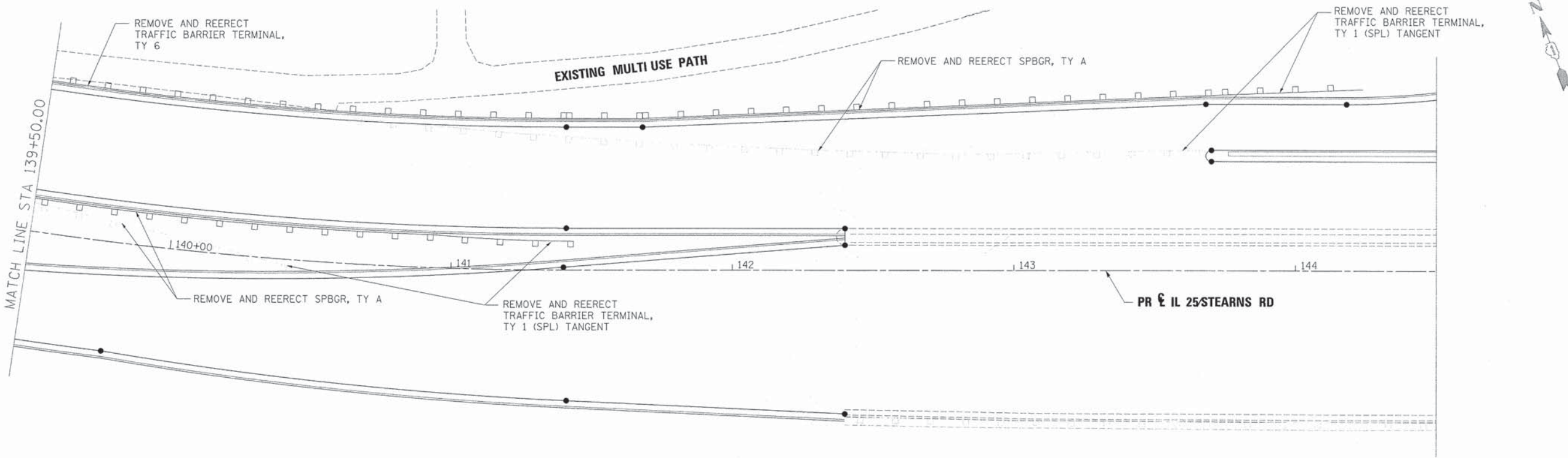
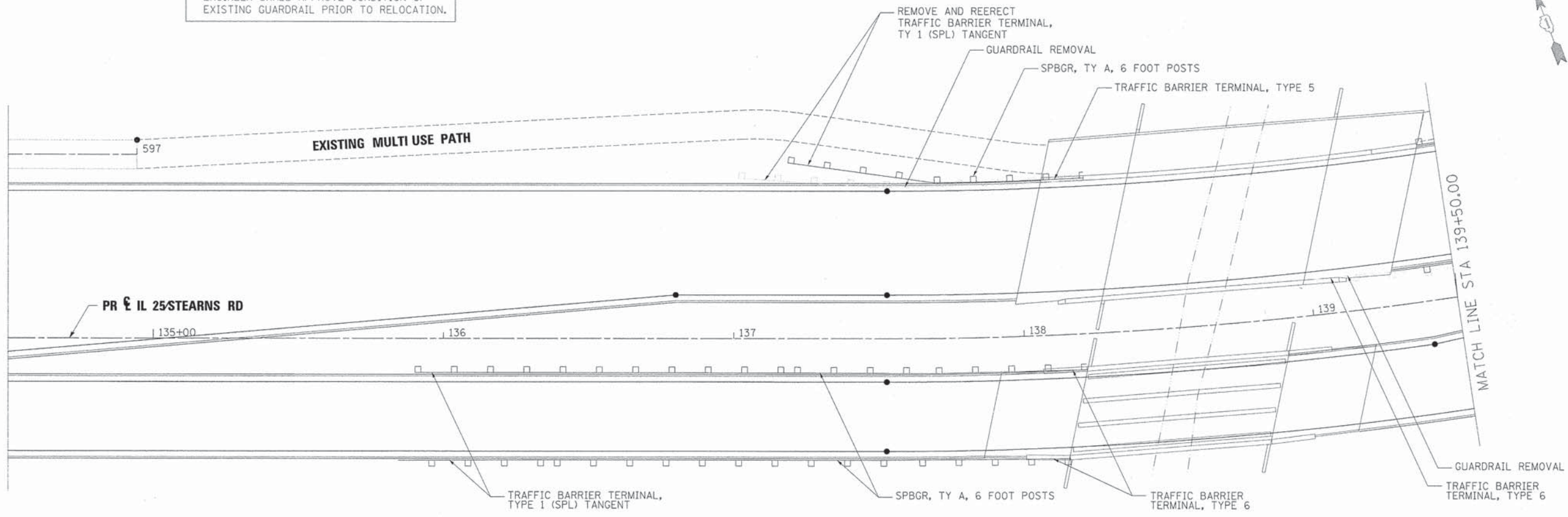


**NOTE**  
ENGINEER SHALL APPROVE CONDITION OF EXISTING GUARDRAIL PRIOR TO RELOCATION.



FILE NAME =	DESIGNED - AAA	REVISED -
...XD163598-sht-guardrail.e.branch.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - JMM	REVISED -
PLOT DATE = 1/17/2013	DATE - 01/18/2013	REVISED -



STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION

GUARDRAIL DETAIL  
EAST BRANCH BREWSTER CREEK

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	201
CONTRACT NO. 63598				

(ILLINOIS) FED. AID PROJECT



**NOTE**

- SEE IDOT DISTRICT 1 STANDARD TC-12 "MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS" FOR PLACEMENT AND TYPE OF RAISED REFLECTIVE PAVEMENT MARKERS.
- FOR PROPOSED PAVEMENT MARKINGS IN THE PCC SECTIONS USE POLYUREA PAVEMENT MARKINGS ACCORDING TO STANDARD TC-12.

**LEGEND**

- THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS (WHITE)
- THERMOPLASTIC PAVEMENT MARKING - LINE 4" (YELLOW)
- THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE) (10' DASH, 30' SKIP)
- THERMOPLASTIC PAVEMENT MARKING - LINE 6" (WHITE) (2' DASH, 6' SKIP)
- THERMOPLASTIC PAVEMENT MARKING - LINE 6" (WHITE)
- THERMOPLASTIC PAVEMENT MARKING - LINE 12" (YELLOW)
- POLYUREA PAVEMENT MARKING TYPE 1 - LETTERS AND SYMBOLS (WHITE)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4" (YELLOW)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4" (WHITE) (10' DASH, 30' SKIP)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 6" (WHITE) (2' DASH, 6' SKIP), (3' DASH, 9' SKIP)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 6" (WHITE)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 8" (WHITE)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 12" (YELLOW)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 12" (WHITE)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 24" (WHITE)
- RAISED REFLECTIVE PAVEMENT MARKER (1-WAY CRYSTAL / OPAQUE)

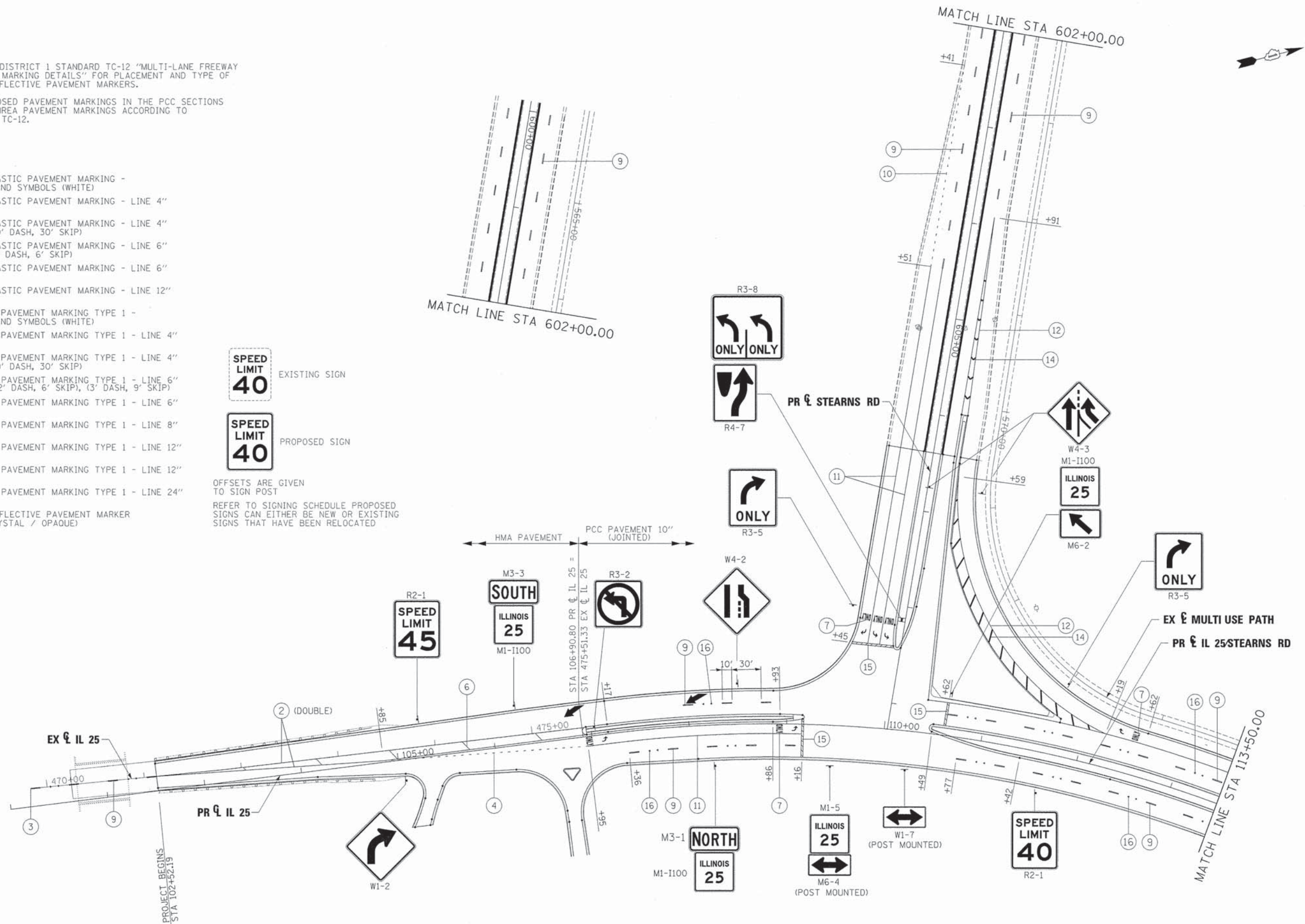


EXISTING SIGN



PROPOSED SIGN

OFFSETS ARE GIVEN TO SIGN POST  
REFER TO SIGNING SCHEDULE PROPOSED SIGNS CAN EITHER BE NEW OR EXISTING SIGNS THAT HAVE BEEN RELOCATED



FILE NAME = ... \D163598-aht-pmk+sign-01.dgn	DESIGNED - AAA	REVISED -		<b>STATE OF ILLINOIS</b> <b>DIVISION OF TRANSPORTATION</b>	<b>PAVEMENT MARKING AND SIGNING PLAN</b> <b>IL 25/STEARNS RD</b>	F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 202		
USER NAME = sbjank	DRAWN - TMB	REVISED -				SCALE: 1"=50'	SHEET NO. 1 OF 5 SHEETS	STA. 102+52.19 TO STA. 113+50.00	CONTRACT NO. 63598		[ILLINOIS] FED. AID PROJECT	
PLOT DATE = 1/17/2013	CHECKED - JMM	REVISED -										
	DATE - 01/18/2013	REVISED -										



**NOTE**

- SEE IDOT DISTRICT 1 STANDARD TC-12 "MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS" FOR PLACEMENT AND TYPE OF RAISED REFLECTIVE PAVEMENT MARKERS.
- FOR PROPOSED PAVEMENT MARKINGS IN THE PCC SECTIONS USE POLYUREA PAVEMENT MARKINGS ACCORDING TO STANDARD TC-12.
- THE R8-8 SIGN POST SHALL HAVE A YELLOW FLASHING BEACON. INSTALLATION DETAIL FOR THE SIGN POST ARE IN THE "TRAFFIC SIGNAL MODIFICATION PLAN - IL 25/STEARNS RD - SHEET 1 OF 2". THE COST OF THE SIGN PANEL R8-8 IS INCLUDED UNDER "SIGN PANEL - TYPE 1".

**LEGEND**

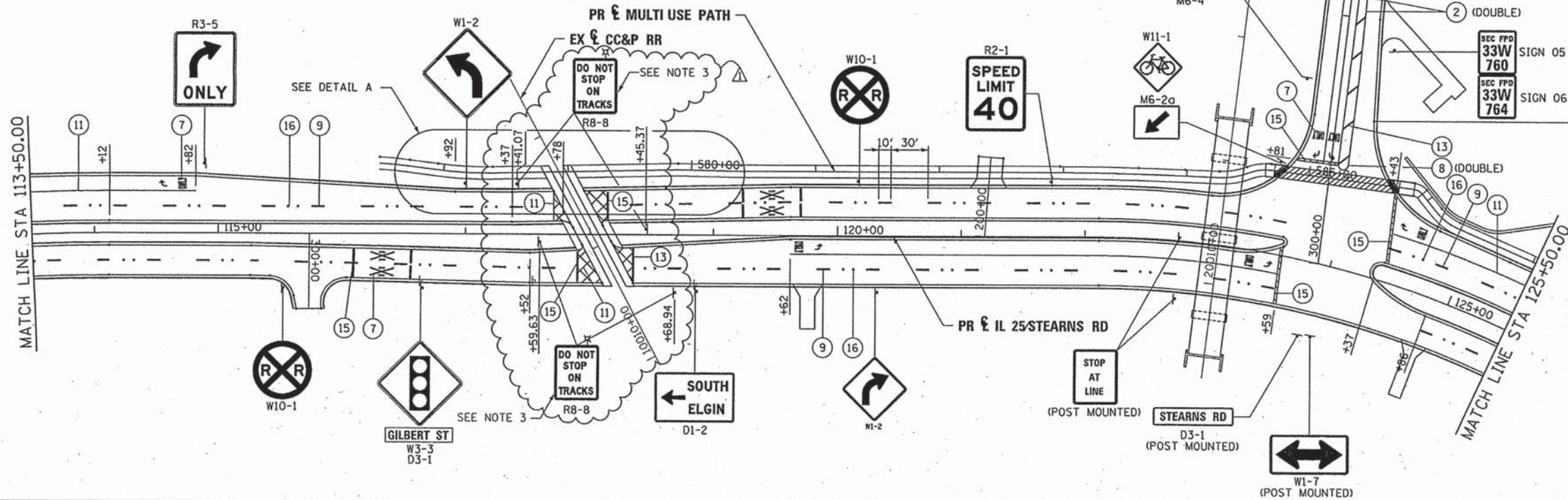
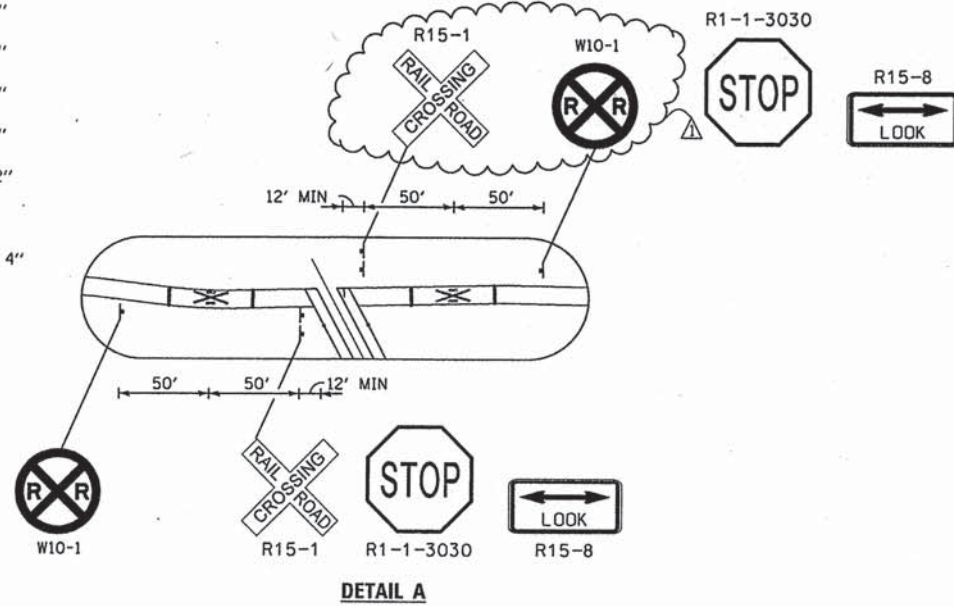
- THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS (WHITE)
- THERMOPLASTIC PAVEMENT MARKING - LINE 4" (YELLOW)
- THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE) (10' DASH, 30' SKIP)
- THERMOPLASTIC PAVEMENT MARKING - LINE 6" (WHITE) (2' DASH, 6' SKIP)
- THERMOPLASTIC PAVEMENT MARKING - LINE 6" (WHITE)
- THERMOPLASTIC PAVEMENT MARKING - LINE 12" (YELLOW)
- POLYUREA PAVEMENT MARKING TYPE 1 - LETTERS AND SYMBOLS (WHITE)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4" (YELLOW)

- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4" (WHITE) (10' DASH, 30' SKIP)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 6" (WHITE) (2' DASH, 6' SKIP), (3' DASH, 9' SKIP)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 6" (WHITE)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 8" (WHITE)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 12" (YELLOW)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 12" (WHITE)
- POLYUREA PAVEMENT MARKING TYPE 1 - LINE 24" (WHITE)
- RAISED REFLECTIVE PAVEMENT MARKER (1-WAY CRYSTAL / OPAQUE)

**SPEED LIMIT 40**  
EXISTING SIGN

**SPEED LIMIT 40**  
PROPOSED SIGN

OFFSETS ARE GIVEN TO SIGN POST  
REFER TO SIGNING SCHEDULE PROPOSED SIGNS CAN EITHER BE NEW OR EXISTING SIGNS THAT HAVE BEEN RELOCATED



FILE NAME =	DESIGNED - AAA	REVISED - ADDENDUM 04/15/2013
... \0163598-ah-pmk-sign-02.dgn	DRAWN - TMB	REVISED -
USER NAME = jma.jawski	CHECKED - JMM	REVISED -
PLOT DATE = 4/19/2013	DATE - 01/18/2013	REVISED -



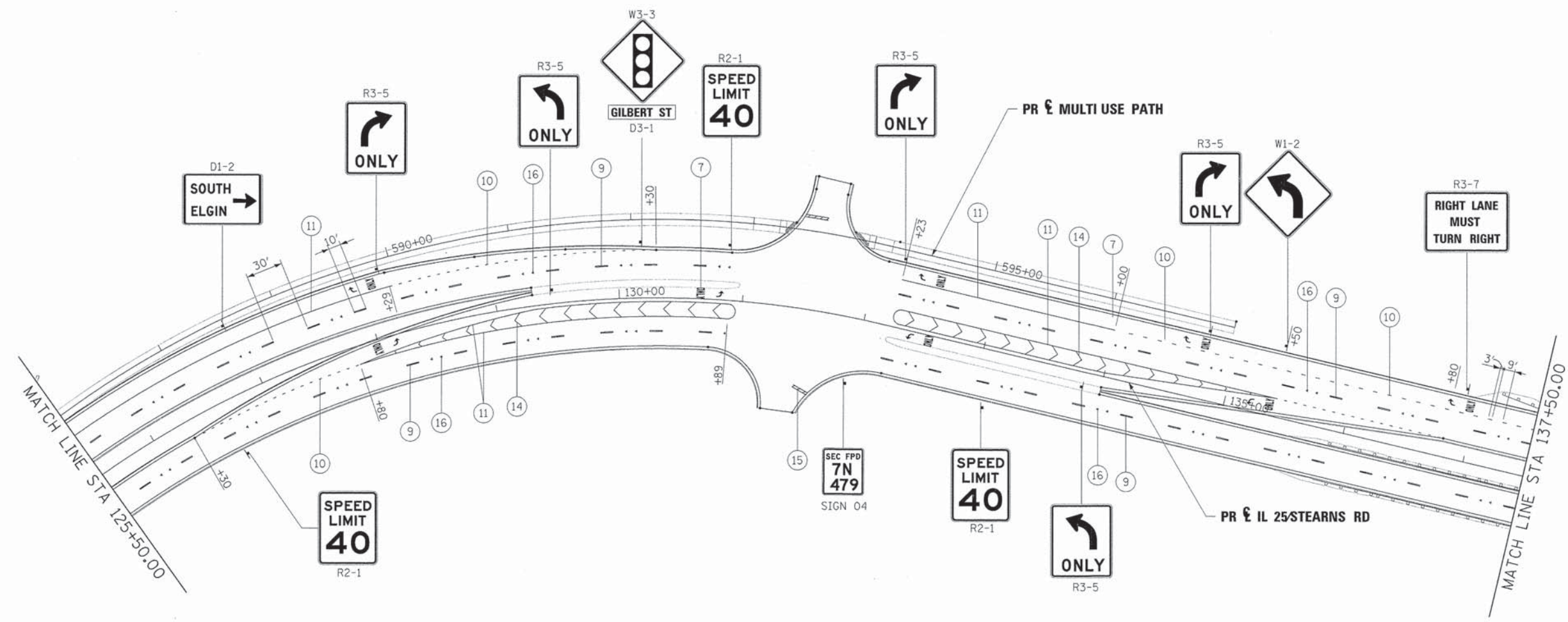
STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION

PAVEMENT MARKING AND SIGNING PLAN  
IL 25/STEARNS RD/GILBERT ST

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	203
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	

SCALE: 1"=50' SHEET NO. 2 OF 5 SHEETS STA. 113+50.00 TO STA. 125+50.00





**NOTE**

- SEE IDOT DISTRICT 1 STANDARD TC-12 "MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS" FOR PLACEMENT AND TYPE OF RAISED REFLECTIVE PAVEMENT MARKERS.
- FOR PROPOSED PAVEMENT MARKINGS IN THE PCC SECTIONS USE POLYUREA PAVEMENT MARKINGS ACCORDING TO STANDARD TC-12.

**LEGEND**

- |   |   |
|---|---|
| ① THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS (WHITE)          | ⑨ POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4" (WHITE) (10' DASH, 30' SKIP)                   |
| ② THERMOPLASTIC PAVEMENT MARKING - LINE 4" (YELLOW)                     | ⑩ POLYUREA PAVEMENT MARKING TYPE 1 - LINE 6" (WHITE) (2' DASH, 6' SKIP), (3' DASH, 9' SKIP) |
| ③ THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE) (10' DASH, 30' SKIP) | ⑪ POLYUREA PAVEMENT MARKING TYPE 1 - LINE 6" (WHITE)  |
| ④ THERMOPLASTIC PAVEMENT MARKING - LINE 6" (WHITE) (2' DASH, 6' SKIP)   | ⑫ POLYUREA PAVEMENT MARKING TYPE 1 - LINE 8" (WHITE)  |
| ⑤ THERMOPLASTIC PAVEMENT MARKING - LINE 6" (YELLOW)                     | ⑬ POLYUREA PAVEMENT MARKING TYPE 1 - LINE 12" (YELLOW)                                      |
| ⑥ THERMOPLASTIC PAVEMENT MARKING - LINE 12" (YELLOW)                    | ⑭ POLYUREA PAVEMENT MARKING TYPE 1 - LINE 12" (WHITE)                                       |
| ⑦ POLYUREA PAVEMENT MARKING TYPE 1 - LETTERS AND SYMBOLS (WHITE)        | ⑮ POLYUREA PAVEMENT MARKING TYPE 1 - LINE 24" (WHITE)                                       |
| ⑧ POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4" (YELLOW)                   | ⑯ RAISED REFLECTIVE PAVEMENT MARKER (1-WAY CRYSTAL / OPAQUE)                                |



OFFSETS ARE GIVEN TO SIGN POST  
REFER TO SIGNING SCHEDULE PROPOSED SIGNS CAN EITHER BE NEW OR EXISTING SIGNS THAT HAVE BEEN RELOCATED

FILE NAME =	DESIGNED - AAA	REVISED -
...ND163598-aht-pmk-sign-03.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - JMM	REVISED -
PLOT DATE = 1/17/2013	DATE - 01/18/2013	REVISED -



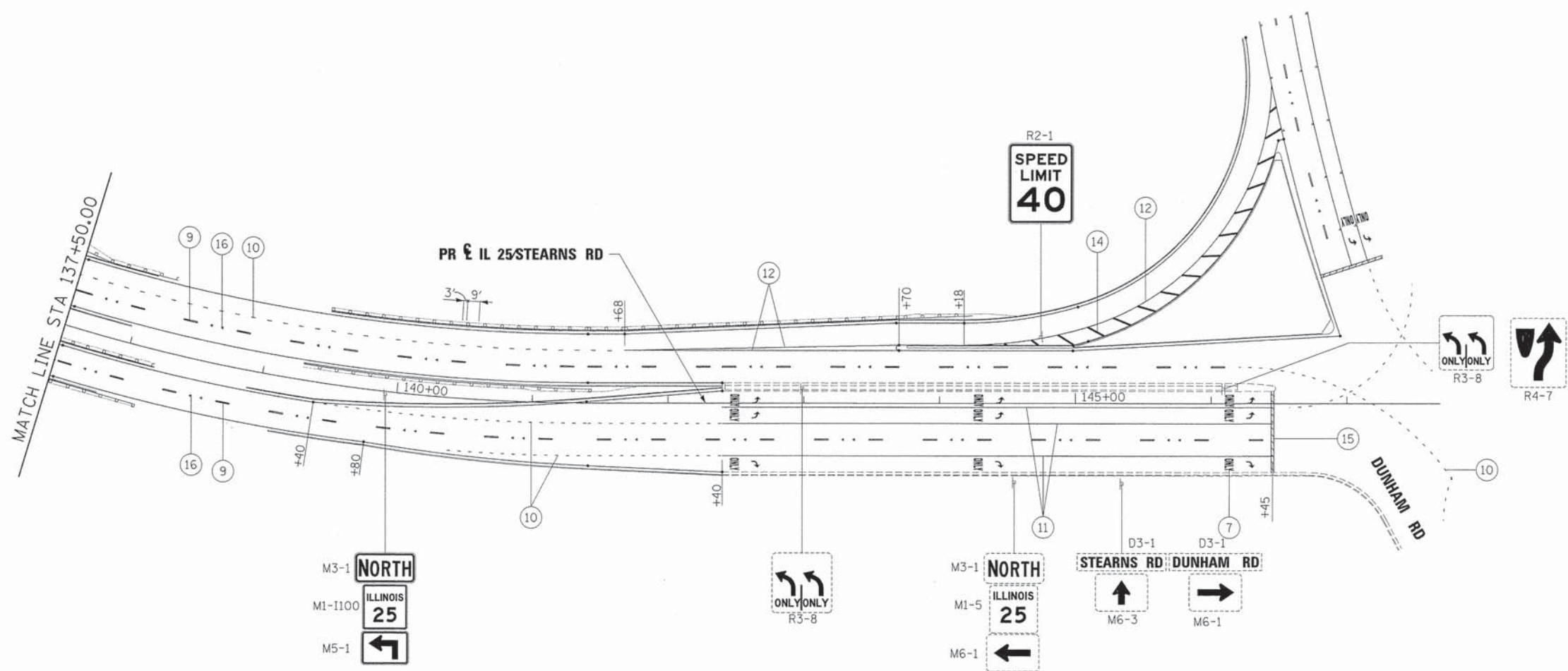
STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION

PAVEMENT MARKING AND SIGNING PLAN  
IL 25/STEARNS RD

SCALE: 1"=50' SHEET NO. 3 OF 5 SHEETS STA. 125+50.00 TO STA. 137+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	204
				CONTRACT NO. 63598
[ILLINOIS] FED. AID PROJECT				





**NOTE**

- SEE IDOT DISTRICT 1 STANDARD TC-12 "MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS" FOR PLACEMENT AND TYPE OF RAISED REFLECTIVE PAVEMENT MARKERS.
- FOR PROPOSED PAVEMENT MARKINGS IN THE PCC SECTIONS USE POLYUREA PAVEMENT MARKINGS ACCORDING TO STANDARD TC-12.

**LEGEND**

- |   |  |
|---|--|
| 1 THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS (WHITE)          | 9 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4" (WHITE) (10' DASH, 30' SKIP)                    |
| 2 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (YELLOW)                     | 10 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 6" (WHITE) (2' DASH, 6' SKIP), (3' DASH, 9' SKIP) |
| 3 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE) (10' DASH, 30' SKIP) | 11 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 6" (WHITE)  |
| 4 THERMOPLASTIC PAVEMENT MARKING - LINE 6" (WHITE) (2' DASH, 6' SKIP)   | 12 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 8" (WHITE)  |
| 5 THERMOPLASTIC PAVEMENT MARKING - LINE 6" (YELLOW)                     | 13 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 12" (YELLOW)                                      |
| 6 THERMOPLASTIC PAVEMENT MARKING - LINE 12" (YELLOW)                    | 14 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 12" (WHITE)                                       |
| 7 POLYUREA PAVEMENT MARKING TYPE 1 - LETTERS AND SYMBOLS (WHITE)        | 15 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 24" (WHITE)                                       |
| 8 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4" (YELLOW)                   | 16 RAISED REFLECTIVE PAVEMENT MARKER (1-WAY CRYSTAL / OPAQUE)                                |



OFFSETS ARE GIVEN TO SIGN POST  
REFER TO SIGNING SCHEDULE PROPOSED SIGNS CAN EITHER BE NEW OR EXISTING SIGNS THAT HAVE BEEN RELOCATED

FILE NAME =	DESIGNED - AAA	REVISED -
...\\D163598-sht-pmk-sign-04.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - JMM	REVISED -
PLOT DATE = 1/17/2013	DATE - 01/18/2013	REVISED -



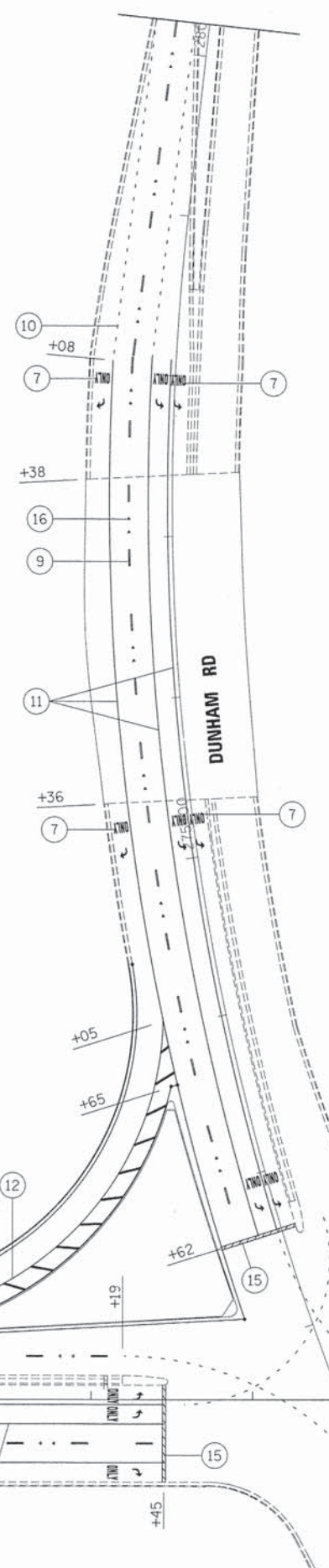
STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION

PAVEMENT MARKING AND SIGNING PLAN  
IL 25/STEARNS RD

SCALE: 1"=50' SHEET NO. 4 OF 5 SHEETS STA. 137+50.00 TO STA. 146+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	205
CONTRACT NO. 63598			[ILLINOIS] FED. AID PROJECT	





**NOTE**

1. SEE IDOT DISTRICT 1 STANDARD TC-12 "MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS" FOR PLACEMENT AND TYPE OF RAISED REFLECTIVE PAVEMENT MARKERS.
2. FOR PROPOSED PAVEMENT MARKINGS IN THE PCC SECTIONS USE POLYUREA PAVEMENT MARKINGS ACCORDING TO STANDARD TC-12.

**LEGEND**

- |   |   |
|---|---|
| 1 THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS (WHITE)          | 9 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4" (WHITE) (10' DASH, 30' SKIP)                     |
| 2 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (YELLOW)                     | 10 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 6" (WHITE) ( 2' DASH, 6' SKIP), (3' DASH, 9' SKIP) |
| 3 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE) (10' DASH, 30' SKIP) | 11 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 6" (WHITE)   |
| 4 THERMOPLASTIC PAVEMENT MARKING - LINE 6" (WHITE) (2' DASH, 6' SKIP)   | 12 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 8" (WHITE)   |
| 5 THERMOPLASTIC PAVEMENT MARKING - LINE 6" (WHITE)                      | 13 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 12" (YELLOW)                                       |
| 6 THERMOPLASTIC PAVEMENT MARKING - LINE 12" (YELLOW)                    | 14 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 12" (WHITE)  |
| 7 POLYUREA PAVEMENT MARKING TYPE 1 - LETTERS AND SYMBOLS (WHITE)        | 15 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 24" (WHITE)  |
| 8 POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4" (YELLOW)                   | 16 RAISED REFLECTIVE PAVEMENT MARKER (1-WAY CRYSTAL / OPAQUE)                                 |

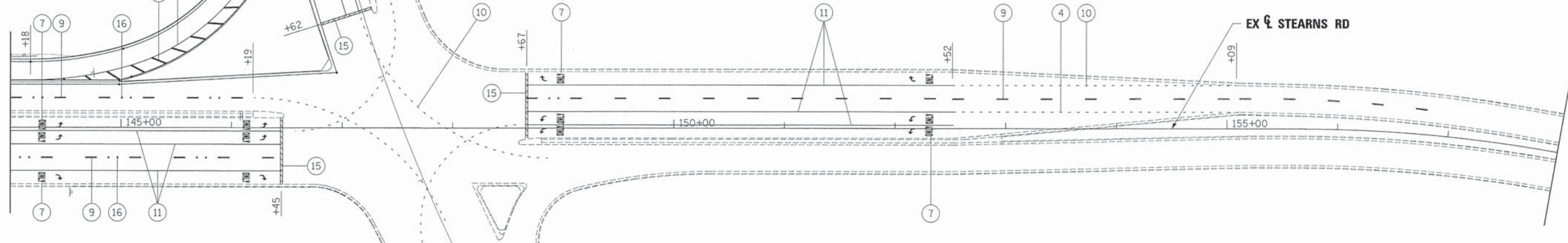


EXISTING SIGN



PROPOSED SIGN

OFFSETS ARE GIVEN TO SIGN POST  
REFER TO SIGNING SCHEDULE PROPOSED SIGNS CAN EITHER BE NEW OR EXISTING SIGNS THAT HAVE BEEN RELOCATED



FILE NAME =	DESIGNED - AAA	REVISED -
...\\0163598-aht-pmk-sign-05.dgn	DRAWN - TMB	REVISED -
USER NAME = sb1ark	CHECKED - JMM	REVISED -
PLOT DATE = 1/17/2013	DATE - 01/18/2013	REVISED -



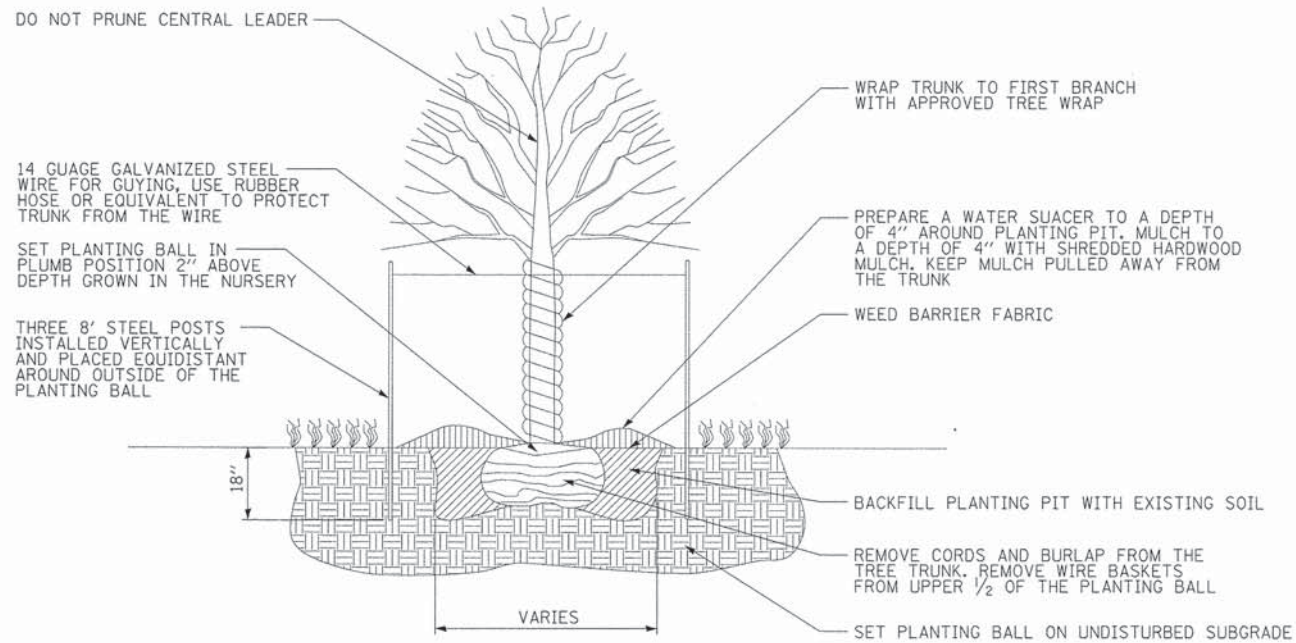
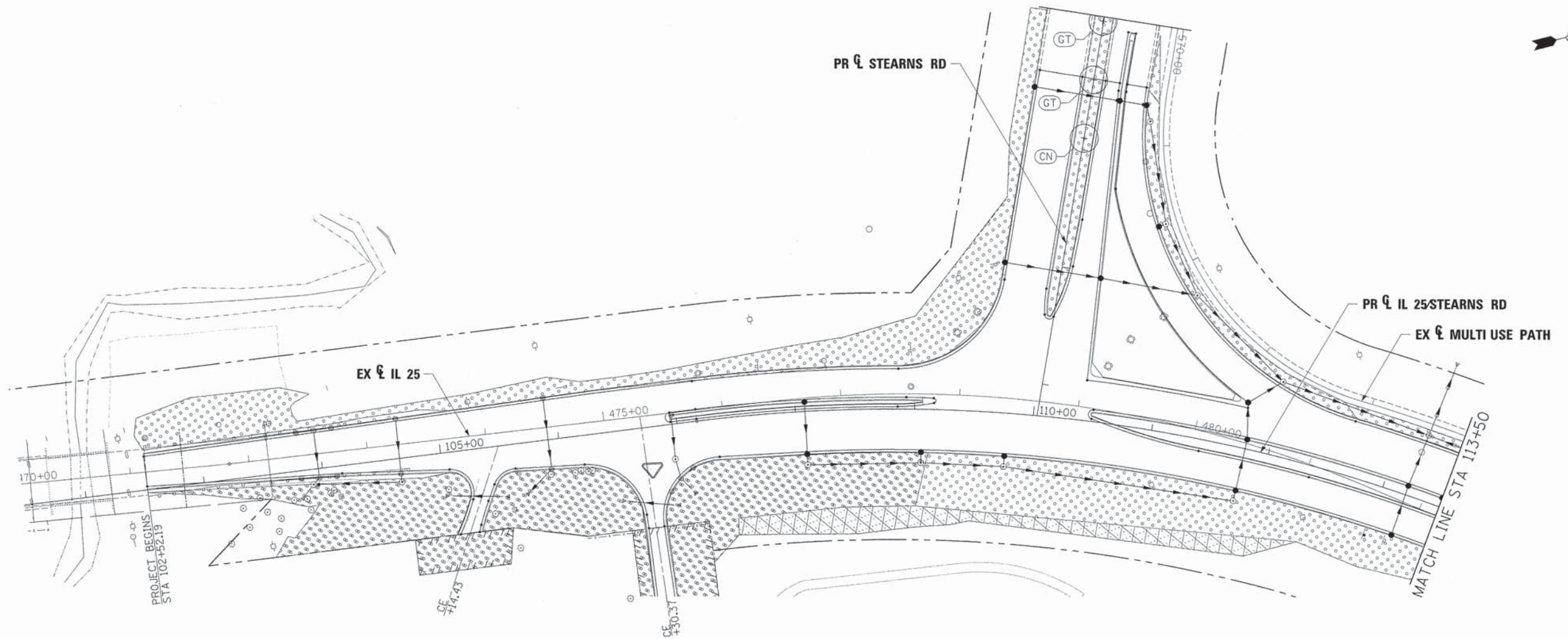
STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION

PAVEMENT MARKING AND SIGNING PLAN  
IL 25/STEARNS RD

SCALE: 1"=50' SHEET NO. 5 OF 5 SHEETS STA. 146+00.00 TO STA. 157+58.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	206
				CONTRACT NO. 63598
ILLINOIS FED. AID PROJECT				





**TREE PLANTING DETAIL**  
N.T.S.

TREES		
CODE	SCIENTIFIC NAME	COMMON NAME
CO	CARYA OVATA	SHAGBARK HICKORY
CE	CELTIS OCCIDENTALIS	COMMON HACKBERRY
CN	CERCIS CANADENSIS	EASTERN REDBUD
CI	CRATAEGUS CRUGALLI INERMIS	THORNLESS COCKSPUR HAWTHORN
GT	GLEDITSIA TRIACANTHOS INERMIS SKYLINE	SKYLINE THORNLESS COMMON
GD	GYMNOCLADUS DIOICUS	KENTUCKY COFFEETREE
PV	PRUNUS VIRGINIANA SCHUBERT	SCHUBERT CHOKEBERRY
QA	QUERCUS ALBA	WHITE OAK
QB	QUERCUS BICOLOR	SWAMP WHITE OAK
QE	QUERCUS ELLIPSOIDALIS	HILL'S OAK
QM	QUERCUS MACROCARPA	BUR OAK
QR	QUERCUS RUBRA	RED OAK
TA	TILIA AMERICANA REDMOND	REDMOND AMERICAN LINDEN

**LEGEND**

- TREE
- SEEDING, CLASS 2A
- SEEDING, CLASS 4 (MOD) MESIC PRAIRIE
- SEEDING, CLASS 5 (MOD) MESIC PRAIRIE

**NOTES:**

LANDSCAPING PLANS HAVE BEEN COORDINATED WITH CORRIDOR LANDSCAPING PLANS (DONE BY OTHERS)

TREES SHOULD NOT BE PLANTED UNDER OR OVER UTILITIES.

FILE NAME =	DESIGNED - AAF	REVISED -
...N0163598-shr-IL25-act-1s-01.dgn	DRAWN - TMB	REVISED -
USER NAME = sbblank	CHECKED - JMM	REVISED -
PLOT DATE = 1/17/2013	DATE - 01/18/2013	REVISED -



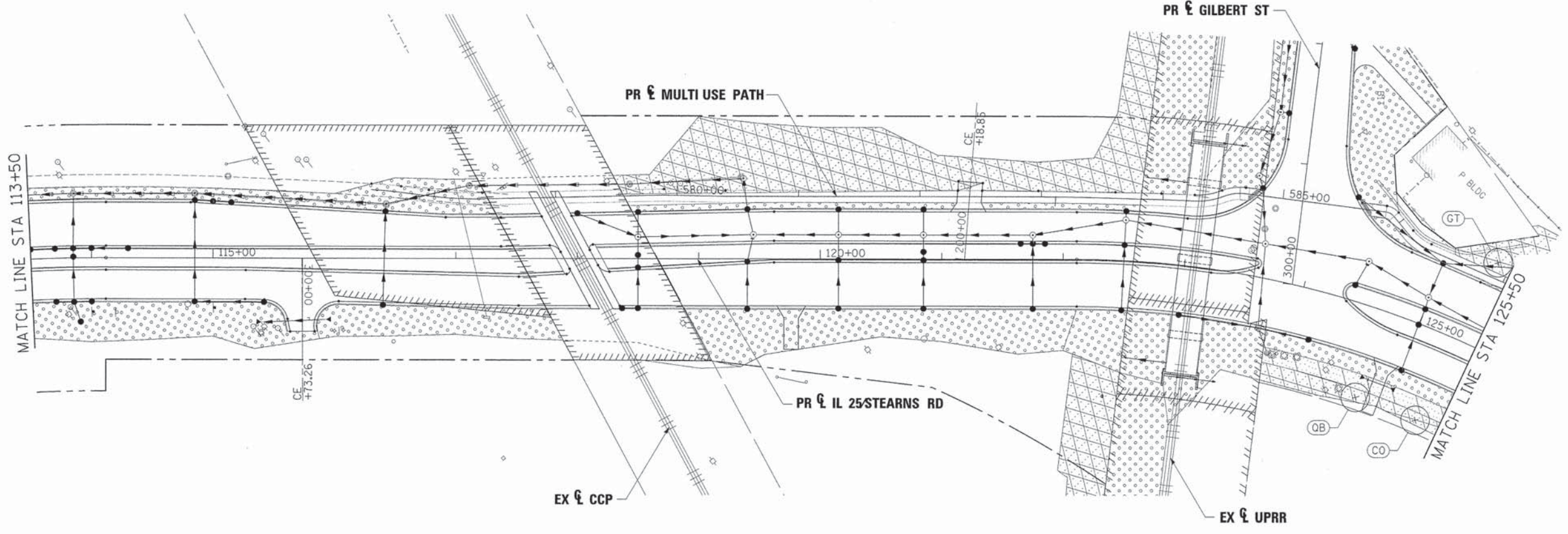
STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION

LANDSCAPING PLANS  
IL 25/STEARNS RD

SCALE: 1"=50' SHEET NO. 1 OF 5 SHEETS STA. 102+52.19 TO STA. 113+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	207
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				





**TREES**

CODE	SCIENTIFIC NAME	COMMON NAME
CO	CARYA OVATA	SHAGBARK HICKORY
CE	CELTIS OCCIDENTALIS	COMMON HACKBERRY
CN	CERCIS CANADENSIS	EASTERN REDBUD
CI	CRATAEGUS CRUGGALLI INERMIS	THORNLESS COCKSPUR HAWTHORN
GT	GLEDITSIA TRIACANTHOS INERMIS SKYLINE	SKYLINE THORNLESS COMMON
GD	GYMNOCLADUS DIOICUS	KENTUCKY COFFEETREE
PV	PRUNUS VIRGINIANA SCHUBERT	SCHUBERT CHOKEBERRY
QA	QUERCUS ALBA	WHITE OAK
QB	QUERCUS BICOLOR	SWAMP WHITE OAK
QE	QUERCUS ELLIPSOIDALIS	HILL'S OAK
QM	QUERCUS MACROCARPA	BUR OAK
OR	QUERCUS RUBRA	RED OAK
TA	TILIA AMERICANA REDMOND	REDMOND AMERICAN LINDEN

**LEGEND**

- TREE
- SEEDING, CLASS 2A
- SEEDING, CLASS 4 (MOD) MESIC PRAIRIE  
SEEDING, CLASS 5 (MOD) MESIC PRAIRIE

**NOTES:**

LANDSCAPING PLANS HAVE BEEN COORDINATED WITH CORRIDOR LANDSCAPING PLANS (DONE BY OTHERS)  
TREES SHOULD NOT BE PLANTED UNDER OR OVER UTILITIES.

FILE NAME =	DESIGNED - AAF	REVISED -
... \DI63598-sht-IL25-stn-1a-02.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - JMM	REVISED -
PLDT DATE = 1/17/2013	DATE - 01/18/2013	REVISED -



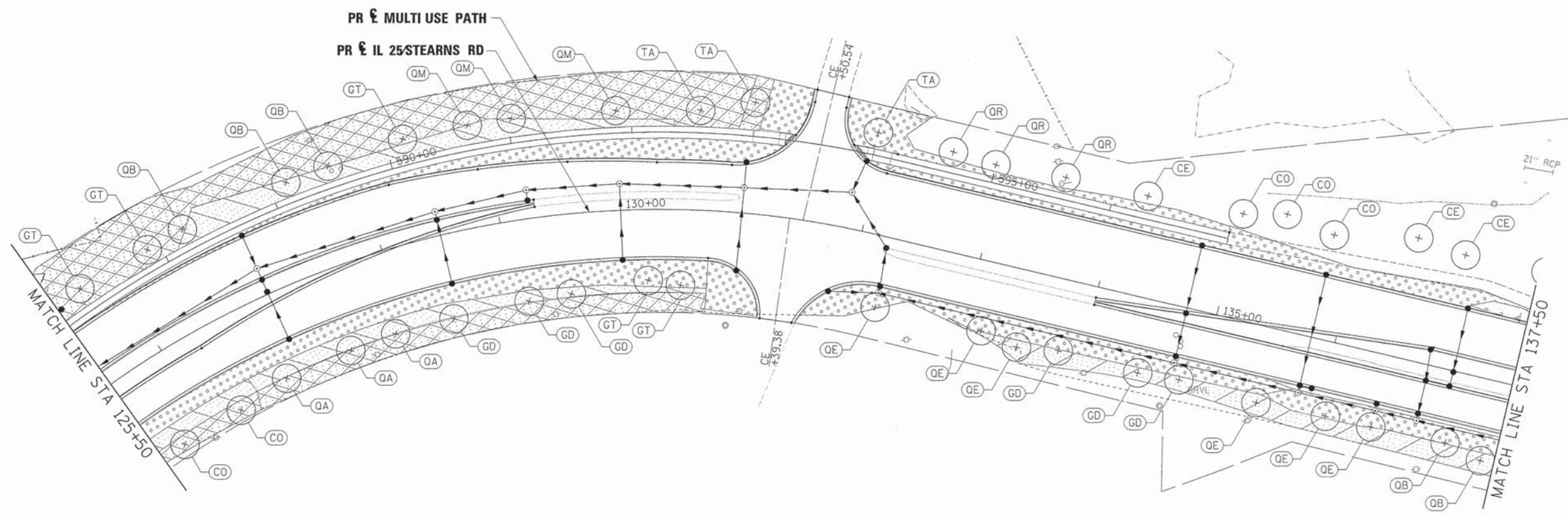
STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION

LANDSCAPING PLANS  
IL 25 STEARNS RD

SCALE: 1"=50' SHEET NO. 2 OF 5 SHEETS STA. 113+50.00 TO STA. 125+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	208
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				





TREES		
CODE	SCIENTIFIC NAME	COMMON NAME
CO	CARYA OVATA	SHAGBARK HICKORY
CE	CELTIS OCCIDENTALIS	COMMON HACKBERRY
CN	CERCIS CANADENSIS	EASTERN REDBUD
CI	CRATAEGUS CRUSGALLI INERMIS	THORNLESS COCKSPUR HAWTHORN
GT	GLEDITSIA TRIACANTHOS INERMIS SKYLINE	SKYLINE THORNLESS COMMON
GD	GYMNOCLADUS DIOICUS	KENTUCKY COFFEETREE
PV	PRUNUS VIRGINIANA SCHUBERT	SCHUBERT CHOKEBERRY
QA	QUERCUS ALBA	WHITE OAK
QB	QUERCUS BICOLOR	SWAMP WHITE OAK
QE	QUERCUS ELLIPSOIDALIS	HILL'S OAK
QM	QUERCUS MACROCARPA	BUR OAK
QR	QUERCUS RUBRA	RED OAK
TA	TILIA AMERICANA REDMOND	REDMOND AMERICAN LINDEN

**LEGEND**

- TREE
- SEEDING, CLASS 2A
- SEEDING, CLASS 4 (MOD) MESIC PRAIRIE  
SEEDING, CLASS 5 (MOD) MESIC PRAIRIE

**NOTES:**  
 LANDSCAPING PLANS HAVE BEEN COORDINATED WITH CORRIDOR LANDSCAPING PLANS (DONE BY OTHERS)  
 TREES SHOULD NOT BE PLANTED UNDER OR OVER UTILITIES.

FILE NAME =	DESIGNED - AAF	REVISED -
...\\0163598-sht-IL25-stn-1s-03.dgn	DRAWN - TMB	REVISED -
USER NAME = sblank	CHECKED - JMM	REVISED -
PLOT DATE = 1/17/2013	DATE - 01/18/2013	REVISED -



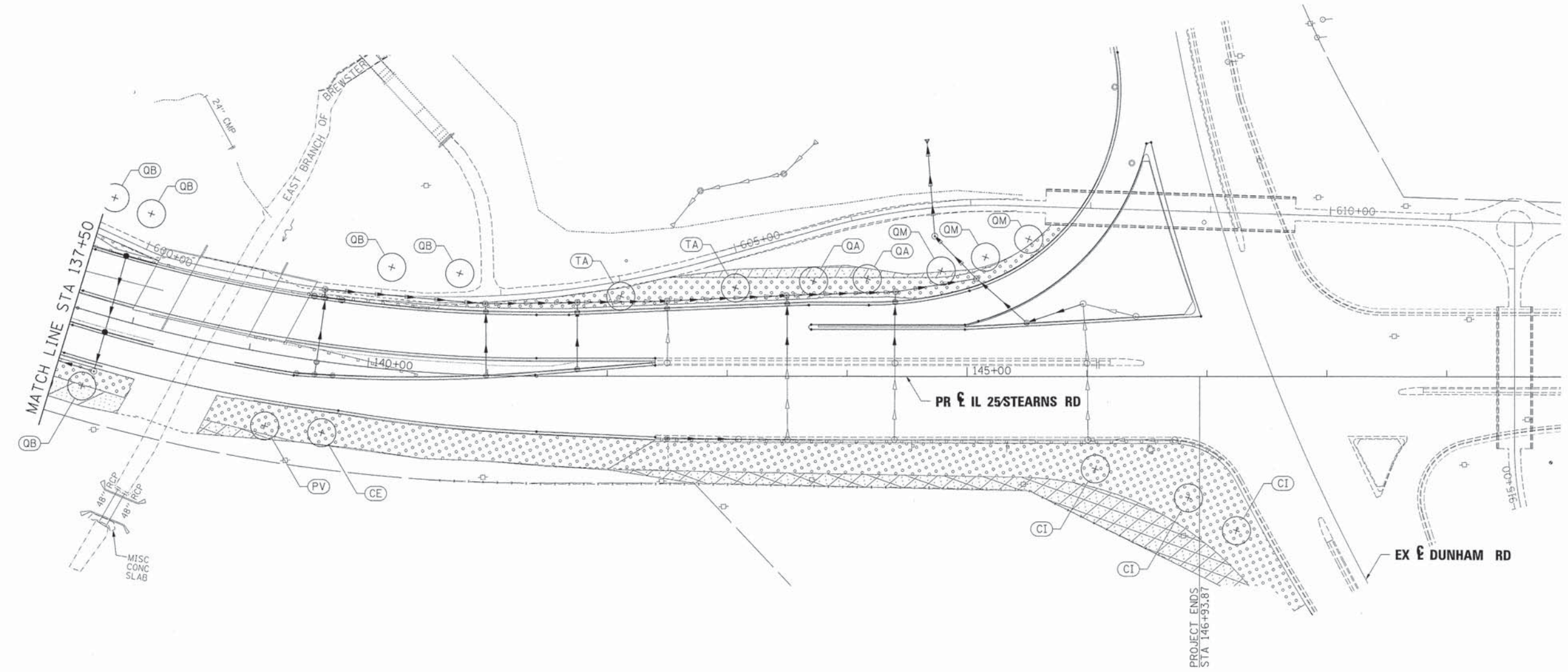
STATE OF ILLINOIS  
 DIVISION OF TRANSPORTATION

LANDSCAPING PLANS  
 IL 25/STEARNS RD

SCALE: 1"=50' SHEET NO. 3 OF 5 SHEETS STA. 125+50.00 TO STA. 137+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	209
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				








**TREES**

CODE	SCIENTIFIC NAME	COMMON NAME
CO	CARYA OVATA	SHAGBARK HICKORY
CE	CELTIS OCCIDENTALIS	COMMON HACKBERRY
CN	CERCIS CANADENSIS	EASTERN REDBUD
CI	CRATAEGUS CRUSGALLI INERMIS	THORNLESS COCKSPUR HAWTHORN
GT	GLEDITSIA TRIACANTHOS INERMIS SKYLINE	SKYLINE THORNLESS COMMON
GD	GYMNOCLADUS DIOICUS	KENTUCKY COFFEETREE
PV	PRUNUS VIRGINIANA SCHUBERT	SCHUBERT CHOKEBERRY
QA	QUERCUS ALBA	WHITE OAK
QB	QUERCUS BICOLOR	SWAMP WHITE OAK
QE	QUERCUS ELLIPSOIDALIS	HILL'S OAK
QM	QUERCUS MACROCARPA	BUR OAK
QR	QUERCUS RUBRA	RED OAK
TA	TILIA AMERICANA REDMOND	REDMOND AMERICAN LINDEN

**LEGEND**

-  TREE
-  SEEDING, CLASS 2A
-  SEEDING, CLASS 4 (MOD) MESIC PRAIRIE  
SEEDING, CLASS 5 (MOD) MESIC PRAIRIE

**NOTES:**  
 LANDSCAPING PLANS HAVE BEEN COORDINATED WITH CORRIDOR LANDSCAPING PLANS (DONE BY OTHERS)  
 TREES SHOULD NOT BE PLANTED UNDER OR OVER UTILITIES.

FILE NAME =	DESIGNED - AAF	REVISED -
... \D163598-sht-IL25-stn-ls-04.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - JMM	REVISED -
PLOT DATE = 1/17/2013	DATE - 01/18/2013	REVISED -



**STATE OF ILLINOIS  
 DIVISION OF TRANSPORTATION**

**LANDSCAPING PLANS  
 IL 25/STEARNS RD**

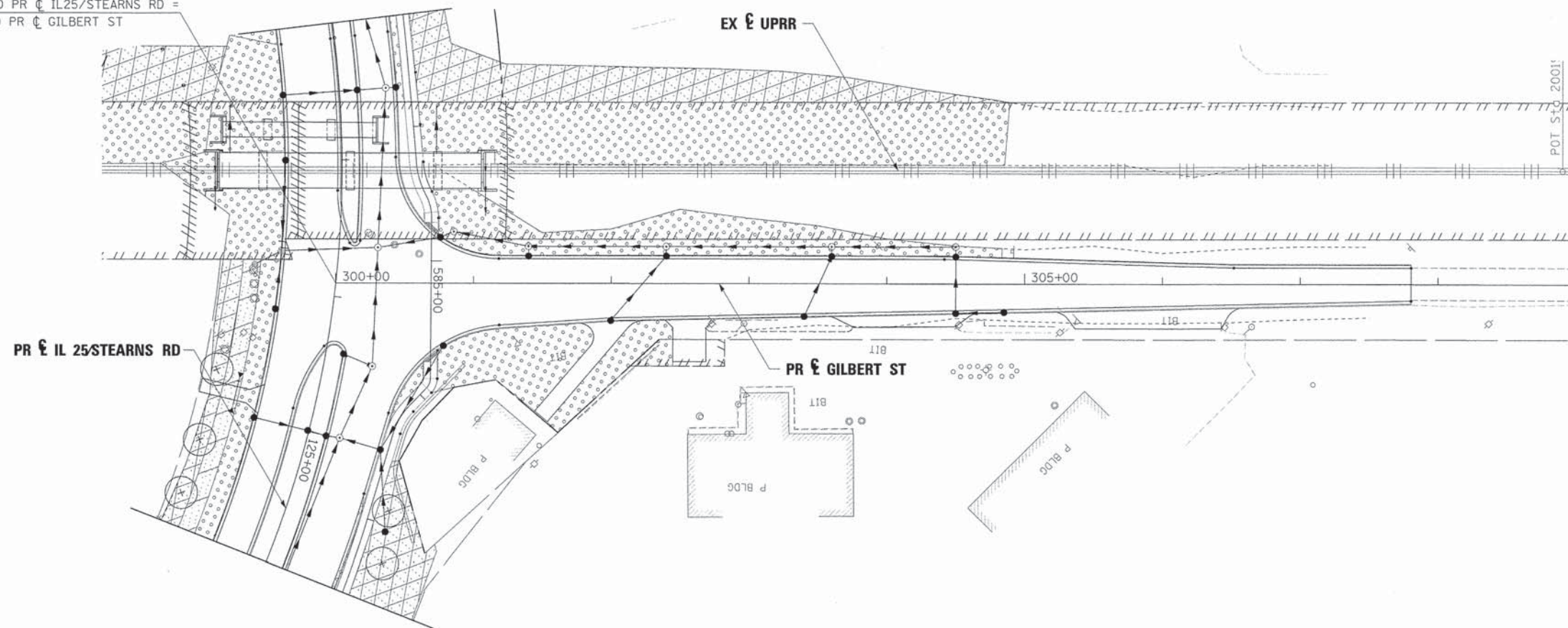
SCALE: 1"=50' SHEET NO. 4 OF 5 SHEETS STA. 137+50.00 TO STA. 146+93.87

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	210
			CONTRACT NO. 63598	
[ILLINOIS] FED. AID PROJECT				








STA 1243+90.20 PR CL 25/STEARNS RD =  
 STA 300+00.00 PR CL GILBERT ST



**LEGEND**

-  TREE
-  SEEDING, CLASS 2A
-  SEEDING, CLASS 4 (MOD) MESIC PRAIRIE  
SEEDING, CLASS 5 (MOD) MESIC PRAIRIE

**NOTES:**

LANDSCAPING PLANS HAVE BEEN COORDINATED WITH CORRIDOR LANDSCAPING PLANS (DONE BY OTHERS)  
 TREES SHOULD NOT BE PLANTED UNDER OR OVER UTILITIES.

TREES		
CODE	SCIENTIFIC NAME	COMMON NAME
CO	CARYA OVATA	SHAGBARK HICKORY
CE	CELTIS OCCIDENTALIS	COMMON HACKBERRY
CN	CERCIS CANADENSIS	EASTERN REDBUD
CI	CRATAEGUS CRUSGALLI INERMIS	THORNLESS COCKSPUR HAWTHORN
GT	GLEDITSIA TRIACANTHOS INERMIS SKYLINE	SKYLINE THORNLESS COMMON
GD	GYMNOCLADUS DIOICUS	KENTUCKY COFFEETREE
PV	PRUNUS VIRGINIANA SCHUBERT	SCHUBERT CHOKEBERRY
QA	QUERCUS ALBA	WHITE OAK
QB	QUERCUS BICOLOR	SWAMP WHITE OAK
QE	QUERCUS ELLIPSOIDALIS	HILL'S OAK
QM	QUERCUS MACROCARPA	BUR OAK
QR	QUERCUS RUBRA	RED OAK
TA	TILIA AMERICANA REDMOND	REDMOND AMERICAN LINDEN

FILE NAME =	DESIGNED - AAF	REVISED -
...\\0163598-sht-gil-1s-09.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - JMM	REVISED -
PLOT DATE = 1/17/2013	DATE - 01/18/2013	REVISED -



STATE OF ILLINOIS  
 DIVISION OF TRANSPORTATION

LANDSCAPING PLANS  
 GILBERT ST

SCALE: 1"=50' SHEET NO. 5 OF 5 SHEETS STA. 300+00.00 TO STA. 307+80.38

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	211
				CONTRACT NO. 63598
ILLINOIS FED. AID PROJECT				



**SUMMARY OF QUANTITIES**

CODE	DESCRIPTION	UNIT	TOTAL QUANTITY	IL-25 AT STEARNS RD	IL-25/STREANS AT GILBERT RD	IL-25/STEARNS RD AT DUNHAM	INTERCONNECT
80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	2	1	1		
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	2762	713	382	172	1495
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	1852	482	610	107	653
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	118	73	45		
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	1313	571	649	93	
81400100	HANDHOLE	EACH	21	9	8	1	3
81400200	HEAVY-DUTY HANDHOLE	EACH	3	1	2		
81400300	DOUBLE HANDHOLE	EACH	5	2	3		
86400100	TRANSCEIVER - FIBER OPTIC	EACH	2	1	1		
87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	4380				4380
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	5471	1526	1968	1977	
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2215	798	1417		
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	8370	4409	2962	999	
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	607		607		
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	7252	4362	2890	1977	
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	77	40	37		
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	6854	3762	2125	967	
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	3	1		2	
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1		1		
87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1		1		
87700230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1	1			
87700250	STEEL MAST ARM ASSEMBLY AND POLE, 42 FT.	EACH	2	1	1		
87702910	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT.	EACH	1	1			
87702990	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 54 FT.	EACH	1		1		
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	52	24	20	8	
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	8	4	4		
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	74	35	39		
87900200	DRILL EXISTING HANDHOLE	EACH	5	1		3	1
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	15	8	7		
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	9	4	5		
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1		1		
88030210	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3	2	1		
88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1		1		
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2		2		
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	34	16	17	1	
88500100	INDUCTIVE LOOP DETECTOR	EACH	19	11	8		
88600700	PREFORMED DETECTOR LOOP	FOOT	1339	656	683		
88700200	LIGHT DETECTOR	EACH	5	2	3		
88700300	LIGHT DETECTOR AMPLIFIER	EACH	2	1	1		
88800100	PEDESTRIAN PUSH-BUTTON	EACH	2		2		
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	3	1	1	1	
89501150	RELOCATE EXISTING TRAFFIC SIGNAL POST	EACH	8	4	4		
89501300	RELOCATE EXISTING MAST ARM ASSEMBLY AND POLE	EACH	1	1			
89502105	REBUILD EXISTING SIGNAL HEAD, LED	EACH	2			2	
89502200	MODIFY EXISTING CONTROLLER	EACH	1			1	
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	5362			665	4697
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	3	1	1	1	
89502376	REBUILD EXISTING HANDHOLE	EACH	1			1	
89502380	REMOVE EXISTING HANDHOLE	EACH	19	8	10	1	
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	20	9	10	1	
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	1362	798	564		
X7240311	RELOCATE EXISTING SIGN PANEL (SPECIAL)	EACH	6	3	3		
X8570226	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	2	1	1		
X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	2	1	1		
X8710031	FIBER OPTIC CABLE 36 FIBERS, SINGLE MODE	FOOT	4380				4380
Z0033056	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1				1
Z0033058	POST MOUNTED FLASHING BEACON INSTALLATION (SPECIAL)	EACH	4	2	2		
Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	21	1	1	1	

\* NOTE: TOTAL INCLUDES SIGNALIZED INTERSECTIONS WITHIN DETOUR ROUTE.

FILE NAME *	DESIGNED - BC	REVISED - ADDENDUM 04/15/2013
...\\0163598-shr-ta-sqa-01.dgn	DRAWN - TMB	REVISED -
USER NAME = toddbenk	CHECKED - MPM	REVISED -
PLOT DATE = 4/15/2013	DATE - 01/18/2013	REVISED -



**STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION**

**SUMMARY OF TRAFFIC SIGNAL  
QUANTITIES**

SCALE: NTS SHEET NO. 1 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	212
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				



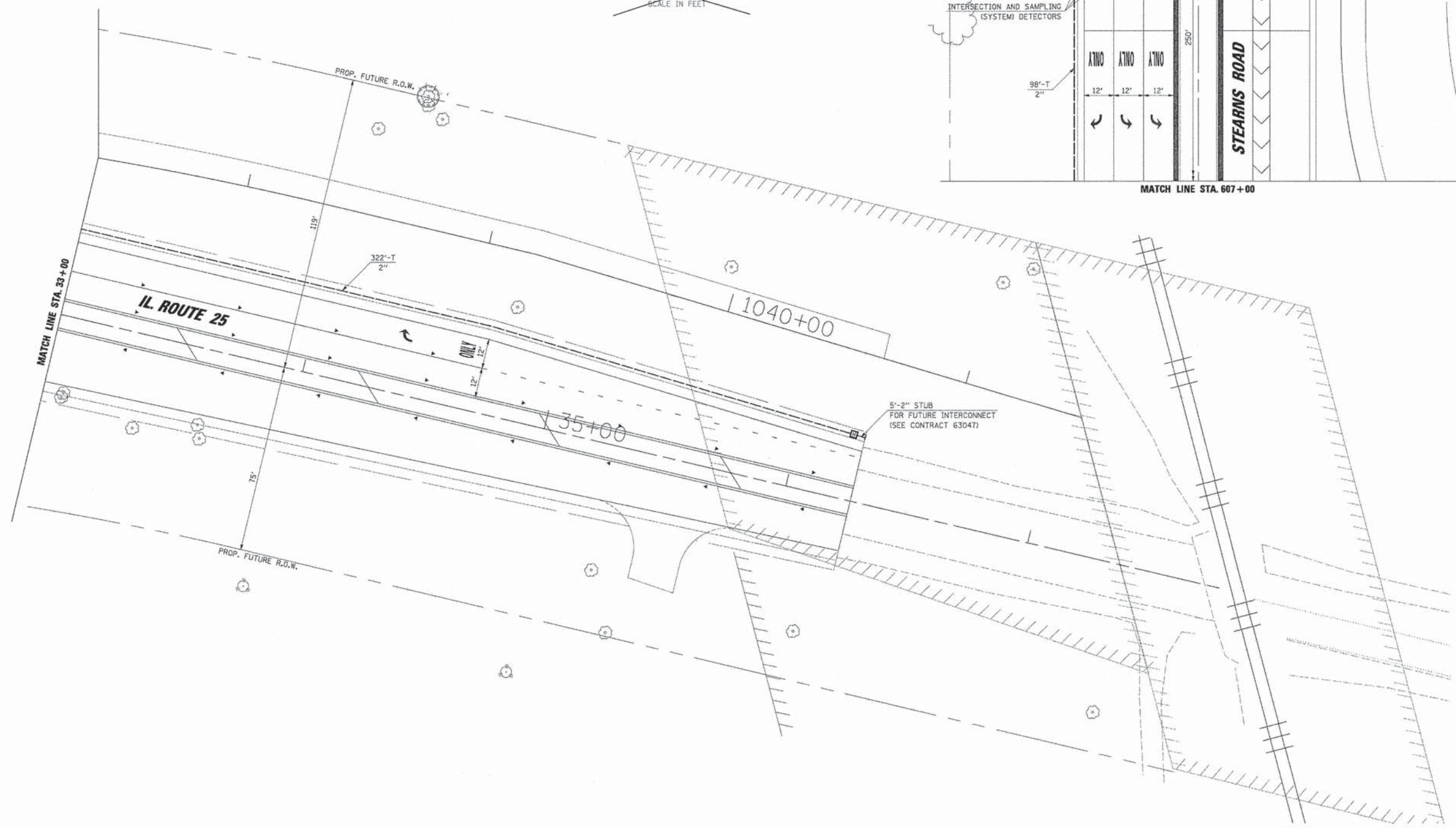
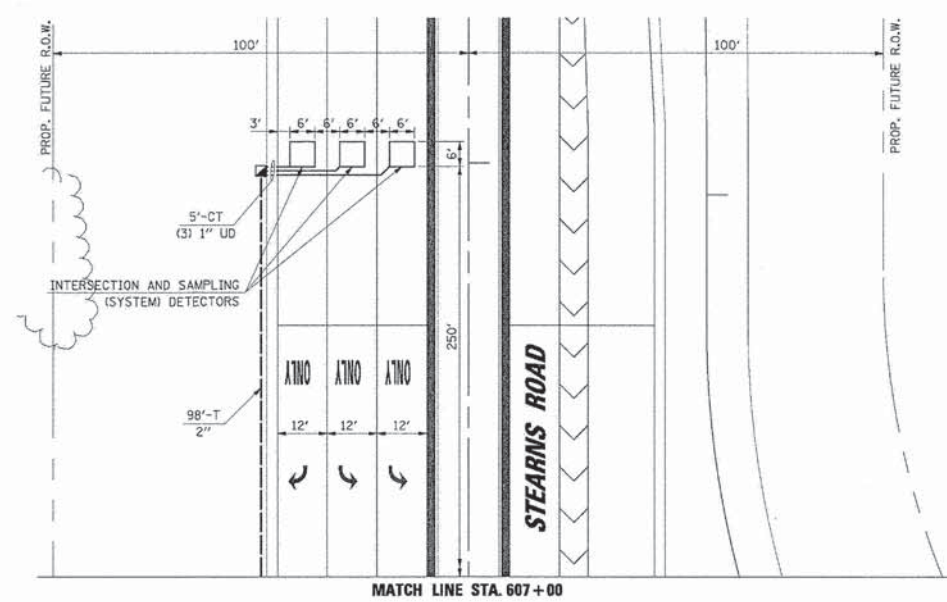
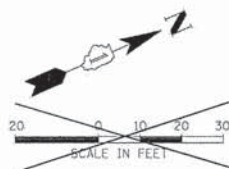
# TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED																		
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE																					
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE																					
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA																					
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED																					
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F																					
UNINTERRUPTIBLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F																					
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)				FIBER OPTIC CABLE NO. 62.5/125, MM12F (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)																					
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE																					
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED																					
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED																					
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM				ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED																					
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM				STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED																					
SIGNAL POST				REMOVE ITEM				SIGNAL POST AND FOUNDATION TO BE REMOVED																					
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM				INTERSECTION & SAMPLING (SYSTEM) DETECTOR																					
GUY WIRE				ABANDON ITEM				SAMPLING (SYSTEM) DETECTOR																					
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				EXISTING INTERSECTION LOOP DETECTOR																					
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR																					
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				EXISTING PREFORMED INTERSECTION LOOP DETECTOR																					
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD				PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR																					
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR																					
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED				PREFORMED SAMPLING (SYSTEM) DETECTOR																					
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID				<h2 style="margin: 0;">RAILROAD SYMBOLS</h2> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 25%;">EXISTING</th> <th style="width: 25%;">PROPOSED</th> </tr> </thead> <tbody> <tr> <td>RAILROAD CONTROL CABINET</td> <td></td> <td></td> </tr> <tr> <td>RAILROAD CANTILEVER MAST ARM</td> <td></td> <td></td> </tr> <tr> <td>FLASHING SIGNAL</td> <td></td> <td></td> </tr> <tr> <td>CROSSING GATE</td> <td></td> <td></td> </tr> <tr> <td>CROSSBUCK</td> <td></td> <td></td> </tr> </tbody> </table>					EXISTING	PROPOSED	RAILROAD CONTROL CABINET			RAILROAD CANTILEVER MAST ARM			FLASHING SIGNAL			CROSSING GATE			CROSSBUCK		
	EXISTING	PROPOSED																											
RAILROAD CONTROL CABINET																													
RAILROAD CANTILEVER MAST ARM																													
FLASHING SIGNAL																													
CROSSING GATE																													
CROSSBUCK																													
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER																									
ILLUMINATED SIGN "NO LEFT TURN"				RADIO INTERCONNECT																									
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO REPEATER																									
DETECTOR LOOP, TYPE I				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED																									
PREFORMED DETECTOR LOOP				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)																									
MICROWAVE VEHICLE SENSOR																													
VIDEO DETECTION CAMERA																													
VIDEO DETECTION ZONE																													
PAN, TILT, ZOOM CAMERA																													
WIRELESS DETECTOR SENSOR																													
WIRELESS ACCESS POINT																													









**FOR INFORMATION ONLY**

FILE NAME =	DESIGNED - BC	REVISED -
...\\0163598-sht-IL25-stns-ex-ts-plan2.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



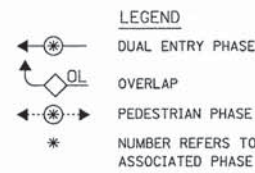
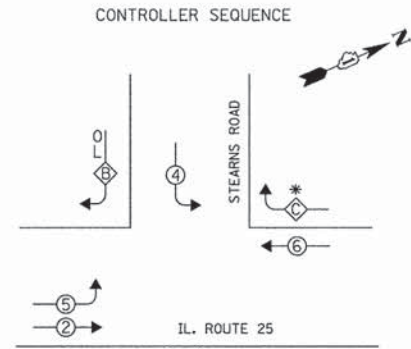
**STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION**

**EXISTING TRAFFIC SIGNAL PLAN  
IL 25/STEARNS RD AT STEARNS RD - SHEET 2 OF 2**

SCALE: NTS SHEET NO. 4 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	215
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				

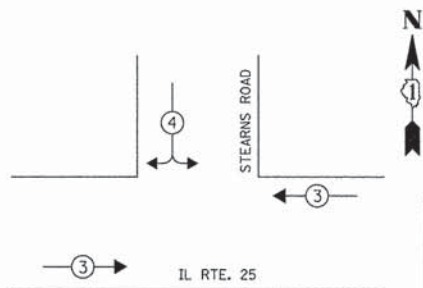




PHASE DESIGNATION DIAGRAM

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	4 + 5	
* C	CONTINUOUS OVERLAP (FREE FLOW RIGHT)	

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	← ↘ ↙ →

TYPE	NO. OF LAMPS	WATTAGE (INCAND.)	LED	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	17	17	0.50	144.50	
(YELLOW)	17	25	0.25	106.25	
(GREEN)	17	15	0.25	63.75	
ARROW	4	12	0.10	4.80	
PED. SIGNAL	-	25	1.00	-	
CONTROLLER	1	100	1.00	100.00	
LUMINAIRE		250	-	0.50	
FLASHER				0.50	

ENERGY COSTS TO: TOTAL = 419.30

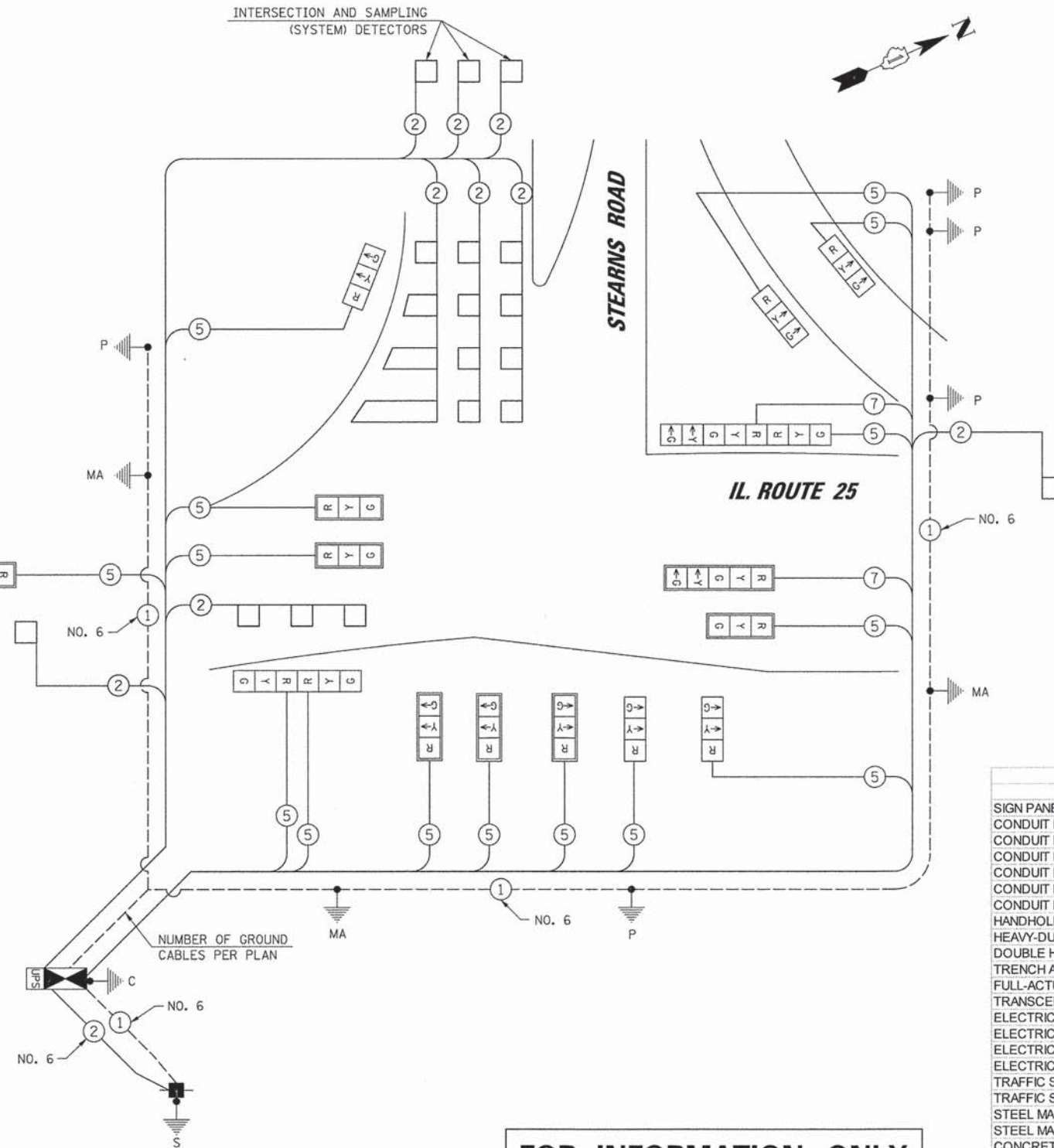
ILLINOIS DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAY/DISTRICT 1  
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY: CONTACT: MARTY RUBIN  
PHONE: (847) 608 2400  
COMPANY: COMED

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
C - CONTROLLER W/ UPS	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+HL-2=
D - CONTROLLER	4 (1.2)	SIGNAL POST	2 (1.0)	(6m+HL-0.6m)=	
E - M. ARM POLE		CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	6 (1.8)
36" (900mm)	15 (4.6)	ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
42" (1050mm)	25 (7.6)	GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

INTERSECTION AND SAMPLING (SYSTEM) DETECTORS



FOR INFORMATION ONLY

EXISTING	PROPOSED	DESCRIPTION
(Symbol)	(Symbol)	8" (200mm) TRAFFIC SIGNAL SECTION
(Symbol)	(Symbol)	12" (300mm) TRAFFIC SIGNAL SECTION
(Symbol)	(Symbol)	12" (300mm) PEDESTRIAN SIGNAL SECTION
(Symbol)	(Symbol)	12" (300mm) PEDESTRIAN SIGNAL SECTION
(Symbol)	(Symbol)	CONTROLLER CABINET SERVICE INSTALLATION
(Symbol)	(Symbol)	TELEPHONE INSTALLATION
(Symbol)	(Symbol)	VEHICLE DETECTOR, INDUCTION LOOP
(Symbol)	(Symbol)	MAGNETIC DETECTOR
(Symbol)	(Symbol)	EMERGENCY VEHICLE LIGHT DETECTOR
(Symbol)	(Symbol)	CONFIRMATION BEACON
(Symbol)	(Symbol)	PUSHBUTTON DETECTOR
(Symbol)	(Symbol)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
(Symbol)	(Symbol)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
(Symbol)	(Symbol)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F
(Symbol)	(Symbol)	SIGNAL FACE WITH BACKPLATE
(Symbol)	(Symbol)	"P" INDICATES PROGRAMMED HEAD.
(Symbol)	(Symbol)	RAILROAD CONTROL CABINET
(Symbol)	(Symbol)	ILLUMINATED SIGN "NO LEFT TURN"
(Symbol)	(Symbol)	ILLUMINATED SIGN "NO RIGHT TURN"
(Symbol)	(Symbol)	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
(Symbol)	(Symbol)	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
(Symbol)	(Symbol)	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
(Symbol)	(Symbol)	UNINTERRUPTIBLE POWER SUPPLY

ITEM	UNIT	TOTAL
SIGN PANEL TYPE 1	SQ FT	24
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	1061
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	196
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	15
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	111
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	145
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	165
HANDHOLE	EACH	3
HEAVY-DUTY HANDHOLE	EACH	6
DOUBLE HANDHOLE	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1438
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2322
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	446
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2500
ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 2C	FOOT	76
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	4
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 46 FT.	EACH	1
CONCRETE FOUNDATION TYPE A	FOOT	20
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	45
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	7
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	5
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
INDUCTIVE LOOP DETECTOR	EACH	9
DETECTOR LOOP, TYPE I	FOOT	674
PREFORMED DETECTOR LOOP	FOOT	117
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUND NO. 6 1C	FOOT	627



**NOTES FOR TEMPORARY TRAFFIC SIGNALS**

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATION WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. ALL TEMPORARY TRAFFIC SIGNALS SHALL MEET THE LATEST ITE LED TRAFFIC SIGNAL STANDARDS.

**CONSTRUCTION NOTES:**

1. LANE CONFIGURATION DEPICTED ON THIS PLAN IS FOR STAGE 1A-1. EXISTING SIGNALS CAN REMAIN IN OPERATION DURING THE PRE-STAGE.
2. BOTH SIGNAL HEADS ON THIS SPAN WIRE SHALL BE BAGGED AND DISABLED DURING STAGE 1A-1. AT THE START OF STAGE 1A-2, BOTH SIGNAL HEADS ON THIS SPAN WIRE SHALL BE UNBAGGED AND ACTIVATED AS A FREE-FLOW RIGHT TURN LANE, AND THE FREE-FLOW SHALL REMAIN IN OPERATION FOR THE REMAINDER OF THE PROJECT.
3. EMERGENCY VEHICLE LIGHT DETECTOR DEPICTED ON THIS PLAN IS FOR STAGE 1A-1. CONTRACTOR TO RELOCATE THE LIGHT DETECTORS FOR EACH CHANGE IN LANE CONFIGURATION.
4. ADDITIONAL VIDEO CAMERA ADDED FOR FLEXIBILITY. CONTRACTOR TO USE THE ONE THAT PROVIDES THE BEST VISIBILITY.

- DENOTES RELOCATED TEMPORARY SIGNAL HEAD FROM PREVIOUS STAGE
- DENOTES RELOCATED EVP EQUIPMENT FROM PREVIOUS STAGE

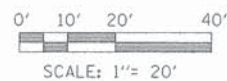
SIGN (A)

**LEFT ON GREEN  
ARROW  
ONLY**

R10-5  
(30" x 36")  
1 REQUIRED

**NOTE:**

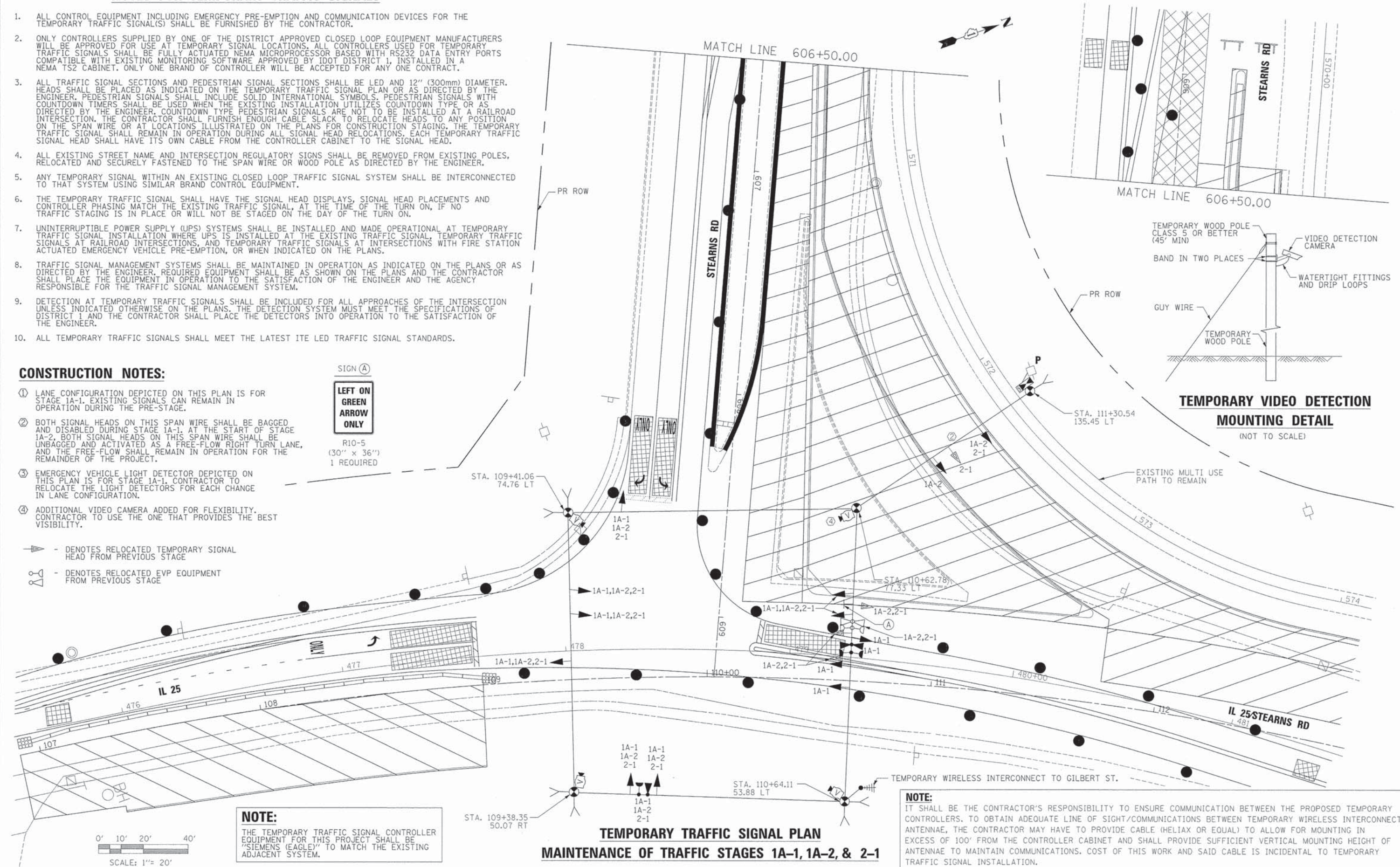
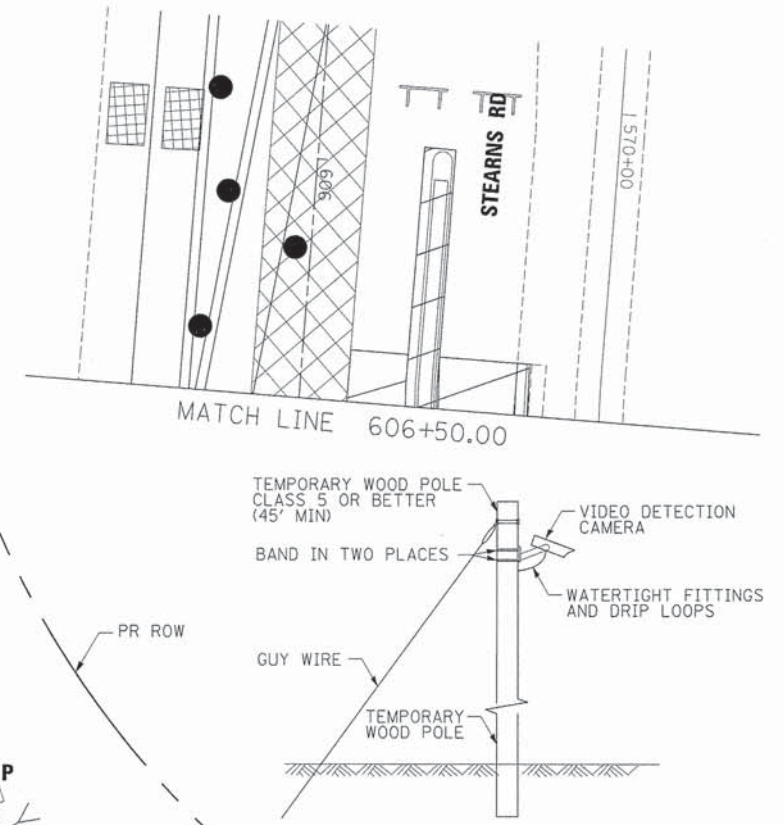
THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.



**TEMPORARY TRAFFIC SIGNAL PLAN  
MAINTENANCE OF TRAFFIC STAGES 1A-1, 1A-2, & 2-1**

**NOTE:**

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMMUNICATION BETWEEN THE PROPOSED TEMPORARY CONTROLLERS. TO OBTAIN ADEQUATE LINE OF SIGHT/COMMUNICATIONS BETWEEN TEMPORARY WIRELESS INTERCONNECT ANTENNAE, THE CONTRACTOR MAY HAVE TO PROVIDE CABLE (HELIAX OR EQUAL) TO ALLOW FOR MOUNTING IN EXCESS OF 100' FROM THE CONTROLLER CABINET AND SHALL PROVIDE SUFFICIENT VERTICAL MOUNTING HEIGHT OF ANTENNAE TO MAINTAIN COMMUNICATIONS. COST OF THIS WORK AND SAID CABLE IS INCIDENTAL TO TEMPORARY TRAFFIC SIGNAL INSTALLATION.



