

**TEMPORARY LIGHTING GENERAL NOTES:**

- THE ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST IDOT STANDARDS, NATIONAL ELECTRICAL CODE AS WELL AS THE NATIONAL ELECTRICAL SAFETY CODE.
- COORDINATE THE INSTALLATION OF ROADWAY LIGHTING WITH THE CONSTRUCTION STAGING. SEE CONSTRUCTION NOTES, LIGHTING SEQUENCE OF CONSTRUCTION.
 

**STAGE 1 - CONSTRUCTION OF NB CD ROAD BRIDGES -**  
EXISTING NB AND SB POLES REMAIN IN SERVICE  
NB TEMPORARY LIGHTING PLAN INSTALLATION

**WINTER SHUTDOWN -** EXISTING NB AND SB POLES REMAIN IN PLACE

**STAGE 2 - CONSTRUCTION OF NB I-57 BRIDGE -**  
SB POLES REMAIN IN SERVICE  
NB TEMPORARY LIGHTING OPERATIONAL PER PLAN  
HMLT SYSTEM CONSTRUCTION

**WINTER SHUTDOWN -** PRIOR TO SHUTDOWN/ TRAFFIC SWITCH  
HMLT ENERGIZED  
NB TEMPORARY POLES REMOVED  
SB EXISTING AND TEMP POLES REMOVED  
NB NEW POLES INSTALLED AND ENERGIZED  
HMLT IN SERVICE DURING SHUTDOWN

**STAGE 3 -** HMLT IN SERVICE
- FOR POLE AND LUMINAIRE DETAILS, REFER TO ELECTRICAL PLANS AND SPECIFICATIONS.
- COORDINATE THE INSTALLATION OF ROADWAY LIGHTING AND UNDERGROUND WORK WITH THE OTHER TRADES.
- IT IS CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION. CONTACT J.U.L.I.E. PRIOR TO THE START OF ANY EXCAVATION WORK.
- MATERIAL QUANTITIES ARE APPROXIMATIONS ONLY. IT IS CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL QUANTITIES PRIOR TO ORDERING MATERIAL.
- A STAGING SCHEDULE FOR MATERIAL INSTALLATION, REMOVAL AND APPROXIMATE DATE OF PROPOSED ENERGIZING OF PERMANENT LIGHTING SHALL BE SUBMITTED PRIOR TO THE COMMENCEMENT OF WORK TO ASSURE COORDINATION WITH THE WORK SCHEDULE.
- ALL PROPOSED LIGHT POLE FOUNDATIONS, LIGHT FIXTURES, UNIT DUCT, AND CONDUIT SHALL BE INSTALLED AS SHOWN ON THE PLANS. THE EXACT LOCATION IS TO BE CONFIRMED IN THE FIELD BY THE RESIDENT ENGINEER.
- CIRCUIT NUMBERING AND DESIGNATIONS SHOWN ON THE PLANS ARE FROM EXISTING DRAWINGS. CONTRACTOR SHALL VERIFY CIRCUIT NUMBERING, CABLE ROUTING AND POWER SOURCES DURING CONSTRUCTION.
- LIGHTING CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE TRAFFIC SURVEILLANCE CONTRACTOR.
- ALL LIGHTING UNITS ALONG I-57 ARE UNDER IDOT JURISDICTION AND SHALL FOLLOW IDOT STANDARDS, DETAILS, AND SPECIFICATIONS. ALL LIGHTING UNITS ALONG I-294 ARE UNDER TOLLWAY JURISDICTION AND SHALL FOLLOW TOLLWAY STANDARDS, SPECIFICATIONS, AND DETAILS AS SHOWN IN THE PLANS.

**SUMMARY OF TEMPORARY AND ILLINOIS TOLLWAY LIGHTING QUANTITIES**

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
ELECTRICAL/LIGHTING QUANTITIES ALONG I-57 (IDOT JURISDICTION)			
81800400	AERIAL CABLE, 4-1/C NO. 2 WITH MESSENGER WIRE	FOOT	2682
83057595	LIGHT POLE, WOOD, 100 FOOT, CLASS 4 WITH 15FT MAST ARM	EACH	8
84200500	REMOVAL OF LIGHT UNIT, SALVAGE	EACH	12
84200806	REMOVAL OF POLE FOUNDATION, CONCRETE	EACH	12
X0323574	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	26
X8210015	TEMPORARY LUMINAIRE, HIGH PRESSURE, SODIUM VAPOR, 400 WATT	EACH	8
ELECTRICAL/LIGHTING QUANTITIES ALONG I-294 (TOLLWAY JURISDICTION)			
81200270	CONDUIT EMBEDDED IN STRUCTURE, 4" DIA., PVC	FOOT	284
81300220	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 6" X 6" X 4"	EACH	14
81300530	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 10" X 6"	EACH	1
81702110	ELECTRICAL CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO.10	FOOT	2360
81800400	AERIAL CABLE, 4-1/C NO. 2 WITH MESSENGER WIRE	FOOT	499
82107300	UNDERPASS LUMINAIRE, 150 WATT, HIGH PRESSURE SODIUM VAPOR	EACH	2
84200806	REMOVAL OF POLE FOUNDATION, CONCRETE	EACH	1
84400105	RELOCATE EXISTING LIGHTING UNIT	EACH	1
	CONDUIT ATTACHED TO STRUCTURE, 1" DIA., PVC COATED GALVANIZED STEEL	FOOT	420
	CONDUIT ATTACHED TO STRUCTURE, 2" DIA., PVC COATED GALVANIZED STEEL	FOOT	20
	LIGHT POLE FOUNDATION (ROADWAY) MEDIAN, TYPE 1	EACH	1
	JUNCTION BOX, STAINLESS STEEL, EMBEDDED IN STRUCTURE, 20" X 12" X 8"	EACH	2
X0323651	UNIT DUCT, 600V, 4-1C NO.2, 1/C NO.8 GROUND, (XLP-TYPE USE) 2" DIA., POLYETHYLENE	FOOT	284
	REMOVE AND REINSTALL EXISTING LIGHTING UNIT	EACH	12

**LEGEND:**

**IDOT ITEMS (I-57)**

- EXISTING ROADWAY LIGHTING UNIT TO REMAIN
- EXISTING ROADWAY LIGHTING UNIT AND FOUNDATION TO BE REMOVED, SHOWN ON EXISTING PLANS
- TEMPORARY ROADWAY LIGHTING UNIT 750 WATT ON WOOD POLE CLASS 4, 70' MOUNTING HEIGHT WITH 15' MAST ARM. SHOWN ON PROPOSED PLANS
- PROPOSED AERIAL CABLE, SIZE AS NOTED
- RGS RIGID GALVANIZED STEEL
- ATS CONDUIT ATTACHED TO STRUCTURE
- EIS CONDUIT EMBEDDED IN STRUCTURE
- UD UNIT DUCT, SIZE AS SHOWN
- EOP EDGE OF TRAVELLED PAVEMENT
- O/S OFFSET
- SS STAINLESS STEEL
- (E) EXISTING

**TOLLWAY ITEMS (I-294 & UNDERPASS)**

- EXISTING TOLLWAY MEDIAN LIGHTING UNIT TO REMAIN
- EXISTING TOLLWAY MEDIAN LIGHTING UNIT TO BE RELOCATED SHOWN ON EXISTING PLANS
- EXISTING TOLLWAY MEDIAN LIGHTING UNIT TO BE RELOCATED SHOWN ON PROPOSED PLANS
- EXISTING CONDUIT EMBEDDED IN STRUCTURE
- === PROPOSED CONDUIT OF THE TYPE AND SIZE SPECIFIED
- A — PROPOSED AERIAL CABLE WITH MESSINGER WIRE
- PROPOSED JUNCTION BOX
- PROPOSED 150W HPS UNDERPASS LUMINAIRE
- EXISTING 150W HPS UNDERPASS LUMINAIRE
- PROPOSED MEDIAN BARRIER WALL EMBEDDED JUNCTION BOX
- EXISTING MEDIAN BARRIER WALL EMBEDDED JUNCTION BOX

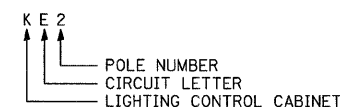
**IDOT DISTRICT 1 STANDARDS**

- BE-800: TEMPORARY LIGHT POLE DETAIL
- BE-801: TEMPORARY AERIAL CABLE INSTALLATION
- BE-702: MISC. ELECTRICAL DETAILS - SHEET A

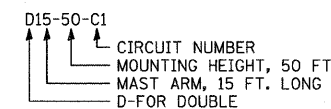
**TOLLWAY STANDARDS**

- STANDARD H2-00: LIGHT STANDARD POLE WIRING
- STANDARD H8-00: MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS - TYPE I CENTERED CASSION, 42" BARRIER

**IDOT LIGHT POLE DESIGNATION:**



**TOLLWAY LIGHT POLE DESIGNATION:**



SHEET E1

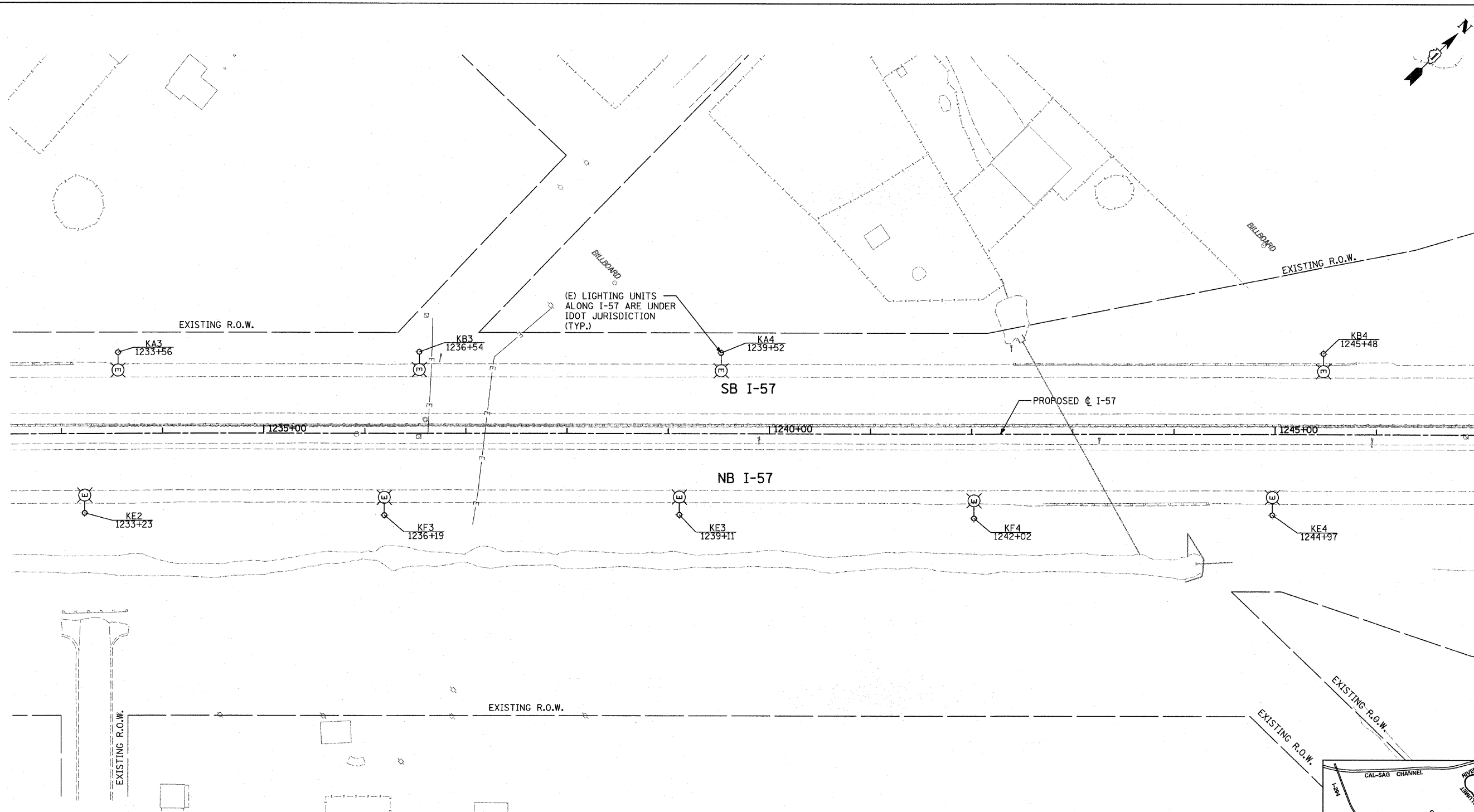
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	PLOT SCALE =	DRAWN - CAC	REVISED  ADDENDUM 1 05/24/10
	PLOT DATE =	CHECKED - DAJ	REVISED -
		DATE - 3/18/2010	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

I-57 AT I-294 INTERCHANGE PROJECT  
LIGHTING GENERAL NOTES, LEGEND, AND QUANTITIES

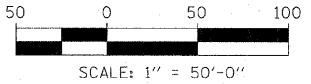
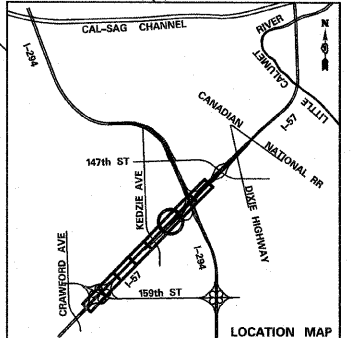
SCALE: NONE SHEET NO. 1 OF 1 SHEET STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	201
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 60J27	



(E) LIGHTING UNITS ALONG I-57 ARE UNDER IDOT JURISDICTION (TYP.)

- NOTES:**
1. IDOT LIGHTING CONTROLLER "K" IS LOCATED AT I-57 STA. 1238+45 ALONG SB I-57.
  2. IDOT LIGHTING CONTROLLER "J" IS LOCATED AT I-57 STA. 1286+79 ALONG NB I-57 ON 147TH STREET.



MATCHLINE STA. 1247+00.00

<b>TYLIN INTERNATIONAL</b>	USER NAME =	DESIGNED - JDF	REVISED -
	PLOT SCALE =	DRAWN - JDF	REVISED -
	PLOT DATE =	CHECKED - DAJ	REVISED -
		DATE - 3/18/2010	REVISED -

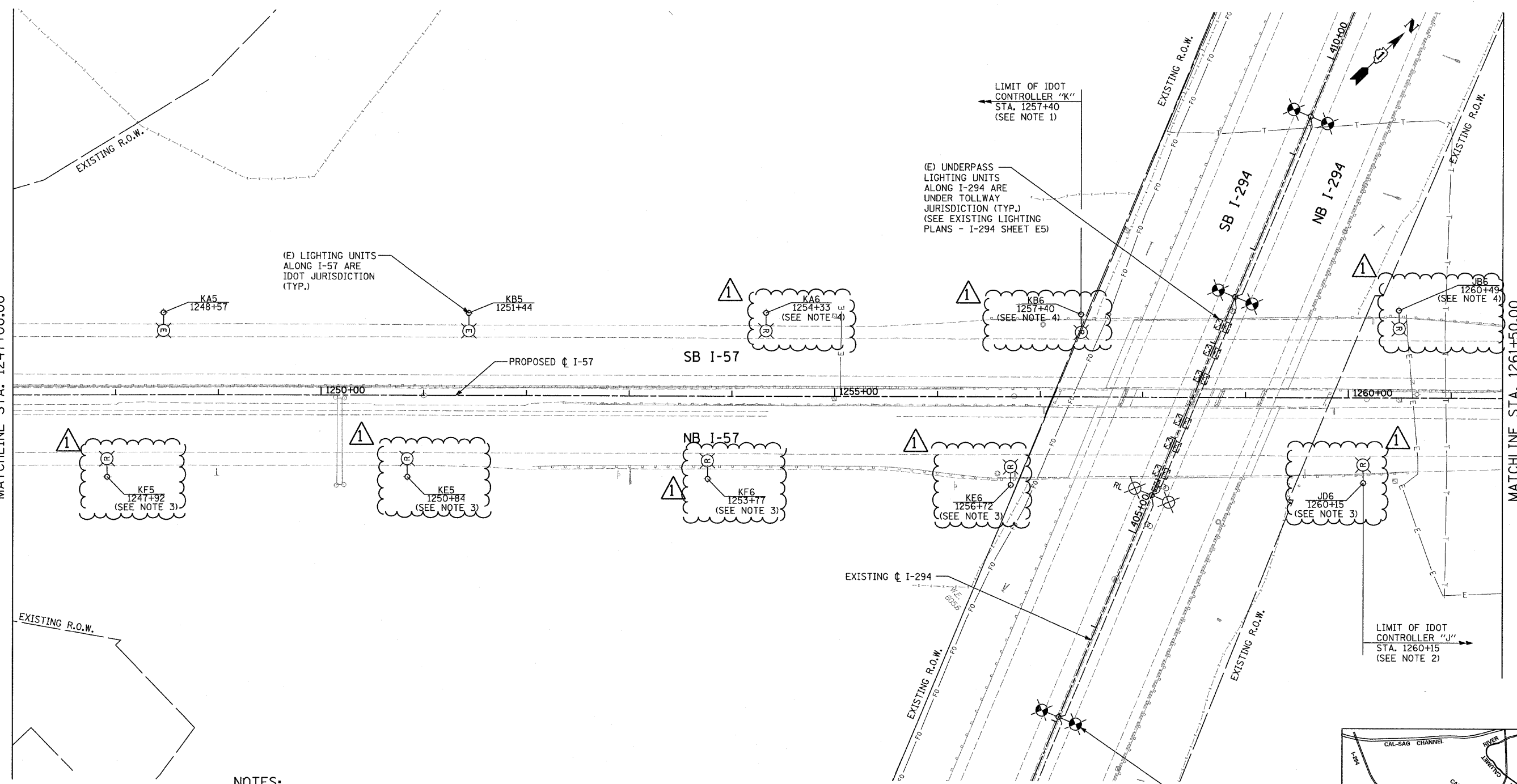
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>I-57 AT I-294 INTERCHANGE PROJECT EXISTING LIGHTING PLANS - I-57</b>			
F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516
SCALE: 1" = 50'		SHEET NO. 1 OF 4 SHEETS	
STA. 1232+50		TO STA. 1247+00	

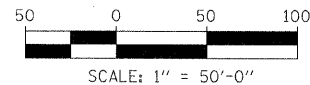
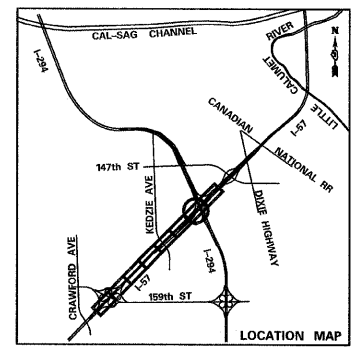
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	516	202
CONTRACT NO. 60J27				

MATCHLINE STA. 1247+00.00

MATCHLINE STA. 1261+50.00



- NOTES:**
1. IDOT LIGHTING CONTROLLER "K" IS LOCATED AT I-57 STA. 1238+45 ALONG SB I-57.
  2. IDOT LIGHTING CONTROLLER "J" IS LOCATED AT I-57 STA. 1286+79 ALONG NB I-57 ON 147TH STREET.
  3. POLE NOT TO BE REMOVED UNTIL TEMPORARY POLES ARE ENERGIZED (STAGE 2).
  4. POLE NOT TO BE REMOVED UNTIL HIGH MAST LIGHT TOWERS ARE ENERGIZED (AFTER STAGE 2).



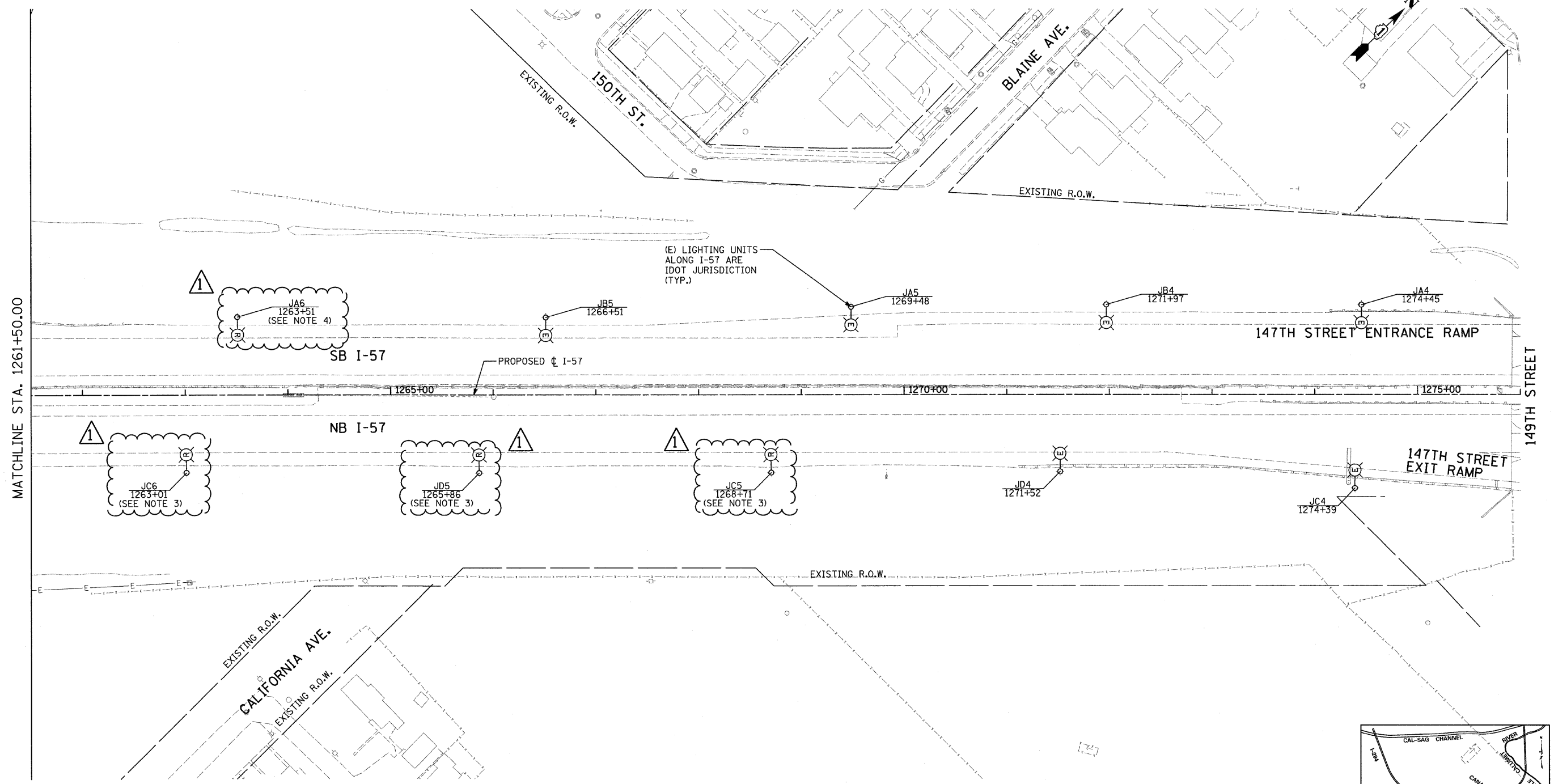
<b>TYLIN INTERNATIONAL</b>	USER NAME =	DESIGNED - JDF	REVISED $\Delta$ - ADDENDUM 1 05/24/10
	PLOT SCALE =	DRAWN - JDF	REVISED -
	PLOT DATE =	CHECKED - DAJ	REVISED -
		DATE - 3/18/2010	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

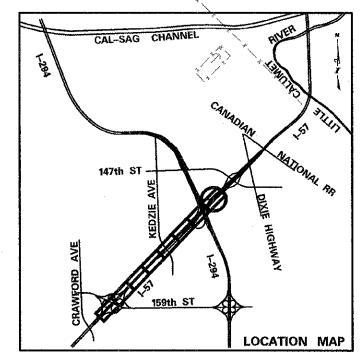
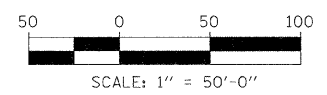
**I-57 AT I-294 INTERCHANGE PROJECT  
EXISTING LIGHTING AND REMOVAL PLAN - I-57**

F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 203
CONTRACT NO. 60J27			ILLINOIS FED. AID PROJECT	

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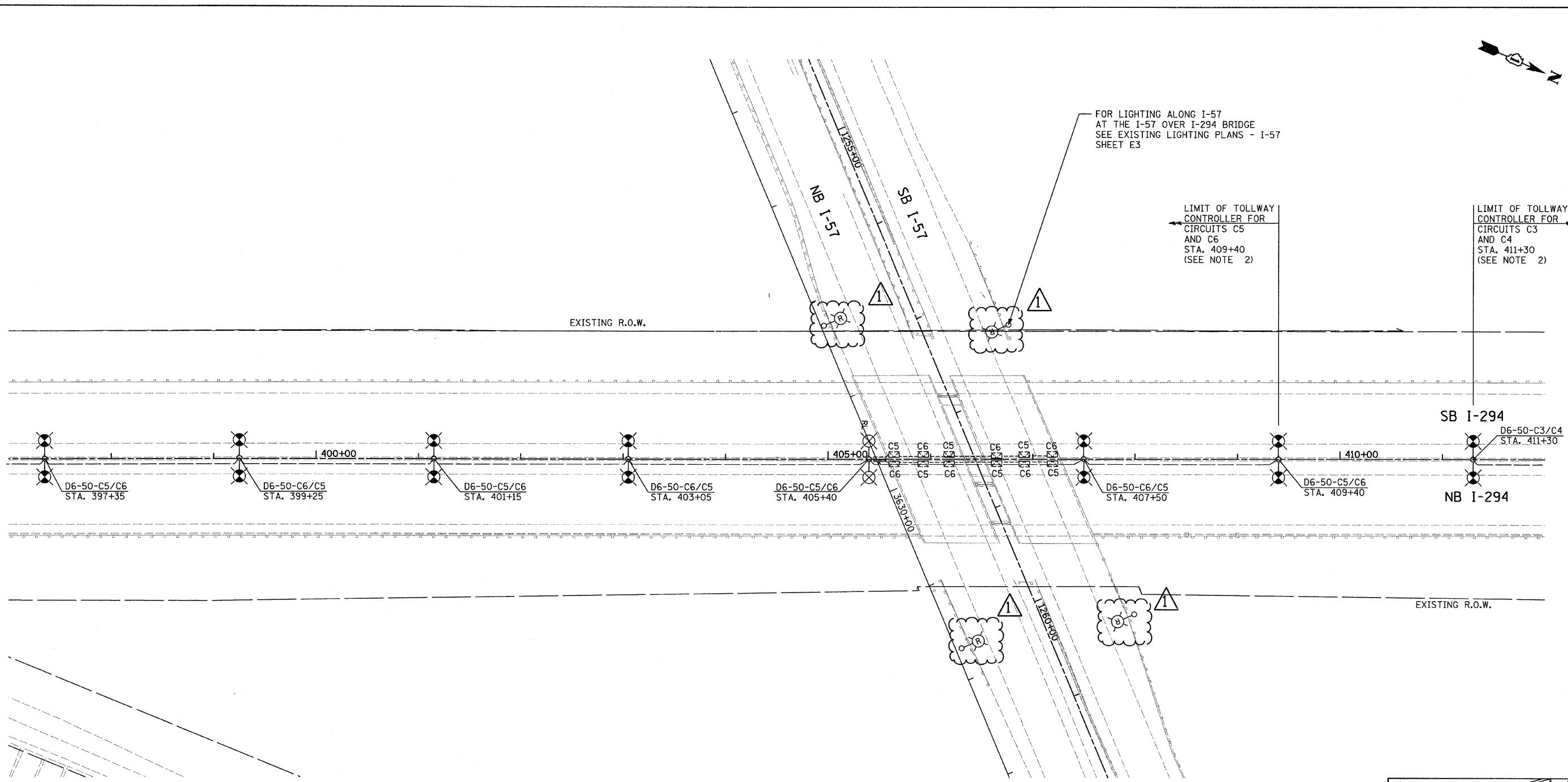


- NOTES:**
1. IDOT LIGHTING CONTROLLER "K" IS LOCATED AT I-57 STA. 1238+45 ALONG SB I-57.
  2. IDOT LIGHTING CONTROLLER "J" IS LOCATED AT I-57 STA. 1286+79 ALONG NB I-57 ON 147TH STREET.
  3. POLE NOT TO BE REMOVED UNTIL TEMPORARY POLES ARE ENERGIZED (STAGE 2).
  4. POLE NOT TO BE REMOVED UNTIL HIGH MAST LIGHT TOWERS ARE ENERGIZED (AFTER STAGE 2).



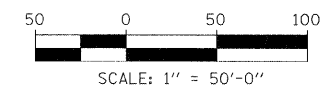
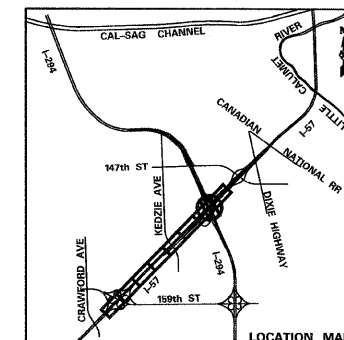
**SHEET E4**

<b>TYLIN INTERNATIONAL</b>	USER NAME =	DESIGNED - JDF	REVISED $\Delta$ - ADDENDUM 1 05/24/10	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>I-57 AT I-294 INTERCHANGE PROJECT EXISTING LIGHTING AND REMOVAL PLAN - I-57</b>	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 204			
	PLOT SCALE =	DRAWN - CAC	REVISED -			SCALE: 1" = 50'	SHEET NO. 3 OF 4 SHEETS	STA. 1261+50 TO STA. 1276+00	CONTRACT NO. 60J27				
	PLOT DATE =	CHECKED - DAJ	REVISED -			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT							
		DATE - 3/18/2010	REVISED -										



**NOTES:**

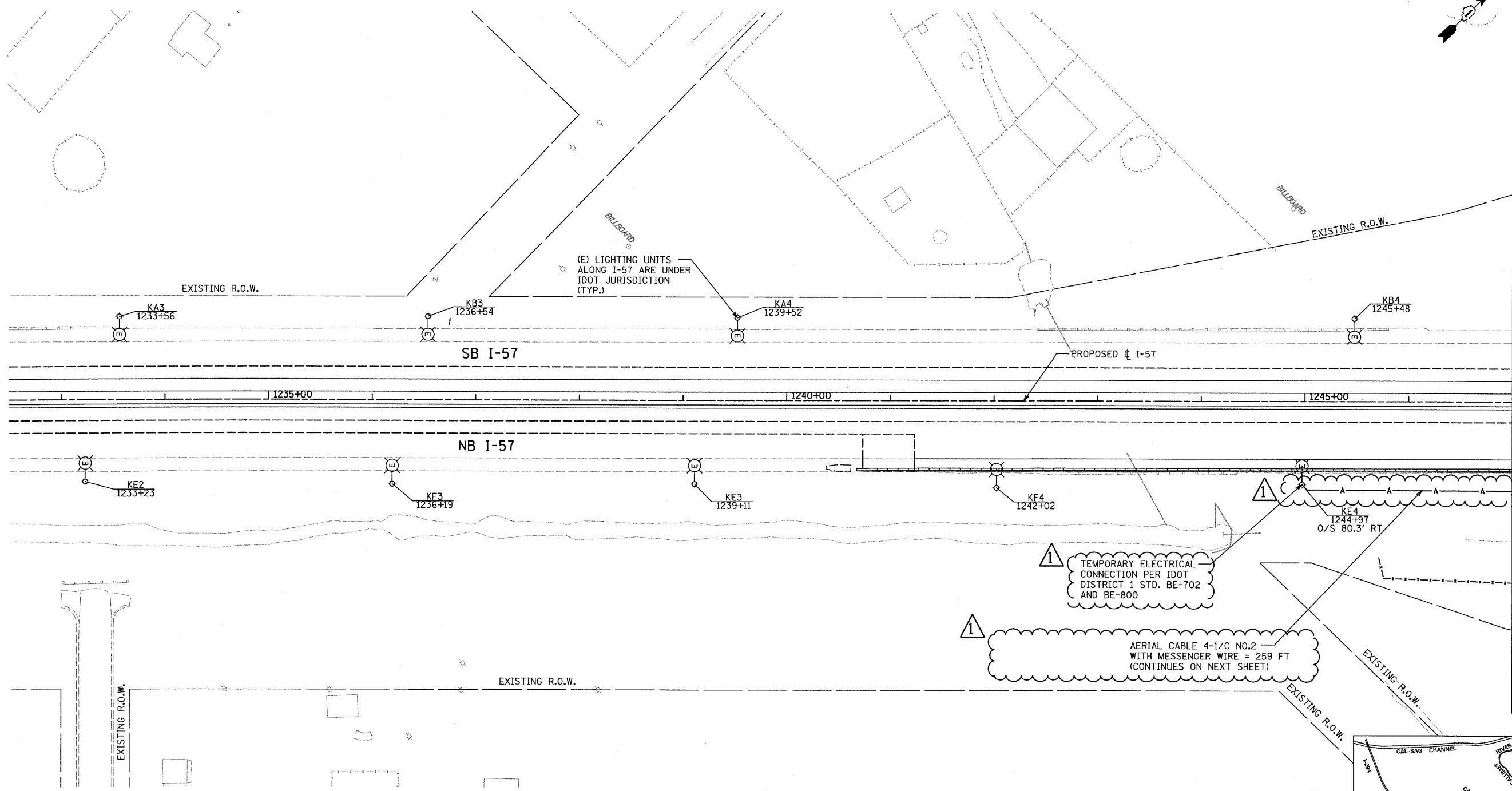
1. THE TOLLWAY LIGHTING CONTROLLER FOR CIRCUITS C5 AND C6 IS LOCATED AT I-294 STA. 387+92 ALONG SB I-294
2. THE TOLLWAY LIGHTING CONTROLLER FOR CIRCUITS C3 AND C4 IS LOCATED AT I-294 STA. 443+98 ALONG NB I-294



**SHEET E5**

<b>TYLIN INTERNATIONAL</b>	USER NAME =	DESIGNED - JDF	REVISED $\Delta$ - ADDENDUM 1 05/24/10	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>I-57 AT I-294 INTERCHANGE PROJECT EXISTING LIGHTING PLAN - I-294</b>		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	DRAWN - JDF	REVISED -		57	1414.2B	COOK	516	205		
	PLOT DATE =	CHECKED - DAJ	REVISED -		SCALE: 1" = 50'    SHEET NO. 4 OF 4 SHEETS    STA. 397+00 TO STA. 412+00		CONTRACT NO. 60J27		FED. ROAD DIST. NO.    ILLINOIS FED. AID PROJECT		
	DATE - 3/18/2010	REVISED -									

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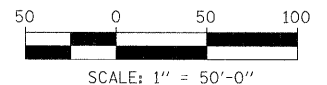
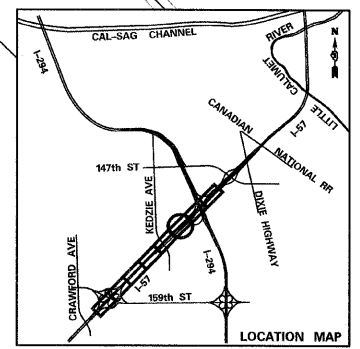


**NOTES:**

1. IDOT LIGHTING CONTROLLER "K" IS LOCATED AT I-57 STA. 1238+45 ALONG SB I-57.
2. IDOT LIGHTING CONTROLLER "J" IS LOCATED AT I-57 STA. 1286+79 ALONG NB I-57 ON 147TH STREET.

TEMPORARY ELECTRICAL CONNECTION PER IDOT DISTRICT 1 STD. BE-702 AND BE-800

AERIAL CABLE 4-1/C NO.2 WITH MESSENGER WIRE = 259 FT (CONTINUES ON NEXT SHEET)



MATCHLINE STA. 1247+00.00

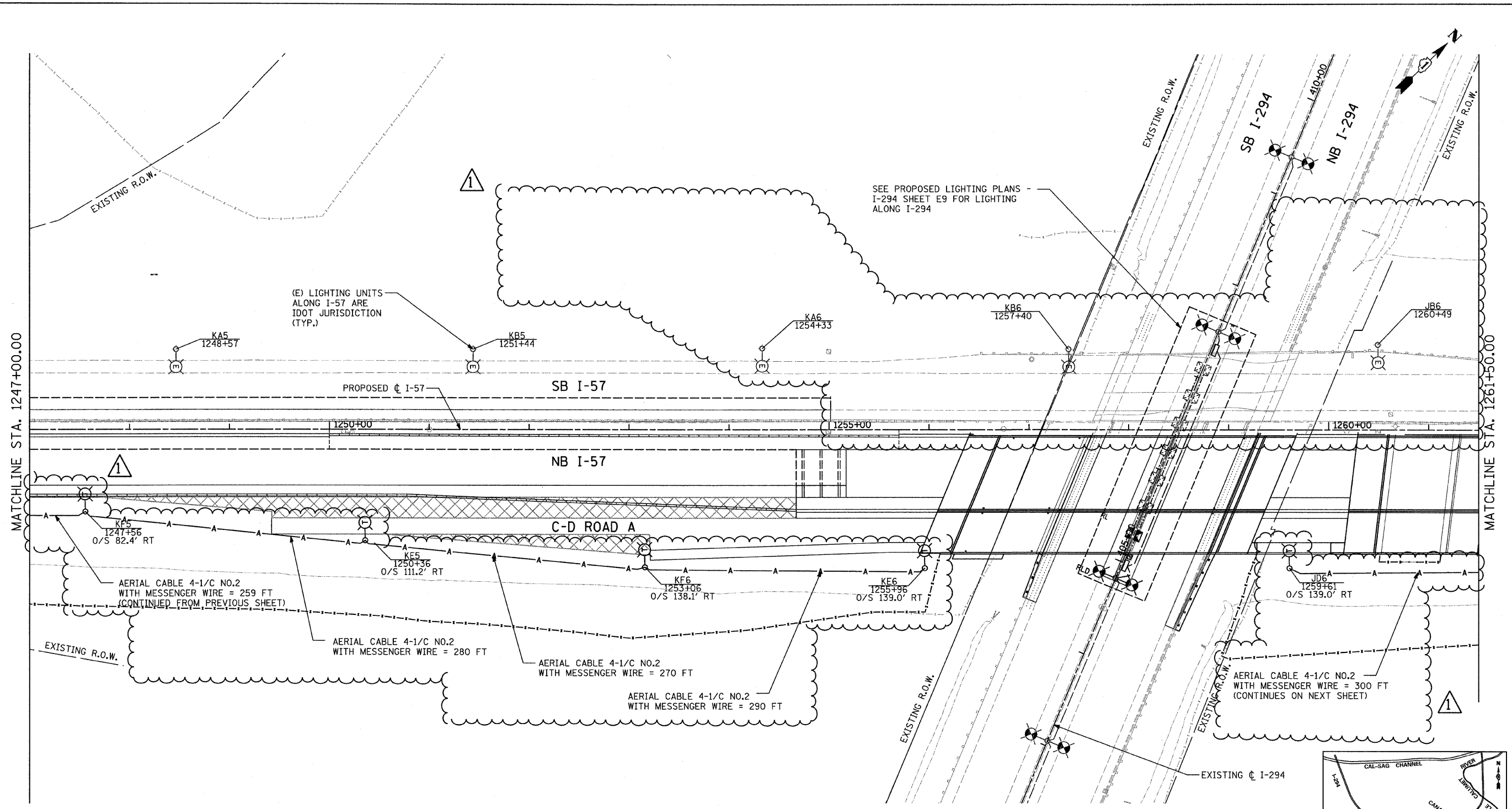
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<b>TYLIN INTERNATIONAL</b>	USER NAME =	DESIGNED - JDF	REVISED $\Delta$ - ADDENDUM 1 05/24/10
	PLOT SCALE =	DRAWN - JDF	REVISED -
	PLOT DATE =	CHECKED - DAJ	REVISED -
		DATE - 3/18/2010	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**1-57 AT I-294 INTERCHANGE PROJECT**  
**PROPOSED STAGE 2 TEMPORARY LIGHTING PLANS - I-57**  
 SCALE: 1" = 50' SHEET NO. 1 OF 4 SHEETS STA. 1232+50 TO STA. 1247+00

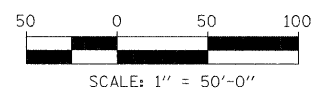
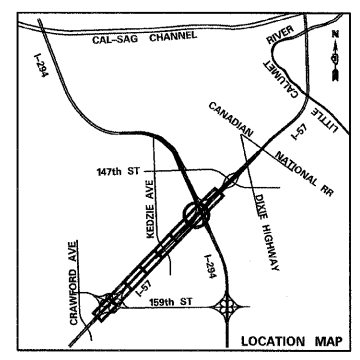
F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 206
CONTRACT NO. 60J27			ILLINOIS FED. AID PROJECT	



SEE PROPOSED LIGHTING PLANS - I-294 SHEET E9 FOR LIGHTING ALONG I-294

(E) LIGHTING UNITS ALONG I-57 ARE IDOT JURISDICTION (TYP.)

- NOTES:**
1. IDOT LIGHTING CONTROLLER "K" IS LOCATED AT I-57 STA. 1238+45 ALONG SB I-57.
  2. IDOT LIGHTING CONTROLLER "J" IS LOCATED AT I-57 STA. 1286+79 ALONG NB I-57 ON 147TH STREET.



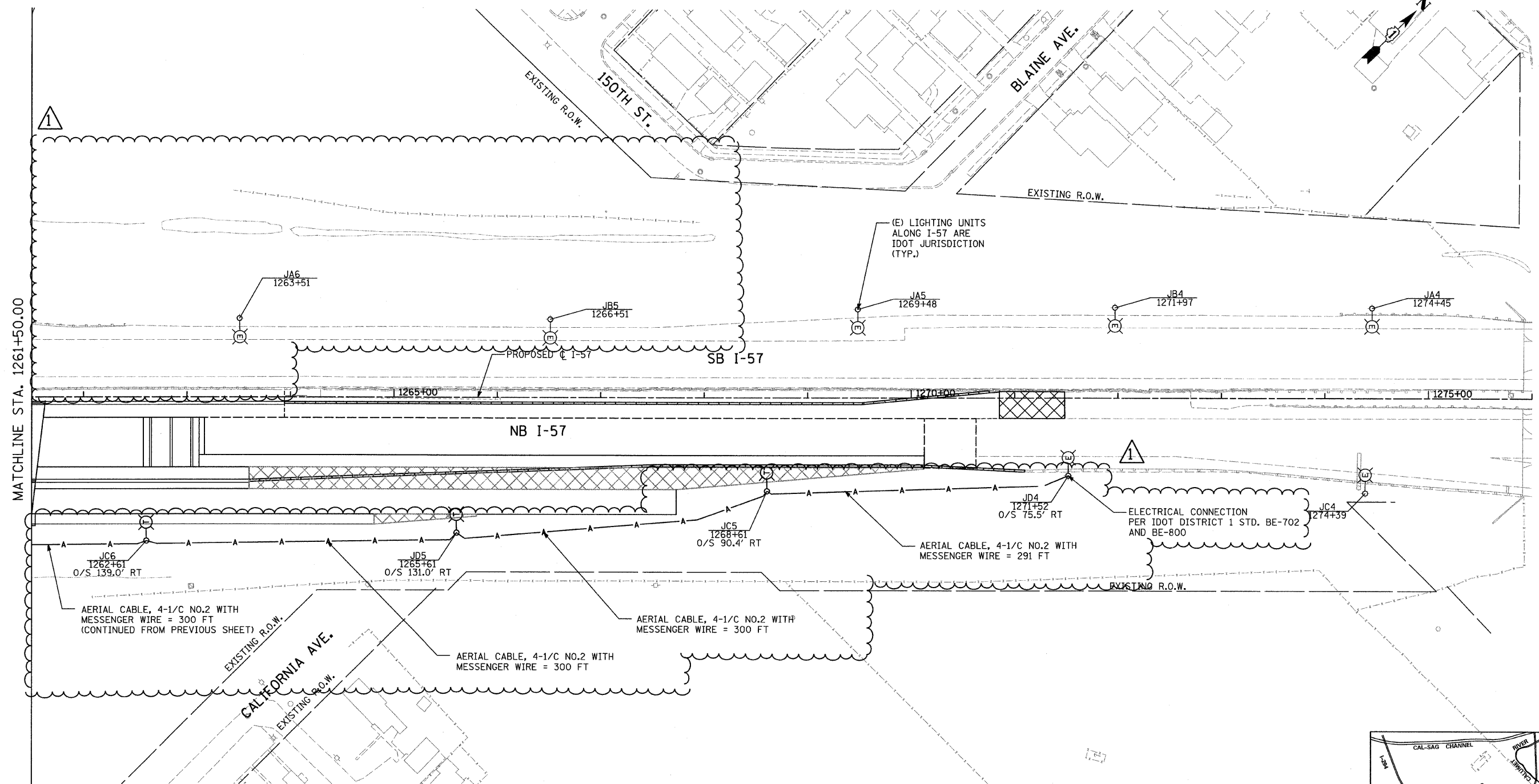
**SHEET E7**

<b>TYLIN INTERNATIONAL</b>	USER NAME =	DESIGNED - JDF	REVISED $\Delta$ - ADDENDUM 1 05/24/10	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>I-57 AT I-294 INTERCHANGE PROJECT PROPOSED STAGE 2 TEMPORARY LIGHTING PLANS - I-57</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	DRAWN - JDF	REVISED -			57	1414.2B	COOK	516	207
	PLOT DATE =	CHECKED - DAJ	REVISED -			CONTRACT NO. 60J27				
		DATE - 3/18/2010	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
SCALE: 1" = 50'    SHEET NO. 2 OF 4 SHEETS    STA. 1247+00 TO STA. 1261+50										

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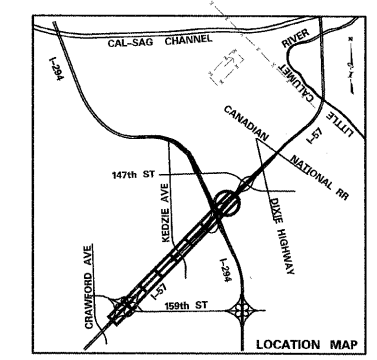
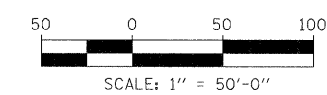
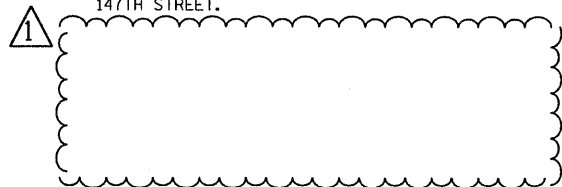
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**NOTES:**

1. IDOT LIGHTING CONTROLLER "K" IS LOCATED AT I-57 STA. 1238+45 ALONG SB I-57.
2. IDOT LIGHTING CONTROLLER "J" IS LOCATED AT I-57 STA. 1286+79 ALONG NB I-57 ON 147TH STREET.



**SHEET E8**

<b>TYLIN INTERNATIONAL</b>	USER NAME =	DESIGNED - JDF	REVISED $\Delta$ - ADDENDUM 1 05/24/10
	PLOT SCALE =	DRAWN - JDF	REVISED -
	PLOT DATE =	CHECKED - DAJ	REVISED -
		DATE - 3/18/2010	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**I-57 AT I-294 INTERCHANGE PROJECT**  
**PROPOSED STAGE 2 TEMPORARY LIGHTING PLANS - I-57**

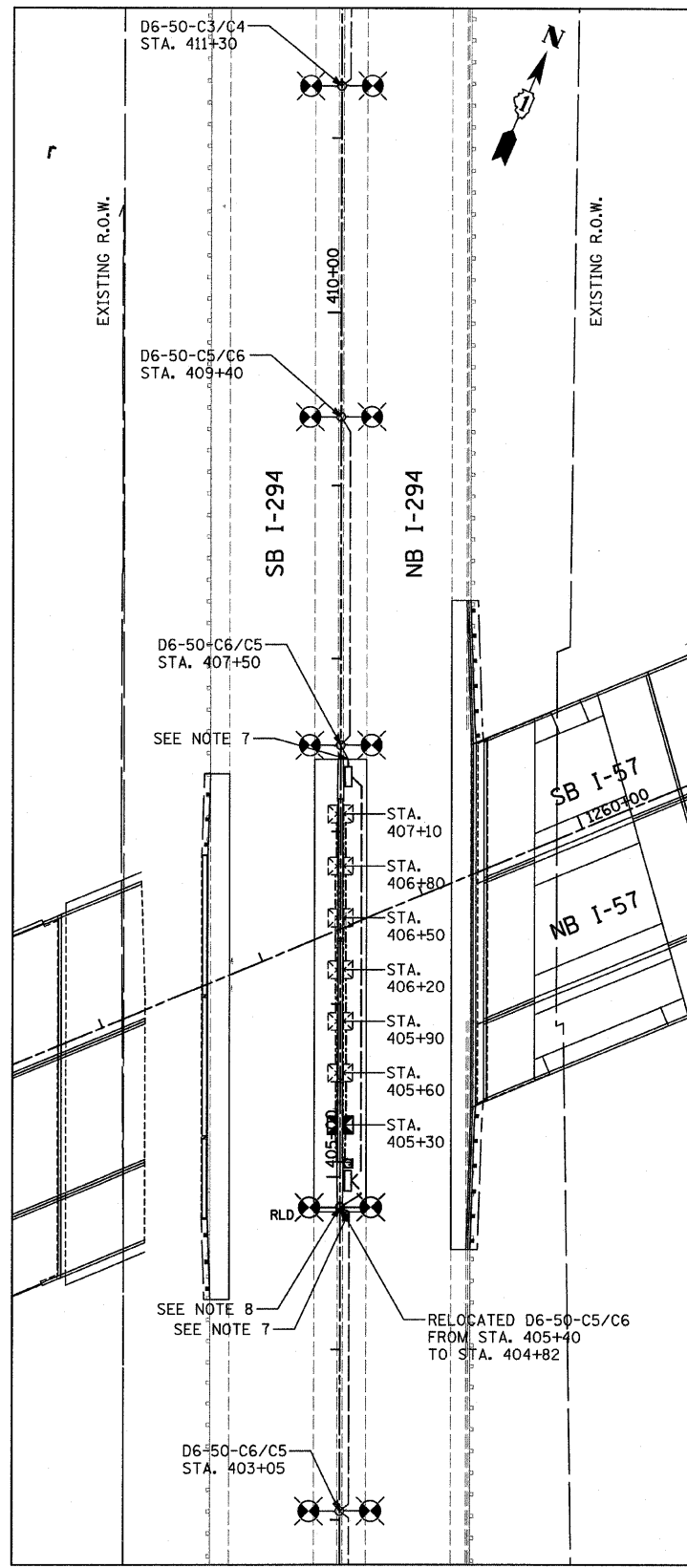
SCALE: SHEET NO. 3 OF 4 SHEETS STA. 1261+50 TO STA. 1276+00

F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 208
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 60J27		

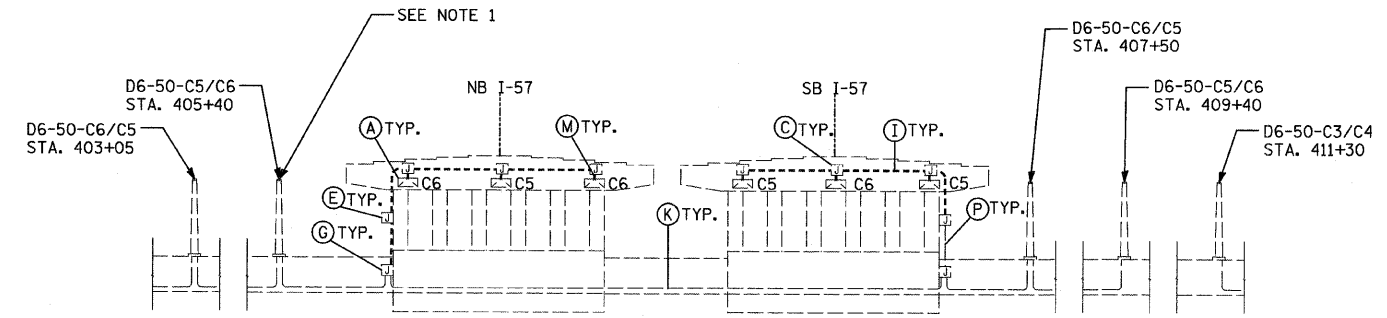
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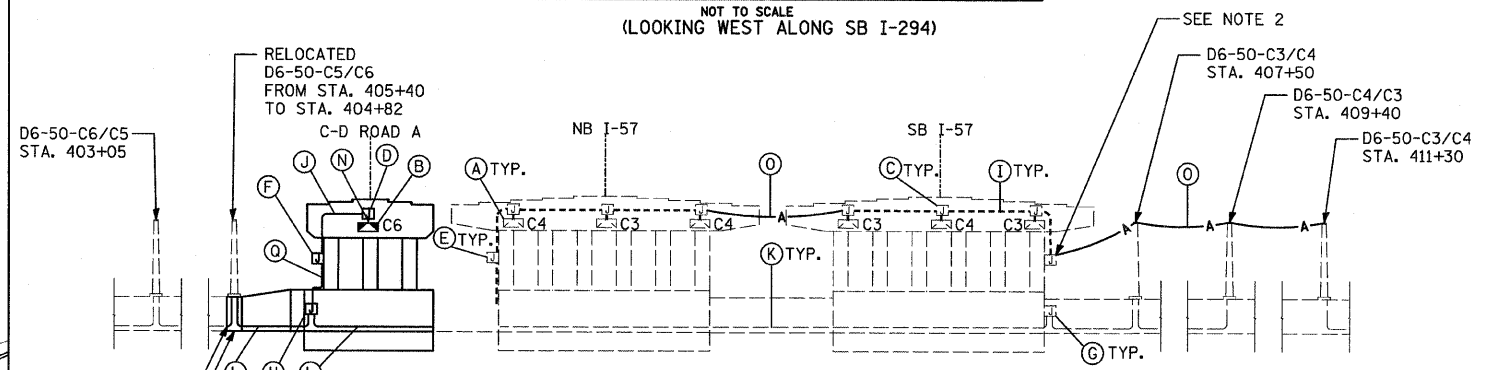




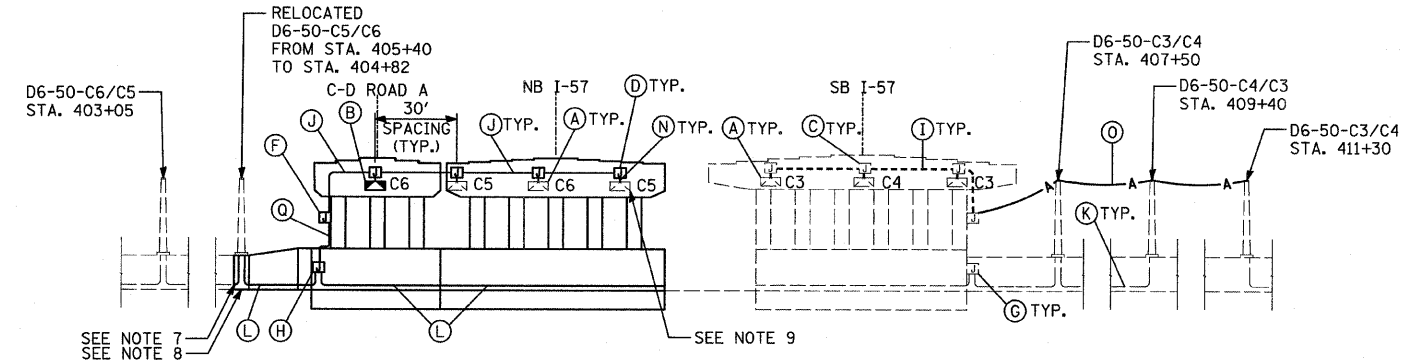
PLAN VIEW: FINAL CONFIGURATION (AFTER STAGE 3)



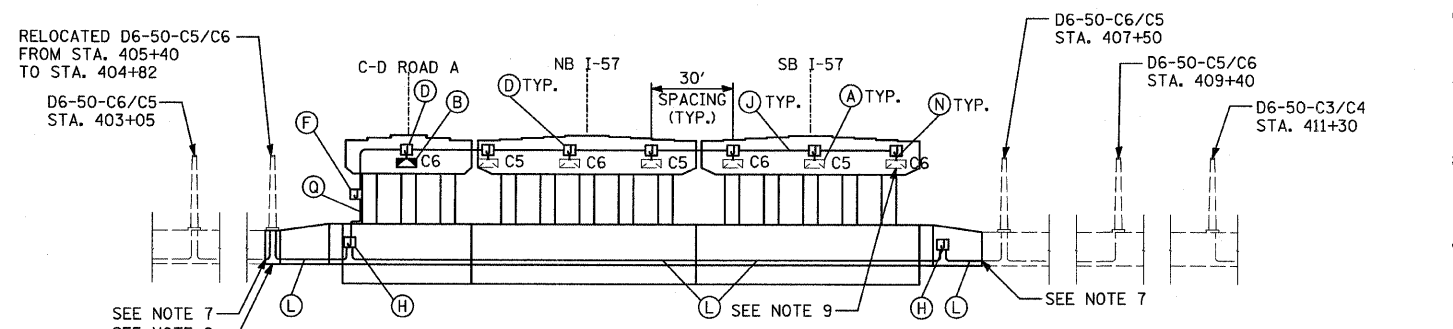
PIER ELEVATION: EXISTING CONFIGURATION  
NOT TO SCALE  
(LOOKING WEST ALONG SB I-294)



PIER ELEVATION: CONFIGURATION AFTER STAGE 1  
NOT TO SCALE  
(LOOKING WEST ALONG SB I-294)



PIER ELEVATION: CONFIGURATION AFTER STAGE 2  
NOT TO SCALE  
(LOOKING WEST ALONG SB I-294)



PIER ELEVATION: FINAL CONFIGURATION (AFTER STAGE 3)  
NOT TO SCALE  
(LOOKING WEST ALONG SB I-294)

**LEGEND**

- (A) EXISTING UNDERPASS LUMINAIRE, 150 WATT, H.P.S. VAPOR (TO BE RELOCATED)
- (B) PROPOSED UNDERPASS LUMINAIRE, 150 WATT, H.P.S. VAPOR
- (C) EXISTING JUNCTION BOX, SS, A.T.S., 6" X 6" X 4"
- (D) PROPOSED JUNCTION BOX, SS, A.T.S., 6" X 6" X 4"
- (E) EXISTING JUNCTION BOX, SS, A.T.S., 12" X 8" X 6"
- (F) PROPOSED JUNCTION BOX, SS, A.T.S., 12" X 10" X 6"
- (G) EXISTING JUNCTION BOX, SS, E.I.S., 20" X 12" X 8"
- (H) PROPOSED JUNCTION BOX, SS, E.I.S., 20" X 12" X 8"
- (I) EXISTING CONDUIT A.T.S., 1" DIA., PVC COATED GALVANIZED STEEL
- (J) PROPOSED CONDUIT A.T.S., 1" DIA., PVC COATED GALVANIZED STEEL
- (K) EXISTING CONDUIT E.I.S., 4" DIA., PVC
- (L) PROPOSED CONDUIT E.I.S., 4" DIA., PVC
- (M) EXISTING FLEXIBLE LIQUID TIGHT STAINLESS STEEL CONDUIT, 1" DIAMETER, 6 FOOT LENGTH
- (N) PROPOSED FLEXIBLE LIQUID TIGHT STAINLESS STEEL CONDUIT, 1" DIAMETER, 6 FOOT LENGTH (INCLUDED IN THE COST OF THE PROPOSED UNDERPASS LUMINAIRE AND REMOVE AND REINSTALL EXISTING LIGHTING UNIT)
- (O) PROPOSED AERIAL CABLE, 4-1/C NO. 2 WITH MESSINGER WIRE
- (P) EXISTING CONDUIT A.T.S., 2" DIA., PVC COATED GALVANIZED STEEL
- (Q) PROPOSED CONDUIT A.T.S., 2" DIA., PVC COATED GALVANIZED STEEL

**NOTES:**

1. EXISTING TOLLWAY LIGHT POLE AT STA. 405+40 SHALL BE REMOVED AND RELOCATED AND SHALL BE PAID AT THE CONTRACT UNIT PRICE PER EACH FOR "RELOCATE EXISTING LIGHTING UNIT".
2. TEMPORARY ELECTRICAL CONNECTIONS AND ALL ELECTRICAL APPURTENANCES REQUIRED DURING STAGED CONSTRUCTION SHALL BE INCLUDED IN THE COST OF "MAINTENANCE OF LIGHTING SYSTEM" FOR THE CONTRACT UNIT PRICE LUMP SUM.
3. ELECTRICAL CABLE FOR THE PROPOSED 4" PVC CONDUIT SHALL BE PAID FOR AS UNIT DUCT, 600V, 4-1C NO.2, 1/C NO.8 GROUND (XLP - TYPE USE), 2" DIA., POLYETHYLENE.
4. ELECTRICAL CABLE TO THE UNDERPASS LUMINAIRES SHALL BE PAID FOR AS ELECTRICAL CABLE IN CONDUIT, 600V (XLP - TYPE) 1/C NO. 10. AND SHALL BE FUSED AT THE SPLICE POINT WITH THE PROPOSED UNIT DUCT.
5. THE TOLLWAY LIGHTING CONTROLLER FOR CIRCUITS C5 AND C6 IS LOCATED AT I-294 STA. 387+92 ALONG SB I-294.
6. THE TOLLWAY LIGHTING CONTROLLER FOR CIRCUITS C3 AND C4 IS LOCATED AT I-294 STA. 443+98 ALONG NB I-294.
7. RECONNECTION OF THE CONDUIT AND CABLING TO THE EXISTING SYSTEM SHALL BE INCLUDED IN THE COST OF "MAINTAIN EXISTING LIGHTING SYSTEM".
8. SEE SHEET E-15 FOR LIGHT POLE FOUNDATION DETAILS. LIGHT POLE FOUNDATION SHALL BE PAID AT THE CONTRACT UNIT PRICE PER EACH FOR "LIGHT POLE FOUNDATION (ROADWAY) MEDIAN, TYPE 1".
9. RELOCATION OF EXISTING UNDERPASS LUMINAIRES SHALL BE PAID AT THE CONTRACT UNIT PRICE PER EACH FOR "REMOVE AND REINSTALL EXISTING LIGHTING UNIT". FOR MOUNTING DETAILS SEE SPECIAL PROVISIONS.
10. LOCATION OF LUMINAIRES AND OTHER APPURTENANCES ALONG NB I-294 IS THE SAME AS DEPICTED ALONG SB I-294.
11. INSTALLATION OF NEW UNDERPASS LIGHTING UNITS SHALL BE DONE IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND TOLLWAY SUPPLEMENTAL SPECIFICATIONS.

SHEET E9

TYLIN INTERNATIONAL	USER NAME =	DESIGNED - JDF	REVISED - 4/29/2010	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-57 AT I-294 INTERCHANGE PROJECT PROPOSED LIGHTING PLANS - I-294	F.A.I. RT#	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	DRAWN - JDF	REVISED -			57	1414.2B	COOK	516	209
	PLOT DATE =	CHECKED - DAJ	REVISED -			CONTRACT NO. 60J27				
		DATE - 3/18/2010	REVISED -			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				
SCALE: 1" = 50'					SHEET NO. 4 OF 4 SHEETS	STA. 402+75 TO STA. 411+75				

**LIGHTING GENERAL NOTES:**

- THE ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST IDOT STANDARDS, NATIONAL ELECTRICAL CODE AS WELL AS THE NATIONAL ELECTRICAL SAFETY CODE.
- COORDINATE THE INSTALLATION OF ROADWAY LIGHTING WITH THE CONSTRUCTION STAGING.
- FOR POLE TOWER AND LUMINAIRE DETAILS, REFER TO ELECTRICAL PLANS AND SPECIFICATIONS.
- COORDINATE THE INSTALLATION OF ROADWAY LIGHTING AND UNDERGROUND WORK WITH THE OTHER TRADES.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MARK THE PROPOSED LOCATIONS OF ALL LIGHT POLE AND TOWER FOUNDATIONS, CENTER LINE OF TRENCH AND PUSHES AND THE LIGHTING CONTROLLER FOR EXAMINATION AND CONFIRMATION WITH THE ENGINEER AT THE PRECONSTRUCTION INSPECTION. THE EXACT LOCATIONS OF ALL ITEMS SHALL BE CONFIRMED WITH THE ENGINEER PRIOR TO STARTING WORK.
- NO SPLICES SHALL BE MADE IN CONDUIT, UNIT DUCT OR HANDHOLES. THESE SHALL BE MADE IN POLE BASES OR ABOVE GROUND JUNCTION BOXES IN AN APPROVED MANNER.
- THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENTS FOR GROUNDING. GROUNDING CONNECTIONS AT THE FOUNDATION SHALL BE EXOTHERMICALLY WELDED, AS SPECIFIED, AND SHALL BE INSPECTED AND APPROVED BY THE RESIDENT ENGINEER PRIOR TO POURING CONCRETE OR BACKFILLING, AS APPLICABLE.
- THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE SPECIFIED REQUIREMENTS FOR BURIED WARNING TAPE, SPECIFIED AS PART OF "TRENCH AND BACKFILL FOR ELECTRICAL WORK." THE INSTALLATION OF THE TAPE SHALL BE INSPECTED BY THE ENGINEER PRIOR TO BACKFILLING OR DURING PLOWING OPERATIONS, AS APPLICABLE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT OF FINISHED GRADE. THE ENGINEER MAY ASSIST THE CONTRACTOR, AS APPLICABLE, BUT THE RESPONSIBILITY FOR THE COORDINATING THE FINISHED GRADE ELEVATION WITH THE TOP OF THE FOUNDATION HEIGHTS AND THE LIKE SHALL REMAIN WITH THE CONTRACTOR.
- NO LIGHT POLES OR TOWERS SHALL BE ERECTED UNTIL THE RESPECTIVE FOUNDATIONS HAVE CURED AS APPROVED BY THE ENGINEER.
- TO MAINTAIN STRUCTURAL INTEGRITY OF THE LIGHT POLES WITH MAST ARMS, THEY SHALL NOT BE ERECTED AND LEFT TO STAND WITHOUT LUMINAIRES. NOTE THAT POLES SHALL NOT BE PAID UNTIL THE LUMINAIRES ARE INSTALLED.
- NO EQUIPMENT OR MATERIAL SHALL BE DELIVERED TO THE JOB SITE PRIOR TO THE APPROVAL AND INSPECTION BY THE ENGINEER. ANY EQUIPMENT OR MATERIAL DELIVERED TO THE JOB SITE PRIOR TO APPROVAL AND INSPECTION SHALL BE REMOVED FROM THE JOB SITE AT THE CONTRACTOR'S EXPENSE.
- THE UNIT DUCT AND CONDUIT SHALL BE INSTALLED MIN. 30 INCHES BELOW FINISHED GRADE (UNLESS DIRECTED OTHERWISE) COMPLETE WITH WARNING TAPE. CONTRACTOR SHALL HANDDIG TEST HOLES FOR EVERY 1000 FT. OF TRENCHING/PLOWING FOR ENGINEER'S APPROVAL OF THE INSTALLATION.
- IT IS CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION. CONTACT J.U.L.I.E. PRIOR TO THE START OF ANY EXCAVATION WORK.
- MATERIAL QUANTITIES ARE APPROXIMATIONS ONLY. IT IS CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL QUANTITIES PRIOR TO ORDERING MATERIAL.
- A STAGING SCHEDULE FOR MATERIAL INSTALLATION, REMOVAL AND APPROXIMATE DATE OF PROPOSED ENERGIZING OF PERMANENT LIGHTING SHALL BE SUBMITTED PRIOR TO THE COMMENCEMENT OF WORK TO ASSURE COORDINATION WITH THE WORK SCHEDULE.
- ALL PROPOSED LIGHT POLE OR TOWER FOUNDATIONS, LIGHT FIXTURES, UNIT DUCT, AND CONDUIT SHALL BE INSTALLED AS SHOWN ON THE PLANS. THE EXACT LOCATION IS TO BE CONFIRMED IN THE FIELD BY THE RESIDENT ENGINEER.
- EACH WIRE SHALL BE IDENTIFIED AT EACH POLE BY APPROPRIATE CONTROLLER AND CIRCUIT NUMBER.
- CONTRACTOR SHALL SUBMIT "RECORD DRAWINGS" A MINIMUM OF 7 DAYS PRIOR TO THE FINAL INSPECTION. "RECORD DRAWINGS" SHALL BE UPDATED REGULARLY DURING CONSTRUCTION AND INDICATE ALL LIGHTING MATERIAL INSTALLATION WITH ANY CHANGES IN RED.
- CONTRACTOR TO VERIFY FOUNDATION BOLT PATTERN PRIOR TO CONSTRUCTING FOUNDATIONS.
- CONTRACTOR'S STAGING AREA SHALL BE AS DIRECTED IN THE PRE-CONSTRUCTION MEETING.
- CIRCUIT NUMBERING AND DESIGNATIONS SHOWN ON THE PLANS ARE FROM EXISTING DRAWINGS. CONTRACTOR SHALL VERIFY CIRCUIT NUMBERING, CABLE ROUTING AND POWER SOURCES DURING CONSTRUCTION.
- LIGHTING CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE TRAFFIC SURVEILLANCE CONTRACTOR.
- ALL LIGHTING UNITS ALONG I-57 ARE UNDER IDOT JURISDICTION AND SHALL FOLLOW IDOT STANDARDS, DETAILS, AND SPECIFICATIONS. ALL LIGHTING UNITS ALONG I-294 ARE UNDER TOLLWAY JURISDICTION AND SHALL FOLLOW TOLLWAY STANDARDS, SPECIFICATIONS, AND DETAILS AS SHOWN IN THE PLANS.
- FOUNDATION DEPTH "D" FOR 130 FT LIGHT TOWER SHALL BE AS FOLLOWS:  
(FOR ALL OTHER DETAILS, REFER TO HIGH MAST LIGHT TOWER FOUNDATION DETAIL (BE-501))

MOUNTING HEIGHT	SOIL CONDITIONS					
	SOFT CLAY Qu = 0.375 TONS/SQ. FT	MEDIUM CLAY Qu = 0.75 TONS/SQ. FT	STIFF CLAY Qu = 1.50 TONS/SQ. FT	LOOSE SAND Ø = 34"	MEDIUM SAND Ø = 37.5"	DENSE SAND Ø = 40"
130 FT (39 m)	43 FT	30 FT	22 FT	22 FT	20 FT	19 FT

**SUMMARY OF PROPOSED ELECTRICAL/LIGHTING QUANTITIES**

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
50200400	ROCK EXCAVATION FOR STRUCTURES	CU YD	34
81101005	CONDUIT ATTACHED TO STRUCTURE, 4" DIA., PVC COATED GALVANIZED STEEL	FOOT	247
81300555	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 12" X 8"	EACH	4
81603203	UNIT DUCT, 600V, 3-1C NO.2, 1/C NO.4 GROUND, (EPR-TYPE RHW), 1 1/2" DIA. POLYETHYLENE	FOOT	3637
81900200	TRENCH BACKFILL FOR ELECTRICAL WORK	FOOT	3390
82102400	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400W	EACH	2
82105600	LUMINAIRE, SODIUM VAPOR, HIGH MAST, HORIZONTAL MOUNT, 400 WATT	EACH	40
83050810	LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 15 FT. MAST ARM	EACH	2
83504700	LIGHT TOWER, 120 FT. MOUNTING HEIGHT, LUMINAIRE MT. - 12	EACH	7
83505700	LIGHT TOWER, 130 FT. MOUNTING HEIGHT, LUMINAIRE MT. - 12	EACH	1
83700250	LIGHT TOWER FOUNDATION, 44" DIAMETER	FOOT	170
83700300	LIGHT TOWER FOUNDATION, 48" DIAMETER	FOOT	30
83800205	BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	2
X0322434	LIGHT TOWER SERVICE PAD, SPECIAL	EACH	8
X0325132	SHAPING AND GRADING AT HIGH MAST LIGHT TOWER	SQ YD	170
X8360360	LIGHT POLE FOUNDATION METAL, 15" BOLT CIRCLE, 10" X 8'	EACH	2

**LEGEND:**

- IDOT ITEMS (I-57)**
- EXISTING ROADWAY LIGHTING UNIT TO REMAIN
  - EXISTING ROADWAY LIGHTING UNIT AND FOUNDATION TO BE REMOVED. SHOWN ON EXISTING PLANS
  - PROPOSED ROADWAY LIGHTING UNIT, ALUMINUM POLE, 47.5 FT M.H., 15 FT MAST ARM, 400 WATT
  - PROPOSED UNIT DUCT IN TRENCH, SIZE AS NOTED
  - RGS RIGID GALVANIZED STEEL
  - ATS CONDUIT ATTACHED TO STRUCTURE
  - EIS CONDUIT EMBEDDED IN STRUCTURE
  - UD UNIT DUCT
  - EOP EDGE OF TRAVELLED PAVEMENT
  - O/S OFFSET
  - SS STAINLESS STEEL
  - (E) EXISTING
  - GROUND ROD OR GROUND ROD ARRAY (SEE FOUNDATION DETAILS)
  - PROPOSED HIGH MAST LIGHT TOWER AND 400 WATT LUMINAIRES.

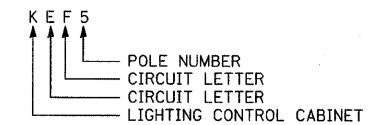
**HMLT FOUNDATION ELEVATIONS**

LIGHT TOWER	STATION	OFFSET	POLE HEIGHT	FOUNDATION ELEVATION
KEF5	1247+15	160.7' RT	120 FT	607.00
KEF6	1251+27	176.6' RT	130 FT	607.00
KEF7	1255+62	134.6' RT	120 FT	628.44
KAB6	1255+63	95.4' LT	120 FT	626.87
JCD7	1259+79	135.4' RT	120 FT	629.45
JAB7	1260+39	87.3' LT	120 FT	622.44
JCD6	1264+00	136.4' RT	120 FT	624.94
JAB6	1264+31	104.0' LT	120 FT	619.84

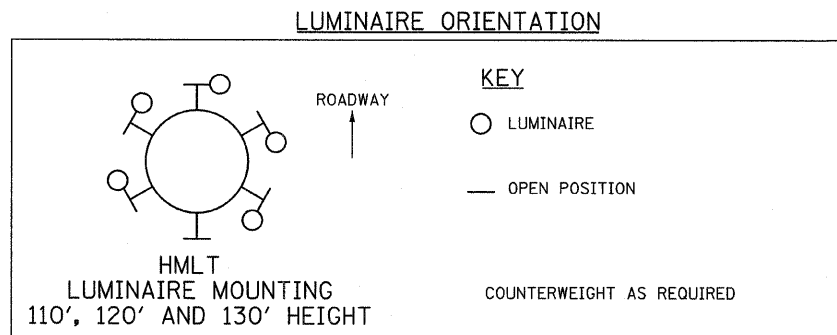
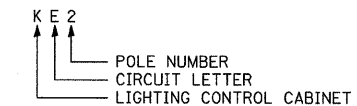
**IDOT DISTRICT 1 STANDARDS**

- BE-305: LIGHT POLE FOUNDATION, METAL
- BE-400: ALUMINUM LIGHT POLE 47'-6" MOUNTING HEIGHT
- BE-500: HIGH MAST LIGHT TOWER 90 FT TO 120 FT
- BE-501: HIGH MAST LIGHT TOWER 90 FT TO 120 FT FOUNDATION DETAILS
- BE-505: HIGH MAST LIGHT TOWER 130 FT TO 150 FT
- BE-702: MISC. ELECTRICAL DETAILS - SHEET A

**IDOT HIGH MAST LIGHT TOWER DESIGNATION:**



**IDOT LIGHT POLE DESIGNATION:**

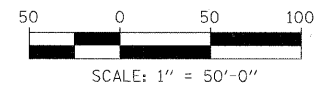
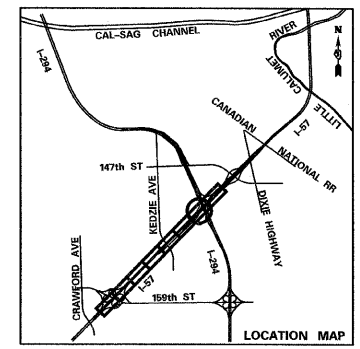
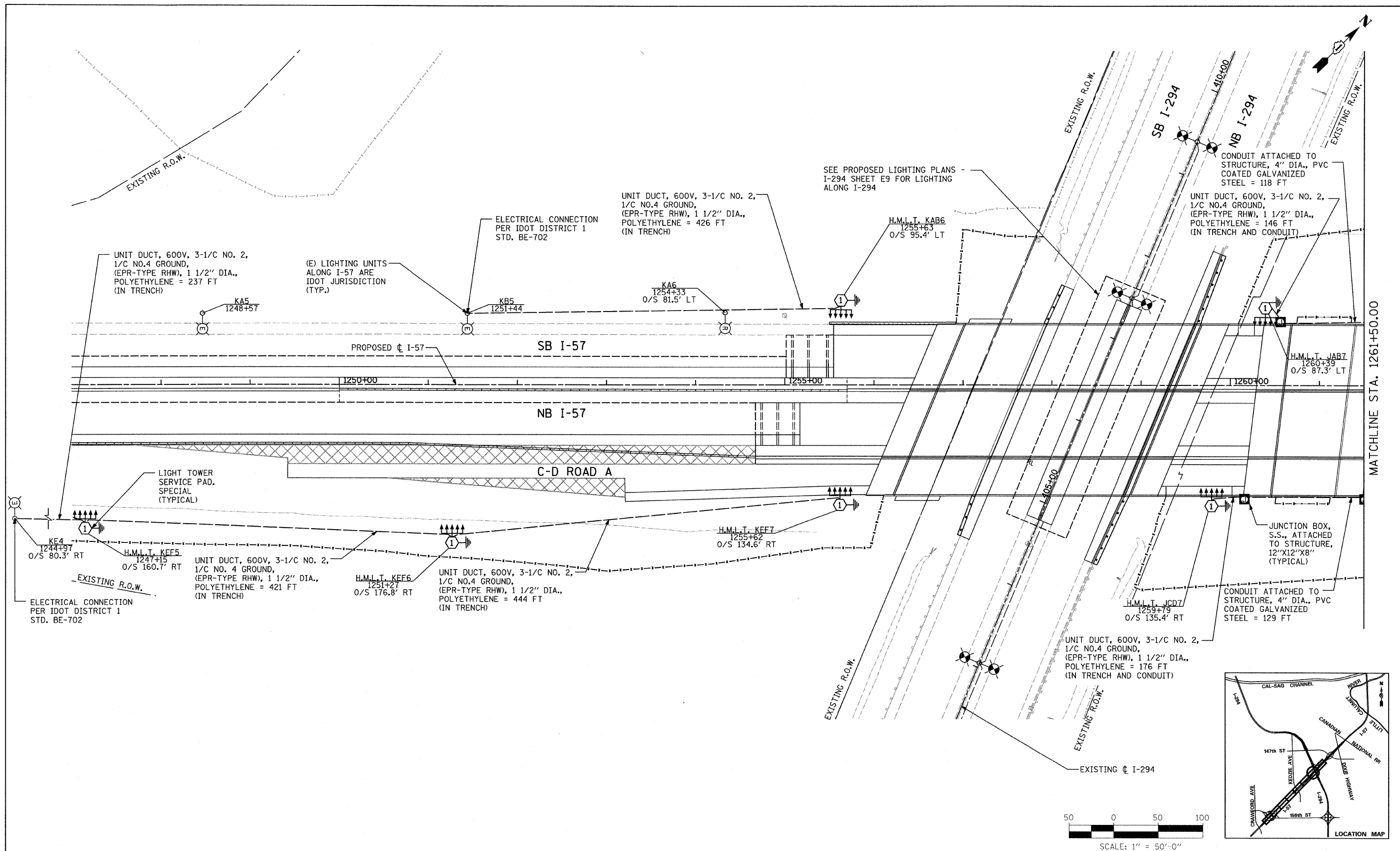


**NEW SHEET**

SHEET E16

<b>TYLIN INTERNATIONAL</b> USER NAME = PLOT SCALE = PLOT DATE =	DESIGNED - JDF	REVISED  - ADDENDUM 1 05/24/10	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-57 AT I-294 INTERCHANGE PROJECT PROPOSED LIGHTING GENERAL NOTES, LEGEND, AND QUANTITIES		F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 209A	
	DRAWN - CAC	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEET	STA. TO STA.	CONTRACT NO. 60J27		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		
	CHECKED - DAJ	REVISED -									
	DATE - 3/18/2010	REVISED -									

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**NEW SHEET** SHEET E17

<b>TYLIN INTERNATIONAL</b>	USER NAME =	DESIGNED - JDF	REVISED $\Delta$ ADDENDUM 1 05/24/10
	PLOT SCALE =	DRAWN - JDF	REVISED -
	PLOT DATE =	CHECKED - DAJ	REVISED -
		DATE - 3/18/2010	REVISED -

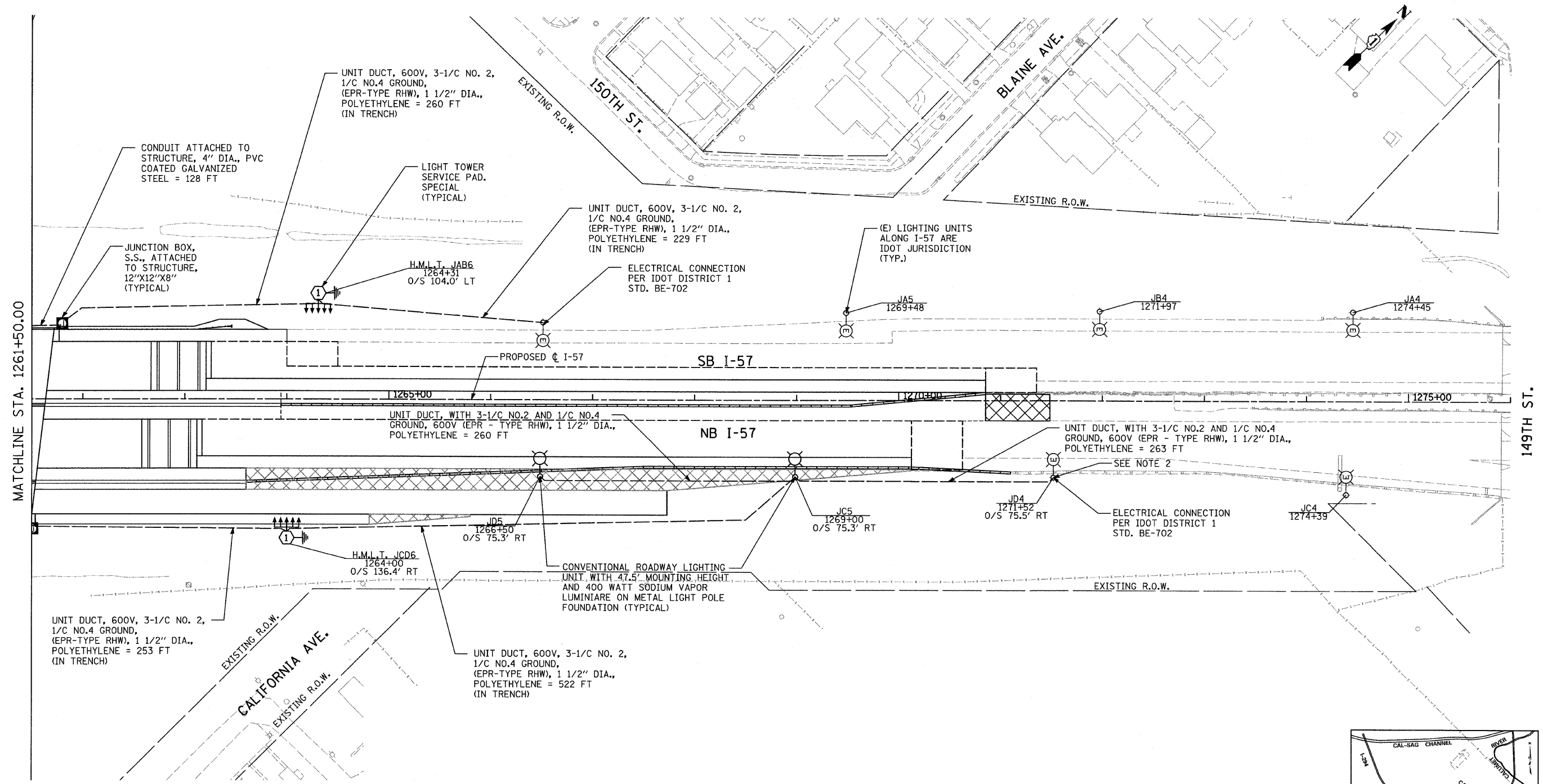
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>I-57 AT I-294 INTERCHANGE PROJECT PROPOSED LIGHTING PLANS - I-57</b>			
SCALE: 1" = 50'	SHEET NO. 1 OF 2 SHEETS	STA. 1247+00	TO STA. 1261+50

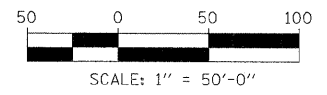
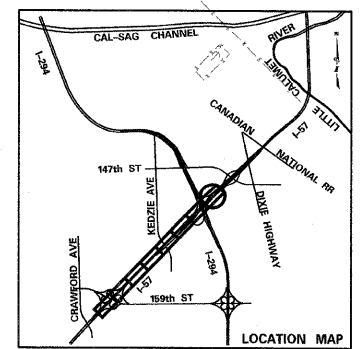
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	1098
CONTRACT NO. 60J27			ILLINOIS FED. AID PROJECT	

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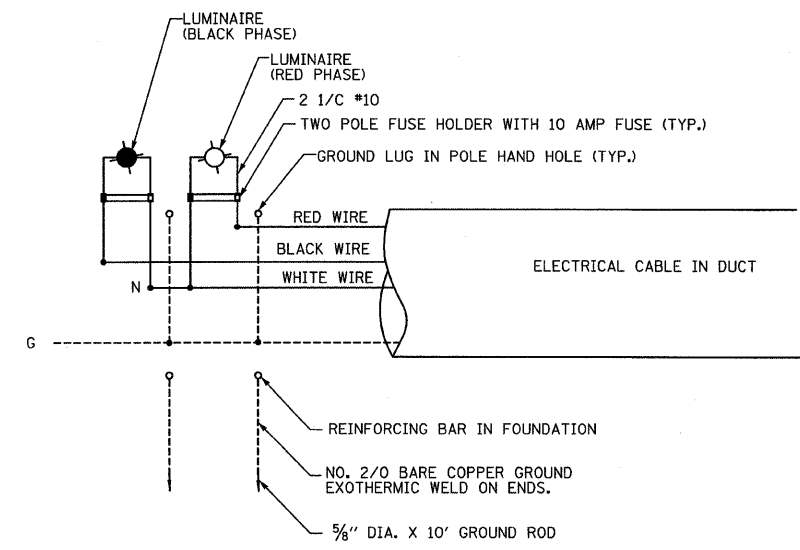
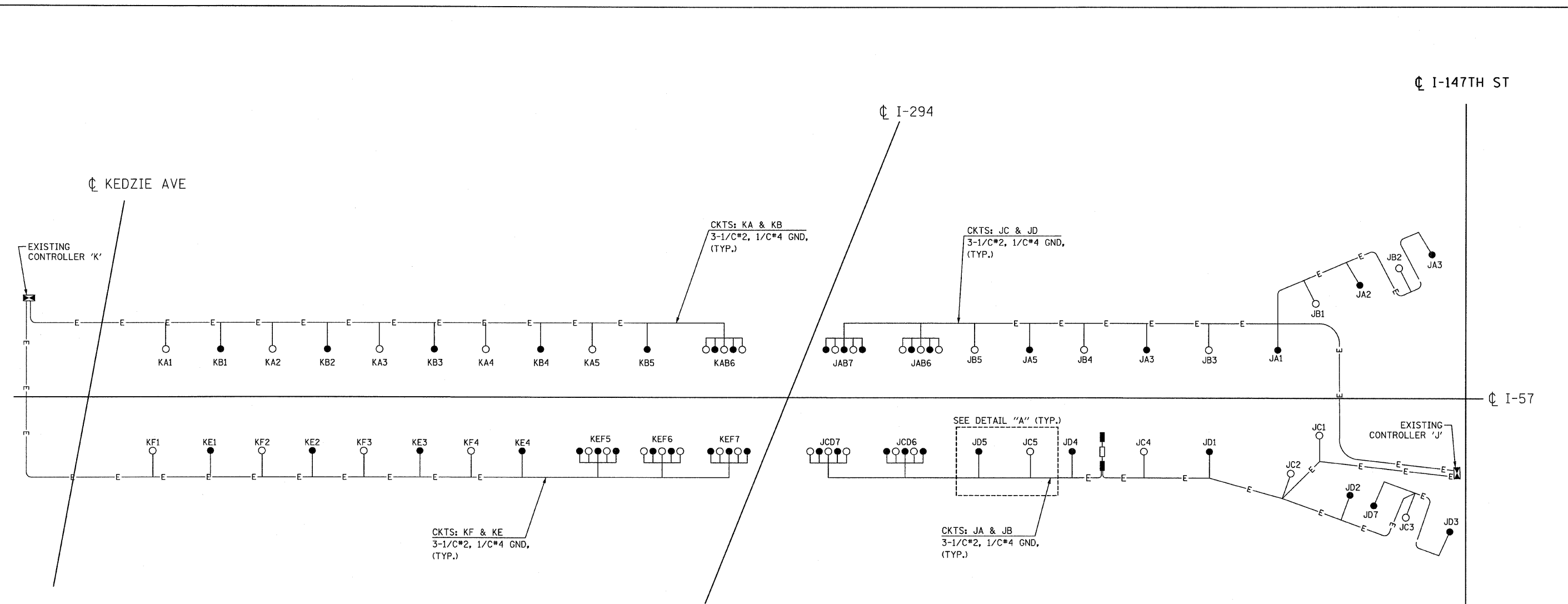
**NOTES:**  
 1. IDOT LIGHTING CONTROLLER "J" IS LOCATED AT I-57 STA. 1286+79 ALONG NB I-57 ON 147TH STREET.



**NEW SHEET** SHEET E18

<b>TYLIN INTERNATIONAL</b> USER NAME = PLOT SCALE = PLOT DATE =	DESIGNED - JDF	REVISED  ADDENDUM 1 05/24/10	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>I-57 AT I-294 INTERCHANGE PROJECT</b> <b>PROPOSED LIGHTING PLANS - I-57</b>		F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 209C
	DRAWN - JDF	REVISED -		SCALE: 1"=50' SHEET NO. 2 OF 2 SHEETS STA. 1261+50 TO STA. 1276+00		CONTRACT NO. 60J27		ILLINOIS FED. AID PROJECT		
	CHECKED - DAJ	REVISED -								
DATE - 3/18/2010	REVISED -									

P:\602540(57-294)\road\elec\em\in\_10-0523\Wiring Plan e-01.dwg 9:38:01 AM



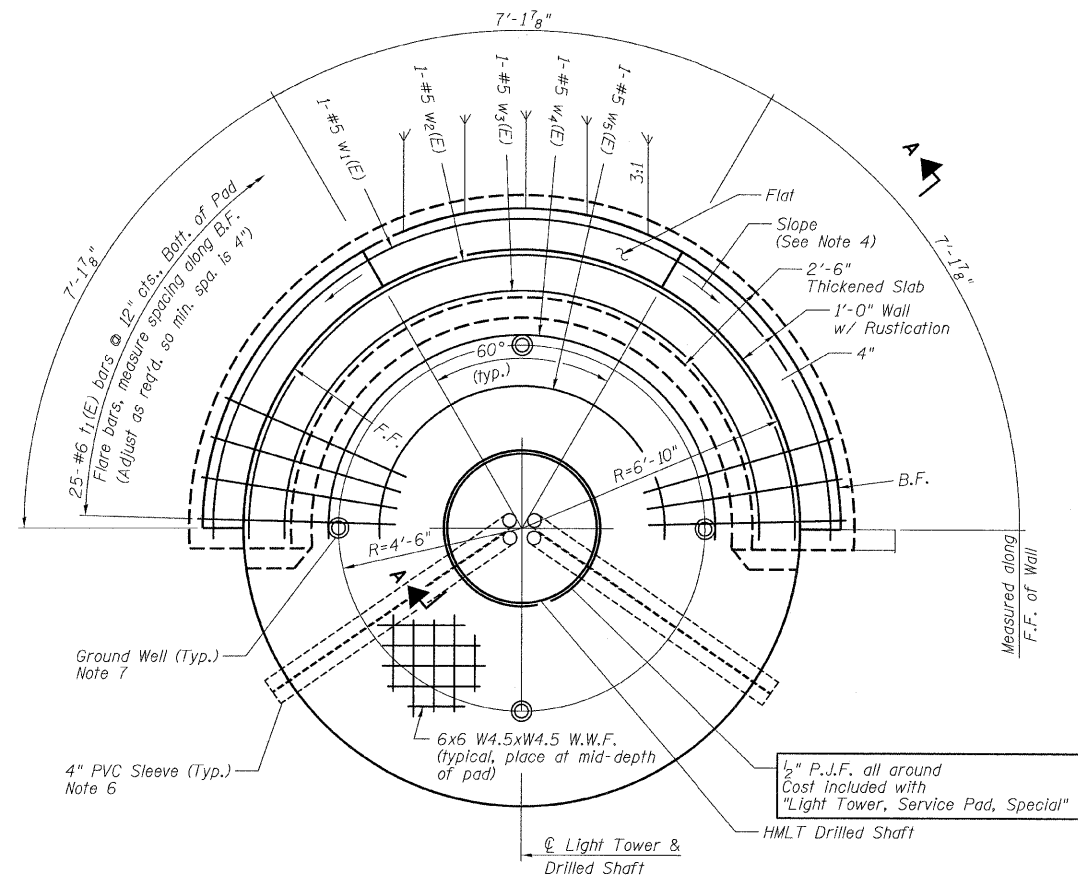
DETAIL "A"  
LUMINAIRE WIRING CONNECTION (TYP.)

- LEGEND:**
- 47.5FT M.H., 15FT M.A., 400W HPS LUMINAIRE, 240V, (RED PHASE)
  - 47.5FT M.H., 15FT M.A., 400W HPS LUMINAIRE, 240V, (BLACK PHASE)
  - ◻ EXISTING LIGHTING CONTROLLER.
  - HIGH MAST TOWER,  
WITH (5) 400W HPS TYPE MC-III LUMINAIRE, 240V  
(OPEN - RED PHASE, SOLID - BLACK PHASE)  
(SEE SHEET E16 FOR MOUNTING HEIGHT)
  - SIGN LUMINAIRE

**NEW SHEET** SHEET E19

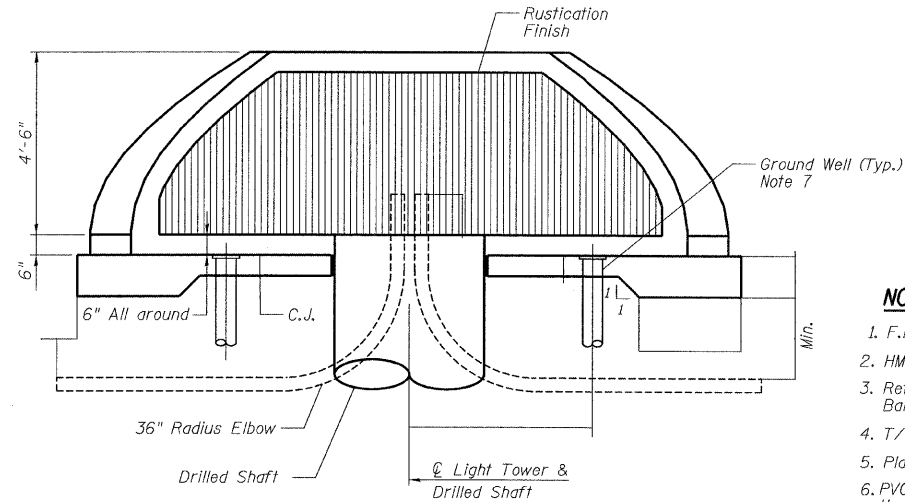
USER NAME =	DESIGNED -	REVISED <b>A</b> - ADDENDUM 1 05/24/10	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>I-57 AT I-294 INTERCHANGE PROJECT PROPOSED WIRING LINE DIAGRAM - I-57</b>		F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 2090	
PLOT SCALE =	DRAWN -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEET	STA. TO STA.	CONTRACT NO. 60J27		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		
PLOT DATE =	CHECKED -	REVISED -									
	DATE - 3/18/2010	REVISED -									

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**PLAN VIEW**

Place Bars  $w_1(E)$  thru  $w_5(E)$  @ 12" cts., Bott. of Pad

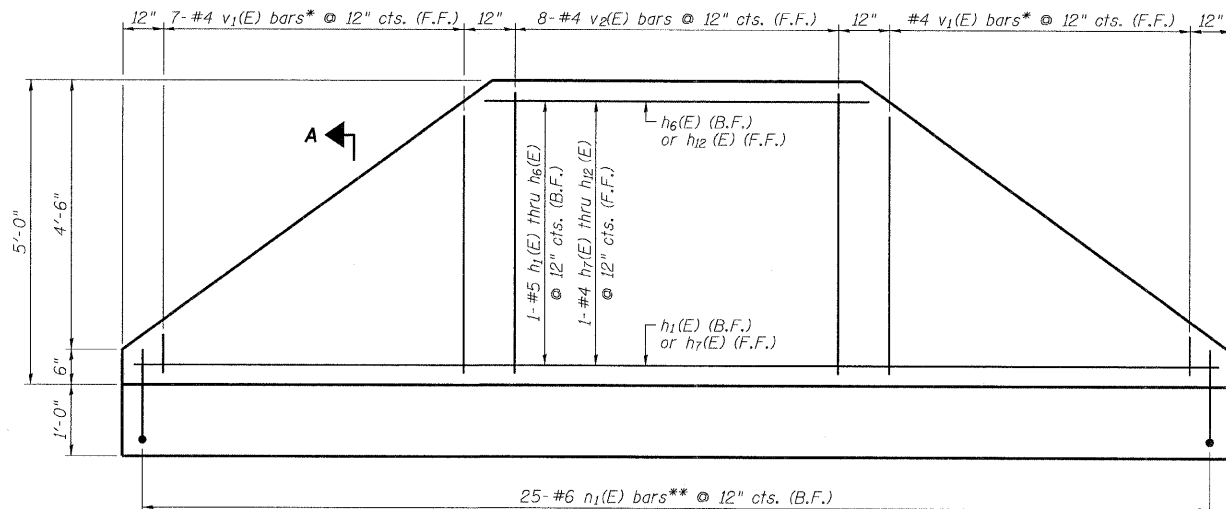


**ELEVATION VIEW**

(HMLT not shown for clarity)

**NOTES**

1. F.F. and B.F. denote Front Face and Back Face, respectively.
2. HMLT denotes High Mast Light Tower.
3. Refer to HMLT Service Pad, Special & Retaining Wall Details 2 for Bar Bending Diagrams, Bill of Material, Bar Sections and Details.
4. T/Wall slope is constant along the arc of any given radius.
5. Place horizontal tails of  $n_1(E)$  bars radially.
6. PVC sleeves must be extended 6 inches beyond the edge of the concrete pad (PVC sleeve shall be included in the cost of Light Tower Service Pad, Special).
7. Adjust service pad reinforcement to miss wells. Any necessary vertical adjustments shall be included in the cost of Light Tower Service Pad, Special.



**5'-0" RETAINING WALL ELEVATION (PROJECTED)**

(Looking at F.F.)

- \* Cut to fit, use remainder of bars at opposite end of wall. See Cutting Diagram (Detail sheet 2 of 2)
- \*\* Cut to fit where necessary, discard excess.

TYLIN INTERNATIONAL	USER NAME =	DESIGNED -	REVISED $\Delta$ - ADDENDUM 1 05/24/10
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -
		DATE - 3/18/2010	REVISED -

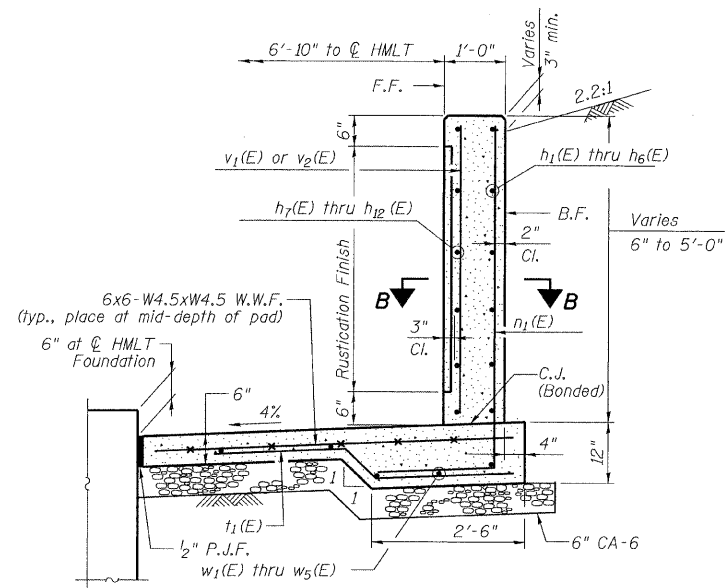
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

I-57 AT I-294 INTERCHANGE PROJECT  
HIGH MAST LIGHT TOWER SERVICE PAD & RETAINING WALL DETAILS

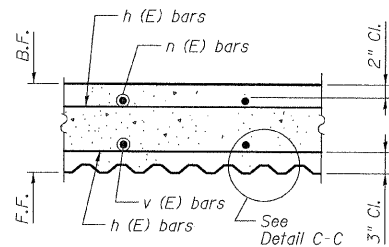
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	209E
CONTRACT NO.			60J27	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SCALE: SHEET NO. 1 OF 2 SHEETS STA. TO STA.

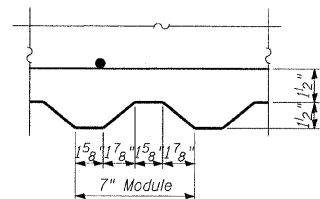
**NEW SHEET** SHEET E20



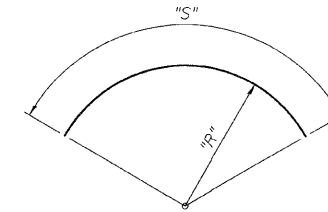
SECTION A-A



SECTION B-B



DETAIL C-C



Bar	"R"	"S"
h1(E)	7'-7"	23'-6"
h2(E)	7'-7"	20'-10"
h3(E)	7'-7"	17'-8"
h4(E)	7'-7"	14'-6"
h5(E)	7'-7"	11'-4"
h6(E)	7'-7"	8'-2"
h7(E)	7'-1 1/2"	22'-1"
h8(E)	7'-1 1/2"	19'-7"
h9(E)	7'-1 1/2"	16'-7"
h10(E)	7'-1 1/2"	13'-7"
h11(E)	7'-1 1/2"	10'-8"
h12(E)	7'-1 1/2"	7'-8"
w1(E)	7'-7"	24'-4"
w2(E)	6'-8"	21'-7"
w3(E)	5'-10"	18'-10"
w4(E)	4'-9"	15'-5"
w5(E)	3'-6"	11'-6"

Note: "R" and "S" measured along bar  $\phi$

BARS w1(E) thru w5(E) & h1(E) thru h12(E)

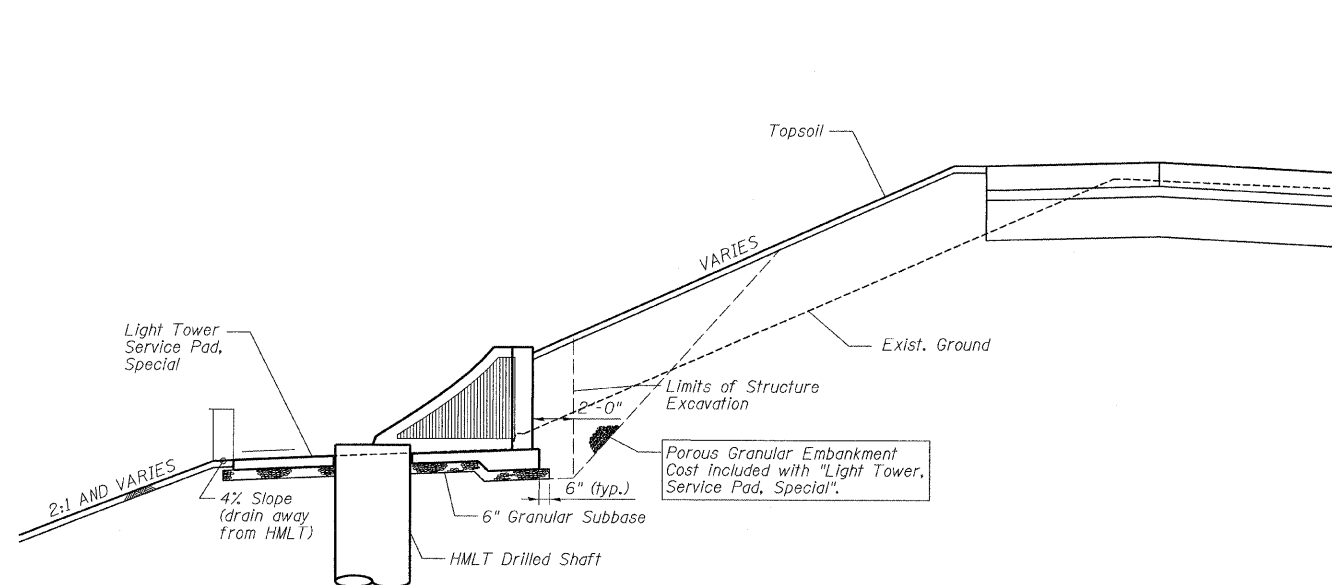
**BILL OF MATERIAL**

Light Tower Service Pad, Special with 5'-0" Wall

Bar	No.	Size	Length	Shape
h1(E)	1	#5	23'-6"	
h2(E)	1	#5	20'-10"	
h3(E)	1	#5	17'-8"	
h4(E)	1	#5	14'-6"	
h5(E)	1	#5	11'-4"	
h6(E)	1	#5	8'-2"	
h7(E)	1	#4	22'-1"	
h8(E)	1	#4	19'-7"	
h9(E)	1	#4	16'-7"	
h10(E)	1	#4	13'-7"	
h11(E)	1	#4	10'-8"	
h12(E)	1	#4	7'-8"	
n1(E)	25	#6	7'-4"	
t1(E)	25	#6	5'-1"	
v1(E)	7	#4	5'-0"	
v2(E)	8	#4	4'-8"	
w1(E)	1	#5	24'-4"	
w2(E)	1	#5	21'-7"	
w3(E)	1	#5	18'-10"	
w4(E)	1	#5	15'-5"	
w5(E)	1	#5	11'-6"	

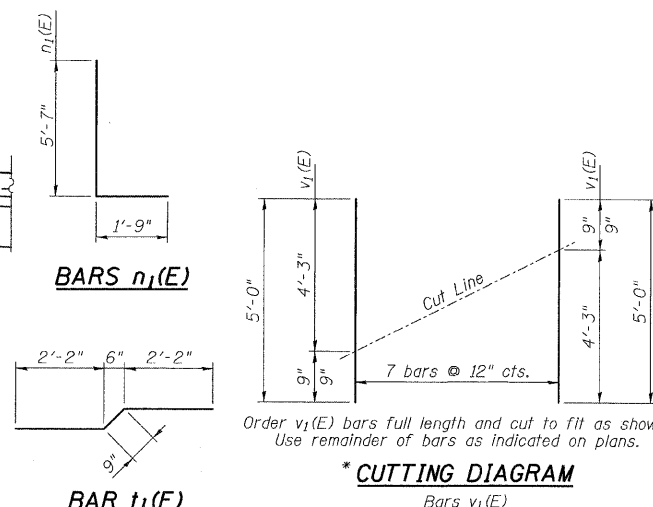
**NOTES**

1. F.F. and B.F. denote Front Face and Back Face, respectively.
2. HMLT denotes High Mast Light Tower.
3. See IDOT Standard Drawing BE501 for additional High Mast Light Tower Foundation and ground well details.
4. Reinforcement Bars designated (E) shall be epoxy coated.
5. Refer to High Mast Light Tower Service Pad, Special & Retaining Wall Details 1 for location and orientation of conduit sleeves and grounding wells.
6. Contractor shall maintain integrity of adjacent pavement as may be required in excavating for HMLT service pad walls.
7. Provide Protective Coat to top, front face, exposed portion of back face, and ends of walls, and top and edges of pad.



