

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	1
			+5	
CONTRACT NO. 62853			= 77	Total Sheets

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAP ROUTE 305 (PALATINE ROAD)
SECTION: 2004-108 BR
UNDER WCRR, UNDER E. FRONTAGE RD.,
UNDER W. FRONTAGE RD. & UNDER WOLF RD.
BRIDGE REHABILITATION

COOK COUNTY
C-91-026-05

FOR INDEX OF SHEETS, SEE SHEET NO. 2

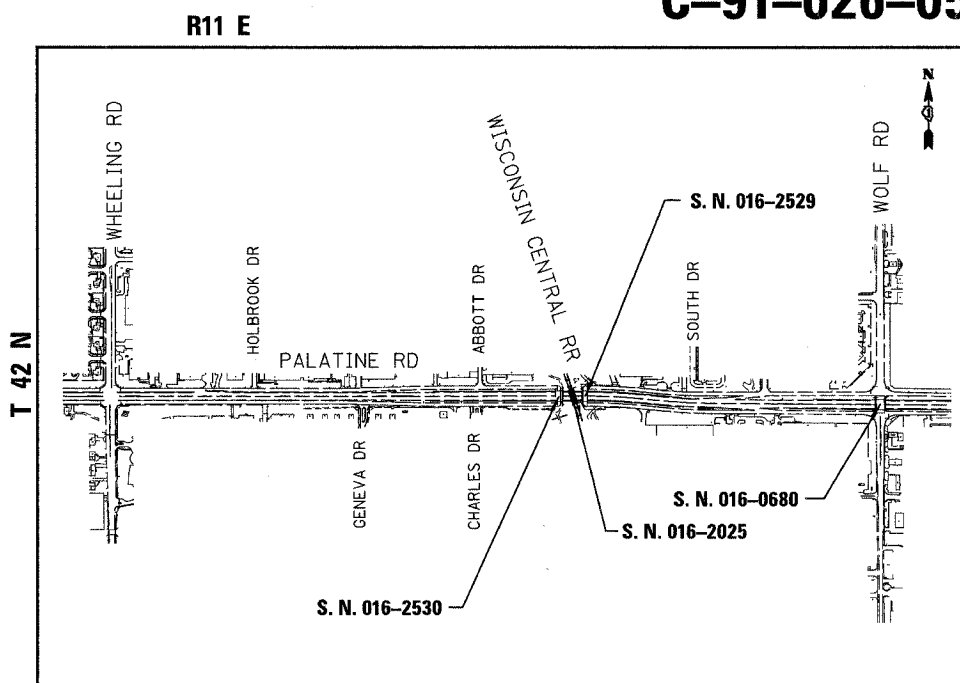
TRAFFIC DATA

2020 ADT = 54,000 - PALATINE ROAD
2020 ADT = 26,000 - WOLF ROAD

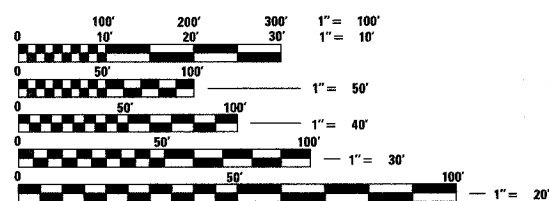
POSTED SPEED LIMIT

PALATINE MAINLINE (W OF R.R.) - 55 MPH
PALATINE MAINLINE (E OF R.R.) - 45 MPH
FRONTAGE ROADS - 30 MPH
WOLF ROAD - 40 MPH

PROJECT LOCATED IN
PROJECT HEIGHTS,
AND WHEELING



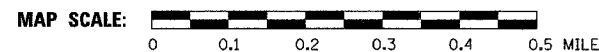
WEST FRONTAGE RD OVER PALATINE RD STATION 420+75 STRUCTURE NO 016-2530 REPAIR SUPERSTRUCTURE AND SUBSTRUCTURE. REMOVE AND REPLACE DECK OVERLAY.	EAST FRONTAGE RD OVER PALATINE RD STATION 422+55 STRUCTURE NO 016-2529 REPAIR SUPERSTRUCTURE AND SUBSTRUCTURE. REMOVE AND REPLACE DECK OVERLAY.
WISC. CENTRAL RR OVER PALATINE RD STATION 421+70 STRUCTURE NO 016-2025 REPAIR SUBSTRUCTURE.	WOLF RD OVER PALATINE RD STATION 1342+78 STRUCTURE NO 016-0680 BEAM REPLACEMENT AND SUBSTRUCTURE REPAIR. REMOVE AND REPLACE DECK OVERLAY.



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.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

CONTRACT NO. 62853



Thomas A. Engel
THOMAS A. ENGEL, P. E.
IL. LIC. NO. 062-047559
EXP 11/30/2005
DATE 01/26/2005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED January 27, 2005
Dina O'Keefe/PP
DISTRICT ENGINEER

August 19, 2005
Mike Hine/ED
ENGINEER OF DESIGN AND ENVIRONMENT

August 19, 2005
Victor Modere/D
DIRECTOR, DIVISION OF HIGHWAYS



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THE STATE OF ILLINOIS

CONSULTANT SERVICES PROJECT MANAGER: MANAR NASHIF (847) 705-4523

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	2

CONTRACT NO. 62853

INDEX OF SHEETS, HIGHWAY STANDARDS AND GENERAL NOTES

INDEX OF SHEETS

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6	SUGGESTED CONSTRUCTION SCHEDULE
7-8	TYPICAL SECTION
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41-46	WEST FRONTAGE ROAD BRIDGE PLANS
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HIGHWAY STANDARDS

515001-02	NAME PLATE FOR BRIDGES
606001-02	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701301-02	LANE CLOSURE 2L, 2W SHORT TIME OPERATIONS
701411-03	LANE CLOSURE MULTILANE AT ENTRANCE OR EXIT RAMP FOR SPEEDS GREATER THAN OR EQUAL TO 45 MPH
701421-01	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS GREATER THAN OR EQUAL TO 45 MPH TO 55 MPH
701422-01	LANE CLOSURE, MULTILANE, FOR SPEEDS GREATER THAN OR EQUAL TO 45 MPH TO 55 MPH
701501-03	URBAN LANE CLOSURE 2L, 2W UNDIVIDED
701601-04	URBAN LANE CLOSURE MULTILANE 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701602-02	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701606-04	URBAN LANE CLOSURE MULTILANE 2W WITH MOUNTABLE MEDIAN
701701-04	URBAN LANE CLOSURE MULTILANE INTERSECTION
701801-03	LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
702001-05	TRAFFIC CONTROL DEVICES
704001-02	TEMPORARY CONCRETE BARRIER
780001-01	TYPICAL PAVEMENT MARKINGS
814001	CONCRETE HANDHOLES
857001	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
880001	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
886001	DETECTOR LOOP INSTALLATIONS
000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001	AREAS OF REINFORCEMENT REBARS
001006	DECIMAL OF AN INCH AND OF A FOOT
635006-02	
635011-01	

GENERAL NOTES - ROADWAY

ALL ELEVATIONS REFER TO 1929 N.G.V.D. DATUM.

THE CONTRACTOR WILL BE REQUIRED TO OBTAIN PERMITS AS REQUIRED AND COORDINATE ALL OPERATIONS WITH THE PALWAUKEE AIRPORT AND THE ILLINOIS DIVISION OF AERONAUTICS FOR ACTIVITIES THAT MAY IMPACT AIRPORT OPERATIONS. THIS WILL INCLUDE EQUIPMENT PARKING AND/OR STORAGE OF MATERIALS.

THE CONTRACTOR WILL BE PROVIDED COPIES OF ALL PERMITS ISSUED TO DATE.

THE CONTRACTOR'S OPERATIONS AND TEMPORARY STORAGE ACTIVITIES SHALL BE LIMITED TO THE WORK AREA AND/OR CONSTRUCTION LIMITS, AND THE AREA IMMEDIATELY ADJACENT TO PROPOSED CURB LINES. ANY ADDITIONAL STAGING AREAS ADJACENT TO THE PROJECT ARE SUBJECT TO PRIOR APPROVAL BY THE ENGINEER. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR COMPLIANCE WITH THE ABOVE REQUIREMENTS.

THE CONTRACTOR'S PERSONNEL SHALL NOT BE ALLOWED TO PARK PERSONAL VEHICLES IN THE WORK AREA AND/OR CONSTRUCTION LIMITS.

WHERE ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC, ADJOINING RESIDENTIAL AREAS AND AIRPORT OPERATIONS.

NO ASBESTOS MATERIALS WERE DETECTED IN ANY BRIDGE CONDITION SURVEYS PERFORMED BY THE STATE.

THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.

THE BITUMINOUS MATERIAL PRIME COAT QUANTITIES HAVE BEEN DETERMINED USING A RATE OF .5 L/M² (1 GAL. PER SQ. YD.). THE AGGREGATE PRIME COAT APPLICATION WAS DETERMINED AT A RATE OF 0.0015 M TON PER SQUARE METER (0.002 TONS PER SQUARE YARD).

SAW CUTTING PRIOR TO ANY REMOVAL ITEMS NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEM BEING REMOVED.

CONTRACT PRICE FOR MEDIAN REMOVAL SHALL INCLUDE REMOVAL OF ANY CURB AND GUTTER ADJACENT TO PAVED MEDIAN.

PERMANENT PAVEMENT MARKING ON THE FRONTAGE ROADS WILL BE PLACED BY OTHERS. THERE WILL BE NO PERMANENT MARKING ON THE FRONTAGE ROAD STRUCTURES.

TWO (2) WEEKS PRIOR TO PLACING PERMANENT PAVEMENT MARKINGS, CONTACT WALTER CZARNY, AREA TRAFFIC FIELD ENGINEER AT 773-685-8386.

PERIODIC CLEANING OF THE INLET FILTERS, AS DIRECTED BY THE ENGINEER, SHALL CONSIST OF INSPECTION, CLEANING (INCLUDES REMOVAL AND PROPER DISPOSAL OF DEBRIS AND SILT THAT HAS ACCUMULATED IN THE FILTER FABRIC BAG), BY VACTORING, REMOVING AND DUMPING, OR ANY OTHER METHOD APPROVED BY THE ENGINEER.

GENERAL NOTES - UTILITIES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 TO HAVE EXISTING UNDERGROUND UTILITIES LOCATED IN THE FIELD (48 HOURS NOTIFICATION IS REQUIRED).

THE CONTRACTOR SHALL PROTECT EXISTING AND NEW UTILITIES. WHEN CONSIDERED NECESSARY BY THE ENGINEER BY METHODS APPROVED BY THE ENGINEER AND SHALL BRACE AND SUPPORT THE UTILITIES PROPERLY IN ORDER TO PREVENT SETTLEMENT, DISPLACEMENT, OR DAMAGE TO THE UTILITIES. THE PROTECTION OF THE UTILITIES AS SPECIFIED HEREIN WILL NOT BE PAID FOR SEPARATELY, BUT THE COST THEREOF SHALL BE INCLUDED IN THE CONTRACT.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE RESPECTIVE UTILITIES AND THE LOCAL AGENCIES INVOLVED.

GENERAL NOTES - FEDERAL AVIATION ADMINISTRATION

THE TALLEST OBJECT OR CONSTRUCTION EQUIPMENT ALLOWED FOR USE IN THE VICINITY OF WOLF ROAD IS LIMITED TO 20 FEET ABOVE EXISTING GROUND UNLESS PRIOR WRITTEN AUTHORIZATION IS OBTAINED FROM THE AIRPORT MANAGER AND THE ILLINOIS DEPARTMENT OF TRANSPORTATION, DIVISION OF AERONAUTICS.

ALL OPERATIONS SHALL BE IN CONFORMANCE WITH AC 150/5370-2E (LATEST EDITION) SAFETY DURING CONSTRUCTION.

PORTABLE FLOOD LIGHTING FOR NIGHTTIME CONSTRUCTION SHALL BE POSITIONED SO AS NOT TO INTERFERE WITH AIRPORT OPERATIONS.

PALWAUKEE MUNICIPAL AIRPORT WILL BE IN OPERATION DURING THE CONSTRUCTION OF THIS PROJECT. COORDINATION OF WORK WITH THE AIRPORT IS MANDATORY SO AS TO MINIMIZE IMPACTS ON AIRPORT OPERATIONS. THE CONTRACTOR SHALL CONTACT THE AIRPORT MANAGER TEN (10) WORKING DAYS IN ADVANCE OF THE START OF CONSTRUCTION SO THAT THE APPROPRIATE NOTAMS MAY BE ISSUED.

CONTRACTOR WILL BE REQUIRED TO PUT AIRPORT FLAGS AND HAVE BEACON LIGHTS ON ALL EQUIPMENT AT ALL TIMES DURING CONSTRUCTION. SEE FLAG DETAIL, THIS SHEET.

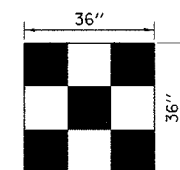
CONTRACTOR SHALL STORE EQUIPMENT AND MATERIALS IN SUCH A MANNER AS NOT TO VIOLATE FEDERAL AVIATION ADMINISTRATION PART 77 IMAGINARY SURFACES ON RUNWAY AND TAXIWAY SAFETY AREAS.

CONTRACTOR SHALL NOTIFY THE AIRPORT MANAGER TEN (10) WORKING DAYS IN ADVANCE OF ANY PLANNED CONSTRUCTION WITHIN RUNWAY APPROACH SURFACES.

TEMPORARY SIGNAL POLES SHALL NOT BE ANY HIGHER THAN THE EXISTING PERMANENT SIGNAL POLES AND SHALL NOT BE PLACED ANY CLOSER TO THE RUNWAY SIX CENTERLINE, SHOWN ON SHEET 16, THAN THE EXISTING PERMANENT SIGNAL POLES.

COMMITMENTS

NONE.



CONSTRUCTION EQUIPMENT AND TRUCK SIGNAL FLAG

REVISIONS	
NAME	DATE
REVISOR - JBS	4/19/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD UNDER WCR, UNDER W. FRONTAGE RD.,
UNDER E. FRONTAGE RD. & UNDER WOLF RD.

GENERAL NOTES

SCALE: NONE
DATE: 02/05
DRAWN BY: ACE/CAD
CHECKED BY: TAE



SUMMARY OF QUANTITIES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	3

CONTRACT NO. 62853

CODE NO.	ITEM	UNIT	URBAN TOTAL QUANTITY	ROADWAY	BRIDGE (WOLF ROAD)	BRIDGE (WEST FRONTAGE ROAD)	BRIDGE (EAST FRONTAGE ROAD)	BRIDGE (WISCONSIN CENTRAL RAILROAD)	SIGNAL (WOLF ROAD)										
				CONSTRUCTION TYPE CODE (100% STATE)															
				1000	SFTY-2A	SFTY-2A	SFTY-2A	SFTY-2A	SFTY-2A	Y031-IF									
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	179	179	0	0	0	0	0										
21101645	TOPSOIL FURNISH AND PLACE, 12"	SQ YD	806	806	0	0	0	0	0										
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	10	10	0	0	0	0	0										
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	10	10	0	0	0	0	0										
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	10	10	0	0	0	0	0										
25200110	SODDING, SALT TOLERANT	SQ YD	806	806	0	0	0	0	0										
25200200	SUPPLEMENTAL WATERING	UNIT	40	40	0	0	0	0	0										
28000510	INLET FILTERS	EACH	7	7	0	0	0	0	0										
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	1.1	1.1	0	0	0	0	0										
40600300	AGGREGATE (PRIME COAT)	TON	4	4	0	0	0	0	0										
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQ YD	386	386	0	0	0	0	0										
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	253	253	0	0	0	0	0										
44000030	BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)	SQ YD	1405	1405	0	0	0	0	0										
44000100	PAVEMENT REMOVAL	SQ YD	732	732	0	0	0	0	0										
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	369	369	0	0	0	0	0										
44000600	SIDEWALK REMOVAL	SQ FT	200	200	0	0	0	0	0										
44001205	BITUMINOUS CONCRETE SURFACE REMOVAL COMPLETE	SQ YD	837	0	367	240	230	0	0										
44001700	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	68	68	0	0	0	0	0										
44003100	MEDIAN REMOVAL	SQ FT	3577	3577	0	0	0	0	0										
50102400	CONCRETE REMOVAL	CU YD	19.7	0	11	2.4	6.3	0	0										
50104100	BRIDGE HANDRAIL REMOVAL	FOOT	66	0	0	0	66	0	0										
50300110	PREFORMED JOINT SEAL 1 3/4"	FOOT	132	0	70	31	31	0	0										
50300120	PREFORMED JOINT SEAL 2 1/2"	FOOT	132	0	70	31	31	0	0										
50300255	CONCRETE SUPERSTRUCTURE	CU YD	86.9	0	72.1	5	9.8	0	0										
50300260	BRIDGE DECK GROOVING	SQ YD	868	0	433	220	215	0	0										
50300300	PROTECTIVE COAT	SQ YD	1138	0	573	310	255	0	0										
50301200	CONCRETE WEARING SURFACE	SQ YD	903	0	433	240	230	0	0										
50301245	FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	680	0	500	30	100	40	0										
50301250	FORMED CONCRETE REPAIR (DEPTH GREATER THAN 5")	SQ FT	200	0	150	10	25	15	0										
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	1210	0	1210	0	0	0	0										
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	5465	0	2150	1684	1631	0	0										

* SPECIALTY ITEM

CONSTRUCTION TYPE CODE
SFTY-2A

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD UNDER WCRR, UNDER W. FRONTAGE RD.,
UNDER E. FRONTAGE RD. & UNDER WOLF RD.

SUMMARY OF QUANTITIES

SCALE: NONE
DATE: 02/05

DRAWN BY: ACE/CAD
CHECKED BY: TAE



Rev.

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN						SIGNAL (WOLF ROAD)						
				ROADWAY	BRIDGE (WOLF ROAD)	BRIDGE (WEST FRONTAGE ROAD)	BRIDGE (EAST FRONTAGE ROAD)	BRIDGE (WISCONSIN CENTRAL RAILROAD)								
				CONSTRUCTION TYPE CODE (100% STATE)												
	1000	SFTY-2A	SFTY-2A	SFTY-2A	SFTY-2A	Y031-IF										
50501130	STRUCTURAL STEEL REPAIR	POUND	100	0	0	0	0	100	0							
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	20110	0	12520	3700	3890	0	0							
50900805	PEDESTRIAN RAILING	FOOT	200	0	135	0	65	0	0							
50901001	STEEL BRIDGE RAIL	FOOT	66	0	0	0	66	0	0							
59000100	EPOXY CRACK SEALING	FOOT	1000	0	110	120	120	650	0							
60300105	FRAMES AND GRATES TO BE ADJUSTED	EACH	3	3	0	0	0	0	0							
60405740	FRAMES AND GRATES TO BE REMOVED	EACH	3	3	0	0	0	0	0							
60406000	FRAMES AND LIDS, TYPE 1, OPEN LID	EACH	3	3	0	0	0	0	0							
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	341	341	0	0	0	0	0							
60619600	CONCRETE MEDIAN, TYPE SB-6.12	SQ FT	3559	3559	0	0	0	0	0							
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	12	0	0	0	0	0							
67100100	MOBILIZATION	L SUM	1	1	0	0	0	0	0							
70101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1	1	0	0	0	0	0							
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	4114	4114	0	0	0	0	0							
70300550	PAVEMENT MARKING TAPE, TYPE III 8"	FOOT	374	374	0	0	0	0	0							
70300560	PAVEMENT MARKING TAPE, TYPE III 12"	FOOT	75	75	0	0	0	0	0							
70300570	PAVEMENT MARKING TAPE, TYPE III 24"	FOOT	159	159	0	0	0	0	0							
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	5900	5900	0	0	0	0	0							
70400100	TEMPORARY CONCRETE BARRIER	FOOT	160	160	0	0	0	0	0							
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	7977	7977	0	0	0	0	0							
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	663	663	0	0	0	0	0							
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	165	165	0	0	0	0	0							
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	107	107	0	0	0	0	0							
* 78003110	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 4"	FOOT	564	564	0	0	0	0	0							
* 78200100	MONODIRECTIONAL PRISMATIC BARRIER REFLECTOR	EACH	8	8	0	0	0	0	0							
* 78200530	BARRIER WALL MARKERS, TYPE C	EACH	24	24	0	0	0	0	0							
78300100	PAVEMENT MARKING REMOVAL	SQ FT	3087	3087	0	0	0	0	0							
* 81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	14	0	0	0	0	0	14							
* 81200170	CONDUIT EMBEDDED IN STRUCTURE, 4" DIA., GALVANIZED STEEL	FOOT	73	0	0	0	0	0	73							
* 81300720	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 16" X 12" X 8"	EACH	2	0	0	0	0	0	2							

* SPECIALTY ITEM

CONSTRUCTION TYPE CODE
SFTY-BN

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD UNDER WCRR, UNDER W. FRONTAGE RD.,
UNDER E. FRONTAGE RD. & UNDER WOLF RD.

SUMMARY OF QUANTITIES

SCALE: NONE
DATE 02/05

DRAWN BY ACE/CAD
CHECKED BY TAE



SUMMARY OF QUANTITIES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62853

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				CONSTRUCTION TYPE CODE (100% STATE)																
				1000	SFTY-2A	SFTY-2A	SFTY-2A	SFTY-2A	Y031-IF											
* 81500200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	14	0	0	0	0	0	0	14										
* 87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1105	0	0	0	0	0	0	1105										
* 87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2032	0	0	0	0	0	0	2032										
* 87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1667	0	0	0	0	0	0	1667										
* 87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1634	0	0	0	0	0	0	1634										
* 87900200	DRILL EXISTING HANDHOLE	EACH	2	0	0	0	0	0	0	2										
* 88600100	DETECTOR LOOP, TYPE I	FOOT	132	0	0	0	0	0	0	132										
* 89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1	0	0	0	0	0	0	1										
* 89502200	MODIFY EXISTING CONTROLLER	EACH	1	0	0	0	0	0	0	1										
* 89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	5281	0	0	0	0	0	0	5281										
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	1210	0	1210	0	0	0	0	0										
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	48	48	0	0	0	0	0	0										
X0323818	CLEANING AND PAINTING EXPOSED REBAR	SQ FT	5	0	0	5	0	0	0	0										
X0712400	TEMPORARY PAVEMENT	SQ YD	732	732	0	0	0	0	0	0										
X4066426	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N70	TON	179	179	0	0	0	0	0	0										
X4067100	POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, IL-4.75, N50	TON	119	119	0	0	0	0	0	0										
X7015000	CHANGEABLE MESSAGE SIGN	CAL MD	10	10	0	0	0	0	0	0										
X7030130	PAVEMENT MARKING TAPE, TYPE III 4", SPECIAL	FOOT	11659	11659	0	0	0	0	0	0										
* X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	856	0	0	0	0	0	0	856										
* X8950200	REBUILD EXISTING HANDHOLE	EACH	1	0	0	0	0	0	0	1										
Z0002600	BAR SPLICERS	EACH	148	0	148	0	0	0	0	0										
Z0003700	BEARING PAD ADJUSTMENT	EACH	84	0	32	26	26	0	0	0										
Z0007300	BRIDGE SIDEWALK REPAIR (FULL DEPTH)	SQ FT	27	0	0	0	27	0	0	0										
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	0	0	0	0	0	0										
[]* Z0030240	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 2	EACH	4	4	0	0	0	0	0	0										
Z0032700	KEYWAY REPAIR	FOOT	87	0	14	0	73	0	0	0										
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	0	0	0	0	1	0	0										

* SPECIALTY ITEM

[] CONSTRUCTION TYPE CODE
SFTY-3A

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD UNDER WCRR, UNDER W. FRONTAGE RD.,
UNDER E. FRONTAGE RD. & UNDER WOLF RD.

SUMMARY OF QUANTITIES

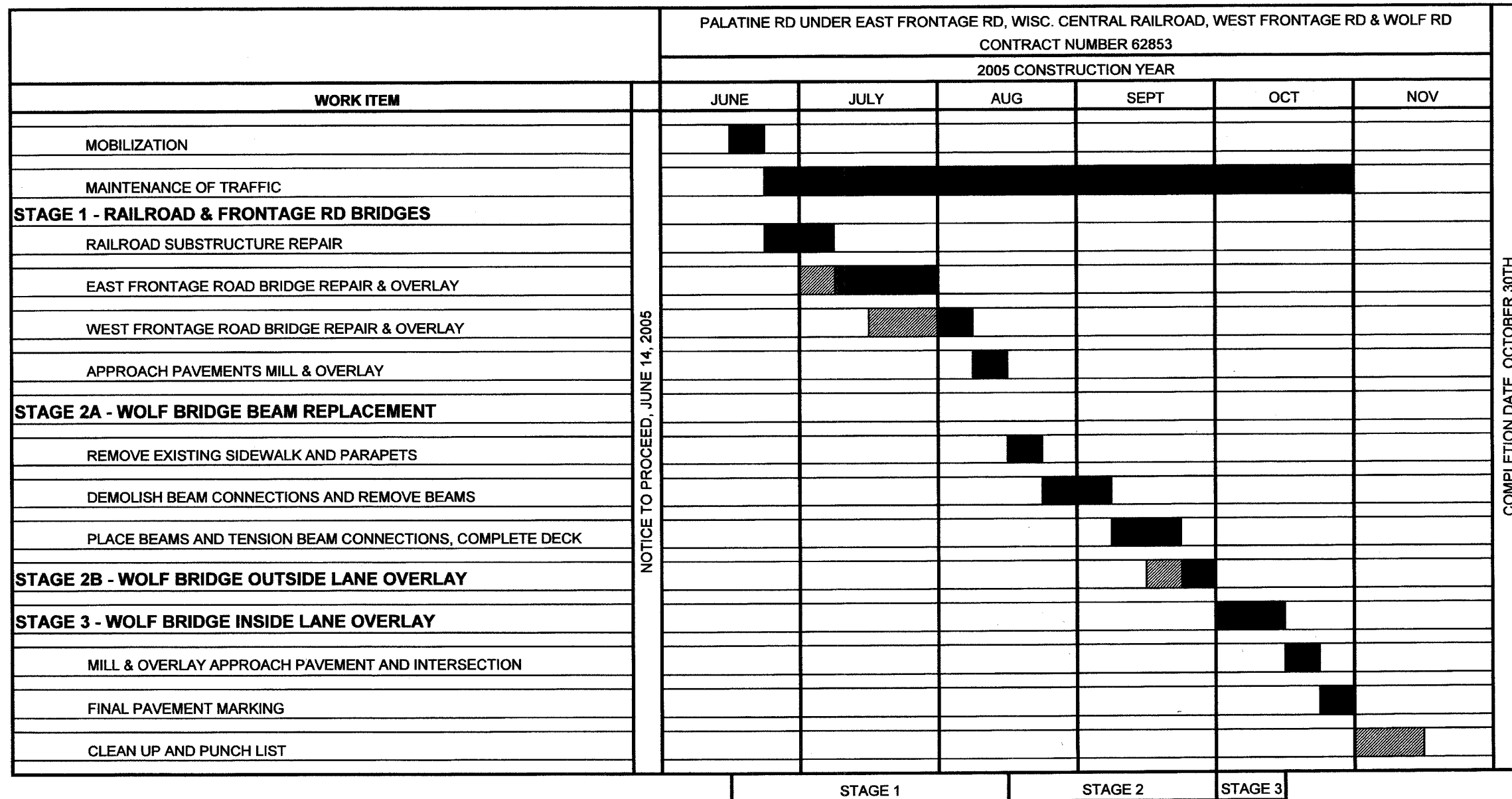
SCALE: NONE
DATE 02/05

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CHECKED BY TAE



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SUGGESTED PROJECT SCHEDULE



NOTE:

THIS PROGRESS SCHEDULE REPRESENTS THE DESIGN SECTION ENGINEER'S SUGGESTED SCHEDULE OF THE OVERALL PROJECT. THE CONTRACTOR SHALL SUBMIT HIS OWN SCHEDULE FOR REVIEW AND APPROVAL.

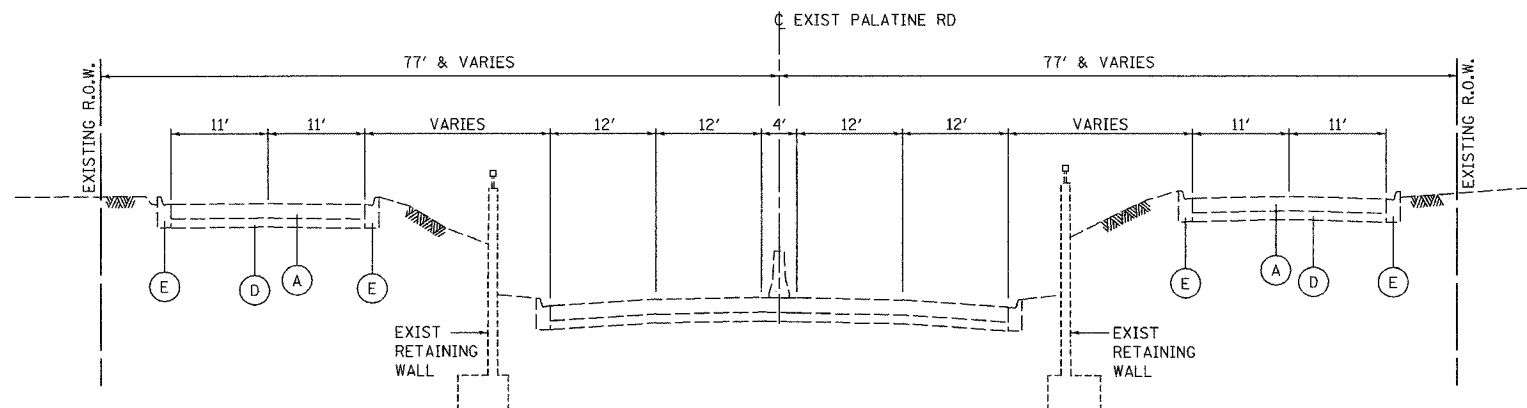
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION PALATINE ROAD UNDER WCRR, UNDER W. FRONTAGE RD., UNDER E. FRONTAGE RD. & UNDER WOLF RD.	
SUGGESTED PROGRESS SCHEDULE	
SCALE: NONE DATE: 02/05	DRAWN BY: ACE/CAD CHECKED BY: TAE

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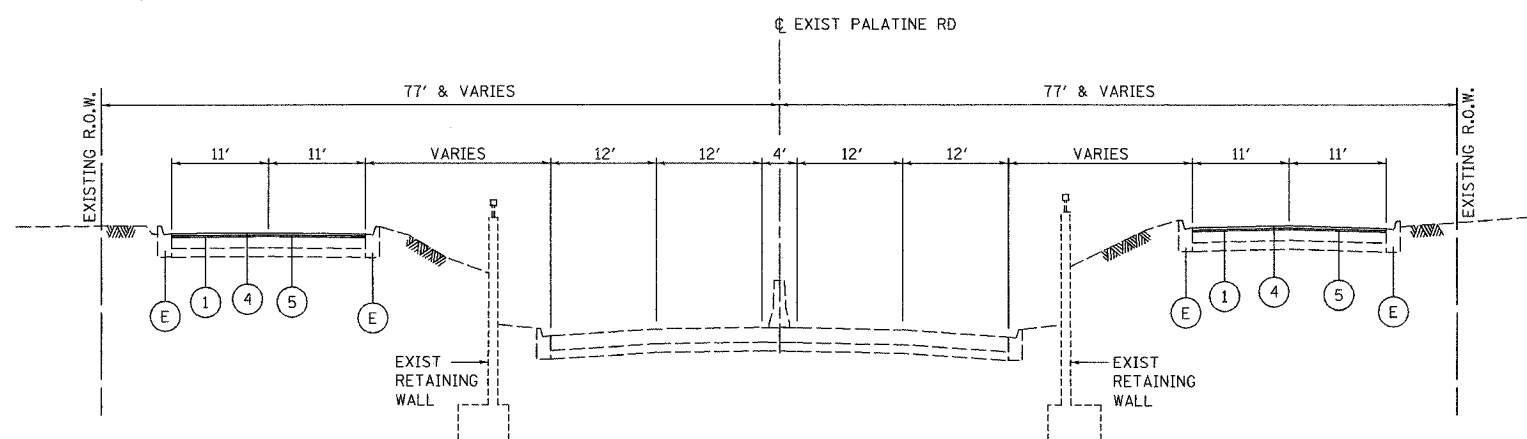
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	7

CONTRACT NO. 62853



EXISTING TYPICAL SECTION
PALATINE FRONTAGE ROADS
STA 420+30
STA 422+90

- EXISTING LEGEND**
- (A) PORTLAND CEMENT CONCRETE PAVEMENT (10-INCH)
 - (B) BITUMINOUS CONCRETE SURFACE (2.5-INCH AND VARIES)
 - (C) PORTLAND CEMENT CONCRETE BASE COURSE (9-INCH)
 - (D) SUB-BASE GRANULAR MATERIAL (6-INCH)
 - (E) COMBINATION CONCRETE CURB AND GUTTER (VARIES)
 - (F) BITUMINOUS/CONCRETE MEDIAN SURFACE
 - (G) SIDEWALK



PROPOSED TYPICAL SECTION
PALATINE FRONTAGE ROADS
STA 420+30
STA 422+90

- PROPOSED LEGEND**
- (1) BITUMINOUS MATERIALS (PRIME COAT)
 - (2) PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
 - (3) COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT
 - (4) BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N70 (1.5")
 - (5) POLYMERIZED LEVELING BINDER (MACHINE METHOD) SUPERPAVE IL-4.75, N50 (1")

NOTE: THESE TYPICAL SECTIONS ARE INTENDED TO REPRESENT THE SCOPE OF OVERLAY ON THE APPROACH PAVEMENTS.

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD UNDER WCR, UNDER W. FRONTAGE RD.,
UNDER E. FRONTAGE RD. & UNDER WOLF RD.

REVISIONS	
NAME	DATE

SCALE: NTS
DATE 02/05

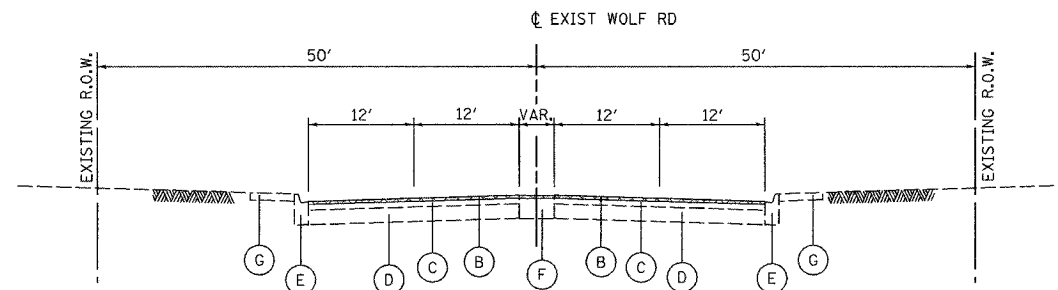
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CONSULTING ENGINEERS

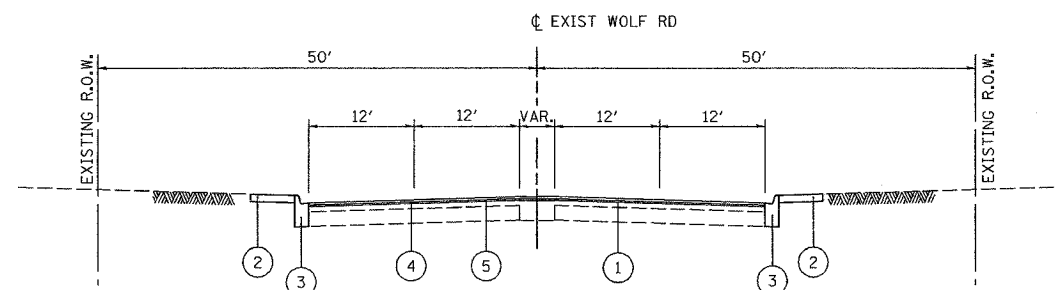
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	8

CONTRACT NO. 62853



- EXISTING LEGEND**
- (A) PORTLAND CEMENT CONCRETE PAVEMENT (10-INCH)
 - (B) BITUMINOUS CONCRETE SURFACE (2.5-INCH AND VARIES)
 - (C) PORTLAND CEMENT CONCRETE BASE COURSE (9-INCH)
 - (D) SUB-BASE GRANULAR MATERIAL (6-INCH)
 - (E) COMBINATION CONCRETE CURB AND GUTTER (VARIES)
 - (F) BITUMINOUS/CONCRETE MEDIAN SURFACE
 - (G) SIDEWALK



- PROPOSED LEGEND**
- (1) BITUMINOUS MATERIALS (PRIME COAT)
 - (2) PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
 - (3) COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT
 - (4) BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N70 (1.5")
 - (5) POLYMERIZED LEVELING BINDER (MACHINE METHOD) SUPERPAVE IL-4.75, N50 (1")

BITUMINOUS MIX CHART

MIXTURE TYPE	PG	RAP % MAX	AIR VOIDS
PROPOSED BITUMINOUS PAVEMENT:			
BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N70 (1.5")	PG 64-22	10	4%±50GYR
POLYMERIZED LEVELING (MACHINE METHOD), SUPERPAVE, IL-4.75 N50 (1")	SBS/SBR PG 76-28	0	2.5%±50GYR
TEMPORARY PAVEMENT:			
BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N50 (1.75")	PG 64-22	15	4%±50GYR
BITUMINOUS BASE COURSE SUPERPAVE (4")	PG 58-22	50	2%±50GYR

THE UNIT WEIGHT FOR ALL BITUMINOUS SURFACE MIXTURES IS 112 LBS/SQ YD/IN

NOTE: THESE TYPICAL SECTIONS ARE INTENDED TO REPRESENT THE SCOPE OF OVERLAY ON THE APPROACH PAVEMENTS.

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD UNDER WCR, UNDER W. FRONTAGE RD.,
UNDER E. FRONTAGE RD. & UNDER WOLF RD.

REVISIONS	
NAME	DATE

SCALE: NTS
DATE 02/05

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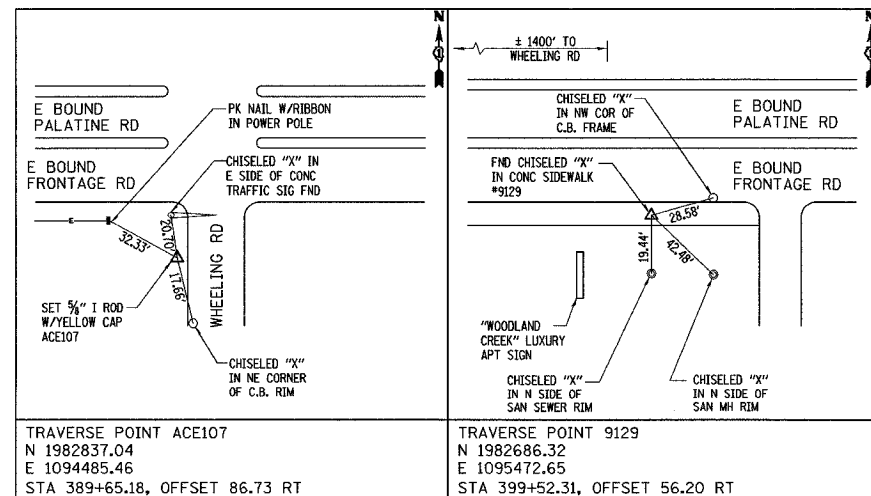
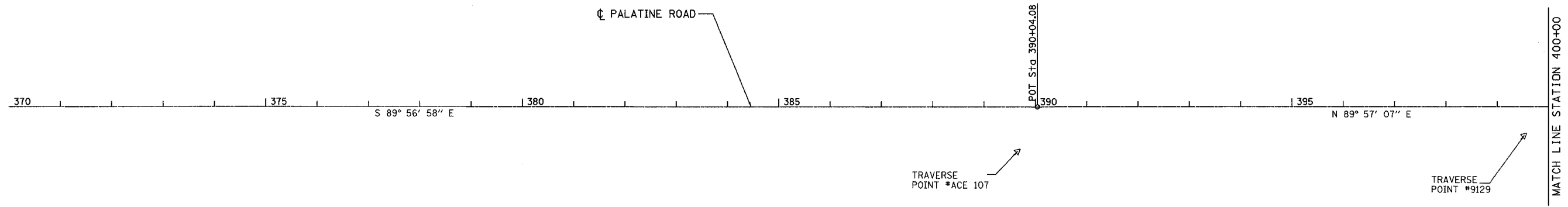
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	11

CONTRACT NO. 62878

BENCHMARKS

- | | | | |
|------|--|-------|--|
| ACE5 | SET RR SPIKE IN W. SIDE OF 1ST UTILITY POLE LOCATED NORTH OF HOLBROOK RD & ON THE EAST SIDE OF WHEELING RD +/- 900' N. OF PALATINE RD
ELEV = 663.12 | BM24P | CHISELED "LJ" IN N.E. CORNER OF THE NORTH ABUT. OF THE WOLF RD BRIDGE OVER PALATINE RD
ELEV = 649.60 |
| ACE6 | SET RR SPIKE IN W. SIDE OF 2ND UTILITY POLE S. OF THE "WOODLAND CREEK" ENT. AND ON THE EAST SIDE OF WHEELING RD +/- 1500' S. OF PALATINE RD
ELEV = 653.63 | BM11 | CHISELED "X" IN N.W. BOLT OF "WOLF RD" EXIT SIGN LOCATED ON THE N. SIDE OF PALATINE RD & EAST OF WOLF RD
ELEV = 648.63 |
| ACE7 | SET RR SPIKE IN W. SIDE OF 1ST UTILITY POLE W. OF ELMHURST RD (RTE 93) & ALONG THE N. ROW OF COM ED'S TRANSMISSION TOWER EASEMENT
ELEV = 663.33 | BM11A | CHISELED "X" IN S.E. BOLT OF FIRE HYDRANT LOCATED ON THE SOUTH SIDE OF THE W. BND FRONTAGE RD (OLD PALATINE RD) 5TH F.H. WEST OF MILWAUKEE AVE (RTE 21)
ELEV = 642.95 |
| ACE8 | SET RR SPIKE IN W. SIDE OF 1ST UTILITY POLE S. OF KEILWORTH AVE AND ON THE EAST SIDE OF ELMHURST RD (RTE 83) & 1700' S. OF PALATINE RD
ELEV = 663.55 | BM11B | CHISELED "X" IN S.W. BOLT OF FIRE HYDRANT LOCATED ON THE SOUTH SIDE OF THE W. BND FRONTAGE RD (OLD PALATINE RD) 2ND F.H. WEST OF MILWAUKEE AVE (RTE 21)
ELEV = 642.21 |
| | | ACE3 | CHISELED "X" IN N.W.'LY BONNET BOLT OF 1ST FIRE HYDRANT N. OF MESSNER DR & OF THE WEST SIDE OF WOLF RD +/- 1800' N. OF PALATINE RD
ELEV = 646.09 |
| | | ACE4 | CHISELED "LJ" IN WEST END OF CONC RETAINING WALL W/ 24" CMP, 165' SOUTH OF THE SOUTH LINE OF "HARPER COLLEGE NORTH EAST CENTER" & ON THE EAST SIDE OF WOLF RD +/- 1800' <
ELEV = 647.67 |



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 PALATINE ROAD UNDER W.C.R.R., UNDER W. FRONTAGE RD.,
 UNDER E. FRONTAGE RD. & UNDER WOLF RD.

**PALATINE ROAD
 ALIGNMENT AND TIE PLAN**

SCALE: 1"=100'
 DATE 02/05
 DRAWN BY ACE/CAD
 CHECKED BY TAE

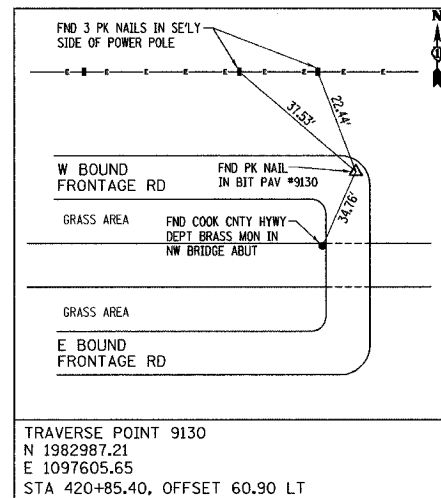
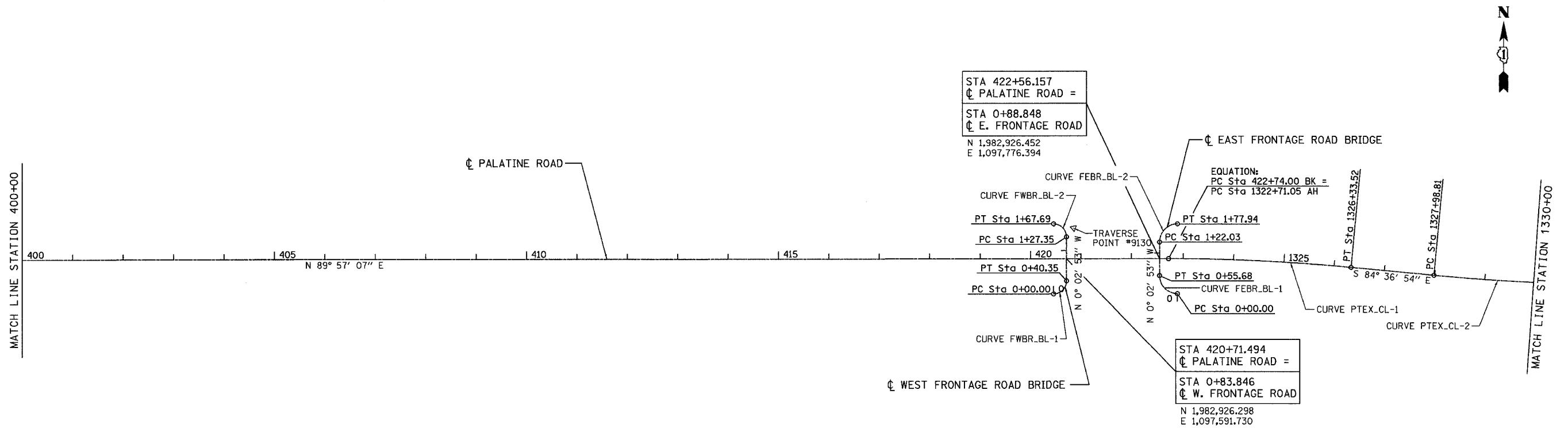


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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	12

CONTRACT NO. 62878

Prop. Curve FWBR.BL-2 PI Sta. 1+52.86 $\Delta = 88^\circ 54' 36''$ (LT) D = 220' 22' 06" T = 25.51' R = 26.00' L = 40.35' E = 10.42' PC Sta. 1+27.35 PT Sta. 1+67.69	Prop. Curve FWBR.BL-1 PI Sta. 0+25.51 $\Delta = 88^\circ 54' 36''$ (LT) D = 220' 22' 06" T = 25.51' R = 26.00' L = 40.35' E = 10.42' PC Sta. 0+00.00 PT Sta. 0+40.35	Prop. Curve FEBR.BL-1 PI Sta. 0+35.14 $\Delta = 88^\circ 36' 36''$ (RT) D = 159' 09' 18" T = 35.14' R = 36.00' L = 55.68' E = 14.31' PC Sta. 0+00.00 PT Sta. 0+55.68	Prop. Curve FEBR.BL-2 PI Sta. 1+57.40 $\Delta = 88^\circ 58' 47''$ (RT) D = 159' 09' 18" T = 35.36' R = 36.00' L = 55.91' E = 14.46' PC Sta. 1+22.03 PT Sta. 1+77.94	Prop. Curve PTEX.CL-1 PI Sta. 1324+52.42 $\Delta = 5^\circ 25' 59''$ (RT) D = 1' 29' 56" T = 181.37' R = 3,822.50' L = 362.46' E = 4.30' PC Sta. 1322+71.05 PT Sta. 1326+33.52	Prop. Curve PTEX.CL-2 PI Sta. 1329+71.24 $\Delta = 4^\circ 59' 07''$ (LT) D = 1' 26' 47" T = 172.43' R = 3,961.00' L = 344.64' E = 3.75' PC Sta. 1327+98.81 PT Sta. 1331+43.46
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD UNDER WCRB, UNDER W. FRONTAGE RD.,
UNDER E. FRONTAGE RD. & UNDER WOLF RD.

**PALATINE ROAD
ALIGNMENT AND TIE PLAN**

SCALE: 1"=100'
DATE: 02/05

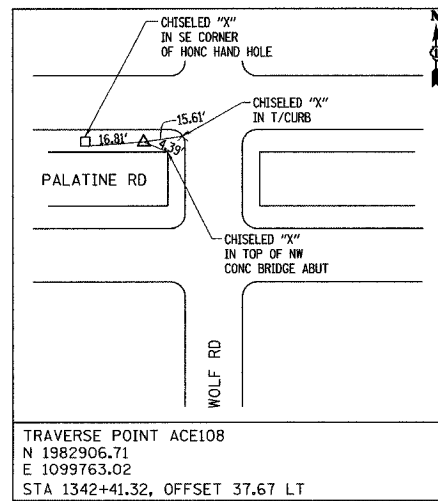
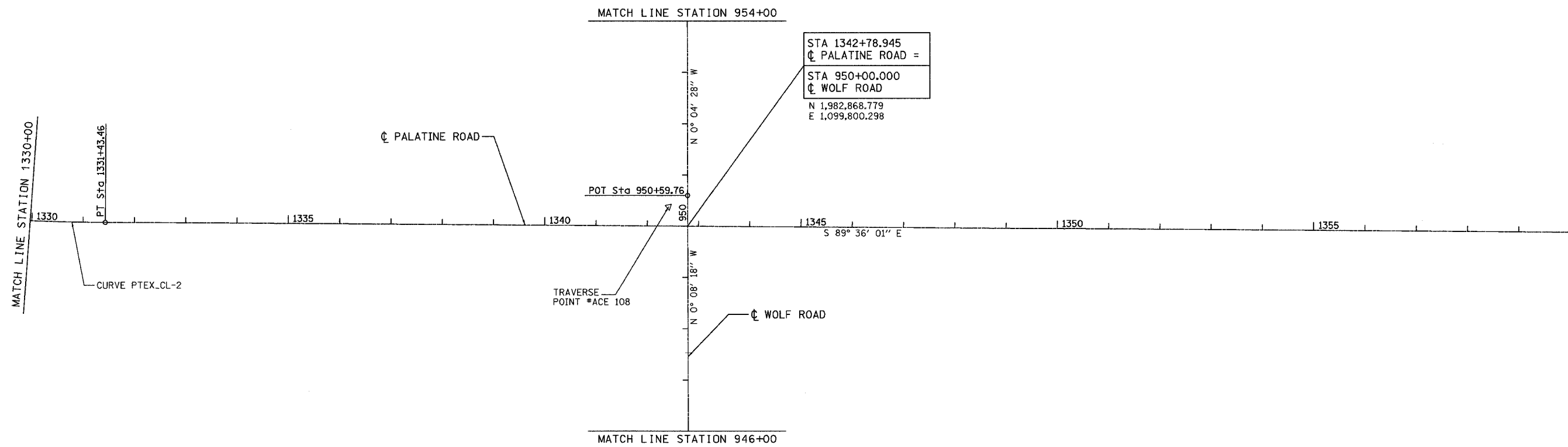
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CONSULTING ENGINEERS**

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	13

CONTRACT NO. 62878



TRVERSE POINT TIE DIAGRAMS
(NOT TO SCALE)

REVISIONS	
NAME	DATE

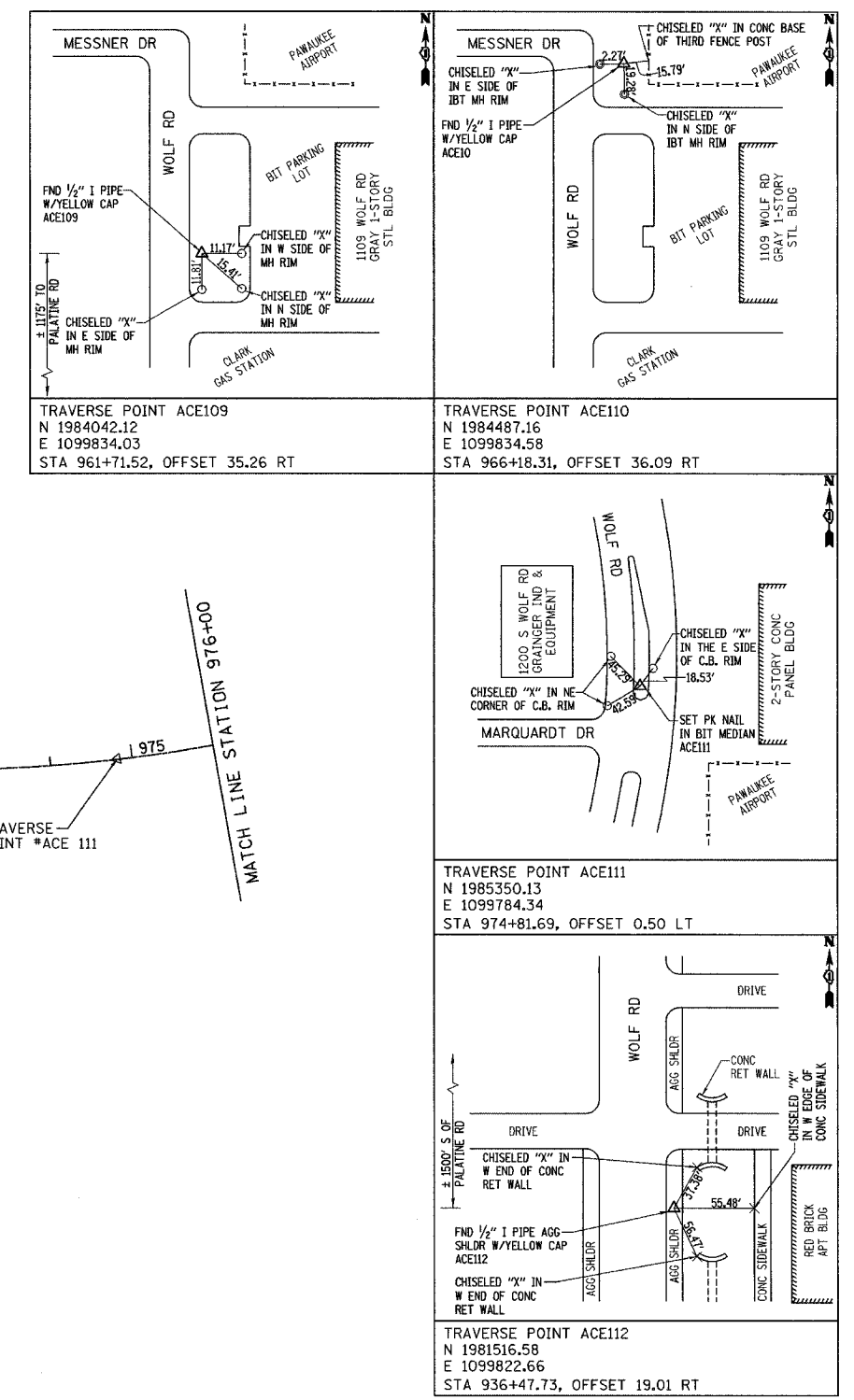
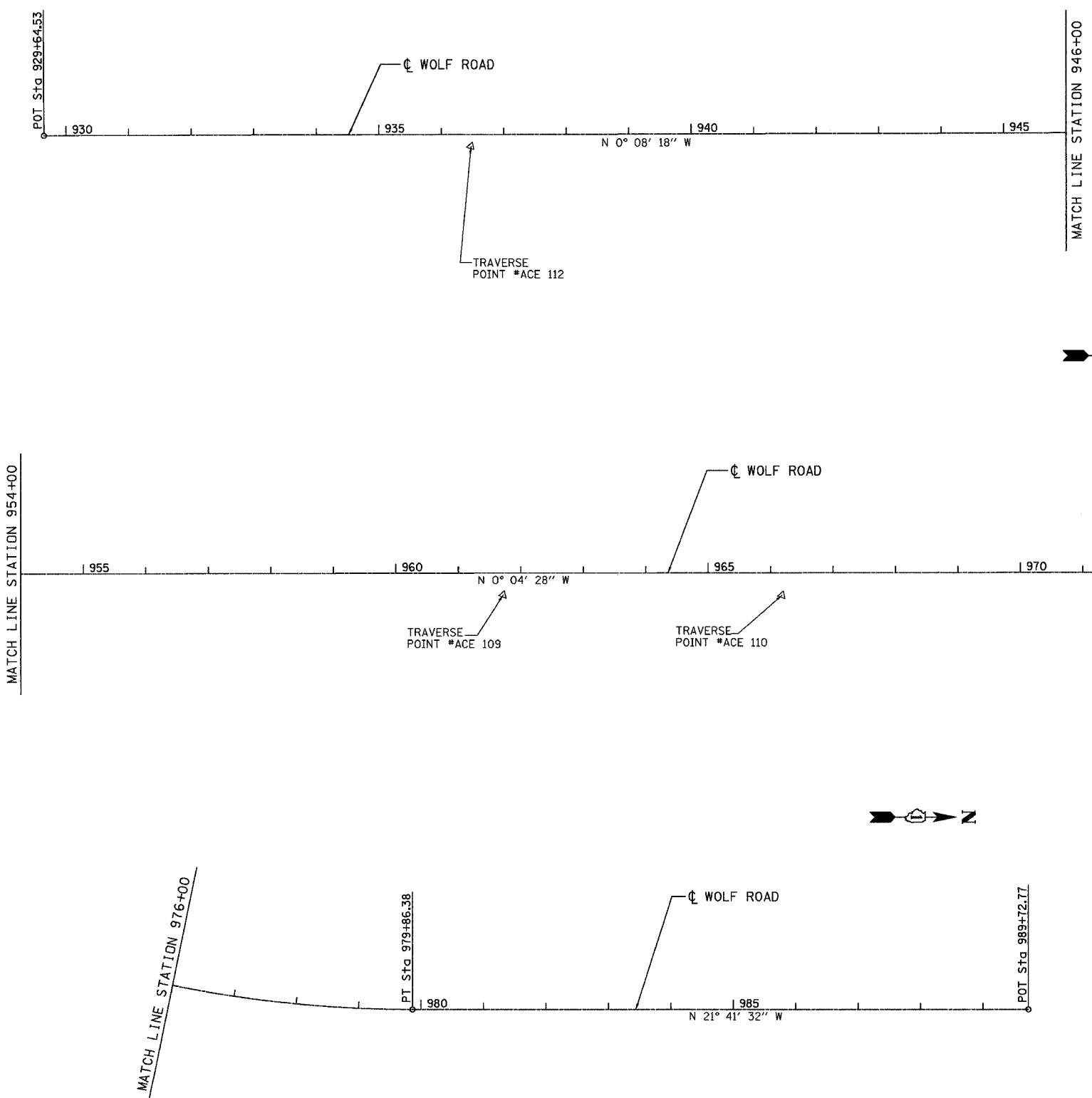
ILLINOIS DEPARTMENT OF TRANSPORTATION
 PALATINE ROAD UNDER WCR, UNDER W. FRONTAGE RD.,
 UNDER E. FRONTAGE RD. & UNDER WOLF RD.

**PALATINE ROAD
 ALIGNMENT AND TIE PLAN**

SCALE: 1"=100'
 DATE 02/05

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 PALATINE ROAD UNDER W.C.R.R., UNDER W. FRONTAGE RD.,
 UNDER E. FRONTAGE RD. & UNDER WOLF RD.

**WOLF ROAD
 ALIGNMENT AND TIE PLAN**

SCALE: 1"=100'
 DATE 02/05

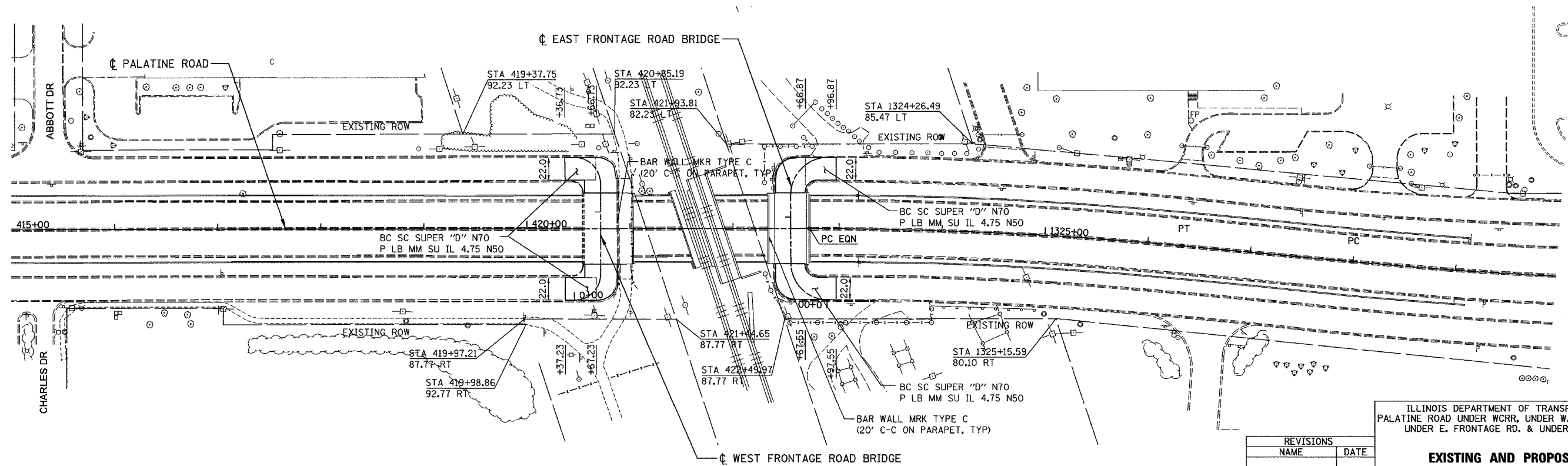
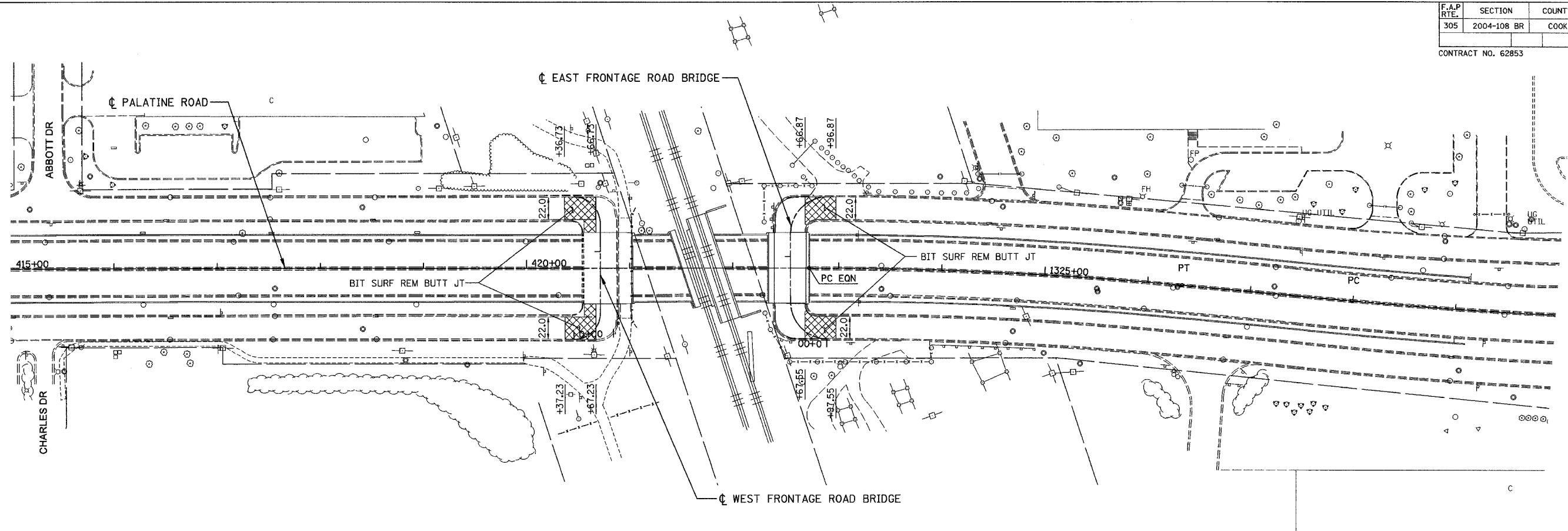
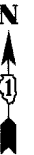
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AMERICAN
 CONSULTING ENGINEERS

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	15

CONTRACT NO. 62853



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 PALATINE ROAD UNDER WCR, UNDER W. FRONTAGE RD.,
 UNDER E. FRONTAGE RD. & UNDER WOLF RD.

