

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	•	COOK	32	1
62997				

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY**

F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION (2122-921 PT 2 & 2323.6-2P) I-9

**SOUTHBOUND KNEE WALLS  
(ROOT ST TO PERSHING RD)**

**COOK COUNTY  
C-91-255-05**

**DESIGN NUMBER  
D-91-417-01**



SIGNATURE *D.D. Mosier*  
DATE Apr. 25, 2008  
EXPIRES Nov. 30, 2009



SIGNATURE *John D. Cornell*  
DATE Apr. 25, 2008  
EXPIRES Nov. 30, 2009



SIGNATURE *Brian L. Umbright*  
DATE APRIL 25, 2008  
EXPIRES Nov. 30, 2009

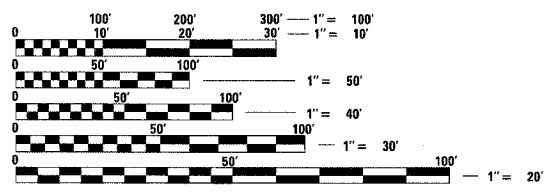


**PROJECT LOCATED IN CITY OF CHICAGO**

**DESIGN DESIGNATION**

WENTWORTH AVE: 8275 (20) URBAN COLLECTOR

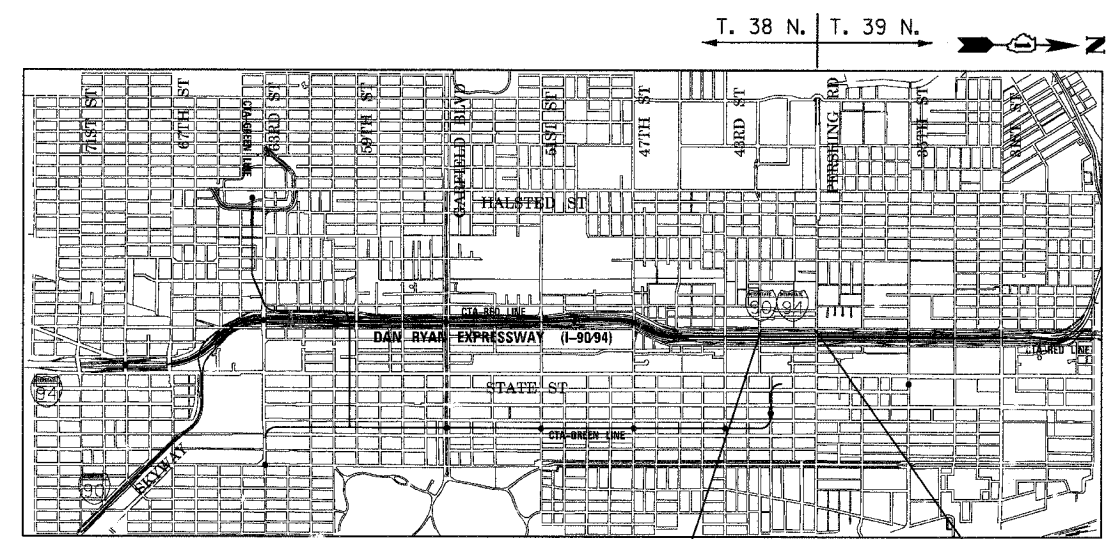
FRONTAGE ROAD:	ADT (2020)	DESIGN SPEED	POSTED SPEED
WENTWORTH AVE	11,000	30	25



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.

**BEFORE EXCAVATING CALL:**  
(J.U.L.I.E.) JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123 OR 811

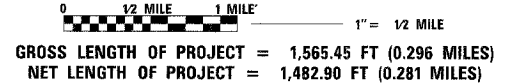
**CONTRACT NO. 62997**



PROJECT BEGINS  
SB WENTWORTH AVE  
STA 40+58

PROJECT ENDS  
SB WENTWORTH AVE  
STA 56+23.45

**LOCATION MAP**



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED APRIL 29, 2008

*Diana M. O'Keefe* DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
June 27, 2008

*Eric E. Narmath* INTERIM ENGINEER OF DESIGN AND ENVIRONMENT  
June 27, 2008

*Christine M. Reed* DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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DISTRICT ONE DESIGN/CONSULTANT SERVICES PROJECT MANAGER  
RAJENDRA SHAH (847) 705-4555

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	32	2
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

62997

**GENERAL NOTES:**

- THE CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH:  
 CONTRACT 60A05 - SB FENCE AND GATES FROM 47TH ST TO 31ST ST  
 CONTRACT 62303 - RECONSTRUCTION OF SOUTHBOUND LOCAL LANES AND RAMPS BETWEEN GARFIELD BOULEVARD AND 31ST ST  
 CONTRACT 62583 - LIGHTING AND SURVEILLANCE 31ST ST TO I-57 INTERCHANGE  
 CONTRACT 62996 - SOUTHBOUND KNEE WALLS (43RD ST TO ROOT ST)  
 CONTRACT 62998 - SOUTHBOUND KNEE WALLS (PERSHING RD TO 35TH ST)
- CONTRACTOR SHALL MATCH ALL WORK COMPLETED IN CONTRACT 62303
- THE LOCATIONS OF EXISTING UTILITIES, AS SHOWN ON THE DRAWINGS, REPRESENT DATA RECEIVED FROM VARIOUS SOURCES. IT IS NOT GUARANTEED TO BE CORRECT OR ALL INCLUSIVE. THE CONTRACTOR MUST CONDUCT HIS OWN INVESTIGATIONS INTO THE LOCATION, SIZE, DEPTH, AND NATURE OF ANY AND ALL EXISTING UTILITIES WHICH MAY IMPACT THE WORK UNDER THIS CONTRACT. ANY EXISTING UTILITIES WHICH ARE TO REMAIN IN SERVICE MUST BE FULLY PROTECTED BY THE CONTRACTOR AND ANY DAMAGE CAUSED BY THE CONSTRUCTION MUST BE IMMEDIATELY REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROTECTION OF ANY AND ALL SURFACE AND UNDERGROUND UTILITIES, EVEN THOUGH THEY MAY NOT BE IDENTIFIED ON THE PLANS.
- THE CONTRACTOR MUST COORDINATE CONSTRUCTION ACTIVITIES WITH THE RESPECTIVE UTILITIES OF THE CITY OF CHICAGO. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR MUST CALL THE CHICAGO UTILITY ALERT NETWORK (C.U.A.N.) AT (312) 744-7000 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRICAL, TELEPHONE, CABLE, AND GAS FACILITIES (48 HOURS NOTIFICATION IS REQUIRED). THE CONTRACTOR MUST CONTACT THE CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT, PERMIT SECTION AT (312) 747-7893 FOR WATER AND CITY SEWER LOCATIONS.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM IDOT.
- WHEN ARTIFICIAL LIGHTING IS USED IN NIGHT OPERATIONS, THE CONTRACTOR MUST EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING COMMERCIAL AND RESIDENTIAL AREAS.
- CHAIN LINK FENCE REMOVAL MUST BE CONSIDERED AS PART OF CLEARING.
- IT MUST BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT NO GAP REMAINS BETWEEN PROPOSED KNEE WALLS OR WHERE PROPOSED KNEE WALL TERMINATES AND EXISTING FENCE REMAINS IN PLACE.
- THE CONTRACTOR MUST TAKE ALL NECESSARY SAFETY PRECAUTIONS TO PROTECT AND PROVIDE ACCESS TO ADJUTING PROPERTY, UTILITIES, PEDESTRIANS, AND VEHICULAR TRAFFIC.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER MUST BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR MUST PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS. THE ENGINEER OR AN AUTHORIZED SURVEYOR AGENT WILL WITNESS OR OTHERWISE REFERENCE AND RESET MONUMENTS AS NECESSARY. ALL PROPERTY CORNERS EXCEPT THOSE WITHIN AREAS WHERE THE SCHEDULE, IF PROVIDED, SHOWS PLACEMENT OF R.O.W. MARKERS MUST REMAIN UNDISTURBED.
- ALL ELEVATIONS IN THIS PLAN SET ARE BASED ON THE CHICAGO CITY DATUM. THE CONVERSION EQUATION FROM CCD TO NAVD 88 IS: NAVD 88 ELEVATION = CCD + 579.19.

- BARRICADES: THE CONTRACTOR MUST PROVIDE AND INSTALL TWO WEIGHTED SANDBAGS ON EACH TYPE I OR TYPE II BARRICADE USED - ONE WEIGHTED SANDBAG ACROSS EACH BOTTOM RAIL. ALL TYPE III BARRICADES REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
- SUPERSTRUCTURE RATING COARSE AGGREGATE MUST BE USED IN THE CONCRETE BARRIER WALL CONCRETE MIXTURE.
- LOCATIONS OF ACCESS CONTROL FENCING AS SHOWN ON THE PLANS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO BETTER FIT FIELD CONDITIONS.
- THE LOCATION OF VARIOUS ITEMS SUCH AS PAVEMENT, BARRIER WALLS, ELECTRICAL SYSTEMS AND DRAINAGE STRUCTURES BUILT IN CONTRACTS UNDER CONSTRUCTION DURING THE PREPARATION OF THESE PLANS IS BASED ON THE PUBLISHED CONTRACT PLAN DRAWINGS AVAILABLE DURING DESIGN. THE CONTRACTOR MUST FIELD VERIFY LIMITS, LOCATIONS AND ELEVATIONS OF THESE PREVIOUSLY CONSTRUCTED ITEMS.
- CRUSHING PLANT AND CONCRETE PLANT LOCATIONS REQUIRE CITY OF CHICAGO APPROVAL.
- THE CONTRACTOR IS ALERTED THAT THERE ARE EXISTING CTA UTILITY FACILITIES WITHIN, ADJACENT TO, AND CROSSING UNDER THE EXPRESSWAY FROM THE FRONTAGE ROADS TO THE CTA OPERATING AREA. THE EXACT LOCATION OF THESE FACILITIES IS NOT KNOWN. THE CONTRACTOR MUST CONTACT THE CTA AT 312-681-3860 FOR LOCATIONS OF THESE FACILITIES BEFORE PROCEEDING WITH ANY WORK WITHIN OR ADJACENT TO THE CTA OPERATING AREA. FOR ADDITIONAL INFORMATION REGARDING BURIED CONDUITS, CONTACT MR. RICK STRAUBEL, MANAGER TECH SUPPORT, AT 312-922-0508.
- THE CONTRACTOR MUST USE CARE IN GRADING OR EXCAVATING NEAR ANY AND ALL EXISTING ITEMS THAT WILL NOT BE REMOVED. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR MUST BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE.
- THE CONTRACTOR MUST MAINTAIN THE SURFACE DRAINAGE OF ALL ROADWAYS DURING CONSTRUCTION OF THIS PROJECT. WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR MUST PROVIDE AND MAINTAIN TEMPORARY OUTLETS AND CONNECTIONS FOR ALL PRIVATE OR PUBLIC DRAINS, SEWERS, AND CATCH BASINS. THE CONTRACTOR MUST PROVIDE FACILITIES TO TAKE IN ALL STORM WATER WHICH WILL BE RECEIVED BY THESE DRAINS AND SEWERS AND DISCHARGE THE SAME. THE CONTRACTOR MUST PROVIDE AND MAINTAIN A TEMPORARY OUTLET AND BE PREPARED AT ALL TIMES TO DISPOSE OF THE WATER RECEIVED FROM THESE TEMPORARY CONNECTIONS UNTIL INSTALLATION IS COMPLETE INCLUDING PAVEMENT. THIS WORK MUST NOT BE PAID FOR SEPERATELY BUT MUST BE CONSIDERED INCLUDED IN THE COST OF THIS CONTRACT.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION OF EXISTING PLANT MATERIAL FOR WHICH THE CONTRACT DOES NOT PROVIDE REMOVAL. THE PROTECTION OF EXISTING PLANT MATERIAL AND THE REPAIR OR REPLACEMENT OF EXISTING PLANT MATERIAL DAMAGED BY THE CONTRACTOR SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 201 OF THE STANDARD SPECIFICATIONS.
- ALL RELOCATION OF EXISTING SIGNS IN CONFLICT WITH PROPOSED CONSTRUCTION SHALL CONFORM TO ARTICLE 107.25 OF THE STANDARD SPECIFICATIONS. EXISTING SIGNS TO BE RELOCATED IN PROPOSED CONCRETE MEDIAN SURFACE SHALL BE INSTALLED USING A SLEEVE OR BY CORING THE CONCRETE MEDIAN SURFACE. THE SLEEVE AND CORING OPERATIONS SHALL BE AS DIRECTED AND APPROVED BY THE ENGINEER. EXISTING SIGNS TO BE RELOCATED ONTO PROPOSED KNEE WALL FOOTINGS SHALL BE INSTALLED ACCORDING TO SECTIONS 728 AND 731 OF THE STANDARD SPECIFICATIONS. LABOR AND MATERIALS FOR RELOCATION OF EXISTING SIGNS WILL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE INCLUDED IN THE COST OF THE FLUTED KNEE WALL.
- THE INTENT OF THE CONTRACT DOCUMENTS IS TO CONSTRUCT THE FLUTED KNEE WALL BEHIND THE EXISTING CURB AND GUTTER. ANY DAMAGE TO THE EXISTING CURB AND GUTTER SHALL BE REPAIRED TO THE ORIGINAL CONDITION OF THE CURB AND GUTTER BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

**GENERAL NOTES: CITY OF CHICAGO**

- IN CASE OF DAMAGE TO CITY OF CHICAGO SEWERS, PRIVATE AND PUBLIC DRAINS, SEWER STRUCTURES AND/OR BENCH MONUMENTS, THE CONTRACTOR MUST IMMEDIATELY CONTACT THE DEPARTMENT OF WATER MANAGEMENT AT (312) 747-7892 OR (312) 747-7893.
- BENCH MONUMENT LOCATIONS WITHIN THE LIMITS OF THE IMPROVEMENT CAN BE OBTAINED FROM THE DEPARTMENT OF WATER MANAGEMENT AT 333 SOUTH STATE STREET, SUITE 410, CHICAGO, IL 60604. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF REPLACING ANY BENCH MONUMENT DAMAGED OR DESTROYED DURING CONSTRUCTION.
- IN LOCATIONS WHERE THE MAIN SEWERS, DRAINAGE STRUCTURES, PUBLIC, AND PRIVATE DRAIN CONNECTIONS ARE DISTURBED OR DAMAGED DURING CONSTRUCTION BY THE CONTRACTOR, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO RESTORE AND REPLACE THE DAMAGED FACILITIES AT HIS/HER OWN EXPENSE TO THE SATISFACTION OF THE DEPARTMENT OF WATER MANAGEMENT. THE SEWER FLOWS MUST BE MAINTAINED AT ALL TIMES.
- EXTREME CAUTION IS TO BE TAKEN TO ENSURE THAT NO FACILITY OWNED AND MAINTAINED BY THE DEPARTMENT OF WATER MANAGEMENT IS DAMAGED DURING CONSTRUCTION. IF ANY DAMAGE OCCURS TO ANY FACILITIES, THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE COST OF REPAIRING OR REPLACING THEM.
- CITY OF CHICAGO WATER VALVE VAULTS AND SEWER STRUCTURES MUST NOT BE CLOSED, COVERED OR OTHERWISE OBSTRUCTED DURING CONSTRUCTION WITHOUT WRITTEN PERMISSION FROM THE CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT.
- THE CHICAGO TRANSIT AUTHORITY (CTA) HAS BUS OPERATIONS ALONG WENTWORTH AVE. THE CONTRACTOR MUST INFORM THE CTA REPRESENTATIVE MS. CHARLENE RIFFER (GENERAL MANAGER CONSTRUCTION) OF THE ON-GOING PROJECT SCHEDULE STARTING 28 DAYS BEFORE THE START OF CONSTRUCTION AT (312) 681-3851.

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)

**GENERAL NOTES**

SCALE: NONE  
 DATE: 04/25/08

DRAWN BY: JDC  
 CHECKED BY: RS

4/24/2008 7:02:08 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
84/90	*	COOK	32	3
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

62997

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY	URBAN
				100% STATE JOOO
20200100	EARTH EXCAVATION	CU YD	323	323
21101615	TOPSOIL FURNISH AND PLACE, 4"	SO YD	183	183
21101645	TOPSOIL FURNISH AND PLACE, 12"	SO YD	298	298
25000210	SEEDING, CLASS 2A	ACRE	0.05	0.05
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	18	18
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	18	18
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	18	18
25001800	SEEDING, CLASS 4 (MODIFIED)	ACRE	0.14	0.14
25100630	EROSION CONTROL BLANKET	SO YD	961	961
44002300	CURB REMOVAL (PARTIAL)	FOOT	150	150
44004250	PAVED SHOULDER REMOVAL	SO YD	475	475
50300225	CONCRETE STRUCTURES	CU YD	8.6	8.6
50300255	CONCRETE SUPERSTRUCTURE	CU YD	7.1	7.1
50300300	PROTECTIVE COAT	SO YD	34	34
50300510	RUSTICATION FINISH	SO FT	59	59
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,510	1,510
60618324	CONCRETE MEDIAN SURFACE, 6" (SPECIAL)	SO FT	636	636
66400550	CHAIN LINK FENCE, 4" (SPECIAL)	FOOT	1,434	1,434
67100100	MOBILIZATION	L SUM	1	1
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	6	6
X0322256	TEMPORARY INFORMATION SIGNING	SO FT	26	26
X0323973	SEDIMENT CONTROL, SILT FENCE	FOOT	1,451	1,451
X0323974	SEDIMENT CONTROL, SILT FENCE MAINTENANCE	FOOT	363	363
X0324640	FLUTED KNEE WALL	FOOT	1,393	1,393
X2500322	SEEDING, CLASS 5A, (MODIFIED)	ACRE	0.14	0.14
X6065740	CONCRETE MEDIAN SURFACE, 5" (MODIFIED)	SO FT	264	264
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1
Z0030020	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	2	2

INDEX OF SHEETS

SHEET	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES AND PROJECT COMMITMENTS
3	SUMMARY OF QUANTITIES / INDEX / HIGHWAY STANDARDS
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19	BD-51 DISTRICT 1, BENCHING DETAIL FOR EMBANKMENT WIDENING
20	TC-10 DISTRICT 1, TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS & DRIVEWAYS
21	TC-17 DISTRICT 1, TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES PARTIAL RAMP CLOSURES
22	TC-18 DISTRICT 1, SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS
23	TC-22 DISTRICT 1, ARTERIAL ROAD INFORMATION SIGN
24-32	CROSS SECTIONS

IDOT HIGHWAY STANDARDS

SHEET	DESCRIPTION
000001-05	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-01	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
664001-01	CHAIN LINK FENCE
701601-05	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701701-05	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-03	LANE CLOSURE, MULTILANE, 1W OR 2W, CROSSWALK OR SIDEWALK CLOSURE, for speeds < 45 mph
701901	TRAFFIC CONTROL DEVICES
720001	SIGN PANEL MOUNTING DETAILS
720006-01	SIGN PANEL ERECTION DETAILS
728001	TELESCOPING STEEL SIGN SUPPORT
731001	BASE FOR TELESCOPING STEEL SIGN SUPPORT

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F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)

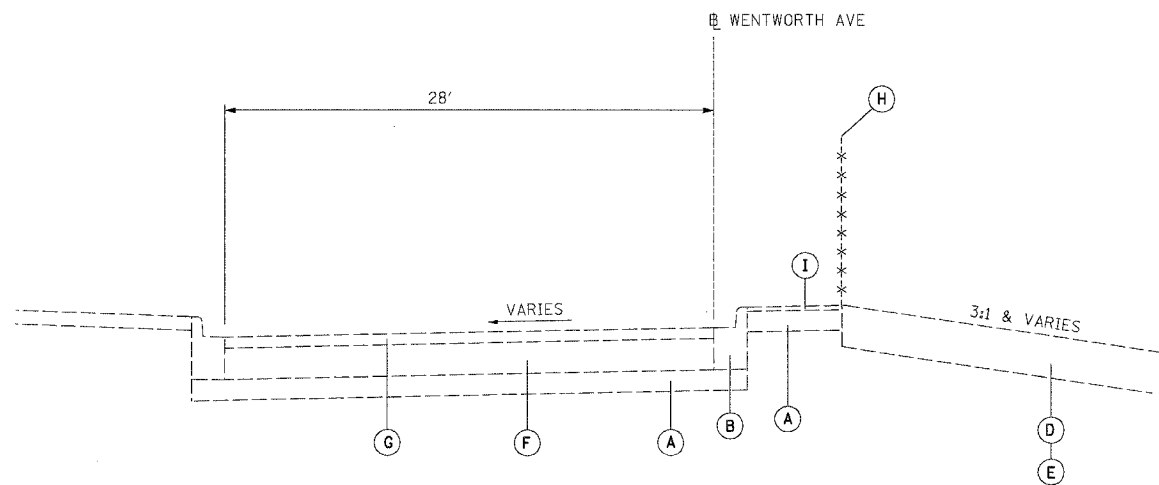
SUMMARY OF QUANTITIES

SCALE: NONE  
DATE: 04/25/08  
DRAWN BY: JDC  
CHECKED BY:

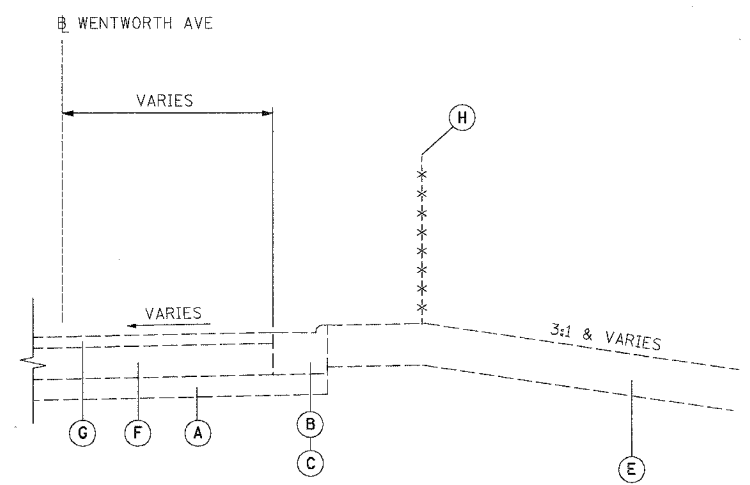
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	32	4
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	62997	



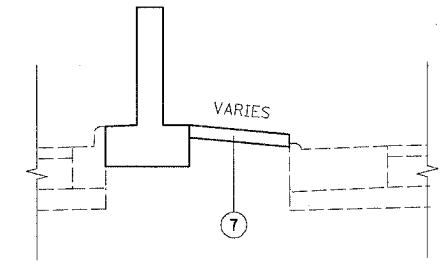
**EXISTING TYPICAL SECTION**  
STA. 40+58 to 53+94.71



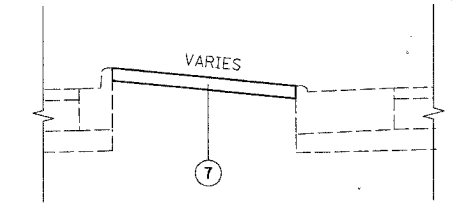
**EXISTING TYPICAL SECTION**  
STA. 54+84.23 to 56+23.45

**EXISTING LEGEND**

- (A) GRANULAR MATERIAL, 6"
- (B) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
- (C) COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.24
- (D) TOPSOIL, 4"
- (E) TOPSOIL, 12"
- (F) PORTLAND CEMENT CONCRETE PAVEMENT, 9"
- (G) BITUMINOUS CONCRETE, 3"
- (H) CHAIN LINK FENCE, 4'
- (I) BITUMINOUS MEDIAN SURFACE, 1 1/2"



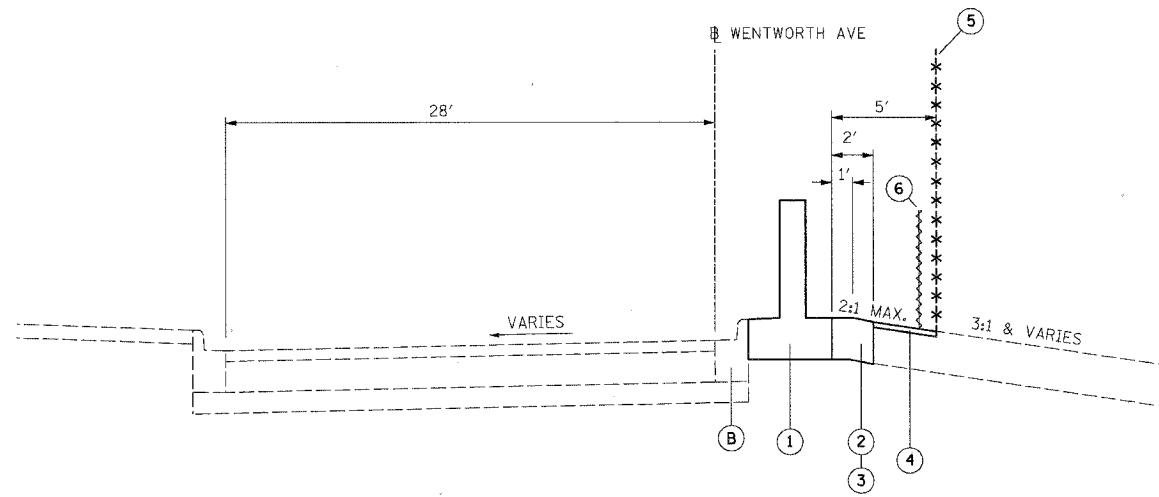
**MEDIAN TREATMENT**  
STA. 53+48 to 53+60



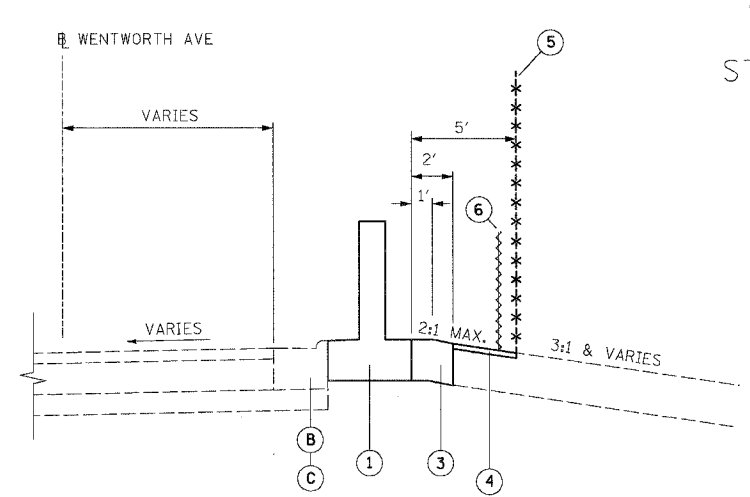
**MEDIAN TREATMENT**  
STA. 53+60 to 53+94.71

**PROPOSED LEGEND**

- (1) FLUTED KNEE WALL
- (2) SEEDING, CLASS 2A / TOPSOIL FURNISH AND PLACE, 4" / EROSION CONTROL BLANKET
- (3) SEEDING, CLASS 4 (MODIFIED) / SEEDING, CLASS 5A (MODIFIED) / TOPSOIL FURNISH AND PLACE, 12" / EROSION CONTROL BLANKET
- (4) SEEDING, CLASS 2A / SEEDING, CLASS 4 (MODIFIED) / SEEDING CLASS 5A (MODIFIED) / EROSION CONTROL BLANKET
- (5) CHAIN LINK FENCE, 4' (SPECIAL)
- (6) SEDIMENT CONTROL, SILT FENCE (TO BE REMOVED AT PROJECT COMPLETION)
- (7) CONCRETE MEDIAN SURFACE, 6" (SPECIAL)



**PROPOSED TYPICAL SECTION**  
STA. 40+68 to 53+48



**PROPOSED TYPICAL SECTION**  
STA. 54+84.23 to 56+23.45

**NOTES:**

1. THICKNESS OF EXISTING PAVEMENT AND GRANULAR MATERIAL ARE TAKEN FROM RECORD DRAWING PLANS.
2. TYPICAL SECTIONS NEED TO BE VERIFIED WITH THE PLANS AS THEY ARE A REPRESENTATION OF THE PLANS. THEY DO NOT SHOW ALL CONFIGURATIONS, JUST THE MOST PREDOMINANT.