SECTION THRU EMBANKMENT

(At Typ. Tower Location)  
HMLT not shown for clarity



\* CUTTING DIAGRAM

Bars v1(E)

**BILL OF MATERIAL**

Item	Unit	5' Total
Welded Wire Fabric	Sq. Yd.	18
Structure Excavation	Cu. Yd.	11
Concrete Structures	Cu. Yd.	7.2
Reinforcement Bars, Epoxy Coated	Pound	775
Rustication Finish	Sq. Ft.	55
Protective Coat	Sq. Yd.	29
Sub-Base Granular Material, Type B 6"	Sq. Yd.	22

**TOTAL BILL OF MATERIAL**

Item	Unit	Total
Light Tower, Service Pad, Special	Each	8

<b>TYLIN INTERNATIONAL</b>	USER NAME =	DESIGNED -	REVISED $\Delta$ - ADDENDUM 1 05/24/10
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -
		DATE - 3/18/2010	REVISED -

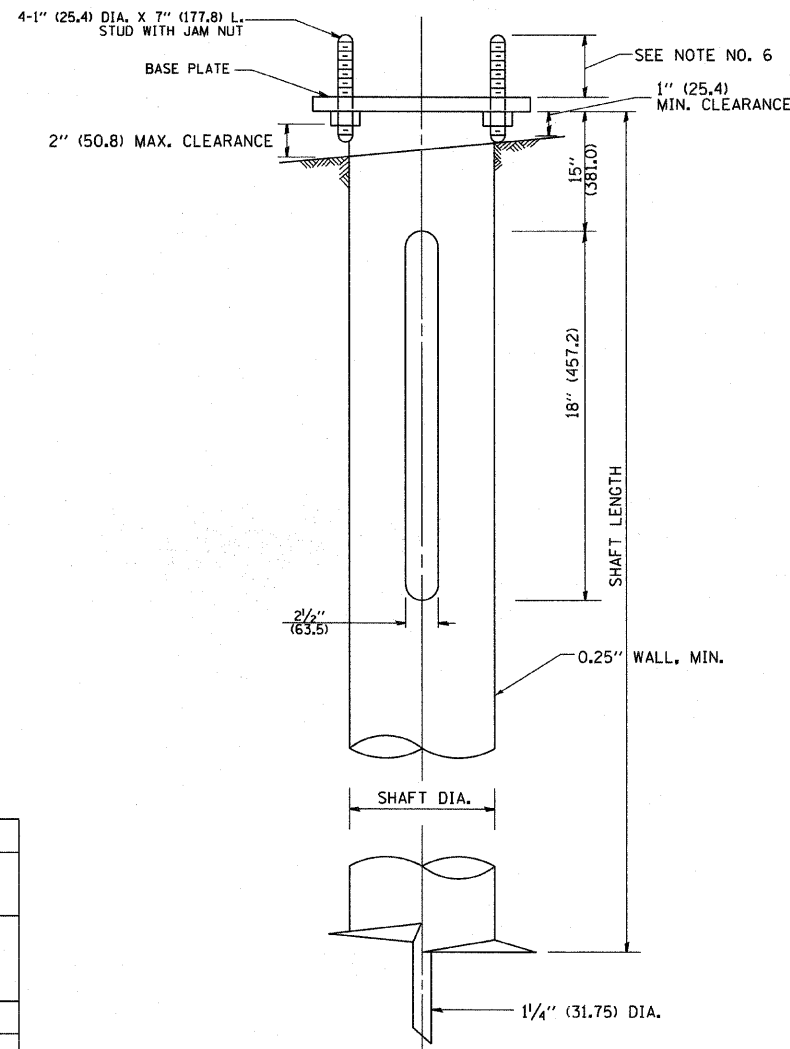
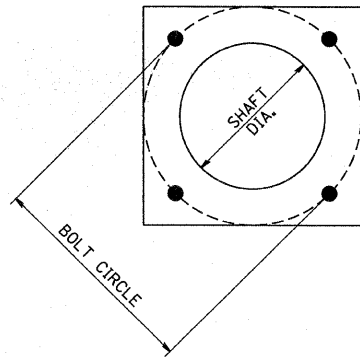
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

I-57 AT I-294 INTERCHANGE PROJECT  
HIGH MAST LIGHT TOWER SERVICE PAD & RETAINING WALL DETAILS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	209F
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	CONTRACT NO. 60J27

**NEW SHEET** SHEET E21



**HELIX FOUNDATION SIZE**

POLE MOUNTING HEIGHT	BOLT CIRCLE	SHAFT DIAMETER	SHAFT LENGTH	BASEPLATE
30 FT.	11 1/2"	8 5/8"	6 FT.	12"x12"x1"
31 FT.-35 FT.	11 1/2"	8 5/8"	6 FT.	12"x12"x1"
36 FT.-40 FT.	15"	8 5/8"	6 FT.	15"x15"x1 1/4"
41 FT.-45 FT.	15"	8 5/8"	6 FT.	15"x15"x1 1/4"
46 FT.-50 FT.	15"	10"	8 FT.	15"x15"x1 1/4"

**METAL HELIX FOUNDATION MATERIALS**

ITEM	MATERIAL REQUIREMENT
BASEPLATE	AASHTO M 270M, GRADE 36 (M270M, GRADE 250)
SHAFT	ASTM A 252, GRADE 2 (PHOSPHOROUS 0.04% MAXIMUM, SULFUR 0.05% MAXIMUM)
HELIX SCREW	AASHTO M 183 (ASTM A 635)
PILOT POINT	AASHTO M 270 (ASTM A 575)
ANCHOR RODS/STUDS	AASHTO M 314 (ASTM F 1554)
HEXAGON NUTS	AASHTO M 291M (ASTM A 563) GRADE DH, OR AASHTO M 292 (ASTM A 194) GRADE 2H
WASHERS	AASHTO M 293 (ASTM F 436)

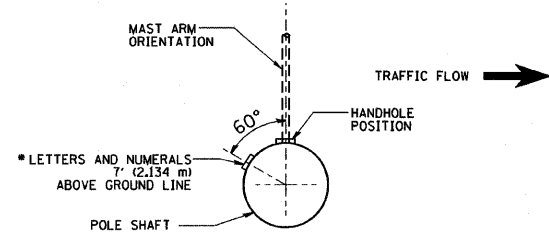
**NOTES:**

- ALL DIMENSION IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- ALL MATERIAL SHALL BE GALVINIZED ACCORDING TO AASHTO M111, UNLESS OTHERWISE SPECIFIED.
- ALL WELDS SHALL BE CONTINUOUS AND NOT LESS THAN 1/4" (6.35 mm) FILLET WELDS. THE WELDED FOUNDATION SHALL BE CAPABLE OF WITHSTANDING 10,000 FT/LBS (13558.18 n.m) OF INSTALLATION TORQUE APPLIED ABOUT THE AXIS OF THE FOUNDATION.
- THE HELIX FOUNDATION SHAFT SHALL BE INSTALLED VERTICAL AND THE BASE PLATE SHALL BE IN LEVEL. THE BREAKAWAY COUPLINGS AND HARDWARE SHALL NOT BE USED TO ALIGN THE POLE INSTALLATION.
- THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE INSTALLATION OF THE LIGHT POLE.
- THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF THE BASE PLATE WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS.
- ANY VOIDS WITHIN THE METAL FOUNDATION SHALL BE FILLED WITH FINE AGGREGATE.
- METAL FOUNDATIONS SHALL BE INSTALLED IN UNDISTURBED SOIL. PREDRILLING A PILOT HOLE AND/OR BACKFILLING AROUND THE FOUNDATION IS NOT ALLOWED.
- THE METAL FOUNDATION SHALL NOT BE INSTALLED TO A TORQUE WHICH EXCEEDS THE MANUFACTURER'S MAXIMUM TORQUE RATING NOR SHALL IT BE INSTALLED TO AN INSTALLATION TORQUE VALUE OF LESS THAN 3,500 FT LB (4,750 KNM). METAL FOUNDATIONS THAT ARE NOT INSTALLED TO FULL INSTALLATION DEPTH OR DO NOT ACHIEVE THE MINIMUM INSTALLATION TORQUE SHALL BE REMOVED AND REPLACED WITH A CONCRETE FOUNDATION AT NO ADDITIONAL COST.
- THE BASEPLATE SHALL BE PERPENDICULAR TO THE SHAFT AXIS ( $\pm 1^\circ$ ) AND THE HOLE CENTERLINE SHALL BE CONCENTRIC ( $\pm 0.188$ ) TO THE SHAFT AXIS.
- THE PILOT POINT AND SHAFT AXIS SHALL BE CONCENTRIC ( $\pm 0.125$ ) AND IN LINE ( $\pm 2^\circ$ ).
- THE BASEPLATE SHALL BE STAMPED WITH THE MANUFACTURERS NAME AND DATE OF MANUFACTURE.

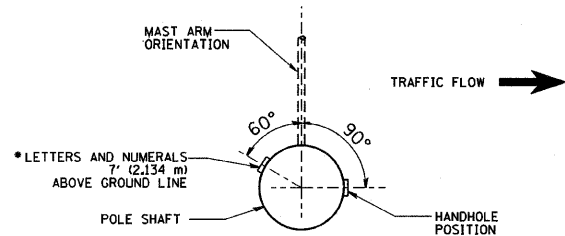
SHEET B10

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	PLOT SCALE = 60.000' / IN.	DRAWN - DLB	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	<b>BE-305</b>		CONTRACT NO. 60327		
	PLOT DATE = 1/4/2008	CHECKED -	REVISED -						FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT	
		DATE - 02-27-07	REVISED -									

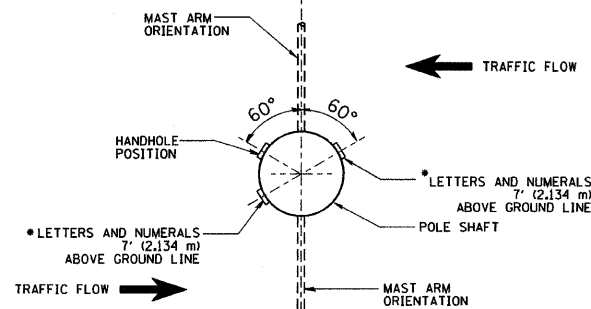




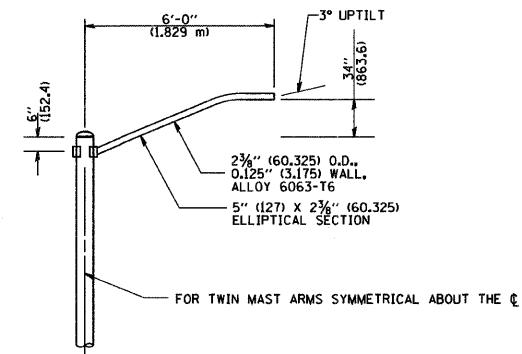
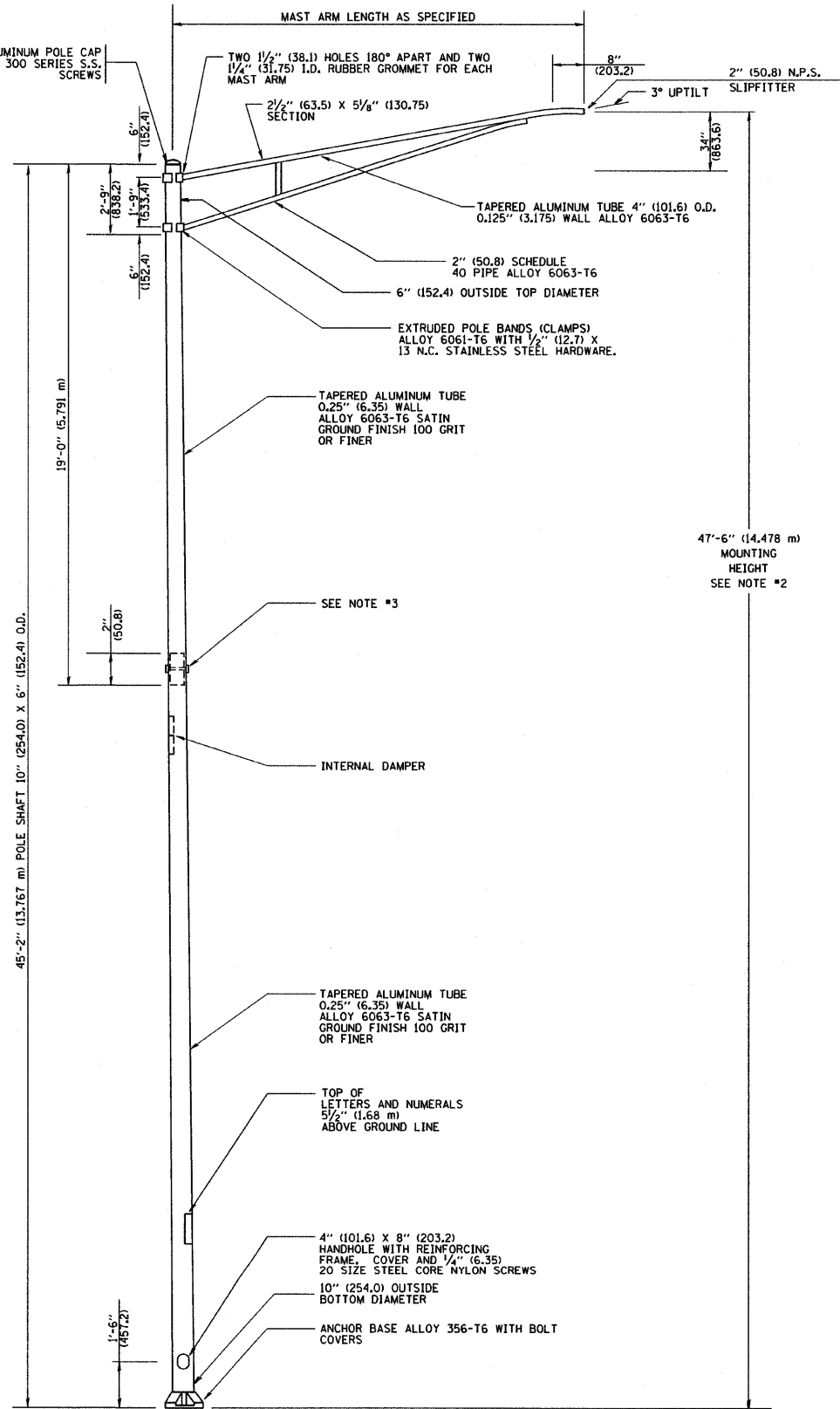
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL



POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES

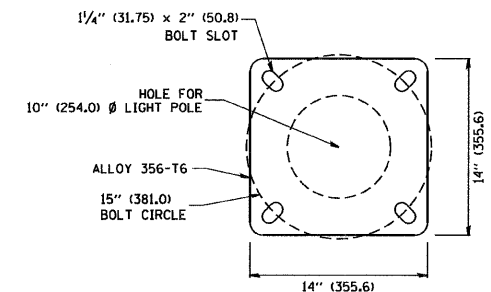


POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES

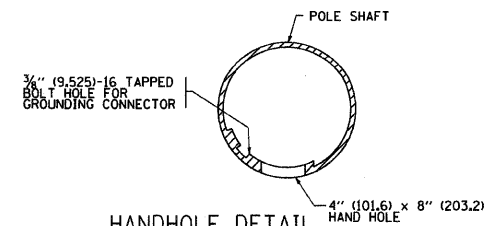


6' (1.8 m) SINGLE MEMBER MAST ARM (N.T.S.)

- NOTES:
1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
  2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
  3. TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
  4. THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
  5. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR, BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.
  6. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
  7. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
  8. LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.



LIGHT POLE BASE PLATE DETAIL  
15 INCH (381.0) BOLT CIRCLE

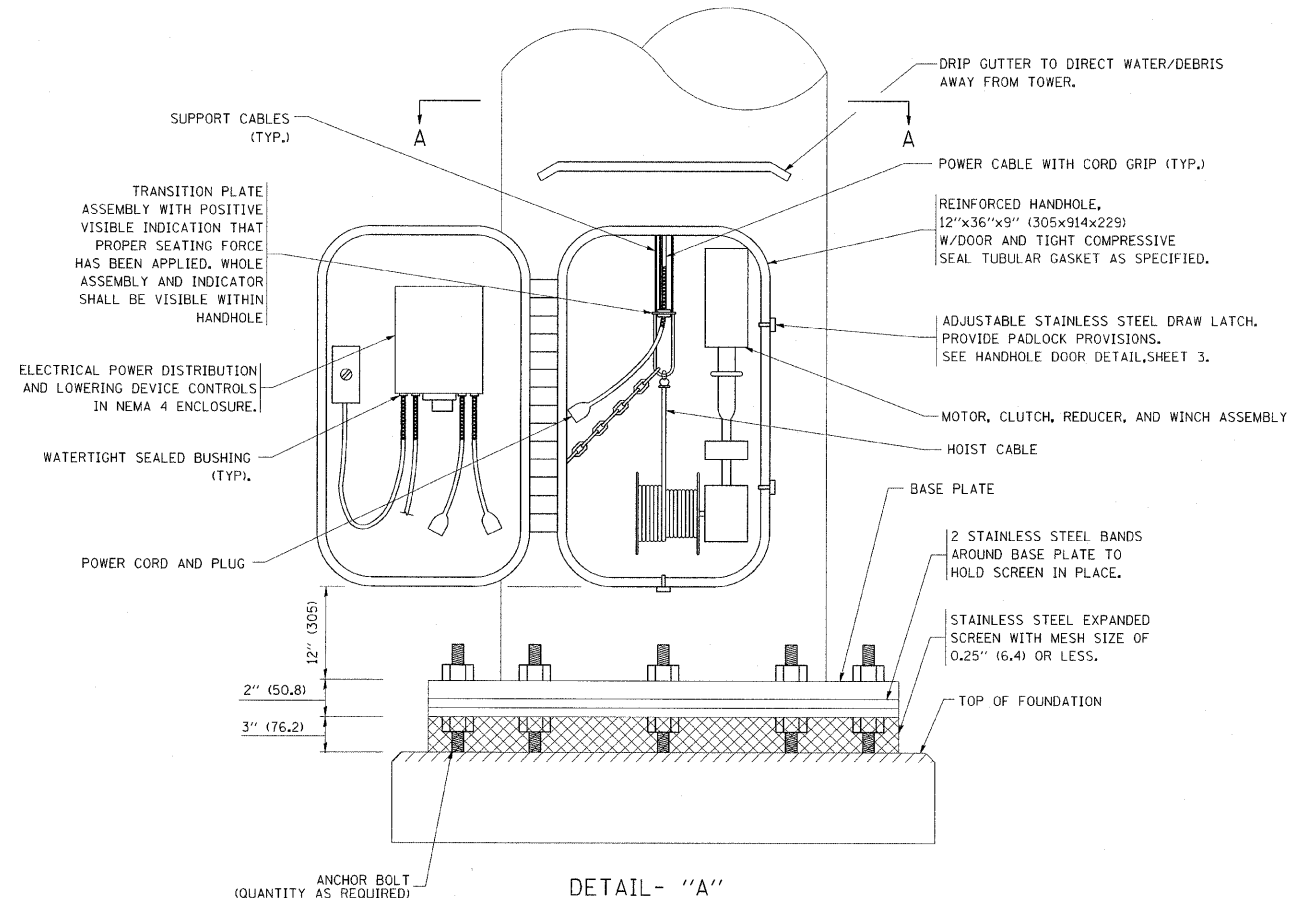
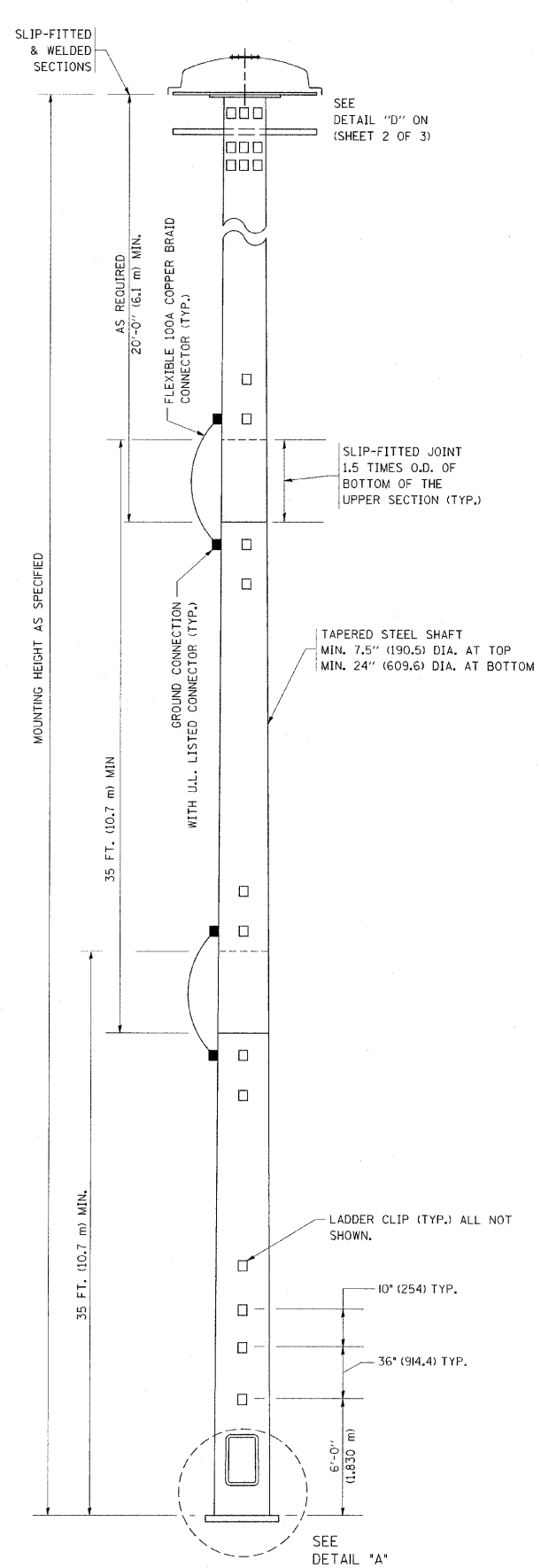


HANDHOLE DETAIL (N.T.S.)

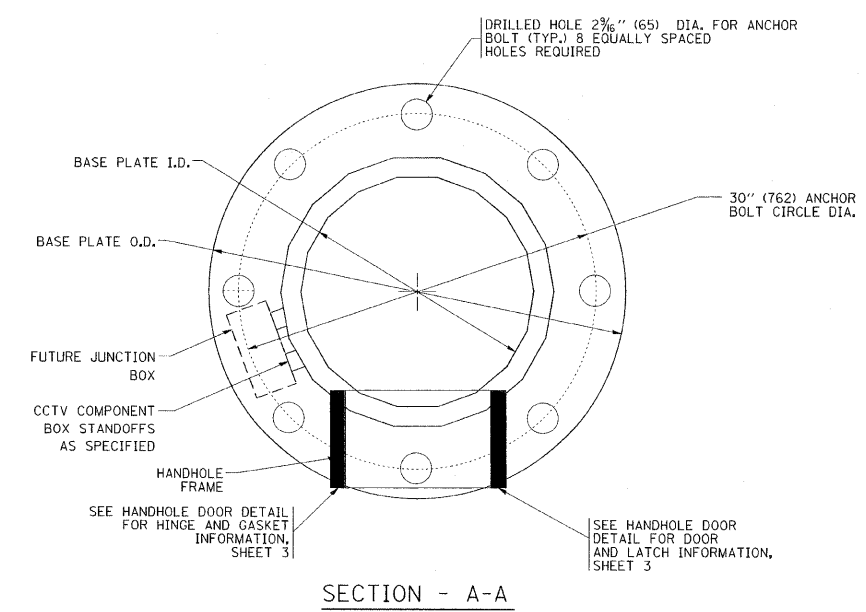
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	PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ALUMINUM LIGHT POLE		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
47'-6" (14.478 m) MOUNTING HEIGHT		57	144.23	COOK	516	210A
SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA.	TO STA.	
		CONTRACT NO. 60327		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

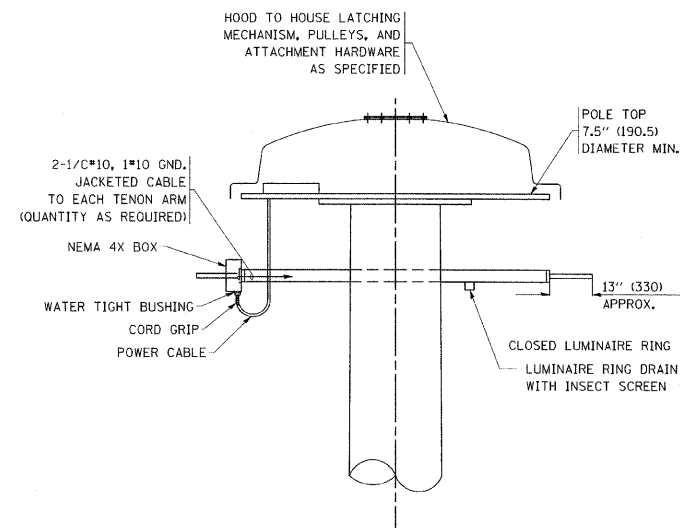


**DETAIL - "A"**  
3 CABLE LOWERING & SUPPORT MECHANISM SHOWN.

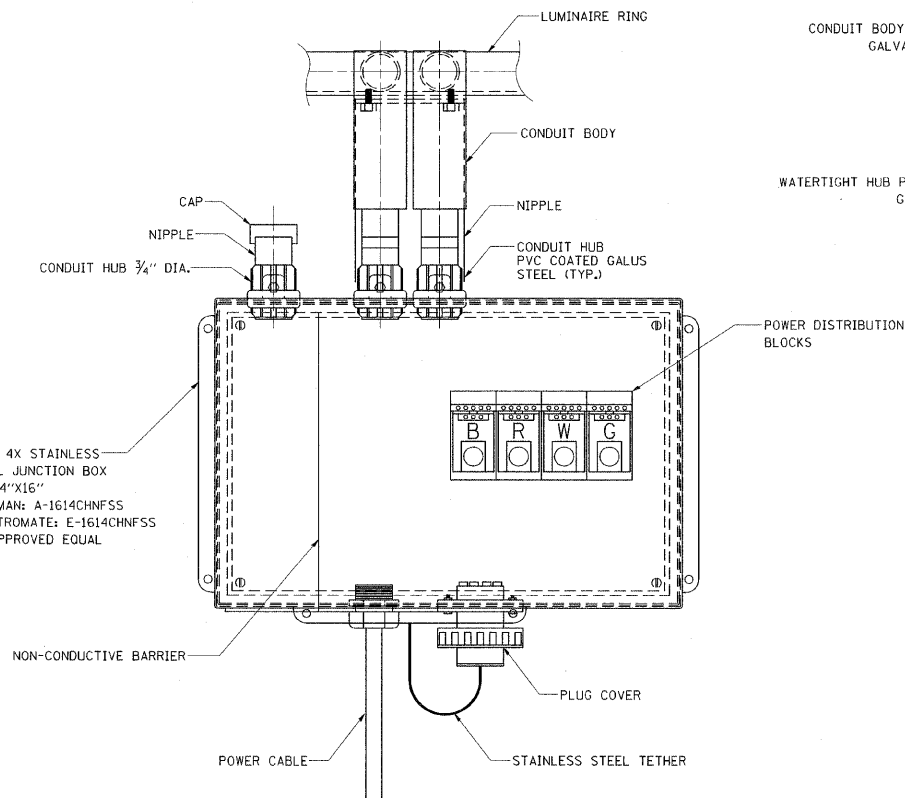


- NOTES:**
1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
  2. THE DESIGN SHALL BE BASED UPON AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" CURRENT AT THE TIME THE PROJECT IS ADVERTISED AND A TOTAL COMBINED LUMINAIRE WEIGHT OF 720 LBS. (326 kg) AND HAVING A TOTAL PROJECTED AREA OF 24 SQ. FT. (7.3 sq. m).
  3. ALL TOWER SHAFT COMPONENTS, INCLUDING, BUT NOT LIMITED TO THE SHAFT SECTIONS, BASE PLATE, LADDER CLIPS, HANDHOLE DOOR, HANDHOLE REINFORCING, RAIN GUTTER, AND BASE PLATE, SHALL BE FABRICATED FROM HIGH-STRENGTH, LOW ALLOY, STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI (345 K PA) ACCORDING TO AASHTO M 223 (ASTM A 572 GR50)
  4. THE ELECTRIC MOTOR, MOTOR GEAR REDUCER, WINCH DRUM ASSEMBLY AND AUTOMATIC SHUTOFF SWITCH OF THE LOWERING DEVICE SHALL BE ACCESSIBLE FROM THE FRONT OF THE TOWER FOR EASY REMOVAL AND MAINTENANCE. ALL COMPONENTS SHALL BE REMOVABLE THROUGH THE HANDHOLE.
  5. THE LIGHT TOWER SHAFT SHALL HAVE LADDER CLIPS. CLIPS SHALL BEGIN 6 FT. (1.8 m) ABOVE THE BASE PLATE WITH ALTERNATE 36 INCH (900) AND 10 INCH (250) SPACING THEREAFTER, FOR THE ENTIRE LENGTH. THE TOP 10 FT. (3 m) OF THE POLE SHAFT SHALL HAVE 3 SETS OF CLIPS. EACH SET OF CLIPS SHALL BE 120 DEGREES APART. CLIPS SHALL BE 0.25 X 2 INCHES (6 X 50) WELDED TO THE SHAFT TO PRODUCE A SLOT 0.625 INCHES (15.9) DEEP AND 1.625 INCHES (41.3) LONG. THE TOP INSIDE EDGE SHALL BE CHAMFERED.
  6. A COPPER BONDING JUMPER SHALL BOND SLIP-FIT POLE SECTIONS TOGETHER WITH A FLAT COPPER MESH AND STAINLESS STEEL GROUND LUGS.
  7. ALL TOWER SHAFT HARDWARE, SUCH AS GROUND LUGS, JUNCTION BOXES, HARDWARE FOR THE HANDHOLE DOOR, INCLUDING THE HANDLE/LATCH MECHANISM, HINGE AND DOOR STOP, SHALL BE STAINLESS STEEL. ALL CONDUIT AND CONDUIT FITTINGS SHALL BE PVC COATED GALVANIZED STEEL.
  8. THE ENTIRE TOWER INCLUDING THE SHAFT, HANDHOLE, HANDHOLE DOOR, BASE PLATE AND ALL OTHER ELEMENTS WELDED TO THE SHAFT SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 111 (ASTM A 123) AND THEN PAINTED AS SPECIFIED. THE LUMINAIRE RING SHALL BE PRIMED AND PAINTED AS SPECIFIED.
  9. THE FINISH COAT SHALL BE FEDERAL STANDARD COLOR NUMBER 16307 (HANFORD GREY). COLOR SAMPLE TO BE SUBMITTED FOR APPROVAL
  10. ALL MULTI-CONDUCTOR CABLES SHALL BE FITTED WITH A HEAT-SHRINK MULTI-LEG BOOT. THE BOOT SHALL MEET MILITARY SPECIFICATION MIL-I-81765/1.
  11. PRIOR TO DELIVERY, THE TOWER AND ALL ITS COMPONENTS SHALL BE INSPECTED BY THE MANUFACTURER'S REPRESENTATIVE IN THE PRESENCE OF THE ENGINEER. ANY PARTS FOUND TO BE DEFECTIVE SHALL BE REPAIRED OR REPLACED.
  12. THE LIGHT TOWER SHALL BE STRAIGHT AND CENTERED ON ITS LONGITUDINAL AXIS, UNDER NO-WIND CONDITIONS, SO WHEN EXAMINED WITH A TRANSIT FROM ANY DIRECTION, THE DEVIATION FROM THE NORMAL SHALL NOT EXCEED 1/8 IN. IN 3 FT (2 mm IN 1 m) WITHIN ANY 5 FT (1.5 m) OF HEIGHT, WITH TOTAL DEVIATION NOT TO EXCEED 3 IN. (75) FROM THE VERTICAL AXIS THROUGH THE CENTER OF THE POLE BASE.
  13. PVC CONDUIT WILL NOT BE ALLOWED.
  14. THE NUMBER OF COUNTER WEIGHTS TO BE SUPPLIED AS A PART OF THE LIGHT TOWER PAY ITEM IS.

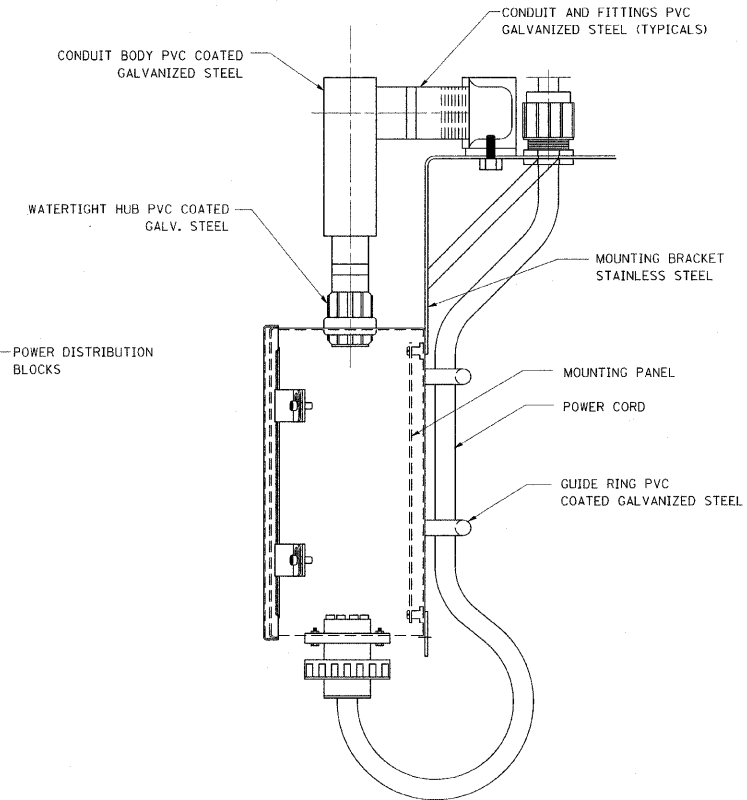
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		DRAWN -	REVISED - R. TOMSONS 05-11-09		<b>90 FT TO 120 FT (27 m TO 36 m)</b>			57	1414.2B	COOK	5/8	2108
		CHECKED -	REVISED -		SCALE: NONE SHEET NO. 1 OF 3 SHEETS STA. TO STA.			<b>BE-500</b> CONTRACT NO. 60727				
		DATE -	REVISED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							



DETAIL - "D"

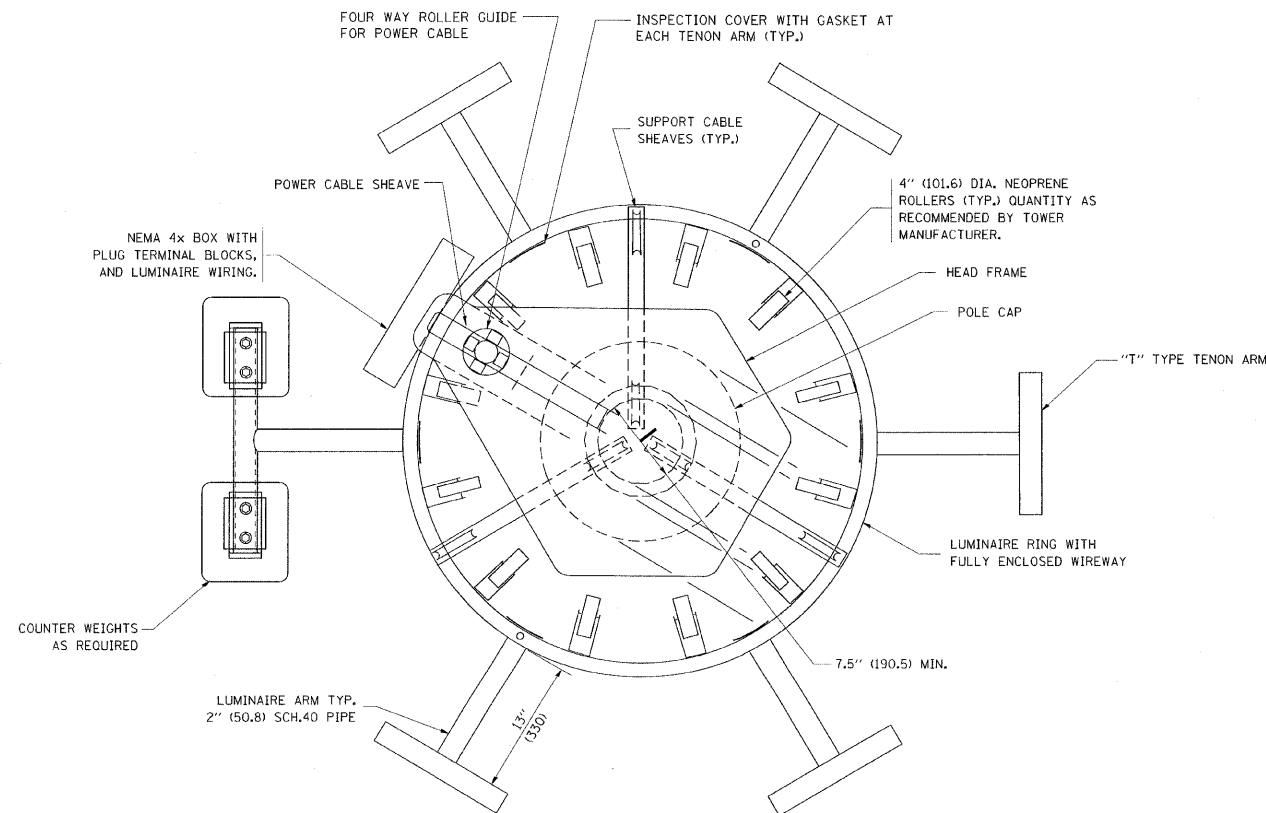


FRONT VIEW

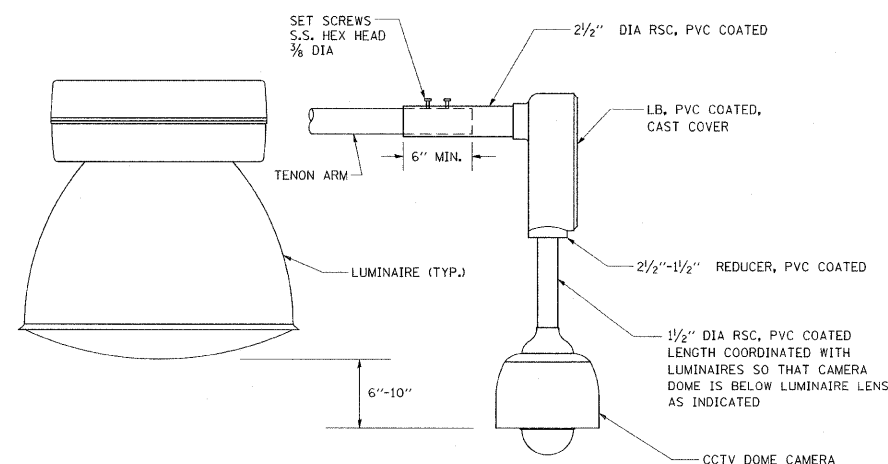


SIDE VIEW

LUMINAIRE RING TERMINAL BOX



SECTION A-A



CCTV CAMERA MOUNTING DETAIL

NOTES:

- LUMINAIRE WIRES SHALL EXTEND 24 INCHES (609 mm) LONGER THAN THEIR RESPECTIVE TENON ARM AND SHALL BE TRAINED BACK INTO THE ARM WHICH SHALL THEN BE CLOSED WITH A CAP AS SPECIFIED. ALL WIRES SHALL BE CAPPED WITH HEAT SHRINK INSULATING BOOTS, CRIMP CAPS ARE UNACCEPTABLE. ALL RING WIRES SHALL BE TAGGED WITH WIRE MARKERS AT BOTH ENDS. THE TENON ARMS SHALL ALSO BE TAGGED CORRESPONDING TO THE WIRING CONTAINED WITHIN.
- SPLICING WILL NOT BE ALLOWED WITHIN THE LUMINAIRE RING.
- ALL TOWER SHAFT HARDWARE, SUCH AS GROUND LUGS, JUNCTION BOXES, HARDWARE FOR THE HANDHOLE DOOR, INCLUDING THE HANDLE/LATCH MECHANISM, HINGE AND DOOR STOP, SHALL BE STAINLESS STEEL. ALL CONDUIT AND CONDUIT FITTINGS SHALL BE PVC COATED GALVANIZED STEEL.
- ALL MULTI-CONDUCTOR CABLES SHALL BE FITTED WITH A HEAT-SHRINK MULTI-LEG BOOT. THE BOOT SHALL MEET MILITARY SPECIFICATION MIL-1-81765/1.

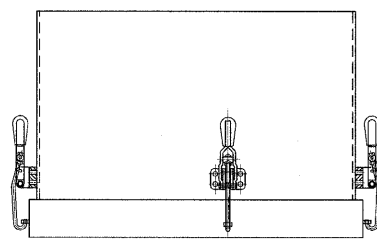
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	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 5/11/2009	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

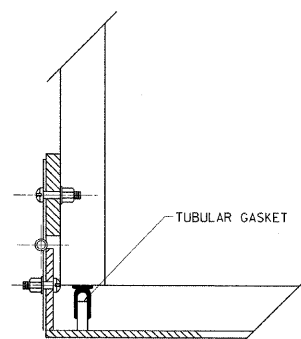
HIGH MAST LIGHT TOWER  
90 FT TO 120 FT (27 m TO 36 m)

SCALE: NONE SHEET NO. 2 OF 3 SHEETS STA. TO STA.

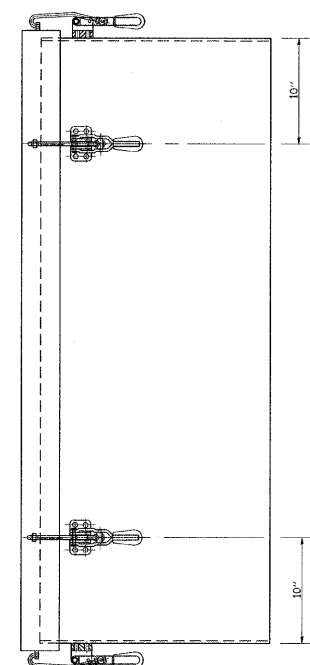
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	Cook	516	210C
BE-500			CONTRACT NO. 60J27	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



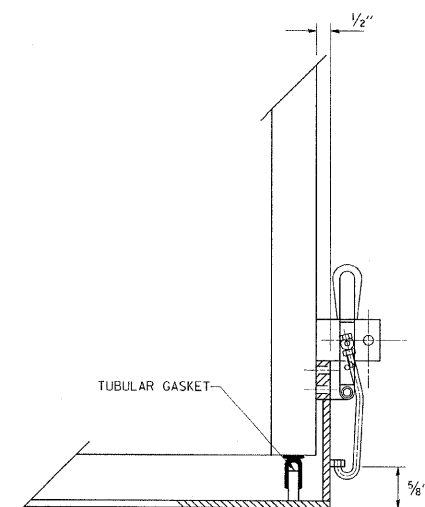
TOP VIEW



HINGE DETAIL

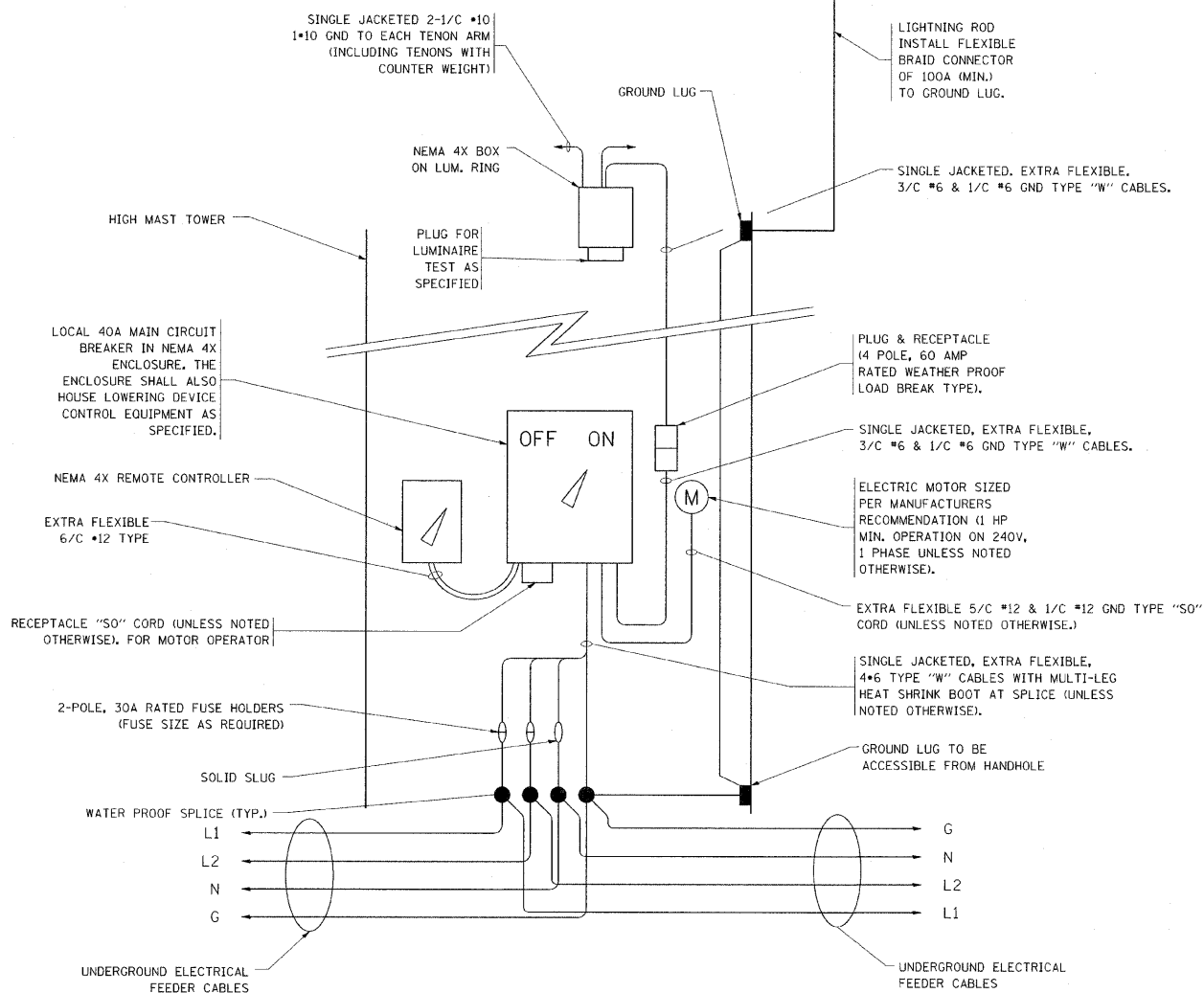


SIDE VIEW

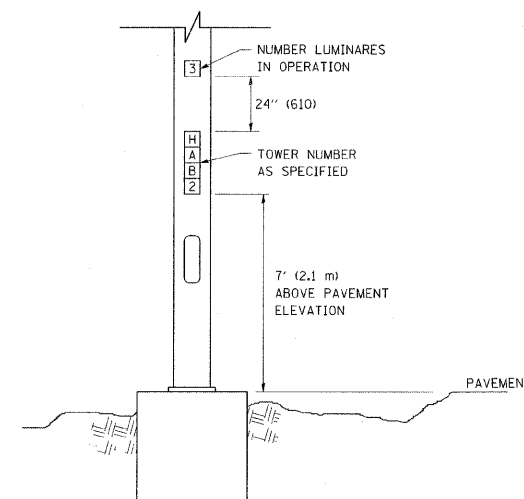


LATCH DETAIL

HANDHOLE DOOR DETAILS



HIGH MAST POLE WIRING DIAGRAM



LIGHT TOWER NUMBERING DETAIL

FILE NAME =	USER NAME = drsvakosgn	DESIGNED -	REVISED - R. TOMSONS 08-04-03
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	PLOT SCALE = 50.0000 / IN.	CHECKED -	REVISED -
	PLOT DATE = 5/11/2009	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

HIGH MAST LIGHT TOWER			
90 FT TO 120 FT (27 m TO 36 m)			
SCALE: NONE	SHEET NO. 3 OF 3 SHEETS	STA.	TO STA.

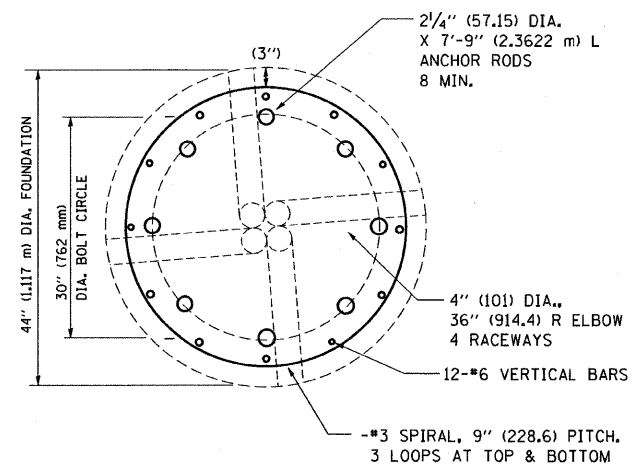
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	Cook	56	210D
BE-500			CONTRACT NO. 60727	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

**LIGHT TOWER FOUNDATION DEPTH "D"**

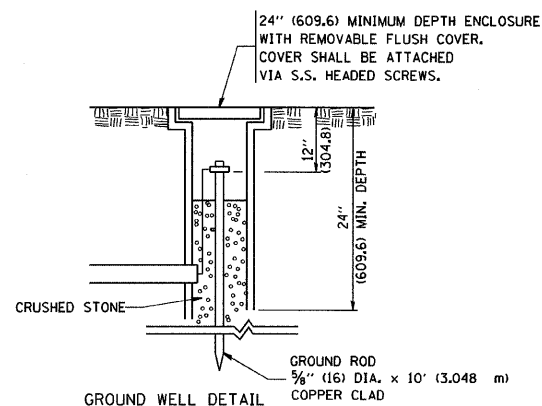
MOUNTING HEIGHT	SOIL CONDITIONS					
	SOFT CLAY O <sub>u</sub> = 0.375 TON/SQ. FT	MEDIUM CLAY O <sub>u</sub> = 0.75 TON/SQ. FT	STIFF CLAY O <sub>u</sub> = 1.50 TON/SQ. FT	LOOSE SAND φ = 34°	MEDIUM SAND φ = 37.5°	DENSE SAND φ = 40°
90 FT (27 m)	29 FT (8.779 m)	20 FT (6.035 m)	15 FT (4.389 m)	15 FT (4.389 m)	13 FT (3.840 m)	12 FT (3.429 m)
100 FT (30 m)	32 FT (9.754 m)	22 FT (6.706 m)	16 FT (4.877 m)	16 FT (4.877 m)	14 FT (4.267 m)	13 FT (3.81 m)
110 FT (33 m)	35 FT (10.719 m)	24 FT (7.377 m)	18 FT (5.365 m)	18 FT (5.365 m)	15 FT (4.694 m)	14 FT (4.191 m)
120 FT (36 m)	38 FT (11.705 m)	26 FT (8.046 m)	19 FT (5.652 m)	19 FT (5.652 m)	17 FT (5.120 m)	16 FT (4.572 m)

**DESIGN NOTES**

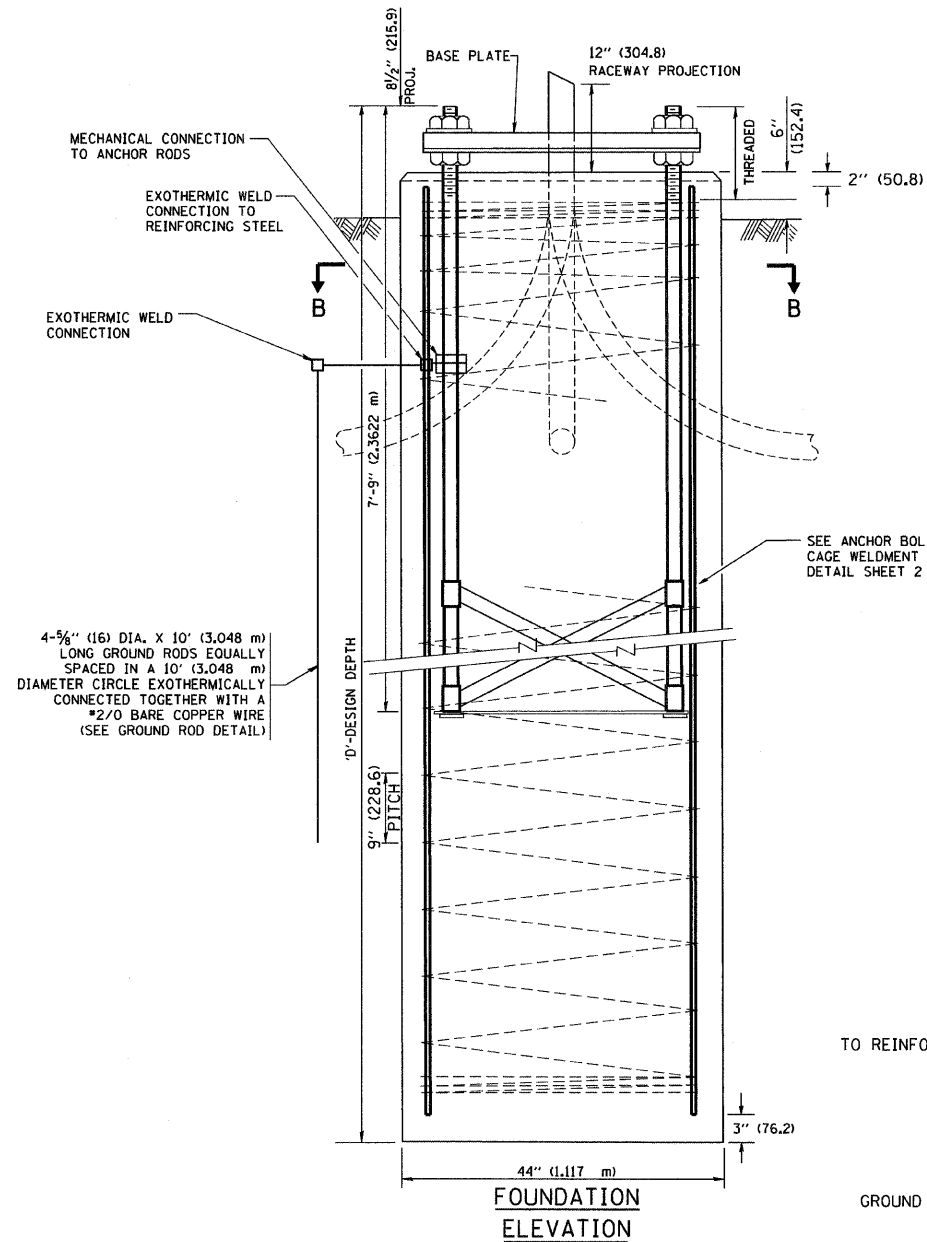
- (1) ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN
- (2) THE ANCHOR RODS SHALL BE VERTICAL NO ADJUSTMENT SHALL BE ALLOWED AFTER THE FOUNDATION IS PLACED.
- (3) THE GAP BETWEEN THE FOUNDATION AND THE BASE PLATE SHALL BE ENCLOSED WITH A STAINLESS STEEL SCREEN FASTENED WITH A STAINLESS STEEL BAND.
- (4) THE TOP OF THE FOUNDATION TO 18" (450) BELOW GRADE SHALL BE FORMED.
- (5) SURFACE WATER WILL NOT BE PERMITTED TO ENTER THE HOLE AND ALL WATER WHICH MAY HAVE INFILTRATED INTO THE HOLE SHALL BE REMOVED BEFORE PLACING CONCRETE.
- (6) THE LIGHT TOWER SHALL NOT BE ERECTED UNTIL AFTER THE CONCRETE HAS BEEN CURED ACCORDING TO ARTICLE 1020.13.
- (7) ANCHOR RODS SHALL BE STRAIGHT AND SHALL BE ACCORDING TO AASHTO M 314 OR ASTM F1554, GRADE 75(GRADE 105) AND GALVANIZED ACCORDING TO ARTICLE 1006.9.
- (8) ANCHOR ROD INFORMATION SHALL BE SUBMITTED FOR APPROVAL AND SHALL BE FULLY COORDINATED FOR APPROVAL WITH TOWER MANUFACTURER REQUIREMENTS.
- (9) REINFORCEMENT BARS SHALL BE ACCORDING TO ARTICLE 1006.10
- (10) TWO ANCHOR RODS OPPOSITE EACH OTHER SHALL HAVE THE ANCHOR ROD THREADS PEENED AFTER NUTS ARE INSTALLED.



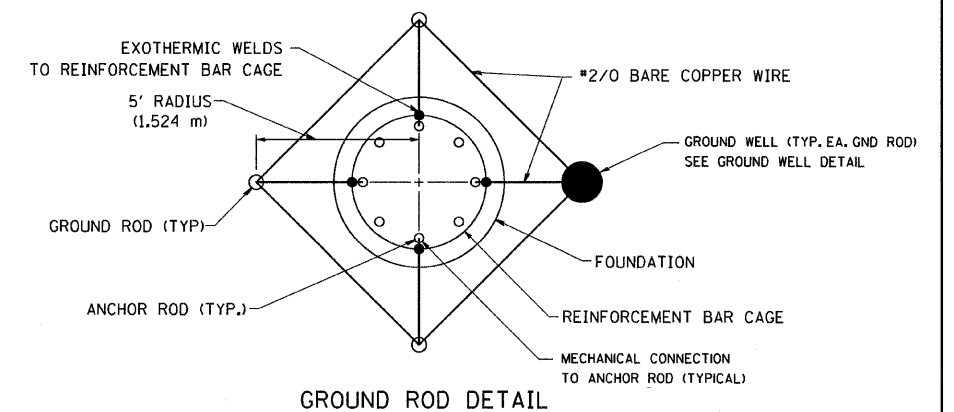
**SECTION-B-B**



**GROUND WELL DETAIL**

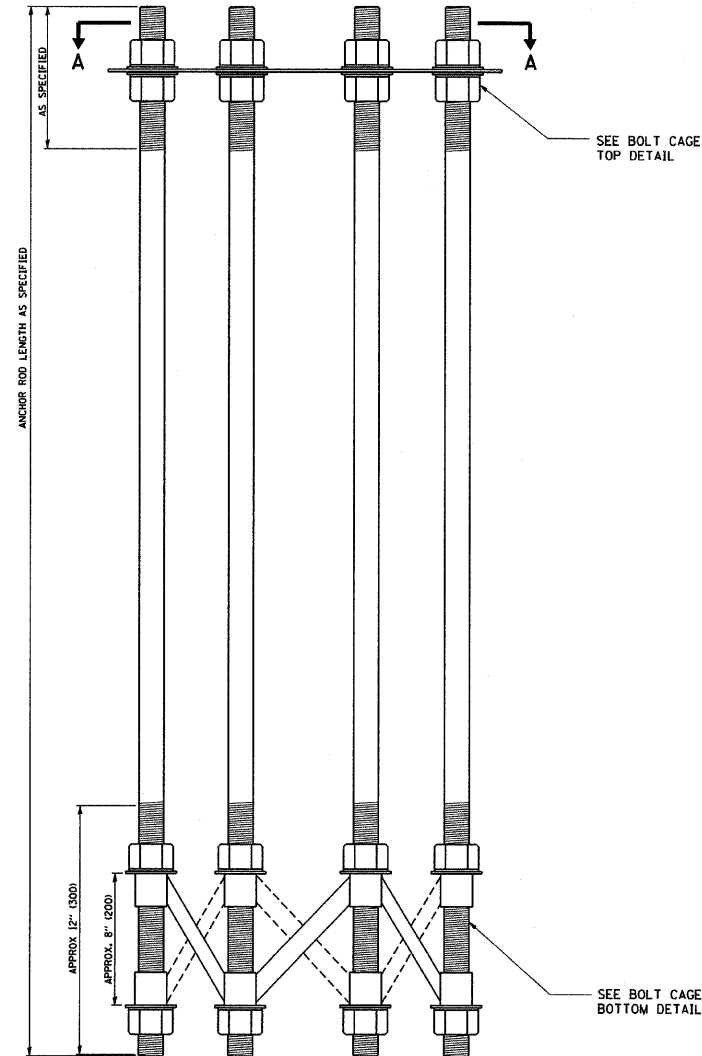


**FOUNDATION ELEVATION**

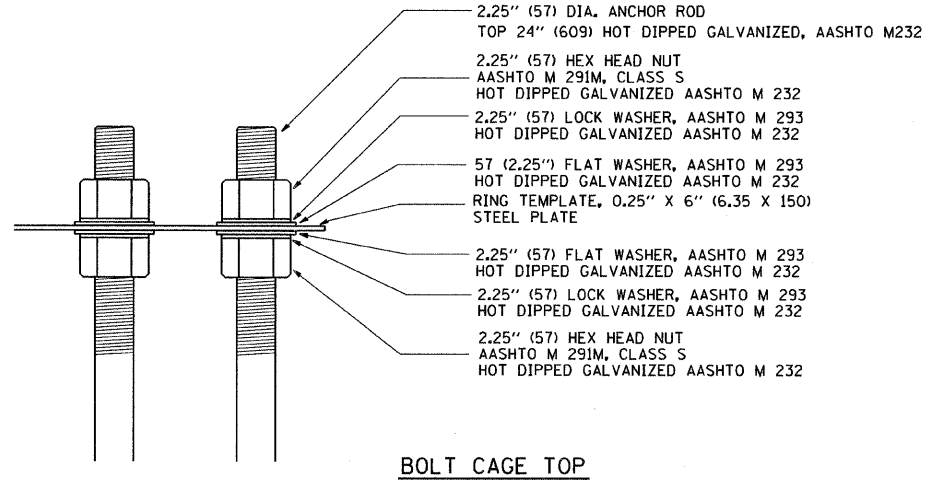


**GROUND ROD DETAIL**

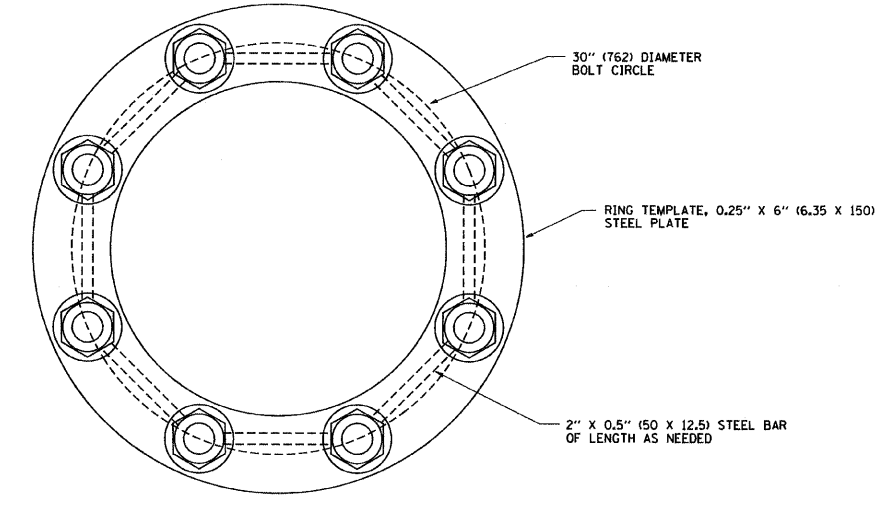
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PLOT SCALE = 50.000' / IN.	CHECKED -	REVISIONS -	DATE -		SCALE: NONE	SHEET NO. 1 OF 2 SHEETS	STA. TO STA.	<b>BE-501</b>				
PLOT DATE = 1/4/2008	DATE -	REVISIONS -	DATE -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							



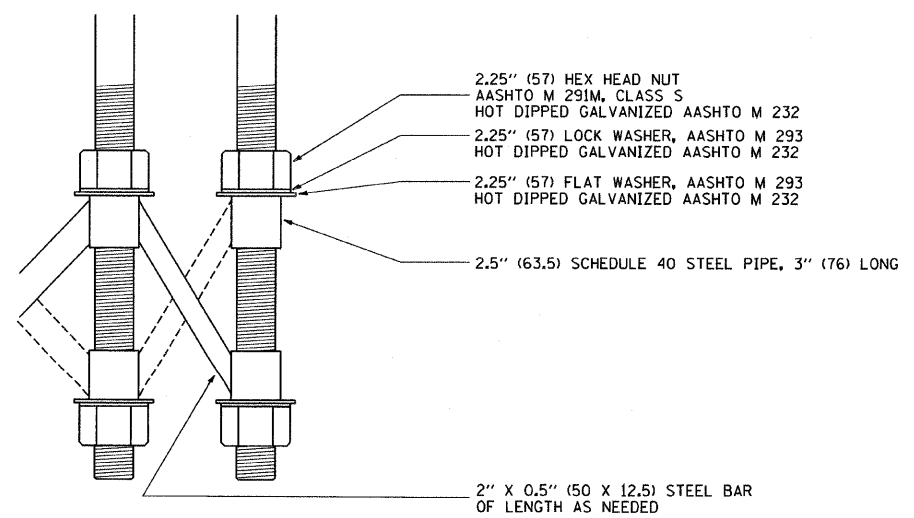
ANCHOR BOLT CAGE



BOLT CAGE TOP



SECTION A-A



BOLT CAGE BOTTOM

**NOTES**

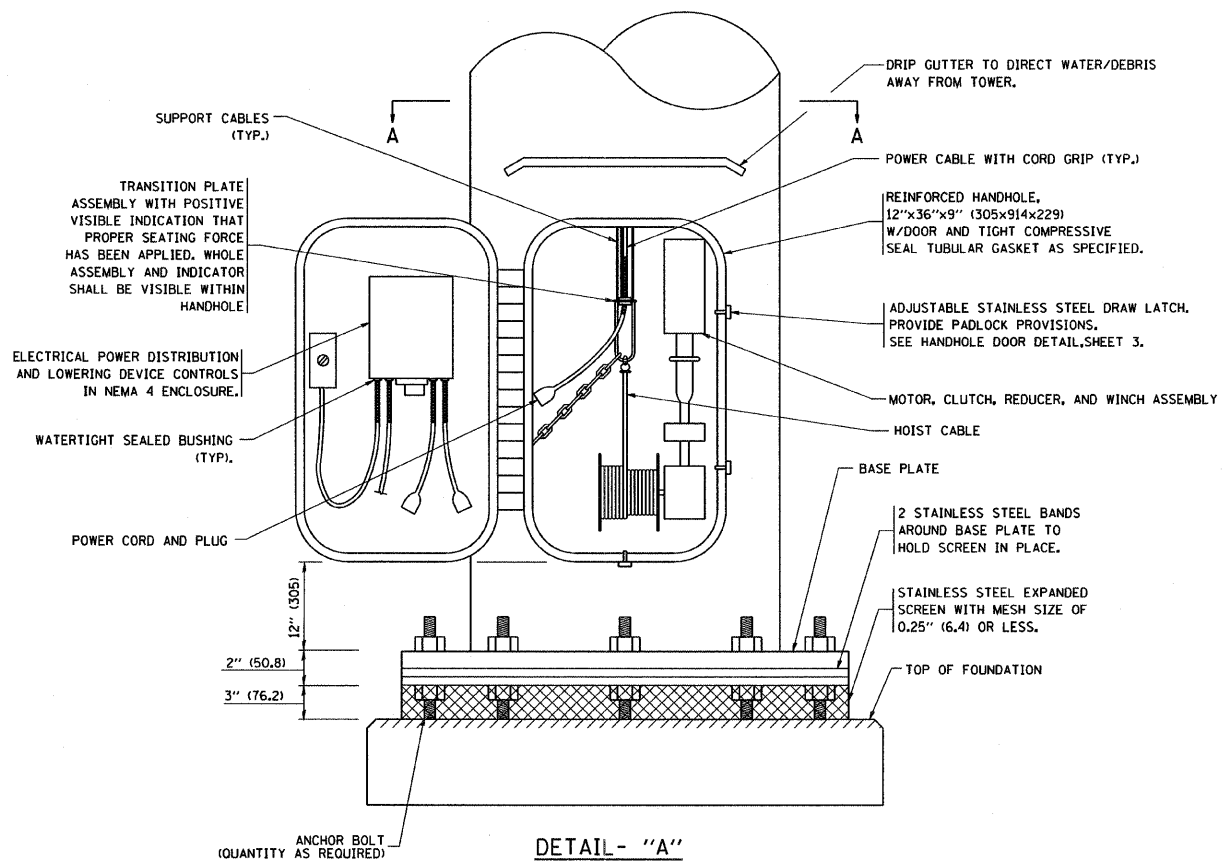
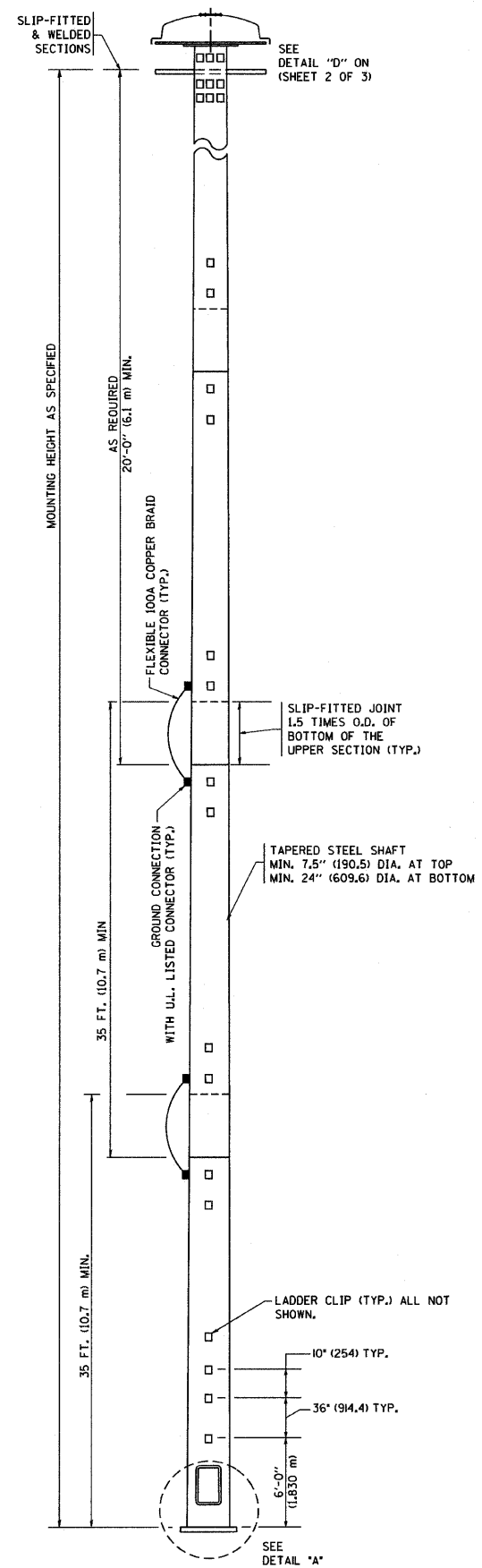
1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN
2. ANCHOR RODS SHALL BE STRAIGHT AND SHALL BE ACCORDING TO AASHTO M 314 OR ASTM F1554, GRADE 725 (GRADE 105) AND GALVANIZED ACCORDING TO ARTICLE 1006.09.
3. ANCHOR ROD INFORMATION SHALL BE SUBMITTED FOR APPROVAL AND SHALL BE FULLY COORDINATED WITH TOWER MANUFACTURERS REQUIREMENTS.

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		DRAWN -	REVISED -
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

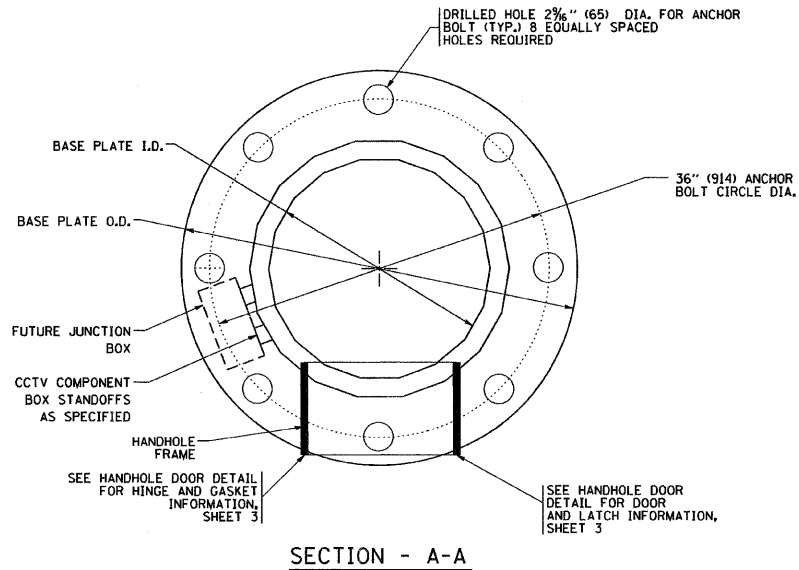
<b>HIGH MAST LIGHT TOWER</b>			
<b>90 FT TO 120 FT (27 m TO 36 m) FOUNDATION DETAIL</b>			
SCALE: NONE	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.

F.A. RTE. = 57	SECTION = 1414.28	COUNTY = Cook	TOTAL SHEETS = 516	SHEET NO. = 210F
<b>BE-501</b>		<b>CONTRACT NO. 60327</b>		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



DETAIL - "A"

3 CABLE LOWERING & SUPPORT MECHANISM SHOWN.

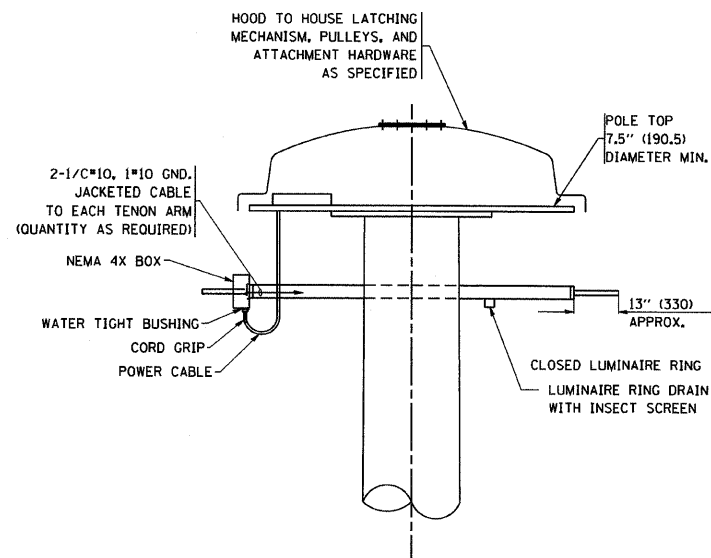


SECTION - A-A

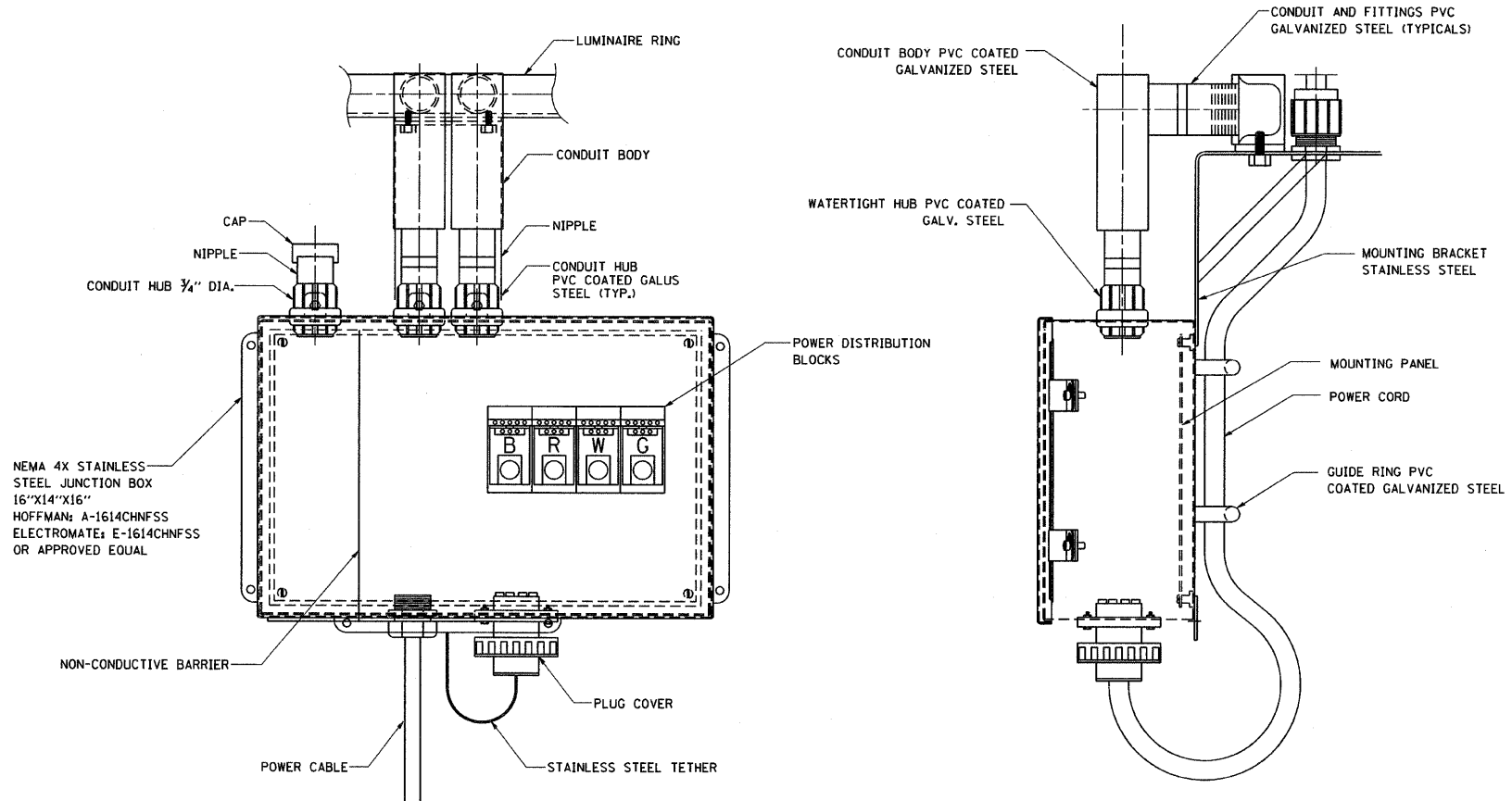
NOTES:

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. THE DESIGN SHALL BE BASED UPON AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" CURRENT AT THE TIME THE PROJECT IS ADVERTISED AND A TOTAL COMBINED LUMINAIRE WEIGHT OF 720 LBS. (326 kg) AND HAVING A TOTAL PROJECTED AREA OF 24 SQ. FT. (7.3 sq. m).
3. ALL TOWER SHAFT COMPONENTS, INCLUDING, BUT NOT LIMITED TO THE SHAFT SECTIONS, BASE PLATE, LADDER CLIPS, HANDHOLE DOOR, HANDHOLE REINFORCING, RAIN GUTTER, AND BASE PLATE, SHALL BE FABRICATED FROM HIGH-STRENGTH, LOW ALLOY, STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSJ (345 K PA) ACCORDING TO AASHTO M 223 (ASTM A 572 GR50)
4. THE ELECTRIC MOTOR, MOTOR GEAR REDUCER, WINCH DRUM ASSEMBLY AND AUTOMATIC SHUTOFF SWITCH OF THE LOWERING DEVICE SHALL BE ACCESSIBLE FROM THE FRONT OF THE TOWER FOR EASY REMOVAL AND MAINTENANCE. ALL COMPONENTS SHALL BE REMOVABLE THROUGH THE HANDHOLE.
5. THE LIGHT TOWER SHAFT SHALL HAVE LADDER CLIPS. CLIPS SHALL BEGIN 6 FT. (1.8 m) ABOVE THE BASE PLATE WITH ALTERNATE 1.8 m (900) AND 10 INCH (250) SPACING THEREAFTER, FOR THE ENTIRE LENGTH. THE TOP 10 FT. (3 m) OF THE POLE SHAFT SHALL HAVE 3 SETS OF CLIPS. EACH SET OF CLIPS SHALL BE 120 DEGREES APART. CLIPS SHALL BE 0.25 X 2 INCHES (6 X 50) WELDED TO THE SHAFT TO PRODUCE A SLOT 0.625 INCHES (15.9) DEEP AND 1.625 INCHES (41.3) LONG. THE TOP INSIDE EDGE SHALL BE CHAMFERED.
6. A COPPER BONDING JUMPER SHALL BOND SLIP-FIT POLE SECTIONS TOGETHER WITH A FLAT COPPER MESH AND STAINLESS STEEL GROUND LUGS.
7. ALL TOWER SHAFT HARDWARE, SUCH AS GROUND LUGS, JUNCTION BOXES, HARDWARE FOR THE HANDHOLE DOOR, INCLUDING THE HANDLE/LATCH MECHANISM, HINGE AND DOOR STOP, SHALL BE STAINLESS STEEL. ALL CONDUIT AND CONDUIT FITTINGS SHALL BE PVC COATED GALVANIZED STEEL.
8. THE ENTIRE TOWER INCLUDING THE SHAFT, HANDHOLE, HANDHOLE DOOR, BASE PLATE AND ALL OTHER ELEMENTS WELDED TO THE SHAFT SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 111 (ASTM A 123) AND THEN PAINTED AS SPECIFIED. THE LUMINAIRE RING SHALL BE PRIMED AND PAINTED AS SPECIFIED.
9. THE FINISH COAT SHALL BE FEDERAL STANDARD COLOR NUMBER 16307 (HANFORD GREY). COLOR SAMPLE TO BE SUBMITTED FOR APPROVAL
10. ALL MULTI-CONDUCTOR CABLES SHALL BE FITTED WITH A HEAT-SHRINK MULTI-LEG BOOT. THE BOOT SHALL MEET MILITARY SPECIFICATION MIL-I-81765/1.
11. PRIOR TO DELIVERY, THE TOWER AND ALL ITS COMPONENTS SHALL BE INSPECTED BY THE MANUFACTURER'S REPRESENTATIVE IN THE PRESENCE OF THE ENGINEER. ANY PARTS FOUND TO BE DEFECTIVE SHALL BE REPAIRED OR REPLACED.
12. THE LIGHT TOWER SHALL BE STRAIGHT AND CENTERED ON ITS LONGITUDINAL AXIS, UNDER NO-WIND CONDITIONS, SO WHEN EXAMINED WITH A TRANSIT FROM ANY DIRECTION, THE DEVIATION FROM THE NORMAL SHALL NOT EXCEED 1/8 IN. IN 3 FT (2 mm IN 1 m) WITHIN ANY 5 FT (1.5 m) OF HEIGHT, WITH TOTAL DEVIATION NOT TO EXCEED 3 IN. (75) FROM THE VERTICAL AXIS THROUGH THE CENTER OF THE POLE BASE.
13. PVC CONDUIT WILL NOT BE ALLOWED.
14. THE NUMBER OF COUNTER WEIGHTS TO BE SUPPLIED AS A PART OF THE LIGHT TOWER PAY ITEM IS

FILE NAME = W:\diststd\22x34\be585.dgn	USER NAME = geglennbt	DESIGNED -	REVISED - 09-02-03	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>HIGH MAST LIGHT TOWER 130 FT TO 150 FT (40 m TO 45.5)</b>		F.A. - RTE. 57	SECTION 1414.2B	COUNTY Cook	TOTAL SHEETS 516	SHEET NO. 2106	
	PLOT SCALE = 50.0000 / IN.	DRAWN -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 3 SHEETS	STA. TO STA.	<b>BE-505</b>		CONTRACT NO. 60J27		
	PLOT DATE = 1/4/2008	CHECKED -	REVISED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							
		DATE -	REVISED -									



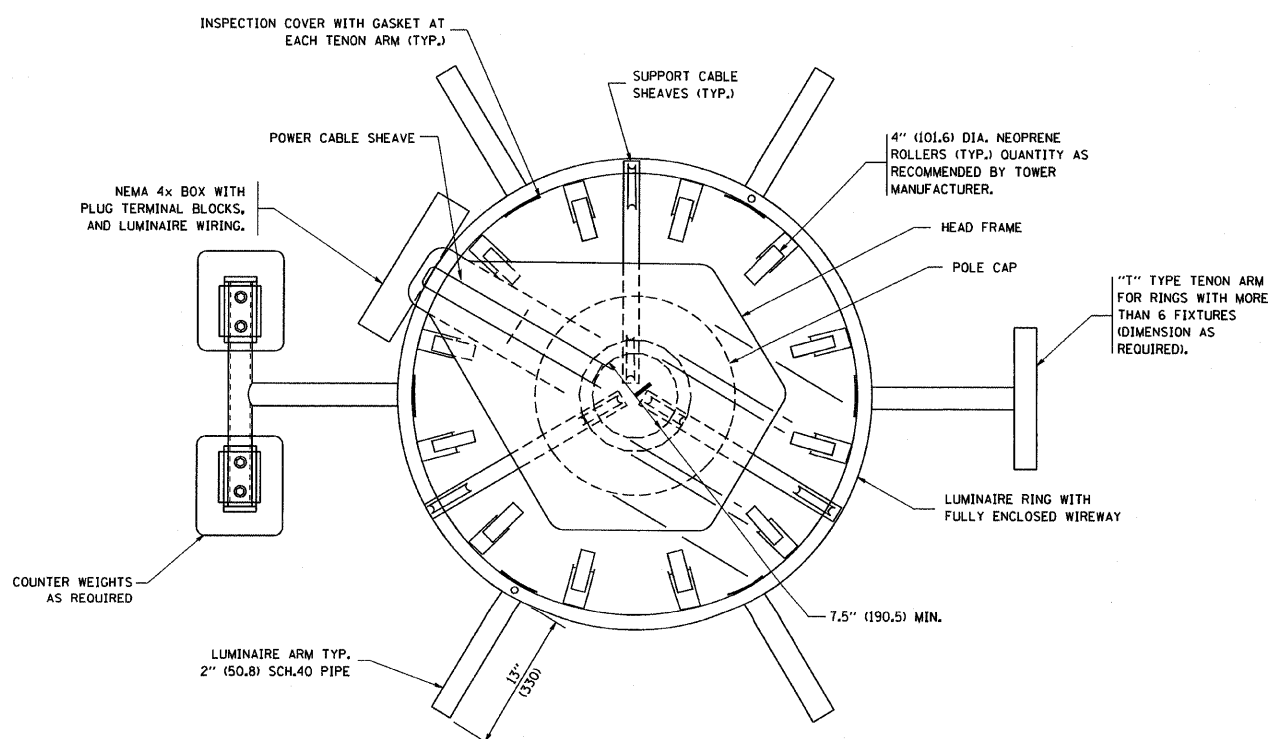
DETAIL-D



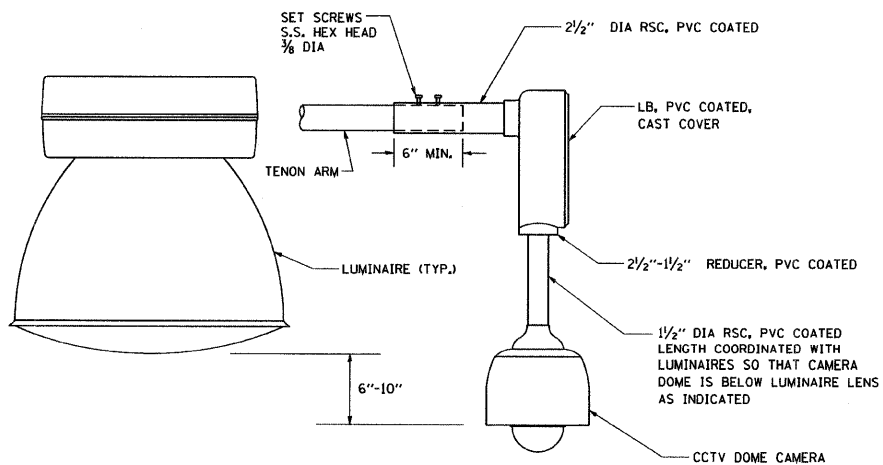
FRONT VIEW

SIDE VIEW

LUMINAIRE RING TERMINAL BOX



SECTION A-A

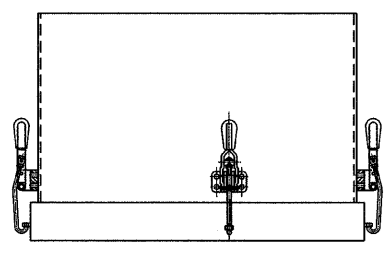


CCTV CAMERA MOUNTING DETAIL

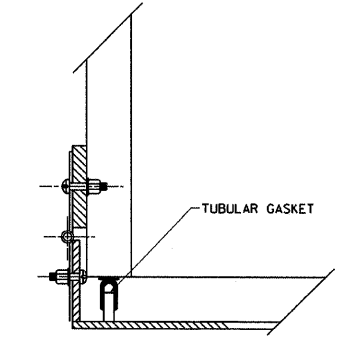
- NOTES:
- LUMINAIRE WIRES SHALL EXTEND 24 INCHES (609 mm) LONGER THAN THEIR RESPECTIVE TENON ARM AND SHALL BE TRAINED BACK INTO THE ARM WHICH SHALL THEN BE CLOSED WITH A CAP AS SPECIFIED. ALL WIRES SHALL BE CAPPED WITH HEAT SHRINK INSULATING BOOTS. CRIMP CAPS ARE UNACCEPTABLE. ALL RING WIRES SHALL BE TAGGED WITH WIRE MARKERS AT BOTH ENDS. THE TENON ARMS SHALL ALSO BE TAGGED CORRESPONDING TO THE WIRING CONTAINED WITHIN.
  - SPLICING WILL NOT BE ALLOWED WITHIN THE LUMINAIRE RING.
  - ALL TOWER SHAFT HARDWARE, SUCH AS GROUND LUGS, JUNCTION BOXES, HARDWARE FOR THE HANDHOLE DOOR, INCLUDING THE HANDLE/LATCH MECHANISM, HINGE AND DOOR STOP, SHALL BE STAINLESS STEEL. ALL CONDUIT AND CONDUIT FITTINGS SHALL BE PVC COATED GALVANIZED STEEL.
  - ALL MULTI-CONDUCTOR CABLES SHALL BE FITTED WITH A HEAT-SHRINK MULTI-LEG BOOT. THE BOOT SHALL MEET MILITARY SPECIFICATION MIL-I-81765/1.

FILE NAME = W:\dststd\22x34\be505.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 09-02-03	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>HIGH MAST LIGHT TOWER 130 FT TO 150 FT (40 m TO 45.5)</b>		F.A. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 50.0000 ' / IN.	DRAWN -	REVISED -		SCALE: NONE	SHEET NO. 2 OF 3 SHEETS	STA.	57	1414.2B	Cook	516	210H
	PLOT DATE = 1/4/2008	CHECKED -	REVISED -				TO STA.	BE-505		CONTRACT NO.		
		DATE -	REVISED -				FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT					

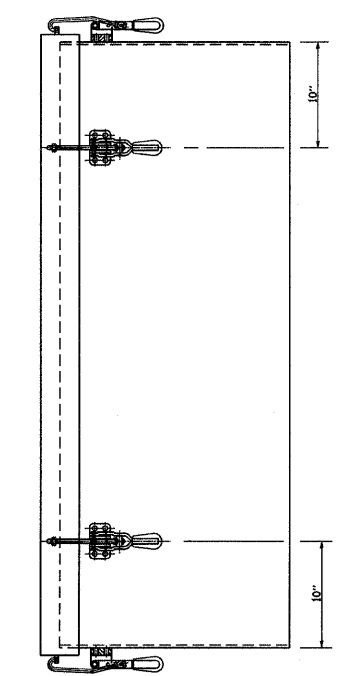




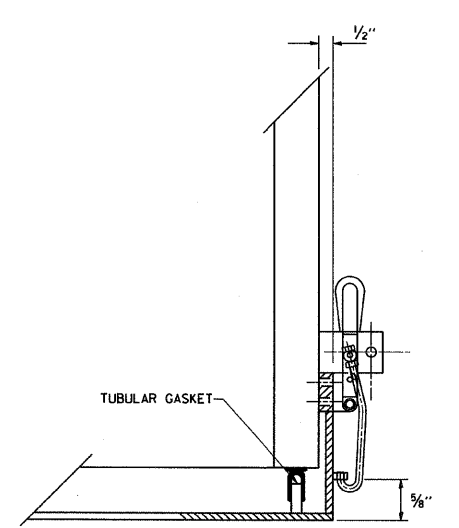
TOP VIEW



HINGE DETAIL

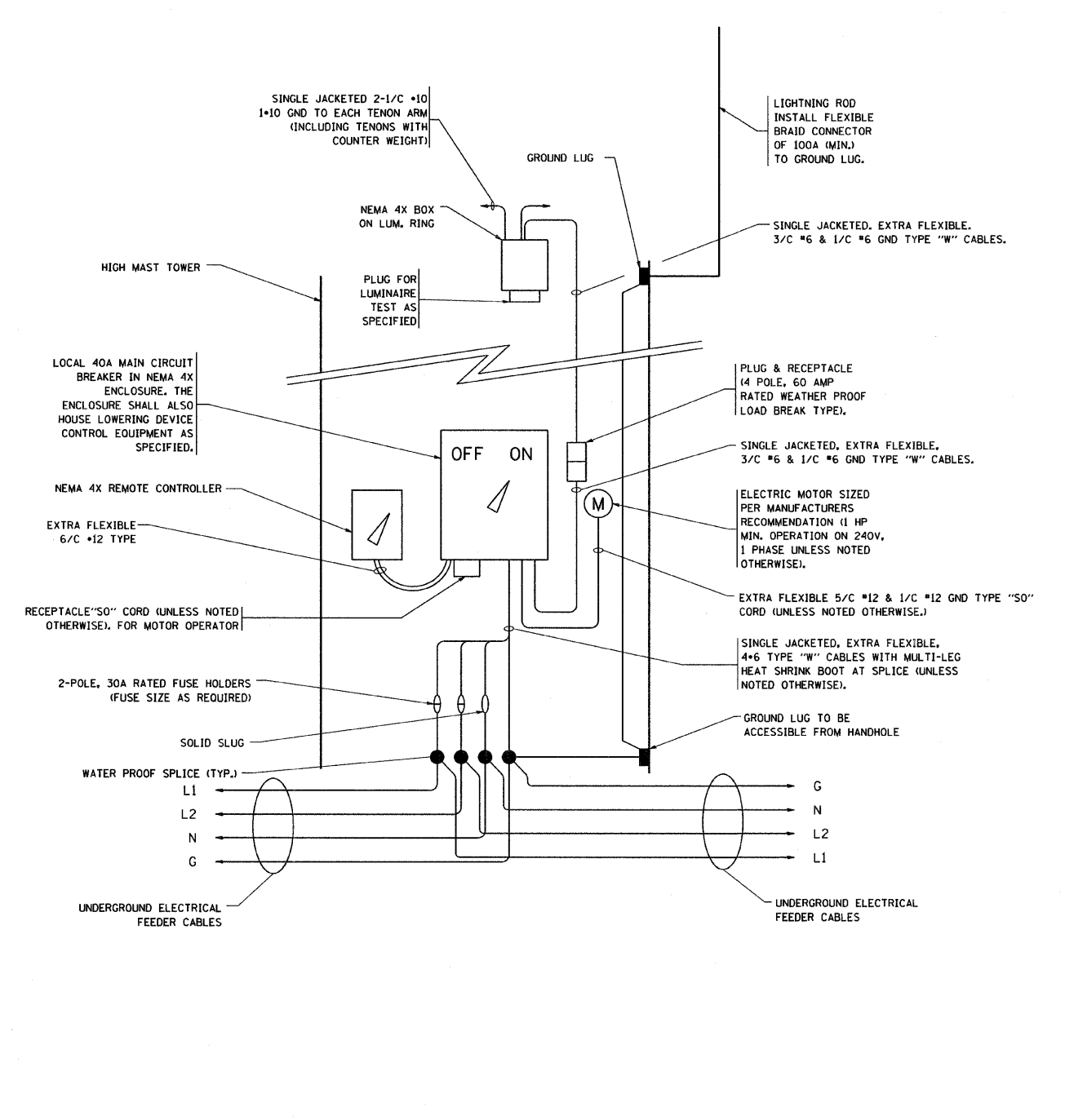


SIDE VIEW

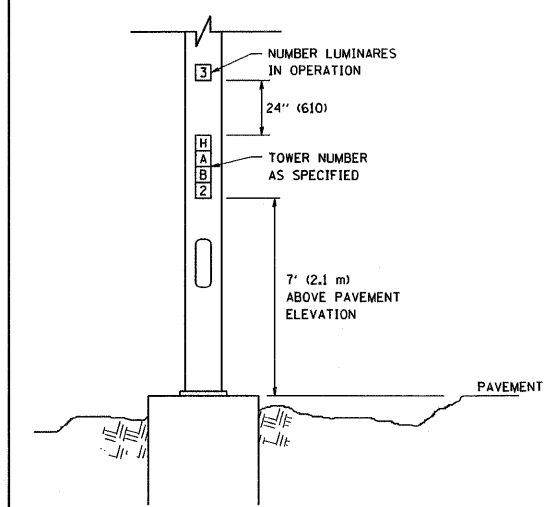


LATCH DETAIL

HANDHOLE DOOR DETAILS

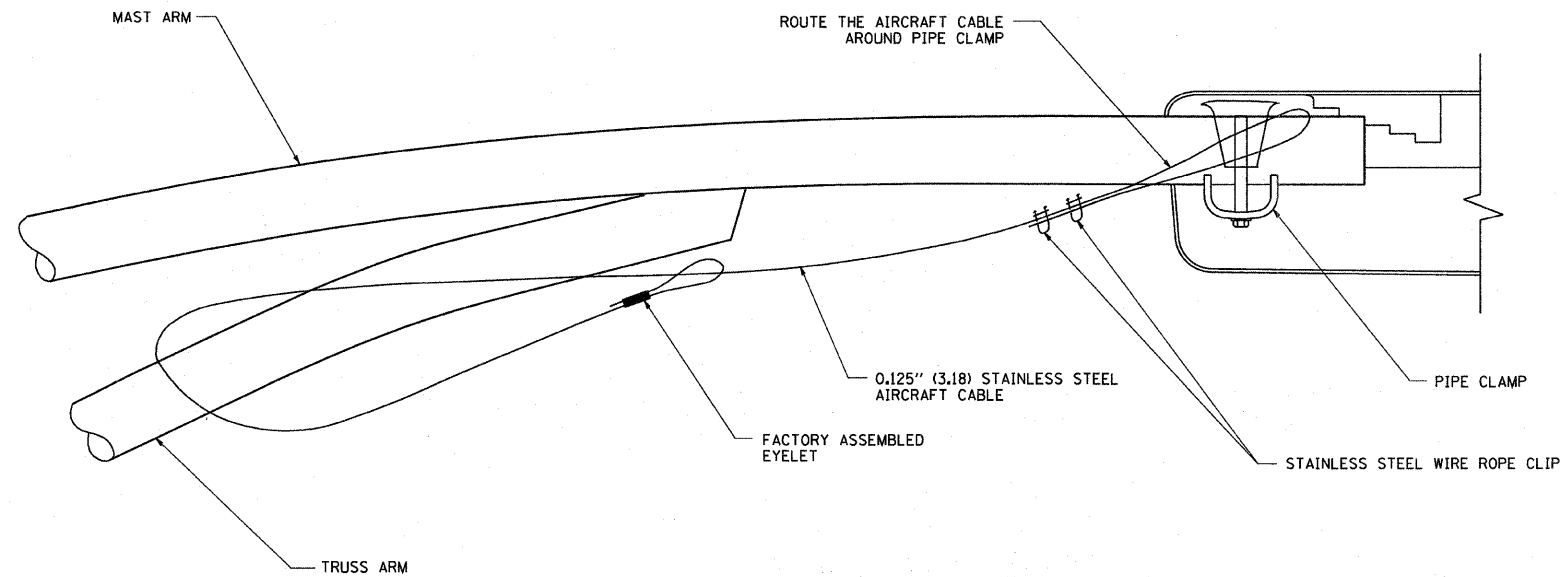


HIGH MAST POLE WIRING DIAGRAM

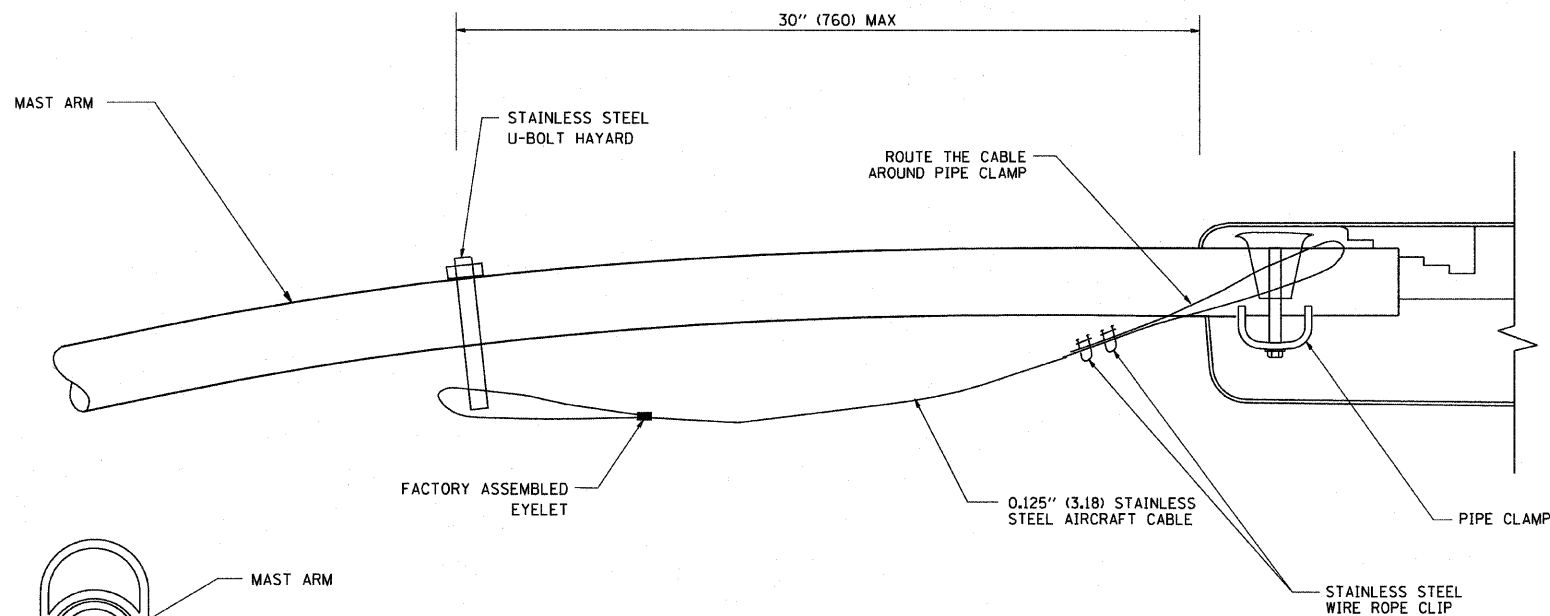


LIGHT TOWER NUMBERING DETAIL

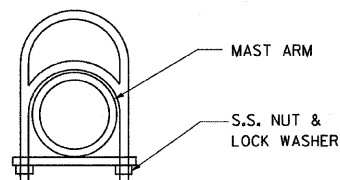
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PLOT SCALE = 50,0000' / IN.	CHECKED -	REVISER -	SCALE: NONE					SHEET NO. 3 OF 3 SHEETS	STA. TO STA.	CONTRACT NO. 60J27		
PLOT DATE = 1/4/2008	DATE -	REVISER -	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT									



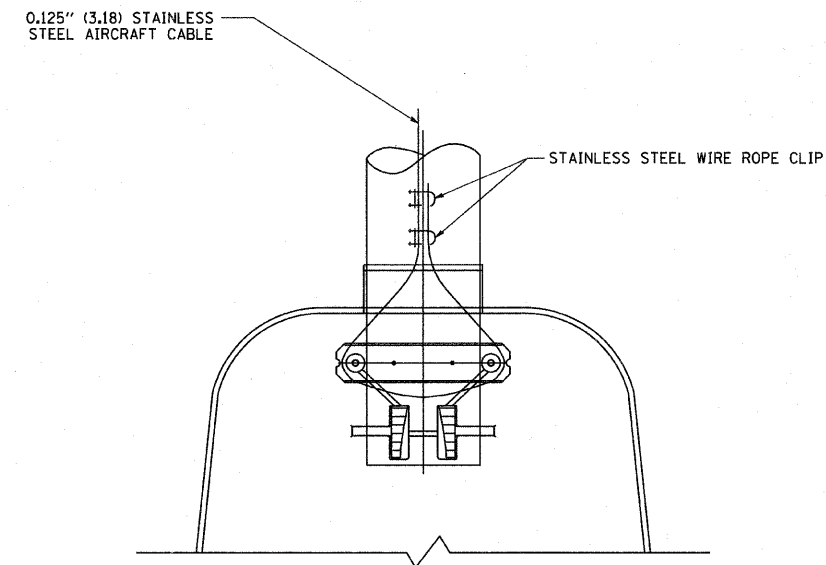
**SIDE VIEW (TRUSS ARM)**  
N.T.S.



**SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)**  
N.T.S.



STAINLESS STEEL  
U-BOLT HAYARD



**BOTTOM VIEW**  
N.T.S.

**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

SHEET E11

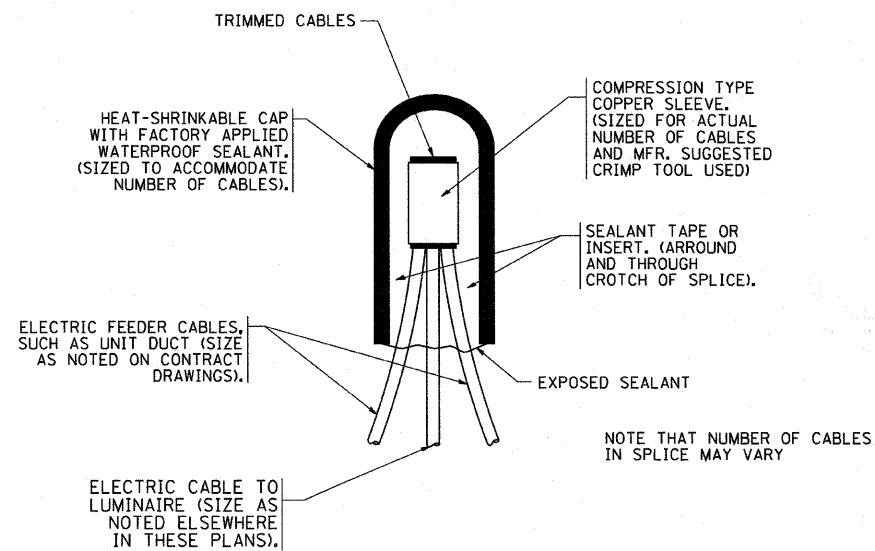
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	PLOT DATE = 1/4/2008	CHECKED -	REVISED -
		DATE -	REVISED -

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

**LUMINAIRE SAFETY CABLE ASSEMBLY**

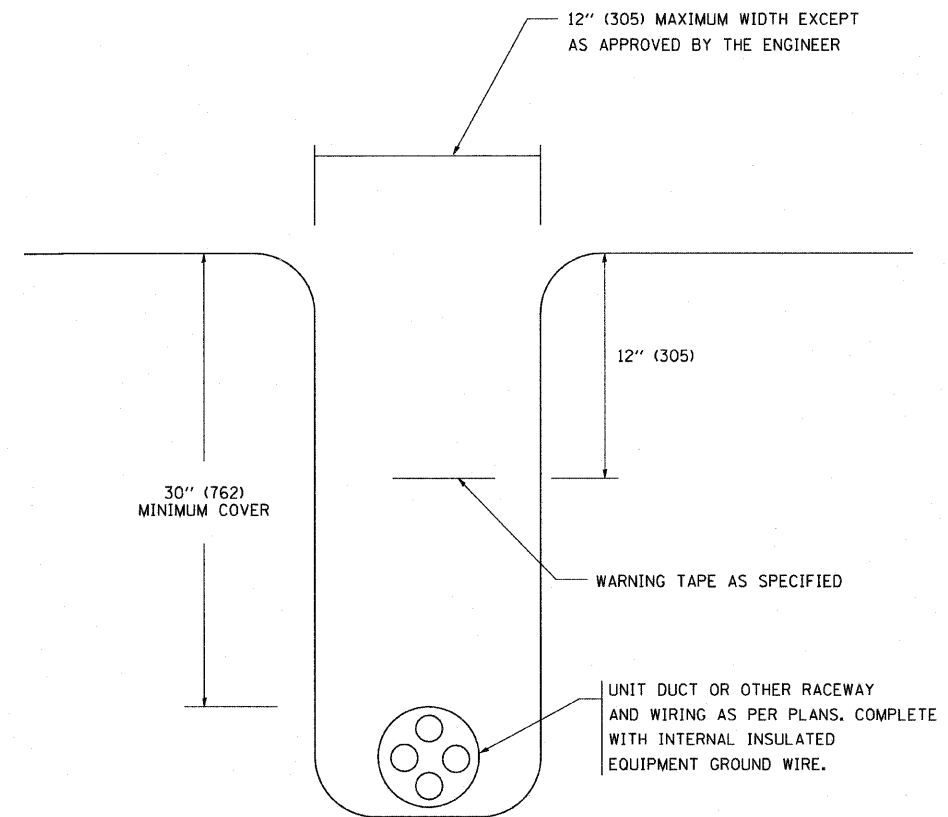
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	211
BE-701			CONTRACT NO. 6027	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



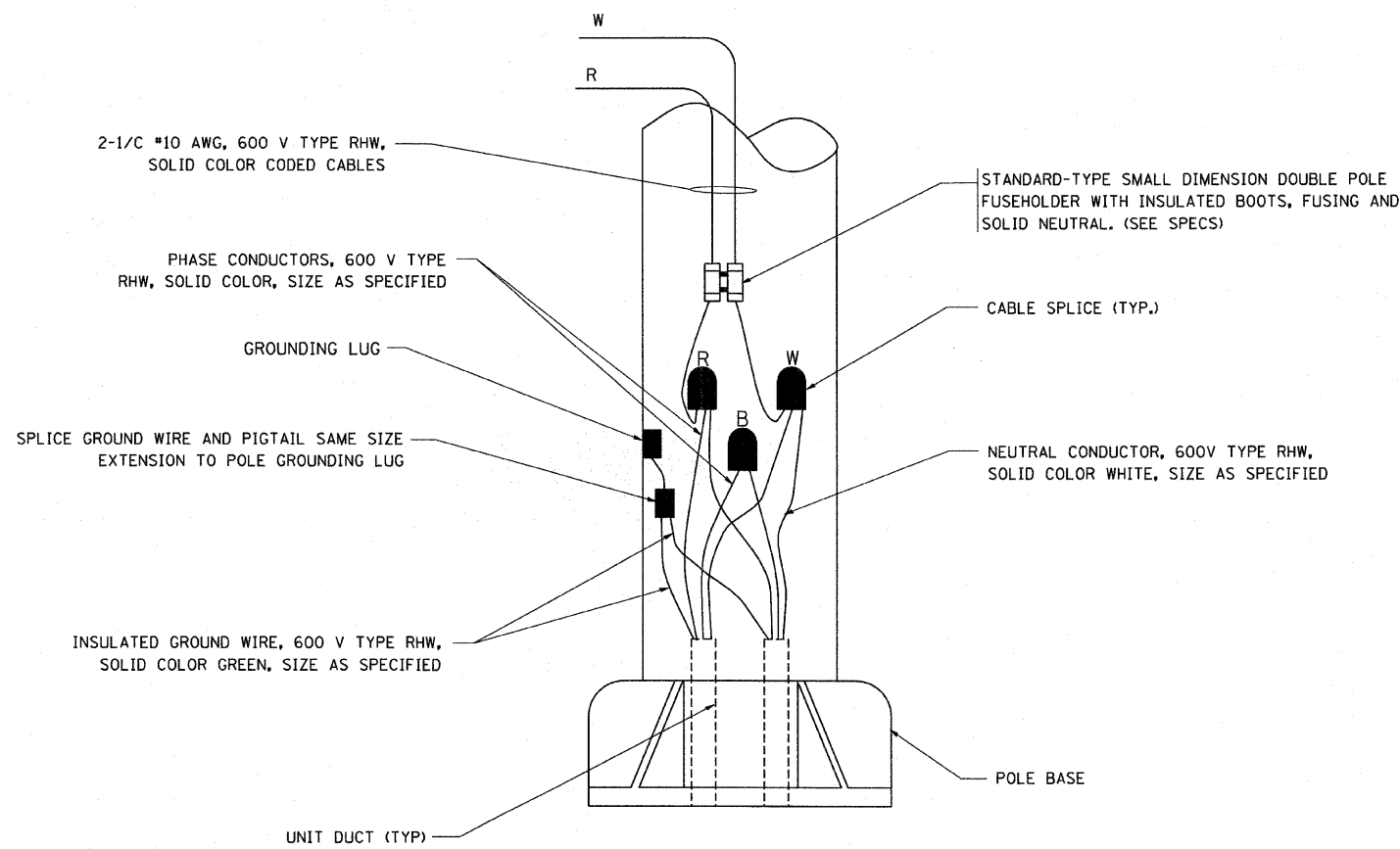
TYPICAL SPLICE DETAIL

N.T.S.



TYPICAL WIRING IN TRENCH DETAIL

N.T.S.



POLE WIRING DETAIL

N.T.S.

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W:\dstatd\22x34\be702.dgn

USER NAME = geglanoht  
PLOT SCALE = 50.000' / IN.  
PLOT DATE = 1/4/2008

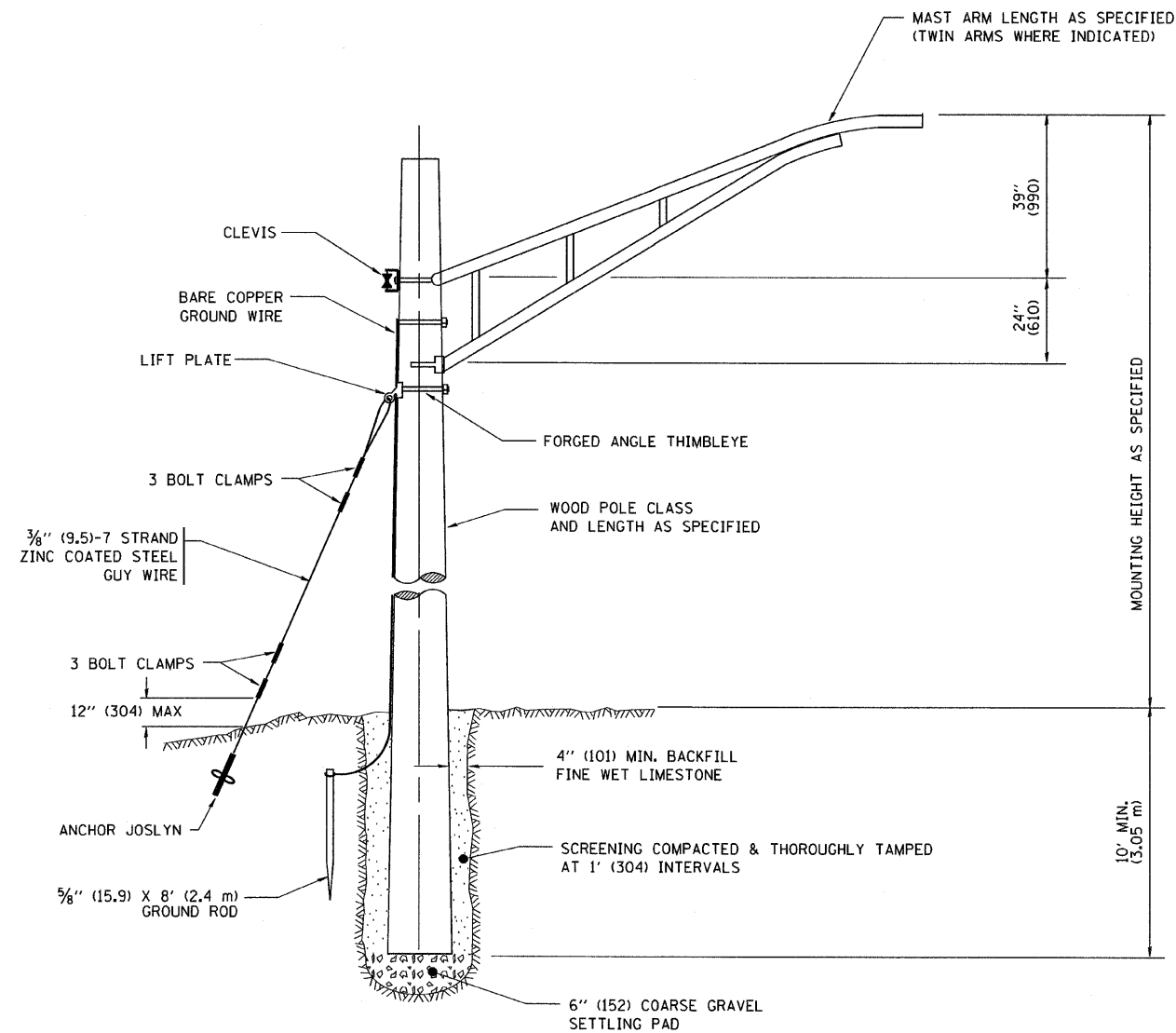
DESIGNED -	REVISED - 08-08-03
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

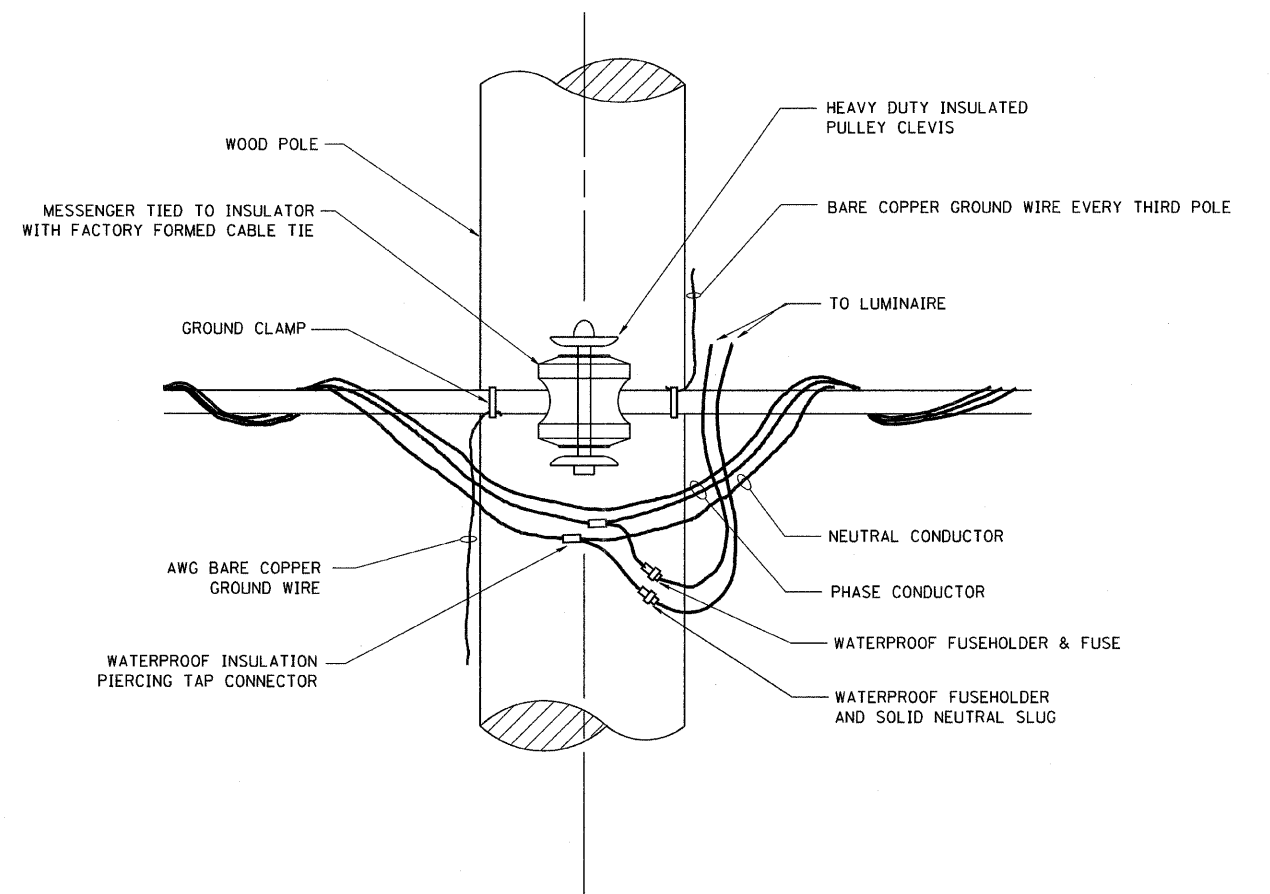
MISC. ELECTRICAL DETAILS  
SHEET A  
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	212
BE-702			CONTRACT NO. 60327	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SHEET E12



TEMPORARY LIGHT POLE DETAIL

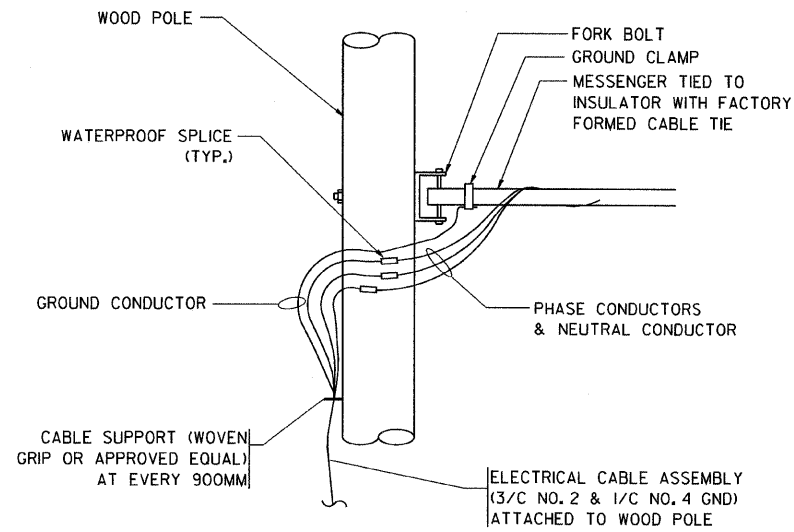


TEMPORARY LIGHT POLE ATTACHMENT DETAIL

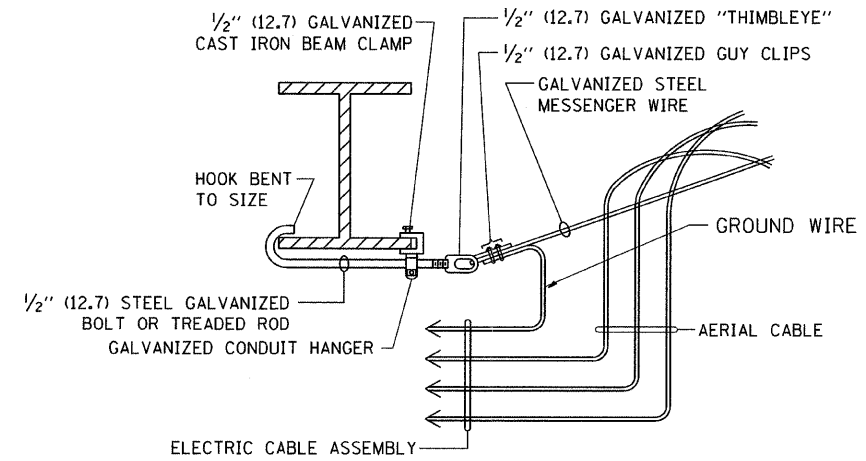
NOTES:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED

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	PLOT SCALE = 50.000' / IN.	DRAWN -	REVISED -		57	1414.2B	Cook	516	212A				
	PLOT DATE = 1/4/2008	CHECKED -	REVISED -		BE-800				CONTRACT NO. 60327				
		DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



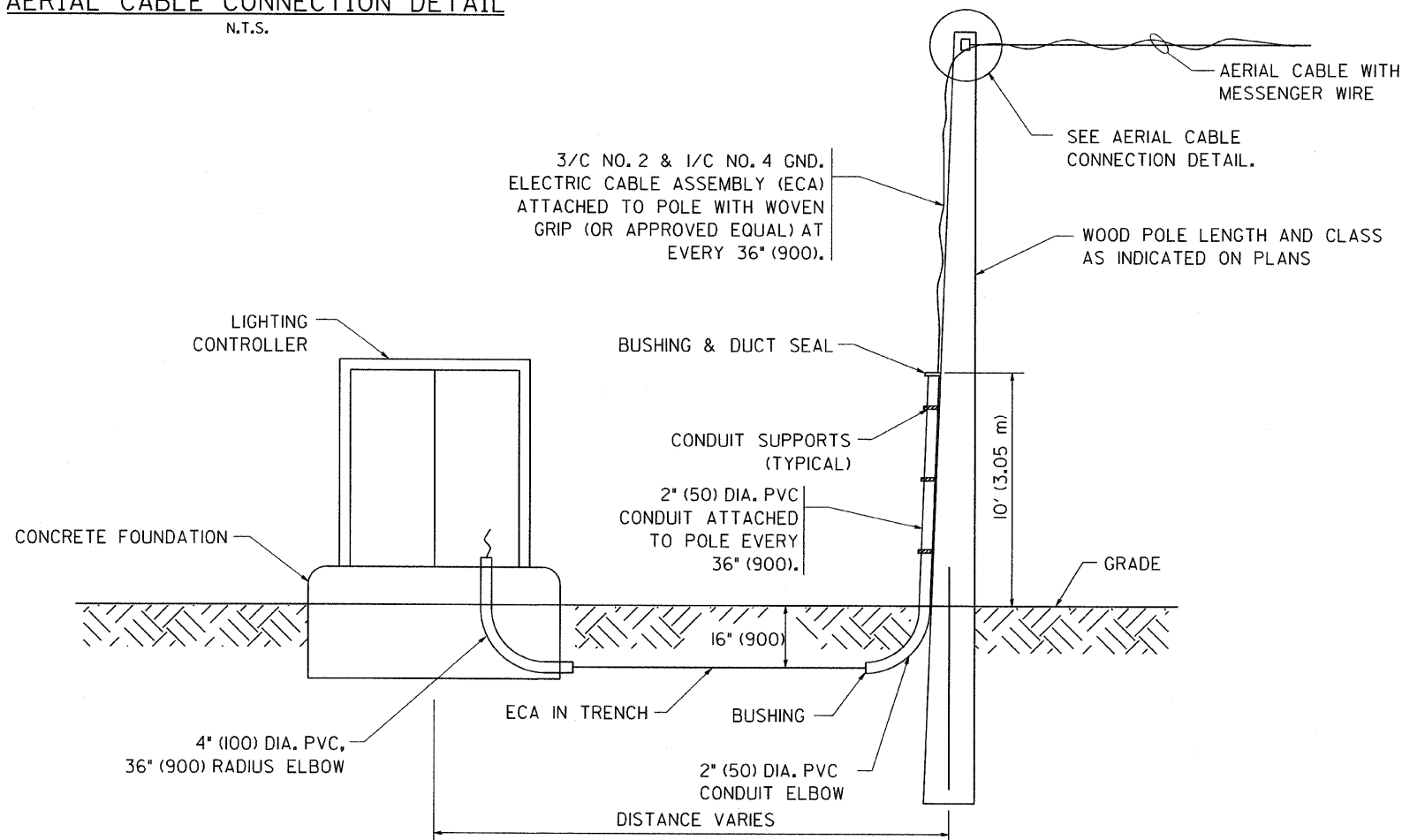
**AERIAL CABLE CONNECTION DETAIL**  
N.T.S.



**AERIAL CABLE ATTACHED TO STRUCTURE**  
NOT TO SCALE

**NOTES:**

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
2. SEE PROPOSED LIGHTING PLAN FOR CONDUIT, CABLE AND ROUTING.
3. THE CONTRACTOR SHALL PROVIDE INTERMEDIATE SUPPORTS TO MAINTAIN MINIMUM CLEARANCES. REFER TO AERIAL AERIAL CABLE ATTACHED TO STRUCTURE DETAIL.
4. COST OF SPLICES AND MOUNTING HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE FOR AERIAL CABLE.



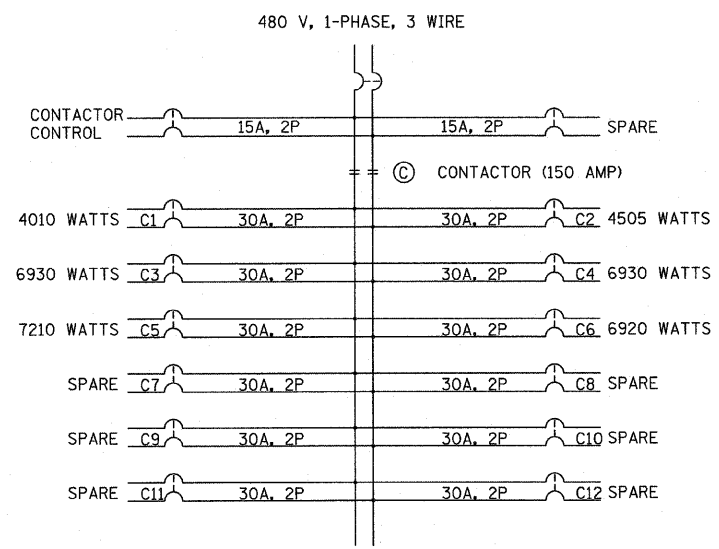
**WOOD POLE TO LIGHTING CONTROLLER WIRING CONNECTION DETAIL**  
N.T.S.

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		DRAWN -	REVISED -
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	PLOT DATE = 1/4/2008	DATE -	REVISED -

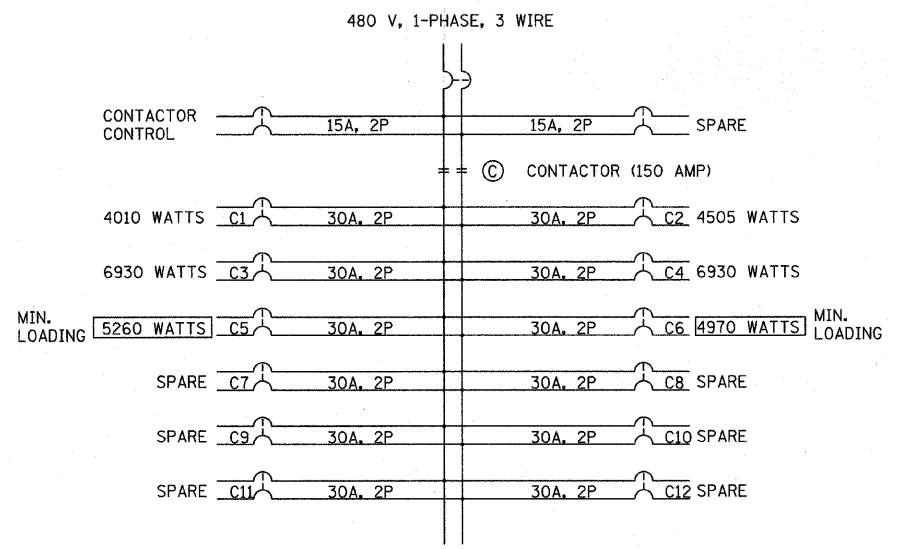
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>TEMPORARY AERIAL CABLE INSTALLATION</b>			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

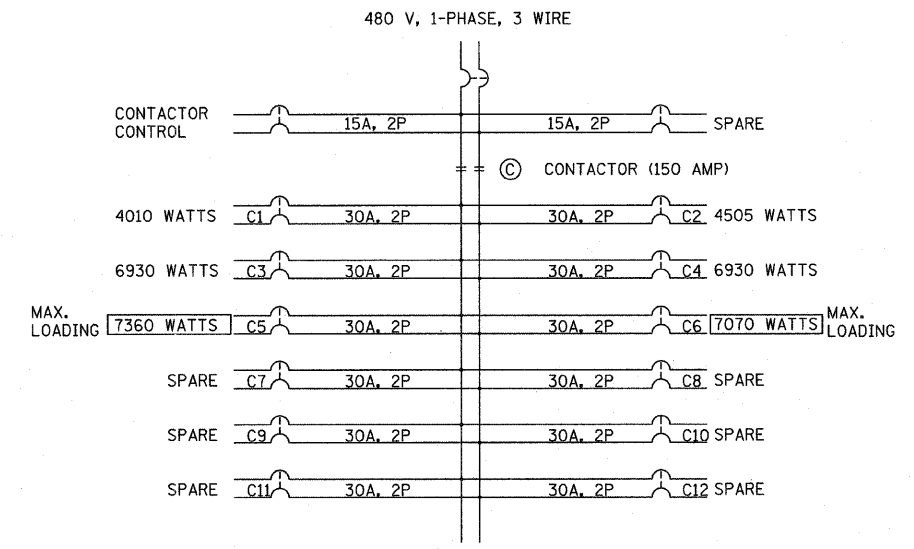
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	212B
BE-801			CONTRACT NO. 60T 27	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



EXISTING TOLLWAY CONTROLLER AT I-294 STA. 387+95 - WIRING DIAGRAM

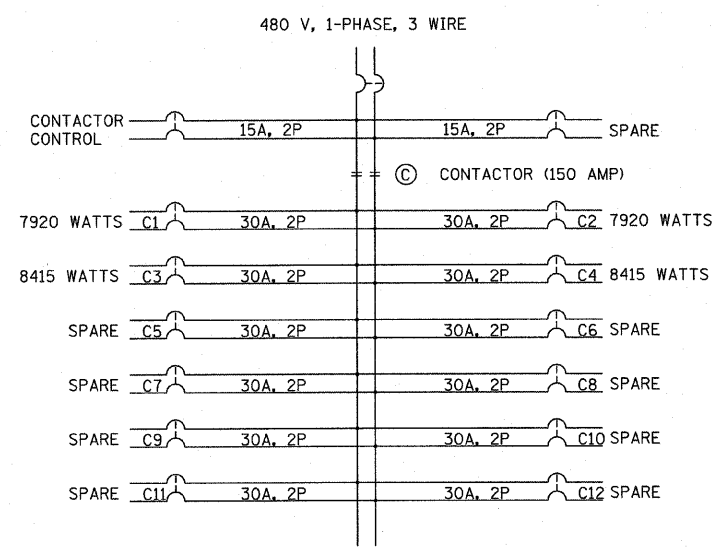


EXISTING TOLLWAY CONTROLLER AT I-294 STA. 387+95 - WIRING DIAGRAM DURING STAGED CONSTRUCTION

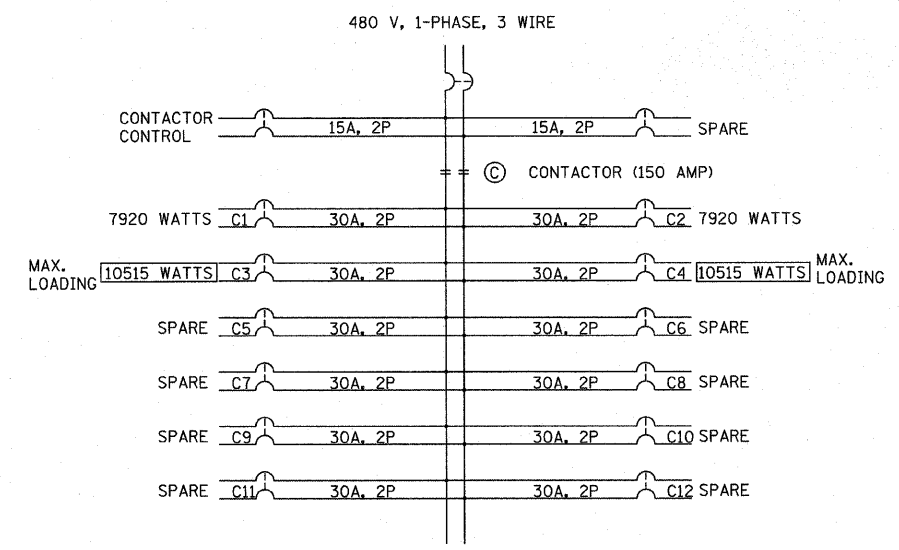


EXISTING TOLLWAY CONTROLLER AT I-294 STA. 387+95 - WIRING DIAGRAM IN FINAL CONFIGURATION

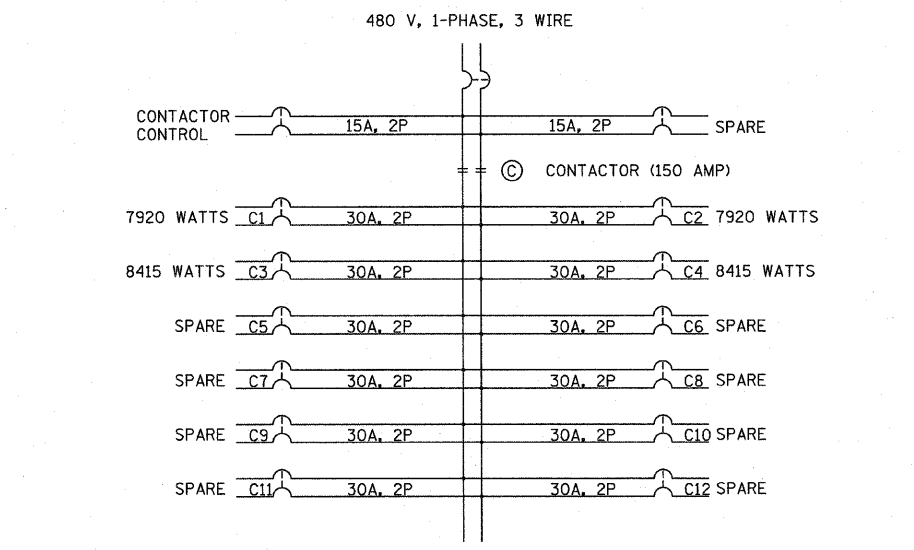
MIN. LOADING FOR CIRCUIT C5: 7210 WATTS (EXISTING LOAD) - 900 WATTS (TEMPORARY UNDERPASS LOAD) - 1200 WATTS (TEMPORARY MEDIAN LIGHT POLE LOAD) + 150 WATTS (ADDITIONAL UNDERPASS LOAD) = 5260 WATTS  
 MIN. LOADING FOR CIRCUIT C6: 6920 WATTS (EXISTING LOAD) - 900 WATTS (TEMPORARY UNDERPASS LOAD) - 1200 WATTS (TEMPORARY MEDIAN LIGHT POLE LOAD) + 150 WATTS (ADDITIONAL UNDERPASS LOAD) = 4970 WATTS  
 MAX. LOADING FOR CIRCUIT C5: 7210 WATTS (EXISTING LOAD) + 150 WATTS (ADDITIONAL UNDERPASS LOAD) = 7360 WATTS  
 MAX. LOADING FOR CIRCUIT C6: 6920 WATTS (EXISTING LOAD) + 150 WATTS (ADDITIONAL UNDERPASS LOAD) = 7070 WATTS



EXISTING TOLLWAY CONTROLLER AT I-294 STA. 443+00 - WIRING DIAGRAM



EXISTING TOLLWAY CONTROLLER AT I-294 STA. 443+00 - WIRING DIAGRAM DURING STAGED CONSTRUCTION

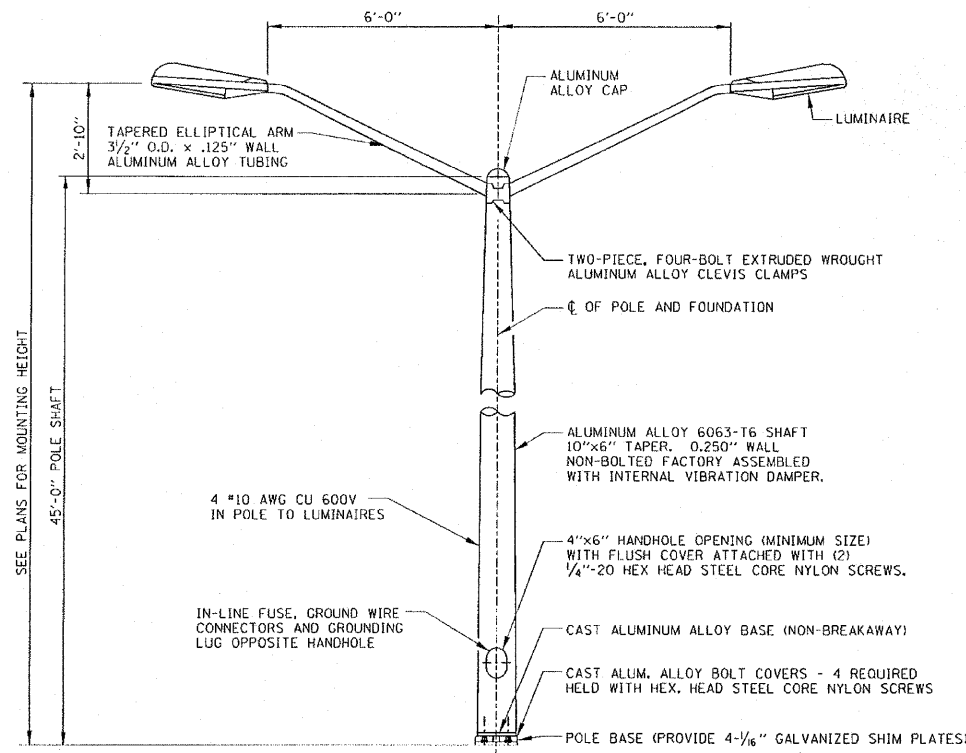


EXISTING TOLLWAY CONTROLLER AT I-294 STA. 443+00 - WIRING DIAGRAM IN FINAL CONFIGURATION

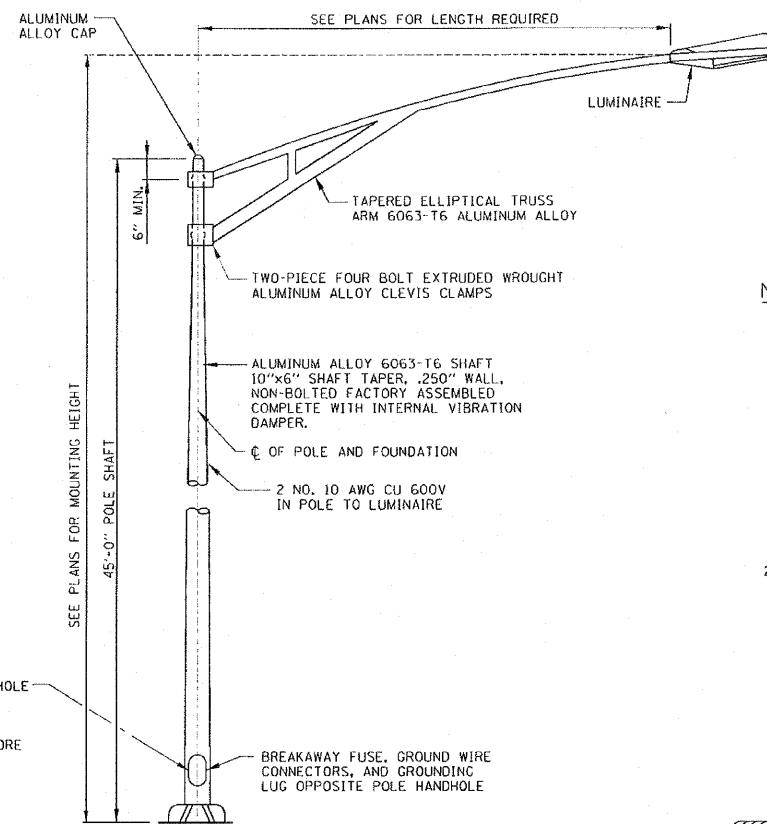
MAX. LOADING FOR CIRCUITS C3 AND C4 INCLUDES: 8415 WATTS (EXISTING LOAD) + 900 WATTS (TEMPORARY UNDERPASS LOAD) + 1200 WATTS (TEMPORARY MEDIAN LIGHT POLE LOAD) = 10515 WATTS  
 PLEASE NOTE: LINE WIRE DIAGRAMS ARE BASED ON EXISTING DESIGN PLANS AND FIELD INVESTIGATIONS. THE CONTRACTOR SHALL FIELD VERIFY CIRCUIT LOADING PRIOR TO THE START OF ANY CONSTRUCTION OPERATIONS.

TYLIN INTERNATIONAL	USER NAME =	DESIGNED - JDF	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-57 AT I-294 INTERCHANGE PROJECT I-294 LIGHTING CONTROLLER WIRING DIAGRAMS			F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 213	
	PLOT SCALE =	DRAWN - JDF	REVISED -		SCALE: N.T.S.	SHEET NO. 1 OF 1 SHEET	STA. TO STA.	CONTRACT NO. 60J27		ILLINOIS FED. AID PROJECT			
	PLOT DATE =	CHECKED - JPM	REVISED -										
		DATE - 3/18/2010	REVISED -										

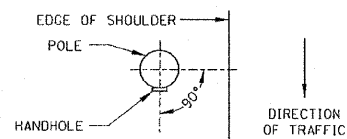
p:\602540(57-294)\road\elec\PI\_ELEC\_TW\_LINE\_DIAGRAM.dgn 3/23/2010 7:02:25 AM



TWIN MAST LIGHT STANDARD DETAIL  
NO SCALE



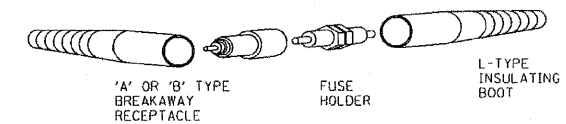
SINGLE MAST LIGHT STANDARD DETAIL  
NO SCALE



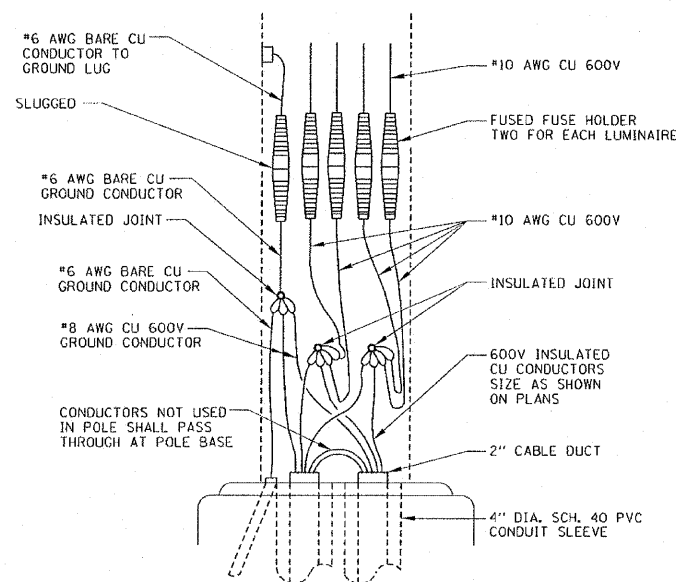
HANDHOLE ORIENTATION

NOTES:

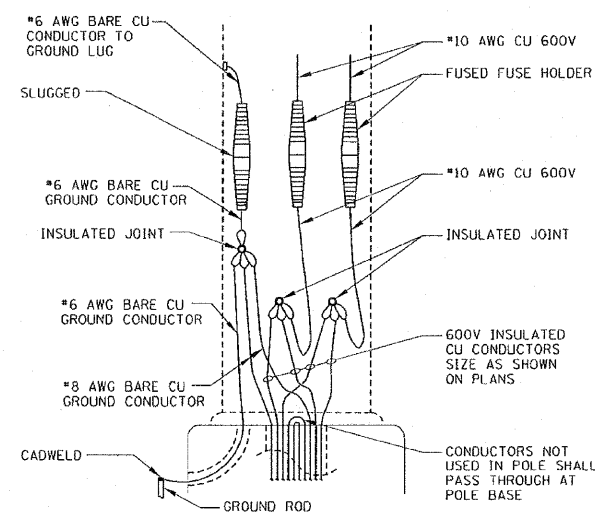
- ALL LIGHT STANDARDS, BOTH NEW AND EXISTING, ARE SHOWN ON PLANS WITH THE FOLLOWING SAMPLE DESCRIPTION:  
 MOUNTING HEIGHT  
 ARM LENGTH  
 SPACING RANGE  
 CIRCUIT NUMBER  
 STATION OF LIGHT STANDARD  
 STA. 0 + 20  
 DISTRIBUTION TYPE  
 CONTROL:  
 S=SEMI-CUTOFF  
 C=FULL CUTOFF
- FOR STRUCTURAL DETAILS OF MEDIAN BARRIER AND CAISSON, SEE STANDARD H8 (MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS), STANDARD H9 (MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS - TYPE 4 RETROFIT, 32" BARRIER) OR STRUCTURAL PLANS.



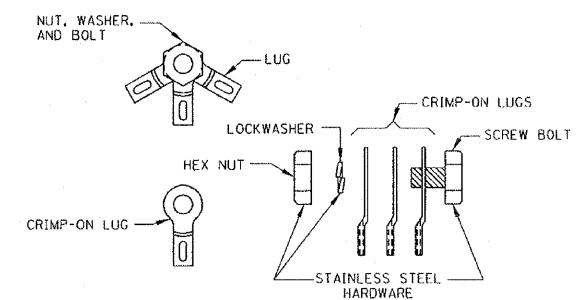
IN-THE-LINE FUSE HOLDER DETAIL WITH BREAKAWAY FEATURE  
NO SCALE



TWIN MAST POLE BASE WIRING DIAGRAM  
NO SCALE



SINGLE MAST POLE BASE WIRING DIAGRAM  
NO SCALE



JOINT ASSEMBLY DETAILS  
NO SCALE

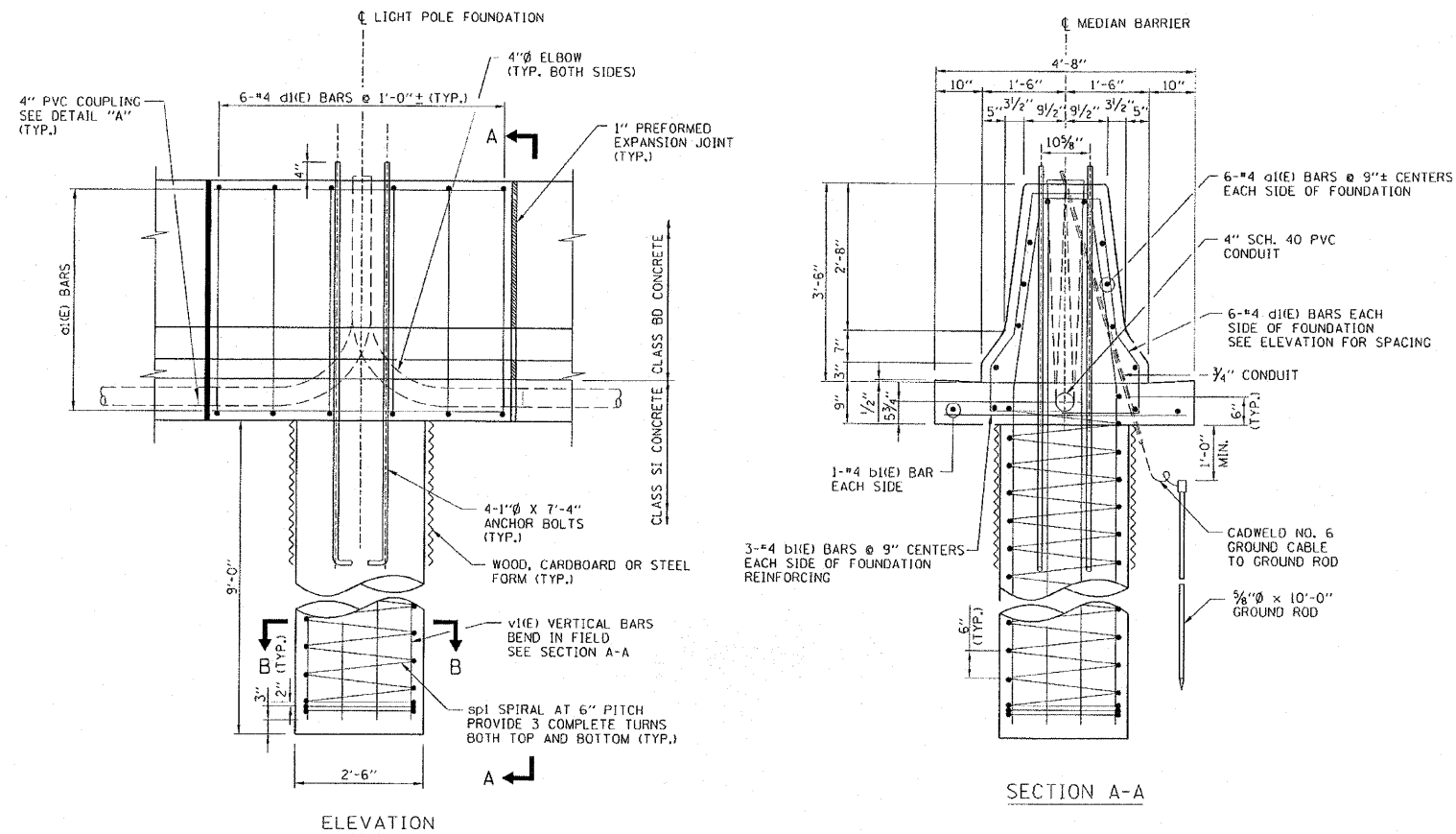
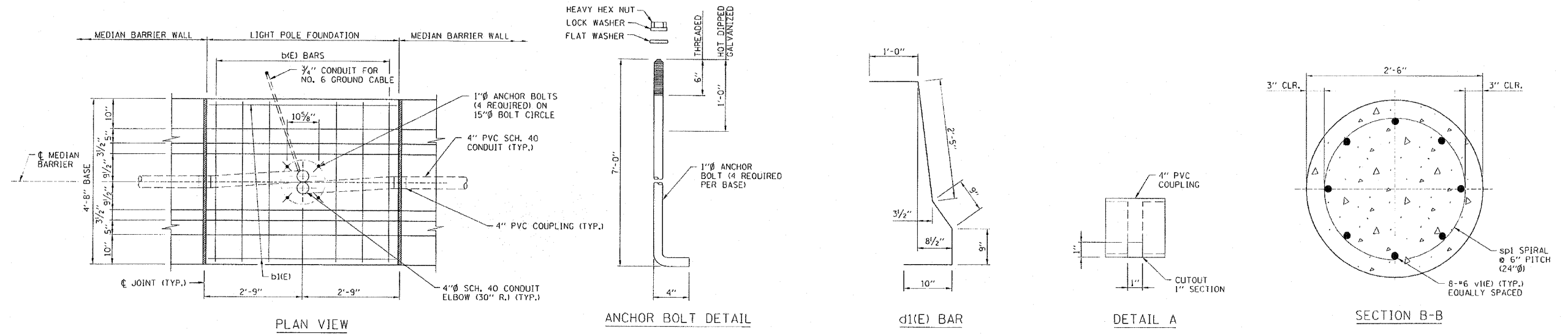
SHEET E14



APPROVED *Jeff Daley* CHIEF ENGINEER DATE 1-1-2007

DATE	REVISIONS

LIGHT STANDARD POLE WIRING  
STANDARD H2-00



REINFORCING BAR SCHEDULE					
BAR	NO.	SIZE	LENGTH	WT. LBS.	SHAPE
d1(E)	12	#4	5'-0"	40	[Symbol]
b1(E)	6	#4	4'-2"	17	[Symbol]
b1(E)	2	#4	5'-2"	7	[Symbol]
d1(E)	12	#4	5'-9"	46	[Symbol]
sp1	1	#4	*	*	[Symbol]
v1(E)	8	#6	11'-9"	142	[Symbol]

\* SEE SECT. A-A

APPROVED: *Jeff Coley*  
 CHIEF ENGINEER DATE: 1-1-2007

TYPE 1 CENTERED CAISSON, 42" BARRIER

SHEET E15

**Illinois Tollway**  
 Open Roads for a Faster Future

DATE	REVISIONS

MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS

STANDARD H8-00



**TRAFFIC SURVEILLANCE GENERAL NOTES**

- THE LOCATIONS OF EXISTING WATER MAINS, GAS MAINS, SEWERS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THEY ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM J.U.L.I.E.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING IDOT ELECTRICAL FACILITIES PRIOR TO PERFORMING ANY WORK AT HIS/HER OWN EXPENSE IF REQUIRED. THE CONTRACTOR SHALL ALSO BE LIABLE FOR ANY DAMAGE TO FACILITIES RESULTING FROM INACCURATE LOCATING.
- THE CONTRACTOR MAY OBTAIN, ON REQUEST, PLANS FOR THE EXISTING ELECTRICAL FACILITIES FROM THE DEPARTMENT.
- THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR LOCATING AND PROVIDING PROTECTION FOR FACILITIES DURING ALL PHASES OF CONSTRUCTION. IF AT ANY TIME, THE FACILITIES ARE DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DEPARTMENT AND MAKE ALL NECESSARY ARRANGEMENTS FOR REPAIR TO THE SATISFACTION OF THE ENGINEER AT HIS/HER OWN EXPENSE.
- THE CONTACT PERSON FOR THIS CONTRACT IS JEFF GALAS, TRAFFIC SYSTEMS CENTER MANAGER, 708-524-2145. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE DEPARTMENT AND THE INVOLVED PARTIES AS DIRECTED BY THE DEPARTMENT.
- THE ENGINEERING DESIGN IN THESE PLANS IS BASED UPON FIELD INVESTIGATIONS OF CURRENT CONDITIONS AND REVIEW OF EXISTING DESIGN PLANS FOR THE INTERCHANGE PROJECT. THE ACTUAL CONDITIONS MAY BE DIFFERENT THAN THOSE DEPICTED. THE CONTRACTOR SHALL VERIFY THE EXISTING FIELD CONDITIONS PRIOR TO ANY CONSTRUCTION ACTIVITIES AND CORRELATE THESE CONDITIONS WITH THE PROPOSED CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL IDENTIFY TO THE ENGINEER ANY SIGNIFICANT DIFFERENCES BETWEEN THESE PLANS AND THE EXISTING FIELD CONDITIONS THAT COULD IMPACT HIS/HER EFFORTS PRIOR TO BEGINNING WORK. CORRECTIVE ACTIONS FOR PROBLEMS ENCOUNTERED AFTER THE CONTRACTOR HAS BEGUN WORK SHALL BE INCLUDED IN THE COST OF THE UNLESS WORK PREVIOUSLY IDENTIFIED TO THE ENGINEER.
- ALL ELECTRICAL WORK SHALL CONFORM TO THE NATIONAL ELECTRIC CODE (NEC).
- THE CONTRACTOR SHALL BE AWARE THAT TEST SOIL BORINGS WERE NOT MADE AT ALL LOCATIONS WHERE SURVEILLANCE ELEMENTS OR RELATED EQUIPMENT ARE TO BE INSTALLED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE SITE CONDITIONS AT THESE LOCATIONS BEFORE THE START OF CONSTRUCTION OPERATIONS.
- WHENEVER CONDUITS (INCLUDING SPARES) ARE INSTALLED FOR FIBER OPTIC OR ELECTRICAL POWER CABLE, A POLYETHYLENE PULL ROPE WITH DETECTABLE METALLIC CONDUCTOR SHALL BE INSTALLED WITH THE CONDUIT. PULL ROPE SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED CONDUIT PAY ITEM.
- THE QUANTITIES OF RACEWAYS WHERE INDICATED IN THE PLANS ARE APPROXIMATIONS ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS AND SHALL INSTALL RACEWAYS IN COMPLETE COMPLIANCE WITH THE SPECIFIED REQUIREMENTS.
- EXACT FIELD LOCATIONS OF SURVEILLANCE ITEMS SHALL BE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL TAKE CARE NOT TO INSTALL SURVEILLANCE ITEMS IN DRAINAGE AREAS.
- ANY GROUND AREAS DISTURBED DURING THE INSTALLATION OF SURVEILLANCE FIELD DEVICES SHALL BE RE GRADED AND SEEDED TO THE SATISFACTION OF THE ENGINEER. THE COST SHALL BE INCLUDED IN THE ASSOCIATED SURVEILLANCE PAY ITEMS.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, CONSTRUCTION METHODOLOGIES, PRODUCT MANUFACTURER SPECIFICATIONS, OWNERS MANUALS, AND USER MANUALS BEFORE PROCURING AND INSTALLING SURVEILLANCE ITEMS AS PART OF THIS CONTRACT. ALL PROPOSED SURVEILLANCE WORK SHALL BE REVIEWED AND APPROVED BY THE DEPARTMENT IN CONSULTATION WITH THE DESIGN ENGINEER.
- NO WORK SHALL BE CONDUCTED BY THE CONTRACTOR ON ANY EXISTING STREET LIGHTING AND SURVEILLANCE CONDUIT, POLES, OR CONTROLLER CABINETS UNDER THE JURISDICTION OF THE DEPARTMENT WITHOUT FIRST NOTIFYING THE DEPARTMENT 72 HOURS BEFORE COMMENCING WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING BY THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ALL APPLICABLE TRAFFIC CONTROL RULES AND REGULATIONS ACCORDING TO SECTION 701 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR MAY BE REQUIRED TO INSTALL ADDITIONAL SIGNS AND APPURTENANCES TO MAINTAIN SAFE CONDITIONS IN THE WORK ZONE AT ALL TIMES AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.
- A QUANTITY OF TRENCH BACKFILL FOR ELECTRICAL WORK HAS BEEN PROVIDED FOR THE REMOVAL OF THE EXISTING REINFORCED CONCRETE DUCT BANK ALONG THE MEDIAN OF I-57.
- THE PROPOSED FIBER OPTIC TRUNK SHALL BE INSTALLED AND ACTIVATED PRIOR TO THE START OF STAGE 3 CONSTRUCTION.

**SUMMARY OF TRAFFIC SURVEILLANCE QUANTITIES**

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	242
81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	87
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	1620
81013000	CONDUIT IN TRENCH, 4" DIA., PVC	FOOT	870
81025600	CONDUIT ENCASED, REINFORCED CONCRETE, 4" DIA., PVC 2 WIDE X 1 HIGH	FOOT	7764
81025700	CONDUIT ENCASED, REINFORCED CONCRETE, 4" DIA., PVC 3 WIDE X 1 HIGH	FOOT	1577
81101000	CONDUIT ATTACHED TO STRUCTURE, 4" DIA., GALVANIZED STEEL	FOOT	878
81101005	CONDUIT ATTACHED TO STRUCTURE, 4" DIA., PVC COATED GALVANIZED STEEL	FOOT	672
81200230	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	1232
81200270	CONDUIT EMBEDDED IN STRUCTURE, 4" DIA., PVC	FOOT	7596
81304200	JUNCTION BOX EMBEDDED IN STRUCTURE 12" X 12" X 8"	EACH	8
81300810	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 18" X 12" X 8"	EACH	3
81400200	HEAVY-DUTY HANDHOLE	EACH	29
81700335	ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE USE) 3-1/C NO. 6	FOOT	2551
81800330	AERIAL CABLE, 3-1/C NO. 6 WITH MESSENGER WIRE	FOOT	1116
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	28285
87200400	SPAN WIRE	FOOT	30198
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1697
87800200	CONCRETE FOUNDATION, TYPE D	FOOT	6
87900200	DRILL EXISTING HANDHOLE	EACH	9
89502380	REMOVE EXISTING HANDHOLE	EACH	17
	CONDUIT IN TRENCH, 1" DIA., COILABLE NONMETALLIC CONDUIT, SPECIAL	FOOT	99
	ELECTRIC CABLE NO. 19, 25 PAIR	FOOT	23303
	JUNCTION BOX, POLE OR POST MOUNTED	EACH	6
	REINFORCED CONCRETE DUCT BANK REMOVAL	FOOT	9851
X0301576	COAXIAL CABLE IN CONDUIT	FOOT	1899
X0322247	MAINTENANCE OF EXISTING TRAFFIC SURVEILLANCE	L SUM	1
X0322441	DIGITAL LOOP DETECTOR SENSOR UNIT (4 CHANNEL)	EACH	1
X0322442	tone EQUIPMENT - 3 FREQUENCY RECEIVER PROGRAMMABLE	EACH	4
X0322443	tone EQUIPMENT - 3 FREQUENCY TRANSMITTER PROGRAMMABLE	EACH	4
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	318
X0323670	PREFORMED DETECTOR LOOP	FOOT	387
X0324866	REMOVE AND REINSTALL SURVEILLANCE CABINET	EACH	1
X0326133	TEMPORARY WOOD POLE, 45 FEET, CLASS 5	EACH	44
X0326502	FIBER OPTIC SPLICE	EACH	28
X0326836	REMOVE AND REINSTALL VIDEO CAMERA AND EQUIPMENT	EACH	2
X8710027	FIBER OPTIC CABLE 4 FIBERS, SINGLE MODE	FOOT	681
X8710035	FIBER OPTIC CABLE 96 FIBERS, SINGLE MODE	FOOT	41443

**LEGEND**

- EXISTING TRAFFIC CONTROL SURVEILLANCE CONDUIT AND CABLING
- EXISTING TRAFFIC CONTROL SURVEILLANCE APPURTENANCES
- REMOVAL OF EXISTING SURVEILLANCE ITEMS
- AERIAL CABLING - SEE PLAN AND WIRING DIAGRAM SHEETS FOR DETAILS
- TEMPORARY WOOD POLE, 45 FEET, CLASS 5
- PROPOSED JUNCTION BOX - SEE PLANS FOR TYPE SPECIFIED
- PROPOSED HEAVY-DUTY HANDHOLE
- PROPOSED PREFORMED DETECTOR LOOP
- PROPOSED CONDUIT - SEE PLANS FOR TYPE AND DETAILS
- RELOCATED EXISTING CONTROLLER- SEE PLANS FOR DETAILS
- REINSTALLED EXISTING SURVEILLANCE CAMERA - SEE PLANS FOR LOCATION
- A.T.S. CONDUIT ATTACHED TO STRUCTURE
- E.I.S. CONDUIT EMBEDDED IN STRUCTURE
- O/S OFFSET
- SS STAINLESS STEEL
- (E) EXISTING

**IDOT STATE STANDARDS**

- 814001: HANDHOLES
- 886001: DETECTOR LOOP INSTALLATIONS

**IDOT DISTRICT 1 STANDARDS**

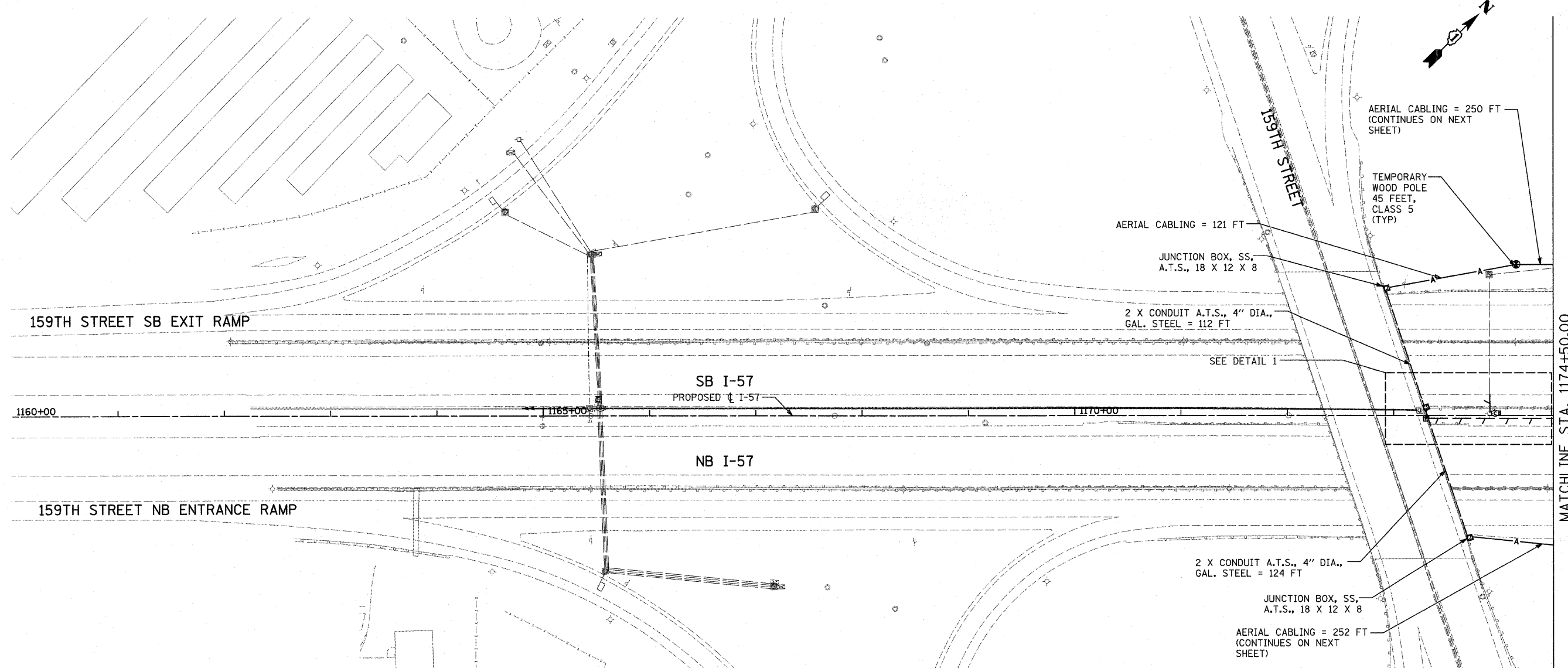
- BD-27: CONCRETE BARRIER TRANSITION & DETAILS, CONCRETE BARRIER BASE
- BE-703: MISCELLANEOUS ELECTRICAL DETAILS, SHEET B J BOX EMBEDDED IN BARRIER WALL - INSTALLATION OF CONDUIT IN BRIDGE PARAPET EXPANSION JOINT - ELECTRIC CONNECTION TO UNDERPASS LIGHTING
- TS-03: HANDHOLE TO INTERCEPT EXISTING CONDUIT

**IDOT TRAFFIC SYSTEMS CENTER STANDARDS**

- TSC: LOOP STATUS REPORT
- TSC: PREFORMED LOOP - TYPICAL INSTALLATION - NEW CONCRETE PAVEMENT

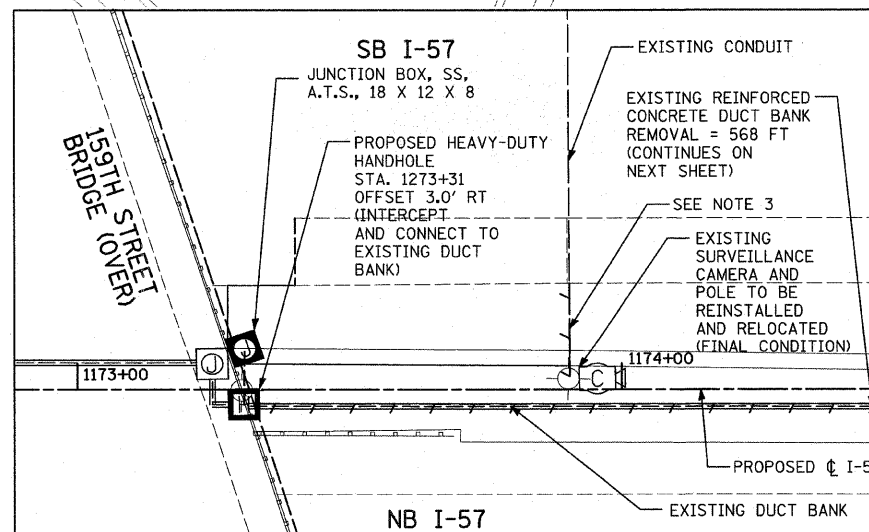
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	PLOT SCALE =	DRAWN - CAC	REVISED -		TRAFFIC SURVEILLANCE GENERAL NOTES, LEGEND, AND QUANTITIES	57	1414.2B	COOK	516	216	
	PLOT DATE =	CHECKED - DAJ	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEET	STA.	TO STA.	CONTRACT NO. 60J27		
DATE - 3/18/2010		REVISED -					FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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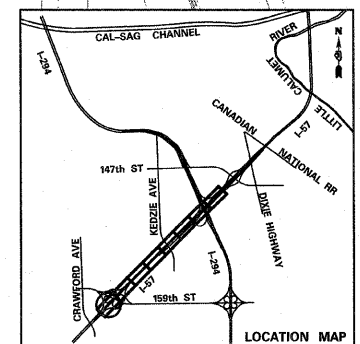
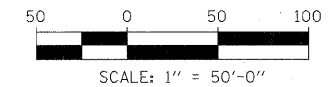


**NOTES:**

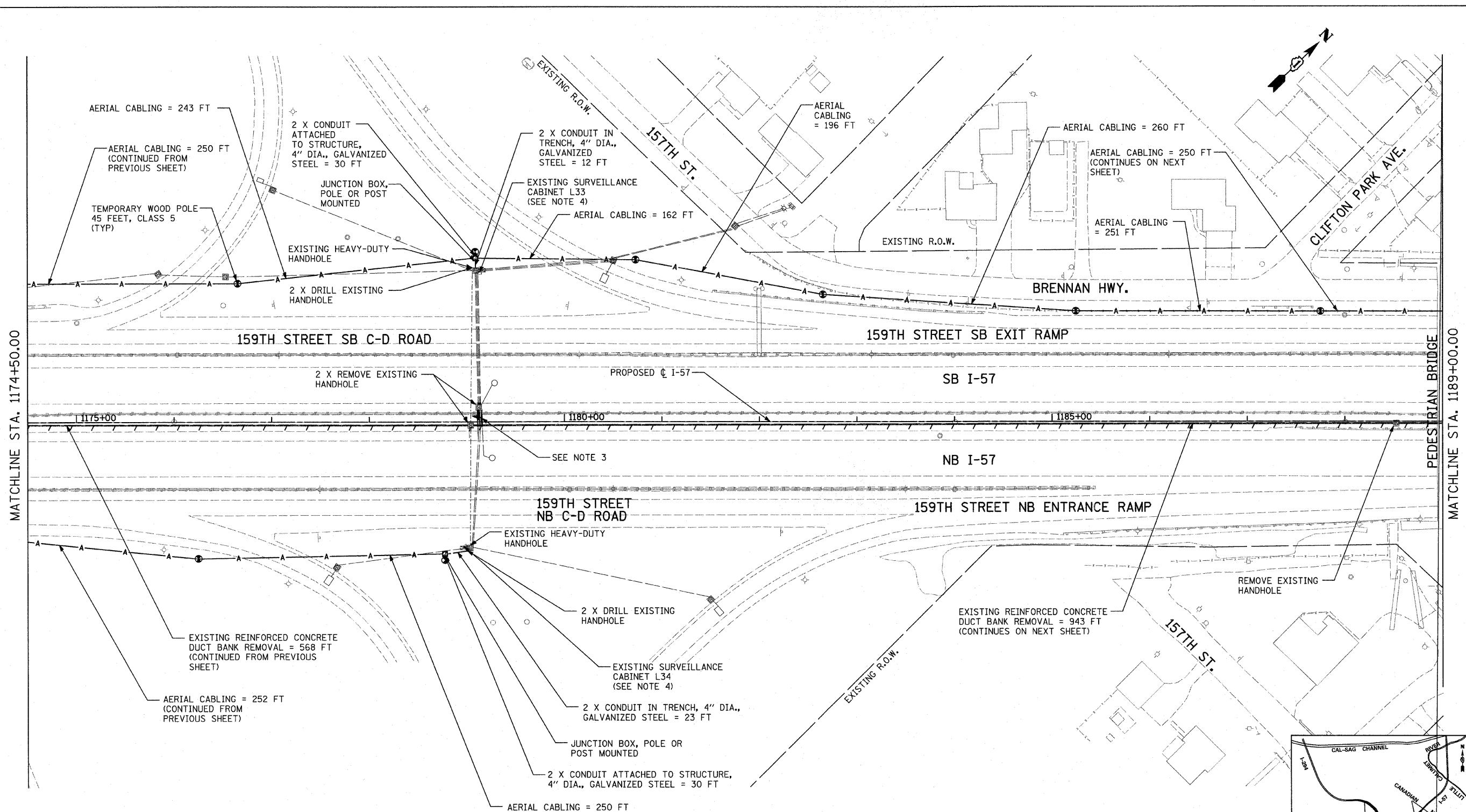
1. SEE WIRING DIAGRAM SHEETS FOR CABLING DETAILS AT 159TH STREET PROPOSED HANDHOLE.
2. SEE WIRING DIAGRAM SHEETS FOR AERIAL CABLING DETAILS ON TEMPORARY WOOD POLES.
3. REMOVAL OF EXISTING CONDUIT SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED REPLACEMENT ITEMS - SEE PROPOSED TRAFFIC SURVEILLANCE PLAN SHEETS



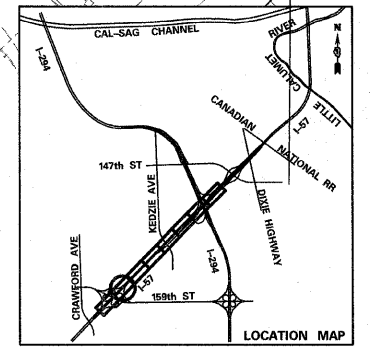
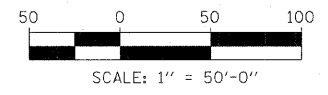
**DETAIL 1**



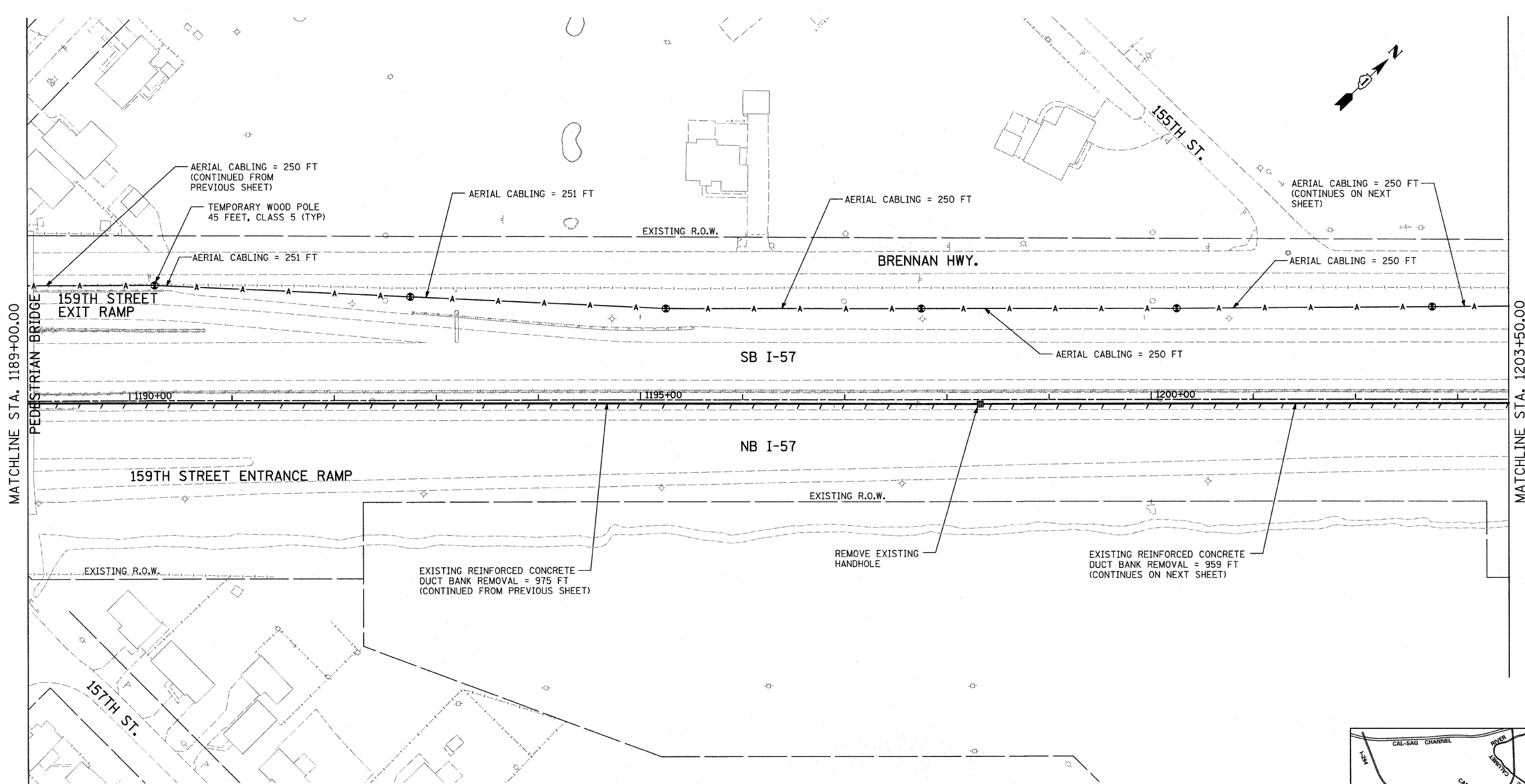
TYLIN INTERNATIONAL	USER NAME =	DESIGNED - JDF	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>I-57 AT I-294 INTERCHANGE PROJECT</b>			F.A.I. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	DRAWN - CAC	REVISED -		57	1414.2B	COOK	516	217			
	PLOT DATE =	CHECKED - DAJ	REVISED -		<b>PROPOSED TEMPORARY TRAFFIC SURVEILLANCE PLANS AND REMOVALS</b>			CONTRACT NO. 60J27				
		DATE - 3/18/2010	REVISED -		SCALE: 1"=50'	SHEET NO. 1 OF 8 SHEETS	STA. 1160+00 TO STA. 1174+50	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



- NOTES:**
- SEE WIRING DIAGRAM SHEETS FOR CABLING DETAILS AT SURVEILLANCE CABINETS L33 AND L34.
  - SEE WIRING DIAGRAM SHEETS FOR AERIAL CABLING DETAILS ON TEMPORARY WOOD POLES.
  - REMOVAL OF EXISTING CONDUIT SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED REPLACEMENT ITEMS - SEE PROPOSED TRAFFIC SURVEILLANCE PLAN SHEETS
  - SEE TEMPORARY TRAFFIC SURVEILLANCE DETAILS FOR CONDUIT INFORMATION AT SURVEILLANCE CABINETS.

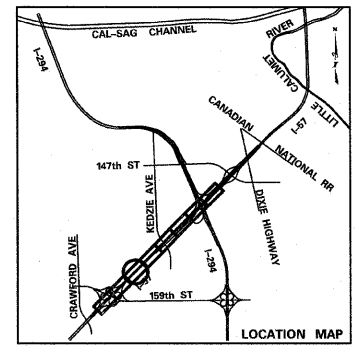
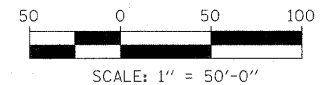


<b>TYLIN INTERNATIONAL</b> USER NAME = PLOT SCALE = PLOT DATE =	DESIGNED - JDF	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>I-57 AT I-294 INTERCHANGE PROJECT</b> <b>PROPOSED TEMPORARY TRAFFIC SURVEILLANCE PLANS AND REMOVALS</b>			F.A.I. RTE. = 57	SECTION = 1414.2B	COUNTY = COOK	TOTAL SHEETS = 516	SHEET NO. = 218	
	DRAWN - CAC	REVISED -		SCALE: 1"=50'    SHEET NO. 2 OF 8 SHEETS    STA. 1174+50 TO STA. 1189+00			CONTRACT NO. 60J27		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			
	CHECKED - DAJ	REVISED -										
	DATE - 3/18/2010	REVISED -										

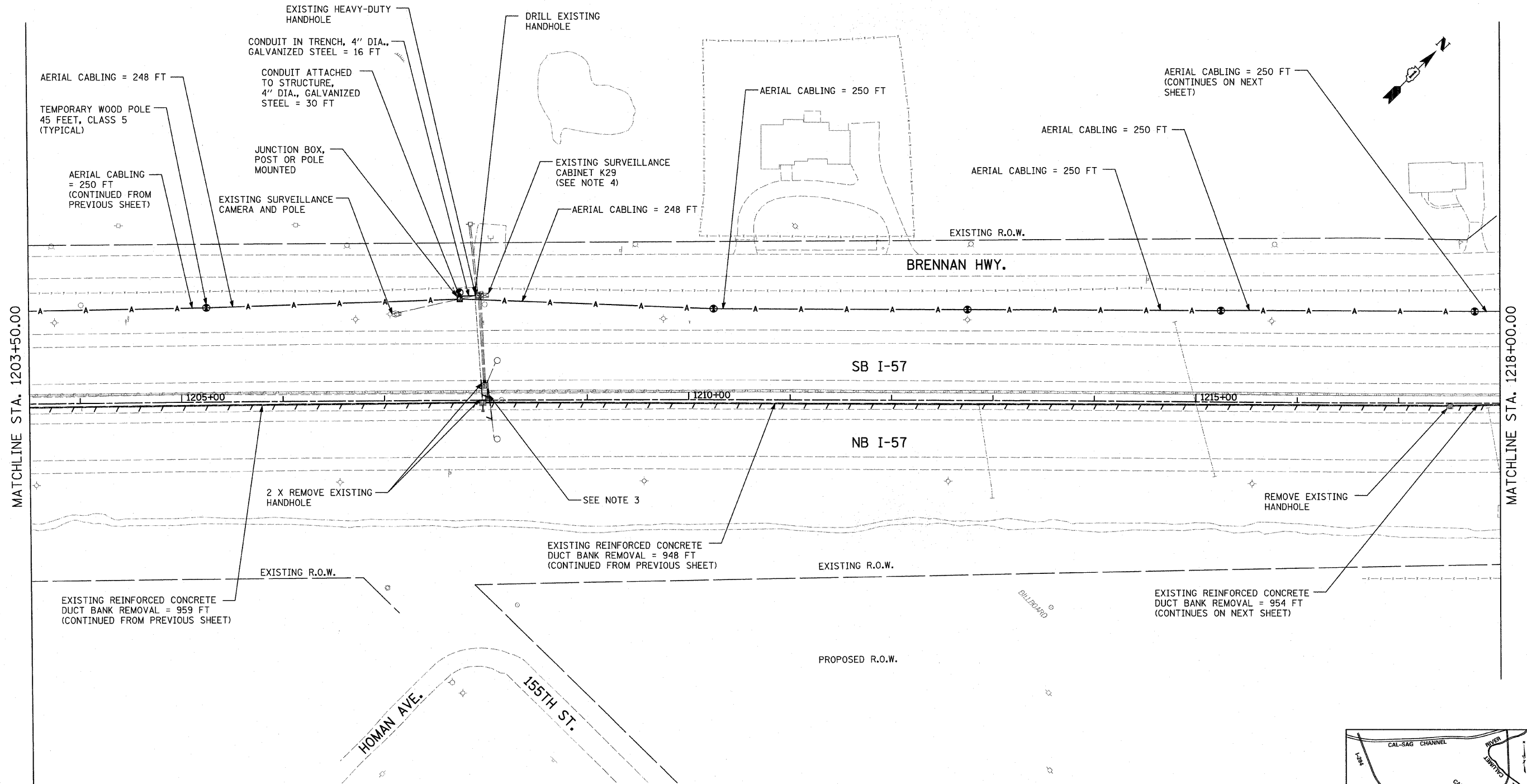


**NOTES:**

1. SEE WIRING DIAGRAM SHEETS FOR AERIAL CABLING DETAILS ON TEMPORARY WOOD POLES.
2. REMOVAL OF EXISTING CONDUIT SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED REPLACEMENT ITEMS - SEE PROPOSED TRAFFIC SURVEILLANCE PLAN SHEETS

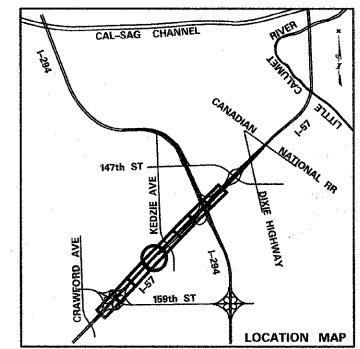
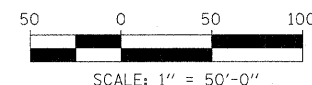


<b>TYLIN INTERNATIONAL</b> USER NAME = PLOT SCALE = PLOT DATE =	DESIGNED - JDF	REVISIONS -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>I-57 AT I-294 INTERCHANGE PROJECT</b> <b>PROPOSED TEMPORARY TRAFFIC SURVEILLANCE PLAN AND REMOVALS</b>		F.A.I. RTE. = 57	SECTION = 1414.2B	COUNTY = COOK	TOTAL SHEETS = 516	SHEET NO. = 219	
	CHECKED - DAJ	REVISIONS -		SCALE: 1"=50'    SHEET NO. 3 OF 8 SHEETS    STA. 1189+00 TO STA. 1203+50		CONTRACT NO. 60J27		FED. ROAD DIST. NO.    ILLINOIS FED. AID PROJECT			
	DATE - 3/18/2010	REVISIONS -									



**NOTES:**

1. SEE WIRING DIAGRAM SHEETS FOR CABLING DETAILS AT SURVEILLANCE CABINET K29
2. SEE WIRING DIAGRAM SHEETS FOR AERIAL CABLING DETAILS ON TEMPORARY WOOD POLES.
3. REMOVAL OF EXISTING CONDUIT SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED REPLACEMENT ITEMS - SEE PROPOSED TRAFFIC SURVEILLANCE PLAN SHEETS.
4. SEE TEMPORARY TRAFFIC SURVEILLANCE DETAILS FOR CONDUIT INFORMATION AT SURVEILLANCE CABINETS.



<b>TYLIN INTERNATIONAL</b>	USER NAME =	DESIGNED - JDF	REVISED -
	PLOT SCALE =	DRAWN - CAC	REVISED -
	PLOT DATE =	CHECKED - DAJ	REVISED -
		DATE - 3/18/2010	REVISED -

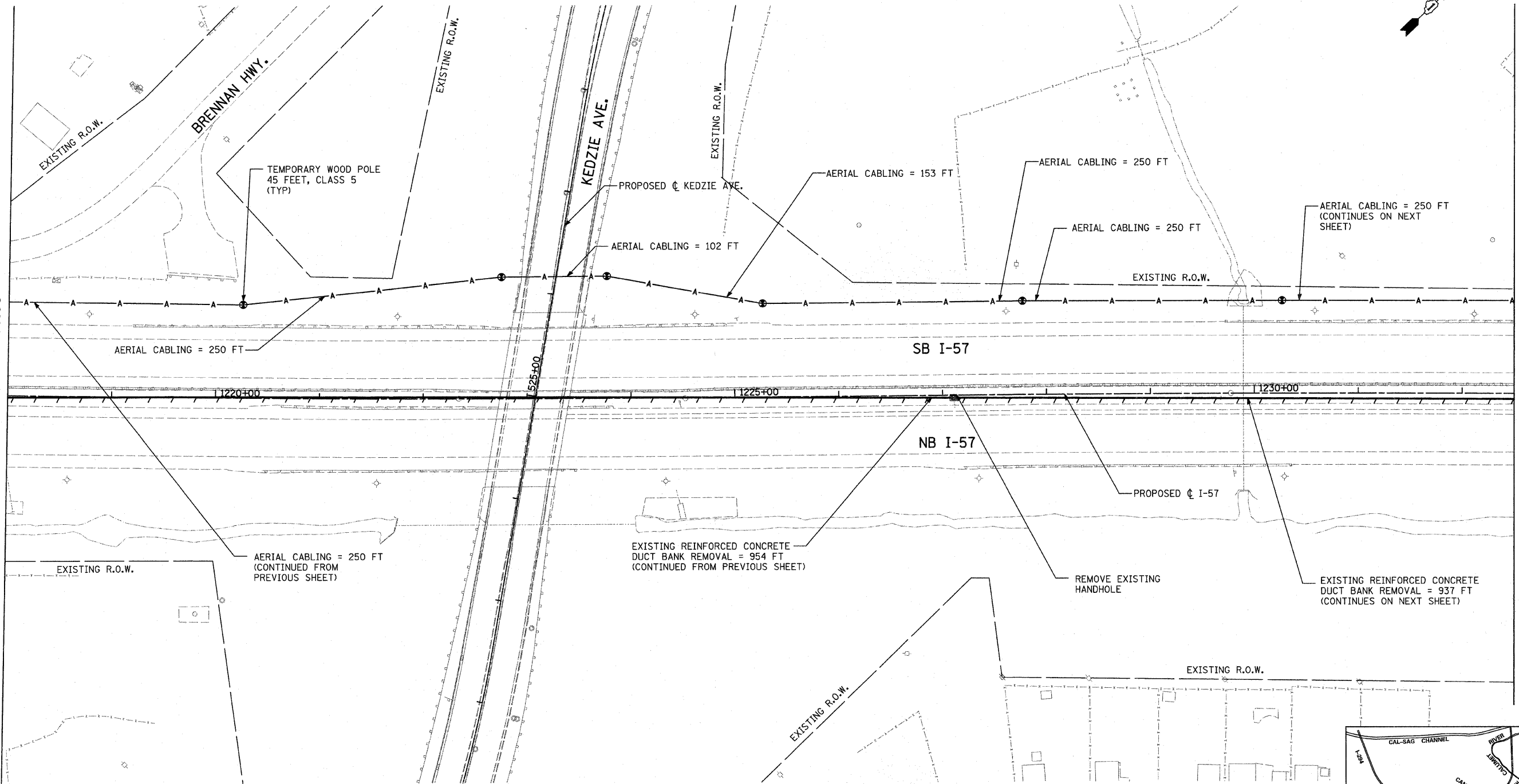
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>I-57 AT I-294 INTERCHANGE PROJECT PROPOSED TEMPORARY TRAFFIC SURVEILLANCE PLAN AND REMOVALS</b>			
SCALE: 1"=50'	SHEET NO. 4 OF 8 SHEETS	STA. 1203+50 TO STA. 1218+00	

F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 220
FED. ROAD DIST. NO. ILLINOIS		FED. AID PROJECT		CONTRACT NO. 60J27

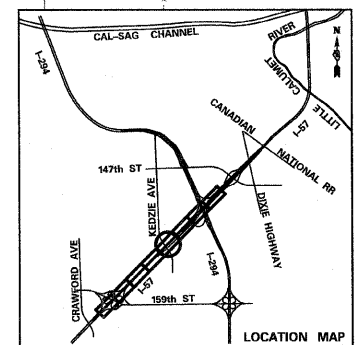
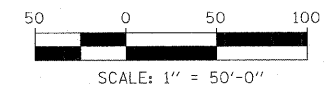
MATCHLINE STA. 1218+00.00

MATCHLINE STA. 1232+50.00



**NOTES:**

1. SEE WIRING DIAGRAM SHEETS FOR AERIAL CABLING DETAILS ON TEMPORARY WOOD POLES.
2. REMOVAL OF EXISTING CONDUIT SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED REPLACEMENT ITEMS - SEE PROPOSED TRAFFIC SURVEILLANCE PLAN SHEETS



TYLIN INTERNATIONAL

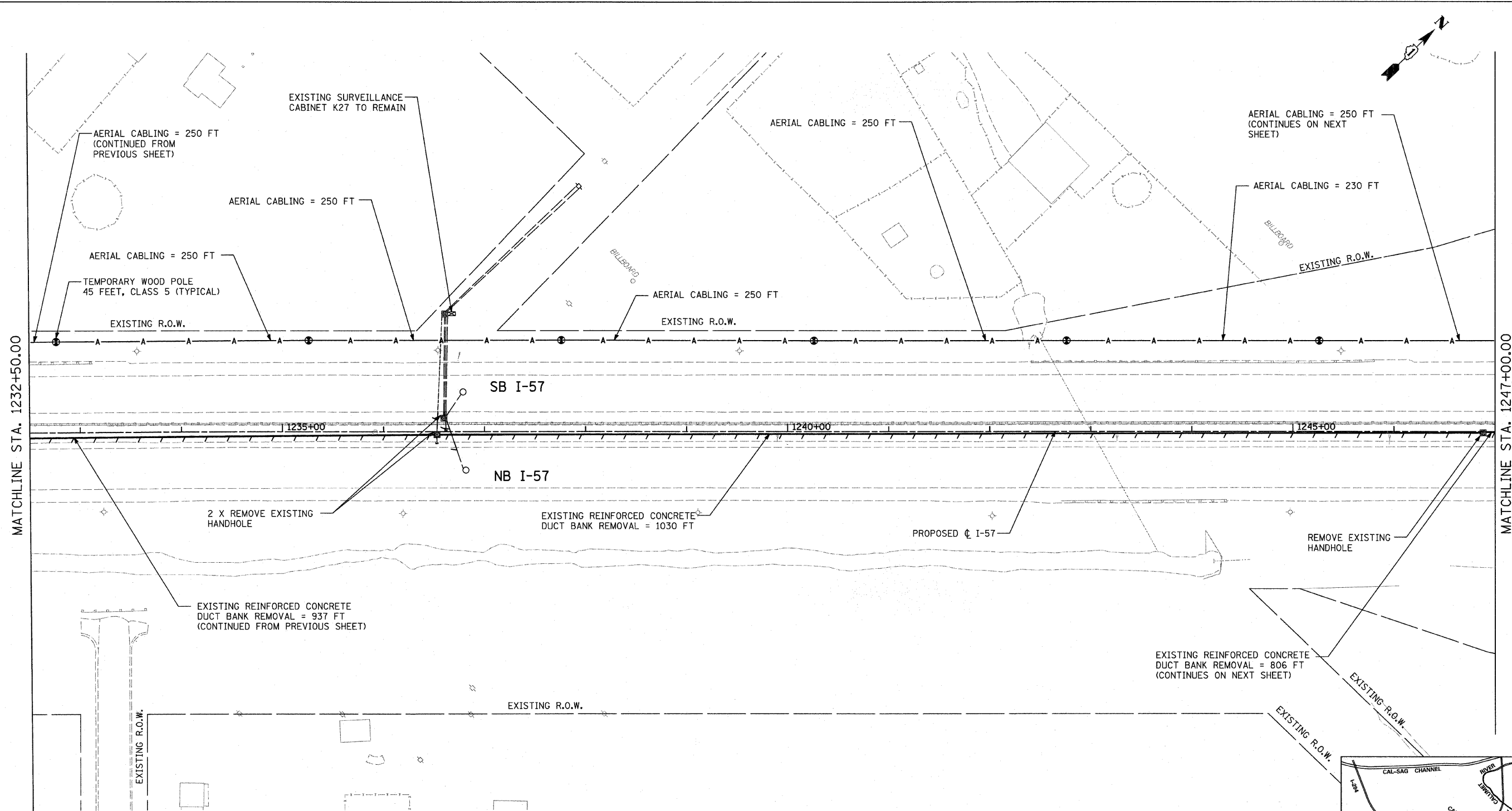
USER NAME =	DESIGNED - JDF	REVISED -
PLOT SCALE =	DRAWN - CAC	REVISED -
PLOT DATE =	CHECKED - DAJ	REVISED -
	DATE - 3/18/2010	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

I-57 AT I-294 INTERCHANGE PROJECT  
PROPOSED TEMPORARY TRAFFIC SURVEILLANCE PLAN AND REMOVALS

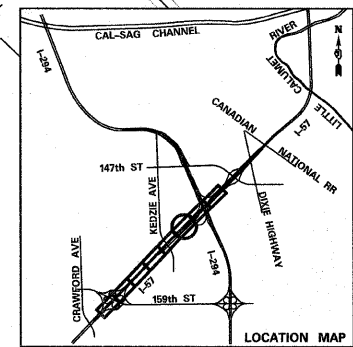
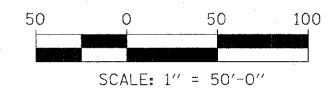
SCALE: 1"=50' SHEET NO. 5 OF 8 SHEETS STA. 1218+00 TO STA. 1232+50

F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 221
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60J27	

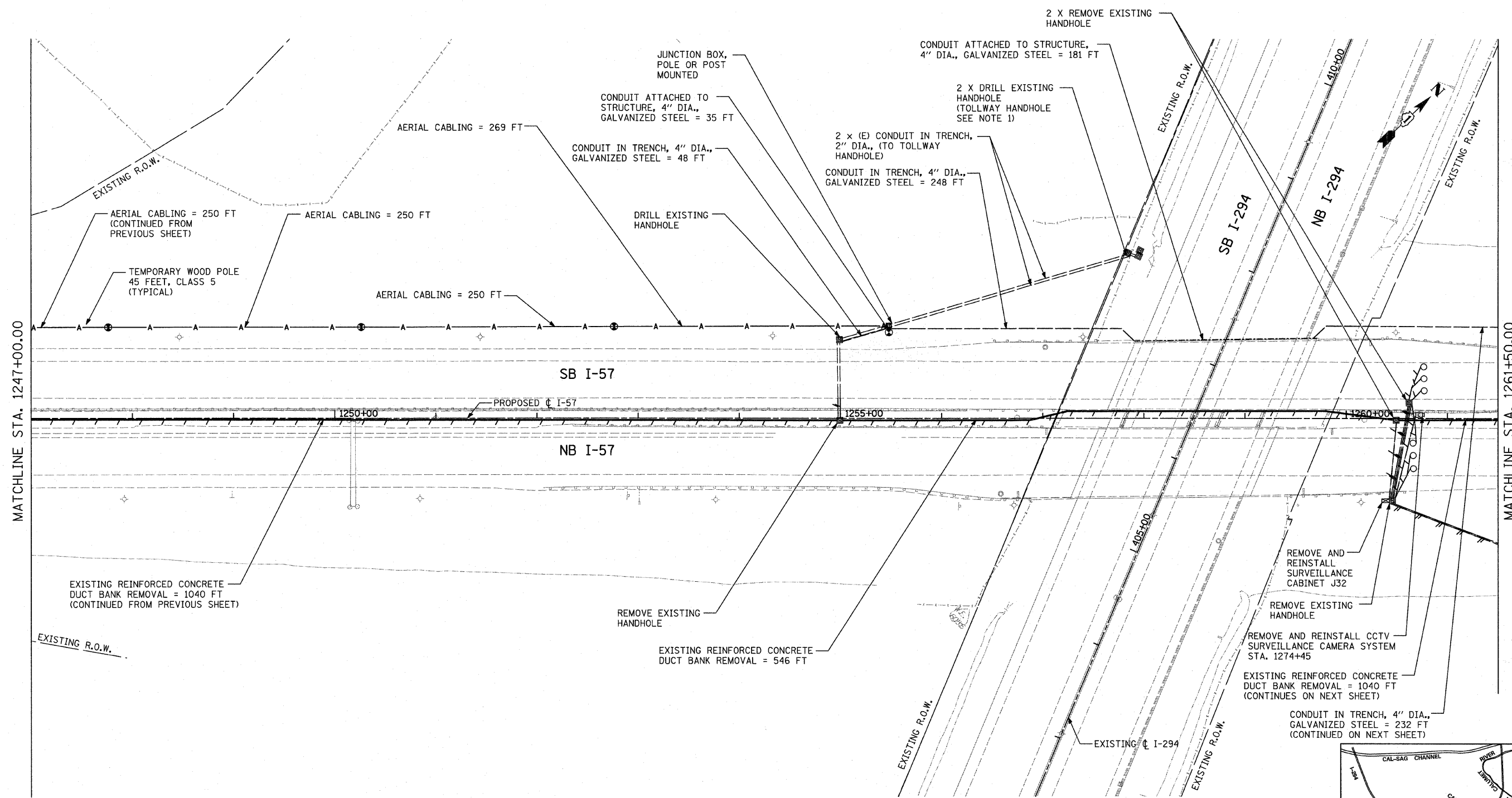


**NOTES:**

1. SEE WIRING DIAGRAM SHEETS FOR AERIAL CABLING DETAILS ON TEMPORARY WOOD POLES.
2. REMOVAL OF EXISTING CONDUIT SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED REPLACEMENT ITEMS - SEE PROPOSED TRAFFIC SURVEILLANCE PLAN SHEETS



<b>TYLIN INTERNATIONAL</b>	USER NAME =	DESIGNED - JDF	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>I-57 AT I-294 INTERCHANGE PROJECT</b>			F.A.I. RTE.:	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	DRAWN - CAC	REVISED -		57	1414.2B	COOK	516	222			
	PLOT DATE =	CHECKED - DAJ	REVISED -		PROPOSED TEMPORARY TRAFFIC SURVEILLANCE PLAN AND REMOVALS			CONTRACT NO. 60J27				
		DATE - 3/18/2010	REVISED -		SCALE: 1"=50'			SHEET NO. 6 OF 8 SHEETS STA. 1232+50 TO STA. 1247+00				
				FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								

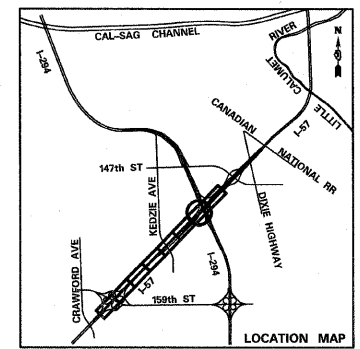
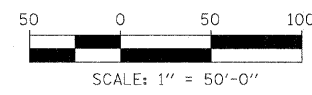


MATCHLINE STA. 1247+00.00

MATCHLINE STA. 1261+50.00

**NOTES:**

1. SEE WIRING DIAGRAM SHEETS FOR CABLING TO TOLLWAY HANDHOLE.
2. SEE WIRING DIAGRAM SHEETS FOR AERIAL CABLING DETAILS ON TEMPORARY WOOD POLES.
3. REMOVAL OF EXISTING CONDUIT SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED REPLACEMENT ITEMS - SEE PROPOSED TRAFFIC SURVEILLANCE PLAN SHEETS



<b>TYLIN</b> INTERNATIONAL	USER NAME =	DESIGNED - JDF	REVISED -
	PLOT SCALE =	DRAWN - CAC	REVISED -
	PLOT DATE =	CHECKED - DAJ	REVISED -
		DATE - 3/18/2010	REVISED -

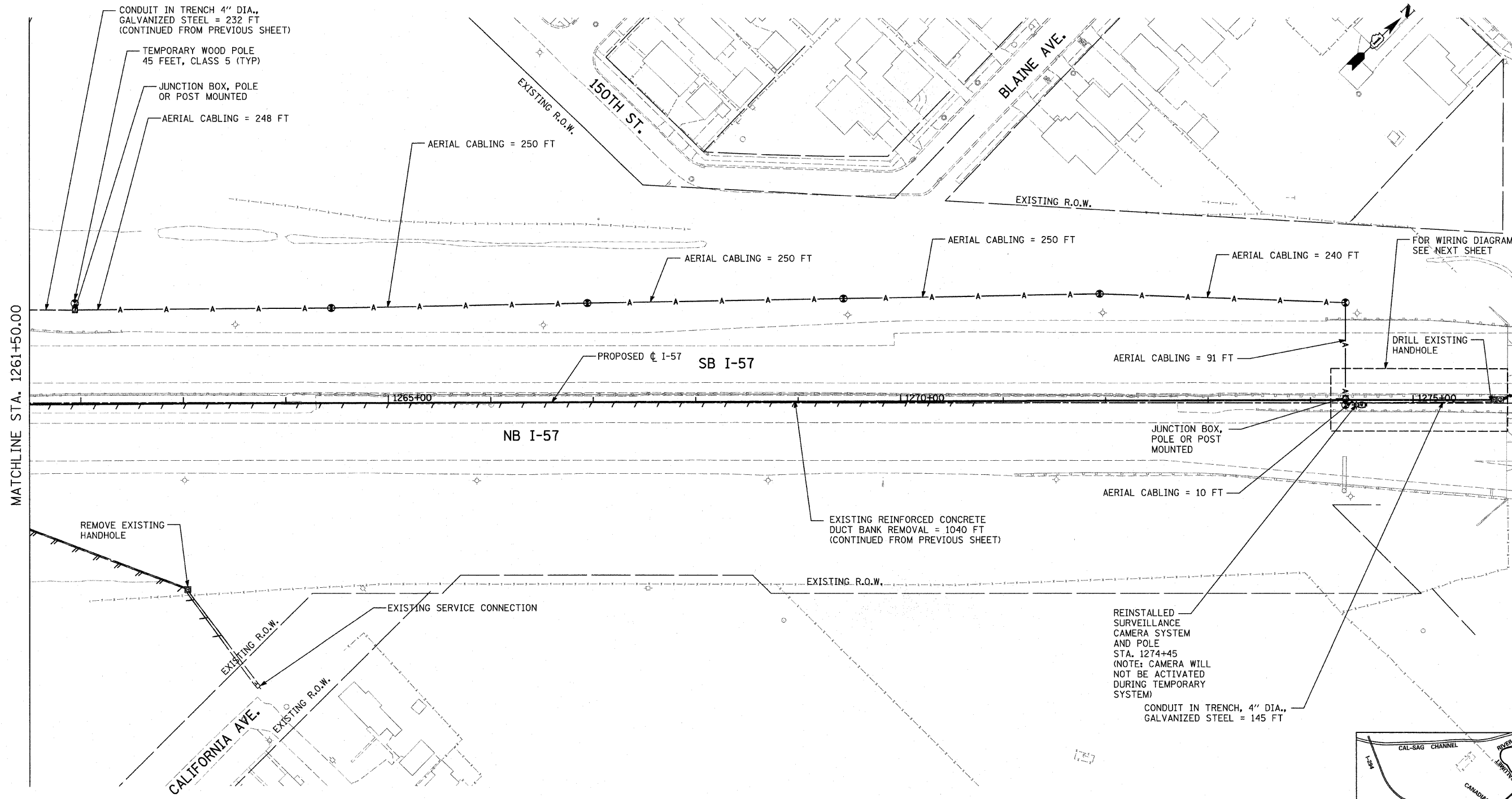
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**I-57 AT I-294 INTERCHANGE PROJECT  
PROPOSED TEMPORARY TRAFFIC SURVEILLANCE PLAN AND REMOVALS**

SCALE: 1"=50'    SHEET NO. 7 OF 8 SHEETS    STA. 1247+00 TO STA. 1261+50

F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 223
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60J27	





MATCHLINE STA. 1261+50.00

CONDUIT IN TRENCH 4" DIA., GALVANIZED STEEL = 232 FT (CONTINUED FROM PREVIOUS SHEET)

TEMPORARY WOOD POLE 45 FEET, CLASS 5 (TYP)

JUNCTION BOX, POLE OR POST MOUNTED

AERIAL CABLING = 248 FT

AERIAL CABLING = 250 FT

AERIAL CABLING = 250 FT

AERIAL CABLING = 250 FT

AERIAL CABLING = 240 FT

PROPOSED  $\phi$  I-57 SB I-57

AERIAL CABLING = 91 FT

NB I-57

JUNCTION BOX, POLE OR POST MOUNTED

AERIAL CABLING = 10 FT

REMOVE EXISTING HANDHOLE

EXISTING REINFORCED CONCRETE DUCT BANK REMOVAL = 1040 FT (CONTINUED FROM PREVIOUS SHEET)

EXISTING R.O.W.

REINSTALLED SURVEILLANCE CAMERA SYSTEM AND POLE STA. 1274+45 (NOTE: CAMERA WILL NOT BE ACTIVATED DURING TEMPORARY SYSTEM)

CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL = 145 FT

CALIFORNIA AVE.

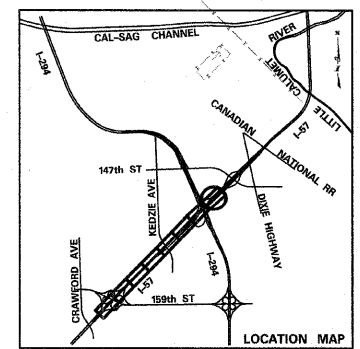
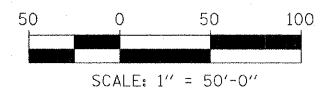
EXISTING R.O.W.

EXISTING R.O.W.

