

① T  
10' DASH  
30' SKIP

① T

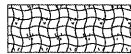
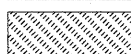
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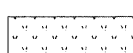
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**PAVEMENT MARKING LEGEND**



- ① PAVEMENT MARKING - LINE 4" WHITE
- ② PAVEMENT MARKING - LINE 5" WHITE
- ③ PAVEMENT MARKING - LINE 6" WHITE
- ④ PAVEMENT MARKING - LINE 8" WHITE
- ⑤ PAVEMENT MARKING - LINE 12" WHITE
- ⑥ PAVEMENT MARKING - LINE 24" WHITE
- ⑦ PAVEMENT MARKING - LINE 4" YELLOW
- ⑧ PAVEMENT MARKING - LINE 5" YELLOW
- ⑨ PAVEMENT MARKING - LINE 6" YELLOW
- ⑩ PAVEMENT MARKING - LINE 8" YELLOW
- ⑪ PAVEMENT MARKING - LINE 12" YELLOW
- ⑫ PAVEMENT MARKING - DOUBLE LINE 4" YELLOW
- ⑬ PAVEMENT MARKING - LETTERS AND SYMBOLS
- ◆ RAISED REFLECTIVE PAVEMENT MARKERS (TWO-WAY AMBER)
- ◄ RAISED REFLECTIVE PAVEMENT MARKERS (ONE-WAY CRYSTAL)
- ◄ RAISED REFLECTIVE PAVEMENT MARKERS (ONE-WAY AMBER)
- Ⓟ POLYUREA PVT MK
- Ⓧ THPL PVT MK

**LANDSCAPE LEGEND**

-  SEEDING, CLASS 7 AND EROSION CONTROL BLANKET
-  SODDING, SALT TOLERANT TOPSOIL FURNISH AND PLACE, 6"

-  SEEDING, CLASS 4 WITH COMPOST FURNISH AND PLACE, 2" PLUS TOPSOIL FURNISH AND PLACE, 4" AND MULCH, METHOD 2
-  SEEDING, CLASS 4B MODIFIED WITH COMPOST FURNISH AND PLACE, 4" AND MULCH, METHOD 2

**SIGNING LEGEND**

- ⌞ EXISTING GROUND SIGN  EXISTING SIGN PANEL
- ⌞ PROPOSED GROUND SIGN  PROPOSED SIGN PANEL

**NOTE**

1. SEE DISTRICT DETAILS TC-12 AND TC-13 FOR ADDITIONAL PAVEMENT MARKING DETAILS. DISTRICT ONE DETAIL TC-12 SHALL APPLY TO THE PAVEMENT MARKING ON US ROUTE 20 EXCEPT THAT THE WIDTH OF THE LANE LINES SHALL BE 4". PAVEMENT MARKINGS AND REFLECTORS ARE SHOWN AT LONGITUDINAL PAVEMENT JOINTS. SEE DISTRICT DETAILS TC-12 AND TC-13 FOR LOCATION OF PAVEMENT MARKINGS AND REFLECTORS RELATIVE TO PAVEMENT JOINTS.

2. IF THE CONTRACTOR ELECTS TO USE PCC FOR THE TEMPORARY PAVEMENT (INTERSTATE) ALONG U.S. ROUTE 20, THE CONTRACTOR SHALL USE POLYUREA IN PLACE OF THERMOPLASTIC AT NO ADDITIONAL COSTS TO THE CONTRACT.

D:\1606\90 BORDE@01.DGN, D:\1606\90 ALFAMANT.DGN, D:\1606\90 LECTWD.DGN, D:\1606\90 RENWERS.DGN, D:\1606\90 RMA.DGN, D:\1606\90 TOPPF.DGN, D:\1606\90 TPCD.DGN, D:\1606\90 SCSHE1.DWG, D:\1606\90 SCSHE2.DWG, D:\1606\90 SCSHE3.DWG, D:\1606\90 SCSHE4.DWG, D:\1606\90 SCSHE5.DWG, D:\1606\90 SCSHE6.DWG, D:\1606\90 SCSHE7.DWG, D:\1606\90 SCSHE8.DWG, D:\1606\90 SCSHE9.DWG, D:\1606\90 SCSHE10.DWG, D:\1606\90 SCSHE11.DWG, D:\1606\90 SCSHE12.DWG, D:\1606\90 SCSHE13.DWG, D:\1606\90 SCSHE14.DWG, D:\1606\90 SCSHE15.DWG, D:\1606\90 SCSHE16.DWG, D:\1606\90 SCSHE17.DWG, D:\1606\90 SCSHE18.DWG, D:\1606\90 SCSHE19.DWG, D:\1606\90 SCSHE20.DWG, D:\1606\90 SCSHE21.DWG, D:\1606\90 SCSHE22.DWG, D:\1606\90 SCSHE23.DWG, D:\1606\90 SCSHE24.DWG, D:\1606\90 SCSHE25.DWG, D:\1606\90 SCSHE26.DWG, D:\1606\90 SCSHE27.DWG, D:\1606\90 SCSHE28.DWG, D:\1606\90 SCSHE29.DWG, D:\1606\90 SCSHE30.DWG, D:\1606\90 SCSHE31.DWG, D:\1606\90 SCSHE32.DWG, D:\1606\90 SCSHE33.DWG, D:\1606\90 SCSHE34.DWG, D:\1606\90 SCSHE35.DWG, D:\1606\90 SCSHE36.DWG, D:\1606\90 SCSHE37.DWG, D:\1606\90 SCSHE38.DWG, D:\1606\90 SCSHE39.DWG, D:\1606\90 SCSHE40.DWG, D:\1606\90 SCSHE41.DWG, D:\1606\90 SCSHE42.DWG, D:\1606\90 SCSHE43.DWG, D:\1606\90 SCSHE44.DWG, D:\1606\90 SCSHE45.DWG, D:\1606\90 SCSHE46.DWG, D:\1606\90 SCSHE47.DWG, D:\1606\90 SCSHE48.DWG, D:\1606\90 SCSHE49.DWG, D:\1606\90 SCSHE50.DWG, D:\1606\90 SCSHE51.DWG, D:\1606\90 SCSHE52.DWG, D:\1606\90 SCSHE53.DWG, D:\1606\90 SCSHE54.DWG, D:\1606\90 SCSHE55.DWG, D:\1606\90 SCSHE56.DWG, D:\1606\90 SCSHE57.DWG, D:\1606\90 SCSHE58.DWG, D:\1606\90 SCSHE59.DWG, D:\1606\90 SCSHE60.DWG, D:\1606\90 SCSHE61.DWG, D:\1606\90 SCSHE62.DWG, D:\1606\90 SCSHE63.DWG, D:\1606\90 SCSHE64.DWG, D:\1606\90 SCSHE65.DWG, D:\1606\90 SCSHE66.DWG, D:\1606\90 SCSHE67.DWG, D:\1606\90 SCSHE68.DWG, D:\1606\90 SCSHE69.DWG, D:\1606\90 SCSHE70.DWG, D:\1606\90 SCSHE71.DWG, D:\1606\90 SCSHE72.DWG, D:\1606\90 SCSHE73.DWG, D:\1606\90 SCSHE74.DWG, D:\1606\90 SCSHE75.DWG, D:\1606\90 SCSHE76.DWG, D:\1606\90 SCSHE77.DWG, D:\1606\90 SCSHE78.DWG, D:\1606\90 SCSHE79.DWG, D:\1606\90 SCSHE80.DWG, D:\1606\90 SCSHE81.DWG, D:\1606\90 SCSHE82.DWG, D:\1606\90 SCSHE83.DWG, D:\1606\90 SCSHE84.DWG, D:\1606\90 SCSHE85.DWG, D:\1606\90 SCSHE86.DWG, D:\1606\90 SCSHE87.DWG, D:\1606\90 SCSHE88.DWG, D:\1606\90 SCSHE89.DWG, D:\1606\90 SCSHE90.DWG, D:\1606\90 SCSHE91.DWG, D:\1606\90 SCSHE92.DWG, D:\1606\90 SCSHE93.DWG, D:\1606\90 SCSHE94.DWG, D:\1606\90 SCSHE95.DWG, D:\1606\90 SCSHE96.DWG, D:\1606\90 SCSHE97.DWG, D:\1606\90 SCSHE98.DWG, D:\1606\90 SCSHE99.DWG, D:\1606\90 SCSHE100.DWG

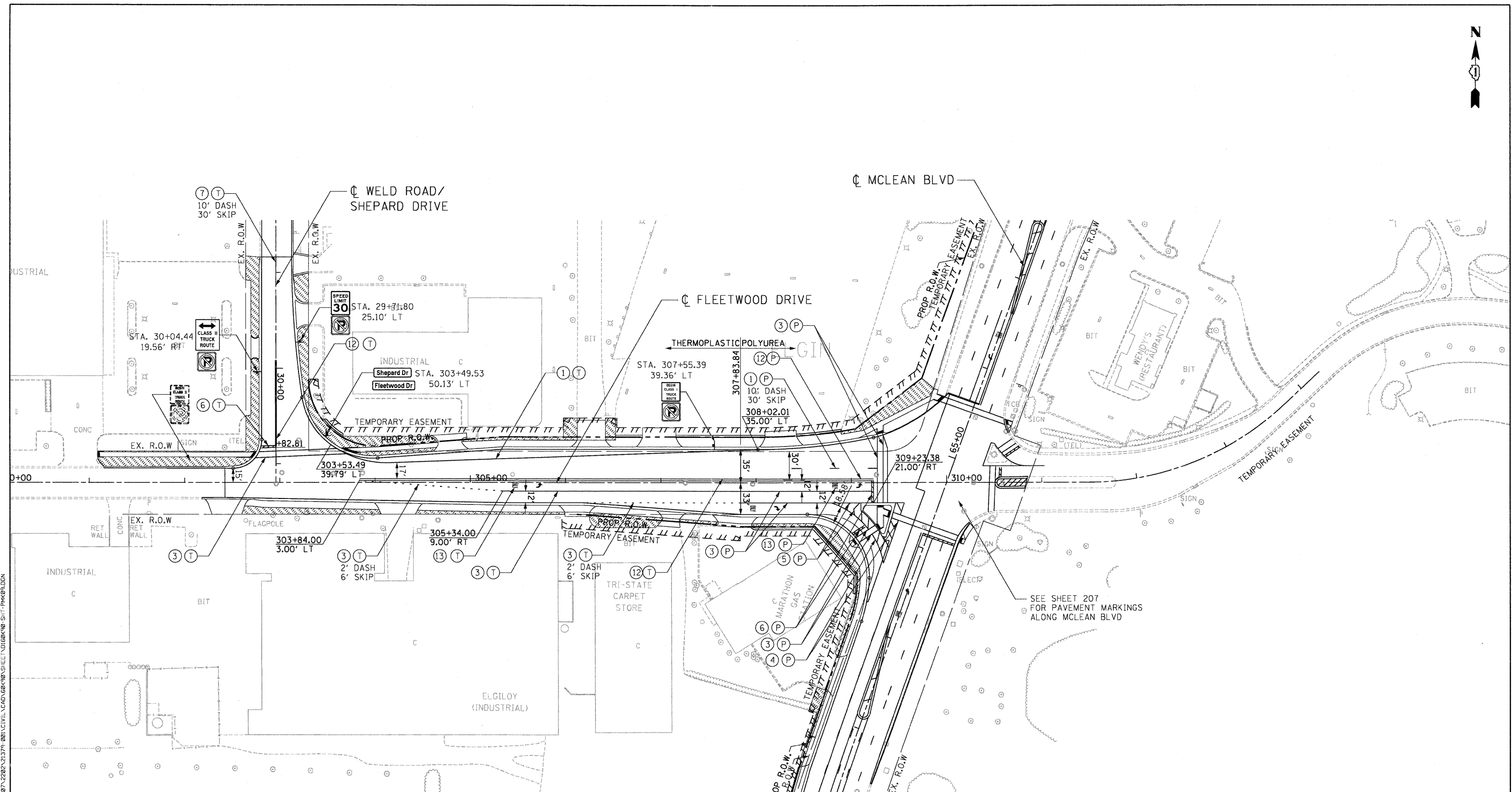
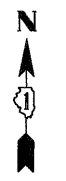
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		DATE - 05/18/11	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
 FAP ROUTE 345 / US ROUTE 20

<b>PAVEMENT MARKING, SIGNING AND LANDSCAPING PLANS</b>			
<b>U.S. ROUTE 20</b>			
SCALE: 1"=50'	SHEET NO. OF SHEETS	STA. 145+00.00 TO STA. 156+00.00	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	8R-HB-2-BY-1	KANE	434	205
FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT
			CONTRACT NO. 60K90	





**PAVEMENT MARKING LEGEND**

- ① PAVEMENT MARKING - LINE 4" WHITE
- ② PAVEMENT MARKING - LINE 5" WHITE
- ③ PAVEMENT MARKING - LINE 6" WHITE
- ④ PAVEMENT MARKING - LINE 8" WHITE
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- RAISED REFLECTIVE PAVEMENT MARKERS (ONE-WAY AMBER)
- Ⓟ POLYUREA PVT MK
- Ⓣ THPL PVT MK

**LANDSCAPE LEGEND**

- SEEDING, CLASS 7 AND EROSION CONTROL BLANKET
- SODDING, SALT TOLERANT TOPSOIL FURNISH AND PLACE, 6"
- SEEDING, CLASS 4 WITH COMPOST FURNISH AND PLACE, 2" PLUS TOPSOIL FURNISH AND PLACE, 4" AND MULCH, METHOD 2
- SEEDING, CLASS 4B MODIFIED WITH COMPOST FURNISH AND PLACE, 4" AND MULCH, METHOD 2

**NOTE**

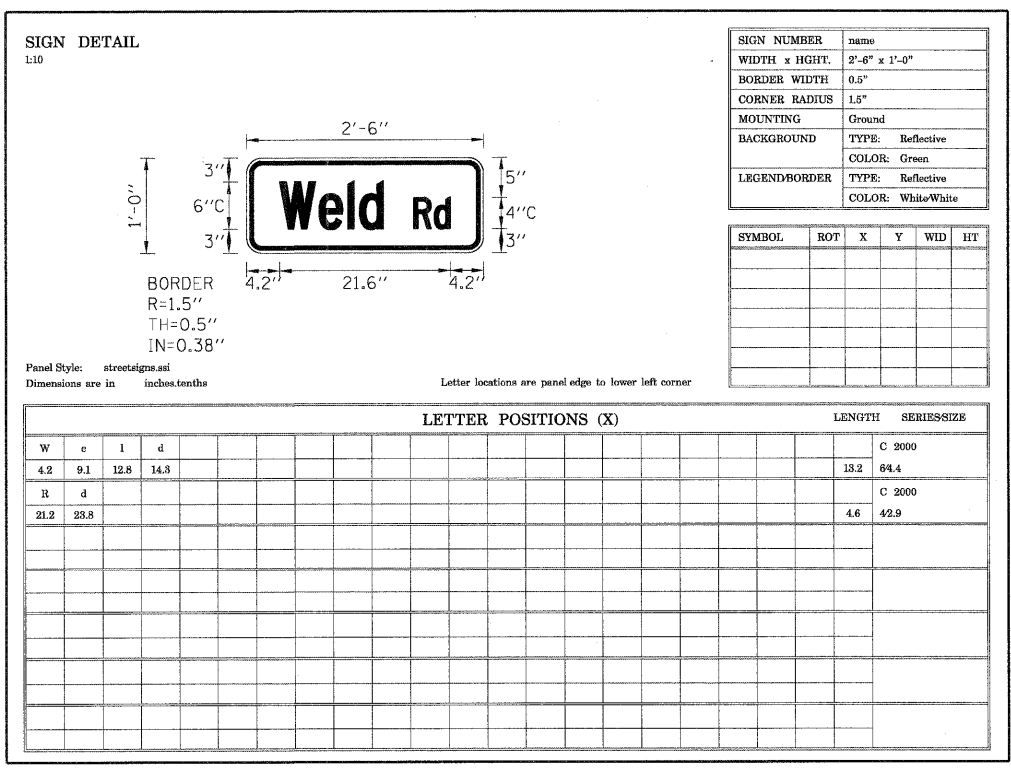
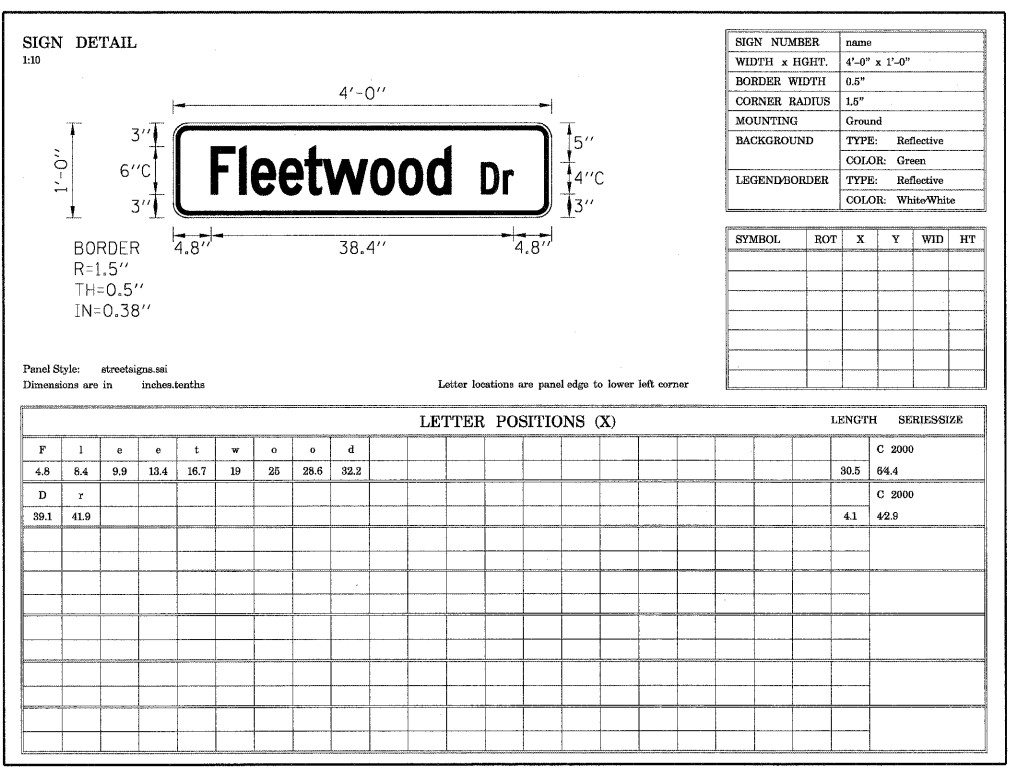
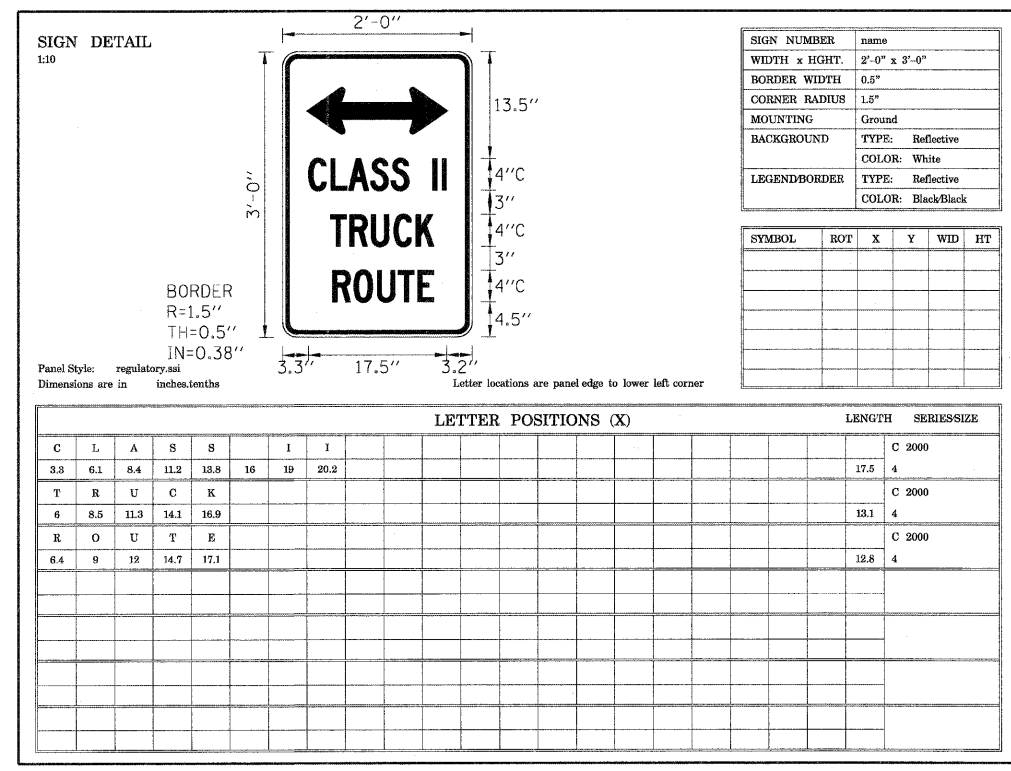
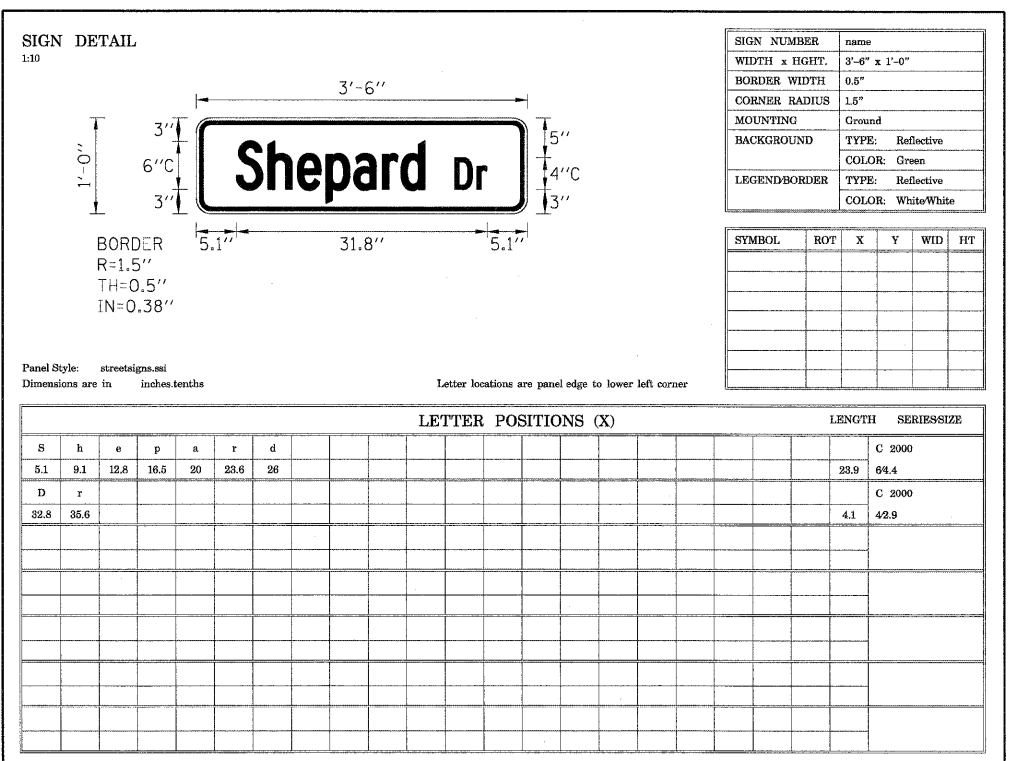
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**SIGNING LEGEND**

- EXISTING GROUND SIGN
- EXISTING SIGN PANEL
- PROPOSED GROUND SIGN
- PROPOSED SIGN PANEL

FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - AMB DRAWN - AMB CHECKED - DDH DATE - 05/18/11	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b> FAP ROUTE 345 / US ROUTE 20	<b>PAVEMENT MARKING, SIGNING AND LANDSCAPING PLANS</b> <b>FLEETWOOD DRIVE</b>	F.A.P. RTE. 345	SECTION BR-HB-2-BY-1	COUNTY KANE	TOTAL SHEETS 434	SHEET NO. 206
<b>TENG</b> TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS					SCALE: 1"=50'    SHEET NO.    OF    SHEETS    STA. 302+15.20 TO STA. 314+28.00		CONTRACT NO. 60K90			





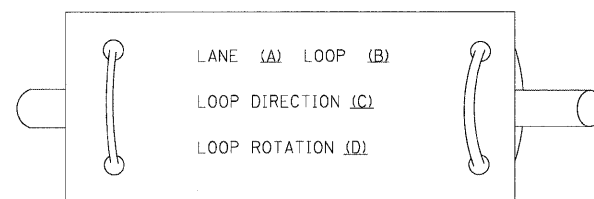
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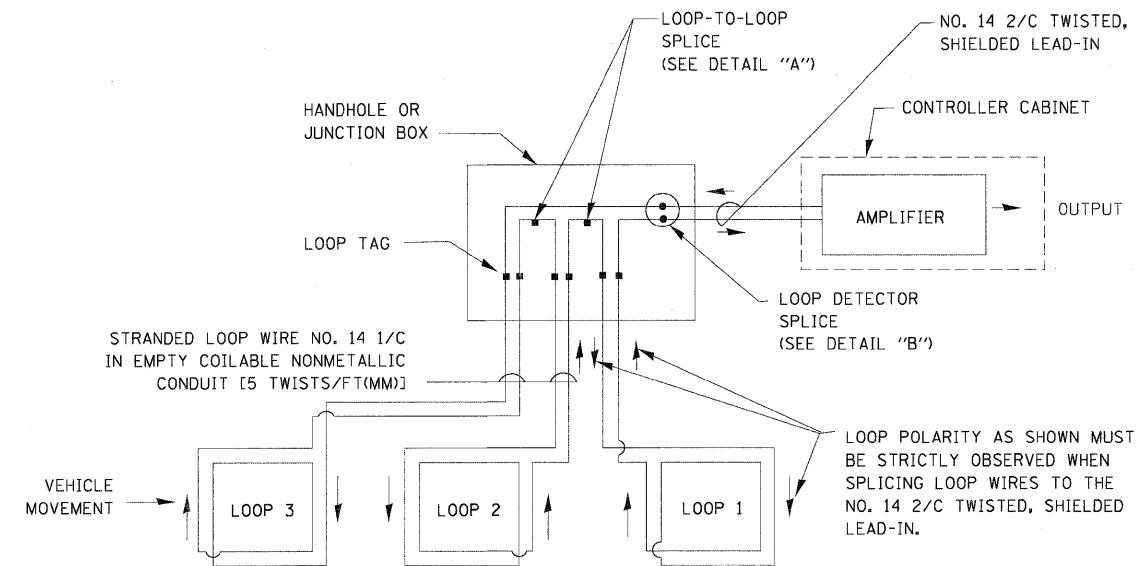
**LOOP DETECTOR NOTES**

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

**LOOP LEAD-IN CABLE TAG**

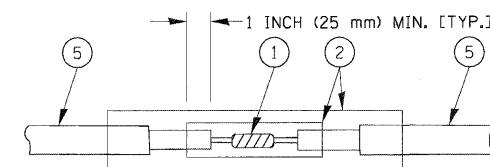


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

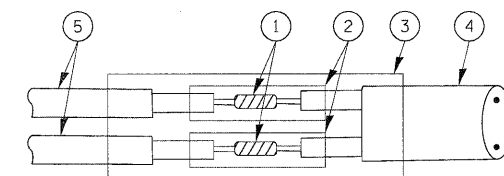


**DETECTOR LOOP WIRING SCHEMATIC**

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

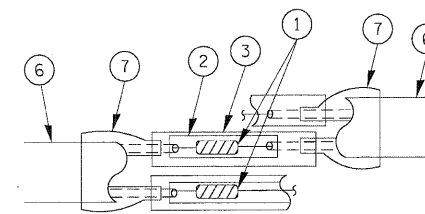


**DETAIL "A"  
LOOP-TO-LOOP SPLICE**

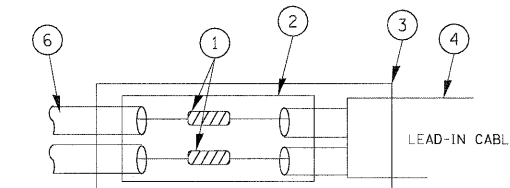


**DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE**

**TYPE I LOOP**



**DETAIL "A"  
LOOP-TO-LOOP SPLICE**



**DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE**

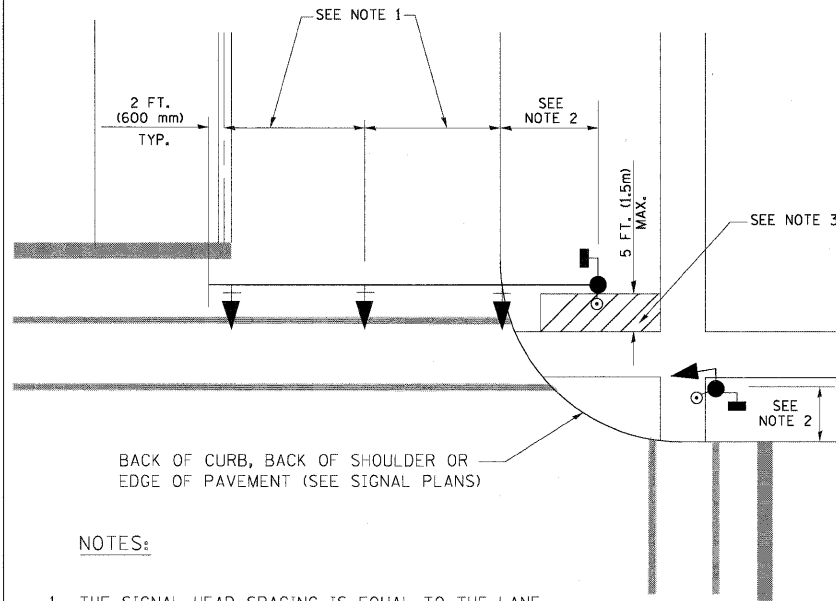
**LOOP DETECTOR SPLICE**

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

FILE NAME =	USER NAME = kanthaphixaybc	DESIGNED - DAD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 20.0000' / IN.		CHECKED - DAD	REVISED -		SCALE:	SHEET NO. 1 OF 6 SHEETS	STA.	TO STA.		FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
PLOT DATE = 10/6/2009		DATE - 10/28/09	REVISED -								

**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST**

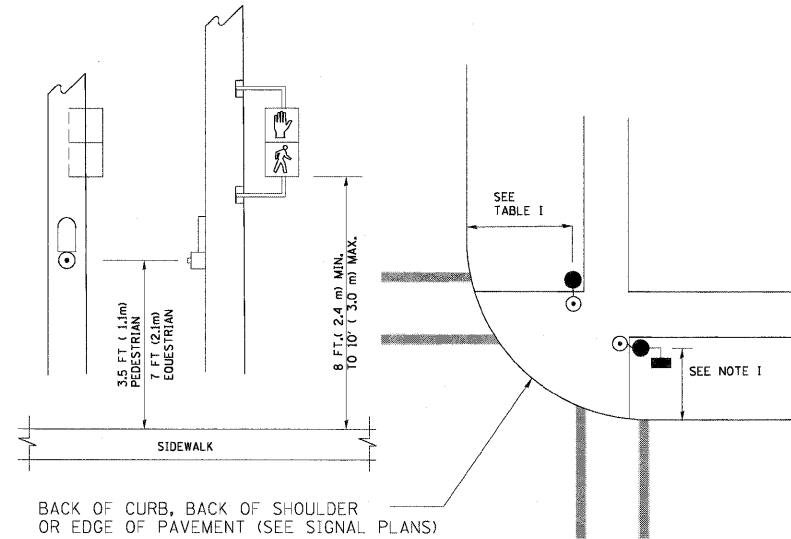
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



**NOTES:**

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

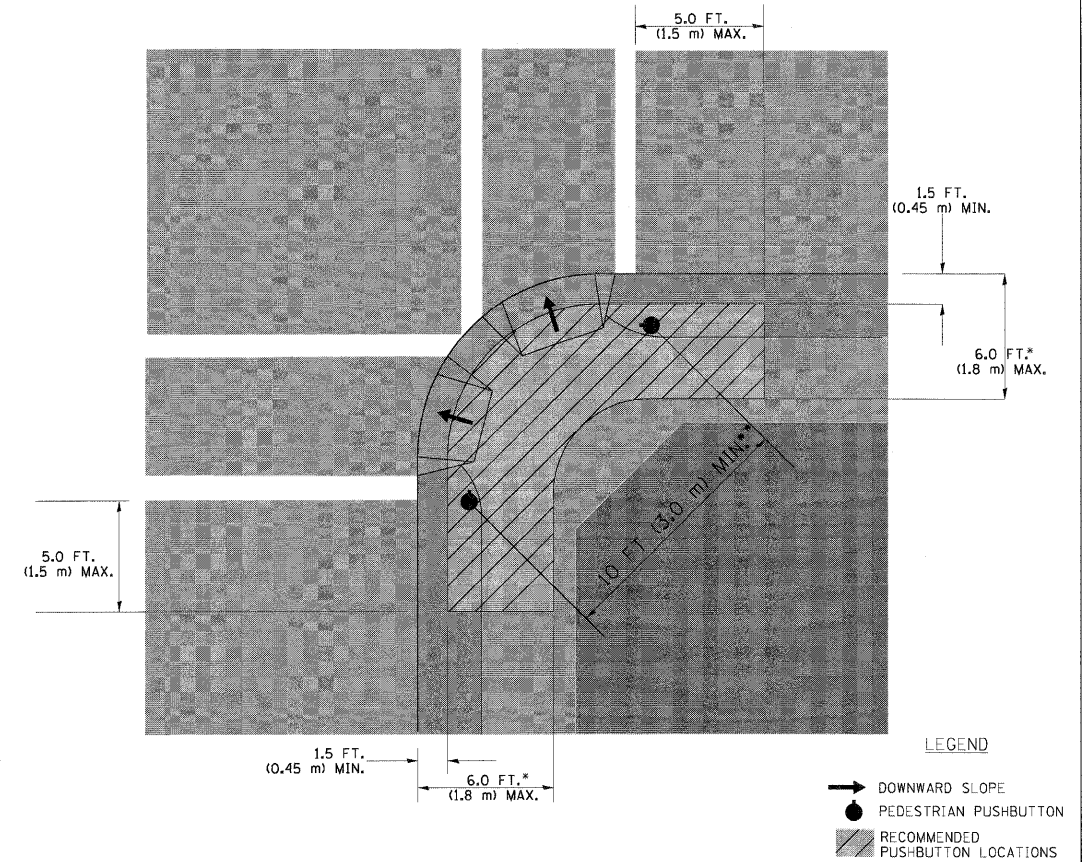
**PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST**



**NOTES:**

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

**RECOMMENDED PUSHBUTTON LOCATIONS**



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

**NOTES:**

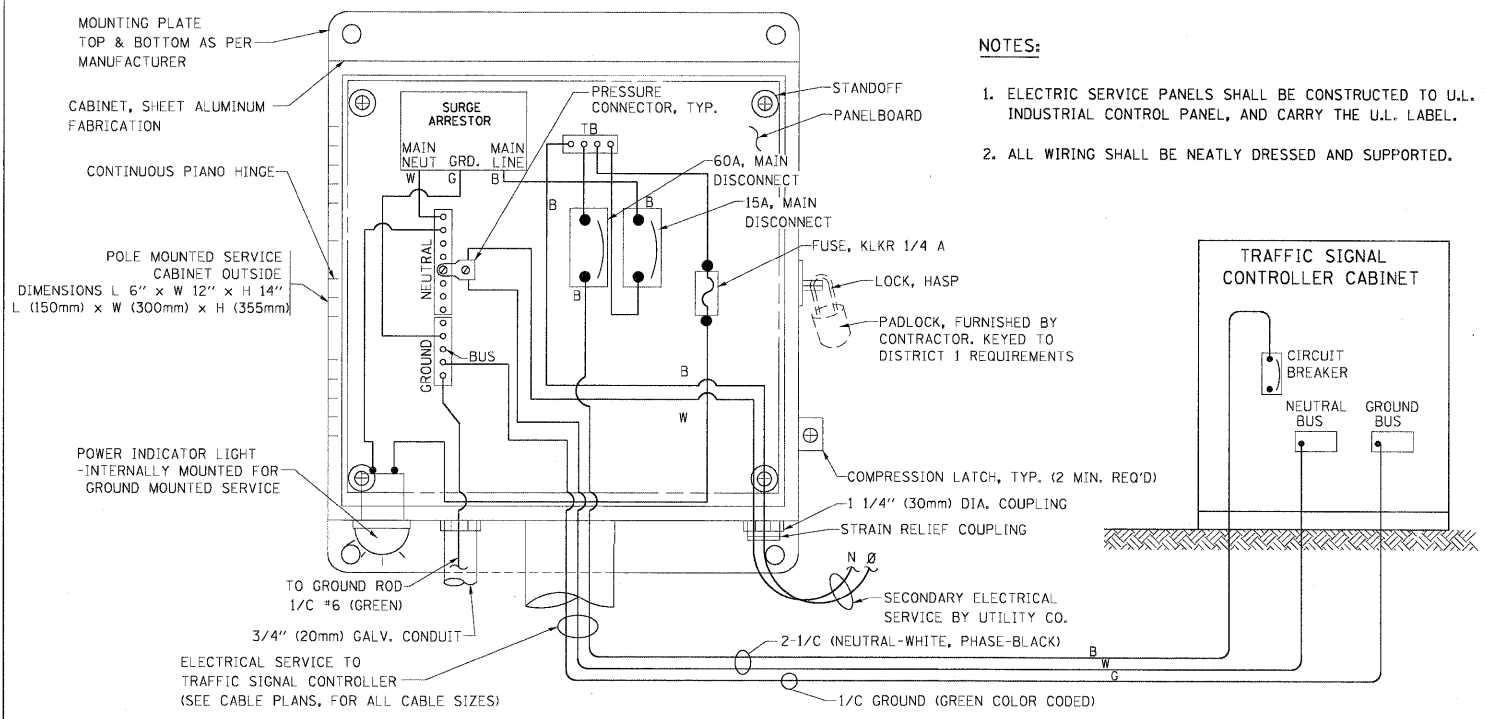
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM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

**TRAFFIC SIGNAL EQUIPMENT OFFSET**

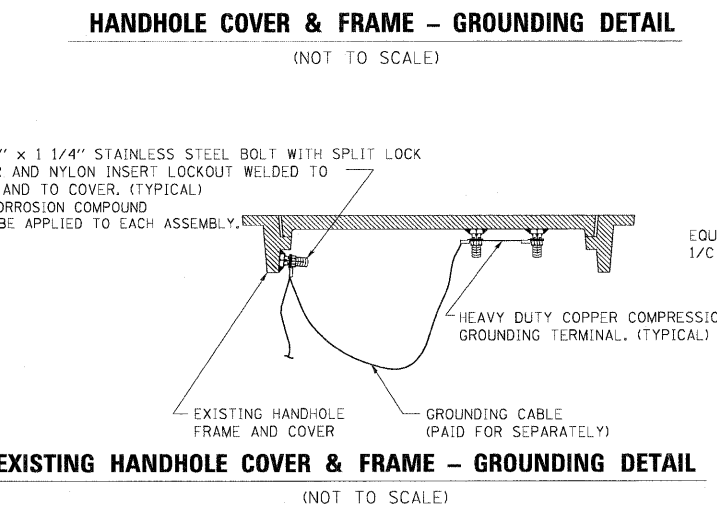
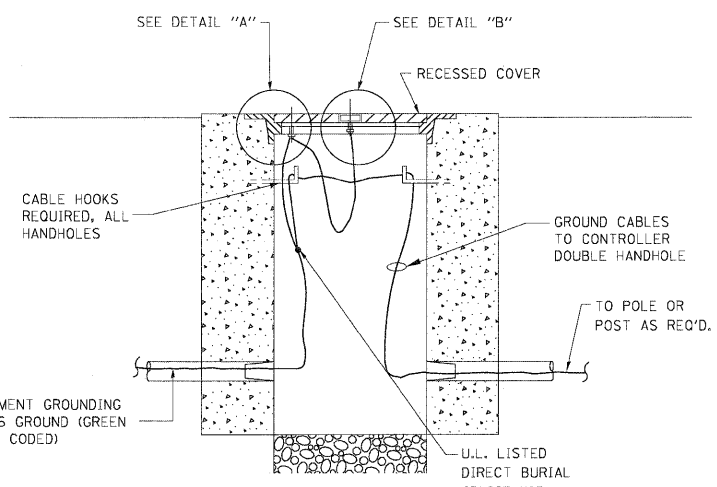
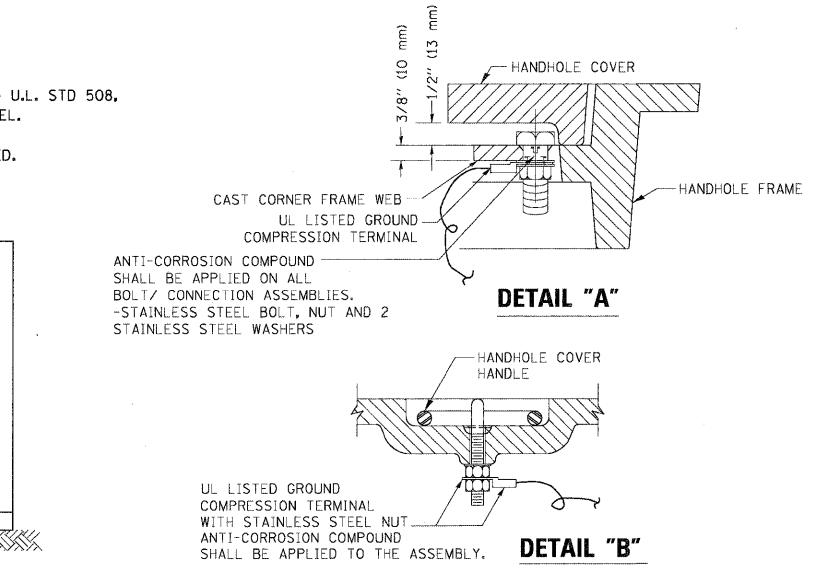
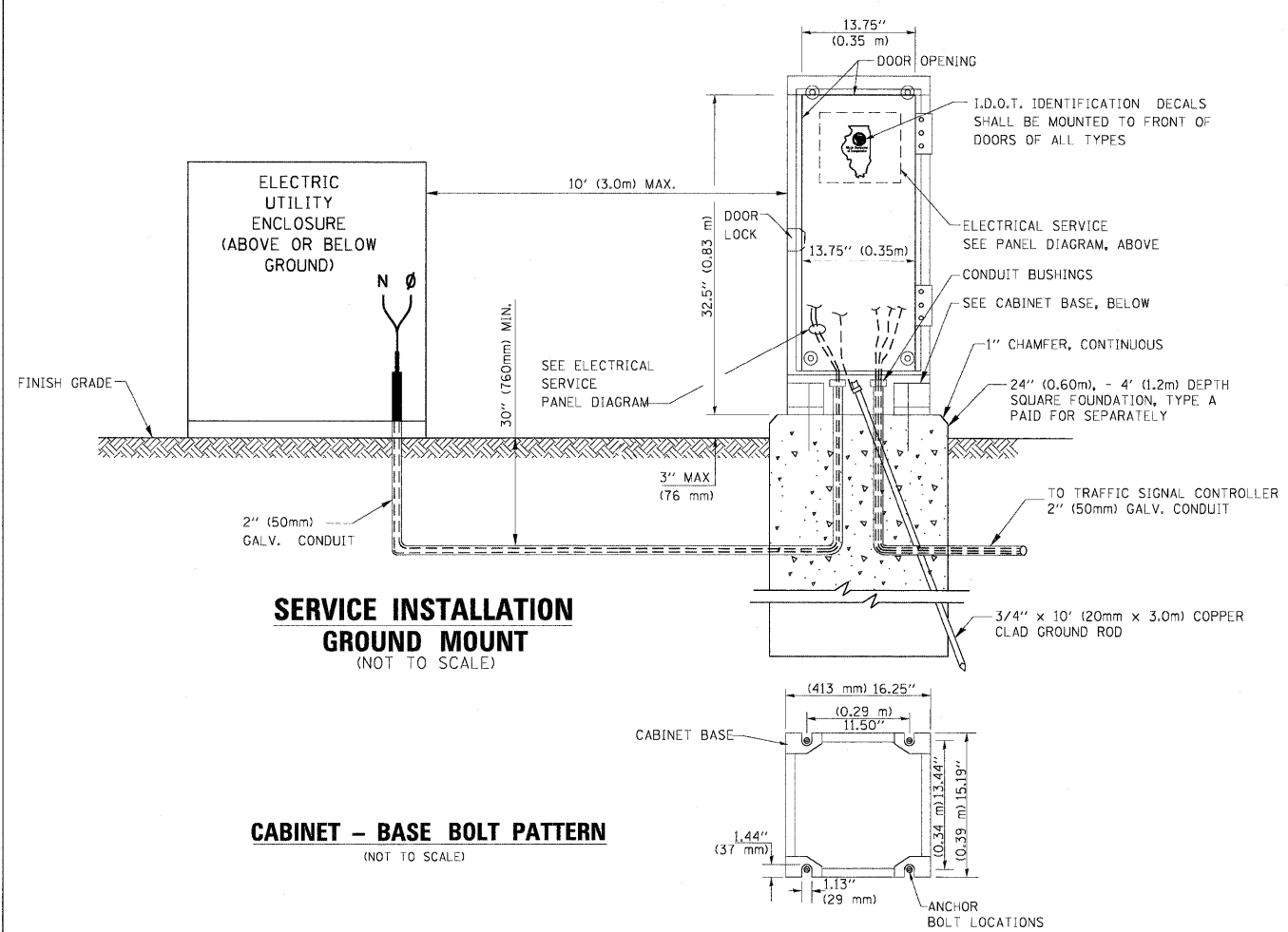
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10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

**NOTES:**

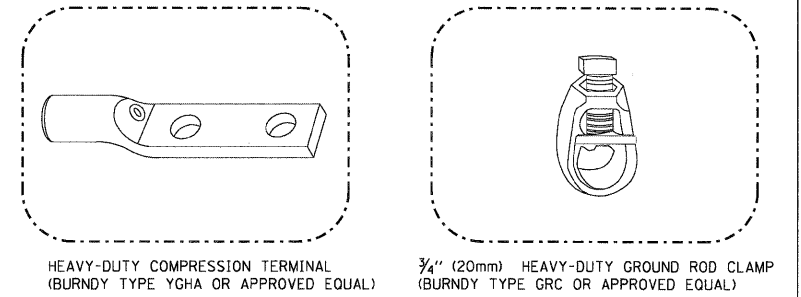
1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM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



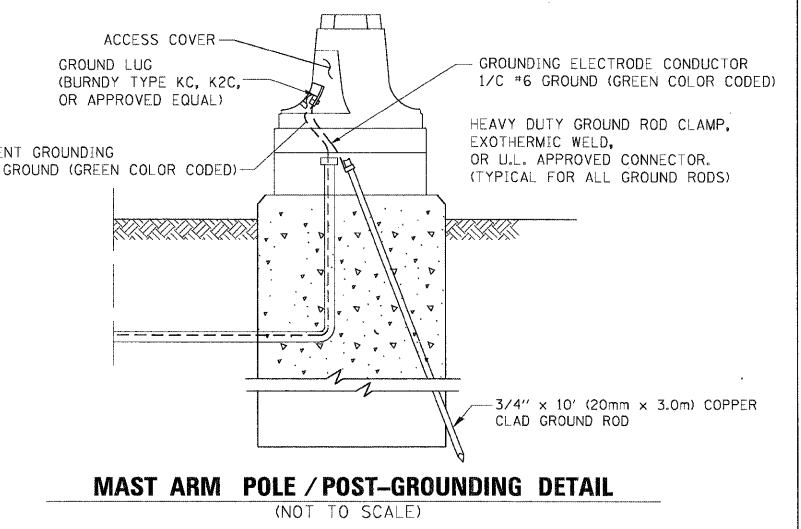
**ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)**  
**SERVICE INSTALLATION POLE MOUNT (SHOWN)**  
 (NOT TO SCALE)

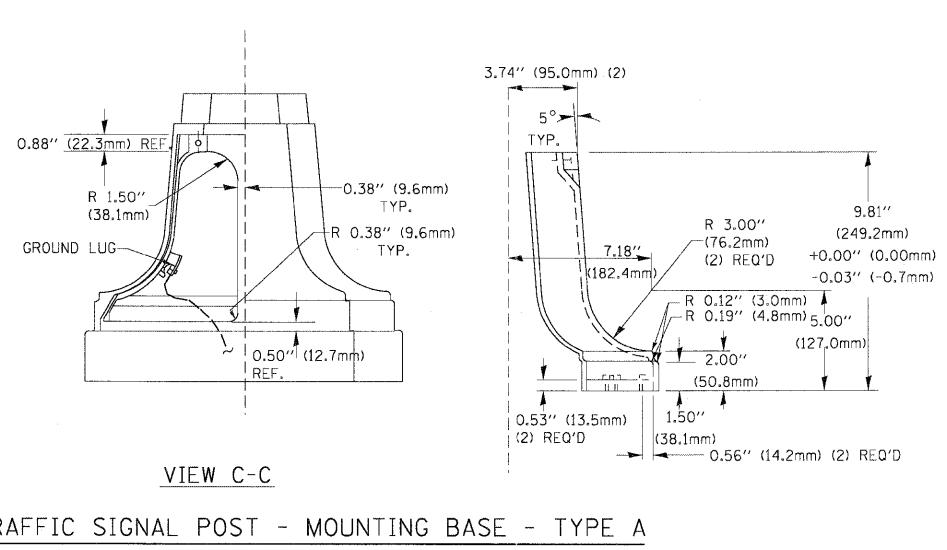
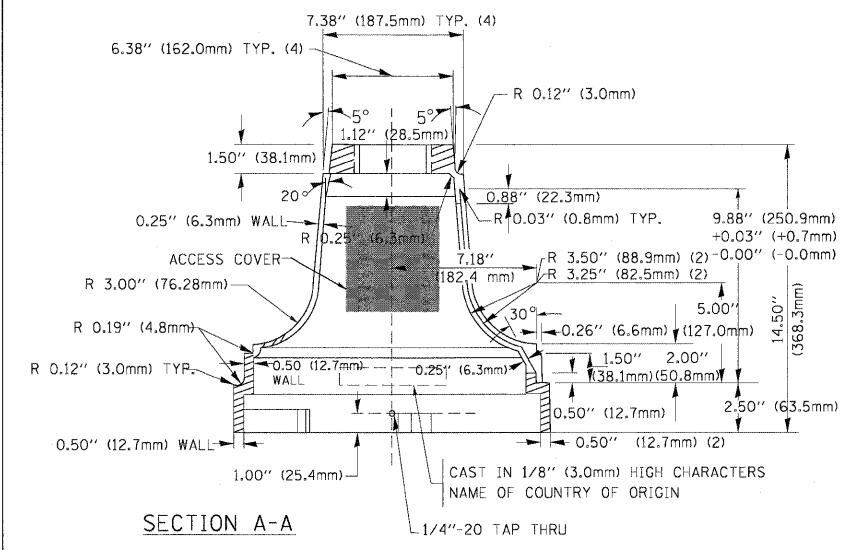
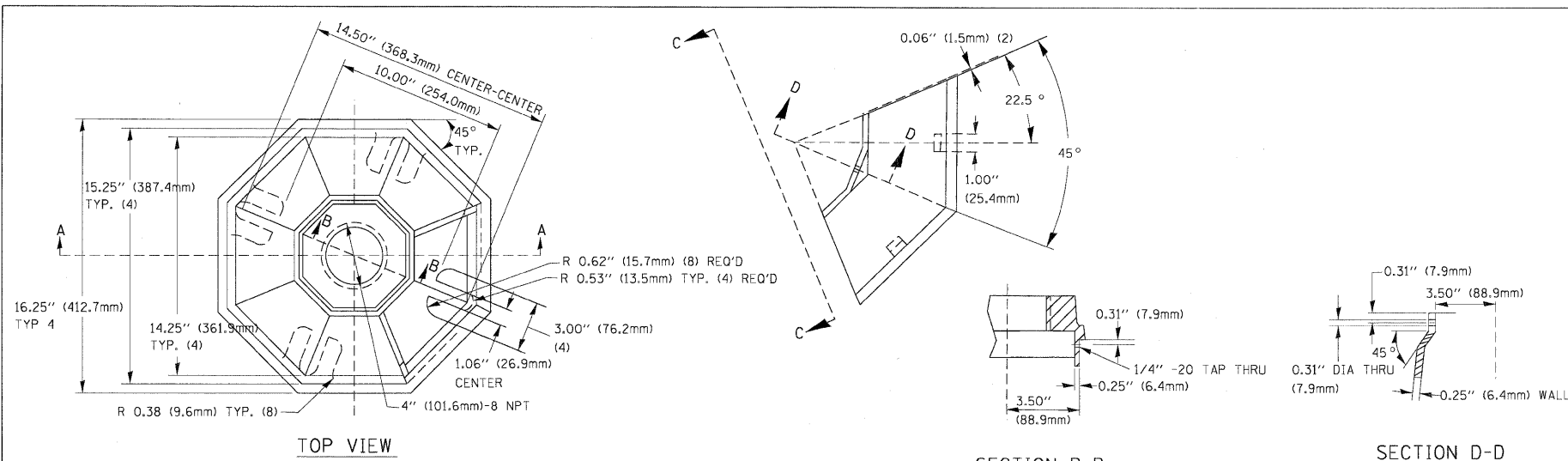


- NOTES:**
- GROUNDING SYSTEM**
1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED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

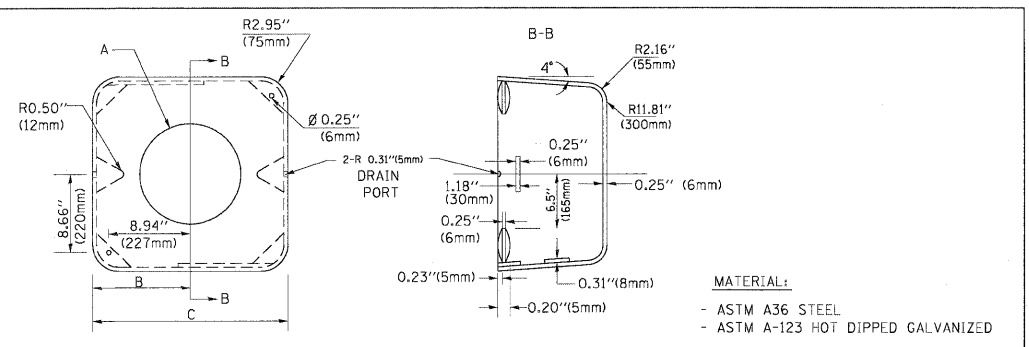


- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
  - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.





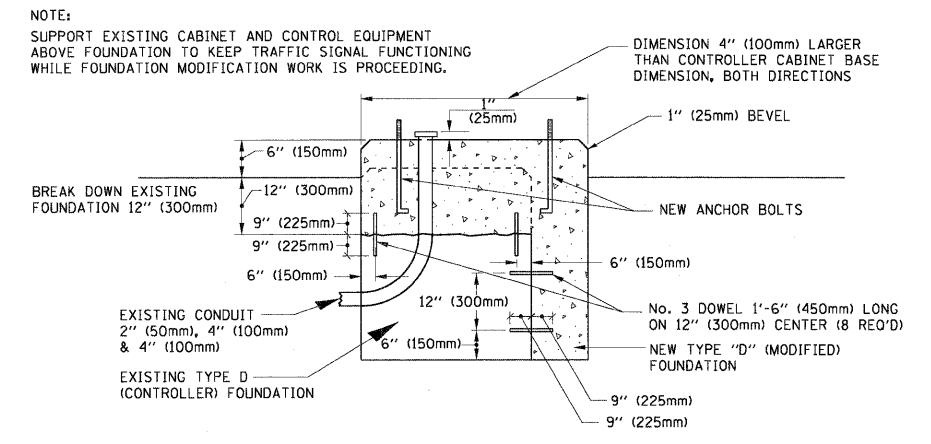
TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



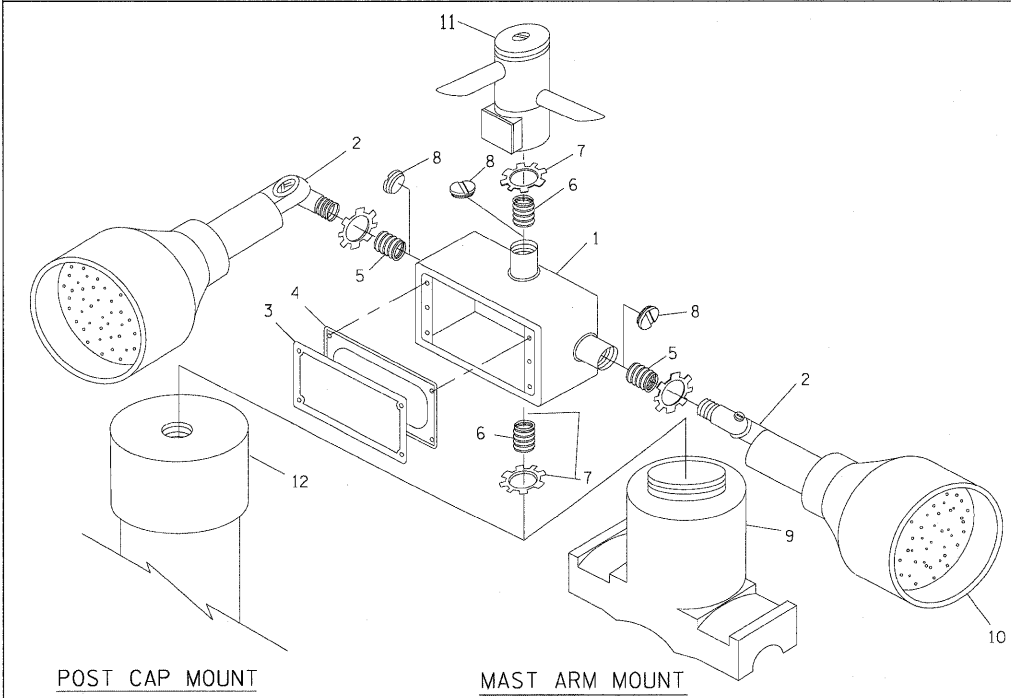
A	B	C	HEIGHT	WEIGHT
VARIES	9.5\"(241mm)	19\"(483mm)	7\"(178mm) - 12\"(300mm)	53 lbs (24kg)
VARIES	10.75\"(273mm)	21.5\"(546mm)	7\"(178mm) - 12\"(300mm)	68 lbs (31 kg)
VARIES	13.0\"(330mm)	26\"(660mm)	7\"(178mm) - 12\"(300mm)	81 lbs (37 kg)
VARIES	18.5\"(470mm)	37\"(940mm)	7\"(178mm) - 12\"(300mm)	126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

SHROUD

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



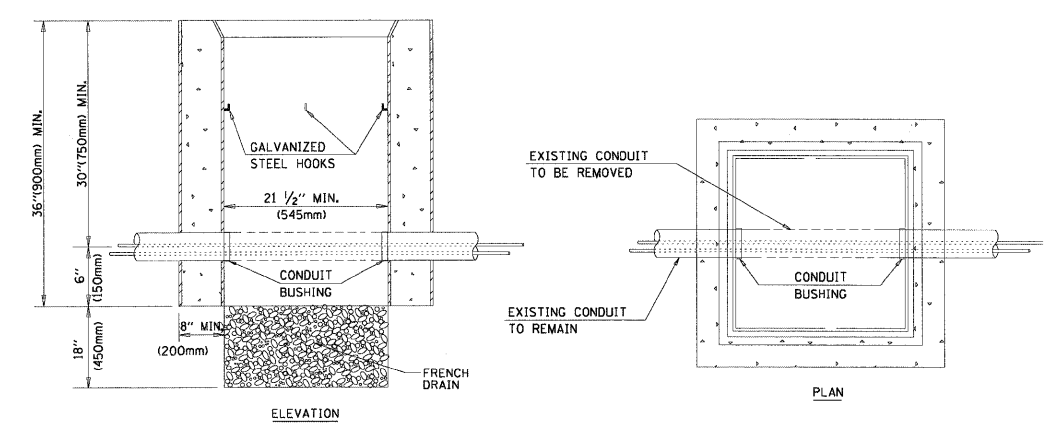
MODIFY EXISTING TYPE "D" FOUNDATION



EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

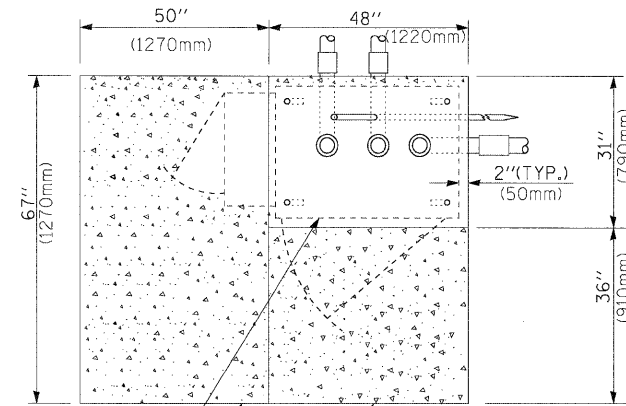
ITEM NO.	IDENTIFICATION
1	OUTLET BOX - GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\"(19 mm) CLOSE NIPPLE
7	3/4\"(19 mm) LOCKNUT
8	3/4\"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT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

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

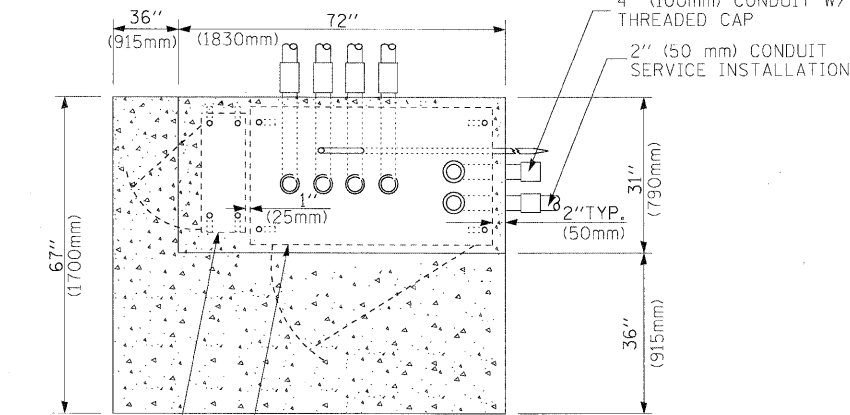


- NOTES:
1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
  2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

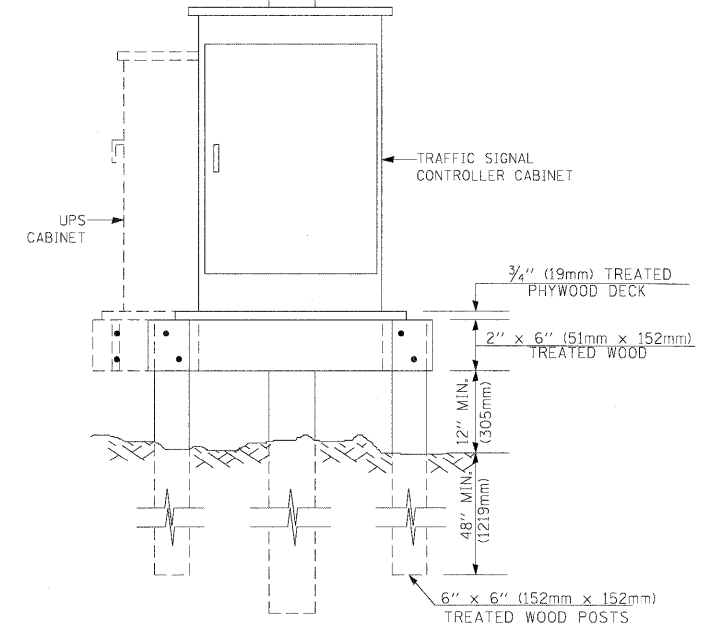
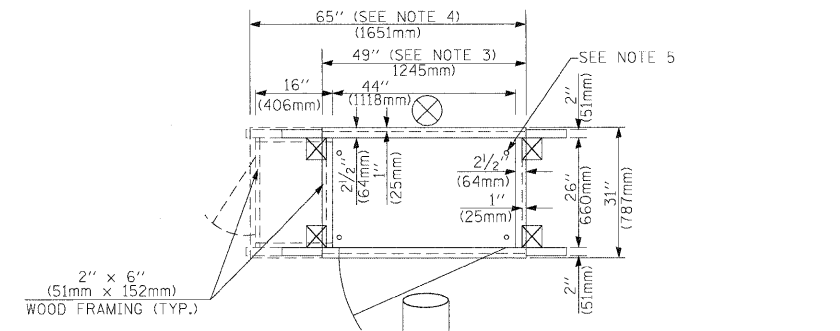
HANDHOLE TO INTERCEPT EXISTING CONDUIT



CONTROLLER CABINET BASE  
EXISTING APRON  
PROPOSED APRON  
**TOP VIEW**



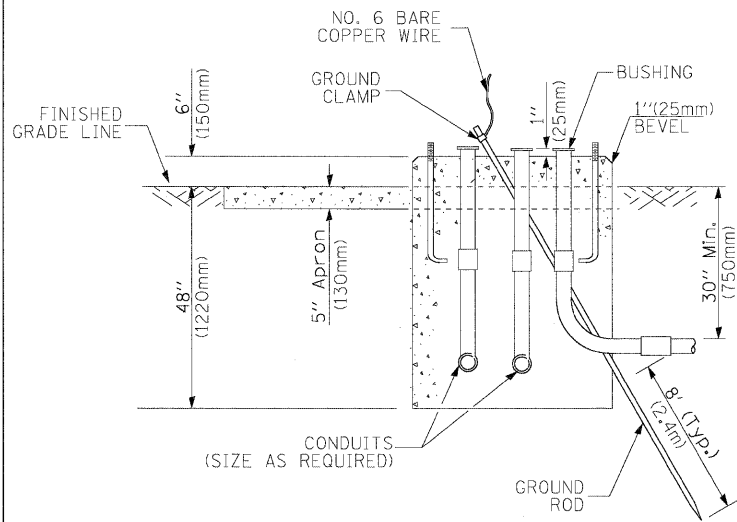
UPS CABINET BASE  
CONTROLLER CABINET BASE  
APRON  
**TOP VIEW**



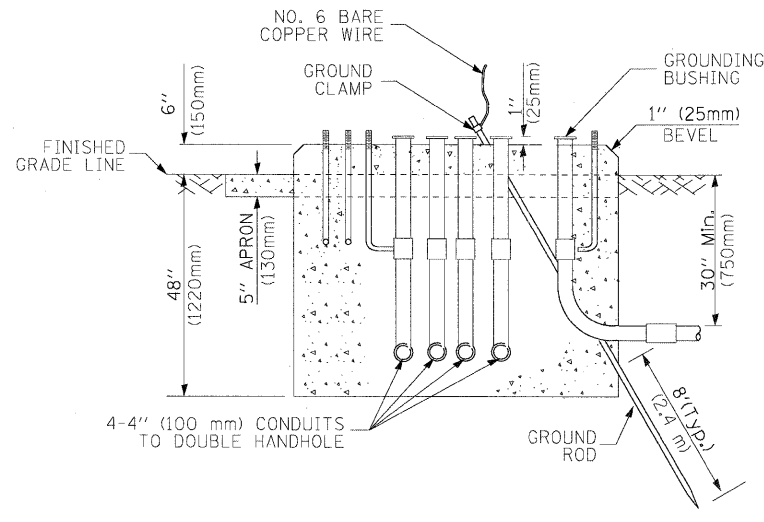
**NOTES:**

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

**TEMPORARY SIGNAL CONTROLLER  
WOOD SUPPORT PLATFORM**



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



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

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

**CABLE SLACK**

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

**VERTICAL CABLE LENGTH**

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

**DEPTH OF FOUNDATION**

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and less than 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 75' (22.9 m) and up to 85' (25.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

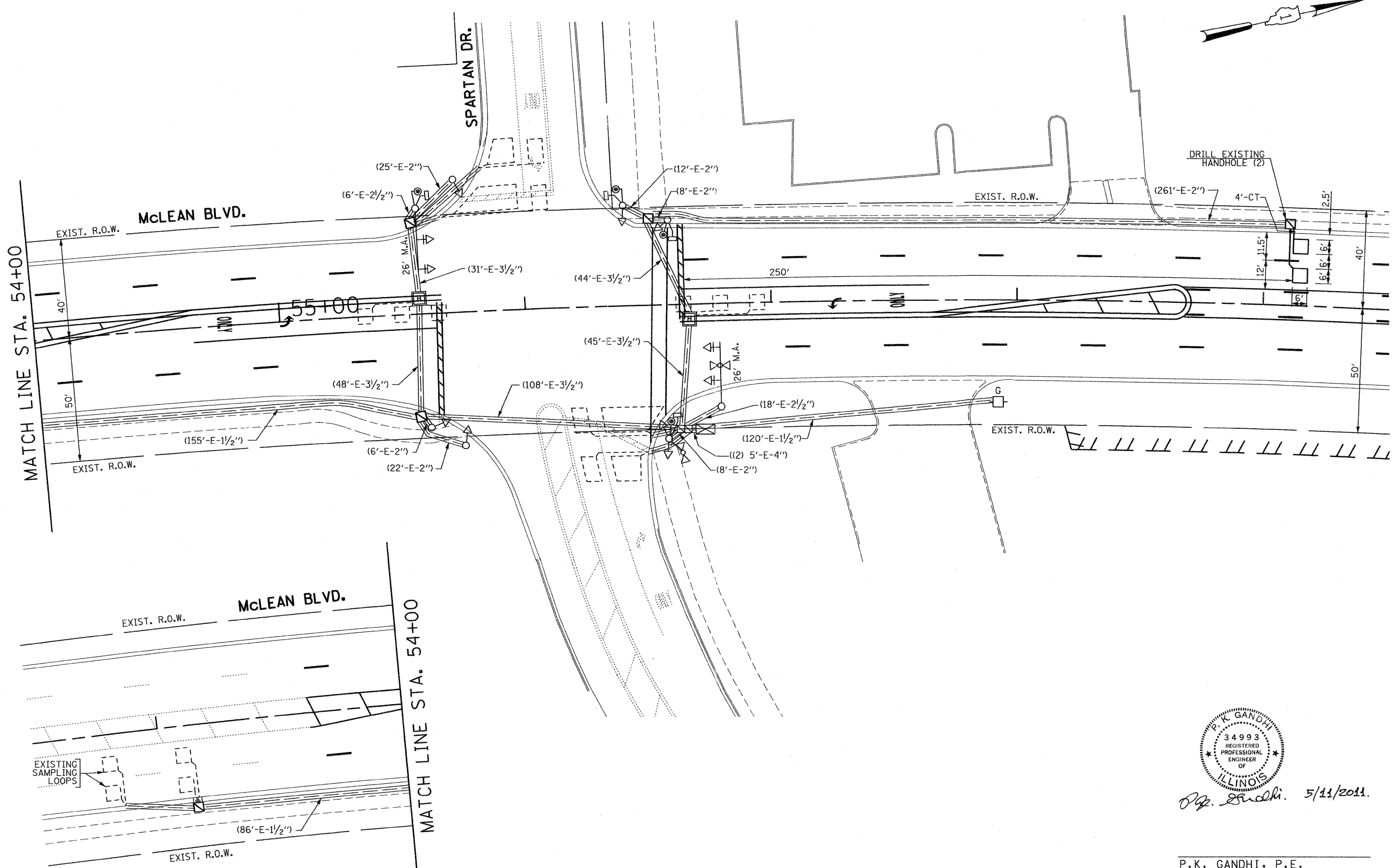
**NOTES:**

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

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

# TRAFFIC SIGNAL LEGEND

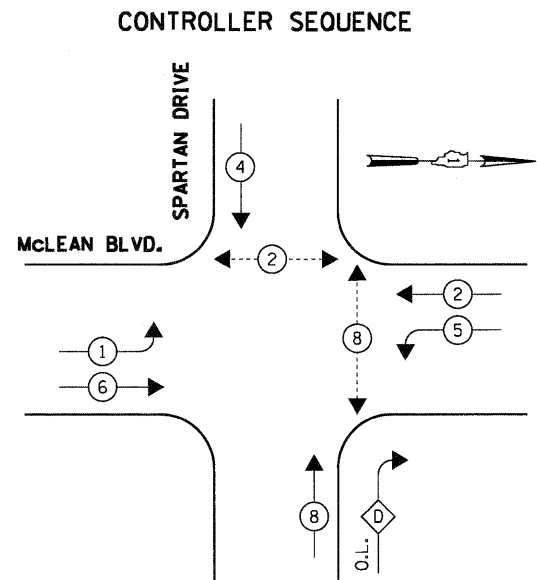
ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED																	
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE																				
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE																				
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA																				
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED																				
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F																				
UNINTERRUPTIBLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F																				
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F																				
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)																				
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE																				
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED																				
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM				STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED																				
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM				ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED																				
SIGNAL POST				REMOVE ITEM				STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED																				
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM				SIGNAL POST AND FOUNDATION TO BE REMOVED																				
GUY WIRE				ABANDON ITEM				INTERSECTION & SAMPLING (SYSTEM) DETECTOR																				
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR																				
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				EXISTING INTERSECTION LOOP DETECTOR																				
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR																				
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD				EXISTING PREFORMED INTERSECTION LOOP DETECTOR																				
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR																				
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR																				
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID				PREFORMED SAMPLING (SYSTEM) DETECTOR																				
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER				<h2 style="margin: 0;">RAILROAD SYMBOLS</h2> <table style="width: 100%; border: none;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 25%; text-align: center;">EXISTING</th> <th style="width: 25%; text-align: center;">PROPOSED</th> </tr> </thead> <tbody> <tr> <td>RAILROAD CONTROL CABINET</td> <td style="text-align: center;"></td> <td style="text-align: center;"></td> </tr> <tr> <td>RAILROAD CANTILEVER MAST ARM</td> <td style="text-align: center;"></td> <td style="text-align: center;"></td> </tr> <tr> <td>FLASHING SIGNAL</td> <td style="text-align: center;"></td> <td style="text-align: center;"></td> </tr> <tr> <td>CROSSING GATE</td> <td style="text-align: center;"></td> <td style="text-align: center;"></td> </tr> <tr> <td>CROSSBUCK</td> <td style="text-align: center;"></td> <td style="text-align: center;"></td> </tr> </tbody> </table>				EXISTING	PROPOSED	RAILROAD CONTROL CABINET			RAILROAD CANTILEVER MAST ARM			FLASHING SIGNAL			CROSSING GATE			CROSSBUCK		
	EXISTING	PROPOSED																										
RAILROAD CONTROL CABINET																												
RAILROAD CANTILEVER MAST ARM																												
FLASHING SIGNAL																												
CROSSING GATE																												
CROSSBUCK																												
ILLUMINATED SIGN "NO LEFT TURN"				RADIO INTERCONNECT																								
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO REPEATER																								
DETECTOR LOOP, TYPE I				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED																								
PREFORMED DETECTOR LOOP				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)																								
MICROWAVE VEHICLE SENSOR																												
VIDEO DETECTION CAMERA																												
VIDEO DETECTION ZONE																												
PAN, TILT, ZOOM CAMERA																												
WIRELESS DETECTOR SENSOR																												
WIRELESS ACCESS POINT																												



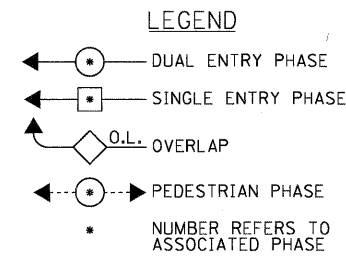
*P.K. Gandhi* 5/11/2011.

