE

Location	Station	Offset from Centerline	Theoretical Grade Elevations (1)	Elevations as Surveyed
Bk. W. Abut.	19+67.75	0.000	610.66	610.67
☉ W. Abut.	19+69.07	0.000	610.62	
A	19+79.07	0.000	610.35	
B	19+89.07	0.000	610.08	610.07
C	19+99.07	0.000	609.83	
D	20+09.07	0.000	609.58	609.57
Pier 1	20+19.49	0.000	609.33	609.30
E	20+29.49	0.000	609.10	
F	20+39.49	0.000	608.88	608.86
G	20+49.49	0.000	608.67	
H	20+59.49	0.000	608.47	608.42
I	20+69.49	0.000	608.27	
Pier 2	20+78.17	0.000	608.11	608.09
J	20+88.17	0.000	607.94	
K	20+98.17	0.000	607.77	607.79
L	21+08.17	0.000	607.61	
M	21+18.17	0.000	607.46	607.48
☉ E. Abut.	21+28.47	0.000	607.32	
Bk. E. Abut.	21+29.79	0.000	607.30	607.30

EASTBOUND PGL

Location	Station	Offset from Centerline	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)
Bk. W. Abut.	19+68.78	3.000	610.58	610.58
☉ W. Abut.	19+70.10	3.000	610.54	610.54
A	19+80.10	3.000	610.27	610.29
B	19+90.10	3.000	610.01	610.05
C	20+00.10	3.000	609.75	609.79
D	20+10.10	3.000	609.50	609.52
Pier 1	20+20.52	3.000	609.26	609.26
E	20+30.52	3.000	609.03	609.04
F	20+40.52	3.000	608.81	608.84
G	20+50.52	3.000	608.60	608.65
H	20+60.52	3.000	608.40	608.42
I	20+70.52	3.000	608.20	608.21
Pier 2	20+79.20	3.000	608.04	608.04
J	20+89.20	3.000	607.87	607.89
K	20+99.20	3.000	607.70	607.74
L	21+09.20	3.000	607.54	607.58
M	21+19.20	3.000	607.40	607.42
☉ E. Abut.	21+29.50	3.000	607.25	607.25
Bk. E. Abut.	21+30.82	3.000	607.23	607.23



To determine "h": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown below, minus slab thickness, equals the fillet heights "h" above top flanges of beams.

FILLET HEIGHTS

Notes:

- (1) From Roadway PGL
- (2) Adjusted to approximate "as built" deck elevations based on deck as surveyed 10/7/2010.

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert G. DeVries
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/21/2011 11:06:45 AM
 PLOT DRIVER: C:\Program Files\Autodesk\AutoCAD 2011\Plot\Plot1.dwg
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SEC Group, Inc.
 An IRI Group Company
 420 N. Front Street,
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 SEC Group, Inc. • Chicago, IL • New Lenox, IL • Chicago, IL

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS
 STRUCTURE NO. 047-0051**

SHEET NO. S-8 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	258
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	

STAGE IA CONSTRUCTION JOINT

Location	Station	Offset from Centerline	Theoretical Grade Elevations (1)	Elevations as Surveyed	Adjusted Theoretical Grade Elevations (2)
Bk. W. Abut.	19+72.88	15.000	610.26	610.28	610.28
☉ W. Abut.	19+74.20	15.000	610.22		610.25
A	19+84.20	15.000	609.95		609.96
B	19+94.20	15.000	609.69	609.65	609.68
C	20+04.20	15.000	609.44		609.41
D	20+14.20	15.000	609.20	609.17	609.15
Pier 1	20+24.62	15.000	608.95	608.91	608.91
E	20+34.62	15.000	608.73		608.69
F	20+44.62	15.000	608.51	608.49	608.48
G	20+54.62	15.000	608.30		608.27
H	20+64.62	15.000	608.11	608.08	608.08
I	20+74.62	15.000	607.92		607.89
Pier 2	20+83.30	15.000	607.76	607.74	607.74
J	20+93.30	15.000	607.59		607.58
K	21+03.30	15.000	607.43	607.41	607.42
L	21+13.30	15.000	607.27		607.28
M	21+23.30	15.000	607.13	607.13	607.15
☉ E. Abut.	21+33.60	15.000	606.99		607.02
Bk. E. Abut.	21+34.92	15.000	606.97	607.00	607.00

BEAM 7

Location	Station	Offset from Centerline	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	19+74.13	18.661	610.15	610.17	610.17
☉ W. Abut.	19+75.45	18.661	610.11	610.14	610.14
A	19+85.45	18.653	609.84	609.85	609.87
B	19+95.45	18.646	609.58	609.57	609.61
C	20+05.45	18.638	609.33	609.30	609.34
D	20+15.44	18.631	609.09	609.04	609.06
Pier 1	20+25.86	18.623	608.85	608.81	608.81
E	20+35.86	18.616	608.62	608.58	608.59
F	20+45.86	18.608	608.41	608.38	608.41
G	20+55.85	18.601	608.21	608.18	608.23
H	20+65.85	18.594	608.01	607.98	608.00
I	20+75.85	18.586	607.82	607.79	607.80
Pier 2	20+84.53	18.580	607.67	607.65	607.65
J	20+94.52	18.572	607.50	607.49	607.51
K	21+04.52	18.565	607.33	607.32	607.36
L	21+14.52	18.558	607.18	607.19	607.23
M	21+24.52	18.550	607.04	607.06	607.08
☉ E. Abut.	21+34.81	18.543	606.90	606.93	606.93
Bk. E. Abut.	21+36.13	18.542	606.88	606.91	606.91

BEAM 8

Location	Station	Offset from Centerline	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	19+76.35	25.130	609.95	609.97	609.97
☉ W. Abut.	19+77.67	25.130	609.92	609.95	609.95
A	19+87.66	25.125	609.65	609.66	609.68
B	19+97.66	25.120	609.39	609.38	609.42
C	20+07.66	25.115	609.14	609.11	609.15
D	20+17.66	25.111	608.90	608.85	608.87
Pier 1	20+28.08	25.106	608.66	608.62	608.62
E	20+38.08	25.101	608.44	608.40	608.41
F	20+48.07	25.096	608.23	608.20	608.23
G	20+58.07	25.091	608.03	608.00	608.05
H	20+68.07	25.086	607.83	607.80	607.82
I	20+78.07	25.081	607.65	607.62	607.63
Pier 2	20+86.75	25.077	607.49	607.47	607.47
J	20+96.75	25.072	607.32	607.31	607.33
K	21+06.74	25.068	607.16	607.15	607.19
L	21+16.74	25.063	607.01	607.02	607.06
M	21+26.74	25.058	606.87	606.89	606.91
☉ E. Abut.	21+37.04	25.053	606.74	606.77	606.77
Bk. E. Abut.	21+38.36	25.052	606.72	606.75	606.75

BEAM 9

Location	Station	Offset from Centerline	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	19+78.57	31.636	609.76	609.78	609.78
☉ W. Abut.	19+79.89	31.636	609.72	609.75	609.75
A	19+89.89	31.634	609.46	609.47	609.49
B	19+99.89	31.632	609.20	609.19	609.23
C	20+09.89	31.629	608.95	608.92	608.96
D	20+19.89	31.627	608.72	608.67	608.69
Pier 1	20+30.31	31.625	608.48	608.44	608.44
E	20+40.31	31.623	608.26	608.22	608.23
F	20+50.31	31.620	608.05	608.02	608.05
G	20+60.31	31.618	607.85	607.82	607.87
H	20+70.30	31.616	607.65	607.62	607.64
I	20+80.30	31.614	607.47	607.44	607.45
Pier 2	20+88.98	31.612	607.32	607.30	607.30
J	20+98.98	31.609	607.15	607.14	607.16
K	21+08.98	31.607	606.99	606.98	607.02
L	21+18.98	31.605	606.84	606.85	606.89
M	21+28.98	31.603	606.71	606.73	606.75
☉ E. Abut.	21+39.28	31.600	606.57	606.60	606.60
Bk. E. Abut.	21+40.60	31.600	606.55	606.58	606.58

BEAM 10

Location	Station	Offset from Centerline	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	19+80.78	38.083	609.56	609.58	609.58
☉ W. Abut.	19+82.10	38.083	609.53	609.56	609.56
A	19+92.10	38.083	609.26	609.27	609.29
B	20+02.10	38.083	609.01	609.00	609.04
C	20+12.10	38.083	608.77	608.74	608.78
D	20+22.10	38.083	608.53	608.48	608.50
Pier 1	20+32.52	38.083	608.29	608.25	608.25
E	20+42.52	38.083	608.08	608.04	608.05
F	20+52.52	38.083	607.87	607.84	607.87
G	20+62.52	38.083	607.67	607.64	607.69
H	20+72.52	38.083	607.48	607.45	607.47
I	20+82.52	38.083	607.30	607.27	607.28
Pier 2	20+91.20	38.083	607.14	607.12	607.12
J	21+01.20	38.083	606.98	606.97	606.99
K	21+11.20	38.083	606.82	606.81	606.85
L	21+21.20	38.083	606.68	606.69	606.73
M	21+31.20	38.083	606.54	606.56	606.58
☉ E. Abut.	21+41.50	38.083	606.41	606.44	606.44
Bk. E. Abut.	21+42.82	38.083	606.39	606.42	606.42

Notes:
 (1) From Roadway PGL
 (2) Adjusted to approximate "as built" deck elevations based on deck as surveyed 10/7/2010.

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 11:08:51 AM
 FILE NAME: 0470051-Tse05.dgn
 PLOT DRIVER: pdfcut
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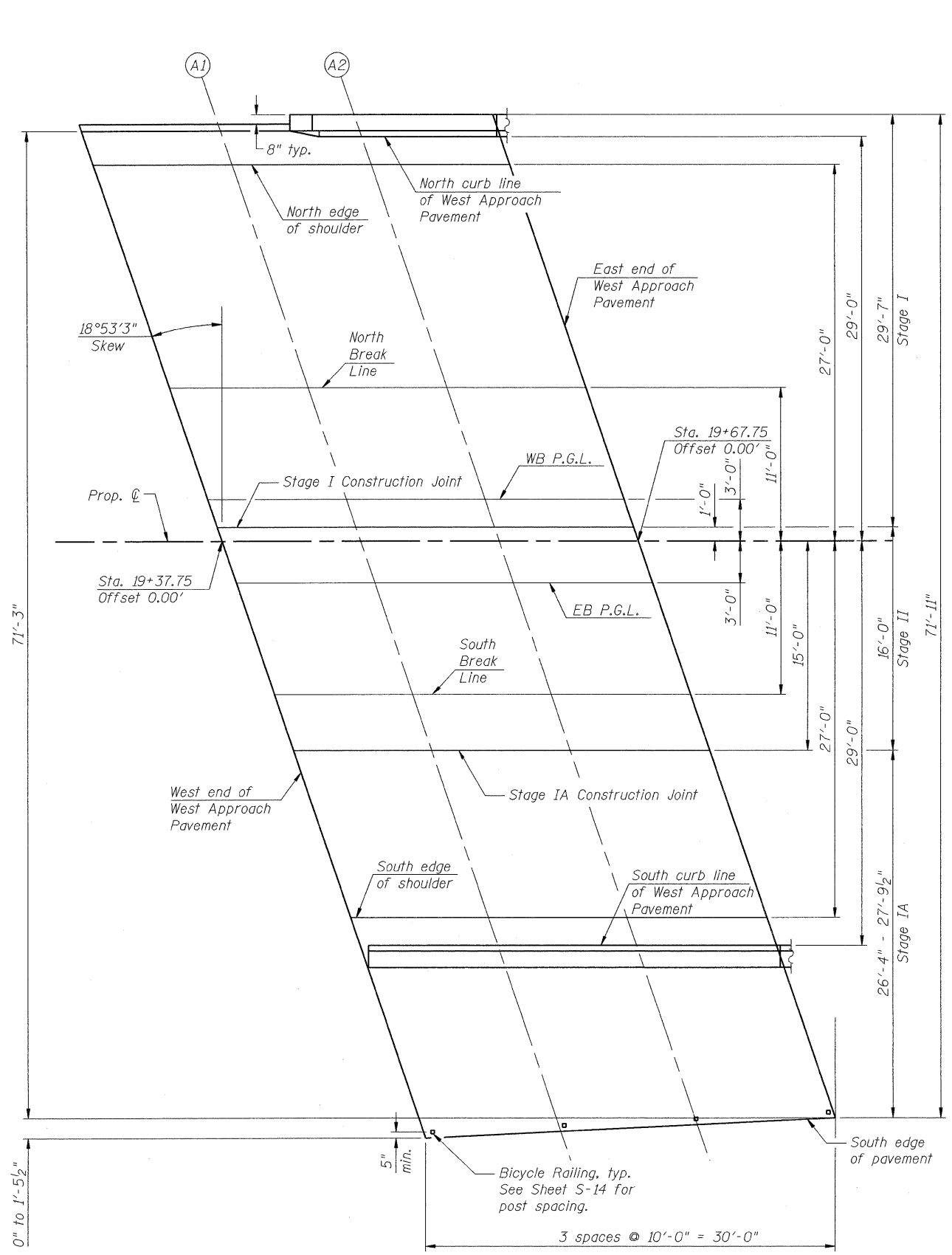
PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

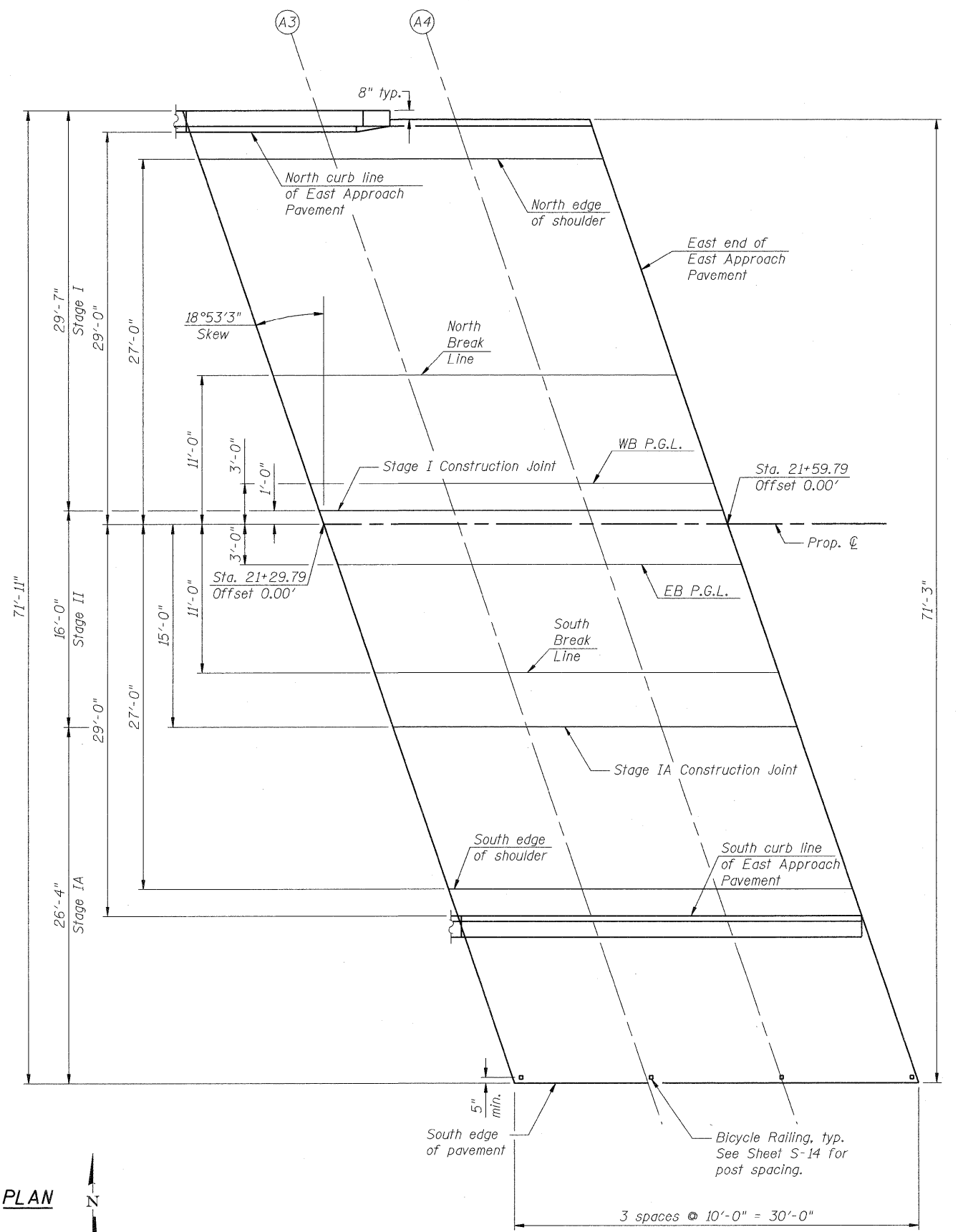
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 047-0051
 SHEET NO. S-9 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	259
			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				



WEST APPROACH



EAST APPROACH



COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert C. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 10:06:57 AM
 FILE NAME: 0470051-18a01.dgn
 PLOT DRIVER: pdt1201
 PEN TABLE: Struct 2014.tbl



PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = rhood	DESIGNED - JPG	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - RCB	REVISED -
	CHECKED - RGD	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TOP OF APPROACH SLAB ELEVATIONS
 STRUCTURE NO. 047-0051**

SHEET NO. S-10 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	260
CONTRACT NO. 66985				

ILLINOIS FED. AID PROJECT

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)
W. End of W. Appr.	19+27.83	-29.000	611.47	611.47
A1	19+37.83	-29.000	611.11	611.10
A2	19+47.83	-29.000	610.75	610.73
E. End of W. Appr.	19+57.83	-29.000	610.39	610.36
W. End of E. Appr.	21+19.87	-29.000	606.89	606.93
A3	21+29.87	-29.000	606.75	606.78
A4	21+39.87	-29.000	606.61	606.63
E. End of E. Appr.	21+49.87	-29.000	606.48	606.48

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)
W. End of W. Appr.	19+28.51	-27.000	611.47	611.47
A1	19+38.51	-27.000	611.10	611.08
A2	19+48.51	-27.000	610.76	610.73
E. End of W. Appr.	19+58.51	-27.000	610.42	610.38
W. End of E. Appr.	21+20.55	-27.000	606.92	606.96
A3	21+30.55	-27.000	606.78	606.81
A4	21+40.55	-27.000	606.64	606.66
E. End of E. Appr.	21+50.55	-27.000	606.51	606.51

NORTH BREAK LINE

Location	Station	Offset	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)
W. End of W. Appr.	19+33.99	-11.000	611.48	611.48
A1	19+43.99	-11.000	611.17	611.18
A2	19+53.99	-11.000	610.88	610.89
E. End of W. Appr.	19+63.99	-11.000	610.59	610.56
W. End of E. Appr.	21+26.03	-11.000	607.17	607.19
A3	21+36.03	-11.000	607.03	607.04
A4	21+46.03	-11.000	606.89	606.89
E. End of E. Appr.	21+56.03	-11.000	606.77	606.77

WEST BOUND PGL

Location	Station	Offset	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)
W. End of W. Appr.	19+36.72	-3.000	611.51	611.51
A1	19+46.72	-3.000	611.22	611.23
A2	19+56.72	-3.000	610.93	610.94
E. End of W. Appr.	19+66.72	-3.000	610.64	610.66
W. End of E. Appr.	21+28.76	-3.000	607.26	607.23
A3	21+38.76	-3.000	607.13	607.11
A4	21+48.76	-3.000	607.01	607.00
E. End of E. Appr.	21+58.76	-3.000	606.90	606.90

STAGE I CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)
W. End of W. Appr.	19+37.41	-1.000	611.52	611.52
A1	19+47.41	-1.000	611.23	611.23
A2	19+57.41	-1.000	610.94	610.94
E. End of W. Appr.	19+67.41	-1.000	610.65	610.66
W. End of E. Appr.	21+29.45	-1.000	607.28	607.29
A3	21+39.45	-1.000	607.16	607.16
A4	21+49.45	-1.000	607.04	607.04
E. End of E. Appr.	21+59.45	-1.000	606.93	606.93

CENTERLINE

Location	Station	Offset	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)
W. End of W. Appr.	19+37.75	0.000	611.52	611.52
A1	19+47.75	0.000	611.23	611.23
A2	19+57.75	0.000	610.94	610.94
E. End of W. Appr.	19+67.75	0.000	610.66	610.67
W. End of E. Appr.	21+29.79	0.000	607.30	607.30
A3	21+39.79	0.000	607.17	607.17
A4	21+49.79	0.000	607.05	607.05
E. End of E. Appr.	21+59.79	0.000	606.95	606.95

Centerline elevations do not include the median depth

EAST BOUND PGL

Location	Station	Offset	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)
W. End of W. Appr.	19+38.78	3.000	611.45	611.45
A1	19+48.78	3.000	611.16	611.16
A2	19+58.78	3.000	610.87	610.87
E. End of W. Appr.	19+68.78	3.000	610.58	610.58
W. End of E. Appr.	21+30.82	3.000	607.23	607.24
A3	21+40.82	3.000	607.11	607.11
A4	21+50.82	3.000	606.99	606.99
E. End of E. Appr.	21+60.82	3.000	606.87	606.87

SOUTH BREAK LINE

Location	Station	Offset	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)
W. End of W. Appr.	19+41.51	11.000	611.21	611.21
A1	19+51.51	11.000	610.93	610.93
A2	19+61.51	11.000	610.65	610.65
E. End of W. Appr.	19+71.51	11.000	610.38	610.38
W. End of E. Appr.	21+33.55	11.000	607.07	607.08
A3	21+43.55	11.000	606.94	606.94
A4	21+53.55	11.000	606.81	606.81
E. End of E. Appr.	21+63.55	11.000	606.69	606.69

STAGE IA CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)
W. End of W. Appr.	19+42.88	15.000	611.09	611.09
A1	19+52.88	15.000	610.81	610.81
A2	19+62.88	15.000	610.53	610.54
E. End of W. Appr.	19+72.88	15.000	610.26	610.28
W. End of E. Appr.	21+34.92	15.000	606.97	607.00
A3	21+44.92	15.000	606.84	606.86
A4	21+54.92	15.000	606.71	606.72
E. End of E. Appr.	21+64.92	15.000	606.59	606.59

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)
W. End of W. Appr.	19+46.99	27.000	610.73	610.73
A1	19+56.99	27.000	610.45	610.45
A2	19+66.99	27.000	610.17	610.18
E. End of W. Appr.	19+76.99	27.000	609.90	609.92
W. End of E. Appr.	21+39.03	27.000	606.67	606.70
A3	21+49.03	27.000	606.55	606.57
A4	21+59.03	27.000	606.43	606.44
E. End of E. Appr.	21+69.03	27.000	606.31	606.31

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)
W. End of W. Appr.	19+47.67	29.000	610.67	610.67
A1	19+57.67	29.000	610.39	610.39
A2	19+67.67	29.000	610.12	610.12
E. End of W. Appr.	19+77.67	29.000	609.85	609.86
W. End of E. Appr.	21+39.71	29.000	606.63	606.64
A3	21+49.71	29.000	606.50	606.50
A4	21+59.71	29.000	606.38	606.38
E. End of E. Appr.	21+69.71	29.000	606.26	606.26

SOUTH EOP

Location	Station	Offset	Theoretical Grade Elevations (1)	Adjusted Theoretical Grade Elevations (2)
W. End of W. Appr.	19+52.39	42.792	610.26	610.26
A1	19+62.22	42.306	609.99	609.99
A2	19+72.05	41.819	609.74	609.74
E. End of W. Appr.	19+81.89	41.333	609.47	609.48
W. End of E. Appr.	21+43.93	41.333	606.34	606.34
A3	21+53.93	41.333	606.21	606.23
A4	21+63.93	41.333	606.09	606.10
E. End of E. Appr.	21+73.93	41.333	605.98	605.98

Notes:
 (1) From Roadway PGL
 (2) Adjusted to approximate "as built" deck elevations based on deck as surveyed 10/7/2010.

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 11:09:02 AM
 FILE NAME: 0470051-15602.dgn
 PLOT DRIVER: pldrvr.plt
 PEN TABLE: 22-14-21



PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

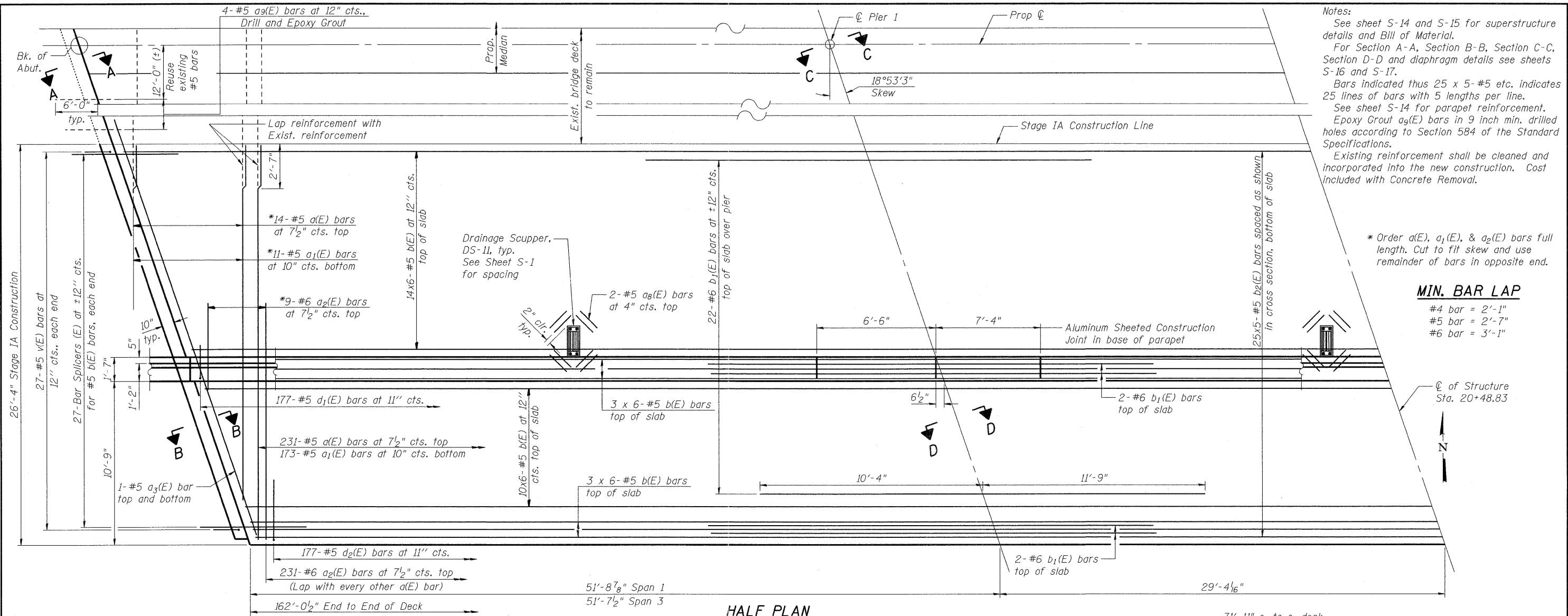
USER NAME = whood	DESIGNED - JPG	REVISED -
	CHECKED - SSM	REVISED -
PLOT SCALE =	DRAWN - RCB	REVISED -
PLOT DATE = 10/14/2011	CHECKED - RGD	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TOP OF APPROACH SLAB ELEVATIONS
 STRUCTURE NO. 047-0052**

SHEET NO. S-11 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	261
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	



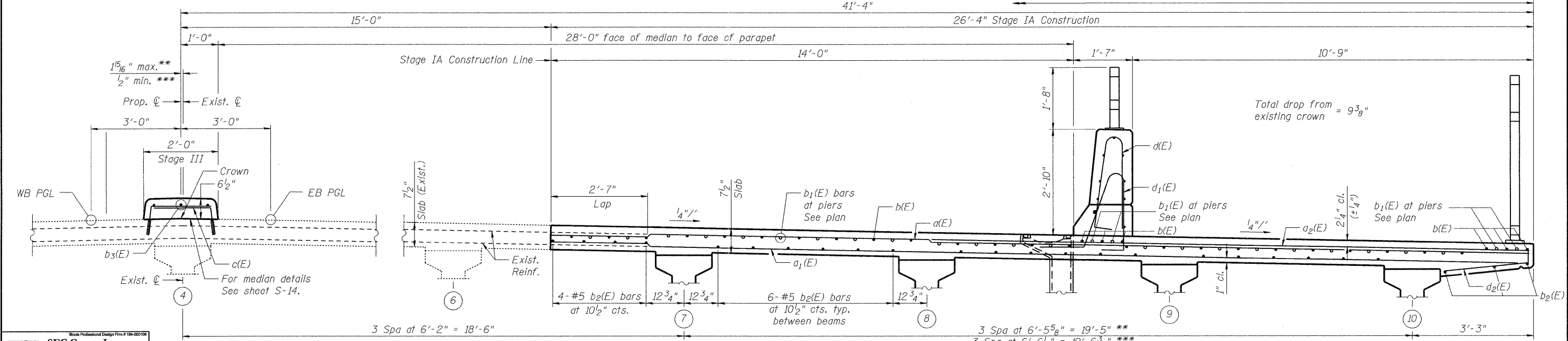
Notes:
 See sheet S-14 and S-15 for superstructure details and Bill of Material.
 For Section A-A, Section B-B, Section C-C, Section D-D and diaphragm details see sheets S-16 and S-17.
 Bars indicated thus 25 x 5-#5 etc. indicates 25 lines of bars with 5 lengths per line.
 See sheet S-14 for parapet reinforcement.
 Epoxy Grout a9(E) bars in 9 inch min. drilled holes according to Section 584 of the Standard Specifications.
 Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

* Order a(E), a1(E), & a2(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

MIN. BAR LAP

- #4 bar = 2'-1"
- #5 bar = 2'-7"
- #6 bar = 3'-1"

HALF PLAN



CROSS SECTION
(Looking East)

** Measured at Back of West Abutment perpendicular to Proposed C US 34.
 *** Measured at Back of East Abutment perpendicular to Proposed C US 34.

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 10:09:40 AM
 FILE NAME: 0470051-Excs-dgn
 PLOT DRIVER: pdt.dft
 PEN TABLE: Structr 2014.tbl

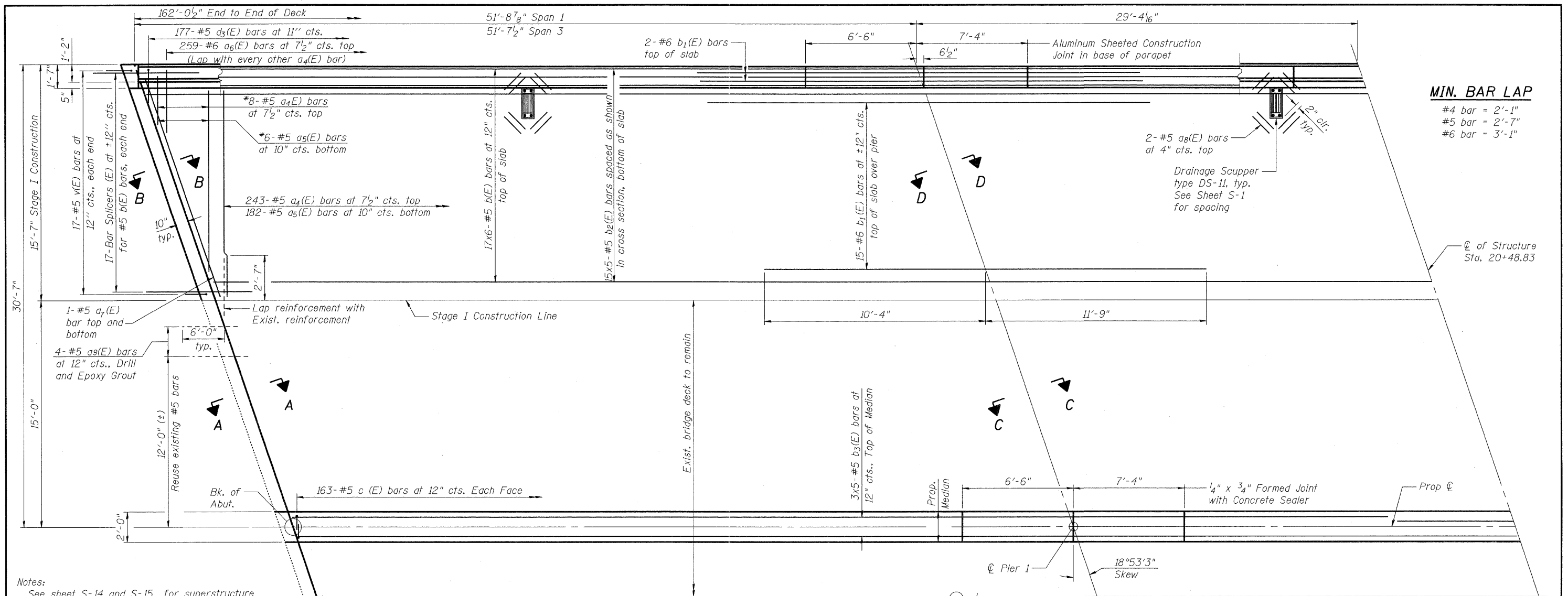
SEC Group, Inc.
 An IRI Group Company
 430 N. First Street,
 Maywood, IL 60150-2038
 L 815.385.1778 F 815.385.1791
 www.secgroup.com
 McHenry, IL, Morrisville, IL, West Linn, IL, Chicago, IL

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 18/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE IA DECK PLAN AND CROSS SECTION
STRUCTURE NO. 047-0051
 SHEET NO. S-12 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	262
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	

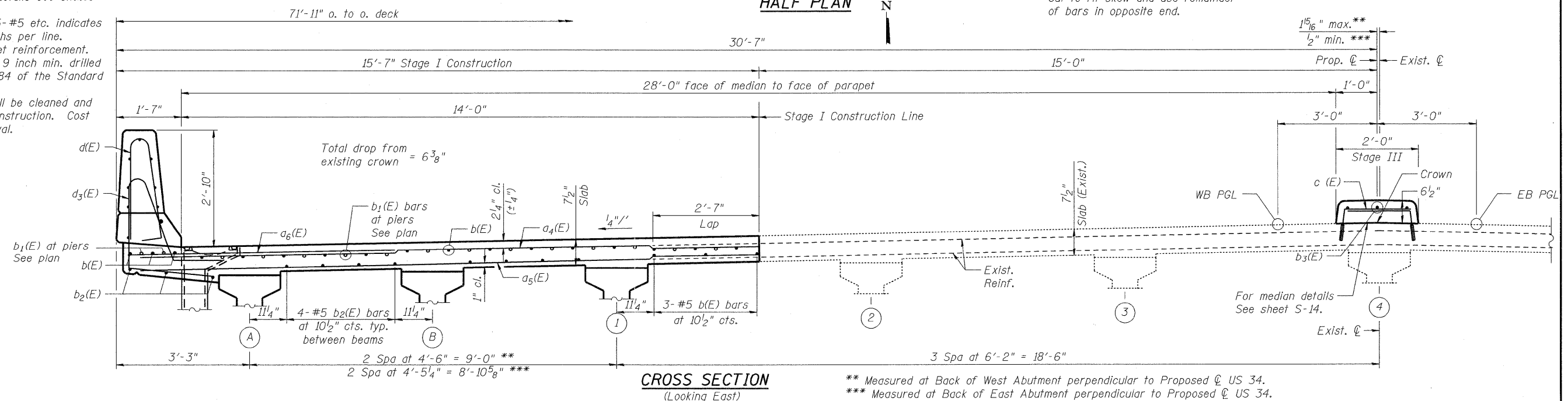


MIN. BAR LAP

- #4 bar = 2'-1"
- #5 bar = 2'-7"
- #6 bar = 3'-1"

Notes:
 See sheet S-14 and S-15 for superstructure details and Bill of Material.
 For Section A-A, Section B-B, Section C-C, Section D-D and diaphragm details see sheets S-16 and S-17.
 Bars indicated thus 15 x 5-#5 etc. indicates 15 lines of bars with 5 lengths per line.
 See sheet S-14 for parapet reinforcement.
 Epoxy Grout a₉(E) bars in 9 inch min. drilled holes according to Section 584 of the Standard Specifications.
 Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

* Order a₄(E) and a₅(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.



CROSS SECTION
(Looking East)

** Measured at Back of West Abutment perpendicular to Proposed CL US 34.
 *** Measured at Back of East Abutment perpendicular to Proposed CL US 34.

COMPANY NAME: SEC GROUP INC.
 PROJECT CONTACT: Robert G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 10:05:15 AM
 FILE NAME: 0470051-WSS-001
 PEN TABLE: S:\Project_2011\10-14-11

SEC Group, Inc.
 An HOK Group Company
 400 N. First Street
 Maywood, IL 60150-2108
 630.585.1770 | 630.585.1784
 www.secgroupinc.com
 Chicago, IL • New York, NY • Chicago, IL

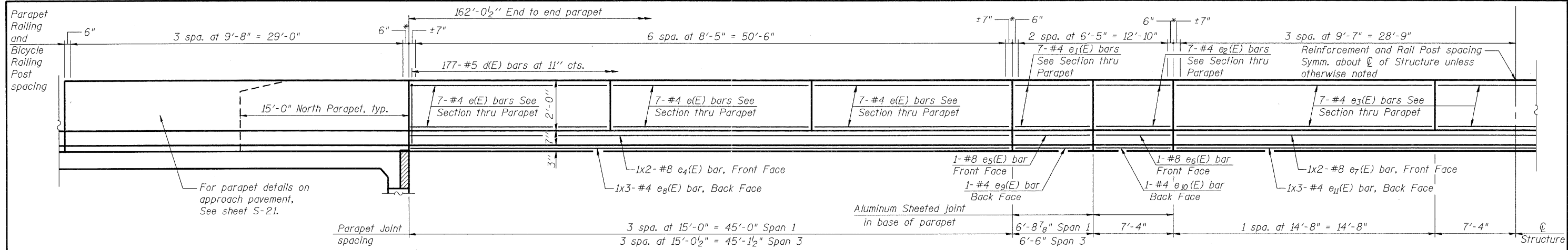
PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

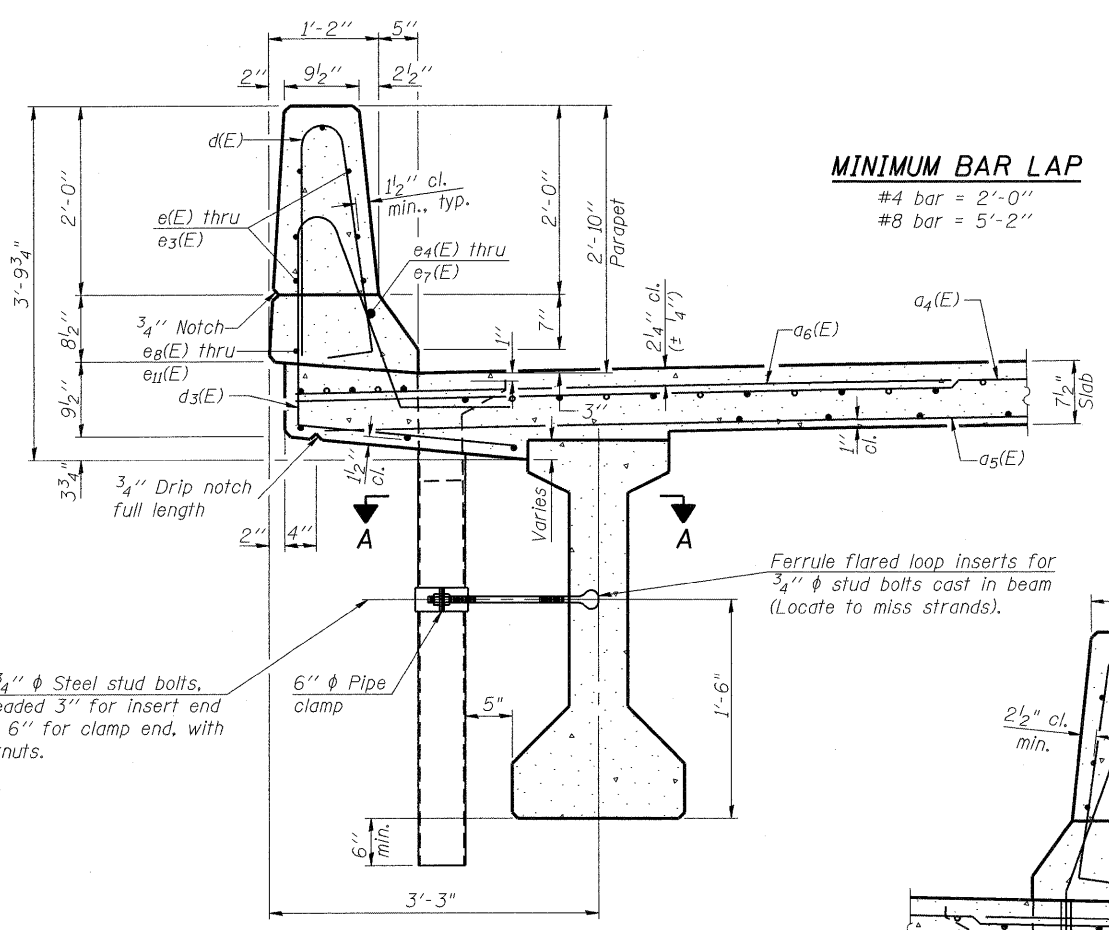
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I DECK PLAN AND CROSS SECTION
STRUCTURE NO. 047-0051
 SHEET NO. S-13 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	263
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				



INSIDE ELEVATION OF PARAPET
 * Railing expansion joint, See sheet S-18.

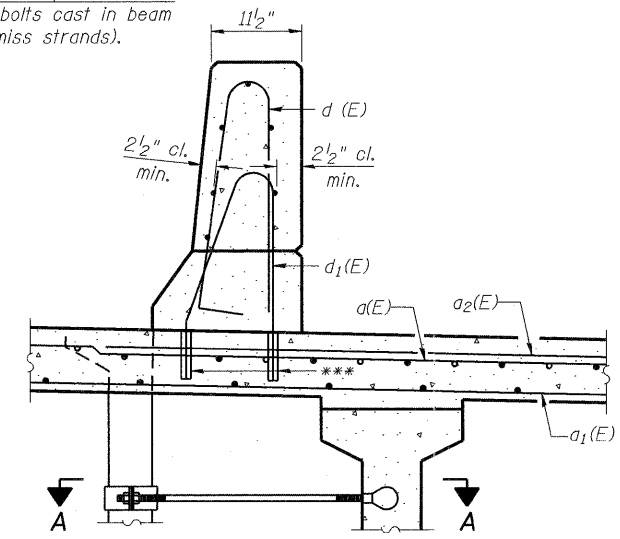


MINIMUM BAR LAP
 #4 bar = 2'-0"
 #8 bar = 5'-2"

Ferrule flared loop inserts for 3/4" φ stud bolts cast in beam (Locate to miss strands).

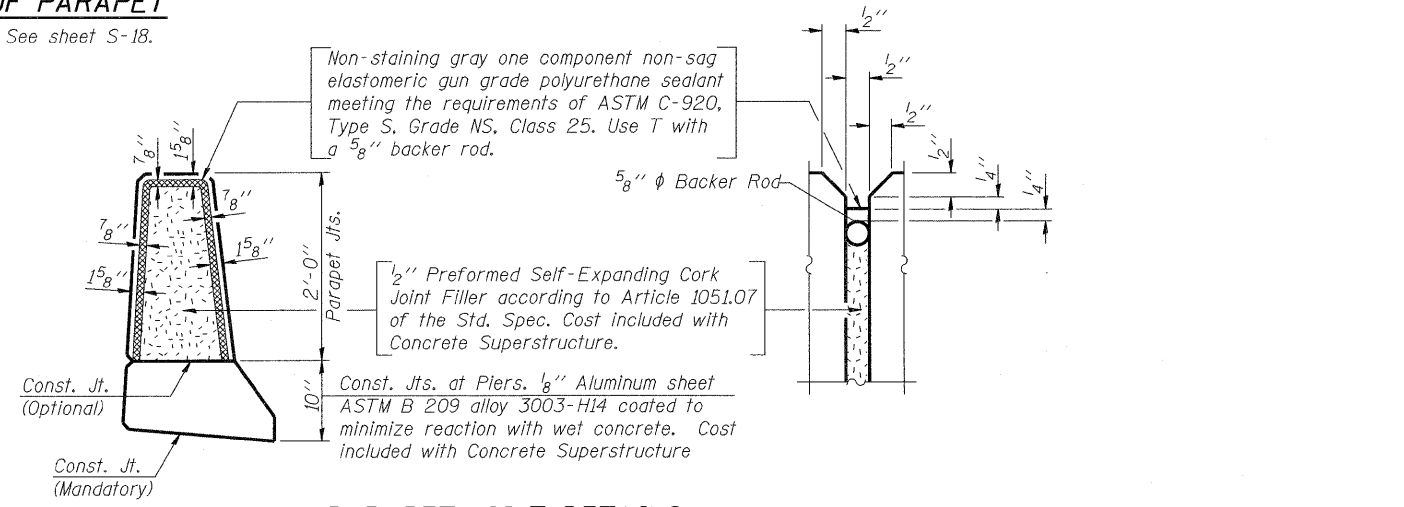
3/4" φ Steel stud bolts, threaded 3" for insert end and 6" for clamp end, with locknuts.

SECTION THRU PARAPET



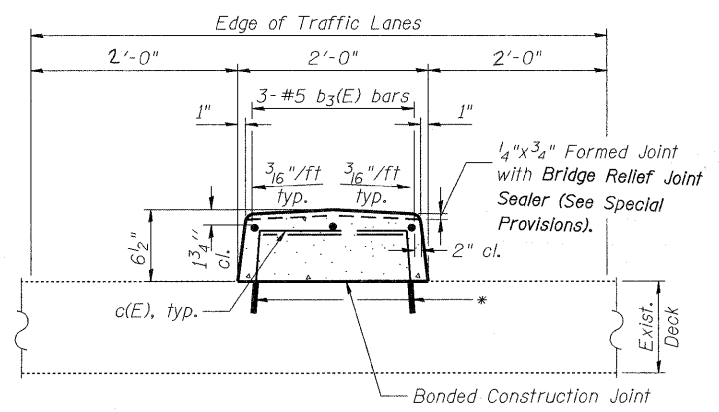
ALTERNATE PARAPET REINFORCEMENT FOR INTERIOR 34" F SHAPE PARAPET

***Core and set alternate #5 d1(E) bar according to Article 509.06 of the Standard Specifications. Cored holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 5 1/2".



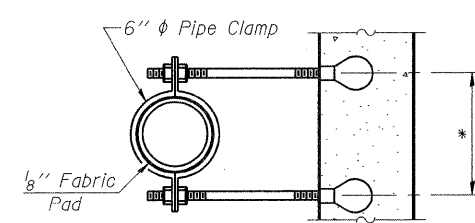
PARAPET JOINT DETAILS

Notes:
 Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
 The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete.
 The clamping device and inserts shall be galvanized according to AASHTO M 232. Cost of clamping device and galvanizing included with Floor Drains.



SECTION THRU MEDIAN

*Core and set #5 c(E) bars according to Article 509.06 of the Standard Specifications. Cored holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 5 1/2".