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)

**TYPICAL SECTIONS**

SCALE: NTS  
DATE: 04/25/08

DRAWN BY: JDC  
CHECKED BY: RS

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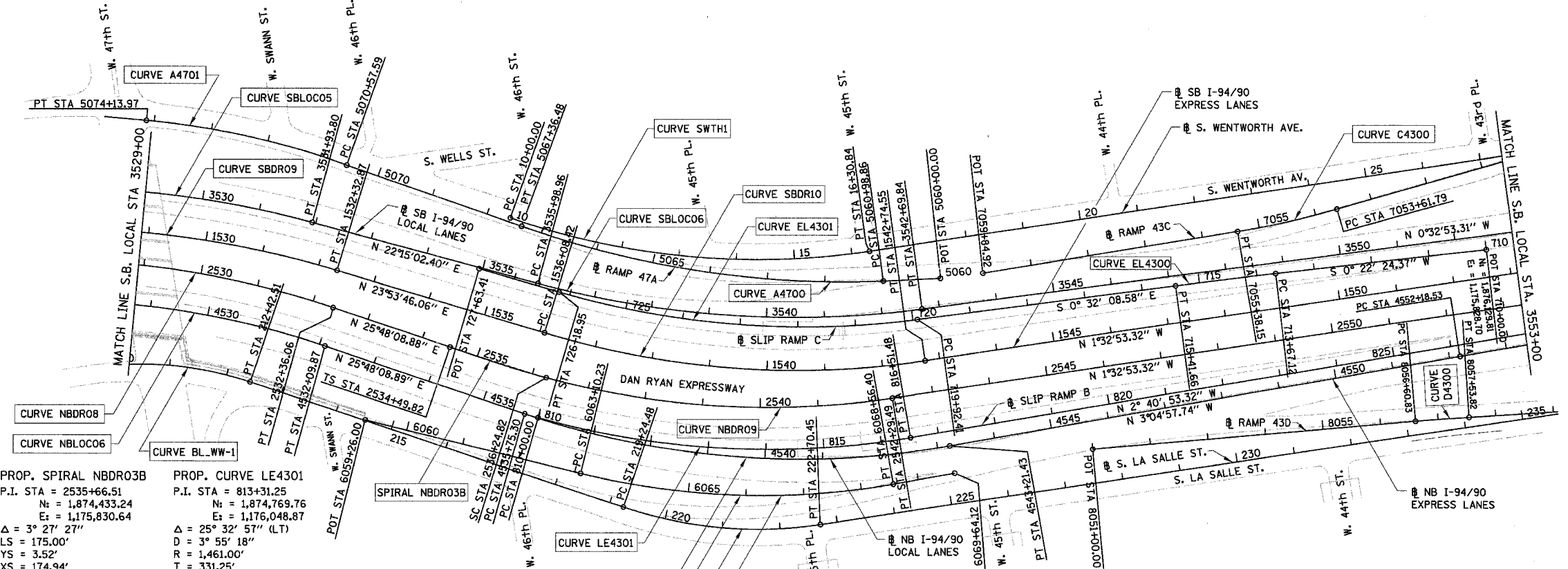
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- PROP. CURVE SBDR10  
P.I. STA = 1539+47.07  
Nt = 1,874,803.43  
Et = 1,175,912.56  
 $\Delta = 25^{\circ} 26' 39''$  (LT)  
D = 3^{\circ} 49' 11"  
R = 1,500.00'  
T = 338.65'  
L = 666.13'  
E = 37.75'  
 $\theta = 5.9\%$   
S.A. = END CONTINUOUSLY ROTATING PLANE AT STA 1537+03.93  
T.R. = 68.20'  
S.E. RUN = 315.00'  
S.R. = STA 1541+69.55 TO STA 1545+52.75  
P.C. STA = 1536+08.42  
Nt = 1,874,493.81  
Et = 1,175,775.38  
P.T. STA = 1542+74.55  
Nt = 1,875,141.96  
Et = 1,175,903.41
- PROP. CURVE EL4300  
P.C. STA = 714+54.39  
Nt = 1,875,675.42  
Et = 1,175,825.74  
 $\Delta = 0^{\circ} 54' 33''$  (LT)  
D = 0^{\circ} 31' 15"  
R = 11,000.00'  
T = 87.27'  
L = 174.54'  
E = 0.35'  
 $\theta = 5.9\%$   
S.A. = END CONTINUOUSLY ROTATING PLANE AT STA 713+67.12  
Nt = 1,875,762.70  
Et = 1,175,826.31  
P.T. STA = 715+41.66  
Nt = 1,875,588.15  
Et = 1,175,826.55
- PROP. CURVE SWTH1  
P.I. STA = 13+21.89  
Nt = 1,874,747.97  
Et = 1,175,711.50  
 $\Delta = 28^{\circ} 04' 24''$  (LT)  
D = 4^{\circ} 27' 01"  
R = 1,287.50'  
T = 321.89'  
L = 630.84'  
E = 39.63'  
 $\theta = 5.9\%$   
T.R. = MATCH EXISTING  
S.E. RUN = MATCH EXISTING  
P.C. STA = 10+00.00  
Nt = 1,874,459.70  
Et = 1,175,568.28  
P.T. STA = 16+30.84  
Nt = 1,875,069.72  
Et = 1,175,702.20
- PROP. CURVE EL4301  
P.I. STA = 723+10.32  
Nt = 1,874,819.53  
Et = 1,175,833.74  
 $\Delta = 23^{\circ} 55' 56''$  (RT)  
D = 3^{\circ} 49' 11"  
R = 1,500.00'  
T = 317.91'  
L = 626.54'  
E = 33.32'  
 $\theta = 5.9\%$   
S.A. = STA 719+00.06 TO STA 720+38.59  
S.E. RUN = MATCH EXISTING  
S.R. = STA 725+72.77 TO 727+63.41 (1.83%)  
P.C. STA = 719+92.41  
Nt = 1,875,137.42  
Et = 1,175,830.77  
P.T. STA = 726+18.95  
Nt = 1,874,527.76  
Et = 1,175,707.50
- PROP. CURVE A4701  
P.I. STA = 5072+36.79  
Nt = 1,874,030.16  
Et = 1,175,360.65  
 $\Delta = 14^{\circ} 54' 56''$  (LT)  
D = 4^{\circ} 11' 07"  
R = 1,369.00'  
T = 179.20'  
L = 356.38'  
E = 11.68'  
 $\theta = 4.4\%$   
T.R. = MATCH EXISTING  
S.E. RUN = MATCH EXISTING  
P.C. STA = 5070+57.59  
Nt = 1,874,189.71  
Et = 1,175,442.25  
P.T. STA = 5074+13.97  
Nt = 1,873,854.99  
Et = 1,175,322.86
- PROP. CURVE A4700  
P.I. STA = 5064+21.82  
Nt = 1,874,765.22  
Et = 1,175,731.41  
 $\Delta = 22^{\circ} 28' 55''$  (RT)  
D = 3^{\circ} 31' 33"  
R = 1,625.00'  
T = 322.97'  
L = 637.62'  
E = 31.78'  
 $\theta = 4.4\%$   
S.A. = STA 5060+00 (3.58%) TO 5061+21.86  
S.E. RUN = MATCH EXISTING  
S.R. = STA 5067+13.48 TO 5067+83.48  
P.C. STA = 5060+98.86  
Nt = 1,875,087.21  
Et = 1,175,756.48  
P.T. STA = 5067+36.48  
Nt = 1,874,477.28  
Et = 1,175,585.12
- PROP. CURVE C4300  
P.I. STA = 7054+50.07  
Nt = 1,875,794.51  
Et = 1,175,741.50  
 $\Delta = 6^{\circ} 44' 11''$  (RT)  
D = 3^{\circ} 49' 11"  
R = 1,500.00'  
T = 88.28'  
L = 176.36'  
E = 2.60'  
 $\theta = 4.6\%$   
S.A. = STA 7053+09.79 TO 7053+87.79  
S.E. RUN = MATCH EXISTING  
S.R. = STA 7055+12.15 TO 7055+90.15  
P.C. STA = 7053+61.79  
Nt = 1,875,881.65  
Et = 1,175,727.39  
P.T. STA = 7055+38.15  
Nt = 1,875,706.31  
Et = 1,175,745.28
- PROP. CURVE NBDR09  
P.I. STA = 2539+31.62  
Nt = 1,874,770.97  
Et = 1,175,969.46  
 $\Delta = 23^{\circ} 53' 35''$  (LT)  
D = 3^{\circ} 57' 05"  
R = 1,450.00'  
T = 306.79'  
L = 604.67'  
E = 32.10'  
 $\theta = 6.0\%$   
S.A. = END CONTINUOUSLY ROTATING PLANE AT STA 2536+24.82  
T.R. = 33.10'  
S.E. RUN = 320.00'  
S.R. = STA 2541+22.82 TO STA 2544+75.92  
P.C. STA = 2536+24.82  
Nt = 1,874,487.21  
Et = 1,175,852.82  
P.T. STA = 2542+29.49  
Nt = 1,875,077.65  
Et = 1,175,961.17



- PROP. CURVE SBLOC06  
P.I. STA = 3539+38.89  
Nt = 1,874,807.75  
Et = 1,175,816.77  
 $\Delta = 22^{\circ} 47' 56''$  (LT)  
D = 3^{\circ} 23' 54"  
R = 1,686.00'  
T = 339.94'  
L = 670.88'  
E = 33.93'  
 $\theta = 5.7\%$   
S.A. = END CONTINUOUSLY ROTATING PLANE AT STA 3537+00.25  
T.R. = 68.79'  
S.E. RUN = 380.00'  
S.R. = STA 3541+43.17 TO STA 3545+91.96  
P.C. STA = 3535+98.96  
Nt = 1,874,493.12  
Et = 1,175,688.05  
P.T. STA = 3542+69.84  
Nt = 1,875,147.67  
Et = 1,175,813.52
- PROP. CURVE NBLOC07  
P.I. STA = 4539+56.47  
Nt = 1,874,785.65  
Et = 1,176,076.72  
 $\Delta = 28^{\circ} 53' 07''$  (LT)  
D = 3^{\circ} 52' 17"  
R = 1,480.00'  
T = 381.17'  
L = 746.13'  
E = 48.30'  
 $\theta = 5.9\%$   
S.A. = END CONTINUOUSLY ROTATING PLANE AT STA 4536+66.66  
T.R. = 68.49'  
S.E. RUN = 393.00'  
S.R. = STA 4541+90.43 TO STA 4546+51.92  
P.C. STA = 4535+98.96  
Nt = 1,874,442.48  
Et = 1,175,910.80  
P.T. STA = 4543+21.43  
Nt = 1,875,166.27  
Et = 1,176,056.22



- PROP. CURVE B4700  
P.I. STA = 6065+87.40  
Nt = 1,874,784.51  
Et = 1,176,124.85  
 $\Delta = 24^{\circ} 04' 19''$  (LT)  
D = 4^{\circ} 24' 27"  
R = 1,300.00'  
T = 277.18'  
L = 546.17'  
E = 29.22'  
 $\theta = 4.9\%$   
S.A. = STA 6061+55.16 TO 6063+58.24  
S.R. = STA 6068+08.40 TO 6068+51.92  
P.C. STA = 6063+10.23  
Nt = 1,874,525.73  
Et = 1,176,025.56  
P.T. STA = 6068+56.40  
Nt = 1,875,061.29  
Et = 1,176,109.94
- PROP. CURVE BL-WW-1  
P.I. STA = 211+05.58  
Nt = 1,873,849.12  
Et = 1,175,736.29  
 $\Delta = 27^{\circ} 13' 24''$  (RT)  
D = 9^{\circ} 44' 58"  
R = 587.69'  
T = 142.30'  
L = 279.23'  
E = 16.98'  
 $\theta = 5.9\%$   
T.R. = MATCH EXISTING  
S.E. RUN = MATCH EXISTING  
P.C. STA = 209+63.28  
Nt = 1,873,706.87  
Et = 1,175,740.12  
P.T. STA = 212+42.51  
Nt = 1,873,977.37  
Et = 1,175,797.95
- PROP. SPIRAL NBDR03B  
P.I. STA = 2535+66.51  
Nt = 1,874,433.24  
Et = 1,175,830.64  
 $\Delta = 3^{\circ} 27' 27''$   
LS = 175.00'  
YS = 3.52'  
XS = 174.94'  
P = 0.88'  
K = 87.49'  
LT = 116.69'  
ST = 58.35'  
LC = 174.97'  
T.S. STA = 2534+49.82  
Nt = 1,874,328.19  
Et = 1,175,779.85  
S.C. STA = 2536+24.82  
Nt = 1,874,487.21  
Et = 1,175,852.82
- PROP. CURVE LE4301  
P.I. STA = 813+31.25  
Nt = 1,874,769.76  
Et = 1,176,048.87  
 $\Delta = 25^{\circ} 32' 57''$  (LT)  
D = 3^{\circ} 55' 18"  
R = 1,461.00'  
T = 331.25'  
L = 651.48'  
E = 37.08'  
 $\theta = 5.9\%$   
S.A. = STA 810+00.00 (4.45%) TO 810+67.35  
T.R. = 71.04'  
S.E. RUN = 208.68'  
S.R. = STA 815+81.92 TO STA 818+61.64  
P.C. STA = 810+00.00  
Nt = 1,874,464.55  
Et = 1,175,920.15  
P.T. STA = 816+51.48  
Nt = 1,875,100.65  
Et = 1,176,033.38
- PROP. CURVE LSA1  
P.I. STA = 221+00.82  
Nt = 1,874,750.89  
Et = 1,176,169.92  
 $\Delta = 27^{\circ} 20' 30''$  (LT)  
D = 7^{\circ} 54' 10"  
R = 725.00'  
T = 176.34'  
L = 345.97'  
E = 21.14'  
 $\theta = 5.9\%$   
T.R. = MATCH EXISTING  
S.E. RUN = MATCH EXISTING  
P.C. STA = 219+24.48  
Nt = 1,874,591.98  
Et = 1,176,093.48  
P.T. STA = 222+70.45  
Nt = 1,874,927.16  
Et = 1,176,164.84

- PROP. CURVE D4300  
P.I. STA = 8057+07.33  
Nt = 1,876,018.11  
Et = 1,176,112.42  
 $\Delta = 1^{\circ} 19' 55''$  (RT)  
D = 1^{\circ} 25' 57"  
R = 4,000.00'  
T = 46.49'  
L = 92.99'  
E = 0.27'  
 $\theta = 2.3\%$   
S.A. = STA 8056+54.83 TO 8056+63.83  
S.R. = STA 8057+50.82 TO 8057+59.82  
P.C. STA = 8056+60.83  
Nt = 1,875,971.65  
Et = 1,176,110.86  
P.T. STA = 8057+53.82  
Nt = 1,876,064.53  
Et = 1,176,115.06

NOTES:  
1. AVERAGE GRID TO GROUND CONVERSION FACTOR = 1.000010988654360  
2. FOR BENCH MARK INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.  
3. FOR RAMP P.O.T. INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHWING RD)

ALIGNMENT PLAN

SCALE: 1"=100'  
DATE: 04/25/08  
DRAWN BY: JDC  
CHECKED BY: RS

BOWMAN, BARRETT & ASSOCIATES INC  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
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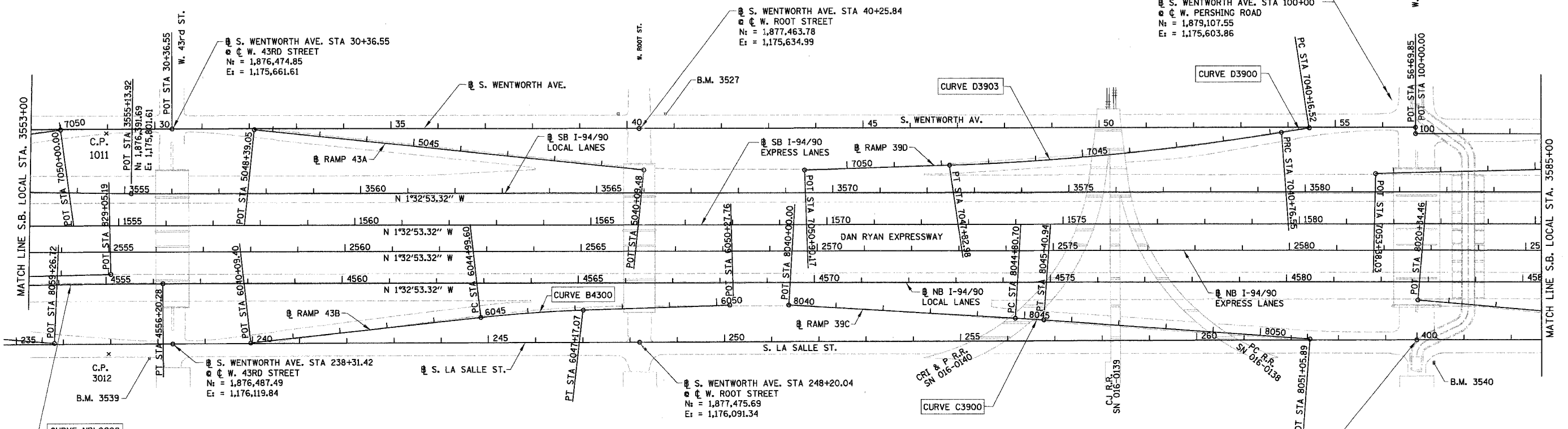
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	32	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62997				

PROP. CURVE D3903  
P.I. STA = 7044+30.25  
N<sub>t</sub> = 1,878,475.96  
E<sub>t</sub> = 1,175,675.24  
Δ = 7° 22' 41" (RT)  
D = 1° 02' 40"  
R = 5,486.00'  
T = 353.70'  
L = 706.43'  
E = 11.39'  
P.C. STA = 7040+76.55  
N<sub>t</sub> = 1,878,823.36  
E<sub>t</sub> = 1,175,608.75  
P.T. STA = 7047+82.98  
N<sub>t</sub> = 1,878,122.90  
E<sub>t</sub> = 1,175,696.57

PROP. CURVE D3900  
P.I. STA = 7040+46.54  
N<sub>t</sub> = 1,878,852.84  
E<sub>t</sub> = 1,175,603.11  
Δ = 0° 47' 26" (LT)  
D = 1° 19' 02"  
R = 4,350.00'  
T = 30.02'  
L = 60.03'  
E = 0.10'  
P.C. STA = 7040+16.52  
N<sub>t</sub> = 1,878,882.40  
E<sub>t</sub> = 1,175,597.87  
P.T. STA = 7040+76.55  
N<sub>t</sub> = 1,878,823.36  
E<sub>t</sub> = 1,175,608.75

⊙ S. WENTWORTH AVE. STA 56+69.85  
⊙ W. PERSHING ROAD  
N<sub>t</sub> = 1,879,107.55  
E<sub>t</sub> = 1,175,590.76

⊙ S. WENTWORTH AVE. STA 100+00  
⊙ W. PERSHING ROAD  
N<sub>t</sub> = 1,879,107.55  
E<sub>t</sub> = 1,175,603.86



PROP. CURVE NBLOC08  
P.I. STA = 4554+19.42  
N<sub>t</sub> = 1,876,262.66  
E<sub>t</sub> = 1,175,997.17  
Δ = 1° 32' 04" (RT)  
D = 0° 22' 55"  
R = 15,000.00'  
T = 200.89'  
L = 401.75'  
E = 1.35'  
P.C. STA = 4552+18.53  
N<sub>t</sub> = 1,876,062.07  
E<sub>t</sub> = 1,176,007.97  
P.T. STA = 4556+20.28  
N<sub>t</sub> = 1,876,463.47  
E<sub>t</sub> = 1,175,991.74

PROP. CURVE B4300  
P.I. STA = 6046+08.39  
N<sub>t</sub> = 1,877,246.14  
E<sub>t</sub> = 1,176,032.59  
Δ = 4° 21' 02" (RT)  
D = 2° 00' 02"  
R = 2,864.00'  
T = 108.79'  
L = 217.47'  
E = 2.07'  
e = 3.02  
S.A. = STA 6044+79.60  
TO 6045+09.60  
S.R. = STA 6047+07.07  
TO 6047+37.07  
P.C. STA = 6044+99.60  
N<sub>t</sub> = 1,877,138.36  
E<sub>t</sub> = 1,176,047.37  
P.T. STA = 6047+17.07  
N<sub>t</sub> = 1,877,354.72  
E<sub>t</sub> = 1,176,026.03

PROP. CURVE C3900  
P.I. STA = 8045+10.82  
N<sub>t</sub> = 1,878,300.35  
E<sub>t</sub> = 1,176,021.08  
Δ = 0° 41' 25" (RT)  
D = 1° 08' 45"  
R = 5,000.00'  
T = 30.12'  
L = 60.24'  
E = 0.09'  
P.C. STA = 8044+80.70  
N<sub>t</sub> = 1,878,270.25  
E<sub>t</sub> = 1,176,020.07  
P.T. STA = 8045+40.94  
N<sub>t</sub> = 1,878,330.44  
E<sub>t</sub> = 1,176,022.46

⊙ S. LASALLE ST. STA 400+00.00 AH  
STA 264+66.03 BK  
⊙ W. PERSHING ROAD  
N<sub>t</sub> = 1,879,121.00  
E<sub>t</sub> = 1,176,043.89

- NOTES:
- AVERAGE GRID TO GROUND CONVERSION  
FACTOR = 1.000010988654360
  - FOR BENCH MARK INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.
  - FOR RAMP P.O.T. INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.