P.K. GANDHI, P.E.  
 NO. 062-034993  
 EXPIRES: 11/30/2011  
 SHEETS 209-225

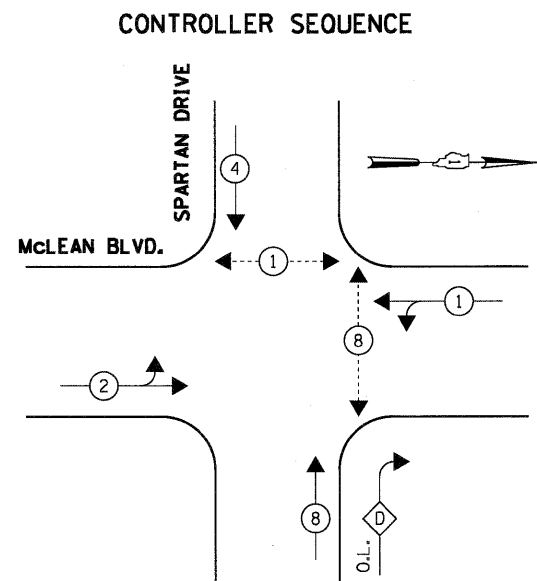
FILE NAME = *FILEL*	USER NAME = *USER*	DESIGNED - PKG	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC SIGNAL MODIFICATION PLAN McLEAN BOULEVARD AT SPARTAN DRIVE</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = *SCALE*	DRAWN - MAA, EA	REVISED -		345	8R-HB-2-BY-1	KANE	434	215				
	PLOT DATE = *DATE*	CHECKED - PKG	REVISED -		SCALE: 1"=20'    SHEET NO.    OF    SHEETS    STA.    TO STA.				CONTRACT NO. 60K90				
	DATE - 5/18/2011	DATE - 5/18/2011	REVISED -		FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT								



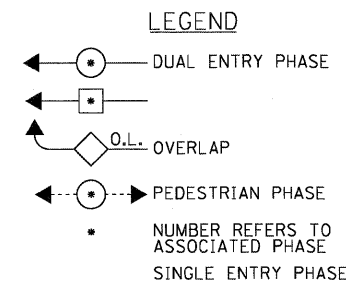
**EXISTING PHASE DESIGNATION DIAGRAM**



OVERLAP LETTER    PERMISSIVE PHASE    PROTECTED PHASE  
 D = 8 + 5

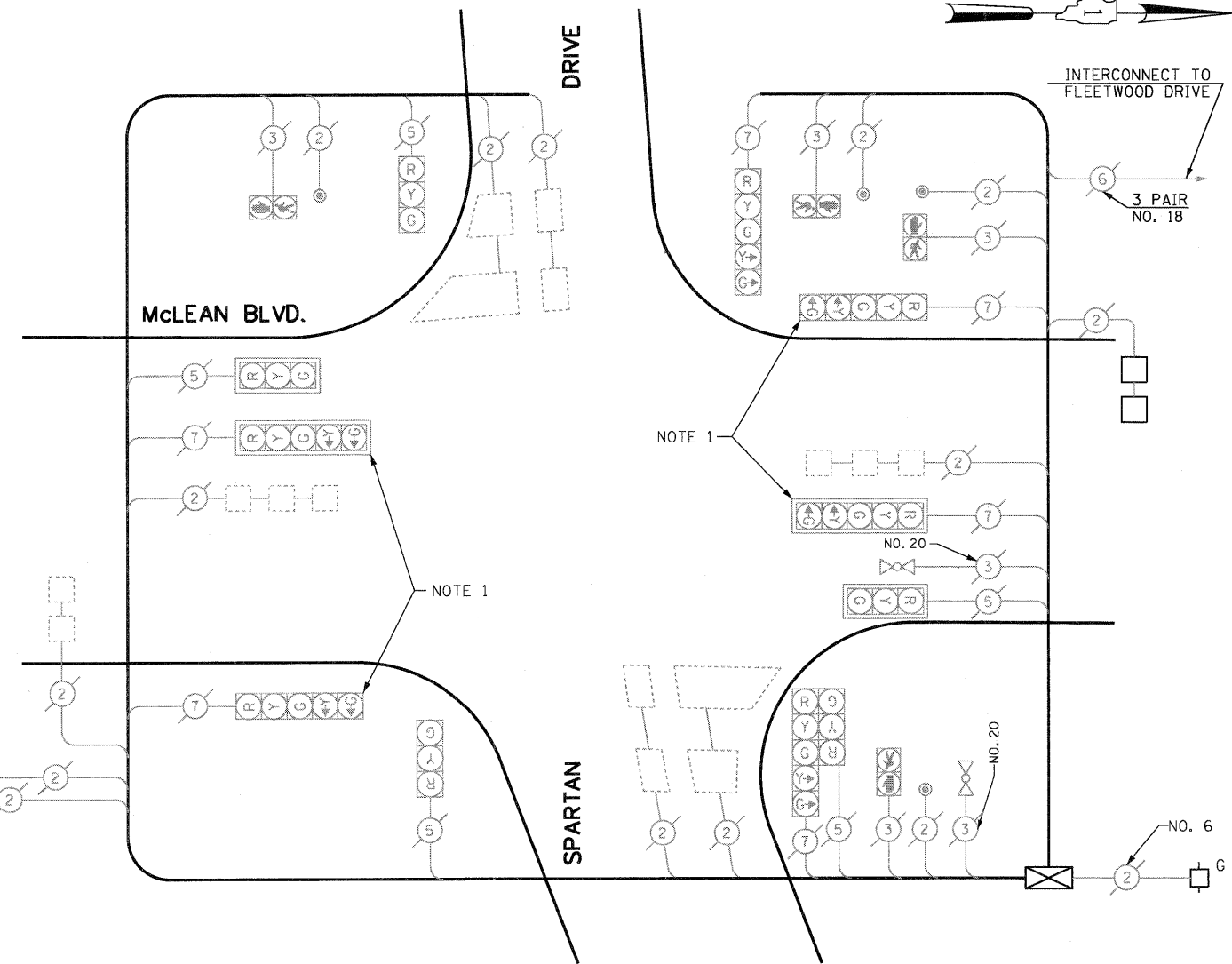


**MODIFIED PHASE DESIGNATION DIAGRAM**  
 (FOR STAGE I.1 ONLY)



OVERLAP LETTER    PERMISSIVE PHASE    PROTECTED PHASE  
 D = 8 + 1

EXISTING SAMPLING LOOPS



NOTE 1: THE YELLOW LEFT ARROW IN THE FIVE SECTION SIGNAL HEADS FOR THE NORTHBOUND AND SOUTHBOUND DIRECTION OF TRAFFIC SHALL BE DISABLED DURING SPLIT PHASE OPERATION FOR NORTH-SOUTH DIRECTION OF TRAFFIC (IN CONSTRUCTION STAGE I.1).

#### SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2	EACH	DRILL EXISTING HANDHOLE
66	FOOT	DETECTOR LOOP, TYPE I
1	EACH	MODIFY EXISTING CONTROLLER
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE		%OPERATION	
SIGNAL (RED)	11	135	17	0.50	93.50
(YELLOW)	11	135	25	0.25	68.75
(GREEN)	11	135	15	0.25	41.25
ARROW	12	135	12	0.10	14.4
PED. SIGNAL	4	90	25	1.00	100.00
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN			25	0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	417.9
CITY OF ELGIN 150 DEXTER COURT ELGIN, ILLINOIS 60120-5570					
ENERGY SUPPLY CONTACT: ELLIE SARALLO PHONE: (630) 424 5124 COMPANY: COMMONWEALTH EDISON					

FILE NAME =	USER NAME = *USER*	DESIGNED - PKG	REVISED -
*FILE#		DRAWN - MAA, EA	REVISED -
	PLOT SCALE = *SCALE*	CHECKED - PKG	REVISED -
	PLOT DATE = *DATE*	DATE - 5/18/2011	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

CABLE PLAN, EXISTING PHASE DESIGNATION DIAGRAM, MODIFIED PHASE DESIGNATION DIAGRAM, SCHEDULE OF QUANTITIES McLEAN BOULEVARD AT SPARTAN DRIVE				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE:				345	8R-HB-2-BY-1	KANE	434	216
SHEET NO. OF SHEETS STA. TO STA.				CONTRACT NO. 60K90				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT								



**NOTES FOR TEMPORARY TRAFFIC SIGNALS**

- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- ONLY CONTROLLERS SUPPLIED BY ONE OF THE IDOT DISTRICT ONE APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
- THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL. AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
- UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL. TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
- TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
- DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF IDOT DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
- WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.
- THE CONTROLLER FOR TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL BE "MULTISONICS 820A" TO MATCH THE EXISTING MULTISONICS TRAFFIC SIGNAL SYSTEM.

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

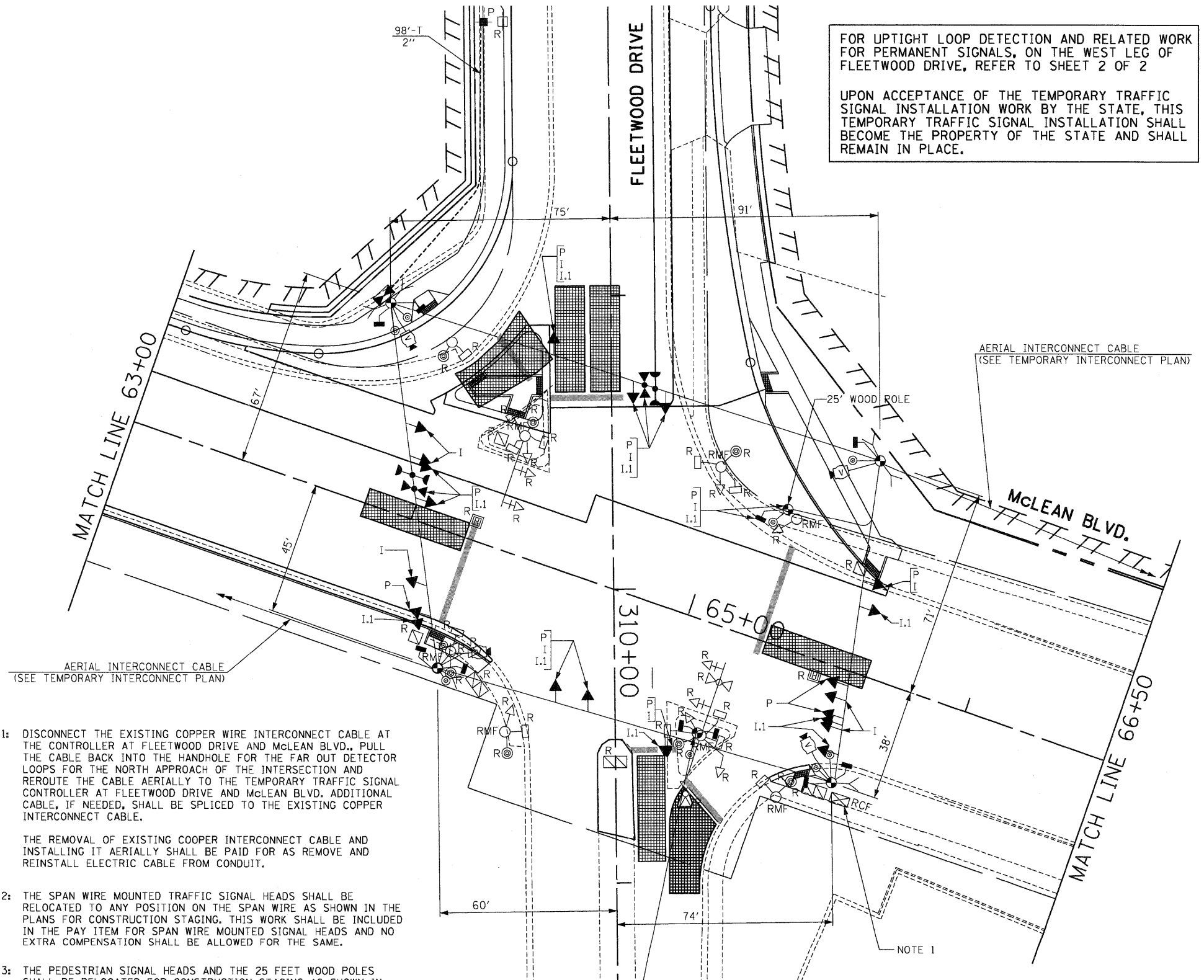
1	EACH	CONTROLLER AND CABINET COMPLETE
1	EACH	SIGNAL HEAD, 1-FACE 3-SECTION, BRACKET MOUNTED
2	EACH	SIGNAL HEAD, 1-FACE 3-SECTION, MAST ARM MOUNTED
4	EACH	SIGNAL HEAD, 1-FACE 5-SECTION, BRACKET MOUNTED
2	EACH	SIGNAL HEAD, 1-FACE 5-SECTION, MAST ARM MOUNTED
1	EACH	SIGNAL HEAD, 2-FACE 5-SECTION, BRACKET MOUNTED
4	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED
1	EACH	PEDESTRIAN SIGNAL HEAD, 2-FACE, BRACKET MOUNTED
2	EACH	PEDESTRIAN SIGNAL HEAD, 3-FACE, BRACKET MOUNTED
6	EACH	TRAFFIC SIGNAL POST
2	EACH	STEEL MAST ARM ASSEMBLY AND POLE
7	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	SERVICE INSTALLATION

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: CITY OF ELGIN

CONTACT INFORMATION:  
MR. BILL BECKER  
CITY OF ELGIN  
ENGINEERING DEPARTMENT  
PHONE: (847) 931-5969

2 EACH LIGHT DETECTOR



FOR UPTIGHT LOOP DETECTION AND RELATED WORK FOR PERMANENT SIGNALS, ON THE WEST LEG OF FLEETWOOD DRIVE, REFER TO SHEET 2 OF 2

UPON ACCEPTANCE OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION WORK BY THE STATE, THIS TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL BECOME THE PROPERTY OF THE STATE AND SHALL REMAIN IN PLACE.

NOTE 1: DISCONNECT THE EXISTING COPPER WIRE INTERCONNECT CABLE AT THE CONTROLLER AT FLEETWOOD DRIVE AND McLEAN BLVD., PULL THE CABLE BACK INTO THE HANDHOLE FOR THE FAR OUT DETECTOR LOOPS FOR THE NORTH APPROACH OF THE INTERSECTION AND REROUTE THE CABLE AERIALLY TO THE TEMPORARY TRAFFIC SIGNAL CONTROLLER AT FLEETWOOD DRIVE AND McLEAN BLVD. ADDITIONAL CABLE, IF NEEDED, SHALL BE SPLICED TO THE EXISTING COPPER INTERCONNECT CABLE.

THE REMOVAL OF EXISTING COOPER INTERCONNECT CABLE AND INSTALLING IT AERIALLY SHALL BE PAID FOR AS REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT.

NOTE 2: THE SPAN WIRE MOUNTED TRAFFIC SIGNAL HEADS SHALL BE RELOCATED TO ANY POSITION ON THE SPAN WIRE AS SHOWN IN THE PLANS FOR CONSTRUCTION STAGING. THIS WORK SHALL BE INCLUDED IN THE PAY ITEM FOR SPAN WIRE MOUNTED SIGNAL HEADS AND NO EXTRA COMPENSATION SHALL BE ALLOWED FOR THE SAME.

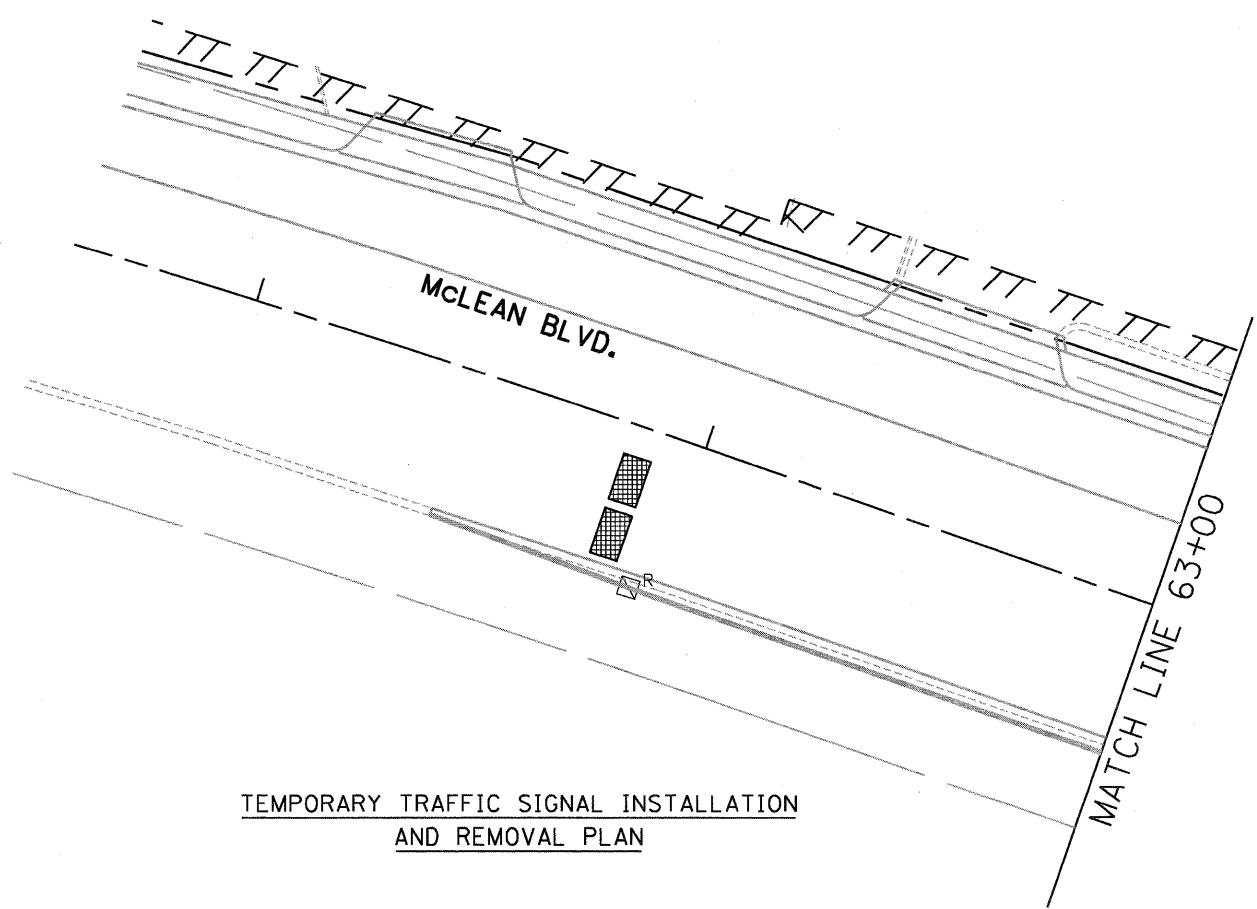
NOTE 3: THE PEDESTRIAN SIGNAL HEADS AND THE 25 FEET WOOD POLES SHALL BE RELOCATED FOR CONSTRUCTION STAGING AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE INCLUDED IN THE PAY ITEMS FOR PEDESTRIAN SIGNAL HEADS AND FOR 25 FEET WOOD POLES. NO EXTRA COMPENSATION SHALL BE ALLOWED FOR THE SAME.

NOTE 4: THE VIDEO DETECTION ZONES SHOWN ON THE PLANS ARE FOR PRE-CONSTRUCTION STAGE AND SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

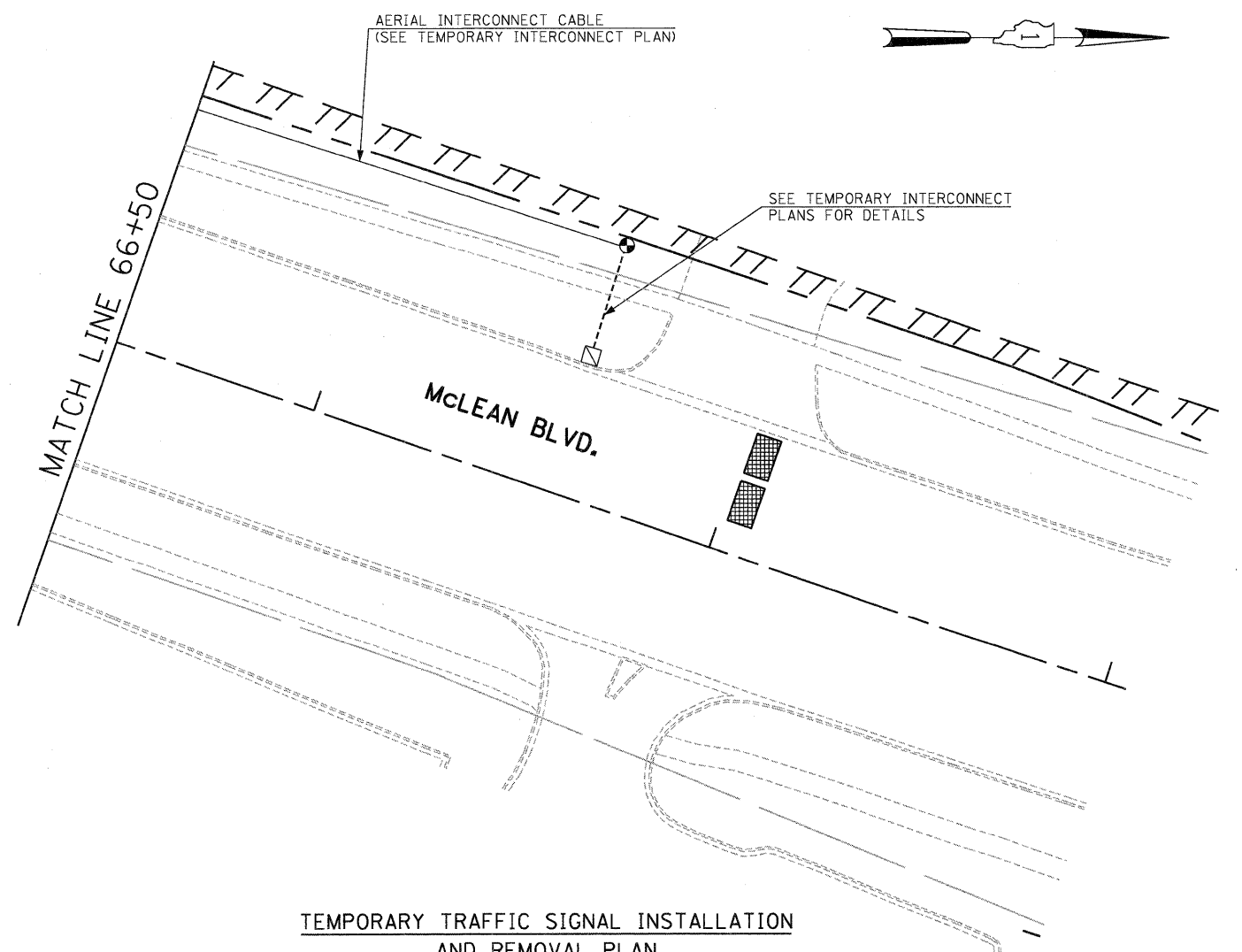
25' WOOD POLE TO BE ADDED WHEN EXIST. M.A. POLE IS REMOVED FOR DETAIL SEE SHEET 216

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "MULTISONICS 820A" TO MATCH THE EXISTING ADJACENT SYSTEM.

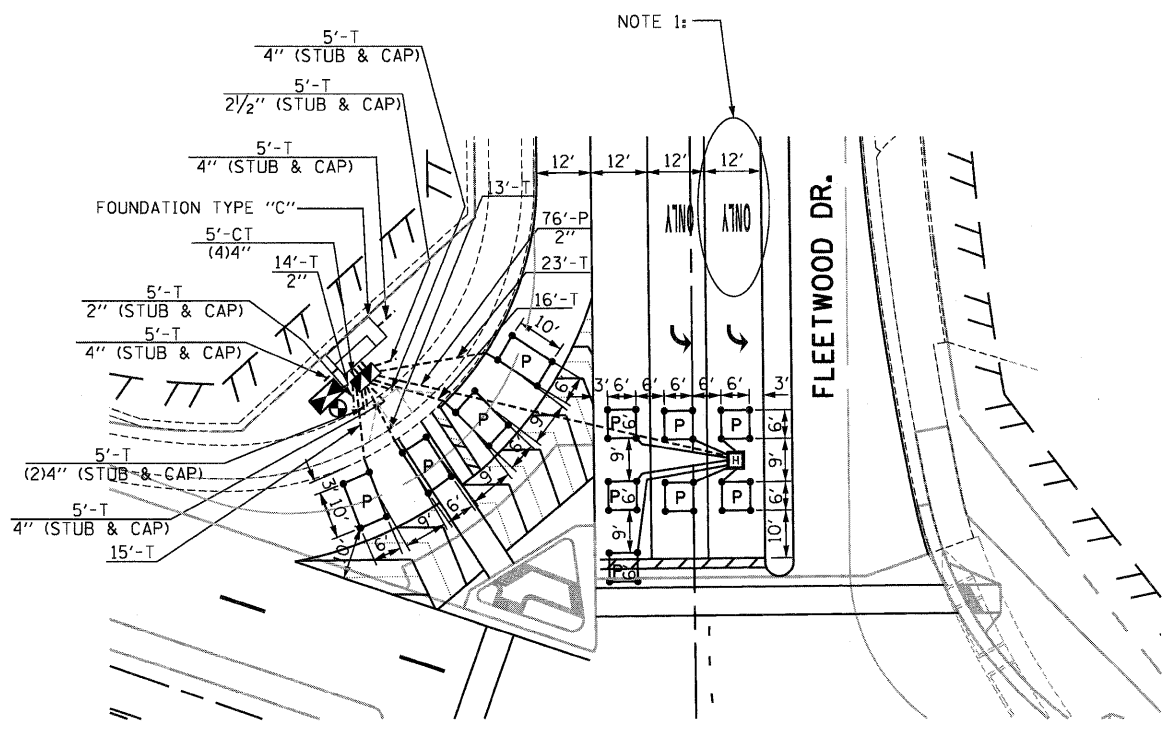
THE "MULTISONICS 820A" CONTROLLER SHALL BE MADE AVAILABLE TO THE CONTRACTOR BY THE CITY OF ELGIN FOR USE IN THE TEMPORARY TRAFFIC SIGNAL INSTALLATION AT FLEETWOOD DRIVE AND McLEAN BLVD.



TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN



TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN



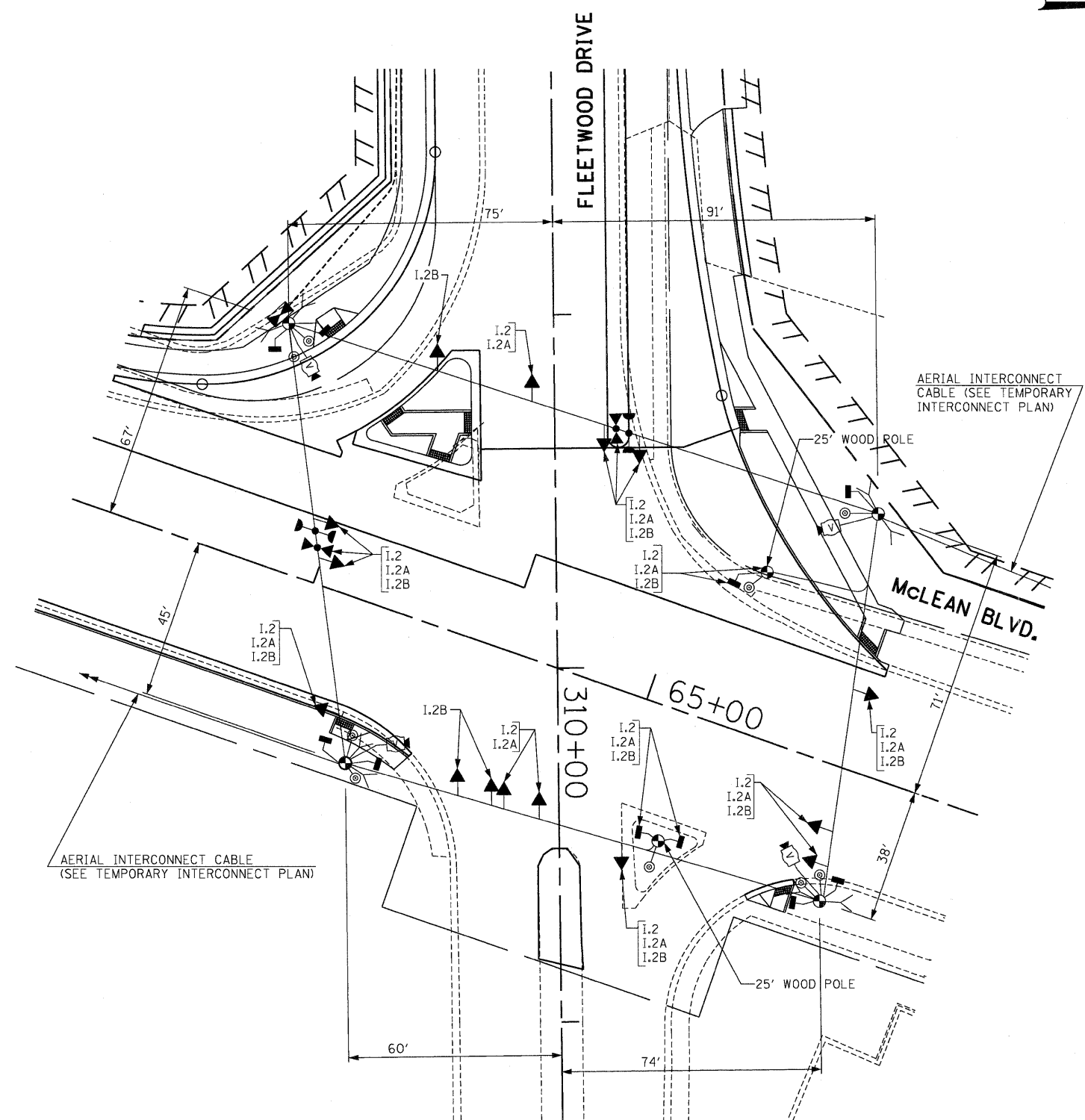
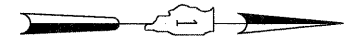
PROPOSED PREFORMED DETECTOR LOOP INSTALLATION PLAN WEST LEG OF FLEETWOOD DR.

NOTE 1: AT THE END OF THE ADVANCE CONTRACT (NO. 60K90), THIS LEFT TURN LANE WILL BE UTILIZED FOR WESTBOUND TRAFFIC AS SHOWN IN PLANS UNTIL NEW SIGNALS WILL BECOME OPERATIONAL. SEE PROPOSED PAVEMENT MARKING AND SIGNING PLANS FOR PAVEMENT MARKING AT THE CONCLUSION OF THIS CONTRACT.

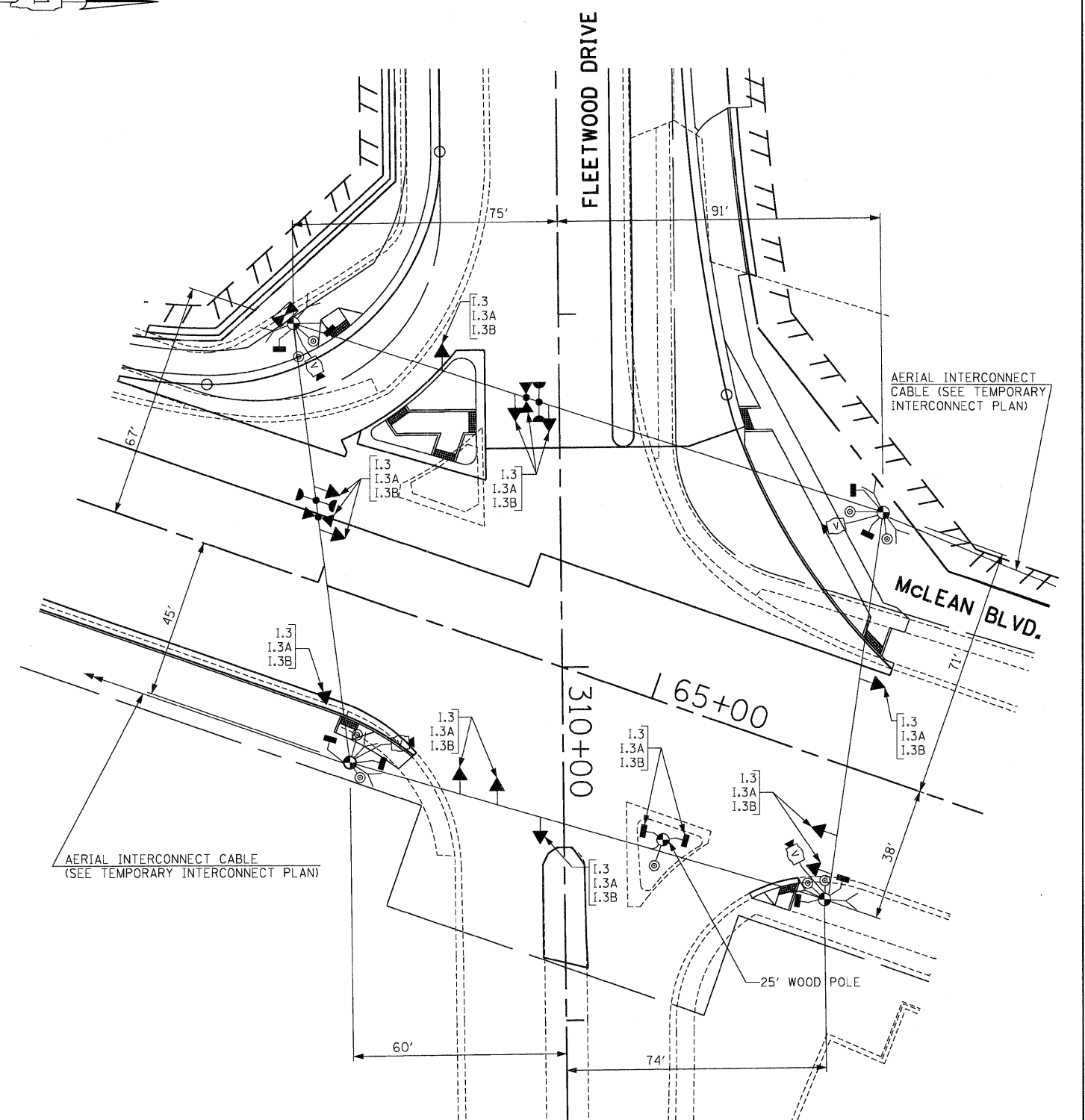
NOTE 2: THE DETECTOR LOOPS ON THE WEST LEG SHALL BE PROVIDED WITH LEAD IN CABLES AND SHALL BE CONNECTED INTO THE TEMPORARY TRAFFIC SIGNAL CONTROLLER AS SHOWN IN THE PLAN. THE LOOPS WHICH WILL BECOME OPERATIONAL AT THE END OF THIS CONTRACT SHALL BE ACTIVATED AS SHOWN IN THE PLAN AND AS DIRECTED BY THE ENGINEER.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "MULTISONICS 820A" TO MATCH THE EXISTING ADJACENT SYSTEM.

FILE NAME =	USER NAME = #USER#	DESIGNED - PKG	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN, REMOVAL PLAN, AND PROPOSED (PARTIAL) TRAFFIC SIGNAL INSTALLATION PLAN McLEAN BOULEVARD AT FLEETWOOD DRIVE (SHEET 2 OF 6)</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - MAA, EA	REVISED -			345	BR-HB-2-BY-1	KANE	434	218
	PLOT SCALE = #SCALE#	CHECKED - PKG	REVISED -			CONTRACT NO. 60K90				
	PLOT DATE = #DATE#	DATE - 5/18/2011	REVISED -			FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				
					SCALE: 1"=20'	SHEET NO. OF SHEETS STA. TO STA.				



SIGNAL HEAD PLACEMENTS FOR STAGES: I.2, I.2A, AND I.2B



SIGNAL HEAD PLACEMENTS FOR STAGES: I.3, I.3A, AND I.3B

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "MULTISONICS 820A" TO MATCH THE EXISTING ADJACENT SYSTEM.

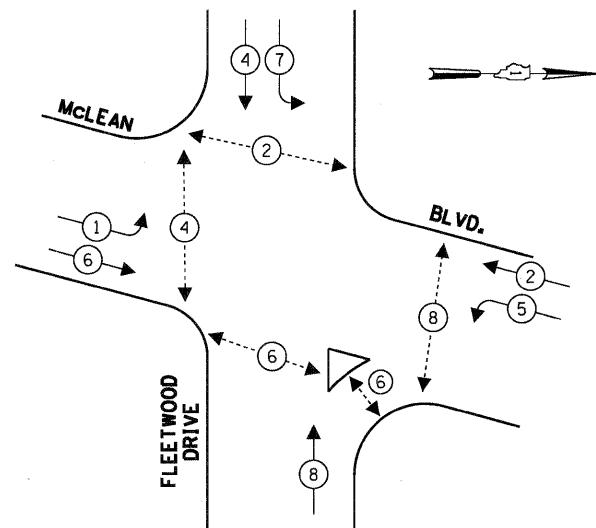
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		CHECKED - PKG	REVISED -
		DATE - 5/18/2011	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN			
McLEAN BOULEVARD AT FLEETWOOD DRIVE STAGE I.2, STAGE I.2A, STAGE I.2B, STAGE I.3, STAGE I.3A, AND STAGE I.3B (SHEET 3 OF 6)			
SCALE: 1"=20'	SHEET NO.	OF SHEETS	STA. TO STA.

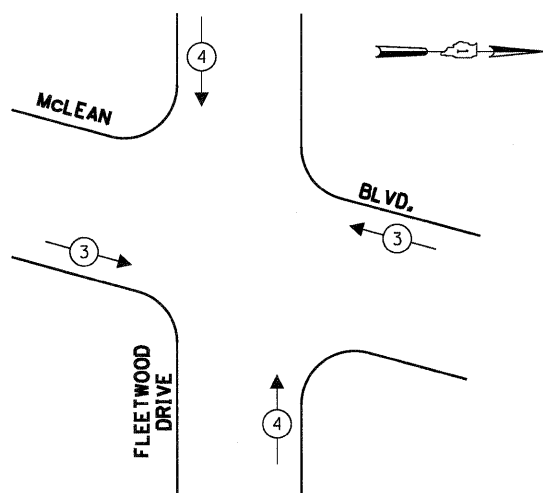
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	8R-HB-2-BY-1	KANE	434	219
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 60K90	

**CONTROLLER SEQUENCE**



TEMPORARY PHASE DESIGNATION DIAGRAM

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←→	↑↓

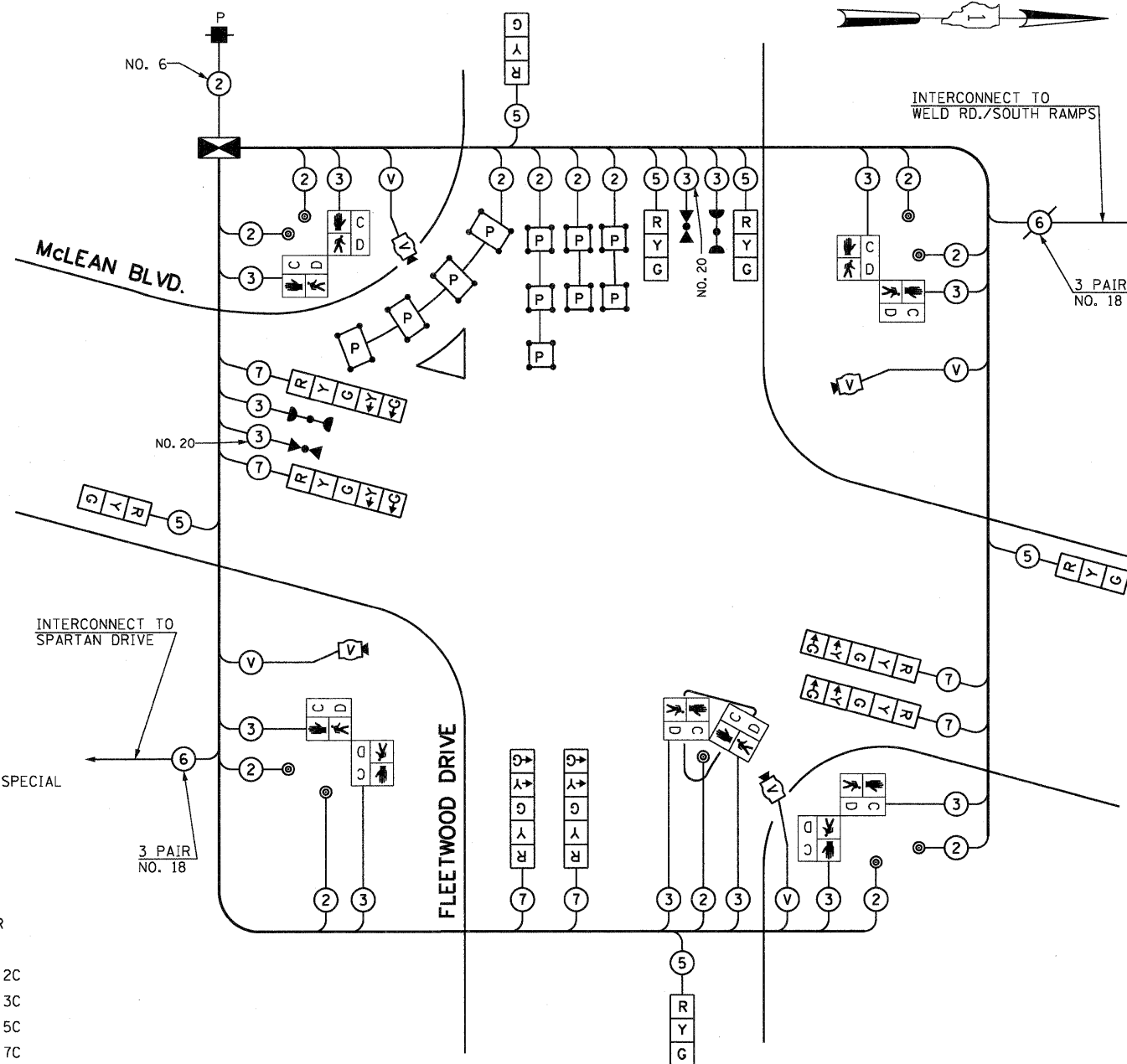
THE DETECTOR LOOPS SHALL HAVE LEAD IN CABLES INSTALLED BETWEEN THE TEMPORARY TRAFFIC SIGNAL CONTROLLER AND THE APPLICABLE HANDHOLES. THE LOOPS TO BE UTILIZED AT THE END OF THIS CONTRACT SHALL BE ACTIVATED AS SHOWN IN THE PLAN AND AS DIRECTED BY THE ENGINEER.

UPON ACCEPTANCE OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION WORK BY THE STATE, THIS TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL BECOME THE PROPERTY OF THE STATE AND SHALL REMAIN IN PLACE.

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	SERVICE INSTALLATION - POLE MOUNTED
117	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
50	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
76	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
1	EACH	HEAVY-DUTY HANDHOLE
1	EACH	DOUBLE HANDHOLE
162	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
1	EACH	TRANSCEIVER
552	FOOT	SPAN WIRE
552	FOOT	TETHER WIRE
* 238	FOOT	ELECTRIC CABLE AERIAL SUSPENDED NO. 20 3/C, TWISTED, SHIELDED
374	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
120	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
2027	FOOT	ELECTRIC CABLE AERIAL SUSPENDED, SIGNAL, NO. 14 2C
2449	FOOT	ELECTRIC CABLE AERIAL SUSPENDED, SIGNAL, NO. 14 3C
1078	FOOT	ELECTRIC CABLE AERIAL SUSPENDED, SIGNAL, NO. 14 5C
1191	FOOT	ELECTRIC CABLE AERIAL SUSPENDED, SIGNAL, NO. 14 7C
4	FOOT	CONCRETE FOUNDATION, TYPE C
6	EACH	SIGNAL HEAD LED, 1-FACE, 3-SECTION, SPAN WIRE MOUNTED
6	EACH	SIGNAL HEAD LED, 1-FACE, 5-SECTION, SPAN WIRE MOUNTED
12	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
3	EACH	INDUCTIVE LOOP DETECTOR
477	FOOT	PREFORMED DETECTOR LOOP
* 2	EACH	LIGHT DETECTOR
* 1	EACH	LIGHT DETECTOR AMPLIFIER
10	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
9	EACH	REMOVE EXISTING HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
4	EACH	TEMPORARY WOOD POLE, 45 FEET, CLASS 5
1	EACH	VIDEO VEHICLE DETECTION SYSTEM
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING
4	EACH	TEMPORARY WOOD POLE, 25 FEET, CLASS 4

\* 100% COST TO CITY OF ELGIN



**TEMPORARY CABLE PLAN**

(NOT TO SCALE)

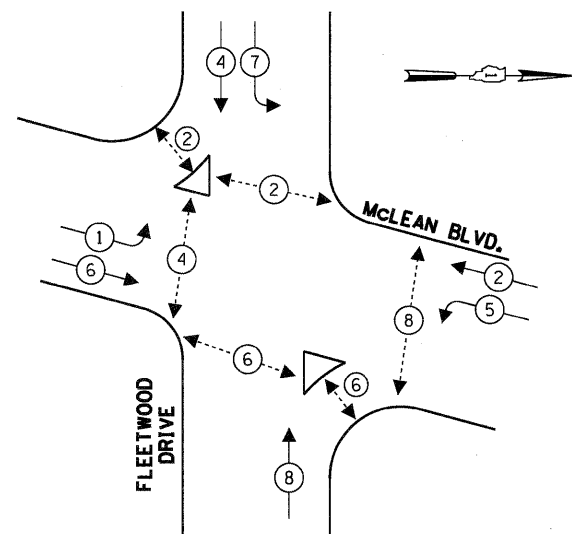
NOTE: THE PEDESTRIAN SIGNAL HEADS AND PUSH-BUTTON IN THE NORTHWEST AND NORTHEAST CORNERS SHALL BE MOUNTED ON SHORTER (25 FT.) WOOD POLE WITH CABLE CONNECTIONS AS SHOWN IN THE PLANS.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "MULTISONICS 820A" TO MATCH THE EXISTING ADJACENT SYSTEM.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE		%OPERATION	
		INCAND.	LED		
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	12	135	12	0.10	14.4
PED. SIGNAL	10	90	25	1.00	250
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN				0.05	
VIDEO SYSTEM	1	150		1.00	150
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL =
CITY OF ELGIN 150 DEXTER COURT ELGIN, ILLINOIS 60120-5570					736.4
ENERGY SUPPLY CONTACT: ELLIE SARALLO PHONE: (630) 424 5124 COMPANY: COMMONWEALTH EDISON					

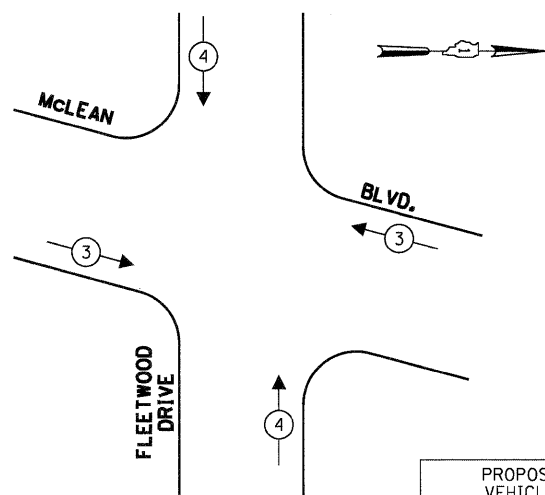


**CONTROLLER SEQUENCE**

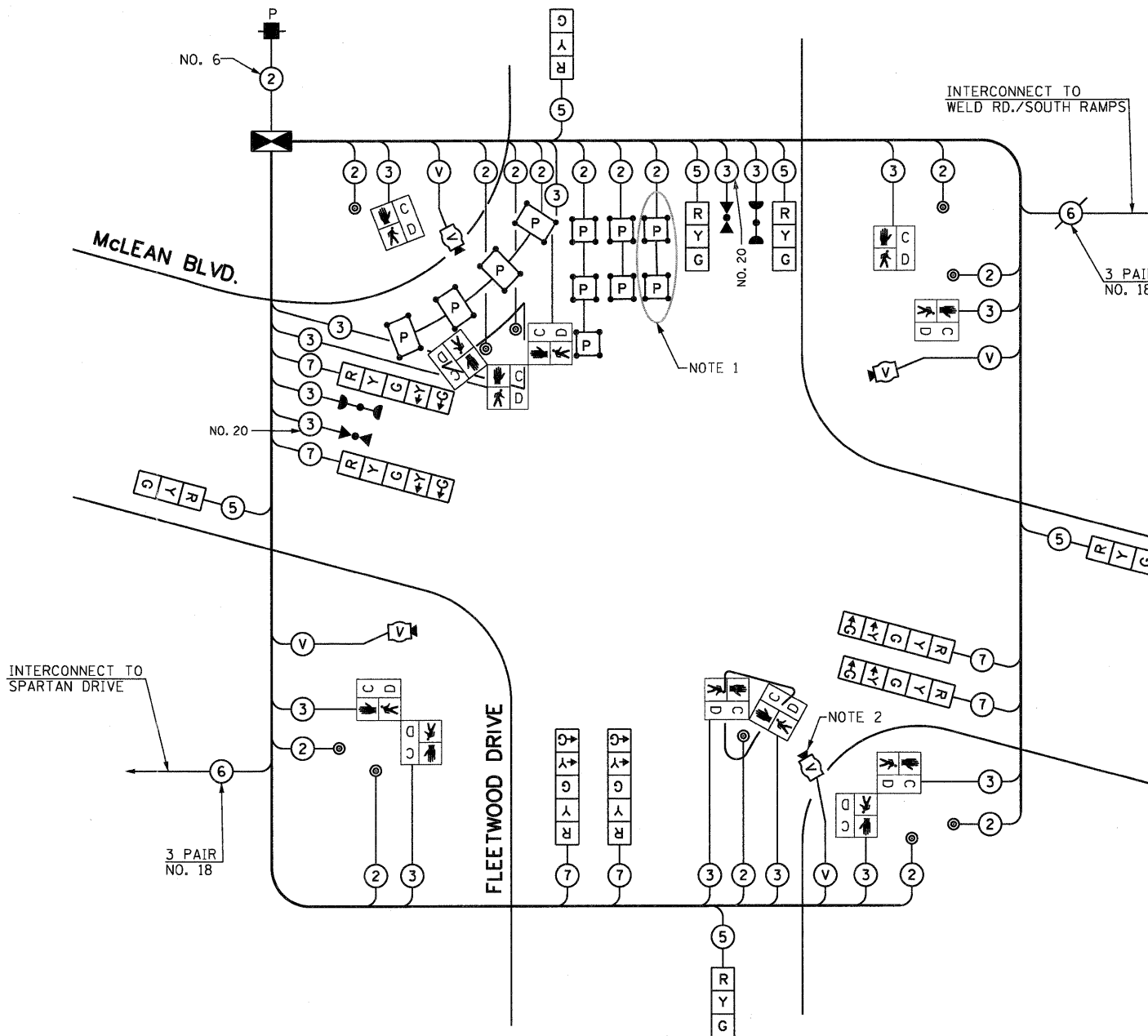


TEMPORARY PHASE DESIGNATION DIAGRAM

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**



PROPOSED EMERGENCY VEHICLE PREEMPTIONS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←→	↑↓



**TEMPORARY CABLE PLAN**

(NOT TO SCALE)

NOTE 1: THE DETECTOR LOOPS IN THE WESTBOUND LANE SHALL NOT BE ACTIVATED UNTIL THE PERMANENT SIGNAL INSTALLATION IS PUT IN OPERATION. THE DETECTOR LOOP CABLES, FOR THE LOOPS TO BE ACTIVATED, SHALL BE CONNECTED INTO THE TEMPORARY CONTROLLER. THE 1-PAIR CABLES FOR THE DETECTOR LOOPS SHALL BE IN CONDUITS AS SHOWN IN THE DETAIL ON SHEET 157.

NOTE 2: THE VIDEO DETECTION CAMERA FOR THE WEST APPROACH OF THE INTERSECTION SHALL BE DISABLED UPON ACTUATION OF THE DETECTOR LOOPS FOR THE WEST APPROACH.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "MULTISONICS 820A" TO MATCH THE EXISTING ADJACENT SYSTEM.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE	%OPERATION		
		INCAND.	LED		
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	12	135	12	0.10	14.4
PED. SIGNAL	12	90	25	1.00	300
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN				0.05	
VIDEO SYSTEM	1	150		1.00	150
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	786.4
CITY OF ELGIN 150 DEXTER COURT ELGIN, ILLINOIS 60120-5570					
ENERGY SUPPLY CONTACT: ELLIE SARALLO PHONE: (630) 424 5124 COMPANY: COMMONWEALTH EDISON					

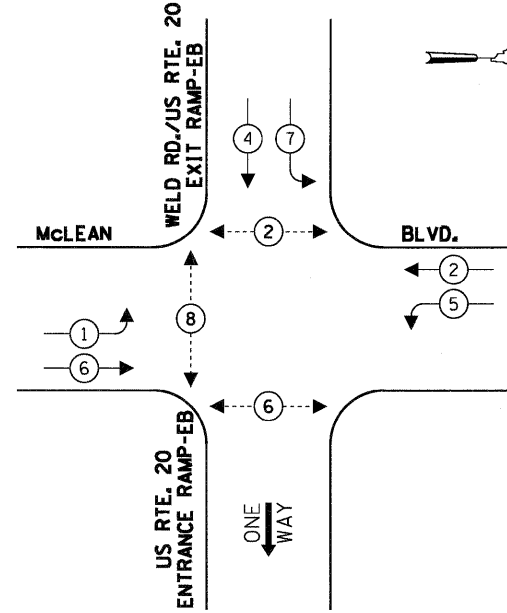
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	PLOT DATE = #DATE*	DATE - 5/18/2011	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN			
AFTER THE WEST LEG OF FLEETWOOD DRIVE IS BUILT			
MCLEAN BOULEVARD AT FLEETWOOD DRIVE (SHEET 6 OF 6)			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	8R-HB-2-BY-1	KANE	434	222
CONTRACT NO. 60K90				
FED. ROAD DIST. NO. - ILLINOIS/FED. AID PROJECT				

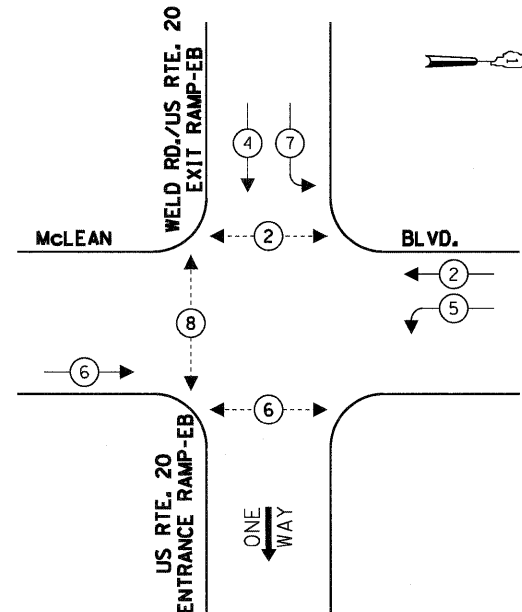
**CONTROLLER SEQUENCE**



EXISTING PHASE DESIGNATION DIAGRAM

- LEGEND**
- ◀ ⊙ ▶ DUAL ENTRY PHASE
  - ◀ □ ▶ SINGLE ENTRY PHASE
  - ◀ ◇ ▶ O.L. OVERLAP
  - ◀ ⊙ ▶ PEDESTRIAN PHASE
  - \* NUMBER REFERS TO ASSOCIATED PHASE

**CONTROLLER SEQUENCE**



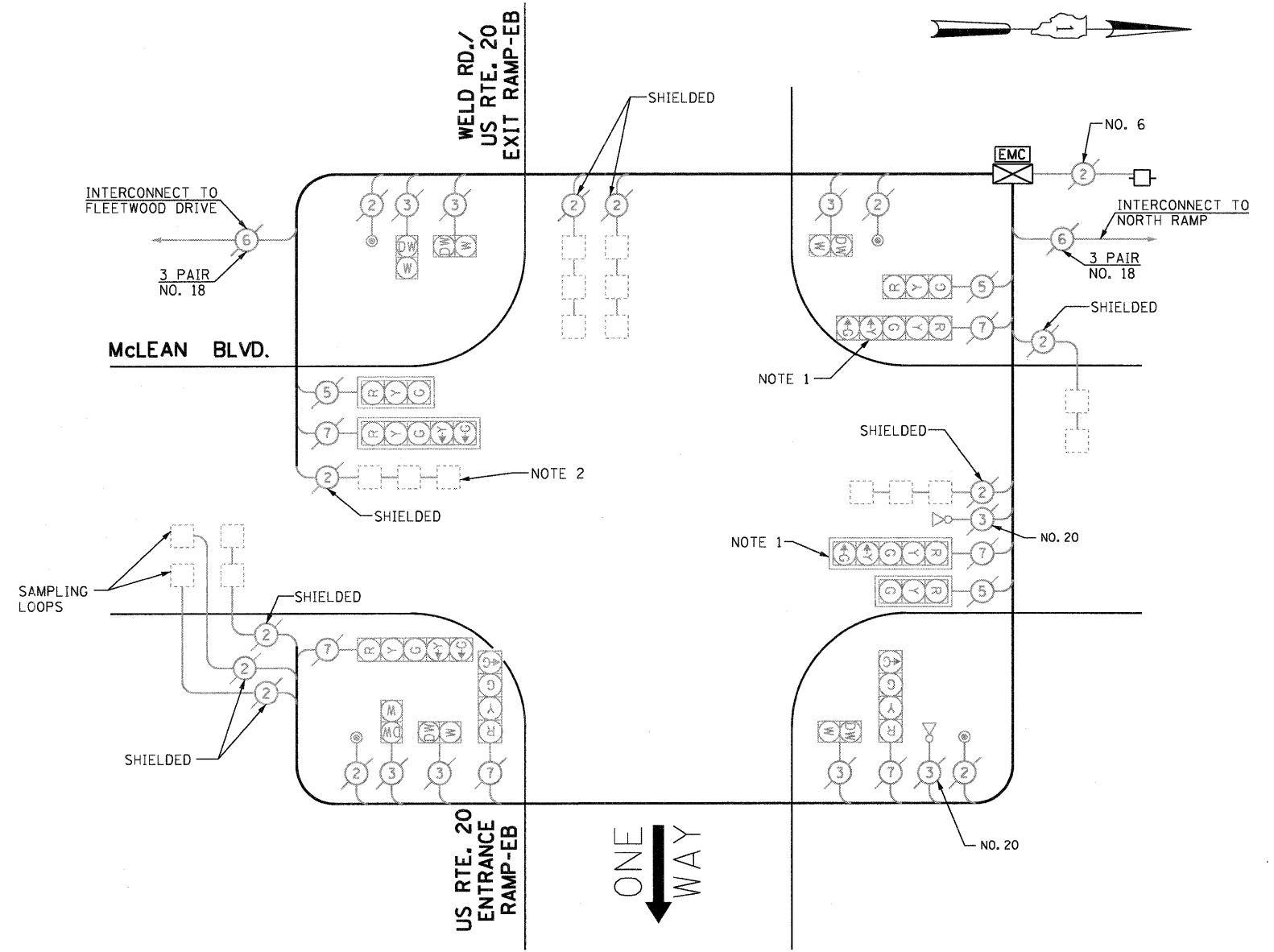
MODIFIED PHASE DESIGNATION DIAGRAM

- LEGEND**
- ◀ ⊙ ▶ DUAL ENTRY PHASE
  - ◀ □ ▶ SINGLE ENTRY PHASE
  - ◀ ◇ ▶ O.L. OVERLAP
  - ◀ ⊙ ▶ PEDESTRIAN PHASE
  - \* NUMBER REFERS TO ASSOCIATED PHASE

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	MODIFY EXISTING CONTROLLER

**MODIFIED CABLE PLAN**  
ALL STAGES (ADVANCE CONTRACT)  
(NOT TO SCALE)



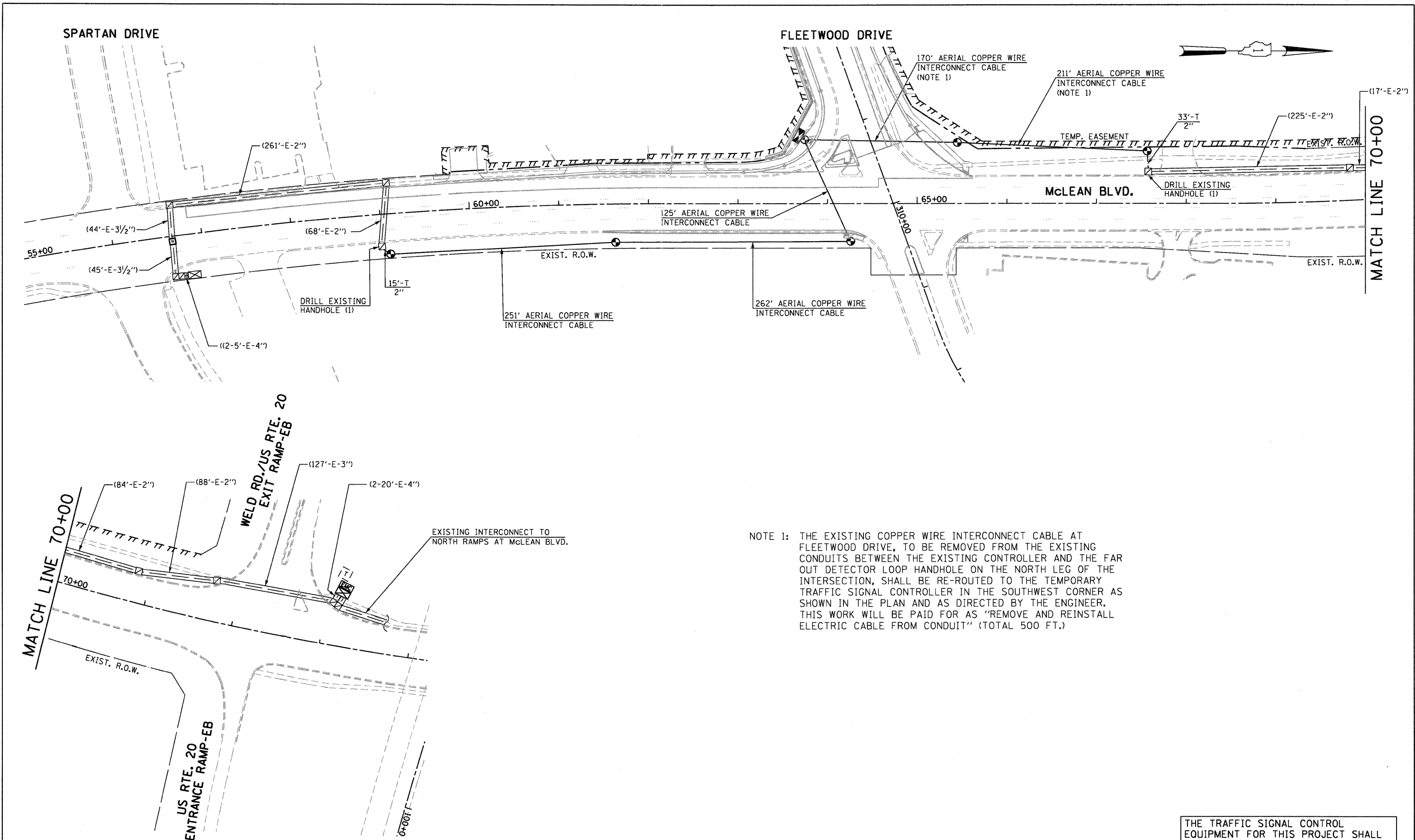
NOTE 1: THE GREEN AND YELLOW LEFT TURN ARROW INDICATION SECTIONS IN THE EXISTING 5-SECTION BRACKET MOUNTED AND MAST ARM MOUNTED SIGNAL HEADS FOR NORTHBOUND DIRECTION OF TRAFFIC SHALL BE DISCONNECTED AT THE CONTROLLER WHEN WELD ROAD WILL BE CLOSED TO TRAFFIC AT ITS INTERSECTION WITH SOUTH RAMPS. THIS WORK SHALL BE INCLUDED IN "MODIFY EXISTING CONTROLLER".

NOTE 2: WHEN WELD ROAD IS CLOSED TO TRAFFIC AT THIS INTERSECTION, THE LEFT TURN PHASE FOR NORTHBOUND TO WESTBOUND DIRECTION OF TRAFFIC, INCLUDING THE DETECTOR LOOPS, SHALL BE DISABLED AT THE CONTROLLER. THIS WORK SHALL BE INCLUDED IN "MODIFY EXISTING CONTROLLER".

NOTE 3: THE LEFT TURN LANE FOR NORTHBOUND TO WESTBOUND TURNING MOVEMENT WILL BE RE-STRIPED FOR ELIMINATION OF THE LEFT TURN LANE, WHEN WELD ROAD WILL BE CLOSED TO TRAFFIC AT THIS INTERSECTION.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "MULTISONICS 820A" TO MATCH THE EXISTING ADJACENT SYSTEM.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE		%OPERATION	
		INCAND.	LED		
SIGNAL (RED)	9	135	17	0.50	607.5
(YELLOW)	9	135	25	0.25	303.75
(GREEN)	11	135	15	0.25	371.25
ARROW	4	135	12	0.10	54
PED. SIGNAL	6	90	25	1.00	540
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN				0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	1976.5
CITY OF ELGIN 150 DEXTER COURT ELGIN, ILLINOIS 60120-5570					
ENERGY SUPPLY CONTACT: ELLIE SARALLO PHONE: (630) 424 5124					
COMPANY: COMMONWEALTH EDISON					



NOTE 1: THE EXISTING COPPER WIRE INTERCONNECT CABLE AT FLEETWOOD DRIVE, TO BE REMOVED FROM THE EXISTING CONDUITS BETWEEN THE EXISTING CONTROLLER AND THE FAR OUT DETECTOR LOOP HANDHOLE ON THE NORTH LEG OF THE INTERSECTION, SHALL BE RE-ROUTED TO THE TEMPORARY TRAFFIC SIGNAL CONTROLLER IN THE SOUTHWEST CORNER AS SHOWN IN THE PLAN AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AS "REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT" (TOTAL 500 FT.)

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "MULTISONICS 820A" TO MATCH THE EXISTING ADJACENT SYSTEM.

FILE NAME =	USER NAME = .GAL.	DESIGNED - PKG	REVISED -
#FILE#		DRAWN - MAA, EA	REVISED -
		CHECKED - PKG	REVISED -
		DATE - 4/26/2011	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

TEMPORARY INTERCONNECT PLAN			
McLEAN BOULEVARD			
FROM SPARTAN DRIVE TO WELD ROAD /US RTE. 20 SOUTH RAMPS			
SCALE: 1"= 50'	SHEET NO.	OF SHEETS	STA. TO STA.

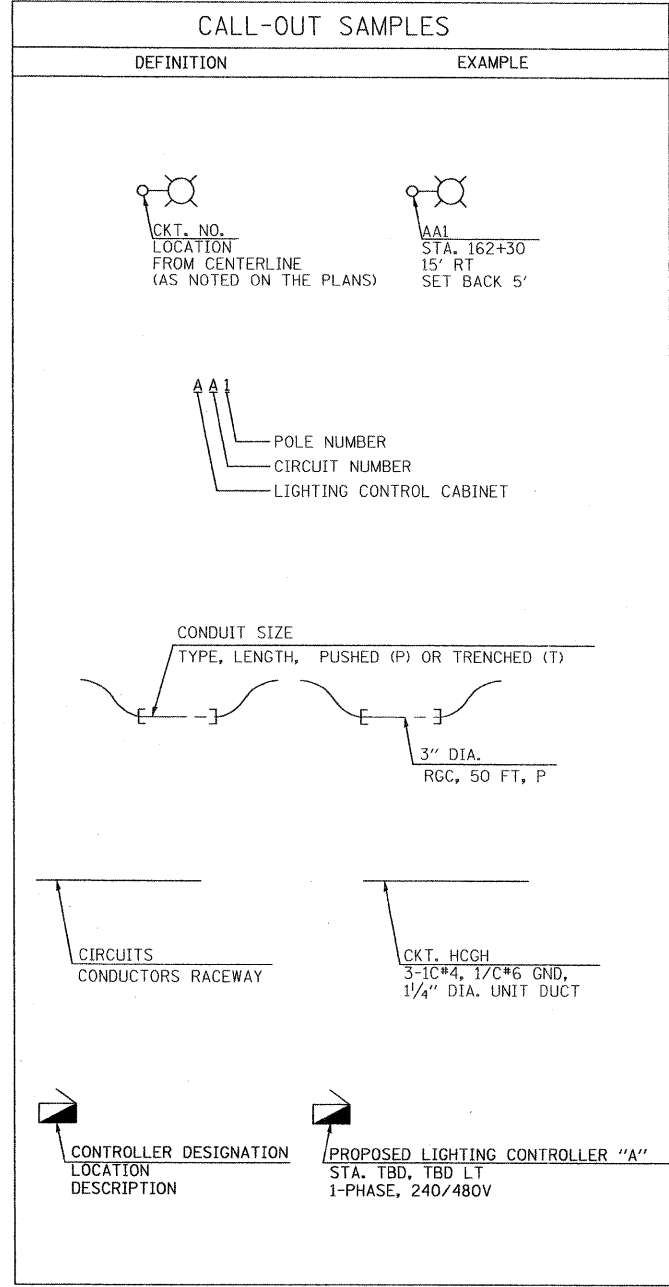
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	8R-HB-2-BY-1	KANE	434	224
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
CONTRACT NO. 60K90				





**LEGEND (IDOT)**

	TEMPORARY WOOD POLE, 50 FT M.H., 20 FT. M.A. COBRA HEAD LUMINAIRE, 400W HPS, TYPE MC-III
	TEMPORARY WOOD POLE, 80 FT M.H., 20 FT. M. A. COBRA HEAD LUMINAIRE, 400W HPS, TYPE MC-III
	EXISTING LIGHT POLE TO TO BE REMOVED AND SALVAGE, (CITY OF ELGIN)
	AERIAL CABLE, AS SPECIFIED IN PLANS
	TEMPORARY LIGHTING CONTROLLER CABINET "T", SINGLE DOOR, CONSOLE TYPE, 100A, 240/480V, 1P
	EXISTING LIGHTING CONTROLLER CABINET
	PROPOSED ELECTRIC SERVICE TRANSFORMER BY COMED ON EXISTING OR PROPOSED UTILITY WOOD POLE
	ELECTRIC GROUND ROD
	GUY WIRE



**ABBREVIATIONS**

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

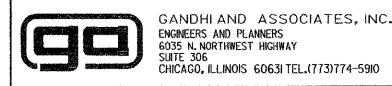
- GENERAL NOTES:**
- THE CONTRACTOR SHALL VERIFY ALL OF THE INFORMATION SHOWN ON THE CONTRACT DRAWINGS, WHICH WOULD AFFECT THE WORK UNDER THIS CONTRACT.
  - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS PROJECT, SPECIFICALLY AS THEY RELATE TO LUMP SUM ITEMS AND UNIT PRICE ITEMS.
  - ALL NEW CONDUITS, UNIT DUCTS, DIRECT BURIAL CABLES, AND APPURTENANCES ARE INDICATED DIAGRAMMATICALLY ON THE DRAWINGS. THE ACTUAL LOCATIONS IN THE FIELD SHALL MEET WITH APPROVAL OF THE ENGINEER.
  - THE ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ASSOCIATED SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS (LATEST EDITION).
  - THE SCALE SHOWN ON PLAN DRAWINGS APPLIES ONLY TO THE FULL SIZE PLANS AND NOT TO REDUCED SIZE PLANS.
  - THE CONTRACTOR SHALL FURNISH AND INSTALL LUMINAIRE LAMPS IN ACCORDANCE WITH THE SUPPLIER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE SPECIFICATIONS. THE COST OF THIS WORK AND MATERIAL SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE APPLICABLE LUMINAIRE PAY ITEM. SEPARATE PAYMENT WILL NOT BE MADE.
  - ALL LUMINAIRES SHALL BE ORIENTED WITH THE OPTICS PERPENDICULAR TO THE ROADWAY UNLESS OTHERWISE INDICATED OR DIRECTED BY THE ENGINEER. THE COST FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE APPLICABLE LUMINAIRE PAY ITEMS. SEPARATE PAYMENT WILL NOT BE MADE.
  - CONDUITS AND UNIT DUCTS SHALL BE INSTALLED AT A MINIMUM 30" DEPTH BELOW GRADE AND POSITIONED IN THE FIELD TO AVOID CONFLICT WITH ROADWAY UNDERDRAINS AND OTHER EXISTING AND PROPOSED UTILITIES. THE CONTRACTOR SHALL INCREASE DEPTH OF UNIT DUCT AND CONDUIT AS REQUIRED AT NO ADDITIONAL COST TO THE STATE. THE CONTRACTOR SHALL COORDINATE RACEWAY DEPTH WITH THE ELECTRICAL DETAILS AND THE ENGINEER.
  - WHERE MULTIPLE CONDUITS ADJACENT TO EACH OTHER ARE INSTALLED IN A COMMON TRENCH, TRENCH AND BACKFILL WILL NOT BE PAID FOR EACH CONDUIT, BUT WILL BE PAID FOR THE LENGTH OF THE COMMON TRENCH ONLY.
  - WHERE THE CONTRACTOR'S EXCAVATION MEETS AN OBSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR DIRECTION IN WRITING PRIOR TO EXCAVATION. THE CONTRACTOR SHALL RESTORE ANY DAMAGE TO EXISTING SYSTEMS OR UTILITIES AND REMOVE EXISTING OBSTRUCTIONS AND FOUNDATIONS TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE FOR THE APPROPRIATE PAY ITEM
  - THE COST OF THE GROUND RODS ARE TO BE INCLUDED IN THE CONTRACT UNIT PRICE OF THE WOOD POLE AND CONTROLLER AND NO EXTRA COMPENSATION SHALL BE MADE. GROUND RODS ARE TO BE PROVIDED EVERY THIRD WOOD POLE AS SHOWN ON THE PLANS.
  - WHEREVER THE TEMPORARY AERIAL CABLE IS REQUIRED TO CROSS AN EXISTING AND/OR PROPOSED ROADWAY, THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 20 FEET (6 METERS) OF VERTICAL CLEARANCE OVER THE ROADWAY AT ALL TIMES.
  - ALL SET BACKS ARE MEASURED FROM THE EXISTING EDGE OF TRAVELED PAVEMENT TO THE CENTER OF THE POLE.
  - THE CONTRACTOR SHALL LOCATE TEMPORARY WOOD POLES SO AS TO AVOID DAMAGE TO EXISTING UTILITIES, AND ANY CHANGE TO THE LOCATIONS OF THE TEMPORARY POLES SHOWN IN THE PLANS MUST BE APPROVED BY THE RESIDENT ENGINEER

- STAGING NOTES:**
- ALL LIGHTING WORK SHOWN ON THESE PLANS SHALL BE INSTALLED AND MADE OPERATIONAL PRIOR TO COMMENCEMENT OF STAGE I CONSTRUCTION FOR THIS CONTRACT (60K90) UNLESS NOTED OTHERWISE.
  - ONLY AFTER THE TEMPORARY LIGHTING SYSTEM IS IN PLACE AND OPERATIONAL SHALL THE CONTRACTOR REMOVE THE EXISTING LIGHTING EQUIPMENT SHOWN FOR REMOVAL ON THE LIGHTING REMOVAL PLANS.
  - THE TEMPORARY LIGHTING SYSTEM SHALL REMAIN IN PLACE UPON COMPLETION OF THIS CONTRACT.
  - THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE TEMPORARY LIGHTING WITH ALL OTHER ELEMENTS OF THE WORK INCLUDING REMOVAL OF EXISTING SEWERS, INSTALLATION OF PROPOSED SEWERS, AND CONSTRUCTION OF RETAINING WALLS, EMBANKMENTS, DETENTION BASINS, AND DITCHES.
  - THE CONTRACTOR SHALL EMBED ALL POLES BASED ON A GROUND SURFACE ELEVATION WHICH IS THE LOWEST OF THE FOLLOWING: THE EXISTING SURFACE ELEVATION, THE PROPOSED GROUND ELEVATION, INTERIM GROUND ELEVATIONS, OR AN ELEVATION SPECIFIED ON THE PLANS FOR A SPECIFIC POLE.



*P.K. Gandhi* 5/11/2011

P.K. GANDHI, P.E.  
NO. 062-034993  
EXPIRES: 11/30/2011  
SHEETS 226-241



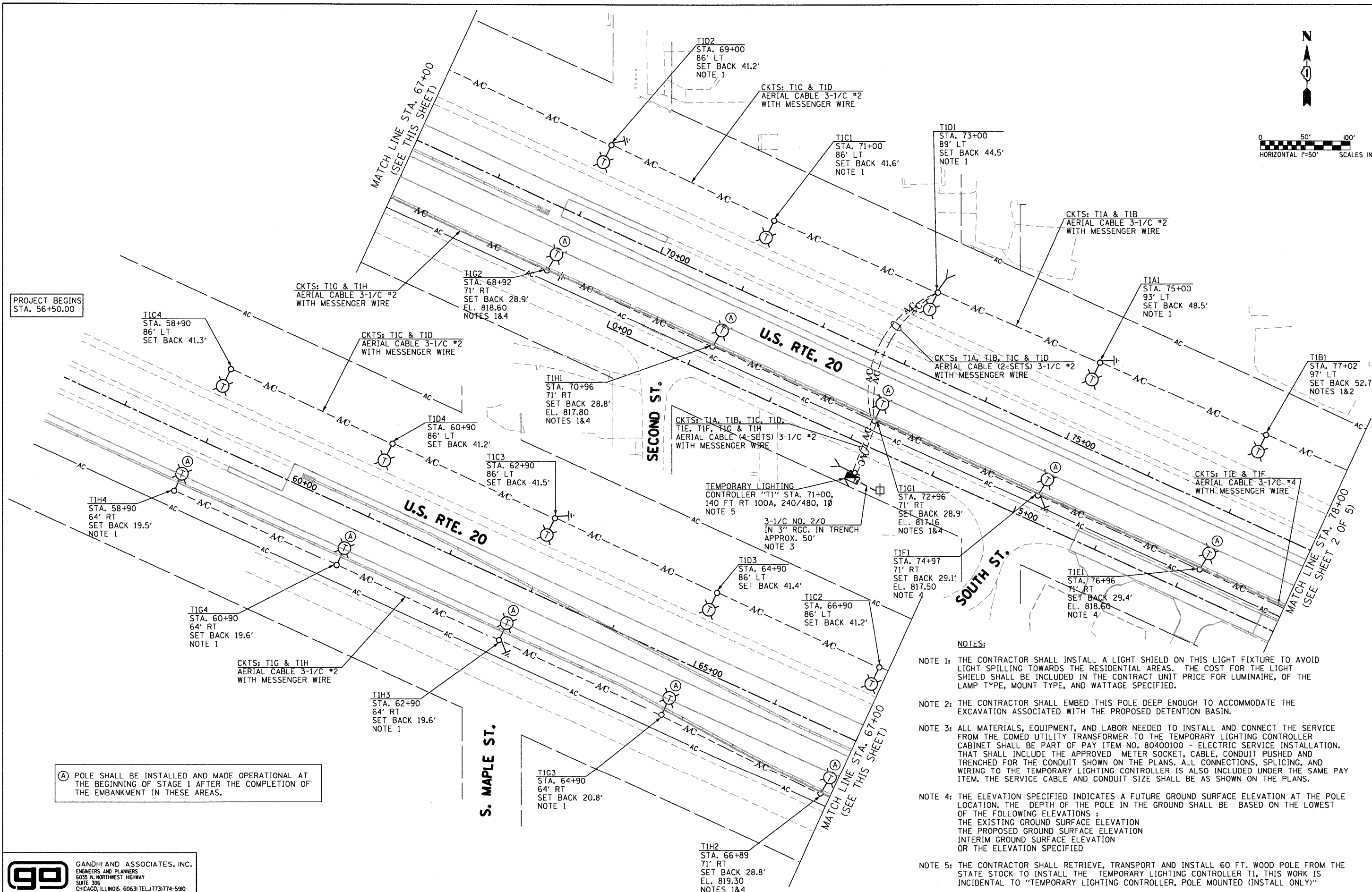
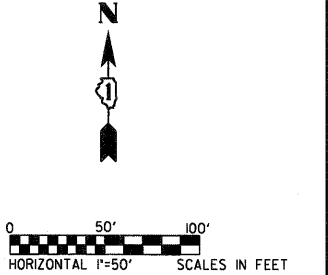
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	PLOT DATE = 5/11/2011	CHECKED - PKG	REVISED -					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
		DATE - 05/18/2011	REVISED -									

SCHEDULE OF QUANTITIES			
PAY ITEM NO.	DESIGNATION	UNIT	TOTAL QUANTITY
80400100	ELECTRIC SERVICE INSTALLATION	EACH	2
80400200	ELECTRIC UTILITY SERVICE CONNECTION	LSUM	1
81301110	JUNCTION BOX, STAINLESS STEEL, EMBEDDED IN STRUCTURE, 12" X 8" X 6"	EACH	4
81800300	AERIAL CABLE, 3-1/2 NO. 2 WITH MESSENGER WIRE	FOOT	19842
84200500	REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	18
84500110	REMOVAL OF LIGHTING CONTROLLER	EACH	1
84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	1
84500130	REMOVAL OF LIGHTING CONTROLLER FOUNDATION	EACH	1
* X8210405	LUMINAIRE SHIELD	EACH	45
* Z0033028	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	21
* -	TEMPORARY WOOD POLE, 90 FT., CLASS 4, 20FT. MAST ARM, AND LUMINAIRE	EACH	2
* -	MAST ARM, 20FT., FOR WOOD POLE (MATERIAL ONLY)	EACH	93
* -	TEMPORARY WOOD POLE, 60 FT., CLASS 4, 20FT. MAST ARM, AND LUMINAIRE (INSTALL ONLY)	EACH	76
* -	TEMPORARY WOOD POLE, 90 FT., CLASS 4, 20FT. MAST ARM, AND LUMINAIRE (INSTALL ONLY)	EACH	17
* -	TEMPORARY LIGHTING CONTROLLER, 240 VOLT, POLE MOUNTED (INSTALL ONLY)	EACH	2

\* DESIGNATES SPECIAL PROVISIONS

**ga** GANDHI AND ASSOCIATES, INC.  
ENGINEERS AND PLANNERS  
6035 N. NORTHWEST HIGHWAY  
SUITE 305  
CHICAGO, ILLINOIS 60631 TEL: (773) 774-5910

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		DATE - 05/18/2011	REVISED -									



PROJECT BEGINS  
STA. 56+50.00

(A) POLE SHALL BE INSTALLED AND MADE OPERATIONAL AT THE BEGINNING OF STAGE 1 AFTER THE COMPLETION OF THE EMBANKMENT IN THESE AREAS.