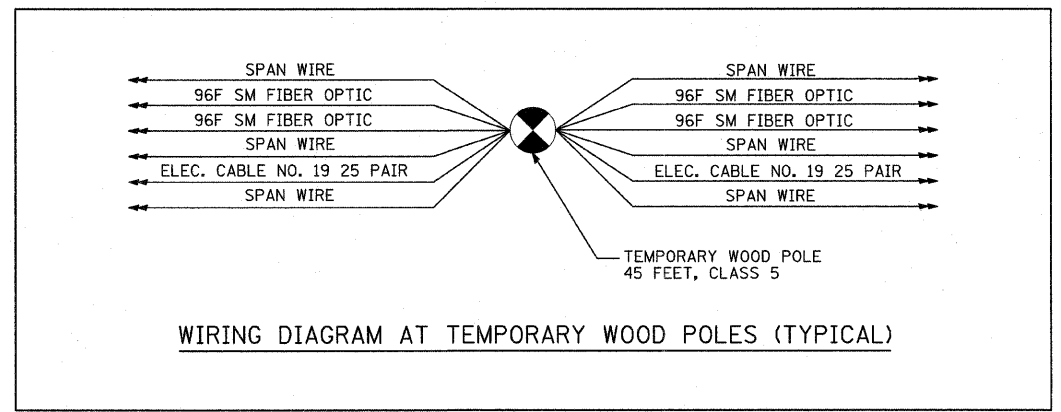
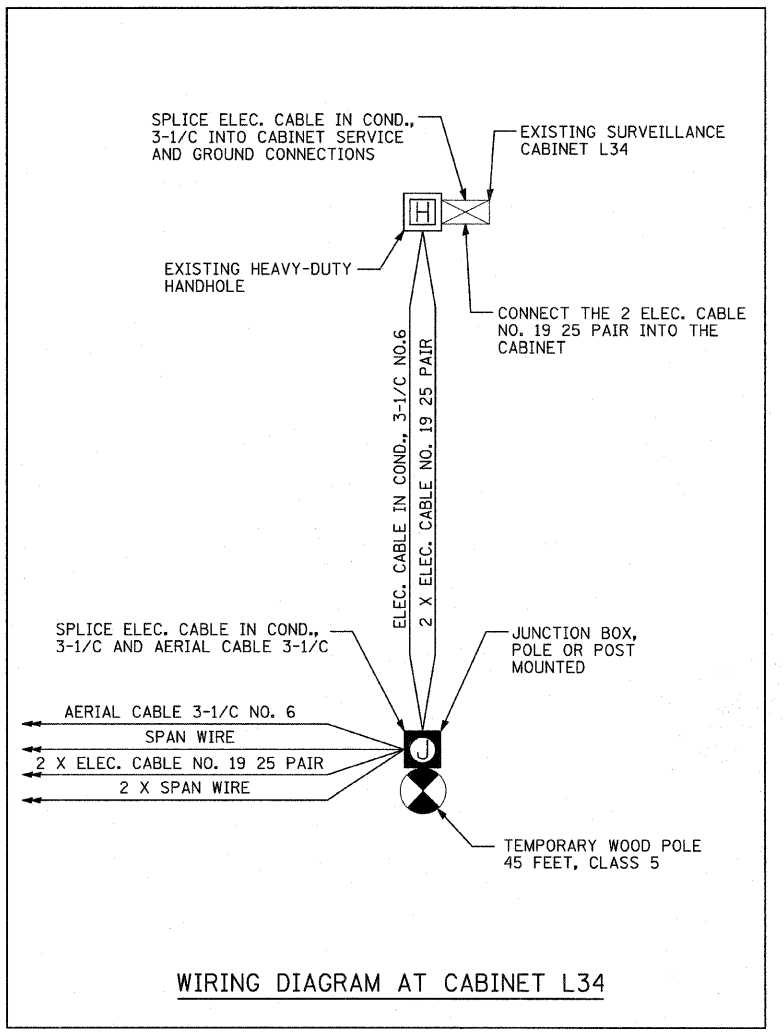
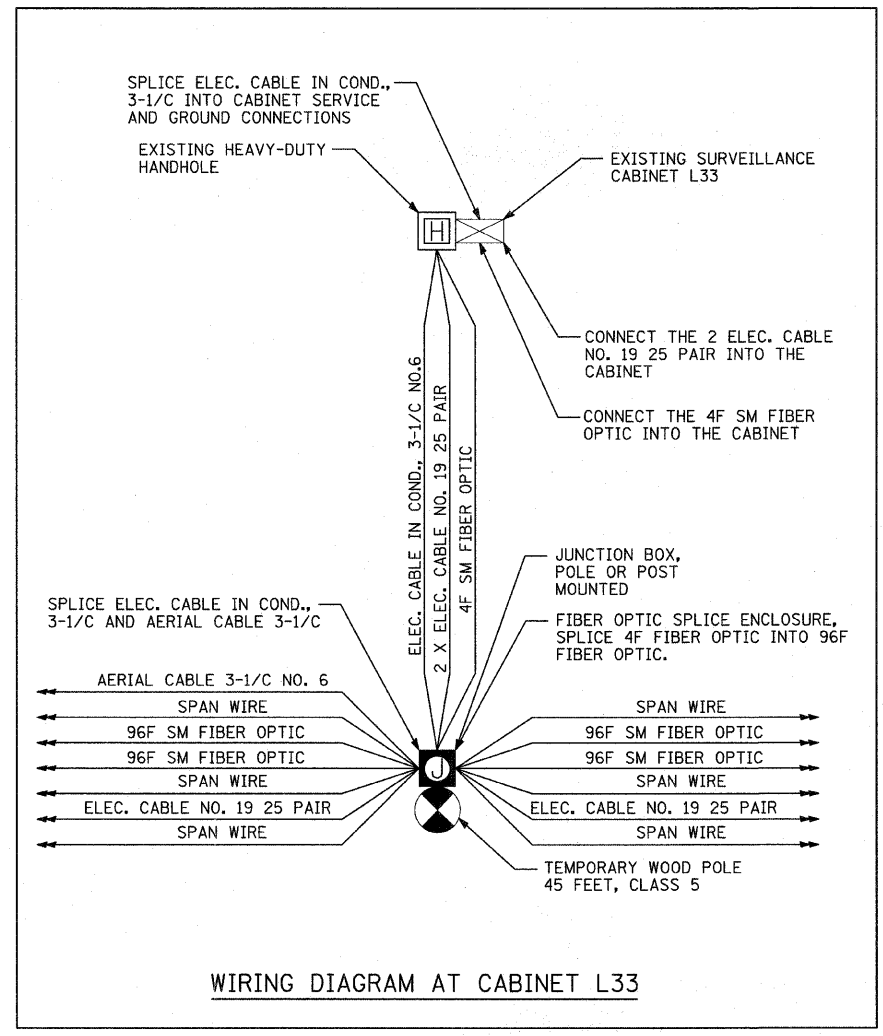
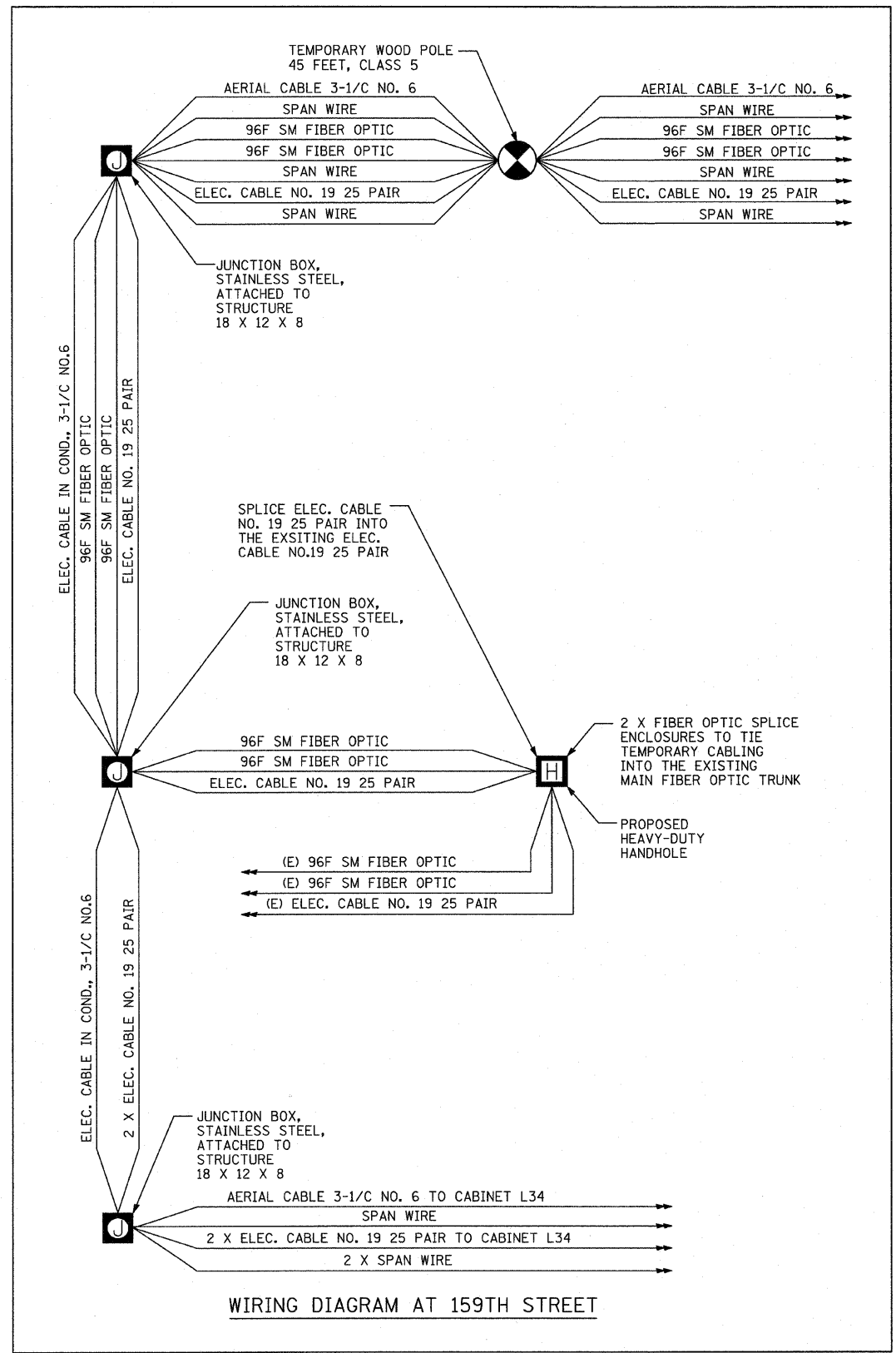
EXISTING SERVICE CONNECTION

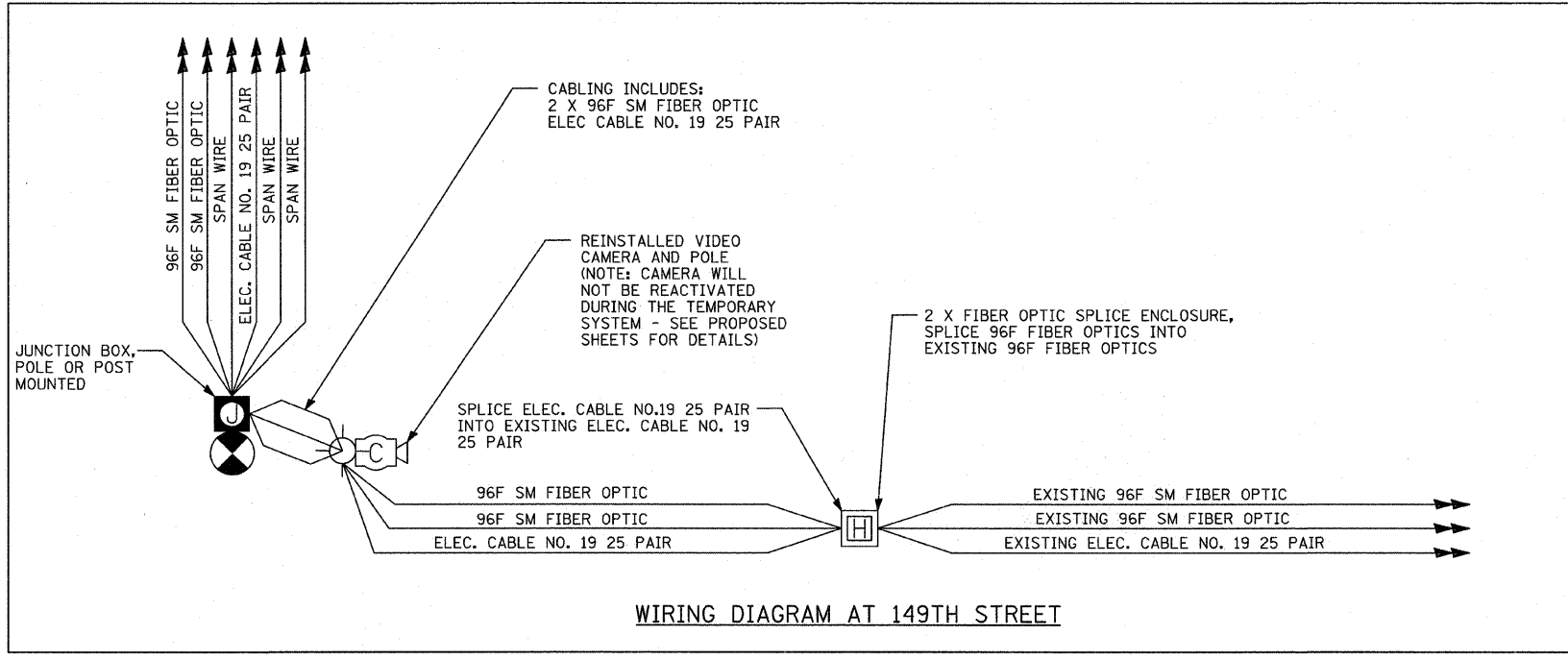
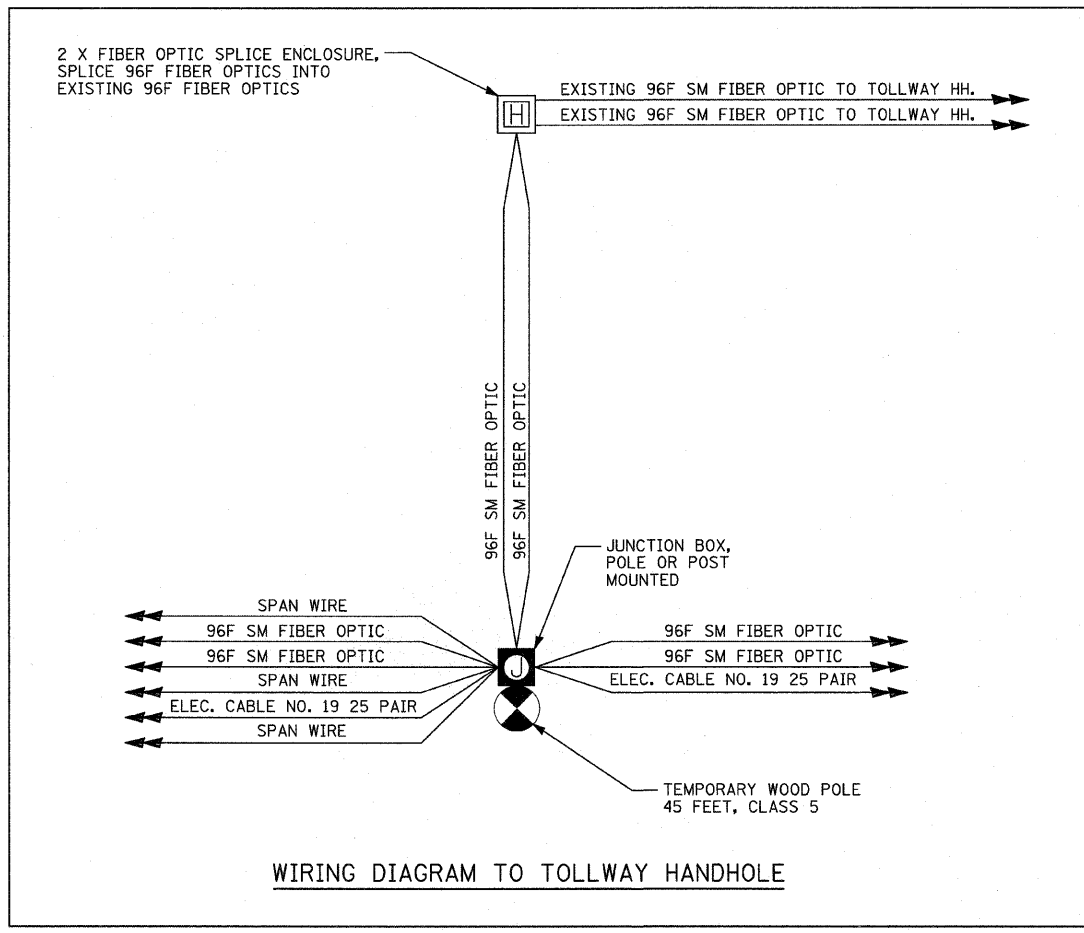
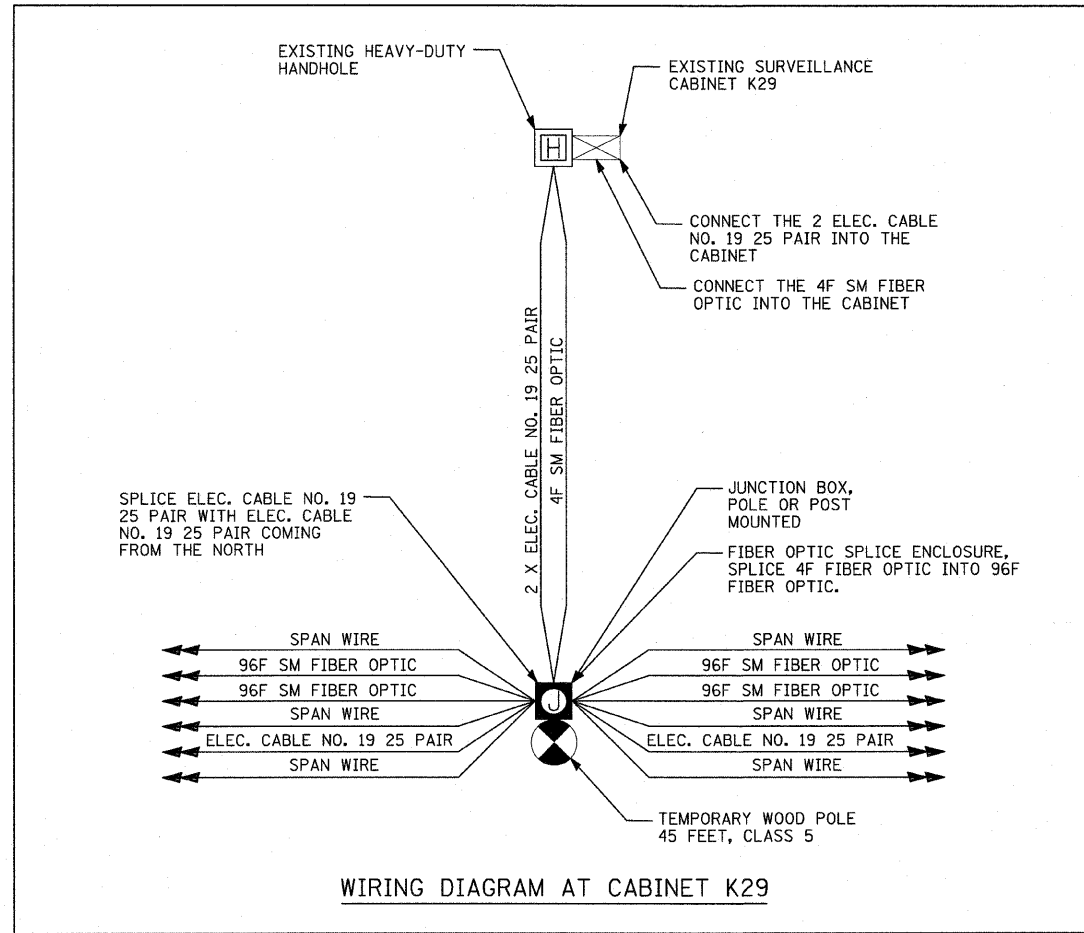
**NOTES:**

- SEE WIRING DIAGRAM SHEETS FOR AERIAL CABLING DETAILS ON TEMPORARY WOOD POLES.
- REMOVAL OF EXISTING CONDUIT SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED REPLACEMENT ITEMS - SEE PROPOSED TRAFFIC SURVEILLANCE PLAN SHEETS

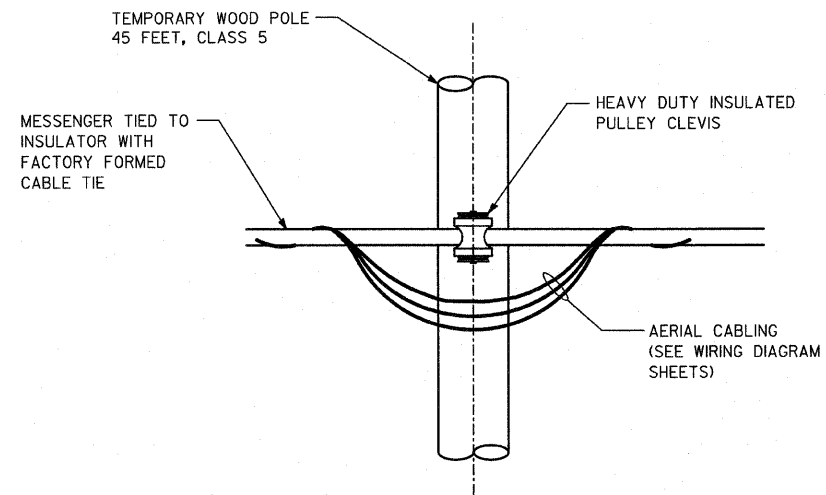


<b>TYLIN INTERNATIONAL</b>	USER NAME =	DESIGNED - JDF	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>I-57 AT I-294 INTERCHANGE PROJECT PROPOSED TEMPORARY TRAFFIC SURVEILLANCE PLAN AND REMOVALS</b>			F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 224	
	PLOT SCALE =	CHECKED - DAJ	REVISED -		SCALE: 1"=50'	SHEET NO. 8 OF 8 SHEETS	STA. 1261+50 TO STA. 1276+00	CONTRACT NO. 60J27					
	PLOT DATE =	DATE - 3/18/2010	REVISED -										

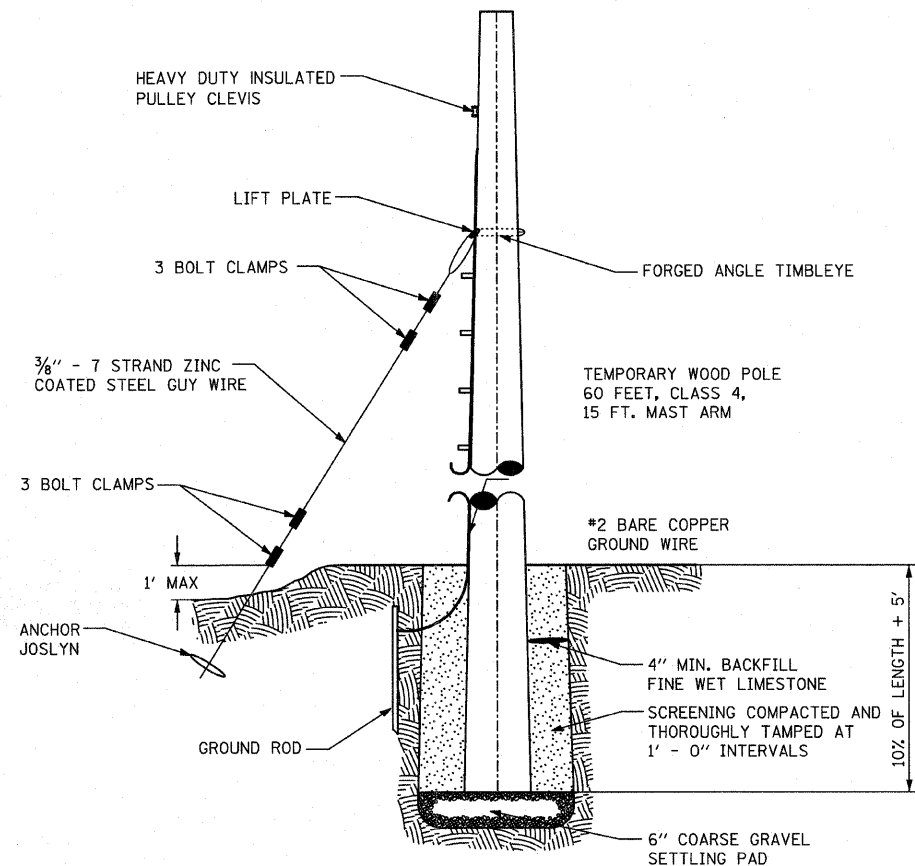




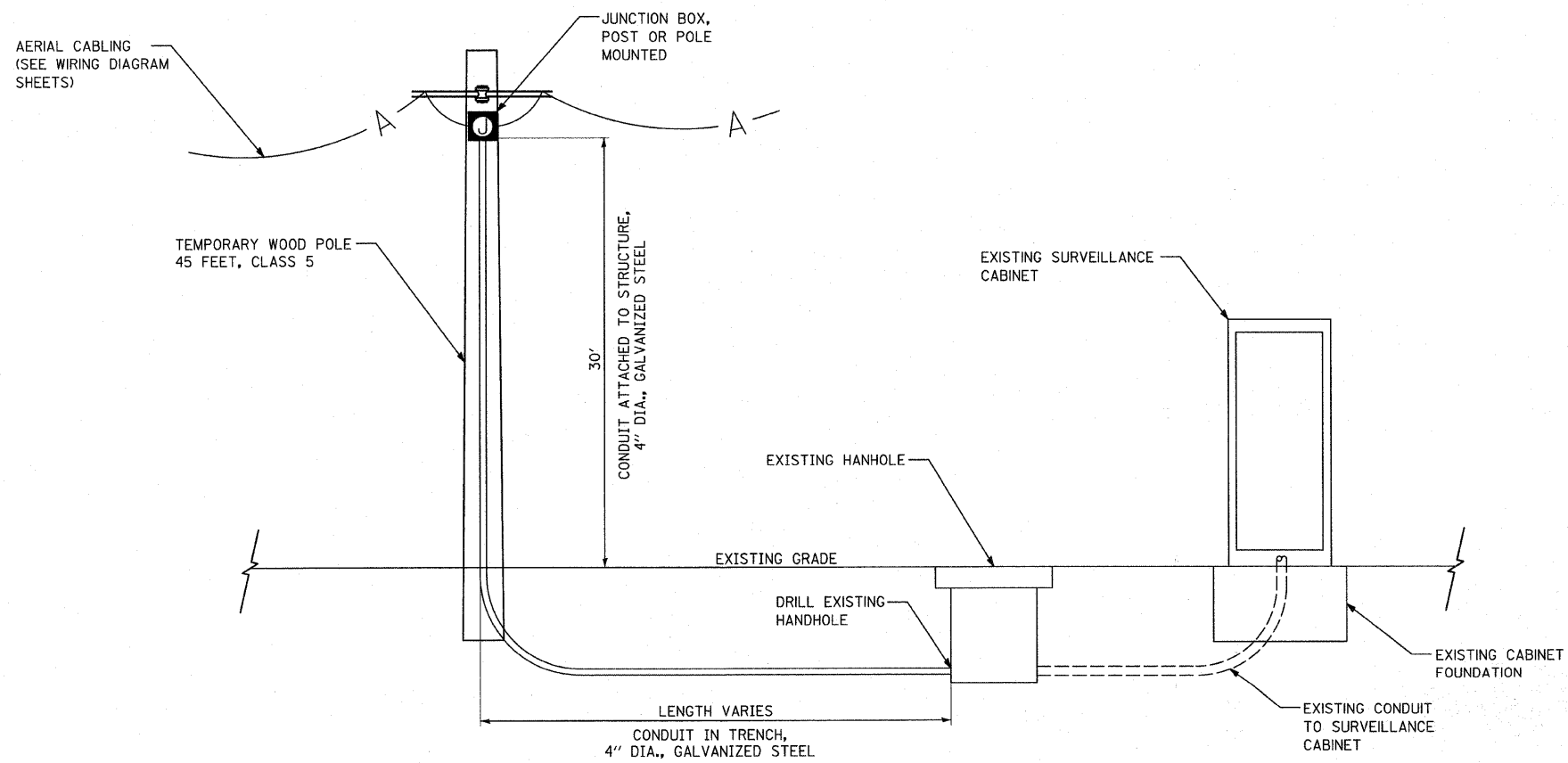
<b>TYLIN INTERNATIONAL</b> USER NAME = PLOT SCALE = PLOT DATE =	DESIGNED - JDF	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>		<b>I-57 AT I-294 INTERCHANGE PROJECT</b> <b>TEMPORARY TRAFFIC SURVEILLANCE WIRING DIAGRAMS</b>			F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 226			
	DRAWN - CAC	REVISED -						SCALE: N.T.S.		SHEET NO. 1 OF 2 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		CONTRACT NO. 60J27	
	CHECKED - DAJ	REVISED -													
	DATE - 3/18/2010	REVISED -													



**WOOD POLE TO WOOD POLE  
CABLE ATTACHMENT DETAIL**  
N.T.S.



**TEMPORARY WOOD POLE DETAIL**  
N.T.S.



**TYPICAL TEMPORARY CONDUIT AT SURVEILLANCE CABINET DETAILS**  
N.T.S.

**TYLIN INTERNATIONAL**

USER NAME =  
PLOT SCALE =  
PLOT DATE =

DESIGNED - JDF  
DRAWN - CAC  
CHECKED - DAJ  
DATE - 3/18/2010

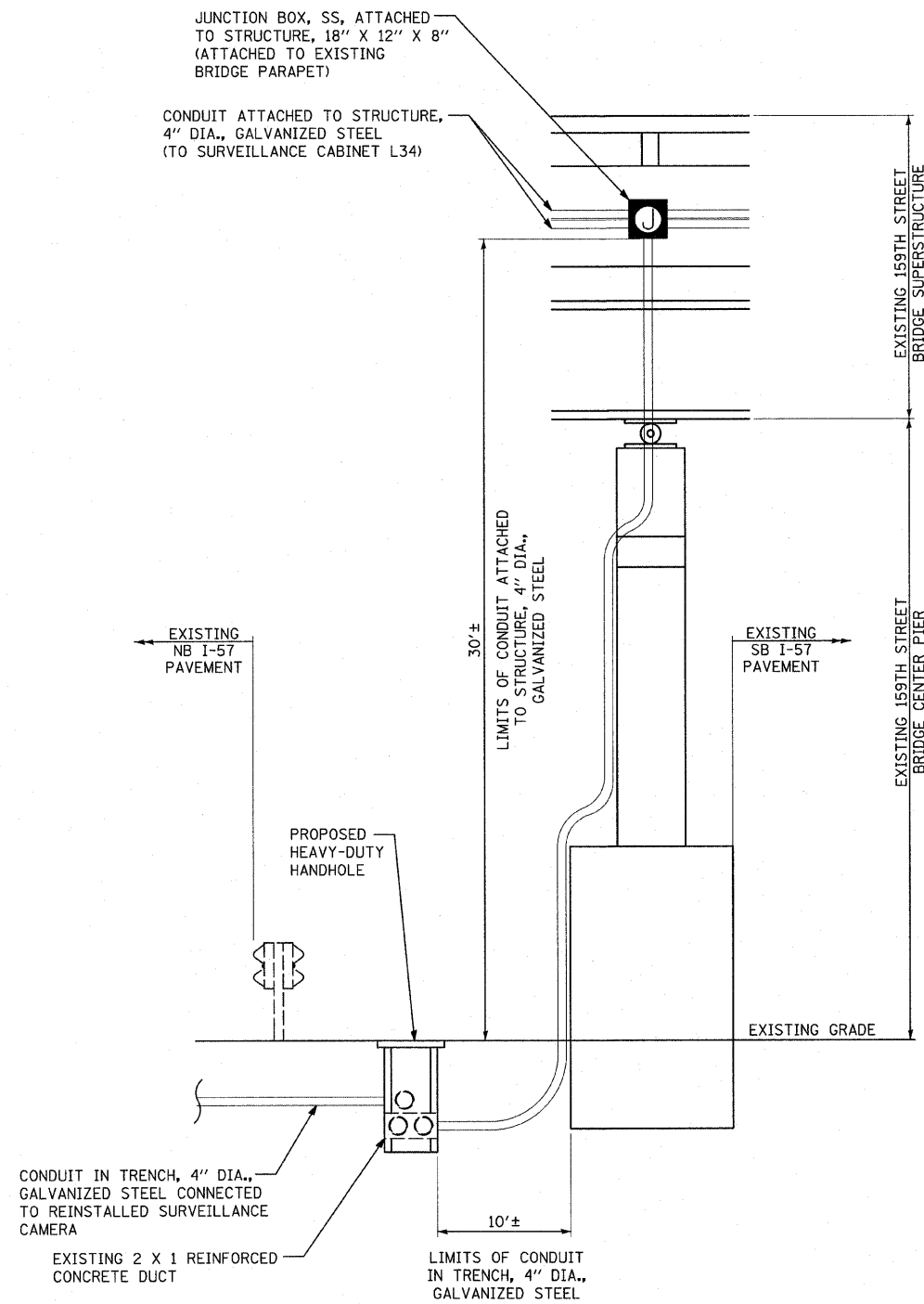
REVISED -  
REVISED -  
REVISED -  
REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**I-57 AT I-294 INTERCHANGE PROJECT  
TEMPORARY TRAFFIC SURVEILLANCE DETAILS**

SCALE: NONE SHEET NO. 1 OF 2 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	227
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60J27	



TEMPORARY CONDUIT ROUTING DETAILS AT 159TH STREET  
(LOOKING WEST)  
NOT TO SCALE

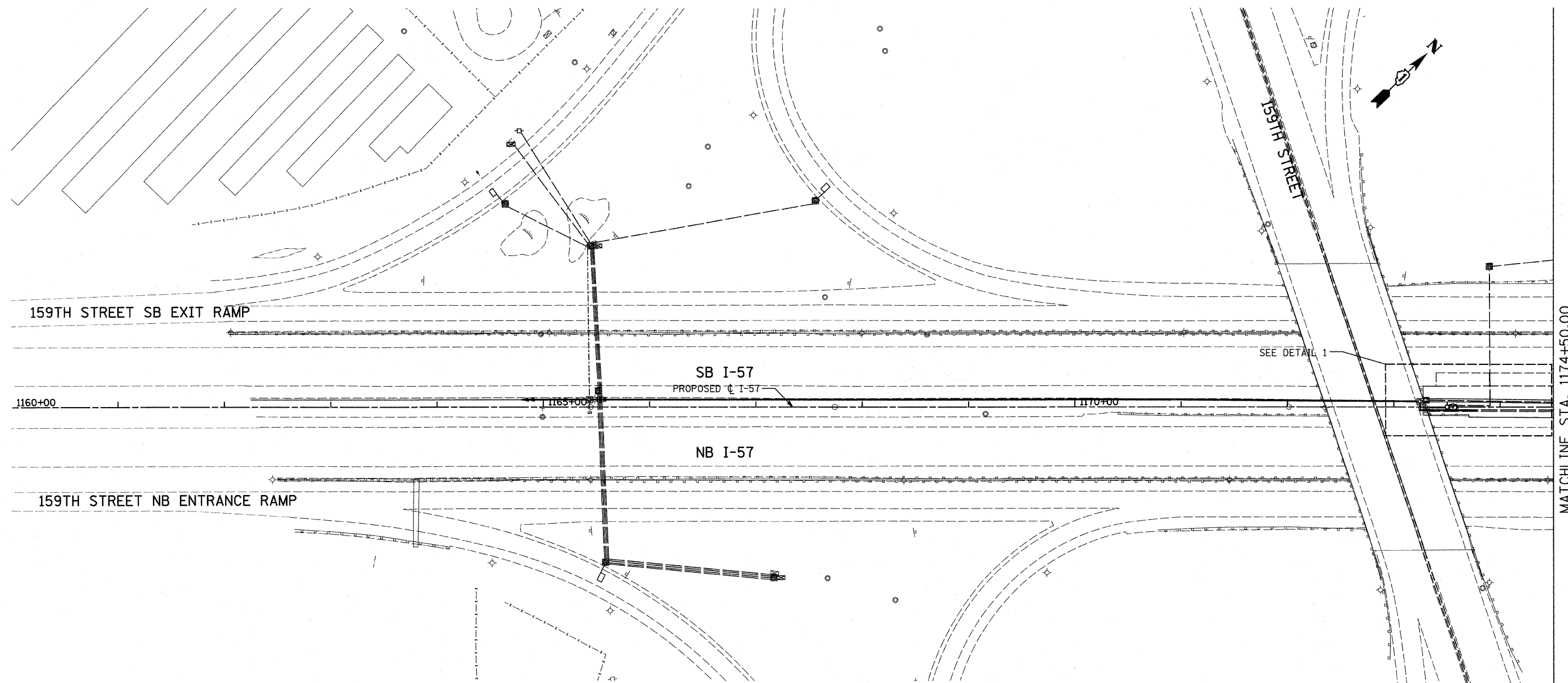
TYLIN INTERNATIONAL

USER NAME =	DESIGNED - JDF	REVISED -
PLOT SCALE =	DRAWN - CAC	REVISED -
PLOT DATE =	CHECKED - DAJ	REVISED -
	DATE - 3/18/2010	REVISED -

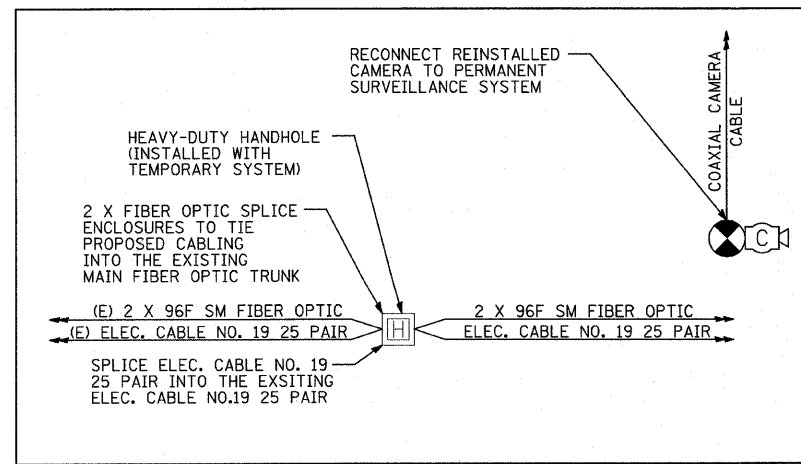
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

I-57 AT I-294 INTERCHANGE PROJECT			
TEMPORARY TRAFFIC SURVEILLANCE DETAILS			
SCALE: N.T.S.	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.

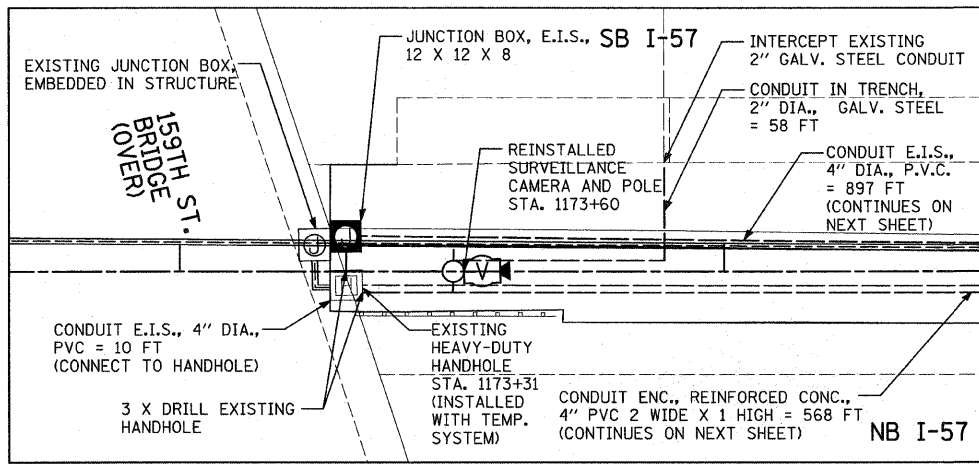
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	228
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60J27	



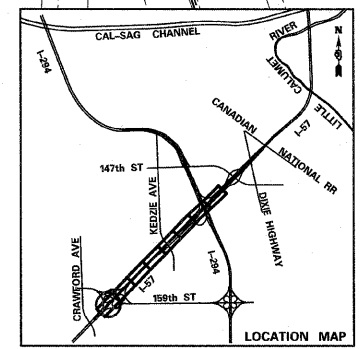
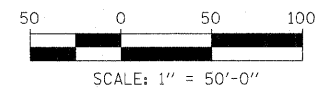
MATCHLINE STA. 1174+50.00



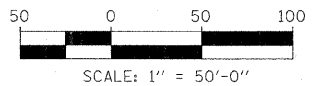
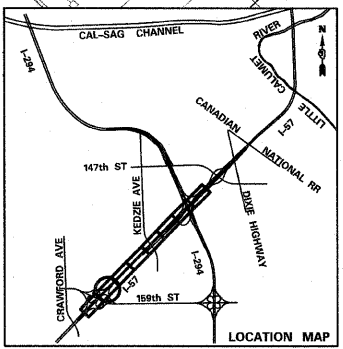
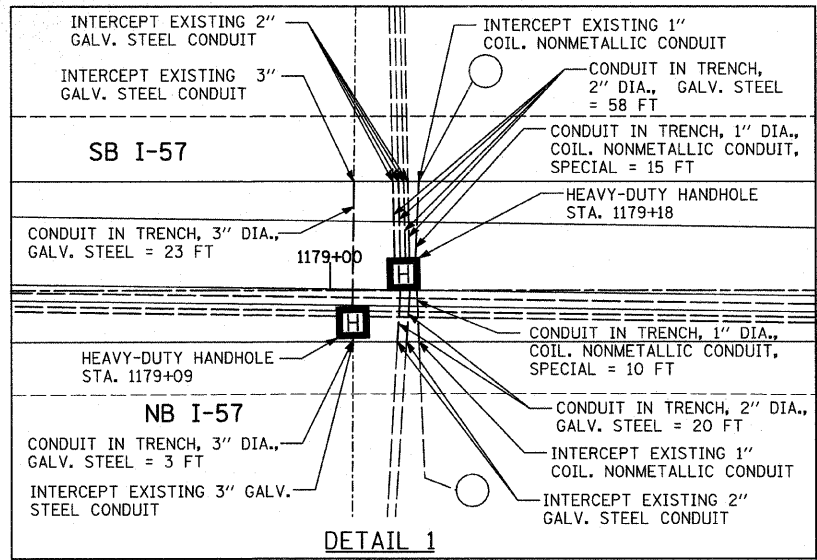
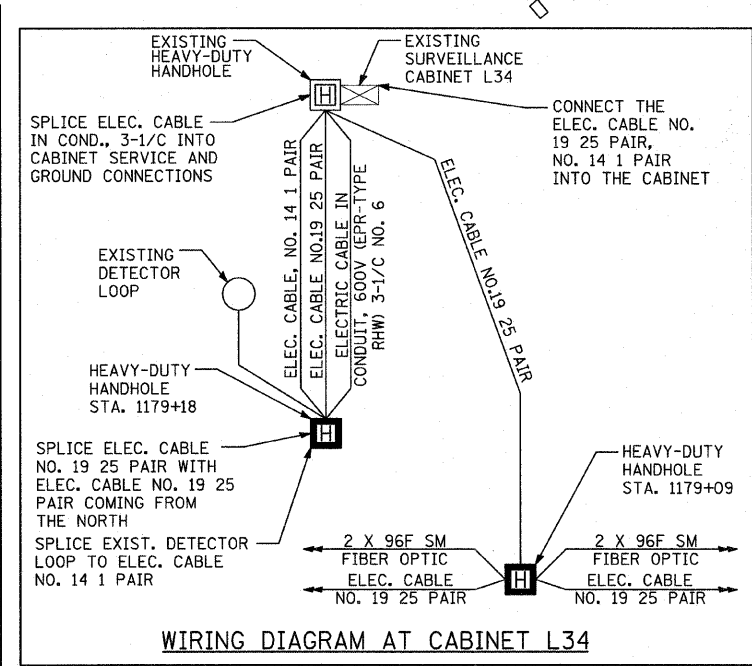
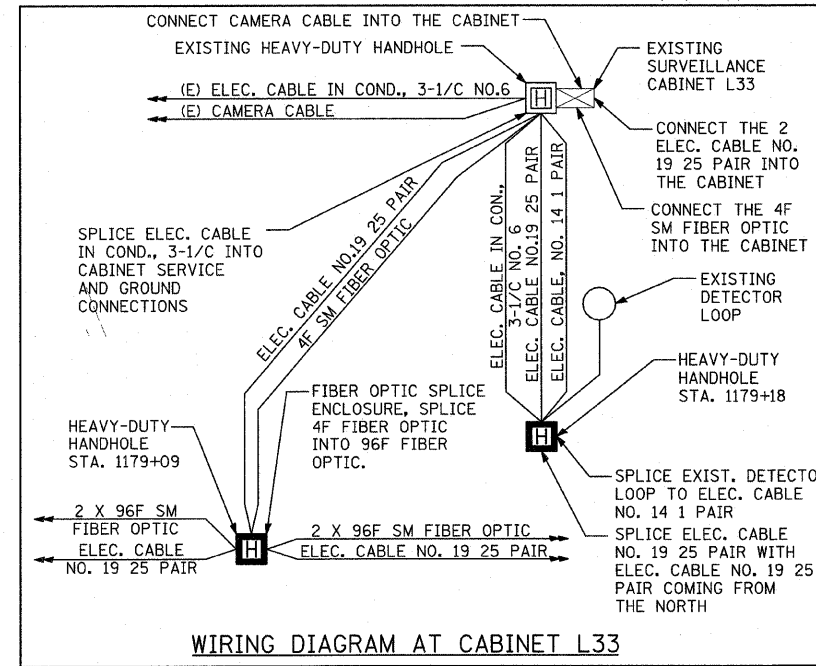
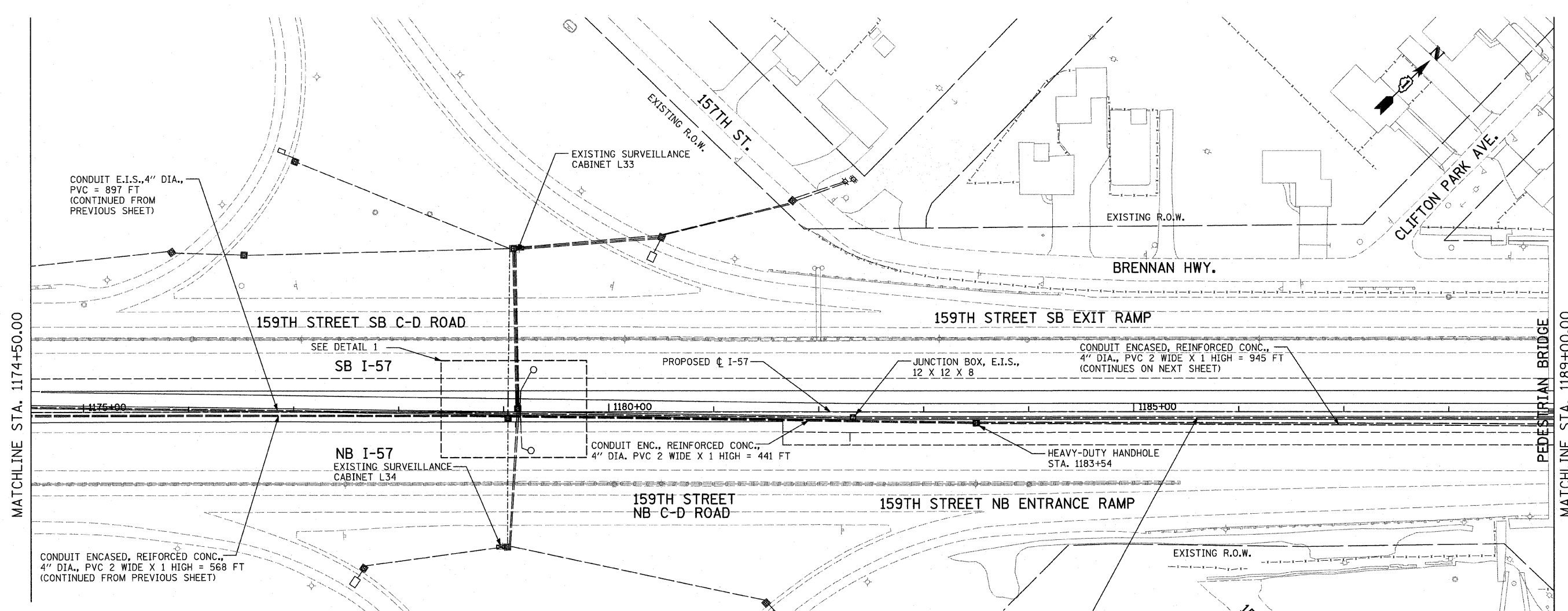
WIRING DIAGRAM AT 159TH STREET



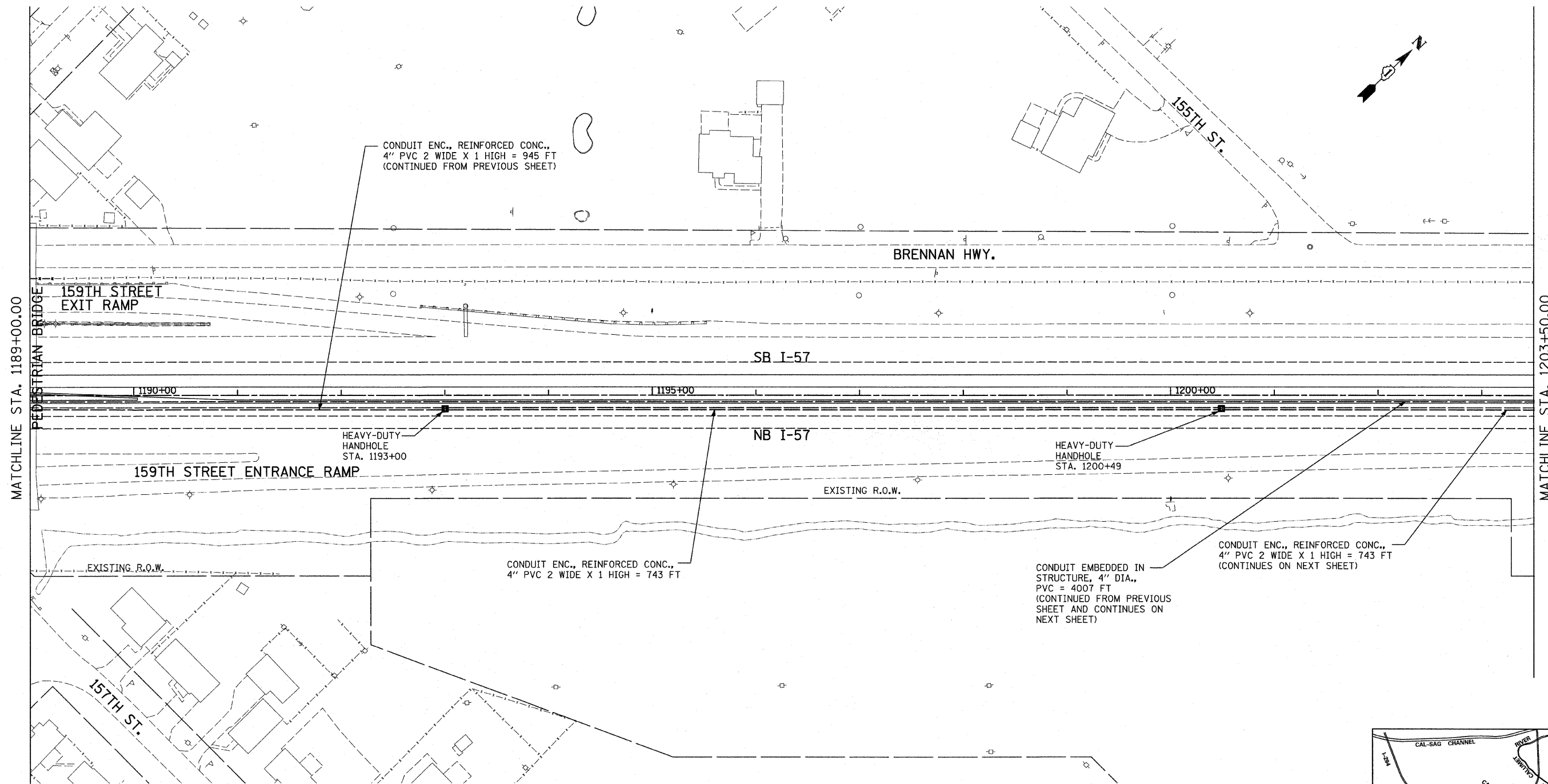
DETAIL 1



<b>TYLIN INTERNATIONAL</b> USER NAME = PLOT SCALE = PLOT DATE =	DESIGNED - CAC	REVISD -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>I-57 AT I-294 INTERCHANGE PROJECT</b> <b>PROPOSED TRAFFIC SURVEILLANCE PLAN</b>			F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 229	
	CHECKED - DAJ	REVISD -		SCALE: 1"=50'    SHEET NO. 1 OF 8 SHEETS    STA. 1160+00 TO STA. 1174+50			CONTRACT NO. 60J27					
	DATE - 3/18/2010	REVISD -										
	FED. ROAD DIST. NO.    ILLINOIS FED. AID PROJECT											



<b>TYLIN INTERNATIONAL</b> USER NAME = PLOT SCALE = PLOT DATE =	DESIGNED - JDF	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>			<b>I-57 AT I-294 INTERCHANGE PROJECT</b> <b>PROPOSED TRAFFIC SURVEILLANCE PLAN</b>			F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 230			
	DRAWN - CAC	REVISED -							SCALE: 1"=50'		SHEET NO. 2 OF 8 SHEETS		STA. 1174+50 TO STA. 1189+00		CONTRACT NO. 60J27	
	CHECKED - DAJ	REVISED -							FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT					
	DATE - 3/18/2010	REVISED -														



MATCHLINE STA. 1189+00.00

MATCHLINE STA. 1203+50.00

CONDUIT ENC., REINFORCED CONC.,  
4" PVC 2 WIDE X 1 HIGH = 945 FT  
(CONTINUED FROM PREVIOUS SHEET)

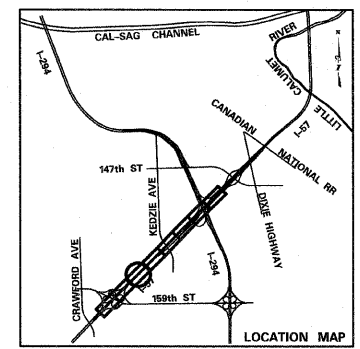
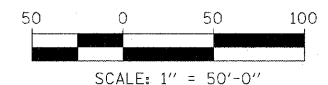
HEAVY-DUTY  
HANDHOLE  
STA. 1193+00

HEAVY-DUTY  
HANDHOLE  
STA. 1200+49

CONDUIT ENC., REINFORCED CONC.,  
4" PVC 2 WIDE X 1 HIGH = 743 FT

CONDUIT EMBEDDED IN  
STRUCTURE, 4" DIA.,  
PVC = 4007 FT  
(CONTINUED FROM PREVIOUS  
SHEET AND CONTINUES ON  
NEXT SHEET)

CONDUIT ENC., REINFORCED CONC.,  
4" PVC 2 WIDE X 1 HIGH = 743 FT  
(CONTINUES ON NEXT SHEET)



**TYLIN** INTERNATIONAL  
USER NAME =  
PLOT SCALE =  
PLOT DATE =

DESIGNED - JDF  
DRAWN - CAC  
CHECKED - DAJ  
DATE - 3/18/2010

REVISED -  
REVISED -  
REVISED -  
REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

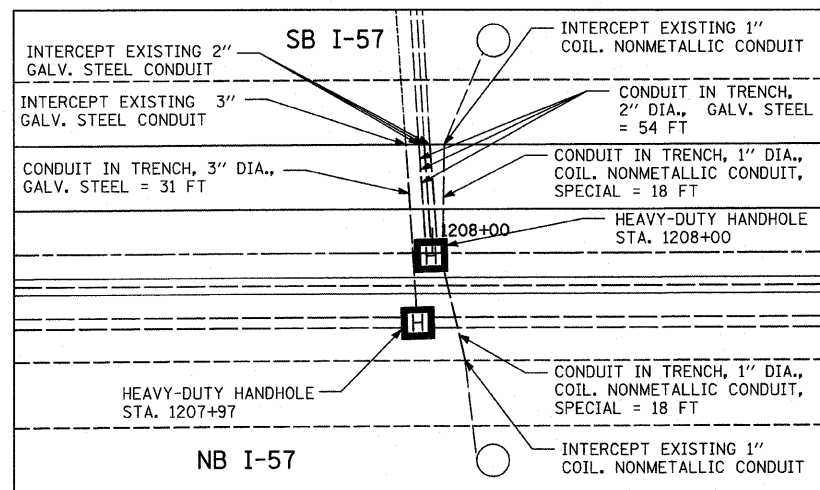
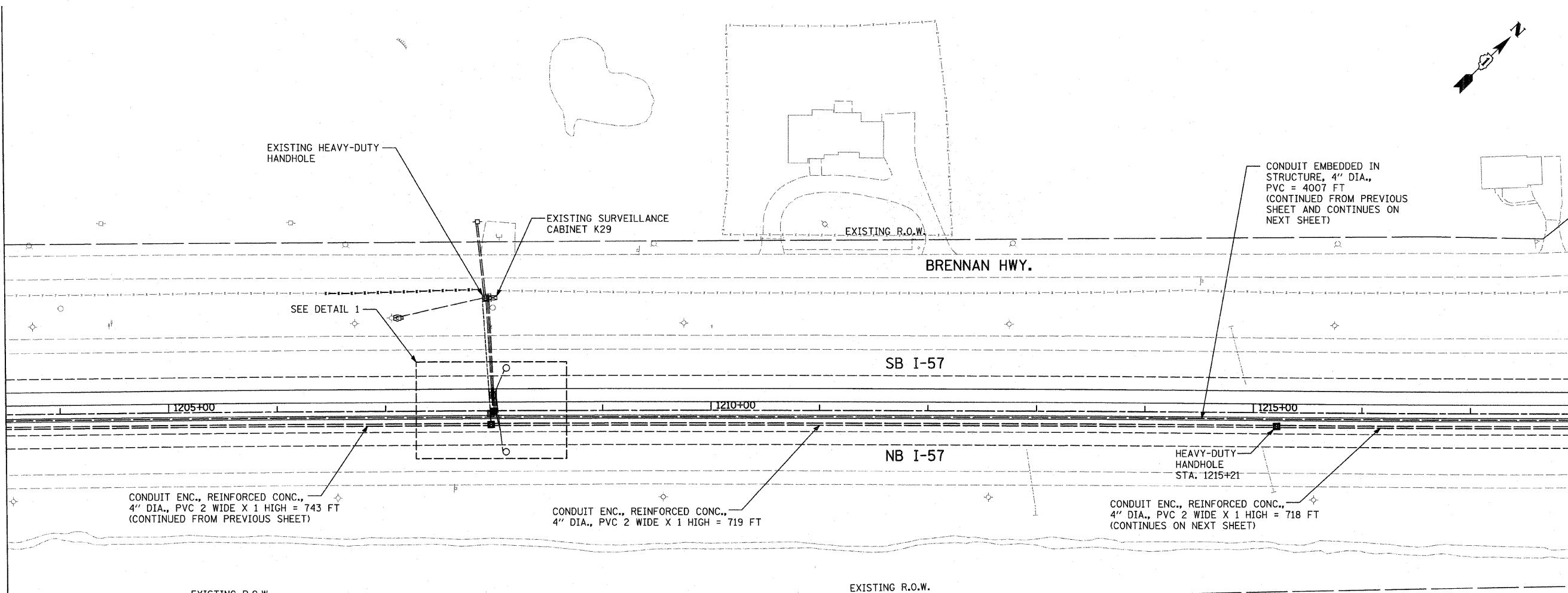
**I-57 AT I-294 INTERCHANGE PROJECT  
PROPOSED TRAFFIC SURVEILLANCE PLAN**  
SCALE: 1"=50' SHEET NO. 3 OF 8 SHEETS STA. 1189+00 TO STA. 1203+50

F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 231
FED. ROAD DIST. NO. ILLINOIS			FED. AID PROJECT	
CONTRACT NO. 60J27				

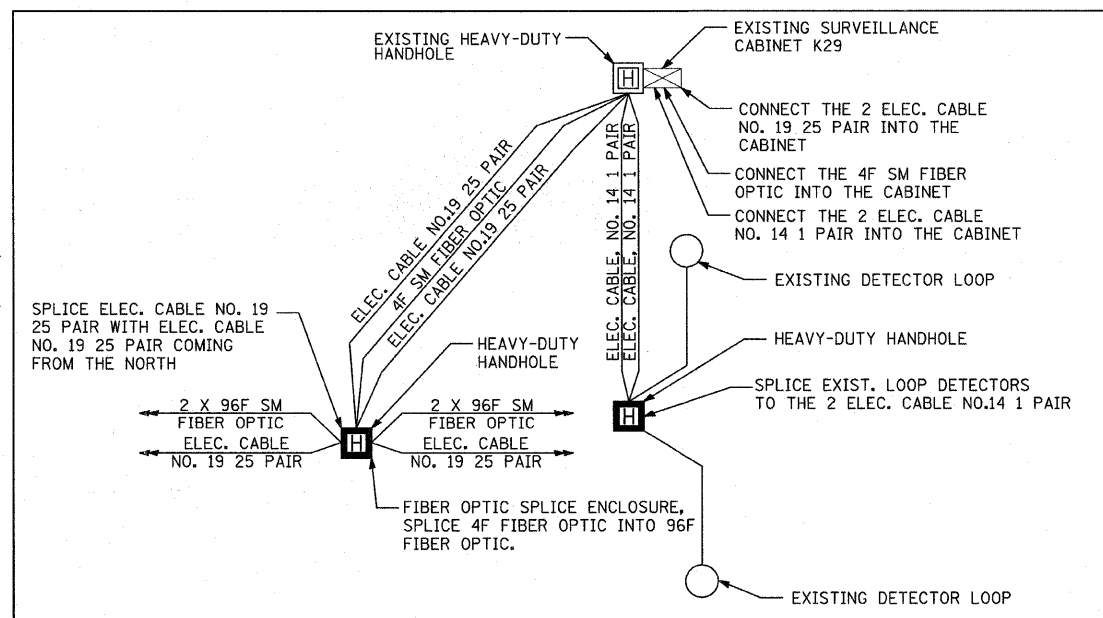


MATCHLINE STA. 1203+50.00

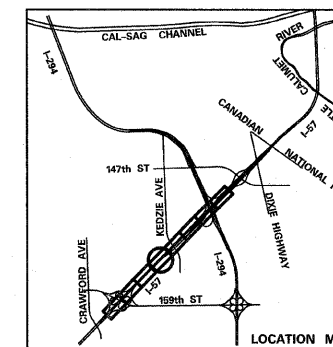
MATCHLINE STA. 1218+00.00



DETAIL 1



WIRING DIAGRAM AT CABINET K29



SCALE: 1" = 50'-0"

TYLIN INTERNATIONAL

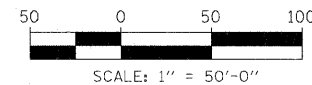
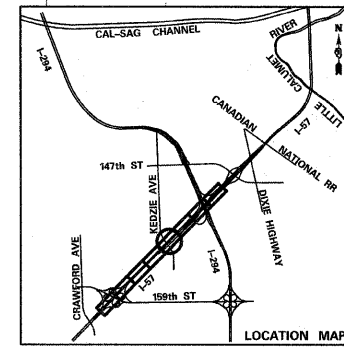
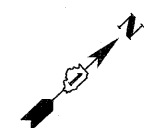
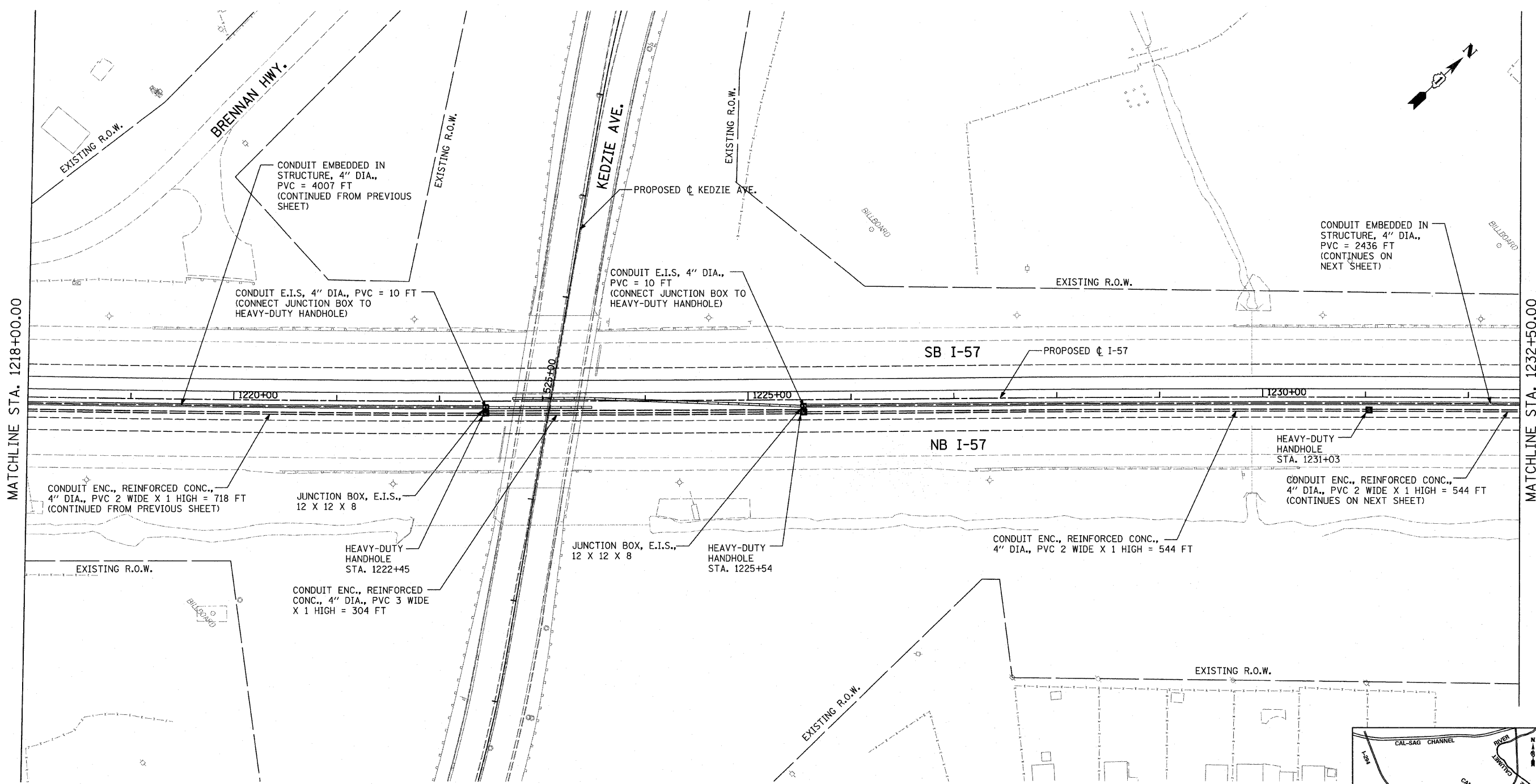
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PLOT SCALE =	DRAWN - CAC	REVISED -
PLOT DATE =	CHECKED - DAJ	REVISED -
	DATE - 3/18/2010	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

I-57 AT I-294 INTERCHANGE PROJECT  
PROPOSED TRAFFIC SURVEILLANCE PLAN

SCALE: 1"=50' SHEET NO. 4 OF 8 SHEETS STA. 1203+50 TO STA. 1218+00

F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	232
CONTRACT NO. 60J27				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



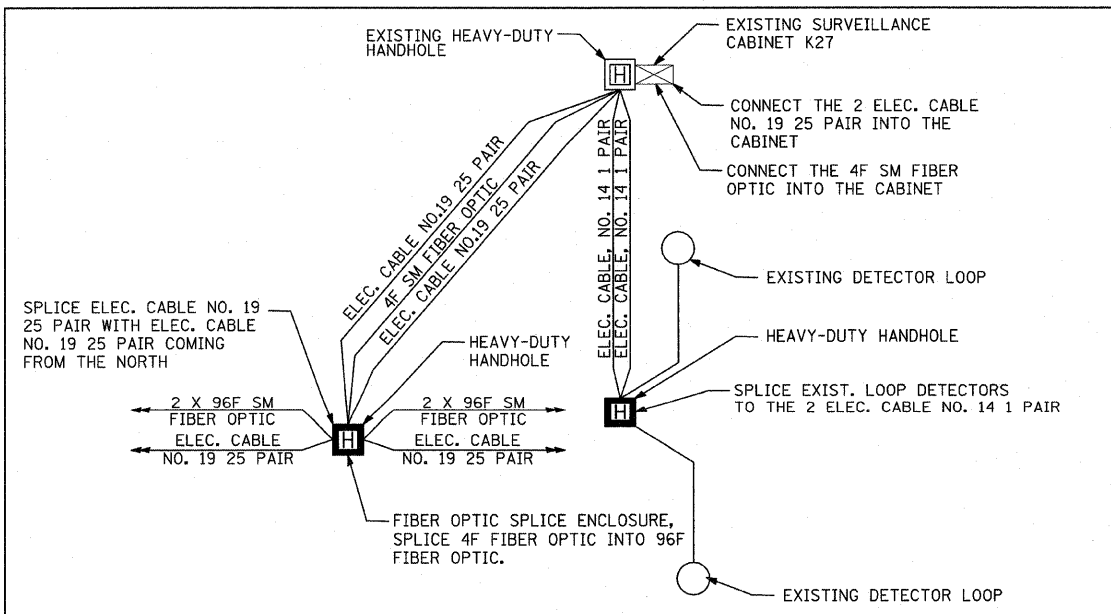
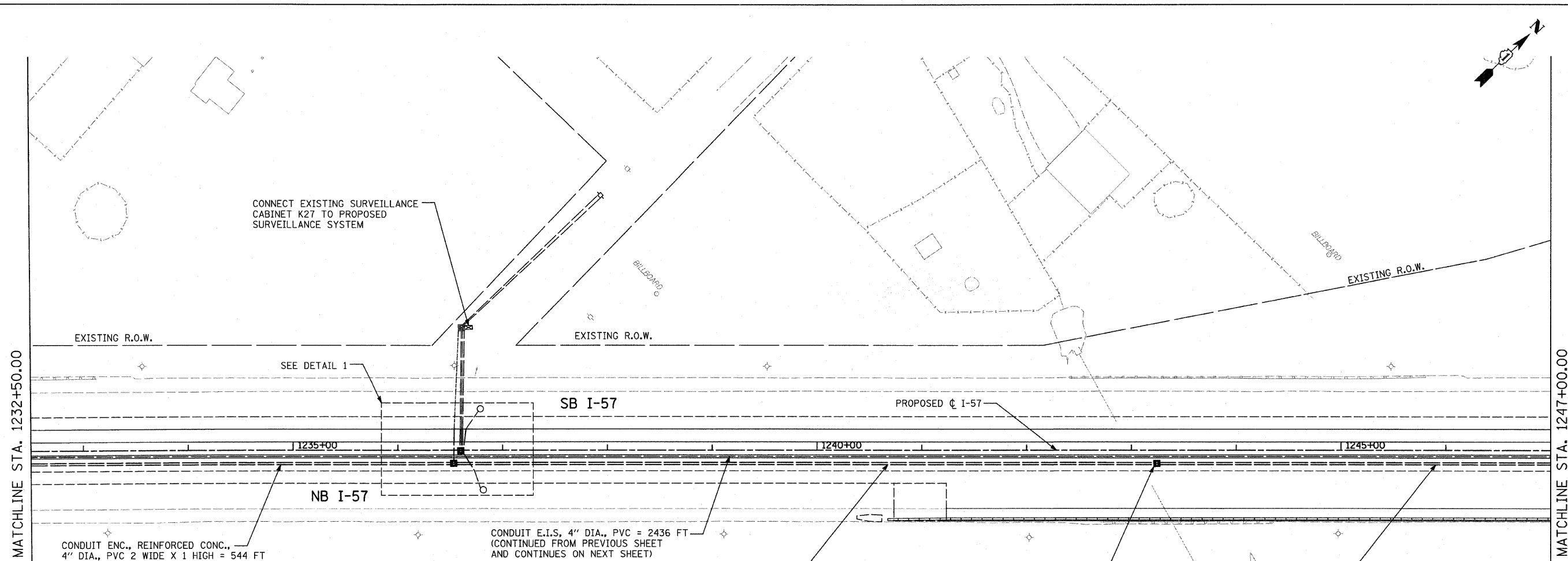
**TYLIN INTERNATIONAL**

USER NAME =	DESIGNED - JDF	REVISED -
PLOT SCALE =	DRAWN - CAC	REVISED -
PLOT DATE =	CHECKED - DAJ	REVISED -
	DATE - 3/18/2010	REVISED -

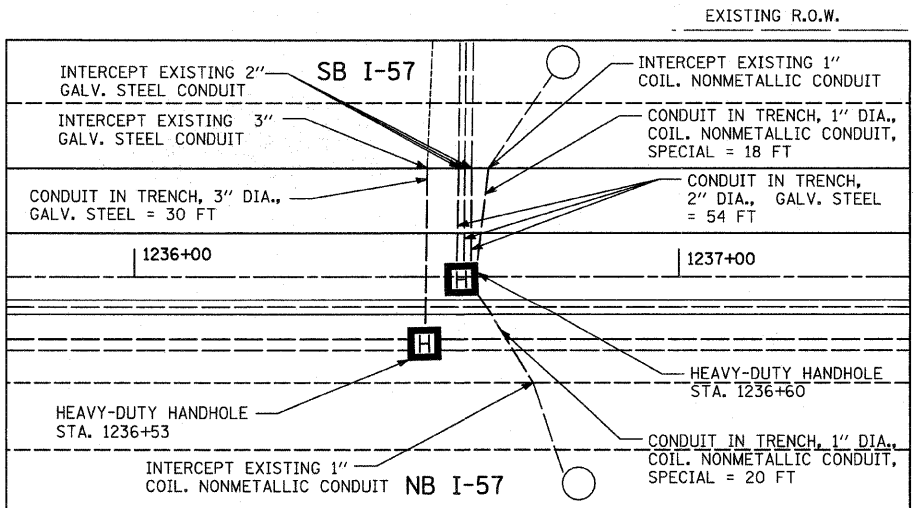
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>I-57 AT I-294 INTERCHANGE PROJECT PROPOSED TRAFFIC SURVEILLANCE PLAN</b>			
SCALE: 1"=50'	SHEET NO. 5 OF 8 SHEETS	STA. 1218+00 TO STA. 1232+50	

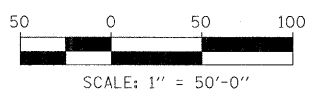
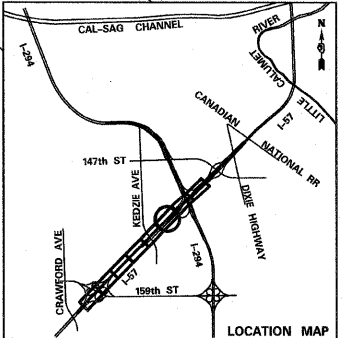
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	233
CONTRACT NO. 60J27				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



WIRING DIAGRAM AT CABINET K27



DETAIL 1



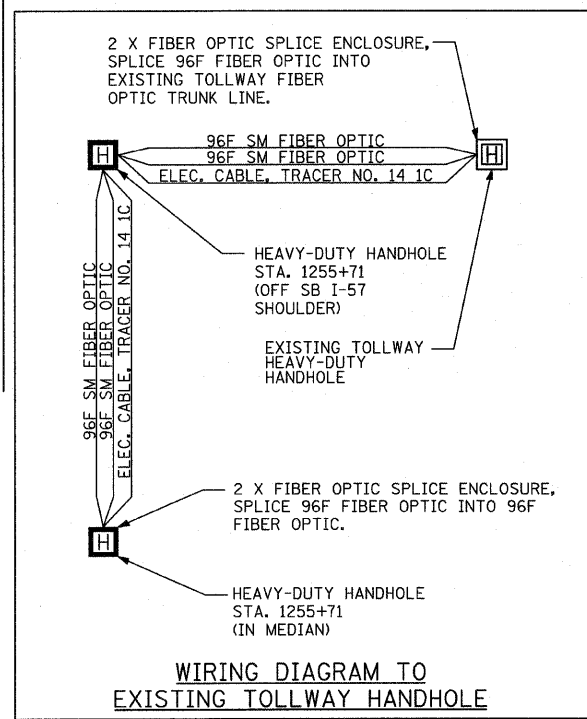
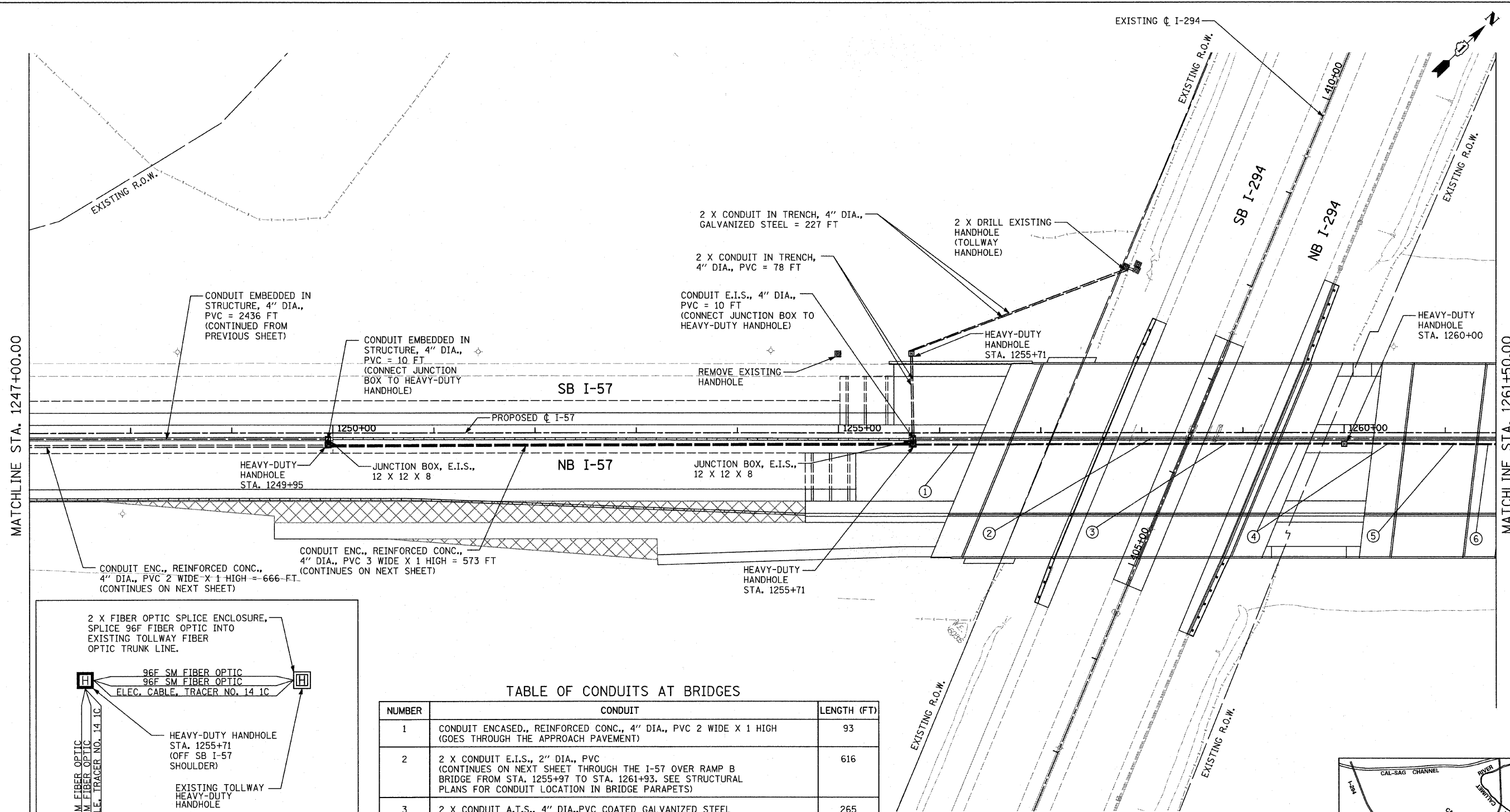
**TYLIN** INTERNATIONAL

USER NAME =	DESIGNED - JDF	REVISED -
PLOT SCALE =	DRAWN - CAC	REVISED -
PLOT DATE =	CHECKED - DAJ	REVISED -
	DATE - 3/18/2010	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

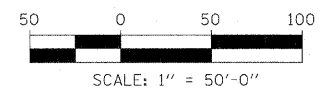
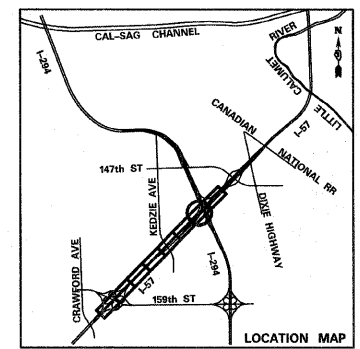
<b>I-57 AT I-294 INTERCHANGE PROJECT PROPOSED TRAFFIC SURVEILLANCE PLAN</b>			
SCALE: 1"=50'	SHEET NO. 6 OF 8 SHEETS	STA. 1232+50 TO STA. 1247+00	

F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 234
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60J27	



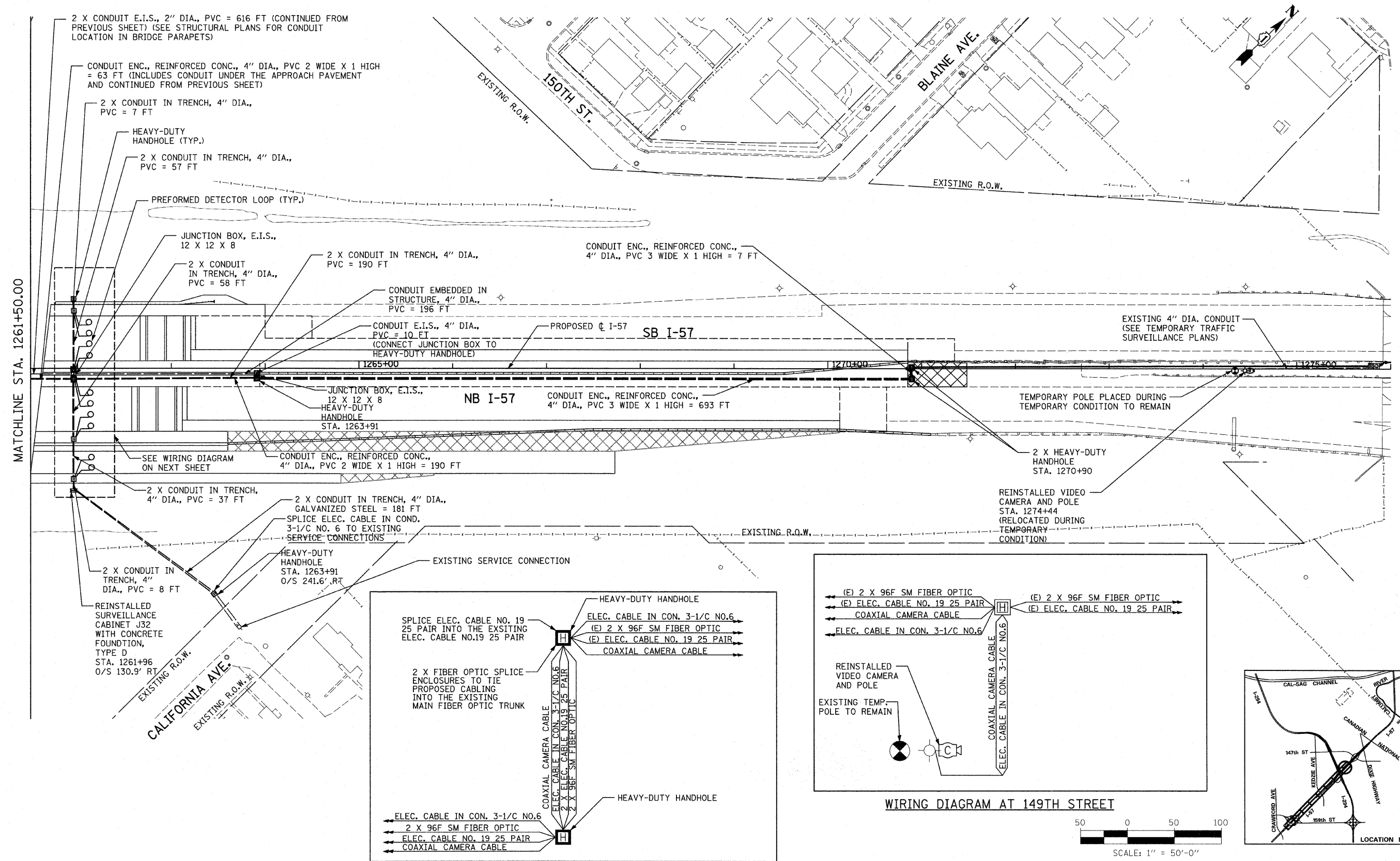
**TABLE OF CONDUITS AT BRIDGES**

NUMBER	CONDUIT	LENGTH (FT)
1	CONDUIT ENCASED., REINFORCED CONC., 4" DIA., PVC 2 WIDE X 1 HIGH (GOES THROUGH THE APPROACH PAVEMENT)	93
2	2 X CONDUIT E.I.S., 2" DIA., PVC (CONTINUES ON NEXT SHEET THROUGH THE I-57 OVER RAMP B BRIDGE FROM STA. 1255+97 TO STA. 1261+93. SEE STRUCTURAL PLANS FOR CONDUIT LOCATION IN BRIDGE PARAPETS)	616
3	2 X CONDUIT A.T.S., 4" DIA., PVC COATED GALVANIZED STEEL (SEE STRUCTURAL PLANS FOR CONDUIT LOCATION)	265
4	CONDUIT ENCASED., REINFORCED CONC., 4" DIA., PVC 2 WIDE X 1 HIGH (INCLUDES CONDUIT UNDER THE APPROACH PAVEMENT)	121
5	2 X CONDUIT A.T.S., 4" DIA., PVC COATED GALVANIZED STEEL (SEE STRUCTURAL PLANS FOR CONDUIT LOCATION)	71
6	CONDUIT ENCASED., REINFORCED CONC., 4" DIA., PVC 2 WIDE X 1 HIGH (INCLUDES CONDUIT UNDER THE APPROACH PAVEMENT AND CONTINUES ON NEXT SHEET)	63

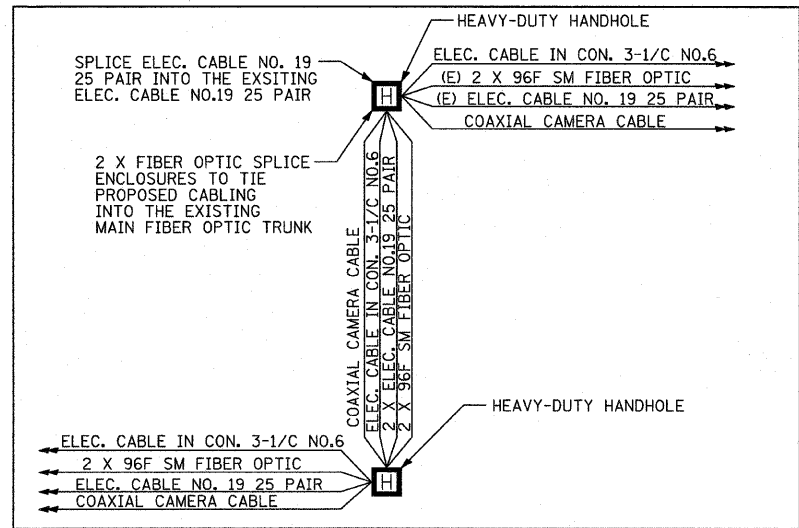


<b>TYLIN INTERNATIONAL</b>	USER NAME =	DESIGNED - JDF	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>I-57 AT I-294 INTERCHANGE PROJECT PROPOSED TRAFFIC SURVEILLANCE PLAN</b>			F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 235
	PLOT SCALE =	CHECKED - DAJ	REVISED -		SCALE: 1"=50'			SHEET NO. 7 OF 8 SHEETS STA. 1247+00 TO STA. 1261+50				
	PLOT DATE =	DATE - 3/18/2010	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60J27				
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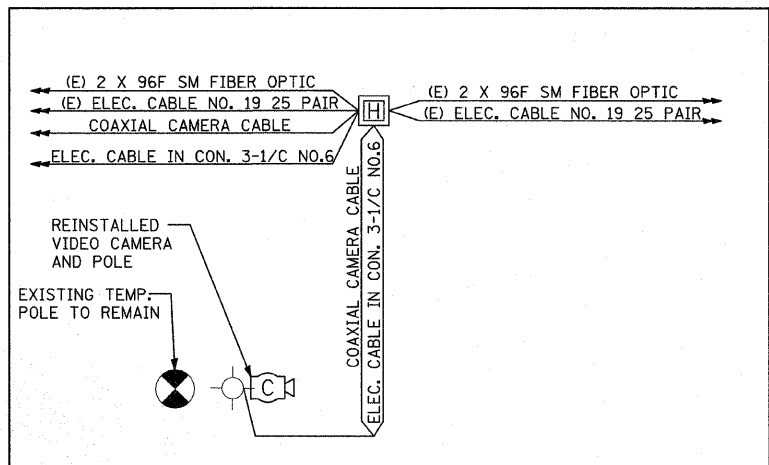
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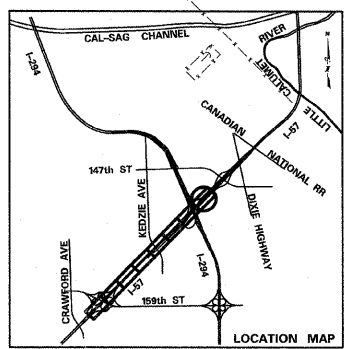
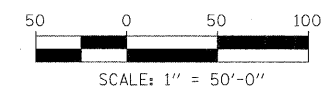
MATCHLINE STA. 1261+50.00



WIRING DIAGRAM AT 150TH STREET



WIRING DIAGRAM AT 149TH STREET



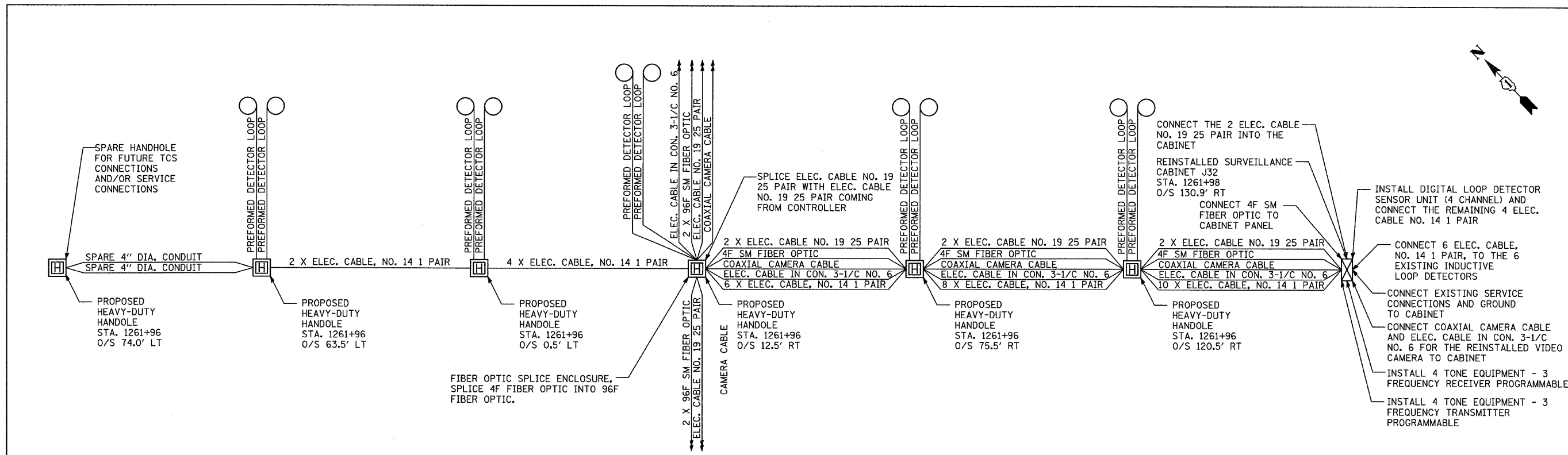
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	PLOT SCALE =	DRAWN - CAC	REVISED -
	PLOT DATE =	CHECKED - DAJ	REVISED -
		DATE - 3/18/2010	REVISED -

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

**I-57 AT I-294 INTERCHANGE PROJECT**  
**PROPOSED TRAFFIC SURVEILLANCE PLAN**

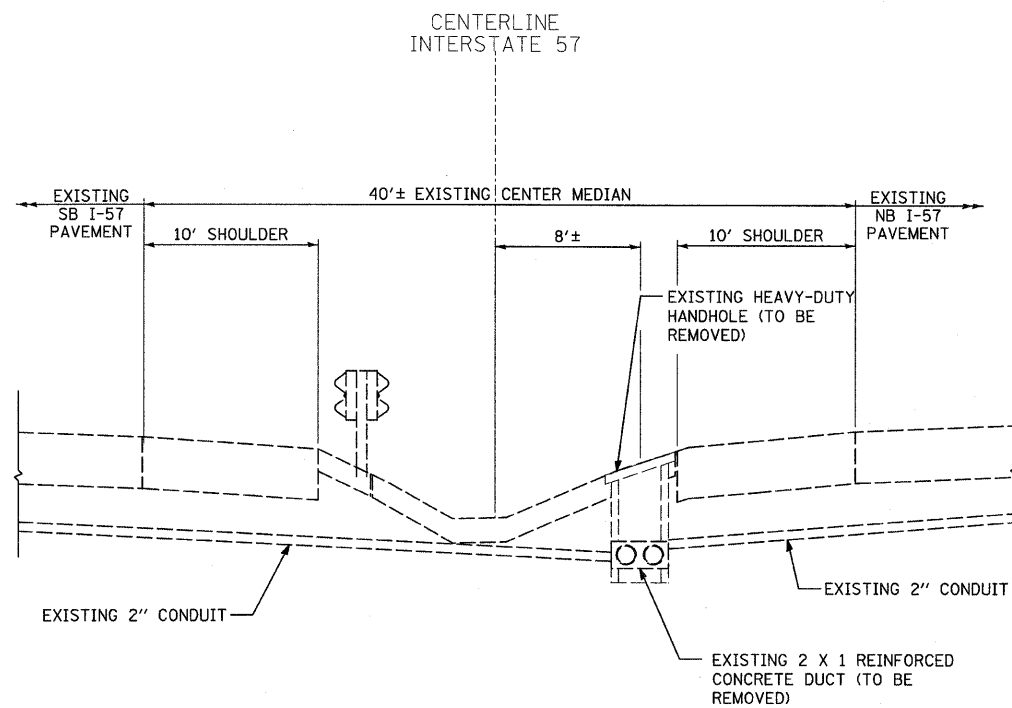
SCALE: 1"=50'    SHEET NO. 8 OF 8 SHEETS    STA. 1261+50 TO STA. 1276+00

F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 236
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60J27	

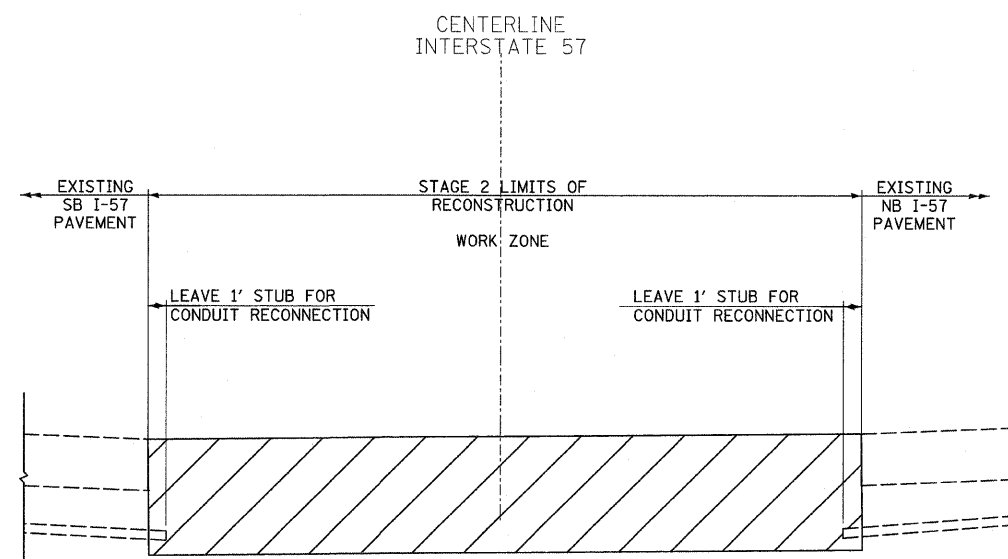


WIRING DIAGRAM TO REINSTALLED CABINET J32

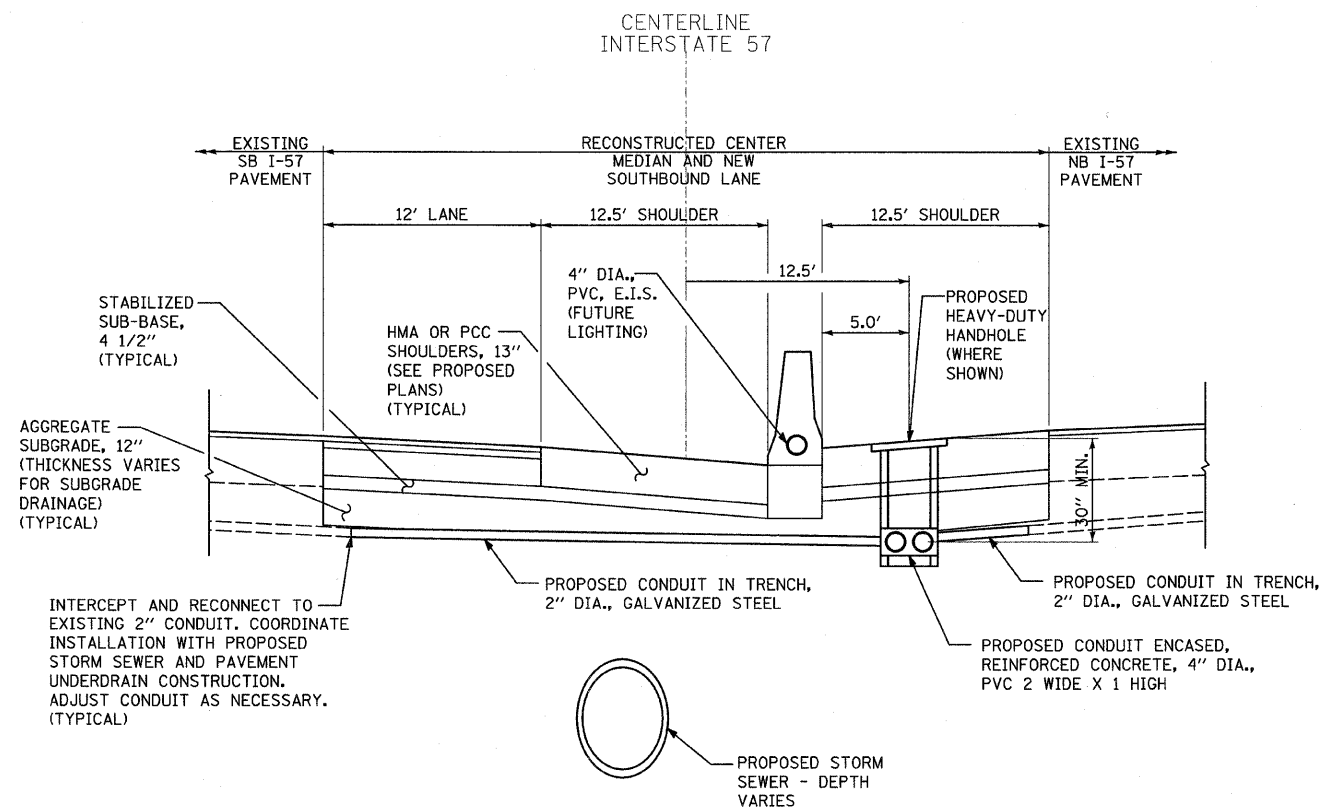
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	PLOT SCALE =	DRAWN - CAC	REVISED -		57	1414.2B	COOK	516	237			
	PLOT DATE =	CHECKED - DAJ	REVISED -		CONTRACT NO. 60J27							
		DATE - 3/18/2010	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							
				SCALE: NONE	SHEET NO. 1 OF 1 SHEET	STA.	TO STA.					



EXISTING TRAFFIC SURVEILLANCE TYPICAL SECTION

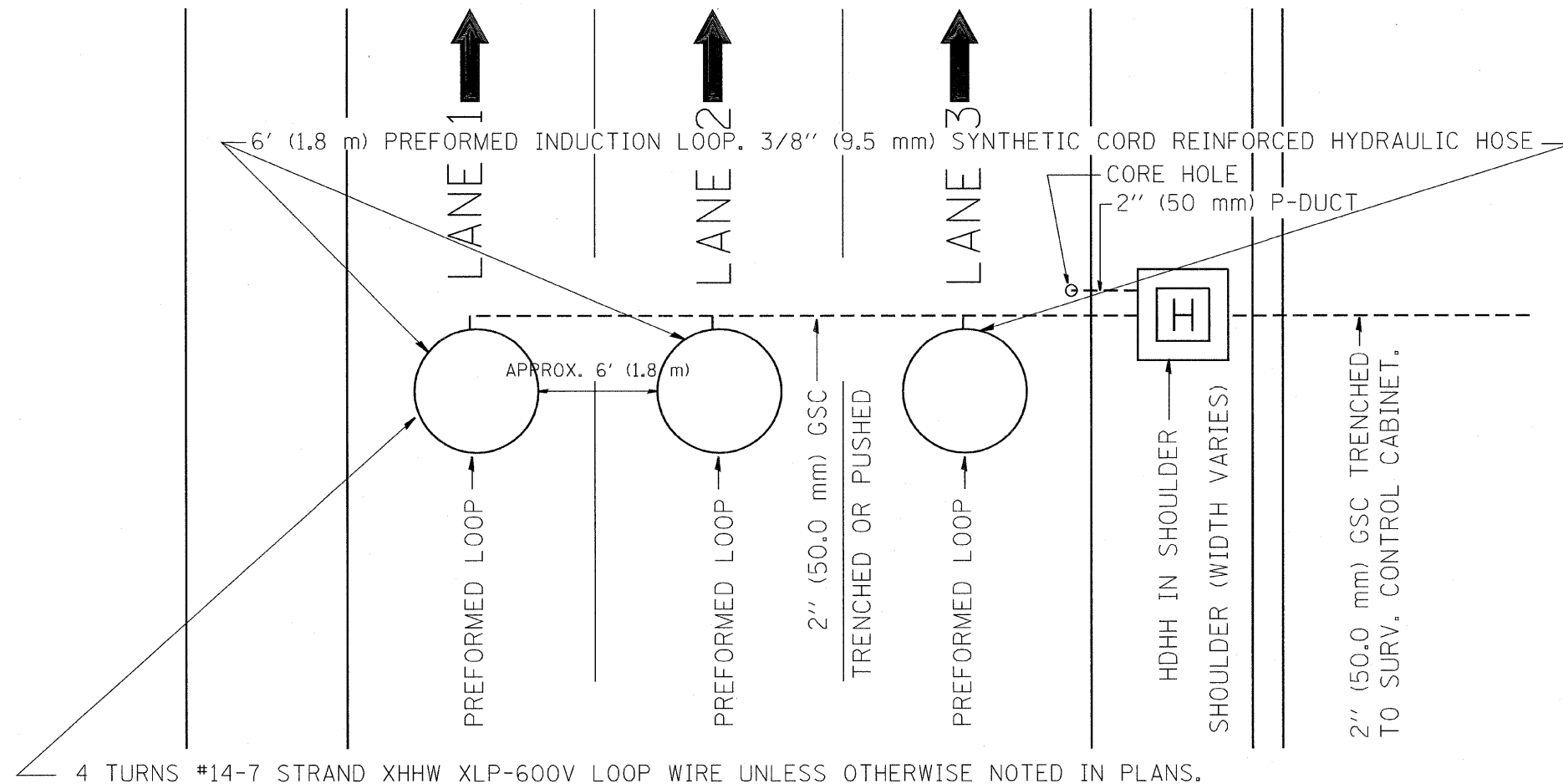


TYPICAL SECTION DURING STAGE 2 CONSTRUCTION

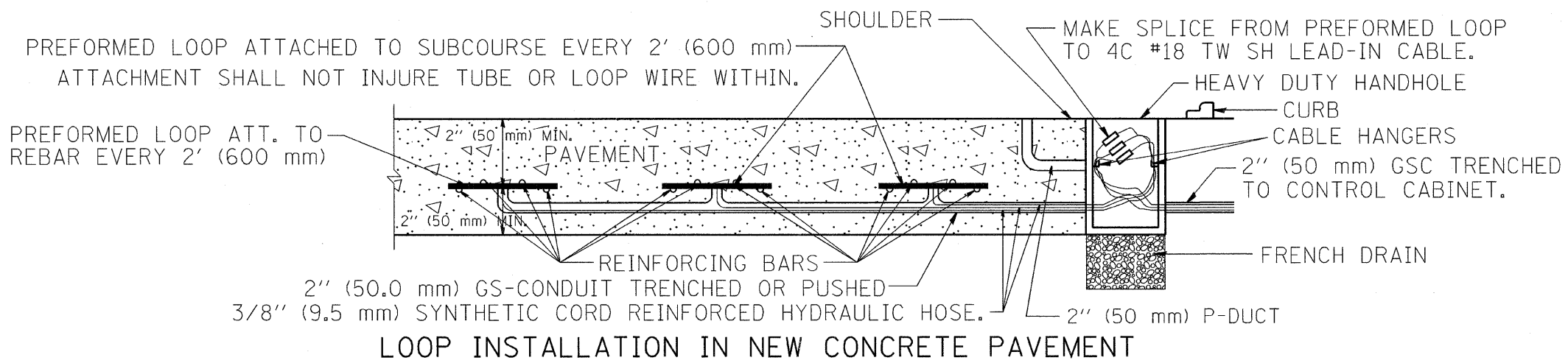


TYPICAL SECTION OF FINAL CONDITION

TYLIN INTERNATIONAL	USER NAME =	DESIGNED - JDF	REVISED - 4/29/2010	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>I-57 AT I-294 INTERCHANGE PROJECT TRAFFIC SURVEILLANCE DETAILS</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	DRAWN - CAC	REVISED -		57	1414.2B	COOK	516	238			
	PLOT DATE =	CHECKED - DAJ	REVISED -		SCALE: N.T.S. SHEET NO. 1 OF 1 SHEETS STA. TO STA.			CONTRACT NO. 60J27				
		DATE - 3/18/2010	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							



**TYPICAL 3 LANE COUNT STATION IN NEW CONCRETE PAVEMENT**



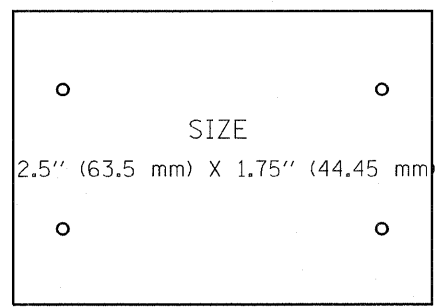
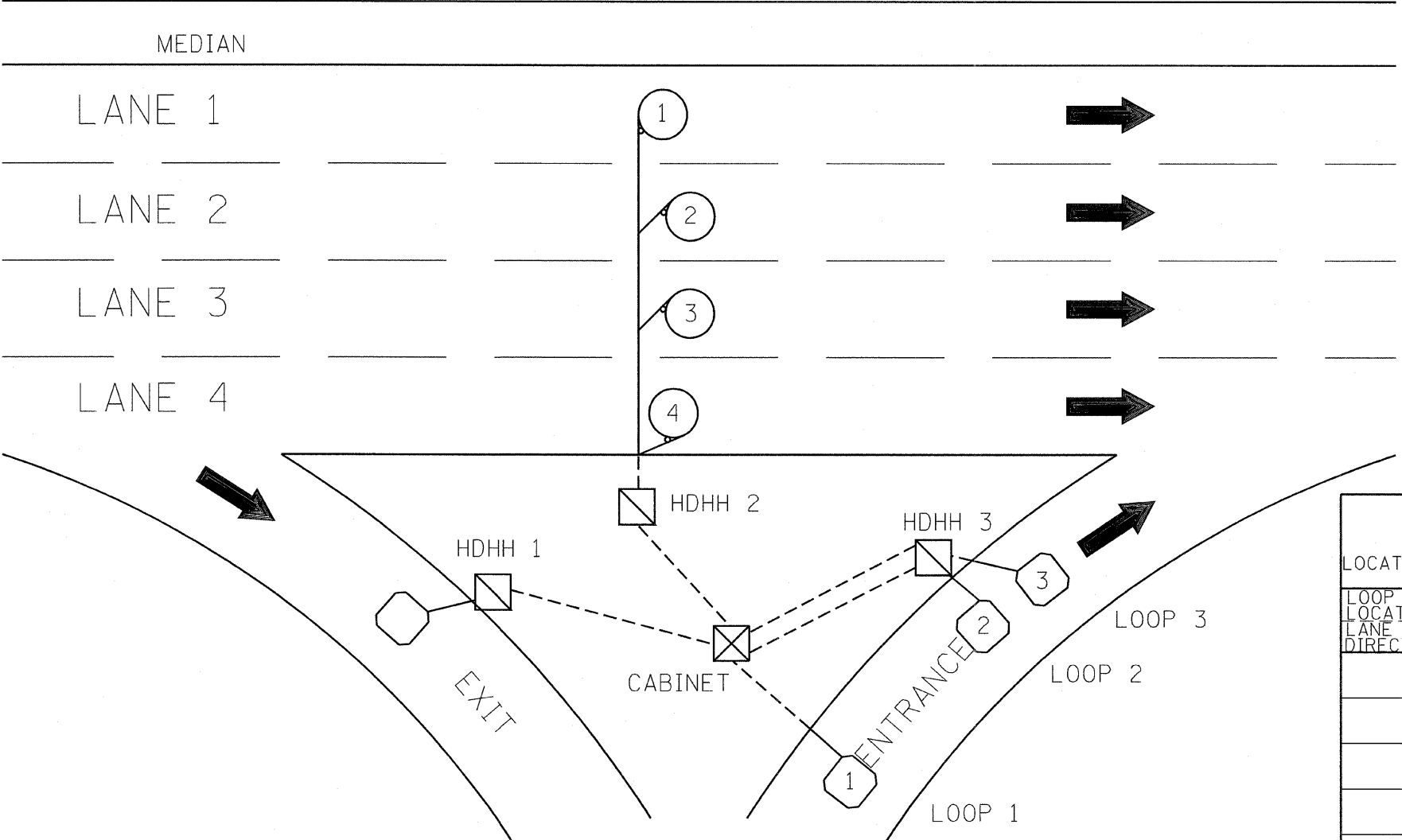
**LOOP INSTALLATION IN NEW CONCRETE PAVEMENT**

**NOTES:**

- 1.- EACH INDUCTION LOOP SHALL HAVE ITS OWN LEAD-IN CABLE TO CABINET.
- 2.- INDUCTION LOOPS SHALL NOT BE CONNECTED IN SERIES WITH OTHER LOOPS.
- 3.- LOOPS LOCATED OVER 1000' (300 m) FROM CABINET SHALL REQUIRE 5 TURNS OF #14 WIRE.
- 4.- FOR LANES 1 AND 3 WRAP LOOPS CLOCKWISE, FOR LANE 2 WRAP LOOP COUNTER CLOCKWISE.
- 5.- FOR COUNT STATIONS WHICH HAVE MORE THAN 3 LANES, A 3" (75 mm) GSC SHALL BE USED.
- 6.- COREHOLE SHALL BE FILLED WITH DUCT SEAL. JOINT SEALER (OZ GEDNEY DOZSEAL 230 OR BETTER) SHALL BE ADDED AFTER DUCT SEAL.