REVISIONS	
NAME	DATE

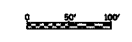
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)

ALIGNMENT PLAN

SCALE: 1"=100'  
DATE: 04/25/08

DRAWN BY: JDC  
CHECKED BY: RS

BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
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ALT-02  
7/24/2008

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	32	7
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

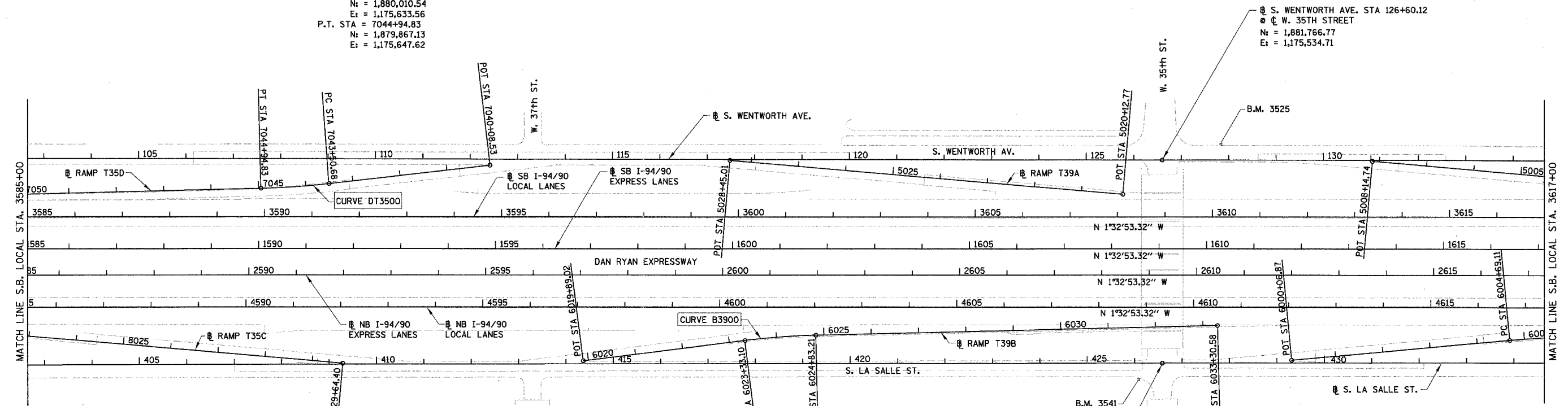
62997

PROP. CURVE DT3500  
P.I. STA = 7044+22.81  
N = 1,879,939.16  
E = 1,175,643.87  
Δ = 5° 14' 38" (RT)  
D = 3° 38' 16"  
R = 1,575.00'  
T = 72.13'  
L = 144.15'  
E = 1.65'  
e = 3.6%  
S.A. = STA 7043+14.68  
TO 7043+59.68  
S.R. = STA 7044+85.83  
TO 7045+30.83  
P.C. STA = 7043+50.68  
N = 1,880,010.54  
E = 1,175,633.56  
P.T. STA = 7044+94.83  
N = 1,879,867.13  
E = 1,175,647.62

PROP. CURVE B3900  
P.I. STA = 6024+08.22  
N = 1,880,970.99  
E = 1,175,932.00  
Δ = 5° 47' 44" (RT)  
D = 3° 51' 39"  
R = 1,484.00'  
T = 75.12'  
L = 150.11'  
E = 1.90'  
e = 3.7%  
S.A. = STA 6022+97.10  
TO 6023+42.10  
S.R. = STA 6024+74.21  
TO 6025+19.21  
P.C. STA = 6023+33.10  
N = 1,880,896.76  
E = 1,175,943.46  
P.T. STA = 6024+83.21  
N = 1,881,046.01  
E = 1,175,928.09

S. LASALLE ST. STA 426+58.57  
W. 35TH STREET  
N = 1,881,778.46  
E = 1,175,967.25

S. WENTWORTH AVE. STA 126+60.12  
W. 35TH STREET  
N = 1,881,766.77  
E = 1,175,534.71



- NOTES:**
- AVERAGE GRID TO GROUND CONVERSION  
FACTOR = 1.000010988654360
  - FOR BENCH MARK INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.
  - FOR RAMP P.O.T. INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.

REVISIONS	
NAME	DATE

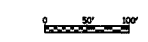
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)

**ALIGNMENT PLAN**

SCALE: 1"=100'  
DATE: 04/25/08

DRAWN BY: JDC  
CHECKED BY: RS

BOWMAN, BARRETT & ASSOCIATES INC.  
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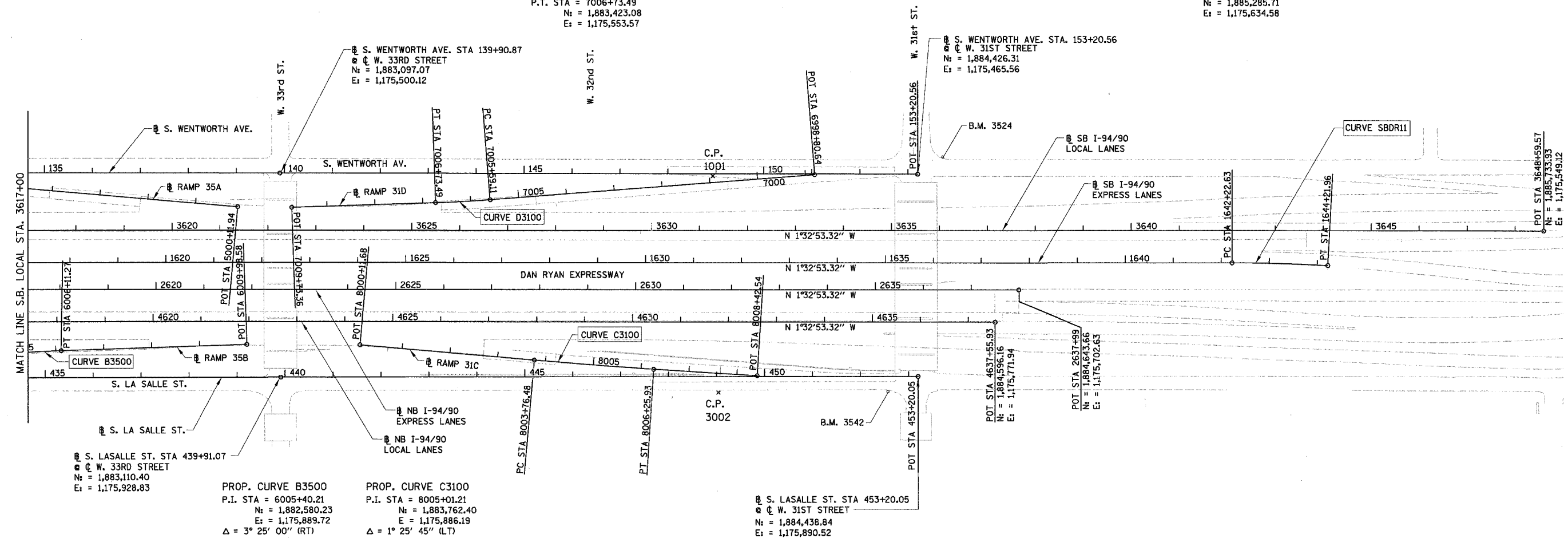
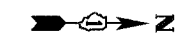
ALT-03  
70-027 PW  
4/24/2008

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	32	8
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

62997

PROP. CURVE D3100  
P.I. STA = 7006+16.31  
Nt = 1,883,480.18  
E = 1,175,550.12  
Δ = 2° 35' 11" (RT)  
D = 2° 15' 40"  
R = 2,534.00'  
T = 57.20'  
L = 114.38'  
E = 0.65'  
e = 2.6%  
S.A. = STA 7005+43.11  
TO 7005+63.11  
S.R. = STA 7006+69.49  
TO 7006+89.49  
P.C. STA = 7005+59.11  
Nt = 1,883,537.06  
Et = 1,175,544.09  
P.T. STA = 7006+73.49  
Nt = 1,883,423.08  
Et = 1,175,553.57

PROP. CURVE SBD11  
P.I. STA = 1643+22.32  
Nt = 1,885,186.06  
E = 1,175,631.95  
Δ = 3° 03' 18" (RT)  
D = 1° 31' 57"  
R = 3,738.57'  
T = 99.69'  
L = 199.33'  
E = 1.33'  
e = ±2.5% (MATCH EXISTING)  
S.A. = STA 1641+95.99  
TO 1642+35.95  
S.R. = N/A  
P.C. STA = 1642+22.63  
Nt = 1,885,086.40  
Et = 1,175,634.65  
P.T. STA = 1644+21.96  
Nt = 1,885,285.71  
Et = 1,175,634.58



S. LASALLE ST. STA 439+91.07  
W. 33RD STREET  
Nt = 1,883,110.40  
Et = 1,175,928.83

PROP. CURVE B3500  
P.I. STA = 6005+40.21  
Nt = 1,882,580.23  
E = 1,175,889.72  
Δ = 3° 25' 00" (RT)  
D = 2° 24' 12"  
R = 2,384.00'  
T = 71.10'  
L = 142.16'  
E = 1.06'  
e = 2.7%  
S.A. = STA 6004+53.11  
TO 6004+73.11  
S.R. = STA 6006+07.27  
TO 6006+27.27  
P.C. STA = 6004+69.11  
Nt = 1,882,509.63  
Et = 1,175,898.23  
P.T. STA = 6006+11.27  
Nt = 1,882,651.20  
Et = 1,175,885.43

PROP. CURVE C3100  
P.I. STA = 8005+01.21  
Nt = 1,883,762.40  
E = 1,175,886.19  
Δ = 1° 25' 45" (LT)  
D = 0° 34' 23"  
R = 10,000.00'  
T = 124.73'  
L = 249.45'  
E = 0.78'  
P.C. STA = 8003+76.48  
Nt = 1,883,637.89  
Et = 1,175,878.68  
P.T. STA = 8006+25.93  
Nt = 1,883,887.05  
Et = 1,175,890.60

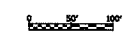
S. LASALLE ST. STA 453+20.05  
W. 31ST STREET  
Nt = 1,884,438.84  
Et = 1,175,890.52

- NOTES:
- AVERAGE GRID TO GROUND CONVERSION  
FACTOR = 1.000010988654360
  - FOR BENCH MARK INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.
  - FOR RAMP P.O.T. INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.

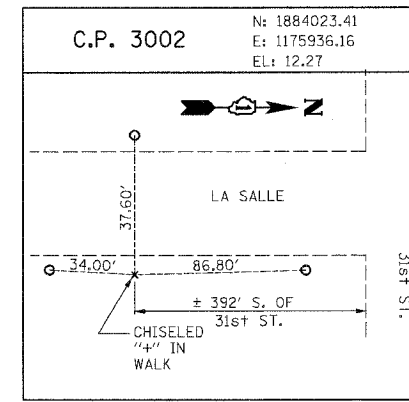
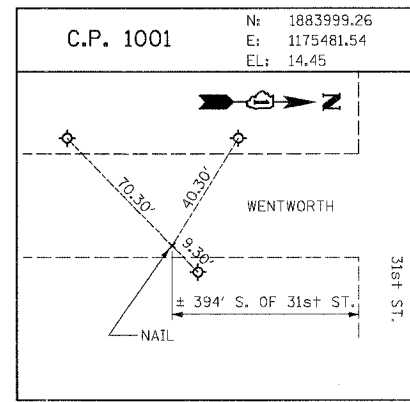
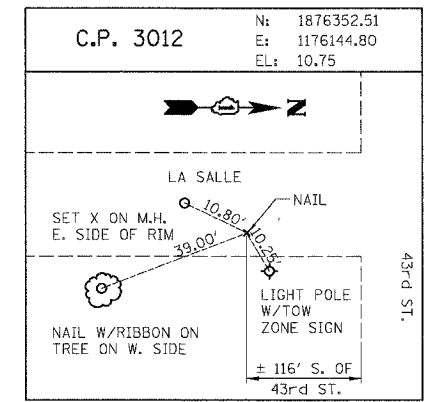
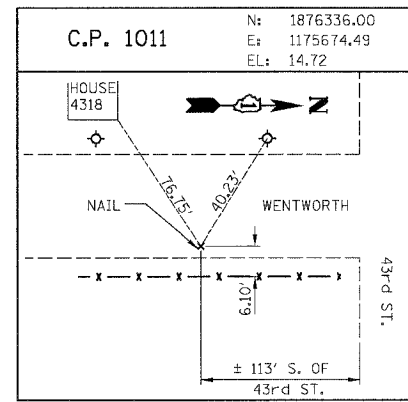
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)  
ALIGNMENT PLAN  
SCALE: 1"=100'  
DATE: 04/25/08  
DRAWN BY: JDC  
CHECKED BY: RS

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RAMP P.O.T. COORDINATE INFORMATION

POINT	DESCRIPTION	STATION	NORTH	EAST
BEGIN	RAMP 47A	5060+00.00	1,875,185.77	1,175,764.15
END	RAMP 47A	5074+13.97	1,873,854.99	1,175,322.86
BEGIN	RAMP 47B	6059+26.00	1,874,166.99	1,175,887.94
END	RAMP 47B	6069+64.12	1,875,168.85	1,176,104.15
BEGIN	RAMP 43C	7050+00.00	1,876,238.80	1,175,669.59
END	RAMP 43C	7059+84.92	1,875,259.95	1,175,764.44
BEGIN	RAMP 43D	8051+00.00	1,875,411.12	1,176,092.10
END	RAMP 43D	8059+26.72	1,876,237.16	1,176,124.86
BEGIN	RAMP 43A	5040+09.48	1,877,475.98	1,175,723.30
END	RAMP 43A	5048+39.05	1,876,648.91	1,175,658.90
BEGIN	RAMP 43B	6040+09.40	1,876,652.70	1,176,113.96
END	RAMP 43B	6050+27.76	1,877,664.85	1,176,007.29
BEGIN	RAMP 39D	7040+16.52	1,878,882.40	1,175,597.87
END	RAMP 39D	7050+90.17	1,877,816.27	1,175,715.09
BEGIN	RAMP 39C	8040+00.00	1,877,789.82	1,176,003.91
END	RAMP 39C	8051+05.89	1,878,894.81	1,176,048.24

POINT	DESCRIPTION	STATION	NORTH	EAST
BEGIN	RAMP T35D	7040+08.53	1,880,349.18	1,175,584.62
END	RAMP T35D	7053+38.03	1,879,025.07	1,175,691.43
BEGIN	RAMP T35C	8020+34.46	1,879,121.15	1,175,958.93
END	RAMP T35C	8029+64.40	1,880,049.40	1,176,014.92
BEGIN	RAMP T39A	5020+12.77	1,881,685.70	1,175,610.45
END	RAMP T39A	5028+45.01	1,880,854.96	1,175,560.34
BEGIN	RAMP T39B	6019+89.02	1,880,556.70	1,175,995.95
END	RAMP T39B	6033+30.58	1,881,892.23	1,175,884.04
BEGIN	RAMP 35A	5000+11.94	1,883,011.02	1,175,573.65
END	RAMP 35A	5008+14.74	1,882,209.69	1,175,525.14
BEGIN	RAMP 35B	6000+06.87	1,882,050.72	1,175,953.56
END	RAMP 35B	6009+98.58	1,883,037.81	1,175,862.08
BEGIN	RAMP 31D	6998+80.64	1,884,211.76	1,175,472.66
END	RAMP 31D	7009+73.36	1,883,123.75	1,175,571.65
BEGIN	RAMP 31C	8000+11.68	1,883,273.75	1,175,856.72
END	RAMP 31C	8008+42.54	1,884,103.52	1,175,898.24

BENCH MARK NO. 3524 ELEV. 15.17  
 DESCRIPTION:  
 CROSS CUT ON NORTH FLANGE BOLT OF FIRE HYDRANT AT THE NORTHWEST CORNER OF 31st ST. AND WENTWORTH AVE.

BENCH MARK NO. 3525 ELEV. 16.93  
 DESCRIPTION:  
 CROSS CUT ON NORTHWEST FLANGE BOLT OF FIRE HYDRANT AT THE NORTHWEST CORNER OF 35th ST. AND WENTWORTH AVE.

BENCH MARK NO. 3526 ELEV. 17.37  
 DESCRIPTION:  
 CROSS CUT ON NORTHWEST FLANGE BOLT OF FIRE HYDRANT AT THE WENTWORTH GARDEN OFFICE ALONG THE WEST SIDE OF WENTWORTH AVE.

BENCH MARK NO. 3527 ELEV. 15.63  
 DESCRIPTION:  
 CROSS CUT ON NORTHERLY FLANGE BOLT OF FIRE HYDRANT AT THE NORTHWEST CORNER OF ROOT ST. AND WENTWORTH AVE.

BENCH MARK NO. 3539 ELEV. 13.10  
 DESCRIPTION:  
 CROSS CUT ON EASTERLY BOLT OF LIGHT POLE BASE AT THE SOUTHEAST CORNER OF 43rd ST. AND LA SALLE ST.

BENCH MARK NO. 3540 ELEV. 12.33  
 DESCRIPTION:  
 SQUARE CUT ON THE SOUTHWEST CORNER OF THE TRAFFIC CONTROL BOX AT THE NORTHEAST CORNER OF 39th ST. AND LA SALLE ST.

BENCH MARK NO. 3541 ELEV. 14.78  
 DESCRIPTION:  
 CROSS CUT ON THE SOUTHWEST BOLT OF LIGHT POLE BASE AT THE SOUTH EAST CORNER OF 35th ST. AND LA SALLE ST.

BENCH MARK NO. 3542 ELEV. 13.57  
 DESCRIPTION:  
 CROSS CUT ON THE EASTERLY FLANGE BOLT OF THE FIRE HYDRANT AT THE INTERSECTION OF 31st ST. AND LA SALLE ST.

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)

ALIGNMENT PLAN

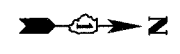
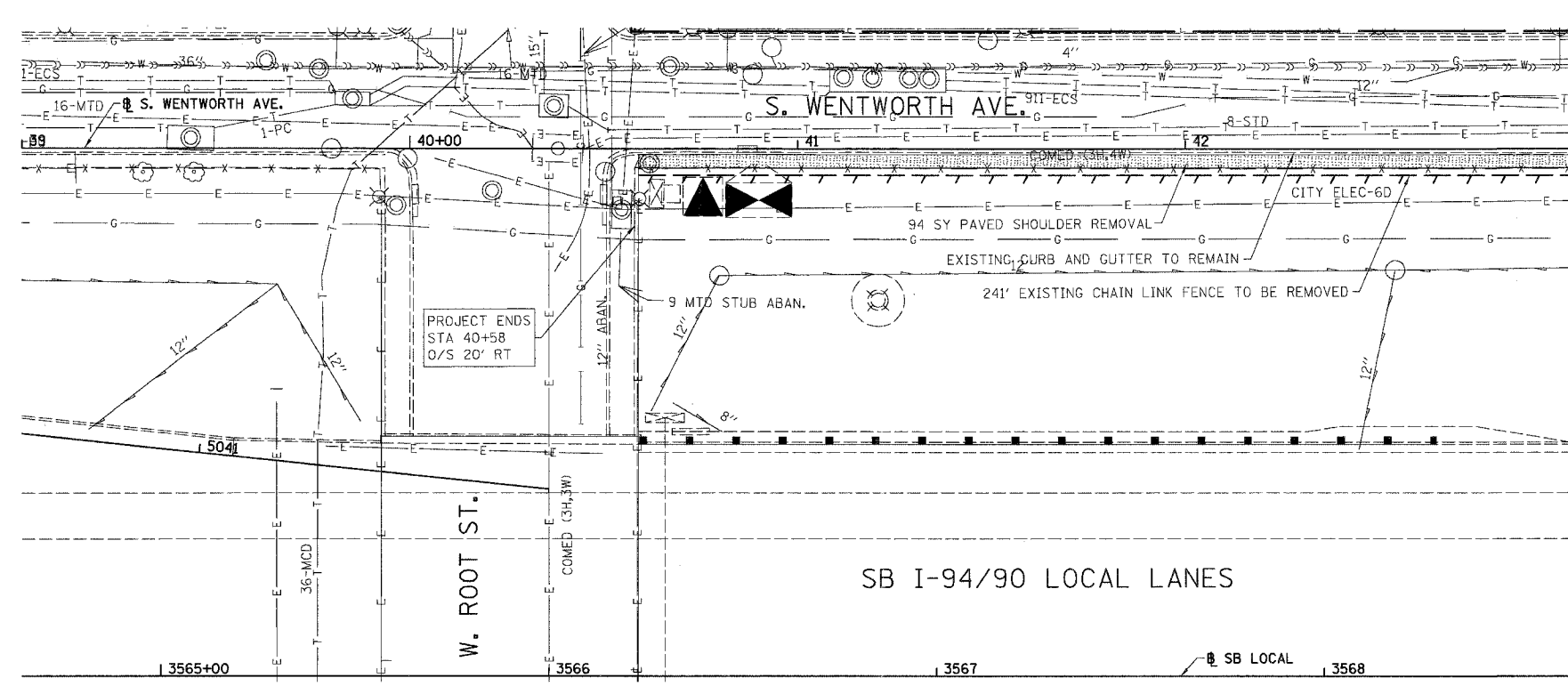
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 DATE: 04/25/08


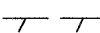
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 CHECKED BY: RS

ALT-05

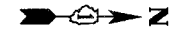
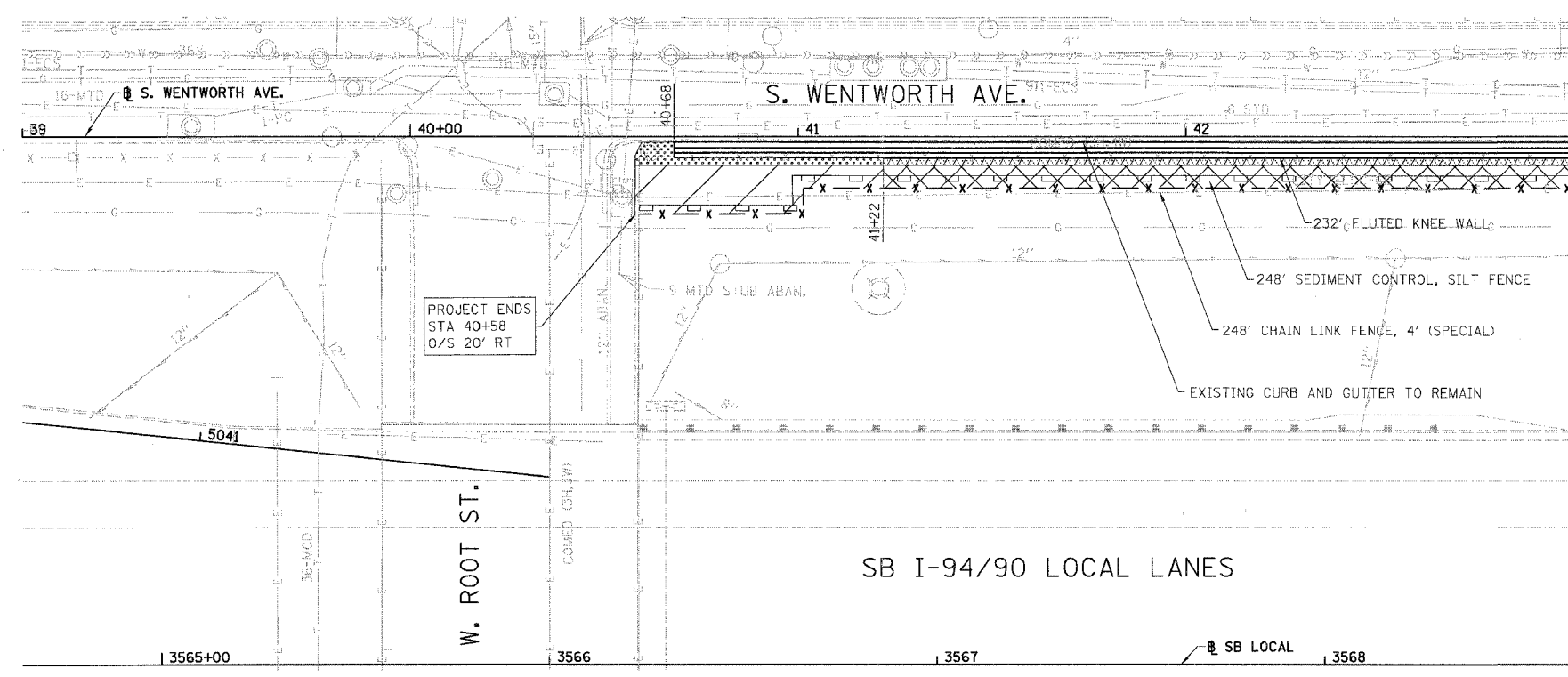
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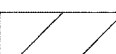


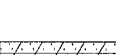
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	32	10
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	62997	



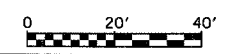
- LEGEND:
-  PAVED SHOULDER REMOVAL
  -  LINEAR REMOVALS

EXISTING CONDITIONS AND REMOVAL  
PROPOSED IMPROVEMENTS



- LEGEND:
-  SEEDING, CLASS 2A  
EROSION CONTROL BLANKET
  -  SEEDING, CLASS 4 (MODIFIED)  
SEEDING CLASS 5A (MODIFIED)  
EROSION CONTROL BLANKET
  -  TOPSOIL FURNISH AND PLACE, 4"  
SEEDING, CLASS 2A  
EROSION CONTROL BLANKET
  -  TOPSOIL FURNISH AND PLACE, 12"  
SEEDING CLASS 4 (MODIFIED)  
SEEDING, CLASS 5A (MODIFIED)  
EROSION CONTROL BLANKET

- NOTES:
- SEE STRUCTURAL DETAIL FOR FLUTED KNEE WALL DETAILS.
  - ALL POINT CALLOUTS ARE TAKEN AT THE EDGE OF THE KNEE WALL BASE.