- NOTES:**
- NOTE 1: THE CONTRACTOR SHALL INSTALL A LIGHT SHIELD ON THIS LIGHT FIXTURE TO AVOID LIGHT SPILLING TOWARDS THE RESIDENTIAL AREAS. THE COST FOR THE LIGHT SHIELD SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR LUMINAIRE, OF THE LAMP TYPE, MOUNT TYPE, AND WATTAGE SPECIFIED.
  - NOTE 2: THE CONTRACTOR SHALL EMBED THIS POLE DEEP ENOUGH TO ACCOMMODATE THE EXCAVATION ASSOCIATED WITH THE PROPOSED DETENTION BASIN.
  - NOTE 3: ALL MATERIALS, EQUIPMENT, AND LABOR NEEDED TO INSTALL AND CONNECT THE SERVICE FROM THE COMED UTILITY TRANSFORMER TO THE TEMPORARY LIGHTING CONTROLLER CABINET SHALL BE PART OF PAY ITEM NO. 80400100 - ELECTRIC SERVICE INSTALLATION. THAT SHALL INCLUDE THE APPROVED METER SOCKET, CABLE, CONDUIT PUSHED AND TRENCHED FOR THE CONDUIT SHOWN ON THE PLANS. ALL CONNECTIONS, SPLICING, AND WIRING TO THE TEMPORARY LIGHTING CONTROLLER IS ALSO INCLUDED UNDER THE SAME PAY ITEM. THE SERVICE CABLE AND CONDUIT SIZE SHALL BE AS SHOWN ON THE PLANS.
  - NOTE 4: THE ELEVATION SPECIFIED INDICATES A FUTURE GROUND SURFACE ELEVATION AT THE POLE LOCATION. THE DEPTH OF THE POLE IN THE GROUND SHALL BE BASED ON THE LOWEST OF THE FOLLOWING ELEVATIONS :  
THE EXISTING GROUND SURFACE ELEVATION  
THE PROPOSED GROUND SURFACE ELEVATION  
INTERIM GROUND SURFACE ELEVATION  
OR THE ELEVATION SPECIFIED
  - NOTE 5: THE CONTRACTOR SHALL RETRIEVE, TRANSPORT AND INSTALL 60 FT. WOOD POLE FROM THE STATE STOCK TO INSTALL THE TEMPORARY LIGHTING CONTROLLER T1, THIS WORK IS INCIDENTAL TO "TEMPORARY LIGHTING CONTROLLER, POLE MOUNTED (INSTALL ONLY)"

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

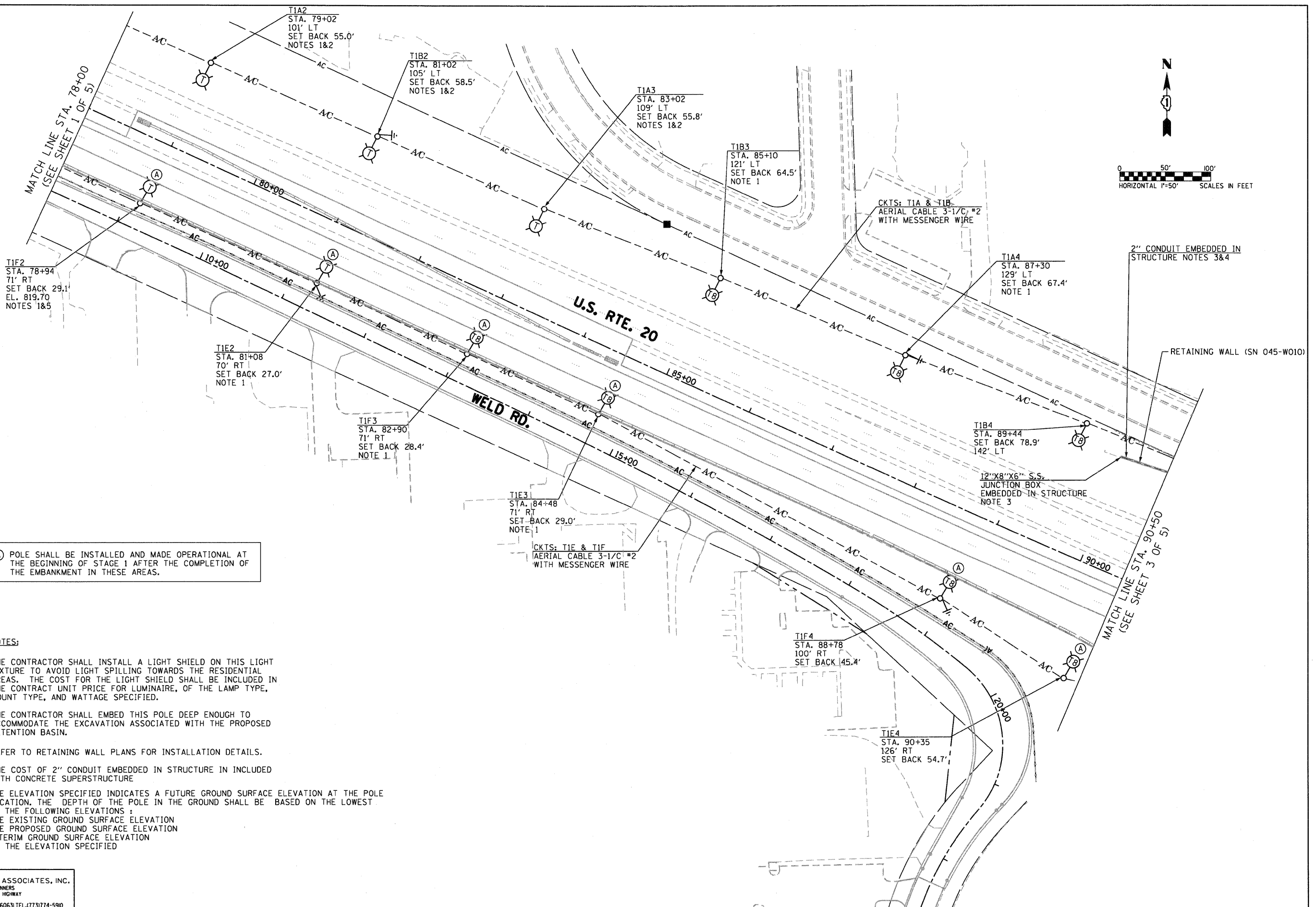
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		DATE - 05/18/2011	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY LIGHTING PLAN  
(SHEET 1 OF 5)**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	8R-HB-2-BY-1	KANE	434	228
CONTRACT NO. 60K90				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



(A) POLE SHALL BE INSTALLED AND MADE OPERATIONAL AT THE BEGINNING OF STAGE 1 AFTER THE COMPLETION OF THE EMBANKMENT IN THESE AREAS.

**NOTES:**

- NOTE 1: THE CONTRACTOR SHALL INSTALL A LIGHT SHIELD ON THIS LIGHT FIXTURE TO AVOID LIGHT SPILLING TOWARDS THE RESIDENTIAL AREAS. THE COST FOR THE LIGHT SHIELD SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR LUMINAIRE, OF THE LAMP TYPE, MOUNT TYPE, AND WATTAGE SPECIFIED.
- NOTE 2: THE CONTRACTOR SHALL EMBED THIS POLE DEEP ENOUGH TO ACCOMMODATE THE EXCAVATION ASSOCIATED WITH THE PROPOSED DETENTION BASIN.
- NOTE 3: REFER TO RETAINING WALL PLANS FOR INSTALLATION DETAILS.
- NOTE 4: THE COST OF 2" CONDUIT EMBEDDED IN STRUCTURE IS INCLUDED WITH CONCRETE SUPERSTRUCTURE
- NOTE 5: THE ELEVATION SPECIFIED INDICATES A FUTURE GROUND SURFACE ELEVATION AT THE POLE LOCATION. THE DEPTH OF THE POLE IN THE GROUND SHALL BE BASED ON THE LOWEST OF THE FOLLOWING ELEVATIONS :  
 THE EXISTING GROUND SURFACE ELEVATION  
 THE PROPOSED GROUND SURFACE ELEVATION  
 INTERIM GROUND SURFACE ELEVATION  
 OR THE ELEVATION SPECIFIED

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 6035 N. NORTHWEST HIGHWAY  
 SUITE 306  
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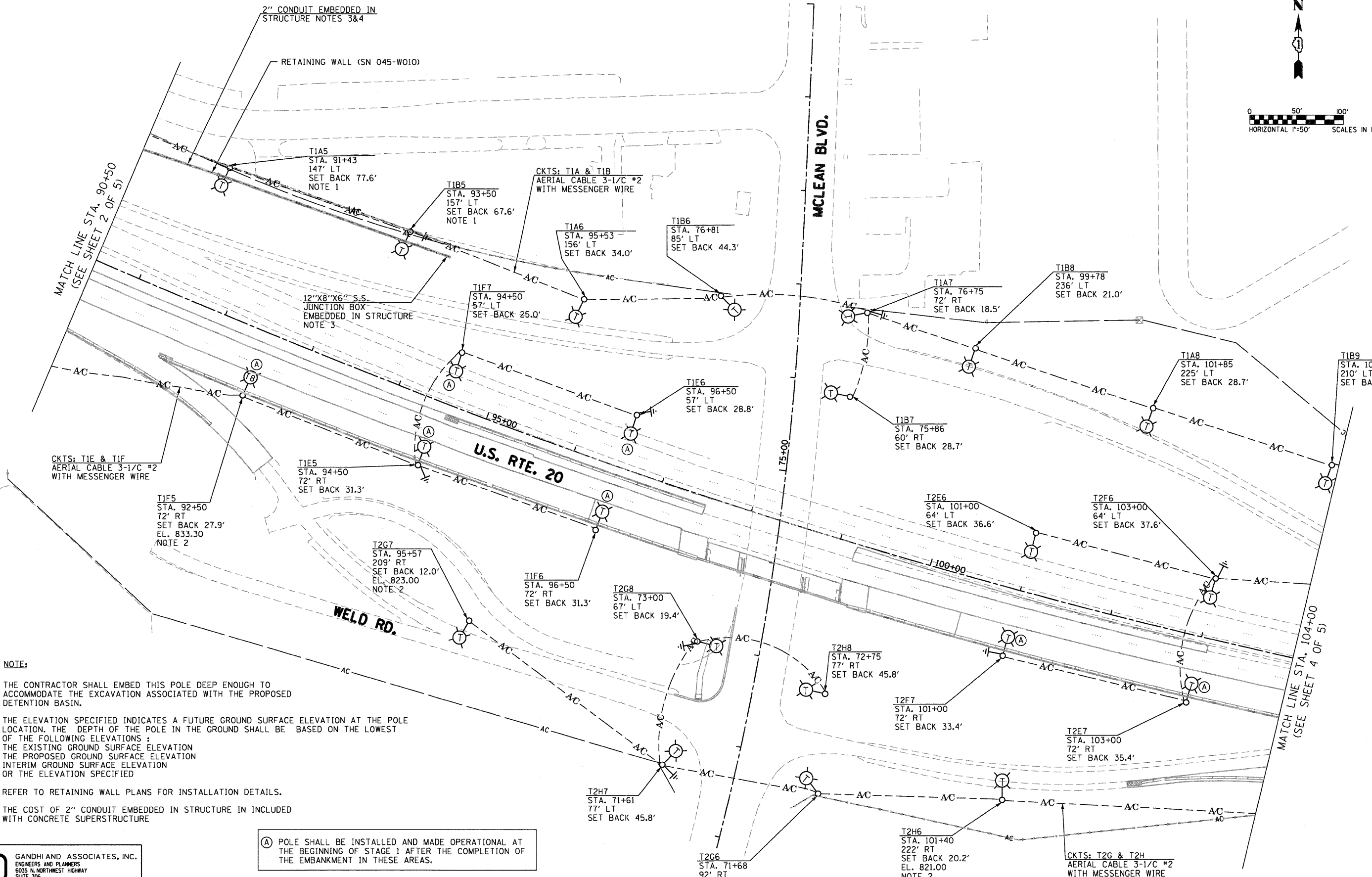
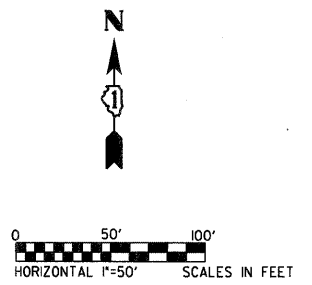
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	PLOT DATE = 5/12/2011	DATE - 05/18/2011	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY LIGHTING PLAN  
 (SHEET 2 OF 5)**

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

F.A.P. RTE. 345	SECTION 8R-HB-2-BY-1	COUNTY KANE	TOTAL SHEETS 434	SHEET NO. 229
CONTRACT NO. 60K90				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



**NOTE:**

NOTE 1: THE CONTRACTOR SHALL EMBED THIS POLE DEEP ENOUGH TO ACCOMMODATE THE EXCAVATION ASSOCIATED WITH THE PROPOSED DETENTION BASIN.

NOTE 2: THE ELEVATION SPECIFIED INDICATES A FUTURE GROUND SURFACE ELEVATION AT THE POLE LOCATION. THE DEPTH OF THE POLE IN THE GROUND SHALL BE BASED ON THE LOWEST OF THE FOLLOWING ELEVATIONS:  
 THE EXISTING GROUND SURFACE ELEVATION  
 THE PROPOSED GROUND SURFACE ELEVATION  
 INTERIM GROUND SURFACE ELEVATION  
 OR THE ELEVATION SPECIFIED

NOTE 3: REFER TO RETAINING WALL PLANS FOR INSTALLATION DETAILS.

NOTE 4: THE COST OF 2" CONDUIT EMBEDDED IN STRUCTURE IS INCLUDED WITH CONCRETE SUPERSTRUCTURE

(A) POLE SHALL BE INSTALLED AND MADE OPERATIONAL AT THE BEGINNING OF STAGE 1 AFTER THE COMPLETION OF THE EMBANKMENT IN THESE AREAS.

**GO** GANDHI AND ASSOCIATES, INC.  
 ENGINEERS AND PLANNERS  
 6015 N. NORTHWEST HIGHWAY  
 SUITE 306  
 CHICAGO, ILLINOIS 60631 TEL: (773) 774-5910

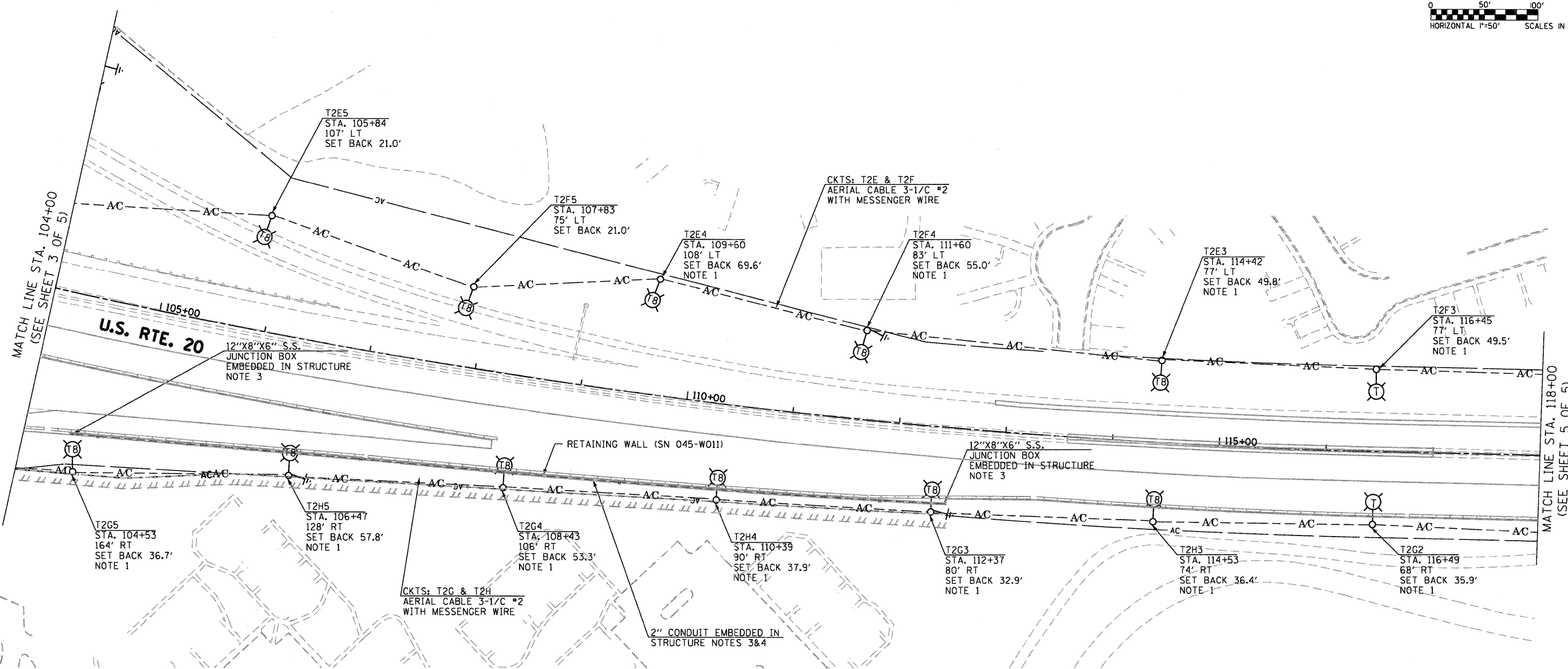
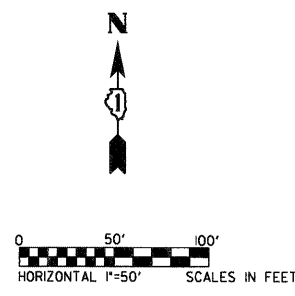
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY LIGHTING PLAN  
 (SHEET 3 OF 5)**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	BR-HB-2-BY-1	KANE	434	230
CONTRACT NO. 60K90				
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				



- NOTES:**
- NOTE 1: THE CONTRACTOR SHALL INSTALL A LIGHT SHIELD ON THIS LIGHT FIXTURE TO AVOID LIGHT SPILLING TOWARDS THE RESIDENTIAL AREAS. THE COST FOR THE LIGHT SHIELD SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR LUMINAIRE, OF THE LAMP TYPE, MOUNT TYPE, AND WATTAGE SPECIFIED.
  - NOTE 2: THE CONTRACTOR SHALL EMBED THIS POLE DEEP ENOUGH TO ACCOMMODATE THE EXCAVATION ASSOCIATED WITH THE PROPOSED RETAINING WALL SN 045-W011
  - NOTE 3: REFER TO RETAINING WALL PLANS FOR INSTALLATION DETAILS.
  - NOTE 4: THE COST OF 2" CONDUIT EMBEDDED IN STRUCTURE IS INCLUDED WITH CONCRETE SUPERSTRUCTURE

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

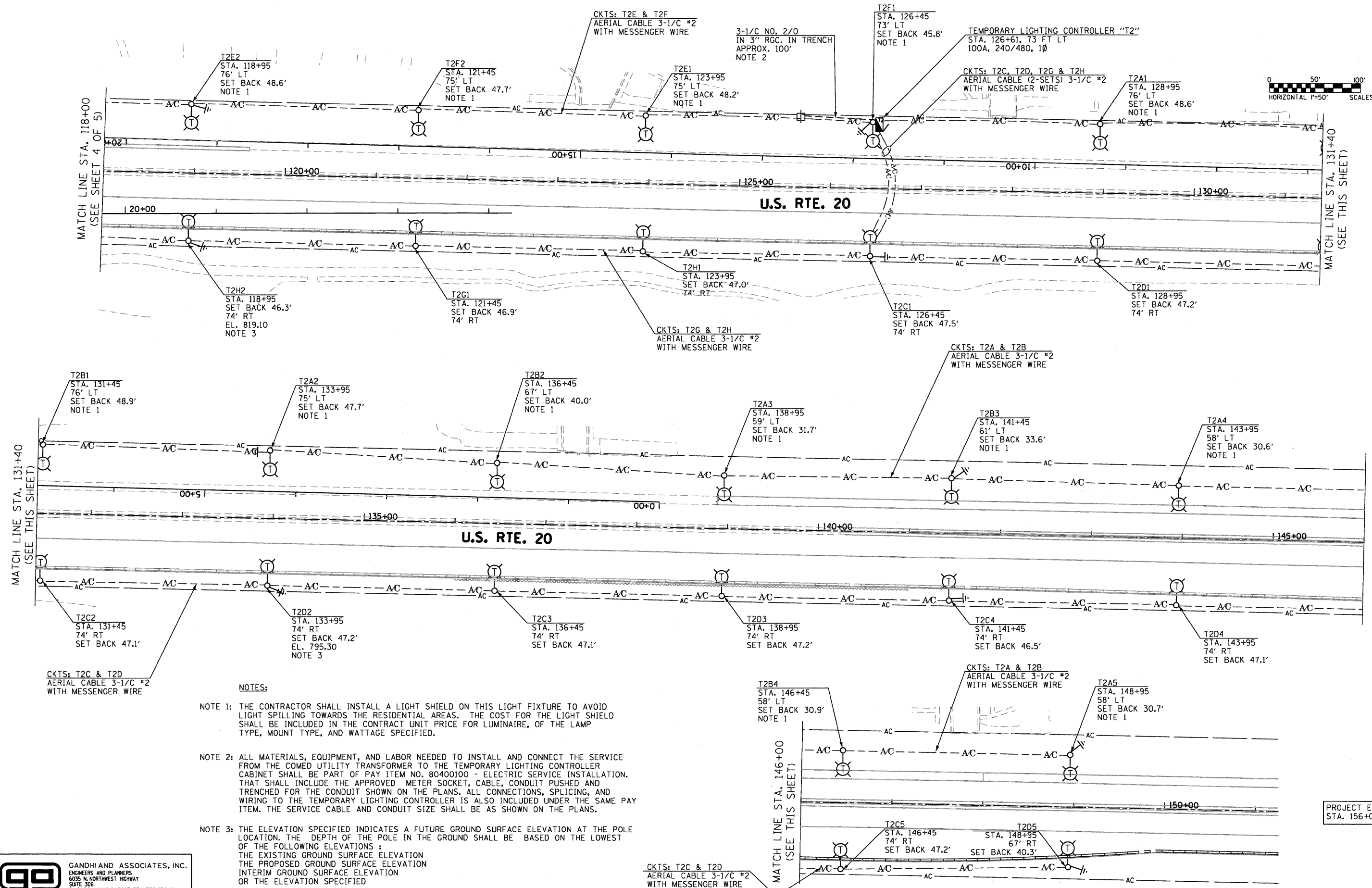
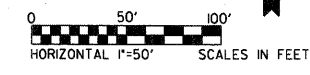
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

<b>TEMPORARY LIGHTING PLAN (SHEET 4 OF 5)</b>			
SCALE: 1"= 50'	SHEET NO. OF SHEETS	STA. TO STA.	

F.A.P. RTE. 345	SECTION 8R-HB-2-BY-1	COUNTY KANE	TOTAL SHEETS 434	SHEET NO. 231
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

CONTRACT NO. 60K90



**NOTES:**

- NOTE 1: THE CONTRACTOR SHALL INSTALL A LIGHT SHIELD ON THIS LIGHT FIXTURE TO AVOID LIGHT SPILLING TOWARDS THE RESIDENTIAL AREAS. THE COST FOR THE LIGHT SHIELD SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR LUMINAIRE, OF THE LAMP TYPE, MOUNT TYPE, AND WATTAGE SPECIFIED.
- NOTE 2: ALL MATERIALS, EQUIPMENT, AND LABOR NEEDED TO INSTALL AND CONNECT THE SERVICE FROM THE COMED UTILITY TRANSFORMER TO THE TEMPORARY LIGHTING CONTROLLER CABINET SHALL BE PART OF PAY ITEM NO. 80400100 - ELECTRIC SERVICE INSTALLATION. THAT SHALL INCLUDE THE APPROVED METER SOCKET, CABLE, CONDUIT PUSHED AND TRENCHED FOR THE CONDUIT SHOWN ON THE PLANS. ALL CONNECTIONS, SPLICING, AND WIRING TO THE TEMPORARY LIGHTING CONTROLLER IS ALSO INCLUDED UNDER THE SAME PAY ITEM. THE SERVICE CABLE AND CONDUIT SIZE SHALL BE AS SHOWN ON THE PLANS.
- NOTE 3: THE ELEVATION SPECIFIED INDICATES A FUTURE GROUND SURFACE ELEVATION AT THE POLE LOCATION. THE DEPTH OF THE POLE IN THE GROUND SHALL BE BASED ON THE LOWEST OF THE FOLLOWING ELEVATIONS :  
 THE EXISTING GROUND SURFACE ELEVATION  
 THE PROPOSED GROUND SURFACE ELEVATION  
 INTERIM GROUND SURFACE ELEVATION  
 OR THE ELEVATION SPECIFIED

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

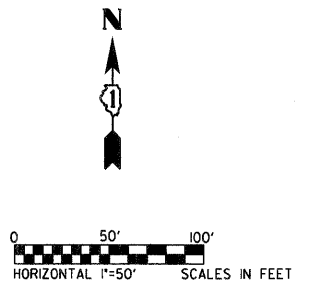
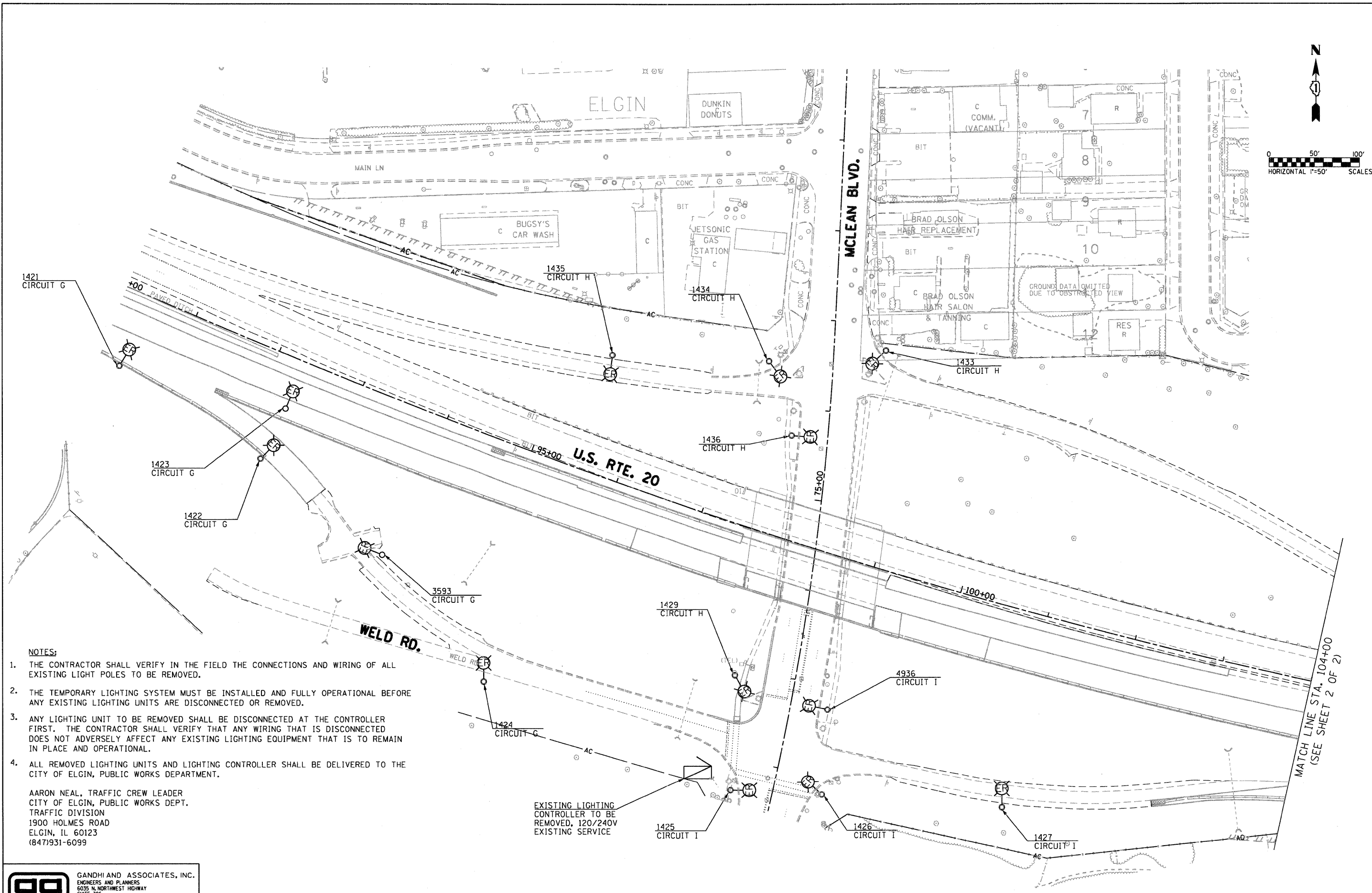
**TEMPORARY LIGHTING PLAN  
 (SHEET 5 OF 5)**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	BR-HB-2-BY-1	KANE	434	232
CONTRACT NO. 60K90				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

PROJECT ENDS  
 STA. 156+00.00





**NOTES:**

1. THE CONTRACTOR SHALL VERIFY IN THE FIELD THE CONNECTIONS AND WIRING OF ALL EXISTING LIGHT POLES TO BE REMOVED.
2. THE TEMPORARY LIGHTING SYSTEM MUST BE INSTALLED AND FULLY OPERATIONAL BEFORE ANY EXISTING LIGHTING UNITS ARE DISCONNECTED OR REMOVED.
3. ANY LIGHTING UNIT TO BE REMOVED SHALL BE DISCONNECTED AT THE CONTROLLER FIRST. THE CONTRACTOR SHALL VERIFY THAT ANY WIRING THAT IS DISCONNECTED DOES NOT ADVERSELY AFFECT ANY EXISTING LIGHTING EQUIPMENT THAT IS TO REMAIN IN PLACE AND OPERATIONAL.
4. ALL REMOVED LIGHTING UNITS AND LIGHTING CONTROLLER SHALL BE DELIVERED TO THE CITY OF ELGIN, PUBLIC WORKS DEPARTMENT.

AARON NEAL, TRAFFIC CREW LEADER  
 CITY OF ELGIN, PUBLIC WORKS DEPT.  
 TRAFFIC DIVISION  
 1900 HOLMES ROAD  
 ELGIN, IL 60123  
 (847)931-6099

EXISTING LIGHTING CONTROLLER TO BE REMOVED, 120/240V EXISTING SERVICE

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

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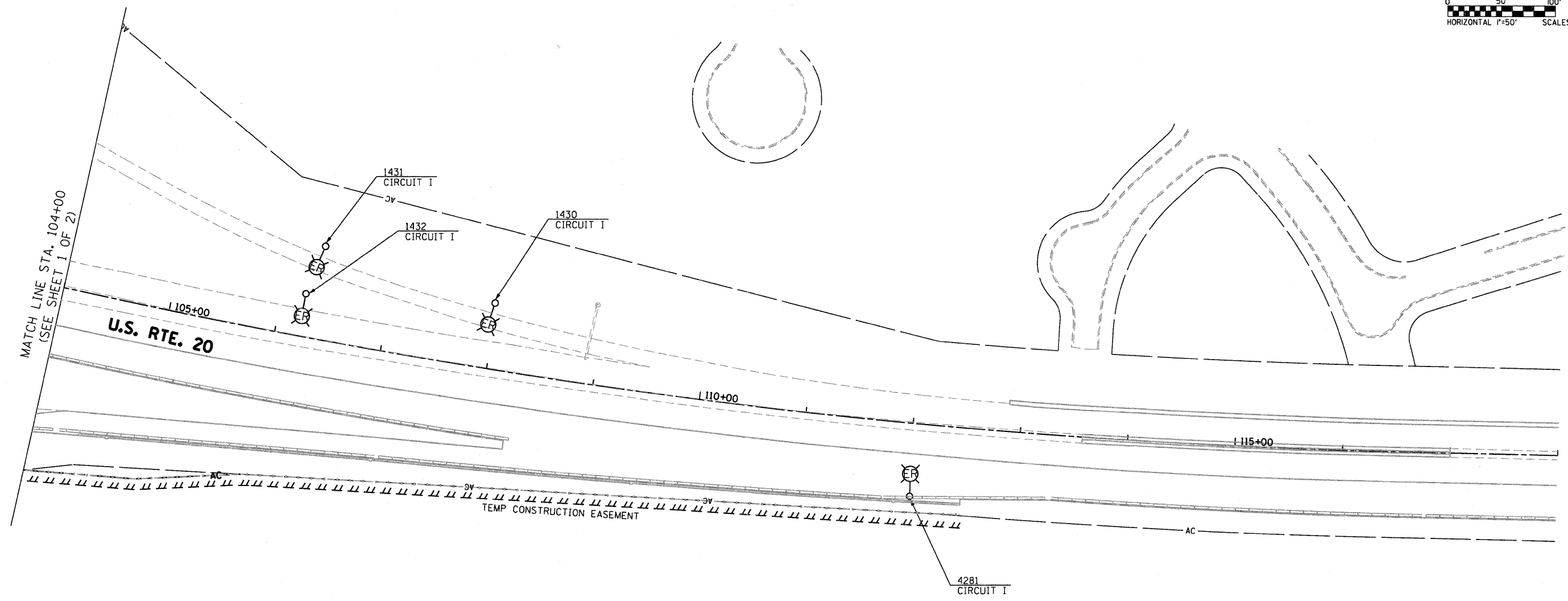
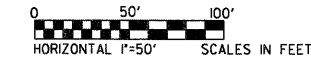
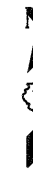
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**LIGHTING REMOVAL PLAN  
 (SHEET 1 OF 2)**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	BR-HB-2-BY-1	KANE	434	233
CONTRACT NO. 60K90				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

MATCH LINE STA. 104+00  
 (SEE SHEET 2 OF 2)



- NOTES:**
1. THE CONTRACTOR SHALL VERIFY IN THE FIELD THE CONNECTIONS AND WIRING OF ALL EXISTING LIGHT POLES TO BE REMOVED.
  2. THE TEMPORARY LIGHTING SYSTEM MUST BE INSTALLED AND FULLY OPERATIONAL BEFORE ANY EXISTING LIGHTING UNITS ARE DISCONNECTED OR REMOVED.
  3. ANY LIGHTING UNIT TO BE REMOVED SHALL BE DISCONNECTED AT THE CONTROLLER FIRST. THE CONTRACTOR SHALL VERIFY THAT ANY WIRING THAT IS DISCONNECTED DOES NOT ADVERSELY AFFECT ANY EXISTING LIGHTING EQUIPMENT THAT IS TO REMAIN IN PLACE AND OPERATIONAL.
  4. ALL REMOVED LIGHTING UNITS AND LIGHTING CONTROLLER SHALL BE DELIVERED TO THE CITY OF ELGIN, PUBLIC WORKS DEPARTMENT.

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 TRAFFIC DIVISION  
 1900 HOLMES ROAD  
 ELGIN, IL 60123  
 (847)931-6099

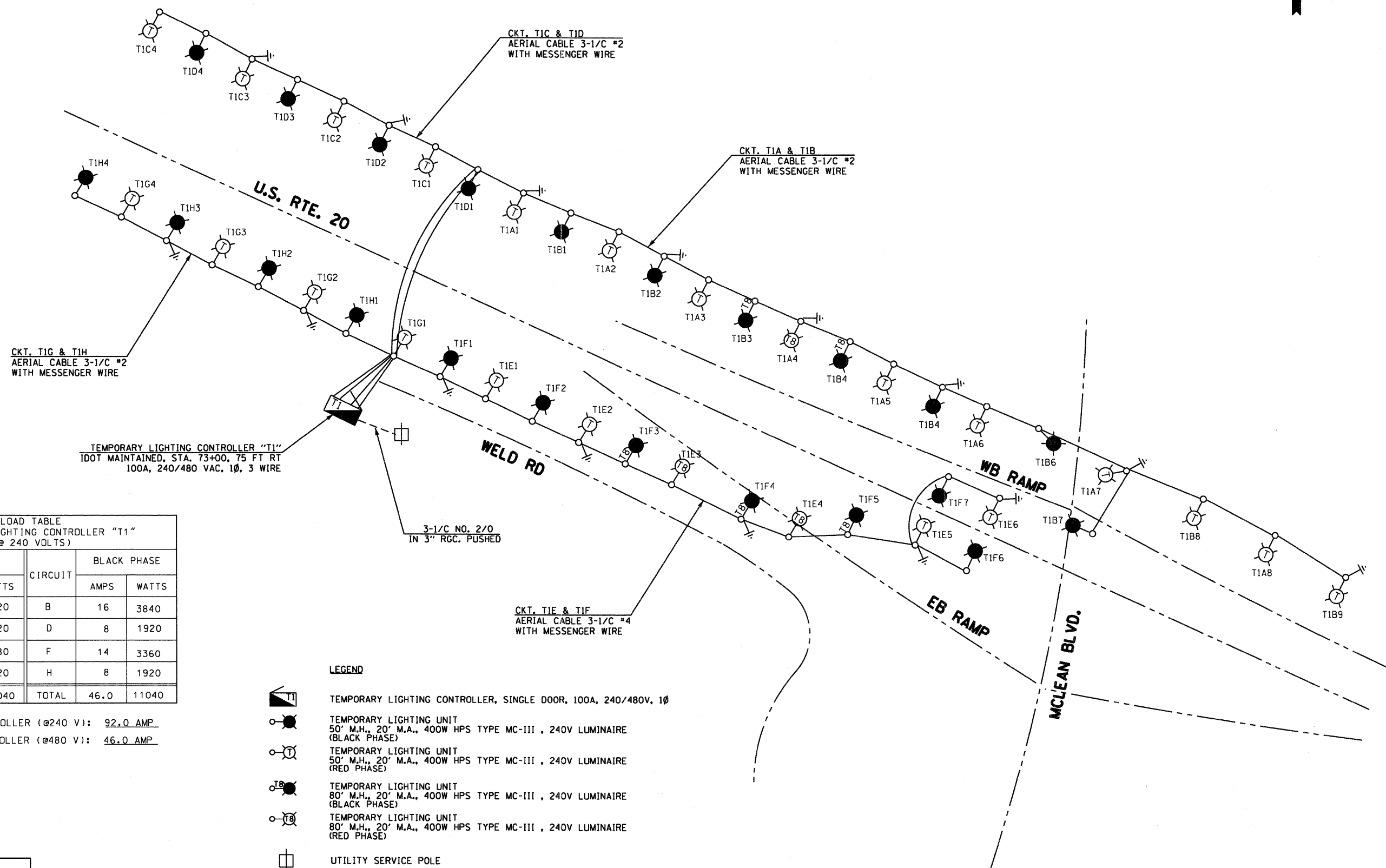
**GO** GANDHI AND ASSOCIATES, INC.  
 ENGINEERS AND PLANNERS  
 6035 N. NORTHWEST HIGHWAY  
 SUITE 306  
 CHICAGO, ILLINOIS 60631 TEL: 773/774-5910

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

LIGHTING REMOVAL PLAN (SHEET 2 OF 2)			
SCALE: 1"= 50'	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	8R-HB-2-BY-1	KANE	434	234
CONTRACT NO. 60K90				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



**LOAD TABLE**  
TEMPORARY LIGHTING CONTROLLER "T1"  
(@ 240 VOLTS)

CIRCUIT	RED PHASE		CIRCUIT	BLACK PHASE	
	AMPS	WATTS		AMPS	WATTS
A	18	4320	B	16	3840
C	8	1920	D	8	1920
E	12	2880	F	14	3360
G	8	1920	H	8	1920
TOTAL	46.0	11040	TOTAL	46.0	11040

TOTAL LOAD ON CONTROLLER (@240 V): 92.0 AMP  
 TOTAL LOAD ON CONTROLLER (@480 V): 46.0 AMP

- LEGEND**
- TEMPORARY LIGHTING CONTROLLER, SINGLE DOOR, 100A, 240/480V, 1Ø
  - TEMPORARY LIGHTING UNIT  
50' M.H., 20' M.A., 400W HPS TYPE MC-III, 240V LUMINAIRE (BLACK PHASE)
  - TEMPORARY LIGHTING UNIT  
50' M.H., 20' M.A., 400W HPS TYPE MC-III, 240V LUMINAIRE (RED PHASE)
  - TEMPORARY LIGHTING UNIT  
80' M.H., 20' M.A., 400W HPS TYPE MC-III, 240V LUMINAIRE (BLACK PHASE)
  - TEMPORARY LIGHTING UNIT  
80' M.H., 20' M.A., 400W HPS TYPE MC-III, 240V LUMINAIRE (RED PHASE)
  - UTILITY SERVICE POLE

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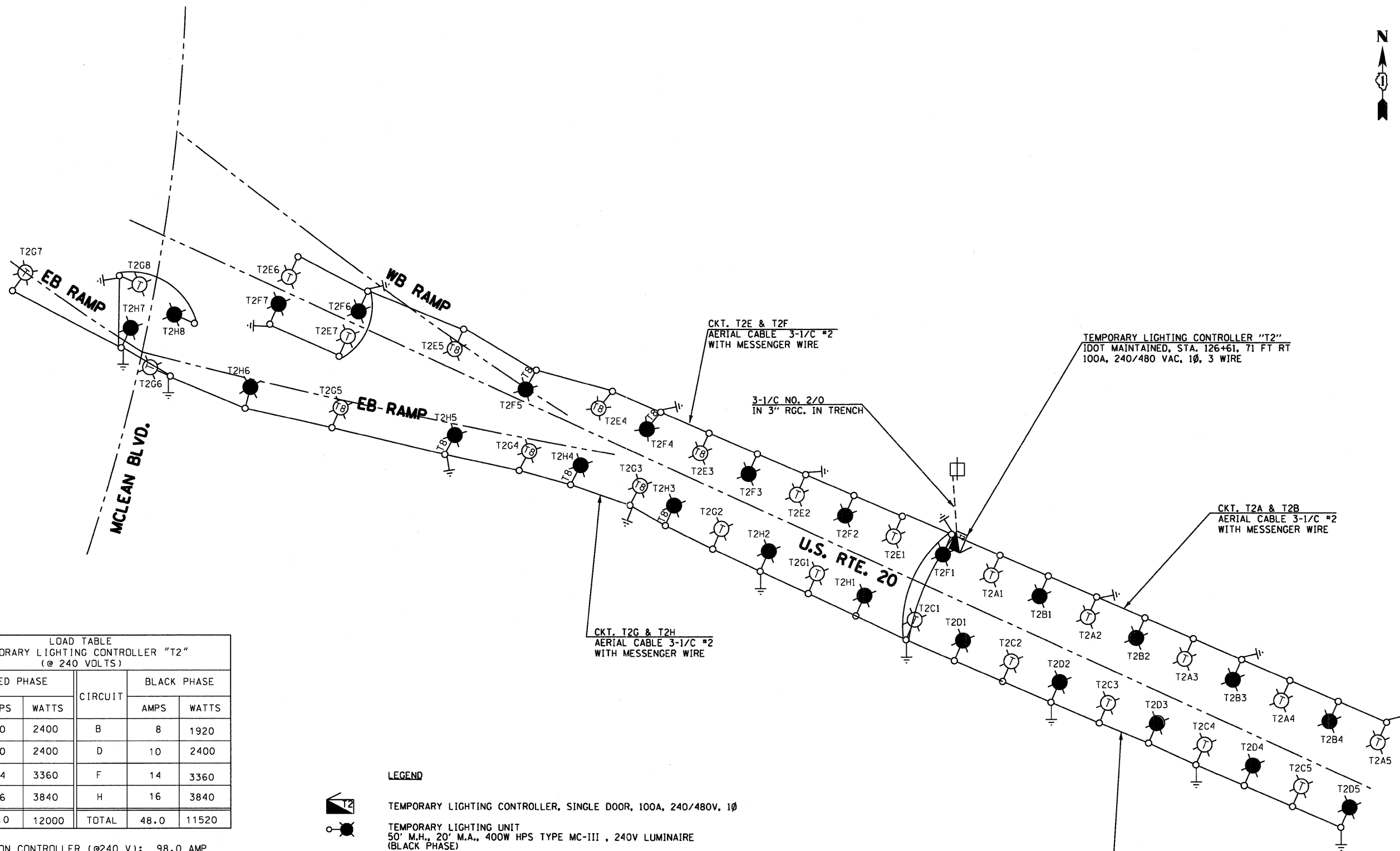
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**TEMPORARY SINGLE LINE DIAGRAM**  
**LIGHTING CONTROLLER "T1"**

SCALE: 1" = 50'	SHEET NO. OF SHEETS	STA. TO STA.
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	8R-HB-2-BY-1	KANE	434	235
CONTRACT NO. 60K90				
FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT				



LOAD TABLE TEMPORARY LIGHTING CONTROLLER "T2" (@ 240 VOLTS)					
CIRCUIT	RED PHASE		CIRCUIT	BLACK PHASE	
	AMPS	WATTS		AMPS	WATTS
A	10	2400	B	8	1920
C	10	2400	D	10	2400
E	14	3360	F	14	3360
G	16	3840	H	16	3840
TOTAL	50.0	12000	TOTAL	48.0	11520

TOTAL LOAD ON CONTROLLER (@240 V): 98.0 AMP  
 TOTAL LOAD ON CONTROLLER (@480 V): 49.0 AMP

**LEGEND**

- TEMPORARY LIGHTING CONTROLLER, SINGLE DOOR, 100A, 240/480V, 1Ø
- TEMPORARY LIGHTING UNIT  
50' M.H., 20' M.A., 400W HPS TYPE MC-III, 240V LUMINAIRE (BLACK PHASE)
- TEMPORARY LIGHTING UNIT  
50' M.H., 20' M.A., 400W HPS TYPE MC-III, 240V LUMINAIRE (RED PHASE)
- TEMPORARY LIGHTING UNIT  
80' M.H., 20' M.A., 400W HPS TYPE MC-III, 240V LUMINAIRE (BLACK PHASE)
- TEMPORARY LIGHTING UNIT  
80' M.H., 20' M.A., 400W HPS TYPE MC-III, 240V LUMINAIRE (RED PHASE)
- UTILITY SERVICE POLE

**GO** GANDHI AND ASSOCIATES, INC.  
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 SUITE 306  
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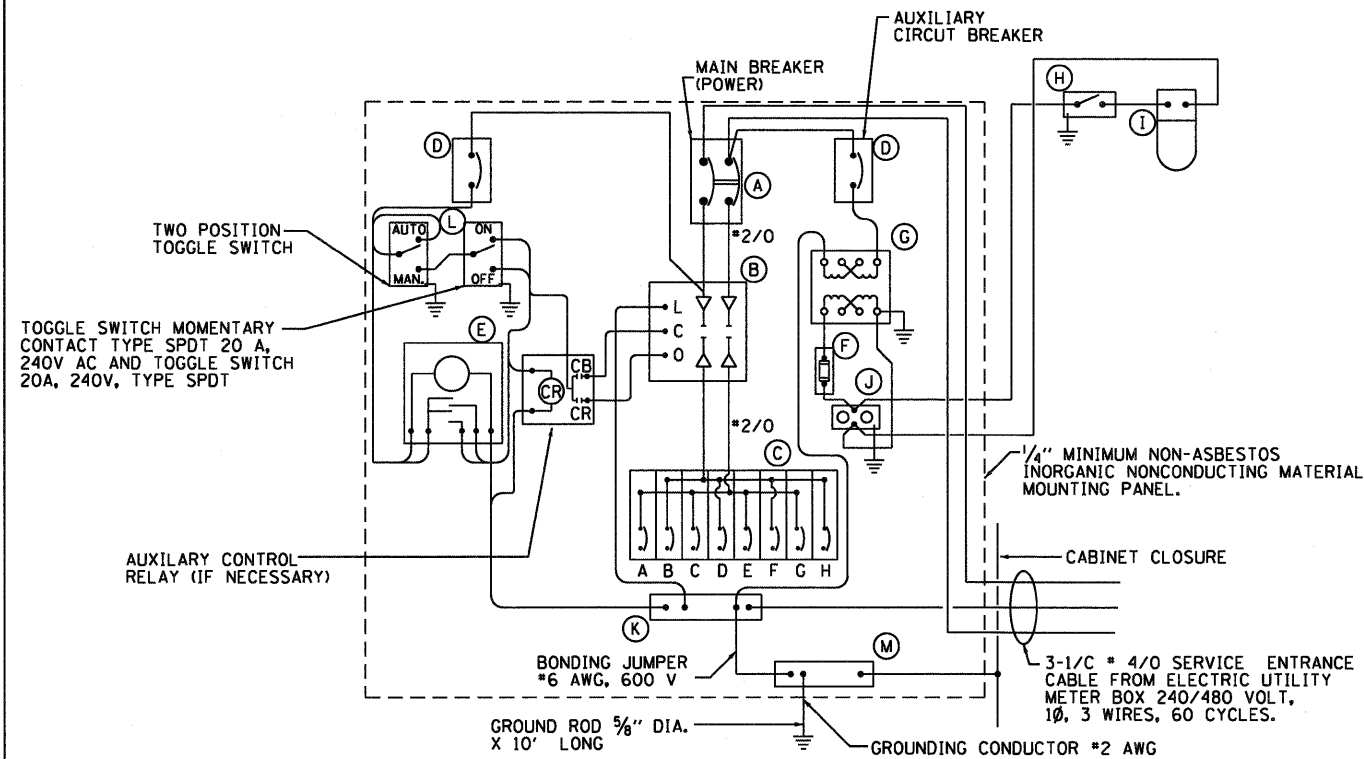
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

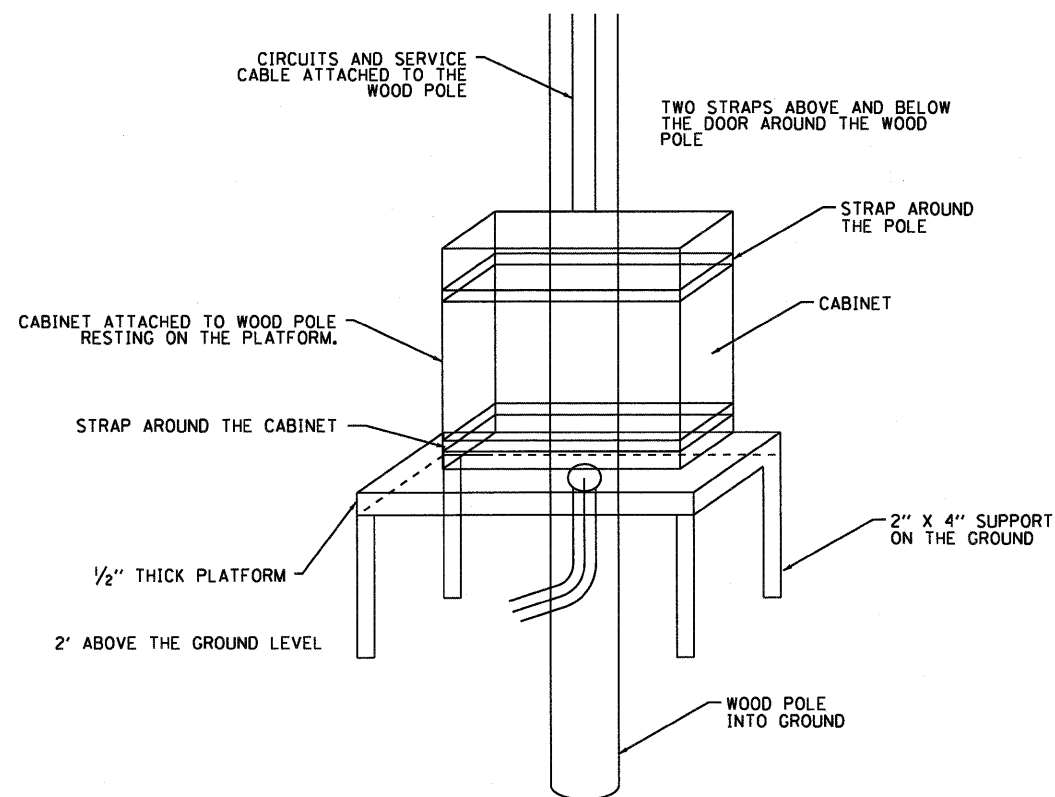
**TEMPORARY SINGLE LINE DIAGRAM  
 LIGHTING CONTROLLER "T2"**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	BR-HB-2-BY-1	KANE	434	236
CONTRACT NO. 60K90				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



PANEL WIRING DIAGRAM



POLE MOUNTED CABINET DETAIL

PANEL EQUIPMENT

BILL OF MATERIAL		
ITEM	QUANTITY	DESCRIPTION
A	1	MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT 100 AMP. FRAME, 100 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 480 VOLT.
B	1	REMOTE CONTROL SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, SINGLE THROW, 100 AMP., 600 VOLTS CONTROL CIRCUIT 240 VOLT.
C	8	CIRCUIT BREAKERS, 1 POLE, 100 AMP. FRAME, 50 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-10,000 AMP. AT 240 V.
D	2	CONTROL CIRCUIT - CIRCUIT BREAKER, 1 POLE, 240 V., 100 AMP. FRAME, 15 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-5000 AMP. AT 240 V.
E	1	ASTRONOMIC MICROPROCESSOR-BASED 2-CHANNEL CONTROLLER (TIME SWITCH).
F	1	20 A., 120 V. FUSE.
G	1	1.5 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240 X 480 / 120 X 240 VOLT, 60HZ.
H	1	SPST 20A SWITCH ON DOOR, TO TURN LIGHT ON WHEN DOOR IS OPEN
I	1	INCANDESCENT LIGHTING FIXTURE ENCLOSED AND GASKETED WITH 60 WATT, 120 V. LAMP.
J	1	20 A., 120 V. DUPLEX RECEPTACLE, GFCI.
K	1	COPPER GROUND BUS 1/4" X 1" X 12" LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS
L	1	TOGGLE SWITCHES MOUNTED IN 4" X 4" BOX.
M	1	COPPER GROUND BUS 1/4" X 1" X 12" LONG MOUNTED ON PANEL WITH LUGS AND SPARE LUGS

NOTES:

- ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.
- FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
- IN FRONT OF CONTROL CABINET DOOR, REMOVE VEGETATION AND 2" TOP SOIL. LEVEL THE AREA AND ON TOP PLACE LENGTH WISE PARALLEL TO CONTROL CABINET, A CONCRETE PAD 36" X 60" X 4" MINIMUM SIZE. THE COST OF LABOR AND MATERIALS ARE INCLUDED IN THE COST OF THE CONTROLLER.
- DOOR SHALL BE CONSTRUCTED FROM THE SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
- DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
- DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 1/4" DIA. STAINLESS STEEL HINGE PIN.
- ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL
- CONTROL WIRING TO BE #12 AWG, 600V, TYPE "SIS" GRAY SWITCH BOARD WIRE, STRANDED COPPER.
- METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET NEAR TO THE SERVICE POLE.
- CABINETS SHALL BE PRIMED AND PAINTED AS SPECIFIED.
- THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
- ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:  
R= RED      BL= BLUE      W= WHITE  
B= BLACK      Y= YELLOW      G= GREEN
- PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
- ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
- THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".
- 12" X 16" STAINLESS STEEL EXTERIOR NAMEPLATE SHALL BE ENGRAVED TO "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.

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

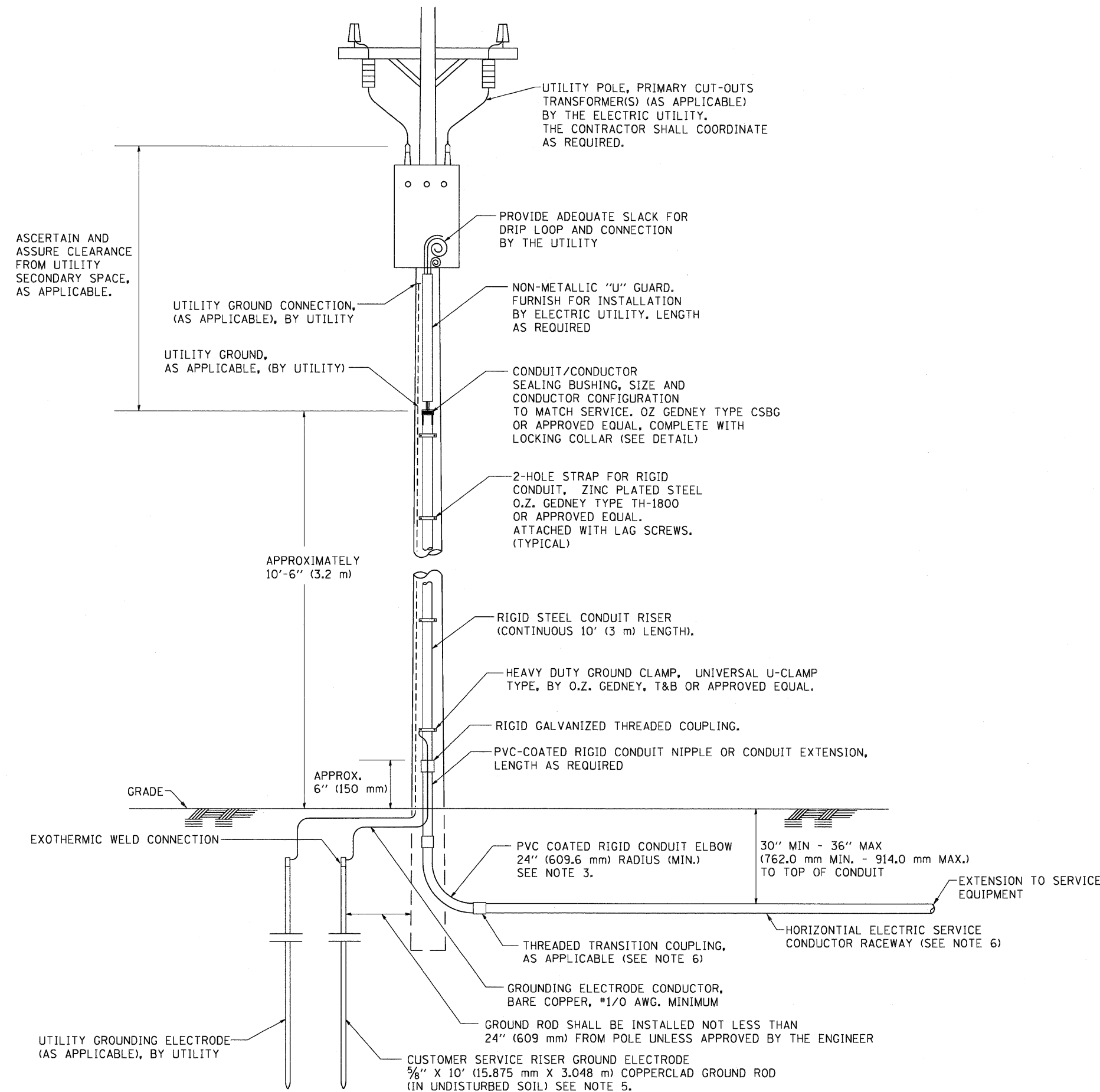
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

POLE MOUNTED LIGHTING CONTROLLER DETAIL

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	8R-HB-2-BY-1	KANE	434	237
CONTRACT NO. 60K90				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

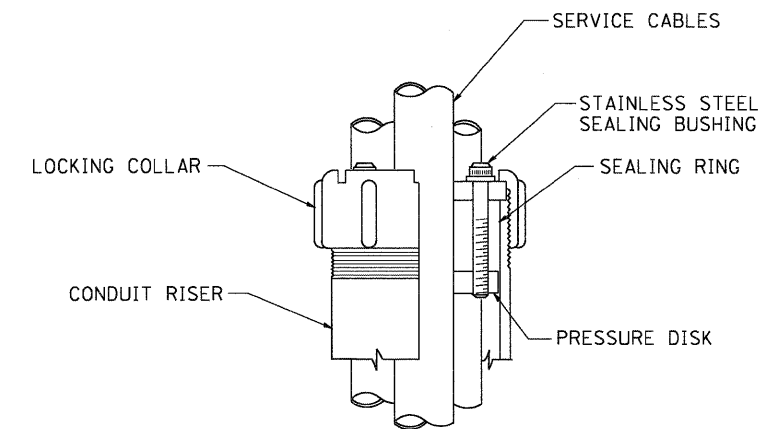


**APPLICATION**

THIS DETAIL APPLIES FOR LOW VOLTAGE ELECTRIC SERVICE (660 V OR LESS) FROM AN OVERHEAD UTILITY SUPPLY TO SEPERATLY-MOUNTED SERVICE EQUIPMENT.

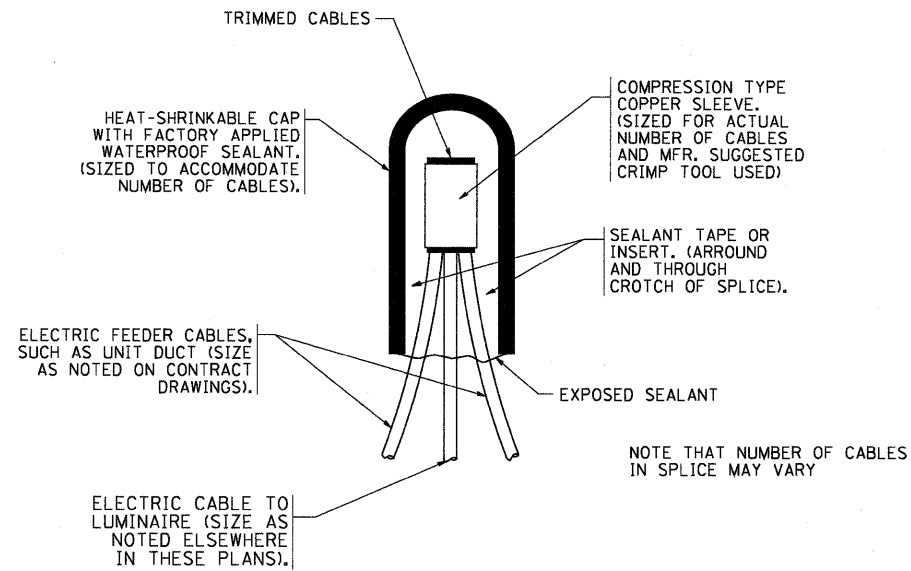
**NOTES**

- SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
- UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
- CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
- PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
- THE HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALIC TO NON METALIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
- PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.



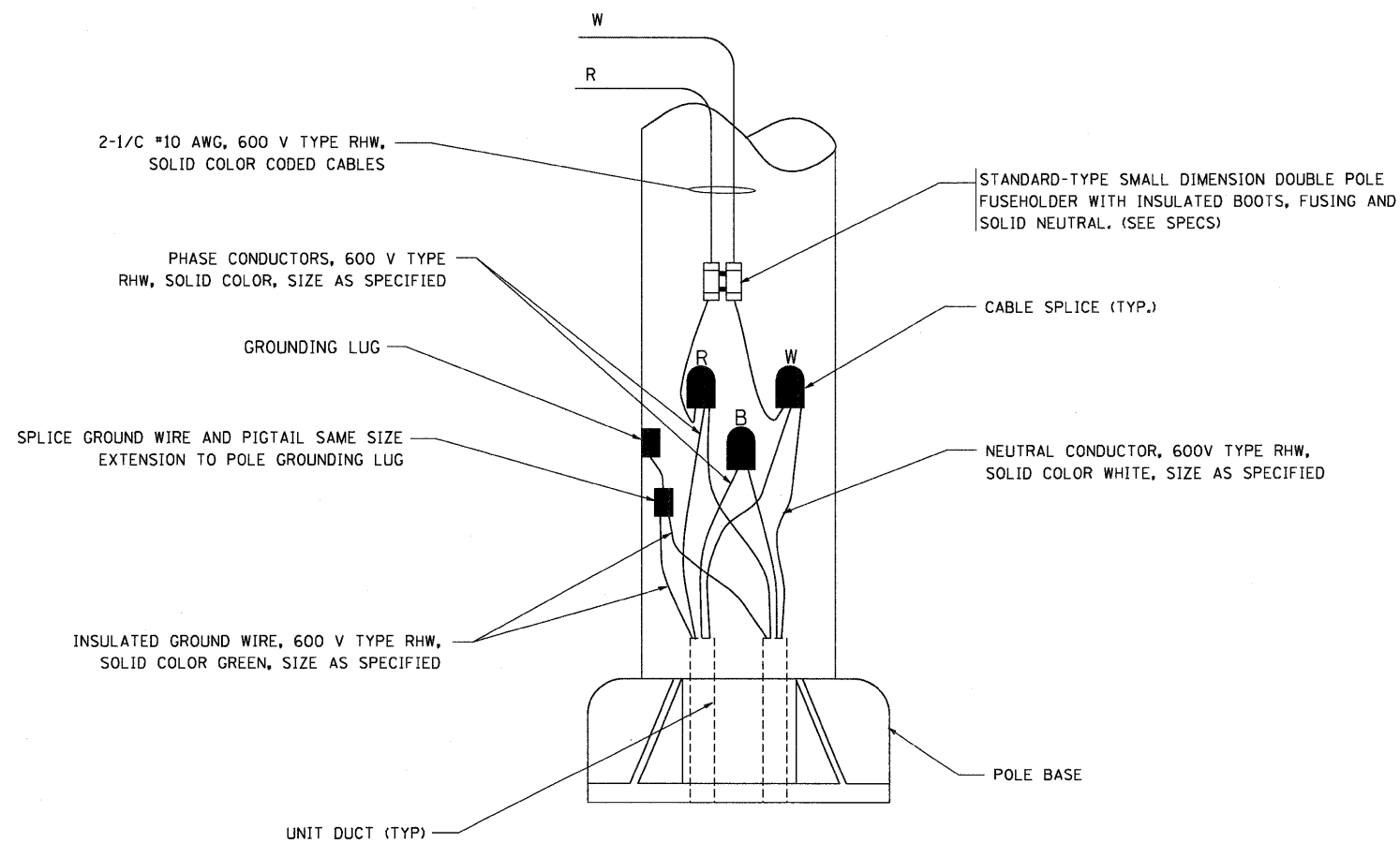
**SEALING BUSHING DETAIL**

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PLOT SCALE = 50.0000' / IN.	CHECKED - MEA	REVISIED -	REVISIED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.		BE-220		CONTRACT NO. 60K90			
PLOT DATE = 1/4/2008	DATE -	REVISIED -	REVISIED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							



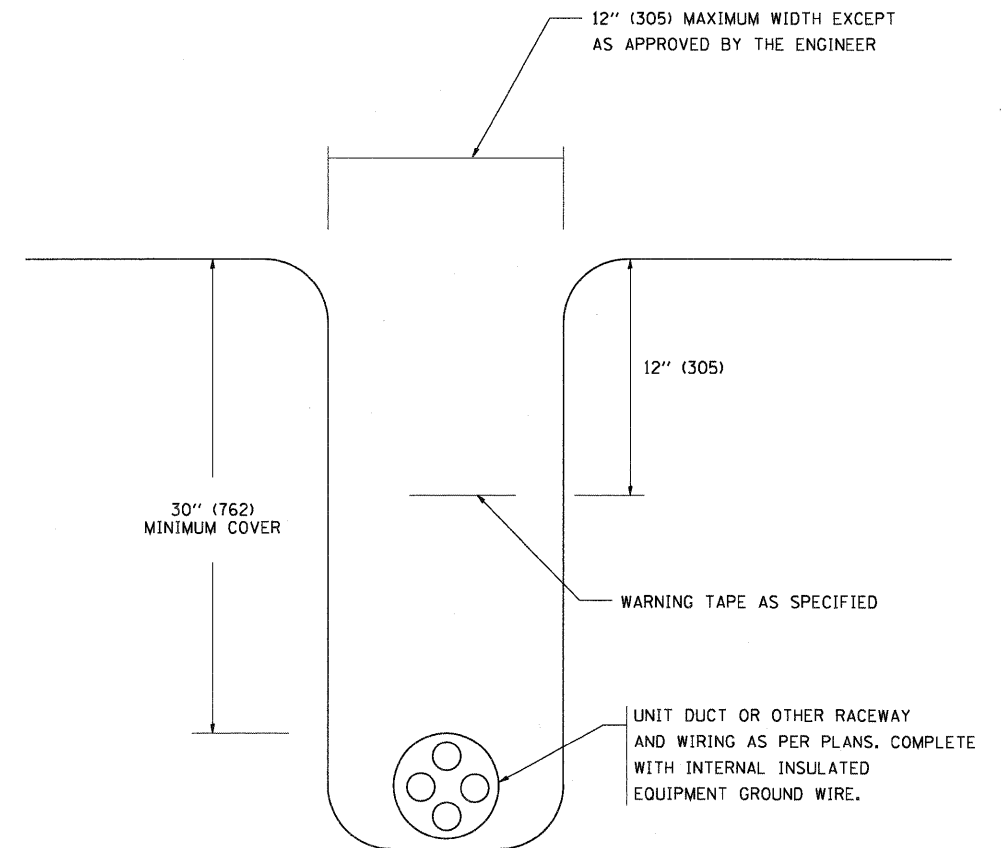
TYPICAL SPLICE DETAIL

N.T.S.



POLE WIRING DETAIL

N.T.S.



TYPICAL WIRING IN TRENCH DETAIL

N.T.S.