FILE NAME =	DESIGNED - BC	REVISED -
...N0163598-sht-IL25-stearns-temp-ts-installation	DRAWN - TMB	REVISED -
USER NAME = sb1ank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE = 01/18/2013	REVISED -



**STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION**

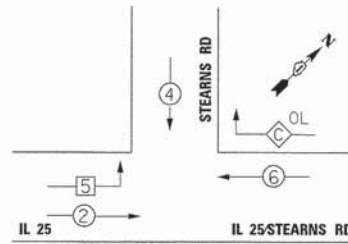
**TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN  
IL 25 STEARNS RD AT STEARNS RD  
STAGES 1A-1, 1A-2, & 2-1**

SCALE: 1"=20' SHEET NO. 6 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	217
				CONTRACT NO. 63598
[ILLINOIS] FED. AID PROJECT				



**TEMPORARY CONTROLLER SEQUENCE**



**LEGEND**

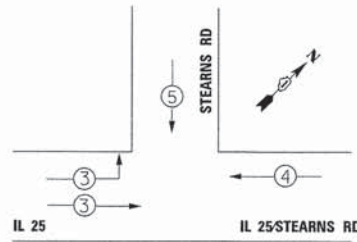
- ⊙ DUAL ENTRY PHASE
- \* NUMBER REFERS TO ASSOCIATED PHASE
- OL OVERLAP
- ⊙ FREE-FLOW RIGHT TURN MOVEMENT TO BE ACTIVATED IN STAGE 1A-2 AND REMAIN ACTIVE THROUGH END OF PROJECT
- ⊙ SINGLE ENTRY PHASE

**NOTE:**

THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.

**TEMPORARY PHASE DESIGNATION DIAGRAM STAGES 1A-1, 1A-2, & 2-1**

**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



TEMPORARY EMERGENCY VEHICLE PREEMPTORS STAGES 1A-1, 1A-2, & 2-1			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	→	←	↓

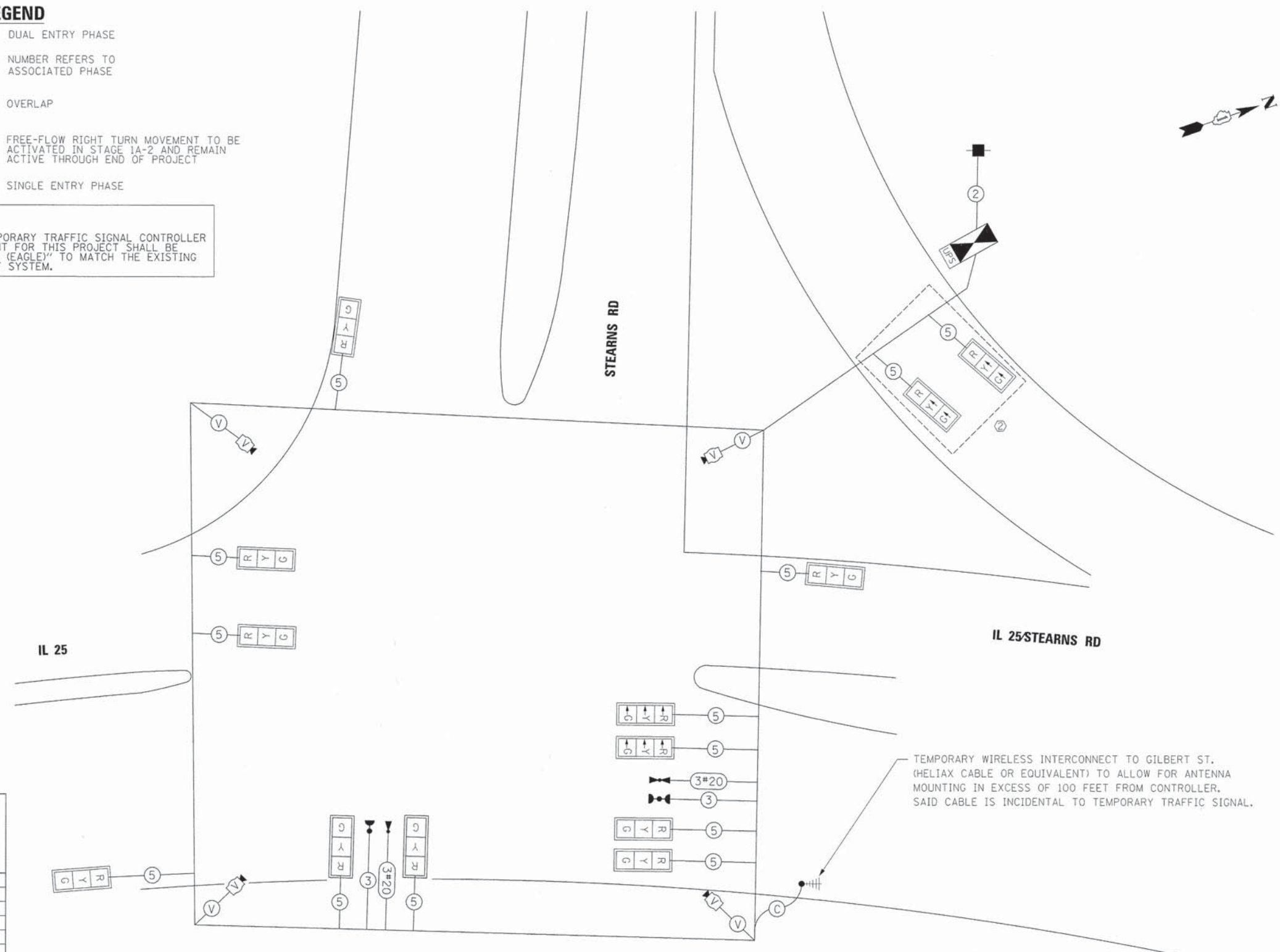
**CONSTRUCTION NOTES:**

- ① THE CONTRACTOR SHALL MAINTAIN THE EXISTING SIGNAL SYSTEM INTERCONNECT DURING TEMPORARY SIGNAL OPERATION.
- ② BOTH SIGNAL HEADS ON THIS SPAN WIRE SHALL BE BAGGED AND DISABLED DURING STAGE 1A-1. AT THE START OF STAGE 1A-2, BOTH SIGNAL HEADS ON THIS SPAN WIRE SHALL BE UNBAGGED AND ACTIVATED AS FREE-FLOW RIGHT TURN LANE, AND THE FREE-FLOW SHALL REMAIN IN OPERATION FOR THE REMAINDER OF THE PROJECT.

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		%OPERATION	
SIGNAL (RED)	11	-	17	0.50	93.50
(YELLOW)	11	-	25	0.25	68.75
(GREEN)	11	-	15	0.25	41.25
ARROW	-	-	12	0.10	-
PED. SIGNAL	-	-	25	1.00	-
CONTROLLER	1	-	100	1.00	100.00
FREE-FLOW ARROW	2	-	15	1.00	30.00
VIDEO SYSTEM	1	150	-	1.00	150.00
FLASHER				0.50	

ENERGY COSTS TO: TOTAL = 483.50

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAY/DISTRICT 1  
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096  
 ENERGY SUPPLY CONTACT: MARTY RUBIN  
 PHONE: (847) 608 2400  
 COMPANY: COMED



**TEMPORARY CABLE PLAN**

TEMPORARY WIRELESS INTERCONNECT TO GILBERT ST. (HELIX CABLE OR EQUIVALENT) TO ALLOW FOR ANTENNA MOUNTING IN EXCESS OF 100 FEET FROM CONTROLLER. SAID CABLE IS INCIDENTAL TO TEMPORARY TRAFFIC SIGNAL.

FILE NAME =	DESIGNED - BC	REVISED -
...D0163598-sht-IL25-stns-temp-ts-cable-stag-	DRAWN - TMB	REVISED -
USER NAME = tbiork	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



STATE OF ILLINOIS  
 DIVISION OF TRANSPORTATION

TEMP CABLE PLAN, TEMP PHASE DESIGNATION DIAGRAM & TEMP EMERGENCY VEHICLE PREEMPTION SEQUENCE, IL 25/STEARNS RD AT STEARNS RD, STAGES 1A-1, 1A-2, & 2-1  
 SCALE: 1"=20' SHEET NO. 7 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	218
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				



**NOTES FOR TEMPORARY TRAFFIC SIGNALS**

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATION WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL. TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. ALL TEMPORARY TRAFFIC SIGNALS SHALL MEET THE LATEST ITE LED TRAFFIC SIGNAL STANDARDS.

**CONSTRUCTION NOTES:**

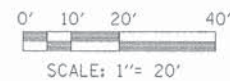
- ① LANE CONFIGURATION DEPICTED ON THIS PLAN IS FOR STAGE 2-2.
- ② FREE-FLOW RT. LANE ACTIVATED IN STAGE 1A-2 AND REMAINS IN OPERATION FOR REMAINDER OF PROJECT.
- ③ ALL SOUTHBOUND SIGNAL HEAD SECTIONS FOR IL 25/STEARNS RD SHALL BE DISABLED AND BAGGED BY THE CONTRACTOR FOR THIS STAGE 2-2.
- ④ ALL NORTHBOUND IL 25 LEFT TURN SIGNAL HEAD SECTIONS SHALL BE DISABLED AND BAGGED BY THE CONTRACTOR FOR THIS STAGE 2-2.
- ⑤ TEMPORARY WOODEN POLE WILL BE THE SAME LOCATION AS PREVIOUS STAGE.
- ⑥ BAG THE R10-5 SIGN IN STAGE 2-2.
- ⑦ ADDITIONAL VIDEO CAMERA ADDED FOR FLEXIBILITY. CONTRACTOR TO USE THE ONE THAT PROVIDES THE BEST VISIBILITY.

**NOTE:**

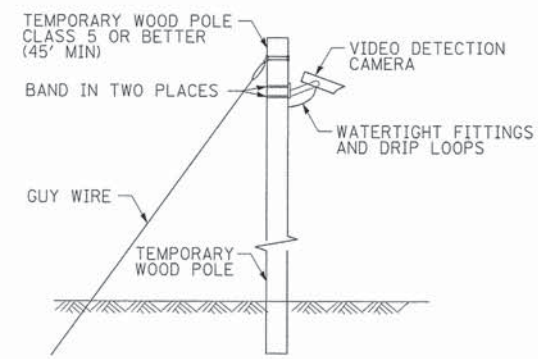
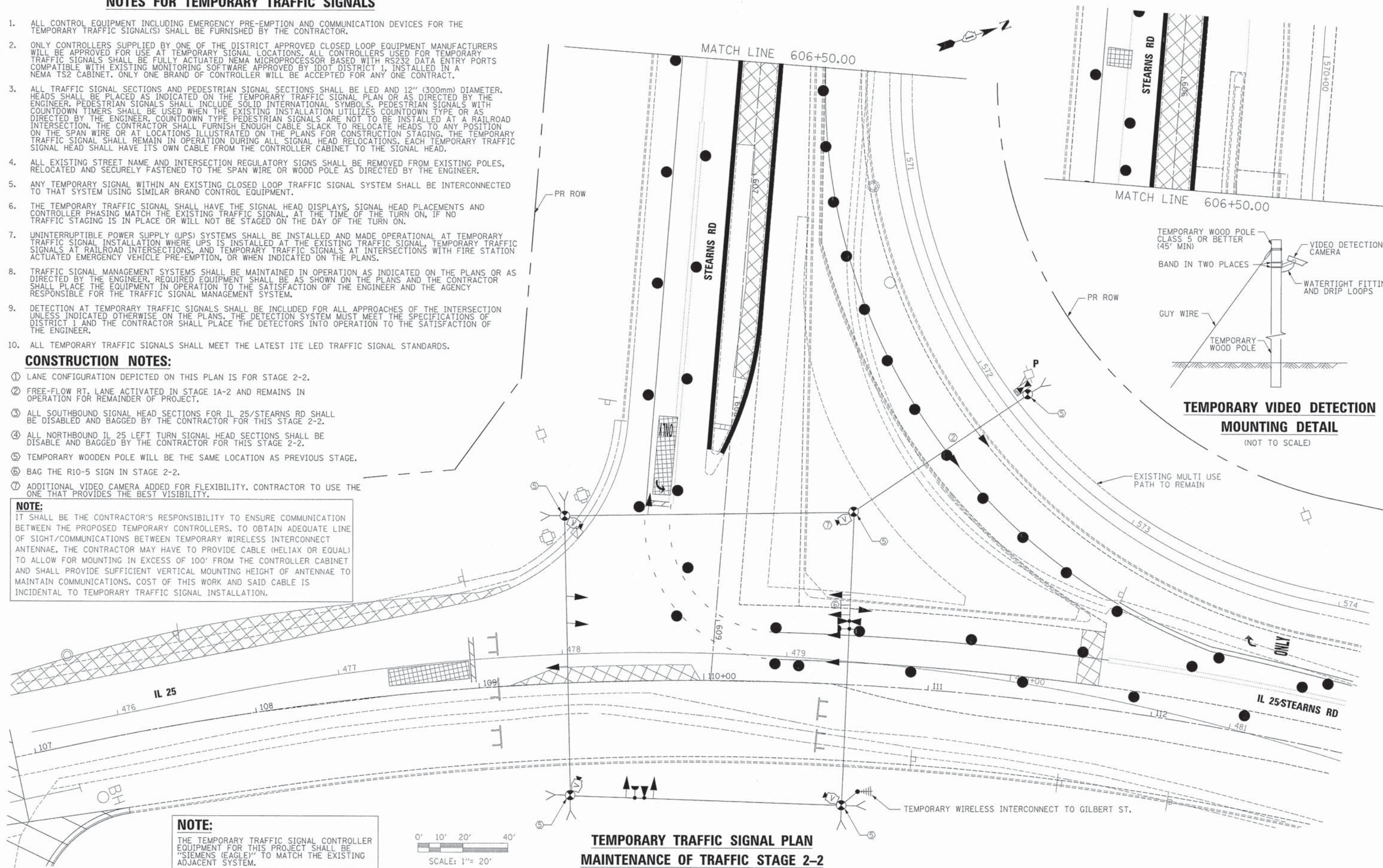
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMMUNICATION BETWEEN THE PROPOSED TEMPORARY CONTROLLERS. TO OBTAIN ADEQUATE LINE OF SIGHT/COMMUNICATIONS BETWEEN TEMPORARY WIRELESS INTERCONNECT ANTENNAE, THE CONTRACTOR MAY HAVE TO PROVIDE CABLE (HELIAX OR EQUAL) TO ALLOW FOR MOUNTING IN EXCESS OF 100' FROM THE CONTROLLER CABINET AND SHALL PROVIDE SUFFICIENT VERTICAL MOUNTING HEIGHT OF ANTENNAE TO MAINTAIN COMMUNICATIONS. COST OF THIS WORK AND SAID CABLE IS INCIDENTAL TO TEMPORARY TRAFFIC SIGNAL INSTALLATION.

**NOTE:**

THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.



**TEMPORARY TRAFFIC SIGNAL PLAN  
MAINTENANCE OF TRAFFIC STAGE 2-2**



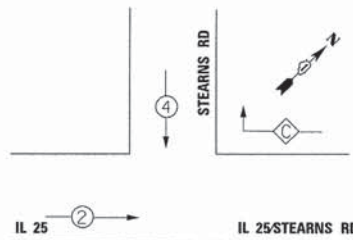
**TEMPORARY VIDEO DETECTION  
MOUNTING DETAIL  
(NOT TO SCALE)**

FILE NAME =	DESIGNED - BC	REVISED -		<b>STATE OF ILLINOIS DIVISION OF TRANSPORTATION</b>		<b>TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN IL 25/STEARNS RD AT STEARNS RD STAGE 2-2</b>		F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
... \D163598-sht-il 25-stns-temp-ts-installation-DRAWN-2.dgn	TMB	REVISED -						361	06-00214-18-RP	KANE	451	219
USER NAME = sbjank	CHECKED - MPM	REVISED -						CONTRACT NO. 63598				
PLOT DATE = 1/18/2013	DATE = 01/18/2013	REVISED -	ILLINOIS FED. AID PROJECT									

SCALE: 1"=20' SHEET NO. 8 OF 49 SHEETS STA. TO STA.



**TEMPORARY CONTROLLER SEQUENCE**



**LEGEND**

- ⊙ DUAL ENTRY PHASE
- \* NUMBER REFERS TO ASSOCIATED PHASE
- OL OVERLAP
- ⊙ FREE-FLOW RIGHT TURN MOVEMENT TO BE ACTIVATED IN STAGE 1A-2 AND REMAIN ACTIVE THROUGH END OF PROJECT

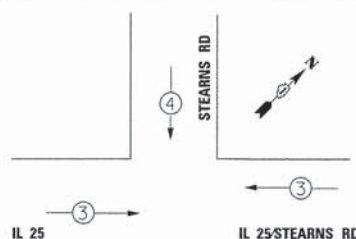
**TEMPORARY PHASE DESIGNATION DIAGRAM STAGE 2-2 (DURING DETOUR OF IL 25)**

NOTE: PHASE 2 TO REMAIN FOR PRIVATE ENT.'S WITHIN CONSTRUCTION LIMITS

**CONSTRUCTION NOTES:**

- ① THE CONTRACTOR SHALL MAINTAIN THE EXISTING SIGNAL SYSTEM INTERCONNECT DURING TEMPORARY SIGNAL OPERATION.
- ② FREE-FLOW RIGHT TURN LANE TRAFFIC SIGNAL HEAD TO BE ACTIVATED IN STAGE 1A-2 AND REMAIN ACTIVE THROUGH END OF PROJECT.
- ③ ALL SOUTHBOUND TRAFFIC SIGNAL HEAD SECTIONS FOR IL 25/STEARNS RD SHALL BE DISABLED AND BAGGED BY THE CONTRACTOR FOR THIS STAGE 2-2.
- ④ ALL NORTHBOUND IL 25 LEFT TURN SIGNAL HEADS SHALL BE DISABLED AND BAGGED BY THE CONTRACTOR FOR THIS STAGE 2-2.

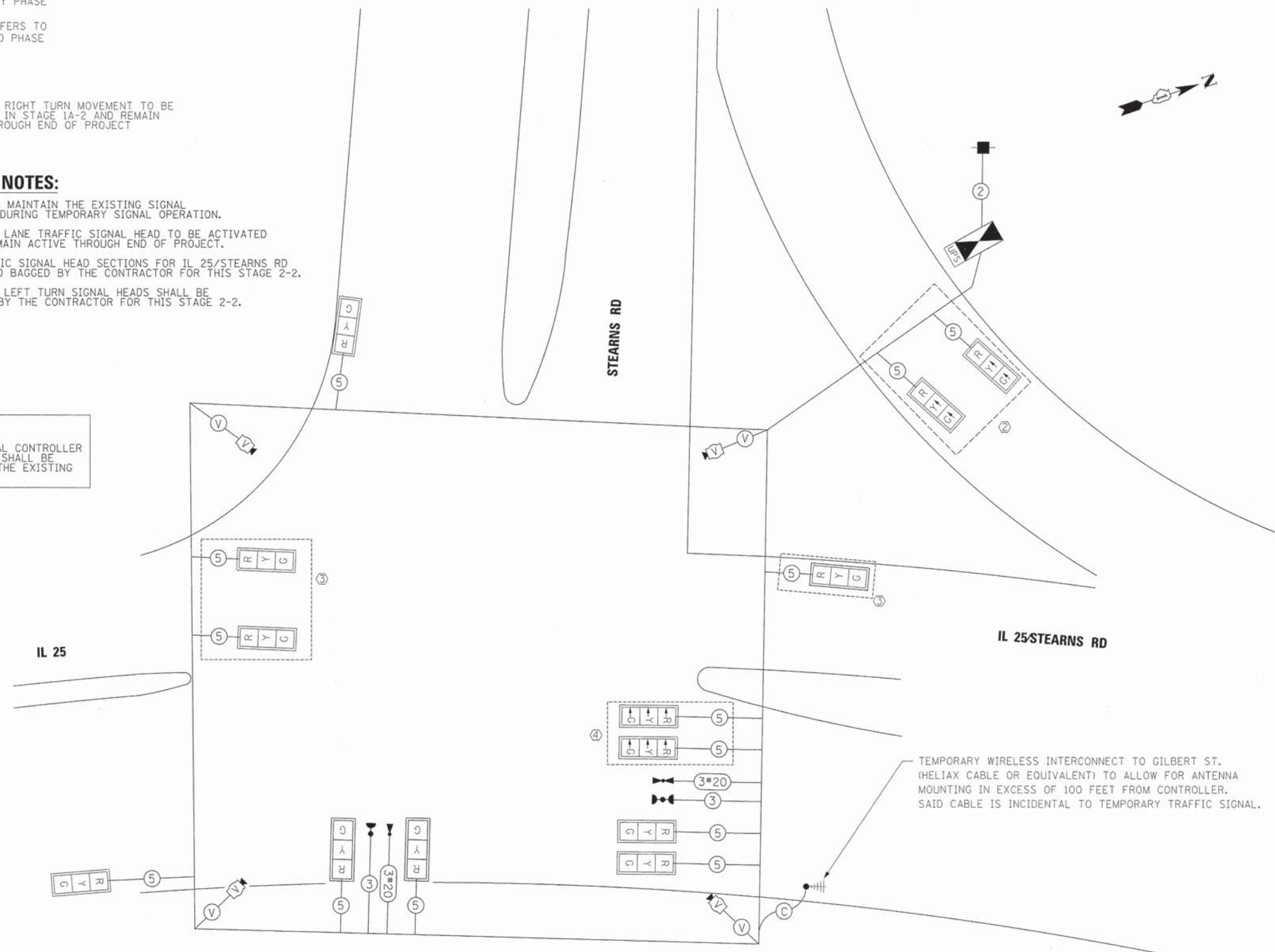
**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



NOTE: THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.

**TEMPORARY EMERGENCY VEHICLE PREEMPTORS STAGE 2-2**

EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓



**TEMPORARY CABLE PLAN**

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	
SIGNAL (RED)	6	-	17	0.50	51.00
(YELLOW)	6	-	25	0.25	37.50
(GREEN)	6	-	15	0.25	22.50
ARROW	-	-	12	0.10	-
PED. SIGNAL	-	-	25	1.00	-
CONTROLLER	1	-	100	1.00	100.00
FREE-FLOW ARROW	2	-	15	1.00	30.00
VIDEO SYSTEM	1	150	-	1.00	150.00
FLASHER				0.50	

ENERGY COSTS TO: TOTAL = 391.00

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAY/DISTRICT 1  
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096  
 ENERGY SUPPLY CONTACT: MARTY RUBIN  
 PHONE: (847) 608 2400  
 COMPANY: COMED

FILE NAME =	DESIGNED - BC	REVISED -
...\\0163598-shr-IL25-stns-temp-ts-cable-stage	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



**STATE OF ILLINOIS DIVISION OF TRANSPORTATION**

**TEMP CABLE PLAN, TEMP PHASE DESIGNATION DIAGRAM, & TEMP EMERGENCY VEHICLE PREEMPTION SEQUENCE, IL 25/STEARNS RD AT STEARNS RD - STAGE 2-2**

SCALE: 1"=20' SHEET NO. 9 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	220
CONTRACT NO. 63598				ILLINOIS FED. AID PROJECT



**NOTES FOR TEMPORARY TRAFFIC SIGNALS**

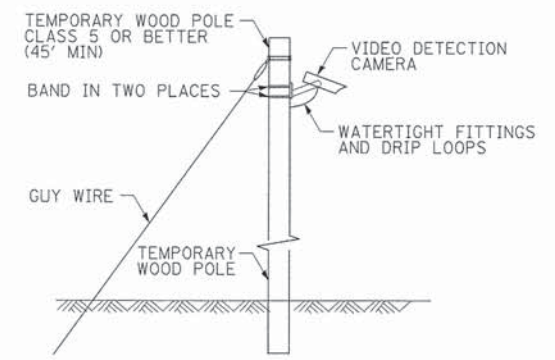
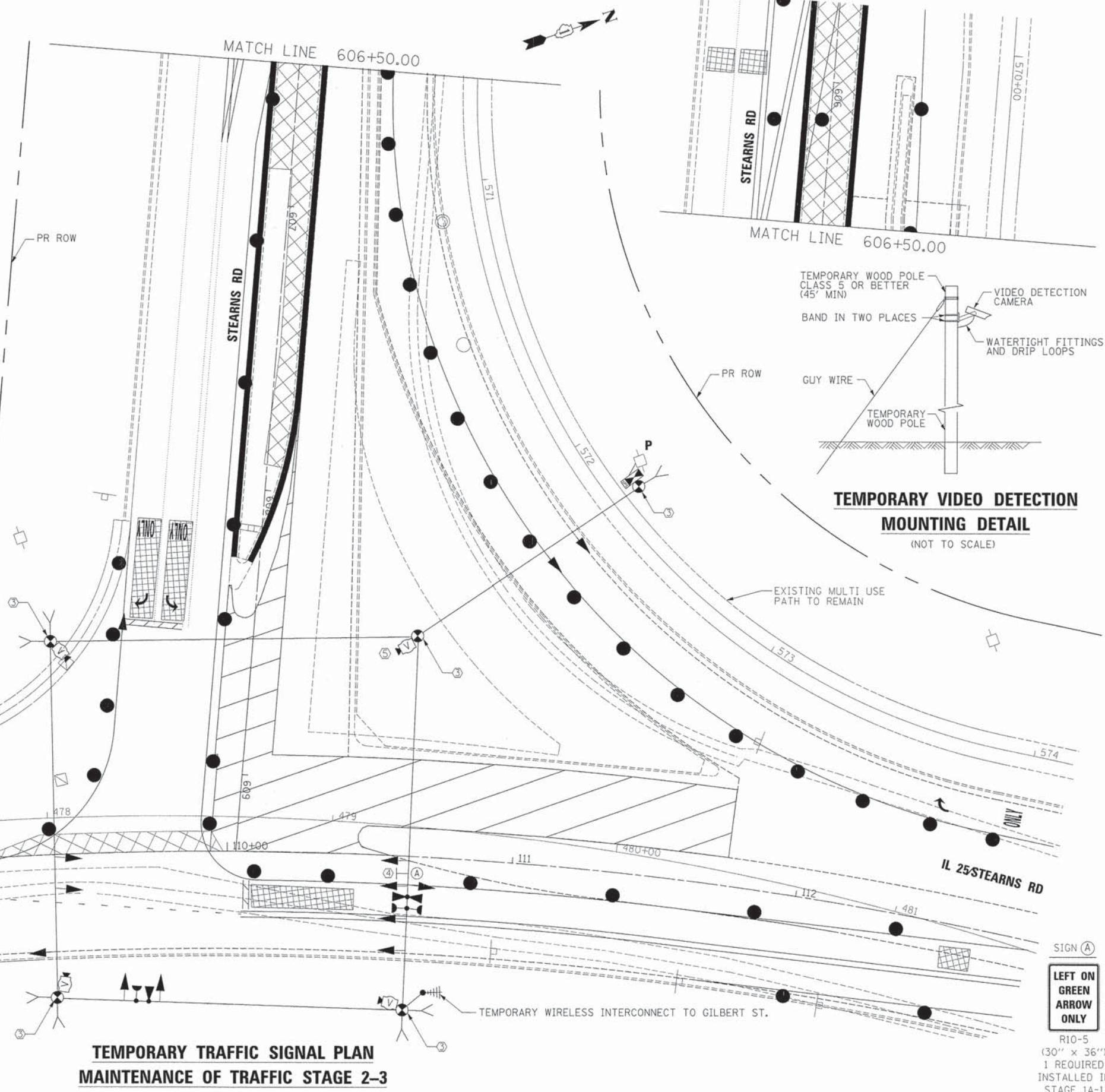
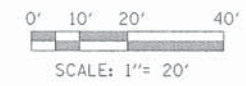
1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATION WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. ALL TEMPORARY TRAFFIC SIGNALS SHALL MEET THE LATEST ITE LED TRAFFIC SIGNAL STANDARDS.

**CONSTRUCTION NOTES:**

- 1 LANE CONFIGURATION DEPICTED ON THIS PLAN IS FOR STAGE 2-3.
- 2 EMERGENCY VEHICLE LIGHT DETECTOR DEPICTED ON THIS PLAN IS FOR STAGE 2-3. CONTRACTOR TO RELOCATE THE LIGHT DETECTORS FOR EACH CHANGE IN LANE CONFIGURATION.
- 3 TEMPORARY WOODEN POLE WILL BE THE SAME LOCATION AS PREVIOUS STAGE.
- 4 UN-BAG THE R10-5 SIGN FOR THIS STAGE 2-3. THIS R10-5 SIGN SHALL REMAIN EXPOSED FOR THE REMAINDER OF THE MOT STAGES.
- 5 ADDITIONAL VIDEO CAMERA ADDED FOR FLEXIBILITY. CONTRACTOR TO USE THE ONE THAT PROVIDES THE BEST VISIBILITY.

**NOTE:**  
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMMUNICATION BETWEEN THE PROPOSED TEMPORARY CONTROLLERS. TO OBTAIN ADEQUATE LINE OF SIGHT/COMMUNICATIONS BETWEEN TEMPORARY WIRELESS INTERCONNECT ANTENNAE, THE CONTRACTOR MAY HAVE TO PROVIDE CABLE (HELIX OR EQUAL) TO ALLOW FOR MOUNTING IN EXCESS OF 100' FROM THE CONTROLLER CABINET AND SHALL PROVIDE SUFFICIENT VERTICAL MOUNTING HEIGHT OF ANTENNAE TO MAINTAIN COMMUNICATIONS. COST OF THIS WORK AND SAID CABLE IS INCIDENTAL TO TEMPORARY TRAFFIC SIGNAL INSTALLATION.

**NOTE:**  
THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.



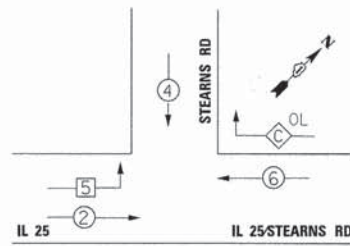
**TEMPORARY TRAFFIC SIGNAL PLAN  
MAINTENANCE OF TRAFFIC STAGE 2-3**

SIGN (A)  
**LEFT ON GREEN  
ARROW  
ONLY**  
R10-5  
(30" x 36")  
1 REQUIRED  
INSTALLED IN  
STAGE 1A-1

FILE NAME =	DESIGNED - BC	REVISED -		<b>STATE OF ILLINOIS DIVISION OF TRANSPORTATION</b>				<b>TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN IL 25/STEARNS RD AT STEARNS RD STAGE 2-3</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
USER NAME = tblank	CHECKED - MPM	REVISED -										361	06-00214-18-RP	KANE	451	221
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -										CONTRACT NO. 63598				ILLINOIS FED. AID PROJECT
			SCALE: 1"=20'				SHEET NO. 10 OF 49 SHEETS		STA. TO STA.							



**TEMPORARY CONTROLLER SEQUENCE**

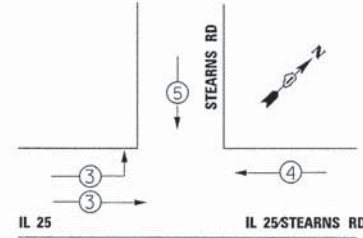


**LEGEND**

- ⊙ \* DUAL ENTRY PHASE
- \* NUMBER REFERS TO ASSOCIATED PHASE
- OL OVERLAP
- ⊙ FREE-FLOW RIGHT TURN MOVEMENT TO BE ACTIVATED IN STAGE 1A-2 AND REMAIN ACTIVE THROUGH END OF PROJECT
- ⊙ SINGLE ENTRY PHASE

**TEMPORARY PHASE DESIGNATION DIAGRAM STAGE 2-3**

**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



**NOTE:**  
THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.

EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	→	←	↓

**CONSTRUCTION NOTES:**

- ① THE CONTRACTOR SHALL MAINTAIN THE EXISTING SIGNAL SYSTEM INTERCONNECT DURING TEMPORARY SIGNAL OPERATION.
- ② FREE-FLOW RIGHT TURN LANE TRAFFIC SIGNAL HEAD TO BE ACTIVATED IN STAGE 1A-2 AND REMAIN THROUGH END OF CONTRACT.

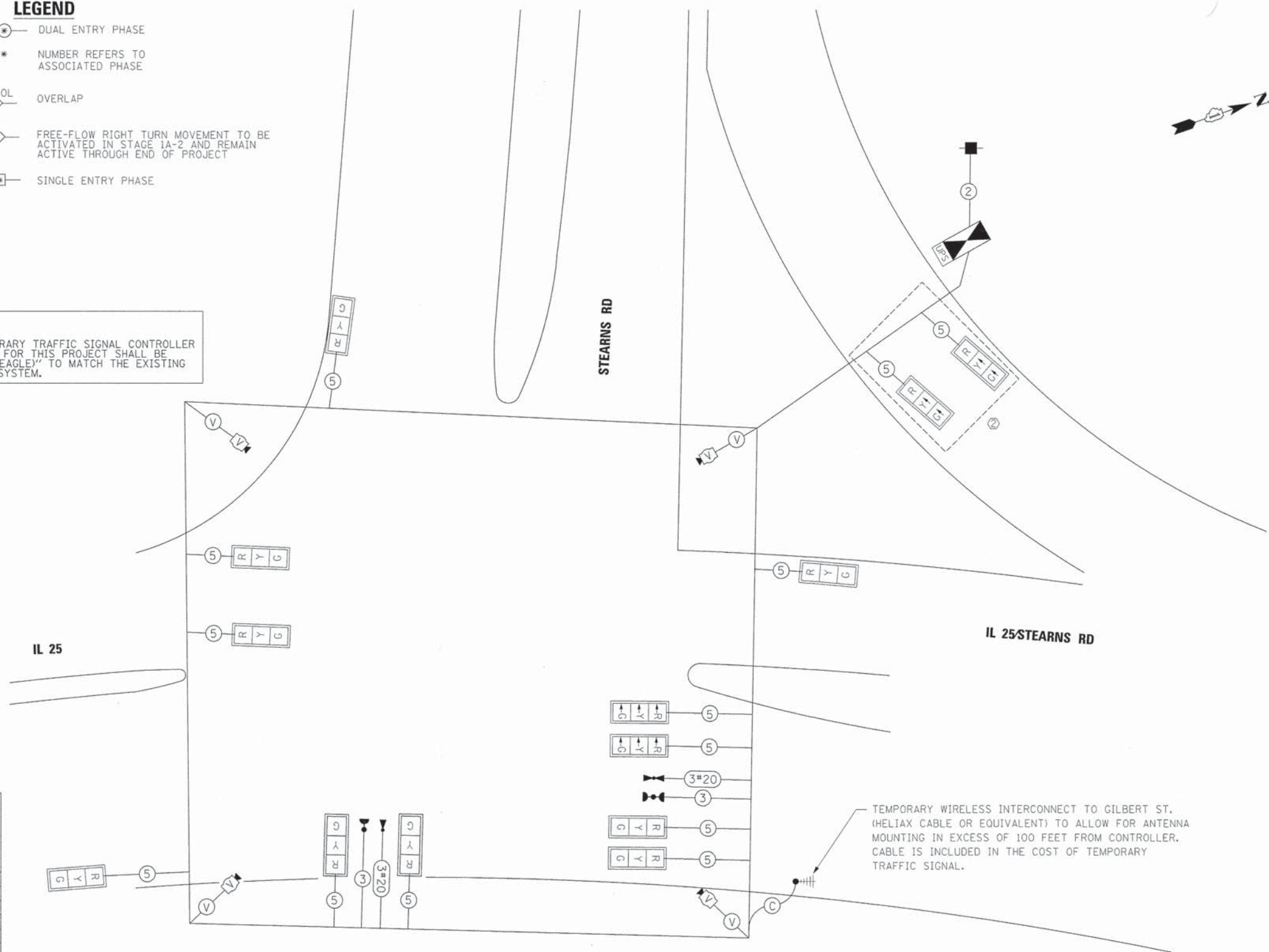
I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	
SIGNAL (RED)	11	-	17	0.50	93.50
(YELLOW)	11	-	25	0.25	68.75
(GREEN)	11	-	15	0.25	41.25
ARROW	-	-	12	0.10	-
PED. SIGNAL	-	-	25	1.00	-
CONTROLLER	1	-	100	1.00	100.00
FREE-FLOW ARROW	2	-	15	1.00	30.00
VIDEO SYSTEM	1	150	-	1.00	150.00
FLASHER				0.50	

ENERGY COSTS TO: TOTAL = 483.50

**ILLINOIS DEPARTMENT OF TRANSPORTATION**

DIVISION OF HIGHWAY/DISTRICT 1  
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MARTY RUBIN  
PHONE: (847) 608 2400  
COMPANY: COMED



**TEMPORARY CABLE PLAN**

TEMPORARY WIRELESS INTERCONNECT TO GILBERT ST. (HELIX CABLE OR EQUIVALENT) TO ALLOW FOR ANTENNA MOUNTING IN EXCESS OF 100 FEET FROM CONTROLLER. CABLE IS INCLUDED IN THE COST OF TEMPORARY TRAFFIC SIGNAL.

FILE NAME =	DESIGNED - BC	REVISED -
...\\0163598-shr-IL25-stns-temp-trs-cable-stage	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLDT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



**STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION**

**TEMP CABLE PLAN & TEMP PHASE DESIGNATION DIAGRAM, & TEMP EMERGENCY VEHICLE PREEMPTION SEQUENCE, IL 25/STEARNS RD AT STEARNS RD, STAGE 2-3**

SCALE: 1"=20' SHEET NO. 11 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	222
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	



**NOTES FOR TEMPORARY TRAFFIC SIGNALS**

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATION WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL. TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. ALL TEMPORARY TRAFFIC SIGNALS SHALL MEET THE LATEST ITE LED TRAFFIC SIGNAL STANDARDS.

**CONSTRUCTION NOTES:**

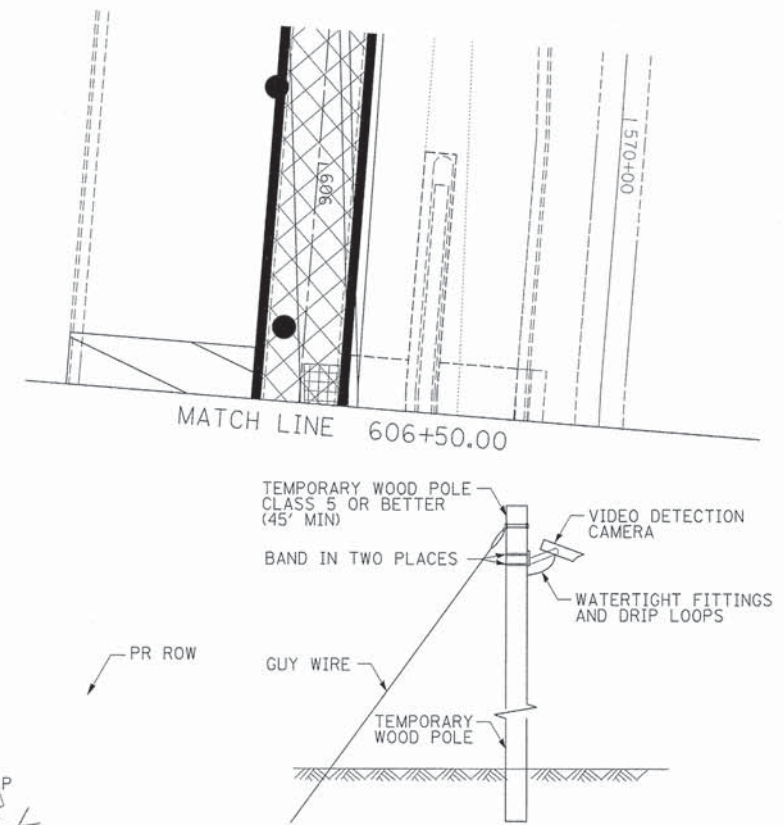
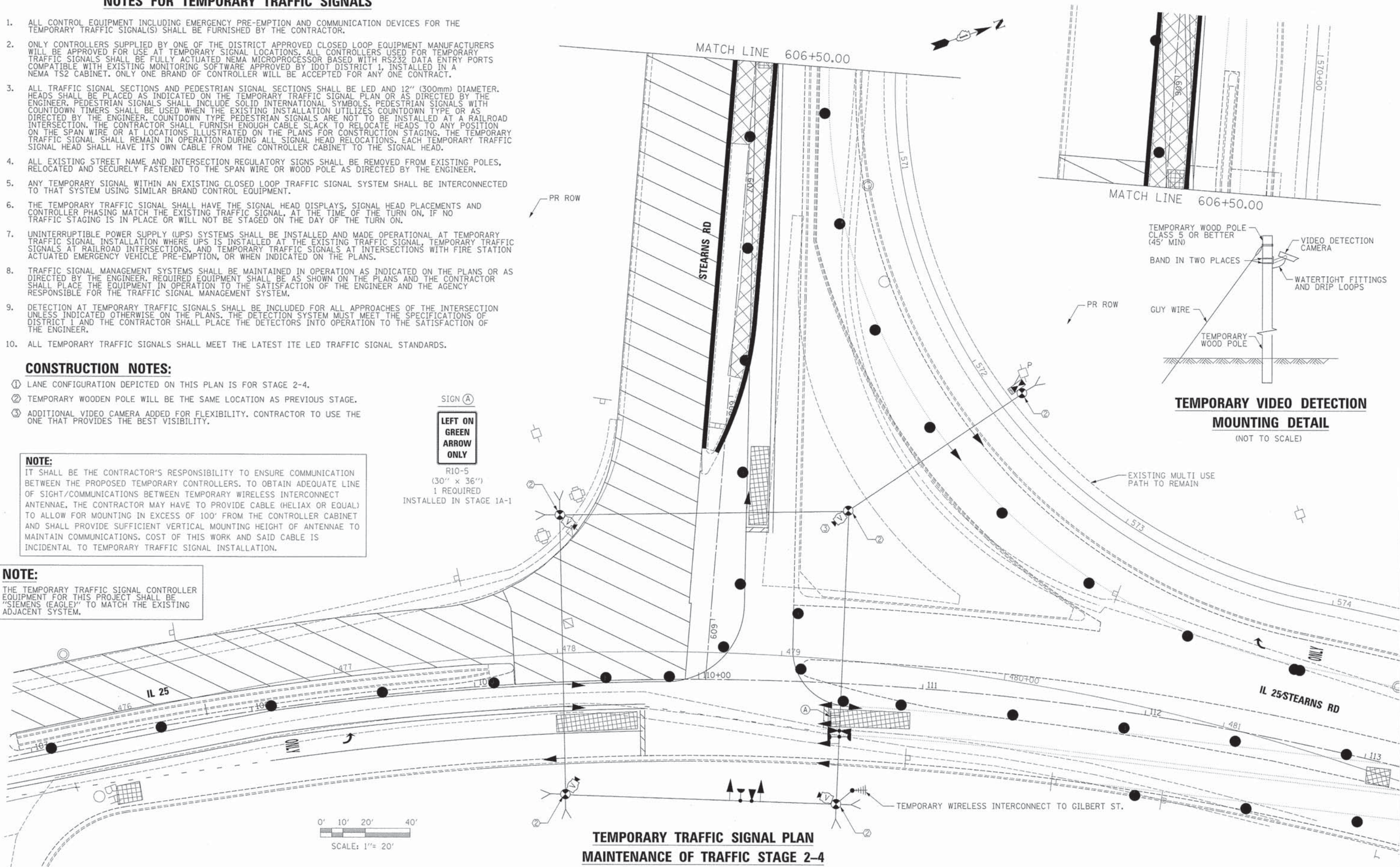
- ① LANE CONFIGURATION DEPICTED ON THIS PLAN IS FOR STAGE 2-4.
- ② TEMPORARY WOODEN POLE WILL BE THE SAME LOCATION AS PREVIOUS STAGE.
- ③ ADDITIONAL VIDEO CAMERA ADDED FOR FLEXIBILITY. CONTRACTOR TO USE THE ONE THAT PROVIDES THE BEST VISIBILITY.

**NOTE:**

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMMUNICATION BETWEEN THE PROPOSED TEMPORARY CONTROLLERS. TO OBTAIN ADEQUATE LINE OF SIGHT/COMMUNICATIONS BETWEEN TEMPORARY WIRELESS INTERCONNECT ANTENNAE, THE CONTRACTOR MAY HAVE TO PROVIDE CABLE (HELIX OR EQUAL) TO ALLOW FOR MOUNTING IN EXCESS OF 100' FROM THE CONTROLLER CABINET AND SHALL PROVIDE SUFFICIENT VERTICAL MOUNTING HEIGHT OF ANTENNAE TO MAINTAIN COMMUNICATIONS. COST OF THIS WORK AND SAID CABLE IS INCIDENTAL TO TEMPORARY TRAFFIC SIGNAL INSTALLATION.

**NOTE:**

THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.



**TEMPORARY VIDEO DETECTION MOUNTING DETAIL**  
(NOT TO SCALE)

**TEMPORARY TRAFFIC SIGNAL PLAN**  
**MAINTENANCE OF TRAFFIC STAGE 2-4**

FILE NAME =	DESIGNED - BC	REVISED -
...D163598-sht-IL25-stns-temp-ts-installation-DRAWN-4.dgn	TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE = 01/18/2013	REVISED -



STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION

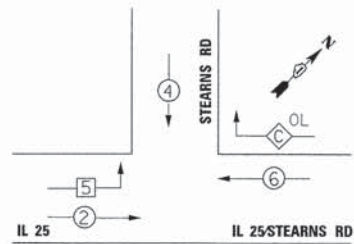
TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN  
IL 25/STEARNS RD AT STEARNS RD  
STAGE 2-4

SCALE: 1"=20' SHEET NO. 12 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	223
				CONTRACT NO. 63598
ILLINOIS FED. AID PROJECT				

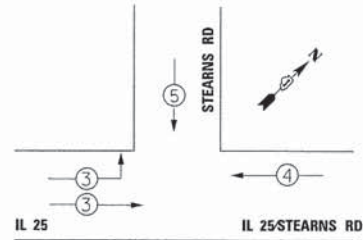


**TEMPORARY CONTROLLER SEQUENCE**



**TEMPORARY PHASE DESIGNATION DIAGRAM  
STAGE 2-4**

**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



**LEGEND**

- ⊙ DUAL ENTRY PHASE
- \* NUMBER REFERS TO ASSOCIATED PHASE
- OL OVERLAP
- ⊙ FREE-FLOW RIGHT TURN MOVEMENT TO BE ACTIVATED IN STAGE 1A-2 AND REMAIN ACTIVE THROUGH END OF PROJECT
- ⊙ SINGLE ENTRY PHASE

**NOTE:**  
THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.

TEMPORARY EMERGENCY VEHICLE PREEMPTORS STAGE 2-4			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	→	←	↓

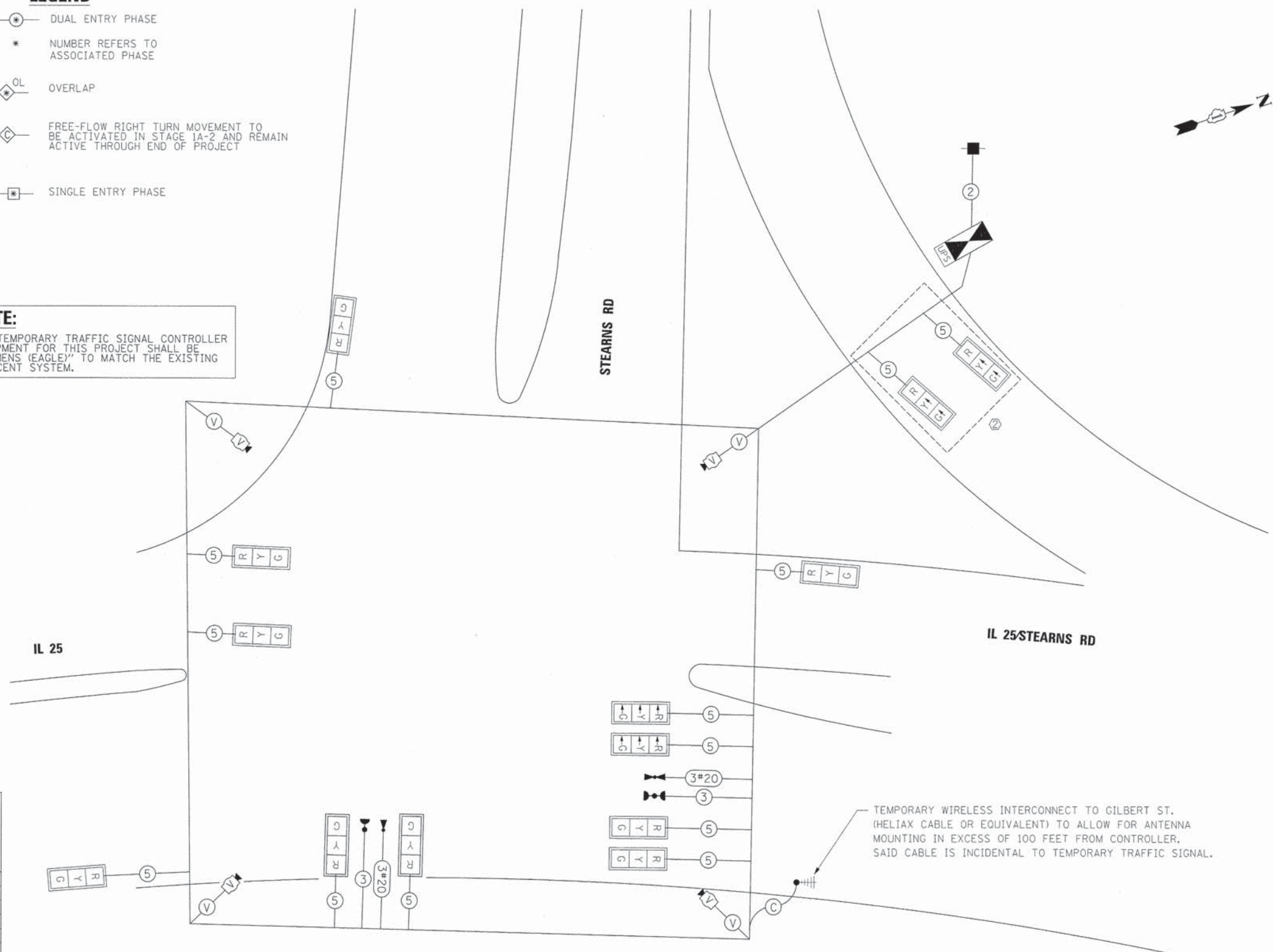
**CONSTRUCTION NOTES:**

- ① THE CONTRACTOR SHALL MAINTAIN THE EXISTING SIGNAL SYSTEM INTERCONNECT DURING TEMPORARY SIGNAL OPERATION.
- ② FREE-FLOW RIGHT TURN LANE TRAFFIC SIGNAL HEAD TO BE ACTIVATED IN STAGE 1A-2 AND REMAIN THROUGH END OF CONTRACT.

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		%OPERATION	
SIGNAL (RED)	11	-	17	0.50	93.50
(YELLOW)	11	-	25	0.25	68.75
(GREEN)	11	-	15	0.25	41.25
ARROW	-	-	12	0.10	-
PED. SIGNAL	-	-	25	1.00	-
CONTROLLER	1	-	100	1.00	100.00
FREE-FLOW ARROW	2	-	15	1.00	30.00
VIDEO SYSTEM	1	150	-	1.00	150.00
FLASHER				0.50	

ENERGY COSTS TO: TOTAL = 483.50

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAY/DISTRICT 1  
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096  
ENERGY SUPPLY CONTACT: MARTY RUBIN  
PHONE: (847) 608 2400  
COMPANY: COMED



TEMPORARY WIRELESS INTERCONNECT TO GILBERT ST. (HELIX CABLE OR EQUIVALENT) TO ALLOW FOR ANTENNA MOUNTING IN EXCESS OF 100 FEET FROM CONTROLLER. SAID CABLE IS INCIDENTAL TO TEMPORARY TRAFFIC SIGNAL.

**TEMPORARY CABLE PLAN**

FILE NAME =	DESIGNED - BC	REVISED -
...\\0163598-sht-IL25-stnrs-temp-ts-cable-stage-2-4	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION

**TEMP CABLE PLAN & TEMP PHASE DESIGNATION DIAGRAM, & TEMP EMERGENCY VEHICLE PREEMPTION SEQUENCE, IL 25/STEARNS RD AT STEARNS RD, STAGE 2-4**  
SCALE: 1"=20' SHEET NO. 13 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	224
CONTRACT NO. 63598				

ILLINOIS FED. AID PROJECT



**NOTES FOR TEMPORARY TRAFFIC SIGNALS**

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATION WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL. TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. ALL TEMPORARY TRAFFIC SIGNALS SHALL MEET THE LATEST ITE LED TRAFFIC SIGNAL STANDARDS.

**CONSTRUCTION NOTES:**

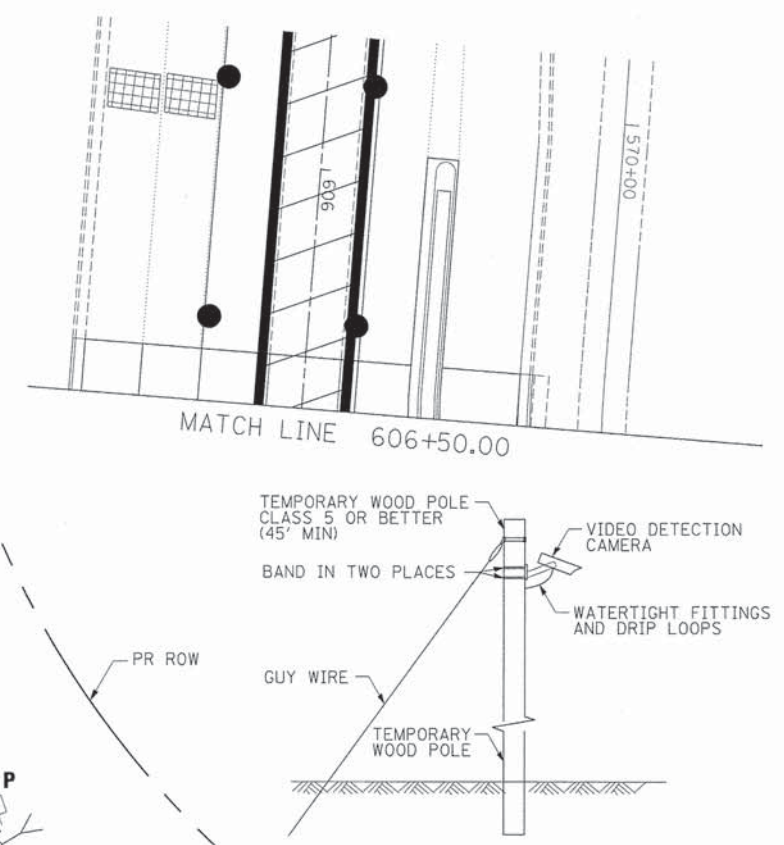
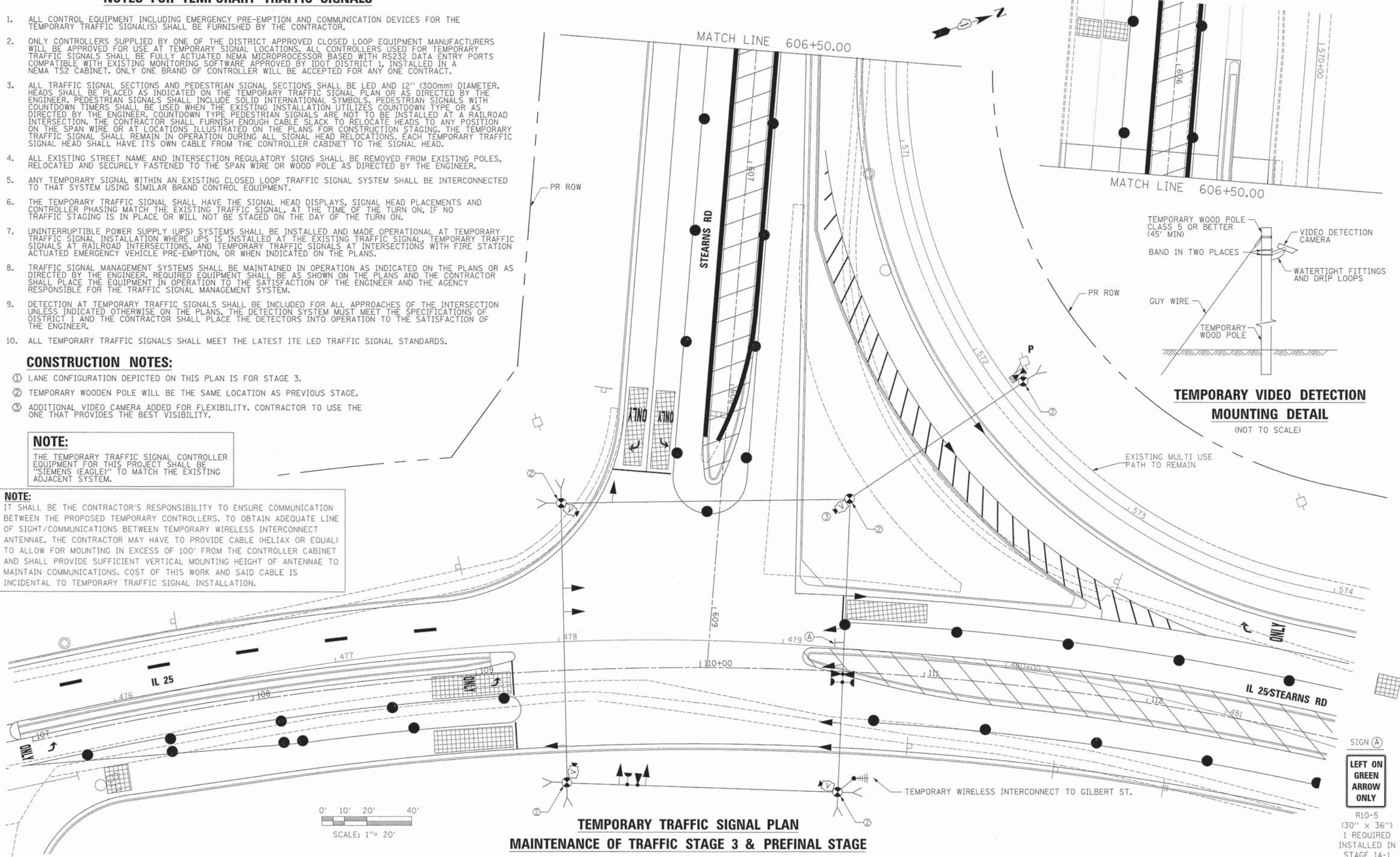
- ① LANE CONFIGURATION DEPICTED ON THIS PLAN IS FOR STAGE 3.
- ② TEMPORARY WOODEN POLE WILL BE THE SAME LOCATION AS PREVIOUS STAGE.
- ③ ADDITIONAL VIDEO CAMERA ADDED FOR FLEXIBILITY. CONTRACTOR TO USE THE ONE THAT PROVIDES THE BEST VISIBILITY.

**NOTE:**

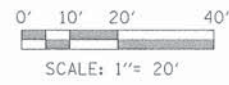
THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.

**NOTE:**

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMMUNICATION BETWEEN THE PROPOSED TEMPORARY CONTROLLERS. TO OBTAIN ADEQUATE LINE OF SIGHT/COMMUNICATIONS BETWEEN TEMPORARY WIRELESS INTERCONNECT ANTENNAE, THE CONTRACTOR MAY HAVE TO PROVIDE CABLE (HELIAX OR EQUAL) TO ALLOW FOR MOUNTING IN EXCESS OF 100' FROM THE CONTROLLER CABINET AND SHALL PROVIDE SUFFICIENT VERTICAL MOUNTING HEIGHT OF ANTENNAE TO MAINTAIN COMMUNICATIONS. COST OF THIS WORK AND SAID CABLE IS INCIDENTAL TO TEMPORARY TRAFFIC SIGNAL INSTALLATION.



**TEMPORARY TRAFFIC SIGNAL PLAN  
MAINTENANCE OF TRAFFIC STAGE 3 & PREFINAL STAGE**



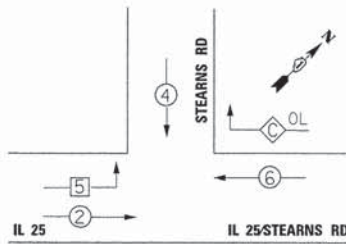
SIGN (A)  
**LEFT ON GREEN  
ARROW  
ONLY**

R10-5  
(30" x 36")  
1 REQUIRED  
INSTALLED IN  
STAGE 1A-1

FILE NAME =	DESIGNED - BC	REVISED -		<b>STATE OF ILLINOIS DIVISION OF TRANSPORTATION</b>		<b>TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN IL 25 / STEARNS RD AT STEARNS RD STAGE 3 &amp; PREFINAL STAGE</b>		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
... \D163598-sht-IL25-stns-temp-ts-installation	DRAWN - TMB	REVISED -						361	06-00214-18-RP	KANE	451	225
USER NAME = sb1ank	CHECKED - MPM	REVISED -						CONTRACT NO. 63598				
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -	SCALE: 1"=20'		SHEET NO. 14 OF 49 SHEETS		STA. TO STA.		ILLINOIS FED. AID PROJECT			



**TEMPORARY CONTROLLER SEQUENCE**



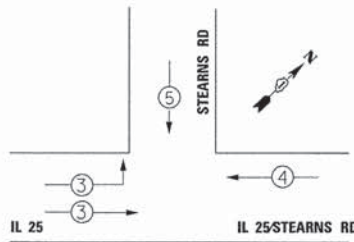
**LEGEND**

- ← ⊛ → DUAL ENTRY PHASE
- \* NUMBER REFERS TO ASSOCIATED PHASE
- ⊛ OL OVERLAP
- ⊞ FREE-FLOW RIGHT TURN MOVEMENT TO BE ACTIVATED IN STAGE 1A-2 AND REMAIN ACTIVE THROUGH END OF PROJECT.
- ← ⊛ → SINGLE ENTRY PHASE

**TEMPORARY PHASE DESIGNATION DIAGRAM STAGES 3 & PREFINAL**

**NOTE:**  
THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.

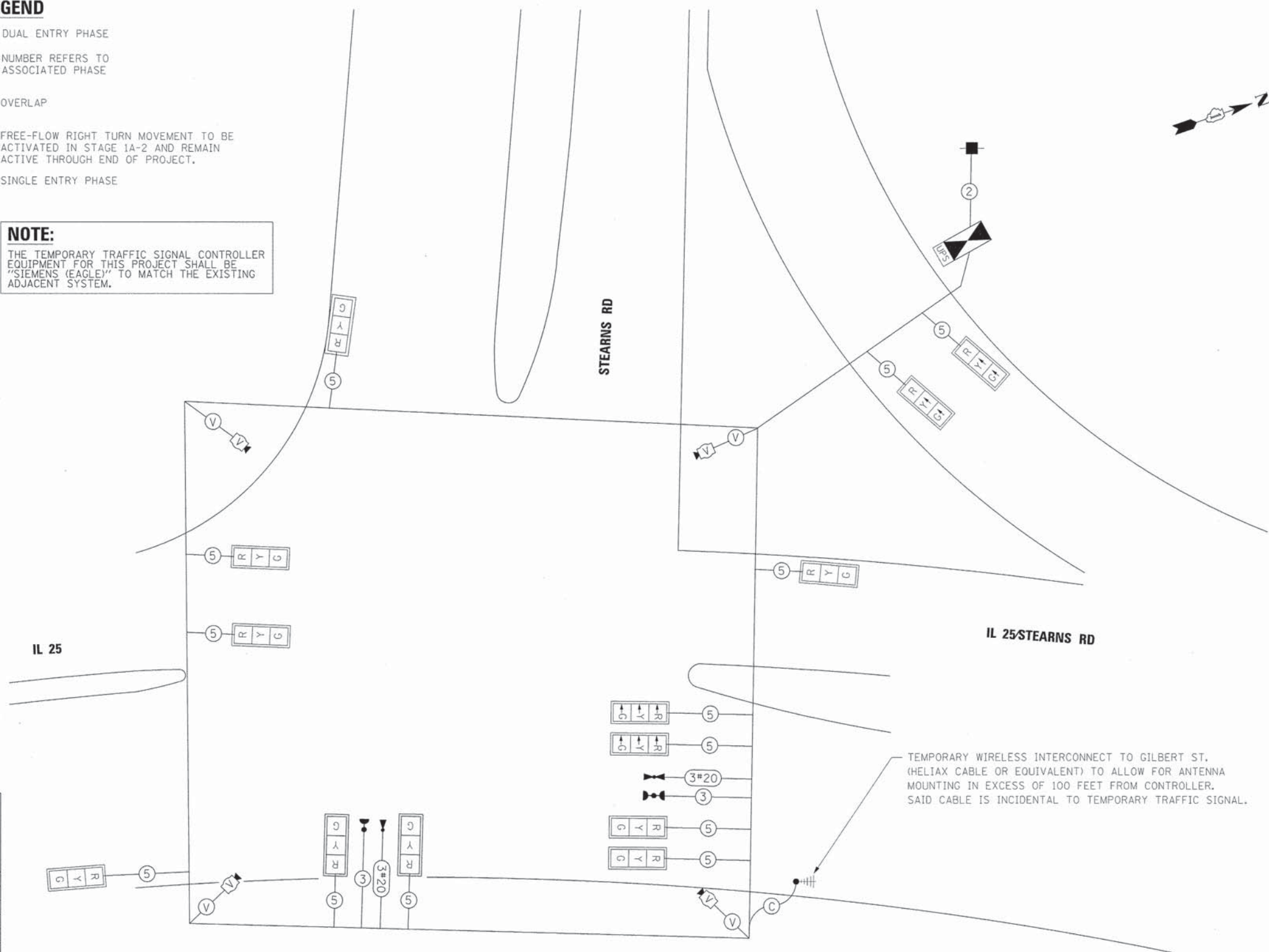
**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



TEMPORARY EMERGENCY VEHICLE PREEMPTORS STAGES 3 & PREFINAL			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	↔	←	↓

**CONSTRUCTION NOTES:**

- ① THE CONTRACTOR SHALL MAINTAIN THE EXISTING SIGNAL SYSTEM INTERCONNECT DURING TEMPORARY SIGNAL OPERATION.



**TEMPORARY CABLE PLAN**

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	
SIGNAL (RED)	11	-	17	0.50	93.50
(YELLOW)	11	-	25	0.25	68.75
(GREEN)	11	-	15	0.25	41.25
ARROW	-	-	12	0.10	-
PED. SIGNAL	-	-	25	1.00	-
CONTROLLER	1	-	100	1.00	100.00
FREE-FLOW ARROW	2	-	15	1.00	30.00
VIDEO SYSTEM	1	150	-	1.00	150.00
FLASHER				0.50	

ENERGY COSTS TO: TOTAL = 483.50

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAY/DISTRICT 1  
201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096  
ENERGY SUPPLY CONTACT: MARTY RUBIN  
PHONE: (847) 608 2400  
COMPANY: COMED

FILE NAME =	DESIGNED - BC	REVISED -
...\\D163598-sht-IL25-stns-temp-ts-cable-stag-	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION

**TEMP CABLE PLAN & TEMP PHASE DESIGNATION DIAGRAM, & TEMP EMERGENCY VEHICLE PREEMPTION SEQUENCE, IL 25/STEARNS RD AT STEARNS RD, STAGES 3 & PREFINAL**  
SCALE: 1"=20' SHEET NO. 15 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-1B-RP	KANE	451	226
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	



**NOTE:**

EXISTING TRAFFIC SIGNALS AT THE INTERSECTION TO REMAIN IN OPERATION UNTIL PRE-STAGE OR AS DIRECTED BY THE ENGINEER. TEMPORARY TRAFFIC SIGNALS SHALL BE IN PLACE AND OPERATIONAL BEFORE REMOVAL OF EXISTING TRAFFIC SIGNALS.

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

- 1 EACH CONTROLLER AND CABINET, COMPLETE
- 12 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 1 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 1 EACH SIGNAL HEAD, 2-FACE, 3-SECTION
- 1 EACH SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION
- 2 EACH MAST ARM ASSEMBLYS
- 1 EACH SIGNAL POST
- 1 EACH SERVICE INSTALLATION

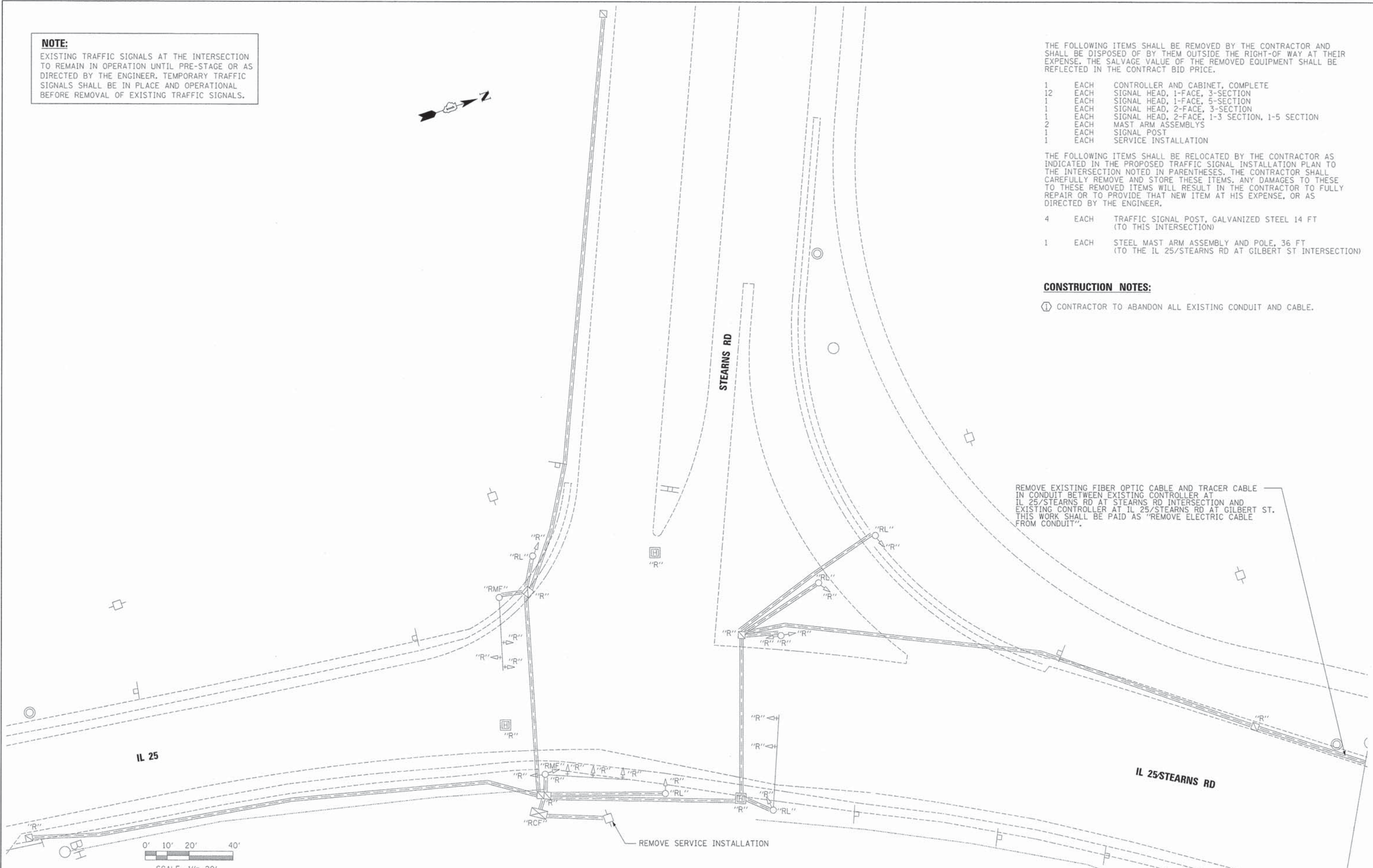
THE FOLLOWING ITEMS SHALL BE RELOCATED BY THE CONTRACTOR AS INDICATED IN THE PROPOSED TRAFFIC SIGNAL INSTALLATION PLAN TO THE INTERSECTION NOTED IN PARENTHESES. THE CONTRACTOR SHALL CAREFULLY REMOVE AND STORE THESE ITEMS. ANY DAMAGES TO THESE TO THESE REMOVED ITEMS WILL RESULT IN THE CONTRACTOR TO FULLY REPAIR OR TO PROVIDE THAT NEW ITEM AT HIS EXPENSE, OR AS DIRECTED BY THE ENGINEER.

- 4 EACH TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT (TO THIS INTERSECTION)
- 1 EACH STEEL MAST ARM ASSEMBLY AND POLE, 36 FT (TO THE IL 25/STEARNS RD AT GILBERT ST INTERSECTION)

**CONSTRUCTION NOTES:**

- ① CONTRACTOR TO ABANDON ALL EXISTING CONDUIT AND CABLE.

REMOVE EXISTING FIBER OPTIC CABLE AND TRACER CABLE IN CONDUIT BETWEEN EXISTING CONTROLLER AT IL 25/STEARNS RD AT STEARNS RD INTERSECTION AND EXISTING CONTROLLER AT IL 25/STEARNS RD AT GILBERT ST. THIS WORK SHALL BE PAID AS "REMOVE ELECTRIC CABLE FROM CONDUIT".



FILE NAME =	DESIGNED - BC	REVISED -		<b>STATE OF ILLINOIS</b> <b>DIVISION OF TRANSPORTATION</b>	<b>TRAFFIC SIGNAL REMOVAL PLAN</b> <b>IL 25/STEARNS RD AT STEARNS RD</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
...\\D163998-sht-IL25-stns-ts-removal.dgn	DRAWN - TMB	REVISED -				361	06-00214-18-RP	KANE	451	227
USER NAME = tblank	CHECKED - MPM	REVISED -				CONTRACT NO. 63598				
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -	ILLINOIS FED. AID PROJECT							

SCALE: 1"=20' SHEET NO. 16 OF 49 SHEETS STA. TO STA.

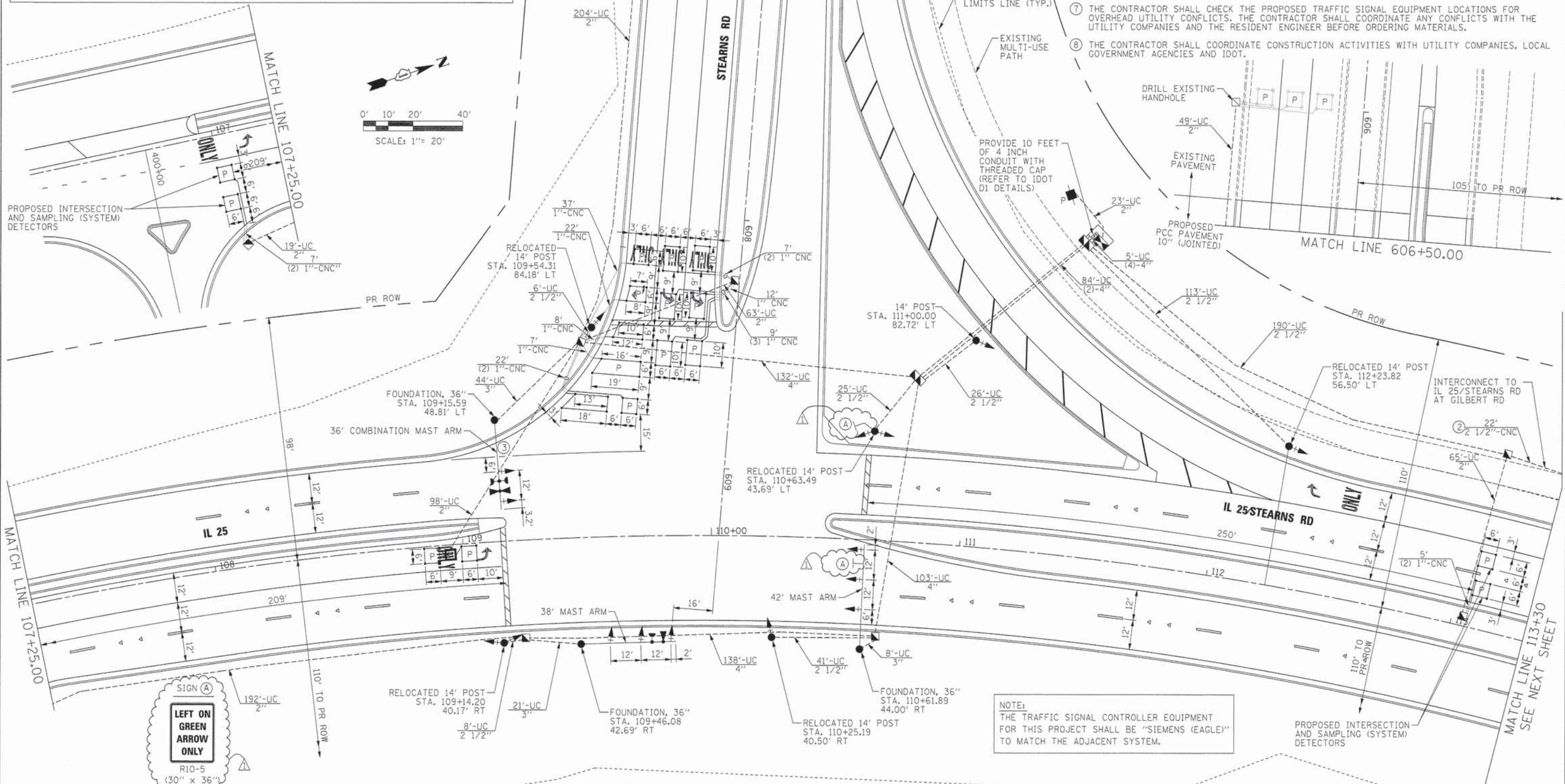


**NOTE:**  
 ANY PROPOSED ACTIVITY IN THE VICINITY OF A HIGHWAY-RAIL GRADE CROSSING MUST ADHERE TO THE GUIDELINES SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) UNDER SECTION 6G.18; WORK IN THE VICINITY OF A GRADE CROSSING WHICH STATES: "WHEN GRADE CROSSINGS EXIST EITHER WITHIN OR IN THE VICINITY OF A TTC ZONE, LANE RESTRICTIONS, FLAGGING, OR OTHER OPERATIONS SHALL NOT CREATE CONDITIONS WHERE VEHICLES CAN BE QUEUED ACROSS THE TRACKS. IF THE QUEUING OF VEHICLES ACROSS THE TRACKS CANNOT BE AVOIDED, A UNIFORMED LAW ENFORCEMENT OFFICER OR FLAGGER SHALL BE PROVIDED AT THE CROSSING TO PREVENT VEHICLES FROM STOPPING ON THE TRACKS, EVEN IF AUTOMATIC WARNING DEVICES ARE IN PLACE."

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA 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 MOVED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOVED FIELDS SHALL BE SEED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

**NOTES:**

- ① ALL LOOPS AT THIS INTERSECTION SHALL BE PREFORMED AND PLACED WITHIN THE PCC PAVEMENT.
- ② 2 1/2" UNDERGROUND GALVANIZED STEEL CONDUIT. THE COST OF THIS ITEM IS INCLUDED IN THE TRAFFIC SIGNAL INTERCONNECT PAY ITEMS.
- ③ COMBINATION MAST ARM TO BE INSTALLED TO ACCOMMODATE FUTURE PTZ CAMERA.
- ④ EXISTING STREET NAME SIGNS ARE TO BE RELOCATED TO PROPOSED EQUIPMENT. THIS WORK IS TO BE PAID AS RELOCATE EXISTING SIGN PANEL (SPECIAL).
- ⑤ IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. THIS SHALL INCLUDE LOCATING THE MAST ARM FOUNDATIONS AND VERIFYING THE MAST ARMS' LENGTHS.
- ⑥ THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ORDERING ANY MATERIALS AND STARTING ANY WORK. FOR LOCATIONS OF UTILITIES, LOCALLY OWNED EQUIPMENT, LEASED ENFORCEMENT CAMERA SYSTEM FACILITIES AND IDOT UNDERGROUND FACILITIES, CONTACT THE LOCAL COUNTIES, MUNICIPALITIES AND IDOT FOR LOCATES. THE CONTRACTOR SHALL CALL 'JULIE' AT (800) 892-0123 OR 811, IN THE CITY OF CHICAGO CONTACT DIGGER AT (312) 744-7000 FOR FIELD LOCATIONS OF BURIED UTILITIES (48 HOURS NOTIFICATION REQUIRED).
- ⑦ THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL COORDINATE ANY CONFLICTS WITH THE UTILITY COMPANIES AND THE RESIDENT ENGINEER BEFORE ORDERING MATERIALS.
- ⑧ THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, LOCAL GOVERNMENT AGENCIES AND IDOT.



**NOTE:**  
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE ADJACENT SYSTEM.

FILE NAME =	DESIGNED - BC	REVISED - ADDENDUM A 04/15/2013
... \DI63598-sht-IL25-stns-ts-mod-plan.dgn	DRAWN - TMB	REVISED -
USER NAME = toddblenk	CHECKED - MPM	REVISED -
PLOT DATE = 4/15/2013	DATE - 01/18/2013	REVISED -



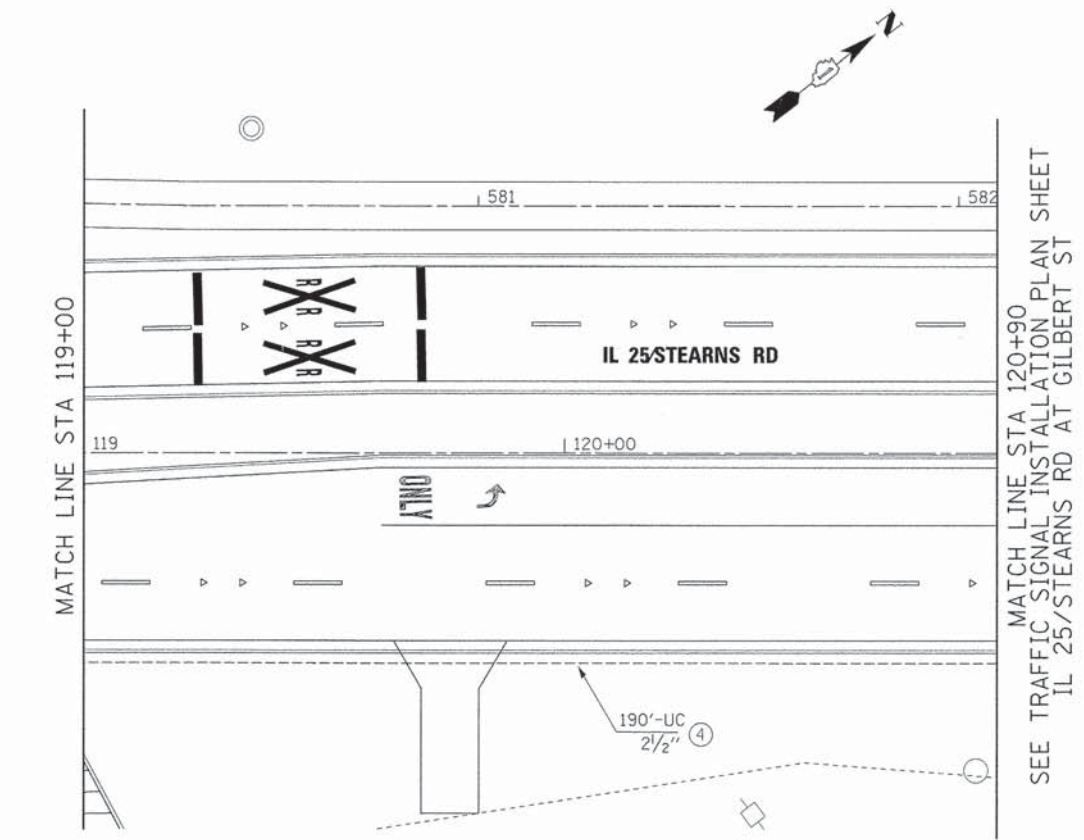
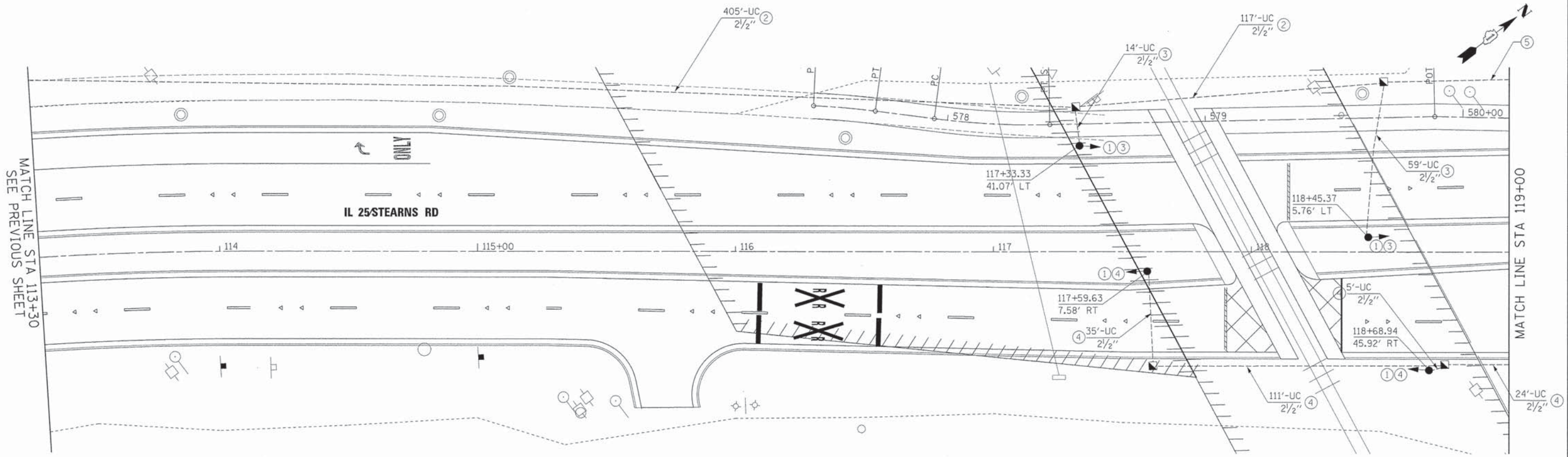
**STATE OF ILLINOIS**  
**DIVISION OF TRANSPORTATION**

**TRAFFIC SIGNAL INSTALLATION PLAN**  
**IL 25/STEARNS RD AT STEARNS RD - SHEET 1 OF 2**

SCALE: 1"=20' SHEET NO. 17 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
361	06-00214-18-RP	KANE	451 228
			CONTRACT NO. 63598
[ILLINOIS] FED. AID PROJECT			





**NOTES:**

- ① CONTRACTOR SHALL INSTALL A FLASHING 1-FACE, 1-SECTION YELLOW SIGNAL ON A WOOD POST PER DETAIL SHOWN ON THIS SHEET. THE SIGNAL SHALL EITHER FLASH OR REMAIN DARK AS PER THE NOTES IN THE RESPECTIVE CABLE PLANS. AN R8-8 SIGN SHALL ALSO BE INSTALLED ON THE POST. THIS WORK SHALL BE PAID FOR AS "POST MOUNTED FLASHING BEACON INSTALLATION (SPECIAL)".
- ② 2 1/2" UNDERGROUND GALVANIZED STEEL CONDUIT. THE COST OF THIS ITEM IS INCLUDED IN THE TRAFFIC SIGNAL INTERCONNECT PAY ITEMS.
- ③ ITEM INCLUDED IN THE IL 25/STEARNS RD AT AT STEARNS RD SCHEDULE OF QUANTITIES.
- ④ ITEM INCLUDED IN THE IL 25/STEARNS RD AT AT GILBERT RD SCHEDULE OF QUANTITIES.
- ⑤ 2" UNDERGROUND GALVANIZED STEEL CONDUIT. THE COST OF THIS ITEM IS INCLUDED IN THE TRAFFIC SIGNAL INTERCONNECT PAY ITEMS.

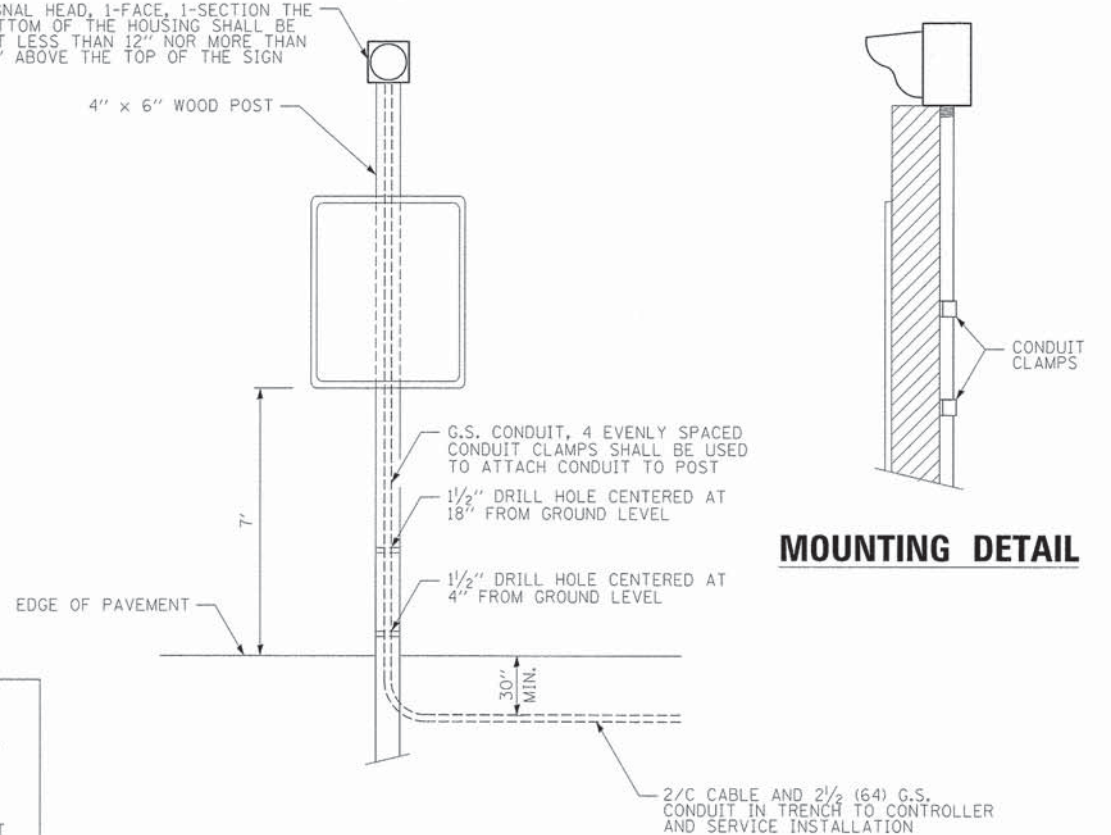
**NOTE:**  
 ANY PROPOSED ACTIVITY IN THE VICINITY OF A HIGHWAY-RAIL GRADE CROSSING MUST ADHERE TO THE GUIDELINES SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) UNDER SECTION 6G.18: WORK IN THE VICINITY OF A GRADE CROSSING WHICH STATES: "WHEN GRADE CROSSINGS EXIST EITHER WITHIN OR IN THE VICINITY OF A TTC ZONE, LANE RESTRICTIONS, FLAGGING, OR OTHER OPERATIONS SHALL NOT CREATE CONDITIONS WHERE VEHICLES CAN BE QUEUED ACROSS THE TRACKS. IF THE QUEUING OF VEHICLES ACROSS THE TRACKS CANNOT BE AVOIDED, A UNIFORMED LAW ENFORCEMENT OFFICER OR FLAGGER SHALL BE PROVIDED AT THE CROSSING TO PREVENT VEHICLES FROM STOPPING ON THE TRACKS, EVEN IF AUTOMATIC WARNING DEVICES ARE IN PLACE."