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)

EXISTING AND PROPOSED  
KNEE WALL PLANS

SCALE: 1"=20'  
DATE: 04/25/08

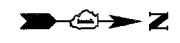
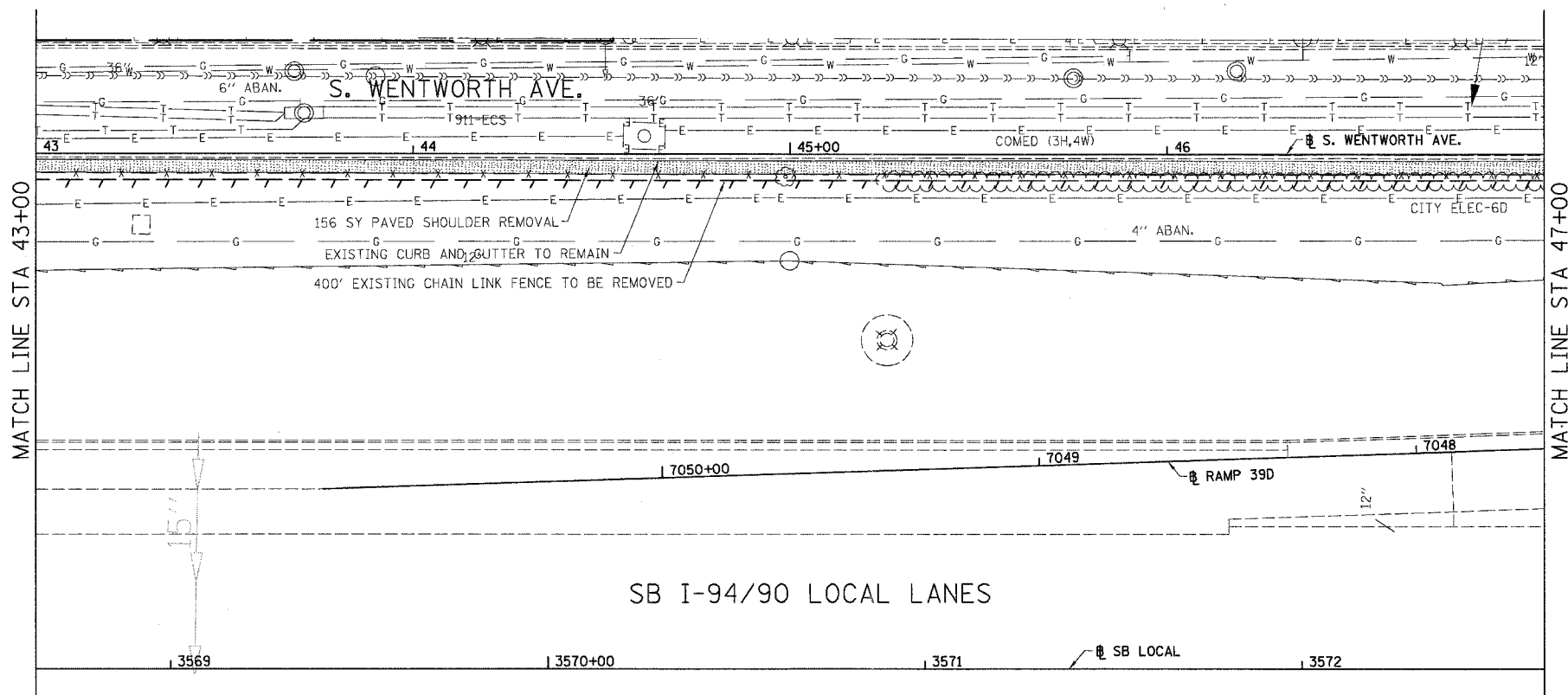
DRAWN BY: JDC  
CHECKED BY: DDM

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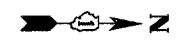
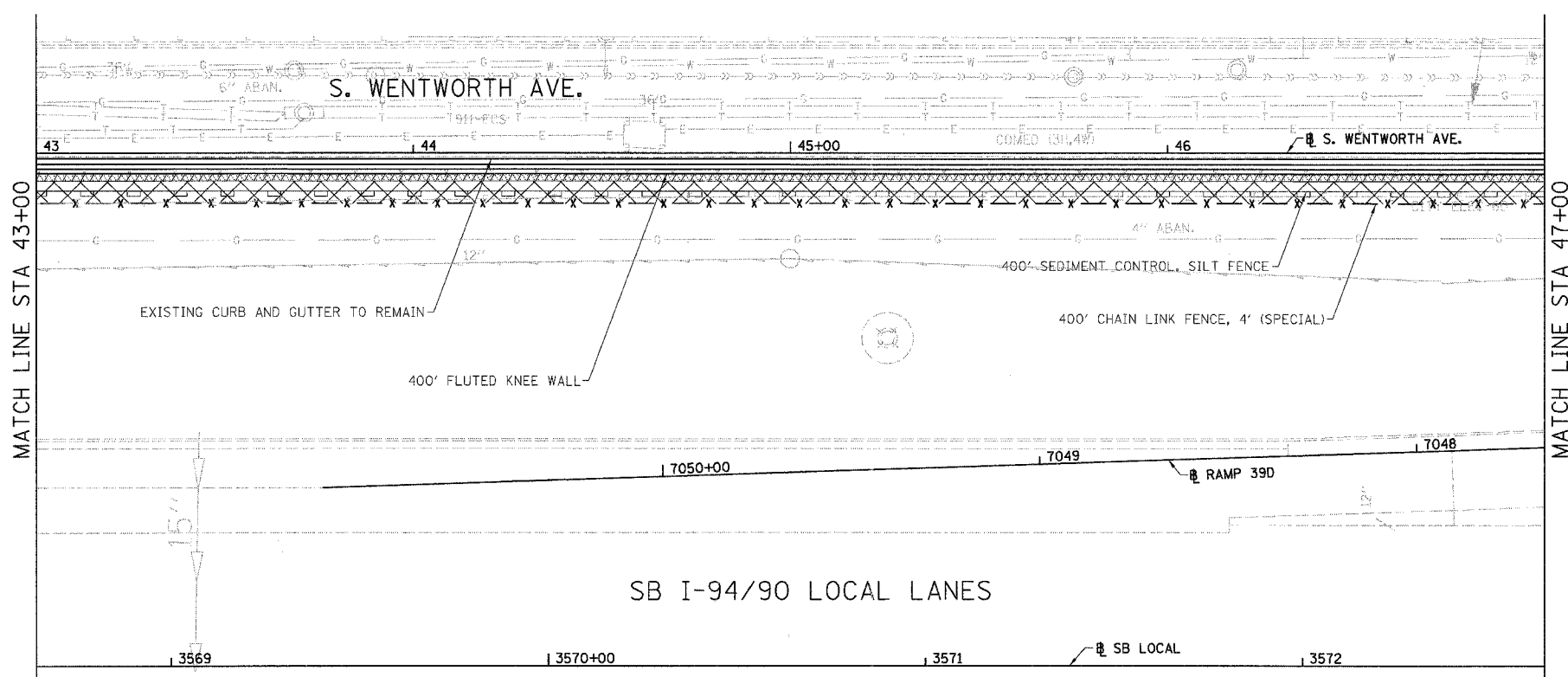
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	32	11
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62997				



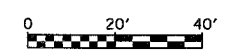
- LEGEND:
- PAVED SHOULDER REMOVAL
  - LINEAR REMOVALS

EXISTING CONDITIONS AND REMOVAL  
PROPOSED IMPROVEMENTS



- LEGEND:
- SEEDING, CLASS 2A  
EROSION CONTROL BLANKET
  - SEEDING, CLASS 4 (MODIFIED)  
SEEDING CLASS 5A (MODIFIED)  
EROSION CONTROL BLANKET
  - TOPSOIL FURNISH AND PLACE, 4"  
SEEDING, CLASS 2A  
EROSION CONTROL BLANKET
  - TOPSOIL FURNISH AND PLACE, 12"  
SEEDING CLASS 4 (MODIFIED)  
SEEDING, CLASS 5A (MODIFIED)  
EROSION CONTROL BLANKET

- NOTES:
1. SEE STRUCTURAL DETAIL FOR FLUTED KNEE WALL DETAILS.
  2. ALL POINT CALLOUTS ARE TAKEN AT THE EDGE OF THE KNEE WALL BASE.



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)

EXISTING AND PROPOSED  
KNEE WALL PLANS

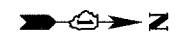
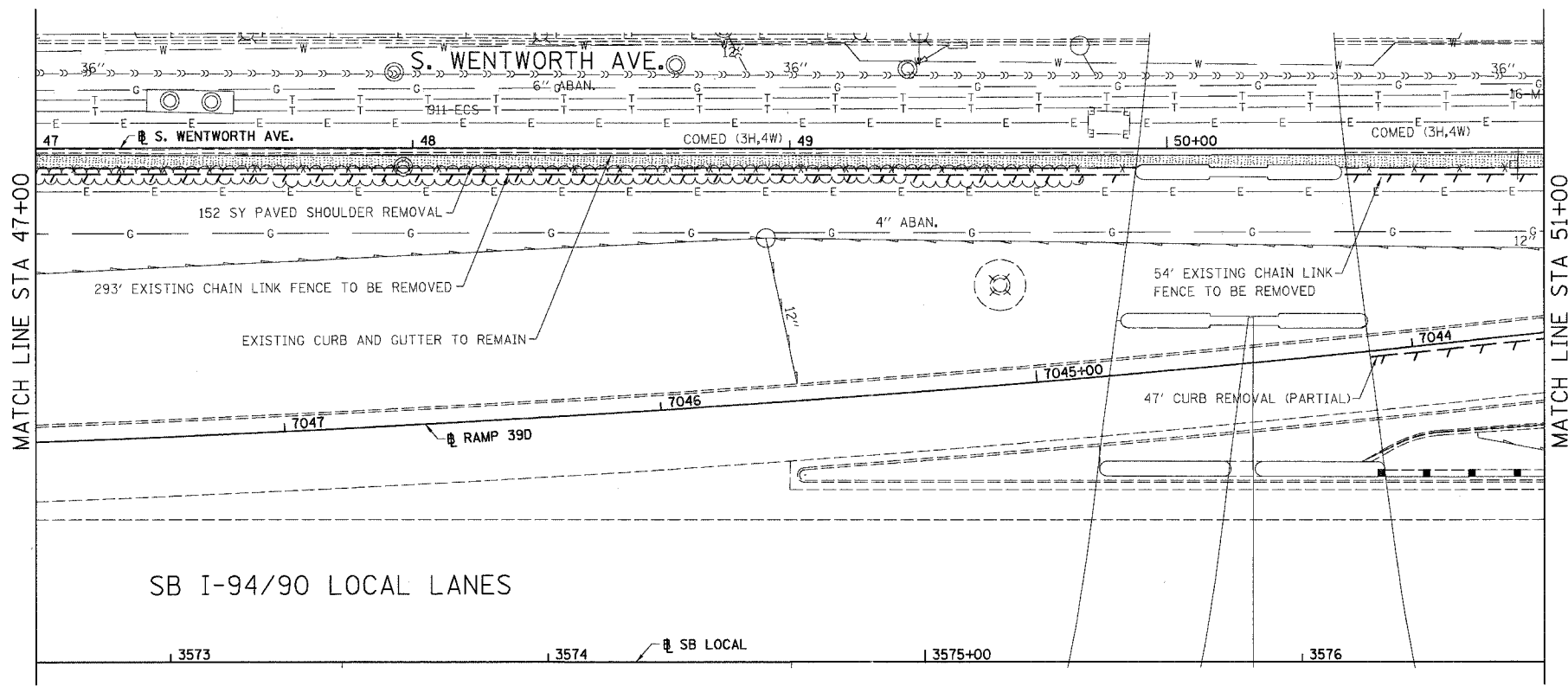
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DATE: 04/25/08

DRAWN BY: JDC  
CHECKED BY: DDM

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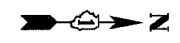
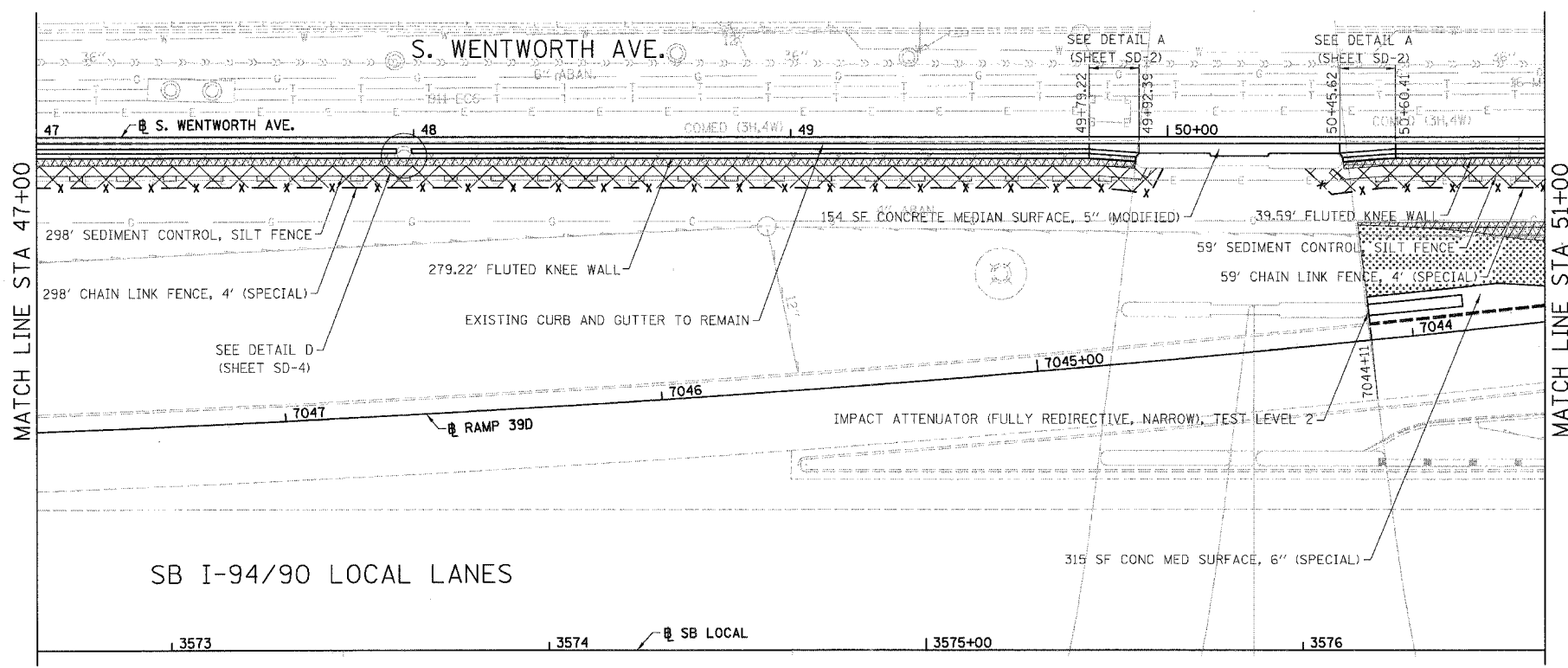
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7/24/2008

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	32	12
STA.		TO STA.		
62997		ILLINOIS FED. AID PROJECT		



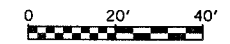
- LEGEND:
- PAVED SHOULDER REMOVAL
  - LINEAR REMOVALS

EXISTING CONDITIONS AND REMOVAL  
PROPOSED IMPROVEMENTS



- LEGEND:
- SEEDING, CLASS 2A  
EROSION CONTROL BLANKET
  - SEEDING, CLASS 4 (MODIFIED)  
SEEDING CLASS 5A (MODIFIED)  
EROSION CONTROL BLANKET
  - TOPSOIL FURNISH AND PLACE, 4\"/>

- NOTES:
1. SEE STRUCTURAL DETAIL FOR FLUTED KNEE WALL DETAILS.
  2. ALL POINT CALLOUTS ARE TAKEN AT THE EDGE OF THE KNEE WALL BASE.



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)

EXISTING AND PROPOSED  
KNEE WALL PLANS

SCALE: 1"=20'  
DATE: 04/25/08

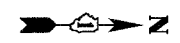
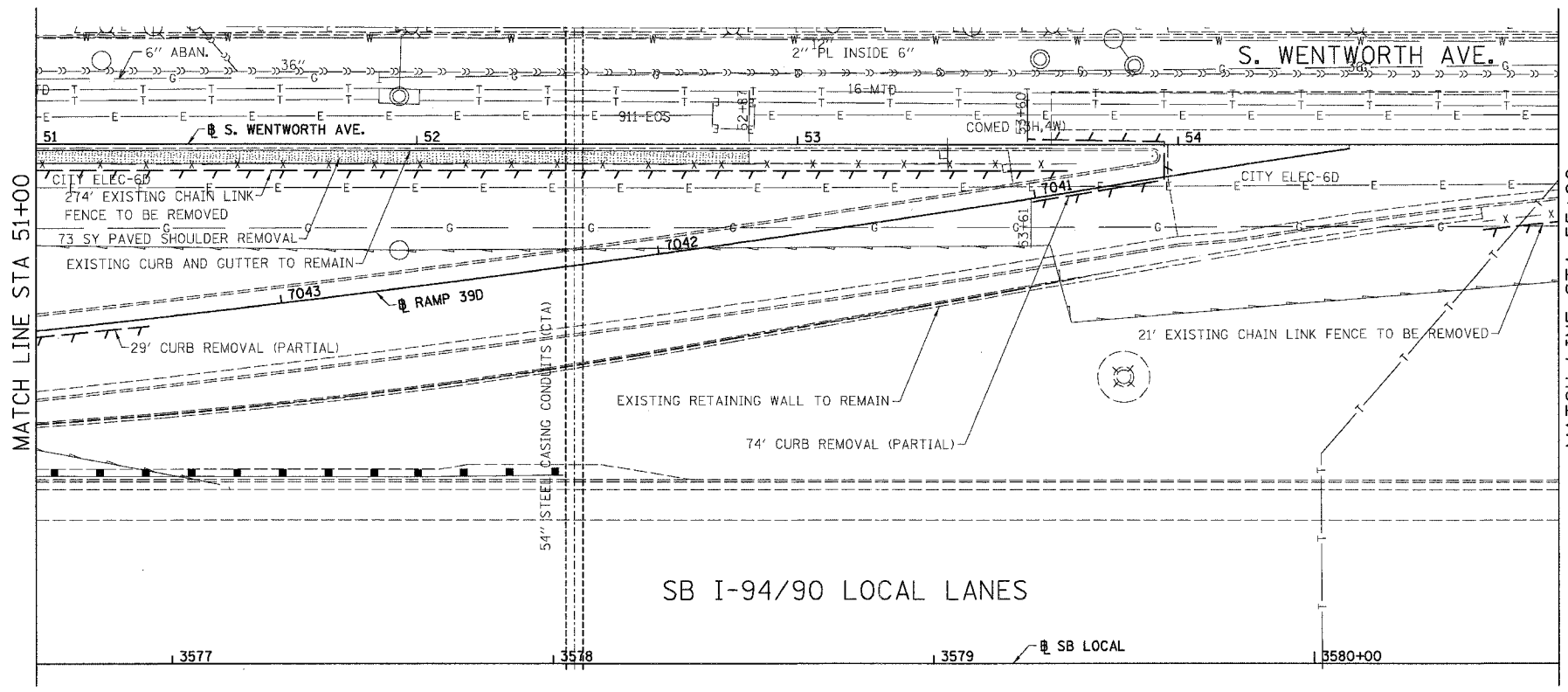
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PL-3  
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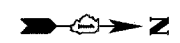
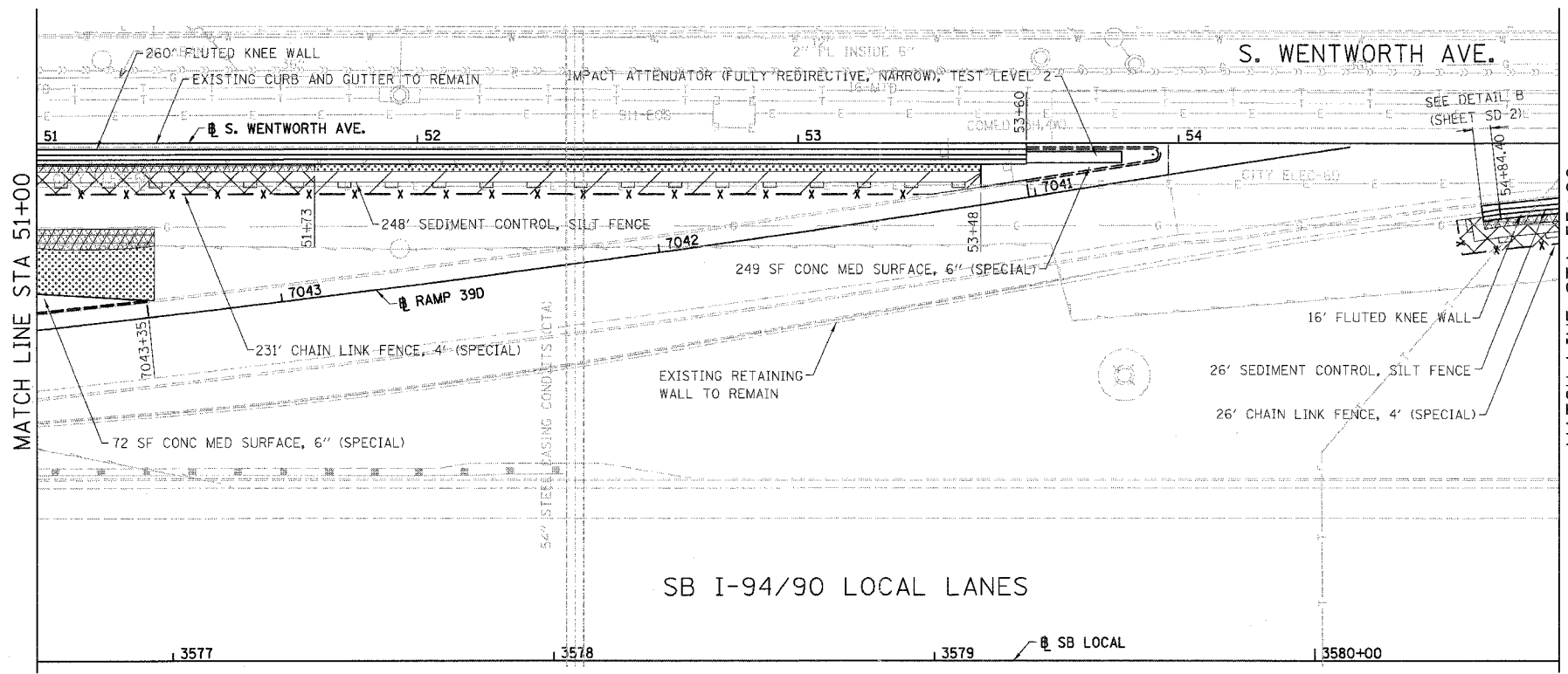


F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	32	13
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62997				



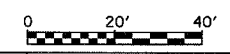
- LEGEND:
- PAVED SHOULDER REMOVAL
  - LINEAR REMOVALS

EXISTING CONDITIONS AND REMOVAL  
PROPOSED IMPROVEMENTS



- LEGEND:
- SEEDING, CLASS 2A  
EROSION CONTROL BLANKET
  - SEEDING, CLASS 4 (MODIFIED)  
SEEDING CLASS 5A (MODIFIED)  
EROSION CONTROL BLANKET
  - TOPSOIL FURNISH AND PLACE, 4"  
SEEDING, CLASS 2A  
EROSION CONTROL BLANKET
  - TOPSOIL FURNISH AND PLACE, 12"  
SEEDING CLASS 4 (MODIFIED)  
SEEDING, CLASS 5A (MODIFIED)  
EROSION CONTROL BLANKET

- NOTES:
1. SEE STRUCTURAL DETAIL FOR FLUTED KNEE WALL DETAILS.
  2. ALL POINT CALLOUTS ARE TAKEN AT THE EDGE OF THE KNEE WALL BASE.