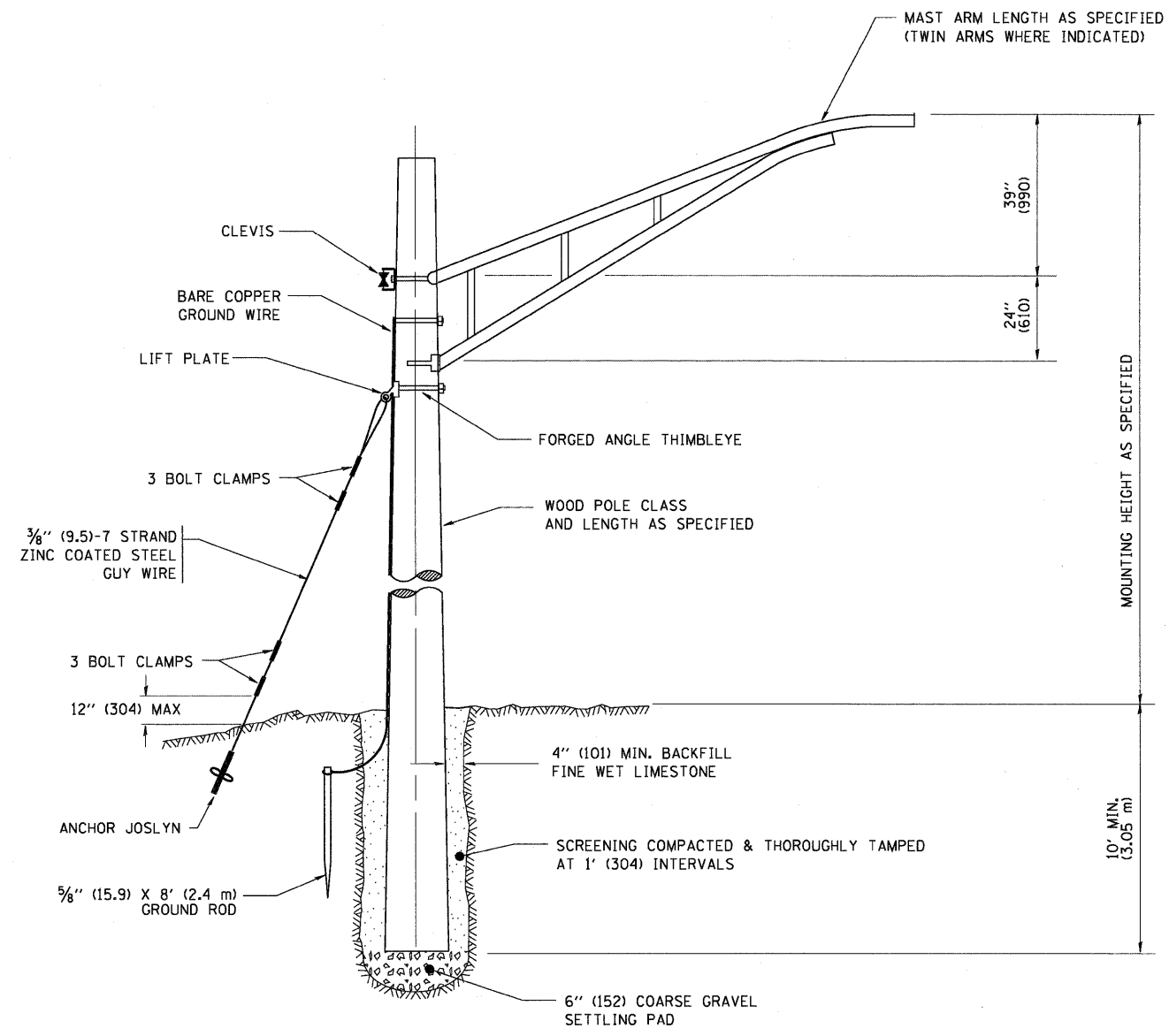
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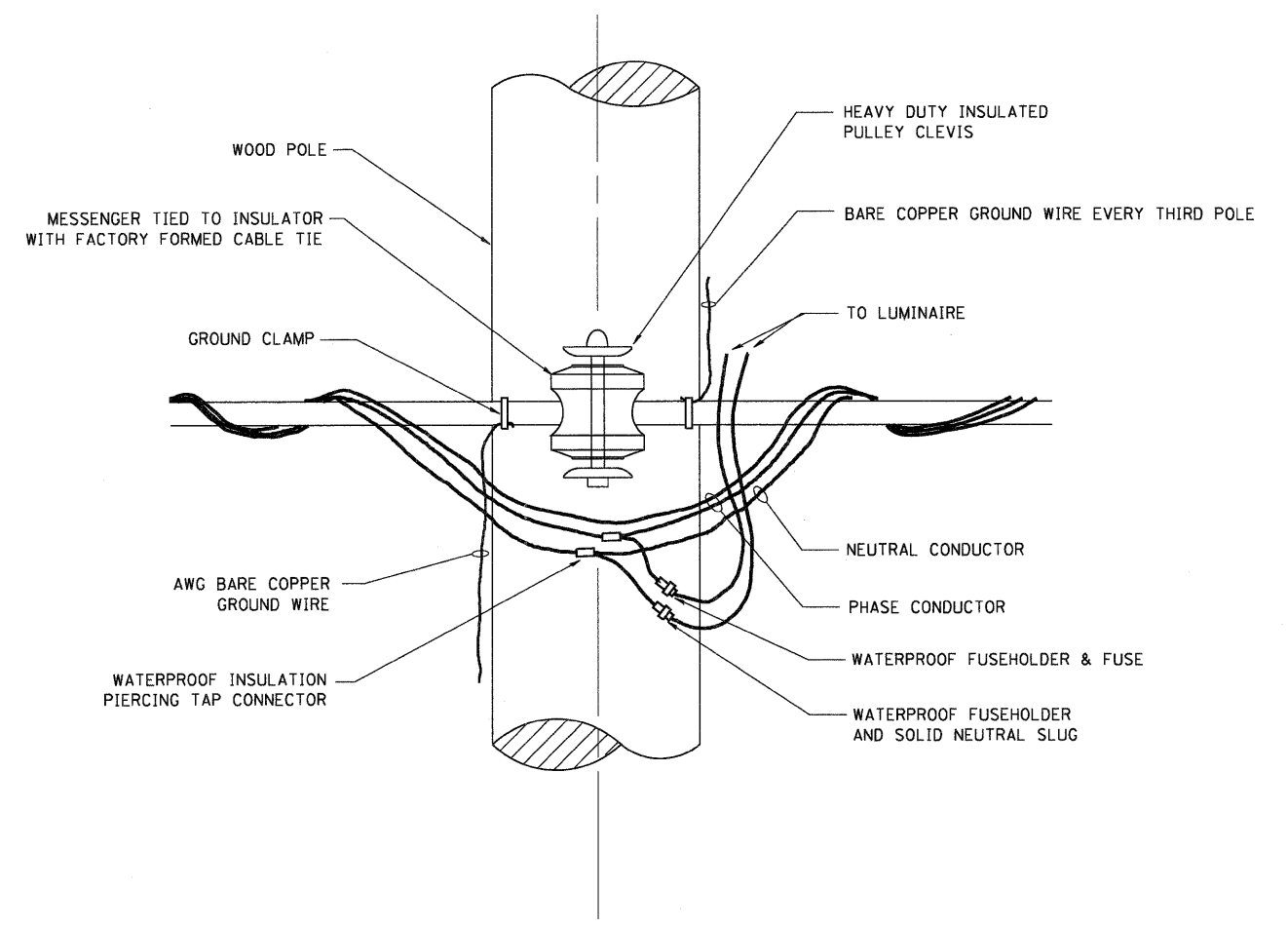
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>MISC. ELECTRICAL DETAILS SHEET A</b>			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	8R-HB-2-BY-1	KANE	434	239
<b>BE-702</b>			<b>CONTRACT NO. 60K90</b>	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TEMPORARY LIGHT POLE DETAIL

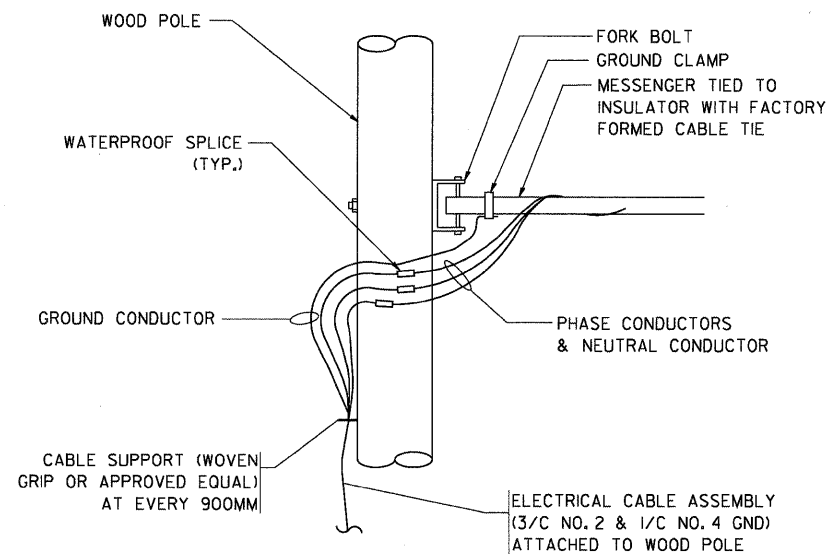


TEMPORARY LIGHT POLE ATTACHMENT DETAIL

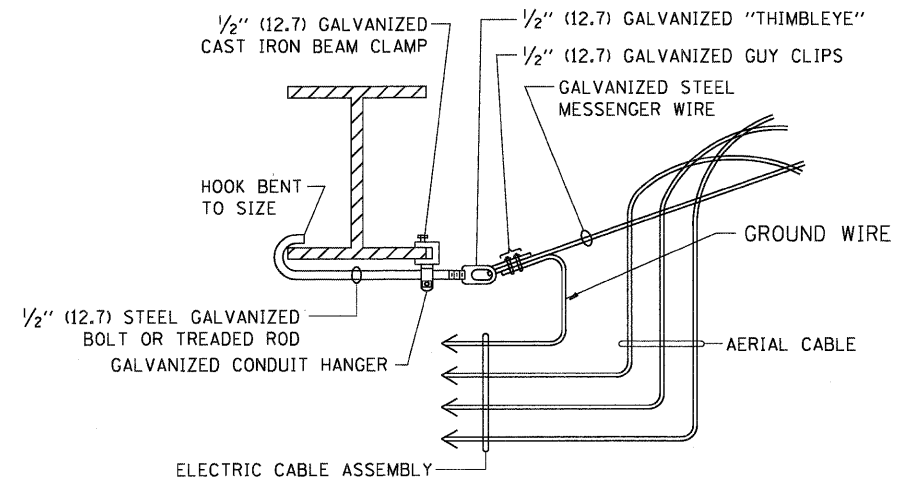
NOTES:  
 1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED

FILE NAME = W:\d:\stsd\22x34\be800.dgn	USER NAME = gegienobt	DESIGNED -	REVISED - 08-08-03	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY LIGHT POLE DETAILS</b>			F.A.P. RTE. 345	SECTION 8R-HB-2-BY-1	COUNTY KANE	TOTAL SHEETS 434	SHEET NO. 240
	PLOT SCALE = 50.000 ' / IN.	DRAWN -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	<b>BE-800</b>				
	PLOT DATE = 1/4/2008	CHECKED -	REVISED -		CONTRACT NO. 60K90							
		DATE -	REVISED -		FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT							





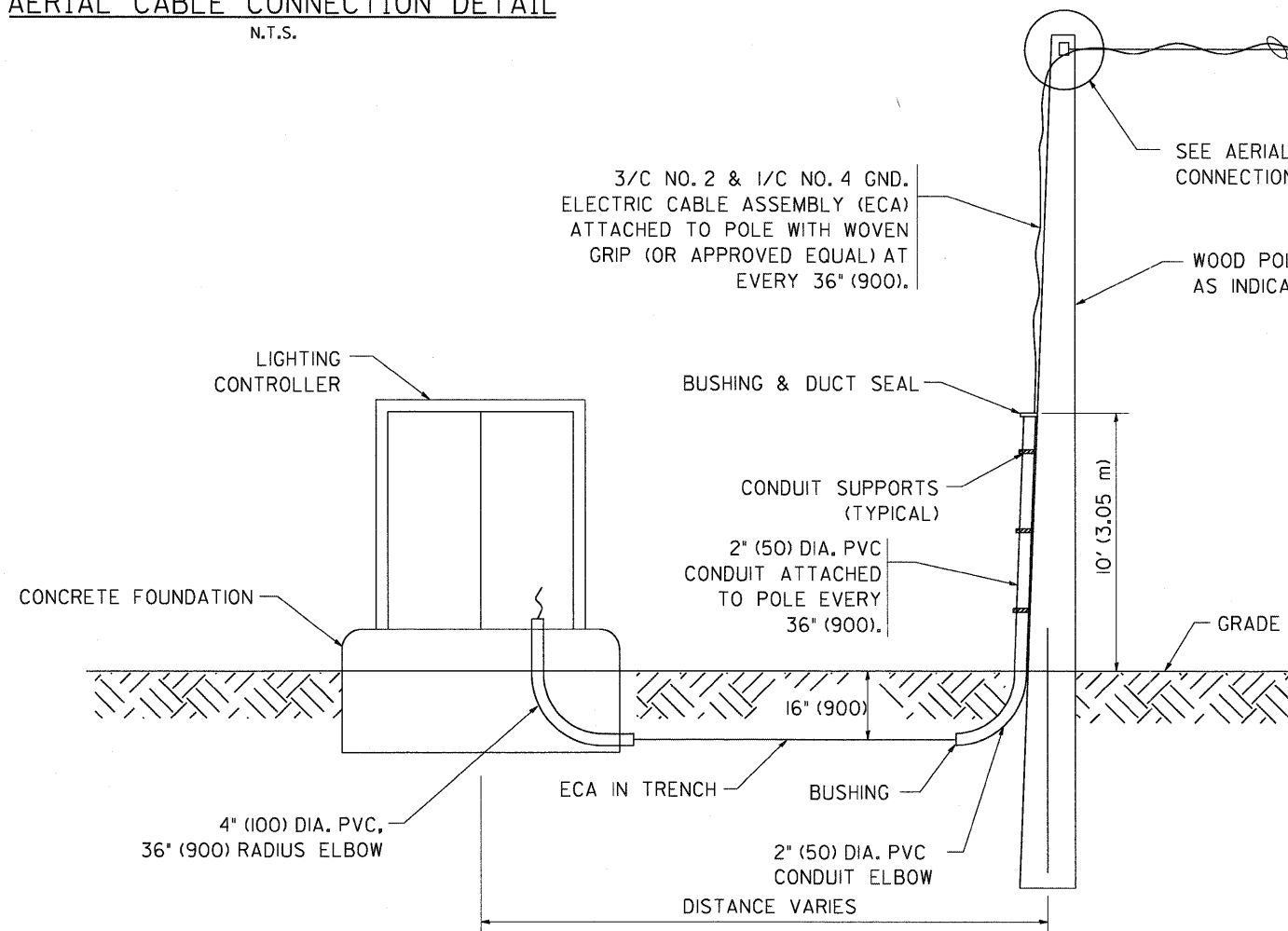
**AERIAL CABLE CONNECTION DETAIL**  
N.T.S.



**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 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.

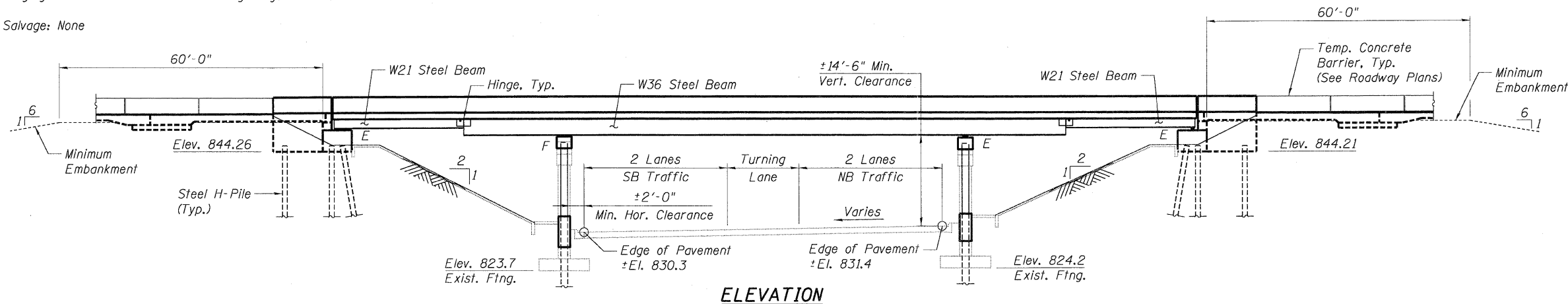
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	PLOT SCALE = 50,000 ' / IN.	CHECKED -	REVISED -					SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	CONTRACT NO. 60K90		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT								

Bench Mark: Cross cut on top of existing bridge deck near NE corner of WB US 20 over McLean Boulevard bridge (SN 045-0002), located 2.1' south of north parapet and 8.0' west of east edge of deck. Elevation = 849.53

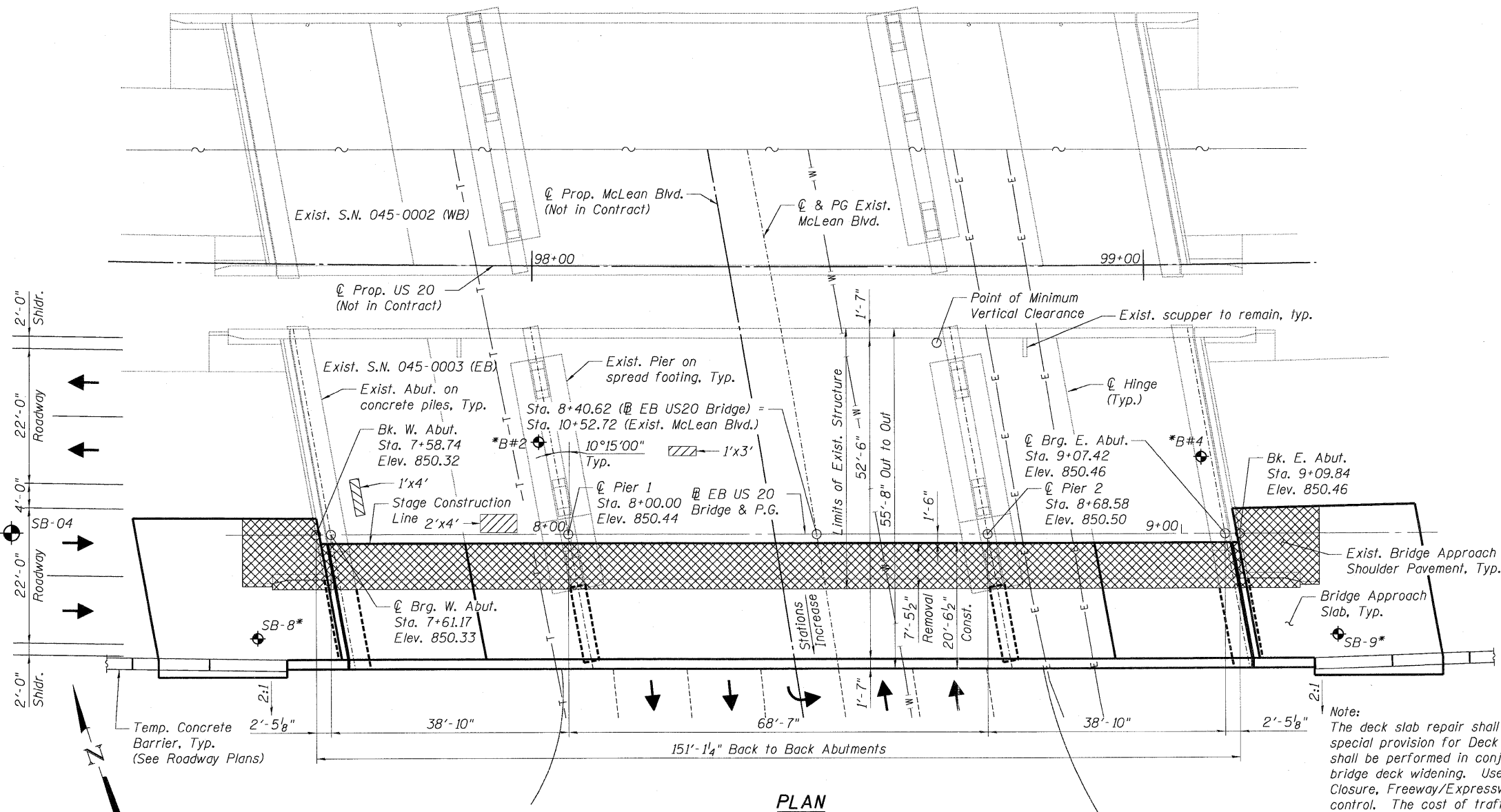
Existing Structures: S.N. 045-0002 (WB) and 045-0003 (EB) built in 1960 as FA Route 6 Section 8R-HB-2 at Sta. 98+40.40. Both structures were widened in 1987. Each structure consists of concrete deck on three-span continuous steel beams. The structures have an overall length of 150'-1" and widths of 42'-11" (WB) and 42'-7" (EB). The spans are supported by concrete piers on spread footings and concrete stub abutments on piles.

Staging: Traffic to be maintained using stage construction.

Salvage: None



ELEVATION



PLAN

Note: The deck slab repair shall be performed according to the special provision for Deck Slab Repair, Special. This work shall be performed in conjunction and concurrent with the bridge deck widening. Use IDOT Std. 701406-05 (Lane Closure, Freeway/Expressway, Day Operations Only) for traffic control. The cost of traffic control shall be included in the contract unit price for Traffic Control and Protection (Special).

**DESIGN SPECIFICATIONS**

AASHTO Standard Specifications for Highway Bridges 17th Edition, 2002

**LOADING HS 20-44**

No allowance for future wearing surface

**DESIGN STRESSES**

**FIELD UNITS - NEW CONSTRUCTION**

$f'_c = 3.5$  ksi  
 $f_y = 60$  ksi (Reinforcement)  
 $f_y = 50$  ksi (Structural Steel)  
 AASHTO M270 Grade 50

**FIELD UNITS - EXISTING**

$f'_c = 3.5$  ksi (1986)  
 $f'_c = 2.8$  ksi (1959)  
 $f_y = 60$  ksi (Reinforcement) (1986)  
 $f_y = 40$  ksi (Reinforcement) (1959)  
 $f_y = 36$  ksi (Structural Steel) (1986)  
 $f_y = 33$  ksi (Structural Steel) (1959)  
 Max. Soil Bearing Pressure = 1.5 tsf (1986)

**SEISMIC DATA**

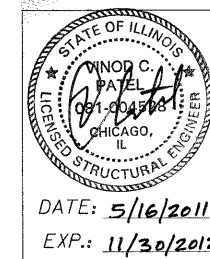
Seismic Performance Category (SPC) = A  
 Bedrock Acceleration Coefficient (A) = 0.036g  
 Site Coefficient (S) = 1.0

**CURVE DATA**

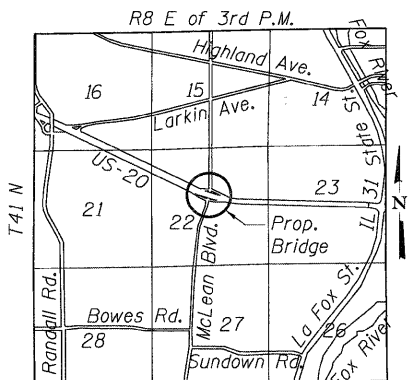
US 20	McLean Boulevard
N/A: Lanes in temporary MOT condition for which no curve data has been defined.	$\Delta = 16^\circ 23' 00''$ (LT)
	$D = 2^\circ 21' 47.3''$
	$T = 349.05'$
	$L = 693.3'$
	$E = 24.56'$
	$R = 2,424.74'$
	S.E. = 0.034'/ft
	P.C. = Sta. 8+35.45
	P.T. = Sta. 11+84.50
	P.I. = Sta. 15+28.75

**APPROVED**  
 FOR STRUCTURAL ADEQUACY ONLY

*W. Carl Pusey (SE)*  
 ENGINEER OF BRIDGES AND STRUCTURES



DATE: 5/16/2011  
 EXP.: 11/30/2012



LOCATION SKETCH

**Legend:**

- Boring Location
- Concrete Removal
- Deck Slab Repair (Partial), Special See Note
- W- Underground Water Line
- T- Underground Telephone Line
- E- Underground Electric Line

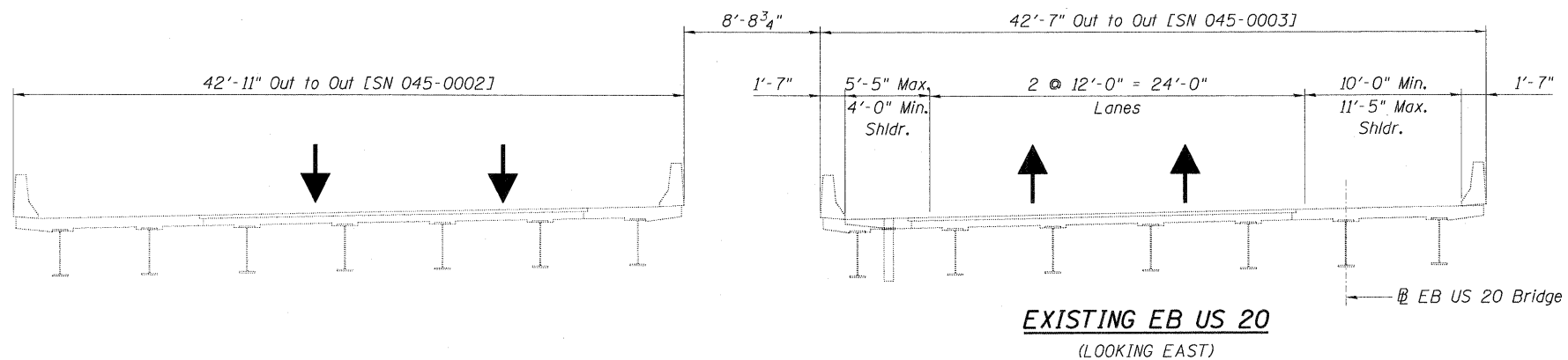
\* Logs for Record Borings shown are available in Existing Structure Plans. See Special Provisions.

**GENERAL PLAN & ELEVATION**  
**US ROUTE 20 OVER MCLEAN BLVD.**  
**FAP ROUTE 345, SECTION 8R-R**  
**KANE COUNTY**  
**STATION 98+32.18**  
**STRUCTURE NO. 045-0003**

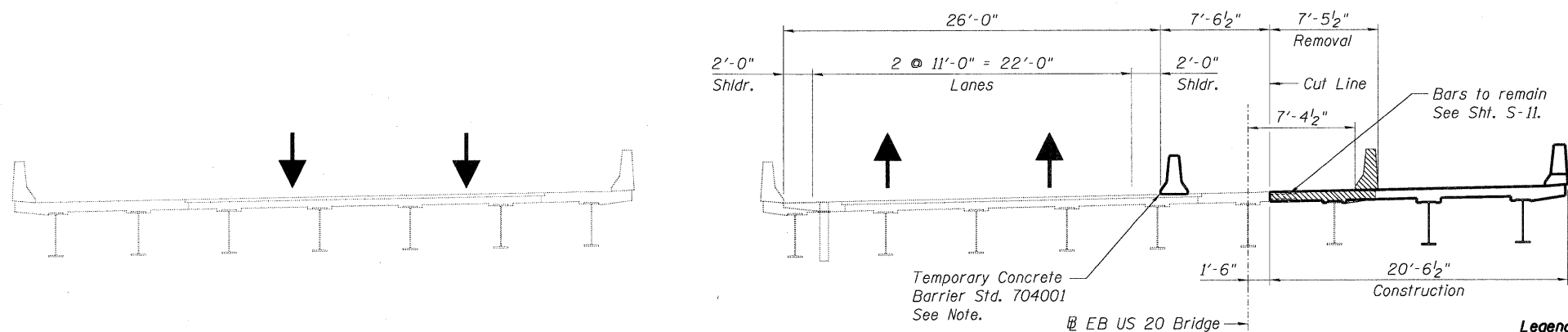
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#FILEL#		DRAWN - PK	REVISED -					SN 045-0003		CONTRACT NO. 60K90		
	PLOT SCALE = #SCALE#	CHECKED - MDB	REVISED -									
	PLOT DATE = #DATE#	DATE - 05/18/11	REVISED -									
SCALE: SHEET NO. S-1 OF S-29								STA. 98+32.18		FED. ROAD DIST. NO. 7 (ILLINOIS) FED. AID PROJECT		







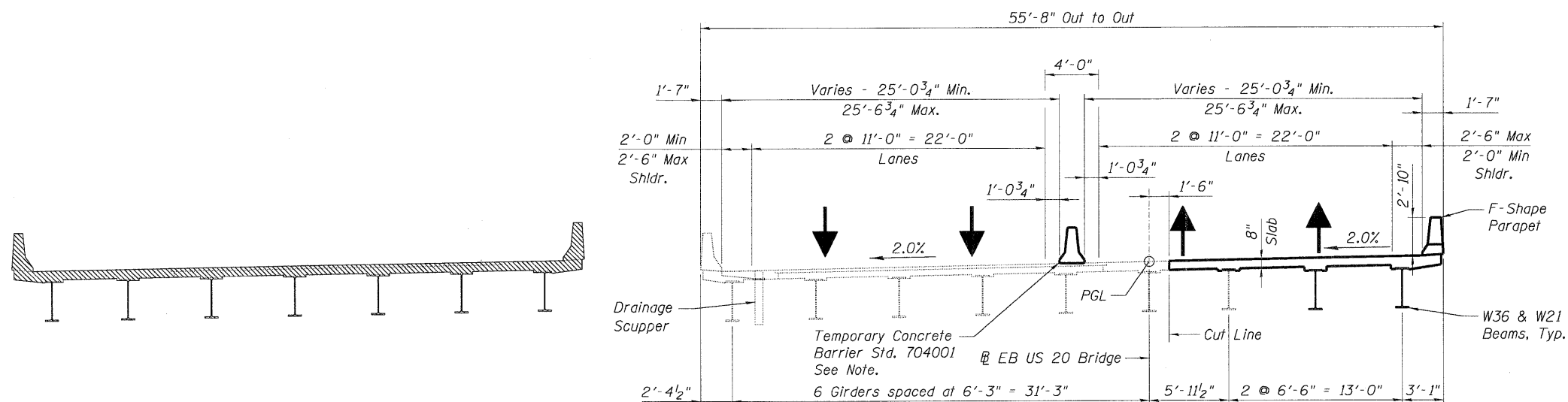
**EXISTING EB US 20**  
(LOOKING EAST)



**STAGE I REMOVAL AND CONSTRUCTION**  
(LOOKING EAST)

**Legend:**

Concrete Removal



**PROPOSED CROSS SECTION**

(LOOKING EAST - STAGE I OF CONTRACT 60H45)

**Note:**

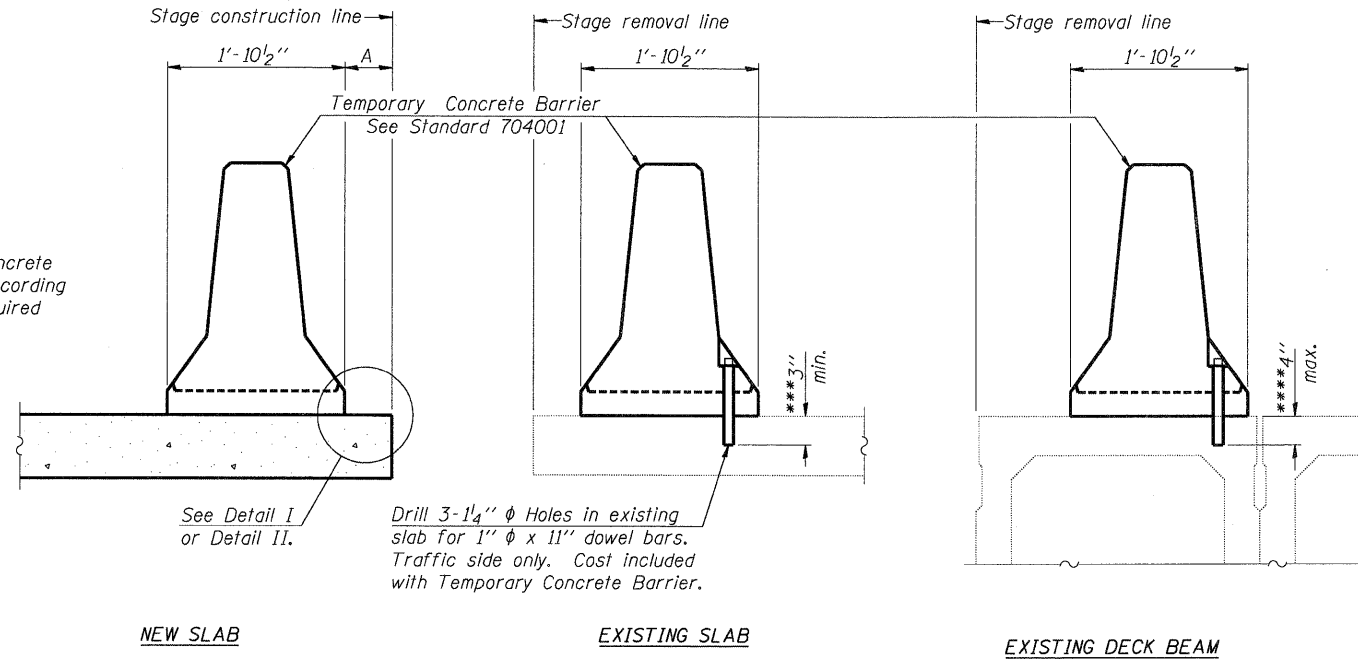
See Roadway Plans for quantity of temporary concrete barrier.

0450003-60499-001-STCONSTR.DGN, \\VALLSNUM\60499-001-BORDER.DGN  
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 HAYMARZ \NTS-0044\AMVAULT\_ID-TRANS.07\2202\21379-000\3\STRUCT\CD\60499-001\0450003-60499-001-STCONSTR\_SHT.DGN

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#FILE#		DRAWN - PK	REVISED -		SCALE:	SHEET NO. S-3	OF S-29	STA. 98+32.18	SN 045-0003		CONTRACT NO. 60K90	
TENG	TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS	CHECKED - MDB	REVISED -									
		DATE - 05/18/11	REVISED -									



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".



Drill 3-1/4"  $\phi$  Holes in existing slab for 1"  $\phi$  x 11" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

**NOTES**

**Detail I - With Bar Splicer or Couplers:**  
Connect one (1) 1" x 7" x "W" 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.

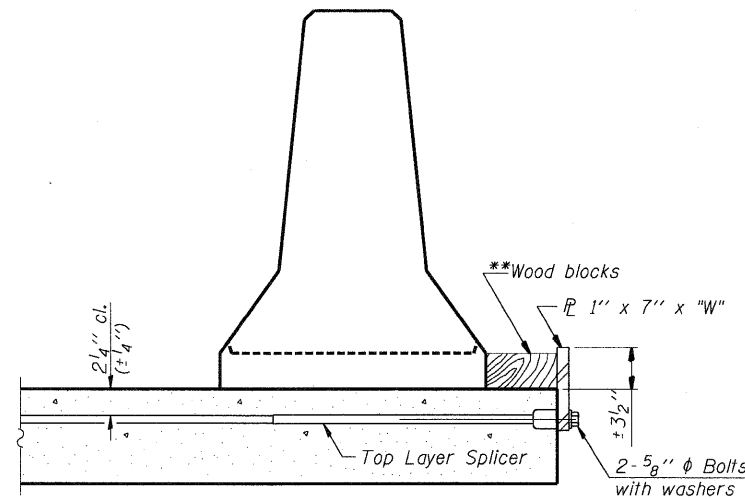
**Detail II - With Extended Reinforcement Bars:**  
Connect one (1) 1" x 7" x "W" steel  $\bar{L}$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier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

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

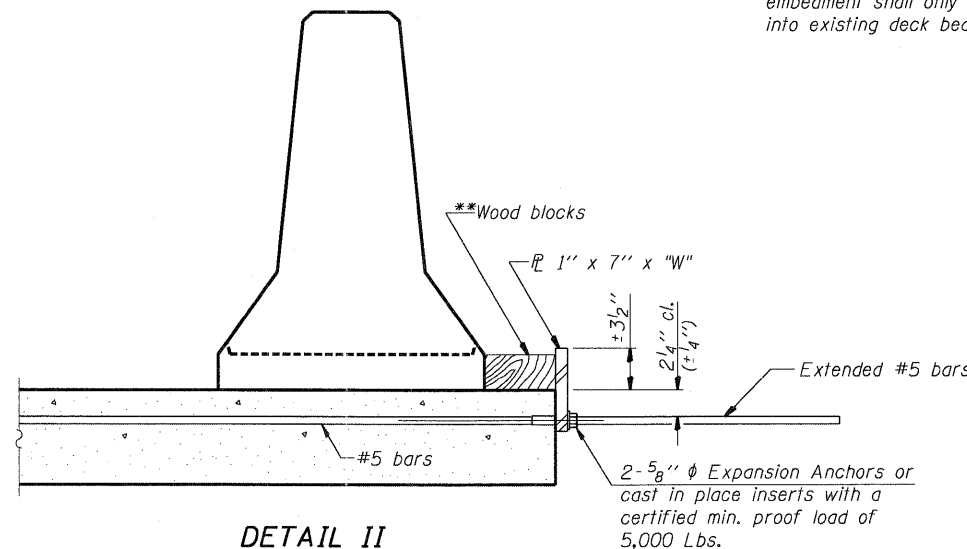
**SECTIONS THRU SLAB OR DECK BEAM**

\*\*\* 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.

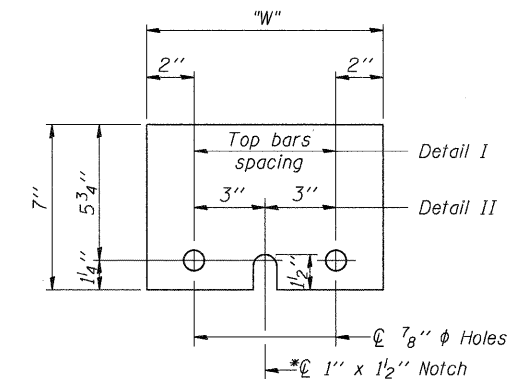
\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



**DETAIL I**



**DETAIL II**



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

\* Required only with Detail II

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

"W" = Top bars spacing + 4"

R-27

7-1-10

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
US 20 OVER MCLEAN BOULEVARD

TEMPORARY CONCRETE BARRIER  
FOR STAGE CONSTRUCTION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	8R-HB-2-BY-1	KANE	434	246
SN 045-0003			CONTRACT NO. 60K90	

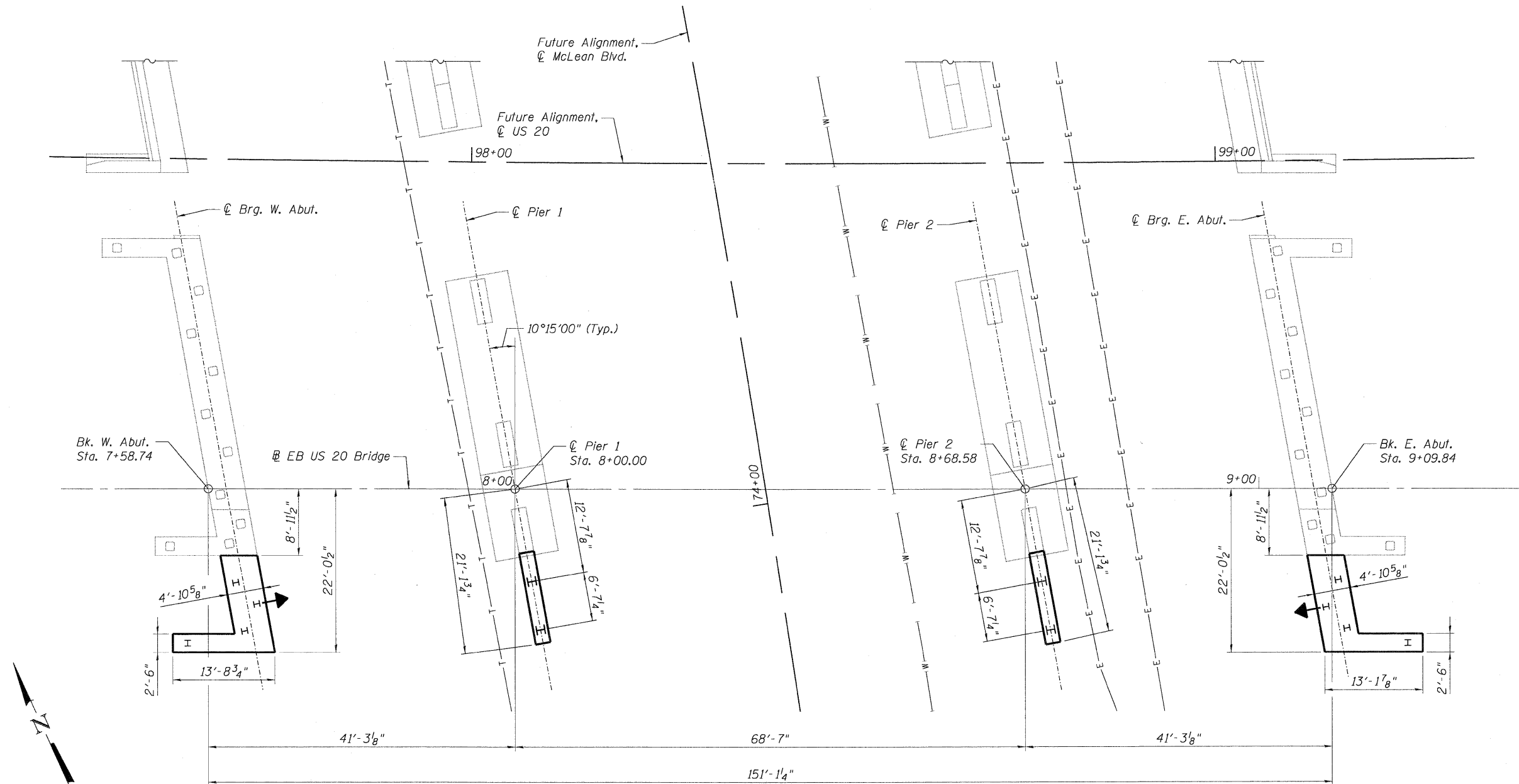
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		CHECKED - MDB	REVISED -
		DATE - 05/18/11	REVISED -

**TENG** TENG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

SCALE: SHEET NO. S-5 OF S-29 STA. 98+32.18

FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT

\\\450003-60K90-001-MISCDETAIL.DGN, \\VLLSNIH-60K90-001-BORDER.DGN  
 \\\450003-60K90-001-MISCDETAIL.DGN, \\STRUCT\CAD\60K90\450003\SHEET\450003-60K90-001-MISCDETAIL.SHT.DGN  
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 \\\450003-60K90-001-MISCDETAIL.DGN, \\STRUCT\CAD\60K90\450003\SHEET\450003-60K90-001-MISCDETAIL.SHT.DGN  
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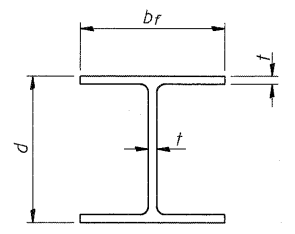
**SUBSTRUCTURE LAYOUT**

- Legend:**
- T — Underground Telephone Line
  - W — Underground Water Line
  - E — Underground Electric Line

- Notes:**
1. See Shfs. S-20 thru S-23 for abutments.
  2. See Shfs. S-24 & S-25 for piers.
  3. See Shf. S-7 for Steel H-Pile Details.

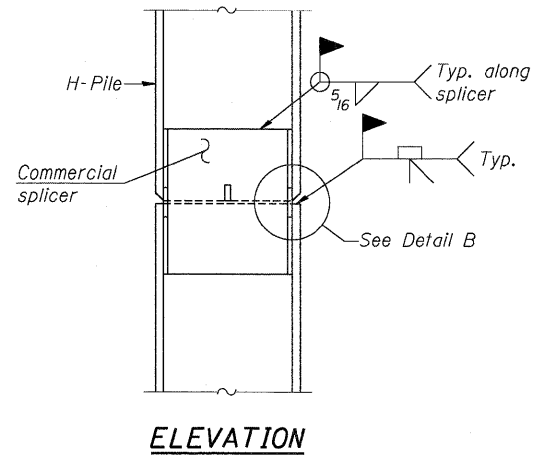
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 DRAWN - PK  
 CHECKED - MDB  
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 REVISED -  
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 PLOT DATE = #DATE#  
**TENG** TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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		DATE - 05/18/11	REVISED -			SCALE:	SHEET NO. S-6 OF S-29	STA. 98+32.18	FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT			

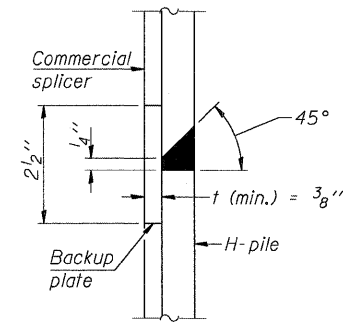


**STEEL PILE TABLE**

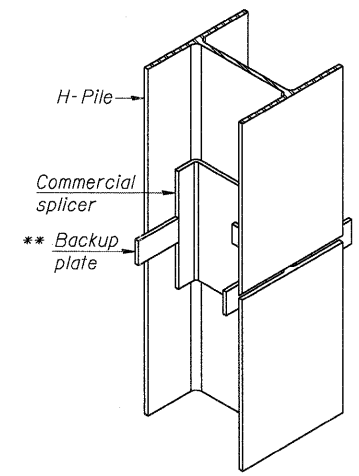
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
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**

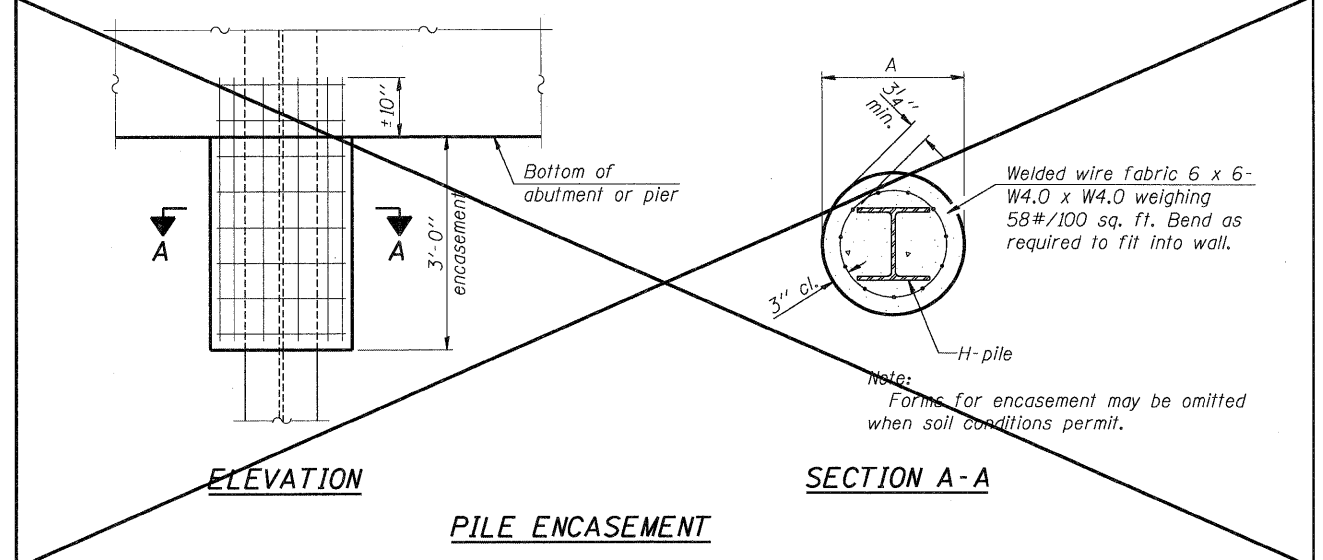


**DETAIL "B"**



**ISOMETRIC VIEW**

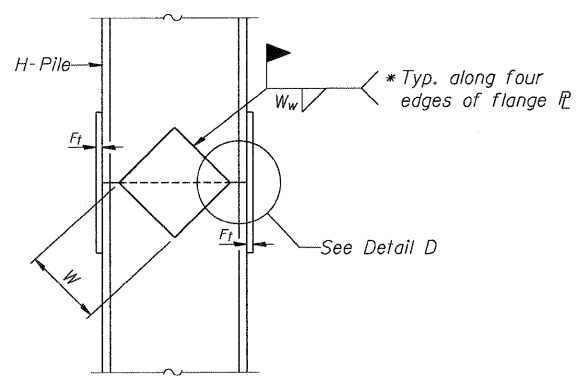
**WELDED COMMERCIAL SPLICE**



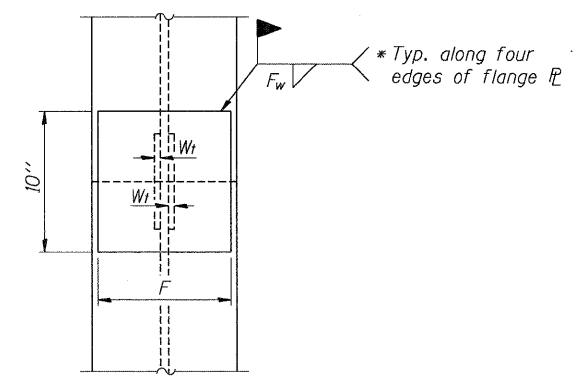
**ELEVATION**

**SECTION A-A**

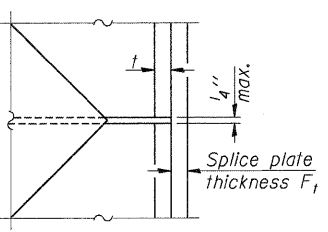
**PILE ENCASEMENT**



**ELEVATION**



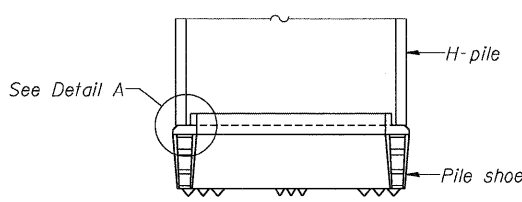
**END VIEW**



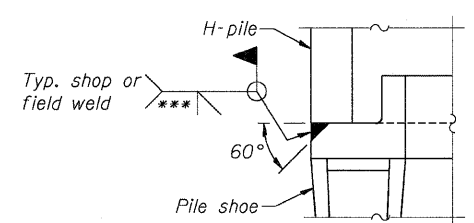
**DETAIL D**

**WELDED PLATE FIELD SPLICE**

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 8/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 8/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5 8/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 8/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5 8/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5 8/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

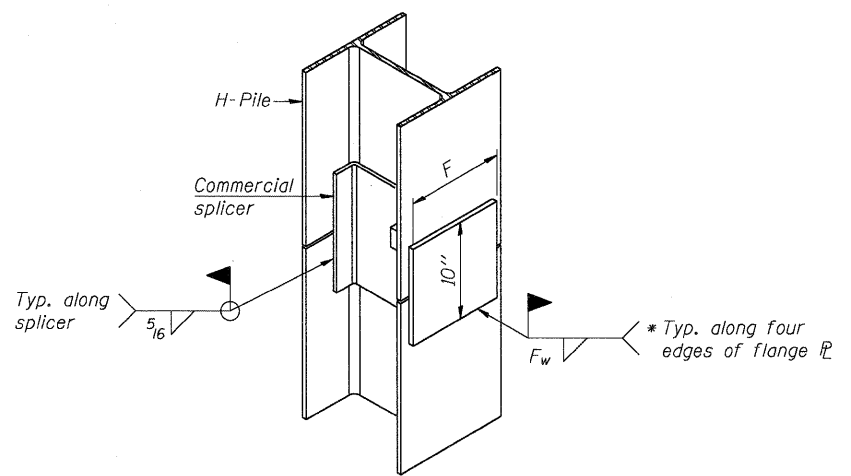


**ELEVATION**



**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.

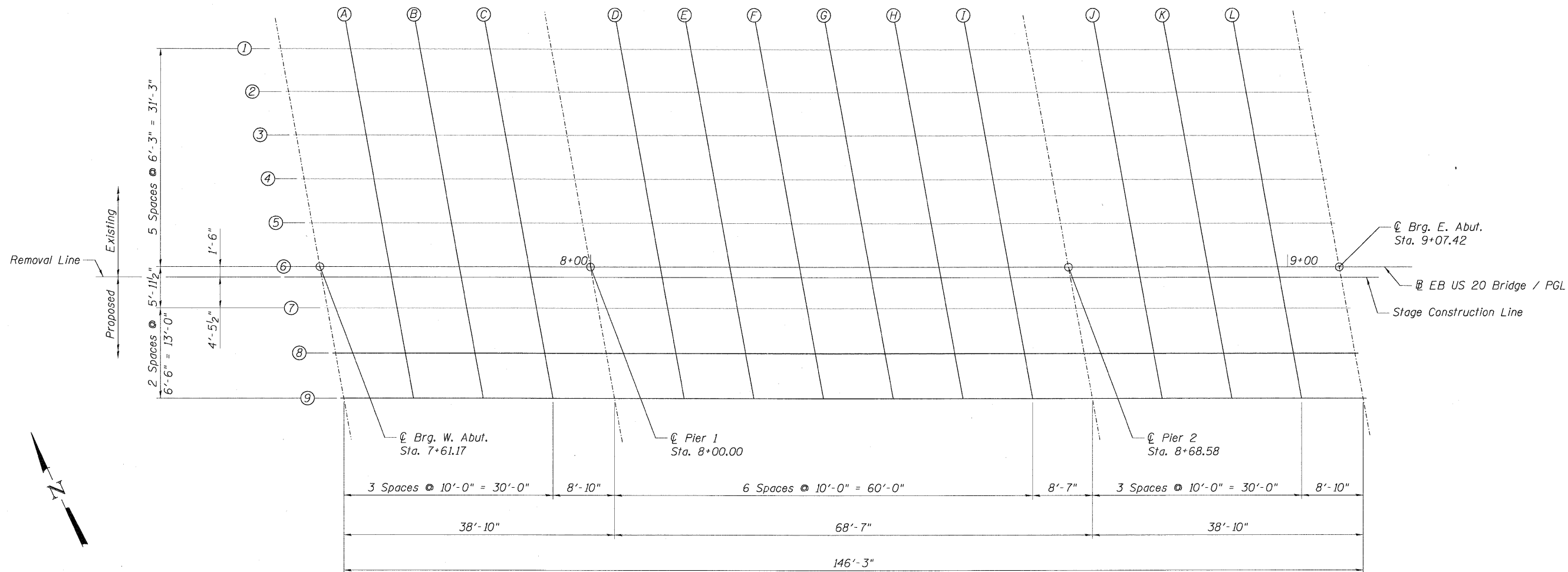
F-HP

7-1-10

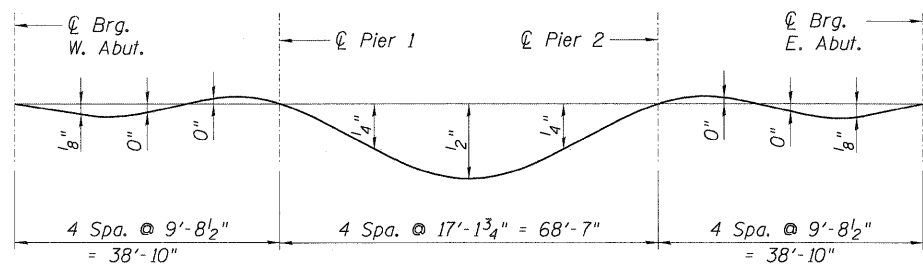
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#FILE#		DRAWN - PK	REVISED -		SCALE:	SHEET NO. S-7 OF S-29	STA. 98+32.18	345	8R-HB-2-BY-1	KANE	434	248
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**PLAN**

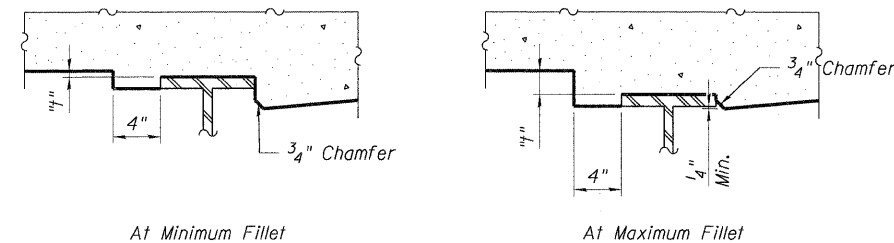


**GIRDER DEAD LOAD DEFLECTIONS**

(Includes weight of concrete only.)

**Note:**

The above deflections are not for use in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown in the tables on Sht. S-9.



**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 above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sht. S-9, minus slab thickness, equals the fillet heights "t" above top flange of beams.

**Note:**

Work this sheet with Sht. S-9.

FILE NAME: \\P01001\PROJECTS\2013\13-001\STRUCT\CAD\60K90\0450003\SHEET\0450003-60K90-001-TOP OF SLAB ELEVATION PLAN.DGN  
 USER: TENSELEY, SHT.DGN  
 DATE: 05/18/11  
 TIME: 10:27:32  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

FILE NAME: \\P01001\PROJECTS\2013\13-001\STRUCT\CAD\60K90\0450003\SHEET\0450003-60K90-001-TOP OF SLAB ELEVATION PLAN.DGN USER: TENSELEY, SHT.DGN DATE: 05/18/11 TIME: 10:27:32 <b>TENG</b> & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS	USER NAME: #USER# PLOT SCALE: #SCALE# PLOT DATE: #DATE#	DESIGNED - PK DRAWN - PK CHECKED - MDB DATE - 05/18/11	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b> US 20 OVER MCLEAN BOULEVARD	<b>TOP OF SLAB ELEVATION PLAN</b> SCALE: SHEET NO. S-8 OF S-29 STA. 98+32.18	<table border="1"> <tr> <th>F.A.P. RTE.</th> <th>SECTION</th> <th>COUNTY</th> <th>TOTAL SHEETS</th> <th>SHEET NO.</th> </tr> <tr> <td>345</td> <td>8R-HB-2-BY-1</td> <td>KANE</td> <td>434</td> <td>249</td> </tr> <tr> <td colspan="2">SN 045-0003</td> <td colspan="3">CONTRACT NO. 60K90</td> </tr> <tr> <td colspan="5">FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT</td> </tr> </table>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	345	8R-HB-2-BY-1	KANE	434	249	SN 045-0003		CONTRACT NO. 60K90			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.																					
345	8R-HB-2-BY-1	KANE	434	249																						
SN 045-0003		CONTRACT NO. 60K90																								
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT																										

**GIRDER 6 / @ EB US 20 Bridge / PGL**

Location	Station	Offset From @ EB US 20 BRIDGE	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for DL Deflections
☉ Brg. W. Abut.	7+61.17	0.00	850.33	850.33
A	7+71.17	0.00	850.36	850.37
B	7+81.17	0.00	850.39	850.39
C	7+91.17	0.00	850.42	850.41
☉ Pier 1	8+00.00	0.00	850.44	850.44
D	8+10.00	0.00	850.46	850.47
E	8+20.00	0.00	850.47	850.50
F	8+30.00	0.00	850.48	850.52
G	8+40.00	0.00	850.49	850.53
H	8+50.00	0.00	850.50	850.52
I	8+60.00	0.00	850.50	850.51
☉ Pier 2	8+68.58	0.00	850.50	850.50
J	8+78.58	0.00	850.49	850.49
K	8+88.58	0.00	850.49	850.49
L	8+98.58	0.00	850.47	850.48
☉ Brg. E. Abut.	9+07.42	0.00	850.46	850.46

**STAGE CONSTRUCTION LINE (See Note 2)**

Location	Station	Offset From @ EB US 20 BRIDGE	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for DL Deflections
☉ Brg. W. Abut.	7+61.44	1.50	850.36	850.36
A	7+71.44	1.50	850.39	850.40
B	7+81.44	1.50	850.42	850.42
C	7+91.44	1.50	850.45	850.45
☉ Pier 1	8+00.27	1.50	850.47	850.47
D	8+10.27	1.50	850.49	850.50
E	8+20.27	1.50	850.50	850.53
F	8+30.27	1.50	850.51	850.55
G	8+40.27	1.50	850.52	850.56
H	8+50.27	1.50	850.53	850.55
I	8+60.27	1.50	850.53	850.54
☉ Pier 2	8+68.85	1.50	850.53	850.53
J	8+78.85	1.50	850.52	850.52
K	8+88.85	1.50	850.52	850.52
L	8+98.85	1.50	850.50	850.51
☉ Brg. E. Abut.	9+07.69	1.50	850.49	850.49

**GIRDER 7**

Location	Station	Offset From @ EB US 20 BRIDGE	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for DL Deflections
☉ Brg. W. Abut.	7+62.25	5.96	850.45	850.45
A	7+72.25	5.96	850.48	850.49
B	7+82.25	5.96	850.51	850.52
C	7+92.25	5.96	850.54	850.54
☉ Pier 1	8+01.08	5.96	850.56	850.56
D	8+11.08	5.96	850.58	850.59
E	8+21.08	5.96	850.59	850.62
F	8+31.08	5.96	850.60	850.64
G	8+41.08	5.96	850.61	850.65
H	8+51.08	5.96	850.62	850.64
I	8+61.08	5.96	850.62	850.63
☉ Pier 2	8+69.66	5.96	850.62	850.62
J	8+79.66	5.96	850.61	850.61
K	8+89.66	5.96	850.60	850.61
L	8+99.66	5.96	850.59	850.60
☉ Brg. E. Abut.	9+08.49	5.96	850.58	850.58

**GIRDER 8**

Location	Station	Offset From @ EB US 20 BRIDGE	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for DL Deflections
☉ Brg. W. Abut.	7+63.42	12.46	850.59	850.59
A	7+73.42	12.46	850.62	850.63
B	7+83.42	12.46	850.65	850.65
C	7+93.42	12.46	850.67	850.67
☉ Pier 1	8+02.26	12.46	850.69	850.69
D	8+12.26	12.46	850.71	850.72
E	8+22.26	12.46	850.72	850.75
F	8+32.26	12.46	850.74	850.77
G	8+42.26	12.46	850.74	850.78
H	8+52.26	12.46	850.75	850.77
I	8+62.26	12.46	850.75	850.76
☉ Pier 2	8+70.84	12.46	850.75	850.75
J	8+80.84	12.46	850.74	850.74
K	8+90.84	12.46	850.73	850.74
L	9+00.84	12.46	850.72	850.73
☉ Brg. E. Abut.	9+09.67	12.46	850.71	850.71

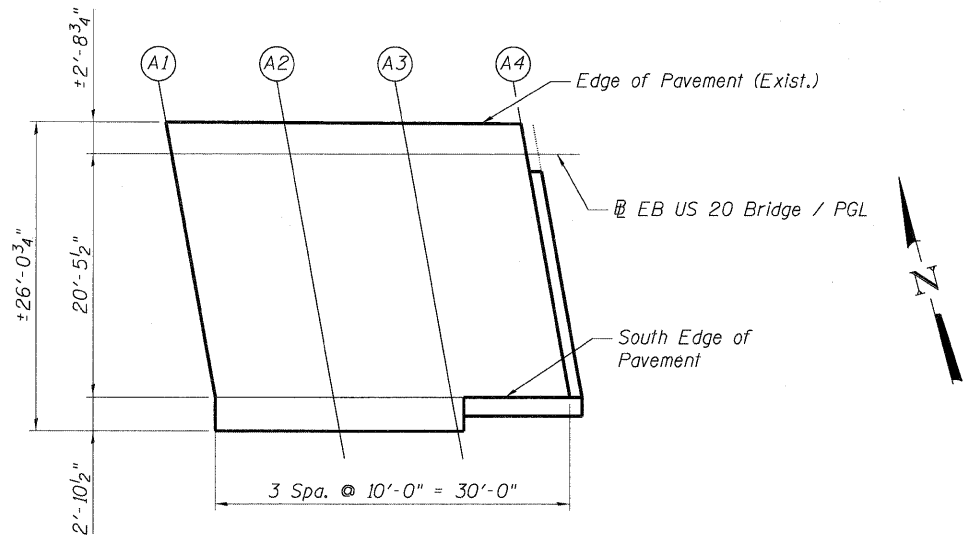
**GIRDER 9**

Location	Station	Offset From @ EB US 20 BRIDGE	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for DL Deflections
☉ Brg. W. Abut.	7+64.59	18.96	850.72	850.72
A	7+74.59	18.96	850.75	850.76
B	7+84.59	18.96	850.78	850.78
C	7+94.59	18.96	850.80	850.80
☉ Pier 1	8+03.43	18.96	850.82	850.82
D	8+13.43	18.96	850.84	850.85
E	8+23.43	18.96	850.86	850.88
F	8+33.43	18.96	850.87	850.90
G	8+43.43	18.96	850.87	850.91
H	8+53.43	18.96	850.88	850.90
I	8+63.43	18.96	850.88	850.89
☉ Pier 2	8+72.01	18.96	850.88	850.88
J	8+82.01	18.96	850.87	850.87
K	8+92.01	18.96	850.86	850.86
L	9+02.01	18.96	850.85	850.86
☉ Brg. E. Abut.	9+10.84	18.96	850.83	850.83

**Notes:**

1. Work this sheet with Sht. S-8.
2. The Theoretical Grade Elevations are intended to match existing deck elevations along the Stage Construction Line. The Contractor shall field verify the existing deck elevations along the Stage Construction Line to validate the Theoretical Grade Elevations shown, prior to removing the existing deck. If deviations greater than 0.02' (1/4") are found, notify the Engineer in writing and request adjusted elevations for all screed lines. The cost of field verifications and any required adjustments shall be included in the cost of Concrete Superstructure.

FILE NAME = \\S:\PROJECTS\21379-001\15\STRUCT\CAD\60K90\450003\5-SHEET\0450003-60K90-002-TOP OF SLAB ELEVATIONS.DWG  
 USER = HAYWARD  
 PLOT SCALE = 1/4"=1'-0"  
 PLOT DATE = 05/18/11  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS



**WEST APPROACH PLAN**

**EDGE OF PAVEMENT (EXIST.) (See Note)**

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
A1	7+28.76	-2.73	850.15
A2	7+38.76	-2.69	850.19
A3	7+48.77	-2.65	850.23
A4	7+58.78	-2.60	850.27

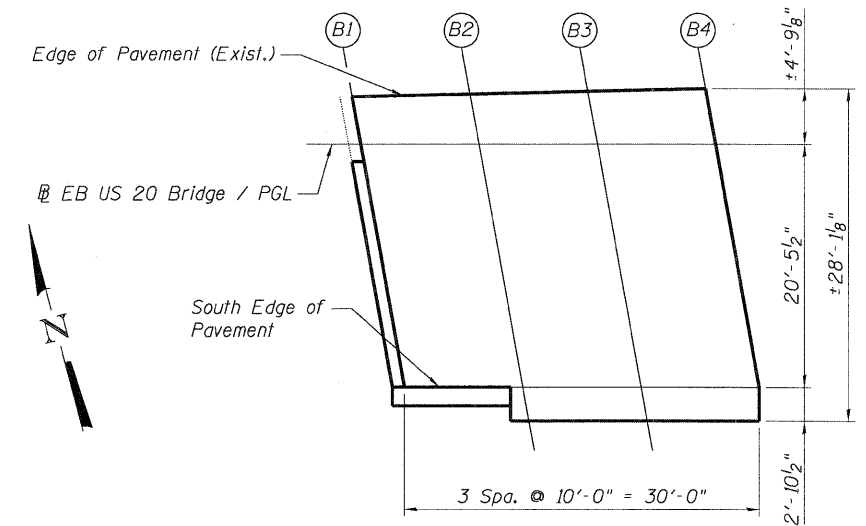
**EB US 20 BRIDGE / PGL**

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
A1	7+29.25	0.00	850.20
A2	7+39.25	0.00	850.25
A3	7+49.25	0.00	850.29
A4	7+59.25	0.00	850.32

**SOUTH EDGE OF PAVEMENT**

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
A1	7+32.95	20.46	850.63
A2	7+42.95	20.46	850.67
A3	7+52.95	20.46	850.71
A4	7+62.95	20.46	850.75

**WEST APPROACH SLAB ELEVATIONS**



**EAST APPROACH PLAN**

**EDGE OF PAVEMENT (EXIST.) (See Note)**

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
B1	9+08.59	-4.06	850.38
B2	9+18.55	-4.29	850.36
B3	9+28.51	-4.53	850.33
B4	9+38.47	-4.76	850.30

**EB US 20 BRIDGE / PGL**

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
B1	9+09.33	0.00	850.46
B2	9+19.33	0.00	850.44
B3	9+29.33	0.00	850.42
B4	9+39.33	0.00	850.39

**SOUTH EDGE OF PAVEMENT**

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
B1	9+13.03	20.46	850.86
B2	9+23.03	20.46	850.84
B3	9+33.03	20.46	850.82
B4	9+43.03	20.46	850.79

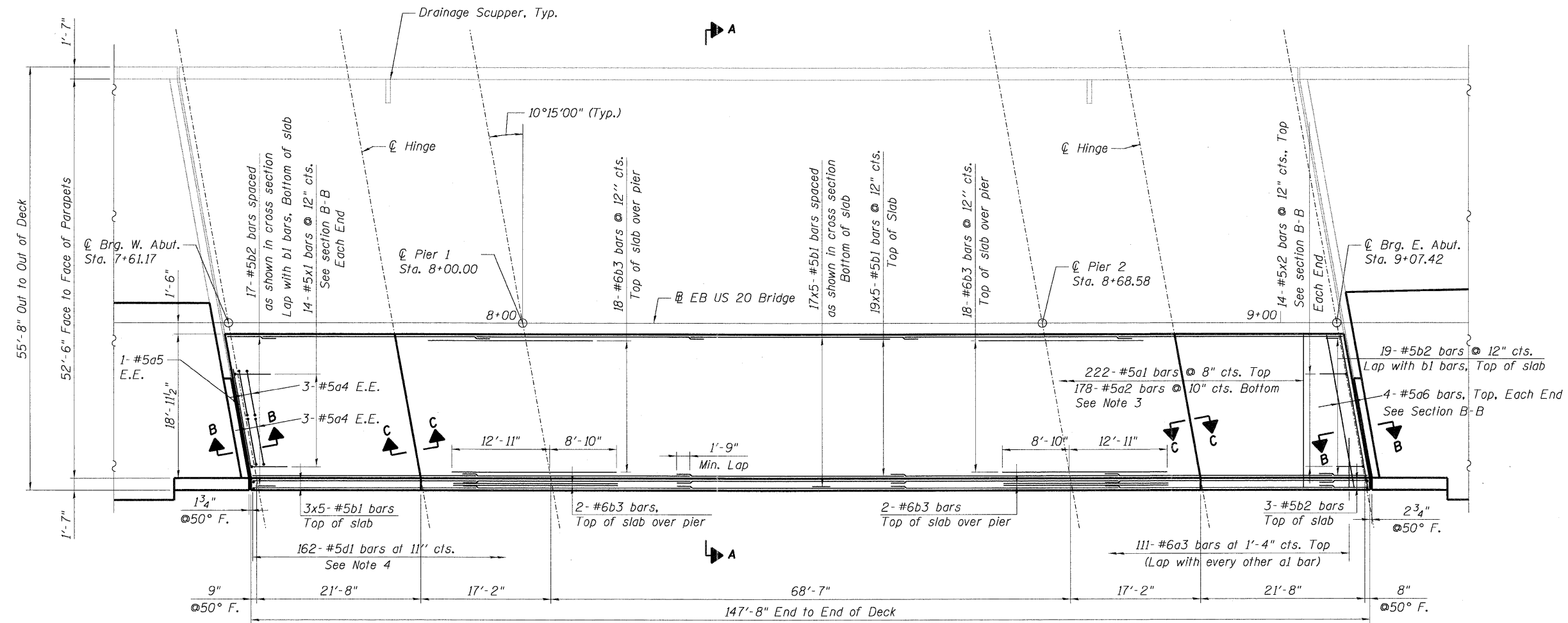
**EAST APPROACH SLAB ELEVATIONS**

**Note:**

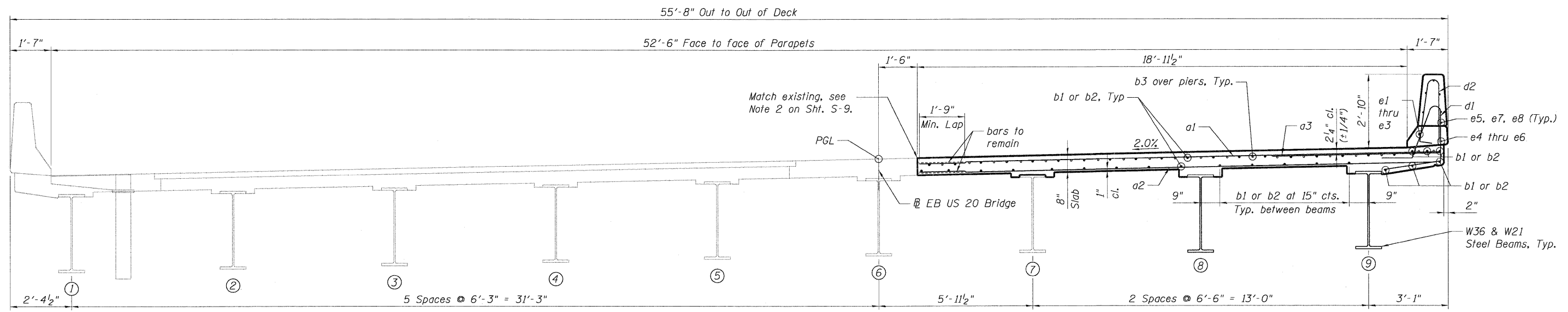
The Theoretical Grade Elevations are intended to match existing pavement elevations along the Edge of Pavement (Exist.). The Contractor shall field verify the existing pavement elevations along the Edge of Pavement (Exist.) to validate the Theoretical Grade Elevations shown. If deviations greater than 0.02' (1/4") are found, notify the Engineer in writing and request adjusted elevations for all screed lines. The cost of field verifications and any required adjustments shall be included in the cost of Concrete Superstructure.

FILE NAME = \\NAS003-60K90-002-TDSELEV.DGN, \\NAS003-60K90-001-BORDER.DGN, \\NAS003-60K90-003-TDSELEV.SHT.DGN  
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 PLOT DATE = #DATE#  
 DESIGNED - PK  
 DRAWN - PK  
 CHECKED - MDB  
 DATE - 05/18/11  
 REVISED -  
 REVISED -  
 REVISED -  
 REVISED -  
 STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 US 20 OVER MCLEAN BOULEVARD  
 TOP OF APPROACH SLAB ELEVATIONS  
 SCALE: SHEET NO. S-10 OF S-29 STA. 98+32.18  
 F.A.P. RTE. 345 SECTION BR-HB-2-BY-1 COUNTY KANE TOTAL SHEETS 434 SHEET NO. 251  
 SN 045-0003 CONTRACT NO. 60K90  
 FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT

FILE NAME =	USER NAME = #USER#	DESIGNED - PK	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b> US 20 OVER MCLEAN BOULEVARD	<b>TOP OF APPROACH SLAB ELEVATIONS</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS	DATE - 05/18/11	REVISED -	REVISED -		SCALE: SHEET NO. S-10 OF S-29 STA. 98+32.18			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				



**DECK PLAN**



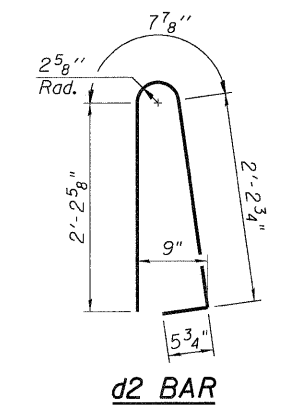
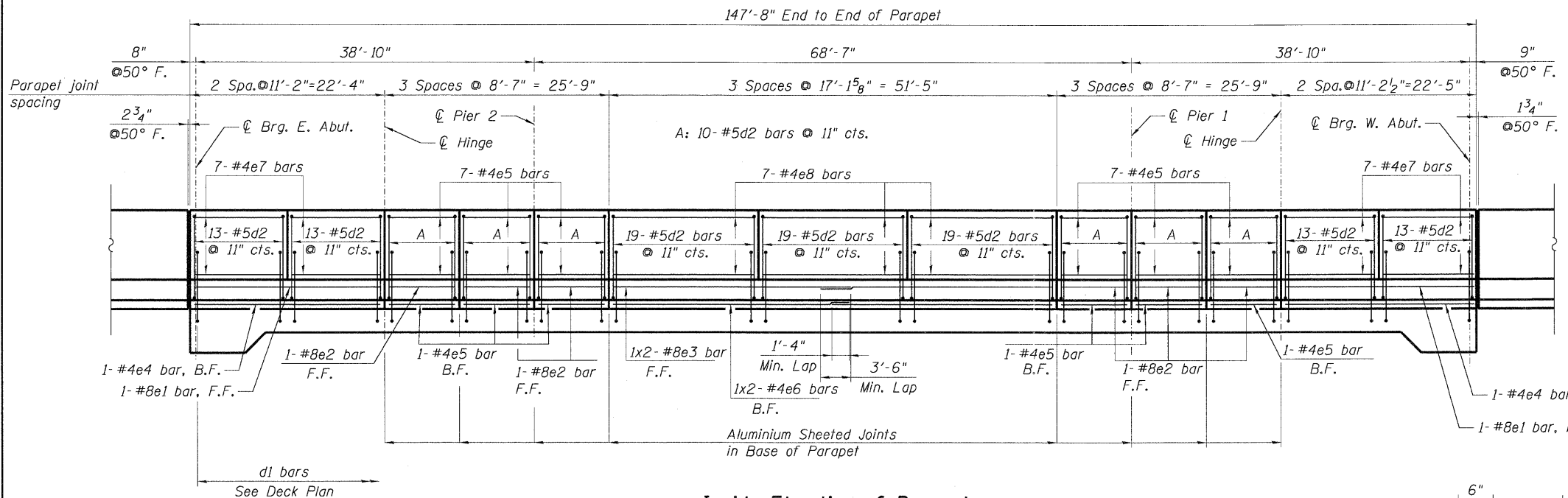
**SECTION A-A**

**Notes:**

1. Work this sheet with Sht. S-12.
2. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
3. Cut bars in field to fit skew and use the remainder of bars at the other end of the deck.
4. Space bars to miss parapet joints.
5. Existing reinforcement shall be cleaned and incorporated into the new construction. Bars may be cut off beyond the minimum lap length. Cost included with Concrete Removal.

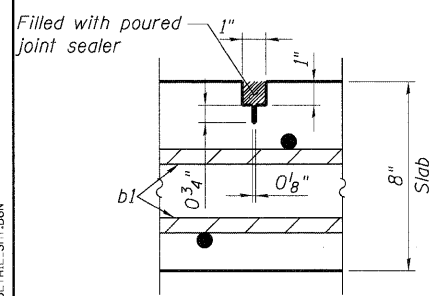
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 PLOT SCALE = #SCALE#  
 PLOT DATE = #DATE#  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

FILE NAME =	USER NAME = #USER#	DESIGNED - PK	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b> US 20 OVER MCLEAN BOULEVARD	<b>DECK PLAN AND CROSS SECTION</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		DATE - 05/18/11	REVISED -		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT							

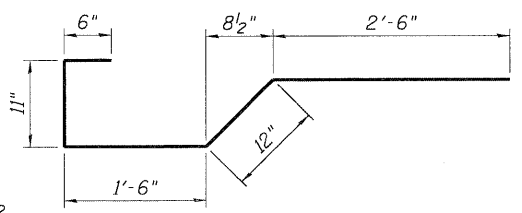
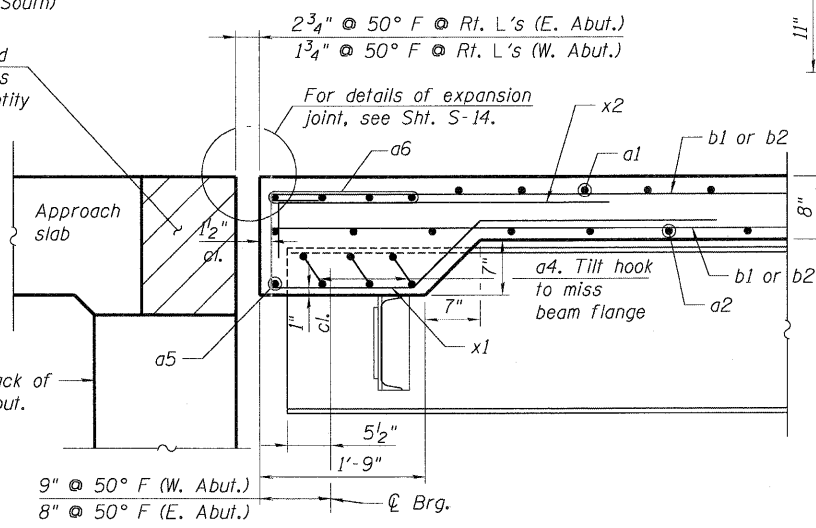


BAR LIST				
Bar	No.	Size	Length	Shape
a1	222	#5	20'-1"	—
a2	178	#5	21'-2"	—
a3	111	#6	6'-6"	—
a4	12	#5	7'-5"	—
a5	2	#5	13'-0"	—
a6	8	#5	20'-5"	—
b1	195	#5	30'-0"	—
b2	39	#5	6'-2"	—
b3	40	#6	21'-9"	—
d1	162	#5	7'-10"	—
d2	169	#5	5'-7"	—
e1	2	#8	22'-1"	—
e2	6	#8	8'-4"	—
e3	2	#8	27'-4"	—
e4	2	#4	22'-1"	—
e5	48	#4	8'-4"	—
e6	2	#4	26'-3"	—
e7	28	#4	10'-11"	—
e8	21	#4	16'-10"	—
x1	28	#5	6'-5"	—
x2	28	#5	4'-1"	—

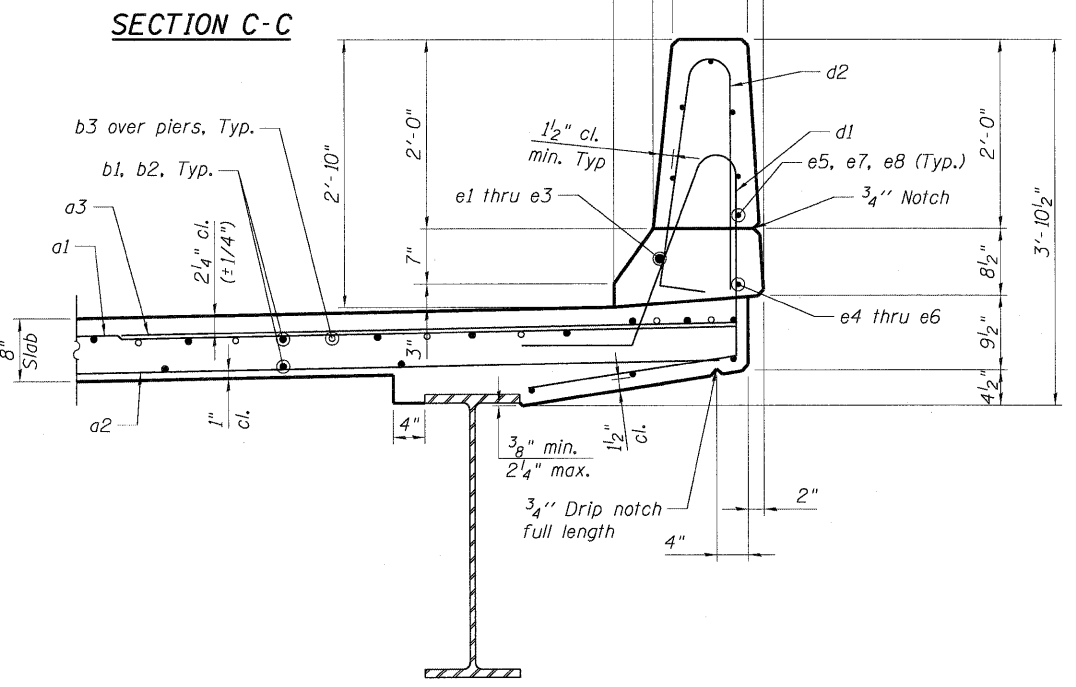
**Inside Elevation of Parapet**  
(Looking South)



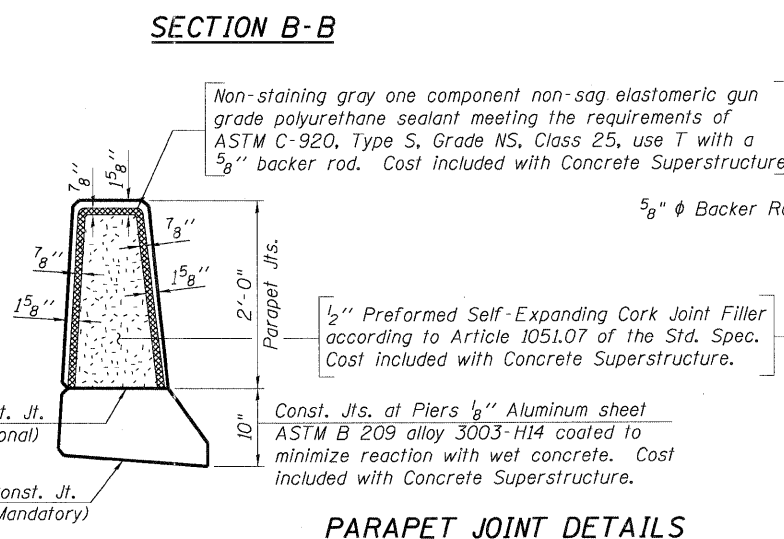
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.