FILE NAME = C:\Projects\TSC\TYPICALS\TSCYP08.dgn	USER NAME = mezog	DESIGNED - J.G.	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER</b>	<b>PREFORMED LOOP TYPICAL INSTALLATION NEW CONCRETE PAVEMENT</b>			F.A. RTE. 57	SECTION 1414.2B	COUNTY Cook	TOTAL SHEETS 516	SHEET NO. 238A
	PLOT SCALE = 100.0000' / IN.	DRAWN - G.M.	REVISED -		SCALE: NONE	SHEET NO.	OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.   ILLINOIS FED. AID PROJECT		
	PLOT DATE = 4/2/2010	CHECKED - J.G.	REVISED -							CONTRACT NO.		
		DATE - 06/22/04	REVISED -									





SUGGESTED TAG  
 PANDUIT  
 #MP250W175-C  
 OR EQUIVALENT

LOOP ANALYZER					
LOCATION _____			DATE _____		
LOOP LOCATION LANE DIRECTION	LOOP WIRE MARKED AND CODED	LOOP SIZE	FREQ. INDUCTANCE	INSULATION	LOOP RESISTANCE

HDHH 1 EXAMPLE  
 IB-EB EXIT  
 CCW IN/  
 TO CABINET # \_\_\_\_\_

HDHH 2 EXAMPLE  
 IB (OB) LANE #\_\_\_\_  
 CCW /OUT  
 TO CABINET # \_\_\_\_\_

HDHH 3 EXAMPLE  
 IB-EB ENT.  
 LOOP #2  
 CW IN/

NOTE:  
 EACH LOOP WIRE SHALL BE TAGGED  
 AS "IN" OR "OUT" AND "CW" OR "CCW".  
 SHIELDED CABLE WILL BE TAGGED IN  
 EACH HANDHOLE AND CABINET TO  
 MATCH THE CABLE LOG.

FILE NAME = C:\Projects\TSC\TYPICALS\TSC\TYP08.dgn	USER NAME = mezeg	DESIGNED - R.L.	REVISIONS - 6/94	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER</b>	<b>LOOP STATUS REPORT</b>		F.A. RTE. 57	SECTION 1414.2B	COUNTY Cook	TOTAL SHEETS 516	SHEET NO. 238B
PLOT SCALE = 100.0000' / IN.	CHECKED - R.L.	REVISIONS - 10/96	SCALE: NONE				SHEET NO. OF SHEETS	STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		CONTRACT NO.
PLOT DATE = 4/2/2010	DATE - 6-27-94	REVISIONS -									

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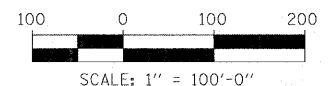
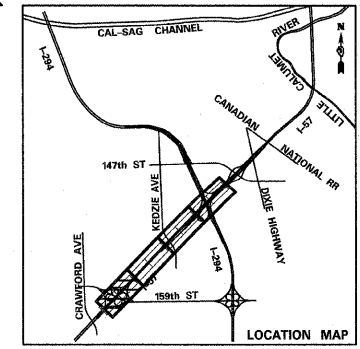
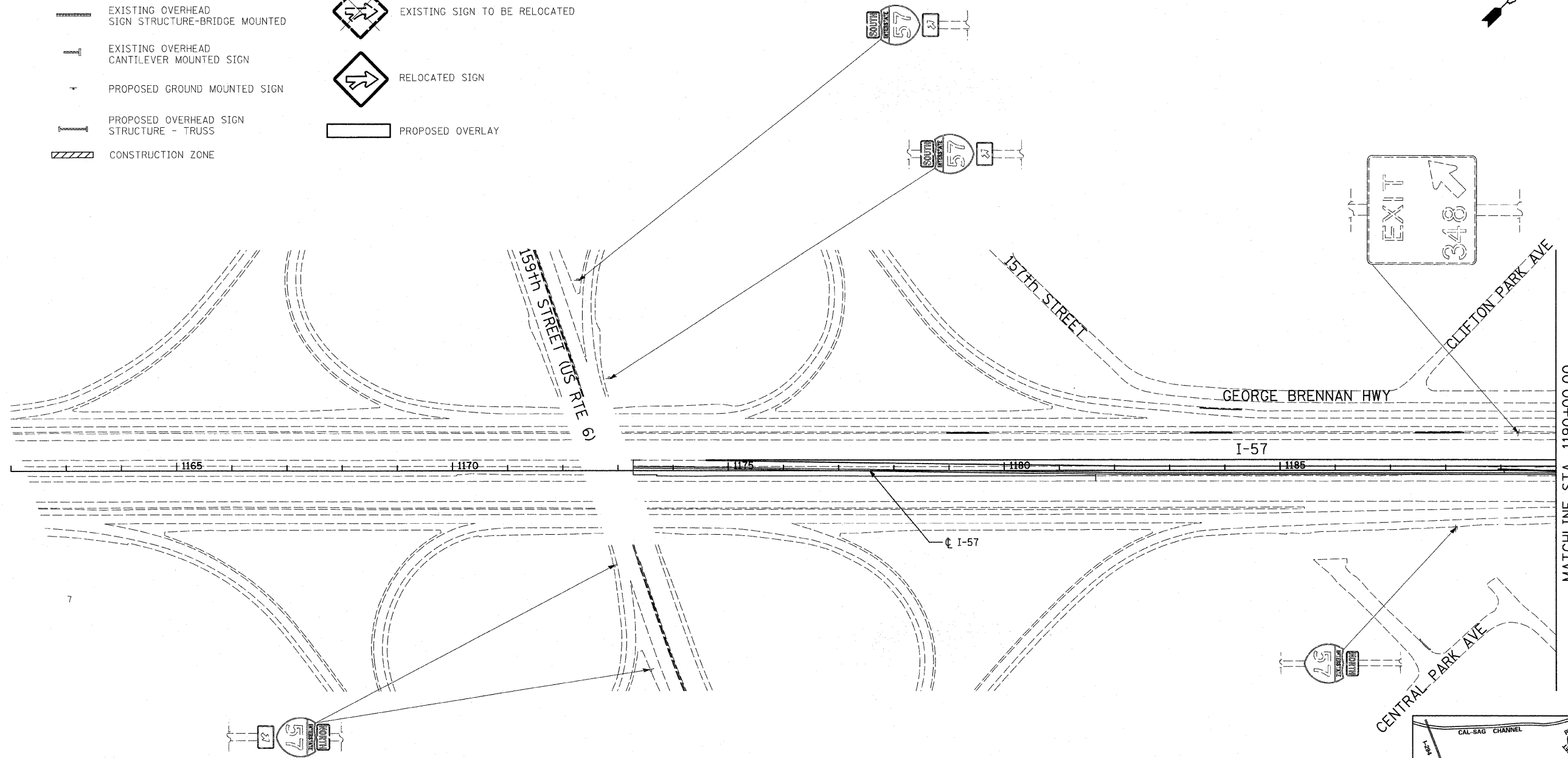
**SIGN SCHEDULE**

EXISTING LOCATION				REMAIN IN PLACE	RELOCATE SIGN PANEL	PROPOSED OVERLAY	RELOCATED SIGNS - POST QUANTITY	RELOCATED SIGNS- WOOD POST LENGTH (FT)	STRUCTURAL STEEL SIGN SUPPORT BREAKAWAY (POUND)	STRUCTURAL STEEL SIGN SUPPORT BREAKAWAY- POST TYPE	CONCRETE FOUNDATION (CU YD)	RELOCATE SIGN PANEL ASSEMBLY - TYPE B (EACH)	SIGN DESCRIPTION
LOCATION	STATION	OFFSET (FT)	MOUNTING										
NB I-57 (159th ST. Entrance Ramp)	1172+93	170.5' RT	LIGHT POLE	1									NORTH I-57 & ARROW
NB I-57 (159th ST. Entrance Ramp)	1173+55	360.0' RT	LIGHT POLE	1									NORTH I-57 & ARROW
NB I-57	1188+16	104.9' RT	LIGHT POLE	1									NORTH I-57
NB I-57	1190+56	96.0' RT	LIGHT POLE	1									SPEED LIMIT 55
NB I-57	1222+49	81.1' RT	WOOD POSTS	1									KEDZIE AVE.
NB I-57	1222+60	OVERHEAD	BRIDGE	1									EXIT 350, (IL83) 147TH ST - SIBLEY BLVD, 1 MILE
NB I-57	1228+74	79.6' RT	LIGHT POLE	1									MILE 349
NB I-57	1230+74	85.7' RT	WOOD POSTS	1									ACCIDENT INVESTIGATION SITE, 1 MILE
NB I-57	1250+21	OVERHEAD	TRUSS			4 MILES	2		2790	W16X45	4.46	1	EXIT 353, 127TH ST BURR OAK AVE, 3 1/2 MILES
NB I-57	1250+21	OVERHEAD	TRUSS			3/4 MILE	2		2790	W16X45	4.46	1	EXIT 350, (IL83) SIBLEY BLVD, 147TH ST, 1/2 MILE
NB I-57	1254+20	85.7' RT	WOOD POSTS		1	3/4 MILE	2	32.66					ACCIDENT INVESTIGATION SITE, 1/2 MILE
NB I-57	1256+85	86.0' RT	WOOD POSTS		1		2	34.66					POSEN, HARVEY, MIDLOTHIAN, EXIT 350
NB I-294	405+85	84.8' RT	WOOD POSTS		1		2	28.66					INTERSTATE 57
SB I-57 (159th ST. Entrance Ramp)	1172+26	346.4' LT	METAL POST	1									SOUTH I-57 & ARROW
SB I-57 (159th ST. Entrance Ramp)	1172+82	168.7' LT	LIGHT POLE	1									SOUTH I-57 & ARROW
SB I-57	1189+30	70.2' LT	LIGHT POLE	1									EXIT 348 & ARROW
SB I-57	1192+24	95.5' LT	LIGHT POLE	1									RAMP 30 M.P.H
SB I-57	1193+24	OVERHEAD	CANTILEVER	1									EXIT 348, 159TH ST & ARROW
SB I-57	1223+69	77.9' LT	WOOD POSTS	1									KEDZIE AVE.
SB I-57	1223+58	OVERHEAD	BRIDGE	1									EXIT 348, 159TH ST 3/4 MILES
SB I-57	1223+58	OVERHEAD	BRIDGE	1									EXIT 348, 167TH ST 1 3/4 MILES
SB I-294	406+98	72.0' LT	WOOD POSTS		1		2	28.66					INTERSTATE 57
SB I-57	1268+56	84.0' LT	LIGHT POLE	1									SPEED LIMIT 55
SB I-57	1272+03	88.5' LT	LIGHT POLE	1									SOUTH I-57

<b>TYLIN INTERNATIONAL</b>	USER NAME =	DESIGNED - DM	REVISED - 4/29/2010	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>I-57 AT I-294 INTERCHANGE PROJECT SIGN SCHEDULE</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	DRAWN - DM	REVISED -		57	1414.2B	COOK	516	239			
	PLOT DATE =	CHECKED - JPM	REVISED -		SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.			CONTRACT NO. 60J27				
		DATE - 3/18/2010	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							

**LEGEND:**

- +— EXISTING GROUND MOUNTED SIGN
- +— EXISTING OVERHEAD TRUSS MOUNTED SIGN
- +— EXISTING OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED
- +— EXISTING OVERHEAD CANTILEVER MOUNTED SIGN
- +— PROPOSED GROUND MOUNTED SIGN
- +— PROPOSED OVERHEAD SIGN STRUCTURE - TRUSS
- ▨ CONSTRUCTION ZONE
- ◊ EXISTING SIGN
- ◊ EXISTING SIGN TO BE RELOCATED
- ◊ RELOCATED SIGN
- ▭ PROPOSED OVERLAY



**TYLIN INTERNATIONAL**

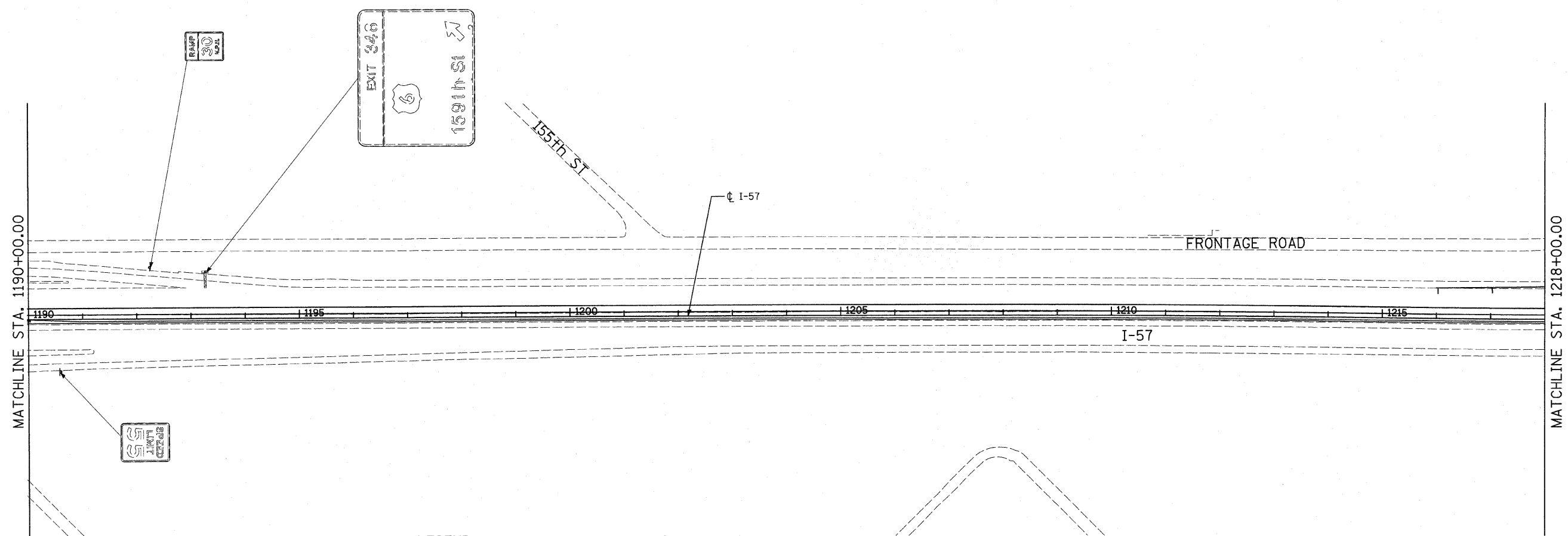
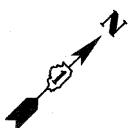
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PLOT SCALE =	DRAWN - DM	REVISED -
PLOT DATE =	CHECKED - JPM	REVISED -
	DATE - 3/18/2010	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

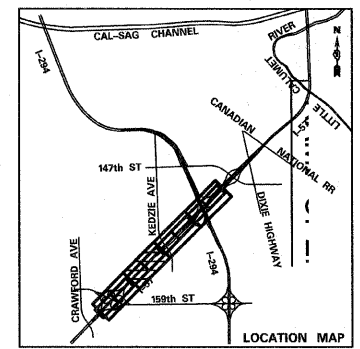
**I-57 AT I-294 INTERCHANGE PROJECT  
SIGNING PLAN**

SCALE: 1"=100' SHEET NO. 1 OF 4 SHEETS STA. 1162+00 TO STA. 1190+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	240
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 60J27	



- LEGEND:**
- EXISTING GROUND MOUNTED SIGN
  - EXISTING OVERHEAD TRUSS MOUNTED SIGN
  - EXISTING OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED
  - EXISTING OVERHEAD CANTILEVER MOUNTED SIGN
  - PROPOSED GROUND MOUNTED SIGN
  - PROPOSED OVERHEAD SIGN STRUCTURE - TRUSS
  - CONSTRUCTION ZONE
  - EXISTING SIGN
  - EXISTING SIGN TO BE RELOCATED
  - RELOCATED SIGN
  - PROPOSED OVERLAY



SCALE: 1" = 100'-0"

**TYLIN INTERNATIONAL**

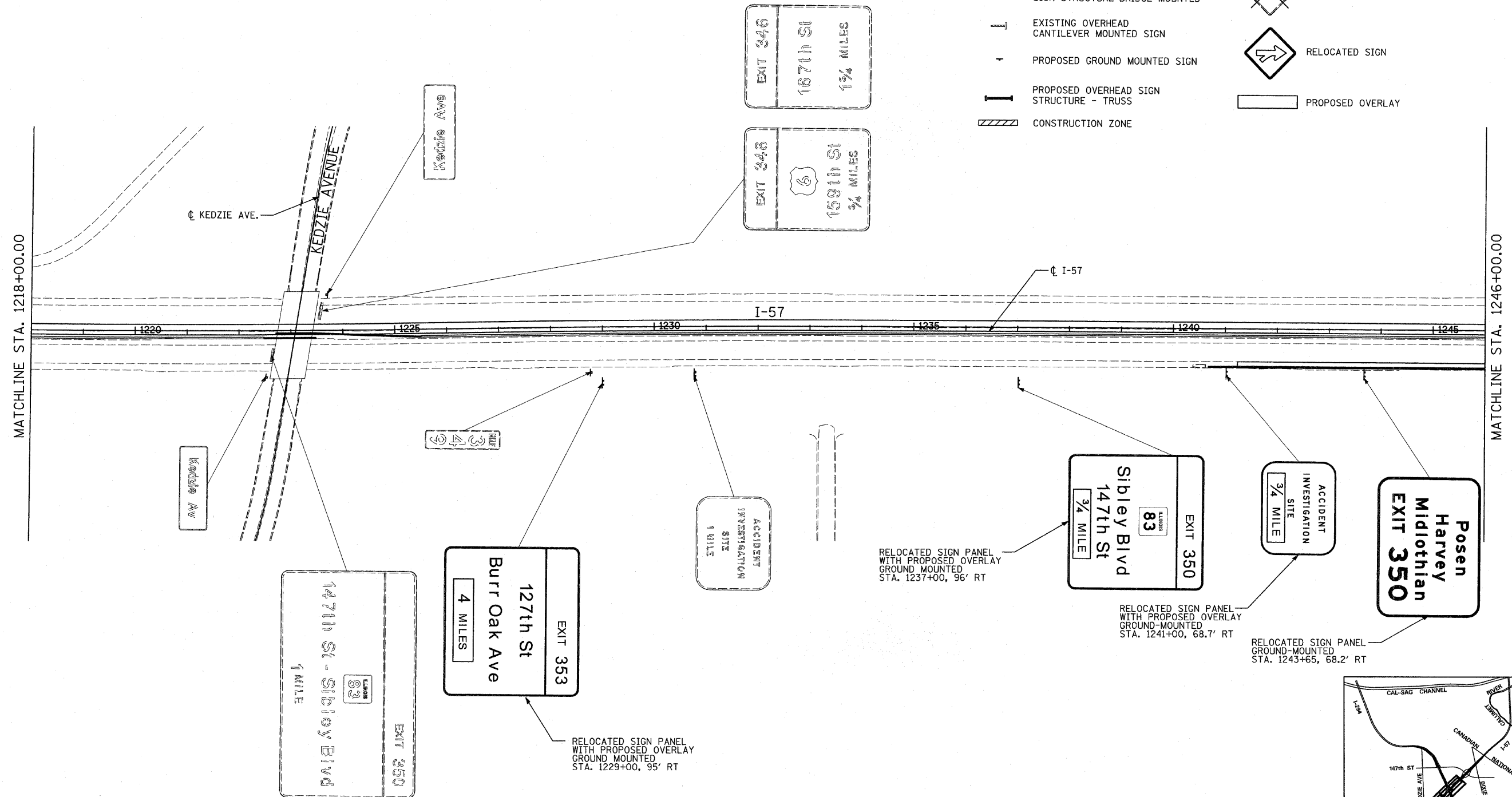
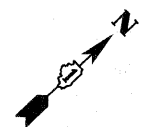
USER NAME =	DESIGNED - DM	REVISED -
PLOT SCALE =	DRAWN - DM	REVISED -
PLOT DATE =	CHECKED - JPM	REVISED -
	DATE - 3/18/2010	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>I-57 AT I-294 INTERCHANGE PROJECT SIGNING PLAN</b>			
SCALE: 1"=100'	SHEET NO. 2 OF 4 SHEETS	STA. 1190+00 TO STA. 1218+00	

F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	241
FED. ROAD DIST. NO.			CONTRACT NO. 60J27	
ILLINOIS FED. AID PROJECT				

- LEGEND:**
- EXISTING GROUND MOUNTED SIGN
  - EXISTING OVERHEAD TRUSS MOUNTED SIGN
  - EXISTING OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED
  - EXISTING OVERHEAD CANTILEVER MOUNTED SIGN
  - PROPOSED GROUND MOUNTED SIGN
  - PROPOSED OVERHEAD SIGN STRUCTURE - TRUSS
  - ▨ CONSTRUCTION ZONE
  - ◊ EXISTING SIGN
  - ◊ EXISTING SIGN TO BE RELOCATED
  - ◊ RELOCATED SIGN
  - ▭ PROPOSED OVERLAY



**TYLIN INTERNATIONAL**

USER NAME =	DESIGNED - DM	REVISED -
PLOT SCALE =	DRAWN - DM	REVISED -
PLOT DATE =	CHECKED - JPM	REVISED -
	DATE - 3/18/2010	REVISED -

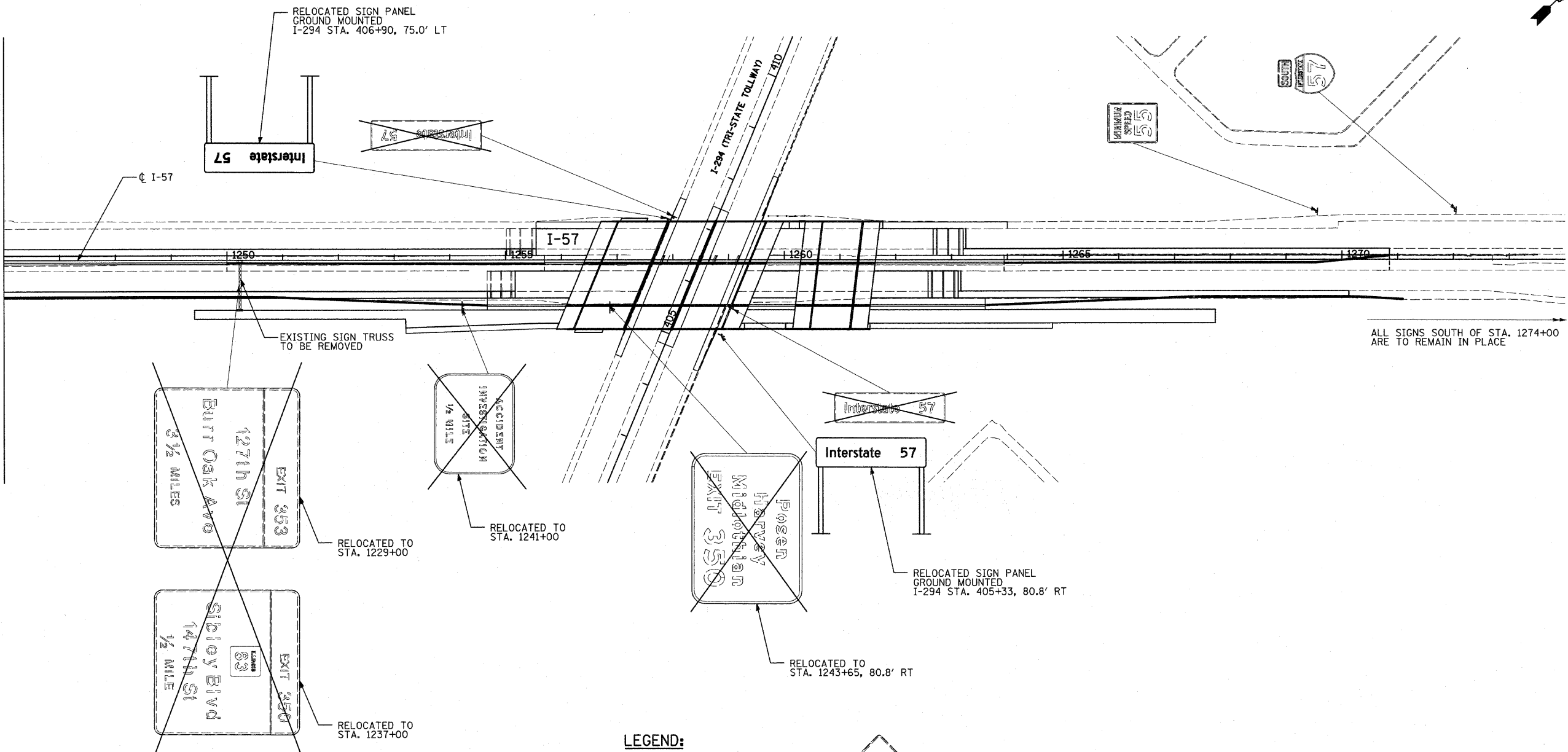
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**I-57 AT I-294 INTERCHANGE PROJECT  
SIGNING PLAN**

SCALE: 1"=100'    SHEET NO. 3 OF 4 SHEETS    STA. 1218+00 TO STA. 1246+00












F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 242
FED. ROAD DIST. NO. ILLINOIS			CONTRACT NO. 60J27	

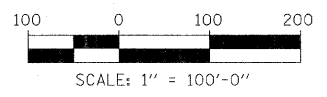
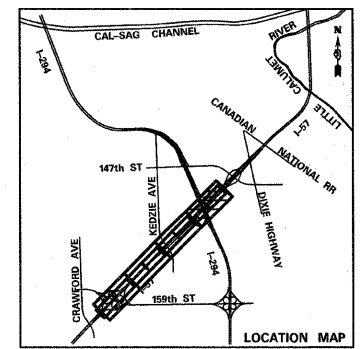
MATCHLINE STA. 1246+00.00



ALL SIGNS SOUTH OF STA. 1274+00 ARE TO REMAIN IN PLACE

**LEGEND:**

-  EXISTING GROUND MOUNTED SIGN
-  EXISTING OVERHEAD TRUSS MOUNTED SIGN
-  EXISTING OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED
-  EXISTING OVERHEAD CANTILEVER MOUNTED SIGN
-  PROPOSED GROUND MOUNTED SIGN
-  PROPOSED OVERHEAD SIGN STRUCTURE - TRUSS
-  CONSTRUCTION ZONE
-  EXISTING SIGN
-  EXISTING SIGN TO BE RELOCATED
-  RELOCATED SIGN
-  PROPOSED OVERLAY



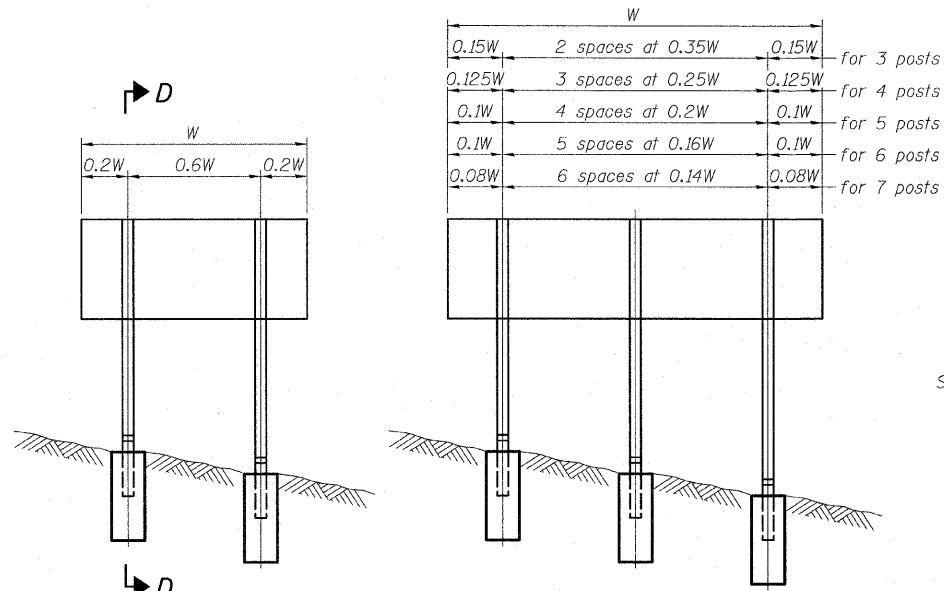
**TYLIN INTERNATIONAL**

USER NAME =	DESIGNED - DM	REVISED -
PLOT SCALE =	DRAWN - DM	REVISED -
PLOT DATE =	CHECKED - JPM	REVISED -
	DATE - 3/18/2010	REVISED -

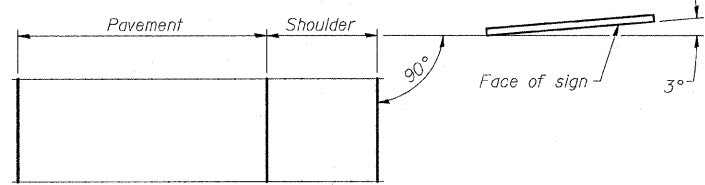
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>I-57 AT I-294 INTERCHANGE PROJECT SIGNING PLAN</b>			
SCALE: 1"=100'	SHEET NO. 4 OF 4 SHEETS	STA. 1246+00 TO STA. 1274+00	

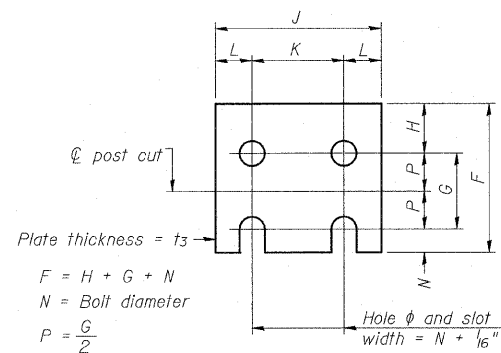
F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 243
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60J27	



**ELEVATION**

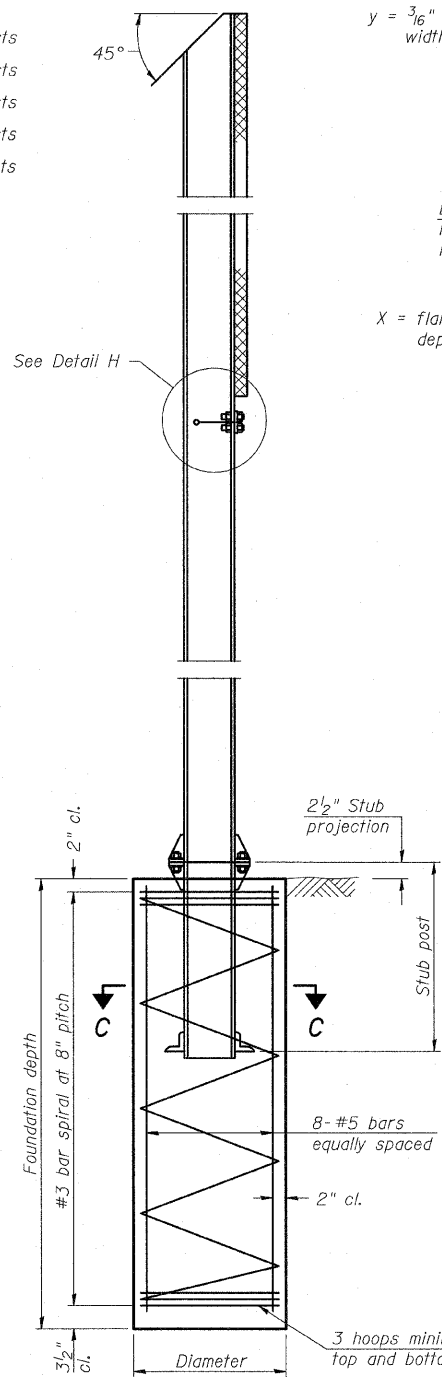


**LOCATION SKETCH**

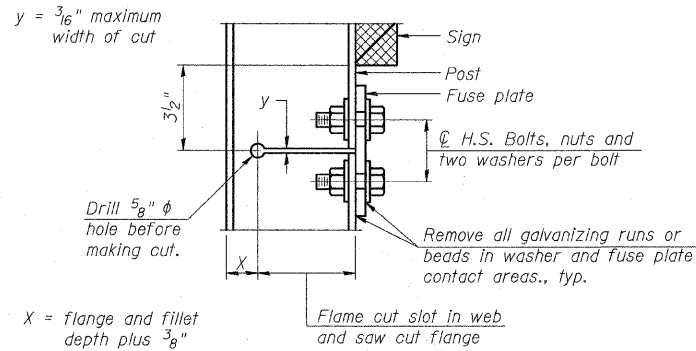


**FUSE PLATE DETAIL**  
(Install with notches down.)

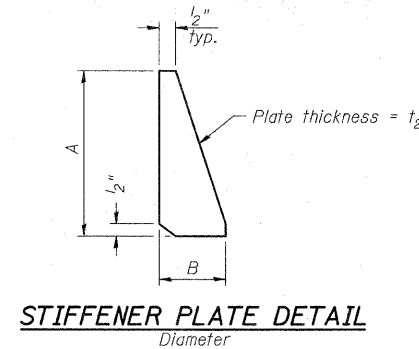
N = Bolt Diameter	G	H
1/2"	2"	1 1/8"
5/8"	2 1/4"	1 1/4"
3/4"	2 1/2"	1 3/8"
7/8"	2 3/4"	1 1/2"
1"	3"	1 5/8"
1 1/8"	3 1/4"	1 3/4"
1 1/4"	3 1/2"	1 7/8"



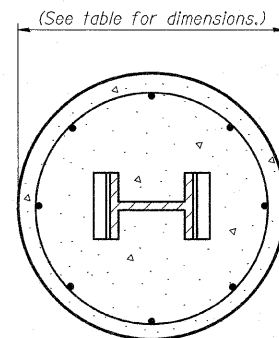
**SECTION D-D**



**DETAIL H**



**STIFFENER PLATE DETAIL**



**SECTION C-C**

**GENERAL NOTES**

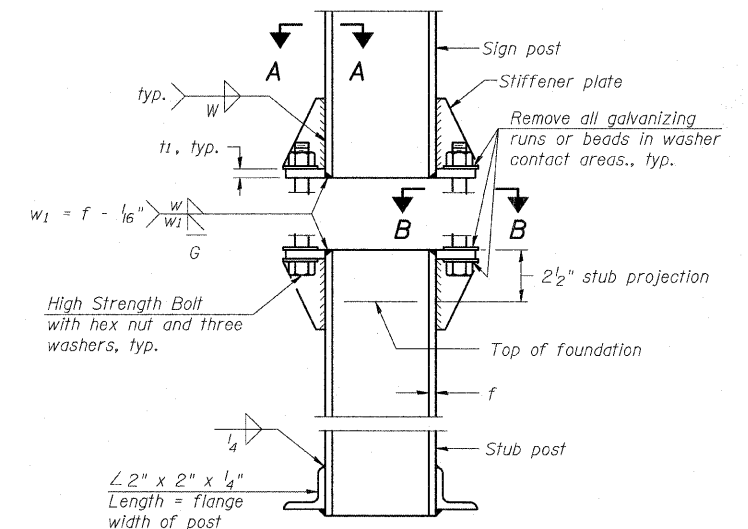
Posts shall be plumbed by using shims with post-to-stub post connection bolts snug tight only. Final tightening of all High Strength Bolts shall be in accordance with Article 727.05 and threads at the junction of the bolt and nut shall be burred or center punched to prevent the nut from loosening.

LOADING: 80 m.p.h. wind with 30% gust factor, normal to sign.

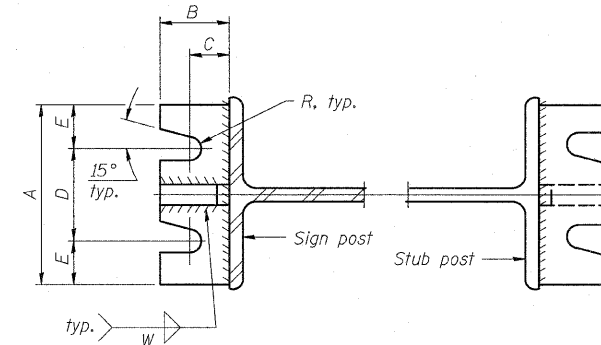
DESIGN STRESSES:  
Structural steel - 20,000 p.s.i.  
Reinforcing steel - 20,000 p.s.i.  
Concrete - 1,400 p.s.i.  
Footing soil pressure - 2,000 p.s.f.

After fabrication, the post, fuse plate and upper 6", min. of the stub post shall be hot-dip galvanized in accordance with AASHTO M111. All bolts, nuts and washers shall be hot-dip galvanized in accordance with AASHTO M232.

Work this sheet with Base Sheet BAW-A-2.

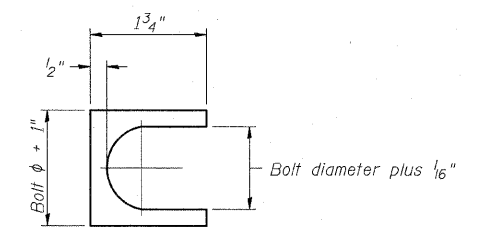


**ELEVATION SIGN POST & STUB POST**



**SECTION A-A**

**SECTION B-B**



**SHIM DETAIL**

Furnish two 0.01" thick and two 0.03" thick stainless steel or brass (ASTM B36) shims per post.

NUMBER	REVISION	DATE

TYLIN INTERNATIONAL	USER NAME =	DESIGNED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -
		DATE - 3/18/2010	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

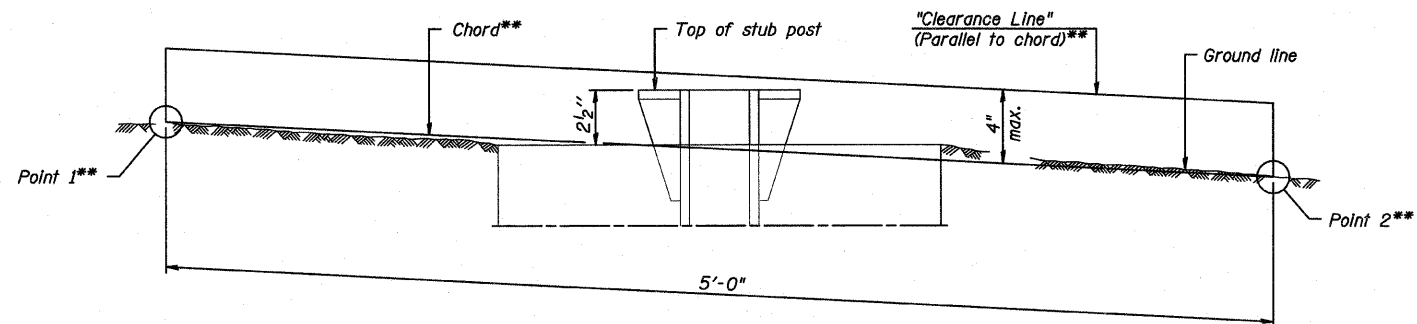
**I-57 AT I-294 INTERCHANGE PROJECT  
BREAKAWAY WIDE FLANGE STEEL SIGNPOST DETAIL 1 OF 2**

F.A.I. RTE. NO. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 244
CONTRACT NO. 60J27			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

POST	CONCRETE FOUNDATION TABLE								POST TO STUB POST CONNECTION DATA								FUSE PLATE DATA					
	Foundation			Reinforcement			Stub Post Length	Bolt Size	A	B	C	D	E	t <sub>1</sub>	t <sub>2</sub>	R	W	J	K	L	t <sub>3</sub>	
	Diameter	Minimum Depth	Concrete (1) cu. yds.	Vertical Bars Length	Bar Spirals Diameter	Bar Spirals Length																lbs. (2)
W6x9	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-3"	5/8" x 3/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	11/32"	1/4"	4"	2 1/4"	7/8"	1/4"
W6x15	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	5/8" x 3/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	11/32"	1/4"	6"	3 1/2"	1 1/4"	3/8"
W8x18	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	3/4" x 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	11/32"	5/16"	5 1/4"	2 3/4"	1 1/4"	3/8"
W10x22	2'-6"	6'-6"	1.18	6'-3"	2'-2 1/2"	105'-0"	92	3'-0"	3/4" x 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	11/32"	5/16"	5 3/4"	2 3/4"	1 1/2"	1/2"
W10x26	2'-6"	7'-0"	1.27	6'-9"	2'-2 1/2"	112'-0"	98	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	11/32"	3/8"	5 3/4"	2 3/4"	1 1/2"	5/8"
W12x26	2'-6"	7'-9"	1.41	7'-6"	2'-2 1/2"	119'-0"	107	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	11/32"	3/8"	6 1/2"	3 1/2"	1 1/2"	5/8"
W14x30	3'-0"	7'-3"	1.90	7'-0"	2'-8 1/2"	145'-0"	113	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	11/32"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"
W14x38	3'-0"	8'-0"	2.09	7'-9"	2'-8 1/2"	153'-0"	122	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	11/32"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"
W16x45	3'-0"	8'-6"	2.23	8'-3"	2'-8 1/2"	162'-0"	130	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	11/32"	3/8"	7"	3 1/2"	1 3/4"	1/2"

\*Dimensional changes required for varying site conditions shall be approved by the Engineer.

POST	FUSE PLATE BOLT SIZE																				
	Sign Height																				
	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"	22'-0"	23'-0"	24'-0"
W6x9	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W6x15	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	5/8" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	---	---	---	---	---	---	---	---	---	---	---	---
W8x18	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	5/8" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	---	---	---	---	---	---	---	---	---	---	---
W10x22	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	---	---	---	---	---	---	---	---
W10x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	---	---	---	---	---	---	---
W12x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	---	---	---	---	---	---
W14x30	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/4"	3/4" x 2 1/4"	---	---	---	---
W14x38	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"
W16x45	---	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"



ELEVATION  
GROUND LINE & STUB POST

\*\* For all "Point 1" and "Point 2" locations, "Clearance Line" must be at or above top of stub post.

- ① Quantity includes all concrete necessary for one foundation.
- ② Includes reinforcement bars and spiral hooping for one foundation.

NUMBER	REVISION	DATE

BREAK-AWAY WIDE FLANGE  
STEEL SIGN POST TABLES

BAW-A-2

12-1-08

TYLIN INTERNATIONAL	USER NAME =	DESIGNED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -
		DATE - 3/18/2010	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

I-57 AT I-294 INTERCHANGE PROJECT			
BREAKAWAY WIDE FLANGE STEEL SIGNPOST DETAIL 2 OF 2			
SCALE:	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	245
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	CONTRACT NO. 60J27



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Bench Mark: Iron rod with yellow cap set 7'± off west side of N.B. shoulder at Sta. 400+00. Elev. 610.79

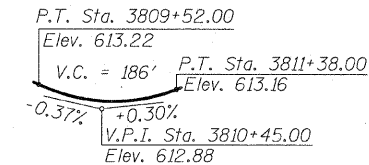
Existing Structures: S.N. 016-1096 S.B. and 016-1097 N.B. built in 1968 as F.A.I. Rte. Section 068-1414.2-C.F. at Sta. 252+48.70. Each structure consists of a reinforced concrete deck supported by two span continuous steel welded plate girders, with an overall length of 254'-10<sup>3</sup>/<sub>8</sub>" and width varying from 68'-9<sup>3</sup>/<sub>8</sub>" to 70'-9<sup>3</sup>/<sub>8</sub>". The spans are supported by a reinforced concrete pier and vaulted abutments on steel piles. Traffic to be maintained by stage construction.

Salvage: The existing protective shielding shall be salvaged.

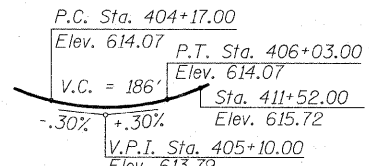
**DESIGN SPECIFICATIONS**  
2007 AASHTO LRFD Bridge Design Specifications,  
4th Edition with 2008 & 2009 Interims  
**LOADING HL-93**  
Allow 50#/sq. ft. for future wearing surface.

**DESIGN STRESSES**  
**FIELD UNITS**  
f<sub>c</sub> = 3,500 psi  
f<sub>y</sub> = 60,000 psi (Reinforcement)  
f<sub>y</sub> = 50,000 psi (M270 Grade 50)

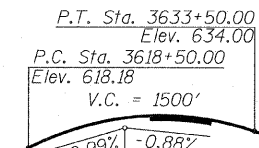
**SEISMIC DATA**  
Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. (S<sub>D1</sub>) = 0.091  
Design Spectral Acceleration at 0.2 sec. (S<sub>D5</sub>) = 0.155  
Soil Site Class = D



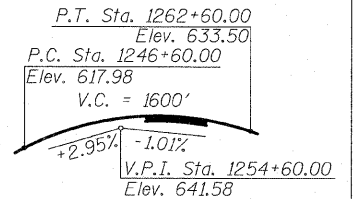
**PROFILE GRADE**  
(Future Ramp L)



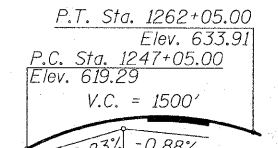
**PROFILE GRADE**  
(Northbound & Southbound I-294)



**PROFILE GRADE**  
(C-D Road A)

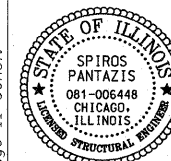


**PROFILE GRADE**  
(Southbound I-57)

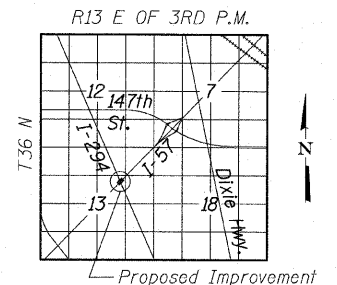


**PROFILE GRADE**  
(Northbound I-57)

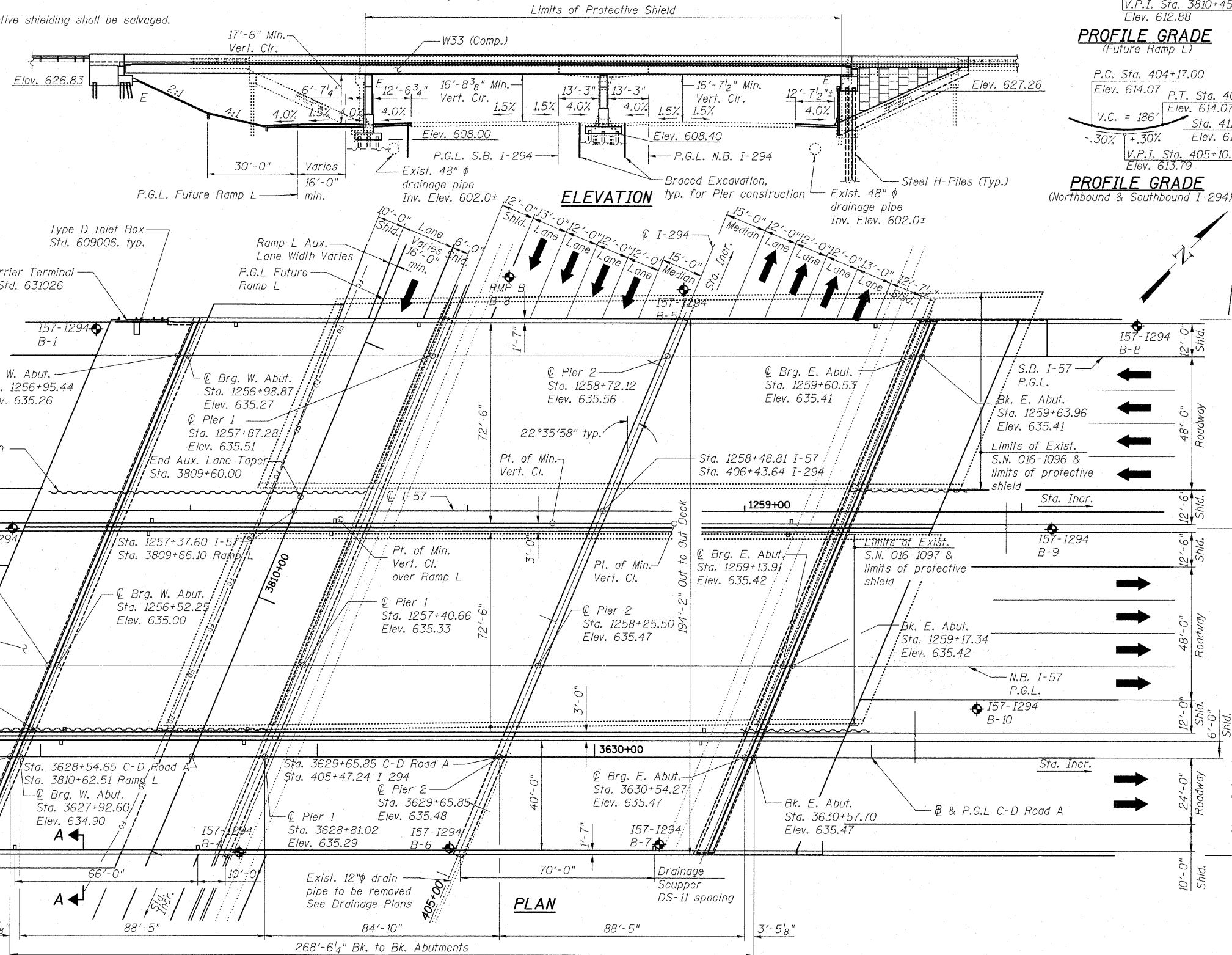
**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY  
Ralph E. Anderson (TSP)  
ENGINEER OF BRIDGES AND STRUCTURES



Signed *[Signature]*  
Spiros Pantazis, S.E. IL Lic. No. 081-006448  
Expires 11-30-2010  
Date 3/18/10



**GENERAL PLAN & ELEVATION**  
**I-57 OVER I-294**  
**F.A.I. RTE. 57 SEC. 1414.2B**  
**COOK COUNTY**  
**STATION 1258+48.81**  
**STRUCTURE NO. 016-1251**



**TYLIN INTERNATIONAL**

DESIGNED - SP	REVISIONS	
CHECKED - SP, PDF	NAME	DATE
DRAWN - PK		
CHECKED - SP, PDF		
DATE - 03/18/10		

SHEET NO. 1 68 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	246
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60J27		

P:\60254057-294\STRUCTURAL\I-57 OVER I-294\0161251-60127-001-G.P.E.dwg

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**GENERAL NOTES**

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 7/8-in.  $\phi$ , holes 15/16-in.  $\phi$ , unless otherwise noted.

Calculated weight of Structural Steel =

Grade 50 = 1,560,090 lbs.  
Grade 36 = 115,580 lbs.

No field welding is permitted except as specified in the contract documents. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Concrete Sealer shall be applied to the exposed surface areas of Piers 1 & 2. At each abutment apply to exposed surfaces of backwalls, bridge seats and front face pile caps.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5G. See Special Provision for "Cleaning and Painting New Metal Structures".

Slipforming of the parapets is not allowed.

Sloped wall shall be reinforced with welded wire fabric, 6in x 6in - w4.0 x w4.0, weighing 58 lbs. per 100 sq. ft. For additional details and reinforcement see ISTHA Standard G2-01. Cost of additional reinforcement in sloped wall shall be included in Slope Wall 4 Inch.

The existing protective shielding shall be removed and salvaged. The Contractor shall deliver it to:  
IDOT District Bridge Office - Attn: Shaker Asfour  
1101 Bluesterfield Road  
Elk Grove Village, IL 60007  
The cost shall be included in Removal of Existing Structures No.1 and 2.

The conduit shown embedded in structure and attached to structure is paid for in the Roadway Plans.

It shall be the Contractor's responsibility to verify the location of all fiber optic utilities prior to starting construction. The Contractor shall initiate the locate process for the fiber optic cable by completing a "Request to Locate Tollway Facilities" form (Tollway Form A-36) and submitting it to the Tollway. Copies of Form A-36 are available from the Tollway's Utility/Permit Section (630-241-6800, ext 3306). Completed A-36 forms shall be faxed to the Tollway to the attention of Tollway Utility Administrator at 630-271-7568, at least four (4) business days prior to starting any underground operations, excavations or digging of any type in general area of the fiber optic cable.

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4	Stage Construction Details
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7	Top of Slab Elevations-SB I57 - 1
8	Top of Slab Elevations-SB I57 - 2
9	Top of Slab Elevations-SB I57 - 3
10	Top of Slab Elevations-NB I57 - 1
11	Top of Slab Elevations-NB I57 - 2
12	Top of Slab Elevations-NB I57 - 3
13	Top of Slab Elevations-C-D Road A -1
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35	Anchorage Slab Details
36	Drainage Details
37	Drainage Scupper DS-11
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40	Structural Steel Details
41	Bearings-Abutments
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48	Mechanically Stabilized Earth Retaining Wall
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54	Pier Details
55	HP Pile Details
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57 - 68	Boring Logs

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu Yd		224.8	224.8
Removal of Existing Structures No. 1	Each			1
Removal of Existing Structures No. 2	Each			1
Protective Shield	Sq Yd	2749		2749
Structure Excavation	Cu Yd		6889.0	6889.0
Concrete Structures	Cu Yd		1664.7	1664.7
Concrete Superstructure	Cu Yd	2,128.0		2,128.0
Bridge Deck Grooving	Sq Yd	6466		6466
Concrete Encasement	Cu Yd		63.9	63.9
Protective Coat	Sq Yd	7,519		7,519
Furnishing and Erecting Structural Steel	L SUM	0.80		0.80
Stud Shear Connectors	Each	33,201		33,201
Reinforcement Bars, Epoxy Coated	Pound	519,610	195,430	715,040
Bar Splicers	Each		542	542
Slope Wall 4 Inch	Sq Yd		1100	1100
Furnishing Steel Piles HP12x53	Foot		12,689	12,689
Driving Piles	Foot		12,689	12,689
Test Pile Steel HP12x53	Each		4	4
Pile Shoes	Each		375	375
Braced Excavation	Cu Yd		1,196	1,196
Name Plates	Each		1	1
Preformed Joint Strip Seal	Foot	431.0		431.0
Elastomeric Bearing Assembly, Type I	Each	62		62
Elastomeric Bearing Assembly, Type II	Each	31		31
Anchor Bolts, 1"	Each	248		248
Concrete Sealer	Sq Ft		9,473	9,473
Geocomposite Wall Drain	Sq Yd		239	239
Pipe Underdrain for Structures 4"	Foot		420	420
Drainage Scuppers, DS11	Each	18		18
Temporary Soil Retention System	Sq Ft		4,262	4,262
Mechanically Stabilized Earth Retaining Wall	Sq Ft		4,860	4,860
Drainage System	L Sum	0.80		0.80

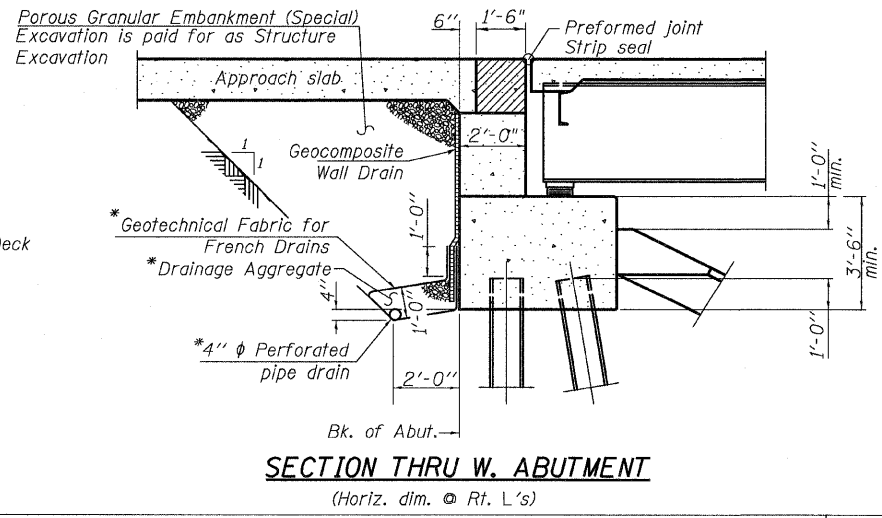
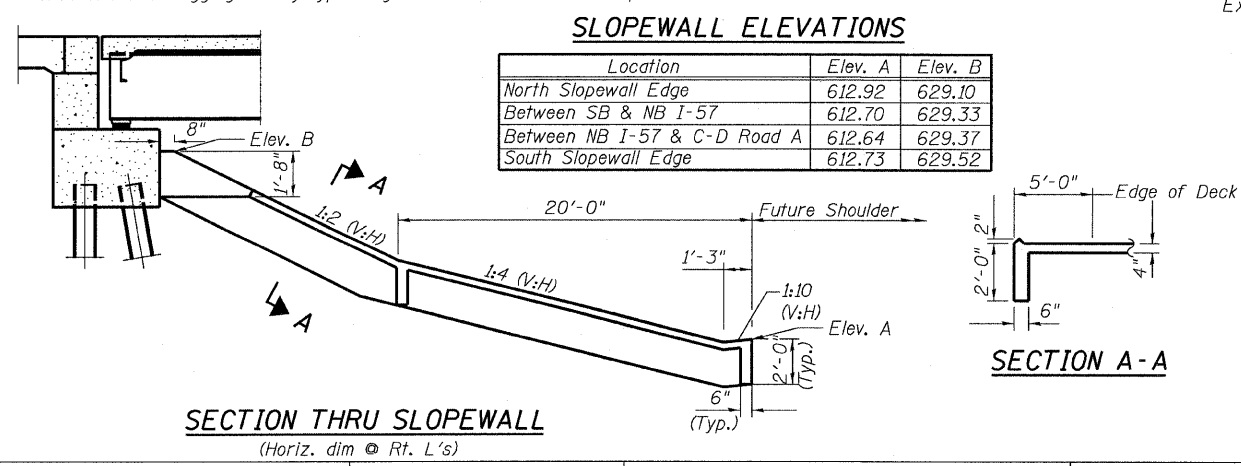
STATION 1258+48.81  
BUILT 20 BY  
STATE OF ILLINOIS  
F.A.I. RT.57 SEC.1414.2B  
LOADING HL-93  
STRUCTURE NO. 016-1251

**NAME PLATE**  
See Std. 515001

\*Included in the cost of Pipe Underdrains for Structures 4"

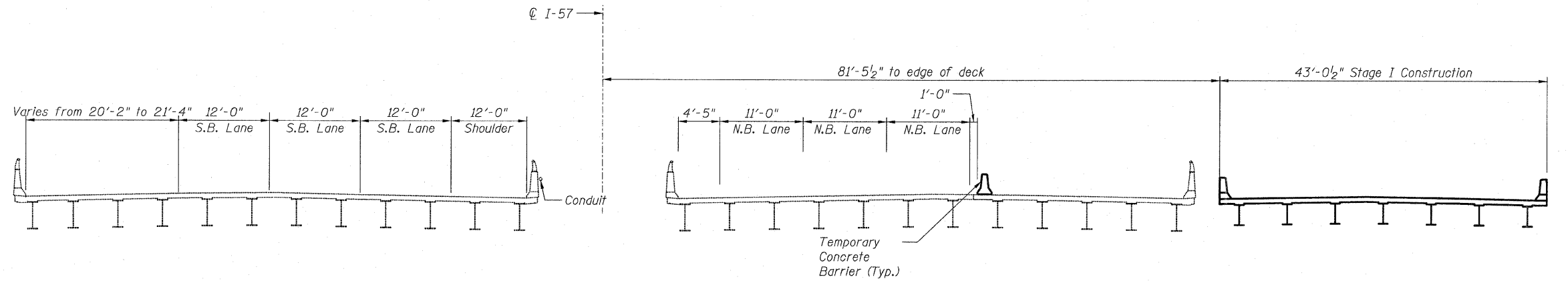
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersection with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)

**GENERAL NOTES, INDEX OF SHEETS,  
BILL OF MATERIAL  
STRUCTURE NO. 016-1251**



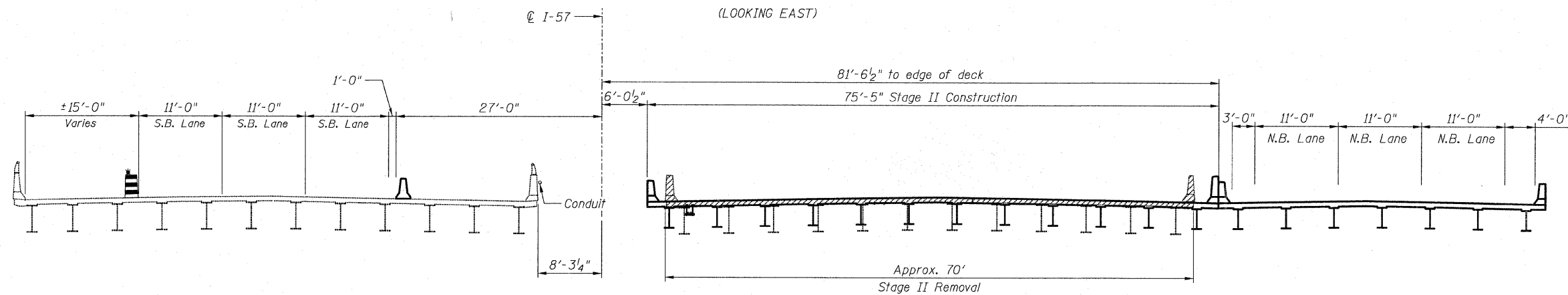
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	DRAWN - SP				68 SHEETS	CONTRACT NO. 60J27				
	CHECKED - SP, PDF					FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
	DATE - 03/18/10		04/29/10							

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



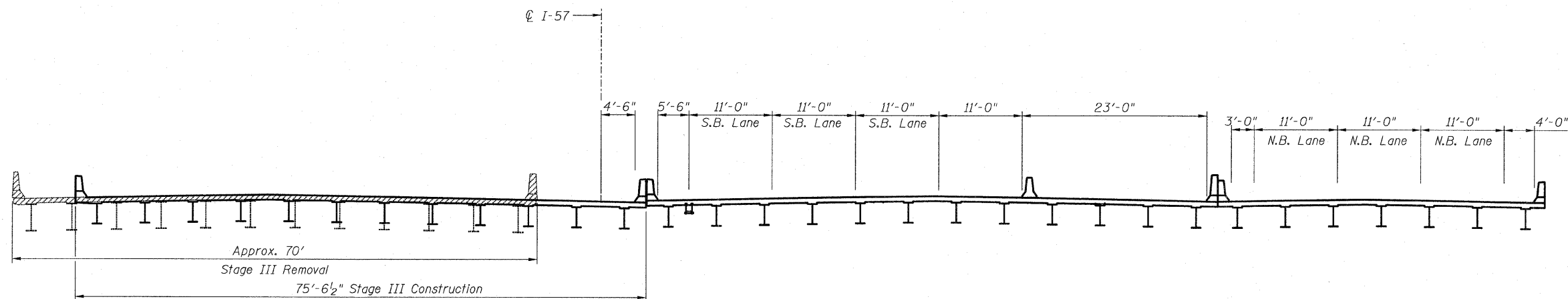
**STAGE I CONSTRUCTION**

(LOOKING EAST)



**STAGE II REMOVAL & CONSTRUCTION**

(LOOKING EAST)



**STAGE III REMOVAL & CONSTRUCTION**

(LOOKING EAST)

**STAGE CONSTRUCTION  
STRUCTURE NO. 016-1251**

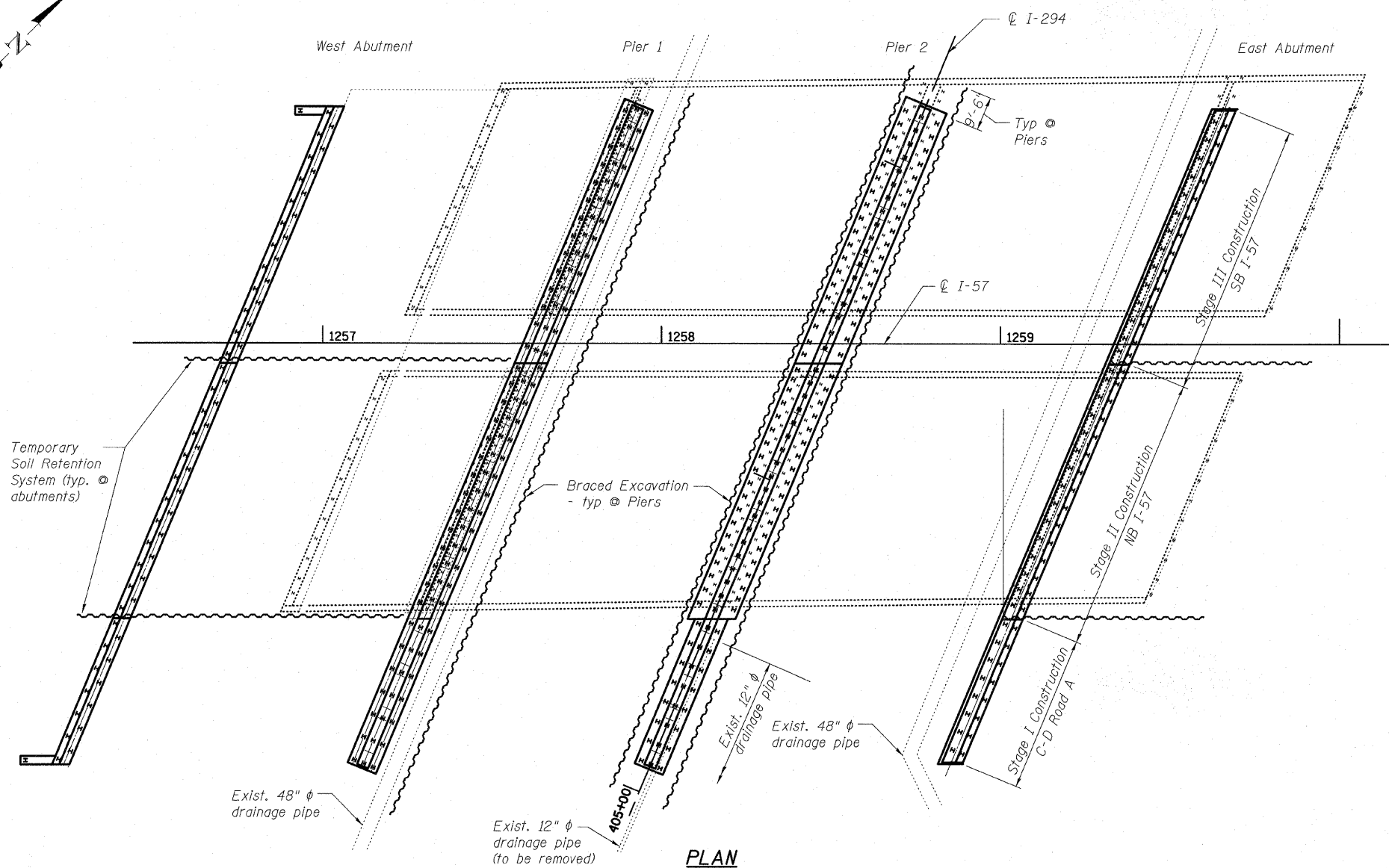
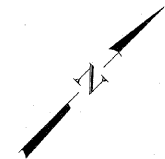
**TYLIN** INTERNATIONAL

DESIGNED -	PK	REVISIONS	
CHECKED -	SP,PDF	NAME	DATE
DRAWN -	PK		
CHECKED -	SP,PDF		
DATE -	03/18/10		

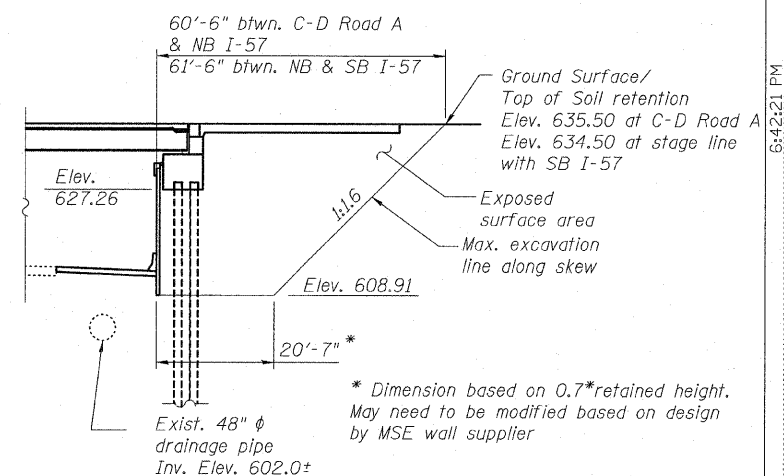
SHEET NO. 3  
68 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



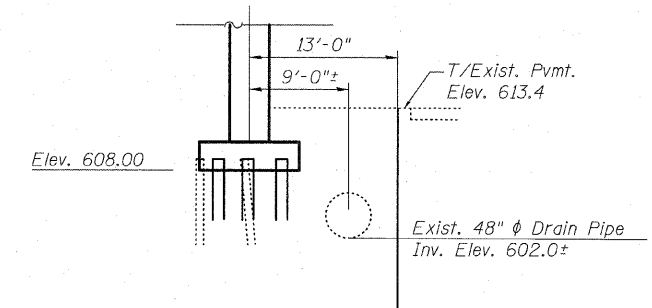
PLAN



**TEMPORARY SOIL RETENTION SYSTEM AT EAST ABUTMENT**

A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

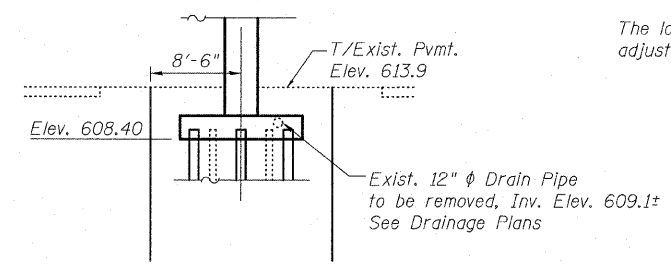
The temporary soil retention system between C-D Road A and NB I-57 shall be installed prior to Stage I Construction. The temporary soil retention system between NB and SB I-57 shall be installed prior to Stage II Construction.



**BRACED EXCAVATION ALONG PIER 1**

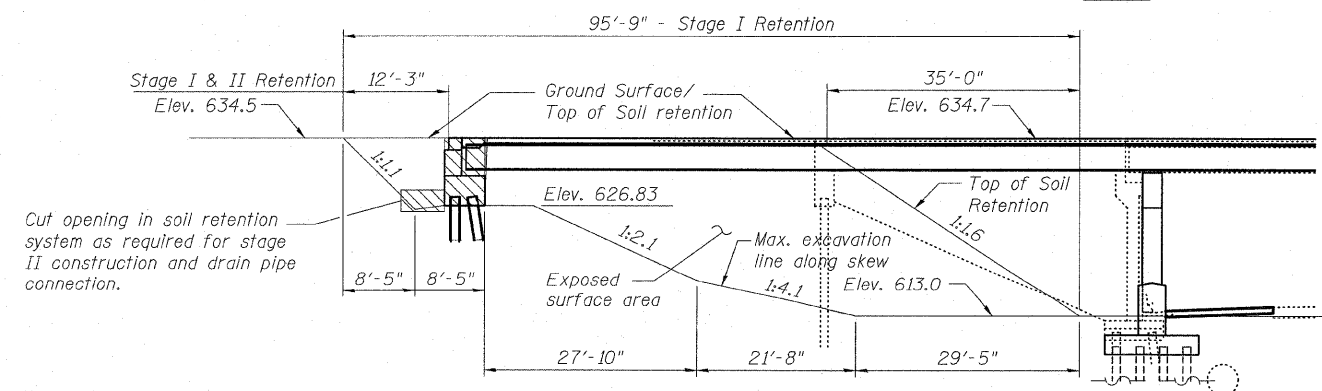
The Contractor shall field verify the location of the 48"  $\phi$  drain pipe prior to the start of work.

The location of the Braced Excavation support may be adjusted as appropriate to clear the drain pipe.



**BRACED EXCAVATION ALONG PIER 2**

The Contractor shall field verify the location of the 12"  $\phi$  drain pipe prior to the start of work.



**TEMPORARY SOIL RETENTION SYSTEM AT WEST ABUTMENT**

A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

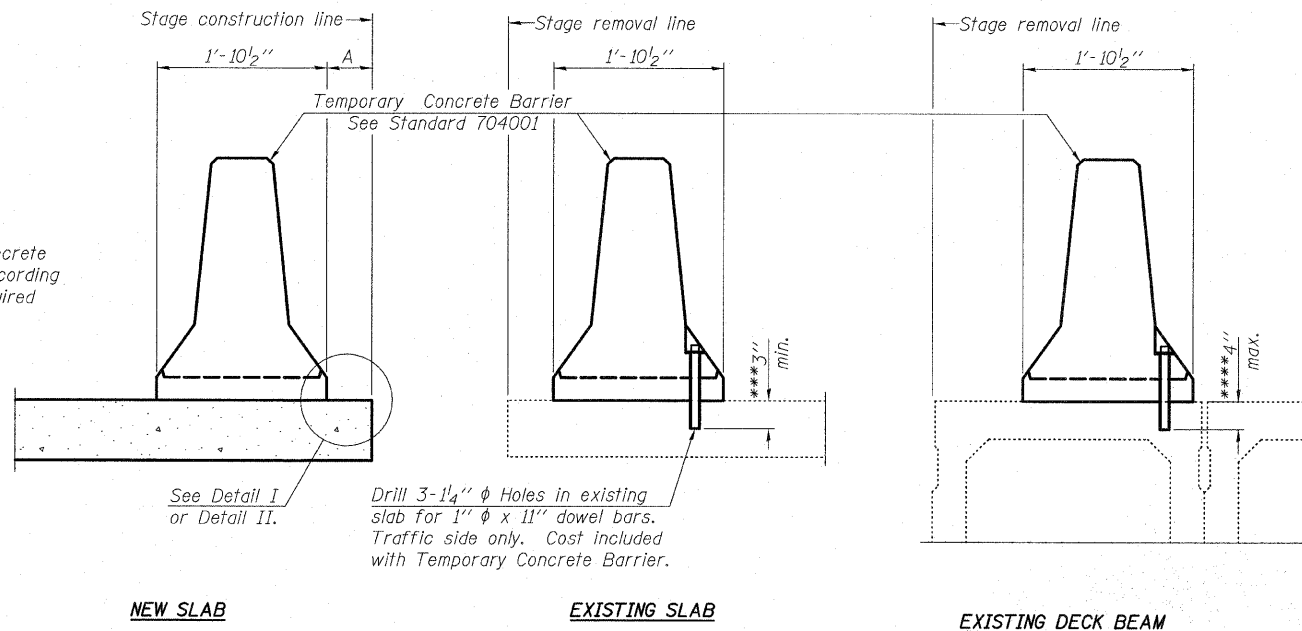
**STAGE CONSTRUCTION DETAILS STRUCTURE NO. 016-1251**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - SP	REVISIONS		SHEET NO. 4	F.A.I RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 249
	CHECKED - SP,	NAME	DATE						
	DRAWN - SP								
	CHECKED - SP,PDF								
	DATE - 03/18/10								
				68 SHEETS	CONTRACT NO. 60J27				
					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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



**SECTIONS THRU SLAB OR DECK BEAM**

**NOTES**

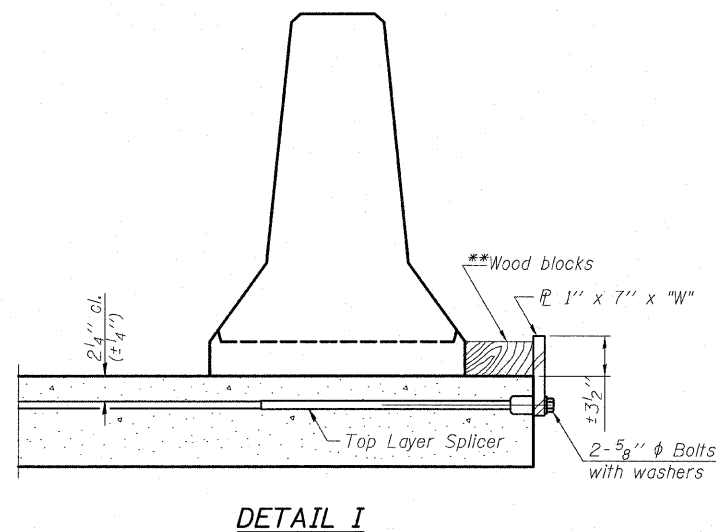
Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1"x7"x10" steel  $\bar{L}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1"x7"x10" steel  $\bar{L}$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.

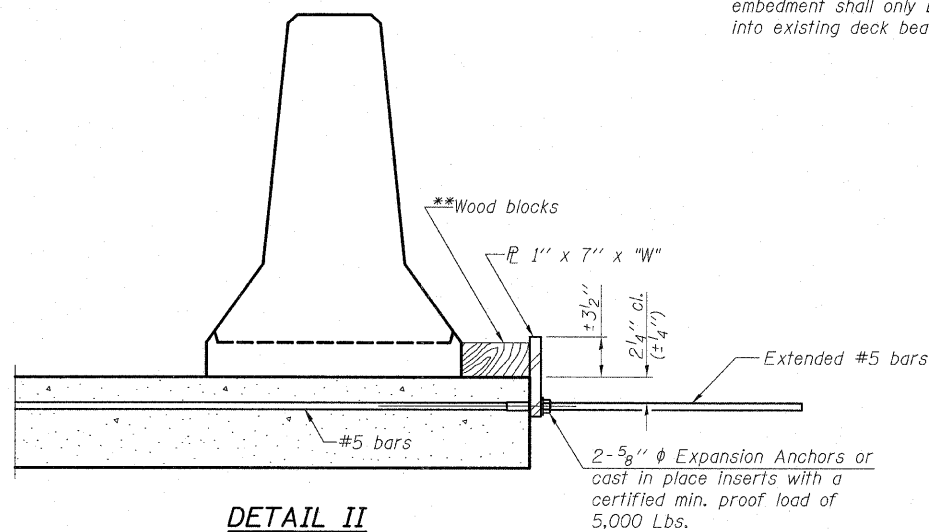
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

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

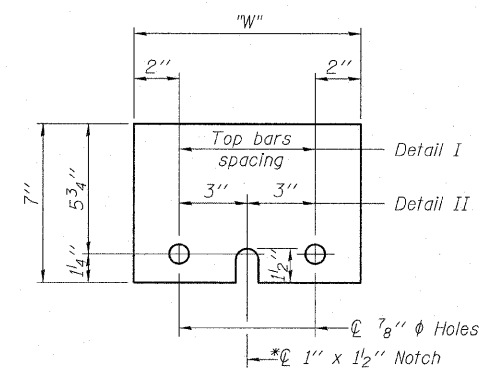
\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



**DETAIL I**



**DETAIL II**



**STEEL RETAINER  $\bar{L}$  1" x 7" x 10"**

\* Required only with Detail II

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

"W" = Top bars spacing + 4"

R-27 11-1-09

**TEMPORARY CONCRETE BARRIER  
STRUCTURE NO. 016-1251**

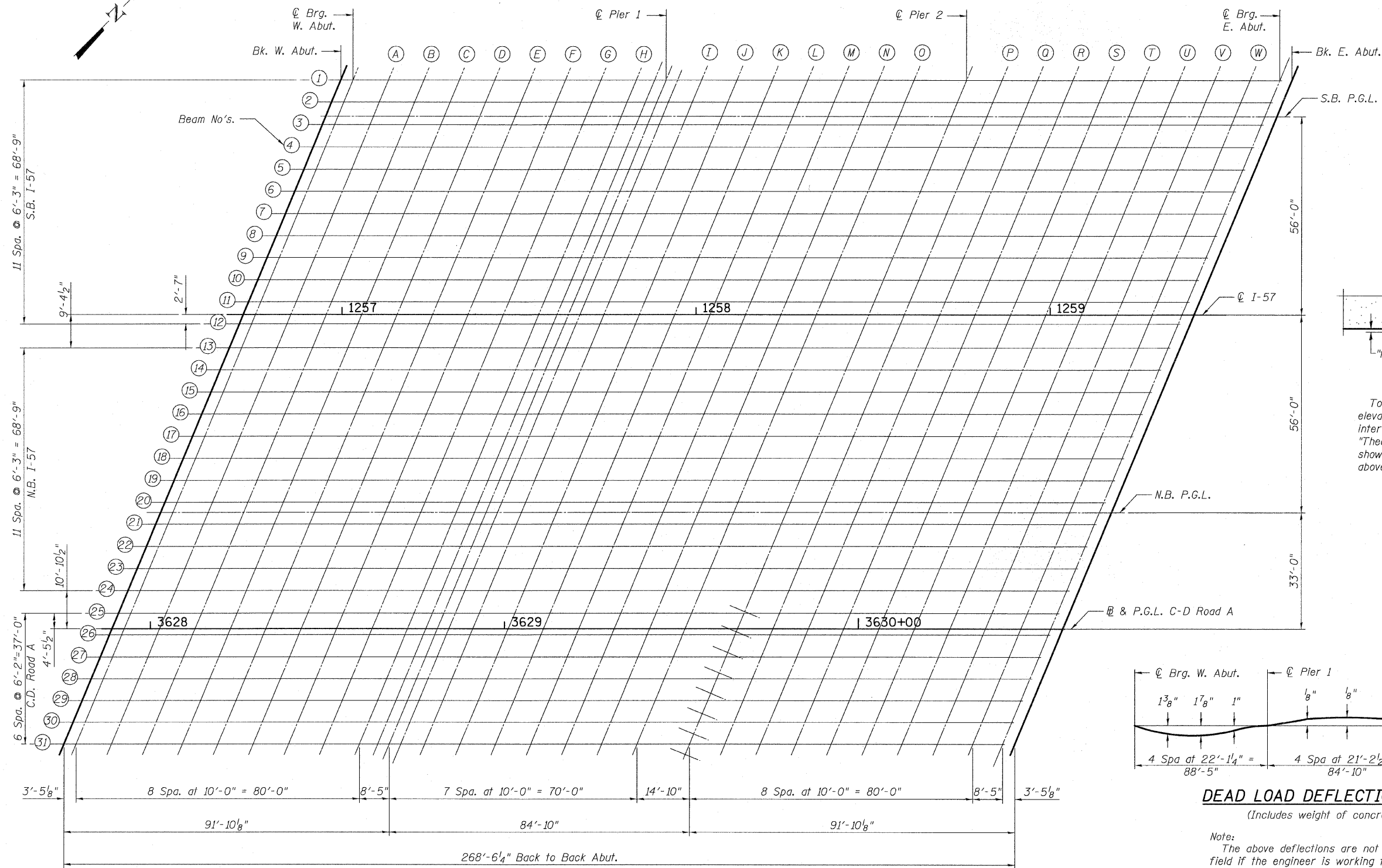
**TYLIN INTERNATIONAL**

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CHECKED - SP,PDF			
DATE - 03/18/10			

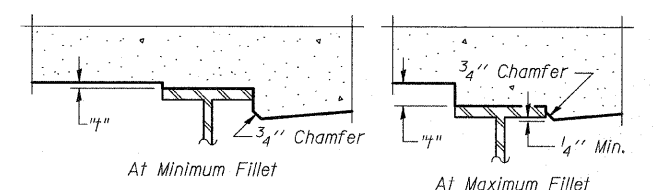
SHEET NO. 5	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68 SHEETS	57	1414.2B	COOK	516	250
FED. ROAD DIST. NO. 1			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60J27					

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

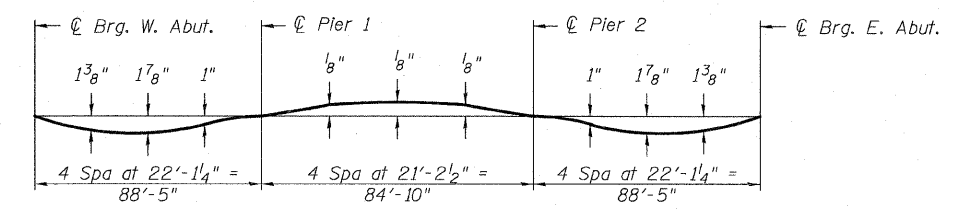


**PLAN**



**FILLET HEIGHTS**

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams.



**DEAD LOAD DEFLECTION DIAGRAM**  
(Includes weight of concrete only.)

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

**TOP OF SLAB ELEVATIONS-LAYOUT**  
**STRUCTURE NO. 016-1251**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - PK	REVISIONS		SHEET NO. 6 68 SHEETS	F.A.I RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 251
	CHECKED - SP,	NAME	DATE						
	DRAWN - PK								
	CHECKED - SP,PDF								
	DATE - 03/18/10								
					CONTRACT NO. 60J27				
					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BEAM - 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut	1256+76.26	46.08	634.72	634.72
⊕ Brg. W. Abut	1256+79.69	46.08	634.73	634.73
A	1256+89.69	46.08	634.78	634.84
B	1256+99.69	46.08	634.81	634.93
C	1257+09.69	46.08	634.85	634.99
D	1257+19.69	46.08	634.88	635.04
E	1257+29.69	46.08	634.92	635.06
F	1257+39.69	46.08	634.94	635.06
G	1257+49.69	46.08	634.97	635.04
H	1257+59.69	46.08	635.00	635.02
⊕ Pier 1	1257+68.10	46.08	635.01	635.01
I	1257+78.10	46.08	635.03	635.02
J	1257+88.10	46.08	635.05	635.04
K	1257+98.10	46.08	635.06	635.05
L	1258+08.10	46.08	635.08	635.07
M	1258+18.10	46.08	635.09	635.08
N	1258+28.10	46.08	635.09	635.08
O	1258+38.10	46.08	635.10	635.08
⊕ Pier 2	1258+52.94	46.08	635.10	635.10
P	1258+62.94	46.08	635.10	635.13
Q	1258+72.94	46.08	635.10	635.17
R	1258+82.94	46.08	635.09	635.21
S	1258+92.94	46.08	635.08	635.22
T	1259+02.94	46.08	635.07	635.22
U	1259+12.94	46.08	635.05	635.19
V	1259+22.94	46.08	635.04	635.14
W	1259+32.94	46.08	635.02	635.07
⊕ Brg. E. Abut	1259+41.35	46.08	635.00	635.00
Bk. E. Abut	1259+44.78	46.08	634.99	634.99

BEAM - 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut	1256+73.66	52.33	634.58	634.58
⊕ Brg. W. Abut	1256+77.09	52.33	634.59	634.59
A	1256+87.09	52.33	634.63	634.70
B	1256+97.09	52.33	634.67	634.79
C	1257+07.09	52.33	634.71	634.85
D	1257+17.09	52.33	634.75	634.90
E	1257+27.09	52.33	634.78	634.92
F	1257+37.09	52.33	634.81	634.92
G	1257+47.09	52.33	634.83	634.90
H	1257+57.09	52.33	634.86	634.89
⊕ Pier 1	1257+65.50	52.33	634.88	634.88
I	1257+75.50	52.33	634.90	634.89
J	1257+85.50	52.33	634.92	634.90
K	1257+95.50	52.33	634.93	634.92
L	1258+05.50	52.33	634.94	634.93
M	1258+15.50	52.33	634.95	634.94
N	1258+25.50	52.33	634.96	634.95
O	1258+35.50	52.33	634.97	634.95
⊕ Pier 2	1258+50.34	52.33	634.97	634.97
P	1258+60.34	52.33	634.97	635.00
Q	1258+70.34	52.33	634.97	635.04
R	1258+80.34	52.33	634.96	635.08
S	1258+90.34	52.33	634.95	635.10
T	1259+00.34	52.33	634.94	635.09
U	1259+10.34	52.33	634.93	635.07
V	1259+20.34	52.33	634.91	635.02
W	1259+30.34	52.33	634.89	634.95
⊕ Brg. E. Abut	1259+38.75	52.33	634.88	634.88
Bk. E. Abut	1259+42.18	52.33	634.87	634.87

BEAM - 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut	1256+71.05	58.58	634.44	634.44
⊕ Brg. W. Abut	1256+74.48	58.58	634.45	634.45
A	1256+84.48	58.58	634.49	634.55
B	1256+94.48	58.58	634.53	634.64
C	1257+04.48	58.58	634.57	634.71
D	1257+14.48	58.58	634.61	634.76
E	1257+24.48	58.58	634.64	634.78
F	1257+34.48	58.58	634.67	634.78
G	1257+44.48	58.58	634.70	634.77
H	1257+54.48	58.58	634.72	634.75
⊕ Pier 1	1257+62.90	58.58	634.74	634.74
I	1257+72.90	58.58	634.76	634.75
J	1257+82.90	58.58	634.78	634.77
K	1257+92.90	58.58	634.80	634.79
L	1258+02.90	58.58	634.81	634.80
M	1258+12.90	58.58	634.82	634.81
N	1258+22.90	58.58	634.83	634.82
O	1258+32.90	58.58	634.84	634.82
⊕ Pier 2	1258+47.73	58.58	634.84	634.84
P	1258+57.73	58.58	634.84	634.87
Q	1258+67.73	58.58	634.84	634.91
R	1258+77.73	58.58	634.83	634.95
S	1258+87.73	58.58	634.82	634.97
T	1258+97.73	58.58	634.81	634.97
U	1259+07.73	58.58	634.80	634.94
V	1259+17.73	58.58	634.79	634.89
W	1259+27.73	58.58	634.77	634.82
⊕ Brg. E. Abut	1259+36.15	58.58	634.75	634.75
Bk. E. Abut	1259+39.57	58.58	634.75	634.75

TOP OF SLAB ELEVATIONS-SB I-57 - 3  
STRUCTURE NO. 016-1251

<b>TYLIN</b> INTERNATIONAL	DESIGNED - PK	REVISIONS		SHEET NO. 9	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.									
	CHECKED - SP,	NAME	DATE							68 SHEETS	57	1414.2B	COOK	516	254			
	DRAWN - PK																	
	CHECKED - SP,PDF															CONTRACT NO. 60J27		
	DATE - 03/18/10															FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BEAM - 22

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut	1256+44.81	9.63	634.76	634.76
⊕ Brg. W. Abut	1256+48.24	9.63	634.78	634.78
A	1256+58.24	9.63	634.82	634.89
B	1256+68.24	9.63	634.87	634.98
C	1256+78.24	9.63	634.91	635.06
D	1256+88.24	9.63	634.95	635.11
E	1256+98.24	9.63	634.99	635.13
F	1257+08.24	9.63	635.03	635.14
G	1257+18.24	9.63	635.06	635.13
H	1257+28.24	9.63	635.09	635.12
⊕ Pier 1	1257+36.66	9.63	635.12	635.12
I	1257+46.66	9.63	635.14	635.13
J	1257+56.66	9.63	635.17	635.15
K	1257+66.66	9.63	635.19	635.18
L	1257+76.66	9.63	635.21	635.20
M	1257+86.66	9.63	635.23	635.22
N	1257+96.66	9.63	635.24	635.23
O	1258+06.66	9.63	635.25	635.24
⊕ Pier 2	1258+21.49	9.63	635.27	635.27
P	1258+31.49	9.63	635.27	635.31
Q	1258+41.49	9.63	635.27	635.35
R	1258+51.49	9.63	635.27	635.39
S	1258+61.49	9.63	635.27	635.42
T	1258+71.49	9.63	635.27	635.42
U	1258+81.49	9.63	635.26	635.40
V	1258+91.49	9.63	635.25	635.36
W	1259+01.49	9.63	635.24	635.29
⊕ Brg. E. Abut	1259+09.91	9.63	635.23	635.23
Bk. E. Abut	1259+13.33	9.63	635.22	635.22

BEAM - 23

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut	1256+42.21	15.88	634.61	634.61
⊕ Brg. W. Abut	1256+45.64	15.88	634.63	634.63
A	1256+55.64	15.88	634.68	634.74
B	1256+65.64	15.88	634.73	634.84
C	1256+75.64	15.88	634.77	634.92
D	1256+85.64	15.88	634.81	634.97
E	1256+95.64	15.88	634.85	634.99
F	1257+05.64	15.88	634.89	635.00
G	1257+15.64	15.88	634.92	634.99
H	1257+25.64	15.88	634.96	634.98
⊕ Pier 1	1257+34.06	15.88	634.98	634.98
I	1257+44.06	15.88	635.01	635.00
J	1257+54.06	15.88	635.03	635.02
K	1257+64.06	15.88	635.06	635.04
L	1257+74.06	15.88	635.07	635.07
M	1257+84.06	15.88	635.09	635.08
N	1257+94.06	15.88	635.11	635.09
O	1258+04.06	15.88	635.12	635.10
⊕ Pier 2	1258+18.89	15.88	635.13	635.13
P	1258+28.89	15.88	635.14	635.17
Q	1258+38.89	15.88	635.14	635.22
R	1258+48.89	15.88	635.14	635.26
S	1258+58.89	15.88	635.14	635.29
T	1258+68.89	15.88	635.14	635.29
U	1258+78.89	15.88	635.13	635.27
V	1258+88.89	15.88	635.13	635.23
W	1258+98.89	15.88	635.11	635.17
⊕ Brg. E. Abut	1259+07.31	15.88	635.10	635.10
Bk. E. Abut	1259+10.73	15.88	635.10	635.10

BEAM - 24

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut	1256+39.61	22.13	634.47	634.47
⊕ Brg. W. Abut	1256+43.04	22.13	634.49	634.49
A	1256+53.04	22.13	634.54	634.60
B	1256+63.04	22.13	634.59	634.70
C	1256+73.04	22.13	634.63	634.77
D	1256+83.04	22.13	634.67	634.83
E	1256+93.04	22.13	634.71	634.85
F	1257+03.04	22.13	634.75	634.86
G	1257+13.04	22.13	634.79	634.86
H	1257+23.04	22.13	634.82	634.85
⊕ Pier 1	1257+31.46	22.13	634.84	634.84
I	1257+41.46	22.13	634.87	634.86
J	1257+51.46	22.13	634.90	634.88
K	1257+61.46	22.13	634.92	634.91
L	1257+71.46	22.13	634.94	634.93
M	1257+81.46	22.13	634.96	634.95
N	1257+91.46	22.13	634.97	634.96
O	1258+01.46	22.13	634.99	634.97
⊕ Pier 2	1258+16.29	22.13	635.00	635.00
P	1258+26.29	22.13	635.01	635.04
Q	1258+36.29	22.13	635.01	635.09
R	1258+46.29	22.13	635.01	635.13
S	1258+56.29	22.13	635.01	635.16
T	1258+66.29	22.13	635.01	635.16
U	1258+76.29	22.13	635.01	635.15
V	1258+86.29	22.13	635.00	635.10
W	1258+96.29	22.13	634.99	635.04
⊕ Brg. E. Abut	1259+04.71	22.13	634.98	634.98
Bk. E. Abut	1259+08.13	22.13	634.97	634.97

TOP OF SLAB ELEVATIONS-NB I-57 - 3  
STRUCTURE NO. 016-1251

<b>TYLIN</b> INTERNATIONAL	DESIGNED - PK	REVISIONS		SHEET NO. 12	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.									
	CHECKED - SP,	NAME	DATE							57	1414.2B	COOK	516	257				
	DRAWN - PK																	
	CHECKED - SP,PDF														CONTRACT NO. 60J27			
	DATE - 03/18/10														FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

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3/17/2010



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**BEAM - 29**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut	3627+80.76	20.21	634.89	634.89
⊙ Brg. W. Abut	3627+84.19	20.21	634.91	634.91
A	3627+94.19	20.21	634.97	635.03
B	3628+04.19	20.21	635.02	635.13
C	3628+14.19	20.21	635.07	635.21
D	3628+24.19	20.21	635.12	635.27
E	3628+34.19	20.21	635.17	635.31
F	3628+44.19	20.21	635.21	635.32
G	3628+54.19	20.21	635.25	635.32
H	3628+64.19	20.21	635.29	635.32
⊙ Pier 1	3628+72.60	20.21	635.32	635.32
I	3628+82.60	20.21	635.35	635.34
J	3628+92.60	20.21	635.39	635.37
K	3629+02.60	20.21	635.41	635.40
L	3629+12.60	20.21	635.44	635.43
M	3629+22.60	20.21	635.46	635.45
N	3629+32.60	20.21	635.48	635.47
O	3629+42.60	20.21	635.50	635.49
⊙ Pier 2	3629+57.44	20.21	635.53	635.53
P	3629+67.44	20.21	635.54	635.57
Q	3629+77.44	20.21	635.55	635.62
R	3629+87.44	20.21	635.55	635.67
S	3629+97.44	20.21	635.56	635.70
T	3630+07.44	20.21	635.56	635.71
U	3630+17.44	20.21	635.56	635.70
V	3630+27.44	20.21	635.56	635.66
W	3630+37.44	20.21	635.55	635.60
⊙ Brg. E. Abut	3630+45.85	20.21	635.54	635.54
Bk. E. Abut	3630+49.29	20.21	635.54	635.54

**BEAM - 30**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut	3627+78.19	26.38	634.76	634.76
⊙ Brg. W. Abut	3627+81.62	26.38	634.78	634.78
A	3627+91.62	26.38	634.84	634.90
B	3628+01.62	26.38	634.90	635.01
C	3628+11.62	26.38	634.95	635.09
D	3628+21.62	26.38	635.00	635.15
E	3628+31.62	26.38	635.05	635.19
F	3628+41.62	26.38	635.09	635.20
G	3628+51.62	26.38	635.13	635.20
H	3628+61.62	26.38	635.17	635.20
⊙ Pier 1	3628+70.04	26.38	635.20	635.20
I	3628+80.04	26.38	635.24	635.22
J	3628+90.04	26.38	635.27	635.25
K	3629+00.04	26.38	635.30	635.29
L	3629+10.04	26.38	635.33	635.32
M	3629+20.04	26.38	635.35	635.34
N	3629+30.04	26.38	635.37	635.36
O	3629+40.04	26.38	635.39	635.38
⊙ Pier 2	3629+54.87	26.38	635.41	635.41
P	3629+64.87	26.38	635.43	635.46
Q	3629+74.87	26.38	635.44	635.51
R	3629+84.87	26.38	635.44	635.56
S	3629+94.87	26.38	635.45	635.59
T	3630+04.87	26.38	635.45	635.60
U	3630+14.87	26.38	635.45	635.59
V	3630+24.87	26.38	635.45	635.55
W	3630+34.87	26.38	635.44	635.49
⊙ Brg. E. Abut	3630+43.29	26.38	635.44	635.44
Bk. E. Abut	3630+46.72	26.38	635.43	635.43

**BEAM - 31**

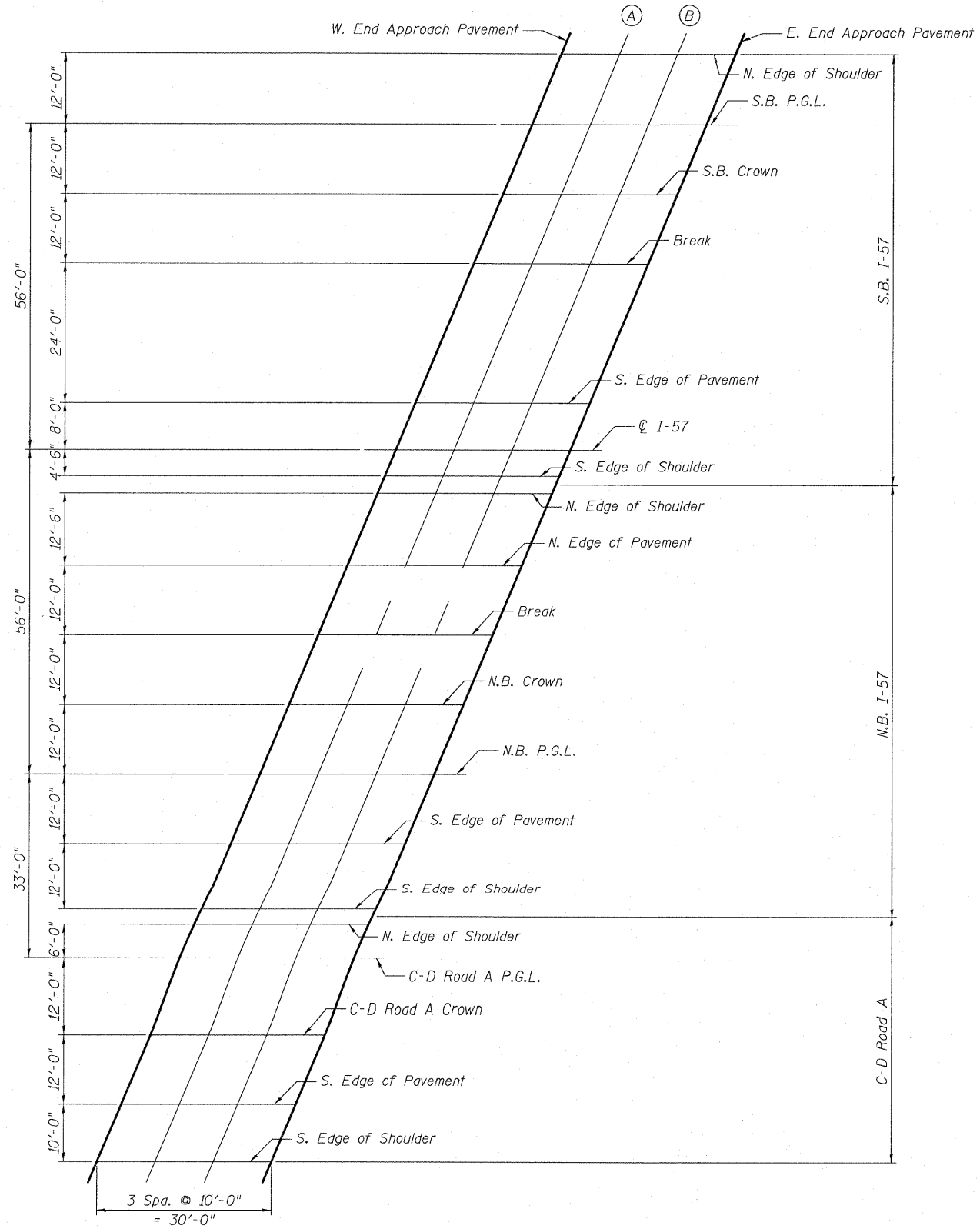
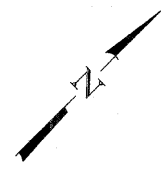
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut	3627+75.62	32.54	634.62	634.62
⊙ Brg. W. Abut	3627+79.05	32.54	634.64	634.64
A	3627+89.05	32.54	634.70	634.76
B	3627+99.05	32.54	634.75	634.87
C	3628+09.05	32.54	634.81	634.95
D	3628+19.05	32.54	634.86	635.01
E	3628+29.05	32.54	634.91	635.05
F	3628+39.05	32.54	634.95	635.06
G	3628+49.05	32.54	634.99	635.06
H	3628+59.05	32.54	635.03	635.06
⊙ Pier 1	3628+67.47	32.54	635.06	635.06
I	3628+77.47	32.54	635.10	635.09
J	3628+87.47	32.54	635.13	635.12
K	3628+97.47	32.54	635.16	635.15
L	3629+07.47	32.54	635.19	635.18
M	3629+17.47	32.54	635.21	635.21
N	3629+27.47	32.54	635.24	635.22
O	3629+37.47	32.54	635.26	635.24
⊙ Pier 2	3629+52.30	32.54	635.28	635.28
P	3629+62.30	32.54	635.29	635.33
Q	3629+72.30	32.54	635.31	635.38
R	3629+82.30	32.54	635.31	635.43
S	3629+92.30	32.54	635.32	635.46
T	3630+02.30	32.54	635.32	635.48
U	3630+12.30	32.54	635.32	635.46
V	3630+22.30	32.54	635.32	635.43
W	3630+32.30	32.54	635.32	635.37
⊙ Brg. E. Abut	3630+40.72	32.54	635.31	635.31
Bk. E. Abut	3630+44.15	32.54	635.31	635.31

**TOP OF SLAB ELEVATIONS C-D ROAD A - 2  
STRUCTURE NO. 016-1251**

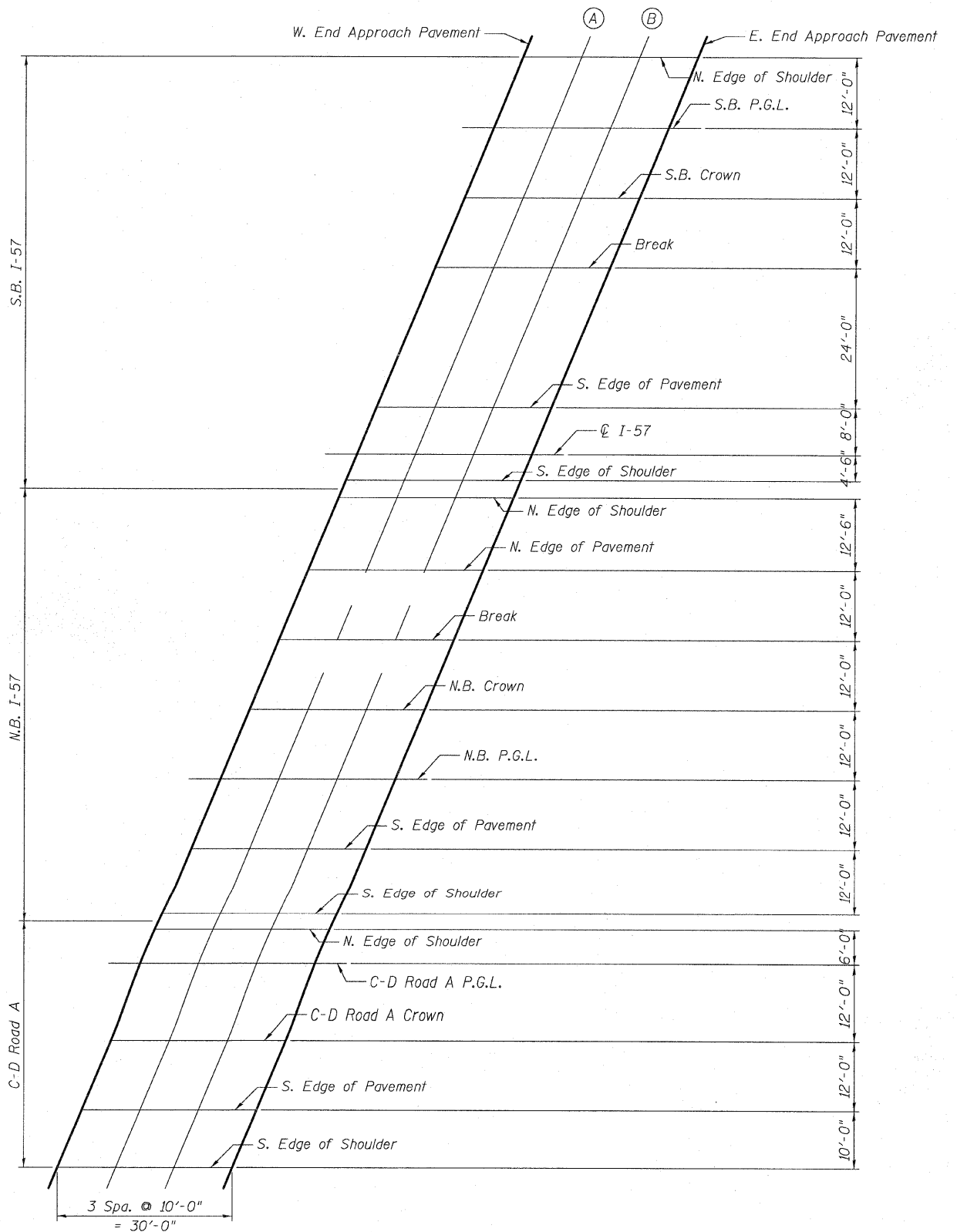
<b>TYLIN</b> INTERNATIONAL	DESIGNED - PK	REVISIONS		SHEET NO. 14	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.										
	CHECKED - SP,	NAME	DATE							68 SHEETS	57	1414.2B	COOK	516	259				
	DRAWN - PK																		
	CHECKED - SP,PDF															CONTRACT NO. 60J27			
	DATE - 03/18/10															FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**PLAN**  
West Approach



**PLAN**  
East Approach

**TOP OF APPROACH SLAB ELEVATIONS-LAYOUT**  
**STRUCTURE NO. 016-1251**

**TYLIN INTERNATIONAL**

	DESIGNED - PK	REVISIONS	
		NAME	DATE
CHECKED - SP,			
DRAWN - PK			
CHECKED - SP,PDF			
DATE - 03/18/10			

SHEET NO. 15	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	260
68 SHEETS	CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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3/17/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**NORTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	1256+70.97	-12.00	634.91
A	1256+80.97	-12.00	634.95
B	1256+90.97	-12.00	634.99
E. End W. Appr. Pav't.	1257+00.97	-12.00	635.03

**SB PGL**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	1256+65.98	0.00	635.13
A	1256+75.98	0.00	635.18
B	1256+85.98	0.00	635.22
E. End W. Appr. Pav't.	1256+95.98	0.00	635.26

**SB I-57**

**CROWN**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	1256+60.99	12.00	635.30
A	1256+70.99	12.00	635.34
B	1256+80.99	12.00	635.39
E. End W. Appr. Pav't.	1256+90.99	12.00	635.43

**CROSS SLOPE BREAK**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	1256+55.99	24.00	635.09
A	1256+65.99	24.00	635.13
B	1256+75.99	24.00	635.18
E. End W. Appr. Pav't.	1256+85.99	24.00	635.22

**SOUTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	1256+46.00	48.00	634.54
A	1256+56.00	48.00	634.59
B	1256+66.00	48.00	634.63
E. End W. Appr. Pav't.	1256+76.00	48.00	634.68

**SOUTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	1256+40.80	60.50	634.25
A	1256+50.80	60.50	634.30
B	1256+60.80	60.50	634.35
E. End W. Appr. Pav't.	1256+70.80	60.50	634.39

**NORTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	1256+39.55	-48.50	634.42
A	1256+49.55	-48.50	634.47
B	1256+59.55	-48.50	634.52
E. End W. Appr. Pav't.	1256+69.55	-48.50	634.57

**NORTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	1256+34.34	-36.00	634.65
A	1256+44.34	-36.00	634.71
B	1256+54.34	-36.00	634.76
E. End W. Appr. Pav't.	1256+64.34	-36.00	634.80

**NB I-57**

**CROSS SLOPE BREAK**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	1256+29.35	-24.00	634.88
A	1256+39.35	-24.00	634.93
B	1256+49.35	-24.00	634.98
E. End W. Appr. Pav't.	1256+59.35	-24.00	635.03

**CROWN**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	1256+24.35	-12.00	635.04
A	1256+34.35	-12.00	635.09
B	1256+44.35	-12.00	635.14
E. End W. Appr. Pav't.	1256+54.35	-12.00	635.19

**NB PGL**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	1256+19.36	0.00	634.82
A	1256+29.36	0.00	634.88
B	1256+39.36	0.00	634.93
E. End W. Appr. Pav't.	1256+49.36	0.00	634.98

**SOUTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	1256+14.37	12.00	634.54
A	1256+24.37	12.00	634.60
B	1256+34.37	12.00	634.65
E. End W. Appr. Pav't.	1256+44.37	12.00	634.71

**SOUTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	1256+09.37	24.00	634.26
A	1256+19.37	24.00	634.32
B	1256+29.37	24.00	634.38
E. End W. Appr. Pav't.	1256+39.37	24.00	634.43

**NORTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	3627+62.21	-6.00	634.59
A	3627+72.21	-6.00	634.65
B	3627+82.21	-6.00	634.71
E. End W. Appr. Pav't.	3627+92.21	-6.00	634.77

**C-D ROAD A PGL**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	3627+59.71	0.00	634.70
A	3627+69.71	0.00	634.76
B	3627+79.71	0.00	634.82
E. End W. Appr. Pav't.	3627+89.71	0.00	634.88

**C-D Road A**

**CROWN**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	3627+54.72	12.00	634.85
A	3627+64.72	12.00	634.92
B	3627+74.72	12.00	634.98
E. End W. Appr. Pav't.	3627+84.72	12.00	635.04

**SOUTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	3627+49.72	24.00	634.63
A	3627+59.72	24.00	634.70
B	3627+69.72	24.00	634.76
E. End W. Appr. Pav't.	3627+79.72	24.00	634.82

**SOUTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr. Pav't.	3627+45.56	34.00	634.40
A	3627+55.56	34.00	634.46
B	3627+65.56	34.00	634.53
E. End W. Appr. Pav't.	3627+75.56	34.00	634.59

**TOP OF WEST APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 016-1251**

<b>TYLIN</b> INTERNATIONAL	DESIGNED - PK	REVISIONS		SHEET NO. 16	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.										
	CHECKED - SP,	NAME	DATE							68 SHEETS	57	1414.2B	COOK	516	261				
	DRAWN - PK															CONTRACT NO. 60J27			
	CHECKED - SP,PDF																FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT
	DATE - 03/18/10																		

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	1259+68.41	-12.00	635.14
A	1259+78.41	-12.00	635.11
B	1259+88.41	-12.00	635.08
E. End E. Appr. Pav't.	1259+98.41	-12.00	635.05

SB PGL

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	1259+63.42	0.00	635.41
A	1259+73.42	0.00	635.38
B	1259+83.42	0.00	635.35
E. End E. Appr. Pav't.	1259+93.42	0.00	635.31

SB I-57

CROWN

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	1259+58.43	12.00	635.61
A	1259+68.43	12.00	635.58
B	1259+78.43	12.00	635.55
E. End E. Appr. Pav't.	1259+88.43	12.00	635.52

CROSS SLOPE BREAK

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	1259+53.43	24.00	635.43
A	1259+63.43	24.00	635.41
B	1259+73.43	24.00	635.38
E. End E. Appr. Pav't.	1259+83.43	24.00	635.35

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	1259+43.44	48.00	634.96
A	1259+53.44	48.00	634.93
B	1259+63.44	48.00	634.91
E. End E. Appr. Pav't.	1259+73.44	48.00	634.88

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	1259+38.24	60.50	634.71
A	1259+48.24	60.50	634.69
B	1259+58.24	60.50	634.66
E. End E. Appr. Pav't.	1259+68.24	60.50	634.63

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	1259+36.99	-48.50	634.87
A	1259+46.99	-48.50	634.85
B	1259+56.99	-48.50	634.82
E. End E. Appr. Pav't.	1259+66.99	-48.50	634.79

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	1259+31.78	-36.00	635.14
A	1259+41.78	-36.00	635.12
B	1259+51.78	-36.00	635.10
E. End E. Appr. Pav't.	1259+61.78	-36.00	635.07

NB I-57

CROSS SLOPE BREAK

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	1259+26.79	-24.00	635.40
A	1259+36.79	-24.00	635.38
B	1259+46.79	-24.00	635.36
E. End E. Appr. Pav't.	1259+56.79	-24.00	635.33

CROWN

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	1259+21.79	-12.00	635.60
A	1259+31.79	-12.00	635.58
B	1259+41.79	-12.00	635.56
E. End E. Appr. Pav't.	1259+51.79	-12.00	635.53

NB PGL

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	1259+16.80	0.00	635.42
A	1259+26.80	0.00	635.40
B	1259+36.80	0.00	635.38
E. End E. Appr. Pav't.	1259+46.80	0.00	635.36

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	1259+11.81	12.00	635.18
A	1259+21.81	12.00	635.16
B	1259+31.81	12.00	635.14
E. End E. Appr. Pav't.	1259+41.81	12.00	635.12

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	1259+06.81	24.00	634.93
A	1259+16.81	24.00	634.92
B	1259+26.81	24.00	634.90
E. End E. Appr. Pav't.	1259+36.81	24.00	634.88

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	3630+59.65	-6.00	635.34
A	3630+69.65	-6.00	635.33
B	3630+79.65	-6.00	635.31
E. End E. Appr. Pav't.	3630+89.65	-6.00	635.29

C-D ROAD A PGL

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	3630+57.15	0.00	635.47
A	3630+67.15	0.00	635.46
B	3630+77.15	0.00	635.44
E. End E. Appr. Pav't.	3630+87.15	0.00	635.42

C-D Road A

CROWN

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	3630+52.16	12.00	635.66
A	3630+62.16	12.00	635.65
B	3630+72.16	12.00	635.64
E. End E. Appr. Pav't.	3630+82.16	12.00	635.62

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	3630+47.16	24.00	635.48
A	3630+57.16	24.00	635.47
B	3630+67.16	24.00	635.46
E. End E. Appr. Pav't.	3630+77.16	24.00	635.44

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr. Pav't.	3630+43.00	34.00	635.28
A	3630+53.00	34.00	635.27
B	3630+63.00	34.00	635.25
E. End E. Appr. Pav't.	3630+73.00	34.00	635.24

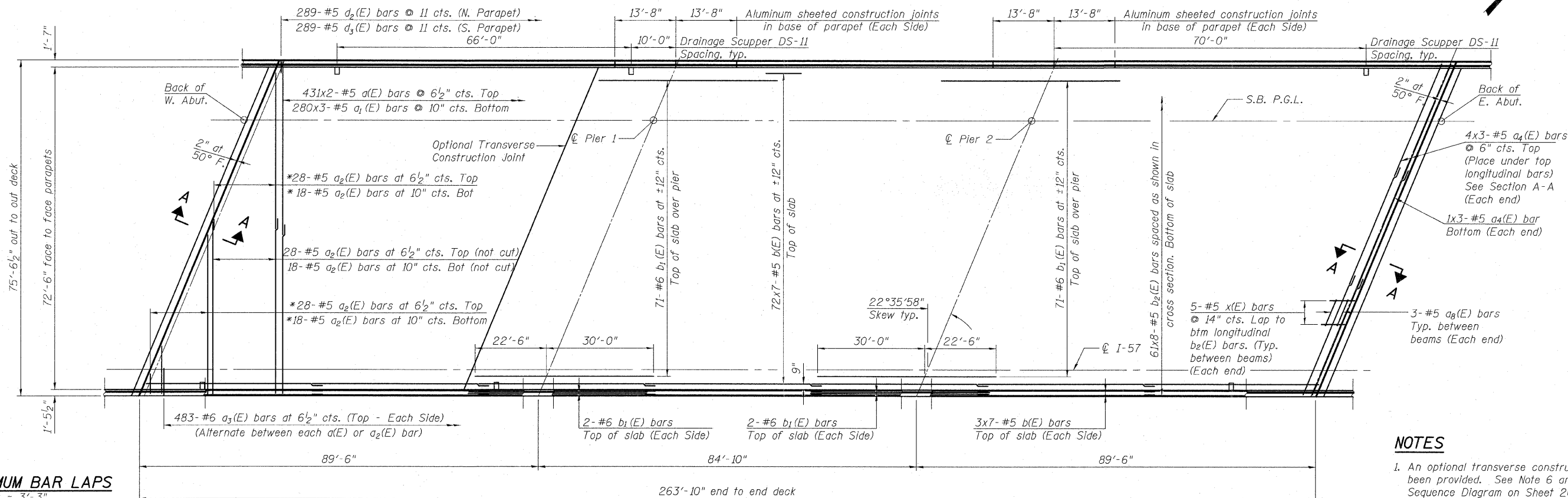
TOP OF EAST APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 016-1251

<b>TYLIN</b> INTERNATIONAL	DESIGNED - PK	REVISIONS		SHEET NO. 17	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.							
	CHECKED - SP.	NAME	DATE							68 SHEETS	57	1414.2B	COOK	516	262	
	DRAWN - PK															CONTRACT NO. 60J27
	CHECKED - SP,PDF															
	DATE - 03/18/10															

F:\60254017-294\STRUCTURAL\I-57\_OVER\_1294\0161251-60J27-017-TOAS-ELEV-2.dgn 3/17/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

\* Order  $a_2(E)$  bars full length.  
Cut to fit skew and use remainder  
of bars in opposite end.