SECTION A-A
 *Dimension as required by Pipe Clamp

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert L. G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 11:09:20 AM
 FILE NAME: 0470051-58001.dgn
 PLOT DRIVER: pdfr21t
 PEN TABLE: STRUCT 22x34.tbl

SEC Group, Inc.
 An M/I Group Company
 430 N. First Street
 Moline, IL 62950-2138
 L 815.385.1778 F 815.385.1781
 www.secgroupinc.com

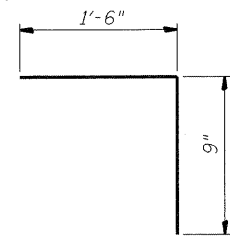
PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
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PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

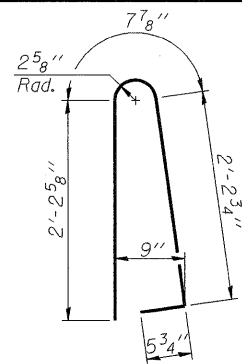
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE DETAILS
 STRUCTURE NO. 047-0051**
 SHEET NO. S-14 OF S-43 SHEETS

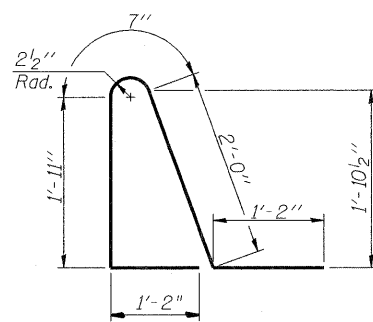
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	264
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	



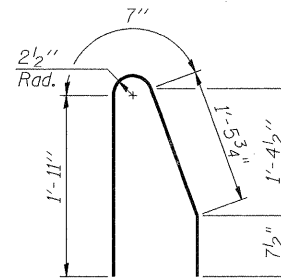
BAR c(E)



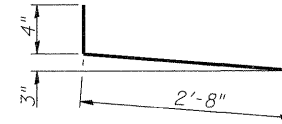
BAR d(E)



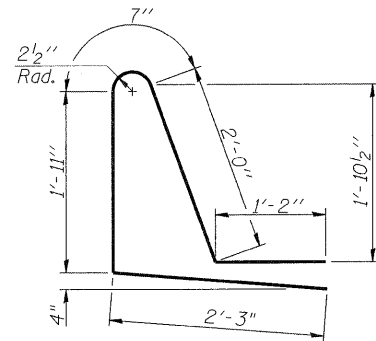
BAR d1(E)



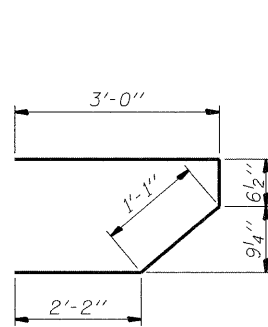
ALTERNATE BAR d1(E)



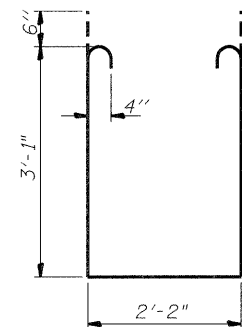
BAR d2(E)



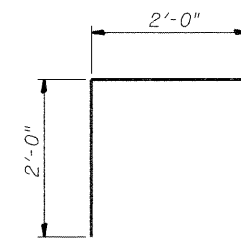
BAR d3(E)



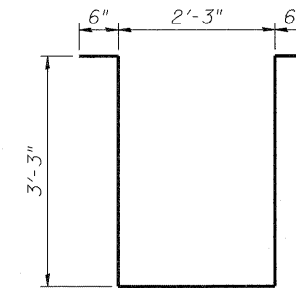
BAR s(E)



BAR s1(E)



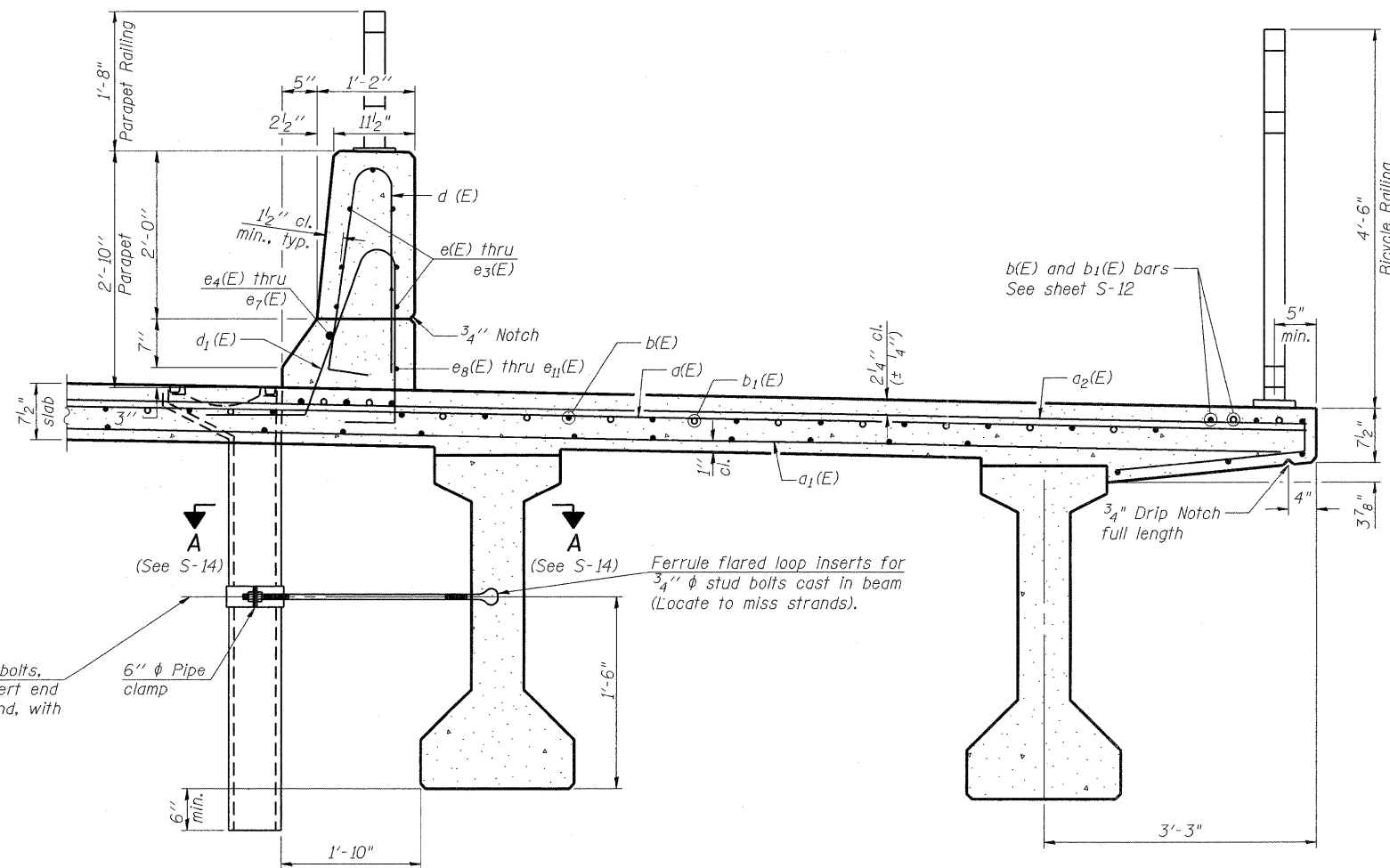
BAR v(E)



BAR s2(E)

**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a (E)	245	#5	26'-0"	—
a1 (E)	184	#5	26'-0"	—
a2 (E)	240	#6	16'-9"	—
a3 (E)	4	#5	27'-6"	—
a4 (E)	251	#5	15'-3"	—
a5 (E)	188	#5	15'-3"	—
a6 (E)	259	#6	6'-0"	—
a7 (E)	4	#5	16'-1"	—
a8 (E)	48	#5	1'-6"	—
a9 (E)	16	#5	6'-9"	—
b (E)	282	#5	29'-2"	—
b1 (E)	94	#6	22'-1"	—
b2 (E)	200	#5	34'-5"	—
b3 (E)	15	#5	34'-1"	—
c (E)	326	#5	2'-3"	└
d (E)	354	#5	5'-7"	└
d1 (E)	177	#5	8'-2"	└
d2 (E)	177	#5	3'-0"	└
d3 (E)	177	#5	7'-11"	└
e (E)	84	#4	14'-8"	—
e1 (E)	28	#4	6'-2"	—
e2 (E)	28	#4	7'-0"	—
e3 (E)	42	#4	14'-4"	—
e4 (E)	8	#8	25'-1"	—
e5 (E)	4	#8	6'-2"	—
e6 (E)	4	#8	7'-0"	—
e7 (E)	4	#8	24'-5"	—
e8 (E)	12	#4	16'-4"	—
e9 (E)	4	#4	6'-2"	—
e10 (E)	4	#4	7'-0"	—
e11 (E)	6	#4	16'-0"	—
m (E)	10	#6	26'-3"	—
m1 (E)	16	#6	10'-2"	—
m2 (E)	12	#6	4'-11"	—
m3 (E)	4	#6	2'-4"	—
m4 (E)	24	#4	6'-0"	—
m5 (E)	14	#8	5'-7"	—
m6 (E)	10	#6	14'-1"	—
m7 (E)	12	#6	7'-10"	—
m8 (E)	12	#6	2'-10"	—
m9 (E)	16	#4	3'-10"	—
s (E)	64	#5	6'-9"	└
s1 (E)	64	#4	9'-4"	└
s2 (E)	52	#4	9'-9"	└
v (E)	88	#5	4'-0"	└
Concrete Superstructure			Cu. Yds.	270.7
Reinforcement Bars, Epoxy Coated			Lbs.	58,800



SECTION THRU BIKE PATH

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert F. G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 11:03:26 AM
 FILE NAME: 047-0051-SS02.dgn
 PLOT NUMBER: 22-34, 1b1
 PLOT TABLE: STRUCT

SEC Group, Inc.
 An HR Green Company
 420 N. Front Street,
 Maitland, FL 32751-2708
 P: 813.385.1778 F: 813.385.1784
 www.secgroup.com

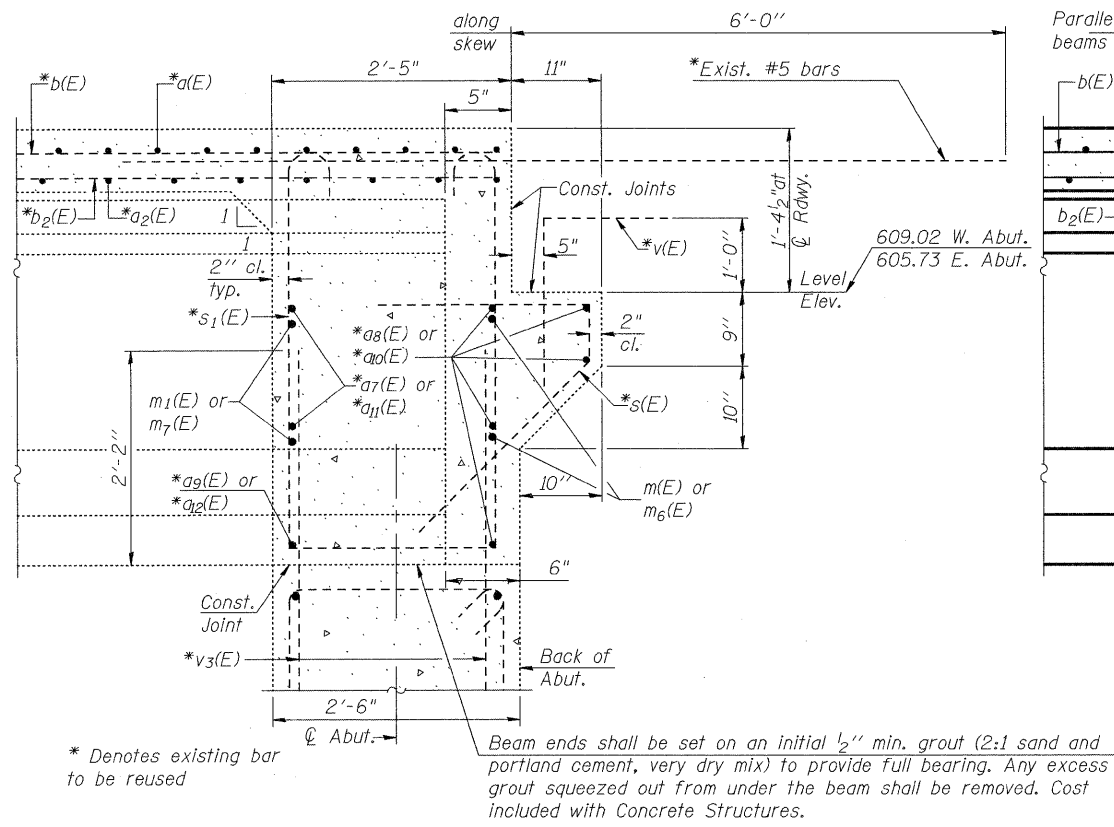
PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

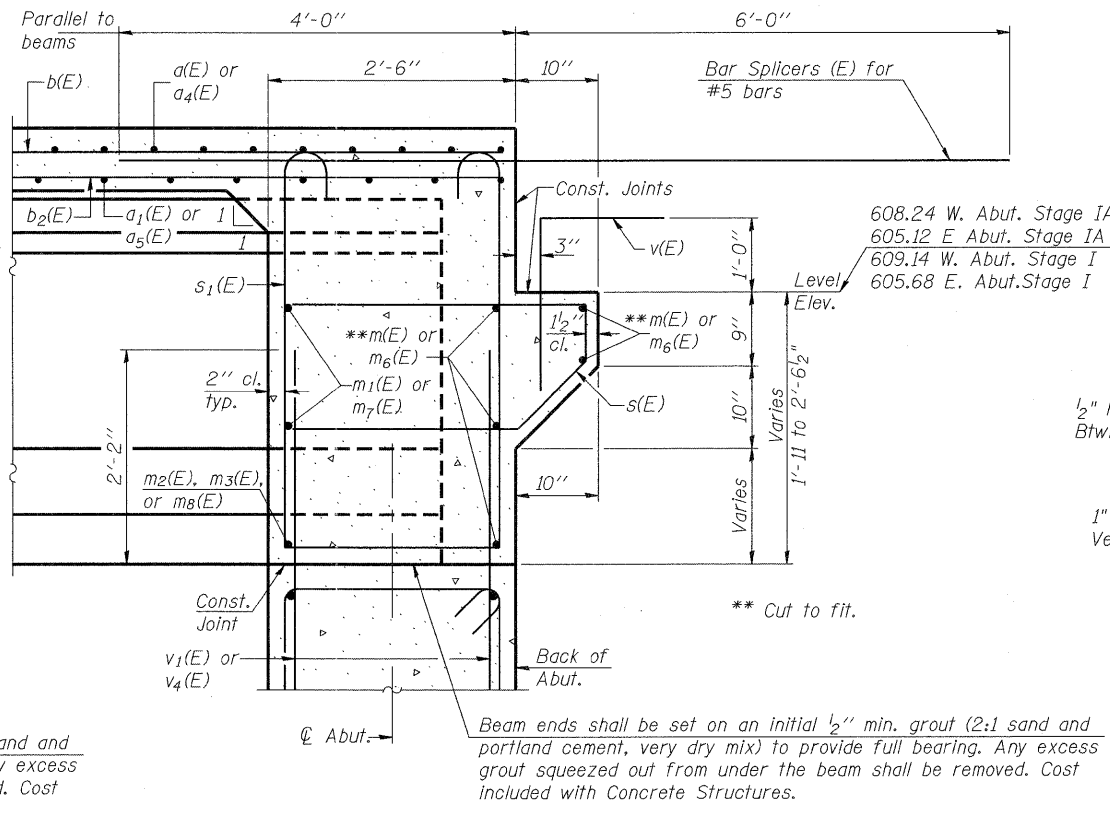
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 047-0051
SHEET NO. S-15 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	265
			CONTRACT NO. 66985	
(ILLINOIS) FED. AID PROJECT				



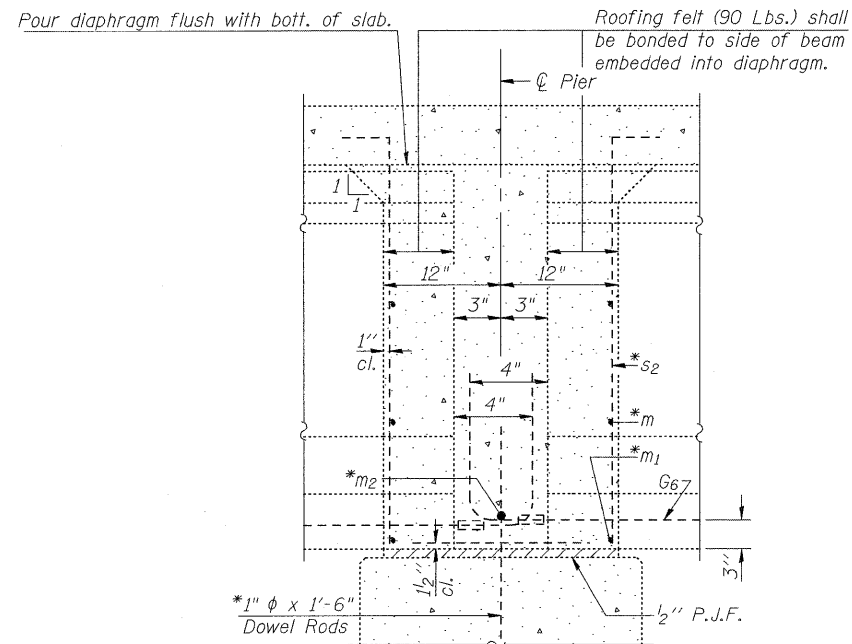
SECTION A-A

For Information Only
Dimensions at right angles to abutment, except as shown. Bar call outs, dimensions, and elevations are from Existing Plans developed by Hazelet and Erdal, Inc. Contractor to verify in field.



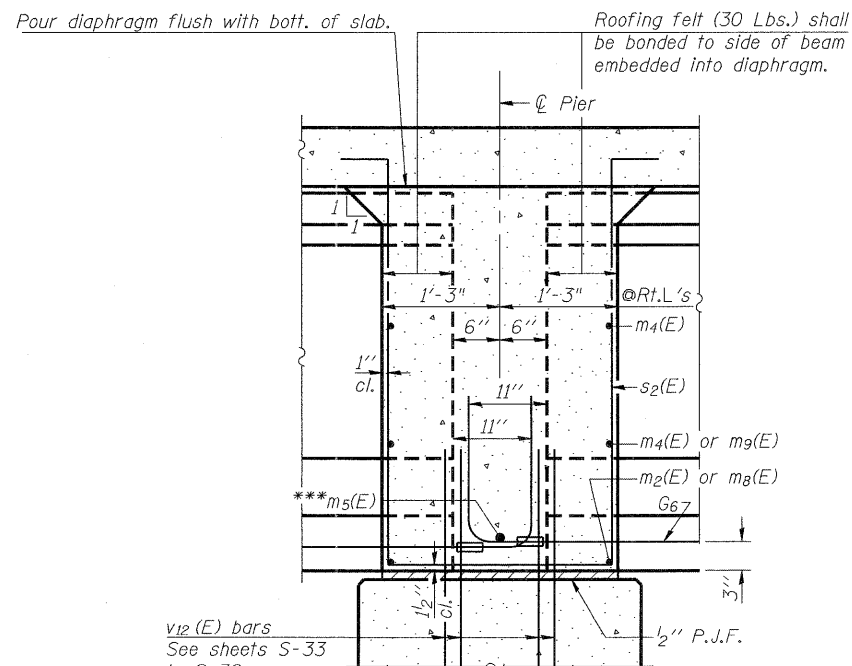
SECTION B-B

Dimensions at right angles to abutment, except as shown.



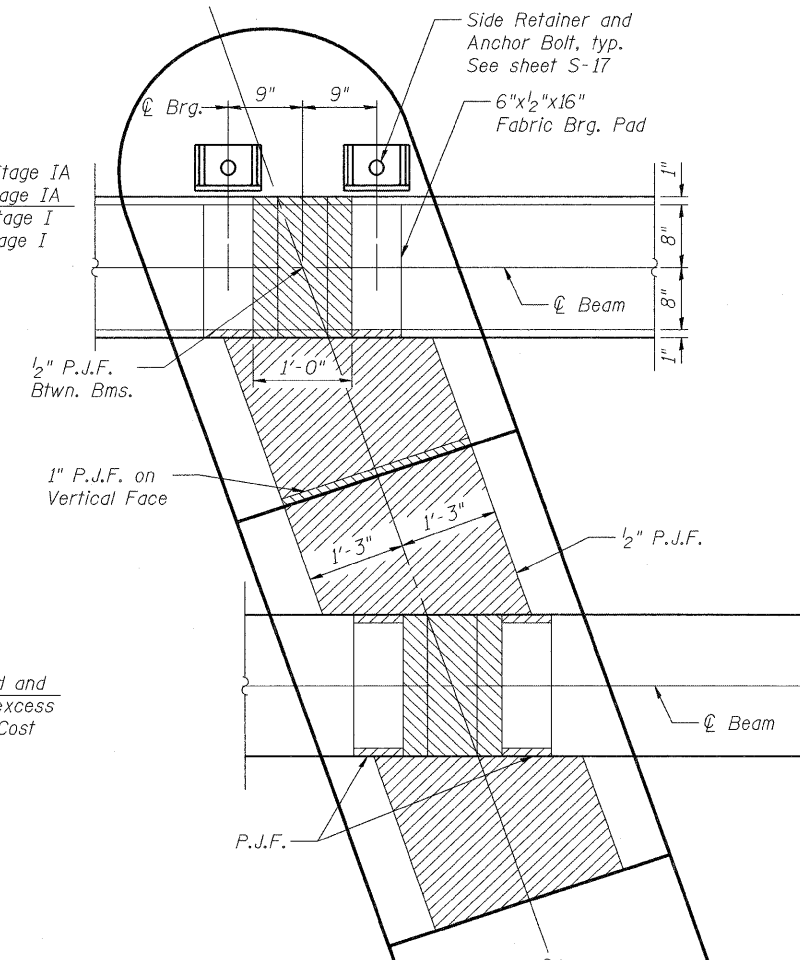
SECTION C-C

For Information Only
Dimensions at right angles to pier. Bar call outs and dimensions are from Existing Plans developed by Hazelet and Erdal, Inc. Contractor to verify in field.



SECTION D-D

Dimensions along ϕ of beam, except as shown.



PLAN AT PIER
(Showing bearing pad and P.J.F. details)

COMPANY NAME: SEC GROUP, INC.
PROJECT CONTACT: Robert F. G. Davies
CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE PLOTTED: 10/16/2011 11:05:30 AM
DRAWN BY: MGH
PLOT DEVICE: HPGL
PEN TABLE: Struct_22-34.tbl

SEC Group, Inc.
An IRI Design Company
420 N. Front Street
Maitland, FL 32751-2328
1-813-385-7778 F 813-385-1781
www.secgroup.com
4640 Spring Hill, Knoxville, TN; New Lenox, IL; Chicago, IL

PB Americas, Inc.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL. 60606

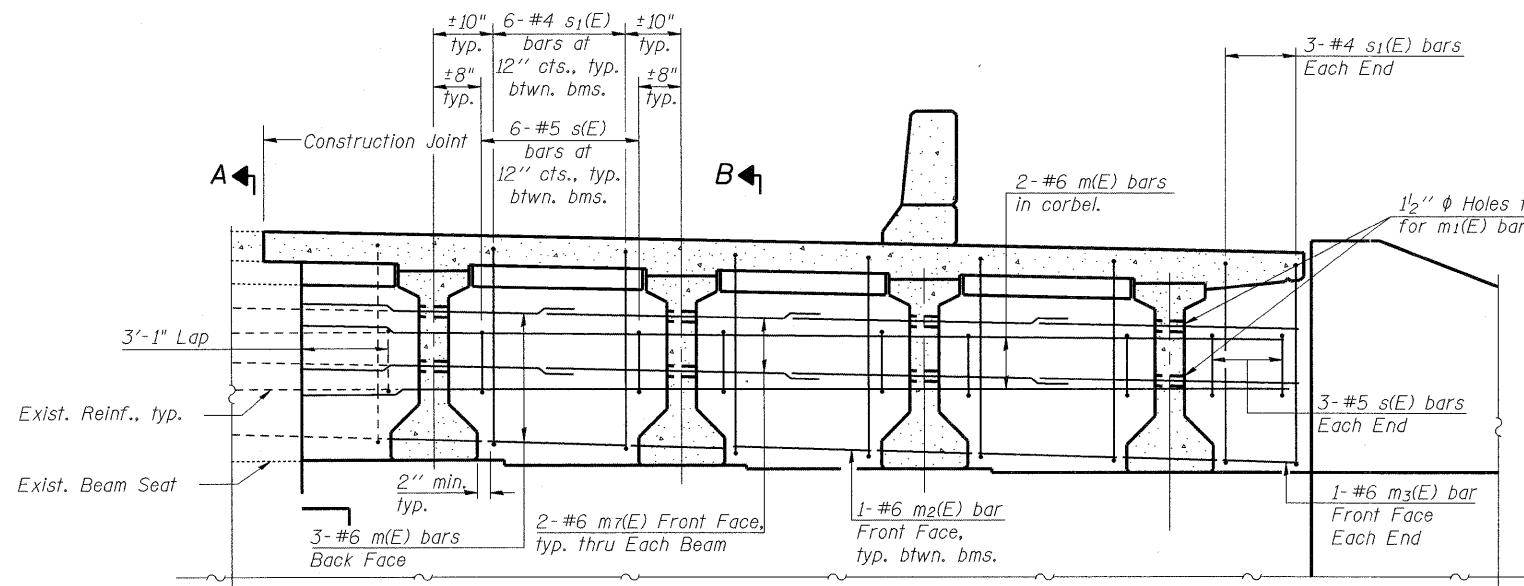
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

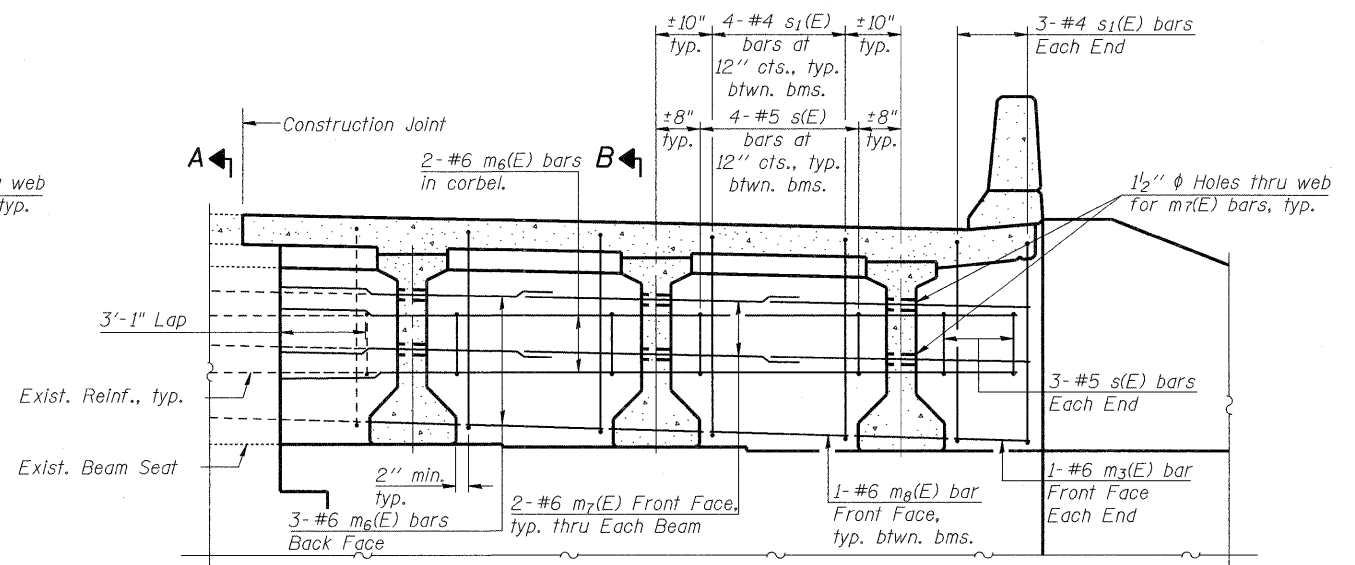
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 047-0051
SHEET NO. S-16 OF S-43 SHEETS

F.A.P. RTE. 591	SECTION 14BR-1	COUNTY KENDALL	TOTAL SHEETS 429	SHEET NO. 266
CONTRACT NO. 66985				

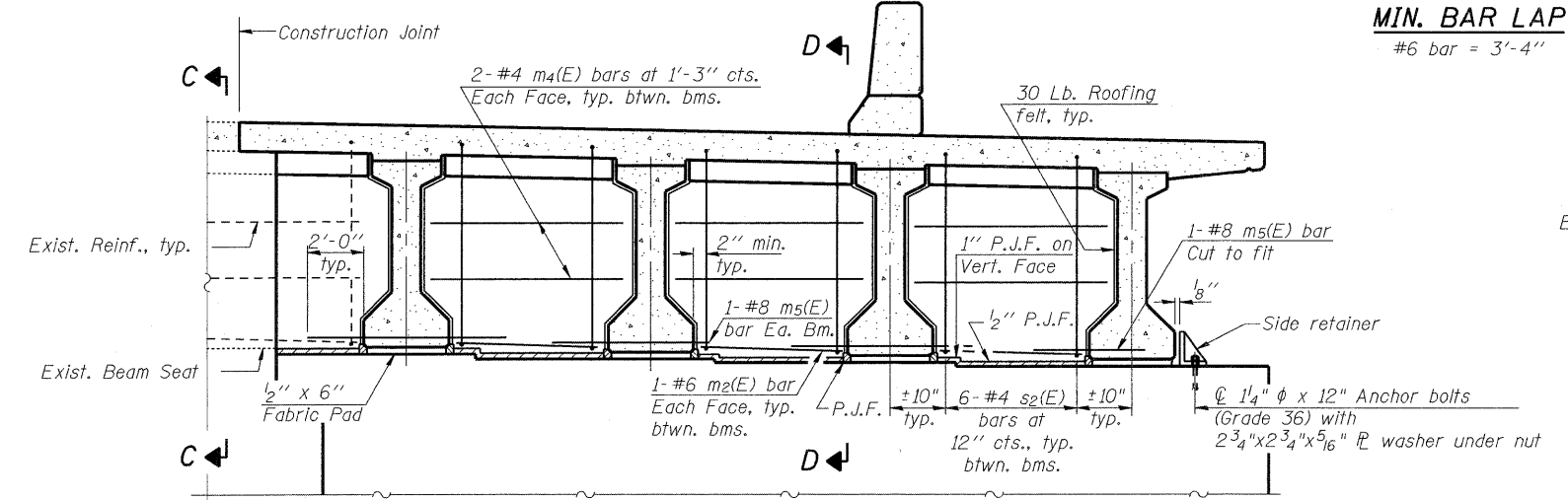
ILLINOIS FED. AID PROJECT



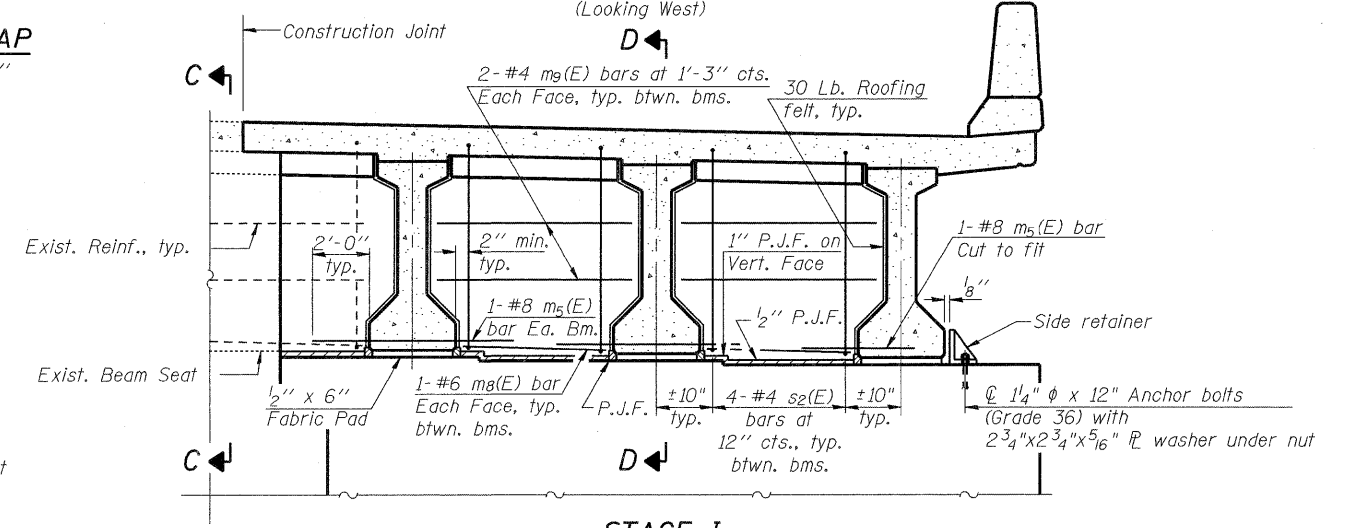
STAGE IA
DIAPHRAGM ELEVATION AT ABUTMENT
(Looking East)



STAGE I
DIAPHRAGM ELEVATION AT ABUTMENT
(Looking West)

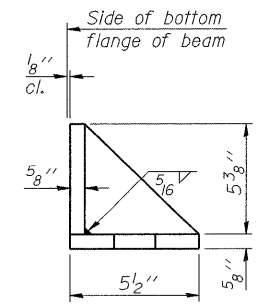


STAGE IA
DIAPHRAGM AT PIER
(Looking East)



STAGE I
DIAPHRAGM AT PIER
(Looking West)

MIN. BAR LAP
#6 bar = 3'-4"



SIDE RETAINER
(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.

NOTES:

- Reinforcement bars in diaphragm are billed with superstructure on sheet S-15.
- Concrete in diaphragm is included with Concrete Superstructure on sheet S-15.
- For details of bars s(E), s1(E) and s2(E) see sheet S-15.
- The s(E), s1(E) and s2(E) bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.
- See sheet S-16 for Sections A-A, B-B, C-C, and D-D.
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- The side retainer shall be galvanized after shop fabrication according to AASHTO M 111.
- Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified.

The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554. Anchor bolts for side retainers may be either cast in place or installed in holes drilled after the supporting member is in place and prior to pouring the deck. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications. Cost of side retainer and anchor bolts shall be included with Concrete Structures. All side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable. Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

COMPANY NAME: SEC GROUP, INC.
PROJECT CONTACT: Robert G. Davies
CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE PLOTTED: 10/14/2011 11:09:35 AM
FILE NAME: 0470051-SS04.dgn
PLOT DATE: 10/14/2011
PLOT SCALE: 1/8" = 1'-0"
PLOT TABLE: STRUCT 22,34,151

SEC Group, Inc.
An HSI Group Company
420 N. Front Street,
Moline, IL 61905-2138
1.815.365.1779 F. 815.365.1751
www.secgroup.com
Moline, IL • St. Louis, MO • Chicago, IL

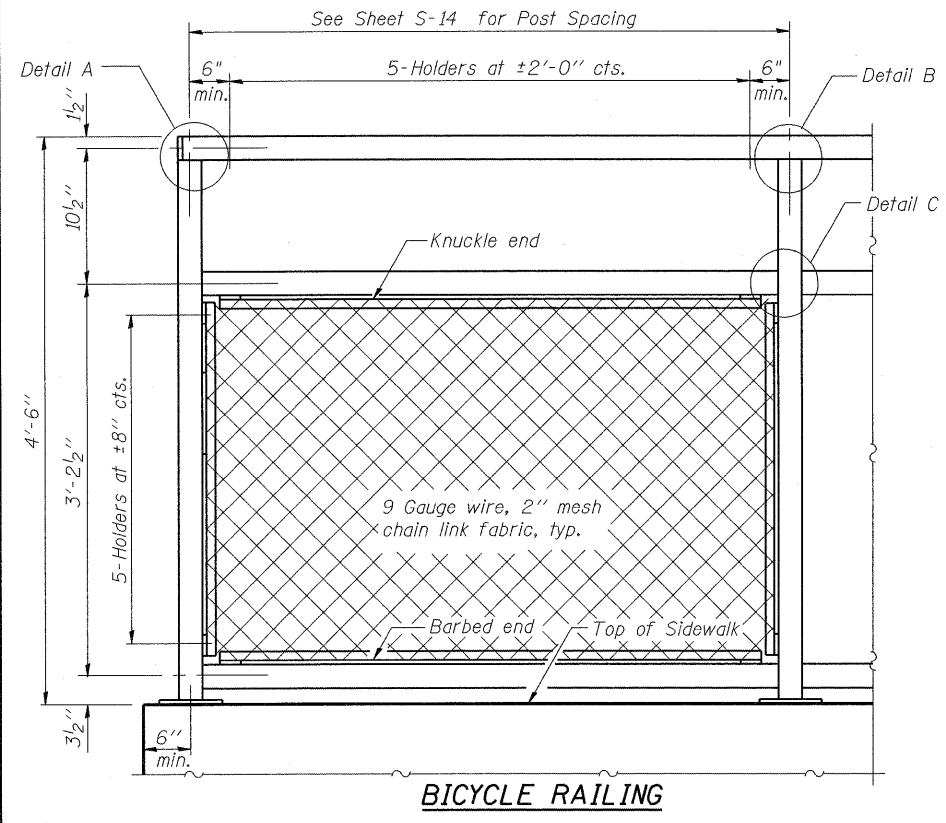
PB Americas, Inc.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

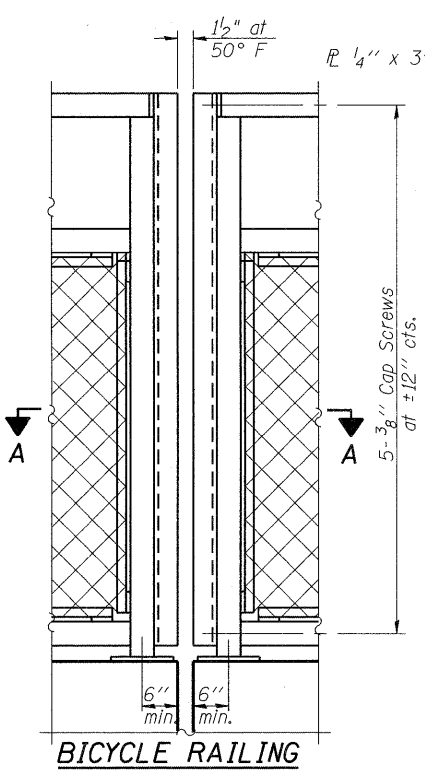
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 047-0051
SHEET NO. S-17 OF S-43 SHEETS

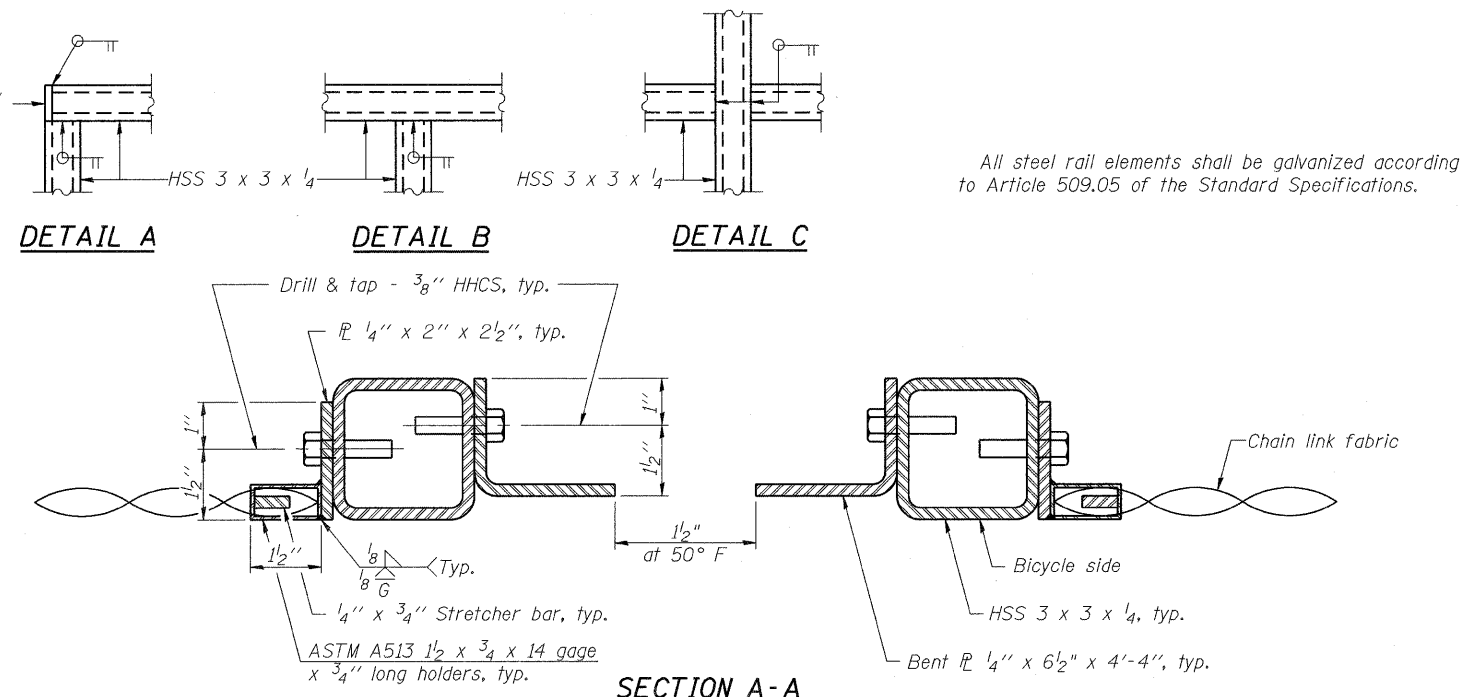
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	267
CONTRACT NO. 66995			ILLINOIS FED. AID PROJECT	



BICYCLE RAILING



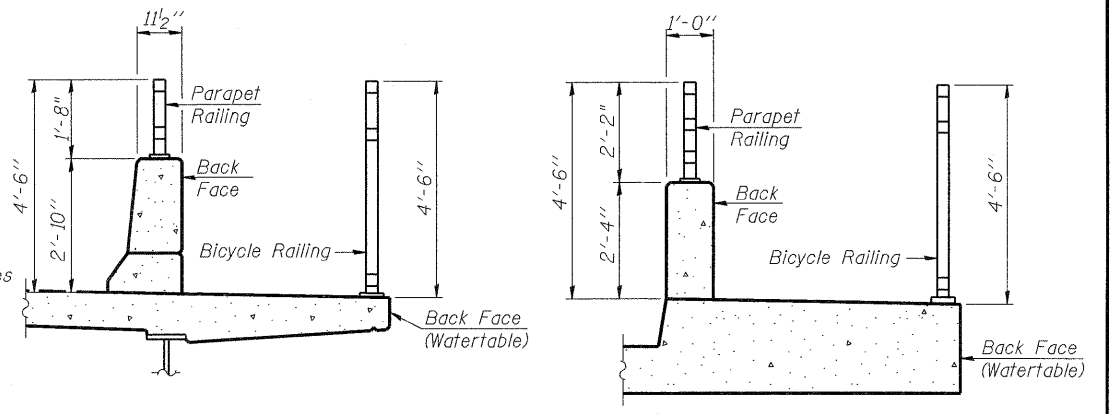
BICYCLE RAILING



DETAIL A DETAIL B DETAIL C

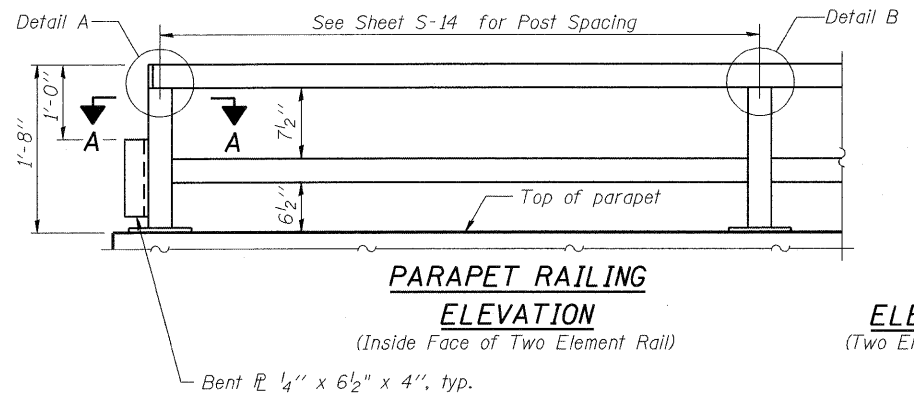
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

SECTION A-A

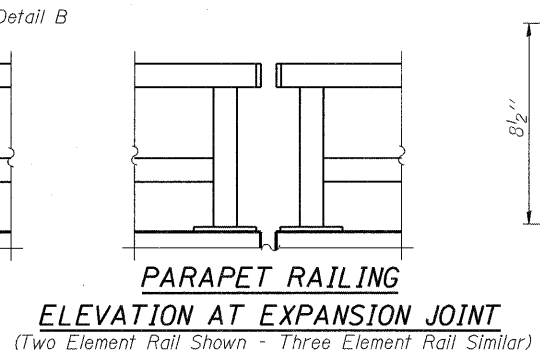


SECTION THRU DECK

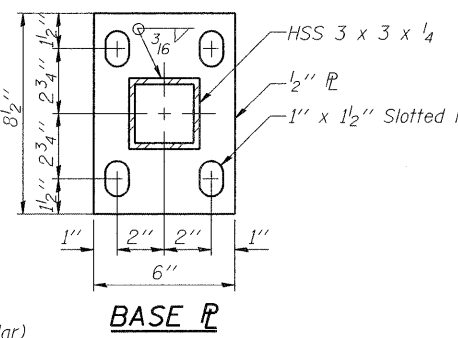
SECTION THRU SIDEWALK



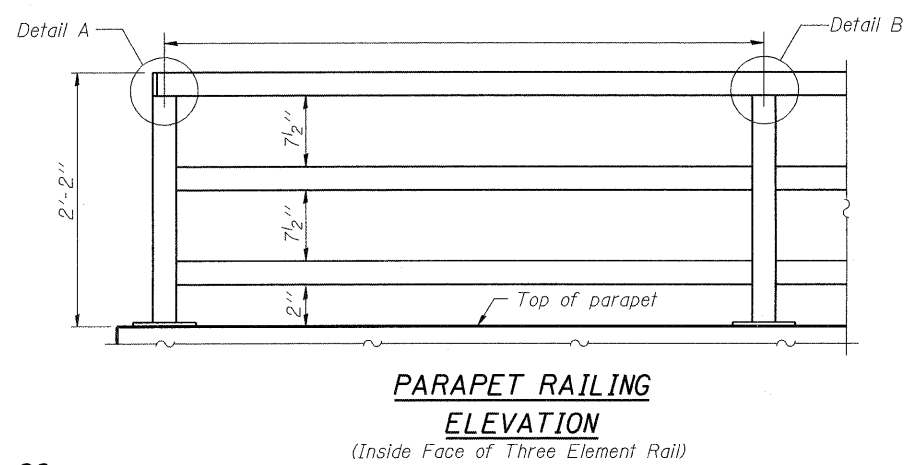
PARAPET RAILING ELEVATION
(Inside Face of Two Element Rail)



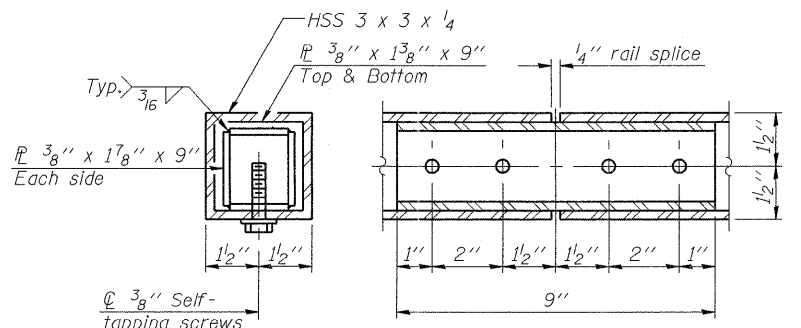
PARAPET RAILING ELEVATION AT EXPANSION JOINT
(Two Element Rail Shown - Three Element Rail Similar)



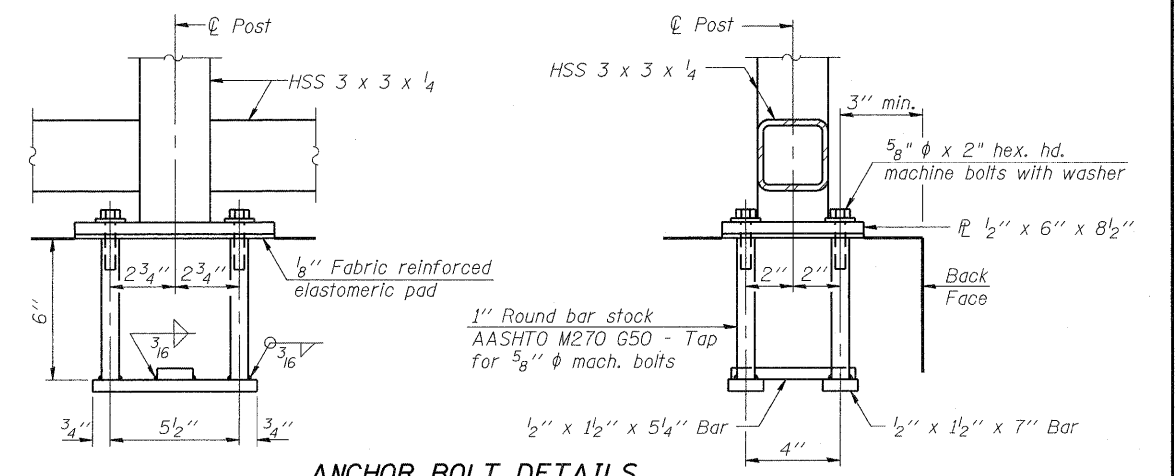
BASE PLATE



PARAPET RAILING ELEVATION
(Inside Face of Three Element Rail)



RAIL SPLICE



ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" φ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing	Foot	222
Parapet Railing	Foot	222

COMPANY NAME: SEC GROUP, INC.
PROJECT CONTACT: Robert F. G. Davies
CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE PLOTTED: 10/14/2011 11:09:40 AM
FILE NAME: 010551-Frd.dgn
PLOT NUMBER: 14
PEN TABLE: STRCT 20,34,161