R8-8  
 (24"x30")  
 4 REQUIRED

(NOTE: THE SIGN PANELS TO BE PAID AS "SIGN PANEL - TYPE 1")

SIGNAL HEAD, 1-FACE, 1-SECTION THE BOTTOM OF THE HOUSING SHALL BE NOT LESS THAN 12" NOR MORE THAN 24" ABOVE THE TOP OF THE SIGN



**POST MOUNTED FLASHING BEACON DETAIL**

FILE NAME =	DESIGNED - BC	REVISED -
...\\0163598-sht-IL25-stns-ts-mod-plan2.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



**STATE OF ILLINOIS  
 DIVISION OF TRANSPORTATION**

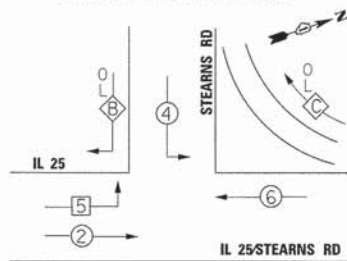
**TRAFFIC SIGNAL INSTALLATION PLAN  
 IL 25/STEARNS RD AT STEARNS RD - SHEET 2 OF 2**

SCALE: 1"=20' SHEET NO. 18 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-1B-RP	KANE	451	229
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	



**CONTROLLER SEQUENCE**

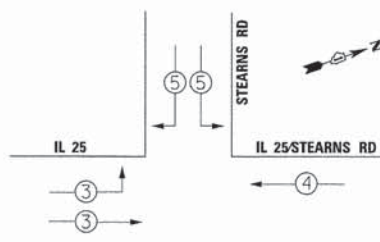


**PHASE DESIGNATION DIAGRAM**

SEE NOTE 1

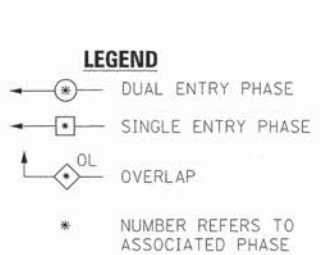
OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	= 4	+ 5
C	= FREE FLOW (HOT RIGHT)	

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

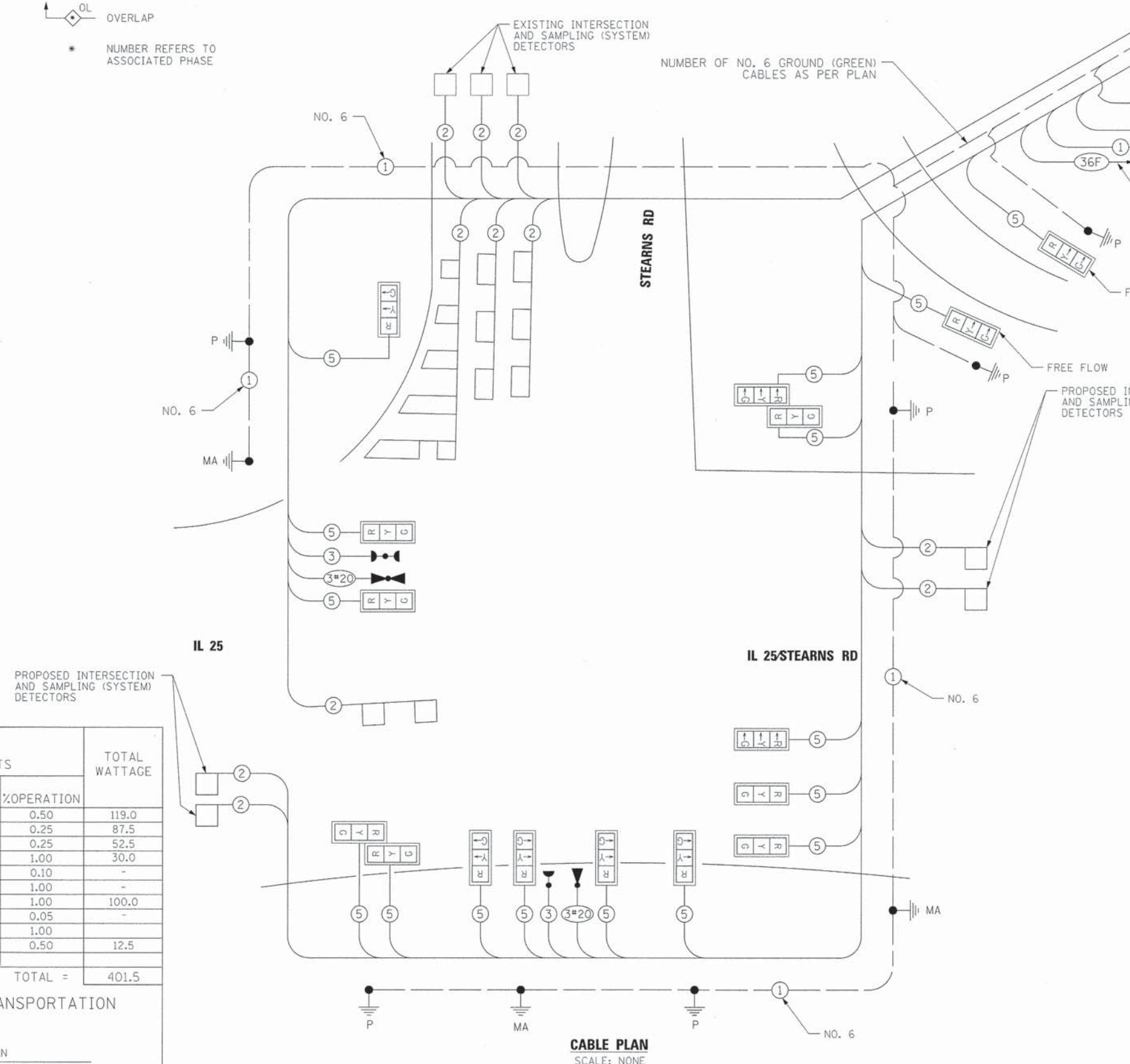


PROPOSED EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTORS	3	4	5
MOVEMENT	→	←	↕

SEE NOTE 2



**NOTE:**  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.



- NOTES:**
- YELLOW FLASHING BEACONS FACING SOUTHBOUND IL 25 AT THE CCP RR SHALL BE ACTIVATED DURING PHASE 6 YELLOW AND RED INTERVALS AND WHEN THE TRAFFIC SIGNALS ARE IN ALL WAY RED FLASH. THESE YELLOW BEACONS SHALL NOT FLASH DURING THE PHASE 6 GREEN INTERVAL.
  - YELLOW FLASHING BEACONS FACING SOUTHBOUND IL 25 AT THE CCP RR SHALL BE ACTIVATED DURING EMERGENCY VEHICLE PREEMPTION PHASES 3 & 5 GREEN, YELLOW AND ALL RED INTERVALS. THESE YELLOW FLASHING BEACONS SHALL NOT FLASH DURING EMERGENCY VEHICLE PREEMPTION PHASE 4 GREEN INTERVAL.

**SCHEDULE OF QUANTITIES**

ITEM	UNIT	TOTAL
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	713
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	482
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	73
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	571
HANDHOLE	EACH	9
HEAVY-DUTY HANDHOLE	EACH	1
DOUBLE HANDHOLE	EACH	2
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1,526
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	798
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	4,409
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	4,362
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	40
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	3,762
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 42 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	24
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	35
DRILL EXISTING HANDHOLE	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	16
INDUCTIVE LOOP DETECTOR	EACH	11
PREFORMED DETECTOR LOOP	FOOT	656
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
RELOCATE EXISTING TRAFFIC SIGNAL POST	EACH	4
RELOCATE EXISTING MAST ARM ASSEMBLY AND POLE	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	8
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	798
RELOCATE EXISTING SIGN PANEL (SPECIAL)	EACH	3
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
POST MOUNTED FLASHING BEACON INSTALLATION (SPECIAL)	EACH	2
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1

**I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		%OPERATION	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	14	-	17	0.50	119.0
(YELLOW)	14	-	25	0.25	87.5
(GREEN)	14	-	15	0.25	52.5
FREEFLOW ARROW	2	-	15	1.00	30.0
ARROW	-	-	12	0.10	-
PED. SIGNAL	-	-	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
ILLUM. SIGN	-	-	25	0.05	-
VIDEO SYSTEM	-	150	-	1.00	-
FLASHER	2	-	25	0.50	12.5

ENERGY COSTS TO: TOTAL = 401.5

**ILLINOIS DEPARTMENT OF TRANSPORTATION**

201 W. CENTER COURT  
SCHAUMBURG, ILLINOIS 60196

ENERGY SUPPLY CONTACT: MARTY RUBIN  
PHONE: (847) 608 2400  
COMPANY: COMED

**CABLE PLAN**  
SCALE: NONE

FILE NAME =	DESIGNED - BC	REVISED -
...\\D16398-sh-t-IL25-stns-rs-cable.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



**STATE OF ILLINOIS**  
**DIVISION OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**  
**IL 25/STEARNS RD AT STEARNS RD**

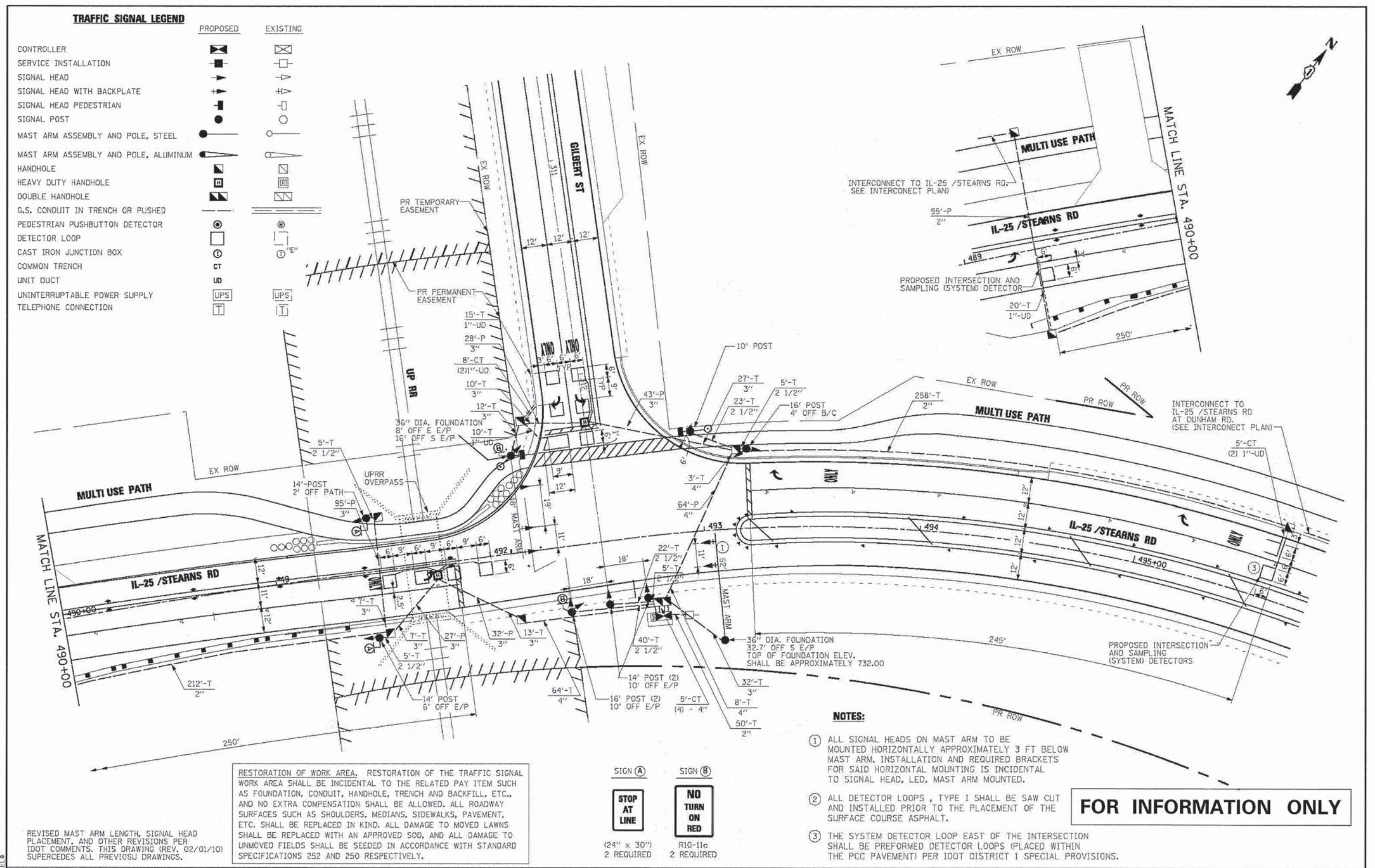
SCALE: 1"=20' SHEET NO. 19 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	230
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	



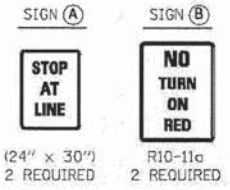
**TRAFFIC SIGNAL LEGEND**

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		
COMMON TRENCH		
UNIT DUCT		
UNINTERRUPTABLE POWER SUPPLY		
TELEPHONE CONNECTION		



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA 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 MOVED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOVED FIELDS SHALL BE SEED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

REVISED MAST ARM LENGTH, SIGNAL HEAD PLACEMENT, AND OTHER REVISIONS PER IDOT COMMENTS. THIS DRAWING (REV. 02/01/10) SUPERCEDES ALL PREVIOUS DRAWINGS.



- NOTES:**
- ALL SIGNAL HEADS ON MAST ARM TO BE MOUNTED HORIZONTALLY APPROXIMATELY 3 FT BELOW MAST ARM. INSTALLATION AND REQUIRED BRACKETS FOR SAID HORIZONTAL MOUNTING IS INCIDENTAL TO SIGNAL HEAD, LED, MAST ARM MOUNTED.
  - ALL DETECTOR LOOPS, TYPE I SHALL BE SAW CUT AND INSTALLED PRIOR TO THE PLACEMENT OF THE SURFACE COURSE ASPHALT.
  - THE SYSTEM DETECTOR LOOP EAST OF THE INTERSECTION SHALL BE PREFORMED DETECTOR LOOPS (PLACED WITHIN THE PCC PAVEMENT) PER IDOT DISTRICT 1 SPECIAL PROVISIONS.

**FOR INFORMATION ONLY**

FILE NAME =	USER NAME = #USER#	DESIGNED - MPM	REVISED
#FILES#		DRAWN - VLM	REVISED
		CHECKED - GHT	REVISED
		DATE - 3/31/09	REVISED

**KANE COUNTY  
DIVISION OF TRANSPORTATION**

<b>TRAFFIC SIGNAL INSTALLATION PLAN IL. RTE. 25 / STEARNS RD. AT GILBERT ST.</b>		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE: SHEET NO. OF SHEETS STA. TO STA.		361	06-00214-15-BR	KANE/DUPAGE	545	260
		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT		CONTRACT NO. 63074		

FILE NAME =	DESIGNED - BC	REVISED -
...\\0163598-sht-IL25-G1-ex-ts-plan.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



**STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION**

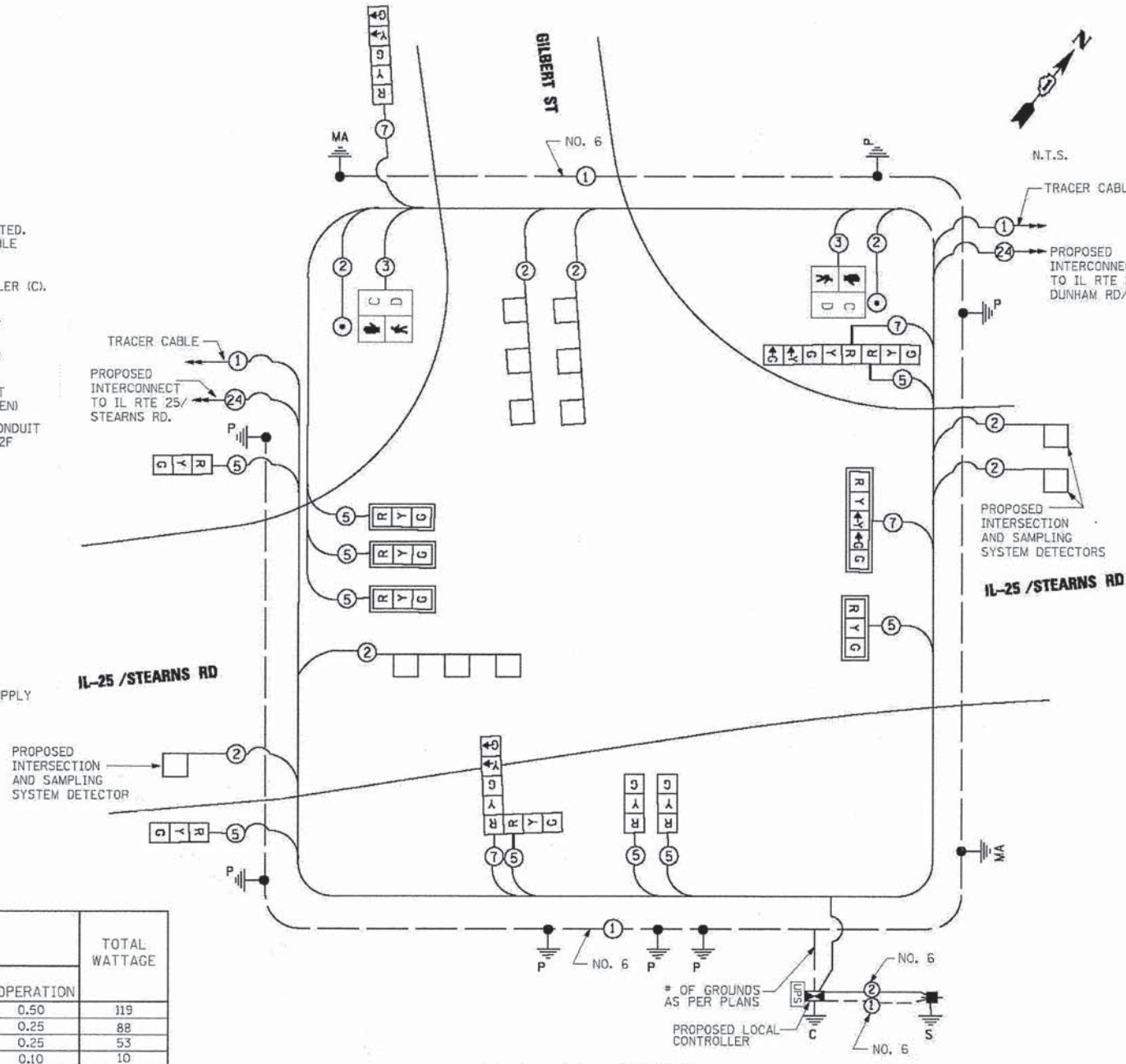
<b>EXISTING TRAFFIC SIGNAL PLAN IL 25/STEARNS RD AT GILBERT ST</b>		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE: 1"=20' SHEET NO. 20 OF 49 SHEETS STA. TO STA.		361	06-00214-18-RP	KANE	451	231
		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT		CONTRACT NO. 63598		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	231
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 63598	



**CABLE SIGNAL LEGEND**

EXISTING	PROPOSED	DESCRIPTION
		12" (300mm) TRAFFIC SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED, ALL LOOP DETECTOR CABLE TO BE SHIELDED.
		GROUND ROD AT CONTROLLER (C).
		GROUND ROD AT POST (P), OR MAST ARM POLE (MA).
		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
		SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
		COUNTDOWN PEDESTRAIN HEAD
		UNINTERRUPTIBLE POWER SUPPLY



**SCHEDULE OF QUANTITIES**

ITEM	UNIT	QUANTITIES
SERVICE INSTALLATION, POLE MOUNTED	EACH	1
CONDUIT IN TRENCH, 1 1/2" DIA., GALVANIZED STEEL	FOOT	0
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	520
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	95
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	117
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	96
CONDUIT PUSHED 3" DIA., GALVANIZED STEEL	FOOT	175
CONDUIT PUSHED 4" DIA., GALVANIZED STEEL	FOOT	64
HANDHOLE	EACH	8
HEAVY-DUTY HANDHOLE	EACH	2
DOUBLE HANDHOLE	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	877
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2/C	FOOT	321
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3/C	FOOT	331
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5/C	FOOT	1353
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7/C	FOOT	526
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1771
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	100
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	4
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 48 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 52 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	28
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E, 36-INCH DIAMETER	FOOT	28
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-5 SECTION, 1-3 SECTION, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM	EACH	5
INDUCTIVE LOOP DETECTOR	EACH	6
DETECTOR LOOP, TYPE I	FOOT	366
PEDESTRIAN PUSH BUTTON	EACH	2
PERFORMED DETECTOR LOOP	FOOT	71
ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1C	FOOT	755
UNINTERRUPTIBLE POWER SUPPLY	EACH	1

**I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		%OPERATION	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	14	-	17	0.50	119
(YELLOW)	14	-	25	0.25	88
(GREEN)	14	-	15	0.25	53
ARROW	8	-	12	0.10	10
CONTROLLER	1	-	100	1.00	100
FLASHER				0.50	

ENERGY COSTS TO: TOTAL = 370

**ILLINOIS DEPARTMENT OF TRANSPORTATION**

201 W. CENTER COURT  
SCHAMBURG, ILLINOIS 60196

ENERGY SUPPLY CONTACT: MARTY RUBIN  
PHONE: 847-608-2400  
COMPANY: COMED

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'-H.-2'-(6m-H.-0.6m)=
E - M. ARM POLE	10 (3.0)	SIGNAL POST	2 (1.0)	BRACKET MOUNTED	13 (4.0)
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	PED. PUSH BUTTON	4 (1.2)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

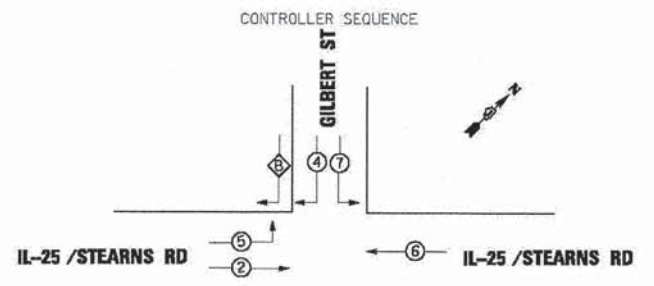
THE END OF THE TRACER CABLE WILL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET

**CABLE PLAN**

**NOTES:**

- ALL DETECTOR LOOPS, TYPE I SHALL BE SAW CUT AND INSTALLED PRIOR TO THE PLACEMENT OF THE SURFACE COURSE ASPHALT.
- THE SYSTEM DETECTOR LOOP EAST OF THE INTERSECTION SHALL BE PREFORMED DETECTOR LOOPS (PLACED WITHIN THE PCC PAVEMENT) PER IDOT DISTRICT 1 SPECIAL PROVISIONS.

REVISED MAST ARM LENGTH, SIGNAL HEAD PLACEMENT, AND OTHER REVISIONS PER IDOT COMMENTS. THIS DRAWING (REV. 02/12/10) SUPERCEDES ALL PREVIOUS DRAWINGS.



**PHASE DESIGNATION DIAGRAM**

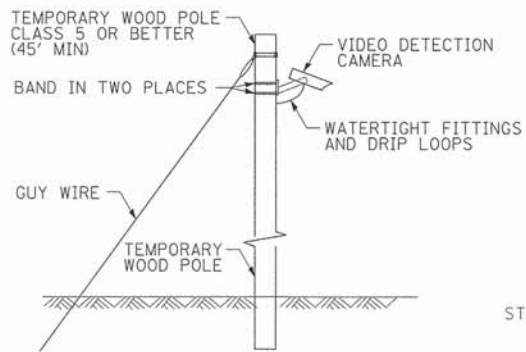
OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	4	5

**FOR INFORMATION ONLY**



**CONSTRUCTION NOTES:**

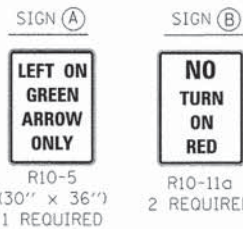
- THE CONTRACTOR SHALL BAG AND DISABLE SIGNAL HEADS, PEDESTRIAN PUSH BUTTONS, AND EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT DURING PRE-STAGE AND STAGES 1A, 1B, AND 1C.
- THE CONTRACTOR SHALL USE EXISTING R10-11a SIGNS AND RELOCATE THEM AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR TO INSTALL A MINIMUM 60 FT WOODEN POLE WITH A MIN 16 FT EMBEDMENT TO ACCOMMODATE EXCAVATION ASSOCIATED WITH LOWERING OF IL 25.
- THE CONTRACTOR TO INSTALL WOOD POLE 4' BELOW PROPOSED SUBGRADE ELEVATION. POLE SHOULD EXTEND NO MORE THAN 14' ABOVE EXISTING GRADE.
- LANE CONFIGURATION DEPICTED ON THIS PLAN IS FOR STAGE 1A. STAGES ARE SHOWN FOR EACH SIGNAL HEAD LOCATION.
- THE CONTRACTOR SHALL BAG AND DISABLE HEADS DURING STAGE 1C.



**TEMPORARY VIDEO DETECTION MOUNTING DETAIL**  
(NOT TO SCALE)

TEMPORARY WOOD POLE CLASS 5 OR BETTER (60' MIN)  
STA 122+53.17 57.00' LT  
CONDUIT TO BE PLACED 1' BELOW PROPOSED SUBGRADE ELEVATION

**NOTE:**  
THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.

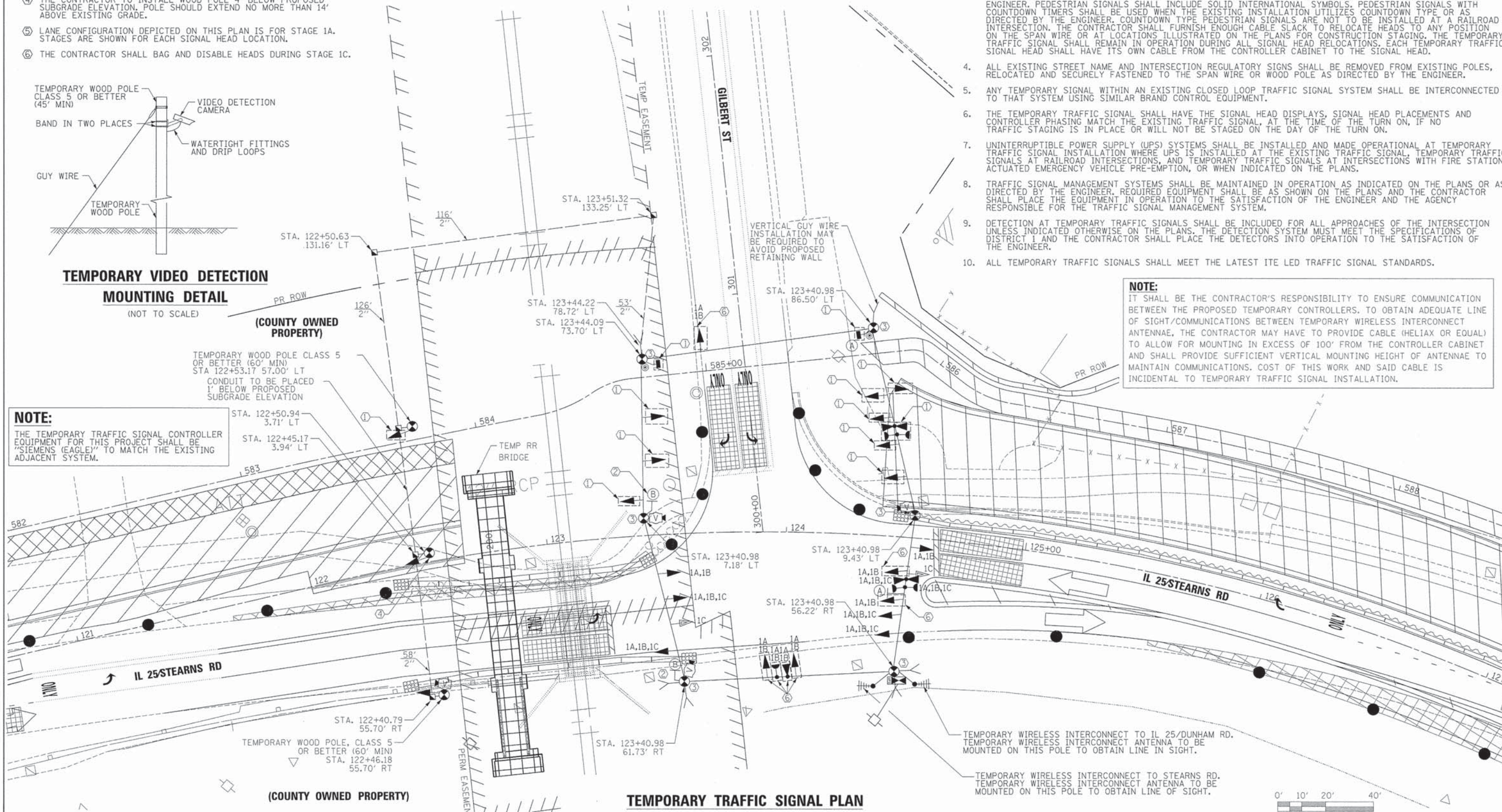


▶ DENOTES RELOCATED TEMPORARY SIGNAL HEAD FROM PRE-STAGE LOCATION

**NOTES FOR TEMPORARY TRAFFIC SIGNALS**

- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. 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.
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE 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.
- THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
- UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATION WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
- TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
- DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
- ALL TEMPORARY TRAFFIC SIGNALS SHALL MEET THE LATEST ITE LED TRAFFIC SIGNAL STANDARDS.

**NOTE:**  
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMMUNICATION BETWEEN THE PROPOSED TEMPORARY CONTROLLERS. TO OBTAIN ADEQUATE LINE OF SIGHT/COMMUNICATIONS BETWEEN TEMPORARY WIRELESS INTERCONNECT ANTENNAE, THE CONTRACTOR MAY HAVE TO PROVIDE CABLE (HELIAX OR EQUAL) TO ALLOW FOR MOUNTING IN EXCESS OF 100' FROM THE CONTROLLER CABINET AND SHALL PROVIDE SUFFICIENT VERTICAL MOUNTING HEIGHT OF ANTENNAE TO MAINTAIN COMMUNICATIONS. COST OF THIS WORK AND SAID CABLE IS INCIDENTAL TO TEMPORARY TRAFFIC SIGNAL INSTALLATION.



**TEMPORARY TRAFFIC SIGNAL PLAN**  
**MAINTENANCE OF TRAFFIC PRE-STAGE AND STAGES 1A, 1B, 1C**

FILE NAME =	DESIGNED - BC	REVISED -
...\\0163998-shr-IL25-Gil-temp-ts-installation	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



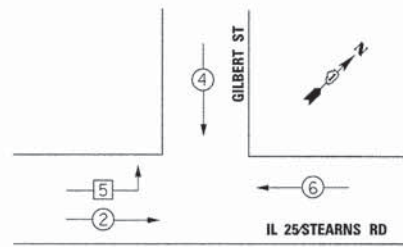
STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION

<b>TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN</b>	
<b>IL 25/STEARNS RD AT GILBERT ST</b>	
<b>PRE-STAGE, STAGE 1A THRU 1C</b>	
SCALE: 1"=20'	SHEET NO. 22 OF 49 SHEETS
STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	233
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	



**TEMPORARY CONTROLLER SEQUENCE**



**LEGEND**

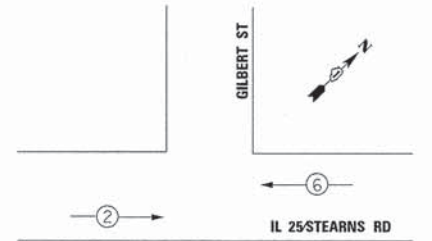
- ← ● → DUAL ENTRY PHASE
- NUMBER REFERS TO ASSOCIATED PHASE
- ← ◻ → PROTECTED LEFT TURN PHASE

**NOTE:**  
THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.

**LEGEND**

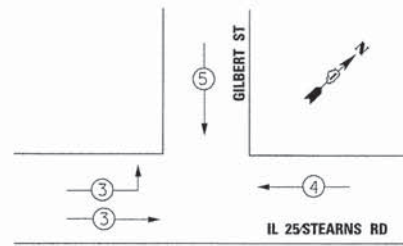
- ← ● → DUAL ENTRY PHASE
- NUMBER REFERS TO ASSOCIATED PHASE
- ← ◻ → PROTECTED LEFT TURN PHASE

**TEMPORARY CONTROLLER SEQUENCE**



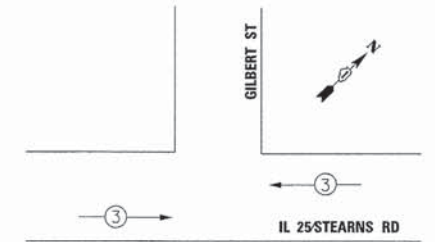
**TEMPORARY PHASE DESIGNATION DIAGRAM STAGES PRE-STAGE, 1A, & 1B**

**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



TEMPORARY EMERGENCY VEHICLE PREEMPTORS PRE-STAGE, STAGES 1A & 1B				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	
MOVEMENT	→	←	↓	

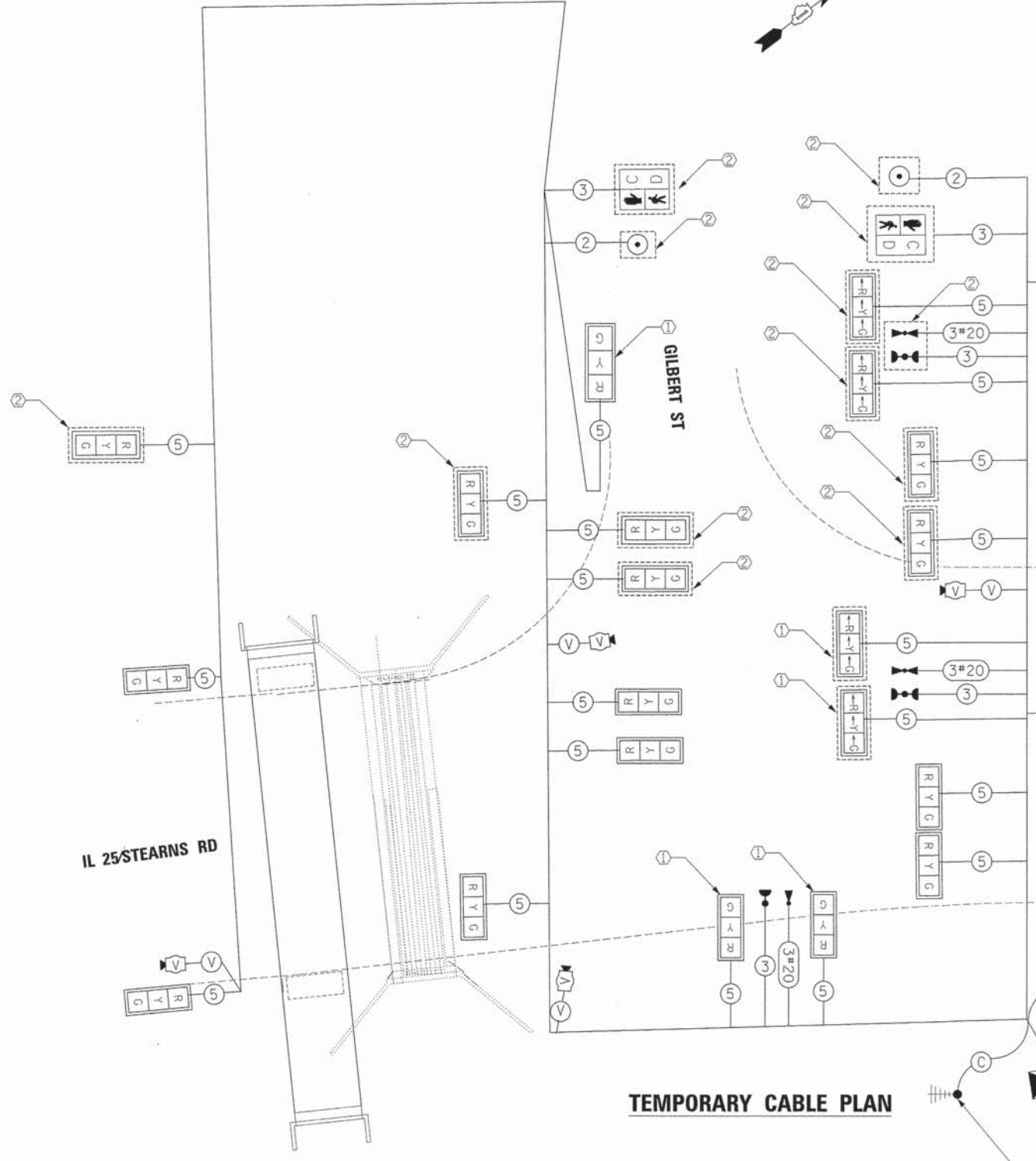
**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



TEMPORARY EMERGENCY VEHICLE PREEMPTORS STAGE 1C	
EMERGENCY VEHICLE PREEMPTOR	3
MOVEMENT	→

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	
SIGNAL (RED)	13	-	17	0.50	110.50
(YELLOW)	13	-	25	0.25	81.25
(GREEN)	13	-	15	0.25	48.75
ARROW	-	-	12	0.10	-
PED. SIGNAL	-	-	25	1.00	-
CONTROLLER	1	-	100	1.00	100.00
ILLUM. SIGN	-	-	25	0.05	-
VIDEO SYSTEM	1	150	-	1.00	150.00
FLASHER				0.50	-
ENERGY COSTS TO: TOTAL =					490.50

ILLINOIS DEPARTMENT OF TRANSPORTATION  
201 W. CENTER COURT  
SCHAMBURG, ILLINOIS 60196  
ENERGY SUPPLY CONTACT: MARTY RUBIN  
PHONE: 847-608-2400  
COMPANY: COMED



**TEMPORARY CABLE PLAN**

- CONSTRUCTION NOTES:**
- DURING STAGE 1C WHEN GILBERT ST IS CLOSED TO TRAFFIC, THE CONTRACTOR SHALL BAG AND DISABLE THE NORTHBOUND IL 25/STEARNS RD LEFT-TURN SIGNAL HEADS AND EASTBOUND GILBERT ST SIGNAL HEADS ONLY.
  - PEDESTRIAN SIGNAL HEADS, TRAFFIC SIGNAL HEADS, PEDESTRIAN PUSH BUTTONS, AND EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE BAGGED THROUGHOUT PRE-STAGE AND STAGE 1.
  - THE CONTRACTOR SHALL MAINTAIN THE EXISTING SIGNAL SYSTEM INTERCONNECT DURING TEMPORARY SIGNAL OPERATION.

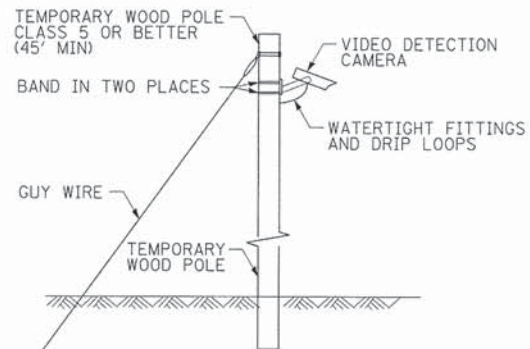


**CONSTRUCTION NOTES:**

- ① THE CONTRACTOR SHALL BAG AND DISABLE THE TRAFFIC SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, AND PEDESTRIAN PUSH BUTTONS DURING STAGE 2.
- ② THE CONTRACTOR SHALL USE EXISTING R10-11a SIGNS AND RELOCATE THEM AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- ③ LANE CONFIGURATION DEPICTED ON THIS PLAN IS FOR STAGE 2.
- ④ TEMPORARY WOODEN POLE WILL BE IN THE SAME LOCATION AS PREVIOUS STAGE.

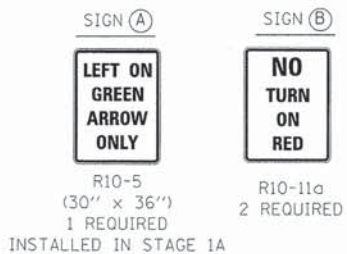
**NOTE:**

THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.



**TEMPORARY VIDEO DETECTION MOUNTING DETAIL**

(NOT TO SCALE)

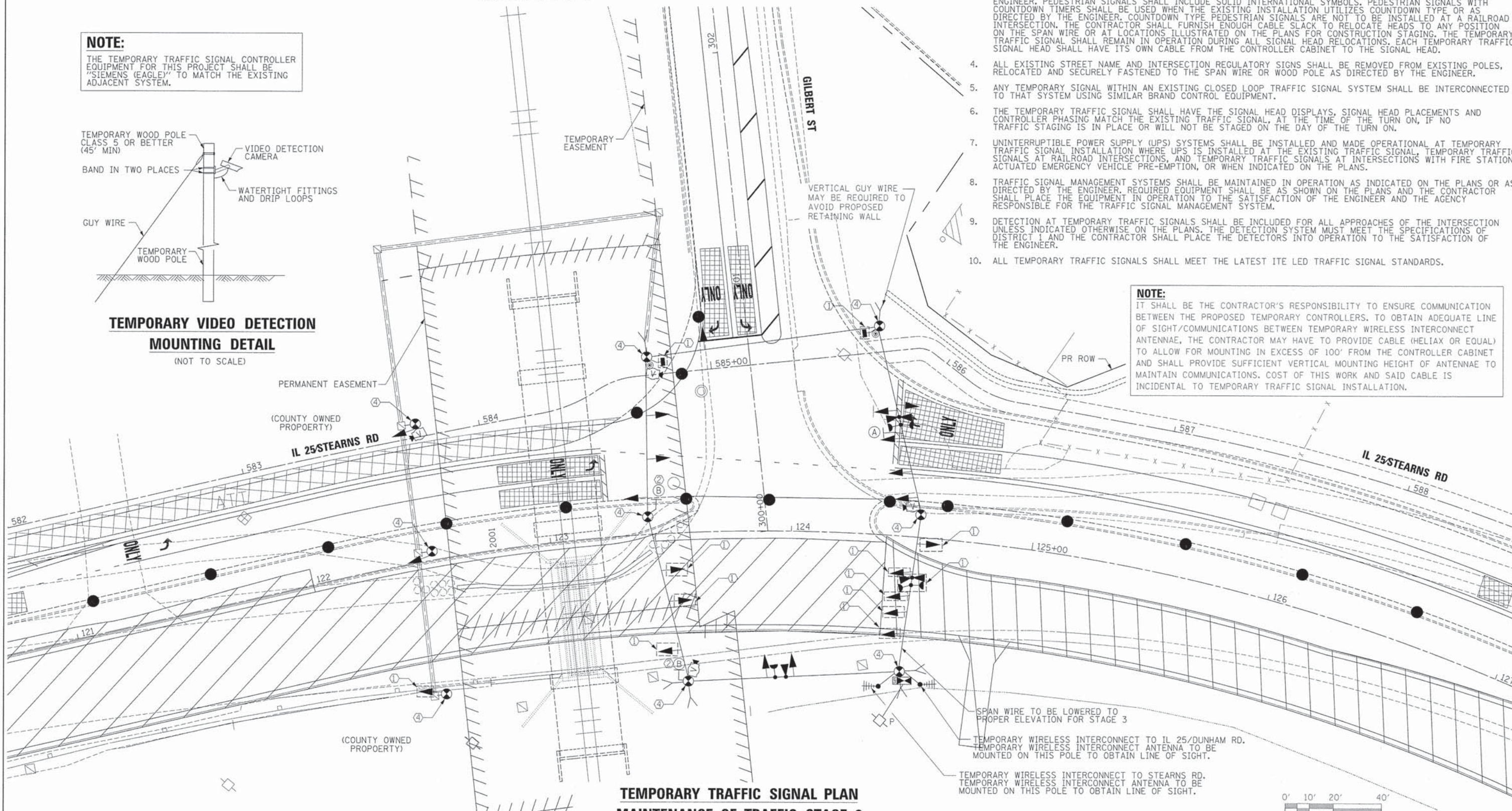


**NOTES FOR TEMPORARY TRAFFIC SIGNALS**

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATION WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. ALL TEMPORARY TRAFFIC SIGNALS SHALL MEET THE LATEST ITE LED TRAFFIC SIGNAL STANDARDS.

**NOTE:**

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMMUNICATION BETWEEN THE PROPOSED TEMPORARY CONTROLLERS. TO OBTAIN ADEQUATE LINE OF SIGHT/COMMUNICATIONS BETWEEN TEMPORARY WIRELESS INTERCONNECT ANTENNAE, THE CONTRACTOR MAY HAVE TO PROVIDE CABLE (HELIAX OR EQUAL) TO ALLOW FOR MOUNTING IN EXCESS OF 100' FROM THE CONTROLLER CABINET AND SHALL PROVIDE SUFFICIENT VERTICAL MOUNTING HEIGHT OF ANTENNAE TO MAINTAIN COMMUNICATIONS. COST OF THIS WORK AND SAID CABLE IS INCIDENTAL TO TEMPORARY TRAFFIC SIGNAL INSTALLATION.



**TEMPORARY TRAFFIC SIGNAL PLAN MAINTENANCE OF TRAFFIC STAGE 2**



FILE NAME =	DESIGNED - BC	REVISED -
... \D163598-sht-IL25-Gil-temp-ts-installation	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PL0T DATE = 1/18/2013	DATE = 01/18/2013	REVISED -



STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION

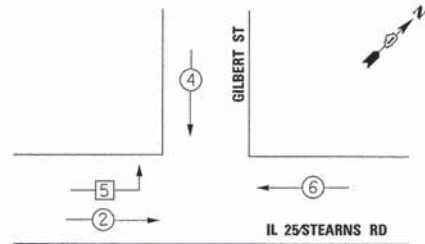
TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN  
IL 25 STEARNS RD AT GILBERT ST  
STAGE 2

SCALE: 1"=20' SHEET NO. 24 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	235
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				



**TEMPORARY CONTROLLER SEQUENCE**



**LEGEND**

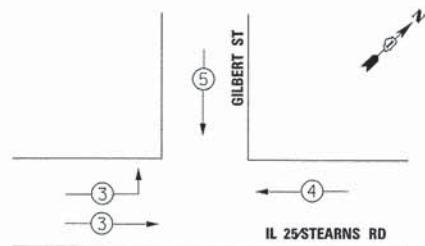
- ◉ DUAL ENTRY PHASE
- ◻ PROTECTED LEFT TURN PHASE
- - NUMBER REFERS TO ASSOCIATED PHASE

**NOTE:**

THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.

**TEMPORARY PHASE DESIGNATION DIAGRAM STAGE 2**

**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



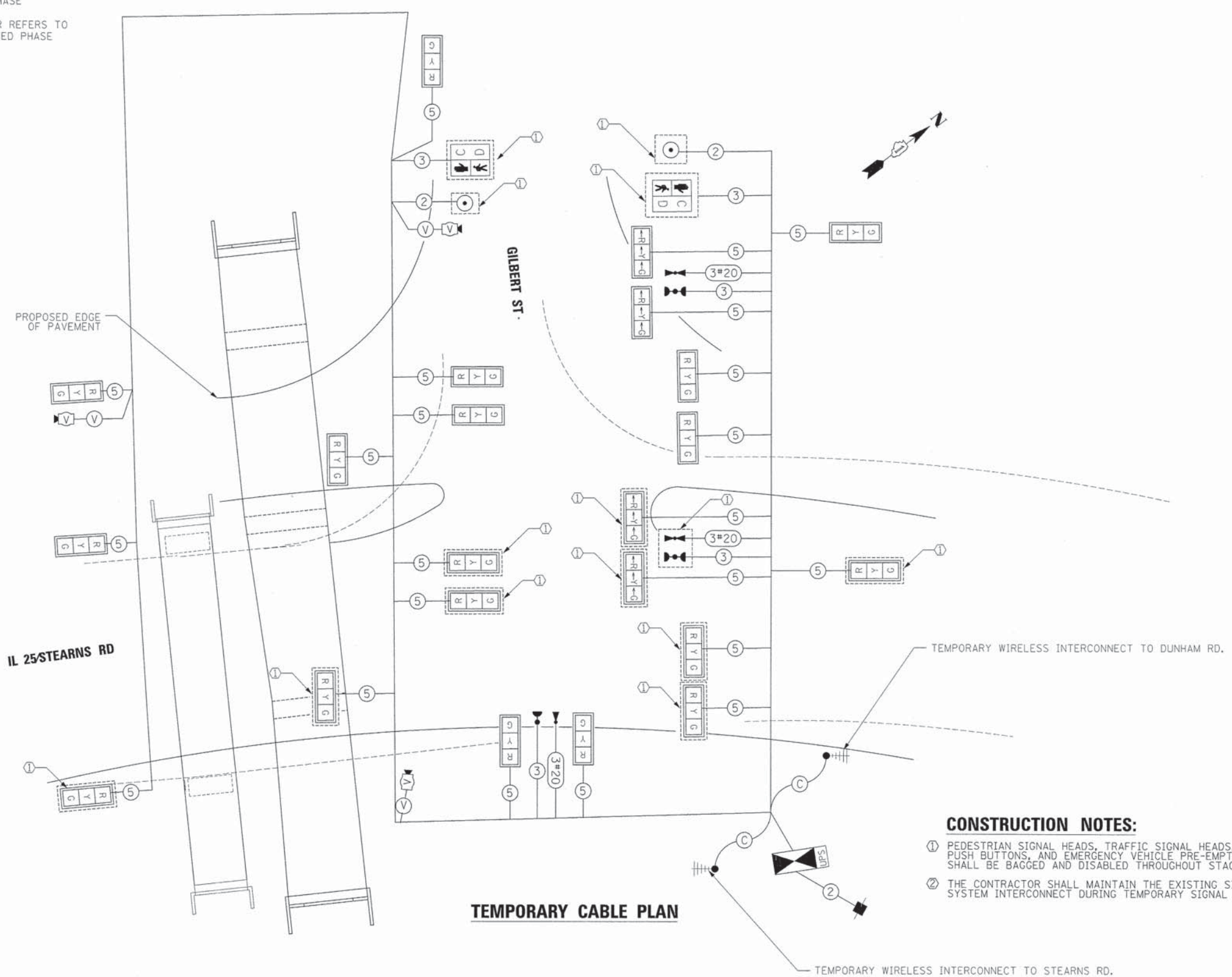
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	↗	←	↓

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	
SIGNAL (RED)	13	-	17	0.50	110.50
(YELLOW)	13	-	25	0.25	81.25
(GREEN)	13	-	15	0.25	48.75
ARROW	-	-	12	0.10	-
PED. SIGNAL	-	-	25	1.00	-
CONTROLLER	1	-	100	1.00	100.00
ILLUM. SIGN	-	-	25	0.05	-
VIDEO SYSTEM	1	150	-	1.00	150.00
FLASHER	-	-	-	0.50	-
ENERGY COSTS TO:					TOTAL = 490.50

ILLINOIS DEPARTMENT OF TRANSPORTATION

201 W. CENTER COURT  
SCHAMBURG, ILLINOIS 60196

ENERGY SUPPLY CONTACT: MARTY RUBIN  
PHONE: 847-608-2400  
COMPANY: COMED



**CONSTRUCTION NOTES:**

- ① PEDESTRIAN SIGNAL HEADS, TRAFFIC SIGNAL HEADS, PEDESTRIAN PUSH BUTTONS, AND EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT SHALL BE BAGGED AND DISABLED THROUGHOUT STAGE 2.
- ② THE CONTRACTOR SHALL MAINTAIN THE EXISTING SIGNAL SYSTEM INTERCONNECT DURING TEMPORARY SIGNAL OPERATION.

**TEMPORARY CABLE PLAN**

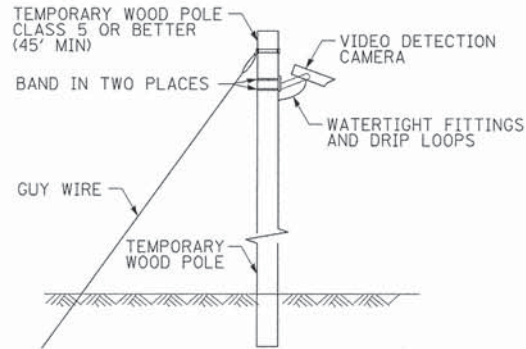


**CONSTRUCTION NOTES:**

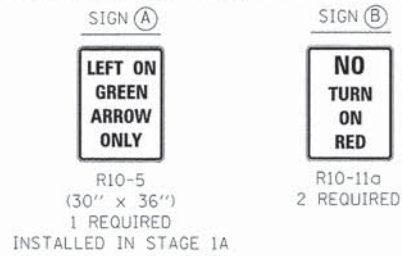
- ① THE CONTRACTOR SHALL BAG AND DISABLE THE TRAFFIC SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, PEDESTRIAN PUSH BUTTONS, AND EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT DURING STAGE 3.
- ② THE CONTRACTOR SHALL USE EXISTING R10-11a SIGNS AND RELOCATE THEM AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- ③ LANE CONFIGURATION DEPICTED ON THIS PLAN IS FOR STAGE 3.
- ④ THE CONTRACTOR SHALL BAG AND DISABLE ALL PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSH BUTTONS DURING STAGE 3. WHEN ALL CONSTRUCTION IS COMPLETED, INCLUDING THE CONSTRUCTION OF THE MULTI-USE PATH, THE CONTRACTOR SHALL ACTIVATE THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSH BUTTONS REGARDLESS IF THE PROPOSED SIGNAL HEADS ARE NOT IN SERVICE AT THE TIME.
- ⑤ TEMPORARY WOODEN POLE WILL BE IN THE SAME LOCATION AS PREVIOUS STAGE.

**NOTE:**

THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.



**TEMPORARY VIDEO DETECTION MOUNTING DETAIL**  
(NOT TO SCALE)

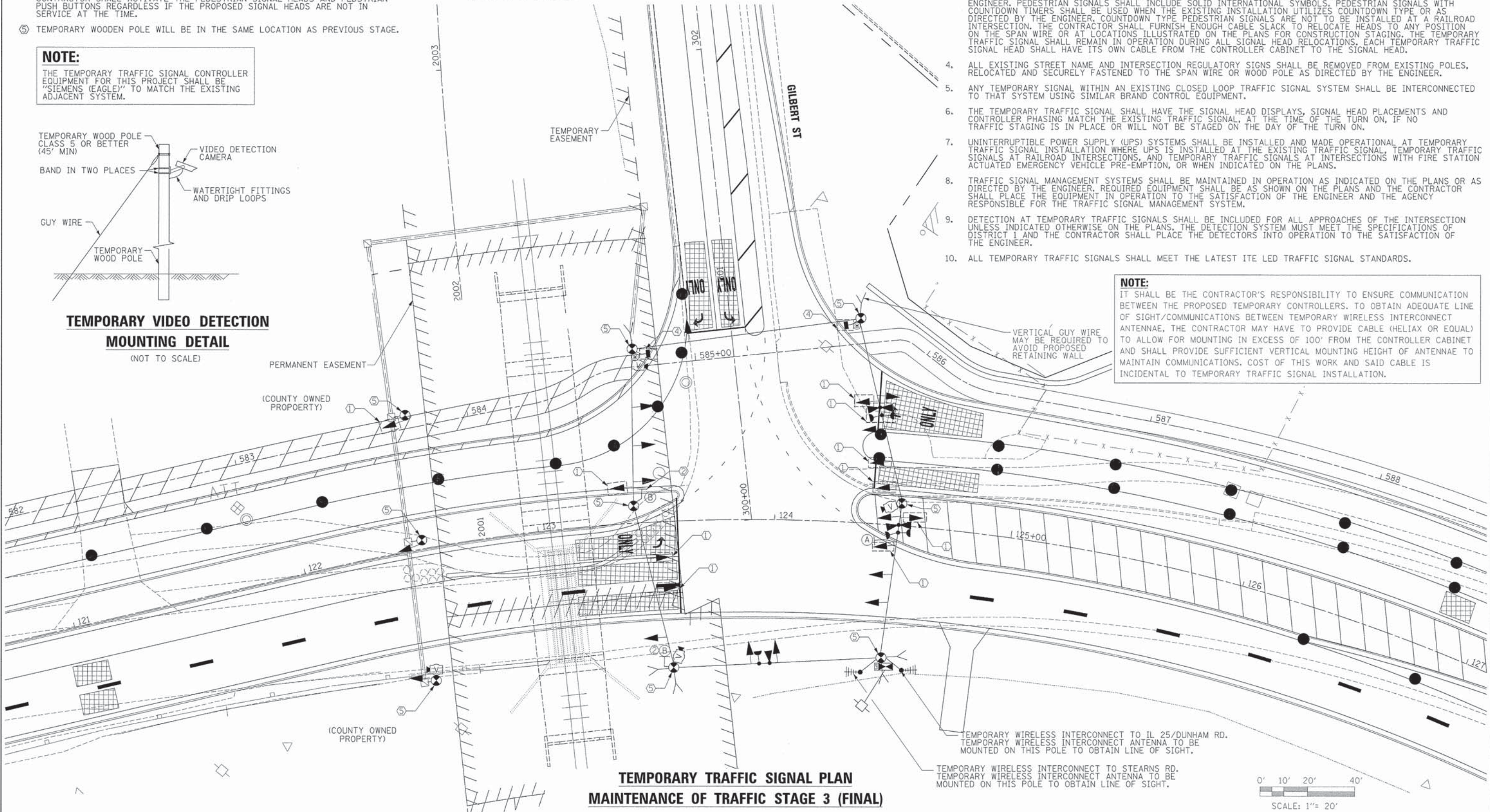


**NOTES FOR TEMPORARY TRAFFIC SIGNALS**

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATION WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. ALL TEMPORARY TRAFFIC SIGNALS SHALL MEET THE LATEST ITE LED TRAFFIC SIGNAL STANDARDS.

**NOTE:**

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMMUNICATION BETWEEN THE PROPOSED TEMPORARY CONTROLLERS. TO OBTAIN ADEQUATE LINE OF SIGHT/COMMUNICATIONS BETWEEN TEMPORARY WIRELESS INTERCONNECT ANTENNAE, THE CONTRACTOR MAY HAVE TO PROVIDE CABLE (HELIAX OR EQUAL) TO ALLOW FOR MOUNTING IN EXCESS OF 100' FROM THE CONTROLLER CABINET AND SHALL PROVIDE SUFFICIENT VERTICAL MOUNTING HEIGHT OF ANTENNAE TO MAINTAIN COMMUNICATIONS. COST OF THIS WORK AND SAID CABLE IS INCIDENTAL TO TEMPORARY TRAFFIC SIGNAL INSTALLATION.



**TEMPORARY TRAFFIC SIGNAL PLAN MAINTENANCE OF TRAFFIC STAGE 3 (FINAL)**

TEMPORARY WIRELESS INTERCONNECT TO IL 25/DUNHAM RD. TEMPORARY WIRELESS INTERCONNECT ANTENNA TO BE MOUNTED ON THIS POLE TO OBTAIN LINE OF SIGHT.

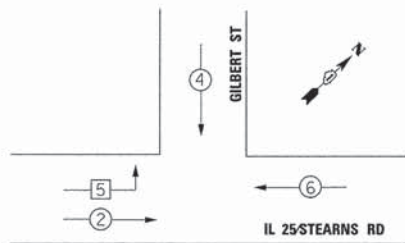
TEMPORARY WIRELESS INTERCONNECT TO STEARNS RD. TEMPORARY WIRELESS INTERCONNECT ANTENNA TO BE MOUNTED ON THIS POLE TO OBTAIN LINE OF SIGHT.



FILE NAME =	DESIGNED - BC	REVISED -		STATE OF ILLINOIS DIVISION OF TRANSPORTATION	TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN IL 25/STEARNS RD AT GILBERT ST STAGE 3 & PRE-FINAL STAGE	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
... \0163598-sht-IL25-Gil-temp-ts-installation	DRAWN - TMB	REVISED -				361	06-00214-18-RP	KANE	451	237
USER NAME = tblank	CHECKED - MPM	REVISED -				CONTRACT NO. 63598				
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -				ILLINOIS FED. AID PROJECT				
SCALE: 1"=20'						SHEET NO. 26 OF 49 SHEETS		STA. TO STA.		

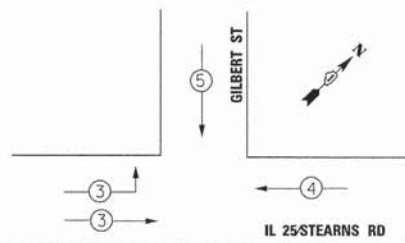


**TEMPORARY CONTROLLER SEQUENCE**



**TEMPORARY PHASE DESIGNATION DIAGRAM STAGE 3**

**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



TEMPORARY EMERGENCY VEHICLE PREEMPTORS STAGE 3			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

**LEGEND**

- DUAL ENTRY PHASE
- NUMBER REFERS TO ASSOCIATED PHASE
- PROTECTED LEFT TURN PHASE

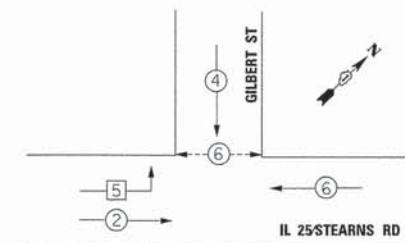
**NOTE:**

THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.

**LEGEND**

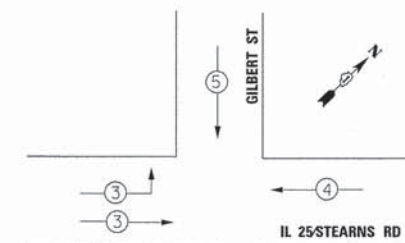
- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE
- PROTECTED LEFT TURN PHASE

**TEMPORARY CONTROLLER SEQUENCE**

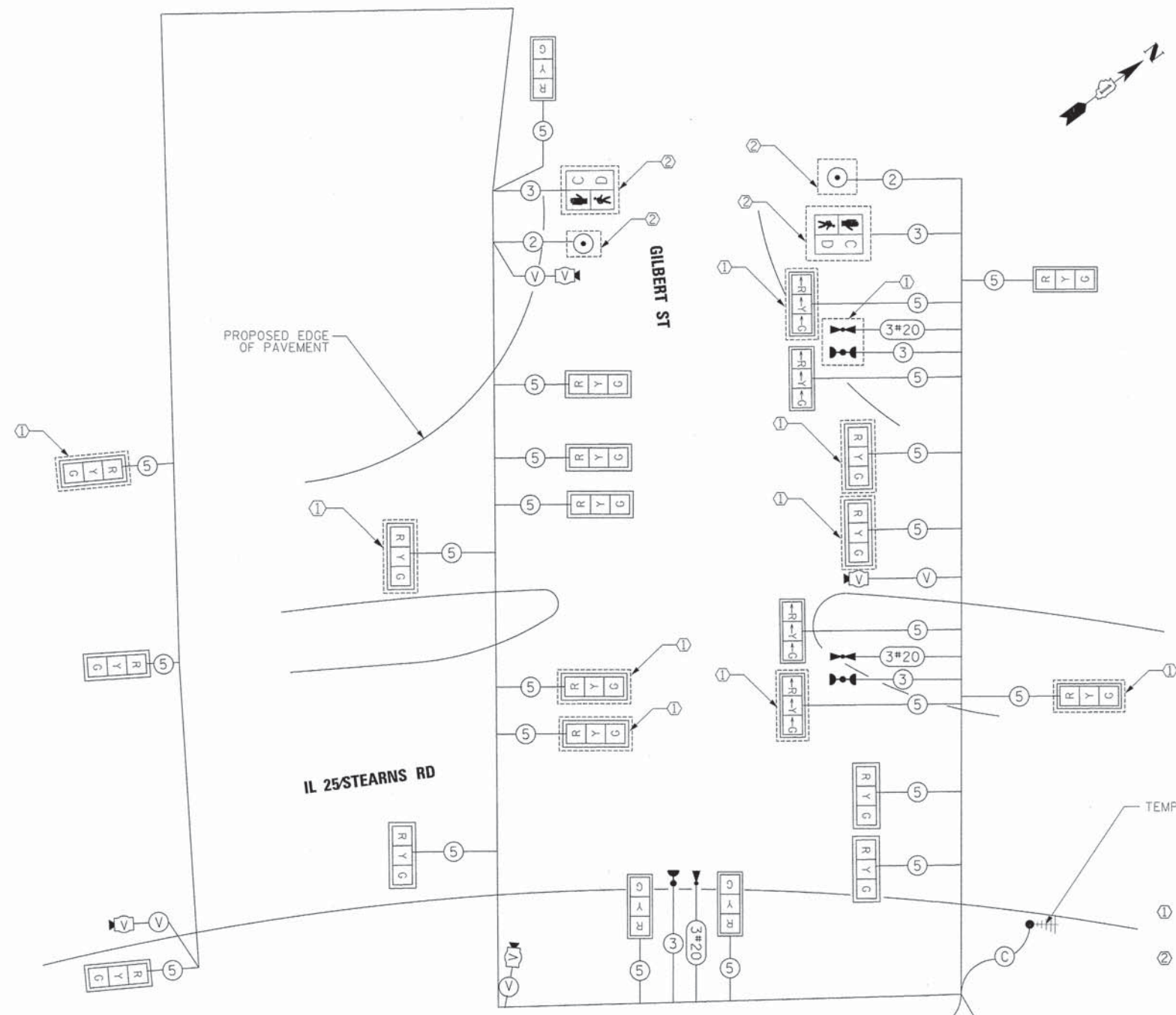


**TEMPORARY PHASE DESIGNATION DIAGRAM PRE-FINAL STAGE**

**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



TEMPORARY EMERGENCY VEHICLE PREEMPTORS PREFINAL STAGE			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			



**TEMPORARY CABLE PLAN**

**CONSTRUCTION NOTES:**

- ① THE TRAFFIC SIGNAL HEADS AND EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT SHALL BE BAGGED AND DISABLED THROUGHOUT STAGE 3 AND PREFINAL.
- ② THE CONTRACTOR SHALL BAG AND DISABLE ALL PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSH BUTTONS DURING STAGE 3. WHEN ALL CONSTRUCTION IS COMPLETED, INCLUDING THE CONSTRUCTION OF THE MULTI-USE PATH, THE CONTRACTOR SHALL ACTIVATE THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSH BUTTONS REGARDLESS IF THE PROPOSED SIGNAL HEADS ARE NOT IN SERVICE AT THE TIME.

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	14	-	17	0.50	119.00
(YELLOW)	14	-	25	0.25	87.50
(GREEN)	14	-	15	0.25	52.50
ARROW	-	-	12	0.10	-
PED. SIGNAL	2	-	25	1.00	50.00
CONTROLLER	1	-	100	1.00	100.00
ILLUM. SIGN	-	-	25	0.05	-
VIDEO SYSTEM	1	150	-	1.00	150.00
FLASHER				0.50	-
ENERGY COSTS TO:				TOTAL =	559.00

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 201 W. CENTER COURT  
 SCHAMBURG, ILLINOIS 60196  
 ENERGY SUPPLY CONTACT: MARTY RUBIN  
 PHONE: 847-608-2400  
 COMPANY: COMED

FILE NAME =	DESIGNED - BC	REVISED -
...ND163598-sht-IL25-Gil-temp-ts-cable-stage-3	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION

TEMP CABLE PLAN, TEMP PHASE DESIGNATION DIAGRAM, & TEMP EMERGENCY VEHICLE PREEMPTION SEQUENCE, IL 25 STEARNS RD AT GILBERT ST, STAGE 3 AND PREFINAL STAGE  
 SCALE: 1"=20' SHEET NO. 27 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	238
				CONTRACT NO. 63598
[ILLINOIS] FED. AID PROJECT				



**NOTE:**

EXISTING TRAFFIC SIGNALS AT THE INTERSECTION TO REMAIN IN OPERATION UNTIL STAGE 1A OR AS DIRECTED BY THE ENGINEER. TEMPORARY TRAFFIC SIGNALS SHALL BE IN PLACE AND OPERATIONAL BEFORE REMOVAL OF EXISTING TRAFFIC SIGNALS.



**CONSTRUCTION NOTES:**

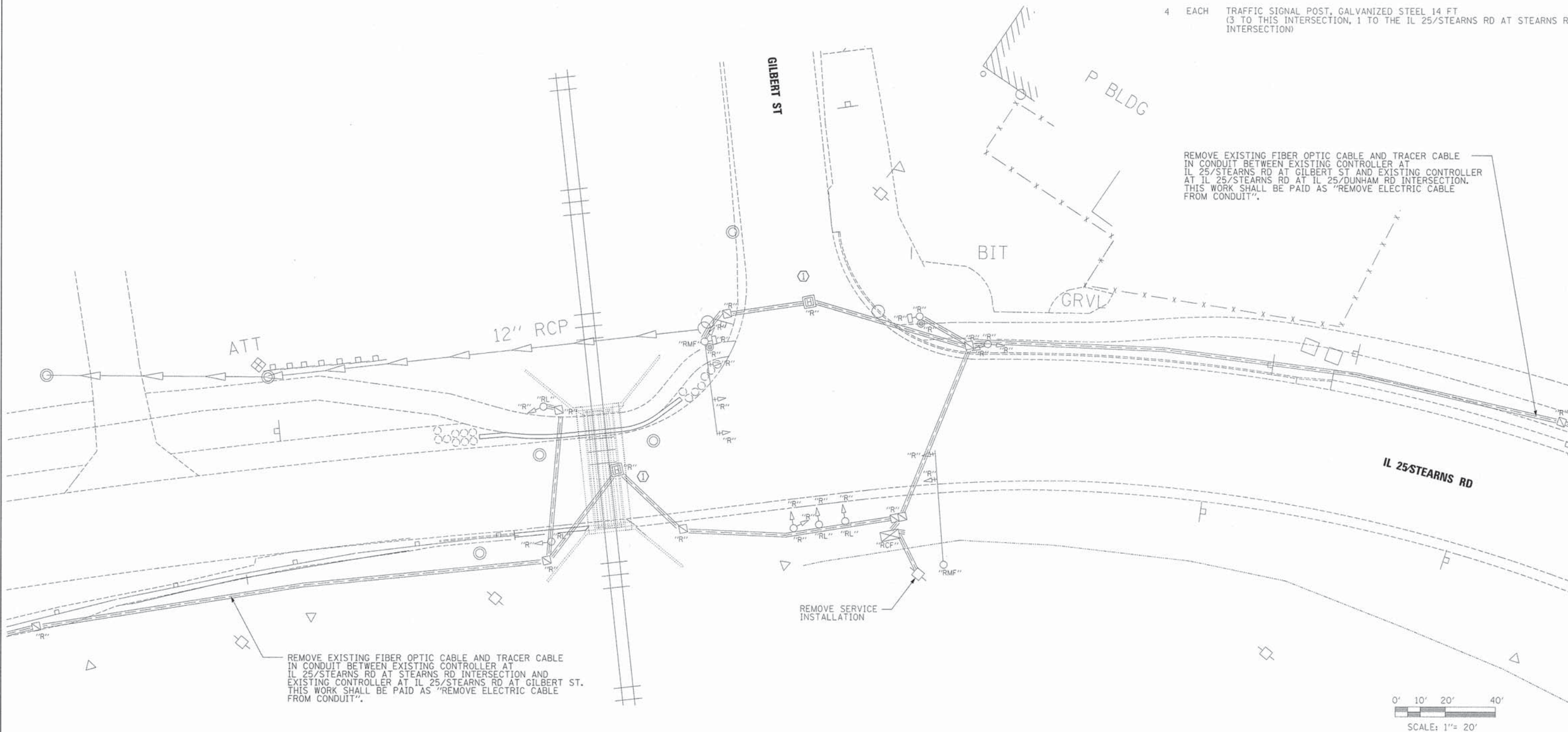
- ① ABANDON EXISTING LOOP DETECTORS.
- ② CONTRACTOR TO ABANDON ALL EXISTING CONDUIT AND CABLE.

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

- 1 EACH CONTROLLER AND CABINET, COMPLETE
- 8 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 2 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 2 EACH SIGNAL HEAD, 2-FACE, 1-5 SECTION, 1-3 SECTION
- 2 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 2 EACH PEDESTRIAN PUSHBUTTON
- 2 EACH MAST ARM ASSEMBLYS
- 3 EACH SIGNAL POST
- 1 EACH SERVICE INSTALLATION

THE FOLLOWING ITEMS SHALL BE RELOCATED ACCORDING TO THE TRAFFIC SIGNAL INSTALLATION PLAN TO THE INTERSECTION INDICATED IN PARENTHESES BELOW. THE REMAINING 3 ITEMS ARE TO BE RELOCATED AT THIS INTERSECTION AS INDICATED IN THE TRAFFIC SIGNAL INSTALLATION PLAN. THE CONTRACTOR SHALL USE CARE IN REMOVING THESE ITEMS. ANY DAMAGES TO THESE REMOVED ITEMS WILL RESULT IN THE CONTRACTOR TO FULLY REPAIR OR TO PROVIDE THAT THE NEW ITEM AT HIS EXPENSE, AS DIRECTED BY THE ENGINEER.

- 4 EACH TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT (3 TO THIS INTERSECTION, 1 TO THE IL 25/STEARNS RD AT STEARNS RD INTERSECTION)



REMOVE EXISTING FIBER OPTIC CABLE AND TRACER CABLE IN CONDUIT BETWEEN EXISTING CONTROLLER AT IL 25/STEARNS RD AT GILBERT ST AND EXISTING CONTROLLER AT IL 25/STEARNS RD AT IL 25/DUNHAM RD INTERSECTION. THIS WORK SHALL BE PAID AS "REMOVE ELECTRIC CABLE FROM CONDUIT".

REMOVE EXISTING FIBER OPTIC CABLE AND TRACER CABLE IN CONDUIT BETWEEN EXISTING CONTROLLER AT IL 25/STEARNS RD AT STEARNS RD INTERSECTION AND EXISTING CONTROLLER AT IL 25/STEARNS RD AT GILBERT ST. THIS WORK SHALL BE PAID AS "REMOVE ELECTRIC CABLE FROM CONDUIT".

FILE NAME =	DESIGNED - BC	REVISED -
...\\D163598-sht-il25-gil-ts-removal.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



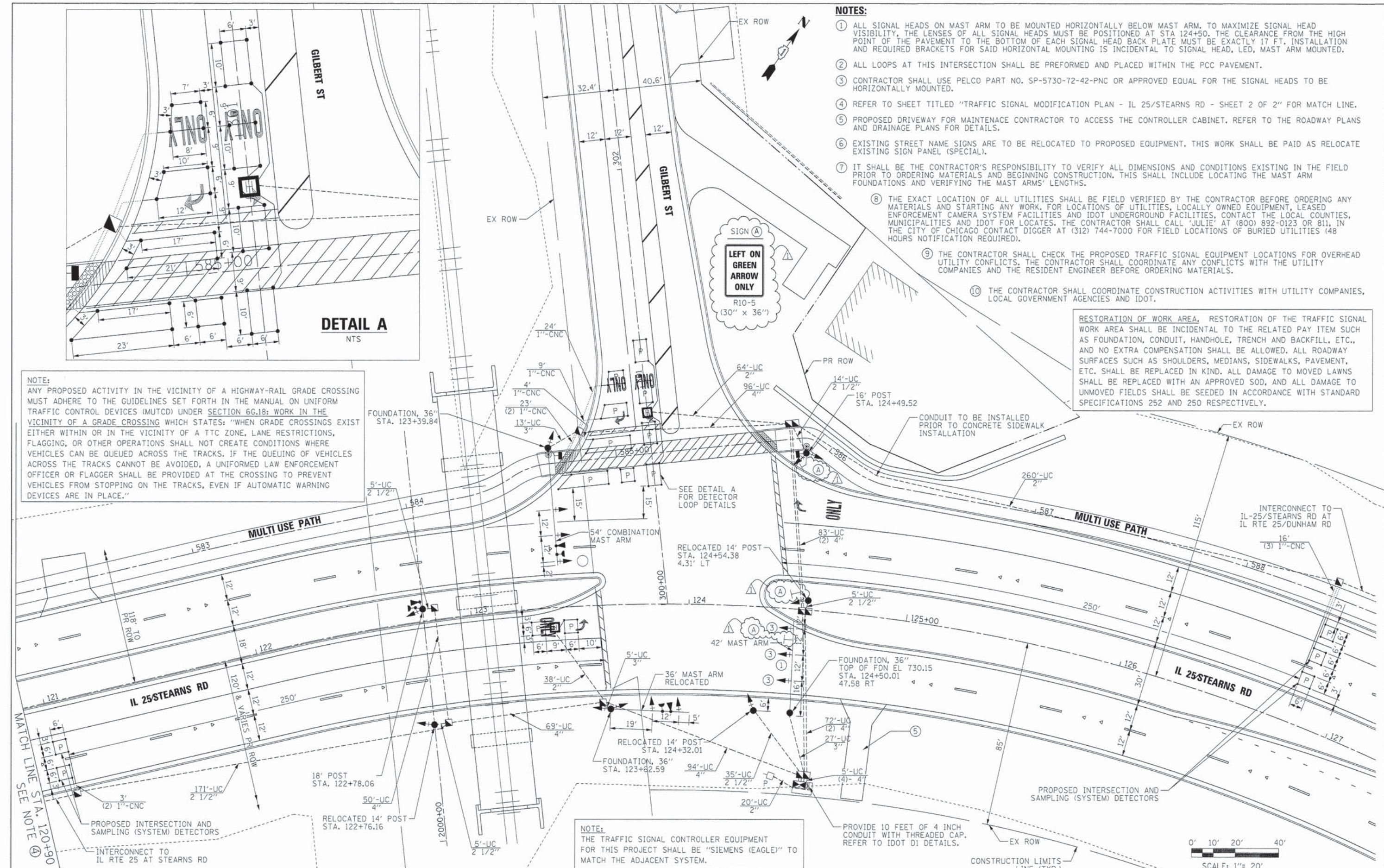
**STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION**

**TRAFFIC SIGNAL REMOVAL PLAN  
IL 25/STEARNS RD AT GILBERT ST**

SCALE: 1"=20' SHEET NO. 28 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	239
				CONTRACT NO. 63598
ILLINOIS FED. AID PROJECT				





**NOTES:**

- ① ALL SIGNAL HEADS ON MAST ARM TO BE MOUNTED HORIZONTALLY BELOW MAST ARM, TO MAXIMIZE SIGNAL HEAD VISIBILITY, THE LENSES OF ALL SIGNAL HEADS MUST BE POSITIONED AT STA 124+50. THE CLEARANCE FROM THE HIGH POINT OF THE PAVEMENT TO THE BOTTOM OF EACH SIGNAL HEAD BACK PLATE MUST BE EXACTLY 17 FT. INSTALLATION AND REQUIRED BRACKETS FOR SAID HORIZONTAL MOUNTING IS INCIDENTAL TO SIGNAL HEAD, LED, MAST ARM MOUNTED.
- ② ALL LOOPS AT THIS INTERSECTION SHALL BE PREFORMED AND PLACED WITHIN THE PCC PAVEMENT.
- ③ CONTRACTOR SHALL USE PELCO PART NO. SP-5730-72-42-PNC OR APPROVED EQUAL FOR THE SIGNAL HEADS TO BE HORIZONTALLY MOUNTED.
- ④ REFER TO SHEET TITLED "TRAFFIC SIGNAL MODIFICATION PLAN - IL 25/STEARNS RD - SHEET 2 OF 2" FOR MATCH LINE.
- ⑤ PROPOSED DRIVEWAY FOR MAINTENACE CONTRACTOR TO ACCESS THE CONTROLLER CABINET. REFER TO THE ROADWAY PLANS AND DRAINAGE PLANS FOR DETAILS.
- ⑥ EXISTING STREET NAME SIGNS ARE TO BE RELOCATED TO PROPOSED EQUIPMENT. THIS WORK SHALL BE PAID AS RELOCATE EXISTING SIGN PANEL (SPECIAL).
- ⑦ IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. THIS SHALL INCLUDE LOCATING THE MAST ARM FOUNDATIONS AND VERIFYING THE MAST ARMS' LENGTHS.
- ⑧ THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ORDERING ANY MATERIALS AND STARTING ANY WORK. FOR LOCATIONS OF UTILITIES, LOCALLY OWNED EQUIPMENT, LEASED ENFORCEMENT CAMERA SYSTEM FACILITIES AND IDOT UNDERGROUND FACILITIES, CONTACT THE LOCAL COUNTIES, MUNICIPALITIES AND IDOT FOR LOCATES. THE CONTRACTOR SHALL CALL 'JULIE' AT (800) 892-0123 OR 811, IN THE CITY OF CHICAGO CONTACT DIGGER AT (312) 744-7000 FOR FIELD LOCATIONS OF BURIED UTILITIES (48 HOURS NOTIFICATION REQUIRED).
- ⑨ THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL COORDINATE ANY CONFLICTS WITH THE UTILITY COMPANIES AND THE RESIDENT ENGINEER BEFORE ORDERING MATERIALS.
- ⑩ THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, LOCAL GOVERNMENT AGENCIES AND IDOT.

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA 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 MOVED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOVED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

**NOTE:**  
 ANY PROPOSED ACTIVITY IN THE VICINITY OF A HIGHWAY-RAIL GRADE CROSSING MUST ADHERE TO THE GUIDELINES SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) UNDER SECTION 6G.18: WORK IN THE VICINITY OF A GRADE CROSSING WHICH STATES: "WHEN GRADE CROSSINGS EXIST EITHER WITHIN OR IN THE VICINITY OF A TTC ZONE, LANE RESTRICTIONS, FLAGGING, OR OTHER OPERATIONS SHALL NOT CREATE CONDITIONS WHERE VEHICLES CAN BE QUEUED ACROSS THE TRACKS. IF THE QUEUING OF VEHICLES ACROSS THE TRACKS CANNOT BE AVOIDED, A UNIFORMED LAW ENFORCEMENT OFFICER OR FLAGGER SHALL BE PROVIDED AT THE CROSSING TO PREVENT VEHICLES FROM STOPPING ON THE TRACKS, EVEN IF AUTOMATIC WARNING DEVICES ARE IN PLACE."

**NOTE:**  
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE ADJACENT SYSTEM.

FILE NAME =	DESIGNED - BC	REVISED - ADDENDUM	04/15/2013
...D163598-shr-IL25-Gil-to-installation.dgn	DRAWN - TMB	REVISED -	
USER NAME = toddjank	CHECKED - MPM	REVISED -	
PLOT DATE = 4/15/2013	DATE - 01/18/2013	REVISED -	



**STATE OF ILLINOIS  
 DIVISION OF TRANSPORTATION**

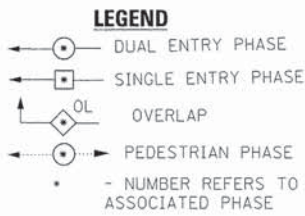
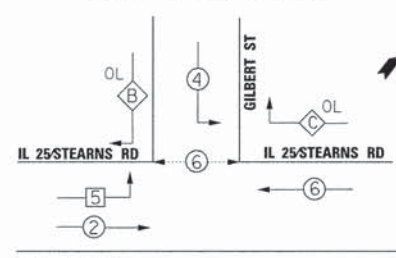
**TRAFFIC SIGNAL INSTALLATION PLAN  
 IL 25/STEARNS RD AT GILBERT ST**

SCALE: 1"=20' SHEET NO. 29 OF 49 SHEETS STA. TO STA.

F.A.P. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	240
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				



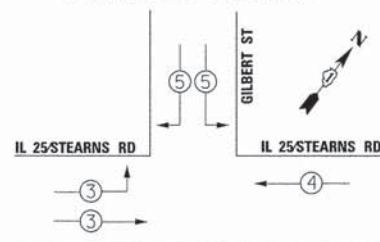
**CONTROLLER SEQUENCE**



**PHASE DESIGNATION DIAGRAM**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	4	5
C	6	4

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**



PROPOSED EMERGENCY VEHICLE PREEMPTORS

EMERGENCY VEHICLE PREEMPTORS	3	4	5
MOVEMENT	→	←	↕

SEE NOTE 2

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

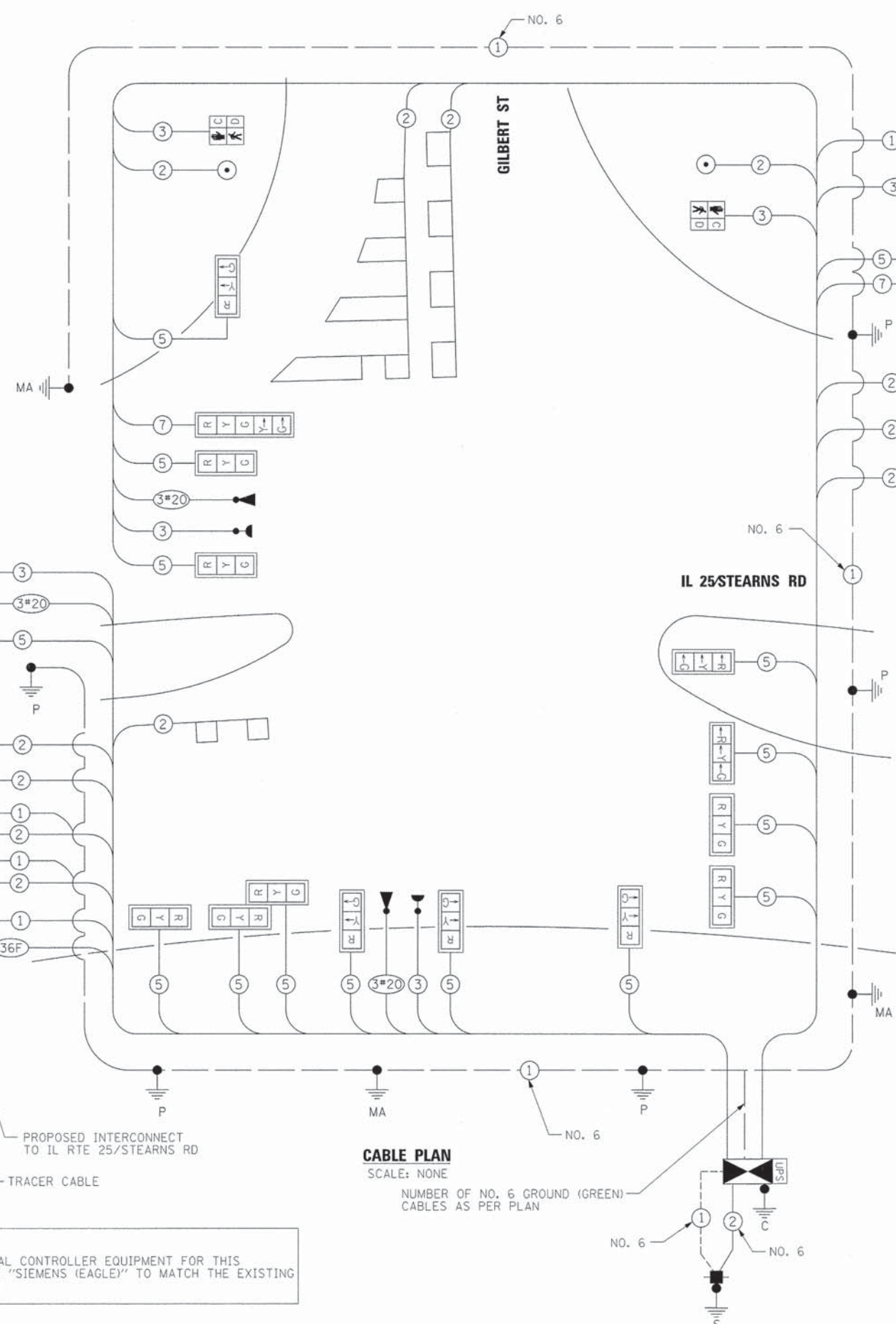
TYPE	NO. LAMPS	WATTAGE		%OPERATION	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	17	-	17	0.50	144.5
(YELLOW)	17	-	25	0.25	106.25
(GREEN)	17	-	15	0.25	63.75
ARROW	2	-	12	0.10	2.4
PED. SIGNAL	2	-	25	1.00	50.0
CONTROLLER	1	-	100	1.00	100.0
FLASHER	2	-	25	0.50	12.5

ENERGY COSTS TO: TOTAL = 479.4

**ILLINOIS DEPARTMENT OF TRANSPORTATION**

201 W. CENTER COURT  
 SCHAUMBURG, ILLINOIS 60196  
 ENERGY SUPPLY CONTACT: MARTY RUBIN  
 PHONE: 847-608-2400  
 COMPANY: COMED

FILE NAME =	DESIGNED - BC	REVISED -
...N0163998-sht-IL25-Gil-ts-cable.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



**NOTES:**

- YELLOW FLASHING BEACONS FACING NORTHBOUND IL 25 AT THE CCPRR SHALL BE ACTIVATED DURING PHASE 2 YELLOW AND RED INTERVALS AND WHEN THE TRAFFIC SIGNALS ARE IN ALL WAY RED FLASH. THE YELLOW BEACONS SHALL NOT FLASH DURING PHASE 2 GREEN INTERVAL.
- YELLOW FLASHING BEACONS FACING NORTHBOUND IL 25 AT THE CCPRR SHALL BE ACTIVATED DURING EMERGENCY VEHICLE PREEMPTION PHASES 4 & 5 GREEN, YELLOW AND ALL RED INTERVALS. THESE YELLOW FLASHING BEACONS SHALL NOT FLASH DURING EMERGENCY VEHICLE PREEMPTION 3 GREEN INTERVAL.

**SCHEDULE OF QUANTITIES**

ITEM	UNIT	TOTAL
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	382
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	610
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	45
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2" DIA.	FOOT	0
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	649
HANDHOLE	EACH	8
HEAVY-DUTY HANDHOLE	EACH	2
DOUBLE HANDHOLE	EACH	3
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1,968
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,417
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2,962
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	607
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2,890
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	37
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	2,125
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 42 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 54 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	20
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	39
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	7
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	5
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	17
INDUCTIVE LOOP DETECTOR	EACH	8
PREFORMED DETECTOR LOOP	FOOT	683
LIGHT DETECTOR	EACH	3
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	2
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
RELOCATE EXISTING TRAFFIC SIGNAL POST	EACH	4
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	10
REMOVE EXISTING CONCRETE FOUNDATION	EACH	10
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	564
RELOCATE EXISTING SIGN PANEL (SPECIAL)	EACH	3
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
POST MOUNTED FLASHING BEACON INSTALLATION (SPECIAL)	EACH	2
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1

**NOTE:**  
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.



**STATE OF ILLINOIS  
 DIVISION OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE  
 IL 25/STEARNS RD AT GILBERT ST**

SCALE: 1"=20' SHEET NO. 30 OF 49 SHEETS STA. TO STA.

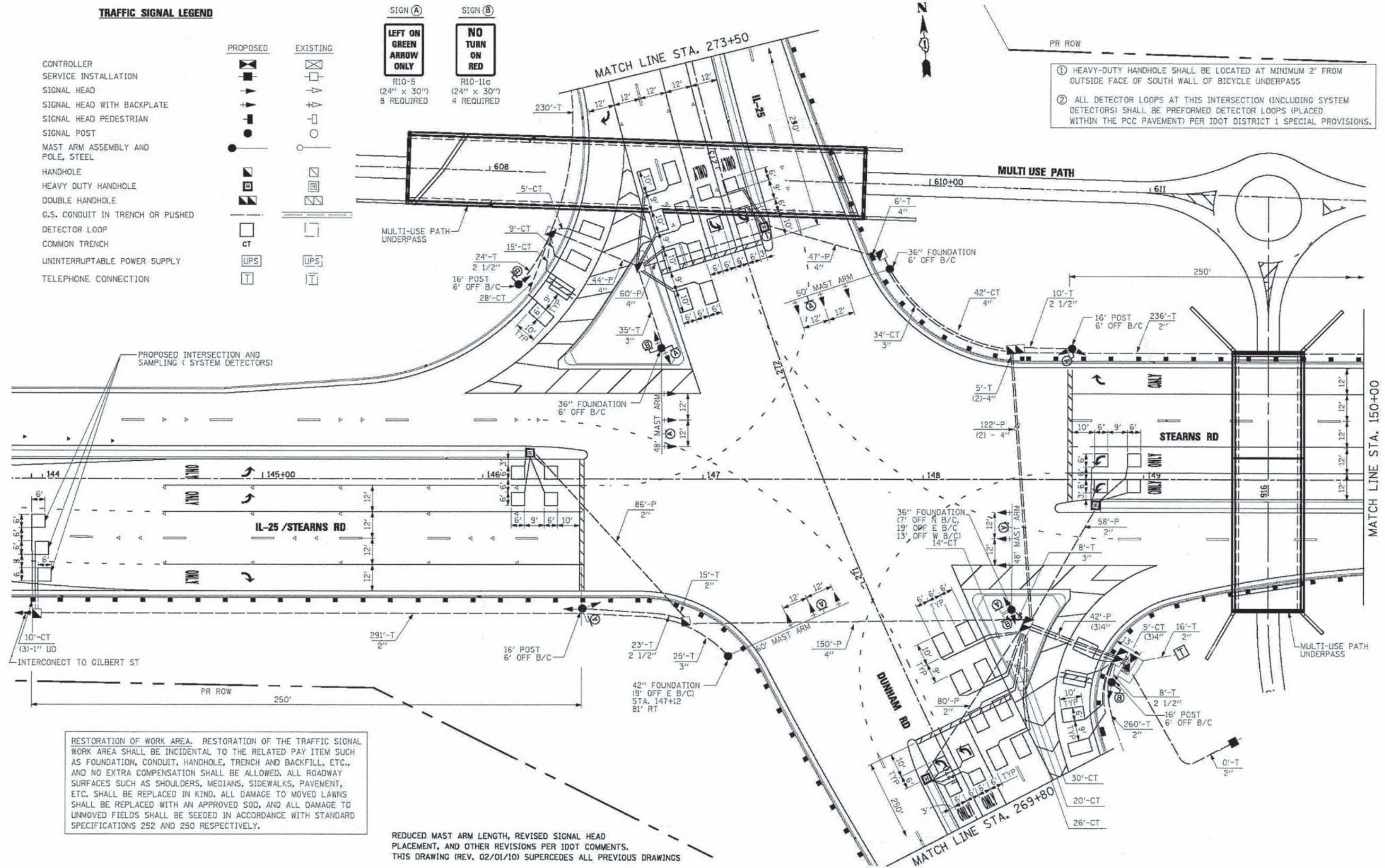
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	241
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				



**TRAFFIC SIGNAL LEGEND**

	PROPOSED	EXISTING
CONTROLLER	[Symbol]	[Symbol]
SERVICE INSTALLATION	[Symbol]	[Symbol]
SIGNAL HEAD	[Symbol]	[Symbol]
SIGNAL HEAD WITH BACKPLATE	[Symbol]	[Symbol]
SIGNAL HEAD PEDESTRIAN	[Symbol]	[Symbol]
SIGNAL POST	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, STEEL	[Symbol]	[Symbol]
HANDHOLE	[Symbol]	[Symbol]
HEAVY DUTY HANDHOLE	[Symbol]	[Symbol]
DOUBLE HANDHOLE	[Symbol]	[Symbol]
G.S. CONDUIT IN TRENCH OR PUSHED	[Symbol]	[Symbol]
DETECTOR LOOP	[Symbol]	[Symbol]
COMMON TRENCH	[Symbol]	[Symbol]
UNINTERRUPTIBLE POWER SUPPLY	[Symbol]	[Symbol]
TELEPHONE CONNECTION	[Symbol]	[Symbol]

SIGN (A)	SIGN (B)
<b>LEFT ON GREEN ARROW ONLY</b>	<b>NO TURN ON RED</b>
R10-5 (24" x 30") 8 REQUIRED	R10-11c (24" x 30") 4 REQUIRED



- ① HEAVY-DUTY HANDHOLE SHALL BE LOCATED AT MINIMUM 2' FROM OUTSIDE FACE OF SOUTH WALL OF BICYCLE UNDERPASS
- ② ALL DETECTOR LOOPS AT THIS INTERSECTION (INCLUDING SYSTEM DETECTORS) SHALL BE PREFORMED DETECTOR LOOPS (PLACED WITHIN THE PCC PAVEMENT) PER IDOT DISTRICT 1 SPECIAL PROVISIONS.