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)

EXISTING AND PROPOSED  
KNEE WALL PLANS

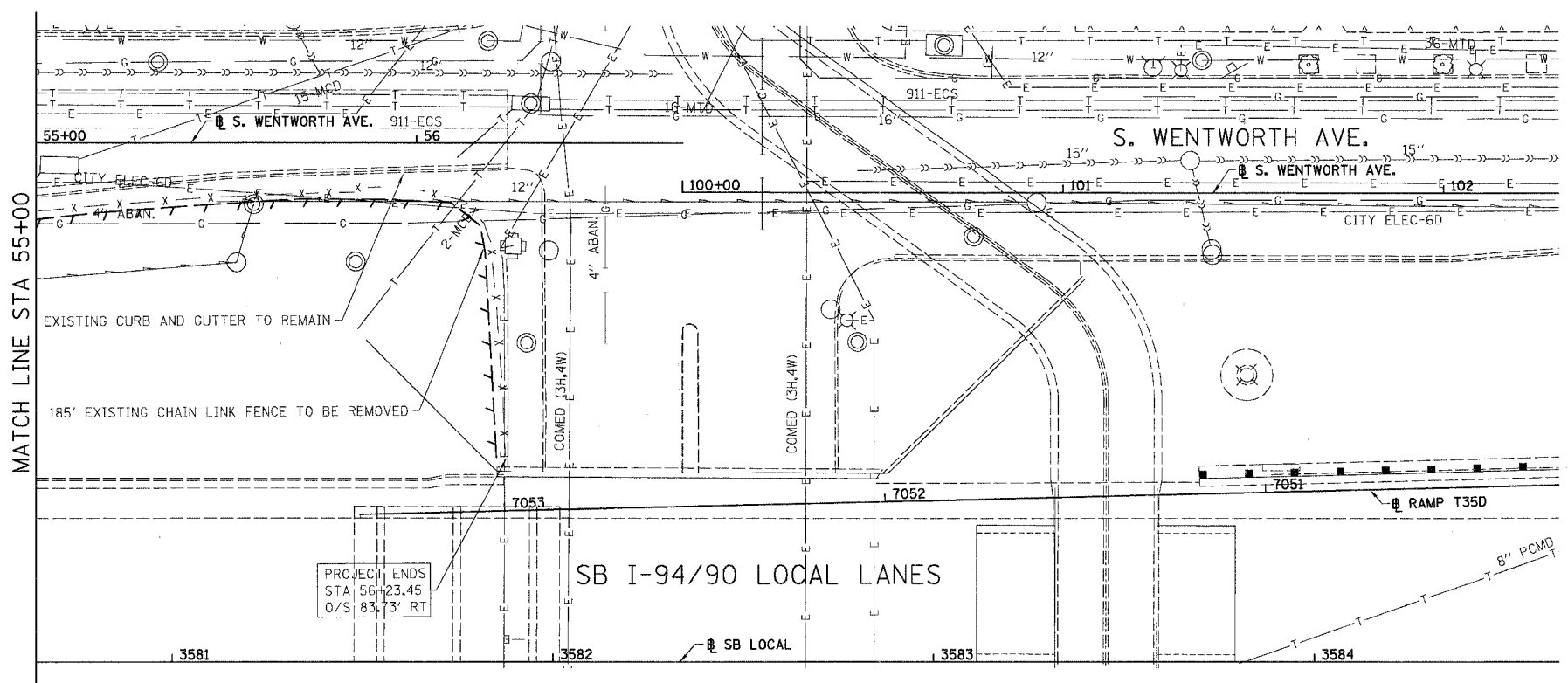
SCALE: 1"=20'  
DATE: 04/25/08



DRAWN BY: JDC  
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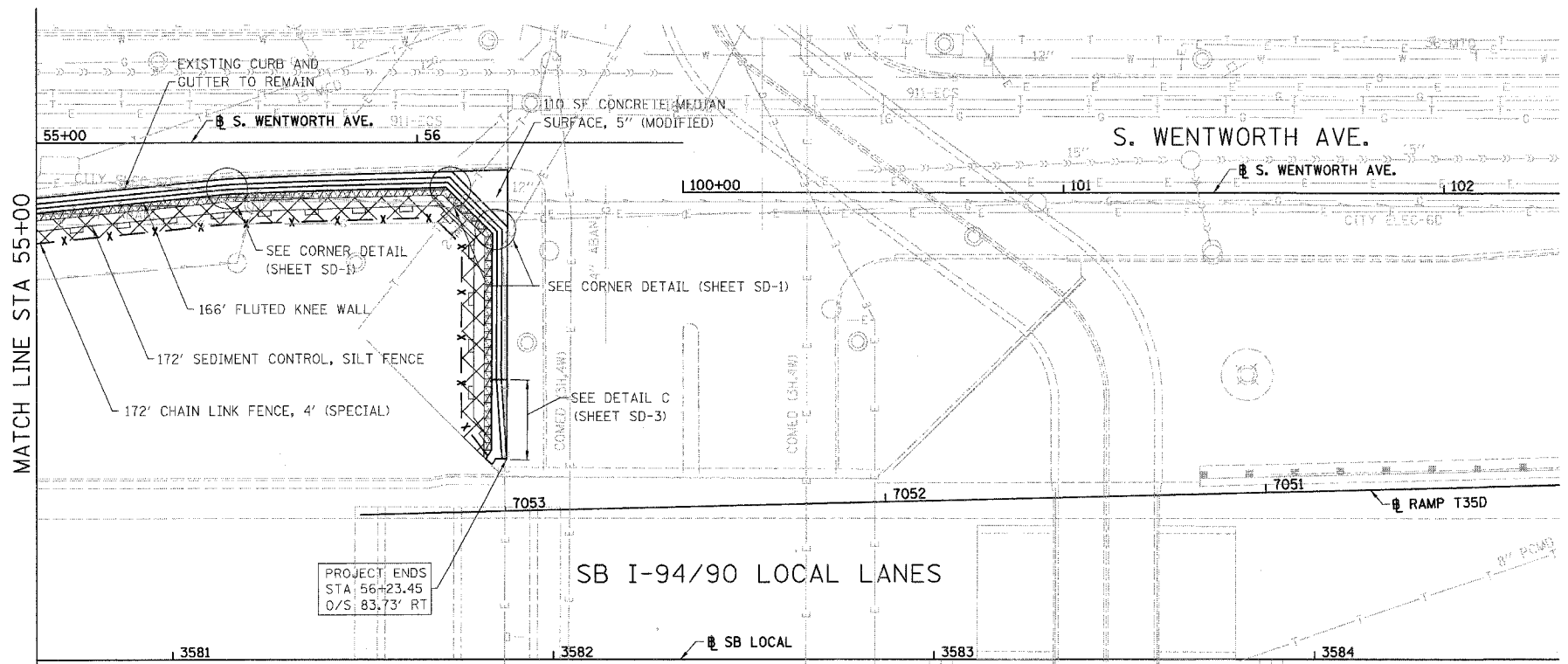
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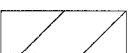


F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	32	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62997				



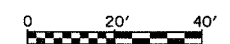
- LEGEND:
-  PAVED SHOULDER REMOVAL
  -  LINEAR REMOVALS

EXISTING CONDITIONS AND REMOVAL  
PROPOSED IMPROVEMENTS



- LEGEND:
-  SEEDING, CLASS 2A  
EROSION CONTROL BLANKET
  -  SEEDING, CLASS 4 (MODIFIED)  
SEEDING CLASS 5A (MODIFIED)  
EROSION CONTROL BLANKET
  -  TOPSOIL FURNISH AND PLACE, 4\"/>

- NOTES:
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NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)

EXISTING AND PROPOSED  
KNEE WALL PLANS

SCALE: 1"=20'  
DATE: 04/25/08

DRAWN BY: JDC  
CHECKED BY: DDM

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90 *		COOK	32	15
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62997				

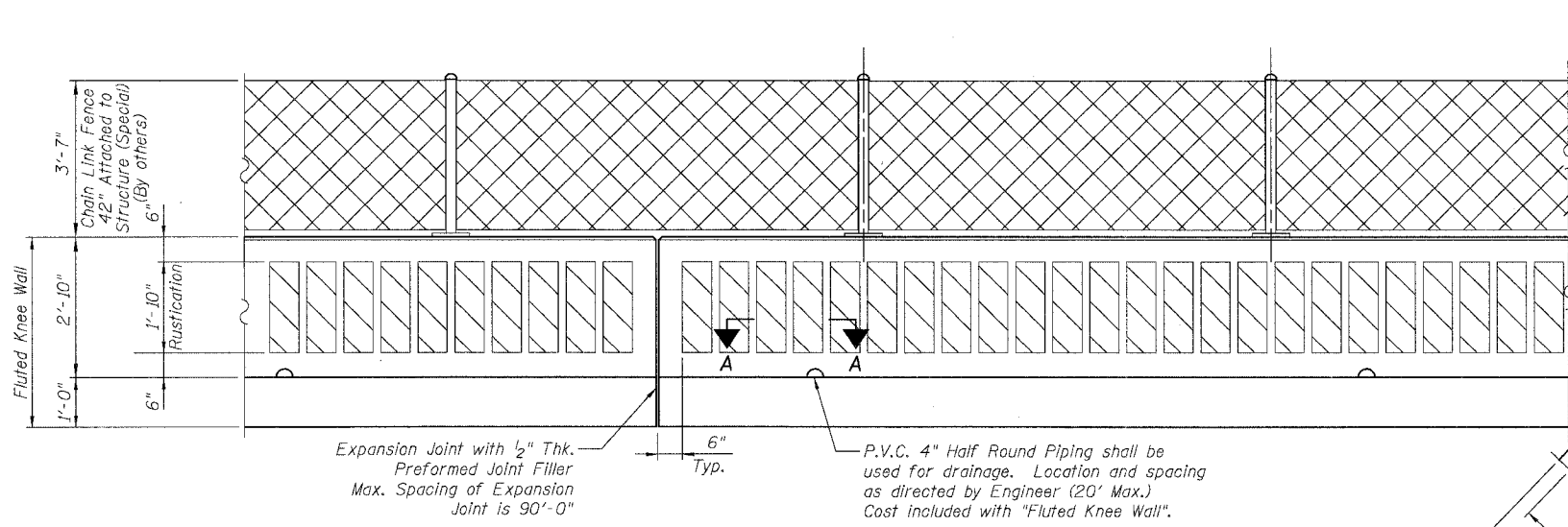
**BILL OF MATERIAL**

Item	Unit	Qty.*
Concrete Structures	Cu. Yd.	0.15
Concrete Superstructure	Cu. Yd.	0.13
Reinforcement Bars, Epoxy Coated	Pound	22.69
Rustication Finish	Sq. Ft.	1.83
Protective Coat	Sq. Yd.	0.62

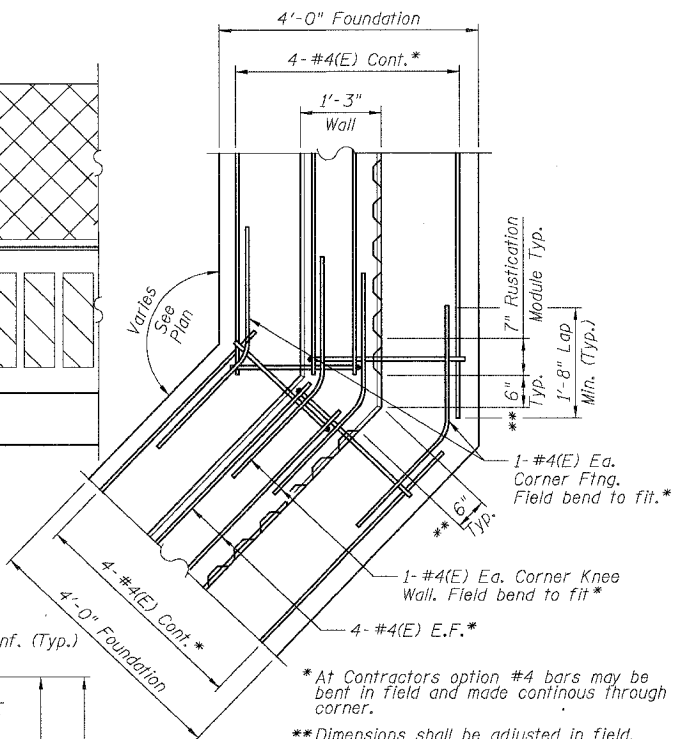
\* Quantities are per foot of Fluted Knee Wall and are provided for estimating purposes only. See Note 5.

**NOTES:**

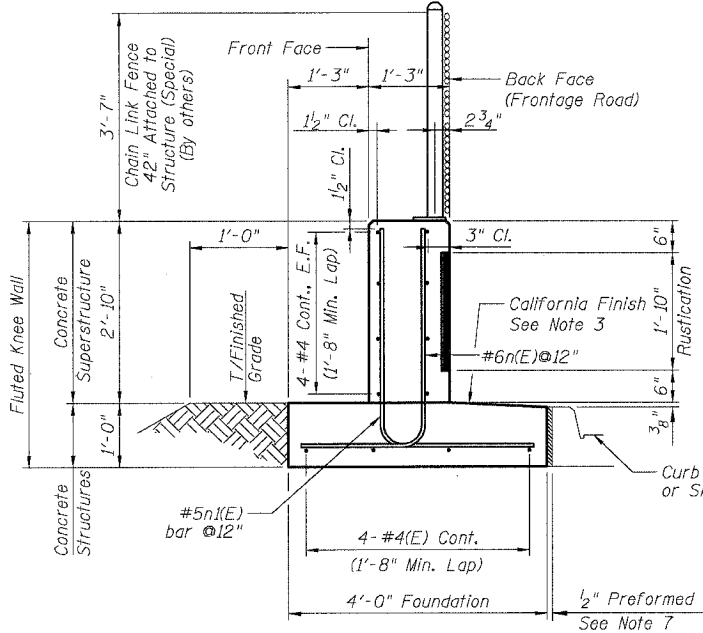
1. Back Face is face adjacent to Frontage Rd. and Front Face is face adjacent to Expressway.
2. Concrete: f'c = 3500 psi
3. Provide California Finish on top of foundation between stem and Frontage Road. See Roadway Details. Cost included with "Fluted Knee Wall".
4. At locations where Fluted Knee Wall abuts a rigid Structure, a 1/2" thick Preformed Expansion Joint Filler conforming to the shape of the Structure shall be installed between the Wall and the Structure.
5. "Fluted Knee Wall" shall include Concrete Superstructure stem, Concrete Structures foundation, Reinforcement Bars, Epoxy Coated, all form liners for Rustication Finish, Protective Coat and Preformed Joint Filler (P.J.F.).
6. Apply Protective Coat to top and front face of stem and top of Frontage Road side of foundation.
7. Cost included with "Fluted Knee Wall."
8. Chain Link Fence 42" Attached to Structure (Special) will not be paid for in this Contract, but shall be furnished and installed in a future Contract by others.
9. See Roadway Plans for limits of excavation for Fluted Knee Wall.



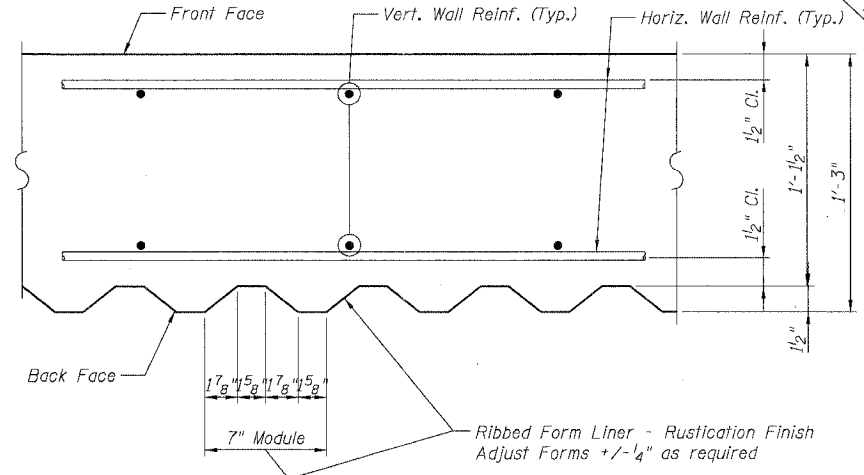
**BACK FACE ELEVATION - FLUTED KNEE WALL**



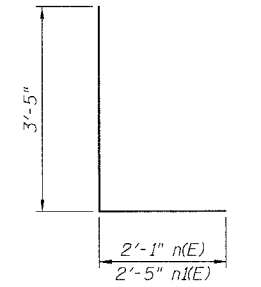
**TYPICAL FLUTED KNEE WALL CORNER DETAIL**



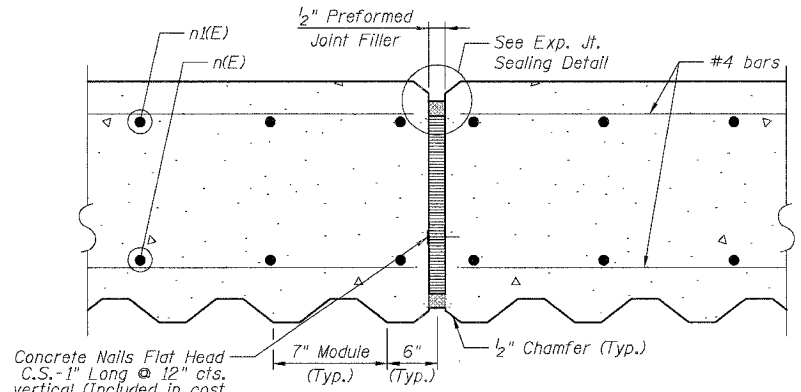
**TYPICAL SECTION FLUTED KNEE WALL**



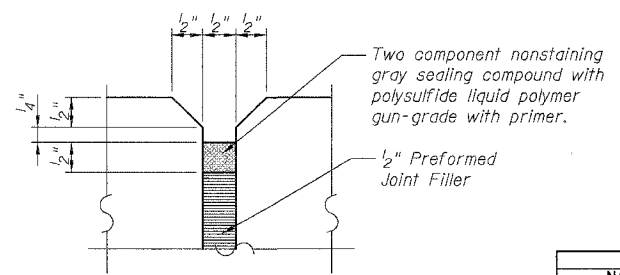
**SECTION A-A**



**BARS n(E) & n(E)**



**EXPANSION JOINT DETAIL**



**EXPANSION JOINT SEALING DETAIL**

**LEGEND:**

- Chain Link Fabric
- Rustication Finish
- E.F. = Each Face

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)  
**FLUTED KNEE WALL**  
 SCALE: NTS  
 DATE: 04/25/08  
 DRAWN BY: LAM  
 CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
 www.bbainc.com

4/24/2008 4:55:59 PM

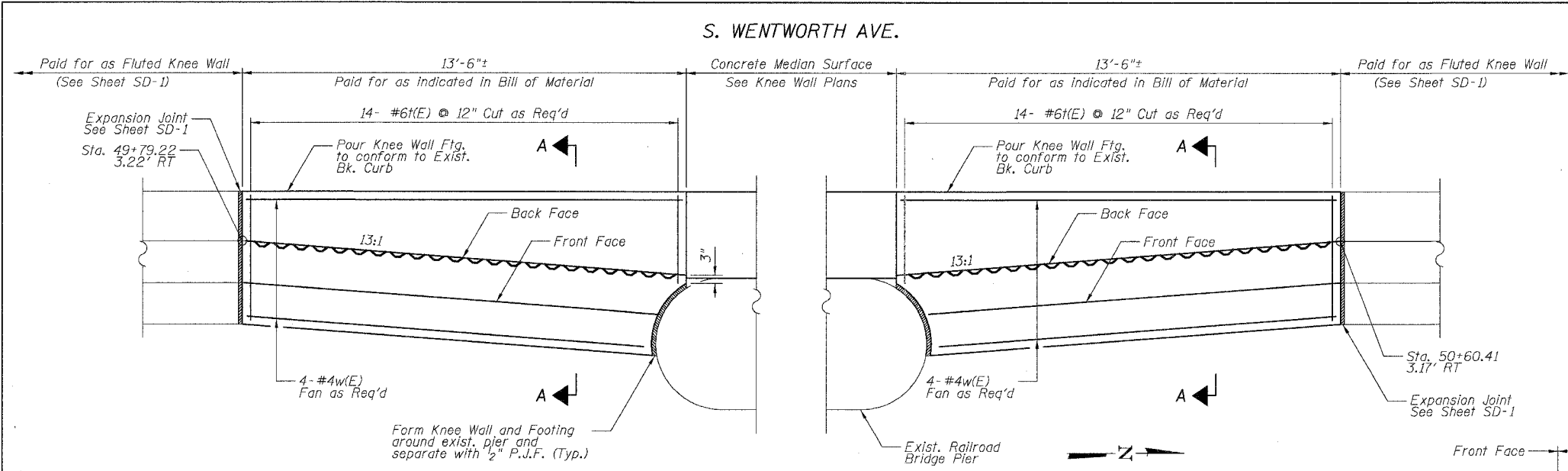
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	32	16
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62997				

**DETAIL A REINFORCEMENT SCHEDULE AND BILL OF MATERIAL**

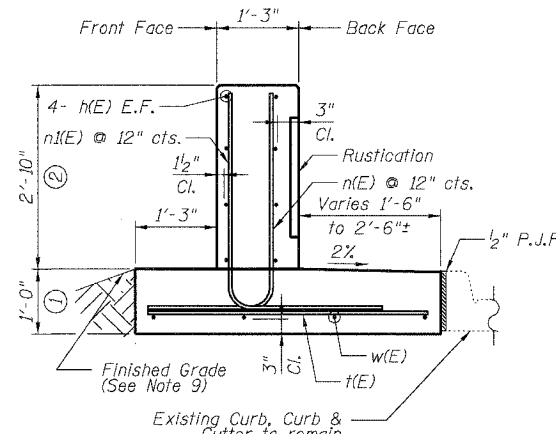
Bar	No.	Size	Length	Shape
h(E)	16	#4	12'-10"	—
n(E)	28	#6	5'-6"	L
n(E)	28	#5	5'-10"	L
t(E)	28	#6	4'-6"	—
w(E)	8	#4	13'-2"	—
Item	Unit	Qty.		
① Concrete Structures	Cu. Yd.	4.5		
② Concrete Superstructure	Cu. Yd.	3.6		
Reinforcement Bars, Epoxy Coated	Pound	800		
Rustication Finish	Sq. Ft.	50		
Protective Coat	Sq. Yd.	19		

**DETAIL B REINFORCEMENT SCHEDULE AND BILL OF MATERIAL**

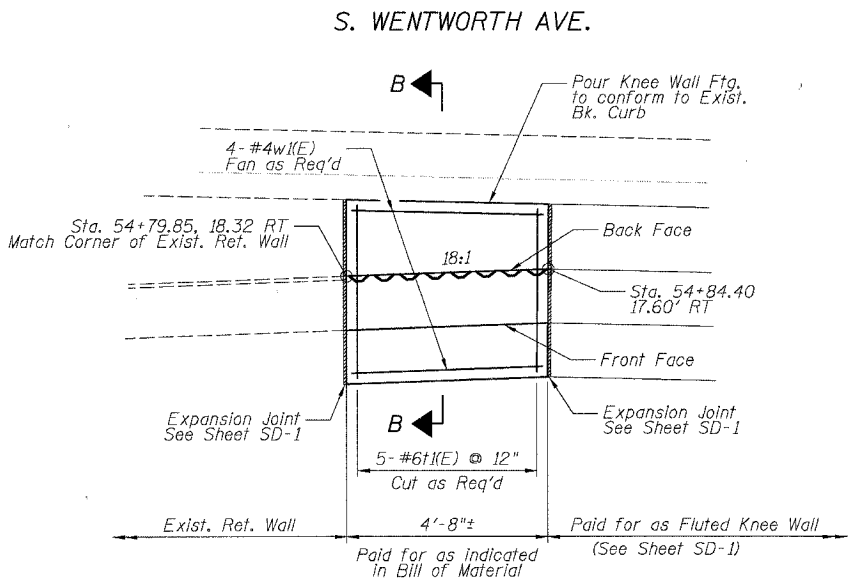
Bar	No.	Size	Length	Shape
h(E)	8	#4	4'-4"	—
n(E)	5	#6	5'-6"	L
n(E)	5	#5	5'-10"	L
t(E)	5	#6	3'-11"	—
w(E)	4	#4	4'-4"	—
Item	Unit	Qty.		
① Concrete Structures	Cu. Yd.	0.8		
② Concrete Superstructure	Cu. Yd.	0.7		
Reinforcement Bars, Epoxy Coated	Pound	140		
Rustication Finish	Sq. Ft.	9		
Protective Coat	Sq. Yd.	3		



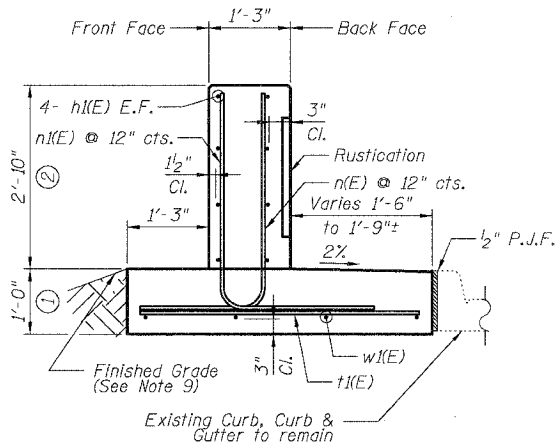
**DETAIL A**



**SECTION A-A**



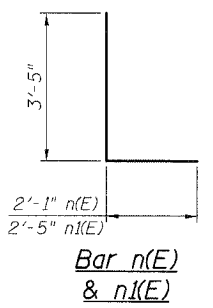
**DETAIL B**



**SECTION B-B**

**NOTES:**

- All stations and offsets measured from S. Wentworth Ave.  $\pm$ .
- Back Face is face adjacent to Frontage Rd. and Front Face is face adjacent to Expressway.
- Concrete: f'c = 3500 psi
- Provide California Finish on top of foundation between stem and Frontage Road. See Roadway Details.
- At locations where Fluted Knee Wall abuts a rigid Structure, a 1/2" thick Preformed Expansion Joint Filler conforming to the shape of the Structure shall be installed between the Fluted Knee Wall and the Structure.
- Apply Protective Coat to top and back face of stem and top of Frontage Road side of foundation.
- For Fluted Knee Wall standard details, see Sheet SD-1
- B.F. = Back Face (Frontage Road Side)  
F.F. = Front Face (Expressway Side)  
E.F. = Each Face
- Shape finished grade as required to match existing conditions.
- P.J.F. included in cost of concrete structures.