**EXISTING AND PROPOSED
 ROADWAY PLAN**

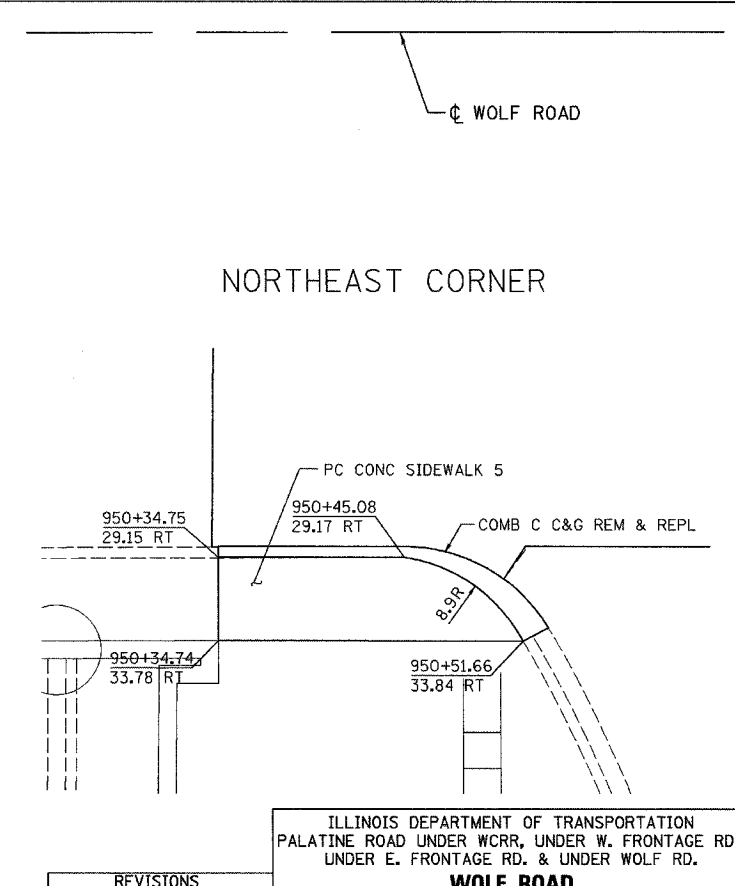
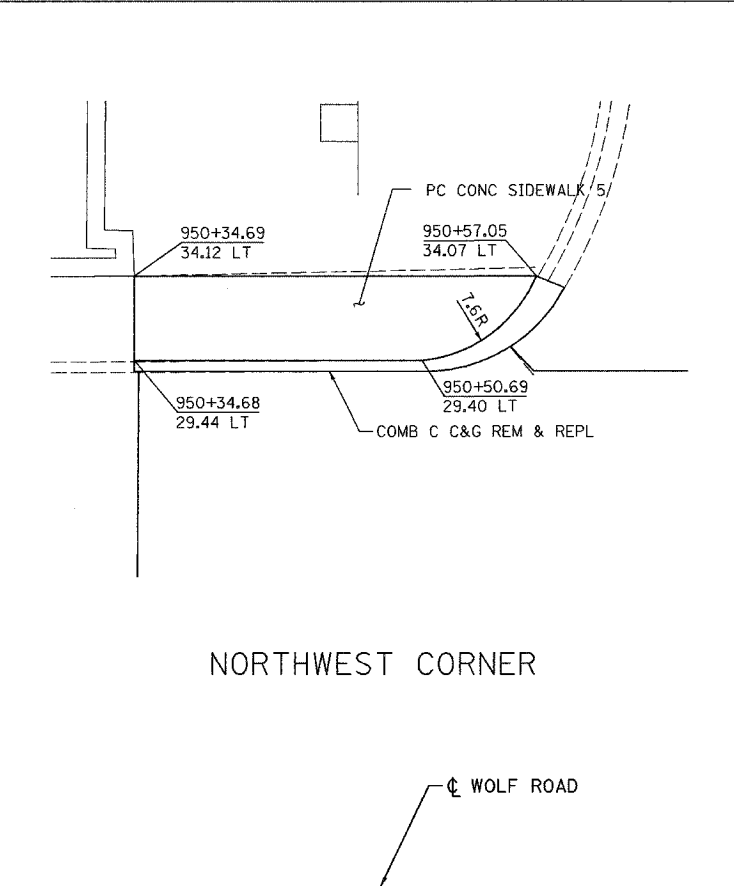
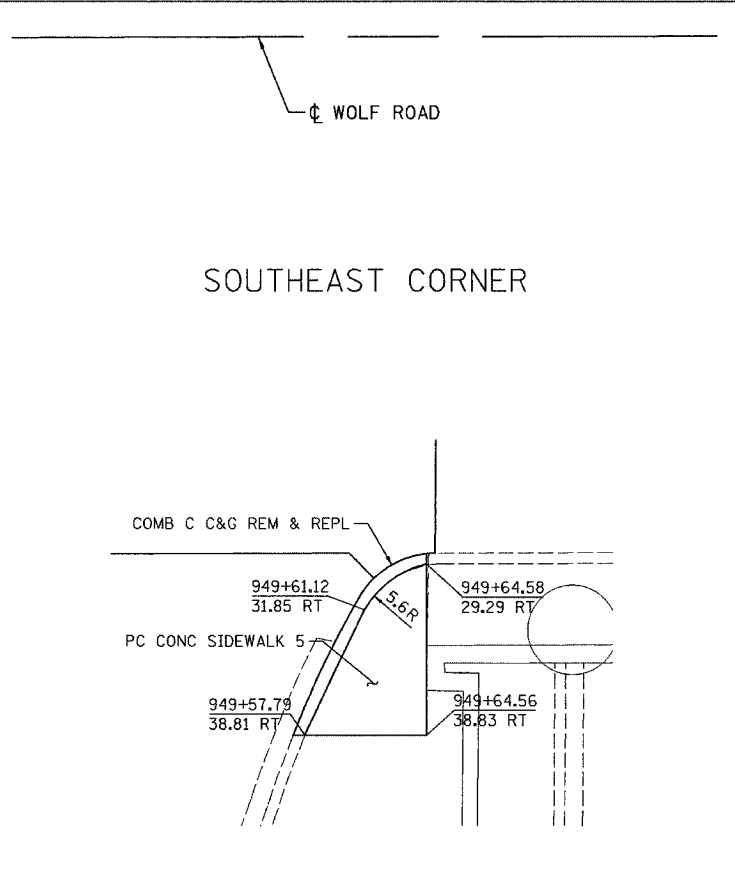
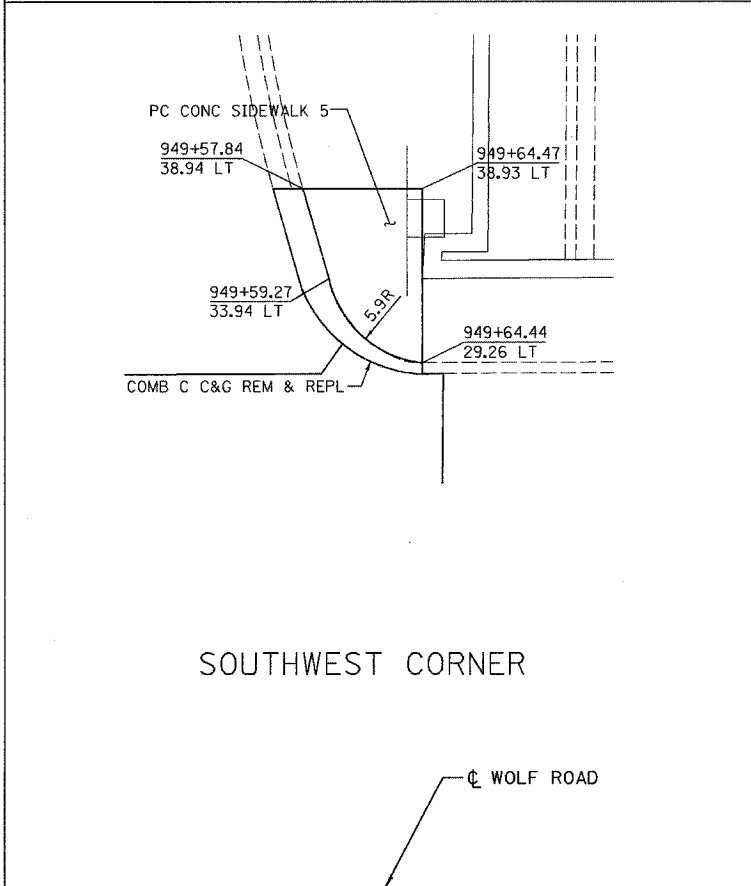
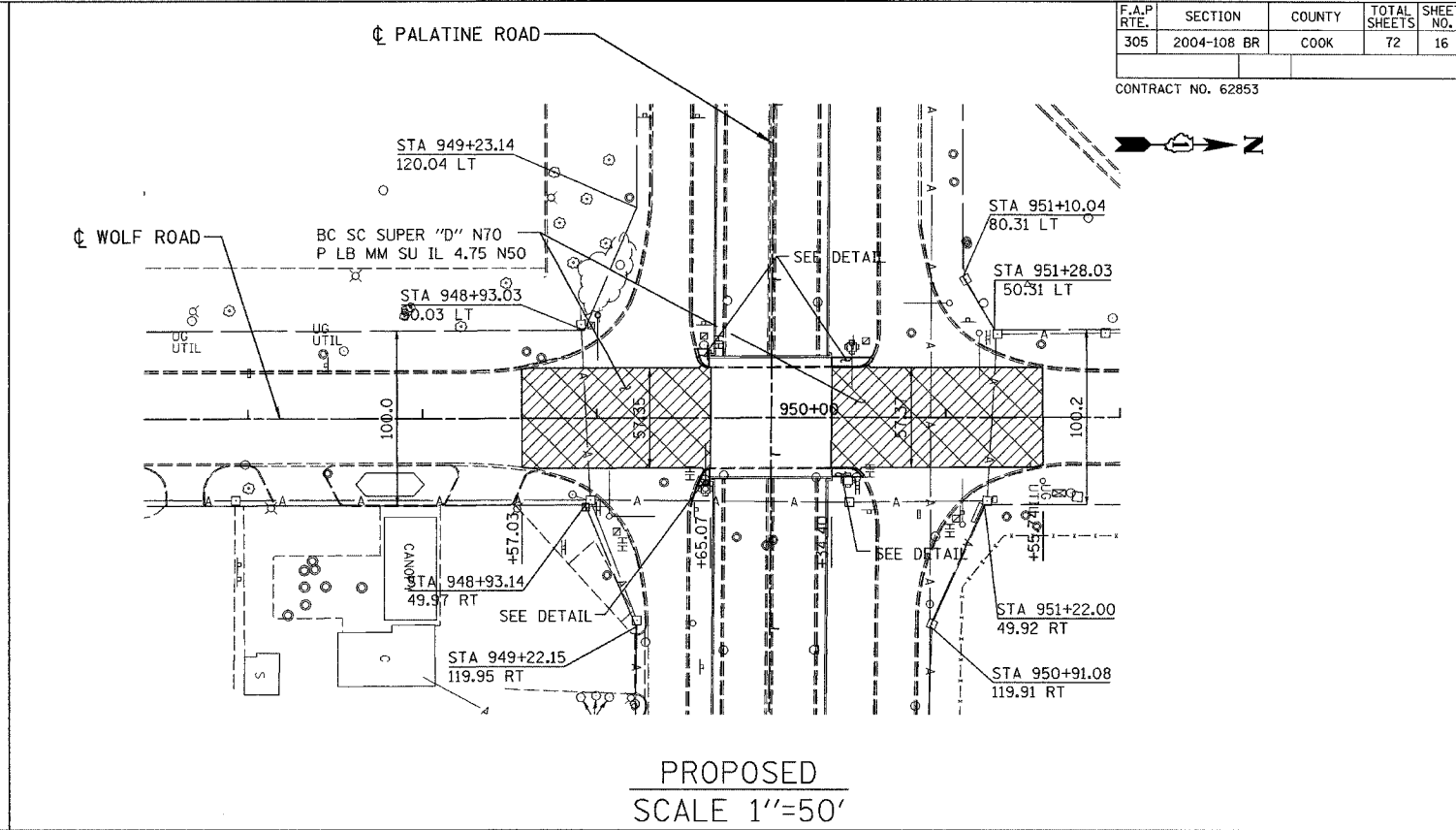
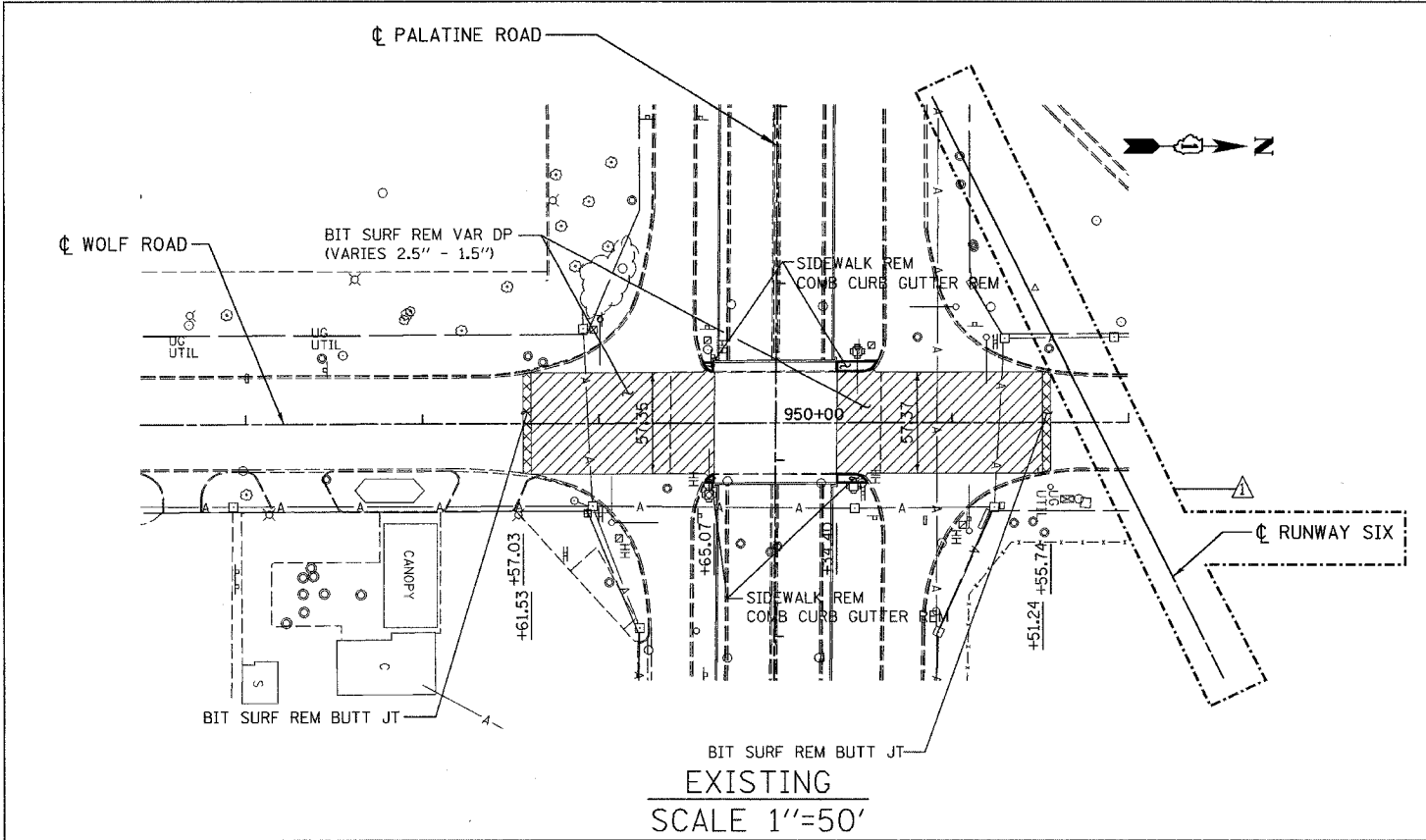
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	16

CONTRACT NO. 62853



SIDEWALK DETAILS
NTS

REVISIONS	
NAME	DATE
REVISED - JBS	4/19/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD UNDER WCR, UNDER W. FRONTAGE RD.,
UNDER E. FRONTAGE RD. & UNDER WOLF RD.

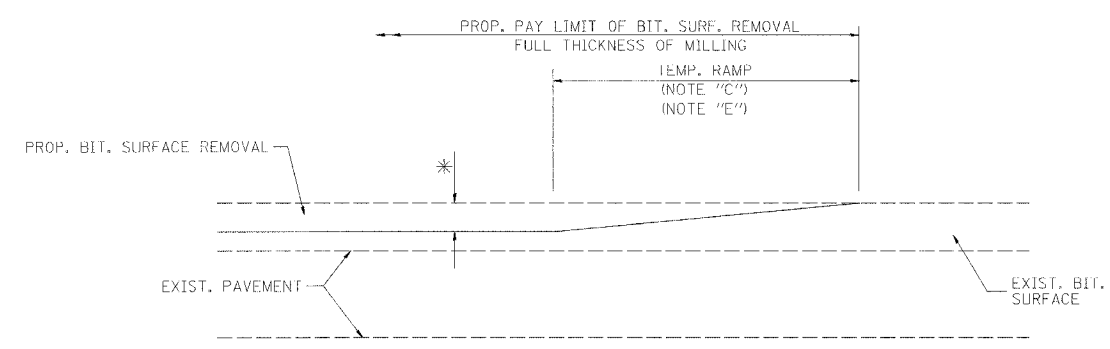
**WOLF ROAD
EXISTING AND PROPOSED
ROADWAY PLAN**

SCALE: AS NOTED
DATE: 02/05
DRAWN BY: ACE/CAD
CHECKED BY: TAE



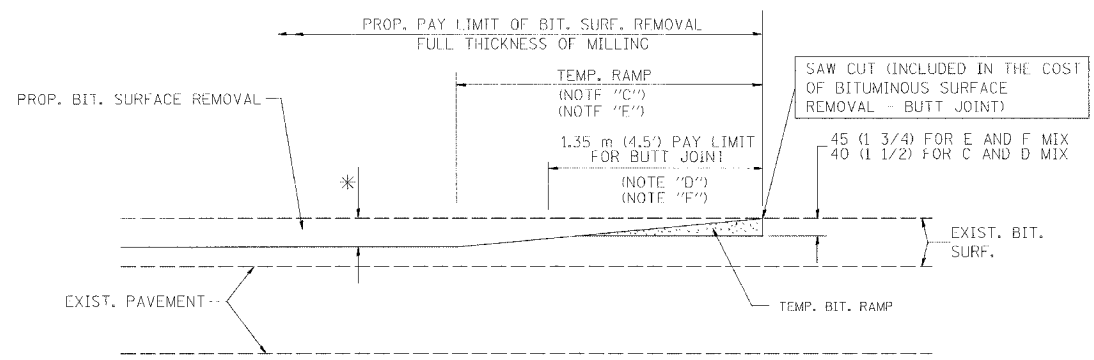
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P.A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	17
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



MILLED TEMPORARY RAMP
(FOR BUTT JOINT AND BIT. TAPER SEE DETAIL BELOW)

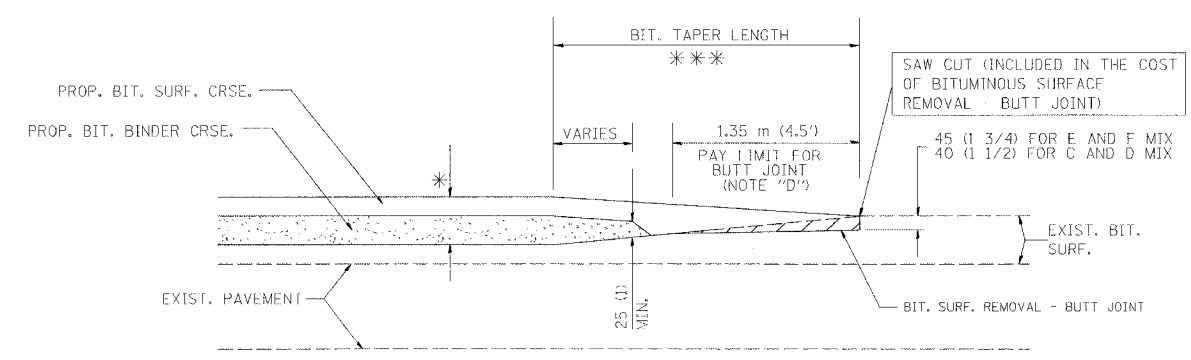
OPTION 1



BITUMINOUS CONSTRUCTED TEMPORARY RAMP
(FOR BUTT JOINT AND BIT. TAPER SEE DETAIL BELOW)

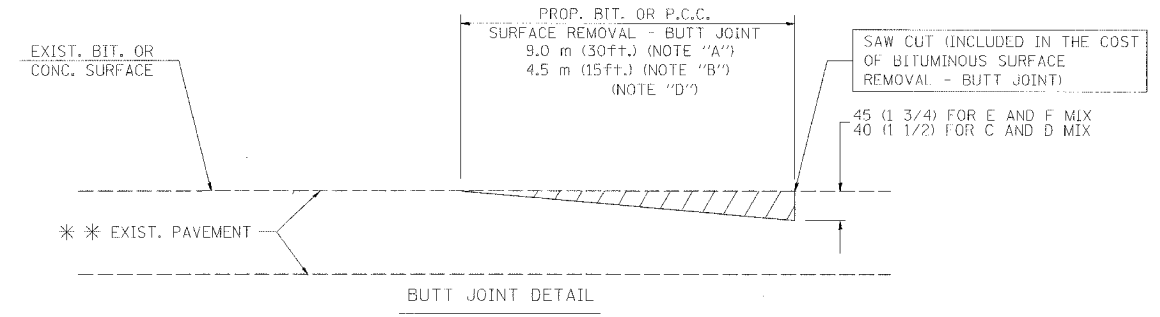
OPTION 2

TYPICAL TEMPORARY RAMP

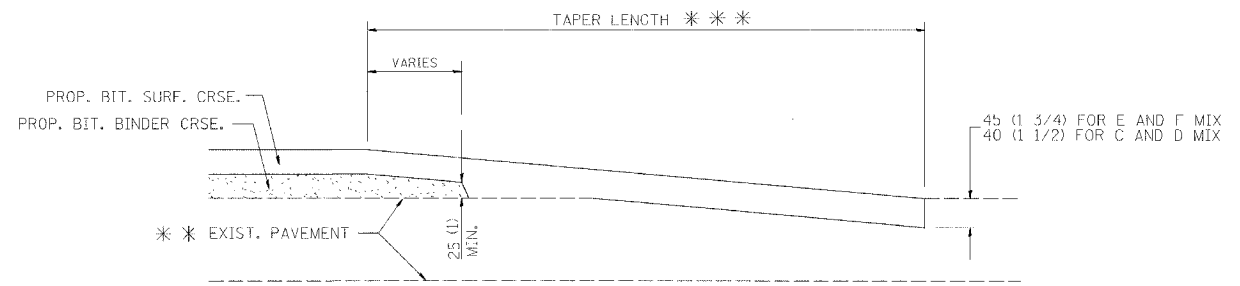


BUTT JOINT AND BITUMINOUS TAPER

TYPICAL BUTT JOINT AND BITUMINOUS TAPER
FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



BITUMINOUS TAPER DETAIL

TYPICAL BUTT JOINT AND BITUMINOUS TAPER
FOR RESURFACING ONLY

*** PC CONCRETE, BITUMINOUS OR BITUMINOUS 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 BITUMINOUS SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED BITUMINOUS COURSES.
- E: TAPER THE TEMP. RAMP AT A RATE OF 900 (3 FT.) PER INCH OF MILLING THICKNESS.
- F: INSTALLATION AND REMOVAL OF THE 1.35 m (4.5') TEMP. BIT. RAMP WILL BE PAID AS "BITUMINOUS SURFACE REMOVAL - BUTT JOINT".
- G: SEE ARTICLE 406.18 AND 406.24 OF THE STANDARD SPECIFICATIONS FOR "BITUMINOUS AND PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 6.1 m (20') PER 25 (1) RESURFACING (NOTE 'A')
3.0 m (10') PER 25 (1) RESURFACING (NOTE 'B')

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

BASIS OF PAYMENT:
THE BUTT JOINT WILL BE PAID FOR PER SQUARE METER (SQUARE YARD.) AS "BITUMINOUS SURFACE REMOVAL - BUTT JOINT" OR AS "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

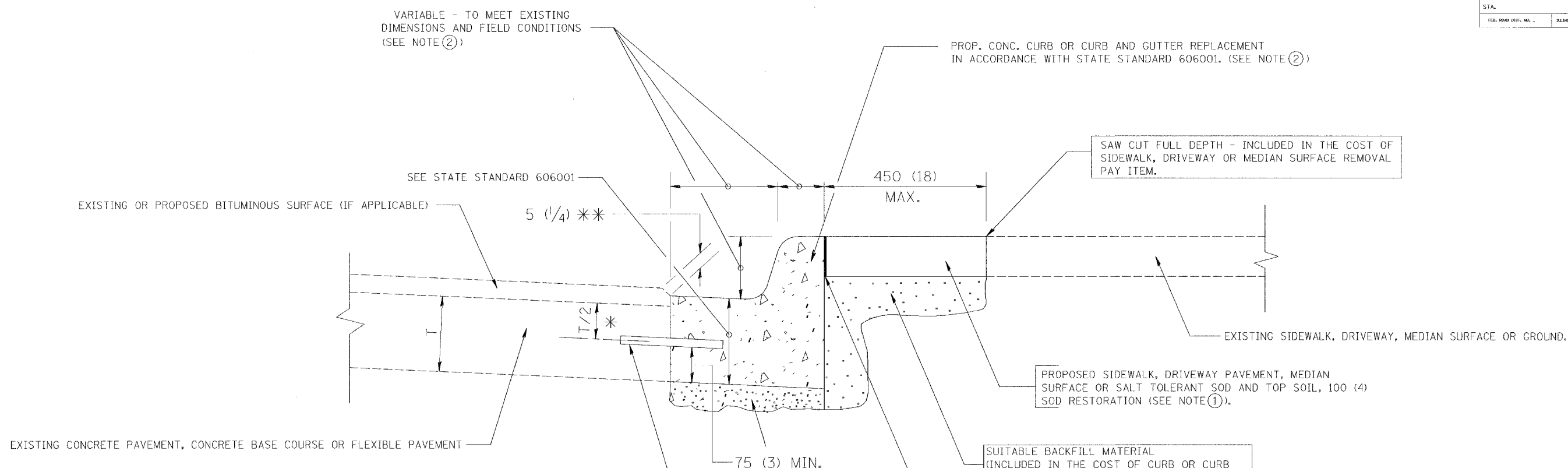
REVISIONS	
NAME	DATE
M. DE YONG	6-13-90
M. DE YONG	7-3-90
M. DE YONG	3-27-92
R. SHAH	09/09/94
R. SHAH	10/25/94
A. ABBAS	03/21/97
M. GOMEZ	04/06/01

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND BITUMINOUS TAPER DETAILS

SCALE: NONE
DATE PLOTTED: **DATE**
DRAWN BY
CHECKED BY

F. A. RITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	17A
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



- * 75 (3) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.
- ** IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

- NOTE:
- ① SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.
 - SALT TOLERANT SOD AND TOP SOIL, 100 (4) RESTORATION WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.
 - ② CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.
 - ③ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.
 - ④ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.
 - ⑤ THE COST OF BITUMINOUS SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.
 - ⑥ THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.
 - ⑦ THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

BASIS OF PAYMENT:
 THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER METER (FOOT) FOR "CURB REMOVE AND REPLACEMENT" OR "COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT".

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

REVISIONS	
NAME	DATE
M. DE YONG	05/28/91
A. HOUSEH	03/11/94
R. SHAH	02/24/95
R. SHAH	03/02/95
R. SHAH	08/19/96
R. SHAH	09/12/96
R. SHAH	09/19/96
R. SHAH	10/03/96
A. ABBAS	03/21/97
M. GOMEZ	01/22/01

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
**CURB OR
 CURB AND GUTTER
 REMOVAL AND REPLACEMENT**

SCALE: NONE
 DATE: **DATE**
 DRAWN BY: _____
 CHECKED BY: _____

BD600-06 (BD-24)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	18

CONTRACT NO. 62853

MAINTENANCE OF TRAFFIC STAGING

 PRE-STAGE

CONSTRUCT TEMPORARY PAVEMENT AS NEEDED FOR STAGE 1 RAMPS.

STAGE 1 - SUGGESTED TRAFFIC PLAN

WEST OF RAILROAD: CLOSE SOUTH FRONTAGE ROAD AT WHEELING ROAD, EXCEPT FOR LOCAL TRAFFIC. PLACE AND MAINTAIN BARRICADES ON NORTH FRONTAGE ROAD EAST OF LAST DRIVEWAY ACCESS.

EAST OF RAILROAD: PLACE AND MAINTAIN BARRICADES ON SOUTH FRONTAGE ROAD JUST EAST OF WORK ZONE. PROVIDE TWO-WAY TRAFFIC ON NORTH FRONTAGE ROAD FROM ALLSTATE DRIVEWAY TO SOUTH DRIVE. CLOSE NORTH FRONTAGE ROAD WEST OF THE ALLSTATE DRIVEWAY.

SUGGESTED WORK ZONES:
 EAST AND WEST FRONTAGE ROAD BRIDGES OVER PALATINE ROAD.

STAGE 2A & 2B - SUGGESTED TRAFFIC PLAN

WOLF ROAD:
 MAINTAIN ONE LANE OF TRAFFIC FROM EACH DIRECTION APPROACHING INTERSECTION WITH PALATINE ROAD AND ACROSS THE BRIDGE. PROVIDE TEMPORARY BARRIER WALL OUTSIDE OF THE TRAFFIC FOR STAGE 2A.

SUGGESTED WORK ZONES:
 STAGE 2A: REPLACE THE THREE OUTER BEAMS ON BOTH SIDE OF THE BRIDGE.

STAGE 2B: CONSTRUCT THE CONCRETE OVERLAY ON THE OUTSIDE OF THE BRIDGE.

STAGE 3 - SUGGESTED TRAFFIC PLAN

WOLF ROAD:
 MAINTAIN ONE LANE OF TRAFFIC EACH DIRECTION APPROACHING THE INTERSECTION WITH PALATINE ROAD. RUN THE TRAFFIC ALONG THE OUTSIDE EDGES OF THE BRIDGE.

SUGGESTED WORK ZONES:
 CONSTRUCT THE REPAIRS AND CONCRETE OVERLAY ON THE INSIDE OF THE BRIDGE.

GENERAL NOTES - TRAFFIC CONTROL

THE CONTRACTOR SHALL NOTIFY JAMES SHERIDAN AT CITY OF PROSPECT HEIGHTS AT 847-398-6070 X 209 AND RICHARD GLENZ AT VILLAGE OF WHEELING AT 847-459-2985 ONE WEEK PRIOR TO EACH MAINTENANCE OF TRAFFIC STAGE AND ONE DAY PRIOR TO LANE CLOSURES ON THE FRONTAGE ROADS.

EAST AND WEST FRONTAGE ROAD BRIDGE SHALL BE OPEN TO TRAFFIC PRIOR TO DETOURING EXPRESS LANES FOR THE REMOVAL OF WOLF ROAD BRIDGE BEAMS.

TYPE II BARRICADES WHEN USED FOR APPROACH TAPERS AND TRAFFIC SHIFTS. AS INDICATED ON THE STATE STANDARDS OR SHOWN ON THE PLANS SHALL BE DIRECTION INDICATOR BARRICADES.

DRUMS/BARRICADES SHALL BE SPACED AT 50' C-C ON TANGENTS, 25' C-C ON TAPERS, AND 12' C-C ON RADII.

THE OVERLAY OF WOLF ROAD BRIDGE SHALL BE PERFORMED HALF AT A TIME IN ORDER TO MAINTAIN PEDESTRIAN ACCESS ACROSS THE BRIDGE ON THE HALF NOT UNDER CONSTRUCTION.

MILLING AND RESURFACING THE WOLF ROAD APPROACH PAVEMENTS AND FRONTAGE ROAD INTERSECTIONS SHALL BE PERFORMED AFTER BRIDGE CONSTRUCTION IS COMPLETE. LANE CLOSURES SHALL BE PER HIGHWAY STANDARD 701602.

ALL MAINTENANCE OF TRAFFIC SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION SPECIAL EXCEPT THE COST OF TEMPORARY PAVEMENT MARKING, TEMPORARY PAVEMENT, CONCRETE BARRIER AND ATTENUATORS.

THE CONTRACTOR IS ADVISED THAT IN THE EVENT OF SNOW, HE/SHE WILL BE RESPONSIBLE FOR THE IMMEDIATE REMOVAL OF ANY MAINTENANCE OF TRAFFIC PROTECTIVE DEVICES REQUIRED FOR HIS/HER OPERATIONS THAT WOULD INTERFERE WITH SNOW REMOVAL OPERATIONS PERFORMED BY THE STATE OR LOCAL AGENCY.

ACCESS TO DRIVEWAYS WITHIN PROJECT LIMITS IS TO BE PROVIDED AT ALL TIMES.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE RESPECTIVE UTILITIES AND THE LOCAL AGENCIES INVOLVED.

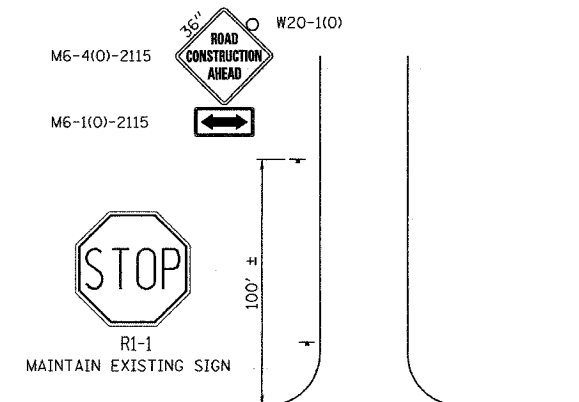
TEMPORARY SIGNING:

- A. THE CONTRACTOR SHALL NOT MOUNT SIGNS ON EXISTING SIGNS.
- B. EXACT SIGN LOCATIONS WILL BE DETERMINED BY THE RESIDENT ENGINEER IN THE FIELD.
- C. EXISTING TRAFFIC CONTROL SIGNS AND MESSAGES THAT ARE IN CONFLICT WITH THE PROPOSED MAINTENANCE OF TRAFFIC SHALL BE TEMPORARILY COVERED OR MODIFIED WITH TEMPORARY OVERLAY AS SHOWN ON PLANS AND AS DIRECTED BY THE ENGINEER

D. ALL TEMPORARY SIGNS AS SHOWN ON THE MOT PLAN SHEETS AND HIGHWAY STANDARDS FOR THE TRAFFIC CONTROL SHALL NOT BE PAID SEPARATELY BUT SHALL BE INCLUDED IN THE PRICE FOR "TRAFFIC CONTROL AND PROTECTION (SPECIAL)"

LEGEND

- DRUMS W/STEADY BURN LIGHTS
- ←+ DIRECTION INDICATOR BARRICADE
- ← TRAFFIC LANE
- ↓ TRAFFIC SIGN (AS NOTED)
- ▨ TEMPORARY PAVEMENT
- TEMPORARY CONCRETE BARRIER
- ▩ WORK ZONE
- ⌈ TYPE III BARRICADE WITH FLASHING LIGHT
- ↑ ARROW BOARD
- ⌋ TYPE II BARRICADE W/STEADY BURN LIGHT



TYPICAL SIGNING AT ALL CROSS STREETS INTERSECTING THE TRAFFIC CONTROL ZONE

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 PALATINE ROAD UNDER WCR, UNDER W. FRONTAGE RD.,
 UNDER E. FRONTAGE RD. & UNDER WOLF RD.

**MAINTENANCE OF TRAFFIC
 STAGING NOTES AND LEGEND**

SCALE: NONE
 DATE: 02/05

DRAWN BY: ACE/CAD
 CHECKED BY: TAE

AMERICAN
 CONSULTING ENGINEERS

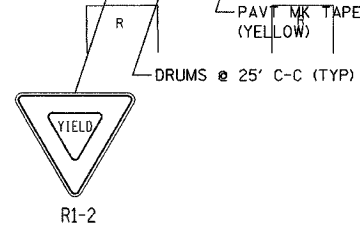
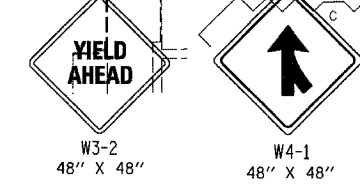
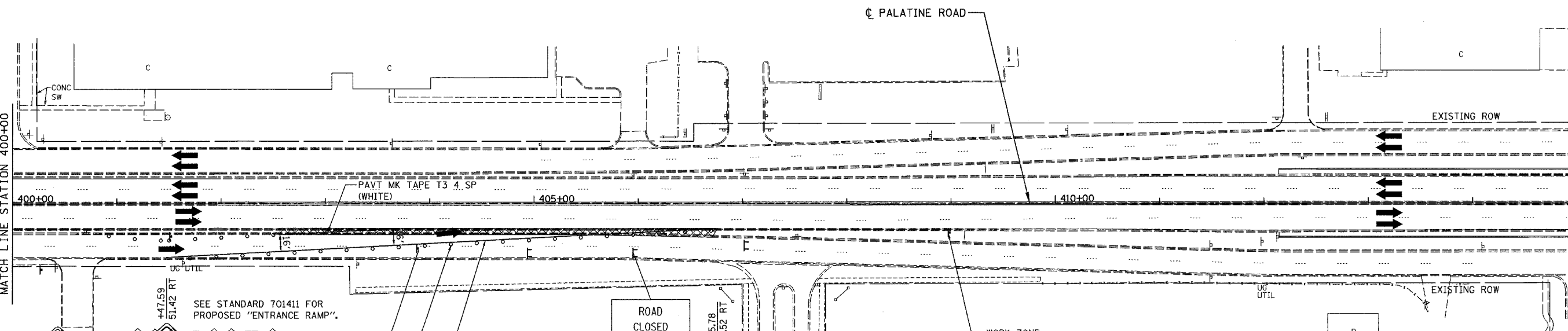
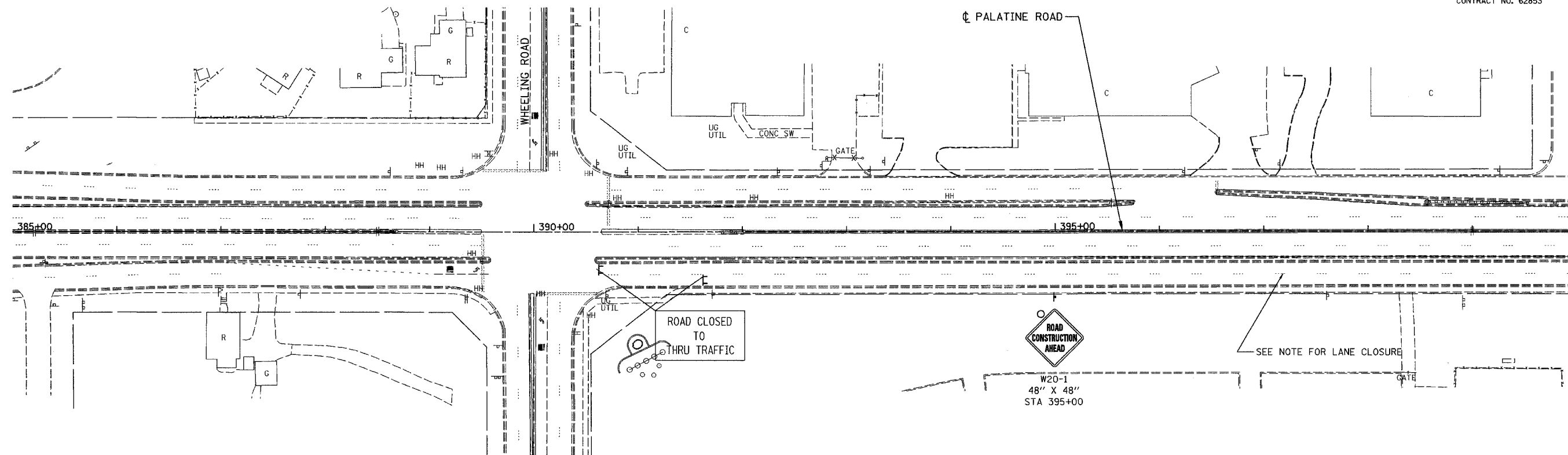
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	19

CONTRACT NO. 62853



MATCH LINE STATION 400+00

MATCH LINE STATION 415+00



ROAD CLOSED

ROAD CLOSED

WORK ZONE PUBLIC INFORMATION SIGN SEE NOTES ON SHT 22.

NOTE: APPLY LEFT LANE CLOSURE PER HIGHWAY STANDARD 701601 ON FRONTAGE ROAD. ENGINEER TO DETERMINE IF SET UP SHOULD BE MODIFIED TO AVOID MISLEADING INFORMATION ON EXPRESS LANES.

ALL WORK INCLUDED IN PAYMENT FOR TRAFFIC CONTROL AND PROTECTION, SPECIAL.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD UNDER WCRR, UNDER W. FRONTAGE RD.,
UNDER E. FRONTAGE RD. & UNDER WOLF RD.

**PALATINE ROAD
MAINTENANCE OF TRAFFIC
FRONTAGE ROAD CLOSURE**

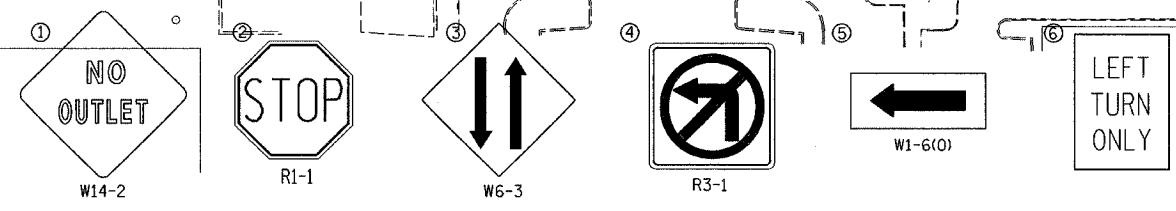
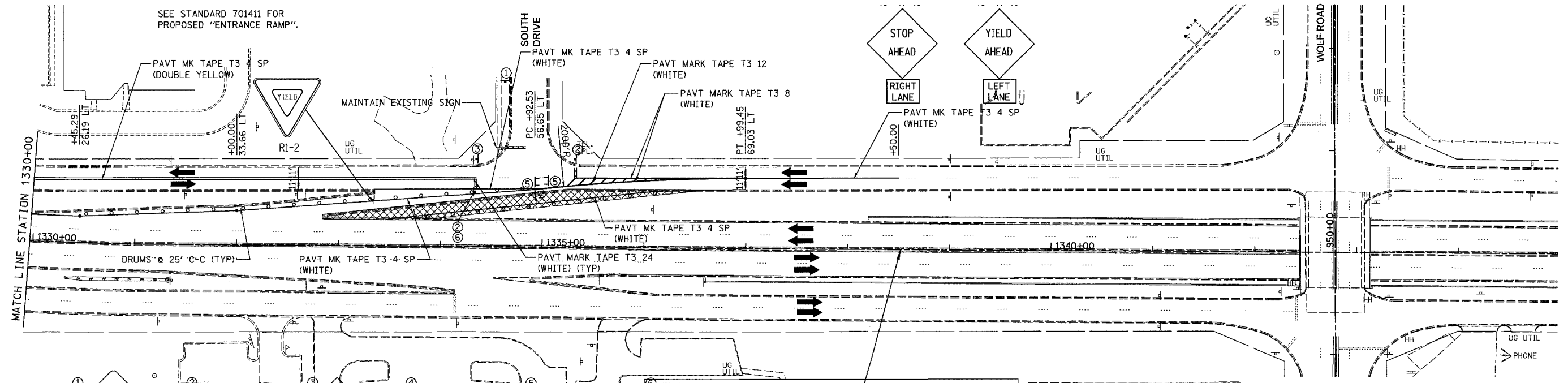
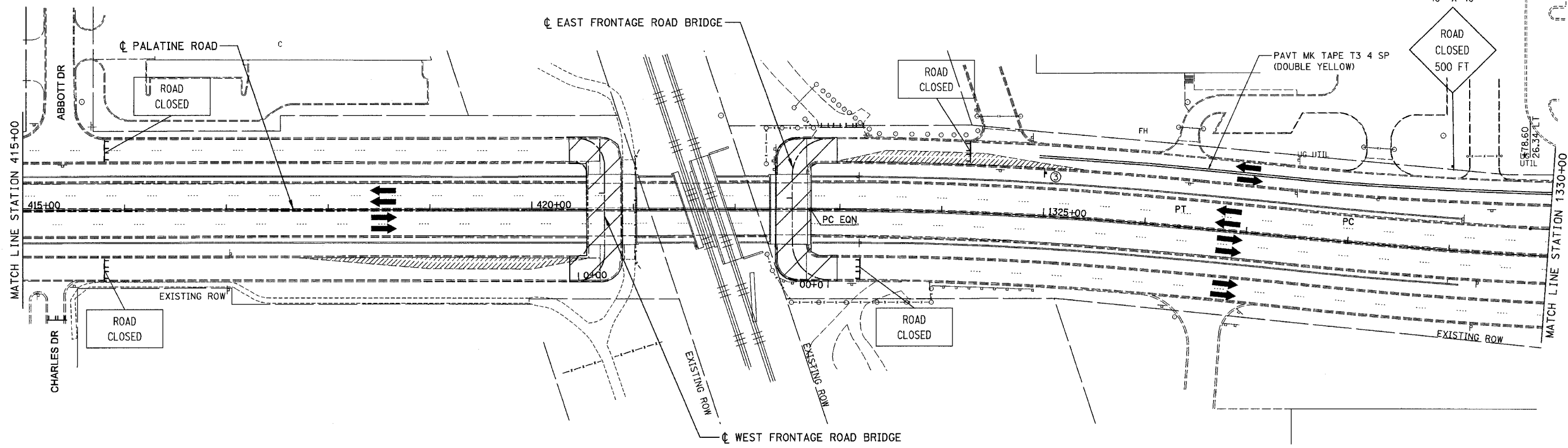
SCALE: 1"=50'
DATE: 02/05
DRAWN BY: ACE/CAD
CHECKED BY: TAE



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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	20

CONTRACT NO. 62853
48" X 48"



① PLACE THIS SIGN SOUTH OF INTERSECTION OF SOUTH DRIVE AND CAPITOL DRIVE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD UNDER WCR, UNDER W. FRONTAGE RD.,
UNDER E. FRONTAGE RD. & UNDER WOLF RD.

**PALATINE ROAD
MAINTENANCE OF TRAFFIC
FRONTAGE ROAD CLOSURE**

SCALE: 1"=50'
DATE: 02/05

DRAWN BY ACE/CAD
CHECKED BY TAE

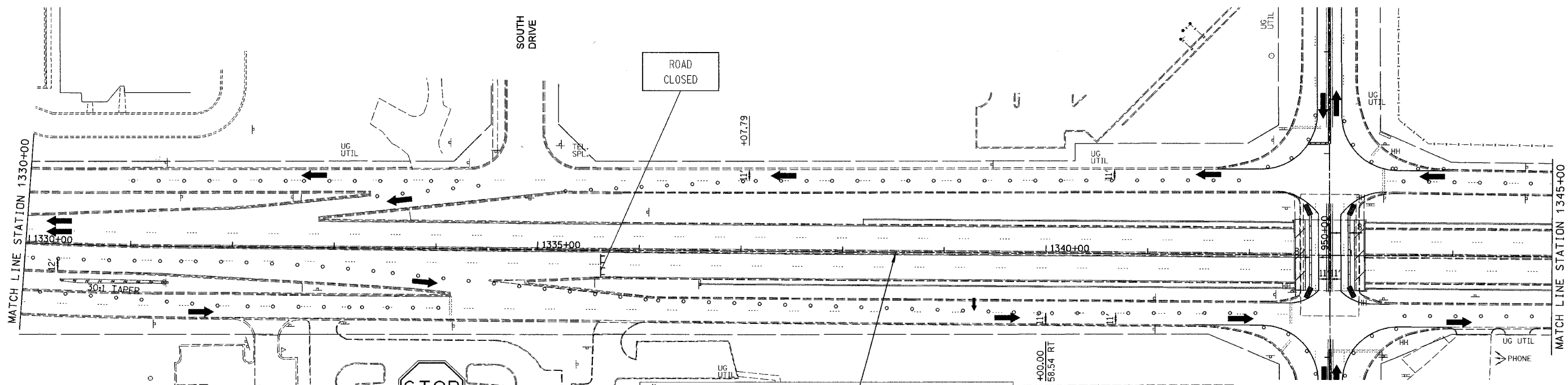
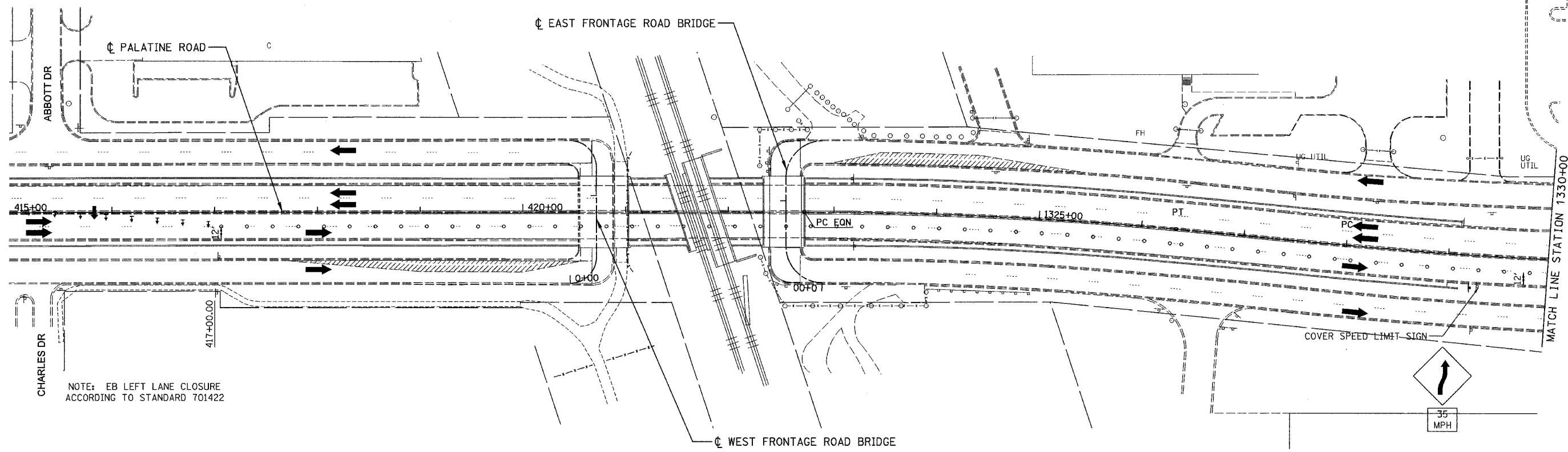
AMERICAN
CONSULTING ENGINEERS

ALL WORK INCLUDED IN PAYMENT FOR TRAFFIC CONTROL AND PROTECTION, SPECIAL.

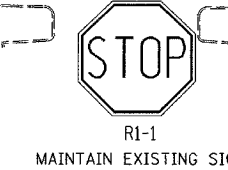
...023 PALATINE MAINT 02-05 01/09/2005 12:58:19 PM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	21

CONTRACT NO. 62853



NOTE: LANE DROP ACCORDING TO HIGHWAY STANDARD 701601.



- NOTES:
1. DETOUR PALATINE ROAD FOR NIGHT TIME CLOSURES ONLY.
 2. WOLF ROAD TEMPORARY CONCRETE BARRIER IS TO REMAIN UNTIL NEW PARAPETS ARE COMPLETED.
 3. LANE CLOSURES FOR FRONTAGE ROAD MAY REMAIN IN PLACE OR BE REMOVED DAILY AT CONTRACTORS OPTION.
 4. ALL WORK INCLUDED IN PAYMENT FOR TRAFFIC CONTROL AND PROTECTION, SPECIAL.

REVISIONS	
NAME	DATE

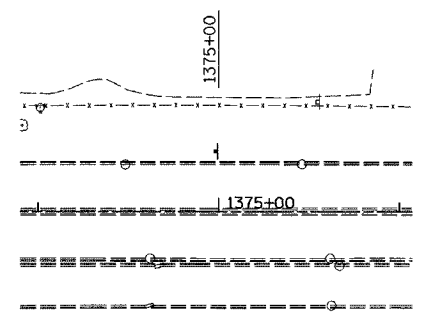
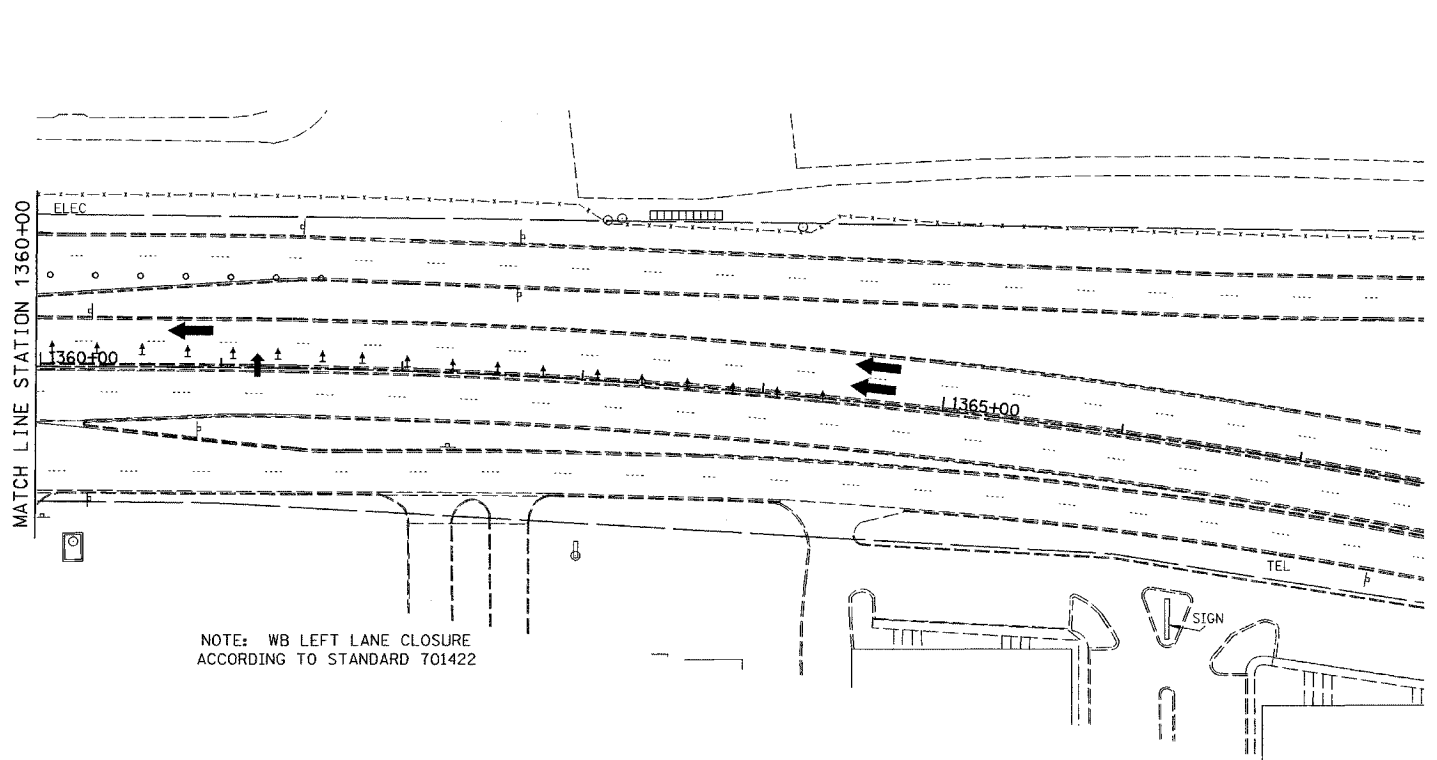
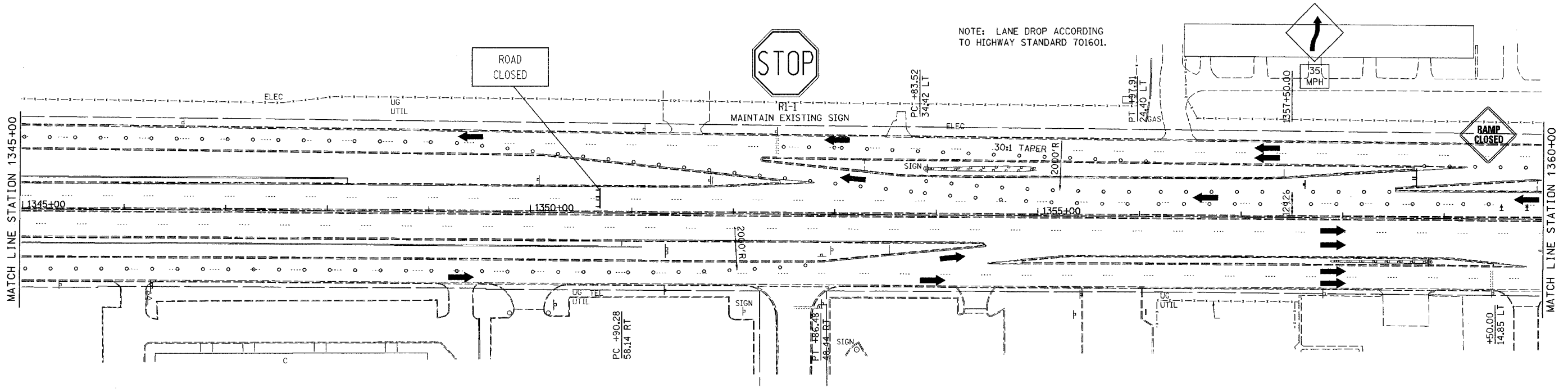
ILLINOIS DEPARTMENT OF TRANSPORTATION
 PALATINE ROAD UNDER WCRR, UNDER W. FRONTAGE RD.,
 UNDER E. FRONTAGE RD. & UNDER WOLF RD.

**PALATINE ROAD
 MAINTENANCE OF TRAFFIC
 STAGE 2A**

SCALE: 1"=50'
 DATE 02/05
 DRAWN BY ACE/CAD
 CHECKED BY TAE



...053 PALATINE ROAD STAGE 2A 02/05 02:05:06 PM



WESTBOUND

WORK ZONE PUBLIC INFORMATION SIGN

NOTE: FURNISH, ERECT, MAINTAIN AND REMOVE SIGNS IN LOCATIONS AND AT TIMES AS DIRECTED BY THE ENGINEER.

CAMERA-READY ARTWORK FOR THE SIGNS WILL BE PROVIDED TO SIGN MANUFACTURING COMPANIES UPON REQUEST BY CONTACTING THE CENTRAL BUREAU OF OPERATIONS AT 217-782-2076. THE SIGN NUMBER IS W21-1116-6048.

PAYMENT FOR WORK ZONE PUBLIC INFORMATION SIGNS SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, SPECIAL.

- NOTES:
1. DETOUR PALATINE ROAD FOR NIGHT TIME CLOSURES ONLY.
 2. WOLF ROAD TEMPORARY CONCRETE BARRIER IS TO REMAIN UNTIL NEW PARAPETS ARE COMPLETED.
 3. LANE CLOSURES FOR FRONTAGE ROAD MAY REMAIN IN PLACE OR BE REMOVED DAILY AT CONTRACTORS OPTION.
 4. ALL WORK INCLUDED IN PAYMENT FOR TRAFFIC CONTROL AND PROTECTION, SPECIAL.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 PALATINE ROAD UNDER WCRR, UNDER W. FRONTAGE RD.,
 UNDER E. FRONTAGE RD. & UNDER WOLF RD.