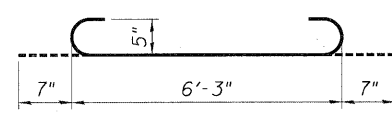
**x1 BAR**



**SECTION THRU PARAPET**

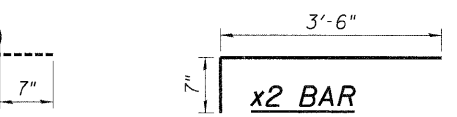


**PARAPET JOINT DETAILS**

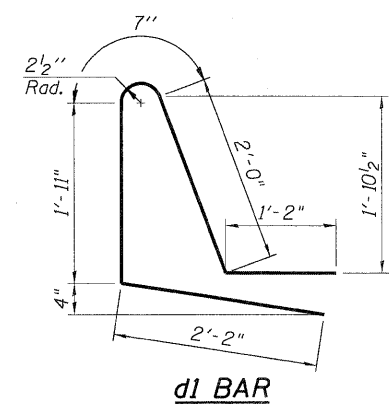


**a4 BAR**

BILL OF MATERIAL		
Item	Unit	Total
Concrete Superstructure	Cu. Yd.	98.4
Bridge Deck Grooving	Sq. Yd.	295
Reinforcement Bars	Pound	21,400

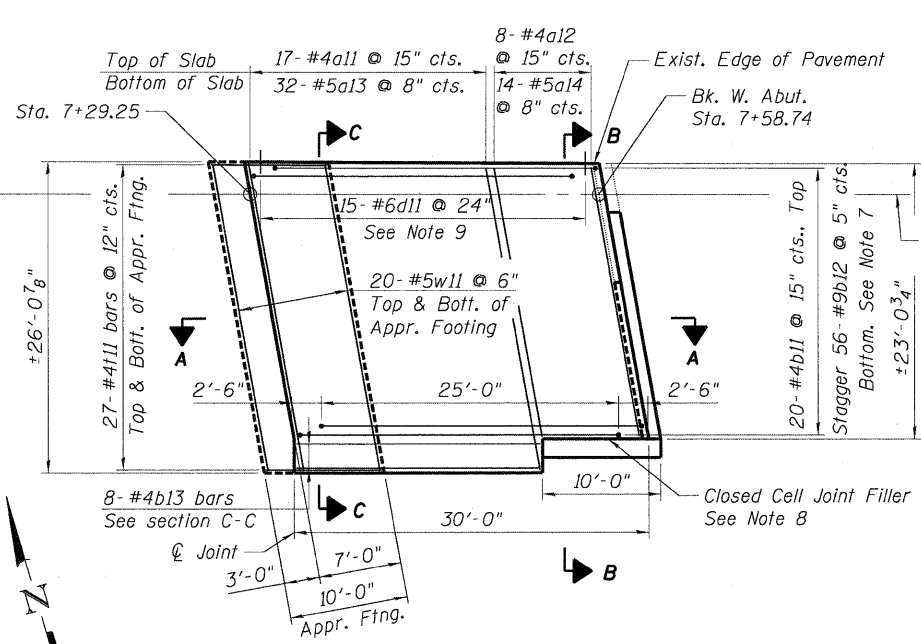


**x2 BAR**

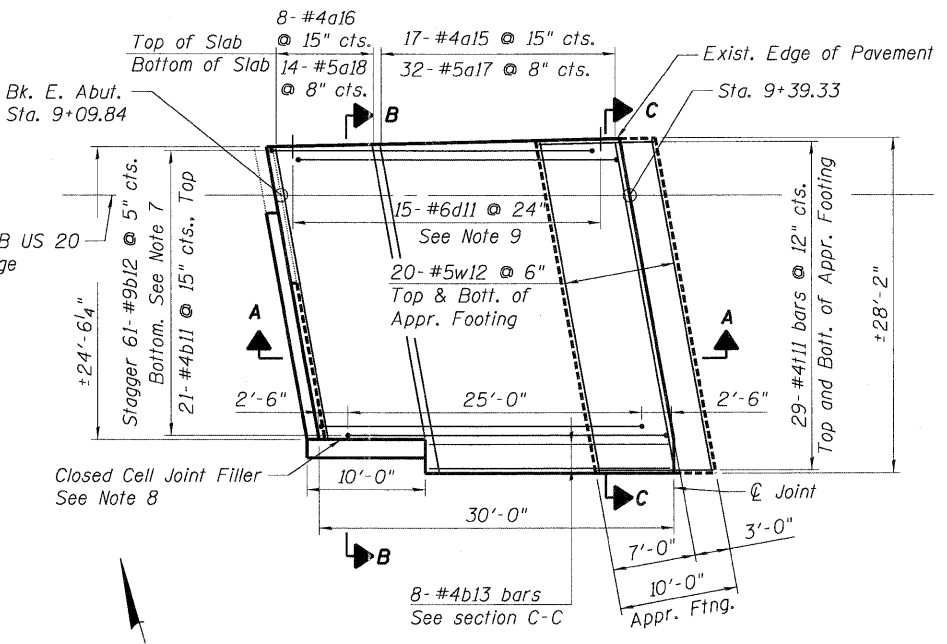


**d1 BAR**

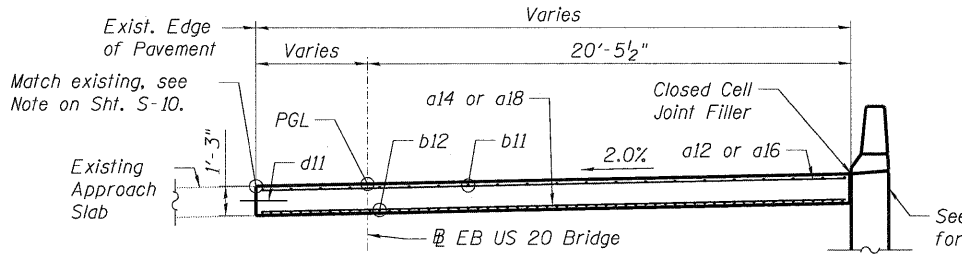
- Notes:**
- Work this sheet with Sht. S-11.
  - B.F. = Back Face  
F.F. = Front Face  
E.E. = Each End
  - Cost of sawcut and poured joint sealer at hinge lines included in concrete Superstructure.



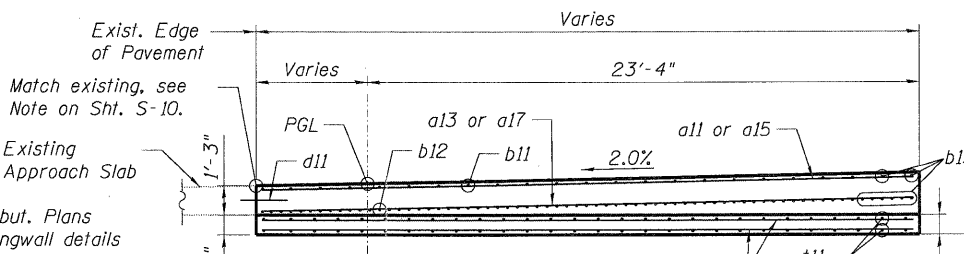
**WEST APPROACH PLAN**



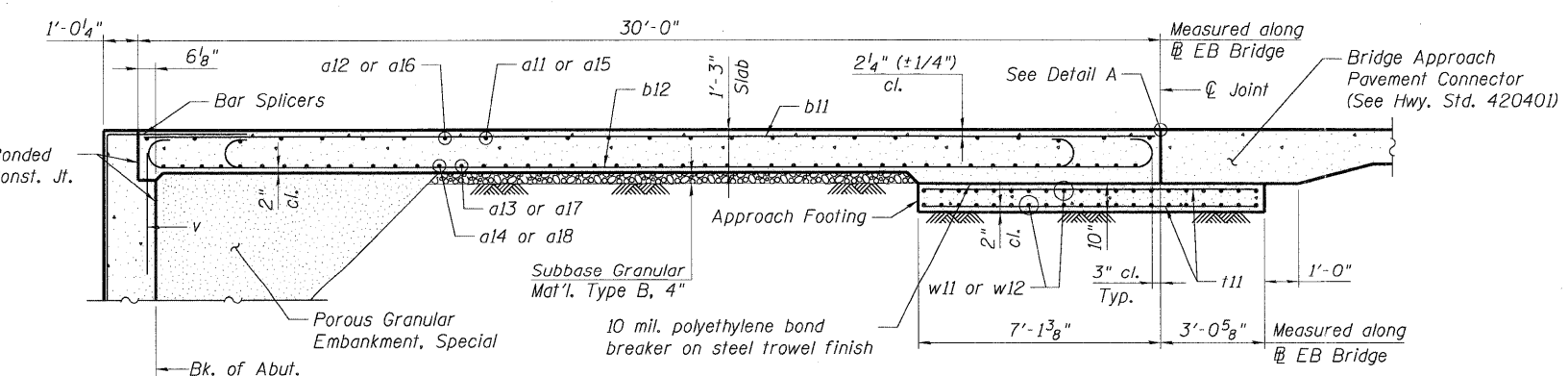
**EAST APPROACH PLAN**



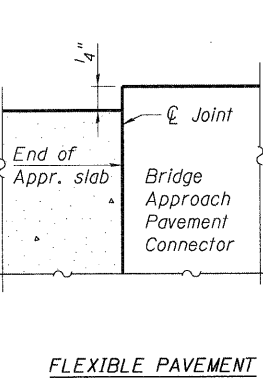
**SECTION B-B**



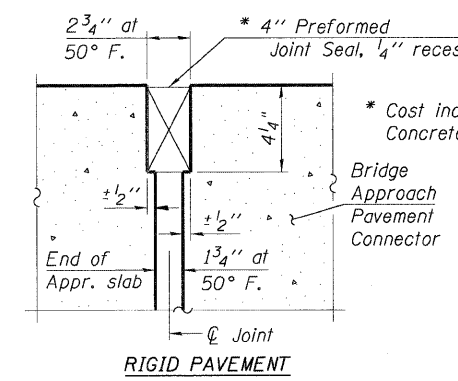
**SECTION C-C**



**SECTION A-A**



**FLEXIBLE PAVEMENT**



**RIGID PAVEMENT**

**DETAIL A**

**Notes:**

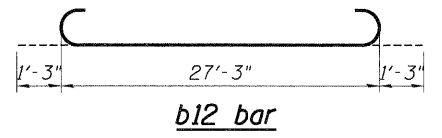
1. The north edge of the bridge approach slabs shall be at the existing edge of pavement.
2. The Approach Slab shall be paid for as Concrete Superstructure.
3. The Approach Footing shall be paid for as Concrete Structures.
4. Cost of excavation for Approach Footing included with Concrete Structures.
5. Cost of Subbase Granular Material, polyethylene bond breaker on steel trowel finish, and Closed Cell Joint Filler included with Concrete Superstructure.
6. The Approach Footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
7. Tilt b12 bars as required to maintain clearance.
8. Closed Cell Joint Filler according to Article 105108 of the Standard Specifications, full depth of slab, full length of wing wall.
9. Drill and epoxy grout dowels in 8" min. drilled holes according to Section 584 of the Standard Specifications. Method and grout are subject to the approval of the Engineer. Locate dowels approximately at mid depth of the existing slab. Cost of drilling and grouting bars shall be included with Reinforcement Bars.

**APPROACH BAR LIST**  
(Total for both Approaches)

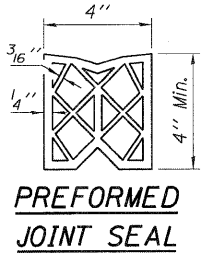
Bar	No.	Size	Length	Shape
a11	17	#4	26'-1"	—
a12	8	#4	23'-1"	—
a13	32	#5	26'-1"	—
a14	14	#5	23'-1"	—
a15	17	#4	27'-10"	—
a16	8	#4	24'-7"	—
a17	32	#5	27'-10"	—
a18	14	#5	24'-7"	—
b11	41	#4	29'-8"	—
b12	117	#9	29'-9"	U
b13	16	#4	20'-8"	—
d11	30	#6	2'-0"	—
l11	112	#4	9'-8"	—
w11	40	#5	26'-0"	—
w12	40	#5	28'-0"	—

**APPROACH BILL OF MATERIAL**  
(Total for both Approaches)

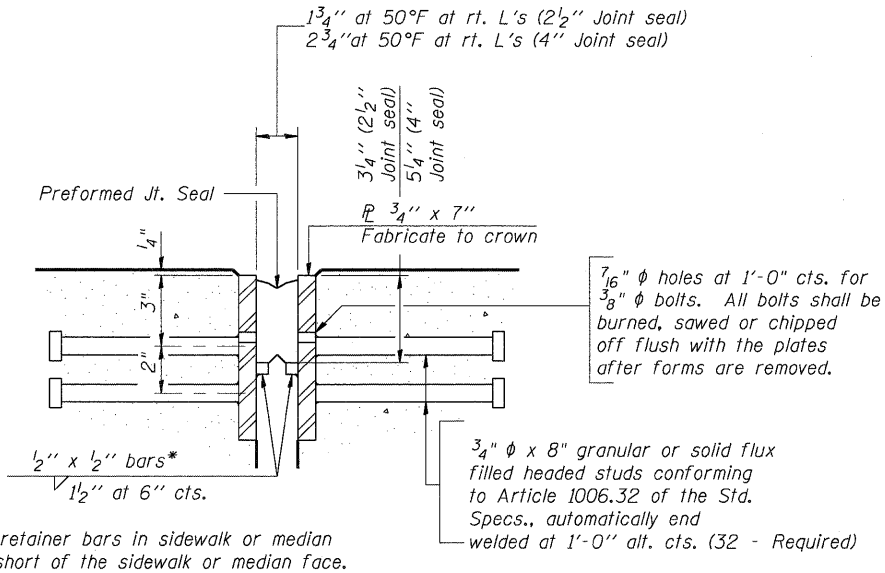
Item	Unit	Total
Concrete Structures	Cu. Yd.	17.0
Concrete Superstructure	Cu. Yd.	76.4
Bridge Deck Grooving	Sq. Yd.	167
Reinforcement Bars	Pound	19,300



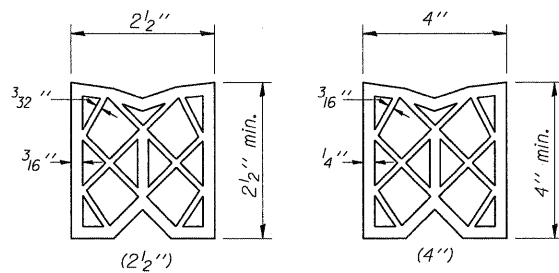
**b12 bar**



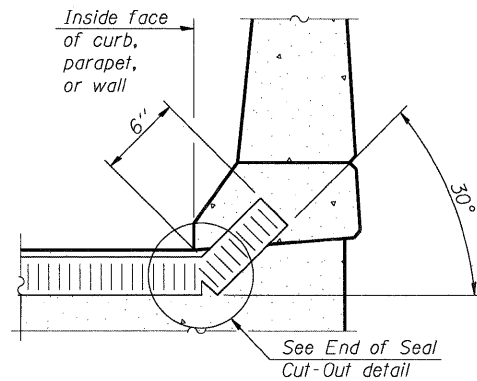
**PREFORMED JOINT SEAL**



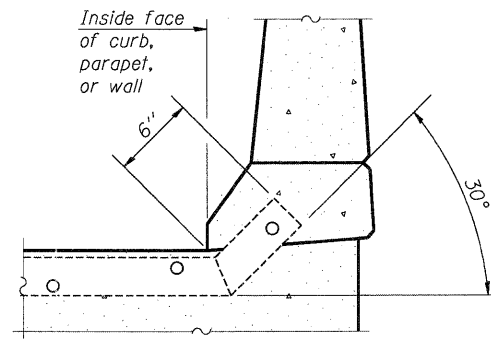
**SECTION THRU EXPANSION JOINT**  
(2 1/2" and 4" joint seals)



**PREFORMED JOINT SEAL**

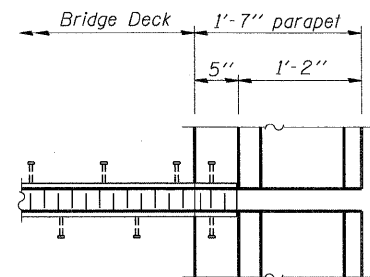


**AT CURB, PARAPET, OR WALL**  
(Showing seal)

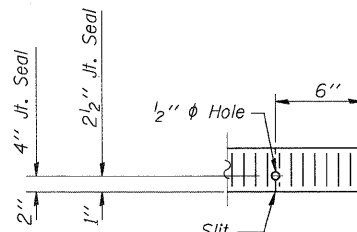


**AT CURB, PARAPET, OR WALL**  
(Showing plate)

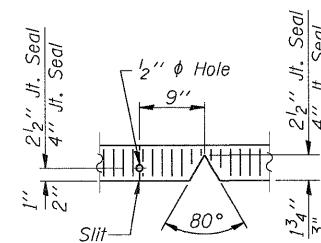
**TYPICAL END TREATMENTS**



**PLAN AT PARAPET**

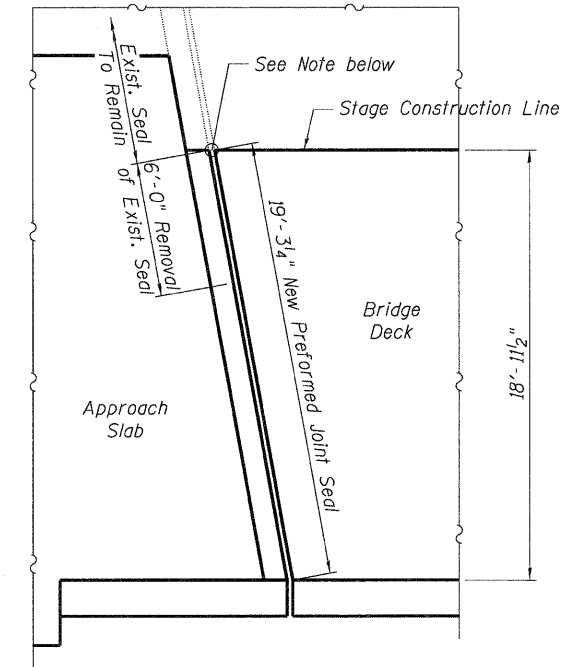


**END OF SEAL CUT-OUT**



**SEAL CUT-OUT AT CURB**

Bridge Joint System (Expansion)		
Design Movement	Required Prefomed Joint Seal Size	Required Strip Seal Rated movement
1"	2 1/2"	1"
1 5/8"	4"	2"



**EXPANSION JOINT PLAN**  
(W. Abut. shown, E. Abut. similar)

Note:  
Cut existing preformed joint seal to provide a flush surface at the stage construction line. Place new preformed joint seal directly against cut end, and seal with one component non-sag elastomeric gun grade polyurethane sealant. Cost included in Prefomed Joint Seal.

**GENERAL NOTES**

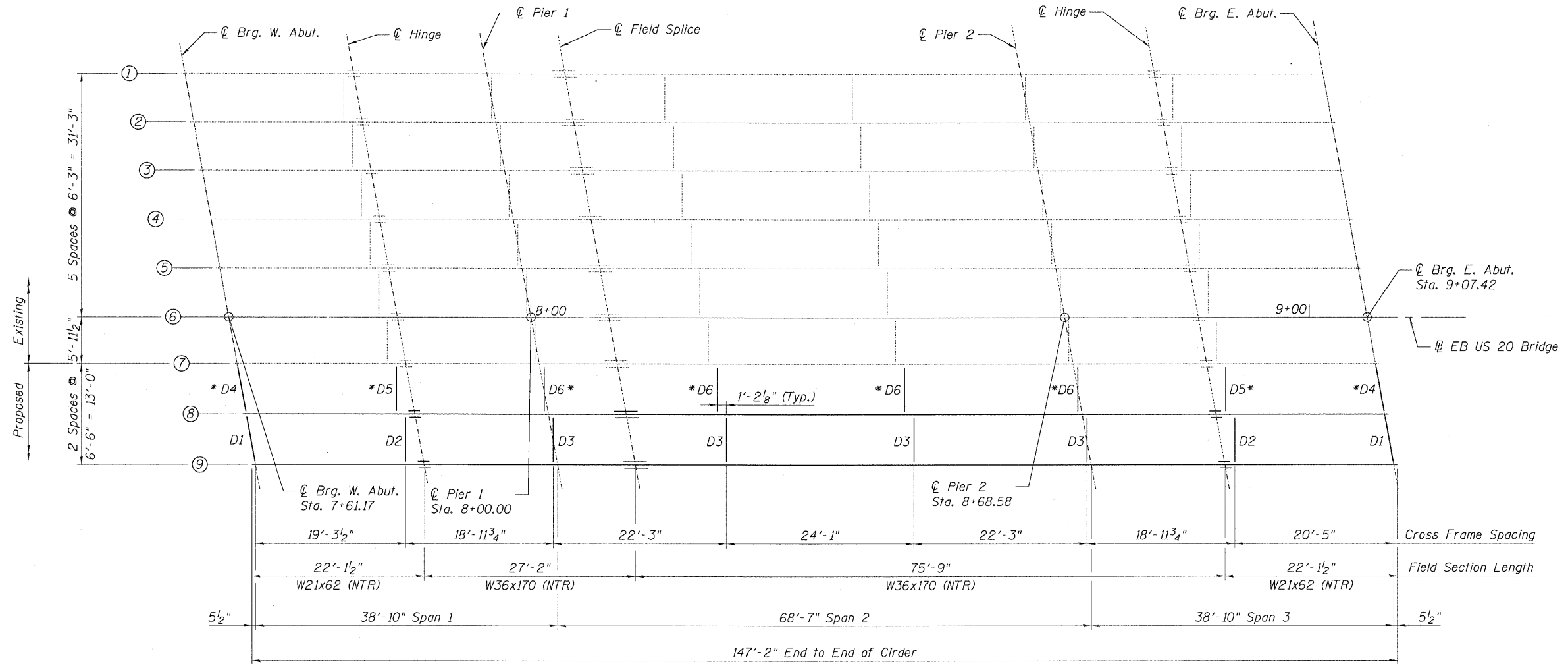
Furnish steel plates in segments of 20 feet maximum length. Maximum space between installed segments shall be 3/16 inch. Seal space with silicone sealant suitable for structural steel.

**BILL OF MATERIAL**

Item	Unit	Total
Prefomed Joint Seal 2 1/2"	Foot	19.5
Prefomed Joint Seal 4"	Foot	19.5

EJ-BJS

10-22-04 (Modified)



**FRAMING PLAN**

\* Field drill holes in existing Girder 7. See Note 5 on Sht. S-17.

	0.3 Sp. 1 0.7 Sp. 3	Pier 1 Pier 2	0.5 Sp. 2
$I_s$	(in <sup>4</sup> ) 1,330	10,500	10,500
$S_s$	(in <sup>3</sup> ) 127	581	581
$Z$	(in <sup>3</sup> ) 144	668	668
$\rho$	(k/')	0.903	1.041
$M \rho$	(k)	53	318
$M \ell$	(k)	126	455
$M_{IM}$	(k)	38	136
$^{5/3} [M \ell + M_I]$	(k)	273	986
$M_a$	(k)	423	1,694
$M_u$	(k)	600	2,783
$f_s \rho$	(ksi)	5.0	6.6
$f_s \ ^{5/3} [M \ell + M_I]$	(ksi)	25.8	20.4
$f_s$ (Overload)	(ksi)	30.8	27.0
$f_s$ (Total)	(ksi)		35.1

$I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total and Overload) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).  
 $Z$ : Plastic Section Modulus of the steel section (in<sup>3</sup>).  
 $\rho$ : Un-factored non-composite dead load (kips/ft.).  
 $M \rho$ : Un-factored moment due to non-composite dead load (kip-ft.).  
 $M \ell$ : Un-factored live load moment (kip-ft.).  
 $M_I$ : Un-factored moment due to impact (kip-ft.).  
 $M_a$ : Factored design moment (kip-ft.).  
 $1.3 [M \rho + \frac{5}{3} (M \ell + M_I)]$   
 $M_u$ : Compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).  
 $f_s$  (Overload): Sum of stresses as computed from the moments below (ksi).  
 $M \rho + \frac{5}{3} (M \ell + M_I)$   
 $f_s$  (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).  
 $1.3 [M \rho + \frac{5}{3} (M \ell + M_I)]$

	Abuts.	Piers	Hinges
$R \rho$	(k) 9.7	63.7	9.7
$R \ell$	(k) 25.8	62.2	25.8
$R_I$	(k) 7.7	18.7	7.7
$R_{Total}$	(k) 43.2	144.6	43.2

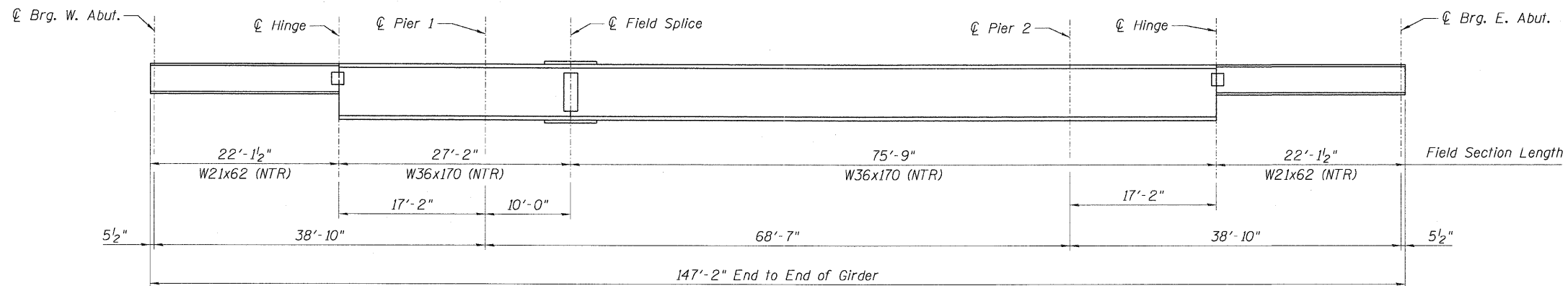
**Notes:**

1. Work this sheet with Sht. S-16 & S-17.
2. All structural steel for girders, splices and hinges shall conform to the requirements of AASHTO M270, Grade 50. All other structural steel shall conform to the requirements of AASHTO M270, Grade 36.

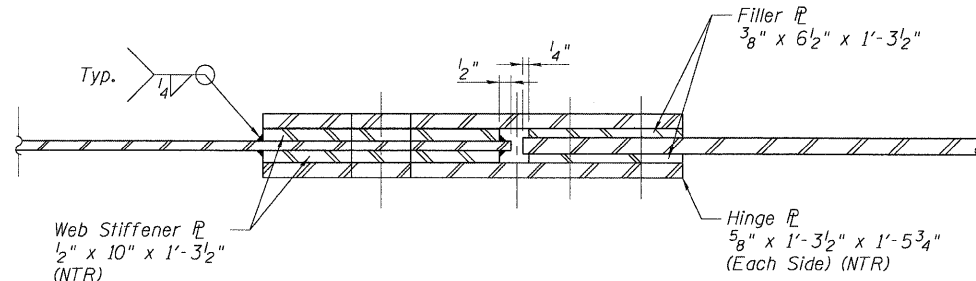
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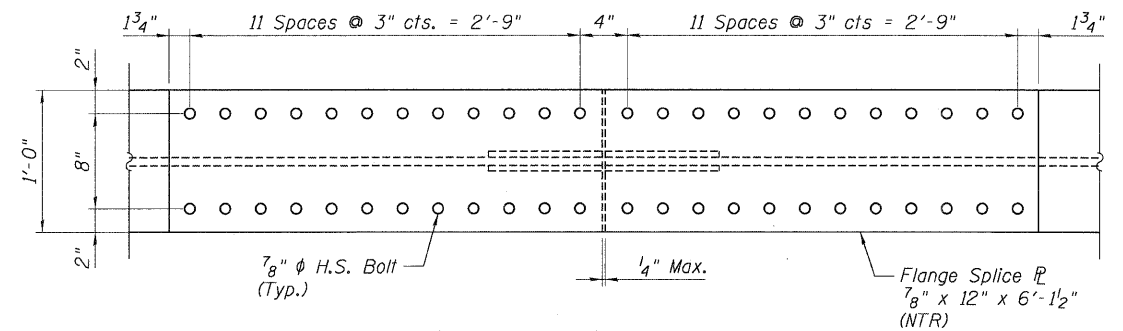




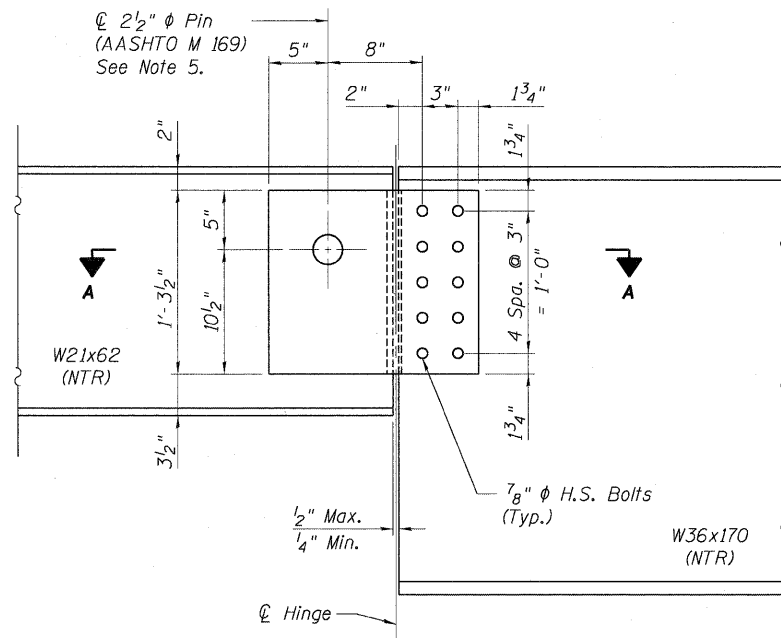
**GIRDER ELEVATION**  
(Girders 8 and 9)



**SECTION A-A**



**TOP & BOTTOM FLANGE**



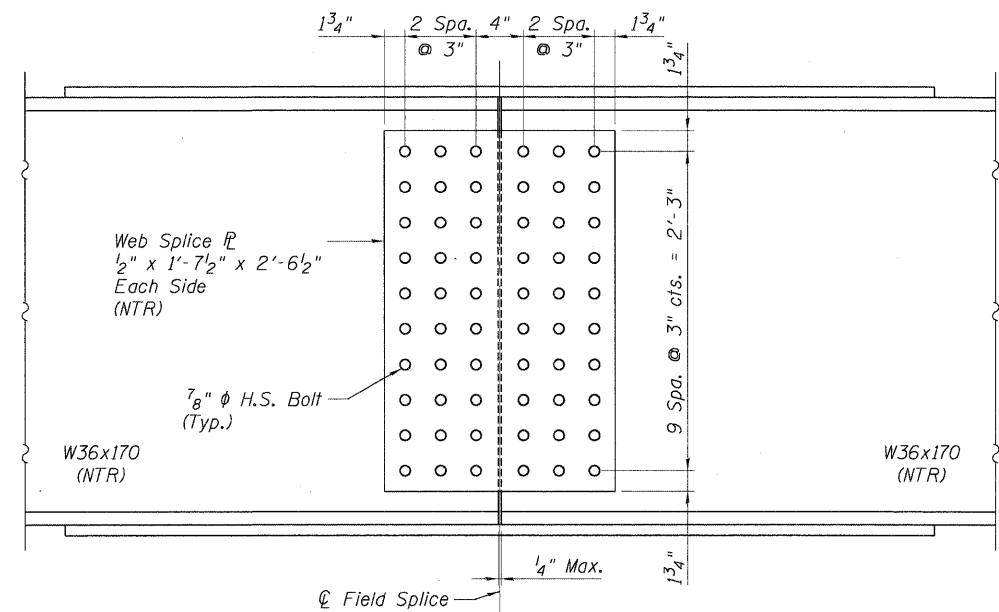
**ELEVATION**  
**HINGE DETAILS**

**Notes:**

1. Work this sheet with Sht. S-15.
2. Load carrying components designated NTR shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
3. Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 7/8"  $\phi$ , holes 15/16"  $\phi$ , unless noted otherwise.
4. Pins shall be AASHTO M169, with recessed threads and two locking nuts.
5. Pin hole in girder webs and hinge plates shall be subpunched and reamed through all thicknesses in shop.

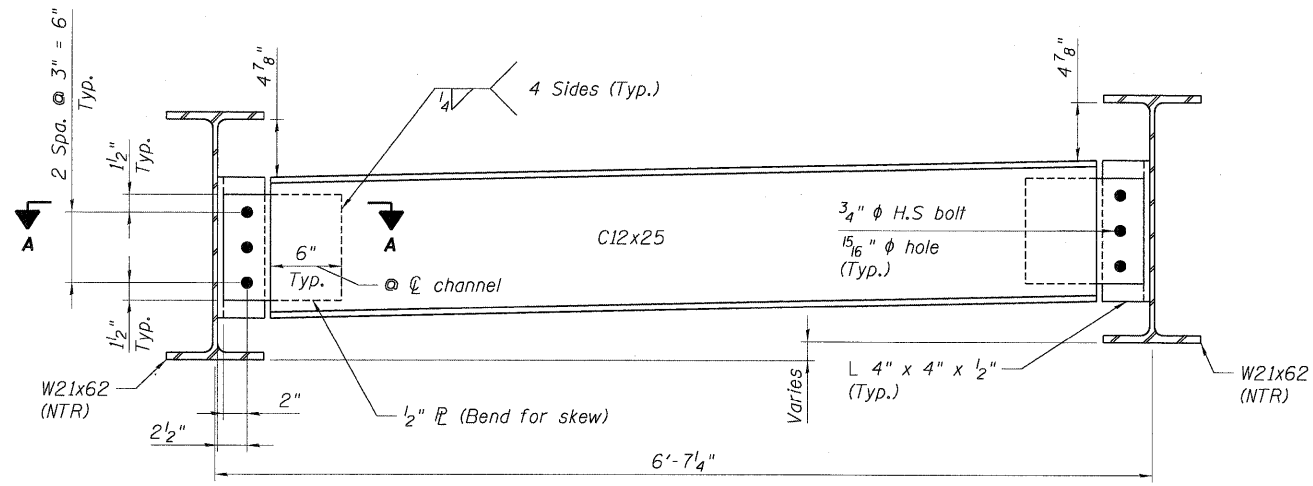
**TOP OF BEAM ELEVATIONS**  
(for fabrication only)

Beam	℄ Brg. W. Abut.	℄ Hinge	℄ Pier 1	℄ Splice	℄ Pier 2	℄ Hinge	℄ Brg. E. Abut.
8	849.80	849.86	849.88	849.89	849.93	849.95	849.91
9	849.93	850.00	850.01	850.02	850.06	850.08	850.04

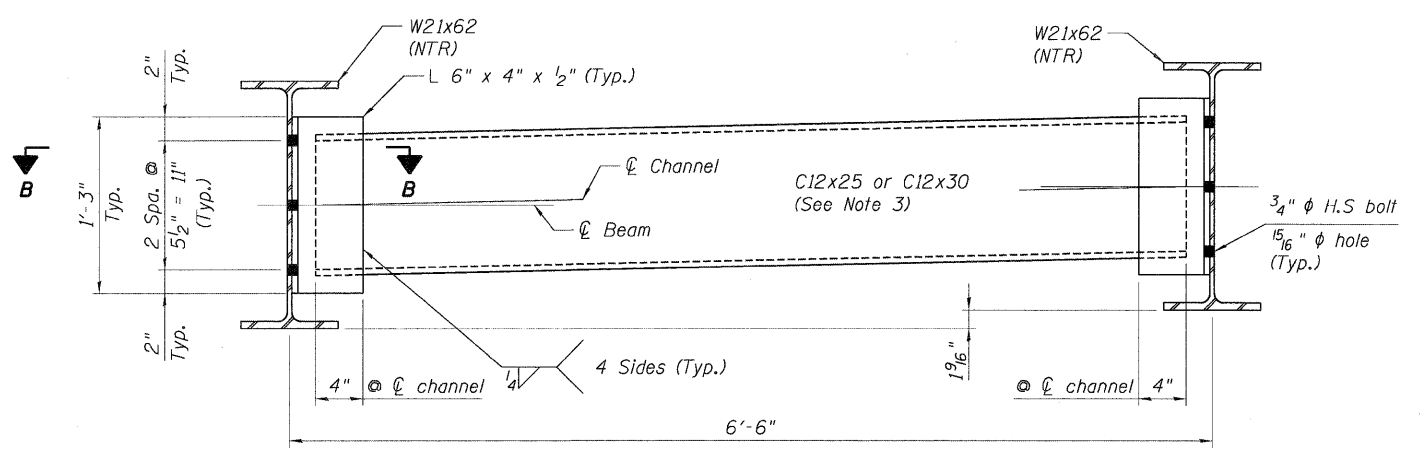


**ELEVATION**  
**FIELD SPLICE DETAILS**

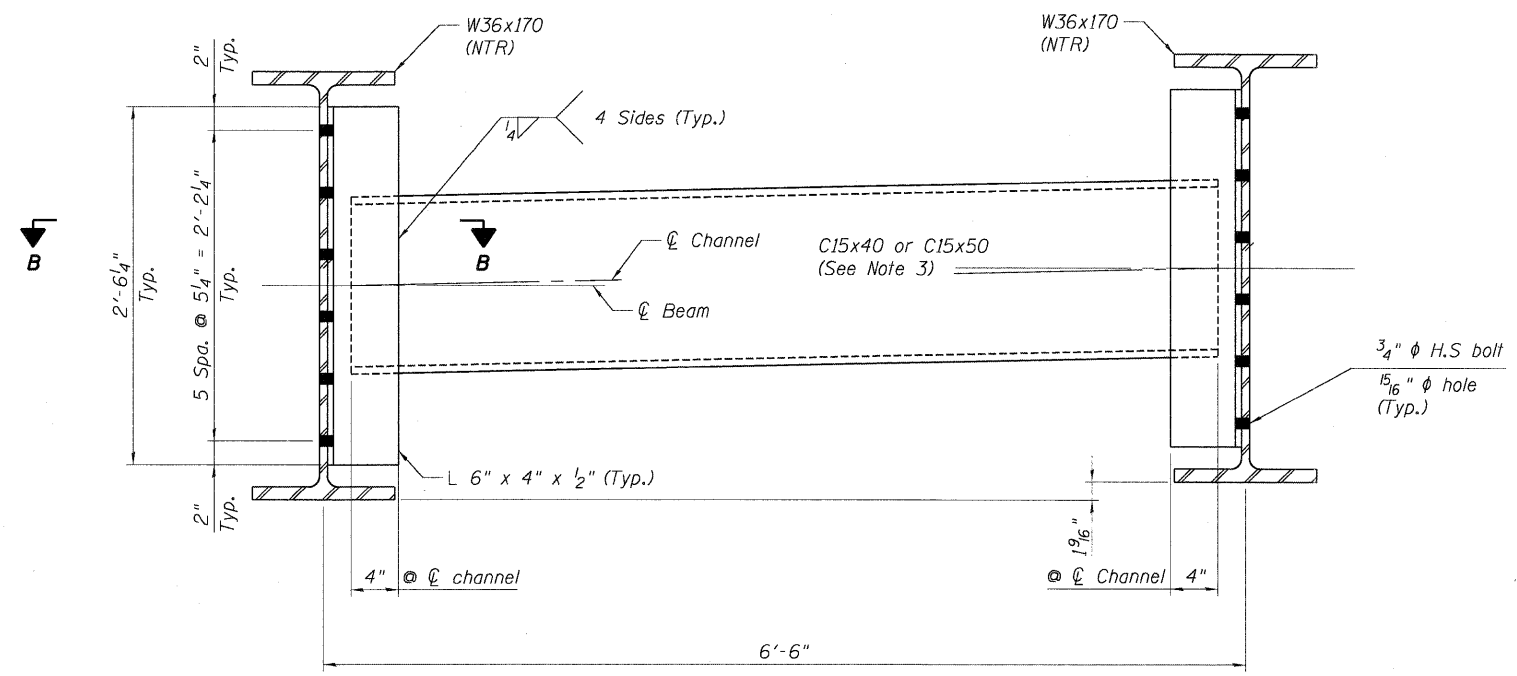
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 DRAWN - PK  
 CHECKED - MDB  
 DATE - 05/18/11  
 REVISED -  
 REVISED -  
 REVISED -  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS  
 STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 US 20 OVER MCLEAN BOULEVARD  
 GIRDER ELEVATION AND DETAILS  
 SCALE: SHEET NO. S-16 OF S-29 STA. 98+32.18  
 F.A.P. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.  
 345 BR-HB-2-BY-1 KANE 434 257  
 SN 045-0003 CONTRACT NO. 60K90  
 FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT



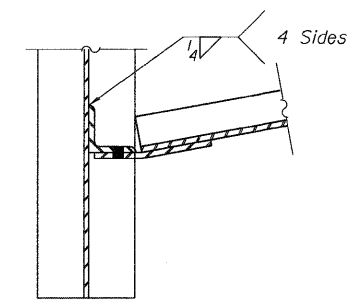
Diaphragms D1 & D4



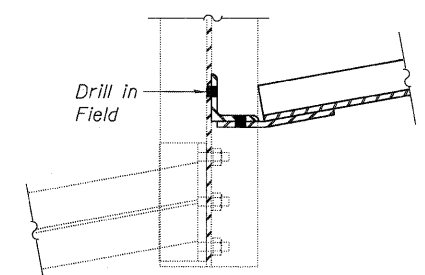
Diaphragms D2 & D5



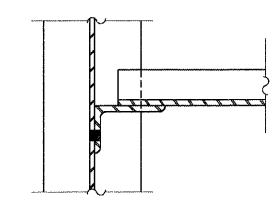
Diaphragms D3 & D6



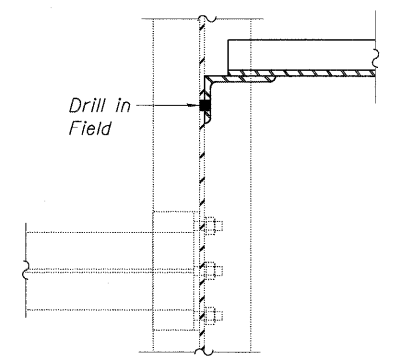
SECTION A-A  
(at proposed beams)



SECTION A'-A'  
(at existing beams)



SECTION B-B  
(at proposed beams)



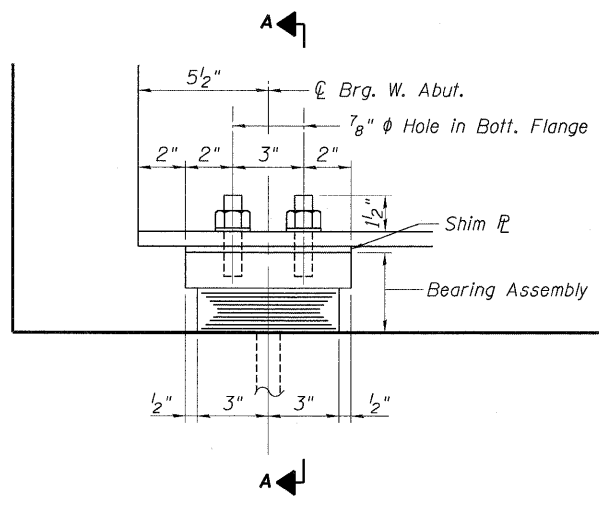
SECTION B'-B'  
(at existing beams)

Notes:

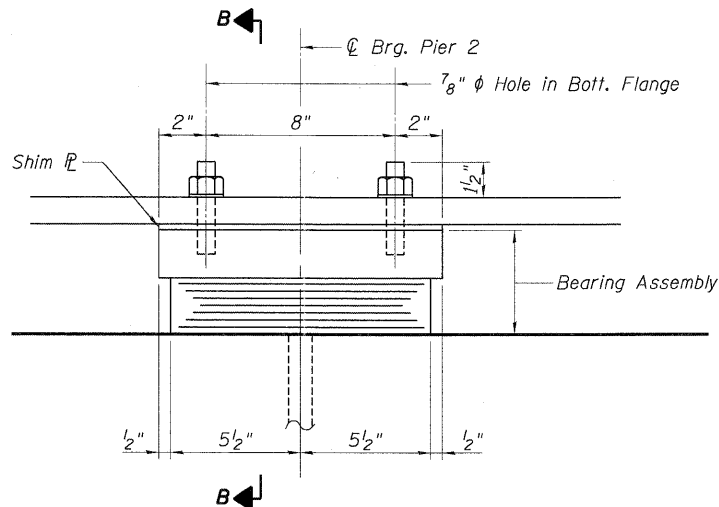
1. Work this Sheet with Sht. S-15.
2. Two hardened washers required for each set of oversized holes.
3. Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
4. All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
5. Field drill holes in existing Girder 7. Contractor shall field verify location of existing diaphragms and their connections to Girder 7, and coordinate proposed diaphragm locations to avoid any conflicts. The field-verified dimensions showing offset of the proposed diaphragms from the existing diaphragms must be shown in the shop drawings. The cost of field verification, shop drawing details and field drilling shall be included in Furnishing and Erecting Structural Steel.

FILE NAME = \\F:\044\AM\VAL\JD\_TRAN\9712202\21374-001\STRUCT\CAD\60K90\0450003\SHEET\0450003-60K90-001-STEELDETAIL\_SHT.DGN  
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 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

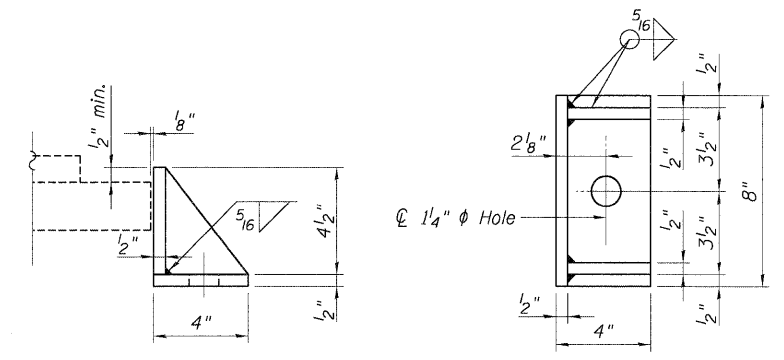
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TENG	PLOT DATE = #DATE#	CHECKED - MDB	REVISED -					SN 045-0003		CONTRACT NO. 60K90		
		DATE - 05/18/11	REVISED -					FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				



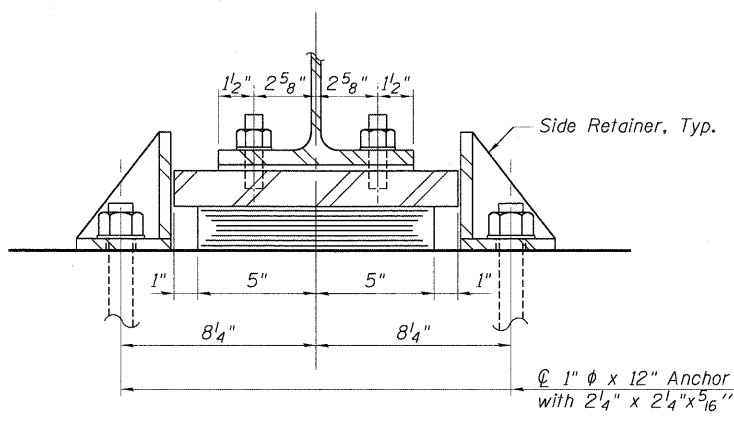
**ELEVATION AT W. ABUT.**  
(Looking North)



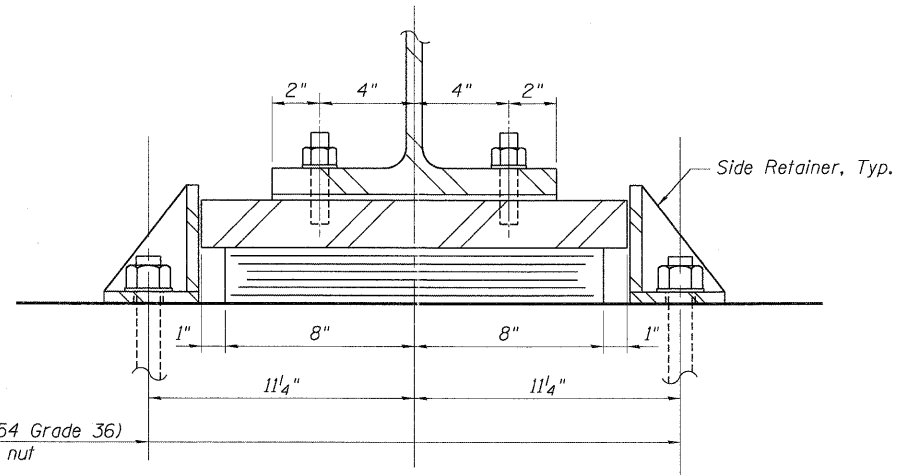
**ELEVATION AT PIER 2**  
(Looking North)



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



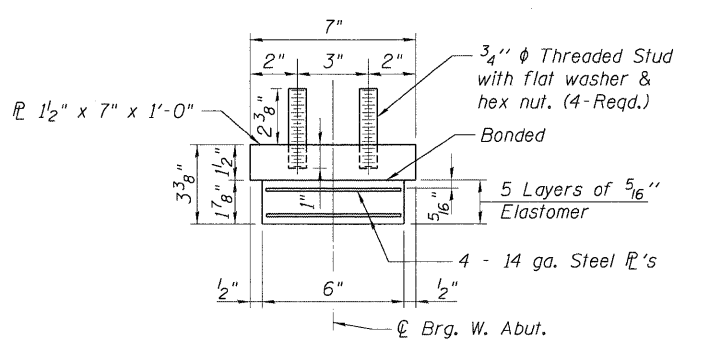
**SECTION A-A**



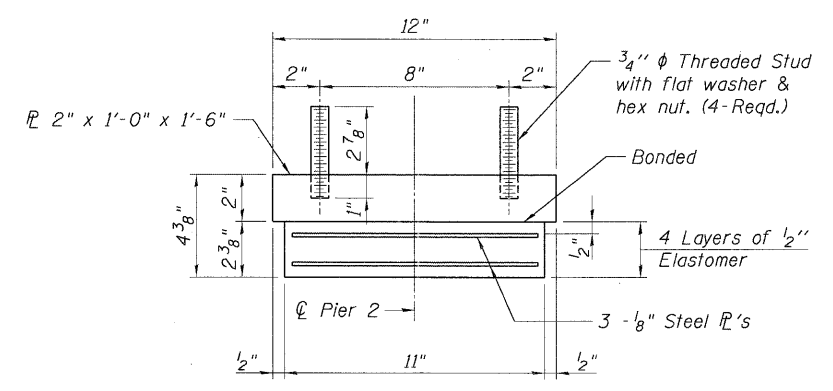
**SECTION B-B**

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	4
Anchor Bolts, 1"	Each	8



**W. ABUT. BEARING ASSEMBLY**  
(2 Thus)



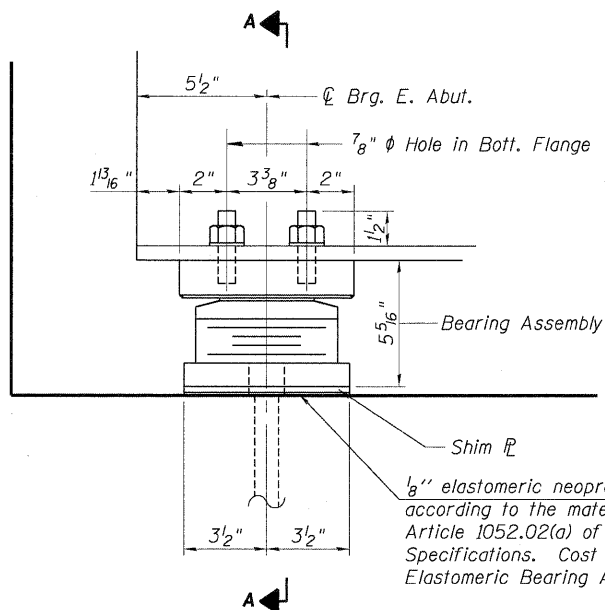
**PIER 2 BEARING ASSEMBLY**  
(2 Thus)

**TYPE I ELASTOMERIC EXPANSION BEARINGS**

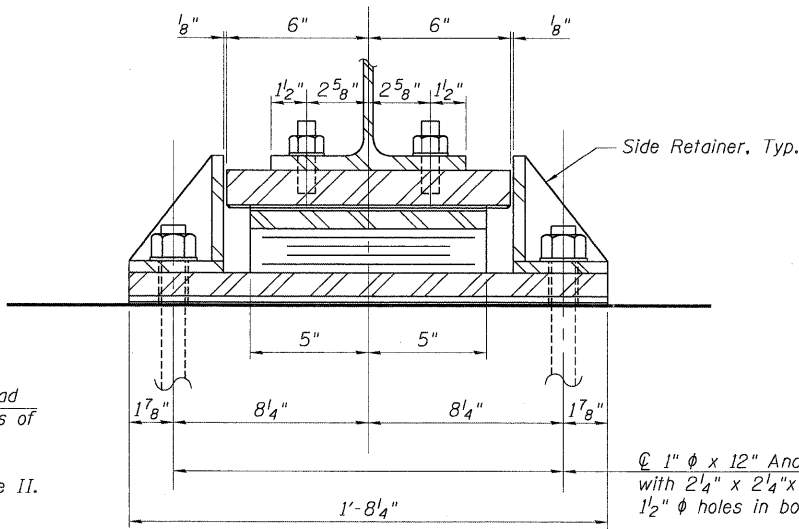
**Notes:**

- Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade and diameter 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 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 elastomeric expansion bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
- Shim plates shall not be placed under Bearing Assembly.
- The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.
- Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates and placed as shown on bearing details.

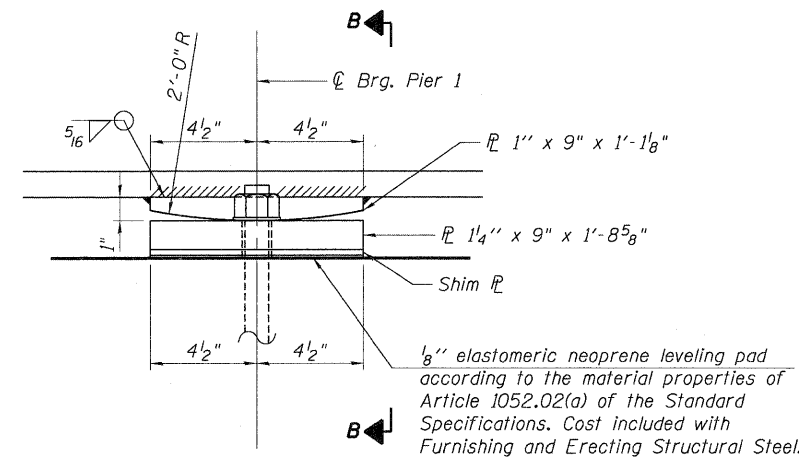
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 USER = WARMZ  
 DATE = 05/18/11  
 TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS



**ELEVATION AT E. ABUT.**  
(Looking South)



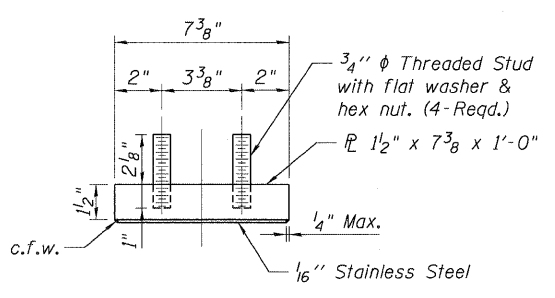
**SECTION A-A**



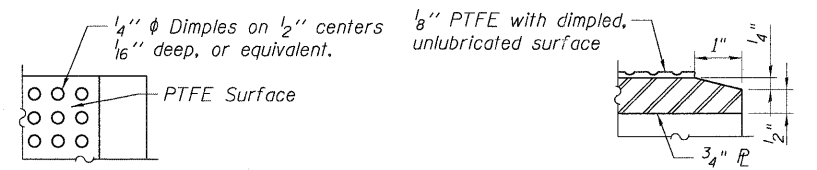
**ELEVATION AT PIER 1**  
**LOW PROFILE FIXED BEARINGS**

**TYPE II ELASTOMERIC EXPANSION BEARINGS**

(2 Thus)

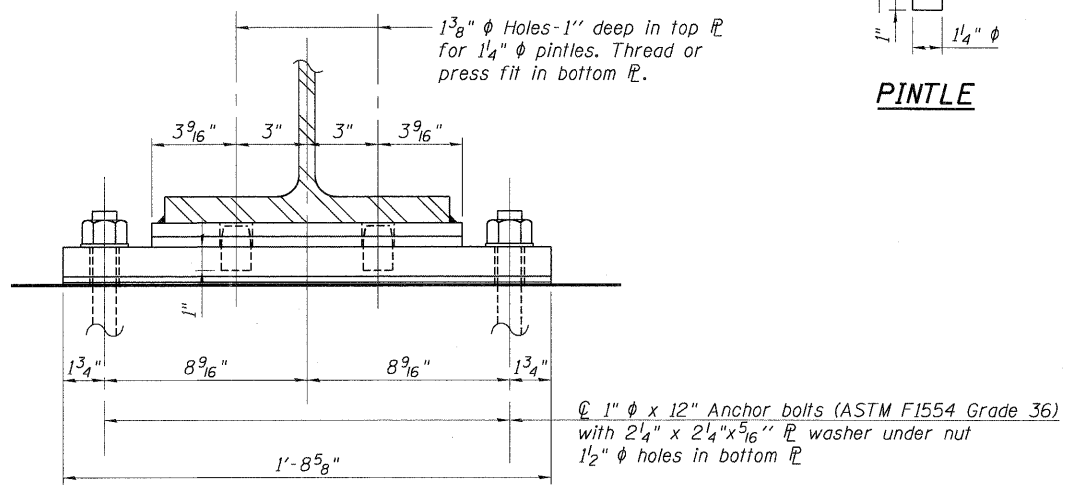


**TOP BEARING ASSEMBLY**

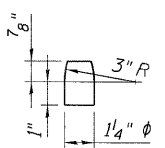


**PLAN - PTFE SURFACE**

**SECTION THRU PTFE**



**SECTION B-B**



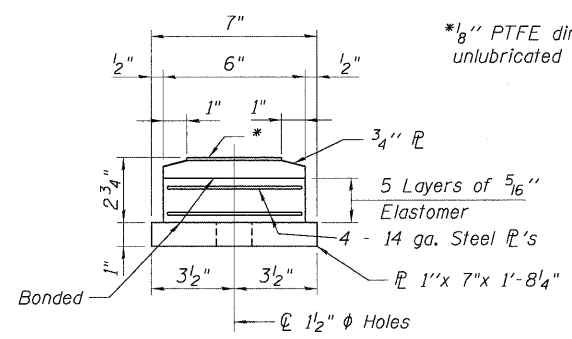
**PINTLE**

**BILL OF MATERIAL**

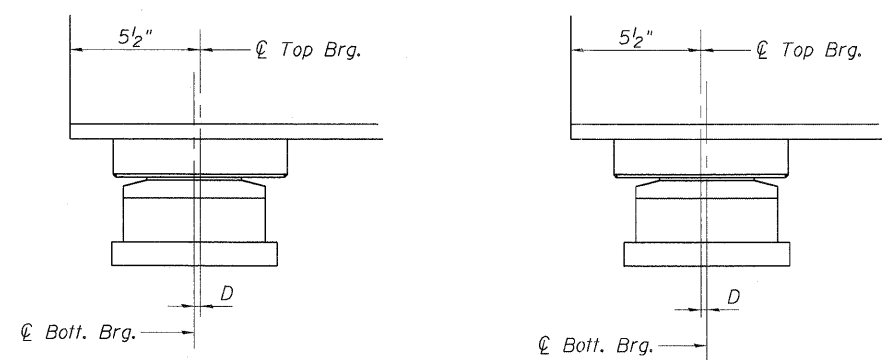
Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	2
Anchor Bolts, 1"	Each	8

**Notes:**

- See Sht. S-18 for side retainer details.
- Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade and diameter 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 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.
- 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 elastomeric expansion bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.
- 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.
- 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.
- The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.
- Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates and placed as shown on bearing details.
- Fixed bearing assemblies, including pintles, shim plates, adjusting shims and elastomeric neoprene leveling pads, included in Furnishing and Erecting Structural Steel.



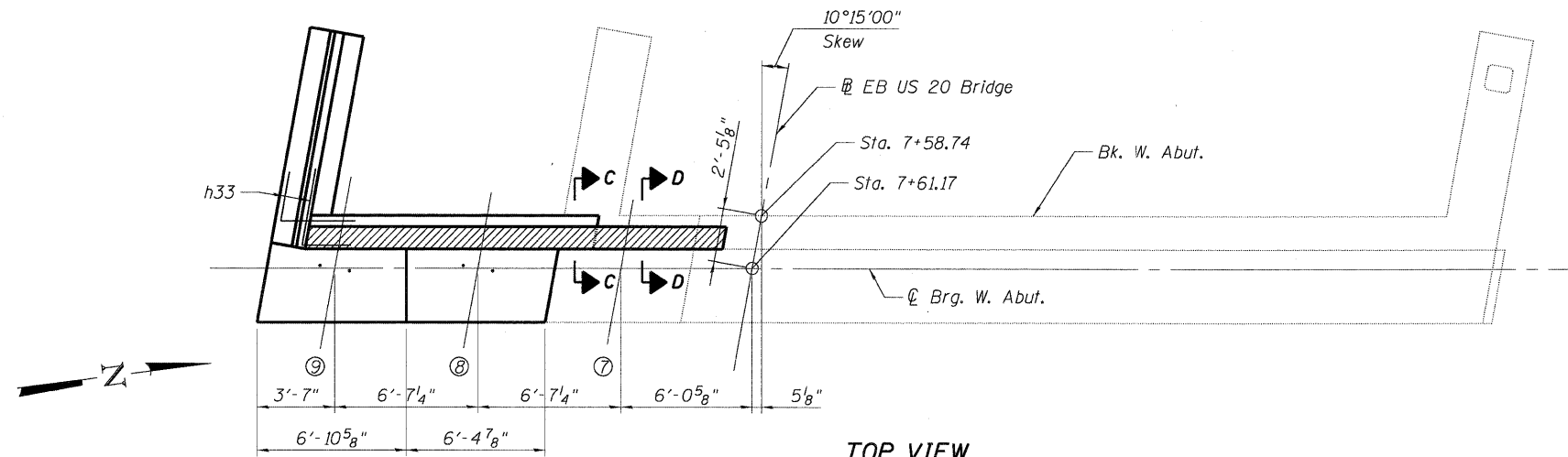
**BOTTOM BEARING ASSEMBLY**



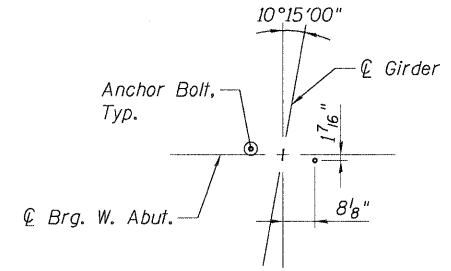
**SETTING ANCHOR BOLTS AT EXPANSION BEARINGS**

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

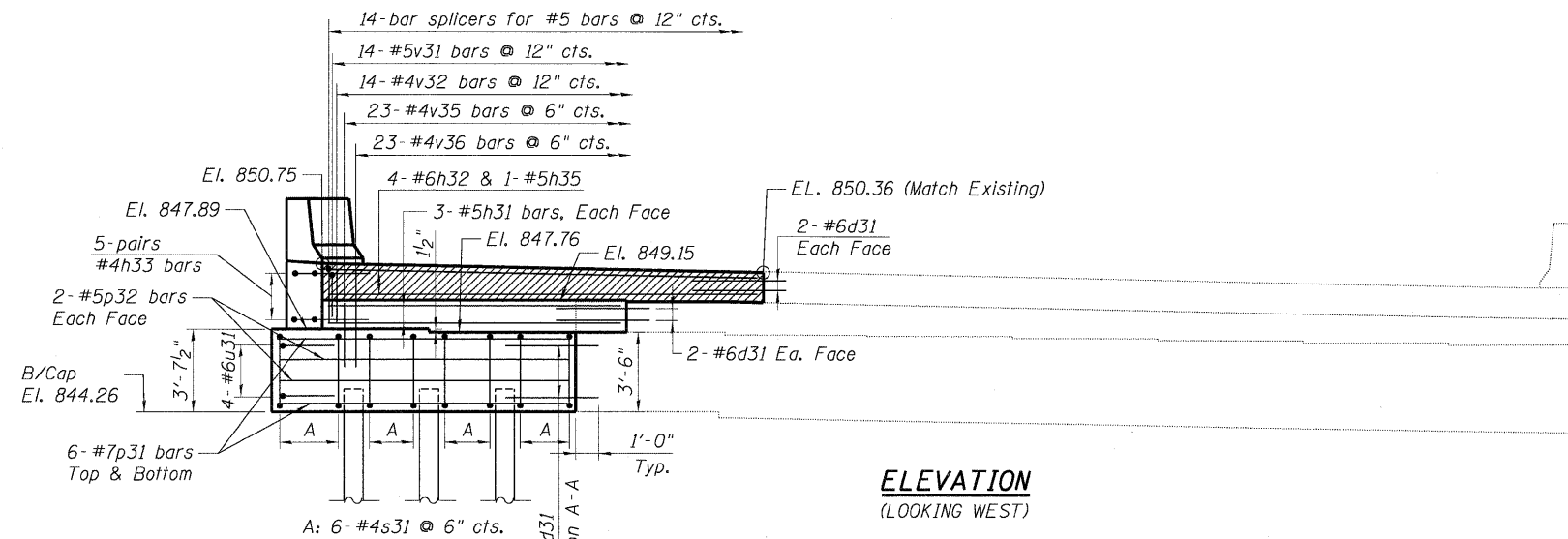
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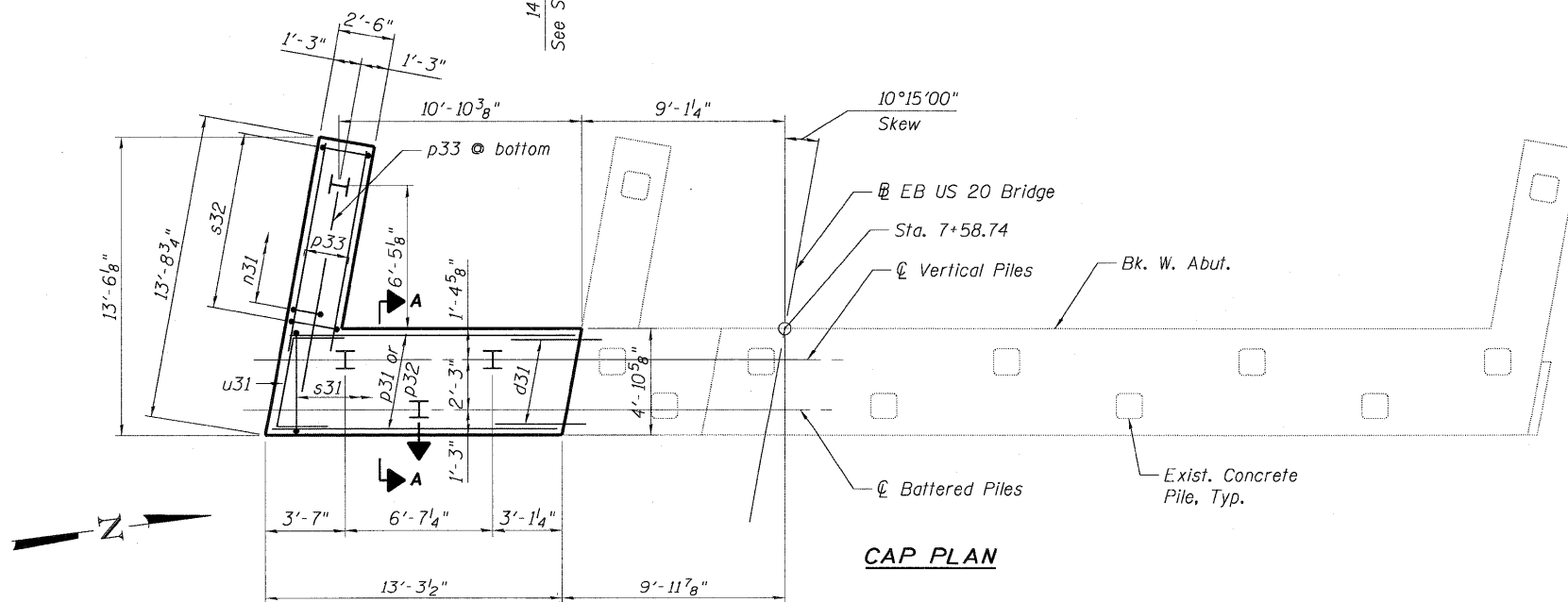
**TOP VIEW**



**ANCHOR BOLT LAYOUT**



**ELEVATION  
(LOOKING WEST)**



**CAP PLAN**

**PILE DATA**

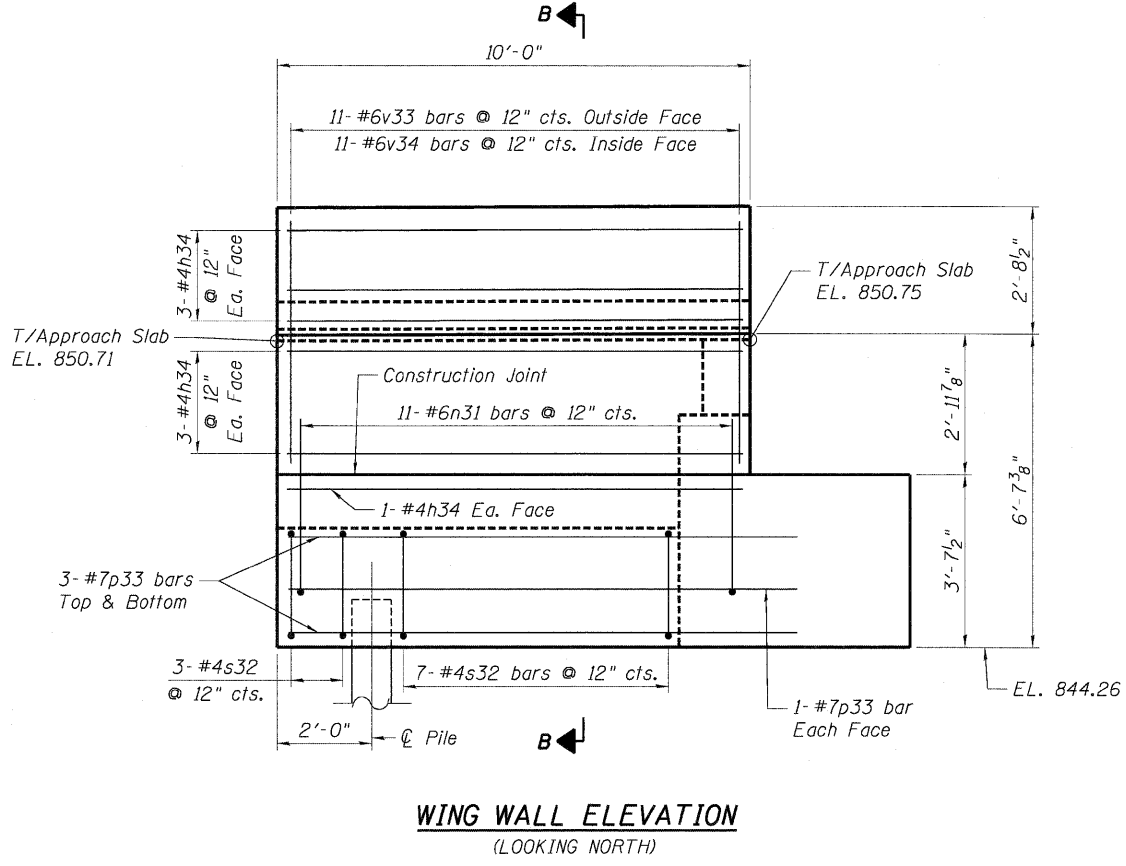
Type: Steel HP 10x42 with pile shoes  
 Nominal Required Bearing: 246 kips  
 Allowable Resistance Available: 82 kips  
 Est. Length: 30' (see Note 9)  
 No. Production Piles: 4  
 No. Test Piles: 0

**Notes:**

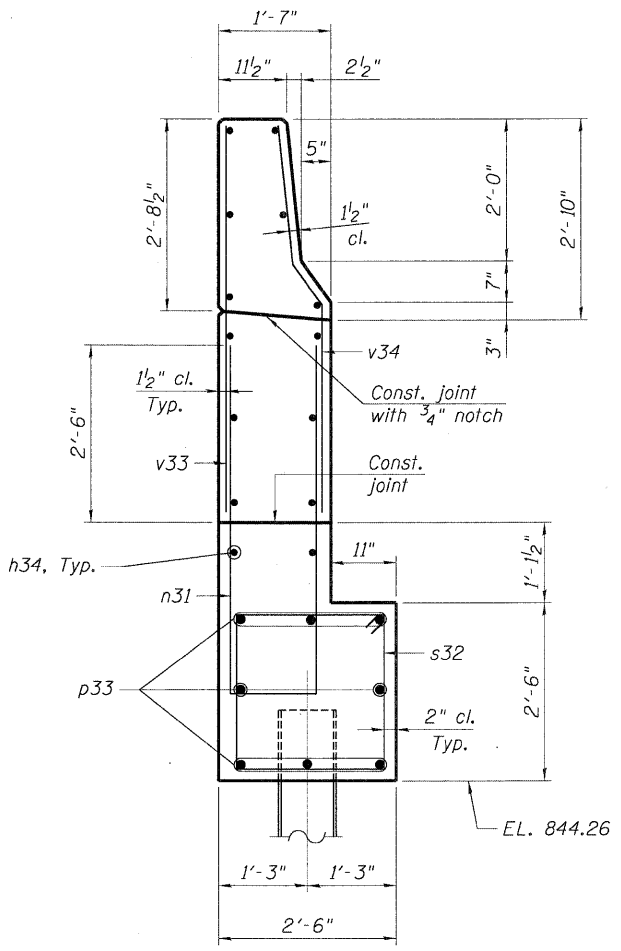
1. Work this sheet with Sht. S-21.
2. Space reinforcement in cap to miss anchor bolts.
3. Pour steps monolithically with cap.
4. For details of steel H-piles, see Sht. S-7.
5. For anchor bolt and bearing details, see Sht. S-18.
6. For details of bar splicers, see Sht. S-26.
7. Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with concrete superstructure.
8. Quantity of concrete in end post included with concrete superstructure.
9. No test piles will be performed; the quantity for Furnishing Steel Piles has been increased by 10' per pile to reflect the uncertainty in length required. The Contractor shall drive piles to the listed Nominal Required Bearing and cut piles at the T/Pile elevation shown. Furnishing Steel Piles shall be paid for at the actual furnished length (as shown in the bill of material). Driving Piles shall be paid for at the actual driven depth below the bottom of cap.
10. Drill and epoxy grout d31 bars in 12" min. drilled holes according to Section 584 of the Standard Specifications. Method and grout are subject to the approval of the Engineer. Locate dowels to provide a minimum of 4" clear cover. Cost of drilling and grouting bars shall be included with Reinforcement Bars.
11. For removal details, see Sht. S-3.