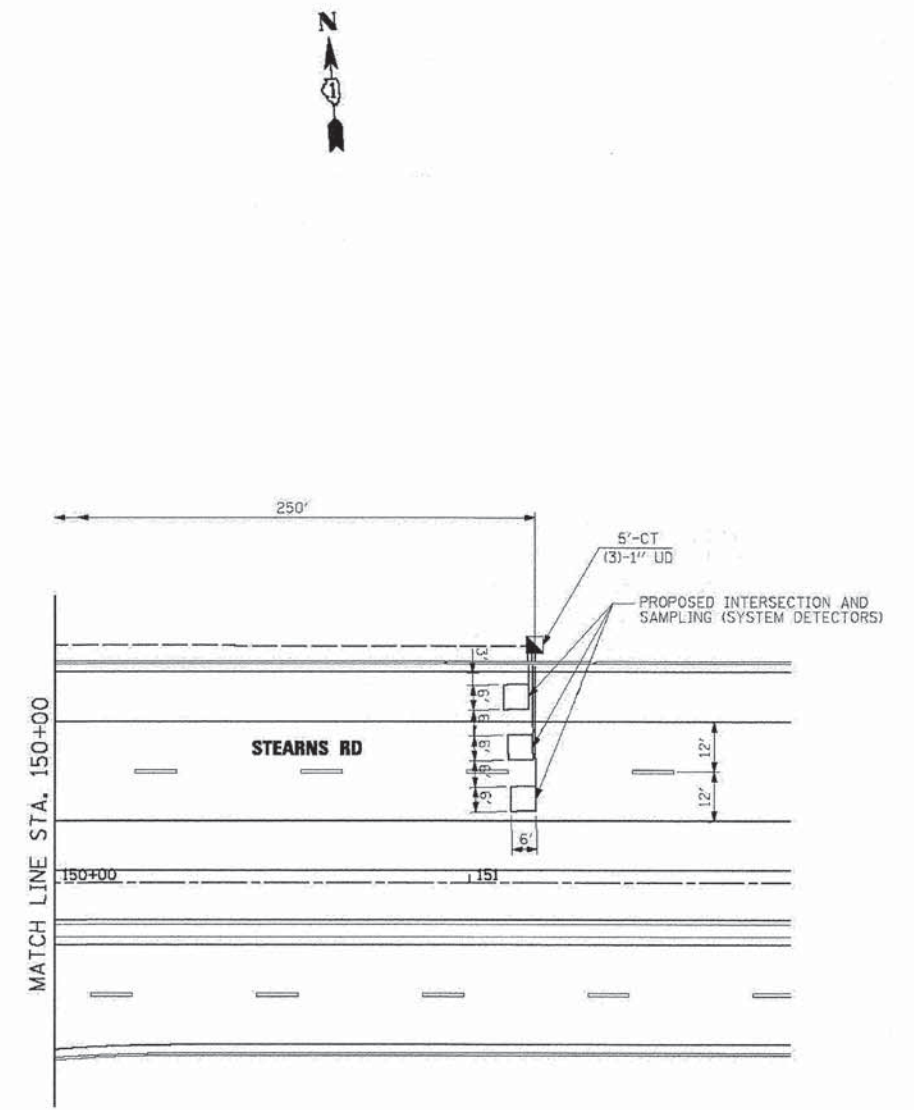
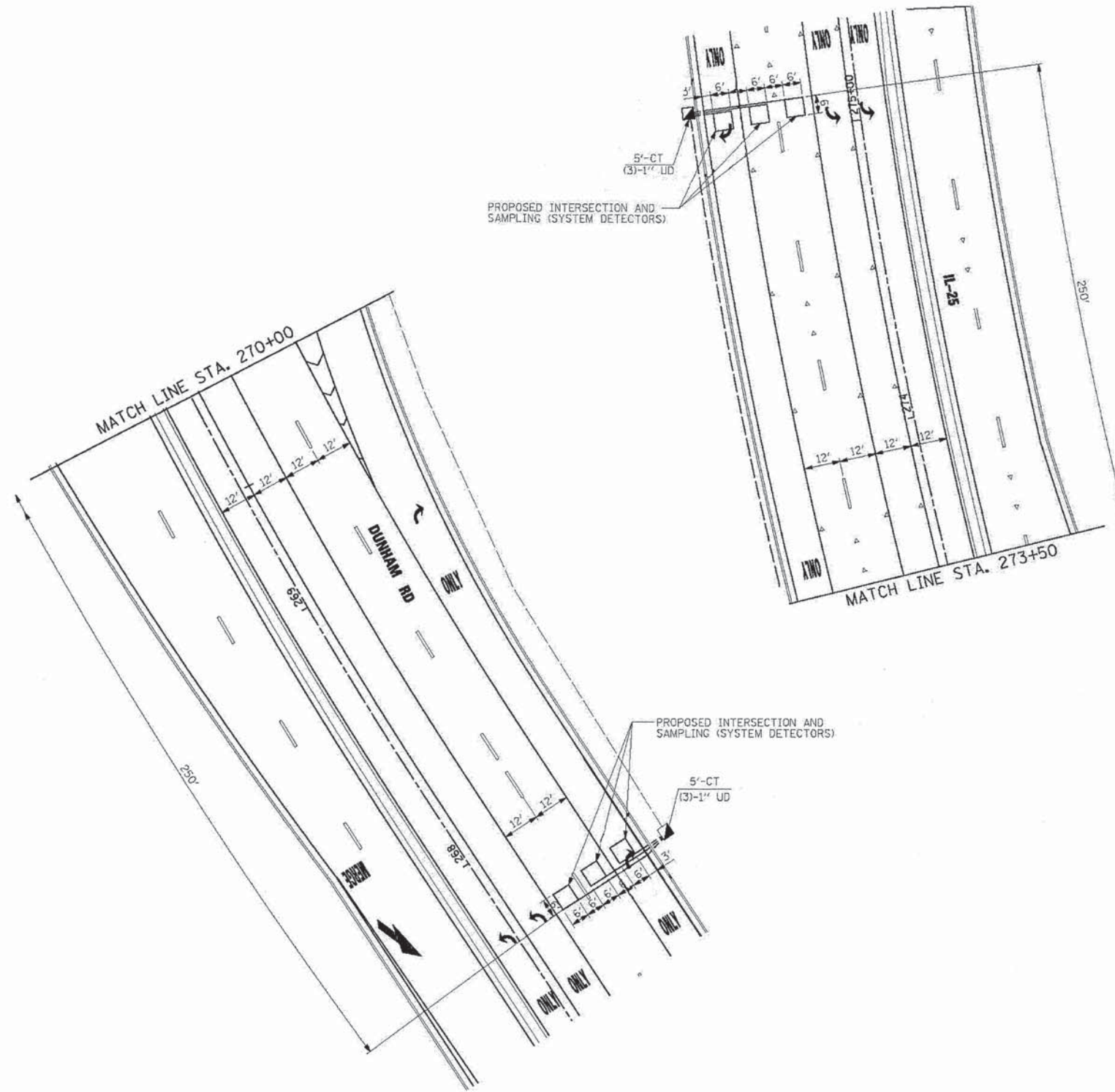
RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL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

REDUCED MAST ARM LENGTH, REVISED SIGNAL HEAD PLACEMENT, AND OTHER REVISIONS PER IDOT COMMENTS. THIS DRAWING (REV. 02/01/10) SUPERCEDES ALL PREVIOUS DRAWINGS

**FOR INFORMATION ONLY**

FILE NAME =	DESIGNED - BC	REVISED -		<b>STATE OF ILLINOIS</b> <b>DIVISION OF TRANSPORTATION</b>	<b>EXISTING TRAFFIC SIGNAL PLAN</b> <b>IL 25/STEARNS RD AT GILBERT ST</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
...\\D163598-sht-IL25-Dun-ex-ts-plan1.dgn	DRAWN - TMB	REVISED -				361	06-00214-18-RP	KANE	451	242
USER NAME = tblank	CHECKED - MPM	REVISED -				CONTRACT NO. 63598				
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -				ILLINOIS FED. AID PROJECT				
SCALE: 1"=20'						SHEET NO. 31 OF 49 SHEETS		STA. TO STA.		





① ALL DETECTOR LOOPS OF THIS INTERSECTIONS SHALL BE PREFORMED DETECTOR LOOPS PER IDOT DISTRICT 1 SPECIAL PROVISIONS.

ADDED FAR BACK LOOPS IN RIGHT TURN LANES

**FOR INFORMATION ONLY**

FILE NAME =	DESIGNED - BC	REVISED -
...\\DI63598-sht-IL25-Dun-ex-ts-plan2.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLDT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



**STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION**

<b>EXISTING TRAFFIC SIGNAL PLAN IL 25/STEARNS RD AT GILBERT ST</b>			
SCALE: 1"=20'	SHEET NO. 32 OF 49 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	243
CONTRACT NO. 63598				
ILLINOIS FED. AID PROJECT				

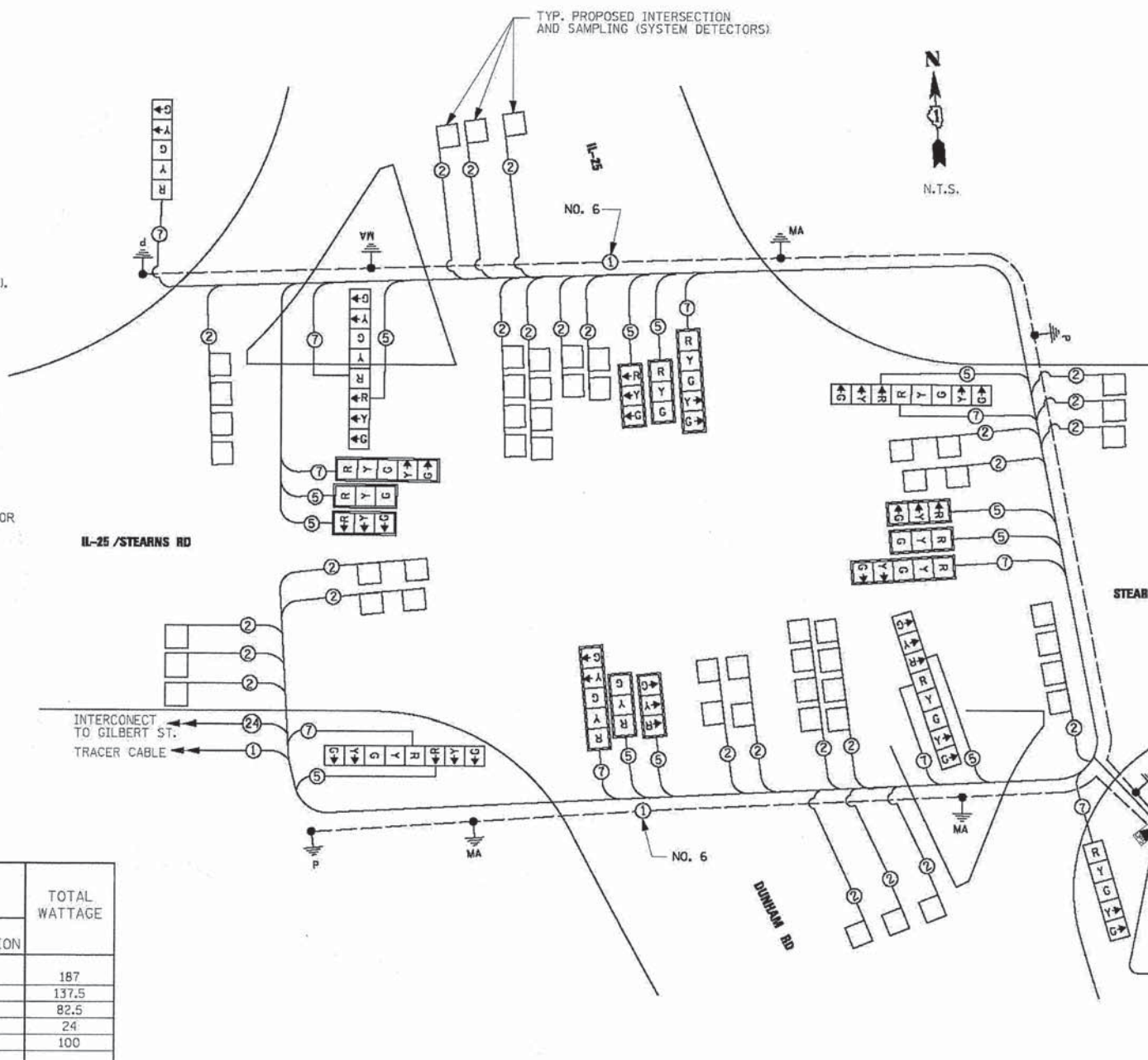


**CABLE SIGNAL LEGEND**

EXISTING	PROPOSED	
		8" (200mm) TRAFFIC SIGNAL SECTION
		12" (300mm) TRAFFIC SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE INSTALLATION
		DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
		GROUND ROD AT CONTROLLER (C).
		GROUND ROD AT POST (P), OR MAST ARM POLE (MA).
		GROUND ROD AT ELECTRIC SERVICE INSTALLATION
		GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
		FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125, MM 12F, SM12F
		DETECTOR LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
		UNINTERRUPTIBLE POWER SUPPLY

**SCHEDULE OF QUANTITIES**

ITEM	UNIT	QUANTITIES
SERVICE INSTALLATION, POLE MOUNTED	EACH	1
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	1118
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	65
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	102
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	73
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	224
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	671
HANDHOLE	EACH	8
HEAVY DUTY HANDHOLE	EACH	4
DOUBLE HANDHOLE	EACH	3
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1489
FULL-ACTUATED CONTROLLER AND TYPE V CABINET	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5/C	FOOT	6681
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7/C	FOOT	2281
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	7771
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	120
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	4
STEEL MAST ARM ASSEMBLY AND POLE, 48 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 50 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 60 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	16
CONCRETE FOUNDATION, TYPE C	FOOT	4
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM	EACH	12
INDUCTIVE LOOP DETECTOR	EACH	26
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
PERFORMED DETECTOR LOOP	FOOT	1922
ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1C	FOOT	715
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
CONCRETE FOUNDATION, TYPE E, 42-INCH DIAMETER	FOOT	21
CONCRETE FOUNDATION, TYPE E, 36-INCH DIAMETER	FOOT	41
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1



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

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE LED	%OPERATION	
SIGNAL (RED)	22	17	0.50	187
(YELLOW)	22	25	0.25	137.5
(GREEN)	22	15	0.25	82.5
ARROW	20	12	0.10	24
CONTROLLER	1	100	1.00	100
FLASHER			0.50	

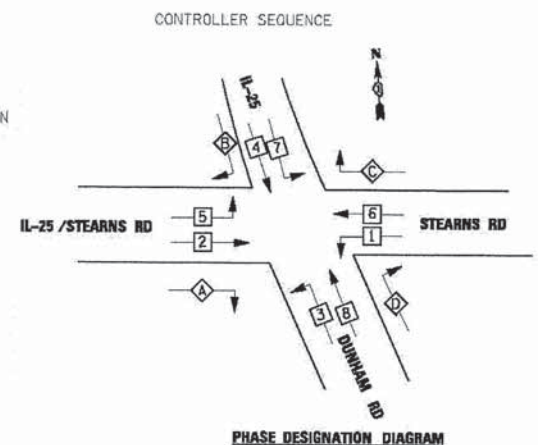
ENERGY COSTS TO: TOTAL = 531

**ILLINOIS DEPARTMENT OF TRANSPORTATION**  
 201 W. CENTER COURT  
 SCHAMBURG, ILLINOIS 60196  
 ENERGY SUPPLY CONTACT: MARTY RUBIN  
 PHONE: 847-608-2400  
 COMPANY: COMED

ALL DETECTOR LOOPS AT THIS INTERSECTION (INCLUDING SYSTEM DETECTORS) SHALL BE PREFORMED DETECTOR LOOPS (PLACED WITHIN THE PCC PAVEMENT) PER IDOT DISTRICT 1 SPECIAL PROVISIONS.

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'-L-2"=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		6m-L-0.6m)=
30" (750mm)	10 (5.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
36" (900 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSH BUTTON	4 (1.2)
42" (1060 mm)	25 (7.6)	ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

**CABLE PLAN**



**LEGEND**  

 - NUMBER REFERS TO ASSOCIATED PHASE

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	2	3
B	4	5
C	6	7
D	8	1

REDUCED MAST ARM LENGTHS, REVISED SIGNAL HEAD PLACEMENT AND ADDED FAR BACK LOOP IN RIGHT TURN LANES

**FOR INFORMATION ONLY**



**NOTES FOR TEMPORARY TRAFFIC SIGNALS**

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.

**RESTORATION OF WORK AREA.** RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE COST OF 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 SPECIFICATIONS 252 AND 250 RESPECTIVELY.

➤ DENOTES RELOCATED TEMPORARY SIGNAL HEAD FROM PREVIOUS STAGE

**CONSTRUCTION NOTES:**

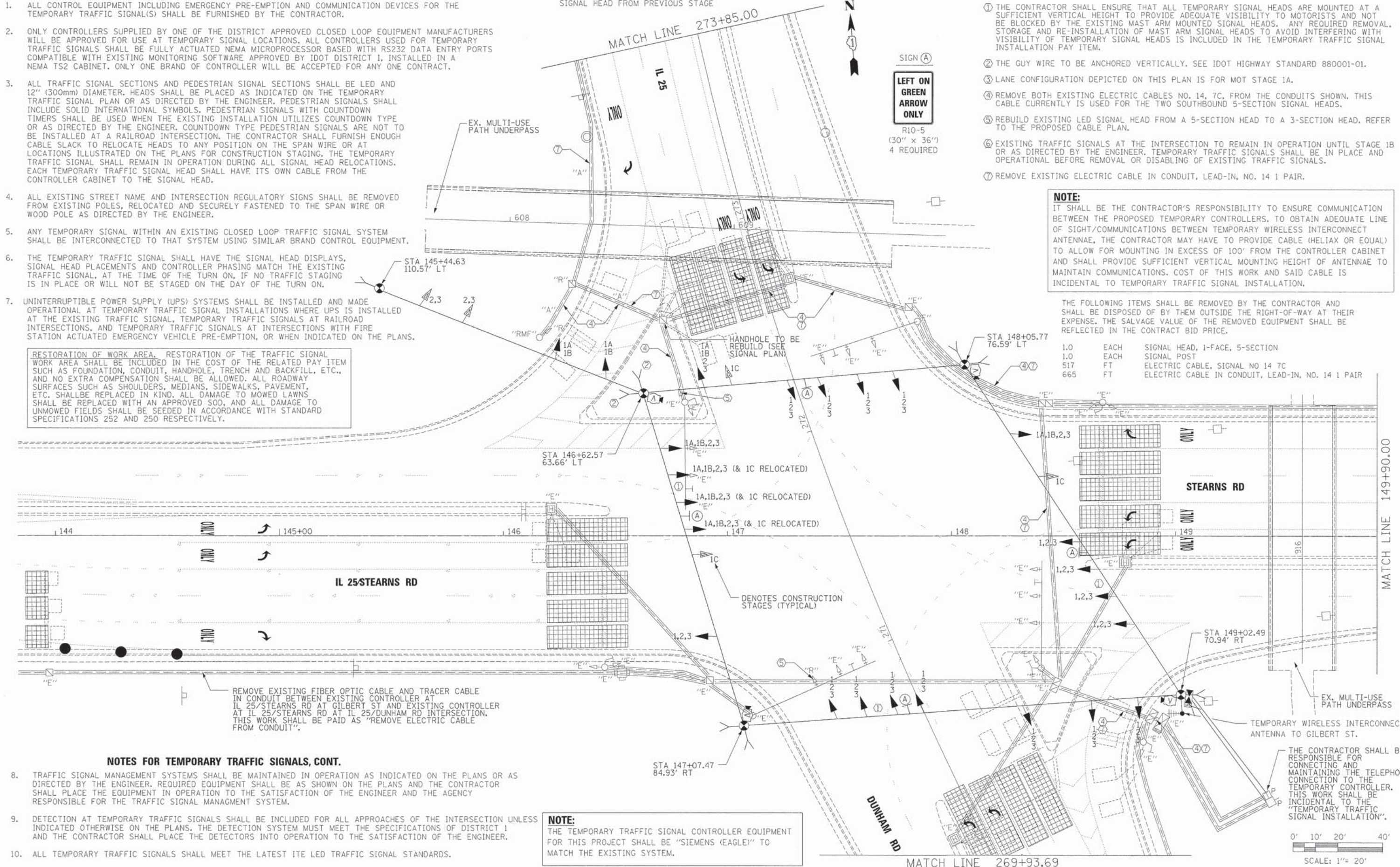
1. THE CONTRACTOR SHALL ENSURE THAT ALL TEMPORARY SIGNAL HEADS ARE MOUNTED AT A SUFFICIENT VERTICAL HEIGHT TO PROVIDE ADEQUATE VISIBILITY TO MOTORISTS AND NOT BE BLOCKED BY THE EXISTING MAST ARM MOUNTED SIGNAL HEADS. ANY REQUIRED REMOVAL, STORAGE AND RE-INSTALLATION OF MAST ARM SIGNAL HEADS TO AVOID INTERFERING WITH VISIBILITY OF TEMPORARY SIGNAL HEADS IS INCLUDED IN THE TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.
2. THE GUY WIRE TO BE ANCHORED VERTICALLY. SEE IDOT HIGHWAY STANDARD 880001-01.
3. LANE CONFIGURATION DEPICTED ON THIS PLAN IS FOR MOT STAGE 1A.
4. REMOVE BOTH EXISTING ELECTRIC CABLES NO. 14, 7C, FROM THE CONDUITS SHOWN. THIS CABLE CURRENTLY IS USED FOR THE TWO SOUTHBOUND 5-SECTION SIGNAL HEADS.
5. REBUILD EXISTING LED SIGNAL HEAD FROM A 5-SECTION HEAD TO A 3-SECTION HEAD. REFER TO THE PROPOSED CABLE PLAN.
6. EXISTING TRAFFIC SIGNALS AT THE INTERSECTION TO REMAIN IN OPERATION UNTIL STAGE 1B OR AS DIRECTED BY THE ENGINEER. TEMPORARY TRAFFIC SIGNALS SHALL BE IN PLACE AND OPERATIONAL BEFORE REMOVAL OR DISABLING OF EXISTING TRAFFIC SIGNALS.
7. REMOVE EXISTING ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR.

**NOTE:**

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMMUNICATION BETWEEN THE PROPOSED TEMPORARY CONTROLLERS. TO OBTAIN ADEQUATE LINE OF SIGHT/COMMUNICATIONS BETWEEN TEMPORARY WIRELESS INTERCONNECT ANTENNAE, THE CONTRACTOR MAY HAVE TO PROVIDE CABLE (HELIX OR EQUAL) TO ALLOW FOR MOUNTING IN EXCESS OF 100' FROM THE CONTROLLER CABINET AND SHALL PROVIDE SUFFICIENT VERTICAL MOUNTING HEIGHT OF ANTENNAE TO MAINTAIN COMMUNICATIONS. COST OF THIS WORK AND SAID CABLE IS INCIDENTAL TO TEMPORARY TRAFFIC SIGNAL INSTALLATION.

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

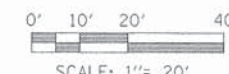
1.0	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION
1.0	EACH	SIGNAL POST
517	FT	ELECTRIC CABLE, SIGNAL NO 14 7C
665	FT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR



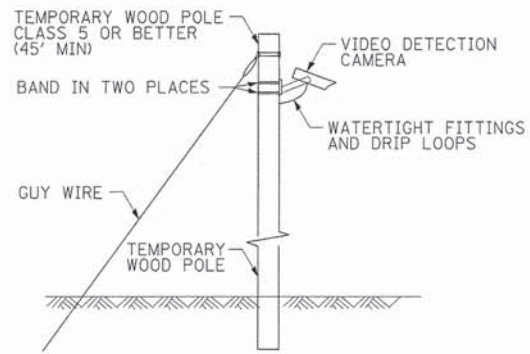
**NOTES FOR TEMPORARY TRAFFIC SIGNALS, CONT.**

8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. ALL TEMPORARY TRAFFIC SIGNALS SHALL MEET THE LATEST ITE LED TRAFFIC SIGNAL STANDARDS.

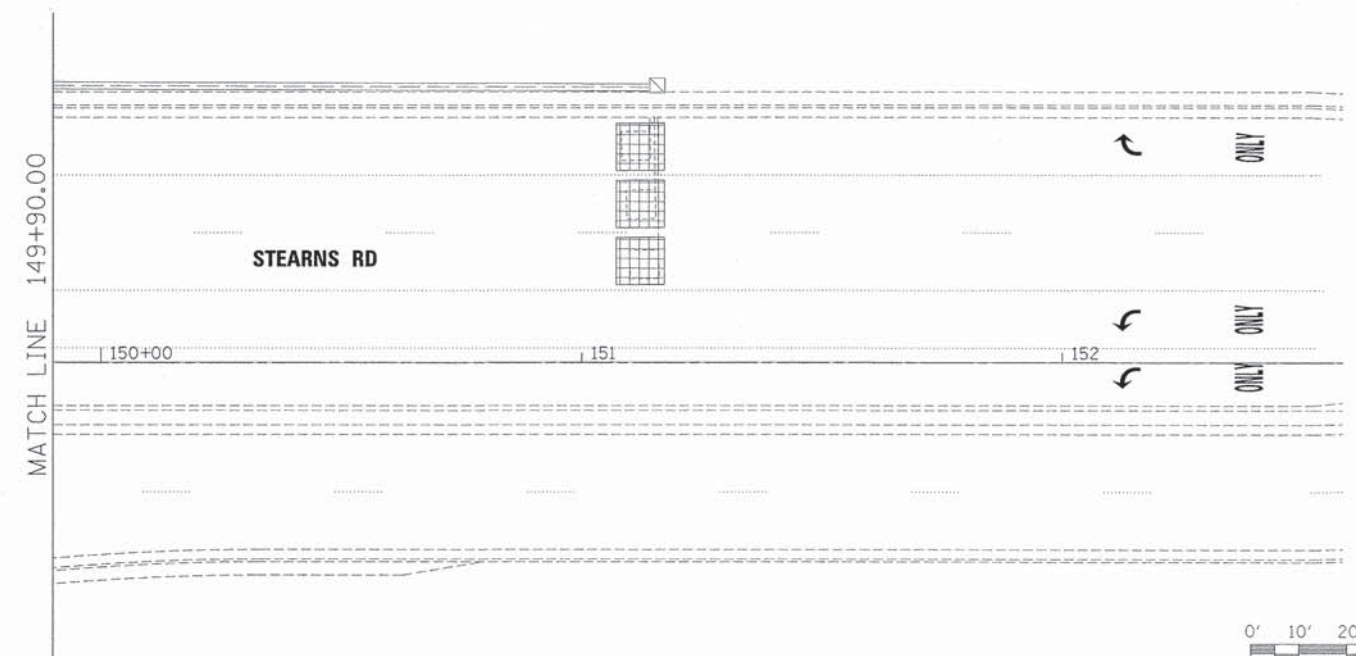
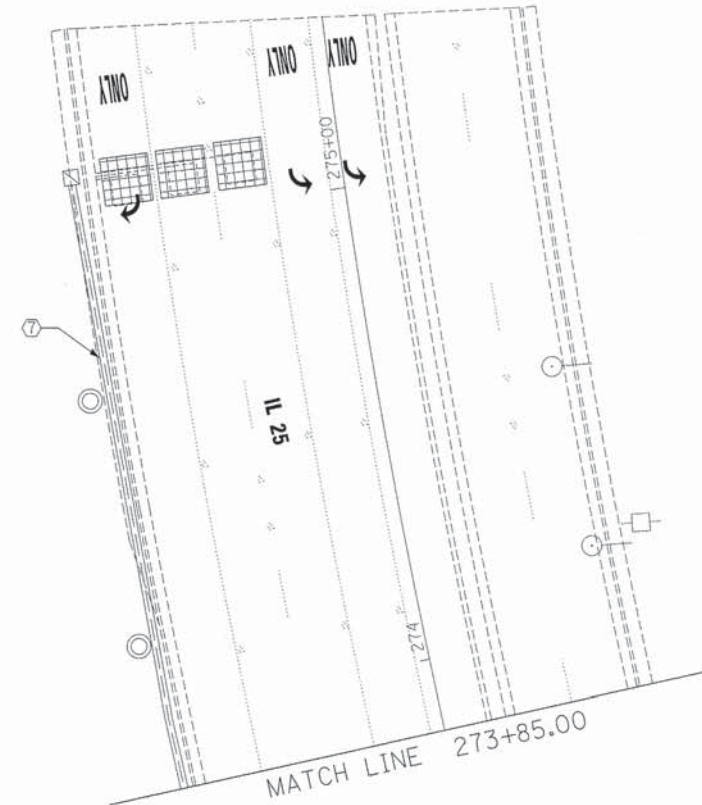
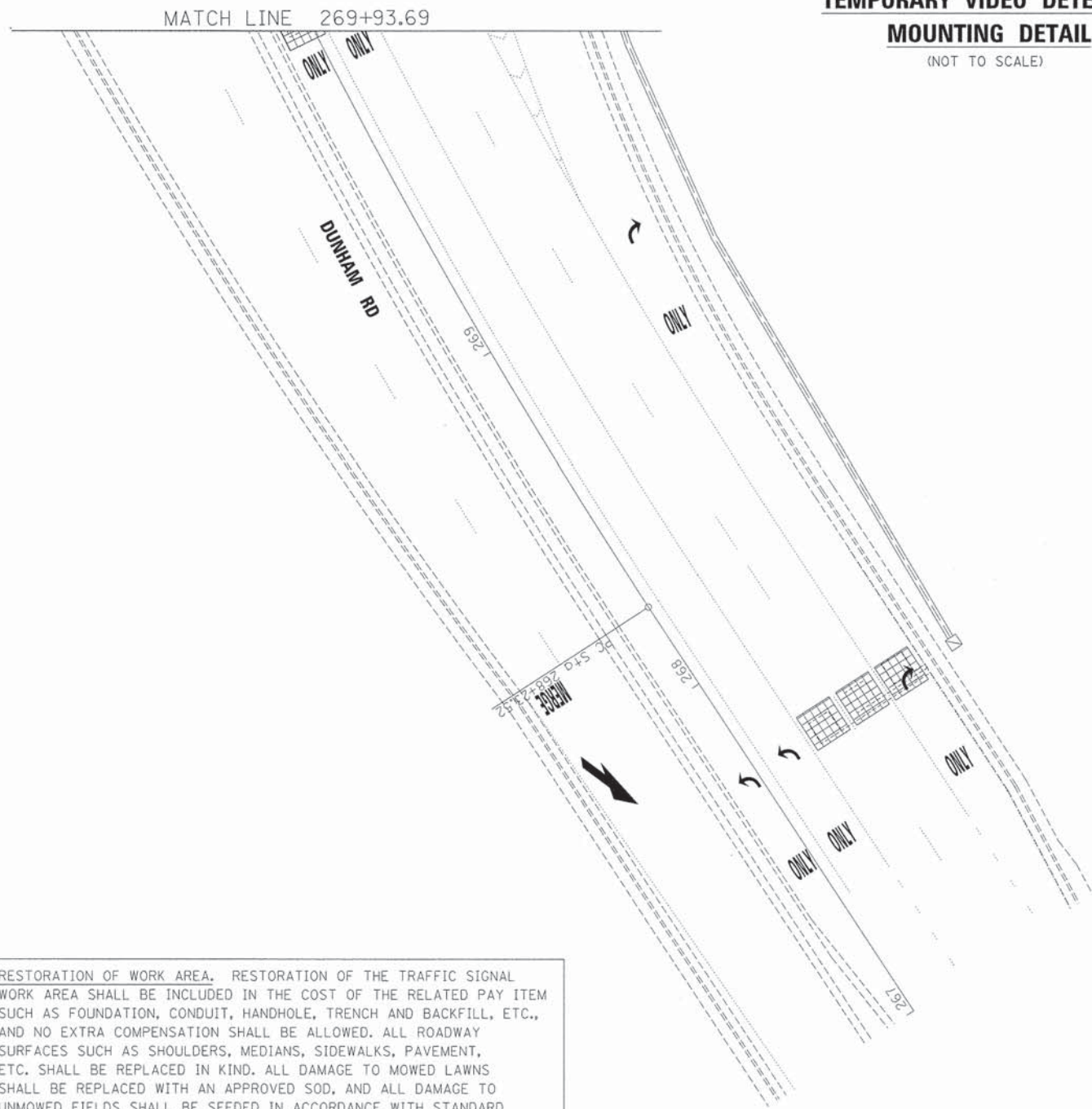
**NOTE:**  
THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING SYSTEM.







**TEMPORARY VIDEO DETECTION MOUNTING DETAIL**  
(NOT TO SCALE)



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE COST OF 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 SPECIFICATIONS 252 AND 250 RESPECTIVELY.

FILE NAME =	DESIGNED - BC	REVISED -
...\\D163598-sht-IL25-Dun-temp-ts-installation	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLDT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



**STATE OF ILLINOIS**  
**DIVISION OF TRANSPORTATION**

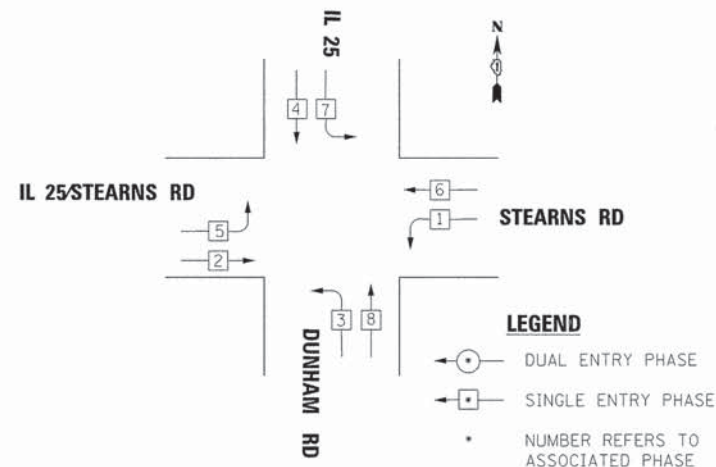
**TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT PLAN, IL 25/STEARNS RD AT IL 25/DUNHAM RD, ALL STAGES - SHEET 2 OF 2**

SCALE: 1"=20' SHEET NO. 35 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	246
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	

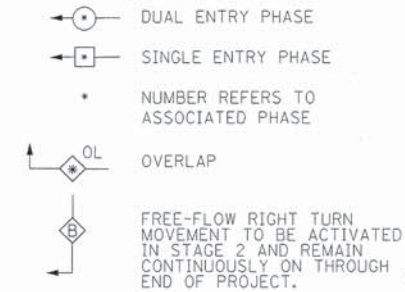


**TEMPORARY CONTROLLER SEQUENCE**

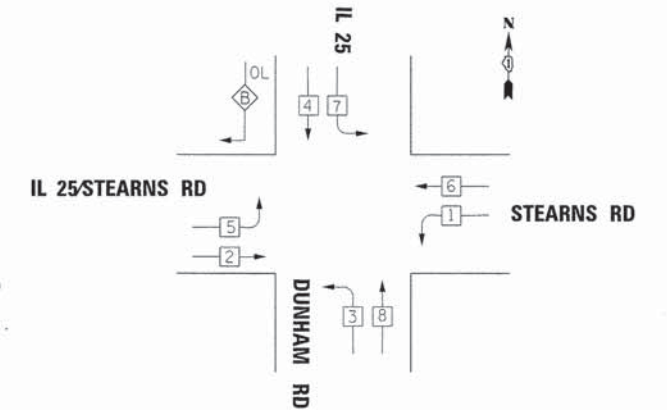


**TEMPORARY PHASE DESIGNATION DIAGRAM STAGES 1A, 1B, & 1C**

**LEGEND**



**TEMPORARY CONTROLLER SEQUENCE**



**TEMPORARY PHASE DESIGNATION DIAGRAM STAGES 2 & 3**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	=	FREE-FLOW RIGHT TURN MOVEMENT

IL 25/STEARNS RD

STEARNS RD

DUNHAM RD

**TEMPORARY CABLE PLAN**

**CONSTRUCTION NOTES:**

① DURING STAGES 2 & 3, THE CONTRACTOR SHALL BAG AND DISABLE THE RED AND YELLOW SIGNAL INDICATIONS AS NOTED.

**NOTE:**

THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING ADJACENT SYSTEM.

MASTER CONTROLLER

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING AND MAINTAINING THE TELEPHONE CONNECTION TO THE TEMPORARY CONTROLLER

TEMPORARY WIRELESS INTERCONNECT ANTENNA TO GILBERT ST.

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	24	-	17	0.50	204.00
(YELLOW)	24	-	25	0.25	150.00
(GREEN)	24	-	15	0.25	90.00
ARROW	-	-	12	0.10	-
PED. SIGNAL	-	-	25	1.00	-
CONTROLLER	1	-	100	1.00	100.00
ILLUM. SIGN	-	-	25	0.05	-
VIDEO SYSTEM	1	150	-	1.00	150.00
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 694.00

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAY/DISTRICT 1  
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096  
 ENERGY SUPPLY CONTACT: MARTY RUBIN  
 PHONE: (847) 608 2400  
 COMPANY: COMED

FILE NAME =	DESIGNED - BC	REVISED -
... \0163598-sht-IL25-Dun-temp-ts-cable.dgn	DRAWN - TMB	REVISED -
USER NAME = tbi1enk	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



STATE OF ILLINOIS  
 DIVISION OF TRANSPORTATION

TEMP CABLE PLAN & TEMP PHASE DESIGNATION DIAGRAM  
 IL 25/STEARNS RD AT IL 25/DUNHAM RD  
 ALL STAGES

SCALE: 1"=20' SHEET NO. 36 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	247
				CONTRACT NO. 63598
[ILLINOIS] FED. AID PROJECT				



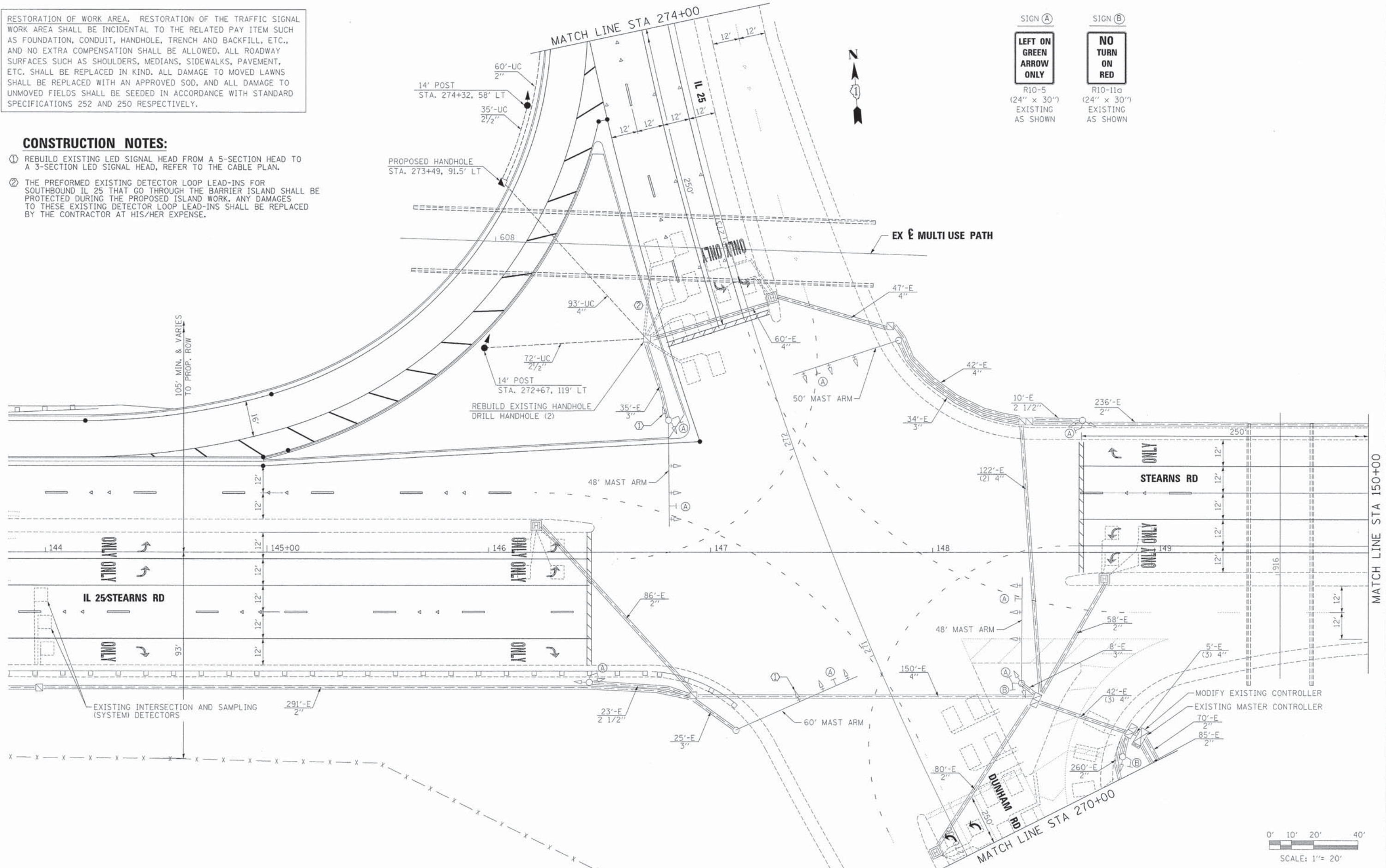
RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL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

**CONSTRUCTION NOTES:**

- ① REBUILD EXISTING LED SIGNAL HEAD FROM A 5-SECTION HEAD TO A 3-SECTION LED SIGNAL HEAD, REFER TO THE CABLE PLAN.
- ② THE PREFORMED EXISTING DETECTOR LOOP LEAD-INS FOR SOUTHBOUND IL 25 THAT GO THROUGH THE BARRIER ISLAND SHALL BE PROTECTED DURING THE PROPOSED ISLAND WORK. ANY DAMAGES TO THESE EXISTING DETECTOR LOOP LEAD-INS SHALL BE REPLACED BY THE CONTRACTOR AT HIS/HER EXPENSE.

SIGN (A)  
**LEFT ON GREEN ARROW ONLY**  
 R10-5 (24" x 30")  
 EXISTING AS SHOWN

SIGN (B)  
**NO TURN ON RED**  
 R10-11a (24" x 30")  
 EXISTING AS SHOWN



FILE NAME =	DESIGNED - BC	REVISED -
...\\0163598-sht-IL25-Dunham-mod-plan.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -

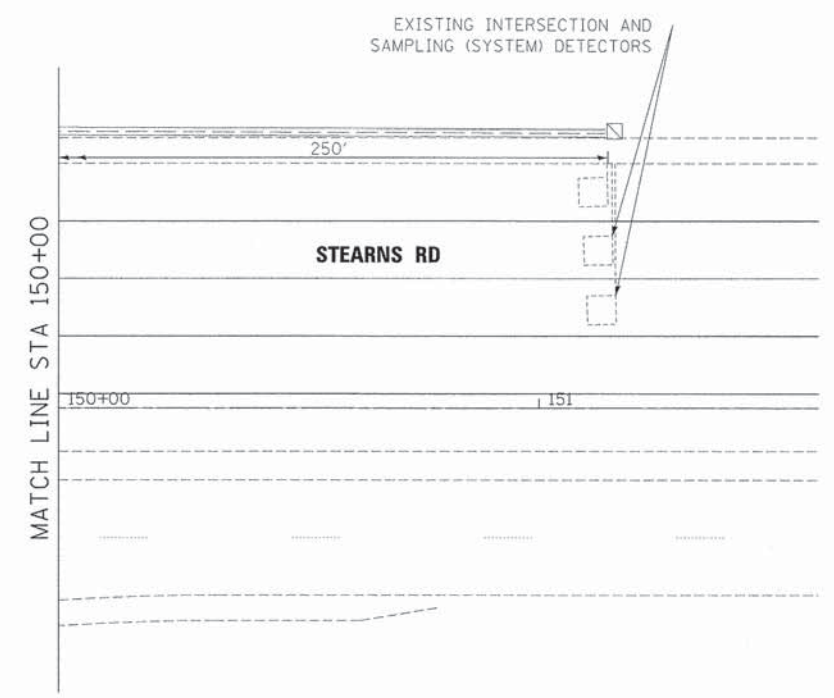
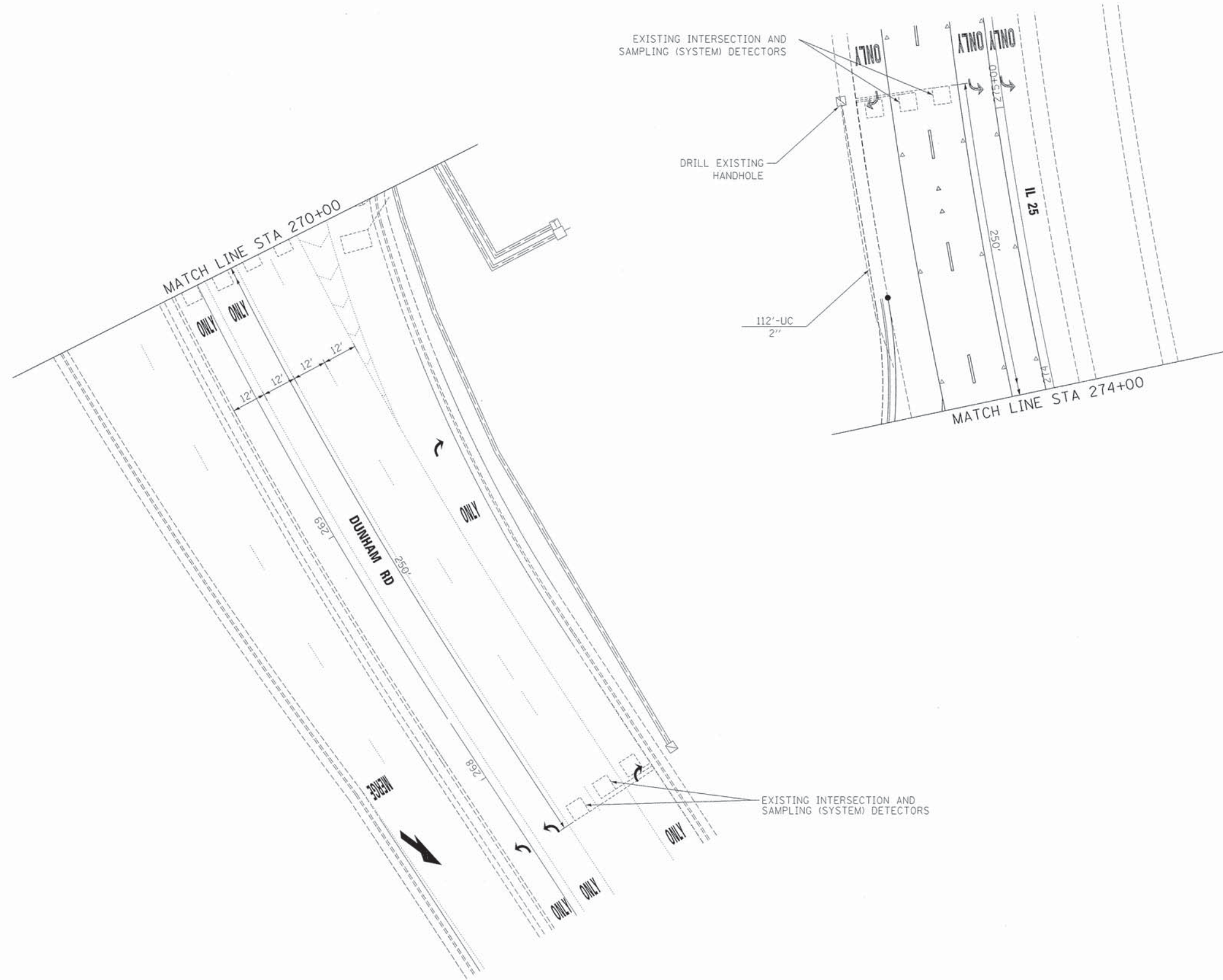
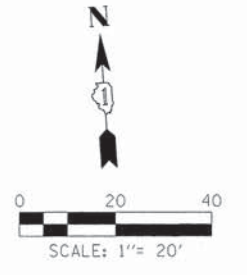


**STATE OF ILLINOIS**  
**DIVISION OF TRANSPORTATION**

**TRAFFIC SIGNAL MODIFICATION PLAN**  
**IL 25/STEARNS RD AT IL 25/DUNHAM RD - SHEET 1 OF 2**  
 SCALE: 1"=20' SHEET NO. 37 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	248
CONTRACT NO. 63598				
ILLINOIS FED. AID PROJECT				





FILE NAME =	DESIGNED - BC	REVISED -
...\\D163598-sht-IL25-Dun-ts-mod-plan2.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



**STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION**

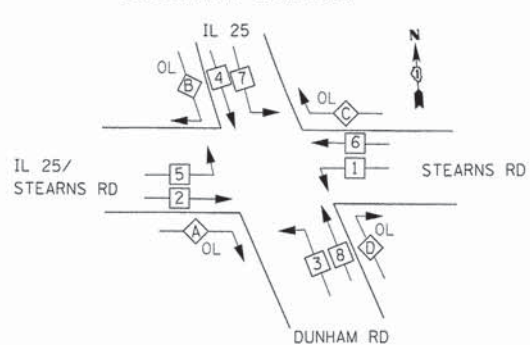
**TRAFFIC SIGNAL MODIFICATION PLAN  
IL 25/STEARNS RD AT IL 25/DUNHAM RD - SHEET 2 OF 2**

SCALE: 1"=20' SHEET NO. 38 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	249
CONTRACT NO. 63598			[ILLINOIS] FED. AID PROJECT	



**CONTROLLER SEQUENCE**



**LEGEND**

- ◻ SINGLE ENTRY PHASE
- ◻ DUAL ENTRY PHASE
- ◻ OVERLAP
- ◻ FREE-FLOW RIGHT TURN MOVEMENT TO BE CONTINUOUSLY ON
- \* - NUMBER REFERS TO ASSOCIATED PHASE

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	2 +	3
B	CONTINUOUS OVERLAP FREE-FLOW RIGHT	
C	6 +	7
D	8 +	1

**PROPOSED PHASE DESIGNATION DIAGRAM**

IL 25/STEARNS RD

EXISTING INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

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

INTERCONNECT TO GILBERT ST.

TRACER CABLE

**CONSTRUCTION NOTES:**

- ① REBUILD EXISTING LED SIGNAL HEAD FROM A 5-SECTION LED SIGNAL HEAD TO A 3-SECTION LED SIGNAL HEAD.

**SCHEDULE OF QUANTITIES**

ITEM	UNIT	TOTAL
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	172
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	107
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	93
HANDHOLE	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1,977
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	999
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	967
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	2
CONCRETE FOUNDATION, TYPE A	FOOT	8
DRILL EXISTING HANDHOLE	EACH	3
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	1
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REBUILD EXISTING SIGNAL HEAD, LED	EACH	2
MODIFY EXISTING CONTROLLER	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	665
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REBUILD EXISTING HANDHOLE	EACH	1
REMOVE EXISTING HANDHOLE	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1

ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR

EXISTING INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

STEARNS RD

NUMBER OF GROUND CABLES AS PER PLAN

EXISTING MASTER CONTROLLER

EXISTING BIKE PATH

DUNHAM RD

EXISTING INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

**CABLE PLAN**

I.D.O.T  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	20	17	0.50	170
(YELLOW)	20	25	0.25	125
(GREEN)	20	15	0.25	75
ARROW	12	12	0.10	14.4
FREEFLOW ARROW	2	15	1.00	30.0
CONTROLLER	1	100	1.00	100.0
FLASHER			0.50	

ENERGY COSTS TO: TOTAL = 514.4

ILLINOIS DEPARTMENT OF TRANSPORTATION  
201 W. CENTER COURT  
SCHAMBURG, ILLINOIS 60196  
ENERGY SUPPLY CONTACT: MARTY RUBIN  
PHONE: 847-608-2400  
COMPANY: COMED

FILE NAME *	DESIGNED - BC	REVISED - ADDENDUM 04/15/2013
...\\D163598-shr-IL25-Dun-to-cable.dgn	DRAWN - TMB	REVISED -
USER NAME * toddblank	CHECKED - MPM	REVISED -
PLOT DATE * 4/15/2013	DATE - 01/18/2013	REVISED -



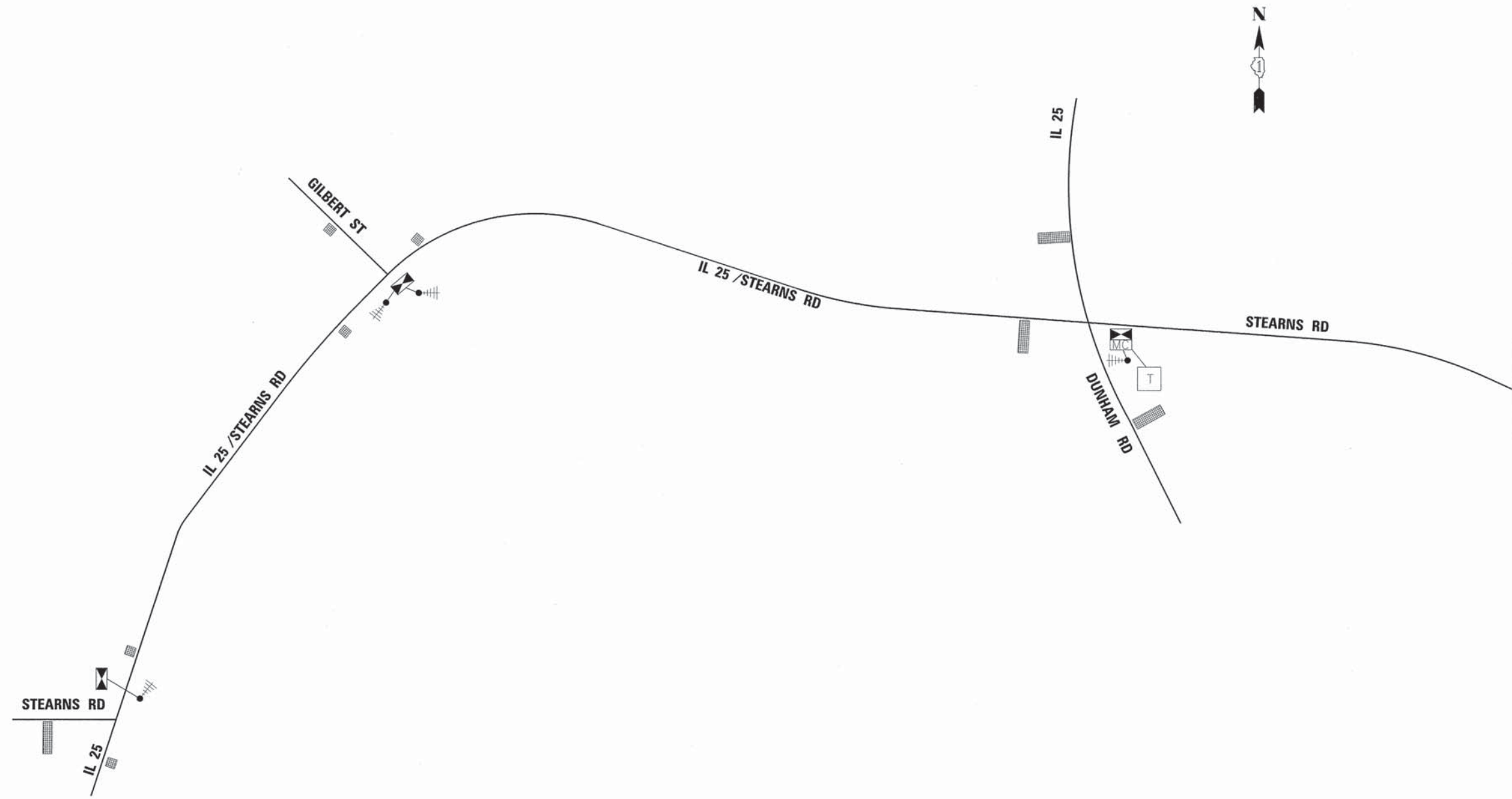
STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION

**SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM  
IL 25/STEARNS RD AT IL 25/DUNHAM RD**

SCALE: 1"=20' SHEET NO. 39 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	250
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	





**NOTE:**  
 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMMUNICATION BETWEEN THE PROPOSED TEMPORARY CONTROLLERS. TO OBTAIN ADEQUATE LINE OF SIGHT/COMMUNICATIONS BETWEEN TEMPORARY WIRELESS INTERCONNECT ANTENNAE, THE CONTRACTOR MAY HAVE TO PROVIDE CABLE (HELIAX OR EQUAL) TO ALLOW FOR MOUNTING IN EXCESS OF 100' FROM THE CONTROLLER CABINET AND SHALL PROVIDE SUFFICIENT VERTICAL MOUNTING HEIGHT OF ANTENNAE TO MAINTAIN COMMUNICATIONS. COST OF THIS WORK AND SAID CABLE IS INCIDENTAL TO TEMPORARY TRAFFIC SIGNAL INSTALLATION.

**NOTE:**  
 THE TEMPORARY TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE EXISTING SYSTEM.

FILE NAME =	DESIGNED - BC	REVISED -
...\\DI63598-shit-InterCon-schem-temp.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



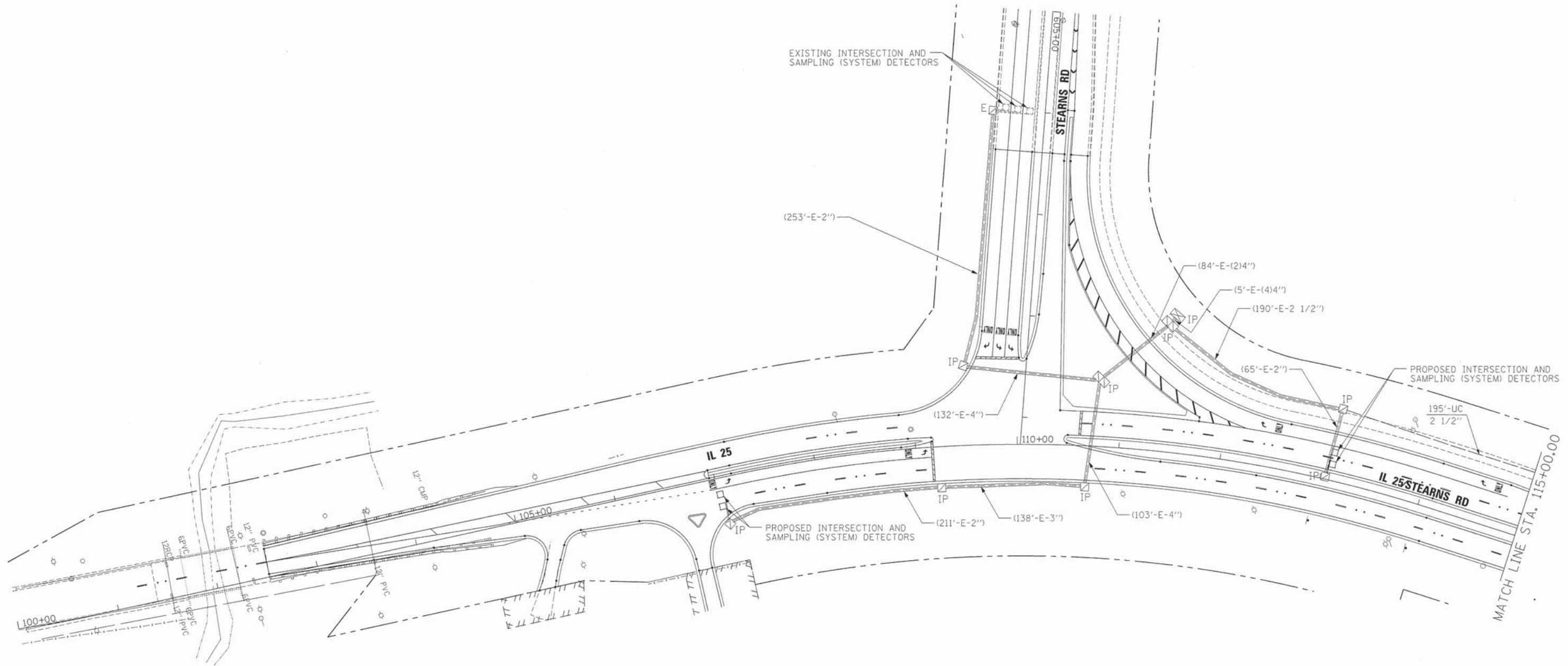
**STATE OF ILLINOIS  
 DIVISION OF TRANSPORTATION**

**TEMPORARY INTERCONNECT SCHEMATIC  
 IL 25 - STEARNS RD TO IL 25/DUNHAM RD**

SCALE: 1"=200' SHEET NO. 40 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	251
				CONTRACT NO. 63598
ILLINOIS FED. AID PROJECT				





RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA 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 MOVED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOVED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE ADJACENT SYSTEM.

FILE NAME =	DESIGNED - BC	REVISED -
...\\0163598-sht-stns-InterCon-01.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



**STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION**

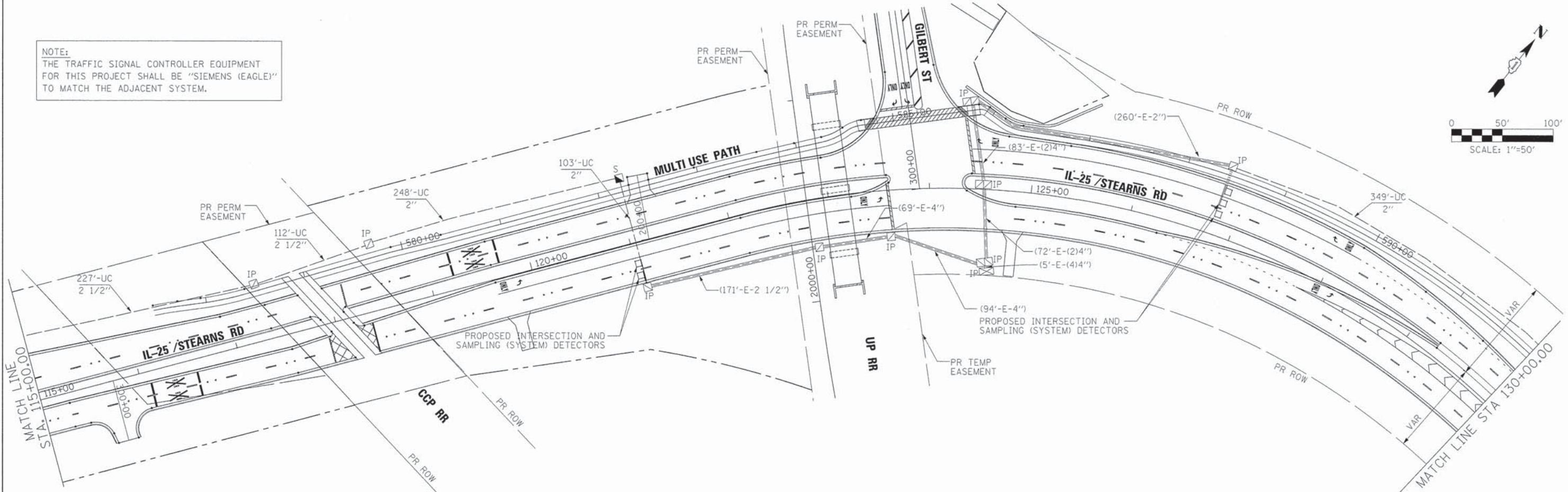
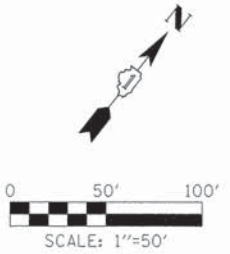
**INTERCONNECT PLAN  
IL 25 - STEARNS RD TO IL 25/DUNHAM RD - SHEET 1 OF 3**

SCALE: 1"=50'    SHEET NO. 41 OF 49 SHEETS    STA.    TO STA.

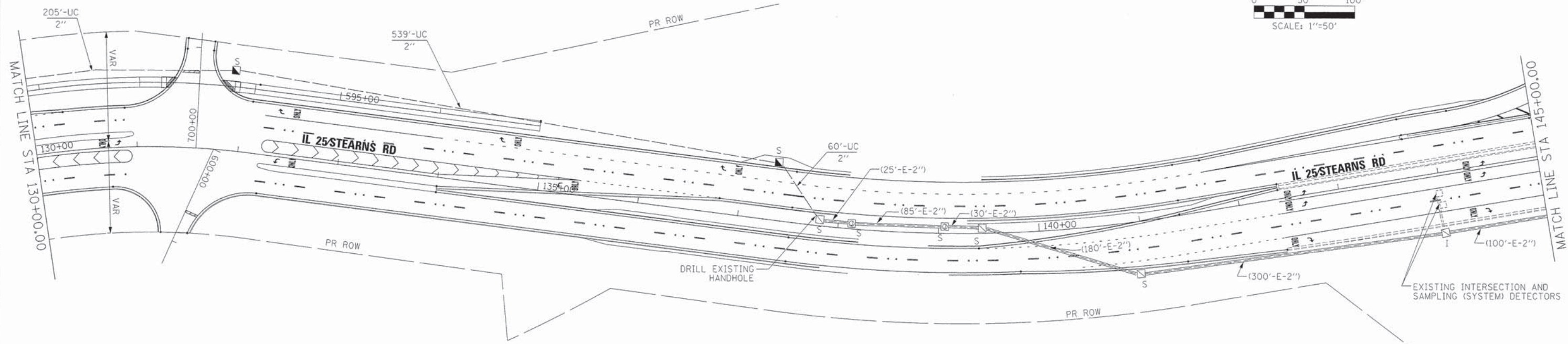
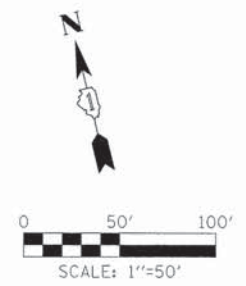
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	252
				CONTRACT NO. 63598
ILLINOIS FED. AID PROJECT				



NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE ADJACENT SYSTEM.



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA 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 MOVED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOVED FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



FILE NAME =	DESIGNED - BC	REVISED -
...ND163598-sht-stns-InterCon-02.dgn	DRAWN - TMB	REVISED -
USER NAME = tborak	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -

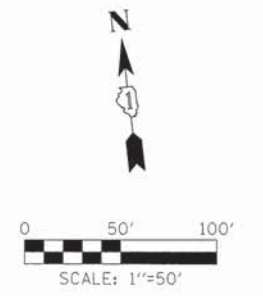
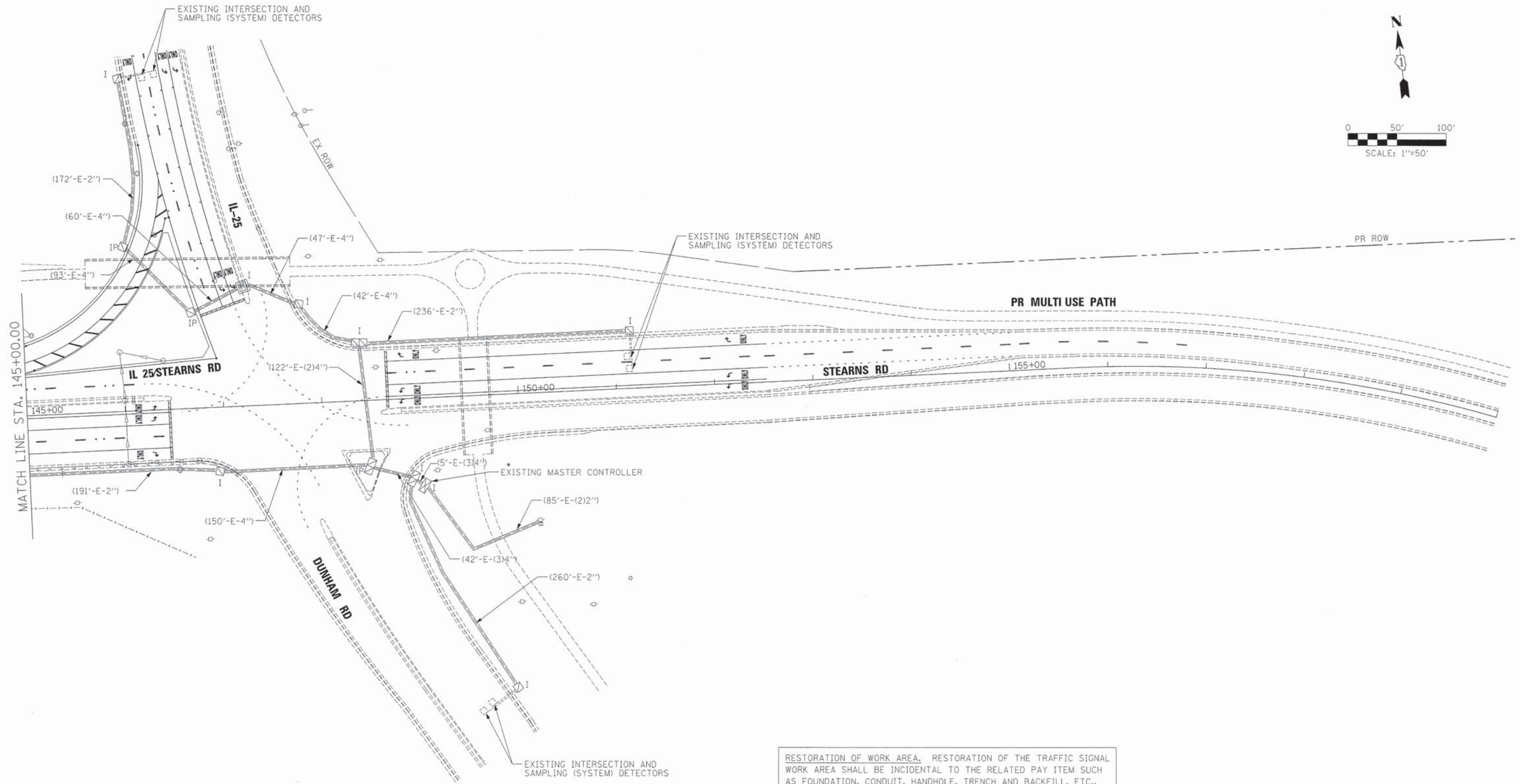


**STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION**

**INTERCONNECT PLAN  
IL 25 - STEARNS RD TO IL 25/DUNHAM RD - SHEET 2 OF 3**  
SCALE: 1"=50' SHEET NO. 42 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	253
				CONTRACT NO. 63598
[ILLINOIS] FED. AID PROJECT				





RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA 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 MOVED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOVED FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "SIEMENS (EAGLE)" TO MATCH THE ADJACENT SYSTEM.

FILE NAME =	DESIGNED - BC	REVISED -
...\\0163598-sht-stns-InterCon-03.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



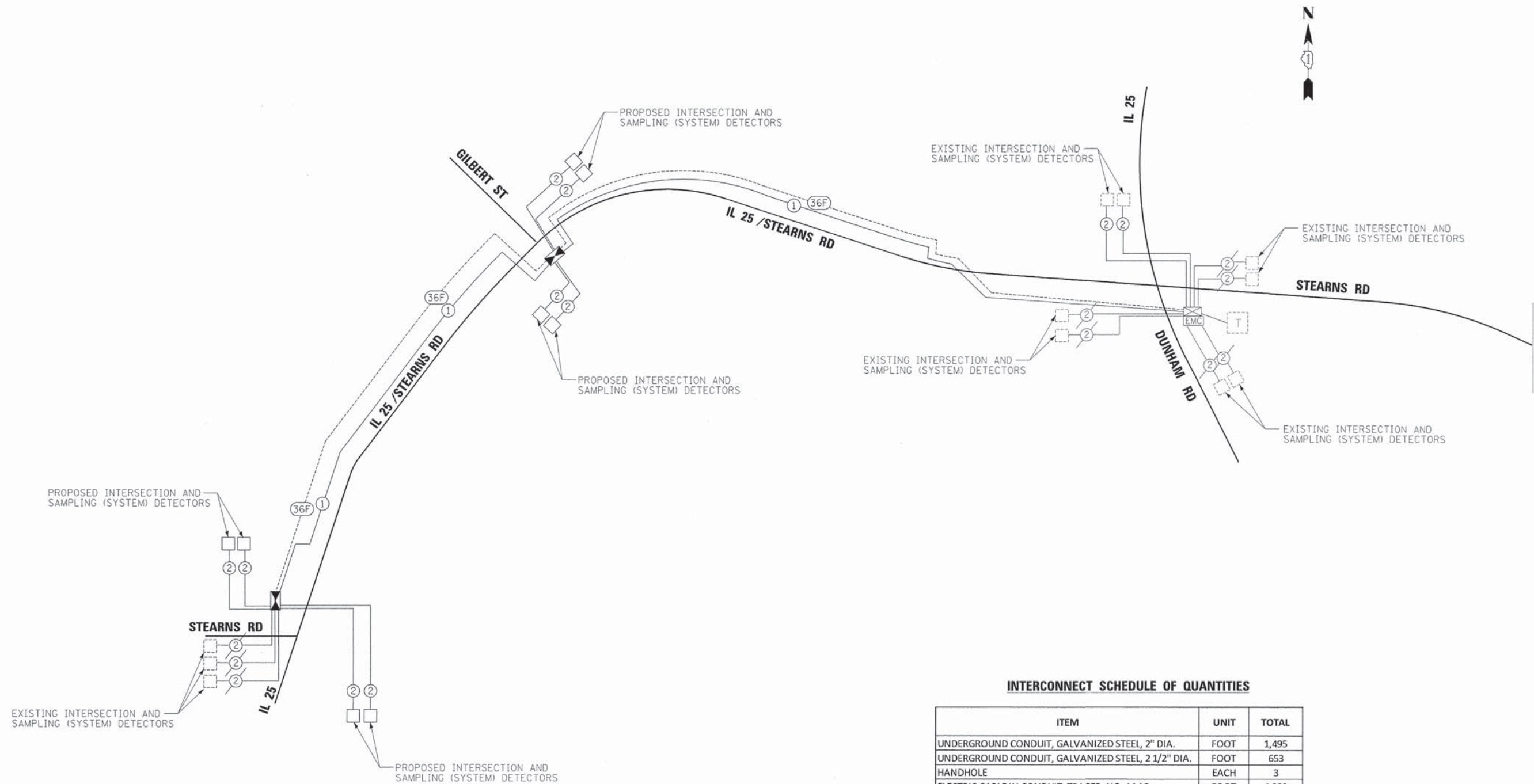
**STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION**

**INTERCONNECT PLAN  
IL 25 - STEARNS RD TO IL 25/DUNHAM RD - SHEET 3 OF 3**

SCALE: 1"=50' SHEET NO. 43 OF 49 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	254
				CONTRACT NO. 63598
ILLINOIS FED. AID PROJECT				





**INTERCONNECT SCHEDULE OF QUANTITIES**

ITEM	UNIT	TOTAL
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	1,495
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	653
HANDHOLE	EACH	3
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	4,380
DRILL EXISTING HANDHOLE	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	4,697
FIBER OPTIC CABLE 36 FIBERS, SINGLE MODE	FOOT	4,380
OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	1

FILE NAME =	DESIGNED - BC	REVISED -
...\\D163598-sht-InterCon-schem.dgn	DRAWN - TMB	REVISED -
USER NAME = tblank	CHECKED - MPM	REVISED -
PLOT DATE = 1/18/2013	DATE - 01/18/2013	REVISED -



**STATE OF ILLINOIS  
DIVISION OF TRANSPORTATION**

**INTERCONNECT SCHEMATIC AND SCHEDULE OF QUANTITIES  
IL 25 - STEARNS RD TO IL 25/DUNHAM RD**

SCALE: NTS SHEET NO. 44 OF 49 SHEETS STA. TO STA.

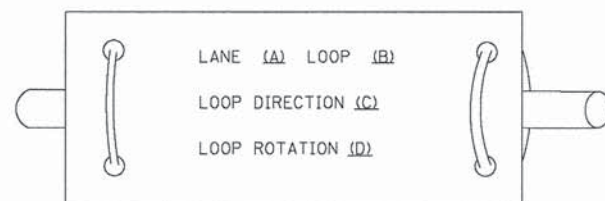
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	255
				CONTRACT NO. 63598
[ILLINOIS] FED. AID PROJECT				



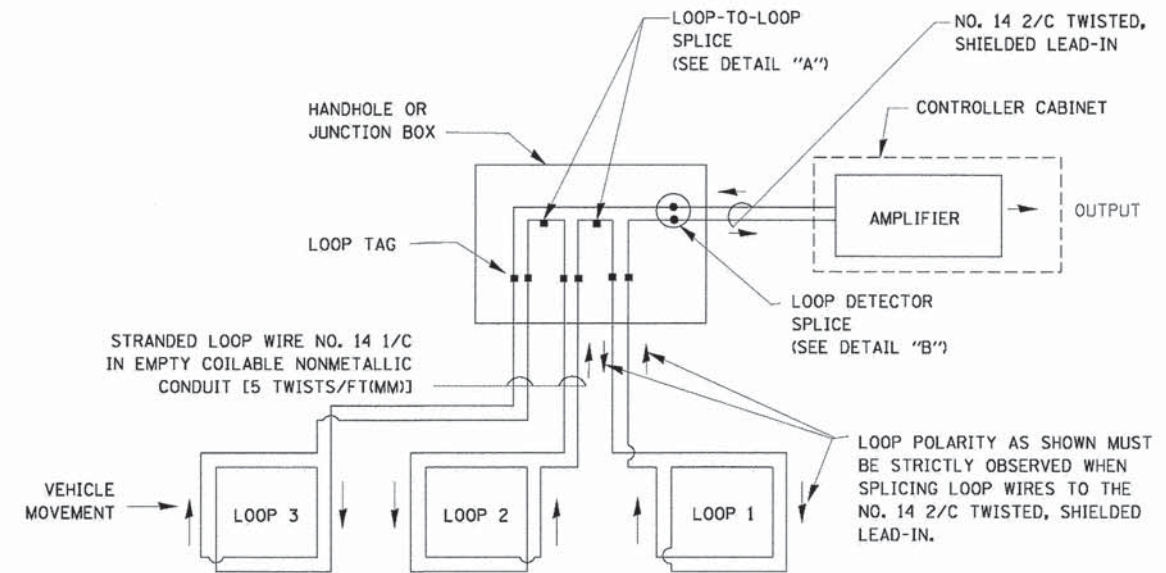
## LOOP DETECTOR NOTES

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

### LOOP LEAD-IN CABLE TAG

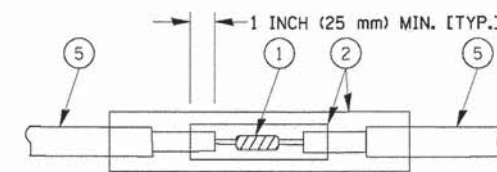


- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

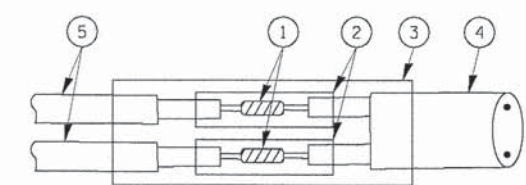


### DETECTOR LOOP WIRING SCHEMATIC

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

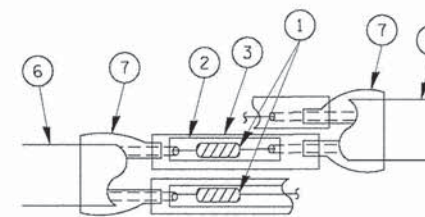


DETAIL "A"  
LOOP-TO-LOOP SPLICE

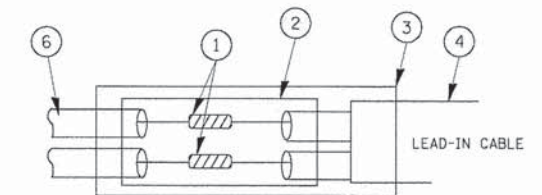


DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

### TYPE I LOOP



DETAIL "A"  
LOOP-TO-LOOP SPLICE



DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

### LOOP DETECTOR SPLICE

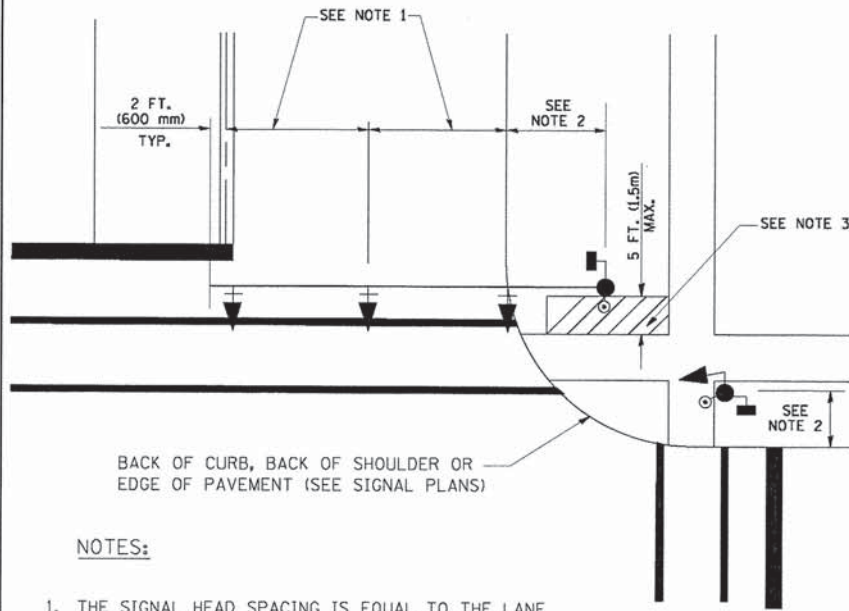
- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- NO. 14 2/C TWISTED, SHIELDED CABLE.
-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

FILE NAME =	USER NAME = bauerdl	DESIGNED - DAD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\p\WIDOT\BAUERDL\0108315\ts05.dgn		DRAWN - BCK	REVISED -			361	06-00214-18-RP	KANE	451	256
		CHECKED - DAD	REVISED -			<b>TS-05</b>		CONTRACT NO. 63598		
		DATE - 10-28-09	REVISED -			SCALE: NONE SHEET NO. 1 OF 6 SHEETS STA. TO STA.		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		



**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST**

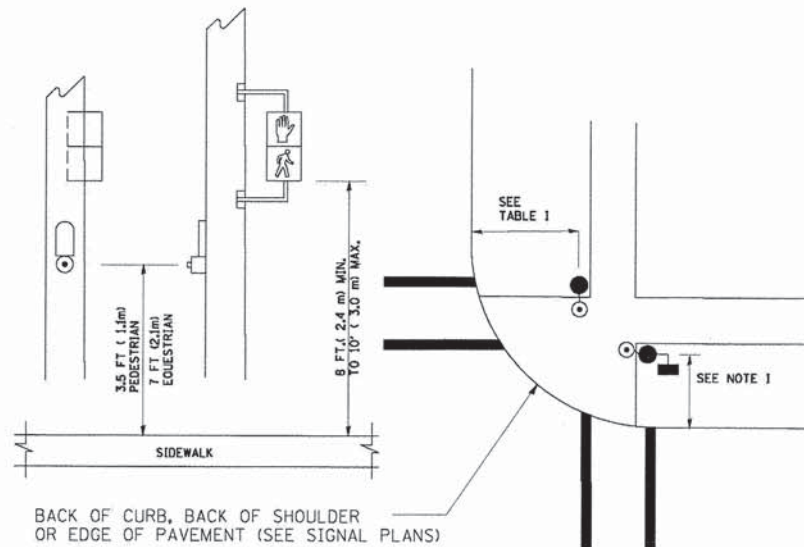
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



**NOTES:**

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

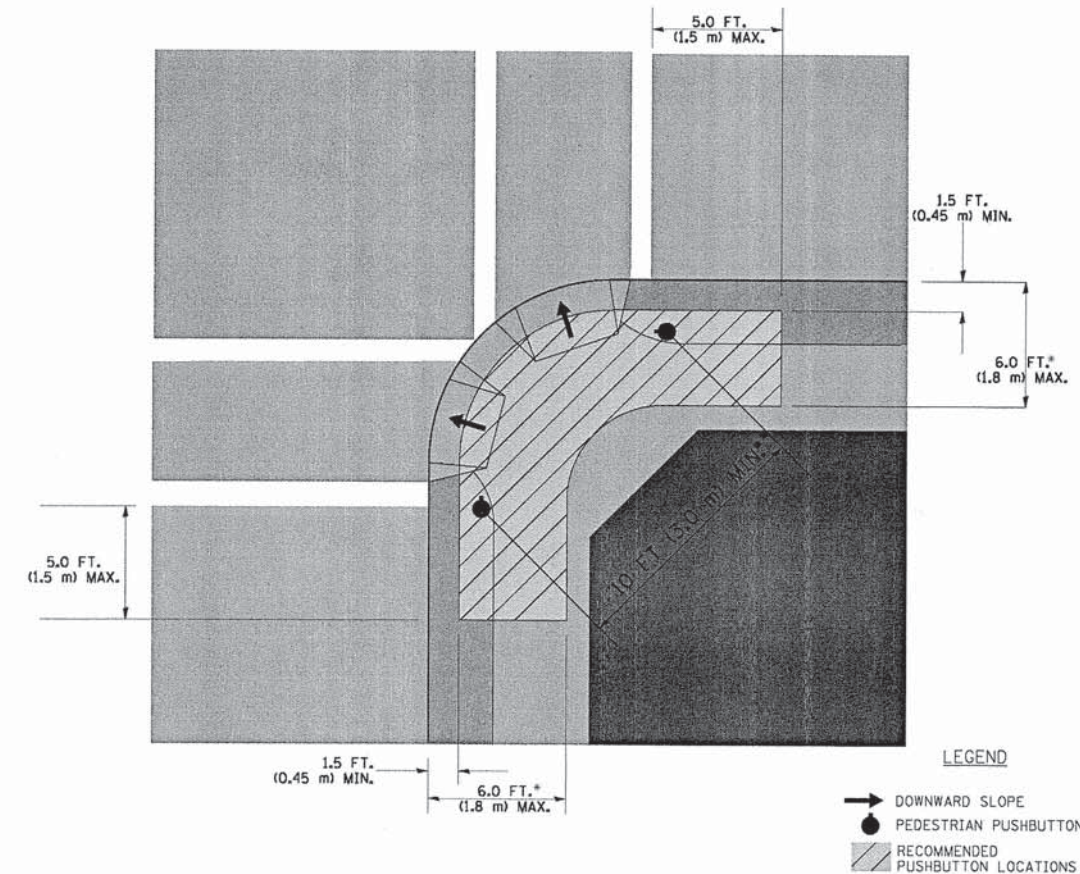
**PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST**



**NOTES:**

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

**RECOMMENDED PUSHBUTTON LOCATIONS**



- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT ( 1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

**NOTES:**

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

**TRAFFIC SIGNAL EQUIPMENT OFFSET**

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

**NOTES:**

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

FILE NAME =	USER NAME = bwardl	DESIGNED - DAD	REVISED -
c:\pwork\PW1001\BAUERDL\d0108315\ts05.dgn		DRAWN - BCK	REVISED -
		CHECKED - DAD	REVISED -
		DATE - 10-28-09	REVISED -

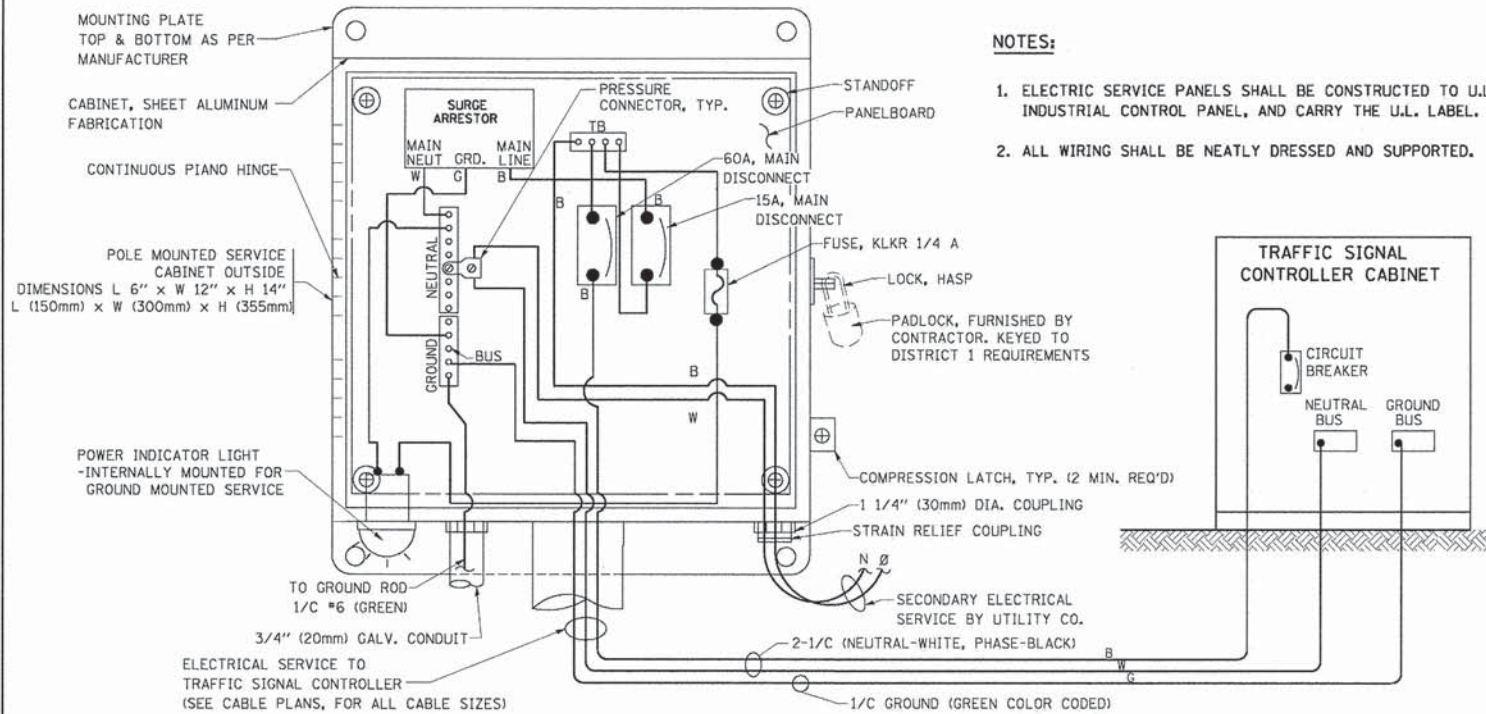
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

