

FEDERAL AID DESIGN ENGINEER: JESSICA FELICIANO 847-705-4487 URS DESIGN ENGINEER: DAVID LANDEWEER 312-939-1000

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	1

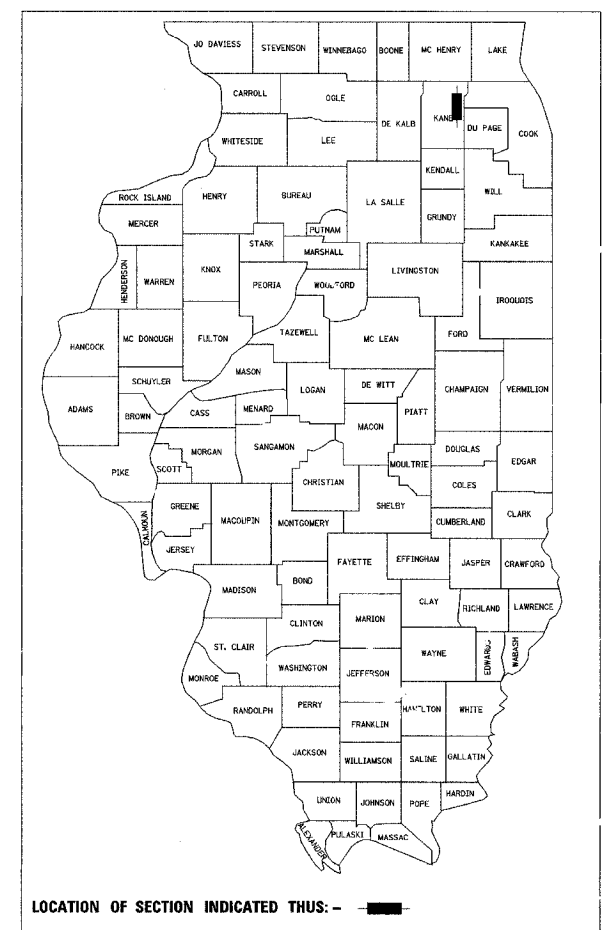
**CONTRACT NO.: 83923** +1 = 56

# KANE COUNTY

## STATE OF ILLINOIS

# PROPOSED FEDERAL AID BRIDGE REPLACEMENT

### IL 31 BRIDGE OVER FUTURE FAP ROUTE 361 (NEW STEARNS ROAD)



**INDEX OF SHEETS**

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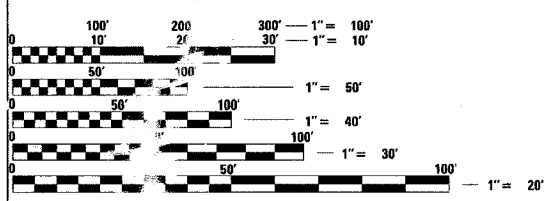
**SECTION NO. 06-00214-06-BR**  
**PROJECT HPP-1527(023)**  
**KANE COUNTY**  
**C-91-232-07**  
**R 8 E**

**TRAFFIC DATA**  
**IL RTE 31:**  
**YEAR 2000 ADT: 8000**  
**YEAR 2020 ADT: 13000**

**DESIGN DESIGNATION (IL 31):**  
**1200(20) MINOR ARTERIAL**  
**DESIGN SPEED = 50 MPH**  
**POSTED SPEED = 45 MPH**

**SCALES:**

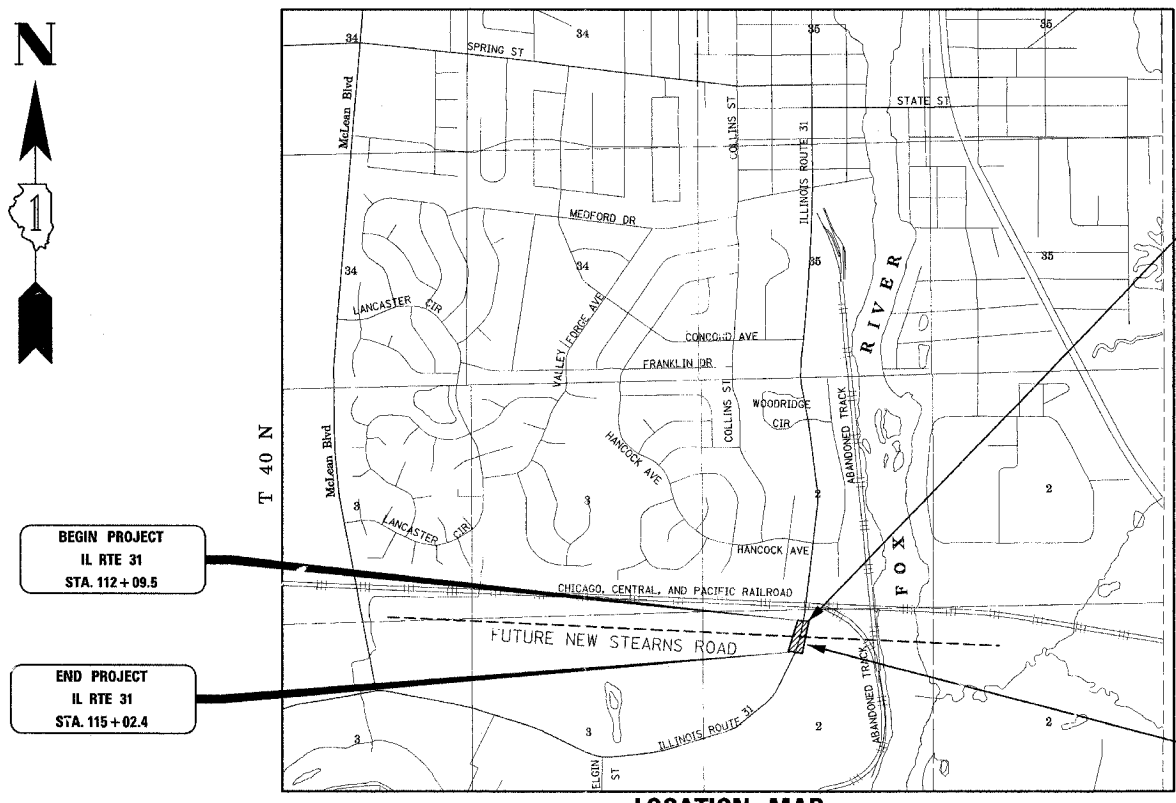
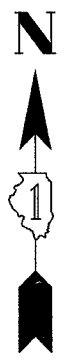
- PLAN: 1" = 20'
- PROFILE, HORIZ.: 1" = 20'
- PROFILE, VERT.: 1" = 5'
- CROSS SECTIONS, HORIZ.: 1" = 10'
- CROSS SECTIONS, VERT.: 1" = 5'



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

**J.U.L.I.E.**  
**JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION**  
**1-800-892-0123**  
**CALL 48 HOURS IN ADVANCE**

**CONTRACT NO.: 83923**



**LOCATION MAP**

**VILLAGE OF SOUTH ELGIN**  
**GROSS LENGTH OF IMPROVEMENT = 292.9 FEET**  
**NET PROJECT LENGTH = 292.9 FEET**

STRUCTRE NO. 045-2031 (STA. 113 + 61.11)  
CONSTRUCT 2 SPAN PPC MULTI-GIRDER  
ON CONCRETE ABUTMENTS AND CENTER PIER

IL 31 OVER NEW STEARNS ROAD  
STA. 113 + 61.1  
LENGTH = 168'-7"  
SN = 045-2031



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Approved **MAY 23 2007**  
*Carl H. Holt*  
COUNTY ENGINEER

Passed **MAY 31 2007**  
*Christopher Holt*  
DISTRICT 1 ENGINEER OF LOCAL ROADS AND STREETS

Releasing for Bid Based on Limited Review  
**June 1 2007**  
*Diane O'Keefe/Sgt*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

**PLANS PREPARED BY:**  
**URS**  
100 S. WACKER DRIVE, SUITE 500 TEL (312) 939-1000  
CHICAGO, IL 60606 FAX (312) 939-4198

DATE: 5/17/07

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83923

## GENERAL NOTES

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, "ADOPTED JANUARY 1, 2007; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE "STANDARD SPECIFICATIONS FOR WATER & SEWER MAIN CONSTRUCTION IN ILLINOIS," FIFTH EDITION; THE DETAILS IN THE PLANS; AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.
- ALL TRAFFIC CONTROL AND OTHER ADVISORY SIGNS NEEDED FOR CONSTRUCTION ARE TO BE FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH ARTICLE 107.14 OF THE STANDARD SPECIFICATIONS.

### UTILITIES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL UTILITIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF ALL UTILITY EQUIPMENT. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY OWNERS AS PROVIDED FOR IN THE STANDARD SPECIFICATIONS IF UTILITY RELOCATION, ADJUSTMENT, OR PROTECTION IS NECESSARY.
- THE LOCATION OF EXISTING DRAINAGE STRUCTURES, STORM SEWERS, WATER MAINS, SANITARY SEWERS, AND ANY OTHER PUBLIC OR PRIVATE UTILITIES AS SHOWN ON THE PLANS IS APPROXIMATE, AND THEIR EXACT LOCATION IS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

### STAKING

- THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL SECTION OR SUBSECTION MONUMENTS, PROPERTY CORNERS, AND REFERENCE MARKERS UNTIL THE OWNER, HIS AGENT, OR AN AUTHORIZED SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATIONS.
- DRAINAGE STRUCTURE OFFSET LOCATIONS GIVEN ON THE DETAILED PLANS ARE TO THE FOLLOWING POINTS:  
A) FOR STRUCTURES FALLING IN THE CURB LINE, TO EDGE OF PAVEMENT;  
B) FOR ALL OTHER STRUCTURES, TO THE CENTER OF THE STRUCTURE.
- ALL ELEVATIONS ARE ON U.S.C.S DATUM.
- ALL OFFSET LOCATIONS GIVEN ON THE DETAILED PLANS FOR STRUCTURES, EDGE OF PAVEMENT, ETC. ARE FROM THE CENTERLINE AS SHOWN ON THE PLANS.

### SEWERS AND WATER MAINS

- ANY LOOSE MATERIAL DEPOSITED IN THE FLOW LINE OF DRAINAGE STRUCTURES, WHICH OBSTRUCTS THE NATURAL FLOW OF WATER SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. PRIOR TO ACCEPTANCE OF THE IMPROVEMENT, ALL DRAINAGE STRUCTURES SHALL BE FREE OF DIRT AND DEBRIS. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN IN AN OPERATING CONDITION TEMPORARY OUTLETS AND CONNECTIONS FOR ALL DRAINS, SEWERS, AND CATCH BASINS. THE CONTRACTOR SHALL PROVIDE FACILITIES WHICH HAVE THE CAPACITY TO RECEIVE AND DISCHARGE THE STORM WATER FLOW RATES NORMALLY ACCEPTED AND RELEASED BY EXISTING DRAINAGE FACILITIES. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- FRAME ELEVATIONS GIVEN ON THE PLANS ARE ONLY TO ASSIST THE CONTRACTOR IN DETERMINING THE APPROXIMATE OVERALL HEIGHT OF THE STRUCTURE. FRAMES ON ALL STRUCTURES WILL BE ADJUSTED TO THE FINAL ELEVATION AND CROSS SLOPE OF THE AREA IN WHICH THEY ARE LOCATED.

### BACKFILL

- STORM SEWER, WATER MAIN, AND SANITARY SEWER SHALL BE BACKFILLED IN ACCORDANCE WITH ARTICLE 550.07, METHOD 1 ONLY, OR AS DIRECTED BY THE ENGINEER.
- ALL TRENCH BACKFILL QUANTITIES FOR STORM AND SANITARY SEWER AND WATER MAIN HAVE BEEN COMPUTED AND SHALL BE PAID FOR IN ACCORDANCE WITH THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS, BUREAU OF CONSTRUCTION TRENCH BACKFILL TABLE.

### MISCELLANEOUS

- THE CONTRACTOR SHALL MAINTAIN EXISTING SIDE STREET ACCESS, AND EXISTING DRIVEWAY ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING CONSTRUCTION OF THE PROJECT. THIS ITEM SHALL BE INCLUDED IN THE ITEM "TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR."
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS CONTRACT.
- WHERE NEW WORK MEETS EXISTING FEATURES TO REMAIN, FIELD CHECK ALL DIMENSIONS AND ELEVATIONS BEFORE PROCEEDING WITH CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
- THE CONTRACTOR WILL BE REQUIRED TO COMPLY WITH ALL STATE REGULATIONS REGARDING AIR, WATER, AND NOISE POLLUTION. THE CONTRACTOR IS PROHIBITED FROM BURNING ANY MATERIAL WITHIN OR ADJACENT TO THE IMPROVEMENT.
- ALL DISTURBED AREAS WITHIN THE PROJECT THAT ARE NOT OTHERWISE SURFACED SHALL BE SEEDED. SEED LIMITS SHOWN ON THE PLANS ARE THE MAXIMUM PAY WIDTHS FOR PAYMENT PURPOSES.
- ALL TYPE I AND II BARRICADES SHALL BE WEIGHTED DOWN WITH TWO SANDBAGS EACH.
- THE CONTRACTOR SHALL PREPARE THE SUBGRADE IN ACCORDANCE WITH ARTICLE 301.03 OF THE STANDARD SPECIFICATIONS PRIOR TO THE REMOVAL OF ANY UNSTABLE MATERIALS.
- FERTILIZER NUTRIENTS:  
USE A FERTILIZER WITH AN ANALYSIS OF 1:1:1 RATIO AT THE FOLLOWING RATE PER ACRE:
- NITROGEN FERTILIZER NUTRIENT 90 LBS.  
PHOSPHORUS FERTILIZER NUTRIENT 90 LBS.  
POTASSIUM FERTILIZER NUTRIENT 90 LBS.
- THE CONTRACTOR WILL BE REQUIRED TO TEMPORARILY RESET ALL EXISTING MAIL BOXES WHICH INTERFERE WITH HIS CONSTRUCTION OPERATIONS. AND AFTER COMPLETION OF ROADWAY CONSTRUCTION TO SET THEM IN THEIR PERMANENT LOCATIONS AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE IN CONFORMANCE WITH ARTICLE 107.20 OF THE STANDARD SPECIFICATIONS, AND THE COST WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

### SIGNING

- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR, ENGINEER AND KANE CO. DOT MAINTENANCE PERSONNEL SHALL INVENTORY THE LOCATION, SIZE, TYPE AND CONDITION OF ALL EXISTING SIGNS. ANY SIGN DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- ALL SIGNS SHALL BE ERECTED IN STRICT CONFORMANCE WITH SECTION 720 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND BY STATE PRE-QUALIFIED CONTRACTOR PERSONNEL, SUCH AS A SUB CONTRACTOR THAT SPECIALIZES IN TRAFFIC CONTROL AND SIGN PLACEMENT. TO INSURE THIS OPERATION IS PERFORMED CORRECTLY THERE WILL BE A WALKTHRU ON THE JOB WITH THE ENGINEER AND KANE CO. DOT MAINTENANCE PERSONNEL AS PART OF THE OVERALL PUNCH LIST.
- ALL WORK INVOLVING SIGNS SHALL BE GOVERNED BY THE FOLLOWING REQUIREMENTS:
- SIGNS SHALL NOT BE MOVED UNTIL PROGRESS OF WORK NECESSITATES IT.
- ALL SIGNS SHALL BE INSTALLED OR RELOCATED IN PERMANENT LOCATIONS AS THE ROADWAY IS COMPLETED. THIS WORK SHALL BE PAID FOR USING THE APPROPRIATE PAY ITEM.
- ALL REMOVED SIGNS WILL BE RETURNED TO THE COUNTY OR STATE, AS APPLICABLE.
- LONGER POSTS MAY BE REQUIRED AT SOME TEMPORARY OR PERMANENT SIGN LOCATIONS TO MAINTAIN PROPER SIGN ELEVATIONS.

**URS** 100 SOUTH WACKER DR. STE 500 TEL (312) 939-1000  
CHICAGO, IL 60606 FAX (312) 939-4198

REVISIONS	
NAME	DATE

IL ROUTE 31 BRIDGE OVER NEW STEARNS ROAD

GENERAL NOTES

SCALE:  
DATE 4/23/2007

DRAWN BY: AMK  
CHECKED BY: DDL

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	3
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO.		83423		

## GENERAL NOTES CONTINUE

### SEDIMENTATION AND EROSION CONTROL NOTES

SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL-STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS, AND THE USE OF TEMPORARY OR PERMANENT MEASURES.

SOIL-EROSION AND SEDIMENT-CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.

DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN 14 CALENDAR DAYS OF THE END OF THE ACTIVE HYDROLOGIC DISTURBANCE, OR REDISTURBANCE.

AREAS OR EMBANKMENTS HAVING SLOPES GREATER THAN 3H:1V SHALL BE STABILIZED WITH EROSION CONTROL BLANKET IN COMBINATION WITH SEEDING.

ALL STORM SEWERS AND CULVERTS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT-CONTROL MEASURE.

ALL TEMPORARY EROSION - AND SEDIMENT-CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.

ALL TEMPORARY AND PERMANENT EROSION-CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED BY THE CONTRACTOR AS NEEDED. THE PROPERTY OWNER SHALL BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE AND REPAIR.

A STABILIZED MAT OF AGGREGATE UNDERLAIN WITH FILTER CLOTH (OR OTHER APPROPRIATE MEASURE) SHALL BE LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, OR PARKING AREA. ANY SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY, OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT-DISPOSAL AREA.

SOIL STOCKPILES SHALL NOT BE LOCATED IN A FLOOD-PRONE AREA OR A DESIGNATED BUFFER PROTECTING WATERS OF THE UNITED STATES.

IF DE-WATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT-CONTROL MEASURE (e.g., SEDIMENT TRAP, SEDIMENT BASIN, INLET FILTERS, OR OTHER APPROPRIATE MEASURE).

THE EROSION-CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER OR GOVERNING AGENCY.

## KANE-DUPAGE SOIL AND WATER DISTRICT NOTES

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTUREAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED TO MINIMUM STANDARDS AND SPECIFICATIONS IN THE ILLINOIS URBAN MANUAL REVISED FEBRUARY 2002.

THE KANE-DUPAGE SOIL AND WATER CONSERVATION DISTRICT (KDSWCD) MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITIES, AND ONE WEEK PRIOR TO THE FINAL CONSTRUCTION.

A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

PRIOR TO COMMENCING LAND-DISTURBANCE ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING BUT NOT LIMITED TO, ADDITIONAL PHASES OF DEVELOPMENT AND OFF-SITE BORROW OR WASTE AREAS) A SUPPLEMENTARY EROSION CONTROL PLAN SHALL BE SUBMITTED TO THE OWNER FOR REVIEW BY THE KDSWCD.

DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. DEWATERING DIRECTLY INTO FIELD TILES OR STORMWATER STRUCTURES IS PROHIBITED.

## STATE STANDARDS

000001-04	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-01	AREAS OF REINFORCEMENT REBARS
280001-03	TEMPORARY EROSION CONTROL SYSTEM
420001-06	PAVEMENT JOINTS
420401-05	BRIDGE APPROACH PAVEMENT
515001-02	NAME PLATE FOR BRIDGES
542401	METAL END SECTION FOR PIPE CULVERT
602401-01	MANHOLE TYPE A
604001-02	FRAME AND LIDS TYPE 1
606001-03	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
609006-03	BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)
630001-07	STEEL PLATE BEAM GUARDRAIL
630301-04	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-06	TRAFFIC BARRIER TERMINAL, TYPE 6
635001	DELINEATORS
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
701001-01	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 4.5 m (15') AWAY
701006-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
701301-02	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
702001-06	TRAFFIC CONTROL DEVICES
720006-01	SIGN PANEL ERECTION DETAILS
720011	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
729001	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGN MARKERS)
780001-01	TYPICAL PAVEMENT MARKINGS

## DISTRICT STANDARDS

BD 32	BUTT JOINTS AND HMA TAPER
BD 34	STEEL PLATE BEAM GUARDRAIL ADJACENT TO CURB AND GUTTER AND STABILIZATION AT TB TTY, 1 SPL.
TC 11	RAISED REFLECTIVE PAVEMENT MARKERS (SNOW PLOW RESISTANT)
TC 13	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
TC 21	TYPICAL MARKING FOR CLOSING STATE HIGHWAYS

LOCATION	SUITABLE EXCAVATION (EARTH EXCAVATION)	EARTH EX. ADJUSTED FOR SHRINKAGE (15%)	SUITABLE EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (FURNISHED EXCAVATION)	UNSUITABLE EXCAVATION (REMOVAL & DISPOSAL OF UNSUITABLE MATERIAL)	UNSUITABLE EMBANKMENT	TOPSOIL FURNISH & PLACE 4"	UNSUITABLE BALANCE WASTE (+) OR SHORTAGE (-)
	CY	CY	CY	CY	CY	CY	CY	CY
ROADWAY	30650	26053	6934	19119	3991	0	1463	2528

EXCESS EARTHWORK WILL BE PLACED AT THE DUNHAM ROAD SITE NORTH OF THE CNIC RAILROAD AT  
 7N512 DUNHAM ROAD, ELGIN  
 7N330 DUNHAM ROAD, ELGIN  
 7N306 DUNHAM ROAD, ELGIN

**URS** 1701 GOLF ROAD, SUITE 1000 TEL (847) 228-0707  
 ROLLING MEADOWS, IL 60008 FAX (847) 228-1115

REVISIONS	
NAME	DATE

IL ROUTE 31 BRIDGE OVER NEW STEARNS ROAD

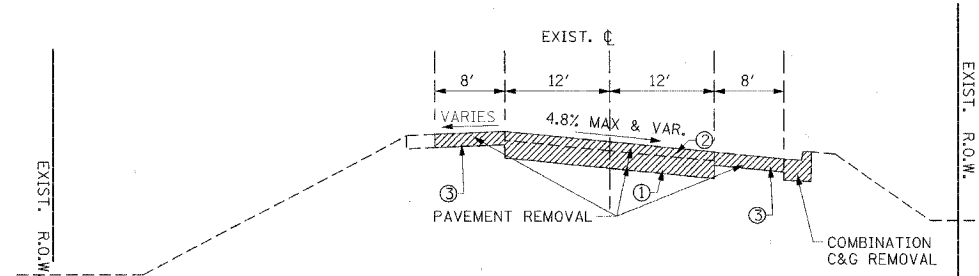
GENERAL NOTES

SCALE: DATE 2/12/2007 DRAWN BY: AMK CHECKED BY: DDL

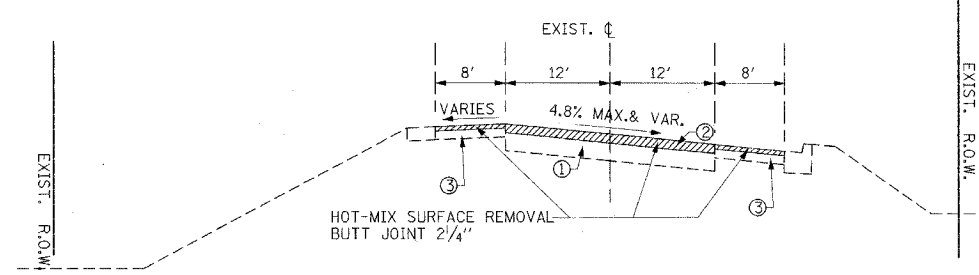


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 83923



**EXISTING TYPICAL SECTION**  
STA. 112+42.8 TO 114+87.7



**EXISTING TYPICAL SECTION**  
STA. 112+09.5 TO STA. 112+42.8  
STA. 114+87.7 TO STA. 115+02.4

REMOVAL

- LEGEND**
- ① EXISTING P.C.C. BASE 9"
  - ② EXISTING HMA OVERLAY 3"
  - ③ EXISTING HMA SHOULDER 8"

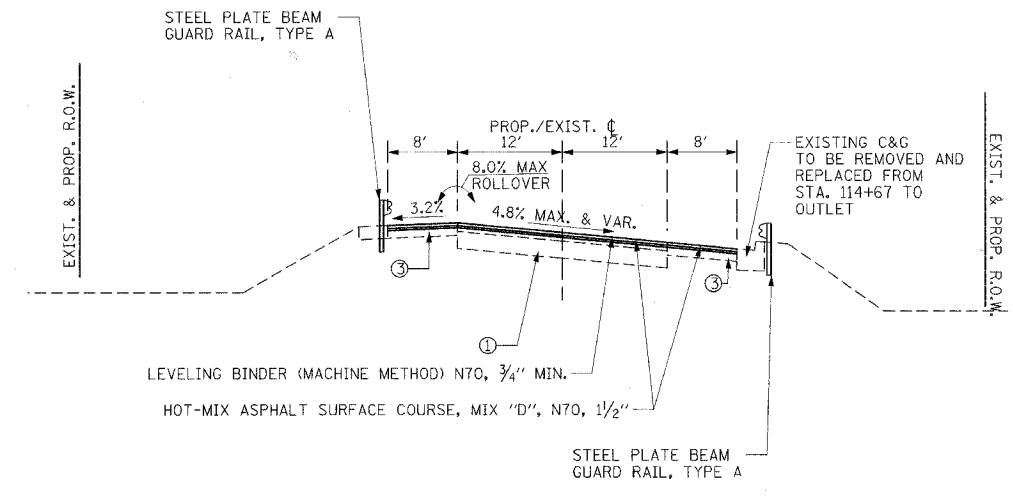
POROUS GRANULAR EMBANKMENT, SUBGRADE (PGES) HAS BEEN PROVIDED FOR USE AT LOCATIONS INDICATED FOR SOILS THAT TEND TO BE UNSUITABLE OR UNSTABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH PGES WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE GEOTECHNICAL ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHOULD BE TESTED WITH STATIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.03 AND THE UNDERCUT GUIDELINES IN THE IDOT SUBGRADE STABILITY MANUAL. IF UNSTABLE AND/OR UNSTABLE MATERIAL IS NOT ENCOUNTERED, THEN THE QUANTITY SHALL BE DEDUCTED AND NO COMPENSATION WILL BE DUE THE CONTRACTOR.

**HOT-MIX ASPHALT MIXTURE REQUIREMENTS**

MIXTURE TYPE	AC TYPE	AIR VOIDS
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, (IL-9.5mm)	PG64-22	4% @ 70 GYR.
LEVELING BINDER (MACHINE METHOD) N70, (3/4" MIN. 2 1/4" MAX), (IL-9.5mm)	PG64-22/ 58-22*	4% @ 70 GYR.

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 142 LBS/SQ YD/IN

\* WHEN RAP EXCEEDS 20%, THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22



**PROPOSED TYPICAL SECTION**  
**IL. RT. 31 OVER NEW STEARNS RD.**  
STA. 112+09.5 TO STA. 112+50.8  
STA. 114+79.4 TO STA. 115+02.4

**IL. RT. 31 BRIDGE AND APPROACHES OMISSION**  
STA. 112+50.8 TO STA. 114+79.4  
(SEE SHEET 18)

**URS** 100 SOUTH WACKER DR. STE 500 TEL (312) 939-1000  
CHICAGO, IL 60606 FAX (312) 939-4198

REVISIONS	
NAME	DATE

IL ROUTE 31 BRIDGE OVER NEW STEARNS ROAD  
EXISTING & PROPOSED  
TYPICAL SECTIONS

SCALE: DATE 2/12/2007  
DRAWN BY: AMK  
CHECKED BY: DDL

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 83923				

NO.	DESCRIPTION	ELEV.	APPROX. STA./OS
BM 11	"BENCH TIE" (YELLOW) SET IN SOUTH FACE OF 12" TREE, 33' +/- NORTH OF THE NORTHWEST CHAINLINK FENCE CORNER THAT SURROUNDS COMMUNICATION TOWER	737.44	550+90.63/141.8' LT.
BM 13	"BENCH TIE" (YELLOW) SET IN EAST FACE OF POWER POLE 110' +/- SOUTH OF CL OF RAILROAD BRIDGE, 10' +/- WEST OF CL OF TROLLEY TRACKS, 5' +/- NORTHWEST OF TROLLEY POWER POLE #50	700.78	
BM 14	"ALUMINUM DISK" SET IN CONCRETE AT SIDE OF ROUTE 31 ACROSS FROM THE PROPERTY LINE EXTENDED BETWEEN RESIDENCE #7N398 AND #7N416	750.20	116+51.27/33.6' LT.
OSBM 125	SOUTHWEST BOLT TRANSMISSION TOWER SOUTHEAST OF 4 BOLTS ON EAST SIDE OF ROUTE 31 SOUTH OF RAILROAD TRACKS	755.42	110+36.70/76.9' LT.

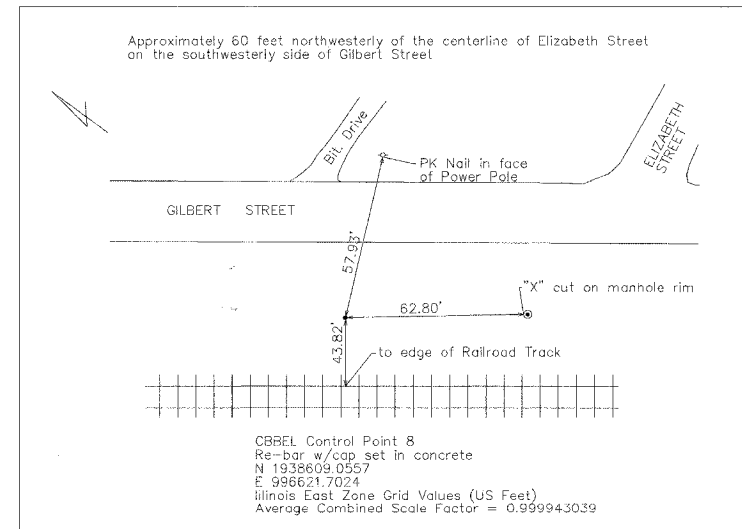
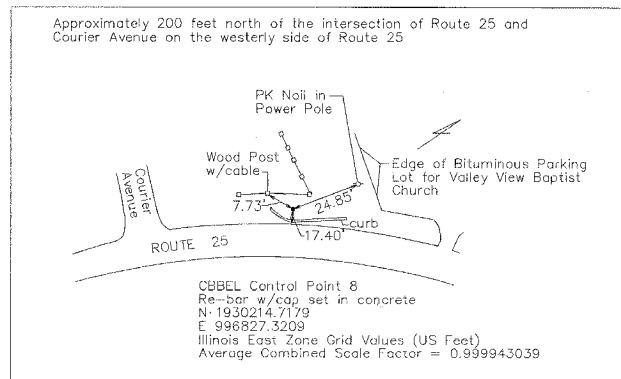
HORIZONTAL CONTROL DATA

STATION	NORTHING	EASTING
ILLINOIS ROUTE 31		
P.O.T. 107+68.31	1935122.4469	994061.3740
P.C. 112+11.80	1934682.2344	994007.5269
P.I. 114+87.40	1934408.6760	993974.0650
P.T. 117+58.16	1934160.0317	993855.1956
P.O.T. 119+44.46	1933991.9569	993774.8440
PROPOSED STERNS ROAD		
P.C. 552+45.94	1934613.6801	993138.6315
P.I. 555+90.82	1934562.1525	993479.6459
P.T. 559+35.18	1934543.5899	993824.0314
P.O.T. 565+00	1934513.1888	994388.0352

Coordinates are "Illinois East Zone" Grid Values (U.S. Feet)  
To obtain ground coordinates, divide by the Average Combined Scale Factor of 0.999943039

PROP. CURVE WEST5  
 PI STA. = 555+90.82  
 I = 5° 30' 25" (LT)  
 D = 0° 47' 56"  
 R = 7,171.00'  
 T = 344.89'  
 L = 689.24'  
 E = 8.29'  
 e = \_\_\_\_\_  
 T.R. = \_\_\_\_\_  
 S.E. RUN = \_\_\_\_\_  
 P.C. STA. = 552+45.94  
 P.T. STA. = 559+35.18

PROP. CURVE IL31\_1  
 PI STA. = 114+87.40  
 I = 18° 34' 38" (RT)  
 D = 3° 24' 01"  
 R = 1,685.07'  
 T = 275.60'  
 L = 546.36'  
 E = 22.39'  
 e = \_\_\_\_\_  
 T.R. = \_\_\_\_\_  
 S.E. RUN = \_\_\_\_\_  
 P.C. STA. = 112+11.80  
 P.T. STA. = 117+58.16



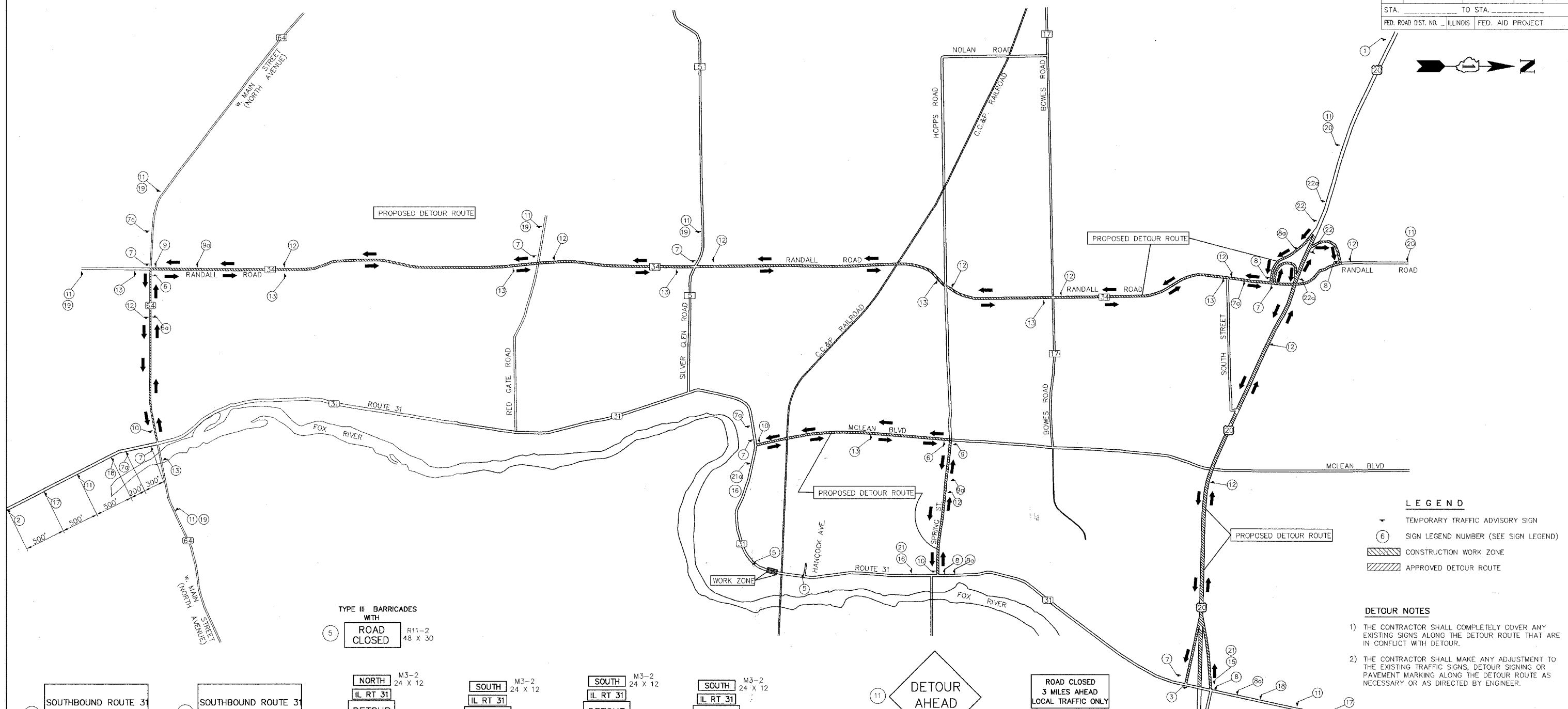
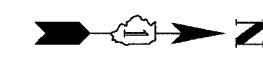
REVISIONS	
NAME	DATE
Road names changed	2/27/07

**URS** 100 SOUTH WACKER DR. STE 500 TEL (312) 939-1000  
 CHICAGO, IL 60606 FAX (312) 939-4198

IL ROUTE 31 BRIDGE OVER NEW STEARNS ROAD

SCALE: DRAWN BY: AMK  
 DATE 4/23/2007 CHECKED BY: DDL

F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	7
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



- LEGEND**
- ▼ TEMPORARY TRAFFIC ADVISORY SIGN
  - ⑥ SIGN LEGEND NUMBER (SEE SIGN LEGEND)
  - ▨ CONSTRUCTION WORK ZONE
  - ▨ APPROVED DETOUR ROUTE

- DETOUR NOTES**
- 1) THE CONTRACTOR SHALL COMPLETELY COVER ANY EXISTING SIGNS ALONG THE DETOUR ROUTE THAT ARE IN CONFLICT WITH DETOUR.
  - 2) THE CONTRACTOR SHALL MAKE ANY ADJUSTMENT TO THE EXISTING TRAFFIC SIGNS, DETOUR SIGNING OR PAVEMENT MARKING ALONG THE DETOUR ROUTE AS NECESSARY OR AS DIRECTED BY ENGINEER.
  - 3) THE CONTRACTOR SHALL NOTIFY THE IDOT TRAFFIC CONTROL SUPERVISOR AT 847-705-4470 AT LEAST 72 HOURS PRIOR TO BEGINNING ANY WORK ON IL31 OR THE DETOUR ROUTE(S).