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 TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS  
 DATE: 05/18/11

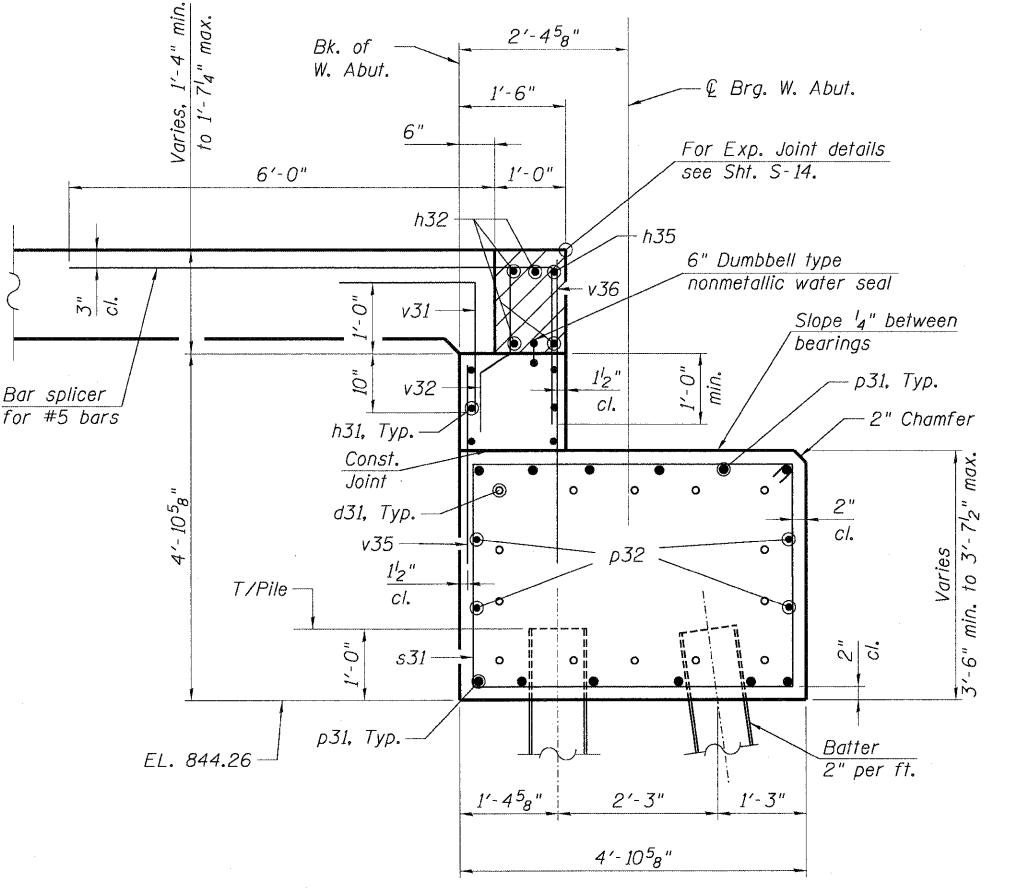
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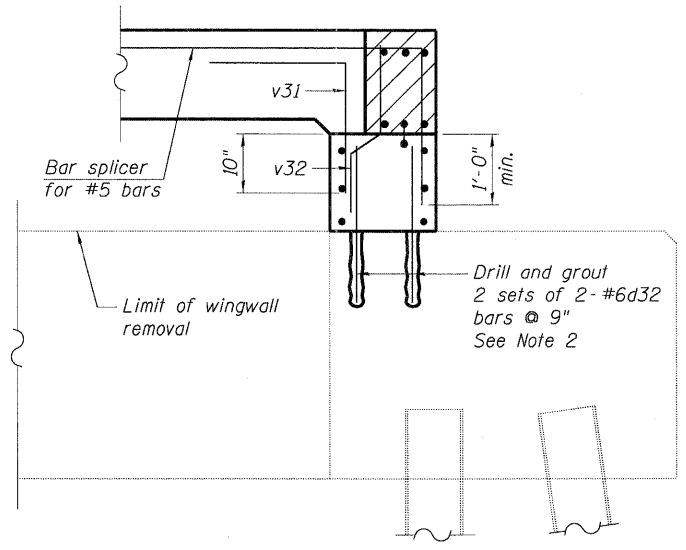
**WING WALL ELEVATION**  
(LOOKING NORTH)



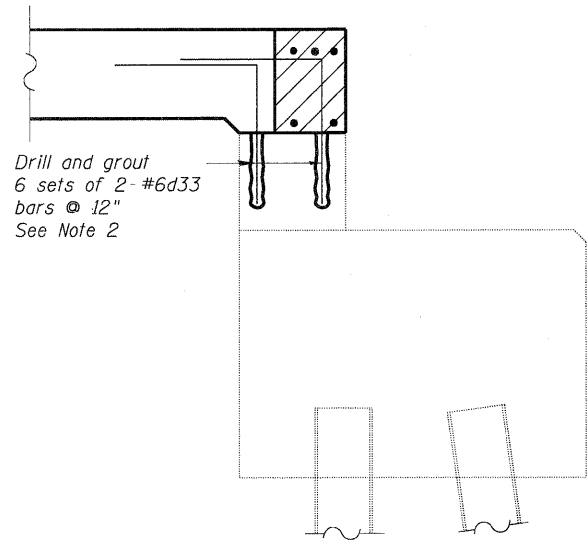
**SECTION B-B**



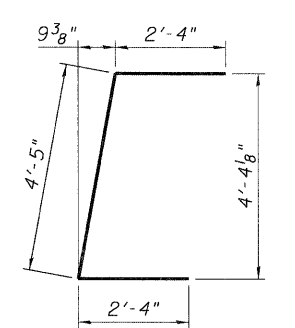
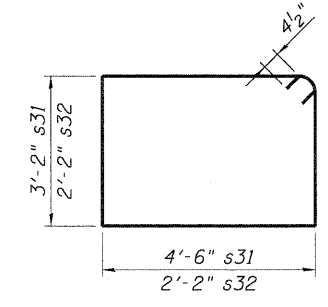
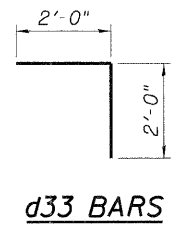
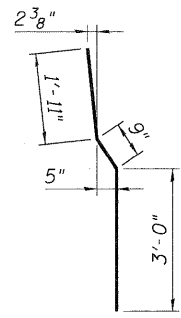
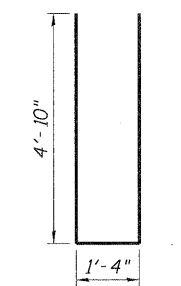
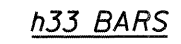
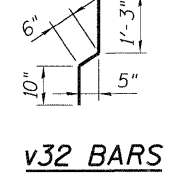
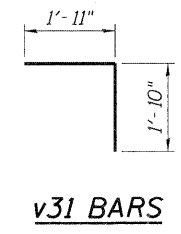
**SECTION A-A**



**SECTION C-C**



**SECTION D-D**



**BAR LIST**

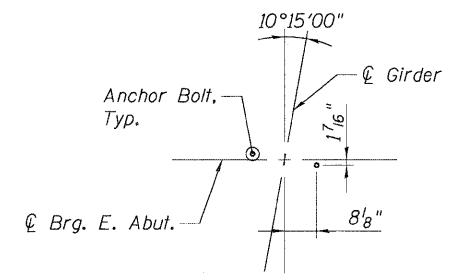
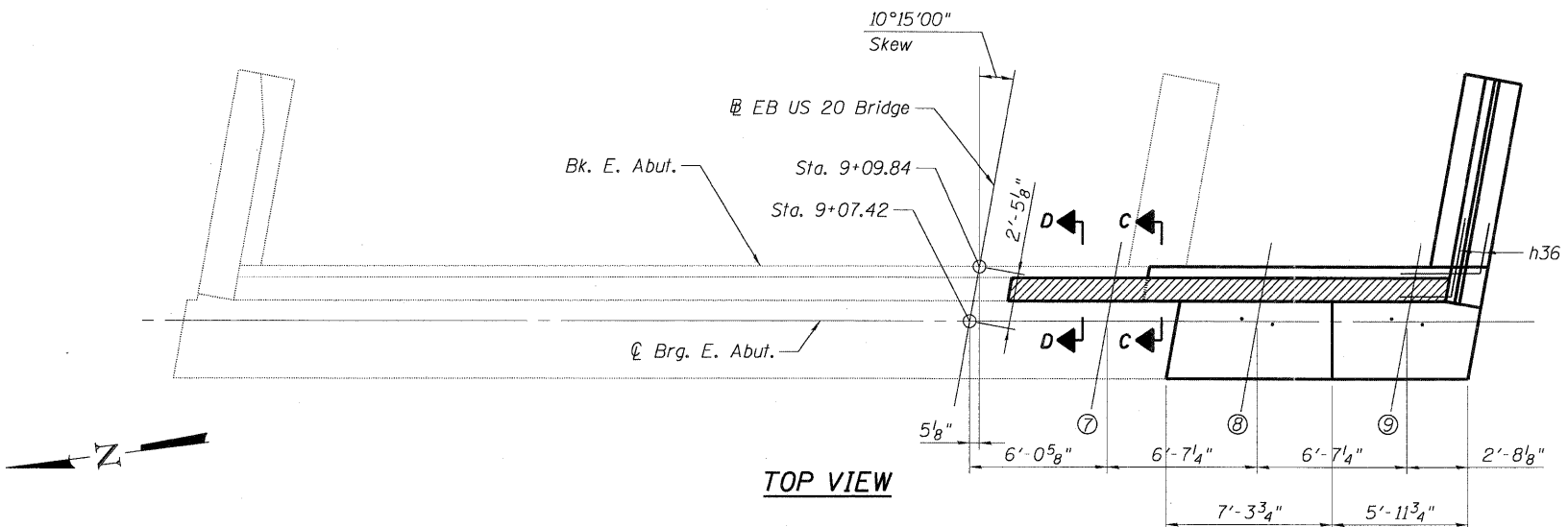
Bar	No.	Size	Length	Shape
d31	22	#6	3'-1"	┌───
d32	4	#6	2'-3"	┌───
d33	12	#6	4'-0"	┌───
h31	6	#5	13'-0"	┌───
h32	4	#6	18'-11"	┌───
h33	10	#4	5'-9"	┌───
h34	14	#4	9'-8"	┌───
h35	1	#5	18'-11"	┌───
n31	11	#6	11'-0"	┌───
p31	12	#7	13'-0"	┌───
p32	4	#5	13'-0"	┌───
p33	8	#7	10'-5"	┌───
s31	24	#4	16'-1"	┌───
s32	10	#4	9'-5"	┌───
u31	4	#6	9'-1"	┌───
v31	14	#5	3'-9"	┌───
v32	14	#4	2'-7"	┌───
v33	11	#6	5'-5"	┌───
v34	11	#6	5'-8"	┌───
v35	23	#4	2'-8"	┌───
v36	23	#4	4'-1"	┌───

**BILL OF MATERIAL**

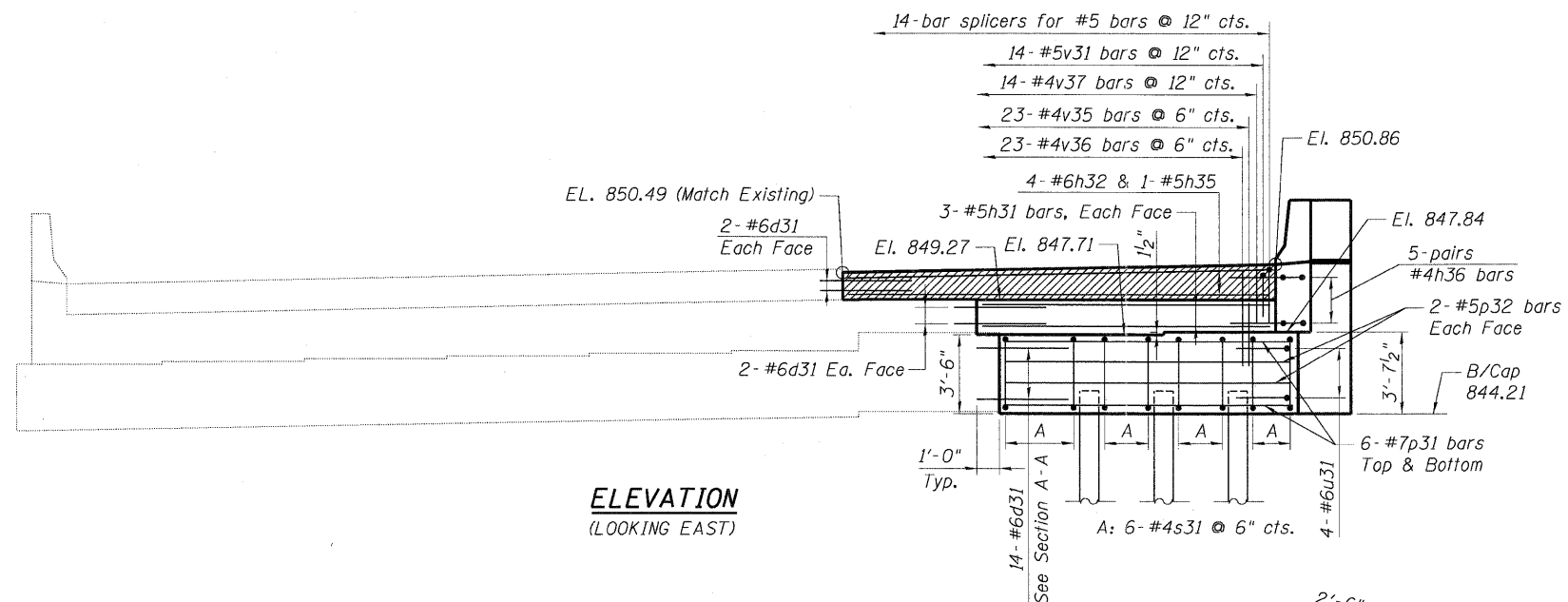
Item	Unit	Total
Structure Excavation	Cu. Yd.	33
Concrete Structures	Cu. Yd.	13.8
Concrete Superstructure	Cu. Yd.	2.2
Reinforcement Bars	Pound	2,000
Furnishing Steel Piles HP 10x42	Foot	160
Driving Piles	Foot	160
Pile Shoes	Each	4

**Notes:**  
 1. Work this sheet with Sht. S-20.  
 2. Drill and epoxy grout dowels into existing abutment wingwall as shown. See Note 10 on Sht. S-20.

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 TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS  
 STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION US 20 OVER MCLEAN BOULEVARD  
 WEST ABUTMENT DETAILS AND BAR LIST  
 SCALE: SHEET NO. S-21 OF S-29 STA. 98+32.18  
 F.A.P. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO. 345 BR-HB-2-BY-1 KANE 434 262 SN 045-0003 CONTRACT NO. 60K90  
 FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT



**ANCHOR BOLT LAYOUT**



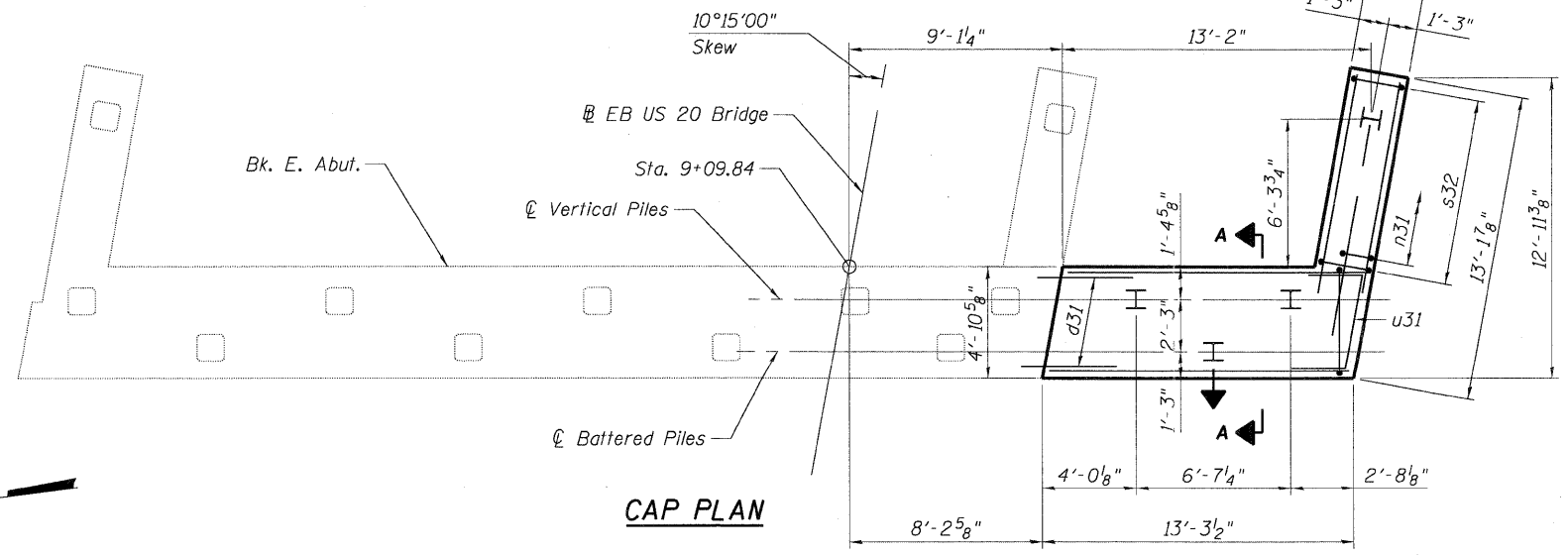
**ELEVATION  
(LOOKING EAST)**

**PILE DATA**

Type: Steel HP 10x42 with pile shoes  
 Nominal Required Bearing: 246 kips  
 Allowable Resistance Available: 82 kips  
 Est. Length: 23' (see Note 9)  
 No. Production Piles: 4  
 No. Test Piles: 0

**Notes:**

1. Work this sheet with Sht. S-23.
2. Space reinforcement in cap to miss anchor bolts.
3. Pour steps monolithically with cap.
4. For details of steel H-piles, see Sht. S-7.
5. For anchor bolt and bearing details, see Sht. S-19.
6. For details of bar splicers, see Sht. S-26.
7. Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with concrete superstructure.
8. Quantity of concrete in end post included with concrete superstructure.
9. No test piles will be performed; the quantity for Furnishing Steel Piles has been increased by 10' per pile to reflect the uncertainty in length required. The Contractor shall drive piles to the listed Nominal Required Bearing and cut piles at the T/Pile elevation shown. Furnishing Steel Piles shall be paid for at the actual furnished length (as shown in the bill of material). Driving Piles shall be paid for at the actual driven depth below the bottom of cap.
10. Drill and epoxy grout d31 bars in 12" min. drilled holes according to Section 584 of the Standard Specifications. Method and grout are subject to the approval of the Engineer. Locate dowels to provide a minimum of 4" clear cover. Cost of drilling and grouting bars shall be included with Reinforcement Bars.
11. For removal details, see Sht. S-3.

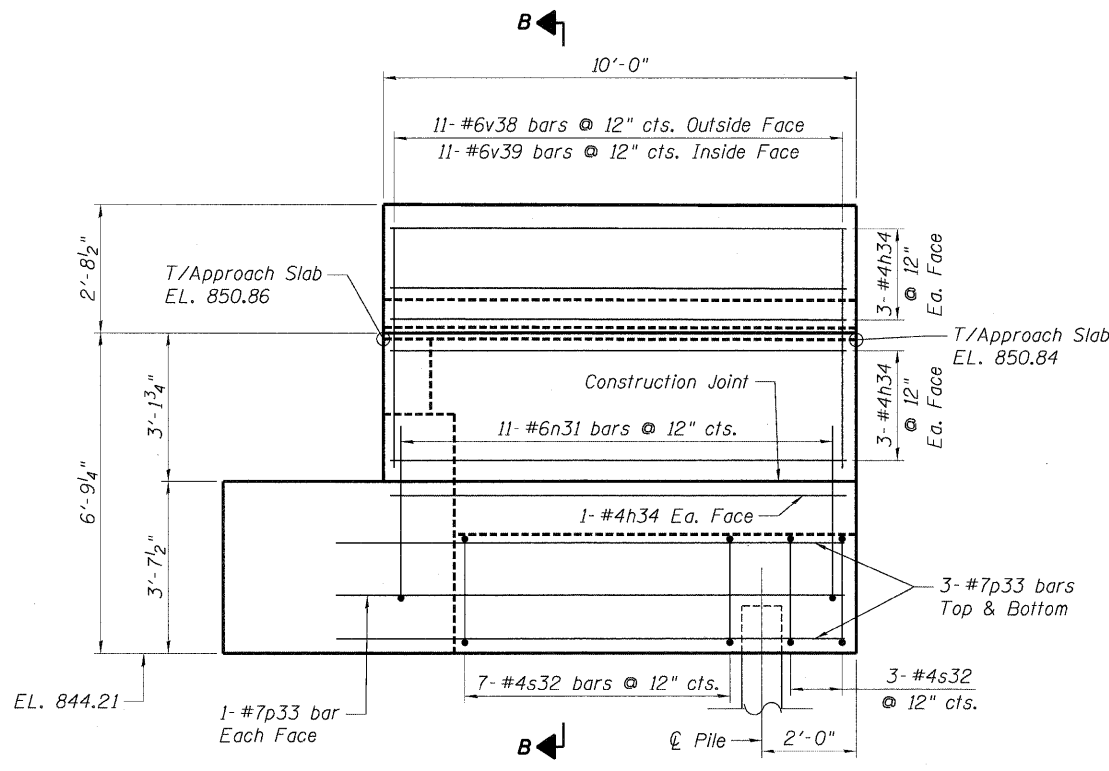


**CAP PLAN**

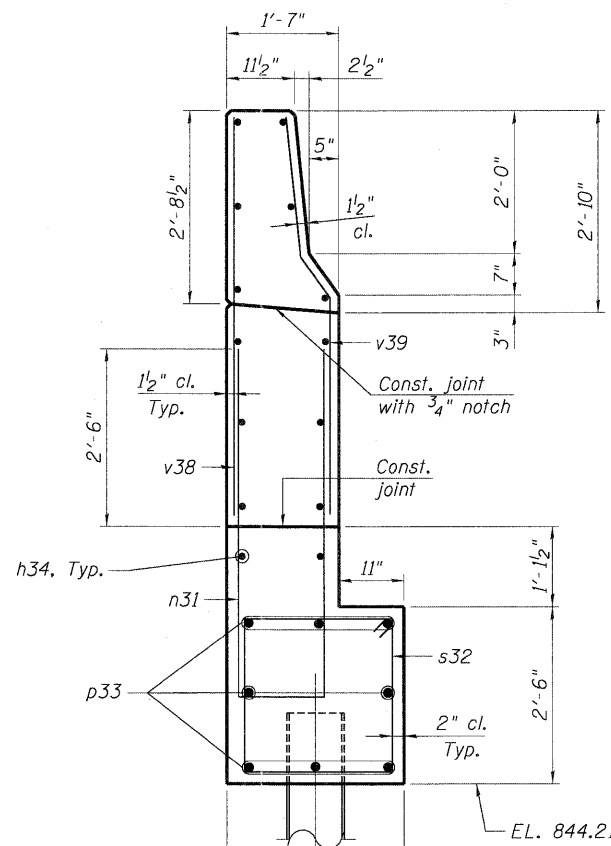
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							FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT			

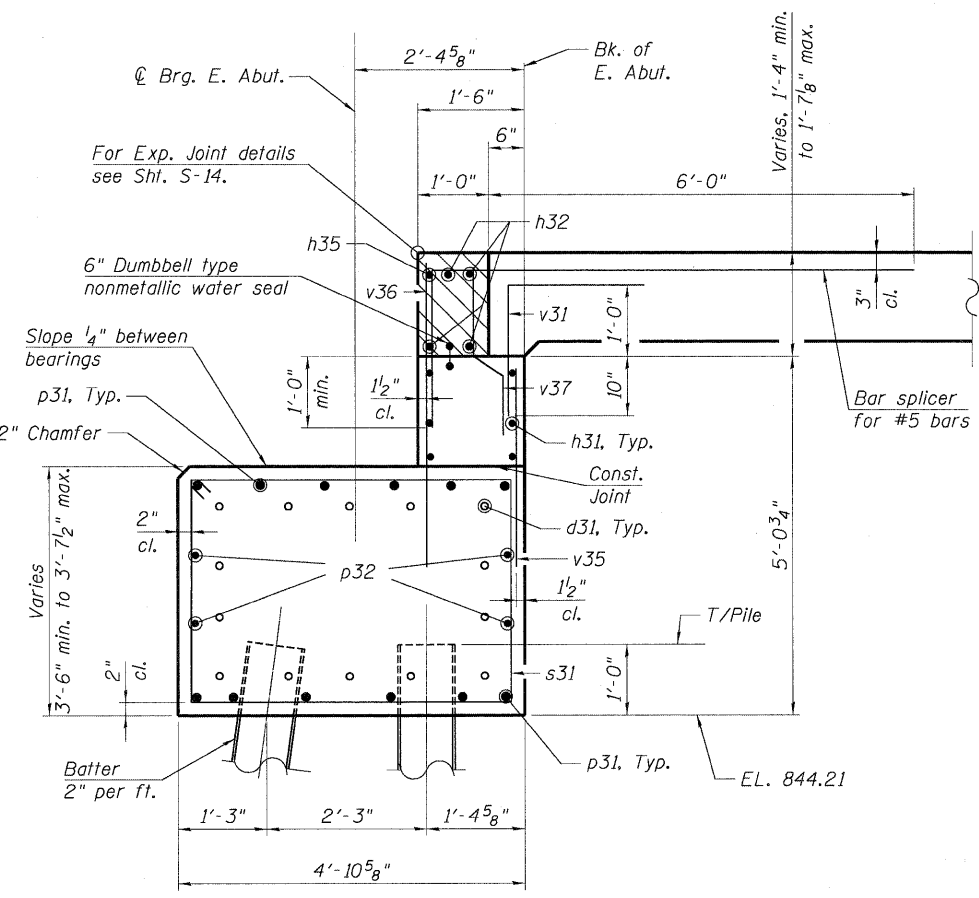




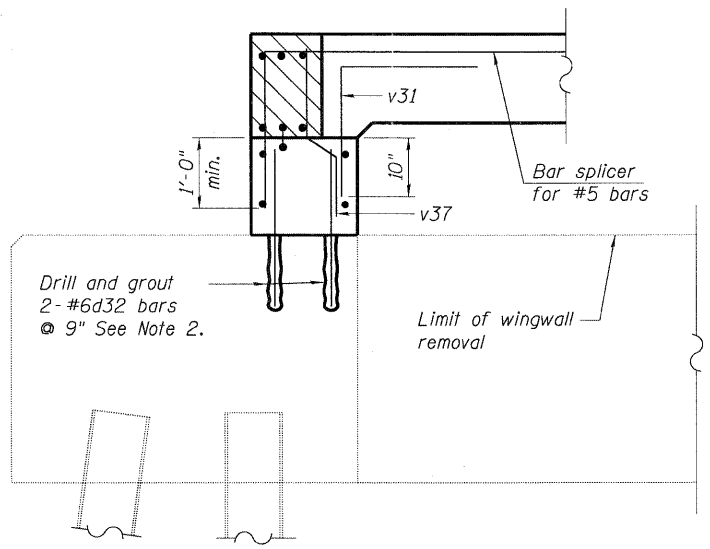
**WING WALL ELEVATION**  
(LOOKING NORTH)



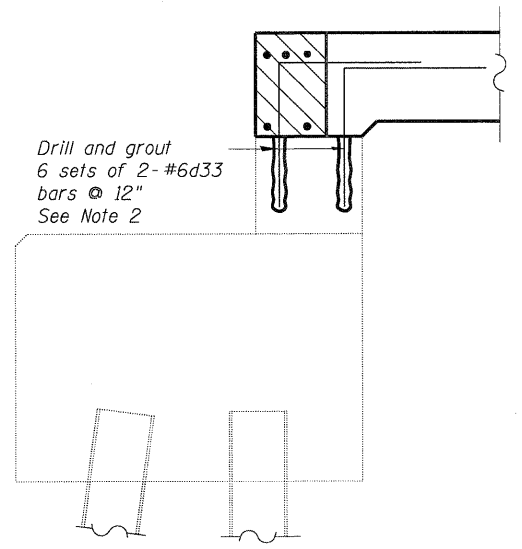
**SECTION B-B**



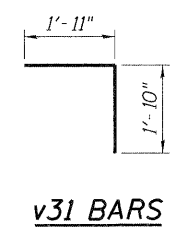
**SECTION A-A**



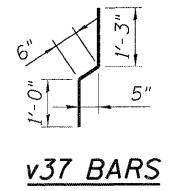
**SECTION C-C**



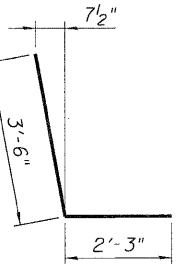
**SECTION D-D**



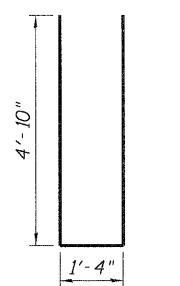
**v31 BARS**



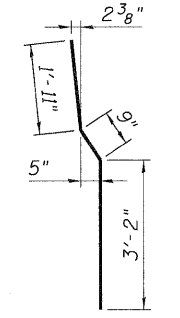
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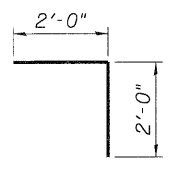
**h36 BARS**



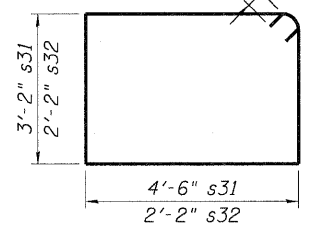
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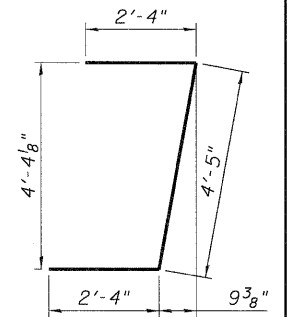
**v39 BARS**



**d33 BARS**



**s31 & s32 BARS**



**u31 BARS**

**BAR LIST**

Bar	No.	Size	Length	Shape
d31	22	#6	3'-1"	
d32	4	#6	2'-3"	
d33	12	#6	4'-0"	
h31	6	#5	13'-0"	
h32	4	#6	18'-11"	
h34	14	#4	9'-8"	
h35	1	#5	18'-11"	
h36	10	#4	5'-9"	
n31	11	#6	11'-0"	
p31	12	#7	13'-0"	
p32	4	#5	13'-0"	
p33	8	#7	10'-5"	
s31	24	#4	16'-1"	
s32	10	#4	9'-5"	
u31	4	#6	9'-1"	
v31	14	#5	3'-9"	
v35	23	#4	2'-8"	
v36	23	#4	4'-1"	
v37	14	#4	2'-9"	
v38	11	#6	5'-7"	
v39	11	#6	5'-10"	

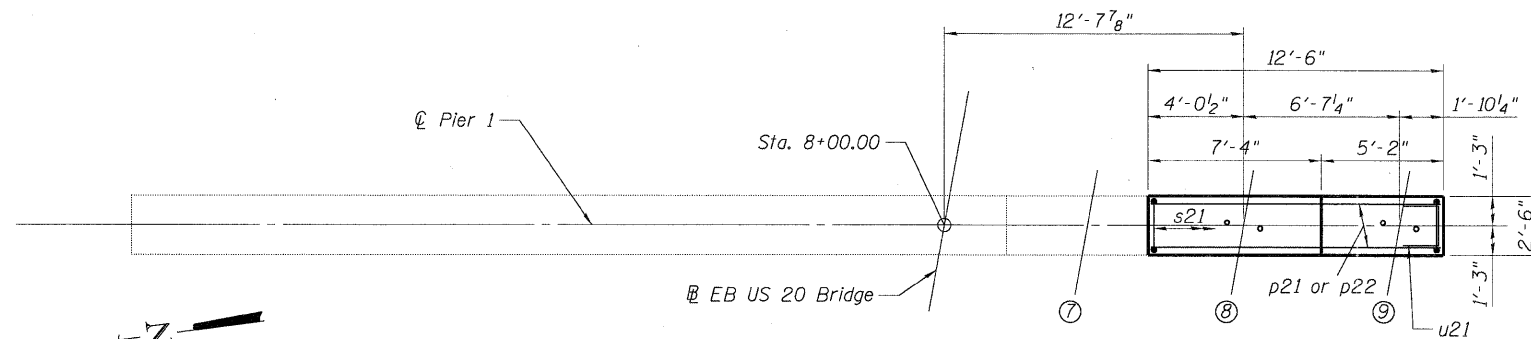
**BILL OF MATERIAL**

Item	Unit	Total
Structure Excavation	Cu. Yd.	35
Concrete Structures	Cu. Yd.	14.0
Concrete Superstructure	Cu. Yd.	2.2
Reinforcement Bars	Pound	2,000
Furnishing Steel Piles HP 10x42	Foot	132
Driving Piles	Foot	132
Pile Shoes	Each	4

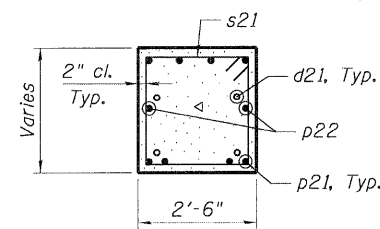
- Notes:**
1. Work this sheet with Sht. S-22.
  2. Drill and epoxy grout dowels into existing abutment wingwall as shown. See Note 10 on Sht. S-22.

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 DRAWN - PK  
 CHECKED - MDB  
 DATE - 05/18/11  
 REVISIONS -  
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 REVISIONS -  
 REVISIONS -  
 REVISIONS -  
 STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 US 20 OVER MCLEAN BOULEVARD  
 EAST ABUTMENT  
 DETAILS AND BAR LIST  
 SCALE: SHEET NO. S-23 OF S-29 STA. 98+32.18  
 F.A.P. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.  
 345 8R-HB-2-BY-1 KANE 434 264  
 SN 045-0003 CONTRACT NO. 60K90  
 FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT

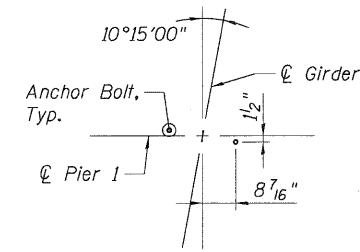




**CAP PLAN**

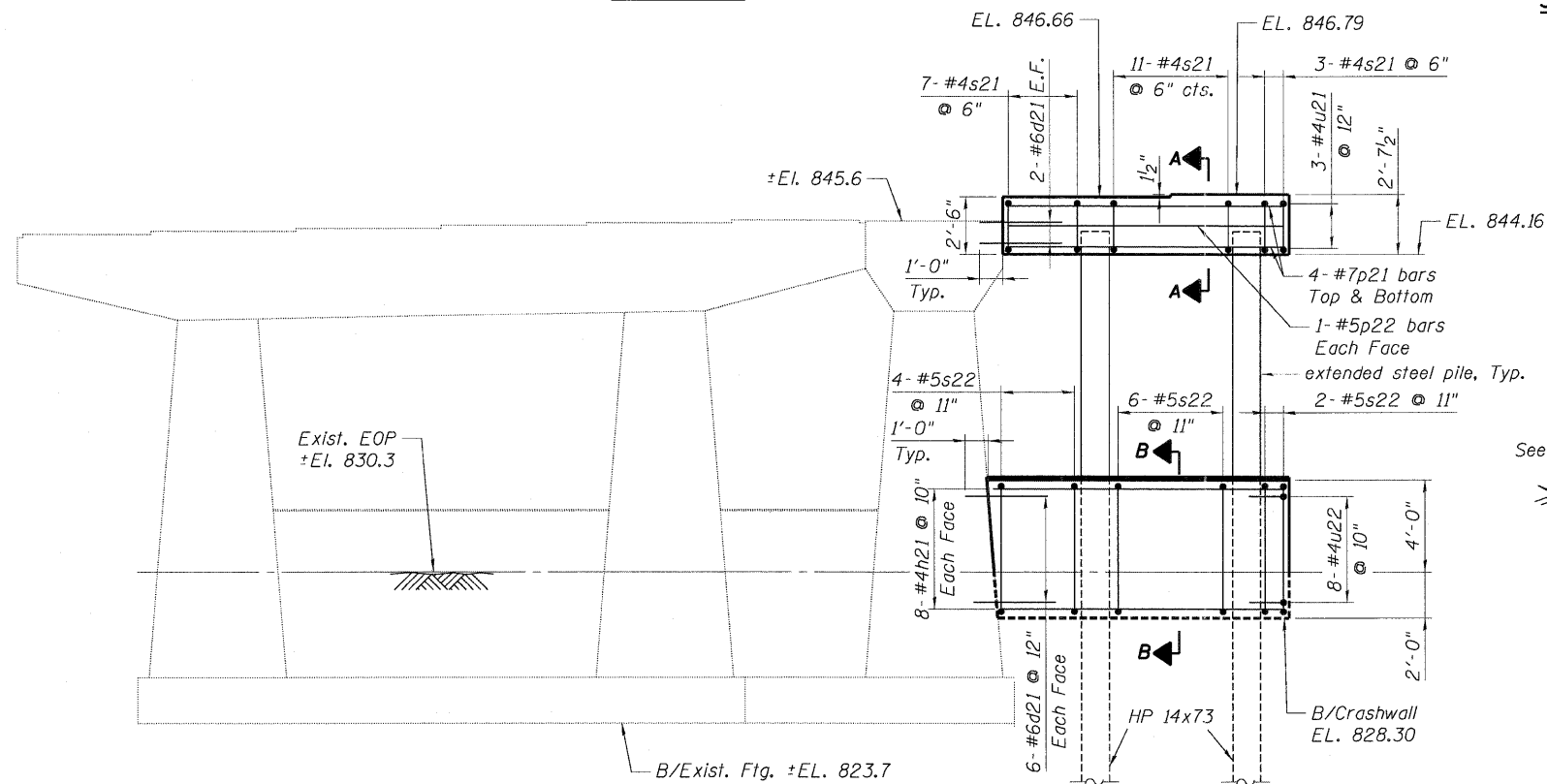


**SECTION A-A**

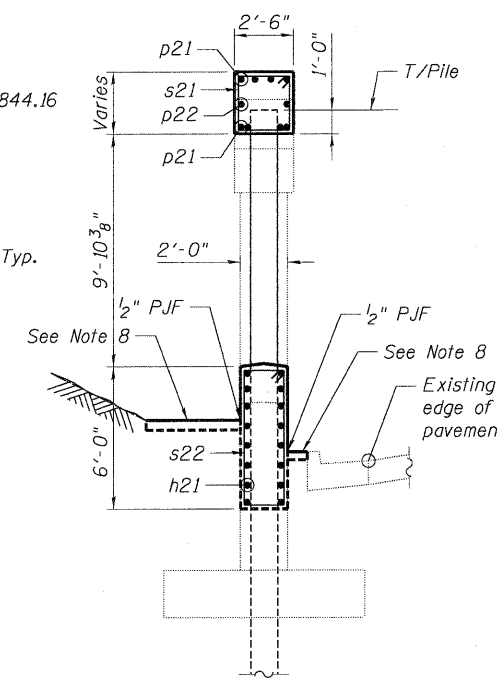


**ANCHOR BOLT LAYOUT**

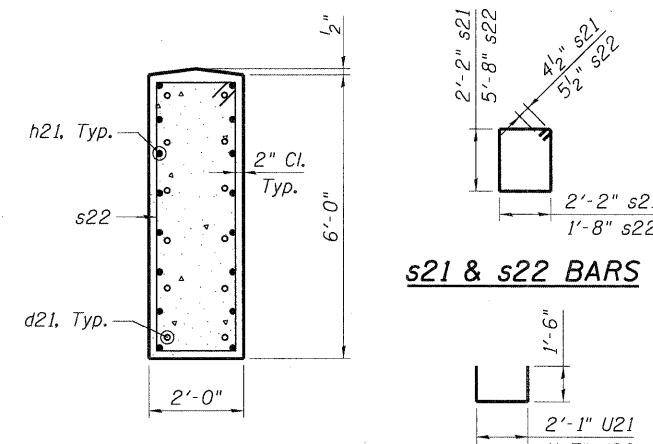
BAR LIST				
Bar	No.	Size	Length	Shape
d21	16	#6	3'-4"	—
h21	16	#4	12'-5"	—
p21	8	#7	12'-2"	—
p22	2	#5	12'-2"	—
s21	21	#4	9'-5"	□
s22	12	#5	15'-7"	□
u21	3	#4	5'-1"	┌
u22	8	#4	4'-7"	┌



**ELEVATION**  
(Looking East)



**END VIEW**  
(Looking North)



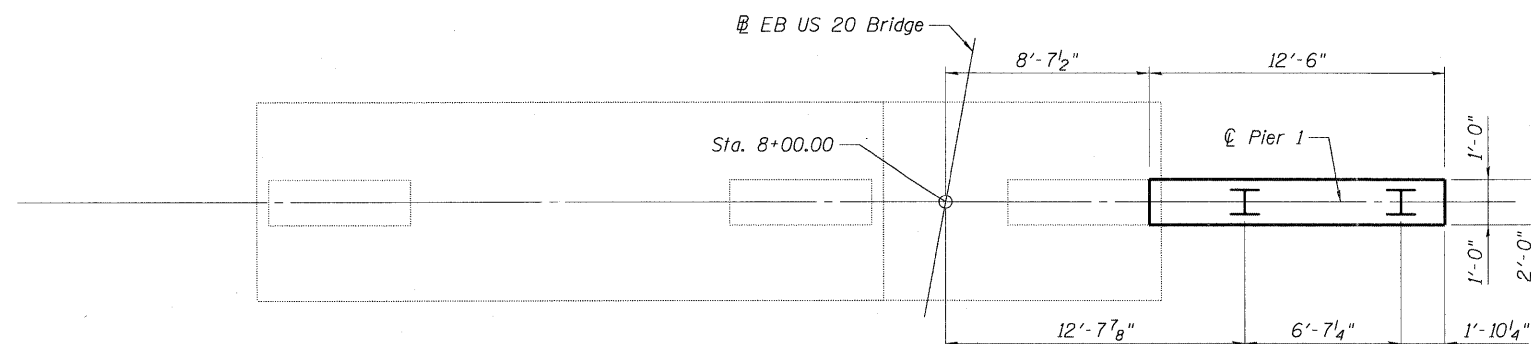
**SECTION B-B**

**BILL OF MATERIAL**

Item	Unit	Total
Structure Excavation	Cu. Yd.	7
Concrete Structures	Cu. Yd.	8.7
Reinforcement Bars	Pound	800
Furnishing Steel Piles HP 14x73	Foot	88
Driving Piles	Foot	88
Pile Shoes	Each	2

**s21 & s22 BARS**

**u21 & u22 BARS**



**FOOTING PLAN**

**PILE DATA**

Type: Steel HP 14x73 with pile shoes  
 Nominal Required Bearing: 432 kips  
 Allowable Resistance Available: 144 kips  
 Est. Length: 34' (see Note 6)  
 No. Production Piles: 2  
 No. Test Piles: 0

**Notes:**

- Space reinforcement in cap to miss anchor bolts.
- Pour steps monolithically with cap.
- For details of steel H-piles, see Sht. S-7.
- For anchor bolt and bearing details, see Sht. S-19.
- During pier construction, traffic on McLean Boulevard shall be maintained according to the staging traffic control plans. See MOT Plans, Sheets 96 & 95.
- No test piles will be performed; the quantity for Furnishing Steel Piles has been increased by 10' per pile to reflect the uncertainty in length required. The Contractor shall drive piles to the listed Nominal Required Bearing and cut piles at the T/Pile elevation shown. Furnishing Steel Piles shall be paid for at the actual furnished length (as shown in the bill of material).
- Drill and epoxy grout d21 bars in 12" min. drilled holes according to Section 584 of the Standard Specifications. Method and grout are subject to the approval of the Engineer. Locate dowels to provide a minimum of 4" clear cover. Cost of drilling and grouting bars shall be included with Reinforcement Bars.
- For sidewalk removal and replacement, see Roadway Plans, Sheets 40 & 41. Cost of preformed joint filler included in Concrete Structures.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 US 20 OVER MCLEAN BOULEVARD

PIER 1

FILE NAME =  
 USER NAME = #USER#  
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 DRAWN - PK  
 CHECKED - MDB  
 DATE - 05/18/11

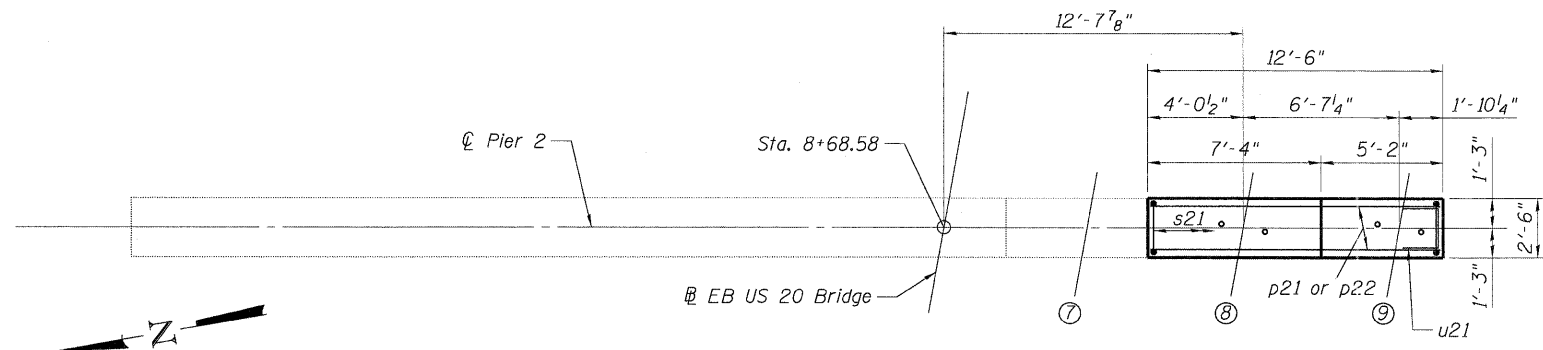
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 REVISED -  
 REVISED -

SCALE:  
 SHEET NO. S-24 OF S-29  
 STA. 98+32.18

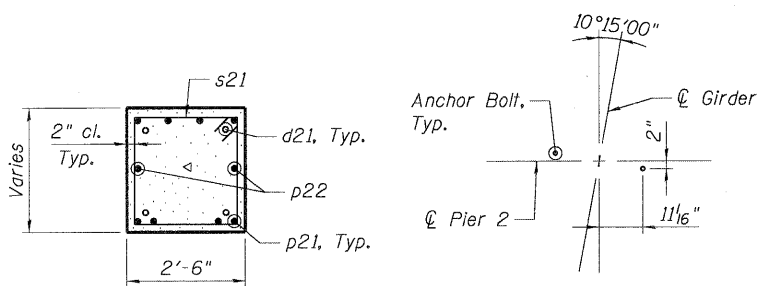
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 345 8R-HB-2-BY-1 KANE 434 265  
 SN 045-0003 CONTRACT NO. 60K90  
 FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT

TENG  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

\P450003-60K90-001-PIER.DGN, \A\ALL\SNUM-60K90-001-BORDER.DGN, \S-13-2011-1528211, \F5-90244\04\VAJL.TD-TRANS.07\2222\21379-001\STRUCT\CAD\60K90-001\PIER.SHT.DGN  
 HAYWARD



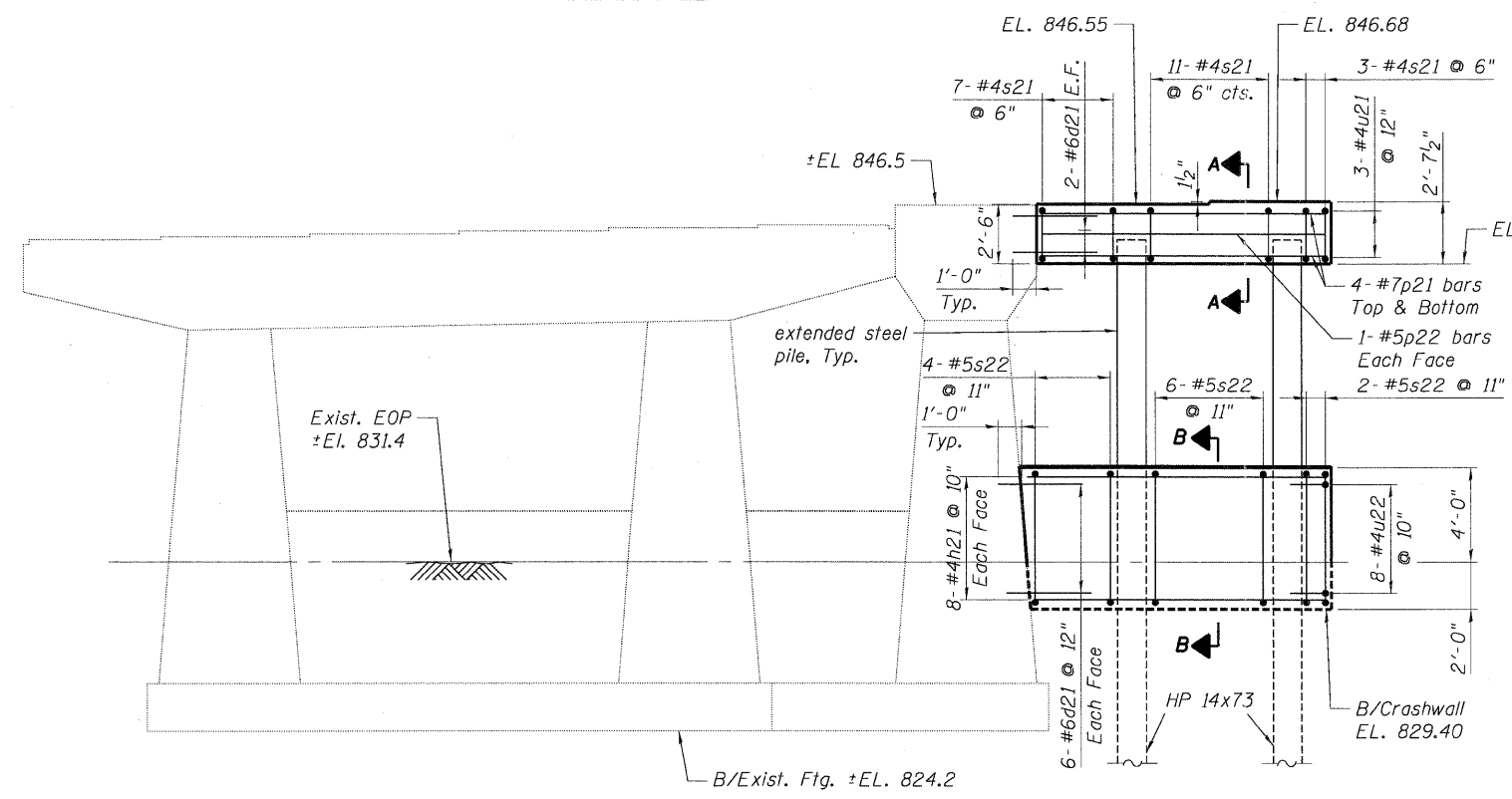
CAP PLAN



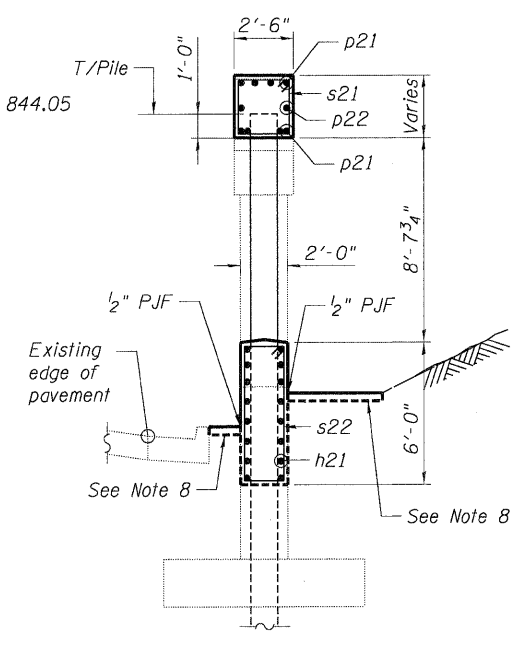
SECTION A-A

ANCHOR BOLT LAYOUT

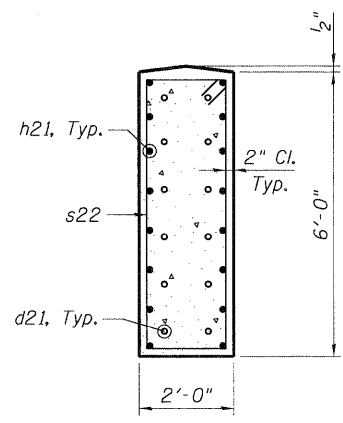
BAR LIST				
Bar	No.	Size	Length	Shape
d21	16	#6	3'-4"	—
h21	16	#4	12'-5"	—
p21	8	#7	12'-2"	—
p22	2	#5	12'-2"	—
s21	21	#4	9'-5"	□
s22	12	#5	15'-7"	□
u21	3	#4	5'-1"	U
u22	8	#4	4'-7"	U



ELEVATION (LOOKING EAST)



SOUTH FACE (LOOKING NORTH)



SECTION B-B

s21 & s22 BARS

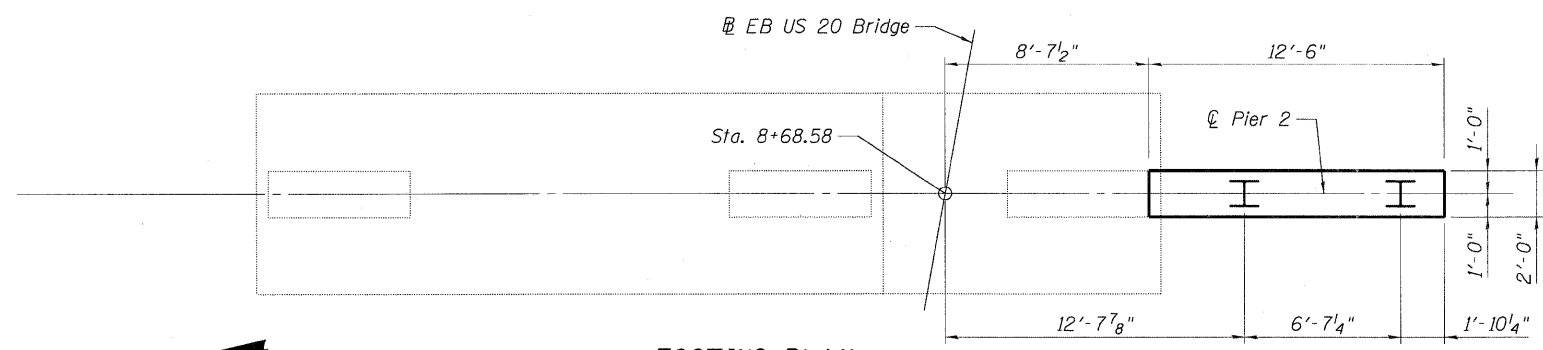
u21 & u22 BARS

Notes:

- Space reinforcement in cap to miss anchor bolts.
- Pour steps monolithically with cap.
- For details of steel H-piles, see Sht. S-7.
- For anchor bolt and bearing details, see Sht. S-18.
- During pier construction, traffic on McLean Boulevard shall be maintained according to the staging traffic control plans. See MOT Plans, Sheets 96 & 95.
- No test piles will be performed; the quantity for Furnishing Steel Piles has been increased by 10' per pile to reflect the uncertainty in length required. The Contractor shall drive piles to the listed Nominal Required Bearing and cut piles at the T/Pile elevation shown. Furnishing Steel Piles shall be paid for at the actual furnished length (as shown in the bill of material).
- Drill and epoxy grout d21 bars in 12" min. drilled holes according to Section 584 of the Standard Specifications. Method and grout are subject to the approval of the Engineer. Locate dowels to provide a minimum of 4" clear cover. Cost of drilling and grouting bars shall be included with Reinforcement Bars.
- For sidewalk removal and replacement, see Roadway Plans, Sheets 40 & 41. Cost of preformed joint filler included in Concrete Structures.

PILE DATA

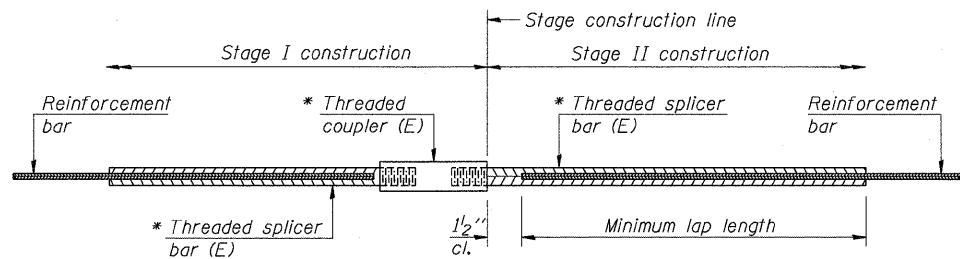
Type: Steel HP 14x73 with pile shoes  
 Nominal Required Bearing: 432 kips  
 Allowable Resistance Available: 144 kips  
 Est. Length: 28' (see Note 6)  
 No. Production Piles: 2  
 No. Test Piles: 0



FOOTING PLAN

04/15/2003 606/90 002-PIER.DGN \\S:\PROJECTS\CD\CD\606\90\04152003\5-SHEET\0450003-606/90 002-PIER.SHT.DGN  
 5-13-2011 15:28:14  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - PK	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b> US 20 OVER MCLEAN BOULEVARD	<b>PIER 2</b>	F.A.P. RTE. 345	SECTION 8R-HB-2-BY-1	COUNTY KANE	TOTAL SHEETS 434	SHEET NO. 266
PLOT SCALE = #SCALE#	CHECKED - MDB	REVISIED -	SN 045-0003			CONTRACT NO. 60K90				
PLOT DATE = #DATE#	DATE 05/18/11	REVISED -	SCALE: SHEET NO. S-25 OF S-29 STA. 98+32.18							
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT										



**STANDARD BAR SPLICER ASSEMBLY**

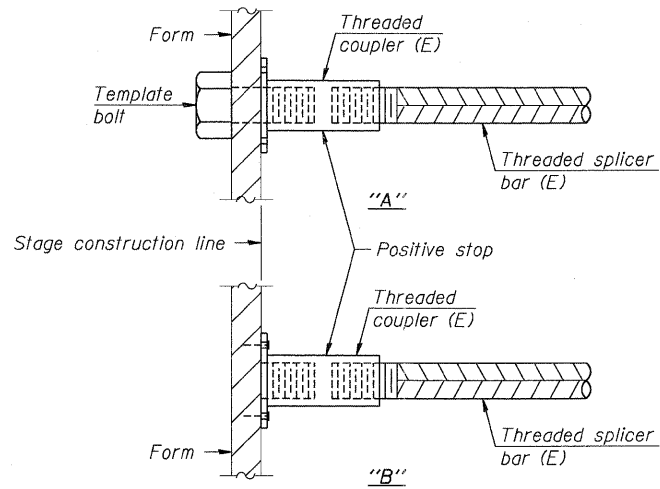
Bar size to be spliced	Minimum Lap Lengths				
	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

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

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

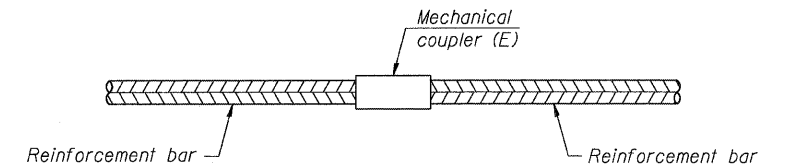
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



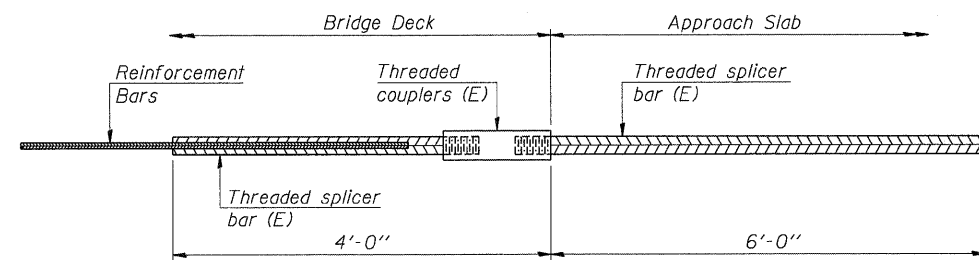
**INSTALLATION AND SETTING METHODS**

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



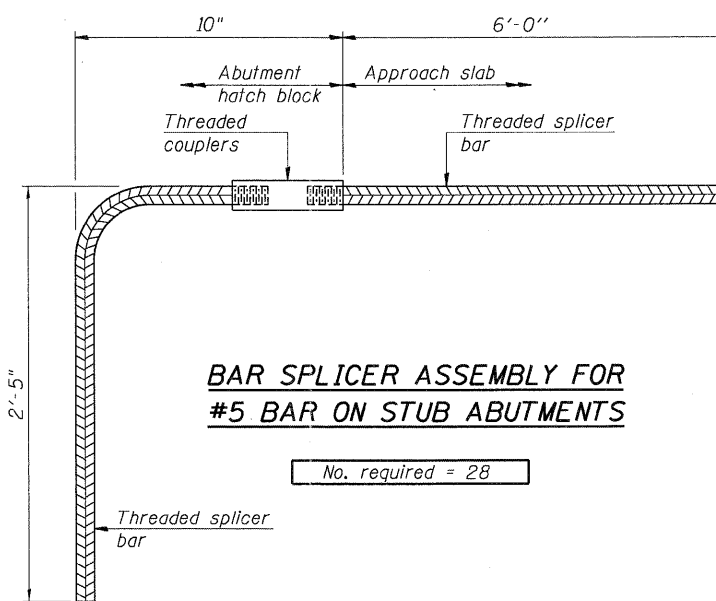
**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



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

No. required =



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required = 28

**NOTES**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy-coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See special provision for Mechanical Splicers.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

1452023-60K-90-001-BARSPLICER.DGN, \\L:\SUN-60K-90-001-BORDER.DGN  
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 \P5-0044\VAULT.D - TRANS\_07\2282\_21379-001\STRUCT\CAD\60K-90\0450003\SHEET\0450003-60K-90-001-BARSPLICER\_SHT.DGN  
 HAYWARD

BSD-1 7-1-10 (Modified)

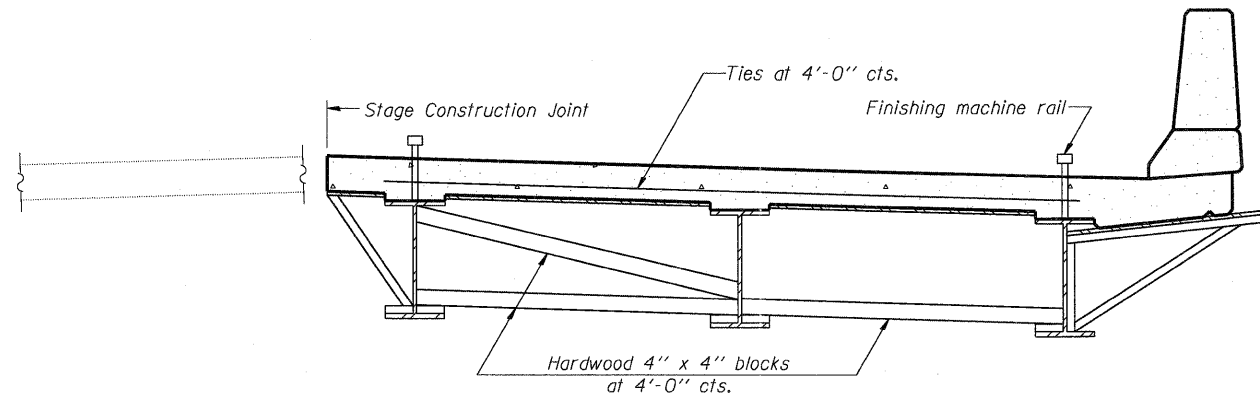
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#FILE#	PLOT SCALE = #SCALE#	DRAWN - PK	REVISED -		SCALE:	SHEET NO. S-26 OF S-29	STA. 98+32.18	345	BR-HB-2-BY-1	KANE	434	267	
<b>TENG</b> TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS	PLOT DATE = #DATE#	CHECKED - MDB	REVISED -						SN 045-0003		CONTRACT NO. 60K90		
		DATE - 05/18/11	REVISED -						FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.

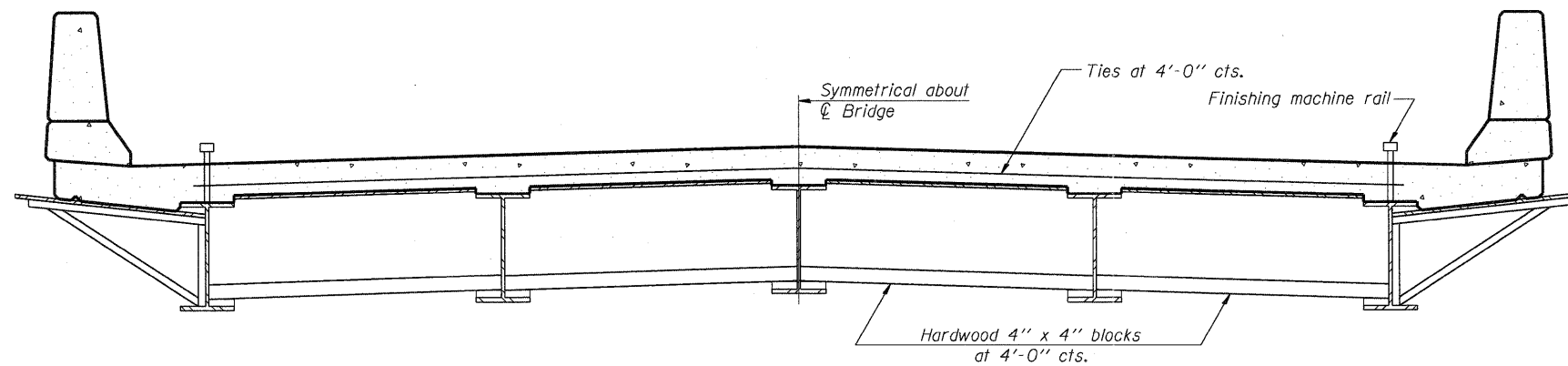
The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



**FORM BRACES FOR  
STAGE CONSTRUCTION**



**FORM BRACES FOR  
STANDARD CONSTRUCTION**

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SB-1

7-1-10

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#FILE#		DRAWN - PK	REVISED -
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PLOT DATE = #DATE#		DATE - 05/18/11	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
US 20 OVER MCLEAN BOULEVARD

CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURES  
WITH W27 BEAMS AND SMALLER

SCALE: SHEET NO. S-27 OF S-29

STA. 98+32.18

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	BR-HB-2-BY-1	KANE	434	268
SN 045-0003			CONTRACT NO. 60K90	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

**TENG** TENG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

Geo **SPRINGS** Inc.  
Geotechnical, Environmental & Civil Engineering  
805 Amphlett Road  
Naperville, Illinois 60563  
(630) 206-8800

### SOIL BORING LOG

PAGE 1 of 2  
DATE 3/31/2010  
LOGGED BY MR  
GSI JOB No. 09118

ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, Illinois Contract No. 60H45  
SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township  
COUNTY Kane DRILLING METHOD Hollow Stem Auger Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 045-0077  
Station: 98+32.18  
BORING NO. SB-04  
Station: 97+12 US 20  
Offset: 49' Right  
Ground Surface Elev. 850.2

D E P T H H	B L O W S	U N I T S	M O I S T Q U A N T	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After Hrs.	D E P T H H	B L O W S	U N I T S	M O I S T Q U A N T	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After Hrs.
8.0" ASPHALT 849.4																			
CLAY-stiff to hard (A-6) Apparent Fill 829.7																			
SAND, GRAVEL & STONE-medium (Fill) 847.2																			
SILTY CLAY-dark gray to black-medium stiff (A-6) Fill, Wet 844.7																			
CLAY LOAM with Gravel & Stone-brown-loose (Fill) 842.2																			
CLAY-brown & gray-stiff to hard (A-6) Apparent Fill 103, 107, 105, 108																			

Geo **SPRINGS** Inc.  
Geotechnical, Environmental & Civil Engineering  
805 Amphlett Road  
Naperville, Illinois 60563  
(630) 206-8800

### SOIL BORING LOG

PAGE 2 of 2  
DATE 3/31/2010  
LOGGED BY MR  
GSI JOB No. 09118

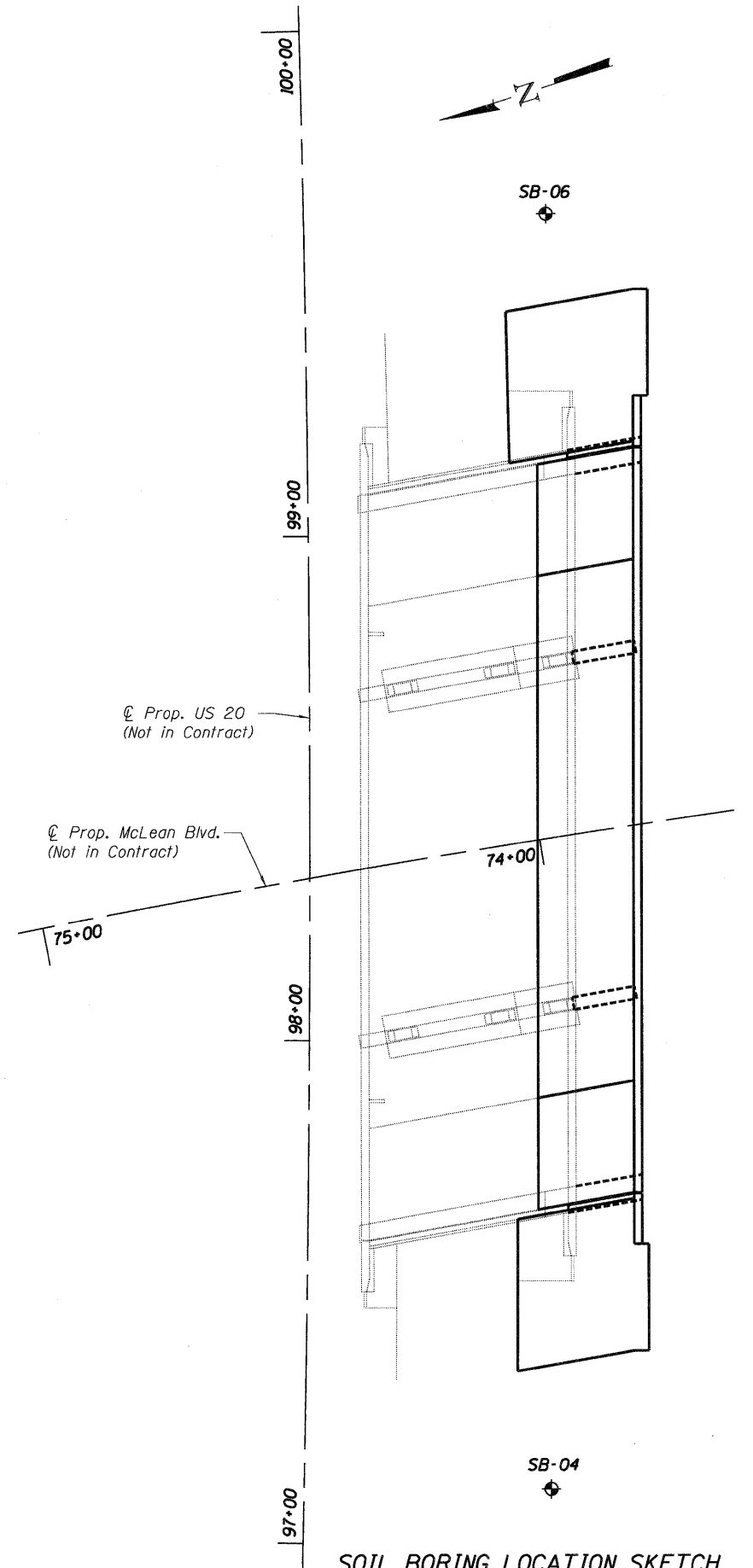
ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, Illinois Contract No. 60H45  
SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township  
COUNTY Kane DRILLING METHOD Hollow Stem Auger Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 045-0077  
Station: 98+32.18  
BORING NO. SB-04  
Station: 97+12 US 20  
Offset: 49' Right  
Ground Surface Elev. 850.2

D E P T H H	B L O W S	U N I T S	M O I S T Q U A N T	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After Hrs.	D E P T H H	B L O W S	U N I T S	M O I S T Q U A N T	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After Hrs.
SAND & GRAVEL-brown-medium dense to very dense (A-1) 798.2																			
SILT-gray-medium dense (A-4) 793.2																			
SAND & GRAVEL-gray-dense to very dense (A-1) 778.2, 775.2																			
GRAVEL-gray-medium dense (A-1) 775.2																			
End Of Boring @ -75.0' Hollow Stem Augers To -10.0' Rotary Drilling To Completion CME Automatic Hammer																			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (S-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NB-No Recovery

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (S-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NB-No Recovery



\\0450003-60K49-001-SOIL BORING.DGN, \\0450003-60K49-001-SOIL BORING.DGN, \\ALL\SNUM-60K49-001-BORDER.DGN, \\0450003-60K49-001-SOIL BORING.DGN, \\ALL\SNUM-60K49-001-BORDER.DGN  
 5-13-2011 15:29:25 \\AYMARZ \S-0244\AHVAJLI.TD \TRANS.07\2202\21379-001\STRUCT.CAD\50K49\0450003\SHEET\0450003-60K49-001-SOIL BORING.SHT.DGN

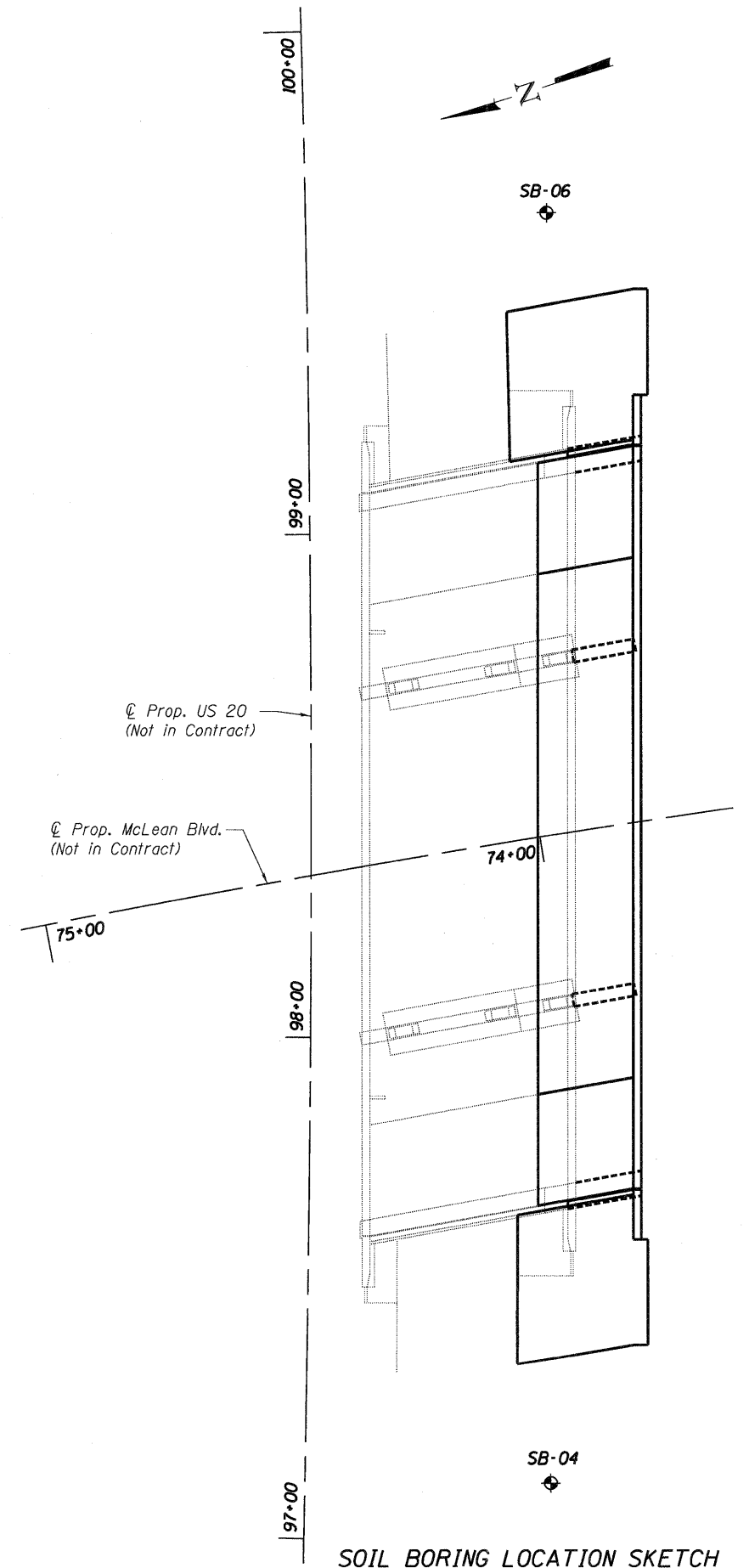


SOIL BORING LOG		PAGE 1 of 2																																					
Geo SPWicas Inc. Geotechnical, Environmental & Civil Engineering 800 Ashland Street Naperville, Illinois 60563 (630) 255-2500		DATE 4/2/2010 LOGGED BY RJ GSI JOB No. 09118																																					
ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, Illinois Contract No. 60H45		SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township																																					
COUNTY Kane DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic																																							
STRUCT. NO. 045-0077 Station: 98+32.18 BORING NO. SB-06 Station: 99+63 US 20 Offset: 48' Right Ground Surface Elev. 850.2		<table border="1"> <tr> <td>Surface Water Elev.</td> <td>n/a</td> <td>D</td> <td>B</td> <td>U</td> <td>M</td> </tr> <tr> <td>Stream Bed Elev.</td> <td>n/a</td> <td>E</td> <td>L</td> <td>C</td> <td>O</td> </tr> <tr> <td>Groundwater Elevation:</td> <td></td> <td>P</td> <td>O</td> <td>S</td> <td>I</td> </tr> <tr> <td>First Encounter</td> <td>n/a</td> <td>T</td> <td>W</td> <td>S</td> <td></td> </tr> <tr> <td>Upon Completion</td> <td>n/a</td> <td>H</td> <td>S</td> <td>Qu</td> <td>T</td> </tr> <tr> <td>After Hrs.</td> <td></td> <td>(ft)</td> <td>(6")</td> <td>(tsf)</td> <td>(%)</td> </tr> </table>		Surface Water Elev.	n/a	D	B	U	M	Stream Bed Elev.	n/a	E	L	C	O	Groundwater Elevation:		P	O	S	I	First Encounter	n/a	T	W	S		Upon Completion	n/a	H	S	Qu	T	After Hrs.		(ft)	(6")	(tsf)	(%)
Surface Water Elev.	n/a	D	B	U	M																																		
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CRUSHED ASPHALT & STONE-medium dense 847.2																																							
CLAY LOAM-dark brown & black-very stiff (A-6) Fill 844.7																																							
CLAY LOAM with Stone-dark brown-medium dense to dense (Fill) 837.2																																							
CLAY LOAM-brown & gray-very stiff to hard (A-6) Fill 813.2																																							
GRAVEL-brown-dense to very dense (A-1) 107																																							

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

SOIL BORING LOG		PAGE 2 of 2																																					
Geo SPWicas Inc. Geotechnical, Environmental & Civil Engineering 800 Ashland Street Naperville, Illinois 60563 (630) 255-2500		DATE 4/2/2010 LOGGED BY RJ GSI JOB No. 09118																																					
ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, Illinois Contract No. 60H45		SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township																																					
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Surface Water Elev.	n/a	D	B	U	M																																		
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Groundwater Elevation:		P	O	S	I																																		
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End Of Boring @ -75.0' Hollow Stem Augers To -10.0' Rotary Drilling To Completion CME Automatic Hammer																																							

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 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
 NR-No Recovery



SOIL BORING LOCATION SKETCH

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 US 20 OVER MCLEAN BOULEVARD

SOIL BORING LOGS  
 2 OF 2

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	8R-HB-2-BY-1	KANE	434	270
SN 045-0003		CONTRACT NO. 60K90		

FILE NAME =	USER NAME = \$USER\$	DESIGNED -	REVISED -
\$FILEL\$		DRAWN - PK	REVISED -
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PLOT DATE = \$DATE\$		DATE - 05/18/11	REVISED -

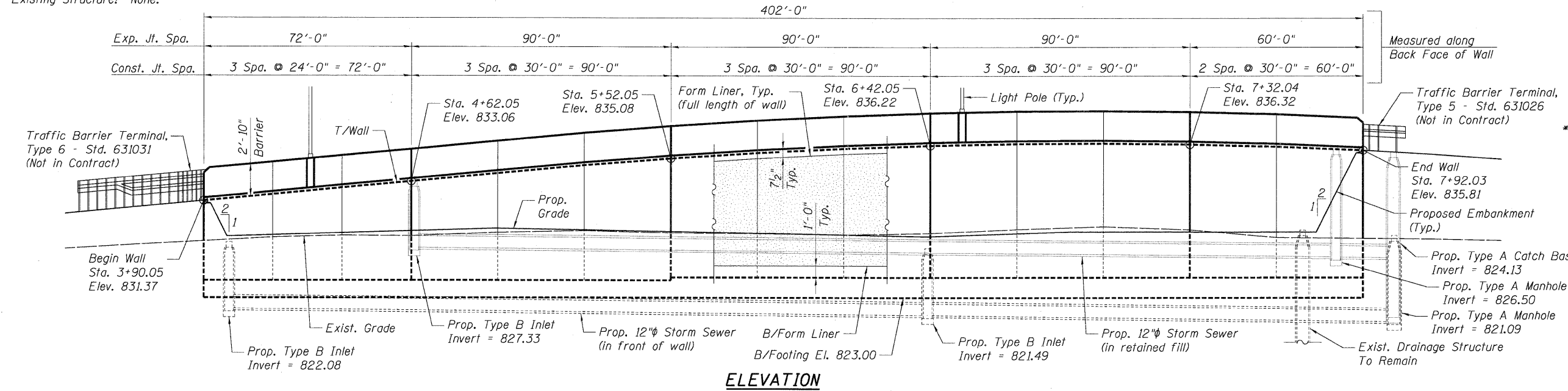
TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

SCALE: SHEET NO. S-29 OF S-29 STA. 98+32.18

FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT

Benchmark: Top of hitch pin near N. edge of shoulder of W.B. US-20 and near W.B. entrance ramp from McLean Blvd. located 0.2' N. of the N. edge of shoulder and 4.2' S. of the center of 4x4 street sign post (±96.5' E. of the ramp gore). Elevation = 842.24 (NAVD 88)

Existing Structure: None.