R-29 7-1-10

 SEC Group, Inc.
 401 N. Front Street
 Suite 900
 Chicago, IL 60606

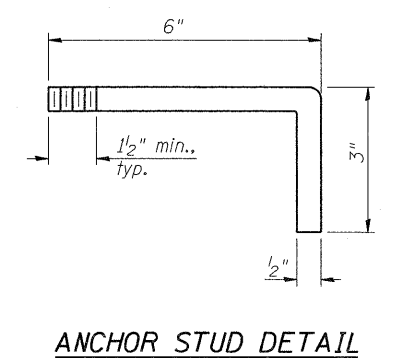
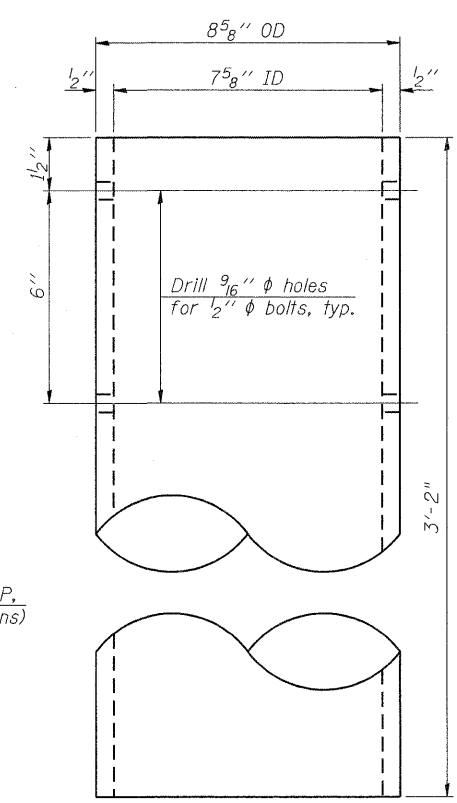
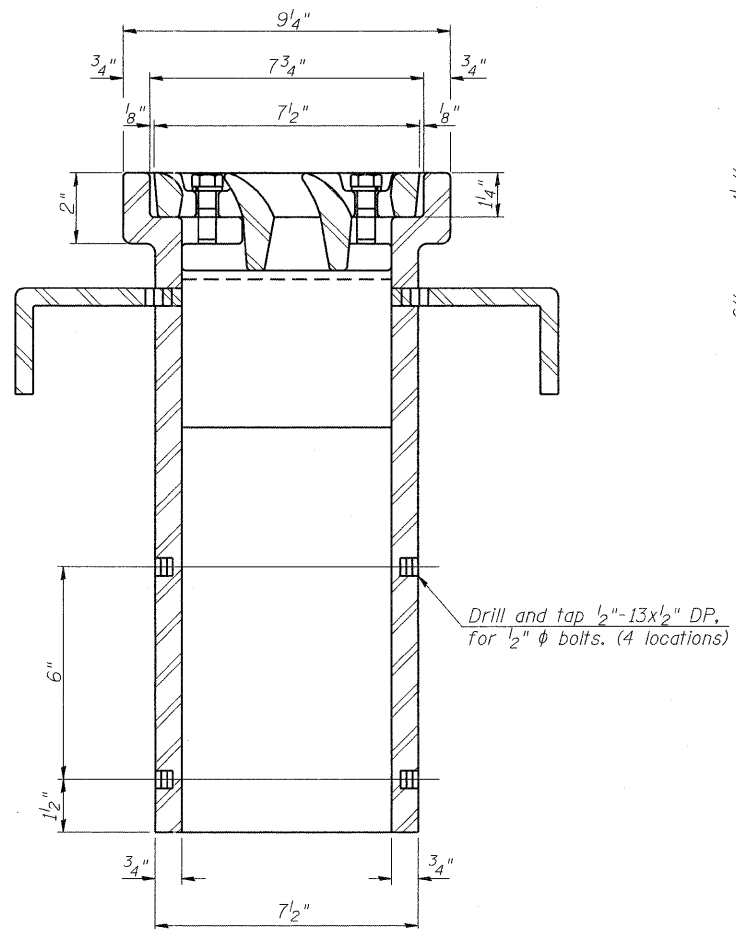
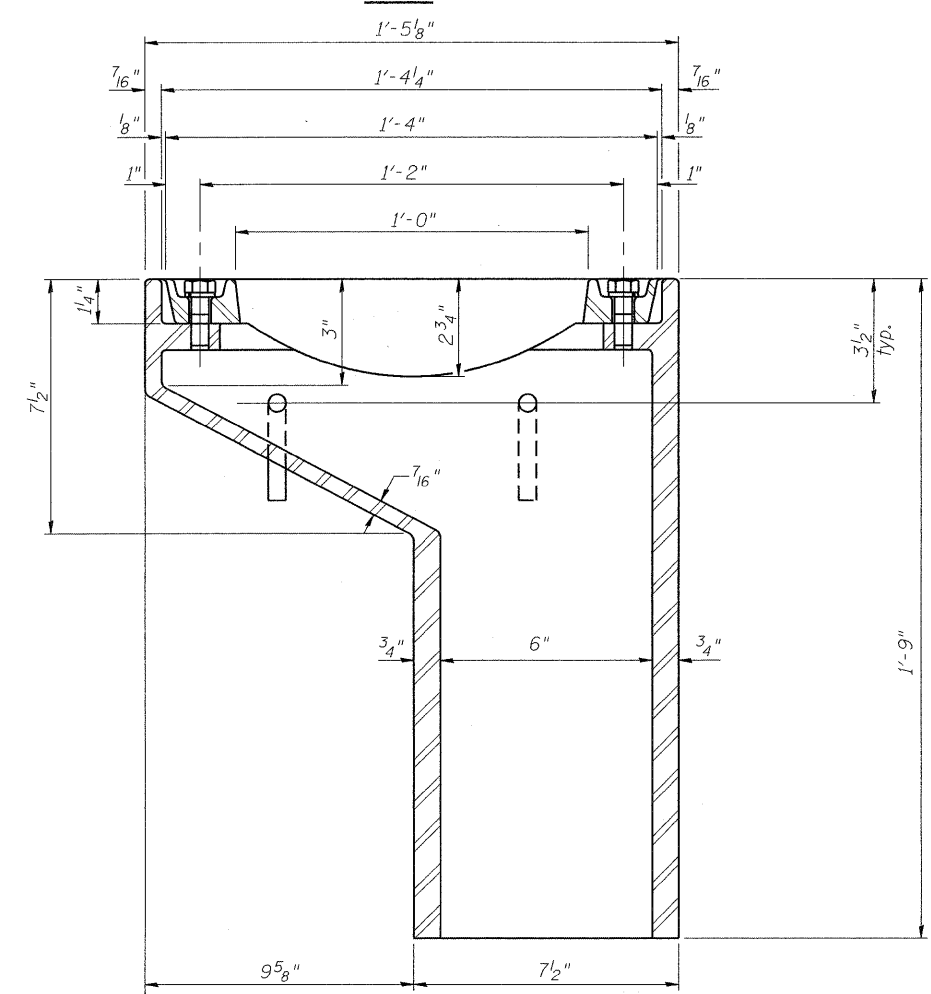
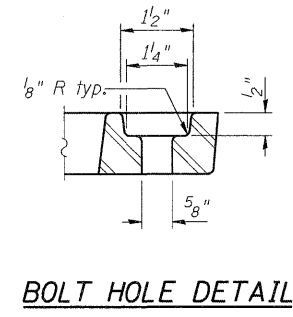
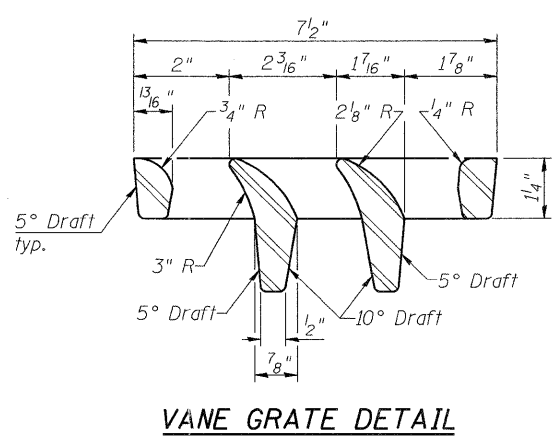
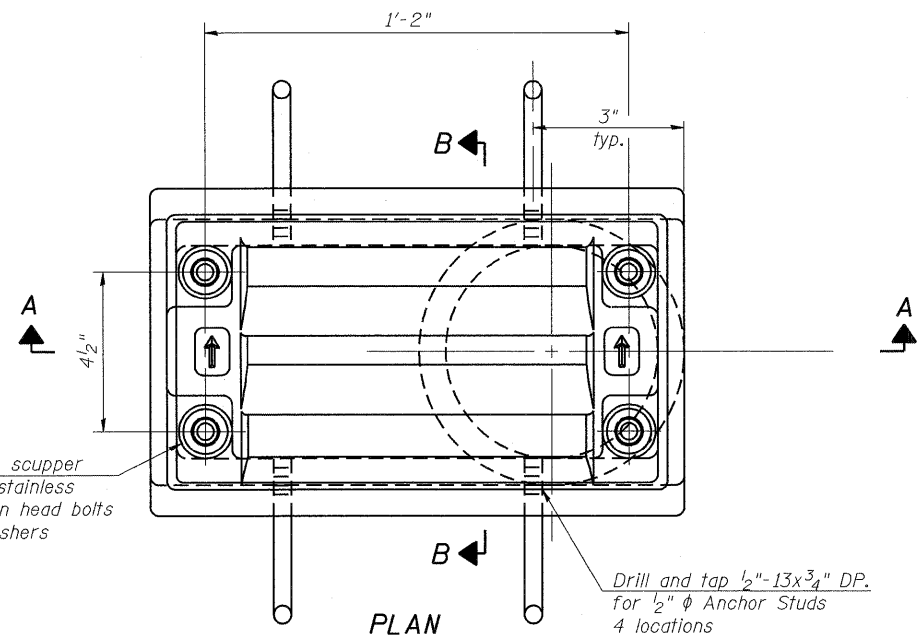
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PLOT SCALE =	CHECKED - SSM	REVISIONS
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISIONS
	CHECKED - RGD	REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BICYCLE RAILING
STRUCTURE NO. 047-0051
 SHEET NO. S-18 OF S-43 SHEETS

F.A.P. RTE. 591	SECTION 14BR-1	COUNTY KENDALL	TOTAL SHEETS 429	SHEET NO. 268
			CONTRACT NO. 66985	
(ILLINOIS) FED. AID PROJECT				

Notes:
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
 Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
 As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
 Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.
 The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
 Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.
 Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



See sheets S-12 and S-13 for scupper location relative to parapet.

DS-11 7-1-10

SEC Group, Inc.
 An HFI Group Company
 420 N. First Street,
 Maywood, IL 60050-2138
 L 815.385.1778 F 815.385.1781
 www.secgroup.com

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

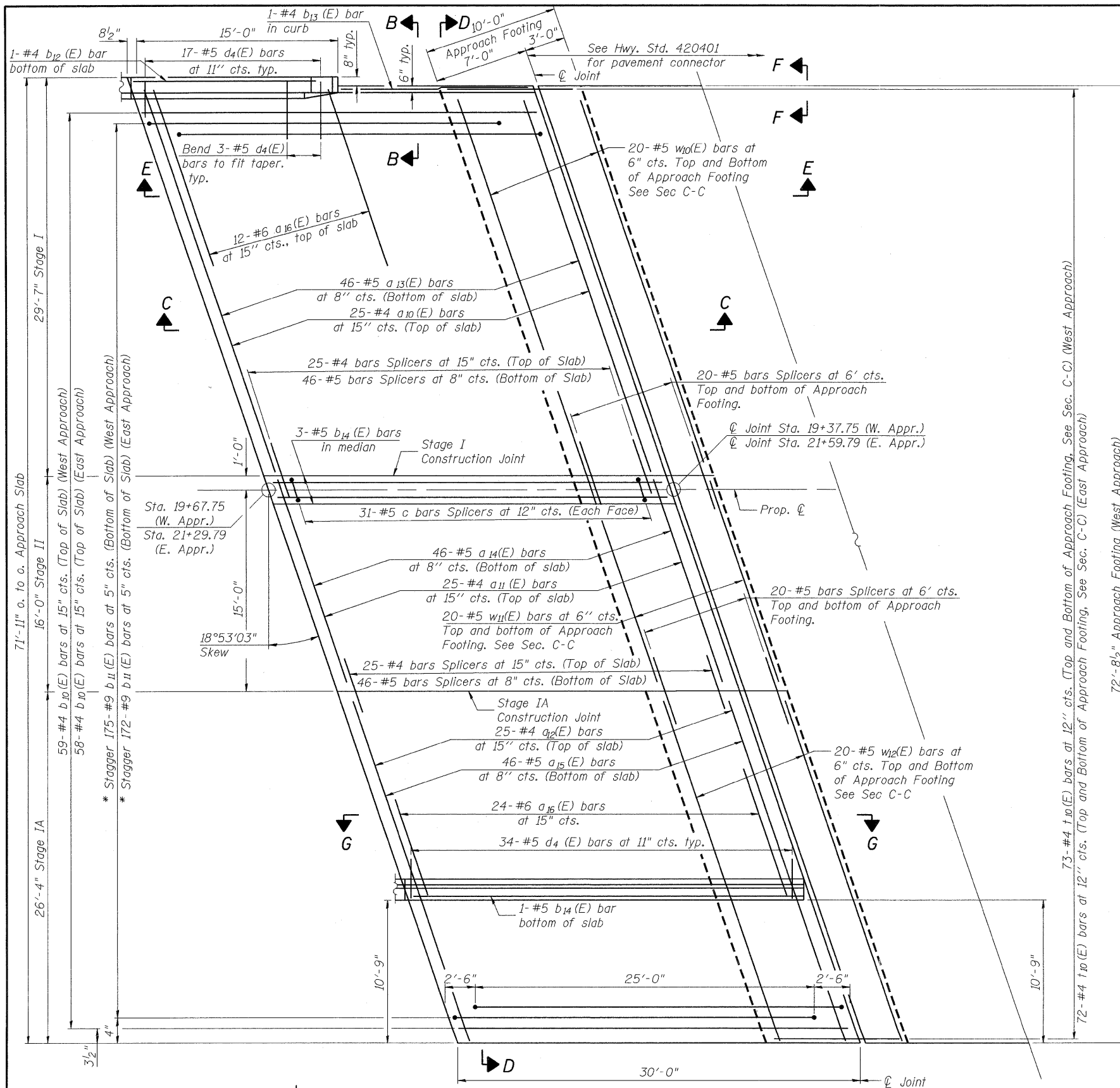
DRAINAGE SCUPPER, DS-11
 STRUCTURE NO. 047-0051
 SHEET NO. S-19 OF S-43 SHEETS

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	6

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	269
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: ROBERT G. DAVIES
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 11:09:44 AM
 FILE NAME: 047051-Scup-001
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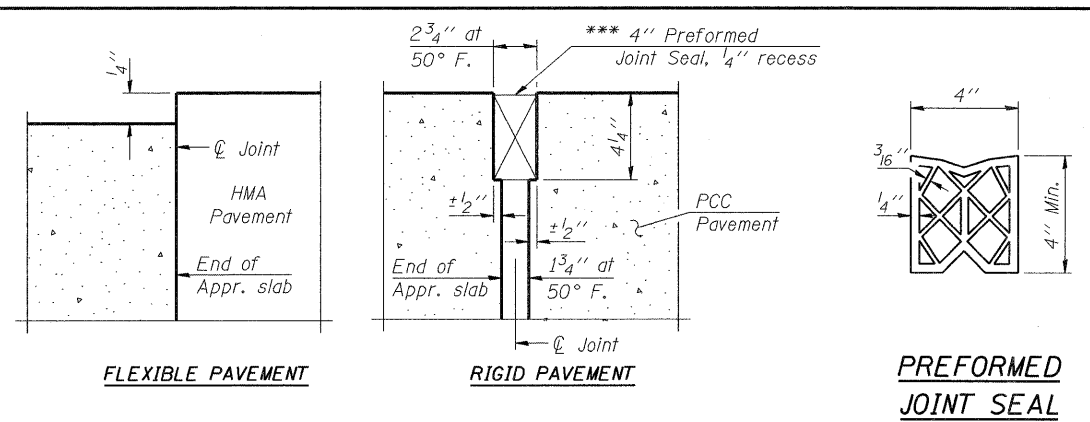
EAST APPROACH PLAN

Note: West Approach is the opposite, including detail shown at right

* Tilt #9 $b_{11}(E)$ bars as required to maintain clearance.

Notes:

See sheet S-21 for Sections C-C, D-D, View E-E and View G-G.
 $a_{10}(E)$, $a_{11}(E)$, $a_{12}(E)$ and $a_{13}(E)$ bar spacings measured along C.Rdwy.
 See sheet S-1 for location of existing 54" RCP storm sewer south of the west approach pavement.



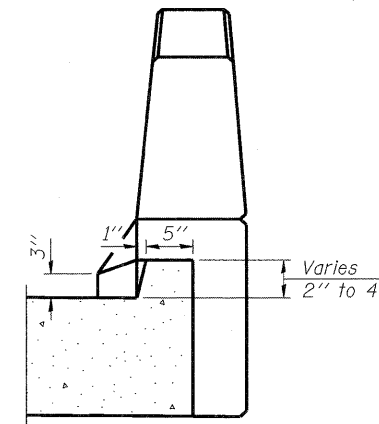
FLEXIBLE PAVEMENT

RIGID PAVEMENT

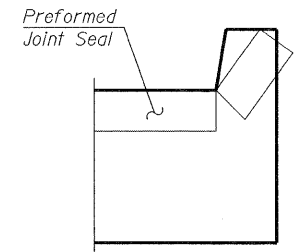
PREFORMED JOINT SEAL

*** Cost included with Concrete Superstructure.

DETAIL A

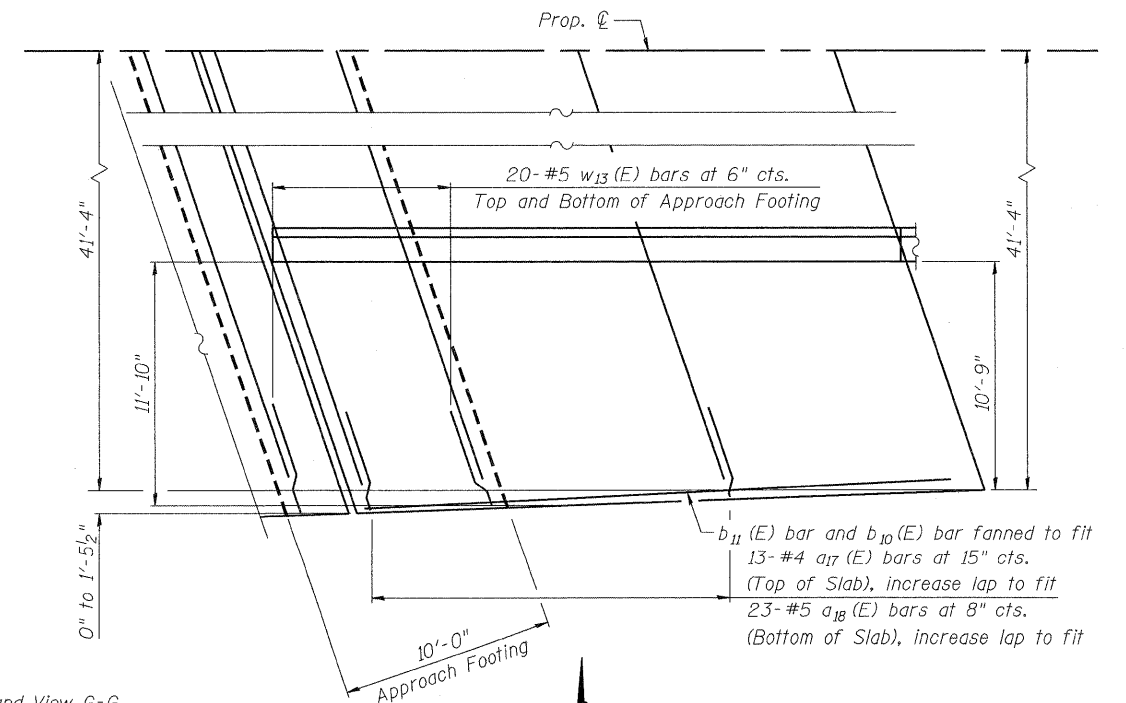


VIEW B-B



Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.

VIEW F-F



WEST APPROACH DETAIL

(Sheet 1 of 2)

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 10:59:48 AM
 PLOT DRIVER: C:\Program Files\Autodesk\AutoCAD 2011\Plot\Plotter\Plotter.ctb
 PEN TABLE: S:\Projects\2011\14BR-1\Struct\2011\14BR-1.dwg

SEC Group, Inc.
 400 N. First Street, Mettawa, IL 60050-2116
 1.815.385.1778 F. 815.385.1781
 www.secgroup.com
 *Illinois Professional Design Firm # 184-000126

PB Americas, Inc.
 230 WEST MONROE STREET, SUITE 900
 CHICAGO, IL. 60606

USER NAME = whoood	DESIGNED - JPG	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - RCB	REVISED -
	CHECKED - RGD	REVISED -

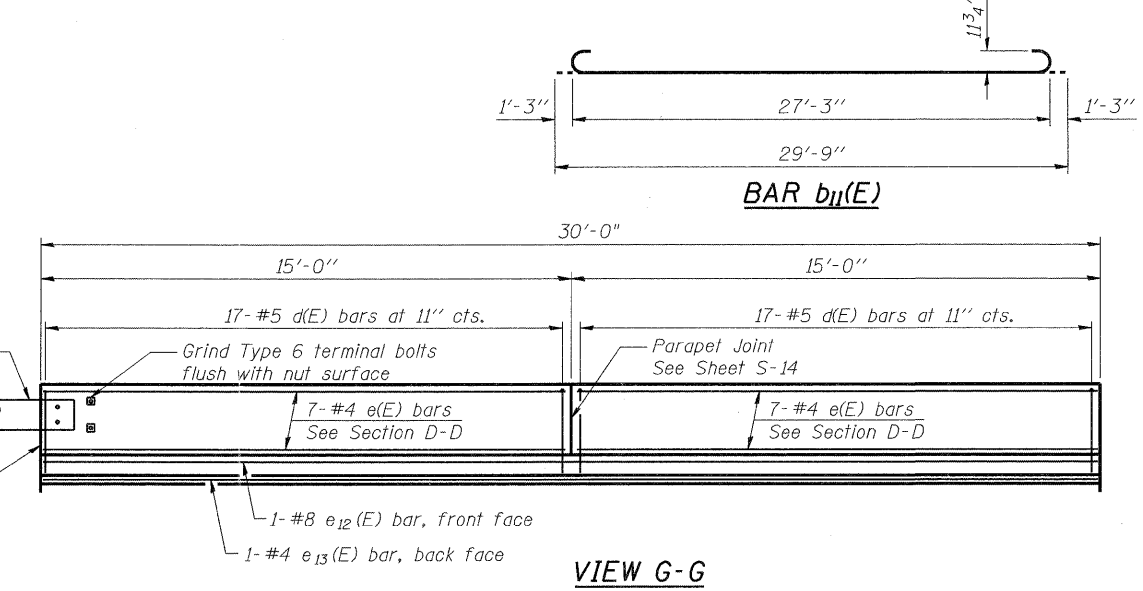
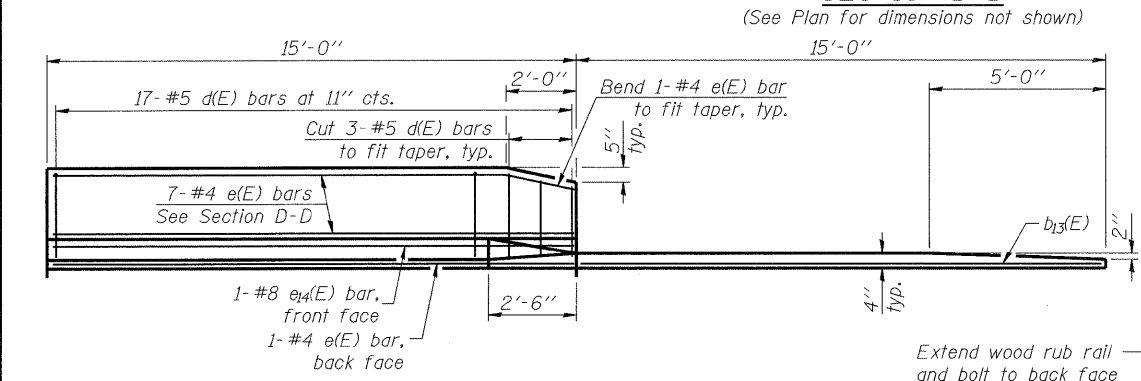
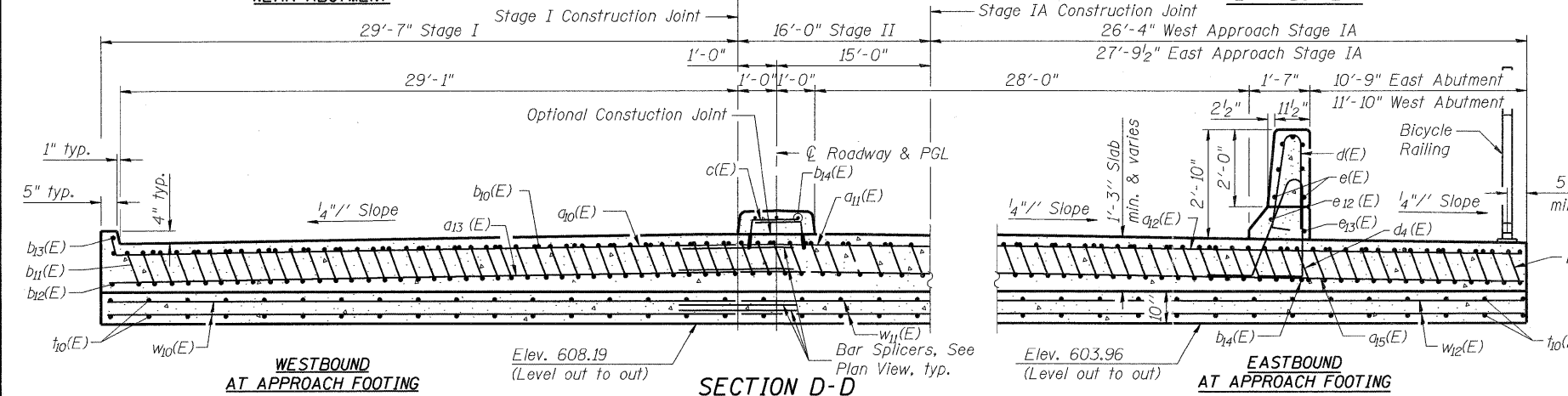
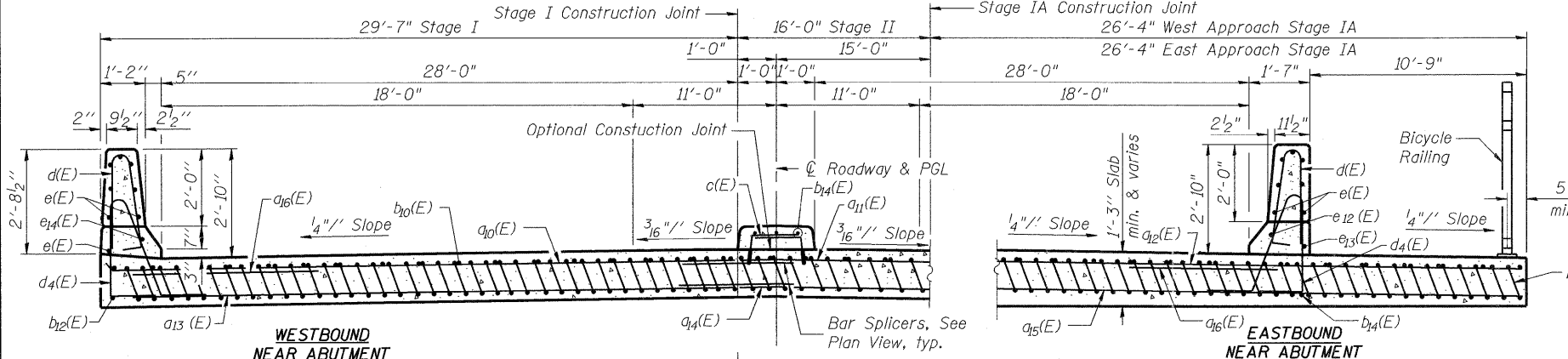
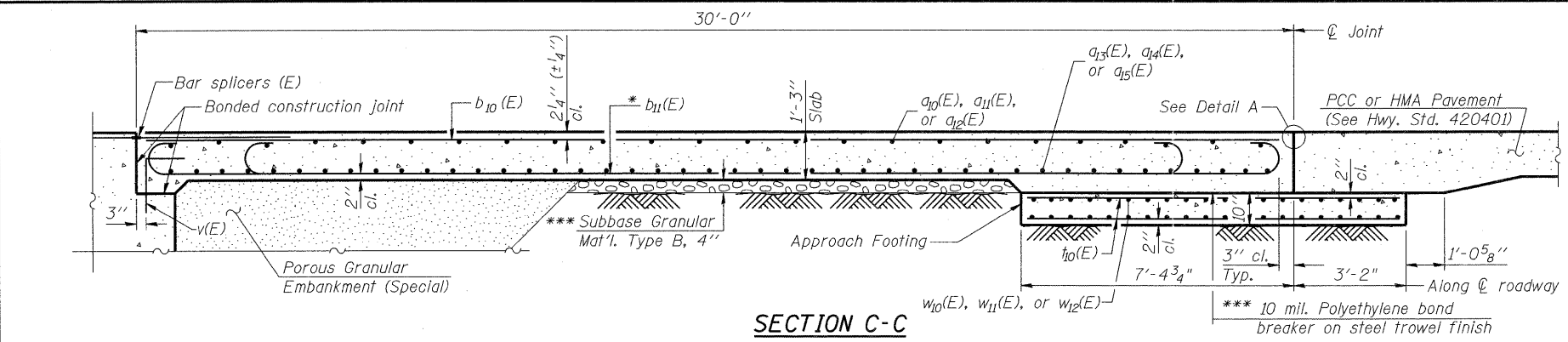
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

**BRIDGE APPROACH SLAB DETAILS
 STRUCTURE NO. 047-0051**

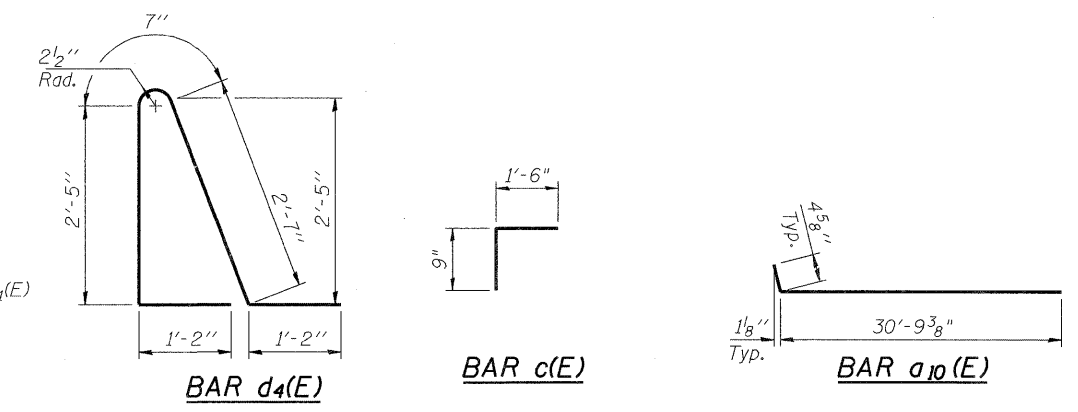
SHEET NO. S-20 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	270
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	

Notes:
 See sheet S-20 for Detail A, View B-B, and View F-F.
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
 Approach footing concrete shall be paid for as Concrete Structures.
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 For v(E) bar details, see sheet S-15.
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
 For bar splicer details, see sheet S-40.
 Cost of excavation for approach footing included with Concrete Structures.
 For Porous Granular Embankment (Special) and drainage treatment details, see sheet S-2.
 For additional parapet details, see sheet S-14.
 See sheet S-14 for Section Thru Median.



* Tilt #9 b11(E) bars as required to maintain clearance.
 *** Cost included with Concrete Superstructure.



**TWO APPROACHES
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a10(E)	50	#4	31'-2"	U
a11(E)	50	#4	16'-6"	U
a12(E)	50	#4	27'-6"	U
a13(E)	92	#5	30'-11"	U
a14(E)	92	#5	16'-6"	U
a15(E)	92	#5	27'-6"	U
a16(E)	72	#6	6'-6"	U
a17(E)	13	#4	3'-0"	U
a18(E)	23	#5	3'-0"	U
b10(E)	117	#4	29'-8"	U
b11(E)	347	#9	29'-9"	C
b12(E)	2	#4	14'-8"	U
b13(E)	2	#4	14'-8"	U
b14(E)	8	#5	29'-8"	U
c(E)	124	#5	2'-3"	T
d(E)	102	#5	5'-7"	U
d4(E)	102	#5	7'-11"	U
e(E)	42	#4	14'-8"	U
e12(E)	2	#8	29'-8"	U
e13(E)	2	#4	29'-8"	U
e14(E)	2	#8	14'-8"	U
t10(E)	290	#4	9'-8"	U
w10(E)	80	#5	30'-11"	U
w11(E)	80	#5	16'-6"	U
w12(E)	80	#5	27'-6"	U
w13(E)	40	#5	3'-1"	U
Concrete Superstructure		Cu. Yd.	237.5	
Concrete Structures		Cu. Yd.	45	
Reinforcement Bars, Epoxy Coated		Pound	58,890	

(Sheet 2 of 2)

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert T. & Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/12/2011 10:06:54 AM
 PLOT NUMBER: 0710007-15002097
 PLOT DATE: 10/12/2011
 STRUCT: 22x34.151

SEC Group, Inc.
 An HSI Group Company
 401 N. First Street
 Chicago, IL 60610-3736
 T 815.385.1778 F 815.385.1781
 www.secgroup.com

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

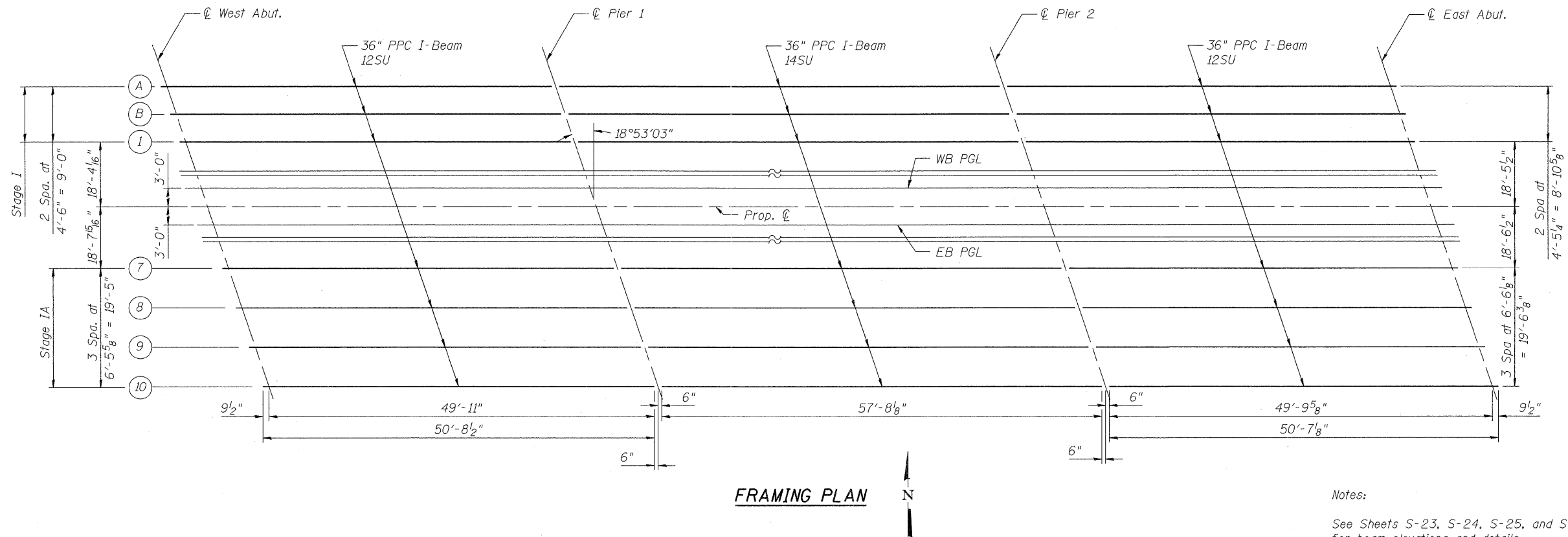
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

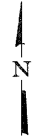
**BRIDGE APPROACH SLAB DETAILS
 STRUCTURE NO. 047-0051**

SHEET NO. S-21 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	271
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	



FRAMING PLAN



Notes:

See Sheets S-23, S-24, S-25, and S-26 for beam elevations and details.

	0.4 Sp. 1 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
I	(in ⁴) 48,647.6		48,647.6
I'	(in ⁴) 148,336		148,336
S _b	(in ³) 3,165.1		3,165.1
S _b '	(in ³) 5,564		5,564
S _t	(in ³) 2,358.1		2,358.1
S _t '	(in ³) 15,878		15,878
Q	(k/')	0.807	0.807
M _Q	('k)	256.1	347.8
s _Q	(k/')	0.121	0.121
M _s Q	('k)	22.5	16.1
M _L	('k)	207.7	198.1
M _I	('k)	56.1	53.5

	Abut.	Pier 1 Span 1 Pier 2 Span 3	Pier 1 Span 2 Pier 2 Span 2
R _Q	(k)	20.9	23.7
R _s Q	(k)	2.3	3.7
R _L	(k)	22.9	14.1
R _I	(k)	15.9	3.8
R _{Total}	(k)	62.0	45.3

*The total R_s Q, R_L, and impact reactions are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier is based on the maximum reactions of either span.

	0.4 Sp. 1 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
I	(in ⁴) 48,647.6		48,647.6
I'	(in ⁴) 168,424		168,424
S _b	(in ³) 3,165.1		3,165.1
S _b '	(in ³) 5,829		5,829
S _t	(in ³) 2,358.1		2,358.1
S _t '	(in ³) 23,695		23,695
Q	(k/')	0.995	0.995
M _Q	('k)	315.8	428.8
s _Q	(k/')	0.275	0.275
M _s Q	('k)	51.0	36.5
M _L	('k)	298.9	285.1
M _I	('k)	86.7	77.0

	Abut.	Pier 1 Span 1 Pier 2 Span 3	Pier 1 Span 2 Pier 2 Span 2
R _Q	(k)	25.7	29.2
R _s Q	(k)	5.3	8.3
R _L	(k)	33.0	20.3
R _I	(k)	9.6	5.5
R _{Total}	(k)	73.6	63.3

*The total R_s Q, R_L, and impact reactions are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier is based on the maximum reactions of either span.

- I: Non-composite moment of inertia of beam section (in⁴).
- I': Composite moment of inertia of beam section (in⁴).
- S_b: Non-composite section modulus for the bottom fiber of the prestressed beam (in³).
- S_b': Composite section modulus for the bottom fiber of the prestressed beam (in³).
- S_t: Non-composite section modulus for the top fiber of the prestressed beam (in³).
- S_t': Composite section modulus for the top fiber of the prestressed beam (in³).
- Q: Un-factored non-composite dead load (kips/ft.).
- M_Q: Un-factored moment due to non-composite dead load conservatively taken at 0.5 of the span (kip-ft.).
- s_Q: Un-factored long-term composite (superimposed) dead load (kips/ft.).
- M_s Q: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
- M_L: Un-factored live load moment on the composite section (kip-ft.).
- M_I: Un-factored moment due to impact on the composite section (kip-ft.).

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 11:02:02 AM
 FILE NAME: 0470051-EFp.dgn
 PLOT DRIVER: pdf.plt
 PLOT TABLE: Struct-22x34.tbl



BP Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

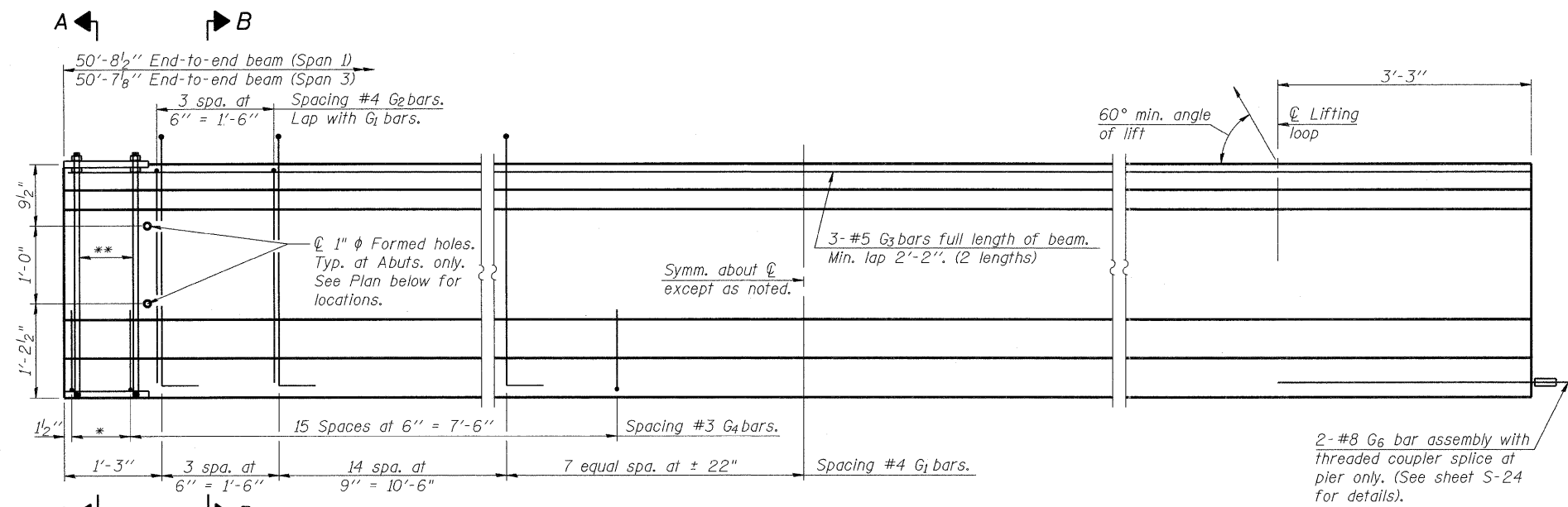
USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - RCB	REVISED -
	CHECKED - RGD	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

FRAMING PLAN - PRESTRESSED BEAM
 STRUCTURE NO. 047-0051

SHEET NO. S-22 OF S-43 SHEETS

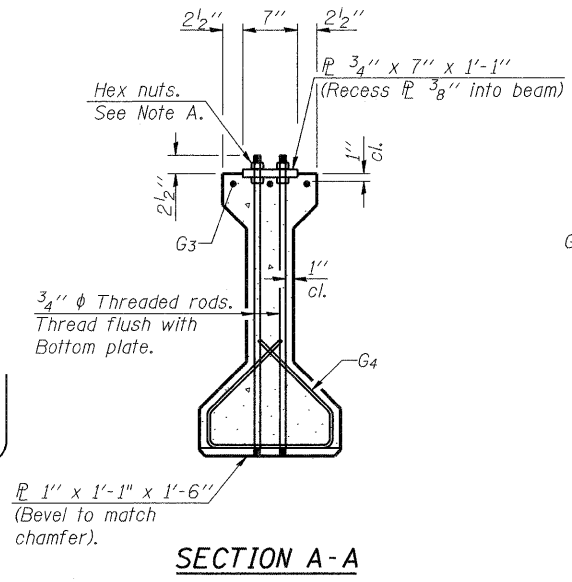
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	272
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	



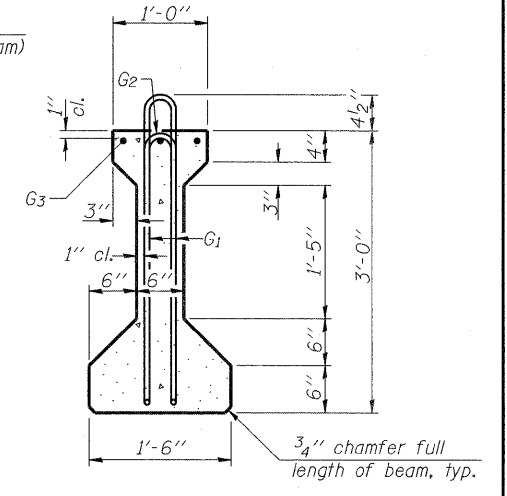
ELEVATION OF BEAM
(Showing reinforcement & dimensions)

* 3 spaces at 3" = 9".
** 4-3/4" ϕ threaded dowel rods at 3" cts., Each Face

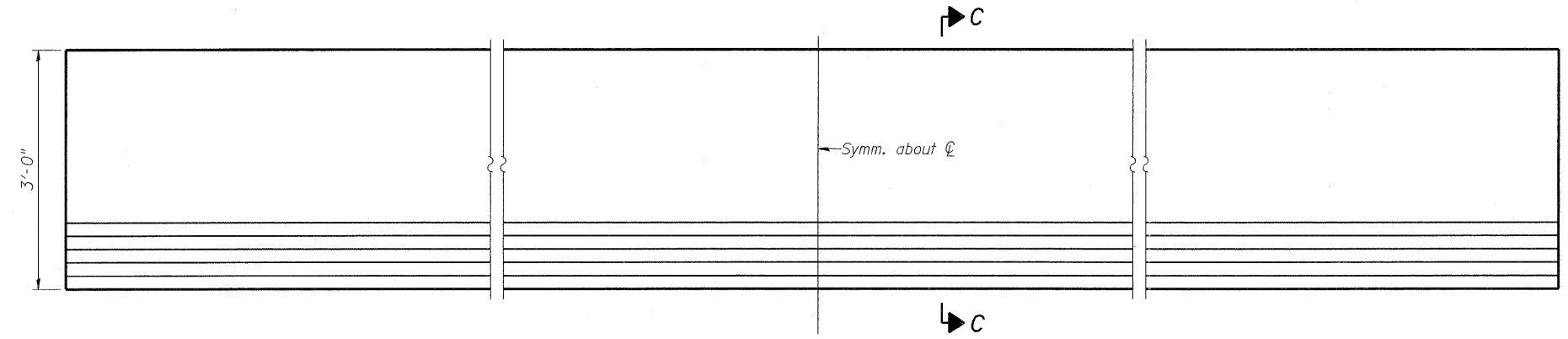
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



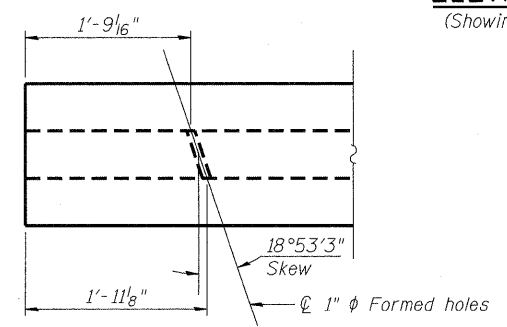
SECTION A-A



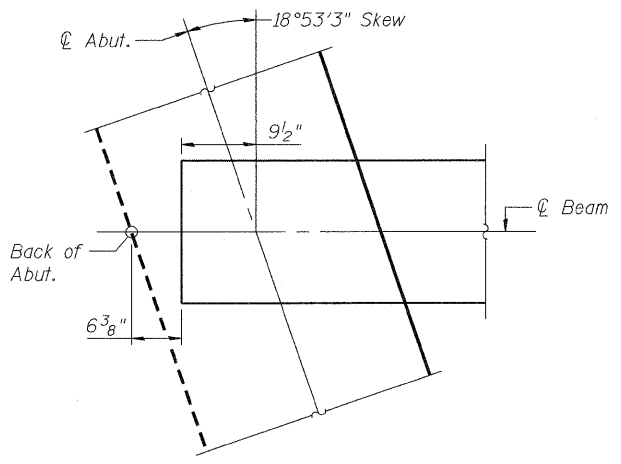
SECTION B-B



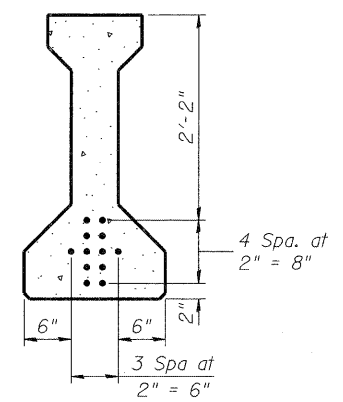
ELEVATION OF BEAM
(Showing prestressing steel)



PLAN
END OF BEAM AT ABUT.



Detail C
(Typ. for all beams)



SECTION C-C

2-Strands 2" up
2-Strands 4" up
4-Strands 6" up
2-Strands 8" up
2-Strands 10" up

*****BAR LIST**
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G ₁	49	#4	7'-5"	U
G ₂	8	#4	5'-8"	U
G ₃ (Span 1)	6	#5	50'-6"	—
G ₃ (Span 3)	6	#5	50'-5"	—
G ₄	38	#3	4'-1"	U
G ₆	2	#8	6'-6"	U

***For information only
Notes:
See sheet S-24 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.

COMPANY NAME: SEC GROUP, INC.
PROJECT CONTACT: Robert T. G. Davies
CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE PLOTTED: 10/19/2011 10:06 AM
PLOT NUMBER: 047-0051-0004.dgn
PEN TABLE: 23,34,151

SEC Group, Inc.
An HSI Group Company
420 N. Front Street,
Maitland, FL 32751-2908
1-813-385-1778 F. 813-385-1781
www.secgroup.com

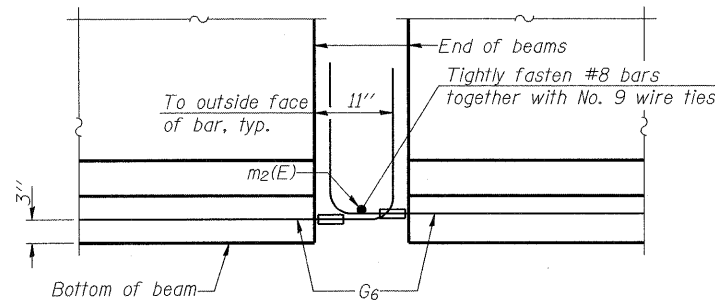
PB Americas, Inc.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - RCB	REVISED -
	CHECKED - RGD	REVISED -

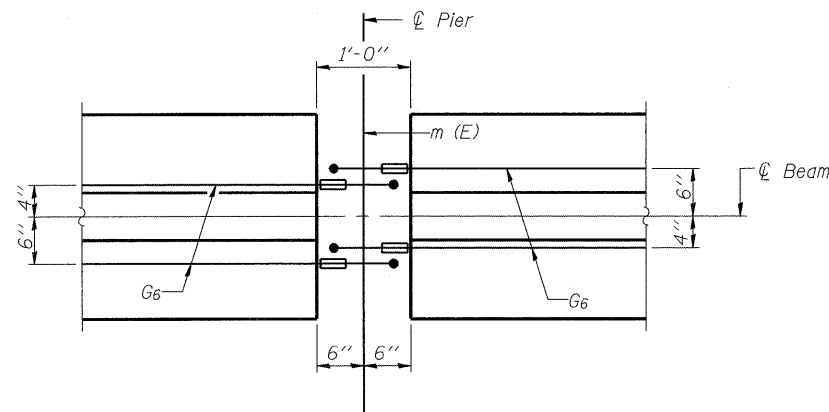
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRESTRESSED BEAM DETAILS - 36" 12SU
STRUCTURE NO. 047-0051
SHEET NO. S-23 OF S-43 SHEETS

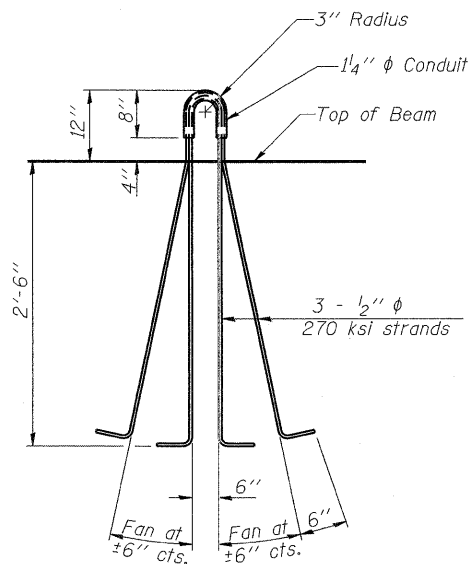
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	273
CONTRACT NO. 66985			[ILLINOIS] FED. AID PROJECT	



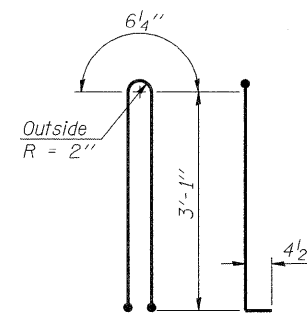
ELEVATION OF BEAM AT PIER



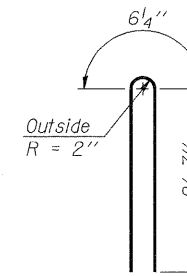
PLAN OF BEAM AT PIER



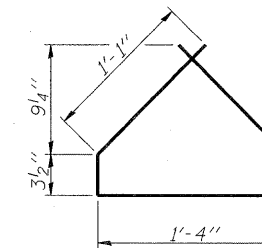
LIFTING LOOP DETAIL



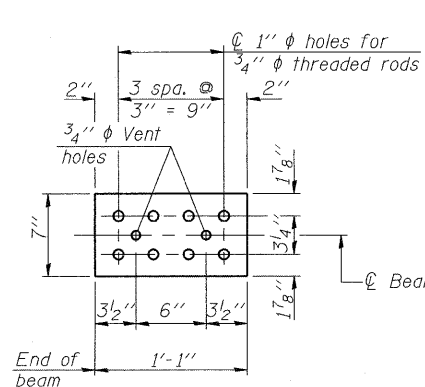
BAR G1



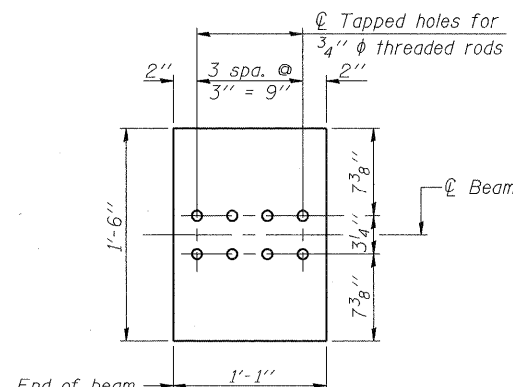
BAR G2



BAR G4

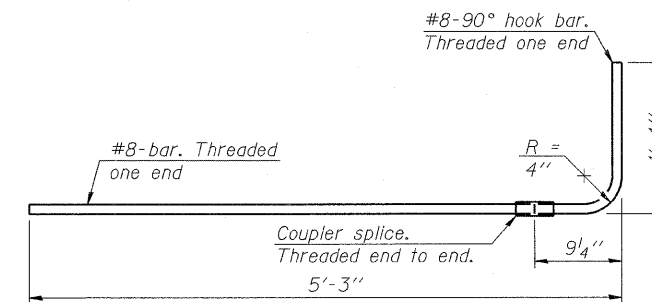


TOP PLATE



BOTTOM PLATE

See bearing details for pintle hole locations when required.