TYPE III BARRICADES WITH ROAD CLOSED R11-2 48 X 30

1 SOUTHBOUND ROUTE 31 CLOSED AT SPRING ST USE DETOUR

2 NORTHBOUND ROUTE 31 CLOSED AT MCLEAN BLVD USE DETOUR

3 SOUTHBOUND ROUTE 31 CLOSED SOUTH OF US 20 LOCAL TRAFFIC ONLY

4 NORTHBOUND ROUTE 31 CLOSED EAST OF MCLEAN BLVD LOCAL TRAFFIC ONLY

5 TYPE III BARRICADES WITH ROAD CLOSED R11-2 48 X 30

6 NORTHbound IL RT 31 DETOUR M3-2 24 X 12, M4-9R 30 X 24

7 SOUTHbound IL RT 31 DETOUR M3-2 24 X 12, M4-9R 30 X 24

8 NORTHbound IL RT 31 DETOUR M3-2 24 X 12, M4-9L 30 X 24

9 SOUTHbound IL RT 31 DETOUR M3-2 24 X 12, M4-9L 30 X 24

10 END DETOUR M4-8a

11 SOUTHbound IL RT 31 DETOUR M3-2 24 X 12, M4-8 30 X 24

12 NORTHbound IL RT 31 DETOUR M3-2 24 X 12, M4-8 30 X 24

13 SOUTHbound IL RT 31 DETOUR M3-2 24 X 12, M4-9L 30 X 24

14 ROAD CLOSED 3 MILES AHEAD LOCAL TRAFFIC ONLY R 11-3 1500mm x 750mm

15 ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY R 11-3 1500mm x 750mm

16 ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY R 11-3 1500mm x 750mm

17 ROAD CLOSED AHEAD W 20-3 1200mm x 1200mm

18 ROAD CLOSED 500 FT. W 20-3 1200mm x 1200mm

19 NORTHbound IL RT 31 M3-2 24 X 12

20 SOUTHbound IL RT 31 M3-2 24 X 12

21 DETOUR M4-10 48 X 18

21a DETOUR M4-10 48 X 18

22 SOUTHbound IL RT 31 DETOUR M3-2 24 X 12, M4-9L 30 X 24

22a SOUTHbound IL RT 31 DETOUR M3-2 24 X 12, M4-9L 30 X 24

**REVISIONS**

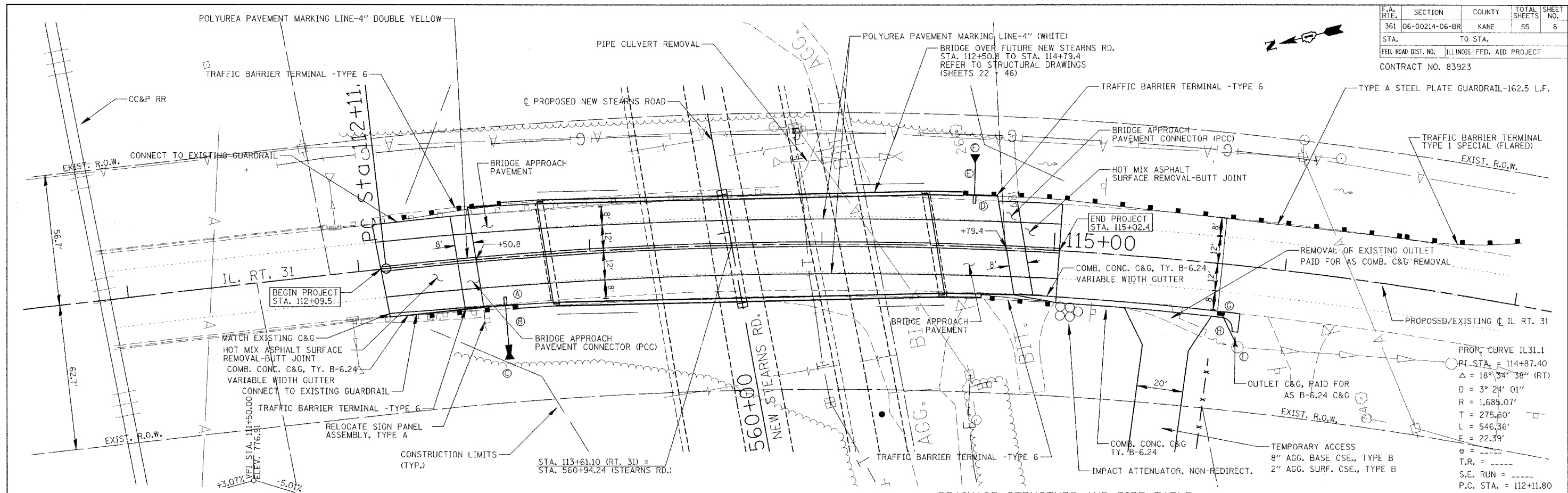
NAME	DATE

**URS** 100 S. Wacker Drive, Suite 500 Chicago, Illinois 60606 TEL (312) 639-1000 FAX (312) 939-4198

**Illinois Route 31  
Bridge over Stearns Road  
DETOUR PLAN**

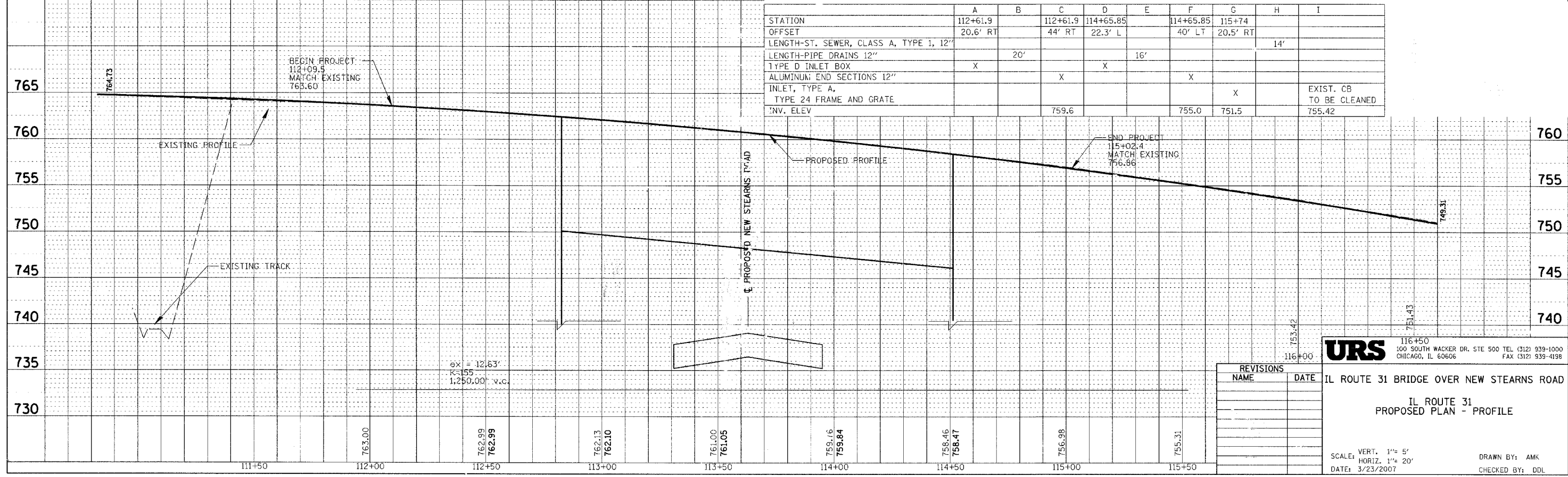
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	8
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 83923				



DRAINAGE STRUCTURE AND PIPE TABLE

	A	B	C	D	E	F	G	H	I
STATION	112+61.9	112+61.9	114+65.85	114+65.85	114+65.85	115+74			
OFFSET	20.6' RT		44' RT	22.3' L	40' LT	20.5' RT			
LENGTH-ST. SEWER, CLASS A, TYPE 1, 12"									14'
LENGTH-PIPE DRAINS 12"		20'			16'				
1 TYPE D INLET BOX	X			X					
ALUMINUM END SECTIONS 12"			X			X			
INLET, TYPE A, TYPE 24 FRAME AND GRATE							X		EXIST. CB TO BE CLEANED
INV. ELEV			759.6			755.0	751.5		755.42



REVISIONS	
NAME	DATE

**URS** 116+50  
100 SOUTH WACKER DR. STE 500 TEL (312) 939-1000  
CHICAGO, IL 60606 FAX (312) 939-4198

IL ROUTE 31 BRIDGE OVER NEW STEARNS ROAD

IL ROUTE 31  
PROPOSED PLAN - PROFILE

SCALE: VERT. 1" = 5'  
HORIZ. 1" = 20'  
DATE: 3/23/2007

DRAWN BY: AMK  
CHECKED BY: DDL

PLAN  
REVISIONS  
DATE  
BY  
CHECKED  
DATE  
BY  
NOTED  
DATE  
BY

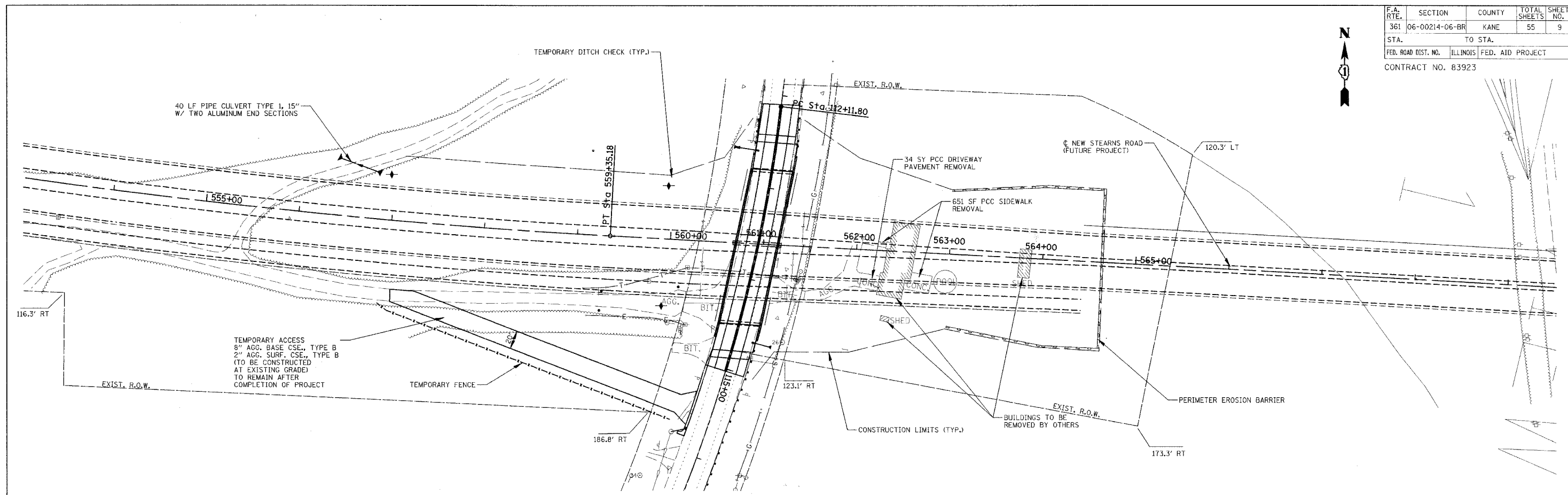
PROFILE  
REVISIONS  
DATE  
BY  
CHECKED  
DATE  
BY  
NOTED  
DATE  
BY



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	9
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 83923				



PLAN	DESIGNED	BY	DATE
	CHECKED		
	ALIGNED		
	NOTED		
	FILED		
	NO.		



PROFILE	DESIGNED	BY	DATE
	CHECKED		
	GRADES		
	PLOTTED		
	NO.		



REVISIONS	
NAME	DATE

**URS** 100 SOUTH WACKER DR. STE 500 TEL (312) 939-1000  
CHICAGO, IL 60606 FAX (312) 939-4198

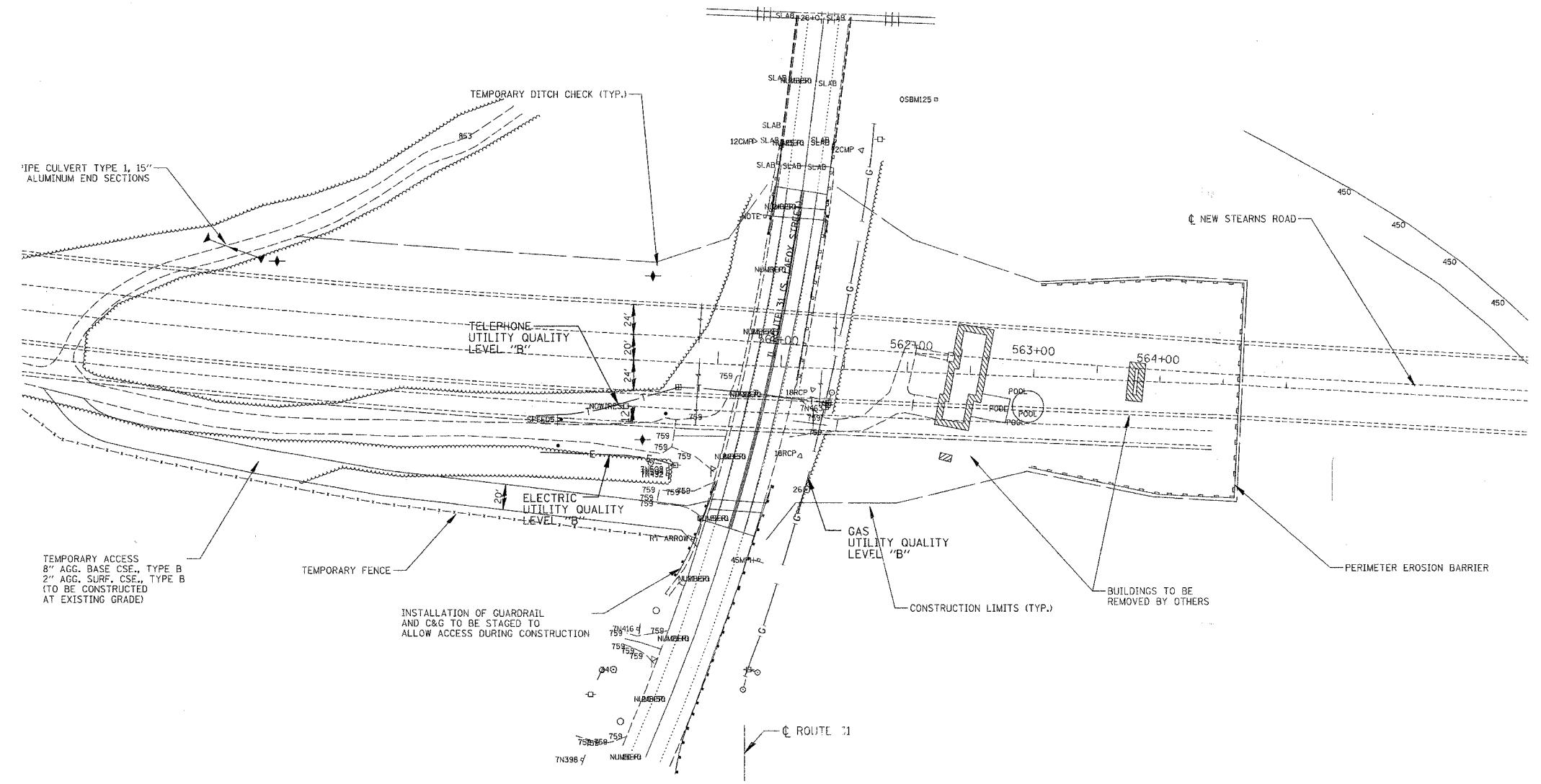
IL ROUTE 31 BRIDGE OVER NEW STEARNS ROAD

NEW STEARNS ROAD  
PROPOSED PLAN - PROFILE

SCALE: VERT. 1" = 5'  
HORIZ. 1" = 20'  
DATE: 3/23/2007

DRAWN BY: AMK  
CHECKED BY: DDI

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-02	Kane	55	9A
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT No. 83923				




**TBE GROUP**  
**TBE GROUP, INC.**  
 CIVIL ENGINEERING \* TRANSPORTATION \* ENVIRONMENTAL  
 \* PLANNING \* UTILITY ENGINEERING/LOCATING

IL09500274  
 TBE SUE PAGE NO: 1 of 1  
 Checked by: *Bob Clear*

Utility Quality Level "B" : Designating

— T — T —	TELEPHONE
— G — G —	GAS
— E — E —	ELECTRIC

Utilities shown in color on these plans as depicted in the legend have been investigated by TBE Group, Inc in accordance with SUE Industry Standards. All other information shown has been provided to TBE Group, Inc by others. TBE's SUE field investigation was performed on 3/28/07. Changes to utilities after these dates may have been made and therefore may result in variances from this plan. Consideration should be given to updating this plan if deemed advisable prior to final design and construction.

  
 205 W. WACKER DRIVE  
 SUITE 1020  
 CHICAGO, IL 60606  
 (312) 704-1970

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SUE Investigation of Underground Utilities  
 IL RT. 31 Bridge over New Stearns Road in South Elgin,  
 Kane County  
 Section No. N/A  
 Contract No. N/A

DRAWN BY : KLC  
 SCALE : 1" = 50'

CONTRACT NO. 83923				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	10
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		

### PIPE OUTLET TO CHANNEL

Pipe Outlet To Well-Defined Channel

**PLAN**

**SECTION A-A**

Filter Fabric  
Bury End Of Fabric 12" Min.

**NOTES:**

- The filter fabric shall meet the requirements in material specification 592 GEOTEXTILE Table 1 or 2, Class I, II or III.
- The rock riprap shall meet the IDOT requirements for the following gradation \_\_\_\_\_.
- The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.

REFERENCE	STANDARD DWG. NO.
Project _____	IL-611
Designed _____	SHEET 1 OF 1
Checked _____	DATE 8-18-94
Approved _____	

### SILT FENCE PLAN

**ELEVATION**

**FABRIC ANCHOR DETAIL**

**NOTES:**

- Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
- Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class I with equivalent opening size of at least 30 for nonwoven and 50 for woven.
- Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

REFERENCE	STANDARD DWG. NO.
Project _____	IL-620
Designed _____	SHEET 1 OF 2
Checked _____	DATE 11-29-01
Approved _____	

### SILT FENCE

**ATTACHING TWO SILT FENCES**

**NOTES:**

- Place the end post of the second fence inside the end post of the first fence.
- Rotate both posts at least 180 degrees in a clockwise direction to create a tight seal with the fabric material.
- Drive both posts a minimum of 18 inches into the ground and bury the flap.

REFERENCE	STANDARD DWG. NO.
Project _____	IL-620(W)
Designed _____	SHEET 2 OF 2
Checked _____	DATE 1-29-99
Approved _____	

### PIPE OUTLET TO FLAT AREA

Pipe Outlet To Flat Area  
No Well-Defined Channel

**PLAN**

**SECTION A-A**

Geotextile

**NOTES:**

- The filter fabric shall meet the requirements in material specifications 592 GEOTEXTILE Table 1 or 2, class I, II or III.
- The rock riprap shall meet the IDOT requirements for the following gradation RR \_\_\_\_\_, Quality \_\_\_\_\_.
- The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.

REFERENCE	STANDARD DWG. NO.
Project _____	IL-610
Designed _____	SHEET 1 OF 1
Checked _____	DATE 9-15-93
Approved _____	

### EROSION BLANKET PLAN

**DETAIL 1**

**DETAIL 2**

**DETAIL 3**

**NOTES:**

- On erosion control paper, check slots, in ditch channel shall be spaced so that one occurs within each 50' on slopes of more than 4% and less than 6%. On slopes of 6% or more, they shall be spaced so that one occurs within each 25'.
- Staples are to be placed alternately, in columns approximately 2' apart and in rows approximately 3' apart. Approximately 175 staples are required per 4' x 225' roll of material and 125 staples are required per 4' x 150' roll of material.
- Erosion control material shall be placed loosely over ground surface. Do not stretch.
- All terminal ends and transverse laps shall be stapled at approximately 12' intervals.

REFERENCE	STANDARD DWG. NO.
Project _____	IL-530
Designed _____	SHEET 1 OF 2
Checked _____	DATE 9-24-94
Approved _____	

### EROSION BLANKET PLAN

**DETAIL 3**

**DETAIL 4**

**DETAIL 5**

**NOTES:**

- On erosion control paper, check slots, in ditch channel shall be spaced so that one occurs within each 50' on slopes of more than 4% and less than 6%. On slopes of 6% or more, they shall be spaced so that one occurs within each 25'.
- Staples are to be placed alternately, in columns approximately 2' apart and in rows approximately 3' apart. Approximately 175 staples are required per 4' x 225' roll of material and 125 staples are required per 4' x 150' roll of material.
- Erosion control material shall be placed loosely over ground surface. Do not stretch.
- All terminal ends and transverse laps shall be stapled at approximately 12' intervals.

REFERENCE	STANDARD DWG. NO.
Project _____	IL-530
Designed _____	SHEET 2 OF 2
Checked _____	DATE 3-1-95
Approved _____	

REVISIONS	
NAME	DATE

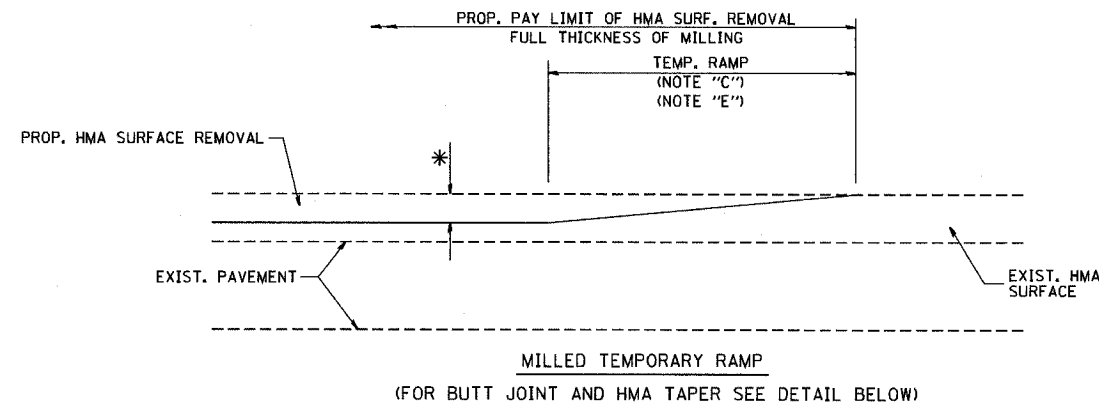
100 S. Wacker Drive, Suite 500  
 Chicago, Illinois 60606  
 TEL (312) 939-1000  
 FAX (312) 939-4198

Illinois Route 31  
 Bridge over Stearns Road  
 Construction Details

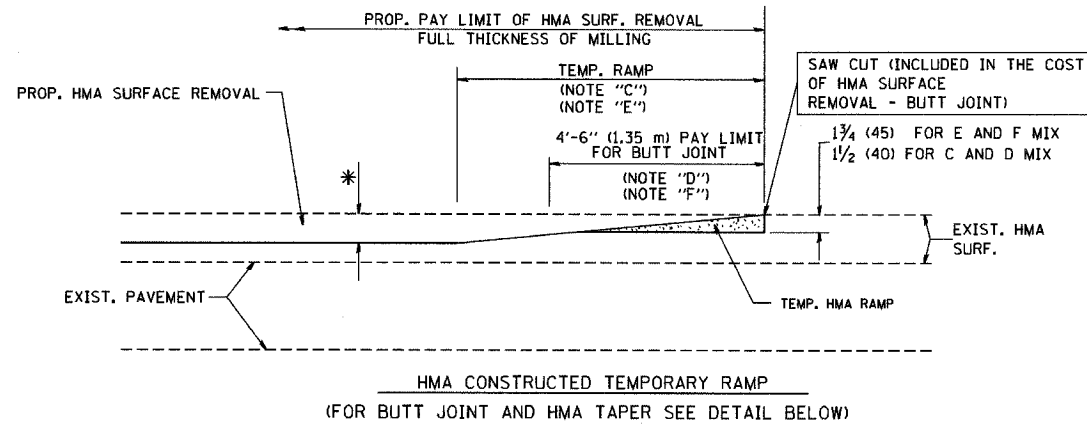
SCALE: \_\_\_\_\_  
 DATE 01/31/2007

DRAWN BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_

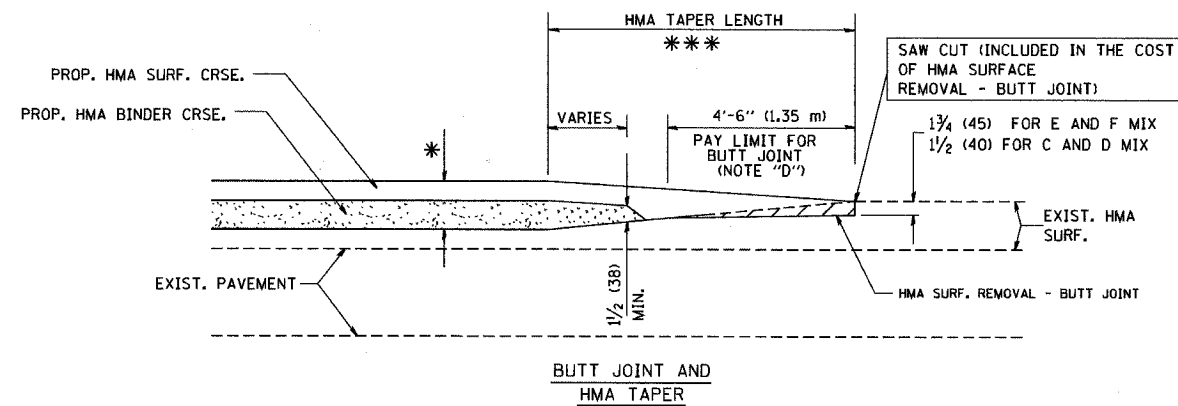
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	



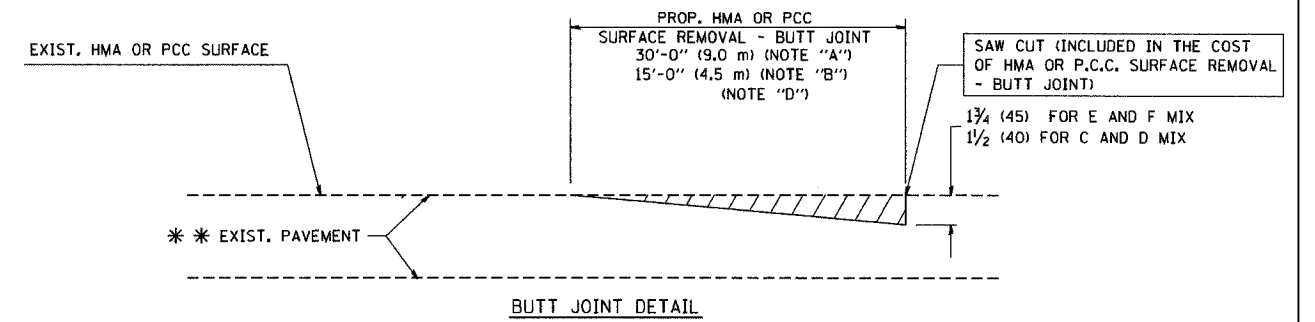
OPTION 1



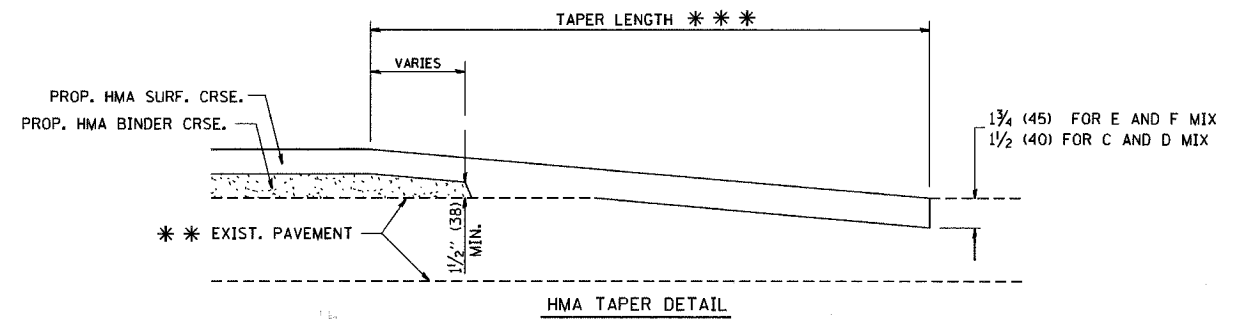
OPTION 2  
TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER  
FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER  
FOR RESURFACING ONLY

\* \* \* PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
  - B: MINOR SIDE ROADS.
  - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
  - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
  - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
  - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
  - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- \* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

\* \* \* 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")  
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

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

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

REVISIONS	
NAME	DATE
M. DE YONG	6-13-90
M. DE YONG	7-3-90
M. DE YONG	3-27-92
R. SHAH	09/09/94
R. SHAH	10/25/94
A. ABBAS	03/21/97
M. GOMEZ	04/06/01
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND HMA TAPER DETAILS

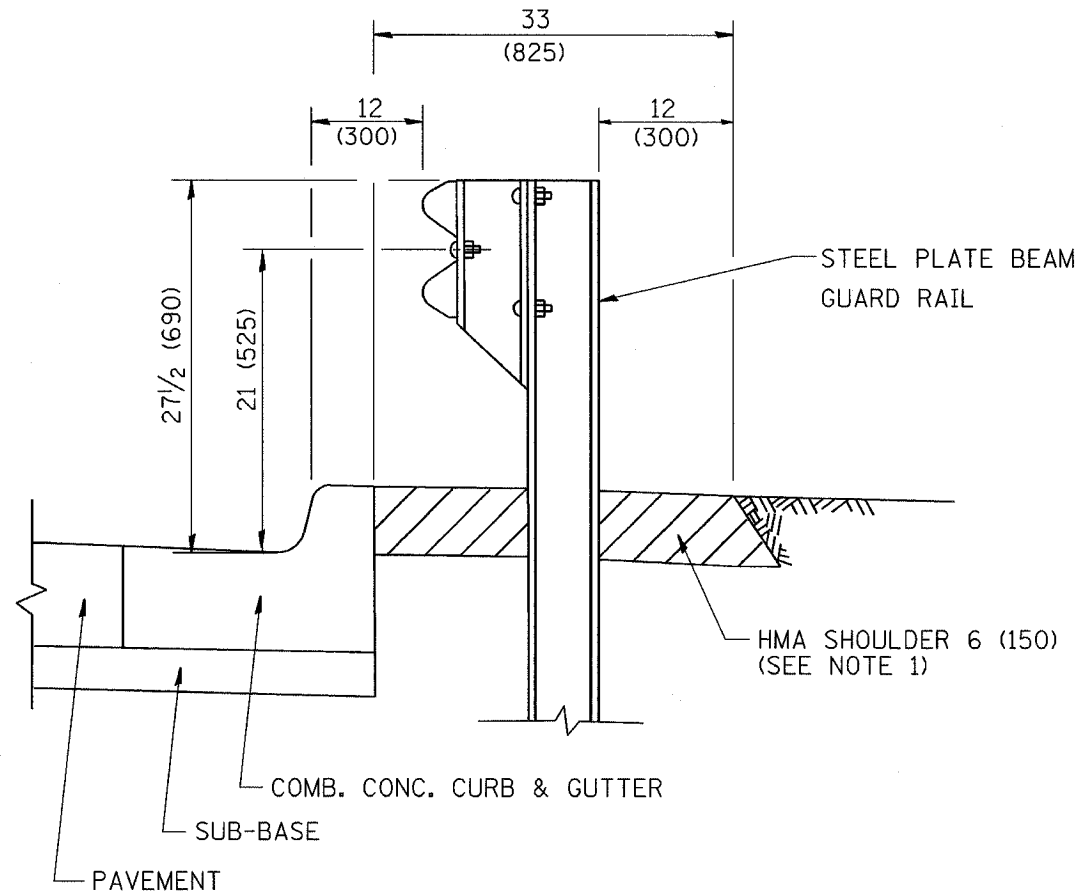
SCALE: VERT. NONE  
HORIZ.

DRAWN BY

CHECKED BY

BD400-05 (VI-BD32)

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

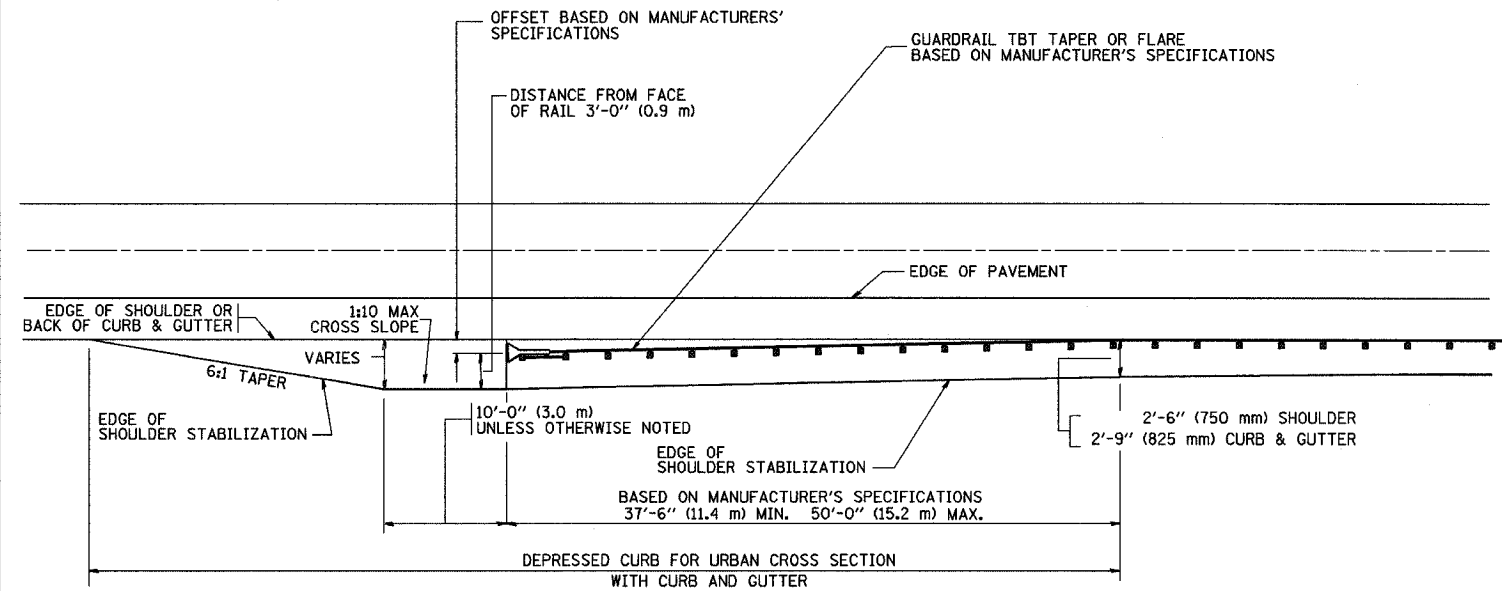


- NOTES: 1. THE HMA SHOULDER SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL
2. GUARD RAIL MAY BE PLACED AT THE BACK OF CURB WHEN DIRECTED BY THE ENGINEER.

BASIS OF PAYMENT: HMA SHOULDER 6 (150) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SHOULDER 6" (150 mm)".

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

**DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER**  
 [FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]



**STABILIZATION AT TBT TY. 1 SPL.**

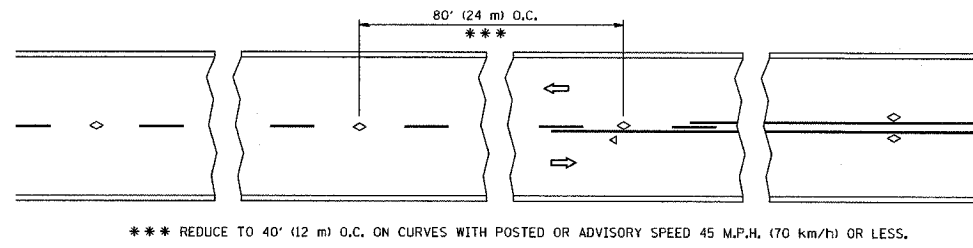
TBT = TRAFFIC BARRIER TERMINAL  
 ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
M. DE YONG	09-22-90
M. DE YONG	07-14-92
R. SHAH	09/09/94
R. SHAH	10/25/94
R. SHAH	02/23/95
A. ABBAS	03/21/97
E. GOMEZ	08/28/00
R. BORO	01/01/07

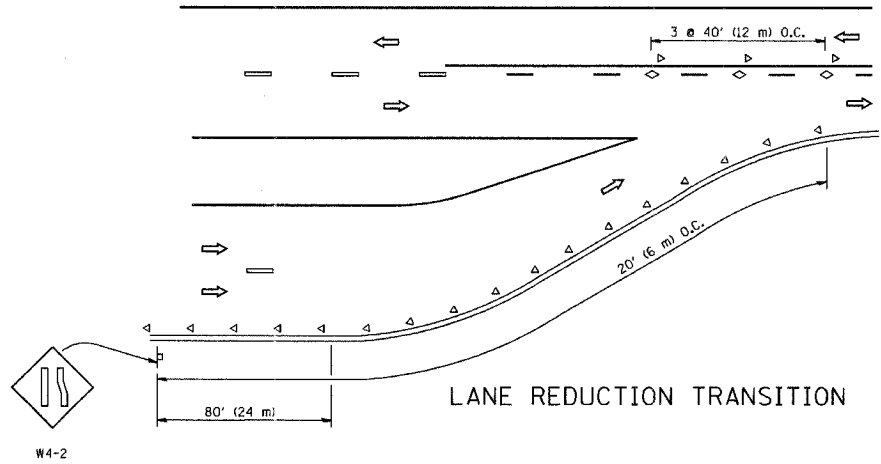
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER STABILIZATION AT TBT TY 1 SPL.**

SCALE: VERT. NONE  
 HORIZ. DRAWN BY Jjs  
 CHECKED BY

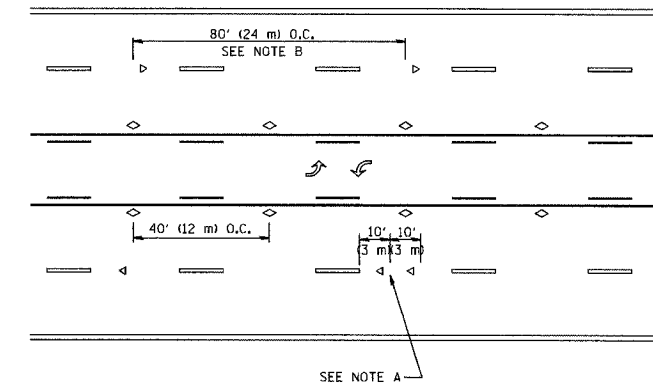
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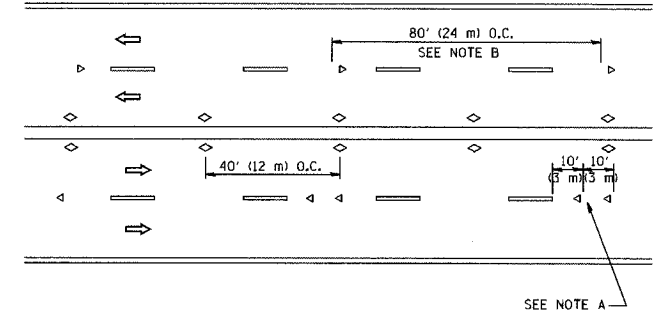
TWO-LANE/TWO-WAY



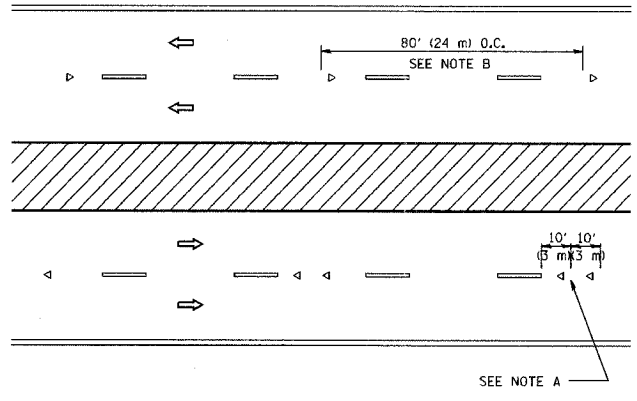
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ◁ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/D)
- ◇ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.
- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

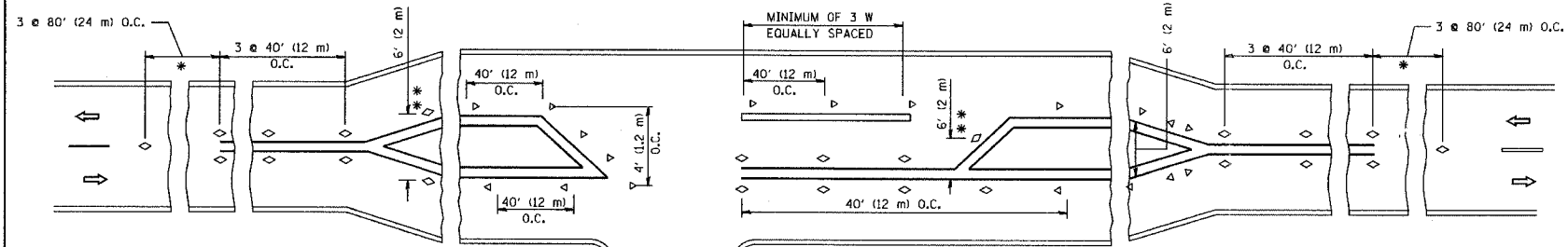
All dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS	
NAME	DATE
T. RAMMACHER	09-19-94
T. RAMMACHER	03-12-99
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TYPICAL APPLICATIONS  
 RAISED REFLECTIVE PAVEMENT  
 MARKERS (SNOW-PLOW RESISTANT)**

SCALE: NONE

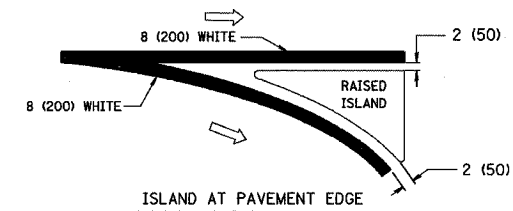
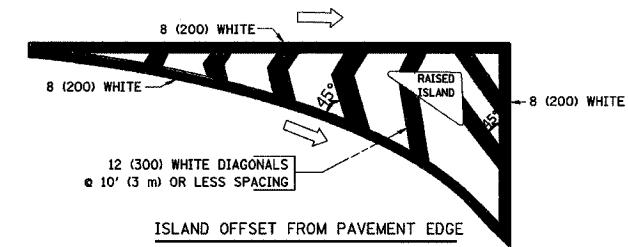
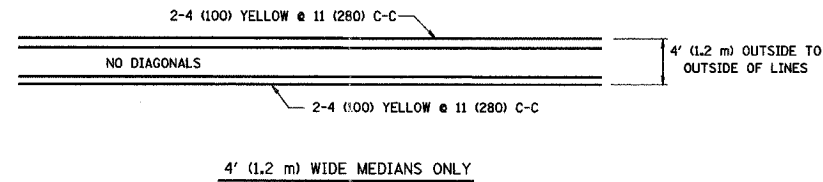
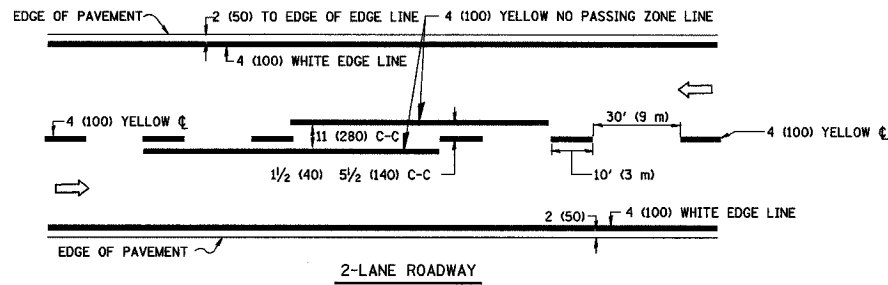
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 CHECKED BY  
 TC-11



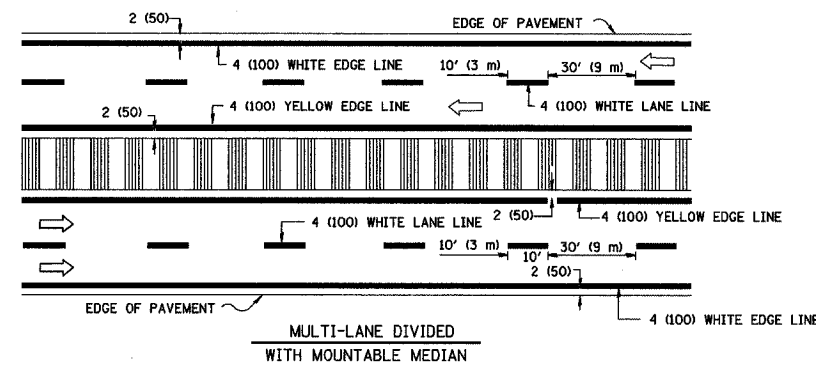
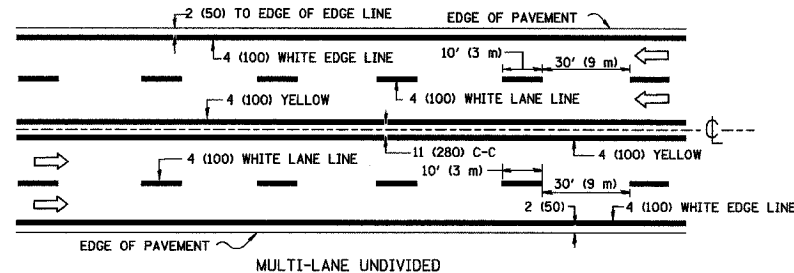
LEFT TURN

PLOT DATE: 5/5/2007  
 FILE NAME: 612007.dwg  
 PLOT SCALE: 1/8"=1'-0" / IN.  
 USER NAME: bwardi

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
981	06-00214-06 BR	KANE	55	14
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