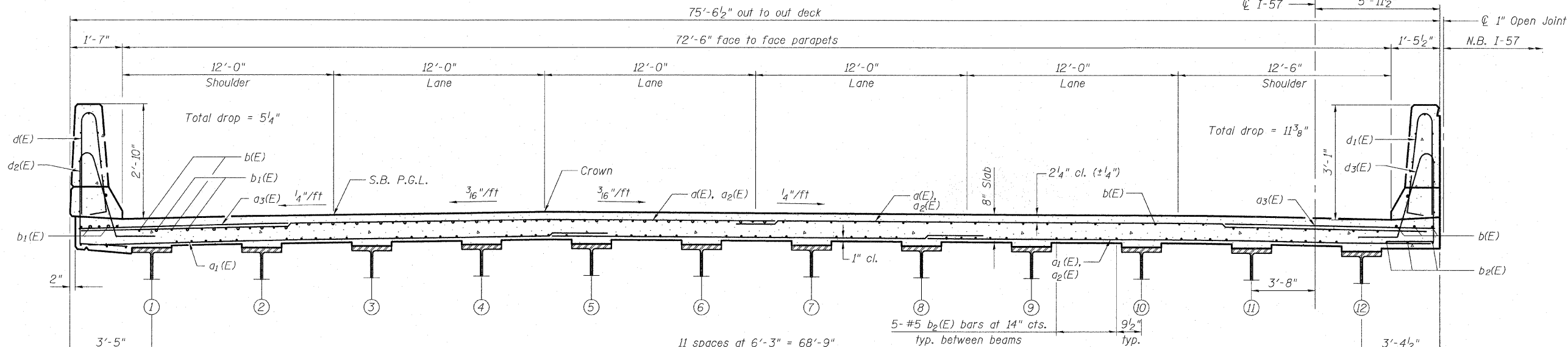


**MINIMUM BAR LAPS**

#5 bar = 3'-3"  
#5 bar = 3'-8" (Top bar lap)  
(Deck Slab)

**NOTES**

1. An optional transverse construction joint has been provided. See Note 6 and Deck Pouring Sequence Diagram on Sheet 20 of 68.
2. See Sheet 20 of 68 for additional notes.



**CROSS SECTION**  
(Looking East)

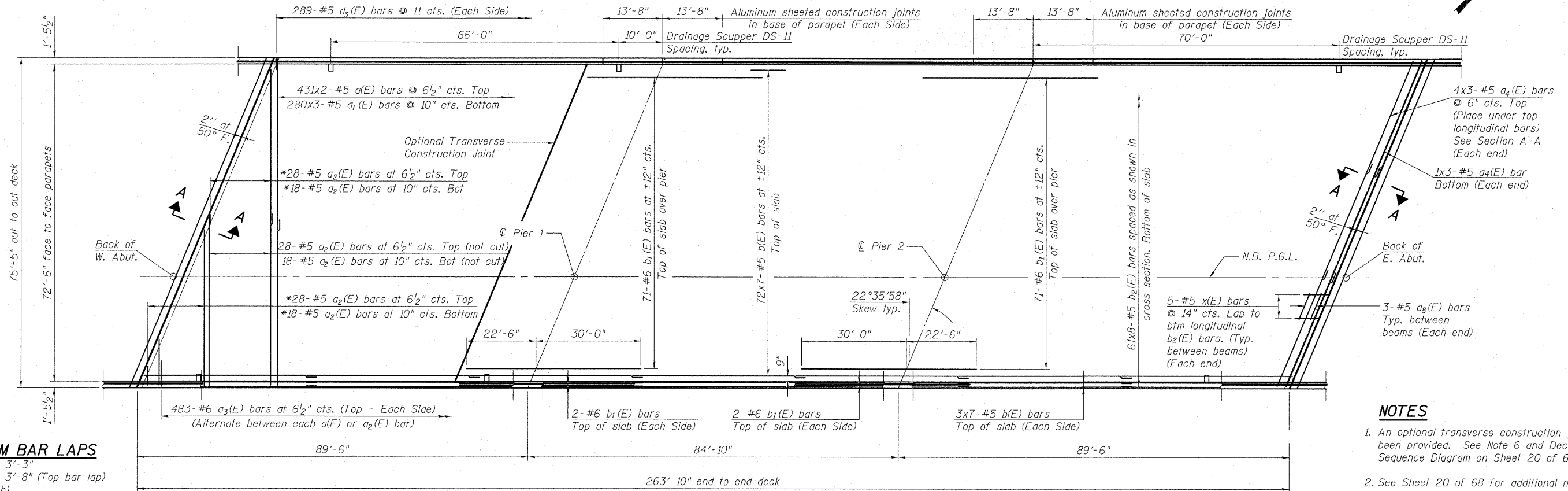
**SUPERSTRUCTURE - SB I-57**  
**STRUCTURE NO. 016-1251**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - PK	REVISIONS		SHEET NO. 18	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.						
	CHECKED - SP,	NAME	DATE							68 SHEETS	57	1414.2B	COOK	516	263
	DRAWN - PK														
	CHECKED - SP,PDF														
	DATE - 03/18/10														
			CONTRACT NO. 60J27												
						FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT									

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

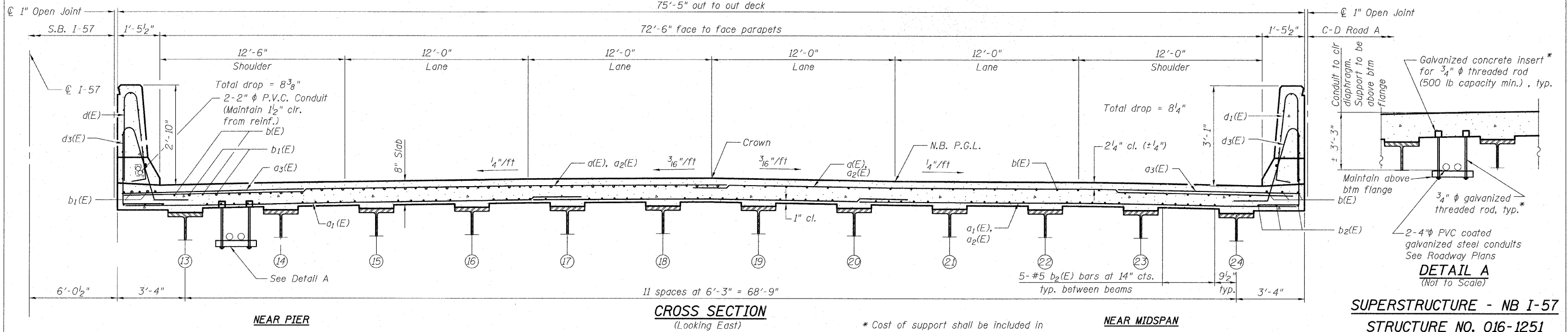
\* Order a<sub>2</sub>(E) bars full length.  
Cut to fit skew and use remainder  
of bars in opposite end.



**MINIMUM BAR LAPS**  
#5 bar = 3'-3"  
#5 bar = 3'-8" (Top bar lap)  
(Deck Slab)

- NOTES**
1. An optional transverse construction joint has been provided. See Note 6 and Deck Pouring Sequence Diagram on Sheet 20 of 68.
  2. See Sheet 20 of 68 for additional notes.

**DECK PLAN**



**CROSS SECTION**  
(Looking East)

**DETAIL A**  
(Not to Scale)

\* Cost of support shall be included in  
the cost of Concrete Superstructure

**TYLIN INTERNATIONAL**

DESIGNED - PK	REVISIONS	
CHECKED - SP,	NAME	DATE
DRAWN - PK		
CHECKED - SP,PDF		
DATE - 03/18/10		

NEAR MIDSPAN

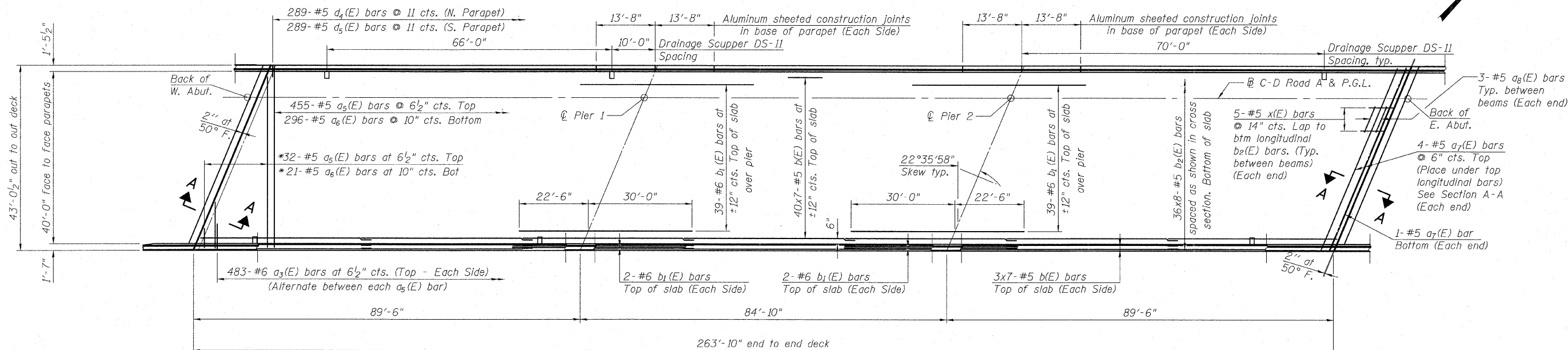
SHEET NO. 19  
68 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

\* Order  $a_5(E)$  and  $a_6(E)$  bars full length.  
Cut to fit skew and use remainder  
of bars in opposite end.

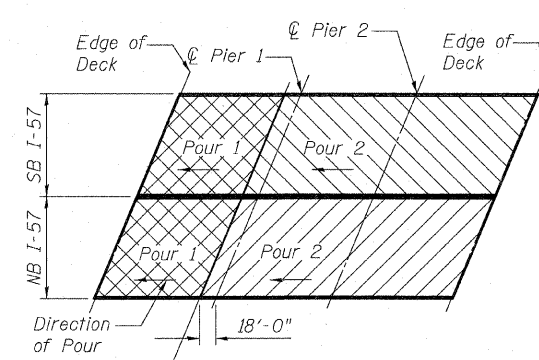
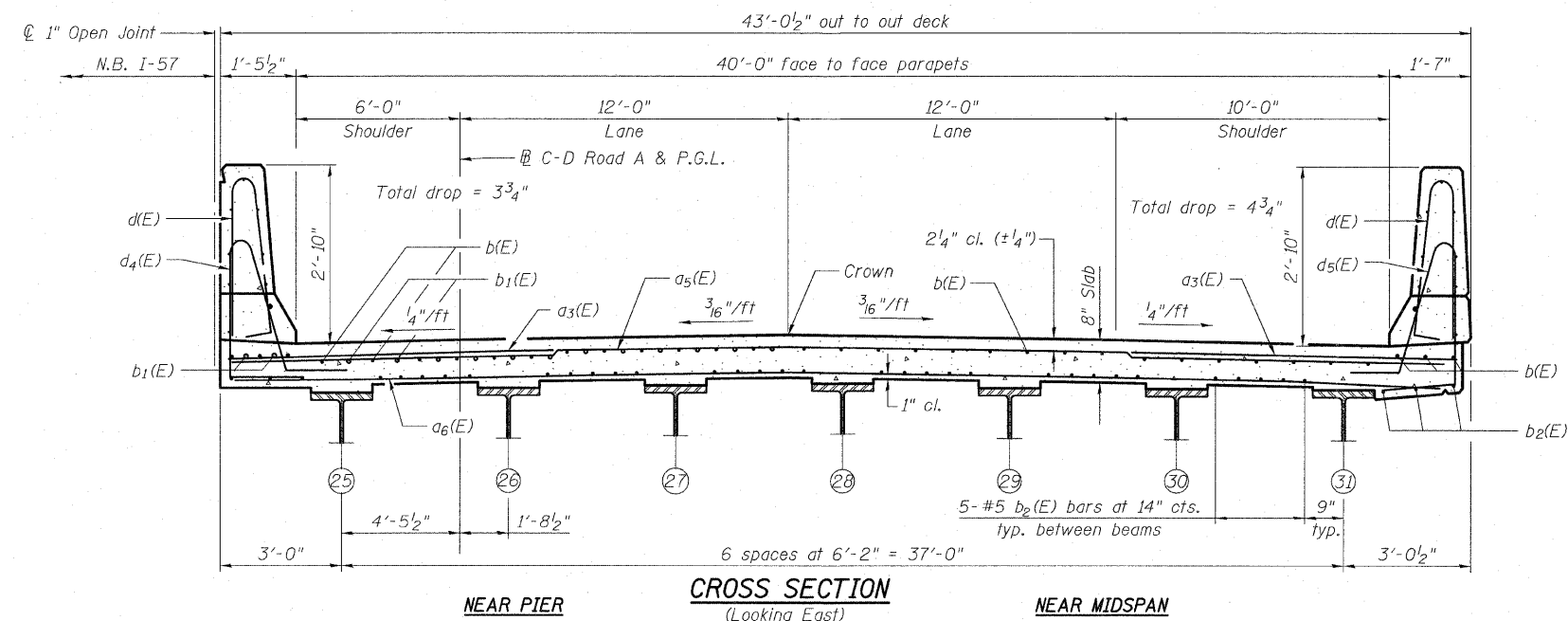


**MINIMUM BAR LAPS**

#5 bar = 3'-3"  
#5 bar = 3'-8" (Top bar lap)  
(Deck Slab)

**NOTES**

- See Sheet 22 of 68 for superstructure details, Section A-A, reinforcement around scuppers and Bill of Material.
- Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
- See Sheet 21 of 68 for parapet reinforcement.
- Cut longitudinal bars to clear drainage scuppers.
- Dimensions are based on a rolled rail strip seal joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on the Expansion Joint Detail sheet.  
*Note 6 for NB & SB 157 Bridge Decks Only*
- When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:
  - At least 72 hours shall have elapsed from the end of the previous pour.
  - The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

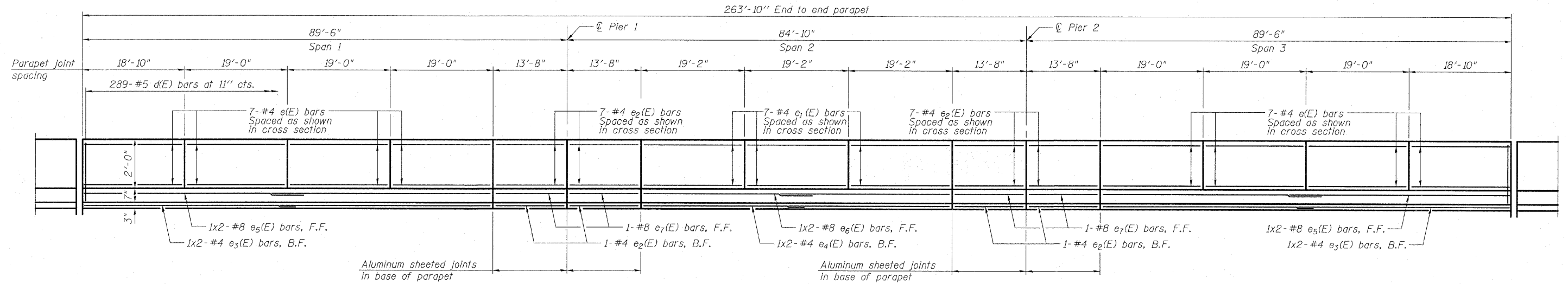


**SUPERSTRUCTURE - C-D ROAD A  
STRUCTURE NO. 016-1251**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - PK	REVISIONS		SHEET NO. 20 68 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - SP,	NAME	DATE		57	1414.2B	COOK	516	265	
	DRAWN - PK				CONTRACT NO. 60J27					
	CHECKED - SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

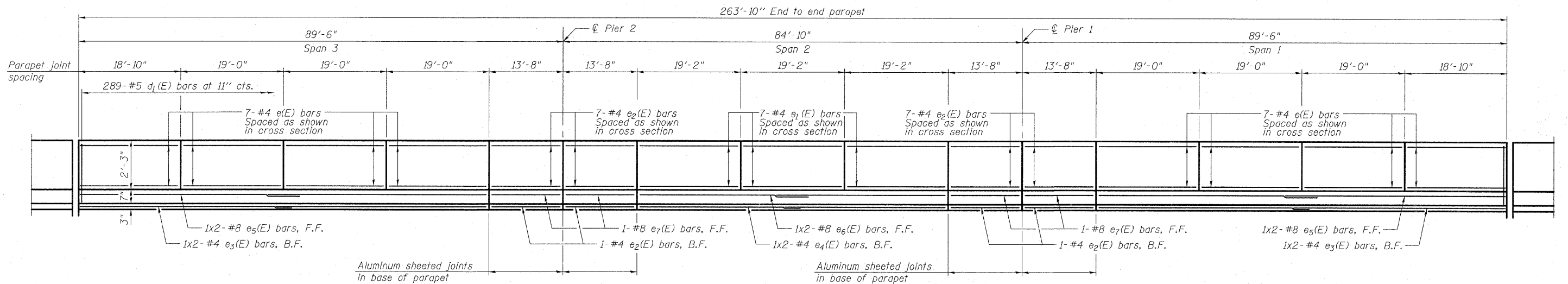
P:\602540157-294\STRUCTURAL\1-57 OVER 1294\0161251-60J27-020-SUPER-RAMP-A.dgn 3/17/2010 6:54:23 PM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



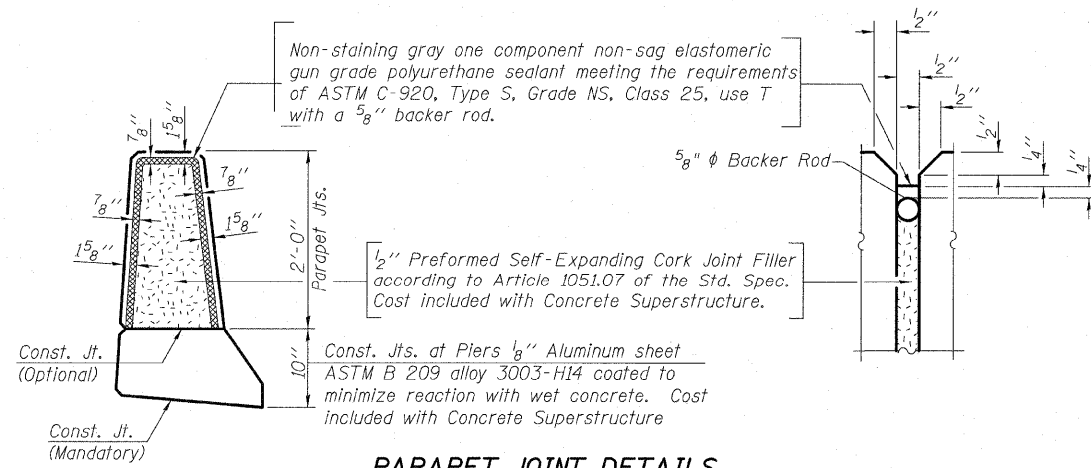
**INSIDE ELEVATION OF PARAPET**

(Outside parapet S.B. I-57 & Inside parapet of C-D Road A shown. Outside parapet of CD Road A opposite hand. Applies to the north parapet of N.B. and S.B. I-57 and each parapet on C-D Road A.)



**INSIDE ELEVATION OF PARAPET**

(Applies to south parapet of N.B. & S.B. I-57 as indicated on Sheets 18 & 19 of 68.)



**PARAPET JOINT DETAILS**

**MINIMUM BAR LAP**

(Parapet)  
#4 bar = 2'-0"  
#8 bar = 5'-2"

**PARAPET ELEVATIONS  
STRUCTURE NO. 016-1251**

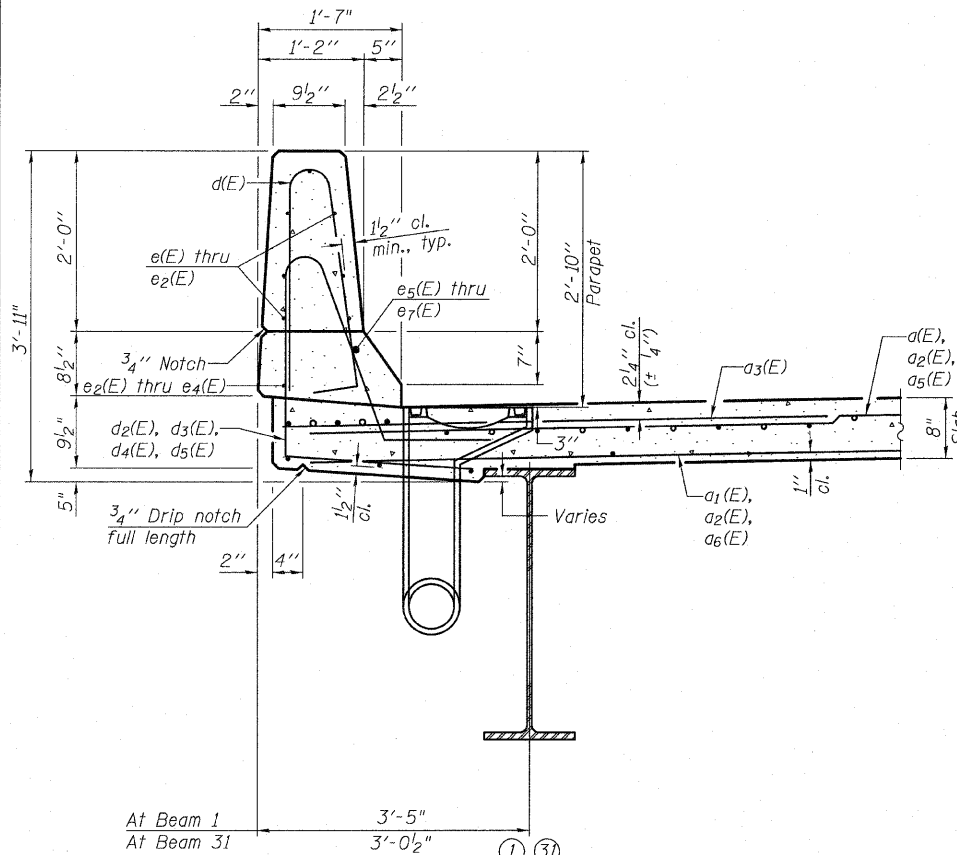
**NOTE**

For parapet with embedded conduit, provide expansion/deflection couplings at each deck expansion joint location.

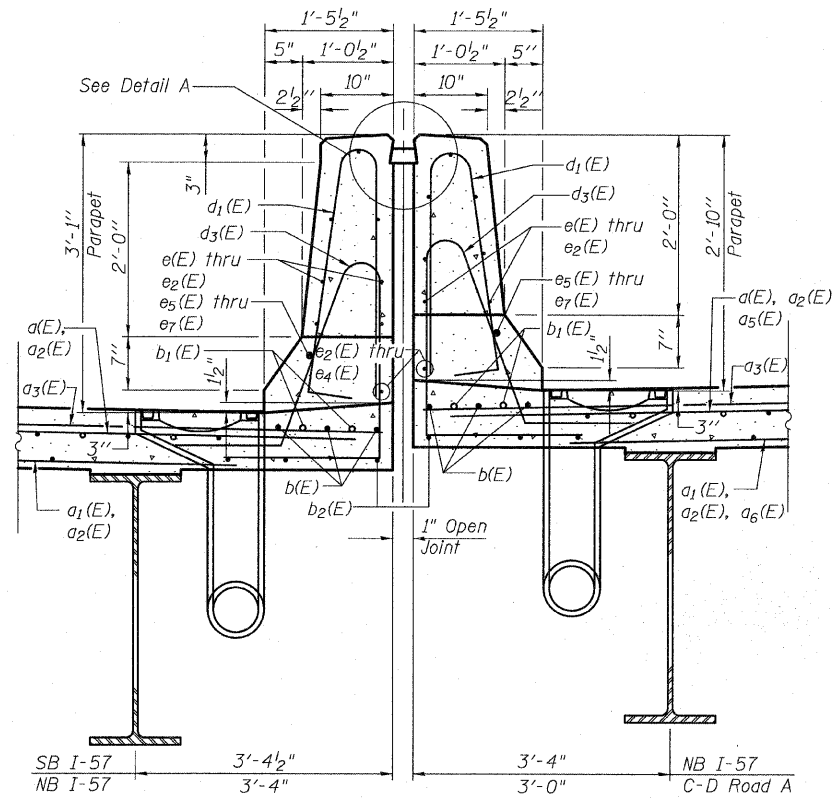
<b>TYLIN INTERNATIONAL</b>	DESIGNED - PK	REVISIONS		SHEET NO. 21	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 266
	CHECKED - SP,	NAME	DATE						
	DRAWN - PK								
	CHECKED - SP,PDF								
	DATE - 03/18/10								
				68 SHEETS	CONTRACT NO. 60J27		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

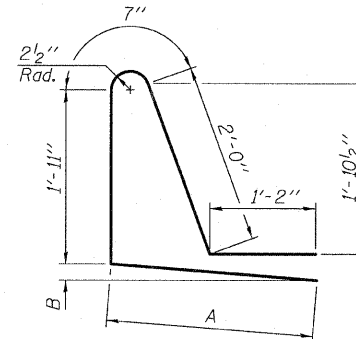
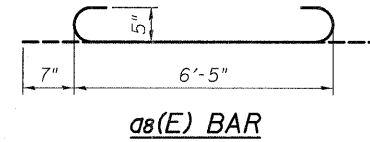


**SECTION THRU PARAPET**



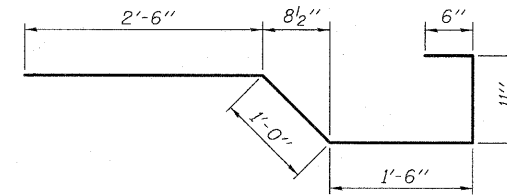
**SECTION THRU MEDIAN PARAPET**

(See sheets 18-20 of 68 for parapet heights)

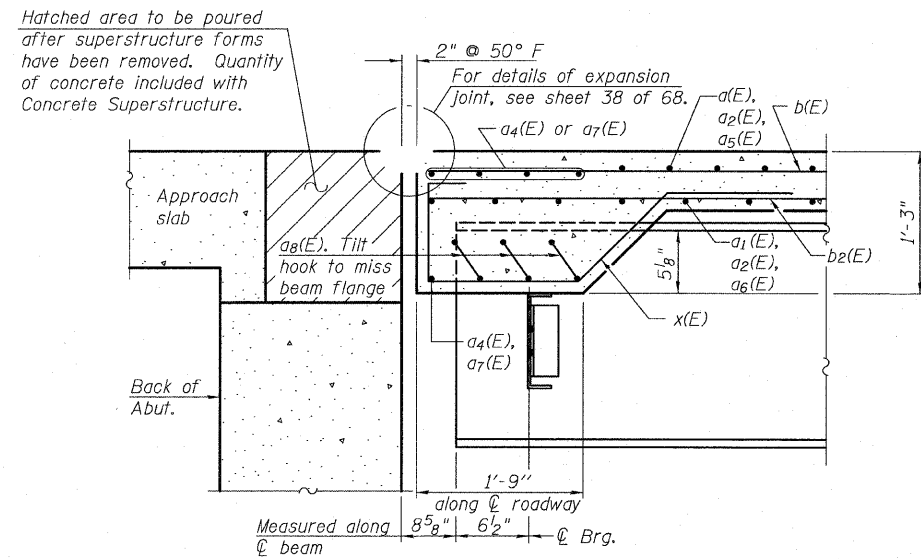


**BARS d2(E) thru d5(E)**

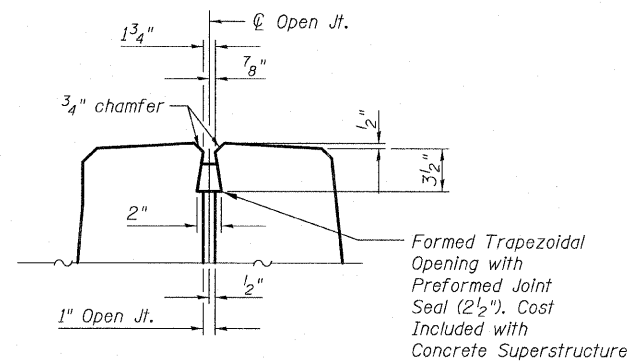
Bar	A	B
d2(E)	2'-3 1/2"	5"
d3(E)	2'-2 1/2"	0"
d4(E)	1'-11"	0"
d5(E)	1'-11"	5"



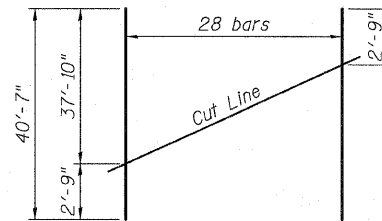
**BAR x(E)**



**SECTION A-A**

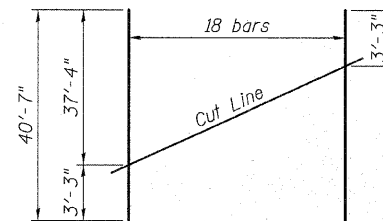


**DETAIL A**



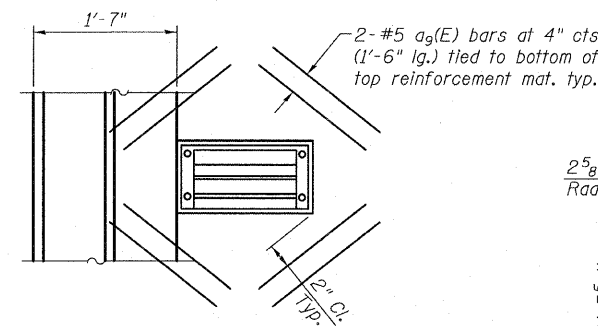
**BAR a2(E) - TOP**

Order bars full length. Cut as shown and use remainder of bars in opposite end.

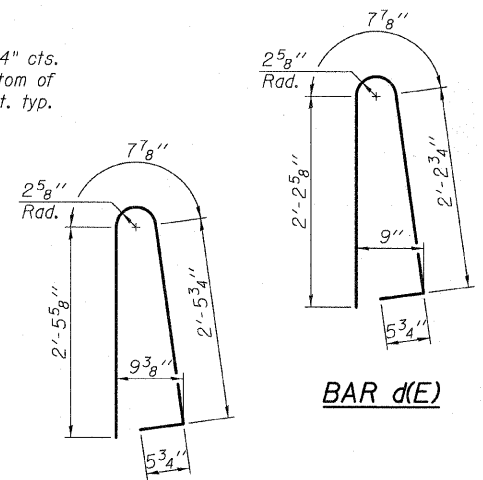


**BAR a2(E) - BOTTOM**

Order bars full length. Cut as shown and use remainder of bars in opposite end.



**PLAN AT SCUPPERS**



**BAR d1(E)**

**BAR d(E)**

**SUPERSTRUCTURE DETAILS  
STRUCTURE NO. 016-1251**

**SUPERSTRUCTURE  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	1724	#5	39'-3"	—
a1(E)	1680	#5	27'-9"	—
a2(E)	368	#5	40'-7"	—
a3(E)	2898	#6	6'-6"	—
a4(E)	60	#5	29'-8"	—
a5(E)	487	#5	42'-7"	—
a6(E)	317	#5	42'-2"	—
a7(E)	10	#5	46'-3"	—
a8(E)	168	#5	7'-7"	U
a9(E)	144	#5	1'-6"	—
b(E)	1414	#5	40'-5"	—
b1(E)	386	#6	52'-6"	—
b2(E)	1264	#5	35'-10"	—
d(E)	1156	#5	5'-7"	—
d1(E)	578	#5	6'-1"	—
d2(E)	289	#5	7'-11 1/2"	—
d3(E)	867	#5	7'-10 1/2"	—
d4(E)	289	#5	7'-7"	—
d5(E)	289	#5	7'-7"	—
e(E)	336	#4	18'-8"	—
e1(E)	126	#4	18'-10"	—
e2(E)	192	#4	13'-4"	—
e3(E)	24	#4	38'-9"	—
e4(E)	12	#4	29'-7"	—
e5(E)	24	#8	40'-4"	—
e6(E)	12	#8	31'-2"	—
e7(E)	24	#8	13'-4"	—
x(E)	280	#5	6'-5"	—
Reinforcement Bars, Epoxy Coated		Pound	378,970	
Concrete Superstructure		Cu. Yds.	1515.7	

**TYLIN INTERNATIONAL**

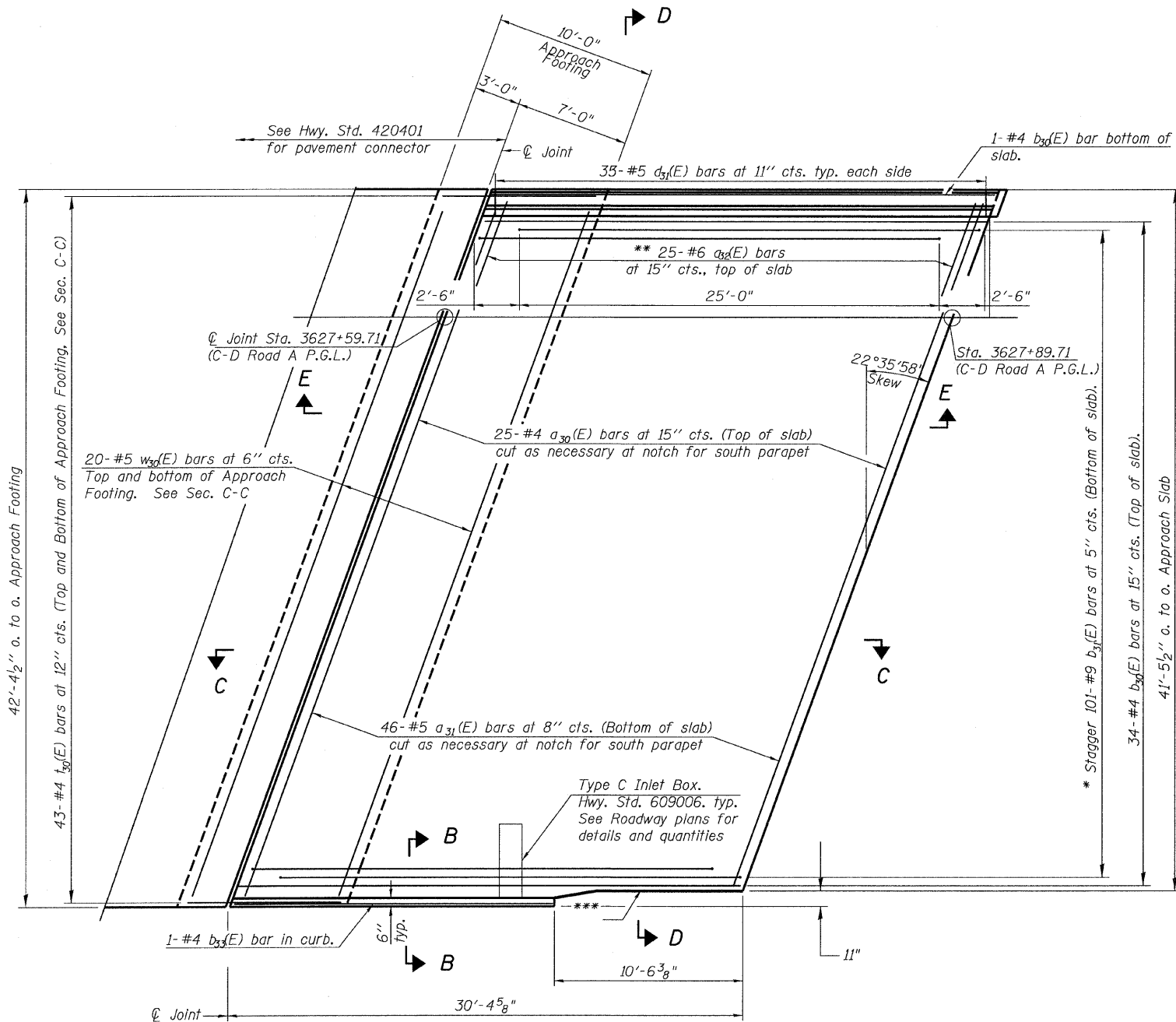
DESIGNED - PK	REVISIONS	
CHECKED - SP,	NAME	DATE
DRAWN - PK		
CHECKED - SP,PDF		
DATE - 03/18/10		

SHEET NO. 22  
68 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	267
CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

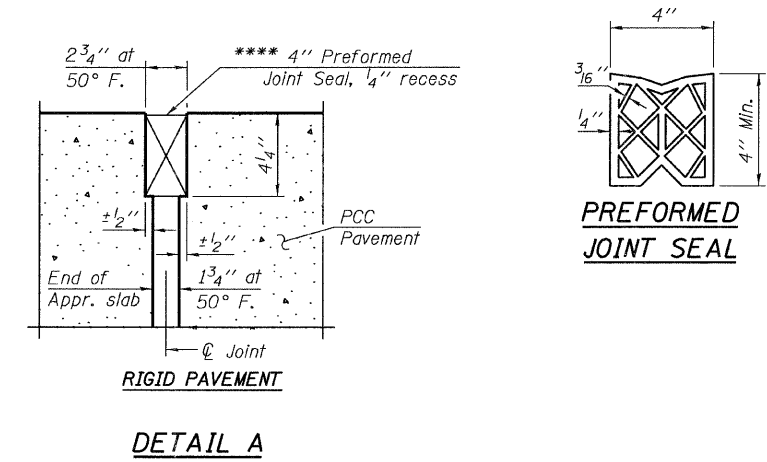
Notes:  
See sheet 24 of 68 for Sections C-C & D-D and View E-E.  
 $a_{30}(E)$  and  $a_{31}(E)$  bar spacings measured along  $\perp$  Rdwy.  
Order  $a_{30}(E)$ ,  $a_{31}(E)$ ,  $b_{30}(E)$  and  $b_{31}(E)$  bars full length. Cut in field to fit Type C Inlet Box, Hwy. Standard 609006.



**PLAN**

- \* Tilt #9  $b_{31}(E)$  bars as required to maintain clearance.
- \*\* Space between  $a_{30}(E)$  bars.
- \*\*\* Closed cell joint filler according to Article 1051.08 of the Std. Specifications: full depth of slab, full length of parapet.

\*\*\*\* Cost included with Concrete Superstructure.



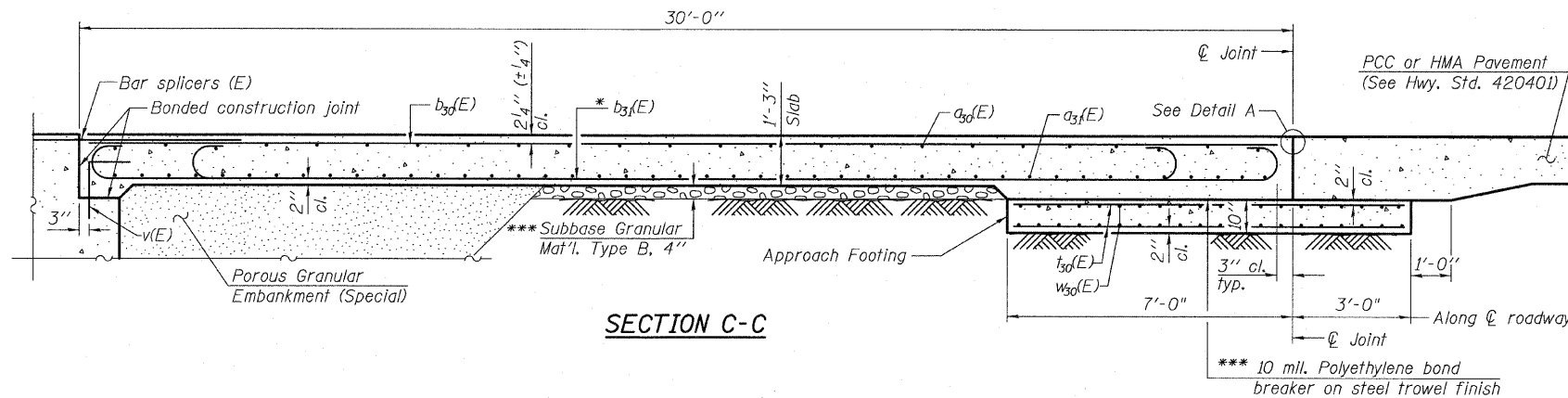
**WEST APPROACH SLAB C-D ROAD A - 1**  
**STRUCTURE NO. 016-1251**

**TYLIN INTERNATIONAL**

DESIGNED - JMA	REVISIONS	
CHECKED - SP,	NAME	DATE
DRAWN - JMA		
CHECKED - SP,PDF		
DATE - 03/18/10		

SHEET NO. 23	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	268
68 SHEETS			CONTRACT NO. 60J27		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

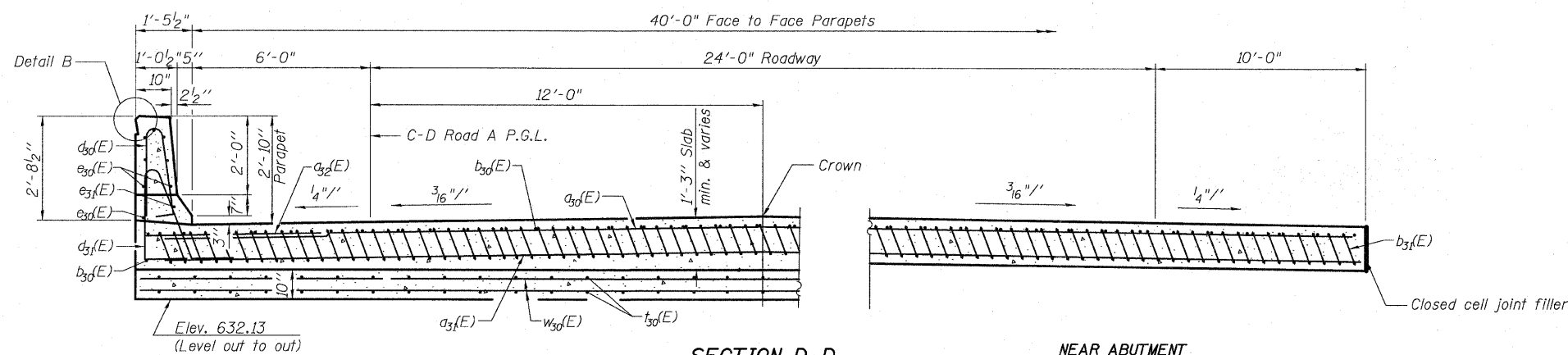


SECTION C-C

Notes:

- See sheet 23 of 68 for Detail A.
- Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
- Approach footing concrete shall be paid for as Concrete Structures.
- Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
- For v(E) bar details, see sheet 43 of 68.
- The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
- For bar splicer details, see sheet 56 of 68.
- Cost of excavation for approach footing included with Concrete Structures.
- For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 68.

The quantity for Bridge Deck Grooving & Protective Coat for approach slab is included with the quantities on sheet 2 of 68.



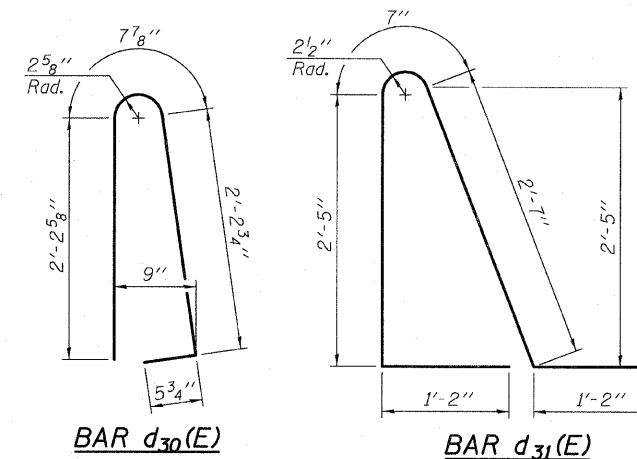
SECTION D-D

AT APPROACH FOOTING

(See Plan for dimensions not shown)

NEAR ABUTMENT

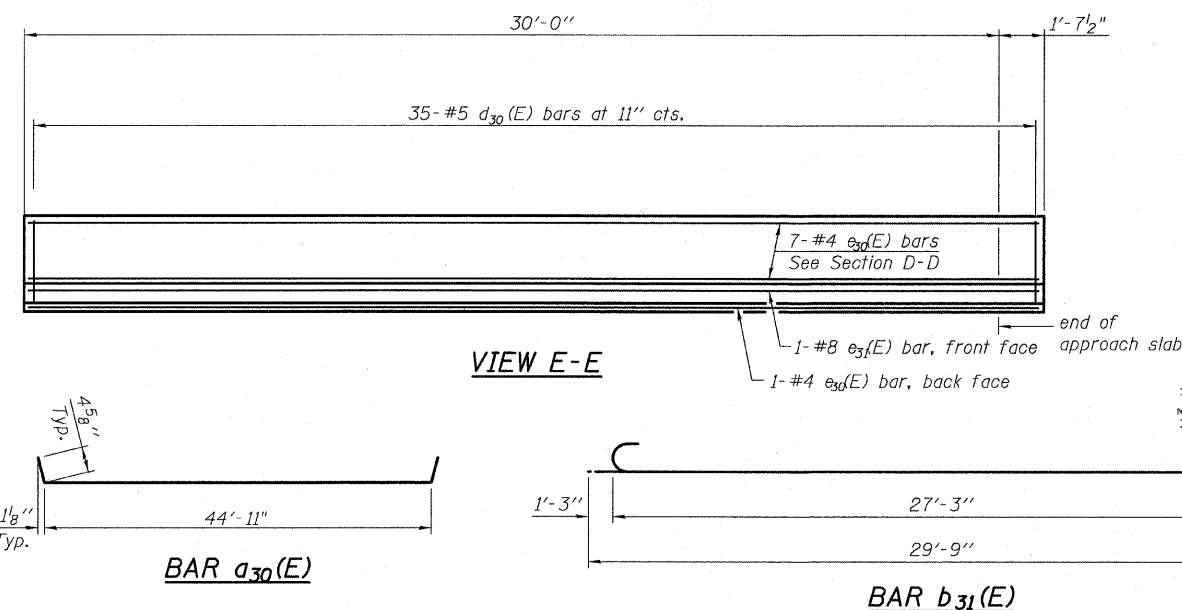
- \* Tilt #9 b31(E) bars as required to maintain clearance.
- \*\*\* Cost Included with Concrete Superstructure.



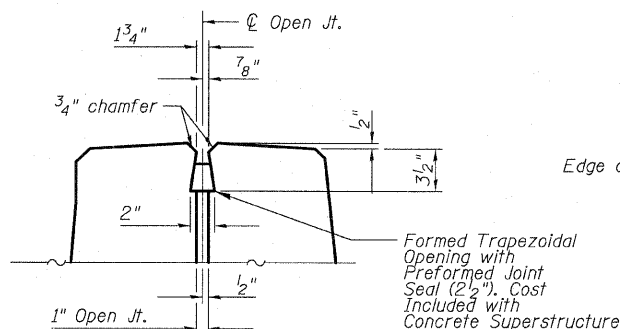
BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a30(E)	25	#4	45'-7"	┌───┐	
a31(E)	46	#5	45'-7"	┌───┐	
a32(E)	50	#6	6'-6"	┌───┐	
b30(E)	35	#4	29'-8"	┌───┐	
b31(E)	102	#9	29'-9"	┌───┐	
b33(E)	1	#4	19'-5"	┌───┐	
d30(E)	35	#5	5'-7"	┌───┐	
d31(E)	35	#5	7'-11"	┌───┐	
e30(E)	8	#4	31'-3"	┌───┐	
e31(E)	1	#8	31'-3"	┌───┐	
t30(E)	86	#4	9'-8"	┌───┐	
w30(E)	40	#5	45'-7"	┌───┐	
Concrete Superstructure				Cu. Yd.	74.1
Concrete Structures				Cu. Yd.	14.2
Reinforcement Bars, Epoxy Coated				Pound	17,570

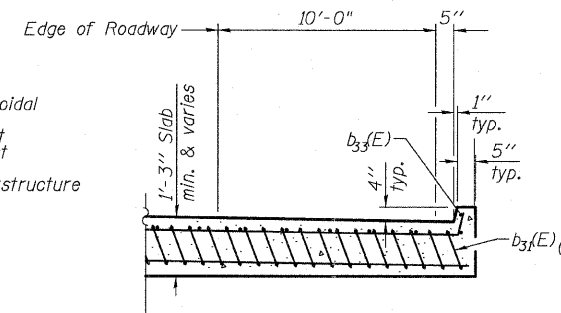
(1.) 2,460 pounds billed in Substructure  
Total in Total Bill of Material on Sheet 2



VIEW E-E



DETAIL B



Section B-B

WEST APPROACH SLAB C-D ROAD A - 2  
STRUCTURE NO. 016-1251

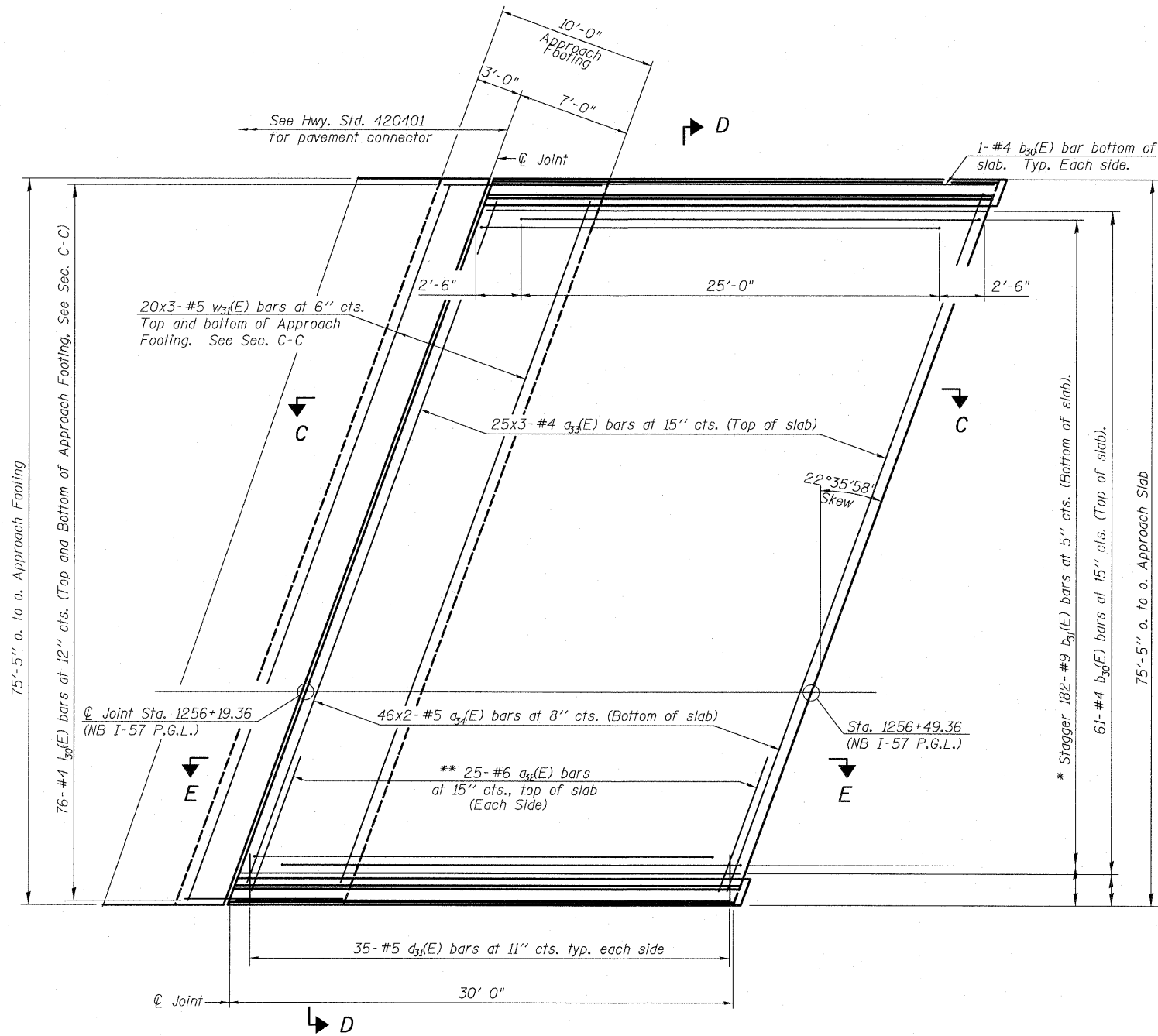
TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS	
	CHECKED - SP,	NAME	DATE
	DRAWN - JMA		
	CHECKED - SP,PDF		
	DATE - 03/18/10		

SHEET NO. 24 68 SHEETS	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	269
FED. ROAD DIST. NO. 1 ILLINOIS			FED. AID PROJECT		



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

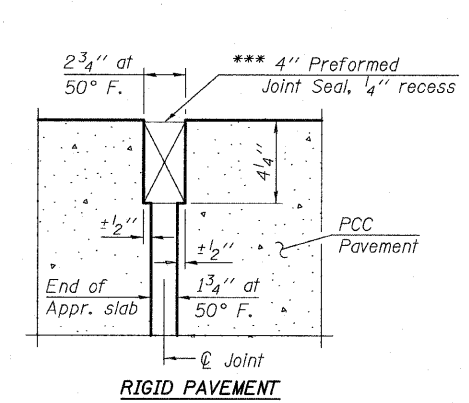
- Notes:  
1. See sheet 26 of 68 for Sections C-C & D-D and View E-E.  
2.  $a_{33}(E)$  and  $a_{34}(E)$  bar spacings measured along  $\varnothing$  Rdwy.  
3. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with three lengths per line



**PLAN**

- \* Tilt #9  $b_1(E)$  bars as required to maintain clearance.
- \*\* Space between  $a_{33}(E)$  bars, typ. each parapet.

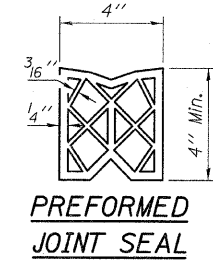
\*\*\* Cost included with Concrete Superstructure.



**DETAIL A**

**Minimum Bar Laps**

- #4 Bar 2'-11"
- #5 Bar 3'-3"



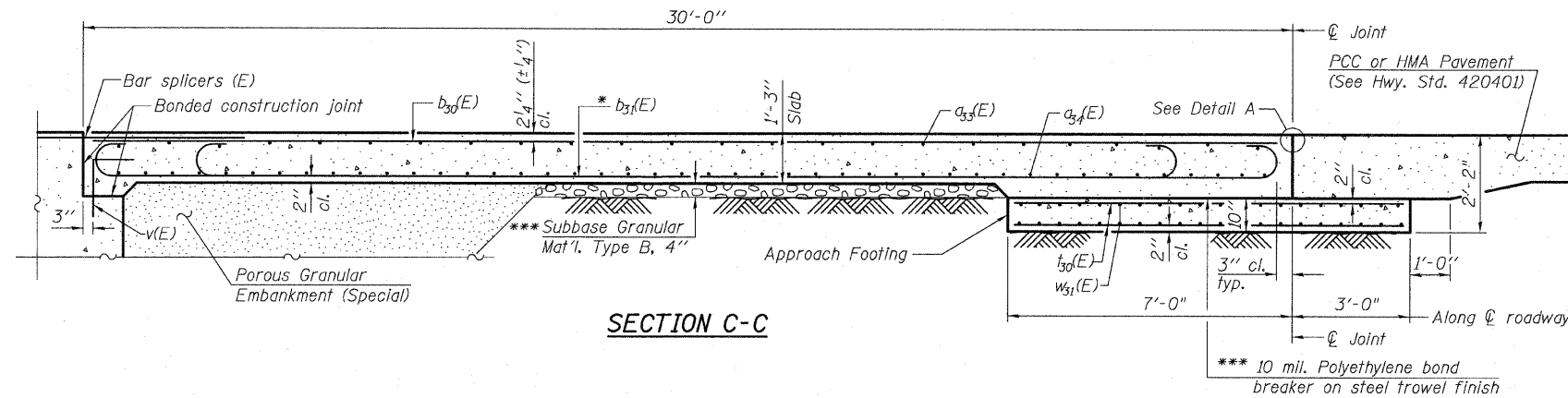
**WEST APPROACH SLAB NB I-57 - 1  
STRUCTURE NO. 016-1251**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - JMA	REVISIONS		SHEET NO. 25 68 SHEETS	F.A.I RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 270
	CHECKED - SP,	NAME	DATE						
	DRAWN - JMA								
	CHECKED - SP,PDF								
	DATE - 03/18/10								
							CONTRACT NO. 60J27		
							FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT		

P:\60254067-294\STRUCTURAL\I-57\_OVER\_1294\0161251-60J27-025-W\_APPR3.dgn

3/17/2010

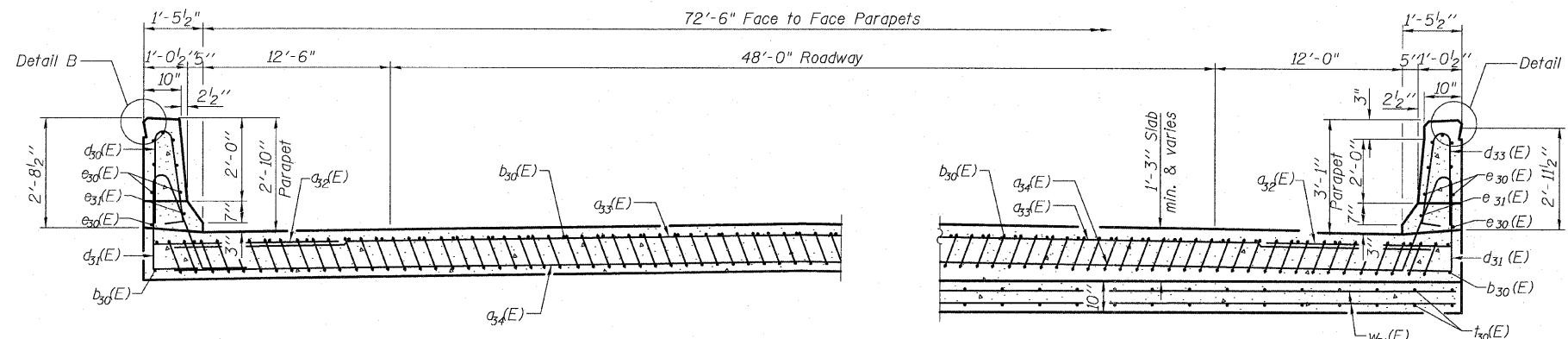
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



SECTION C-C

Notes:  
See sheet 25 of 68 for Detail A.  
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
Approach footing concrete shall be paid for as Concrete Structures.  
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
For v(E) bar details, see sheet 43 of 68.  
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
For bar splicer details, see sheet 56 of 68.  
Cost of excavation for approach footing included with Concrete Structures.  
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 68.

The quantity for Bridge Deck Grooving & Protective Coat for approach slab is included with the quantities on sheet 2 of 68.

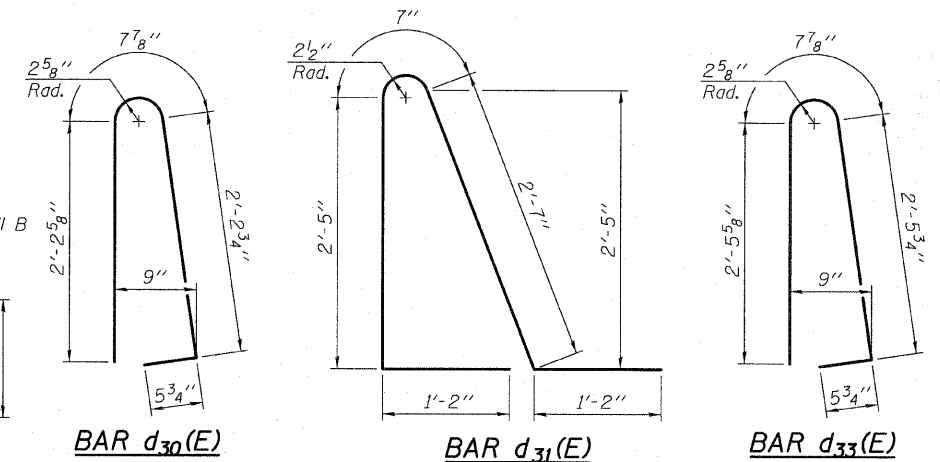


NEAR ABUTMENT

SECTION D-D

(See Plan for dimensions not shown)  
(See Cross Slope Sketch below for lane widths and P.G.L. location)

AT APPROACH FOOTING



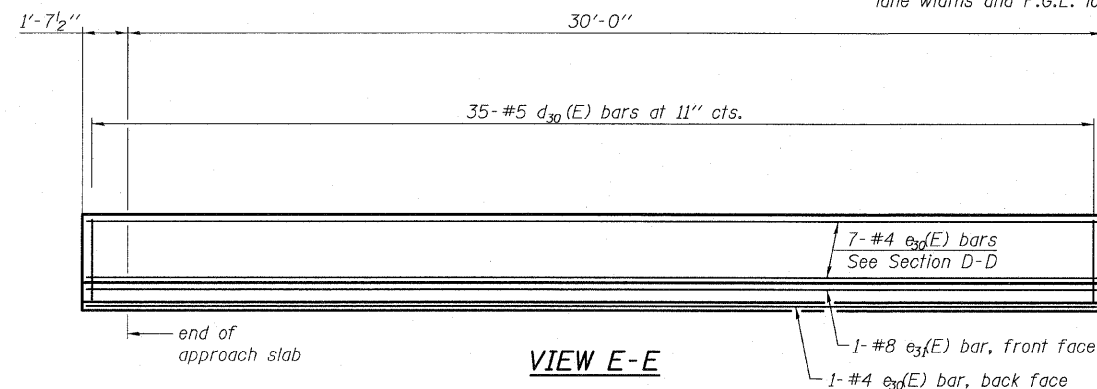
BAR d30(E)

BAR d31(E)

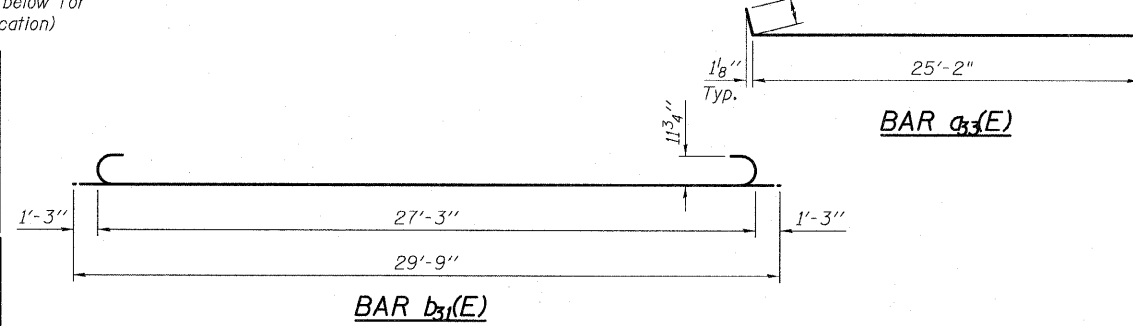
BAR d33(E)

\* Tilt #9 b31(E) bars as required to maintain clearance.

\*\*\* Cost included with Concrete Superstructure.

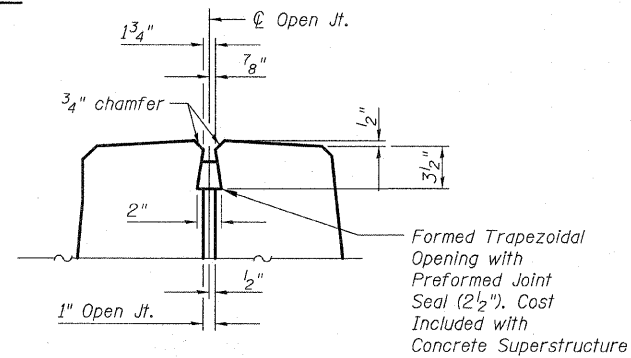


VIEW E-E



BAR a33(E)

BAR b31(E)



DETAIL B

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a32(E)	50	#6	6'-6"	—	
a33(E)	75	#4	29'-1"	—	
a34(E)	92	#5	42'-4"	—	
b30(E)	63	#4	29'-8"	—	
b31(E)	182	#9	29'-9"	—	
d30(E)	35	#5	5'-7"	—	
d31(E)	70	#5	7'-11"	—	
d33(E)	35	#5	6'-1"	—	
e30(E)	16	#4	31'-3"	—	
e31(E)	2	#8	31'-3"	—	
t30(E)	152	#4	9'-8"	—	
w31(E)	120	#5	29'-4"	—	
Concrete Superstructure				Cu. Yd.	113.1
Concrete Structures				Cu. Yd.	25.3
(1.) Reinforcement Bars, Epoxy Coated				Pound	31,830

(1.) 4,660 pounds billed in Substructure  
Total in Total Bill of Material on Sheet 2

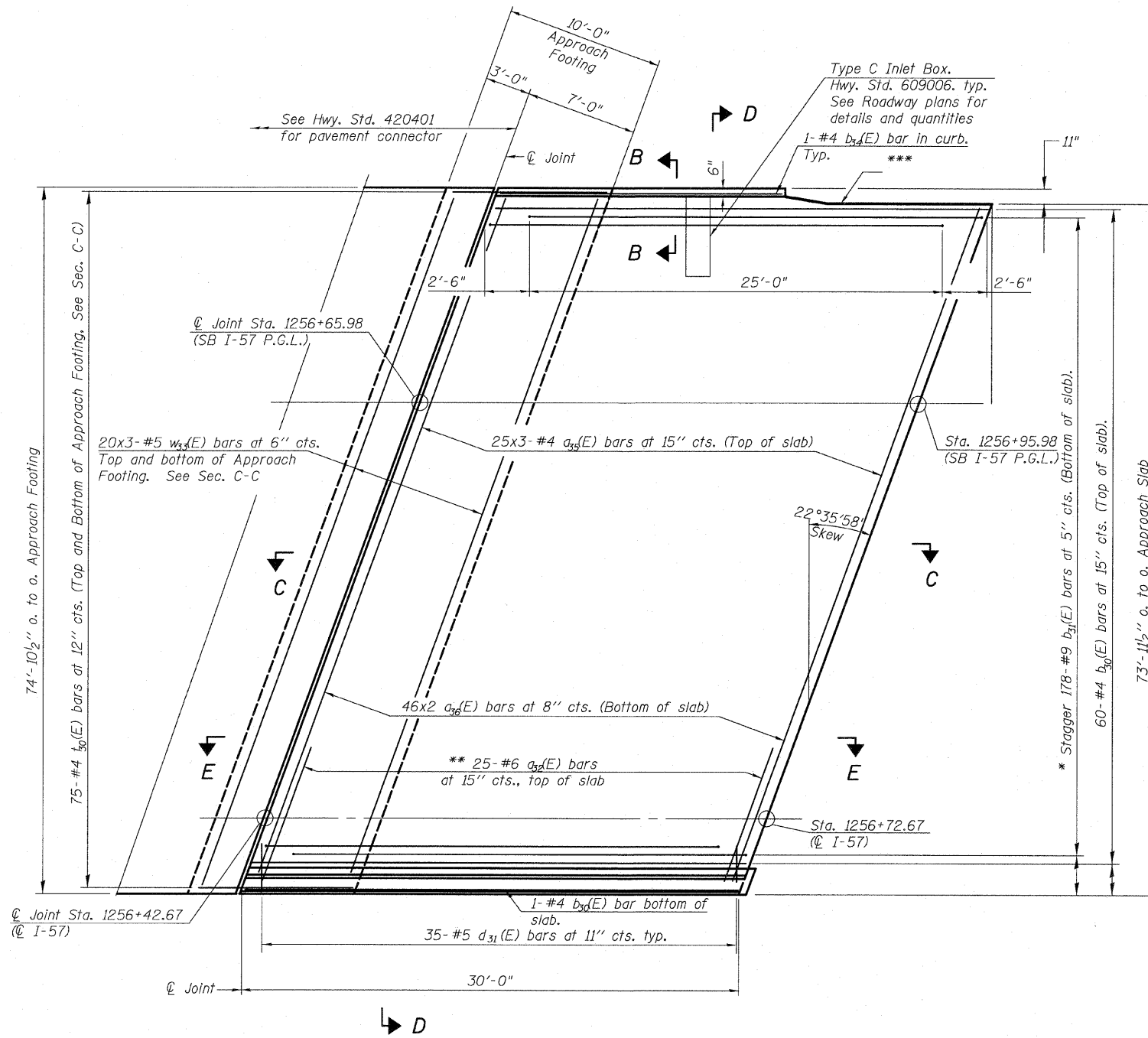
WEST APPROACH SLAB NB I-57 - 2  
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS	
	CHECKED - SP.	NAME	DATE
	DRAWN - JMA		
	CHECKED - SP,PDF		
	DATE - 03/18/10		

SHEET NO. 26 68 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	271
				CONTRACT NO. 60J27	
	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

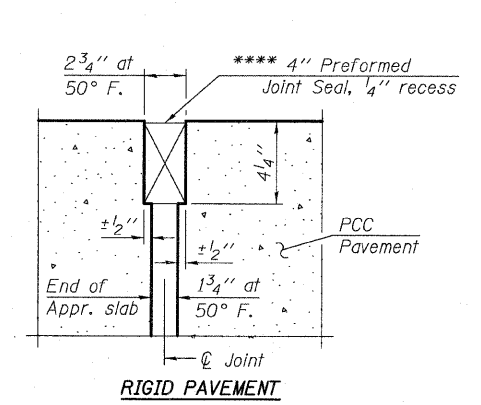
Notes:  
See sheet 28 of 68 for Sections C-C & D-D and View E-E.  
 $a_{33}(E)$  and  $a_{34}(E)$  bar spacings measured along  $\text{C.Rdwy.}$   
Order  $a_{33}(E)$ ,  $a_{34}(E)$ ,  $b_{30}(E)$  and  $b_{31}(E)$  bars full length. Cut in field to fit Type C Inlet Box, Hwy. Standard 609006.



PLAN

\* Tilt #9  $b_{31}(E)$  bars as required to maintain clearance.  
\*\* Space between  $a_{35}(E)$  bars, typ. each parapet.  
\*\*\* Closed cell joint filler according to Article 1051.08 of the Std. Specifications: full depth of slab, full length of parapet. Typ. each parapet.

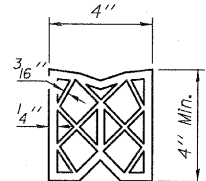
\*\*\*\* Cost included with Concrete Superstructure.



DETAIL A

Minimum Bar Laps

#4 Bar 2'-11"  
#5 Bar 3'-3"

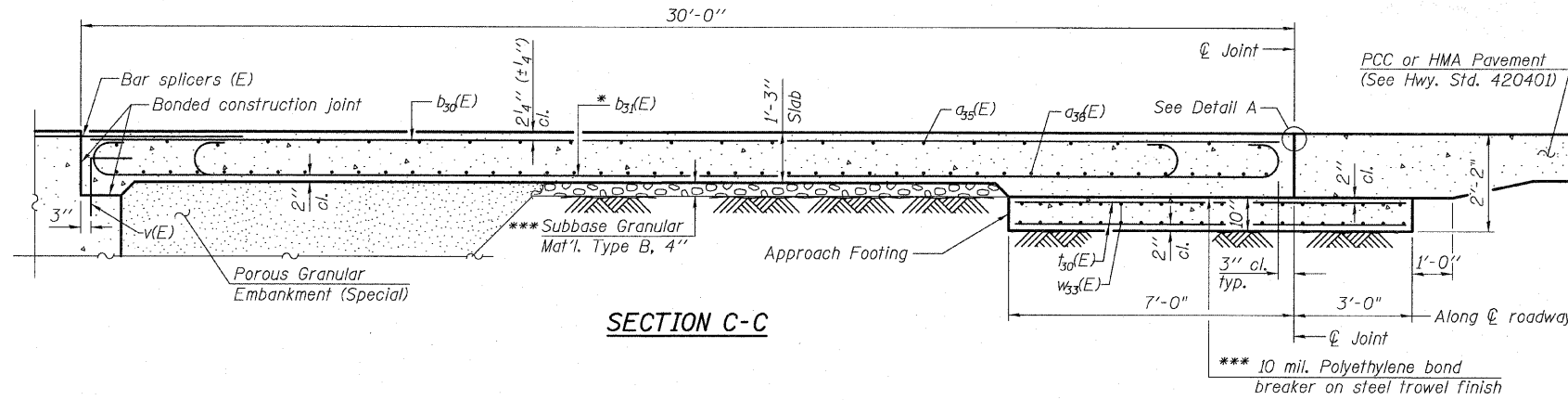


PREFORMED JOINT SEAL

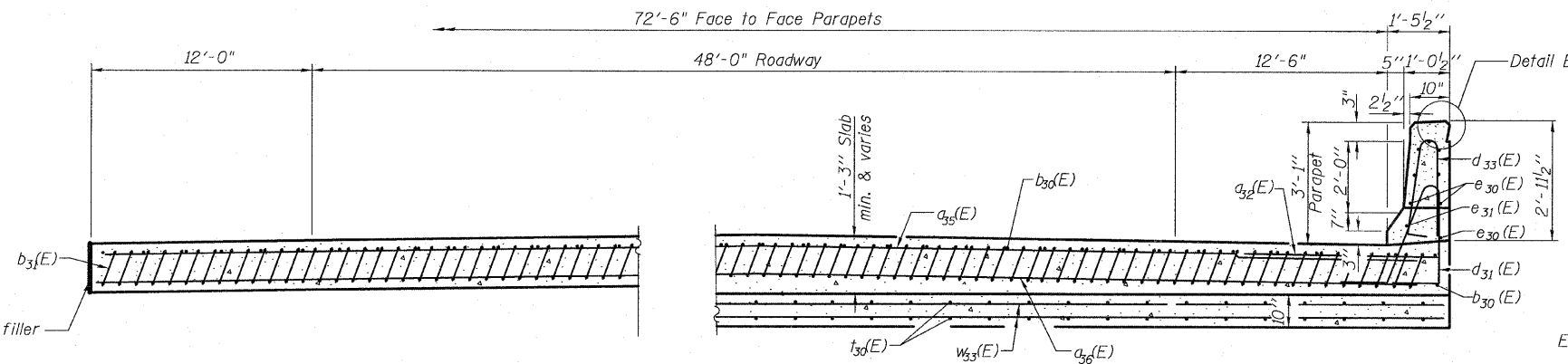
WEST APPROACH SLAB SB I-57 - 1  
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS		SHEET NO. 27	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.								
	CHECKED - SP,	NAME	DATE							57	1414.2B	COOK	516	272			
	DRAWN - JMA																
	CHECKED - SP,PDF														CONTRACT NO. 60J27		
	DATE - 03/18/10														FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



SECTION C-C

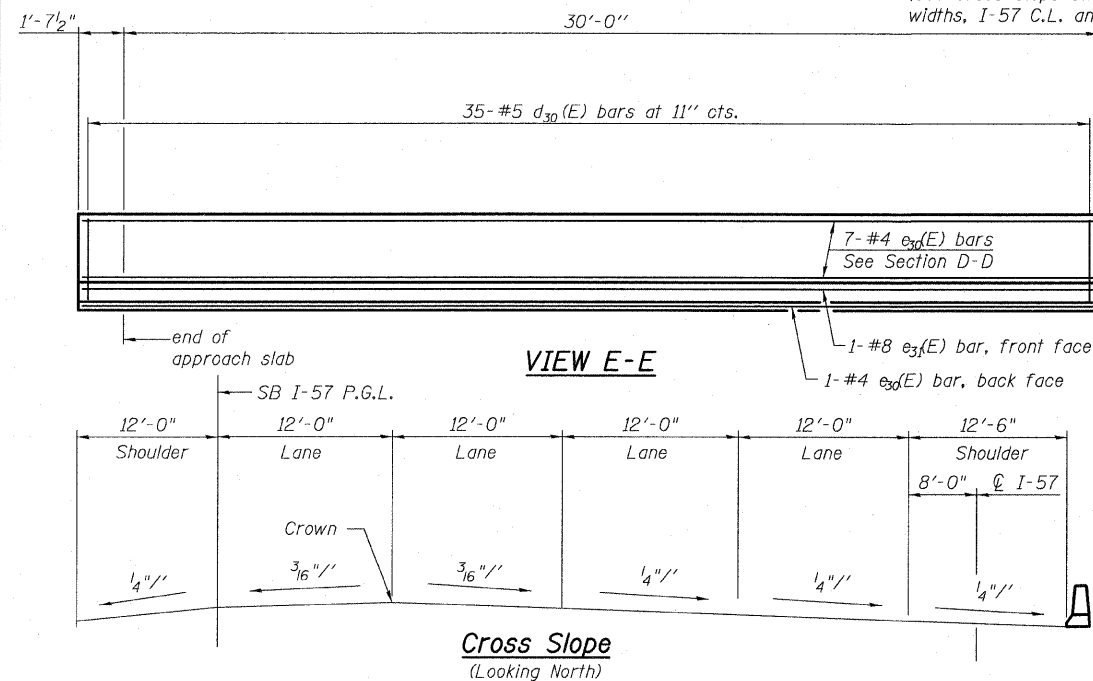


NEAR ABUTMENT

AT APPROACH FOOTING

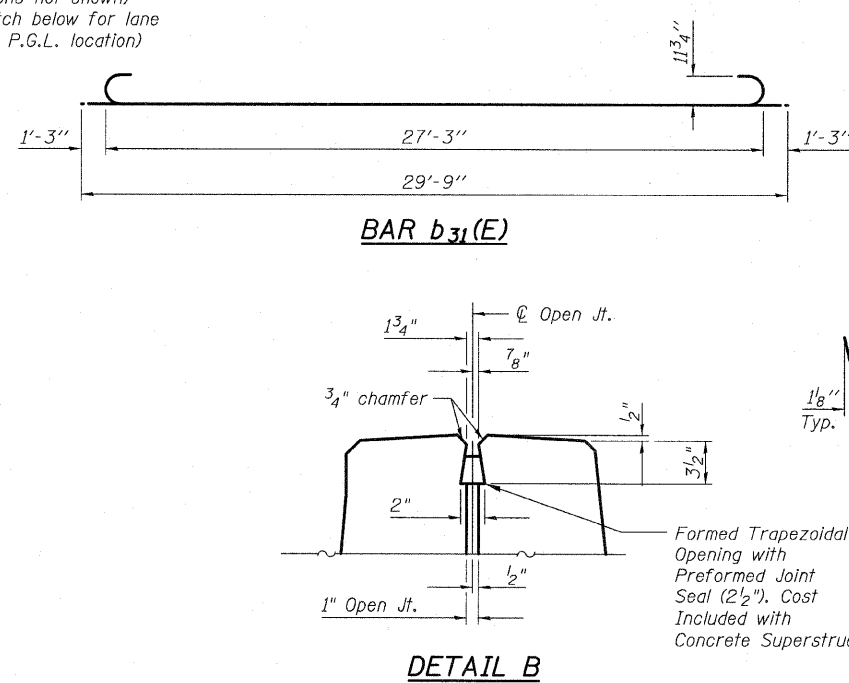
SECTION D-D

(See Plan for dimensions not shown)  
(See Cross Slope Sketch below for lane widths, I-57 C.L. and P.G.L. location)

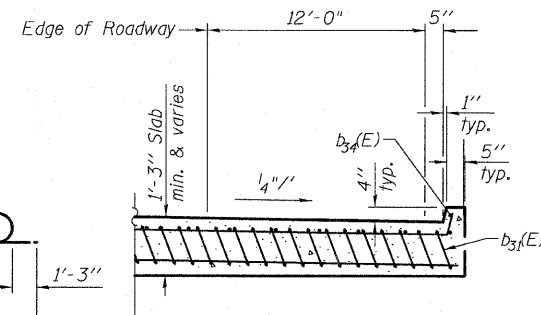


VIEW E-E

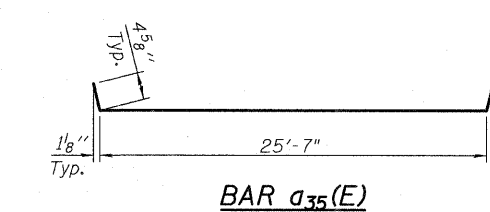
Cross Slope  
(Looking North)



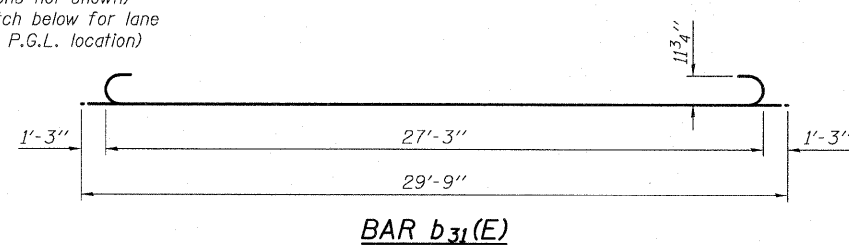
DETAIL B



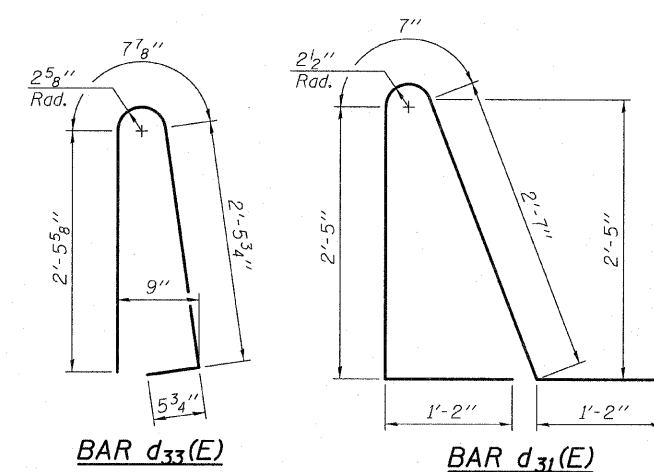
VIEW B-B



BAR a35(E)



BAR b31(E)



BAR d33(E)

BAR d31(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a32(E)	25	#6	6'-6"	—	
a35(E)	75	#4	28'-11"	—	
a36(E)	92	#5	42'-0"	—	
b30(E)	61	#4	29'-8"	—	
b31(E)	178	#9	29'-9"	—	
b34(E)	1	#4	20'-2"	—	
d31(E)	35	#5	7'-11"	—	
d34(E)	35	#5	6'-1"	—	
e30(E)	8	#4	31'-3"	—	
e31(E)	1	#8	31'-3"	—	
i30(E)	150	#4	9'-8"	—	
w33(E)	120	#5	29'-1"	—	
Concrete Superstructure				Cu. Yd.	109.1
Concrete Structures				Cu. Yd.	25.1
(1.) Reinforcement Bars, Epoxy Coated				Pound	30,330

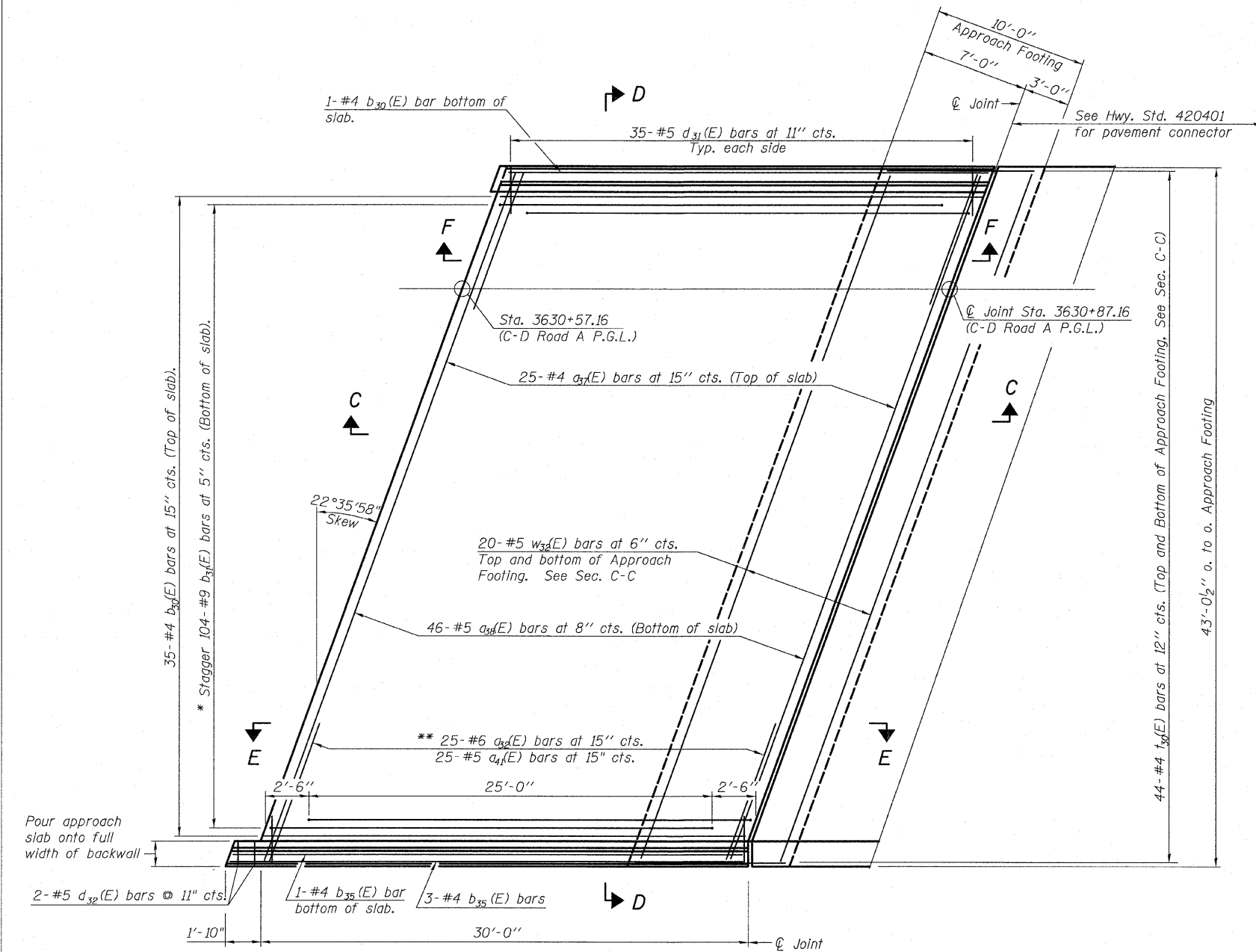
(1.) 4,610 pounds billed in Substructure  
Total in Total Bill of Material on Sheet 2

WEST APPROACH SB I-57 - 2  
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS		SHEET NO. 28	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 273
	CHECKED - SP,	NAME	DATE						
	DRAWN - JMA								
	CHECKED - SP,PDF								
	DATE - 03/18/10								
					68 SHEETS		CONTRACT NO. 60J27		
					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

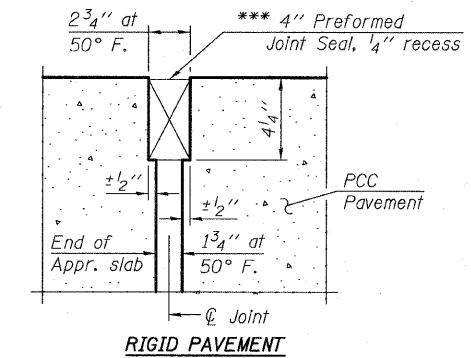
- Notes:  
1. See sheet 30 of 68 for Sections C-C & D-D and View E-E.  
2.  $a_{33}(E)$  and  $a_{34}(E)$  bar spacings measured along  $\text{C-Rdwy.}$   
3. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



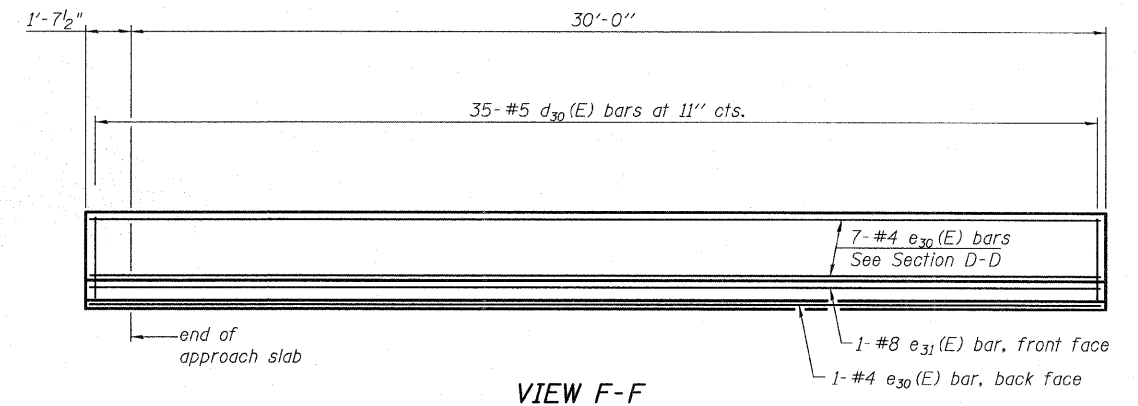
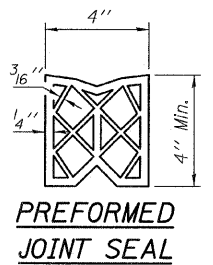
PLAN

- \* Tilt #9  $b_{31}(E)$  bars as required to maintain clearance.
- \*\* Space between  $a_{33}(E)$  bars, typ. each parapet.

\*\*\* Cost included with Concrete Superstructure.



DETAIL A



VIEW F-F

**EAST APPROACH SLAB C-D ROAD A - 1**  
**STRUCTURE NO. 016-1251**

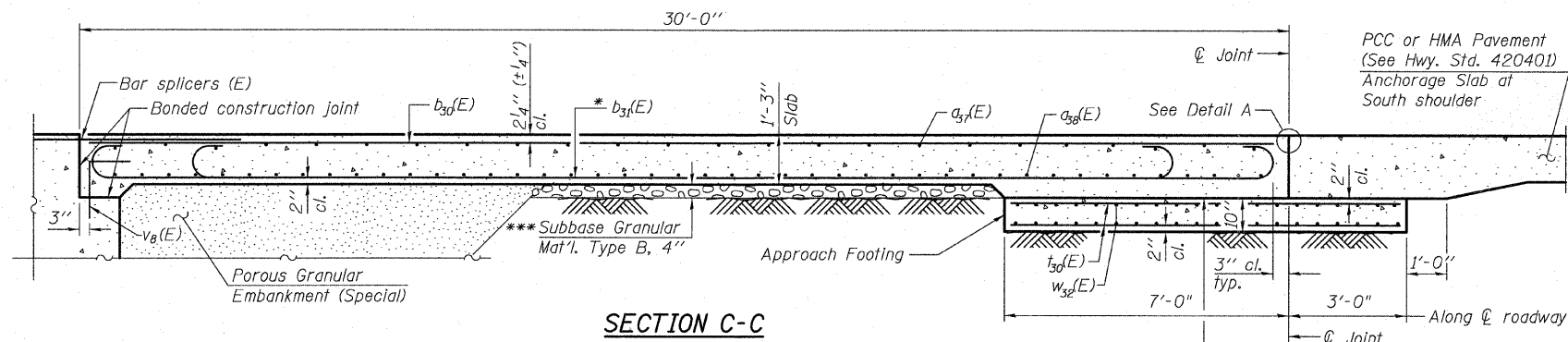
<b>TYLIN INTERNATIONAL</b>	DESIGNED - JMA	REVISIONS		SHEET NO. 29 68 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - SP.	NAME	DATE		57	1414.2B	COOK	516	274	
	DRAWN - JMA				CONTRACT NO. 60J27					
	CHECKED - SP,PDF				FED. ROAD DIST. NO. 1		ILLINOIS		FED. AID PROJECT	
	DATE - 03/18/10									

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

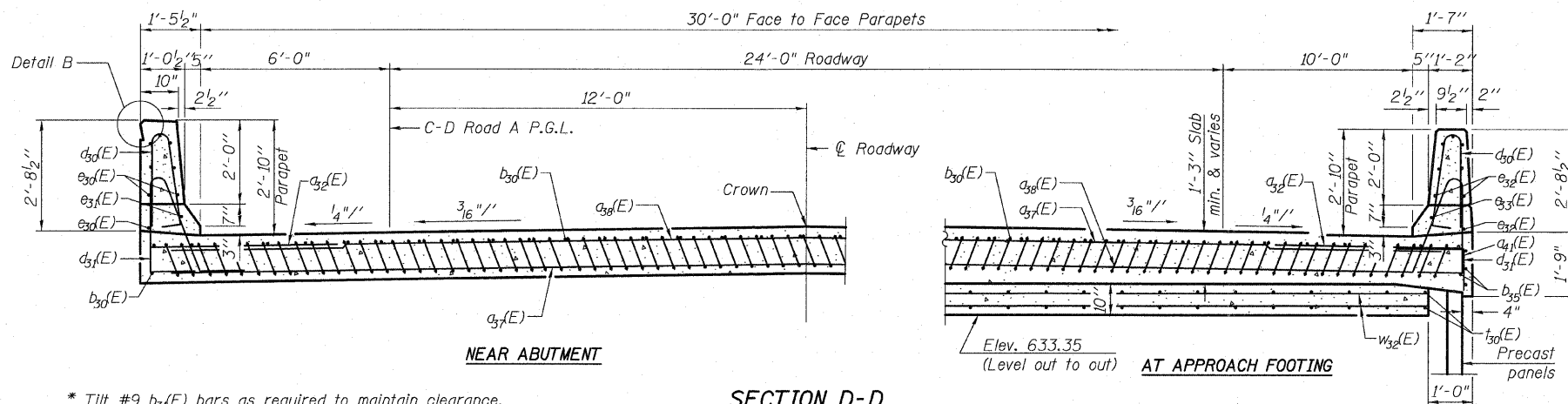
Notes:

See sheet 29 of 68 for Detail A.  
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
Approach footing concrete shall be paid for as Concrete Structures.  
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
For  $v_8(E)$  bar details, see sheet 46 of 68.  
The approach footing maximum applied service bearing pressure ( $Q_{max}$ ) = 2.0 ksf.  
For bar splicer details, see sheet 56 of 68.  
Cost of excavation for approach footing included with Concrete Structures.  
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 68.

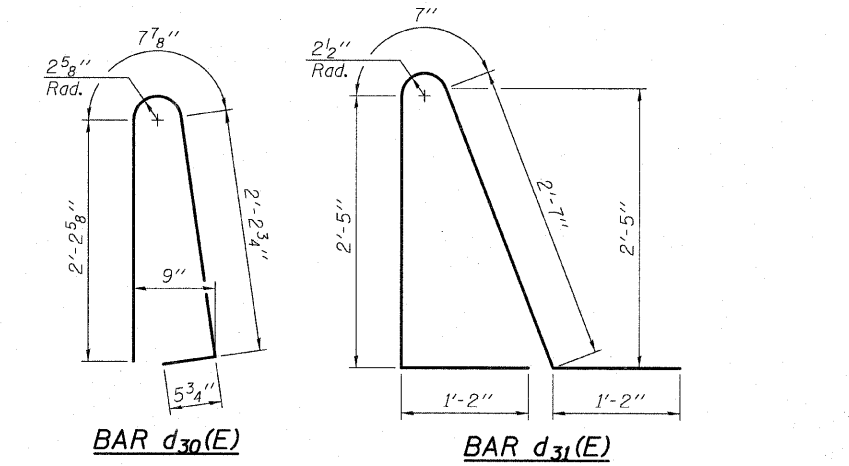
The quantity for Bridge Deck Grooving & Protective Coat for approach slab is included with the quantities on sheet 2 of 68.