**PALATINE ROAD
 MAINTENANCE OF TRAFFIC
 STAGE 2A**

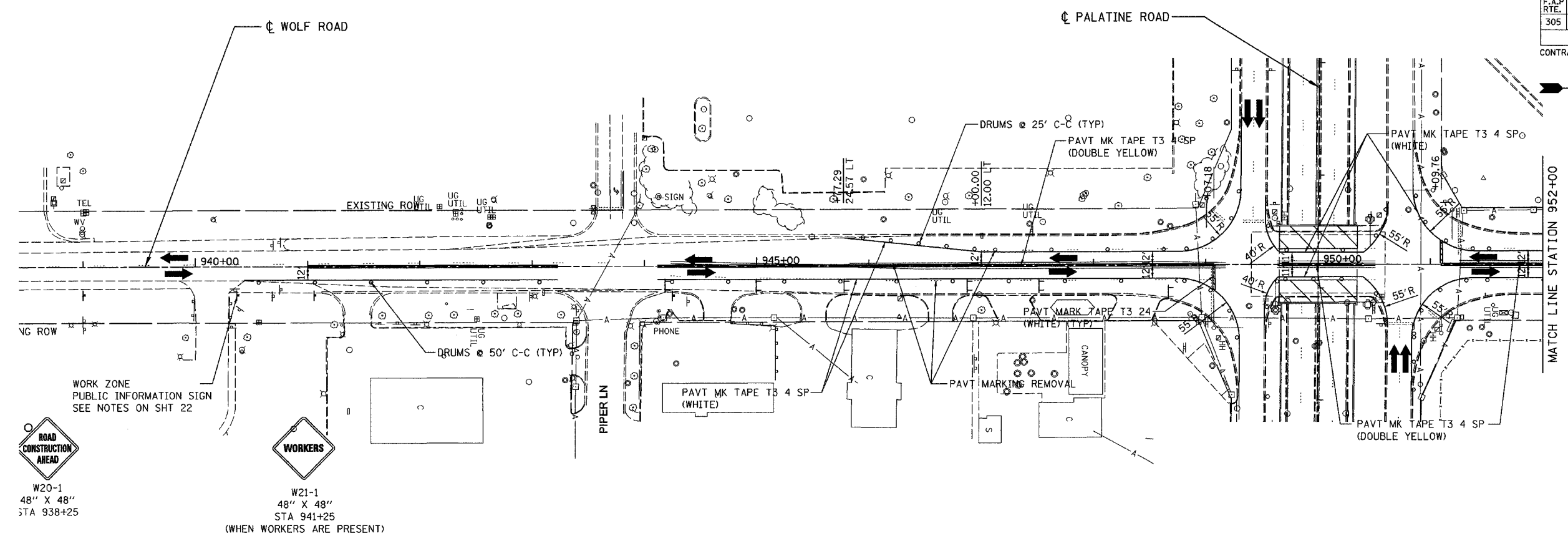
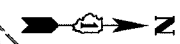
SCALE: 1"=50'
 DATE: 02/05

DRAWN BY ACE/CAD
 CHECKED BY TAE

AMERICAN
 CONSULTING ENGINEERS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	23

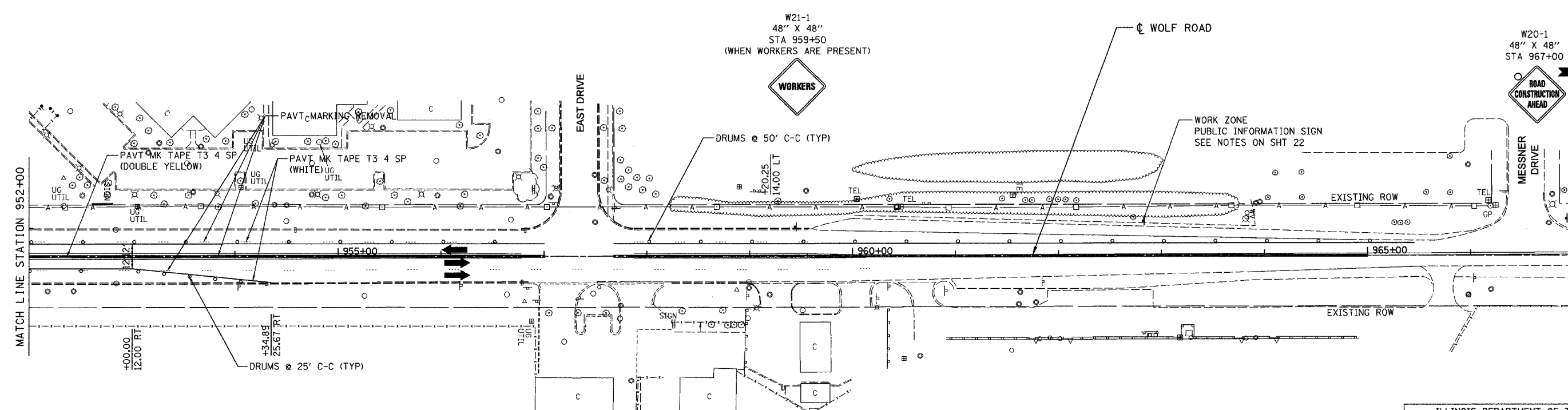
CONTRACT NO. 62853



WORK ZONE PUBLIC INFORMATION SIGN SEE NOTES ON SHT 22

W20-1 48" X 48" STA 938+25

W21-1 48" X 48" STA 941+25 (WHEN WORKERS ARE PRESENT)



W21-1 48" X 48" STA 959+50 (WHEN WORKERS ARE PRESENT)

W20-1 48" X 48" STA 967+00

WORK ZONE PUBLIC INFORMATION SIGN SEE NOTES ON SHT 22

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD UNDER WCR, UNDER W. FRONTAGE RD.,
UNDER E. FRONTAGE RD. & UNDER WOLF RD.

**WOLF ROAD
MAINTENANCE OF TRAFFIC
STAGE 2B**

SCALE: 1"=50'
DATE 02/05

DRAWN BY ACE/CAD
CHECKED BY TAE

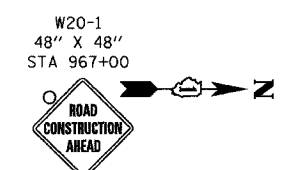
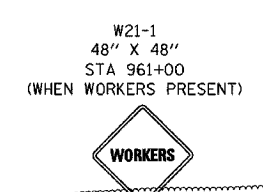
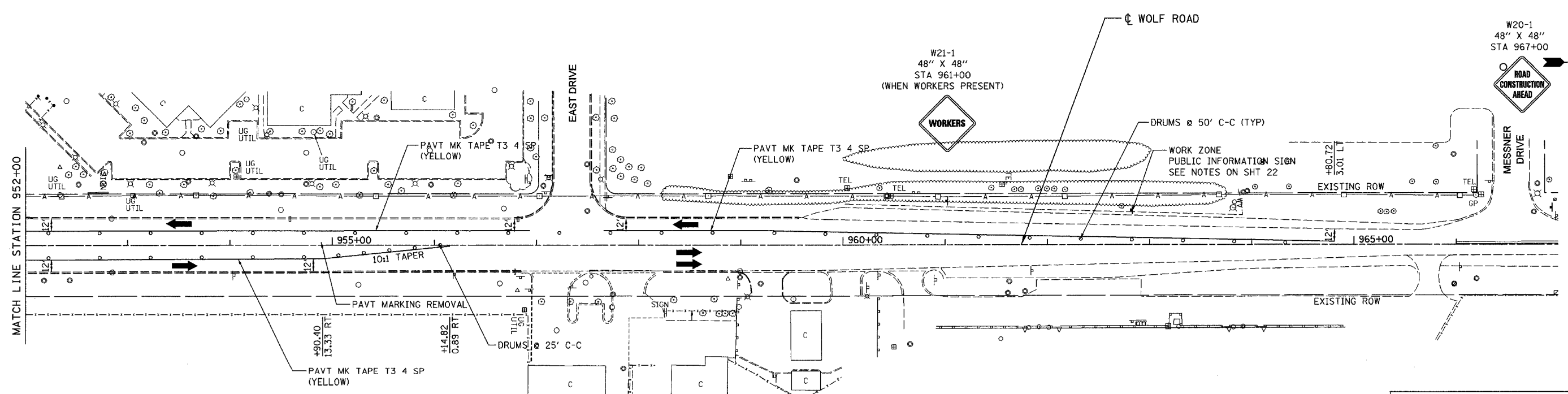
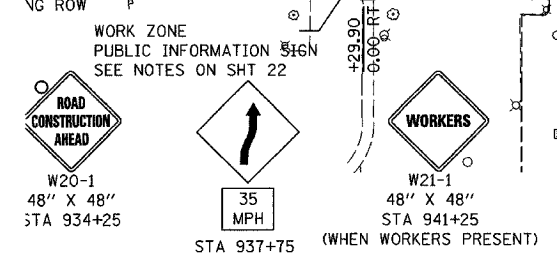
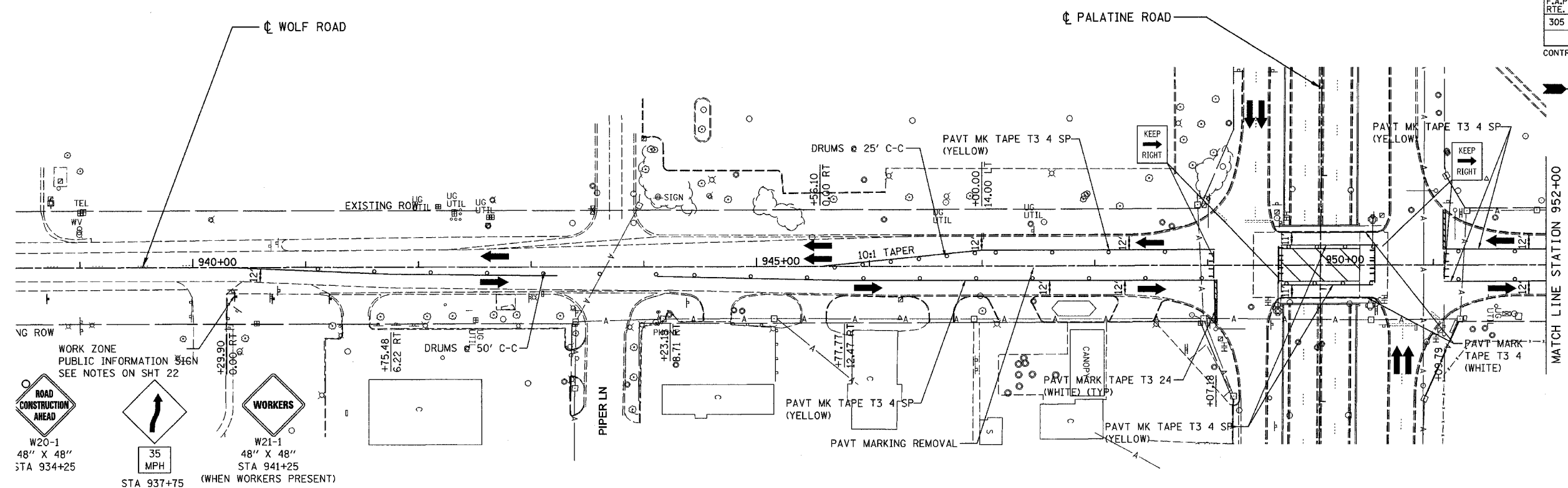


REVISIONS	
NAME	DATE

ALL WORK INCLUDED IN PAYMENT FOR
TRAFFIC CONTROL AND PROTECTION, SPECIAL.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	24

CONTRACT NO. 62853



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD UNDER WCRR, UNDER W. FRONTAGE RD.,
UNDER E. FRONTAGE RD. & UNDER WOLF RD.

**WOLF ROAD
MAINTENANCE OF TRAFFIC
STAGE 3**

SCALE: 1"=50'
DATE: 02/05
DRAWN BY: ACE/CAD
CHECKED BY: TAE

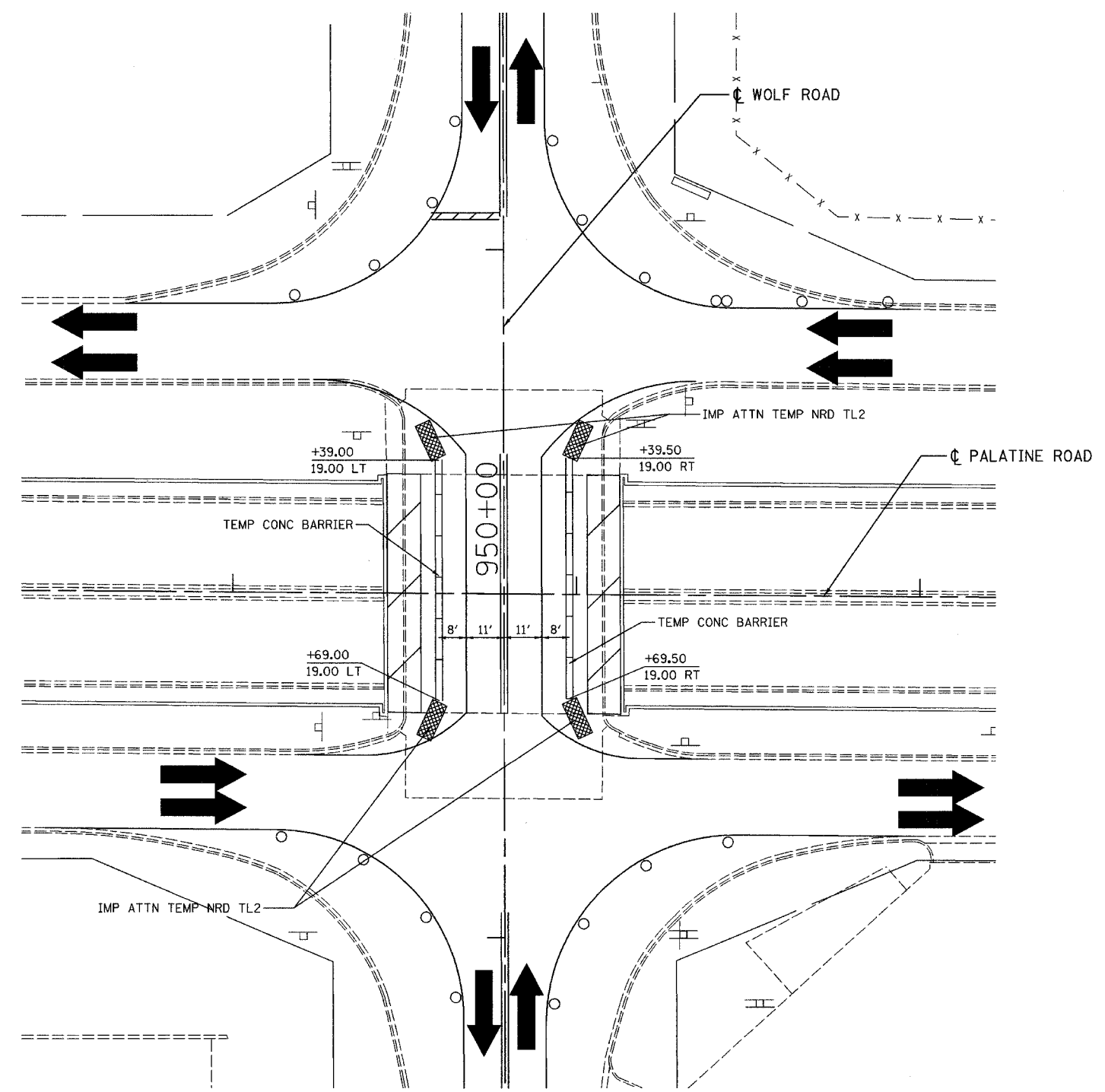


ALL WORK INCLUDED IN PAYMENT FOR
TRAFFIC CONTROL AND PROTECTION, SPECIAL.

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	25

CONTRACT NO. 62853



MAINTENANCE OF TRAFFIC
STAGE 2A DETAIL

REVISIONS	
NAME	DATE

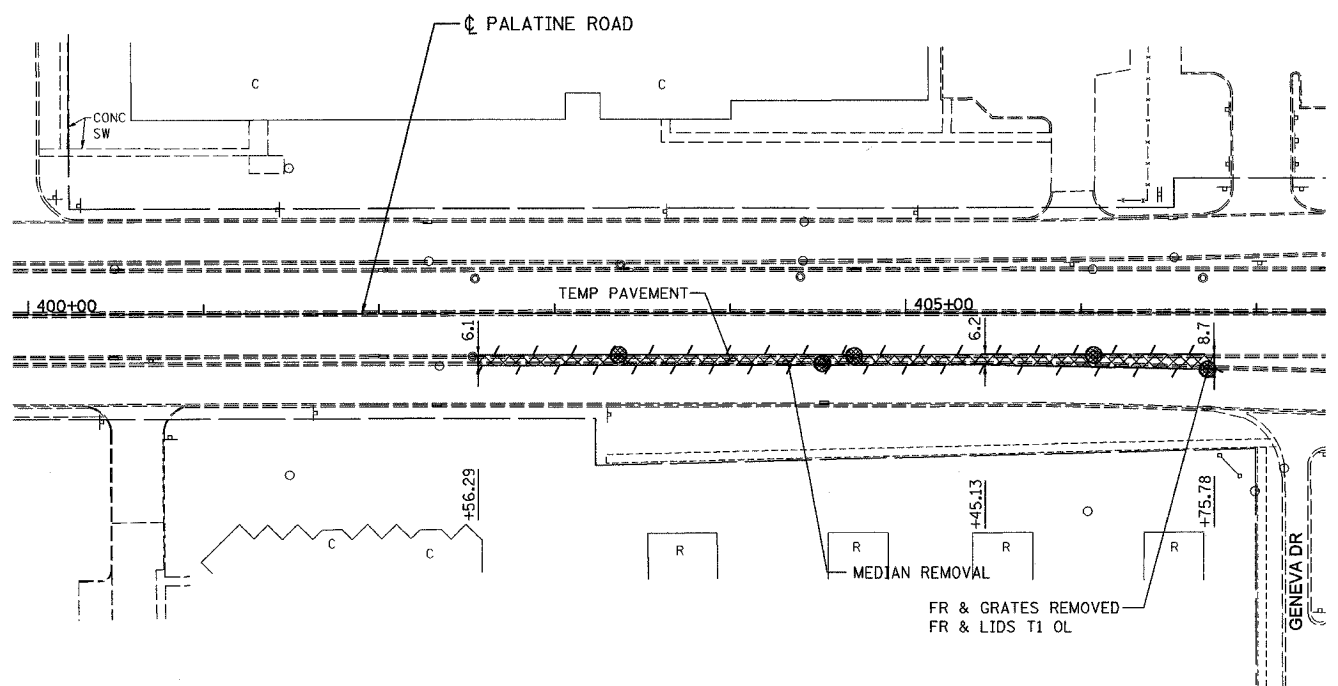
ILLINOIS DEPARTMENT OF TRANSPORTATION
 PALATINE ROAD UNDER WCRR, UNDER W. FRONTAGE RD.,
 UNDER E. FRONTAGE RD. & UNDER WOLF RD.

**MAINTENANCE OF TRAFFIC DETAILS
 STAGE 2A**

SCALE: NONE DRAWN BY ACE/CAD
 DATE 02/05 CHECKED BY TAE

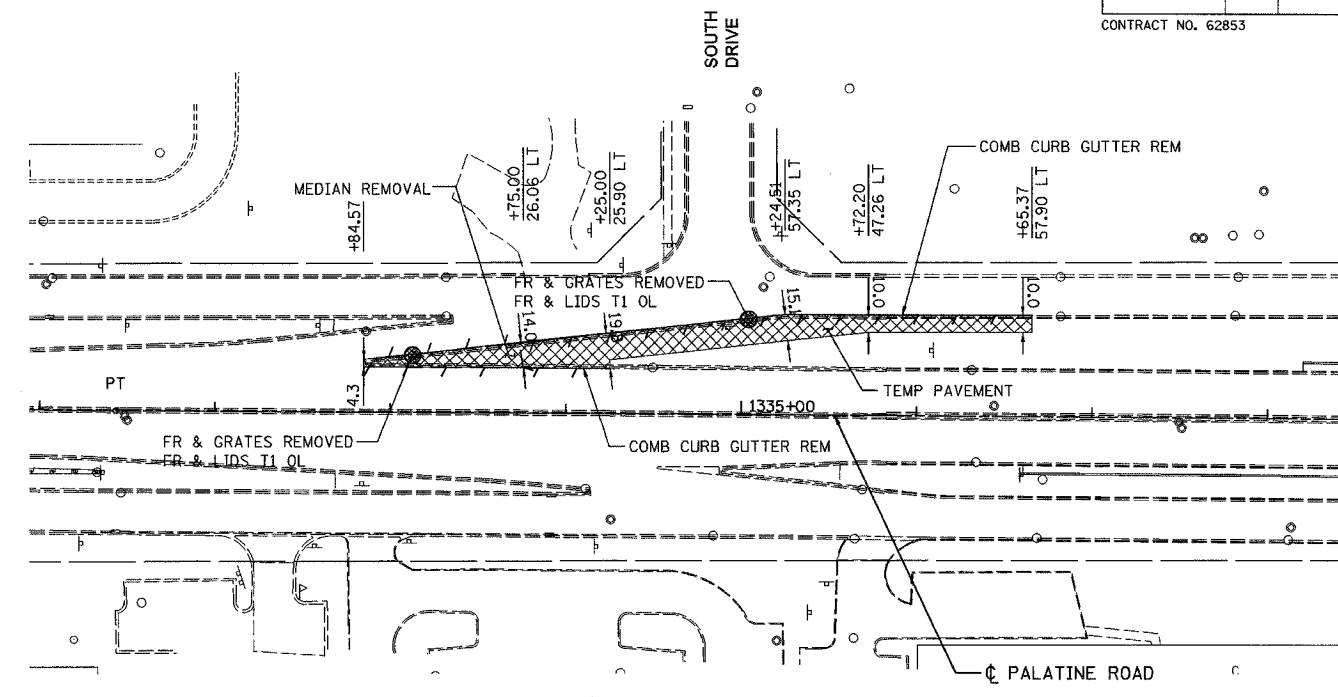
AMERICAN
 CONSULTING ENGINEERS

...\\scb\palatine\stagedetail.dwg 02/09/2005 12:59:28 PM

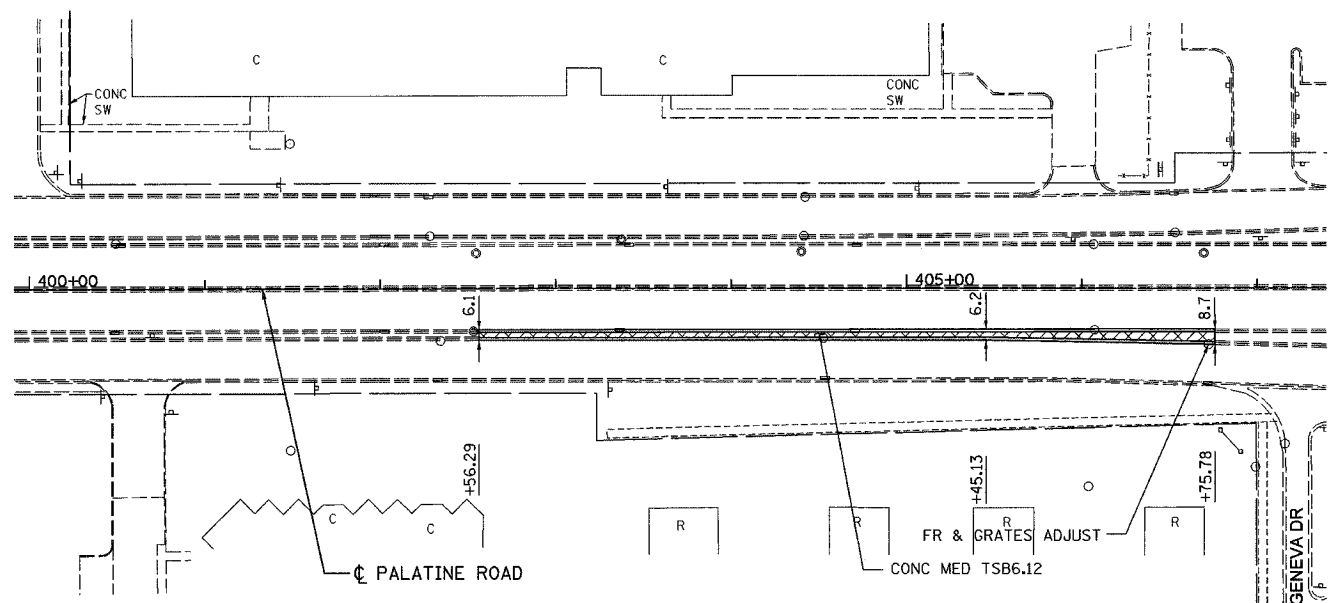


MEDIAN REMOVAL FOR MAINTENANCE OF TRAFFIC WEST OF FRONTAGE ROAD BRIDGES

● INLET FILTERS

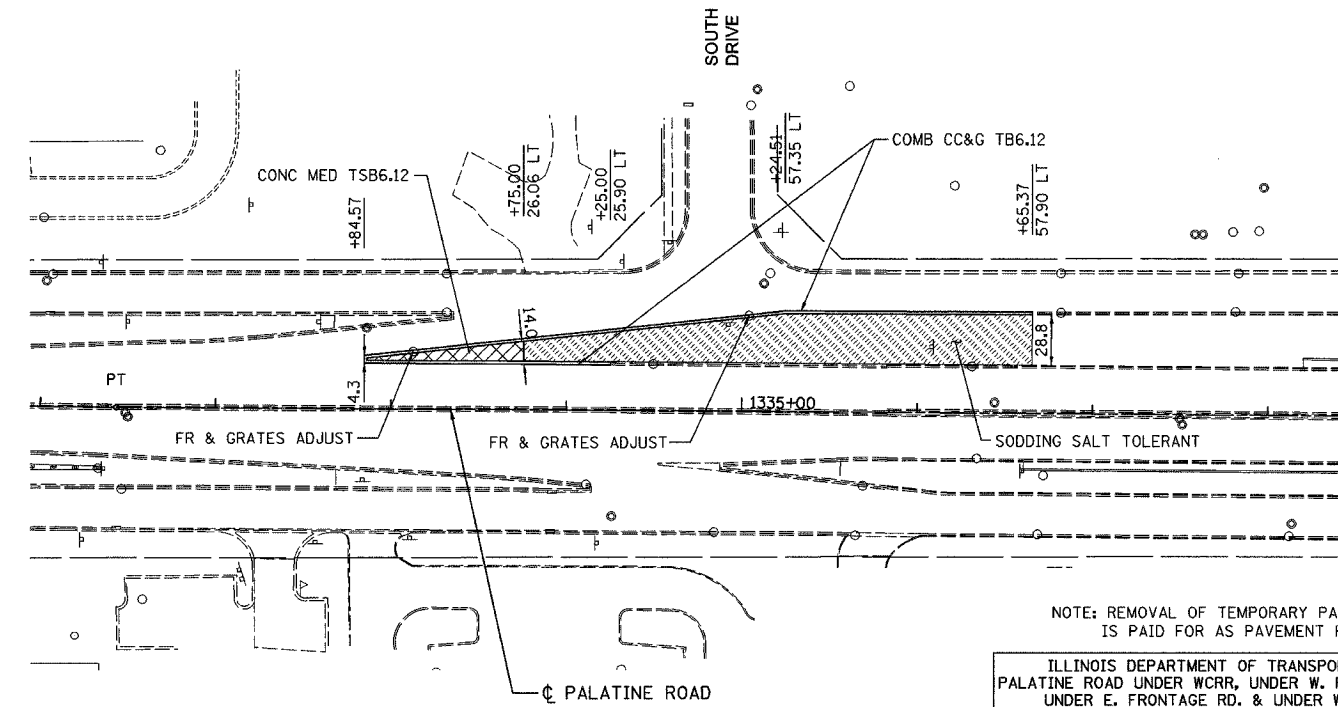


MEDIAN REMOVAL FOR MAINTENANCE OF TRAFFIC EAST OF FRONTAGE ROAD BRIDGES



MEDIAN RESTORATION WEST OF FRONTAGE ROAD BRIDGES

- NOTES:
- 1) SAW CUT AT LIMITS OF MEDIAN AND CURB REMOVAL.
 - 2) ALL OPEN AREAS TO BE RESTORED WITH TEMPORARY PAVEMENT PRIOR TO OPENING ADJACENT LANE.
 - 3) RAMP CONSTRUCTION AND RESTORATION WILL BE COMPLETED USING HIGHWAY STANDARD 701421 FOR LANE CLOSURES.



MEDIAN RESTORATION EAST OF FRONTAGE ROAD BRIDGES

NOTE: REMOVAL OF TEMPORARY PAVEMENT IS PAID FOR AS PAVEMENT REMOVAL.

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD UNDER W. FRONTAGE RD., UNDER E. FRONTAGE RD. & UNDER WOLF RD.

PALATINE ROAD MAINTENANCE OF TRAFFIC DETAILS TEMPORARY RAMPS

SCALE: 1"=50' DATE 02/05 DRAWN BY ACE/CAD CHECKED BY TAE

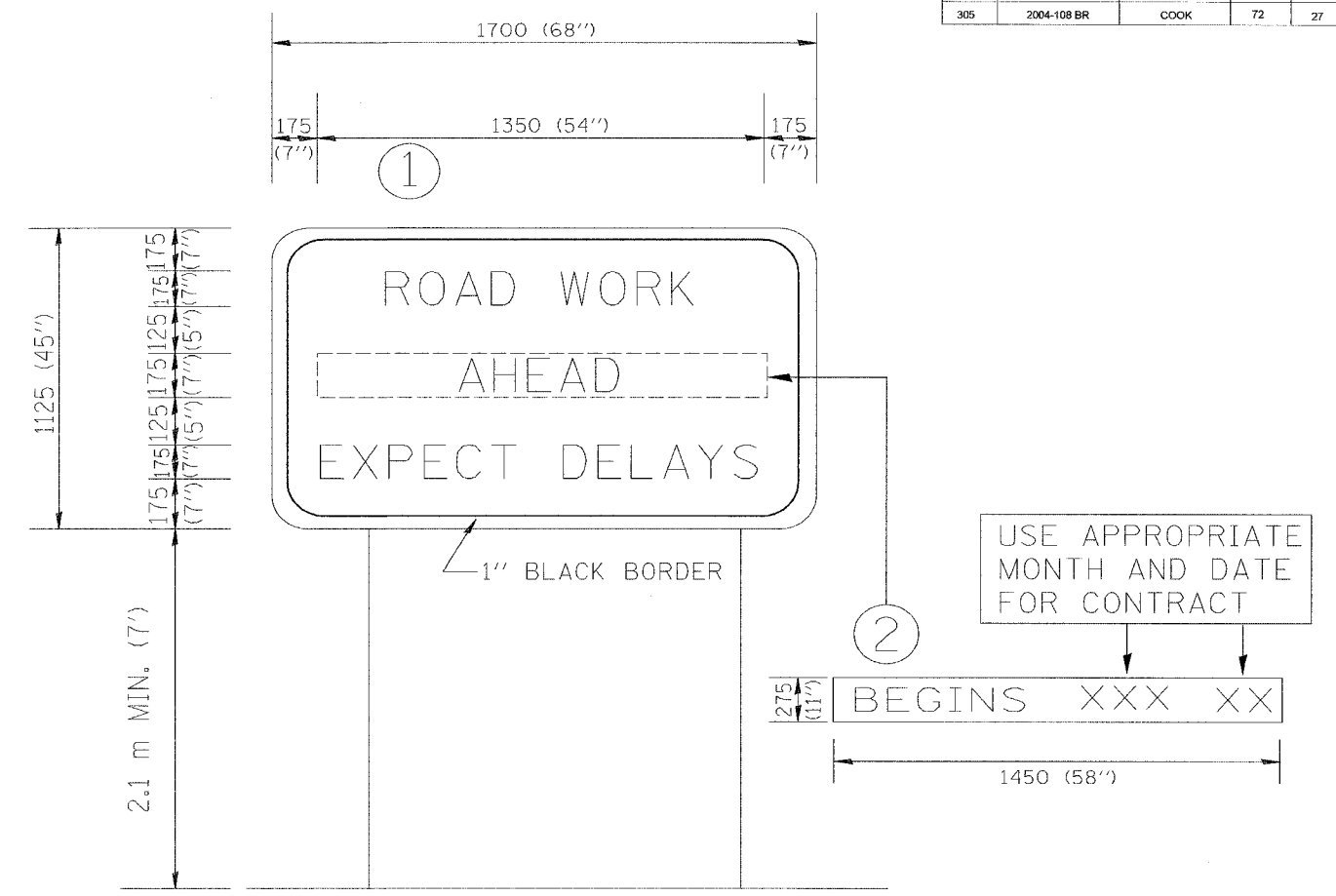


REVISIONS	
NAME	DATE

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62853

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	27



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 2.3 SQ. M. (25.70 SQ. FT.)

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

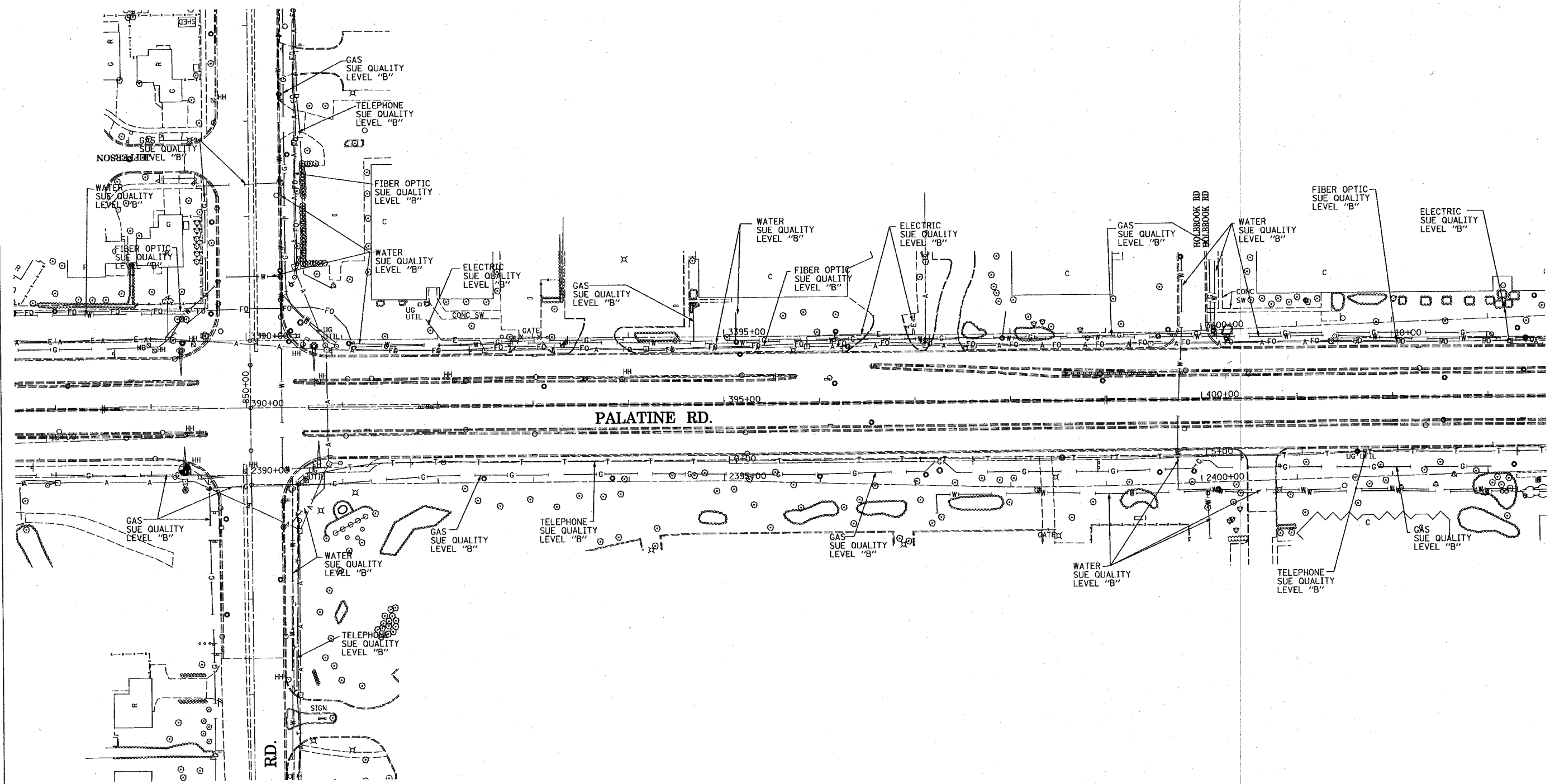
REVISIONS	
NAME	DATE
R. MIRS	9-15-97
R. MIRS	12-11-97
T. RAMMACHER	2-2-99

ILLINOIS DEPARTMENT OF TRANSPORTATION
TEMPORARY INFORMATION SIGNING

DRAWN BY: BUR. OF DESIGN
CHECKED BY:

62853

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1313,1415,1516	Cook	72	27A
STA. 387+57		TO STA. 403+60		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



TBE GROUP, INC.
 CIVIL ENGINEERING * TRANSPORTATION * ENVIRONMENTAL
 * PLANNING * UTILITY ENGINEERING/LOCATING
 SOUTHERN REGION: FL, GA, SC, NC
 NORTHERN REGION: IL, IN, MI, OH, MD, NJ, NY
 PA, VA, CANADA
 WESTERN REGION: AZ, NV, NM, TX, CA, OR, UT, WA
 IL09500107, IL09500112, IL09500163
 TBE SUE PAGE NO: 9 of 22
 Signature *Sandra...*
 SUE Quality Level "A" : Test Holes
 SUE Quality Level "B" : Designating

—T—T—T—	TELEPHONE
—W—W—W—	WATER
—G—G—G—	GAS
—CTV—CTV—CTV—	CABLE TELEVISION
—FO—FO—FO—	FIBER OPTIC
—E—E—E—	ELECTRIC

Utilities shown on these plans as depicted in the legend have been investigated by TBE Group, Inc in accordance with SUE Industry Standards as of 5/08/03.
 All other information shown has been provided to TBE Group, Inc by others.

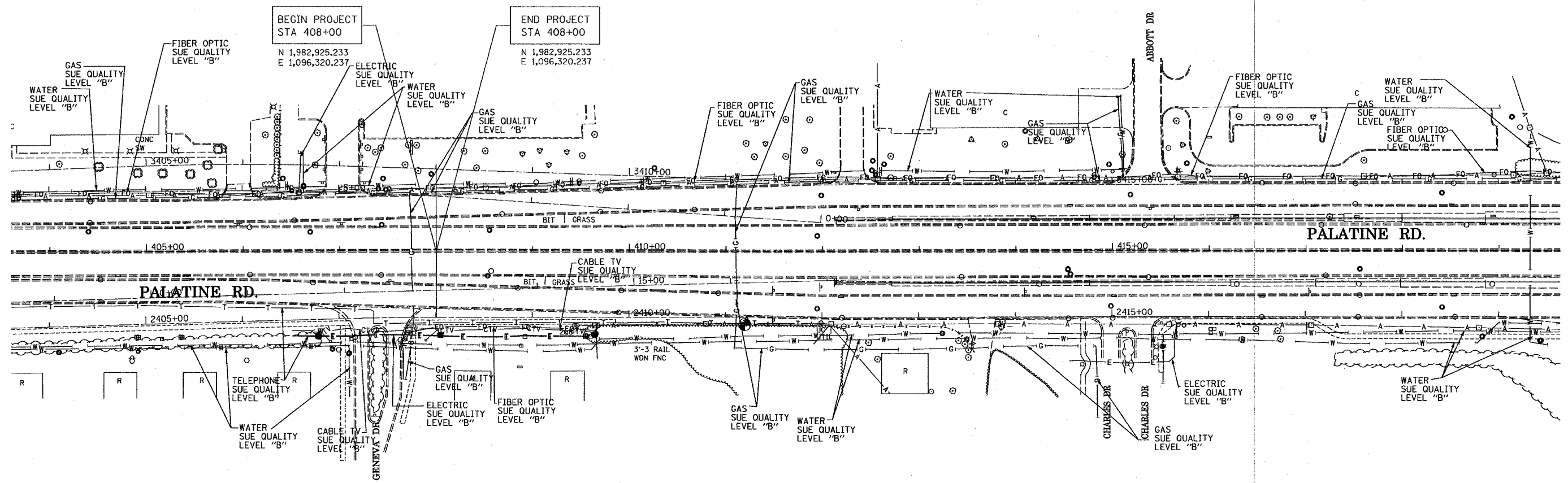
205 W. WACKER DRIVE
 SUITE 1020
 CHICAGO, IL 60606
 (312) 704-1970

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SUE Investigation of Underground Utilities
 IPalatine Road West of IL. RT. 83 to
 IL RT. 21 in Cook County.
 Contract No. 60789
 SCALE : 1" = 50'
 SQL "B" DATE : 5/08/03
 DRAWN BY : JAC
 CHECKED BY

62853

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1313,1415,1516	Cook	72	27B
STA. 403+60		TO STA. 419+63		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



TBE GROUP, INC.
 CIVIL ENGINEERING • TRANSPORTATION • ENVIRONMENTAL
 • PLANNING • UTILITY ENGINEERING/LOCATING
 SOUTHERN REGION: FL, GA, SC, NC
 NORTHERN REGION: IL, IN, MI, OH, MD, NJ, NY
 PA, VA, CANADA
 WESTERN REGION: AZ, NV, NM, TX, CA, OR, UT, WA
 IL09500107, IL09500112, IL09500163
 TBE SUE PAGE NO: 10 of 22
 Signature *[Signature]*
 SUE Quality Level "A" : Test Holes
 SUE Quality Level "B" : Designating

—T—T—T—	TELEPHONE
—W—W—W—	WATER
—G—G—G—	GAS
—CTV—CTV—CTV—	CABLE TELEVISION
—FO—FO—FO—	FIBER OPTIC
—E—E—E—	ELECTRIC

Utilities shown on these plans as depicted in the legend have been investigated by TBE Group, Inc in accordance with SUE Industry Standards as of 5/08/03. All other information shown has been provided to TBE Group, Inc by others.

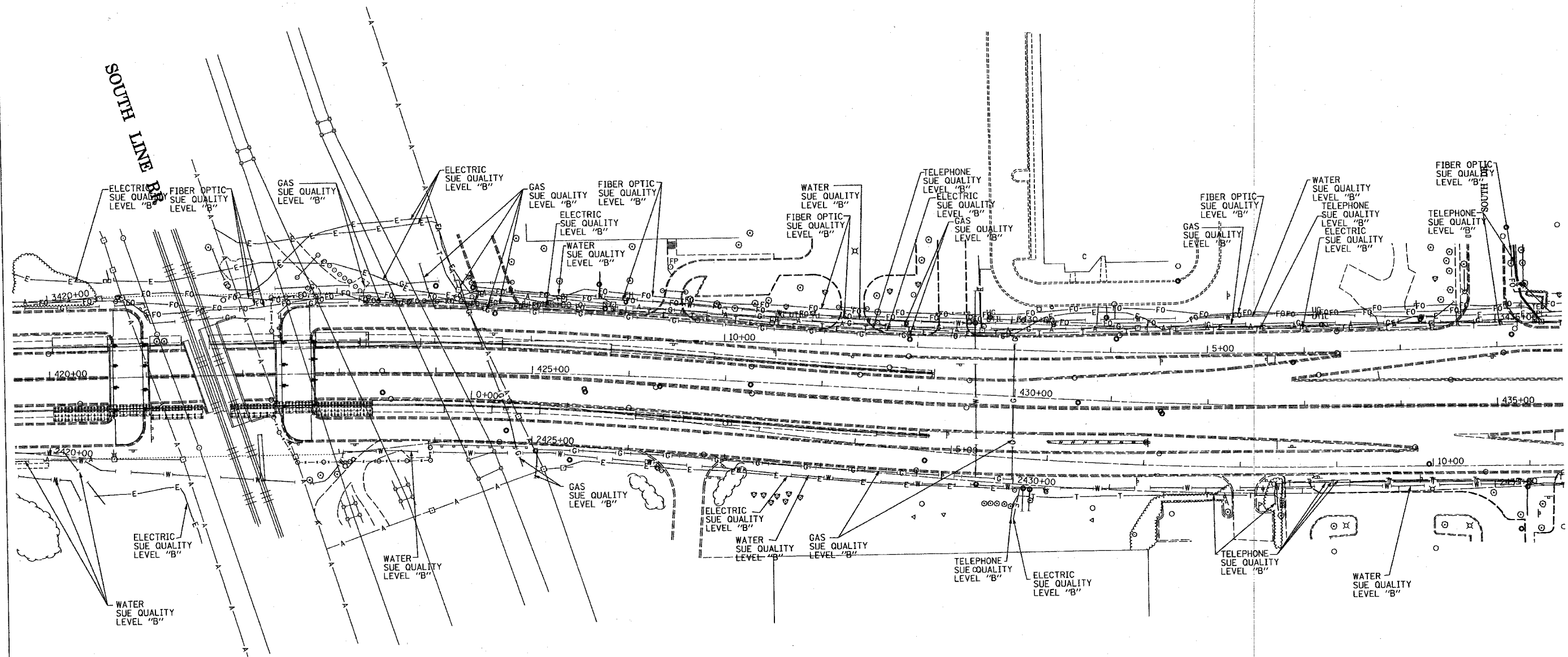
205 W. WACKER DRIVE
 SUITE 1020
 CHICAGO, IL 60606
 (312) 704-1970

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SUE Investigation of Underground Utilities
 IPalatine Road West of IL. RT. 83 to
 IL RT. 21 in Cook County.
 Contract No. 60789
 SCALE : 1" = 50'
 SQL "B" DATE : 5/08/03
 DRAWN BY : JAC
 CHECKED BY

62853


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1313,1415,1516	Cook	72	27C
STA. 419+63		TO STA. 435+67		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



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 NORTHERN REGION: IL, IN, MI, OH, MD, NJ, NY
 PA, VA, CANADA
 WESTERN REGION: AZ, NV, NM, TX, CA, OR, UT, WA
 IL09500107, IL09500112, IL09500163
 TBE SUE PAGE NO: 11 of 22
 Signature *Sandra A. ...*
 SUE Quality Level "A" : Test Holes
 SUE Quality Level "B" : Designating

—T—T—T—	TELEPHONE
—W—W—W—	WATER
—G—G—G—	GAS
—CTV—CTV—CTV—	CABLE TELEVISION
—FO—FO—FO—	FIBER OPTIC
—E—E—E—	ELECTRIC

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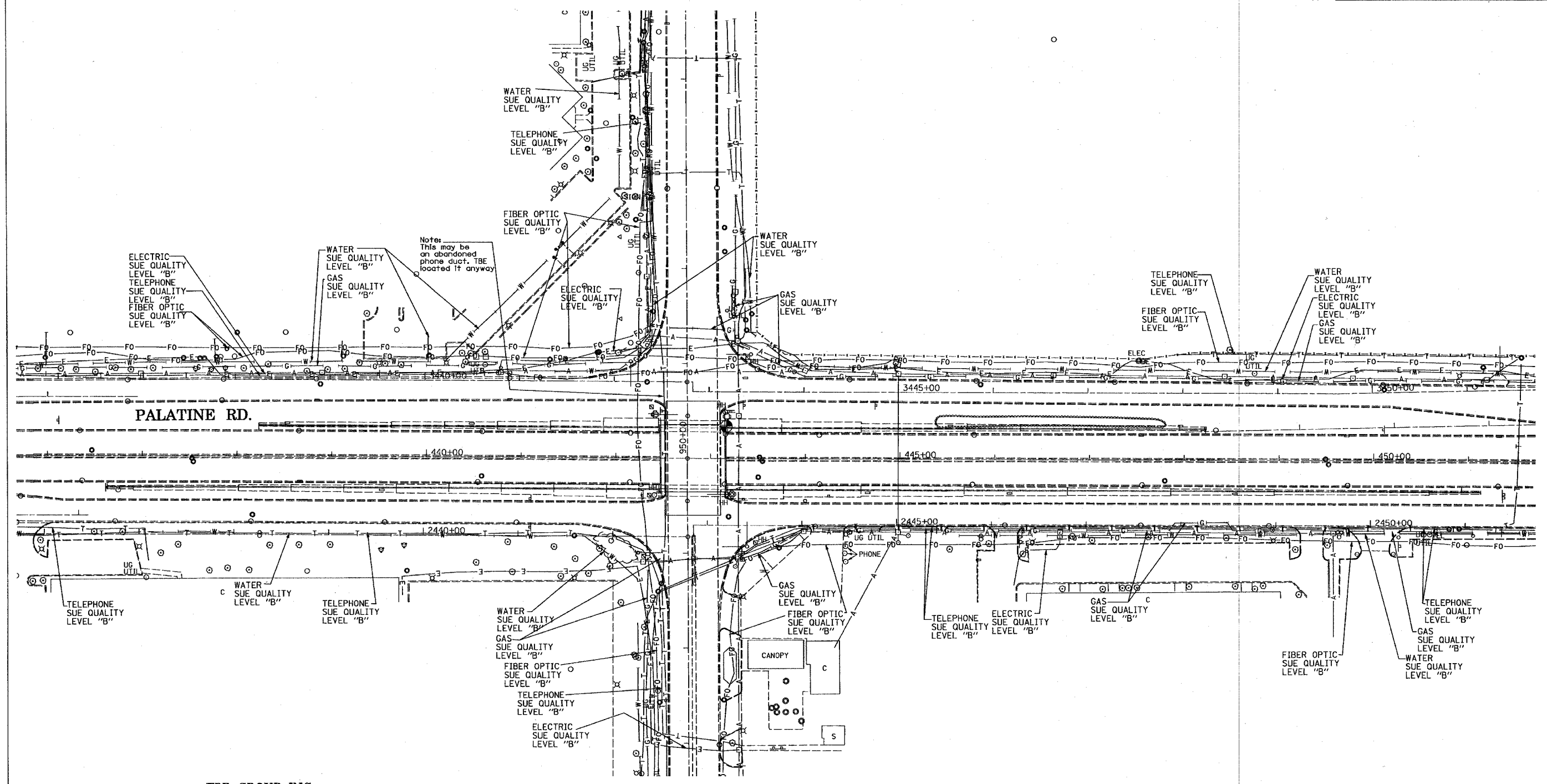

 205 W. WACKER DRIVE
 SUITE 1020
 CHICAGO, IL 60606
 (312) 704-1970

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SUE Investigation of Underground Utilities
 I Palatine Road West of IL. RT. 83 to
 IL RT. 21 in Cook County.
 Contract No. 60789
 SCALE : 1" = 50'
 SQL "B" DATE : 5/08/03
 DRAWN BY : JAC
 CHECKED BY :

62853


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1313,1415,1516	Cook	72	27D
STA. 435+67		TO STA. 451+70		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



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 SOUTHERN REGION: FL, GA, SC, NC
 NORTHERN REGION: IL, IN, MI, OH, MD, NJ, NY
 PA, VA, CANADA
 WESTERN REGION: AZ, NV, NM, TX, CA, OR, UT, WA
 IL09500107, IL09500112, IL09500163
 TBE SUE PAGE NO: 12 of 22
 Signature *Sandra Amores*
 SUE Quality Level "A" : Test Holes
 SUE Quality Level "B" : Designating

—T—T—T—	TELEPHONE
—W—W—W—	WATER
—G—G—G—	GAS
—CTV—CTV—CTV—	CABLE TELEVISION
—FO—FO—FO—	FIBER OPTIC
—E—E—E—	ELECTRIC

Utilities shown on these plans as depicted in the legend have been investigated by TBE Group, Inc in accordance with SUE Industry Standards as of 5/08/03.
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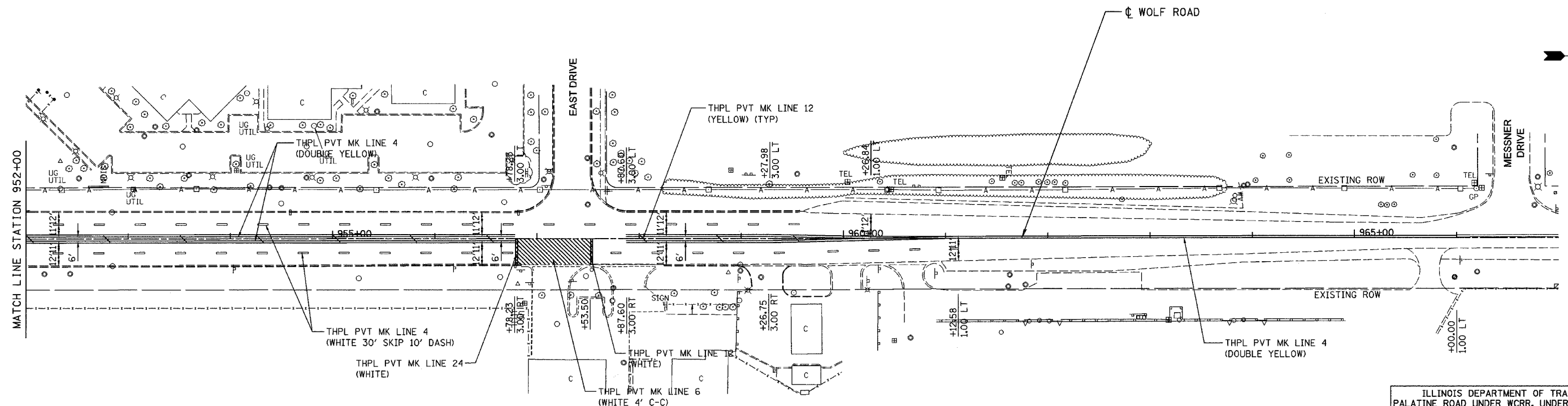
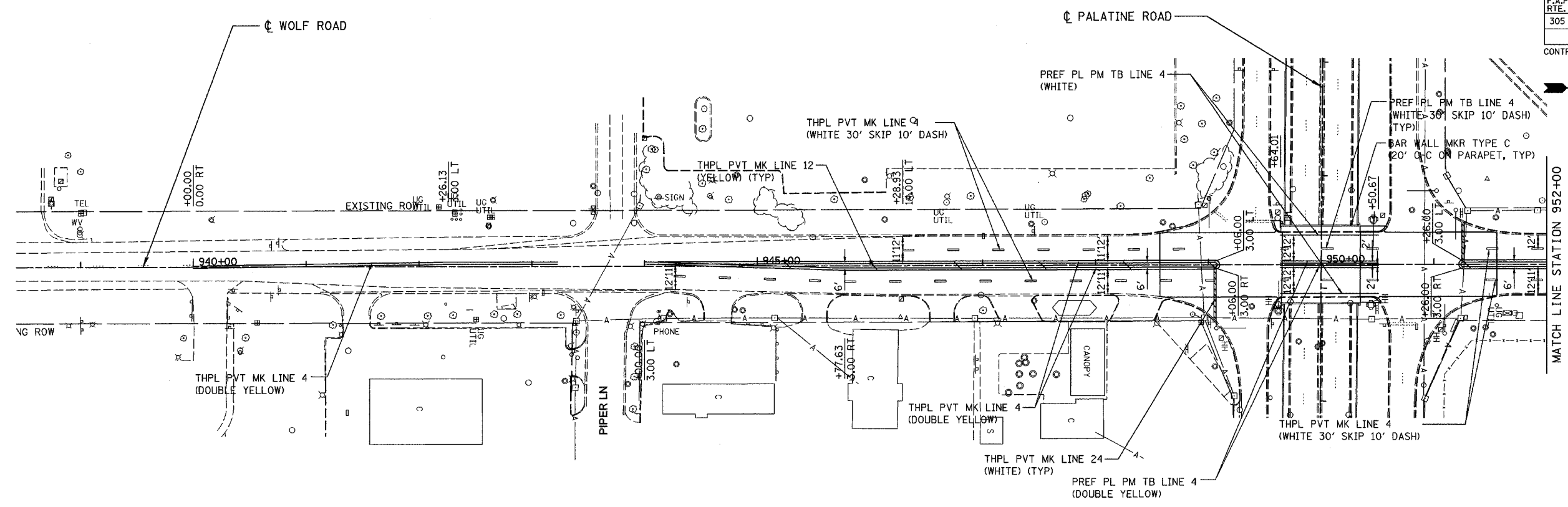

 205 W. WACKER DRIVE
 SUITE 1020
 CHICAGO, IL 60606
 (312) 704-1970

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SUE Investigation of Underground Utilities
 IPalatine Road West of IL. RT. 83 to
 IL RT. 21 in Cook County.
 Contract No. 60789
 SCALE : 1" = 50'
 SQL "B" DATE : 5/08/03
 DRAWN BY : JAC
 CHECKED BY :

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	28

CONTRACT NO. 62853



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 PALATINE ROAD UNDER WCRR, UNDER W. FRONTAGE RD.,
 UNDER E. FRONTAGE RD. & UNDER WOLF RD.