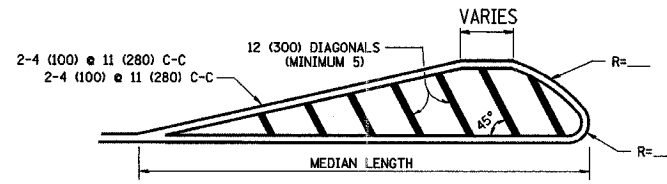
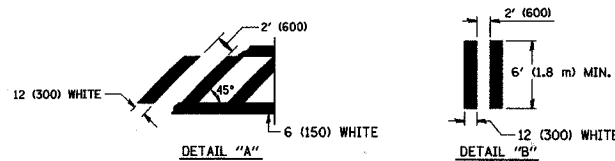
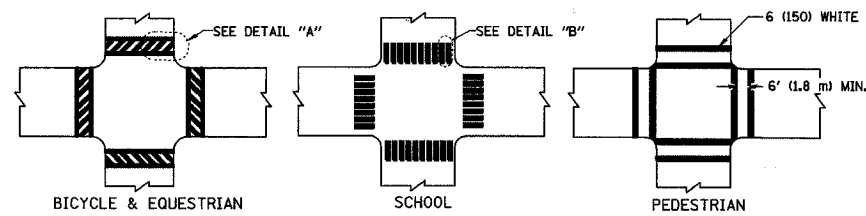


TYPICAL ISLAND MARKING



NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

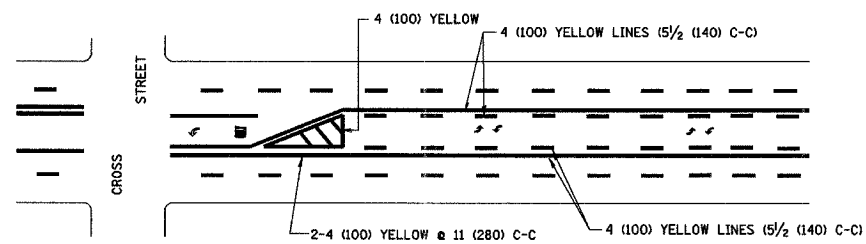
TYPICAL LANE AND EDGE LINE MARKING



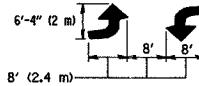
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))  
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)  
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

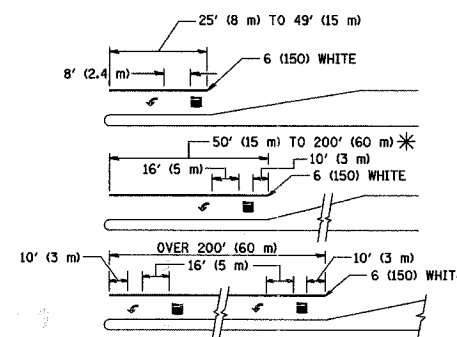


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) (ONLY) AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)

\* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH "X"=54.0 SQ. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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

REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT ONE  
TYPICAL PAVEMENT MARKINGS

SCALE: NONE

DRAWN BY CADD

CHECKED BY

TC-13

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06 BR	KANE	55	15
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

**ROUTE MARKERS**

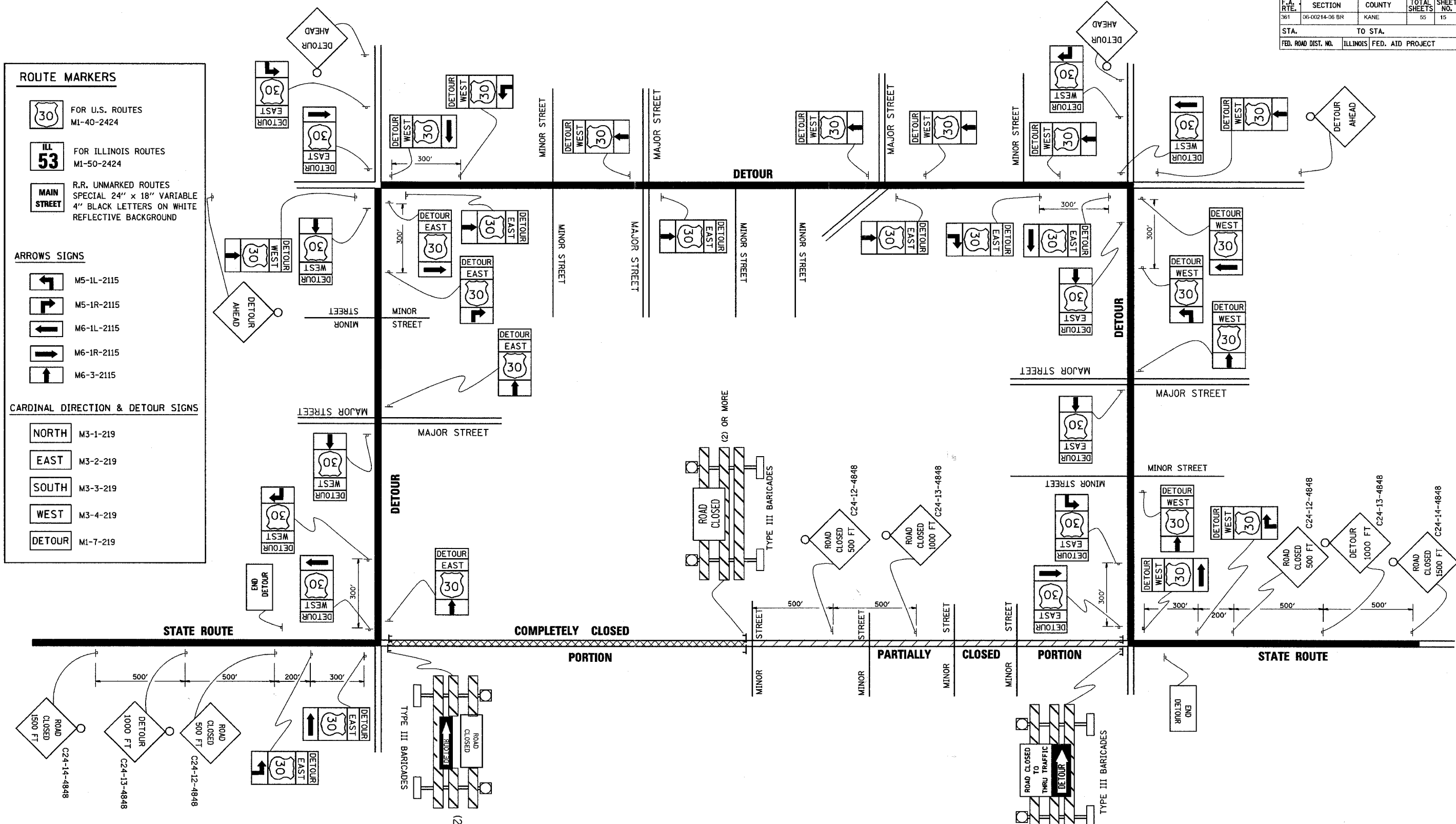
- FOR U.S. ROUTES MI-40-2424
- FOR ILLINOIS ROUTES MI-50-2424
- R.R. UNMARKED ROUTES SPECIAL 24" x 18" VARIABLE 4" BLACK LETTERS ON WHITE REFLECTIVE BACKGROUND

**ARROWS SIGNS**

- M5-1L-2115
- M5-1R-2115
- M6-1L-2115
- M6-1R-2115
- M6-3-2115

**CARDINAL DIRECTION & DETOUR SIGNS**

- NORTH M3-1-219
- EAST M3-2-219
- SOUTH M3-3-219
- WEST M3-4-219
- DETOUR M1-7-219



REVISIONS	
NAME	DATE
	10/18/02

ILLINOIS DEPARTMENT OF TRANSPORTATION

**TYPICAL MARKING FOR CLOSING STATE HIGHWAYS**

SCALE: NONE

DRAWN BY  
CHECKED BY  
TC-21

DATE = 3/7/2007  
 FILE = 06-00214-06 BR.dgn  
 PLOT SCALE = 50:0000 / IN.  
 USER NAME = baward



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

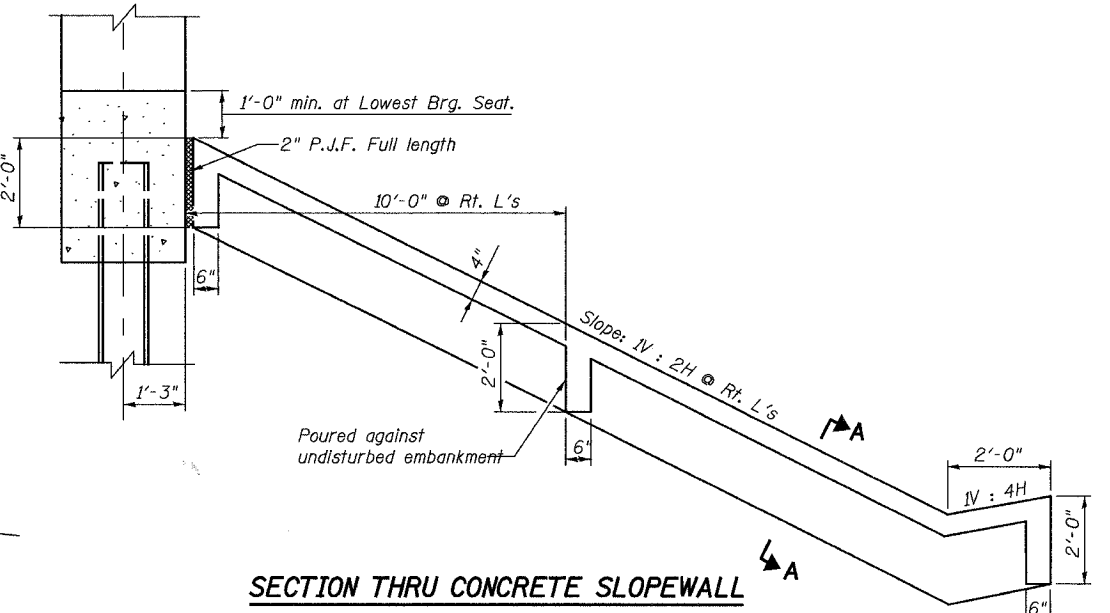
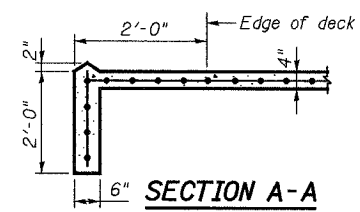
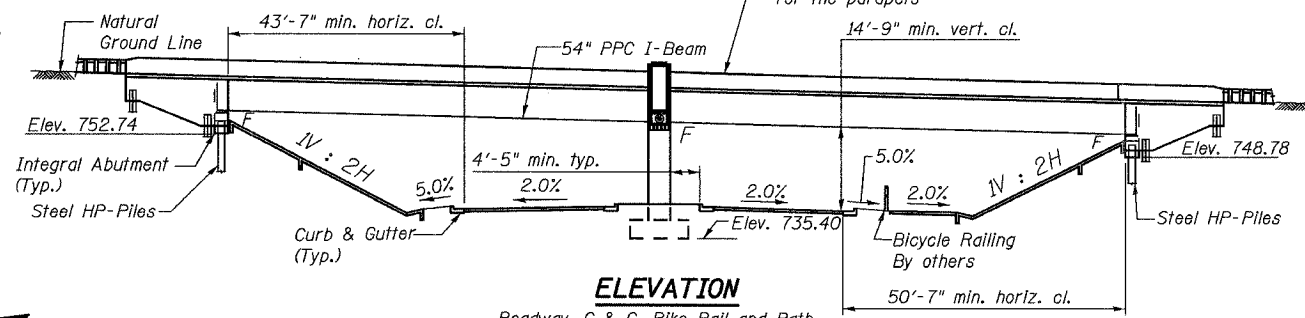
STATION 113+62.11  
BUILT 2008 BY  
STATE OF ILLINOIS  
F.A.U. 3887  
LOADING HS20  
SEC. 06-00214-06-BR  
STRUCTURE NO. 045-2031

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	16
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

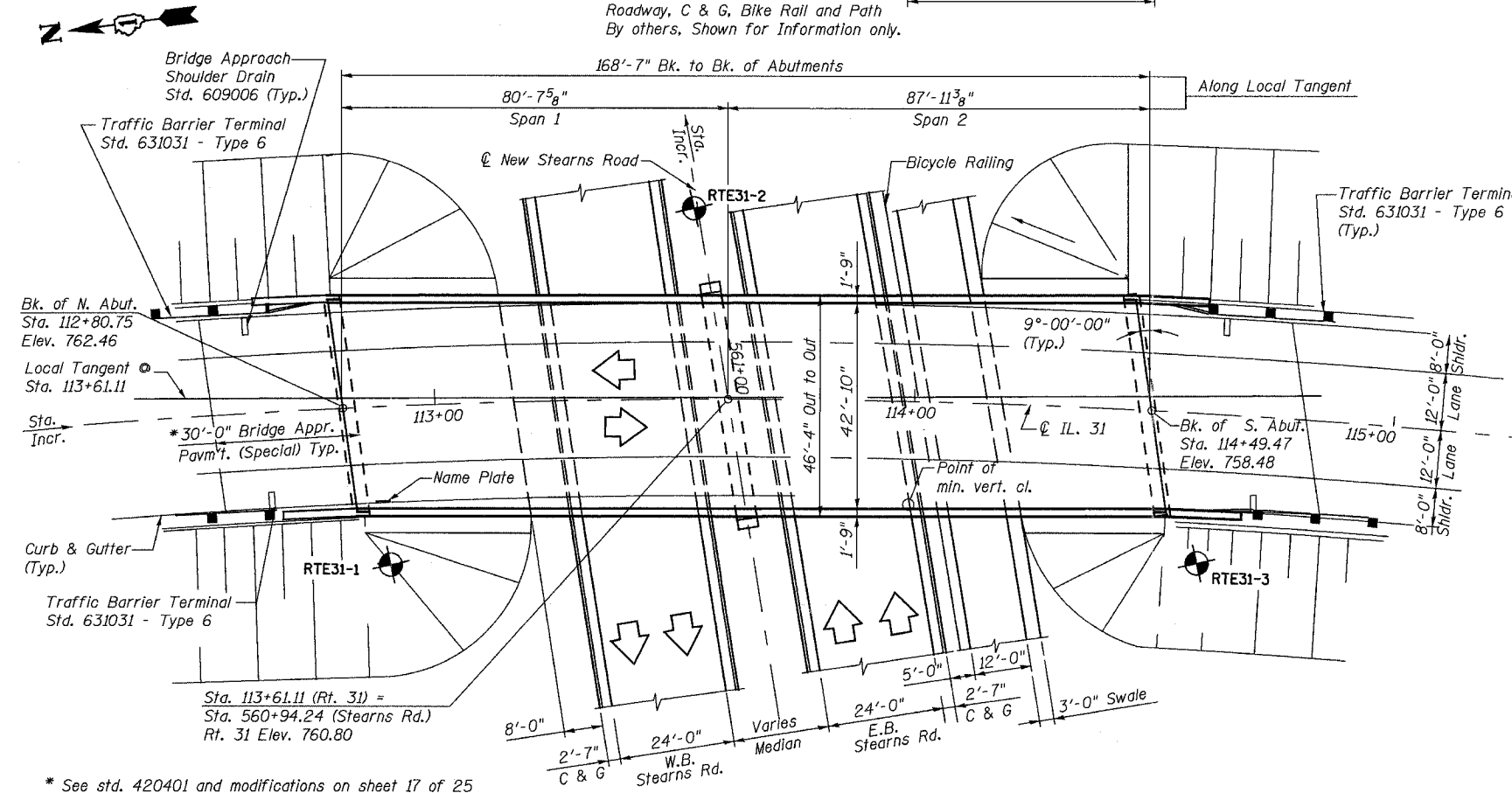
CONTRACT NO. 83923

SHEET NO. 1  
25 SHEETS

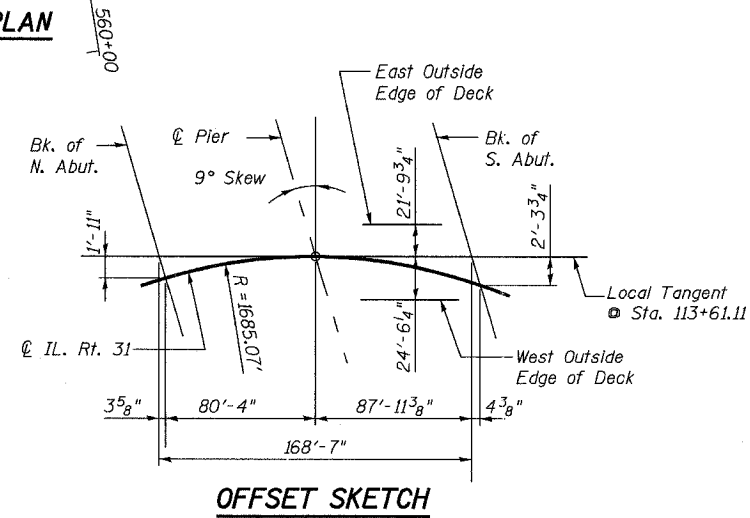
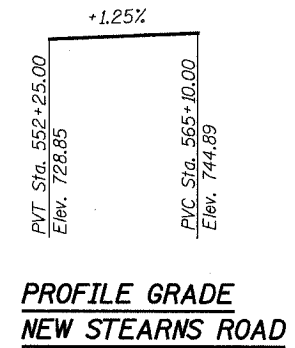
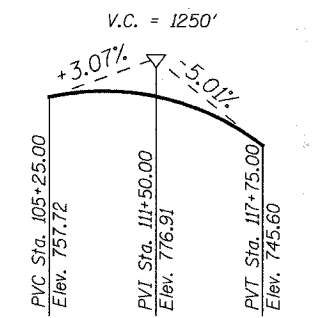
Benchmark BM-14:  
"Aluminum Disk" set in concrete at side of Route 31 across from the property line extended between residences #7N398 and #7N416. Elev. 750.195  
No existing structure.



Slope wall shall be reinforced with welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.



Indicates Boring



**LOADING HS20-44**  
Allow 50#/sq. ft. for future wearing surface.

**DESIGN SPECIFICATIONS**  
2002 AASHTO

**DESIGN STRESSES**  
FIELD UNITS

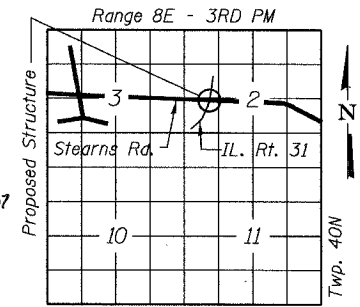
$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (reinforcement)

**PRECAST PRESTRESSED UNITS**  
 $f'_c = 6,000$  psi  
 $f'_d = 5,000$  psi  
 $f'_s = 270,000$  psi ( $\frac{1}{2}$ "  $\phi$  low lax. strands)  
 $f'_{sl} = 201,960$  psi ( $\frac{1}{2}$ "  $\phi$  low lax. strands)

**CURVE DATA IL.31**  
 $\Delta = 18^\circ 34' 38''$   
 $D = 3^\circ 24' 01''$   
 $R = 1685.07'$   
 $T = 275.60'$   
 $L = 546.36'$   
 $E = 22.39'$   
 $S.E. = 0.048$  ' / ' /  
P.C. STA. = 112+11.80  
P.T. STA. = 117+58.16  
P.I. STA. = 114+87.40  
S.E. attained Sta. 110+87.00 to Sta. 112+50.20  
S.E. removed Sta. 117+19.76 to Sta. 118+82.96

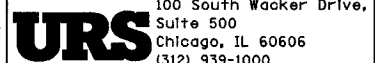
**SEISMIC DATA**  
Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.037  
Site Coefficient (S) = 1.0

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY  
Ralph E. Anderson  
Engineer of Bridges and Structures



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY  
**GENERAL PLAN & ELEVATION**  
F.A.U. 3887  
STATION 113+61.11  
SCALE: 1" = 40'  
SECTION 06-00214-06-BR  
STRUCTURE NO. 045-2031  
DATE: 00/00/2007



Q:\Kane\_25366355\_IL31\Bridges\Struct1\Final\_set\_May07\01\_GP&E.dwg 5/18/2007 2:57:46 PM  
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DESIGNED	JRT
CHECKED	NPP
DRAWN	SOI
CHECKED	JPB

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	17
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT-		

SHEET NO. 2  
25 SHEETS

CONTRACT NO. 83923

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60 (IL Modified). See Special Provisions.
- The back face of wingwalls shall be waterproofed according to Article 503.18 of the Standard Specifications.
- Reinforcement bars designated (E) shall be epoxy coated.
- All construction joints shall be bonded.
- The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.
- All side retainers, anchor bolts, nuts & washers shall be galvanized according to AASHTO M111 or M232 (as applicable)
- Architectural Form Liner as designated in the plans and Special Provisions shall be accomplished using custom rock form line pattern #1103 Rustic Ashlar, as supplied and manufactured by Custom Rock Formliners, Inc. or approved equal.
- The exterior surface and underside of the fascia beams, underside of the deck overhang and exposed portions of the abutments, wingwalls as designated on the plans shall be stained at the same time the architectural form liner is stained to ensure a uniform appearance.  
  
The color of the stain shall be base color #33446 (medium tan) from Federal Color Standard 595B. Test samples of the stain on concrete shall be submitted for acceptance to the Engineer before any staining is to start on the structure.
- Concrete Sealer shall be applied to the designated area of the Median Pier.

INDEX OF SHEETS

- General Plan & Elevation
- General Notes, Bill of Materials & Index of Drawings
- Substructure Layout
- Top of Slab Elevations
- Top of Slab Elevations
- Superstructure Plan & Cross Section
- Superstructure Details
- Framing Plan
- PPC I-Beam Details Span 1
- PPC I-Beam Details Span 2
- PPC I-Beam Details
- Diaphragm Details at Abutments
- Diaphragm Details at Pier
- North Abutment Details
- South Abutment Details
- Abutment Wingwall Details
- Bridge Approach Pavement Details
- Bridge Aesthetic Treatments and Details
- Pier Details
- Pier Sections
- Bar Splicer Assembly Details
- H-Pile Detail and Weld Plate Field Splice
- Soil Boring Log 1
- Soil Boring Log 2
- Soil Boring Log 3

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER STRUCTURE	SUBSTRUCTURE		TOTAL
			PIER	ABUTMENTS	
Porous Granular Embankment, Special	Cu. Yd.	-	-	217	217
Structure Excavation	Cu. Yd.	-	105	426	531
Concrete Structures	Cu. Yd.	-	161.3	70.3	231.5
Concrete Superstructure	Cu. Yd.	302.8	-	-	302.8
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54 In	Foot	1002.5	-	-	1002.5
Reinforcement Bars, Epoxy Coated	Pound	55,560	12,210	12,290	80,060
Name Plates	Each	1	-	-	1
Geocomposite Wall Drain	Sq. Yd.	-	-	82	82
Pipe Underdrains For Structures 4"	Foot	-	-	94	94
Bar Splicers	Each	86	-	-	86
Bridge Deck Grooving	Sq. Yd.	765	-	-	765
Protective Coat	Sq. Yd.	980	-	-	980
Furnishing Steel Piles HP14X73	Foot	-	-	1128	1128
Driving Piles	Foot	-	-	1128	1128
Pile Shoes	Each	-	-	30	30
Test Pile Steel HP14X73	Each	-	-	2	2
Concrete Encasement	Cu. Yd.	-	-	16.4	16.4
Slope Wall 4 Inch	Sq. Yd.	-	-	399	399
Architectural Form Liner	Sq. Yd.	84	121	46	250
Staining Concrete Structures	Sq. Yd.	435	93	23	551

Wingwall quantities are included in Abutments.

\$DATE\$ \$TIME\$

DESIGNED	NPP
CHECKED	JPB
DRAWN	SOI
CHECKED	JPB

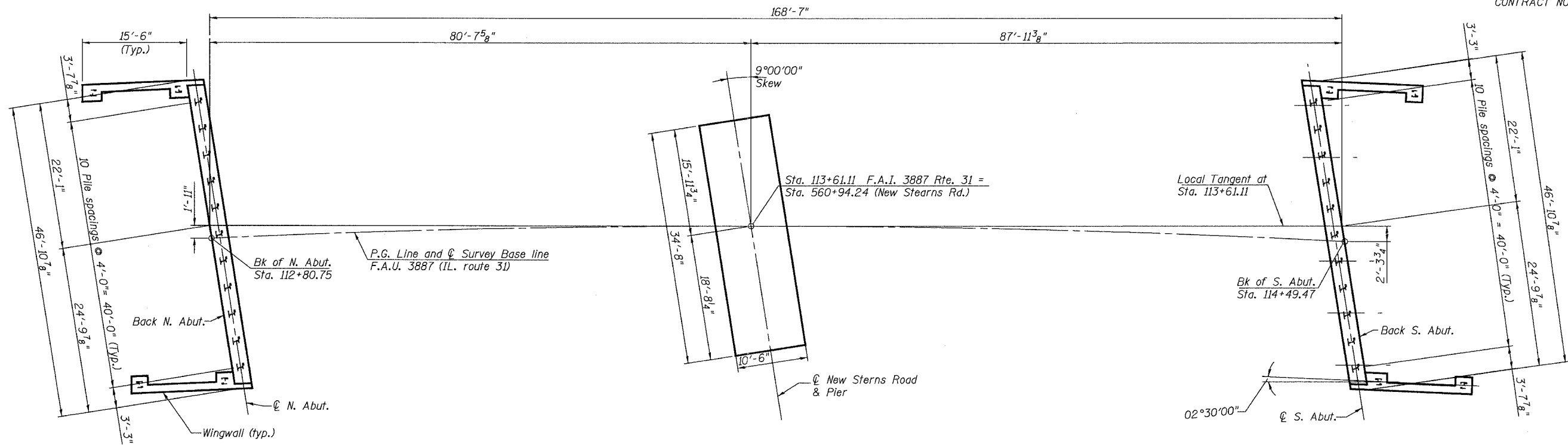
**URS**  
100 South Wacker Drive,  
Suite 500  
Chicago, IL 60606  
(312) 939-1000

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD KANE COUNTY
NAME	DATE	
		<b>GEN. NOTES, INDEX OF SHTS. &amp; TOTAL BILL OF MATERIAL</b>  F.A.U. 3887 SECTION 06-00214-06-BR STATION 113+61.11 STRUCTURE NO. 045-2031 SCALE: N.T.S. DATE: 00/00/2007

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	18
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 83923	

SHEET NO. 3  
25 SHEETS



PLAN

DATE \$ TIME \$

DESIGNED	NPP
CHECKED	JPB
DRAWN	SOI
CHECKED	JPB

**URS**  
100 South Wacker Drive,  
Suite 500  
Chicago, IL 60606  
(312) 939-1000

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY  
**SUBSTRUCTURE LAYOUT**

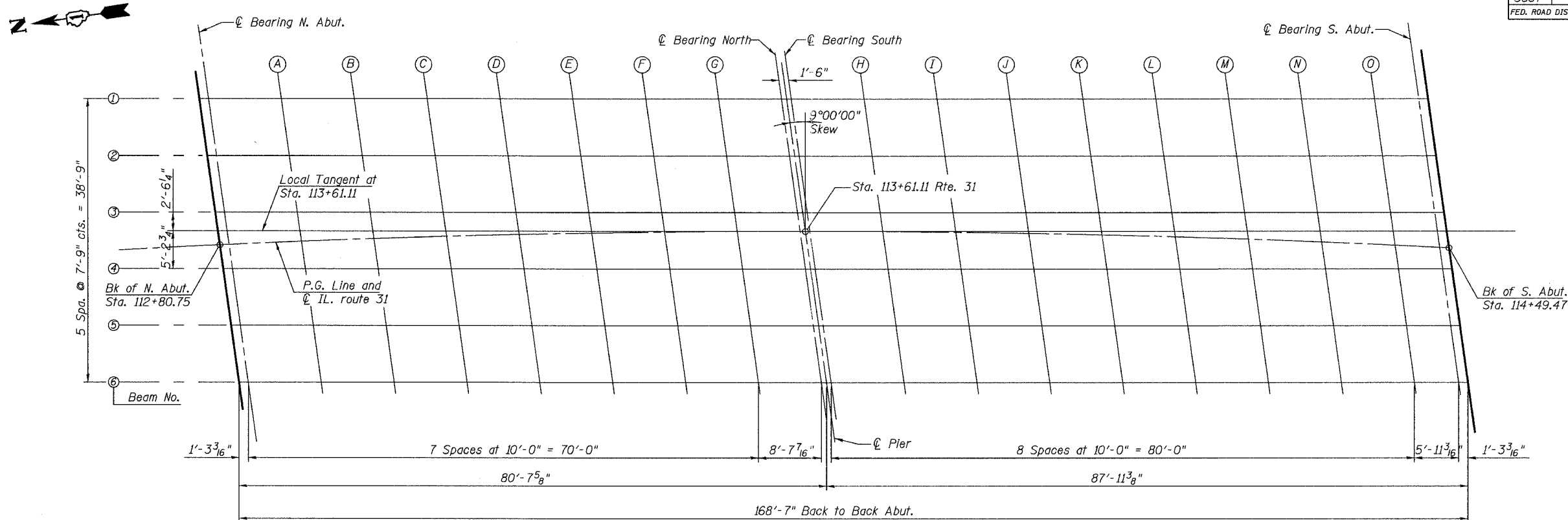
F.A.U. 3887 SECTION 06-00214-06-BR  
STATION 113+61.11 STRUCTURE NO. 045-2031  
SCALE: DATE: 00/00/2007

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	19
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-				

SHEET NO. 4  
25 SHEETS

CONTRACT NO. 83923



PLAN

BEAM - 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back N Abut	112+78.57	-20.07	763.00	763.00
☉ Brg N Abut	112+79.82	-20.01	762.98	762.98
A	112+89.69	-19.55	762.77	762.75
B	112+99.57	-19.16	762.56	762.51
C	113+09.46	-18.82	762.35	762.29
D	113+19.34	-18.54	762.13	762.06
E	113+29.23	-18.33	761.91	761.85
F	113+39.12	-18.17	761.69	761.64
G	113+49.02	-18.07	761.46	761.44
N ☉ Brg Pier	113+57.54	-18.03	761.26	761.26
☉ Pier	113+58.29	-18.02	761.25	761.25
S ☉ Brg Pier	113+59.03	-18.02	761.23	761.23
H	113+68.92	-18.04	761.00	760.96
I	113+78.82	-18.12	760.76	760.69
J	113+88.71	-18.25	760.52	760.43
K	113+98.60	-18.44	760.27	760.17
L	114+08.49	-18.69	760.02	759.93
M	114+18.37	-19.01	759.77	759.69
N	114+28.25	-19.37	759.51	759.46
O	114+38.13	-19.80	759.25	759.23
☉ Brg S Abut	114+43.98	-20.08	759.10	759.10
Back S Abut	114+45.23	-20.15	759.07	759.07

CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back N Abut	112+79.22	-14.01	763.18	763.18
☉ Brg N Abut	112+80.48	-13.95	763.15	763.15
A	112+90.39	-13.50	762.94	762.92
B	113+00.30	-13.11	762.74	762.69
C	113+10.22	-12.77	762.52	762.46
D	113+20.14	-12.50	762.31	762.24
E	113+30.06	-12.29	762.09	762.02
F	113+39.99	-12.13	761.86	761.82
G	113+49.92	-12.04	761.63	761.61
N ☉ Brg Pier	113+58.48	-12.00	761.44	761.44
☉ Pier	113+59.22	-12.00	761.42	761.42
S ☉ Brg Pier	113+59.97	-12.00	761.40	761.40
H	113+69.90	-12.02	761.17	761.13
I	113+79.83	-12.11	760.93	760.86
J	113+89.75	-12.25	760.69	760.60
K	113+99.68	-12.45	760.44	760.34
L	114+09.60	-12.70	760.19	760.10
M	114+19.52	-13.02	759.94	759.86
N	114+29.44	-13.40	759.68	759.63
O	114+39.35	-13.83	759.42	759.40
☉ Brg S Abut	114+45.22	-14.12	759.27	759.27
Back S Abut	114+46.48	-14.18	759.23	759.23

BEAM - 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back N Abut	112+79.41	-12.27	763.09	763.09
☉ Brg N Abut	112+80.67	-12.21	763.06	763.06
A	112+90.59	-11.76	762.86	762.83
B	113+00.51	-11.37	762.65	762.60
C	113+10.44	-11.04	762.43	762.37
D	113+20.37	-10.77	762.22	762.15
E	113+30.30	-10.55	762.00	761.93
F	113+40.24	-10.40	761.77	761.73
G	113+50.18	-10.31	761.54	761.52
N ☉ Brg Pier	113+58.75	-10.27	761.35	761.35
☉ Pier	113+59.49	-10.27	761.33	761.33
S ☉ Brg Pier	113+60.24	-10.27	761.31	761.31
H	113+70.18	-10.30	761.08	761.04
I	113+80.12	-10.38	760.84	760.77
J	113+90.05	-10.52	760.60	760.51
K	113+99.99	-10.72	760.35	760.25
L	114+09.92	-10.98	760.10	760.01
M	114+19.85	-11.30	759.85	759.77
N	114+29.78	-11.68	759.59	759.54
O	114+39.70	-12.12	759.33	759.31
☉ Brg S Abut	114+45.58	-12.40	759.18	759.18
Back S Abut	114+46.83	-12.47	759.14	759.14

DESIGNED JRT  
CHECKED NPP  
DRAWN SOI  
CHECKED NPP

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY  
**TOP OF SLAB ELEVATIONS**  
F.A.U. 3887 SECTION 06-00214-06-BR  
STATION 113+61.11 STRUCTURE NO. 045-2031  
SCALE: DATE: 00/00/2007

100 South Wacker Drive,  
Suite 500  
Chicago, IL 60606  
(312) 939-1000  
**URS**

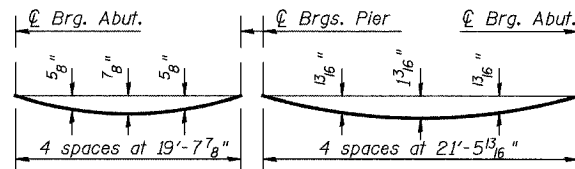
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	20
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 5

25 SHEETS

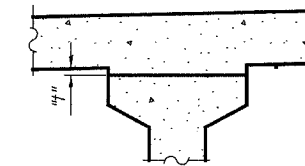
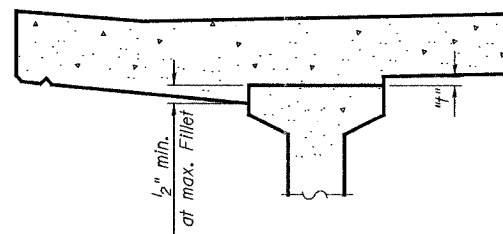
CONTRACT NO. 83923



**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete, excluding beams).

Note:  
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 4 and 5 of 25.



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

**FILLET HEIGHTS**

**BEAM -3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back N Abut	112+80.26	-4.47	762.69	762.69
Q Brg N Abut	112+81.52	-4.41	762.66	762.66
A	112+91.49	-3.96	762.46	762.43
B	113+01.46	-3.58	762.25	762.20
C	113+11.43	-3.26	762.03	761.97
D	113+21.41	-2.99	761.82	761.75
E	113+31.39	-2.78	761.60	761.53
F	113+41.37	-2.64	761.37	761.33
G	113+51.36	-2.55	761.14	761.12
N Q Brg Pier	113+59.96	-2.52	760.95	760.95
Q Pier	113+60.71	-2.52	760.93	760.93
S Q Brg Pier	113+61.46	-2.52	760.91	760.91
H	113+71.45	-2.55	760.67	760.64
I	113+81.43	-2.64	760.44	760.37
J	113+91.41	-2.79	760.19	760.11
K	114+01.39	-3.00	759.95	759.85
L	114+11.37	-3.27	759.70	759.60
M	114+21.35	-3.60	759.45	759.37
N	114+31.32	-3.99	759.19	759.13
O	114+41.28	-4.43	758.93	758.91
Q Brg S Abut	114+47.19	-4.73	758.77	758.77
Back S Abut	114+48.45	-4.79	758.74	758.74

**LOCAL TANGENT LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back N Abut	112+80.54	-1.93	762.56	762.56
Q Brg N Abut	112+81.80	-1.87	762.54	762.54
A	112+91.78	-1.43	762.33	762.30
B	113+01.77	-1.05	762.12	762.07
C	113+11.75	-0.72	761.91	761.84
D	113+21.75	-0.46	761.69	761.62
E	113+31.74	-0.26	761.47	761.40
F	113+41.74	-0.11	761.24	761.20
G	113+51.74	-0.03	761.01	760.99
N Q Brg Pier	113+60.36	0.00	760.81	760.81
Q Pier	113+61.11	0.00	760.80	760.80
S Q Brg Pier	113+61.86	0.00	760.78	760.78
H	113+71.86	-0.03	760.54	760.51
I	113+81.86	-0.13	760.31	760.24
J	113+91.86	-0.28	760.06	759.98
K	114+01.85	-0.49	759.82	759.72
L	114+11.85	-0.76	759.57	759.47
M	114+21.83	-1.10	759.31	759.23
N	114+31.82	-1.49	759.06	759.00
O	114+41.80	-1.93	758.80	758.78
Q Brg S Abut	114+47.72	-2.23	758.64	758.64
Back S Abut	114+48.98	-2.29	758.61	758.61

**PG LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back N Abut	112+80.75	0.00	762.46	762.46
Q Brg N Abut	112+82.01	0.00	762.44	762.44
A	112+92.01	0.00	762.26	762.23
B	113+02.01	0.00	762.06	762.02
C	113+12.01	0.00	761.87	761.80
D	113+22.01	0.00	761.66	761.59
E	113+32.01	0.00	761.45	761.39
F	113+42.01	0.00	761.23	761.19
G	113+52.01	0.00	761.01	760.99
N Q Brg Pier	113+60.36	0.00	760.81	760.81
Q Pier	113+61.11	0.00	760.80	760.80
S Q Brg Pier	113+61.86	0.00	760.78	760.78
H	113+71.86	0.00	760.54	760.51
I	113+81.86	0.00	760.30	760.23
J	113+91.86	0.00	760.05	759.96
K	114+01.86	0.00	759.79	759.70
L	114+11.86	0.00	759.53	759.43
M	114+21.86	0.00	759.26	759.18
N	114+31.86	0.00	758.98	758.93
O	114+41.86	0.00	758.70	758.68
Q Brg S Abut	114+48.19	0.00	758.52	758.52
Back S Abut	114+49.47	0.00	758.48	758.48

**BEAM -4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back N Abut	112+81.12	3.33	762.29	762.29
Q Brg N Abut	112+82.38	3.39	762.27	762.27
A	112+92.39	3.83	762.06	762.03
B	113+02.41	4.21	761.85	761.80
C	113+12.43	4.53	761.64	761.57
D	113+22.46	4.79	761.42	761.35
E	113+32.48	4.99	761.20	761.14
F	113+42.51	5.13	760.97	760.93
G	113+52.54	5.21	760.74	760.72
N Q Brg Pier	113+61.19	5.23	760.54	760.54
Q Pier	113+61.94	5.23	760.53	760.53
S Q Brg Pier	113+62.69	5.23	760.51	760.51
H	113+72.72	5.19	760.27	760.24
I	113+82.75	5.09	760.03	759.97
J	113+92.78	4.93	759.79	759.70
K	114+02.81	4.72	759.55	759.45
L	114+12.83	4.44	759.30	759.20
M	114+22.85	4.10	759.04	758.96
N	114+32.87	3.71	758.78	758.73
O	114+42.88	3.25	758.52	758.50
Q Brg S Abut	114+48.81	2.95	758.37	758.37
Back S Abut	114+50.08	2.89	758.33	758.33

**BEAM -5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back N Abut	112+81.98	11.13	761.90	761.90
Q Brg N Abut	112+83.25	11.19	761.87	761.87
A	112+93.31	11.63	761.66	761.64
B	113+03.37	12.00	761.45	761.40
C	113+13.44	12.31	761.24	761.17
D	113+23.51	12.56	761.02	760.95
E	113+33.59	12.76	760.80	760.74
F	113+43.66	12.89	760.57	760.53
G	113+53.74	12.96	760.34	760.32
N Q Brg Pier	113+62.43	12.98	760.14	760.14
Q Pier	113+63.18	12.98	760.13	760.13
S Q Brg Pier	113+63.94	12.98	760.11	760.11
H	113+74.02	12.93	759.87	759.84
I	113+84.09	12.82	759.63	759.57
J	113+94.17	12.66	759.39	759.30
K	114+04.24	12.43	759.14	759.05
L	114+14.31	12.15	758.89	758.80
M	114+24.37	11.80	758.64	758.56
N	114+34.43	11.40	758.38	758.33
O	114+44.49	10.93	758.12	758.10
Q Brg S Abut	114+50.45	10.63	757.96	757.96
Back S Abut	114+51.73	10.56	757.93	757.93

**BEAM -6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back N Abut	112+82.85	18.93	761.50	761.50
Q Brg N Abut	112+84.13	18.99	761.47	761.47
A	112+94.24	19.42	761.27	761.24
B	113+04.35	19.78	761.05	761.01
C	113+14.46	20.09	760.84	760.78
D	113+24.58	20.34	760.62	760.55
E	113+34.70	20.53	760.40	760.34
F	113+44.82	20.65	760.17	760.13
G	113+54.95	20.72	759.94	759.92
N Q Brg Pier	113+63.68	20.73	759.74	759.74
Q Pier	113+64.43	20.73	759.73	759.73
S Q Brg Pier	113+65.19	20.72	759.71	759.71
H	113+75.32	20.67	759.47	759.44
I	113+85.44	20.56	759.23	759.17
J	113+95.56	20.38	758.99	758.90
K	114+05.68	20.15	758.74	758.64
L	114+15.80	19.85	758.49	758.39
M	114+25.91	19.50	758.23	758.16
N	114+36.02	19.08	757.98	757.92
O	114+46.12	18.61	757.72	757.69
Q Brg S Abut	114+52.11	18.30	757.56	757.56
Back S Abut	114+53.39	18.23	757.52	757.52

DESIGNED JRT  
CHECKED NPP  
DRAWN SOI  
CHECKED NPP

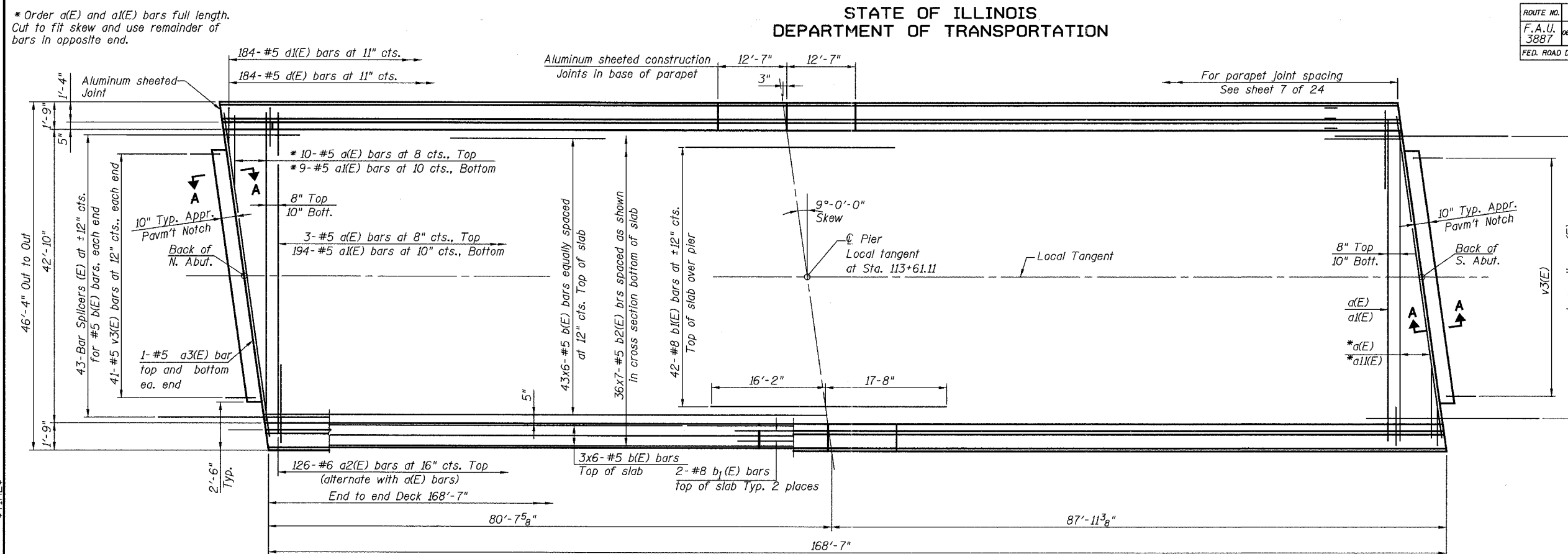
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD KANE COUNTY
NAME	DATE	
		<p><b>TOP OF SLAB ELEVATIONS</b></p> <p>F.A.U. 3887      SECTION 06-00214-06-BR STATION 113+61.11      STRUCTURE NO. 045-2031 SCALE:      DATE: 00/00/2007</p>

**URS**  
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Chicago, IL 60606  
(312) 939-1000

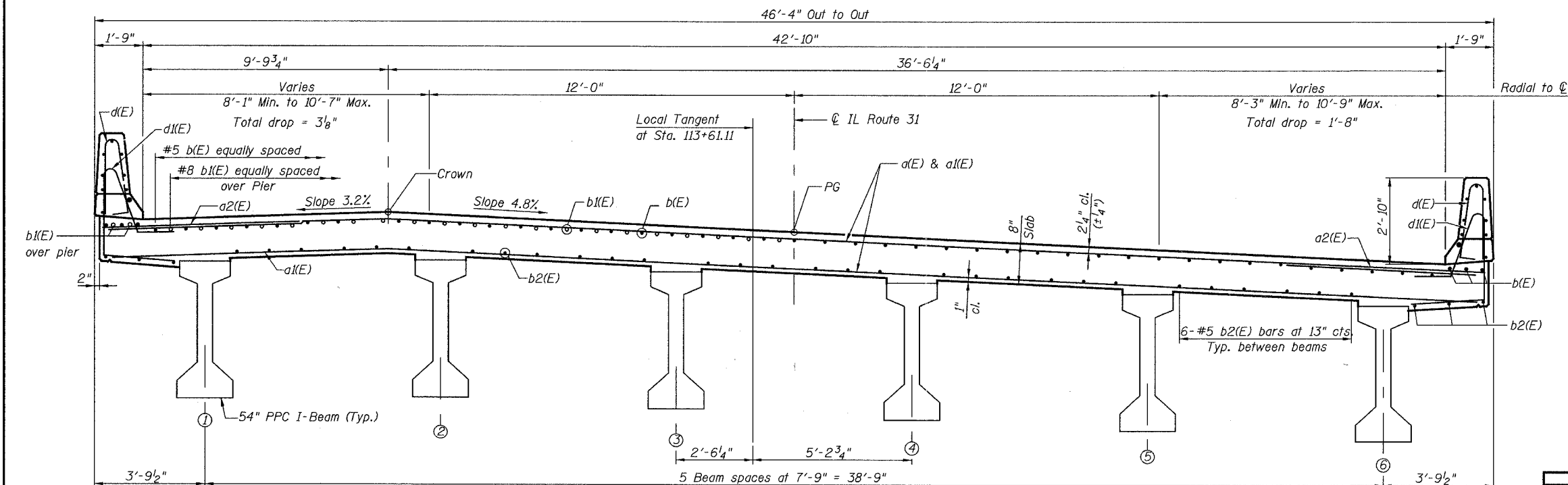
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	21
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT-		CONTRACT NO. 83923

SHEET NO. 6  
25 SHEETS



**PLAN**  
Scale 1/8"=1'-0"



NEAR PIER

**CROSS SECTION**  
(Looking South)

NEAR MIDSPAN

- Notes:
1. See Sheet 7 of 25 for superstructure details and Bill of Material.
  2. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
  3. See Sheet 7 of 25 for parapet reinforcement.
  4. See sheet 12 of 25 for section A-A.
  5. Reinforcement bars designated (E) shall be epoxy coated.
  6. Minimum lap length for #5 bar is 1'-8".