SECTION C-C



SECTION D-D



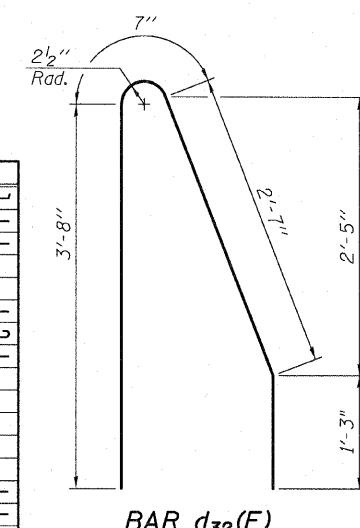
BAR d30(E)

BAR d31(E)

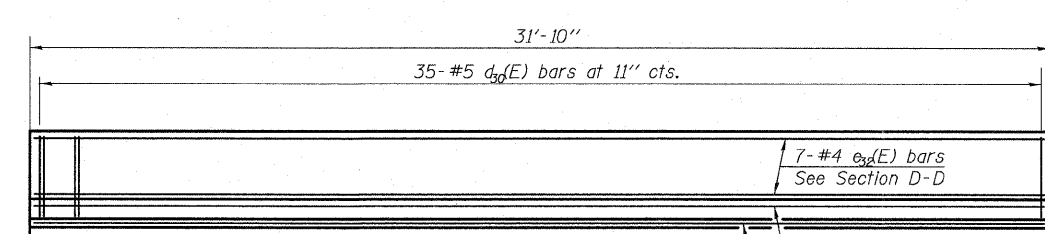
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a3f(E)	25	#4	46'-4"	—
a34(E)	46	#5	46'-4"	—
a35(E)	50	#6	6'-6"	—
a4f(E)	25	#5	3'-9"	—
b30(E)	36	#4	29'-8"	—
b31(E)	104	#9	29'-9"	—
b34(E)	4	#5	31'-6"	—
d30(E)	70	#5	5'-7"	—
d31(E)	70	#5	7'-11"	—
d32(E)	2	#5	8'-1"	—
e30(E)	8	#4	31'-3"	—
e31(E)	1	#8	31'-3"	—
e32(E)	8	#4	31'-6"	—
e33(E)	1	#8	31'-6"	—
f30(E)	88	#4	9'-8"	—
w30(E)	40	#5	44'-3"	—
Concrete Superstructure		Cu. Yd.	75.1	
Concrete Structures		Cu. Yd.	14.4	
(1.) Reinforcement Bars, Epoxy Coated		Pound	18,830	

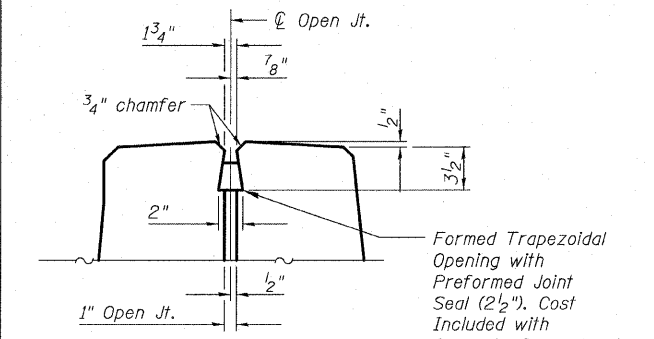
(1.) 2,420 pounds billed in Substructure  
Total in Total Bill of Material on Sheet 2



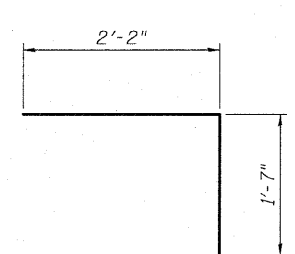
BAR d32(E)



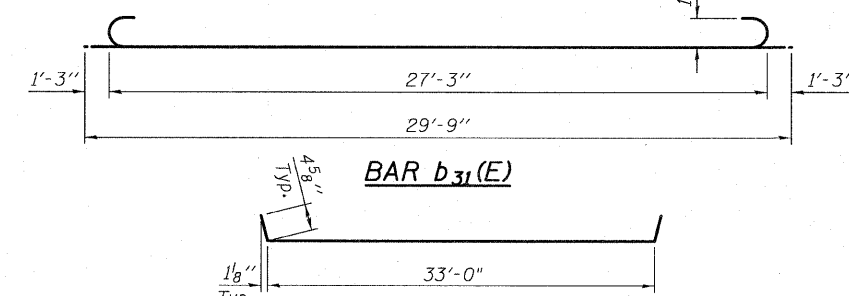
VIEW E-E



DETAIL B



BAR a41(E)



BAR b31(E)

BAR a37(E)

EAST APPROACH SLAB C-D ROAD A -2  
STRUCTURE NO. 016-1251

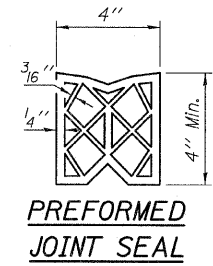
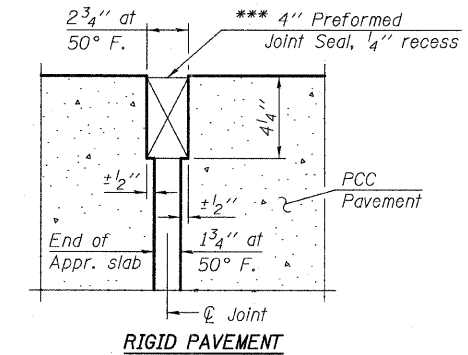
TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS		SHEET NO. 30	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - SP,	NAME	DATE		57	1414.2B	COOK	516	275	
	DRAWN - JMA				CONTRACT NO. 60J27					
	CHECKED - SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

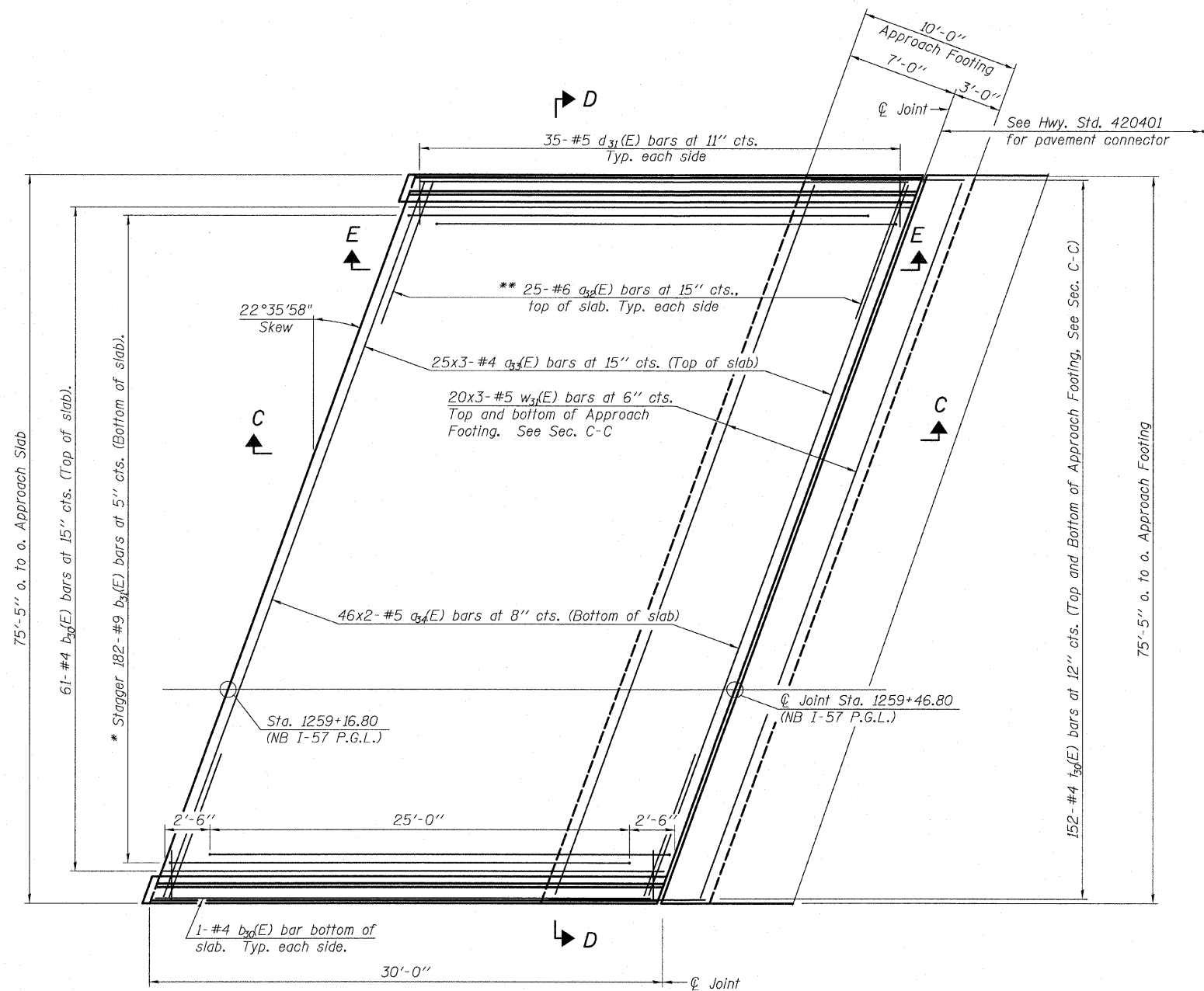
- Notes:  
1. See sheet 32 of 68 for Sections C-C & D-D and View E-E.  
2.  $a_{33}(E)$  and  $a_{34}(E)$  bar spacings measured along  $\phi$  Rdwy.  
3. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

\*\*\* Cost Included with Concrete Superstructure.



Minimum Bar Laps

- #4 Bar 2'-11"  
#5 Bar 3'-3"



PLAN

- \* Tilt #9  $b_{31}(E)$  bars as required to maintain clearance.  
\*\* Space between  $a_{33}(E)$  bars, typ. each parapet.

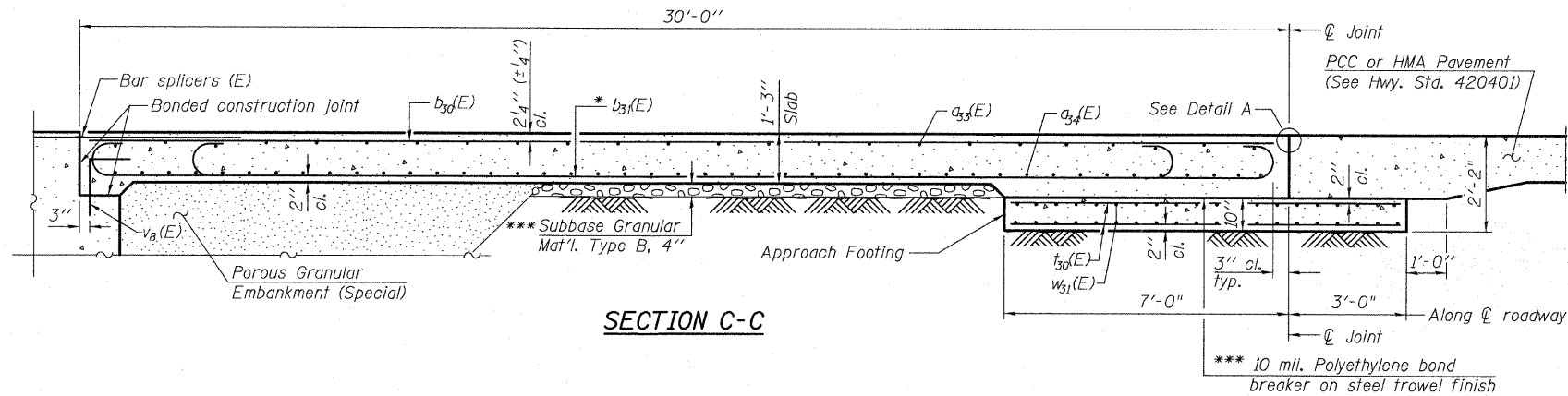
EAST APPROACH SLAB NB I-57 - 1  
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL

DESIGNED	REVISIONS	NAME	DATE
- JMA			
CHECKED - SP,			
DRAWN - JMA			
CHECKED - SP,PDF			
DATE - 03/18/10			

SHEET NO. 31 68 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	276
FED. ROAD DIST. NO. 1 ILLINOIS			FED. AID PROJECT		
			CONTRACT NO. 60J27		

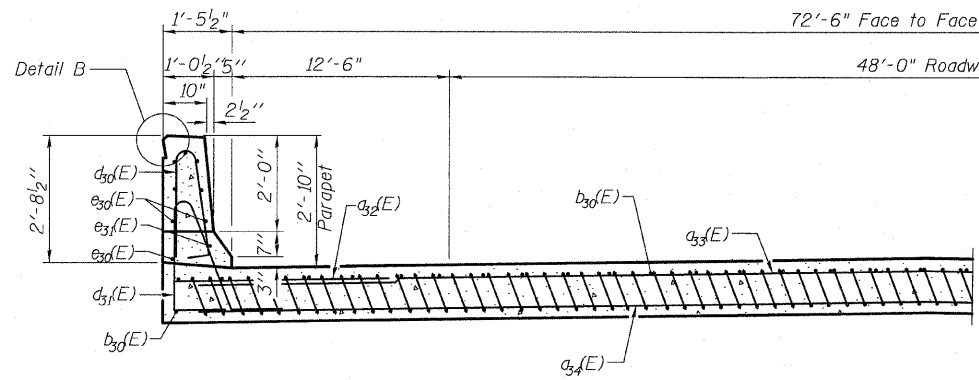
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



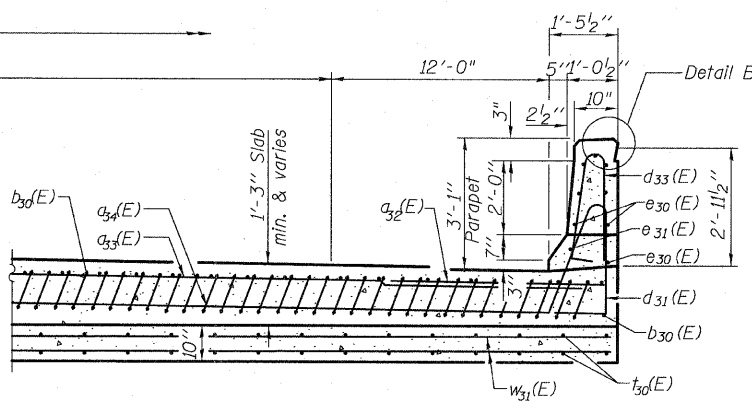
SECTION C-C

Notes:  
See sheet 31 of 68 for Detail A.  
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
Approach footing concrete shall be paid for as Concrete Structures.  
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
For  $v_8(E)$  bar details, see sheet 46 of 68.  
The approach footing maximum applied service bearing pressure ( $Q_{max}$ ) = 2.0 ksf.  
For bar splicer details, see sheet 56 of 68.  
Cost of excavation for approach footing included with Concrete Structures.  
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 68.

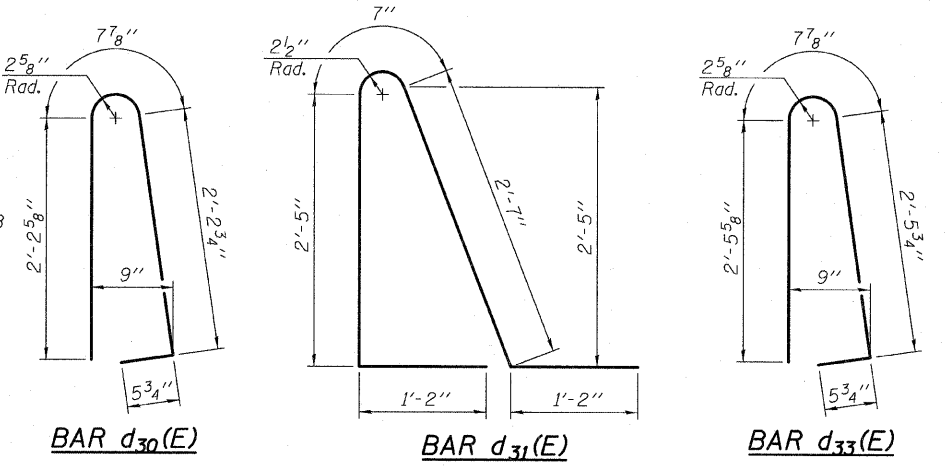
The quantity for Bridge Deck Grooving & Protective Coat for approach slab is included with the quantities on sheet 2 of 68.



NEAR ABUTMENT



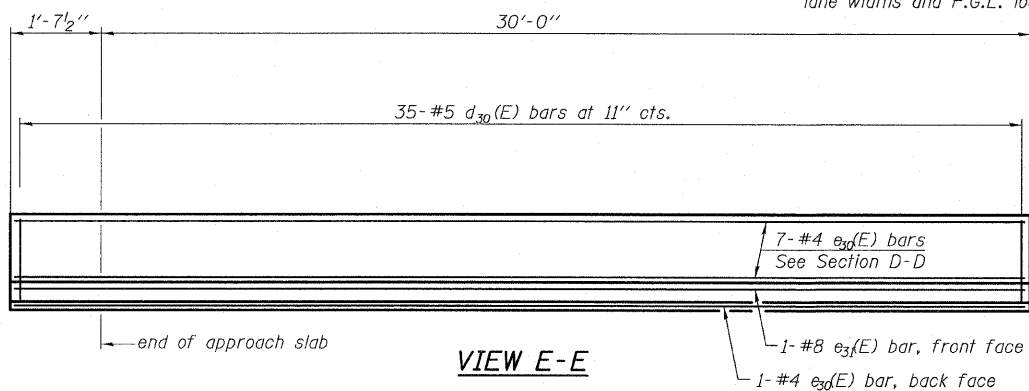
AT APPROACH FOOTING



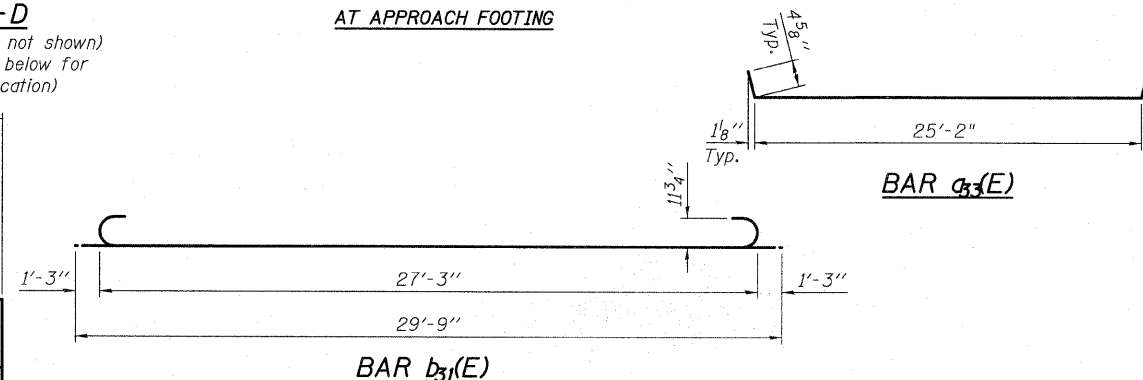
BILL OF MATERIAL

\* Tilt #9  $b_{31}(E)$  bars as required to maintain clearance.  
\*\*\* Cost included with Concrete Superstructure.

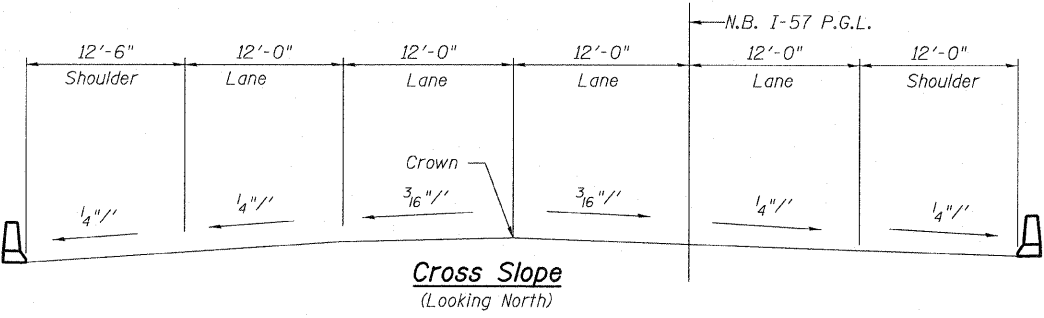
SECTION D-D  
(See Plan for dimensions not shown)  
(See Cross Slope Sketch below for lane widths and P.G.L. location)



VIEW E-E



DETAIL B



Cross Slope  
(Looking North)

Bar	No.	Size	Length	Shape
$a_{32}(E)$	50	#6	6'-6"	—
$a_{33}(E)$	75	#4	29'-1"	—
$a_{34}(E)$	92	#5	42'-4"	—
$b_{30}(E)$	63	#4	29'-8"	—
$b_{31}(E)$	182	#9	29'-9"	—
$d_{30}(E)$	35	#5	5'-7"	—
$d_{31}(E)$	70	#5	7'-11"	—
$d_{33}(E)$	35	#5	6'-1"	—
$e_{30}(E)$	16	#4	31'-3"	—
$e_{31}(E)$	2	#8	31'-3"	—
$t_{30}(E)$	152	#4	9'-8"	—
$w_{31}(E)$	120	#5	29'-4"	—
Concrete Superstructure			Cu. Yd.	113.1
Concrete Structures			Cu. Yd.	25.3
(1.) Reinforcement Bars, Epoxy Coated			Pound	31,830

(1.) 4,660 pounds billed in Substructure  
Total in Total Bill of Material on Sheet 2

EAST APPROACH SLAB NB I-57 - 2  
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS		SHEET NO. 32	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.											
	CHECKED - SP,	NAME	DATE							57	1414.2B	COOK	516	277						
	DRAWN - JMA														68 SHEETS	ILLINOIS	CONTRACT NO. 60J27			
	CHECKED - SP,PDF																	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT
	DATE - 03/18/10																			

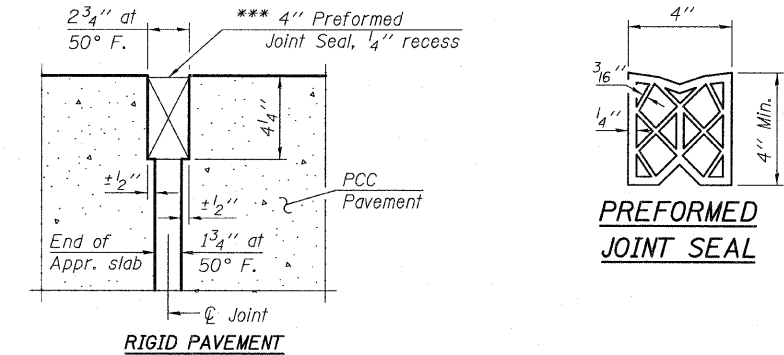
P:\60254\057-294\STRUCTURAL\I-57 OVER 1294\0161251-60J27-032-E-APPR4.dgn 3/17/2010



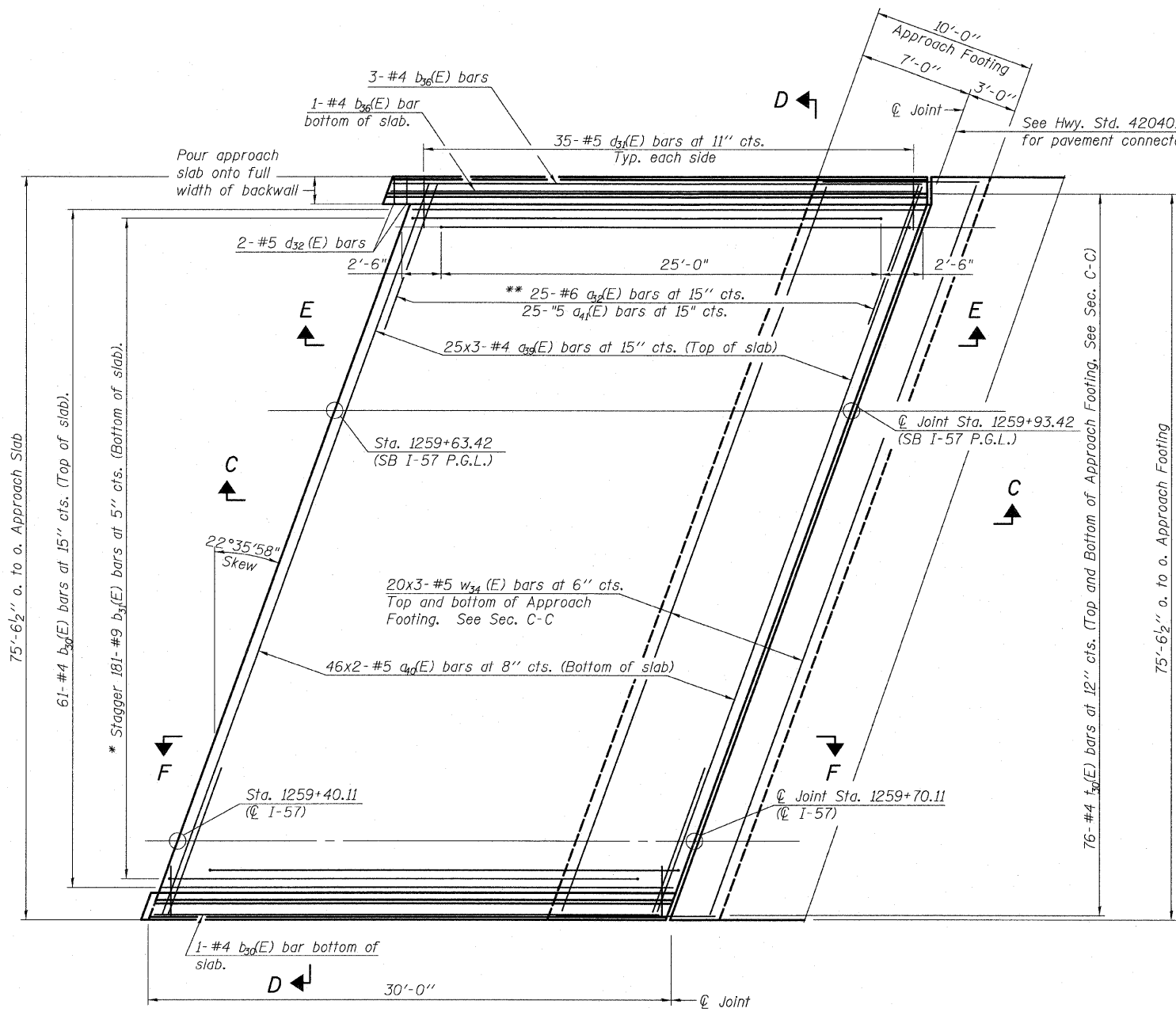
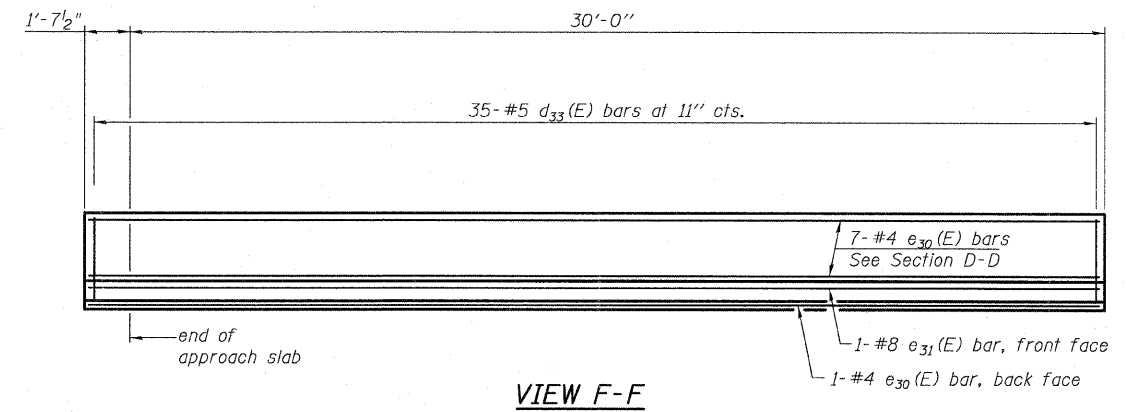
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

- Notes:  
1. See sheet 34 of 68 for Sections C-C & D-D and View E-E.  
2.  $a_3(E)$  and  $a_4(E)$  bar spacings measured along  $\text{C Rwy}$ .  
3. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

\*\*\* Cost included with Concrete Superstructure.



Minimum Bar Laps  
#4 Bar 2'-11"  
#5 Bar 3'-3"



PLAN

- \* Tilt #9  $b_{31}(E)$  bars as required to maintain clearance.
- \*\* Space between  $a_{30}(E)$  bars, typ. each parapet.

EAST APPROACH SLAB SB I-57 - 1  
STRUCTURE NO. 016-1251

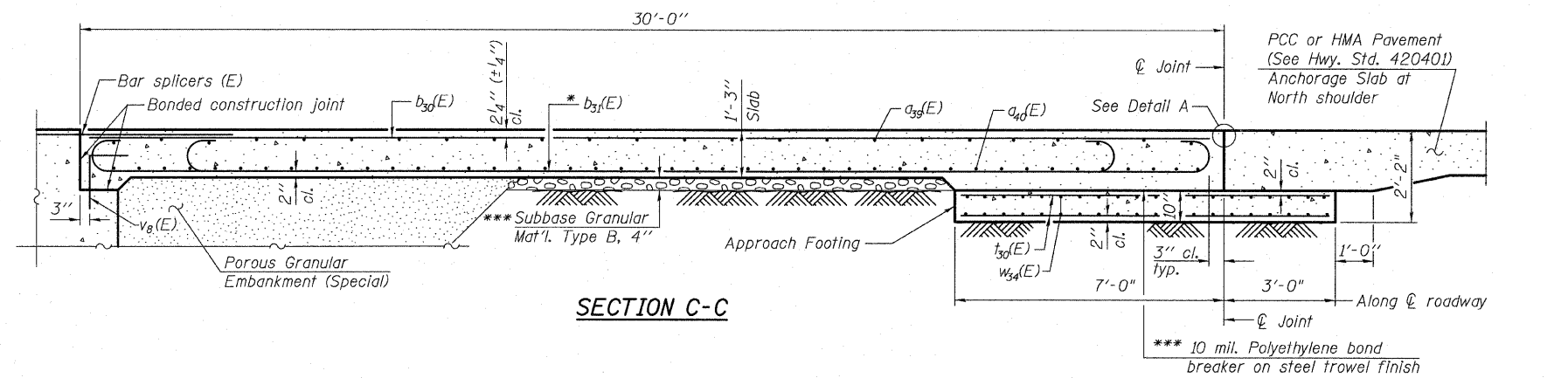
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	CHECKED - SP,	NAME	DATE						
	DRAWN - JMA								
	CHECKED - SP,PDF								
	DATE - 03/18/10								
					CONTRACT NO. 60J27				
					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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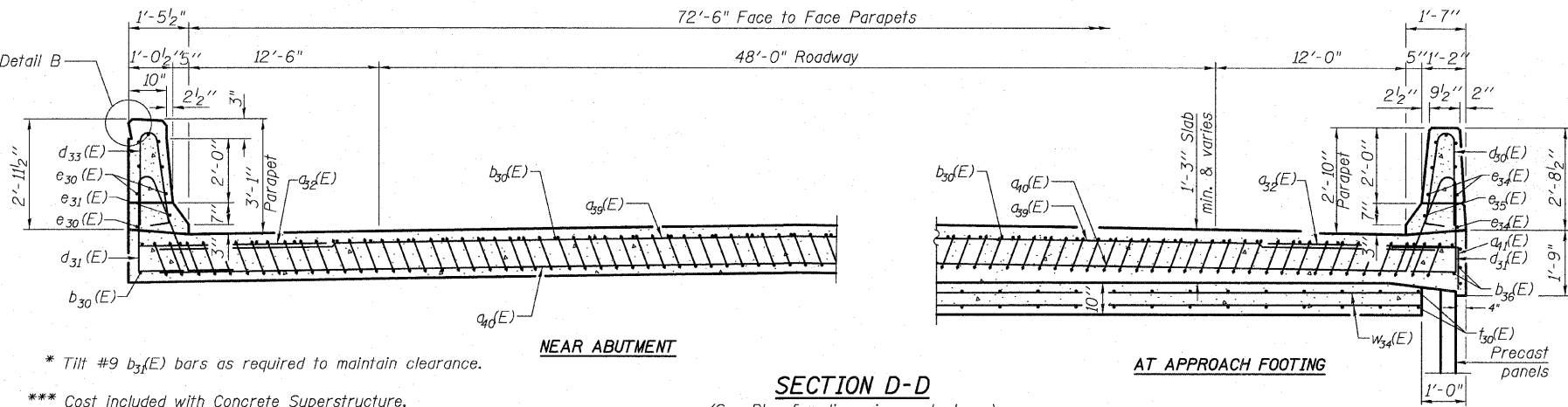
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Notes:  
See sheet 33 of 68 for Detail A.  
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
Approach footing concrete shall be paid for as Concrete Structures.  
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
For  $v_8(E)$  bar details, see sheet 46 of 68.  
The approach footing maximum applied service bearing pressure ( $Q_{max}$ ) = 2.0 ksf.  
For bar splicer details, see sheet 56 of 68.  
Cost of excavation for approach footing included with Concrete Structures.  
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 68.

The quantity for Bridge Deck Grooving & Protective Coat for approach slab is included with the quantities on sheet 2 of 68.



SECTION C-C



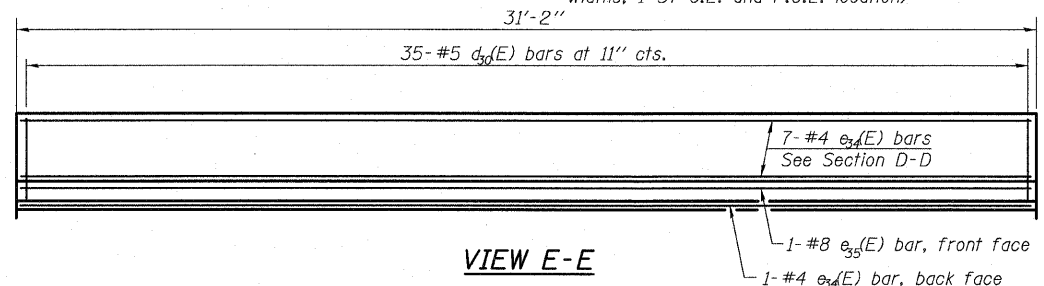
NEAR ABUTMENT

SECTION D-D

AT APPROACH FOOTING

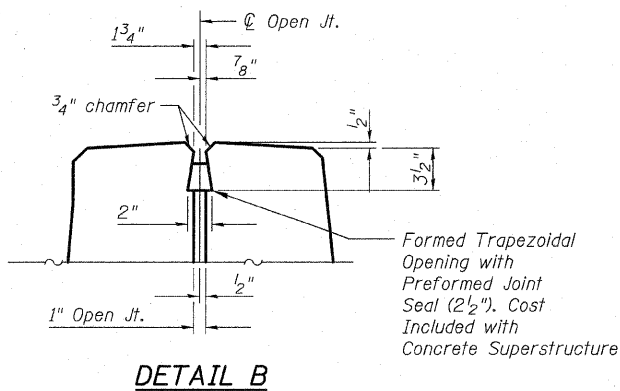
\* Tilt #9  $b_{31}(E)$  bars as required to maintain clearance.  
\*\*\* Cost included with Concrete Superstructure.

(See Plan for dimensions not shown)  
(See Cross Slope Sketch below for lane widths, I-57 C.L. and P.G.L. location)

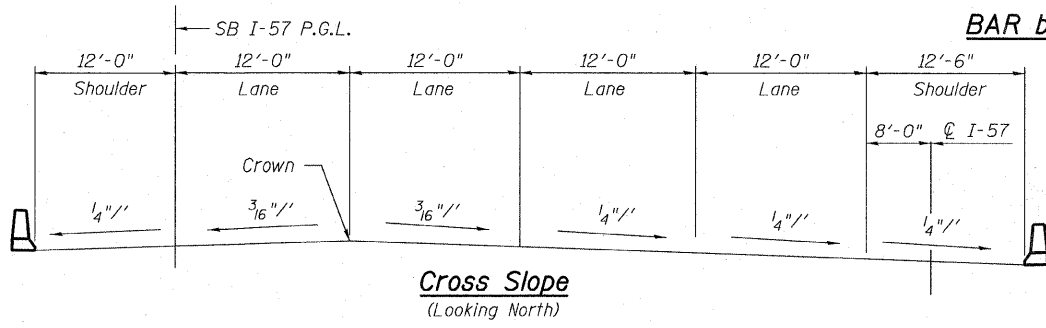


VIEW E-E

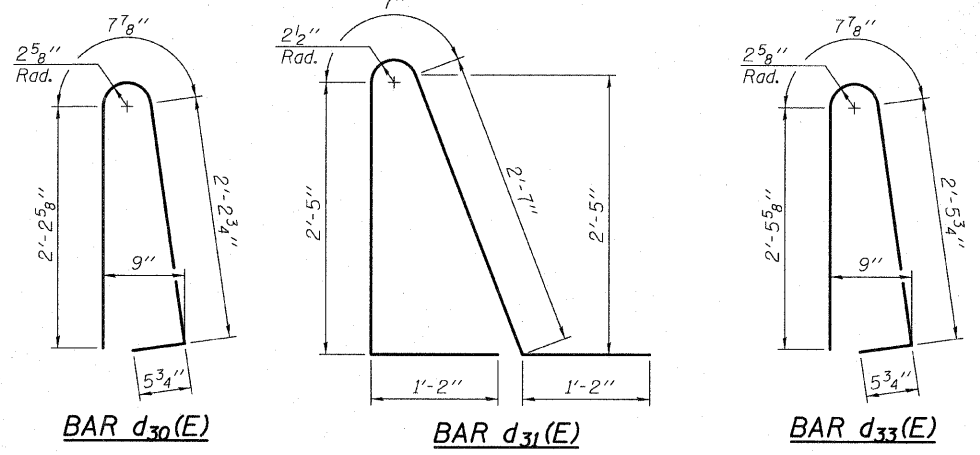
BAR a39(E)



DETAIL B



Cross Slope  
(Looking North)



BAR d30(E)

BAR d31(E)

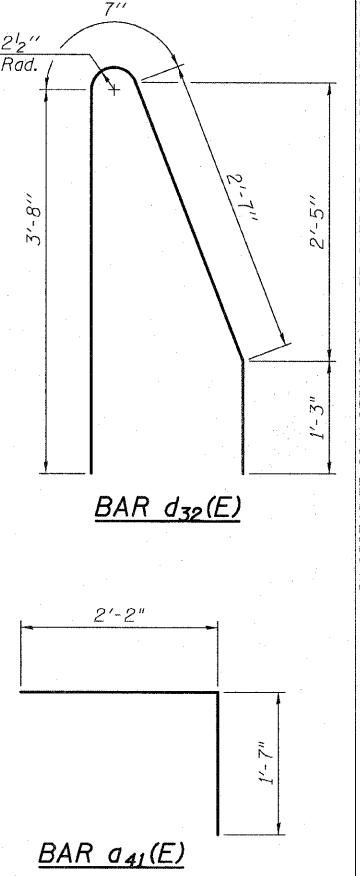
BAR d33(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_{39}(E)$	75	#4	29'-2"	—
$a_{40}(E)$	92	#5	42'-5"	—
$a_{32}(E)$	50	#6	6'-6"	—
$a_{34}(E)$	25	#5	3'-9"	—
$b_{30}(E)$	62	#4	29'-8"	—
$b_{31}(E)$	181	#9	29'-9"	—
$b_{36}(E)$	4	#5	30'-10"	—
$d_{30}(E)$	35	#5	5'-7"	—
$d_{31}(E)$	70	#5	7'-11"	—
$d_{32}(E)$	2	#5	8'-1"	—
$d_{33}(E)$	35	#5	6'-1"	—
$e_{30}(E)$	8	#4	31'-3"	—
$e_{31}(E)$	1	#8	31'-3"	—
$e_{34}(E)$	8	#4	30'-10"	—
$e_{35}(E)$	1	#8	30'-10"	—
$t_{30}(E)$	152	#4	9'-8"	—
$w_{34}(E)$	120	#5	28'-8"	—
Concrete Superstructure		Cu. Yd.		113.4
Concrete Structures		Cu. Yd.		25.3
(1.) Reinforcement Bars, Epoxy Coated		Pound		31,830

(1.) 4,570 pounds billed in Substructure  
Total in Total Bill of Material on Sheet 2

EAST APPROACH SLAB SB I-57 - 2  
STRUCTURE NO. 016-1251



BAR d32(E)

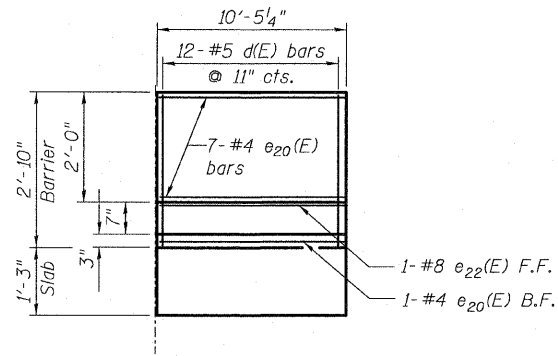
BAR a41(E)

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS		SHEET NO. 34	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.					
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	DRAWN - JMA													CONTRACT NO. 60J27
	CHECKED - SP,PDF													
	DATE - 03/18/10													

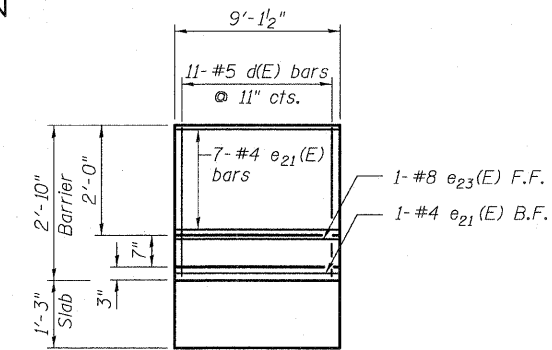
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3/17/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



INSIDE ELEVATION OF BARRIER

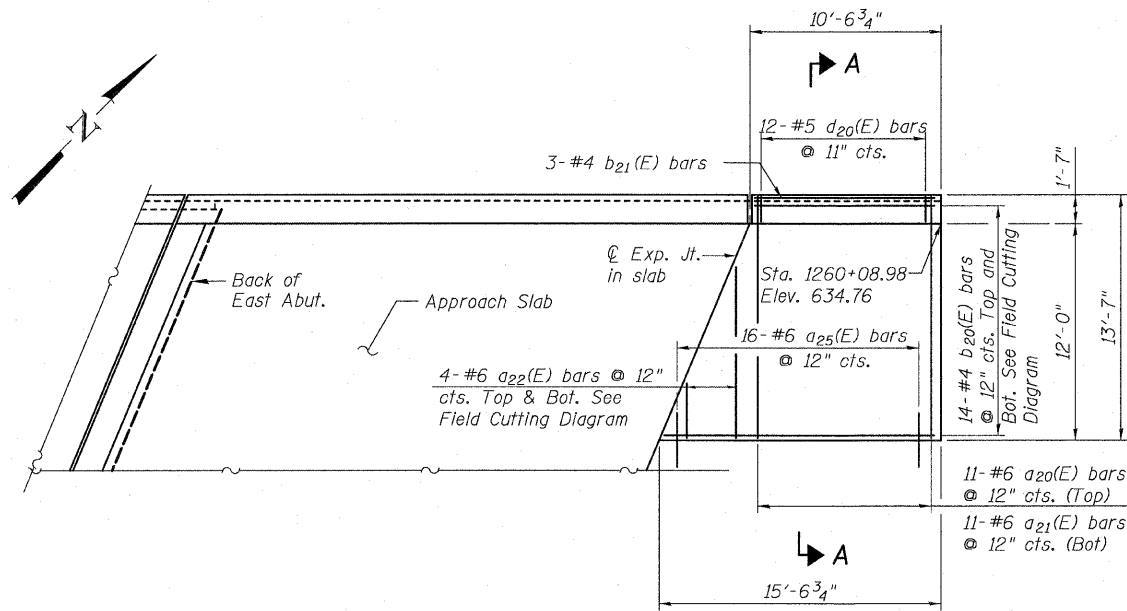


INSIDE ELEVATION OF BARRIER

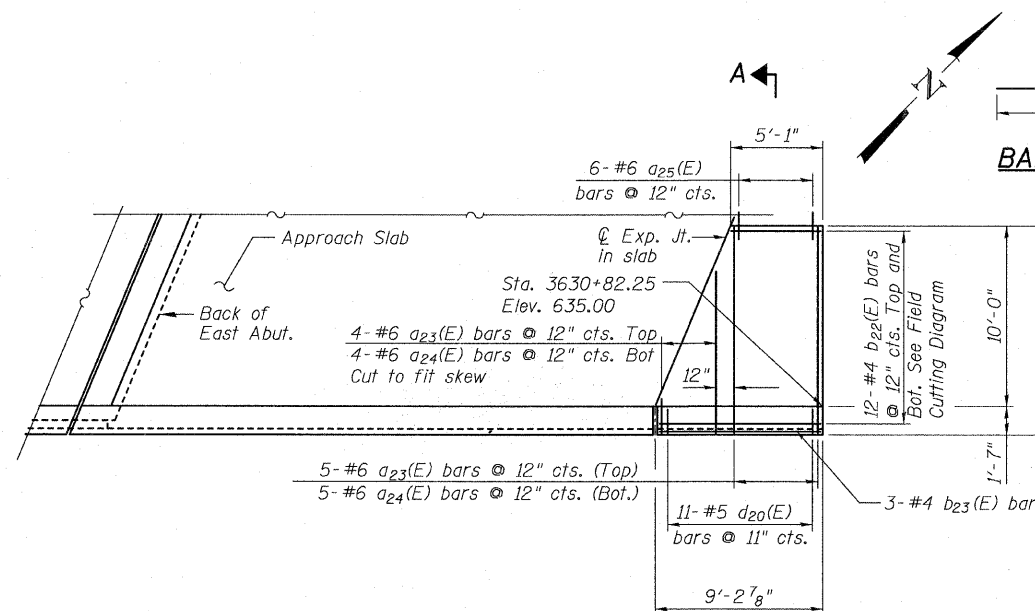
BAR a<sub>23</sub>(E)

BAR a<sub>20</sub>(E)

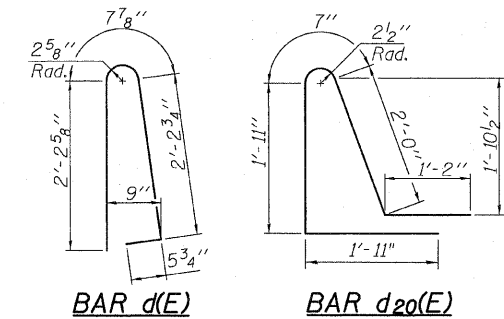
BAR NO.	SIZE	LENGTH	SHAPE
a <sub>20</sub> (E)	11 #6	14'-8"	U
a <sub>21</sub> (E)	11 #6	13'-3"	U
a <sub>22</sub> (E)	4 #6	12'-10"	U
a <sub>23</sub> (E)	9 #6	12'-8"	U
a <sub>24</sub> (E)	9 #6	11'-3"	U
a <sub>25</sub> (E)	22 #6	2'-6"	U
b <sub>20</sub> (E)	14 #4	25'-3"	U
b <sub>21</sub> (E)	3 #4	10'-1"	U
b <sub>22</sub> (E)	12 #4	13'-7"	U
b <sub>23</sub> (E)	3 #4	8'-10"	U
d(E)	23 #5	5'-7"	U
d <sub>20</sub> (E)	23 #5	7'-7"	U
e <sub>20</sub> (E)	8 #4	10'-1"	U
e <sub>21</sub> (E)	8 #4	8'-10"	U
e <sub>22</sub> (E)	1 #8	10'-1"	U
e <sub>23</sub> (E)	1 #8	8'-10"	U
Concrete Superstructure			Cu. Yd. 14.4
Reinforcement Bars, Epoxy Coated			Pound 1,800



PLAN-SB I-57 North Side

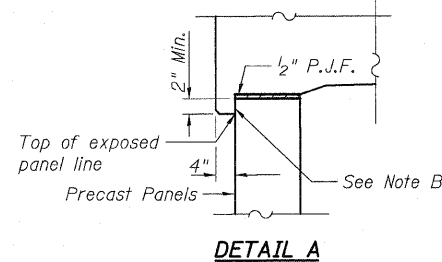


PLAN C-D ROAD A South Side



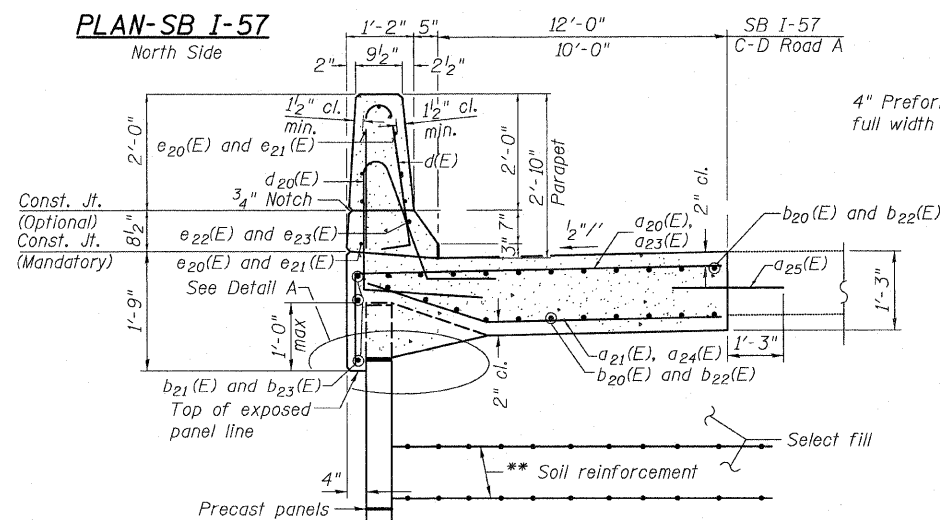
BAR d(E)

BAR d<sub>20</sub>(E)



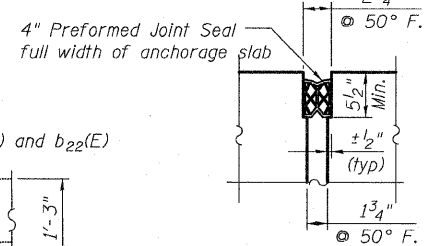
DETAIL A

Note B:  
Bond breaker membrane on front of panel

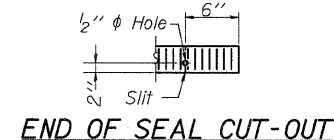


SECTION A-A

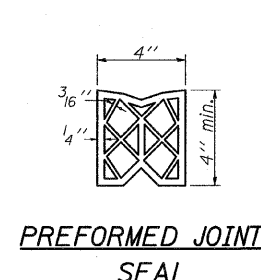
\*\*The M.S.E. wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft. of wall.



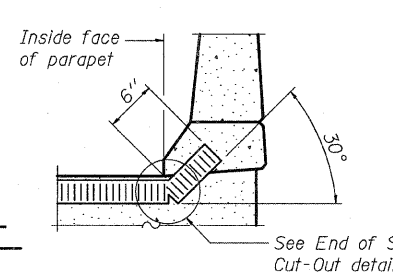
SECTION



END OF SEAL CUT-OUT

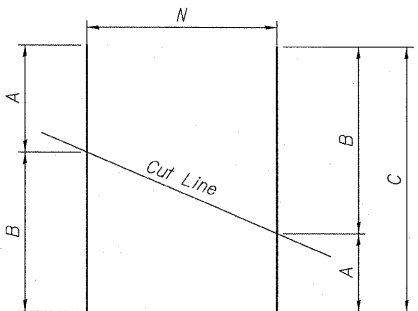


PREFORMED JOINT SEAL



END OF SEAL TREATMENT AT PARAPET

DETAIL - EXPANSION JOINT IN SLAB



Bar	N	A	B	C
a <sub>22</sub> (E)	4-#6	2'-10"	10'-0"	12'-10"
b <sub>20</sub> (E)	14-#4	10'-1"	15'-2"	25'-3"
b <sub>22</sub> (E)	12-#4	4'-9"	8'-10"	13'-7"

FIELD CUTTING DIAGRAM  
Order bars full length. Cut as shown and use remainder of bars in opposite face

ANCHORAGE SLAB DETAILS  
S.N. 016-1251

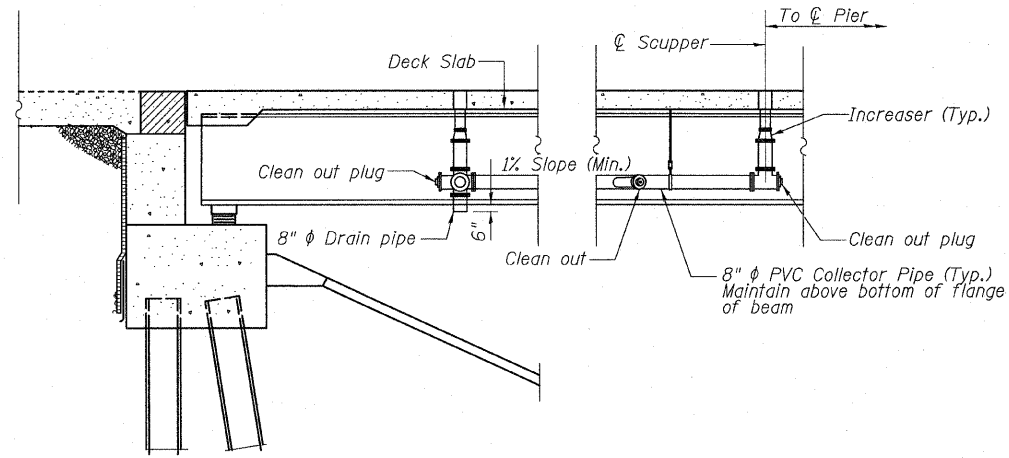
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DESIGNED - JMA	REVISIONS	
CHECKED - SP,	NAME	DATE
DRAWN - JMA		
CHECKED - SP,PDF		
DATE - 03/18/10		

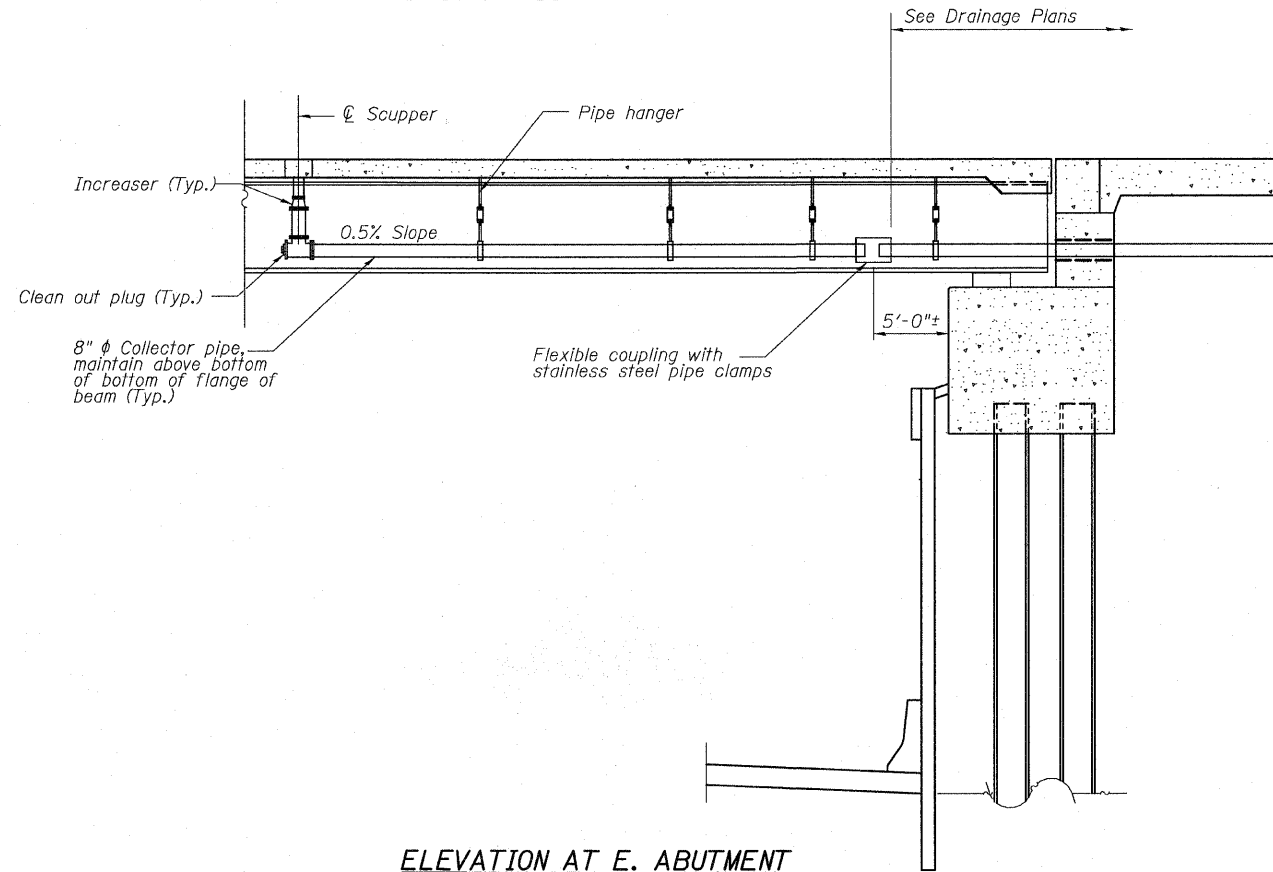
SHEET NO. 35  
68 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	280
CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

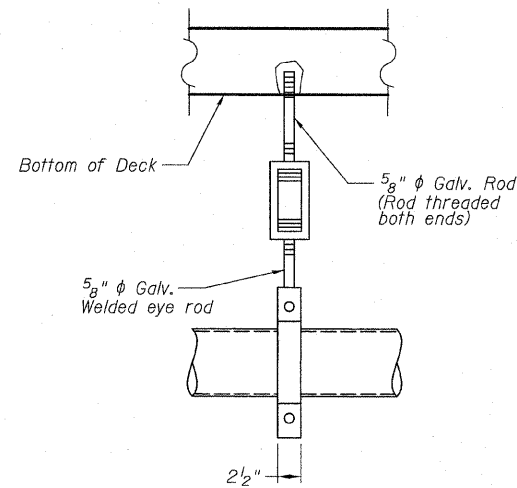
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



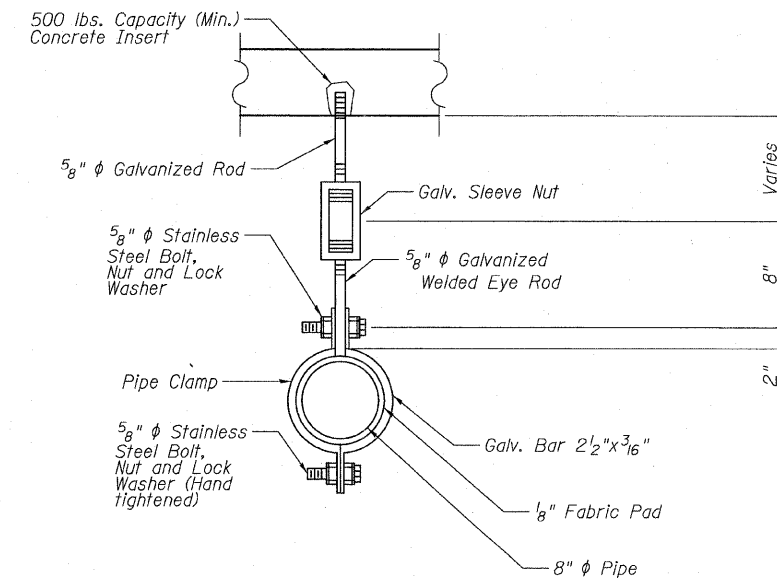
ELEVATION AT W. ABUTMENT



ELEVATION AT E. ABUTMENT



ELEVATION



TYPICAL SECTION

PIPE HANGER DETAIL

DRAINAGE DETAILS  
STRUCTURE NO. 016-1251

**NOTES:**

1. See sheets 18 thru 20 of 68 for location of scuppers.
2. See Special Provisions for additional information.
3. Contractor to provide shop drawings for drainage system.

**TYLIN** INTERNATIONAL

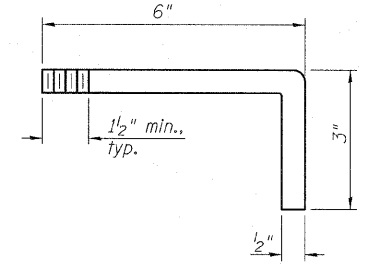
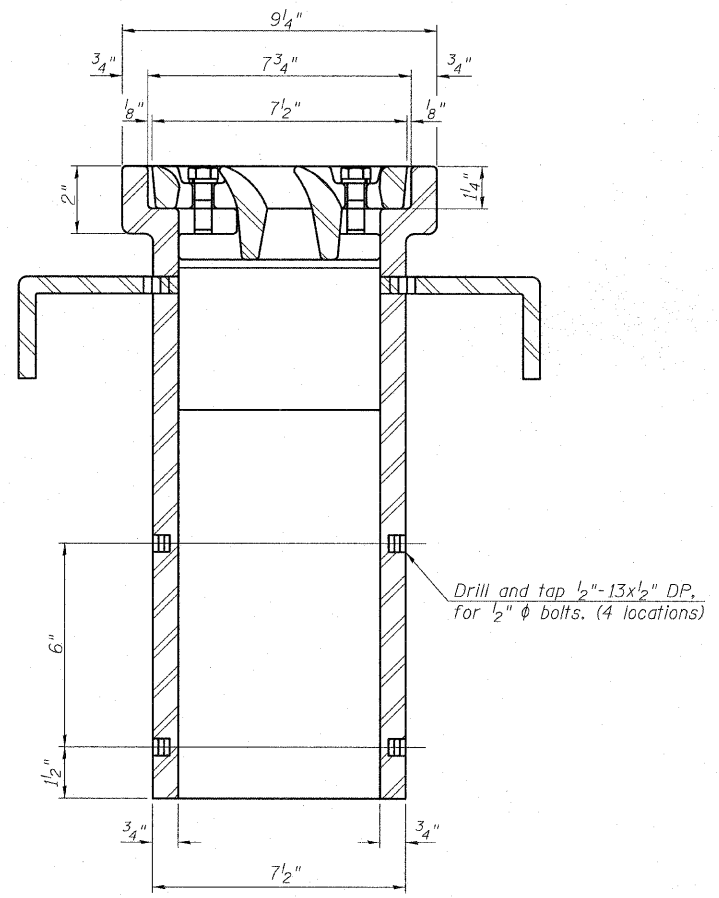
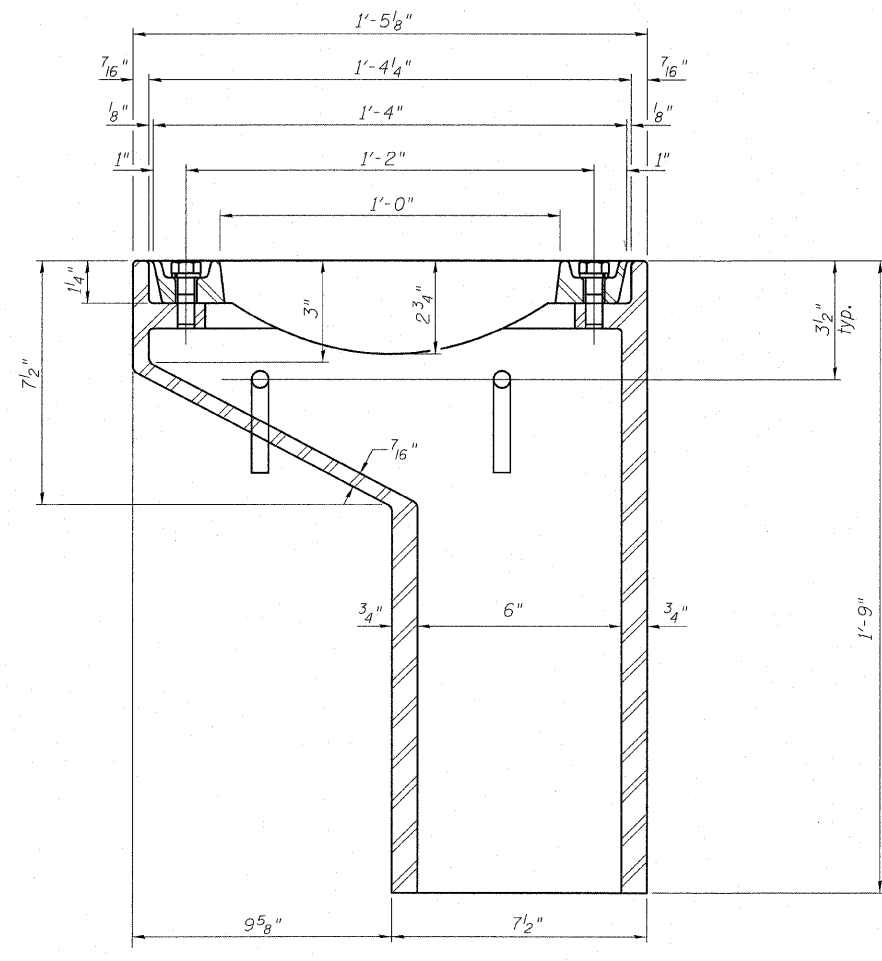
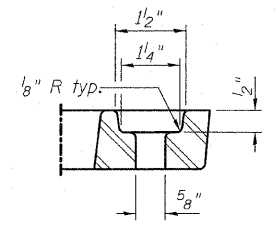
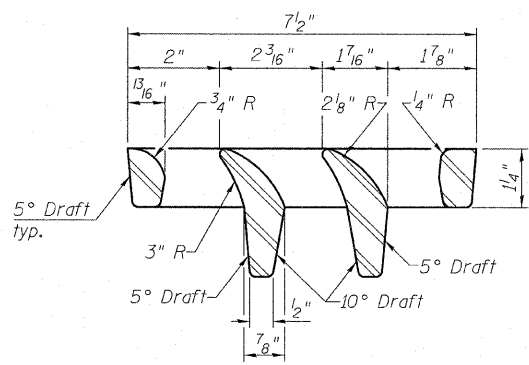
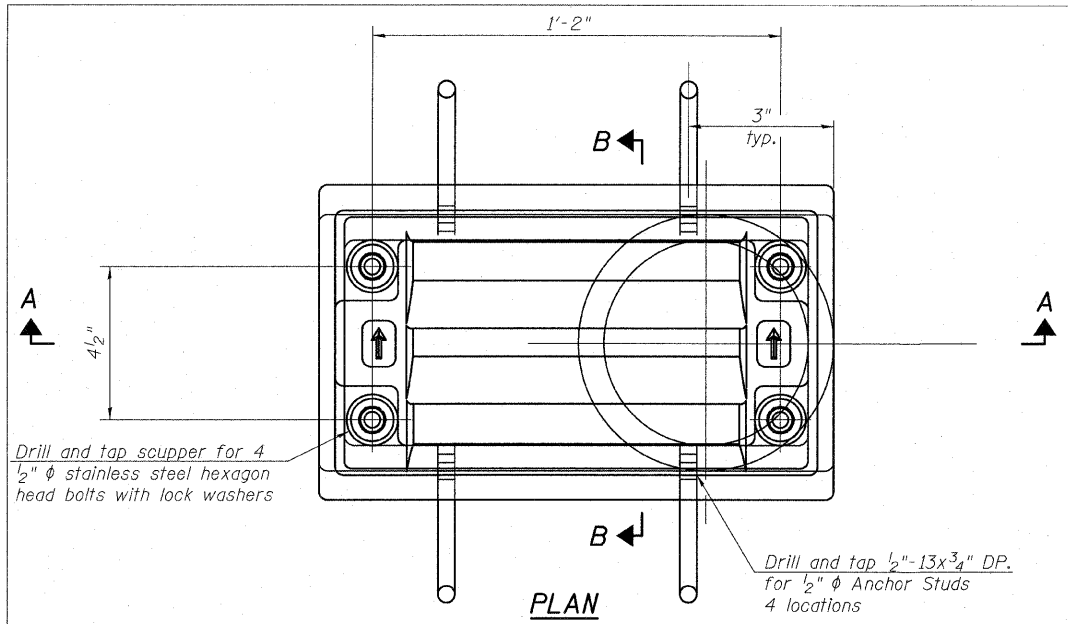
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	CHECKED - AD,LS	NAME	DATE
	DRAWN - JWX,EI		
	CHECKED - LS,SP,PDF		
	DATE - 03/18/10		

SHEET NO. 36  
62 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	281
CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	18

DRAINAGE SCUPPER DS-11  
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL

DESIGNED	SP	REVISIONS	
CHECKED	SP	NAME	DATE
DRAWN	SP		
CHECKED	SP,PDF		
DATE	03/18/10		

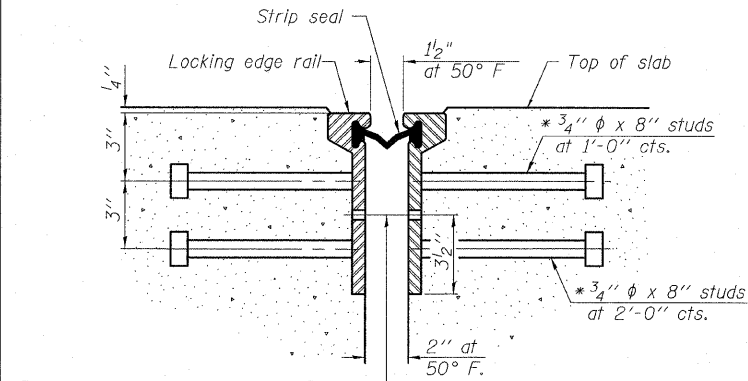
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SHEET NO. 37	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	68 SHEETS	1414.2B	COOK	516	282
			CONTRACT NO. 60J27		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT		

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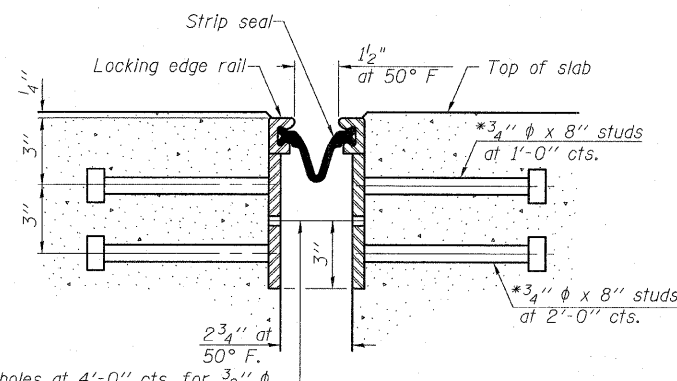
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



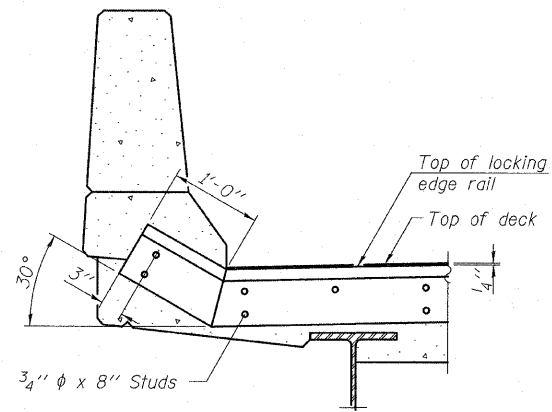
7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

**SECTION THRU ROLLED RAIL JOINT**



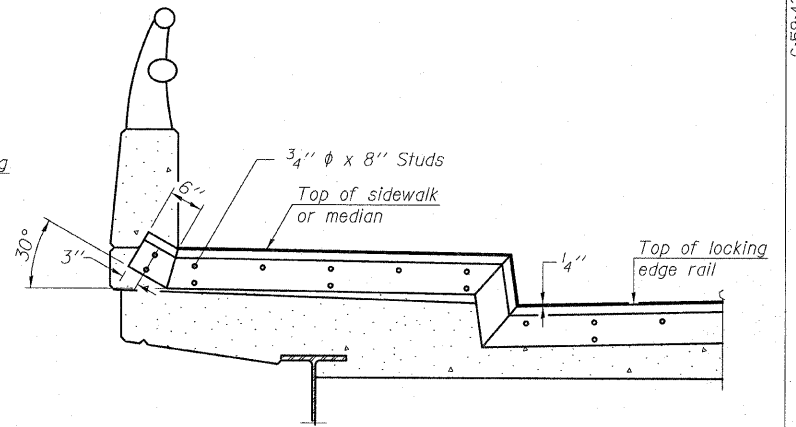
7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

**SECTION THRU WELDED RAIL JOINT**



**AT PARAPET**

See Section A-A for end treatment of skews > 30°.



**AT SIDEWALK OR MEDIAN**

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

**TYPICAL END TREATMENTS**

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches. The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

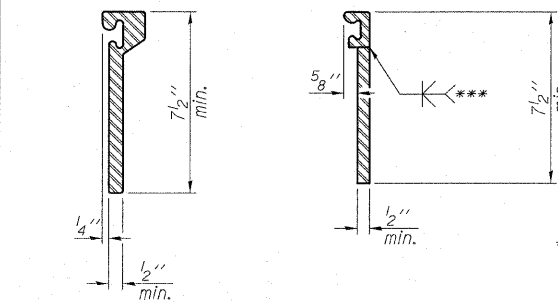
The manufacturer's recommended installation methods shall be followed.

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

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

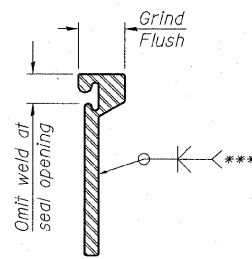
Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

The expansion joint shall not be continuous between the open joint that separates each bound of traffic. Each Abutment location will have an expansion joint for C-D Road A, NB I-57 and SB I-57 with end treatments at each parapet as shown on this sheet.



**ROLLED EXTRUDED RAIL**

**WELDED RAIL**

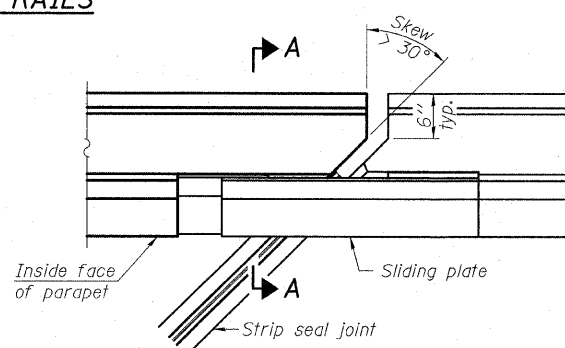


\*\*\* Back gouge not required if complete joint penetration is verified by mock-up.

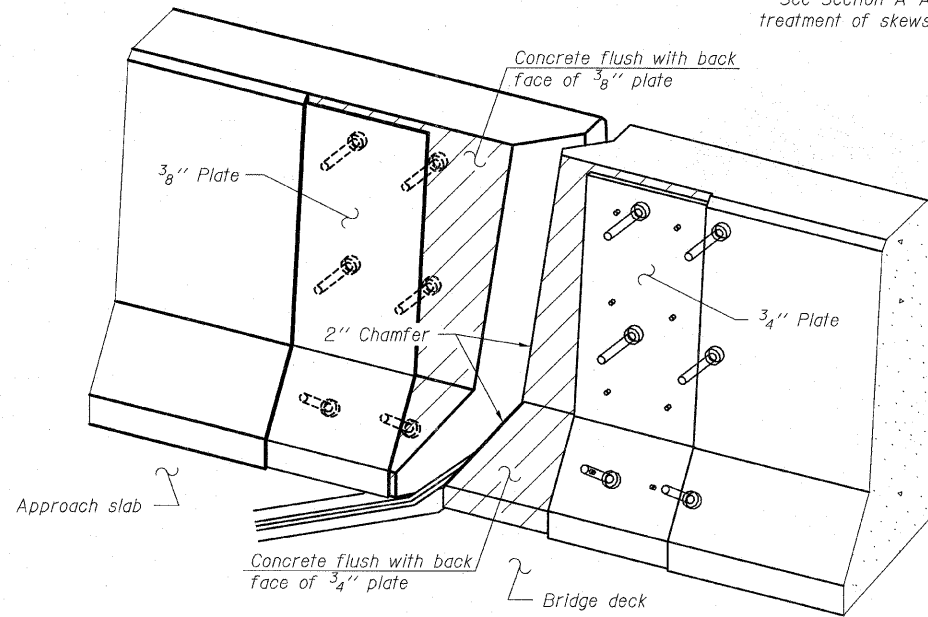
**LOCKING EDGE RAIL SPLICE**

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

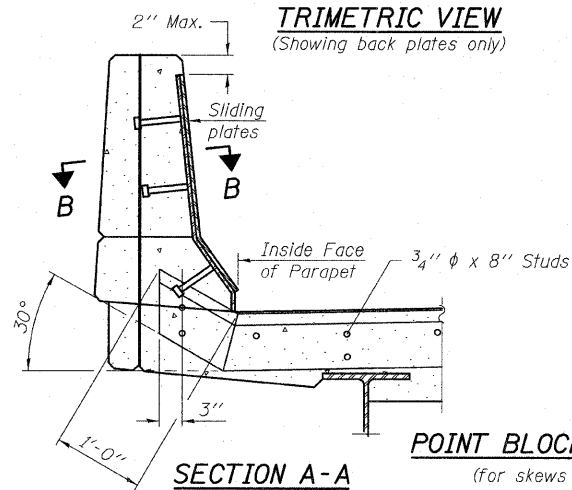
**LOCKING EDGE RAILS**



**PLAN**

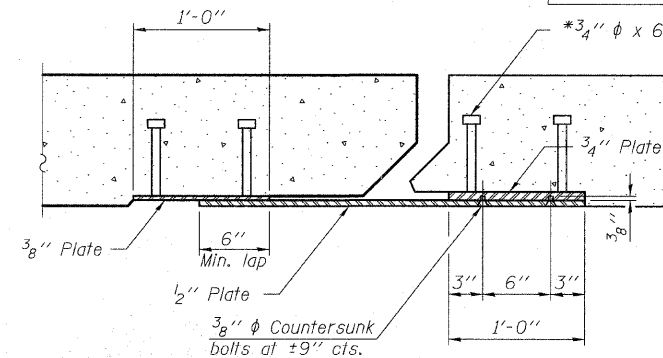


**TRIMETRIC VIEW (Showing back plates only)**



**SECTION A-A**

**POINT BLOCK DETAILS (for skews > 30°)**



**SECTION B-B**

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	431.0

**PREFORMED JOINT STRIP SEAL STRUCTURE NO. 016-1251**

**TYLIN INTERNATIONAL**

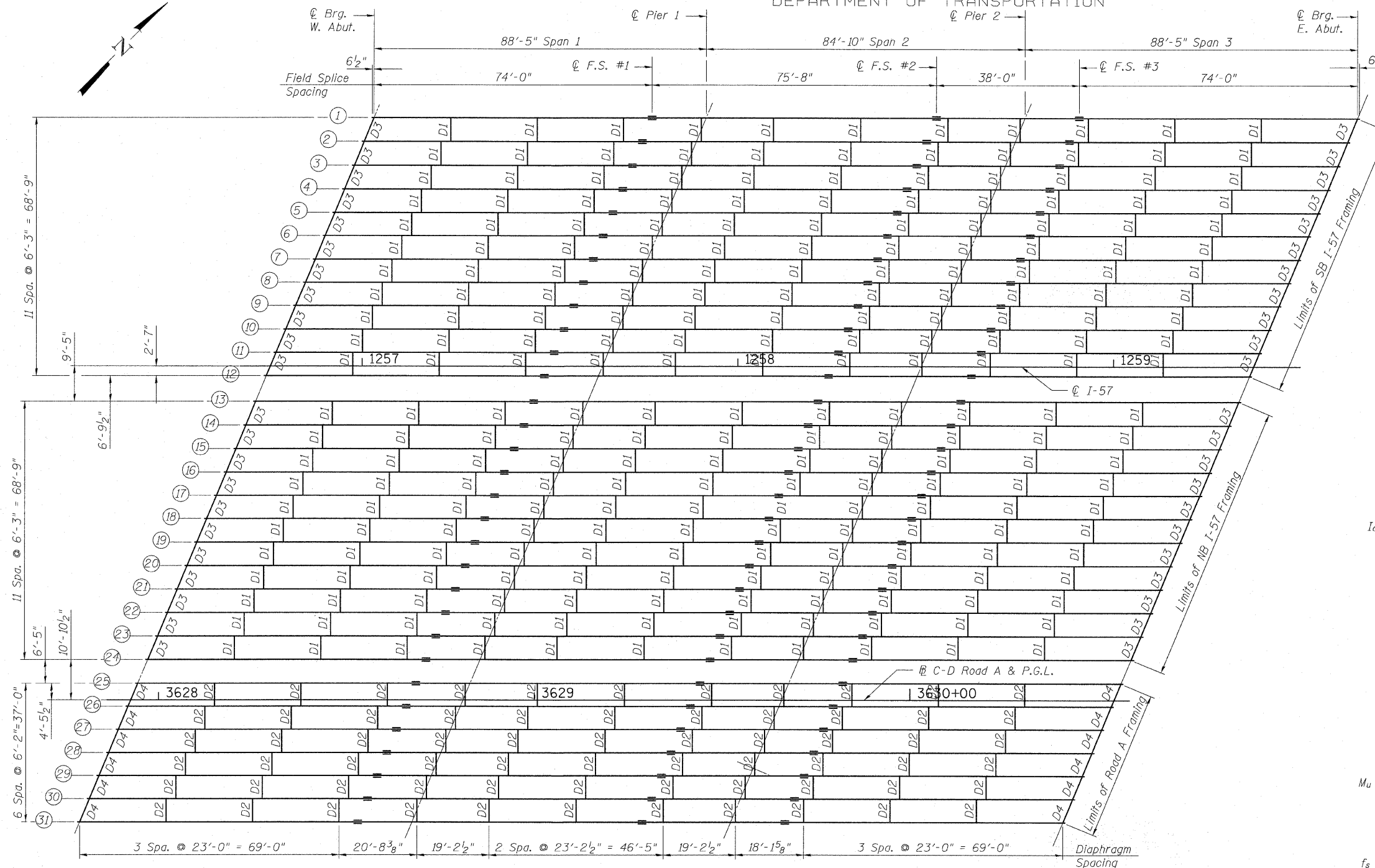
EJ-SSJ 11-1-09

DESIGNED - SP	REVISIONS	
CHECKED - SP,	NAME	DATE
DRAWN - SP		
CHECKED - SP,PDF		
DATE - 03/18/10		

SHEET NO. 38	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	283
68 SHEETS	CONTRACT NO. 60J27				
	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



	0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
$I_s$	(in <sup>4</sup> ) 9290	11,600	11,600
$I_c(n)$	(in <sup>4</sup> ) 22,301	-	25,882
$I_c(3n)$	(in <sup>4</sup> ) 16,314	-	18,970
$S_s$	(in <sup>3</sup> ) 549	686	686
$S_c(n)$	(in <sup>3</sup> ) 766	-	920
$S_c(3n)$	(in <sup>3</sup> ) 692	-	835
Z	(in <sup>3</sup> )	772	
DC1	(k/ft) 0.825	0.858	0.858
MDC1	(k) 511	660	112
DC2	(k/ft) 0.128	0.128	0.128
MDC2	(k) 85	89	26
DW	(k/ft) 0.308	0.308	0.308
MDW	(k) 203	214	63
$M_L + IM$	(k) 1065	793	833
$M_u$ (Strength I)	(k) 2913	2645	1725
$\phi_r M_n$ , $\phi_r M_{nc}$	(k) 3728	3221	4305
$f_s$ DC1	(ksi) 11.2	11.5	1.9
$f_s$ DC2	(ksi) 1.5	1.6	0.4
$f_s$ DW	(ksi) 3.5	3.7	0.9
$f_s$ 1.3(I+IM)	(ksi) 21.7	18.0	14.1
$f_s$ (Service II)	(ksi) 37.9	34.8	17.3
$V_r$	(k) 27.3	-	16.3

(Controlling cases are beams over C-D Road A)

\* Compact sections

- $I_s$ ,  $S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total-Strength I, and Service II) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(n)$ ,  $S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total-Strength I, and Service II) due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(3n)$ ,  $S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).
- Z: Plastic Section Modulus of the steel section in non-composite areas. Omit line in Moment Table if not used in design calculations (in<sup>3</sup>).
- DC1: Un-factored non-composite dead load (kips/ft.).
- MDC1: Un-factored moment due to non-composite dead load (kip-ft.).
- DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_L + IM$ : Un-factored live load moment plus dynamic load allowance (Impact) (kip-ft.).
- $M_u$  (Strength I): Factored design moment (kip-ft.).  
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$
- $\phi_r M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
- $\phi_r M_{nc}$ : Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).
- $f_s$  (Service II): Sum of stresses as computed from the moments below (ksi).  
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_L + IM$
- $V_r$ : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

NOTES

- All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
- All structural steel for beams and splices shall conform to the requirements of AASHTO M270, Grade 50. All other structural steel shall conform to the requirements of AASHTO M270, Grade 36.

FRAMING PLAN

	Abut.	Pier
$R_{DC1}$	(k) 29.8	80.8
$R_{DC2}$	(k) 4.6	12.1
$R_{DW}$	(k) 11.2	29.1
$R_L + IM$	(k) 81.2	118.8
$R_{Total}$	(k) 126.8	240.8

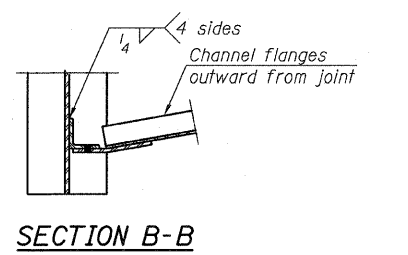
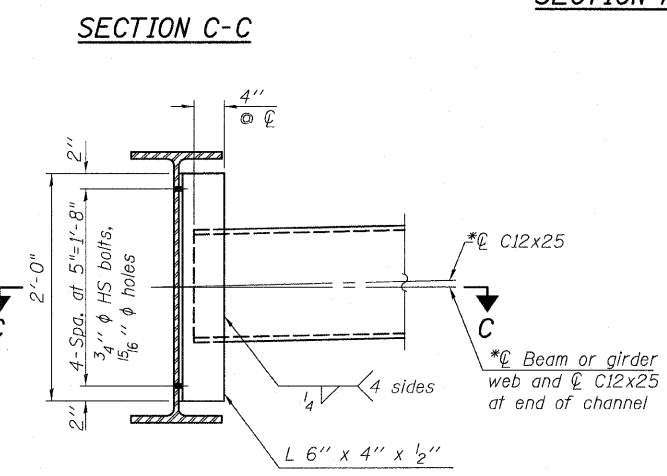
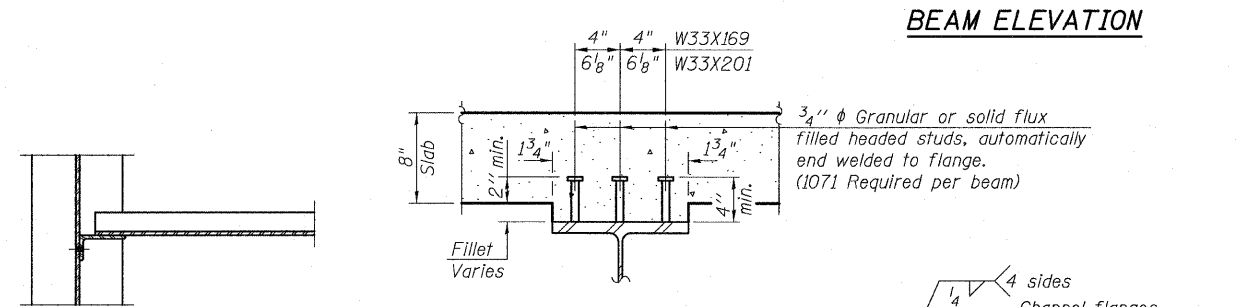
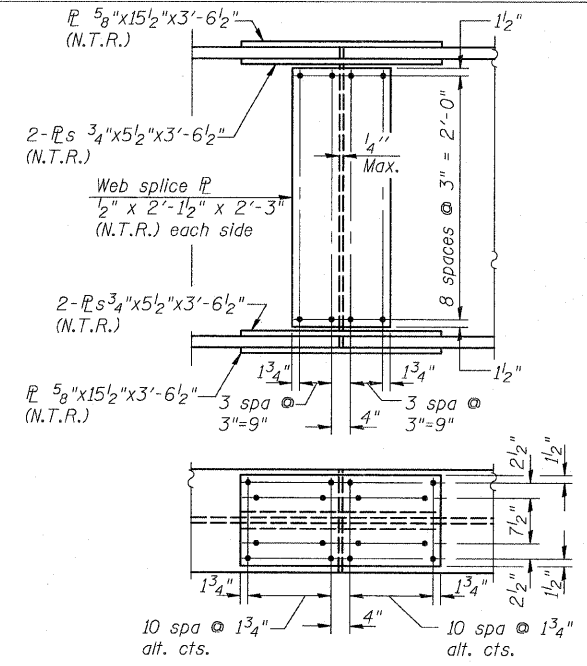
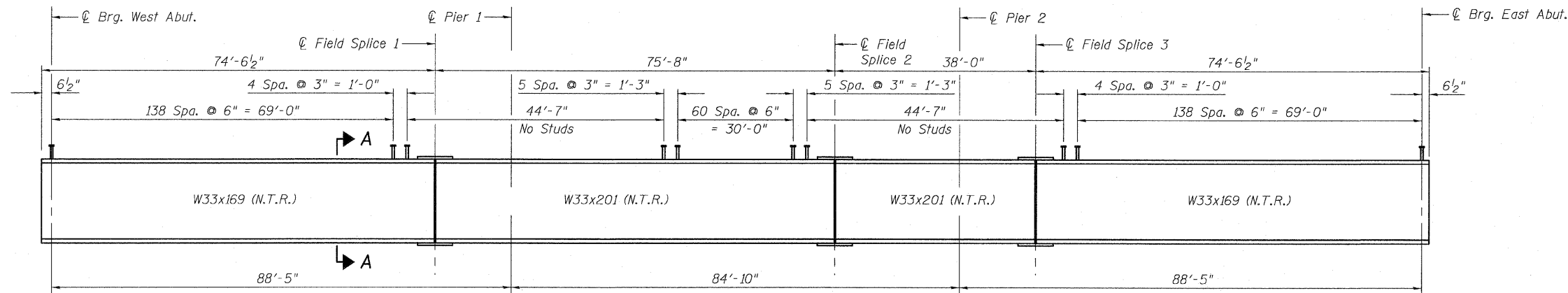
(Controlling cases are beams over C-D Road A)

FRAMING PLAN  
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - SP	REVISIONS		SHEET NO. 39	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.							
	CHECKED - SP,	NAME	DATE							68 SHEETS	57	1414.2B	COOK	516	284	
	DRAWN - SP															CONTRACT NO. 60J27
	CHECKED - SP,PDF															
	DATE - 03/18/10															
				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT												

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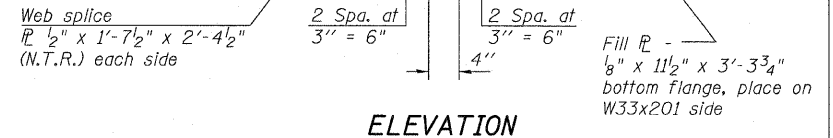
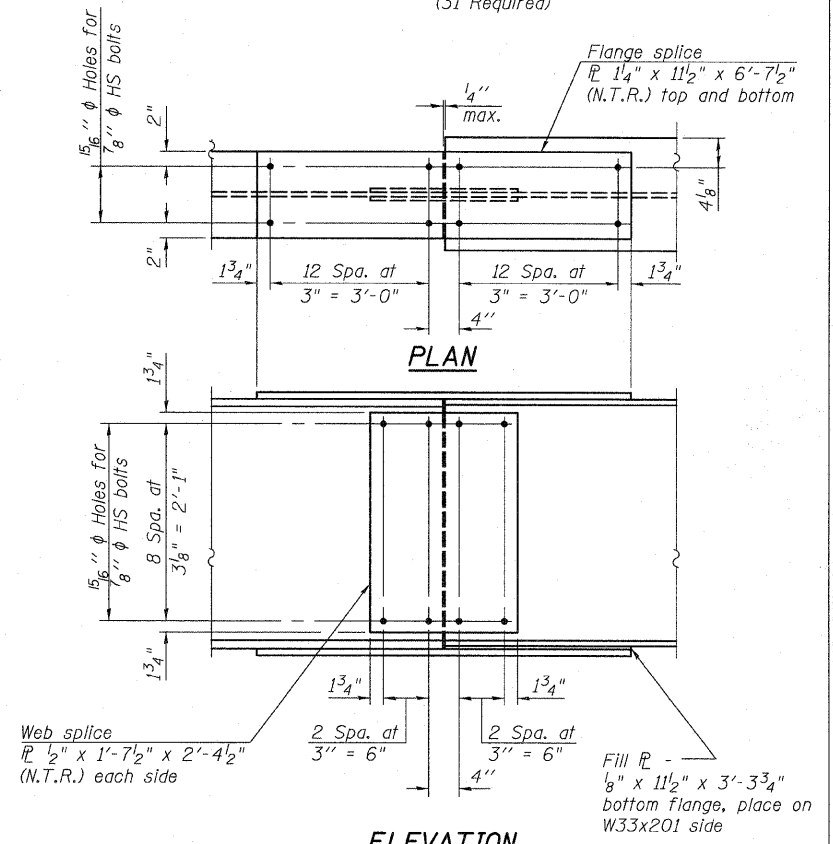
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



TOP OF BEAM ELEVATIONS

For Fabrication Only

Beam	℄ Brg. W. Abut.	℄ F.S. #1	℄ Pier 1	℄ F.S. #2	℄ Pier 2	℄ F.S. #3	℄ Brg. E. Abut.
1	634.36	634.51	634.51	634.51	634.54	634.56	634.47
2	634.48	634.63	634.63	634.64	634.67	634.69	634.61
3	634.56	634.75	634.75	634.75	634.79	634.81	634.74
4	634.67	634.84	634.84	634.85	634.89	634.91	634.84
5	634.67	634.84	634.85	634.86	634.90	634.92	634.86
6	634.56	634.74	634.74	634.76	634.80	634.83	634.76
7	634.44	634.62	634.62	634.65	634.69	634.71	634.66
8	634.30	634.48	634.49	634.51	634.56	634.59	634.53
9	634.16	634.35	634.35	634.38	634.43	634.46	634.41
10	634.02	634.21	634.22	634.25	634.30	634.33	634.28
11	633.87	634.07	634.08	634.12	634.17	634.20	634.16
12	633.73	633.94	633.95	633.99	634.04	634.07	634.03
13	633.89	634.40	634.11	634.15	634.20	634.23	634.20
14	634.01	634.22	634.24	634.28	634.33	634.36	634.33
15	634.13	634.35	634.36	634.41	634.46	634.49	634.47
16	634.25	634.47	634.48	634.54	634.59	634.62	634.60
17	634.36	634.58	634.59	634.65	634.71	634.74	634.73
18	634.44	634.67	634.69	634.75	634.80	634.84	634.83
19	634.44	634.67	634.69	634.71	634.75	634.81	634.85
20	634.33	634.57	634.58	634.65	634.71	634.75	634.75
21	634.20	634.44	634.46	634.53	634.60	634.63	634.64
22	634.06	634.31	634.32	634.40	634.46	634.50	634.51
23	633.91	634.17	634.19	634.27	634.33	634.37	634.38
24	633.77	634.03	634.05	634.13	634.20	634.24	634.26
25	634.10	634.38	634.42	634.57	634.61	634.63	634.66
26	634.20	634.49	634.52	634.63	634.70	634.75	634.78
27	634.28	634.58	634.61	634.72	634.79	634.84	634.88
28	634.30	634.60	634.63	634.75	634.82	634.87	634.92
29	634.19	634.50	634.52	634.64	634.72	634.77	634.82
30	634.07	634.38	634.41	634.53	634.61	634.66	634.72
31	633.92	634.24	634.27	634.40	634.48	634.53	634.59



STRUCTURAL STEEL DETAILS  
STRUCTURE NO. 016-1251

**INTERIOR DIAPHRAGMS - D1, D2**  
(242 - D1 required)  
(66 - D2 required)

Note:  
Two hardened washers required for each set of oversized holes.  
\*Alternate channels (C12x30) are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.  
The alternate, if utilized, shall be provided at no additional cost to the Department.

**END DIAPHRAGMS - D3, D4**  
(44 - D3 required)  
(12 - D4 required)

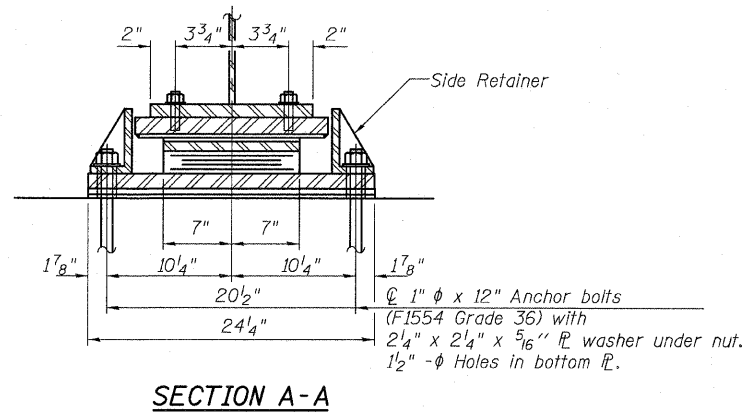
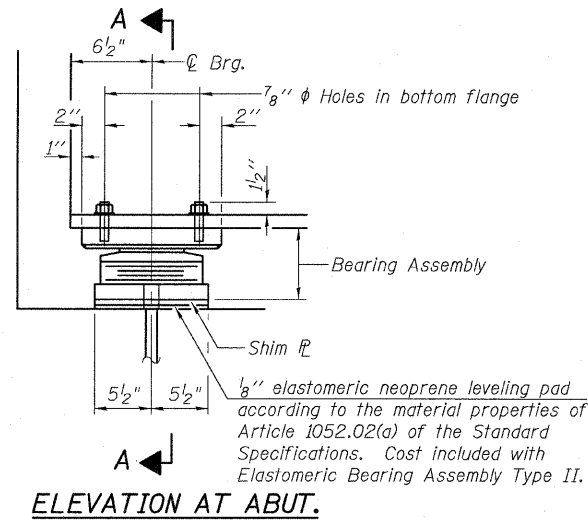
Note:  
Two hardened washers required for each set of oversized holes.

TYLIN INTERNATIONAL	DESIGNED - SP	REVISIONS		SHEET NO. 40	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - SP,	NAME	DATE		57	1414.2B	COOK	516	285	
	DRAWN - SP				68 SHEETS	CONTRACT NO. 60J27				
	CHECKED - SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

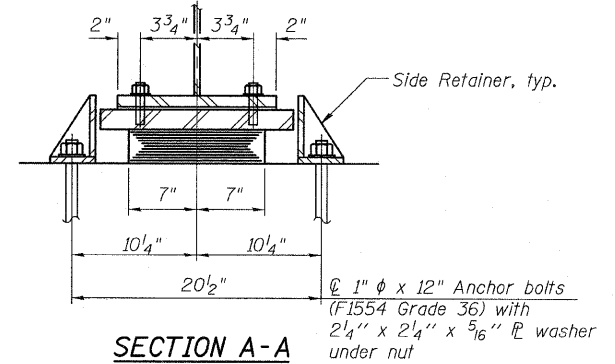
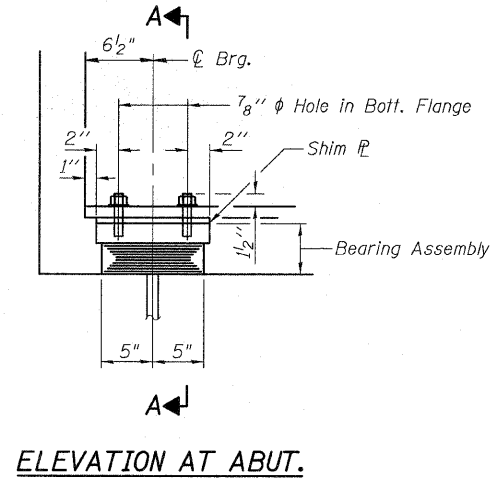
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**TYPE II ELASTOMERIC EXP. BRG. AT W. ABUT.**



**TYPE I ELASTOMERIC EXP. BRG. AT E. ABUT.**

Notes for Type I and Type II bearings this sheet:  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified, ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Anchor bolts for Type I bearings may be cast in place or installed in holes drilled before or after members are in place. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II or Elastomeric Bearing Assembly, Type I.

For Type II bearings, the 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

For Type II bearings, bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

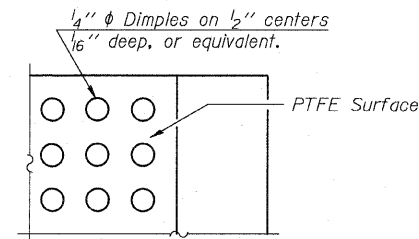
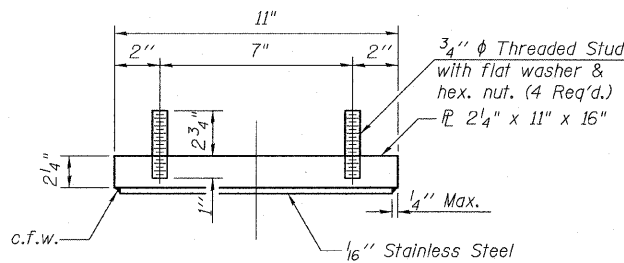
H.S. Bolts shall be galvanized according to AASHTO M298, class 50.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

**BILL OF MATERIAL**

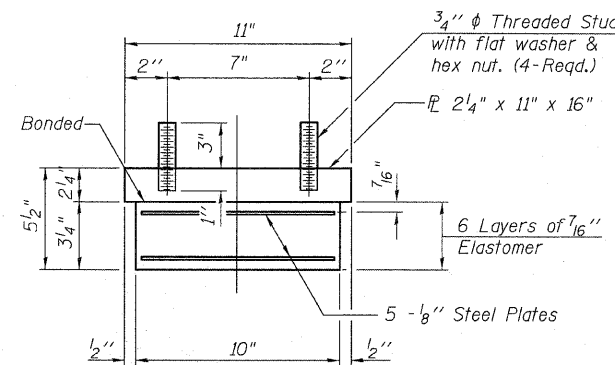
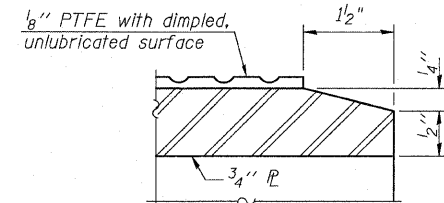
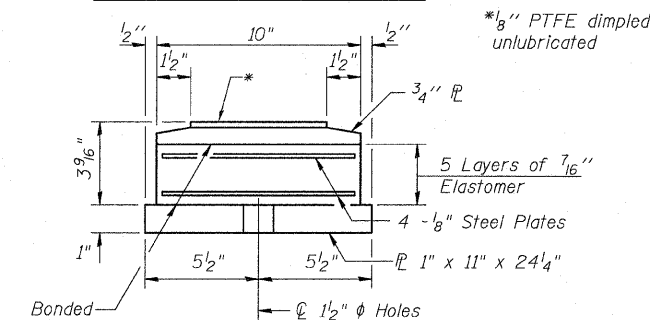
Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	31
Elastomeric Bearing Assembly Type I	Each	31
Anchor Bolts, 1"	Each	124

**BEARINGS-ABUTMENTS  
STRUCTURE NO. 016-1251**



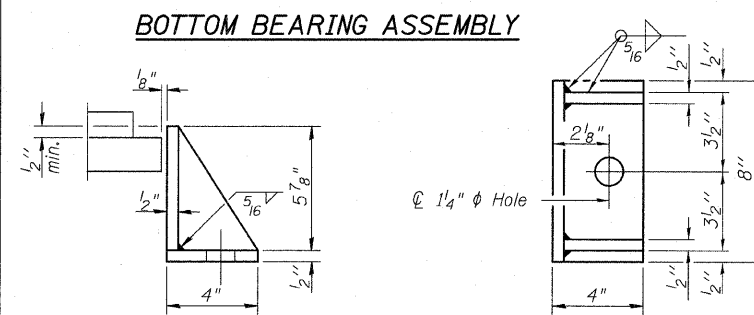
**TOP BEARING ASSEMBLY**

**PLAN-PTFE SURFACE**

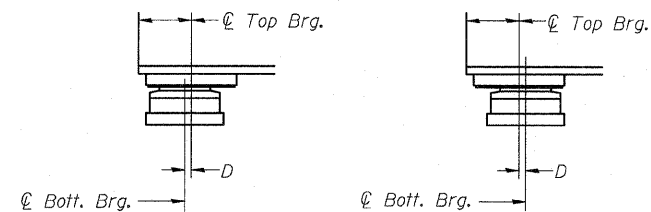


**BEARING ASSEMBLY**

Note:  
Shim plates shall not be placed under Bearing Assembly.



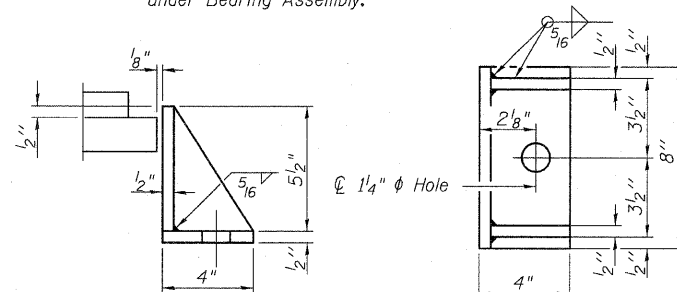
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BELOW 50°F. (Move bott. brg. away from fixed brg.) ABOVE 50°F. (Move bott. brg. toward fixed brg.)

**SETTING ANCHOR BOLTS AT EXP. BRG.**

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



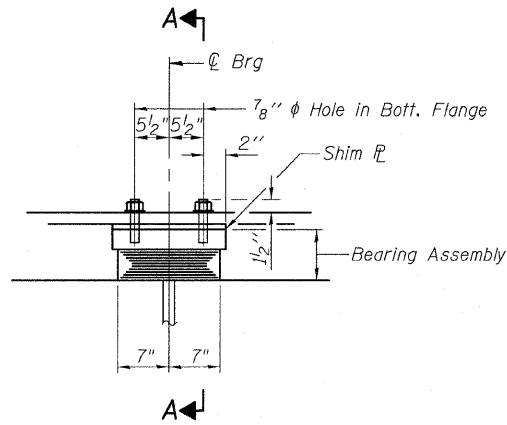
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

**TYLIN INTERNATIONAL**

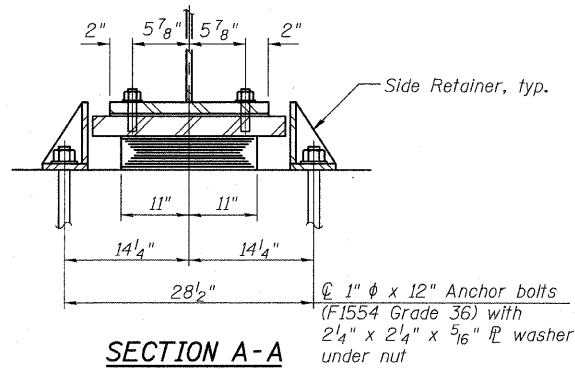
DESIGNED - JMA	REVISIONS	
CHECKED - SP,	NAME	DATE
DRAWN - JMA		
CHECKED - SP,PDF		
DATE - 03/18/10		

SHEET NO. 41	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68 SHEETS	57	1414.2B	COOK	516	286
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

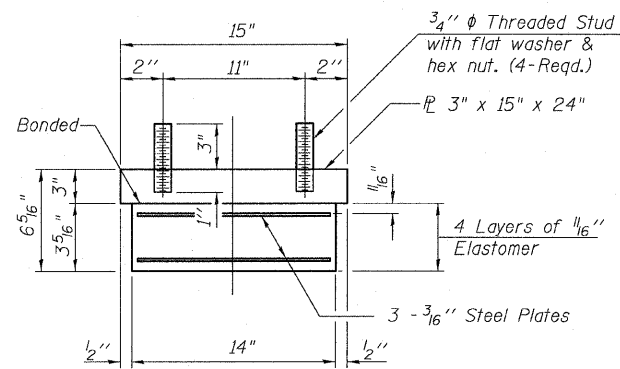


ELEVATION AT PIER



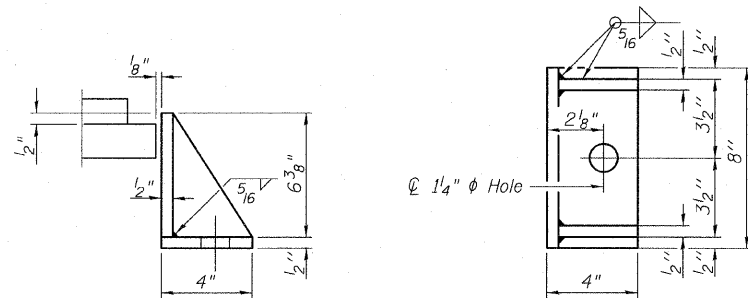
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.  
AT PIER 1



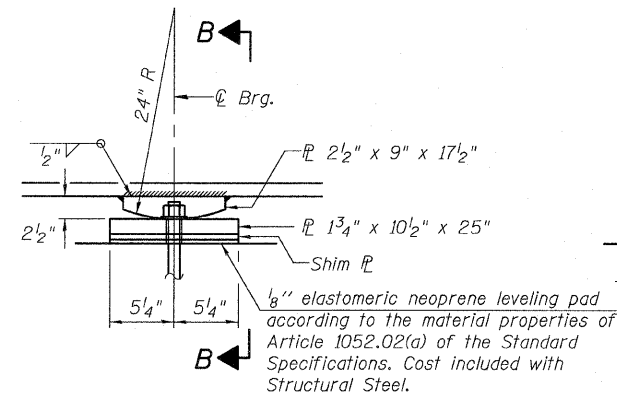
BEARING ASSEMBLY

Note:  
Shim plates shall not be placed  
under Bearing Assembly.