G6 BAR ASSEMBLY

NOTES

Inserts for 3/4" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
 Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling. Tilt G6 bars when necessary to maintain 1 1/2" clearance.
 The top and bottom plates shall be AASHTO M270 Grade 50.
 The bottom plates shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized.
 Threaded rods shall be ASTM F 1554 Grade 55.
 The G6 bar assembly shall be capable of developing 125 percent of the yield strength of the grade 60 reinforcement bar components. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar.
 Beams requiring G6 bar assemblies shall not be released from the fabricator until they have attained 45 days of age or older.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	Ft.	709

**PRESTRESSED BEAM DETAILS - 36" 12SU
STRUCTURE NO. 047-0051**

SHEET NO. S-24 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	274
			CONTRACT NO. 66985	

ILLINOIS FED. AID PROJECT

PI-4-36D 1-28-11

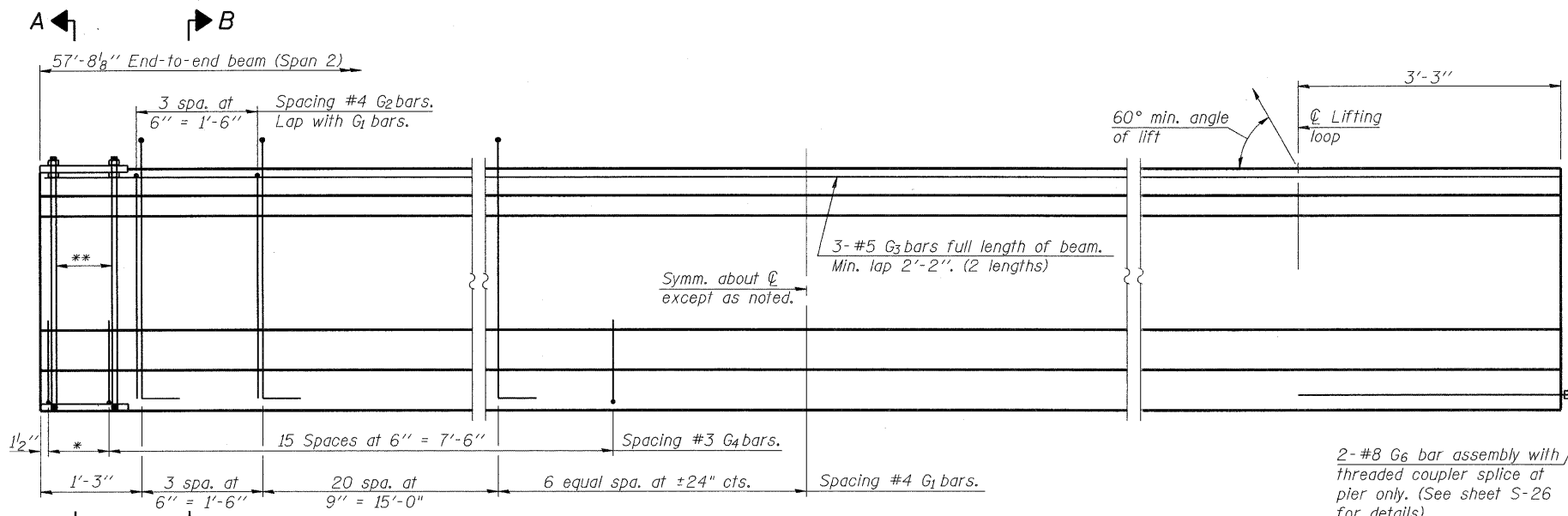
SEC Group, Inc.
 An IBM Global Company
 401 N. First Street,
 Mayfield, IL 60202-0198
 618.365.1778 & 618.365.1781
 www.secgroupinc.com
 *McHenry, IL *Woodstock, IL *New Lenox, IL *Chicago, IL

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - RCB	REVISED -
	CHECKED - RGD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

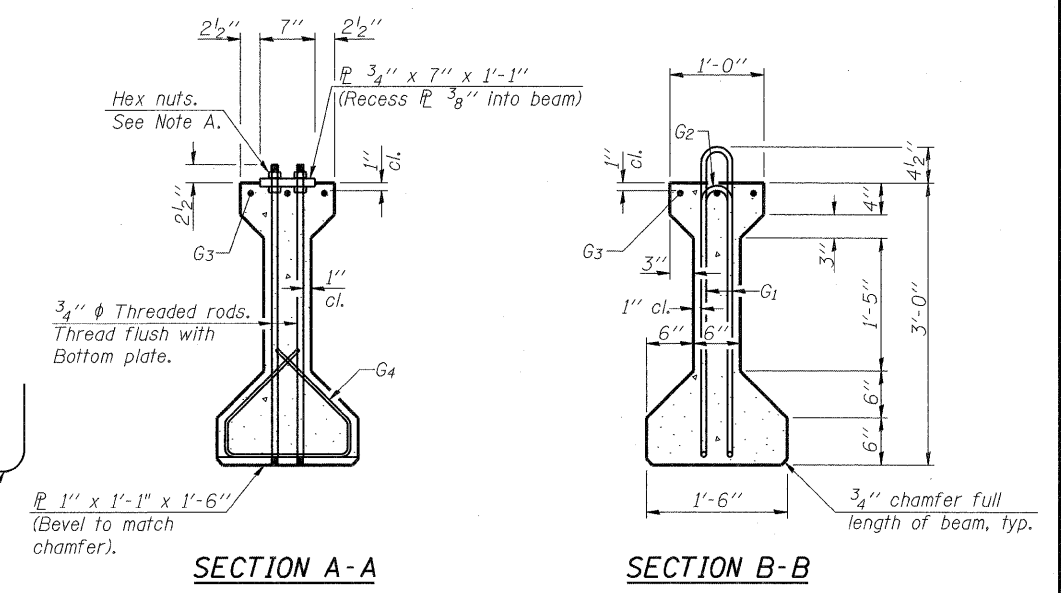
COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 11:00:09 AM
 FILE NAME: 0470051-Pbd02.dgn
 PLOT DRIVER: Pbd02f
 PEN TABLE: S-24.tbl



ELEVATION OF BEAM
(Showing reinforcement & dimensions)

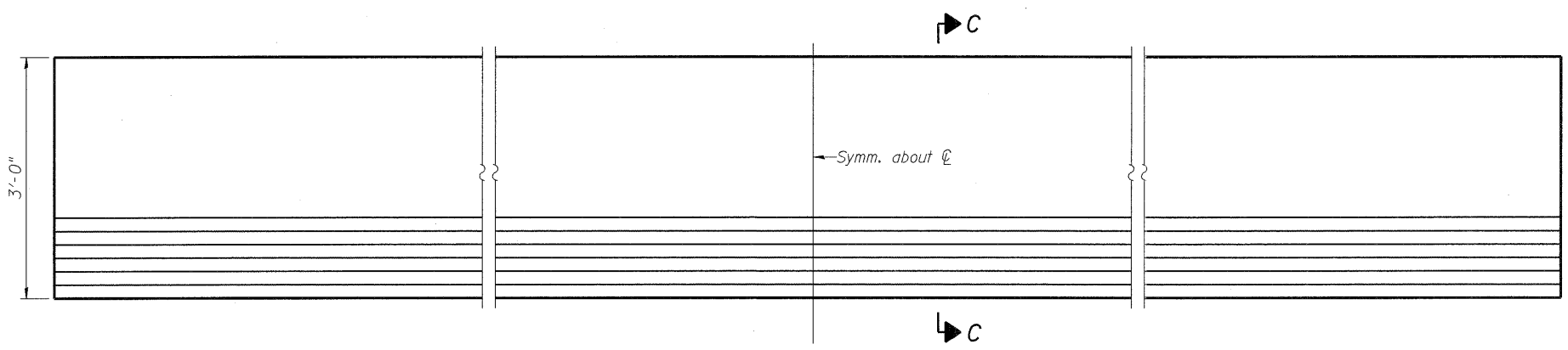
* 3 spaces at 3" = 9".
** 4-3/4" φ threaded dowel rods at 3" cts., Each Face

Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.

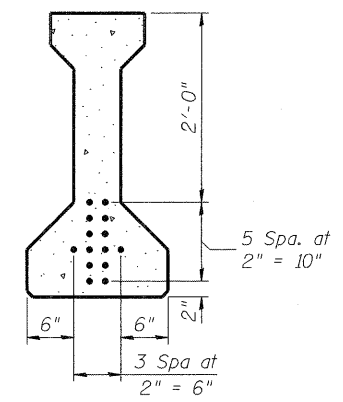


SECTION A-A

SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C

2-Strands 2" up
2-Strands 4" up
4-Strands 6" up
2-Strands 8" up
2-Strands 10" up
2-Strands 12" up

*****BAR LIST
ONE BEAM ONLY**

Bar	No.	Size	Length	Shape
G ₁	59	#4	7'-5"	⌒
G ₂	8	#4	5'-8"	⌒
G ₃	6	#5	29'-10"	—
G ₄	38	#3	4'-1"	⌒
G ₆	4	#8	6'-6"	⌒

***For information only

Notes:
See sheet S-26 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.

COMPANY NAME: SEC GROUP, INC.
PROJECT CONTACT: Robert G. Davies
CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE PLOTTED: 10/14/2011 11:02:42 AM
FILE NAME: 0470051-P003.dgn
PLOT DRIVER: p01.dpt
PEN TABLE: Struct_2004.tbl



PB Americas, Inc.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL 60606

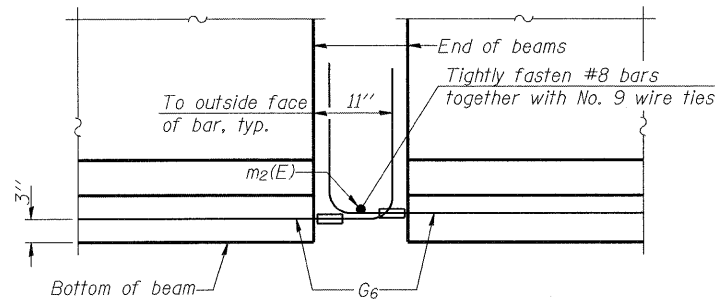
USER NAME = whood	DESIGNED - MGH	REVISED -
	CHECKED - SSM	REVISED -
PLOT SCALE =	DRAWN - RCB	REVISED -
PLOT DATE = 10/14/2011	CHECKED - RGD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

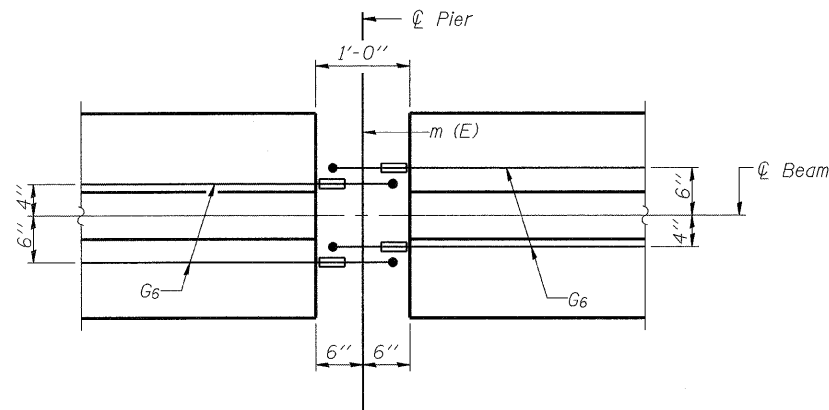
**PRESTRESSED BEAM DETAILS - 36" 14SU
STRUCTURE NO. 047-0051**

SHEET NO. S-25 OF S-43 SHEETS

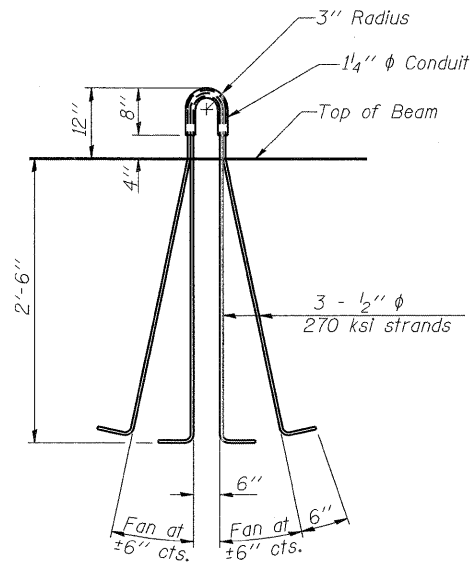
F.A.P. RTE. 591	SECTION 14BR-1	COUNTY KENDALL	TOTAL SHEETS 429	SHEET NO. 275
			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				



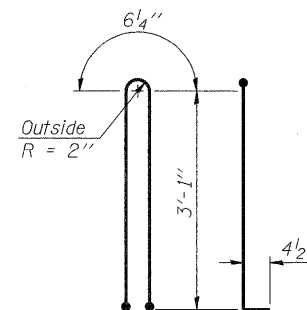
ELEVATION OF BEAM AT PIER



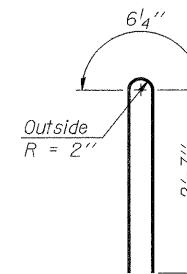
PLAN OF BEAM AT PIER



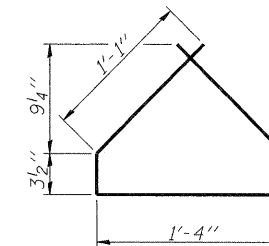
LIFTING LOOP DETAIL



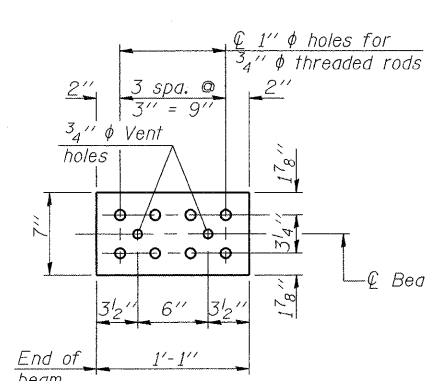
BAR G1



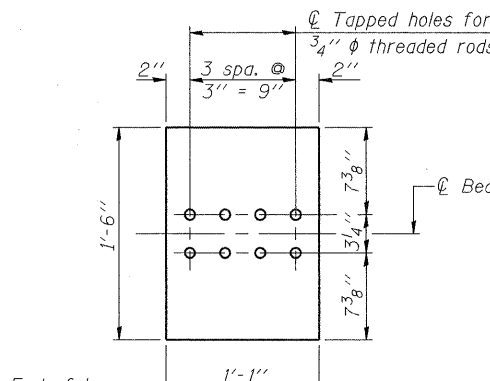
BAR G2



BAR G4

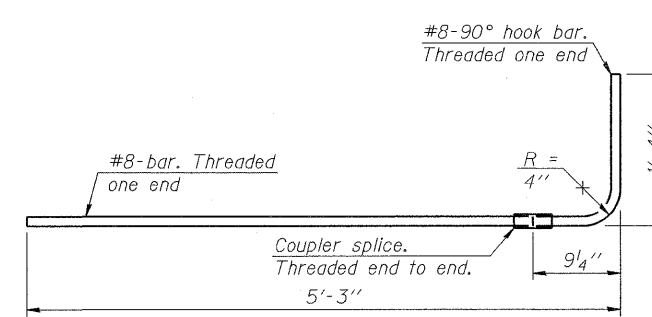


TOP PLATE



BOTTOM PLATE

See bearing details for pintle hole locations when required.



G6 BAR ASSEMBLY

NOTES

Inserts for 3/4" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling. Tilt G₆ bars when necessary to maintain 1/2" clearance. The top and bottom plates shall be AASHTO M270 Grade 50. The bottom plates shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized. Threaded rods shall be ASTM F 1554 Grade 55. The G₆ bar assembly shall be capable of developing 125 percent of the yield strength of the grade 60 reinforcement bar components. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar. Beams requiring G₆ bar assemblies shall not be released from the fabricator until they have attained 45 days of age or older.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	Ft.	404

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert L. G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/21/2011 11:03:5 AM
 PLOT SCALE: 0.7500
 PLOT DNGR: 0470257-P0004.dgn
 PEN TABLE: STRUCT 23,34,151

PI-4-36D 1-28-11

SEC Group, Inc.
 A 101 Grass Company
 420 N. First Street,
 Maitland, IL 60155-0158
 T: 616.365.1778 F: 616.365.1761
 www.secgroupinc.com

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - RCB	REVISED -
	CHECKED - RGD	REVISED -

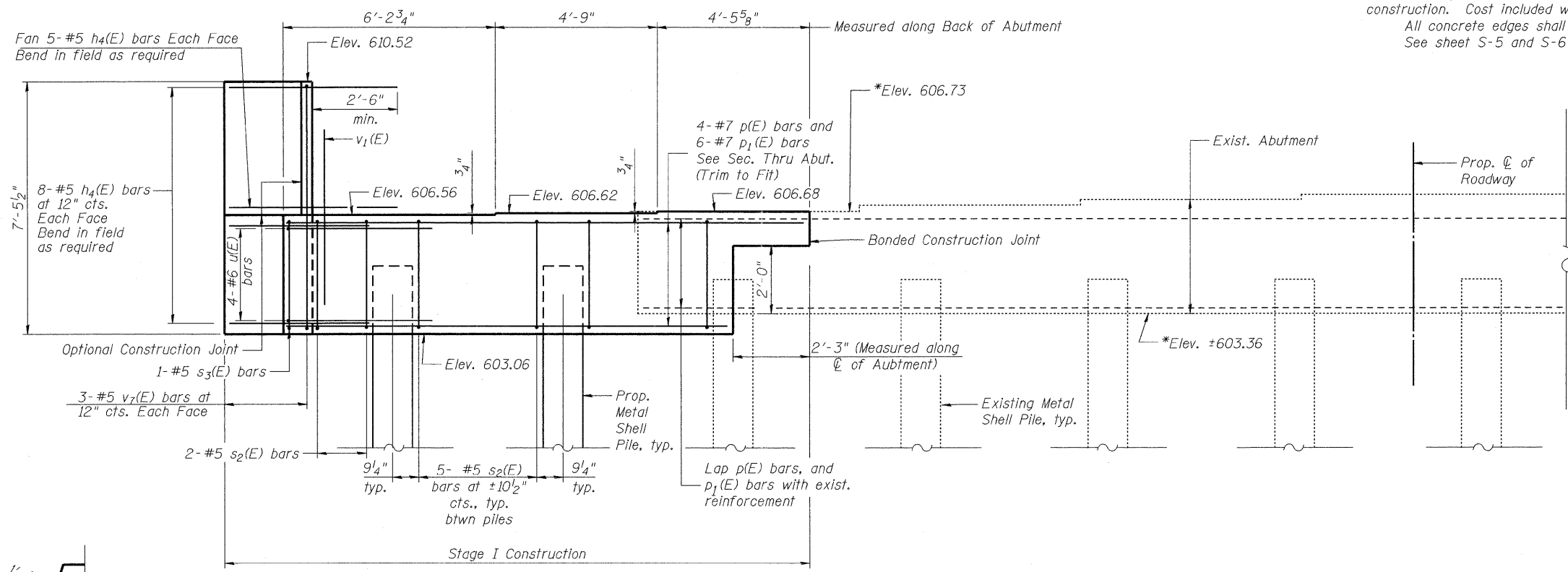
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PRESTRESSED BEAM DETAILS - 36" 14SU
STRUCTURE NO. 047-0051**

SHEET NO. S-26 OF S-43 SHEETS

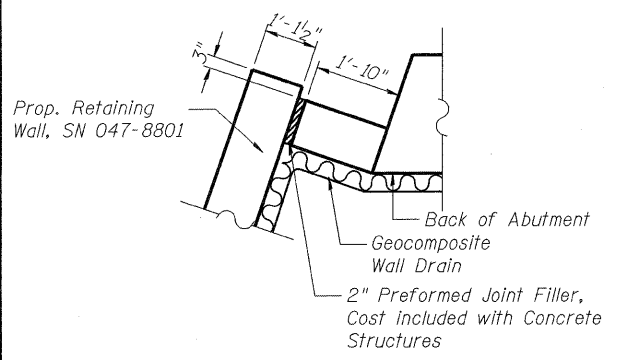
F.A.P. RTE. 591	SECTION 14BR-1	COUNTY KENDALL	TOTAL SHEETS 429	SHEET NO. 276
			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

Notes:
 Pour steps monolithically with cap.
 For details of piles see sheet S-39.
 Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
 All concrete edges shall have standard 3/4" chamfer.
 See sheet S-5 and S-6 for Concrete Removal details.

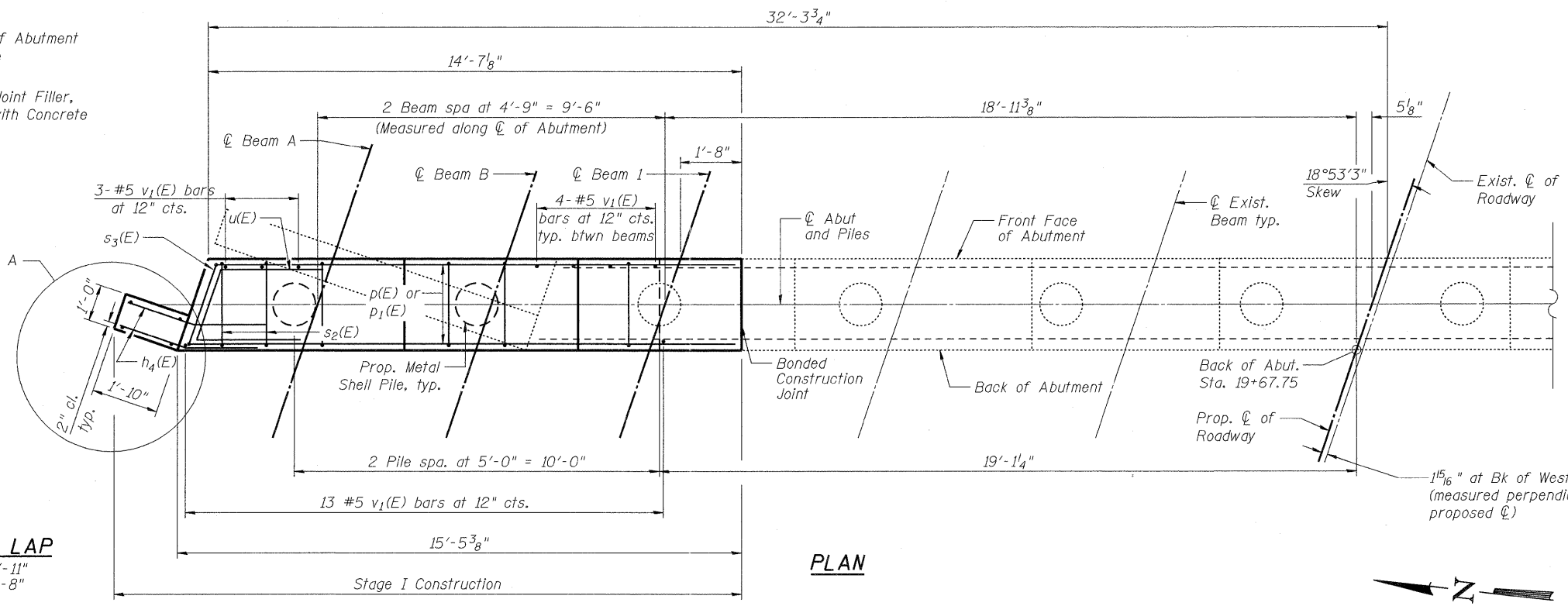


ELEVATION
 (Looking East)

* Elevations based on Existing Plans by Hazelet & Endal, Inc. Contractor to verify in field.



DETAIL A



PLAN

MIN. BAR LAP
 #5 bar 2'-11"
 #8 bar 4'-8"



COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert L. & Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/24/2011 10:09 AM
 FILE NAME: 07/26/09-14801.dgn
 PLOT NUMBER: 22x34.1b1
 PEN TABLE:

SEC Group, Inc.
 An HDR Group Company
 420 N. Front Street
 Chicago, IL 60610-2138
 T 312.385.1778 F 312.385.1781
 www.secgroup.com

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - JPG	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

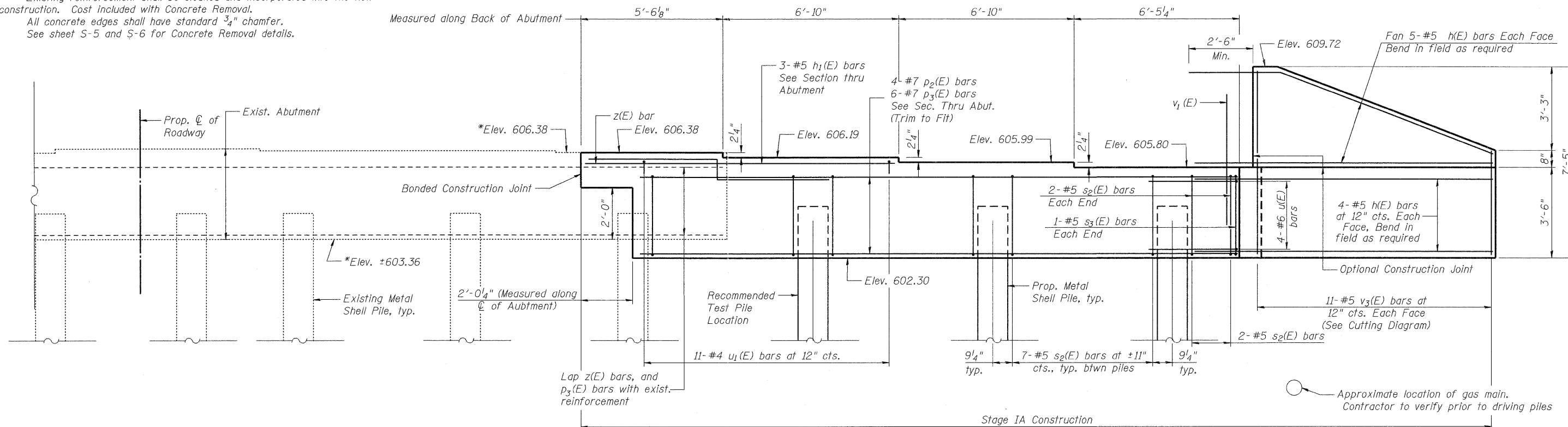
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT
STRUCTURE NO. 047-0051
 SHEET NO. S-27 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	148R-1	KENDALL	429	277
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	

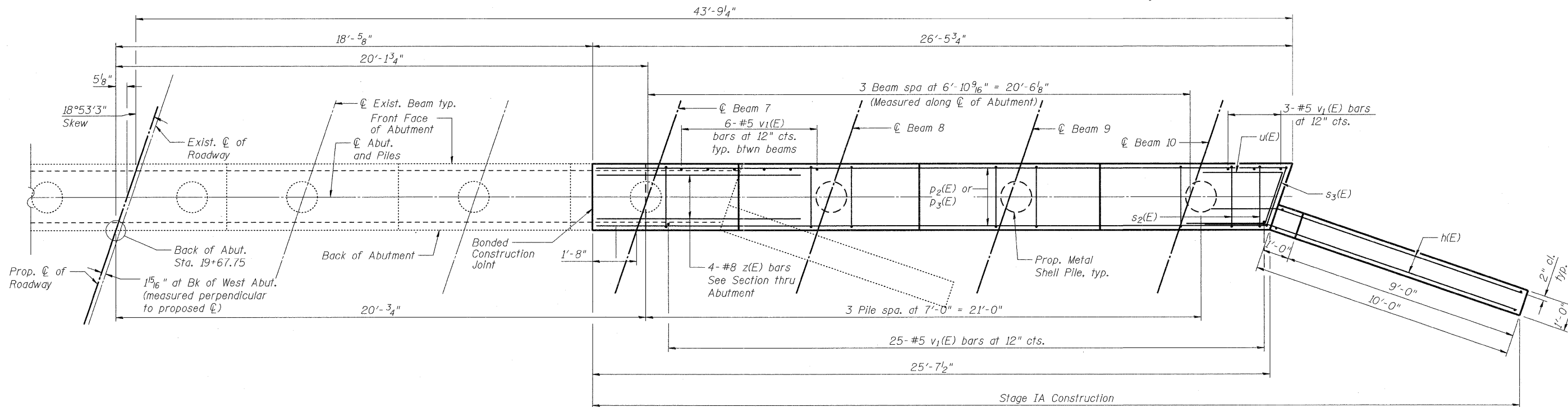
Notes:

Pour steps monolithically with cap.
 For details of piles see sheet S-39.
 Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
 All concrete edges shall have standard 3/4" chamfer.
 See sheet S-5 and S-6 for Concrete Removal details.



ELEVATION
 (Looking East)

* Elevations based on Existing Plans by Hazelet & Endal, Inc. Contractor to verify in field.



PLAN

MIN. BAR LAP
 #5 bar 2'-11"
 #8 bar 4'-8"



COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert F. G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/24/2011 10:02:22 AM
 FILE NAME: 071051-WB102.dgn
 PLOT TABLE: S-28
 PLOT DATE: 10/24/11

SEC Group, Inc.
 An IIT Group Company
 400 N. Front Street,
 Maitland, FL 32751-2139
 T: 813.385.1778 F: 813.385.1741
 www.secgroup.com
 Chicago, IL • Knoxville, TN • New Lenox, IL

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL 60606

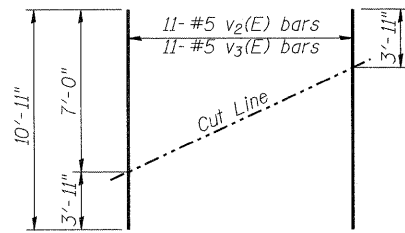
USER NAME = whood	DESIGNED - JPG	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT
STRUCTURE NO. 047-0051

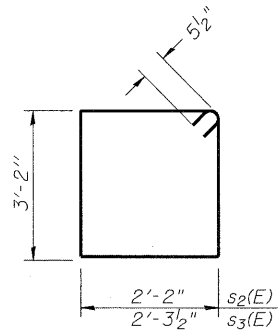
SHEET NO. S-28 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	278
			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

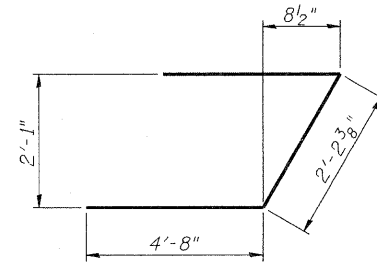


FIELD CUTTING DIAGRAM

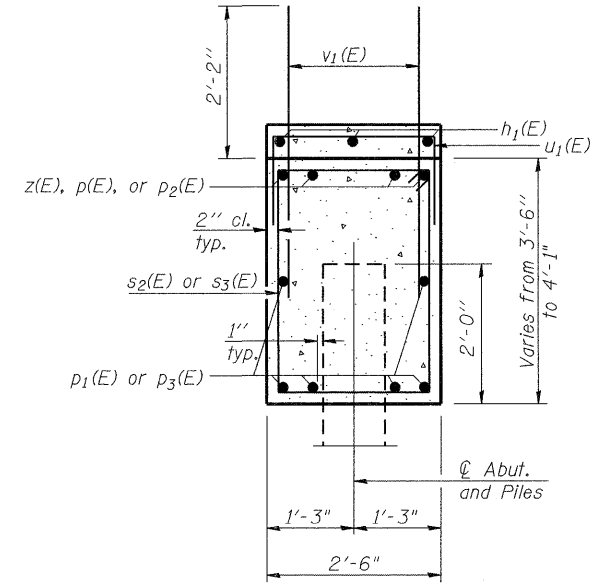
Order $v_2(E)$ and $v_3(E)$ full length.
Cut as shown and use remainder of bars in opposite face.



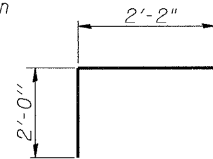
BARS $s_2(E)$ & $s_3(E)$



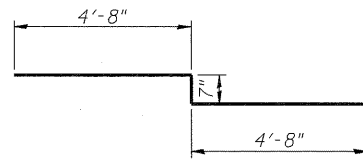
BAR $u(E)$



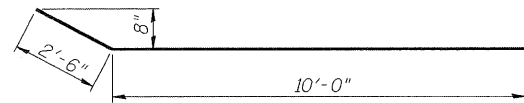
SEC. THRU ABUT.



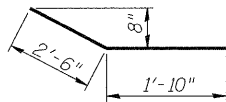
BAR $u_1(E)$



BAR $z(E)$



BAR $h(E)$



BAR $h_4(E)$

PILE DATA WEST ABUTMENT

Type: Metal Shell Piles 14"x0.312"
Nominal Required Bearing: 412 kips
Factored Resistance Available: 226 Kips
Est. Length: 28 Ft.
No. Production Piles: 4
No. Test Piles: 1

Note: Piles for the west abutment shall be driven through 18" to 24" precored holes extending 2' into the existing grade according to article 512.09 (c) of the Standard Specifications. Cost included in Driving Piles.

WEST ABUTMENT BILL OF MATERIALS

Bar	No.	Size	Length	Shape
$h(E)$	27	#5	12'-6"	—/
$h_1(E)$	3	#5	12'-0"	—/
$h_4(E)$	8	#5	4'-4"	—/
$p(E)$	4	#7	15'-0"	—/
$p_1(E)$	6	#7	12'-8"	—/
$p_2(E)$	4	#7	25'-5"	—/
$p_3(E)$	6	#7	24'-0"	—/
$s_2(E)$	35	#5	11'-7"	□
$s_3(E)$	2	#5	11'-10"	□
$u(E)$	8	#6	11'-7"	—/
$u_1(E)$	11	#4	6'-2"	□
$v_1(E)$	70	#5	4'-4"	—/
$v_2(E)$	11	#5	10'-11"	—/
$v_3(E)$	11	#5	10'-11"	—/
$v_7(E)$	3	#5	7'-1"	—/
$z(E)$	4	#8	9'-11"	—/
Structure Excavation		Cu. Yd.	100	
Concrete Structures		Cu. Yd.	16.3	
Reinforcement Bars, Epoxy Coated		Pound	2530	
Furnishing Metal Shell Piles, 14"x0.312"		Foot	112	
Driving Piles		Foot	112	
Test Pile Metal Shells		Each	1	

COMPANY NAME: SEC GROUP INC.
PROJECT CONTACT: Robert G. Davies
CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE PLOTTED: 10/14/2011 10:05:26 AM
PLOT NUMBER: 047-051-02103-099
PEN TABLE: Struct 20-34.tbl

SEC Group, Inc.
All IRI Great Company
401 N. Front Street
Moline, IL 61902-0208
L 815.385.1779 F 815.385.1781
www.secgroupinc.com
Chicago, IL • St. Louis, IL • New Lenox, IL • Chicago, IL

PB Americas, Inc.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL 60606

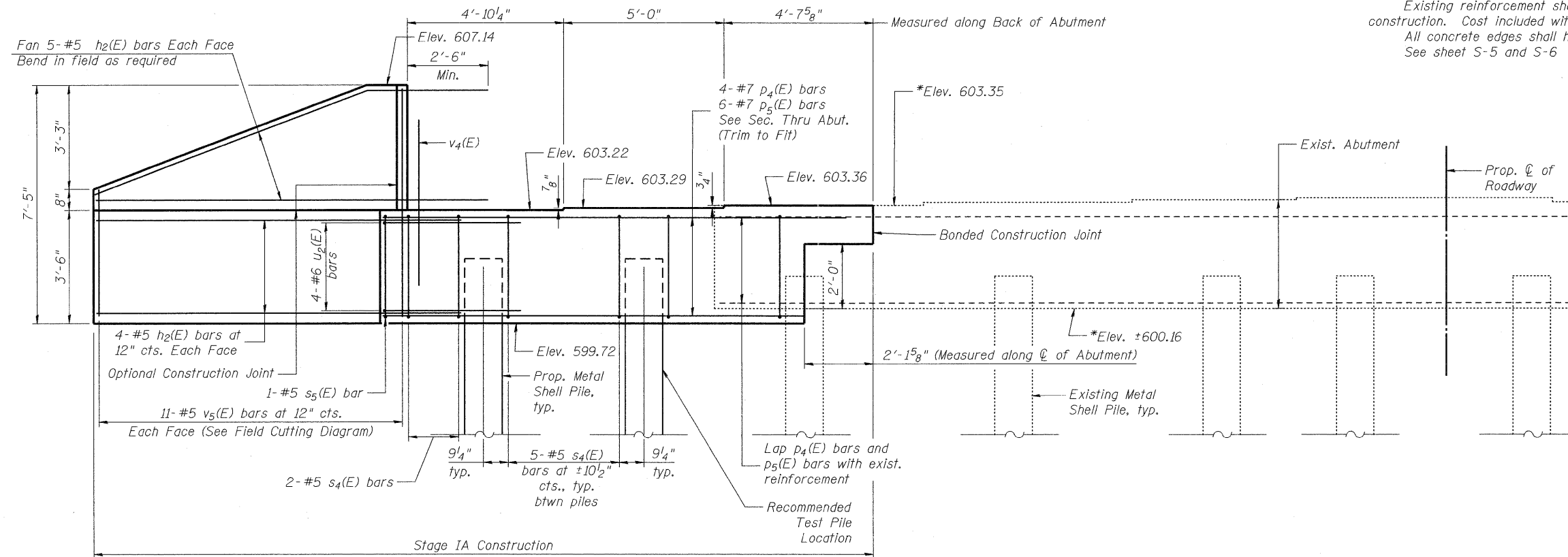
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PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST ABUTMENT DETAILS
STRUCTURE NO. 047-0051**
SHEET NO. S-29 OF S-43 SHEETS

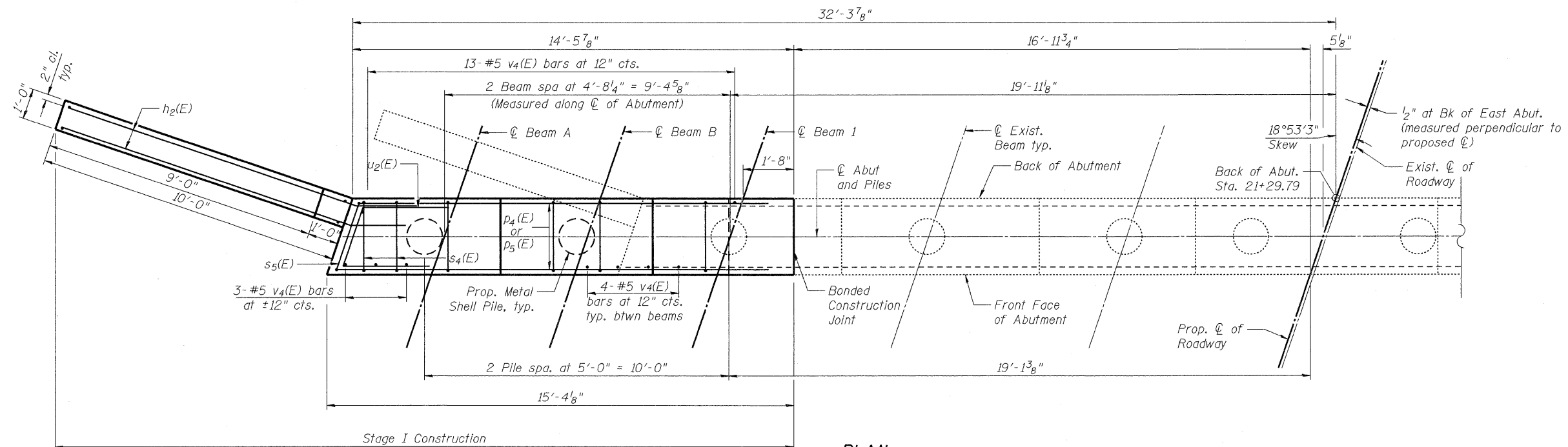
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	279
			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

Notes:
 Pour steps monolithically with cap.
 For details of piles see sheet S-39.
 Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
 All concrete edges shall have standard 3/4" chamfer.
 See sheet S-5 and S-6 for Concrete Removal details.



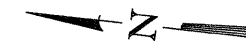
* Elevations based on Existing Plans by Hazelet & Endal, Inc. Contractor to verify in field.

ELEVATION
 (Looking East)



MIN. BAR LAP
 #5 bar 2'-11"
 #8 bar 4'-8"

PLAN



SEC GROUP, INC.
 PROJECT CONTACT: Robert G. Davies
 ILLINOIS DEPARTMENT OF TRANSPORTATION
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 FILE NAME: 07/26/14-14003 AM
 PLOT DATE: 07/26/14-14003 AM
 PEN TABLE: 22,34,151

SEC Group, Inc.
 An HR Group Company
 420 N. Front Street,
 Moline, IL 61704-2138
 T 815.385.1778 F 815.385.1781
 www.secgroup.com

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = whood
 PLOT SCALE =
 PLOT DATE = 18/14/2011

DESIGNED - JPG
 CHECKED - SSM
 DRAWN - WJH
 CHECKED - RGD

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT
STRUCTURE NO. 047-0051

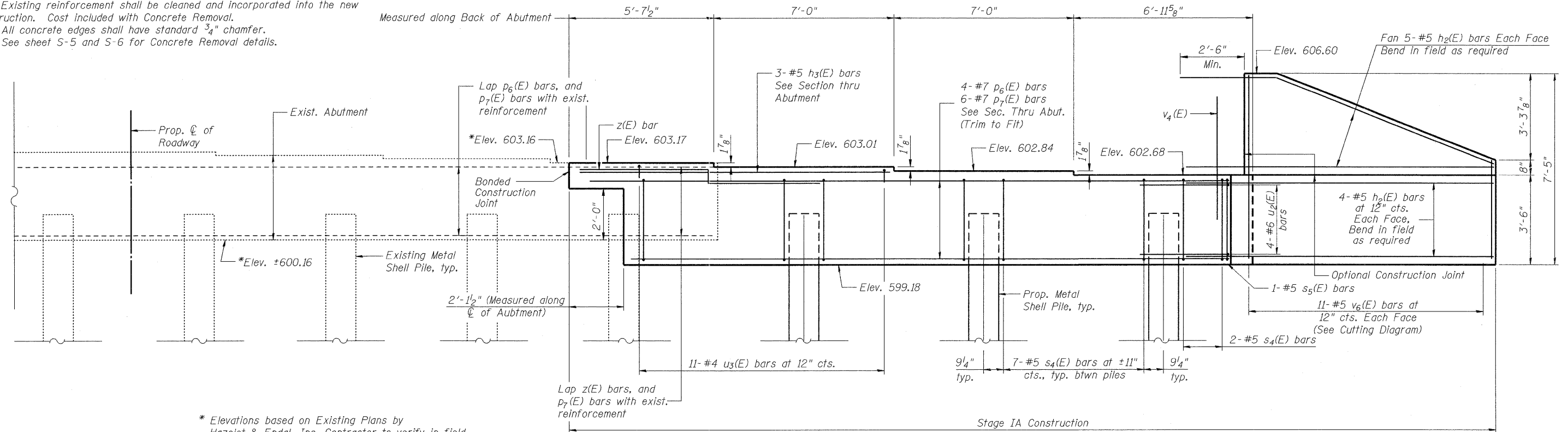
SHEET NO. S-30 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	280
CONTRACT NO. 66985				

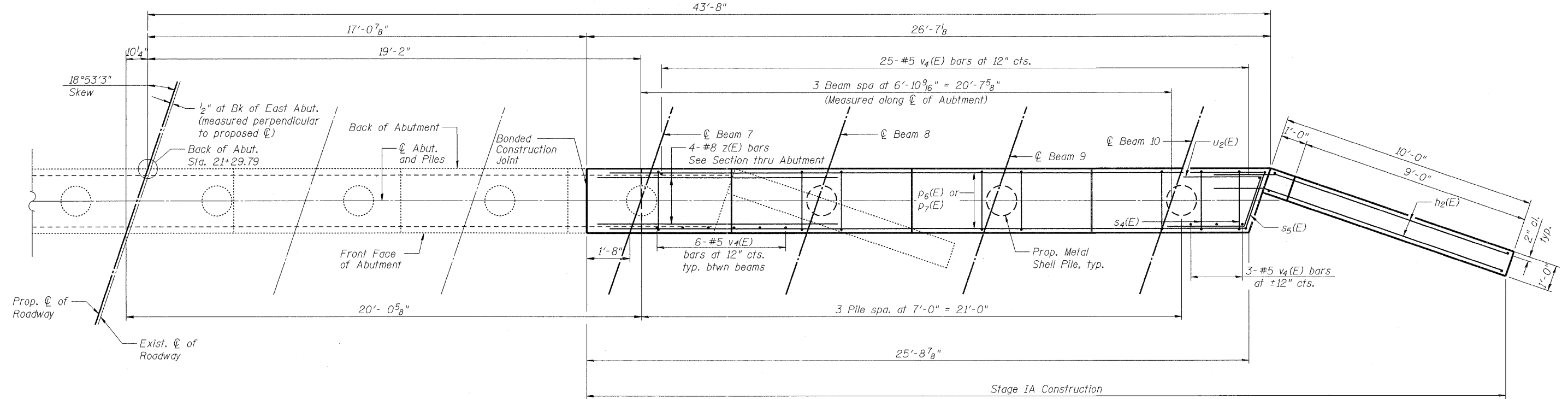
ILLINOIS FED. AID PROJECT

Notes:

See sheet S-4 for Concrete Removal details.
 Pour steps monolithically with cap.
 For details of piles see sheet S-39.
 Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
 All concrete edges shall have standard 3/4" chamfer.
 See sheet S-5 and S-6 for Concrete Removal details.

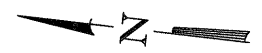


ELEVATION
(Looking East)



PLAN

MIN. BAR LAP
 #5 bar 2'-11"
 #8 bar 4'-8"



COMPANY NAME: SEC GROUP INC.
 PROJECT CONTACT: Robert G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/27/2011 10:03:33 AM
 FILE NAME: 1047-0051-001.dgn
 PLOT DRIVER: pdcfacit
 PEN TABLE: Struct_20x34.tbl

SEC Group, Inc.
 Illinois Professional Design Firm # 104-020106
 400 N. Front Street
 Naperville, IL 60563-2110
 L 630.385.7770 F 630.385.1781
 www.secgroupinc.com
 rdavies@secgroupinc.com alex.lerner@secgroupinc.com

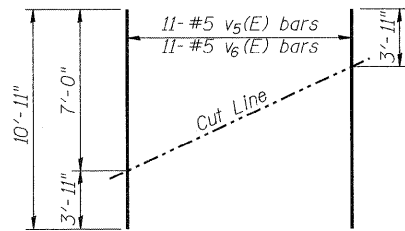
PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL 60606

USER NAME = whood	DESIGNED - JPG	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

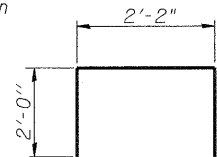
EAST ABUTMENT
STRUCTURE NO. 047-0051
 SHEET NO. S-31 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	281
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	

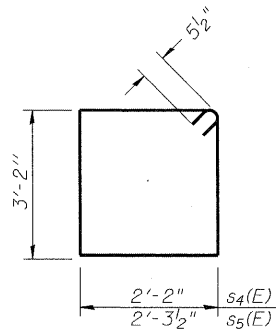


FIELD CUTTING DIAGRAM

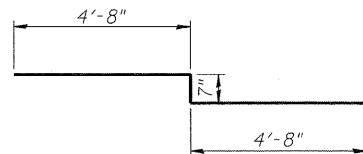
Order $v_5(E)$ and $v_6(E)$ full length.
Cut as shown and use remainder of bars in opposite face.