DESIGNED	JRT
CHECKED	NPP
DRAWN	SOI
CHECKED	NPP

P11-2-R 11-1-06

**URS**  
100 South Wacker Drive,  
Suite 500  
Chicago, IL 60606  
(312) 939-1000

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY  
**SUPERSTRUCTURE PLAN  
AND CROSS SECTION**  
F.A.U. 3887 SECTION 06-00214-06-BR  
STATION 113+61.11 STRUCTURE NO. 045-2031  
SCALE: DATE: 00/00/2007

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	22
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7  
25 SHEETS

CONTRACT NO. 83923

**SUPERSTRUCTURE  
BILL OF MATERIAL**

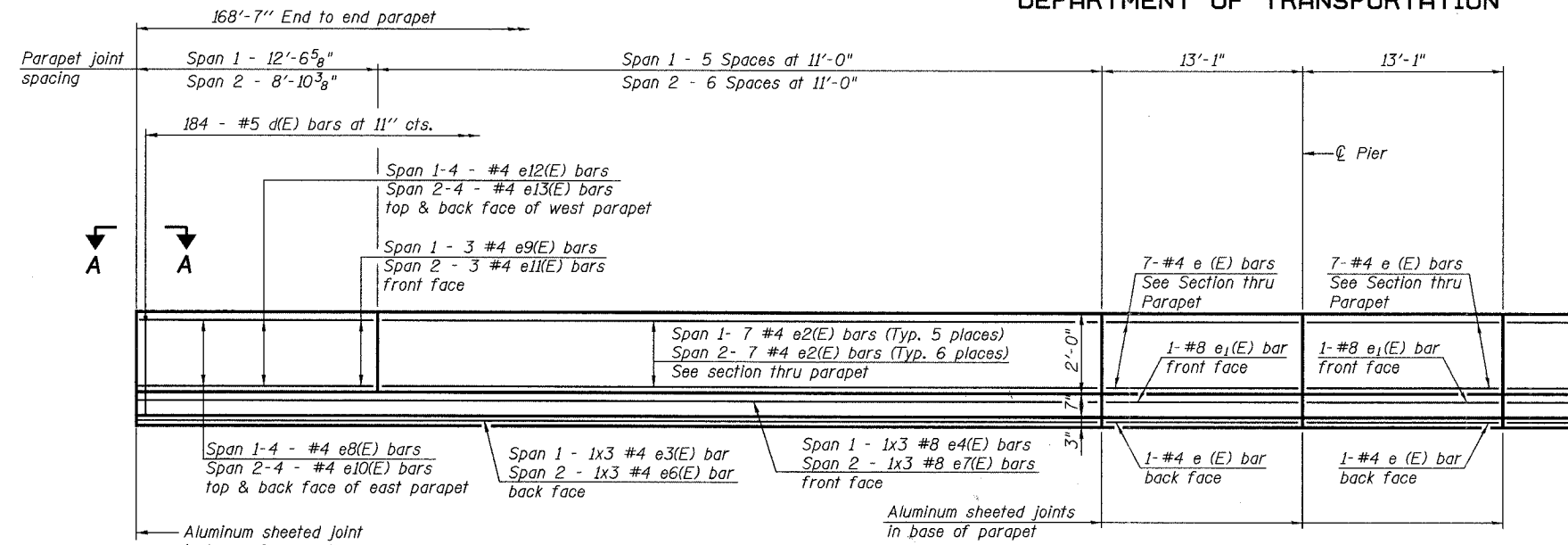
Bar	No.	Size	Length	Shape
d(E)	253	#5	45'-9"	
d1(E)	203	#5	45'-4"	
d2(E)	252	#6	6'-6"	
d3(E)	4	#5	44'-7"	
b(E)	294	#5	29'-9"	
b1(E)	45	#8	33'-10"	
b2(E)	252	#5	25'-6"	
d(E)	368	#5	5'-7"	
d1(E)	368	#5	8'-4"	
e(E)	32	#4	12'-10"	
e1(E)	4	#8	12'-10"	
e2(E)	154	#4	10'-9"	
e3(E)	6	#4	23'-11"	
e4(E)	6	#8	25'-9"	
e6(E)	6	#4	27'-0"	
e7(E)	6	#8	28'-2"	
e8(E)	4	#4	12'-6"	
e9(E)	6	#4	12'-3"	
e10(E)	4	#4	8'-3"	
e11(E)	6	#4	9'-6"	
e12(E)	4	#4	12'-0"	
e13(E)	4	#4	10'-9"	
m1(E)	6	#6	44'-11"	
m2(E)	24	#6	9'-10"	
m3(E)	20	#6	5'-8"	
m4(E)	4	#6	2'-8"	
m5(E)	30	#4	7'-0"	
m6(E)	6	#8	5'-10"	
m7(E)	4	#6	44'-4"	
s9(E)	90	#5	5'-9"	
s10(E)	68	#4	13'-2"	
s11(E)	30	#4	12'-4"	
v3(E)	82	#5	3'-4"	
Reinforcement Bars, Epoxy Coated			Lbs.	55,560
Concrete Superstructure			Cu. Yds.	302.8
Bridge Deck Grooving			Sq. Yds.	765
Protective Coat			Sq. Yds.	980
Bar Splicers			Each	86

Bars indicated thus: 3x7 #5 etc. indicates 3 lines of #5 bars with 7 lengths per line.

Reinforcement bars designated (E) shall be epoxy coated.

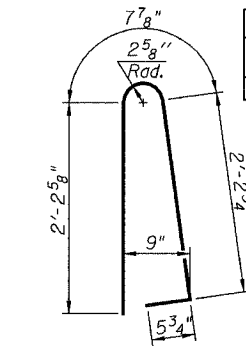
See Sheet 18 of 25 for Architectural Form Liner and Staining Concrete Structures Details and Quantities for parapets and deck overhangs.

Protective coat shall be applied to top and inside faces of parapets and top surface of deck. Protective coat shall be applied to bridge deck after bridge deck grooving operations have been completed.

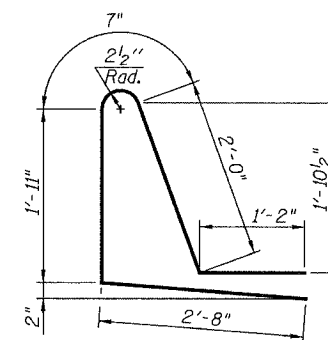


**INSIDE ELEVATION OF PARAPET**

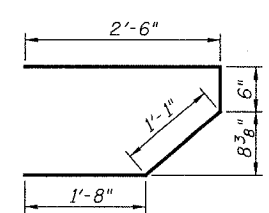
**MINIMUM BAR LAP**  
(Parapet)  
#4 bar = 1'-8"  
#8 bar = 4'-6"



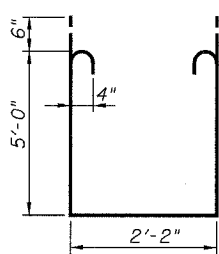
**BAR d(E)**



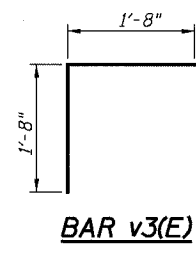
**BAR d1(E)**



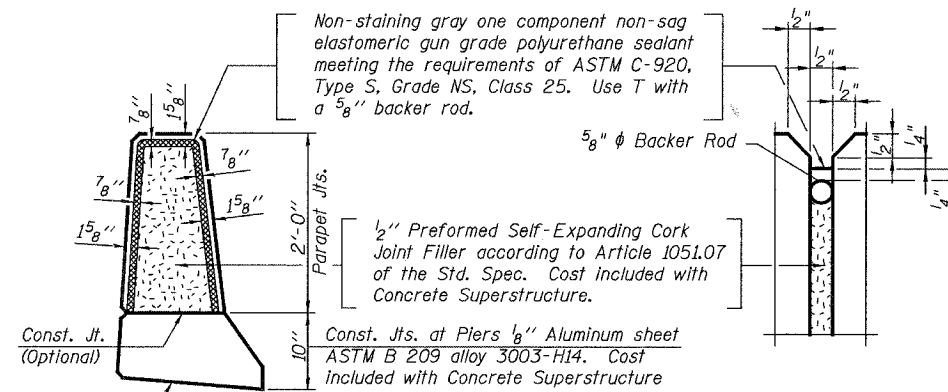
**BAR s9(E)**



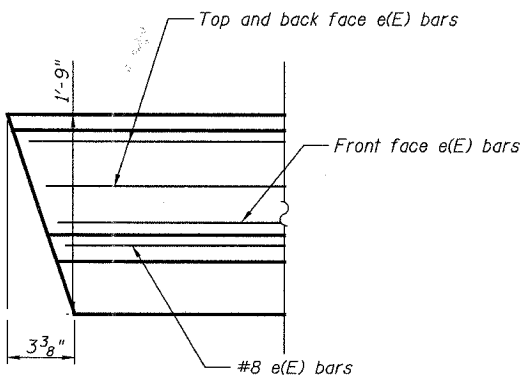
**BAR s10(E)**



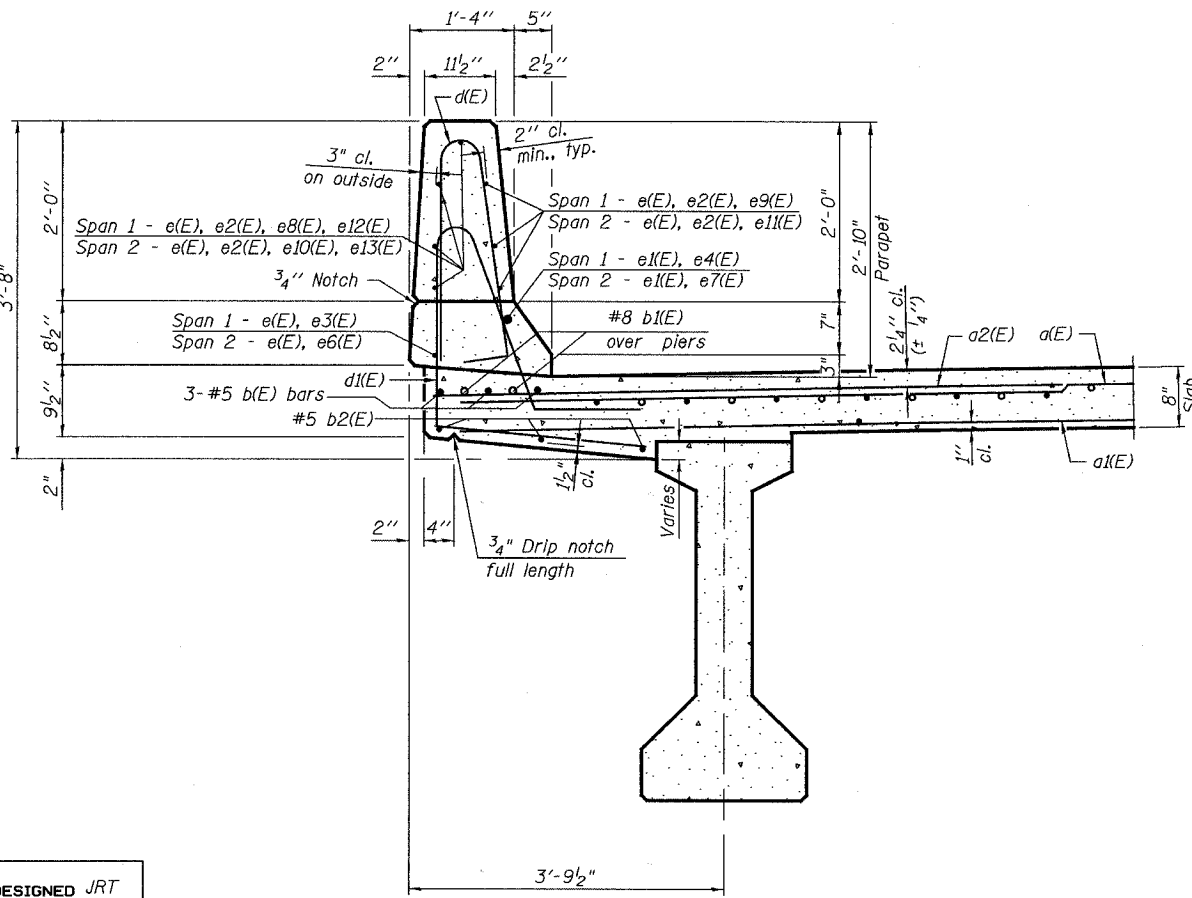
**BAR v3(E)**



**PARAPET JOINT DETAILS**



**SECTION A-A**



**SECTION THRU PARAPET**

(Parapet reveals not shown for clarity. See sheet 18 for reveal and finish details.)

DESIGNED	JRT
CHECKED	NPP
DRAWN	SOI
CHECKED	NPP

PI-I-D 11-1-06

100 South Wacker Drive,  
Suite 500  
Chicago, IL 60606  
(312) 939-1000

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY

**SUPERSTRUCTURE DETAILS**

F.A.U. 3887  
STATION 113+61.11  
SCALE:

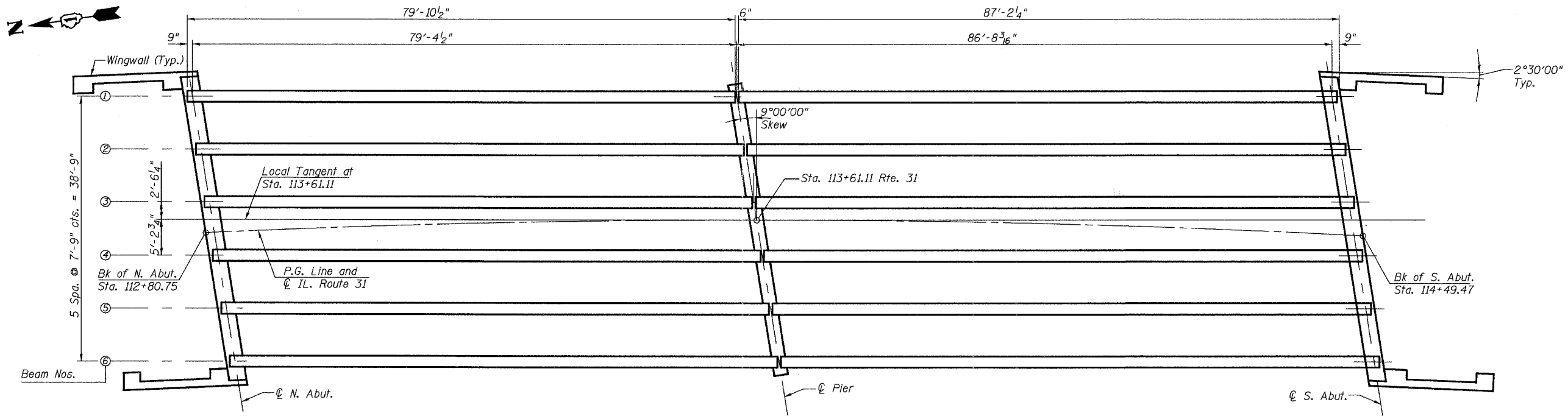
SECTION 06-00214-06-BR  
STRUCTURE NO. 045-2031  
DATE: 00/00/2007

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 8  
25 SHEETS

CONTRACT NO. 83923



	0.4 Span 1	Pier	0.6 Span 2
$I$	213,721	213,721	213,721
$I'$	544,590	544,590	544,590
$S_b$	8,559	8,559	8,559
$S_b'$	13,188	13,188	13,188
$S_t$	7,362	7,362	7,362
$S_t'$	42,858	42,858	42,358
$\ell$	1.42	1.42	1.42
$M\ell$	1,073	0	1,281
$s\ell$	0.49	0.49	0.49
$M_s\ell$	202	-420.4	274
$M\ell$	661	-590	725
$M_{Imp}$	162	-141.6	171

	North Abut.	Pier	South Abut.
$R\ell$	57	118	62
$R_s\ell$	14	51	17
$R\ell$	44	65	44
$Imp.$	11	16	11
$R_{Total}$	126	250	134

\* The total  $R_s\ell$ ,  $R\ell$ , and impact reactions are assumed to be distributed evenly to each beam support line at a pier regardless of the span ratios.

All beams are precast prestressed concrete I-Beam, 54"

- $I$ : Non-composite moment of inertia of beam section (in. <sup>4</sup>).
- $I'$ : Composite moment of inertia of beam section (in. <sup>4</sup>).
- $S_b$ : Non-composite section modulus for the bottom fiber of the prestressed beam (in. <sup>3</sup>).
- $S_b'$ : Composite section modulus for the bottom fiber of the prestressed beam (in. <sup>3</sup>).
- $S_t$ : Non-composite section modulus for the top fiber of the prestressed beam (in. <sup>3</sup>).
- $S_t'$ : Composite section modulus for the top fiber of the prestressed beam (in. <sup>3</sup>).
- $\ell$ : Un-factored non-composite dead load (kips/ft.).
- $M\ell$ : Un-factored moment due to non-composite dead load conservatively taken at 0.5 of the span (kip-ft.).
- $s\ell$ : Un-factored long-term composite (superimposed) dead load (kips/ft.).
- $M_s\ell$ : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
- $M\ell$ : Un-factored live load moment on the composite section (kip-ft.).
- $M_{Imp}$ : Un-factored moment due to impact on the composite section (kip-ft.).

DESIGNED ASL  
CHECKED NPP  
DRAWN SOI  
CHECKED NPP

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY

FRAMING PLAN

F.A.U. 3887  
STATION 113+61.11  
SCALE:      DATE: 00/00/2007

**URS**  
100 South Wacker Drive,  
Suite 500  
Chicago, IL 60606  
(312) 939-1000



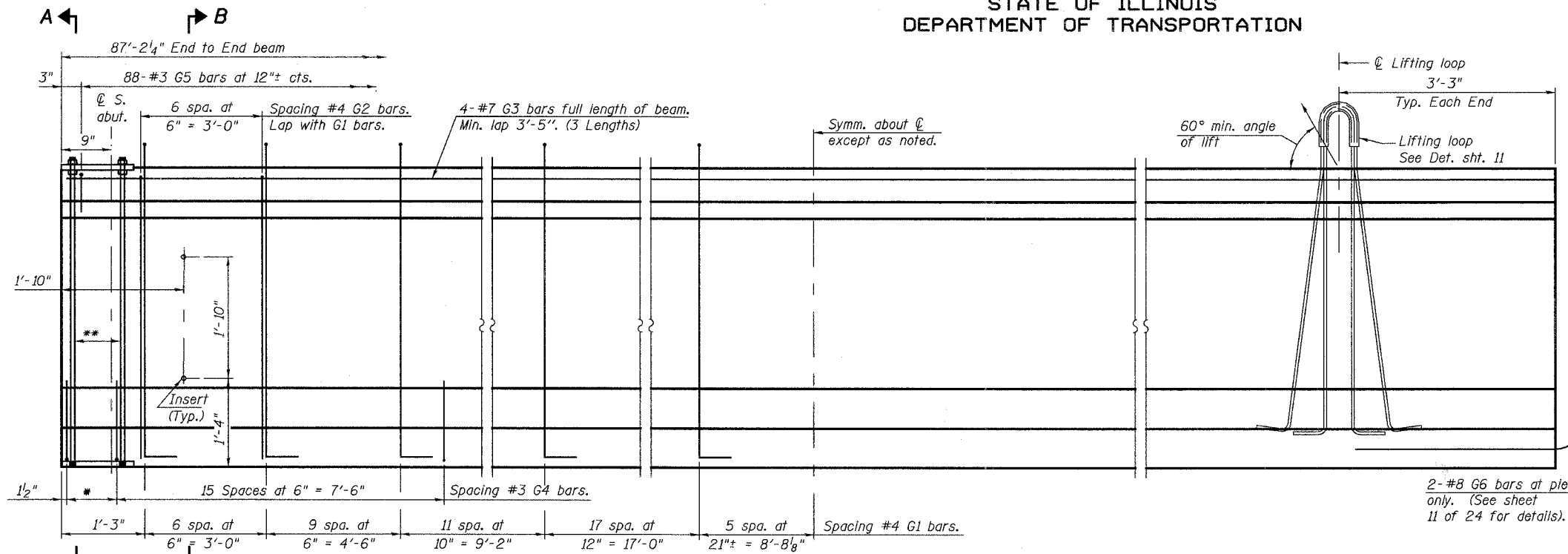


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	25
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 10  
25 SHEETS

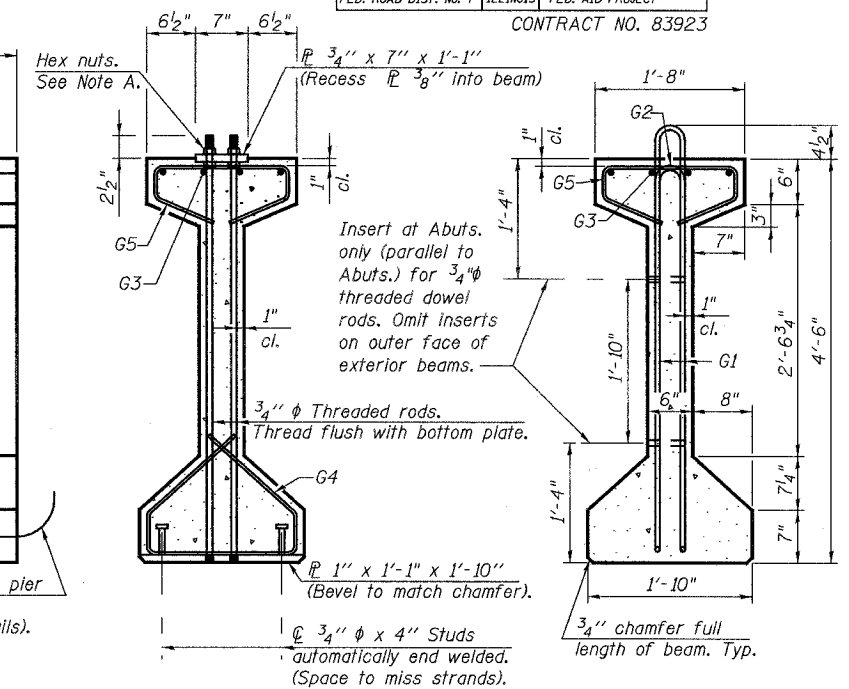
CONTRACT NO. 83923



**ELEVATION OF BEAM**

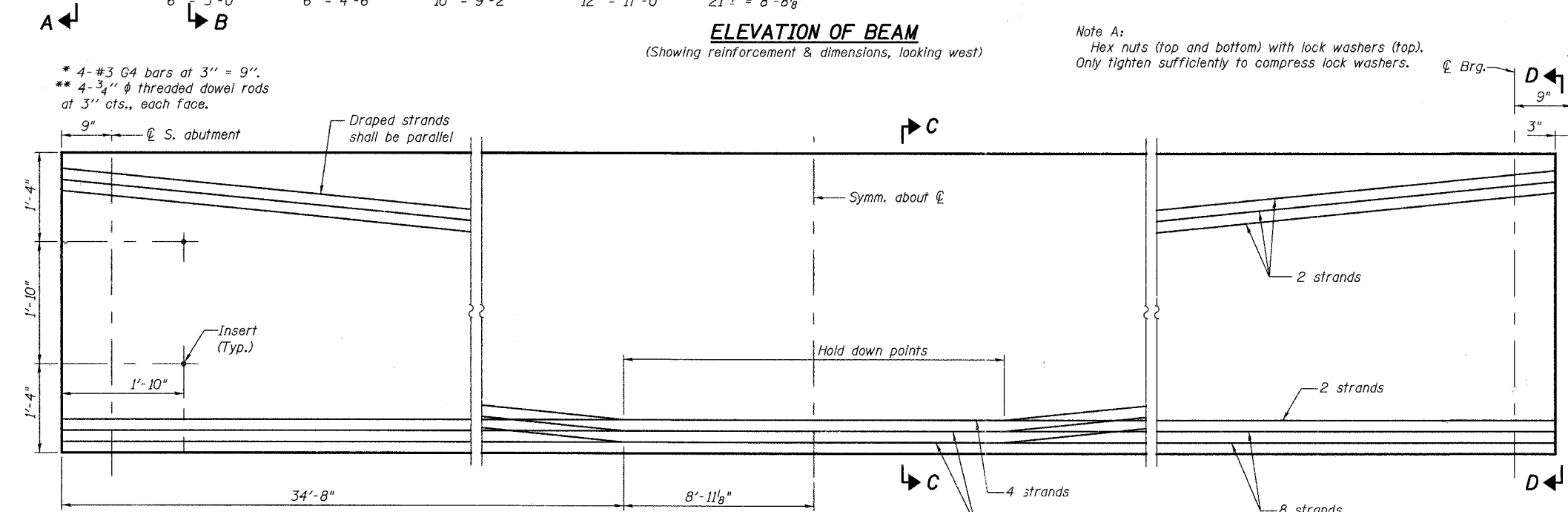
(Showing reinforcement & dimensions, looking west)

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



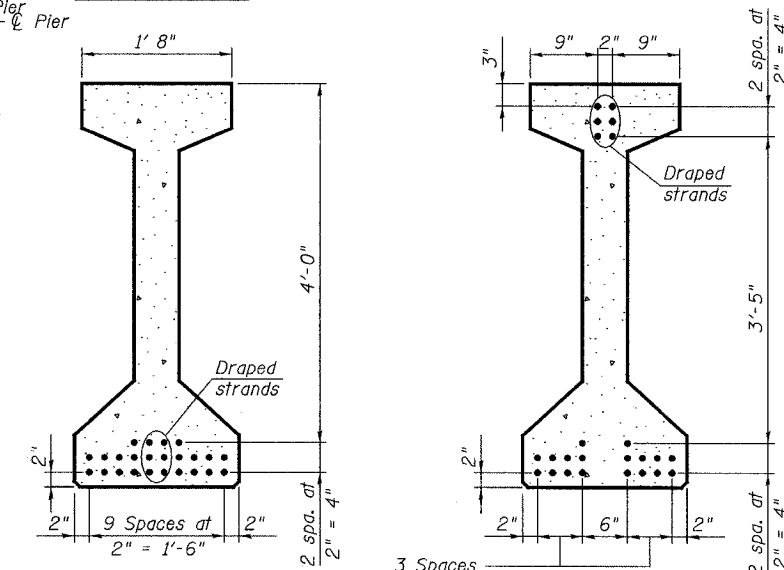
**SECTION A-A**

**SECTION B-B**



**ELEVATION OF BEAM**

(Showing prestressing steel)



**SECTION C-C**

**SECTION D-D**

- Notes:
- See sheet 11 of 25 for additional details and Bill of Material.
  - Required release strength,  $f'_{ci}$ , shall be 5,000 psi.
  - See sheet 18 of 25 for Staining Concrete Structures details.
  - Provide a minimum of 4 Inserts in the web of fascia beams to support sign structures. The location and size will be as determined by the Engineer. The cost of inserts is included with Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54 In.

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

Bar	No.	Size	Length	Shape
G1	97	#4	10'-5"	⊏
G2	14	#4	8'-8"	⊏
G3	12	#7	32'-4"	—
G4	38	#3	4'-11"	⊏
G5	88	#3	3'-5"	⊏
G6	2	#8	3'-9"	⊏

\*\*\* For information only

DESIGNED	ASL
CHECKED	NPP
DRAWN	SOI
CHECKED	NPP

PI-4-54  
12-21-06

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(312) 939-1000

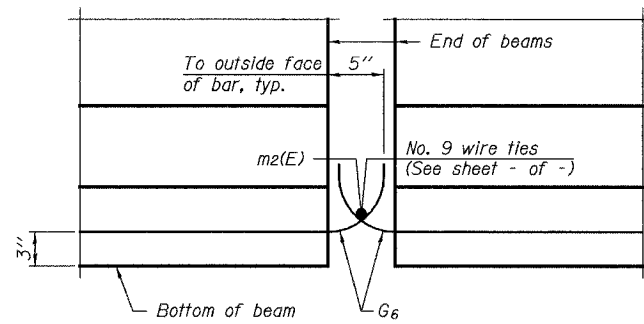
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY  
**PPC I-BEAM DETAILS  
SPAN 2**  
F.A.U. 3887  
STATION 113+61.11  
SCALE:  
SECTION 06-00214-06-BR  
STRUCTURE NO. 045-2031  
DATE: 00/00/2007

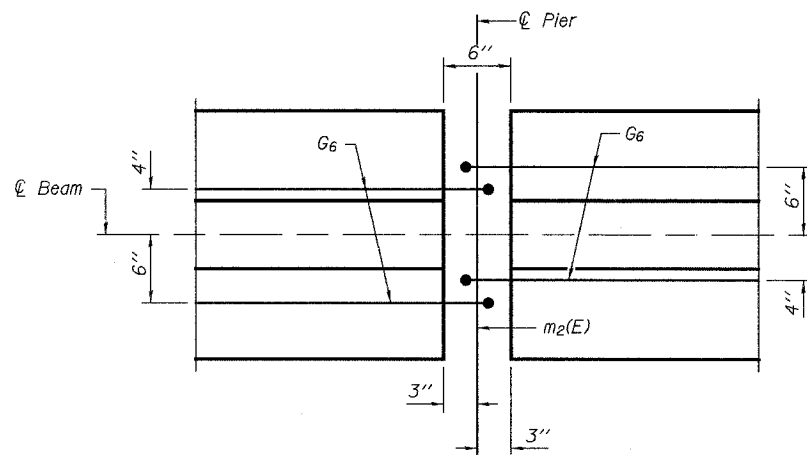
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	26
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 83923	

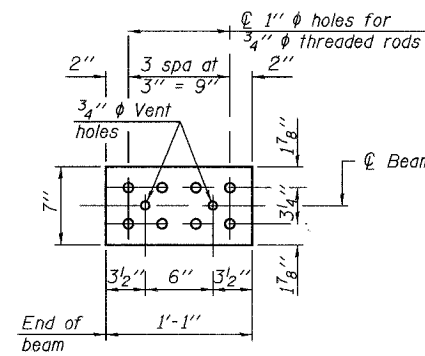
SHEET NO. 11  
25 SHEETS



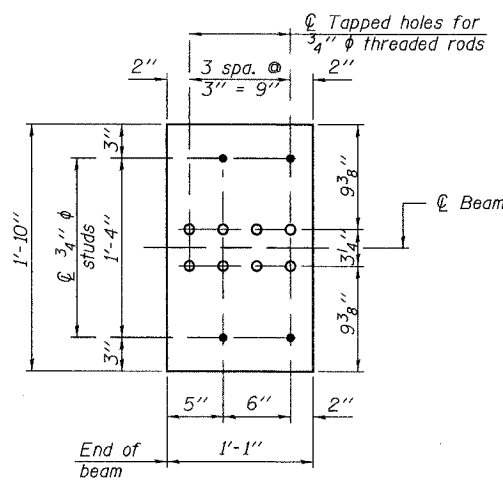
ELEVATION OF BEAM AT PIER



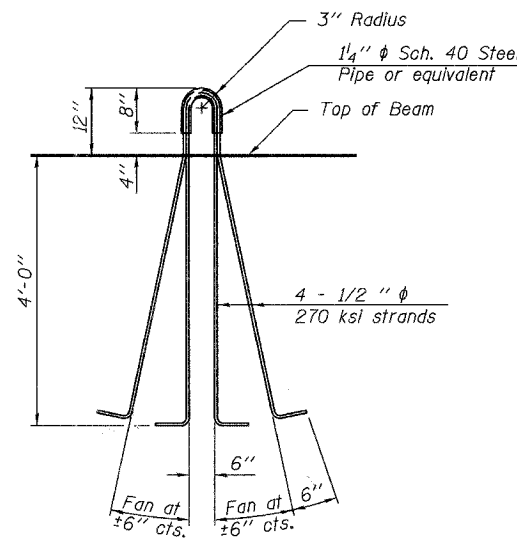
PLAN OF BEAM AT PIER



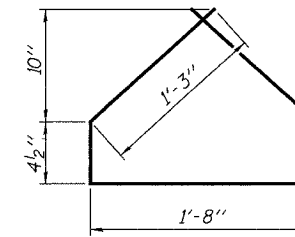
TOP PLATE



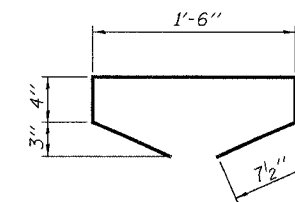
BOTTOM PLATE



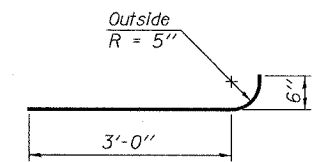
LIFTING LOOP DETAIL



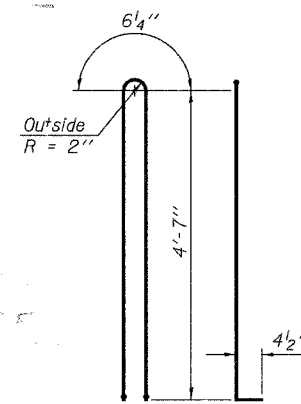
BAR G4



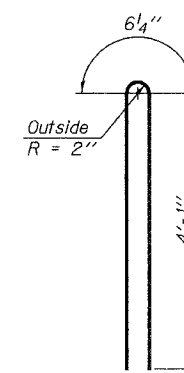
BAR G5



BAR G6



BAR G1



BAR G2

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54"	Ft.	1002.5

See Sheet 18 of 24 for Staining Concrete Surface Details for fascia beams.