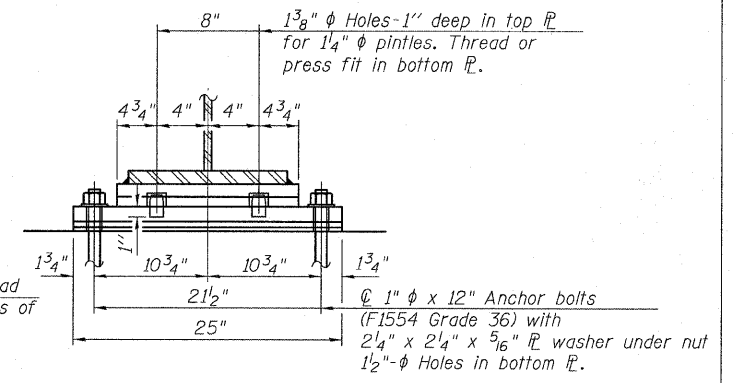
SIDE RETAINER

Equivalent rolled angle with stiffeners  
will be allowed in lieu of welded plates.

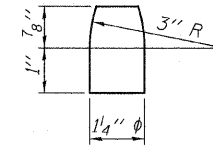


ELEVATION AT PIER

FIXED BEARING  
AT PIER 2



SECTION B-B



PINTLE

Notes for bearing this sheet:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

H.S. Bolts shall be galvanized according to AASHTO M298, Class 50.

The structural steel plates of the bearing assemblies shall conform to the requirements of AASHTO M270 Grade 50.

Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

BILL OF MATERIAL

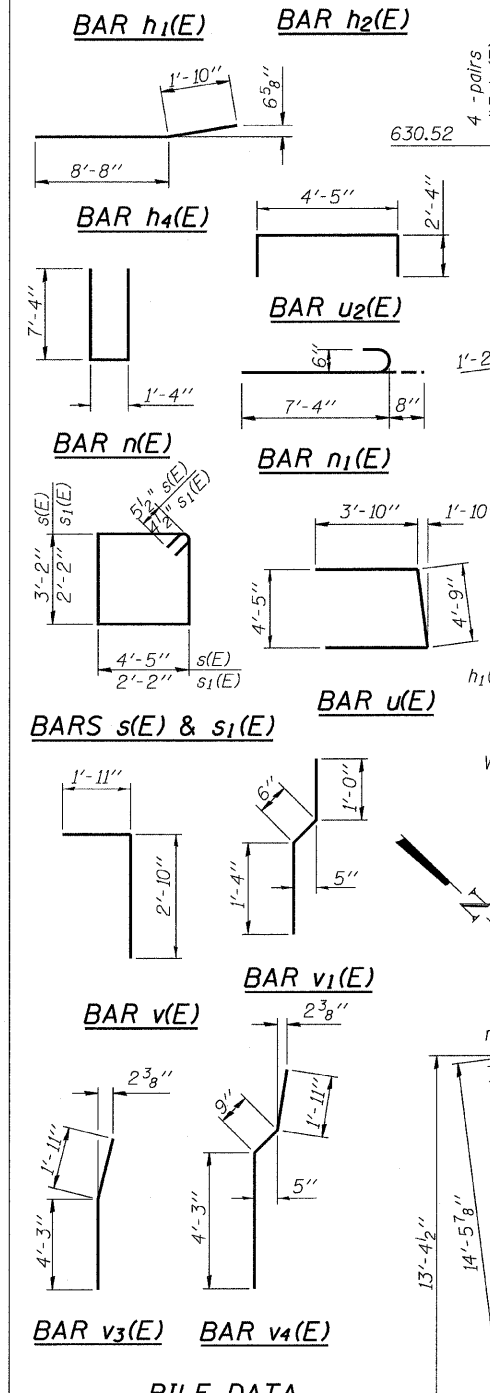
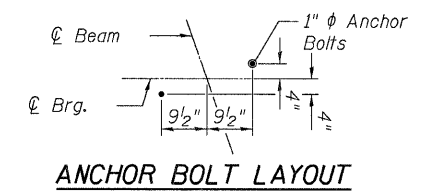
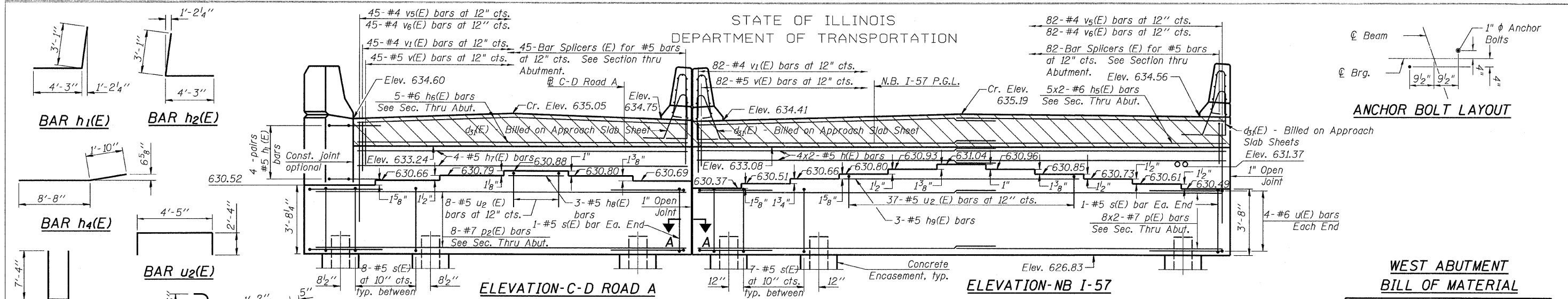
Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	31
Anchor Bolts, 1"	Each	124

BEARINGS-PIERS  
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS		SHEET NO. 42	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.										
	CHECKED - SP.	NAME	DATE							68 SHEETS	57	1414.2B	COOK	516	287				
	DRAWN - JMA															CONTRACT NO. 60J27			
	CHECKED - SP,PDF															FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			
	DATE - 03/18/10																		
I-2E-1 II-1-09																			

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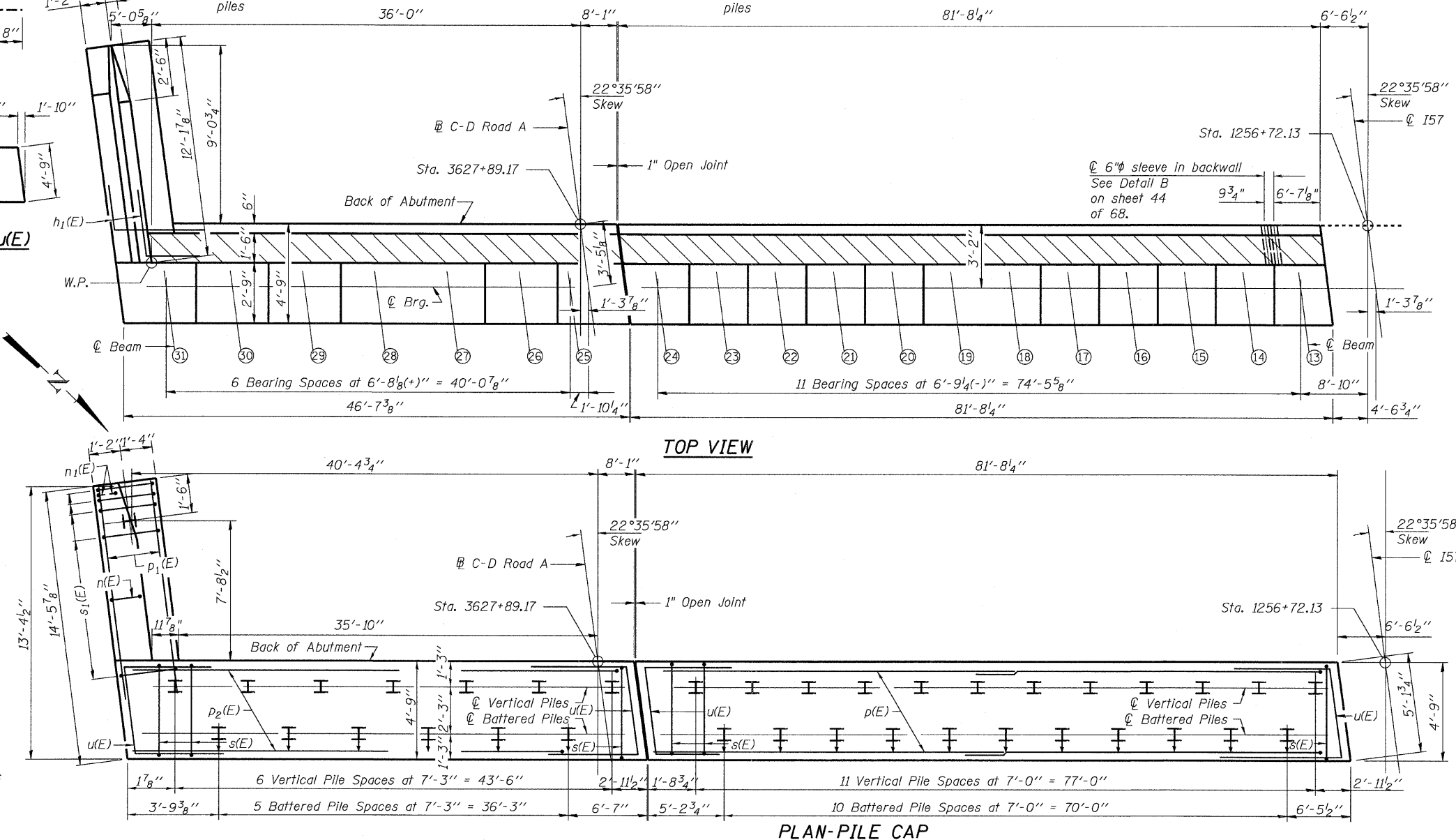
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



WEST ABUTMENT  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	16	#5	46'-5"	
h1(E)	8	#5	7'-4"	
h2(E)	8	#5	7'-4"	
h3(E)	22	#4	11'-2"	
h4(E)	14	#4	10'-6"	
h5(E)	20	#6	43'-0"	
h6(E)	5	#6	46'-3"	
h7(E)	4	#5	44'-8"	
h8(E)	3	#5	13'-0"	
h9(E)	3	#5	40'-6"	
h10(E)	6	#5	32'-2"	
h11(E)	3	#5	26'-9"	
n(E)	18	#6	16'-0"	
n1(E)	6	#6	8'-0"	
p(E)	32	#7	43'-4"	
p1(E)	12	#7	12'-2"	
p2(E)	8	#7	46'-3"	
s(E)	208	#5	16'-1"	
s1(E)	24	#4	9'-5"	
u(E)	24	#6	12'-5"	
u2(E)	135	#5	9'-1"	
v(E)	208	#5	4'-9"	
v1(E)	208	#4	2'-10"	
v2(E)	24	#6	6'-7"	
v3(E)	6	#6	6'-2"	
v4(E)	18	#6	6'-11"	
v5(E)	208	#4	4'-1"	
v6(E)	208	#4	4'-6"	
Structure Excavation		Cu. Yd.	433	
Concrete Structures		Cu. Yd.	209.2	
Reinforcement Bars, Epoxy Coated		Pound	16,300	
Furnishing Steel Piles, HP 12x53		Foot	1,680	
Driving Piles		Foot	1,680	
Test Pile, Steel HP 12x53		Each	1	
Concrete Encasement		Cu. Yd.	63.9	

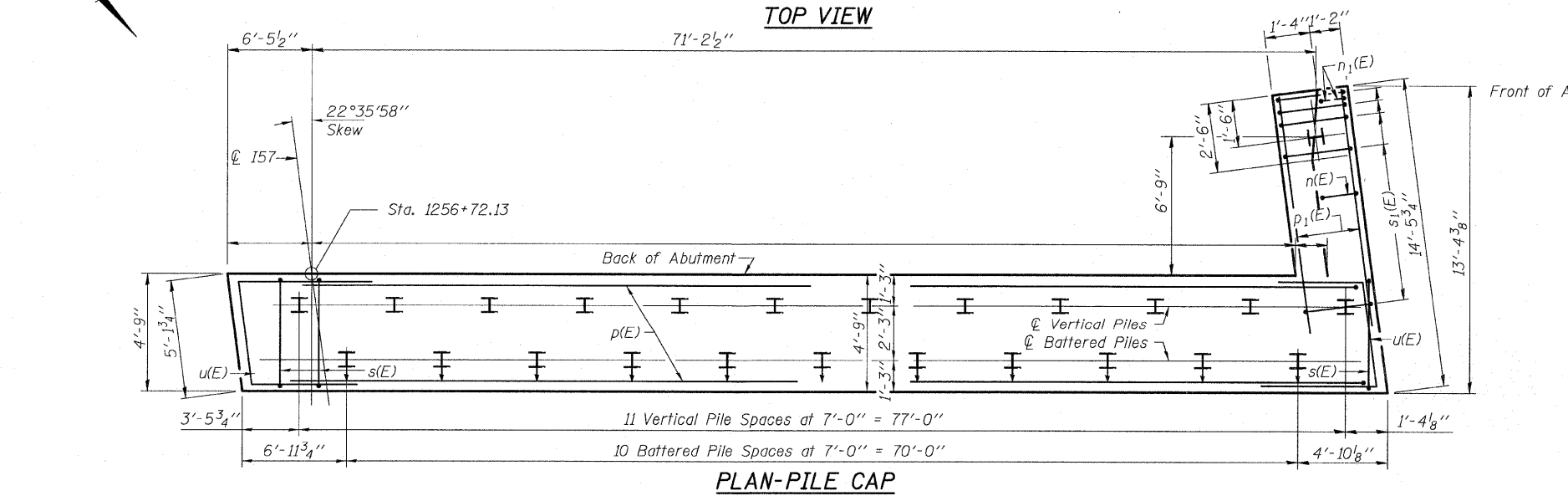
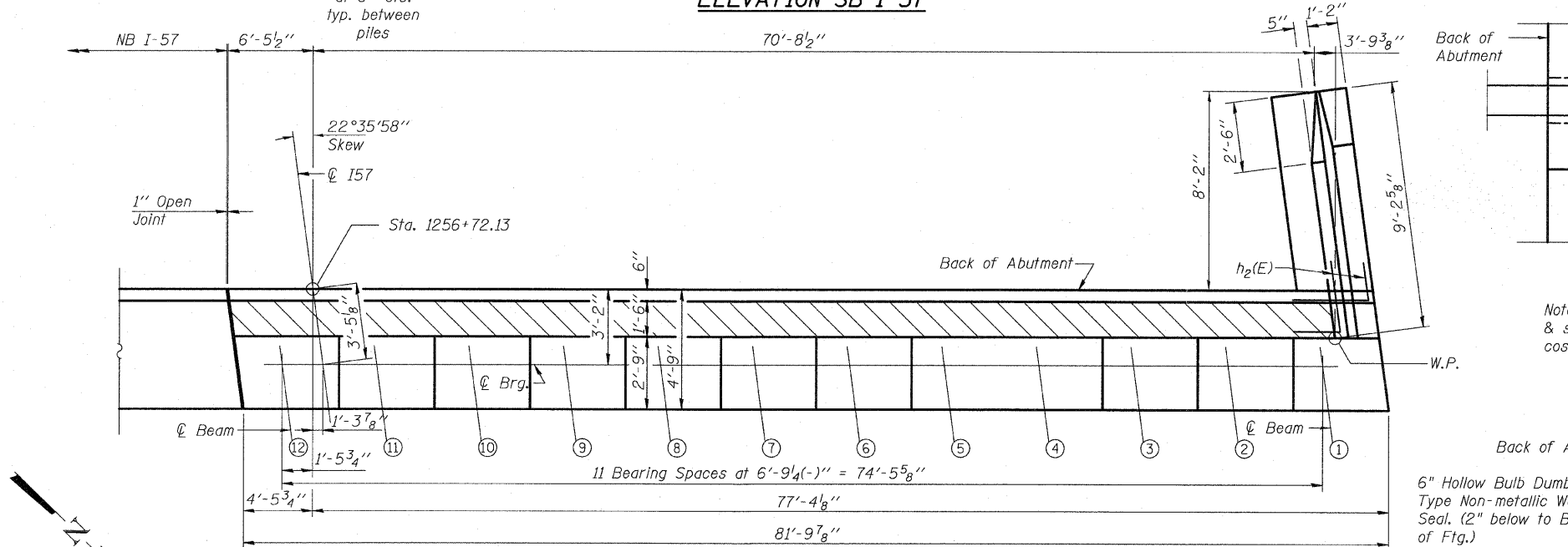
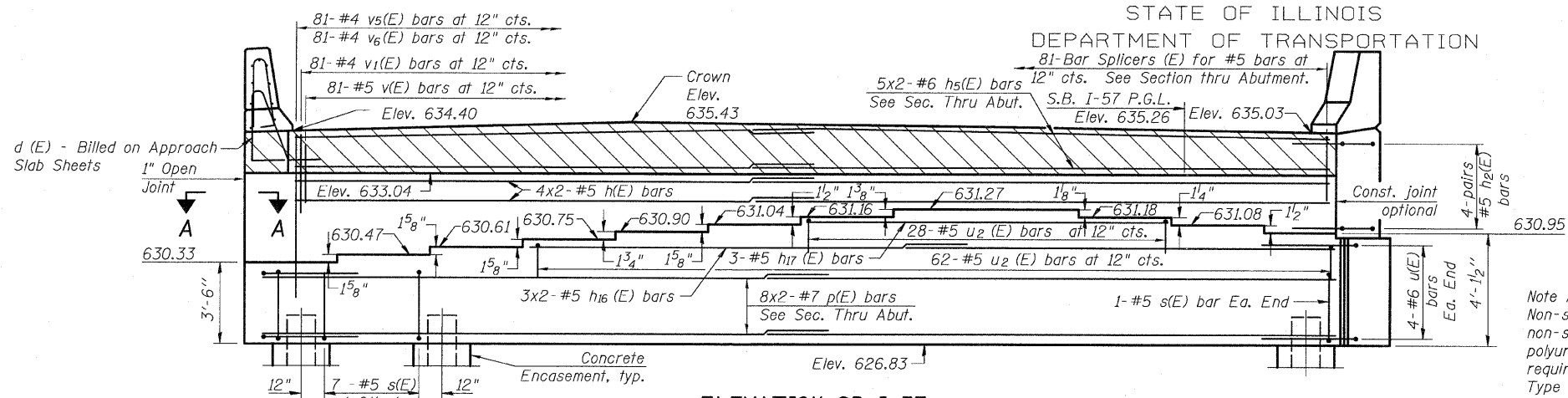
For notes see sheet 44 of 68.



WEST ABUTMENT - 1  
STRUCTURE NO. 016-1251

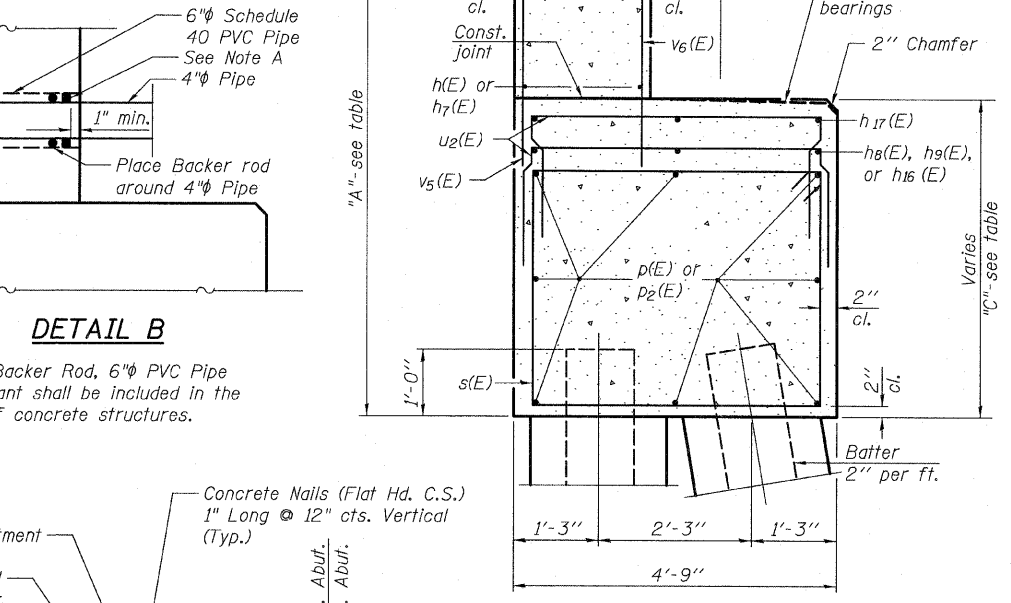
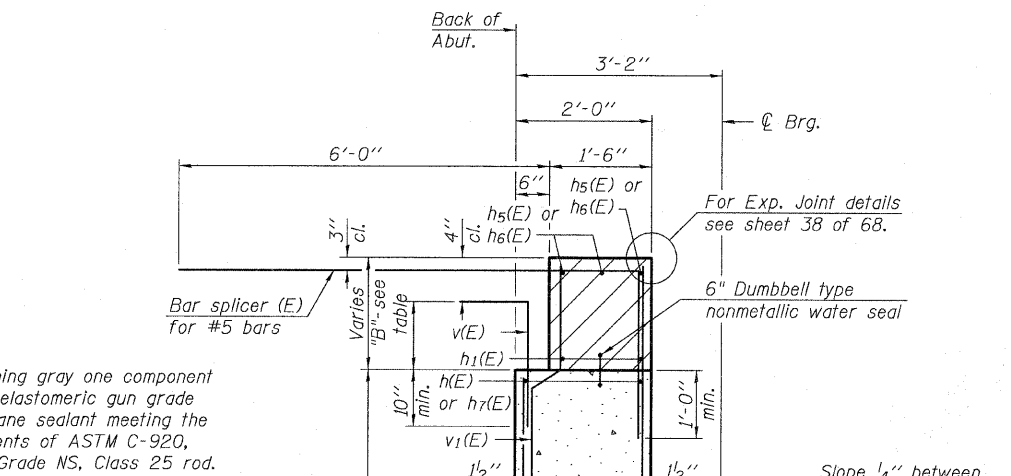
<b>TYLIN INTERNATIONAL</b> DESIGNED - EKH CHECKED - SP, DRAWN - EKH CHECKED - SP,PDF DATE - 03/18/10	REVISIONS NAME DATE		SHEET NO. 43 68 SHEETS	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 288
	CONTRACT NO. 60J27							
	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							
	DATE 04/29/10							

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**TYLIN INTERNATIONAL**  
DESIGNED - EKH  
CHECKED - SP.  
DRAWN - EKH  
CHECKED - SP,PDF  
DATE - 03/18/10

REVISIONS	
NAME	DATE



Location	A	B	C
C-D Road A	6'-4 1/8"	1'-4 3/8" to 1'-9 3/4"	3'-8 1/4" to 4'-0 5/8"
NB I-57	6'-3"	1'-4" to 2'-1 3/8"	3'-6 1/2" to 4'-2 1/2"
SB I-57	6'-2 1/2"	1'-4 3/8" to 2'-4 5/8"	3'-6" to 4'-5 1/4"

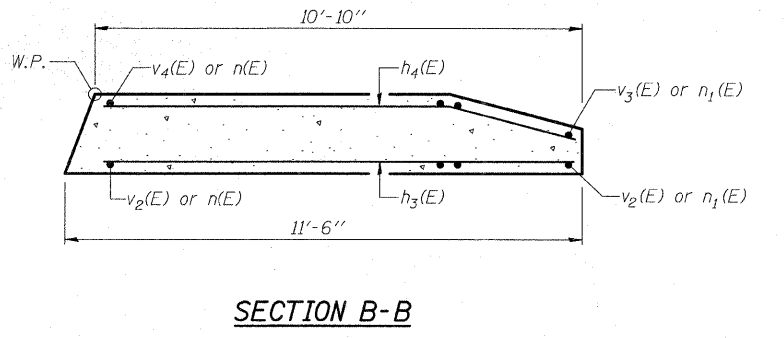
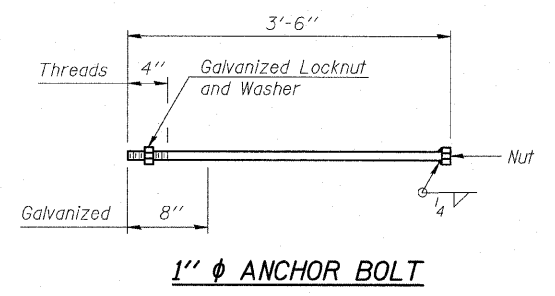
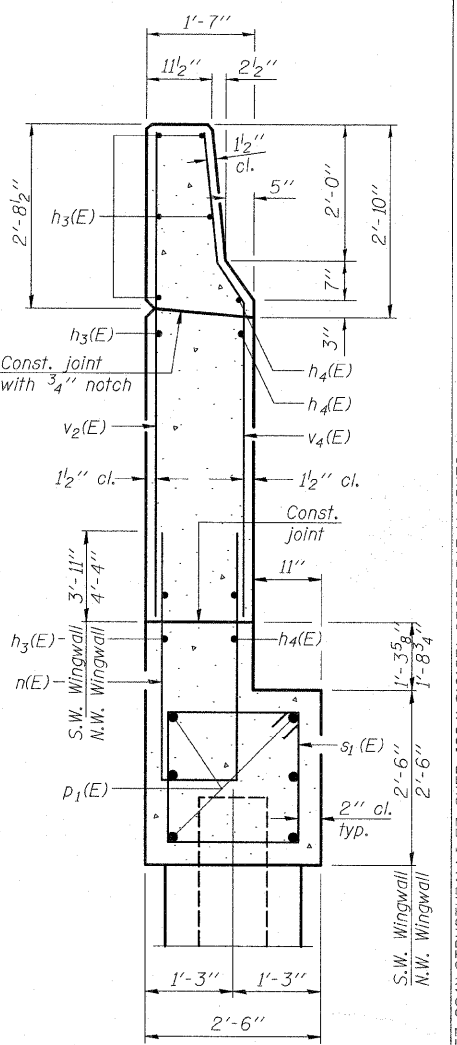
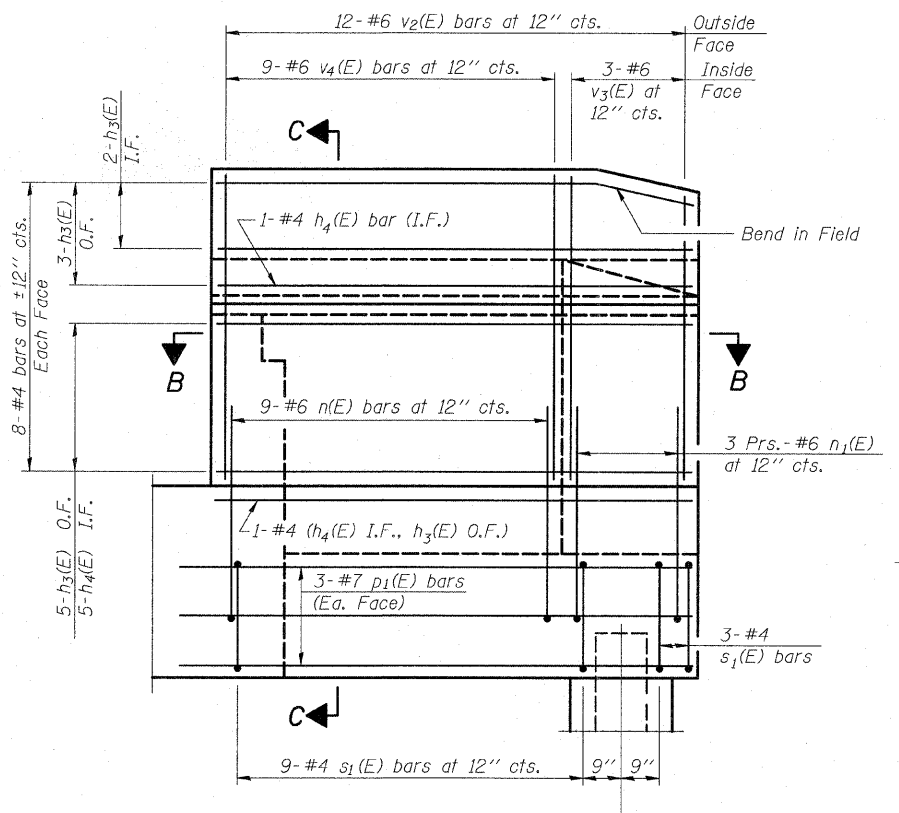
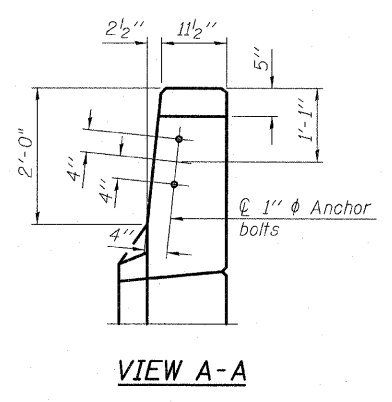
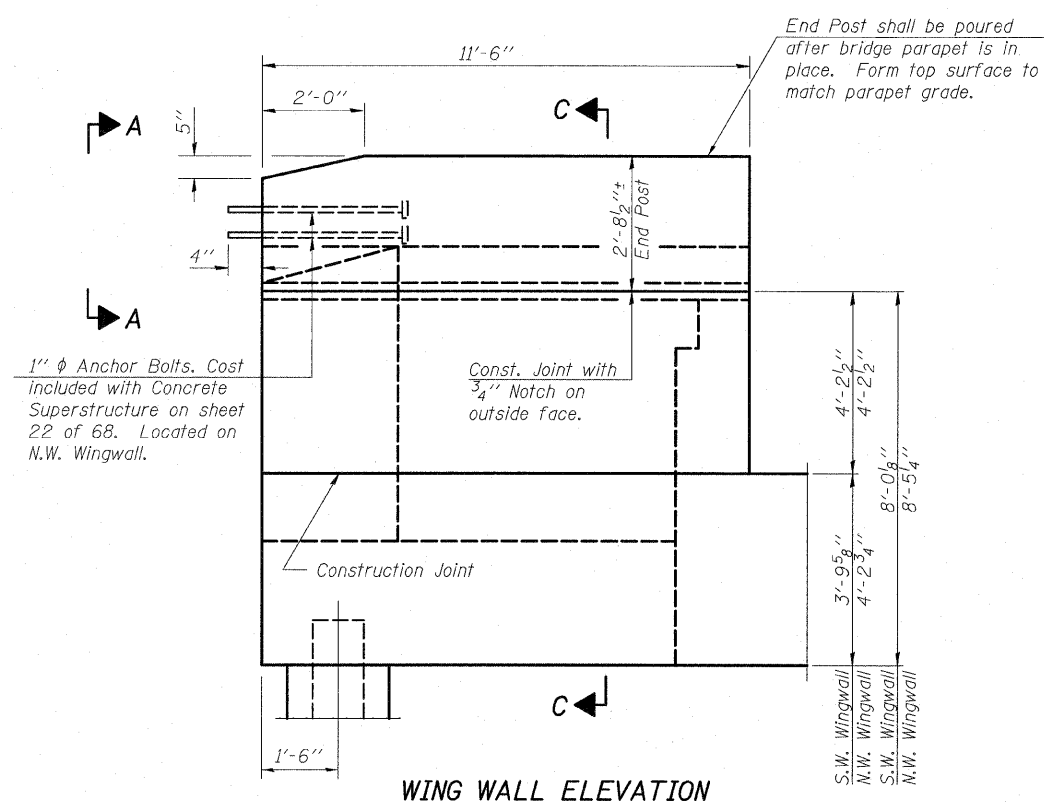
**WEST ABUTMENT - 2  
STRUCTURE NO. 016-1251**

Notes:  
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure. Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. Quantity of concrete in end post included with Concrete Superstructure on sheet 22 of 68. For details of piles and Concrete Encasement see sheet 55 of 68. For details of Bar Splicers, see sheet 56 of 68.

SHEET NO. 44 68 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	289
CONTRACT NO. 60J27					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



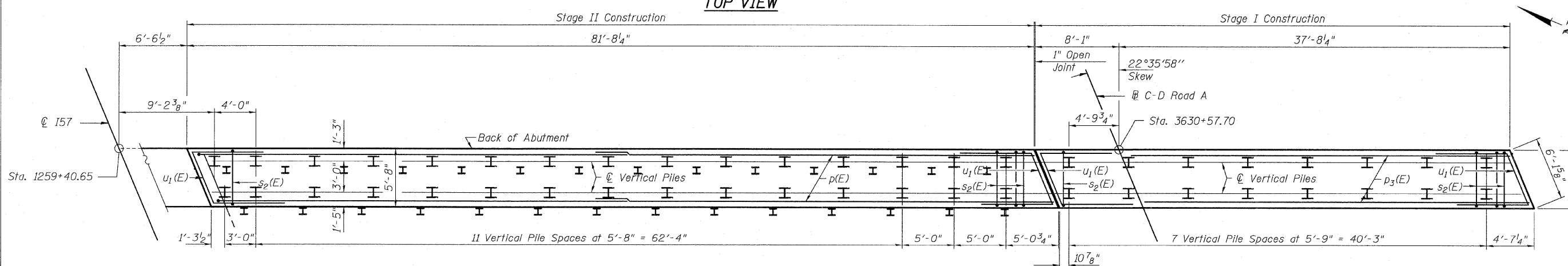
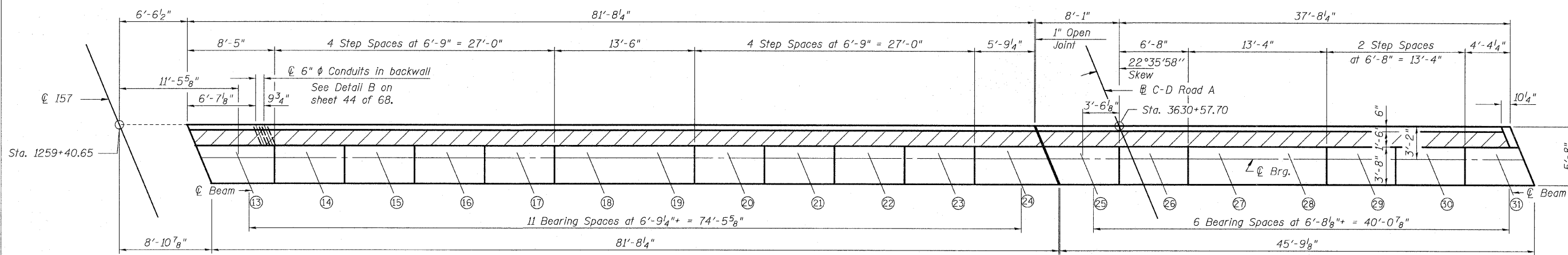
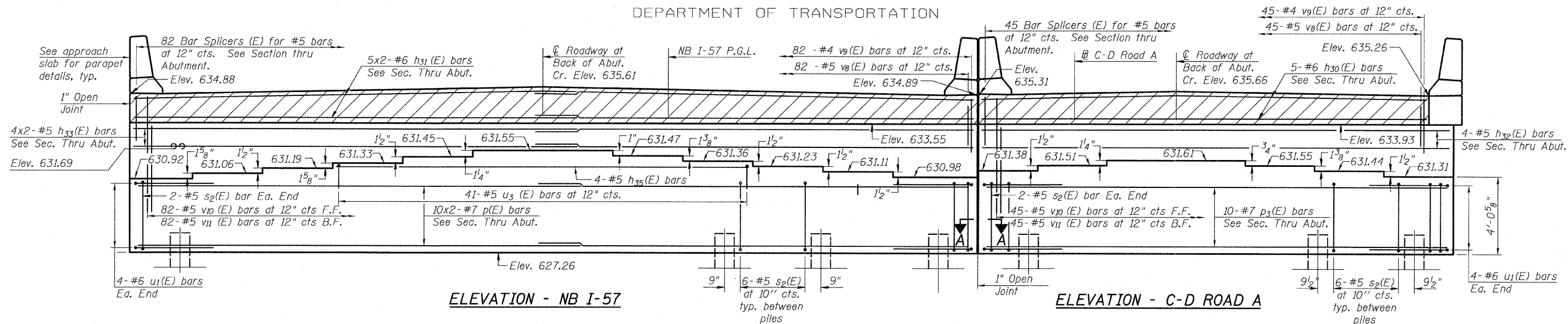
For notes, see sheet 44 of 68.

WEST ABUTMENT DETAILS  
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - EKH	REVISIONS		SHEET NO. 45	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 290					
	CHECKED - SP.	NAME	DATE											
	DRAWN - EKH													
	CHECKED - SP,PDF													
	DATE - 03/18/10													
					68 SHEETS					CONTRACT NO. 60J27				
										FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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STATE OF ILLINOIS  
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PLAN-PILE CAP

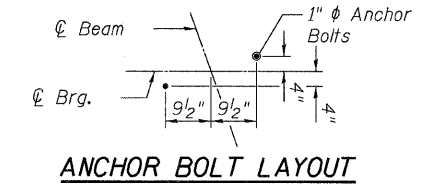
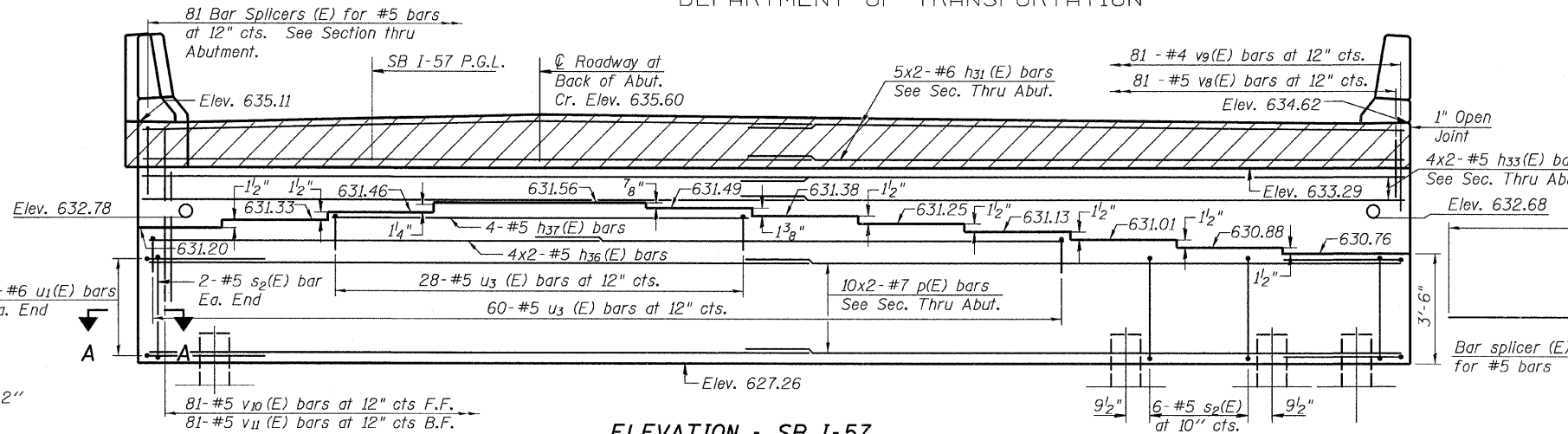
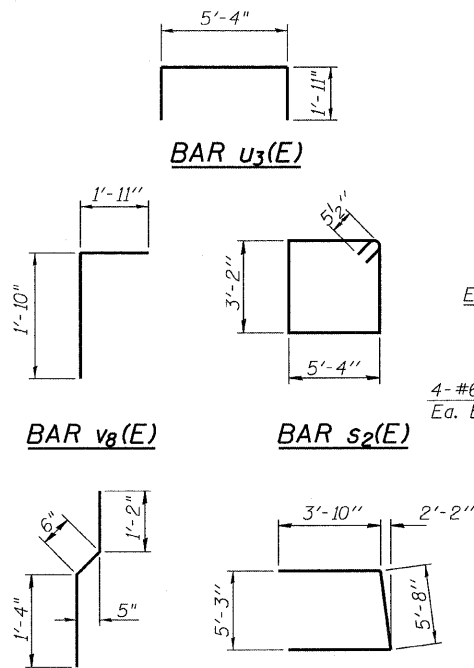
EAST ABUTMENT - 1  
STRUCTURE NO. 016-1251

For notes, see sheet 47 of 68.  
For section A-A, see sheet 44 of 68.

<b>TYLIN</b> INTERNATIONAL	DESIGNED - EKH	REVISIONS		SHEET NO. 46	F.A.I RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 291
	CHECKED - SP,	NAME	DATE						
	DRAWN - EKH								
	CHECKED - SP,PDF								
	DATE - 03/18/10								
				68 SHEETS	CONTRACT NO. 60J27				
					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



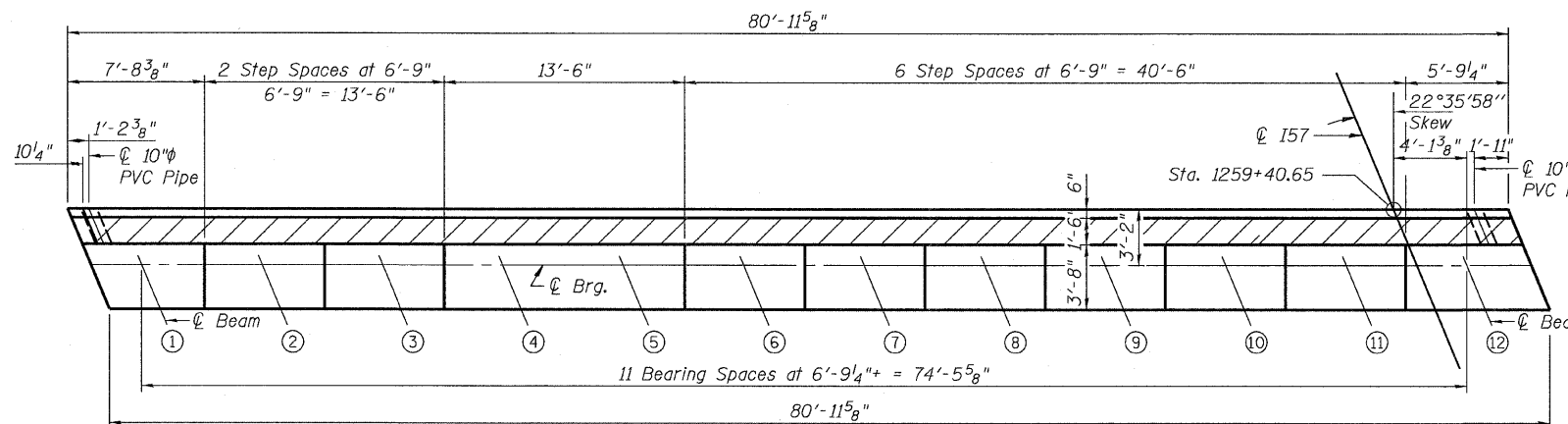
ABUTMENT  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h30(E)	5	#6	44'-7"	
h31(E)	20	#6	42'-8"	
h32(E)	4	#5	45'-5"	
h33(E)	16	#5	42'-4"	
h35(E)	4	#5	40'-2"	
h36(E)	8	#5	31'-4"	
h37(E)	4	#5	26'-8"	
p(E)	40	#7	43'-4"	
p3(E)	10	#7	45'-5"	
s2(E)	216	#5	17'-11"	
u1(E)	24	#6	13'-4"	
u3(E)	129	#5	9'-2"	
v8(E)	208	#5	3'-9"	
v9(E)	208	#4	3'-0"	
v10(E)	208	#4	6'-3"	
v11(E)	208	#4	4'-0"	
Structure Excavation		Cu. Yd.	5,182	
Concrete Structures		Cu. Yd.	215.6	
Reinforcement Bars, Epoxy Coated		Pound	15,930	
Furnishing Steel Piles, HP 12x53		Foot	3,358	
Driving Piles		Foot	3,358	
Test Pile, Steel HP 12x53		Each	1	

PILE DATA

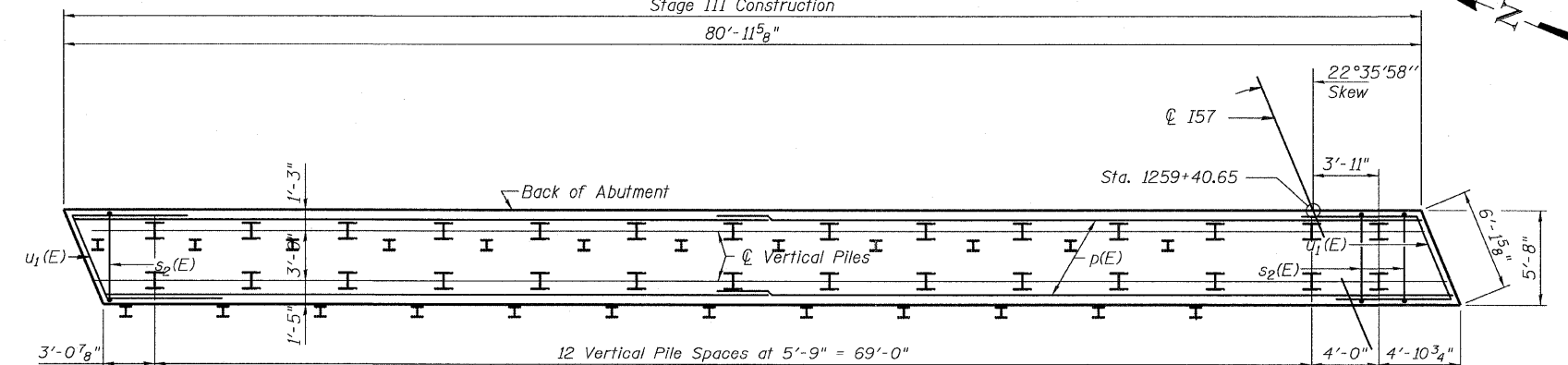
Type: HP 12x53 with Pile Shoes  
Nominal Required Bearing: 295 kips  
Factored Resistance Available: 162 kips  
Est. Length: 46 feet  
No. Production Piles: 73  
No. Test Piles: 1

Piles shall be driven through 18" diameter precored holes extending to Elevation 600 according to Article 512.09(c) of the Standard Specifications.  
Cost included with Driving Piles.

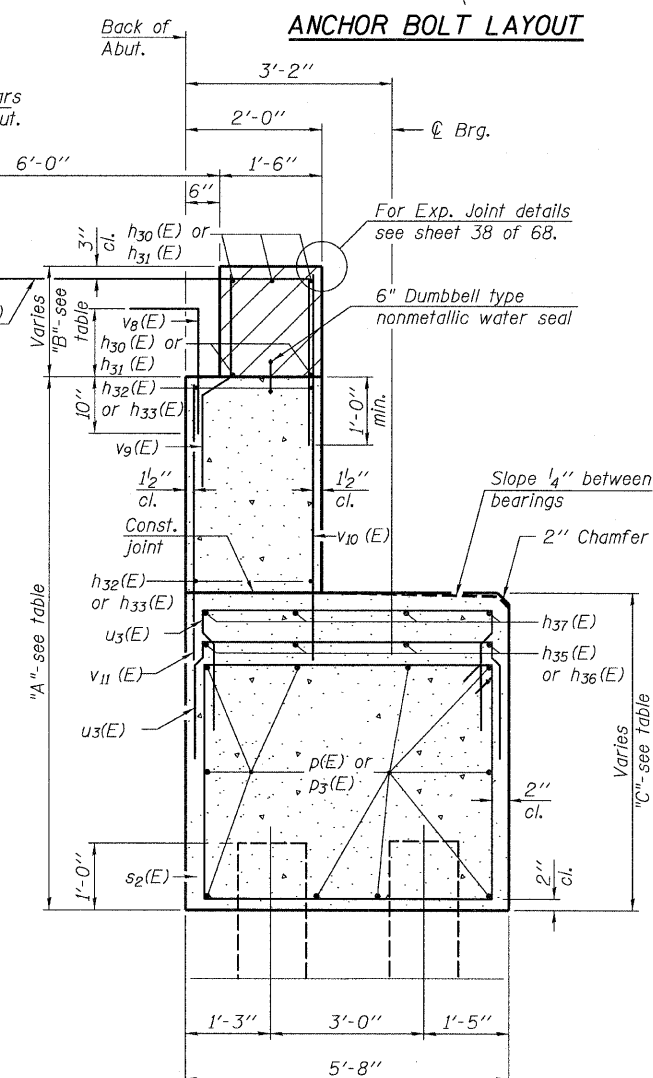


TOP VIEW

Stage III Construction



PLAN-PILE CAP



SEC. THRU ABUT.

Location	A	B	C
C-D Road A	6'-8"	1'-4" to 1'-8 3/4"	4'-0 5/8" to 4'-4 1/4"
NB I-57	6'-3 1/2"	1'-4" to 2'-0 1/4"	3'-7 7/8" to 4'-3 1/2"
SB I-57	6'-0 3/8"	1'-4" to 2'-3 3/4"	3'-6" to 4'-3 5/8"

Notes:  
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure. Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. For details of piles, see sheet 55 of 68. For details of Bar Splicers, see sheet 56 of 68. For section A-A, see sheet 44 of 68. Piles shall be driven prior to placement of the reinforced select fill and coated with bitumen from the bottom of the select fill to 1" above the base of the abutment. The cost of the bitumen coating shall be included with the cost of the Furnishing Piles.

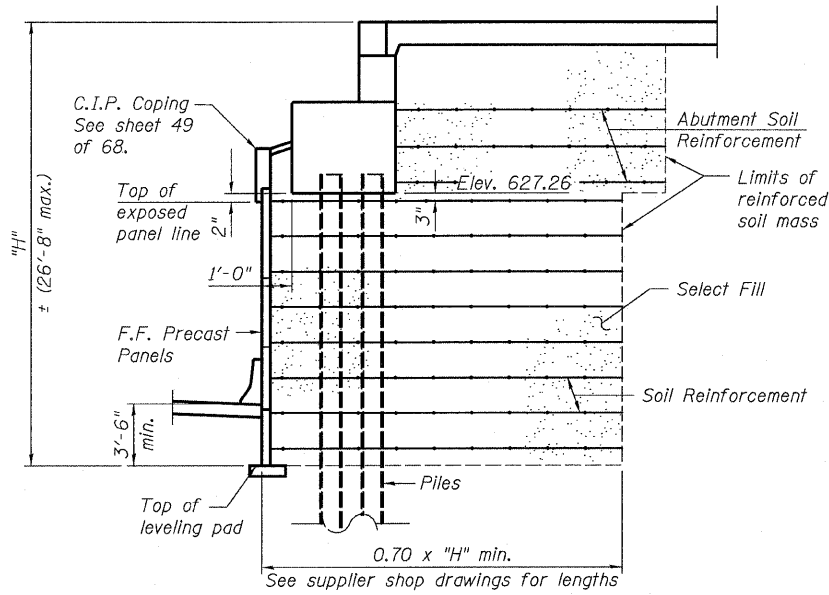
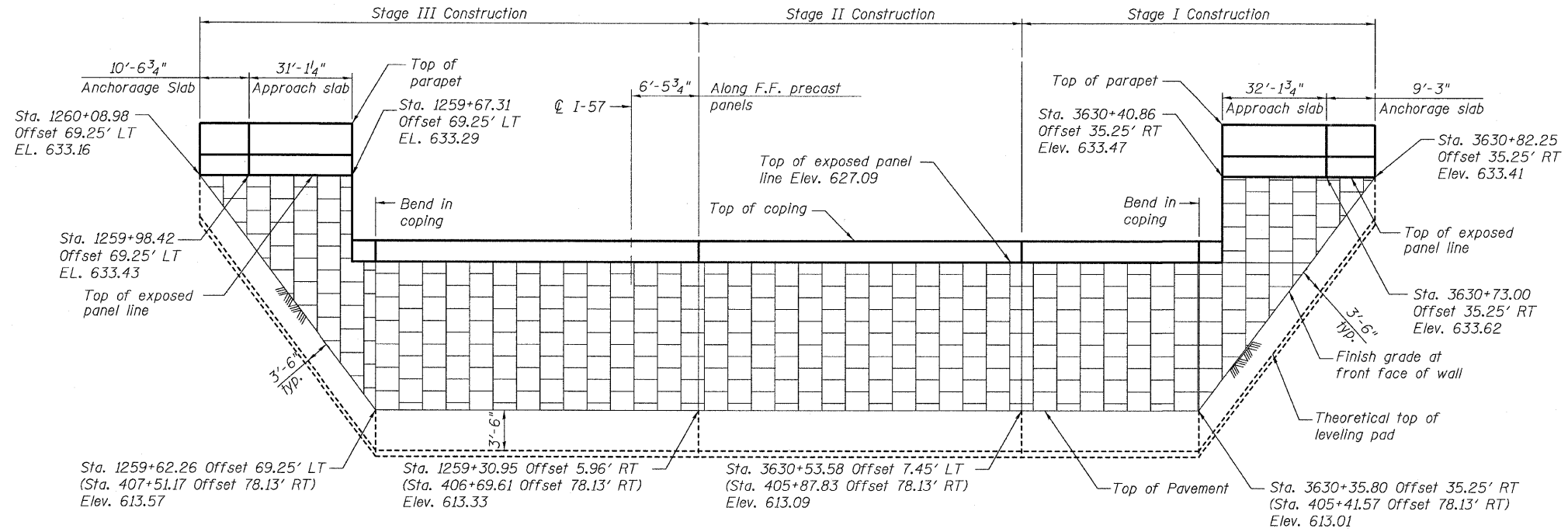
EAST ABUTMENT - 2 AND DETAILS  
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL

DESIGNED - EKH	REVISIONS	
CHECKED - SP,	NAME	DATE
DRAWN - EKH		
CHECKED - SP,PDF		
DATE - 03/18/10		04/29/10

SHEET NO. 47	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 292
68 SHEETS	CONTRACT NO. 60J27			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**SECTION THRU ABUTMENT**

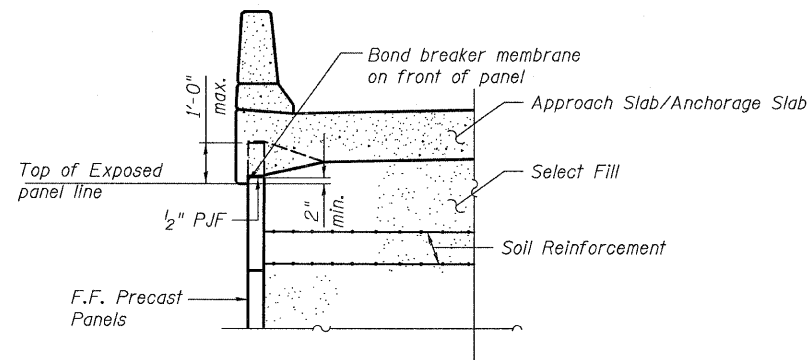
**NOTES**

The MSE wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 1.83 kips/ft of abutment.

Piles shall be driven prior to placement of the reinforced select fill and coated with bitumen from the bottom of the select fill to 1" above the base of abutment. The cost of the bitumen coating shall be included with the cost of furnishing piles.

**EAST ABUTMENT WALL**

Developed elevation along front face



**SECTION THRU WINGWALLS**

The M.S.E. wall supplier's internal stability design shall account for the slabs bearing pressure surcharge of 1.0 ksf.

**NOTES**

Offsets are to Front Face of precast panels.

For coping details see sheet 49 of 68.

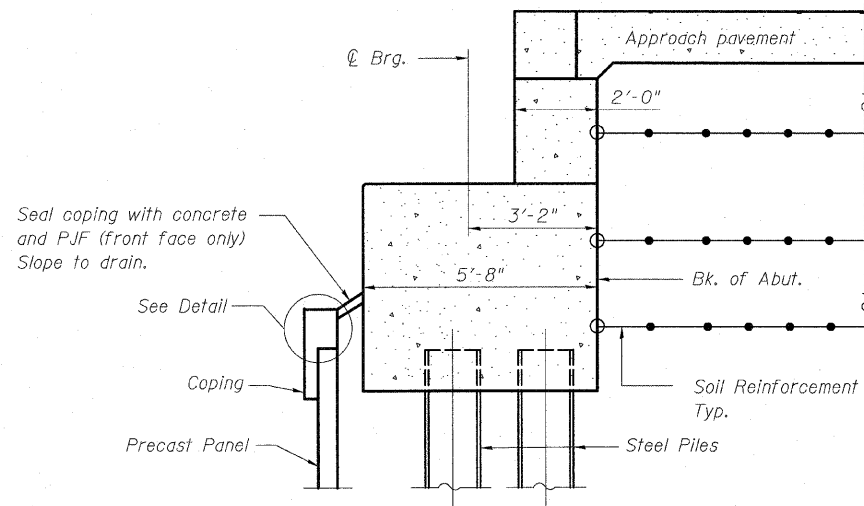
For anchorage slab details, see sheet 35 of 68.

**MECHANICALLY STABILIZED  
EARTH RETAINING WALL  
STRUCTURE NO. 016-1251**

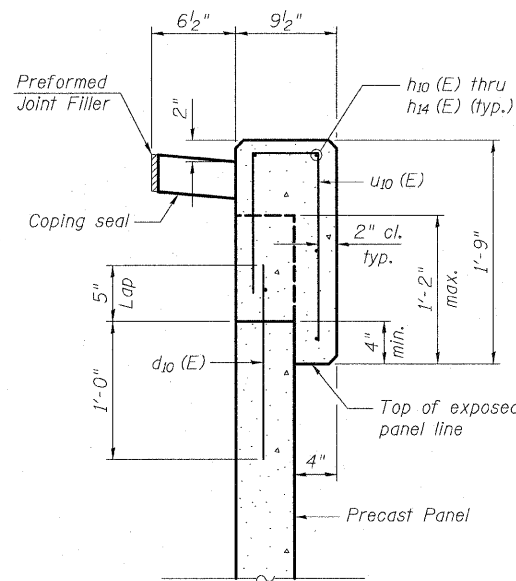
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	DRAWN - JA				CONTRACT NO. 60J27					
	CHECKED - SP, PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									



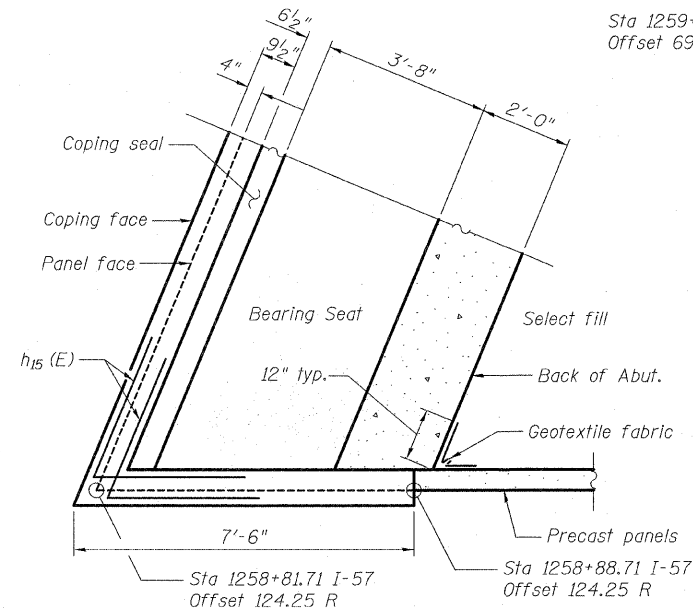
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



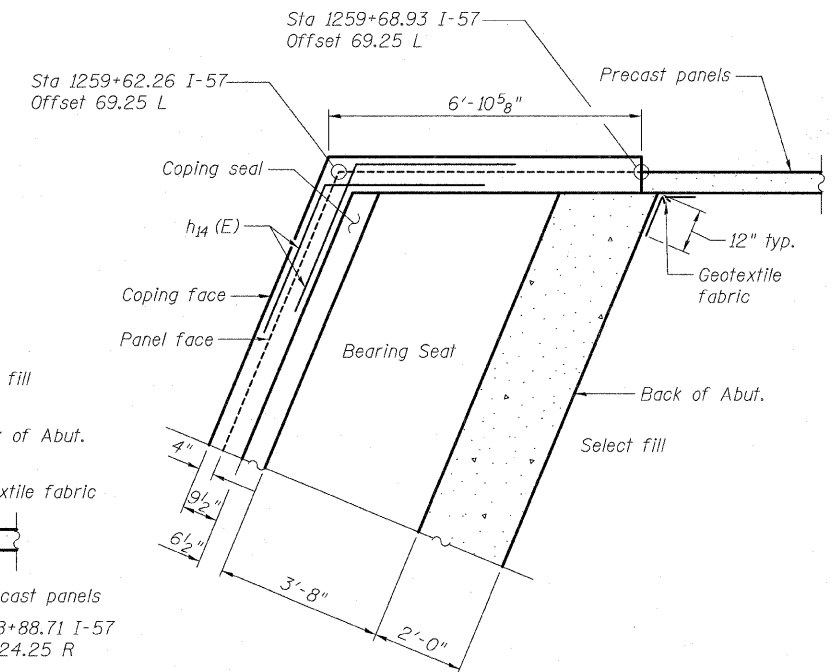
**SECTION THRU E. ABUTMENT**  
(Horiz. dim. @ Rt. L's)



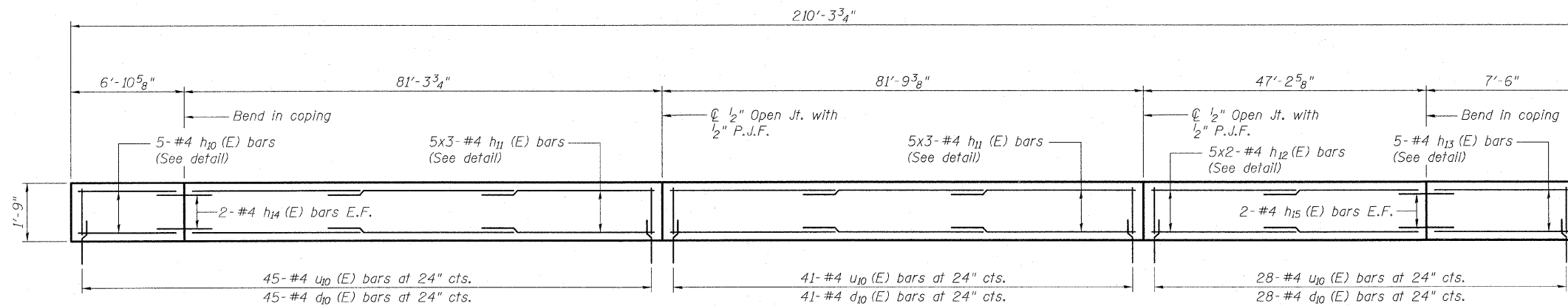
**DETAIL**



**PLAN AT ABUT. - S. END**

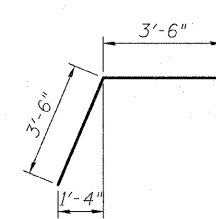


**PLAN AT ABUT. - N. END**

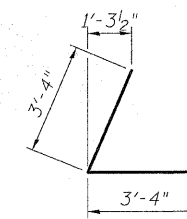


**ELEVATION**

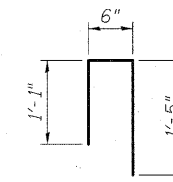
**MINIMUM BAR LAP**  
#4 bar - 2'-7"



**BAR h14 (E)**



**BAR h15 (E)**



**BAR u10 (E)**

**BILL OF MATERIAL**

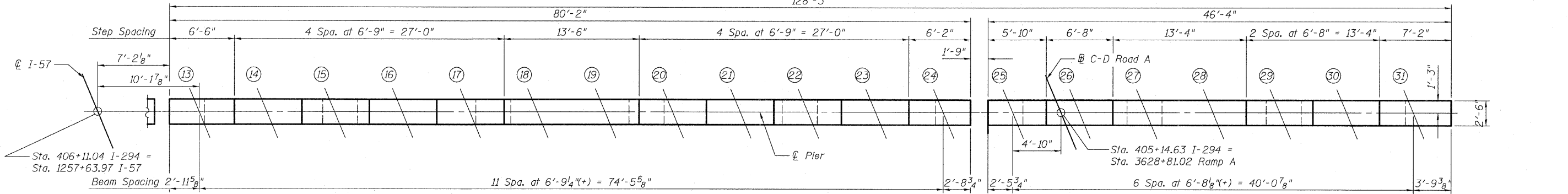
Bar	No.	Size	Length	Shape
d10 (E)	114	#4	1'-5"	U
h10 (E)	5	#4	6'-6"	Bent
h11 (E)	30	#4	28'-10"	Bent
h12 (E)	10	#4	24'-9"	Bent
h13 (E)	5	#4	7'-2"	Bent
h14 (E)	4	#4	7'-0"	Bent
h15 (E)	4	#4	6'-8"	Bent
u10 (E)	114	#4	3'-0"	U
Concrete Structures		Cu. Yd.	10.8	
Reinforcement Bars, Epoxy Coated		Pound	1,170	

**MECHANICALLY STABILIZED EARTH  
RETAINING WALL - DETAILS  
STRUCTURE NO. 016-1251**

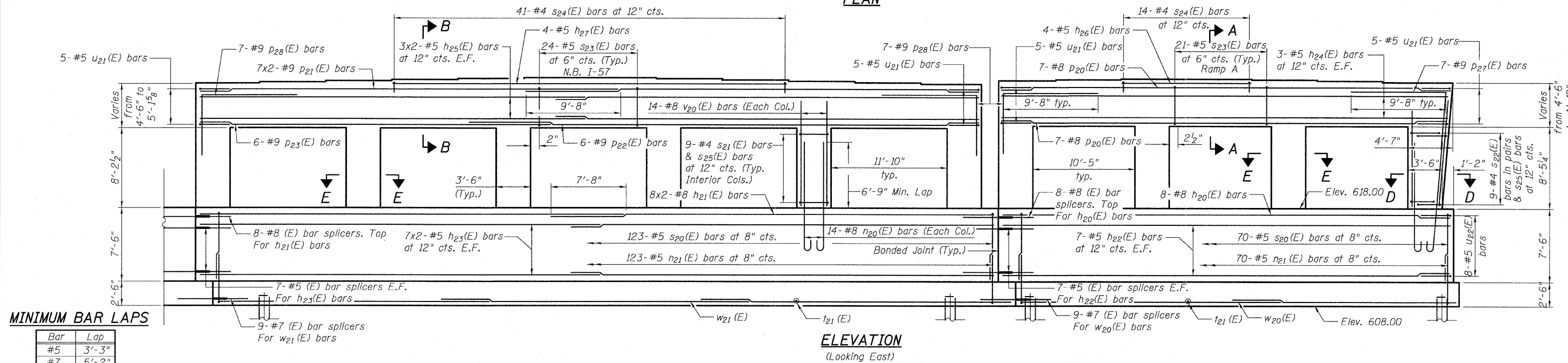
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	CHECKED - SP,	NAME	DATE					516	294
	DRAWN - PK							CONTRACT NO. 60J27	
	CHECKED - SP,PDF							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	
	DATE - 03/18/10			68 SHEETS					

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
128'-3"



PLAN

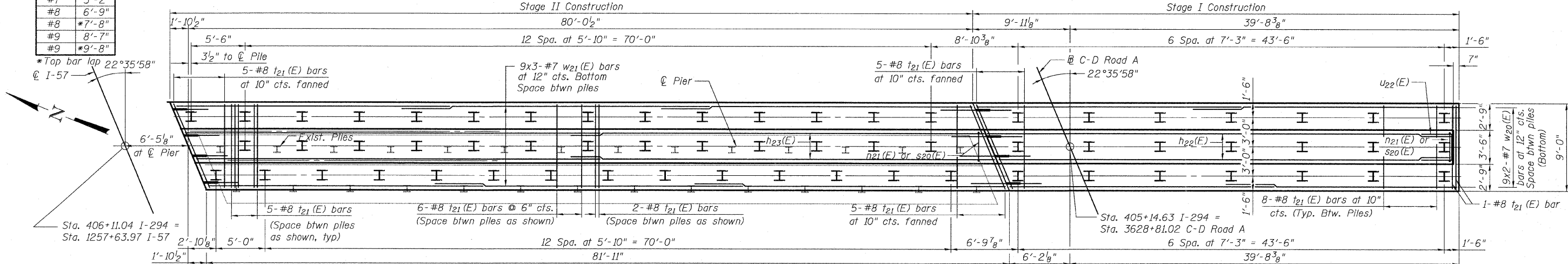


ELEVATION  
(Looking East)

MINIMUM BAR LAPS

Bar	Lap
#5	3'-3"
#7	5'-2"
#8	6'-9"
#8	*7'-8"
#9	8'-7"
#9	*9'-8"

\*Top bar lap 22°35'58"



FOOTING PLAN

NOTES:

- See Sheet 51 of 68 for Notes.
- For Sections and Bill of Material see Sheet 54 of 68.

PIER 1 PLAN AND ELEVATION - 1  
STRUCTURE NO. 016-1251

SEAT ELEVATIONS

Beam No.	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Elevation	630.78	630.90	631.03	631.15	631.26	631.35	631.35	631.25	631.13	630.99	630.85	630.71	631.09	631.19	631.27	631.27	631.19	631.07	630.94
Step Height	1/2"	1/2"	1/2"	1 3/8"	1 1/8"	0"	1/4"	1/2"	1 5/8"	1 5/8"	1 5/8"		1 1/4"	1"	0"	1"	1 1/2"	1 1/2"	

TYLIN INTERNATIONAL

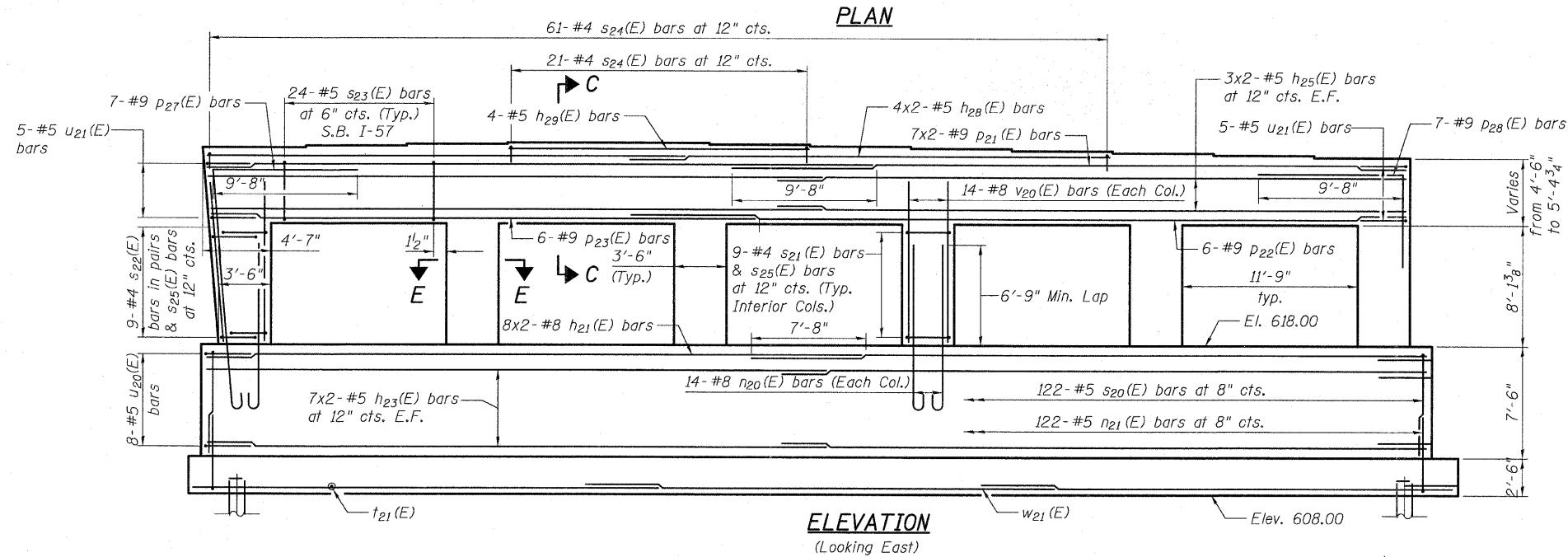
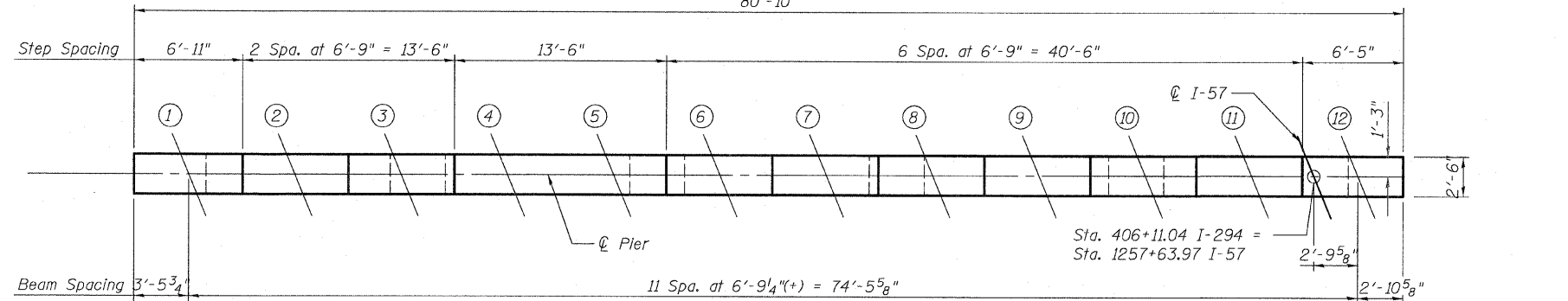
DESIGNED - PK	REVISIONS
CHECKED - SP,	NAME
DRAWN - PK	DATE
CHECKED - SP,PDF	
DATE - 03/18/10	

SHEET NO. 50  
68 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	295
CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

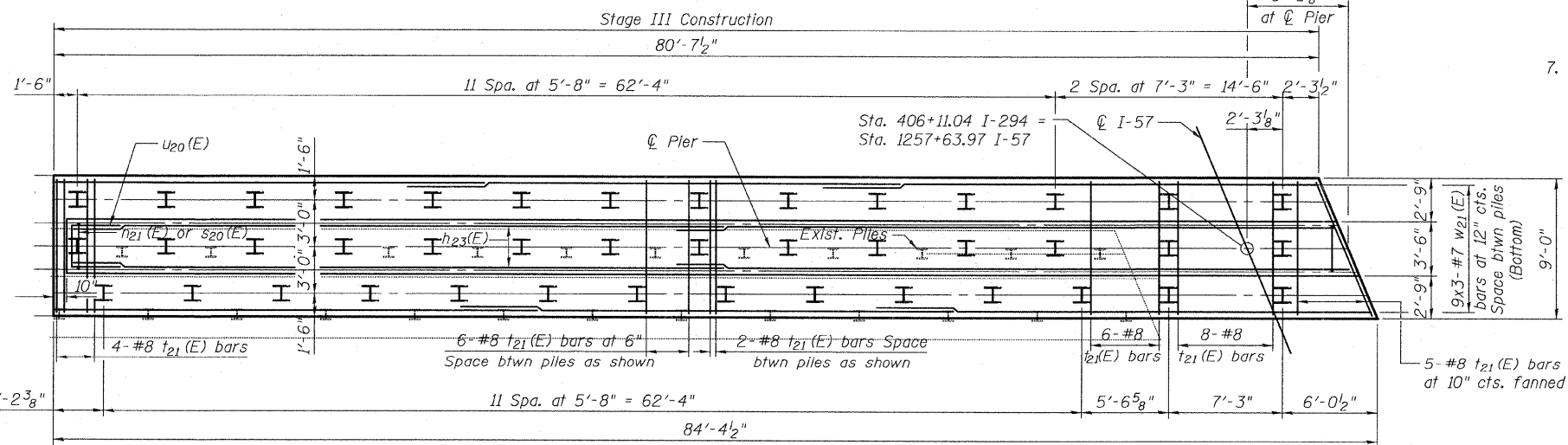
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
80'-10"



**NOTES:**

- Contractor may adjust pile spacing to miss existing piles subject to approval by the Engineer.
- Existing Steel piles shall be cut-off 1 foot below bottom of proposed footing. Cost included with "Removal of Existing Structures."
- Space reinforcement in cap to miss anchor bolts.
- Pour steps monolithically with cap.
- For details of piles see Sheet 55 of 68.
- For sections, end view, anchor bolt layout, reinforcing details and Bill of Material see Sheet 54 of 68.
- Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



**MINIMUM BAR LAPS**

Bar	Lap
#5	3'-3"
#7	5'-2"
#8	6'-9"
#8	*7'-8"
#9	8'-7"
#9	*9'-8"

\*Top bar lap

**SEAT ELEVATIONS**

Beam No.	1	2	3	4	5	6	7	8	9	10	11	12
Elevation	631.18	631.30	631.42	631.51	631.51	631.41	631.29	631.16	631.02	630.89	630.75	630.61
Step Height	1 1/2"	1 1/2"	1 1/8"	0"	1 1/4"	1 1/2"	1 1/2"	1 5/8"	1 1/2"	1 5/8"	1 5/8"	1 5/8"

**FOOTING PLAN**

**PIER 1 PLAN AND ELEVATION - 2**  
**STRUCTURE NO. 016-1251**

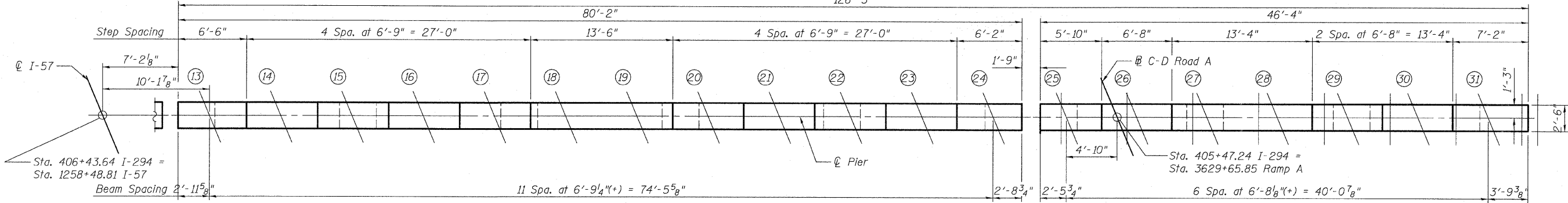
**TYLIN INTERNATIONAL**

DESIGNED - PK	REVISIONS	
CHECKED - SP,	NAME	DATE
DRAWN - PK		
CHECKED - SP,PDF		
DATE - 03/18/10		

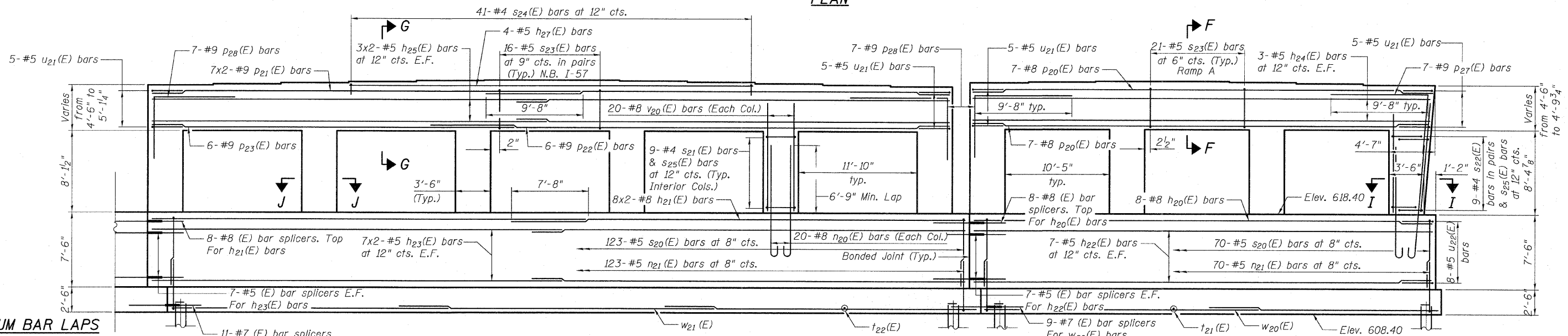
SHEET NO. 51  
68 SHEETS

F.A.I R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	296
CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
128'-3"



PLAN

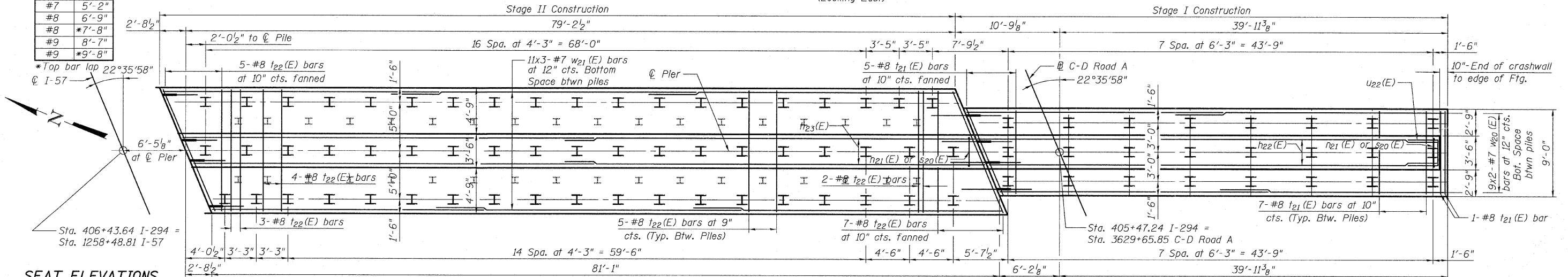


ELEVATION  
(Looking East)

MINIMUM BAR LAPS

Bar	Lap
#5	3'-3"
#7	5'-2"
#8	6'-9"
#8	*7'-8"
#9	8'-7"
#9	*9'-8"

\*Top bar lap 22°35'58"



FOOTING PLAN

NOTES:

1. See Sheet 53 of 68 for Notes.
2. For Sections and Bill of Material see Sheet 54 of 68.

PIER 2 PLAN AND ELEVATION - 1  
STRUCTURE NO. 016-1251

SEAT ELEVATIONS

Beam No.	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Elevation	631.03	631.16	631.29	631.42	631.54	631.63	631.63	631.54	631.42	631.29	631.16	631.03	631.44	631.53	631.62	631.62	631.55	631.44	631.31
Step Height	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/8"	0"	1 1/8"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/8"	1 1/8"	0"	1 1/8"	1 3/8"	1 1/2"	1 1/2"

TYLIN INTERNATIONAL

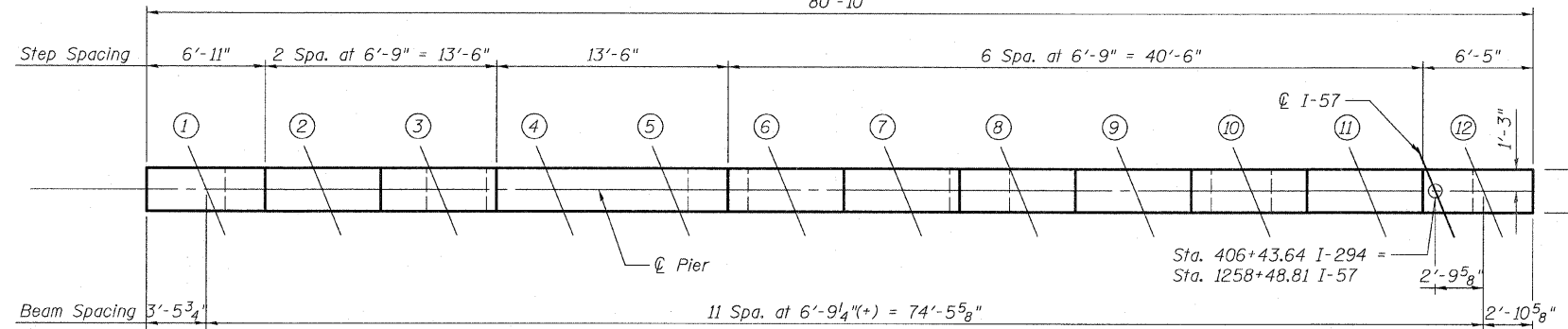
DESIGNED - PK	REVISIONS
CHECKED - SP,	NAME
DRAWN - PK	DATE
CHECKED - SP,PDF	
DATE - 03/18/10	

SHEET NO. 52  
68 SHEETS

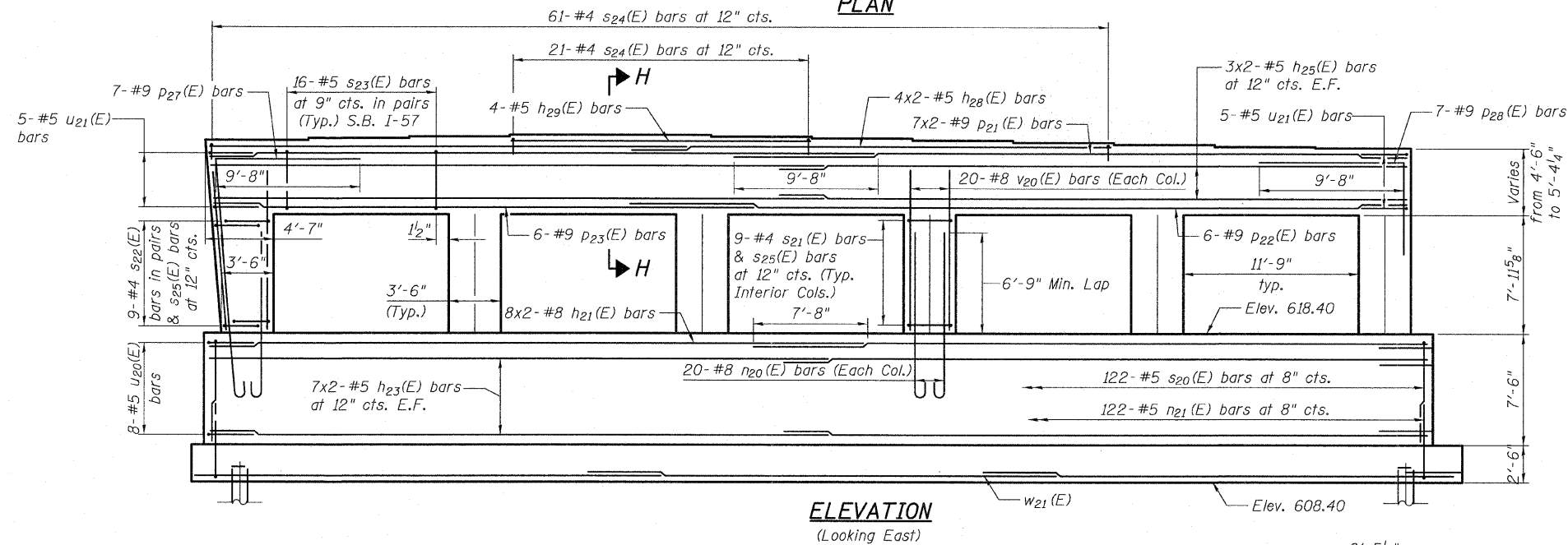
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	297
CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
80'-10"



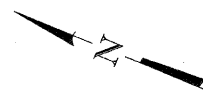
PLAN



ELEVATION  
(Looking East)

NOTES:

- Contractor may adjust pile spacing to miss existing piles subject to approval by the Engineer.
- Existing Steel piles shall be cut-off 1 foot below bottom of proposed footing. Cost included with "Removal of Existing Structures."
- Space reinforcement in cap to miss anchor bolts.
- Pour steps monolithically with cap.
- For details of piles see Sheet 55 of 68.
- For sections, end view, anchor bolt layout, reinforcing details and Bill of Material see Sheet 54 of 68.
- Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



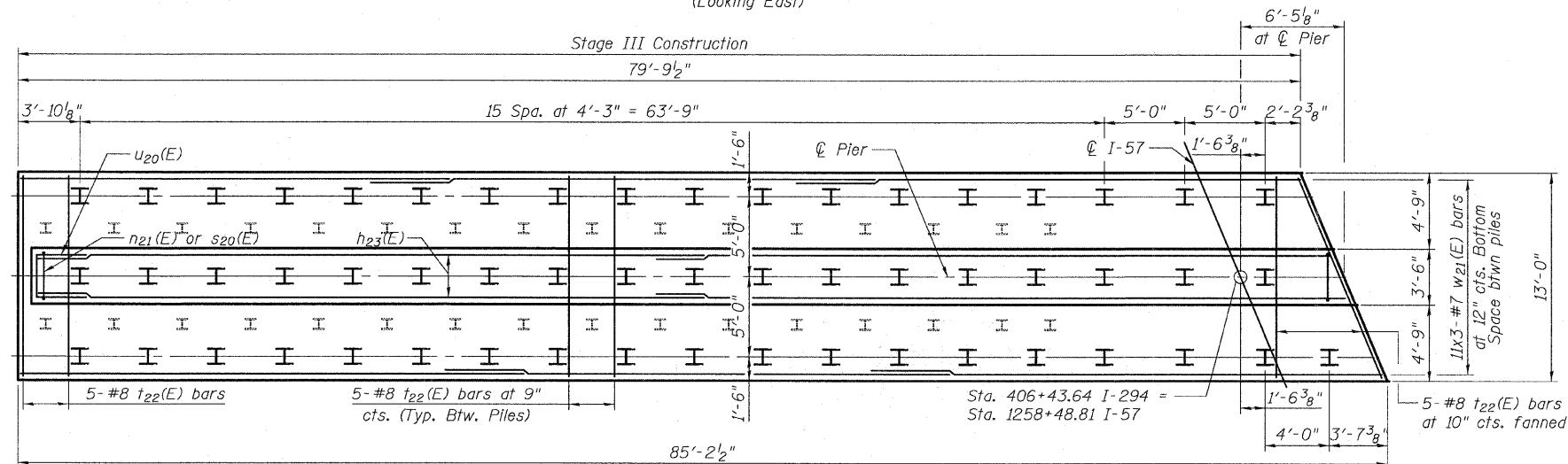
MINIMUM BAR LAPS

Bar	Lap
#5	3'-3"
#7	5'-2"
#8	6'-9"
#8	*7'-8"
#9	8'-7"
#9	*9'-8"

\*Top bar lap

SEAT ELEVATIONS

Beam No.	1	2	3	4	5	6	7	8	9	10	11	12
Elevation	631.37	631.50	631.62	631.72	631.72	631.63	631.52	631.39	631.26	631.13	631.00	630.87
Step Height	1 1/2"	1 1/2"	1 1/4"	0"	1 1/8"	1 3/8"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 5/8"



FOOTING PLAN

PIER 2 PLAN AND ELEVATION - 2  
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL

DESIGNED - PK	REVISIONS	
CHECKED - SP,	NAME	DATE
DRAWN - PK		
CHECKED - SP,PDF		
DATE - 03/18/10		

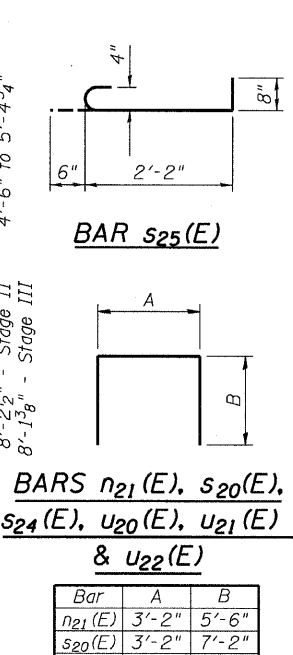
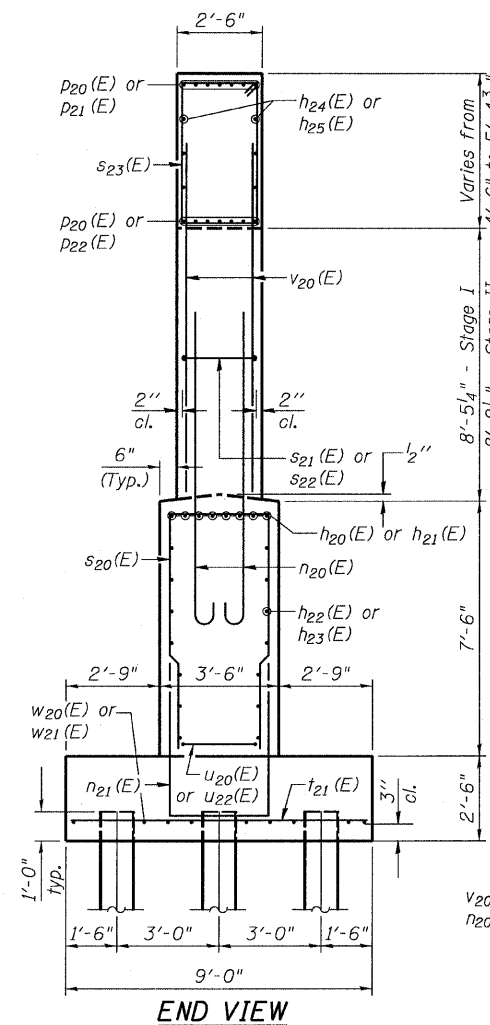
SHEET NO. 53  
68 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	298
CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

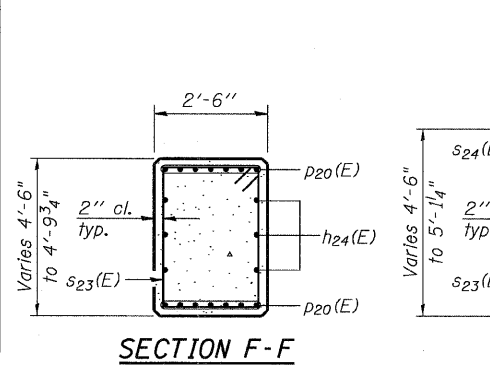
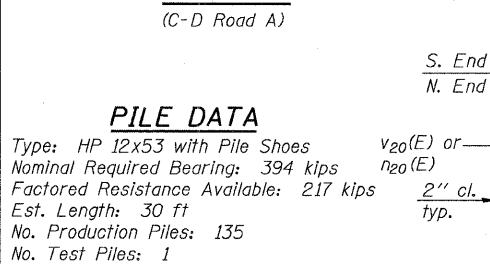
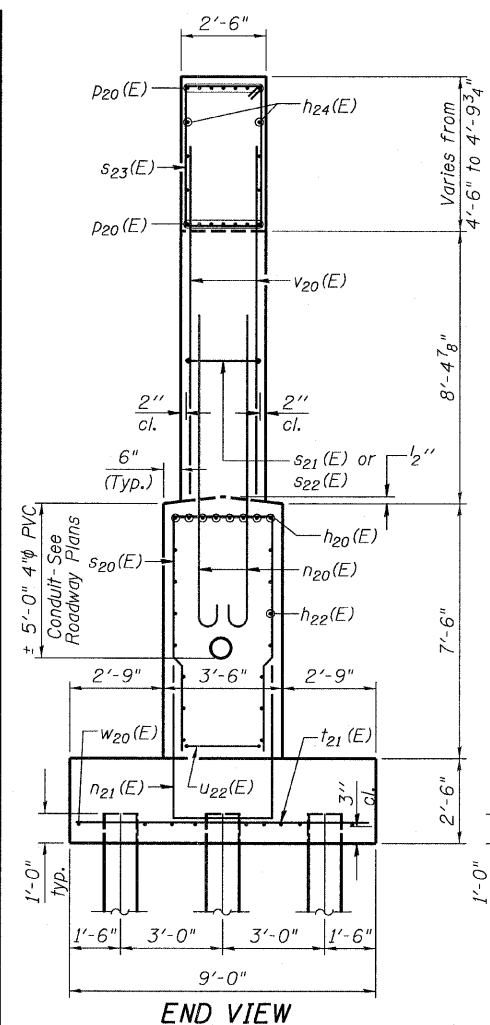
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PIER 1 - BILL OF MATERIAL

PIER 2 - BILL OF MATERIAL



Bar	No.	Size	Length	Shape
h20(E)	8	#8	46'-2"	
h21(E)	32	#8	44'-10"	
h22(E)	14	#5	46'-2"	
h23(E)	56	#5	42'-8"	
h24(E)	6	#5	46'-0"	
h25(E)	24	#5	41'-10"	
h26(E)	4	#5	13'-0"	
h27(E)	4	#5	40'-2"	
h28(E)	8	#5	32'-1"	
h29(E)	4	#5	19'-11"	
n20(E)	224	#8	11'-8"	
n21(E)	315	#5	14'-2"	
p20(E)	14	#8	46'-0"	
p21(E)	28	#9	45'-1"	
p22(E)	12	#9	51'-8"	
p23(E)	12	#9	37'-6"	
p27(E)	14	#9	18'-8"	
p28(E)	28	#9	18'-6"	
s20(E)	315	#5	17'-6"	
s21(E)	126	#4	11'-5"	
s22(E)	36	#4	10'-3"	
s23(E)	303	#5	13'-7"	
s24(E)	123	#4	6'-2"	
s25(E)	144	#4	3'-4"	
t21(E)	277	#8	8'-9"	
u20(E)	8	#5	9'-6"	
u21(E)	30	#5	8'-6"	
u22(E)	8	#5	12'-2"	
v20(E)	224	#8	12'-3"	
w20(E)	18	#7	27'-5"	
w21(E)	54	#7	31'-9"	
Structure Excavation		Cu. Yd.	570	
Concrete Structures		Cu. Yd.	519.7	
Reinforcement Bars, Epoxy Coated		Pound	64,660	
Furnishing Steel Piles, HP12x53		Foot	3,601	
Driving Piles		Foot	3,601	
Test Pile Steel HP12x53		Each	1	



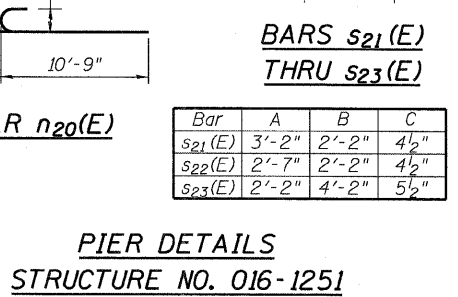
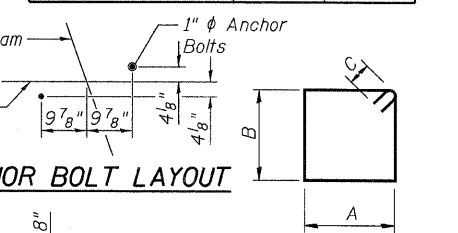
PILE DATA

Type: HP 12x53 with Pile Shoes  
Nominal Req. Bearing: 378 kips (SB I-57)  
Factored Resistance Available: 208 kips (SB I-57)  
Est. Length: 32 ft (SB I-57)  
Nominal Req. Bearing: 350 kips (NB I-57, C-D Road A)  
Factored Resistance Available: 193 kips (NB I-57, C-D Road A)  
Est. Length: 37 ft (NB I-57, C-D Road A)  
No. Production Piles: 103  
No. Test Piles: 1

PILE DATA

Type: HP 12x53 with Pile Shoes  
Nominal Required Bearing: 394 kips  
Factored Resistance Available: 217 kips  
Est. Length: 30 ft  
No. Production Piles: 135  
No. Test Piles: 1

Bar	No.	Size	Length	Shape
h20(E)	8	#8	46'-2"	
h21(E)	32	#8	44'-10"	
h22(E)	14	#5	46'-2"	
h23(E)	56	#5	42'-8"	
h24(E)	6	#5	46'-0"	
h25(E)	24	#5	41'-10"	
h27(E)	4	#5	40'-2"	
h28(E)	8	#5	32'-1"	
h29(E)	4	#5	19'-11"	
n20(E)	320	#8	11'-8"	
n21(E)	315	#5	14'-2"	
p20(E)	14	#8	46'-0"	
p21(E)	28	#9	45'-1"	
p22(E)	12	#9	51'-8"	
p23(E)	12	#9	37'-6"	
p27(E)	14	#9	18'-8"	
p28(E)	28	#9	18'-6"	
s20(E)	315	#5	17'-6"	
s21(E)	126	#4	11'-5"	
s22(E)	36	#4	10'-3"	
s23(E)	303	#5	13'-7"	
s24(E)	123	#4	6'-2"	
s25(E)	144	#4	3'-4"	
t21(E)	56	#8	8'-9"	
t22(E)	191	#8	12'-9"	
u20(E)	8	#5	9'-6"	
u21(E)	30	#5	8'-6"	
u22(E)	8	#5	12'-2"	
v20(E)	320	#8	12'-3"	
w20(E)	18	#7	27'-5"	
w21(E)	66	#7	31'-9"	
Structure Excavation		Cu. Yd.	704	
Concrete Structures		Cu. Yd.	579.8	
Reinforcement Bars, Epoxy Coated		Pound	73,990	
Furnishing Steel Piles, HP12x53		Foot	4,050	
Driving Piles		Foot	4,050	
Test Pile Steel HP12x53		Each	1	

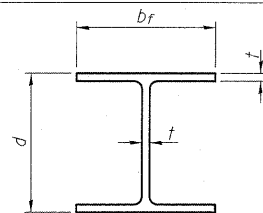


PIER DETAILS  
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - PK	REVISIONS		SHEET NO. 54	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - SP,	NAME	DATE		57	1414.2B	COOK	516	299
	DRAWN - PK				68 SHEETS	CONTRACT NO. 60J27			
	CHECKED - SP, PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/18/10		04/29/10						

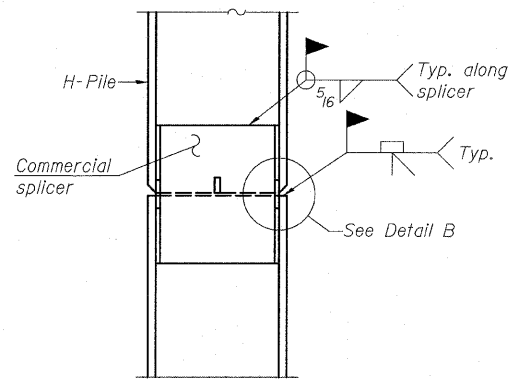
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

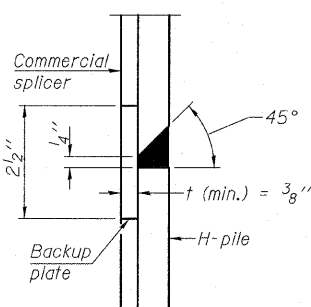


STEEL PILE TABLE

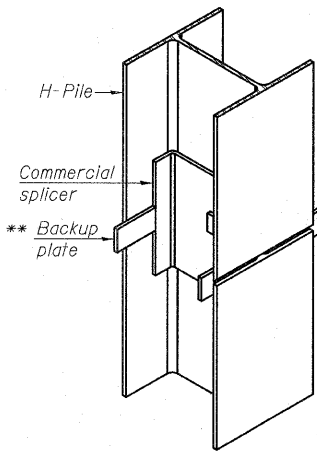
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



ELEVATION

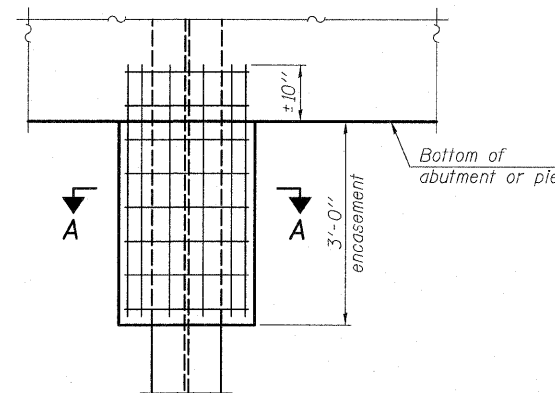


DETAIL "B"



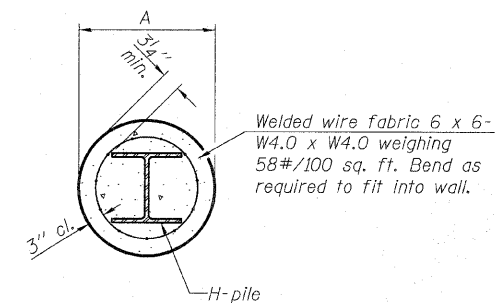
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



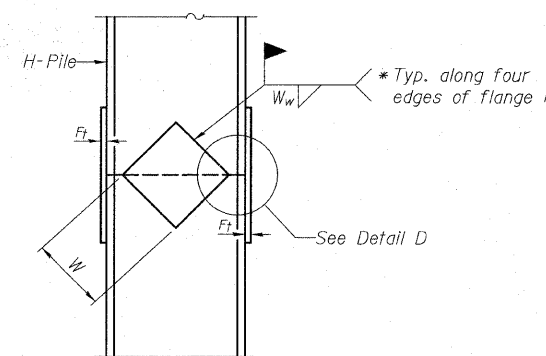
ELEVATION

PILE ENCASEMENT

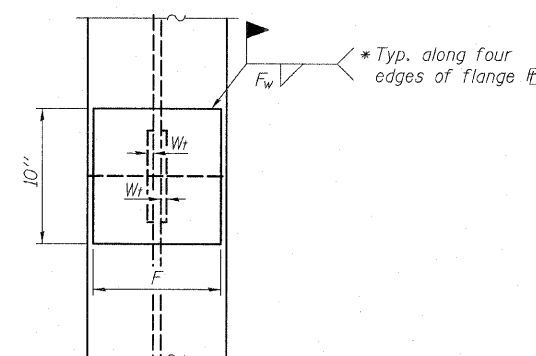


SECTION A-A

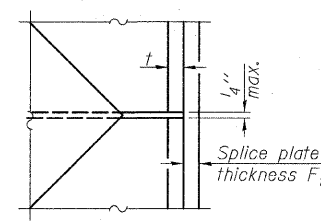
Note:  
Forms for encasement may be omitted when soil conditions permit.



ELEVATION



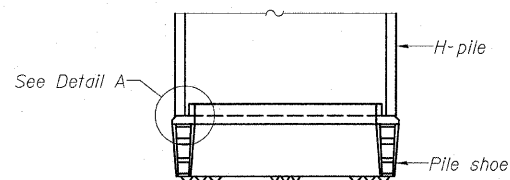
END VIEW



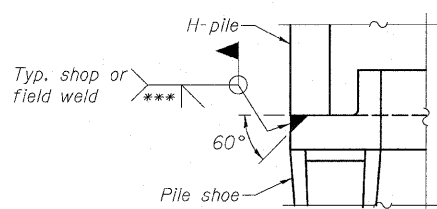
DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 8/8"	1 1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 8/8"	1 1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5 8/8"	1 1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 8/8"	1 1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5 8/8"	1 1/2"
x74	10"	7/8"	11/16"	6 1/2"	5 8/8"	1 1/2"
x63	10"	5/8"	1/2"	6 1/2"	1 1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1 1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1 1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1 1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1 1/2"	3/8"

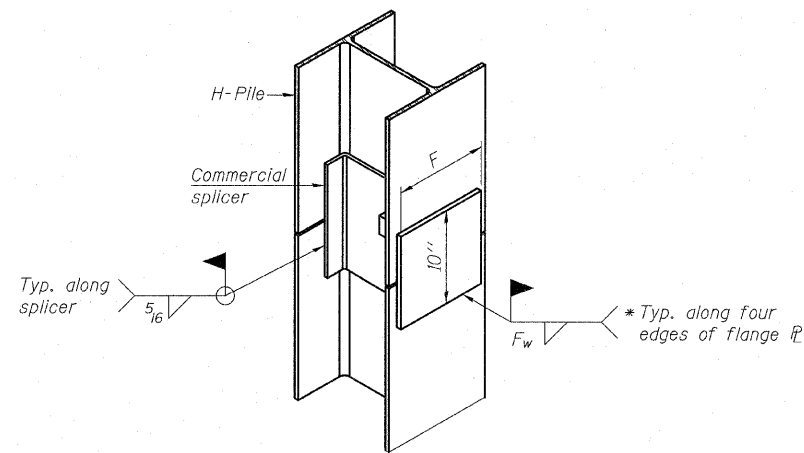


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- \* 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.).

Note:  
The steel H-piles shall be according to AASHTO M270 Grade 50.

HP PILE DETAILS  
STRUCTURE NO. 016-1251

F-HP 11-1-09

TYLIN INTERNATIONAL	DESIGNED - SP	REVISIONS		SHEET NO. 55	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - SP,	NAME	DATE		68 SHEETS	57	1414.2B	COOK	516	300
	DRAWN - SP					CONTRACT NO. 60J27				
	CHECKED - SP,PDF					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/18/10									

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