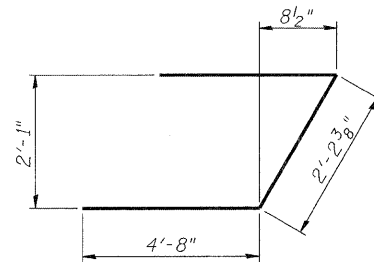
BAR $u_3(E)$



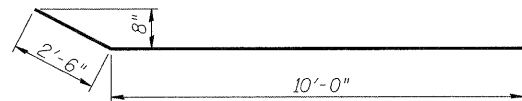
BARS $s_4(E)$ & $s_5(E)$



BAR $z(E)$



BAR $u_2(E)$

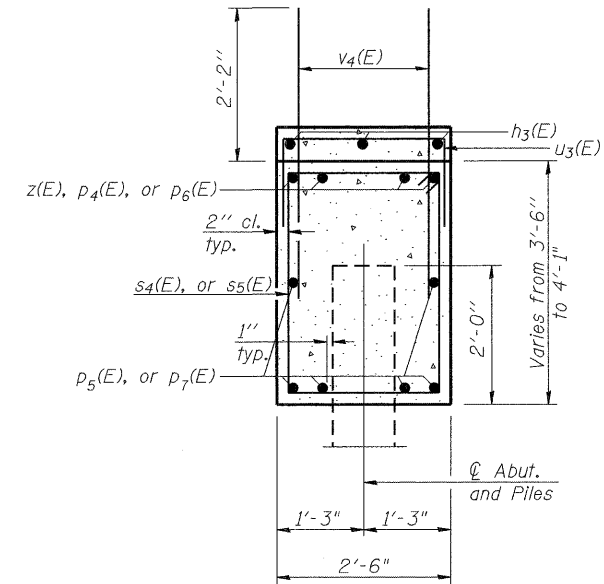


BAR $h_2(E)$

PILE DATA EAST ABUTMENT

Type: Metal Shell Piles 14"x0.312"
Nominal Required Bearing: 383 Kips
Factored Resistance Available: 211 Kips
Est. Length: 42 Ft.
No. Production Piles: 4
No. Test Piles: 1

Note: Piles for the east abutment shall be driven through 18" to 24" precored holes extending 2' into the existing grade according to article 512.09 (c) of the Standard Specifications. Cost included in Driving Piles.



SEC. THRU ABUT.

**EAST ABUTMENT
BILL OF MATERIALS**

Bar	No.	Size	Length	Shape
$h_2(E)$	36	#5	12'-6"	—/—
$h_3(E)$	3	#5	12'-0"	—/—
$p_4(E)$	4	#7	15'-0"	—/—
$p_5(E)$	6	#7	12'-8"	—/—
$p_6(E)$	4	#7	25'-5"	—/—
$p_7(E)$	6	#7	24'-0"	—/—
$s_4(E)$	35	#5	11'-7"	□
$s_5(E)$	2	#5	11'-10"	□
$u_2(E)$	8	#6	11'-7"	—/—
$u_3(E)$	11	#4	6'-2"	—/—
$v_4(E)$	70	#5	4'-4"	—/—
$v_5(E)$	11	#5	10'-11"	—/—
$v_6(E)$	11	#5	10'-11"	—/—
$z(E)$	4	#8	9'-11"	—/—
Structure Excavation			Cu. Yd.	100
Concrete Structures			Cu. Yd.	18
Reinforcement Bars, Epoxy Coated			Pound	2590
Furnishing Metal Shell Piles, 14"x0.312"			Foot	168
Driving Piles			Foot	168
Test Pile Metal Shells			Each	1

COMPANY NAME: SEC GROUP, INC.
PROJECT CONTACT: Robert G. Davies
CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE PLOTTED: 10/14/2011 10:03:57 AM
PLOT DRIVER: rgs-eb-rcs-001
PEN TABLE: 22x34.tbl

SEC Group, Inc.
A HOK Group Company
420 N. Front Street
Maitland, FL 32751-2138
T 813.385.1778 F 813.385.1781
www.secgroup.com

PB Americas, Inc.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - JPG	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EAST ABUTMENT DETAILS
STRUCTURE NO. 047-0051**

SHEET NO. S-32 OF S-43 SHEETS

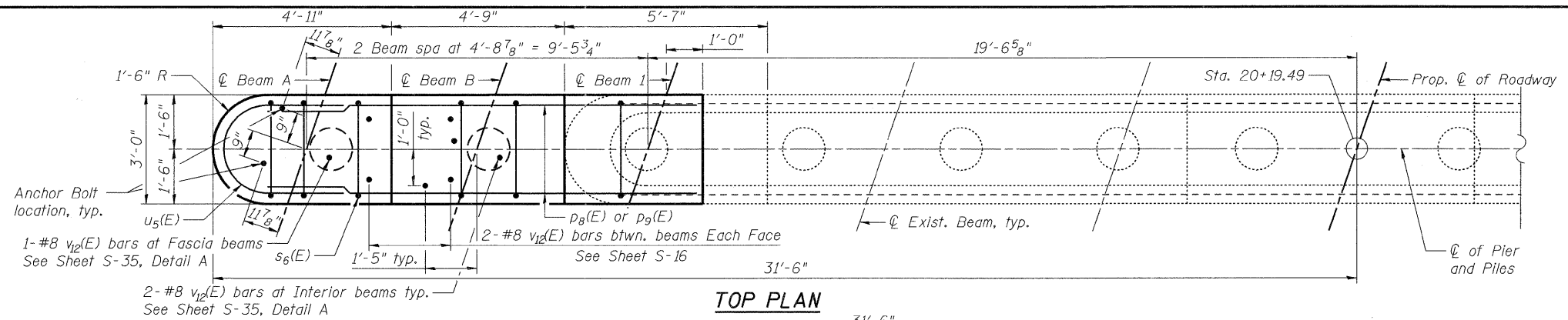
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	282
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	

Notes:

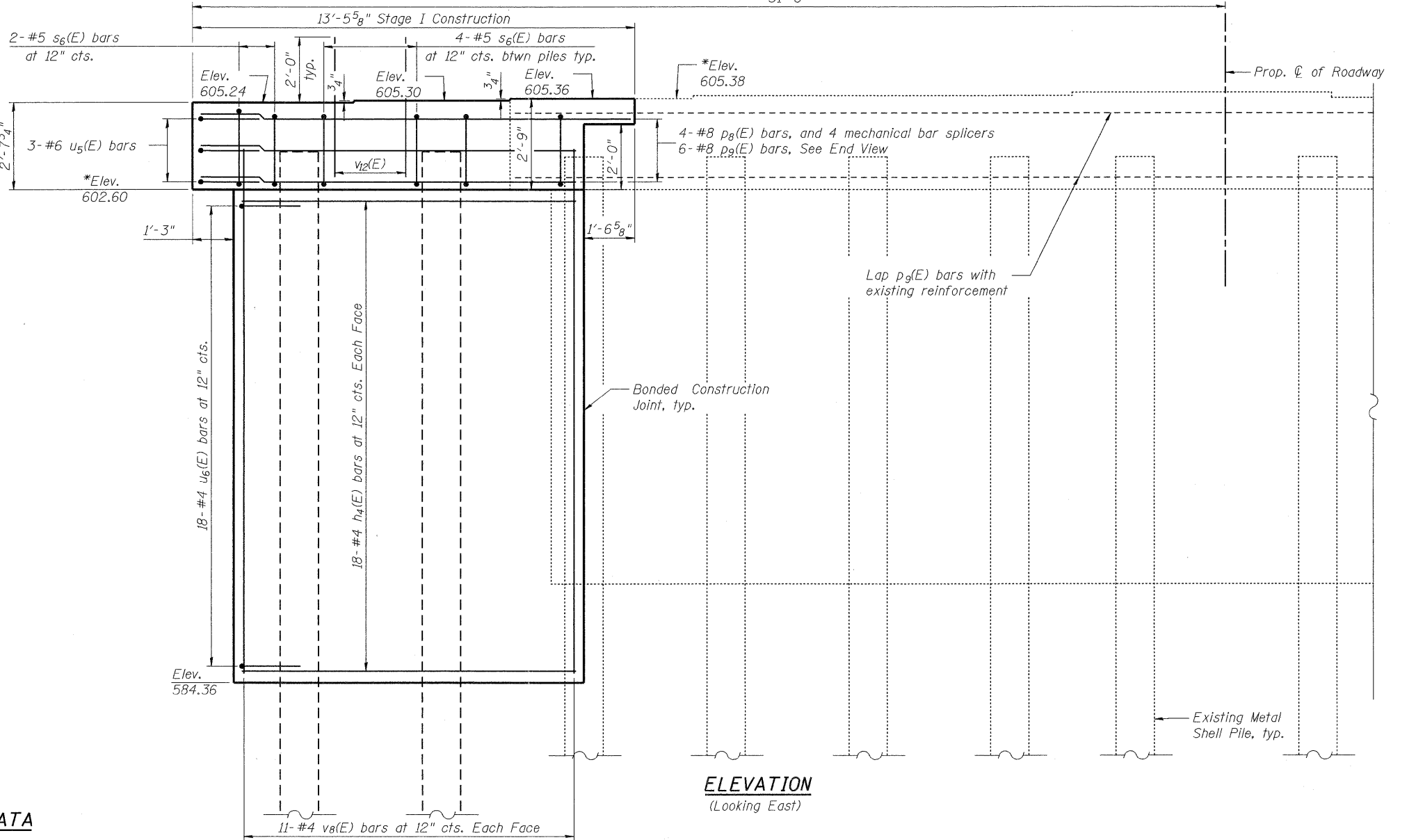
Space reinforcement in cap to miss anchor bolts.
 Four steps monolithically with cap.
 For details of piles, see sheet S-39.
 Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

See sheet S-5 and S-6 for Concrete Removal details.
 See sheet S-17 for details related to anchor bolts.

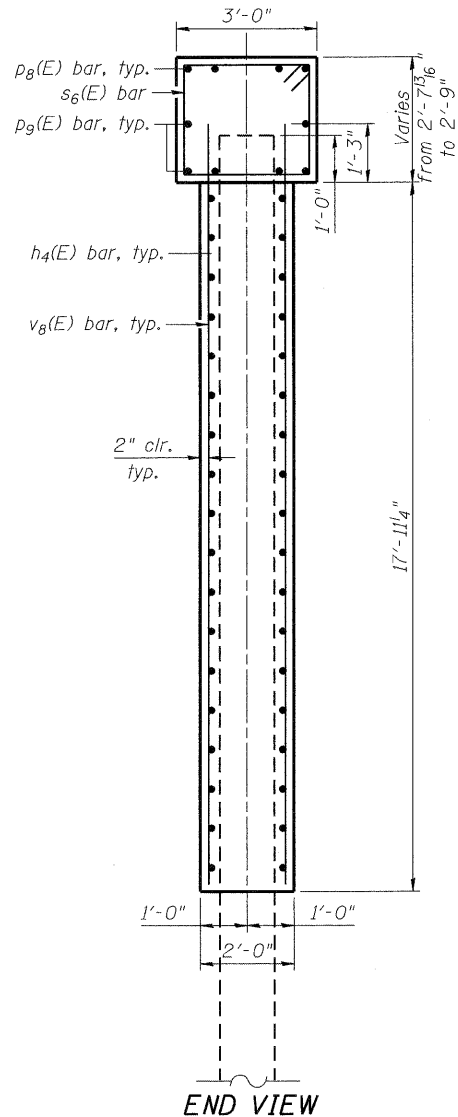
* Elevations based on Existing Plans by Hazelet & Endal, Inc. Contractor to verify in field.



TOP PLAN

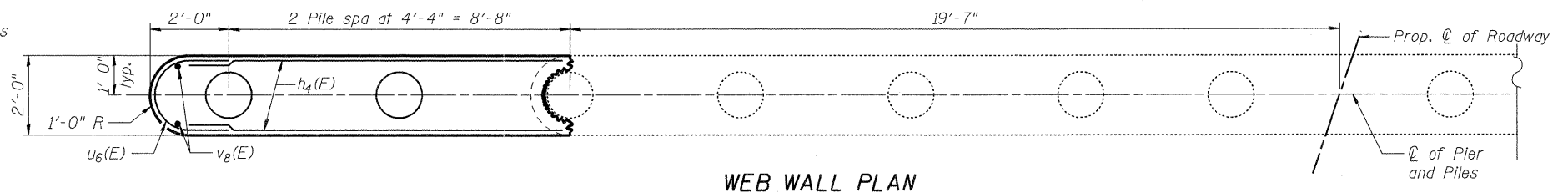


ELEVATION
(Looking East)



PILE DATA

Type: Metal Shell Piles 14"x0.312"
 Nominal Required Bearing: 469 Kips
 Factored Resistance Available: 209 Kips
 Est. Length: 35 Ft.
 No. Production Piles: 1
 No. Test Piles: 1



WEB WALL PLAN

COMPANY NAME: SEC GROUP INC.
 PROJECT CONTACT: Robert G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 11:03:41 AM
 PLOT DRIVER: C:\Program Files\Autodesk\AutoCAD 2011\Plot\Plotter\Plotter1010.dgn
 PEN TABLE: Structure_20x34.tbl



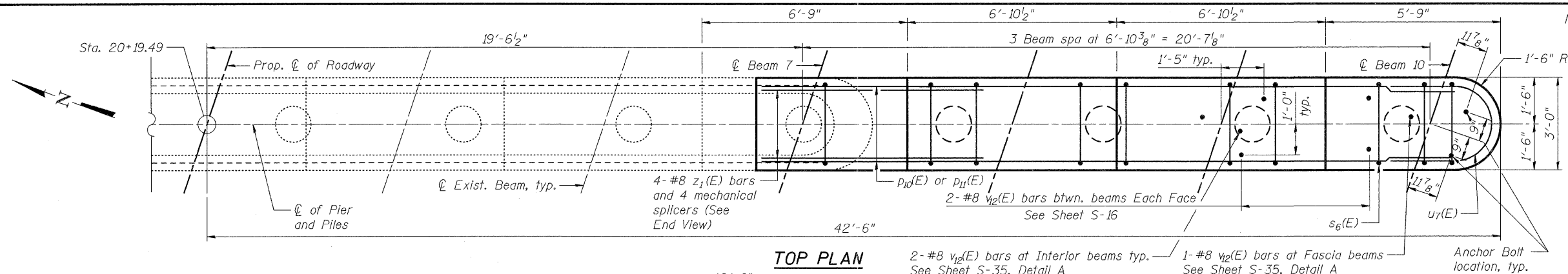
PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - JPG	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

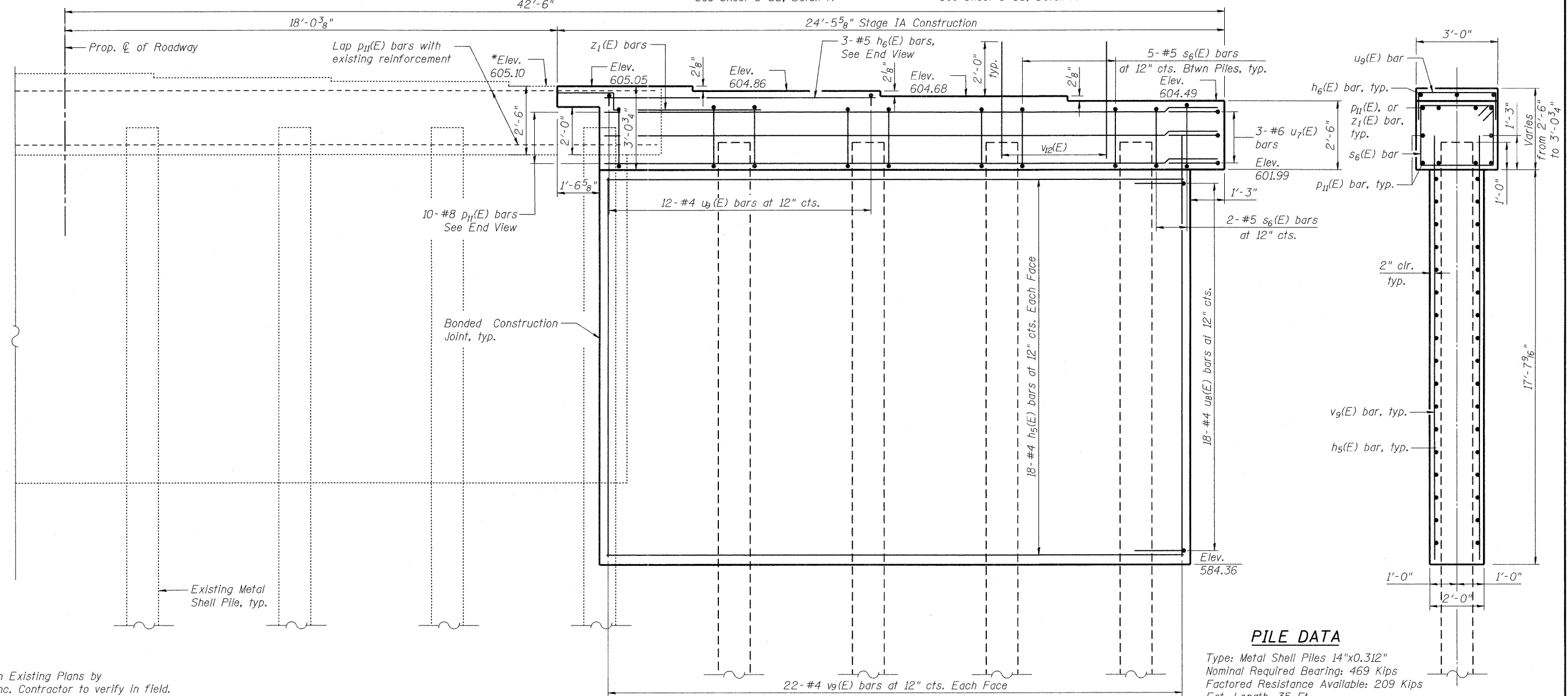
PIER 1
STRUCTURE NO. 047-0051
 SHEET NO. S-33 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	283
			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				



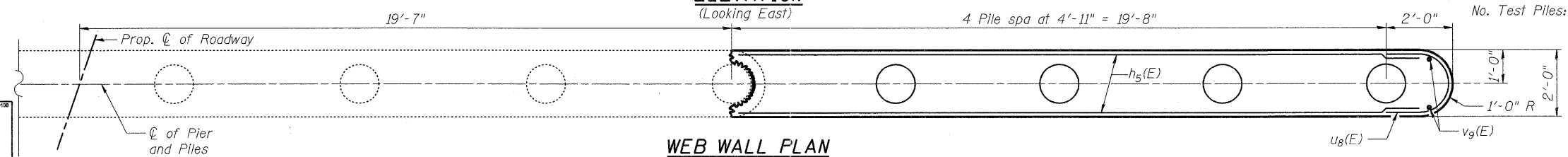
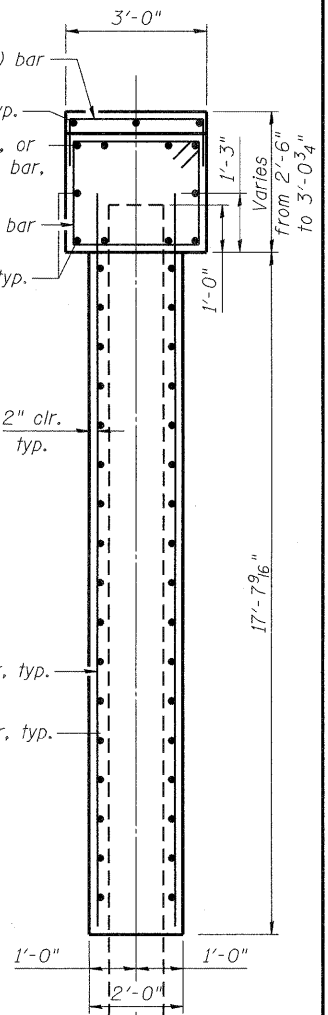
Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet S-39.
 Existing reinforcement shall be cleaned and incorporated into the new construction.
 Cost included with Concrete Removal.

See sheet S-5 and S-6 for Concrete Removal details.
 See sheet S-17 for details related to anchor bolts.



* Elevations based on Existing Plans by Hazelet & Endal, Inc. Contractor to verify in field.

PILE DATA
 Type: Metal Shell Piles 14"x0.312"
 Nominal Required Bearing: 469 Kips
 Factored Resistance Available: 209 Kips
 Est. Length: 35 Ft.
 No. Production Piles: 4
 No. Test Piles: 0



SEC Group, Inc.
 420 N. Front Street,
 Suite 900
 Chicago, IL 60606

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = whood
 DESIGNED - JPG
 CHECKED - SSM
 DRAWN - WJH
 CHECKED - RGD

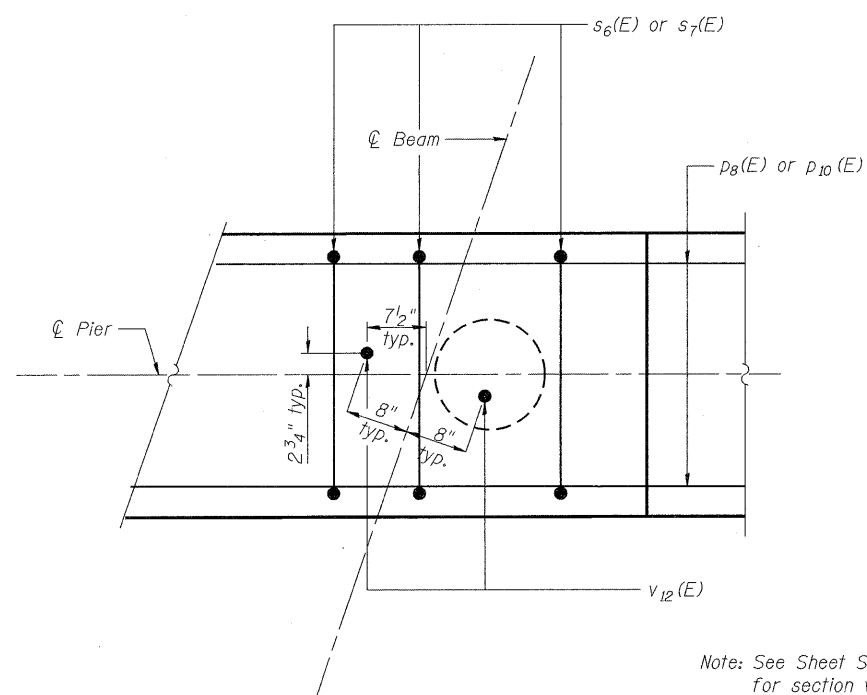
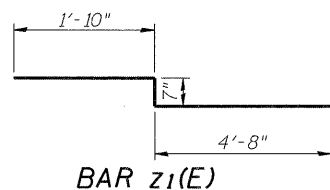
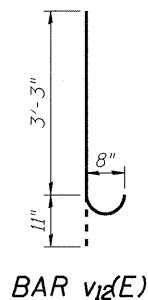
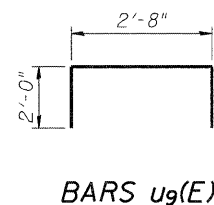
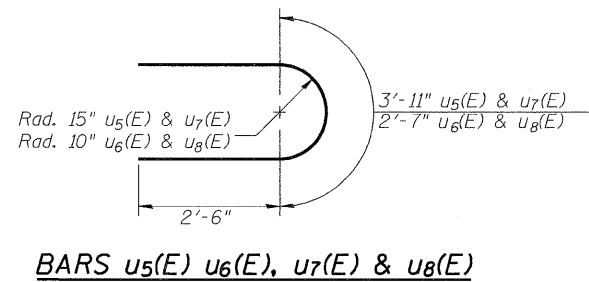
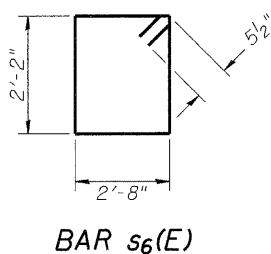
DESIGNED -
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REVISIONS:
 REVISION NO. | DATE | DESCRIPTION

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PIER 1
 STRUCTURE NO. 047-0051
 SHEET NO. S-34 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	284
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	



**BILL OF MATERIAL
PIER 1**

Bar	No.	Size	Length	Shape
$h_4(E)$	36	#4	10'-4"	—
$h_5(E)$	36	#4	21'-4"	—
$h_6(E)$	3	#5	11'-6"	—
$D_8(E)$	4	#8	13'-1"	—
$D_9(E)$	6	#8	11'-1"	—
$D_{11}(E)$	10	#8	22'-3"	—
$s_6(E)$	32	#5	10'-7"	□
$u_5(E)$	3	#6	8'-11"	U
$u_6(E)$	18	#4	7'-7"	U
$u_7(E)$	3	#6	8'-11"	U
$u_8(E)$	18	#4	7'-7"	U
$u_9(E)$	12	#4	6'-8"	U
$v_8(E)$	22	#4	19'-0"	—
$v_9(E)$	44	#4	18'-8"	—
$v_{12}(E)$	26	#8	4'-2"	U
$z_1(E)$	4	#8	7'-1"	—
Cofferdam Excavation		Cu. Yd.	88	
* Cofferdam (Type 2) (Location - 1)		Each	1	
* Cofferdam (Type 2) (Location - 2)		Each	1	
Concrete Structures		Cu. Yd.	53	
Seal Coat Concrete		Cu. Yd.	72	
Reinforcement Bars, Epoxy Coated		Pound	3,570	
Furnishing Metal Shell Piles, 14"x0.312"		Foot	175	
Driving Piles		Foot	175	
Mechanical Splicers		Each	8	
Test Pile Metal Shells		Each	1	

Notes:
For details of Mechanical Splicers, see sheet S-40

* Each location noted for Cofferdam (Type 2) is for one end of a pier.

COMPANY NAME: SEC GROUP, INC.
PROJECT CONTACT: Robert J. G. Davies
CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE PLOTTED: 10/24/2011 11:02:50 AM
PLOT DRIVERS: C:\Program Files\Autodesk\AutoCAD 2011\Plot\Plotter\Plotter01c.dgn
PEN TABLE: Struct_22x34.tbl

SEC Group, Inc.
An IBM Group Company
420 N. Front Street,
Moline, IL 61704-2138
T 815.385.1778 F 815.385.1781
www.secgroupinc.com
Chicago, IL • St. Louis, IL • New Lenox, IL • Chicago, IL

PB Americas, Inc.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL 60606

USER NAME = whood	DESIGNED - JPG	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

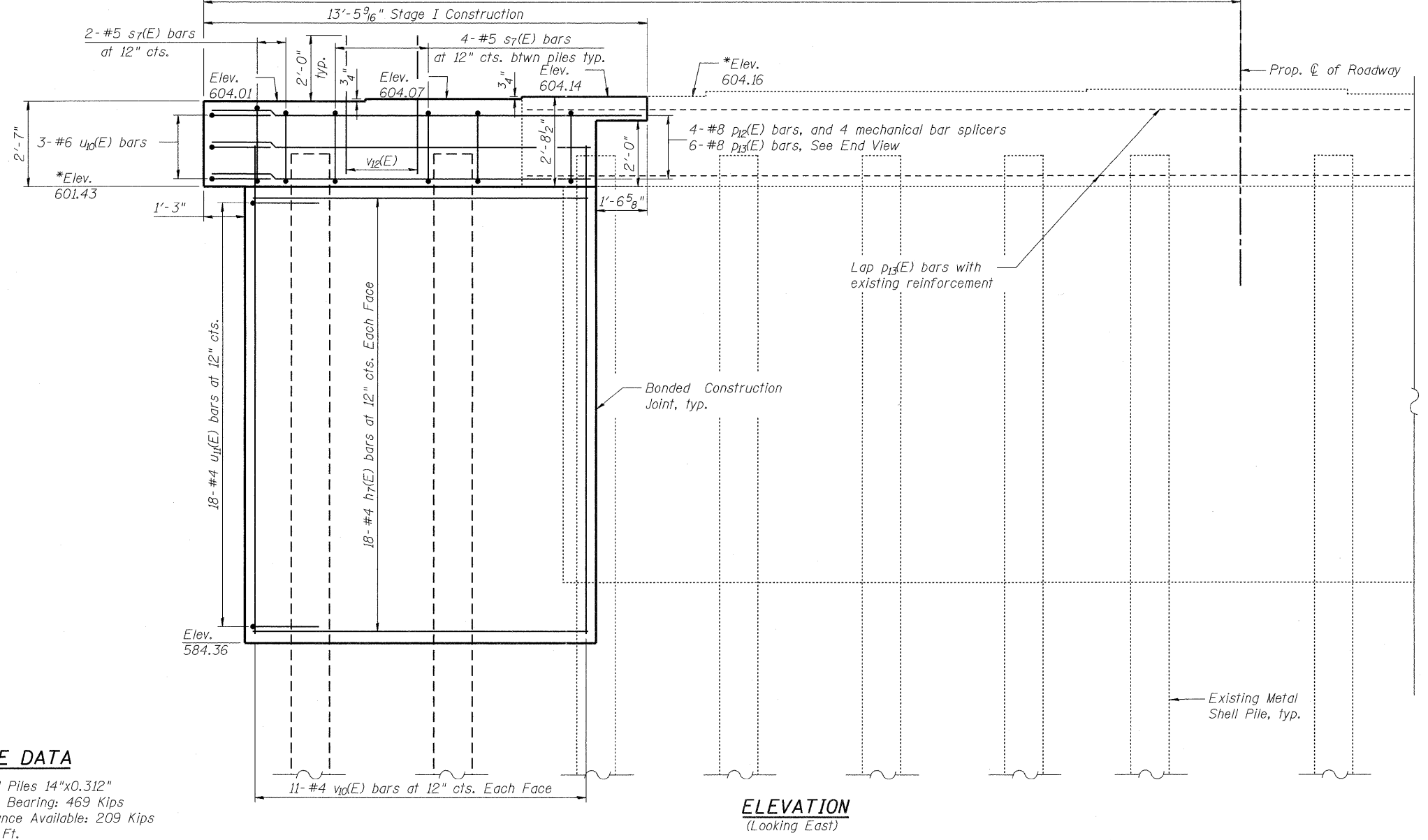
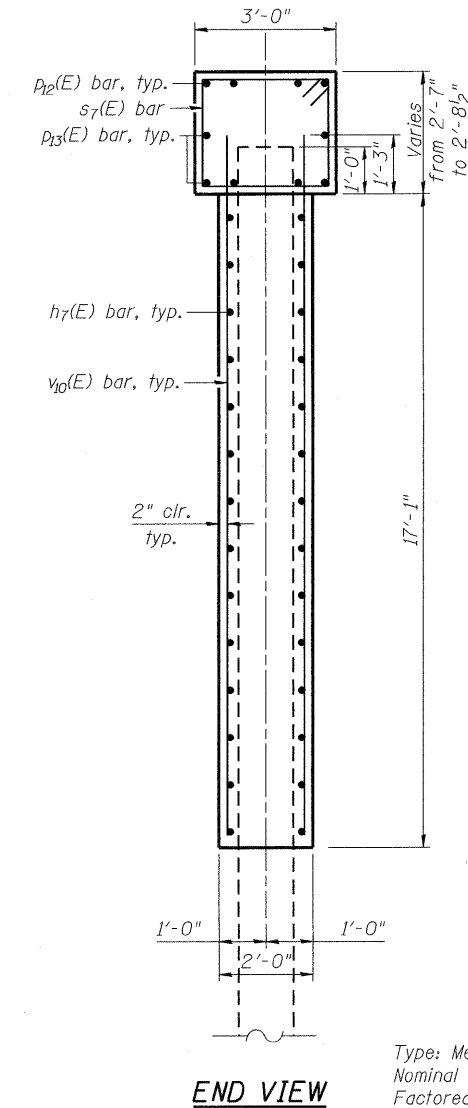
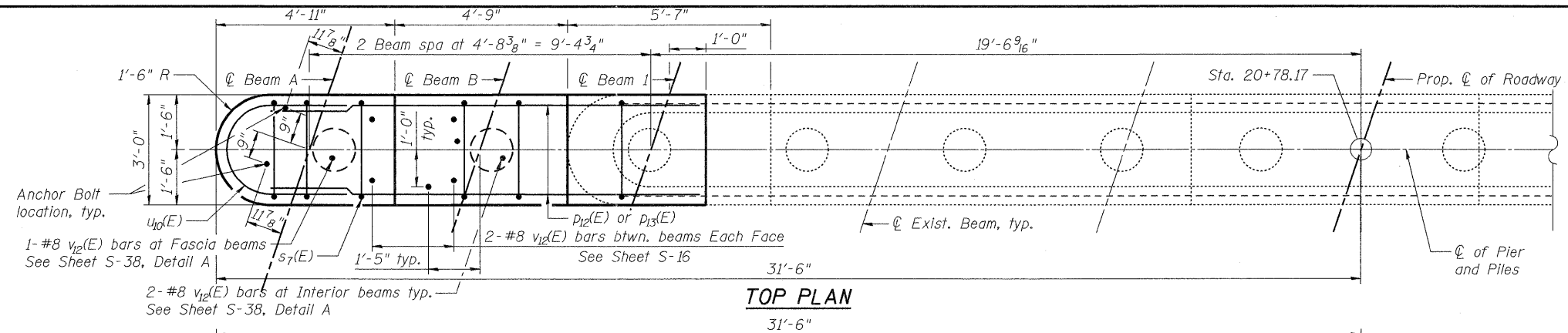
**PIER 1 DETAILS
STRUCTURE NO. 047-0051**
SHEET NO. S-35 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	285
			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

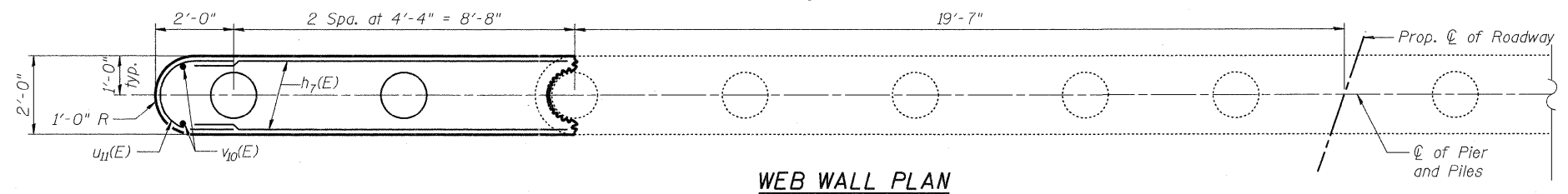
Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet S-39.
 Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

See sheet S-5 and S-6 for Concrete Removal details.
 See sheet S-17 for details related to anchor bolts.

* Elevations based on Existing Plans by Hazelet & Endal, Inc. Contractor to verify in field.



PILE DATA
 Type: Metal Shell Piles 14"x0.312"
 Nominal Required Bearing: 469 Kips
 Factored Resistance Available: 209 Kips
 Est. Length: 35 Ft.
 No. Production Piles: 2
 No. Test Piles: 0



COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert G. Davison
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 07/26/2011 10:05:55 AM
 PLOT BY: jh-merca-09n
 PEN TABLE: Defact
 STRUCT: 22x34.tbl

SEC Group, Inc.
 An HR Group Company
 420 N. Front Street
 Melrose, IL 60552-7258
 T 815.385.1778 F 815.385.1781
 www.secgroupinc.com
 *Illinois Lic. #043014264, New Lanark, IL, Chicago, IL

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL 60606

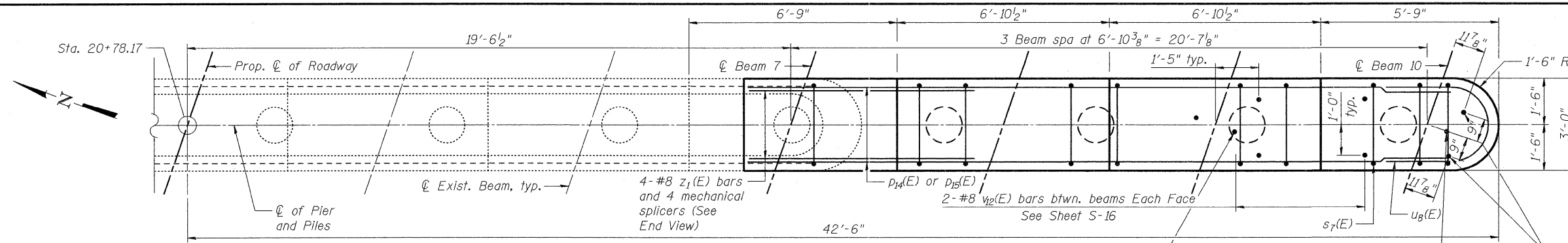
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 PLOT SCALE =
 PLOT DATE = 10/14/2011

DESIGNED - JPG	REVISIONS -
CHECKED - SSM	REVISIONS -
DRAWN - WJH	REVISIONS -
CHECKED - RGD	REVISIONS -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PIER 2
 STRUCTURE NO. 047-0051**
 SHEET NO. S-36 OF S-43 SHEETS

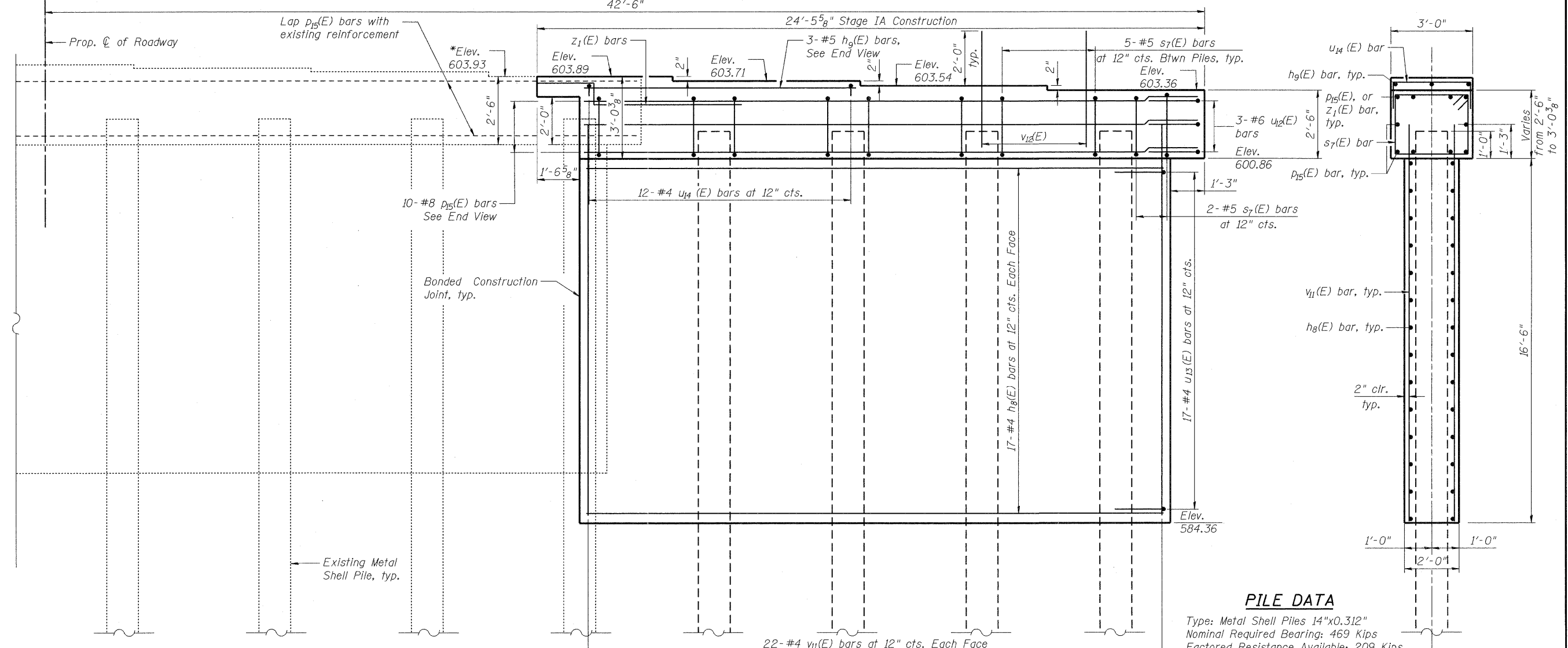
F.A.P. RTE. 591	SECTION 14BR-1	COUNTY KENDALL	TOTAL SHEETS 429	SHEET NO. 286
CONTRACT NO. 66985				
ILLINOIS FED. AID PROJECT				



Notes:
 Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.
 For details of piles, see sheet S-39.
 Existing reinforcement shall be cleaned and incorporated into the new construction.
 Cost included with Concrete Removal.

See sheet S-5 and S-6 for Concrete Removal details.
 See sheet S-17 for details related to anchor bolts.

TOP PLAN

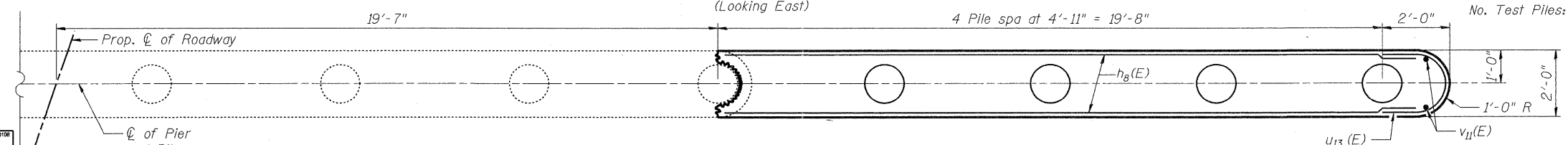


ELEVATION
(Looking East)

PILE DATA

Type: Metal Shell Piles 14"x0.312"
 Nominal Required Bearing: 469 Kips
 Factored Resistance Available: 209 Kips
 Est. Length: 35 Ft.
 No. Production Piles: 3
 No. Test Piles: 1

END VIEW



WEB WALL PLAN

* Elevations based on Existing Plans by Hazelet & Endal, Inc. Contractor to verify in field.

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: Robert G. Davies
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 07/22/2010 11:00 AM
 PLOT DEVICE: HP-GL/PS-Plotter
 PLOT TABLE: Struct_22x34.tbl

SEC Group, Inc.
 An HR Owen Company
 420 N. Front Street
 Moline, IL 61902-2138
 T 815.385.1778 F 815.385.1781
 www.secgroupinc.com
 Chicago, IL • St. Louis, MO • Kansas City, MO • Chicago, IL

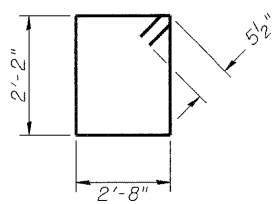
PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - JPG	REVISED -
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PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

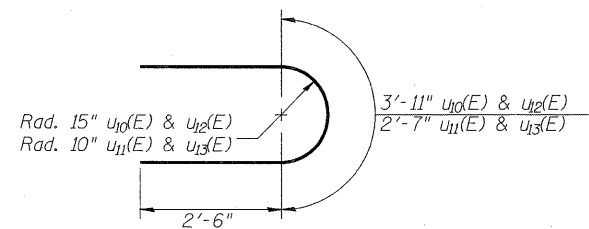
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2
STRUCTURE NO. 047-0051
 SHEET NO. S-37 OF S-43 SHEETS

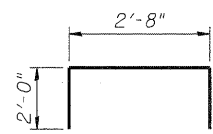
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	287
			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				



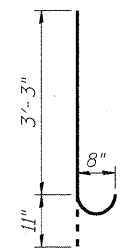
BAR $s_7(E)$



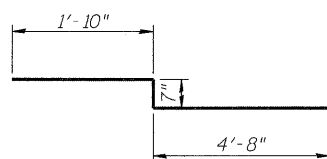
BARS $u_{10}(E)$, $u_{11}(E)$, $u_{12}(E)$ & $u_{13}(E)$



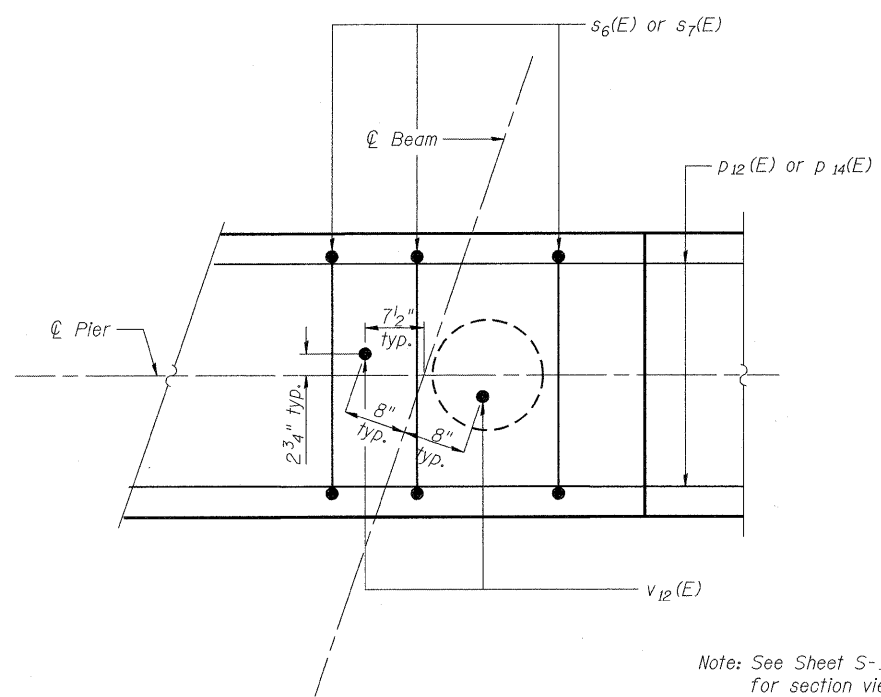
BAR $u_{14}(E)$



BAR $v_{11}(E)$



BAR $z_1(E)$



Note: See Sheet S-16 for section view

DETAIL A

**BILL OF MATERIAL
PIER 2**

Bar	No.	Size	Length	Shape
$h_T(E)$	36	#4	10'-4"	—
$h_B(E)$	34	#4	21'-4"	—
$h_B(E)$	3	#5	11'-6"	—
$D_{12}(E)$	4	#8	13'-1"	—
$D_{13}(E)$	6	#8	11'-1"	—
$D_{15}(E)$	10	#8	22'-3"	—
$s_7(E)$	32	#5	10'-7"	□
$u_{10}(E)$	3	#6	8'-11"	U
$u_{11}(E)$	18	#4	7'-7"	U
$u_{12}(E)$	3	#6	8'-11"	U
$u_{13}(E)$	17	#4	7'-7"	U
$u_{14}(E)$	12	#4	6'-8"	U
$v_{10}(E)$	22	#4	18'-2"	—
$v_{11}(E)$	44	#4	17'-7"	—
$v_{12}(E)$	26	#8	4'-2"	—
$z_1(E)$	4	#8	7'-1"	—
Cofferdam Excavation			Cu. Yd.	88
* Cofferdam (Type 2) (Location - 3)			Each	1
* Cofferdam (Type 2) (Location - 4)			Each	1
Concrete Structures			Cu. Yd.	50
Seal Coat Concrete			Cu. Yd.	72
Reinforcement Bars, Epoxy Coated			Pound	3,490
Furnishing Metal Shell Piles, 14"x0.312"			Foot	175
Driving Piles			Foot	175
Mechanical Splicers			Each	8
Test Pile Metal Shells			Each	1

Notes:
For details of Mechanical Splicers, see sheet S-40

* Each location noted for Cofferdam (Type 2) is for one end of a pier.

COMPANY NAME: SEC GROUP, INC.
PROJECT CONTACT: Robert G. Davies
CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE PLOTTED: 10/12/2011 11:14:03 AM
FILE NAME: 0470051-Pier 02L.dgn
PLOT DATE: 10/12/2011
REV. TABLE: Structure: 22-34.1b1



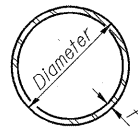
PB Americas, Inc.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - JPG	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

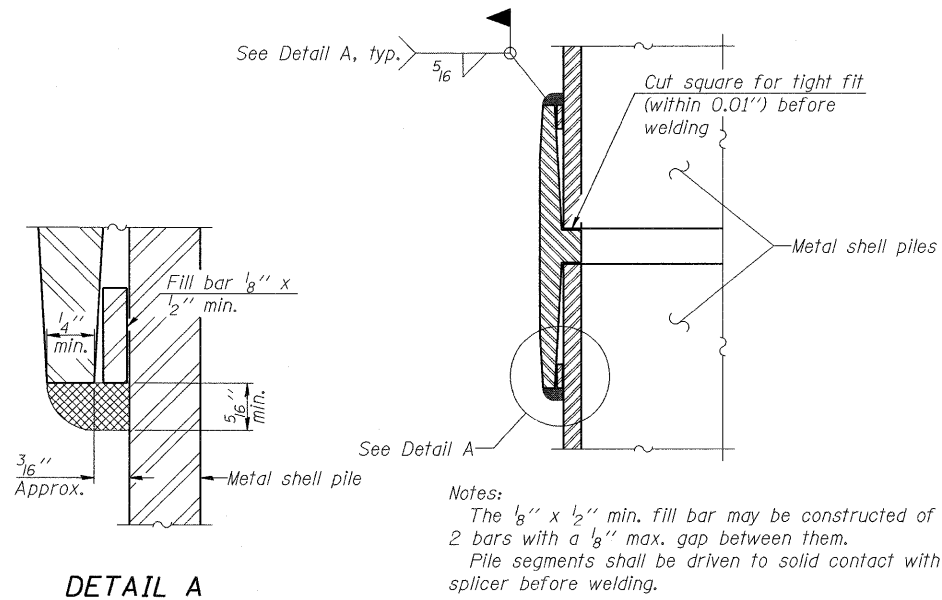
**PIER 2 DETAILS
STRUCTURE NO. 047-0051**
SHEET NO. S-38 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	288
			CONTRACT NO. 66985	
[ILLINOIS] FED. AID PROJECT				



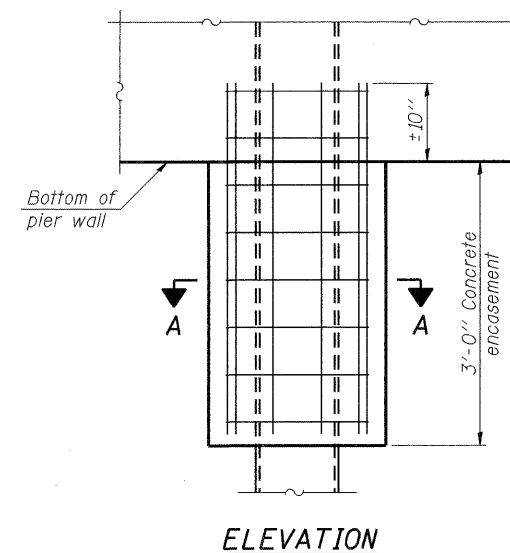
METAL SHELL PILE TABLE

Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361

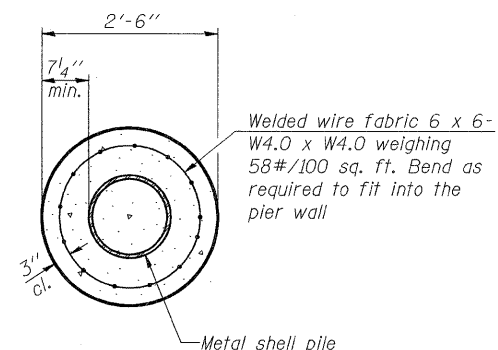


Notes:
 The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
 Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



ELEVATION

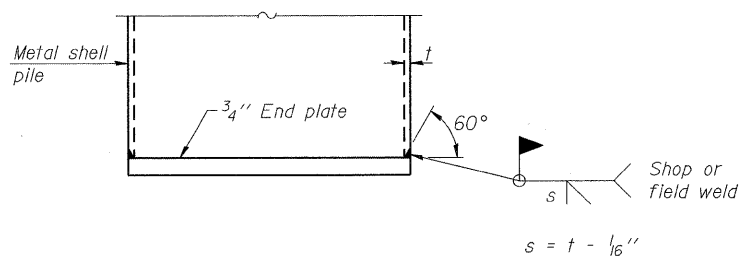


SECTION A-A

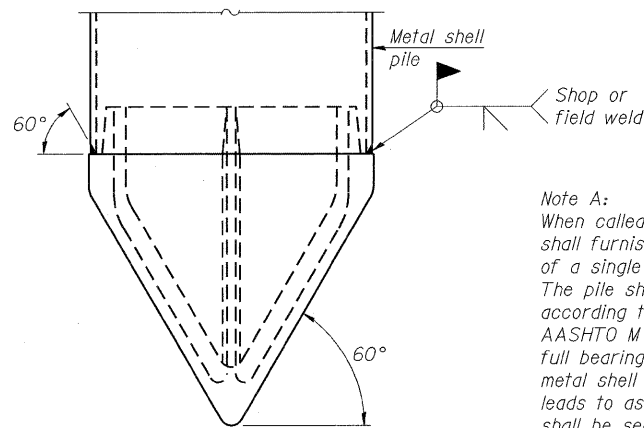
Note:
 Forms for encasement may be omitted when soil conditions permit.