NOTES

Inserts for 3/4"  $\phi$  threaded dowel rods, when specified, are to be two strut, coil type for interior beams and single coil, flared loop type for exterior beams.  
 Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.  
 The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.  
 Non-prestressing steel shall conform to ASTM A 706 (IL MOD), Grade 60.  
 A minimum 2 1/2"  $\phi$  lifting pin shall be used to engage the lifting loops during handling.  
 Cut G6 bars when necessary to maintain 1/2" clearance.  
 The bottom plates and studs shall be galvanized according to AASHTO M11.  
 Threaded rods shall be ASTM F 1554 Grade 55.  
 The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to all portions of the I-beam or Bulb-T beam, except the top surface of the top flange and the bottom surface of the bottom flange, starting at each beam end and extending out a distance of 54 inches. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

DESIGNED	ASL
CHECKED	NPP
DRAWN	SOI
CHECKED	NPP

PI-4-54D 12-21-06

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY

PPC I-BEAM DETAILS

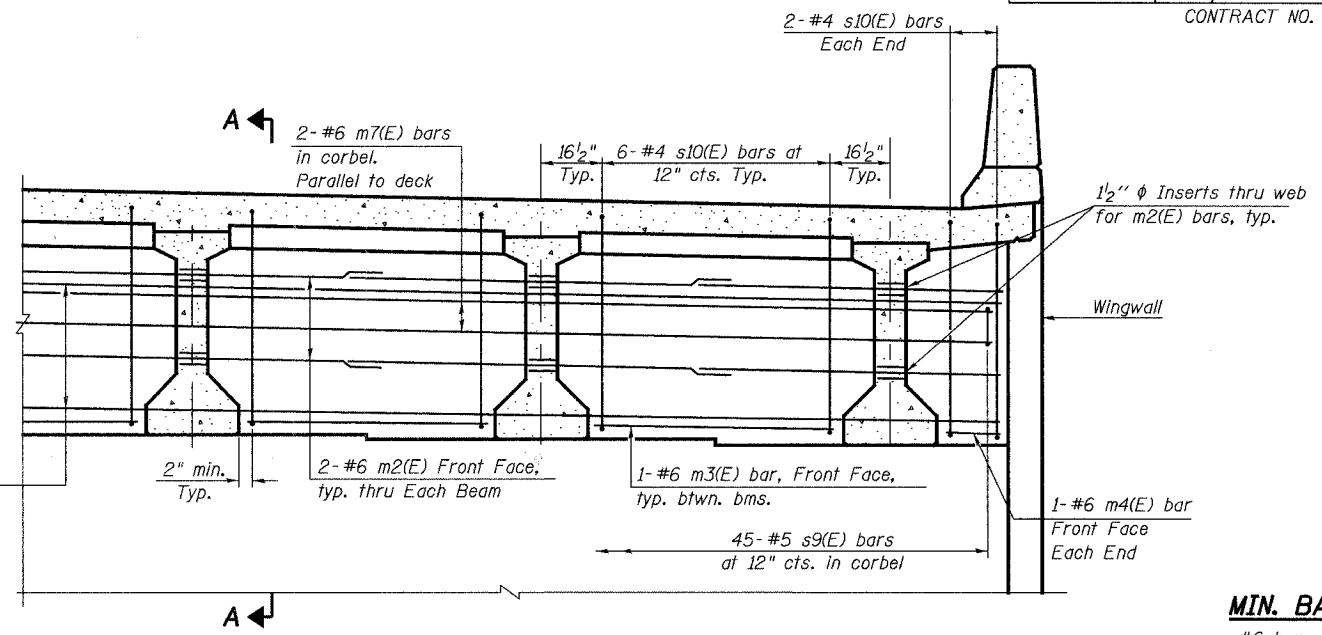
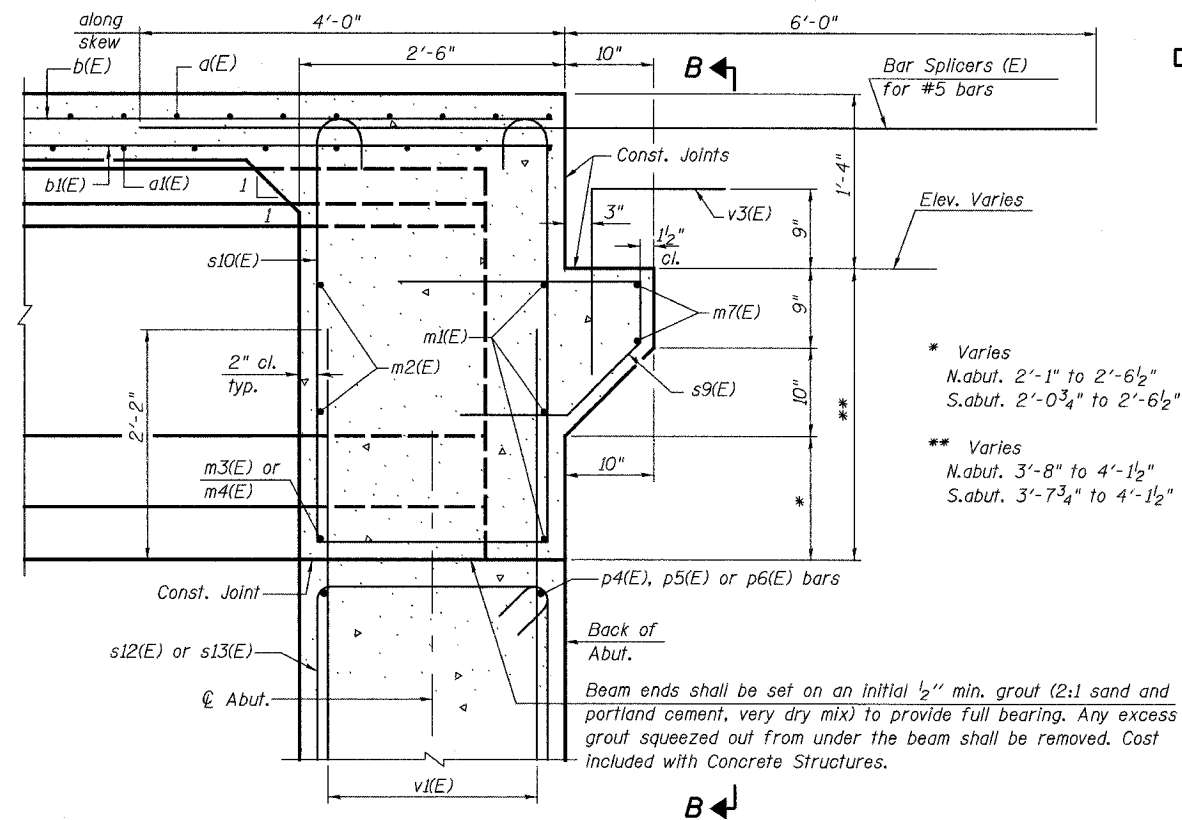
F.A.U. 3887  
STATION 113+61.11  
SCALE:

SECTION 06-00214-06-BR  
STRUCTURE NO. 045-2031  
DATE: 00/00/2007

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	27
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT-	CONTRACT NO. 83923	

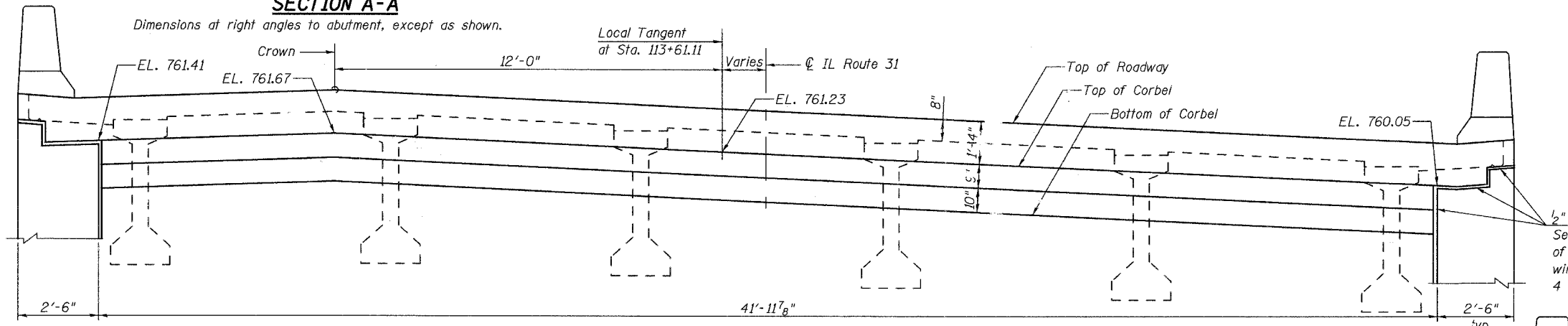
SHEET NO. 12  
25 SHEETS



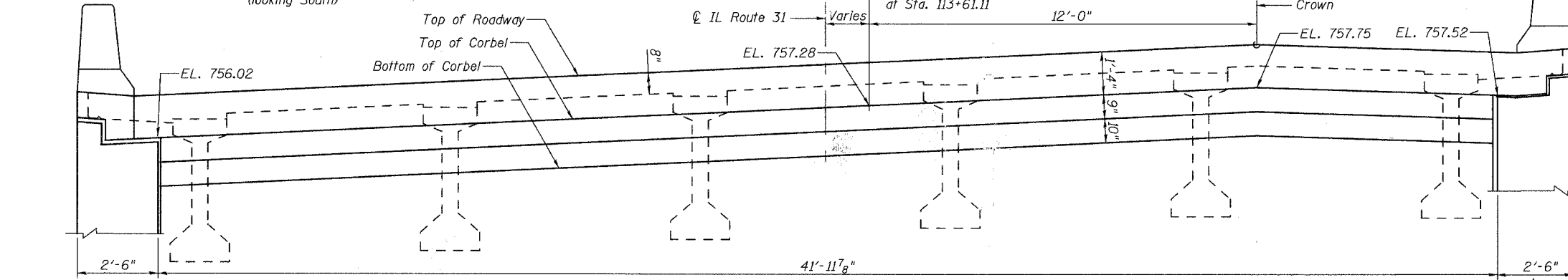
**MIN. BAR LAP**  
#6 bar = 2'-0"

**DIAPHRAGM ELEVATION AT ABUTMENT**

**SECTION A-A**



**SECTION B-B AT N. ABUT**  
(looking South)



**SECTION B-B AT S. ABUT.**  
(looking North)

- Notes:
1. Reinforcement bars in diaphragm are billed with superstructure on sheet 7 of 25.
  2. Concrete in diaphragm is included with Concrete Superstructure on sheet 7 of 25.
  3. For details of bars s9(E), s10(E) and v3(E) see sheet 7 of 25.
  4. The s9(E), s10(E) and v3(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
  5. See sheet 18 of 25 for Architectural Form liner details.

DESIGNED	ASL
CHECKED	NPP
DRAWN	SOI
CHECKED	NPP

PI-2D1 & PI-2DDI 11-1-06

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY

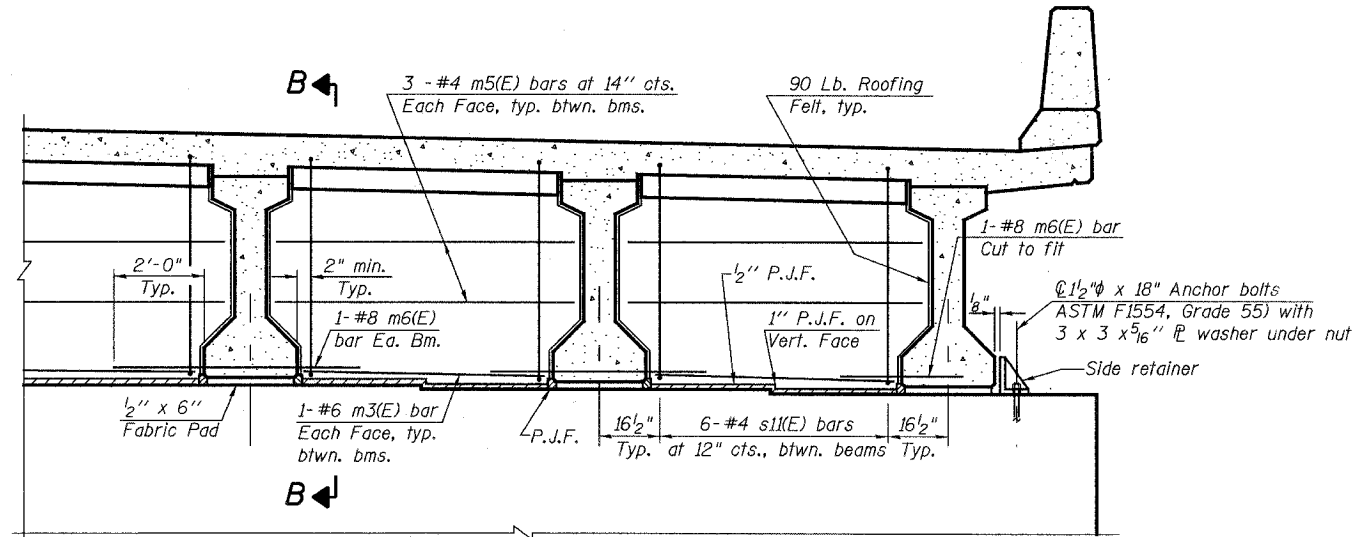
**DIAPHRAGM DETAILS  
AT ABUTMENTS**

F.A.U. 3887  
STATION 113+61.11  
SCALE:

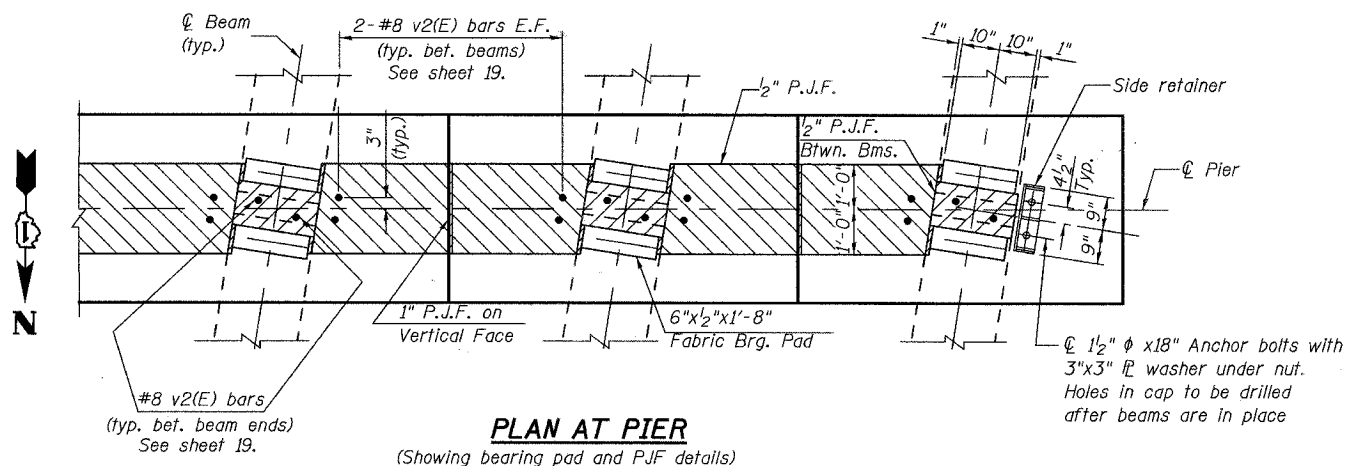
SECTION 06-00214-06-BR  
STRUCTURE NO. 045-2031  
DATE: 00/00/2007

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 13 25 SHEETS
F.A.U. 3887	06-00214-06-BR	KANE	55	28	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 83923		



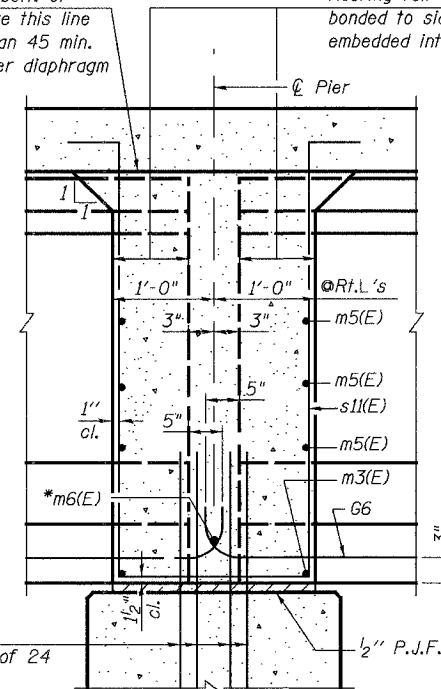
DIAPHRAGM ELEVATION AT PIER



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

Pour diaphragm flush with bott. of slab. Concrete in slab above this line shall be placed not less than 45 min. nor more than 90 min. after diaphragm has been poured.

Roofing felt shall be bonded to side of beam embedded into diaphragm.



\* Tightly fasten the #8 bars together with No. 9 wire ties.

SECTION B-B

Dimensions along  $\phi$  of beam, except as shown.

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 7 of 25.

Concrete in diaphragm is included with Concrete Superstructure on sheet 7 of 25.

For details of bar s11(E), see sheet 7 of 25.

The s11(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

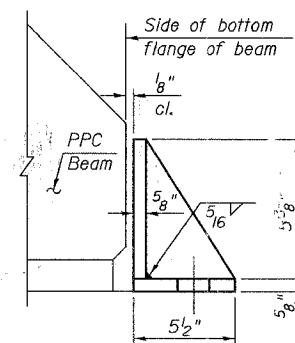
Cost of 90 Lb. roofing felt is included with Concrete Superstructure.

The side retainer shall be galvanized after shop fabrication according to AASHTO M 111. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

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

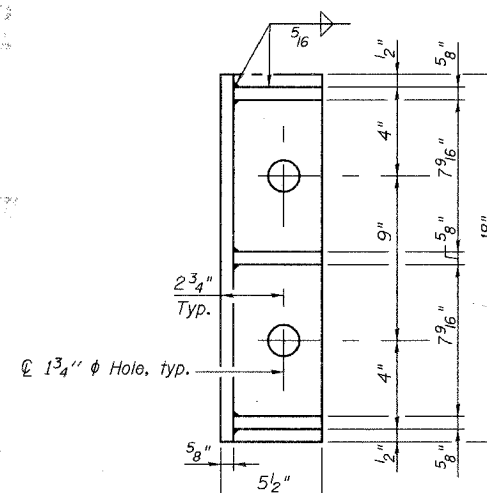
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

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



SIDE RETAINER

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



\$DATE\$ \$FILES\$

DESIGNED	ASL
CHECKED	NPP
DRAWN	SOI
CHECKED	NPP

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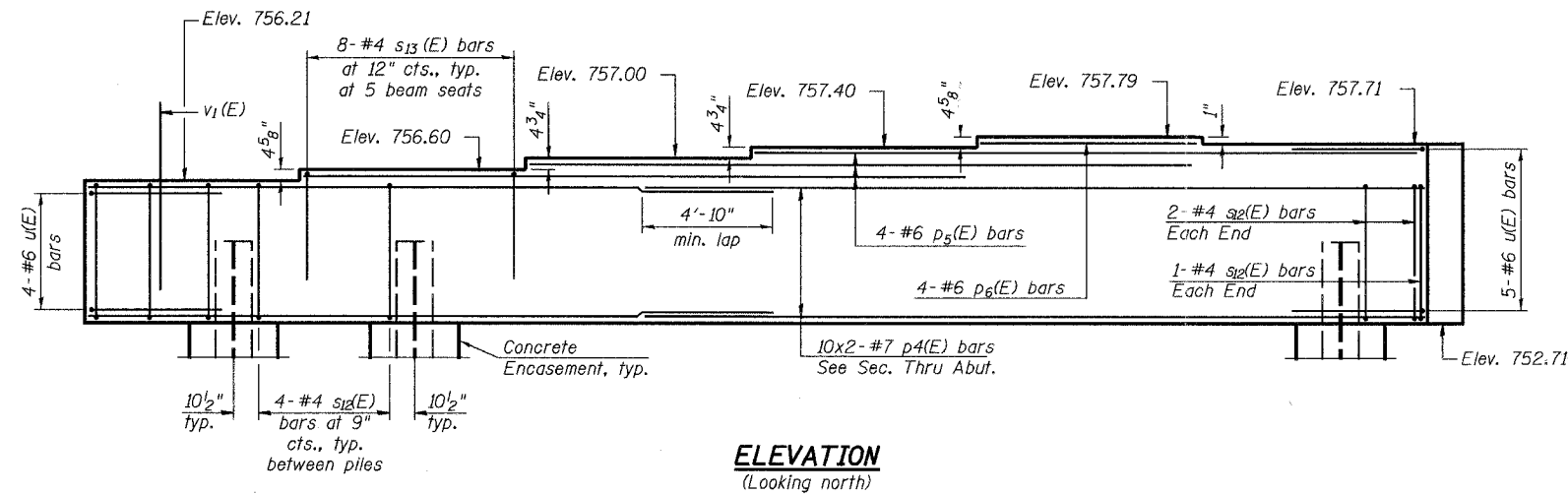
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD KANE COUNTY	DIAPHRAGM DETAILS AT PIER
NAME	DATE		
		F.A.U. 3887	SECTION 06-00214-06-BR
		STATION 113+61.11	STRUCTURE NO. 045-2031
		SCALE:	DATE: 00/00/2007

Notes: Pour steps monolithically with cap.

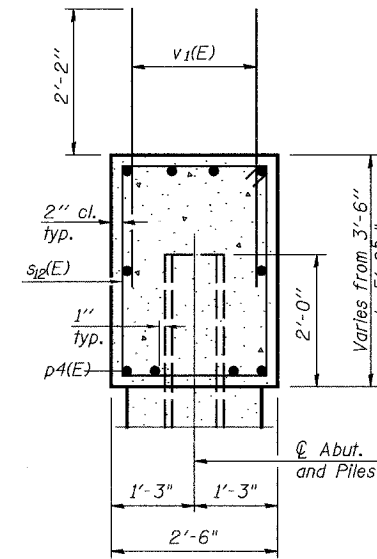
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 14 25 SHEETS
F.A.U. 3887	06-00214-06-BR	KANE	55	29	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

CONTRACT NO. 83923



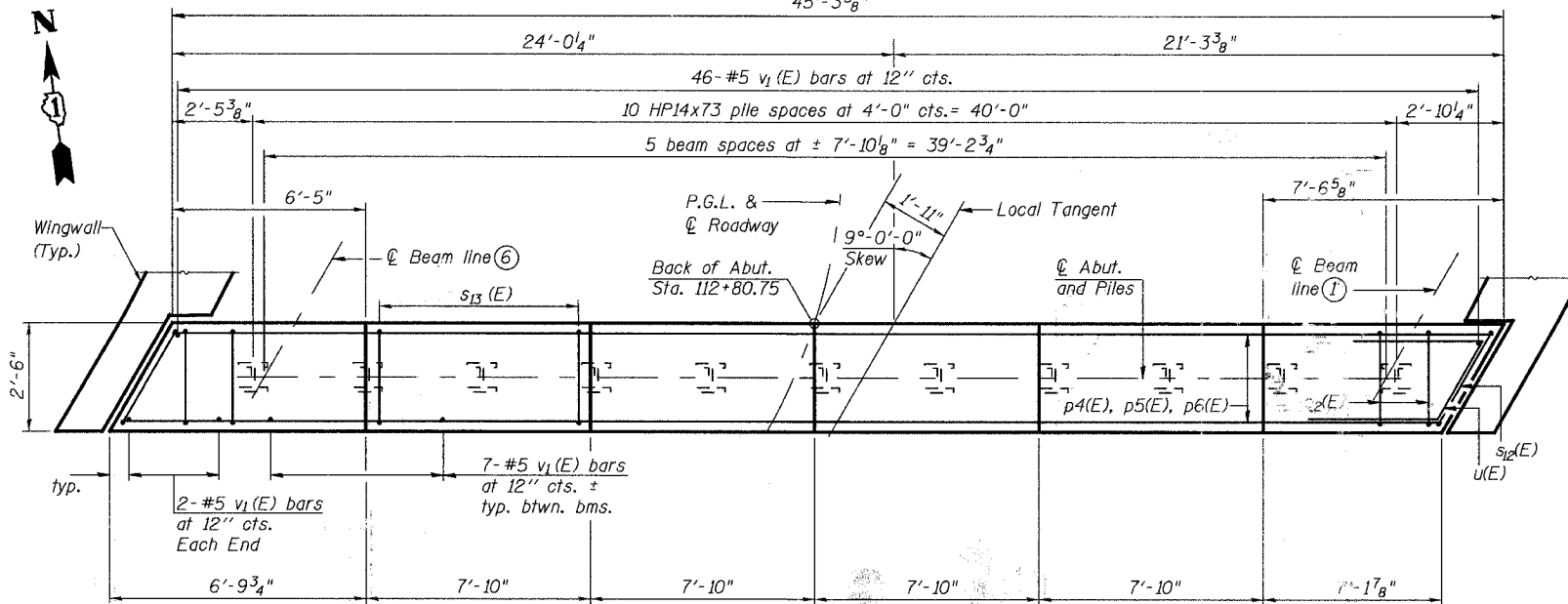
**ELEVATION**  
(Looking north)



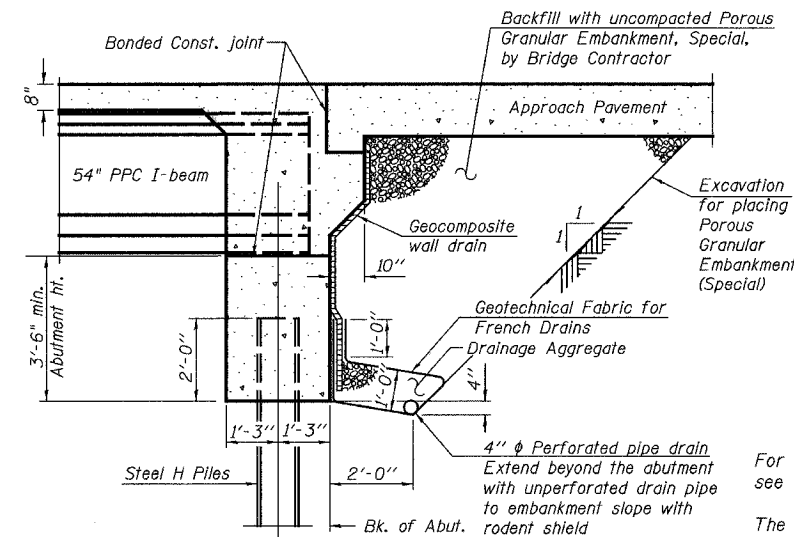
**SEC. THRU ABUT.**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
p4(E)	20	#7	25'-0"	
p5(E)	12	#6	22'-3"	
p6(E)	4	#6	7'-6"	
s12(E)	46	#4	11'-6"	□
s13(E)	40	#4	8'-2"	□
u(E)	9	#6	7'-4"	└┘
v1(E)	85	#5	4'-4"	
Structure Excavation		Cu. Yd.	163	
Concrete Structures		Cu. Yd.	18.6	
Reinforcement Bars, Epoxy Coated		Pound	2,530	
Furnishing Steel Piles HP14x73		Foot	510	
Test Pile Steel HP14x73		Each	1	
Driving Piles		Foot	510	
Concrete Encasement		Cu. Yd.	6.0	
Pile shoes		Each	11	
Porous Granular Embankment, Special		Cu. Yd.	108	
Geocomposite Wall Drain		Sq. Yd.	41	
Pipe Underdrains For Structures 4"		Foot	47	



**PLAN**



**SECTION SHOWING DRAINAGE BEHIND ABUTMENT**

For details of piles and Concrete Encasement, see sheet 21 of 25.

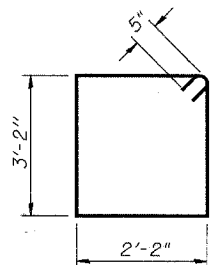
The cost of non-perforated drain pipe from back of abutment to embankment slope and rodent shield is included with Pipe Underdrains For Structures 4".

See sheet 18 for Architectural Form Liner Surface and Staining Concrete Surface Details.

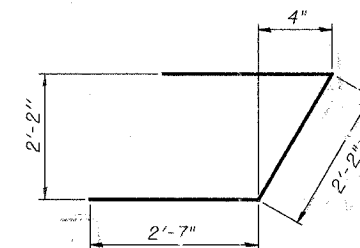
**PILE DATA**

Type: Steel HP14x73 with Pile Shoes  
Nominal Required Bearing: 240 kips  
Allowable Resistance Available: 80 kips  
Est. Length: 51'  
No. Production Piles: 10  
No. Test Piles: 1

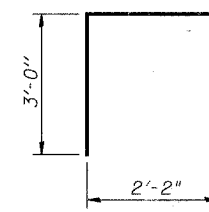
The Test Pile shall be driven to 110 percent of the Nominal Required Bearing Indicated in the pile data information



**BAR s12(E)**



**BAR u(E)**



**BAR s13(E)**

DESIGNED	ASL
CHECKED	NPP
DRAWN	SOI
CHECKED	NPP

AI-R 11-1-06

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY

**NORTH ABUTMENT DETAILS**

F.A.U. 3887 STATION 113+61.11  
SCALE: N.T.S.  
SECTION 06-00214-06-BR STRUCTURE NO. 045-2031  
DATE: 00/00/2007

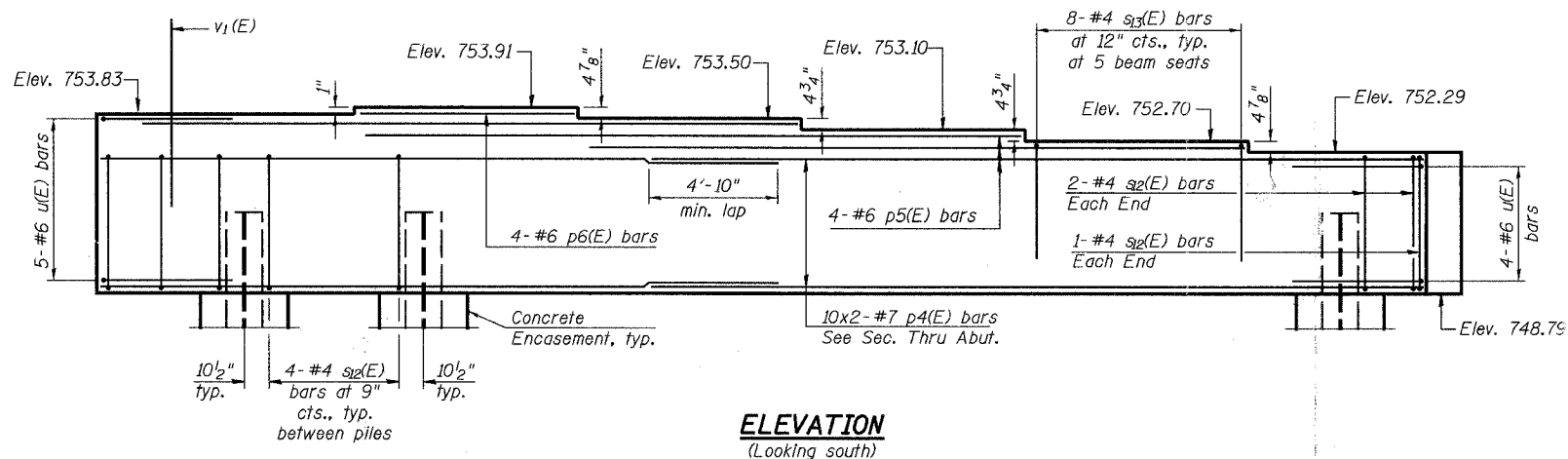
Notes: Pour steps monolithically with cap.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

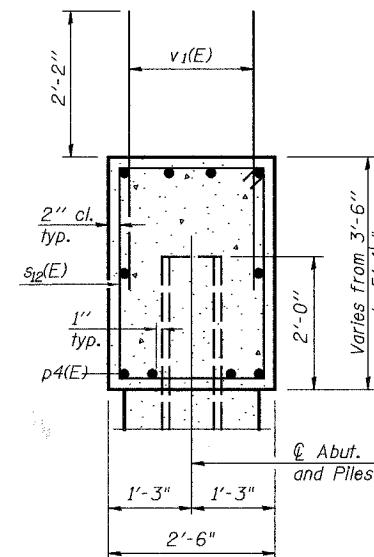
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	30
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT-		

CONTRACT NO. 83923

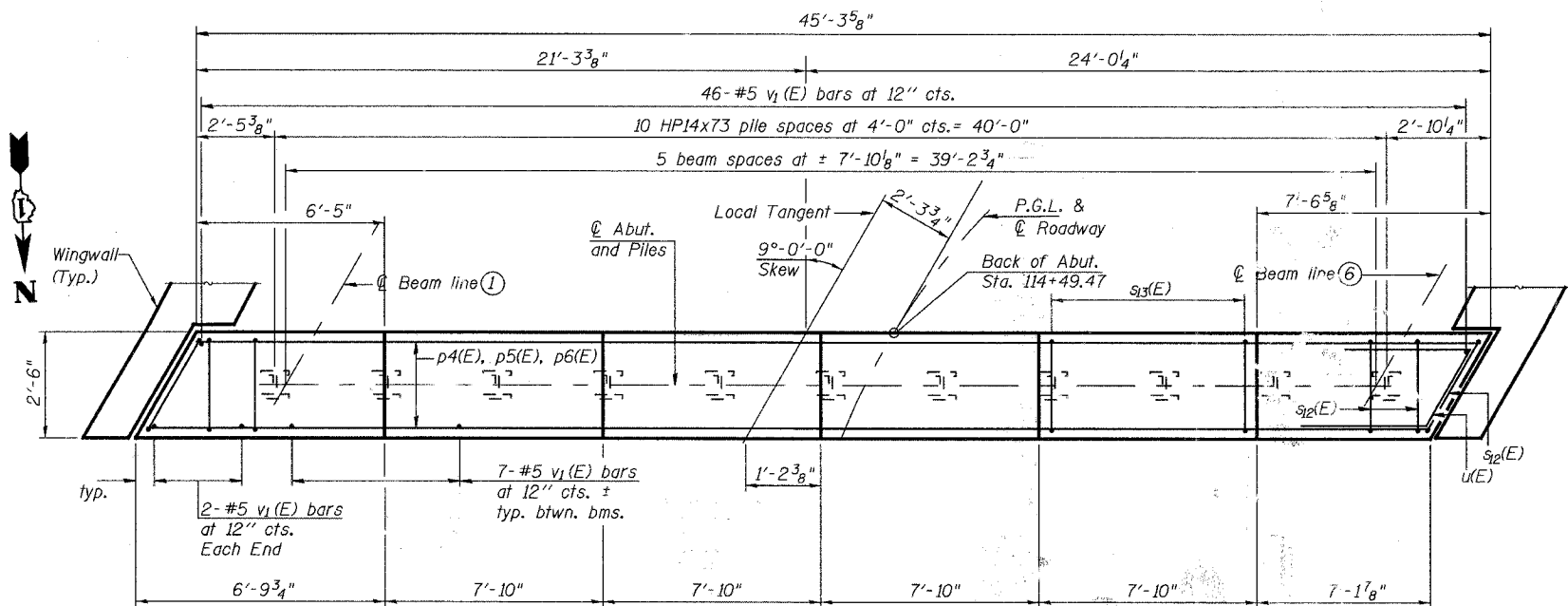
SHEET NO. 15  
25 SHEETS



**ELEVATION**  
(Looking south)



**SEC. THRU ABUT.**

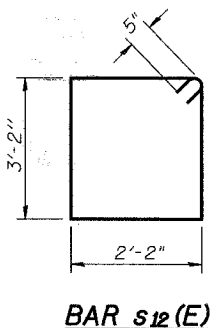


**PLAN**

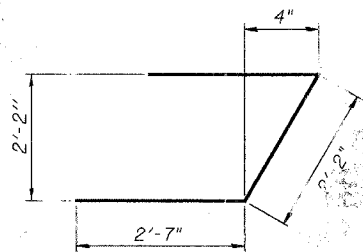
**PILE DATA**

Type: Steel HP14x73 with Pile Shoes  
Nominal Required Bearing: 240 kips  
Allowable Resistance Available: 80 kips  
Est. Length: 49'  
No. Production Piles: 10  
No. Test Piles: 1

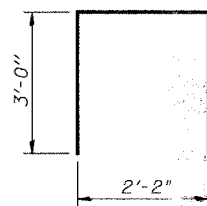
The Test Pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information



**BAR s12(E)**



**BAR u(E)**



**BAR s13(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
p4(E)	20	#7	25'-0"	
p5(E)	12	#6	22'-3"	
p6(E)	4	#6	7'-6"	
s12(E)	46	#4	11'-6"	
s13(E)	40	#4	8'-2"	
u(E)	9	#6	7'-4"	
v1(E)	85	#5	4'-4"	
Structure Excavation		Cu. Yd.	16.3	
Concrete Structures		Cu. Yd.	18.6	
Reinforcement Bars, Epoxy Coated		Pound	2,530	
Furnishing Steel Piles HP14x73		Foot	490	
Test Pile Steel HP14x73		Each	1	
Driving Piles		Foot	490	
Concrete Encasement		Cu. Yd.	6.0	
Pile shoes		Each	11	
Porous Granular Embankment, Special		Cu. Yd.	109	
Geocomposite Wall Drain		Sq. Yd.	41	
Pipe Underdrains For Structures 4"		Foot	47	

For details of piles and Concrete Encasement, see sheet 21 of 25.

The cost of non-perforated drain pipe from back of abutment to embankment slope and rodent shield is included with Pipe Underdrains For Structures 4".

See sheet 18 for Architectural Form Liner Surface and Staining Concrete Surface details.

See sheet 14 for details of drainage behind abutment.

DESIGNED ASL  
CHECKED NPP  
DRAWN SOI  
CHECKED NPP

AI-R 11-1-06

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ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY

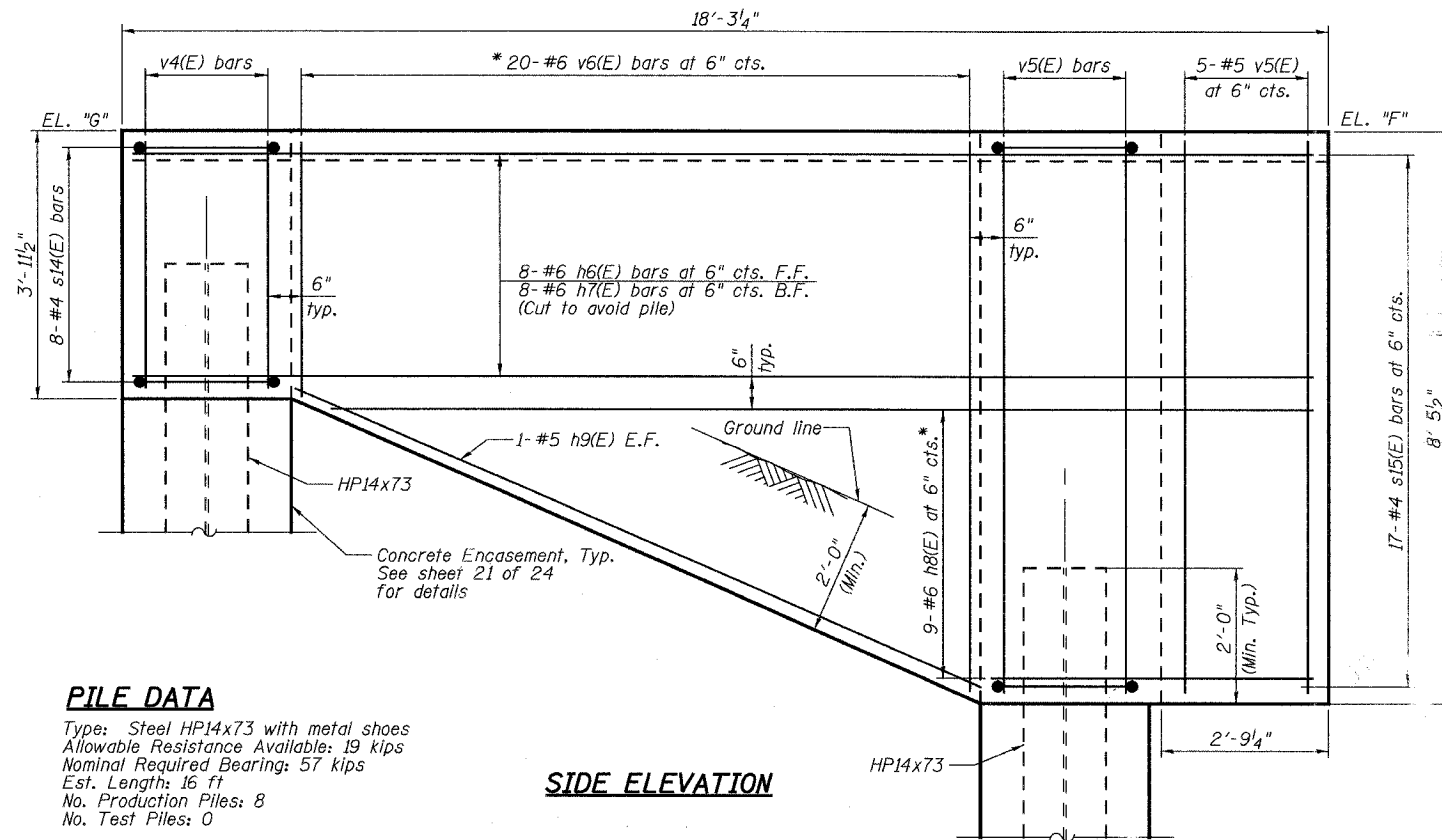
**SOUTH ABUTMENT DETAILS**

F.A.U. 3887 STATION 113+  
SCALE: N.T.S.  
SECTION 06-00214-06-BR STRUCTURE NO. 045-2031  
DATE: 00/00/2007

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

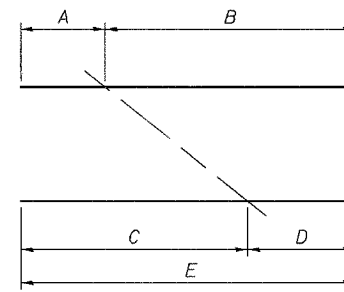
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	31
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
CONTRACT NO. 83923				

SHEET NO. 16  
25 SHEETS



**PILE DATA**

Type: Steel HP14x73 with metal shoes  
 Allowable Resistance Available: 19 kips  
 Nominal Required Bearing: 57 kips  
 Est. Length: 16 ft  
 No. Production Piles: 8  
 No. Test Piles: 0



**BAR LENGTHS**

Bar	A	B	C	D	E	F	G
v6(E)	3'-4"	7'-5"	7'-5"	3'-4"	10'-9"	20	4
h8(E)	2'-6"	11'-11"	11'-9"	2'-8"	14'-5"	9	4

F=No. of bars  
G=No. of sets

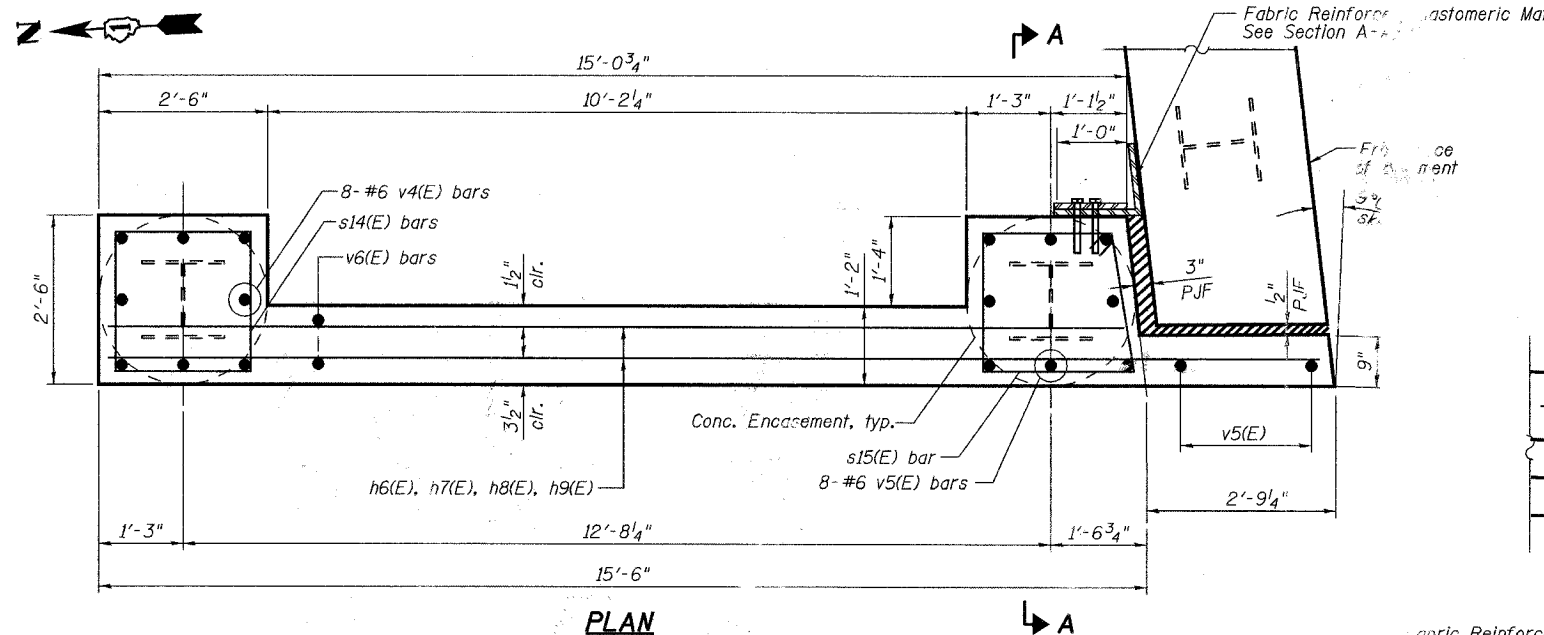
\* Order v6(E) & h8(E) bars full length. Cut to fit as shown and use remainder of bars in other face.  
 h8(E) B and D lengths are to be used in the front face.