**WOLF ROAD
 PAVEMENT MARKING PLAN**

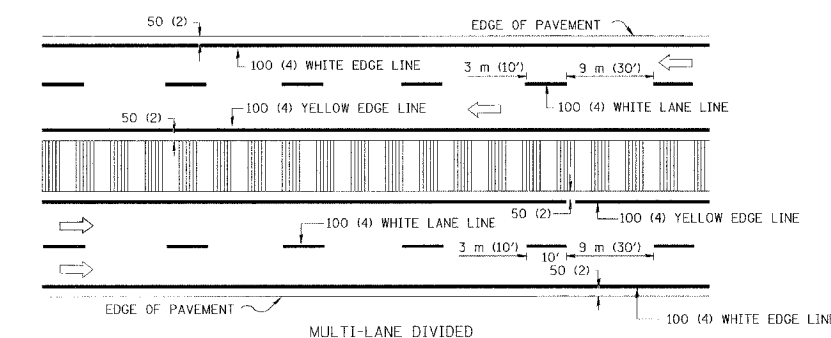
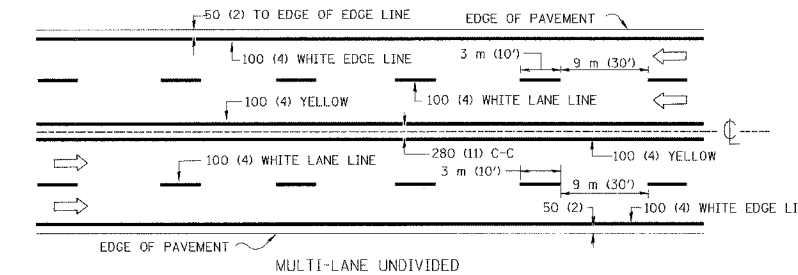
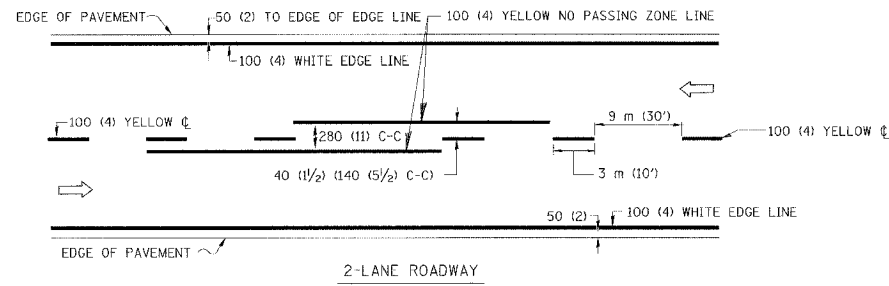
SCALE: 1"=50'
 DATE: 02/05

DRAWN BY ACE/CAD
 CHECKED BY TAE



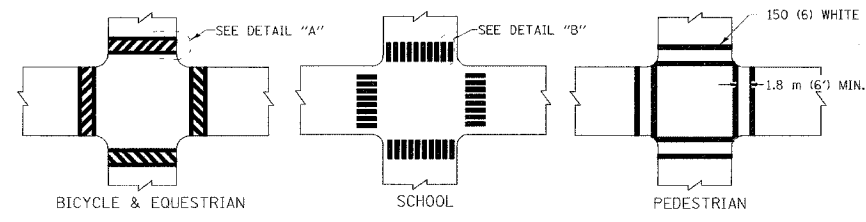
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F. & S. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	29
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

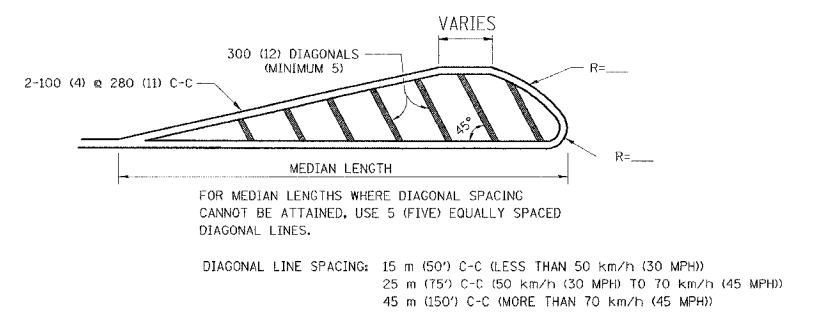
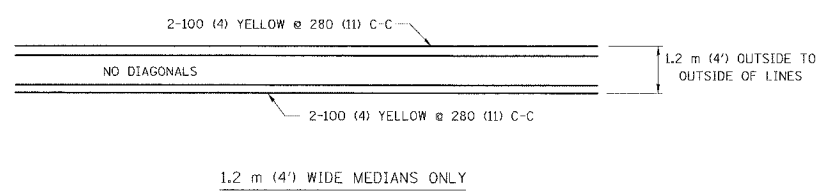


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

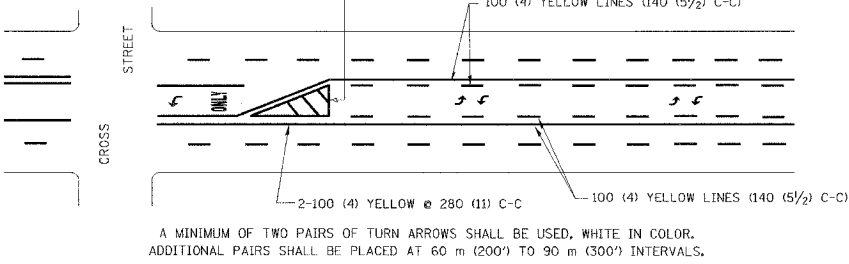


TYPICAL CROSSWALK MARKING

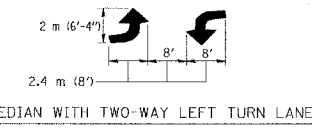


DIAGONAL LINE SPACING: 15 m (50') C-C (LESS THAN 50 km/h (30 MPH))
25 m (75') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH))
45 m (150') C-C (MORE THAN 70 km/h (45 MPH))

MEDIANS OVER 1.2 m (4') WIDE

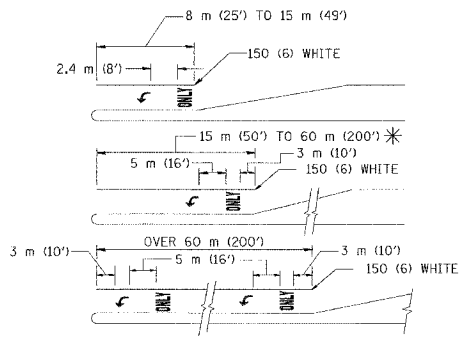


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 60 m (200') TO 90 m (300') INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

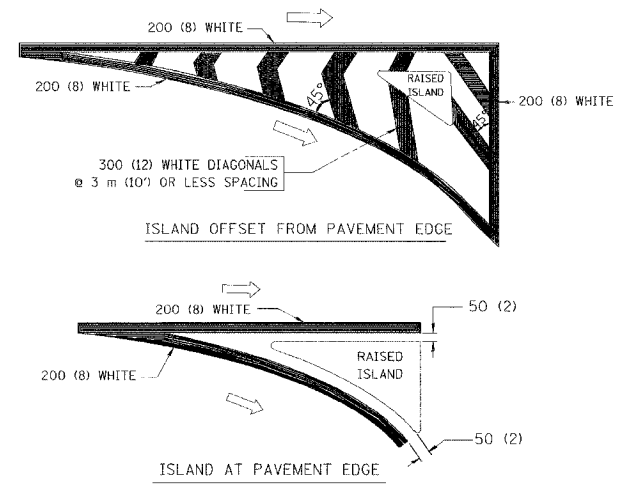
TYPICAL PAINTED MEDIAN MARKING



FULL SIZE LETTERS 2.4 m (8') AND ARROWS SHALL BE USED.
AREA = 1.5 m² (15.6 SQ. FT.) ONLY AREA = 1.9 m² (20.8 SQ. FT.)
* TURN LANES IN EXCESS OF 120 m (400') 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



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	100 (4)	SKIP-DASH	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 100 (4)	SOLID	YELLOW	280 (11) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	100 (4) 2 @ 100 (4)	SOLID SOLID	YELLOW YELLOW	140 (5 1/2) C-C FROM SKIP-DASH CENTERLINE 280 (11) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	100 (4) 125 (5) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	3 m (10') LINE WITH 9 m (30') SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	600 (2') LINE WITH 1.8 m (6') SPACE
EDGE LINES	100 (4)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	150 (6) LINE; FULL SIZE LETTERS & SYMBOLS (2.4 m (8'))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 100 (4) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE FOR SKIP-DASH; 140 (5 1/2) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	2.4 m (8') LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 150 (6) 300 (12) @ 45° 300 (12) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 1.8 m (6') APART 600 (2') APART 600 (2') APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	600 (24)	SOLID	WHITE	PLACE 1.2 m (4') IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 100 (4) WITH 300 (12) DIAGONALS @ 45° NO DIAGONALS USED FOR 1.2 m (4') WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	280 (11) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	200 (8) WITH 300 (12) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 4.5 m (15') C-C (LESS THAN 50 km/h (30 MPH)) 6 m (20') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 9 m (30') C-C (OVER 70 km/h (45 MPH))
RAILROAD CROSSING	600 (24) TRANSVERSE LINES; "RR" IS 1.8 m (6') LETTERS; 400 (16) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=0.33m ² (3.6 SQ. FT.) EACH "X"=5.0 m ² (54.0 SQ. FT.)
SHOULDER DIAGONALS	15 m (50') C-C (LESS THAN 50 km/h (30 MPH)) 25 m (75') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 45 m (150') C-C (OVER 70 km/h (45 MPH))	SOLID	WHITE - RIGHT YELLOW - LEFT	

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

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

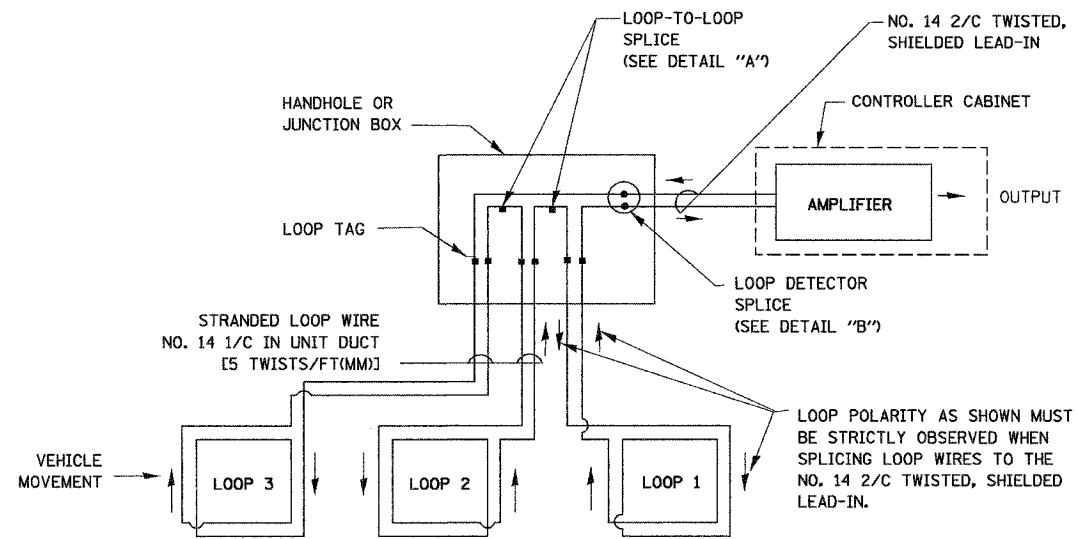
ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
TYPICAL PAVEMENT
MARKINGS

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

SCALE: NONE
DATE: **DATE**
DRAWN BY: CADD
CHECKED BY:

LOOP DETECTOR NOTES

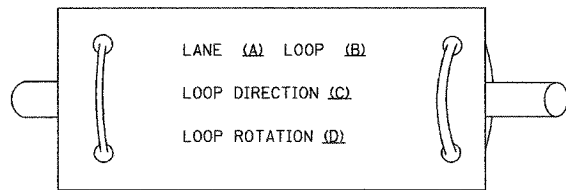
- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED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



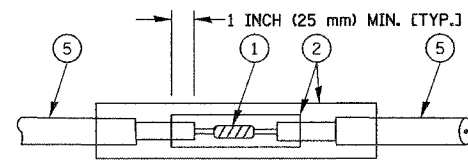
DETECTOR LOOP WIRING SCHEMATIC

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

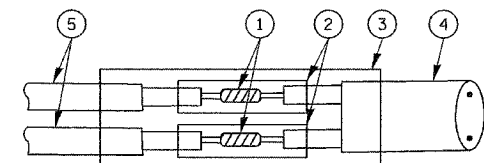
LOOP LEAD-IN CABLE TAG



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



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

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

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT. NONE
HORIZ. NONE
DATE 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

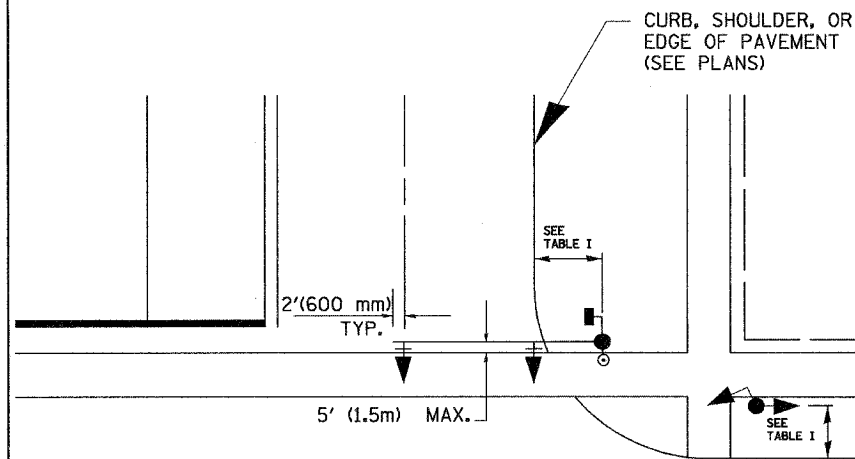
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F.A.W. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	31
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

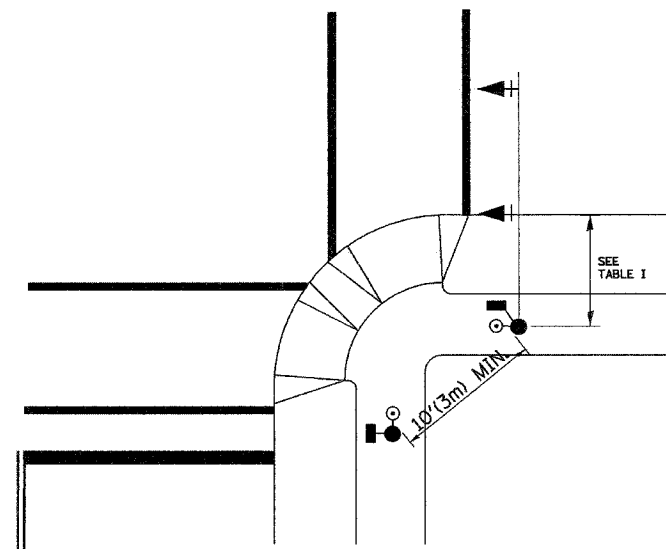
CONTRACT NO. 62853

TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

- AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.

AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.

PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:
A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.
B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.
C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).
E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK
- PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

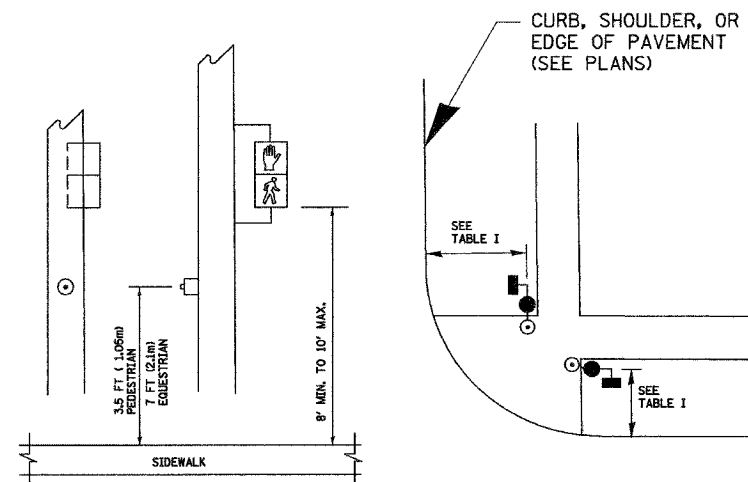


TABLE I

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

REVISIONS	
NAME	DATE

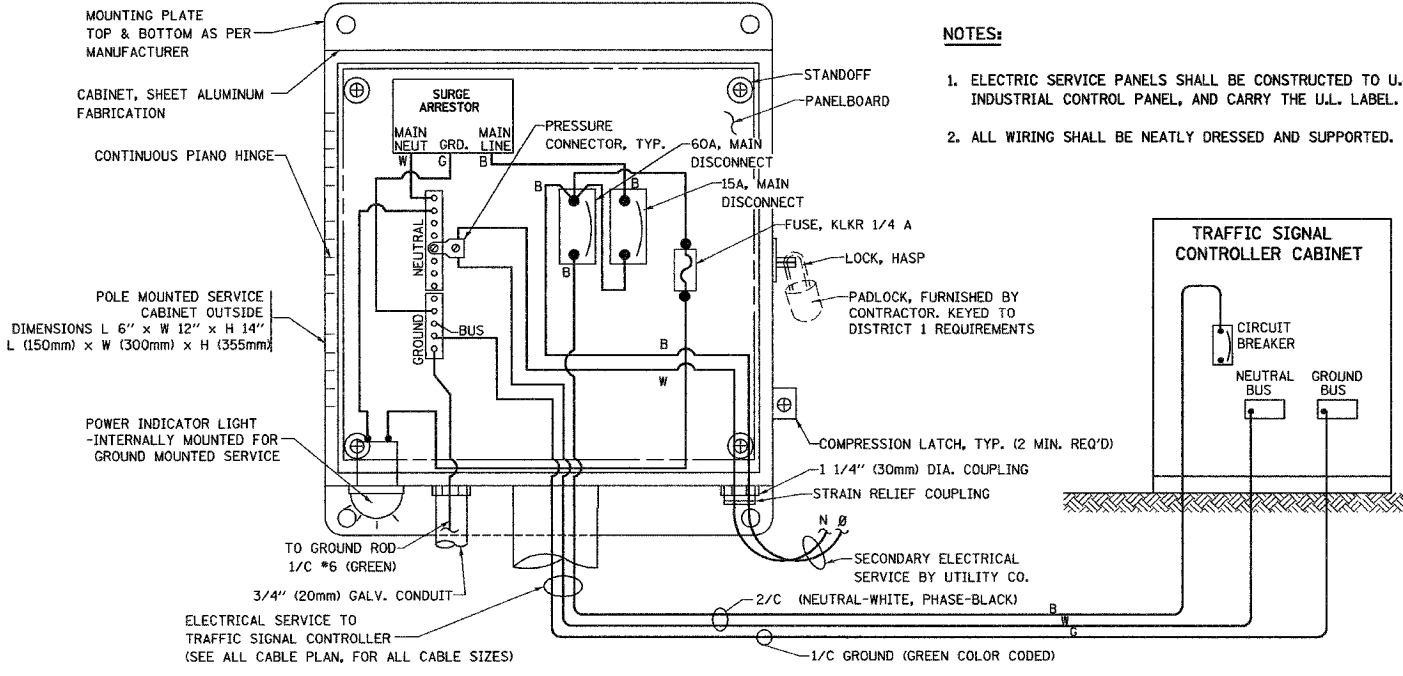
ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT. NONE
HORIZ. NONE
DATE 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 2 OF 4

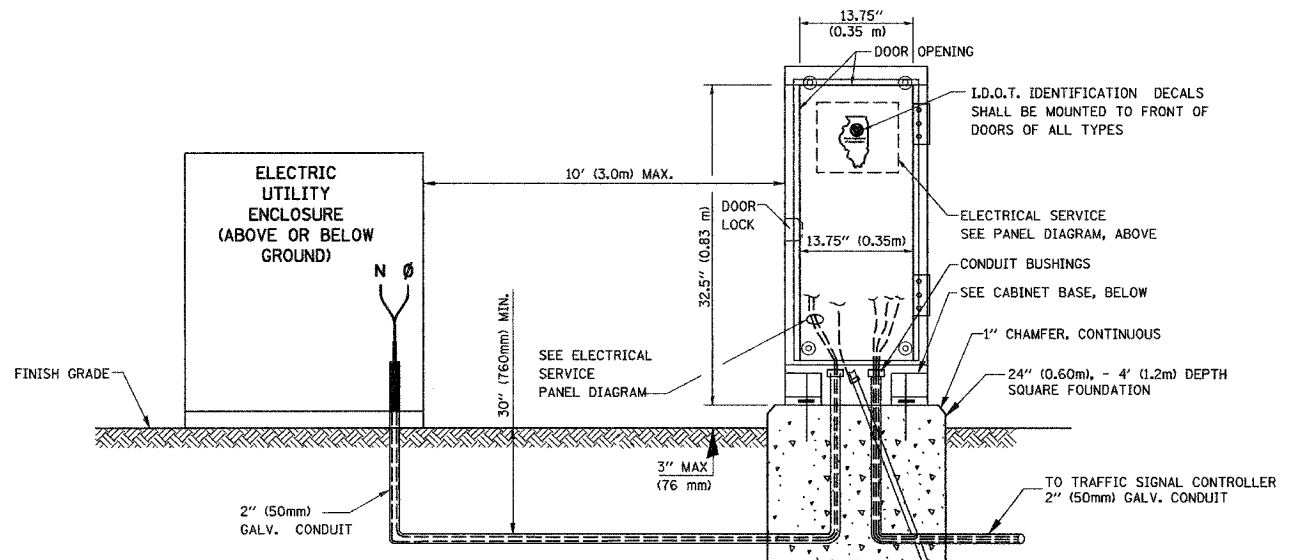
F.A.W. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	32
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62853



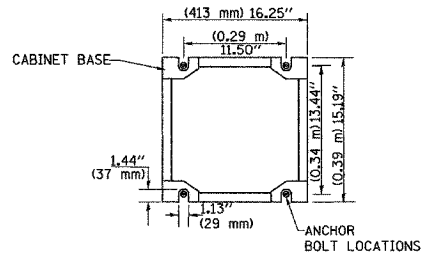
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)
(NOT TO SCALE)



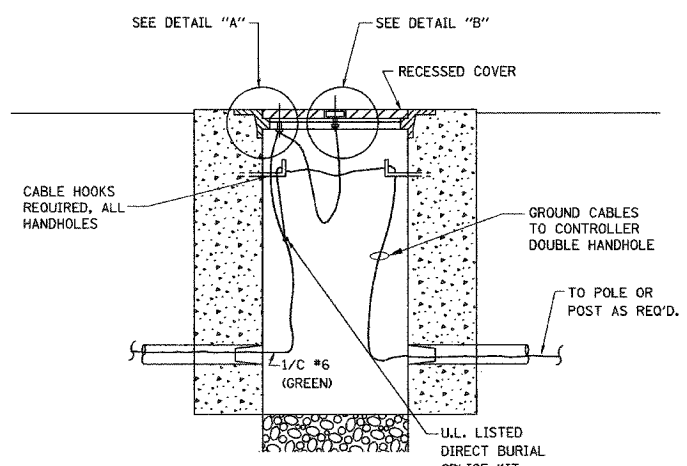
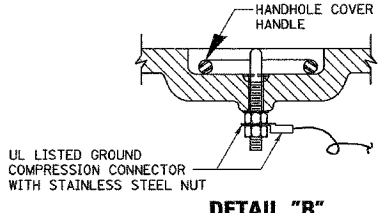
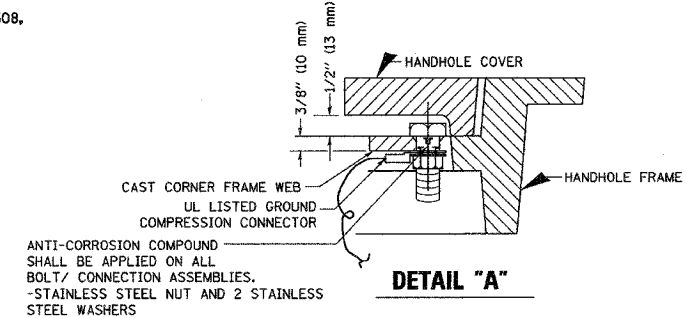
SERVICE INSTALLATION GROUND MOUNT

(NOT TO SCALE)



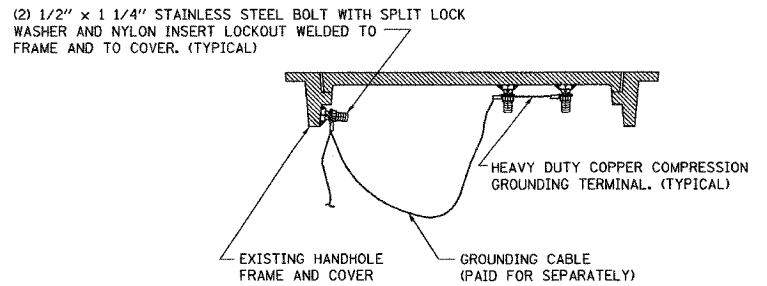
CABINET - BASE BOLT PATTERN

(NOT TO SCALE)



HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)



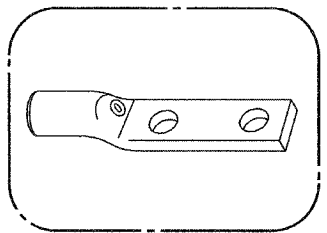
EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

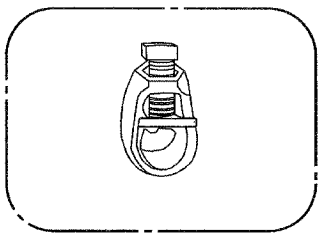
NOTES:

GROUNDING SYSTEM

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



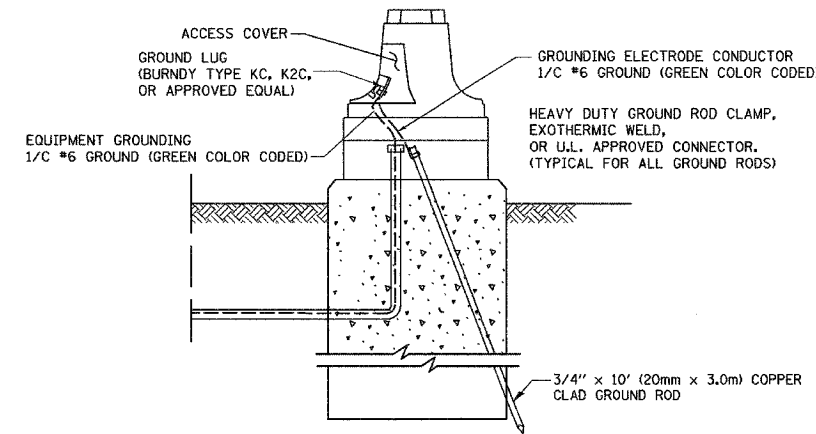
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

NOTES:

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



MAST ARM POLE / POST-GROUNDING DETAIL

(NOT TO SCALE)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

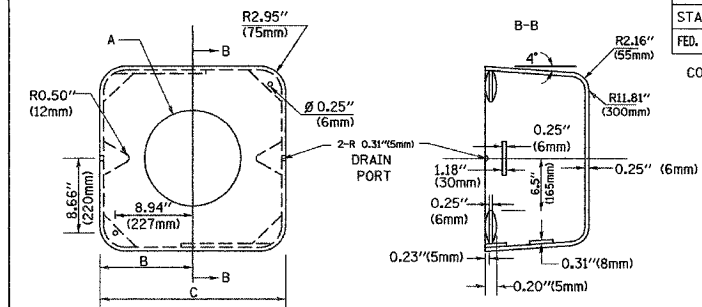
SCALE: VERT. NONE
HORIZ. 1-01-02
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 3 OF 4

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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	33
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

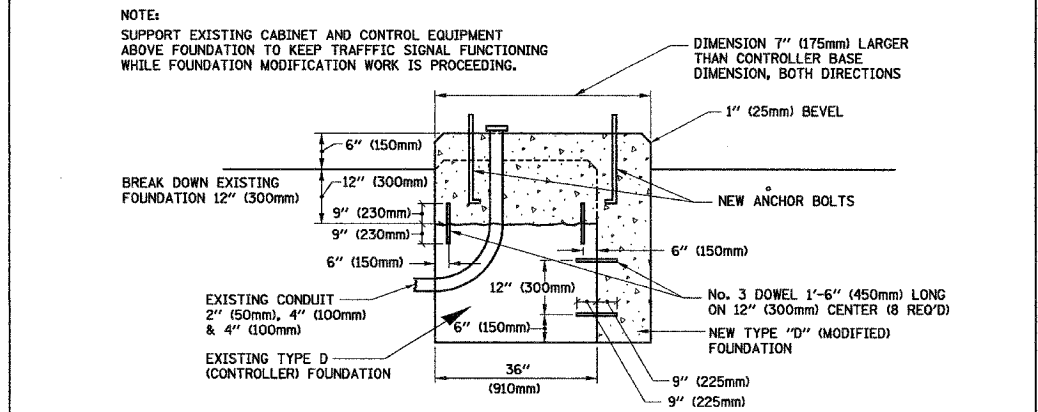
CONTRACT NO. 62853

MATERIAL:
 - ASTM A48 CLASS 30 GREY IRON
 - ASTM A123 HOT DIPPED GALVANIZED

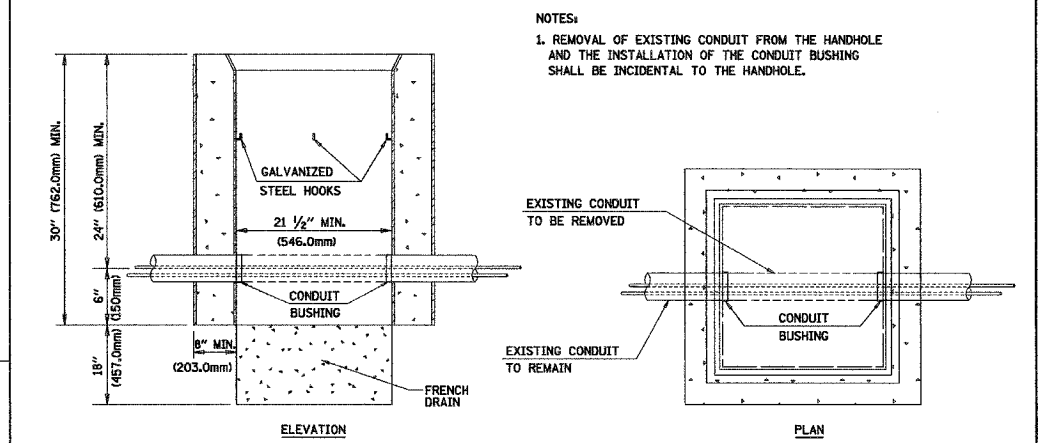


TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125" (257mm)	9.5" (241mm)	19" (483mm)	12" (300mm)	24kg
II	Ø 11.125" (283mm)	10.75" (273mm)	21.5" (546mm)	12" (300mm)	26kg

SHROUD DETAIL



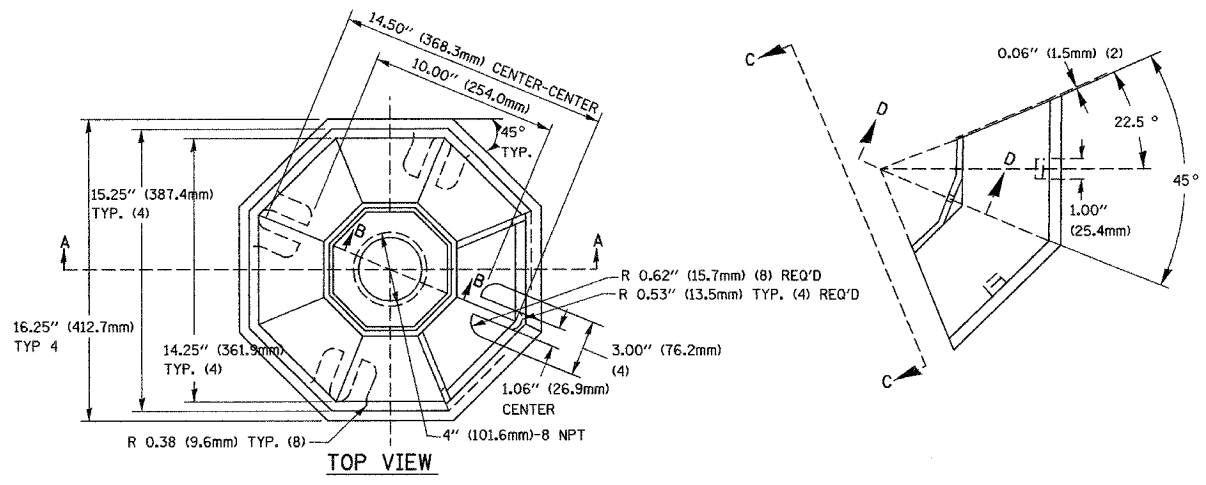
MODIFY EXISTING TYPE "D" FOUNDATION (NOT TO SCALE)



DETAIL HANDHOLE TO INTERCEPT EXISTING CONDUIT N.T.S.

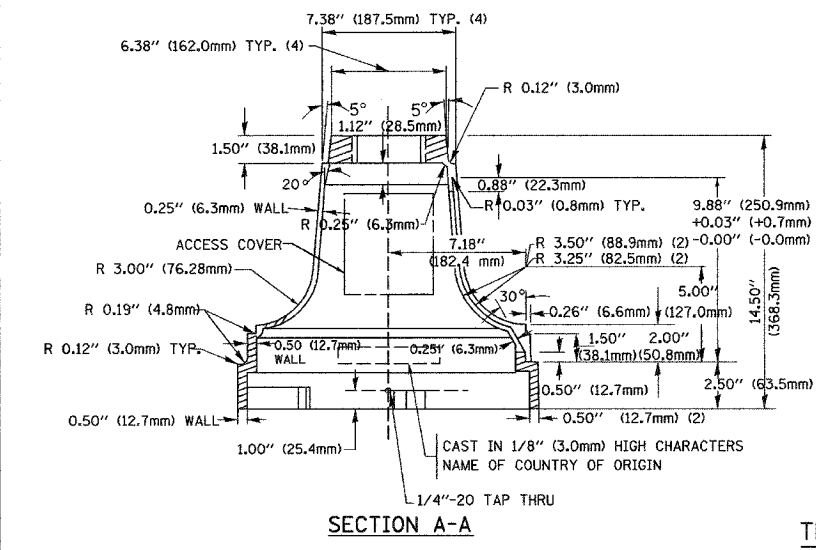
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT 1
 STANDARD TRAFFIC SIGNAL DESIGN DETAILS
 SCALE: VERT. NONE
 HORIZ. 1-01-02
 DATE 1-01-02
 DRAWN BY: RWP
 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 4 OF 4

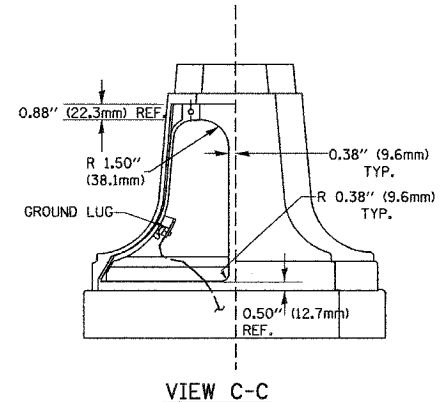


SECTION B-B

SECTION D-D

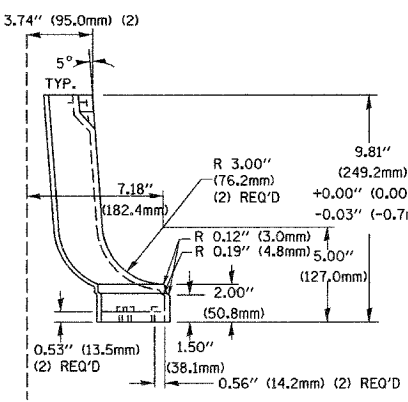


SECTION A-A



VIEW C-C

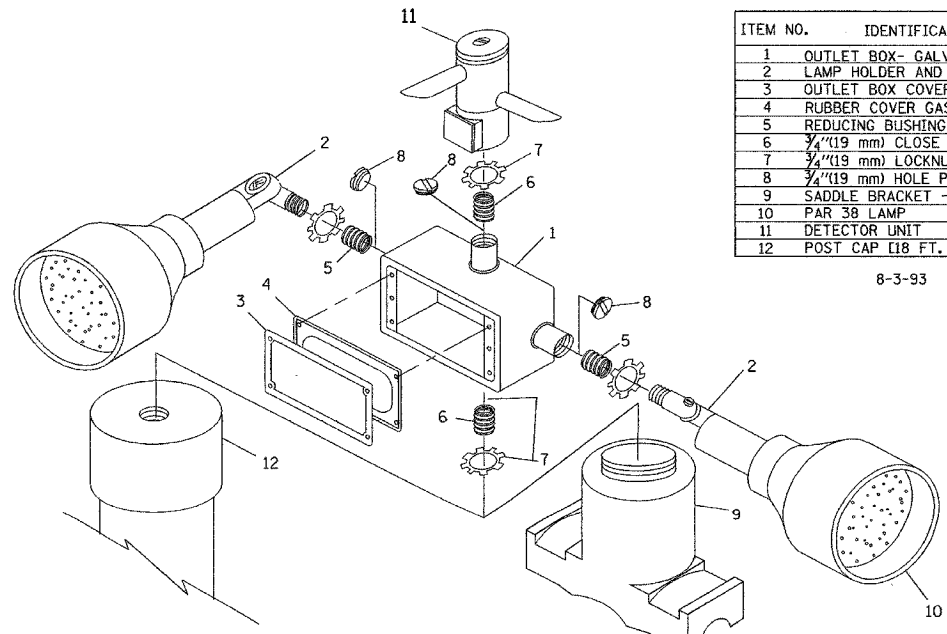
TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



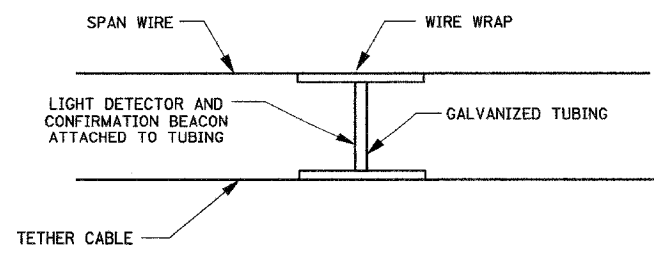
- NOTES:
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
 - ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
 ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
 ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
 - WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED.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

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

8-3-93



POST CAP MOUNT
 MAST ARM MOUNT
 EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS (NOT TO SCALE)

I:\projects\projects\2004\polat\signal\plans\inc\volff\04-std4_wolf.dgn
 DATE-TIME: 11/11/04 10:00:00 AM
 DGN-SPEC: 11/11/04 10:00:00 AM

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
305	2004-108 BR	COOK	72	34
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT:	
CONTRACT NO. 62853				

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1. INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.

TEMPORARY TRAFFIC SIGNAL LEGEND

- ◀ TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- ◀ TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- ⊗ TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 26 FOOT MAXIMUM
- ⊠ TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- ⊕ TEMPORARY SERVICE INSTALLATION
- ⊔ TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- ⊕ VIDEO CAMERA ASSEMBLY
- ⊕ PEDESTRIAN PUSHBUTTON DETECTOR
- ⊕ EMERGENCY VEHICLE LIGHT DETECTOR
- ⊕ CONFIRMATION BEACON
- ⊕ VEHICLE DETECTOR, INDUCTION LOOP
- CT COMMON TRENCH
- UD UNIT DUCT
- G.S. CONDUIT IN GROUND
- ⊕ HANDHOLE
- ⊕ HEAVY DUTY HANDHOLE
- ⊕ TEMPORARY AVIATION RED OBSTRUCTION LIGHT
- ⊕ TEMPORARY AVIATION PHOTOELECTRIC CONTROL

EXISTING TRAFFIC SIGNAL LEGEND

- ⊗ EXISTING AVIATION RED OBSTRUCTION LIGHT
- ⊕ EXISTING AVIATION PHOTOELECTRIC CONTROL
- ◀ EXISTING SIGNAL HEAD
- ◀ EXISTING SIGNAL HEAD WITH BACKPLATE
- ⊕ EXISTING MAST ARM ASSEMBLY AND POLE, STEEL
- ⊕ EXISTING HANDHOLE
- ⊕ EXISTING DOUBLE HANDHOLE
- EXISTING GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED
- ⊕ EXISTING EMERGENCY VEHICLE SYSTEM DETECTOR
- ⊕ EXISTING CONFIRMATION BEACON
- ⊕ EXISTING CONTROLLER
- ⊕ EXISTING SERVICE INSTALLATION

SPECIAL NOTE TO CONTRACTOR

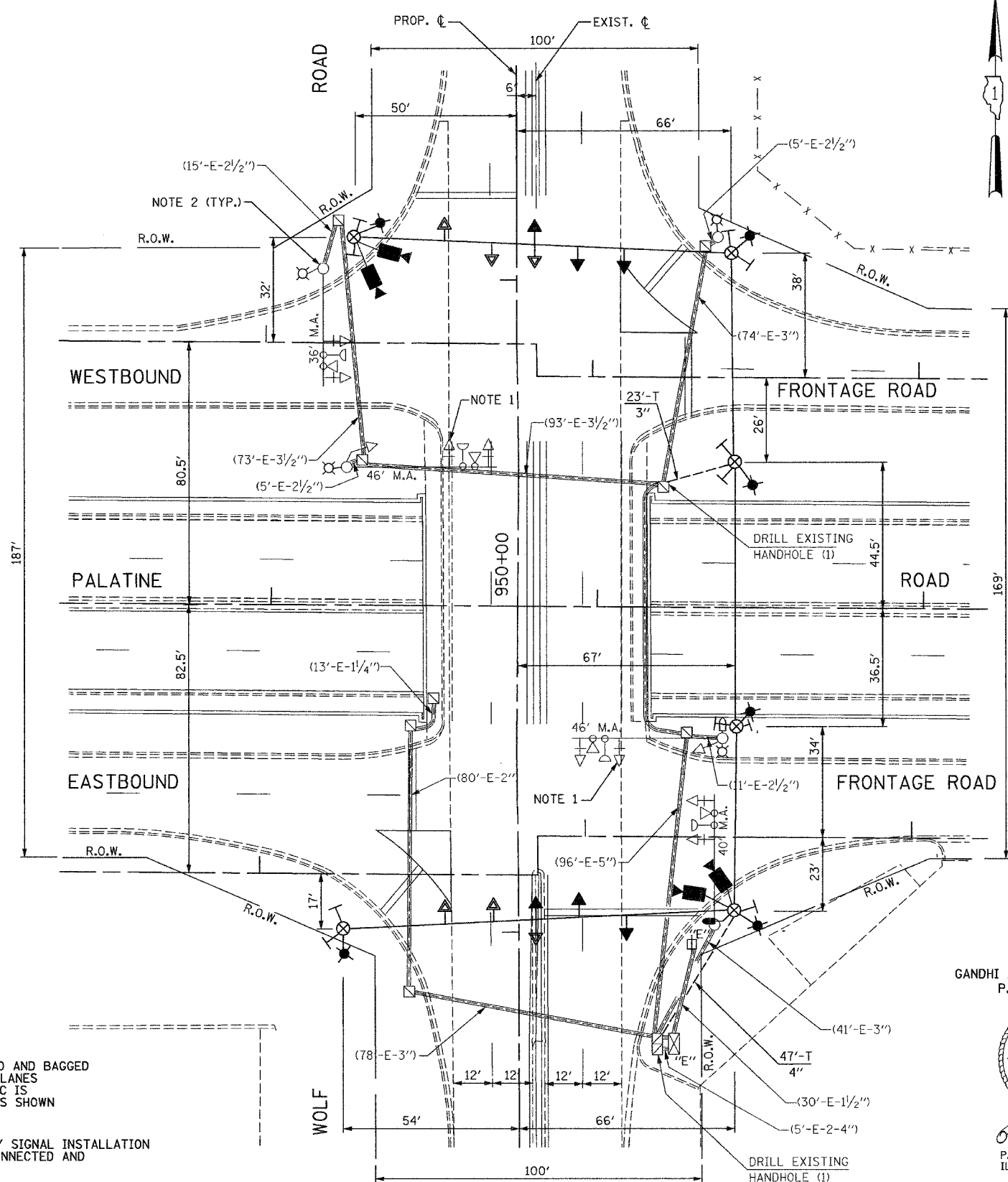
THE EXISTING TRAFFIC SIGNAL CONTROLLER IS UTILIZED FOR TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE SIGNAL HEADS NOT NEEDED DURING THE TEMPORARY TRAFFIC SIGNAL OPERATION SHALL BE DISCONNECTED AND BAGGED. UPON COMPLETION OF THE CONSTRUCTION ACTIVITIES, AND PRIOR TO REMOVAL OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION, ALL THE EXISTING TRAFFIC SIGNAL HEADS WHICH WERE DISCONNECTED AND BAGGED SHALL BE CONNECTED AND UNBAGGED AS DIRECTED BY THE ENGINEER. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION".

THE EXISTING TRAFFIC SIGNAL CONTROLLER, SIGNALS, MAST ARMS, HANDHOLES AND APPURTENANCES UTILIZED FOR TEMPORARY SIGNAL INSTALLATION ARE SHOWN IN THE PLAN AND SHALL REMAIN IN PLACE.

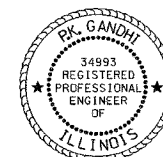
PAYMENT FOR ALL WORK ON THIS SHEET IS INCLUDED IN THE COST OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION"

NOTE 1: THE EXISTING SIGNAL HEADS INDICATED WITH NOTE 1 SHALL BE DISCONNECTED AND BAGGED WHEN THE NORTHBOUND AND SOUTHBOUND TRAFFIC IS MOVED TO THE CENTER LANES ON THE BRIDGE. THEY SHALL BE CONNECTED AND UNBAGGED WHEN THE TRAFFIC IS MOVED TO THE OUTSIDE LANES ON THE BRIDGE. THIS WORK SHALL BE DONE AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

NOTE 2: THE MAST ARMS AND SIGNAL HEADS NOT USED AS A PART OF THE TEMPORARY SIGNAL INSTALLATION ARE NOT SHOWN ON THE PLAN. THE SIGNAL HEADS NOT USED SHALL BE DISCONNECTED AND BAGGED AS DIRECTED BY THE ENGINEER.



GANDHI AND ASSOCIATES, INC.
P.K. GANDHI, P.E.



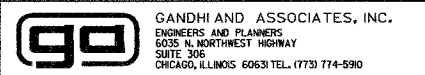
P.K. Gandhi, P.E.
IL. REG. NO. 062-34993

EXP. 11-30-2005
DATE 03-09-2005

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD: WISCONSIN CENTRAL RR TO
US 45/ILL 21 (Milwaukee Ave.)
TEMPORARY TRAFFIC SIGNAL PLAN
WOLF ROAD AT EAST AND WESTBOUND
FRONTAGE ROADS TO AND FROM PALATINE ROAD

SCALE: 1"=20'
DATE: 01/14/2005
DRAWN BY: JF/BC
DESIGNED BY: PKG/RRM
CHECKED BY: PKG/RRM



TEMPORARY SEQUENCE OF OPERATION

MOVEMENT	1		2				3				4				FLASH		
PHASE	1		2				3				4						
INTERVAL	1	2A	2B	3	4A	4B	4C	4D	5	6A	6B	7	8A	8B		8C	8D
CHANGE TO	2		3				4				1						
WOLF ROAD NEAR AND FAR RIGHT SIGNALS AT EASTBOUND FRONTAGE ROAD	N/B	↑G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	
WOLF ROAD FAR LEFT SIGNAL AT EASTBOUND FRONTAGE ROAD	N/B	↑G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	
WOLF ROAD FAR SIDE SIGNALS AT WESTBOUND FRONTAGE ROAD	N/B	↑G	↑G	↑G	↑G	↑G	↑G	Y	R	R	R	R	R	R	R	R	
WOLF ROAD NEAR AND FAR RIGHT SIGNALS AT WESTBOUND FRONTAGE ROAD	S/B	R	R	R	R	R	R	R	↑G	Y	R	R	R	R	R	R	
WOLF ROAD FAR LEFT SIGNAL AT WESTBOUND FRONTAGE ROAD	S/B	R	R	R	R	R	R	R	↑G	Y	R	R	R	R	R	R	
WOLF ROAD FAR SIDE SIGNALS AT EASTBOUND FRONTAGE ROAD	S/B	R	R	R	R	R	R	R	↑G	↑G	↑G	↑G	↑G	↑G	Y	R	
EASTBOUND FRONTAGE ROAD ALL SIGNALS	E/B	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	
WESTBOUND FRONTAGE ROAD ALL SIGNALS	W/B	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	

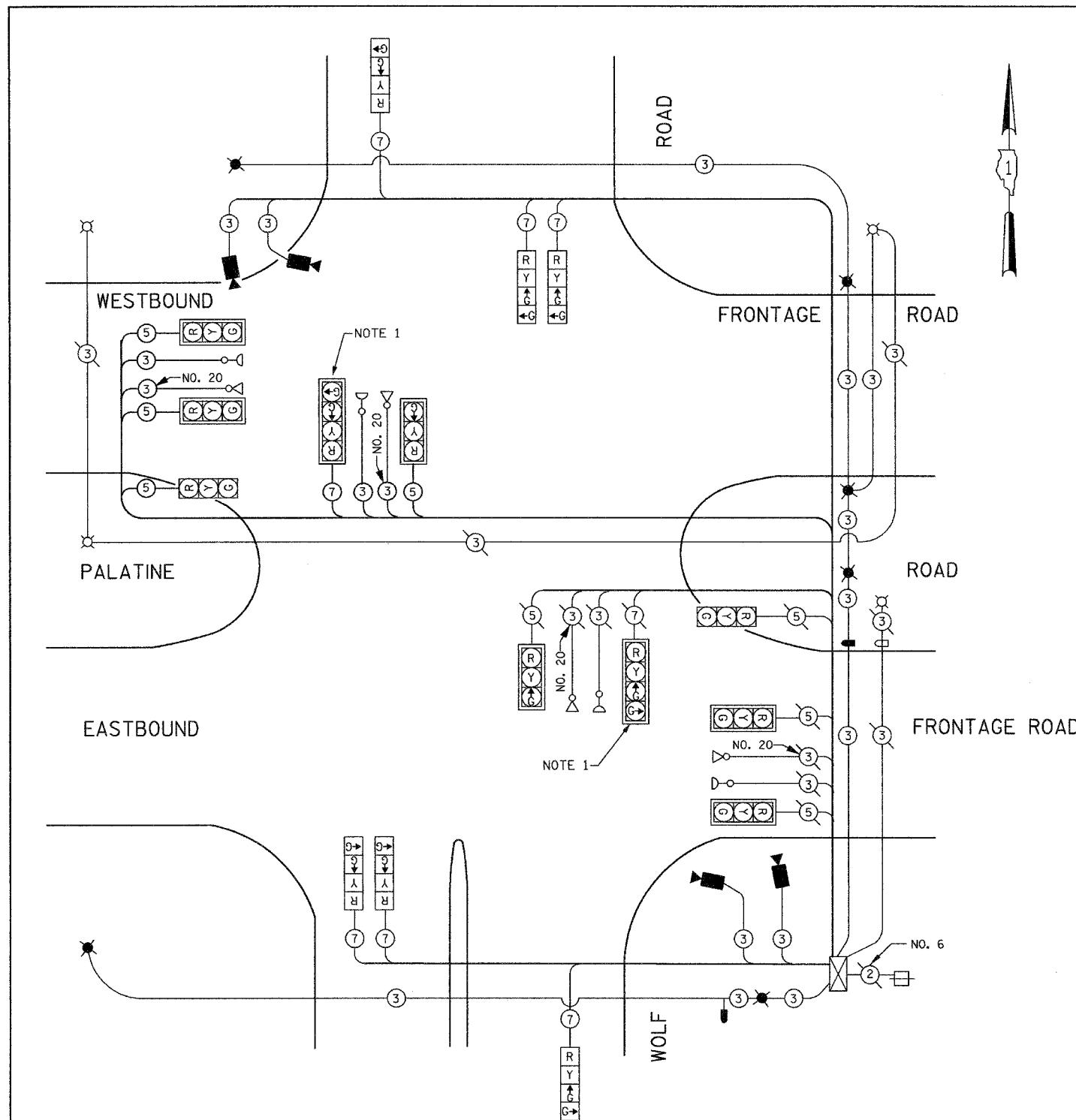
* THE FAR RIGHT SIGNALS SHALL BE DISCONNECTED AND BAGGED WHEN THE NB AND SB TRAFFIC IS MOVED TO THE CENTER LANES ON THE BRIDGE.

EXISTING CABLE DIAGRAM LEGEND

- ② DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
- Ⓜ SIGNAL FACE WITH BACKPLATE. *P* INDICATES PROGRAMMED HEAD.
- ⊗ AVIATION RED OBSTRUCTION LIGHT
- AVIATION PHOTOELECTRIC CONTROL
- ⊗ EMERGENCY VEHICLE LIGHT DETECTOR
- ⊙ CONFIRMATION BEACON
- ⊠ EXISTING CONTROLLER CABINET
- ⊞ EXISTING SERVICE INSTALLATION

TEMPORARY CABLE DIAGRAM LEGEND

- Ⓜ TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300mm)
- ⑤ INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- ⊗ EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- ⊙ VEHICLE DETECTOR, INDUCTION LOOP
- ⊙ PEDESTRIAN PUSHBUTTON DETECTOR
- ⊞ 12" (300mm) PEDESTRIAN SIGNAL SECTION
- Ⓜ VIDE CAMERA ASSEMBLY
- ⊗ AVIATION RED OBSTRUCTION LIGHT
- AVIATION PHOTOELECTRIC CONTROL



NOTE 1: THE EXISTING SIGNAL HEADS INDICATED WITH NOTE 1 SHALL BE DISCONNECTED AND BAGGED WHEN THE NORTHBOUND AND SOUTHBOUND TRAFFIC IS MOVED TO THE CENTER LANES ON THE BRIDGE. THEY SHALL BE CONNECTED AND UNBAGGED WHEN THE TRAFFIC IS MOVED TO THE OUTSIDE LANES ON THE BRIDGE. THIS WORK SHALL BE DONE AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

NOTE 2: THE EXISTING DETECTOR LOOPS SHALL BE DISABLED DURING TEMPORARY SIGNAL OPERATION AND THE VIDEO DETECTION SHALL BE INSTALLED AS SHOWN.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE	% OPERATION	
		INCAND.	LED	
SIGNAL (RED)	16	135	17	1080.0
SIGNAL (YELLOW)	16	135	25	540.0
SIGNAL (GREEN)	24	135	15	810.0
ARROW	-	135	12	0.10
PED. SIGNAL	-	90	25	-
CONTROLLER	1	100	100	100
ILLUM. SIGN				0.05
FLASHER				0.50
ENERGY COSTS TO:				TOTAL = 2530.0
ILLINOIS DEPARTMENT OF TRANSPORTATION 201 WEST CENTER COURT SCHAUMBURG, ILLINOIS 60196-1096				
ENERGY SUPPLY CONTACT: JOAN COOK PHONE: (847) 816-5461 COMPANY: Com. Edison				

REVISIONS	
NAME	DATE

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER																					PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	PREEMPTOR NUMBER 5	PREEMPTOR NUMBER 6	CLEAR TO NORMAL SEQUENCE											
	1	1				1	3				3	5				5	5	7				7	7													
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1P	1Q	1R	1S	1T	1U	1V	1W	1X	1Y	1Z	1AA	1BB	1CC	1DD	2	3	4	5				
CHANGE TO EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	2	1C	1D	1E	4 OR 5	1G	3	1J	2	1L	1M	1N	4 OR 5	3	1R	1S	1T	2 OR 3	4	1W	5	1Y	1Z	1AA	2 OR 3	1CC	4	5								
WOLF ROAD NEAR AND FAR RIGHT SIGNALS AT EASTBOUND FRONTAGE ROAD	N/B	↑ G →	Y	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	↑ G →	R	R	R	◇		
WOLF ROAD FAR LEFT SIGNAL AT EASTBOUND FRONTAGE ROAD	N/B	↑ G	Y	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	↑ G	R	R	R	◇		
WOLF ROAD FAR SIDE SIGNALS AT WESTBOUND FRONTAGE ROAD	N/B	↑ G ←	↑ G ←	↑ G ←	Y	R	↑ G ←	↑ G ←	↑ G ←	↑ G ←	↑ G ←	↑ G ←	↑ G ←	Y	R	↑ G ←	R	R	R	R	R	R	R	R	R	R	R	R	R	↑ G ←	↑ G ←	R	R	◇		
WOLF ROAD NEAR AND FAR RIGHT SIGNALS AT WESTBOUND FRONTAGE ROAD	S/B	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	R	R	↑ G →	Y	R	R	R	R	R	R	R	R	R	R	↑ G →	R	R	R	◇	
WOLF ROAD FAR LEFT SIGNAL AT WESTBOUND FRONTAGE ROAD	S/B	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	R	R	↑ G	Y	R	R	R	R	R	R	R	R	R	R	↑ G	R	R	R	◇	
WOLF ROAD FAR SIDE SIGNALS AT EASTBOUND FRONTAGE ROAD	S/B	R	R	R	R	R	R	R	R	R	R	R	R	R	↑ G ←	↑ G ←	Y	R	↑ G ←	↑ G ←	↑ G ←	↑ G ←	↑ G ←	↑ G ←	↑ G ←	Y	R	↑ G ←	↑ G ←	↑ G ←	↑ G ←	R	R	↑ G ←	↑ G ←	◇
EASTBOUND FRONTAGE ROAD ALL SIGNALS	E/B	R	R	R	R	R	R	Y	R	Y	R	R	R	R	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	◇		
WESTBOUND FRONTAGE ROAD ALL SIGNALS	W/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	R	R	Y	R	G	R	R	R	G	◇			

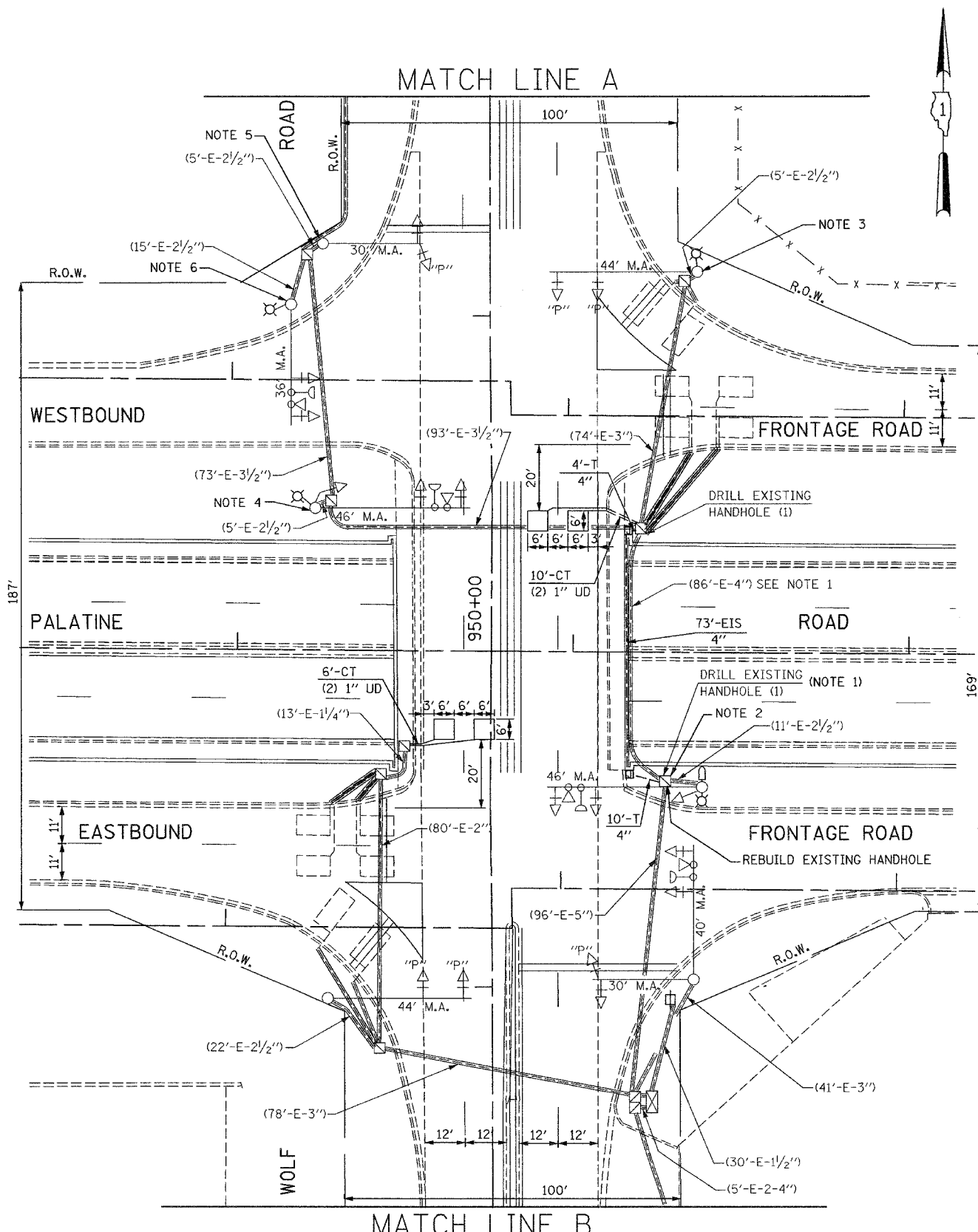
- THE FAR RIGHT SIGNALS SHALL BE DISCONNECTED AND BAGGED WHEN THE NB AND SB TRAFFIC IS MOVED TO THE CENTER LANES ON THE BRIDGE.

◇ EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY VEHICLE INTERVAL AFTER EMERGENCY VEHICLE INTERVAL 2, 3, 4 OR 5 IS TERMINATED.