CONCRETE ENCASEMENT AT PIERS

"NOT USED"



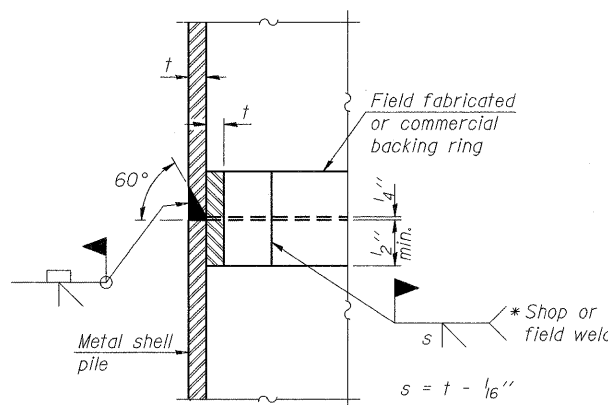
END PLATE ATTACHMENT



METAL SHELL PILE SHOE ATTACHMENT

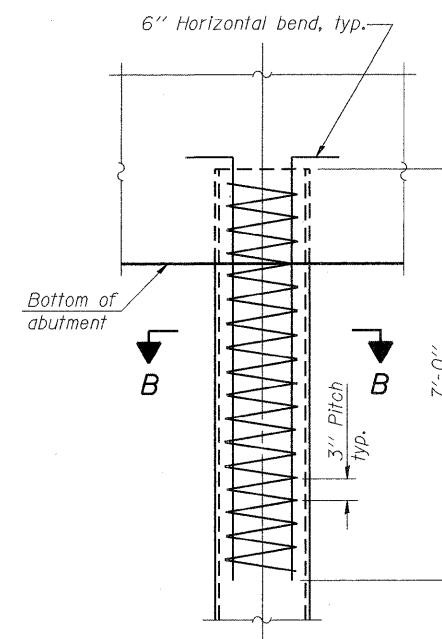
(See Note A)

Note A:
 When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.



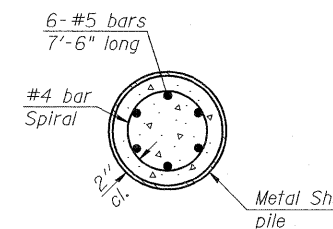
COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION

METAL SHELL REINFORCEMENT AT ABUTMENTS



SECTION B-B

Note:
 The metal shell piles shall be according to ASTM A 252 Grade 3.

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: ROBERT G. DAVIES
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 11:10:05 AM
 FILE NAME: 0470051-MSS-001
 PEN: JWB
 PEN TABLE: STRUCT_22x34.rvt

F-MS 7-1-10



PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

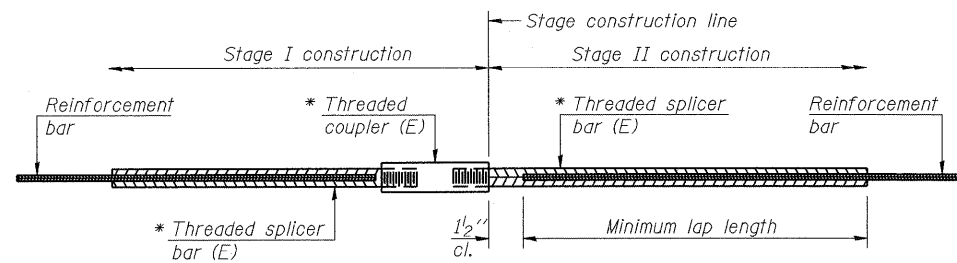
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PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**METAL SHELL PILES
 STRUCTURE NO. 047-0051**

SHEET NO. S-39 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	289
			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				



STANDARD BAR SPLICER ASSEMBLY

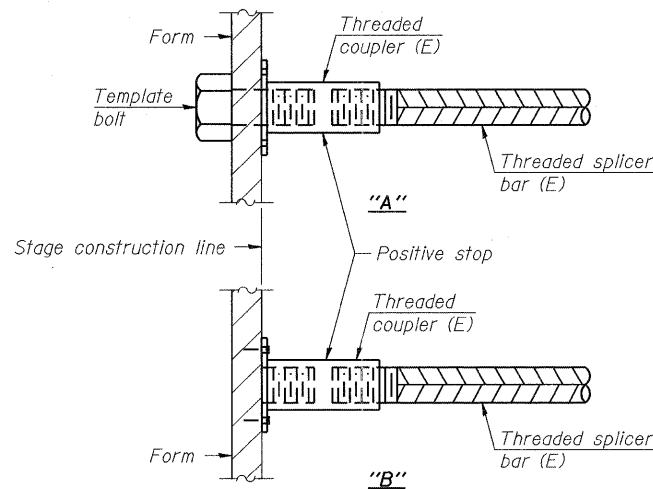
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1/2" + thread length

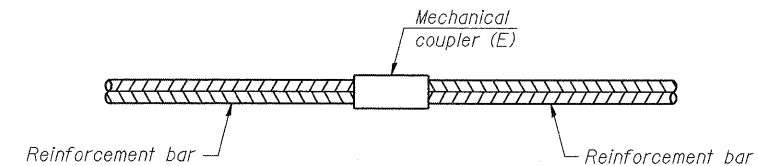
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
W. Approach Slab	#4	50	2'-1"
W. Approach Slab	#5	172	2'-7"
E. Approach Slab	#4	50	2'-1"
E. Approach Slab	#5	172	2'-7"



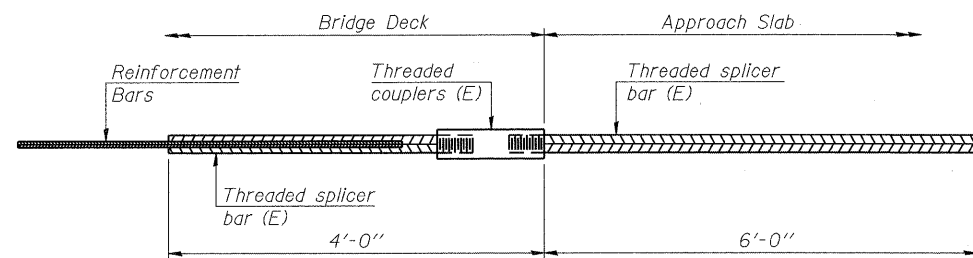
INSTALLATION AND SETTING METHODS

"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.



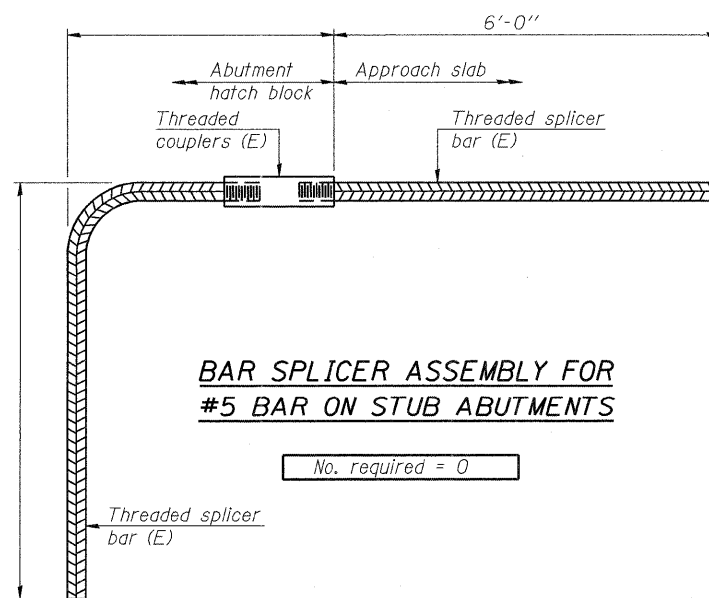
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Pier 1	#8	8
Pier 2	#8	8



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 88



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 0

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

COMPANY NAME: SEC GROUP, INC.
 PROJECT CONTACT: ROBERT T. G. DAVIES
 CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
 DATE PLOTTED: 10/14/2011 11:09 AM
 FILE NAME: 0470047-bld.dgn
 PLOT NUMBER: 0470047
 PEN TABLE: STRUCT_22,34,41

BSD-1 7-1-10

SEC Group, Inc.
 An IRI Group Company
 420 N. First Street,
 Melrose, IL 62562-2136
 T 815.385.1778 F 815.385.1781
 www.secgroup.com

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 900
 CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

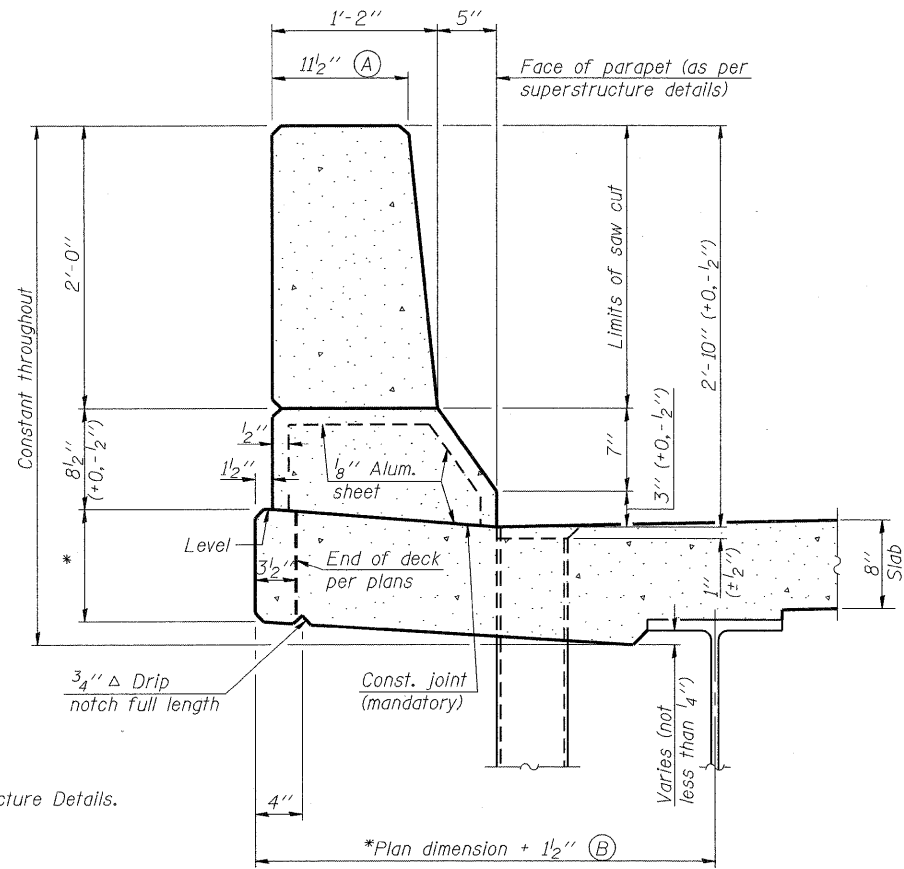
**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICERS DETAILS
 STRUCTURE NO. 047-0051**

SHEET NO. S-40 OF S-43 SHEETS

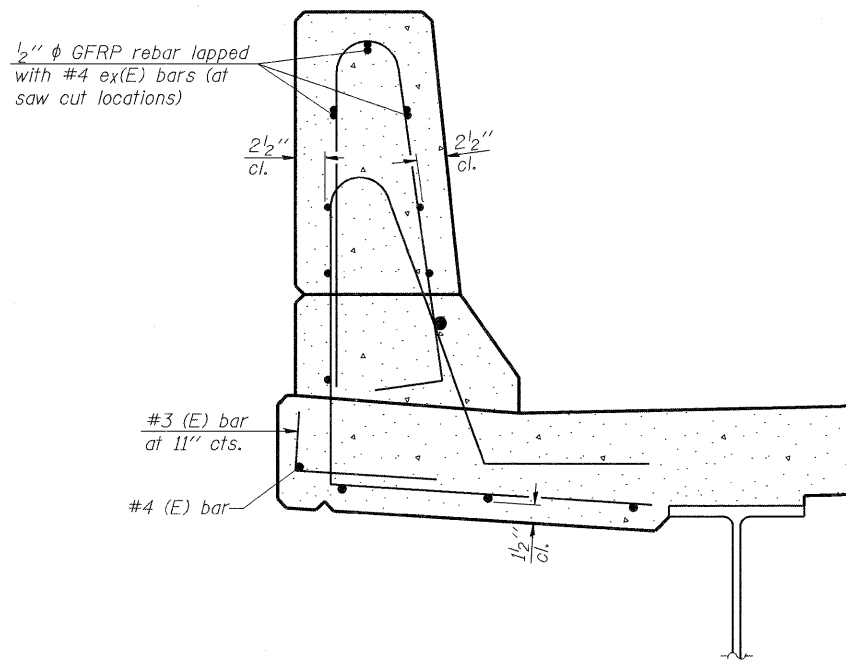
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	290

CONTRACT NO. 66985

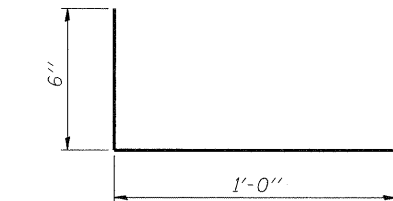
ILLINOIS FED. AID PROJECT



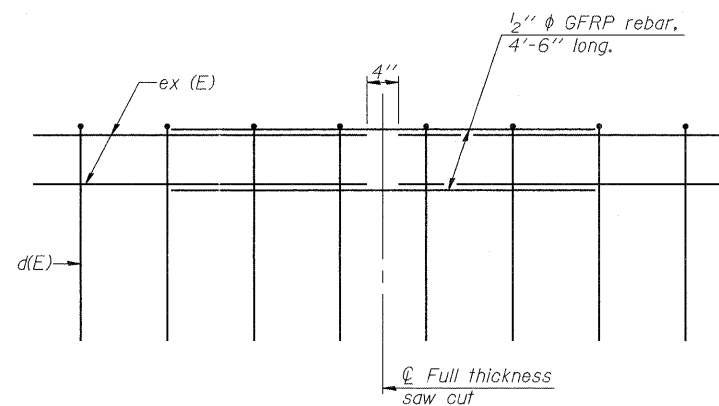
SECTION
(Showing dimensions)



SECTION
(Showing reinforcement clearances for slip forming and additional reinforcement bars)



#3 (E) BAR



GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section at each parapet joint location.)

GENERAL NOTES

All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. of parapet.
Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.
Steel superstructure shown. Other superstructure types similar.

* See Superstructure Details.

COMPANY NAME: SEC GROUP, INC.
PROJECT CONTACT: ROBERT G. DAVIES
CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE PLOTTED: 10/14/2011 10:13 AM
FILE NAME: 0470051-02a.dgn
PLOT DATE: 10/14/2011
PEN TABLE: SFP-34.tbl

SFP-34 7-1-10



PB Americas, Inc.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL. 60606

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PLOT DATE = 10/14/2011	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 047-0051

SHEET NO. S-41 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	291
			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				



SOIL BORING LOG

Page 1 of 2

Date 7/1/88

ROUTE FAP591 (US 34) DESCRIPTION Rt 34 over Big Rock Creek LOGGED BY K Whittington

SECTION 14BR-1 LOCATION SW 1/4, SEC. 23, TWP. 37N, R1NG. 06E, 3rd PM

COUNTY Kendall DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	BORING NO. Station Offset Ground Surface Elev.	DEPTH (ft)	BLOW COUNT (ft)	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SURFACE WATER ELEV. Stream Bed Elev.	GROUNDWATER ELEV. First Encounter Upon Completion After Hrs.	SPT (blows)	UCS (psi)	MOISTURE CONTENT (%)
047-0088 (Prop.) 047-0051 (Exist.) 172+32.5	0066-B1 (W. Abut.) 19+14.96 26.00ft RL 611				Surface Water Elev. Stream Bed Elev.					
					Groundwater Elev. First Encounter Upon Completion After Hrs.					
					Loose, brown gray, cohesive, Sand (continued)	590.50				
					Medium, Sand and Gravel					
					Medium, brown, CA06 Gravel- fill	808.50				
					Very stiff, brown, Silty Clay Loam with Gravel	601.50				
					Dense, brown, Sand and Gravel	583.00				
					33'-50' sample intervals- washed					
					Medium, brown, Sandy Loam with 3" of Gravel at 15.5'	585.50				
					Loose, brown gray, cohesive, Sand	594.60				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Page 2 of 2

Date 7/1/88

ROUTE FAP591 (US 34) DESCRIPTION Rt 34 over Big Rock Creek LOGGED BY K Whittington

SECTION 14BR-1 LOCATION SW 1/4, SEC. 23, TWP. 37N, R1NG. 06E, 3rd PM

COUNTY Kendall DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	BORING NO. Station Offset Ground Surface Elev.	DEPTH (ft)	BLOW COUNT (ft)	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SURFACE WATER ELEV. Stream Bed Elev.	GROUNDWATER ELEV. First Encounter Upon Completion After Hrs.	SPT (blows)	UCS (psi)	MOISTURE CONTENT (%)
047-0088 (Prop.) 047-0051 (Exist.) 172+32.5	0066-B1 (W. Abut.) 19+14.96 26.00ft RL 611				Surface Water Elev. Stream Bed Elev.					
					Groundwater Elev. First Encounter Upon Completion After Hrs.					
					Dense, brown, Sand and Gravel					
					30'-55' sample intervals- washed (continued)					
					End of Boring	564.60				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Page 1 of 2

Date 7/9/00

ROUTE FAP591 (US 34) DESCRIPTION Rt 34 over Big Rock Creek LOGGED BY K Whittington

SECTION 14BR-1 LOCATION SW 1/4, SEC. 23, TWP. 37N, R1NG. 06E, 3rd PM

COUNTY Kendall DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	BORING NO. Station Offset Ground Surface Elev.	DEPTH (ft)	BLOW COUNT (ft)	UNIFIED SOIL CLASSIFICATION	DESCRIPTION	SURFACE WATER ELEV. Stream Bed Elev.	GROUNDWATER ELEV. First Encounter Upon Completion After Hrs.	SPT (blows)	UCS (psi)	MOISTURE CONTENT (%)
047-0088 (Prop.) 047-0051 (Exist.) 172+32.5	0066-B2 (E. Abut.) 21+90.89 16.00ft Lt. 605				Surface Water Elev. Stream Bed Elev.					
					Groundwater Elev. First Encounter Upon Completion After Hrs.		595.0			
					Augered, shoulder stone					
					Medium, brown, Sand and Gravel Gravel is rounded to angular Augered Gravel up to 2 1/2"					
					Free water at 20.0'					
					Medium, brown, Barry, Gravel- fill	802.50				
					25'-45' sample intervals- washed 40' sample interval- no recovery (continued)					
					Soft, black, Silty Clay	596.00				
					Very soft, brown, Loam	593.00				
					Medium, brown, Sand and Gravel Gravel is rounded to angular Augered Gravel up to 2 1/2"	591.50				
					Free water at 20.0'					
					25'-45' sample intervals- washed 40' sample interval- no recovery					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

COMPANY NAME: SEC GROUP, INC.
PROJECT CONTACT: Robert G. Davies
CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE PLOTTED: 10/14/2001 11:42:50 AM
FILE NAME: 0470051-SE01.dgn
PLOT DRIVER: PLOTDRIVER
PEN TABLE: S:\PROJECT\22-34.tbl



PB Americas, Inc.
230 WEST MONROE STREET,
SUITE 900
CHICAGO, IL. 60606

USER NAME = whood	DESIGNED - MGH	REVISED -
PLOT SCALE =	CHECKED - SSM	REVISED -
PLOT DATE = 10/14/2001	DRAWN - WJH	REVISED -
	CHECKED - RGD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 047-0051
SHEET NO. S-42 OF S-43 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	14BR-1	KENDALL	429	292
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	



SOIL BORING LOG

Page 2 of 2

Date 7/5/08

ROUTE FAP591 (US 34) DESCRIPTION Rt 34 over Big Rock Creek LOGGED BY K Whittington

SECTION 14BR-1 LOCATION SW 1/4, SEC. 23, TWP. 37N, RNG. 06E, 3rd PM

Table with columns for COUNTY, DRILLING METHOD, HAMMER TYPE, and CNE Automatic. Includes data for SOIL BORING LOG with columns for DEPTH, BLOW COUNT, and SOIL TYPE.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T205) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Page 1 of 2

Date 7/7/08

ROUTE FAP591 (US 34) DESCRIPTION Rt 34 over Big Rock Creek LOGGED BY K Whittington

SECTION 14BR-1 LOCATION SW 1/4, SEC. 23, TWP. 37N, RNG. 06E, 3rd PM

Table with columns for COUNTY, DRILLING METHOD, HAMMER TYPE, and CNE Automatic. Includes data for SOIL BORING LOG with columns for DEPTH, BLOW COUNT, and SOIL TYPE.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T205) BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Page 2 of 2

Date 7/7/08

ROUTE FAP591 (US 34) DESCRIPTION Rt 34 over Big Rock Creek LOGGED BY K Whittington

SECTION 14BR-1 LOCATION SW 1/4, SEC. 23, TWP. 37N, RNG. 06E, 3rd PM

Table with columns for COUNTY, DRILLING METHOD, HAMMER TYPE, and CNE Automatic. Includes data for SOIL BORING LOG with columns for DEPTH, BLOW COUNT, and SOIL TYPE.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T205) BBS, from 137 (Rev. 8-99)

COMPANY NAME: SEC GROUP, INC. PROJECT CONTACT: Robert F. G. Davies ILLINOIS DEPARTMENT OF TRANSPORTATION CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION FILE NAME: 070805-14BR-01.dwg PLOT DRIVER: pdt.plt PEN TABLE: Struct_20x34.tbl



PB Americas, Inc. 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL. 60606

Table with columns for USER NAME, DESIGNED, CHECKED, DRAWN, PLOT SCALE, and PLOT DATE.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

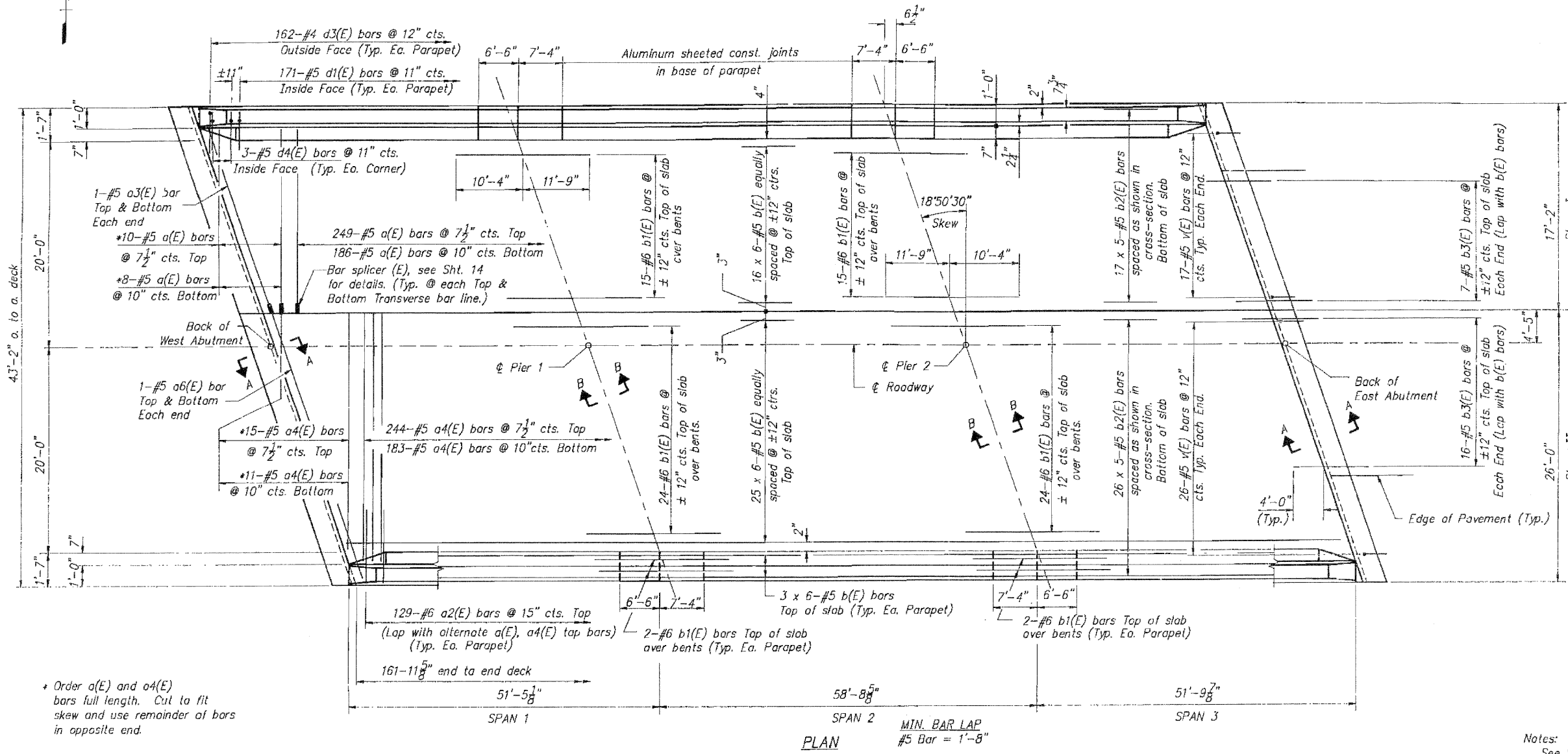
SOIL BORING LOGS STRUCTURE NO. 047-0051 SHEET NO. S-43 OF S-43 SHEETS

Table with columns for F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, and SHEET NO.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

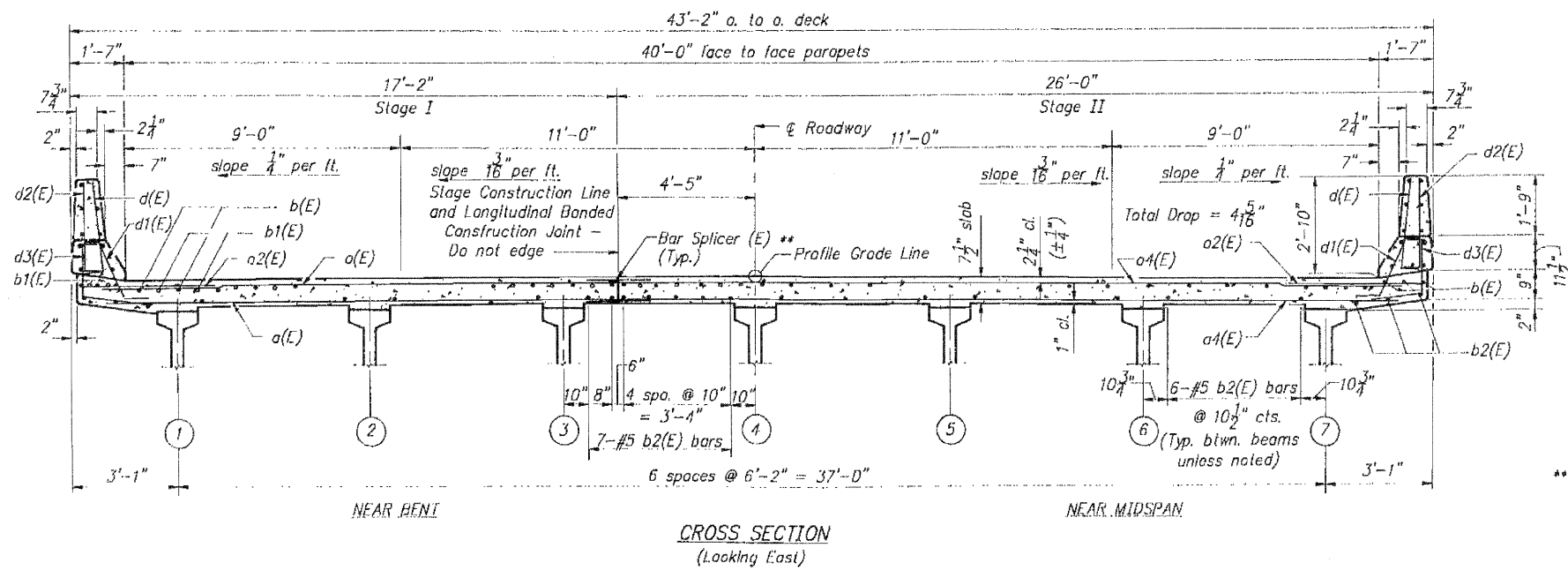
ROUTE NO. F.A.P. 591	SECTION #	COUNTY KENDALL	TOTAL SHEETS 51	SHEET NO. 24
FEDERAL ROAD DIST. NO. ILLINOIS FEDERAL AID PROJECT- # (14R)RS-2 & 14BR-1				

SHEET NO. 5
OF 17 SHEETS



**DRAWINGS PROVIDED FOR INFORMATION ONLY.
DRAWINGS ARE NOT "AS-BUILT"**

Notes:
See Sheet #6 for superstructure details, Bill of Material and parapet reinforcement.
See Sheet #9 for Section A-A and Section B-B.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 26 x 5-#5 etc. indicates 26 lines of bars with 5 lengths per line.



HAZELET + ERDAL, INC.
CONSULTING ENGINEERS
FILE NUMBER 577
DRAWN BY: R.S./M.H.
CHECKED BY: L.P.M.
APPROVED BY: E.H.A.

** Lapped bars at this location shall be tied with double the number of ties normally used.

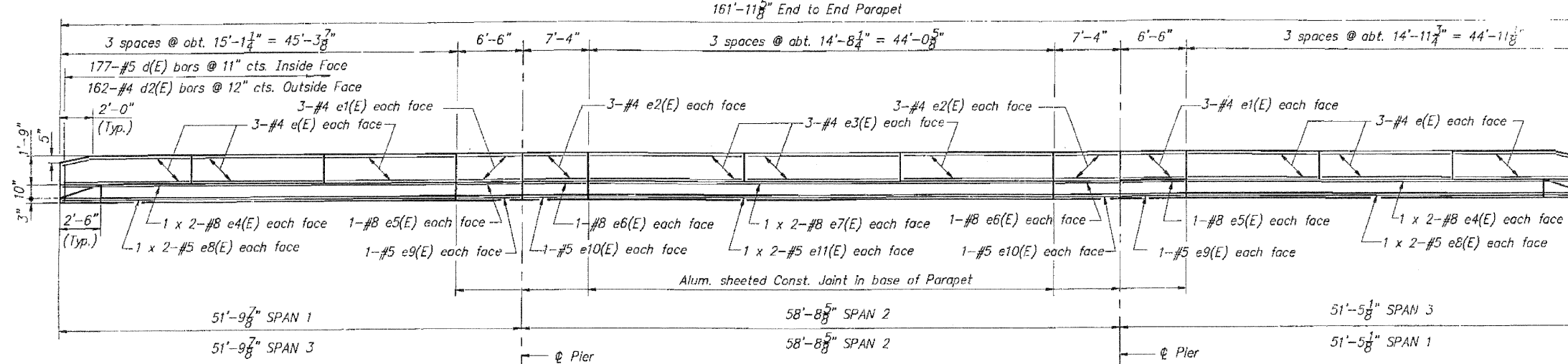
SUPERSTRUCTURE
F.A.P. ROUTE 591 SECTION 14BR-1
KENDALL COUNTY
STA. 172+32.50
BRIDGE APPENDIX
EXISTING STRUCTURE - ORIGINAL PLANS
1 OF 7
SHEET NO 293A

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6 OF 17 SHEETS
F.A.P. 591	#	KENDALL	51	25	
FEDERAL ROAD DIST. NO. ILLINOIS FEDERAL AID PROJECT:					

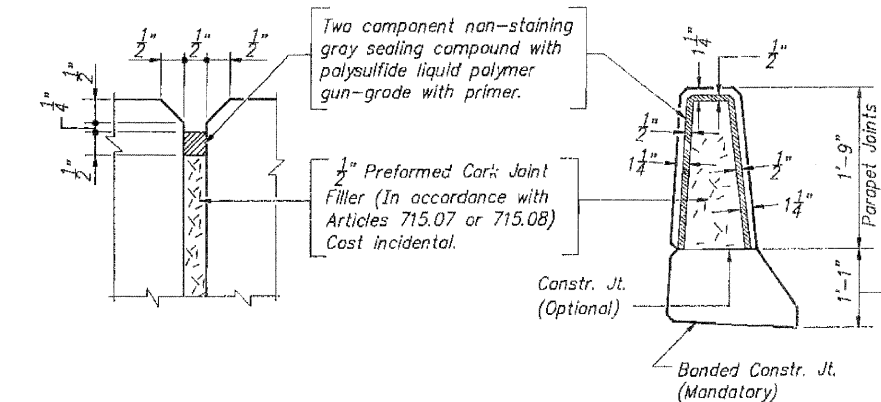
(14)RS-2 & 14BR-1
SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	453	#5	16'-0"	
a2(E)	258	#6	4'-0"	
a3(E)	4	#5	17'-8"	
a4(E)	453	#5	24'-10"	
a6(E)	4	#5	27'-0"	
a7(E)	24	#5	8'-3"	
a8(E)	10	#6	17'-10"	
a9(E)	12	#6	4'-10"	
a10(E)	10	#6	27'-2"	
a11(E)	4	#5	8'-9"	
a12(E)	4	#6	2'-3"	
b(E)	282	#5	28'-4"	
b1(E)	86	#6	22'-1"	
b2(E)	215	#5	33'-8"	
b3(E)	46	#5	10'-0"	
d(E)	354	#5	3'-0"	
d1(E)	342	#5	2'-7"	
d2(E)	324	#4	3'-0"	
d3(E)	324	#4	3'-10"	
d4(E)	12	#5	2'-10"	
e(E)	72	#4	14'-8"	
e1(E)	24	#4	6'-2"	
e2(E)	24	#4	7'-1"	
e3(E)	36	#4	14'-5"	
e4(E)	16	#8	23'-10"	
e5(E)	8	#8	6'-2"	
e6(E)	8	#8	7'-1"	
e7(E)	8	#8	23'-3"	
e8(E)	16	#5	23'-4"	
e9(E)	8	#5	6'-2"	
e10(E)	8	#5	7'-1"	
e11(E)	8	#5	22'-9"	
m	48	#4	5'-9"	
m1	24	#6	4'-9"	
m2	14	#8	5'-6"	
s(E)	72	#5	5'-3"	
s1(E)	72	#4	9'-3"	
s2	60	#4	9'-4"	
v(E)	86	#5	3'-0"	
Reinforcement Bars		Lbs.	940	
Reinforcement Bars (Epoxy Coated)		Lbs.	49,670	
Class X Concrete Superstructure		Cu. Yds.	251.2	

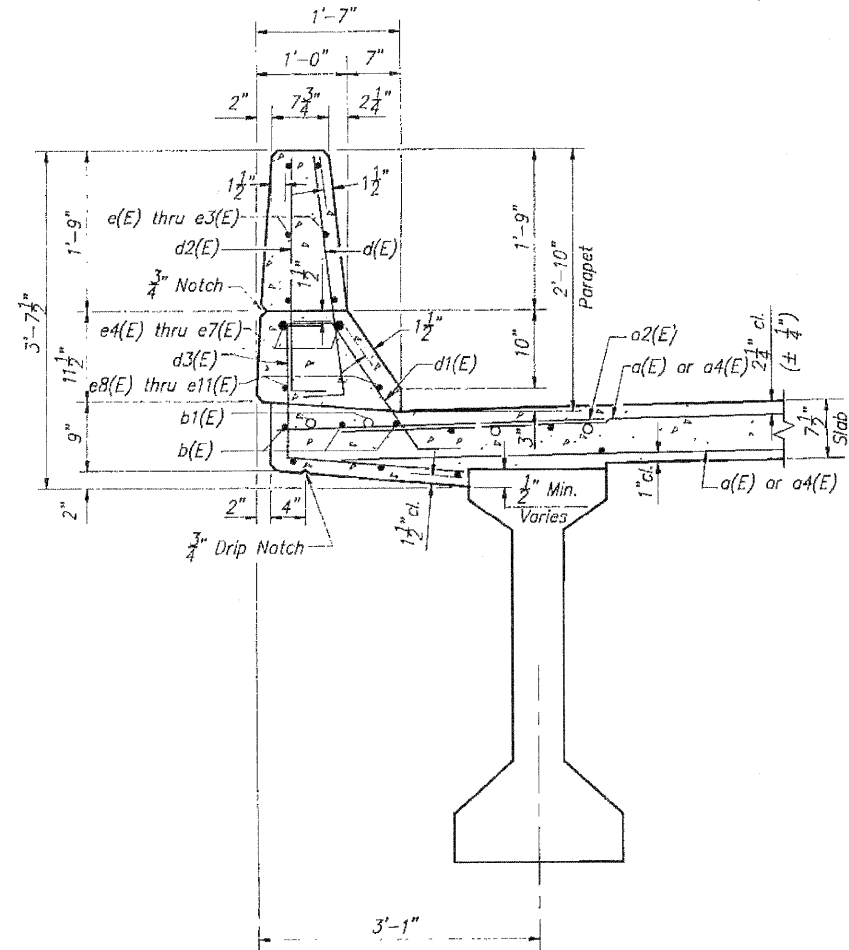


INSIDE ELEVATION OF PARAPET

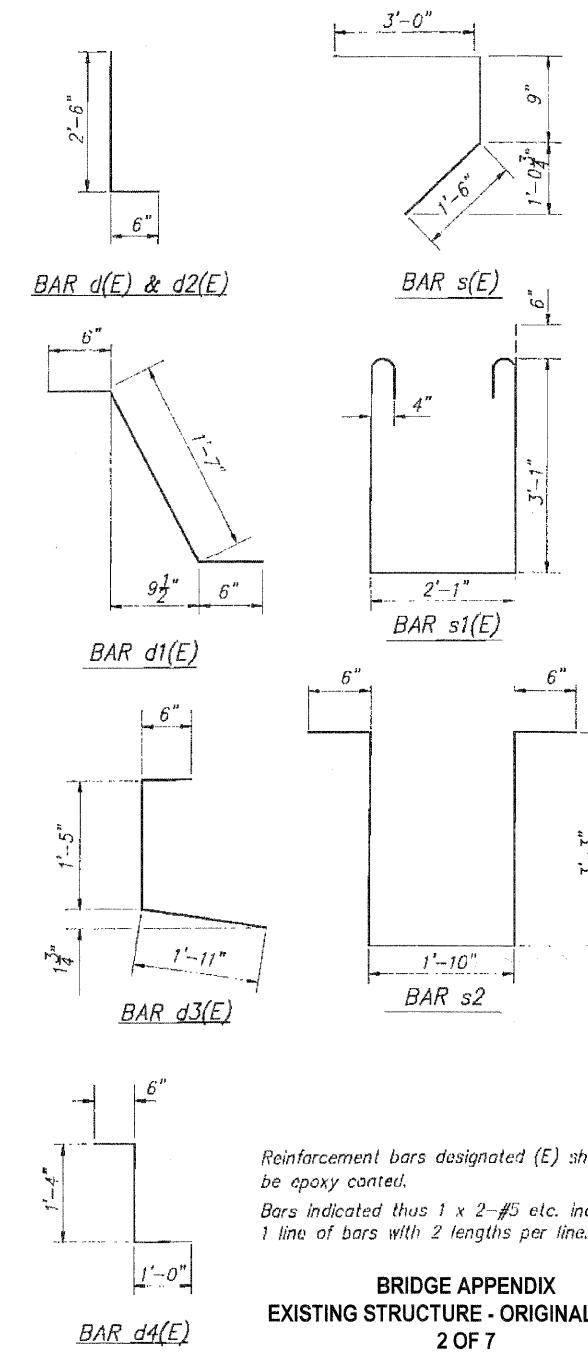
MIN. BAR LAP
#5 Bar = 1'-8"
#8 Bar = 2'-8"



PARAPET JOINT DETAILS



SECTION THRU PARAPET



DRAWINGS PROVIDED FOR
INFORMATION ONLY.
DRAWINGS ARE NOT
"AS-BUILT"

Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

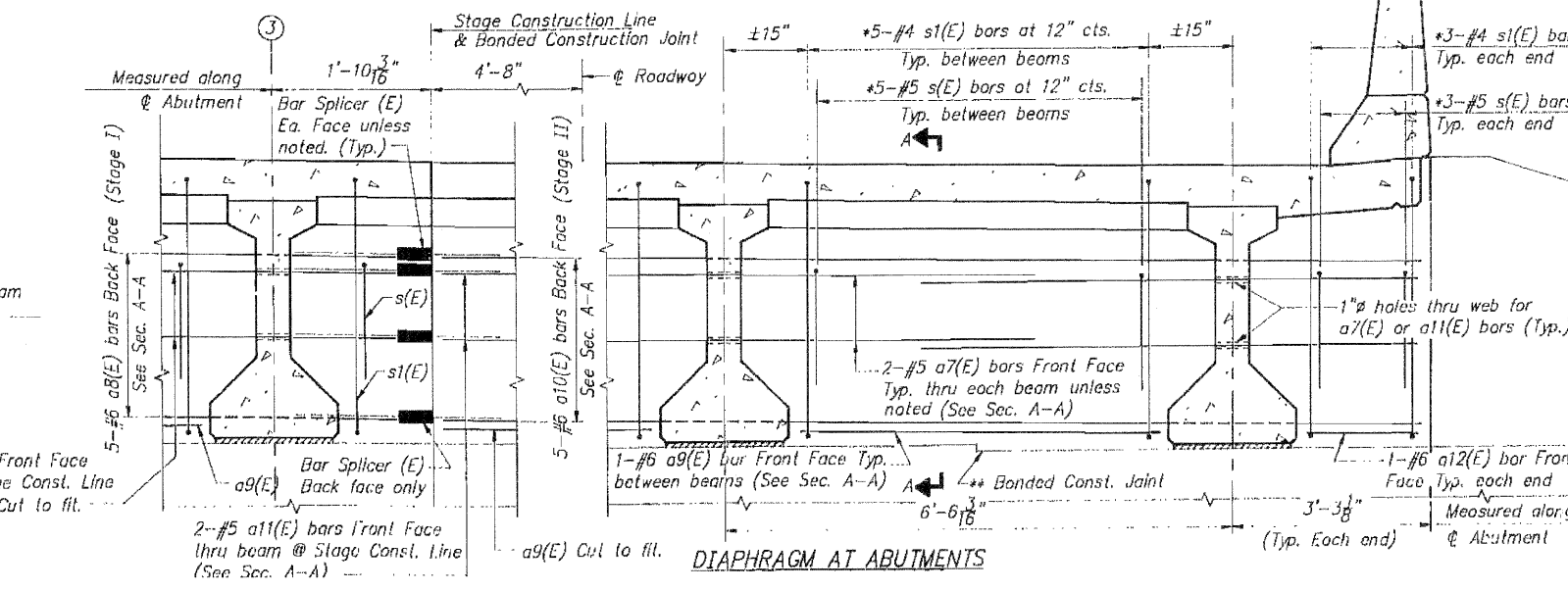
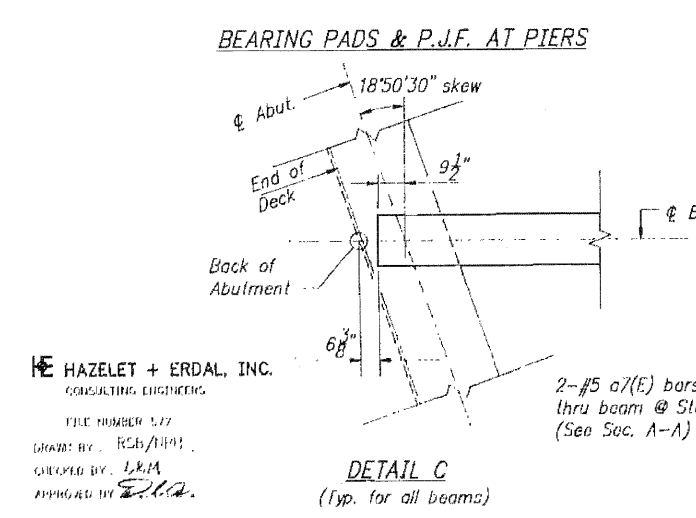
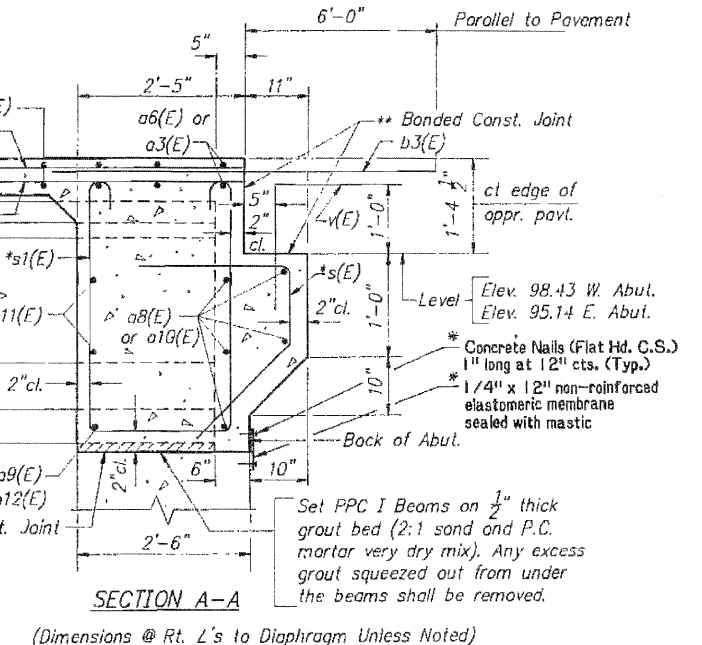
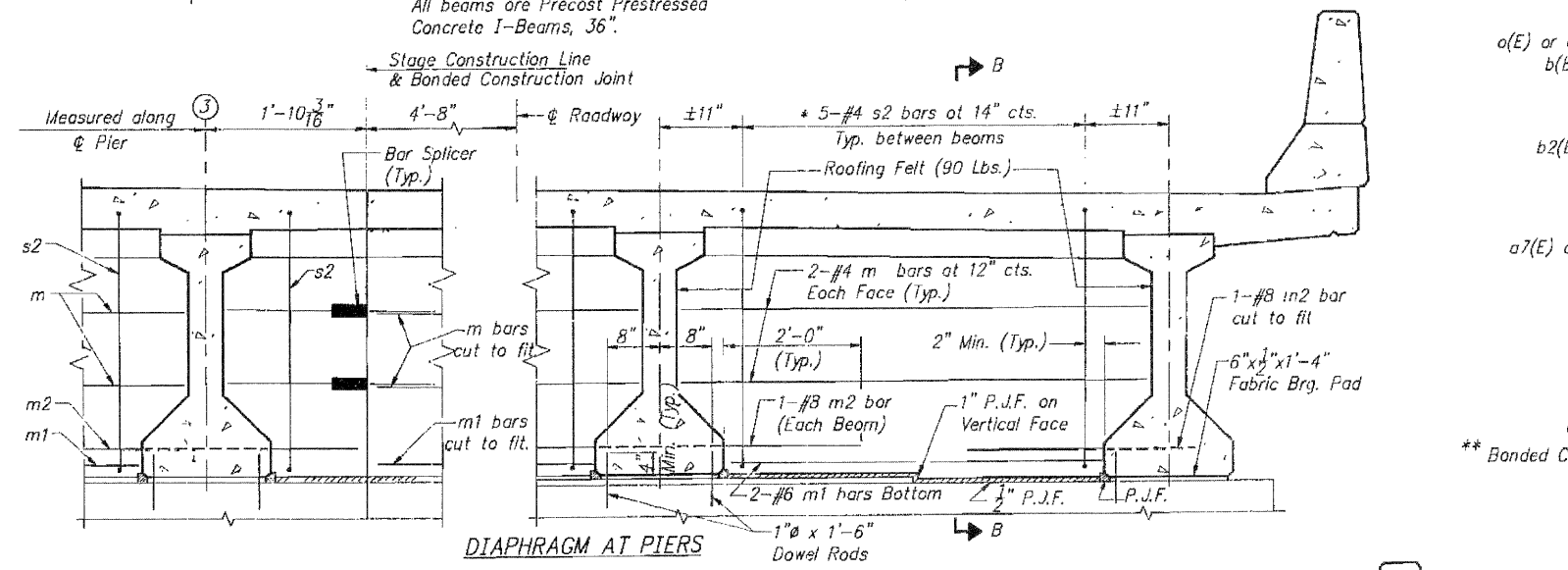
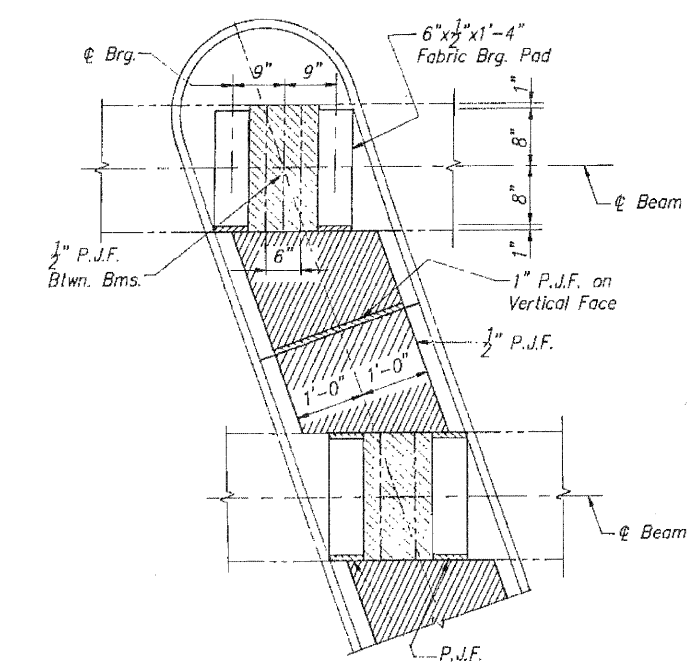
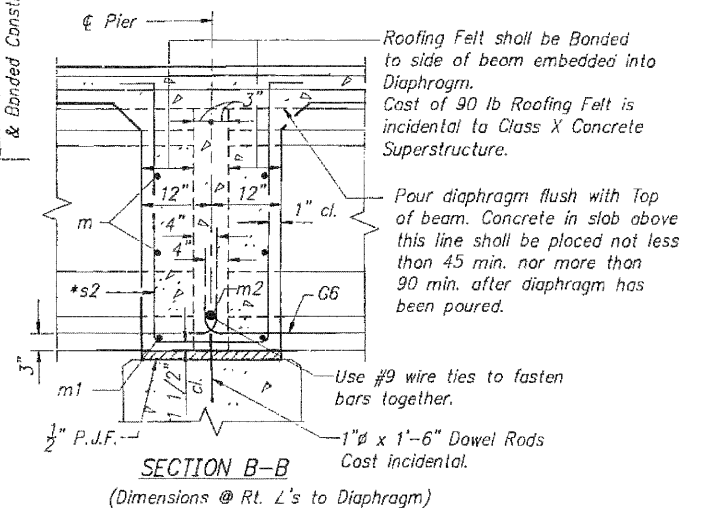
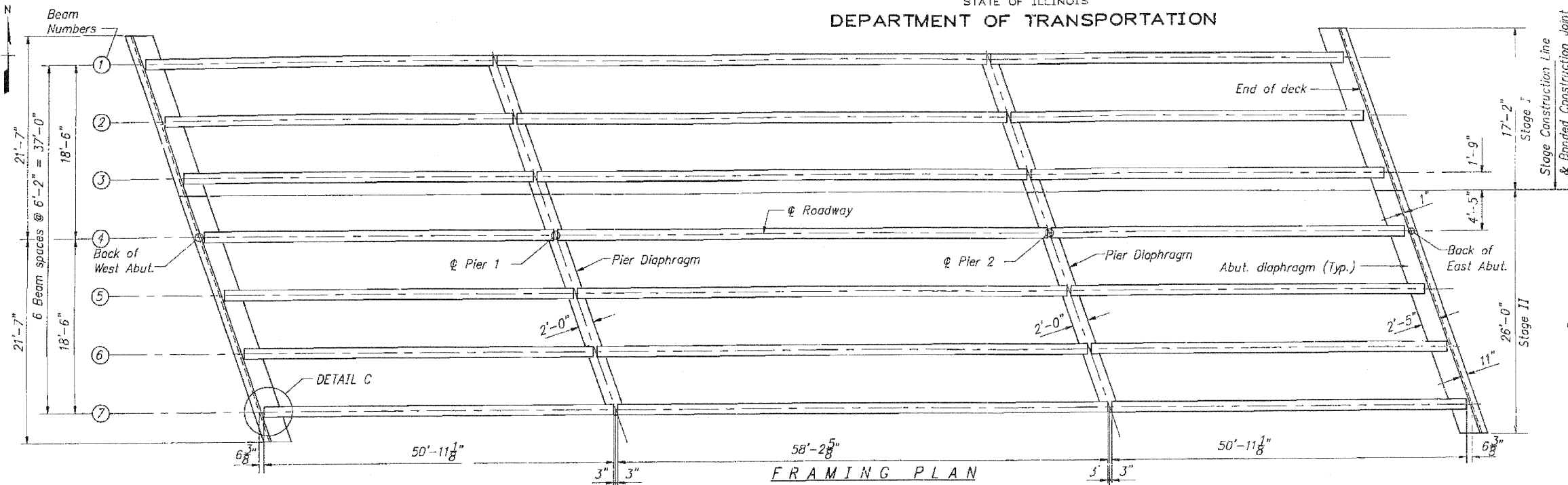
BRIDGE APPENDIX
EXISTING STRUCTURE - ORIGINAL PLANS
2 OF 7

SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 591 SECTION 14BR-1
KENDALL COUNTY SHEET NO
STA. 172+32.50 293B

HAZELET + ERDAL, INC.
CONSULTING ENGINEERS
FILE NUMBER 577
DRAWN BY PSH/BJH
CHECKED BY LEM
APPROVED BY [Signature]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9
F.A.P. 591	*	KENDALL	51	28	OF 17 SHEETS
FEDERAL ROAD DIST. NO. ILLINOIS FEDERAL AID PROJECT- * (14R)RS-2 & 14BR-1					



* Cost is incidental to Class X Concrete

NOTES:

Reinforcement Bars and Class X Concrete Superstructure are billed with superstructure on sheet #6. For spacing of b3(E) and v(E) bars see Plan on sheet #5.