**WINGWALL ELEVATION TABLE**

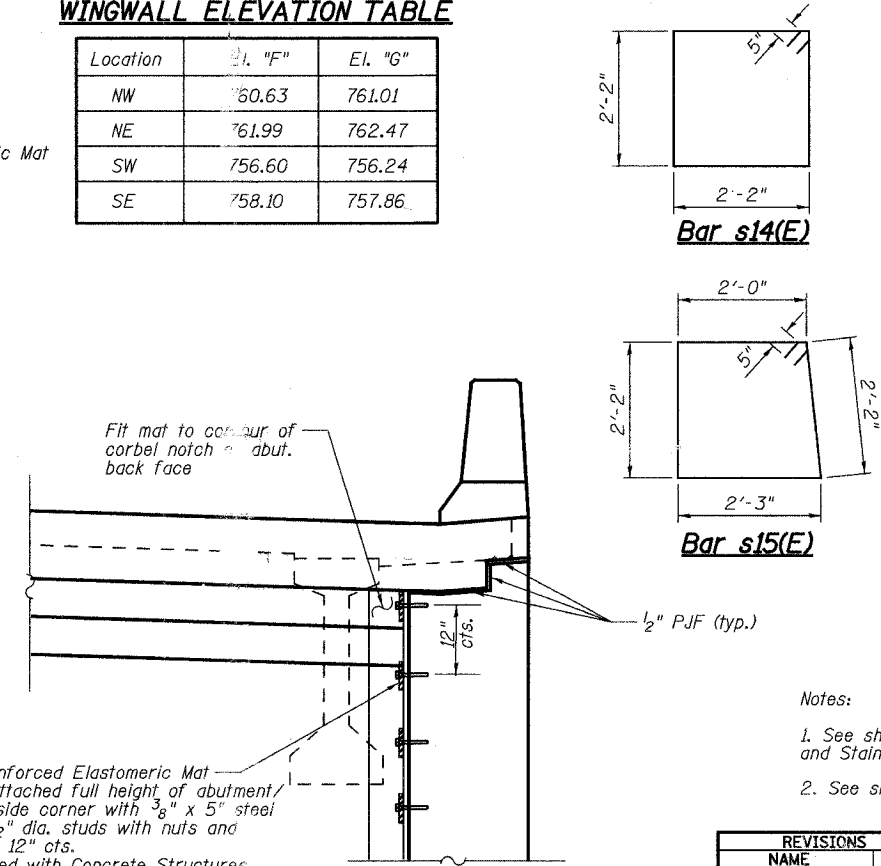
Location	El. "F"	El. "G"
NW	760.63	761.01
NE	761.99	762.47
SW	756.60	756.24
SE	758.10	757.86

**\*\* BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
b3(E)	12	#5	15'-3"	
d(E)	68	#5	5'-7"	
d(E)	68	#5	8'-4"	
e11(E)	6	#4	15'-0"	
e14(E)	10	#4	15'-6"	
e15(E)	6	#4	15'-5"	
e16(E)	2	#8	15'-4"	
e17(E)	10	#4	14'-11"	
e18(E)	2	#8	15'-1"	
h6(E)	32	#6	17'-7"	
h7(E)	32	#6	17'-5"	
h8(E)	36	#6	16'-11"	
h9(E)	8	#6	11'-3"	
s14(E)	32	#4	9'-6"	
s15(E)	68	#4	9'-5"	
v4(E)	32	#6	3'-7"	
v5(E)	52	#6	8'-1"	
v6(E)	80	#6	11'-7"	
Structure Excavation	Cu. Yd.		100	
Concrete Structures	Cu. Yd.		33.1	
Concrete Encasement	Cu. Yd.		4.4	
Reinforcement Bars, Epoxy Coated	Pound		7,230	
Furnishing Steel Piles HP14x73	Foot		128	
Driving Piles	Foot		128	
Pile Shoes	Each		8	



The NW Wingwall is shown  
The Wingwalls at other 3 Locations are similar.



- Notes:
- See sheet 18 of 25 for Architectural Form Liner Surface and Staining Concrete Surface Details.
  - See sheet 17 of 25 for section through the wall.

DESIGNED	ASL
CHECKED	NPP
DRAWN	DYS
CHECKED	NPP

**URS**  
100 South Wacker Drive,  
Suite 500  
Chicago, IL 60606  
(312) 939-1000

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY

**ABUTMENT WINGWALL DETAILS**

F.A.U. 3887 STATION 113+61.11 SCALE:  
SECTION 06-00214-06-BR STRUCTURE NO. 045-2031 DATE: 00/00/2007

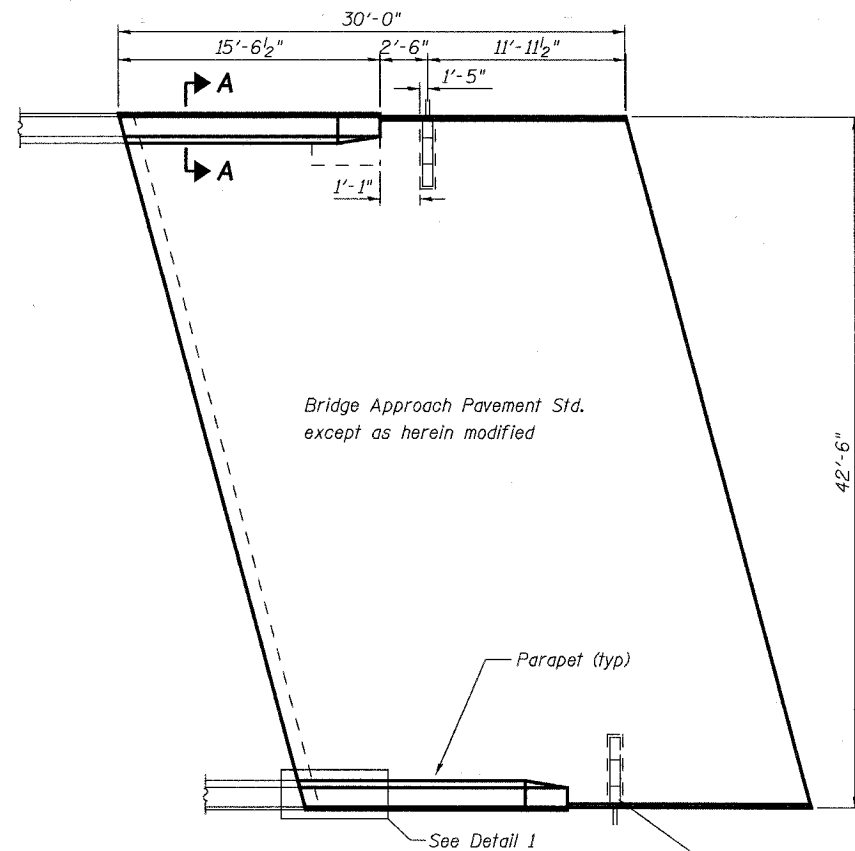


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

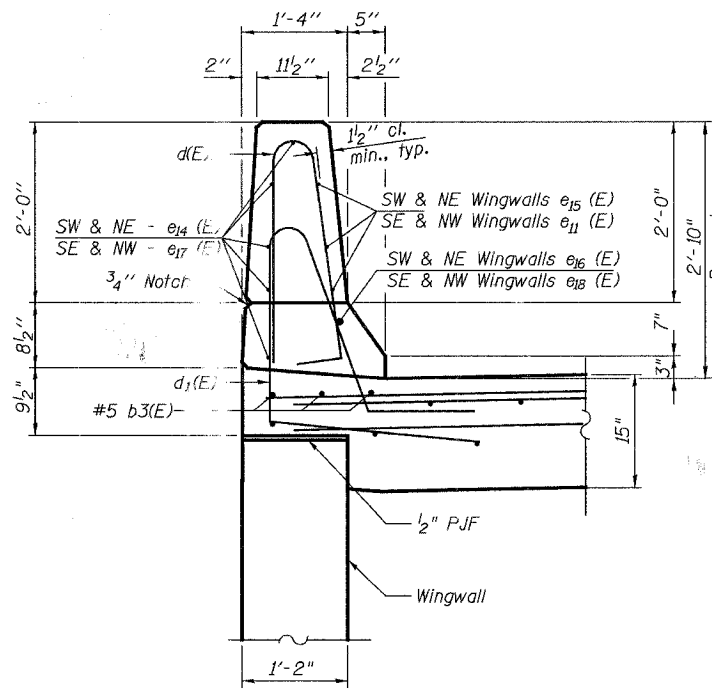
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	32
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 17  
25 SHEETS

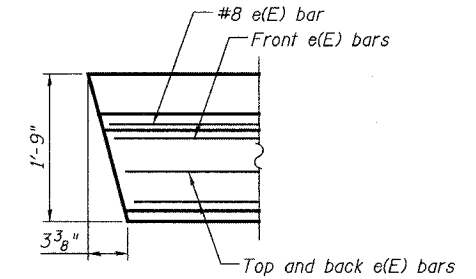
CONTRACT NO. 83923



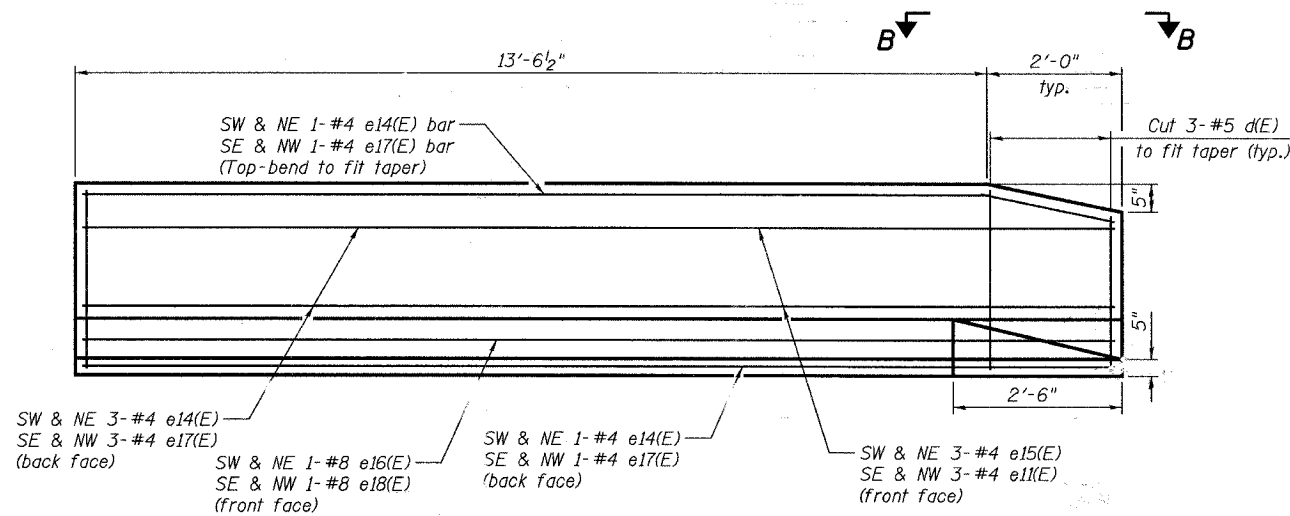
PLAN



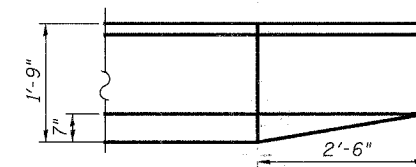
SECTION A-A



DETAIL 1



INSIDE PARAPET ELEVATION  
(Typical at Four Locations)



SECTION B-B

- Notes:
- The details shown here are changes required for Bridge Approach Pavement Standard 420401.
  - Quantities for these details are included on Sheet 16 of 25.

DESIGNED	JRT
CHECKED	NPP
DRAWN	DYS
CHECKED	NPP

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY  
**BRIDGE APPROACH  
PAVEMENT DETAILS**

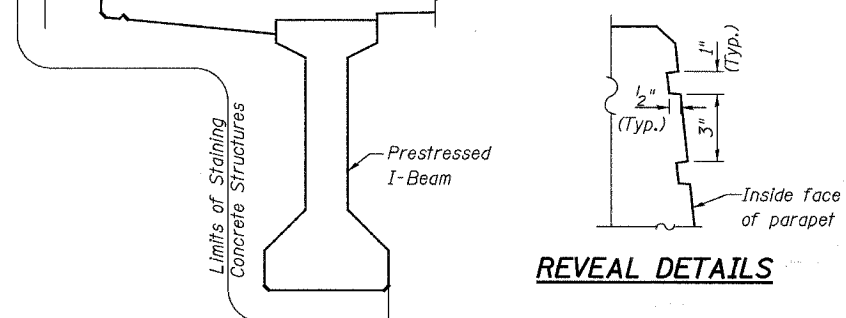
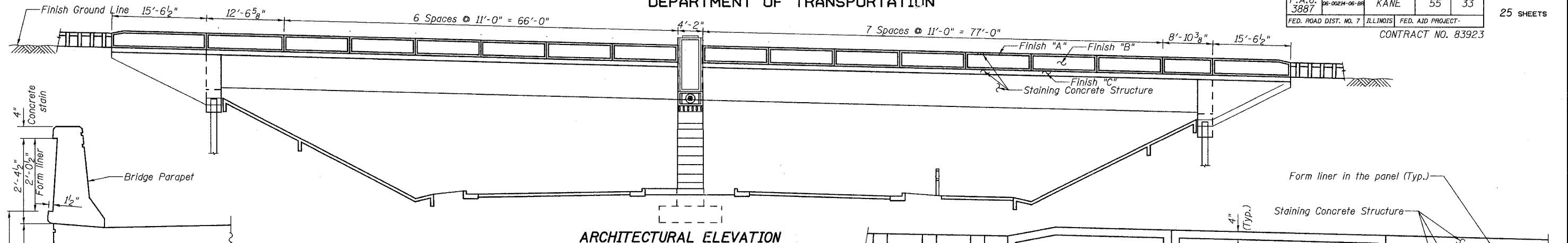
F.A.U. 3887 STATION 113+61.11 SCALE:  
SECTION 06-00214-06-BR STRUCTURE NO. 045-2031 DATE: 00/00/2007

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Sulzr 500  
Chicago, IL 60606  
(312) 79-1000

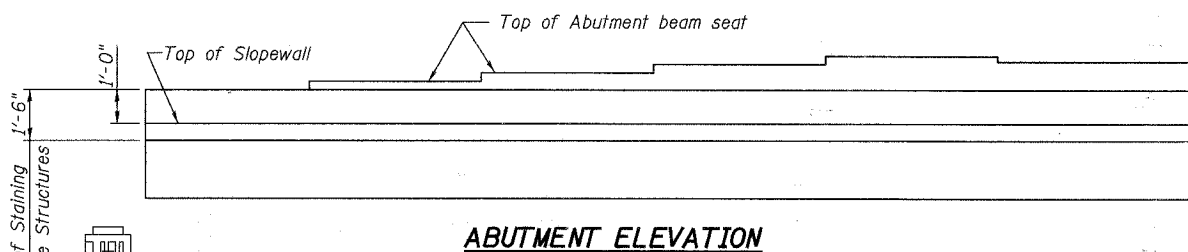
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	33
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
CONTRACT NO. 8392.3				

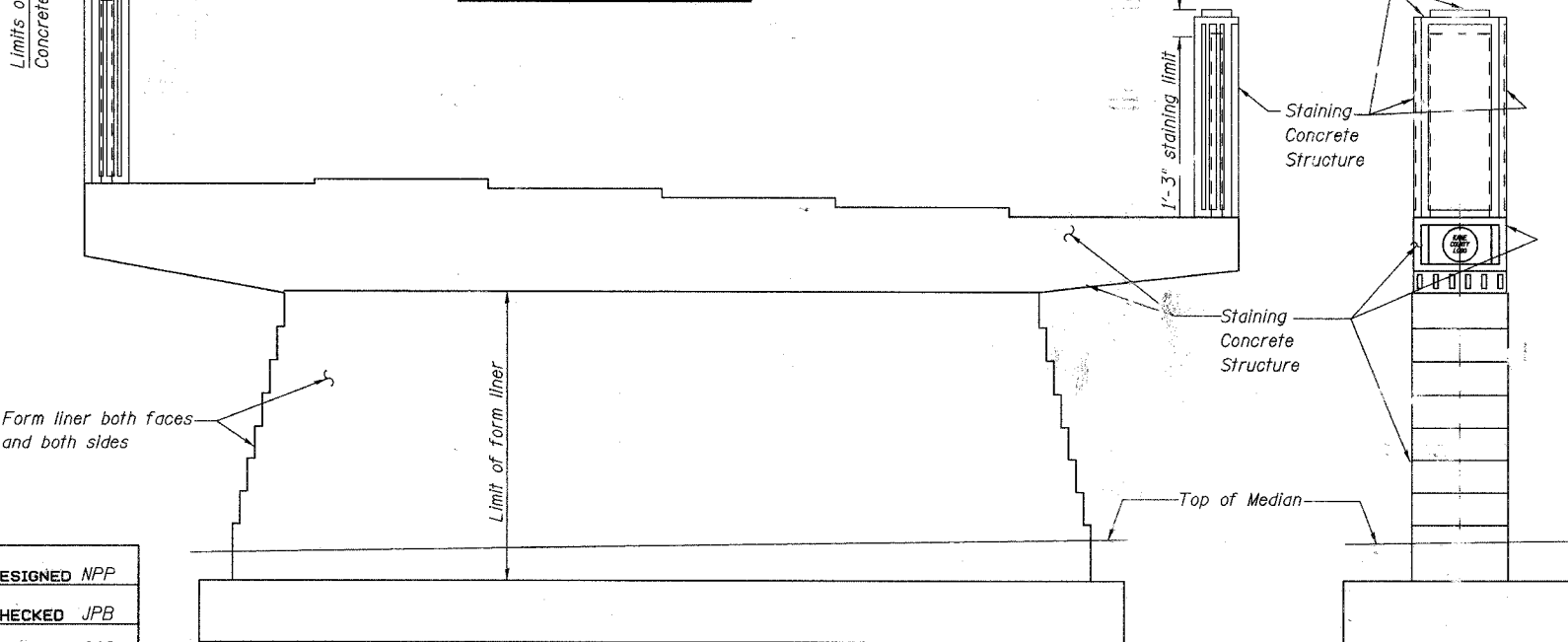
SHEET NO. 18  
25 SHEETS



SECTION THRU PARAPET

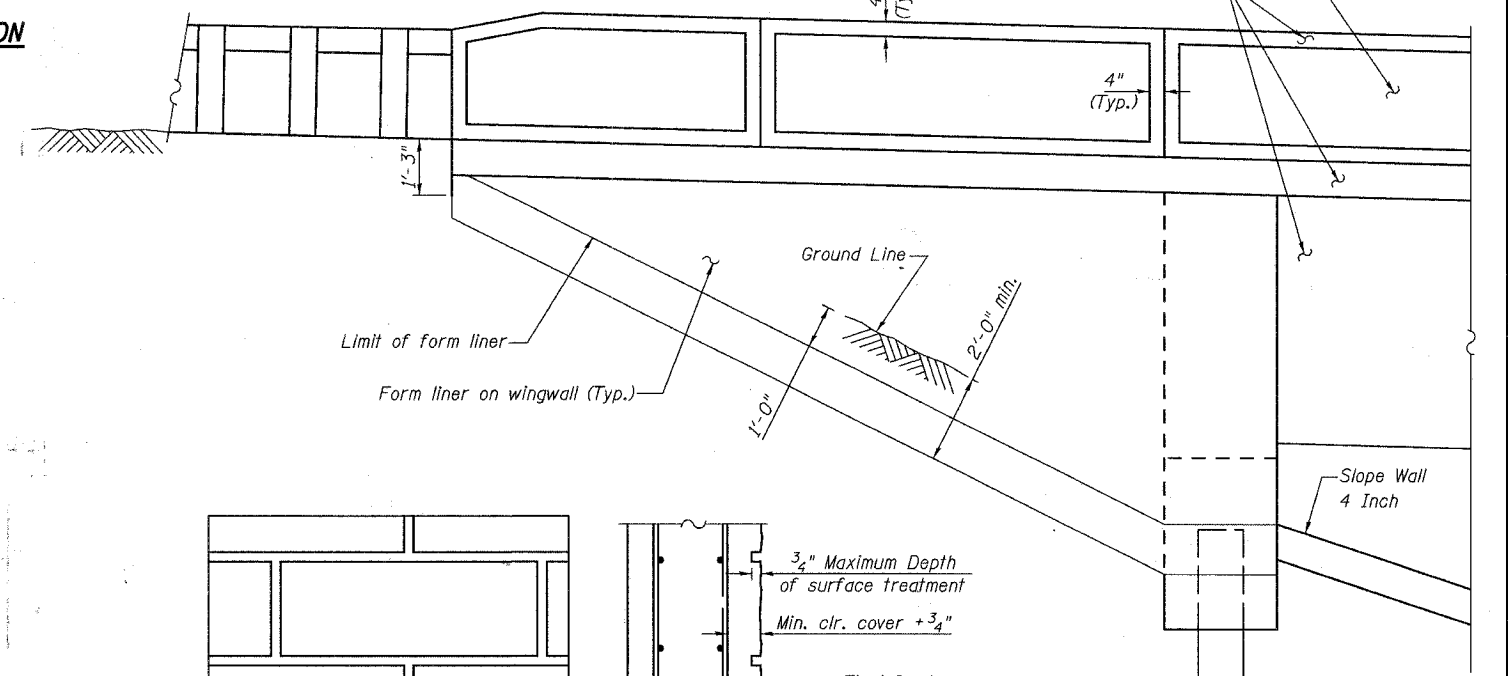


ABUTMENT ELEVATION

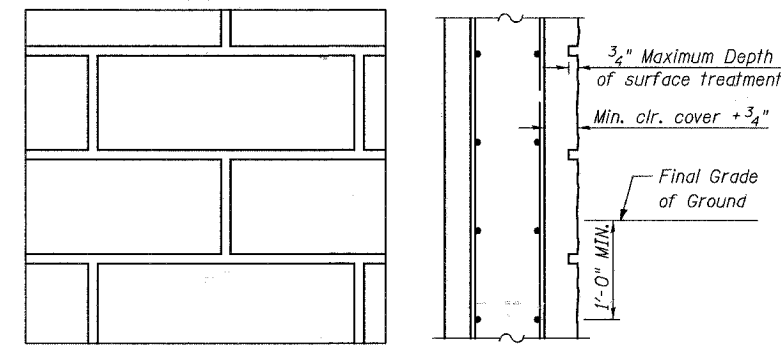


PIER ELEVATION

PIER END VIEW



WINGWALL ELEVATION DETAIL



CHISELED LIMESTONE TYPICAL SECTION

(Scottsystem CHISELED LIMESTONE WITH JOINTS #166D)

Maximum Relief = 3/4"  
Stone Size = 8" to 32", 9" high

FORMLINER DETAIL

Color for Staining Concrete Structure is Base Color 33446 (Medium Tan) from Federal Color Standard 595B. The County reserves the right to select other form liner and stain colors. The Contractor shall submit test samples of form liner and stain colors for acceptance to the County before ordering materials. Provide a concrete test panel 4'x4' with the form liner and stained selected by the County for final selection of form liner and stain colors.

BILL OF MATERIAL

DESCRIPTION	UNIT	QUANT.
Architectural Form Liner	SQ. YD.	250
Staining Concrete Structures	SQ. YD.	551

Notes:

- See special provisions for Architectural Form liner
- See special provisions for finish "A", "B", "C" & "D" and Staining Concrete Structures
- See general notes sheet 2 of 25
- See sheet 20 of 25 for details of reveal at pier.

DESIGNED NPP  
CHECKED JPB  
DRAWN SOI  
CHECKED JPB

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY  
**BRIDGE AESTHETIC TREATMENTS AND DETAILS**

F.A.U. 3887 SECTION 06-00214-06-BR  
STATION 113+61.11 STRUCTURE NO. 045-2031  
SCALE: DATE: 00/00/2007

**URS**  
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Notes:

1. Space reinforcement in cap to miss anchor bolts
2. Bars indicated thus 11 x 2 - #8 etc. indicates 11 lines of bars with 2 lengths per line.
3. Pour steps monolithically with cap.
4. See sheet 18 for architectural details.
5. See sheet 20 for Sections A-A & B-B.
6. See Sheet 18 for Architectural Form Liner Surface and Staining Concrete Surface Details.

\* 5x2-#5 h1(E) bars at 12" cts.  
 5-#5 h2(E) bars at 12" cts.  
 5-#5 h3(E) bars at 12" cts.  
 5-#5 h4(E) bars at 12" cts.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

52'-0"

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	34
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-			CONTRACT NO. 83923	

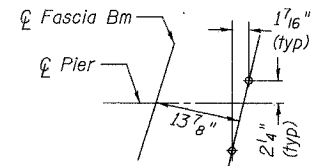
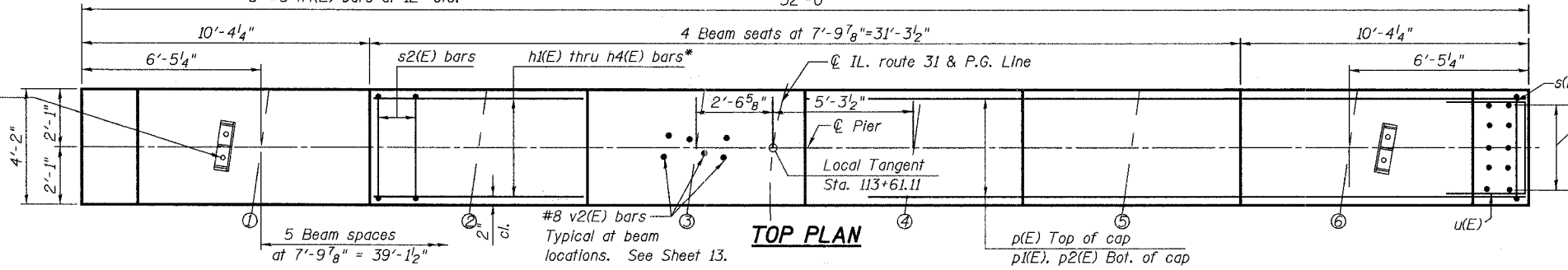
SHEET NO. 19

25 SHEETS

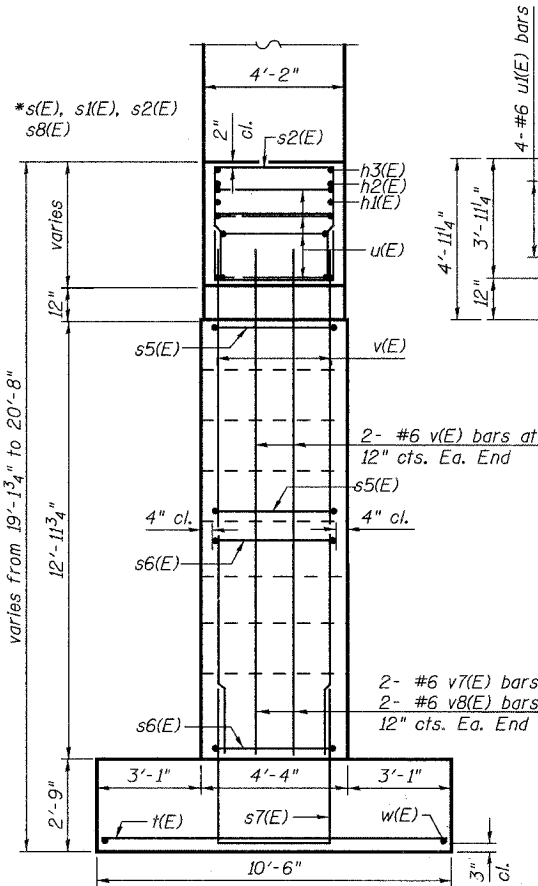
CONTRACT NO. 83923

Anchor Bolt (Typ.)  
 See detail for layout and Sheet 13 for notes

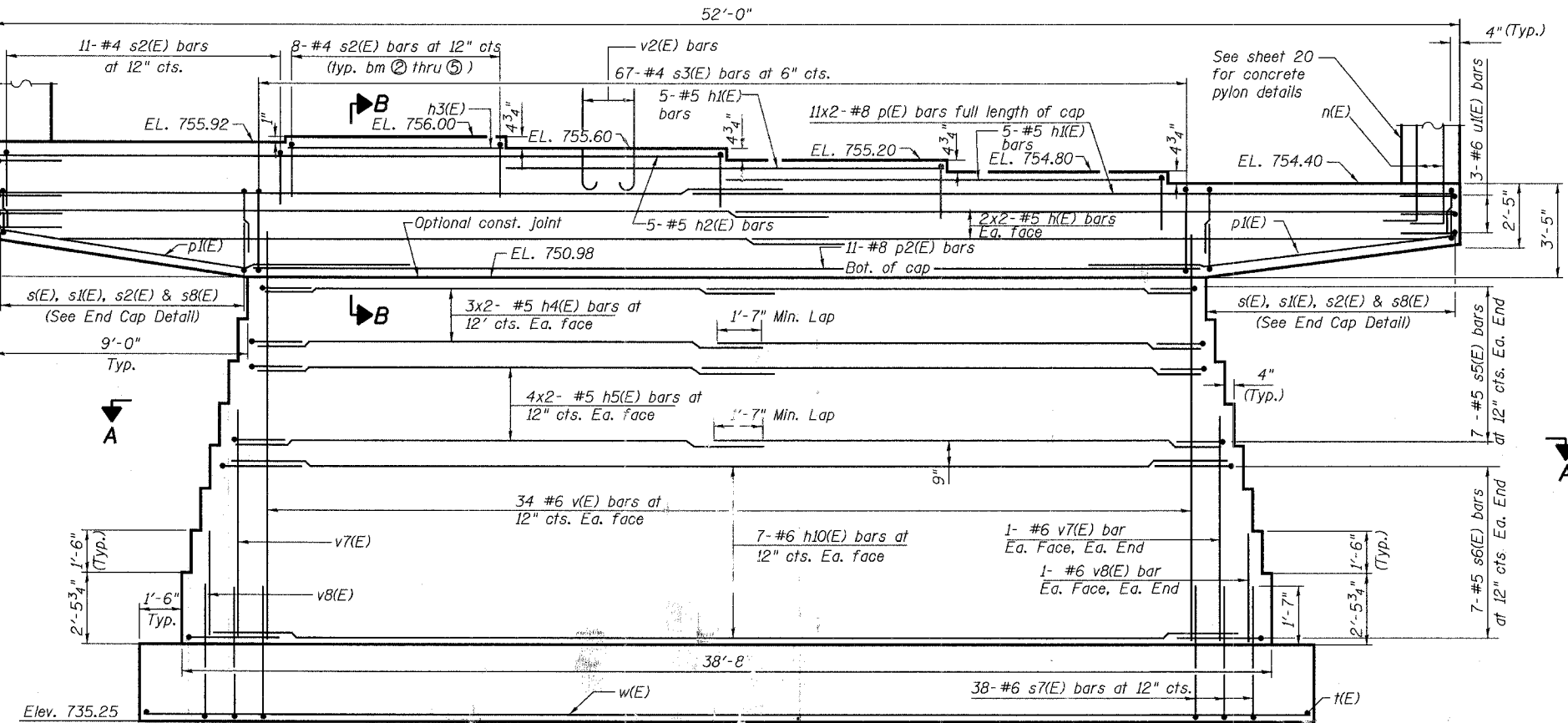
10 #5 n(E) bars  
 2 rows at 10 1/2" cts.  
 Ea. End. See Sheet 20



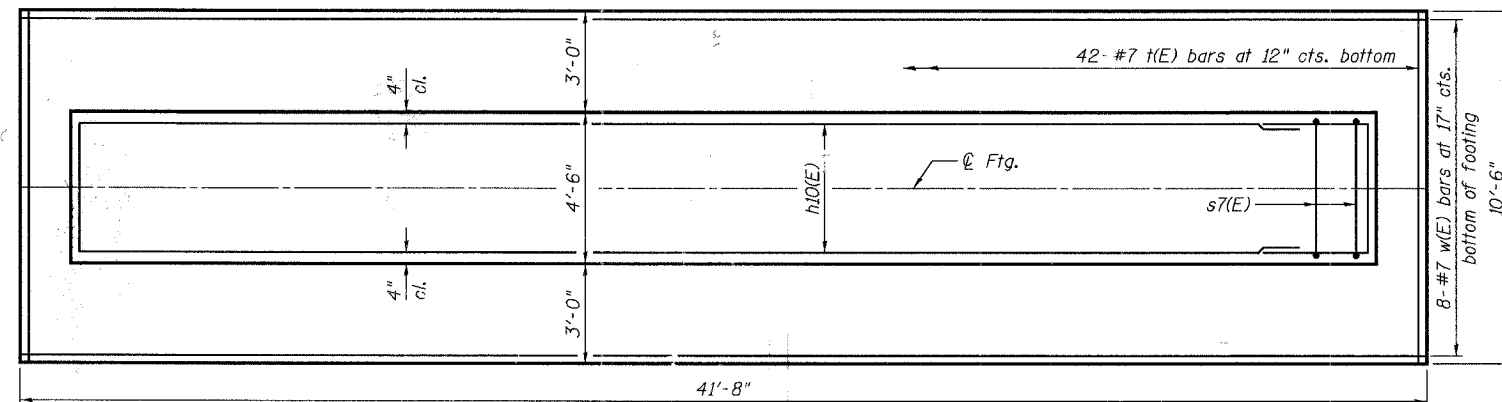
ANCHOR BOLT DETAIL



END VIEW



ELEVATION  
 (Looking South)



FOOTING PLAN

Maximum footing bearing pressure ( $Q_{max}$ ) = 5.4 ksf

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h (E)	8	#5	27'-3"	
h1(E)	10	#5	15'-4"	
h2(E)	5	#5	25'-3"	
h3(E)	5	#5	7'-6"	
h4(E)	12	#5	18'-2"	
h5(E)	16	#5	19'-6"	
h10(E)	14	#6	36'-0"	
p(E)	22			
		#8	29'-0"	
p1(E)	22	#8	12'-6"	
p2(E)	11	#8	34'-0"	
		#4	7'-6"	
s(E)	16	#4	7'-10"	
s2(E)	20	#4	8'-6"	
s3(E)	67	#4	14'-4"	
s5(E)	14	#5	9'-6"	
s6(E)	14	#6	9'-10"	
s7(E)	38	#6	14'-2"	
s8(E)	40	#5	8'-6"	
s16(E)	36	#4	6'-1"	
n(E)	20	#6	4'-8"	
t (E)	42	#7	10'-3"	
u1(E)	7	#6	7'-2"	
		#6	15'-0"	
v (E)	72	#6	15'-0"	
v2(E)	32	#8	4'-6"	
v7(E)	8	#6	8'-6"	
v8(E)	8	#6	4'-0"	
v25(E)	20	#5	8'-9"	
w (E)	8	#7	41'-5"	
Structure Excavation	Cu. Yd.	105		
Concrete Structures	Cu. Yd.	161.3		
Reinforcement Bars, Epoxy Coated	Pound	12,210		

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
 KANE COUNTY

**PIER DETAILS**

F.A.U. 3887 SECTION 06-00214-06-BR  
 STATION 113+61.11 STRUCTURE NO. 045-2031  
 SCALE: DATE: 00/00/2007

100 South Wacker Drive,  
 Suite 500  
 Chicago, IL 60606  
 (312) 939-1000

**URS**

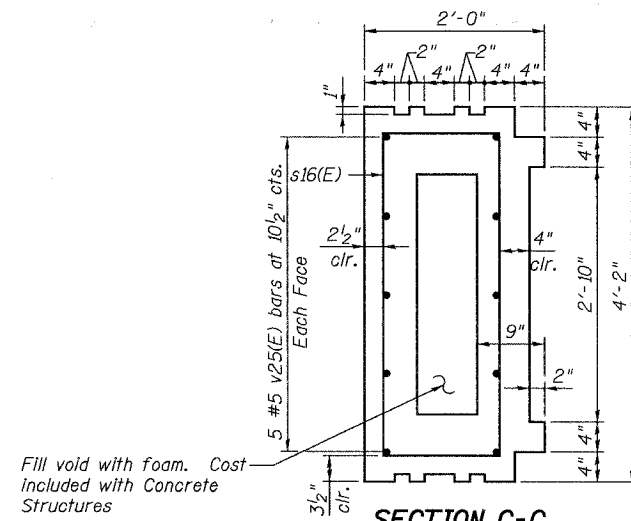
DESIGNED	JRT
CHECKED	NPP
DRAWN	DYS
CHECKED	NPP

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

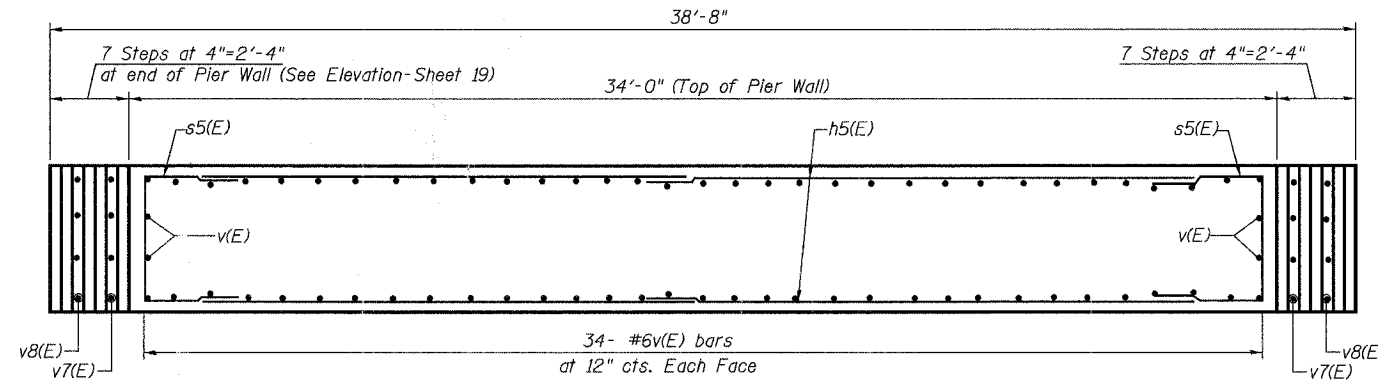
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	35
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 20  
25 SHEETS

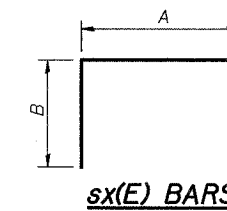
CONTRACT NO. 83923



**SECTION C-C**  
1"=1'-0"

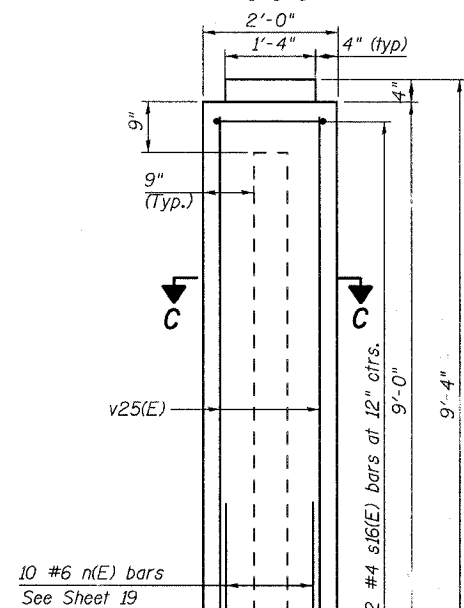


**SECTION A-A**

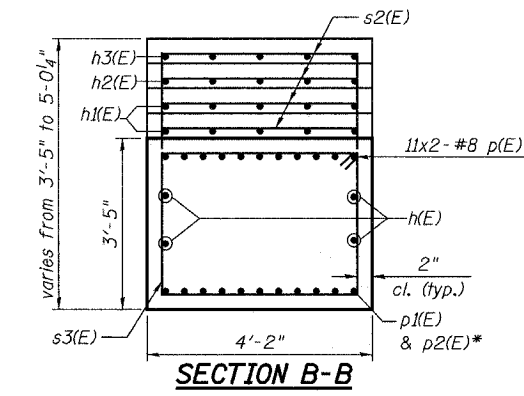


**A & B DIMENSIONS**

Bar	A	B
s(E)	3'-10"	1'-10"
s1(E)	3'-10"	2'-0"
s2(E)	3'-10"	2'-4"
s5(E)	3'-10"	2'-10"
s6(E)	3'-10"	3'-0"
s7(E)	3'-10"	5'-2"
s8(E)	3'-10"	2'-4"
s16(E)	1'-3"	2'-5"

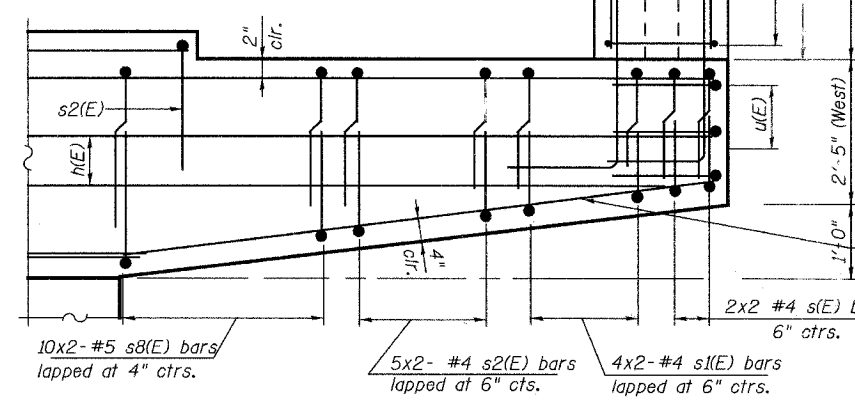
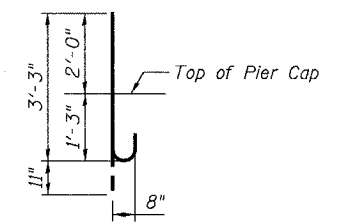
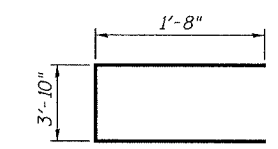
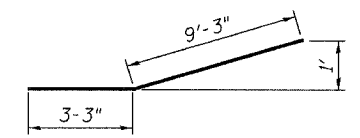
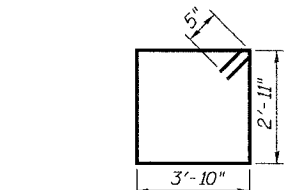


**SECTION B-B**

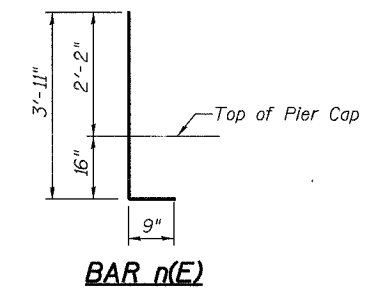
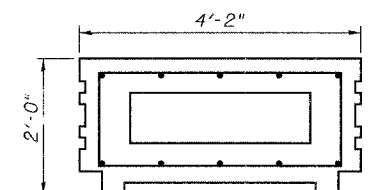
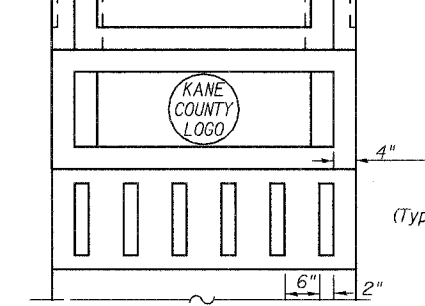
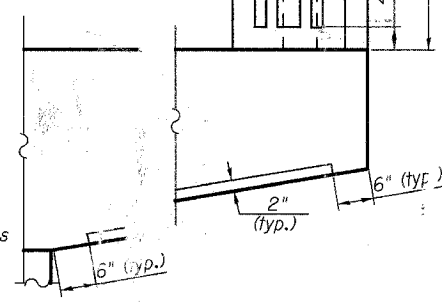


**SECTION B-B**

\* Equally spaced in 1 row at bottom of cap.