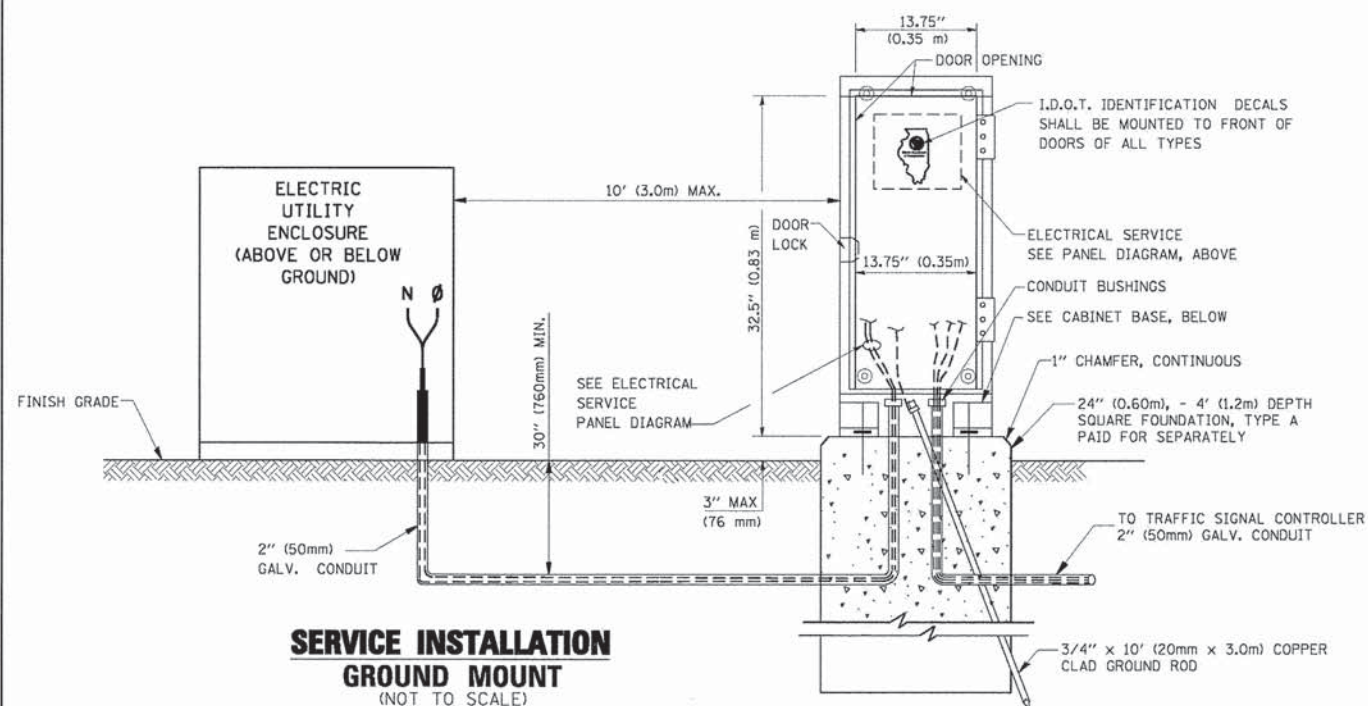
SCALE: NONE SHEET NO. 2 OF 6 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	257
TS-05		CONTRACT NO. 63598		
FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT				



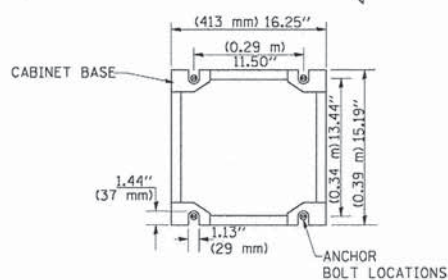


**ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)**  
**SERVICE INSTALLATION POLE MOUNT (SHOWN)**  
 (NOT TO SCALE)



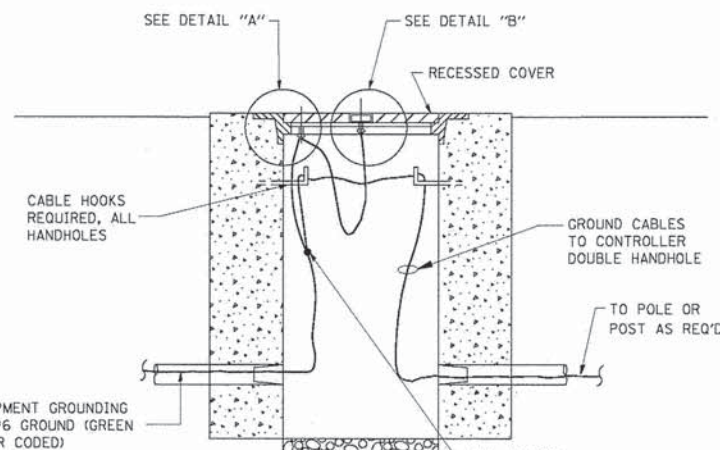
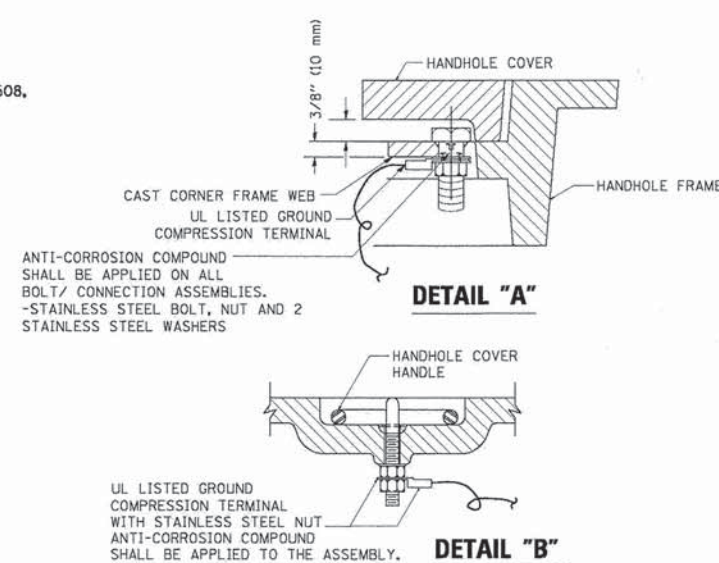
**SERVICE INSTALLATION GROUND MOUNT**  
 (NOT TO SCALE)

**CABINET - BASE BOLT PATTERN**  
 (NOT TO SCALE)

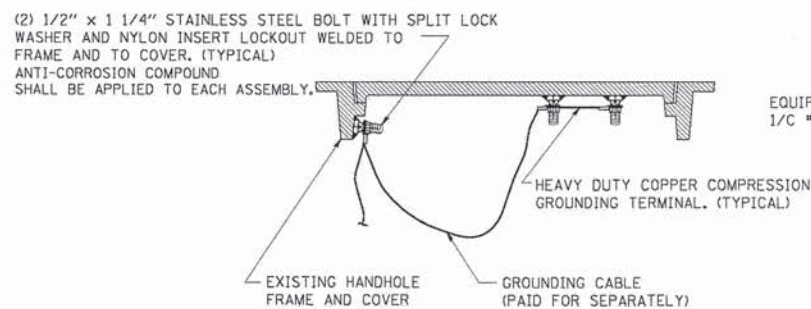


**NOTES:**

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



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

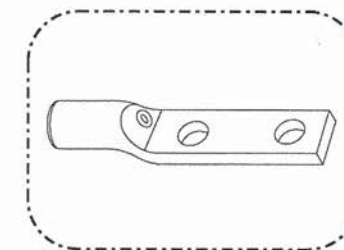


**EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL**  
 (NOT TO SCALE)

**NOTES:**

**GROUNDING SYSTEM**

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4\"/>
- 2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
- 3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- 4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



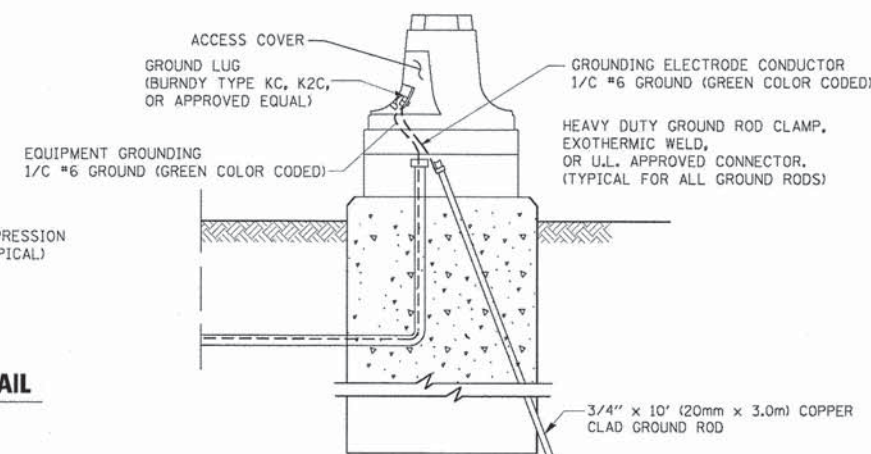
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



3/4\"/>

**NOTES:**

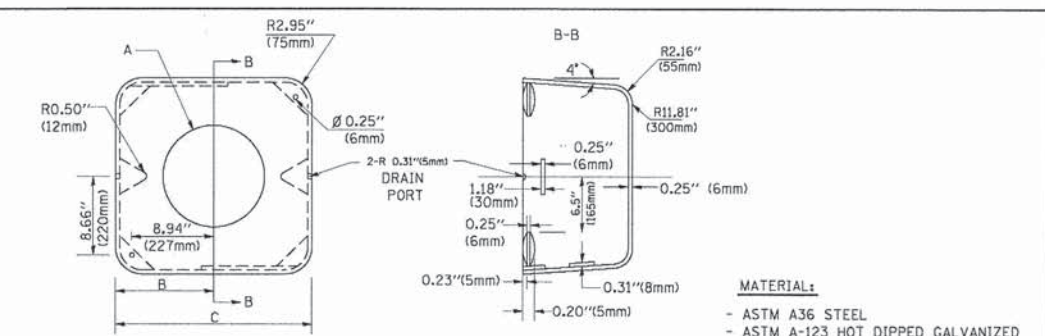
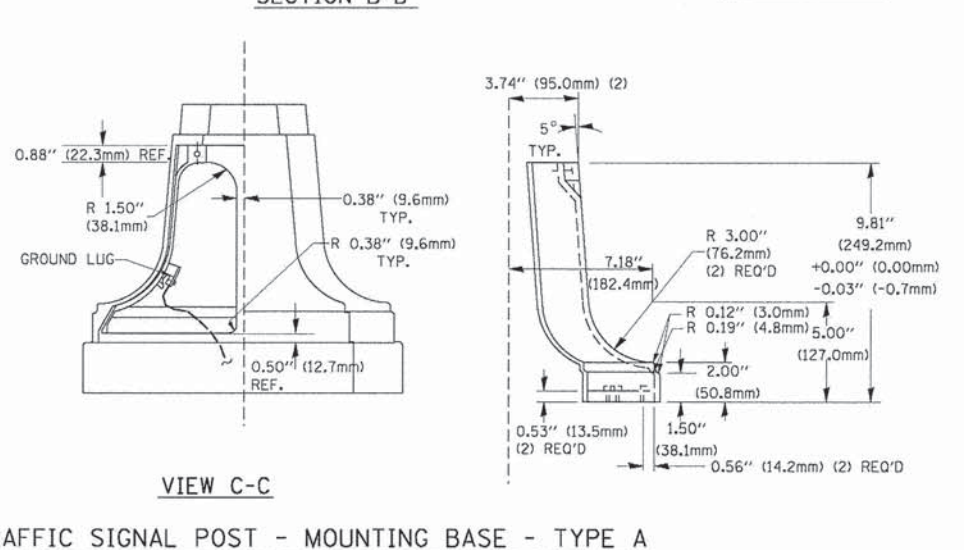
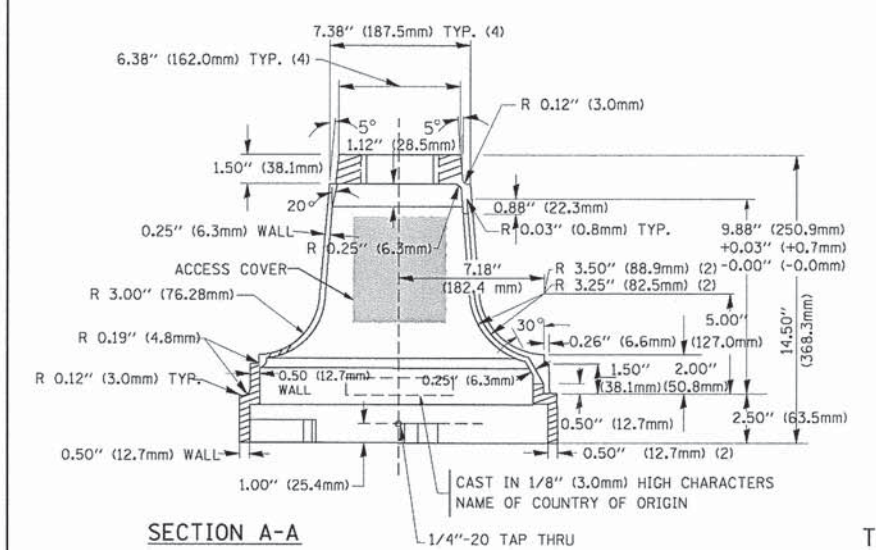
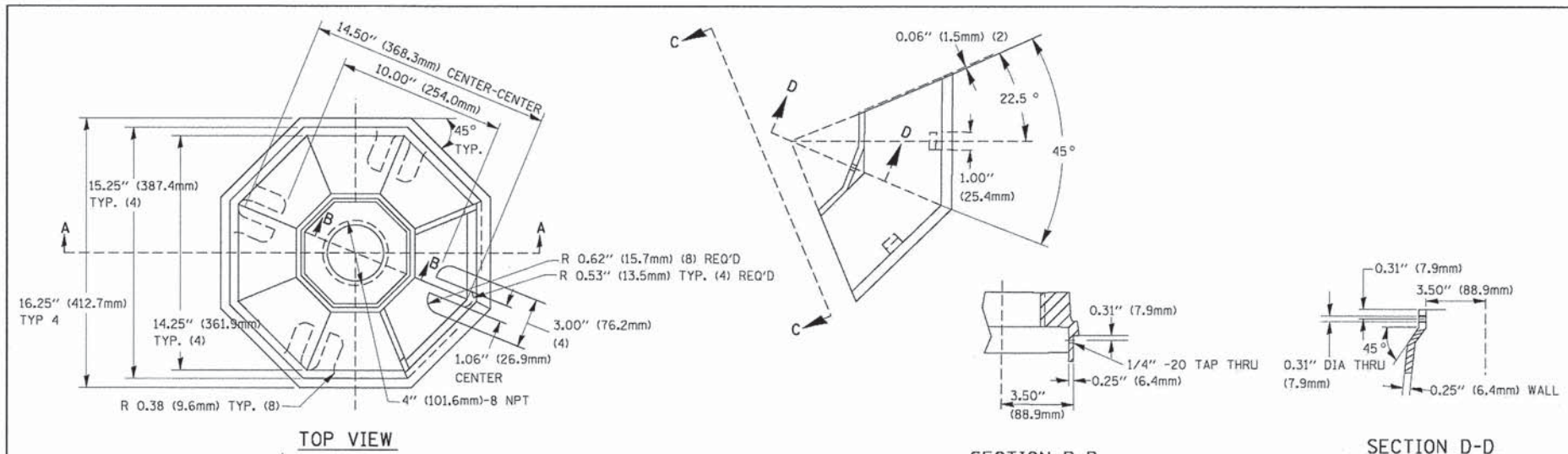
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



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

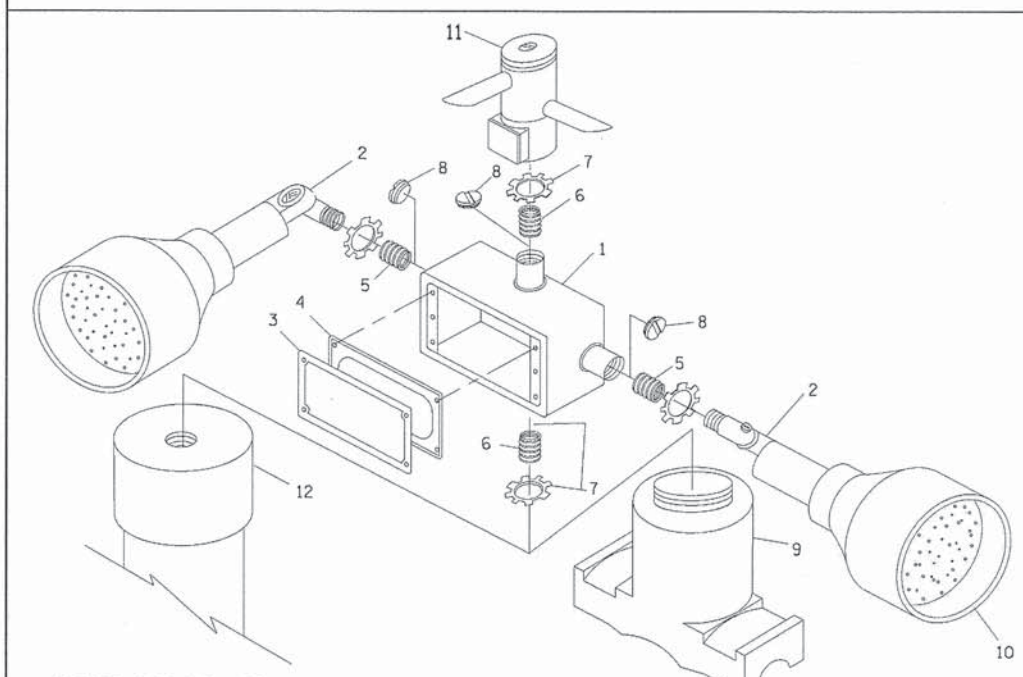
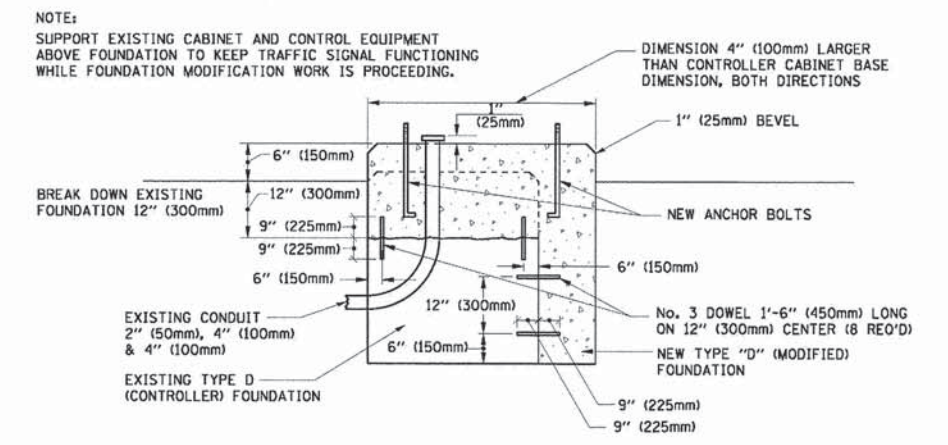
FILE NAME =	USER NAME = bauerd1	DESIGNED - DAD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>			F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 258
PLT SCALE = 50.0000' / IN.	CHECKED - DAD	DATE - 10-28-09	REVISED -		SCALE: NONE	SHEET NO. 3 OF 6 SHEETS	STA. TO STA.	<b>TS-05</b>		CONTRACT NO. 63598		
PLT DATE = 11/4/2009					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							





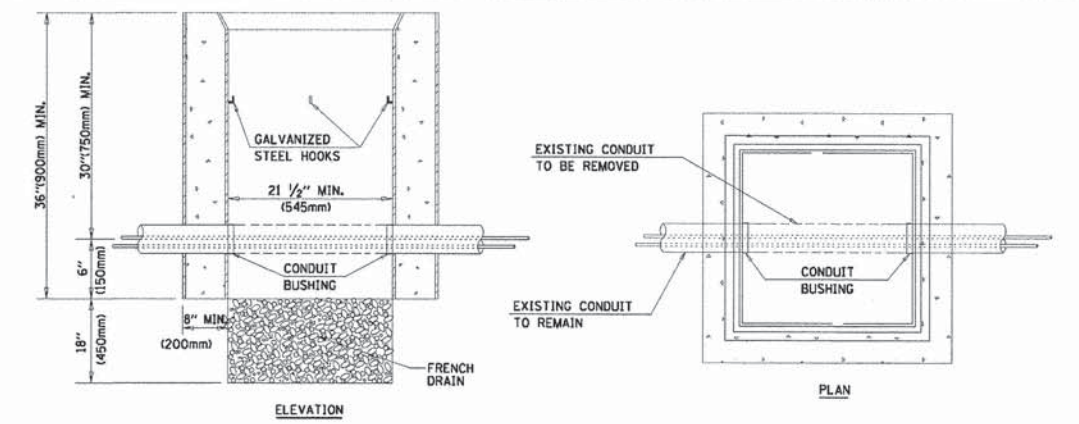
A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5\"(241mm)	19\"(483mm)	7\"(178mm) - 12\"(300mm)	53 lbs (24kg)
VARIABLES	10.75\"(273mm)	21.5\"(546mm)	7\"(178mm) - 12\"(300mm)	68 lbs (31 kg)
VARIABLES	13.0\"(330mm)	26\"(660mm)	7\"(178mm) - 12\"(300mm)	81 lbs (37 kg)
VARIABLES	18.5\"(470mm)	37\"(940mm)	7\"(178mm) - 12\"(300mm)	126 lbs (57 kg)

- NOTES:
- DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
  - THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
  - THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.



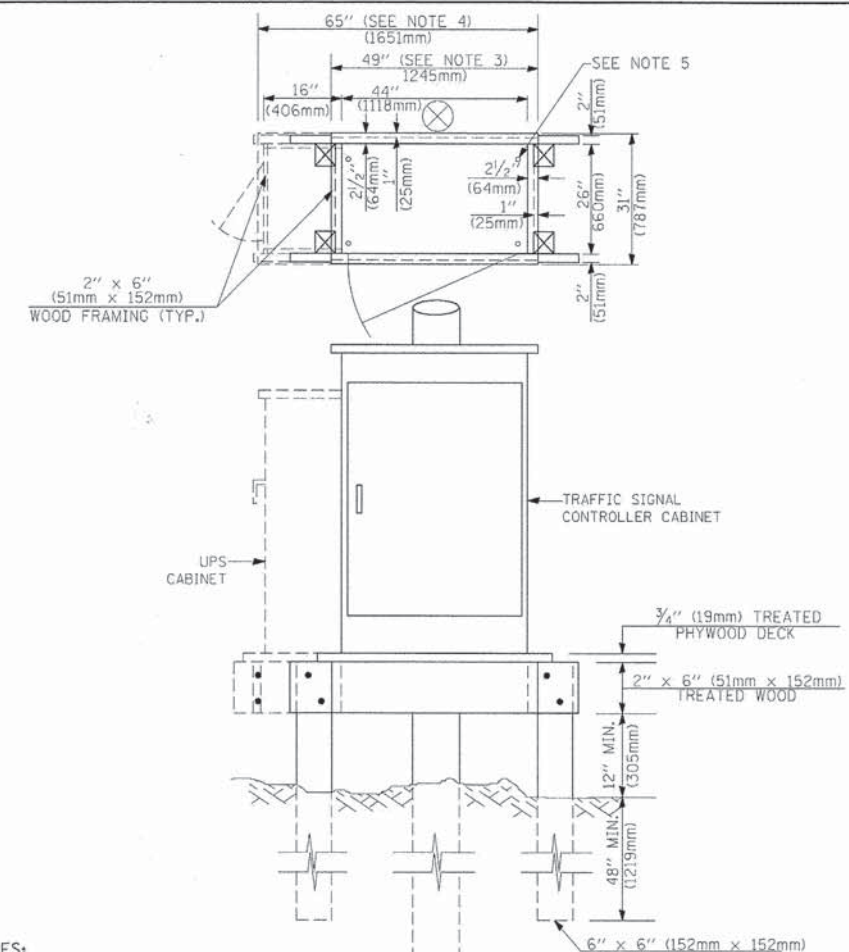
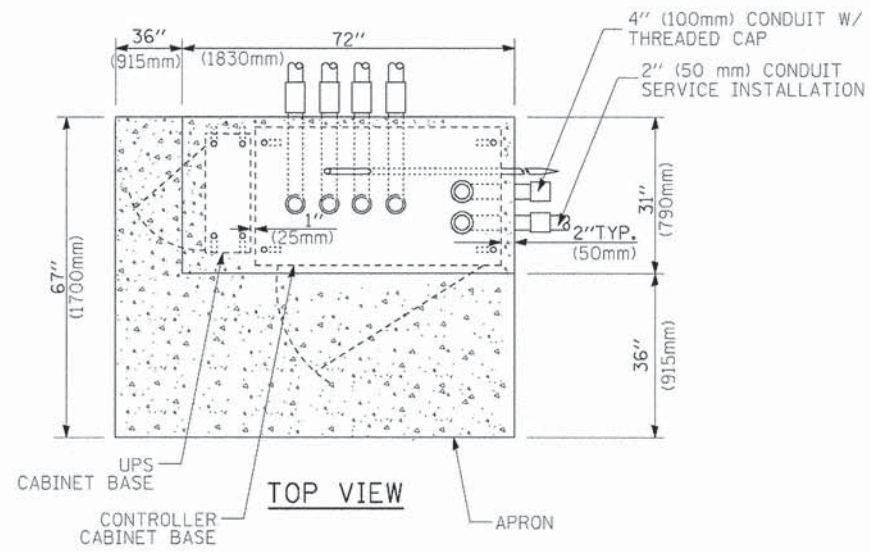
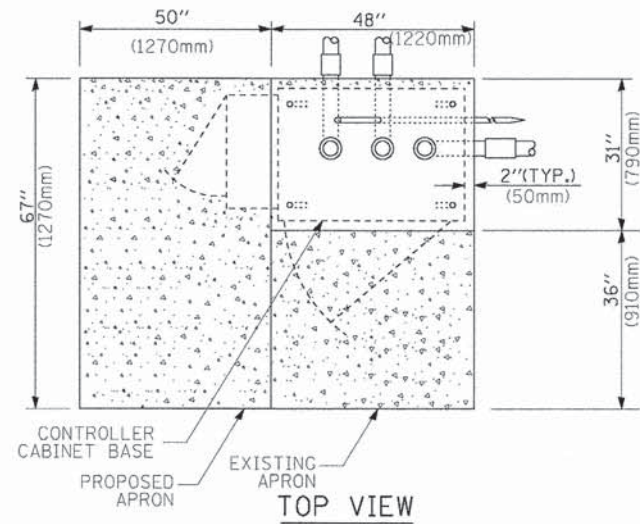
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\"(19 mm) CLOSE NIPPLE
7	3/4\"(19 mm) LOCKNUT
8	3/4\"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT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

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



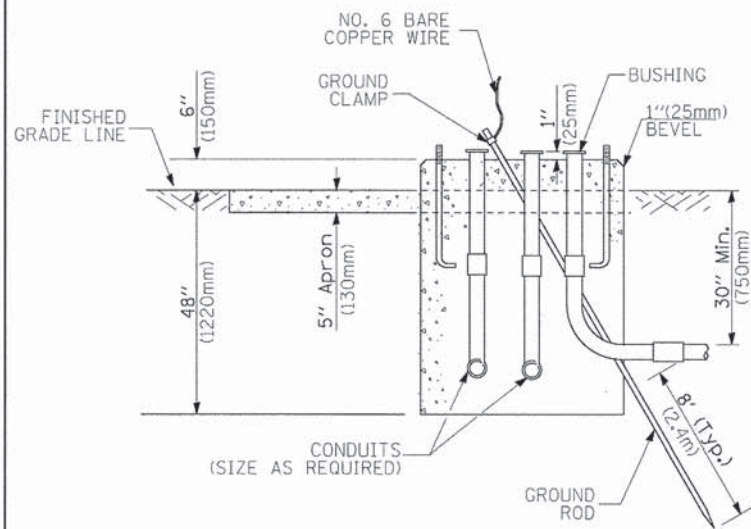
- NOTES:
- HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
  - REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.



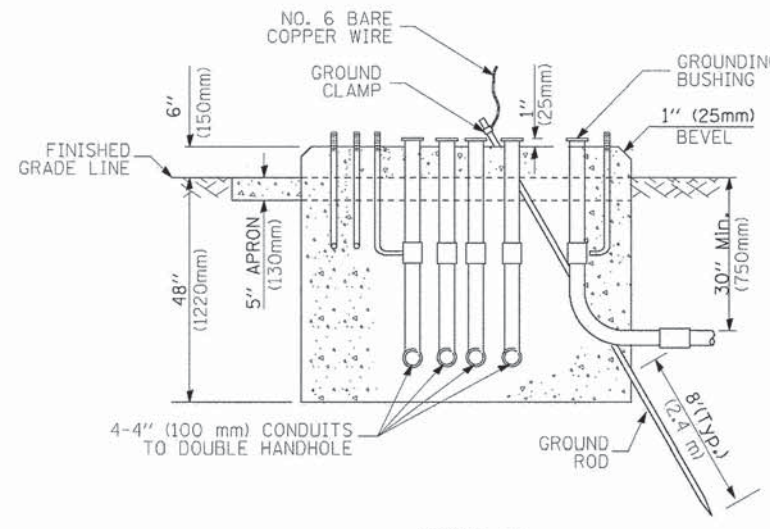


- NOTES:**
1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
  2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
  3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
  4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
  5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
  6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

**TEMPORARY SIGNAL CONTROLLER WOOD SUPPORT PLATFORM**



**TYPE D FOR GROUND MOUNTED CONTROLLER CABINET AND UPS BATTERY CABINET**



**TYPE C FOR GROUND MOUNTED CONTROLLER CABINET AND UPS BATTERY CABINET**

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

**CABLE SLACK**

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0-L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

**VERTICAL CABLE LENGTH**

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

**DEPTH OF FOUNDATION**

Mast Arm Length	Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

- NOTES:**
1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (QU) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
  2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
  3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
  4. For mast arm assemblies with dual arms refer to state standard 878001.

**DEPTH OF MAST ARM FOUNDATIONS, TYPE E**



**Existing Structure:**

Single-span ballasted deck plate girder bridge, 52' long and 14' wide, with 4-W36x300 steel beams supported by semi-gravity type abutments. Built as Chicago & Northwestern Railroad over Illinois Route 25 in 1974 under Section 49-SB-1. The contractor must remove the existing structure and replace it with a four span rolled beam superstructure supported on driven steel pile bents. A temporary Shoo-fly track and bridge will be constructed.

**Benchmark:**  
 BM-19: "Aluminum Disk" set in concrete, 0.10± mile south of Gilbert Street on east side of Illinois Route 25, 4'± from split rail fence. Elevation 724.23. (NGVD 1929)

**LOADING COOPER E-80**  
 IMPACT: Diesel Impact  
 Allow Imposed Dead Load of 30" of Ballast

**DESIGN SPECIFICATIONS**

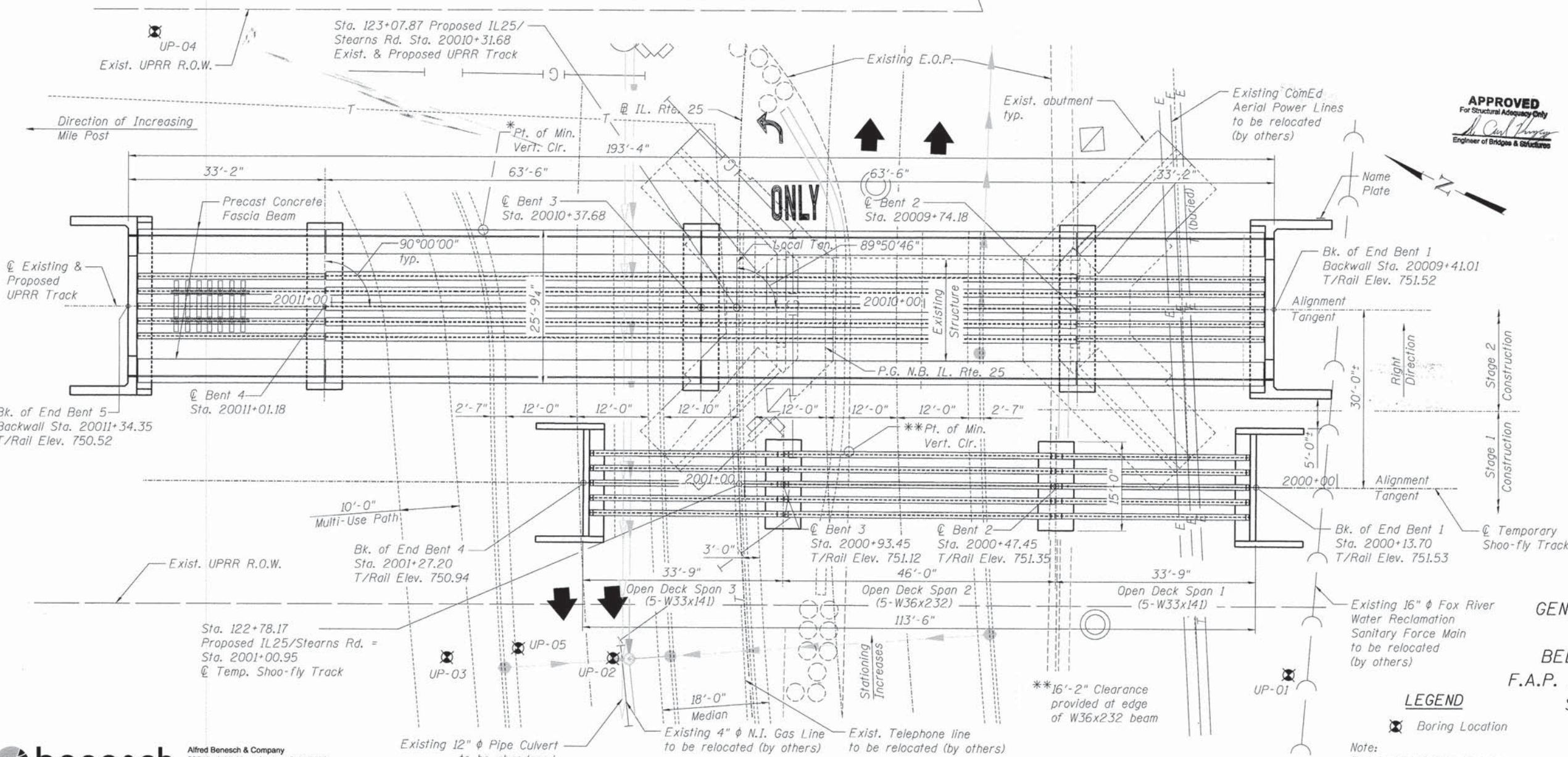
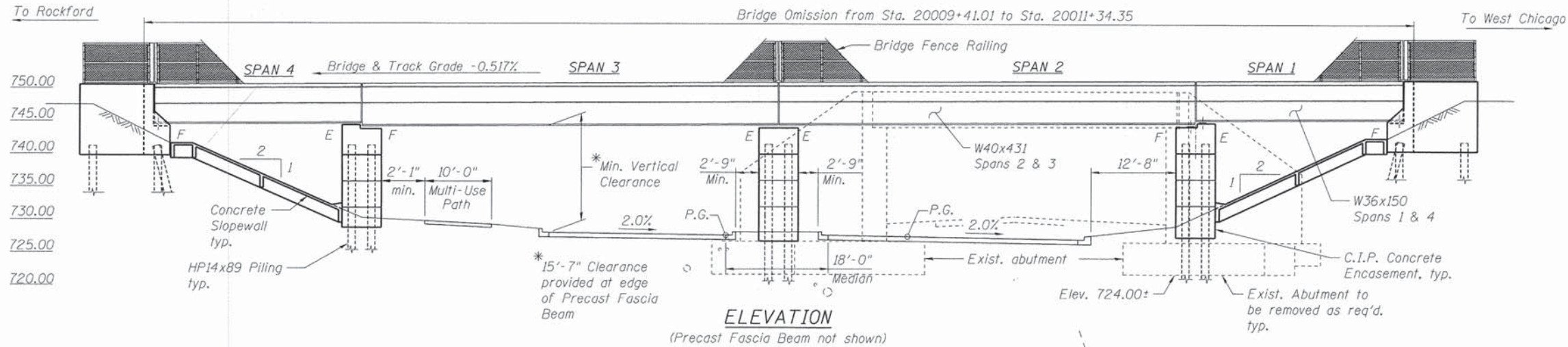
2011 AREMA Specifications  
 Live Load Deflection: L/640  
 Permanent Bridge  
 Design Speed: 50 m.p.h.  
 Temporary Shoo-fly Bridge  
 Design Speed: 30 m.p.h.

**DESIGN STRESSES**

**FIELD UNITS**  
 $f'_c = 4,000$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 50,000$  psi (Structural Steel)

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
 Design Spectral Acceleration at 1.0 sec. ( $S_{D1}$ ) = 0.089g  
 Design Spectral Acceleration at 0.2 sec. ( $S_{D5}$ ) = 0.152g  
 Soil Site Class = D



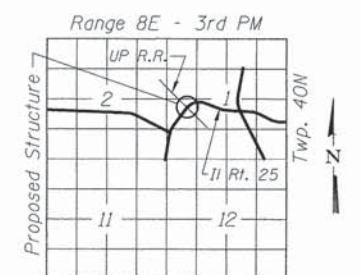
Railroad utilities may exist within UPRR right-of-way. Prior to the start of any construction or excavation, utility relocations will have to be coordinated with the UPRR.

**APPROVED**  
 For Structural Adequacy Only  
 H. Carl Thayer  
 Engineer of Bridges & Structures

LARRY R. BELLISAR  
 081-004910  
 LICENSED PROFESSIONAL  
 STRUCTURAL  
 ENGINEER  
 STATE OF ILLINOIS

EXPIRATION DATE: 11-30-2014  
 DATE: 12-14-2012

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AREMA Manual for Railway Engineering.



**LEGEND**

⊗ Boring Location  
 Note:  
 For Index of Drawings see Sheet UP-4.

**GENERAL PLAN AND ELEVATION**  
 U.P.R.R. BRIDGE 37.71  
 BELVIDERE SUBDIVISION OVER  
 F.A.P. 361 ROUTE IL 25/STEARNS RD.  
 SECTION 06-00214-18-RP  
 KANE COUNTY  
 STATION 20010+31.68  
 STRUCTURE NO. 045-3168

**benesch**  
 engineers - scientists - planners  
 Alfred Benesch & Company  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
Perim.Br.-001.GPE.dgn		CHECKED - LRB	REVISED -
		DRAWN - RMG	REVISED -
		CHECKED - LRB	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

SHEET NO. UP-1 OF UP-52 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	261
			CONTRACT NO. 63598	

ILLINOIS FED. AID PROJECT

X:\100005\10074\Engineering\_Documents\_Phase\_II\SN\_045\_3168\_UPRR\_Bridge\PLANS\Perim.Br.-001.GPE.dgn 8:44:28 AM 1/5/2013



**GENERAL NOTES:**

- All construction, workmanship and materials shall be in accordance with the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, dated January 1, 2012, and the 2011 American Railway Engineering and Maintenance-of-way Association (AREMA) manual for Railway Engineering. In the event of conflicts between specifications, the more restrictive will apply.
- The proposed superstructure and substructure are designed in accordance with the 2011 AREMA Manual, Chapter 8 - Concrete Structures and Foundations, and Chapter 15, Steel Structures.
- The proposed superstructure and substructure have been designed for Cooper E80 Live Loading plus Impact and 30 inches total depth of ballast, (or Alternate Live Load where applicable).
- All information shown on these plans regarding location of the existing track and existing ground elevations are based on information provided by survey including preliminary general arrangement.

**DIVISION OF RESPONSIBILITY:**

- A. Railroad
- Remove rail and other track material as required, and perform cut-overs for proposed track and Temporary Shoo-fly track.
  - Provide and install bridge marker signs at each end of bridge.
- B. Contractor
- Coordinate all construction activities with the railroad.
  - Provide and install new ballast, ties, rail and OTM for proposed track and Temporary Shoo-fly track.
  - Before ordering any material, the contractor shall make a detailed field inspection of the site, verifying all pertinent dimensions and elevations. Any variations in dimensions or elevations from those shown on the plans shall be reported immediately to the Engineer.
  - Verify the location, relocation, abandonment, and/or temporary support of all utilities affected by the construction of the structure and embankment and coordinate these activities with the appropriate utility companies, agencies and/or authorities. For information on, and relocation of, fiber optic cable, call 1-800-336-9193.
  - Apply for and obtain all construction permits necessary to perform the work.
  - Provide the railroad with a detailed construction plan defining the activity, schedule and procedure for each aspect of the work. Construction shall not begin until the construction plan has been approved by the railroad.
  - Supply all material and perform all work not supplied or performed by the railroad.
  - Provide all temporary shoring and/or bracing required to support and protect the existing embankments and track affected by the work. Provide the railroad with details, design and procedure for all temporary shoring and/or bracing. All temporary shoring and bracing shall be designed, signed and sealed by a Structural Engineer licensed in the State of Illinois. All temporary shoring and bracing must be submitted to and approved by the UPRR AVP Design and Construction Design prior to beginning construction. The provisions of UPRR Guidelines for Temporary Shoring shall be met.
  - Construction submittals to be designed per UPRR and AREMA requirements and reviewed by the Engineer and UPRR.
  - Accomplish activities within the schedule specified in the approved construction plan.

**CAST-IN-PLACE CONCRETE NOTES:**

- All concrete material, placement and workmanship shall be in accordance with Chapter 8 of the 2011 edition of AREMA.
- Minimum compressive strength - 4000 lb. per square inch at 28 days.
- Exposed surfaces shall be formed in a manner that will produce a smooth and uniform appearance without rubbing or plastering. Exposed edges of 90 degrees or less are to be chamfered  $\frac{3}{4}$ " x  $\frac{3}{4}$ ". Top surface to have a smooth finish, free of all float or trowel marks with the exception that a broom finish be used on all walkway surfaces.
- Concrete shall be proportioned such that the water-cementitious material ratio (by weight) does not exceed the values in AREMA Table 8-1-9. Cast-in-place concrete must contain a minimum of 565 pounds of cementitious material per cubic yard of concrete. If fly ash is used with cement it shall be limited to 15% of cementitious material.
- Cement shall be Type I, II or III Portland Cement per ASTM C150.
- Course aggregate shall be Size No. 67.
- Fine aggregate shall be natural sand.
- Aggregates shall be graded in accordance with ASTM C33.
- Air content shall be between 5% and 7% (by volume).
- Admixtures, other than air entrainment, shall not be used without approval by the Engineer.
- Membrane curing compound shall conform to ASTM C309 Type 2.
- Apply Thoroc Epoxy Adhesive 24LPL or approved alternate before placing new concrete against hardened surfaces.
- Construction joints are permitted only where shown on the drawings.
- Concrete for permanent bridge shall have an architectural treatment as shown on the plans.
- The Contractor shall use self-consolidating concrete (SCC) for all bent encasement concrete. The self-consolidating concrete shall conform to all requirements as specified in the Special Provisions. Cost of SCC shall be included with the cost of Concrete Structures (Special).
- The Contractor shall provide adequate forms to contain the increased hydraulic pressure of the self-consolidating concrete.

**REINFORCING STEEL**

- Reinforcing steel for abutment, bents and wingwalls for the permanent bridge shall be epoxy-coated, deformed, new billet bars per current ASTM A615 specifications and meet the requirements of AREMA Section 1.6. Reinforcement bars designated (E) shall be epoxy coated.
- Reinforcing steel for the temporary bridge shall be plain (black), deformed, new billet bars per current ASTM A615 specifications and meet the requirements of AREMA Section 1.6.
- Reinforcing steel requiring field welding or bending shall conform to ASTM A706 Specifications, Grade 60. Fabrication of reinforcing steel shall be per Chapter 7 of the CRSI Manual of Standard Practice. Dimensions of bending details shall be out to out of bars.
- Reinforcing steel is to be blocked to proper location and securely wired against displacement. Tack welding of reinforcing is prohibited. Minimum concrete cover not otherwise noted shall meet 2011 AREMA requirements.

**PRECAST CONCRETE NOTES:**

- All concrete material, placement and workmanship shall be in accordance with Chapter 8 of the 2011 edition of AREMA.
- Minimum compressive strength - 5,000 lb. per square inch at 28 days.
- Exposed surfaces shall be formed in a manner that will produce a smooth and uniform appearance without rubbing or plastering. Exposed edges of 90 degrees or less are to be chamfered  $\frac{3}{4}$ " x  $\frac{3}{4}$ ". Top surface to have a smooth finish, free of all float or trowel marks.
- Concrete shall be proportioned such that the water-cementitious material ratio (by weight) does not exceed the values in AREMA Table 8-1-9. Precast concrete must contain a minimum of 610 pounds of cementitious material per cubic yard of concrete.
- Cement shall be either Type I or Type III Portland Cement.
- Aggregates shall be graded in accordance with ASTM C33.
- Coarse aggregate shall be Size No. 67.
- Fine aggregate shall be natural sand.
- Air content shall be between 5% and 7% (by volume).
- Admixtures shall not be used without approval by the Engineer.
- Curing shall be accomplished by wet curing or the application of a Type 2 Membrane.
- For precast elements, the fabricator shall stencil the fabricator's name, date of fabrication, the bridge number, lifting weight and piece mark on each component.
- The production facility must be pre-certified. Production procedures for the manufacture of precast members shall be in accordance with AREMA and the current edition of the Precast Concrete Institute's Manual MNL 116 for quality control.
- Dimensional tolerances governing the manufacture of precast members shall conform to Division VI, Section 6.4.6 of the Precast Concrete Institute's Manual MNL 116 for quality control. Tolerance for location of lifting devices shall be  $\pm 1/2$ ".
- The Fabricator will be responsible for the design of the lifting loops or lift anchors for the erection of the precast members. Required details to be coordinated with the Contractor and approved by the Engineer. The area around all lifting loops shall be recessed so that the loops can be removed to a depth of  $\frac{3}{4}$ " and grouted. Properly designed lift anchors are acceptable in lieu of lifting loops.
- The fabricator will be responsible for the loading and properly securing the precast concrete members for shipment. All concrete components shall be made available, at the railroad's discretion, for inspection by the Engineer-of-Record and the railroad at the fabricator's plant prior to shipment.
- For notes regarding Precast/Prestressed Fascia Beam, see Sheet UP-31.



FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
Perm_Br_002_Constnotes1.dgn		CHECKED - LRB	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/13/2012	CHECKED - LRB	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
CONSTRUCTION NOTES (1 OF 2)**

SHEET NO. UP-2 OF UP-52 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	262
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				



**STRUCTURAL STEEL NOTES:**

**DESIGN STRESSES:**

Design stresses for the following materials are in accordance with AREMA.

Structural Steel: ASTM A709, 50W Fy = 50,000 psi  
 Structural Steel: ASTM A709, Grade 36 Fy = 36,000 psi

**DESIGN LOADING:**

- \* Live Load, Longitudinal Beams = Cooper E-80 or Alternative Live Load Chapter 15
- Impact = 2011 AREMA Chapter 15
- Longitudinal Load = 2011 AREMA Chapter 15
- Other Loads = 2011 AREMA Chapter 15
- Ballast = 30" deep (accounts for future raises)
- \* Beams were analyzed and designed to satisfy deflection criteria under E-80 or Alternate Loading, Impact and Dead Loads without any composite action.

**STRUCTURAL STEEL:**

1. Fabrication and shop assembly shall comply with 2011 AREMA Chapter 15, Part 3: "Fabrication".
2. Fabrication of structural steel shall be performed by a fabricator certified under AISC Certification Program, Category CBR, Major Steel Bridges, Fracture Critical Endorsement.
3. Structural steel shall conform to the following requirements:

**Permanent Bridge:**

- Beams . . . . . ASTM A709, Grade 50WT2
- Ballast curbs, diaphragms, diaphragm connectors, deck support brackets and sole plates . . . . . ASTM A588
- Deck plates, cover plates, backwall plates and flashing plates . . . . . ASTM A709, Grade 36
- Fence posts . . . . . ASTM A500 Grade B
- Anchor rods (anchor bolts, swedge bolts) . . . . . ASTM F1554, Grade 36
- Embedded structural steel and sole plates (Fascia Beam) . . . . . ASTM A588
- Anchor Bolts (Fascia Beam) . . . . . ASTM F1554, Grade 105
- Temporary Bridge:**
- Beams, diaphragms, stiffeners and sole plates . . . . . ASTM A709, Grade 36
- Handrail . . . . . ASTM A709, Grade 36
- Anchor Bolts . . . . . ASTM F1554, Grade 36
- Pile Plates . . . . . ASTM A36

4. Calculated weight of Structural Steel =

**Permanent Bridge:**

- ASTM A709, Grade 50WT2 . . . . . 336,000 lbs.
- ASTM A588 . . . . . 70,035 lbs.
- ASTM A36 . . . . . 93,456 lbs.
- ASTM F1554 Grade 36 . . . . . 273 lbs.
- Misc. Steel (Drain Pipe) . . . . . 76 lbs.
- Total = 499,840 lbs.

**Temporary Bridge:**

- ASTM A709, Grade 36 . . . . . 114,720 lbs.
- ASTM F1554 Grade 36 . . . . . 195 lbs.
- ASTM A709, Grade 36 (Handrail) . . . . . 1,065 lbs.
- ASTM A709, Grade 36 (Pile Plates) . . . . . 9,170 lbs.
- ASTM A709, Grade 36 (Bent bracing) . . . . . 2,892 lbs.
- ASTM A709, Grade 36 (Misc. Steel) . . . . . 364 lbs.
- Total = 128,406 lbs.

5. Structural steel shall be of the type and quality as designated on the plans. Material supplied shall meet the longitudinal Charpy V-notch requirements as specified in the AREMA provisions.
6. The wide flange beams for the permanent and temporary structures are noted as conforming to the supplemental requirements for non-fracture critical impact test requirements noted in Table 1-2, Section 1.2.1, Chapter 15 of the AREMA specifications for Zone 2 service temperature. These components are noted on the plans as notch toughness requirements (N.T.R.).
7. All shop and field bolted connections shall use high strength bolts (including nuts and washers) conforming to ASTM A325 Type 3. All bolts shall be 3/4" diameter unless otherwise noted. Holes for bolts shall be 1/16" diameter larger than nominal bolt diameter unless otherwise noted. All high strength steel bolts shall have one hardened steel washer per bolt under the element to be turned and shall be installed using the "turn of the nut method". Alternative bolt fastening methods are subject to approval of the Engineer.

**STRUCTURAL STEEL NOTES:**

8. Bolts shall be placed so that the bolt heads are on the outside (exposed) surface of member unless shown otherwise on the plans. Threads shall be excluded from the shear plane in all connections.
9. Center to center dimensions for all bolts shall be as noted.
10. Machine bolts for shipment shall be ASTM A307.
11. Welding: All welding shall be in accordance with the current edition of the Bridge Welding Code, AWS D1.5 and shall also conform to the applicable provisions of AREMA, Chapter 15. Welding to be allowed only as shown on design drawings and approved shop drawings.
12. Welded joints are to be AWS prequalified. All welding shall be done to minimize distortion. The welding sequence and procedures to be used shall be submitted for approval to the Engineer.
13. Fully automatic submerged arc welding shall be required for this project. Manual shielded arc welding or semiautomatic submerged arc welding will be allowed only if fully automatic submerged arc welding is not practical.
14. The fabricator shall submit copies of welder's certificates for semi-automatic welding process. If overhead welding is planned during fabrication, certificates for overhead semi-automatic welding process shall also be submitted to the Engineer.
15. In addition to the requirements of AREMA Chapter 15, Sections 1.14 and 3.5, nondestructive testing of welds shall be performed in accordance with the detailed specifications.
16. Grinding shall be in the longitudinal direction.
17. The fabricator shall submit three (3) copies of detailed shop drawings prior to beginning fabrication. Fabrication shall not begin until shop drawings are approved.
18. The fabricator shall shop assemble the beam span prior to shipping. During assembly and reaming all bolts shall be placed in holes as the work progresses to assure proper fit.
19. Shop assembled span shall be inspected by the Engineer before the steel is disassembled and shipped to the erection site.
20. All steel components shall be inspected by the Engineer before shipment.

**WATERPROOFING:**

1. Waterproofing and protective asphalt panels shall comply with the recommendations of Chapter 8, Part 29 of AREMA. The waterproofing shall consist of one layer of 3/32" Butyl Rubber Membrane waterproofing system. Protective asphalt panels shall be placed in two - 1/2" layers with total thickness not less than 1" and shall be laid with joints staggered. Protective asphalt panels shall be bonded to the membrane and each other.
2. Four inches of ballast shall be placed over waterproofing and protective asphalt panels immediately upon acceptance by the Engineer. No construction traffic is allowed on waterproofing until the ballast covering is in place. Waterproofing installation shall be observed and approved by the manufacturer's representative.

**PILE DRIVING**

1. All piles shall be driven to the capacity shown on the plans. If any numbered pile cannot be driven to the capacity shown, the Engineer must be notified.
2. Estimated capacity of driven piles shall be calculated using the Modified ENR Formula, with F.S. = 5 unless otherwise noted. Qualified Contractor QC personnel to verify nominal bearing capacity of piles and submit to the Engineer. Direct questions to the Engineer.
3. In lieu of the hammer selection criteria and use of the Modified ENR Formula, with F.S. = 5 specified in Section 02455 of the Specifications, the contractor shall conduct a wave equation analysis to establish the driving criteria at all pile foundations which specify a nominal required bearing above 600 kips. The analysis and calculations shall be submitted to the Engineer for approval.
4. The contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the substructures specified or approved by the Engineer before ordering the remainder of piles.
5. Mark every pile with a dimension indicating the pile depth from cut-off to point of the pile. The dimension should be rounded to the nearest foot.
6. The mark shall be welded on to outside face, low mile post side on the pile face, approximately 1' below the bottom of the cap, and in numbers of approximately 3" in height. If pile is not exposed, no mark is required.
7. All steel H-piles shall conform to ASTM A572, Grade 50.

**FIELD WELDING**

1. Welding must be accomplished with the SMAW or FCAW process. Welding must be in compliance with the requirements specified in AWS D1.5, except 5/16" fillet welds may be made with a single pass. Welding electrodes must be E7018 for SMAW or E70T-1 or E-70T-5 for FCAW.
2. Welders must possess valid certification. Welding must be performed by operators who have been qualified previously by tests as prescribed by the American Welding Society's standard qualification procedure to perform the work required. The qualifications of the personnel must be submitted to the Engineer in advance of the work.

**MISCELLANEOUS STEEL SPECIFICATIONS:**

1. Design and Workmanship - Per 2011 AREMA Manual for Railway Engineering.
2. Miscellaneous Steel - Per current ASTM A588 specifications unless otherwise noted.
3. Steel Coating - None.
4. Welding - Arc process per 2011 AREMA Manual for Railway Engineering and AWS D1.1 Structural Welding Code.

**MISCELLANEOUS MATERIAL NOTES:**

1. Bearing pads for beam spans shall be polyurethane pads (80 Durometer).
2. Bearing pads shall be shipped flat.
3. Bearing pads shall meet the requirements of Table 15-10-2 of the AREMA Manual for Railway Engineering.



Alfred Benesch & Company  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-565-0450 Job No. 10074

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
Perim_Br_003_Constnotes2.dgn	egrsmm	CHECKED - LRB	REVISED -
		DRAWN - RMG	REVISED -
		CHECKED - LRB	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
 CONSTRUCTION NOTES (2 OF 2)**

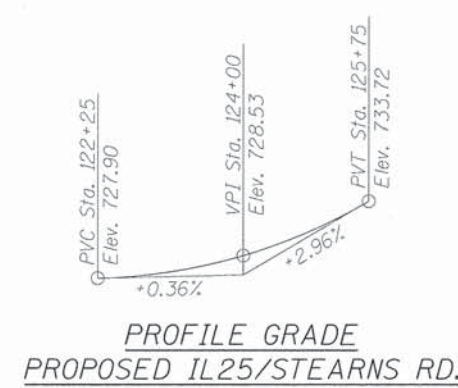
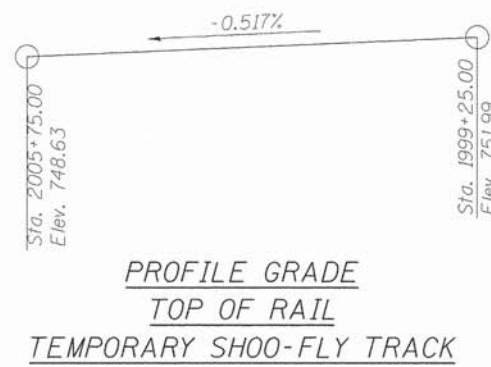
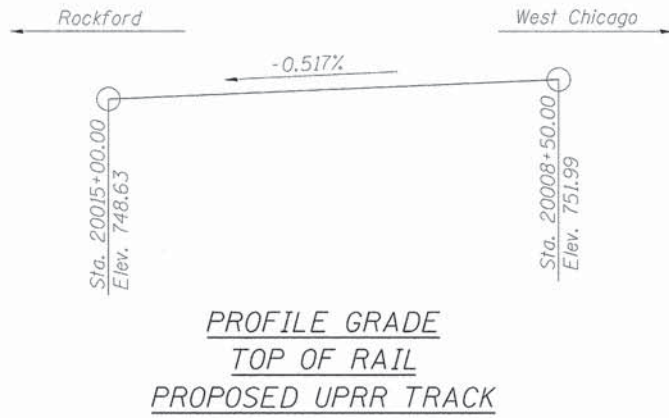
SHEET NO. UP-3 OF UP-52 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	263
				CONTRACT NO. 63598
ILLINOIS FED. AID PROJECT				



INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
UP-1	General Plan and Elevation
UP-2	Construction Notes (1 of 2)
UP-3	Construction Notes (2 of 2)
UP-4	Index of Drawings and Summary of Quantities
UP-5-12	Log of Borings
UP-13	Foundation Plan and Pile Details
UP-14	Construction Staging - Stage 1A
UP-15	Construction Staging - Stages 1B and 1C
UP-16	Temporary Support System Details
UP-17	End Bent Details (1 of 2)
UP-18	End Bent Details (2 of 2)
UP-19	Bents 2 and 4 - Plan and Elevation
UP-20	Bent 3 - Plan and Elevation
UP-21	Deck Cross Section
UP-22	Waterproofing Details
UP-23	Beam Framing Plan
UP-24	Beam Elevation and Design Data
UP-25	Assembly Details (1 of 2)
UP-26	Assembly Details (2 of 2)
UP-27	Structural Steel Details (1 of 2)
UP-28	Structural Steel Details (2 of 2)
UP-29	Deck Plate and Curb Layout
UP-30	Bridge Fence Railing Details
UP-31	Fascia Beam Details (1 of 3)
UP-32	Fascia Beam Details (2 of 3)
UP-33	Fascia Beam Details (3 of 3)
UP-34	Temporary Bridge General Plan and Elevation
UP-35	Temporary Bridge Pile Layout and Details
UP-36	Temporary Bridge End Bent Details
UP-37	Temporary Bridge Bents 2 and 3 Details
UP-38	Temporary Bridge Deck Plan
UP-39	Temporary Bridge Deck Sections, Details and Material Schedule
UP-40	Temporary Bridge Handrail Details
UP-41	Temporary Bridge Framing Plan
UP-42	Temporary Bridge Beam Details
UP-43	Temporary Bridge Precast End Bent Details
UP-44	Temporary Bridge Precast End Bent Wingwall Details
UP-45	Temporary Bridge Precast Bent Cap Details
UP-46	Existing Plans Sheet (1 of 7)
UP-47	Existing Plans Sheet (2 of 7)
UP-48	Existing Plans Sheet (3 of 7)
UP-49	Existing Plans Sheet (4 of 7)
UP-50	Existing Plans Sheet (5 of 7)
UP-51	Existing Plans Sheet (6 of 7)
UP-52	Existing Plans Sheet (7 of 7)



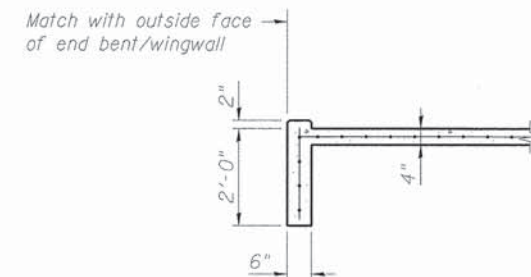
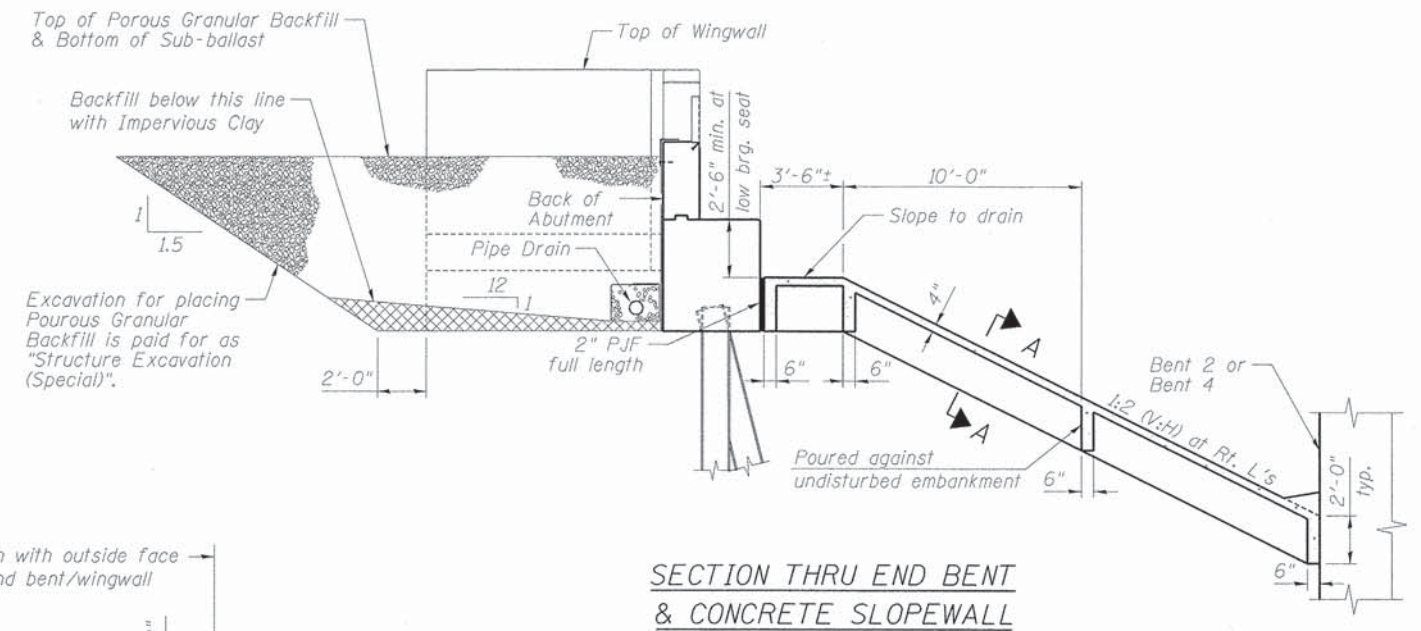
U.P.R.R. BRIDGE 37.71  
BUILT 201 BY STATE OF ILLINOIS  
OVER F.A.P. 361 ROUTE 1L 25/STEARNS RD.  
SECTION 06-00214-18-RP  
STATION 20010+31.68 LOADING COOPER E-80  
STRUCTURE NO. 045-3168

**NAME PLATE**  
See Std. 515001

SUMMARY OF BILL OF MATERIALS

PAY ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
20900110	Porous Granular Backfill	Cu. Yd.	228
* 50100300	Removal of Existing Structures No. 1	Each	1
50100400	Removal of Existing Structures No. 2	Each	1
50500105	Furnishing and Erecting Structural Steel	L. Sum	1
50800205	Reinforcement Bars, Epoxy Coated	Pound	27,300
50901730	Bridge Fence Railing	Foot	428
51100100	Slope Wall 4 Inch	Sq. Yd.	194
51201900	Furnishing Steel Piles HP14x89	Foot	5,705
51203900	Test Pile Steel HP14x89	Each	5
51500100	Name Plates	Each	1
58000100	Membrane Waterproofing	Sq. Ft.	3,932
58700300	Concrete Sealer	Sq. Ft.	5,350
Z0002300	Ballast	Cu. Yd.	40
Z0018905	Drill and Grout Bars	Each	96
Z0073500	Temporary Support System	L. Sum	1
X5020200	Structure Excavation (Special)	Cu. Yd.	1,019
X5030225	Concrete Structures (Special)	Cu. Yd.	388.2
X5120005	Driving Piles (Special)	Foot	5,705
X6013600	Pipe Underdrains 4" (Modified)	Foot	90
XX006847	Vinyl Fence, 4'	Foot	774
XX008386	Precast Concrete Box Segments	L. Sum	1
XX008626	Temporary Bridge	L. Sum	1
	Pile Shoes (Special)	Each	60
	Structure Marker Signs	Each	2

\* Estimated quantity for Removal of Existing Structures No. 1:  
Concrete = 579 Cu. Yd.  
Steel = 104,420 Pounds



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 side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

**benesch**  
engineers · scientists · planners

Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgr1mm	DESIGNED - JLS	REVISED -
Per...004_Gennotes.dgn		CHECKED - LRB	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/13/2012	CHECKED - LRB	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
INDEX OF DRAWINGS AND SUMMARY OF QUANTITIES

F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 264
ILLINOIS FED. AID PROJECT				CONTRACT NO. 63598

SHEET NO. UP-4 OF UP-52 SHEETS



**SOIL BORING LOG**

PAGE 1 of 2  
 DATE 4/25/2011  
 LOGGED BY RJ  
 GSI JOB No. 08032

Geo Services Inc. Geotechnical, Environmental & Civil Engineering  
 805 Amherst Court, Suite 204  
 Naperville, Illinois 60563  
 (630) 355-2656

ROUTE F.A. 361 DESCRIPTION Stearns Road (IL. Route 25) From Dunham Road To CC&P RR  
 SECTION 98-00214-02-BR LOCATION SEC. 1-SW 1/4, TWP. 40 N., RNG. 8 E., 3rd P.M.  
 COUNTY Kane DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE Diedrich Automatic

STRUCT. NO. 045-3168  
 Station -

BORING NO. UP-01  
 Station: 2000+08 UPRR  
 Offset: 31.5' Left  
 Ground Surface Elev. 732.2

DEPTH TH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST S (%)	Description	DEPTH TH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST S (%)	Surface Water Elev.	
									Stream Bed Elev.	Groundwater Elevation: First Encounter Upon Completion After _____ Hrs.
				18.0" TOPSOIL-black					<u>n/a</u>	
	AS	-	18			8			<u>n/a</u>	
730.7	2			SAND & GRAVEL-brown-medium dense (A-1)		11				
	5						11 NP	24		
	9		6				11			
	8						13			
726.7	-5	11 NP	4		-25	15 NP	9			
	5			SAND with Gravel-brown-medium dense (A-1-b)		12				
	9						12			
724.2	11	NP	14	SAND-brown-medium dense (A-3)		13	NP	20		
	2			CLAY-gray-stiff (A-6)		10				
	5						10			
	-10	8 NP	4				-30	15	1.25P	15
	2						8		121	
	4			CLAY-gray-stiff (A-6)		8				
	13	NP	4				8			
	3						8			
	1						-35	10	1.0B	14
	-15	1 NP	4			10		114		
	10					8				
	11					8				
	13	NP	4			5				
	8					10		114		
	12					8				
	-20	12 NP	20			-40	5	1.0B	17	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)  
 NR-No Recovery

**SOIL BORING LOG**

PAGE 2 of 2  
 DATE 4/25/2011  
 LOGGED BY RJ  
 GSI JOB No. 08032

Geo Services Inc. Geotechnical, Environmental & Civil Engineering  
 805 Amherst Court, Suite 204  
 Naperville, Illinois 60563  
 (630) 355-2656

ROUTE F.A. 361 DESCRIPTION Stearns Road (IL. Route 25) From Dunham Road To CC&P RR  
 SECTION 98-00214-02-BR LOCATION SEC. 1-SW 1/4, TWP. 40 N., RNG. 8 E., 3rd P.M.  
 COUNTY Kane DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE Diedrich Automatic

STRUCT. NO. 045-3168  
 Station -

BORING NO. UP-01  
 Station: 2000+08 UPRR  
 Offset: 31.5' Left  
 Ground Surface Elev. 732.2

DEPTH TH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST S (%)	Description	DEPTH TH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST S (%)	Surface Water Elev.	
									Stream Bed Elev.	Groundwater Elevation: First Encounter Upon Completion After _____ Hrs.
				CLAY LOAM-gray-medium stiff (A-6)					<u>n/a</u>	
							4			<u>n/a</u>
	5			CLAY-gray-stiff (A-6)						
	7						3			
	-45	9	-	18						
				CLAY LOAM-gray-medium stiff (A-6)						
	4						10B			
	6						26			
	-50	8	1.25B		21		-70	26	NP	14
				SANDY LOAM-gray-dense to very dense (A-2)						
							24			
				CLAY LOAM-gray-medium stiff (A-6)						
							20			
							26			
	-55	13	0.6B		17		657.2	-75	50/3	NP
				CLAY LOAM-gray-medium stiff (A-6)						
							20			
							26			
							114			
				End Of Boring @ -75.0' Hollow Stem Augers To -15.0' Rotary Drilling To Completion Diedrich Automatic Hammer						
							121			
							13			
	-60	4	0.6B		13		-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)  
 NR-No Recovery



FILE NAME =	USER NAME = rgramm	DESIGNED - JLS	REVISED -
Perm.Br_085.Borings.Ldgn		CHECKED - LRB	REVISED -
PLOT SCALE =		DRAWN - RMG	REVISED -
PLOT DATE = 12/13/2012		CHECKED - LRB	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
 LOG OF BORINGS (1 OF 8)**

SHEET NO. UP-5 OF UP-52 SHEETS

F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 265
CONTRACT NO. 63598				ILLINOIS FED. AID PROJECT

X:\100005\10074\Engineer\ng.Documents\Phase-II\SN\_045\_3168\_UPRR\_Bridge\PLANS\Perms.Br\_005\_Borings-1.dgn 3:08:33 PM 12/13/2012



<b>Geo Services, Inc.</b> Geotechnical, Environmental & Civil Engineering 805 Arhove St., Suite 204 Naperville, Illinois 60565 (630) 355-2838				<b>SOIL BORING LOG</b>				PAGE <u>1</u> of <u>2</u>			
				DATE <u>4/20/2011</u>				LOGGED BY <u>RJ</u>			
				GSI JOB No. <u>08032</u>							
ROUTE <u>F.A. 361</u>				DESCRIPTION <u>Stearns Road (IL. Route 25) From Dunham Road To CC&amp;P RR</u>							
SECTION <u>98-00214-02-BR</u>				LOCATION <u>SEC. 1-SW 1/4, TWP. 40 N., RNG. 8 E., 3rd P.M.</u>							
COUNTY <u>Kane</u>				DRILLING METHOD <u>Hollow Stem Auger/Rotary</u> HAMMER TYPE <u>Diedrich Automatic</u>							
STRUCT. NO. <u>045-3168</u>				Surface Water Elev. <u>n/a</u>				D E P T H			
Station <u>-</u>				Stream Bed Elev. <u>n/a</u>				B L O W S			
BORING NO. <u>UP-02</u>				Groundwater Elevation:				U C S			
Station: <u>2001+22 UPRR</u>				First Encounter <u>Dry to 10'</u>				M O I S T			
Offset: <u>29.5' Left</u>				Upon Completion <u>n/a</u>				Qu			
Ground Surface Elev. <u>730.3</u>				After _____ Hrs.				(ft) (/6") (tsf) (%)			
18.0" TOPSOIL-black											
728.8				AS - 25							
12				SAND with Gravel-brown-							
12				very loose to medium dense (A-1-b)				2			
12				NP 6				2			
				707.3				1 NP 22			
6								3			
9								3			
-5 9				NP 7				-25 2 NP 22			
5				SAND & GRAVEL-brown-				5			
11				loose to medium dense (A-1)				8			
11				NP 6				8 NP 16			
3								2			
5								4			
-10 11				NP 5				-30 6 NP 18			
10											
12											
12				NP 10				698.3			
6								3			
12								3			
-15 14				NP 7				-35 3 1.1B 17			
3				CLAY-gray-stiff (A-6)							
6											
11				NP 19				712.3			
7				SAND with Gravel-brown-				3			
7				very loose to medium dense (A-1-b)				5			
-20 7				NP 14				-40 5 1.3B 20			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)  
NR-No Recovery

<b>Geo Services, Inc.</b> Geotechnical, Environmental & Civil Engineering 805 Arhove St., Suite 204 Naperville, Illinois 60565 (630) 355-2838				<b>SOIL BORING LOG</b>				PAGE <u>2</u> of <u>2</u>			
				DATE <u>4/20/2011</u>				LOGGED BY <u>RJ</u>			
				GSI JOB No. <u>08032</u>							
ROUTE <u>F.A. 361</u>				DESCRIPTION <u>Stearns Road (IL. Route 25) From Dunham Road To CC&amp;P RR</u>							
SECTION <u>98-00214-02-BR</u>				LOCATION <u>SEC. 1-SW 1/4, TWP. 40 N., RNG. 8 E., 3rd P.M.</u>							
COUNTY <u>Kane</u>				DRILLING METHOD <u>Hollow Stem Auger/Rotary</u> HAMMER TYPE <u>Diedrich Automatic</u>							
STRUCT. NO. <u>045-3168</u>				Surface Water Elev. <u>n/a</u>				D E P T H			
Station <u>-</u>				Stream Bed Elev. <u>n/a</u>				B L O W S			
BORING NO. <u>UP-02</u>				Groundwater Elevation:				U C S			
Station: <u>2001+22 UPRR</u>				First Encounter <u>Dry to 10'</u>				M O I S T			
Offset: <u>29.5' Left</u>				Upon Completion <u>n/a</u>				Qu			
Ground Surface Elev. <u>730.3</u>				After _____ Hrs.				(ft) (/6") (tsf) (%)			
				CLAY LOAM-gray-							
				medium dense (A-6)							
				108							
				7							
				13							
				-65 16				-21			
				663.3							
				CLAY-gray-stiff (A-6)							
				106							
				38							
				45							
				-50 4 1.0B 21				-70 5 1.1B NP 8			
				Clayey SAND, GRAVEL & FRACTURED							
				ROCK-gray-very dense (A-1/A-2)							
				106							
				27							
				30							
				-55 6 1.0B 22				655.3 -75 35 NP 10			
				End Of Boring @ -75.0'							
				Hollow Stem Augers To -10.0'							
				Rotary Drilling To Completion							
				Diedrich Automatic Hammer							
				673.3							
				CLAY LOAM-gray-							
				medium dense (A-6)							
				7							
				8							
				-60 9				-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)  
NR-No Recovery



Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME : Perm.Br.-086_Borings.2.dgn	USER NAME : rgrimm	DESIGNED - JLS	REVISED - -
		CHECKED - LRB	REVISED - -
		DRAWN - RMG	REVISED - -
		CHECKED - LRB	REVISED - -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
LOG OF BORINGS (2 OF 8)**

SHEET NO. UP-6 OF UP-52 SHEETS

F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 266
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	

X:\1000005\10074\Engineering\Documents\_Phase\_1\SN\_045\_3168\_UPRR\_Bridge\PLANS\Ferm.Br.-086\_Borings-2.dgn 3:09:01 PM 12/13/2012



Geo Services Inc. Geotechnical, Environmental & Civil Engineering  
805 Amberley Court, Suite 204  
Naperville, Illinois 60565  
(630) 355-2838

**SOIL BORING LOG** PAGE 1 of 2  
DATE 4/21/2011  
LOGGED BY RJ  
GSI JOB No. 08032

ROUTE F.A. 361 DESCRIPTION Stearns Road (IL. Route 25) From Dunham Road To CC&P RR  
SECTION 98-00214-02-BR LOCATION SEC. 1-SW 1/4, TWP. 40 N., RNG. 8 E., 3rd P.M.  
COUNTY Kane DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE Diedrich Automatic

STRUCT. NO. 045-3168  
Station -  
BORING NO. **UP-03**  
Station: 2001+50 UPRR  
Offset: 29.5' Left  
Ground Surface Elev. 729.4

DEPTH TH (ft)	BLOW W (/6")	UCS Qu (tsf)	MOIST S (%)	Surface Water Elev. <i>n/a</i>				Stream Bed Elev. <i>n/a</i>				Groundwater Elevation:			
				DEPTH TH (ft)	BLOW W (/6")	UCS Qu (tsf)	MOIST S (%)	DEPTH TH (ft)	BLOW W (/6")	UCS Qu (tsf)	MOIST S (%)	First Encounter	Upon Completion	After _____ Hrs.	

12.0" TOPSOIL-black	728.4	AS	-	16														
SANDY CLAY-gray-medium dense (A-4/A-6)	726.4			109														
Clayey SAND-brown-very loose (A-2)	723.9			12														
SAND & GRAVEL-brown-medium dense (A-1)				8														
CLAY-gray-stiff (A-6)				9														
CLAY LOAM-gray-stiff to very stiff (A-6)				108														

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)  
NR-No Recovery

Geo Services Inc. Geotechnical, Environmental & Civil Engineering  
805 Amberley Court, Suite 204  
Naperville, Illinois 60565  
(630) 355-2838

**SOIL BORING LOG** PAGE 2 of 2  
DATE 4/21/2011  
LOGGED BY RJ  
GSI JOB No. 08032

ROUTE F.A. 361 DESCRIPTION Stearns Road (IL. Route 25) From Dunham Road To CC&P RR  
SECTION 98-00214-02-BR LOCATION SEC. 1-SW 1/4, TWP. 40 N., RNG. 8 E., 3rd P.M.  
COUNTY Kane DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE Diedrich Automatic

STRUCT. NO. 045-3168  
Station -  
BORING NO. **UP-03**  
Station: 2001+50 UPRR  
Offset: 29.5' Left  
Ground Surface Elev. 729.4

DEPTH TH (ft)	BLOW W (/6")	UCS Qu (tsf)	MOIST S (%)	Surface Water Elev. <i>n/a</i>				Stream Bed Elev. <i>n/a</i>				Groundwater Elevation:			
				DEPTH TH (ft)	BLOW W (/6")	UCS Qu (tsf)	MOIST S (%)	DEPTH TH (ft)	BLOW W (/6")	UCS Qu (tsf)	MOIST S (%)	First Encounter	Upon Completion	After _____ Hrs.	

CLAY-gray-stiff (A-6)				108														
CLAY LOAM-gray-stiff to very stiff (A-6)				124														

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)  
NR-No Recovery



Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
Perim_Br_007_Borings_3.dgn		CHECKED - LRB	REVISED -
		DRAWN - RMG	REVISED -
		CHECKED - LRB	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
LOG OF BORINGS (3 OF 8)

SHEET NO. UP-7 OF UP-52 SHEETS

F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 267
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				

X:\1000005\10074\Engineering\Documents\_Phase\_1\1\N\_045\_3168\_UPRR\_Bridge\PLANS\Perim\_Br\_007\_Borings\_3.dgn 3:09:30 PM 12/13/2012















Geo Services Inc. **ROCK CORE LOG** PAGE 1 of 1  
 Geotechnical, Environmental & Civil Engineering  
 805 Amberly Court, Suite 204  
 Naperville, Illinois 60565  
 (630) 355-2838

DATE 10/8/2012  
 LOGGED BY DR  
 GSI JOB No. 08032

ROUTE F.A. 361 DESCRIPTION Stearns Road (IL. Route 25) From Dunham Road To CC&P RR  
 SECTION 98-00214-02-BR LOCATION SEC. 1-SW 1/4, TWP. 40 N., RNG. 8 E., 3rd P.M.  
 COUNTY Kane CORING METHOD Rotary Wash

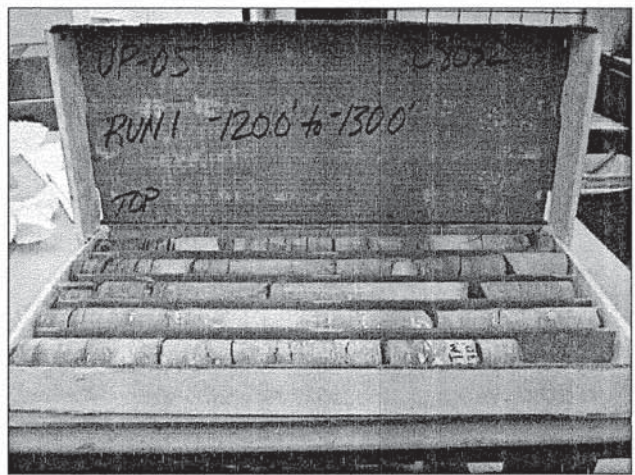
STRUCT. NO. 045-3168 CORING BARREL TYPE & SIZE NX Double Swivel-10 ft  
 Station - Core Diameter 2.0 in  
 BORING NO. UP-05 Top of Rock Elev. 611.1  
 Station: 2001+38 UPRR Begin Core Elev. 611.5  
 Offset: 27.9' Left  
 Ground Surface Elev. 731.5

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORRECTION (min/ft)	STRENGTH (tsf)
------------	----------	--------------	------------	---------------------	----------------

RUN 1 (-120.0' to -120.4') SILTY CLAY LOAM-gray-hard

RUN 1 (-120.4' to -130.0')  
 SILURIAN SYSTEM, NIAGARAN SERIES DOLOMITE  
 Gray & fine grained with horizontal bedding. Soft & argillaceous with some thin clay partings. Tight horizontal fractures throughout. Becoming light gray with wavy bedding & some chert nodules @ -127.2'.

1	98.5	50.2	n/a	n/a	
---	------	------	-----	-----	--



Color pictures of the cores Yes Cores will be stored for examination for -  
 The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

Geo Services Inc. **SOIL BORING LOG** PAGE 1 of 3  
 Geotechnical, Environmental & Civil Engineering  
 805 Amberly Court, Suite 204  
 Naperville, Illinois 60565  
 (630) 355-2838

DATE 10/3/2012  
 LOGGED BY MD  
 GSI JOB No. 08032

ROUTE F.A. 361 DESCRIPTION Stearns Road (IL. Route 25) From Dunham Road To CC&P RR  
 SECTION 98-00214-02-BR LOCATION SEC. 1-SW 1/4, TWP. 40 N., RNG. 8 E., 3rd P.M.  
 COUNTY Kane DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 045-3168  
 Station -  
 BORING NO. UP-06  
 Station: 200+44 UPRR  
 Offset: 123.7' Right  
 Ground Surface Elev. 732.2

DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOIST (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	DEPTH (ft)	BLOWS (/6")	UCS (tsf)	MOIST (%)
------------	-------------	-----------	-----------	---------------------	------------------	------------------------	------------	-------------	-----------	-----------

Blind Drill To -68.5'

				n/a	n/a	First Encounter Dry to 10.0'				
						Upon Completion n/a				
						After Hrs.				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)  
 NR-No Recovery

FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
PLOT SCALE =		CHECKED - LRB	REVISED -
PLOT DATE = 12/13/2012		DRAWN - RMG	REVISED -
		CHECKED - LRB	REVISED -

F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 271
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				



PAGE 2 of 3

**SOIL BORING LOG**

DATE 10/3/2012  
 LOGGED BY MD  
 GSI JOB No. 08032

Geo Services, Inc.  
 Geotechnical, Environmental & Civil Engineering  
 805 Arthur Court, Suite 204  
 Naperville, Illinois 60565  
 (630) 355-2838

ROUTE F.A. 361 DESCRIPTION Stearns Road (IL Route 25) From Dunham Road To CC&P RR  
 SECTION 98-00214-02-BR LOCATION SEC. 1-SW 1/4, TWP. 40 N., RNG. 8 E., 3rd P.M.  
 COUNTY Kane DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 045-3168 Station -

BORING NO. UP-06  
 Station: 200+44 UPRR  
 Offset: 123.7' Right  
 Ground Surface Elev. 732.2

D E P T H	B L O W S	U C S	M O I S T	Surface Water Elev. <i>n/a</i> Stream Bed Elev. <i>n/a</i> Groundwater Elevation: First Encounter <u>Dry to 10.0'</u> $\nabla$ Upon Completion <u>n/a</u> $\nabla$ After _____ Hrs. $\nabla$	D E P T H	B L O W S	U C S	M O I S T
(ft)	(/6")	(tsf)	(%)	(ft)	(/6")	(tsf)	(%)	

PAGE 3 of 3

**SOIL BORING LOG**

DATE 10/3/2012  
 LOGGED BY MD  
 GSI JOB No. 08032

Geo Services, Inc.  
 Geotechnical, Environmental & Civil Engineering  
 805 Arthur Court, Suite 204  
 Naperville, Illinois 60565  
 (630) 355-2838

ROUTE F.A. 361 DESCRIPTION Stearns Road (IL Route 25) From Dunham Road To CC&P RR  
 SECTION 98-00214-02-BR LOCATION SEC. 1-SW 1/4, TWP. 40 N., RNG. 8 E., 3rd P.M.  
 COUNTY Kane DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 045-3168 Station -

BORING NO. UP-06  
 Station: 200+44 UPRR  
 Offset: 123.7' Right  
 Ground Surface Elev. 732.2

D E P T H	B L O W S	U C S	M O I S T	Surface Water Elev. <i>n/a</i> Stream Bed Elev. <i>n/a</i> Groundwater Elevation: First Encounter <u>Dry to 10.0'</u> $\nabla$ Upon Completion <u>n/a</u> $\nabla$ After _____ Hrs. $\nabla$	D E P T H	B L O W S	U C S	M O I S T
(ft)	(/6")	(tsf)	(%)	(ft)	(/6")	(tsf)	(%)	

Blind Drill To -68.5'				663.7					
					29				
					38				
				-70	45	NP	15		
					43				
				-50	50/5"				
				-55		NP	13		
					38				
				-80	50/3"				
						NP	16		

CLAYEY SAND with Gravel-gray-very dense (A-2)

CLAYEY SAND with Gravel-gray-very dense (A-2)

CLAYEY COBBLES, BOULDERS & FRACTURED ROCK-very dense (A-2)	649.2	50/0"	NR						631.2
					40				
				-85	22				
				-90	50/1"	NP	6		
					44				
				-100	30				
					50/2"		8		
					48				
					50/3"				
				-100			8		

CLAYEY COBBLES, BOULDERS & FRACTURED ROCK-very dense (A-2)

CLAYEY COBBLES, BOULDERS & FRACTURED ROCK-gray-very dense (A-2)

COBBLES, BOULDERS & FRACTURED ROCK-gray-very dense (A-1)

End Of Boring @ -101.0'  
Hollow Stem Augers To -10.0'  
Rotary Drilling To Completion  
10.0' Of 4.0" Casing Used  
CME Automatic Hammer

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
 NR-No Recovery

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
 NR-No Recovery



FILE NAME = <u>Perm_Br_012_Borings_8.dgn</u>	USER NAME = <u>mgrmm</u>	DESIGNED - <u>JLS</u>	REVISED -
		CHECKED - <u>LRB</u>	REVISED -
	PLOT SCALE =	DRAWN - <u>RMG</u>	REVISED -
	PLOT DATE = <u>12/13/2012</u>	CHECKED - <u>LRB</u>	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168**  
**LOG OF BORINGS (8 OF 8)**

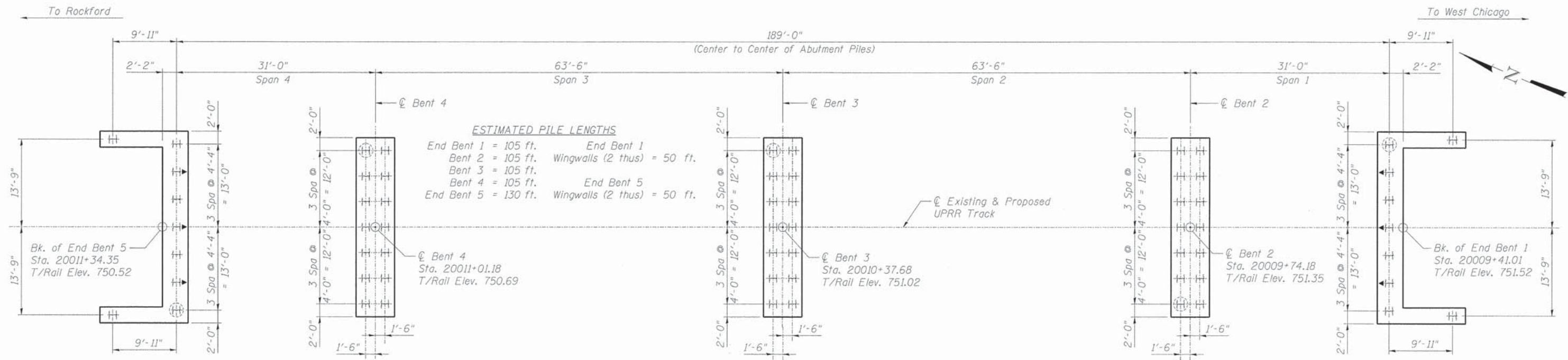
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	272
CONTRACT NO. 63598				

SHEET NO. UP-12 OF UP-52 SHEETS

ILLINOIS FED. AID PROJECT

X:\1000005\10074\Engineering\_Documents\_Phase\_II\NSN\_045\_3168\_UPRR\_Bridge\PLANS\Perm\_Br\_012\_Borings\_8.dgn 3:11:54 PM 12/13/2012



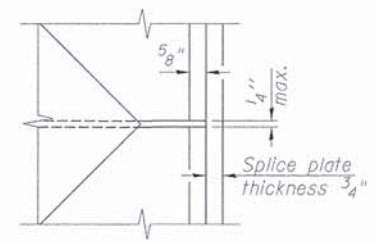
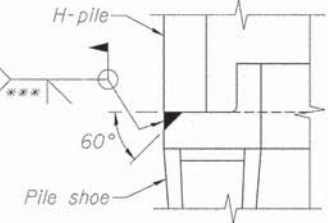
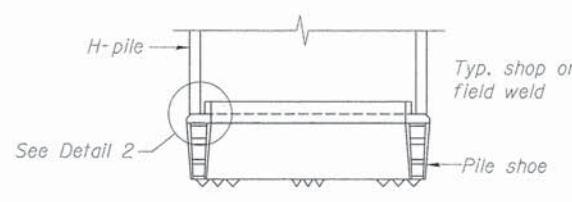
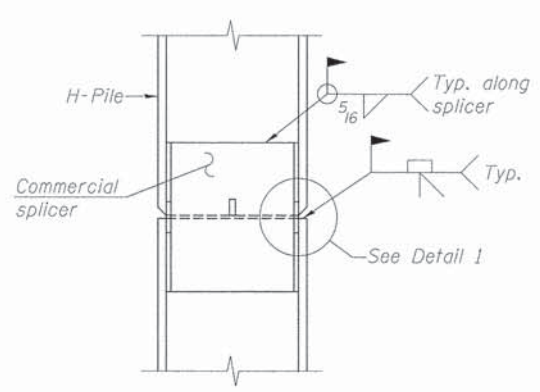


**ESTIMATED PILE LENGTHS**

End Bent 1 = 105 ft.	End Bent 1 = 50 ft.
Bent 2 = 105 ft.	Wingwalls (2 thus) = 50 ft.
Bent 3 = 105 ft.	
Bent 4 = 105 ft.	End Bent 5 = 130 ft.
End Bent 5 = 130 ft.	Wingwalls (2 thus) = 50 ft.

**PLAN - FOUNDATION & PILE LAYOUT**

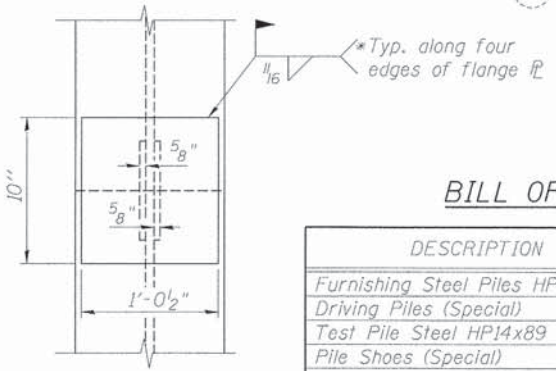
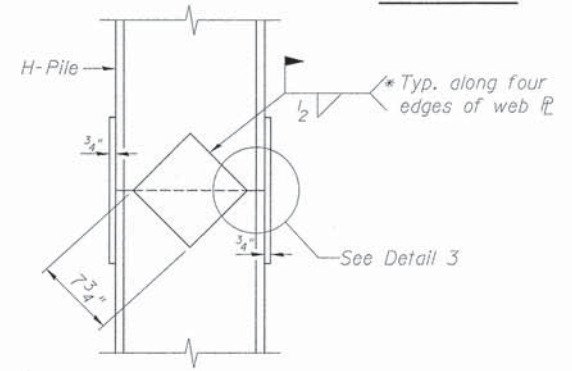
Note:  
All Piles are steel HP14x89.