REVISIONS	
NAME	DATE

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	37
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT:	
CONTRACT NO. 62853				

- NOTE 1: THE CONTRACTOR SHALL REMOVE THE EXISTING 4" CONDUIT ATTACHED TO STRUCTURE AND REPLACE IT WITH A 4" CONDUIT TO BE EMBEDDED IN THE PROPOSED PARAPET WALL. THE EXISTING CABLES AFFECTED BY THE REMOVAL OF EXISTING CONDUIT SHALL BE REMOVED AND NEW CABLES SHALL BE INSTALLED IN THEIR PLACE AS SHOWN IN THE CABLE DIAGRAM. THIS WORK SHALL BE DONE AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. THE CONDUIT AND JUNCTION BOXES (IF ANY) REMOVAL WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCIDENTAL TO THE STRUCTURAL REMOVAL PAY ITEMS.
- NOTE 2: REMOVE 250' OF 3/C CABLE (2 CABLES), 250' OF 3/C NO. 20 CABLE (2 CABLES), 625' OF 5/C CABLE (5 CABLES), 500' OF 7/C CABLE (4 CABLES), AND 625' OF 1 PAIR LEAD-IN CABLE (5 CABLES) BETWEEN CONTROLLER CABINET AND THIS HANDHOLE (TOTAL 2250')
- NOTE 3: REMOVE 118' OF 3/C CABLE (1 CABLE) FOR AVIATION OBSTRUCTION RED LIGHT, 149' OF 5/C CABLE (1 CABLE), AND 160' OF 7/C CABLE (1 CABLE) BETWEEN HANDHOLE IN SOUTHEAST CORNER OF WB FRONTAGE ROAD AND THE MAST ARM POLE. ALSO REMOVE 87' OF 1 PAIR LEAD-IN CABLE (1 CABLE) BETWEEN THE HANDHOLES. (TOTAL 514')
- NOTE 4: REMOVE 176' OF 3/C CABLE (1 CABLE), 176' OF 3/C NO. 20 CABLE (1 CABLE) 311' OF 5/C CABLE (2 CABLES), AND 170' OF 7/C CABLE (1 CABLE) BETWEEN HANDHOLE IN SOUTHEAST CORNER OF WB FRONTAGE ROAD AND THIS MAST ARM POLE. (TOTAL 833')
- NOTE 5: REMOVE 238' OF 7/C CABLE (2 CABLES) BETWEEN HANDHOLE IN SOUTHEAST CORNER OF WB FRONTAGE ROAD AND THE MAST ARM POLE. (TOTAL 238')
- NOTE 6: REMOVE 249' OF 3/C CABLE (1 CABLE), 249' OF 3/C NO. 20 CABLE (1 CABLE), AND 497' OF 5/C CABLE (2 CABLES), BETWEEN HANDHOLE IN SOUTHEAST CORNER OF WB FRONTAGE ROAD AND THE MAST ARM POLE. (TOTAL 995')
- NOTE 7: REMOVE 451' OF 1 PAIR LEAD-IN CABLE (1 CABLE) BETWEEN THE HANDHOLE IN THE SOUTHEAST CORNER OF WB FRONTAGE ROAD AND THIS HANDHOLE. (TOTAL 451')



TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	[Symbol]	[Symbol]
SERVICE INSTALLATION	[Symbol]	[Symbol]
SIGNAL HEAD	[Symbol]	[Symbol]
SIGNAL HEAD WITH BACKPLATE	[Symbol]	[Symbol]
SIGNAL HEAD, PEDESTRIAN	[Symbol]	[Symbol]
SIGNAL POST	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, STEEL	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, ALUMINUM	[Symbol]	[Symbol]
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE	[Symbol]	[Symbol]
UNIT DUCT	[Symbol]	[Symbol]
COMMON TRENCH	[Symbol]	[Symbol]
HANDHOLE	[Symbol]	[Symbol]
HEAVY DUTY HANDHOLE	[Symbol]	[Symbol]
DOUBLE HANDHOLE	[Symbol]	[Symbol]
GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED	[Symbol]	[Symbol]
PEDESTRIAN PUSHBUTTON DETECTOR	[Symbol]	[Symbol]
DETECTOR LOOP	[Symbol]	[Symbol]
CAST IRON JUNCTION BOX	[Symbol]	[Symbol]
EMERGENCY VEHICLE SYSTEM DETECTOR	[Symbol]	[Symbol]
CONFIRMATION BEACON	[Symbol]	[Symbol]
SIGNAL HEAD, OPTICALLY PROGRAMMED	[Symbol]	[Symbol]
CONDUIT SPLICE	[Symbol]	[Symbol]
WOOD POLE	[Symbol]	[Symbol]
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	[Symbol]	[Symbol]
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE	[Symbol]	[Symbol]
RAILROAD CONTROL CABINET	[Symbol]	[Symbol]
TELEPHONE CONNECTION	[Symbol]	[Symbol]
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"	[Symbol]	[Symbol]
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"	[Symbol]	[Symbol]
MICROWAVE VEHICLE SENSOR	[Symbol]	[Symbol]
AVIATION RED OBSTRUCTION LIGHT	[Symbol]	[Symbol]
AVIATION PHOTOELECTRIC CONTROL	[Symbol]	[Symbol]
STAINLESS STEEL JUNCTION BOX ATTACHED TO STRUCTURE	[Symbol]	[Symbol]

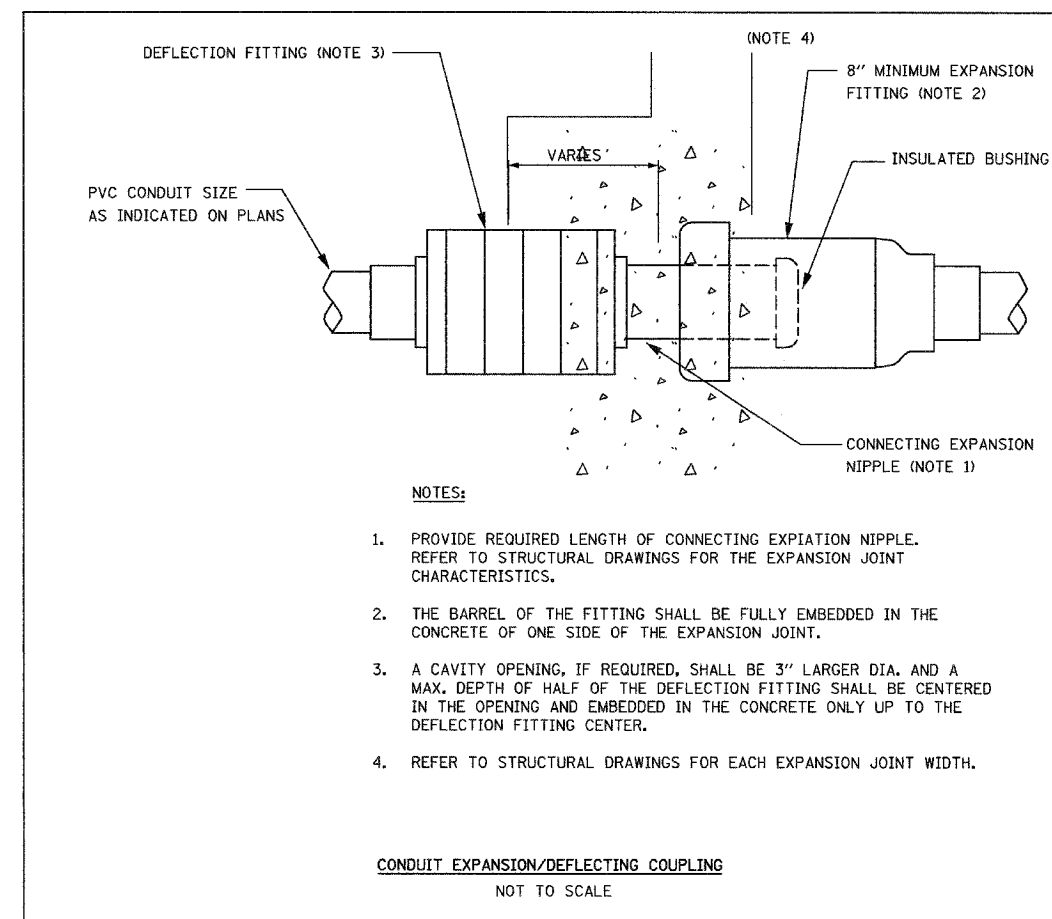
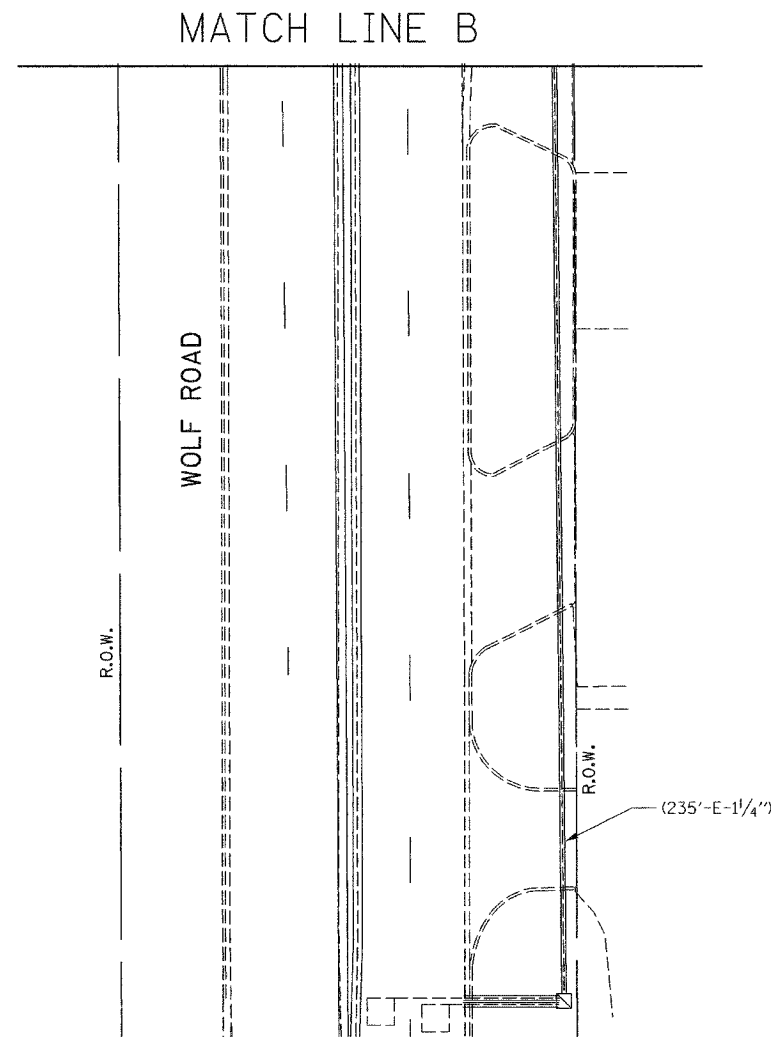
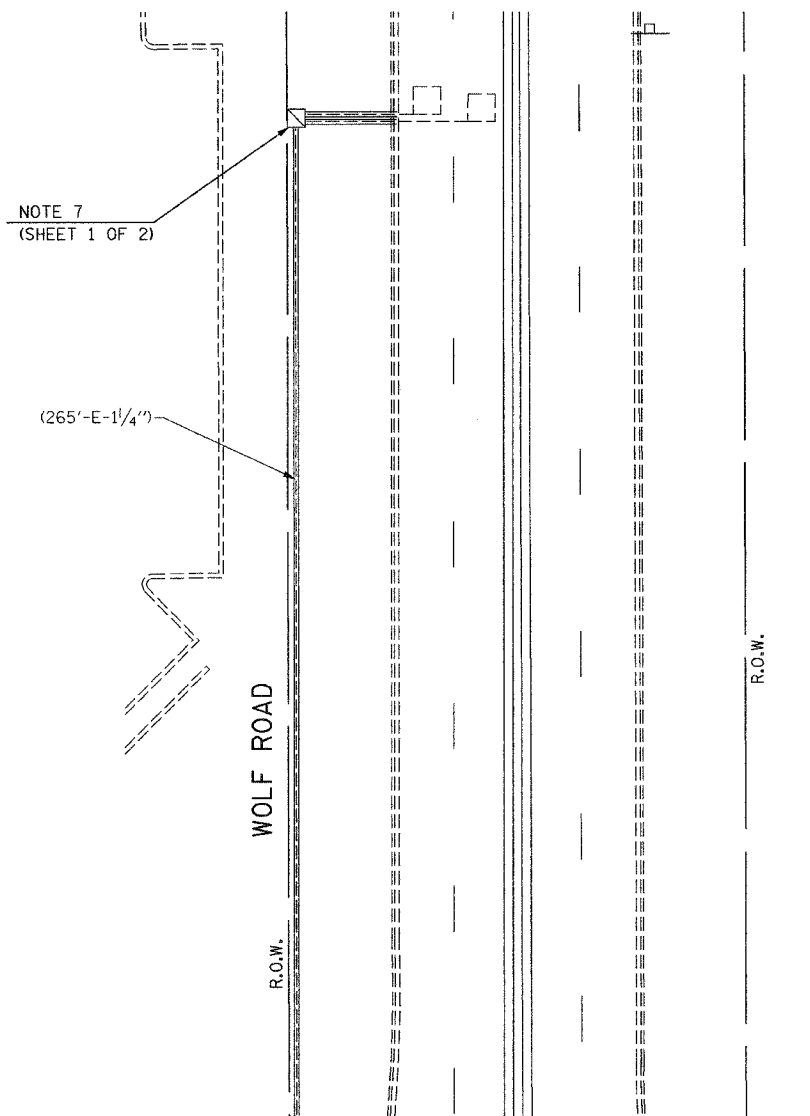
GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
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SUITE 303
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

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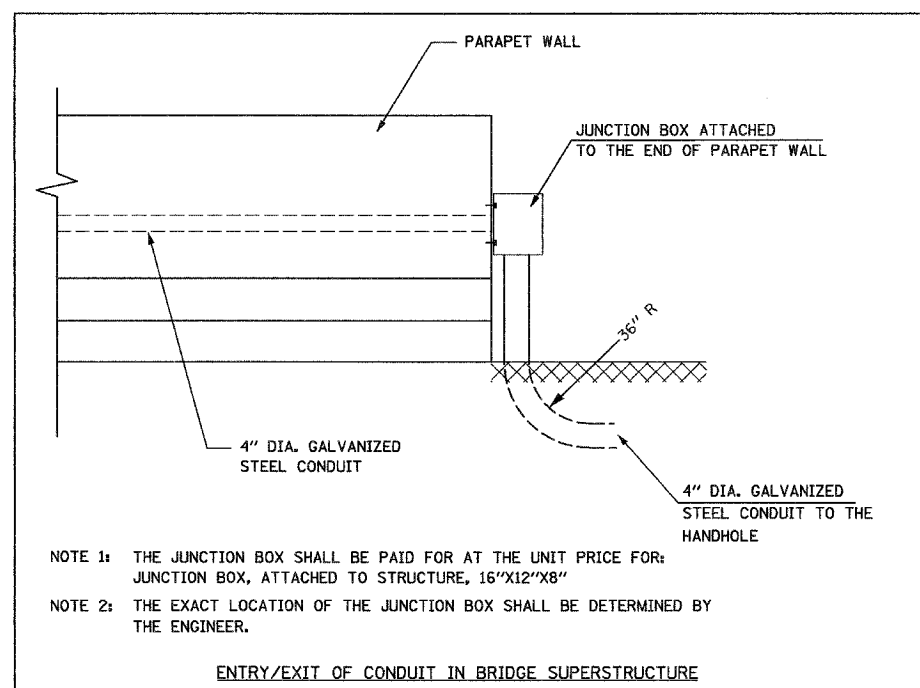
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD: WISCONSIN CENTRAL RR TO
US 45/ILL 21 (Milwaukee Ave.)
EXISTING TRAFFIC SIGNAL PLAN MODIFICATION
WOLF ROAD AT EAST AND WESTBOUND
FRONTAGE ROADS TO AND FROM PALATINE ROAD
SHEET 1 OF 2
SCALE: 1"=20'
DATE: 01/14/2005
DRAWN BY: JF/BC
DESIGNED BY: PKG/RRM
CHECKED BY: PKG/RRM

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108-PR	38 COOK	72	38
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		
CONTRACT NO. 62853				



MATCH LINE A



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ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD: WISCONSIN CENTRAL RR TO
US 45/ILL 21 (Milwaukee Ave.)
EXISTING TRAFFIC SIGNAL PLAN MODIFICATION
WOLF ROAD AT EAST AND WESTBOUND
FRONTAGE ROADS TO AND FROM PALATINE ROAD
SHEET 2 OF 2

SCALE: 1"=20'
DATE: 01/14/2005

DRAWN BY: JF/BC
DESIGNED BY: PKG/RRM
CHECKED BY: PKG/RRM

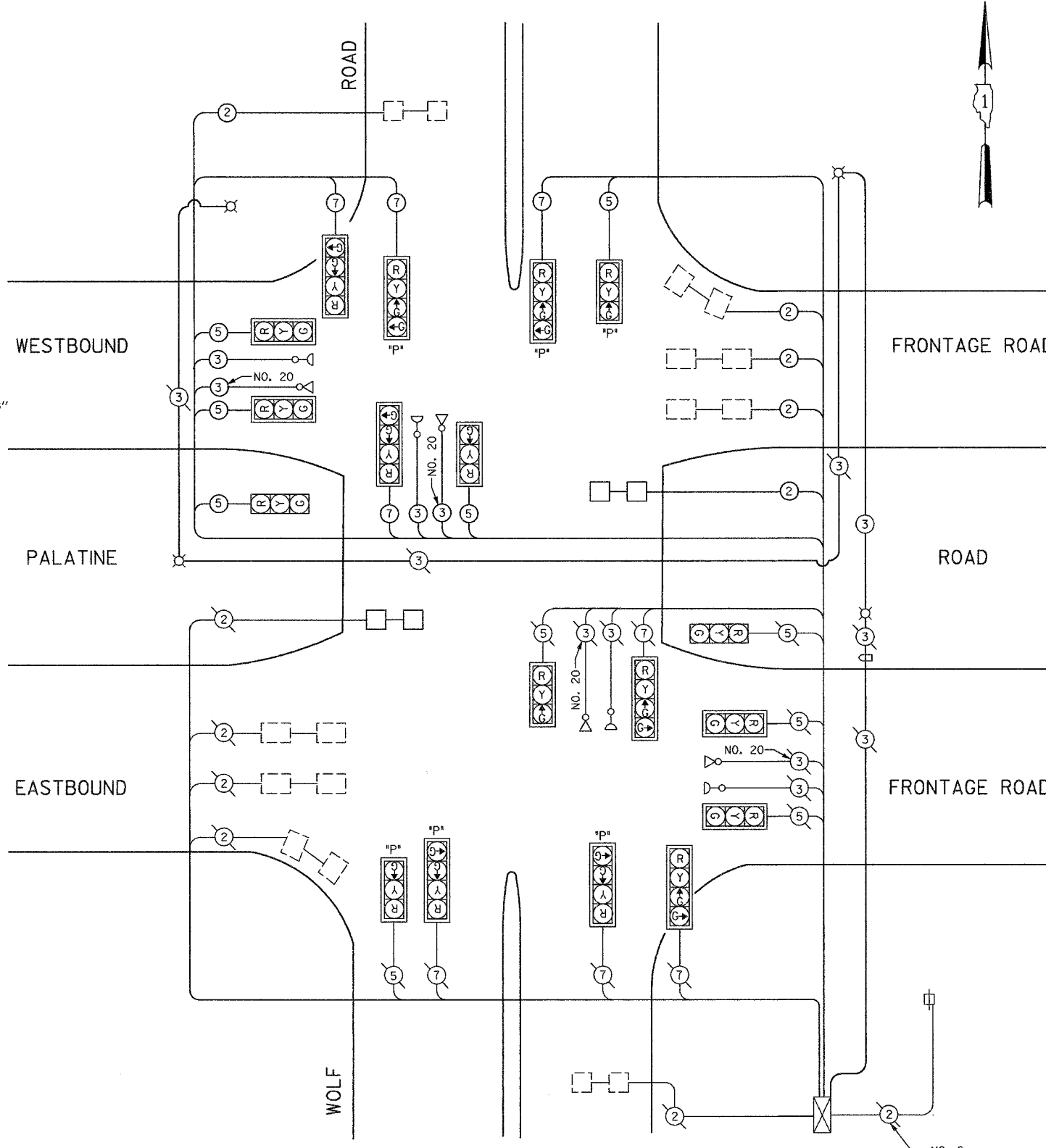
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
305	2004-108 BR	COOK	72	39
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT:	
CONTRACT NO. 62853				

CABLE PLAN LEGEND

- | | | |
|-----------------|-----------------|---|
| EXISTING | PROPOSED | |
| | | 8" (200mm) TRAFFIC SIGNAL SECTION |
| | | 12" (300mm) TRAFFIC SIGNAL SECTION |
| | | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | | CONTROLLER CABINET |
| | | SERVICE INSTALLATION |
| | | TELEPHONE INSTALLATION |
| | | VEHICLE DETECTOR, INDUCTION LOOP |
| | | MAGNETIC DETECTOR |
| | | EMERGENCY VEHICLE LIGHT DETECTOR |
| | | CONFIRMATION BEACON |
| | | PUSH-BUTTON DETECTOR |
| | | DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| | | GROUND CABLE IN CONDUIT NO.6 SOLID COPPER (GREEN) |
| | | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MMI2F & SMI2F |
| | | SIGNAL FACE WITH BACKPLATE. *P* INDICATES PROGRAMMED HEAD. |
| | | RAILROAD CONTROL CABINET |
| | | ILLUMINATED SIGN, FIBER OPTIC 'NO LEFT TURN' |
| | | ILLUMINATED SIGN, FIBER OPTIC 'NO RIGHT TURN' |
| | | GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER |
| | | GROUND ROD AT POST OR MAST ARM POLE |
| | | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| | | LOCAL AND MASTER CONTROLLER |
| | | MICROWAVE VEHICLE SENSOR |
| | | AVIATION RED OBSTRUCTION LIGHT |
| | | AVIATION PHOTOELECTRIC CONTROL |

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
14	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
73	FOOT	CONDUIT EMBEDDED IN STRUCTURE, 4" DIA., GALVANIZED STEEL
2	EACH	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 18" X 8"
14	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1105	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
2032	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
1667	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
1634	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
2	EACH	DRILL EXISTING HANDHOLE
132	FOOT	DETECTOR LOOP, TYPE 1
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	MODIFY EXISTING CONTROLLER
5281	FOOT	REMOVE ELECTRIC CABLE FROM CONDUIT
856	FOOT	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED
1	EACH	REBUILD EXISTING HANDHOLE



CABLE PLAN
NOT TO SCALE

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE	
TYPE	NO LAMPS	WATTAGE	OPERATION		
		INCAND.	LED		
SIGNAL (RED)	12	135	17	0.50	675.0
(YELLOW)	12	135	25	0.25	337.5
(GREEN)	16	135	15	0.25	472.5
ARROW		135	12	0.10	
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100		100.0
ILLUM. SIGN				0.05	
OPT. SIGNAL (RED)	6	150		0.50	450.0
(YELLOW)	6	150		0.25	225.0
(GREEN)	10	150		0.25	375.0
AVIATION LIGHTRED	4	54		1.00	216.0
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	3121.0

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

GO GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
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SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD; WISCONSIN CENTRAL RR TO
US 45/ILL 21 (Milwaukee Ave.)
**EXISTING CABLE PLAN MODIFICATION
WOLF ROAD AT EAST AND WESTBOUND
FRONTAGE ROADS TO AND FROM PALATINE ROAD**
SCALE: NONE
DATE: 01/14/2005
DRAWN BY: JF
DESIGNED BY: PKG/RRM
CHECKED BY: PKG/RRM

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RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2004-108 BR	COOK	72	40
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62853				

EXISTING SEQUENCE OF OPERATION

MOVEMENT																													F L A S H							
	6							8						2					4																	
PHASE																																				
INTERVAL	1	2A	2B	3A	3B	3C	3D	4	5A	5B	6A	6B	6C	6D	7	8A	8B	8C	8D	9A	9B	10	11A	11B	11C	11D	12A	12B								
CHANGE TO	8							2 OR 4						6 OR 8					4																	
WOLF ROAD AT WESTBOUND FRONTAGE RD. FAR RIGHT SIGNAL	N/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	G	G	R	R	R	R	R	R	R	R
WOLF ROAD AT WESTBOUND FRONTAGE RD. END MAST ARM AND FAR LEFT SIGNAL	N/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	G	G	R	R	R	R	R	R	R	R
WOLF ROAD AT WESTBOUND FRONTAGE RD. NEAR RIGHT AND FAR RIGHT SIGNALS	S/B	G	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
WOLF ROAD AT WESTBOUND FRONTAGE RD. END MAST ARM (FAR MAST ARM SIGNAL)	S/B	G	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
WOLF ROAD AT EASTBOUND FRONTAGE RD. NEAR RIGHT AND FAR RIGHT SIGNALS	N/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	G	G	R	R	R	R	R	R	R	R
WOLF ROAD AT EASTBOUND FRONTAGE RD. END MAST ARM (FAR MAST ARM SIGNAL)	N/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	G	G	R	R	R	R	R	R	R	R
WOLF ROAD AT EASTBOUND FRONTAGE RD. FAR RIGHT SIGNAL	S/B	G	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
WOLF ROAD AT EASTBOUND FRONTAGE RD. END MAST ARM AND FAR LEFT SIGNAL	S/B	G	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
WESTBOUND FRONTAGE RD. MAST ARM SIGNALS AND FAR LEFT SIGNAL	W/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	Y	R	R	R	R	R	R	R	R	R	R
EASTBOUND FRONTAGE RD. MAST ARM SIGNALS AND FAR LEFT SIGNAL	E/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1																		4						7					10										PREEMPTOR NUMBER 2 PREEMPTOR NUMBER 3 PREEMPTOR NUMBER 4 PREEMPTOR NUMBER 5					CLEAR TO NORMAL SEQUENCE
	1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1P	1Q	1R	1S	1T	1U	1V	1W	1X	1Y	1Z	1AA	1BB	1CC	1DD	2	3	4	5													
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER																																													
CHANGE TO EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	3	1C	5	1E	1F	1G	2 OR 4	5	1K	3	1M	1N	1P	2 OR 4	2	1S	1T	1U	3 OR 5	1W	4	4	1Z	2	1BB	1CC	1DD	3 OR 5																	
WOLF ROAD AT WESTBOUND FRONTAGE RD. FAR RIGHT SIGNAL	N/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R									
WOLF ROAD AT WESTBOUND FRONTAGE RD. END MAST ARM AND FAR LEFT SIGNAL	N/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R									
WOLF ROAD AT WESTBOUND FRONTAGE RD. NEAR RIGHT AND FAR RIGHT SIGNALS	S/B	G	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R									
WOLF ROAD AT WESTBOUND FRONTAGE RD. END MAST ARM (FAR MAST ARM SIGNAL)	S/B	G	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R									
WOLF ROAD AT EASTBOUND FRONTAGE RD. NEAR RIGHT AND FAR RIGHT SIGNALS	N/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R									
WOLF ROAD AT EASTBOUND FRONTAGE RD. END MAST ARM (FAR MAST ARM SIGNAL)	N/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R									
WOLF ROAD AT EASTBOUND FRONTAGE RD. FAR RIGHT SIGNAL	S/B	G	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R									
WOLF ROAD AT EASTBOUND FRONTAGE RD. END MAST ARM AND FAR LEFT SIGNAL	S/B	G	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R									
WESTBOUND FRONTAGE RD. MAST ARM SIGNALS AND FAR LEFT SIGNAL	W/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R									
EASTBOUND FRONTAGE RD. MAST ARM SIGNALS AND FAR LEFT SIGNAL	E/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R									

◇ EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY VEHICLE INTERVAL AFTER EMERGENCY VEHICLE INTERVAL 2, 3, 4 OR 5 IS TERMINATED.

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SUITE 306
CHICAGO, ILLINOIS 60631 TEL: (773) 774-5390

ILLINOIS DEPARTMENT OF TRANSPORTATION
PALATINE ROAD; WISCONSIN CENTRAL RR TO
US 45/ILL 21 (Milwaukee Ave.)

EXISTING SEQUENCE OF OPERATION,
EXISTING EMERGENCY VEHICLE PREEMPTION
SEQUENCE OF OPERATION
WOLF ROAD & PALATINE RD.

REVISIONS	
NAME	DATE

SCALE: NONE
DATE: 01/14/2005

DRAWN BY: JF/BC
DESIGNED BY: ----
CHECKED BY: PKG/RRM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1 6 SHEETS
S. B. I. P. O. P. 385	X	COOK	72	41	
*2004-108 BR			Contract No. 62853		

Benchmark: CCHD BM found in NW corner of the Frontage Road bridge over Palatine Road approximately 2000' east of Wheeling Road, Elev. 655.02

Existing Structure: Structure No. 016-2530 built as West Frontage Road over F.A.S. Route 116, Palatine Road, Section 110-1415 in 1963. The structure was widened in 2003. The superstructure consists of 33" x 36" PPC Deck Beams supporting a bituminous concrete wearing surface. The length of the structure is 65'-6" center to center of bearings. The existing deck width is 48'-4" out to out of deck. The deck is not skewed.

Construction Staging: The road shall be closed during construction.

Scope of Work:

1. Remove bituminous concrete wearing surface and waterproofing membrane system and place concrete wearing surface.
2. Extend existing concrete parapet on west side of bridge.
3. Repair the concrete Deck Beams.
4. Reconstruct the expansion joints.
5. Repair the existing abutments.

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-322 Grade 60.

2. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

3. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splice or anchorage system. Cost included with "Concrete Removal".

4. All construction joints shall be bonded.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Bituminous Concrete Surface Removal Complete	Sq Yd	240
Concrete Removal	Cu Yd	2.4
Preformed Joint Seal 1 3/4"	Foot	31
Preformed Joint Seal 2 1/2"	Foot	31
Concrete Superstructure	Cu Yd	5.0
Bridge Deck Grooving	Sq Yd	220
Protective Coat	Sq Yd	310
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq Ft	30
Reinforcement Bars, Epoxy Coated	Pound	3,700
Epoxy Crack Sealing	Foot	120
Concrete Wearing Surface	Sq Yd	240
Bearing Pad Adjustment	Each	26
Cleaning and Painting Exposed Rebar	Sq Ft	5
Furnishing and Erecting Structural Steel	Pound	1,684
Formed Concrete Repair (Depth Larger Than 5")	Sq. Ft.	10

LOADING HS20-44

Allow 25 lbs./sq.ft. future wearing surface

DESIGN SPECIFICATIONS

1996 AASHTO w/1997 & 1998 Interims

DESIGN STRESSES

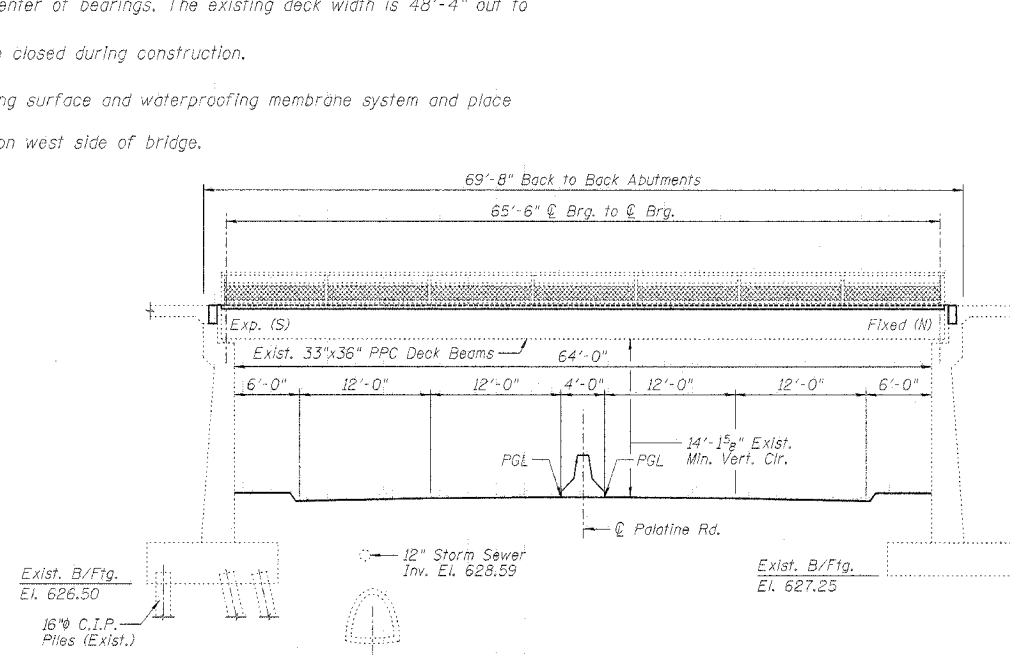
FIELD UNITS

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

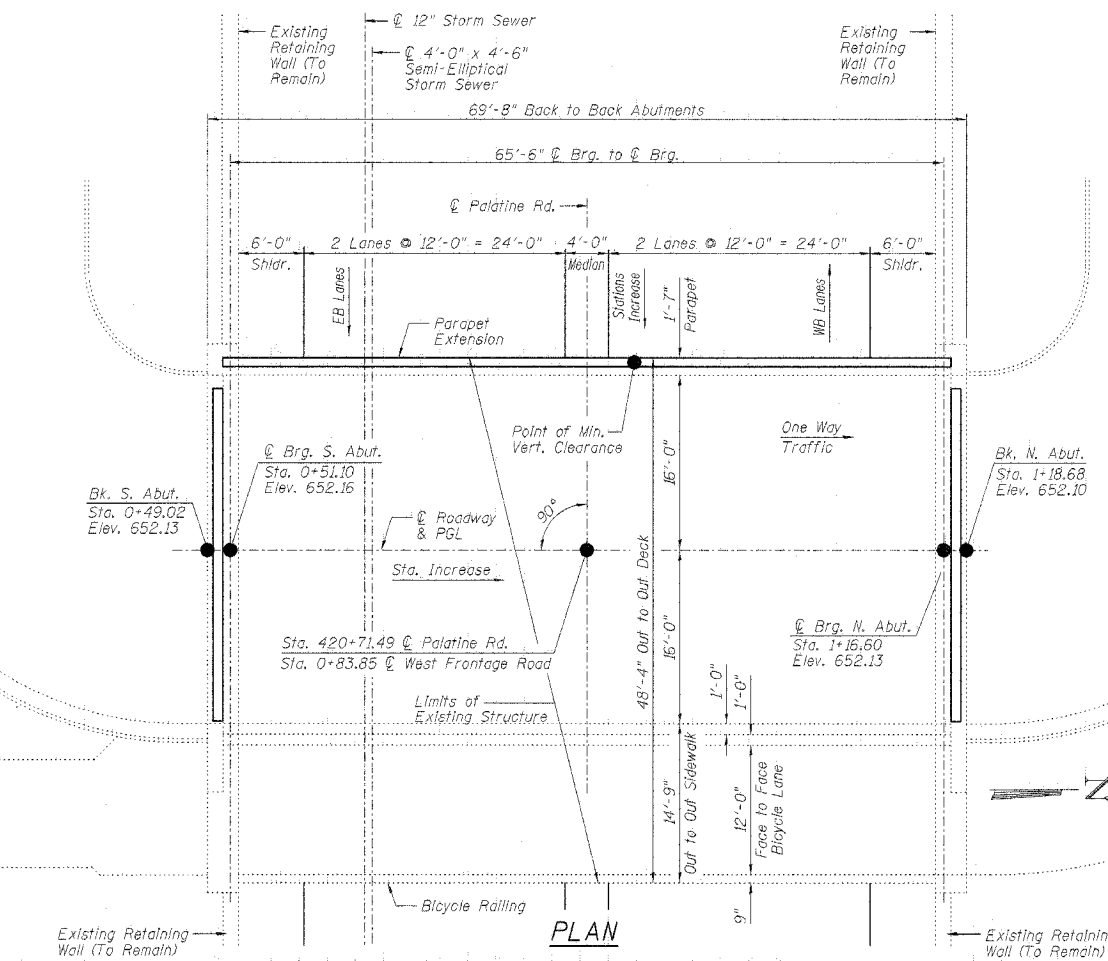


Signature: [Signature]
Date: 02-04-05
Expires: 11-30-2006

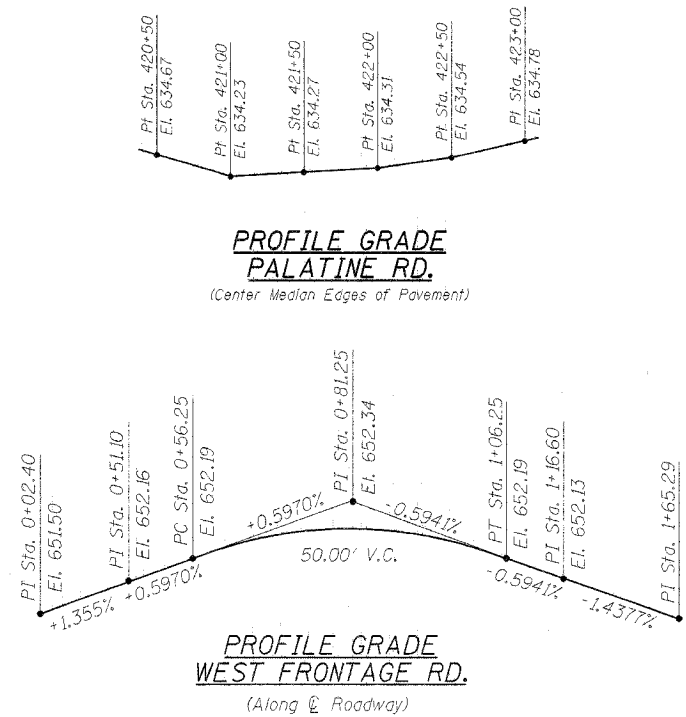
GENERAL PLAN & ELEVATION
WEST FRONTAGE ROAD OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 0+88.97
STRUCTURE NO. 016-2530



ELEVATION
(Looking West)



PLAN

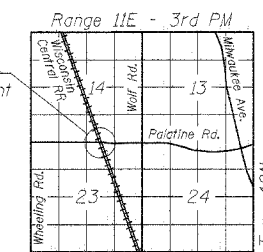


PROFILE GRADE
WEST FRONTAGE RD.
(Along Centerline of Roadway)

BRANCO & ZROKA ENGINEERING, P.C.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

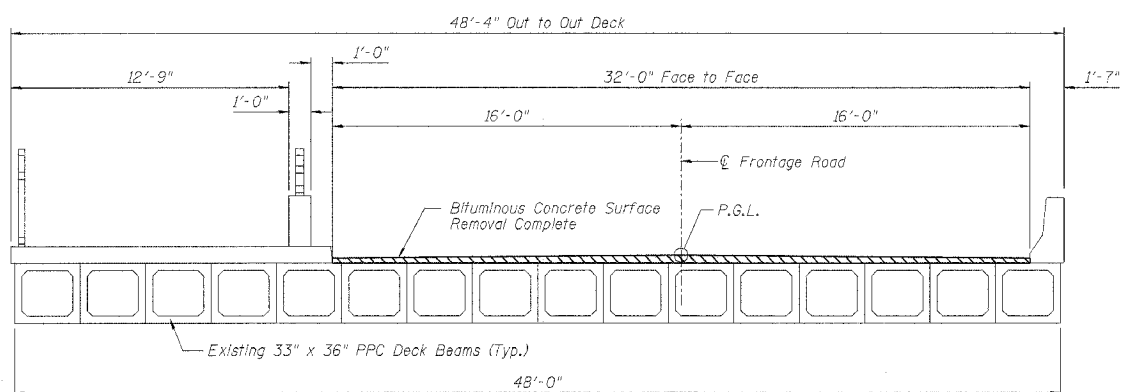
February 2005



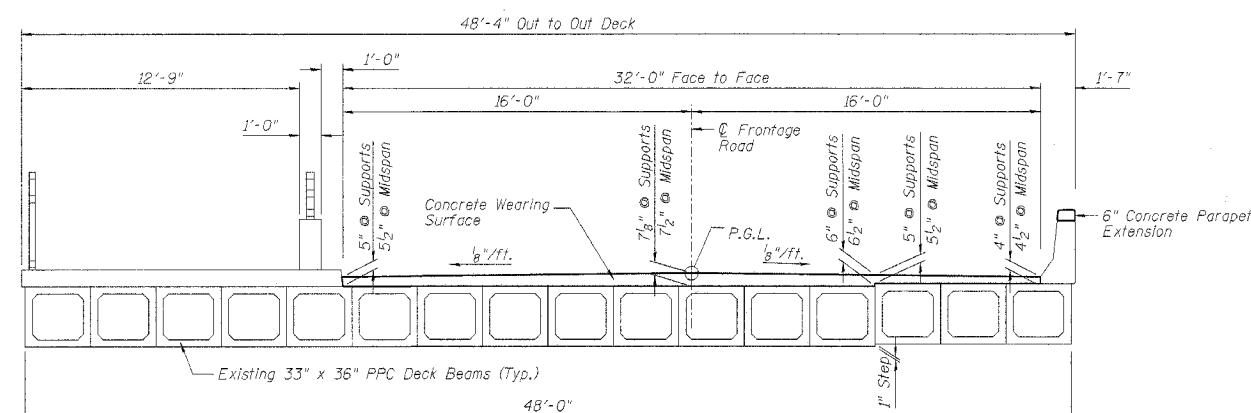
LOCATION SKETCH

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 6 SHEETS
S.B.L. P.A.M. 285	*	COOK	72	42	
*2004-108 BR			Contract No. 62853		



EXISTING CROSS SECTION
(Looking South)



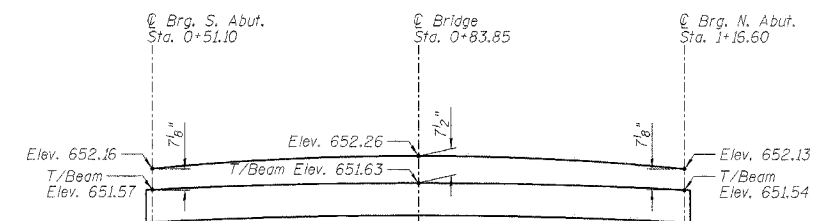
PROPOSED CROSS SECTION
(Looking South)

NOTE: Contractor shall not damage existing portland mortar facing course as it shall be reused.

LEGEND

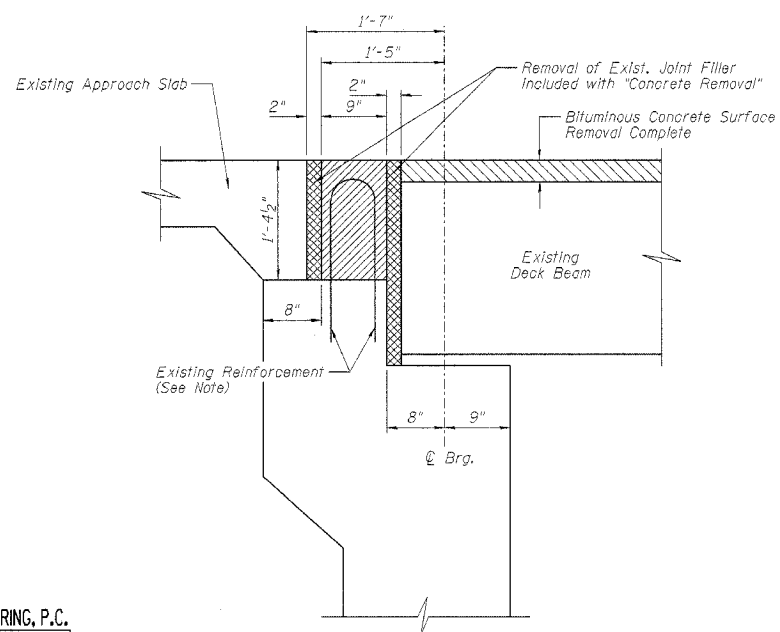
- Concrete Removal
- Bifuminous Concrete Surface Removal (Complete)

Note:
Existing Reinforcement extending into removed areas shall be blast cleaned, straightened and incorporated into new construction. Cost included with "Concrete Removal". Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with "Concrete Removal".

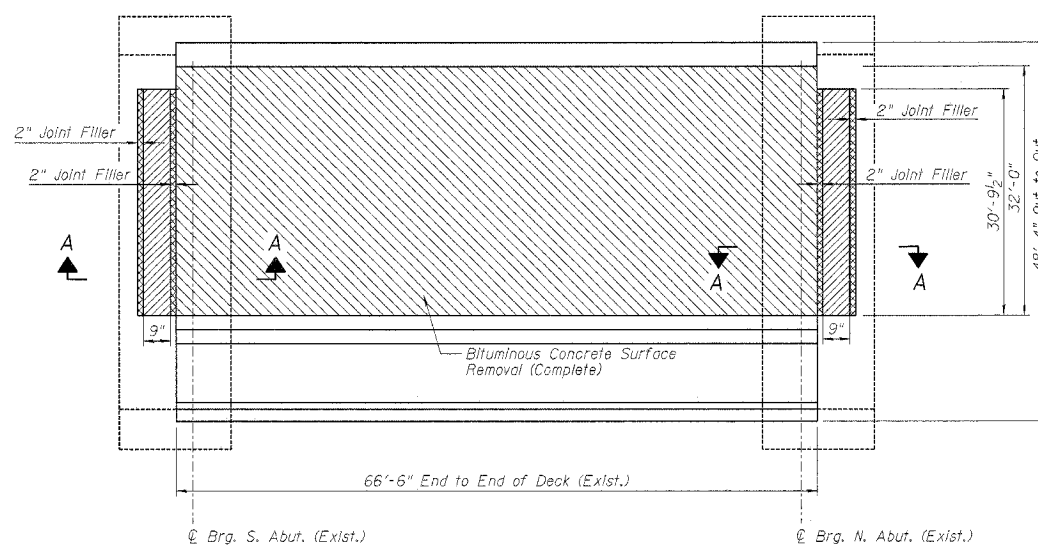


OVERLAY PROFILE

(Along Frontage Rd.)
(Beam elevation at midspan derived from survey data)



SECTION A-A THROUGH EXISTING ABUTMENT



CONCRETE REMOVAL PLAN

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Bituminous Concrete Surface Removal Complete	Sq Yd	240
Concrete Removal	Cu Yd	2.4

CROSS SECTION AND LIMITS OF REMOVAL
WEST FRONTAGE ROAD OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 0+88.97
STRUCTURE NO. 016-2530

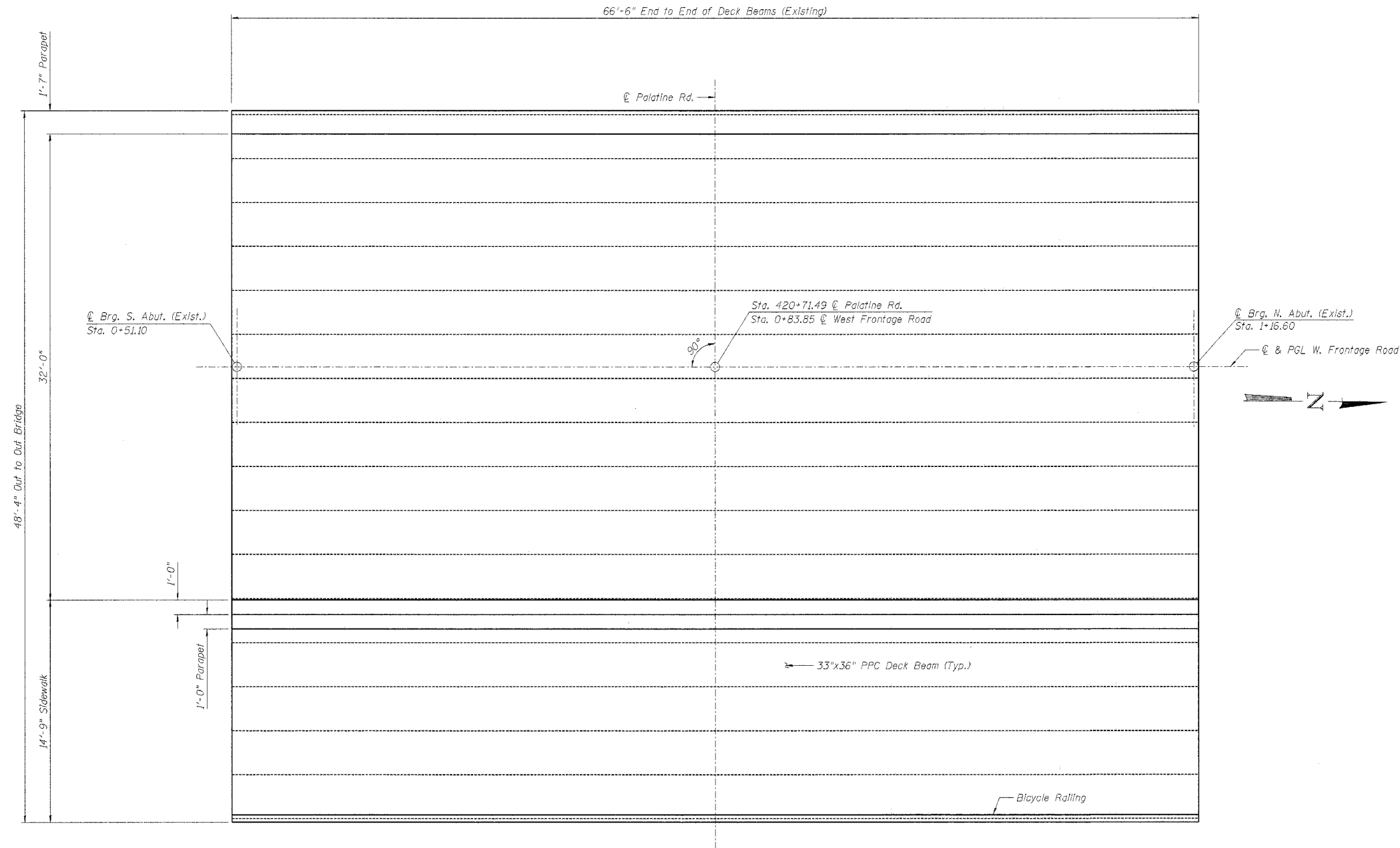
BRANCO & ZROKA ENGINEERING, P.C.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

February 2005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
S.B.L. P.A.P. 305	#	COOK	72	43	6 SHEETS
*2004-108 BR			Contract No. 62853		



AS BUILT PLAN OF CONCRETE DECK BEAM REPAIRS
TOP VIEW

NOTE

After removal of the bituminous overlay, any areas with delamination extending to the top mat of reinforcement on the beam shall be cleaned of any loose concrete and filled back up with the concrete overlay. Any area where the damage extends below the top mat of reinforcement on the beam shall be brought to the attention of the Bureau of Bridges and Structures for further disposition. Work included in the cost of "Concrete Wearing Surface."

BRANCO & ZROKA ENGINEERING, P.C.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

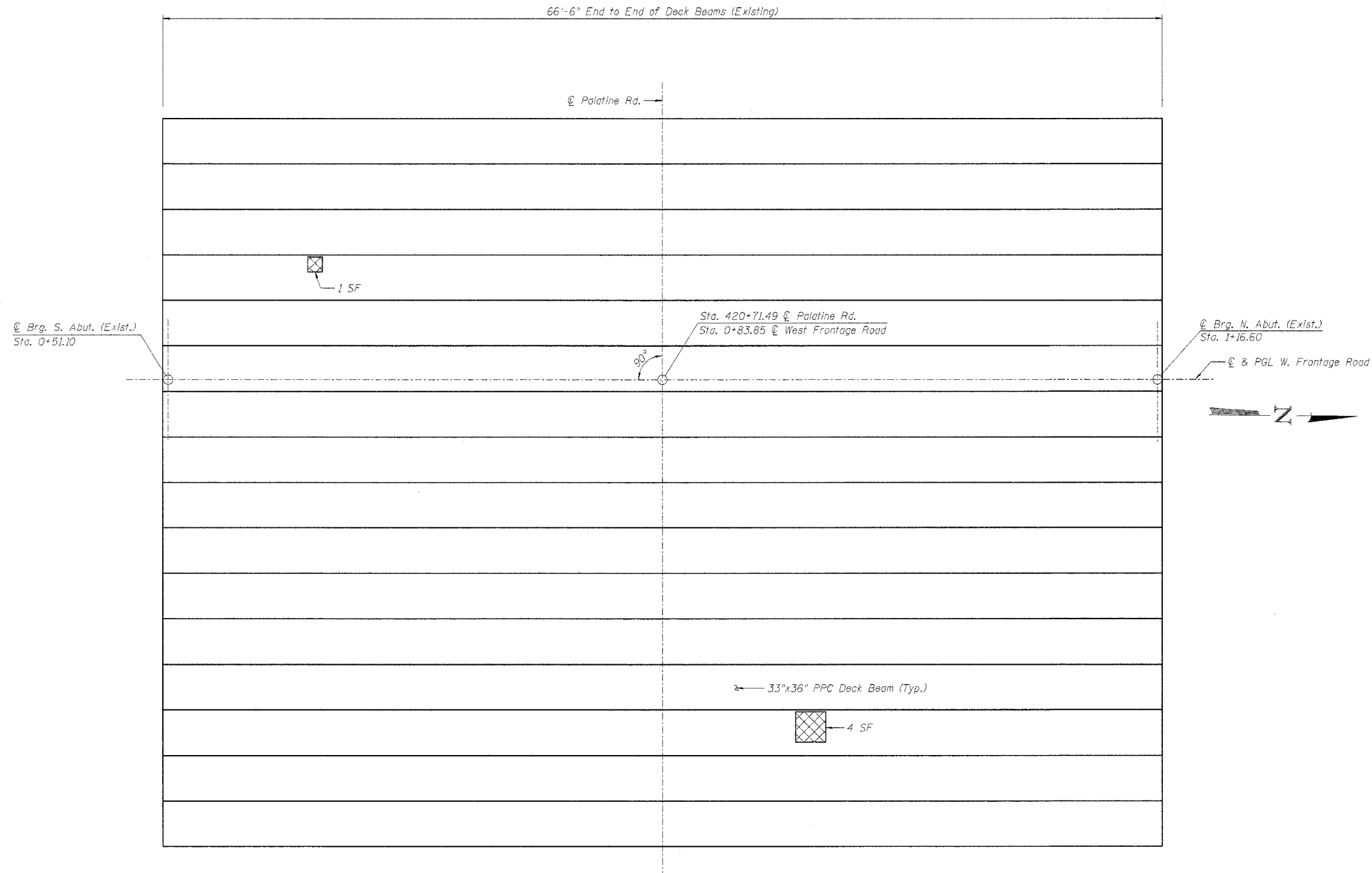
February 2005

CONCRETE DECK BEAM REPAIRS I
WEST FRONTAGE ROAD OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 0+88.97
STRUCTURE NO. 016-2530

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4 6 SHEETS
S. B. 1 P. A. M. 305	X	COOK	72	44	

*2004-108 BR Contract No. 62853



PLAN OF CONCRETE DECK BEAM REPAIRS
BOTTOM VIEW

NOTES

Repair areas shown are the surveyed areas of deterioration.
The actual area to be repaired shall be as directed by the Engineer.

Variations in the quantities shall not be cause for additional compensation,
however, the Contractor will be paid for the quantity actually furnished
at the unit price bid for the work.

LEGEND

Surveyed Area Showing Delamination
on Bottom of Beam

BILL OF MATERIAL

Item	Unit	Quantity
Cleaning & Painting Exposed Rebar	Sq. Ft.	5

Survey Date: December 1992

BRANCO & ZROKA ENGINEERING, P.C.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

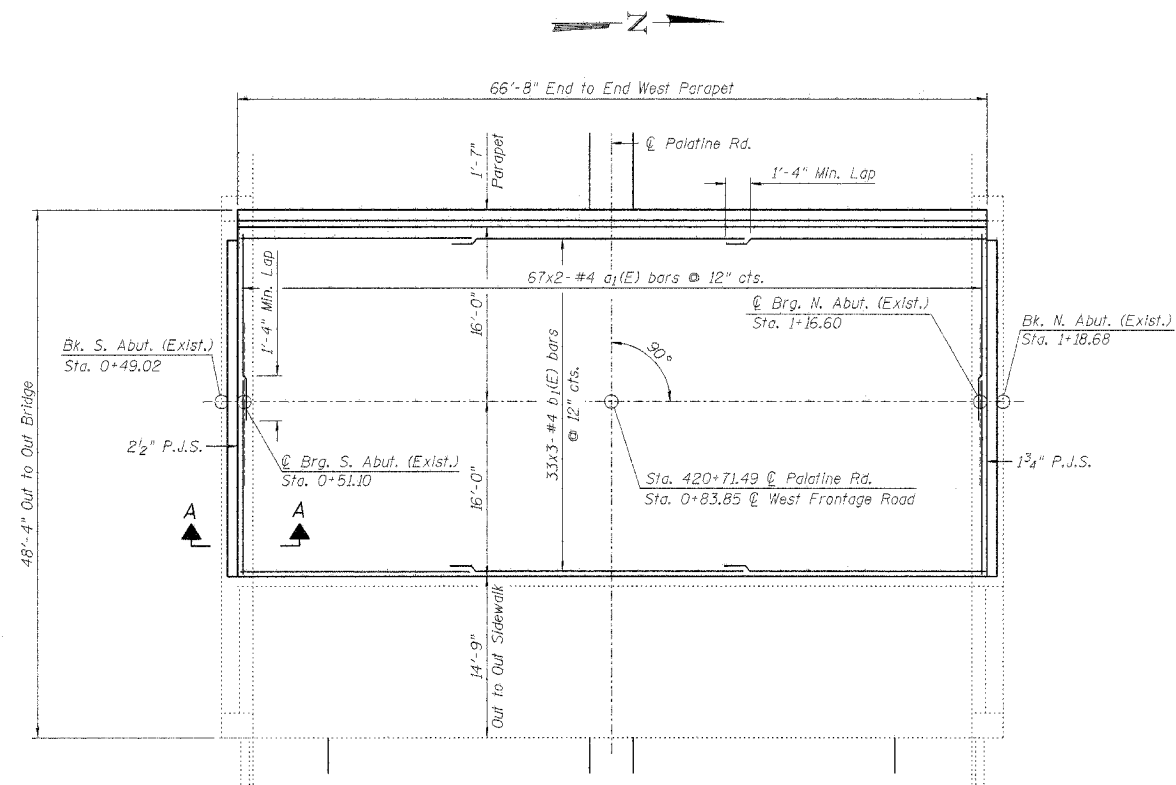
February 2005

CONCRETE DECK BEAM REPAIRS II
WEST FRONTAGE ROAD OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 0+88.97
STRUCTURE NO. 016-2530

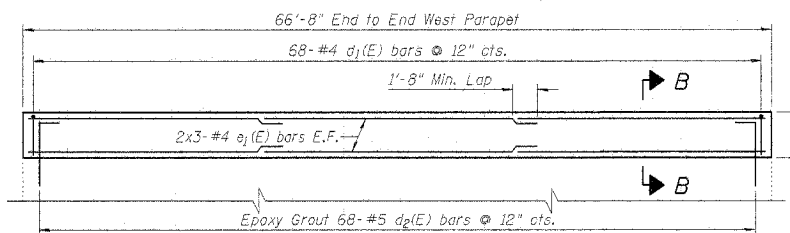
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. 5 6 SHEETS
F.A.P. 305	*	COOK	72	45	

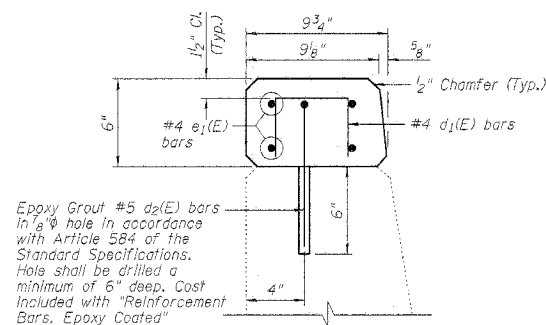
*2004-108 BR Contract No. 62853



DECK PLAN



INSIDE ELEVATION OF PARAPET



SECTION B-B

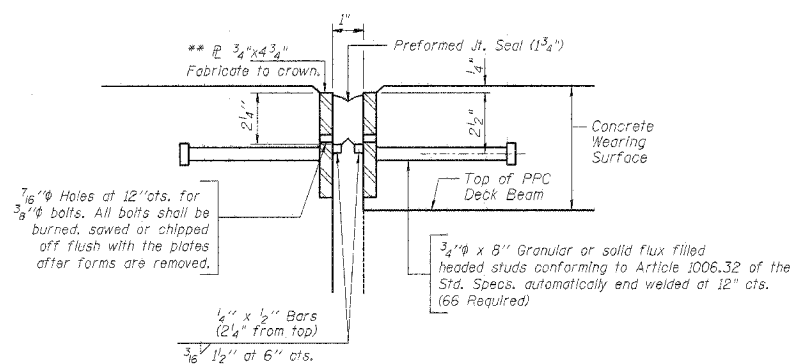
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d1(E)	134	#4	16'-11"	—
b1(E)	99	#4	23'-6"	—
d1(E)	68	#4	1'-1"	□
d2(E)	68	#5	1'-4"	┌
e1(E)	12	#4	23'-3"	—

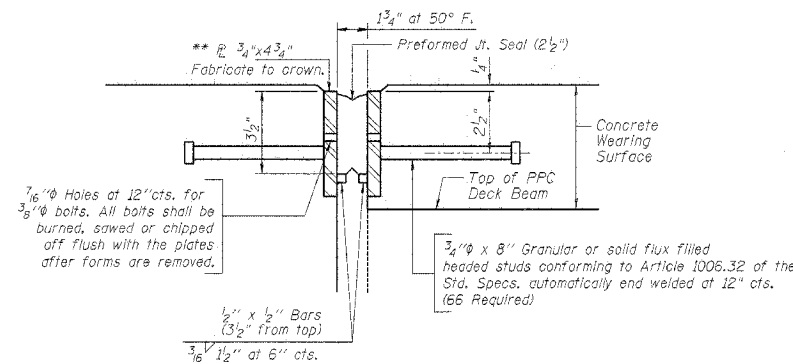
Item	Unit	Quantity
Preformed Joint Seal 1 3/4"	Foot	31
Preformed Joint Seal 2 1/2"	Foot	31
Bridge Deck Grooving	Sq. Yd.	220
Protective Coat	Sq. Yd.	310
Concrete Superstructure	Cu Yd	1.0
Reinforcement Bars, Epoxy Coated	Pound	3,400
Concrete Wearing Surface	Sq. Yd.	240
Furnishing and Erecting Structural Steel	Pound	1,684

Reinforcement bars designated (E) shall be epoxy coated

Bars indicated thus: 33x3-#4 etc. Indicates 33 lines of bars with 3 lengths per line.

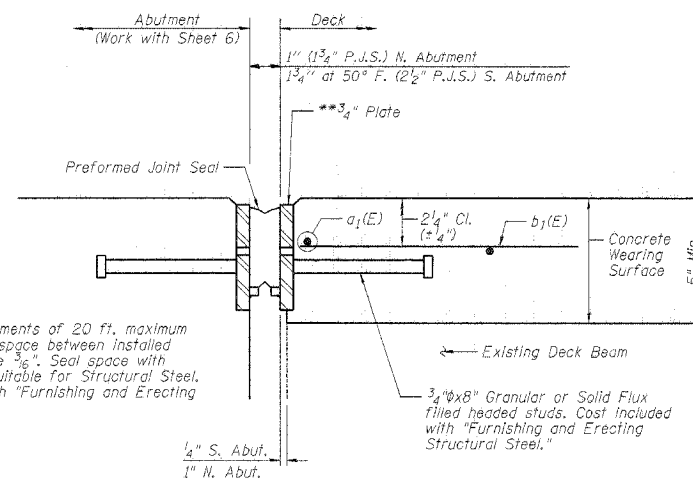


1 3/4" PREFORMED JOINT SEAL DETAIL



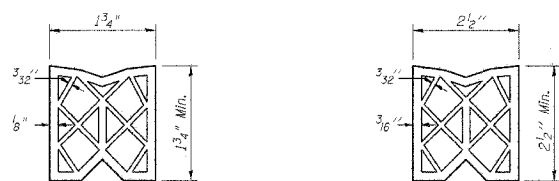
2 1/2" PREFORMED JOINT SEAL DETAIL

**Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be 1/8". Seal space with Silicon Sealant suitable for Structural Steel. Cost included with "Furnishing and Erecting Structural Steel."