**END CAP DETAIL**  
3/4"=1'-0"



Notes:  
1. See Sheet 19 for locations of sections A-A and B-B

DESIGNED	JRT
CHECKED	NPP
DRAWN	SOI
CHECKED	NPP

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY

**PIER SECTIONS**

F.A.U. 3887  
STATION 113+61.11  
SCALE:

SECTION 06-00214-06-BR  
STRUCTURE NO. 045-2031  
DATE: 00/00/2007

**URS**  
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Chicago, IL 60606  
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	36
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 83923	

SHEET NO. 21  
25 SHEETS

**NOTES**

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

- ① Minimum Capacity (Tension in kips) =  $1.25 \times f_y \times A_t$
  - ② Minimum \*Pull-out Strength (Tension in kips) =  $0.66 \times f_y \times A_t$
- Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $A_t$  = Tensile stress area of lapped reinforcement bars.  
\* = 28 day concrete

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

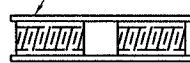
The diameter of this part is equal or larger than the diameter of bar spliced.

**ROLLED THREAD DOWEL BAR**



**\*\* ONE PIECE**

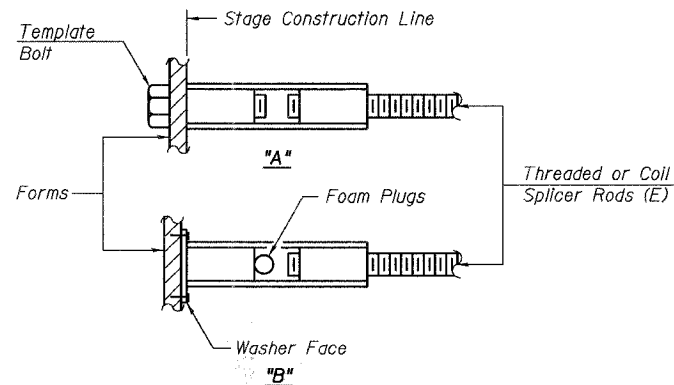
Wire Connector



**WELDED SECTIONS**

**BAR SPLICER ASSEMBLY ALTERNATIVES**

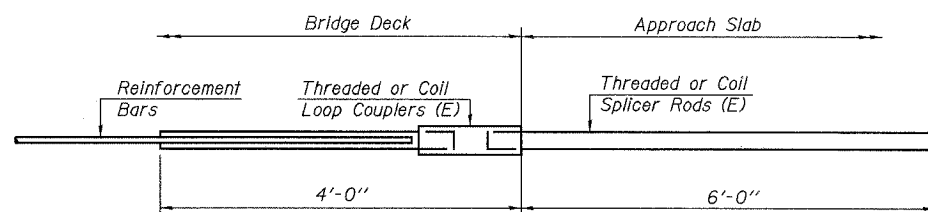
\*\* Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



**INSTALLATION AND SETTING METHODS**

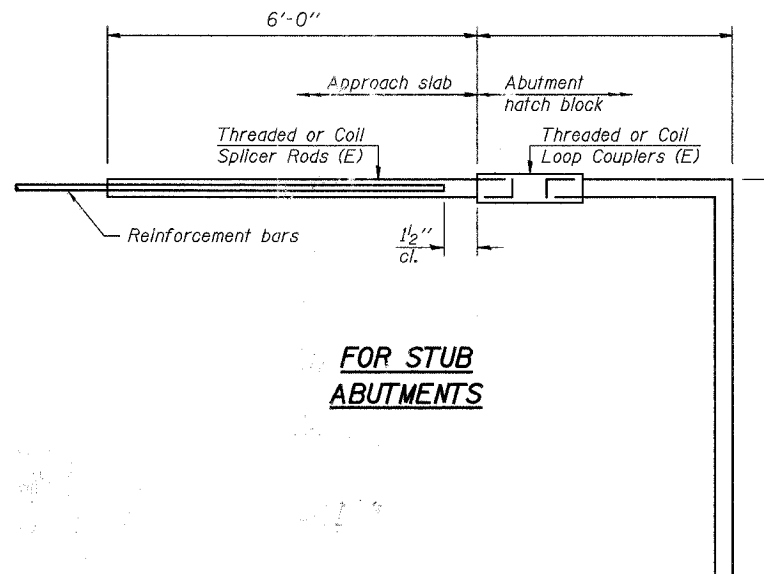
"A" : Set bar splicer assembly by means of a template bolt.  
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
(E) : Indicates epoxy coating.

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



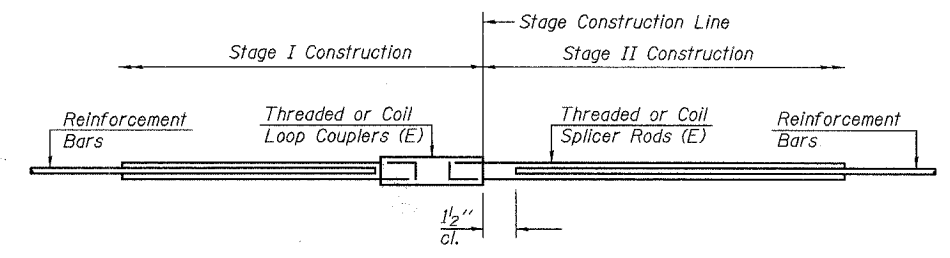
**FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 86



**FOR STUB ABUTMENTS**

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



**STANDARD**

Bar Size	No. Assemblies Required	Location
#5	86	Deck & Approach Pavement Slab

DESIGNED NPP  
CHECKED JPB  
DRAWN SOI  
CHECKED JPB

BSD-1

11-1-06

**URS**  
100 South Wacker Drive,  
Suite 500  
Chicago, IL 60606  
(312) 939-1000

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY  
**BAR SPLICER ASSEMBLY DETAILS**

F.A.U. 3887  
STATION 113+61.11  
SCALE:

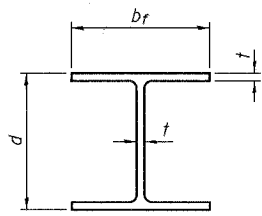
SECTION 06-00214-06-BR  
STRUCTURE NO. 045-2031  
DATE: 00/00/2007

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	37
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

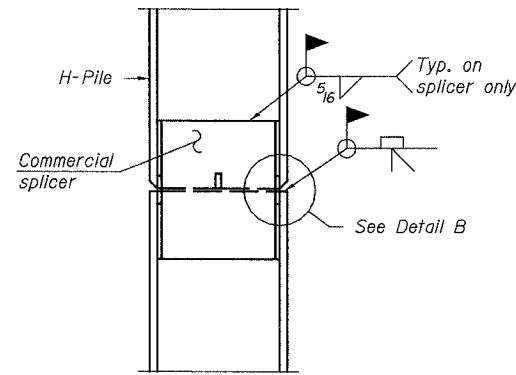
SHEET NO. 22  
25 SHEETS

CONTRACT NO. 83923

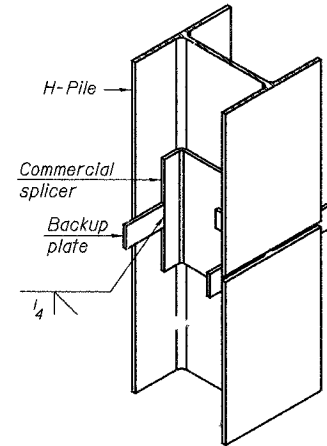


STEEL PILE TABLE

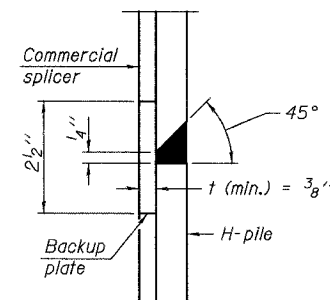
Designation	Depth d	Flange width b <sub>f</sub>	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"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

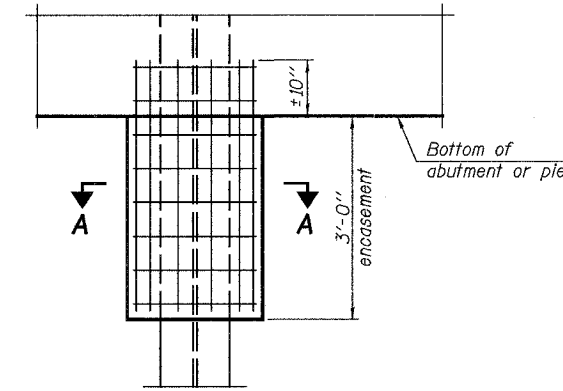


ISOMETRIC VIEW



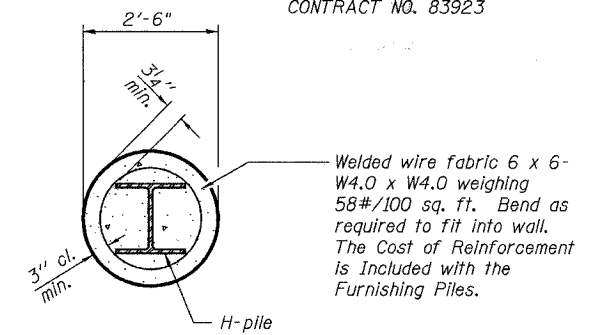
DETAIL "B"

WELDED COMMERCIAL SPLICE



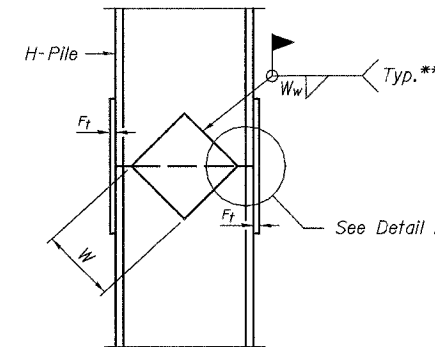
ELEVATION

PILE ENCASEMENT

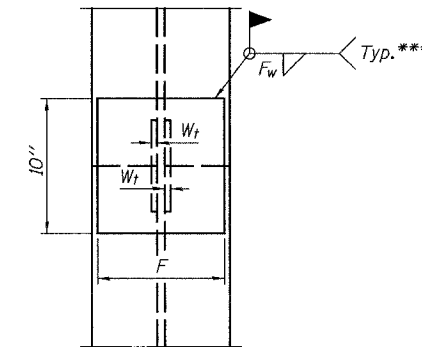


SECTION A-A

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

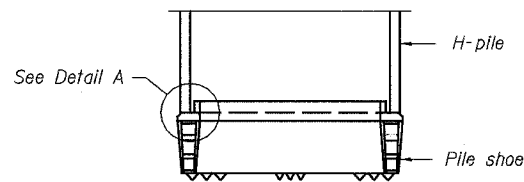


ELEVATION

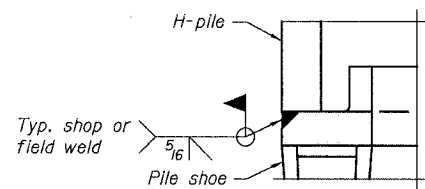


END VIEW

Designation	F	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 8/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 8/8"	1/2"
x89	12 1/2"	3/4"	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"	1/16"	6 1/2"	5 8/8"	1/2"
x74	10"	7/8"	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"

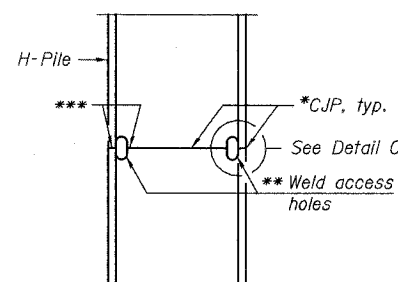


ELEVATION

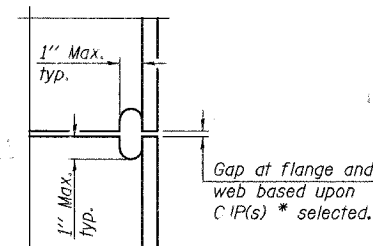


DETAIL A

H-PILE SHOE ATTACHMENT

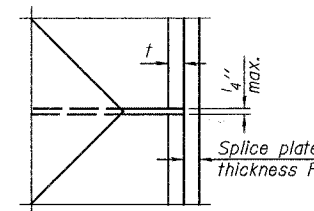


ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE



DETAIL D

- \* Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
- \*\* Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
- \*\*\* Interrupt welds 1/4" from end of each pile.

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

DESIGNED NPP  
CHECKED JPB  
DRAWN SOI  
CHECKED JPB

F-HP

11-1-06

100 South Wacker Drive,  
Suite 500  
Chicago, IL 60606  
(312) 939-1000



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY  
**H-PILE DETAIL AND WELD  
PLATE FIELD SPLICE**  
F.A.U. 3887 STATION 113+61.11 SECTION 06-00214-06-BR STRUCTURE NO. 045-2031  
SCALE: DATE: 00/00/2007

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	38
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				
CONTRACT NO. 83923				

SHEET NO. 23  
25 SHEETS

ILLINOIS DEPARTMENT OF TRANSPORTATION  
Testing Service Corporation  
STRUCTURE BORING LOG

Page 1 of 2  
Date Started: 5/23/04  
Date Completed: 6/23/04

ROUTE: F.A.U. 3887 DESCRIPTION: IL Route 31 over New Stearns Road  
SECTION: 06-00214-06-BR STRUCT. NO. 045-2031 DRILLED BY: TSC L60393

COUNTY: Kane LOCATION: West End North Abutment S. 2-SW 1/4 TWP. 40 N. R. 8 E.

Boring No.	Station	Offset	Surface Water Elev.	Groundwater Elev. when drilling	at Completion	after	Hrs.	DEPTH	LOG	Gravel	W %
								FT	SO	ft	%
BTE31-1	112+91	33.006 RT	759.50 R								
								14		4.5	2.9
								12			22.7
								10			
								17			4.0
								15			
								18			
								20			
								7		15%	10.9
								8			
								10			5.7
								12			2.9
								21			
								14			
								1		4.5	
								13			
								11		4.9	
								10			
								14			
								15			4.4
								13		4.8	
								11			
								14			
								18			20.0
								14			
								19			
								21		3.0	
								20			
								10		5.9	
								12			
								16			4.3
								15			
								22			

ILLINOIS DEPARTMENT OF TRANSPORTATION  
Testing Service Corporation  
STRUCTURE BORING LOG

Page 2 of 2  
Date Started: 5/23/04  
Date Completed: 6/23/04

STRUCTURE NO. 045-2031  
ROUTE: F.A.U. 3887  
SECTION: 06-00214-06-BR  
COUNTY: Kane

STRUCTURE NO. 045-2031  
ROUTE: F.A.U. 3887  
SECTION: 06-00214-06-BR  
COUNTY: Kane

Boring No.	Station	Offset	Surface Water Elev.	Groundwater Elev. when drilling	at Completion	after	Hrs.	DEPTH	LOG	Gravel	W %
								FT	SO	ft	%
BTE31-1	112+91	33.006 RT	710.69 R								
								17			3.4
								15			
								20			
								17			3.4
								15			
								20			
								17			3.4
								15			
								20			
								17			3.4
								15			
								20			
								17			3.4
								15			
								20			
								17			3.4
								15			
								20			
								17			3.4
								15			
								20			

\$DATE\$ \$TIME\$

DESIGNED: NPP  
CHECKED: JPB  
DRAWN: SOI  
CHECKED: JPB

**URS**  
100 South Wacker Drive,  
Suite 500  
Chicago, IL 60606  
(312) 939-1000

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY

**SOIL BORING LOG 1**

F.A.U. 3887  
STATION: 61.11  
SCALE: 1"=10'

SECTION 06-00214-06-BR  
STRUCTURE NO. 045-2031  
DATE: 00/00/2007

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-00214-06-BR	KANE	55	39
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 83923

SHEET NO. 24  
25 SHEETS

ILLINOIS DEPARTMENT OF TRANSPORTATION  
Testing Service Corporation  
STRUCTURE BORING LOG

Page 1 of 2  
Date Started 7/20/04  
Date Completed 7/20/04

ROUTE: F.A.U. 3887 DESCRIPTION: IL Route 31 over New Stearns Road  
SECT: 98-00214-02-BR STRUCT. NO: 045-2031 DRILLED BY: TSC L-69,393  
COUNTY: Kane LOCATION: East End Center Pier S 2 SW 14 TWP. 40 N R. 8 E

Sample No.	RTE 31-2	D	B	Surface Water Elev.	D	B
Station	113+56	E	L	Groundwater Elev.	P	L
Offset	39.80(11.1)	T	O	when drilling	I	O
Surface Elev.	707.95 ft	H	S	at Completion	H	S
				after		
		Qu	W	Hrs	Cor	W
		ty	%		rec	%
1.0	Back and down CLAY and Topsoil over 3.48-7.8	7	15%	23.1	12	1.6
2.0	Back and down CLAY and Topsoil over 3.48-7.8	7	15%	23.1	16	1.6
3.0	Back and down CLAY and Topsoil over 3.48-7.8	7	15%	23.1	19	1.6
4.0	Dense brown SAND and GRAVEL, occasional Cobbles, damp A-1	10	10%	25.2	15	3.3
5.0	Dense brown SAND and GRAVEL, occasional Cobbles, damp A-1	12	10%	25.2	16	3.3
6.0	Dense brown SAND and GRAVEL, occasional Cobbles, damp A-1	14	10%	25.2	18	4.7
7.0	Dense brown SAND and GRAVEL, occasional Cobbles, damp A-1	14	10%	25.2	18	4.7
8.0	Dense brown SAND and GRAVEL, occasional Cobbles, damp A-1	14	10%	25.2	18	4.7
9.0	Dense brown SAND and GRAVEL, occasional Cobbles, damp A-1	14	10%	25.2	18	4.7
10.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
11.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
12.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
13.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
14.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
15.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
16.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
17.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
18.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
19.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
20.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
21.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
22.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
23.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
24.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
25.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
26.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
27.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
28.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
29.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3
30.0	Stiff brown SILTY CLAY LOAM, occasional seams, moist A-6	16	10%	25.2	19	2.3

NOTE: (N) = Sum of last two blow values in next 10 (20) or 30 Blows (Swedish Blow) and then, last  
blows: Depth, Offset, and Locations all in feet

ILLINOIS DEPARTMENT OF TRANSPORTATION  
Testing Service Corporation  
STRUCTURE BORING LOG

Page 2 of 2  
Date Started 7/20/04  
Date Completed 7/20/04

STRUCTURE NO: 045-2031  
ROUTE: F.A.U. 3887  
SECTION: 98-00214-02-BR  
COUNTY: Kane

STRUCTURE NO: 045-2031  
ROUTE: F.A.U. 3887  
SECTION: 98-00214-02-BR  
COUNTY: Kane

Sample No.	RTE 31-2	D	B	Surface Water Elev.	D	B
Station	113+56	E	L	Groundwater Elev.	P	L
Offset	39.80(11.1)	T	O	when drilling	I	O
Surface Elev.	707.95 ft	H	S	at Completion	H	S
				after		
		Qu	W	Hrs	Cor	W
		ty	%		rec	%
31.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
32.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
33.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
34.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
35.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
36.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
37.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
38.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
39.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
40.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
41.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
42.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
43.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
44.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
45.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
46.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
47.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
48.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
49.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1
50.0	Dense gray fine SAND, wet A-3	14	10%	25.2	14	3.1

NOTE: (N) = Sum of last two blow values in next 10 (20) or 30 Blows (Swedish Blow) and then, last  
blows: Depth, Offset, and Locations all in feet

DESIGNED: NPP  
CHECKED: JPB  
DRAWN: SOI  
CHECKED: JPB

URS  
100 South Wacker Drive,  
Suite 500  
Chicago, IL 60606  
(312) 939-1000

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD  
KANE COUNTY

SOIL BORING LOG 2

F.A.U. 3887 SECTION 06-00214-06-BR  
STATION 113+61.11 STRUCTURE NO. 045-2031  
SCALE: DATE: 00/00/2007



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 3887	06-0024-06-BR	KANE	55	40
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-				
CONTRACT NO. 83923				

SHEET NO. 25  
25 SHEETS

ILLINOIS DEPARTMENT OF TRANSPORTATION  
Testing Service Corporation  
STRUCTURE BORING LOG

Page 1 of 1  
Date Started: 9/22/04  
Date Completed: 9/22/04

ROUTE: F.A.U. 3887 DESCRIPTION: IL Route 31 over New Stearns Road

STRUCTURE NO. 045-2031 DRILLED BY: TSC L-90393

SECTION: 06-0024-06-BR

COUNTY: Kane LOCATION: West End Stone Abutment 2-SW 1/4 TWP. 40N, RNC. 3E

Boring No.	Station	Offset	Surface Elev.	Groundwater Elev.	when drilling	at Completion	after	DEPT	BL	OW	OU	W
			H	S	ft	ft	ft	H	S	ft	ft	%
RTS21-3	113+62	31.00 RT	756.76									
FILL Dark brown clayey loess			756.76									
Soft brown CLAY, fine block clay, moist			756.76					9	13	15	3.0	
Medium dense brown GRAVEL, fine sand, clean			756.76					13	16	22	1.1	
Dense brown and gray GRAVEL, coarse sand, cobbles, damp			756.76					17	28	38	2.1	
Dense brown and gray fine sand, damp			756.76					19	34	44	1.9	
Medium dense gray clayey SILT, moist			756.76					19	28	35	3.5	
Dense gray SILT, fine sand, moist			756.76					19	28	35	19.4	

(N) = Sum of last two blow values in sample. (OU) = Blow Count or Penetration Test (S) = Depth, Offset, and Elevations are in Feet.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
Testing Service Corporation  
STRUCTURE BORING LOG

Page 2 of 2  
Date Started: 9/22/04  
Date Completed: 9/22/04

STRUCTURE NO. 045-2031  
ROUTE: F.A.U. 3887  
SECTION: 06-0024-06-BR  
COUNTY: Kane

Boring No.	Station	Offset	Surface Elev.	Groundwater Elev.	when drilling	at Completion	after	DEPT	BL	OW	OU	W
			H	S	ft	ft	ft	H	S	ft	ft	%
RTS21-3	113+62	31.00 RT	706.76									
Dense brown SILT, fine sand, moist, A-4			706.76									
Dense brown and gray SILT, fine sand, moist			706.76					13	16	22	7.5	
Dense brown and gray SILT, fine sand, moist			706.76					17	28	38	3.0	
Dense brown and gray SILT, fine sand, moist			706.76					19	34	44	1.9	
Dense brown and gray SILT, fine sand, moist			706.76					19	28	35	3.5	
Dense brown and gray SILT, fine sand, moist			706.76					19	28	35	19.4	

(N) = Sum of last two blow values in sample. (OU) = Blow Count or Penetration Test (S) = Depth, Offset, and Elevations are in Feet.

\$FILE\$ \$DATE\$ \$TIME\$ \$DATE\$ \$TIME\$

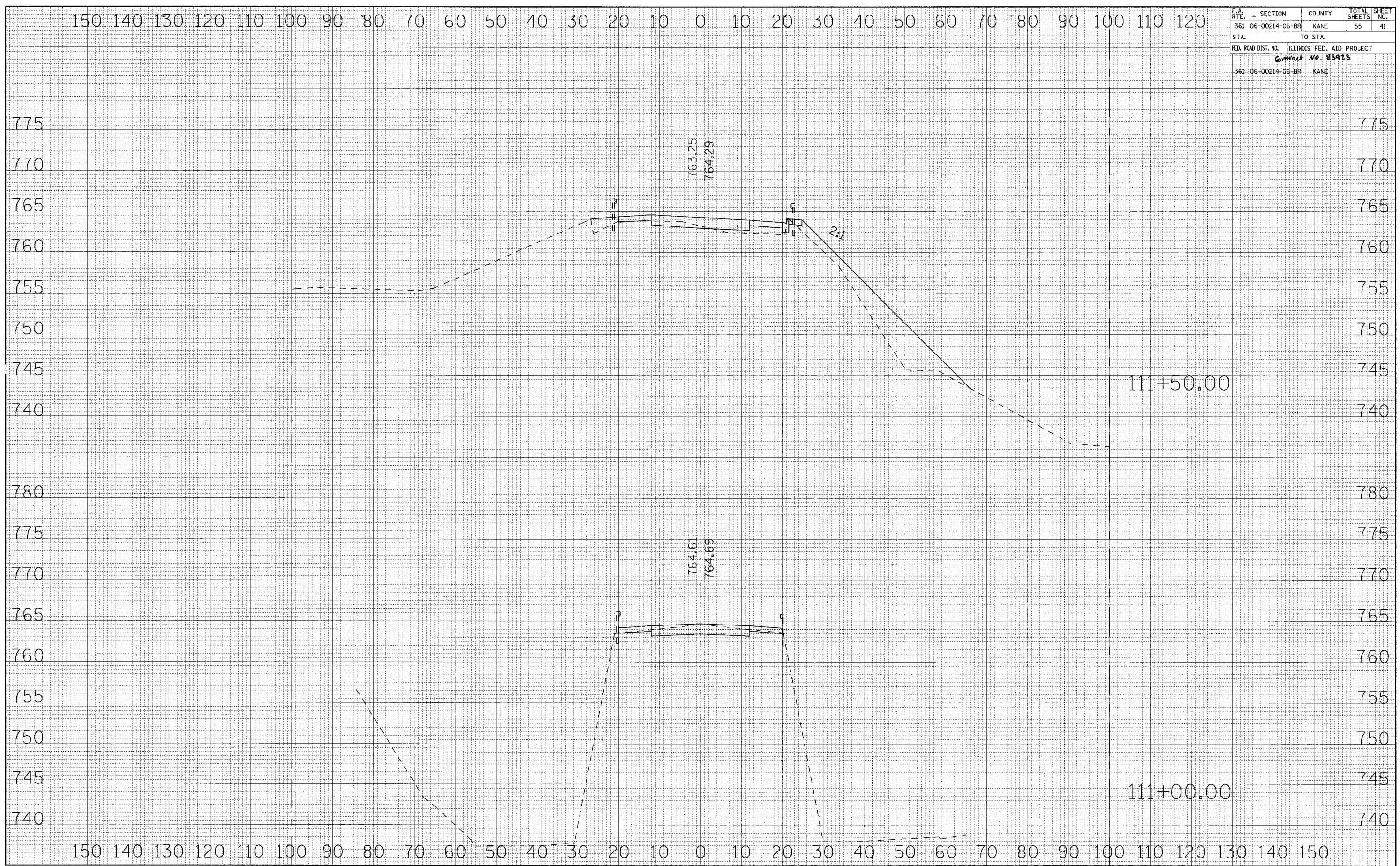
DESIGNED	NPP
CHECKED	JPB
DRAWN	SOI
CHECKED	JPB

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION ILLINOIS ROUTE 31 OVER NEW STEARNS ROAD KANE COUNTY	
<b>SOIL BORING LOG 3</b>	
F.A.U. 3887 STATION 113+61.11 SCALE:	SECTION 06-0024-06-BR STRUCTURE NO. 045-2031 DATE: 00/00/2007

**URS**  
100 South Wacker Drive,  
Suite 500  
Chicago, IL 60606  
(312) 939-1000

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	41
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		Contract No. 83923		
361-06-00214-06-BR		KANE		



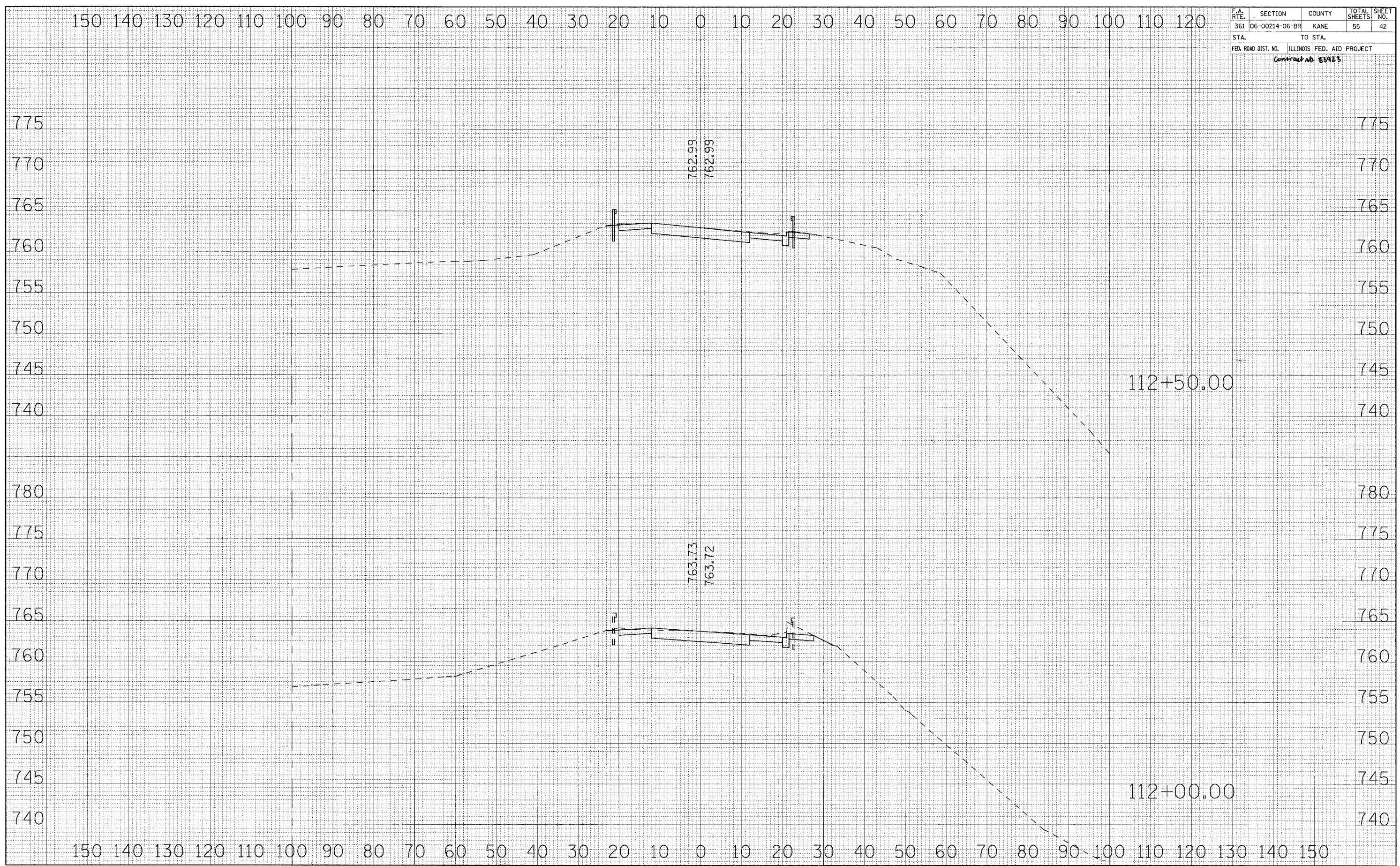
FINAL SURVEY	DATE
NO.	
BY	
REVISIONS	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	

ORIGINAL SURVEY	DATE
NO.	
BY	
REVISIONS	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	42
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
Contract No. 83923				

FINAL SURVEY	CHECKED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS	
	CHECKED	

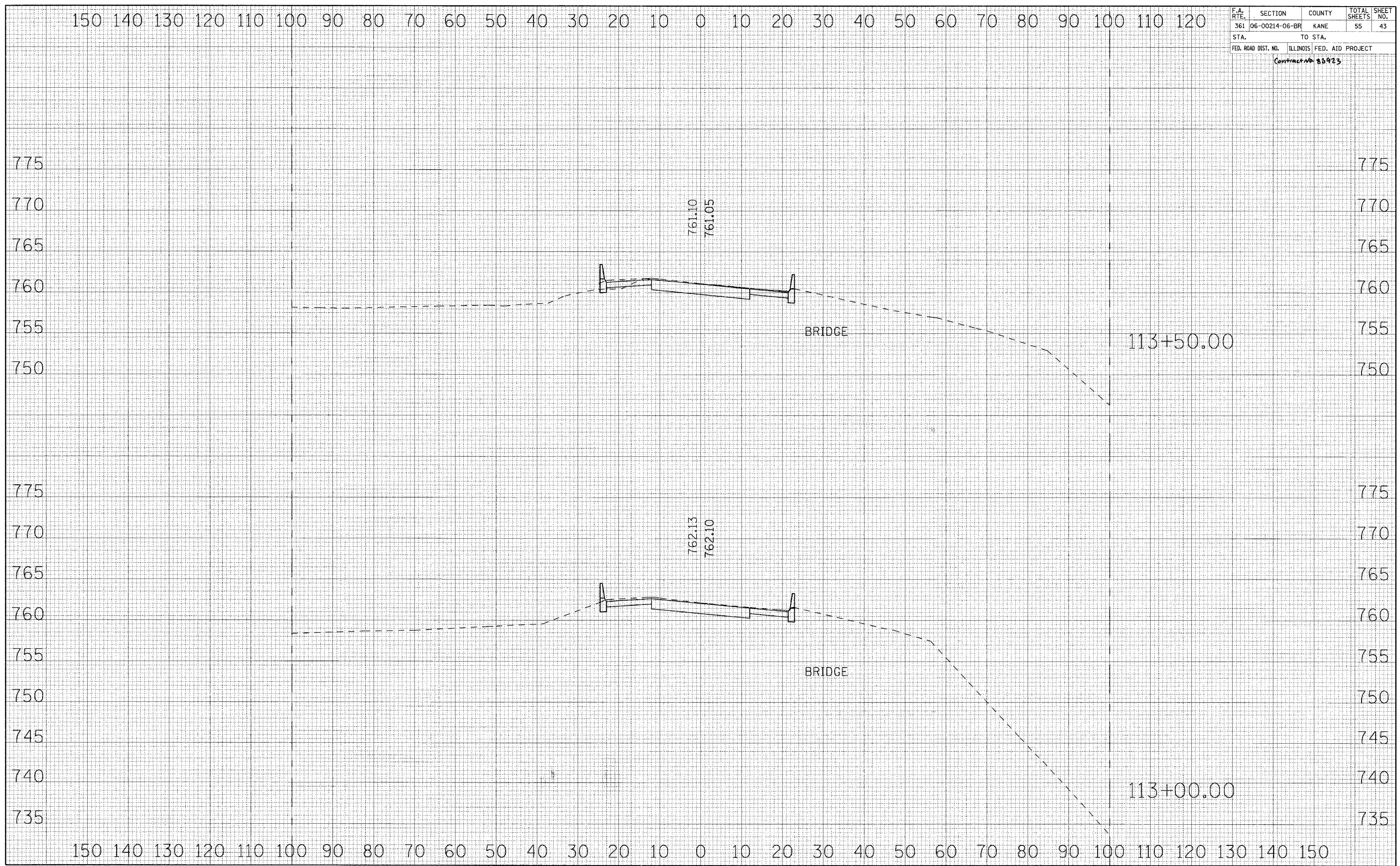
ORIGINAL SURVEY	CHECKED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS	
	CHECKED	



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	43
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
Contract No. 88923				

FINAL SURVEY	DATE
CONVERTED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	

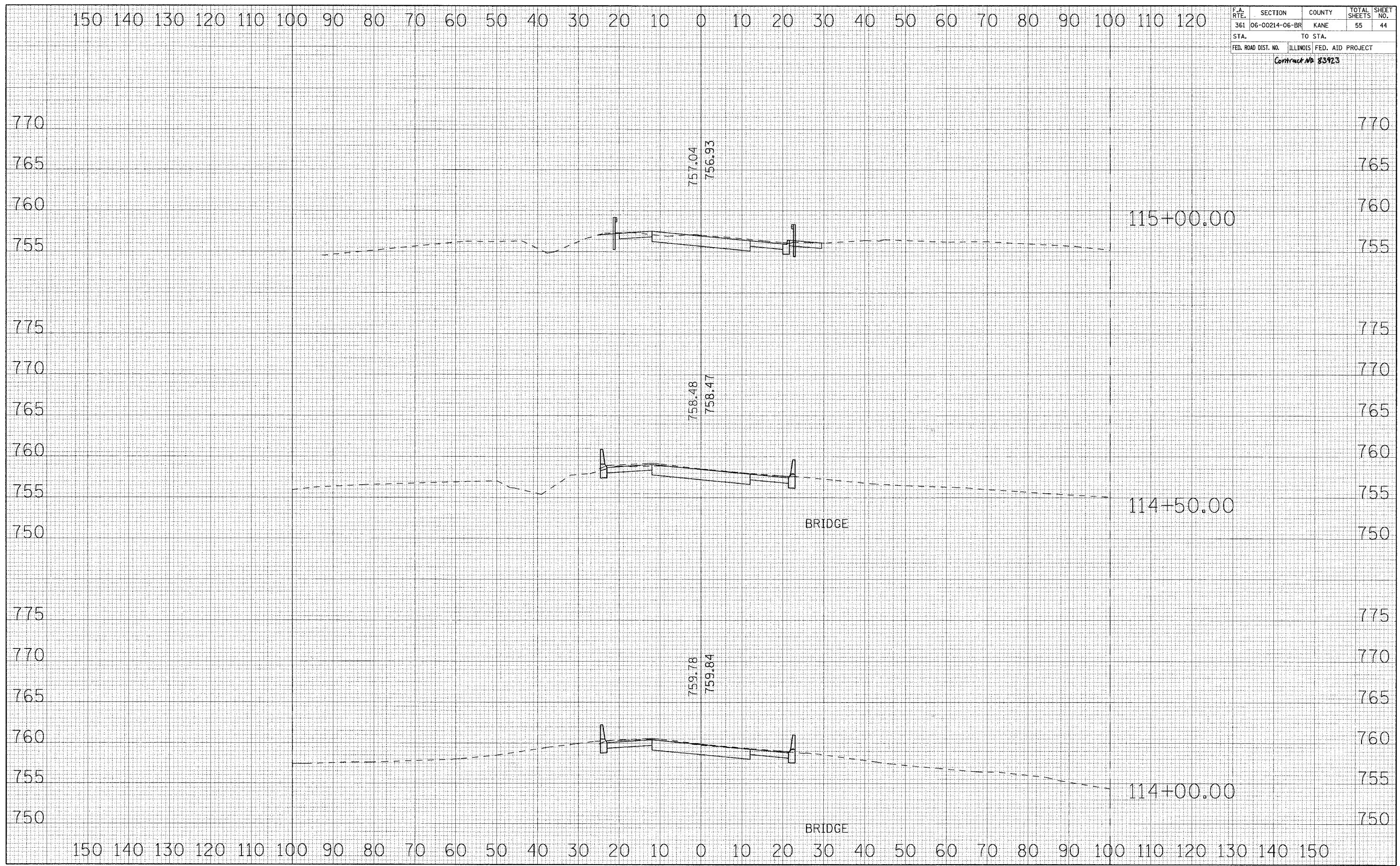
ORIGINAL SURVEY	DATE
CONVERTED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	44
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
Contract No. 83923				

DATE	BY
FINISHED SURVEY	CHECKED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