**LEGEND**

H	Vertical HP14x89 Pile
H▶	HP14x89 Pile at 3:12 Forward Batter
(H)	HP14x89 Test Pile

**H-PILE SHOE ATTACHMENT**



**BILL OF MATERIAL**

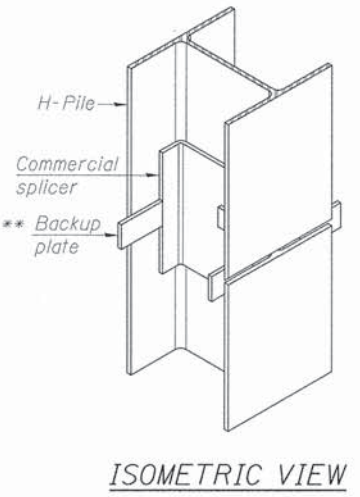
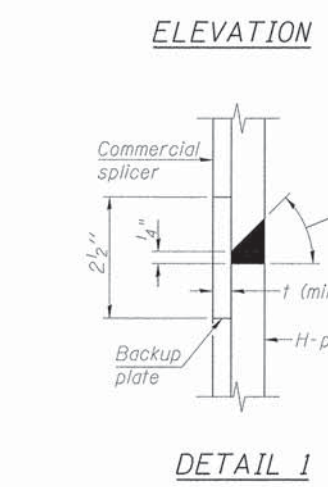
DESCRIPTION	UNIT	QUANTITY
Furnishing Steel Piles HP14x89	Foot	5,705
Driving Piles (Special)	Foot	5,705
Test Pile Steel HP14x89	Each	5
Pile Shoes (Special)	Each	60

**PILE DRIVING NOTES:**

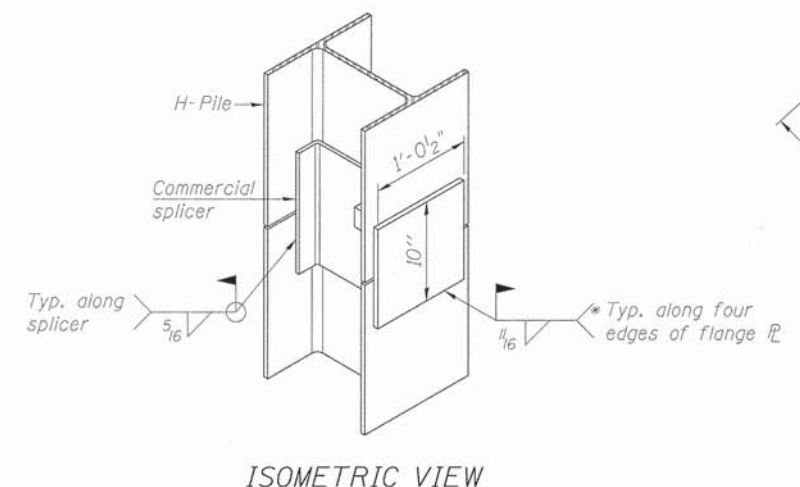
- All End Bent piles shall be driven to 50 ton capacity, all four End Bent Wingwall piles shall be driven to 12 ton capacity, and all intermediate bent piles shall be driven to 70 ton capacity. If any pile cannot be driven to this capacity, the Engineer must be notified.
- Estimated capacity of driven piles shall be calculated using the Modified ENR Formula with F.S. = 5, unless otherwise noted. Direct questions to the Engineer.
- The steel H-piles shall be according to ASTM A572, Grade 50.

- \* Interrupt welds 1/4" from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer (5/16" min.).

**WELDED PLATE FIELD SPLICE**



**WELDED COMMERCIAL SPLICE**



**WELDED COMMERCIAL SPLICE ALTERNATE**

**benesch**  
engineers - scientists - planners

Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
FOUNDATION PLAN AND PILE DETAILS**

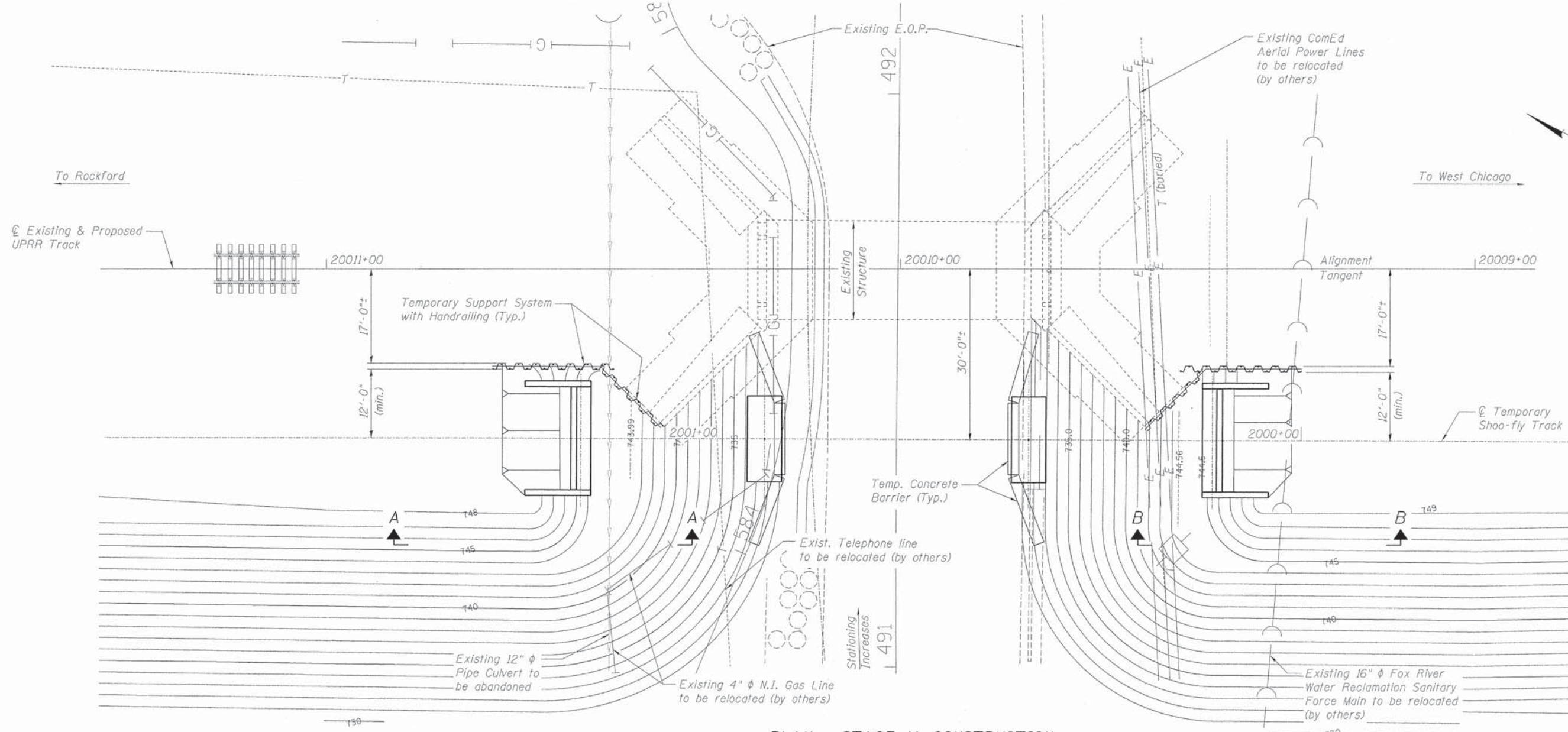
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	273
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	

FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
Perms.Br_013.Pile.Layout.dgn		CHECKED - LRB	REVISED -
	PLLOT SCALE =	DRAWN - RMG	REVISED -
	PLLOT DATE = 12/13/2012	CHECKED - LRB	REVISED -

SHEET NO. UP-13 OF UP-52 SHEETS

X:\100005\10074\Engineering\Documents\_Phase\_11\SN\_045\_3168\_UPRR\_Bridge\PLANS\UPRR\_Bridge\PLANS\Perms.Br\_013.Pile.Layout.dgn 3:12:23 PM 12/13/2012





PLAN - STAGE 1A CONSTRUCTION

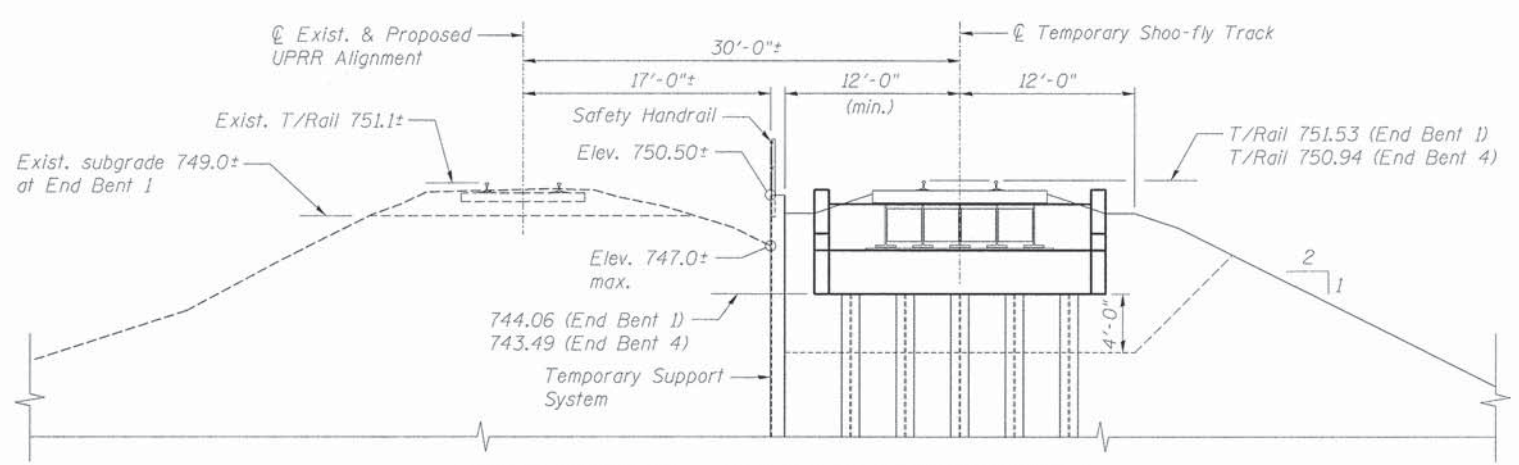
**PROPOSED CONSTRUCTION SEQUENCE**

Stage 1A - Construct Temporary Shoo-fly bridge and embankment.

Maintain rail traffic on existing UPRR track.

Maintain existing vehicular traffic patterns on IL 25/Stearns Road except for night time closures to erect the temporary span over the roadway, and for removal of the existing bridge span.

1. Construct portion of shoo-fly embankment to 4 feet below the bottom of cap elevation of the new abutments for the temporary bridge.
2. Install Temporary Support System as shown to protect existing UPRR track.
3. Drive steel pipe piling and construct the abutments and bents for the temporary bridge.
4. Complete construction of the shoo-fly embankment.
5. Complete construction of the shoo-fly bridge.
6. During a track outage, cut-over UPRR track to the shoo-fly alignment.
7. Remove existing bridge superstructure.



CROSS SECTION - STAGE 1A CONSTRUCTION

End Bent 1 shown (Looking toward West Chicago)  
End Bent 4 similar

**NOTE:**  
See sheet UP-16 for Views A-A and B-B.

**benesch**  
engineers - scientists - planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = egrimm	DESIGNED - JLS	REVISED -
Perm.Br.014.Const.Stage1.dgn		CHECKED - LRB	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/13/2012	CHECKED - LRB	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

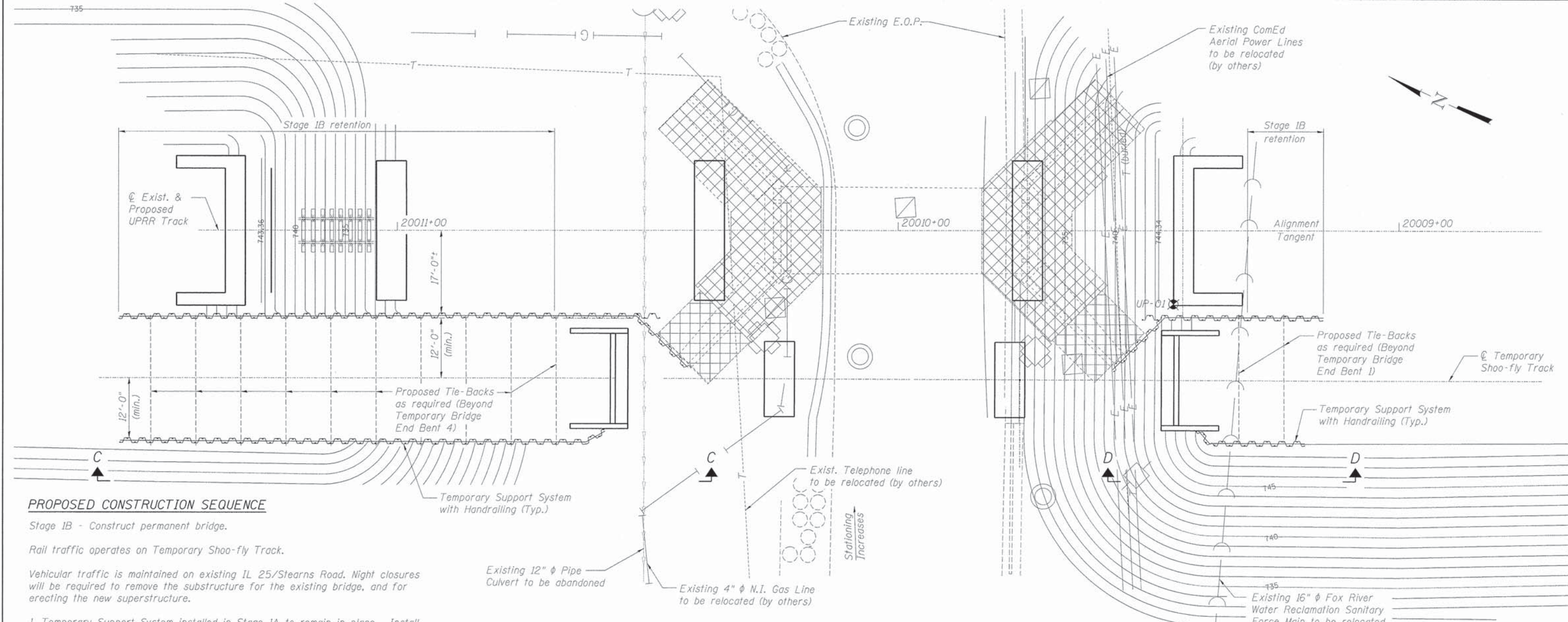
**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168**  
**CONSTRUCTION STAGING - STAGE 1A**

SHEET NO. UP-14 OF UP-52 SHEETS

F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 274
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				

X:\1000005\10074\Engineering\Documents\_Phase-II\SN\_045\_3168\_UPRR\_Bridge\PLANS\Perm.Br.014\_Const.Stage1.dgn 3:12:25 PM 12/13/2012



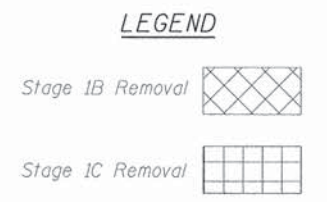


PLAN - STAGE 1B CONSTRUCTION

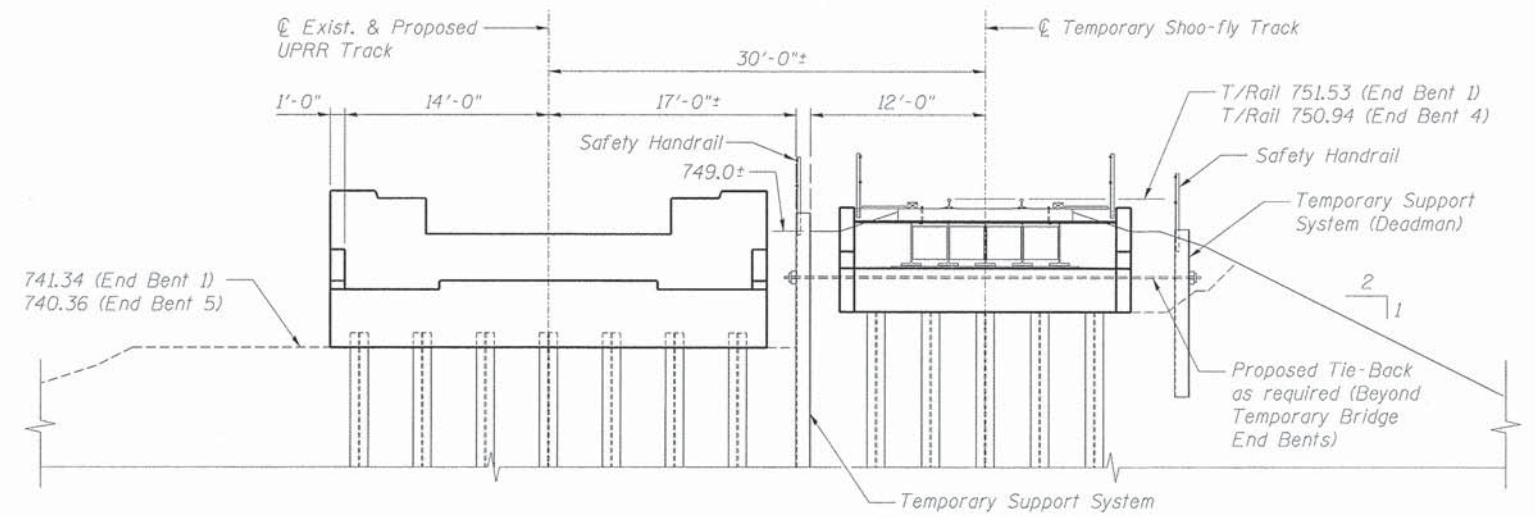
**PROPOSED CONSTRUCTION SEQUENCE**

- Stage 1B - Construct permanent bridge.  
 Rail traffic operates on Temporary Shoo-fly Track.  
 Vehicular traffic is maintained on existing IL 25/Stearns Road. Night closures will be required to remove the substructure for the existing bridge, and for erecting the new superstructure.
1. Temporary Support System installed in Stage 1A to remain in place. Install additional Temporary Support System as shown to protect the Shoo-fly Track.
  2. Excavate existing embankment, while installing temporary tie-backs as necessary, to the level of the bottom of new bent caps and abutment caps.
  3. Complete excavation required to construct new abutments and concrete bent caps.
  4. Remove portions of the existing substructure as shown.
  5. Drive steel pipe piles and complete construction to the level of the bottom of cap for new bents and abutments.
  6. Construct embankment slope on the east end of the new bridge.
  7. Complete construction of the permanent bridge superstructure.
  8. During a track outage, cut-over UPRR track to the new alignment.

- Stage 1C - Construct new roadway  
 Rail traffic operates on new alignment.  
 Vehicular traffic is temporarily maintained on existing IL 25/Stearns Rd. until completion of the West (SB) portion of the new roadway.
1. Remove Temporary Shoo-fly bridge, Temporary Support System and remaining portions of the original abutment.
  2. Excavate shoo-fly embankment and existing embankment beneath the permanent bridge to construct the new south bound roadway.
  3. Place Concrete Encasement for Bents 3 & 4.
  4. Shift vehicular traffic to newly constructed roadway.
  5. Construct new north bound lanes.
  6. Place Concrete Encasement for Bent 2.



**NOTE:**  
 See sheet UP-16 for Views C-C and D-D.



CROSS SECTION - STAGE 1B CONSTRUCTION

End Bent 1 shown (Looking toward West Chicago)  
 End Bent 5 similar with Shoo-fly Track on grade

**benesch**  
 engineers · scientists · planners  
 Alfred Benesch & Company  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
Permn.Br.-015.Const.Stage2.3.dgn		CHECKED - LRB	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/13/2012	CHECKED - LRB	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

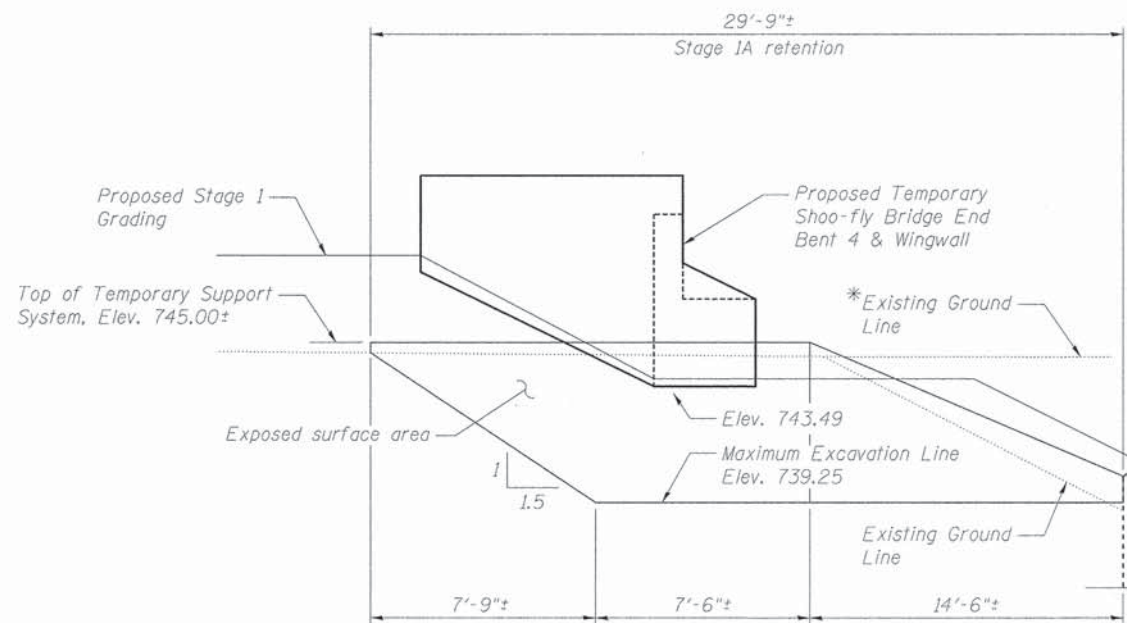
**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168**  
**CONSTRUCTION STAGING - STAGES 1B AND 1C**

SHEET NO. UP-15 OF UP-52 SHEETS

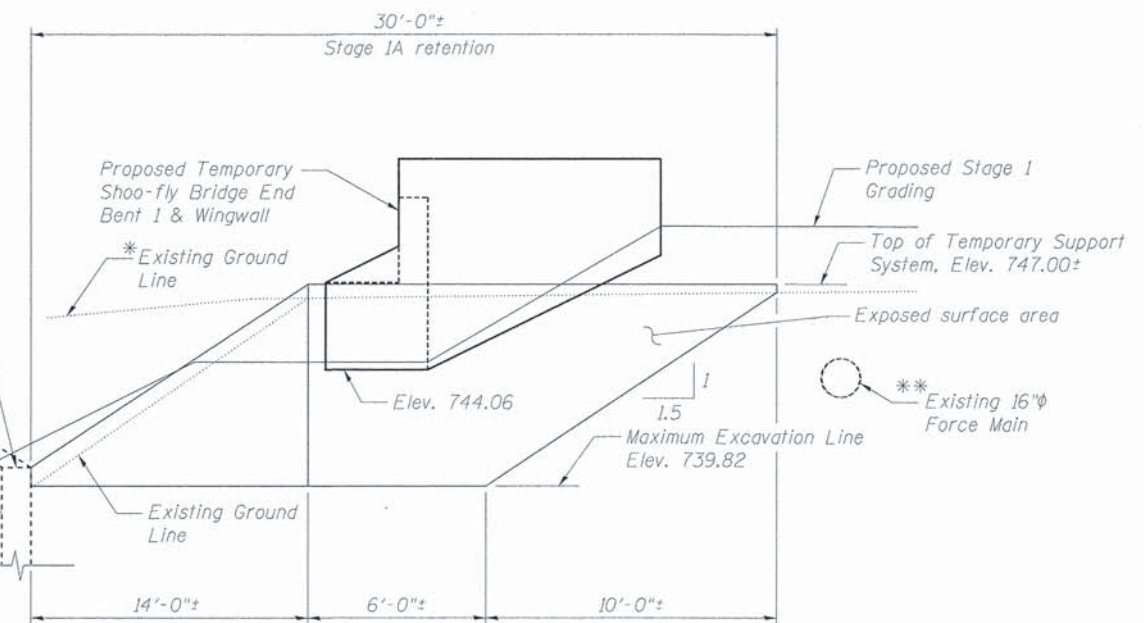
F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 275
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	

X:\1000005\10074\Engineering\_Documents\_Phase\_11\SN\_045\_3168\_UPRR\_Bridge\PLANS\Permn.Br.-015.Const.Stage2.3.dgn 3:12:26 PM 12/13/2012





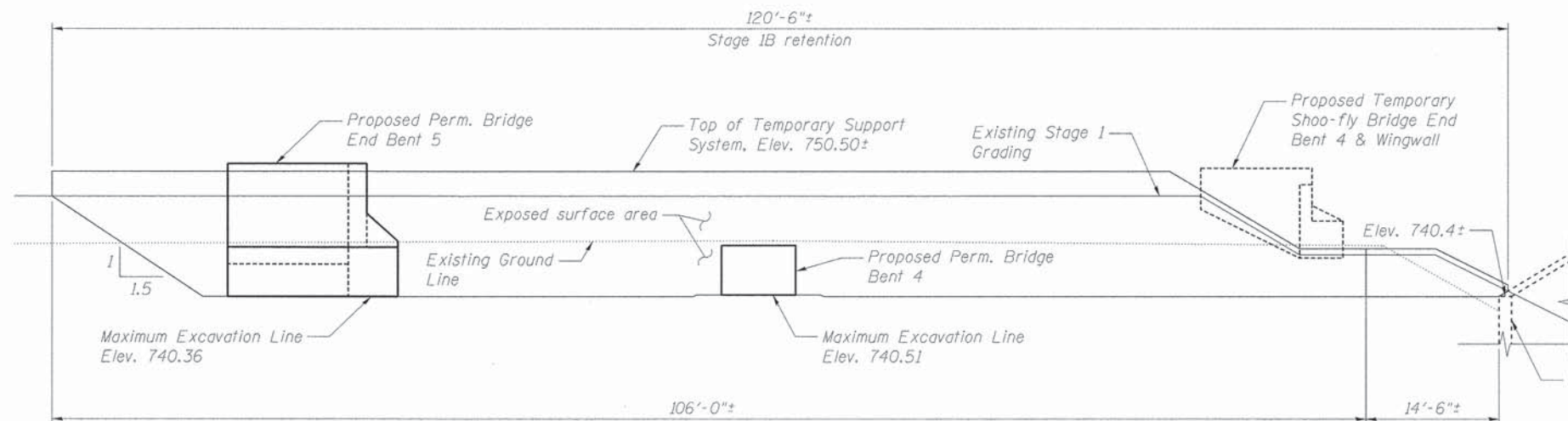
VIEW A-A



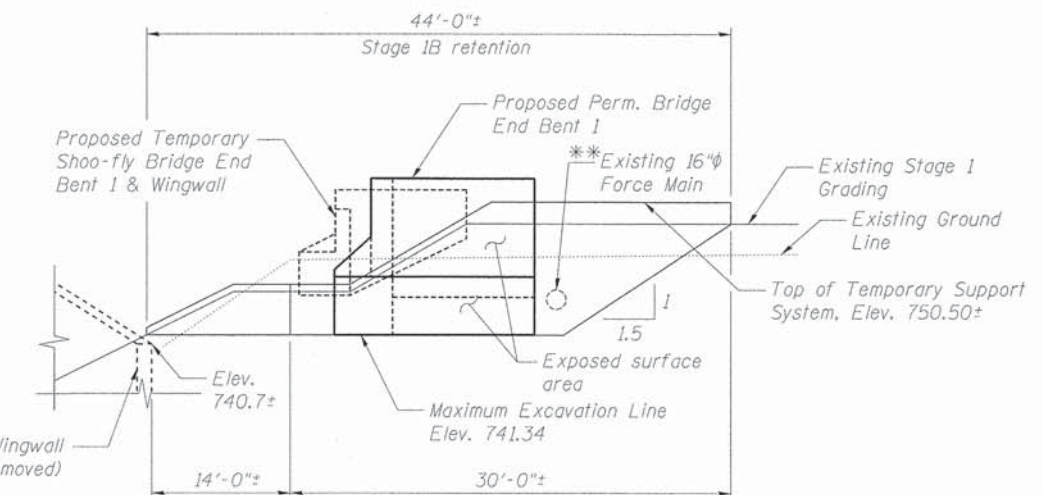
VIEW B-B

**TEMPORARY SUPPORT SYSTEM - ELEVATION**  
(Stage IA)

\*(Existing 16" Force Main to be relocated by others, invert elevation unknown)



VIEW C-C



VIEW D-D

\*(Existing 16" Force Main to be relocated by others, invert elevation unknown)

**TEMPORARY SUPPORT SYSTEM - ELEVATION**  
(Stage IB)

**BILL OF MATERIAL**  
(Stage IA)

ITEM	UNIT	TOTAL
*** Temporary Support System	Sq. Ft.	214

**BILL OF MATERIAL**  
(Stage IB)

ITEM	UNIT	TOTAL
*** Temporary Support System	Sq. Ft.	990

\*\*\*For Information Only. See Note 3.

**NOTES:**

1. See sheet UP-14 for location of Views A-A and B-B.
2. See sheet UP-15 for location of Views C-C and D-D.
3. The area measured for the Temporary Support System is the vertical exposed surface area envelope of the excavation supported by the Temporary Support System (For Information Only).
4. All dimensions for the Temporary Support System are measured along the face of the wall.

**benesch**  
engineers · scientists · planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
Perm_Br_016_TSRS_Elevs.dgn		CHECKED - LRB	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/13/2012	CHECKED - LRB	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168**  
**TEMPORARY SUPPORT SYSTEM DETAILS**

SHEET NO. UP-16 OF UP-52 SHEETS

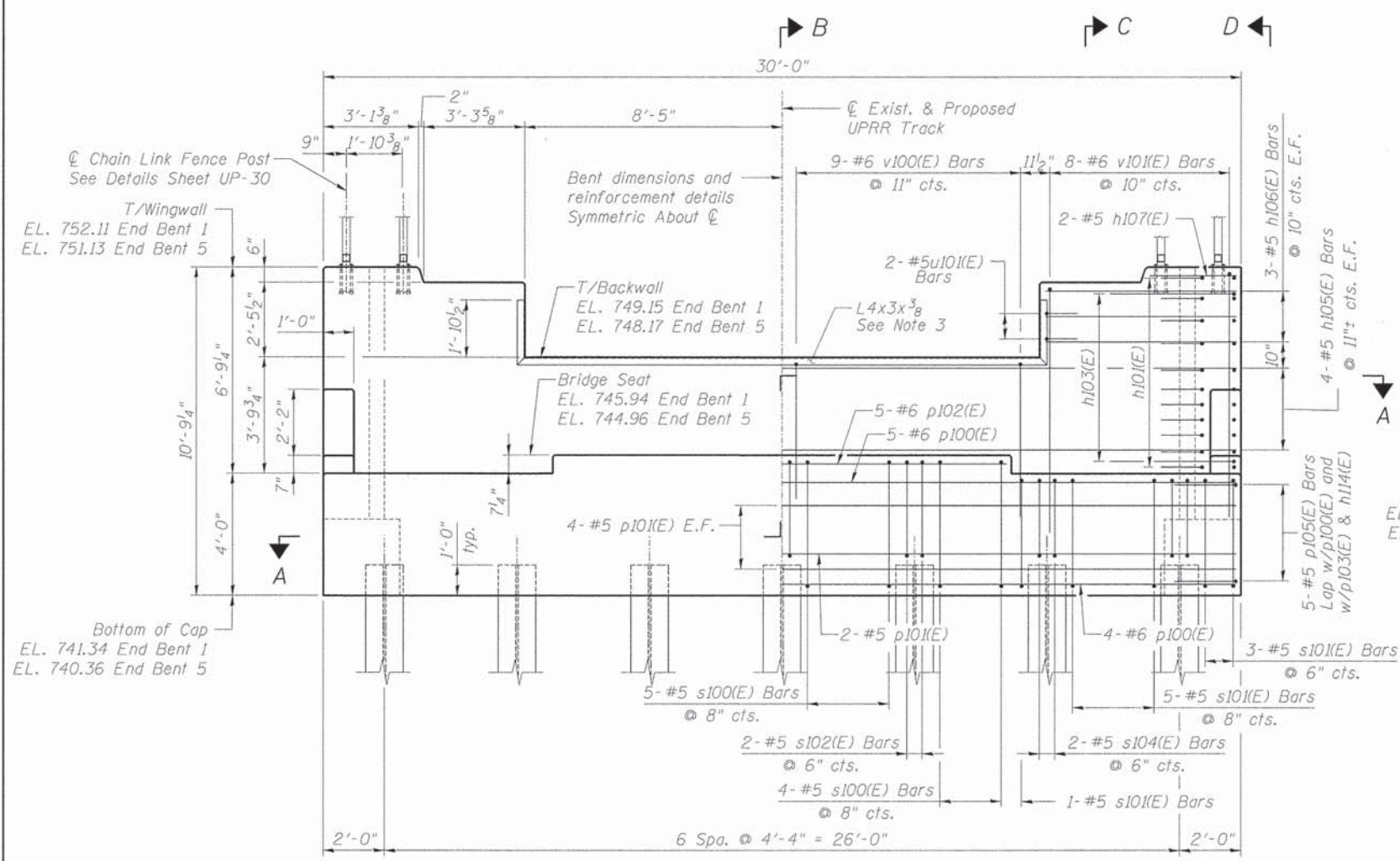
F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 276
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	

X:\100005\10074\Engineer\ng\_Documents\_Phase\_11\SN\_045\_3168\_UPRR\_Bridge\PLANS\Perm\_Br\_016\_TSRS\_Elevs.dgn

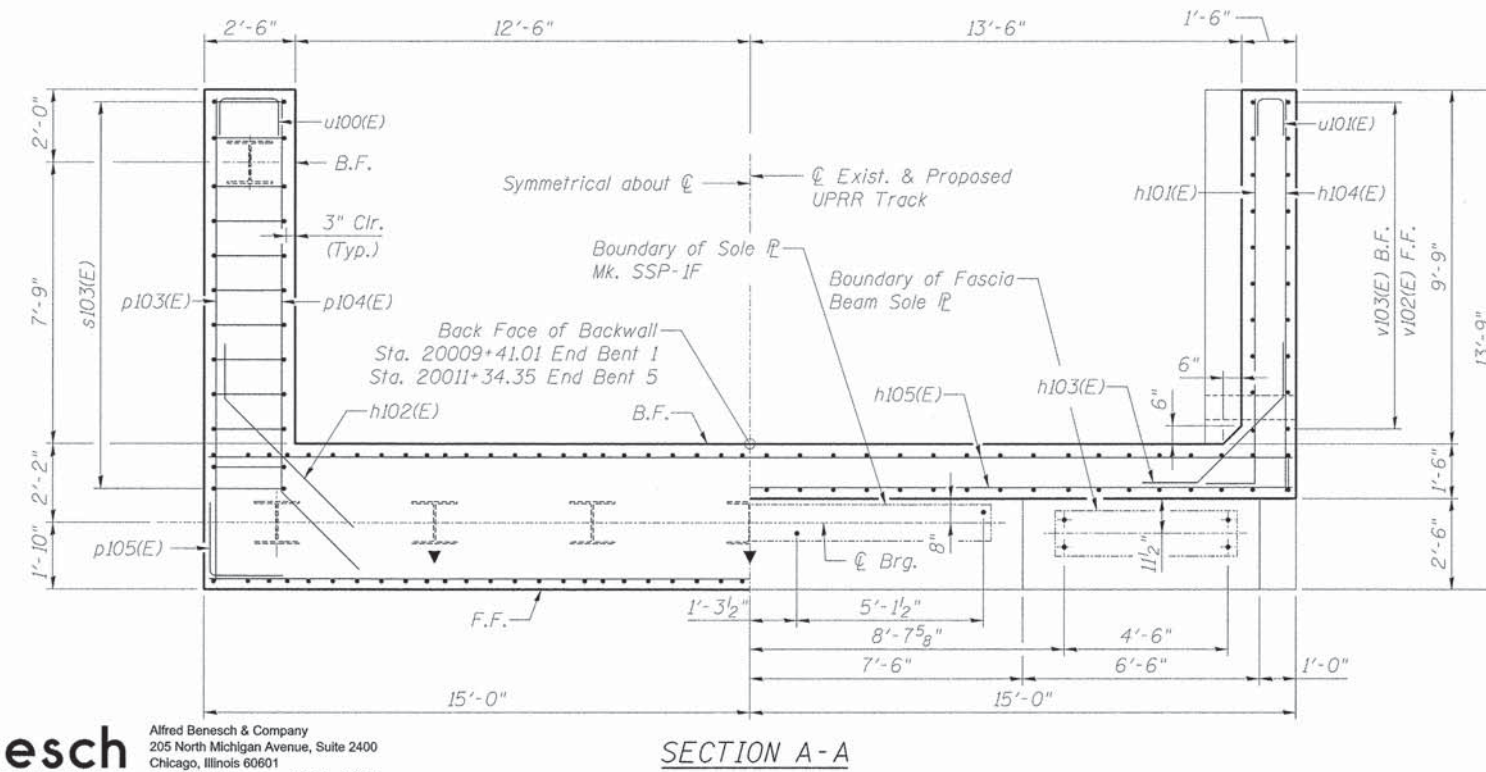
3:12:28 PM

12/13/2012

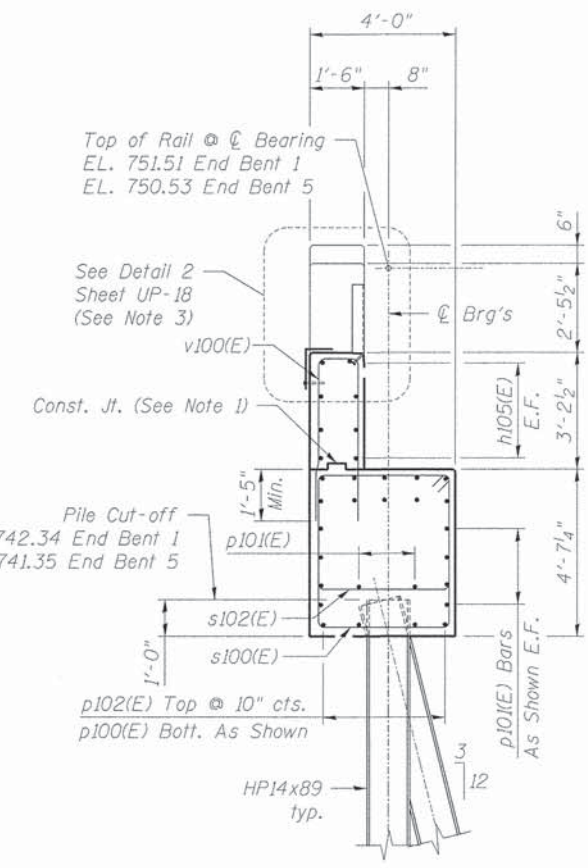




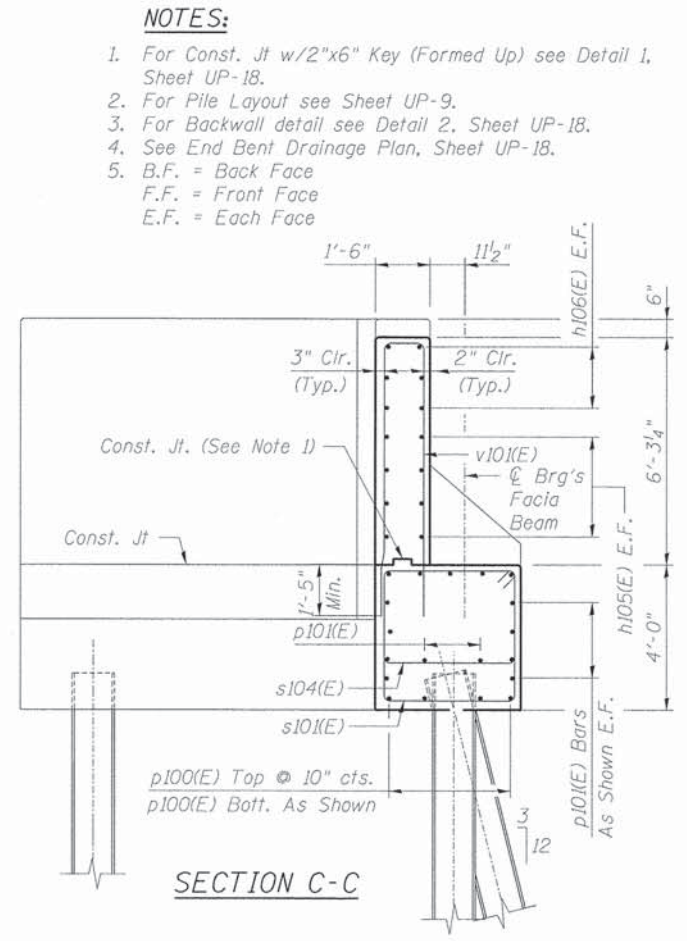
**ELEVATION**



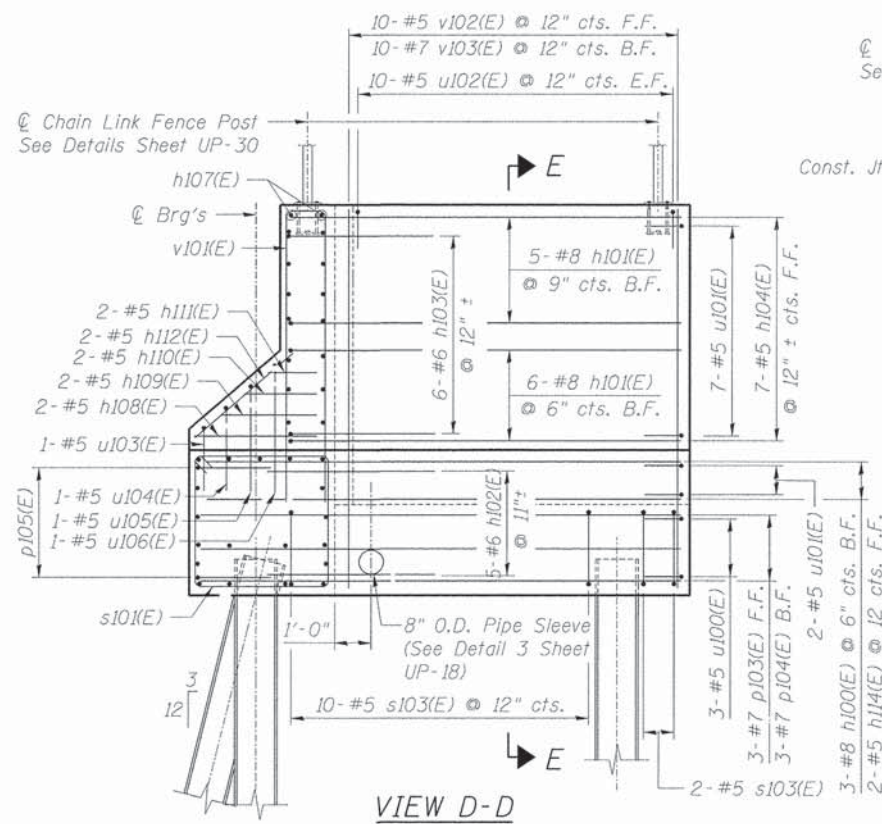
**SECTION A-A**



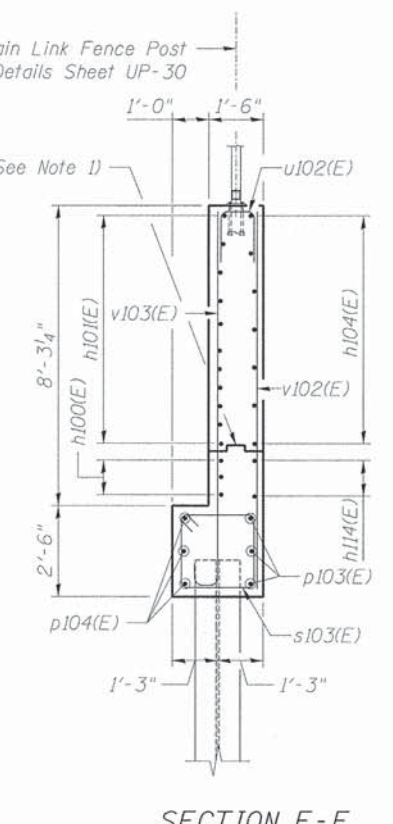
**SECTION B-B**



**SECTION C-C**



**VIEW D-D**



**SECTION E-E**

- NOTES:**
1. For Const. Jt w/2"x6" Key (Formed Up) see Detail 1, Sheet UP-18.
  2. For Pile Layout see Sheet UP-9.
  3. For Backwall detail see Detail 2, Sheet UP-18.
  4. See End Bent Drainage Plan, Sheet UP-18.
  5. B.F. = Back Face  
F.F. = Front Face  
E.F. = Each Face

**benesch**  
engineers · scientists · planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
END BENT DETAILS (1 OF 2)**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	277
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	

FILE NAME =	USER NAME = rgrimm	DESIGNED - RK	REVISED -
Perm.Br_017_End Bent Details_1.dgn		CHECKED - LRB	REVISED -
	PLOT SCALE =	DRAWN - RK	REVISED -
	PLOT DATE = 12/13/2012	CHECKED - LRB	REVISED -

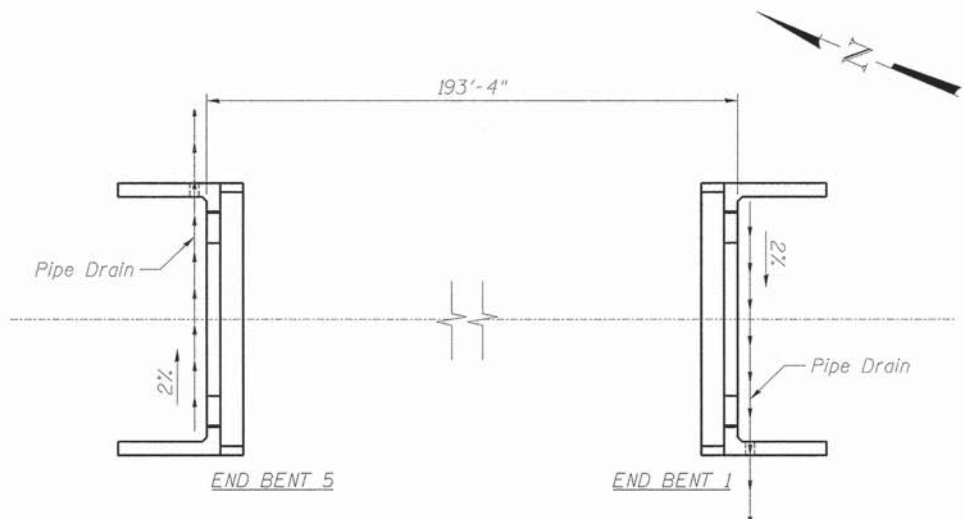
SHEET NO. UP-17 OF UP-52 SHEETS

X:\100005\10074\Engineering\_Documents\_Phase\_II\NSN\_045\_3168\_UPRR\_Bridge\PLANS\Ferm.Br\_017\_End Bent Details\_1.dgn 3/12/2012 3:12:29 PM 12/13/2012

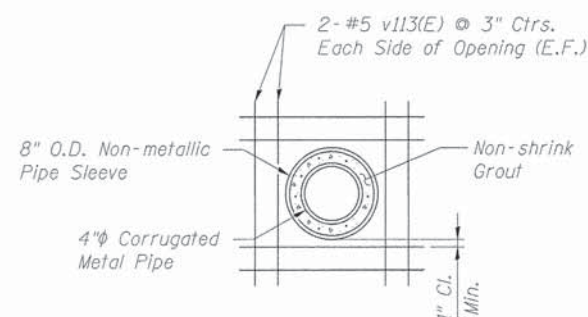
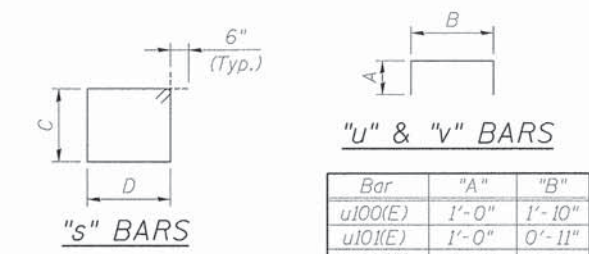
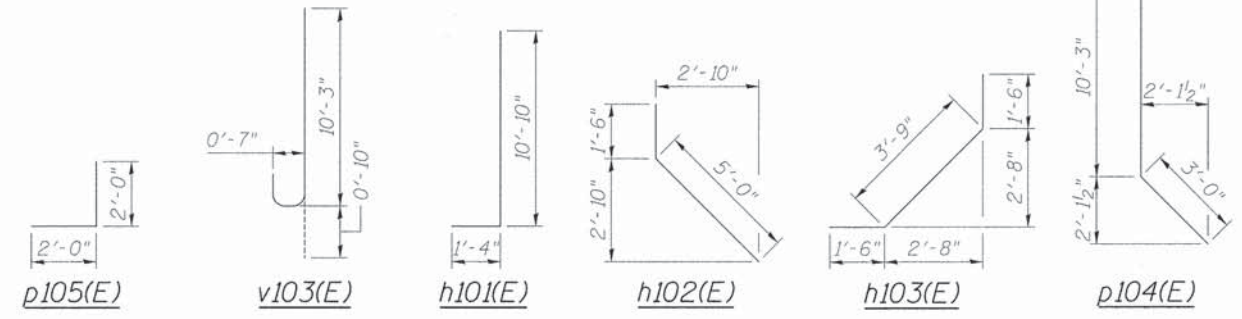


**END BENT  
BILL OF BARS**

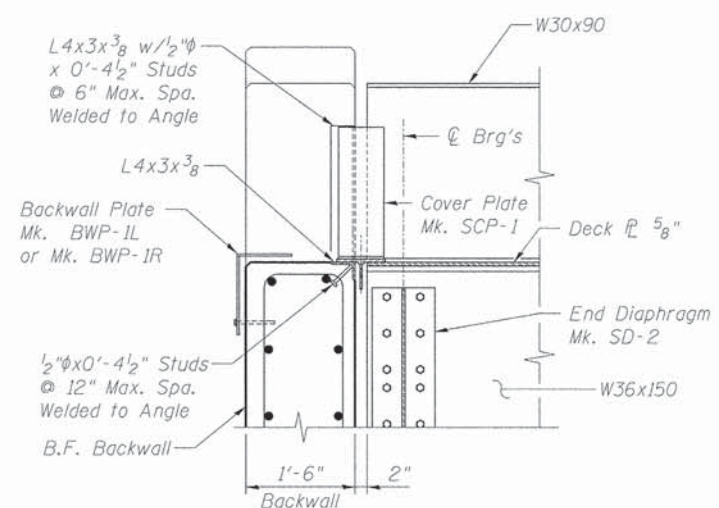
Bar	No.	Size	Length	Shape
p100(E)	9	#6	29'-6"	
p101(E)	10	#5	29'-6"	
p102(E)	5	#6	14'-8"	
p103(E)	6	#7	13'-3"	
p104(E)	6	#7	13'-3"	
p105(E)	10	#5	4'-0"	
s100(E)	18	#5	16'-6"	
s101(E)	18	#5	15'-4"	
s102(E)	6	#5	14'-6"	
s103(E)	24	#5	9'-2"	
s104(E)	8	#5	13'-4"	
u100(E)	6	#5	3'-10"	
u101(E)	22	#5	2'-11"	
u102(E)	20	#5	3'-1"	
u103(E)	2	#5	4'-4"	
u104(E)	2	#5	5'-4"	
u105(E)	2	#5	6'-6"	
u106(E)	2	#5	7'-10"	
v100(E)	18	#6	10'-1"	
v101(E)	16	#6	17'-1"	
v102(E)	20	#5	10'-4"	
v103(E)	20	#7	11'-5"	
h100(E)	6	#8	13'-3"	
h101(E)	22	#8	12'-2"	
h102(E)	10	#6	6'-6"	
h103(E)	12	#6	6'-9"	
h104(E)	14	#5	10'-10"	
h105(E)	8	#5	29'-8"	
h106(E)	12	#5	6'-3"	
h107(E)	4	#5	2'-10"	
h108(E)	4	#5	3'-4"	
h109(E)	4	#5	2'-8"	
h110(E)	4	#5	2'-0"	
h111(E)	4	#5	1'-4"	
h112(E)	4	#5	3'-6"	
h113(E)	16	#5	1'-6"	
h114(E)	4	#5	13'-3"	
Concrete Structures (Special)			Cu. Yd.	40.9
Reinforcement Bars, Epoxy Coated			Pound	5,560
Pipe Underdrains 4" (Modified)			Foot	45



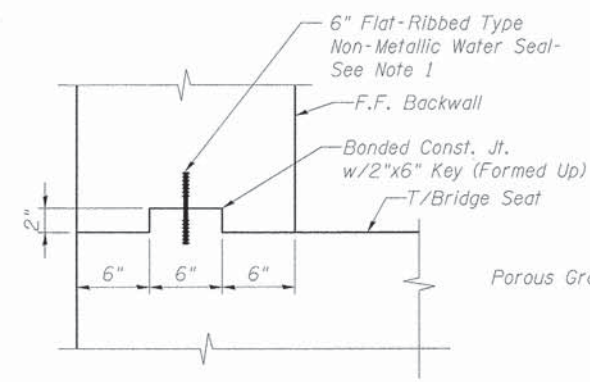
**END BENT DRAINAGE PLAN**  
(End Bent 1 pipe drain shall outlet to the West and End Bent 5 pipe drain shall outlet to the East)



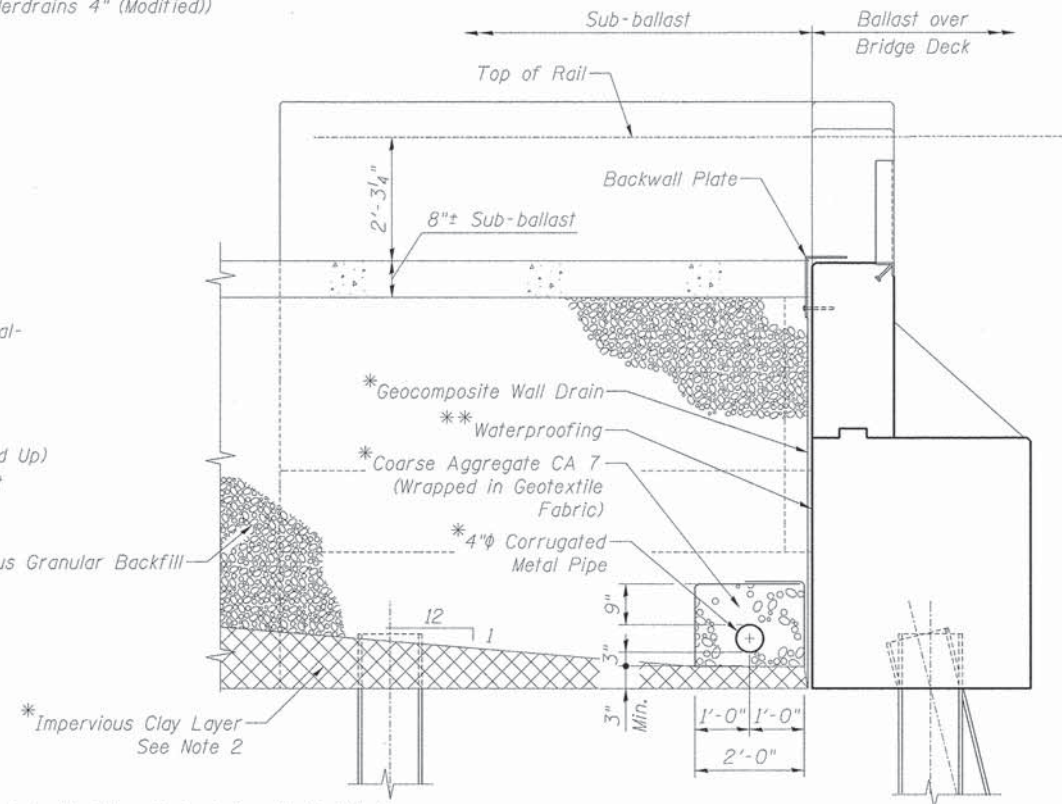
**DETAIL 3**  
(Cost of non-metallic sleeve and non-shrink grout included in Pipe Underdrains 4" (Modified))



**DETAIL 2**



**DETAIL 1**  
Scale: 1/2"=1'-0"



**SECTION THRU END BENT**

\* Cost included with "Pipe Underdrains 4" (Modified)"  
\*\* Cost included with "Concrete Structures (Special)"

**Notes:**  
1. All bar dimensions are out to out.  
2. The quantities provided are for one (1) end bent.

- NOTES:**
- The centerline of the waterstop should be aligned with the center of the joint. The waterstop must be installed and properly secured prior to concrete placement to ensure proper positioning and concrete consolidation around the waterstop. Thoroughly consolidate the concrete around the waterstop to prevent voids or honeycombing. The waterstop shall not be cut or modified to allow reinforcement to pass through the waterstop.
  - Impervious clay layer required to maintain slope of subdrain.
  - Adjust reinforcement as required to miss anchor bolts.
  - Concrete Sealer shall be applied to all exposed surfaces.
  - B.F. = Back Face  
F.F. = Front Face  
E.F. = Each Face

**benesch**  
engineers - scientists - planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgrimm	DESIGNED - RK	REVISED -
Perm.Br_018_End Bent Details_2.dgn		CHECKED - LRB	REVISED -
	PLOT SCALE =	DRAWN - RK	REVISED -
	PLOT DATE = 12/13/2012	CHECKED - LRB	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
END BENT DETAILS (2 OF 2)**

SHEET NO. UP-18 OF UP-52 SHEETS

F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 278
ILLINOIS FED. AID PROJECT			CONTRACT NO. 63598	

X:\1002005\10074\Engineering\_Documents\_Phase\_1\1\NSN\_045\_3168\_UPRR\_Bridge\PLANS\Perm.Br\_018\_End Bent Details\_2.dgn 3:12:31 PM 12/13/2012



**BENTS 2 & 4**  
**BILL OF MATERIAL**

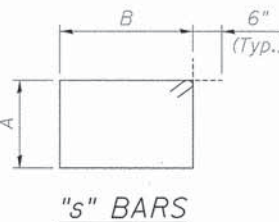
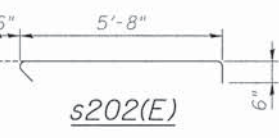
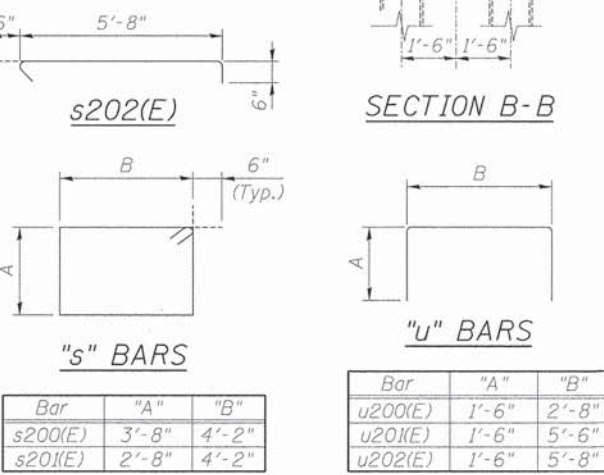
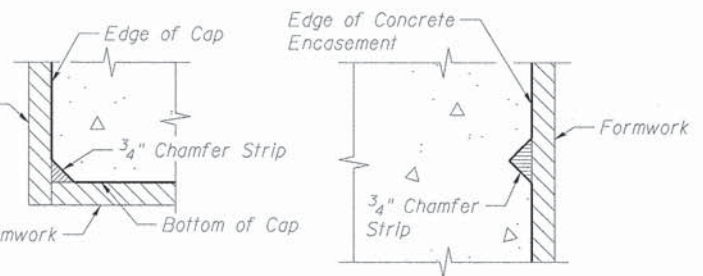
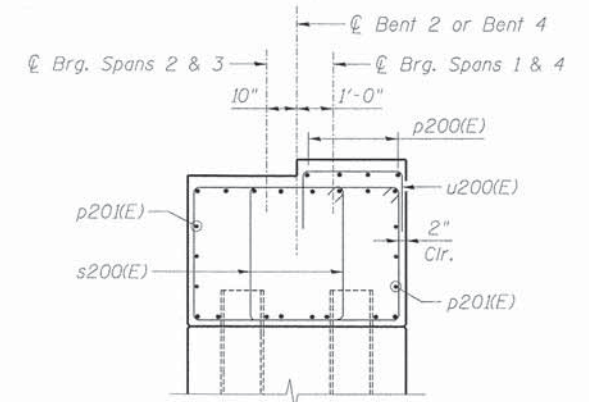
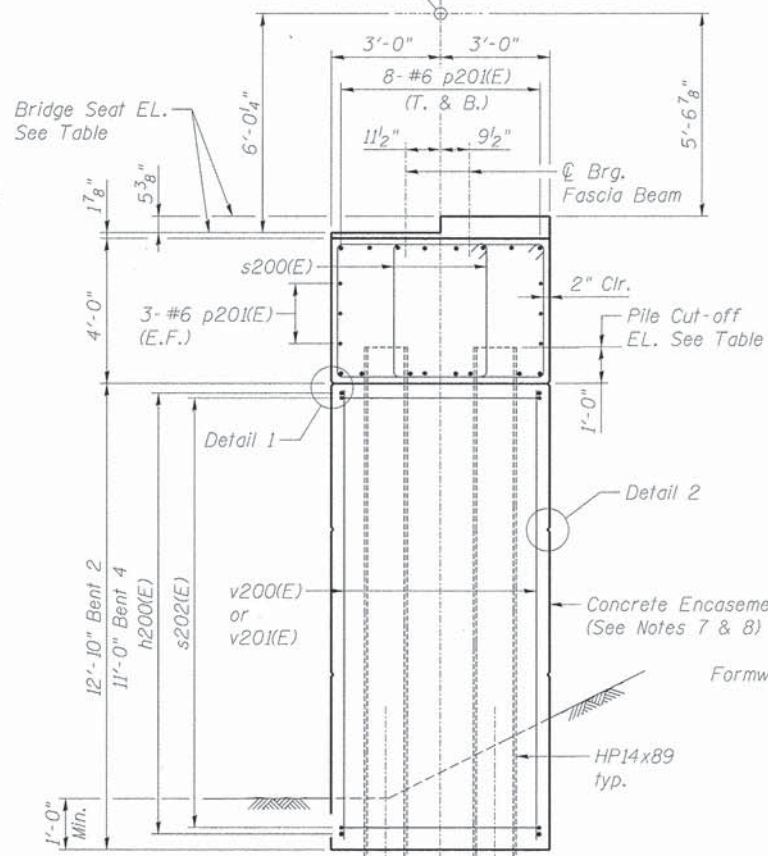
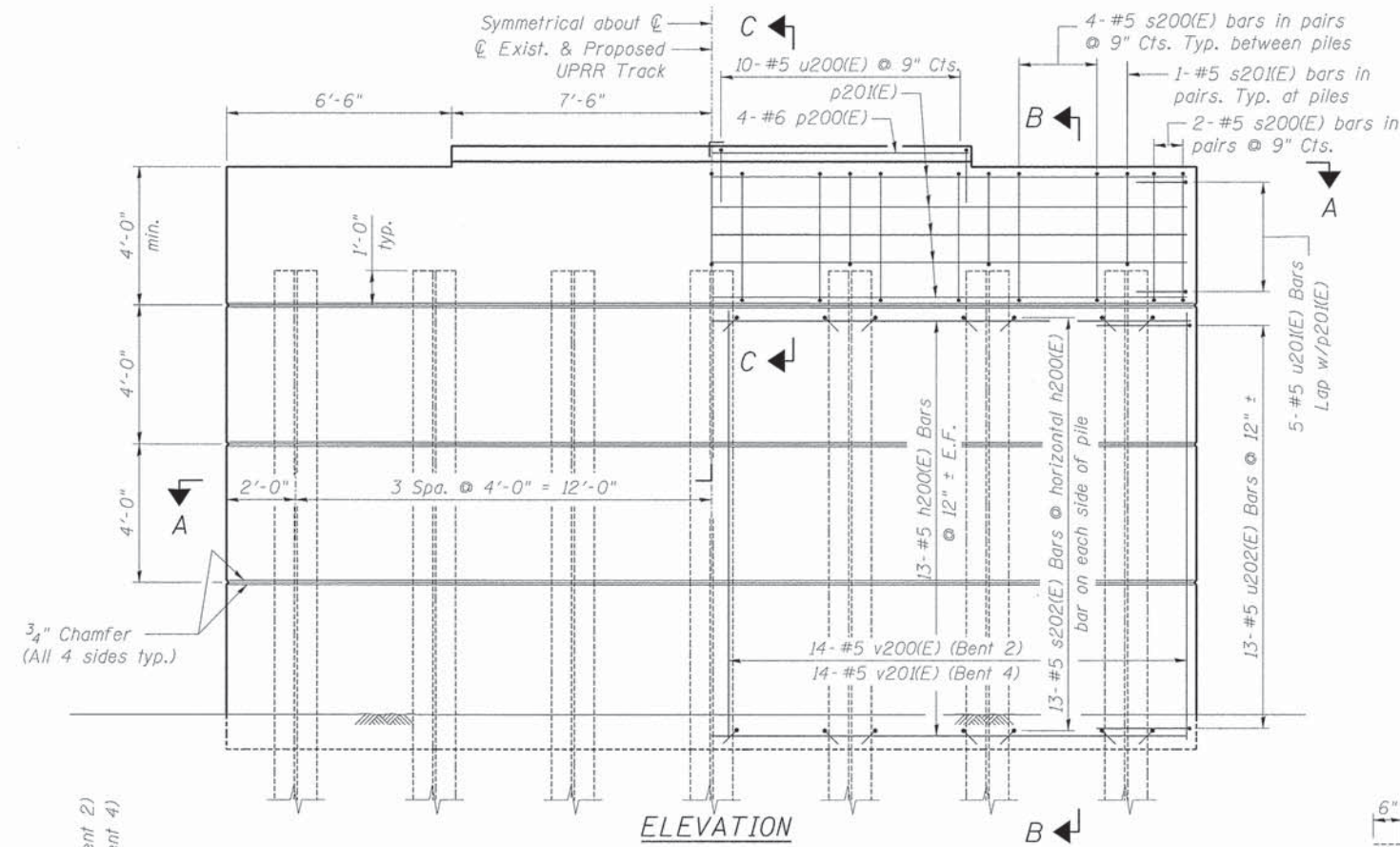
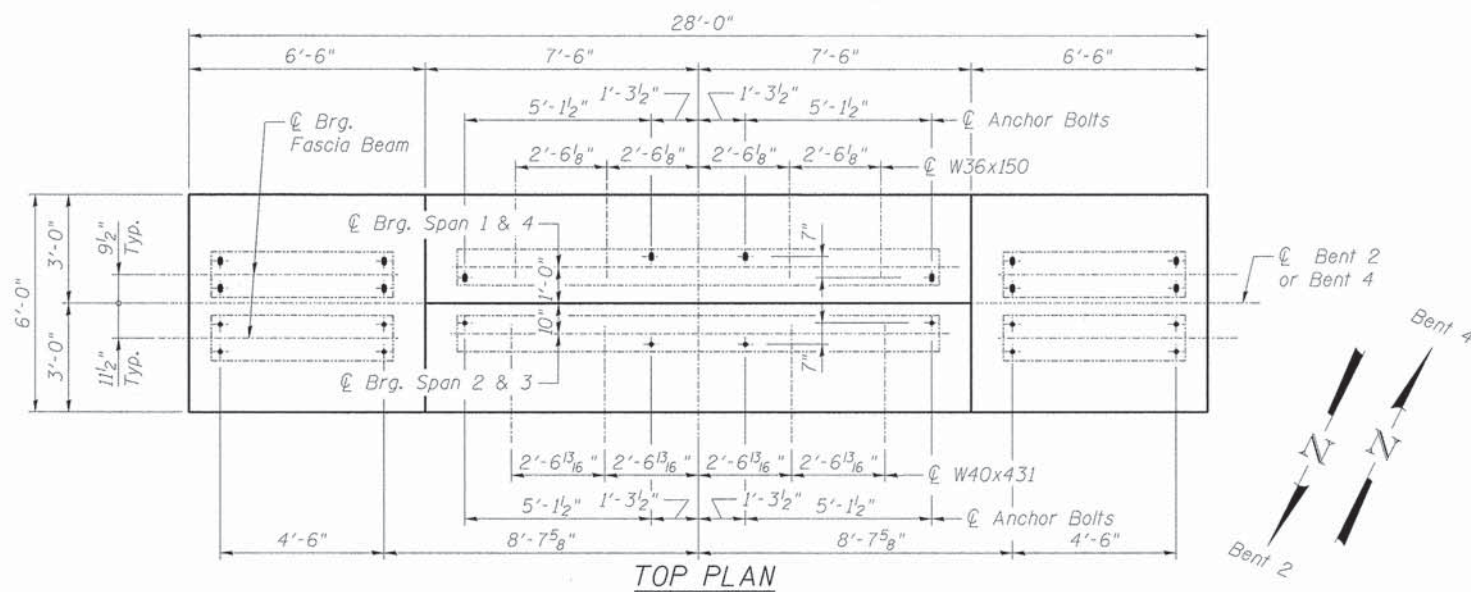
Bar	No.	Size	Length	Shape
h200(E)	52	#5	27'-8"	□
p200(E)	8	#6	14'-8"	□
p201(E)	44	#6	27'-8"	□
s200(E)	112	#5	16'-8"	□
s201(E)	28	#5	14'-8"	□
s202(E)	364	#5	6'-8"	□
u200(E)	40	#5	5'-8"	□
u201(E)	20	#5	8'-6"	□
u202(E)	52	#5	8'-8"	□
v200(E)	66	#5	12'-4"	□
v201(E)	66	#5	10'-6"	□

Concrete Structures (Special)	Cu. Yd.	200.8
Reinforcement Bars, Epoxy Coated	Pound	10,880

Notes:  
1. All bar dimensions are out to out.  
2. The quantities provided are for two (2) bents.

**TABLE OF ELEVATIONS**

T/Rail EL.	Bridge Seat EL.				Pile Cut-off			
	Bent 2	Bent 4	Span 1	Span 2	Span 3	Span 4	Bent 2	Bent 4
751.35	750.69	745.78	745.33	744.67	745.12	742.17	741.51	



Bar	"A"	"B"
u200(E)	1'-6"	2'-8"
s200(E)	3'-8"	4'-2"
s201(E)	2'-8"	4'-2"

Bar	"A"	"B"
u200(E)	1'-6"	2'-8"
u201(E)	1'-6"	5'-6"
u202(E)	1'-6"	5'-8"

- NOTES:**
- Piles to be driven and bent cap poured in Stage 2.
  - Concrete Encasement to be poured in Stage 3.
  - For Pile Layout see Sheet UP-13.
  - Adjust reinforcement as required to miss anchor bolts.
  - Concrete Sealer shall be applied to all exposed surfaces.
  - B.F. = Back Face  
F.F. = Front Face  
E.F. = Each Face
  - The Contractor shall use self-consolidating concrete (SCC) for all bent encasement concrete. The self-consolidating concrete shall conform to all requirements as specified in the Special Provisions. Cost of SCC shall be included with the cost of Concrete Structures (Special).
  - The Contractor shall provide adequate forms to contain the increased hydraulic pressure of the self-consolidating concrete.

**benesch**  
engineers · scientists · planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168**  
**BENTS 2 AND 4 - PLAN AND ELEVATION**

FILE NAME: Perm.Br\_019.Bent.2.4.Dtls.dgn  
USER NAME: rgrimm  
DESIGNED: JLS  
CHECKED: LRB  
DRAWN: RK  
CHECKED: LRB

PLOT SCALE: 1/8" = 1'-0"  
PLOT DATE: 12/13/2012

REVISIONS:  
REVISIONS:  
REVISIONS:  
REVISIONS:

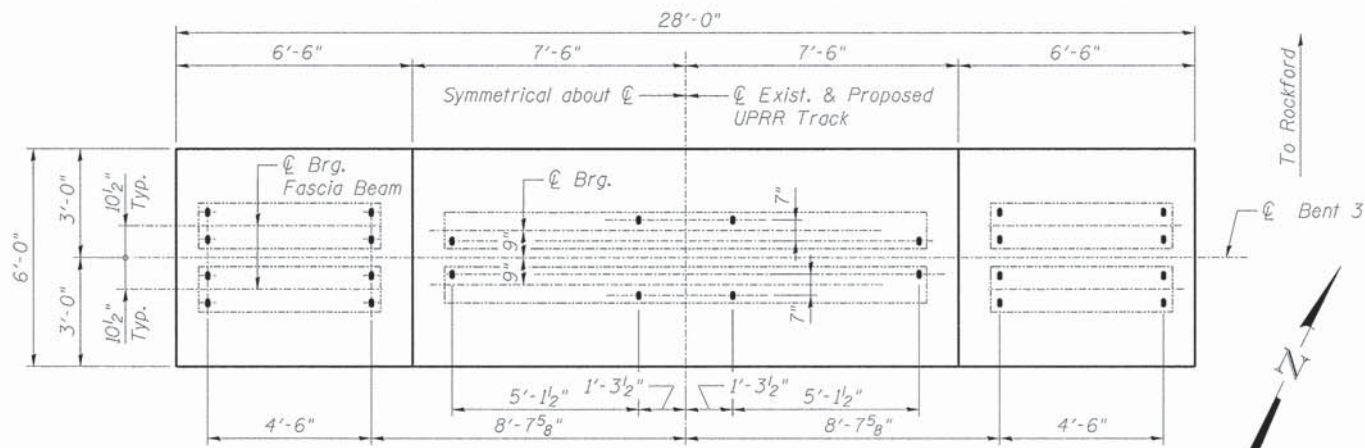
SHEET NO. UP-19 OF UP-52 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	279

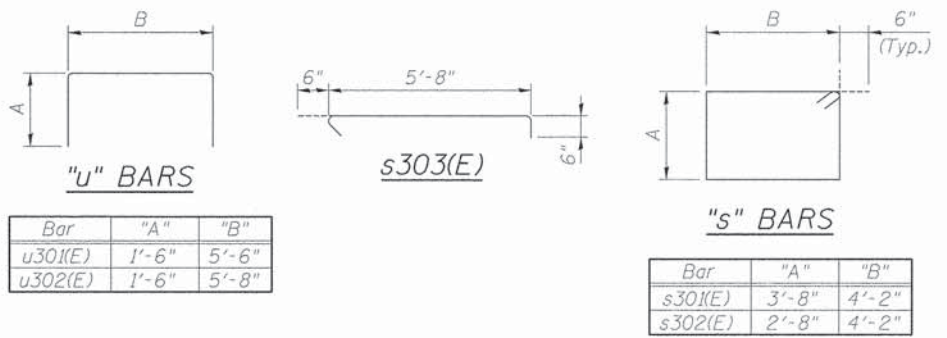
CONTRACT NO. 63598  
ILLINOIS FED. AID PROJECT

X:\100005\10074\Engineering\Documents\Phase\_II\NSN\_045\_3168\_UPRR\_Bridge\PLANS\Perm.Br\_019\_Bent.2.4.Dtls.dgn 3:12:32 PM 12/13/2012





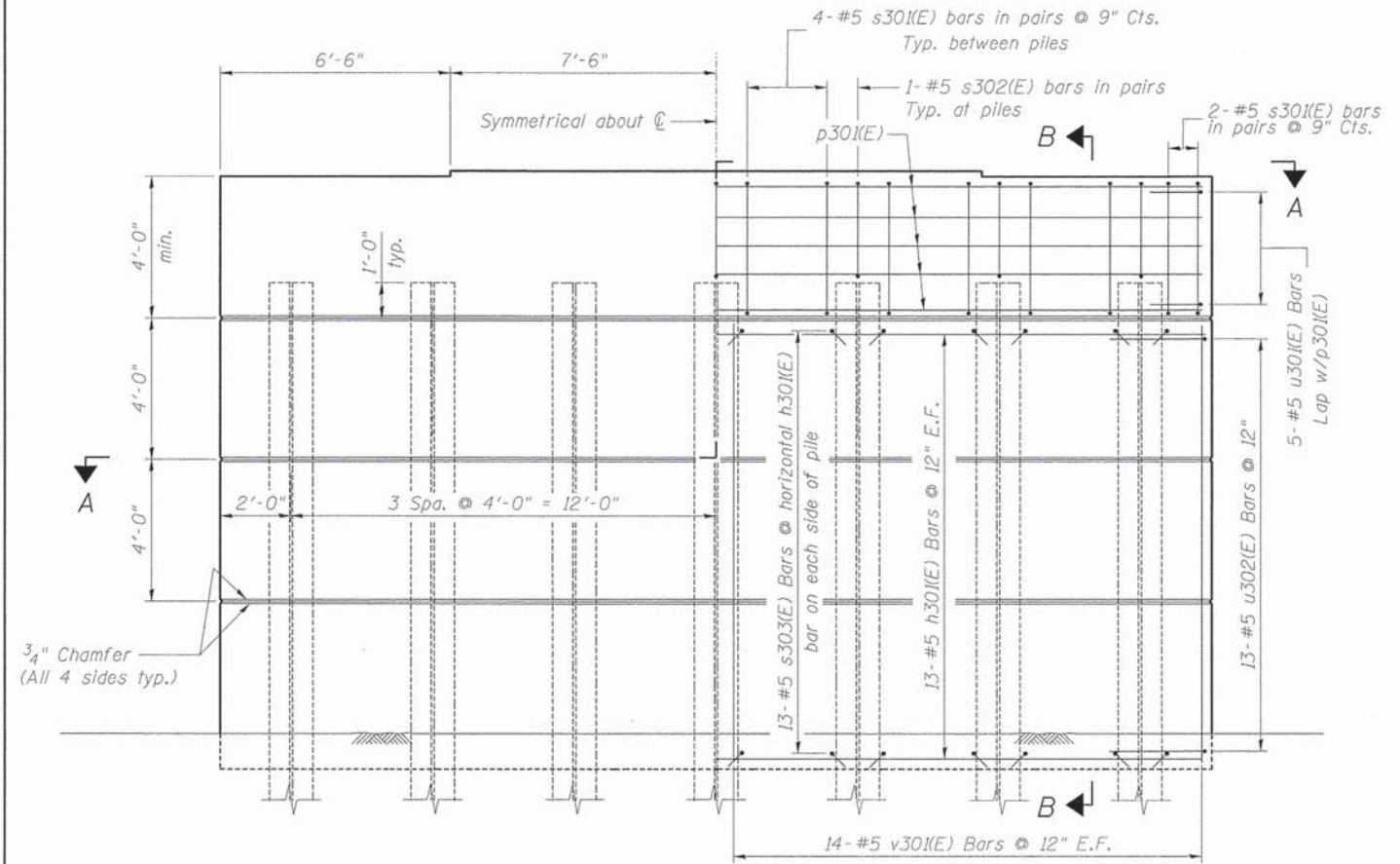
PLAN - BENT 3



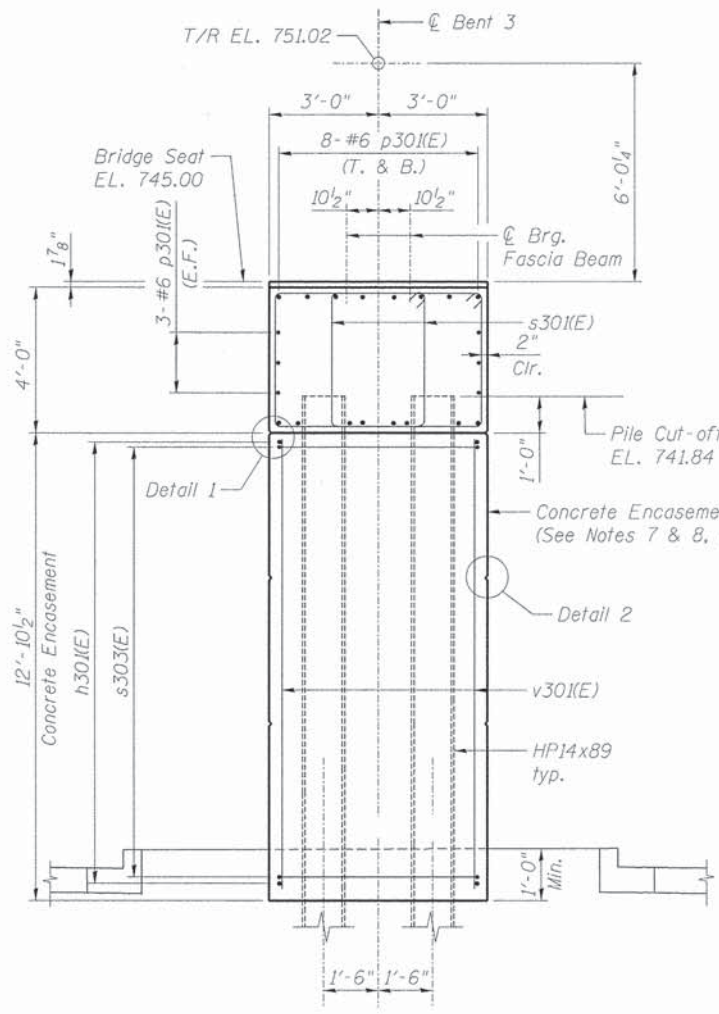
**BENT 3**  
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h301(E)	26	#5	27'-8"	—
p301(E)	22	#6	27'-8"	—
s301(E)	56	#5	16'-8"	□
s302(E)	14	#5	14'-8"	□
s303(E)	182	#5	6'-8"	┌┐
u301(E)	10	#5	8'-6"	┌┐
u302(E)	26	#5	8'-8"	┌┐
v301(E)	66	#5	12'-5"	—
Concrete Structures (Special)			Cu. Yd.	105.6
Reinforcement Bars, Epoxy Coated			Pound	5,300

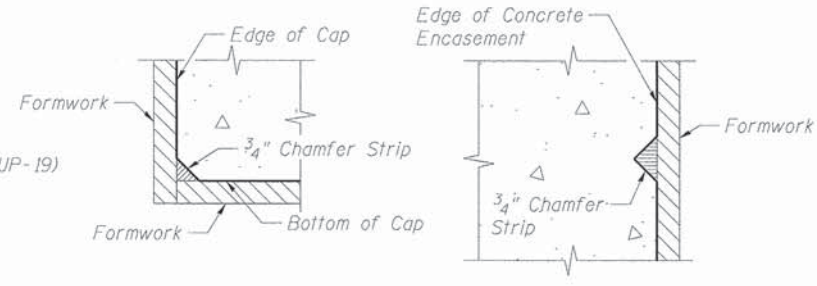
Note:  
1. All bar dimensions are out to out.



ELEVATION

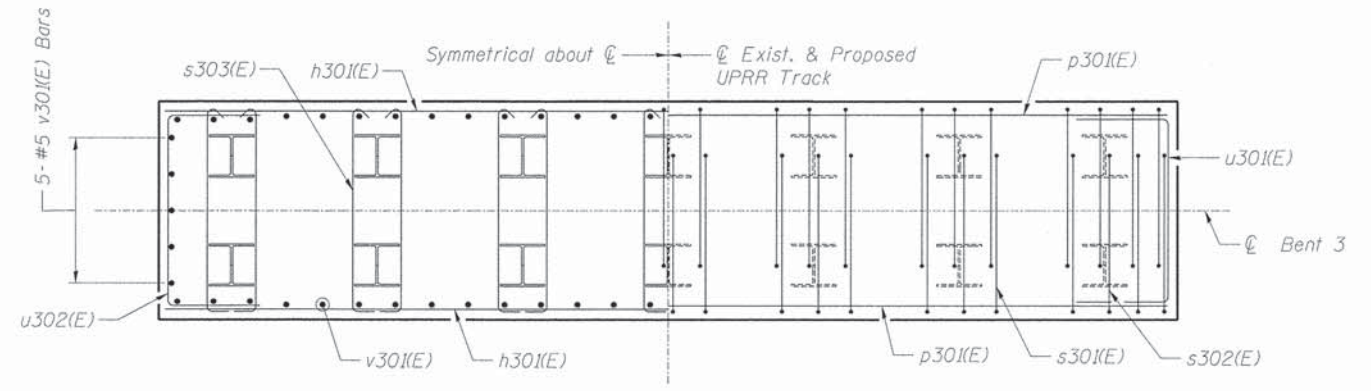


SECTION B-B



DETAIL 1

DETAIL 2



SECTION A-A

**benesch**  
engineers · scientists · planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgrimm	DESIGNED -	REVISED -
Perm_Br_020_Bent_3.Dtl.dgn		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE = 12/13/2012	CHECKED -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

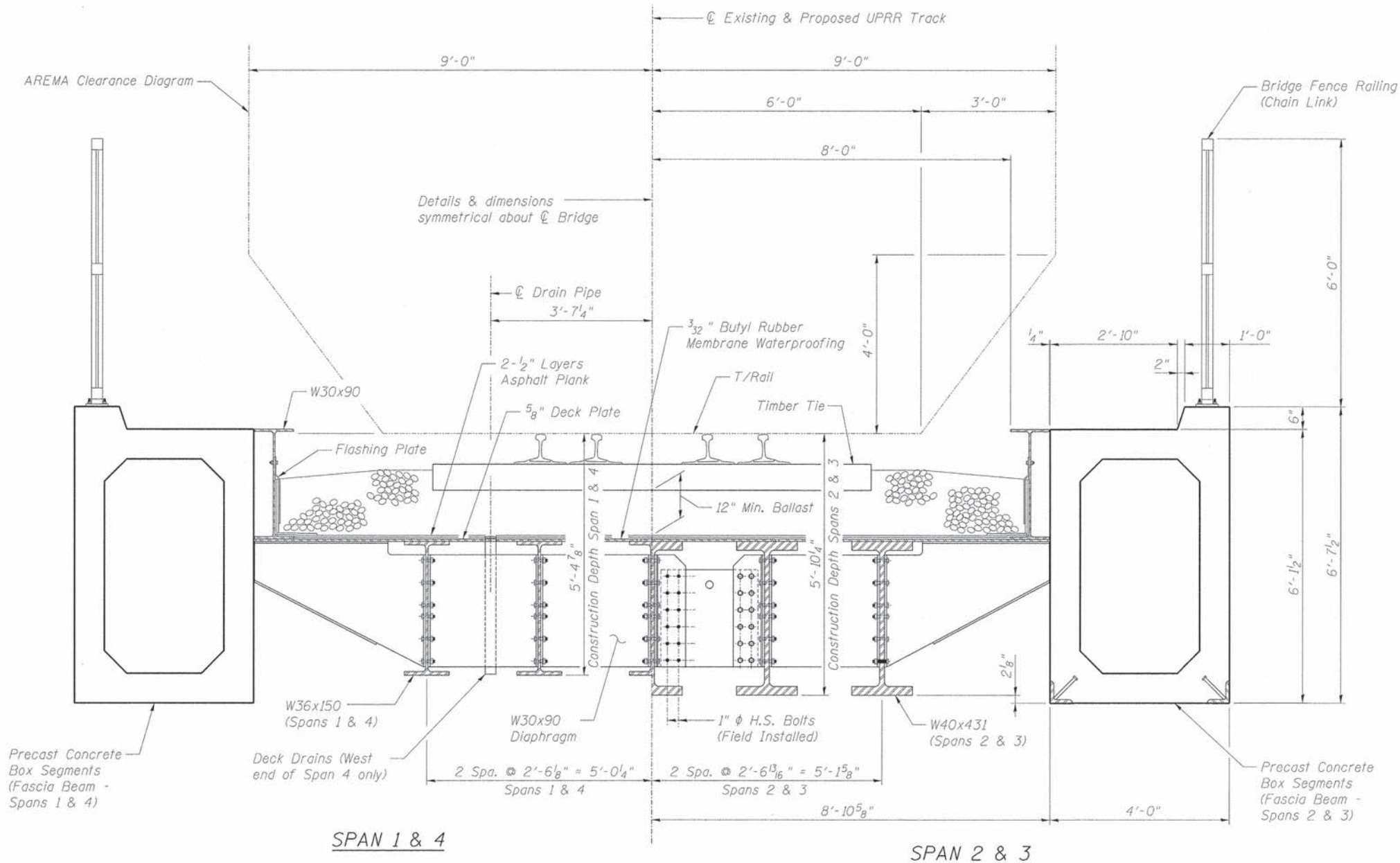
M.P. 37.71 BELVEDERE SUBDIVISION - STRUCTURE NO. 045-3168  
BENT 3 - PLAN AND ELEVATION

SHEET NO. UP-20 OF UP-52 SHEETS

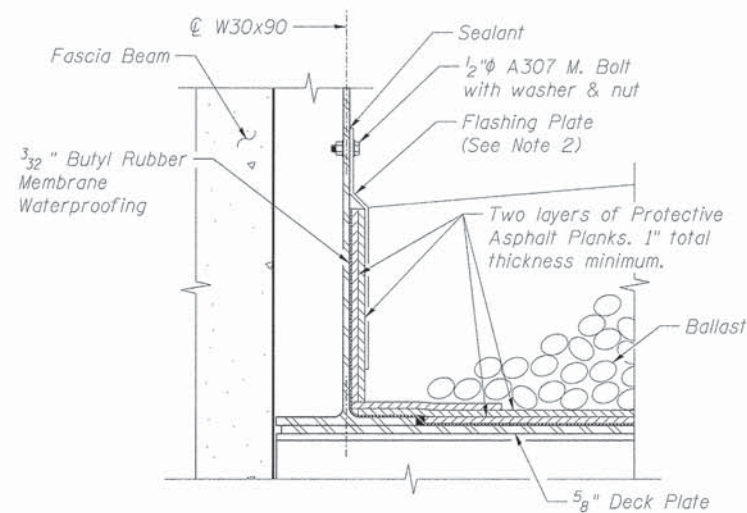
F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 280
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	

X:\100005\10074\Engineering\_Documents\_Phase\_11\N\_045\_3168\_UPRR\_Bridge\PLANS\Perm\_Br\_020\_Bent\_3.Dtl.dgn 3:12:33 PM 12/13/2012





TYPICAL DECK CROSS SECTION



FLASHING INSTALLATION DETAIL

Construction Depth - Spans 1 & 4

- 7 5/16" Rail
- 1 5/16" Tie  $\bar{C}$
- 7" Tie
- 12" Ballast (Min.)
- 1" 2-1/2" Layers Asphalt Plank
- 3/32" Butyl Rubber Membrane Waterproofing
- 5/8" Deck Plate
- 35 7/8" Beam W36x150

5'-4 7/8"  $\pm$  Construction Depth (Min.)

Construction Depth - Spans 2 & 3

- 7 5/16" Rail
- 1 5/16" Tie  $\bar{C}$
- 7" Tie
- 12" Ballast (Min.)
- 1" 2-1/2" Layers Asphalt Plank
- 3/32" Butyl Rubber Membrane Waterproofing
- 5/8" Deck Plate
- 41 1/4" Beam W40x431

5'-10 1/4"  $\pm$  Construction Depth (Min.)

NOTES:

1. T/Rail to T/Tie = 8 1/4". Dimension includes 7 5/16" height of 136 lb. rail and a 1 5/16" tie plate.
2. For Waterproofing Details see Sheet UP-22.