**DESIGN SPECIFICATIONS**

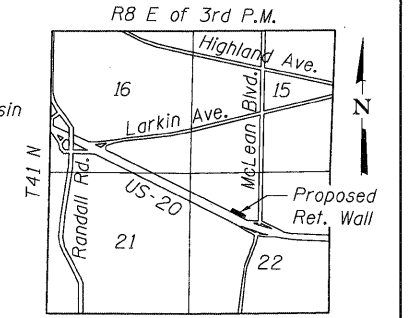
2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

**DESIGN STRESSES**

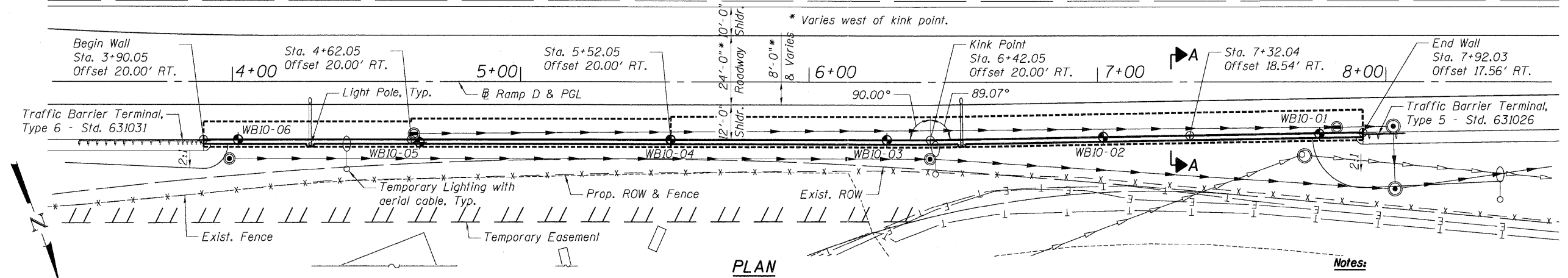
**FIELD UNITS**

f<sub>c</sub> = 3.5 ksi  
 f<sub>y</sub> = 60 ksi (reinforcement)  
 Maximum Allowable Soil Bearing Pressure = 4 ksf \*

\* Maximum Applied and Equivalent Uniform Soil Bearing Pressures are provided on Sht. RW10-7.



**LOCATION SKETCH**



**LEGEND:**

- ⊕ Soil Boring Location
- Existing Storm Sewer
- Proposed Storm Sewer
- Existing Drainage Structure
- Proposed Drainage Structure
- Proposed Temporary Lighting
- Proposed Permanent Lighting
- Existing Underground Telephone Line
- Existing Underground Electric Line

**GENERAL NOTES:**

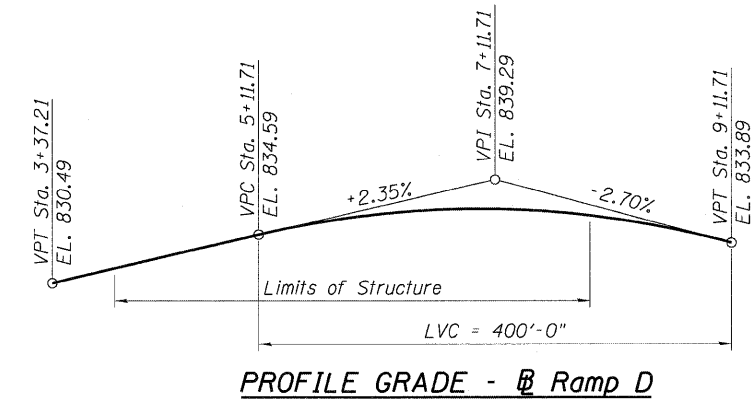
1. Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60. See Special Provisions.
  2. Reinforcement bars designated (E) shall be epoxy coated.
  3. Slipforming of the barrier is NOT allowed.
- Notes:**
1. Offsets are measured from Ramp D to the back face of wall.
  2. Ramp D construction will be staged; embankment placed in Contract 60K90, subbase and pavement placed in Contract 60H45.
  3. Tie pipe underdrain into Proposed Type B Inlet in front of wall near east end and Proposed Type A Catch Basin in retained fill at west end. See Drainage Plans for details of inlets, manholes, and storm sewers.

**TOTAL BILL OF MATERIAL**

Item	Unit	Total
Structure Excavation	Cu Yd	946
Concrete Structures	Cu Yd	539.2
Form Liner Textured Surface	Sq Ft	3,529
Protective Coat	Sq Yd	177
Reinforcement Bars, Epoxy Coated	Pound	73,310
Geocomposite Wall Drain	Sq Yd	360
Porous Granular Embankment, Special	Cu Yd	442
Pipe Underdrains for Structures 4"	Foot	425

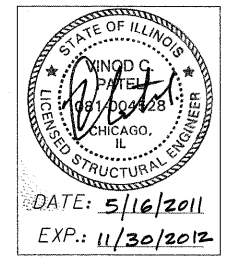
**INDEX OF SHEETS**

- RW10-1 General Plan and Elevation
- RW10-2 Wall Plan and Elevation, 1 of 5
- RW10-3 Wall Plan and Elevation, 2 of 5
- RW10-4 Wall Plan and Elevation, 3 of 5
- RW10-5 Wall Plan and Elevation, 4 of 5
- RW10-6 Wall Plan and Elevation, 5 of 5
- RW10-7 Details and Bar List
- RW10-8 Form Liner Details
- RW10-9 Soil Boring Logs, 1 of 2
- RW10-10 Soil Boring Logs, 2 of 2



**APPROVED**  
 FOR STRUCTURAL ADEQUACY ONLY

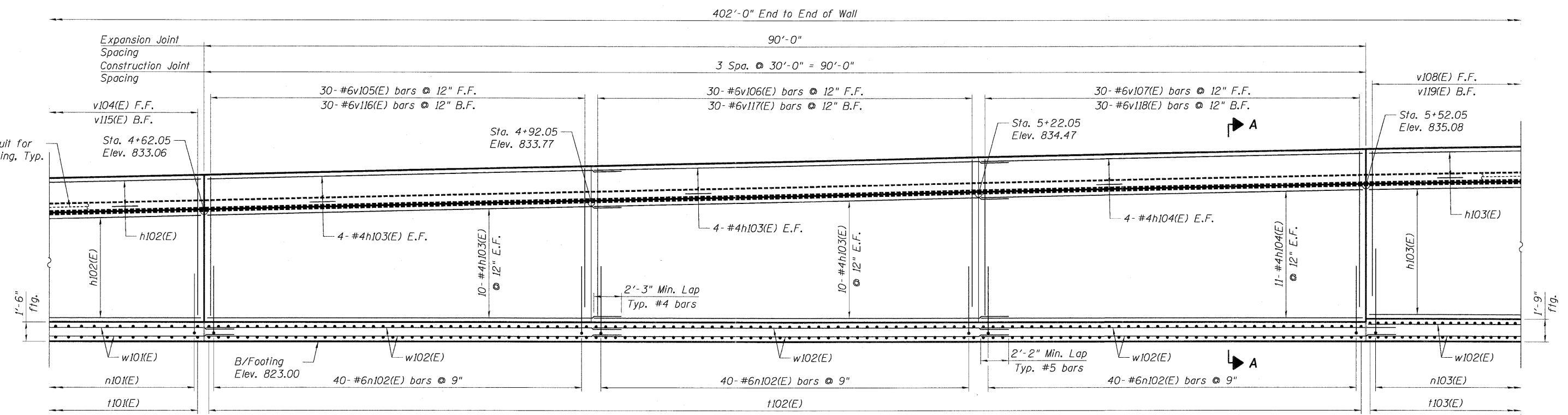
*D. Carl Papp* (100)  
 ENGINEER OF BRIDGES AND STRUCTURES



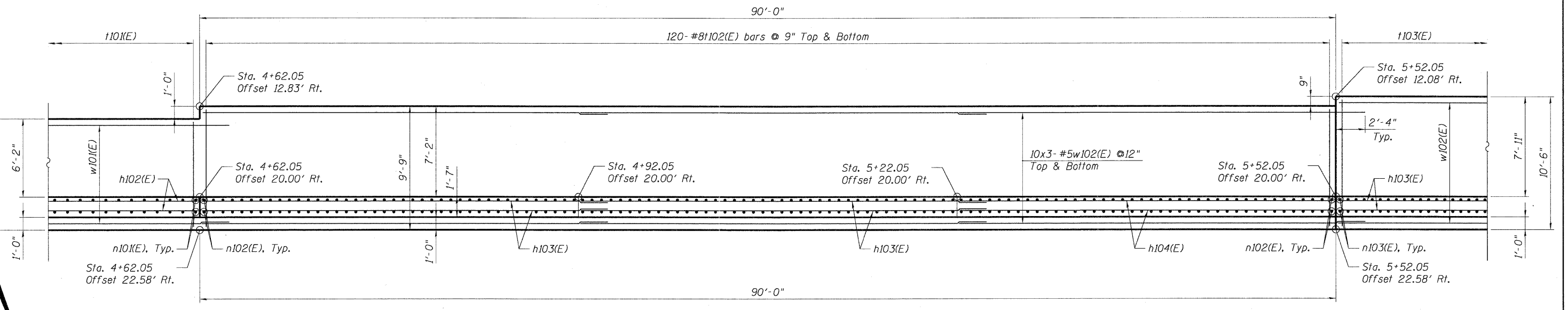




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 5-13-2011 10:52:43  
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 HAYWARD  
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 HAYWARD  
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 HAYWARD



**ELEVATION**



**PLAN**

**Note:**  
See Sht. RW10-2 for notes.

FILE NAME =	USER NAME = #USER#
#FILE#	

DESIGNED -	MDB	REVISED -	
DRAWN -	MDB	REVISED -	
CHECKED -	PK	REVISED -	
DATE	05/18/11	REVISED -	

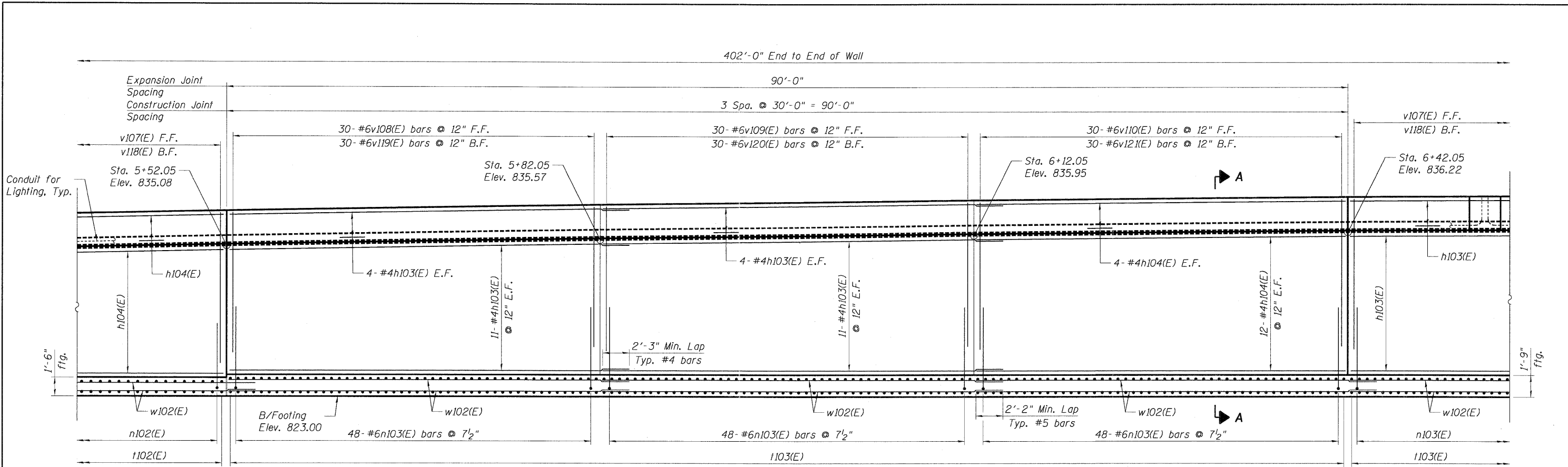
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PLOT DATE = #DATE#	

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
 US 20 OVER MCLEAN BOULEVARD

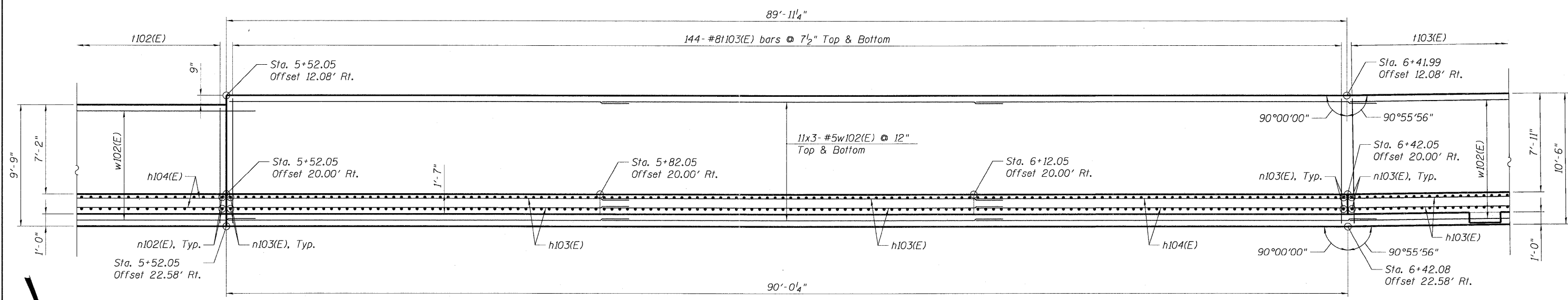
<b>WALL PLAN AND ELEVATION</b>	
<b>2 OF 5</b>	
SCALE:	SHEET NO. RW10-3 OF RW10-10 STA. 3+90.05 TO STA. 7+92.03

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	BR-HB-2-BY-1	KANE	434	273
SN 045-W010			CONTRACT NO. 60K90	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				





ELEVATION

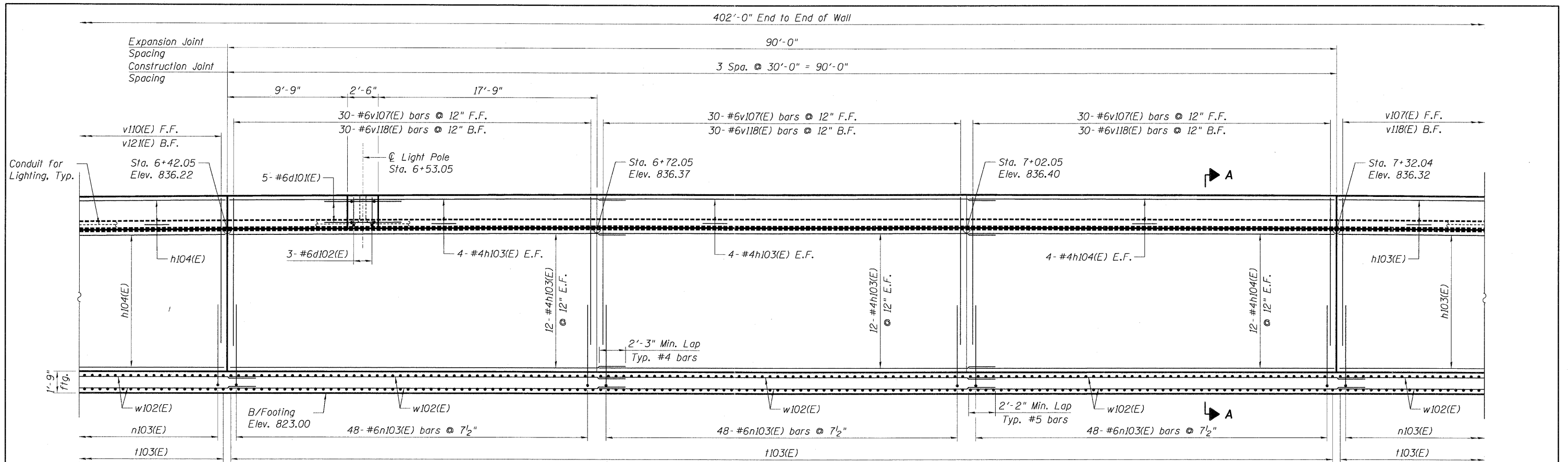


PLAN

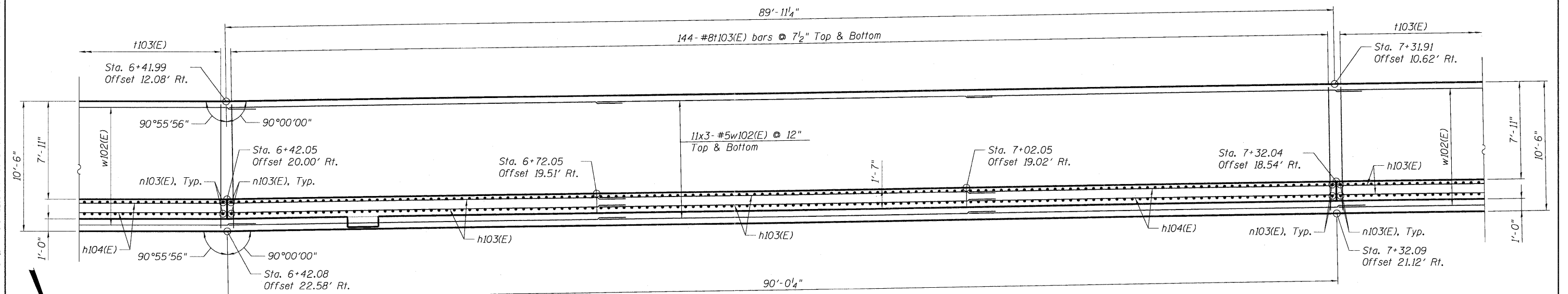
**Note:**  
See Sht. RW10-2 for notes.

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 USER = HAYWARD  
 TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS  
 5-13-2011 15:28:45

FILE NAME =	USER NAME = #USER#	DESIGNED - MDB	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b> US 20 OVER MCLEAN BOULEVARD	<b>WALL PLAN AND ELEVATION</b> <b>3 OF 5</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#	PLOT SCALE = #SCALE#	DRAWN - MDB	REVISED -					345	BR-HB-2-BY-1	KANE	434	274
PLOT DATE = #DATE#	DATE - 05/18/11	CHECKED - PK	REVISED -					SN 045-W010		CONTRACT NO. 60K90		
								SCALE: SHEET NO. RW10-4 OF RW10-10 STA. 3+90.05 TO STA. 7+92.03 FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				



**ELEVATION**



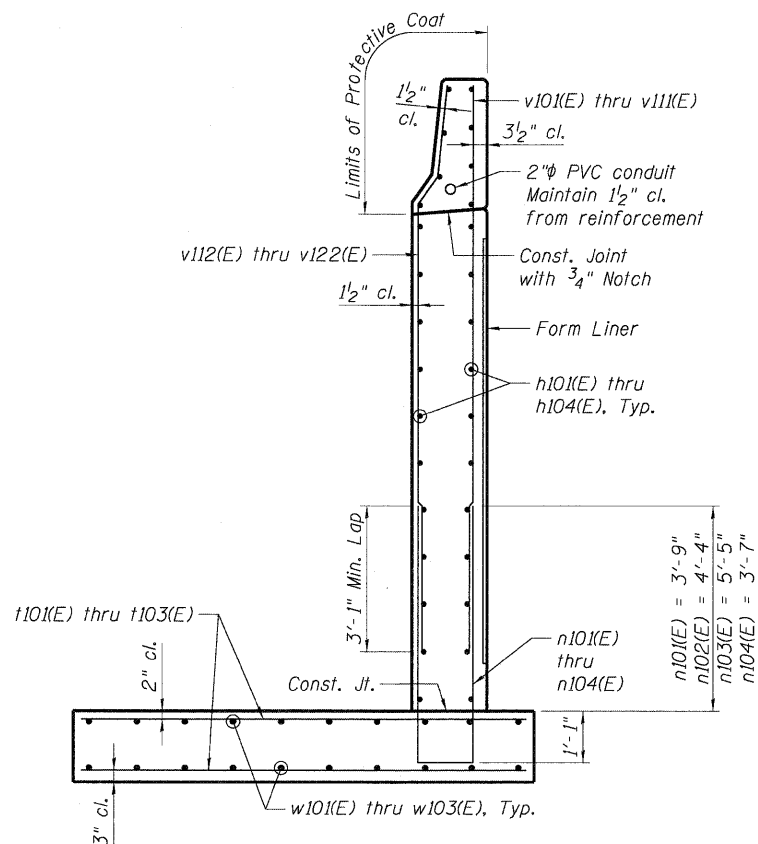
**PLAN**

**Note:**  
See Sht. RW10-2 for notes.

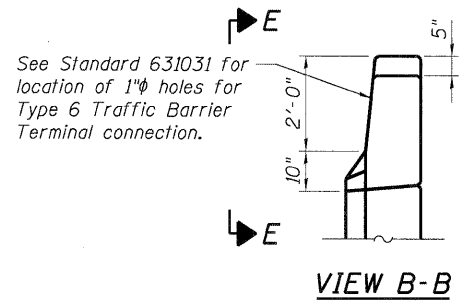
045W010-60K90-005-RET WALL.DGN, \\ALLSUN-60K90-001-BORDER.DGN  
 5-13-2011, 15:28:48  
 HAYMARZ \NF5-004\AMVAUL\_ID-TRANS.07\2222\3179-001\STRUCT\COA\60K90-045W010-SHEET\045W010-60K90-005-RET WALL-SHT.DGN

FILE NAME = \$FILEL\$	USER NAME = #USER\$	DESIGNED - MDB	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b> US 20 OVER MCLEAN BOULEVARD	<b>WALL PLAN AND ELEVATION</b> <b>4 OF 5</b>			F.A.P. RTE. 345	SECTION 8R-HB-2-BY-1	COUNTY KANE	TOTAL SHEETS 434	SHEET NO. 275
TENG	TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS	DRAWN - MDB	REVISED -		SCALE:	SHEET NO. RW10-5	OF RW10-10	STA. 3+90.05	TO STA. 7+92.03	SN 045-W010 CONTRACT NO. 60K90		
		CHECKED - PK	REVISED -							FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		
		DATE - 05/18/11	REVISED -									

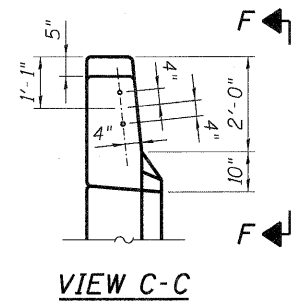




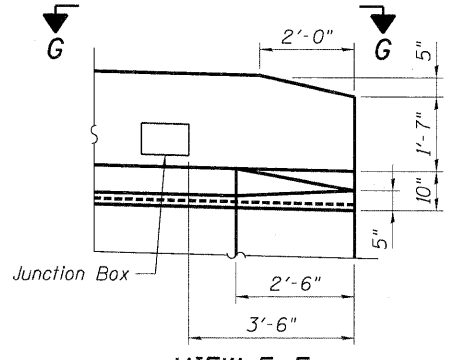
**SECTION A-A**  
(Showing Reinforcement)



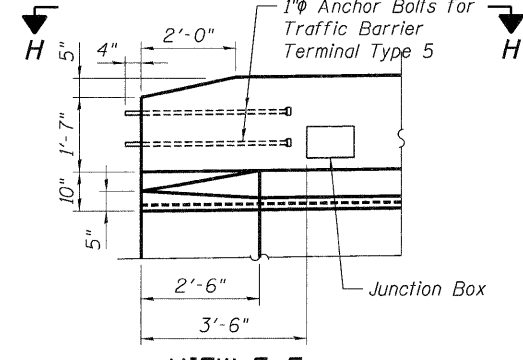
**VIEW B-B**



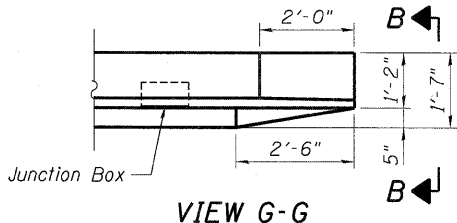
**VIEW C-C**



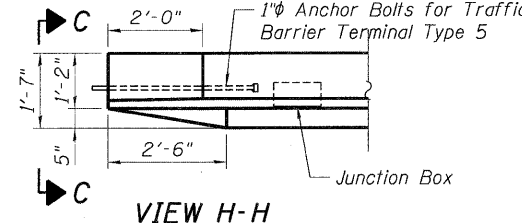
**VIEW E-E**



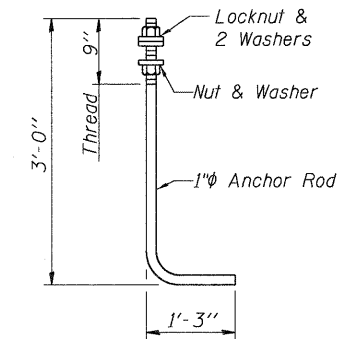
**VIEW F-F**



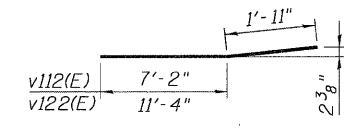
**VIEW G-G**



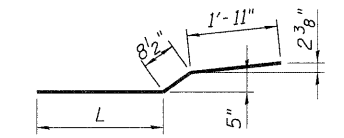
**VIEW H-H**



**ANCHOR ROD**  
(For Light Pole connection)  
ASTM F 1554 Grade 105

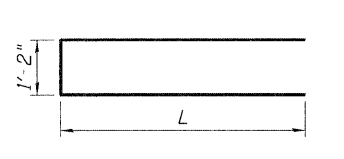


**v112(E) & v122(E) BARS**



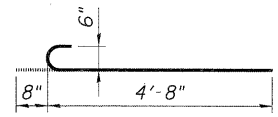
**v113(E) thru v121(E) BARS**

Bar	L
v113(E)	7'-0 1/2"
v114(E)	7'-7 1/2"
v115(E)	8'-2 1/2"
v116(E)	8'-3 1/2"
v117(E)	8'-11 1/2"
v118(E)	9'-7 1/2"
v119(E)	8'-9 1/2"
v120(E)	9'-1 1/2"
v121(E)	9'-4 1/2"

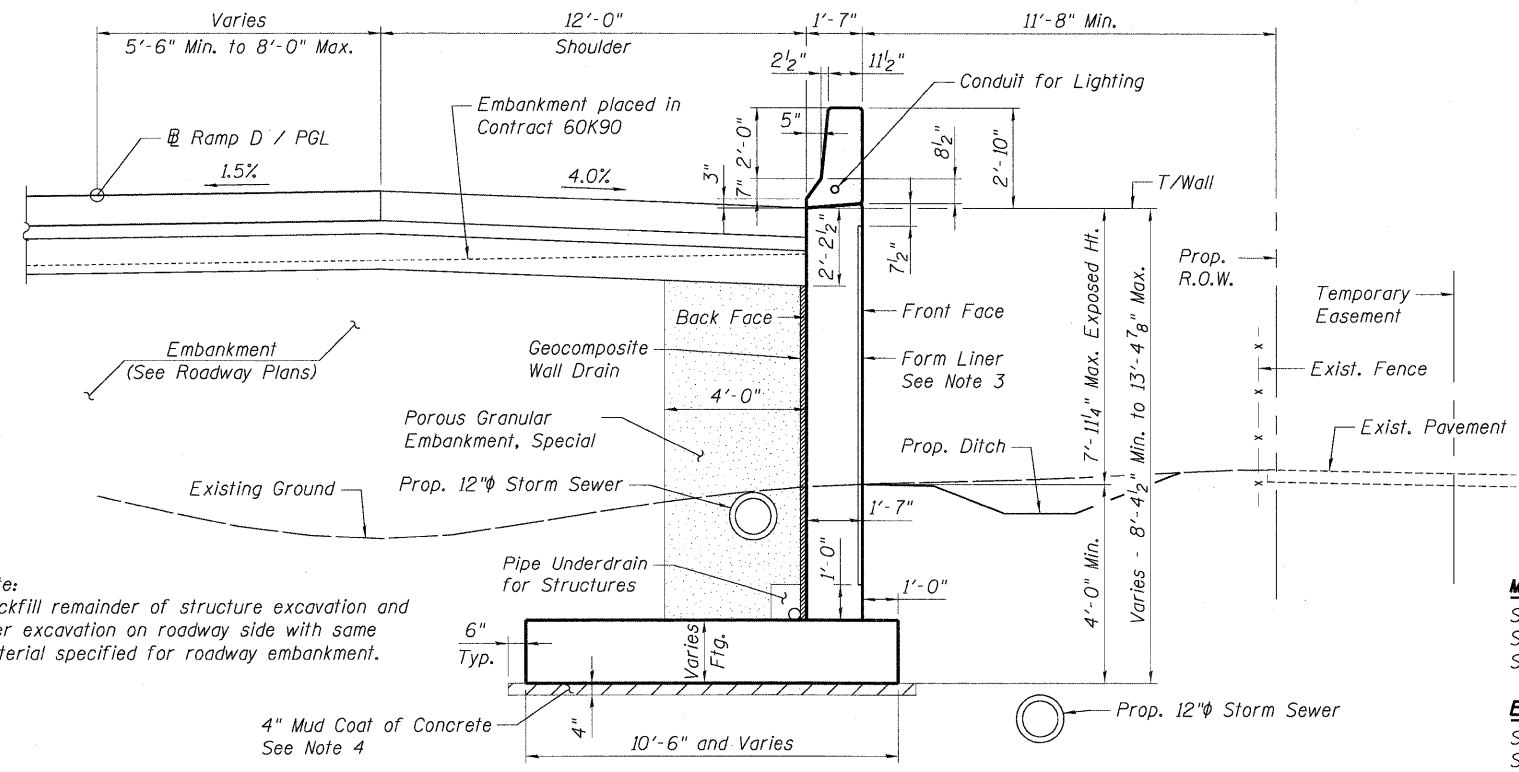


**n101(E) thru n103(E) BARS**

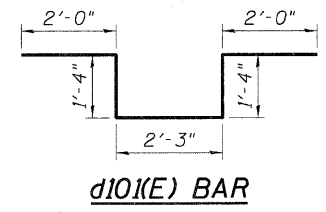
Bar	L
n101(E)	4'-10"
n102(E)	5'-5"
n103(E)	6'-6"



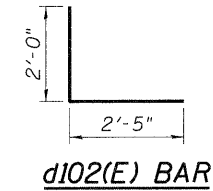
**n104(E) BAR**



**SECTION A-A**  
(Showing Dimensions)



**d101(E) BAR**



**d102(E) BAR**

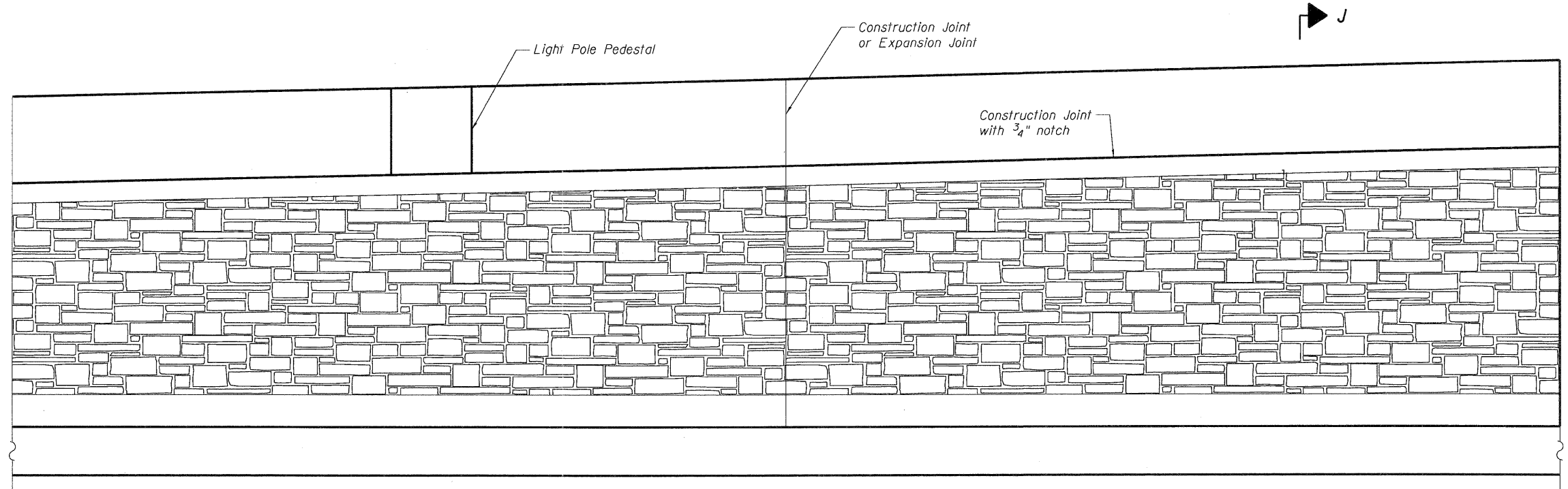
**Maximum Applied Soil Bearing Pressure**  
Station 3+90.05 - 4+62.05 = 2.6 ksf  
Station 4+62.05 - 5+52.05 = 3.1 ksf  
Station 5+52.05 - 7+92.03 = 3.4 ksf

**Equivalent Uniform Soil Bearing Pressure**  
Station 3+90.05 - 4+62.05 = 2.0 ksf  
Station 4+62.05 - 5+52.05 = 2.3 ksf  
Station 5+52.05 - 7+92.03 = 2.6 ksf

- Notes:**
1. Work this sheet with Shts. RW10-2 thru RW10-6.
  2. Cost of anchor bolts for Type 5 Traffic Barrier Terminal connection, 2" PVC Conduit for lighting, and anchor rods for light pole connection included in Concrete Structures.
  3. For Form Liner details, see Sht. RW10-8.
  4. The mud coat must be placed at the end of each work day or prior to adverse weather, whichever occurs first. The concrete shall be from an approved mix design (with a minimum compressive strength of 2,500 psi at 7 days), with a slump less than 6". Cost included in Concrete Structures.

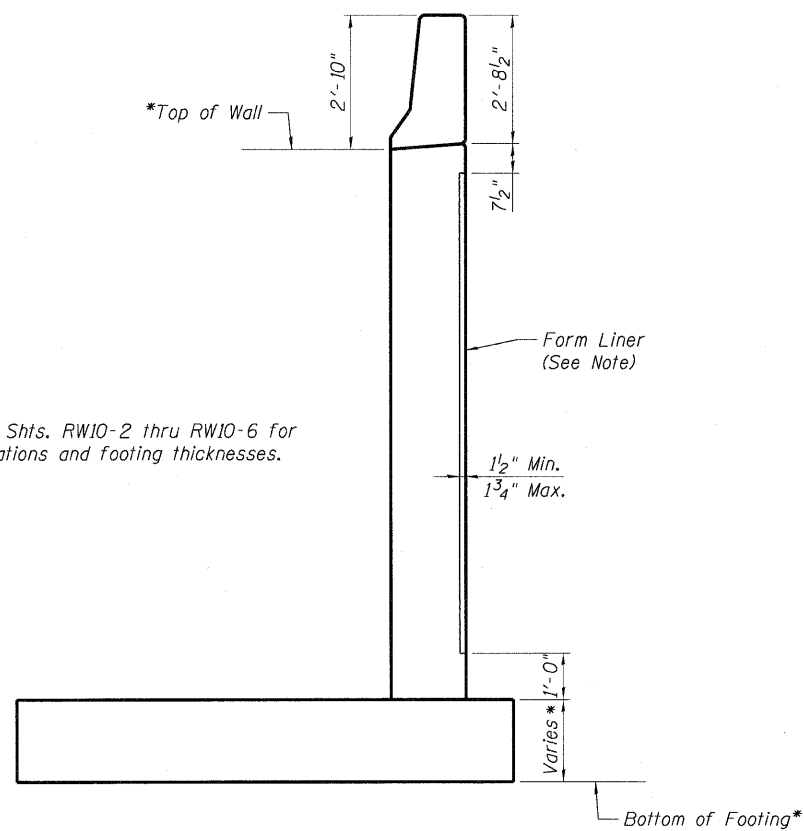
BAR LIST				
Bar	No.	Size	Length	Shape
d101(E)	10	#6	8'-11"	[Shape]
d102(E)	6	#6	4'-5"	[Shape]
h101(E)	48	#4	26'-3"	[Shape]
h102(E)	26	#4	23'-9"	[Shape]
h103(E)	212	#4	32'-3"	[Shape]
h104(E)	126	#4	29'-9"	[Shape]
h105(E)	8	#4	1'-6"	[Shape]
n101(E)	69	#6	10'-10"	[Shape]
n102(E)	120	#6	12'-0"	[Shape]
n103(E)	380	#6	14'-2"	[Shape]
n104(E)	12	#6	5'-4"	[Shape]
v101(E)	144	#8	8'-5"	[Shape]
v102(E)	240	#8	9'-5"	[Shape]
v103(E)	768	#8	10'-2"	[Shape]
v104(E)	3	#6	9'-1"	[Shape]
v105(E)	21	#6	9'-6"	[Shape]
v106(E)	24	#6	10'-1"	[Shape]
v107(E)	24	#6	10'-8"	[Shape]
v108(E)	30	#6	10'-9"	[Shape]
v109(E)	30	#6	11'-5"	[Shape]
v110(E)	150	#6	12'-1"	[Shape]
v111(E)	30	#6	11'-3"	[Shape]
v112(E)	30	#6	11'-7"	[Shape]
v113(E)	57	#6	11'-10"	[Shape]
v114(E)	3	#6	13'-3"	[Shape]
v115(E)	3	#6	9'-1"	[Shape]
v116(E)	21	#6	9'-8"	[Shape]
v117(E)	24	#6	10'-3"	[Shape]
v118(E)	24	#6	10'-10"	[Shape]
v119(E)	30	#6	10'-11"	[Shape]
v120(E)	30	#6	11'-7"	[Shape]
v121(E)	150	#6	11'-3"	[Shape]
v122(E)	30	#6	11'-9"	[Shape]
v123(E)	57	#6	12'-0"	[Shape]
v124(E)	3	#6	13'-3"	[Shape]
w101(E)	36	#5	38'-2"	[Shape]
w102(E)	214	#5	32'-2"	[Shape]
w103(E)	22	#5	29'-8"	[Shape]

4545010-60K90-007-RET WALL.DGN, 4545010-60K90-001-BORDER.DGN, 4545010-60K90-007-RET WALL.DGN, 5-13-2011, 15:28:53, HAYMARZ, V:\5-2011\4545010-60K90-001\STRUCT\CAD\60K90-007-RET WALL.DGN, 4545010-60K90-007-RET WALL.DGN



**TYPICAL WALL ELEVATION - SHOWING FORM LINER**

(Pattern: Small Random Ashlar)



**SECTION J-J**

**Note:**

The Form Liner pattern shall be Small Random Ashlar manufactured by Milestones Incorporated (235 Monroe Street, Hudson, Wisconsin 54016; Ph. 715/381-9660), or approved equal. The Form Liner shall be designed to hide liner shape and pattern repeat. The pattern relief shall be 1/2" minimum to 1 3/4" maximum.

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
US 20 OVER MCLEAN BOULEVARD**

**FORM LINER DETAILS**

FILE NAME =  
#FILEL#

USER NAME = #USER#  
PLOT SCALE = #SCALE#  
PLOT DATE = #DATE#

DESIGNED - MDB  
DRAWN - MDB  
CHECKED - PK  
DATE - 05/18/11

REVISED -  
REVISED -  
REVISED -  
REVISED -

SCALE: SHEET NO. RW10-8 OF RW10-10 STA. 3+90.05 TO STA. 7+92.03

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	BR-HB-2-BY-1	KANE	434	278
SN 045-W010			CONTRACT NO. 60K90	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

\045\010-60K90-008-RET WALL.DGN, \ALLSNUM-60K90-001-BORDER.DGN  
 \S-13-2011-152528:55  
 \S-044-VAVVAULT, D-TRANS, 07\2202\21379-001\STRUCT\CAD\60K90\045\010-SHEET\045\010-60K90-008-RET WALL.SHT.DGN  
 HAYWARD

**TENG** TENG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

SOIL BORING WB10-01

SOIL BORING WB10-02

SOIL BORING WB10-03

Geo Services Inc. SOIL BORING LOG PAGE 1 of 1  
 DATE 4/21/2010  
 LOGGED BY RJ  
 GSI JOB No. 09118

ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, IL IDOT Job No. D-91-632-09  
 SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. SE, 3rd PM, Elgin Township  
 COUNTY Kane DRILLING METHOD 3.25" Hollow Stem Auger Hammer TYPE Diedrich Automatic

STRUCT. NO. 045-W010  
 Station -  
 BORING NO. WB10-01  
 Station: 7+77 Ramp D  
 Offset: 18' Right  
 Ground Surface Elev. 827.9

Description	Depth (ft)	Bulge (ft)	S-Value (ft)	Penetration (ft)	Unit Weight (pcf)	Moisture (%)	UCS Failure Mode								
							B	S	P	VS					
12.0" TOPSOIL-black	826.9	AS	-	9											
CLAY LOAM-dark brown-stiff (A-6) Fill	2														
	3	125P		16											
	5														
SAND & GRAVEL-brown-medium dense to very dense (A-1)	822.4			21											
	12														
SAND & GRAVEL-brown-medium dense to very dense (A-1)	807.9			2											
	10	34	NP	2											
SAND & GRAVEL-brown-medium dense to very dense (A-1)	8														
	15	17	NP	4											
SAND & GRAVEL-brown-medium dense to very dense (A-1)	13														
	13														
SAND & GRAVEL-brown-medium dense to very dense (A-1)	809.2			3											
	11	NP		3											

End Of Boring @ -20.0'  
 Hollow Stem Augers  
 Diedrich Automatic Hammer 807.9 -20 11 NP 3

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
 NR-No Recovery

Geo Services Inc. SOIL BORING LOG PAGE 1 of 1  
 DATE 4/21/2010  
 LOGGED BY RJ  
 GSI JOB No. 09118

ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, IL IDOT Job No. D-91-632-09  
 SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. SE, 3rd PM, Elgin Township  
 COUNTY Kane DRILLING METHOD 3.25" Hollow Stem Auger Hammer TYPE Diedrich Automatic

STRUCT. NO. 045-W010  
 Station -  
 BORING NO. WB10-02  
 Station: 7+02 Ramp D  
 Offset: 19' Right  
 Ground Surface Elev. 829.2

Description	Depth (ft)	Bulge (ft)	S-Value (ft)	Penetration (ft)	Unit Weight (pcf)	Moisture (%)	UCS Failure Mode								
							B	S	P	VS					
12.0" TOPSOIL-black	828.2	AS	-	19											
SILTY CLAY-brown-very stiff (A-6) Wet	4														
	6	225P		26											
SAND & GRAVEL-brown-medium dense to very dense (A-1)	826.2			7											
	3														
SAND & GRAVEL-brown-medium dense to very dense (A-1)	809.2			2											
	10	35	NP	2											

End Of Boring @ -20.0'  
 Hollow Stem Augers  
 Diedrich Automatic Hammer 809.2 -20 35 NP 2

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
 NR-No Recovery

Geo Services Inc. SOIL BORING LOG PAGE 1 of 1  
 DATE 4/21/2010  
 LOGGED BY RJ  
 GSI JOB No. 09118

ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, IL IDOT Job No. D-91-632-09  
 SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. SE, 3rd PM, Elgin Township  
 COUNTY Kane DRILLING METHOD 3.25" Hollow Stem Auger Hammer TYPE Diedrich Automatic

STRUCT. NO. 045-W010  
 Station -  
 BORING NO. WB10-03  
 Station: 6+27 Ramp D  
 Offset: 20' Right  
 Ground Surface Elev. 828.5

Description	Depth (ft)	Bulge (ft)	S-Value (ft)	Penetration (ft)	Unit Weight (pcf)	Moisture (%)	UCS Failure Mode								
							B	S	P	VS					
12.0" TOPSOIL-black	827.5	AS	-	24											
SILTY CLAY-brown-very stiff (A-6) Wet	4														
	6	275P		26											
SAND & GRAVEL-brown-medium dense to very dense (A-1)	825.5			6											
	3														
SAND & GRAVEL-brown-medium dense to very dense (A-1)	808.5			3											
	10	30	NP	4											
SAND & GRAVEL-brown-medium dense to very dense (A-1)	808.5			3											
	15	NP		3											

End Of Boring @ -20.0'  
 Hollow Stem Augers  
 Diedrich Automatic Hammer 808.5 -20 15 NP 3

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
 NR-No Recovery

\\s:\projects\60k90-001\SOILBORING\LOGS\WB10-01\WB10-01-01\SOILBORING\_SHT.DGN  
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 HAYMARKZ

SOIL BORING WB10-04

SOIL BORING WB10-05

SOIL BORING WB10-06

Geo Services Inc. SOIL BORING LOG PAGE 1 of 1 DATE 4/21/2010 LOGGED BY RJ GSI JOB No. 09118

ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, IL IDOT Job No. D-91-632-09 SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township COUNTY Kane DRILLING METHOD 3.25" Hollow Stem Auger Hammer TYPE Diedrich Automatic

STRUCT. NO. 045-W010 Station - BORING NO. WB10-04 Station: 5+52 Ramp D Offset: 20' Right Ground Surface Elev. 828.4

Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter Upon Completion	After Hrs.	D	B	U	M
		(ft) (6") (tsf) (%)			(ft)	(6")	(tsf)	(%)
n/a	n/a		Dry					
			Dry					
12.0" TOPSOIL-black	827.4	AS						
SILTY CLAY-brown-stiff to very stiff (A-6) Wet								
	822.9	4	1.0B	23				
SAND & GRAVEL-brown-medium dense (A-1)								
End Of Boring @ -20.0'								
Hollow Stem Augers								
Diedrich Automatic Hammer	808.4	20	14	NP	4			

Geo Services Inc. SOIL BORING LOG PAGE 1 of 1 DATE 4/21/2010 LOGGED BY RJ GSI JOB No. 09118

ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, IL IDOT Job No. D-91-632-09 SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township COUNTY Kane DRILLING METHOD 3.25" Hollow Stem Auger Hammer TYPE Diedrich Automatic

STRUCT. NO. 045-W010 Station - BORING NO. WB10-05 Station: 4+65 Ramp D Offset: 21' Right Ground Surface Elev. 828.8

Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter Upon Completion	After Hrs.	D	B	U	M
		(ft) (6") (tsf) (%)			(ft)	(6")	(tsf)	(%)
n/a	n/a		Dry					
			Dry					
12.0" TOPSOIL-black	827.8	AS						
SILTY CLAY-brown-stiff to very stiff (A-6) Wet								
	823.3	5	1.3B	27				
SAND & GRAVEL-brown-medium dense to dense (A-1)								
End Of Boring @ -20.0'								
Hollow Stem Augers								
Diedrich Automatic Hammer	808.8	20	16	NP	5			

Geo Services Inc. SOIL BORING LOG PAGE 1 of 1 DATE 4/20/2010 LOGGED BY RJ GSI JOB No. 09118

ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, IL IDOT Job No. D-91-632-09 SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township COUNTY Kane DRILLING METHOD 3.25" Hollow Stem Auger Hammer TYPE Diedrich Automatic

STRUCT. NO. 045-W010 Station - BORING NO. WB10-06 Station: 4+02 Ramp D Offset: 20' Right Ground Surface Elev. 828.2

Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter Upon Completion	After Hrs.	D	B	U	M
		(ft) (6") (tsf) (%)			(ft)	(6")	(tsf)	(%)
n/a	n/a		Dry					
			Dry					
12.0" TOPSOIL-black	827.2	AS						
SILTY CLAY-brown-very stiff (A-6) Wet								
	824.7	3	3.5P	26				
SAND & GRAVEL-brown-medium dense to very dense (A-1)								
End Of Boring @ -20.0'								
Hollow Stem Augers								
Diedrich Automatic Hammer	808.2	20	17	NP	4			

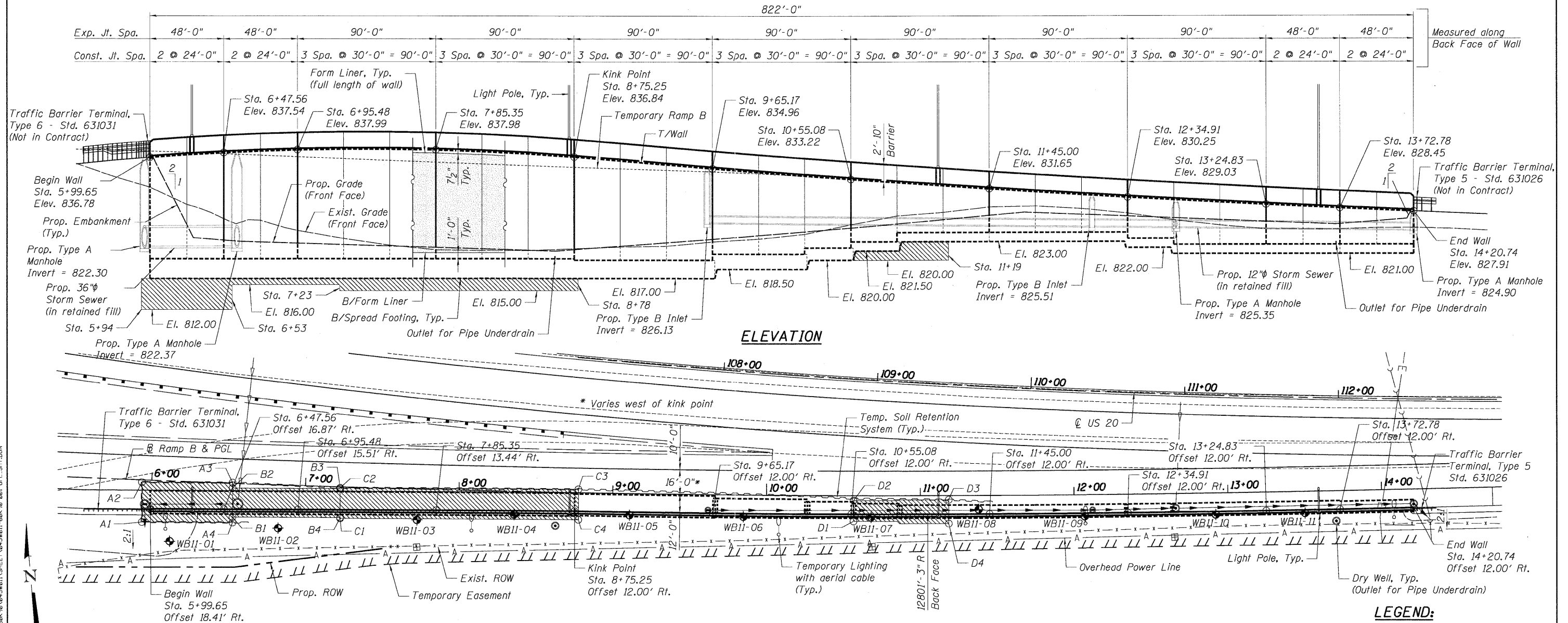
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 HAYWARD

<b>TENG</b> TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS	FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS          DEPARTMENT OF TRANSPORTATION          US 20 OVER MCLEAN BOULEVARD</b>	<b>SOIL BORING LOGS          2 OF 2</b>				F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = #DATE#		DATE - 05/18/11	REVISED -						SCALE:	SHEET NO. RW10-10 OF RW10-10	STA. 3+90.05 TO STA. 7+92.03	FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT	



Benchmark: Top of iron rod near S. edge of shoulder of E.B. US-20 and near E.B. entrance ramp from McLean Boulevard, located 0.5' S. of the S. edge of shoulder and 29.9' E. of the center of easterly most guardrail post. Elev. 840.37 (NAVD 88)

Existing Structure: None.



**ELEVATION**

**PLAN**

**DESIGN SPECIFICATIONS**

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

**DESIGN STRESSES**

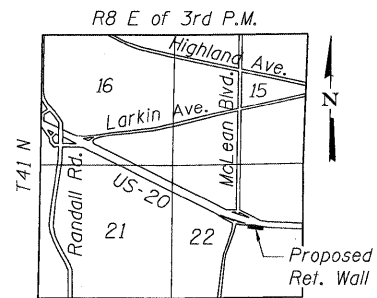
**FIELD UNITS**

$f'_c = 3.5 \text{ ksi}$   
 $f_y = 60 \text{ ksi (Reinforcement)}$   
 \* Maximum Allowable Soil Bearing Pressure:  
 Sta. 5+99.65 - 13+24.83 = 4.0 ksf  
 Sta. 13+24.83 - 14+20.74 = 2.4 ksf

\* Maximum Applied and Equivalent Uniform Soil Bearing Pressures are provided on Sht. RW11-12.

**CURVE DATA - RAMP B-1**

$\Delta = 4^\circ 32' 09'' \text{ (LT)}$   
 $D = 0^\circ 26' 53''$   
 $T = 506.50'$   
 $L = 1,012.47'$   
 $E = 10.03'$   
 $R = 12,789.25'$   
 $S.E. = N/A$   
 $P.C. = \text{Sta. } 4+59.48$   
 $P.T. = \text{Sta. } 14+71.95$   
 $P.I. = \text{Sta. } 9+65.98$



**LOCATION SKETCH**

**LIMITS OF REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES**

Location	Station	Offset	Location	Station	Offset
A1	5+94.45	27.18' Rt.	B1	6+53.20	21.78' Rt.
A2	5+93.57	1.44' Rt.	B2	6+52.64	3.04' Rt.
A3	6+52.53	0.46' Lt.	B3	7+22.60	1.14' Rt.
A4	6+53.30	25.28' Rt.	B4	7+23.06	19.89' Rt.
C1	7+23.07	20.39' Rt.	D1	10+56.58	16.58' Rt.
C2	7+22.59	0.64' Rt.	D2	10+56.58	3.08' Rt.
C3	8+77.57	2.20' Lt.	D3	11+18.52	2.58' Rt.
C4	8+77.82	17.55' Rt.	D4	11+18.52	18.08' Rt.

**APPROVED**  
 FOR STRUCTURAL ADEQUACY ONLY  
*D. Carl Pusey, III*  
 ENGINEER OF BRIDGES AND STRUCTURES



DATE: 5/16/2011  
 EXP.: 11/30/2012

**LEGEND:**

- A - Exist. Aerial Utility Line
- S - Exist. Storm Sewer
- P - Prop. Storm Sewer
- - Exist. Drainage Structure
- ⊙ - Prop. Drainage Structure
- - Prop. Temporary Lighting
- - - Prop. Permanent Lighting
- ▨ - Removal and Disposal of Unsuitable Material for Structures

**Notes:**

1. Offsets are measured from @ Ramp B to the back face of wall.
2. Wall backfilling will be staged, accommodating Temporary Ramp B pavement and traffic during Contract 60K90 Stage II MOT.
3. Outlet pipe underdrain to dry wells as shown. See Drainage Plans for details of storm sewer, manholes, inlets and dry wells.

**GENERAL NOTES**

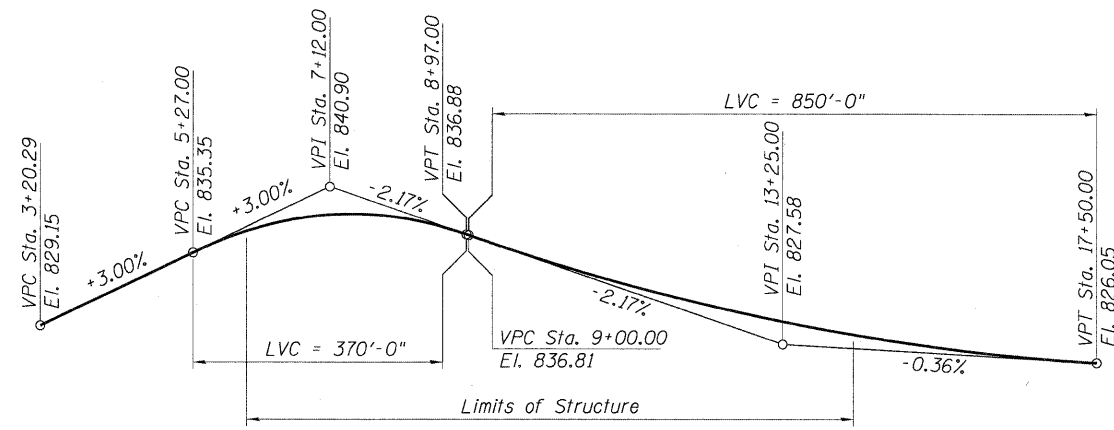
1. Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60. See Special Provisions.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Slipforming of the barrier is NOT allowed.

**TOTAL BILL OF MATERIAL**

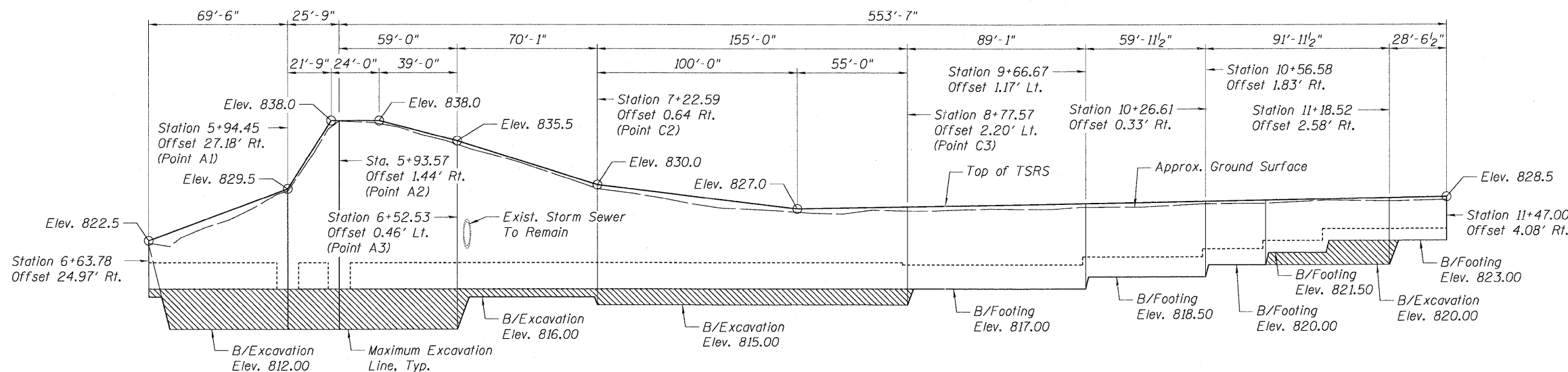
ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu Yd	569
Structure Excavation	Cu Yd	2,877
Removal and Disposal of Unsuitable Material for Structures	Cu Yd	632
Concrete Structures	Cu Yd	1,649.9
Form Liner Textured Surface	Sq Ft	8,676
Protective Coat	Sq Yd	360
Reinforcement Bars, Epoxy Coated	Pound	183,740
Geocomposite Wall Drain	Sq Yd	899
Porous Granular Embankment, Special	Cu Yd	1,222
Pipe Underdrains for Structures 4"	Foot	830
Temporary Soil Retention System	Sq Ft	8,630

**INDEX OF SHEETS**

- RW11-1 General Plan and Elevation
- RW11-2 General Notes, Index of Sheets, and Total Bill of Material
- RW11-3 Wall Plan and Elevation, 1 of 9
- RW11-4 Wall Plan and Elevation, 2 of 9
- RW11-5 Wall Plan and Elevation, 3 of 9
- RW11-6 Wall Plan and Elevation, 4 of 9
- RW11-7 Wall Plan and Elevation, 5 of 9
- RW11-8 Wall Plan and Elevation, 6 of 9
- RW11-9 Wall Plan and Elevation, 7 of 9
- RW11-10 Wall Plan and Elevation, 8 of 9
- RW11-11 Wall Plan and Elevation, 9 of 9
- RW11-12 Wall Sections
- RW11-13 Details and Bar List
- RW11-14 Form Liner Details
- RW11-15 Soil Boring Logs, 1 of 4
- RW11-16 Soil Boring Logs, 2 of 4
- RW11-17 Soil Boring Logs, 3 of 4
- RW11-18 Soil Boring Logs, 4 of 4



**PROFILE GRADE - B RAMP B**



**LEGEND:**

Removal and Disposal of Unsuitable Material for Structures

**TEMPORARY SOIL RETENTION SYSTEM**

(Developed Elevation)

(Points A1, A2, A3, C2, C3 refer to the table for Limits of Removal and Disposal of Unsuitable Material for Structures on Sht. RW11-1.)

**Note:**

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.

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 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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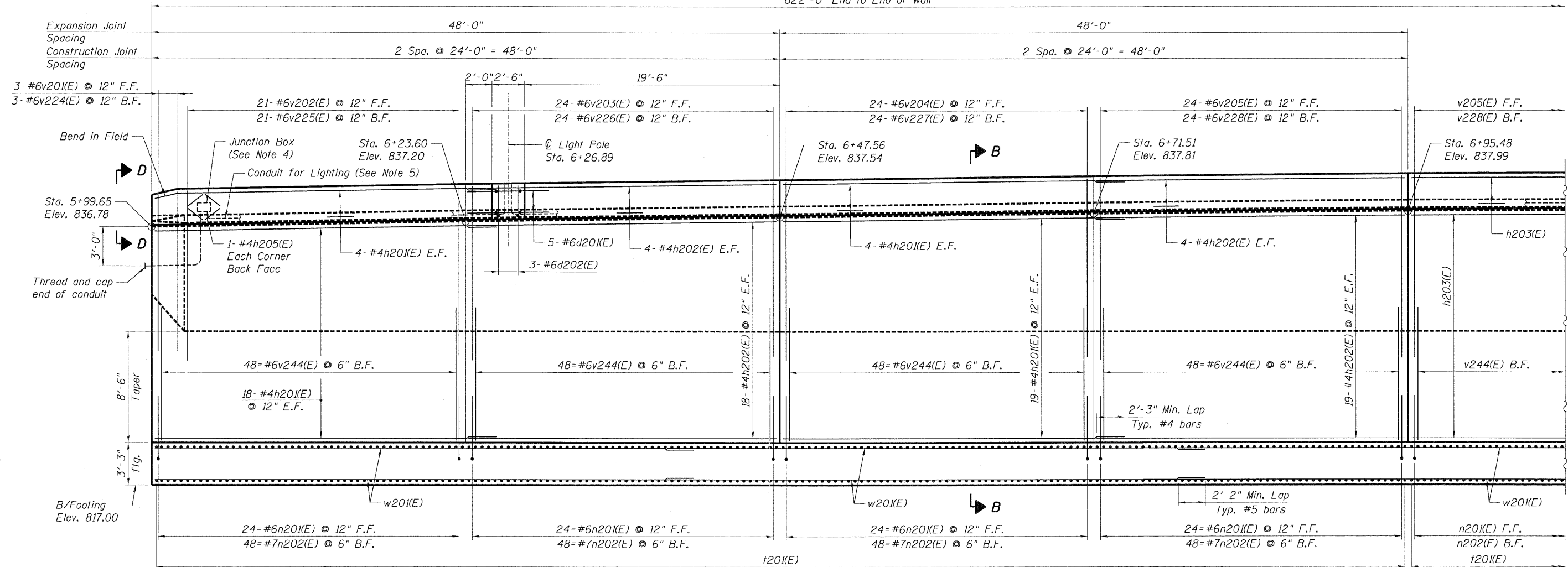
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 US 20 OVER MCLEAN BOULEVARD

GENERAL NOTES, INDEX OF SHEETS, AND TOTAL BILL OF MATERIAL

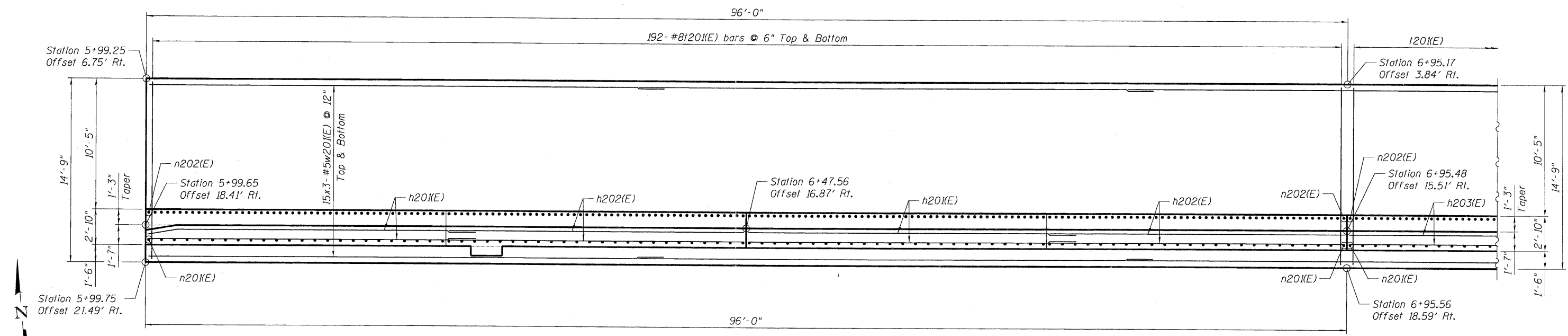
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345	BR-HB-2-BY-1	KANE	434	282
SN 045-W011		CONTRACT NO. 60K90		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

822'-0" End to End of Wall



**ELEVATION**



**PLAN**

**Note:**  
See Sht. RW11-11 for notes.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
US 20 OVER MCLEAN BOULEVARD

WALL PLAN AND ELEVATION  
1 OF 9

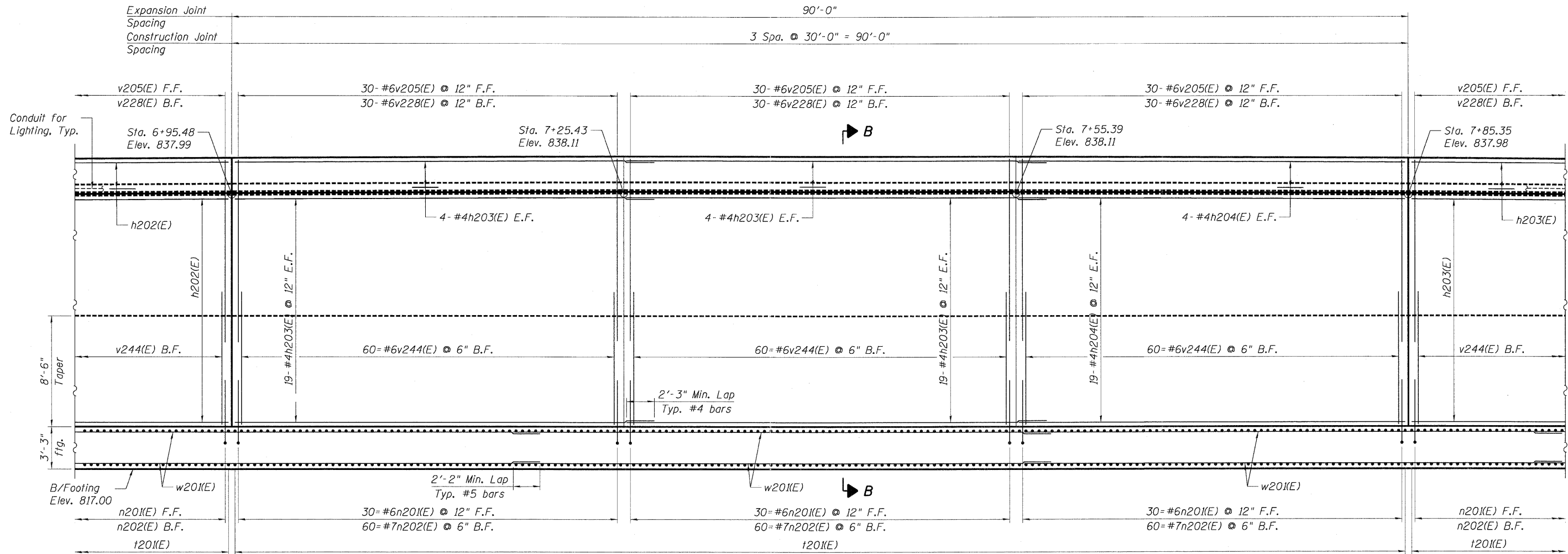
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SN 045-W011			CONTRACT NO. 60K90	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

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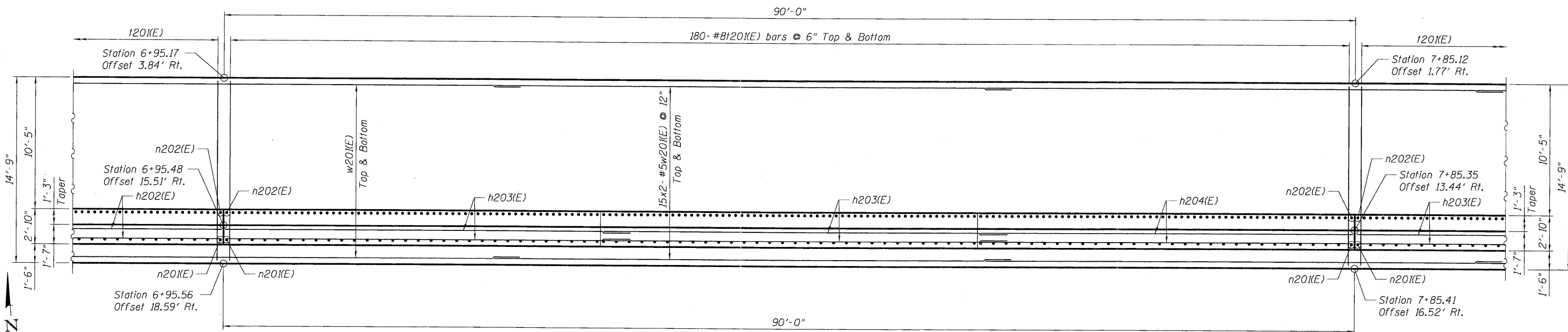
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 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

822'-0" End to End of Wall



ELEVATION



PLAN

Note:  
See Sht. RW11-11 for notes.

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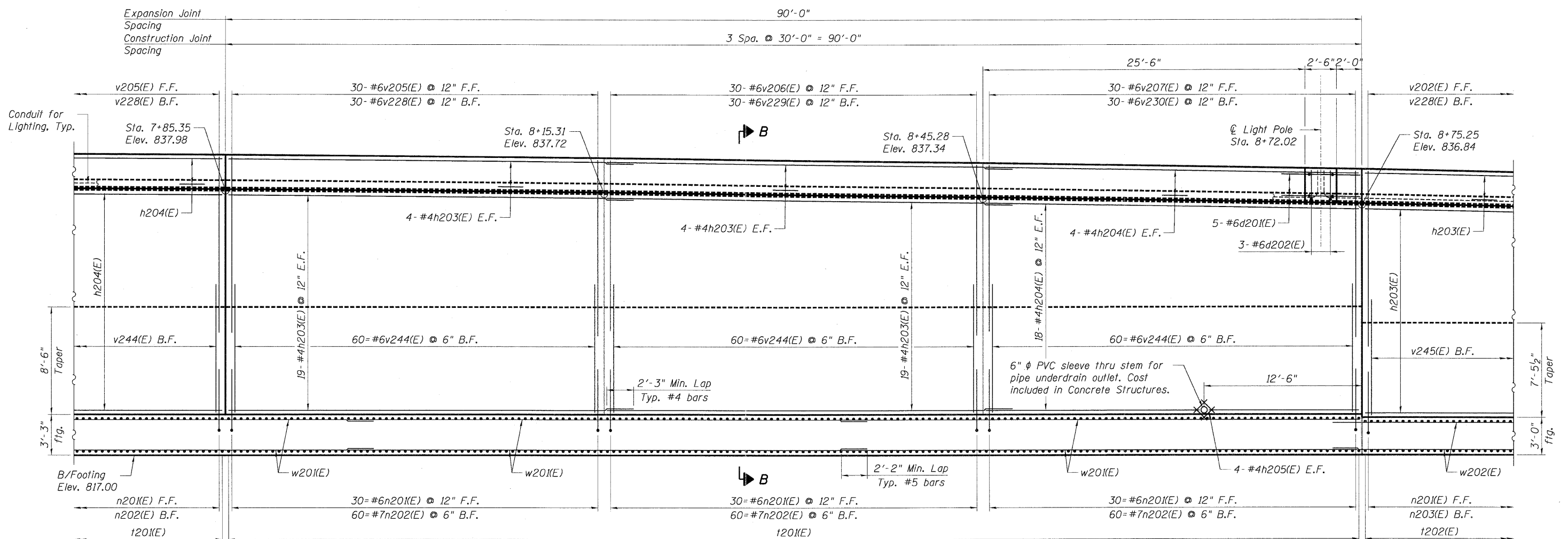
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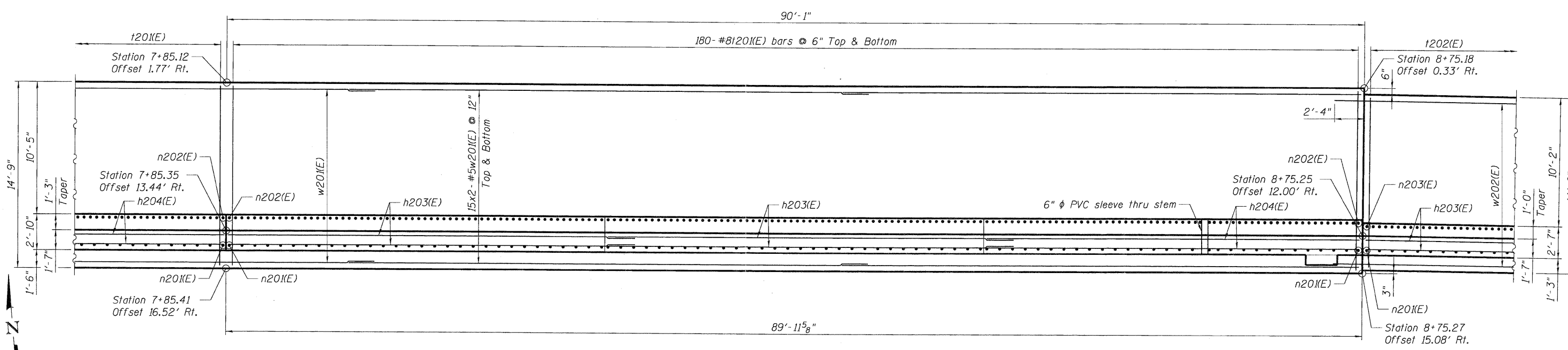
822'-0" End to End of Wall

90'-0"

3 Spa. @ 30'-0" = 90'-0"



ELEVATION



PLAN

Note: See Sht. RW11-11 for notes.