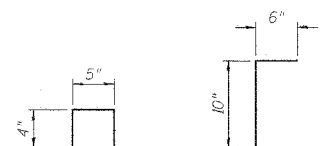
SECTION A-A

(2 1/2" PJS Shown, 1 3/4" PJS Similar)



PREFORMED JOINT SEAL (1 3/4")

PREFORMED JOINT SEAL (2 1/2")



BAR d1(E) BAR d2(E)

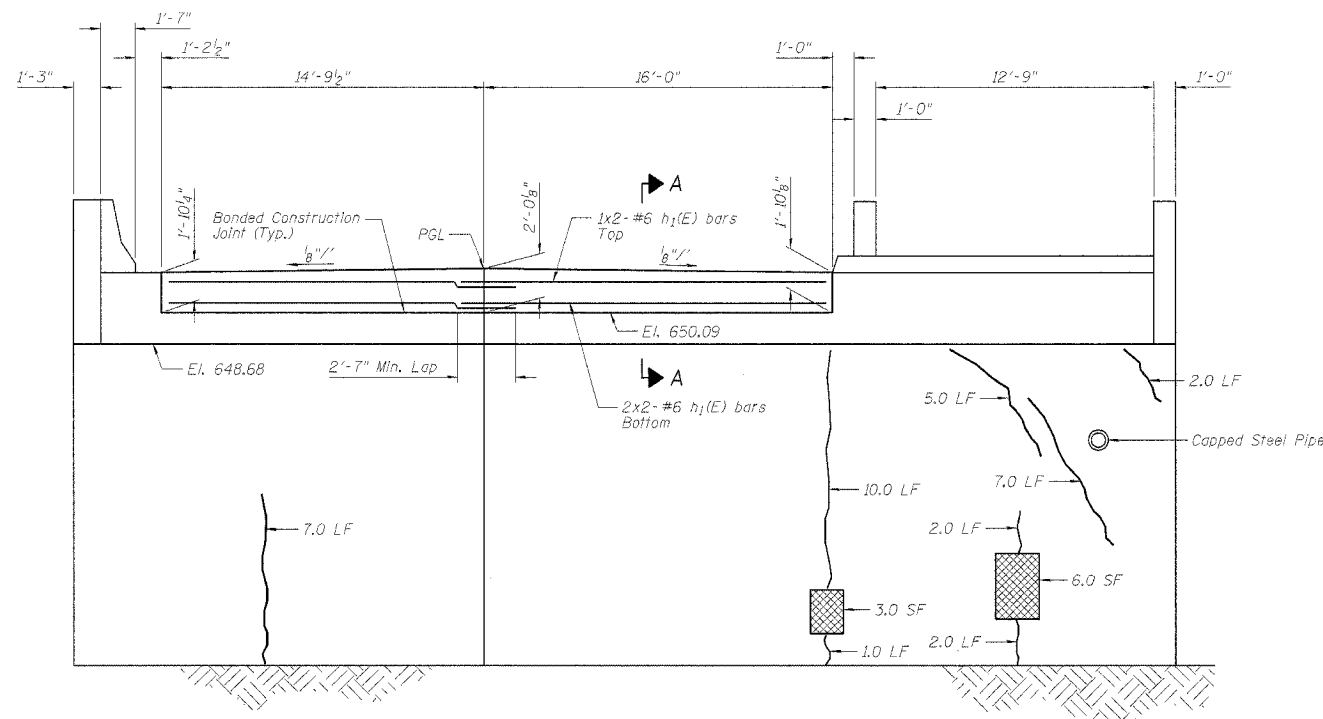
BRANCO & ZROKA ENGINEERING, P.C.	
DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

February 2005

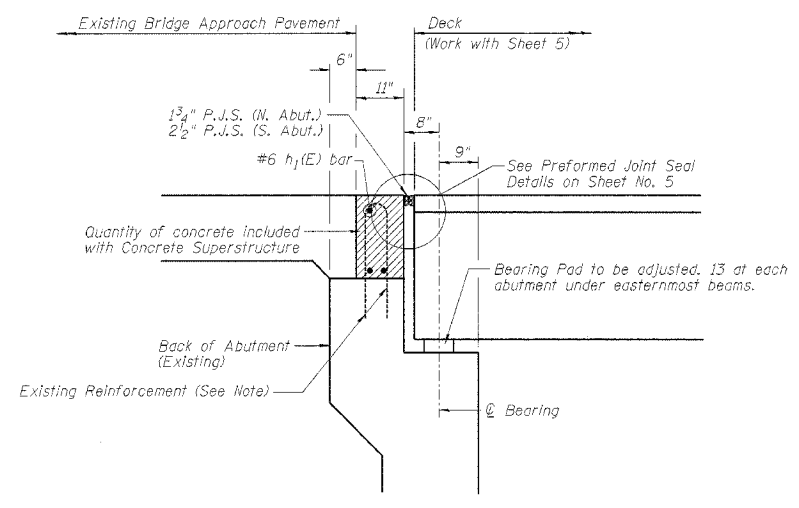
EXPANSION JOINT AND PARAPET DETAILS
WEST FRONTAGE ROAD OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 0+88.97
STRUCTURE NO. 016-2530

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6
S.R.L. P. A. P. 305	*	COOK	72	46	6 SHEETS
*2004-108 BR			Contract No. 62853		



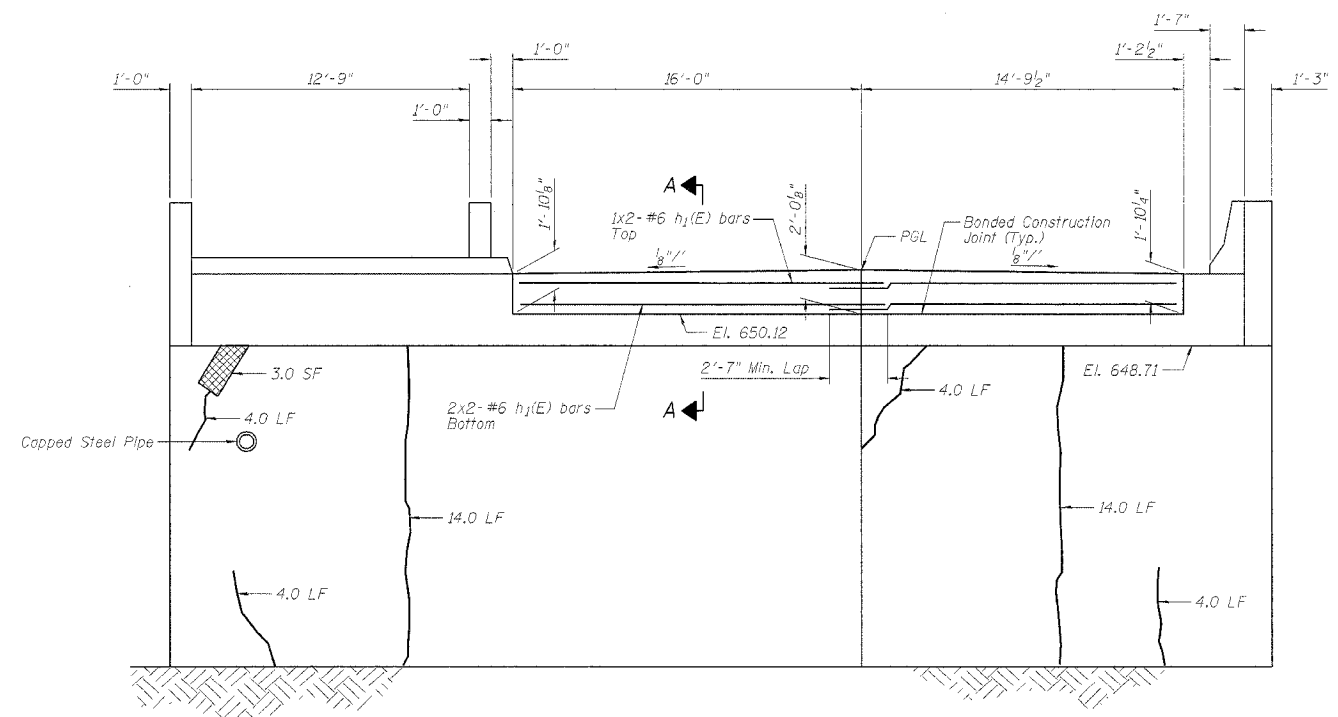
NORTH ABUTMENT ELEVATION



SECTION A-A

Existing Reinforcement extending into removed areas shall be blast cleaned, straightened and incorporated into new construction. Cost included with "Concrete Removal." Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with "Concrete Removal."

LEGEND
 Surveyed Area Requiring Formed Concrete Repair (Depth <5")
 Surveyed Length Requiring Epoxy Crack Sealing



SOUTH ABUTMENT ELEVATION

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₁ (E)	12	#6	16'-8"	—
Item	Unit	Quantity		
Concrete Superstructure	Cu. Yd.	4.0		
Epoxy Crack Sealing	Foot	120		
Reinforcement Bars, Epoxy Coated	Pound	300		
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.	30		
Formed Concrete Repair (Depth Larger Than 5")	Sq. Ft.	10		

NOTES
 Reinforcement bars designated (E) shall be epoxy coated.
 Bars indicated thus: 1x2-#6 etc., indicates 1 line of bars with 2 lengths per line.
 Survey Date: October 1992
 Repair areas shown are the surveyed areas of deterioration. The actual area to be repaired shall be as directed by the Engineer.
 Variations in the quantities shall not be cause for additional compensation, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

BRANCO & ZROKA ENGINEERING, P.C.
 DESIGNED LAS
 CHECKED DAZ
 DRAWN SAW
 CHECKED LAS
 February 2005

ABUTMENT REPAIR
 WEST FRONTAGE ROAD OVER PALATINE ROAD
 FAP 305/PALATINE ROAD
 SECTION 2004-108 BR
 COOK COUNTY
 STA. 0+88.97
 STRUCTURE NO. 016-2530

Benchmark: CCHD BM found in NW corner of the Frontage Road bridge over Palatine Road approximately 2000' east of Wheeling Road, Elev. 655.02

Existing Structure: Structure No. 016-2529 built as East Frontage Road over F.A.S. Route 116, Palatine Road Section 110-1415 in 1963. The superstructure consists of 33" x 36" PPC Deck Beams supporting a bituminous concrete wearing surface. The length of the structure is 65'-6" center to center of bearings. The existing deck width is 41'-0" out to out of deck. The deck is not skewed.

Construction Staging: The road shall be closed during construction.

Scope of Work:

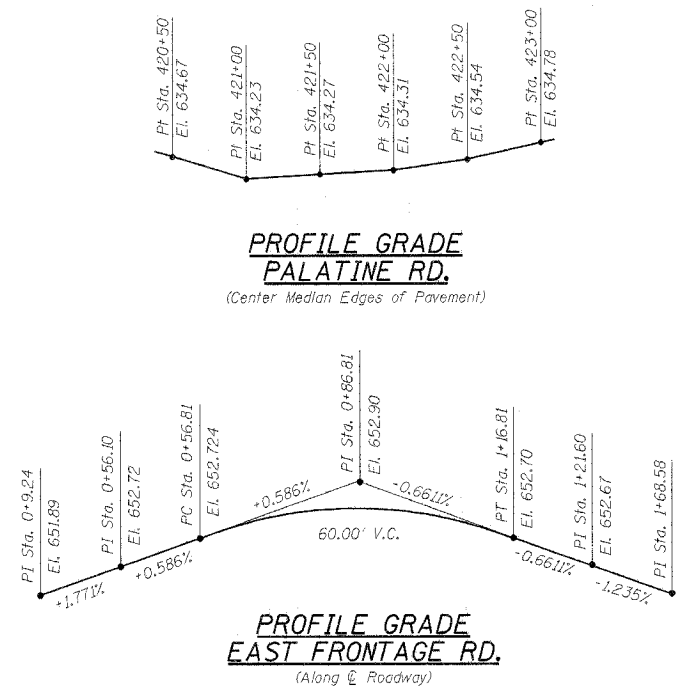
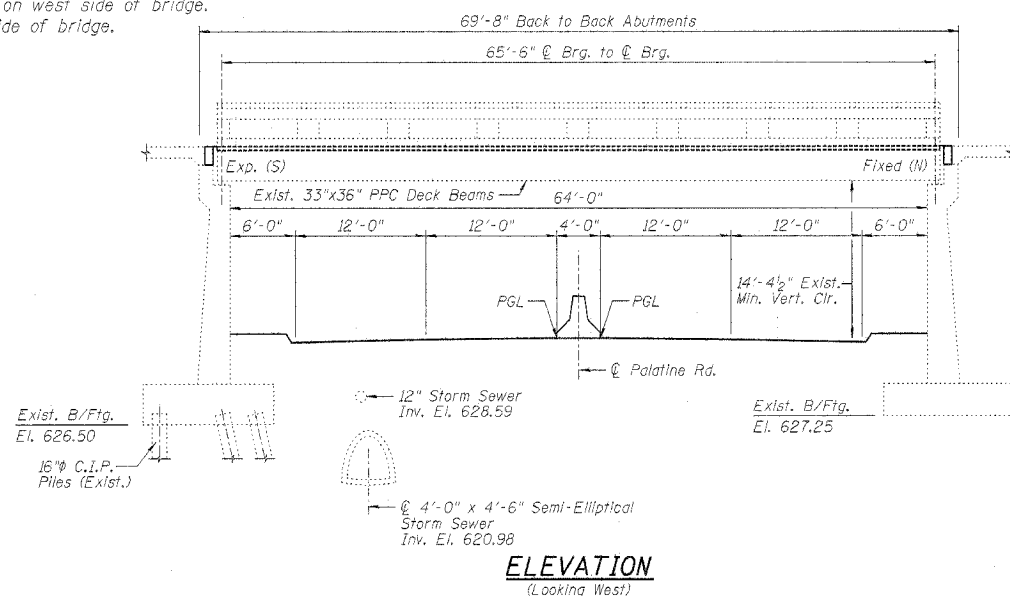
1. Remove bituminous concrete wearing surface and waterproofing membrane system and place concrete wearing surface.
2. Replace existing concrete parapet on west side of bridge.
3. Install Steel Bridge Rail on east side of bridge.
4. Repair the concrete Deck Beams.
5. Reconstruct the expansion joints.
6. Repair the existing abutments.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. 1
F. A. P. 305		COOK	72	47	7 SHEETS
			*2004-108 BR	Contract No. 62853	

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-322 Grade 60.
2. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
3. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splice or anchorage system. Cost included with "Concrete Removal".
4. All Construction Joints shall be bonded.
5. High Voltage Overhead Transmission Lines. Maintain 20 foot safety clearance with all equipment.



TOTAL BILL OF MATERIAL

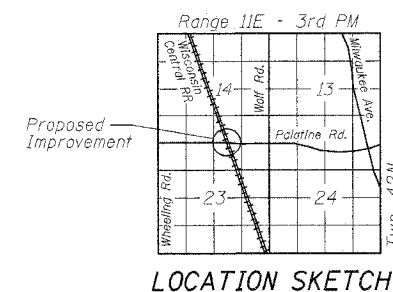
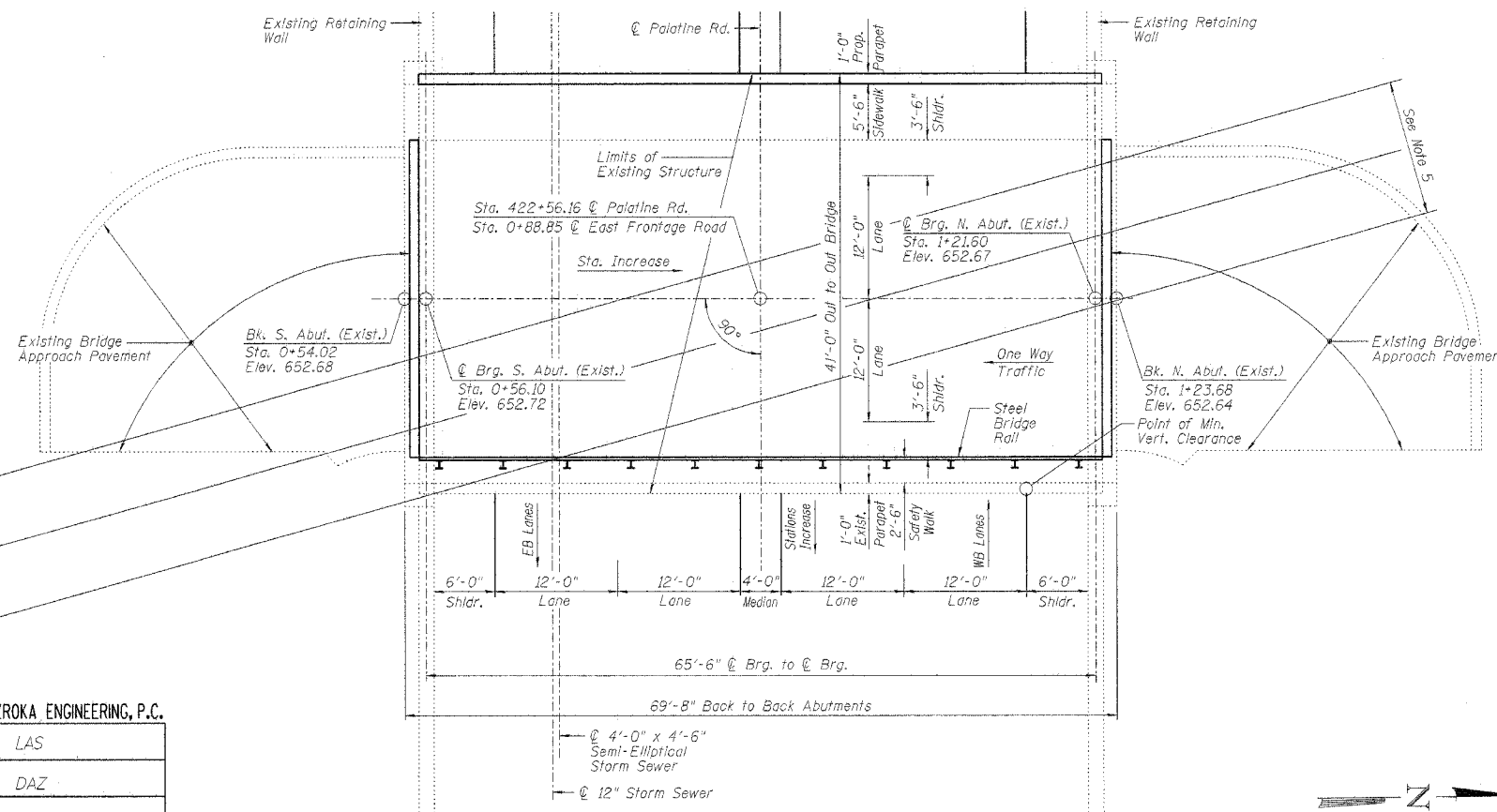
ITEM	UNIT	QUANTITY
Bituminous Concrete Surface Removal Complete	Sq Yd	230
Concrete Removal	Cu Yd	6.3
Preformed Joint Seal 1 3/4"	Foot	31
Preformed Joint Seal 2 1/2"	Foot	31
Concrete Superstructure	Cu Yd	9.8
Bridge Deck Grooving	Sq Yd	215
Protective Coat	Sq Yd	255
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq Ft	100
Reinforcement Bars, Epoxy Coated	Pound	3,890
Pedestrian Railing	Foot	65
Steel Bridge Rail	Foot	66
Epoxy Crack Sealing	Foot	120
Concrete Wearing Surface	Sq Yd	230
Bridge Sidewalk Repair (Full Depth)	Sq Ft	27
Keyway Repair	Foot	73
Bearing Pad Adjustment	Each	26
Furnishing and Erecting Structural Steel	Pound	1,631
Bridge Handrail Removal	Foot	66
Formed Concrete Repair (Depth Larger Than 5")	Sq. Ft.	25

LOADING HS20-44

DESIGN SPECIFICATIONS
1996 AASHTO w/1997 & 1998 Interims

DESIGN STRESSES

FIELD UNITS
f_c = 3,500 psi
f_y = 60,000 psi (reinforcement)



Signature: *Deborah A. Zroka*
Date: 02-04-05
Expires: 11-30-2006

GENERAL PLAN & ELEVATION
EAST FRONTAGE ROAD OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 0+88.85
STRUCTURE NO. 016-2529

BRANCO & ZROKA ENGINEERING, P.C.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

February 2005

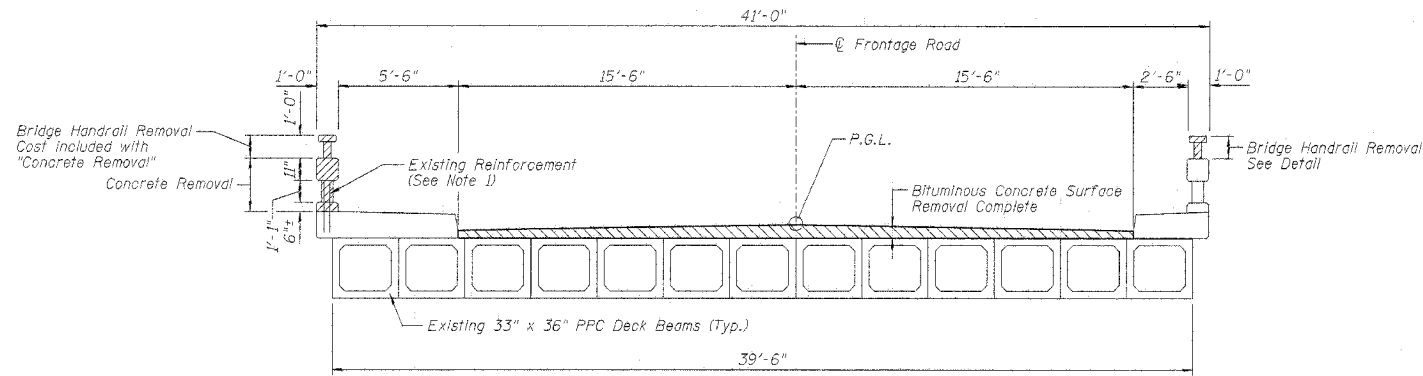
PLAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

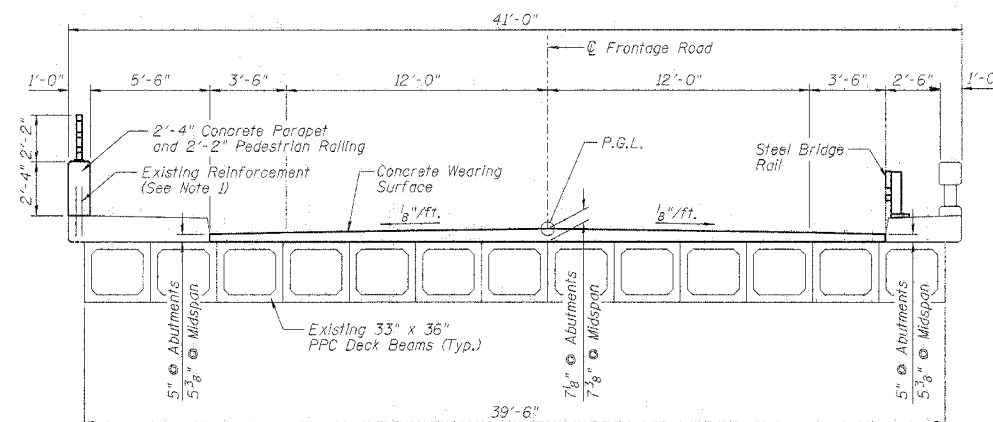
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F. A. P. 305	4	COOK	72	48

*2004-108 BR Contract No. 62853

SHEET NO. 2
7 SHEETS



EXISTING CROSS SECTION
(Looking North)



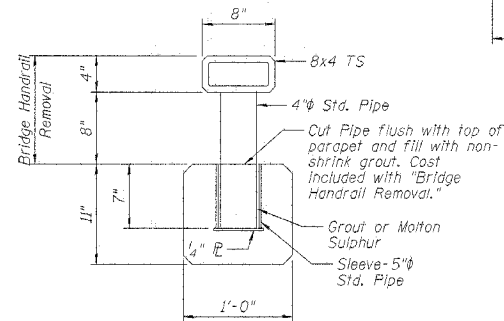
PROPOSED CROSS SECTION
(Looking North)

LEGEND

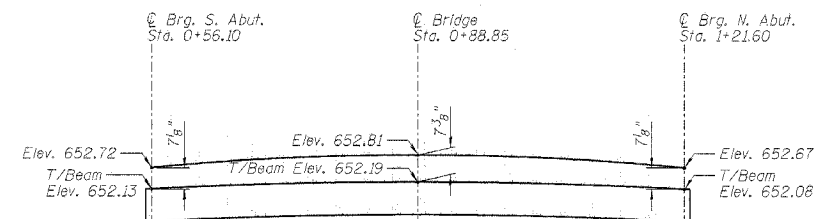
- Concrete Removal (Unless Noted Otherwise)
- Bituminous Concrete Surface Removal Complete

Note:

Existing Reinforcement extending into removed areas shall be blast cleaned, straightened and incorporated into new construction. Cost included with "Concrete Removal". Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with "Concrete Removal".



BRIDGE HANDRAIL REMOVAL DETAIL

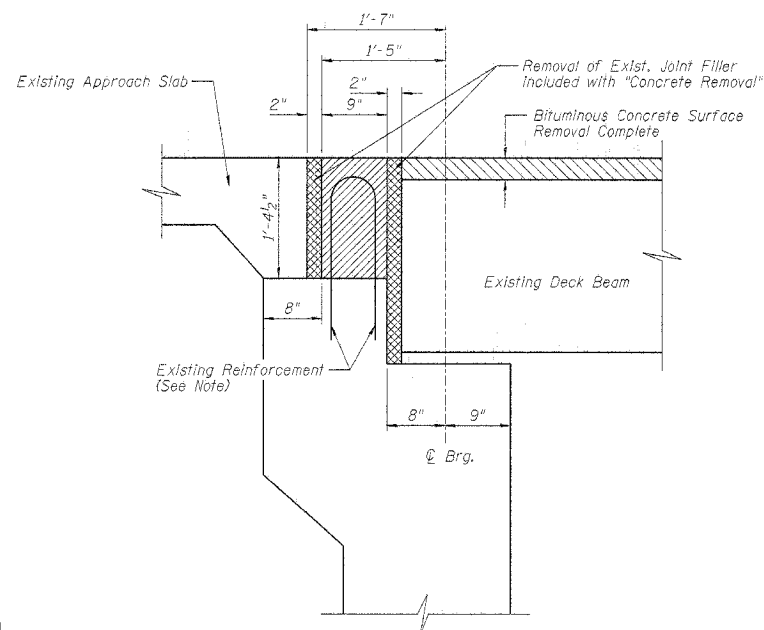


OVERLAY PROFILE

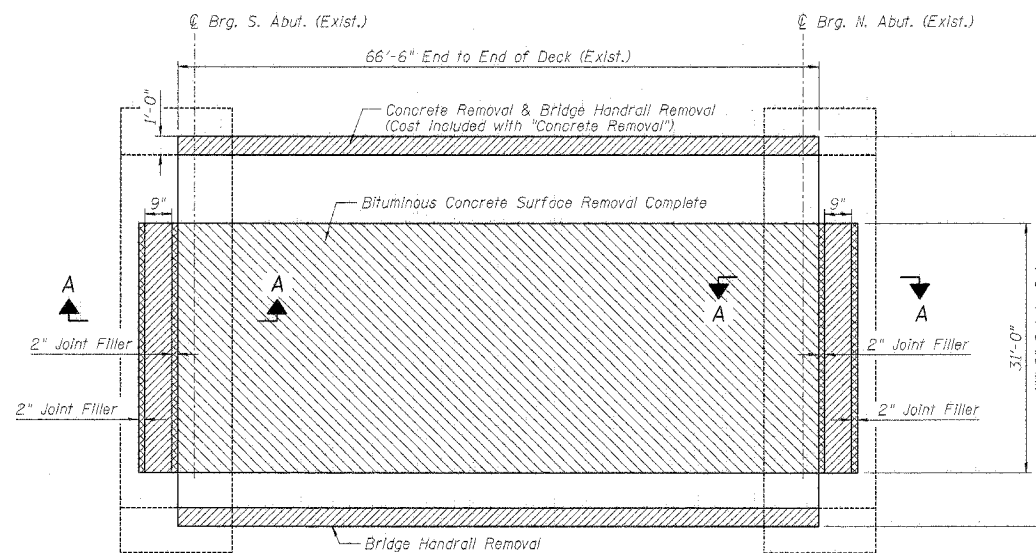
(Along Frontage Rd.)
(Beam elevation at midspan derived from survey data)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Bituminous Concrete Surface Removal Complete	Sq Yd	230
Concrete Removal	Cu Yd	6.3
Bridge Handrail Removal	Foot	66



SECTION A-A THROUGH EXISTING ABUTMENT



CONCRETE REMOVAL PLAN

BRANCO & ZROKA ENGINEERING, P.C.

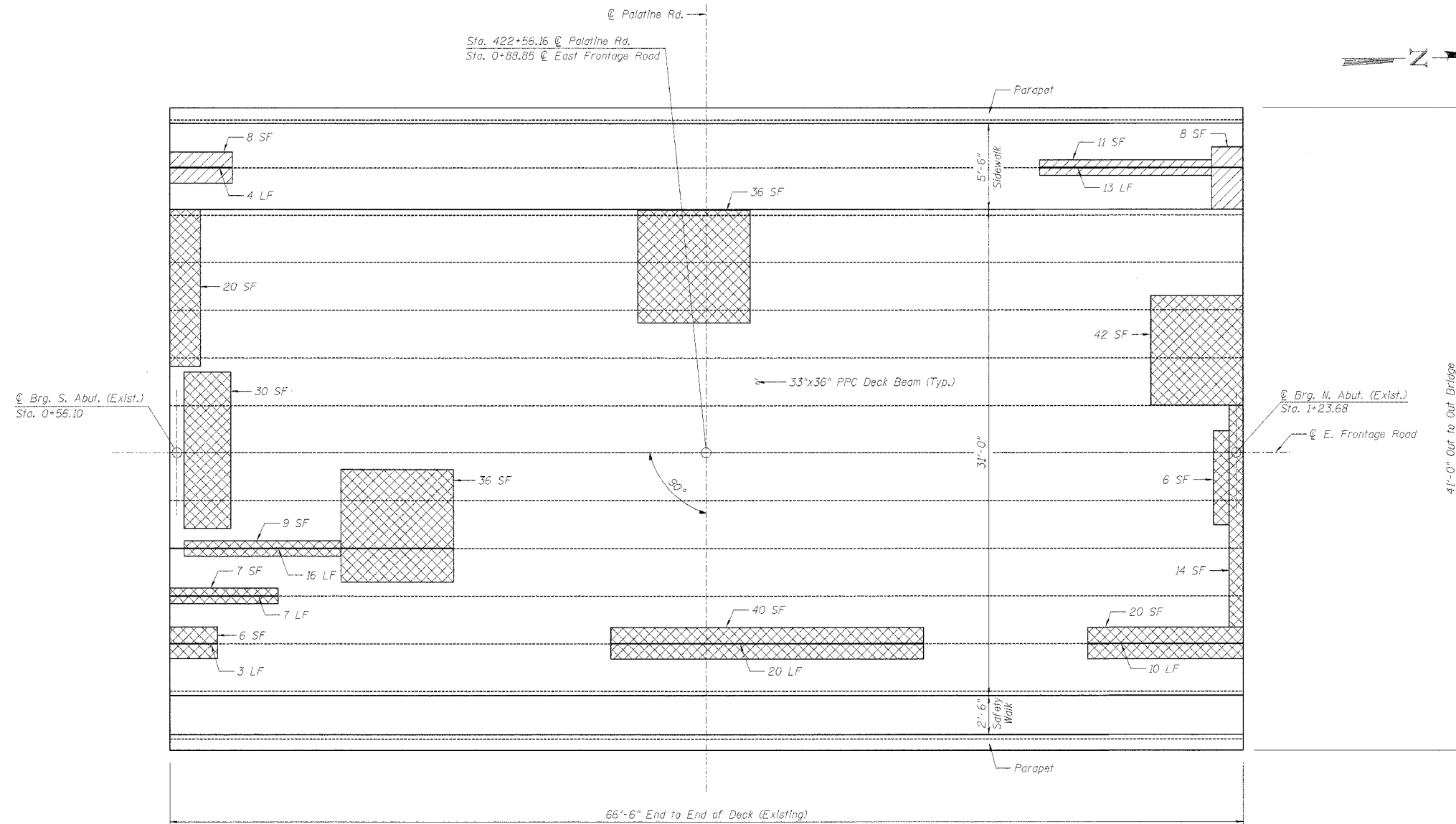
DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

February 2005

**CROSS SECTION AND LIMITS OF REMOVAL
EAST FRONTAGE ROAD OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 0+88.85
STRUCTURE NO. 016-2529**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
S.B.L. P.A.P. 305	*	COOK	72	49	7 SHEETS
*2004-108 BR			Contract No. 62853		



PLAN OF CONCRETE DECK BEAM REPAIRS
TOP VIEW

LEGEND

- Surveyed Area Showing Possible Delamination of Top of Beam
- Surveyed Sidewalk Area Requiring Full Depth Repair
- Surveyed Length of Keyway Repair

NOTES

Repair areas shown are the surveyed areas of deterioration. The actual area to be repaired shall be as directed by the Engineer.

Variations in the quantities shall not be cause for additional compensation, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Contractor must exercise extreme care while doing sidewalk repairs so as not to damage the PPC Deck Beams.

Surveyed areas that show possible delamination should be investigated after removal of the bituminous overlay. Any areas with delamination extending to the top mat of reinforcement on the beam shall be cleaned of any loose concrete and filled back up with the concrete overlay. Any area where the damage extends below the top mat of reinforcement on the beam shall be brought to the attention of the Bureau of Bridges and Structures for further disposition. Work included in the cost of "Concrete Wearing Surface."

BILL OF MATERIAL

Item	Unit	Quantity
Bridge Sidewalk Repair (Full Depth)	Sq. Ft.	27
Keyway Repair	Foot	73

Survey Date: December 1992

BRANCO & ZROKA ENGINEERING, P.C.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

February 2005

CONCRETE DECK BEAM REPAIRS
EAST FRONTAGE ROAD OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 0+88.85
STRUCTURE NO. 016-2529

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

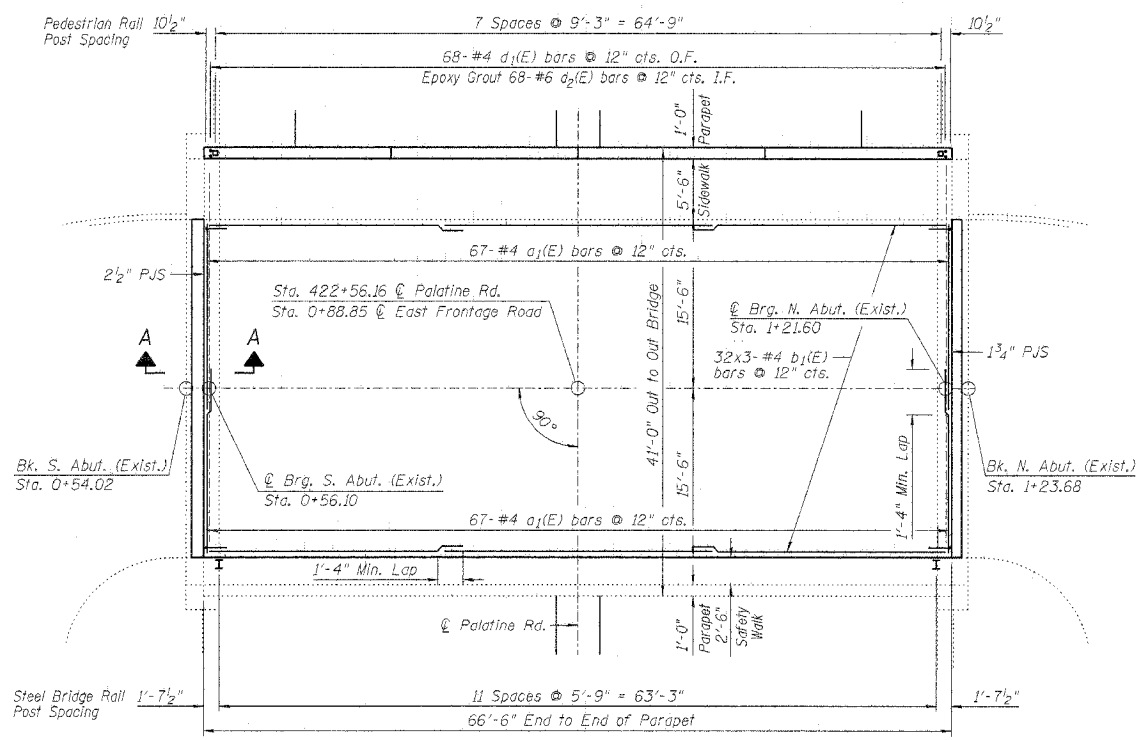
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4
S.B.L.	x	COOK	72	50	7 SHEETS
*2004-108 BR		Contract No. 62853			

BILL OF MATERIAL

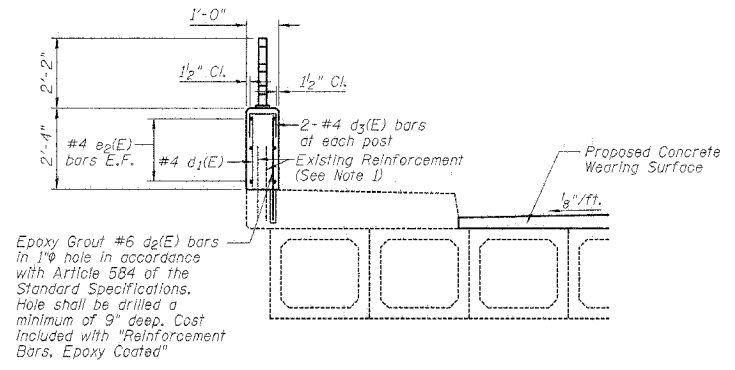
Bar No.	Size	Length	Shape
a ₁ (E)	#4	16'-0"	—
b ₁ (E)	#4	23'-0"	—
d ₁ (E)	#4	2'-1"	—
d ₂ (E)	#6	2'-11"	—
d ₃ (E)	#4	2'-0"	□
e ₂ (E)	#4	16'-3"	—

Item	Unit	Quantity
Preformed Joint Seal 1 3/4"	Foot	31
Preformed Joint Seal 2 1/2"	Foot	31
Bridge Deck Grooving	Sq. Yd.	215
Protective Coat	Sq. Yd.	255
Concrete Superstructure	Cu Yd	5.8
Reinforcement Bars, Epoxy Coated	Pound	3,590
Concrete Wearing Surface	Sq. Yd.	230
Furnishing and Erecting Structural Steel	Pound	1,631

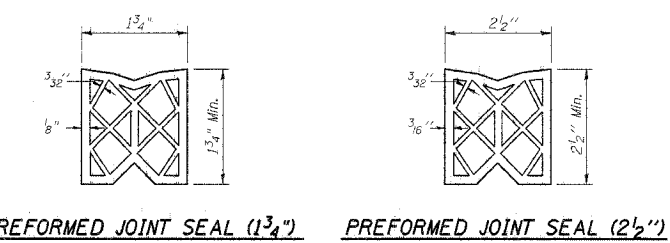
Reinforcement bars designated (E) shall be epoxy coated



DECK PLAN

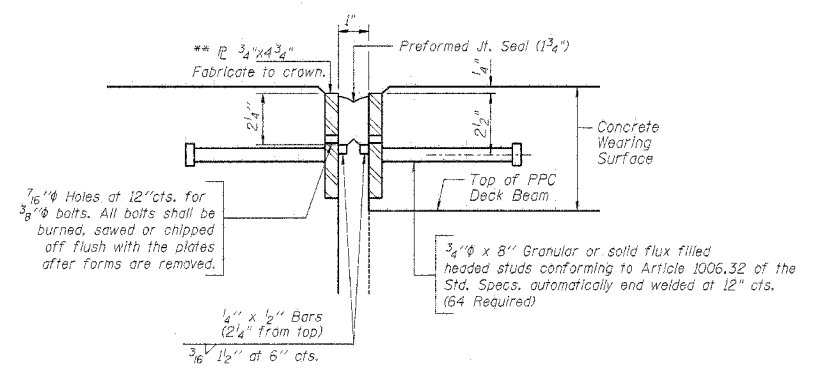


SECTION THRU PROPOSED PARAPET

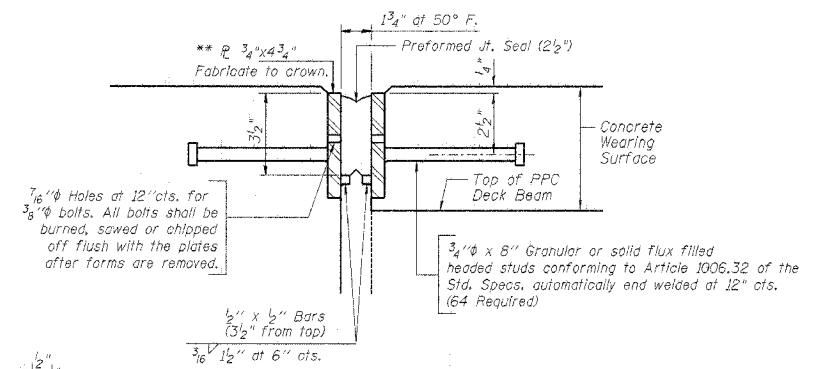


PREFORMED JOINT SEAL (1 3/4") **PREFORMED JOINT SEAL (2 1/2")**

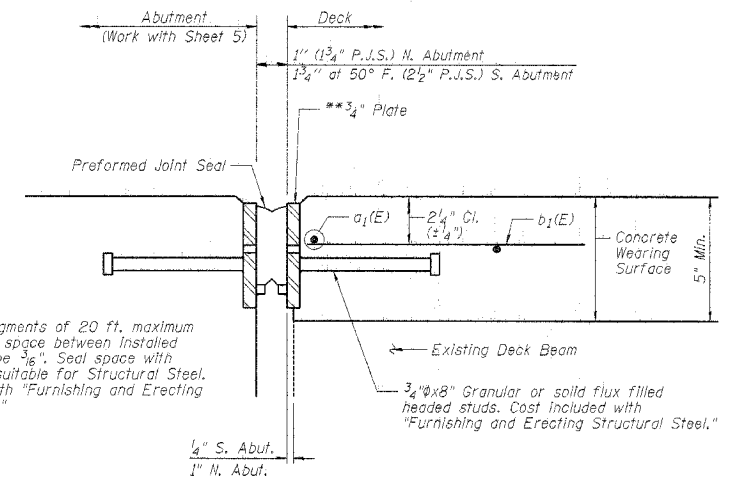
DEVELOPED ELEVATION THRU PARAPET



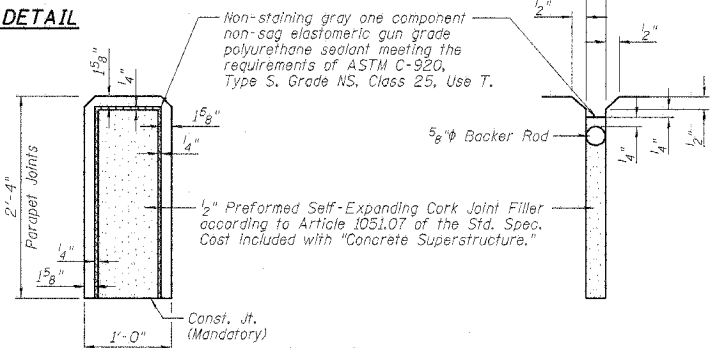
1 3/4" PREFORMED JOINT SEAL DETAIL



2 1/2" PREFORMED JOINT SEAL DETAIL



SECTION A-A
(2 1/2" PJS Shown, 1 3/4" PJS Similar)



PARAPET JOINT DETAILS

- NOTES:
- Existing Reinforcement extending into removed areas shall be blast cleaned, straightened and incorporated into new construction. Cost included with "Concrete Removal." Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with "Concrete Removal."
 - For Pedestrian Rail Details, see Sheet 6.
 - For Steel Bridge Rail Details, See Sheet 7.
 - Bars indicated thus: 32x3-#4 etc. Indicates 32 lines of bars with 3 lengths per line.

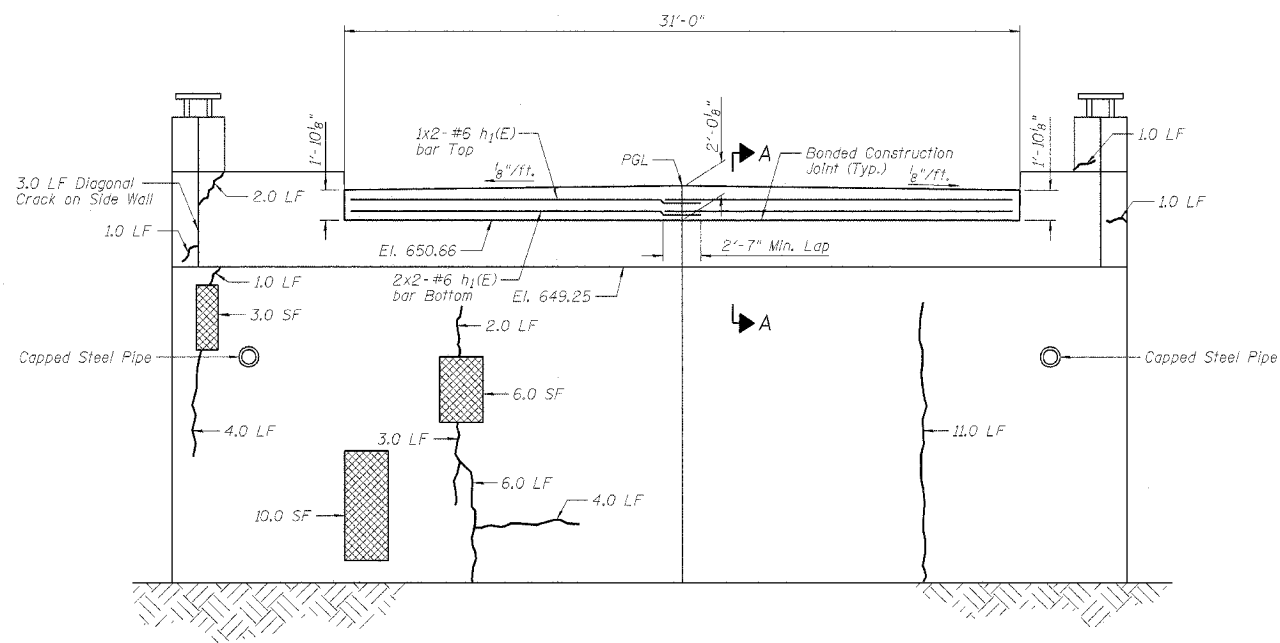
EXPANSION JOINT AND PARAPET DETAILS
EAST FRONTAGE ROAD OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 0+88.85
STRUCTURE NO. 016-2529

BRANCO & ZROKA ENGINEERING, P.C.
DESIGNED LAS
CHECKED DAZ
DRAWN SAW
CHECKED LAS
February 2005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. S.R.L. F.A.P. 305	SECTION *	COUNTY COOK	TOTAL SHEETS 72	SHEET 51	SHEET NO. 5 7 SHEETS
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*2004-108 BR Contract No. 62853



NORTH ABUTMENT ELEVATION

LEGEND

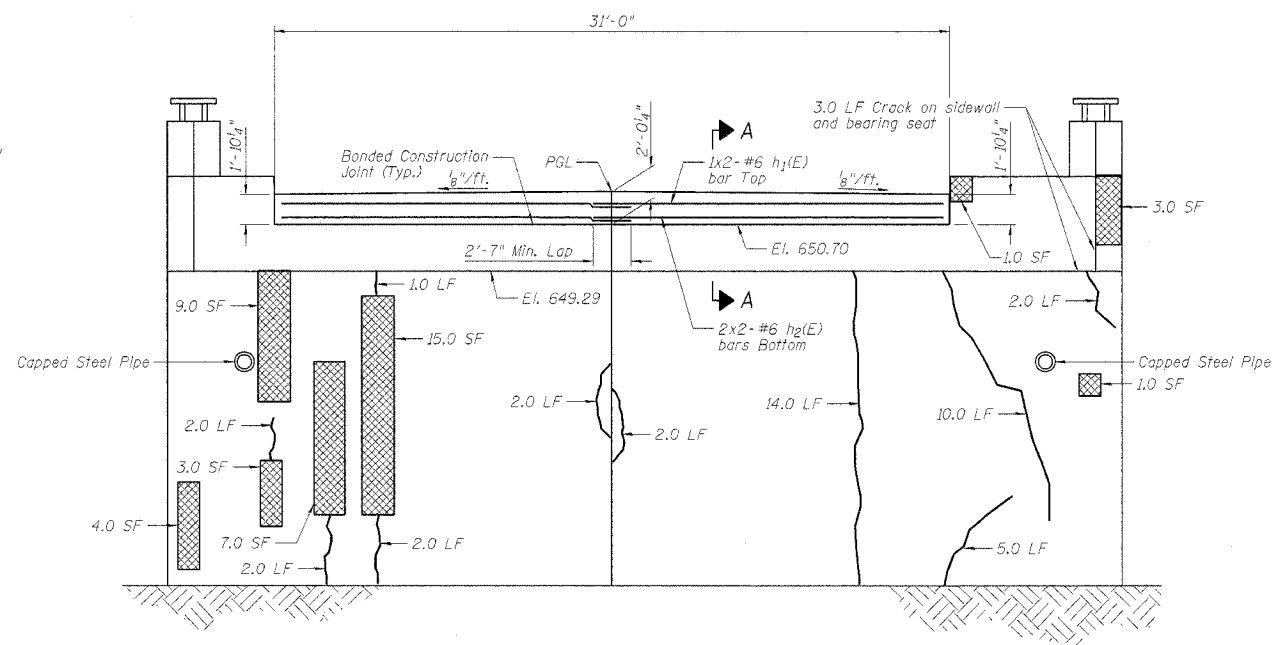
- Surveyed Area Requiring Formed Concrete Repair (Depth ≤ 5")
- Surveyed Length Requiring Epoxy Crack Sealing

NOTES

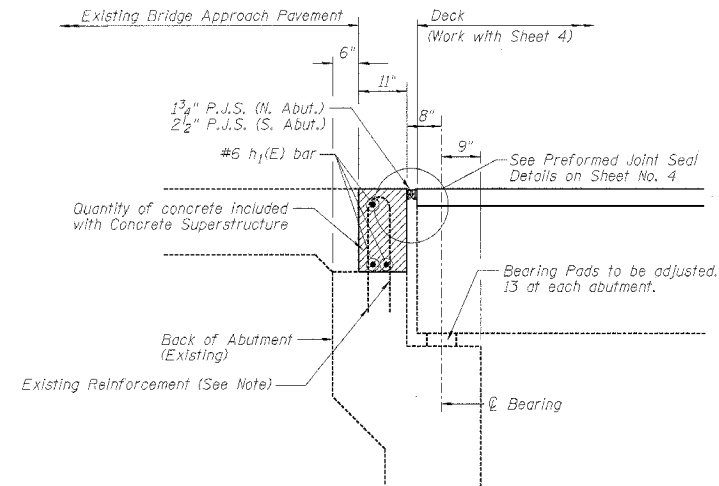
Repair areas shown are the surveyed areas of deterioration. The actual area to be repaired shall be as directed by the Engineer.

Variations in the quantities shall not be cause for additional compensation, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Bars indicated thus: 1x2-#6 etc., indicates 1 line of bars with 2 lengths per line.



SOUTH ABUTMENT ELEVATION



SECTION A-A

Existing Reinforcement extending into removed areas shall be blast cleaned, straightened and incorporated into new construction. Cost Included with "Concrete Removal." Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost Included with "Concrete Removal."

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₁ (E)	12	#6	16'-8"	—
Item	Unit	Quantity		
Concrete Superstructure	Cu. Yd.	4.0		
Epoxy Crack Sealing	Foot	120		
Reinforcement Bars, Epoxy Coated	Pound	300		
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.	100		
Formed Concrete Repair (Depth Larger Than 5")	Sq. Ft.	25		

Reinforcement bars designated (E) shall be epoxy coated.
Survey Date: October 1992

BRANCO & ZROKA ENGINEERING, P.C.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

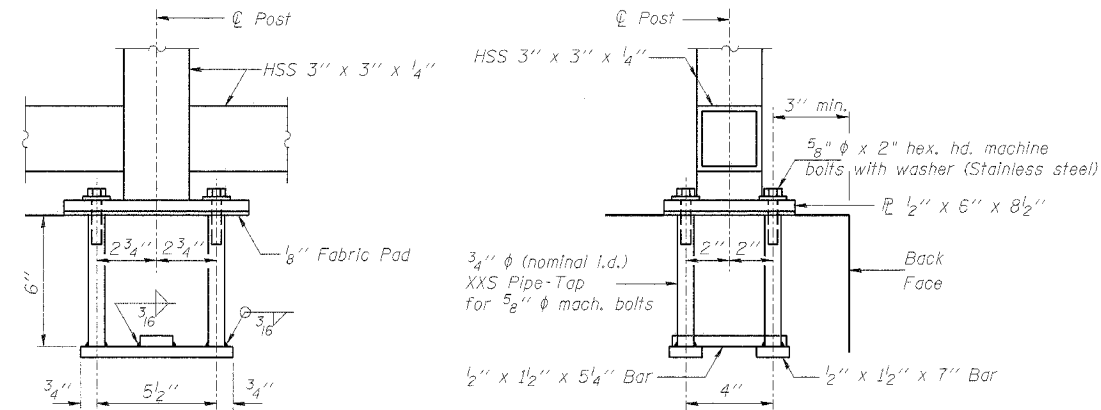
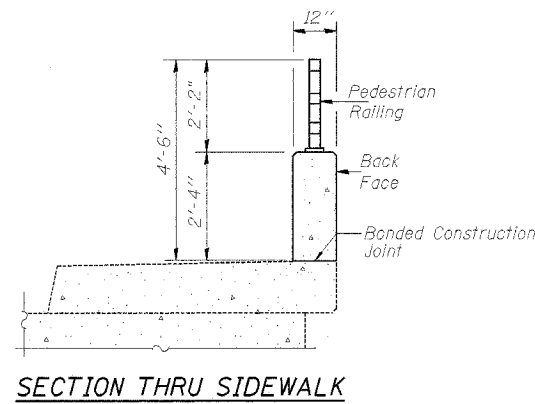
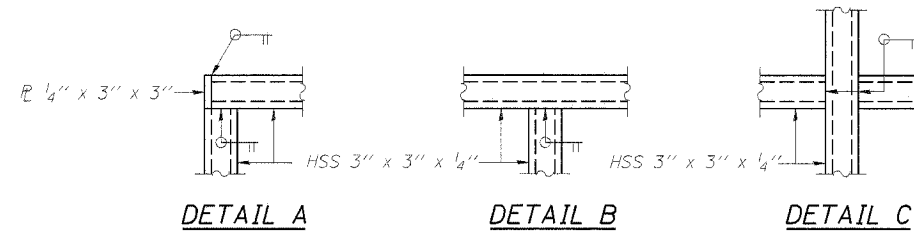
February 2005

ABUTMENT REPAIR
EAST FRONTAGE ROAD OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 0+88.85
STRUCTURE NO. 016-2529

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6 7 SHEETS
P. A. P. 285	*	COOK	72	52	

*2004-108 BR Contract No. 62853



ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and epoxy grouting 5/8" ϕ anchor rods. Embedment shall be according to the manufacturer's specifications.

NOTES

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the Contract Unit Price per foot for Pedestrian Railing.

Hollow structural sections shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36.

If the option of drilling and epoxy grouting the anchor rods is chosen, the Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with premeasured amounts of the adhesive chemical.

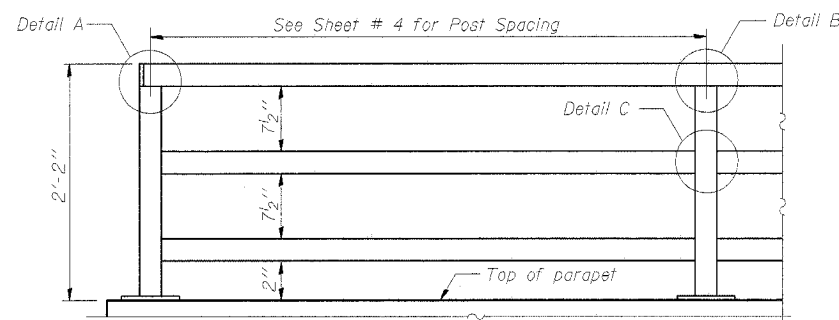
Space reinforcement to miss anchor rods.

All posts, railing, splices, anchor devices, and bent plates shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. All bolts, nuts, washers, and anchor rods shall be galvanized according to AASHTO M 232 except stainless steel bolts as noted.

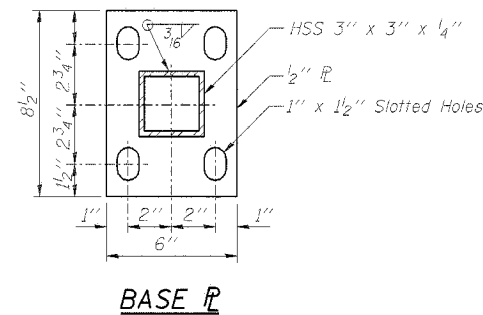
Vent holes for galvanizing shall be placed in the posts and rails at locations that will not allow the accumulation of moisture in the members.

BILL OF MATERIAL

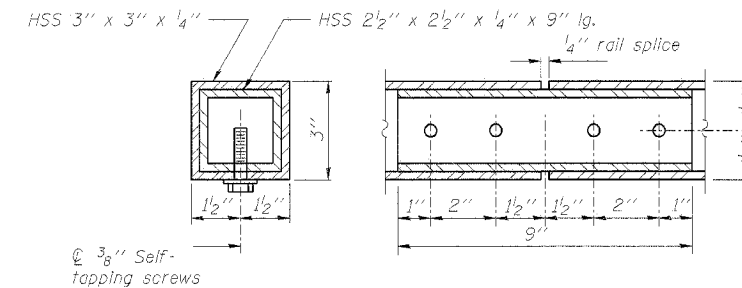
Item	Unit	Quantity
Pedestrian Railing	Foot	65



**PEDESTRIAN RAILING
ELEVATION**
(Inside Face of Three Element Rail)



BASE PL



RAIL SPLICE

BRANCO & ZROKA ENGINEERING, P.C.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

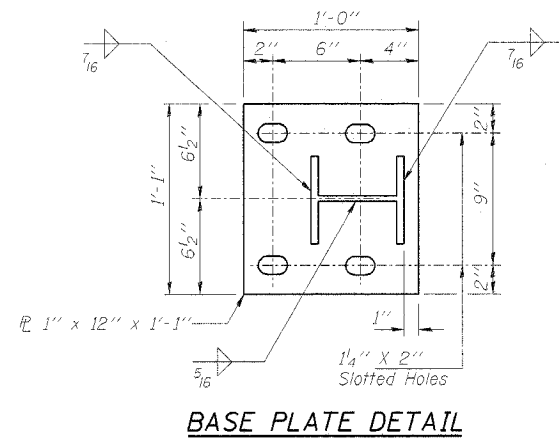
R-29 (Modified) 9-01-03 (10'-0" Maximum Post Spacing)

**PEDESTRIAN RAILING
EAST FRONTAGE ROAD OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 0+88.85
STRUCTURE NO. 016-2529**

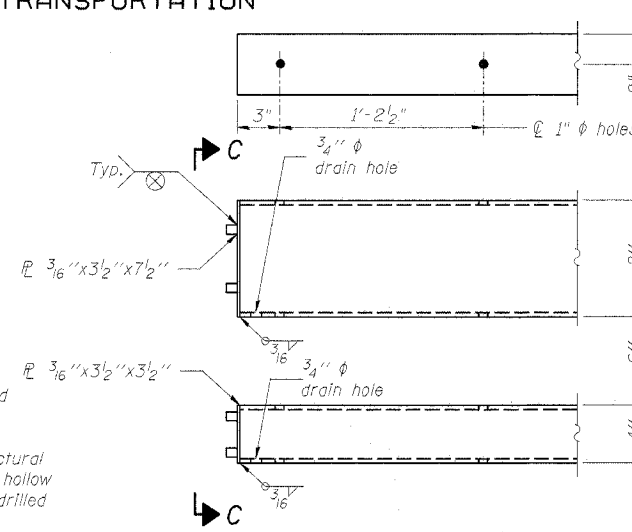
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7 7 SHEETS
S. R. 1. P. A. P. 305	X	COOK	72	53	

*2004-108 BR Contract No. 62853



BASE PLATE DETAIL



END OF RAIL DETAILS

NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500, Grade B, Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0°F.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts shall conform to AASHTO M 270, Grade 50.

Bolts, cap screws and nuts shall conform to the requirements of ASTM designation A 307 except that threaded rods, nuts and washers shall conform to AASHTO M 164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.

All posts, railing, rail splices and anchor rods shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.

Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.

Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.

Expansion joint width shall be "D" at 50° F and shall be adjusted for other temperatures according to Article 503.10(c) of the Standard Specifications.

The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.

Nuts for 1" φ threaded anchor rods connecting the base plate to the concrete shall be tightened to a snug fit and given an additional 1/8 turn.

BILL OF MATERIAL

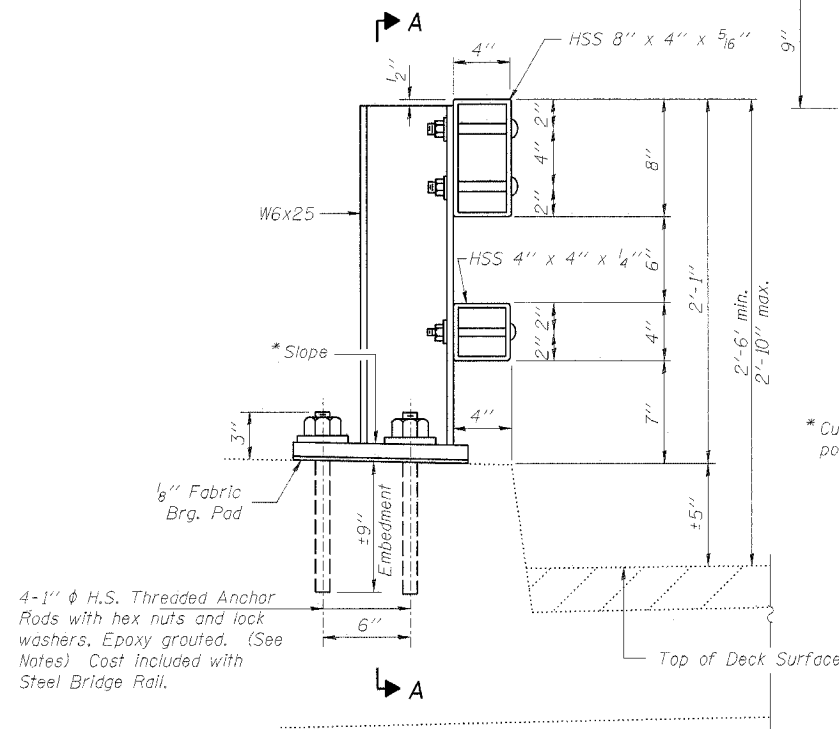
Item	Unit	Quantity
Steel Bridge Rail	Foot	66

SPLICE DIMENSIONS

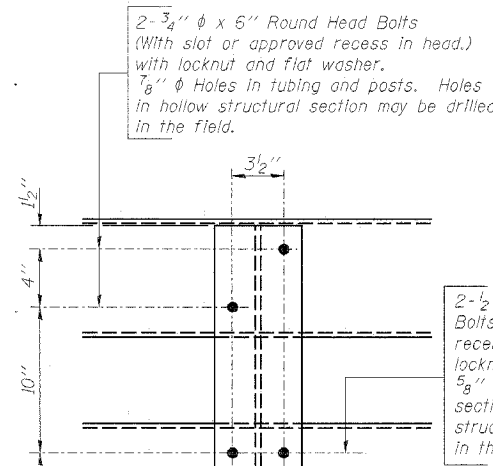
T	D	A	B	C	E
≤4"	2 1/2"	1'-8"	2"	4"	2 1/2"
>4" ≤6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
>6 1/2" ≤9"	5"	2'-4"	3 1/2"	6 1/2"	9"
>9" ≤13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

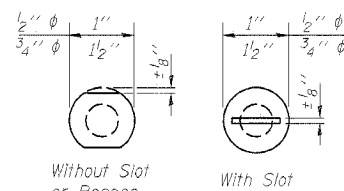
STEEL BRIDGE RAIL
CURB MOUNTED (2399)
EAST FRONTAGE ROAD OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 0+88.85
STRUCTURE NO. 016-2529



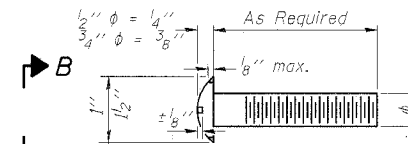
SECTION AT RAIL POST



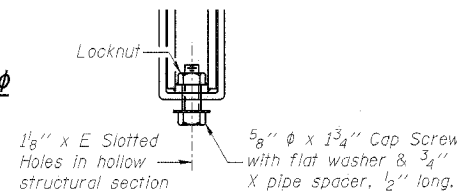
SECTION A-A



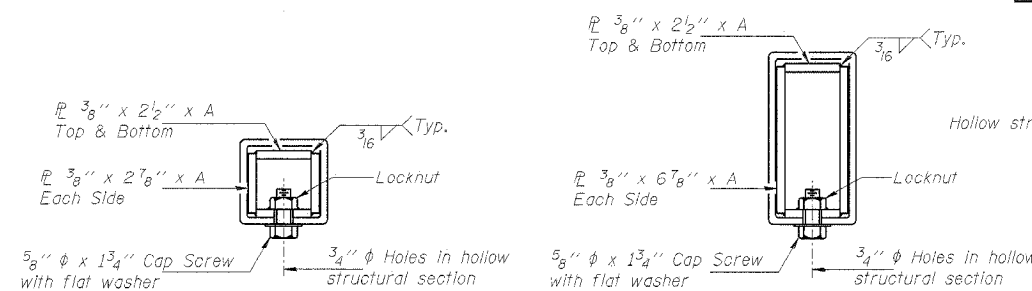
VIEW B-B



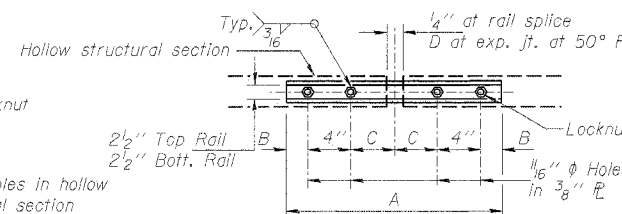
DETAIL OF 1/2" φ & 3/4" φ
ROUND HEAD BOLTS



RAIL SPLICE CONNECTION
AT EXPANSION JT.



SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE AT
TYPICAL

BRANCO & ZROKA ENGINEERING, P.C.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
2004-108 BR	#	COOK	72	54	5 SHEETS
			CONTRACT NO. 62853		

Benchmark: CCHD BM found in NW corner of the Frontage Road bridge over Palatine Road approximately 2000' east of Wheeling Road, Elev. 655.02

Existing Structure: Structure No. 016-2025 built as Soo Line Railroad over F.A.S. Route 116, Palatine Road Section 110-1415 in 1963. The superstructure consists of a 66" built up through girder, 71'-6" span. The deck is skewed 18° 18' 00". Also Wisconsin Central Railroad Siding Track over Palatine Road. The superstructure consists of a 118" welded through girder, 104'-6" span. The deck is not skewed. Total bridge width is 39'-9".

Construction Staging: The railroad shall be kept open at all times.

Scope of Work:

1. Structural Steel Repair.
2. Repairs to abutments and retaining walls.

GENERAL NOTES

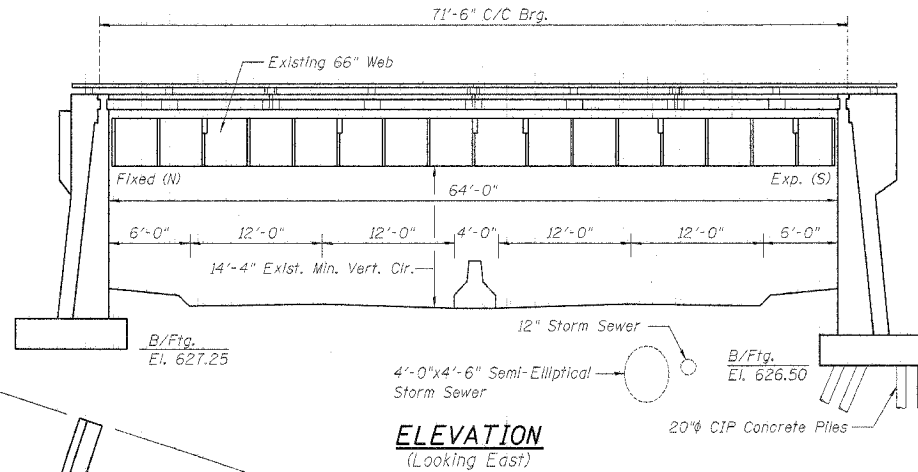
Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

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

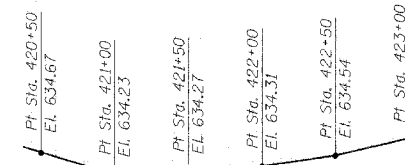
It is the Contractor's responsibility to take measurements in the field of the existing structure wherever new steel is to be replaced or connected into the existing material prior to ordering or fabricating any new steel. Existing connectors are either rivets or bolts, 1/4" Ø per existing plans. Where connectors are to be replaced with H.S. bolts, the Contractor shall field verify the connector diameter, gage, and spacing and shall replace the connectors with H.S. bolts of the same diameter. The Contractor shall be responsible for the proper fitting and assembly of all parts of the work.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures."

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M 300, Type 1. Cost included with Structural Steel Repair.



ELEVATION
(Looking East)



PROFILE GRADE
PALATINE RD.
(Center Median Edges of Pavement)

LOADING

Cooper E-80 plus impact for equipment without hammer blow

DESIGN SPECIFICATIONS

AREMA, 2001

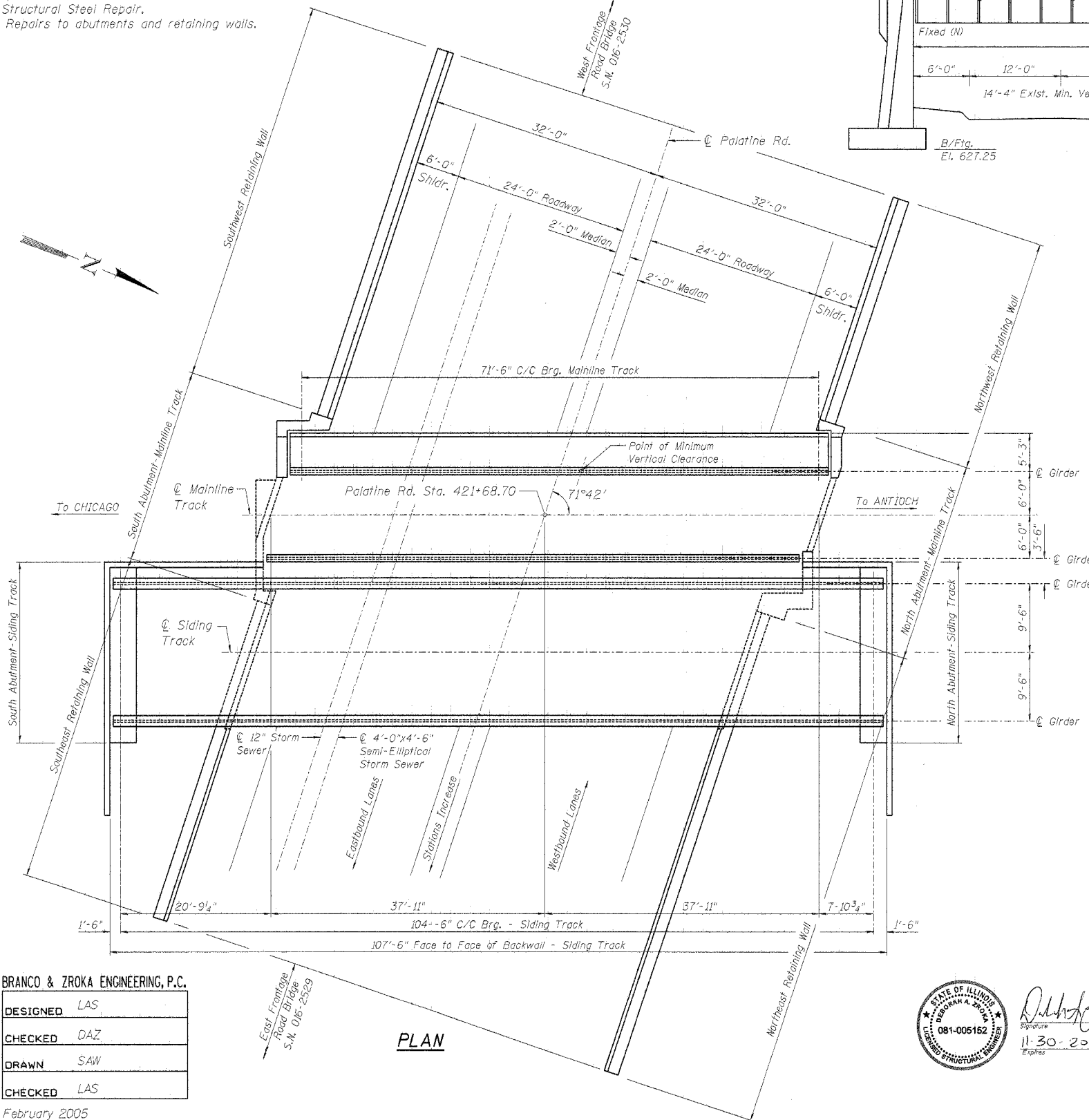
DESIGN STRESSES

FIELD UNITS

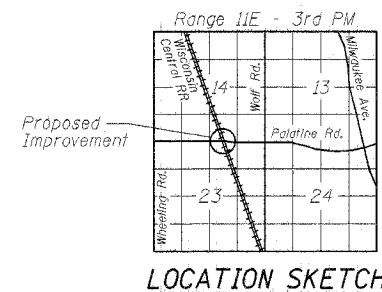
- $f'_c = 3,500$ psi
- $f'_s = 20,000$ psi - Structural Steel (A36)
- $f_s = 24,000$ psi Reinforcing Bars (Grade 60)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq Ft	40
Structural Steel Repair	Pound	100
Epoxy Crack Sealing	Foot	650
Railroad Protective Liability Insurance	L Sum	1
Railroad Flagmen	L Sum	1
Formed Concrete Repair (Depth Larger Than 5")	Sq. Ft.	15



PLAN



LOCATION SKETCH

BRANCO & ZROKA ENGINEERING, P.C.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

February 2005



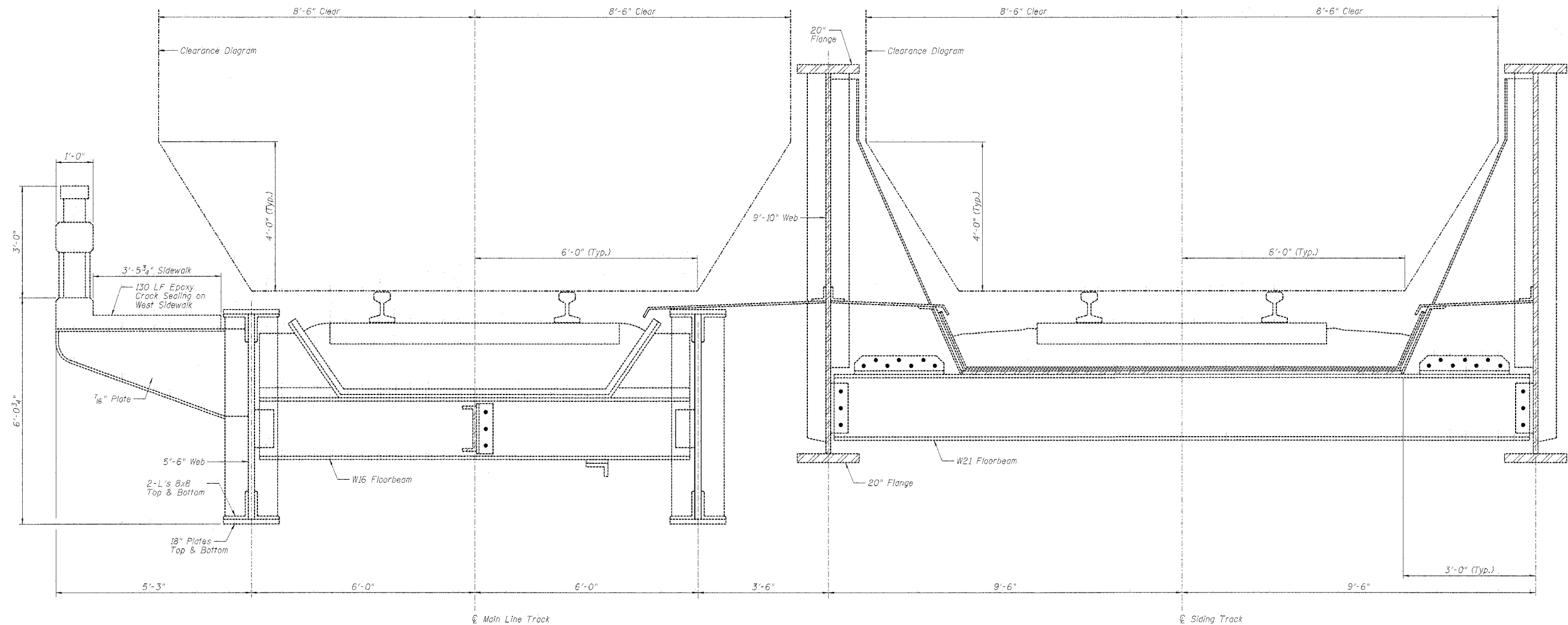
Signature: [Signature]
Date: 02-04-05
11-30-2006

GENERAL PLAN & ELEVATION
WISCONSIN CENTRAL RAILROAD
OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 421+68.70
STRUCTURE NO. 016-2025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 5 SHEETS
S.B.L. P.A.P. 2005	*	COOK	72	55	

*2004-108 BR CONTRACT NO. 62853



CROSS SECTION

(Looking North)
Details are provided for information only

BILL OF MATERIAL

Item	Unit	Quantity
Epoxy Crack Sealing	Foot	130

Epoxy Crack Sealing quantity has been estimated.

BRANCO & ZROKA ENGINEERING, P.C.

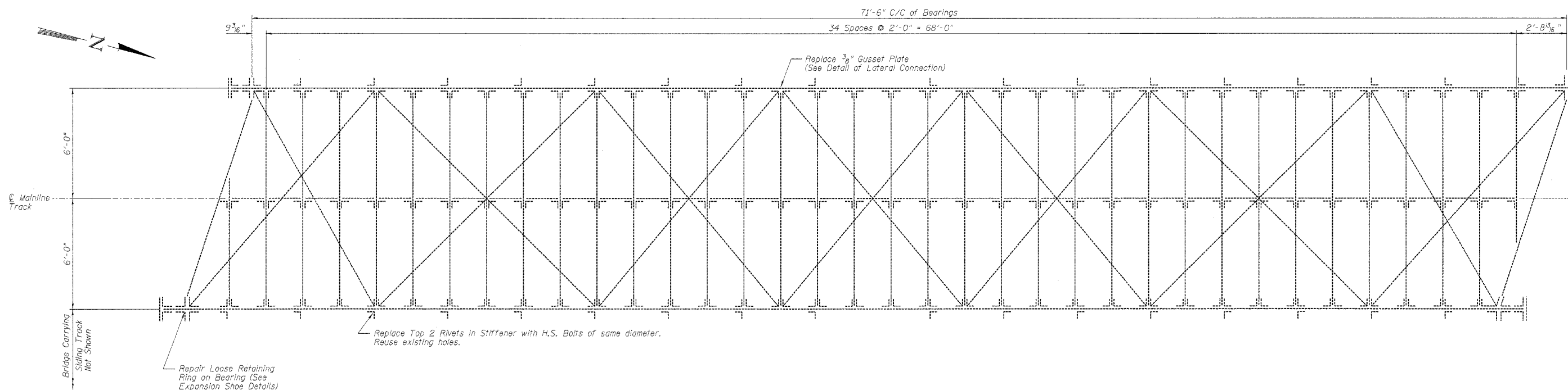
DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

February 2005

CROSS SECTION
WISCONSIN CENTRAL RAILROAD
OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 421+68.70
STRUCTURE NO. 016-2025

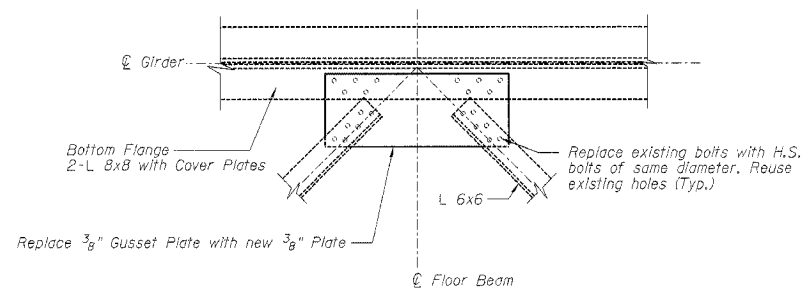
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 5 SHEETS
E.A.L. P.A.P. 385	7	COOK	72	56	
*2004-108 BR			CONTRACT NO. 62853		



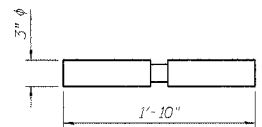
FRAMING PLAN

(Only mainline railroad bridge shown for clarity)

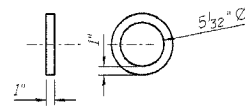


DETAIL OF LATERAL CONNECTION

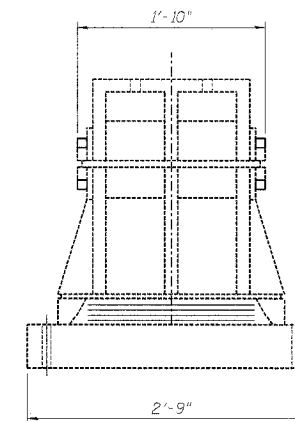
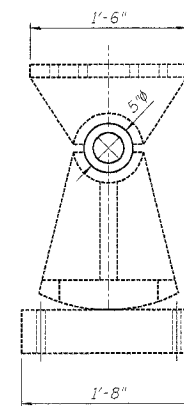
It is the Contractor's responsibility to take measurements in the field of the existing structure wherever new steel is to be replaced or connected into the existing material prior to ordering or fabricating any new steel. Existing connectors are either rivets or bolts, 7/8" φ per existing plans. Where connectors are to be replaced with H.S. bolts, the Contractor shall field verify the connector diameter, gage, and spacing and shall replace the connectors with H.S. bolts of the same diameter. The Contractor shall be responsible for the proper fitting and assembly of all parts of the work.



PIN



RING



EXPANSION SHOE DETAILS

NOTE:

Expansion Shoe details shown for information only. Inside retaining ring on southeast bearing is loose. Approximately 3/4" of the ring is not touching the shoe. Reposition ring back on shoe and weld to top shoe using 4-1/2" long welds (3/16" fillets). Cost included with Structural Steel Repair.

BILL OF MATERIAL

Item	Unit	Quantity
Structural Steel Repair	Pound	100

FRAMING PLAN & BEARING REPAIR DETAILS

WISCONSIN CENTRAL RAILROAD

OVER PALATINE ROAD

FAP 305/PALATINE ROAD

SECTION 2004-108 BR

COOK COUNTY

STA. 421+68.70

STRUCTURE NO. 016-2025

BRANCO & ZROKA ENGINEERING, P.C.

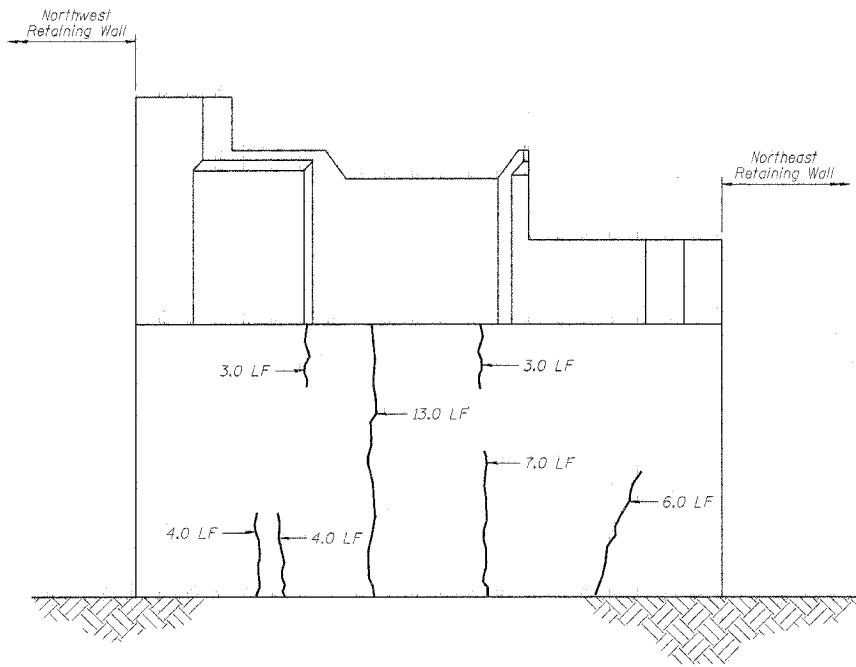
DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

February 2005

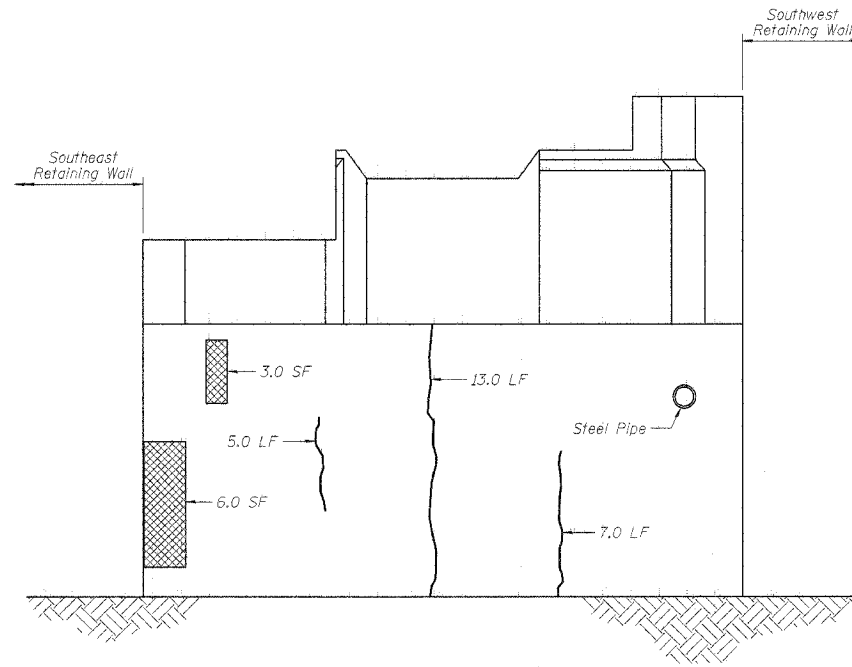
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4 5 SHEETS
S.B.L. P. M. P. 2004	*	COOK	72	57	

*2004-108 BR CONTRACT NO. 62853



NORTH ABUTMENT MAINLINE TRACK ELEVATION



SOUTH ABUTMENT MAINLINE TRACK ELEVATION

LEGEND

- Surveyed Area Requiring Formed Concrete Repair (Depth ≤ 5")
- Surveyed Length Requiring Epoxy Crack Sealing

BILL OF MATERIAL

Item	Unit	Quantity
Epoxy Crack Sealing	Foot	100
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.	20
Formed Concrete Repair (Depth Larger Than 5")	Sq. Ft.	5

NOTES

Repair areas shown are the surveyed areas of deterioration. The actual area to be repaired shall be as directed by the Engineer.

Variations in the quantities shall not be cause for additional compensation, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Survey date: October 1992

BRANCO & ZROKA ENGINEERING, P.C.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

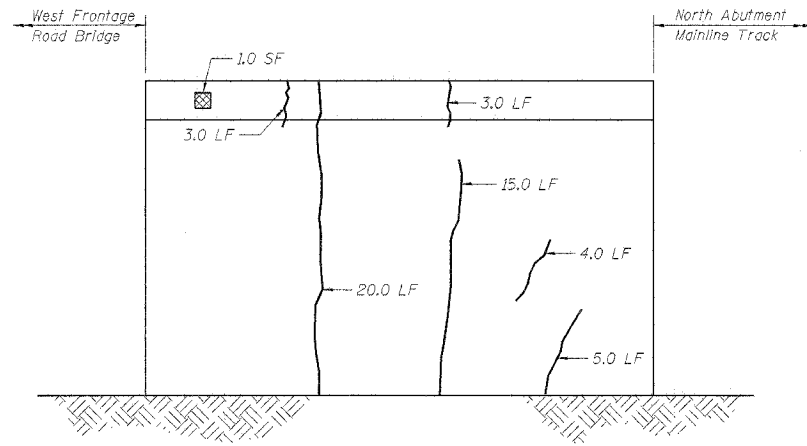
February 2005

ABUTMENT REPAIR DETAILS
WISCONSIN CENTRAL RAILROAD
OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 421+68.70
STRUCTURE NO. 016-2025

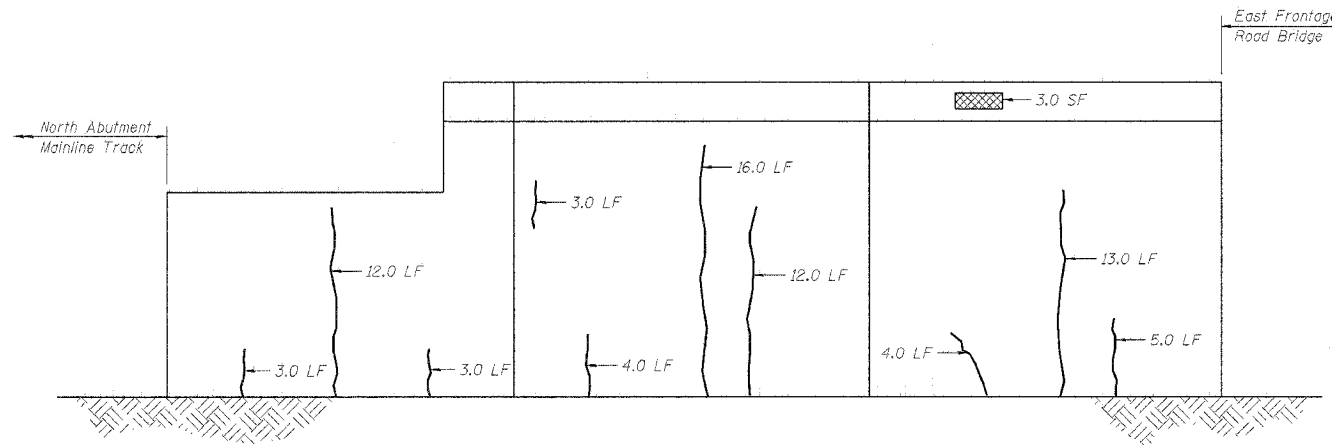
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5 5 SHEETS
S.B.S. P.A.P. 305	A	COOK	72	58	

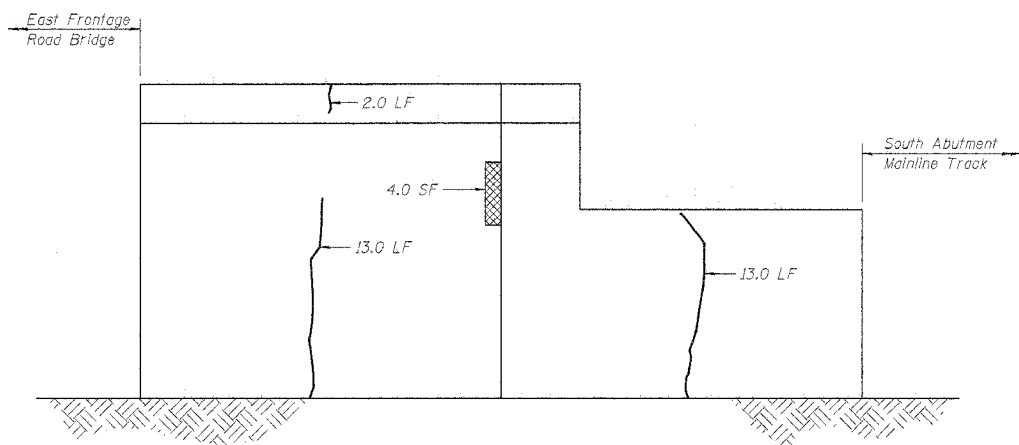
*2004-108 BR CONTRACT NO. 62853



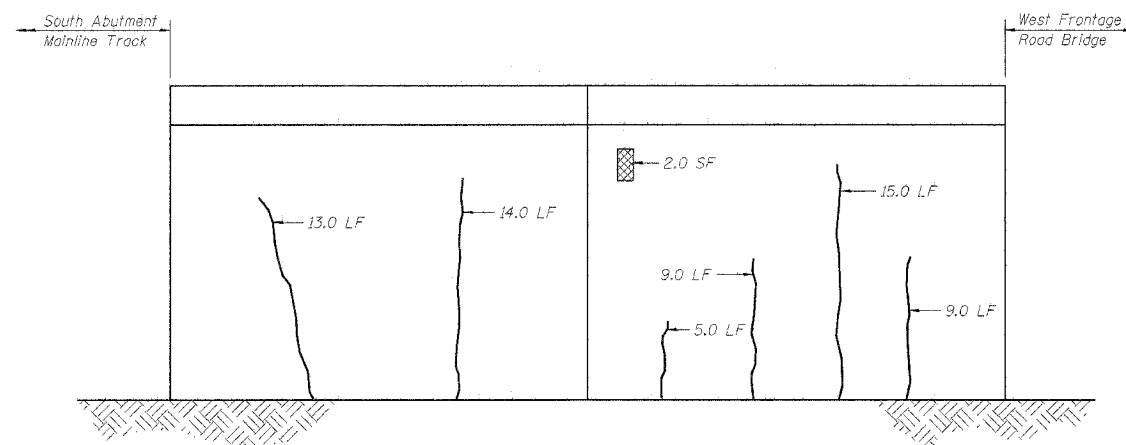
NORTHWEST RETAINING WALL ELEVATION



NORTHEAST RETAINING WALL ELEVATION



SOUTHEAST RETAINING WALL ELEVATION



SOUTHWEST RETAINING WALL ELEVATION

BRANCO & ZROKA ENGINEERING, P.C.

DESIGNED	LAS
CHECKED	DAZ
DRAWN	SAW
CHECKED	LAS

February 2005

LEGEND

- Surveied Area Requiring Formed Concrete Repair (Depth ≤ 5")
- Surveied Length Requiring Epoxy Crack Sealing

BILL OF MATERIAL

Item	Unit	Quantity
Epoxy Crack Sealing	Foot	550
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.	20
Formed Concrete Repair (Depth Larger Than 5")	Sq. Ft.	10

NOTES

Repair areas shown are the surveyed areas of deterioration. The actual area to be repaired shall be as directed by the Engineer.

Variations in the quantities shall not be cause for additional compensation, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Survey date: October 1992

RETAINING WALL REPAIR DETAILS
WISCONSIN CENTRAL RAILROAD
OVER PALATINE ROAD
FAP 305/PALATINE ROAD
SECTION 2004-108 BR
COOK COUNTY
STA. 421+68.70
STRUCTURE NO. 016-2025

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

1. General Plan and Elevation
2. Stage Construction Details
3. Temporary Concrete Barrier
4. Superstructure Removal
5. Concrete Deck Beam Repairs
6. Deck Plan and Cross Section
7. Superstructure Details
8. Deck Joints
9. Pedestrian Railing
10. Framing Plan
11. Box Beam Details
12. Abutment Removal and Repair
13. Abutments
14. Bar Splicer Assembly Details

ROUTE NO.	SECTION	COUNTY	LENG	SHEET	SHEET NO. 1
FAP 305	*	Cook	72	59	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract No. 62853 *2004-108 BR

GENERAL NOTES

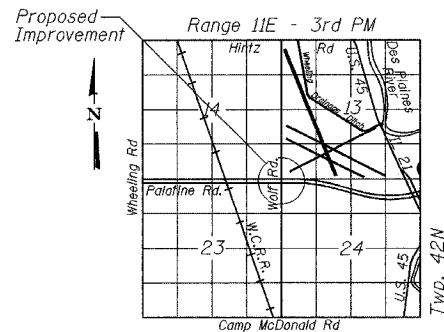
1. Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-322 Grade 60.
2. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
3. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splice or anchorage system. Cost included with "Concrete Removal".
4. Protective Coat shall be applied to the entire top surface of the bridge deck including sidewalk and the tops and inside vertical faces of the sidewalk parapets and as directed by the Engineer.
5. The Contractor must follow the guidelines of Article 107.09 while performing removal operations.
6. Expansion guards which are not cast in the precast unit shall be fabricated and erected according to Article 503.10(c) of the Standard Specifications and are included in quantity of structural steel.
7. The top surface of the beams shall be finished according to Article 504.06 of the Standard Specification except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".

TOTAL BILL OF MATERIAL

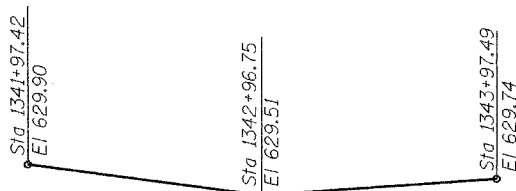
ITEM	UNIT	QUANTITY
Bituminous Concrete Surface Removal Complete	Sq Yd	367
Concrete Removal	Cu Yd	11.0
Preformed Joint Seal 1 3/4"	Foot	70
Preformed Joint Seal 2 1/2"	Foot	70
Concrete Superstructure	Cu Yd	72.1
Bridge Deck Grooving	Sq Yd	433
Protective Coat	Sq Yd	573
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq Ft	500
Reinforcement Bars, Epoxy Coated	Pound	12,520
Pedestrian Railing	Foot	135
Epoxy Crack Sealing	Foot	110
Concrete Wearing Surface	Sq Yd	433
Keyway Repair	Foot	14
Bar Splicers	Each	148
Furnishing and Erecting Structural Steel	Pound	2,150
Bearing Pad Adjustment	Each	32
Removal of Existing Precast Prestressed Concrete Deck Beams	Sq Ft	1,210
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq Ft	1,210
Formed Concrete Repair (Depth Greater Than 5")	Sq. Ft.	150

Benchmark: Chiseled Square in N.E. corner of the North Abutment of the Wolf Rd. Bridge over Palatine Rd. Station 950+34 offset 36'-5" right, Elevation = 649.60
Existing Structure: Structure No. 016-0680 built as Wolf Road, over Palatine Road, Section 110-1415 in 1963 by the Cook County Highway Department. The length of the structure is 66'-2" center to center of bearings. The superstructure consists of 33"x36" PPC Deck Beams supporting a bituminous concrete wearing surface. The existing deck is 70'-0" out to out of deck.

- Scope of Work:
1. Remove bituminous concrete wearing surface and waterproofing membrane system.
 2. Remove and replace six Deck Beams, Sidewalks and Concrete pedestrian rail.
 3. Repair the remaining concrete Deck Beams.
 4. Reconstruct the expansion joints and place new concrete wearing surface - variable depth.
 5. Repair the existing abutments.
 6. Resurface the existing approach slabs. (See Roadway Plans)

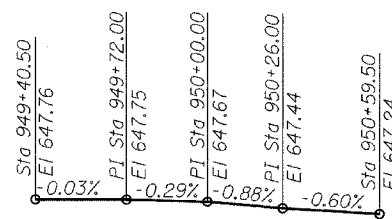


LOCATION SKETCH



PROFILE GRADE PALATINE RD

(PGL Along North Median Edge of Pavement)



PROFILE GRADE WOLF RD

(Along Center Roadway)

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

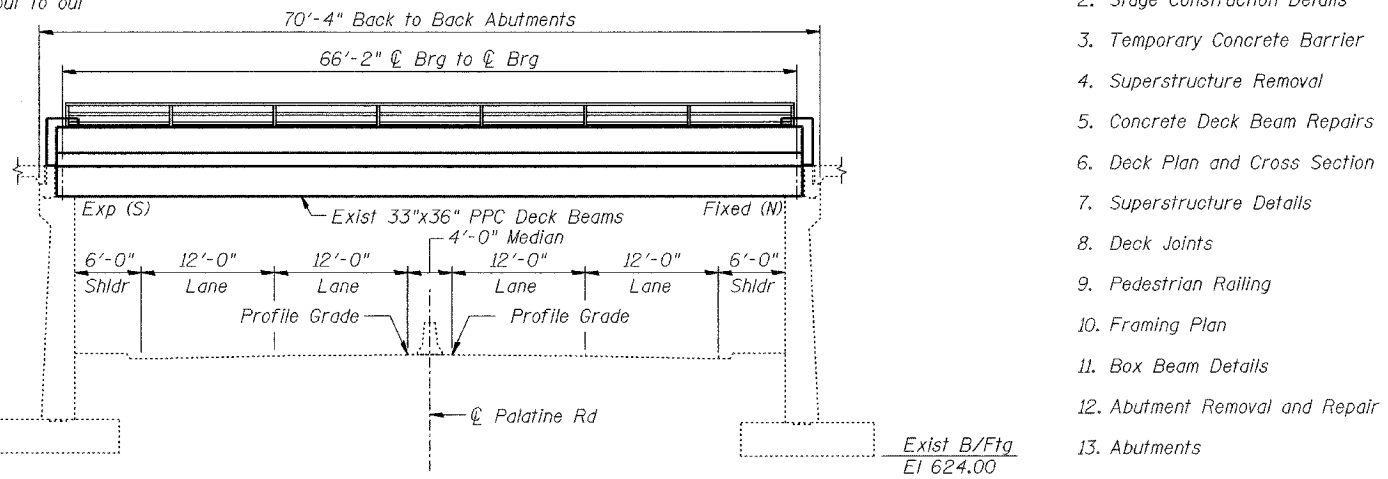
FIELD UNITS

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

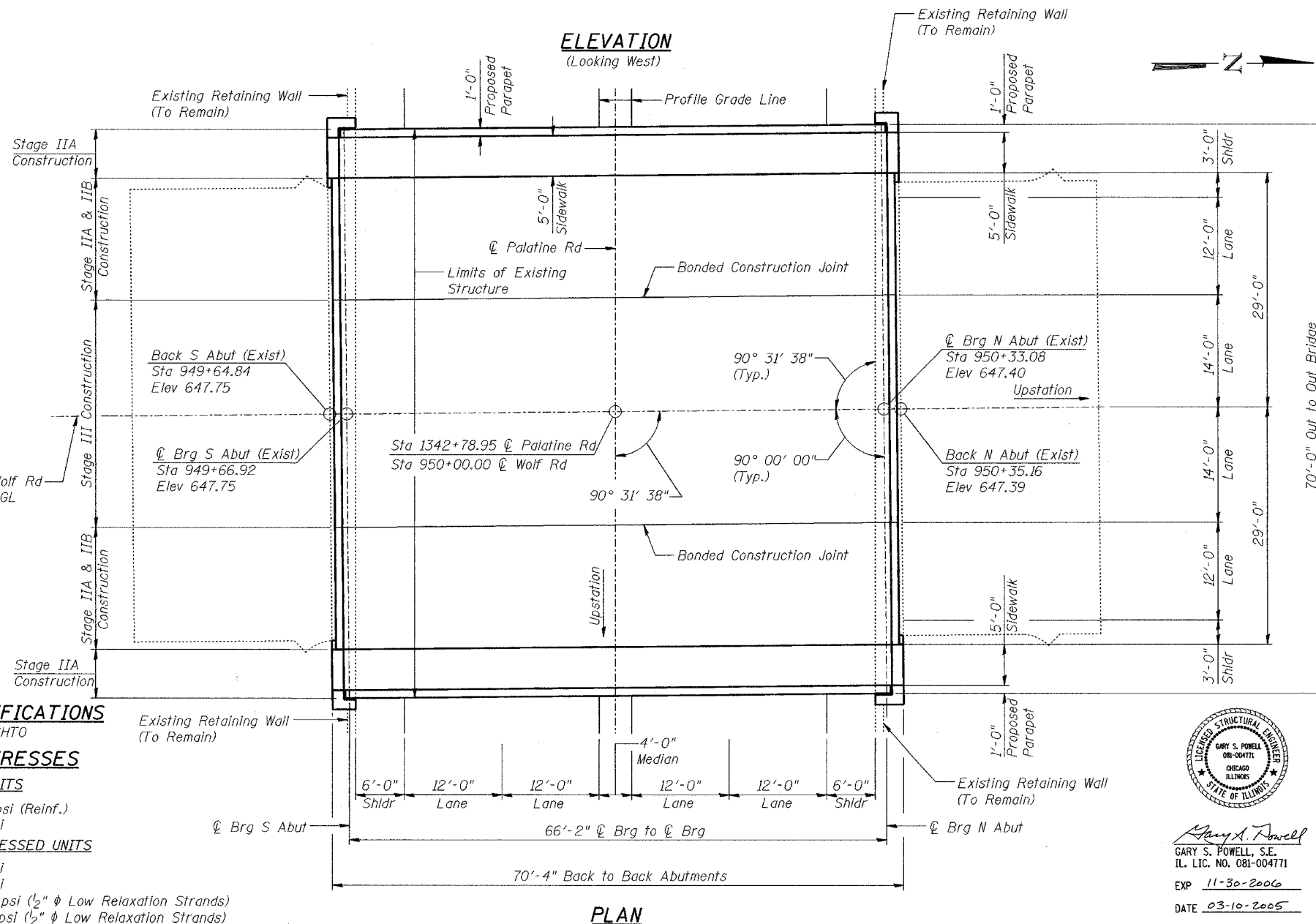
PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi
 $f'_{ci} = 4,000$ psi
 $f'_s = 270,000$ psi (1/2" ϕ Low Relaxation Strands)
 $f'_{si} = 201,960$ psi (1/2" ϕ Low Relaxation Strands)

DESIGNED	BPS
CHECKED	KFA
DRAWN	BPS
CHECKED	GSP



ELEVATION (Looking West)



PLAN

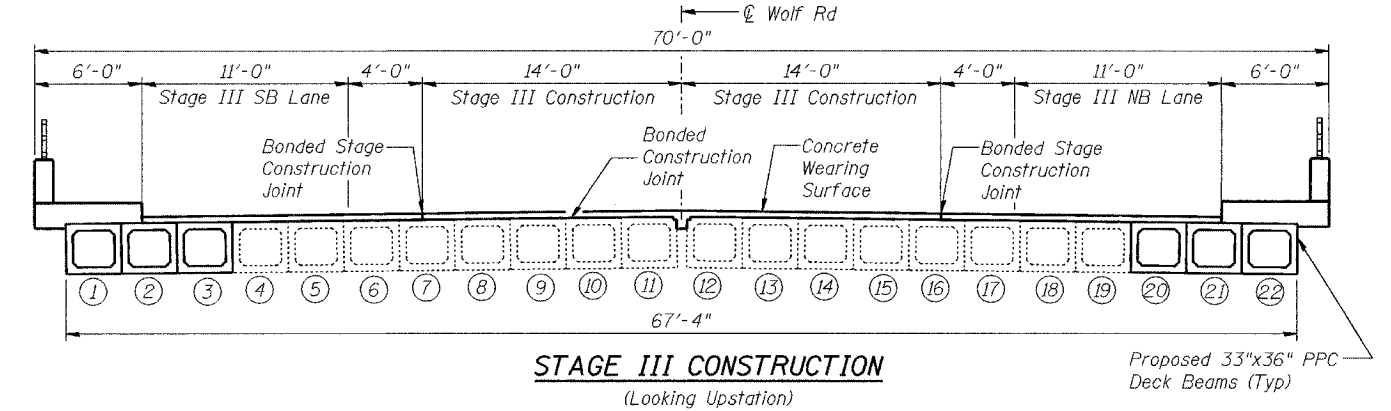
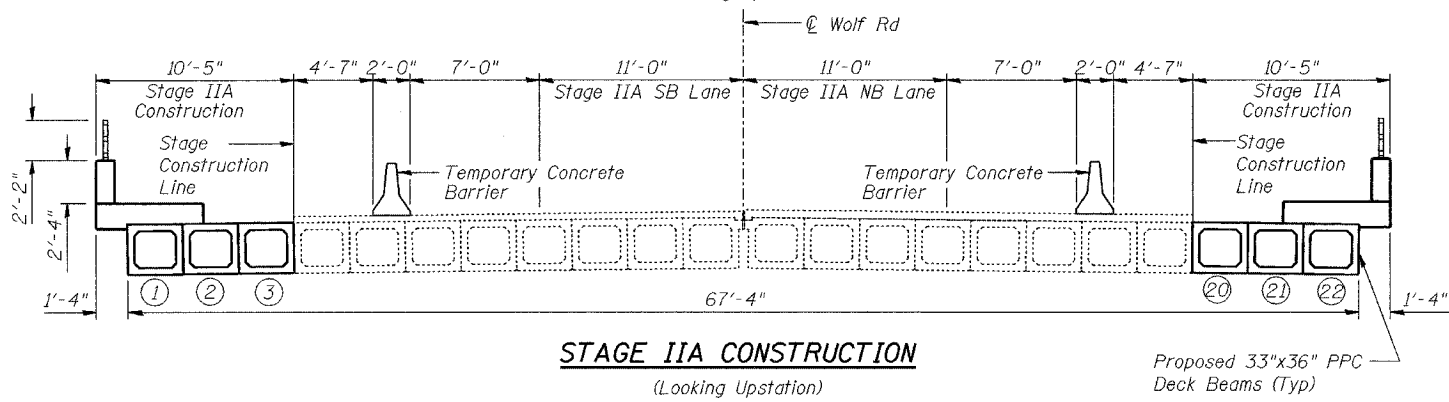
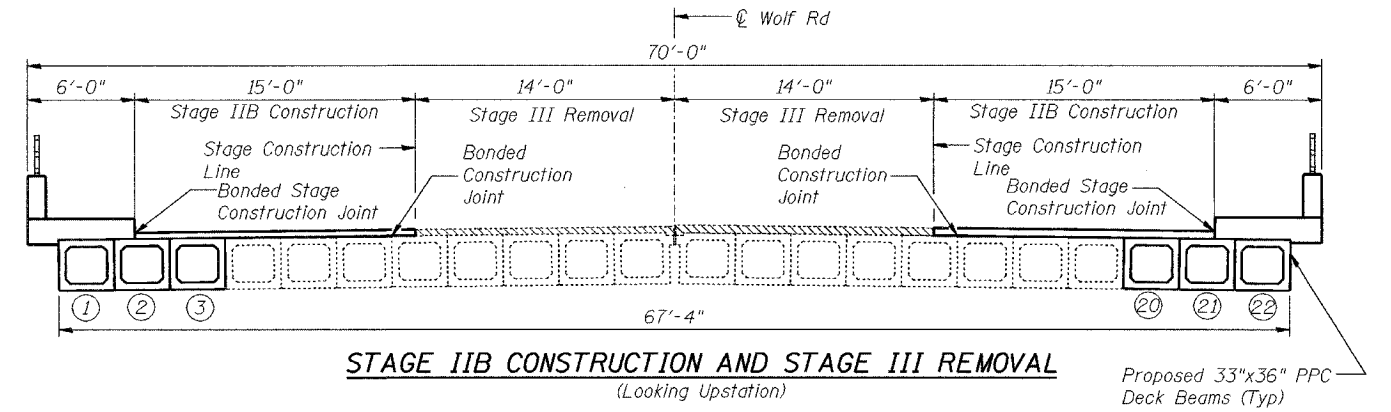
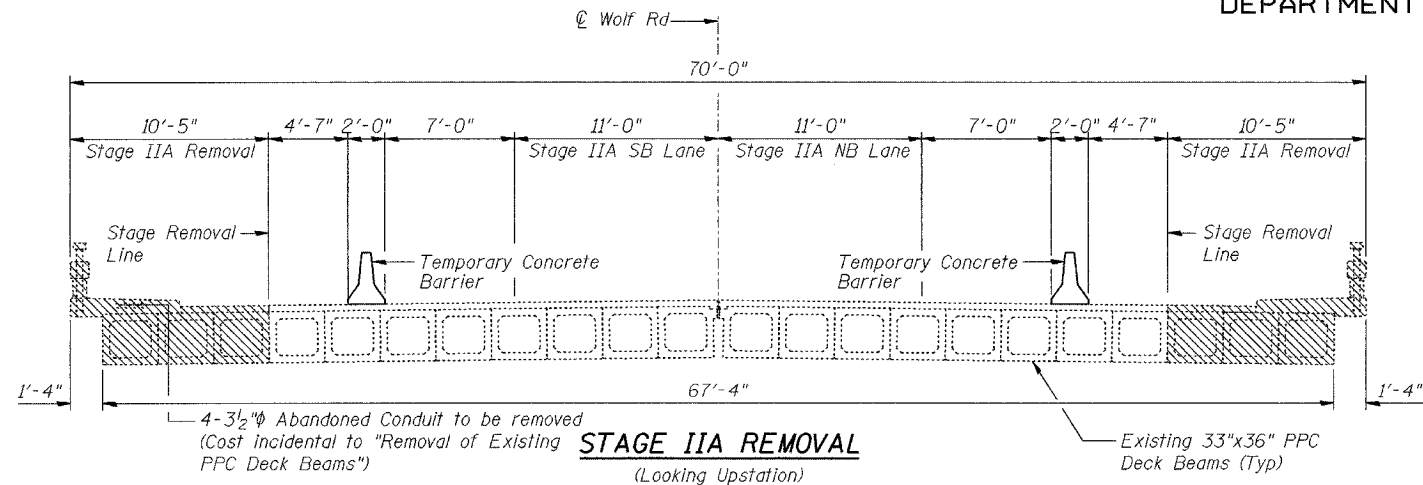


GARY S. POWELL, S.E.
IL. LIC. NO. 081-004771
EXP 11-30-2006
DATE 03-10-2005

GENERAL PLAN AND ELEVATION
WOLF RD. OVER PALATINE RD.
F.A.P. RTE. 305 SECT. 2004-108 BR
COOK COUNTY
STATION 950+00.00
STRUCTURE NO. 016-0680

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. 2 14 SHEETS
FAP 305	*	Cook	72	60	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		
Contract No. 62853		*2004-108 BR			



- Notes:
1. Cross Sections are looking north which is upstation.
 2. See Sheet No 3 for Temporary Concrete Barrier Details. For quantity of Temporary Concrete Barrier, see Roadway Plans.
 3. See Roadway Plans and Maintenance of Traffic notes and details for additional information.
 4. Stages shown correlate to MOT Construction Staging. See Roadway Plans.

- Area to be Removed

STAGE IIA REMOVAL

1. Install Temporary Concrete barrier as shown to locate traffic in one NB 11'-0" lane with an 7' shoulder & one SB 11'-0" lane with an 7' shoulder.
2. Remove handrail, concrete bridge rail, sidewalk, wearing surface and three exterior box beams on each side.

STAGE IIA CONSTRUCTION

1. Erect proposed concrete box beams ① thru ③, and ⑳ thru ㉒.
2. Construct new sidewalk and bridge railing on each side of bridge.

STAGE IIB REMOVAL

1. Remove Temporary Concrete Barrier.
2. Remove wearing surface as shown.

STAGE IIB CONSTRUCTION

1. Construct new wearing surface as shown.

STAGE III REMOVAL

1. Remove wearing surface as shown.

STAGE III CONSTRUCTION

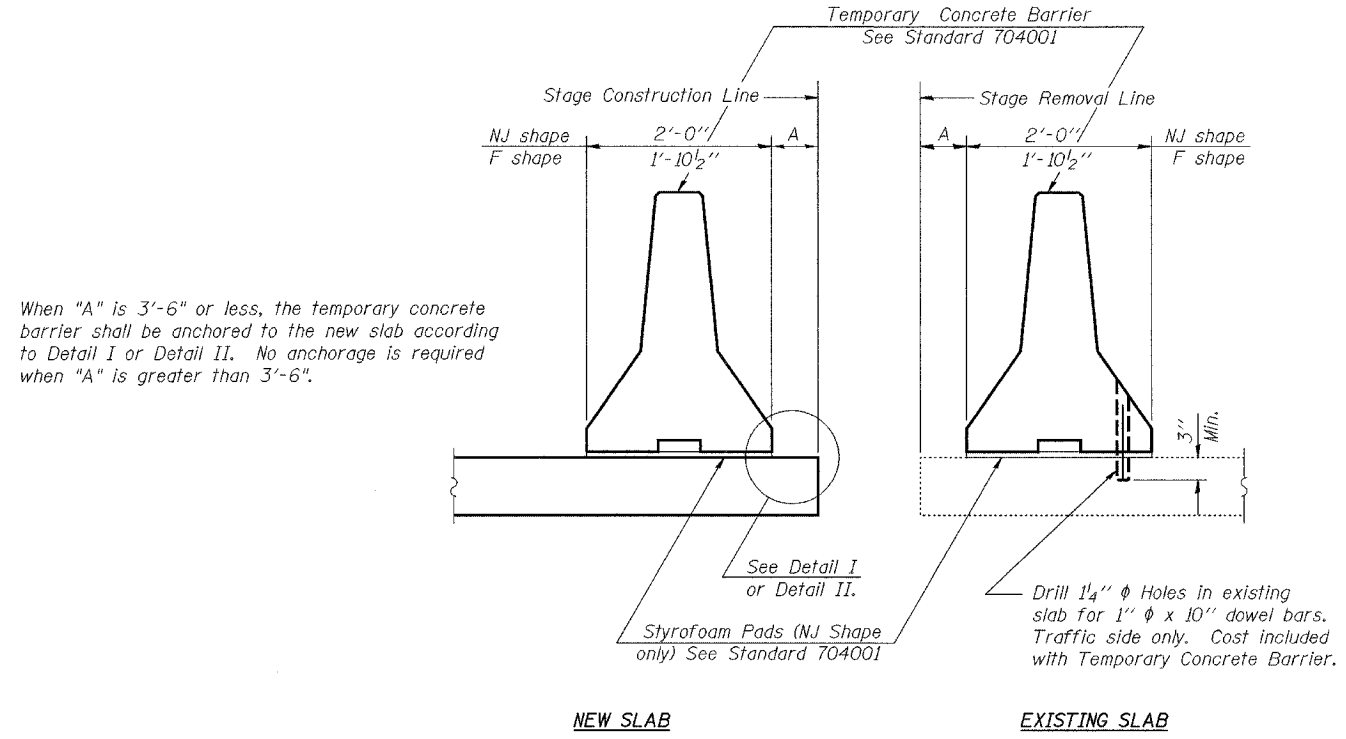
1. Construct new wearing surface as shown.

DESIGNED	BPS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

STAGE CONSTRUCTION DETAILS
WOLF RD. OVER PALATINE RD.
F.A.P. RTE. 305 SECT. 2004-108 BR
COOK COUNTY
STATION 950+00.00
STRUCTURE NO. 016-0680

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	JOIN. SHEETS	SHEET NO.	SHEET NO. 3 14 SHEETS
FAP 305	*	Cook	72	61	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		
		Contract No. 62853 *2004-108 BR			



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

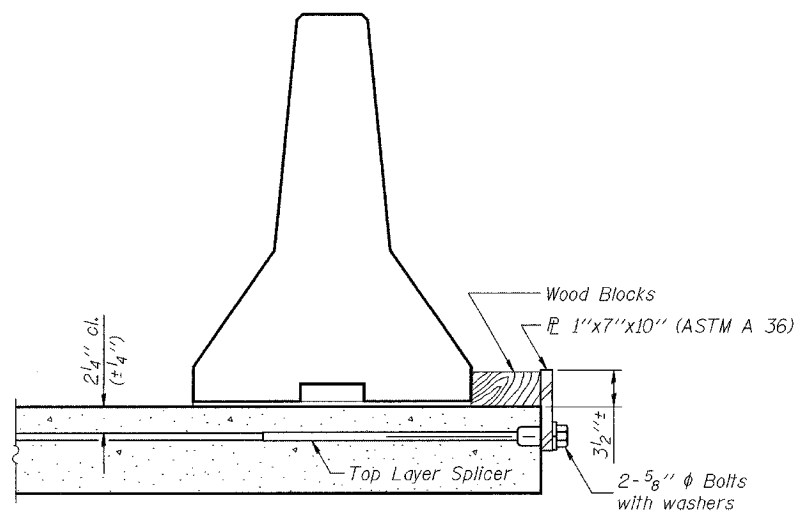
NOTES

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

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

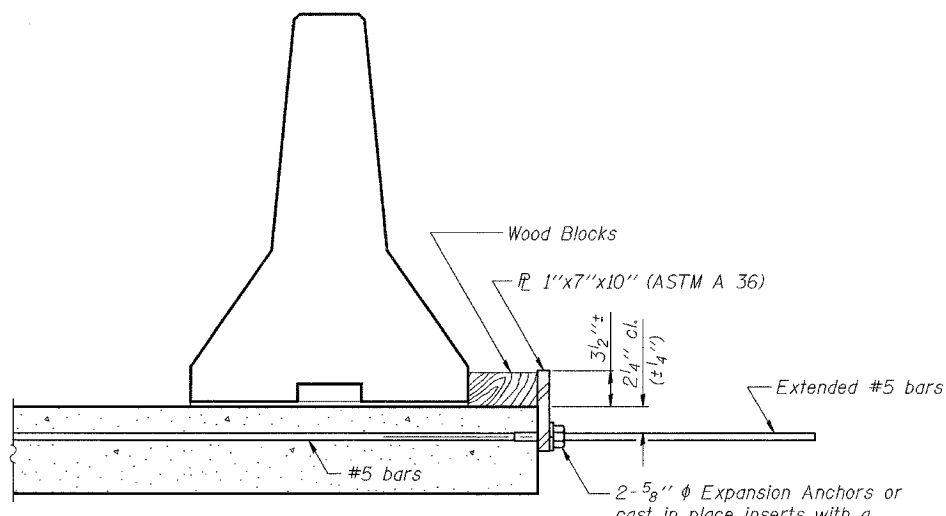
Cost of anchorage is included with Temporary Concrete Barrier.