**benesch**  
engineers · scientists · planners

Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
DECK CROSS SECTION

SHEET NO. UP-21 OF UP-52 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	281
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	

FILE NAME =  
Perm.Br\_021.Deck.Section.dgn

USER NAME = rgrimm

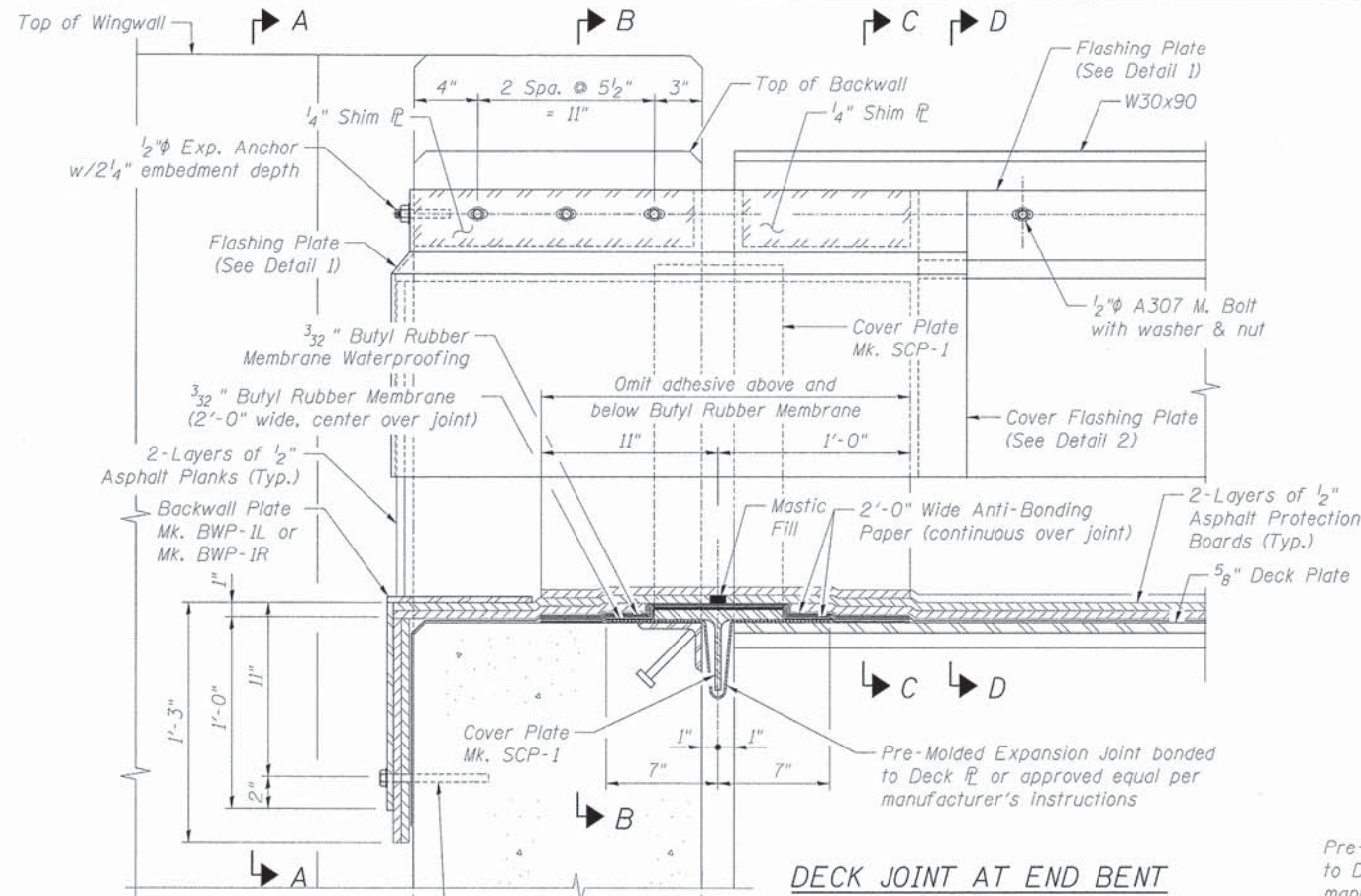
DESIGNED - JLS  
CHECKED - LRB

PLLOT SCALE =  
DRAWN - RMG

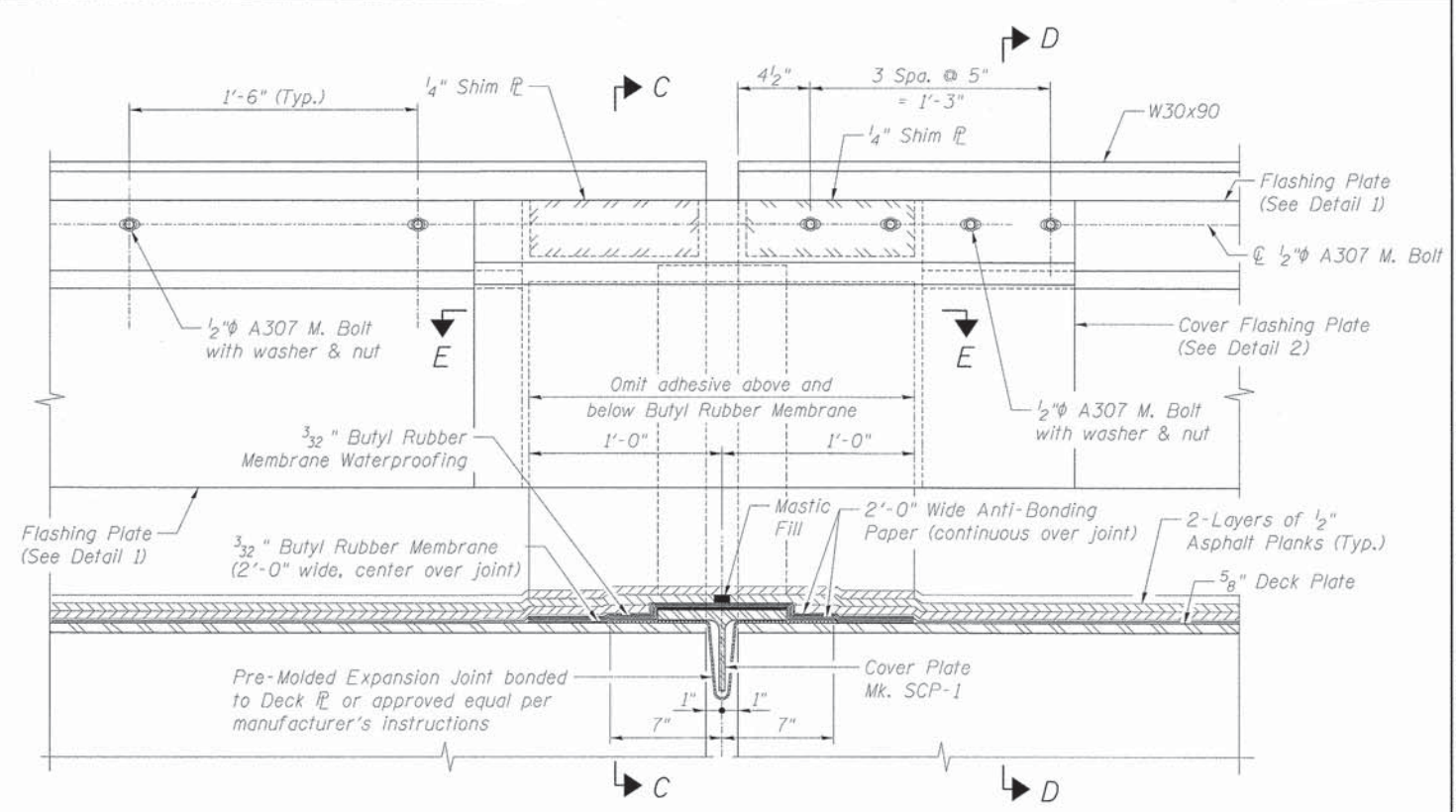
PLLOT DATE = 12/13/2012  
CHECKED - LRB

REVISIED -  
REVISIED -  
REVISIED -  
REVISIED -

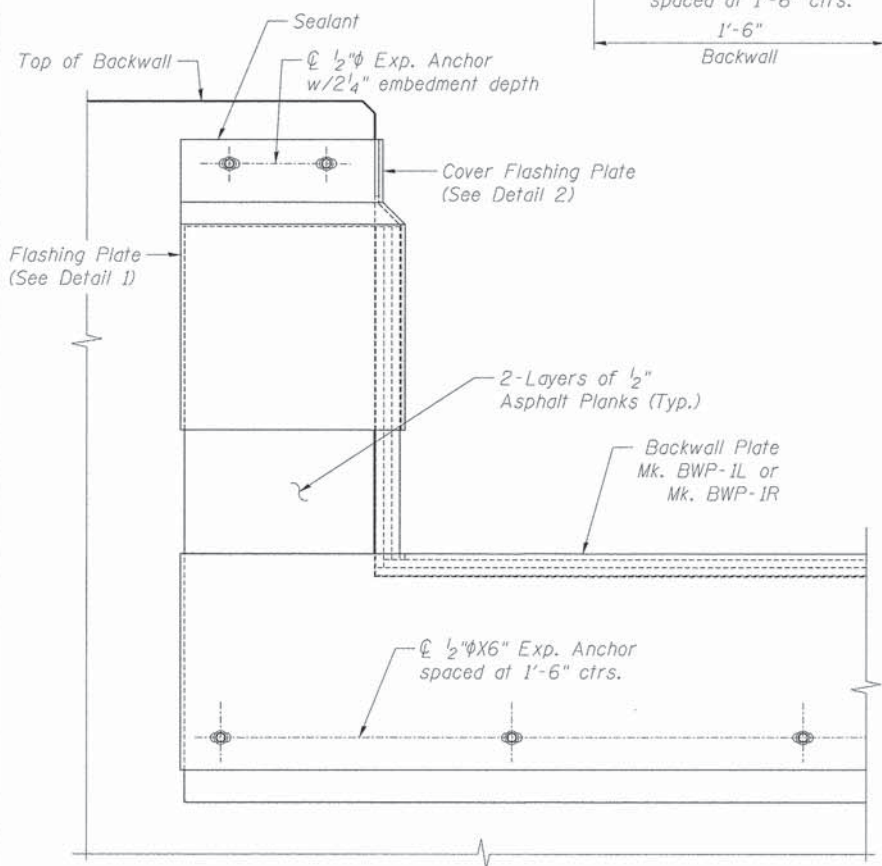




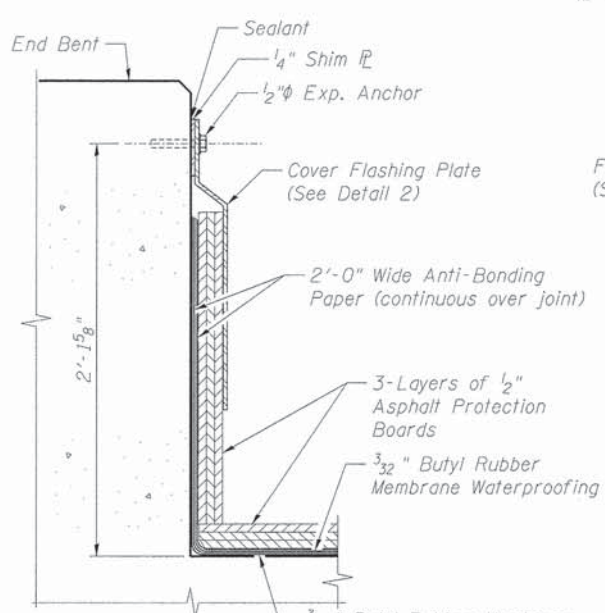
**DECK JOINT AT END BENT**



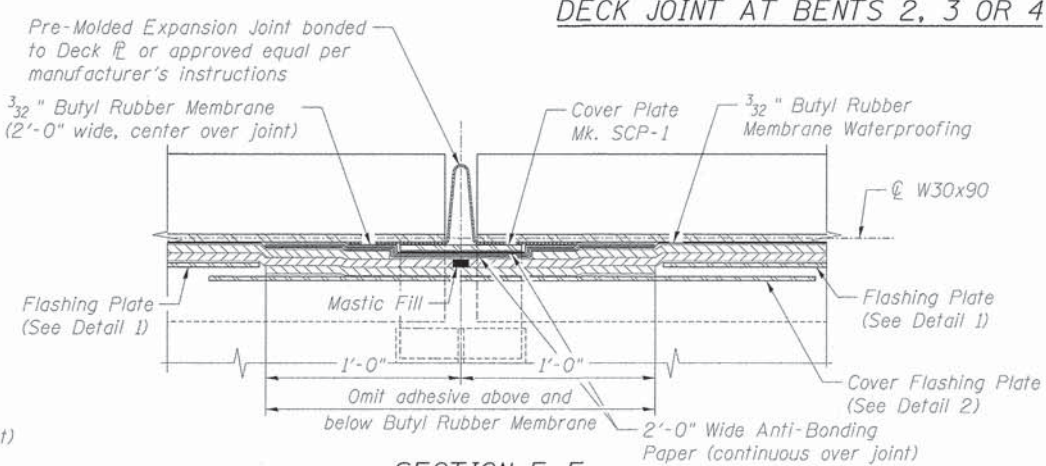
**DECK JOINT AT BENTS 2, 3 OR 4**



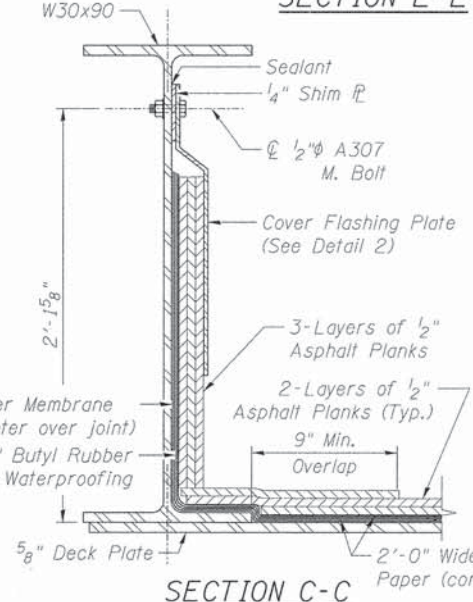
**VIEW A-A**



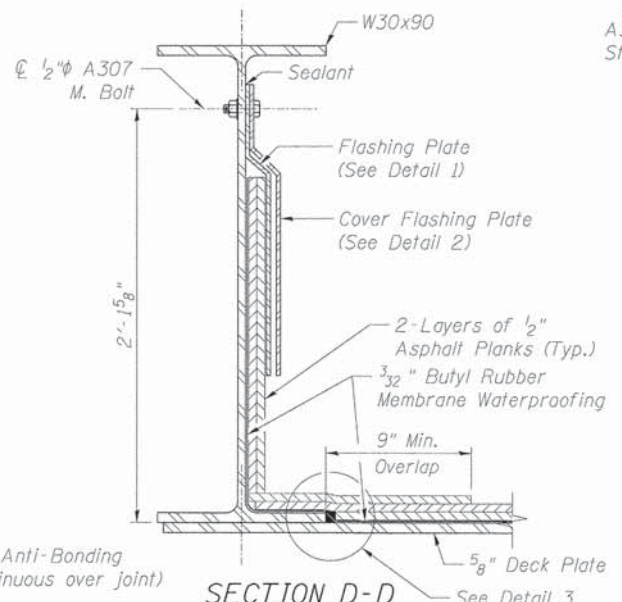
**SECTION B-B**



**SECTION E-E**

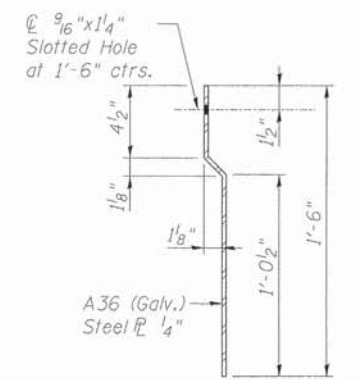


**SECTION C-C**

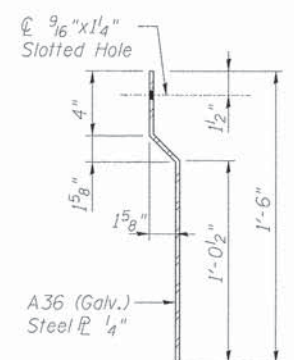


**SECTION D-D**

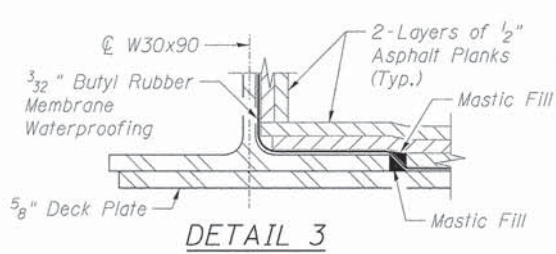
- NOTES:**
1. For Cover Plate details see Sheet UP-28.
  2. For Backwall Plate details see Sheet UP-28.
  3. For Backwall detail see Detail 2 Sheet UP-18.



**DETAIL 1**



**DETAIL 2**



**DETAIL 3**



Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgrimm	DESIGNED - RK	REVISED -
PLOT SCALE =	DESIGNED - LRB	REVISIONS -	
PLOT DATE = 12/13/2012	DRAWN - RK	REVISIONS -	
	CHECKED - LRB	REVISIONS -	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

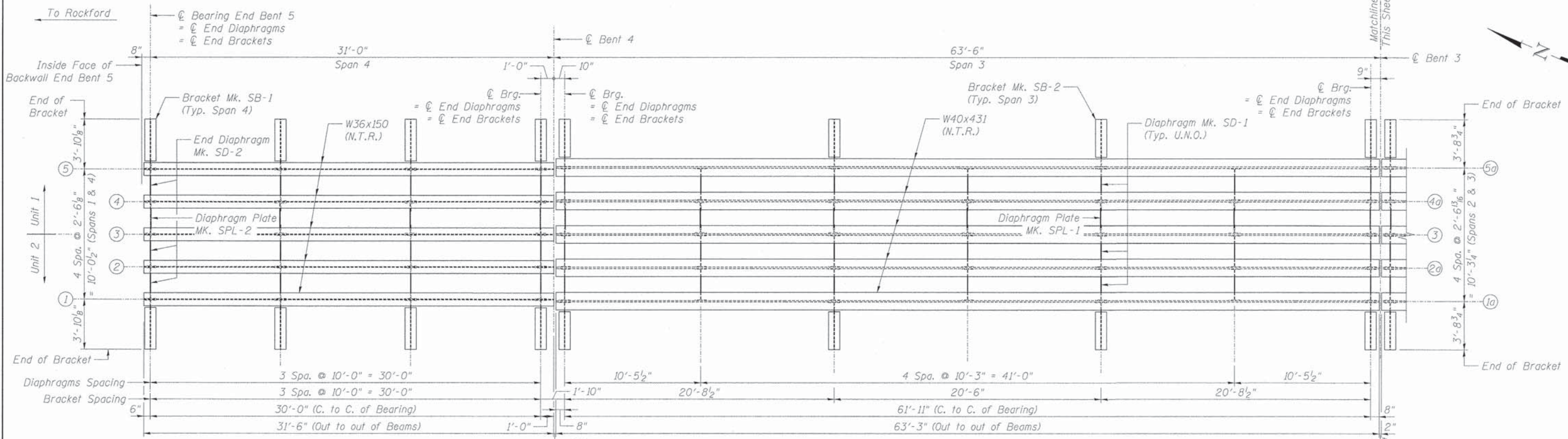
**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
WATERPROOFING DETAILS**

SHEET NO. UP-22 OF UP-52 SHEETS

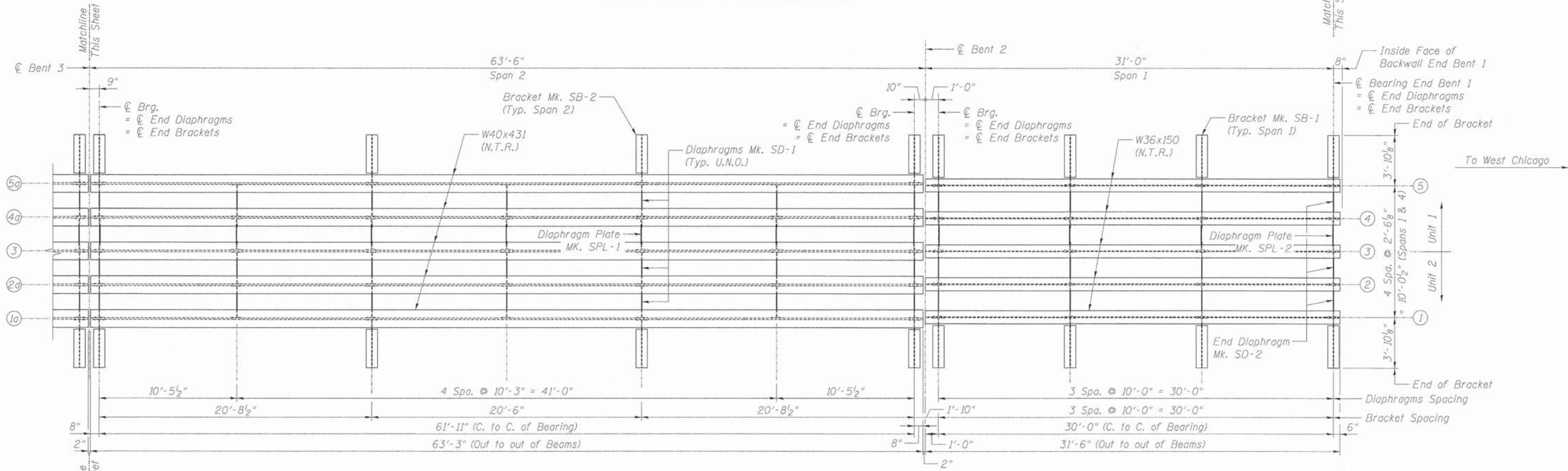
F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 282
				CONTRACT NO. 63598
ILLINOIS FED. AID PROJECT				

X:\1000005\10074\Engineering\Documents\Phase-1\15N\_045\_3168\_UPRR\Bridge\PLANS\Perm.Br.-022-Waterproofing\_Details.dgn 3:12:36 PM 12/13/2012





FRAMING PLAN - SPANS 3 & 4



FRAMING PLAN - SPANS 1 & 2

**NOTE:**  
N.T.R. indicates Notch Toughness Requirements.

**benesch**  
engineers - scientists - planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
Perm_Br_023_Framing_Plan.dgn		CHECKED - LRB	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/13/2012	CHECKED - LRB	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

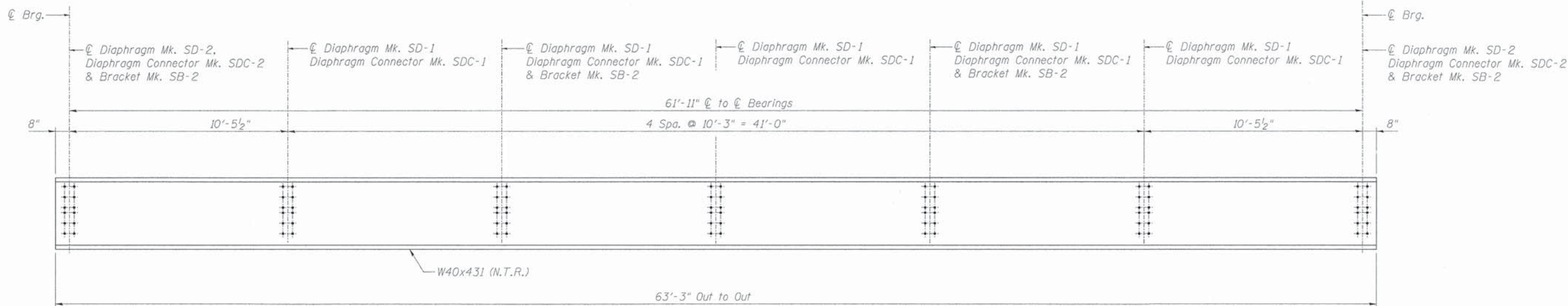
M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
BEAM FRAMING PLAN

SHEET NO. UP-23 OF UP-52 SHEETS

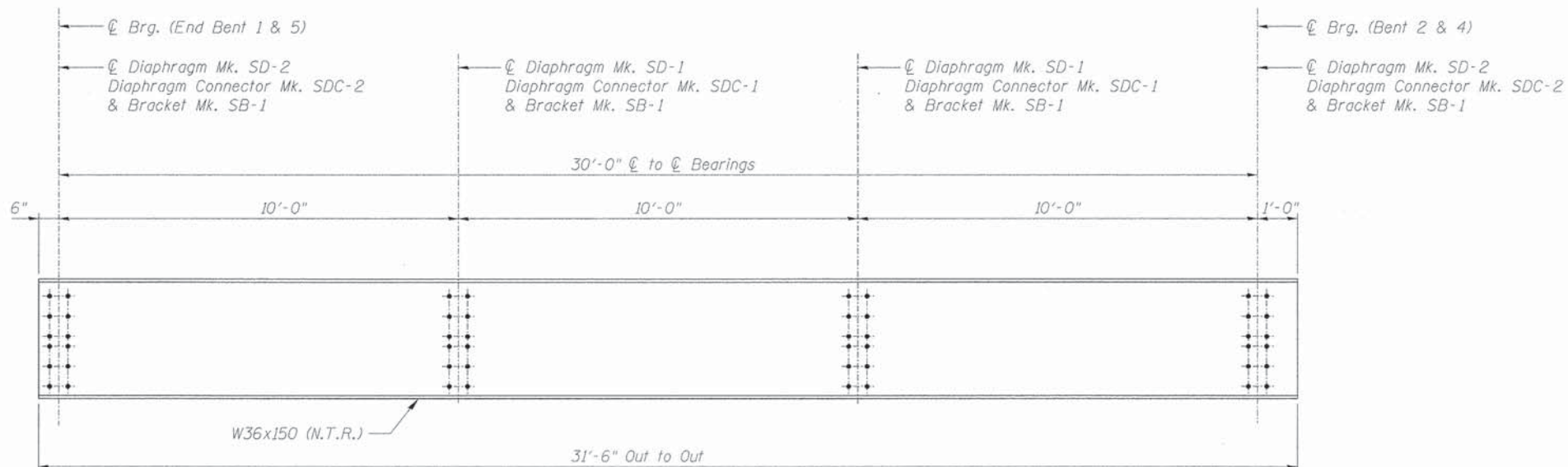
F.A.P. RTE. = 361	SECTION = 06-00214-18-RP	COUNTY = KANE	TOTAL SHEETS = 451	SHEET NO. = 283
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	

X:\1000005\10074\Engineering\_Documents\_Phase\_II\SN\_045\_3168\_UPRR\_Bridge\PLANS\Perm\_Br\_023\_Framing\_Plan.dgn 3:12:38 PM 12/13/2012





**ELEVATION - BEAMS 1a, 2a, 3, 4a & 5a (SPANS 2 & 3)**  
 10 Req'd  
 Est. Wt. = 27,270 LB. Each



**ELEVATION - BEAMS 1 THRU 5 (SPANS 1 & 4)**  
 10 Req'd  
 Est. Wt. = 4,730 LB. Each

**MOMENT AND SHEAR PER BEAM**

MOMENT			
	Spans 1 & 4		Spans 2 & 3
Dead Load	170 k-ft		857 k-ft
Live Load	Alternate LL	394 k-ft	E80 1104 k-ft
Impact	195 k-ft		487 k-ft
	Total		2,448 k-ft
Section - A709 Gr. 50W	W36x150		W40x431
Gross I Furnished	9,040 in <sup>4</sup>		34,800 in <sup>4</sup>
Net I Furnished	8,735 in <sup>4</sup>		34,150 in <sup>4</sup>
Net Section Modulus Furnished	487 in <sup>3</sup>		1,654 in <sup>3</sup>
Allowable Max. Stress in Flange	27.5 ksi		27.5 ksi
Actual stress in Flange	Tension	18.7 ksi	17.8 ksi
	Compression	18.1 ksi	17.5 ksi
Allowable Max. Deflection	0.57"		1.16"
Actual Max. Deflection Live Load + Impact	0.37"		1.09"
SHEAR			
Dead Load	23 k		56 k
Live Load	Alternate LL	59 k	E80 81 k
Impact	29 k		36 k
	Total		173 k
Web Shear	4.9 ksi		3.1 ksi

Total estimated weight of structural steel = 499,840 Lbs. Quantity provided for information only.

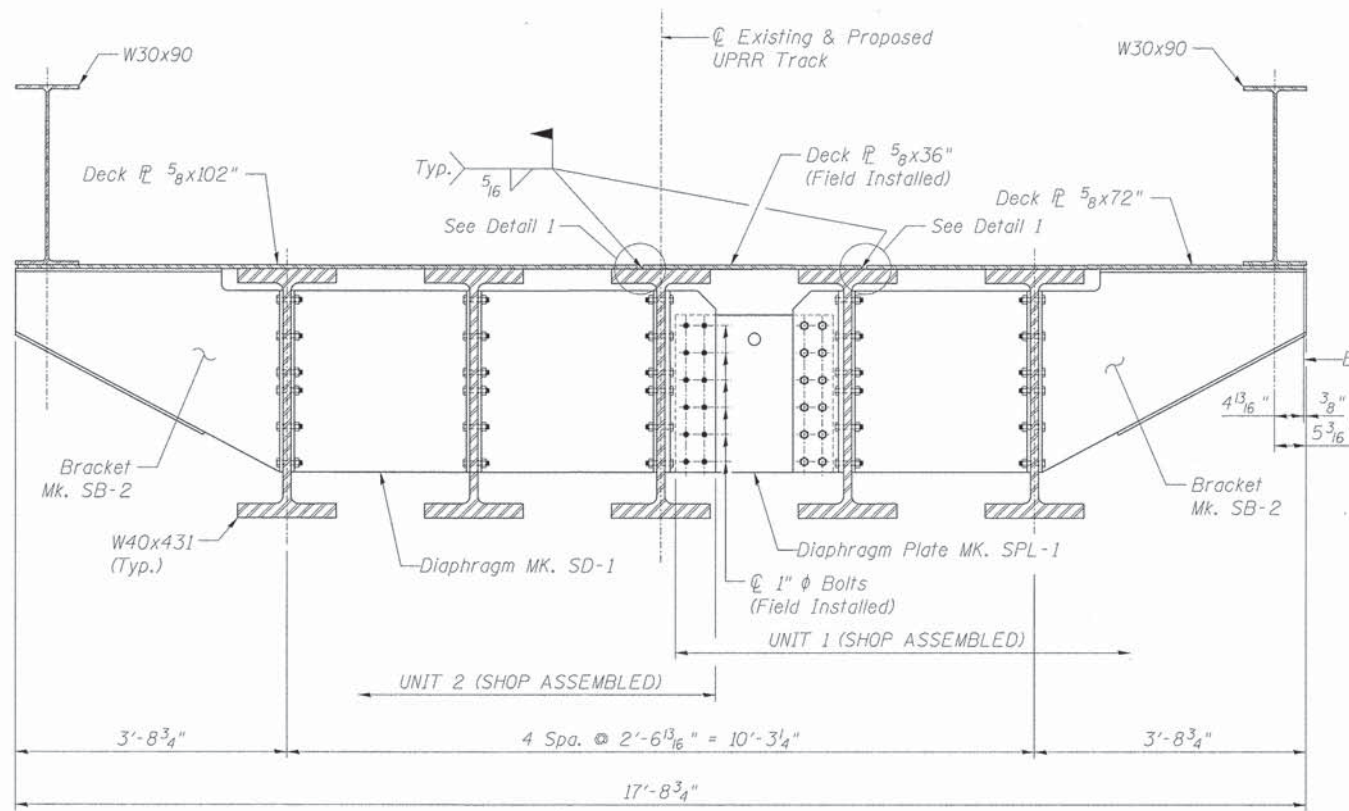
**BEARING ON MASONRY**

	Spans 1 & 4	Spans 2 & 3
Total Reaction	111 k	173 k
Net Bearing Area Furnished	168 in <sup>2</sup>	219 in <sup>2</sup>
Average Bearing Stress	661 psi	790 psi

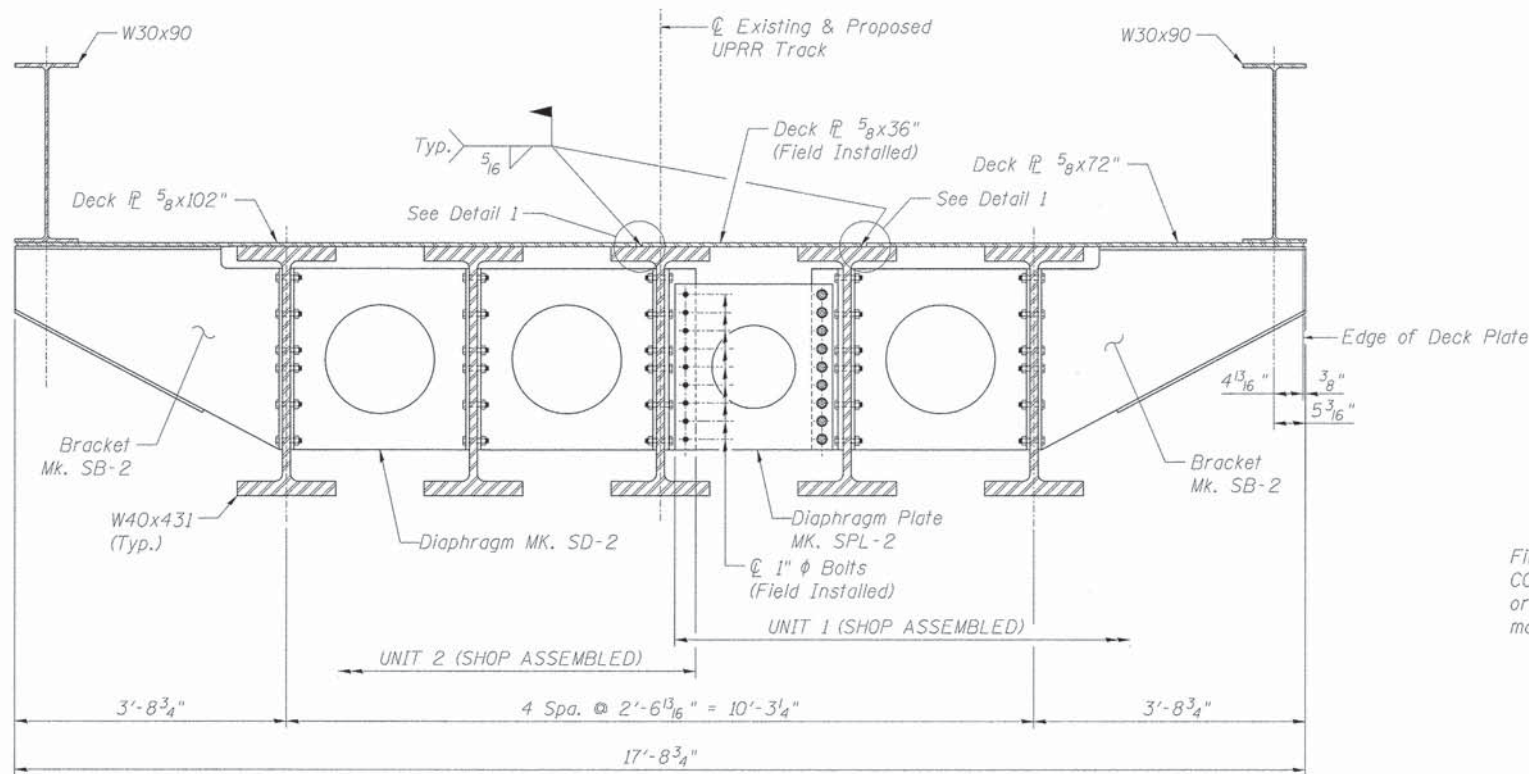
**NOTE:**

- N.T.R. indicates Notch Toughness Requirements.
- Holes are 13/16" φ for 3/4" H.S. Bolts.



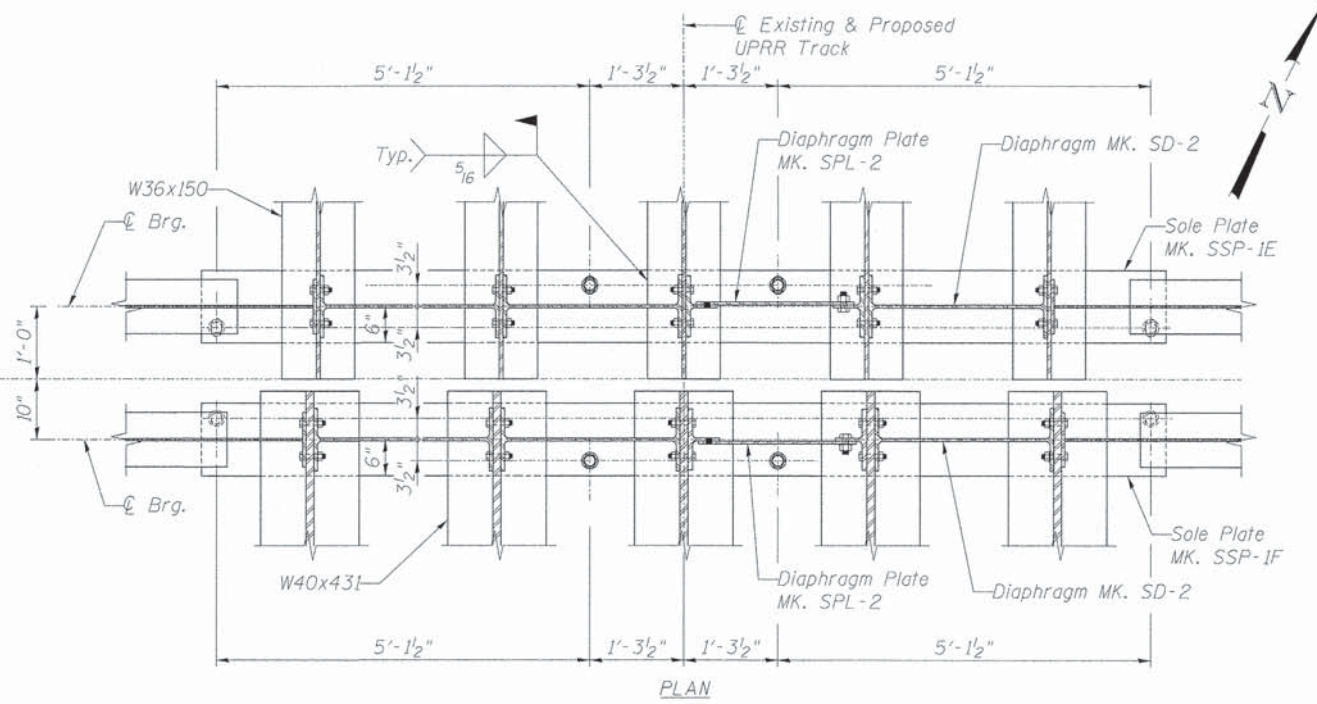


**SECTION - ASSEMBLED SPAN AT INTERIOR DIAPHRAGM**  
 (Section Shown at Span 3,  
 Span 1, 2 and 4 similar)

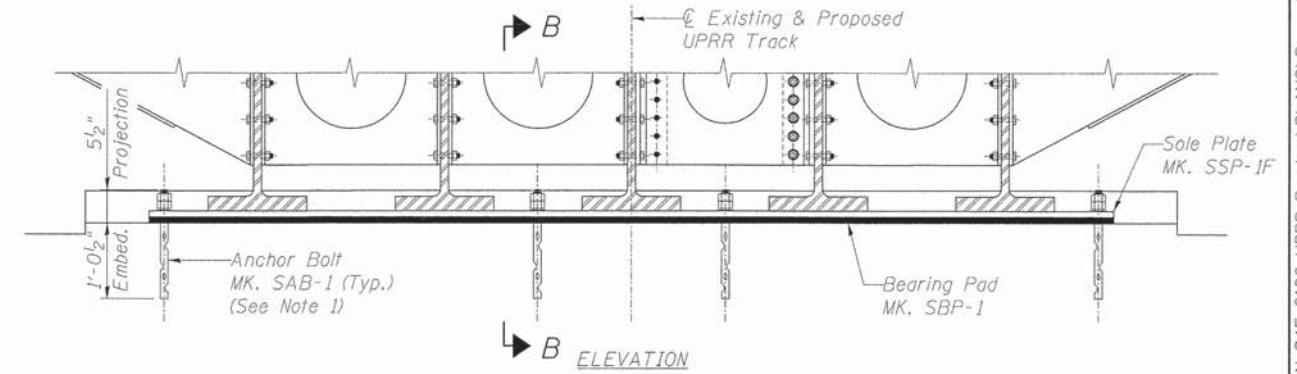


**SECTION - ASSEMBLED SPAN AT END DIAPHRAGM**  
 (Section Shown at Span 3,  
 Span 1, 2 and 4 similar)

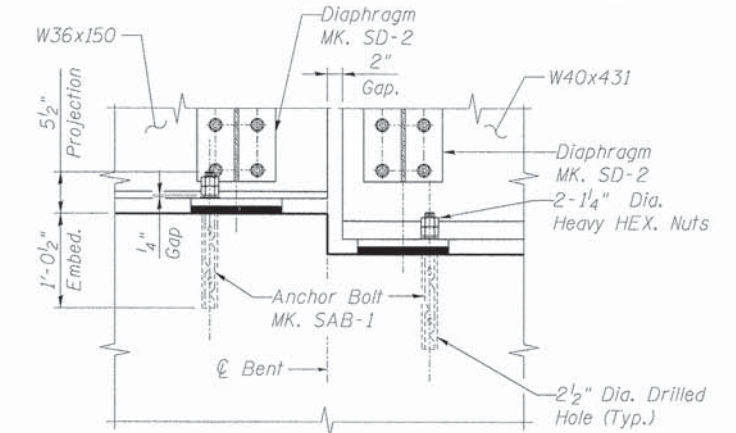
℄ Bent 4



PLAN

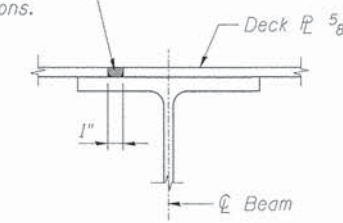


**B ELEVATION**  
**BEARING ASSEMBLY DETAILS**  
 (Section Shown at Bent 4 through Span 3)



SECTION B-B

Fill gap in field with Carlisle  
 CCW-201 Polyurethane Sealant  
 or approved equal per  
 manufacturer's instructions.



DETAIL 1

- NOTES:**
1. Install Anchor Bolt in 2 1/2"φ Drilled Holes w/ Epoxy Grout.
  2. For Anchor Bolt Detail see Sheet UP-27.
  3. For Bearing Pad Details see Sheet UP-28.

**benesch**  
 engineers · scientists · planners  
 Alfred Benesch & Company  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-565-0450 Job No. 10074

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168**  
**ASSEMBLY DETAILS (1 OF 2)**

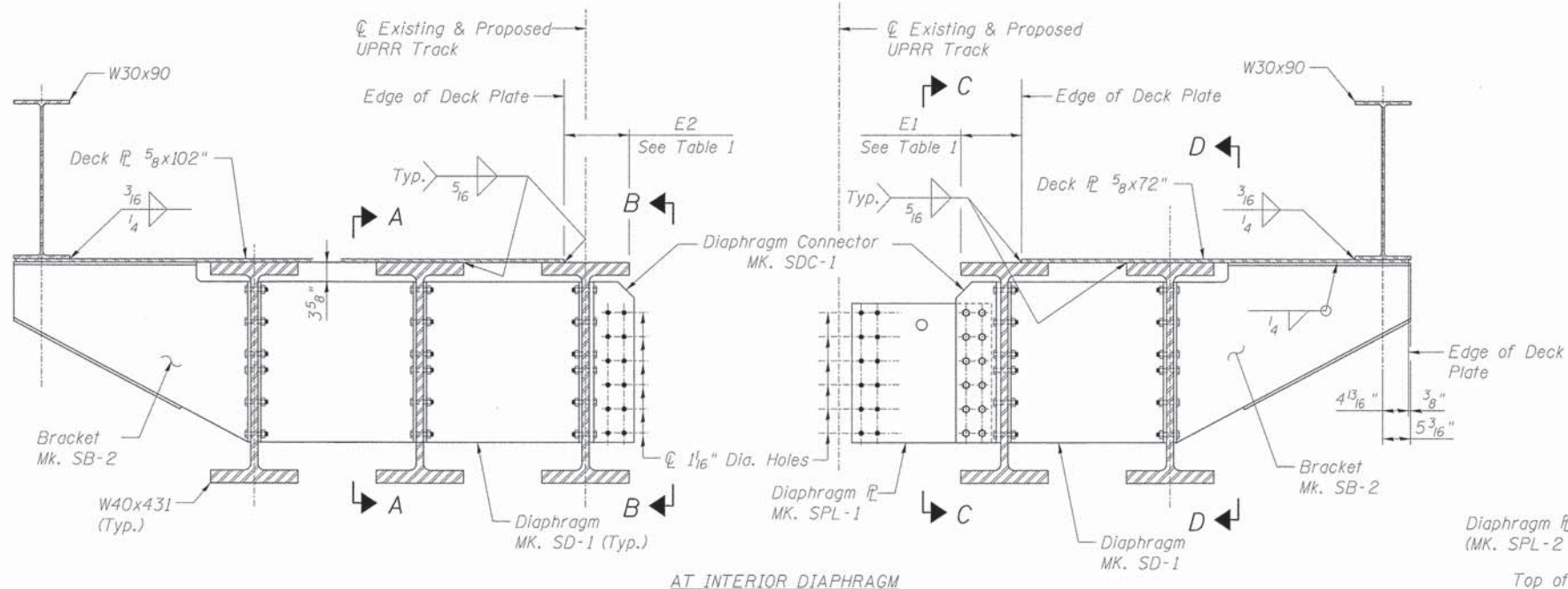
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	285
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
Perms.Br..025.Assembly Details.1.dgn	rgrimm	JLS	-
PLOT SCALE =	DRAWN -	CHECKED -	REVISED -
PLOT DATE = 12/13/2012	RK	LRB	-
	CHECKED -	REVISED -	
	LRB	-	

SHEET NO. UP-25 OF UP-52 SHEETS

X:\100005\10074\Engineering\Documents\_Phase\_1\11\SN\_045\_3168\_LUPRR\_Bridge\PLANS\Perms.Br..025-Assembly Details.1.dgn 3:12:40 PM 12/13/2012

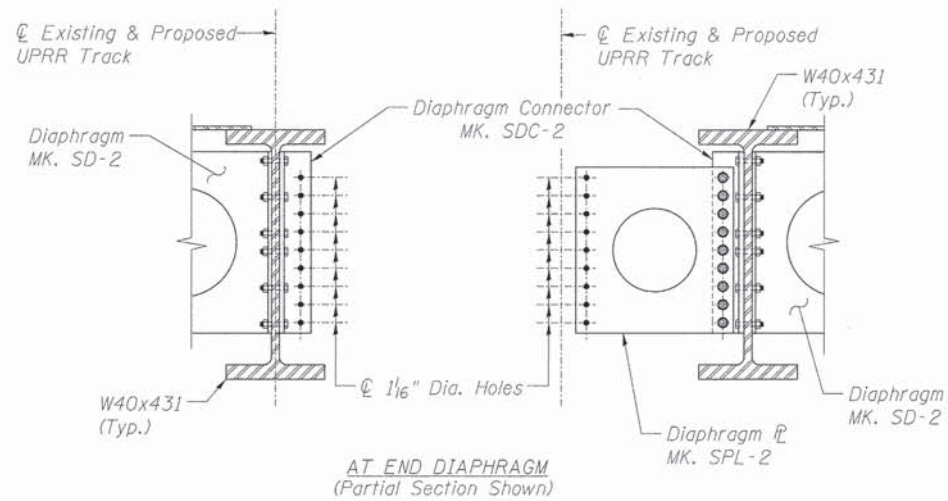




**SECTION - UNIT 2**  
(Shown through Span 2 & 3  
Span 1 and 4 similar)

**AT INTERIOR DIAPHRAGM**

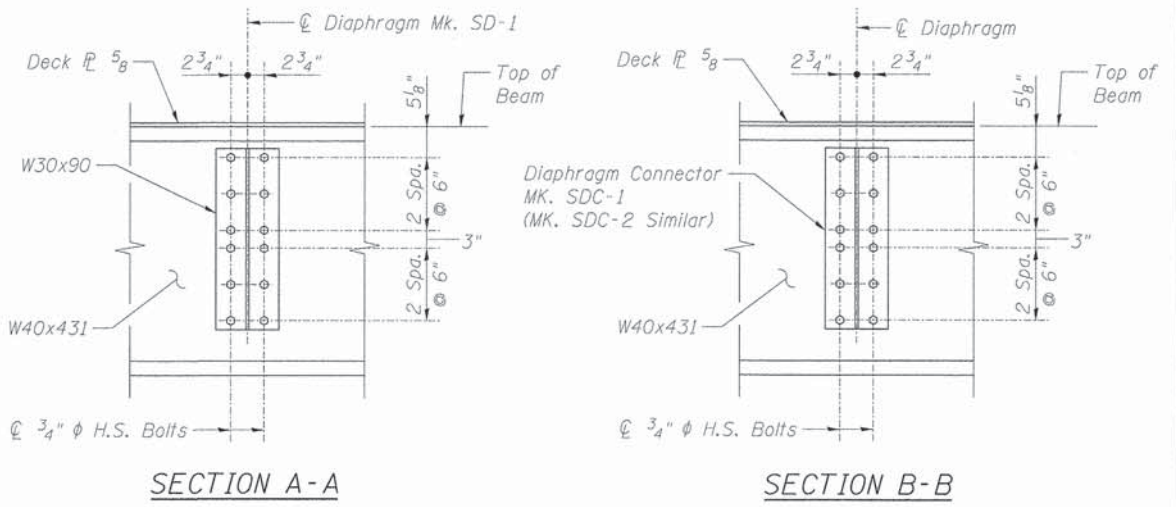
**SECTION - UNIT 1**  
(Shown through Span 2 & 3,  
Span 1 and 4 similar)



**AT END DIAPHRAGM**  
(Partial Section Shown)

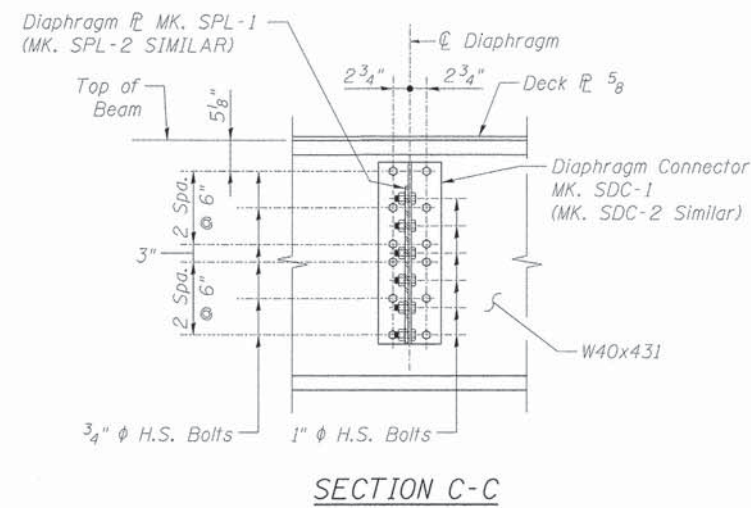
**TABLE 1**

Beam Size	EDGE DECK PLATE TO EDGE OF BEAM	
	Unit 1	Unit 2
W36x150	9 <sup>7</sup> / <sub>8</sub> "	10"
W40x431	11 <sup>5</sup> / <sub>16</sub> "	1'-0 <sup>1</sup> / <sub>8</sub> "

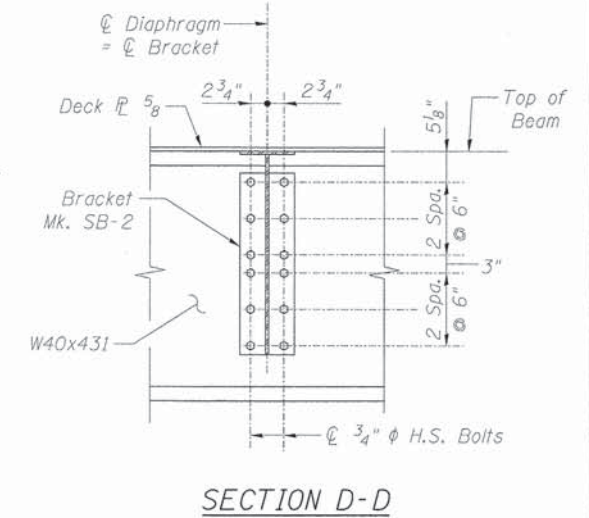


**SECTION A-A**

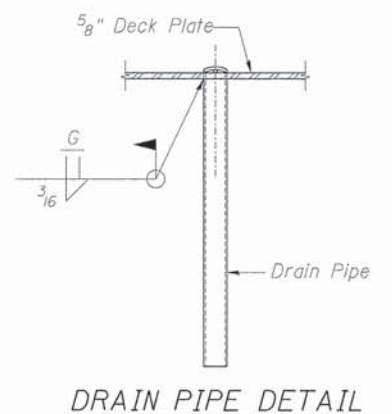
**SECTION B-B**



**SECTION C-C**

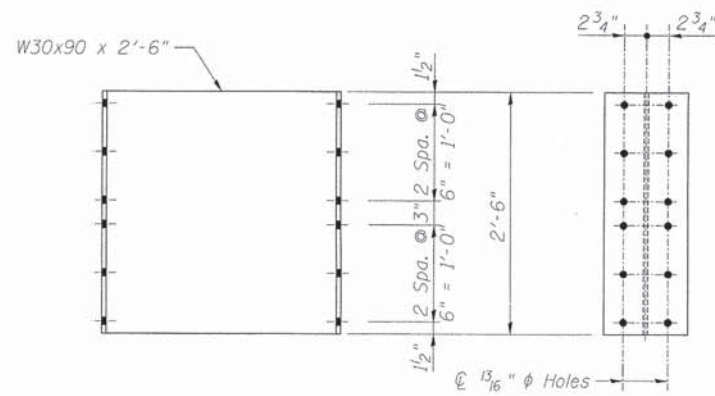


**SECTION D-D**



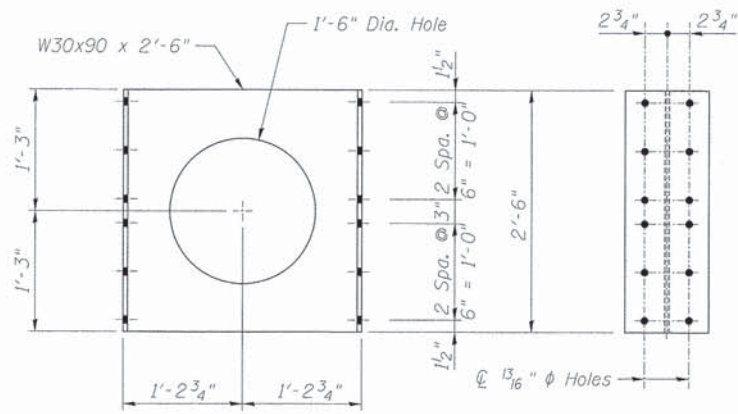
**DRAIN PIPE DETAIL**





**DIAPHRAGM MK. SD-1**

42 Req'd  
Est. Wt. = 225 LB. Each

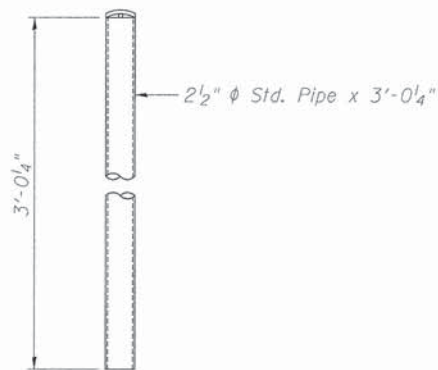


**DIAPHRAGM MK. SD-2**

24 Req'd  
Est. Wt. = 225 LB. Each



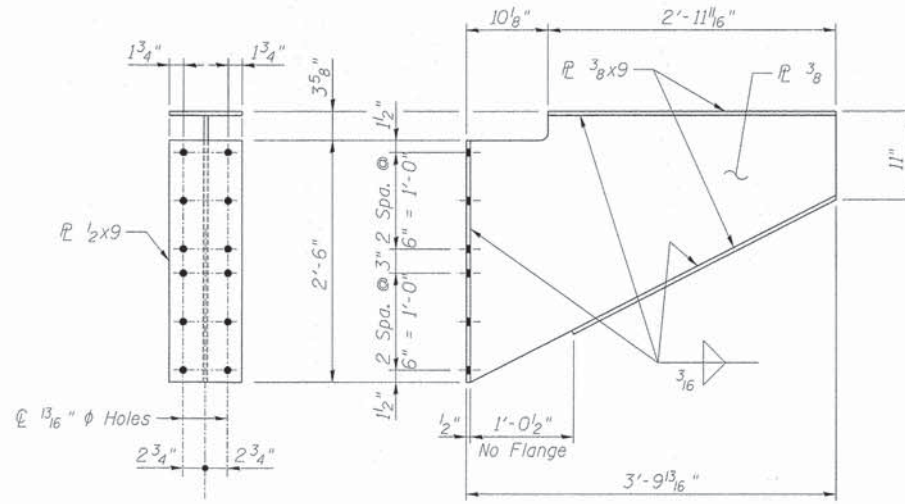
PLAN



ELEVATION

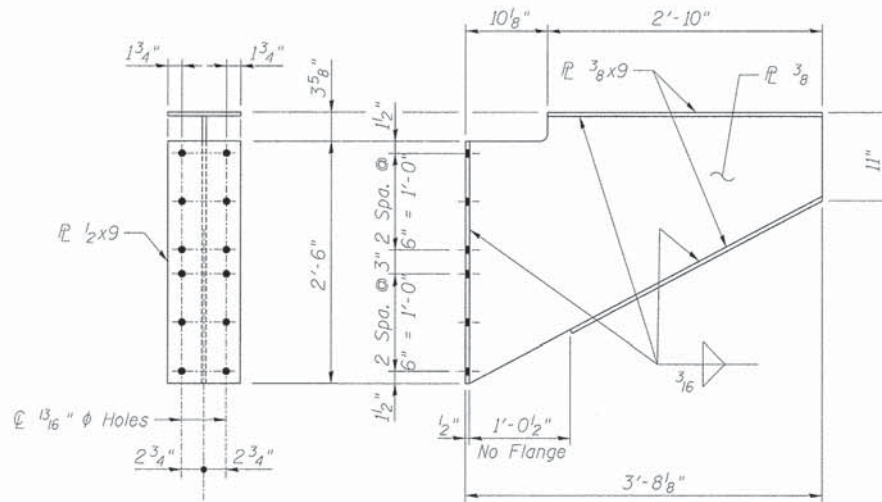
**DRAIN PIPE**

4 Req'd  
Est. Wt. = 18 LB. Each



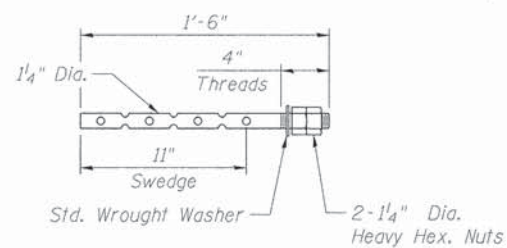
**BRACKET MK. SB-1**

16 Req'd  
Est. Wt. = 212 LB. Each



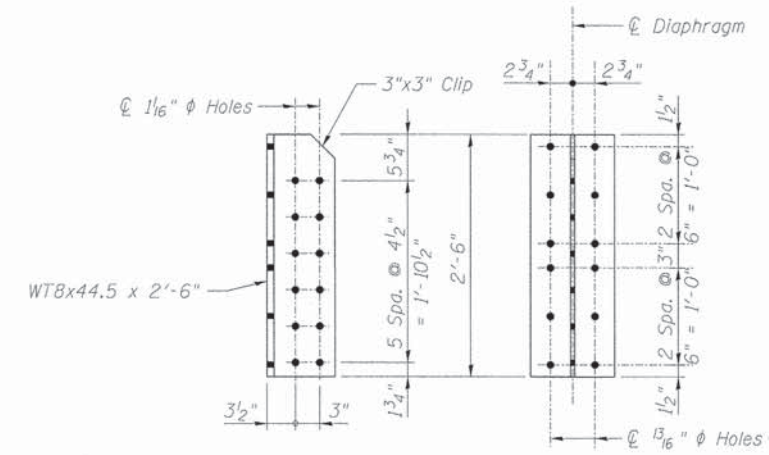
**BRACKET MK. SB-2**

16 Req'd  
Est. Wt. = 205 LB. Each



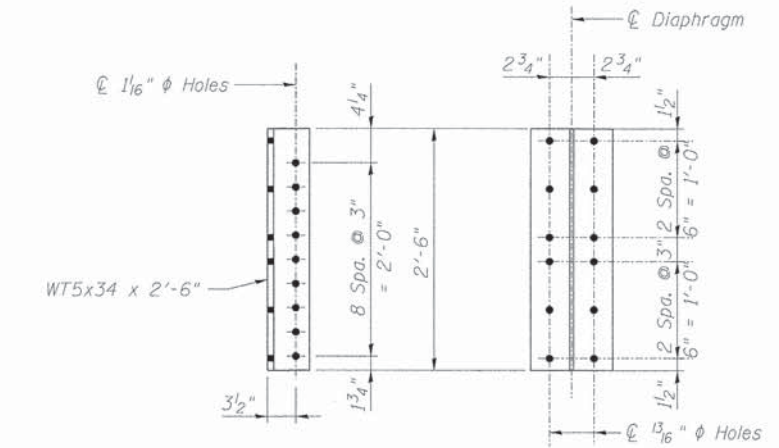
**ANCHOR BOLT MK. SAB-1**

32 Req'd  
Est. Wt. = 8.1 LB. Each



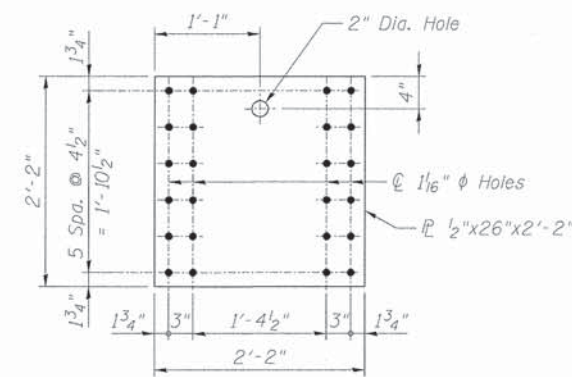
**DIAPHRAGM CONNECTOR MK. SDC-1**

28 Req'd  
Est. Wt. = 112 LB. Each



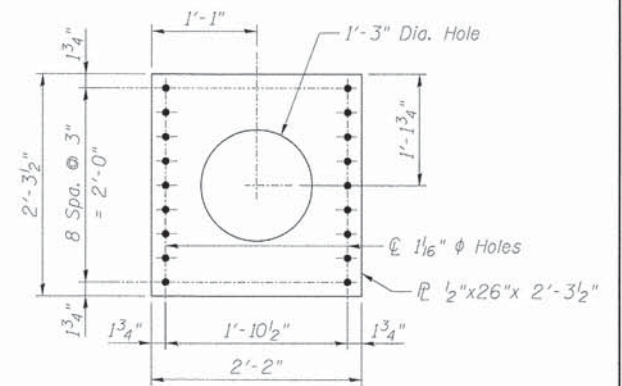
**DIAPHRAGM CONNECTOR MK. SDC-2**

16 Req'd  
Est. Wt. = 85 LB. Each



**DIAPHRAGM PLATE MK. SPL-1**

14 Req'd  
Est. Wt. = 96 LB. Each



**DIAPHRAGM PLATE MK. SPL-2**

8 Req'd  
Est. Wt. = 102 LB. Each

**NOTE:**

For Material Specification, see Structural Steel Notes Sheet UP-3.

**benesch**  
engineers · scientists · planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
Perms.Br.-027.Steel.Details.1.dgn		CHECKED - LRB	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/13/2012	CHECKED - LRB	REVISED -

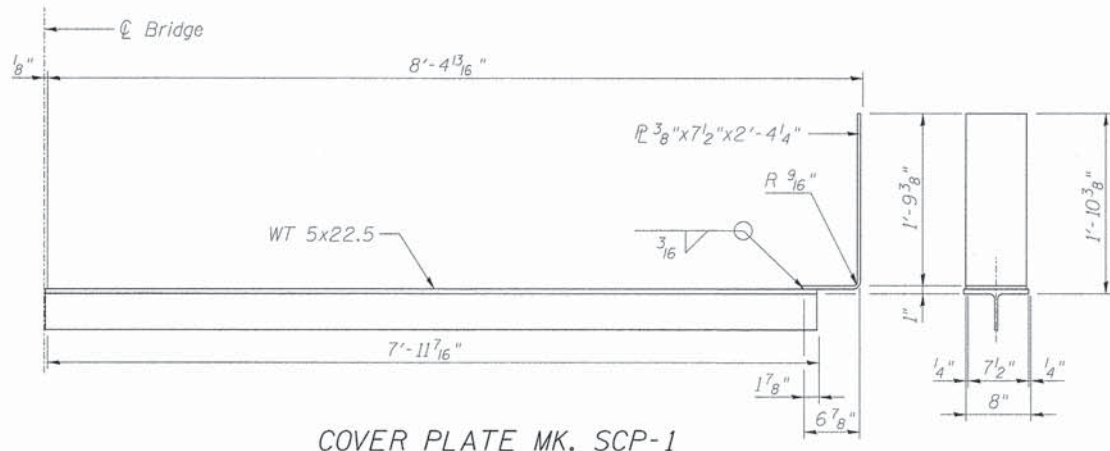
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

M.P. 37.71 BELVERE SUBDIVISION - STRUCTURE NO. 045-3168  
STRUCTURAL STEEL DETAILS (1 OF 2)

SHEET NO. UP-27 OF UP-52 SHEETS

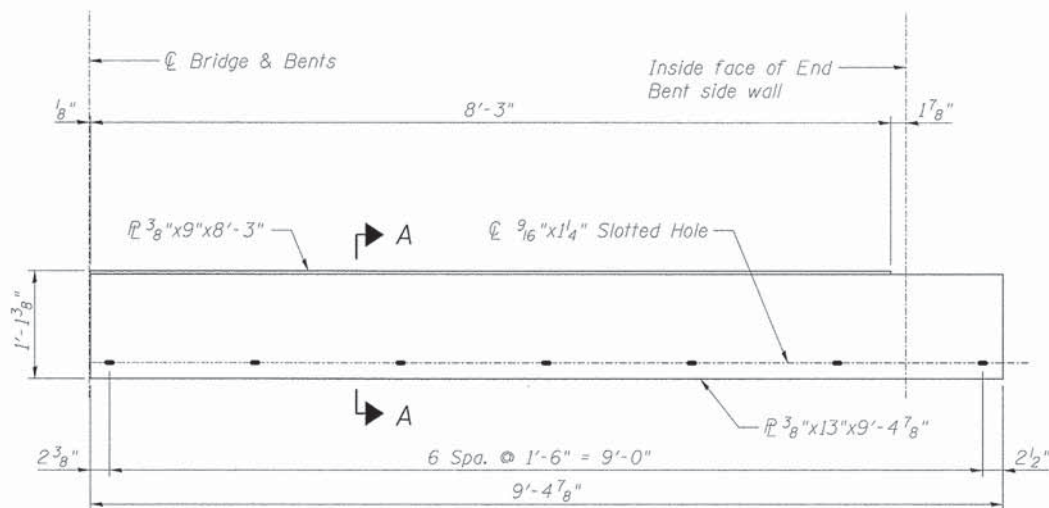
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	287
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				





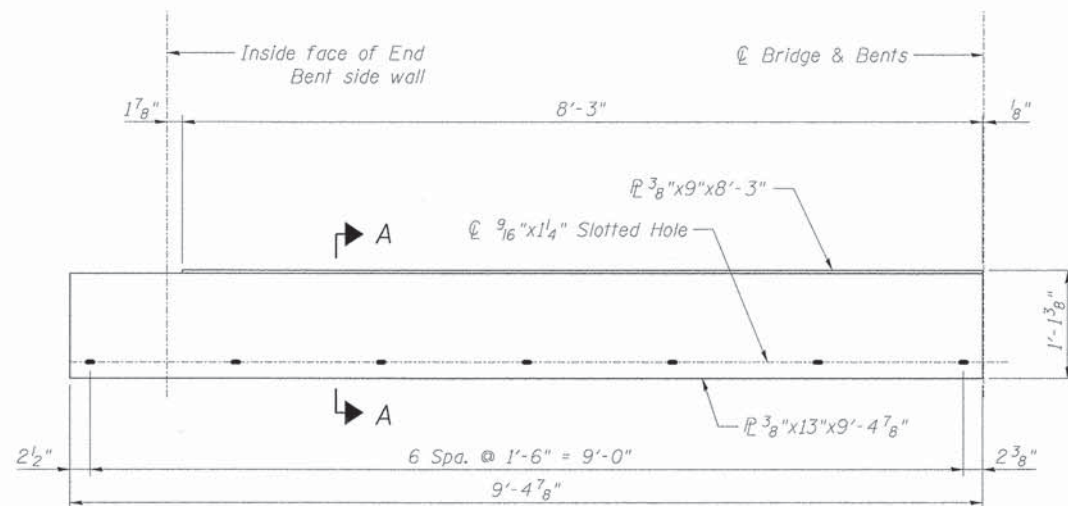
**COVER PLATE MK. SCP-1**

10 Req'd  
Est. Wt. = 202 lbs. Each



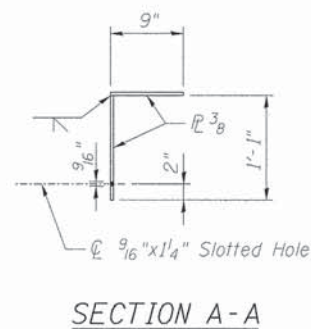
**BACKWALL PLATE MK. BWP-1L**

2 Req'd  
Est. Wt. = 251 lbs. Each

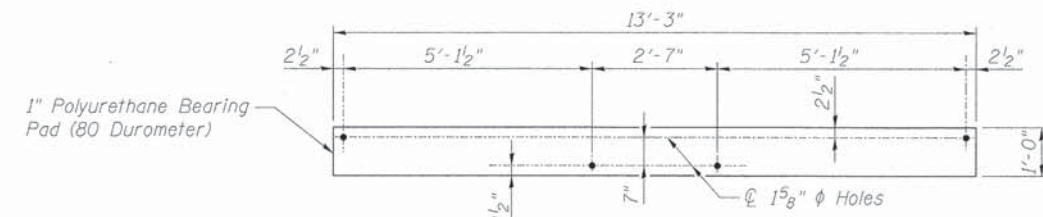


**BACKWALL PLATE MK. BWP-1R**

2 Req'd  
Est. Wt. = 251 lbs. Each

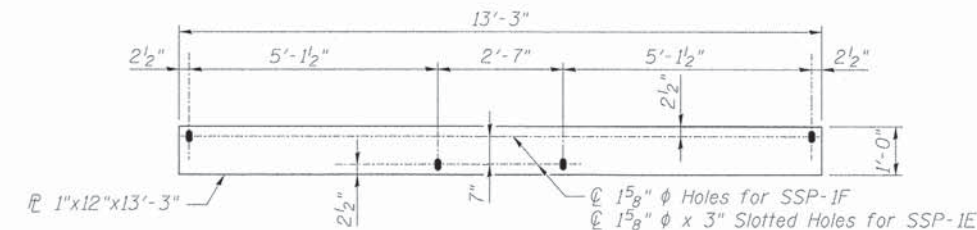


**SECTION A-A**



**BEARING PAD MK. SBP-1**

8 Req'd



**SOLE PLATES MK. SSP-1E & SSP-1F**

MK. SSP-1E Shown 4 Req'd  
MK. SSP-1F 4 Req'd  
Est. Wt. = 541 lbs. Each

**NOTES:**

1. For Steel Material Specification, see Structural Steel Notes Sheet UP-3.
2. For Bearings Pad Material Specification, see Miscellaneous Material Notes Sheet UP-3.



Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = mgrimm	DESIGNED - JLS	REVISED -
PLOT SCALE =		CHECKED - LRB	REVISED -
PLOT DATE = 12/13/2012		DRAWN - RMG	REVISED -
		CHECKED - LRB	REVISED -

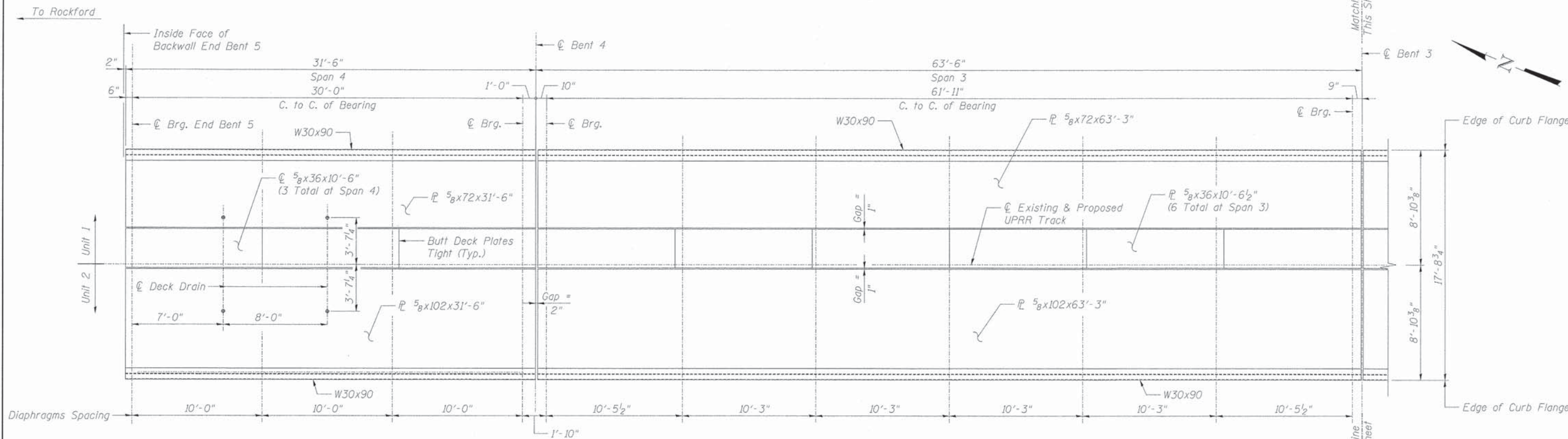
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
STRUCTURAL STEEL DETAILS (2 OF 2)**

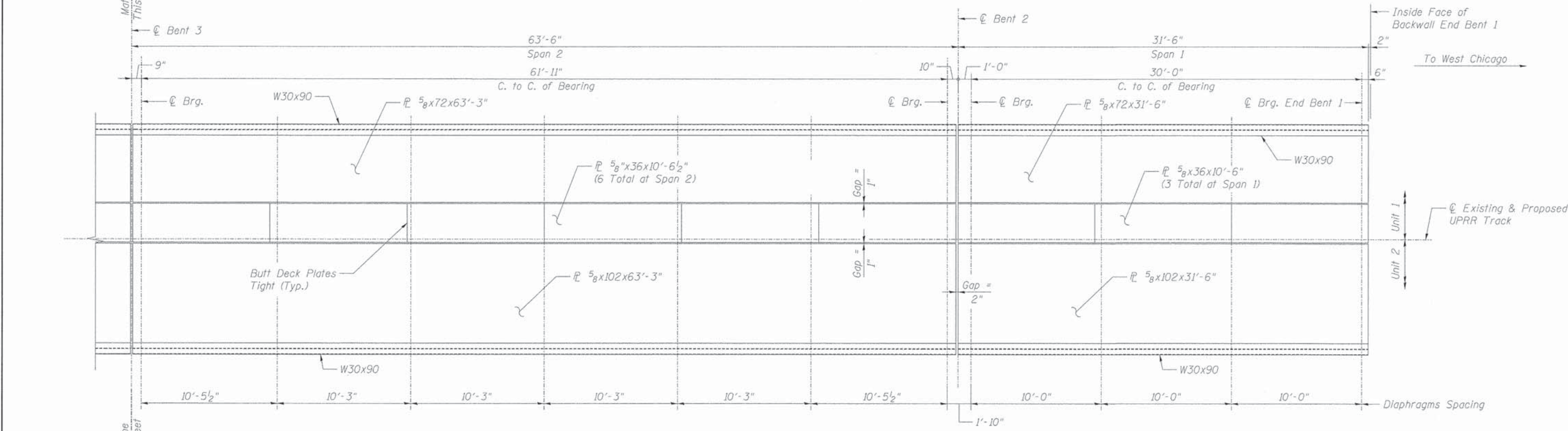
SHEET NO. UP-28 OF UP-52 SHEETS

F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 288
CONTRACT NO. 63598			[ILLINOIS] FED. AID PROJECT	





PLAN - DECK PLATES AND CURBS



PLAN - DECK PLATES AND CURBS

**NOTE:**  
For details of welding Deck Plates to superstructure steel, see sheets UP-25 and UP-26.

**benesch**  
engineers • scientists • planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgr/mm	DESIGNED - JLS	REVISED -
Perm_Br_029_Deck_Plate_Layout.dgn		CHECKED - LRB	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/13/2012	CHECKED - LRB	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

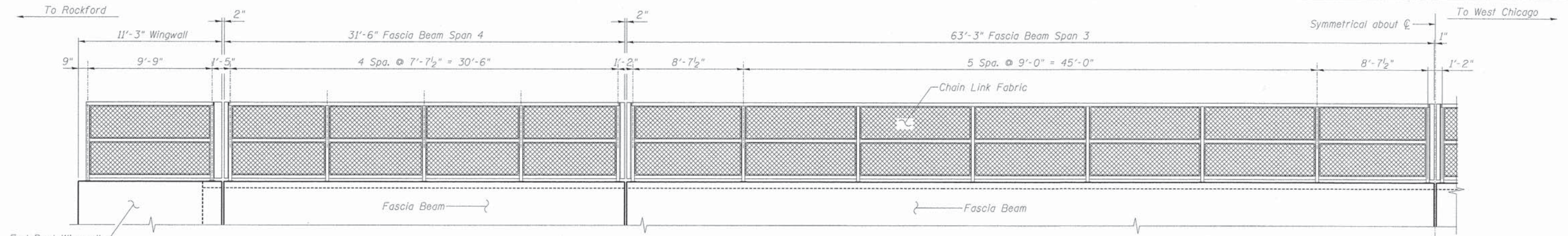
M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
DECK PLATE AND CURB LAYOUT

SHEET NO. UP-29 OF UP-52 SHEETS

F.A.P. RTE. = 361	SECTION = 06-00214-18-RP	COUNTY = KANE	TOTAL SHEETS = 451	SHEET NO. = 289
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	

X:\100005\10074\Engineer-ing\_Documents\_Phase\_1\1\SN\_045\_3168\_UPRR\_Bridge\PLANS\Perm\_Br\_029\_Deck\_Plate\_Layout.dgn 12/13/2012 3:12:44 PM





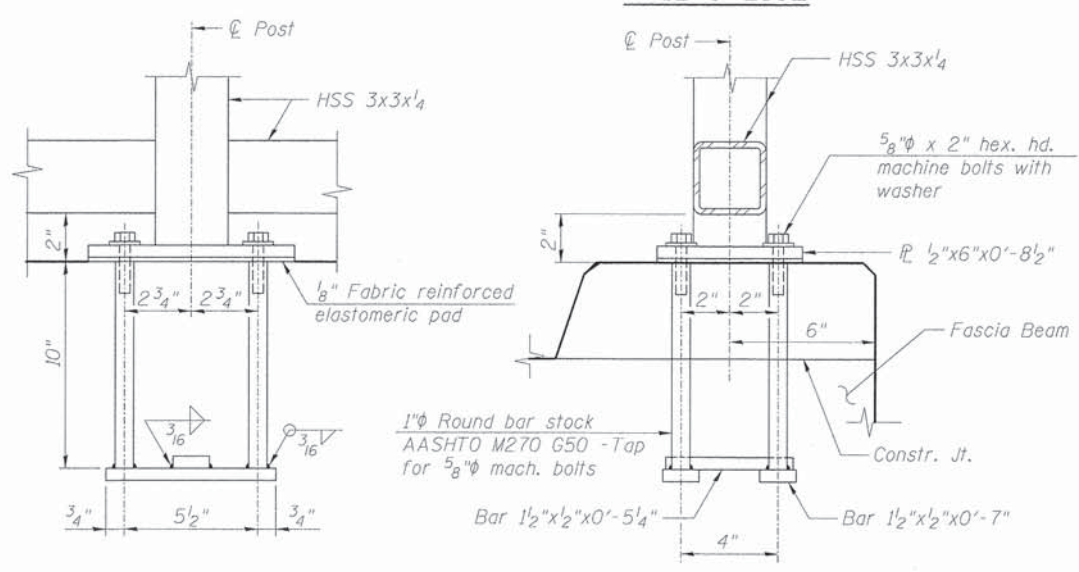
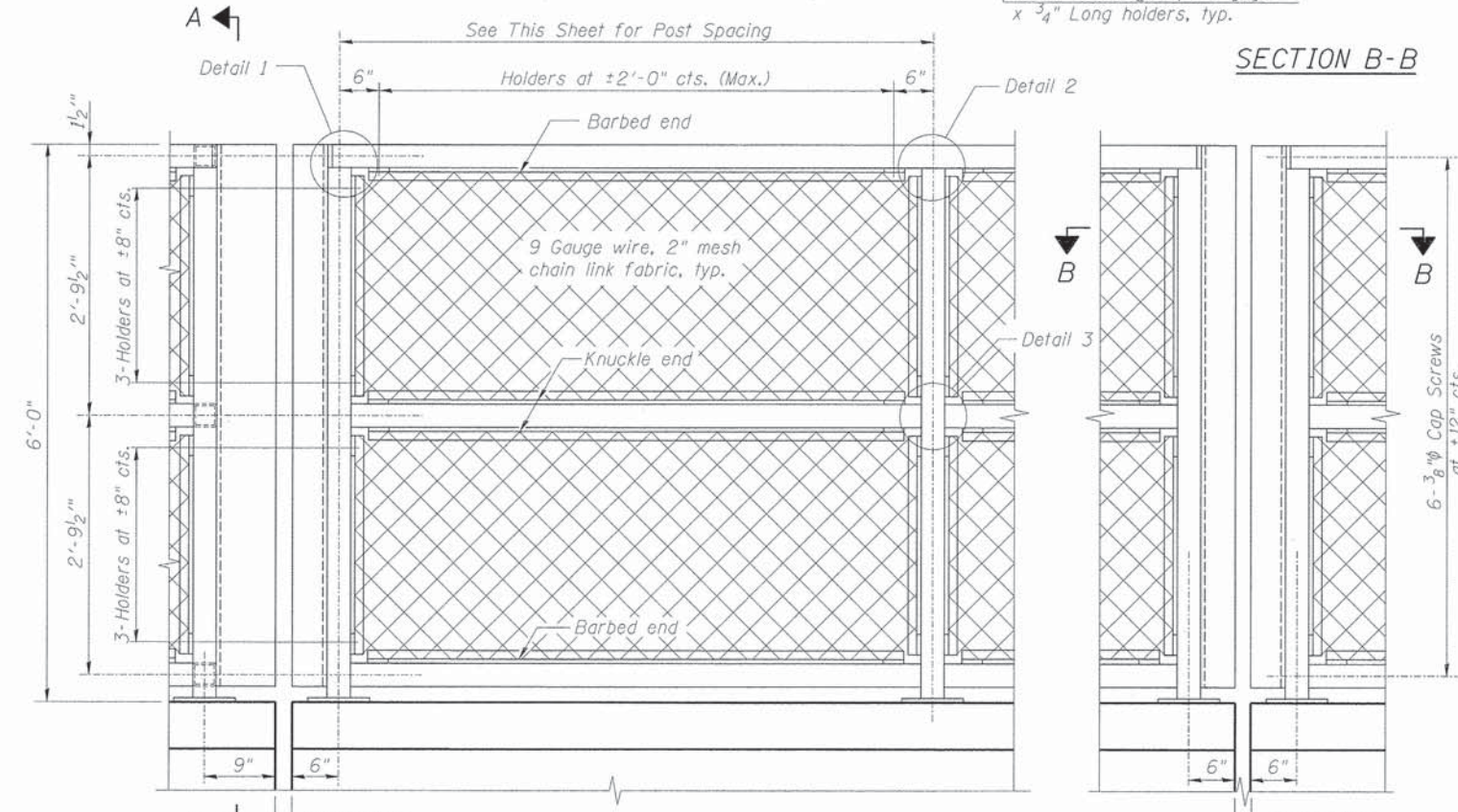
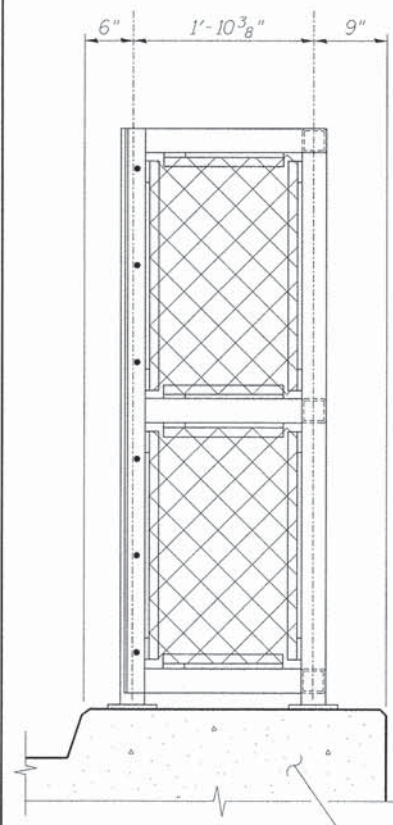
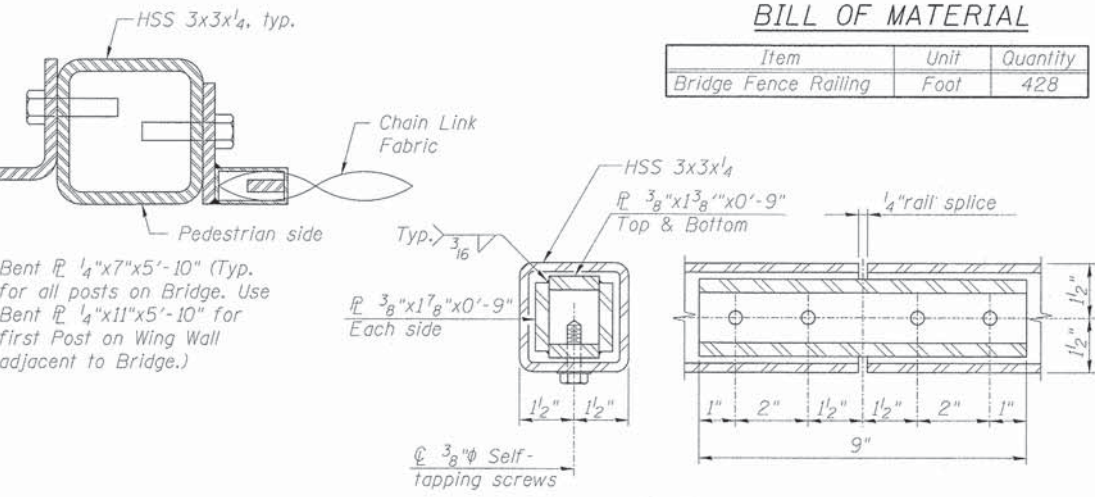
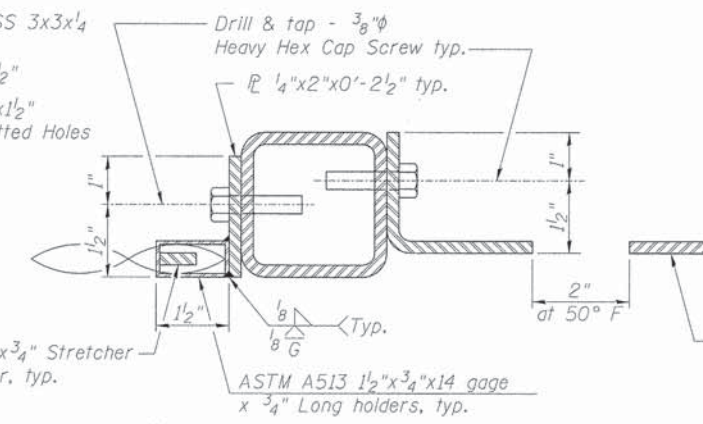
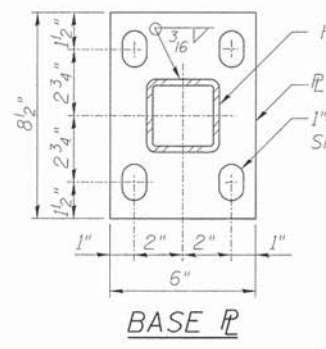
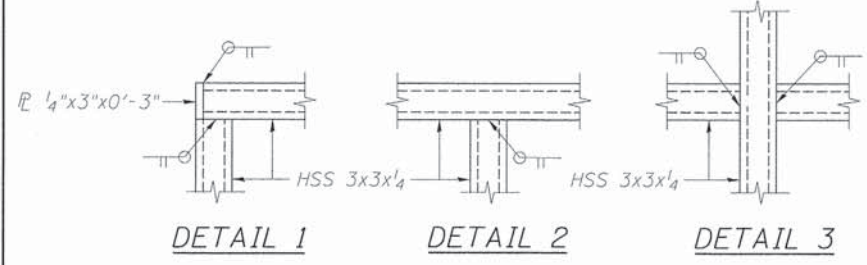
**CHAIN LINK FENCE ELEVATION**

(West Fence shown, looking East)  
(East Fence similar, looking West)

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

**BILL OF MATERIAL**

Item	Unit	Quantity
Bridge Fence Railing	Foot	428



**ANCHOR BOLT DETAILS**

Note:  
In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 3/8" anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

**benesch**  
engineers - scientists - planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

**ELEVATION**  
(Pedestrian Side)

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVEDERE SUBDIVISION - STRUCTURE NO. 045-3168**  
**BRIDGE FENCE RAILING DETAILS**

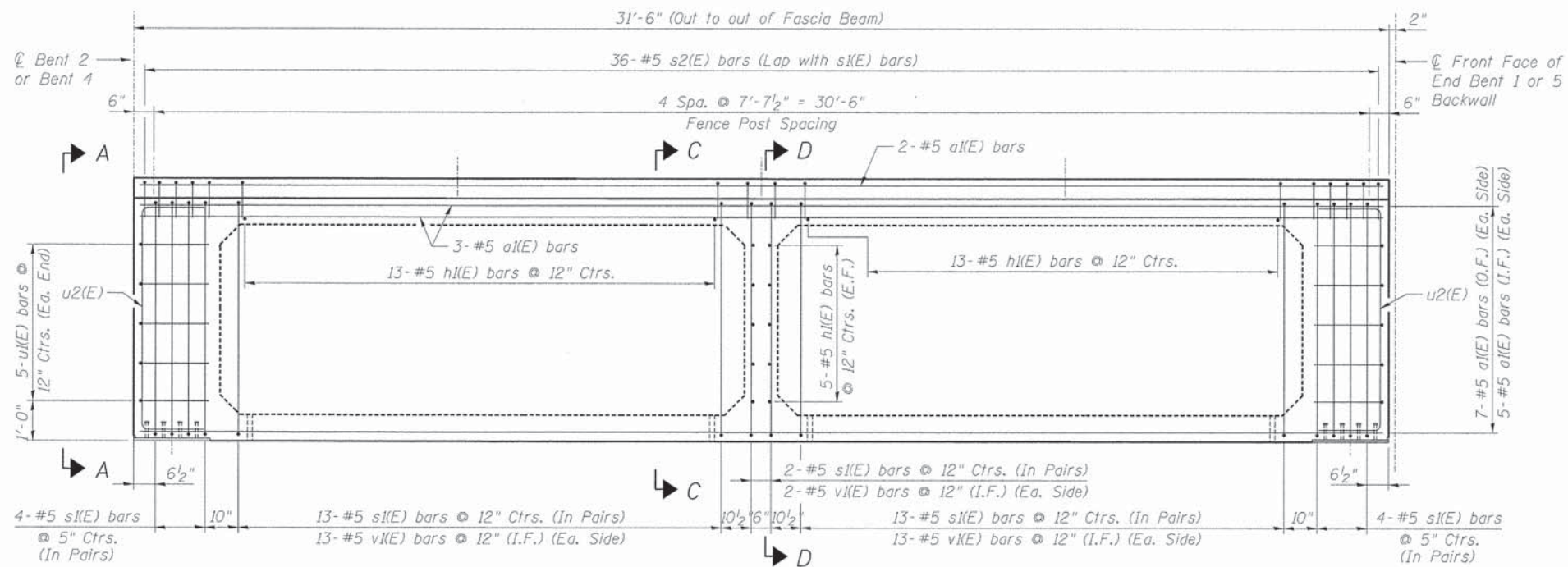
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	290
				CONTRACT NO. 63598
ILLINOIS FED. AID PROJECT				

FILE NAME	USER NAME	DESIGNED	REVISED
Perm.Br.030.Chain.Link.Fence.Details.dgn	egrmm	JLS	-
		LRB	-
		RMG	-
		LRB	-

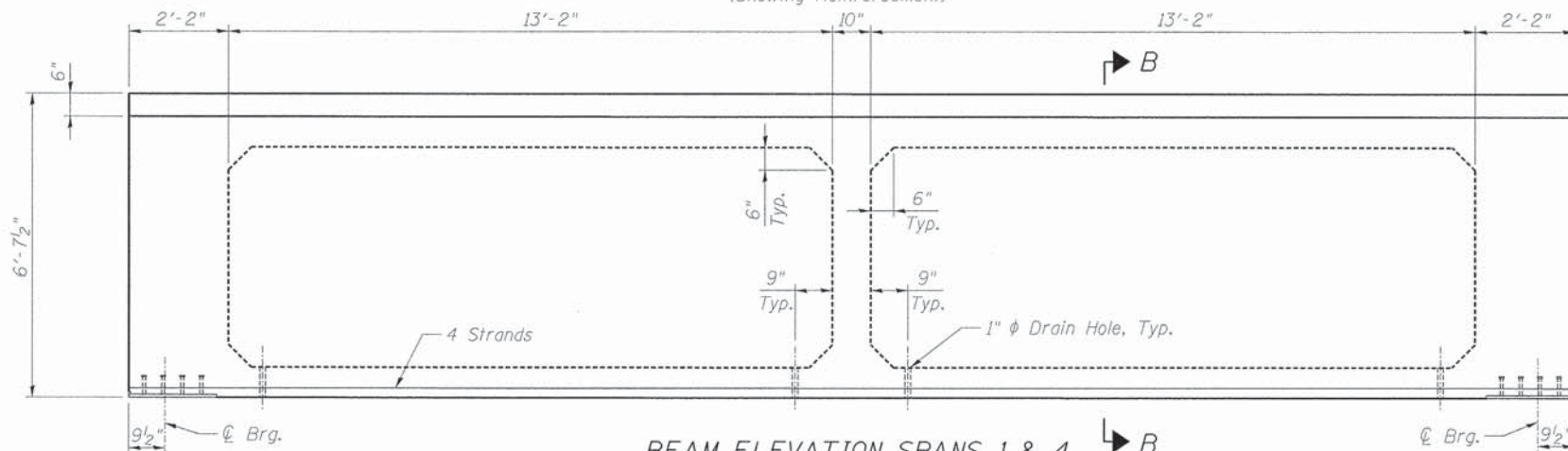
SHEET NO. UP-30 OF UP-52 SHEETS

X:\1000005\10074\Engineer\ing-Documents\Phase-1\1\SN.045-3168\UPRR\Bridge\Chain\_Link\_Fence\_Details.dgn 3:12:46 PM 12/13/2012

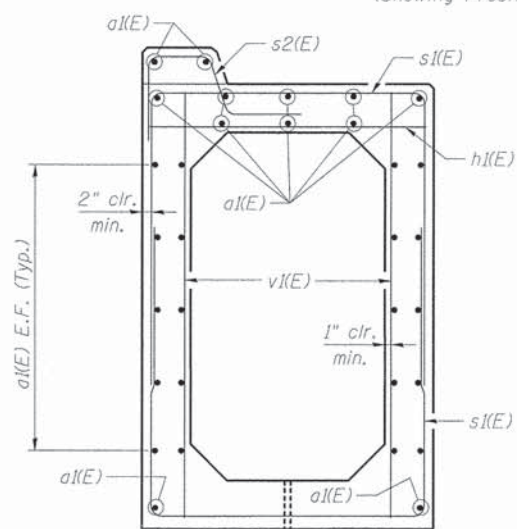




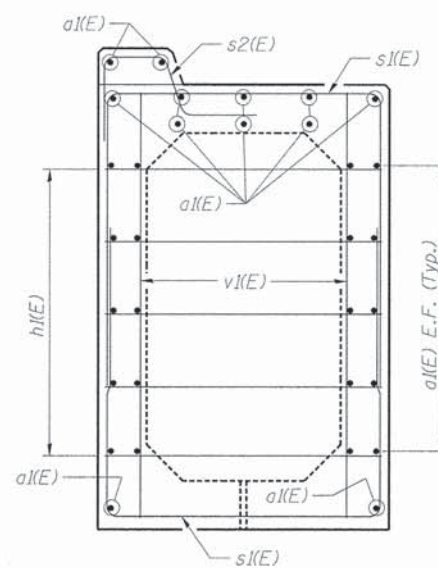
**BEAM ELEVATION**  
(Showing Reinforcement)



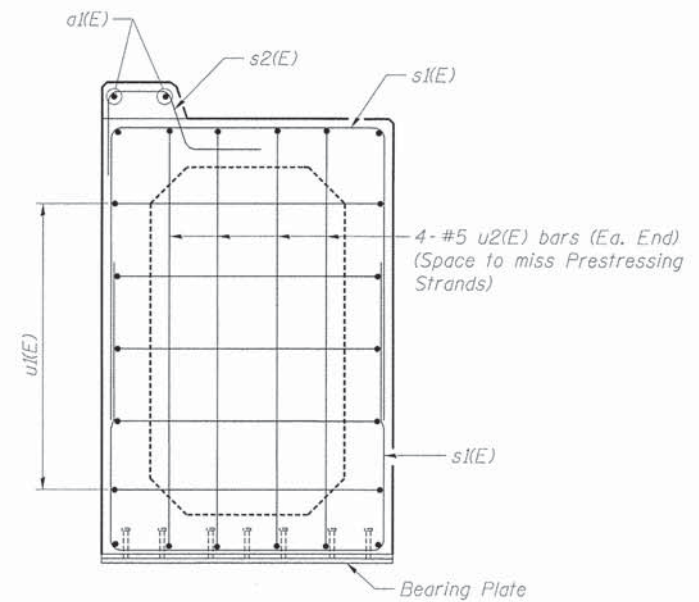
**BEAM ELEVATION SPANS 1 & 4**  
(Showing Prestressing Strands)



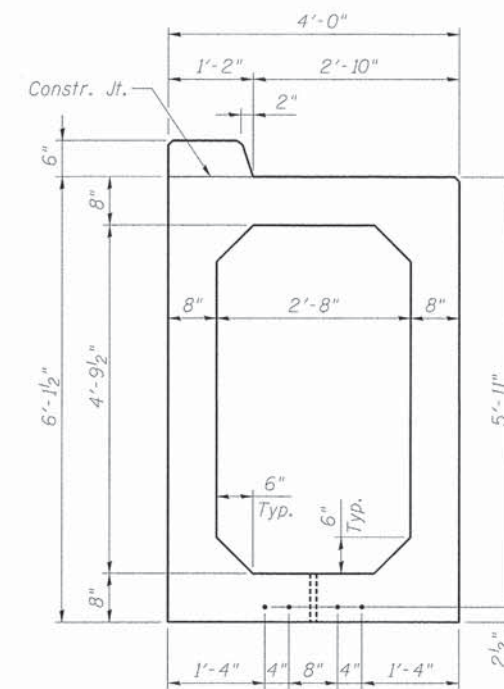
**SECTION C-C**



**SECTION D-D**



**VIEW A-A**



**SECTION B-B**

**BILL OF MATERIAL\***

ITEM	UNIT	TOTAL
Precast Concrete Box Segments	Foot	126

\*For Information Only

**NOTES:**

1. Required release strength,  $f'_{ci}$ , shall be 5,000 psi.
2. Required final strength,  $f'_c$ , shall be 6,000 psi.
3. All prestressing strands are straight.
4. For Fascia Beam Bearing Detail, see Sheet UP-33.
5. For Fence Post Anchorage details, see Sheet UP-30.
6. See Sheet UP-33 for additional notes.
7. Lifting Devices, see UP-2, note 15 under "Precast Concrete Notes".