REVISIONS	NAME	DATE

SHEET SD-2

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)

DETAILS A & B

SCALE: NTS  
DATE: 04/25/08

DRAWN BY: TL  
CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbainc.com

15660 CANTONVILLE ST. SHEETS 1560-1565 3/20/08 4:58:14 PM

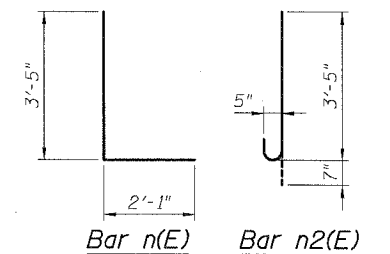
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	32	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62997				

**DETAIL C REINFORCEMENT SCHEDULE AND BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
n(E)	8	#4	20'-9"	—
n(E)	22	#6	5'-6"	L
n2(E)	22	#5	4'-0"	—
t(E)	22	#6	3'-8"	—
t(E)	3	#4	4'-0"	—
w(E)	4	#4	20'-8"	—
Item	Unit	Qty.		
① Concrete Structures	Cu. Yd.	3.3		
② Concrete Superstructure	Cu. Yd.	2.8		
Reinforcement Bars, Epoxy Coated	Pound	570		
Protective Coat	Sq. Yd.	12		

**NOTES:**

- All stations and offsets measured from S. Wentworth Ave. @.
- Back Face is face adjacent to Frontage Rd. and Front Face is face adjacent to Expressway.
- Concrete:  $f'c = 3500$  psi
- Provide California Finish on top of foundation between stem and Frontage Road. See Roadway Details.
- At locations where Fluted Knee Wall abuts a rigid structure, a 2" thick Preformed Expansion Joint Filler conforming to the shape of the structure shall be installed between the Fluted Knee Wall and the structure.
- Apply Protective Coat to top and back face of stem and top of Frontage Road side of foundation.
- For Fluted Knee Wall standard details, see Sheet SD-1
- B.F. = Back Face (Frontage Road Side)  
F.F. = Front Face (Expressway Side)  
E.F. = Each Face
- Shape finished grade as required to match existing conditions.
- P.J.F. included in cost of concrete structures.



SHEET SD-3

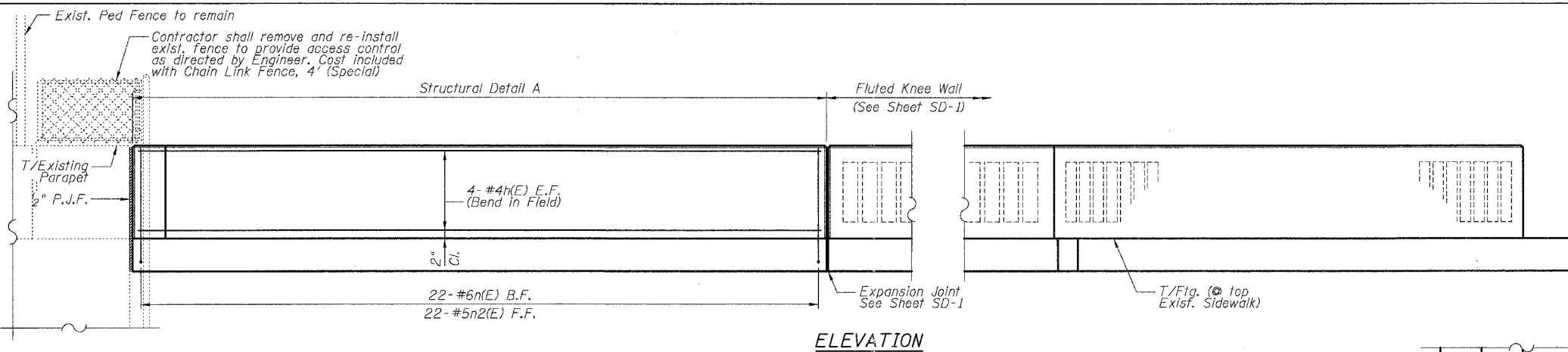
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING RD)

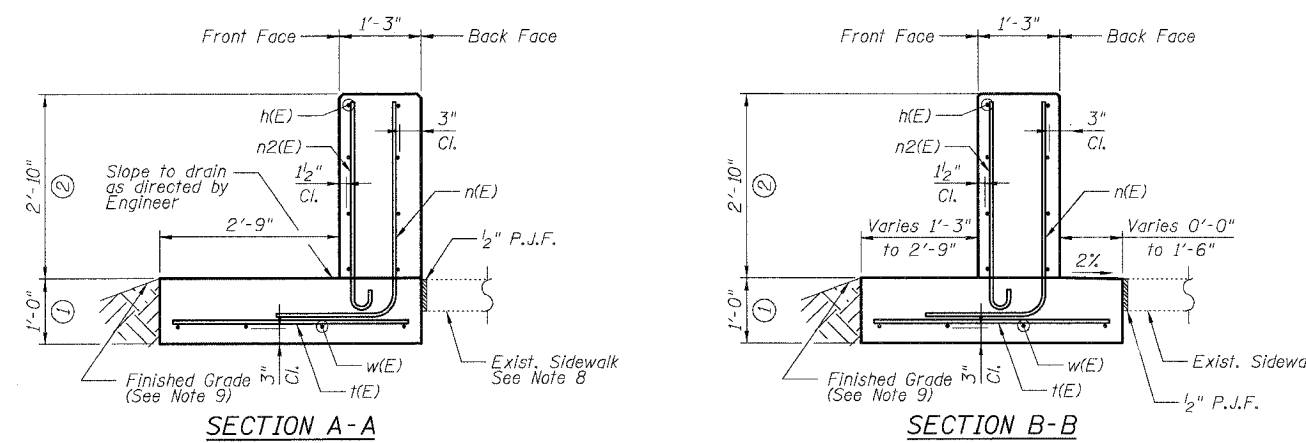
DETAIL C

SCALE: NTS  
DATE: 04/25/08

DRAWN BY: TL  
CHECKED BY: BLU

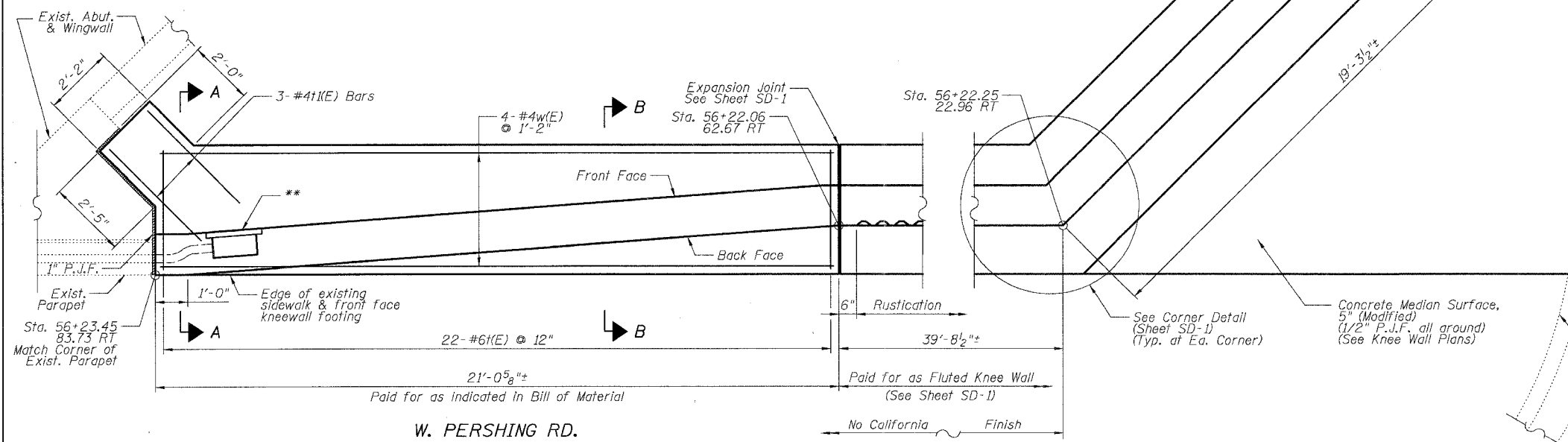


**ELEVATION**



**SECTION A-A**

**SECTION B-B**



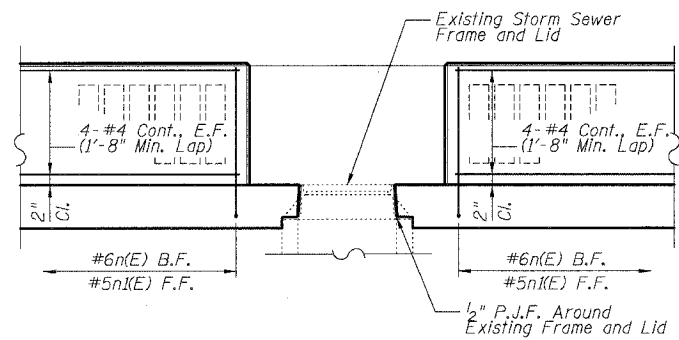
**PLAN**

\*\* Contractor shall provide a stainless steel junction box and cover flush with the front face of Knee Wall and extend existing conduit from end of existing parapet as directed by the Engineer. Cost incidental to Concrete Superstructures

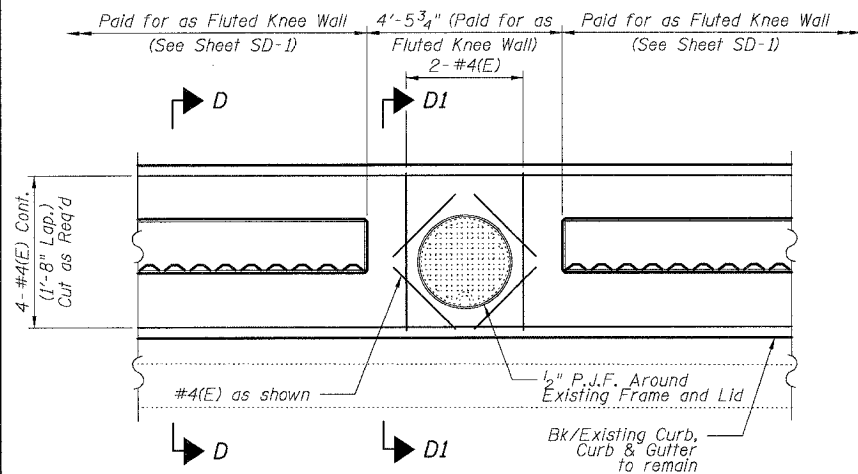
BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbainc.com

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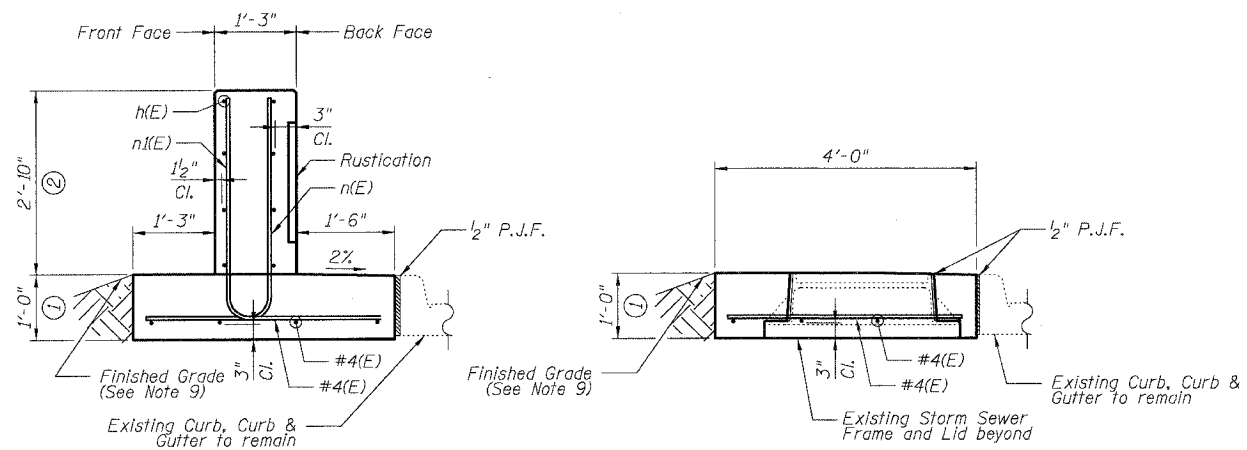
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	32	18
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62997				



DETAIL D - ELEVATION

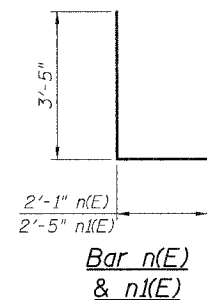


DETAIL D - PLAN



SECTION D-D

SECTION D1-D1



NOTES:

- All stations and offsets measured from S. Wentworth Ave. E.
- Back Face is face adjacent to Frontage Rd. and Front Face is face adjacent to Expressway.
- Concrete:  $f'c = 3500$  psi
- Provide California Finish on top of foundation between stem and Frontage Road. See Roadway Details.
- At locations where Fluted Knee Wall abuts a rigid Structure, a 1/2" thick Preformed Expansion Joint Filler conforming to the shape of the Structure shall be installed between the Fluted Knee Wall and the Structure.
- Apply Protective Coat to top and back face of stem and top of Frontage Road side of foundation.
- For Fluted Knee Wall standard details, see Sheet SD-1
- B.F. = Back Face (Frontage Road Side)  
F.F. = Front Face (Expressway Side)  
E.F. = Each Face
- Shape finished grade as required to match existing conditions.
- P.J.F. included in cost of concrete structures.

BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbainc.com

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SOUTHBOUND KNEE WALLS (ROOT ST TO PERSHING ST)

SCALE: NTS  
DATE: 04/25/08

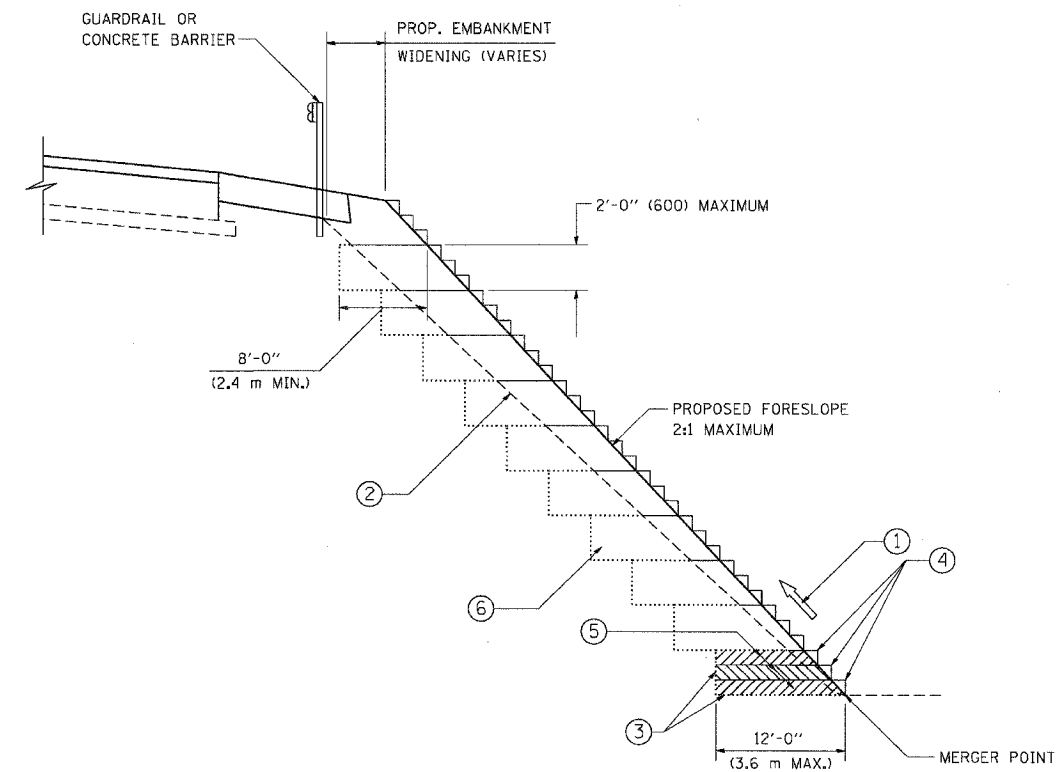
DRAWN BY: TL  
CHECKED BY: BLU

SHEET SD-4

DETAIL D

4/24/2008 4:55:57 PM

CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	32	19
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL BENCHING DETAIL  
FOR EMBANKMENT

**NOTES:**

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

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

REVISIONS	
NAME	DATE
	06/16/04

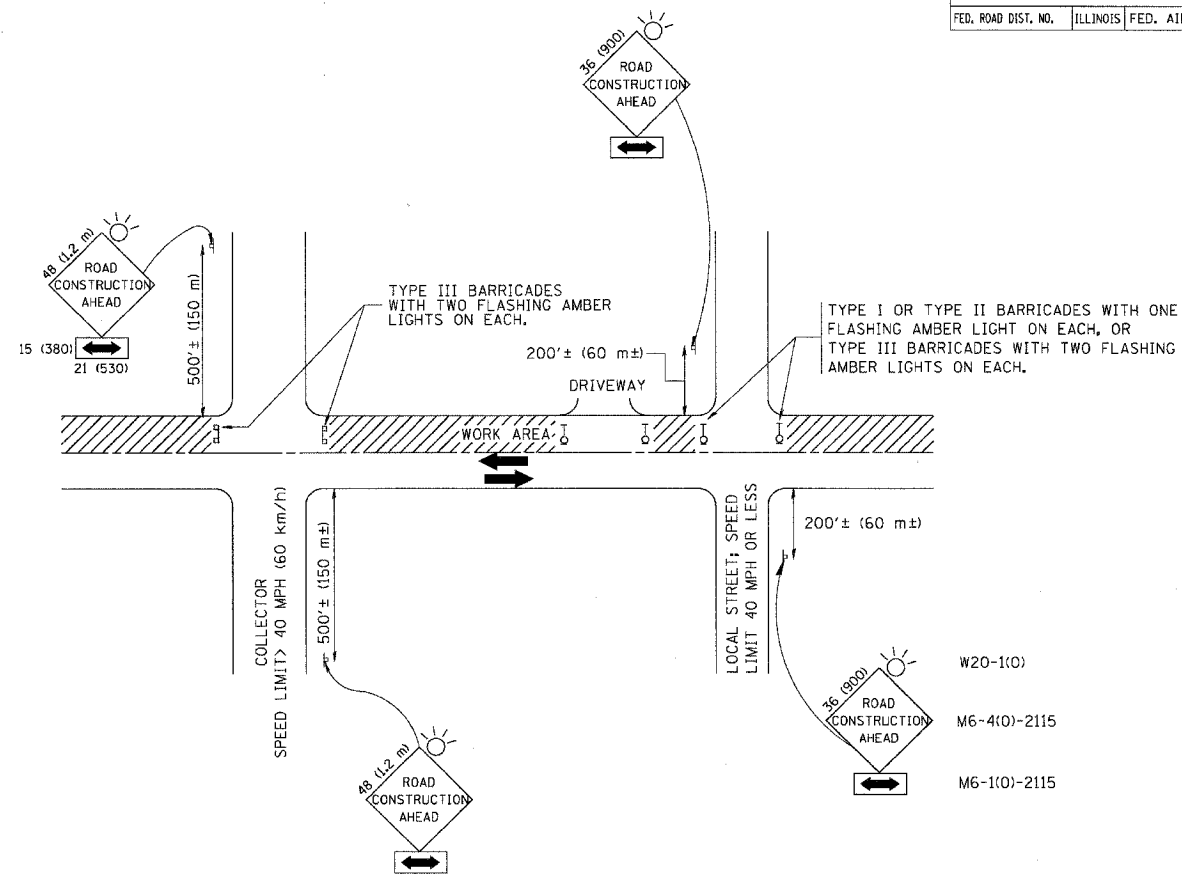
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**BENCHING DETAIL  
FOR EMBANKMENT  
WIDENING**

SCALE: VERT. NONE  
HORIZ.

DRAWN BY: CADD  
CHECKED BY: S.E.B.  
BD-51

PLOT DATE = 3/5/2007  
FILE NAME = K:\Users\cadd\p1\p1.dgn  
USER NAME = cadd

F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	32	20
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.

b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.

b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.

3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. OBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 TRAFFIC CONTROL AND PROTECTION  
 FOR  
 SIDE ROADS, INTERSECTIONS, AND  
 DRIVEWAYS

SCALE: NONE

DRAWN BY  
 CHECKED BY

TC-10

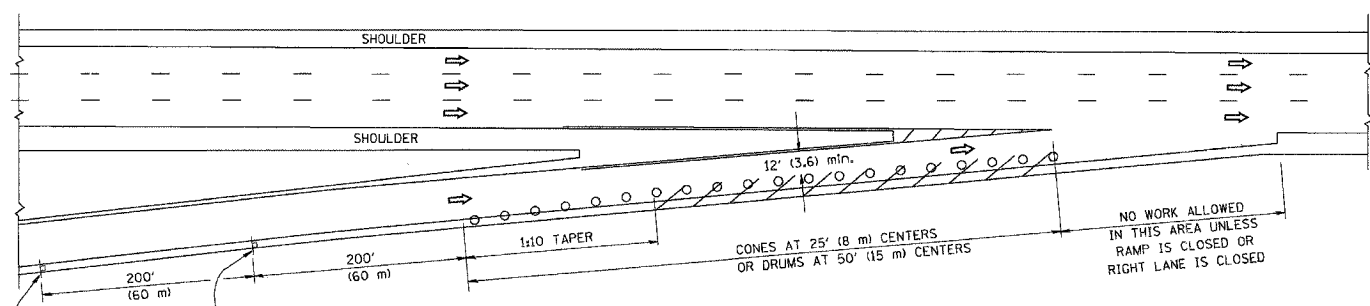


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	32	21
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

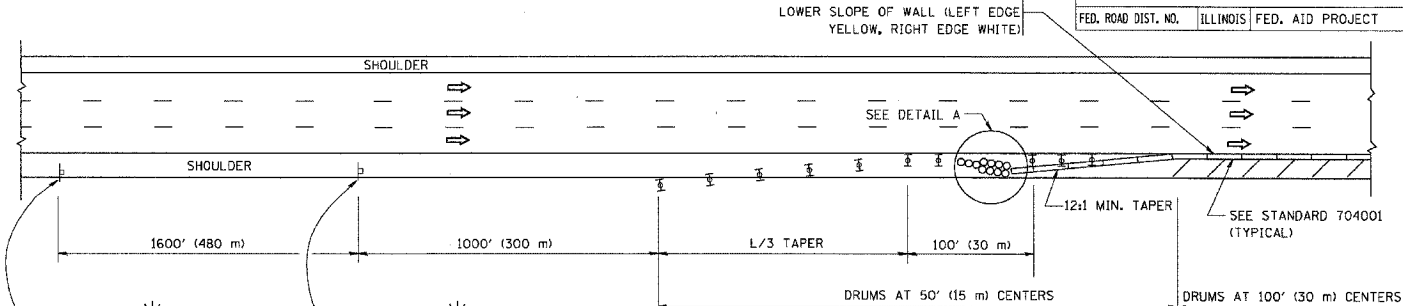
PARTIAL RAMP CLOSURE DETAILS

SHOULDER CLOSURE DETAILS

REFLECTIVE 6 (150) EDGE LINE ON LOWER SLOPE OF WALL (LEFT EDGE YELLOW, RIGHT EDGE WHITE)