* Place s(E), sl(E) and s2(E) bars at right angles to Abutment / Pier.

** Bonded Construction Joint in accordance with Article 504.13(a)(2) of Std. Spec's.

MIN. BAR LAP #5 Bar = 1'-8"

DIAPHRAGM DETAILS
F.A.P. ROUTE 591 SECTION 14BR-1
KENDALL COUNTY
STA. 172+32.50
SHEET NO 293C

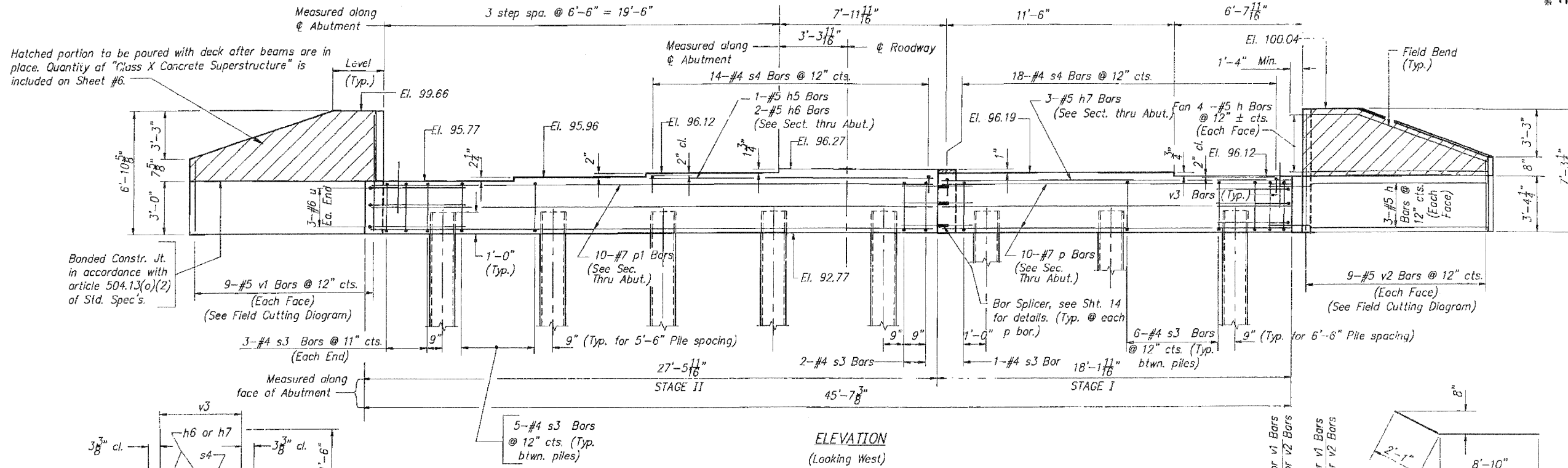
BRIDGE APPENDIX EXISTING STRUCTURE - ORIGINAL PLANS
3 OF 7

HAZELET + ERDAL, INC.
CONSULTING ENGINEERS
FILE NUMBER 177
DRAWN BY: RCB/1/191
CHECKED BY: LRM
APPROVED BY: [Signature]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

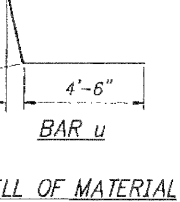
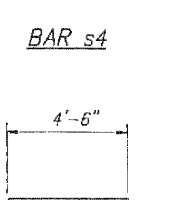
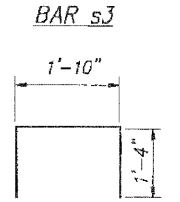
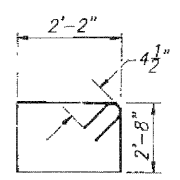
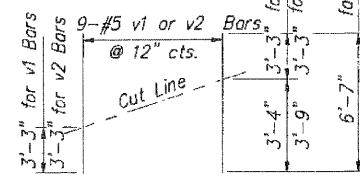
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 591	#	KENDALL	51	29
FEDERAL ROAD DIST. NO.		ILLINOIS	FEDERAL AID PROJECT-	
# 14R)RS-2 & 14BR-1				

WEST ABUTMENT
F.A.P. ROUTE 591 SECTION 14BR-1
KENDALL COUNTY
STA. 172+32.50



Notes:
All edges shall have standard 3/4" chamfer except as noted.
Tilt bars if necessary to maintain min. clearance.

DRAWINGS PROVIDED FOR
INFORMATION ONLY.
DRAWINGS ARE NOT
"AS-BUILT"

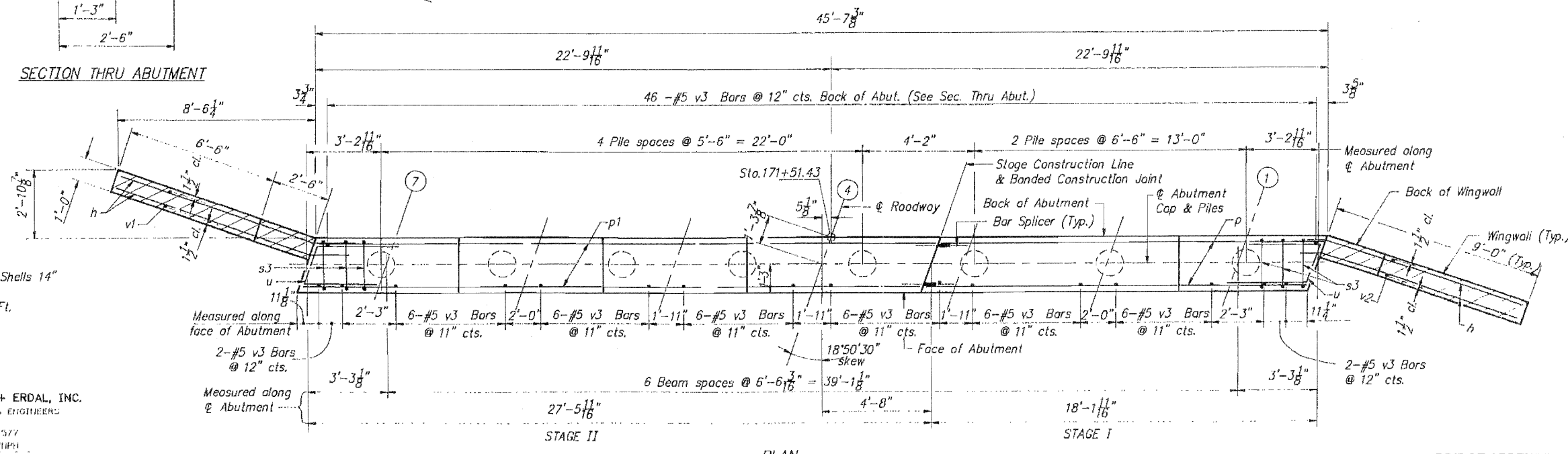


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	28	#5	10'-11"	—
h5	1	#5	13'-9"	—
h6	2	#5	14'-2"	—
h7	3	#5	17'-9"	—
p	10	#7	17'-9"	—
p1	10	#7	27'-1"	—
s3	41	#4	10'-5"	□
s4	32	#4	4'-6"	□
u	6	#6	11'-2"	—
v1	9	#5	6'-7"	—
v2	9	#5	7'-0"	—
v3	86	#5	3'-0"	—
Reinforcement Bars			Lbs.	2210
Class X Concrete			Cu. Yds.	15.8
Furnishing Metal				
Pile Shells 14"			Lin. Ft.	248
Driving & Filling Shells			Lin. Ft.	248

PILE DATA
Type: Metal Pile Shells 14"
Capacity: 45 Ton
Est. Length: 31 Ft.
No. Required: 8

HAZELET + ERDAL, INC.
CONSULTING ENGINEERS
FILE NUMBER 577
DRAWN BY: RSB/1/1/1
CHECKED BY: J.S.A.
APPROVED BY: [Signature]

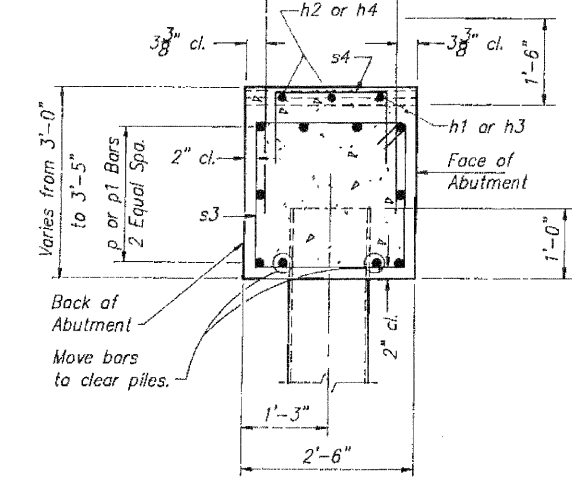
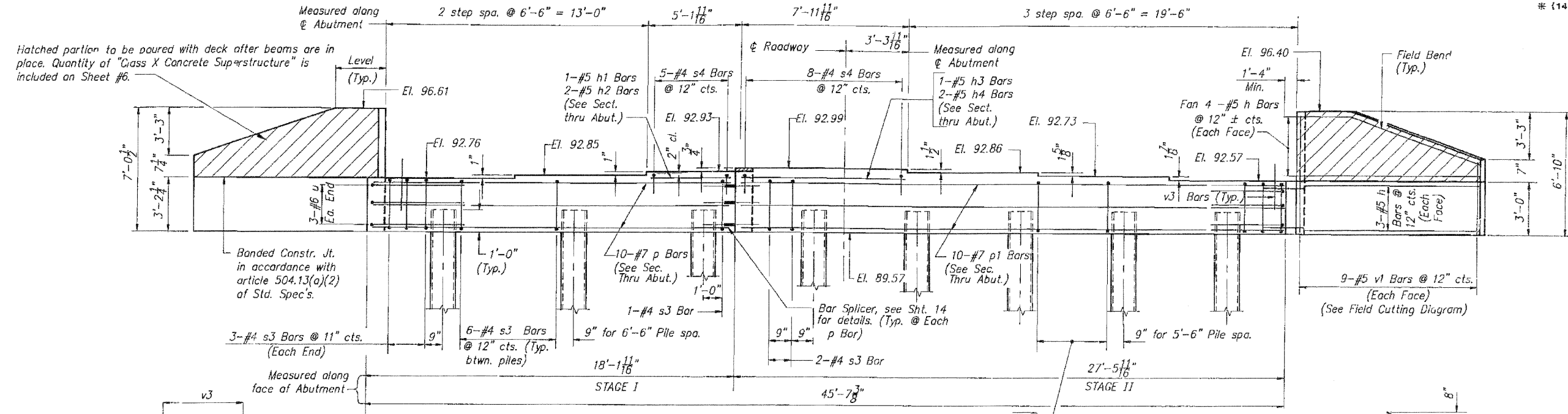


BRIDGE APPENDIX
EXISTING STRUCTURE - ORIGINAL PLANS
4 OF 7

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

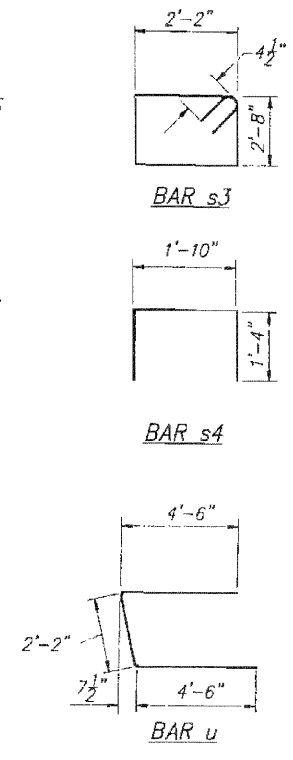
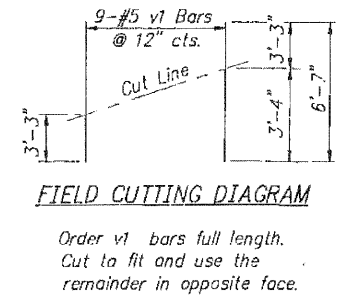
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 591	#	KENDALL	51	30
FEDERAL ROAD DIST. NO.		ILLINOIS	FEDERAL AID PROJECT	
* (14R)RS-2 & 14BR-1				

SHEET NO. 11
OF 17 SHEETS



Notes:
All edges shall have standard 3/4" chamfer except as noted.
Tilt bars if necessary to maintain min. clearance.

**DRAWINGS PROVIDED FOR INFORMATION ONLY.
DRAWINGS ARE NOT "AS-BUILT"**

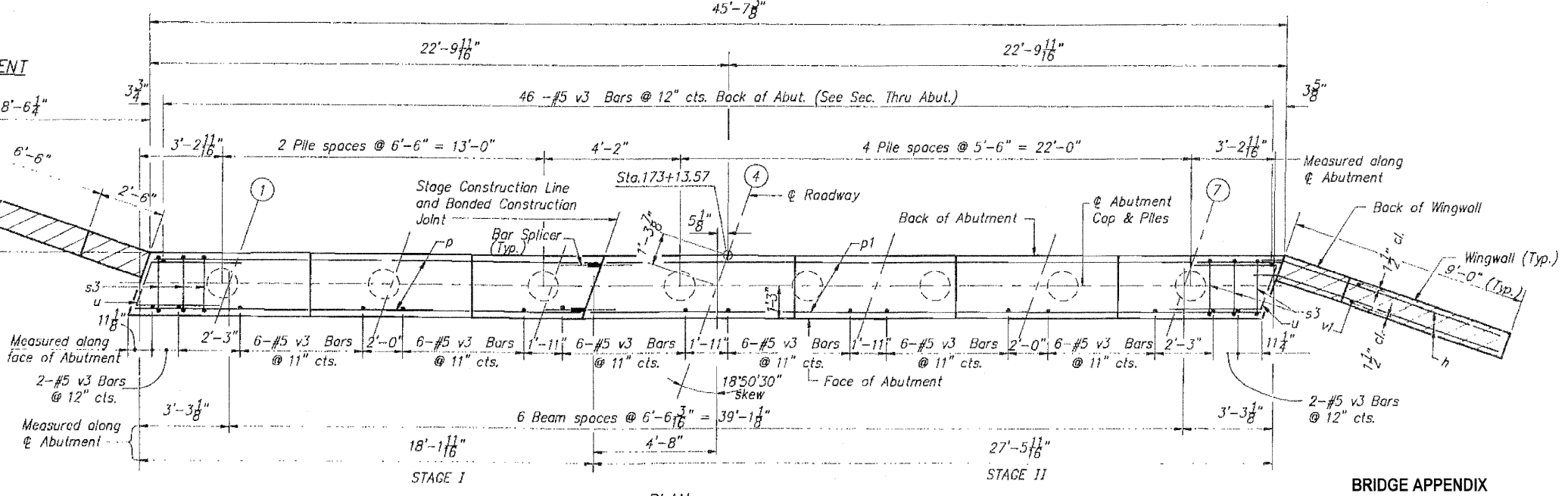


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	28	#5	10'-11"	—
h1	1	#5	4'-5"	—
h2	2	#5	4'-9"	—
h3	1	#5	7'-11"	—
h4	2	#5	7'-3"	—
p	10	#7	17'-9"	—
p1	10	#7	27'-1"	—
s3	41	#4	10'-5"	□
s4	13	#4	4'-6"	□
u	6	#6	11'-2"	—
v1	18	#5	6'-7"	—
v3	86	#5	3'-0"	—
Reinforcement Bars			Lbs.	2090
Class X Concrete			Cu. Yds.	15.4
Furnishing Metal				
Pile Shells 14"			Lin. Ft.	224
Driving & Filling Shells			Lin. Ft.	224
Test Pile Metal Shells			Each	1

PILE DATA
Type: Metal Pile Shell 14"
Capacity: 45 Ton
Est. Length: 32 Ft.
No. Required: 7 + 1 Test Pile

HAZELET + ERDAL, INC.
CONSULTING ENGINEERS
FILE NUMBER 577
DRAWN BY KCR/10/11
CHECKED BY LRM
APPROVED BY DLO



PLAN

BRIDGE APPENDIX
EXISTING STRUCTURE - ORIGINAL PLANS
5 OF 7

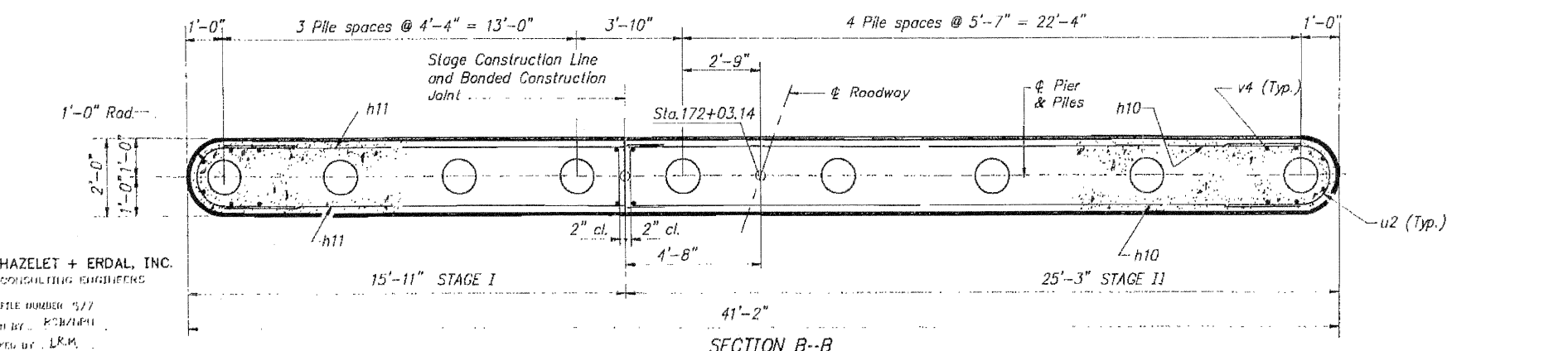
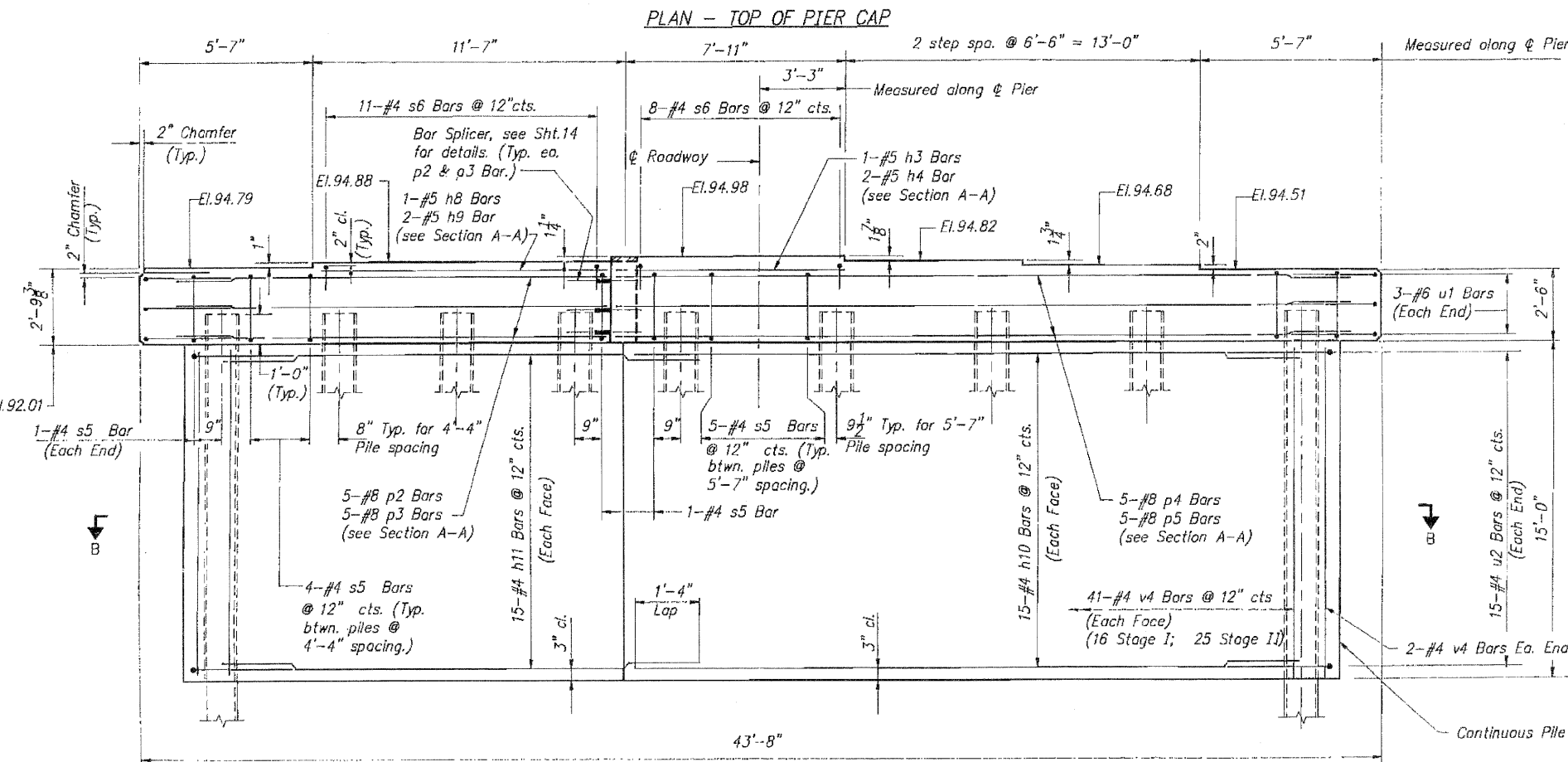
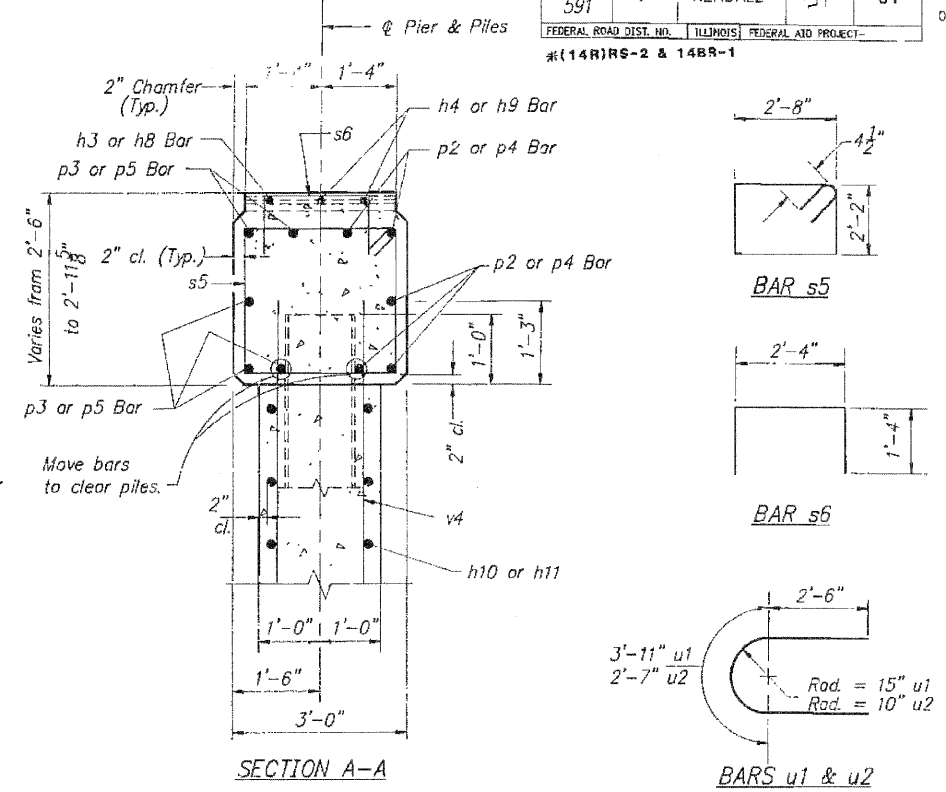
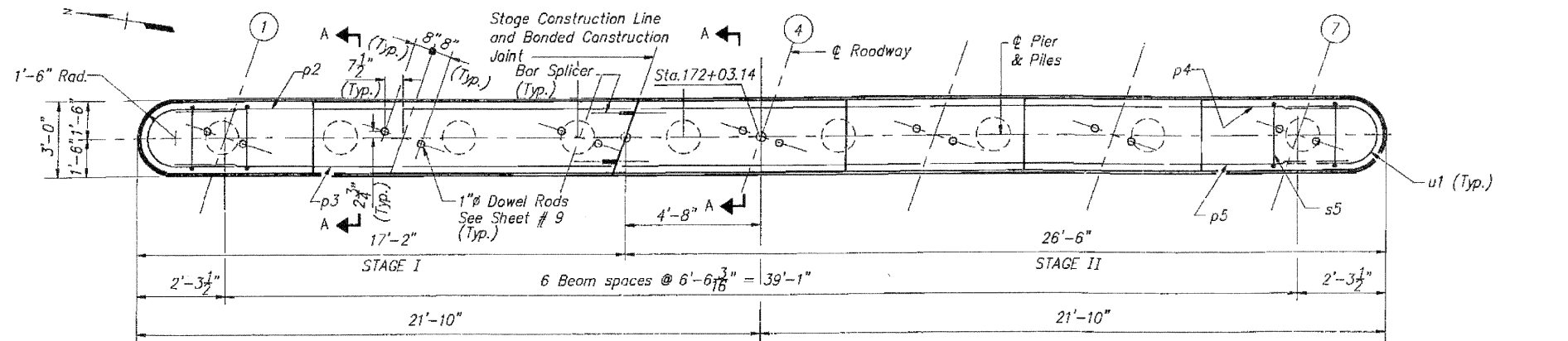
EAST ABUTMENT
F.A.P. ROUTE 591 SECTION 14BR-1
KENDALL COUNTY
STA. 172+32.50

SHEET NO
293E

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 591	#	KENDALL	51	31
FEDERAL ROAD DIST. NO.		ILLINOIS	FEDERAL AID PROJECT	
#(14BR)-2 & 14BR-1				

SHEET NO. 12
OF 17 SHEETS



DRAWINGS PROVIDED FOR INFORMATION ONLY. DRAWINGS ARE NOT "AS-BUILT"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h4	2	#5	7'-3"	—
h3	1	#5	7'-11"	—
h8	1	#5	10'-10"	—
h9	2	#5	11'-3"	—
h10	30	#4	24'-0"	—
h11	30	#4	16'-4"	—
p2	5	#8	15'-10"	—
p3	5	#8	15'-0"	—
p4	5	#8	24'-4"	—
p5	5	#8	25'-2"	—
s5	36	#4	10'-5"	□
s6	19	#4	5'-0"	□
u1	6	#6	8'-11"	U
u2	30	#4	7'-7"	U
v4	86	#4	16'-0"	—
Reinforcement Bars		Lbs.		3400
Class X Concrete		Cu. Yds.		52.7
Furnishing Metal Pile Shells 14"		Lin. Ft.		272
Driving & Filling Shells		Lin. Ft.		272
Test Pile Metal Shells		Each		1

Notes:
All edges shall have standard 3/4" chamfer except as noted.
Space reinforcement in cap to miss dowel rods.
Pour steps monolithically with cap.

PILE DATA
Type: Metal Shell 14"
Capacity: 45 Ton
Est. Length: 34 Ft. (Min. Tip El. 59.0)
No. Required: 8 + 1 Test Pile

PIER 1
F.A.P. ROUTE 591 SECTION 14BR-1
KENDALL COUNTY
STA. 172+32.50

BRIDGE APPENDIX
EXISTING STRUCTURE - ORIGINAL PLANS
6 OF 7

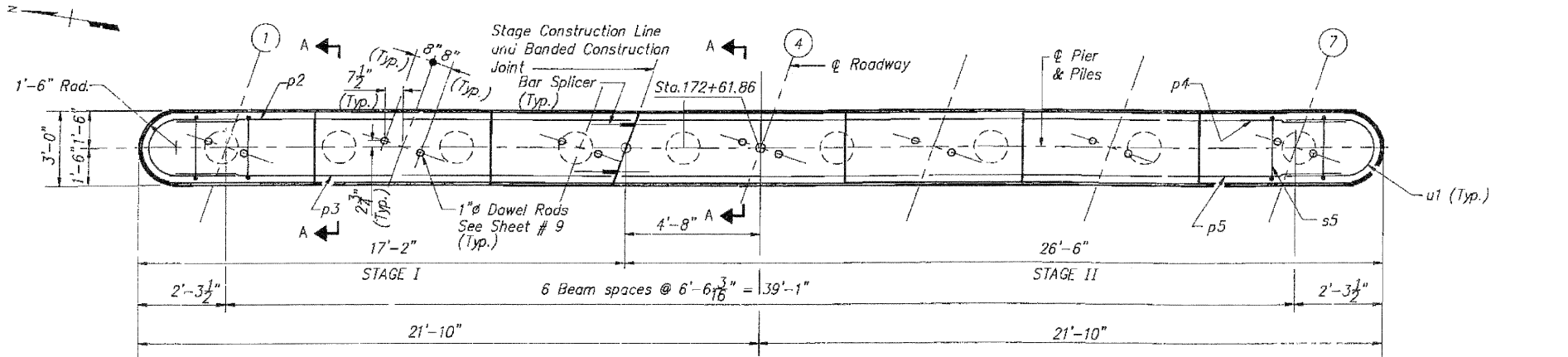
SHEET NO 293F

HAZELET + ERDAL, INC.
CONSULTING ENGINEERS
FILE NUMBER 577
DRAWN BY: K.S./L.P.H.
CHECKED BY: L.R.M.
APPROVED BY: E.P.R.
DATE: 10/22/88

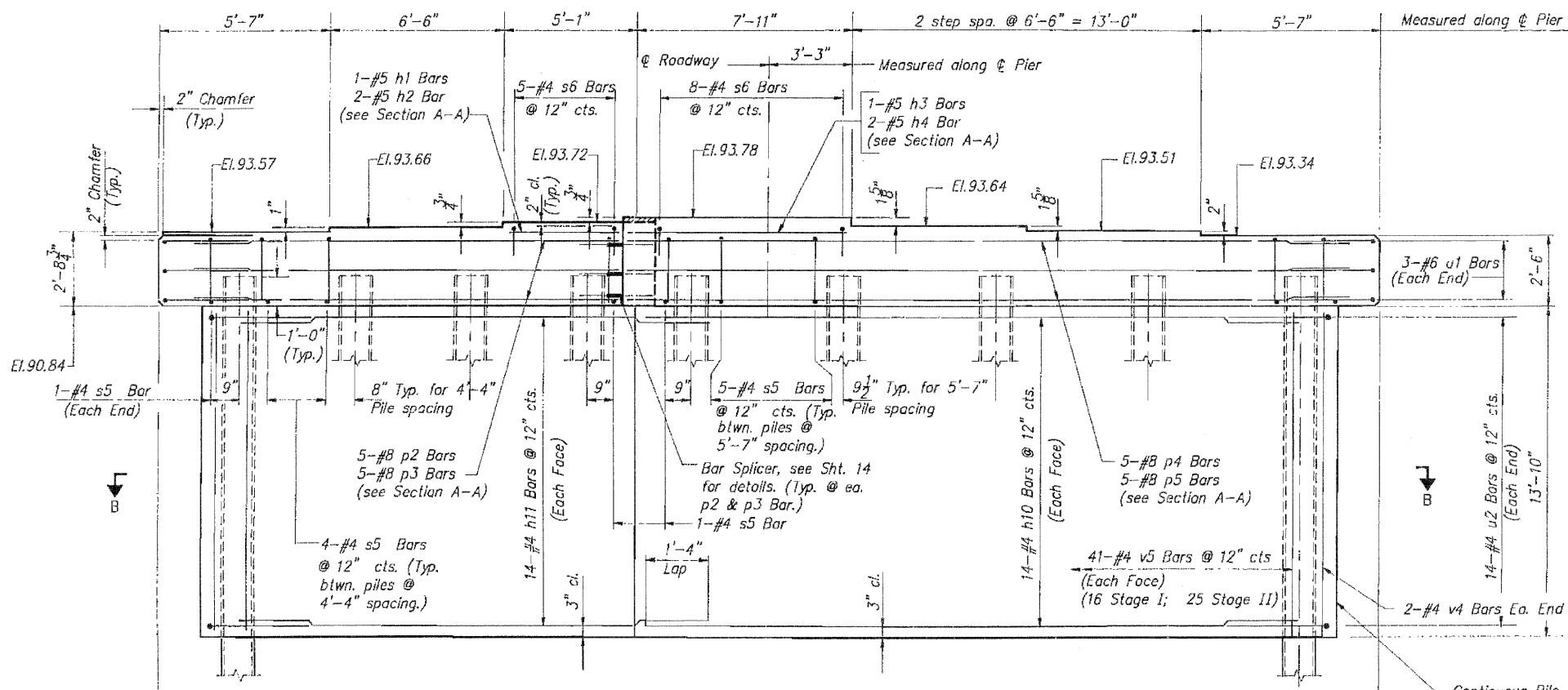
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 591	SECTION #	COUNTY KENDALL	TOTAL SHEETS 51	SHEET NO. 32
FEDERAL ROAD DIST. NO. ILLINOIS FEDERAL AID PROJECT * (14R)RS-2 & 14BR-1				

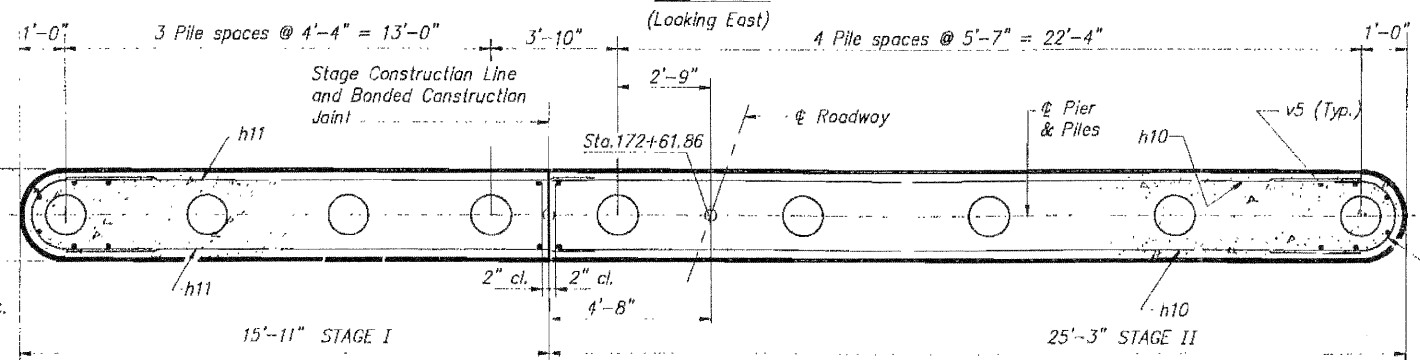
SHEET NO. 13
OF 17 SHEETS



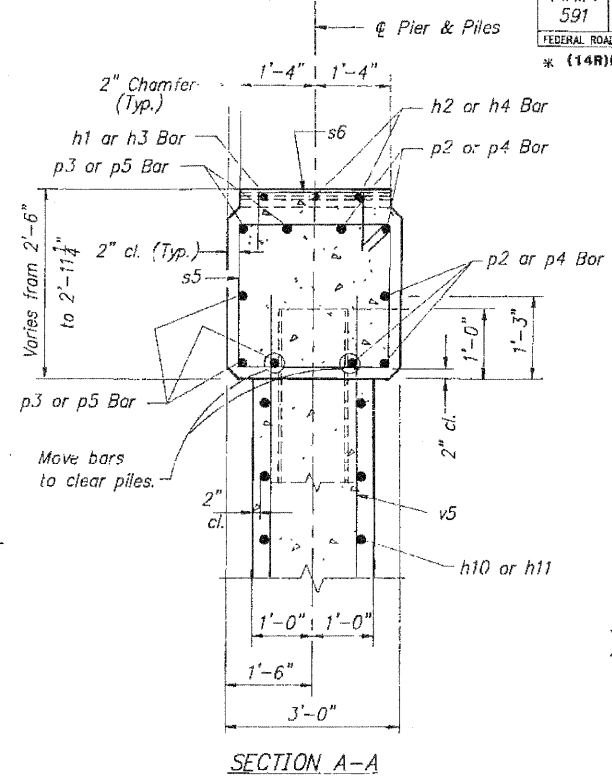
PLAN



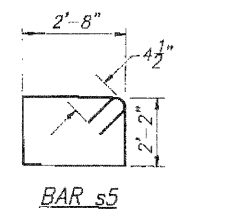
ELEVATION
(Looking East)



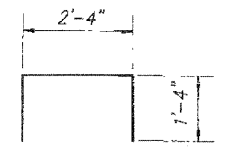
SECTION B-B



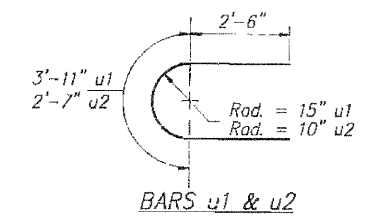
SECTION A-A



BAR s5



BAR s6



BARS u1 & u2

DRAWINGS PROVIDED FOR
INFORMATION ONLY.
DRAWINGS ARE NOT
"AS-BUILT"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1	1	#5	4'-5"	—
h2	2	#5	4'-9"	—
h3	1	#5	7'-11"	—
h4	2	#5	7'-3"	—
h10	28	#4	24'-0"	—
h11	28	#4	16'-4"	—
p2	5	#8	15'-10"	—
p3	5	#8	15'-0"	—
p4	5	#8	24'-4"	—
p5	5	#8	25'-2"	—
s5	36	#4	10'-5"	□
s6	13	#4	5'-0"	□
u1	6	#6	8'-11"	—
u2	28	#4	7'-7"	—
v5	86	#4	14'-10"	—
Reinforcement Bars		Lbs.		3230
Class X Concrete		Cu.Yds.		49.5
Furnishing Metal Pile Shells 14"		Lin. Ft.		297
Driving & Filling Shells		Lin. Ft.		297

Notes:
All edges shall have standard 3/4" chamfer except as noted.
Space reinforcement in cop to miss dowel rods.
Pour steps monolithically with cop.

PILE DATA

Type: Metal Shell 14"
Capacity: 45 Ton
Est. Length: 33 Ft. (Min Tip El. 59.0)
No. Required: 9

BRIDGE APPENDIX
EXISTING STRUCTURE - ORIGINAL PLANS
7 OF 7

PIER 2
F.A.P. ROUTE 591 SECTION 14BR-1
KENDALL COUNTY
STA. 172+32.50

SHEET NO
293G

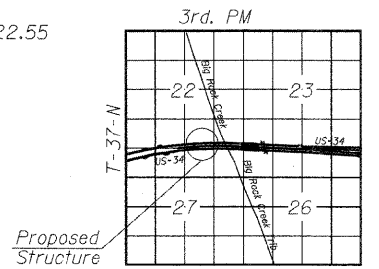
HAZELET + ERDAL, INC.
CONSULTING ENGINEERS
FILE NUMBER 577
DRAWN BY: R.D./H.P.
CHECKED BY: L.M.
APPROVED BY: [Signature]

Bench Mark:
 (BM#299) Railroad spike in power pole, North side of center line US 34
 Sta. 59+72.36, Offset 49.27' Lt.; Elev. 646.929.
 Existing Structure: None.

CURVE DATA
 (U.S. Rte 34 P11-1)
 P.I. Sta. = 12+39.83
 $\Delta = 18^\circ-54'-33''$ (RT)
 $D = 1^\circ-31'-40''$
 $T = 624.48'$
 $L = 1,237.60'$
 $E = 51.64'$
 $e = 2.2\%$
 $R = 3,750.00'$
 P.C. Sta. = 6+15.36
 P.T. Sta. = 18+52.96
 $T.R. = 66.6'$
 $S.E. \text{ Runoff} = 73.3'$
 S.E. Removed from Sta 18+16.33 to Sta 19+56.19

DESIGN SPECIFICATIONS

2002 AASHTO
DESIGN STRESSES
FIELD UNITS
 $f'_c = 3,500 \text{ psi}$
 $f_y = 60,000 \text{ psi}$ (Reinforcement)
 $f_y = 50,000 \text{ psi}$ (AASHTO M270 Grade 50) (Soldier Piles)



LOCATION SKETCH

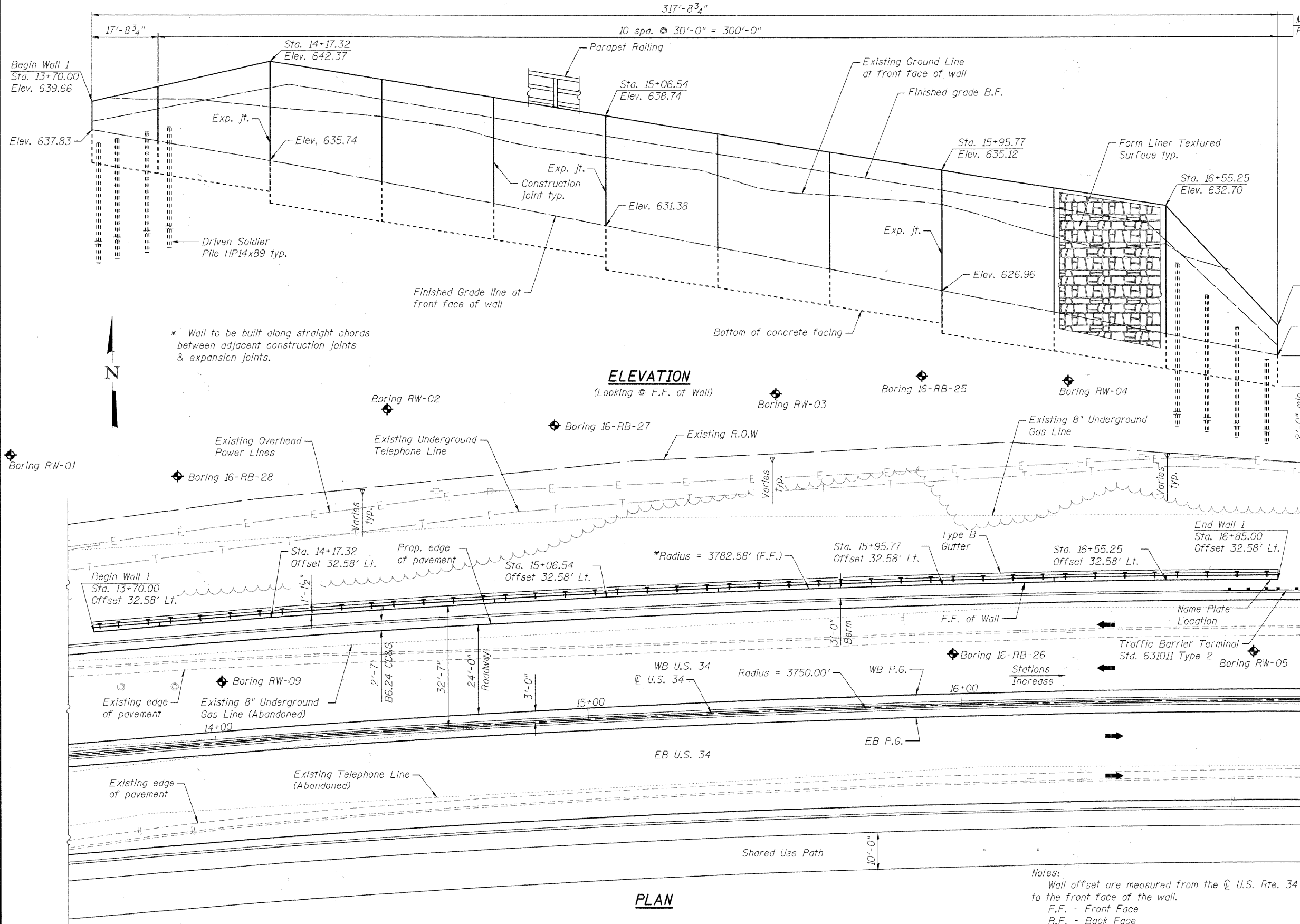
APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
Jamal I. Grainawi
 ENGINEER OF BRIDGES AND STRUCTURES



Signed *Jamal I. Grainawi*
 JAMAL I. GRAINAWI, S.E. II. Lic. No. 081-006161
 Expires 11-30-2012
 Date MAY 6, 2011

GENERAL PLAN & ELEVATION
U.S. ROUTE 34
F.A.P RTE. 591 - SEC. 14R-1
KENDALL COUNTY
STATION 13+70.00 TO 16+85.00
STRUCTURE NO. 047-8800

Notes:
 Wall offset are measured from the \odot U.S. Rte. 34 to the front face of the wall.
 F.F. - Front Face
 B.F. - Back Face



PLAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 047-8800

SHEET NO. 1 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2+14R-1 & BR-10+15R-1	KENDALL	429	294
			CONTRACT NO. 66985	
ILLINOIS FED. AID PROJECT				

T:\16829-PrinthePkw-Ph2\StructCadd\Prefinal\US34 Retaining Wall 1\0478800-66985-001-GPE.dgn 05-MAY-2011 10:31

PB Americas, Inc.
 230 WEST MONROE STREET,
 SUITE 300
 CHICAGO, IL 60606
 (312)782-8150

FILE NAME = 0478800-66985-001-GPE.dgn	DESIGNED - Y. Ali	REVISIONS -
PLOT SCALE = NONE	CHECKED - M. Shaikh	REVISIONS -
PLOT DATE = 5/5/2011	DRAWN - H. Alkhatib	REVISIONS -
	CHECKED - J. GRAINAWI	REVISIONS -

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706, Grade 60.
 Reinforcement bars designated (E) shall be epoxy coated.
 The Contractor is responsible for the design and performance of the lagging using no less than a 3" nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.
 Prior to commencing work, the Contractor shall verify the location of all existing utilities. Work shall be completed in such a manner so as not to disturb or damage the existing utilities.

INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 General Data
- 3-5 Plan and Elevation
- 6-7 Sections and Details
- 8 Parapet Railing
- 9 HP Pile Details
- 10-13 Soil Boring Logs

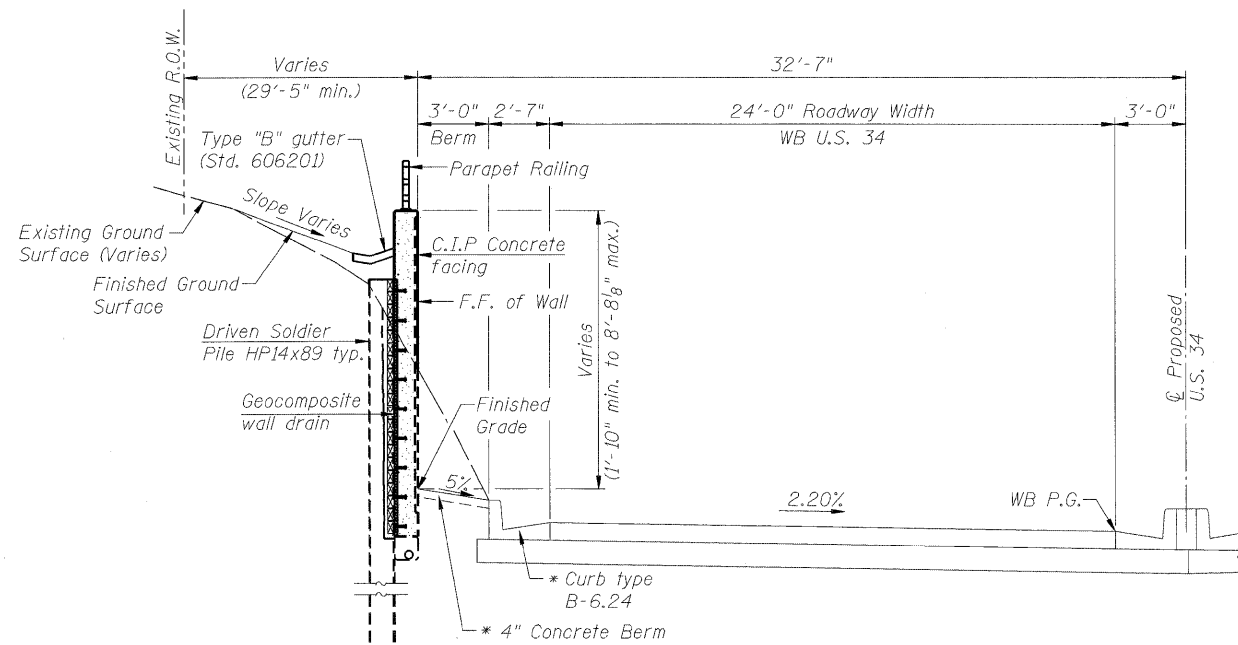
TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Structures	Cu. Yd.	123.7
Protective Coat	Sq. Yd.	301
Form Liner Textured Surface	Sq. Ft.	2585
Stud Shear Connectors	Each	314
Reinforcement Bars, Epoxy Coated	Pound	14230
Parapet Railing	Foot	319
Name Plates	Each	1
Geocomposite Wall Drain	Sq. Yd.	153
Pipe Underdrains for Structures 4"	Foot	318
Concrete Gutter, Type B	Foot	319
Driving Soldier Piles	Foot	1376
Untreated Timber Lagging	Sq. Ft.	1935
Furnishing Soldier Piles (HP Section)	Foot	1376

Note: Excavation and Backfill quantities are included with Roadway quantities.

WORK POINTS & WALL ELEVATION

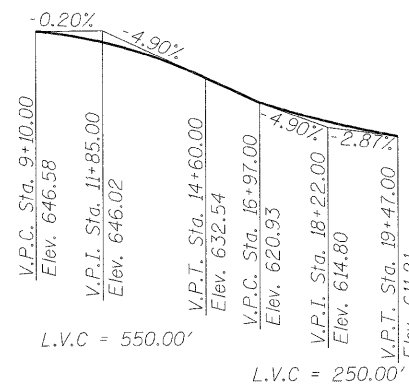
WP No.	Station	Offset Left Ft.	Top/Wall Elev.	Bott./Wall Elev.
1	13+70.00	32.58	639.66	635.58
2	13+87.58	32.58	640.67	634.88
3	14+17.32	32.58	642.37	633.70
3	14+17.32	32.58	642.37	632.87
4	14+47.07	32.58	641.16	631.66
5	14+76.81	32.58	639.95	630.45
6	15+06.54	32.58	638.74	629.24
6	15+06.54	32.58	638.74	628.41
7	15+36.29	32.58	637.53	627.20
8	15+66.03	32.58	636.33	625.99
9	15+95.77	32.58	635.12	624.79
9	15+95.77	32.58	635.12	624.12
10	16+25.52	32.58	633.91	622.91
11	16+55.26	32.58	632.70	621.70
12	16+85.00	32.58	624.57	620.49



TYPICAL WALL SECTION

(Looking East)

* See Roadway Plans



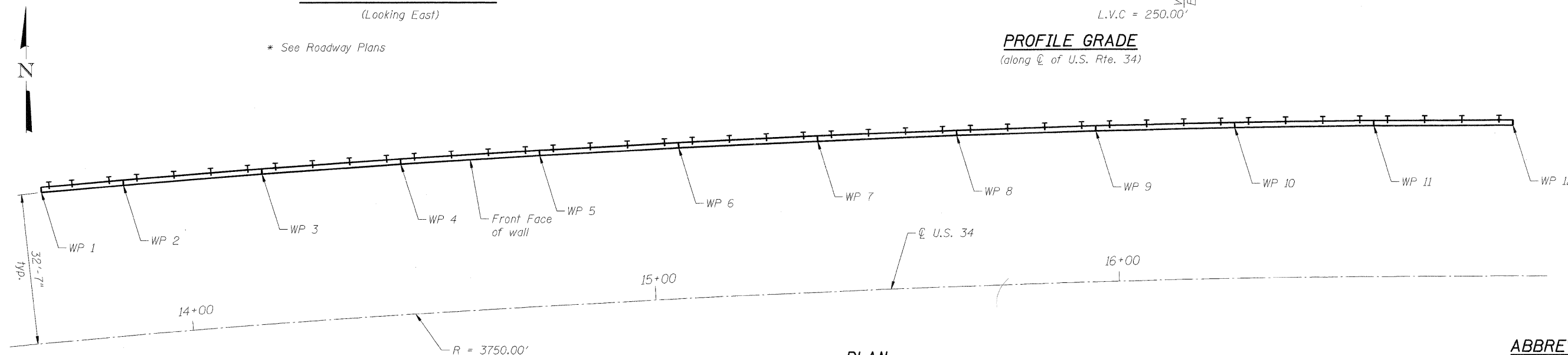
PROFILE GRADE

(along centerline of U.S. Rte. 34)

STATION 13+70.00 TO 16+85.00
 BUILT 20__ BY
 STATE OF ILLINOIS
 F.A.P. RTE. 591 SEC. 14R-1
 STRUCTURE NO. 047-8800

NAME PLATE

See Std. 515001



PLAN

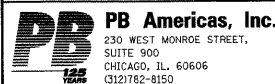
(Work point location)

Note:
 Wall to be built along straight chords
 between adjacent construction joints
 & expansion joints.

ABBREVIATIONS

- E.F. Each Face
- N.F. Near Face
- F.F. Front Face
- B.F. Back Face
- WP Work Point

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 05-MAY-2011 10:31



FILE NAME = 0478802-66985-002-DAT.dgn
 PLOT SCALE = NONE
 PLOT DATE = 5/5/2011

DESIGNED - Y. AII
 CHECKED - M. Shaikh
 DRAWN - H. Alkhatib
 CHECKED - J. GRAINAWI

REVISED -
 REVISED -
 REVISED -
 REVISED -

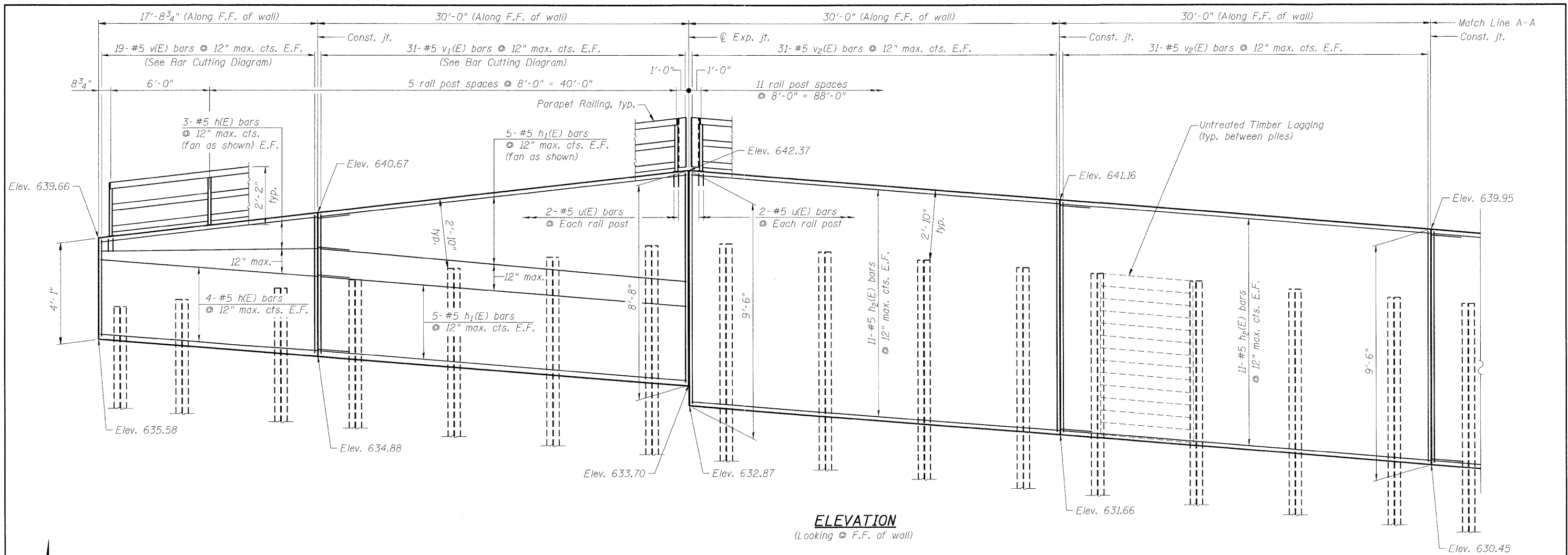
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL DATA
 STRUCTURE NO. 047-8800

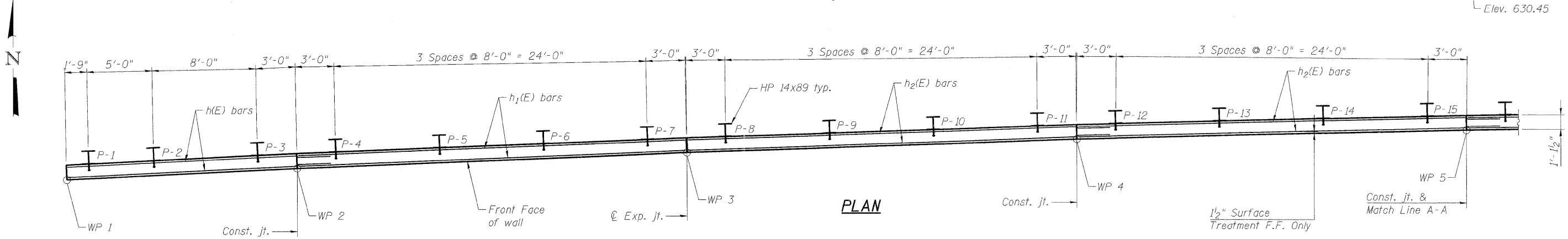
SHEET NO. 2 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	295

CONTRACT NO. 66985
 ILLINOIS/FED. AID PROJECT



ELEVATION
(Looking @ F.F. of wall)



PLAN

PILE SCHEDULE

Pile Name	Top Elev.	Bottom Elev.	Length	Shear Studs	
				No.	Spacing
P-1	636.93	604.93	32'-0"	3	6" max.
P-2	637.21	605.21	32'-0"	4	6" max.
P-3	637.55	605.55	32'-0"	6	6" max.
P-4	638.00	606.00	32'-0"	7	6" max.
P-5	638.46	606.46	32'-0"	5	12" max.
P-6	638.91	606.91	32'-0"	5	12" max.
P-7	639.37	607.37	32'-0"	6	12" max.
P-8	639.42	607.42	32'-0"	7	12" max.

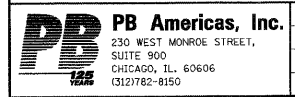
Pile Name	Top Elev.	Bottom Elev.	Length	Shear Studs	
				No.	Spacing
P-9	639.09	607.09	32'-0"	7	12" max.
P-10	638.77	606.77	32'-0"	7	12" max.
P-11	638.45	606.45	32'-0"	7	12" max.
P-12	638.21	606.21	32'-0"	7	12" max.
P-13	637.88	605.88	32'-0"	7	12" max.
P-14	637.56	605.56	32'-0"	7	12" max.
P-15	637.24	605.24	32'-0"	7	12" max.

MINIMUM BAR LAP

#5 bar = 2'-11"

Notes:
Wall to be built along straight chords between adjacent construction joints & expansion joints.
For match line A-A, see sheet 4 of 13.
For parapet railing details, see sheet 8 of 13.
For sections and details, see sheets 6 and 7 of 13.
For bill of material, see sheet 7 of 13.

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FILE NAME = 0478800-66985-003-P&E.dgn
DESIGNED - Y. Ail
CHECKED - M. Shalkh
PLOT SCALE = NONE
PLOT DATE = 5/5/2011

DESIGNED - Y. Ail
CHECKED - M. Shalkh
DRAWN - D. C. PATEL
CHECKED - J. GRAINAWI

REVISED -
REVISED -
REVISED -
REVISED -

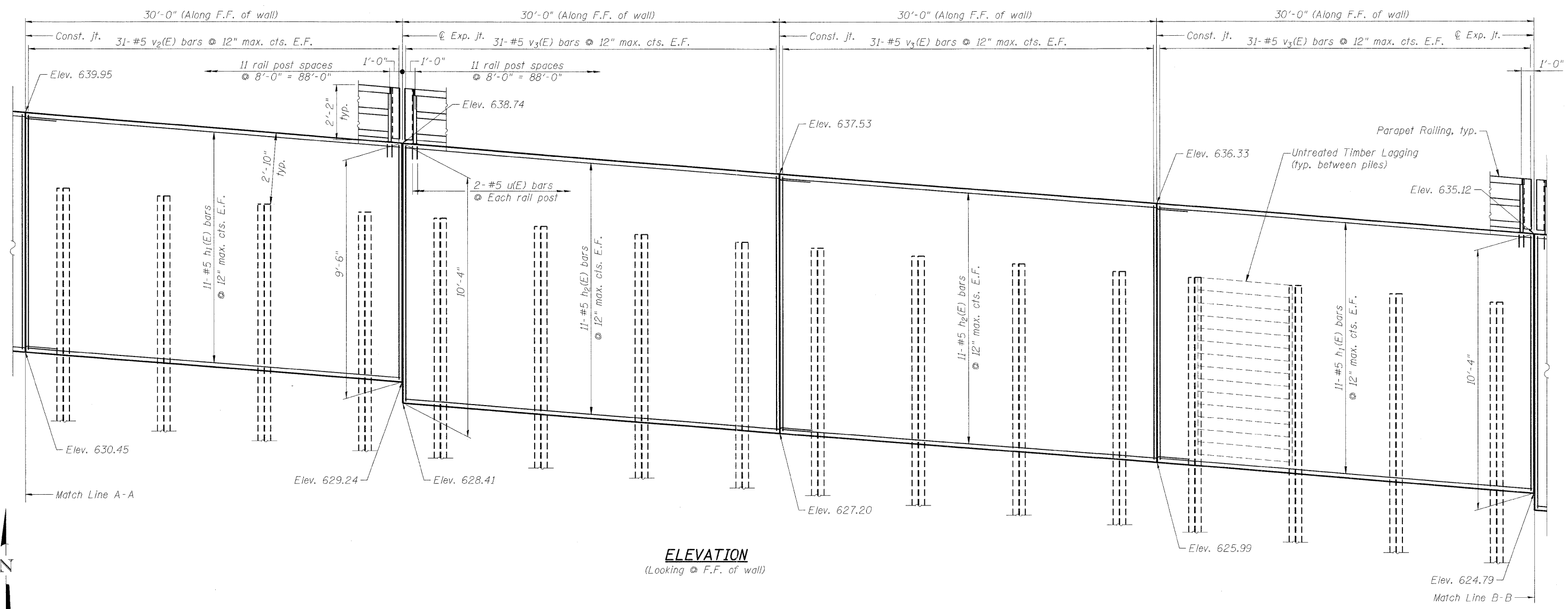
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PLAN AND ELEVATION
STRUCTURE NO. 047-8800**

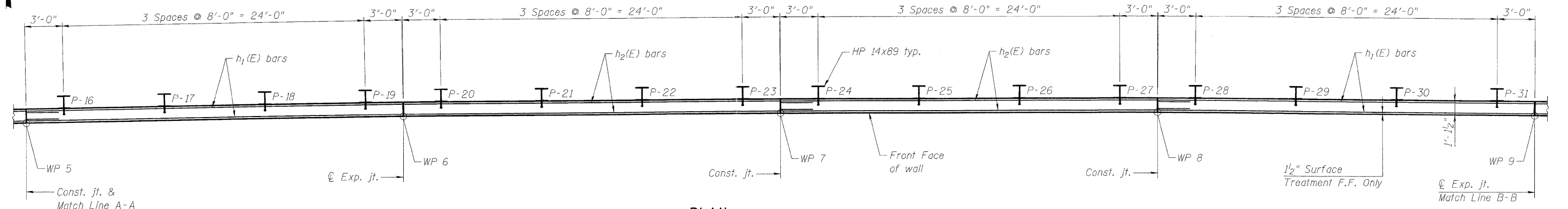
SHEET NO. 3 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	296
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	

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05-MAY-2011 10:31



ELEVATION
(Looking @ F.F. of wall)



PLAN

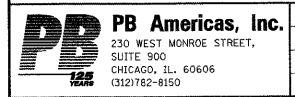
PILE SCHEDULE

Pile Name	Top Elev.	Bottom Elev.	Length	Shear Studs	
				No.	Spacing
P-16	637.00	605.00	32'-0"	7	12" max.
P-17	636.67	604.67	32'-0"	7	12" max.
P-18	636.35	604.35	32'-0"	7	12" max.
P-19	636.03	604.03	32'-0"	7	12" max.
P-20	635.79	603.79	32'-0"	8	12" max.
P-21	635.46	603.46	32'-0"	8	12" max.
P-22	635.14	603.14	32'-0"	8	12" max.
P-23	634.82	602.82	32'-0"	8	12" max.

Pile Name	Top Elev.	Bottom Elev.	Length	Shear Studs	
				No.	Spacing
P-24	634.58	602.58	32'-0"	8	12" max.
P-25	634.26	602.26	32'-0"	8	12" max.
P-26	633.94	601.94	32'-0"	8	12" max.
P-27	633.61	601.61	32'-0"	8	12" max.
P-28	633.37	601.37	32'-0"	8	12" max.
P-29	633.05	601.05	32'-0"	8	12" max.
P-30	632.73	600.73	32'-0"	8	12" max.
P-31	632.41	600.41	32'-0"	8	12" max.

MINIMUM BAR LAP
#5 bar = 2'-11"

Notes:
Wall to be built along straight chords between adjacent construction joints & expansion joints.
For match line A-A, see sheet 3 of 13.
For match line B-B, see sheet 5 of 13.
For parapet railing details, see sheet 8 of 13.
For sections and details, see sheets 6 and 7 of 13.
For bill of material, see sheet 7 of 13.



FILE NAME = 0478800-66985-004-P&E.dgn
DESIGNED - Y. All
CHECKED - M. Shalkh
DRAWN - D. C. PATEL
CHECKED - J. GRAINAWI
PLOT SCALE = NONE
PLOT DATE = 5/5/2011

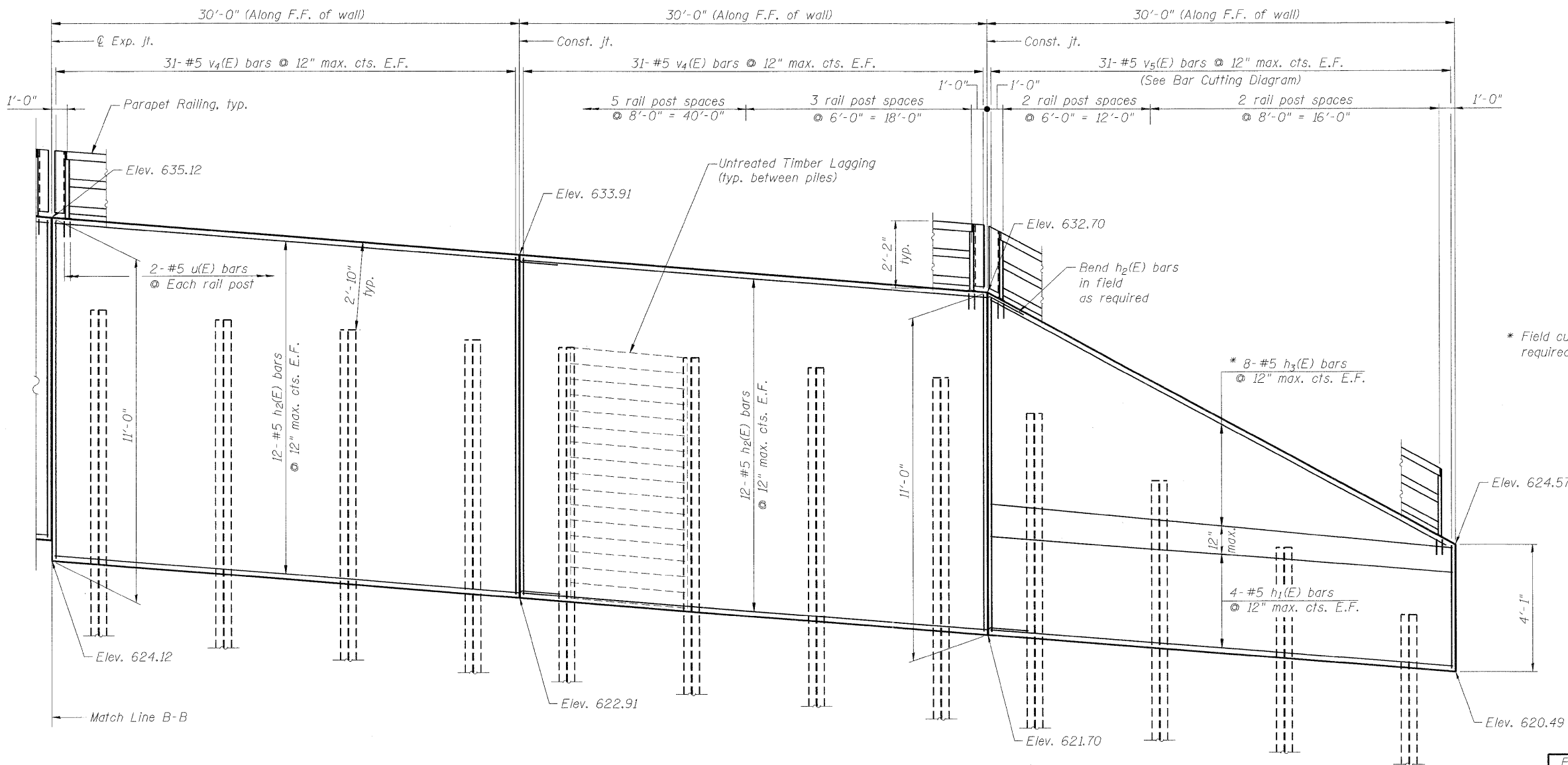
DESIGNED - Y. All
CHECKED - M. Shalkh
DRAWN - D. C. PATEL
CHECKED - J. GRAINAWI

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PLAN AND ELEVATION
STRUCTURE NO. 047-8800**
SHEET NO. 4 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	297
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	



* Field cut bars $h_3(E)$ as required. Fan bars as shown.

PILE SCHEDULE

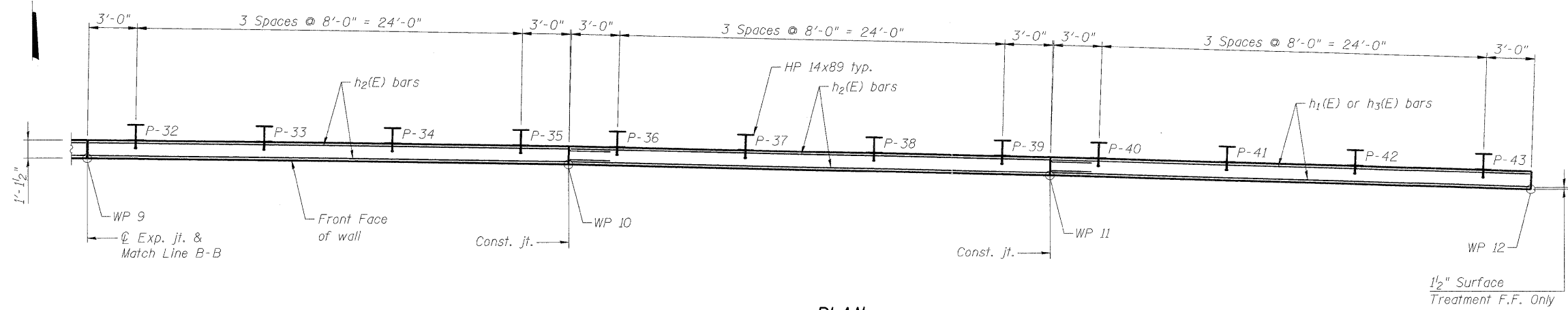
Pile Name	Top Elev.	Bottom Elev.	Length	Shear Studs	
				No.	Spacing
P-32	632.17	600.17	32'-0"	9	12" max.
P-33	631.84	599.84	32'-0"	9	12" max.
P-34	631.52	599.52	32'-0"	9	12" max.
P-35	631.20	599.20	32'-0"	9	12" max.
P-36	630.96	598.96	32'-0"	9	12" max.
P-37	630.63	598.63	32'-0"	9	12" max.
P-38	630.31	598.31	32'-0"	9	12" max.
P-39	629.99	597.99	32'-0"	9	12" max.
P-40	629.05	597.05	32'-0"	8	12" max.
P-41	626.89	594.89	32'-0"	6	12" max.
P-42	624.72	592.72	32'-0"	8	6" max.
P-43	622.55	590.55	32'-0"	4	6" max.

MINIMUM BAR LAP

#5 bar = 2'-11"

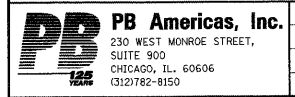
Notes:
 Wall to be built along straight chords between adjacent construction joints & expansion joints.
 For match line B-B, see sheet 4 of 13.
 For parapet railing details, see sheet 8 of 13.
 For sections and details, see sheets 6 and 7 of 13.
 For bill of material, see sheet 7 of 13.

ELEVATION
(Looking @ F.F. of wall)



PLAN

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FILE NAME = 0478800-66985-005-P&E.dgn	DESIGNED - Y. Ali	REVISED -
CHECKED - M. Shalkh	REVISED -	
PLOT SCALE = NONE	DRAWN - D. C. PATEL	REVISED -
PLOT DATE = 5/5/2011	CHECKED - J. GRAINAWI	REVISED -

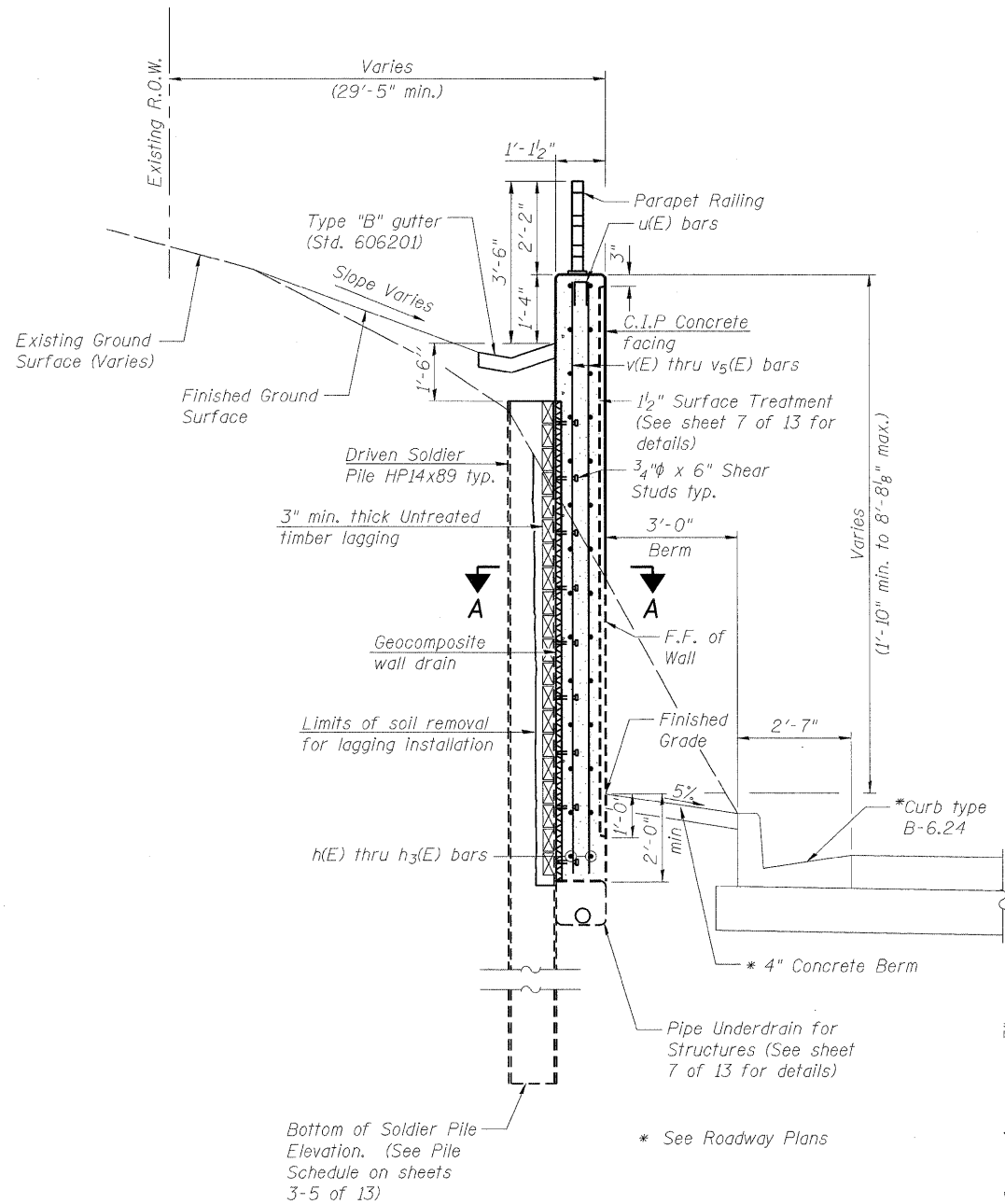
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND ELEVATION
STRUCTURE NO. 047-8800

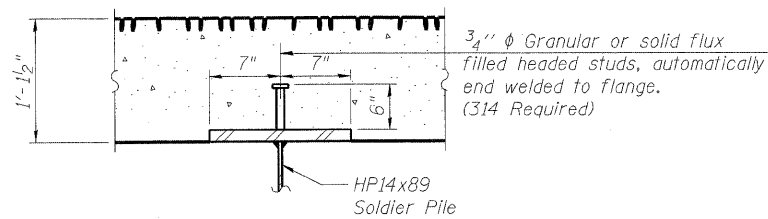
SHEET NO. 5 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	298
CONTRACT NO. 66985			ILLINOIS FED. AID PROJECT	

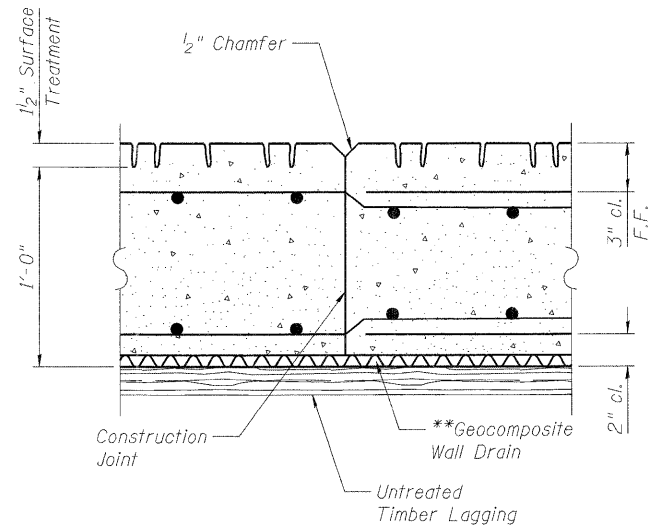
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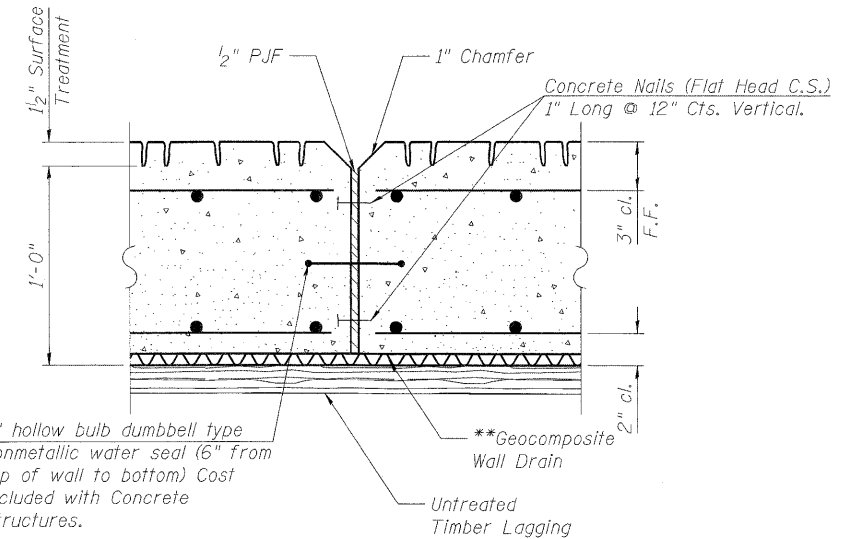
SECTION THRU WALL
(Looking East)



SECTION B-B

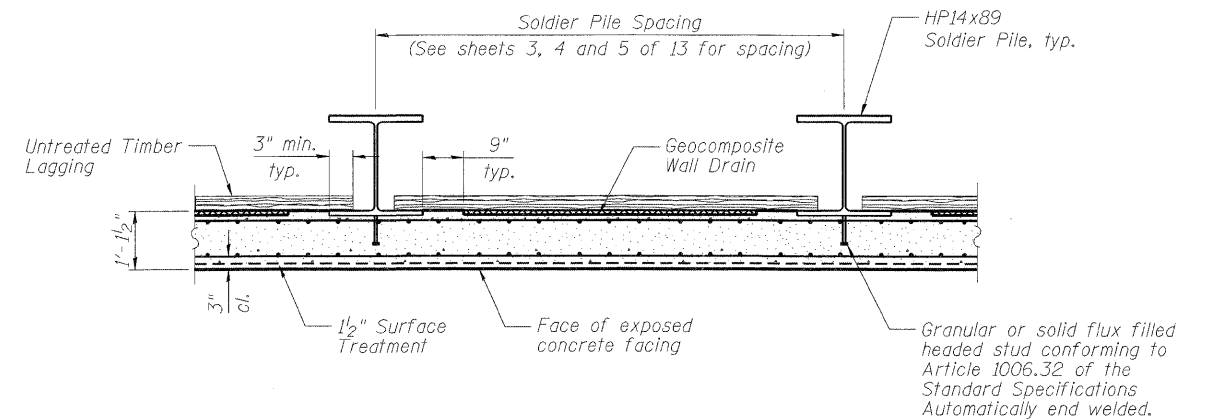


CONSTRUCTION JOINT DETAIL



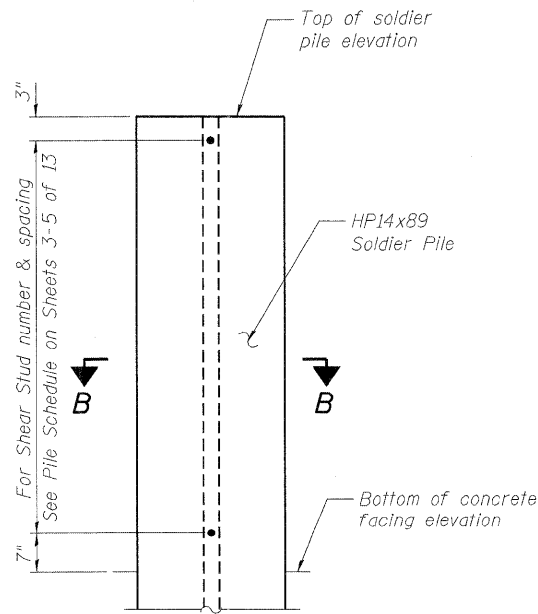
EXPANSION JOINT DETAIL

** Geocomposite Wall Drain shall not have a thickness greater than 1/2".

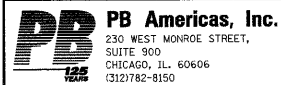


SECTION A-A
(Section rotated 90° for clarity)

Notes:
For Parapet Railing details, see sheet 8 of 13.
For Bill of Material, see sheet 7 of 13.



SHEAR STUD DETAIL



FILE NAME = 0478800-66985-006-DET.dgn
PLOT SCALE = NONE
PLOT DATE = 5/5/2011

DESIGNED - Y. Ali
CHECKED - M. Shalkh
DRAWN - H. Aikhatb
CHECKED - J. GRAINAWI

REVISED -
REVISED -
REVISED -
REVISED -

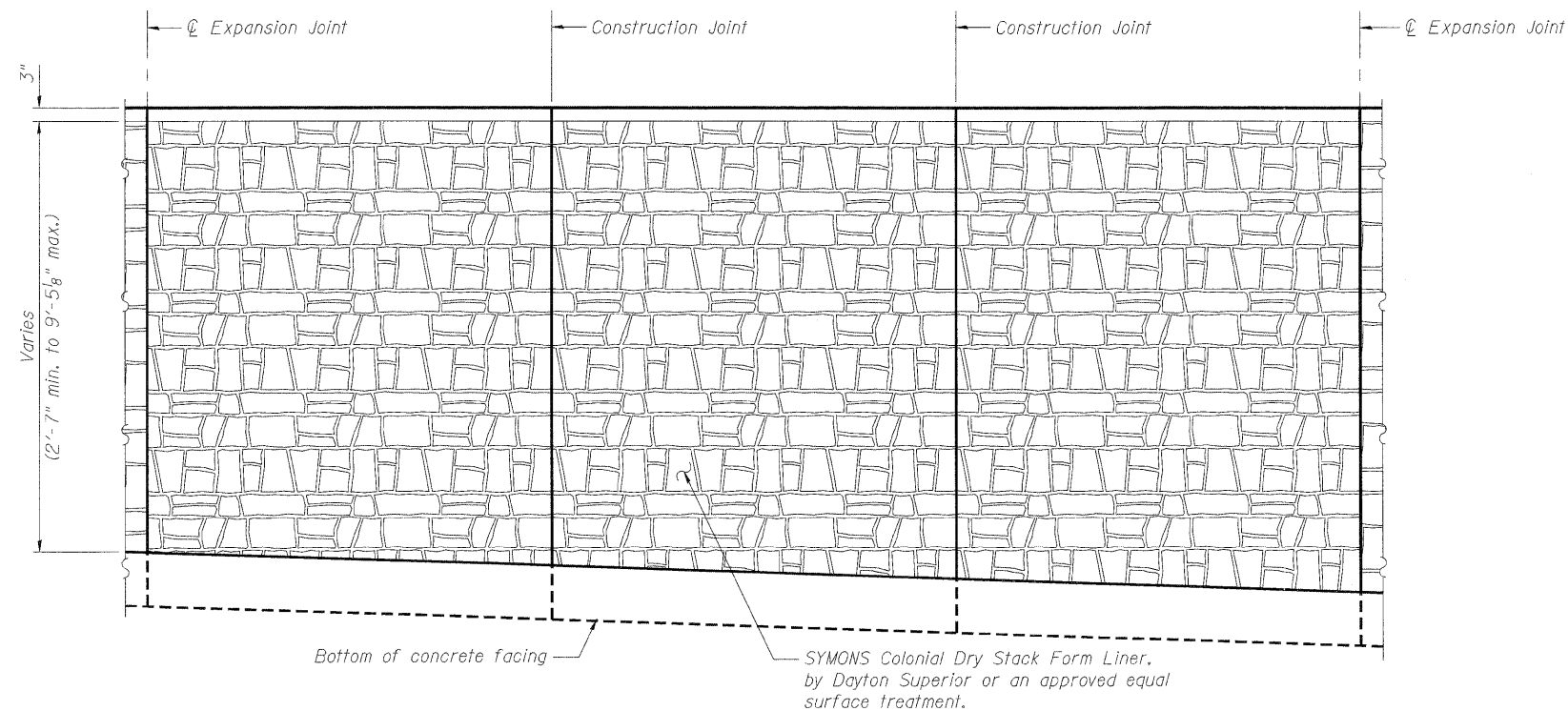
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTIONS AND DETAILS
STRUCTURE NO. 047-8800

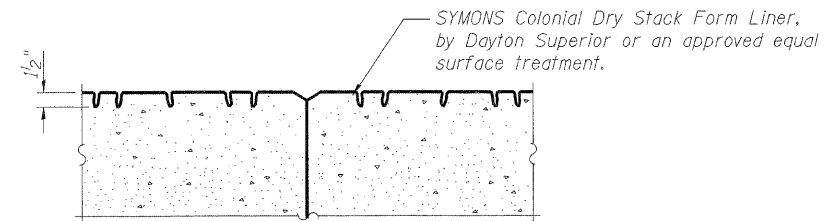
SHEET NO. 6 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 66985				

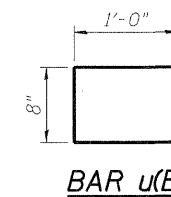
ILLINOIS FED. AID PROJECT



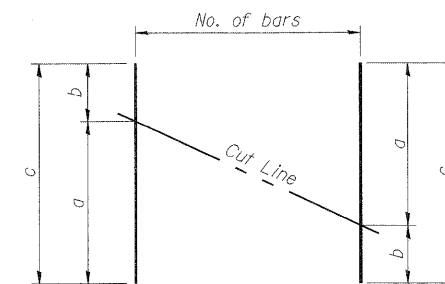
ELEVATION - TYPICAL SURFACE TREATMENT
(Front Face of Wall)



SURFACE TREATMENT DETAIL



BAR u(E)



BAR CUTTING DIAGRAM

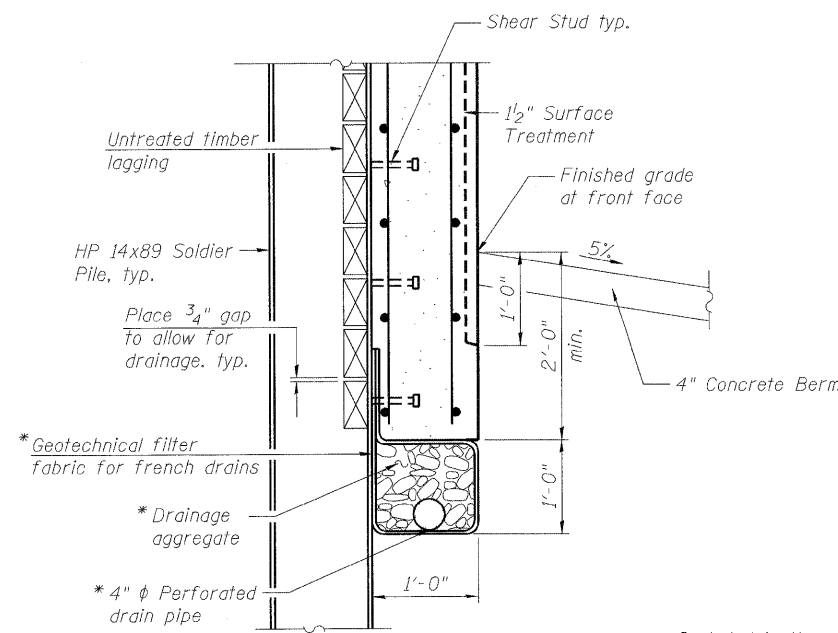
Order v(E), v₁(E) and v₅(E) bars full length. Cut as shown and use remainder of bars in opposite face.

DIMENSIONS

Bar	No.	a	b	c
v(E)	19	5'-6"	3'-10"	9'-4"
v ₁ (E)	31	8'-5"	5'-6"	13'-11"
v ₅ (E)	31	10'-9"	3'-10"	14'-7"

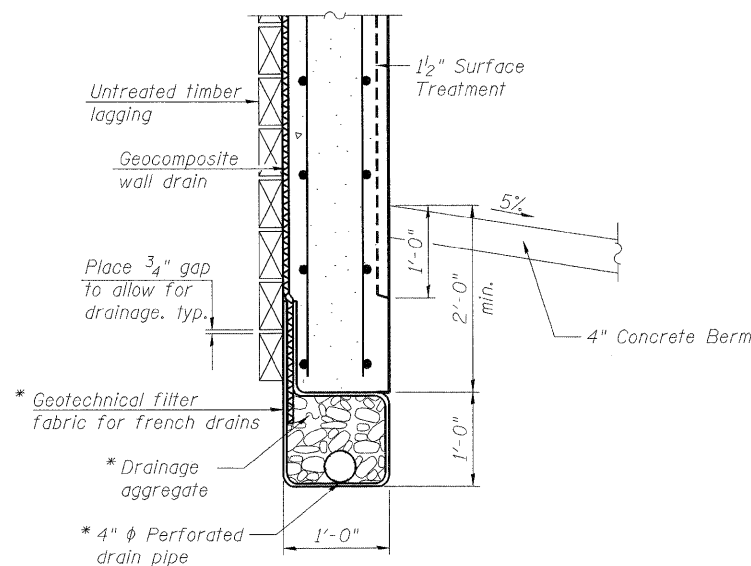
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	14	#5	20'-8"	—
h ₁ (E)	72	#5	29'-10"	—
h ₂ (E)	136	#5	32'-11"	—
h ₃ (E)	16	#5	30'-11"	—
u(E)	90	#5	2'-8"	□
v(E)	19	#5	9'-4"	—
v ₁ (E)	31	#5	13'-11"	—
v ₂ (E)	186	#5	9'-3"	—
v ₃ (E)	186	#5	10'-1"	—
v ₄ (E)	124	#5	10'-9"	—
v ₅ (E)	31	#5	14'-7"	—
Stud Shear Connectors	Each			314
Reinforcement Bars, Epoxy Coated	Pound			14230
Concrete Structures	Cu. Yd.			123.7
Driving Soldier Piles	Foot			1376
Furnishing Soldier Piles (HP Section)	Foot			1376
Geocomposite Wall Drain	Sq. Yd.			153
Untreated Timber Lagging	Sq. Ft.			1935
Pipe Underdrains for Structures 4"	Foot			318



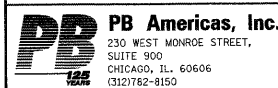
**PIPE UNDERDRAIN
DETAIL AT SOLDIER PILE**

*Included in the cost of Pipe Underdrains for Structures.



**PIPE UNDERDRAIN DETAIL
BETWEEN SOLDIER PILES**

T:\16825-PrairiePkwy-Ph2\Struct\Cadd\Pre\final\US34 Retaining Wall 10478800-66985-007-DET.dgn
05-MAY-2011 10:31



FILE NAME = 0478800-66985-007-DET.dgn
DESIGNED - Y. Ail
CHECKED - M. Shalkh
PLOT SCALE = NONE
PLOT DATE = 5/5/2011

DRAWN - H. Alkhatib
CHECKED - J. GRAINAWI

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTIONS AND DETAILS
STRUCTURE NO. 047-8800

SHEET NO. 7 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	300
				CONTRACT NO. 66985
ILLINOIS FED. AID PROJECT				