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

Bar	No.	Size	Length	Shape
a1(E)	32	#5	31'-2"	—
h1(E)	36	#5	3'-8"	—
s1(E)	72	#5	13'-2"	—
s2(E)	36	#5	3'-8"	—
u1(E)	10	#5	5'-2"	—
u2(E)	8	#5	9'-8"	—
v1(E)	56	#5	5'-8"	—

\*\*\*For Information Only  
(Lifting weight = 72,500 lbs.)



Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

**SECTION C-C**

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

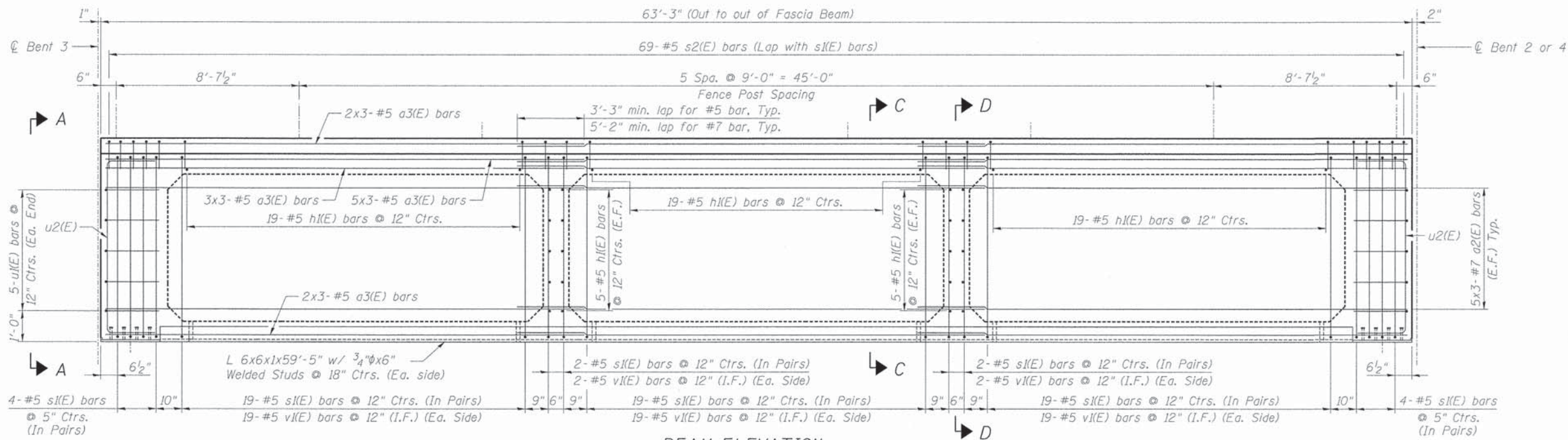
**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168**  
**FASCIA BEAM DETAILS (1 OF 3)**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	291
				CONTRACT NO. 63598
ILLINOIS FED. AID PROJECT				

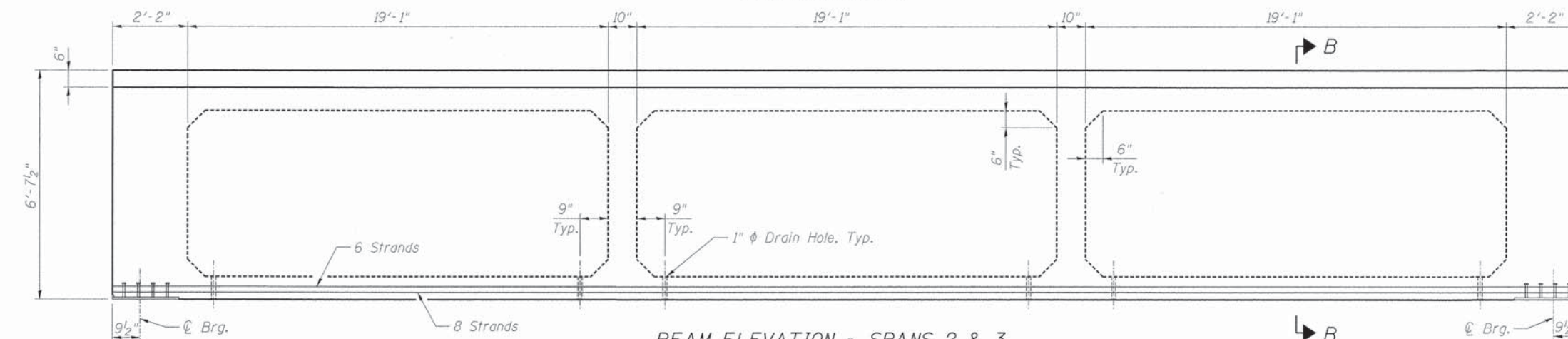
SHEET NO. UP-31 OF UP-52 SHEETS

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
Perm.Br.031.Fascia.Beam.Details.1.dgn	rgsimm	JLS	-
PLOT SCALE =		CHCKED -	REVISED -
PLOT DATE = 12/13/2012		LRB	-
		DRAWN -	REVISED -
		RMG	-
		CHCKED -	REVISED -
		LRB	-

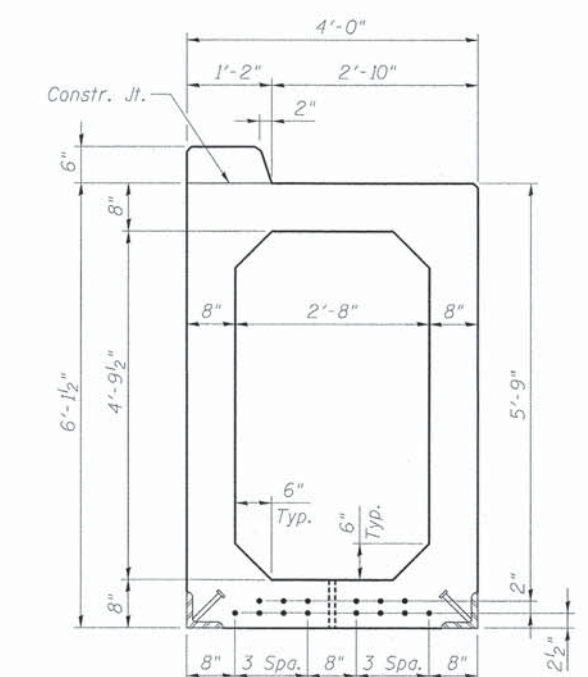
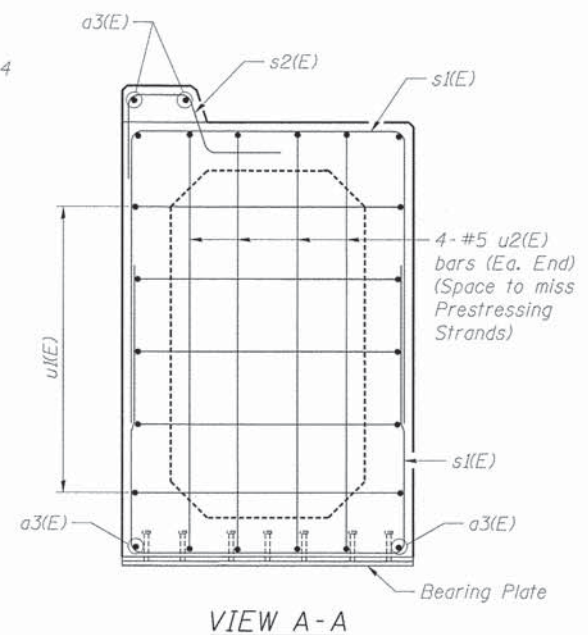




**BEAM ELEVATION**  
 (Showing Reinforcement)



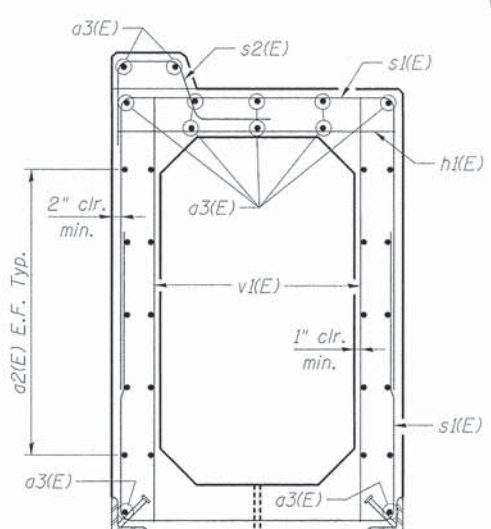
**BEAM ELEVATION - SPANS 2 & 3**  
 (Showing Prestressing Strands)



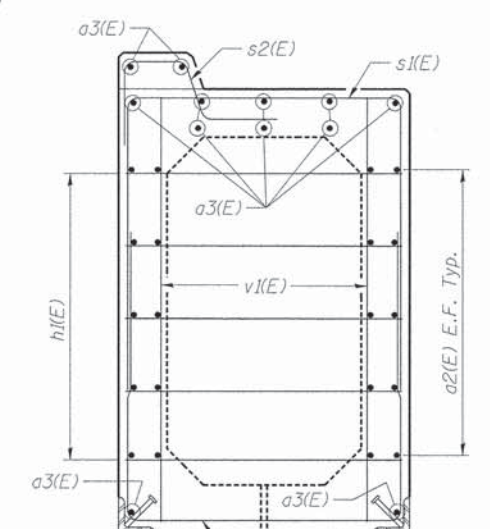
**BILL OF MATERIAL\***

ITEM	UNIT	TOTAL
Precast Concrete Box Segments	Foot	253

\*For Information Only



**SECTION C-C**



**SECTION D-D**

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

Bar	No.	Size	Length	Shape
a2(E)	60	#7	24'-6"	—
a3(E)	36	#5	23'-2"	—
h1(E)	77	#5	3'-8"	—
s1(E)	138	#5	13'-2"	—
s2(E)	69	#5	3'-8"	—
u1(E)	10	#5	5'-2"	—
u2(E)	8	#5	9'-8"	—
v1(E)	122	#5	5'-8"	—

\*\*\*For Information Only  
 (Lifting weight = 135,000 lbs.)

**NOTES:**

1. Required release strength, f'ci, shall be 5,000 psi.
2. Required final strength, f'c, shall be 6,000 psi.
3. All prestressing strands are straight.
4. For Fascia Beam Bearing Detail, see Sheet UP-33.
5. For Fence Post Anchorage details, see Sheet UP-30.
6. See Sheet UP-33 for additional notes.

**benesch**  
 engineers - scientists - planners  
 Alfred Benesch & Company  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-565-0450 Job No. 10074

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
 FASCIA BEAM DETAILS (2 OF 3)**

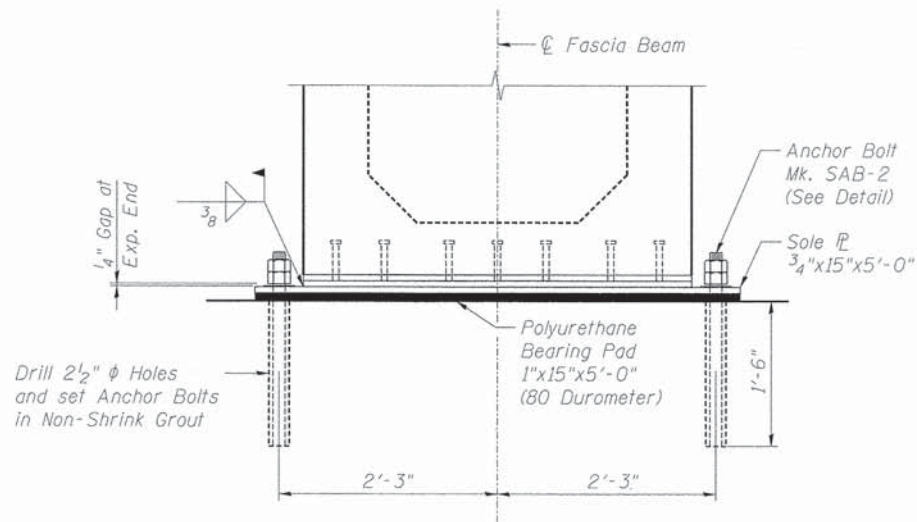
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	292
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	

FILE NAME	USER NAME	DESIGNED	REVISED
Perm.Br_032.Fascia.Beam.Details.2.dgn	rgrimm	JLS	-
		LRB	-
		RMG	-
		LRB	-

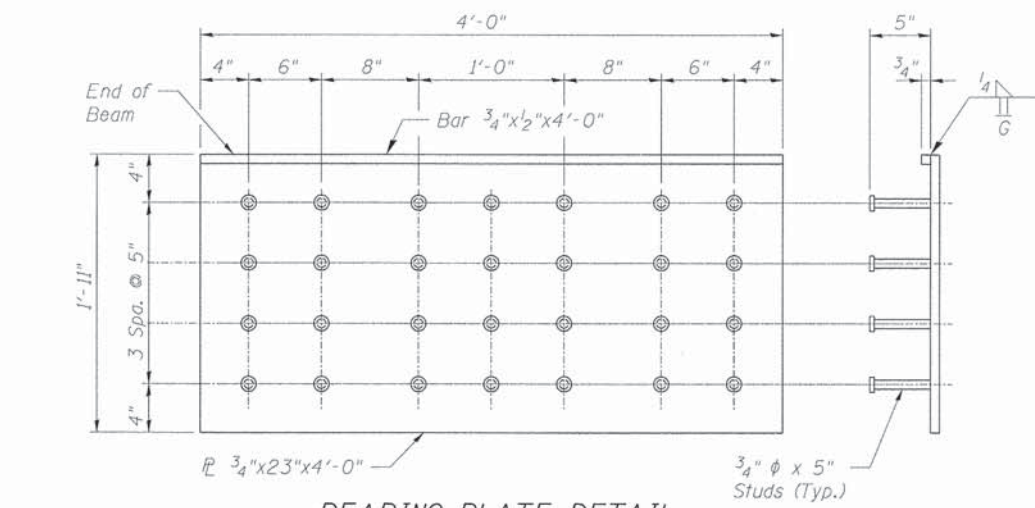
SHEET NO. UP-32 OF UP-52 SHEETS

X:\100005\10074\Engineering\Documents\Phase-1\1\SN\_045-3168\_UPRR\_Bridge\PLANS\Perm.Br\_032\_Fascia.Beam.Details.2.dgn 3:12:48 PM 12/13/2012

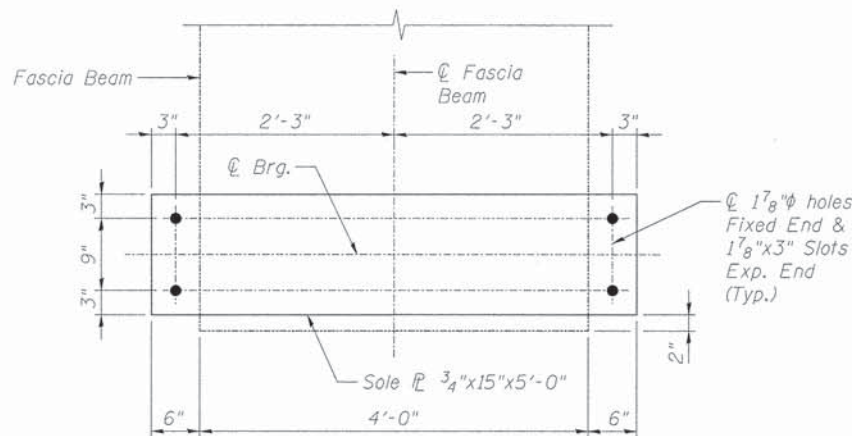




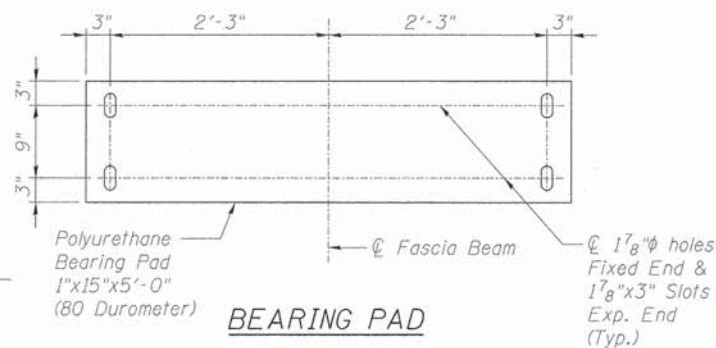
FASCIA BEAM BEARING DETAIL



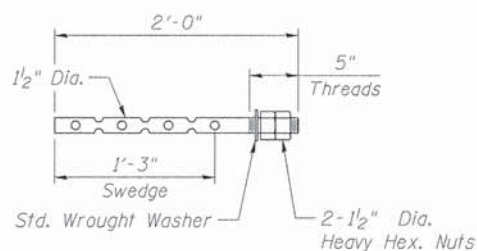
BEARING PLATE DETAIL



SOLE PLATE DETAIL

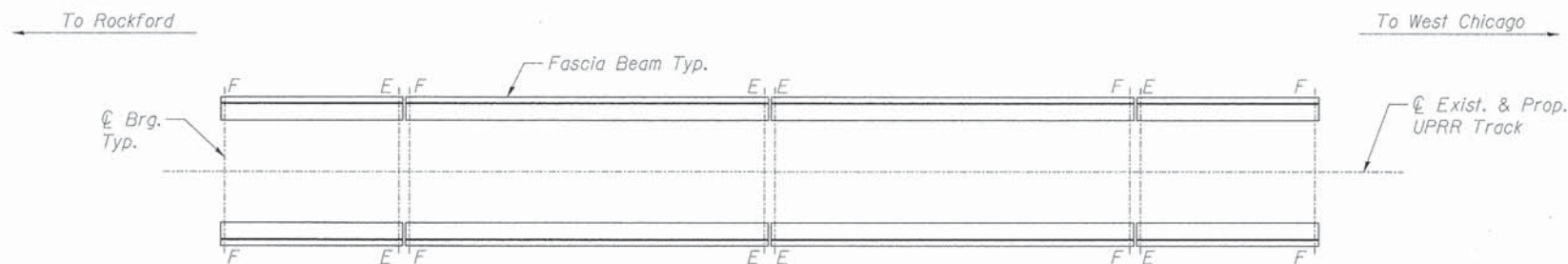


BEARING PAD



ANCHOR BOLT MK. SAB-2

64 Req'd  
Est. Wt. = 10.3 LB. Each



LOCATION PLAN

GENERAL NOTES:

Design, materials and construction of prestressed concrete beams shall be in accordance with the Current UPRR Standard Specifications and the current A.R.E.M.A. Manual for Railway Engineering, Chapter 8, Part 17 - Prestressed Concrete Beam.

Ultimate compressive cylinder strength of beam concrete shall be not less than 5,000 p.s.i. at transfer of prestressing force, and 6,000 p.s.i. in 28 days.

Ultimate compressive cylinder strength of curb concrete shall be not less than 3,500 p.s.i. in 28 days.

Concrete shall be air-entrained containing 7% plus or minus 1% air by volume.

Maximum size of coarse aggregate shall be 3/4 inch.

Minimum concrete cover on reinforcement shall be 1 1/2 inches, except as noted.

All exposed edges shall be chamfered 3/4 inch.

All prestressing strands shall be 1/2 inch diameter, 7 wire uncoated, low-relaxation, with minimum f's = 270,000 p.s.i. and otherwise meeting the requirements of the current A.S.T.M. designation: A416.

Initial prestress shall be 0.75 f's = 31,000 lbs. per strand.

Non-prestressing reinforcement shall be deformed bars meeting the current A.S.T.M. designation: A615, Grade 60. Fabrication of reinforcing steel shall be as per Chapter 7 of the current C.R.S.I. Manual of Standard Practice.

Dead Load: (Assumed - lbs. per lin. ft. of Beam)

Curb and Bridge Fence Railing	135
Beams	2100

Total Dead Load 2235

Live Load: 100 psf over walkway width.

Impact: Not Used.

SPECIAL NOTES TO MANUFACTURER:

Production procedures and dimensional tolerances for the manufacture of precast, prestressed beams shall be in accordance with the Prestressed Concrete Institute's current manual MNL-116 for Quality Control.

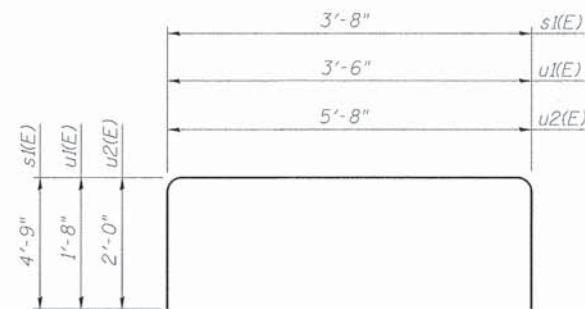
An alternate strand pattern better suited to the manufacturer's facilities, which has the same eccentricity as the pattern shown on this plan will be considered for approval prior to casting upon submission by the manufacturer of plans and computations.

If reinforcing bar supports are used, they shall be Class 1, plastic protected, in accordance with Chapter 3 of the C.R.S.I. Manual of Standard Practice.

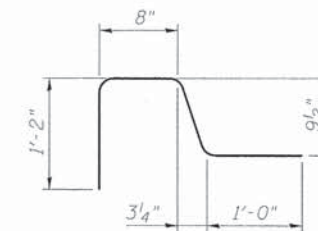
Manufacturer shall cut prestressing strands flush with ends of concrete beams and paint.

If lifted with slings instead of lifting loops, slings must not be placed more than 3'-0" from ends of Beams.

The walk surface on the top side of the Fascia Beam shall receive a non-slip broom finish in the transverse direction of the Beam (perpendicular to Beam length).



BARS s1(E), u1(E) & u2(E)



BAR s2(E)



Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
Perm.Br_033.Fascia.Beam.Details.3.dgn		CHECKED - LRB	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/13/2012	CHECKED - LRB	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

M.P. 37.71 BELVIDERE SUBDIVISION - STRUCTURE NO. 045-3168  
FASCIA BEAM DETAILS (3 OF 3)

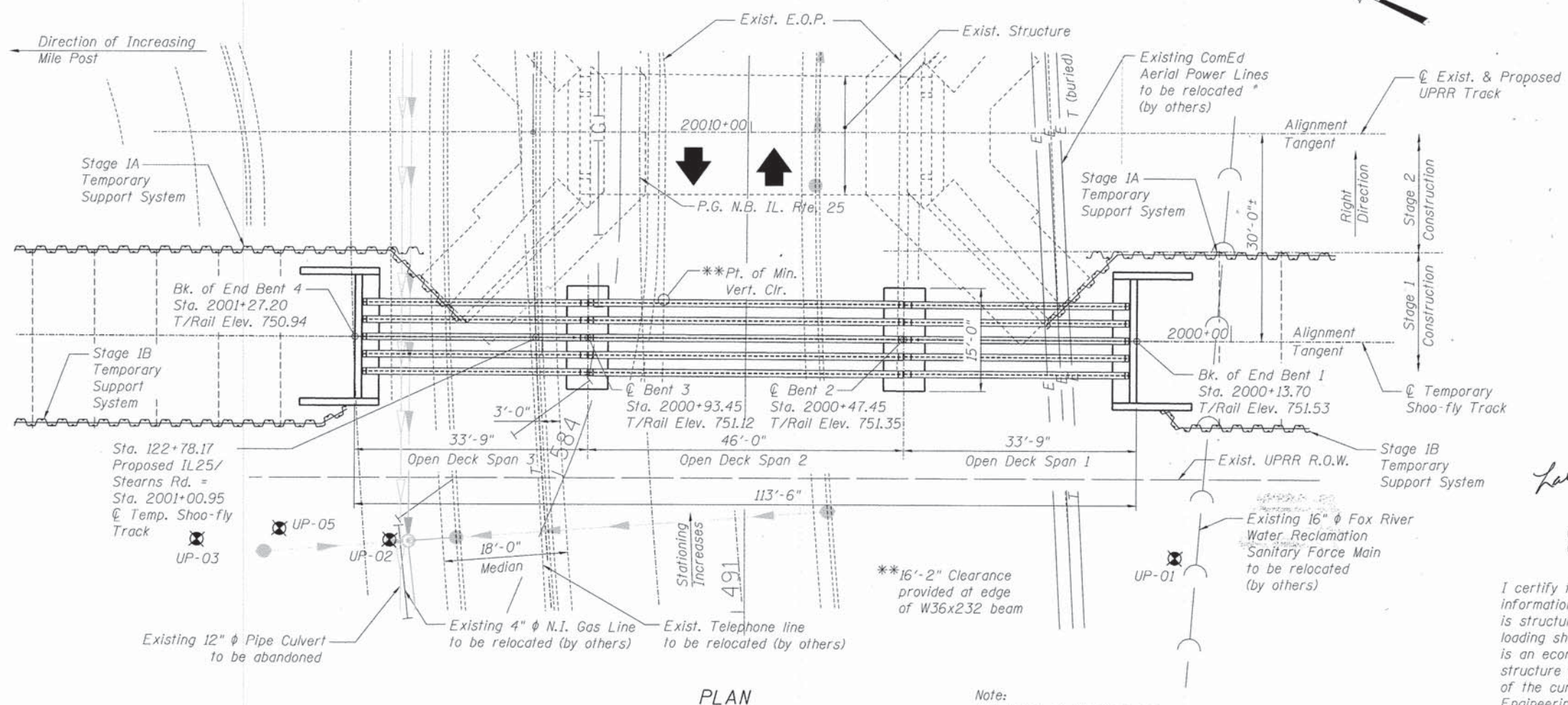
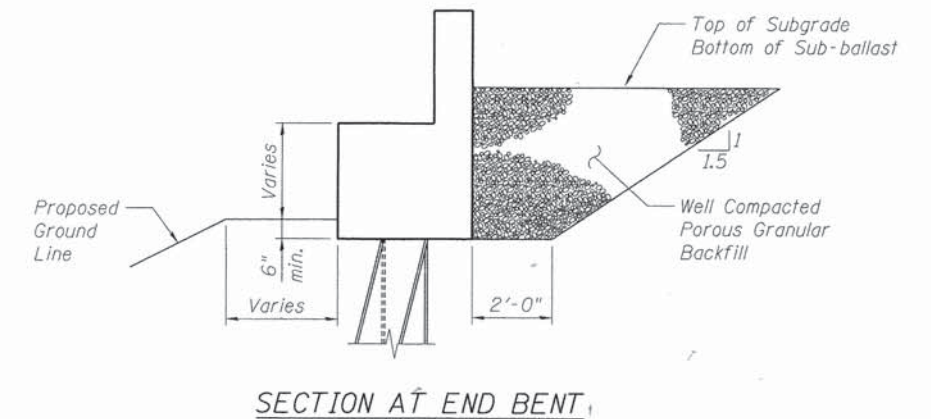
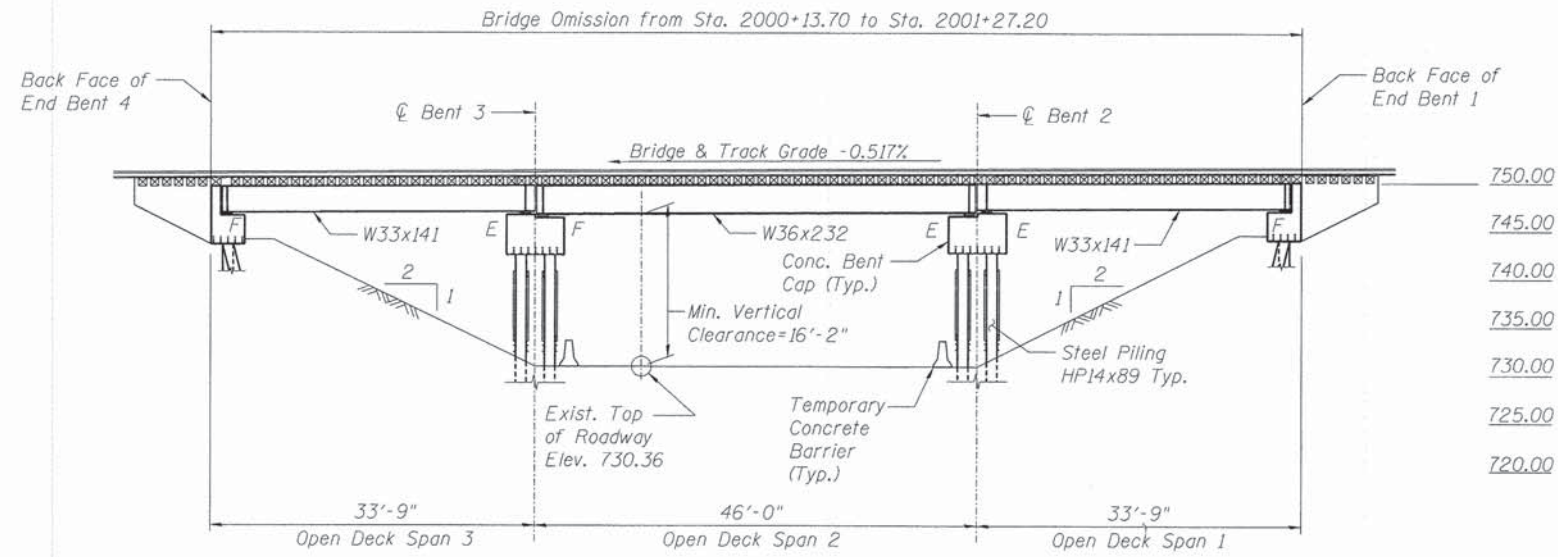
SHEET NO. UP-33 OF UP-52 SHEETS

F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 293
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				



To Rockford

To West Chicago



LOADING COOPER E-80

IMPACT: Diesel Impact

DESIGN SPECIFICATIONS

2011 AREMA Specifications  
Live Load Deflection: L/640  
Temporary Shoo-fly Bridge  
Design Speed: 30 m.p.h.

DESIGN STRESSES

FIELD UNITS

$f'_c = 4,000$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 36,000$  psi (Structural Steel)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. ( $S_{D1}$ ) = 0.089g  
Design Spectral Acceleration at 0.2 sec. ( $S_{D5}$ ) = 0.152g  
Soil Site Class = D

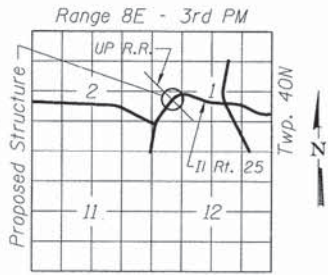
APPROVED  
For Structural Adequacy Only  
*Larry R. Bellisario*  
Engineer of Bridges & Structures

LARRY R. BELLISARIO  
081-004910  
LICENSED  
STRUCTURAL  
ENGINEER  
STATE OF ILLINOIS

EXPIRATION DATE: 11-30-2014  
DATE: 12-14-2012

LEGEND

$\otimes$  Boring Location



I certify that to the best of knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AREMA Manual for Railway Engineering.

Note:  
For Index of Drawings see  
Sheet UP-4.

**benesch**  
engineers - scientists - planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
Temp.Br.-001.GPE.dgn		CHECKED - LRB	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE 1/5/2013	CHECKED - LRB	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

M.P. 37.71 BELVIDERE SUBDIVISION - TEMPORARY BRIDGE  
GENERAL PLAN AND ELEVATION

SHEET NO. UP-34 OF UP-52 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	294
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				

X:\100005\10074\Engineering\_Documents\_Phase\_II\SN\_045\_3168\_UPRR\_Bridge\PLANS\Temp.Br.-001.GPE.dgn  
1/5/2013 8:44:30 AM



To Rockford

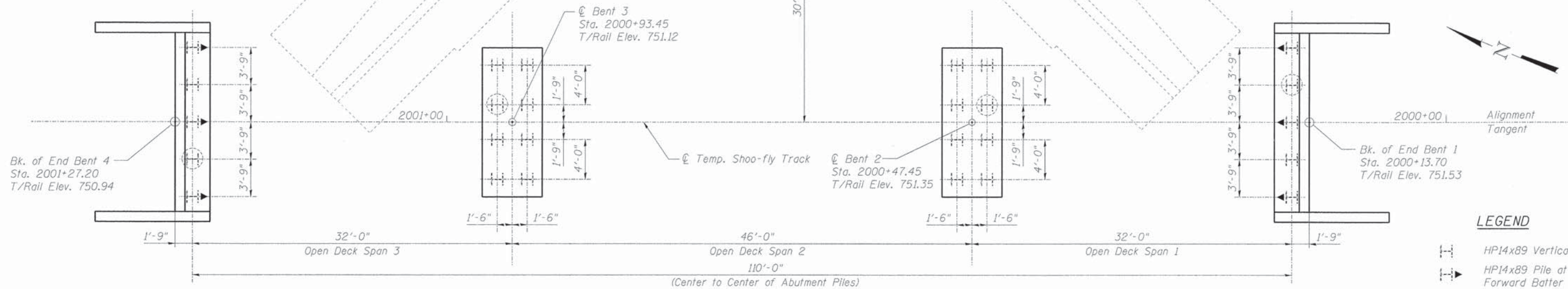
To West Chicago

Alignment Tangent

### ESTIMATED PILE LENGTHS

- End Bent 1 = 105 ft.
- Bent 2 = 105 ft.
- Bent 3 = 105 ft.
- End Bent 4 = 105 ft.

Note: All Piles are steel HP14x89.



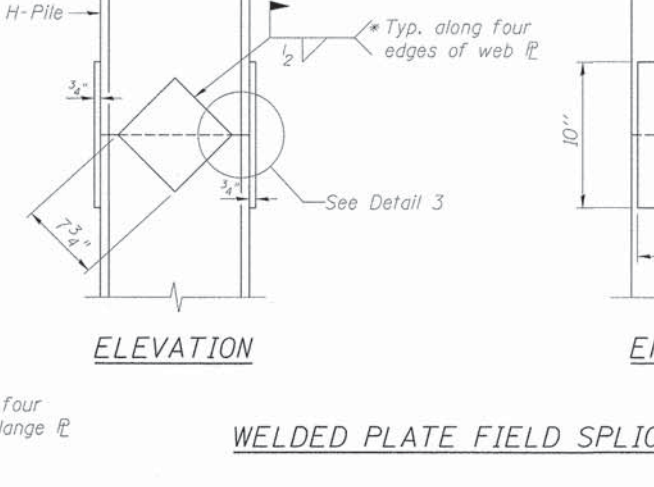
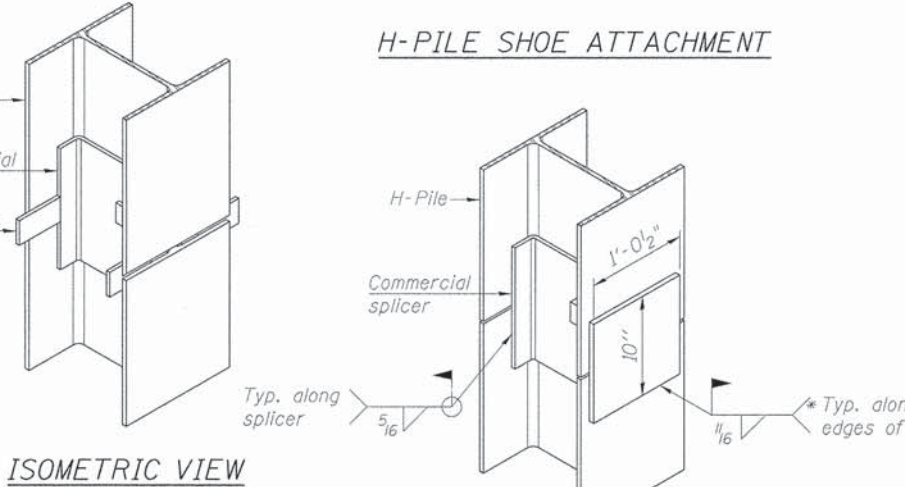
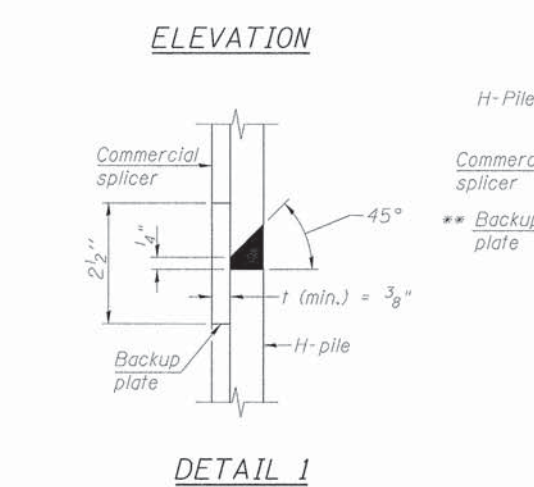
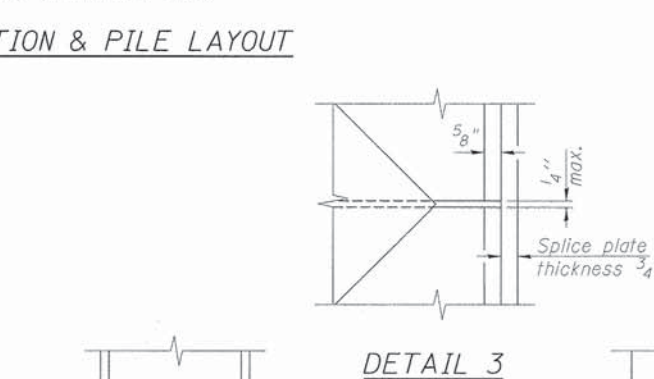
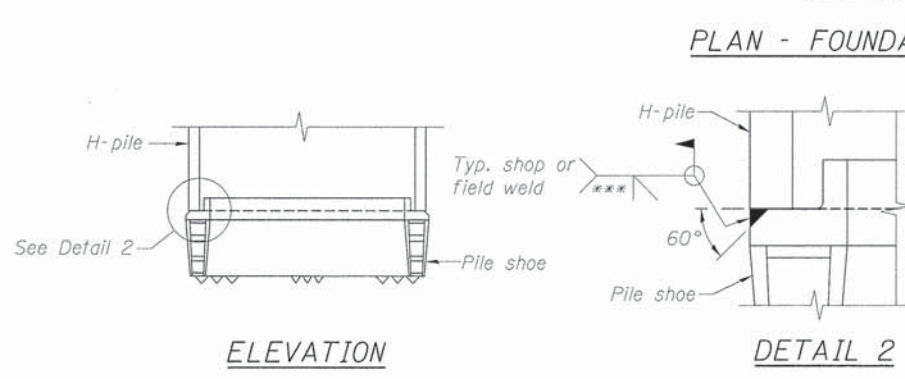
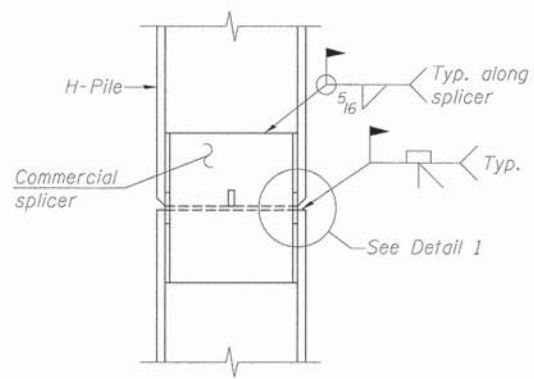
### LEGEND

- HP14x89 Vertical Pile
- HP14x89 Pile at 3:12 Forward Batter
- HP14x89 Test Pile

### BILL OF MATERIAL\*

DESCRIPTION	UNIT	QUANTITY
Furnishing Steel Piles HP14x89	Foot	2,310
Driving Piles (Special)	Foot	2,310
Test Pile Steel HP14x89	Each	4
Pile Shoes (Special)	Each	26

\* For Information Only, items are included in cost of "Temporary Bridge".



### WELDED PLATE FIELD SPLICE

- \* Interrupt welds 1/4" from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer (5/16" min.).

### PILE DRIVING NOTES:

- All End Bent piles shall be driven to 55 ton capacity and all intermediate bent piles shall be driven to 60 ton capacity. If any pile cannot be driven to this capacity, the Engineer must be notified.
- Estimated capacity of driven piles shall be calculated using the Modified ENR Formula with F.S. = 5, unless otherwise noted. Direct questions to the Engineer.
- The steel H-piles shall be according to ASTM A572, Grade 50.

**benesch**  
engineers - scientists - planners

Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

M.P. 37.71 BELVIDERE SUBDIVISION - TEMPORARY BRIDGE  
PILE LAYOUT AND DETAILS

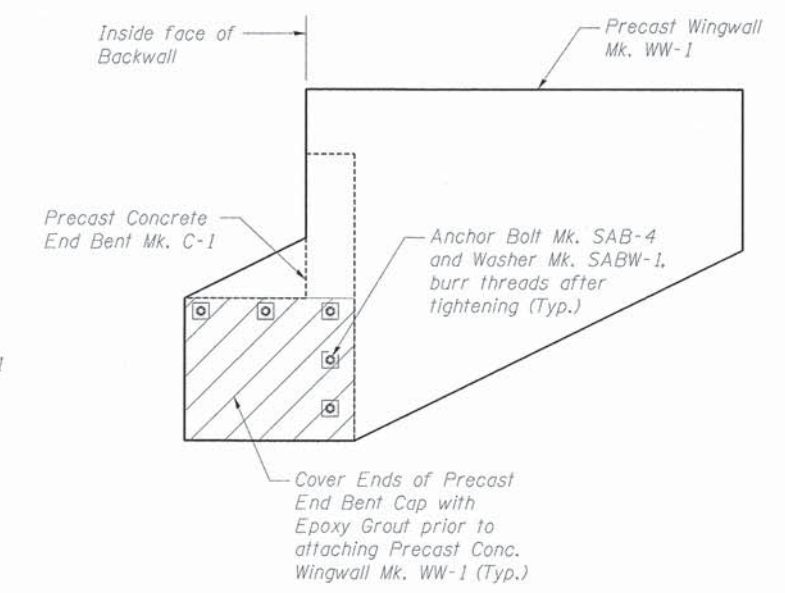
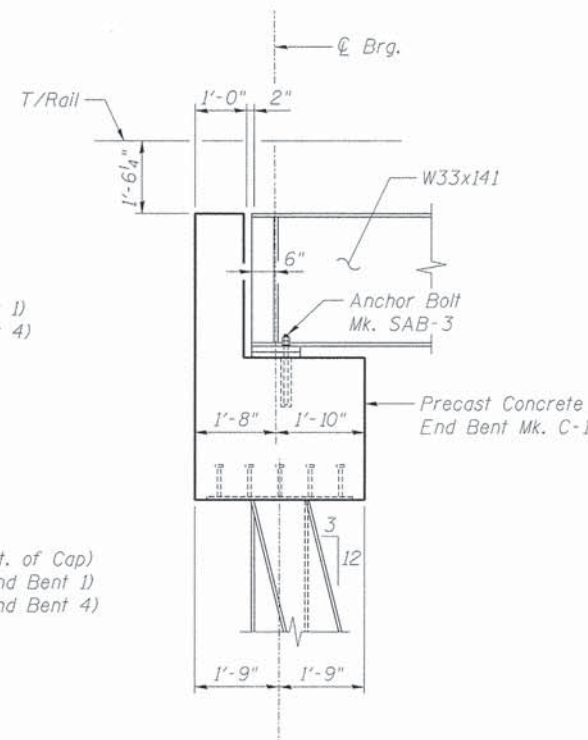
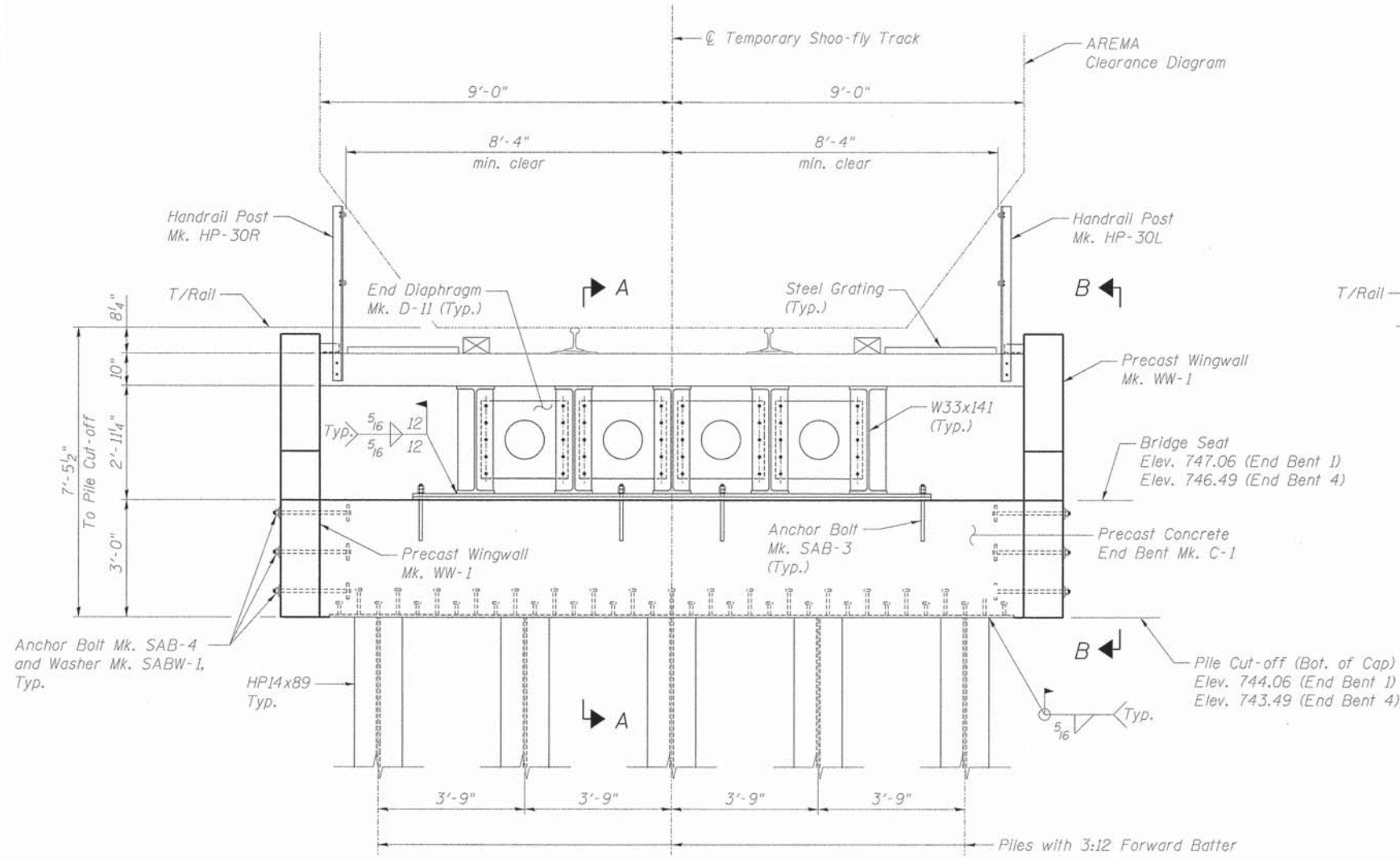
SHEET NO. UP-35 OF UP-52 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	295
				CONTRACT NO. 63598
ILLINOIS FED. AID PROJECT				

FILE NAME	USER NAME	DESIGNED	REVISIONS
Temp.Br.002.Pile.Layout.dgn	egrsmm	JLS	-
		LRB	-
		RMG	-
		LRB	-
			-

X:\100005\10074\Engineer\ng\_Documents\_Phase-1\11\SN\_045-3168\UPRR\_Bridge\PLANS\Temp.Br.002\_Pile.Layout.dgn 3:12:52 PM 12/13/2012





- NOTES:**
1. For Precast Concrete End Bent details see sheet UP-43.
  2. T/Rail to T/Tie = 8 1/4". Dimension includes 7 5/16" height for 136 lb. rail and a 1 5/16" tie plate.

**benesch**  
 engineers · scientists · planners  
 Alfred Benesch & Company  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-565-0450 Job No. 10074

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

M.P. 37.71 BELVIDERE SUBDIVISION – TEMPORARY BRIDGE  
 END BENT DETAILS

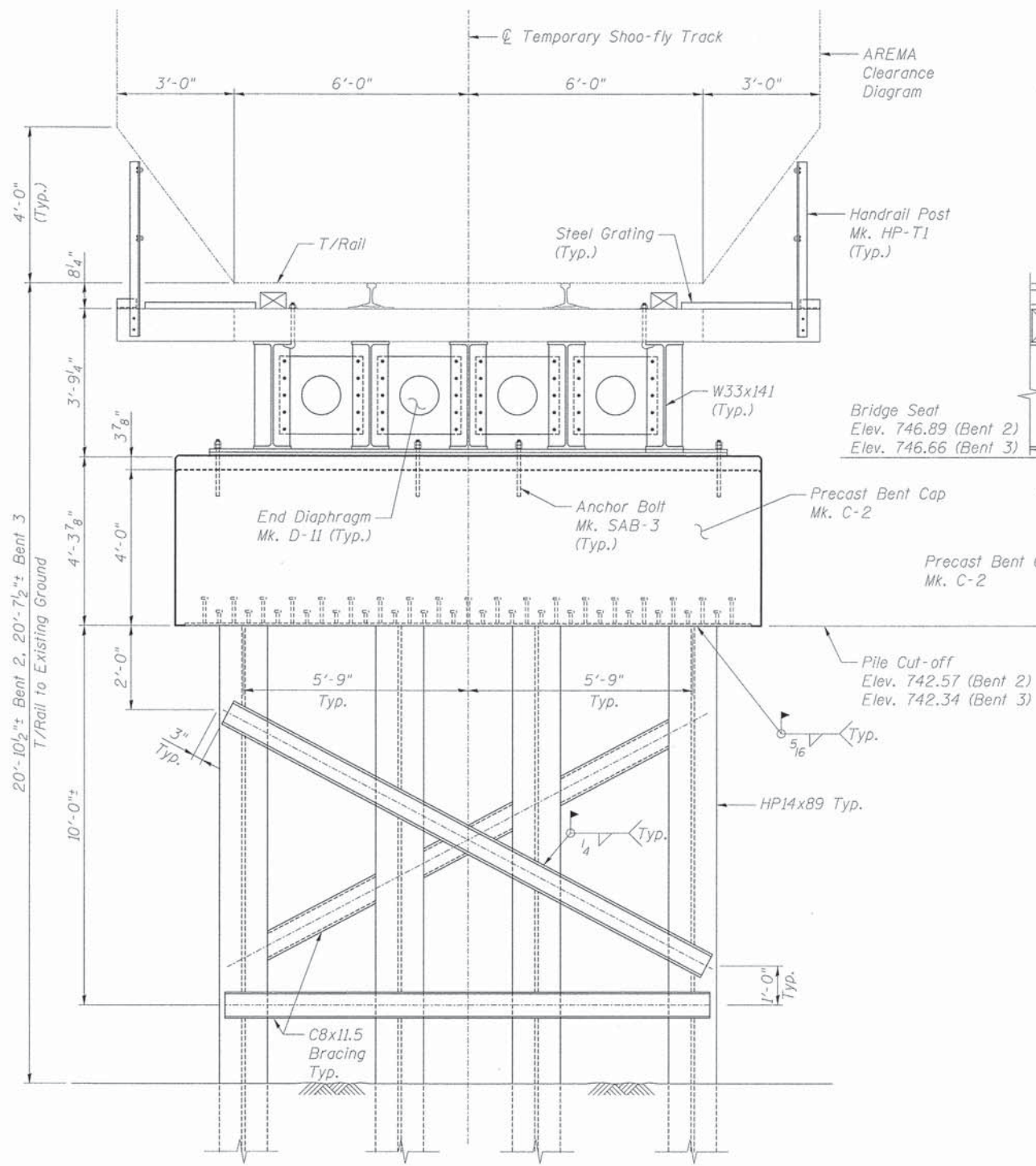
SHEET NO. UP-36 OF UP-52 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	296
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
Temp.Br_003_Typ_Sections1.dgn	mgrimm	JLS	-
PLOT SCALE =	DRAWN -	CHECKED -	REVISED -
PLOT DATE = 12/13/2012	RMG	LRB	-
	CHECKED -	REVISED -	
	LRB	-	

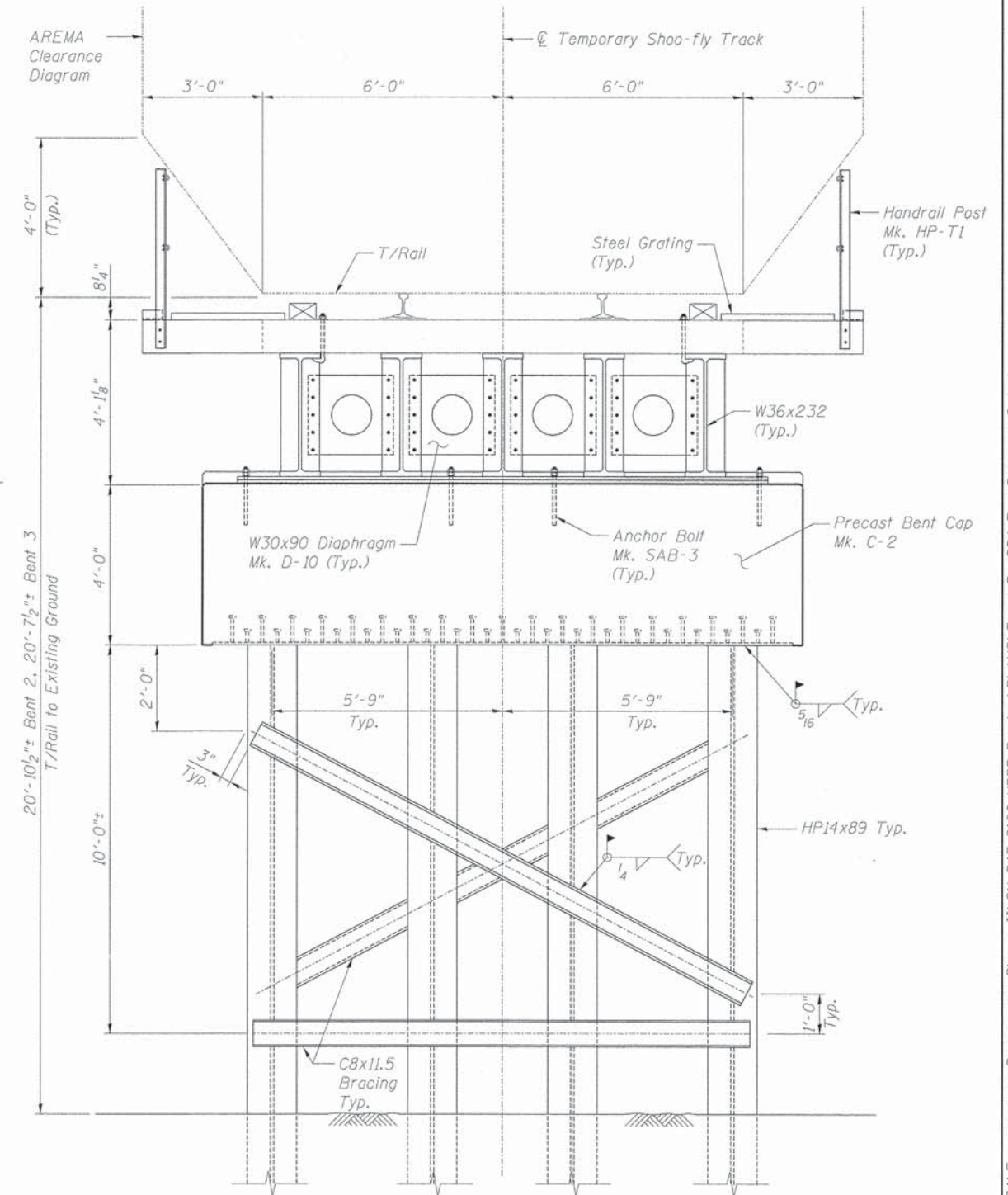
X:\100005\10074\Engineer\ng\_Documents\_Phase\_11\SN\_045\_3168.LUPRR\_Bridge\PLANS\Temp\_Br\_003\_Typ\_Sections1.dgn  
 3:12:53 PM  
 12/13/2012





**ELEVATION BENT 3 - SPAN 3**  
(Looking toward Chicago)  
(Bent 2 similar)

**SECTION THRU BENT 3**



**ELEVATION BENT 3 - SPAN 2**  
(Looking toward Rockford)  
(Bent 2 similar)

**NOTES:**

1. For Precast Bent Cap details see sheet UP-45.
2. T/Rail to T/Tie = 8 1/4". Dimension includes 7 5/16" height for 136 lb. rail and a 1 5/16" tie plate.
3. N.S. denotes Near Side.  
F.S. denotes For Side.

**benesch**  
engineers · scientists · planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgr1mm	DESIGNED - JLS	REVISED -
Temp.Br_004_Typ_Sections2.dgn		CHECKED - LRB	REVISED -
		DRAWN - RMG	REVISED -
		CHECKED - LRB	REVISED -

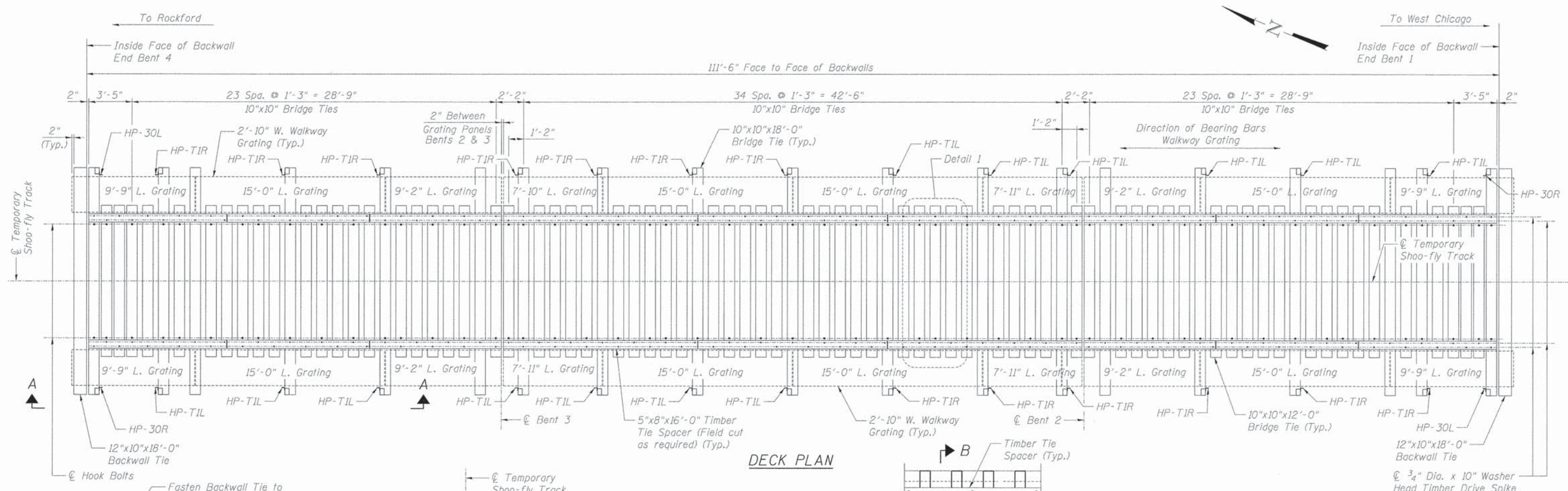
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**M.P. 37.71 BELVIDERE SUBDIVISION - TEMPORARY BRIDGE**  
**BENTS 2 AND 3 DETAILS**

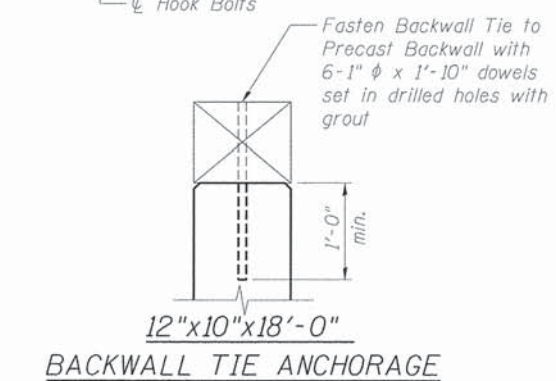
SHEET NO. UP-37 OF UP-52 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	297
			CONTRACT NO. 63598	
ILLINOIS FED. AID PROJECT				

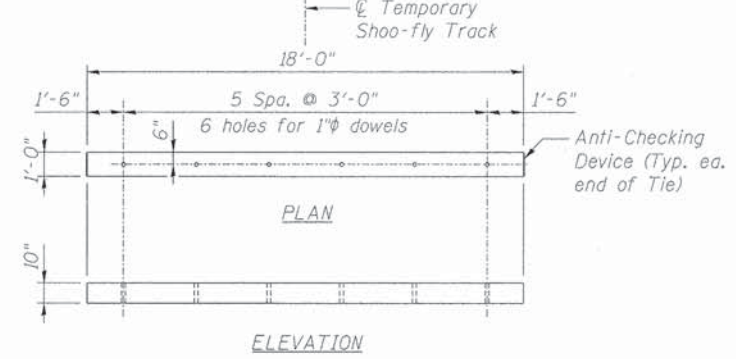




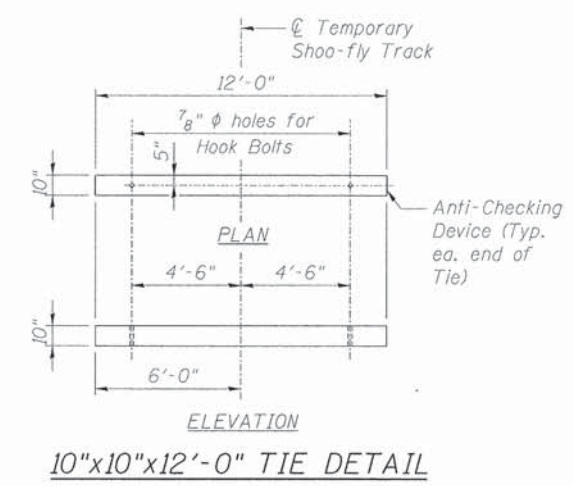
**DECK PLAN**



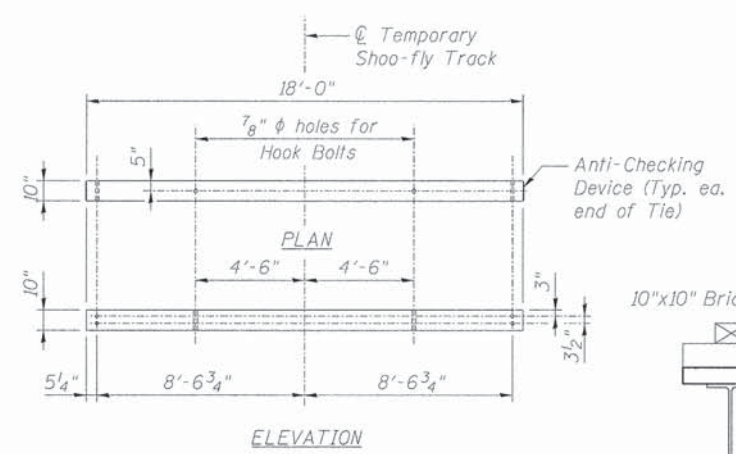
**BACKWALL TIE ANCHORAGE**



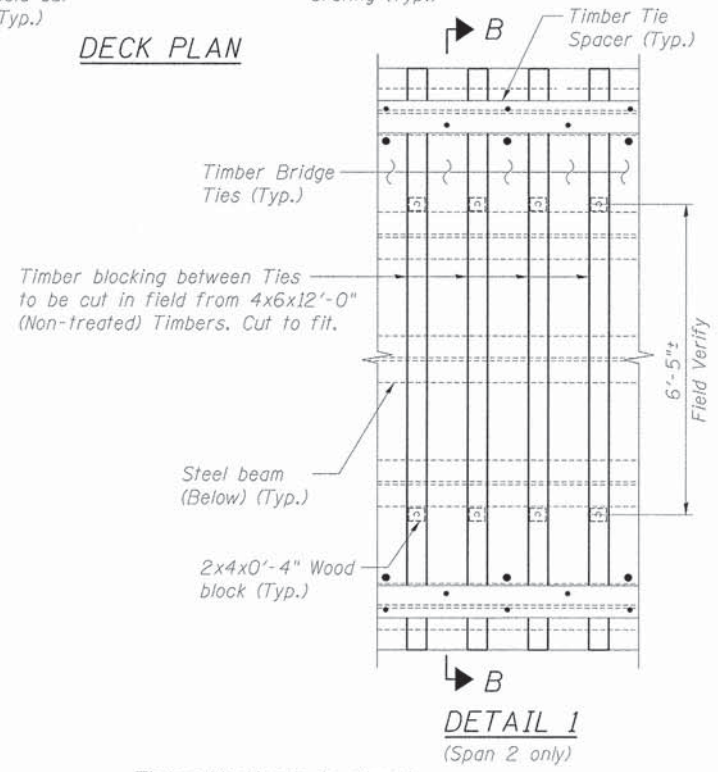
**12"x10"x18'-0" BACKWALL TIE DETAIL**



**10"x10"x12'-0" TIE DETAIL**



**10"x10"x18'-0" TIE DETAIL**



**SECTION B-B**  
(Span 2 only)

**NOTES:**

1. Field verify all dimensions, stations and elevations prior to start of construction.
2. Bridge ties and timber tie spacers to be produced from Softwood Species, West Coast Douglas Fir Select Structural or Southern Pine No. 1 Dense.
3. Timber to be well seasoned and conditioned. Timber to be pressure treated per AREMA specifications.
4. All bridge ties and timber tie spacers shall have anti-checking devices installed at each end.
5. All ties shall be bundled in groups of no more than 16 ties.
6. All holes for hook bolts to be pre-drilled.
7. Field holes, abrasions and cuts shall be treated with a preservative that meets the specifications of the American Wood-Preserver's Association. Treatment shall follow AWWA Standard M4-06.
8. Ties, rail and OTM to be provided by the Contractor. Additional material required and not listed in the Bill of Material to be provided by the Contractor.
9. Walkway grating shall be Type W/B as manufactured by IKG Borden, or approved equal, with 1 3/4" x 3/16" serrated bearing bars.
10. Use 8 cut spikes for all ties per UPRR Standards Drawing 0453B, Pattern 2 (Cut spikes for inside guardrail not included).
11. Timber Blocking to be installed between Timber Ties, (Span 2 only), to prevent material from dropping thru deck to roadway below. Timber blocking to be cut to fit in field. Secure 2x4 Wood block to bottom of Timber Blocking prior to installing Blocking.

**benesch**  
engineers - scientists - planners  
Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = rgrzmm	DESIGNED - JLS	REVISED -
Temp_Br_085_Deck_Plan.dgn		CHECKED - LRB	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/13/2012	CHECKED - LRB	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

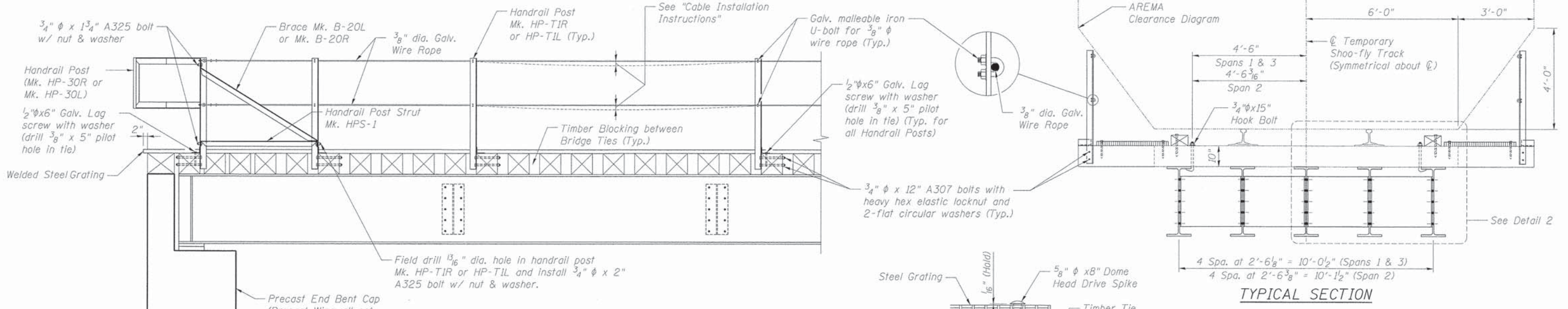
**M.P. 37.71 BELVIDERE SUBDIVISION - TEMPORARY BRIDGE**  
**DECK PLAN**

SHEET NO. UP-38 OF UP-52 SHEETS

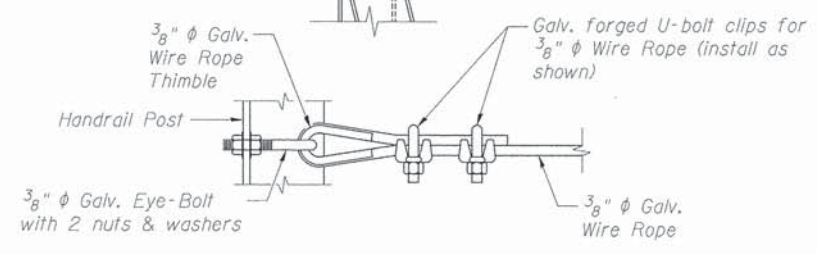
F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 298
				CONTRACT NO. 63598
ILLINOIS FED. AID PROJECT				

X:\1100005\10074\Engineering\Documents\Phase\_1\TNS\_045\_3168\UPRR\_Bridge\PLANS\Temp\_Br\_005\_Deck\_Plan.dgn 3:12:56 PM 12/13/2012





VIEW A-A



CABLE END INSTALLATION DETAIL

CABLE INSTALLATION INSTRUCTIONS (PER SPAN)

1. Prior to installing cable, make sure all Handrails Posts, Braces and Struts are installed with connections complete.
2. Thread Cable through all U-bolt clips and secure at End Posts. (Do not stretch)
3. Hang a minimum of 15 lbs. on cable between 2 Posts near mid-span, Span 2, and stretch cable to remove sag. Allow 2" max. sag to remain.
4. Tighten U-bolt clips and Eye-Bolts at End Posts.
5. Remove hanging weight(s).
6. Tighten U-bolt clips at intermediate Handrail Posts.

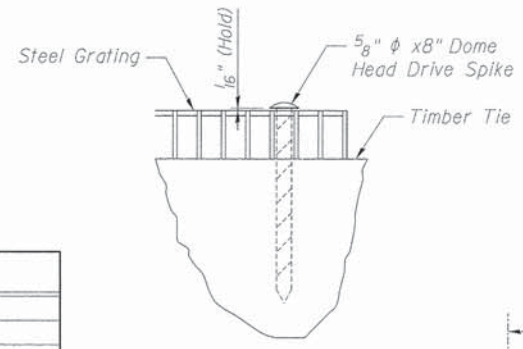
WALKWAY GRATING SCHEDULE

REQ'D	UNIT	DESCRIPTION
4	EA.	Welded Steel Grating (1 3/4" x 3/16" serrated bars) 34" wide x 7'-11" long (galvanized)
4	EA.	Welded Steel Grating (1 3/4" x 3/16" serrated bars) 34" wide x 9'-2" long (galvanized)
4	EA.	Welded Steel Grating (1 3/4" x 3/16" serrated bars) 34" wide x 9'-9" long (galvanized)
8	EA.	Welded Steel Grating (1 3/4" x 3/16" serrated bars) 34" wide x 15'-0" long (galvanized)

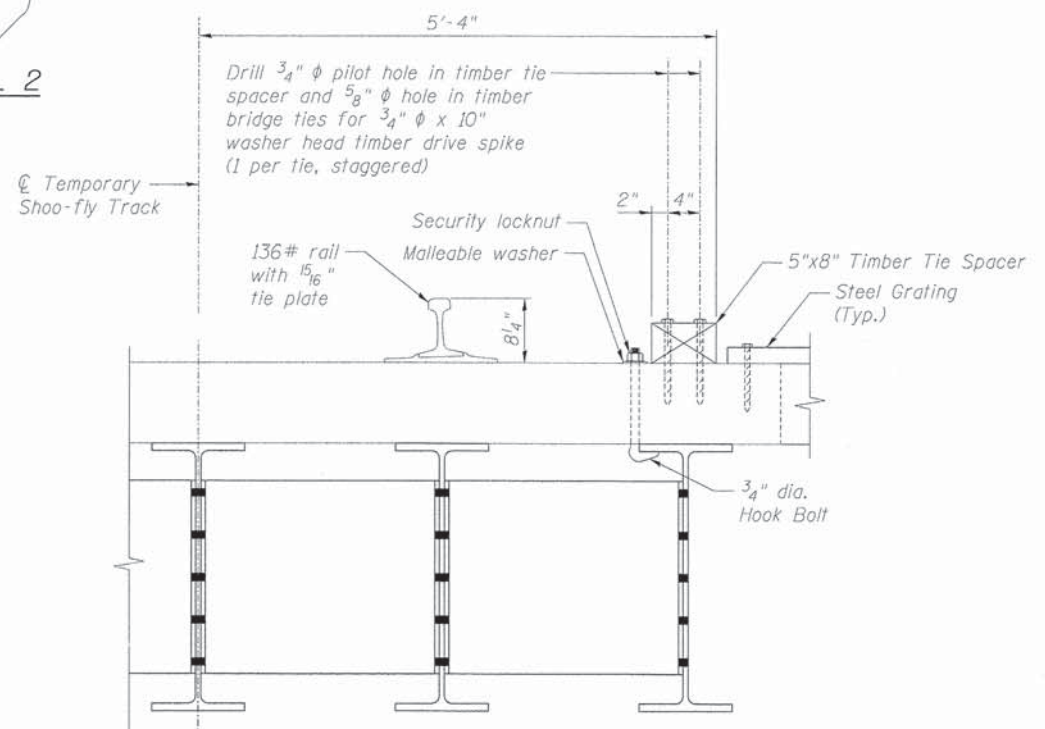
Estimated weight of walkway grating = 8,150 lb.

TIMBER DECK & WALKWAY SCHEDULE

REQ'D	UNIT	DESCRIPTION
2	EA.	12"x10"x 18'-0" Backwall Ties, Treated, (per detail)
72	EA.	10"x10"x 12'-0" Bridge Ties, Treated, (per detail)
19	EA.	10"x10"x 18'-0" Bridge Ties, Treated, (per detail)
14	EA.	5"x8"x 16'-0" Timber Tie Spacer
36	EA.	Timber Blocking 4"x6"x12'-0"
72	EA.	Wood Block 2"x4"x0'-4"
13	EA.	Handrail Post Mk. HP-T1R (Per detail)
13	EA.	Handrail Post Mk. HP-T1L (Per detail)
2	EA.	Handrail Post Mk. HP-30R (Per detail)
2	EA.	Handrail Post Mk. HP-30L (Per detail)
2	EA.	Brace Mk. B-20R (Per detail)
2	EA.	Brace Mk. B-20L (Per detail)
4	EA.	Handrail Post Strut Mk. HPS-1 (Per detail)
470	FEET	3/8" Nominal Diameter Wire Rope, 7 wire, galv. steel strand, Siemens Martins Grade, A-coating
16	EA.	Galv. Malleable Iron U-bolt Clips w/ 2 elastic locknuts (MIL-N-25027), zinc plated, for 3/8" dia. Wire Rope
52	EA.	Galv. Malleable Iron U-bolts w/ 2 elastic locknuts (MIL-N-25027), zinc plated, for 3/8" dia. Wire Rope
8	EA.	3/8" Galv. Eye-Bolt with 2 nuts & 2 washers
8	EA.	3/8" Galv. Wire Rope Thimble for 3/8" dia. Wire Rope
8	EA.	3/4" x 1 3/4" A325 H.S. Bolt, Type 1 w/ Heavy Hex Nut (A563, lubricated) and flat circular washer (F436), each component hot dip or mechanically zinc coated
4	EA.	3/4" x 2" A325 H.S. Bolt, Type 1 w/ Heavy Hex Nut (A563, lubricated) and flat circular washer (F436), each component hot dip or mechanically zinc coated
60	EA.	3/4" x 12" A307 Heavy Hex Grade A Bolt, w/ elastic locknut (MIL-N-25027) & 2 - flat circular washer (F436), each component hot dip or mechanically zinc coated
30	EA.	1/2" x 6" lag screw and flat circular washer, each component hot dip or mechanically zinc coated
182	EA.	3/4" x 10" washer head timber drive spike
104	EA.	5/8" x 8" dome head drive spike (AREMA spec) (Galv.)
106	EA.	3/4" x 15" hook bolt w/ 3" thread
106	EA.	#10 malleable washer for 3/4" dia. bolt
106	EA.	3/4" #10 security locknut part SH 515
1	KEG	Spikes for wood ties per UPRR Standards Drawing No. 0451
1	LOT	1 3/4" x 3/16" WB Serrated Walkway Grating (per schedule, this sheet)
72	EA.	3/8" x 4" Lag Screws
12	EA.	1" x 1'-10" Steel Dowels



DETAIL 2



DETAIL 2

- NOTES:
1. See sheet UP-40 for Handrail Details.
  2. Install miscellaneous timber under ends of grating as required (Typ.).

**benesch**  
engineers · scientists · planners

Alfred Benesch & Company  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450 Job No. 10074

FILE NAME =	USER NAME = pgr3mm	DESIGNED - JLS	REVISED -
Temp.Br_006_Deck_Section.dgn		CHECKED - LRB	REVISED -
		DRAWN - RMG	REVISED -
		CHECKED - LRB	REVISED -

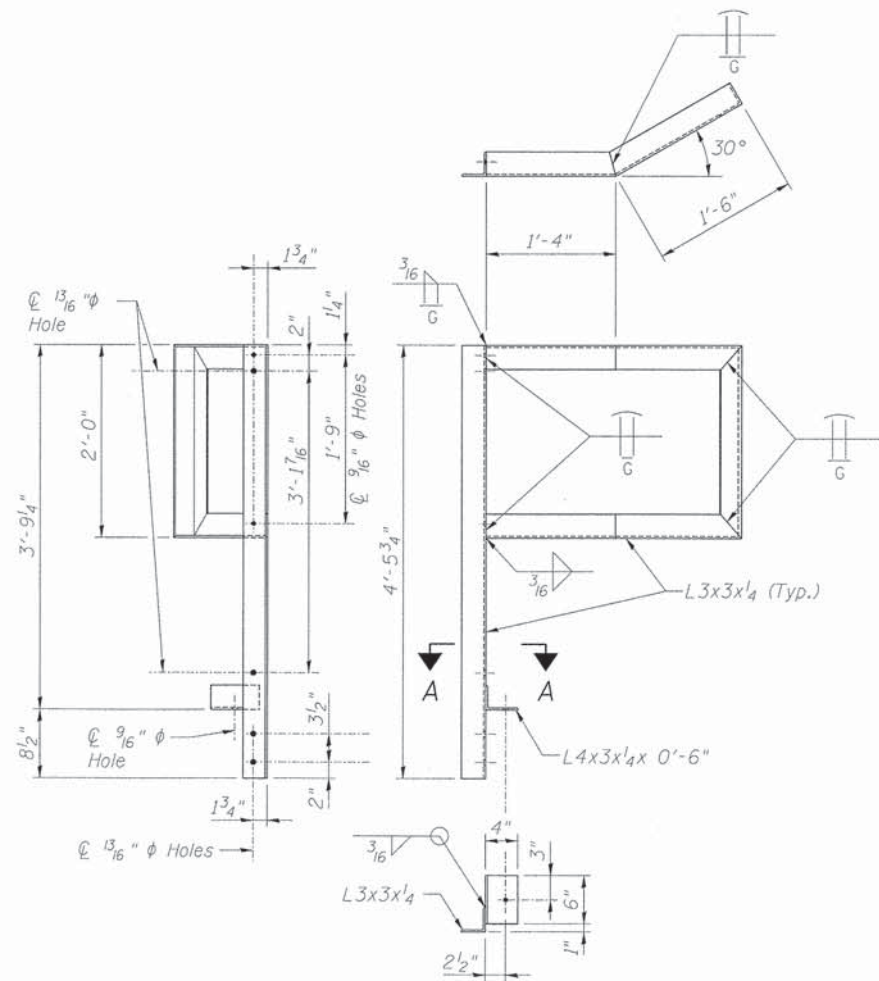
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

M.P. 37.71 BELVIDERE SUBDIVISION - TEMPORARY BRIDGE  
DECK SECTIONS, DETAILS AND MATERIAL SCHEDULE

SHEET NO. UP-39 OF UP-52 SHEETS

F.A.P. RTE. 361	SECTION 06-00214-18-RP	COUNTY KANE	TOTAL SHEETS 451	SHEET NO. 299
ILLINOIS FED. AID PROJECT			CONTRACT NO. 63598	

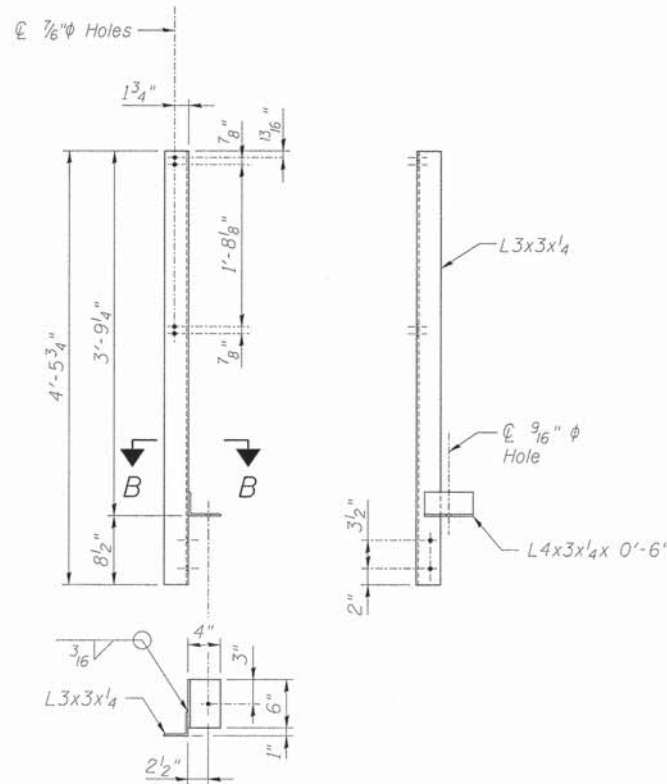




SECTION A-A

**HANDRAIL POST MK. HP-30R**

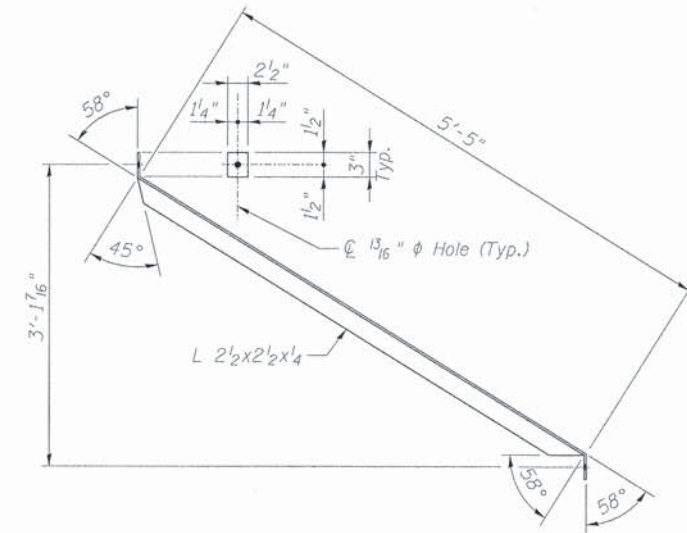
Scale: 1" = 1'-0"  
 Est. Wt. = 62.0 lb. Ea.  
 HANDRAIL POST MK. HP-30L (Opposite Hand)  
 (2 Req'd. each Mk. HP-30R/L)



SECTION B-B

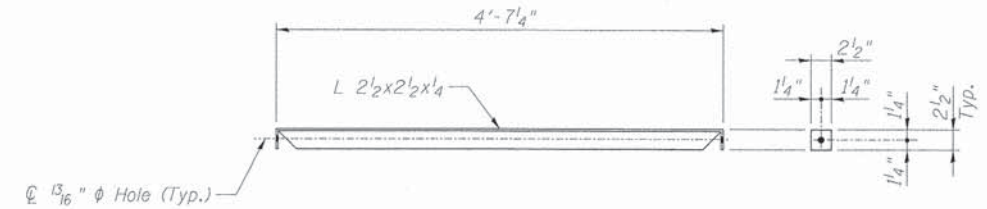
**HANDRAIL POST MK. HP-T1R**

Scale: 1" = 1'-0"  
 Est. Wt. = 24.4 lb. Ea.  
 HANDRAIL POST MK. HP-T1L (Opposite Hand)  
 (13 Req'd. each Mk. HP-T1R/L)



**HANDRAIL BRACE MK. B-20R**

Scale: 1" = 1'-0"  
 Est. Wt. = 24.4 lb. Ea.  
 HANDRAIL BRACE MK. B-20L (Opposite Hand)  
 (4 Req'd)



**HANDRAIL POST STRUT MK. HPS-1**

Scale: 1" = 1'-0"  
 Est. Wt. = 20.6 lb. Ea.  
 (4 Req'd)

FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
Temp.Br..007.Handrail.Dtlis.dgn		CHECKED - LRB	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/13/2012	CHECKED - LRB	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-18-RP	KANE	451	300
CONTRACT NO. 63598			ILLINOIS FED. AID PROJECT	