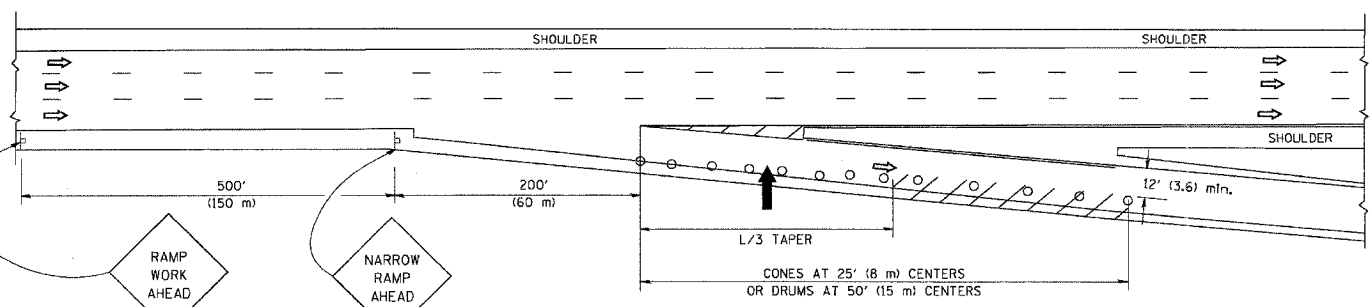


TYPICAL ENTRANCE RAMP

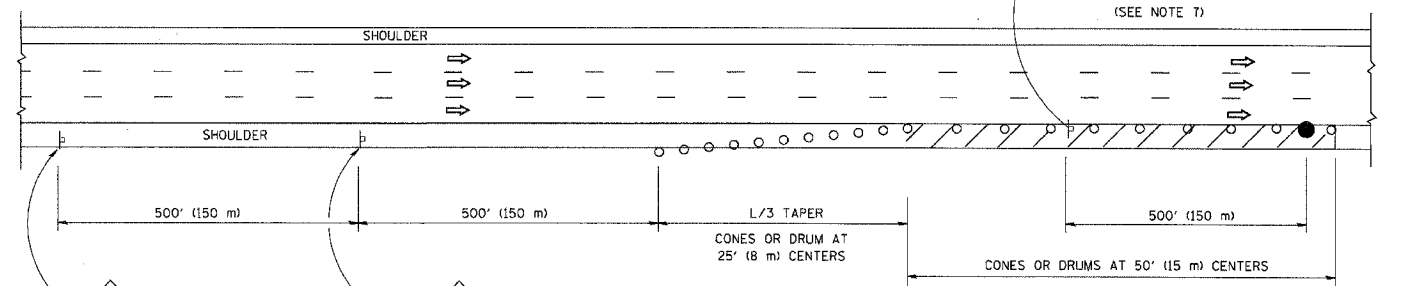


PERMANENT SHOULDER CLOSURE

OR WHEN SPECIFIED INSTALL TEMPORARY CONCRETE BARRIER WALL WITH BARRIER WALL REFLECTORS PER TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)

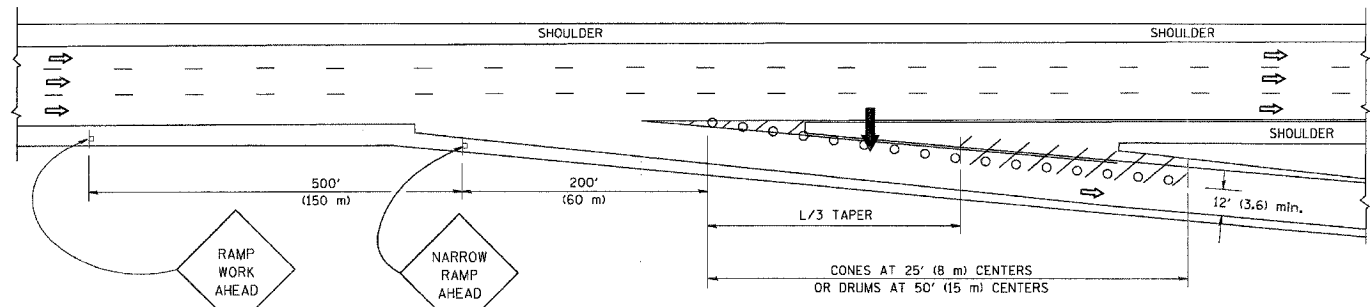


TYPICAL EXIT RAMP

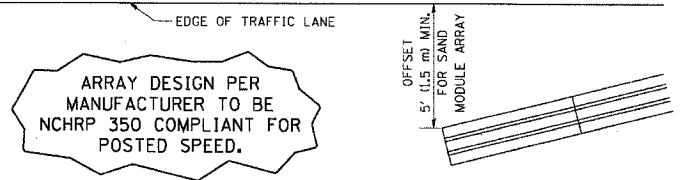


DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:  
1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCR OACH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



TYPICAL EXIT RAMP



ARRAY DESIGN PER MANUFACTURER TO BE NCHRP 350 COMPLIANT FOR POSTED SPEED.

DETAIL "A"  
IMPACT ATTENUATOR, TEMPORARY  
(SEE NOTE 5)

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

REVISIONS	
NAME	DATE
DWS	11/96
JAF	12/02
NCHRP 350	04/03
JAF	2/06
SPB	1/07

ILLINOIS DEPARTMENT OF TRANSPORTATION  
TRAFFIC CONTROL DETAILS  
FOR FREEWAY  
SHOULDER CLOSURES  
PARTIAL RAMP CLOSURES

SCALE: NONE

DESIGNED BY: DWS  
DRAWN BY:  
CHECKED BY:

TC-17

SYMBOLS

- ARROWBOARD
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

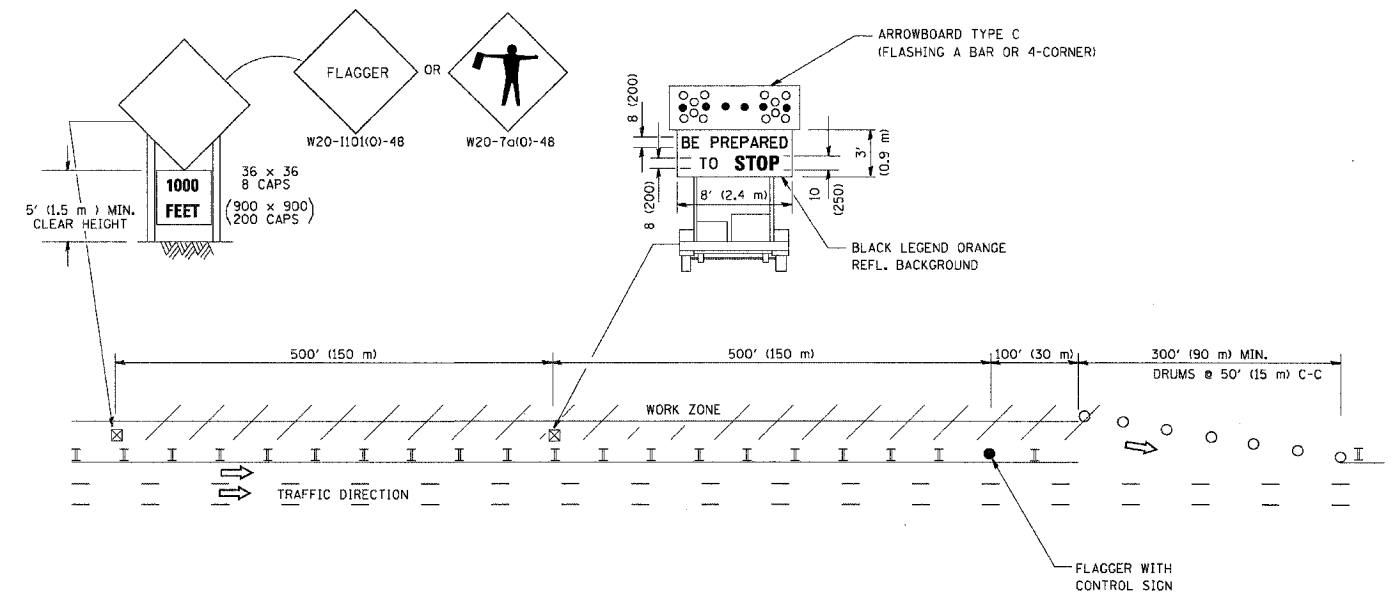
GENERAL NOTES

- THE "L" DISTANCE EQUALS:  
SPEED LIMIT      FORMULAS  
45 mph (80 km/h)      METRIC      ENGLISH  
OR GREATER:      L=0.65(W/S)      L=(W/S)
- PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.
- THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE "TRAFFIC BARRIER TERMINAL, TYPE III, TEMPORARY" DEVICE TO MEET NCHRP350 FOR POSTED SPEED.
- AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
- THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
  - FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
  - THE WORK ACTIVITY REQUIRES FREQUENT ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.

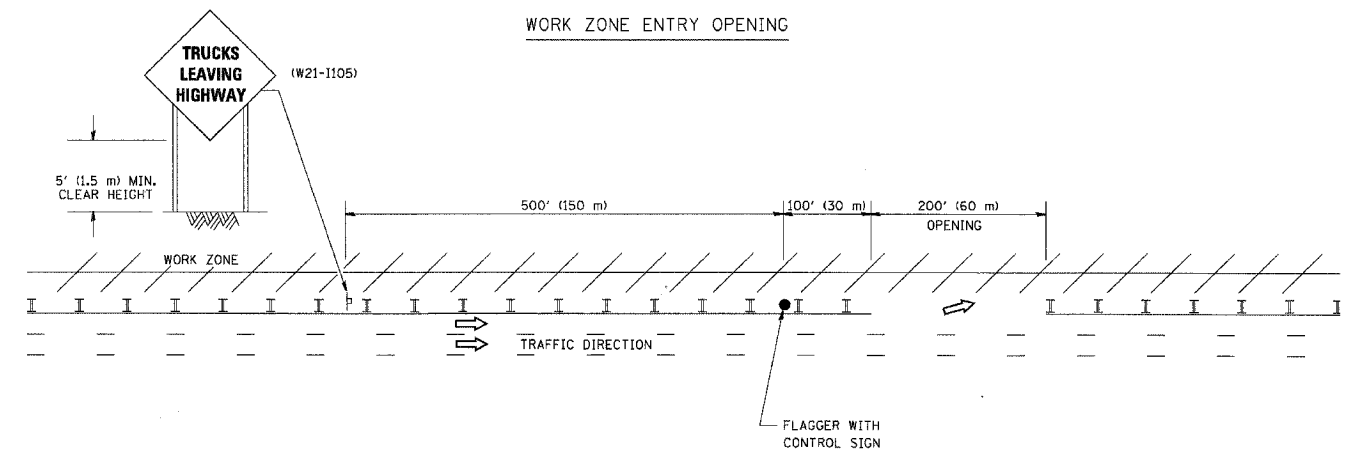
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	32	22
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. The Arrowboard, the Flagger Ahead trailer mounted sign, and the Trucks Leaving Highway sign shall be removed or turned away from traffic and the exit and entry openings shall be closed when the flagging operation ceases.
2. Work Zone Exit Openings should be a minimum of one half mile apart.
3. Exiting the work zone at any place other than at a Work Zone Exit Opening will be prohibited.
4. All vehicles shall enter the work zone at entry openings, using their turn signals to warn motorists

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

REVISIONS	
NAME	DATE
DWS	8/98
JAF	4/03
JAF	2/06
SPB	1/07

ILLINOIS DEPARTMENT OF TRANSPORTATION  
SIGNING FOR FLAGGING OPERATIONS  
AT WORK ZONE OPENINGS

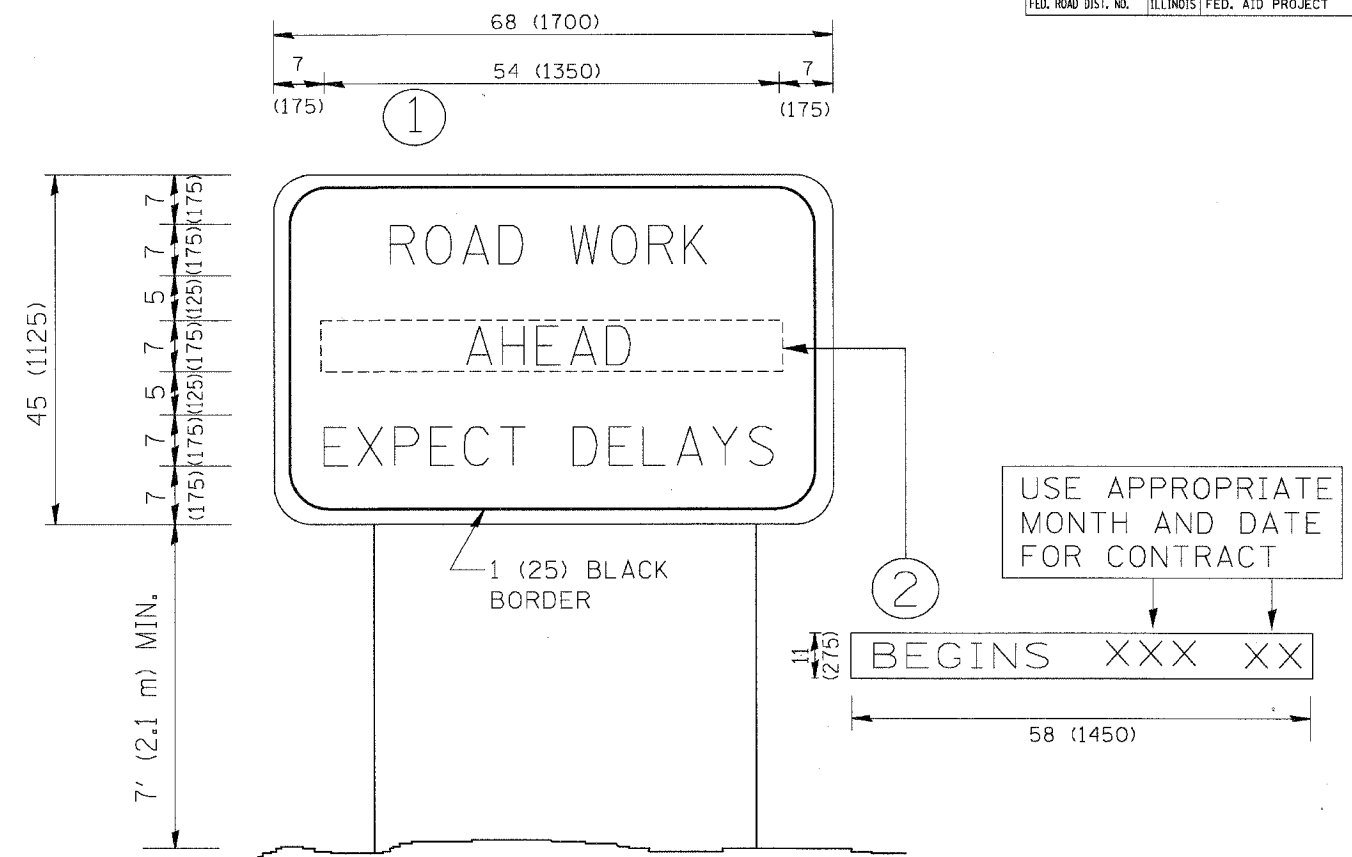
SCALE: NONE

DRAWN BY CADD

CHECKED BY

TC-18

CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	32	23
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

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

REVISIONS	
NAME	DATE
R. MIRS	9-15-97
R. MIRS	12-11-97
T. RAMMACHER	2-2-99
C. JUCIUS	1-31-07

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**ARTERIAL ROAD  
INFORMATION SIGN**

SCALE: NONE

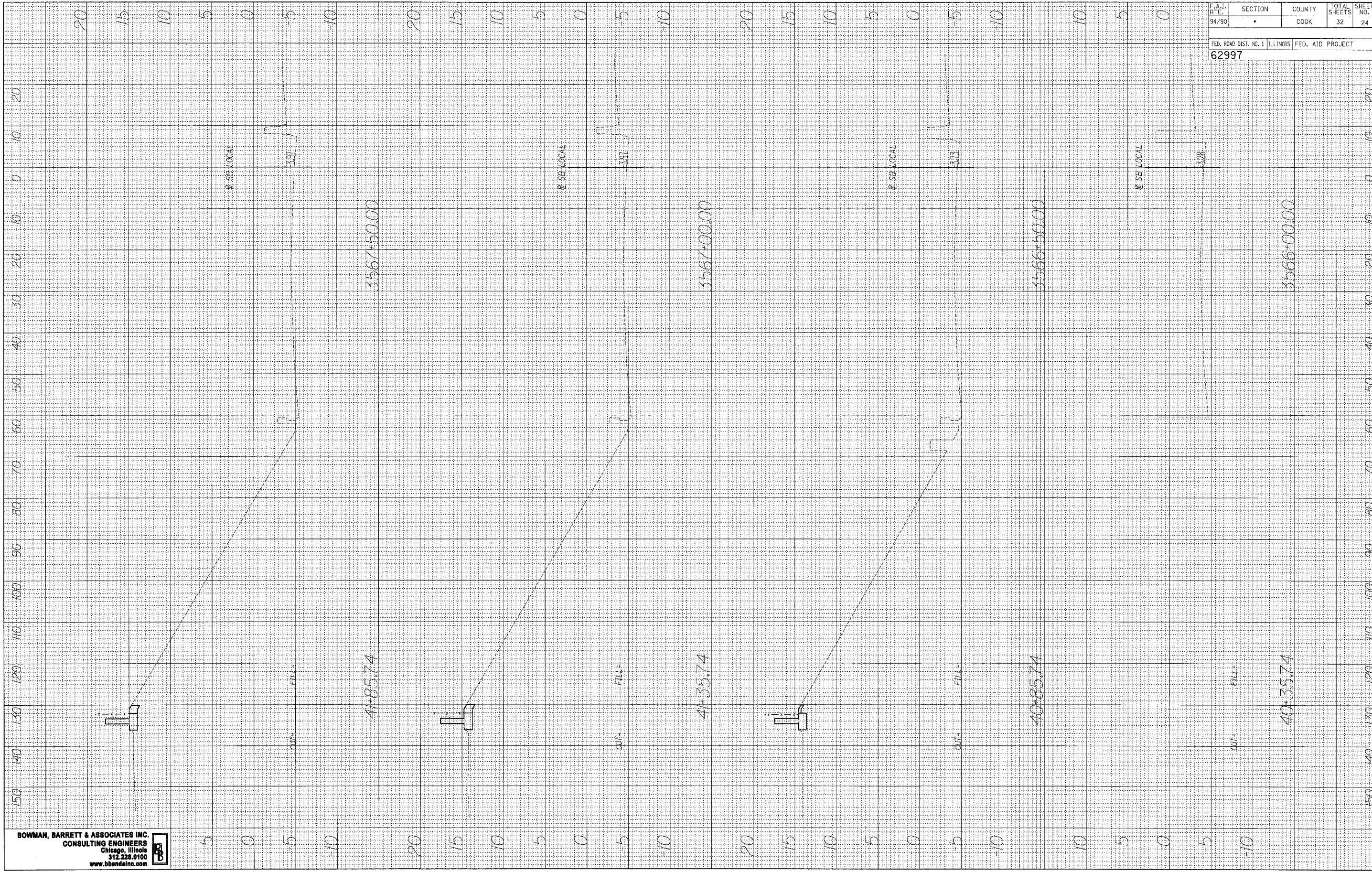
DRAWN BY DESIGN

CHECKED BY

TC22

FINAL SURVEY  
 SURVEYED \_\_\_\_\_ BY \_\_\_\_\_ DATE \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_

ORIGINAL SURVEY  
 SURVEYED \_\_\_\_\_ BY \_\_\_\_\_ DATE \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_



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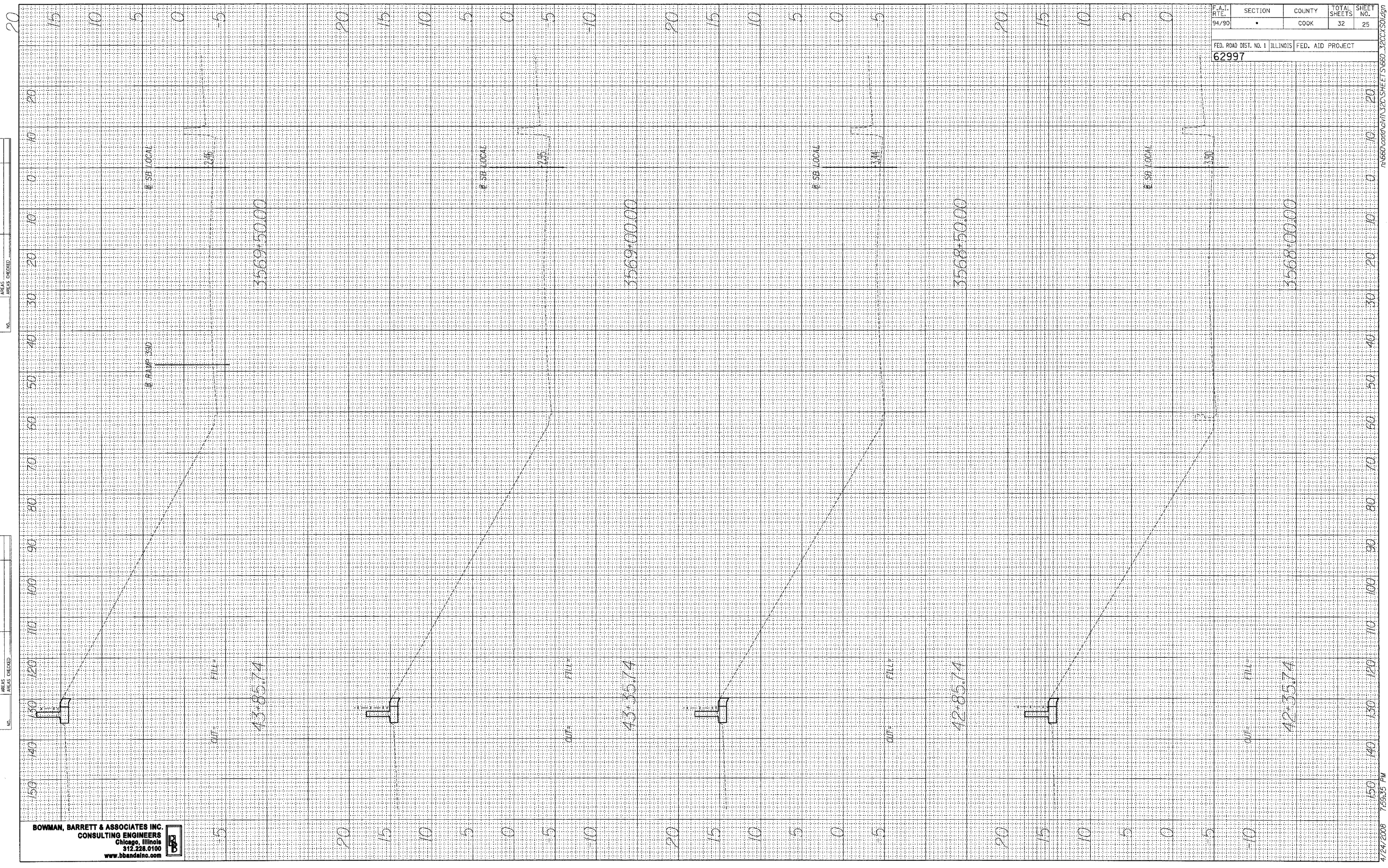
F.A.I. RTE. 94/90	SECTION •	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 24
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT 62997				



FINAL SURVEY NO. \_\_\_\_\_  
 SURVEYED \_\_\_\_\_ BY \_\_\_\_\_ DATE \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_

ORIGINAL SURVEY NO. \_\_\_\_\_  
 SURVEYED \_\_\_\_\_ BY \_\_\_\_\_ DATE \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_

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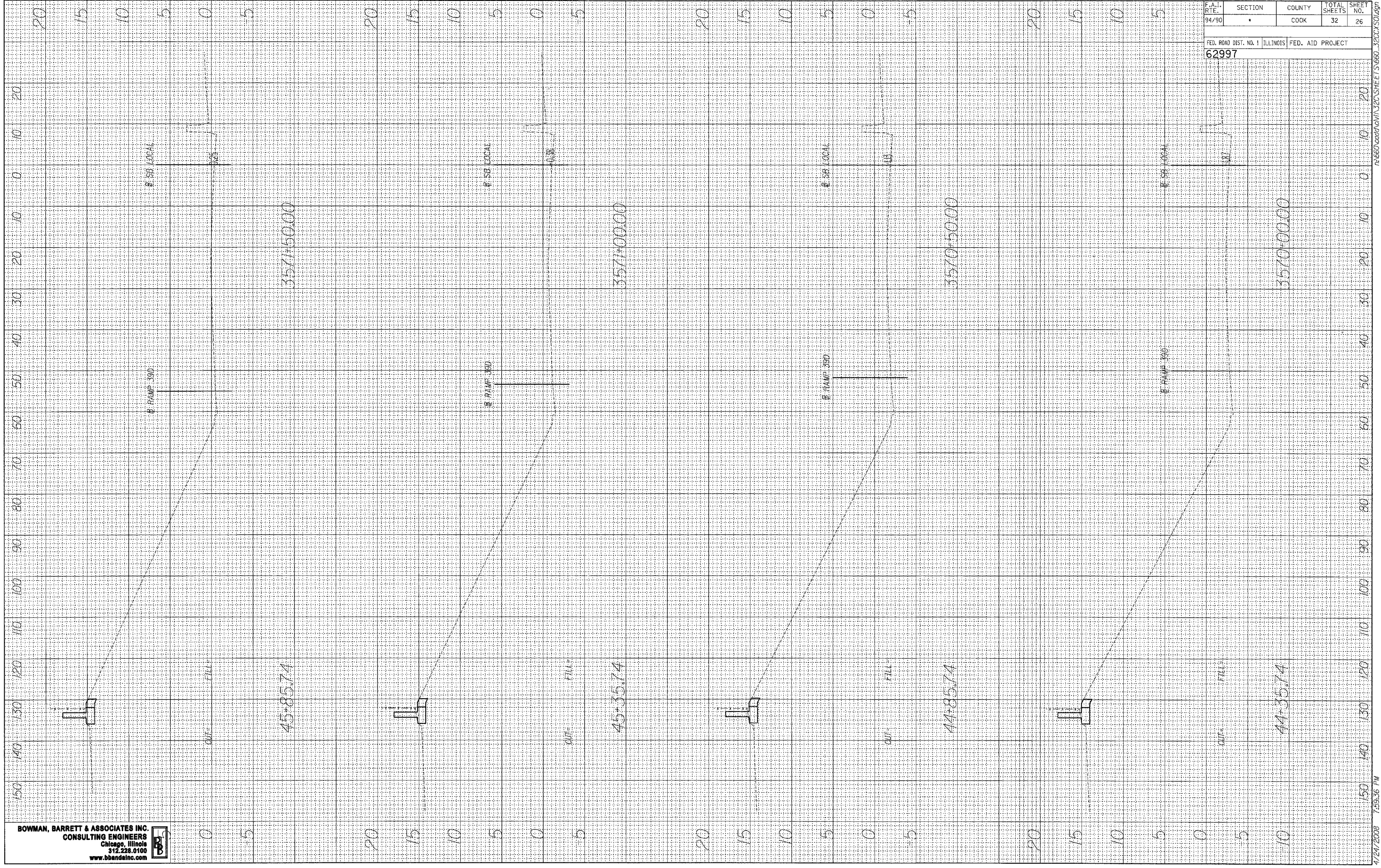