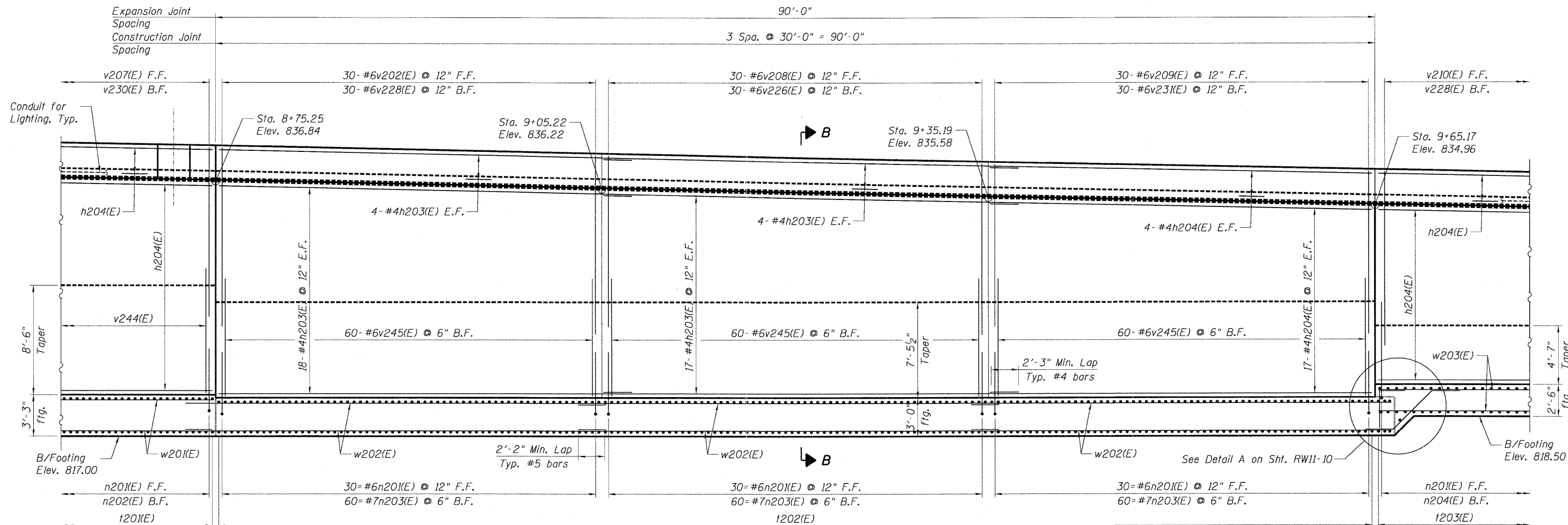
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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION US 20 OVER MCLEAN BOULEVARD

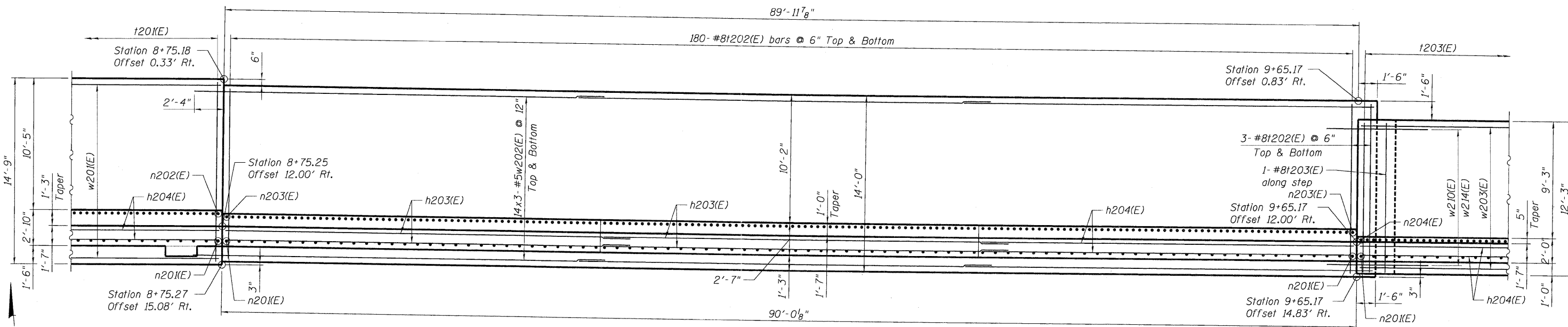
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F.A.P. R.T.E. 345	SECTION 8R-HB-2-BY-1	COUNTY KANE	TOTAL SHEETS 434	SHEET NO. 285
SN 045-W011		CONTRACT NO. 60K90		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

822'-0" End to End of Wall



ELEVATION



PLAN

Note: See Sht. RW11-11 for notes.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
US 20 OVER MCLEAN BOULEVARD

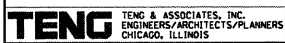
WALL PLAN AND ELEVATION  
4 OF 9

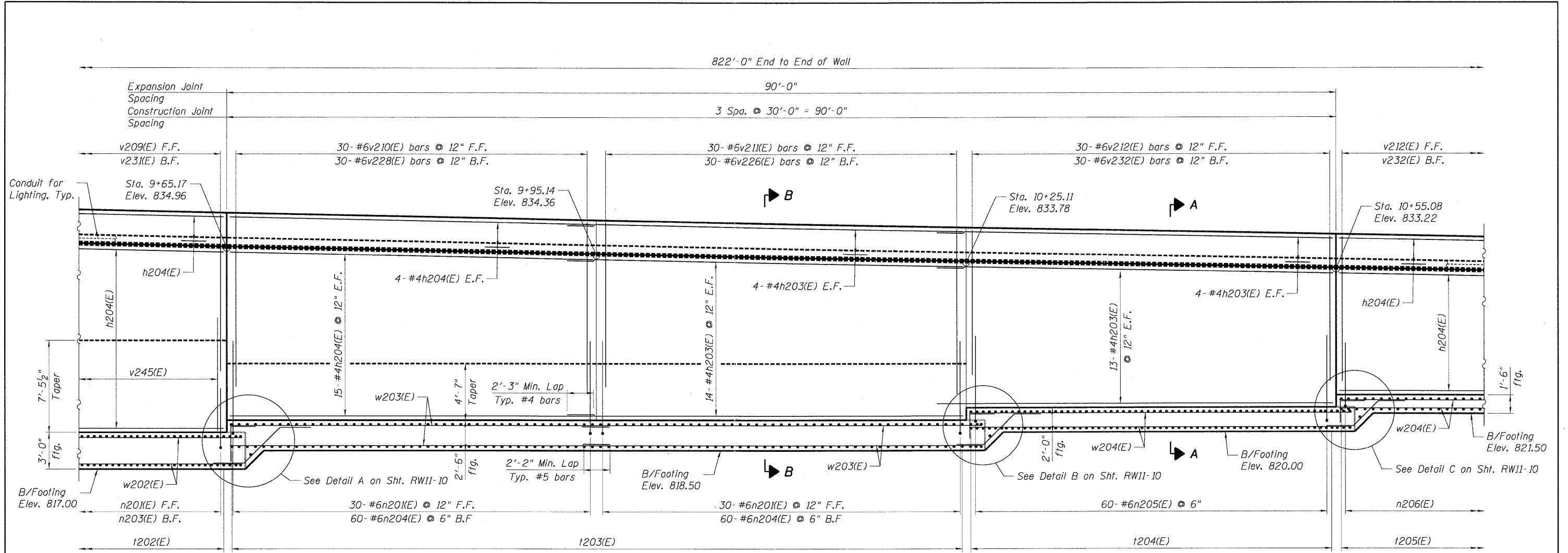
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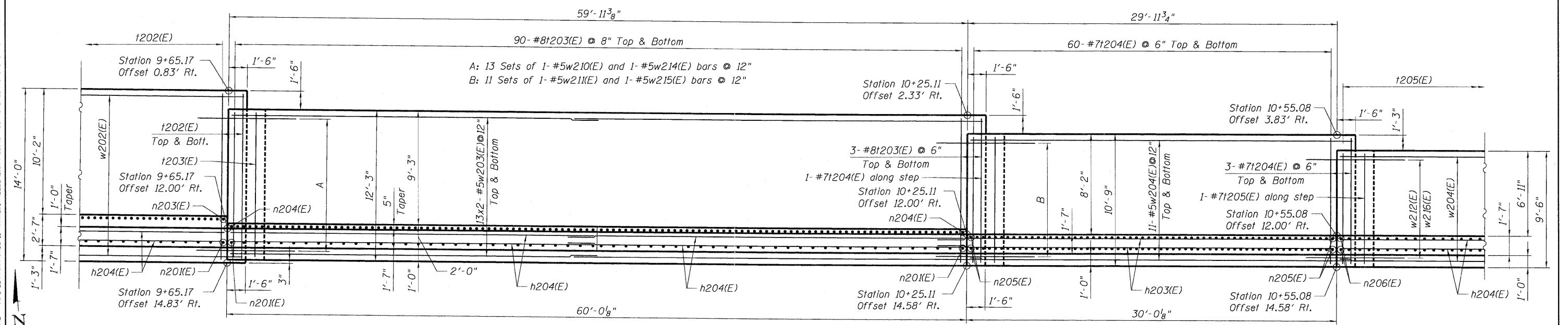
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**ELEVATION**

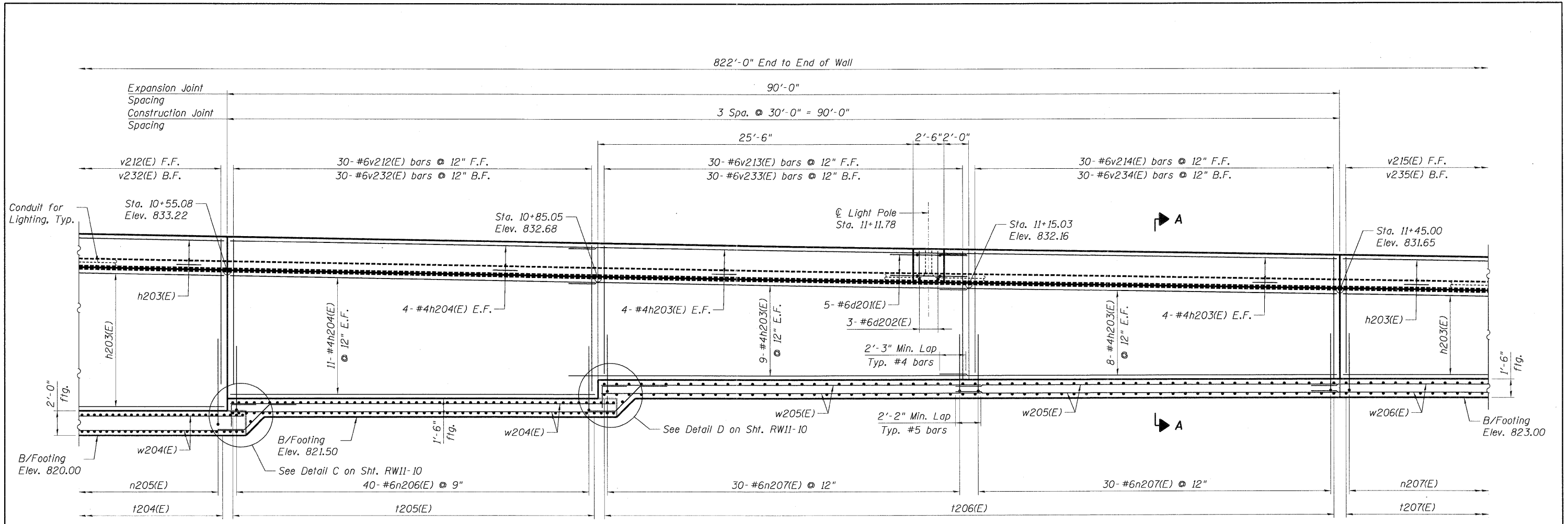


**PLAN**

**Note:**  
See Sht. RW11-11 for notes.

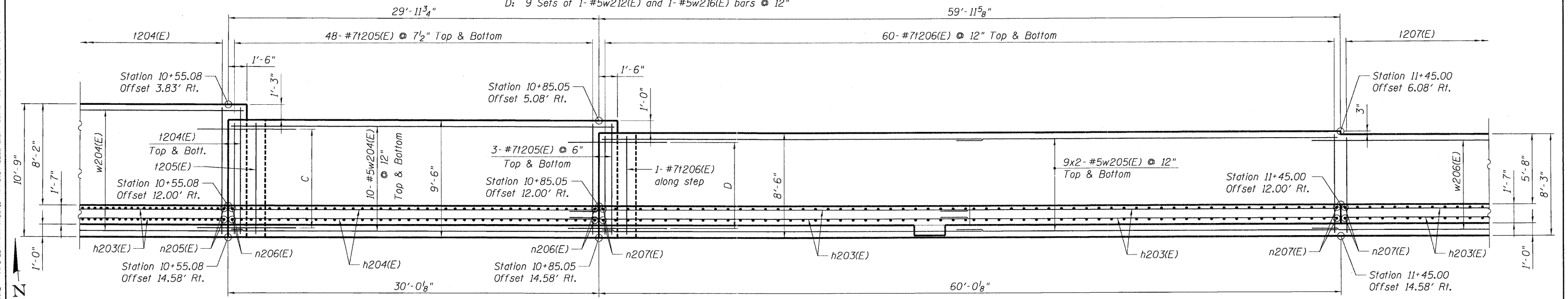
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<b>TENG</b> TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS				SCALE: SHEET NO. RW11-7 OF RW11-18 STA. 5+99.65 TO STA. 14+20.74							



**ELEVATION**

C: 10 Sets of 1-#5w212(E) and 1-#5w216(E) bars @ 12"  
 D: 9 Sets of 1-#5w212(E) and 1-#5w216(E) bars @ 12"



**PLAN**

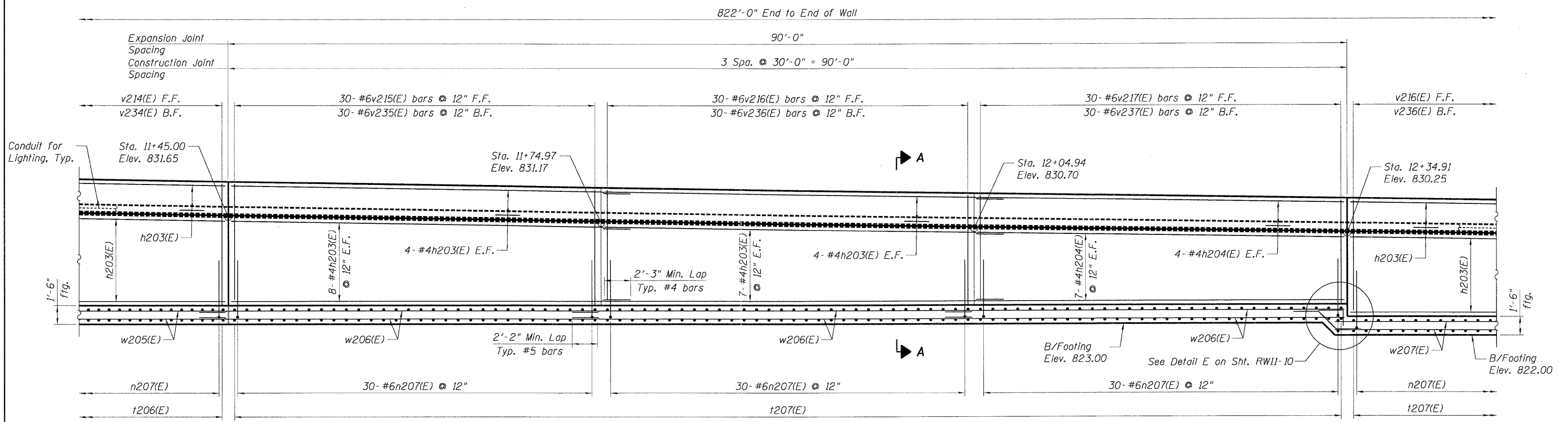
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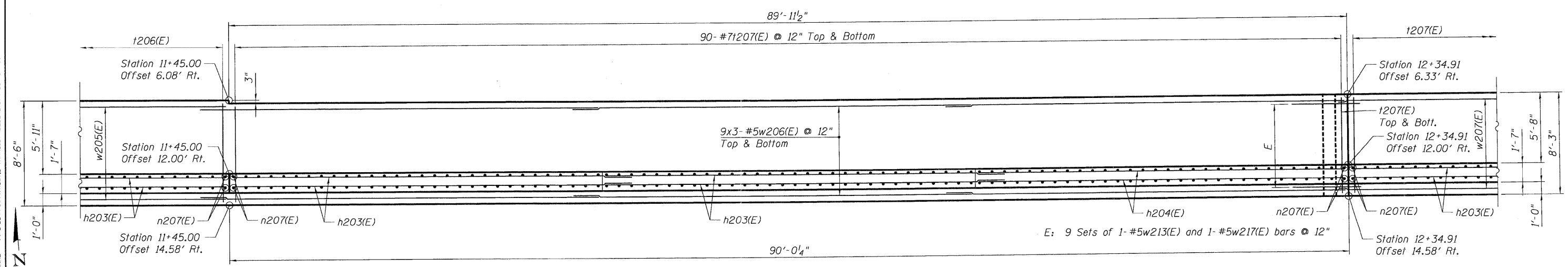
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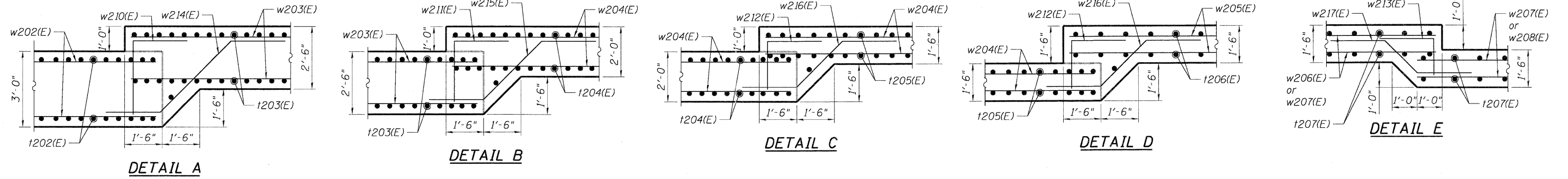
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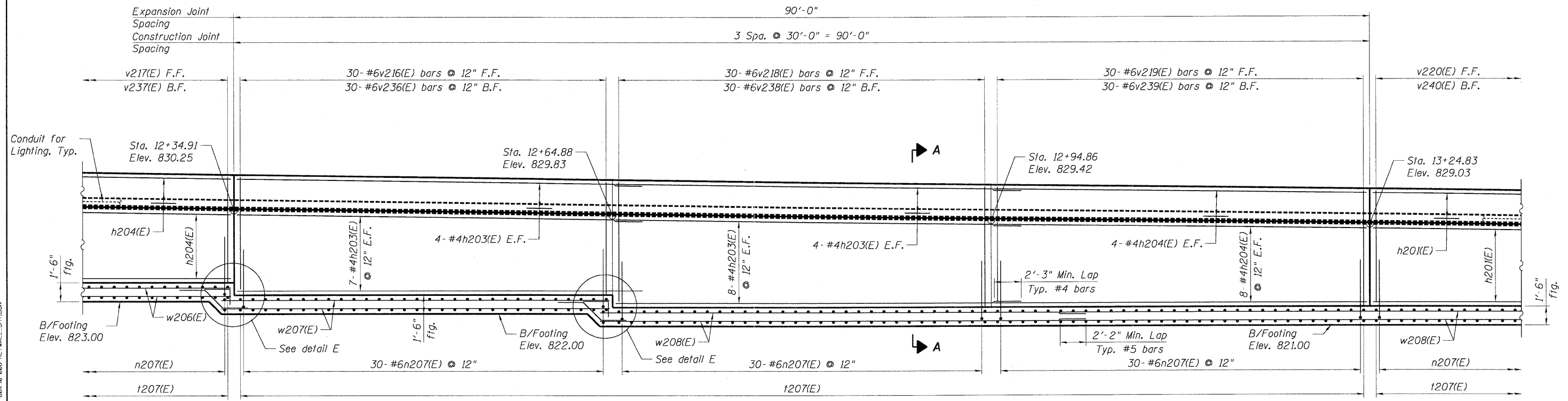
**PLAN**

**Note:**  
See Sht. RW11-11 for notes.

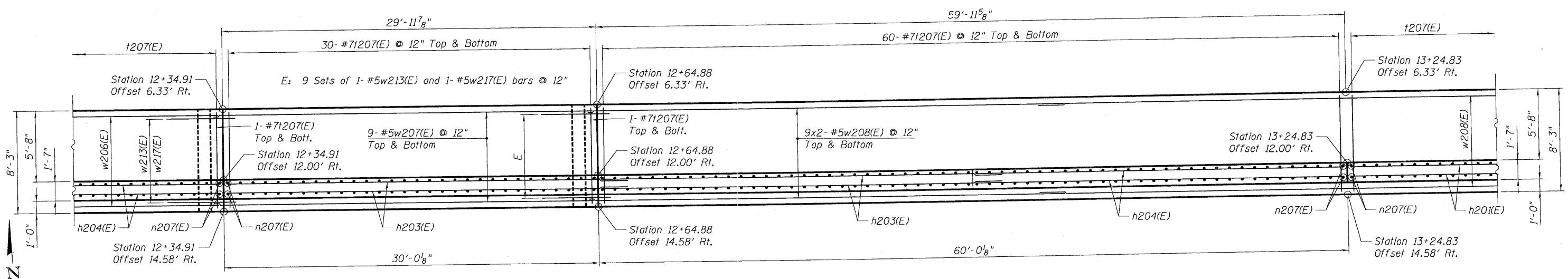
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822'-0" End to End of Wall



**ELEVATION**



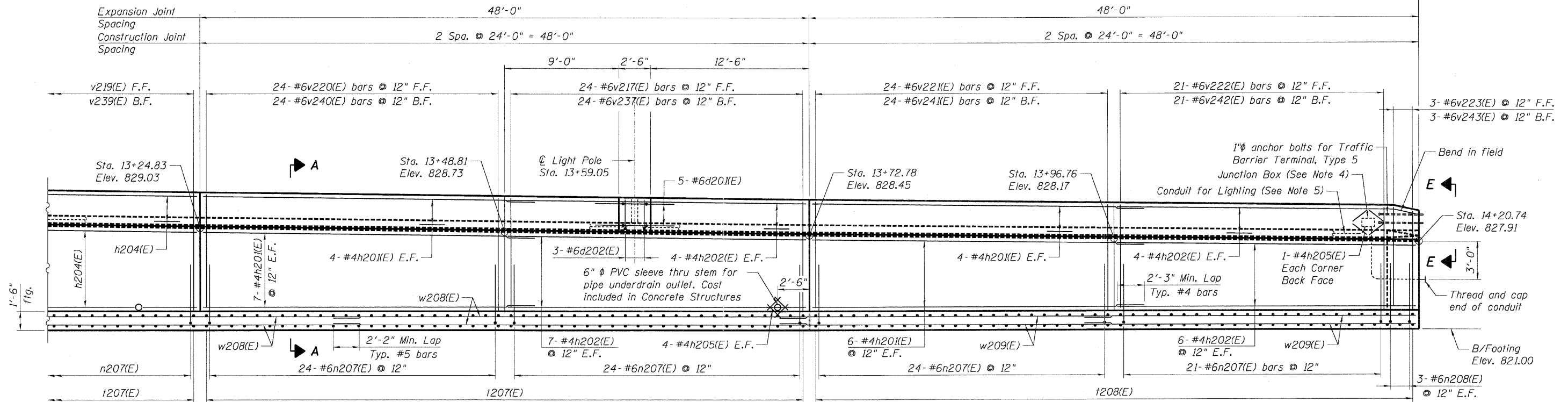
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**Note:**  
See Sht. RW11-11 for notes.

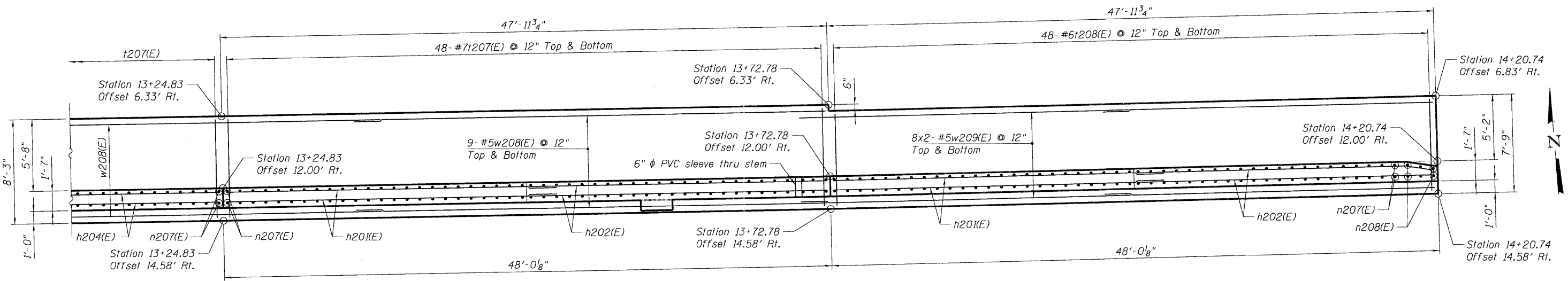
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FILE NAME =	USER NAME = #USER#	DESIGNED - MDB	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b> US 20 OVER MCLEAN BOULEVARD	<b>WALL PLAN AND ELEVATION</b> <b>8 OF 9</b>		F.A.P. RTE. 345	SECTION 8R-HB-2-BY-1	COUNTY KANE	TOTAL SHEETS 434	SHEET NO. 290	
#FILE#	PLOT SCALE = #SCALE#	DRAWN - MDB	REVISED -		SCALE:	SHEET NO. RW11-10	OF RW11-18	STA. 5+99.65 TO STA. 14+20.74	SN 045-W011 CONTRACT NO. 60K90		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT	
TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS	PLOT DATE = #DATE#	CHECKED - PK	REVISED -		DATE - 05/18/11							
		DATE -	REVISED -									

822'-0" End to End of Wall



ELEVATION



PLAN

Notes:

1. Work this sheet with Shts. RW11-3 thru RW11-10 and RW11-12 thru RW11-13.
2. Bars indicated thus 10x2-#5 etc. indicates 10 lines of bars with 2 lengths per line.
3. B.F. = Back Face  
F.F. = Front Face  
E.F. = Each Face
4. Refer to Lighting Plans for junction box pay item.
5. Cost of anchor bolts for Type 5 Traffic Barrier Terminal connection, 2" PVC Conduit for lighting, and anchor rods for light pole connection included in Concrete Structures.

FILE NAME =  
#FILE#

USER NAME = #USER#  
PLOT SCALE = #SCALE#  
PLOT DATE = #DATE#

DESIGNED - MDB  
DRAWN - MDB  
CHECKED - PK  
DATE - 05/18/11

REVISED -  
REVISED -  
REVISED -  
REVISED -

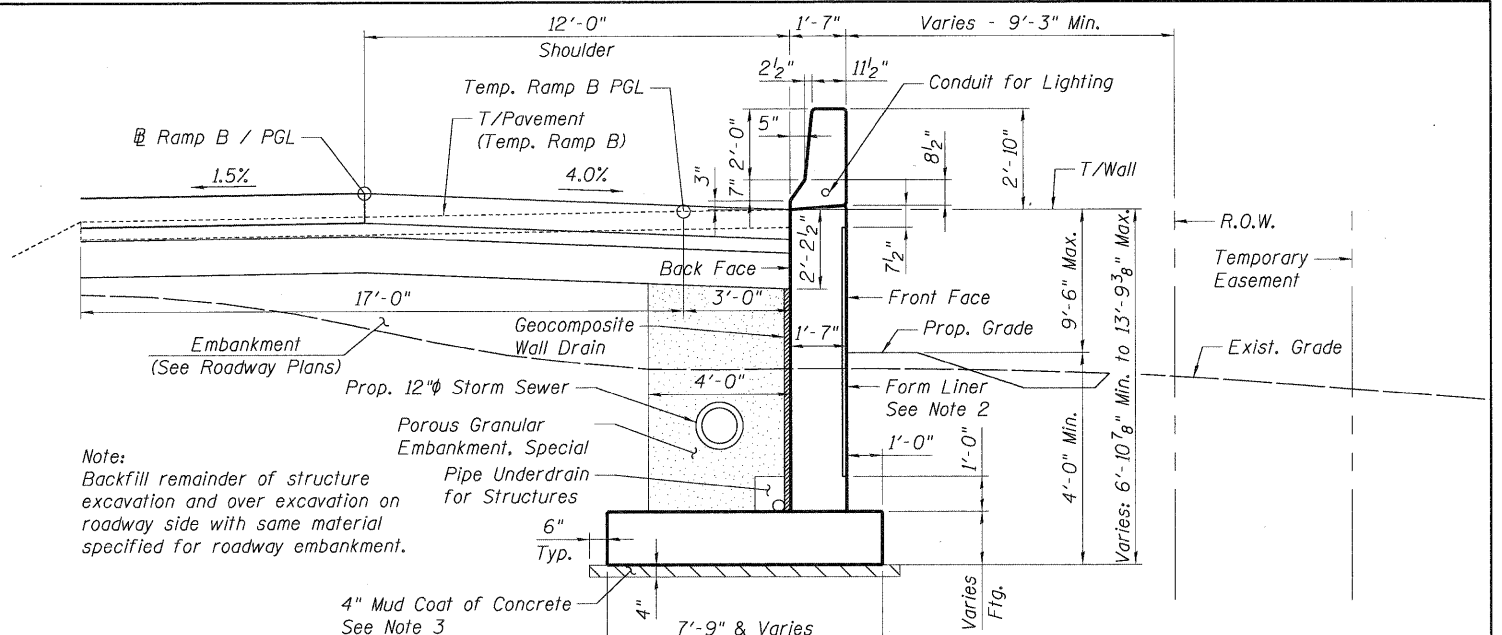
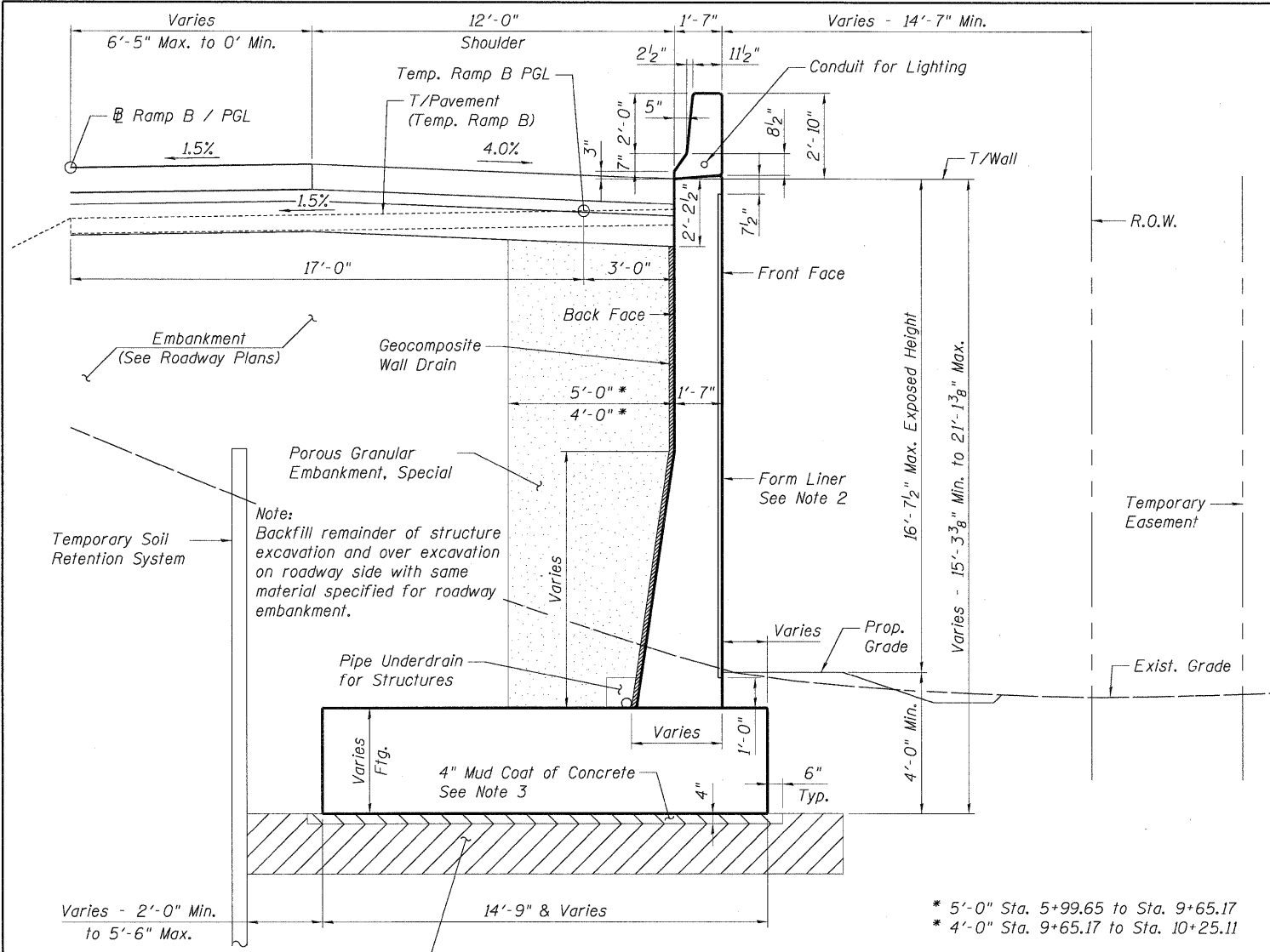
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
US 20 OVER MCLEAN BOULEVARD

WALL PLAN AND ELEVATION  
9 OF 9

SCALE: SHEET NO. RW11-11 OF RW11-18 STA. 5+99.65 TO STA. 14+20.74

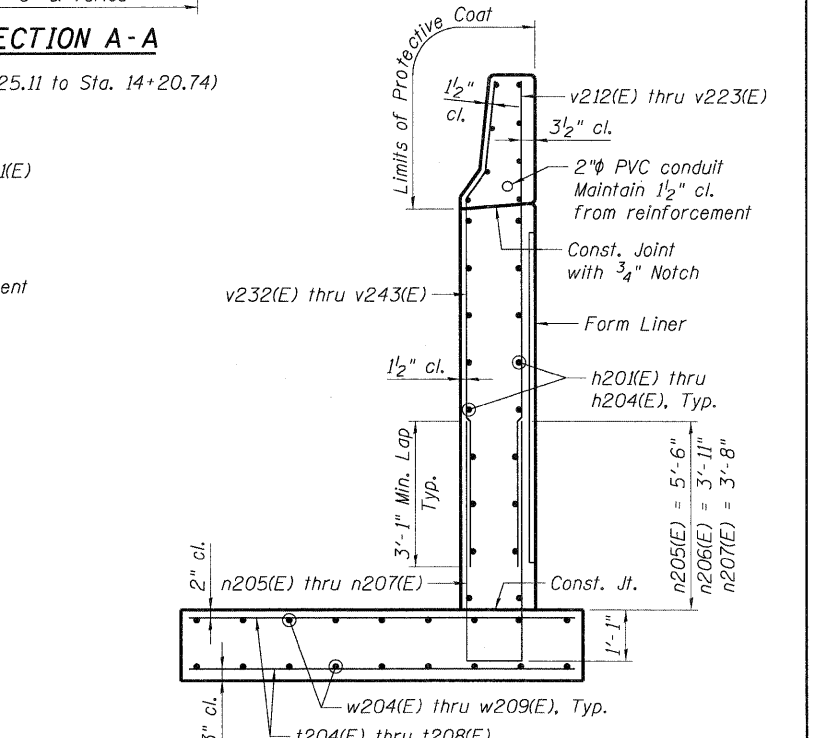
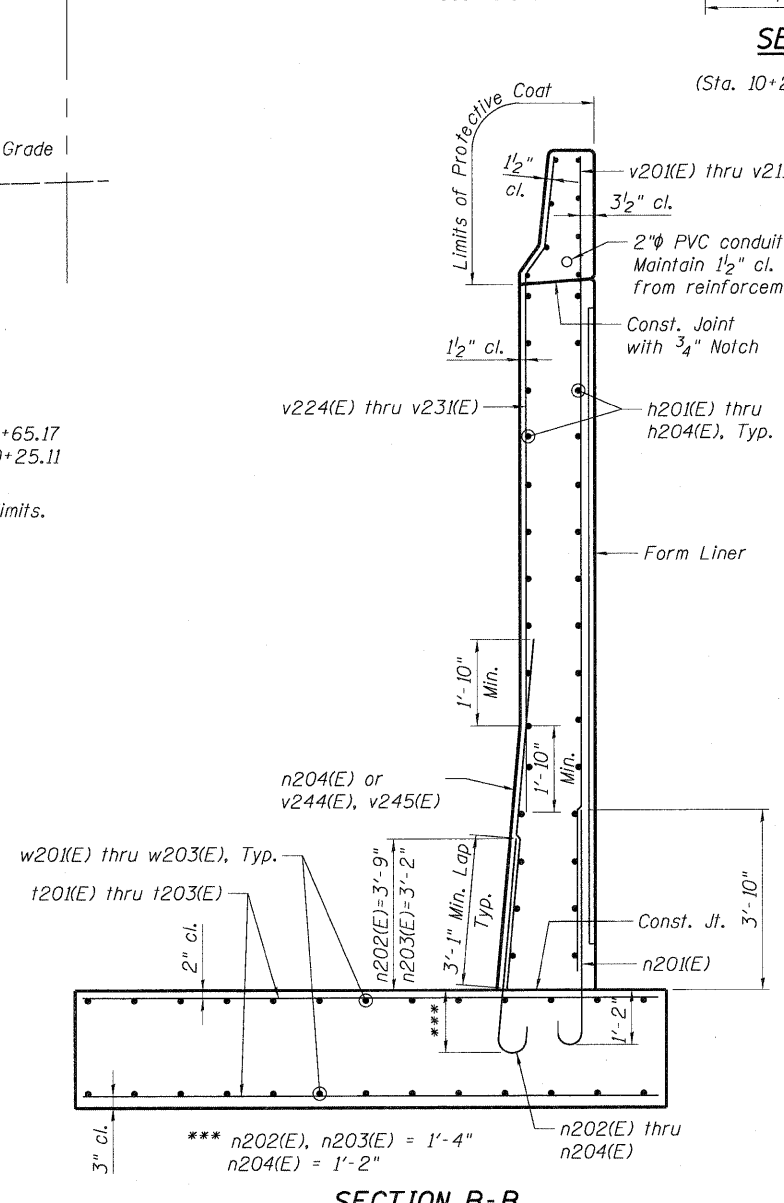
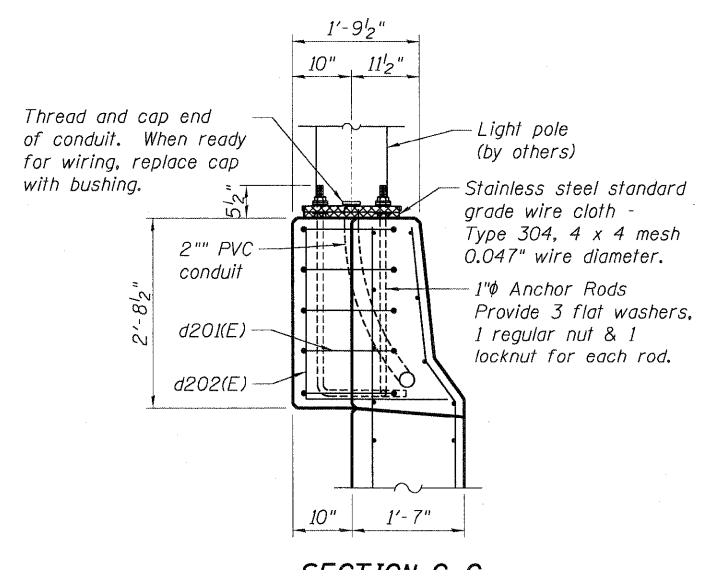
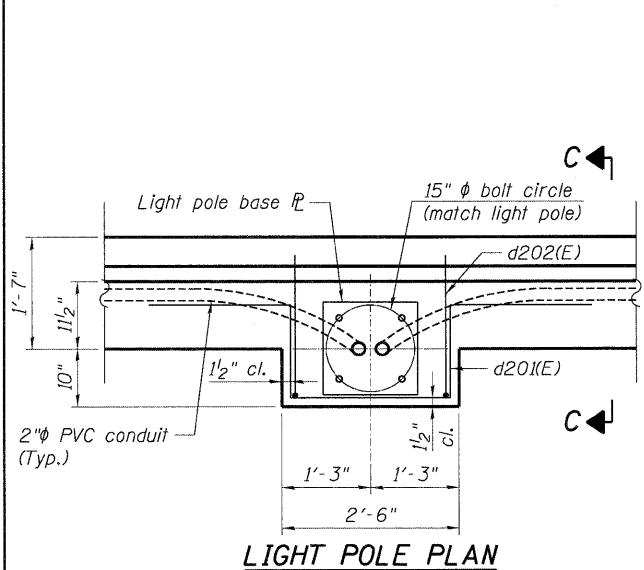
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	8R-HB-2-BY-1	KANE	434	291
SN 045-W011			CONTRACT NO. 60K90	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

5-13-2011 15:25:39  
 \S\5-0044\AMVAULT\0-TRANS\07\2202\21379-20\STRUCT\COAN\60K90\045W011\SHEET\045W011-60K90-009-RET.WALL.SHT.DGN  
 HAYMARZ  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS



Removal and Disposal of Unsuitable Material for Structures. Backfill with compacted crushed stone (CA6, CA10 or CA18). The backfill shall be paid for as Porous Granular Embankment. \*\*

\* 5'-0" Sta. 5+99.65 to Sta. 9+65.17  
\* 4'-0" Sta. 9+65.17 to Sta. 10+25.11  
\*\* See Plan and Elevation for limits.



**Maximum Applied Soil Bearing Pressure**

Sta. 5+99.65 to 8+75.25 = 5.2 ksf
Sta. 8+75.25 to 9+65.17 = 5.0 ksf
Sta. 9+65.17 to 10+25.11 = 4.2 ksf
Sta. 10+25.11 to 10+55.08 = 3.5 ksf
Sta. 10+55.08 to 10+85.05 = 3.0 ksf
Sta. 10+85.05 to 11+45.00 = 2.5 ksf
Sta. 11+45.00 to 13+72.78 = 2.3 ksf
Sta. 13+72.78 to 14+20.74 = 2.0 ksf

**Equivalent Uniform Soil Bearing Pressure**

Sta. 5+99.65 to 8+75.25 = 3.9 ksf
Sta. 8+75.25 to 9+65.17 = 3.8 ksf
Sta. 9+65.17 to 10+25.11 = 3.2 ksf
Sta. 10+25.11 to 10+55.08 = 2.6 ksf
Sta. 10+55.08 to 10+85.05 = 2.3 ksf
Sta. 10+85.05 to 11+45.00 = 1.9 ksf
Sta. 11+45.00 to 13+72.78 = 1.7 ksf
Sta. 13+72.78 to 14+20.74 = 1.5 ksf

**Notes:**

- Work this sheet with Shts. RW11-3 thru RW11-13.
- For Form Liner details, see Sht. RW11-14.
- The mud coat must be placed at the end of each work day or prior to adverse weather, whichever occurs first. The concrete shall be from an approved mix design (with a minimum compressive strength of 2,500 psi at 7 days), with a slump less than 6". Cost included in Concrete Structures.





SOIL BORING WB11-01

SOIL BORING WB11-02

SOIL BORING WB11-03

Geo SPACAS Inc. SOIL BORING LOG PAGE 1 of 1  
 DATE 4/22/2010 LOGGED BY RJ GSI JOB No. 09118  
 ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, IL IDOT Job No. D-91-632-09  
 SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township  
 COUNTY Kane DRILLING METHOD Hollow Stem Auger/Rotary Hammer TYPE Diedrich Automatic  
 STRUCT. NO. 045-W011 Station -  
 BORING NO. WB11-01 Station: 6+13 Ramp B Offset: 39' Right Ground Surface Elev. 823.0  
 Surface Water Elev. n/a Stream Bed Elev. n/a  
 Groundwater Elevation: First Encounter n/a Upon Completion n/a  
 After Hrs. 783.0-40 NP 9  
 18.0" TOPSOIL-black 821.5 AS - 18  
 SILTY CLAY-brown-medium stiff to very stiff (A-6) Wet 91  
 SAND & GRAVEL-brown-medium dense to very dense (A-1) 86  
 SILTY CLAY LOAM-gray-loose (A-4) 815.0  
 SANDY LOAM-brown-medium dense (A-2) 812.5  
 SAND & GRAVEL-brown-medium dense to very dense (A-1) 810.0  
 End of Boring @ -40.0'  
 Hollow Stem Augers To -10.0'  
 Rotary Drilling To Completion  
 Diedrich Automatic Hammer

Geo SPACAS Inc. SOIL BORING LOG PAGE 1 of 1  
 DATE 4/22/2010 LOGGED BY RJ GSI JOB No. 09118  
 ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, IL IDOT Job No. D-91-632-09  
 SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township  
 COUNTY Kane DRILLING METHOD Hollow Stem Auger/Rotary Hammer TYPE Diedrich Automatic  
 STRUCT. NO. 045-W011 Station -  
 BORING NO. WB11-02 Station: 6+83 Ramp B Offset: 28' Right Ground Surface Elev. 822.0  
 Surface Water Elev. n/a Stream Bed Elev. n/a  
 Groundwater Elevation: First Encounter n/a Upon Completion n/a  
 After Hrs. 782.0-40 NP 7  
 18.0" TOPSOIL-black 820.5 AS - 31  
 SILTY CLAY-brown-stiff to very stiff (A-6) Wet 90  
 SAND & GRAVEL-brown-dense to very dense (A-1) 90  
 Clayey SAND & GRAVEL-brown-medium dense (A-2) 816.5  
 SAND & GRAVEL-brown-dense to very dense (A-1) 814.0  
 SAND & GRAVEL-brown-dense to very dense (A-1) 790.0  
 SAND-brown-dense (A-3) 785.0  
 SAND & GRAVEL-brown-dense (A-1) 782.0-40 NP 7  
 End of Boring @ -40.0'  
 Hollow Stem Augers To -10.0'  
 Rotary Drilling To Completion  
 Diedrich Automatic Hammer

Geo SPACAS Inc. SOIL BORING LOG PAGE 1 of 1  
 DATE 4/22/2010 LOGGED BY RJ GSI JOB No. 09118  
 ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, IL IDOT Job No. D-91-632-09  
 SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township  
 COUNTY Kane DRILLING METHOD Hollow Stem Auger/Rotary Hammer TYPE Diedrich Automatic  
 STRUCT. NO. 045-W011 Station -  
 BORING NO. WB11-03 Station: 7+73 Ramp B Offset: 20' Right Ground Surface Elev. 820.8  
 Surface Water Elev. n/a Stream Bed Elev. n/a  
 Groundwater Elevation: First Encounter n/a Upon Completion n/a  
 After Hrs. 780.8-40 NP 18  
 TOPSOIL-black 816.3 AS - 23  
 SAND & GRAVEL-brown-dense to very dense (A-1) 816.3  
 SILTY CLAY-brown-medium stiff to very stiff (A-6) Wet 94  
 Clayey SAND & GRAVEL-brown-dense (A-2) 792.8  
 Clayey SAND & GRAVEL-brown-medium dense (A-2) 810.3  
 SAND & GRAVEL-brown-dense to very dense (A-1) 805.3  
 SAND-brown-very dense (A-3) 788.8  
 End of Boring @ -40.0'  
 Hollow Stem Augers To -10.0'  
 Rotary Drilling To Completion  
 Diedrich Automatic Hammer

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
 NR-No Recovery

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
 NR-No Recovery

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
 NR-No Recovery

045W011-60K90-001-SOILBORING.DGN, \VAL\SNUM-60K90-001-BORDER.DGN  
 5-13-2011, 15:22:57  
 HAYWARD \F5-2044\AMVAULT.D - TRANS. 07-2202-21379-201\AS\STRUCT\CA0\B0K90\045W011\SHEET 045W011-60K90-001-SOILBORING.SHEET.DGN

SOIL BORING WB11-04

SOIL BORING WB11-05

SOIL BORING WB11-06

SOIL BORING LOG for WB11-04. Includes header information, drilling method (3.25" Hollow Stem Auger), and soil profile data with blow counts and soil descriptions like Clayey SAND & GRAVEL and SAND & GRAVEL.

SOIL BORING LOG for WB11-05. Includes header information, drilling method (3.25" Hollow Stem Auger), and soil profile data with blow counts and soil descriptions like 18.0" TOPSOIL-black and SILTY CLAY-brown.

SOIL BORING LOG for WB11-06. Includes header information, drilling method (3.25" Hollow Stem Auger), and soil profile data with blow counts and soil descriptions like 7.0" TOPSOIL-black and SAND & GRAVEL-brown.

Vertical text on the left margin: 045W011-60K90-001-SOILBORING.DGN, VAL:SNUM-60K90-001-BORDER.DGN, ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS

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



SOIL BORING WB11-07

SOIL BORING WB11-08

SOIL BORING WB11-09

Geo **SPARCAS** Inc. Geotechnical, Environmental & Civil Engineering  
805 Amphlett Street, Suite 200  
Naperville, Illinois 60563  
(630) 256-7534

SOIL BORING LOG

PAGE 1 of 1  
DATE 4/27/2010  
LOGGED BY RJ  
GSI JOB No. 09118

ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, IL IDOT Job No. D-91-632-09  
SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township  
COUNTY Kane DRILLING METHOD 3.25" Hollow Stem Auger Hammer TYPE Diedrich Automatic

STRUCT. NO. 045-W011  
Station -  
BORING NO. WB11-07  
Station: 10+68 Ramp B  
Offset: 14' Right  
Ground Surface Elev. 825.3

D E P T H H	B L O W S Qu	U C S T	M O I S T	Surface Water Elev. Stream Bed Elev.	Groundwater Elevation: First Encounter Upon Completion	D E P T H H	B L O W S Qu	U C S T	M O I S T	After	
										(ft)	(6")
12.0" TOPSOIL 824.3 AS - 19											
SILTY CLAY-brown-stiff to very stiff (A-6) Wet											
819.8											
SAND & GRAVEL-brown-very dense (A-1)											
End Of Boring @ -20.0' Hollow Stem Augers Diedrich Automatic Hammer 805.3 -20 NP 2											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

Geo **SPARCAS** Inc. Geotechnical, Environmental & Civil Engineering  
805 Amphlett Street, Suite 200  
Naperville, Illinois 60563  
(630) 256-7534

SOIL BORING LOG

PAGE 1 of 1  
DATE 4/28/2010  
LOGGED BY RJ  
GSI JOB No. 09118

ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, IL IDOT Job No. D-91-632-09  
SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township  
COUNTY Kane DRILLING METHOD 3.25" Hollow Stem Auger Hammer TYPE Diedrich Automatic

STRUCT. NO. 045-W011  
Station -  
BORING NO. WB11-08  
Station: 11+38 Ramp B  
Offset: 9' Right  
Ground Surface Elev. 827.1

D E P T H H	B L O W S Qu	U C S T	M O I S T	Surface Water Elev. Stream Bed Elev.	Groundwater Elevation: First Encounter Upon Completion	D E P T H H	B L O W S Qu	U C S T	M O I S T	After	
										(ft)	(6")
7.0" TOPSOIL 826.4 AS - 21											
SILTY CLAY-brown-very stiff (A-6)											
824.1											
SAND & GRAVEL-brown-medium dense to very dense (A-1)											
End Of Boring @ -20.0' Hollow Stem Augers Diedrich Automatic Hammer 807.1 -20 NP 3											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

Geo **SPARCAS** Inc. Geotechnical, Environmental & Civil Engineering  
805 Amphlett Street, Suite 200  
Naperville, Illinois 60563  
(630) 256-7534

SOIL BORING LOG

PAGE 1 of 1  
DATE 4/28/2010  
LOGGED BY RJ  
GSI JOB No. 09118

ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, IL IDOT Job No. D-91-632-09  
SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township  
COUNTY Kane DRILLING METHOD 3.25" Hollow Stem Auger Hammer TYPE Diedrich Automatic

STRUCT. NO. 045-W011  
Station -  
BORING NO. WB11-09  
Station: 12+07 Ramp B  
Offset: 14' Right  
Ground Surface Elev. 827.5

D E P T H H	B L O W S Qu	U C S T	M O I S T	Surface Water Elev. Stream Bed Elev.	Groundwater Elevation: First Encounter Upon Completion	D E P T H H	B L O W S Qu	U C S T	M O I S T	After	
										(ft)	(6")
TOPSOIL-dark brown to black 826.5 AS - 22											
SILTY CLAY-brown-very stiff (A-6)											
824.5											
SAND & GRAVEL-brown-medium dense to very dense (A-1)											
End Of Boring @ -20.0' Hollow Stem Augers Diedrich Automatic Hammer 807.5 -20 NP 3											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

\\s045w011-60k99-001-SOILBORING.DGN, \\s045w011-60k99-001-BORDER.DGN, \\s045w011-60k99-001-DRILLING.DGN, \\s045w011-60k99-001-SHEET\A045W011-60K99-003-SOILBORING\_SHT.DGN

SOIL BORING WB11-10

SOIL BORING WB11-11

Geo Services Inc. SOIL BORING LOG PAGE 1 of 1 DATE 4/28/2010 LOGGED BY RJ GSI JOB No. 09118

ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, IL IDOT Job No. D-91-632-09

SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township

COUNTY Kane DRILLING METHOD 3.25" Hollow Stem Auger Hammer TYPE Diedrich Automatic

STRUCT. NO. 045-W011 Station - SURFACE WATER ELEV. *n/a* Stream Bed Elev. *n/a* GROUNDWATER ELEVATION: First Encounter *Dry* Upon Completion *Dry* After \_\_\_\_\_ Hrs. \_\_\_\_\_

DEPTH (ft)	B (%)	U (tsf)	M (%)
0			
2			89
4			
5	1.0B		32
7			
10			
-5	9	NP	10
10			
15			
22		NP	6
29			
24			
-10	23	NP	4
33			
38			
501"		NP	4
40			
29			
-15	26	NP	5
22			
28			
33		NP	3
32			
39			
501"		NP	5

TOPSOIL-black 824.1

SILTY CLAY-brown-stiff (A-6) Wet 822.1

SAND & GRAVEL-brown-medium dense to very dense (A-1)

End Of Boring @ -20.0'  
Hollow Stem Augers  
Diedrich Automatic Hammer 805.1 -20 501" NP 5

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N' value) is the sum of the last two blow values in each sampling zone (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NB-No Recovery

Geo Services Inc. SOIL BORING LOG PAGE 1 of 1 DATE 4/28/2010 LOGGED BY RJ GSI JOB No. 09118

ROUTE FAP 345 (U.S. Route 20) DESCRIPTION US 20 over McLean Boulevard, Elgin, IL IDOT Job No. D-91-632-09

SECTION 8R-R LOCATION SEC. 22, TWP. 41N, RNG. 8E, 3rd PM, Elgin Township

COUNTY Kane DRILLING METHOD 3.25" Hollow Stem Auger Hammer TYPE Diedrich Automatic

STRUCT. NO. 045-W011 Station - SURFACE WATER ELEV. *n/a* Stream Bed Elev. *n/a* GROUNDWATER ELEVATION: First Encounter *Dry* Upon Completion *Dry* After \_\_\_\_\_ Hrs. \_\_\_\_\_

DEPTH (ft)	B (%)	U (tsf)	M (%)
0			
3			97
6			
6	2.6B		25
2			
5			
-5	6	NP	13
5			
7			
8		NP	8
15			
24			
-10	21	NP	7
19			
21			
23		NP	5
15			
24			
-15	24	NP	4
17			
21			
23		NP	5
20			
25			
27		NP	4

14.0" TOPSOIL-black 822.8

SILTY CLAY-brown-very stiff (A-6) Wet 821.0

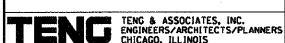
SAND & GRAVEL-brown-medium dense to dense (A-1)

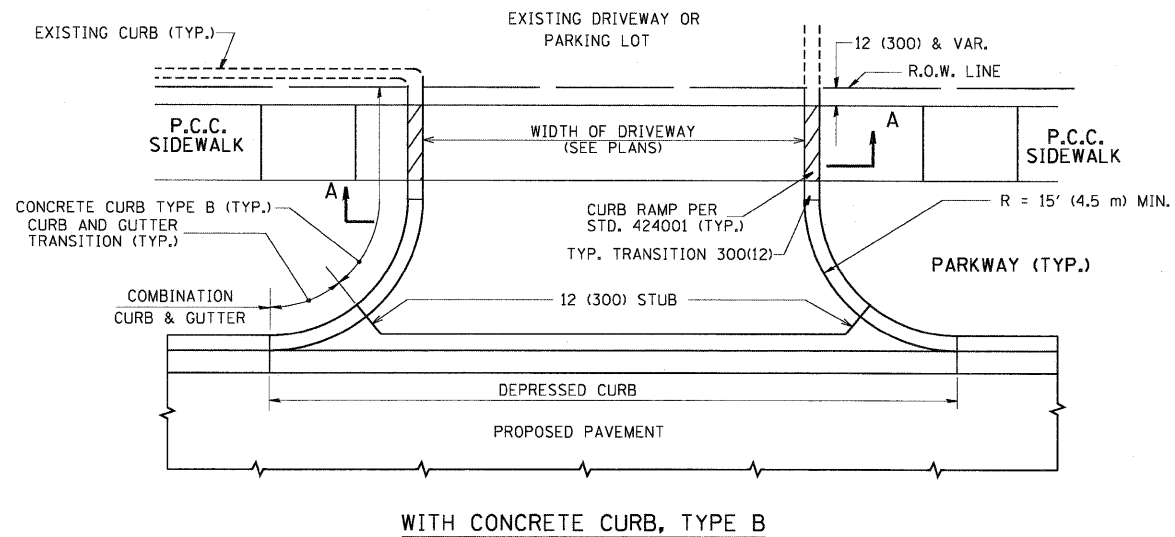
End Of Boring @ -20.0'  
Hollow Stem Augers  
Diedrich Automatic Hammer 804.0 -20 27 NP 4

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N' value) is the sum of the last two blow values in each sampling zone (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NB-No Recovery

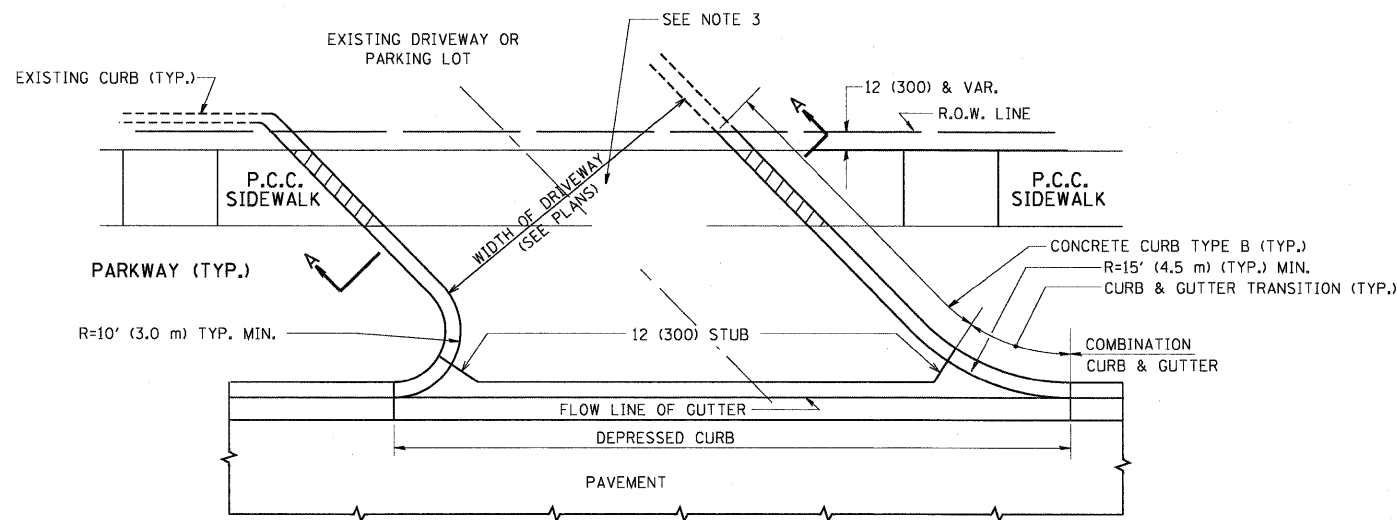
\\Fs-2044\AM\VAULT\222221\STRUCT\CAD\60639\045WB11-10\WB11-10\_S01\BORING\_SHT.DGN

FILE NAME = *FILEL\$	USER NAME = *USER\$	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b> US 20 OVER MCLEAN BOULEVARD	<b>SOIL BORING LOGS</b> <b>4 OF 4</b>	SCALE: SHEET NO. RW11-18 OF RW11-18 STA. 5+99.65 TO STA. 14+20.74	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
							345	8R-HB-2-BY-1	KANE	434	298
						SN 045-W011		CONTRACT NO. 60K90			
						FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

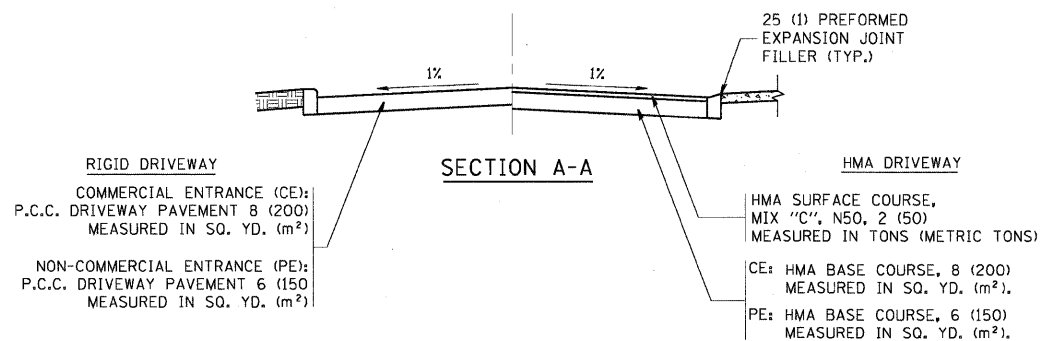




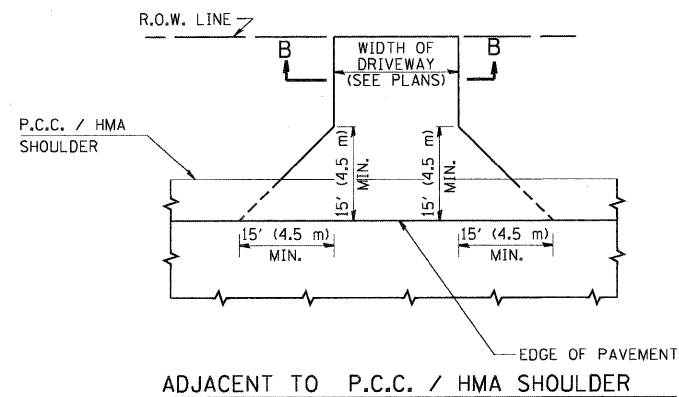
WITH CONCRETE CURB, TYPE B



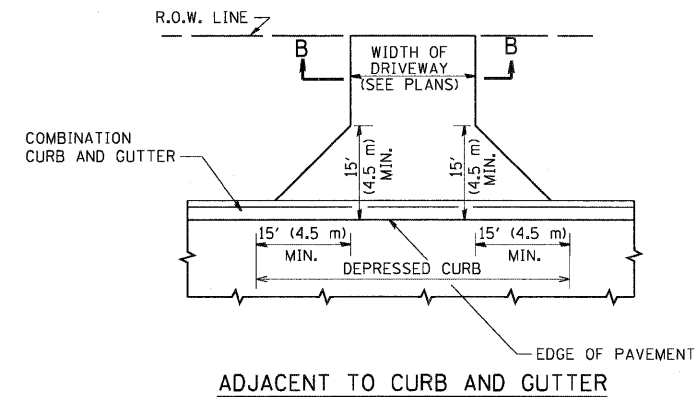
WITH CONCRETE CURB, TYPE B



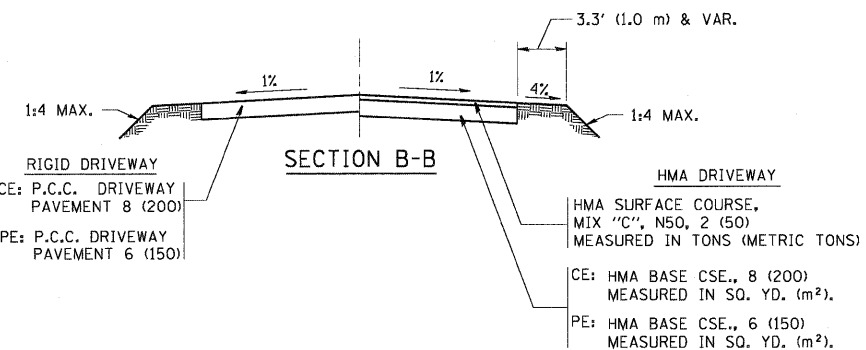
SECTION A-A



ADJACENT TO P.C.C. / HMA SHOULDER



ADJACENT TO CURB AND GUTTER



SECTION B-B

**GENERAL NOTES:**

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

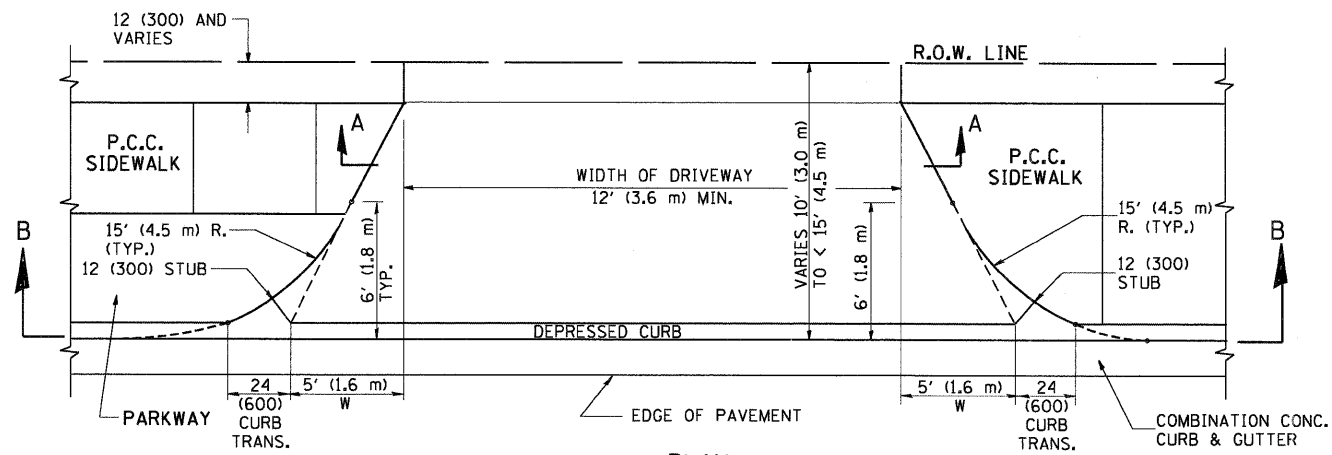
WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

FILE NAME = c:\projects\dist\22x34\bd01.dgn	USER NAME = bawardl	DESIGNED - R. SHAH	REVISED - M. GOMEZ 04-06-01
		DRAWN -	REVISED - P. LOFLUER 04-15-03
	PLOT SCALE = 49.9999' / IN.	CHECKED -	REVISED - R. BORO 01-01-07
	PLOT DATE = 6/12/2008	DATE - 11-04-95	REVISED - R. BORO 06-11-08

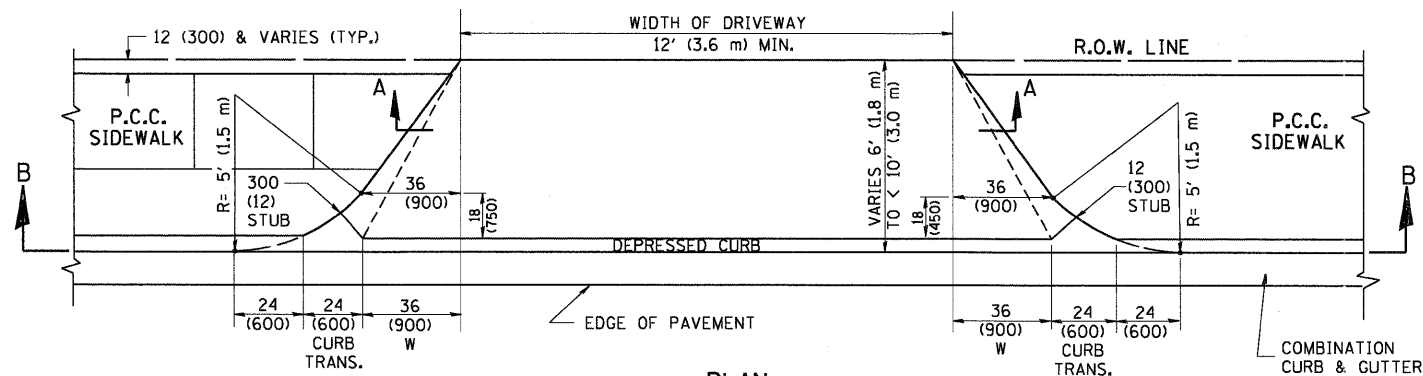
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W. AND FACE OF CURB &amp; EDGE OF SHOULDER &gt;= 15' (4.5 m)</b>			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	

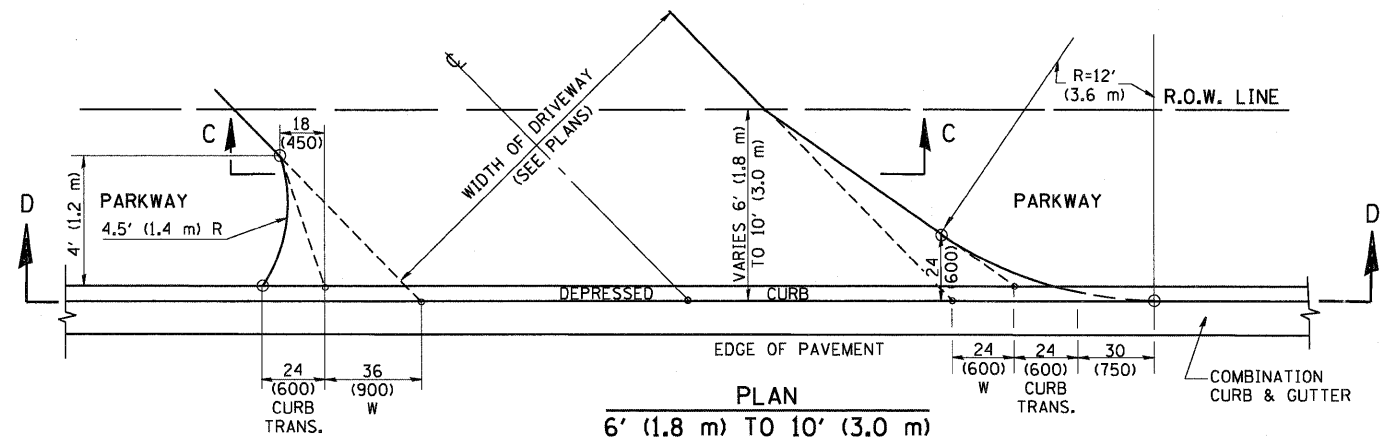
F.A.P. RTE. 345	SECTION SR-HB-2-BY-1	COUNTY KANE	TOTAL SHEETS 434	SHEET NO. 299
<b>BD0156-07 (BD-01)</b>			<b>CONTRACT NO. 60K90</b>	
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				



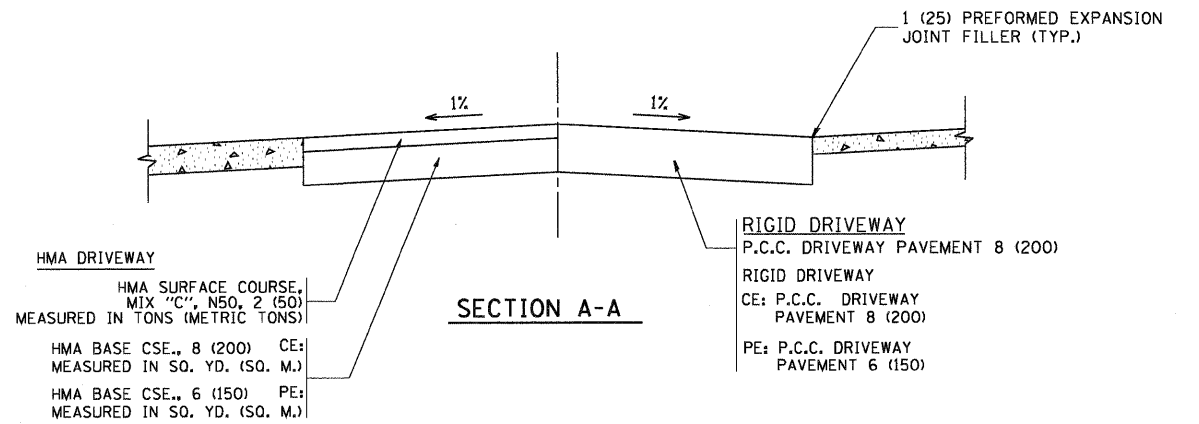
**PLAN**  
10' (3.0 m) TO < 15' (4.5 m)



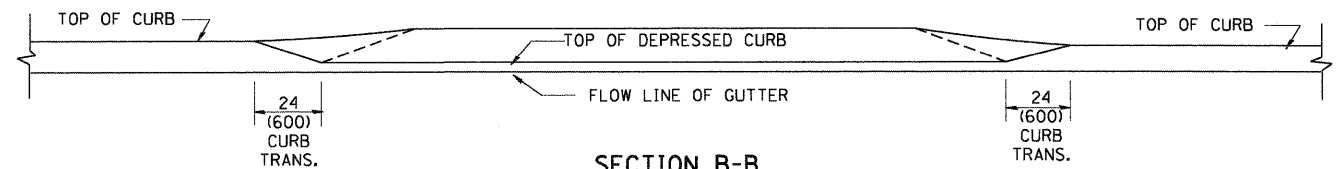
**PLAN**  
6' (1.8 m) TO < 10' (3.0 m)



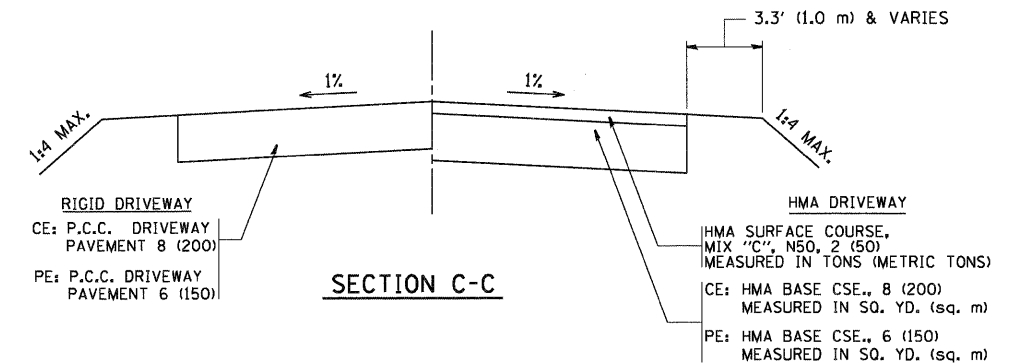
**PLAN**  
6' (1.8 m) TO 10' (3.0 m)



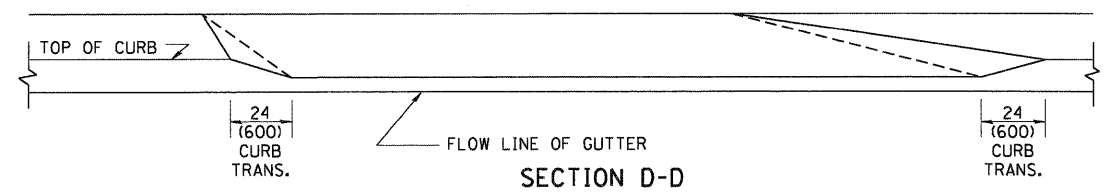
**SECTION A-A**



**SECTION B-B**



**SECTION C-C**



**SECTION D-D**

**GENERAL NOTES**

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY, NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

"W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

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

FILE NAME = W:\diststd\22x34\bd02.dgn	USER NAME = geglennob	DESIGNED - R. SHAH	REVISED - T. HOLTZ 04-08-97
		DRAWN -	REVISED - M. GOMEZ 04-06-01
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED - P. LOFLEUR 04-15-03
	PLOT DATE = 1/4/2008	DATE - 11-06-95	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DRIVEWAY DETAILS  
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)**

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

F.A.P. RTE. 345	SECTION 8R-HB-2-BY-1	COUNTY KANE	TOTAL SHEETS 434	SHEET NO. 300
BD400-02 (BD-02)			CONTRACT NO. 60K90	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				