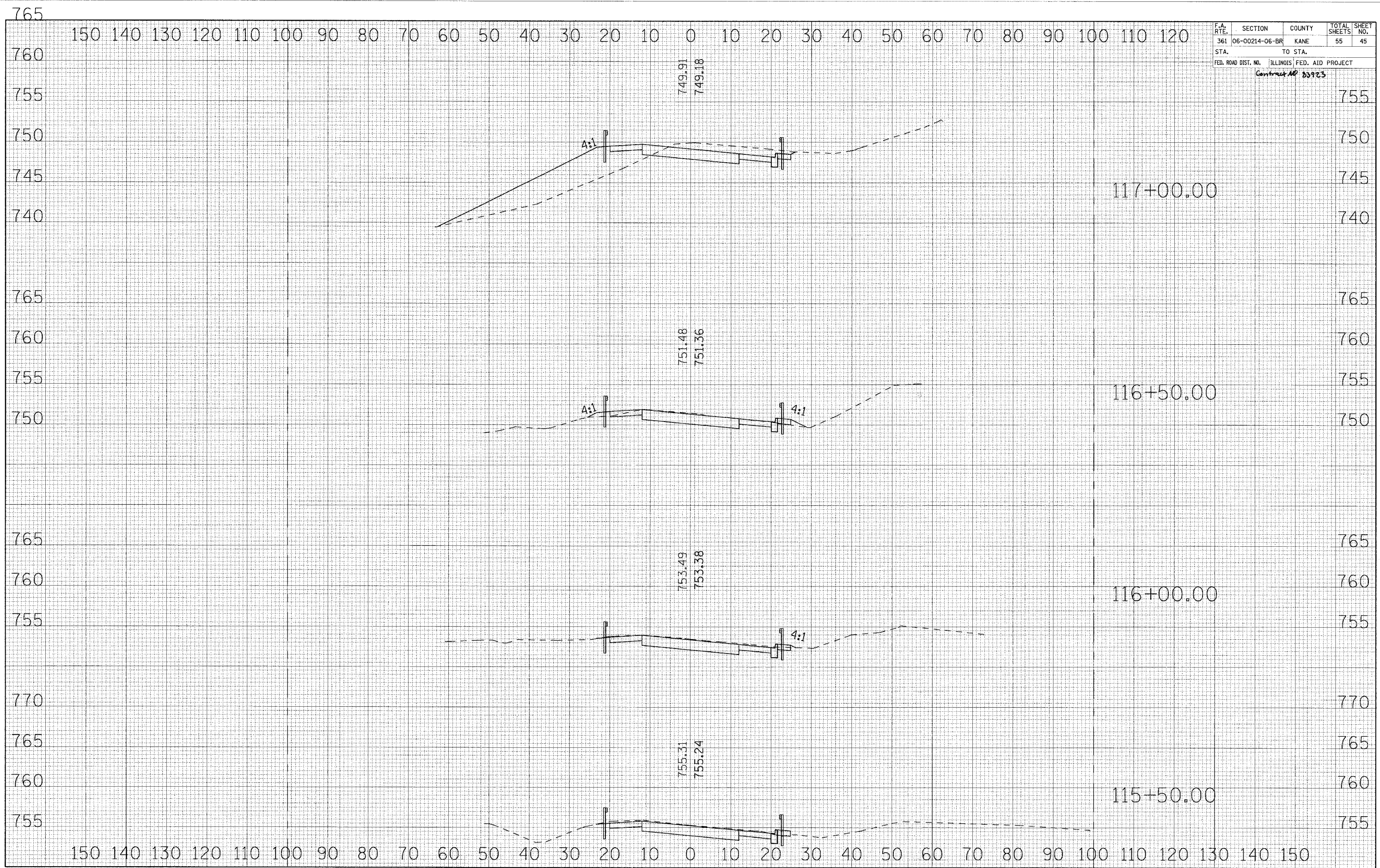
DATE	BY
ORIGINAL SURVEY	CHECKED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED



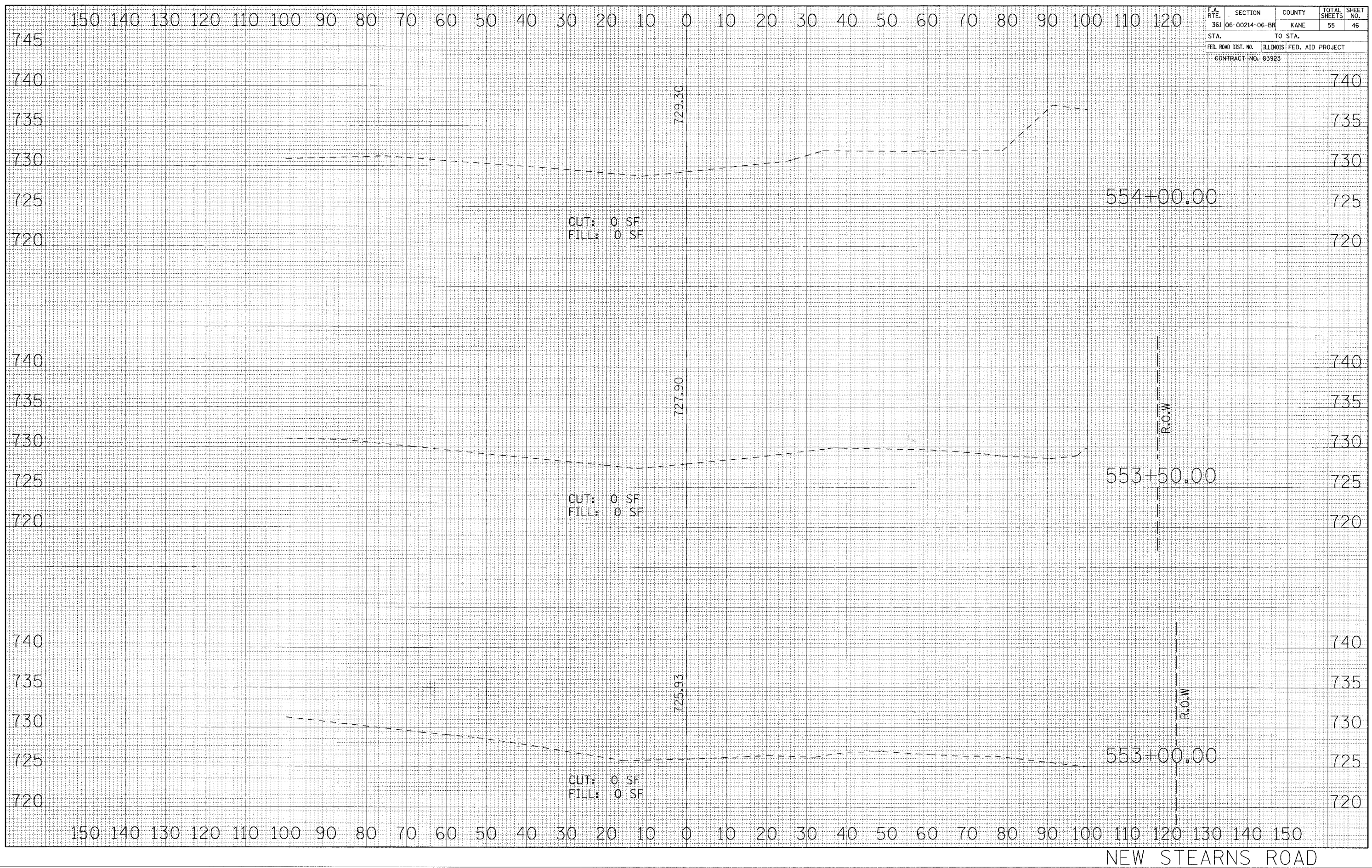
FINAL	DATE
SURVEY	BY
NOTE BOOK	
NO.	
DESIGNED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	

ORIGINAL	DATE
SURVEY	BY
NOTE BOOK	
NO.	
DESIGNED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	45
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
Contract AP 83923				



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	46
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 83923				



FINAL SURVEY	SUBMITTED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
NO.		

ORIGINAL SURVEY	SUBMITTED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
NO.		

NEW STEARNS ROAD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	47
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

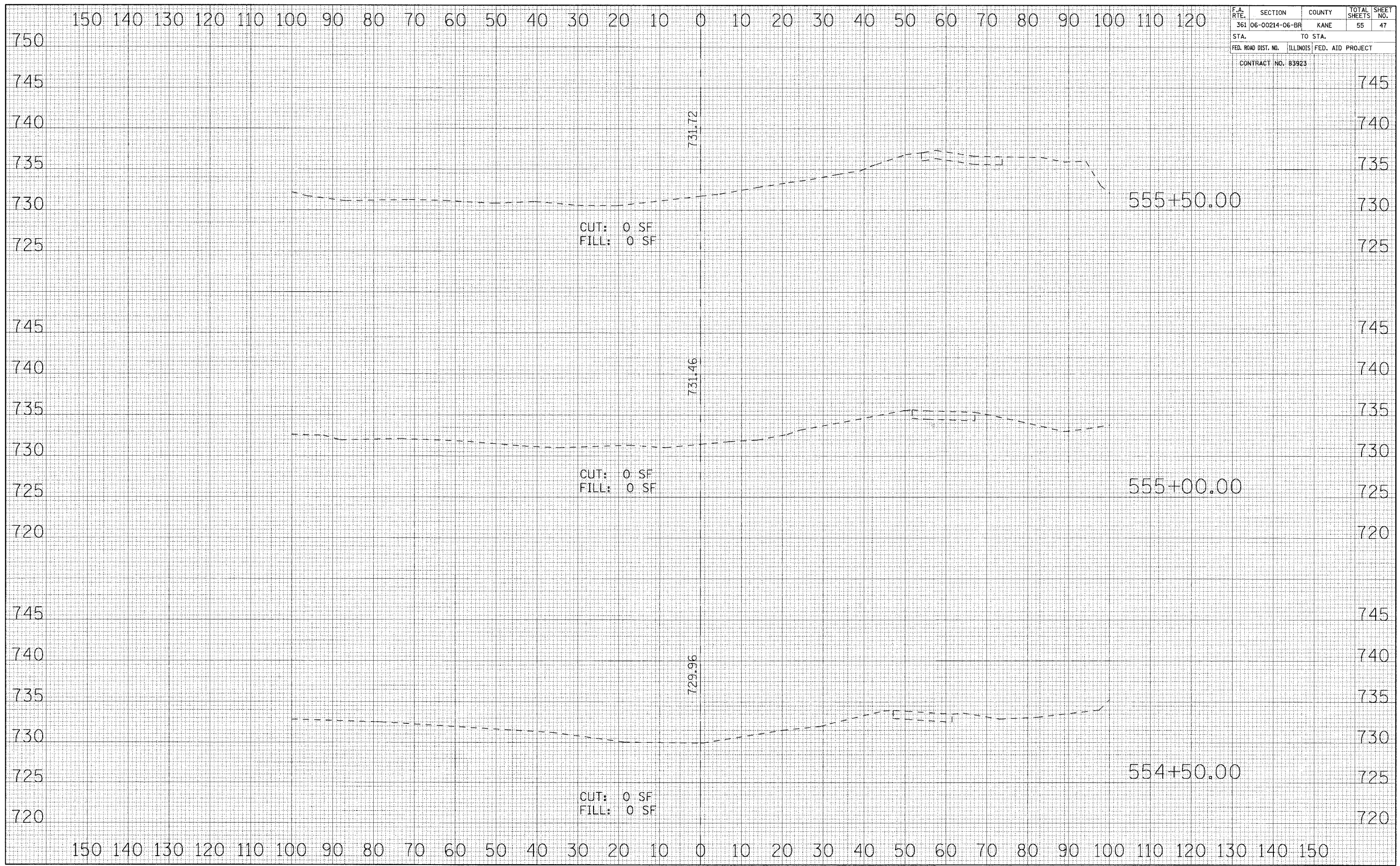
CONTRACT NO. 83923

DATE	BY

FINAL SURVEY	REVISIONS

DATE	BY

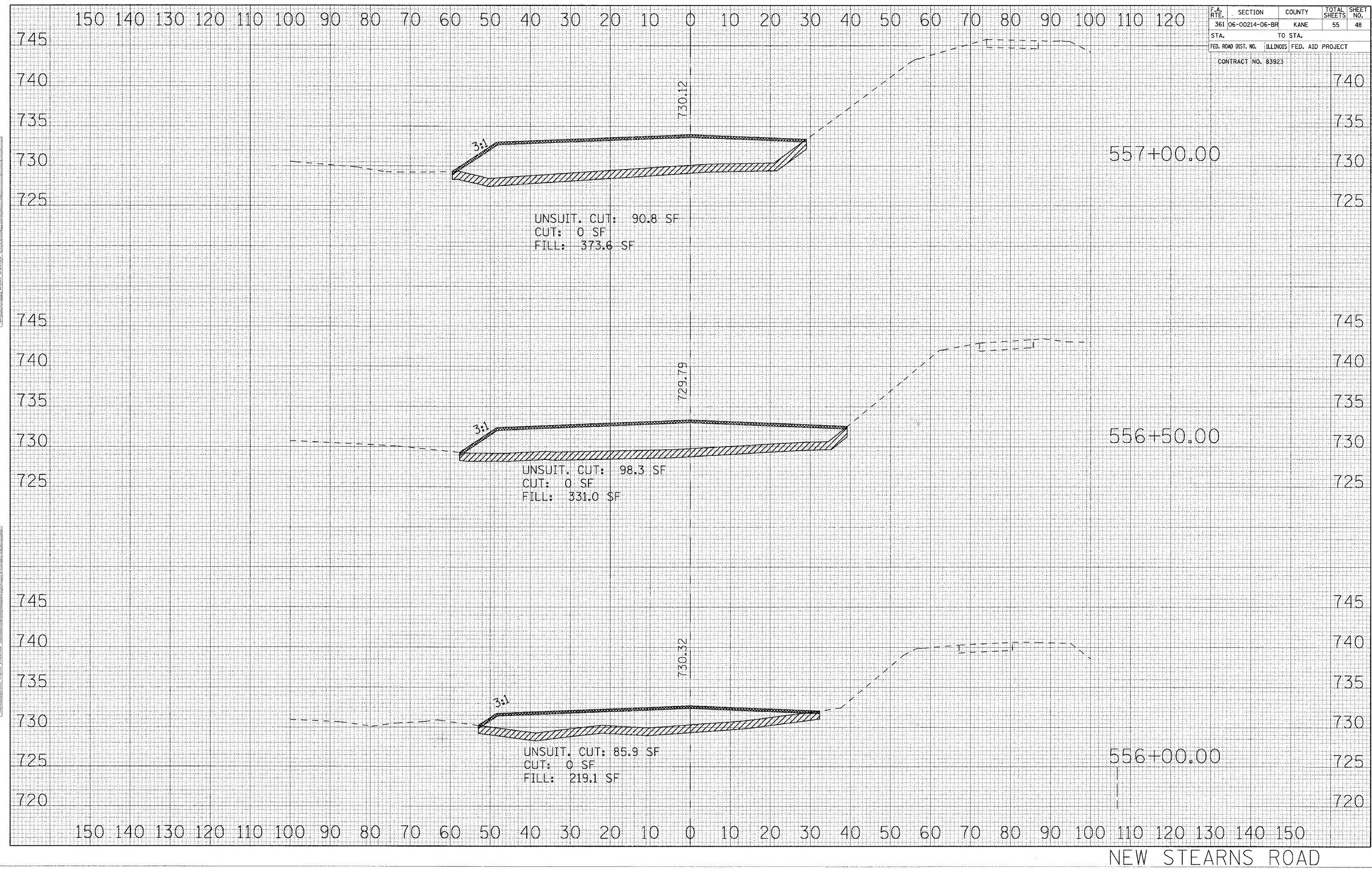
ORIGINAL SURVEY	REVISIONS



NEW STEARNS ROAD



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	48
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 83923				



FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTED		
AREAS CHECKED		

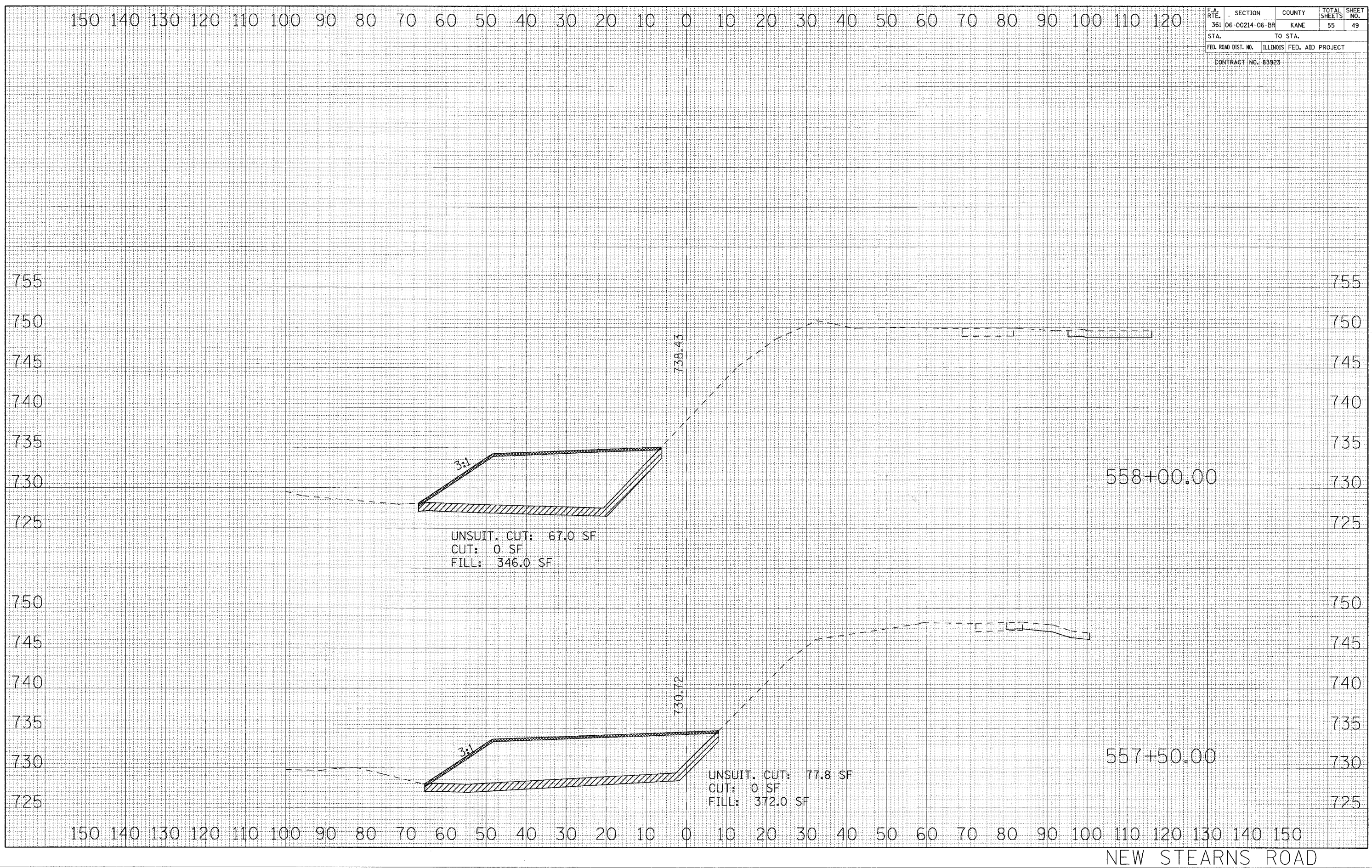
ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTED		
AREAS CHECKED		

NEW STEARNS ROAD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	49
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 83923				

FINAL SURVEY	CONVERTED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		
	NO.		

ORIGINAL SURVEY	CONVERTED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		
	NO.		



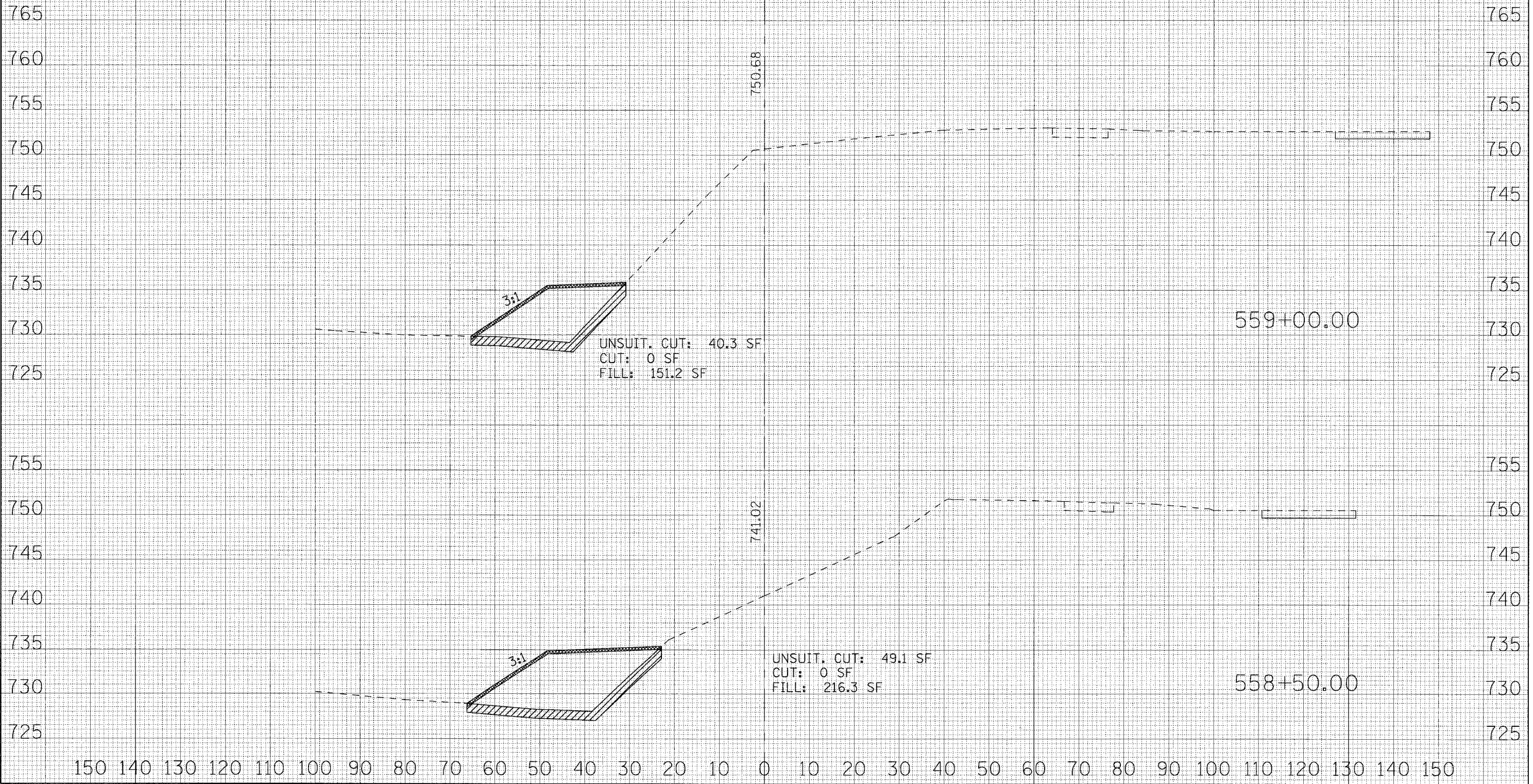
NEW STEARNS ROAD

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	50
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 83923				

DATE	
BY	
REVIEWED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
REVIEWED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



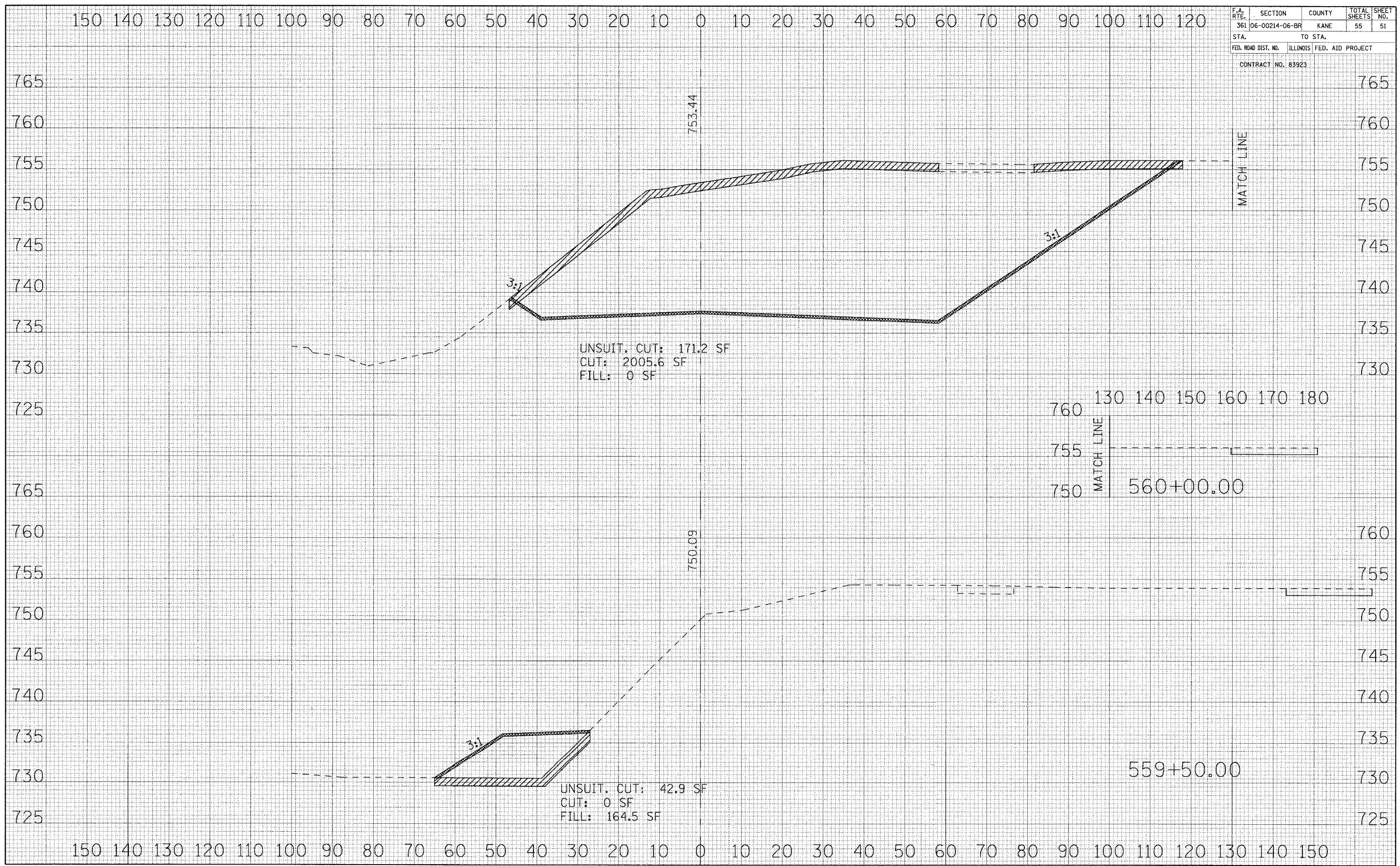
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NEW STEARNS ROAD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	51
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 83923				

FINAL SURVEY	CHECKED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY	CHECKED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS CHECKED	

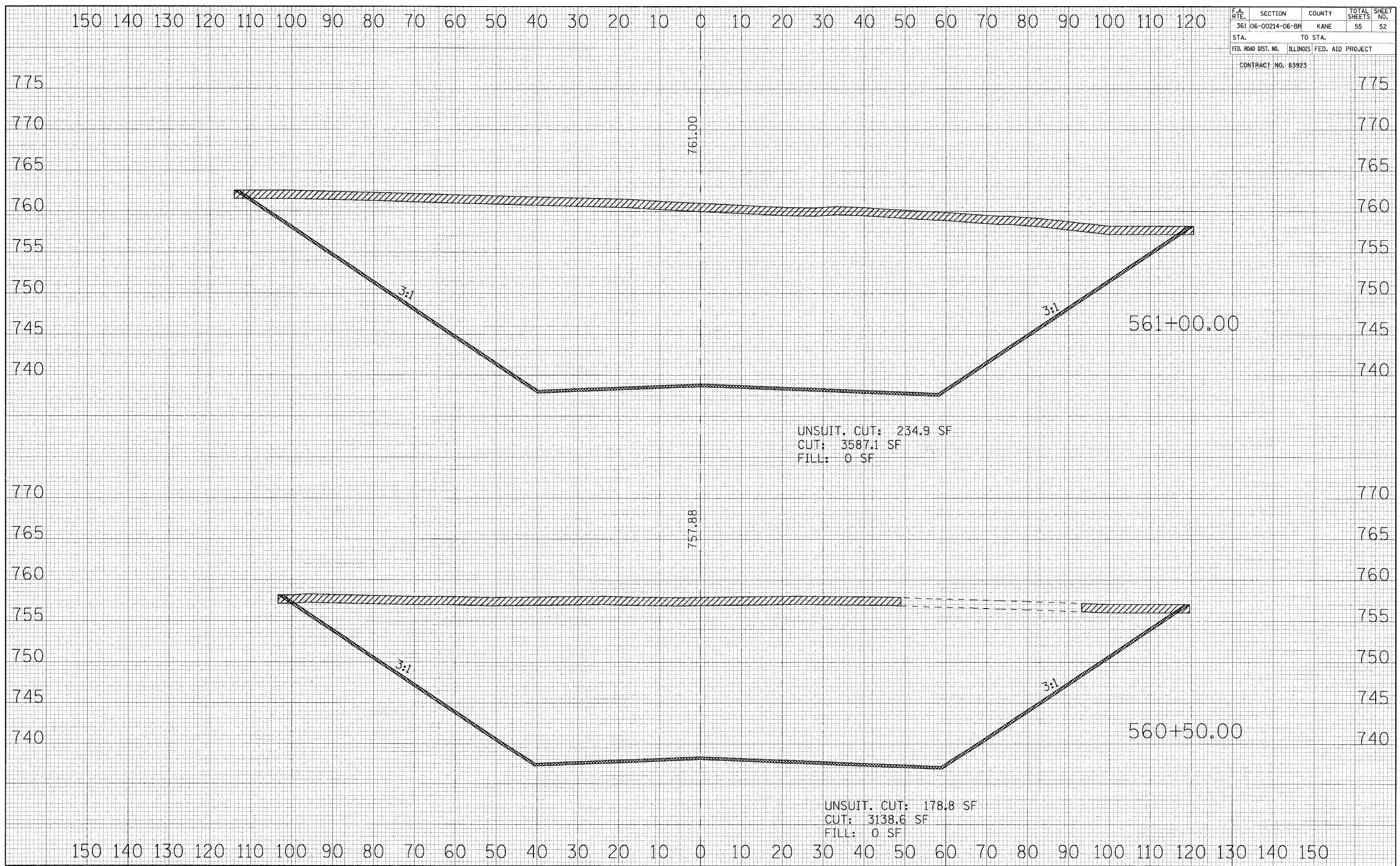


UNSUIT. CUT: 171.2 SF  
 CUT: 2005.6 SF  
 FILL: 0 SF

UNSUIT. CUT: 42.9 SF  
 CUT: 0 SF  
 FILL: 164.5 SF

NEW STEARNS ROAD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	52
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83923				



UNSUIT. CUT: 234.9 SF  
 CUT: 3587.1 SF  
 FILL: 0 SF

UNSUIT. CUT: 178.8 SF  
 CUT: 3138.6 SF  
 FILL: 0 SF

NEW STEARNS ROAD

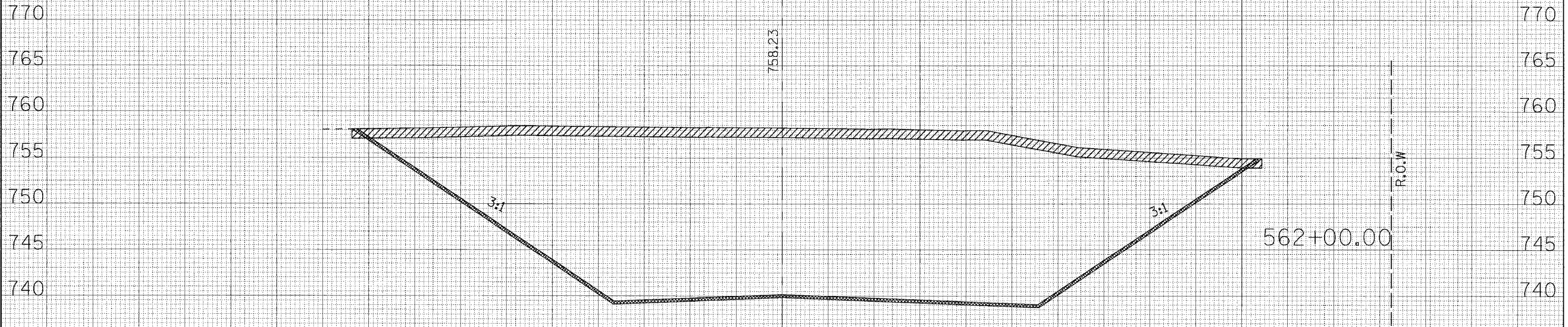
DATE	BY
FINAL SURVEY	CHECKED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

DATE	BY
ORIGINAL SURVEY	CHECKED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

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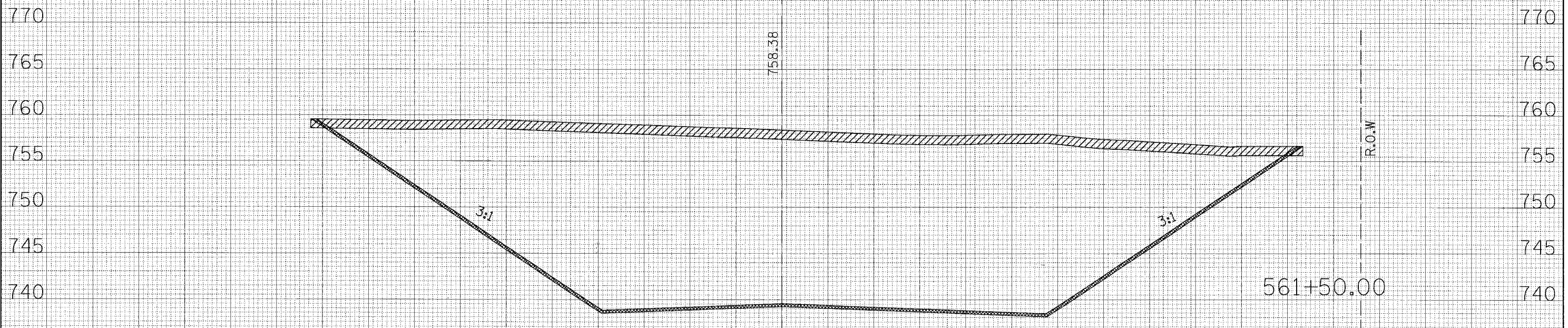
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	53
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83923				

FINAL SURVEY	CHECKED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS CHECKED	



UNSUIT. CUT: 194.5 SF  
CUT: 2521.7 SF  
FILL: 0 SF

ORIGINAL SURVEY	CHECKED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS CHECKED	



UNSUIT. CUT: 216.1 SF  
CUT: 2881.2 SF  
FILL: 0 SF

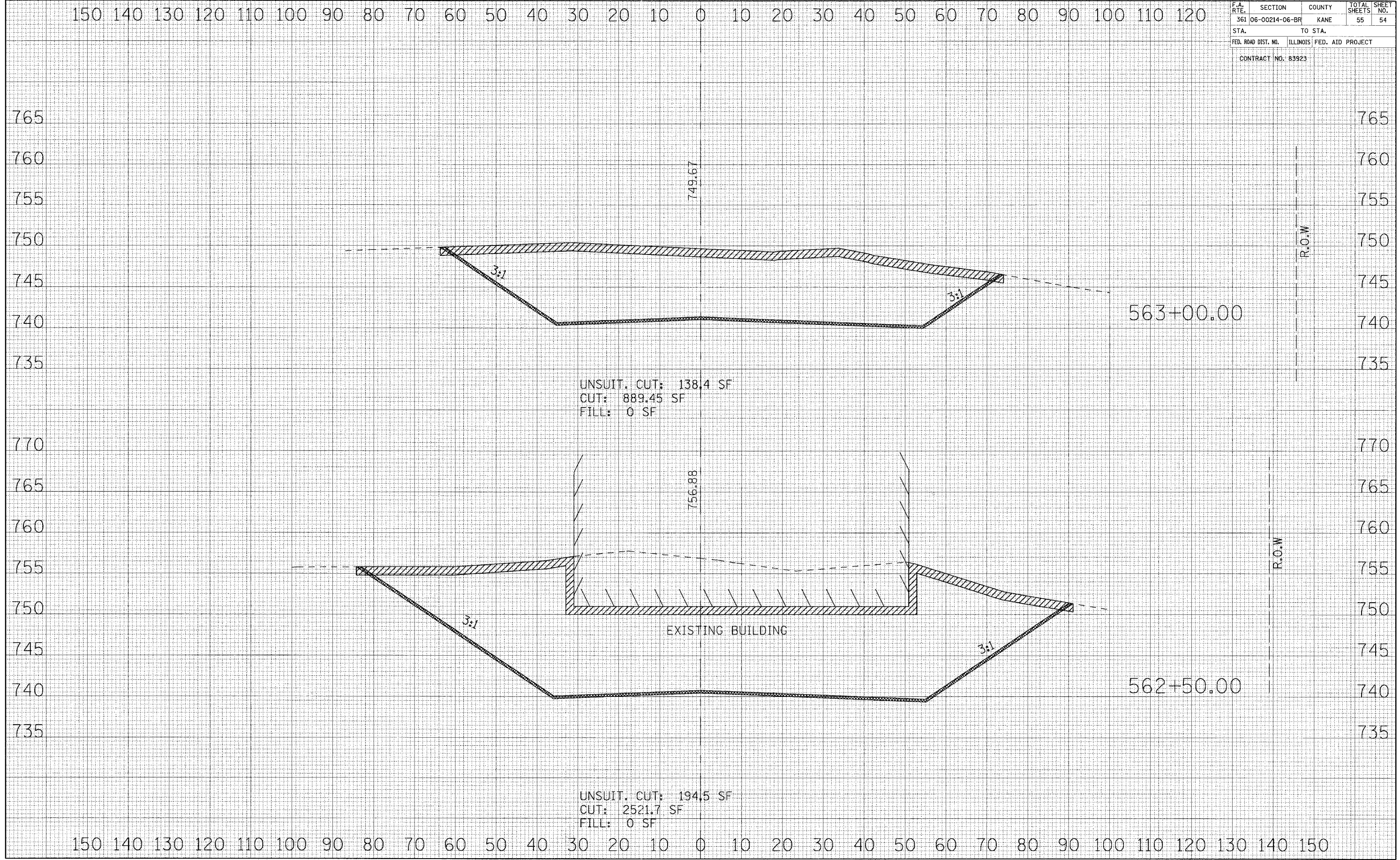
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NEW STEARNS ROAD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BP	KANE	55	54
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 83923				

DATE	BY

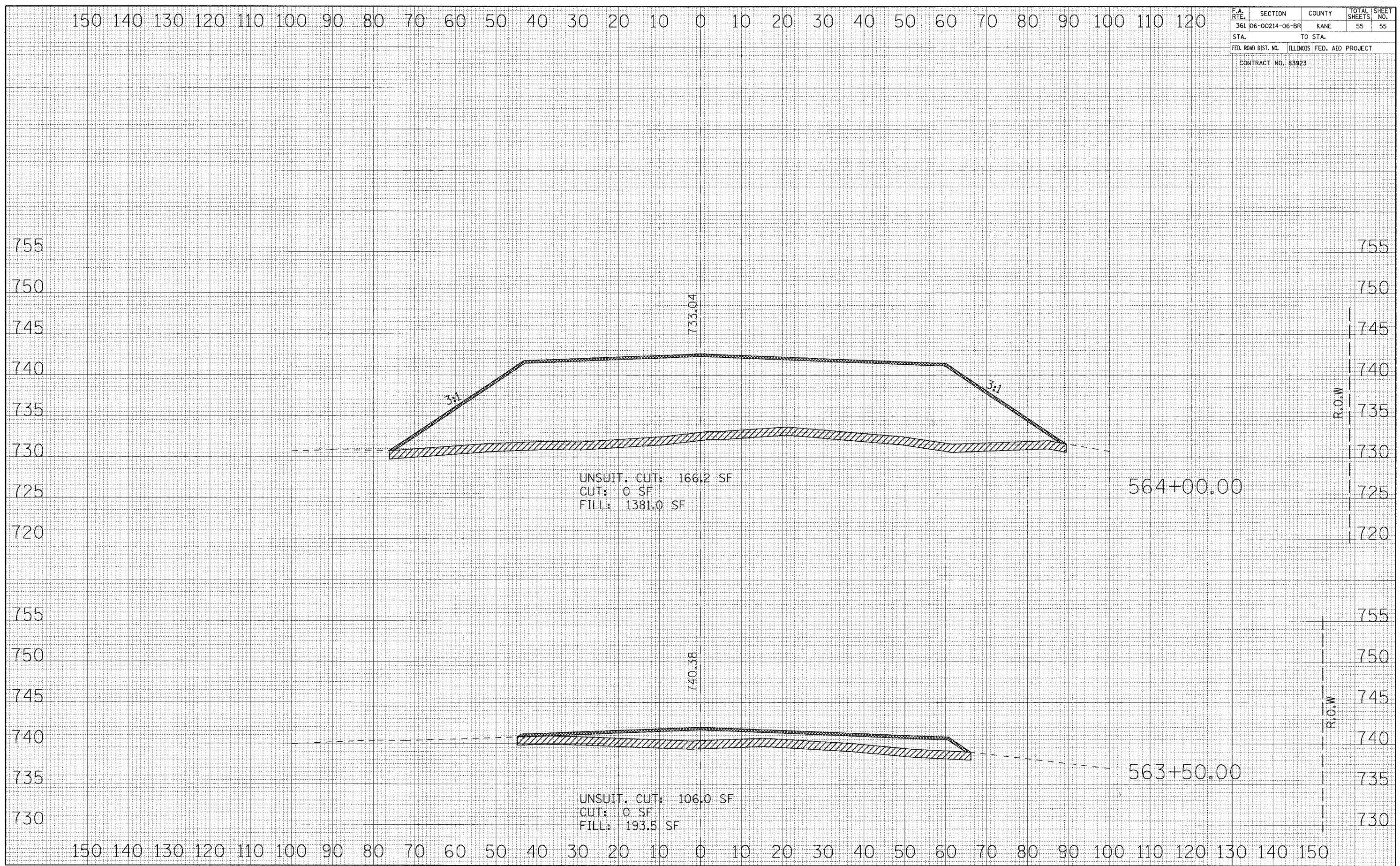
DATE	BY



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-06-BR	KANE	55	55
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 83923				

DATE	BY

DATE	BY



NEW STEARNS ROAD