F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	•	COOK	32	25
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
62997				



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

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



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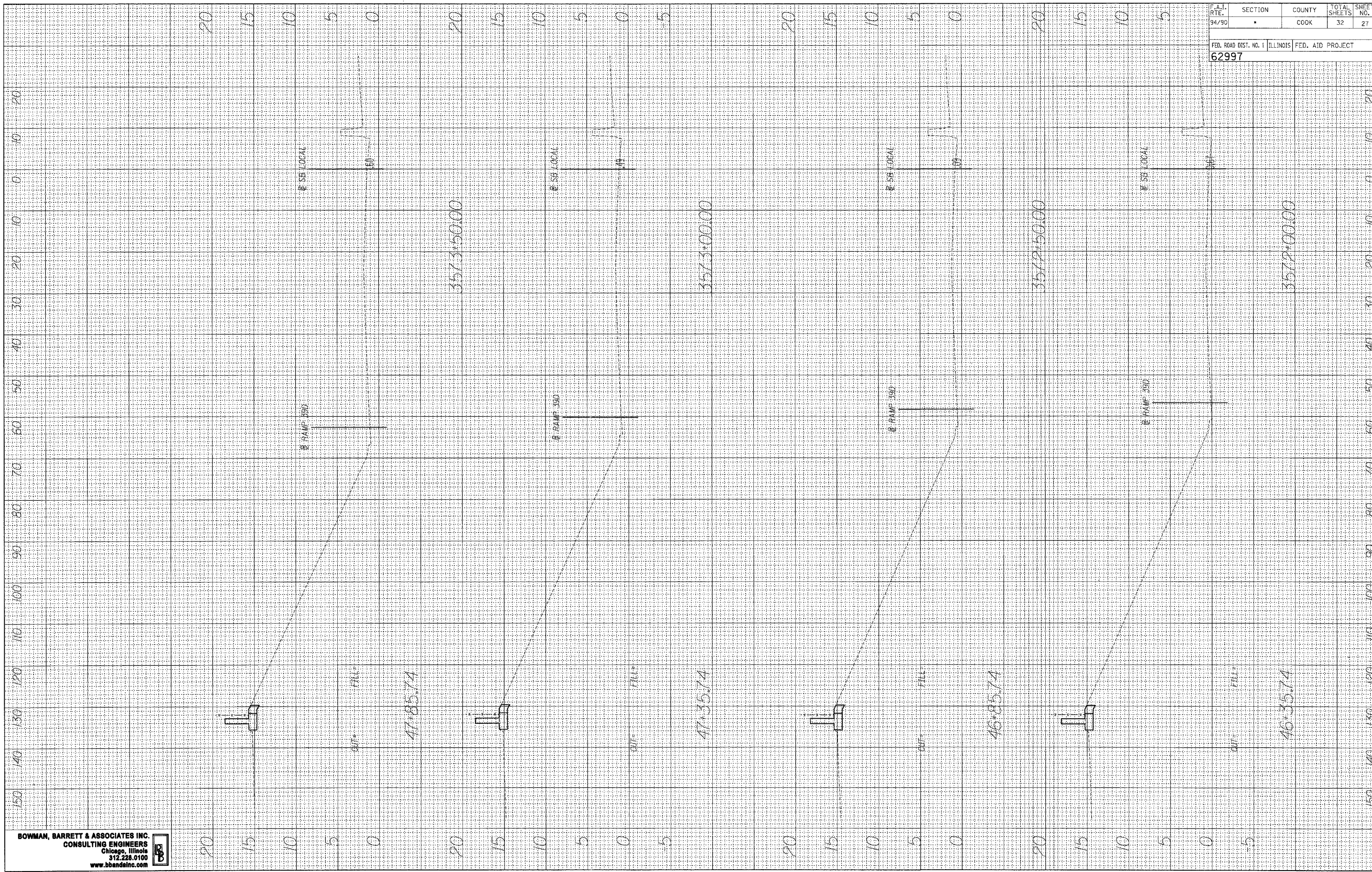
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94/90	•	COOK	32	26
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
62997				



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

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

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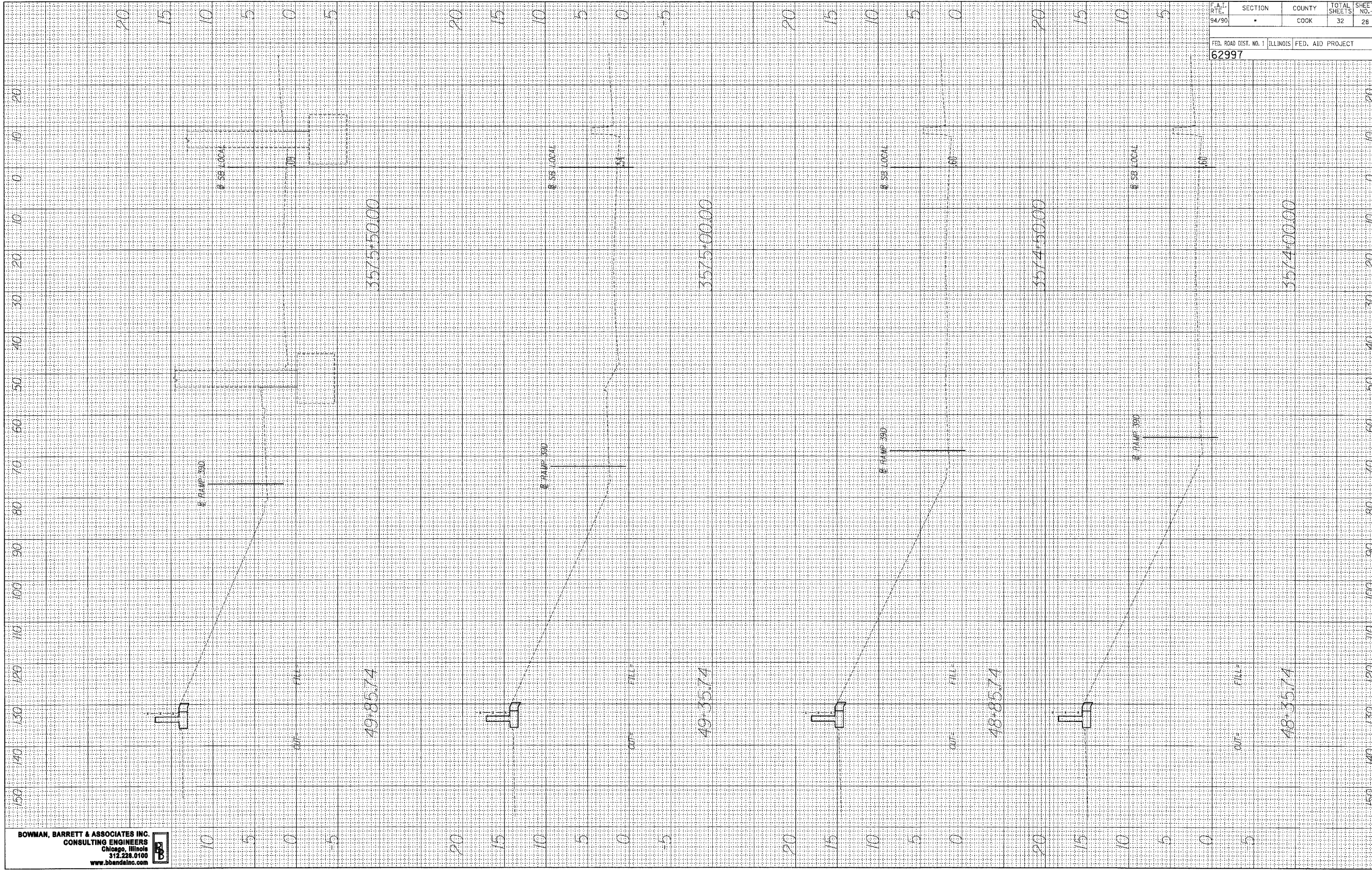
F.A.I. RTE. 94/90	SECTION	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 27
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
62997				



FINAL SURVEY SURVEYED PLOTTED NOTE BOOK NO. BY DATE

ORIGINAL SURVEY SURVEYED PLOTTED NOTE BOOK NO. BY DATE

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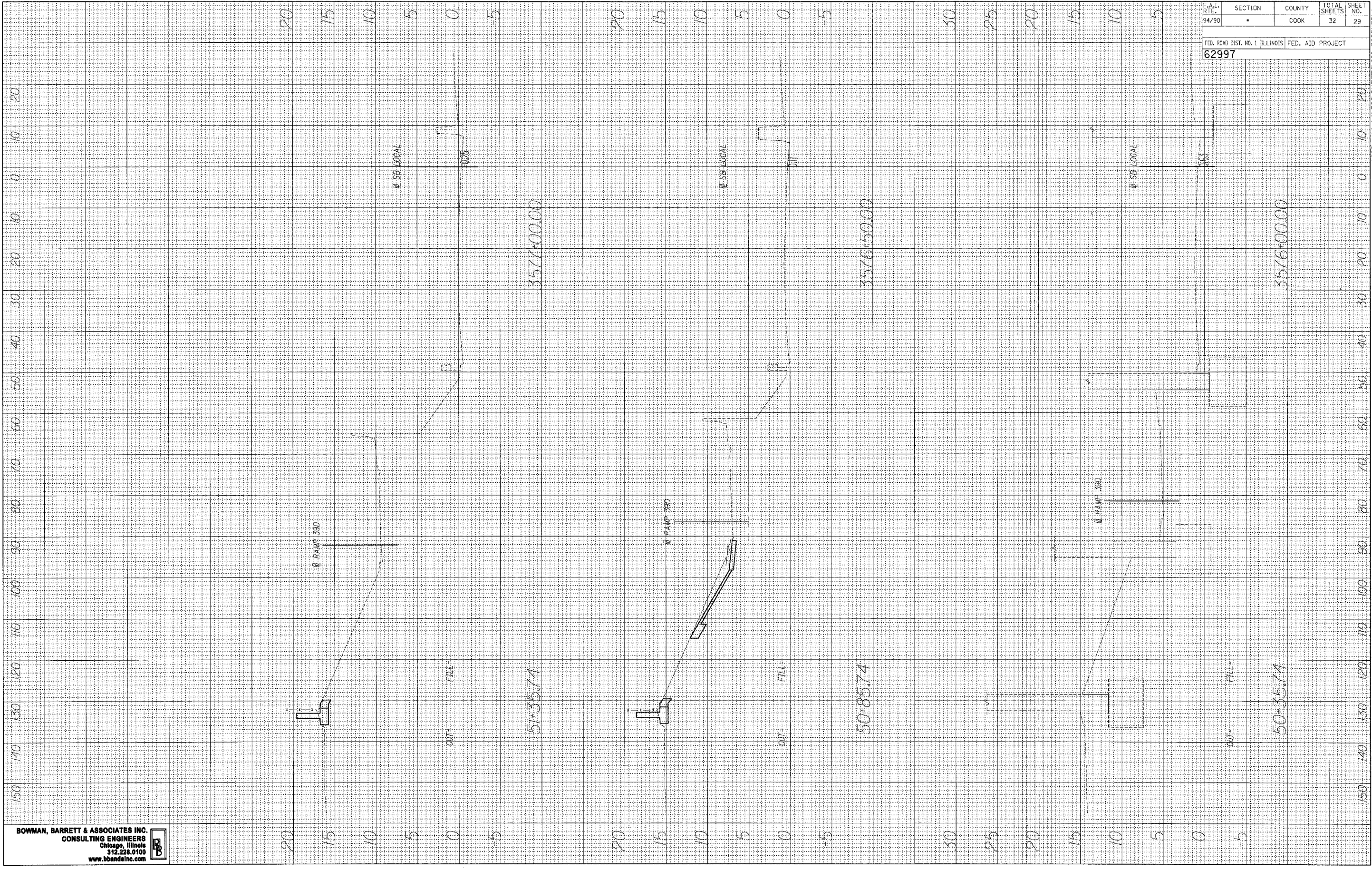
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	32	28
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
62997				



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

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

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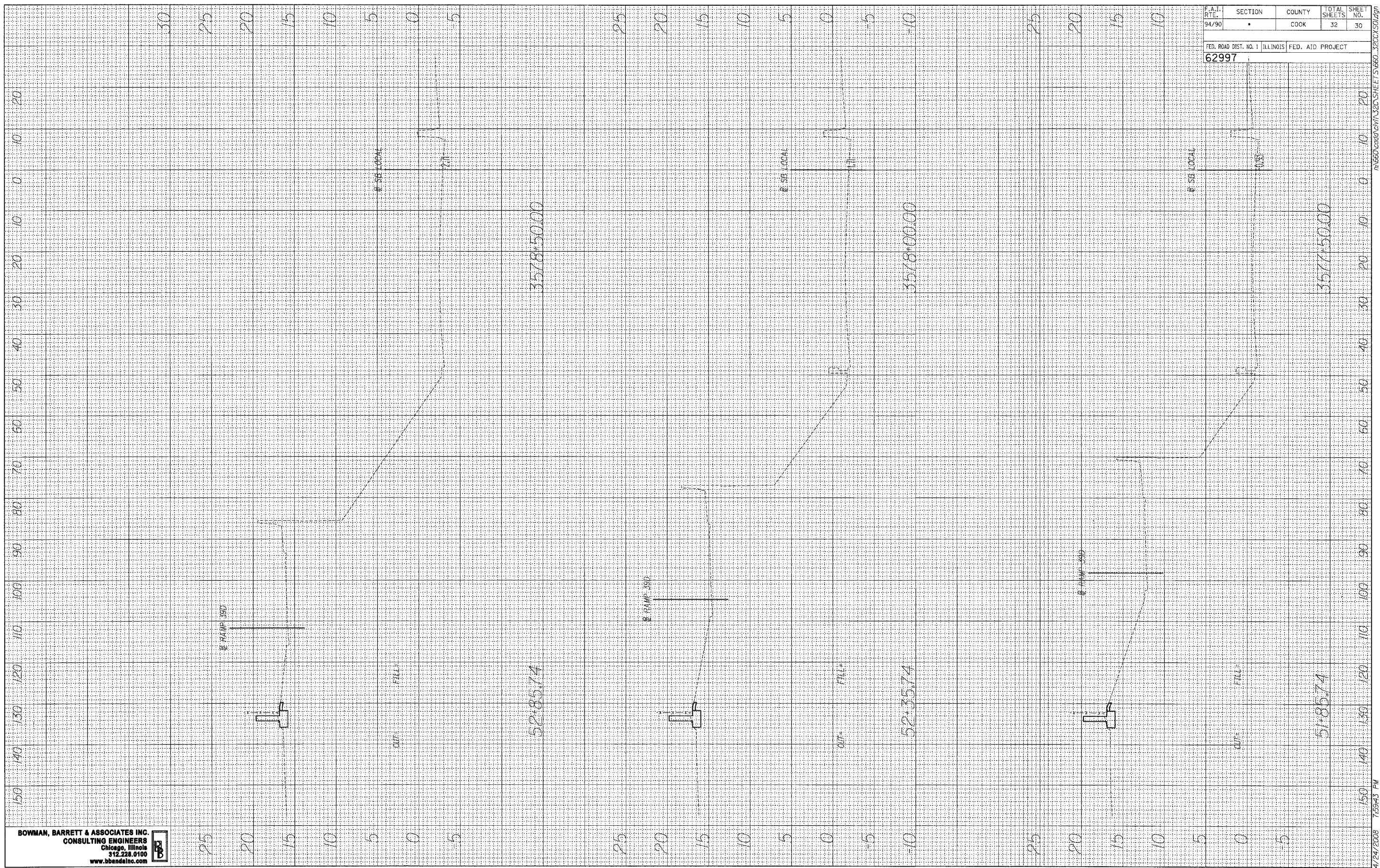


F.A.I. RT. 94/90	SECTION *	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 29
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
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FINAL SURVEY SURVEYED BY DATE  
 SURVEY PLOTTED  
 NOTE BOOK TEMPLATE  
 NO. AREAS CHECKED

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



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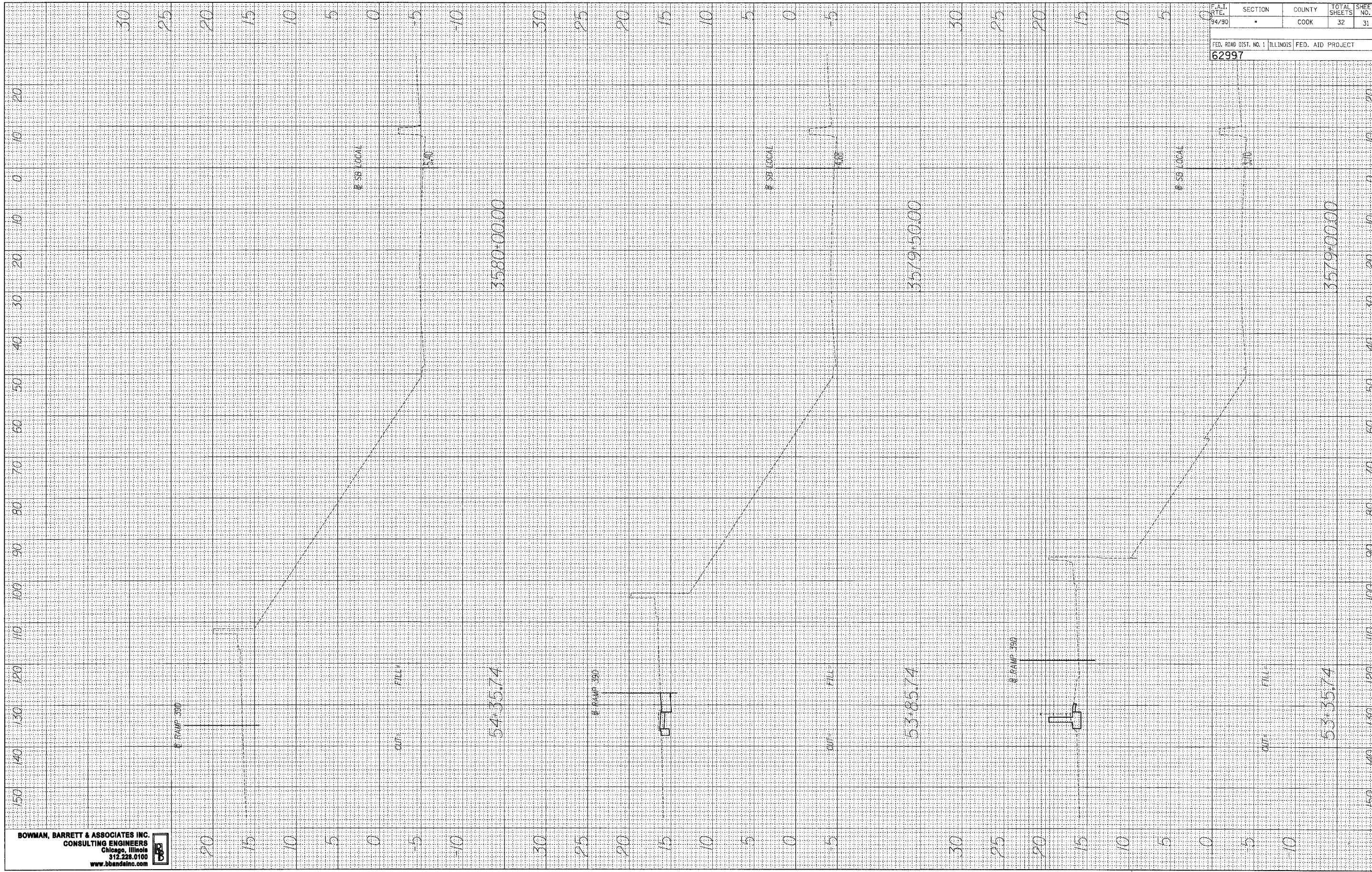
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	32	30
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
62997				

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



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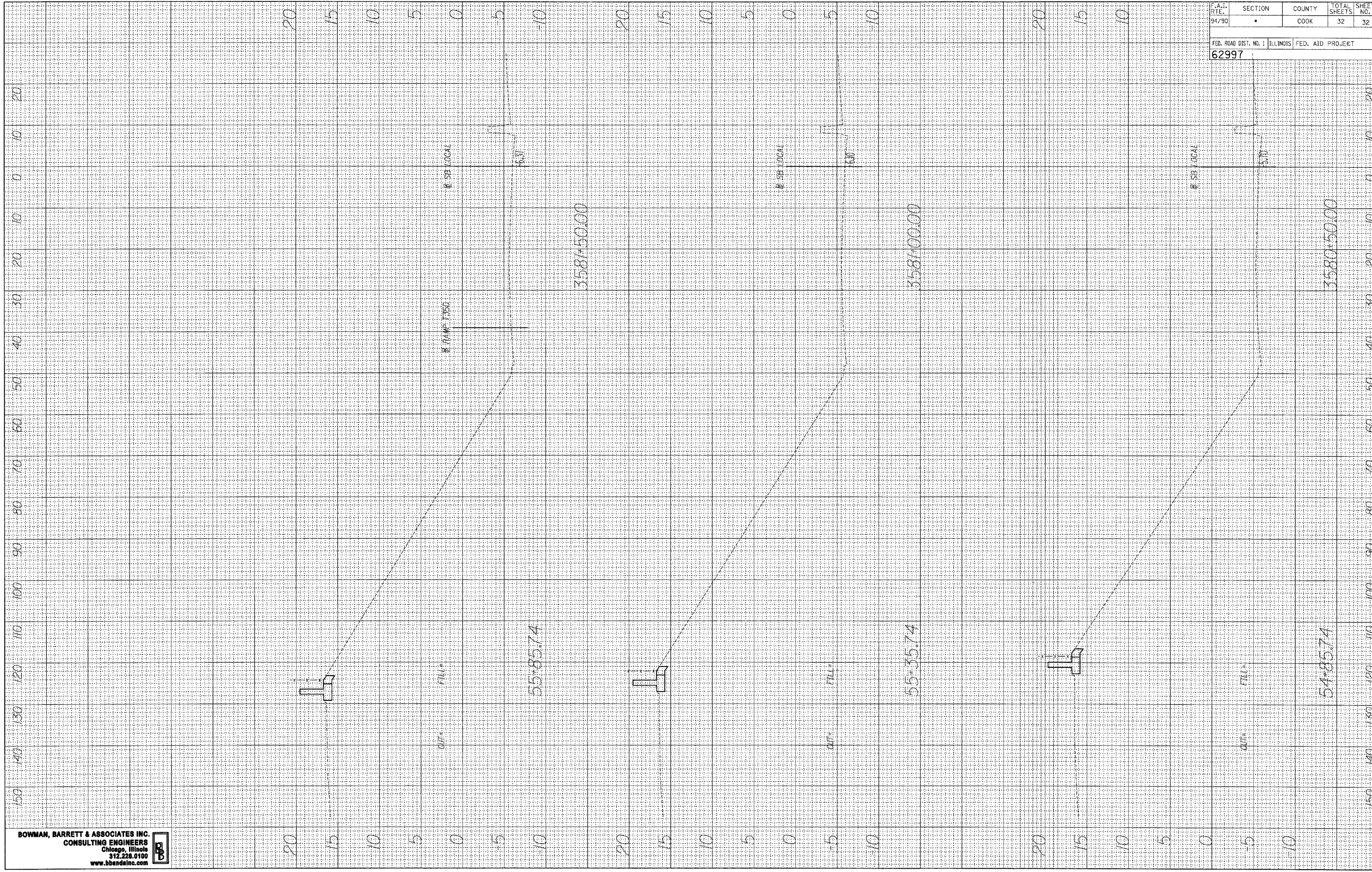
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	32	31

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT  
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FINAL SURVEY SURVEYED BY DATE  
 PLOTTED BY DATE  
 NOTE BOOK NO. TEMPLATE AREAS CHECKED

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



F.A.I. RTE. 94/90	SECTION •	COUNTY COOK	TOTAL SHEETS 32	SHEET NO. 32
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
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