SECTIONS THRU SLAB



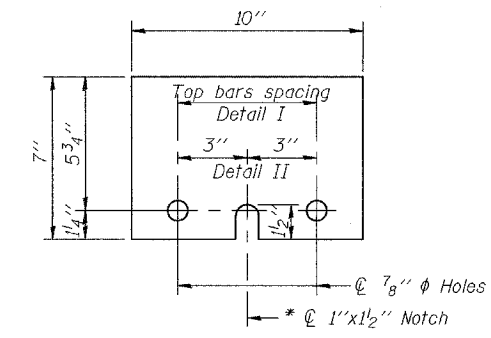
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



1"x7"x10"

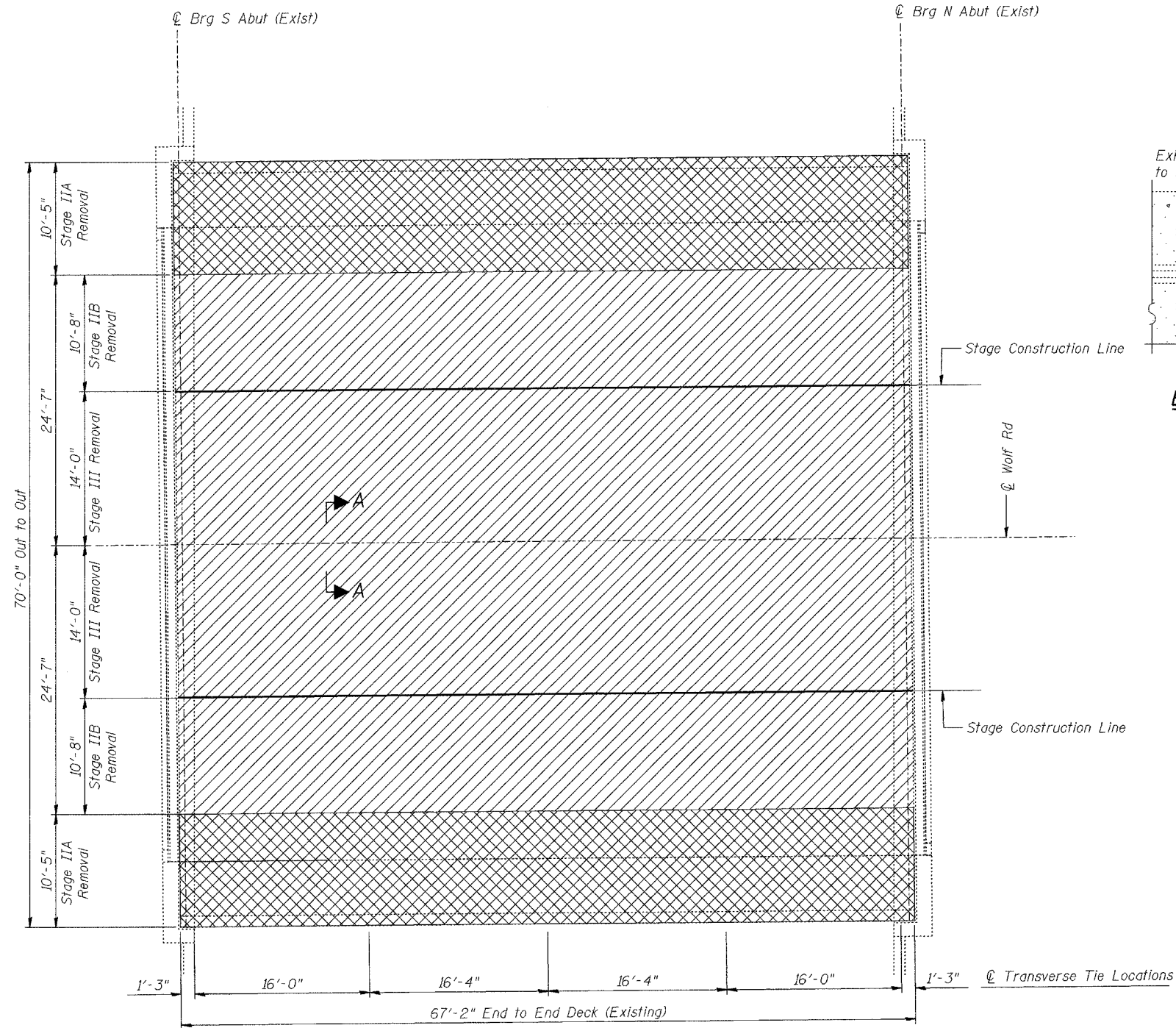
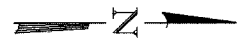
* Required only with Detail II

DESIGNED	BPS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

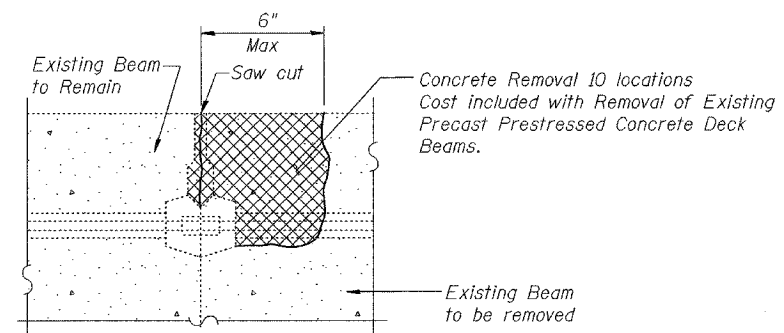
TEMPORARY CONCRETE BARRIER
WOLF RD. OVER PALATINE RD.
F.A.P. RTE. 305 SECT. 2004-108 BR
COOK COUNTY
STATION 950+00.00
STRUCTURE NO. 016-0680

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

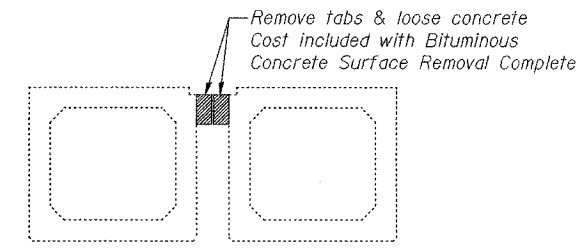
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4 14 SHEETS
FAP 305	*	Cook	72	62	
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	
				Contract No. 62853 *2004-108 BR	



CONCRETE REMOVAL PLAN



BEAM REMOVAL DETAIL AT TRANSVERSE TIES



SECTION A-A THROUGH LONGITUDINAL JOINT

Note:

- Existing Reinforcement extending into removed areas shall be blast cleaned, straightened and incorporated into new construction. Cost included with "Concrete Removal". Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with "Concrete Removal".
- Bituminous & Concrete removal located on top of deck beams being replaced shall be included in cost of "Removal of Existing PPC Deck Beams"
- See Electrical Drawings for removal of existing conduit attached to the East side of the bridge and the electrical box on the sidewalk at the South West corner of the bridge.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Bituminous Concrete Surface Removal Complete	Sq Yd	367
Removal of Existing Precast Prestressed Concrete Deck Beams	Sq Ft	1,210

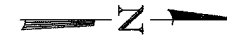
LEGEND

- Bituminous Concrete Surface Removal (Complete)
- Bituminous & Concrete Removal (Cost Included with Removal of Existing PPC Deck Beams)

DESIGNED	BPS
CHECKED	KFA
DRAWN	BPS
CHECKED	GSP

**SUPERSTRUCTURE REMOVAL
WOLF RD. OVER PALATINE RD.
F.A.P. RTE. 305 SECT. 2004-108 BR
COOK COUNTY
STATION 950+00.00
STRUCTURE NO. 016-0680**

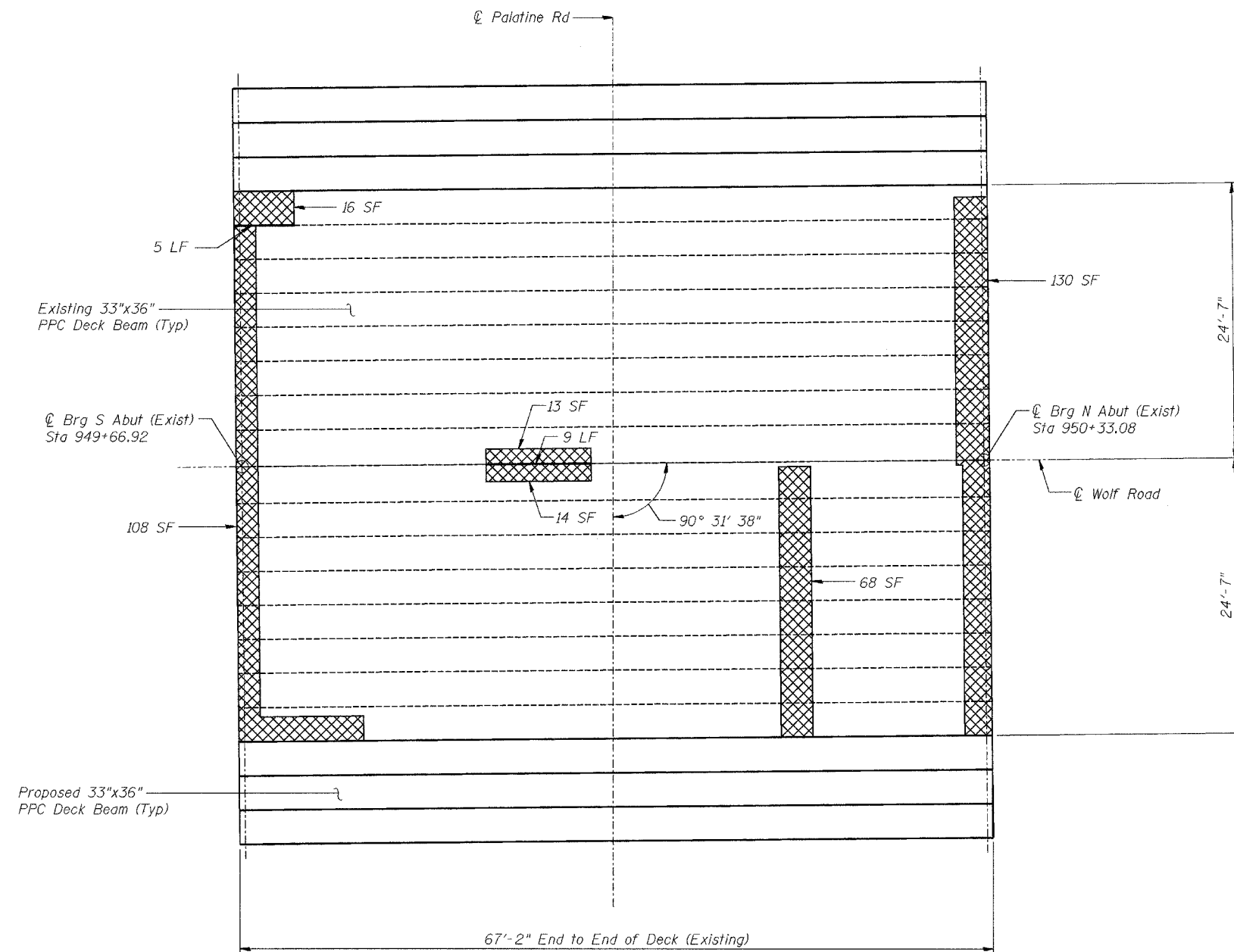
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 305	*	Cook	72	63
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT
		Contract No. 62853		*2004-108 BR

SHEET NO. 5

14 SHEETS



PLAN OF CONCRETE DECK BEAM REPAIRS
TOP VIEW

LEGEND

- Length of Keyway Repair based on Infrared Survey dated 12/21/92.
- Area Showing Possible Delaminations of Top of Beam based on Infrared Survey dated 12/21/92

NOTES

Repair areas shown are the surveyed areas of deterioration. The actual area to be repaired shall be as directed by the Engineer.

Variations in the quantities shall not be cause for additional compensation, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Surveyed areas that show possible delamination should be investigated after removal of the bituminous overlay. Any areas with delamination extending to the top mat of reinforcement on the beam shall be cleaned of any loose concrete and filled back up with the concrete overlay. Cost included with "Concrete Wearing Surface." Any area where the damage extends below the top mat of reinforcement on the beam shall be brought to the attention of the Bureau of Bridges and Structures for further disposition.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Keyway Repair	Foot	14

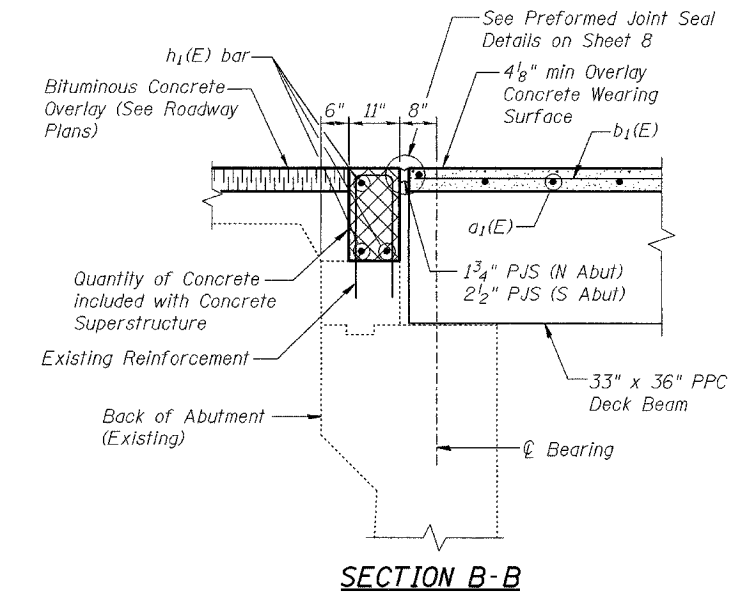
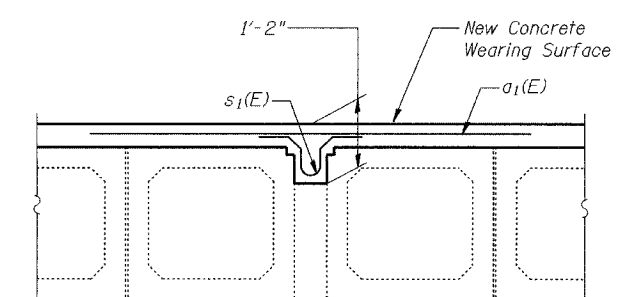
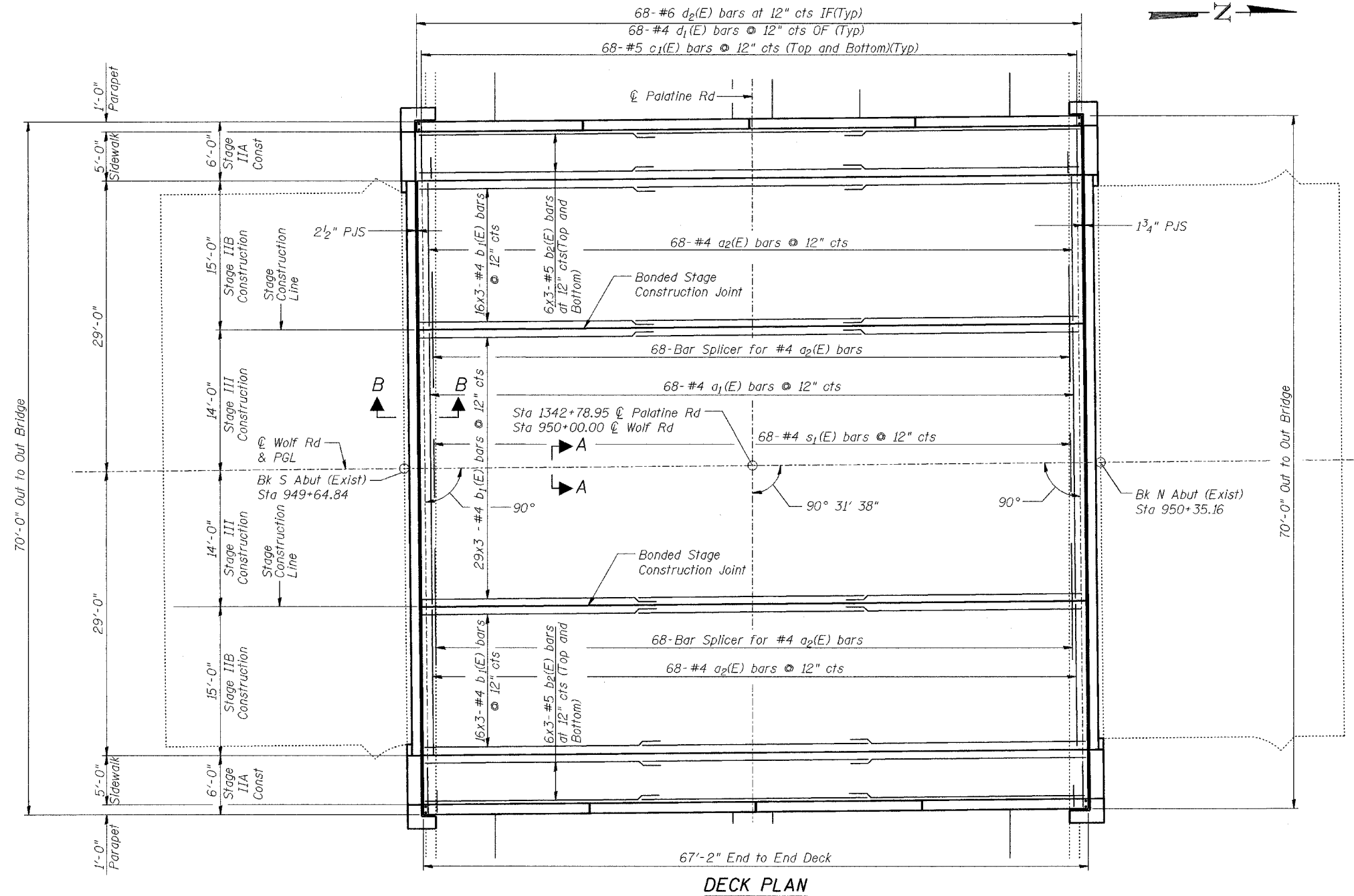
DESIGNED	BPS
CHECKED	KFA
DRAWN	BPS
CHECKED	GSP

CONCRETE DECK BEAM REPAIRS
WOLF RD. OVER PALATINE RD.
F.A.P. RTE. 305 SECT. 2004-108 BR
COOK COUNTY
STATION 950+00.00
STRUCTURE NO. 016-0680

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

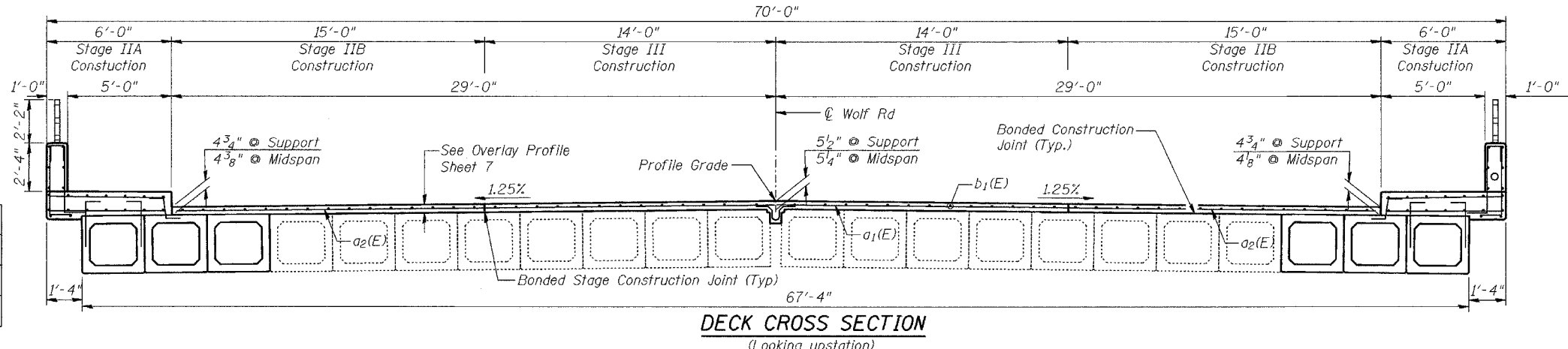
ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
FAP 305	*	Cook	72	64
FED. ROAD DIST. NO. 7		ILL. PROJ. NO.	FED. AID PROJECT NO.	
			Contract No. 62853 *2004-108 BR	

SHEET NO. 6
14 SHEETS



- NOTES
1. Bars indicated thus: 30x3 - #4 etc indicates 30 lines of bars with 3 lengths per line.
 2. EF = Each Face, OF = Outer Face, IF = Inner Face
 3. For Parapet Elevation, Sidewalk Details and Bill of Material See Sheet 7.
 4. See Electrical Plans for proposed conduit.

LAP LENGTHS
#4 - 1'-8"
#5 - 2'-2"



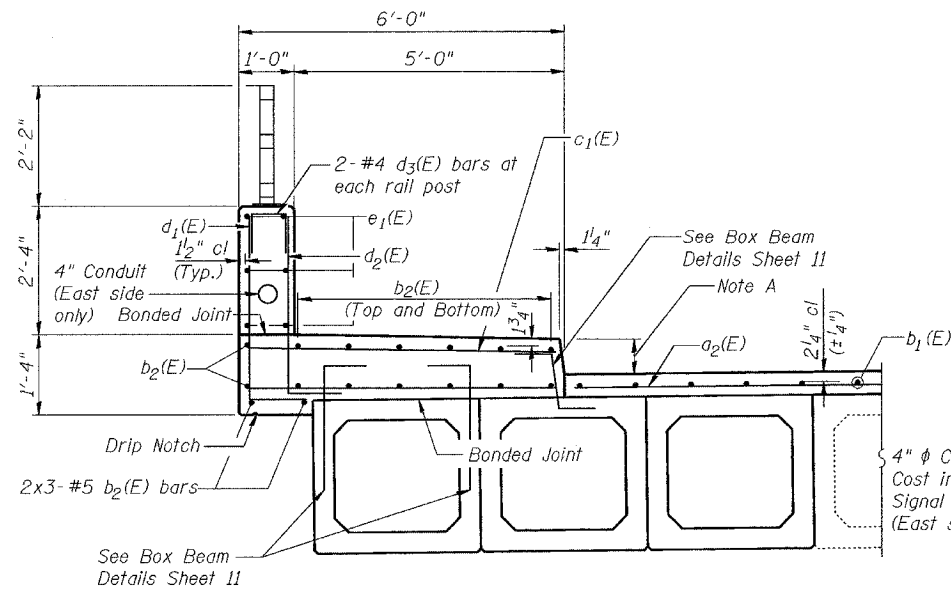
DESIGNED	BPS
CHECKED	KFA
DRAWN	BPS
CHECKED	GSP

**DECK PLAN AND CROSS SECTION
WOLF RD. OVER PALATINE RD.
F.A.P. RTE. 305 SECT. 2004-108 BR
COOK COUNTY
STATION 950+00.00
STRUCTURE NO. 016-0680**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

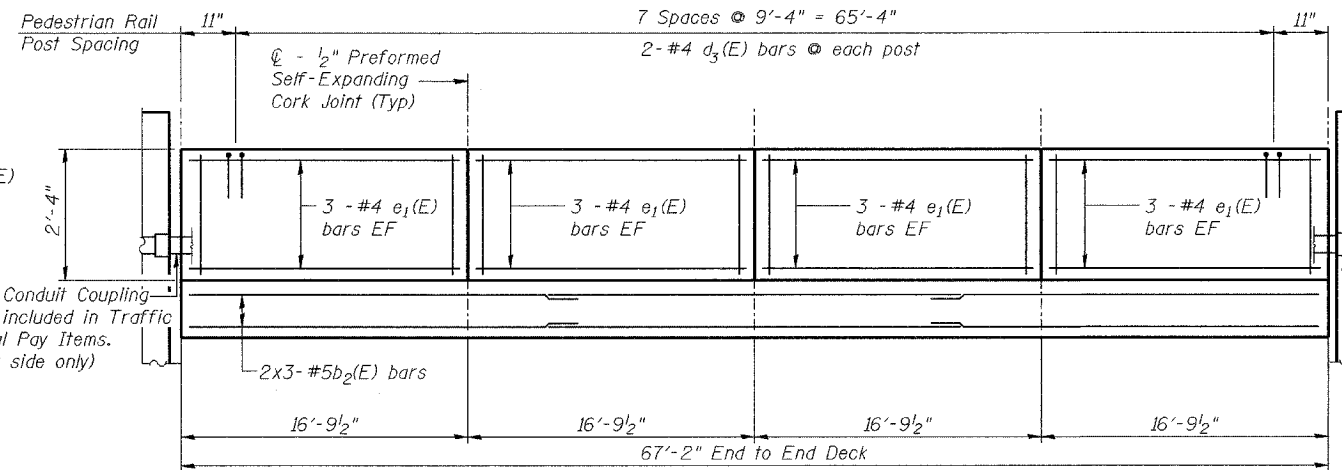
ROUTE NO. FAP 305	SECTION *	COUNTY Cook	SHEET 72	NO. OF SHEETS 65	SHEET NO. 7 14 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract No. 62853 *2004-108 BR

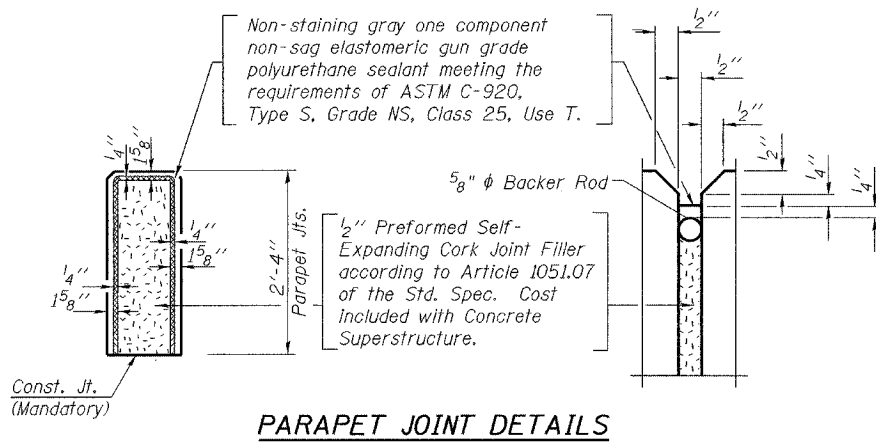
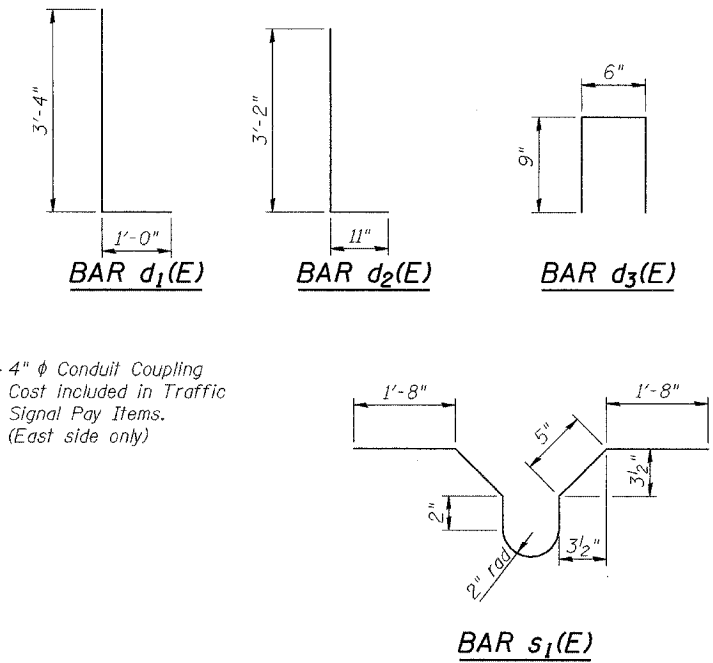


SECTION THRU PROPOSED PARAPET & SIDEWALK

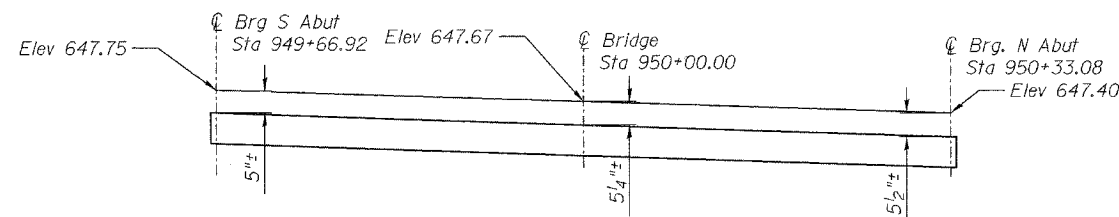
Note A: Curb height varies from 6 1/2" @ Sta 949+66.0 to 9" @ Sta 949+68.5, and remains constant 9" from Sta 949+68.5 to Sta 950+32.16.



PARAPET ELEVATION



PARAPET JOINT DETAILS



OVERLAY PROFILE

(Along Wolf Road)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁ (E)	68	#4	27'-8"	—
a ₂ (E)	136	#4	14'-8"	—
b ₁ (E)	183	#4	23'-6"	—
b ₂ (E)	96	#5	23'-10"	—
c ₁ (E)	272	#5	5'-8"	—
d ₁ (E)	136	#4	4'-4"	L
d ₂ (E)	136	#6	4'-1"	L
d ₃ (E)	32	#4	2'-0"	Π
e ₁ (E)	48	#4	16'-6"	—
s ₁ (E)	68	#4	5'-0"	∩
Item		Unit	Quantity	
Bridge Deck Grooving		Sq Yd	433	
Protective Coat		Sq Yd	573	
Concrete Superstructure		Cu Yd	59.4	
Reinforcement Bars, Epoxy Coated		Pound	11,490	
Concrete Wearing Surface		Sq Yd	433	
Bar Splicers		Each	136	

Reinforcement bars designated (E) shall be epoxy coated.

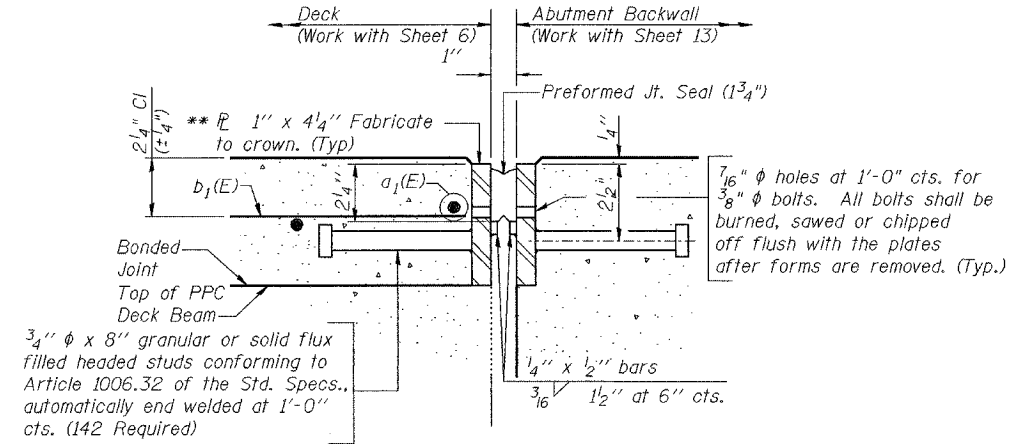
DESIGNED	BPS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

SUPERSTRUCTURE DETAILS
WOLF RD. OVER PALATINE RD.
F.A.P. RTE. 305 SECT. 2004-108 BR
COOK COUNTY
STATION 950+00.00
STRUCTURE NO. 016-0680

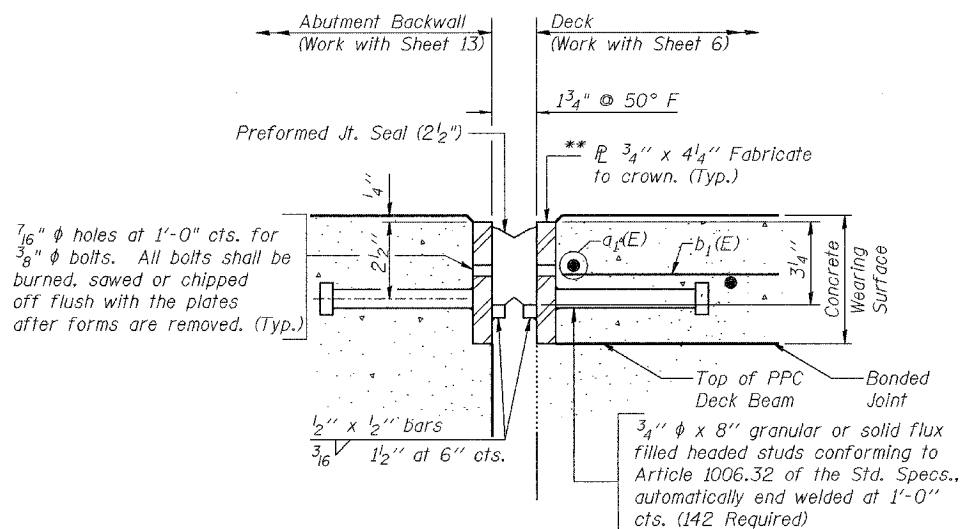
Notes:
For Plan and Cross Section, See Sheet 6.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

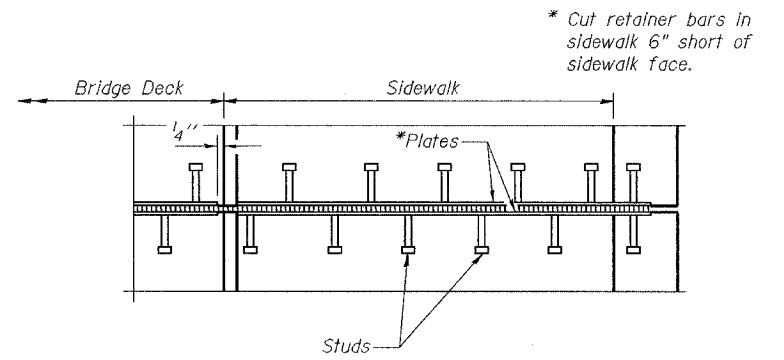
ROUTE NO. FAP 305	SECTION *	COUNTY Cook	DIST. 72	SHEET 66	SHEET NO. 8 14 SHEETS
FED. ROAD DIST. 101-7		ILLINOIS		FED. AID PROJECT Contract No. 62853 *2004-108 BR	



SECTION THRU 1 3/4" FIXED JOINT

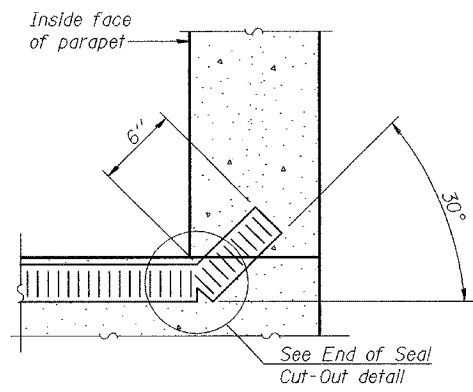


SECTION THRU 2 1/2" EXPANSION JOINT

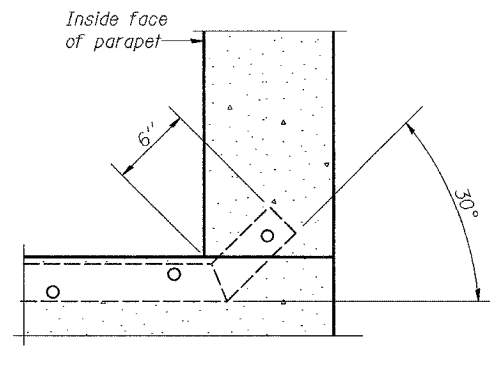


PLAN AT SIDEWALK

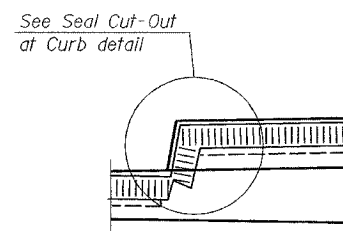
**Furnish in segments of 20 ft maximum length. Maximum space between installed segments shall be 3/16". Seal space with Silicon Sealant suitable for Structural Steel. Cost included with "Furnishing and Erecting Structural Steel."



AT CURB, PARAPET, OR WALL
(Showing seal)

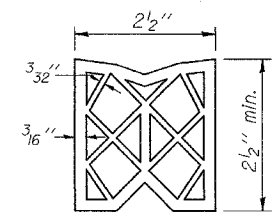
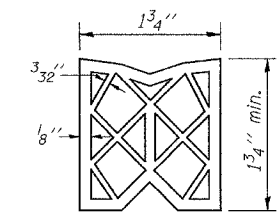


AT CURB, PARAPET, OR WALL
(Showing plate)



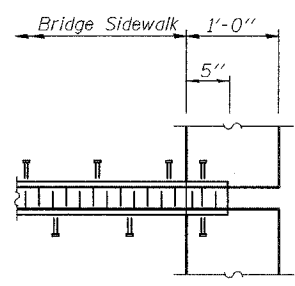
AT SIDEWALK OR MEDIAN

TYPICAL END TREATMENTS FOR PREFORMED JOINT SEAL

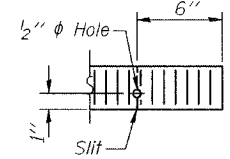


PREFORMED JOINT SEAL (1 3/4") PREFORMED JOINT SEAL (2 1/2")

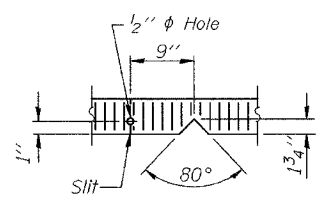
DESIGNED	BPS
CHECKED	KFA
DRAWN	BPS
CHECKED	GSP



PLAN AT PARAPET



END OF SEAL CUT-OUT



SEAL CUT-OUT AT CURB

BILL OF MATERIAL

Item	Unit	Quantity
Preformed Joint Seal 1 3/4"	Foot	70
Preformed Joint Seal 2 1/2"	Foot	70
Furnishing and Erecting Structural Steel	Pound	2,150

DECK JOINTS
WOLF RD. OVER PALATINE RD.
F.A.P. RTE. 305 SECT. 2004-108 BR
COOK COUNTY
STATION 950+00.00
STRUCTURE NO. 016-0680

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO. 9
FAP 305	*	Cook	72 67	14 SHEETS
FED. ROAD DIST. NO. 7		ILL. PROJ. NO.		FED. AID PROJECT
		Contract No. 62853		*2004-108 BR

NOTES

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the Contract Unit Price per foot for Pedestrian Railing.

Hollow structural sections shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36.

If the option of drilling and epoxy grouting the anchor rods is chosen, the Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.

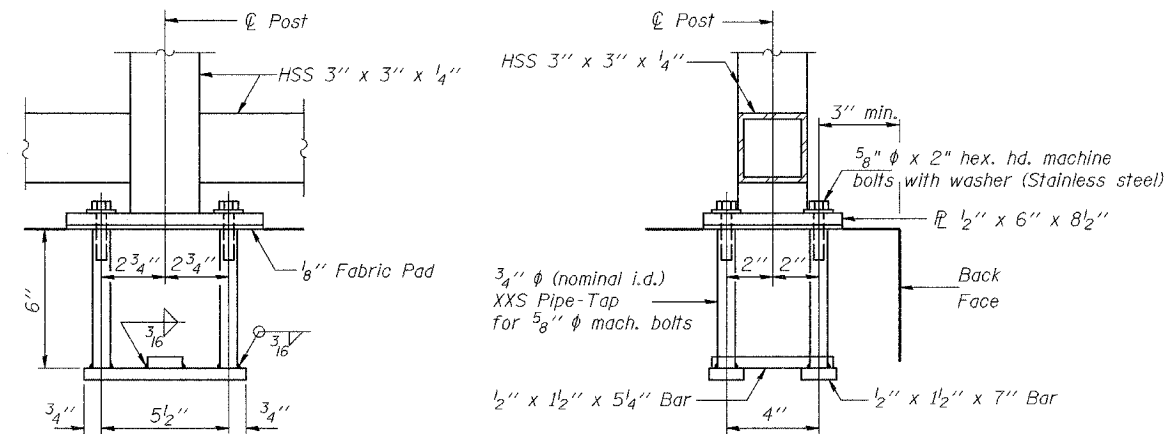
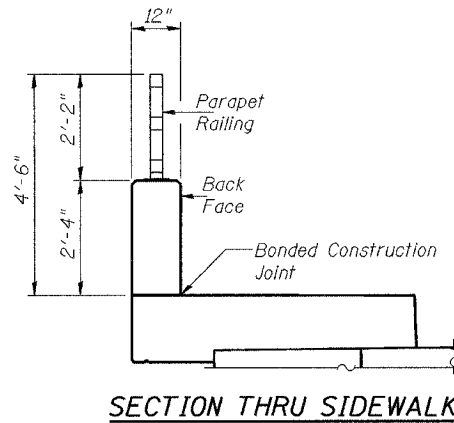
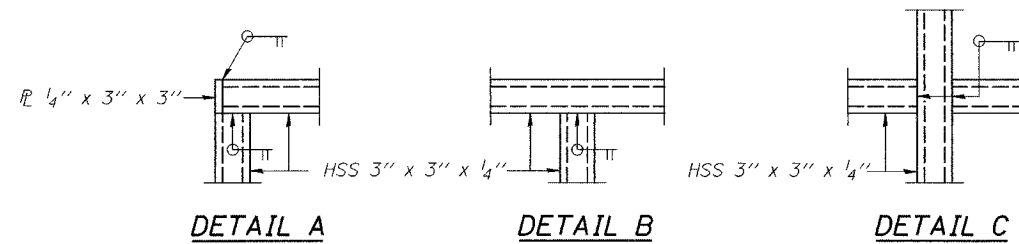
Space reinforcement to miss anchor rods.

All posts, railing, splices anchor devices, and bent plates shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. All bolts, nuts, washers, and anchor rods shall be galvanized according to AASHTO M 232 except stainless steel bolts as noted.

Vent holes for galvanized shall be placed in the posts and rails at locations that will not allow the accumulation of moisture in the members.

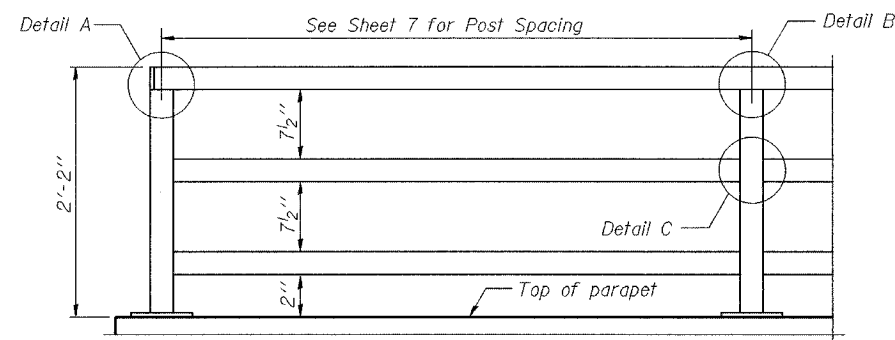
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Pedestrian Railing	Foot	135



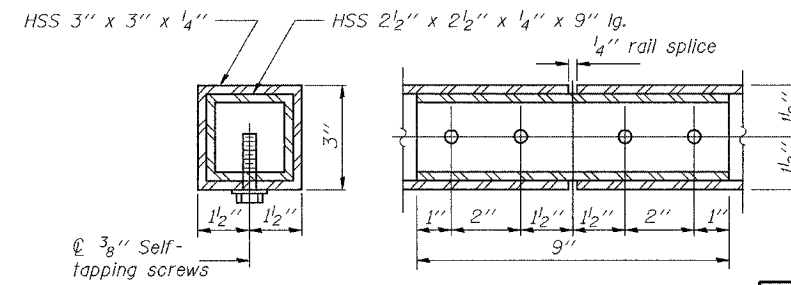
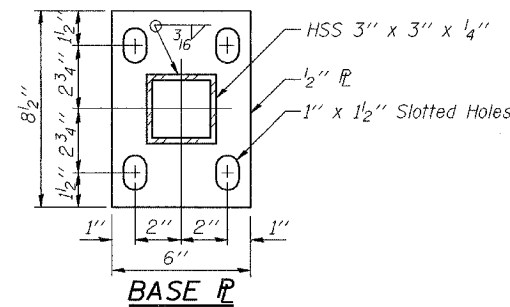
ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and epoxy grouting 5/8" ϕ anchor rods. Embedment shall be according to the manufacturer's specifications.



**PARAPET RAILING
ELEVATION**

(Inside Face of Three Element Rail)



RAIL SPLICE

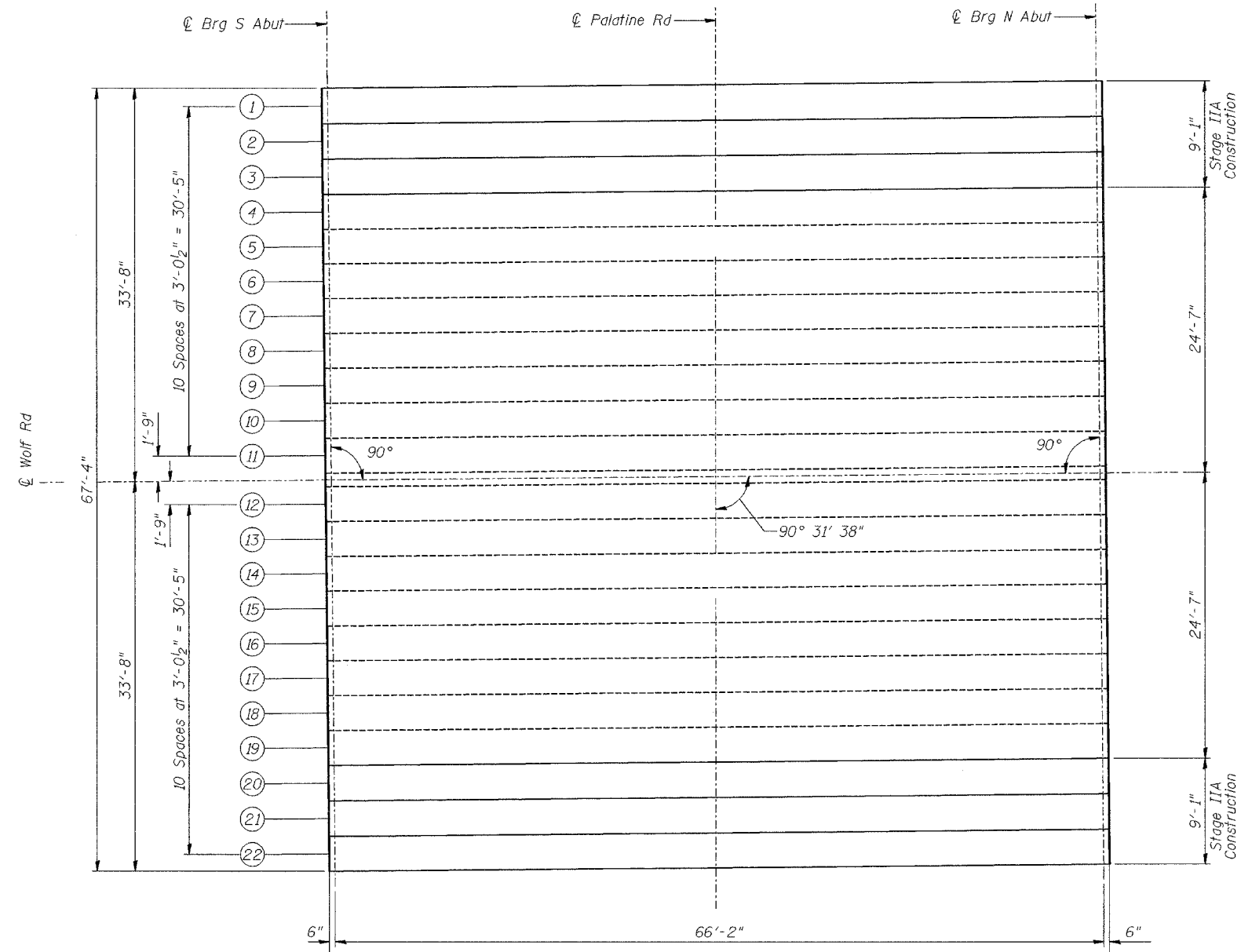
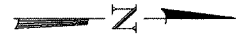
DESIGNED	BPS
CHECKED	KFA
DRAWN	BPS
CHECKED	GSP

R-29 (Modified) 9-01-03 (10'-0" Maximum Post Spacing)

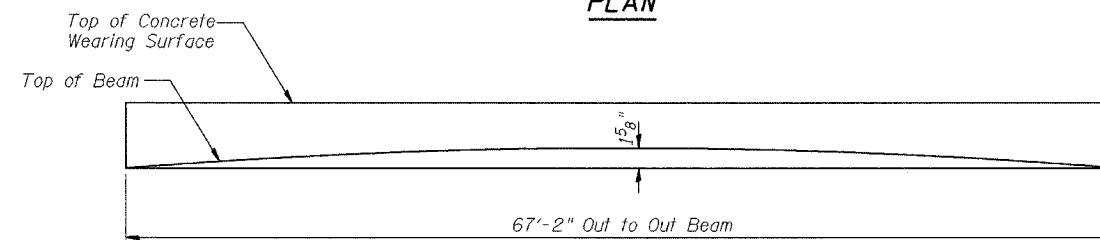
PEDESTRIAN RAILING
WOLF RD. OVER PALATINE RD.
F.A.P. RTE. 305 SECT. 2004-108 BR
COOK COUNTY
STATION 950+00.00
STRUCTURE NO. 016-0680

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10 14 SHEETS
FAP 305	*	Cook	72	68	
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	
		Contract No. 62853		*2004-108 BR	



PLAN



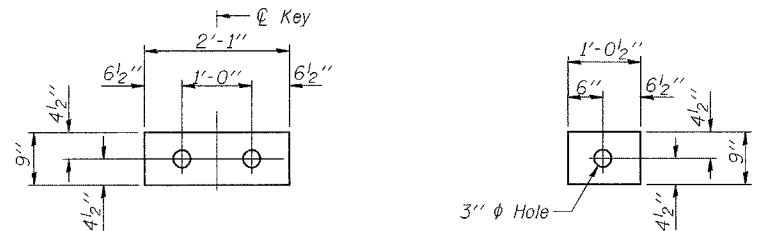
INITIAL CAMBER DIAGRAM

DESIGNED	BPS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

FRAMING PLAN
WOLF RD. OVER PALATINE RD.
F.A.P. RTE. 305 SECT. 2004-108 BR
COOK COUNTY
STATION 950+00.00
STRUCTURE NO. 016-0680

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11
FAP 305	*	Cook	72	69	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			
		Contract No. 62853		*2004-108 BR	



FABRIC BEARING PAD
(Interior - 4 Required)

FABRIC BEARING PAD
(Exterior - 4 Required)

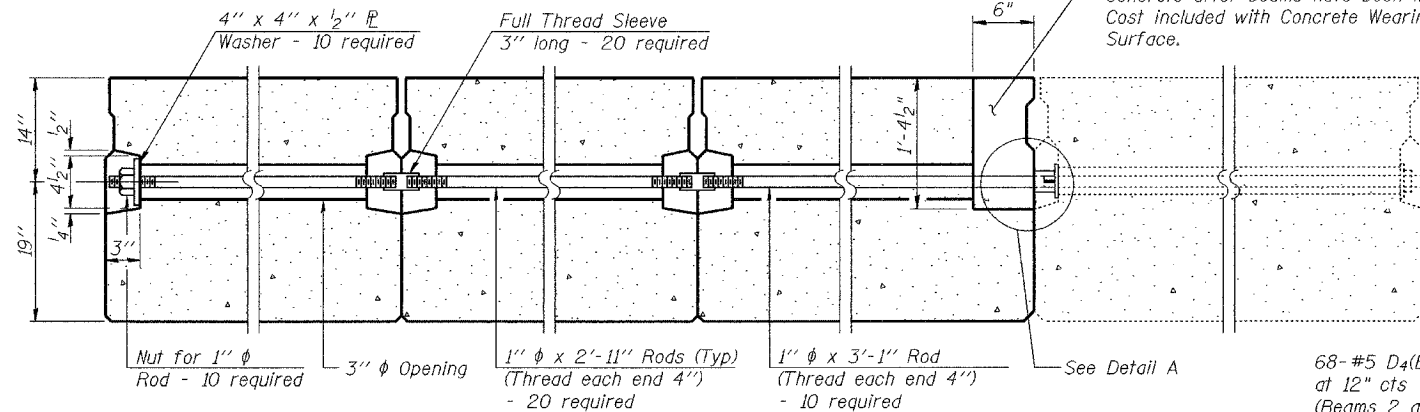
FIXED



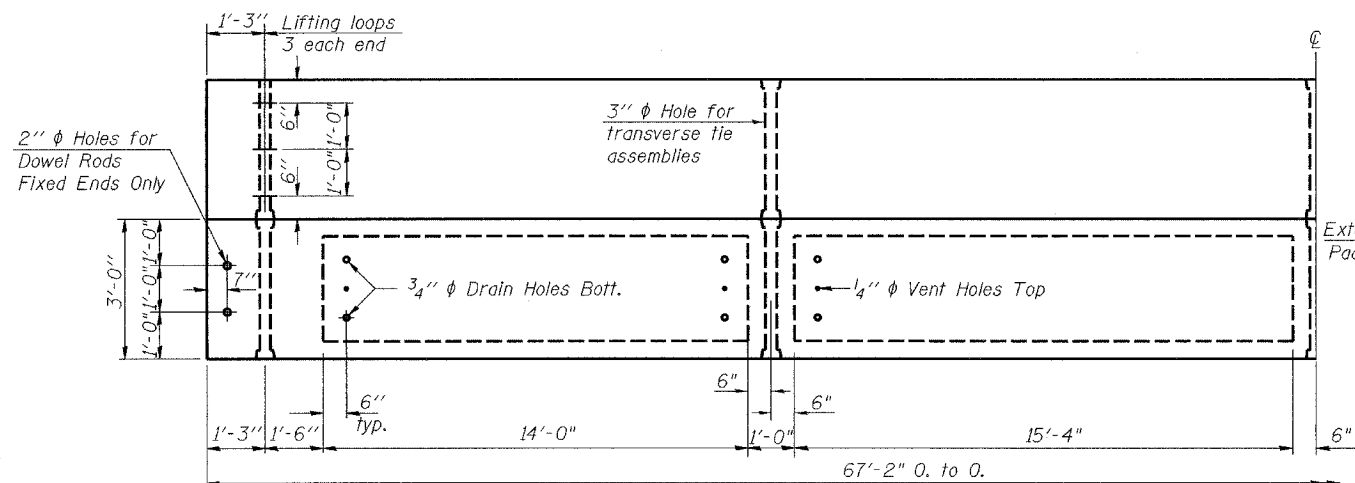
FABRIC BEARING PAD
(Interior - 4 Required)

FABRIC BEARING PAD
(Exterior - 4 Required)

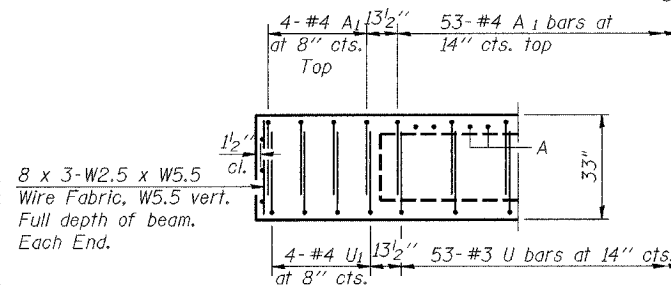
EXPANSION



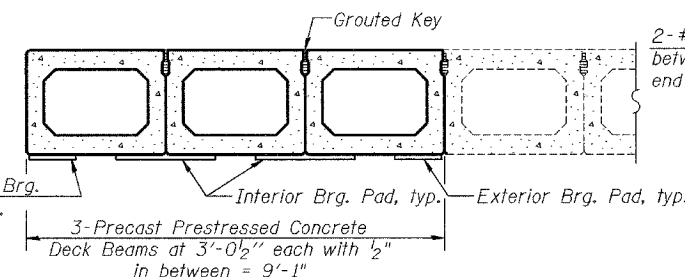
TRANSVERSE TIE ASSEMBLY



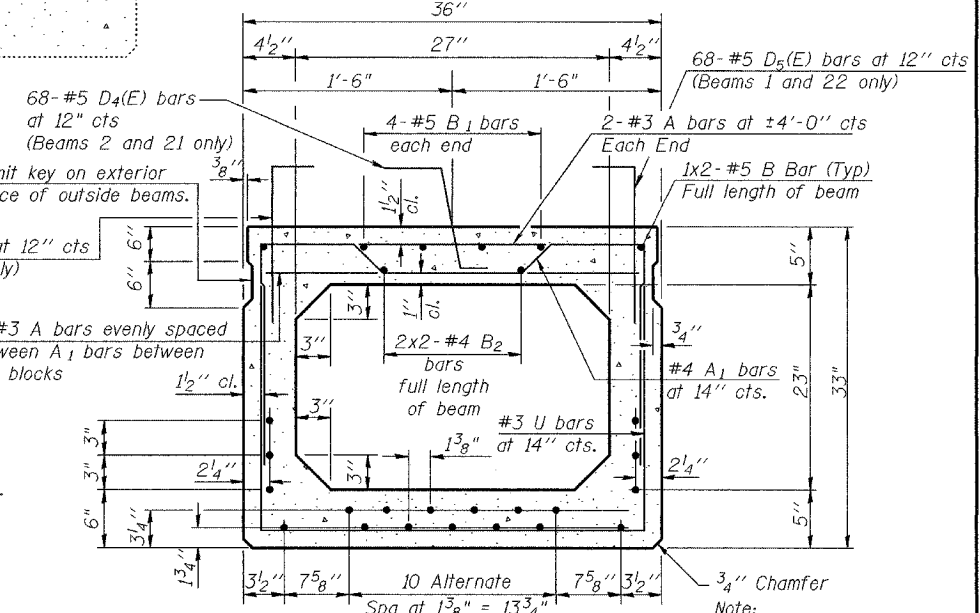
PLAN



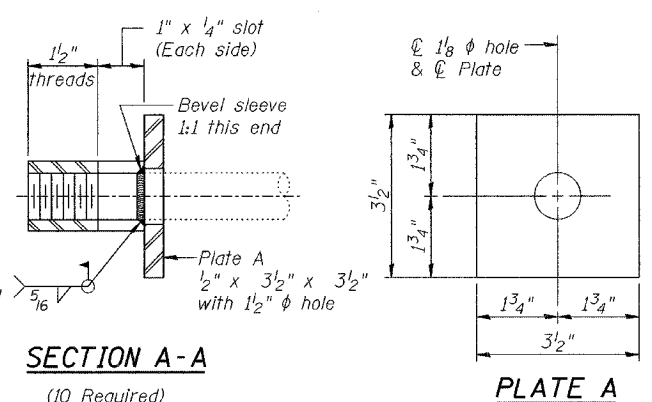
END ELEVATION



REPLACED BEAM CROSS SECTION



TYPICAL SECTION



SECTION A-A

PLATE A

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be $3\frac{1}{2}$ " ϕ 270 ksi strands, as shown. The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. Non prestressing steel shall conform to AASHTO M-31 or M322 Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two $\frac{1}{8}$ " fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key. Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'cl, shall be 4,000 p.s.i. Bars noted thus, 3x2-#5 indicates 3 lines of bars with 2 lengths of bars per line.

$\frac{1}{2}$ " ϕ Strands, Each Strand Stressed to 30,900 Lbs.
7-Strands $13\frac{3}{4}$ " up, 6-Strands $3\frac{1}{4}$ " up, 2 Strands 6" up, 2-Strands 9" up, 2-Strands 12" up

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
A	108	#3	2'-8"		
A ₁	61	#4	6'-1"		
B	8	#5	13'-6"		
B ₁	4	#5	34'-8"		
B ₂	4	#4	34'-5"		
D ₄ (E)	68	#5	2'-9"		
D ₅ (E)	136	#5	2'-4"		
U	53	#3	7'-3"		
U ₁	8	#4	7'-3"		
Item				Unit	Quantity
Precast Prestressed Concrete Deck Beams (33" Depth)				Sq. Ft.	1,210

Bar List is for one Beam Only.

Reinforcement Bars designated (E) shall be epoxy coated.
* Bar D₄(E) required for Beams 2 and 21 only.
** Bar D₅(E) required for Beams 1 and 22 only.

BOX BEAM DETAILS
WOLF RD. OVER PALATINE RD.
F.A.P. RTE. 305 SECT. 2004-108 BR
COOK COUNTY
STATION 950+00.00
STRUCTURE NO. 016-0680

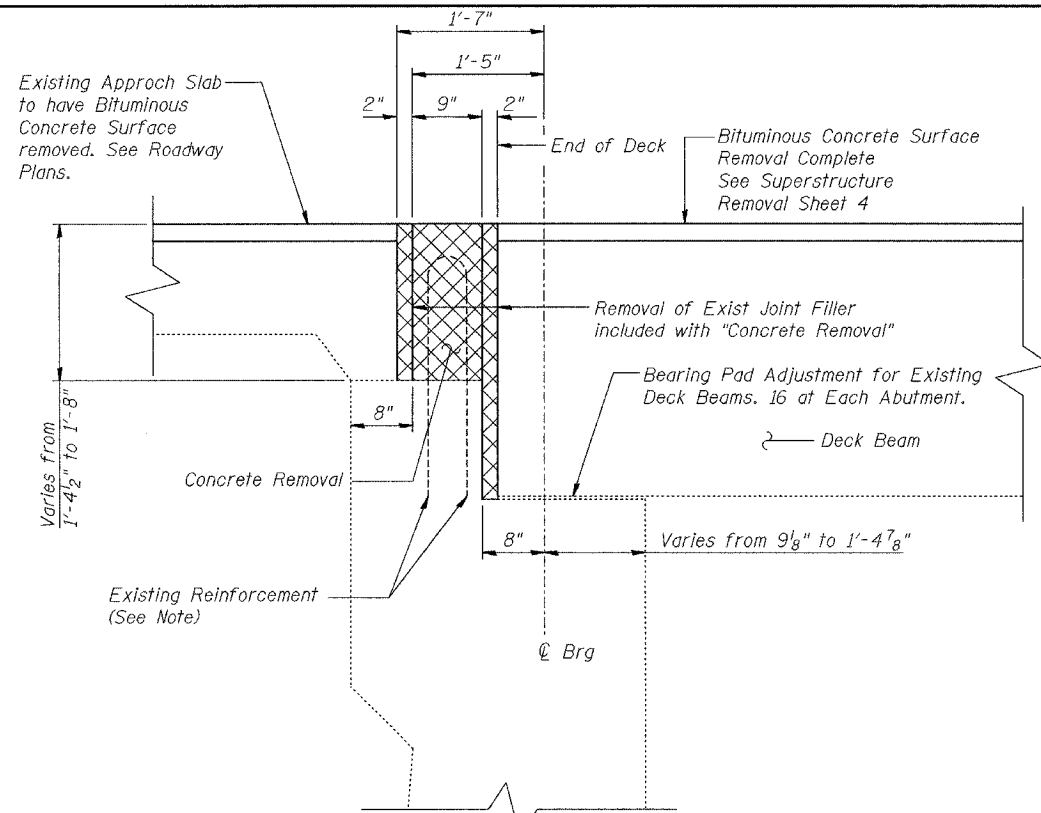
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CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

PD-5-S 1-16-04

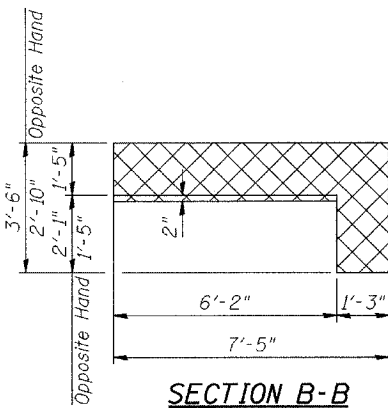
LIFTING LOOP DETAIL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

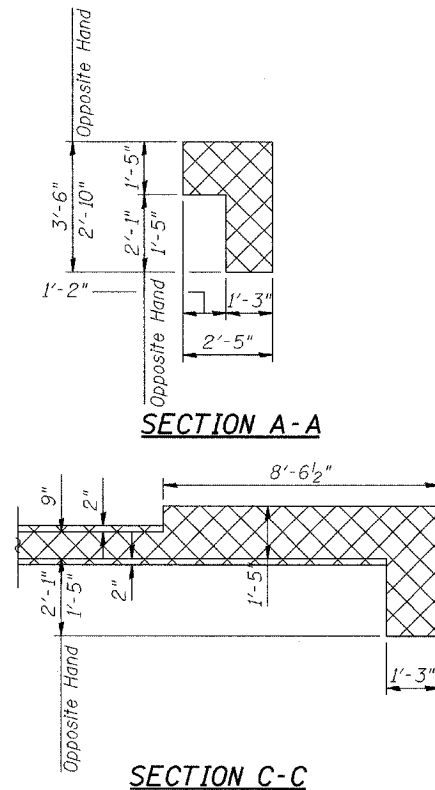
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 305	*	Cook	72	70
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT-
		Contract No. 62853		*2004-108 BR



SECTION D-D THROUGH EXISTING ABUTMENT



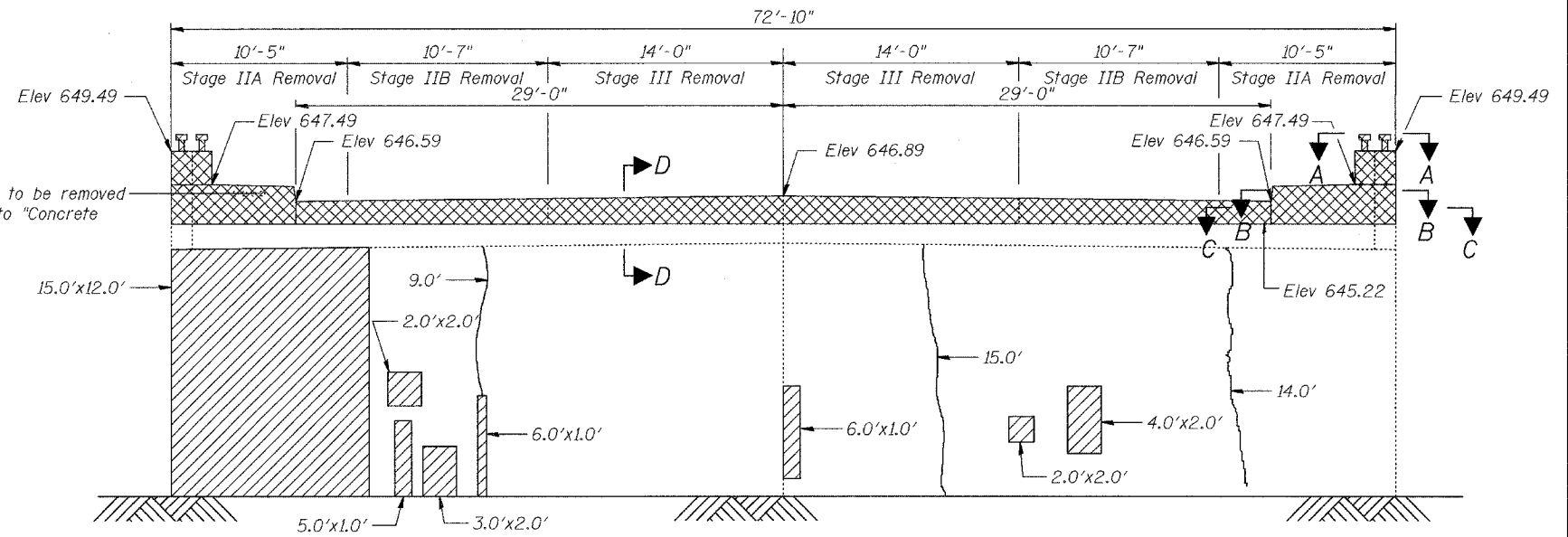
SECTION B-B



SECTION A-A

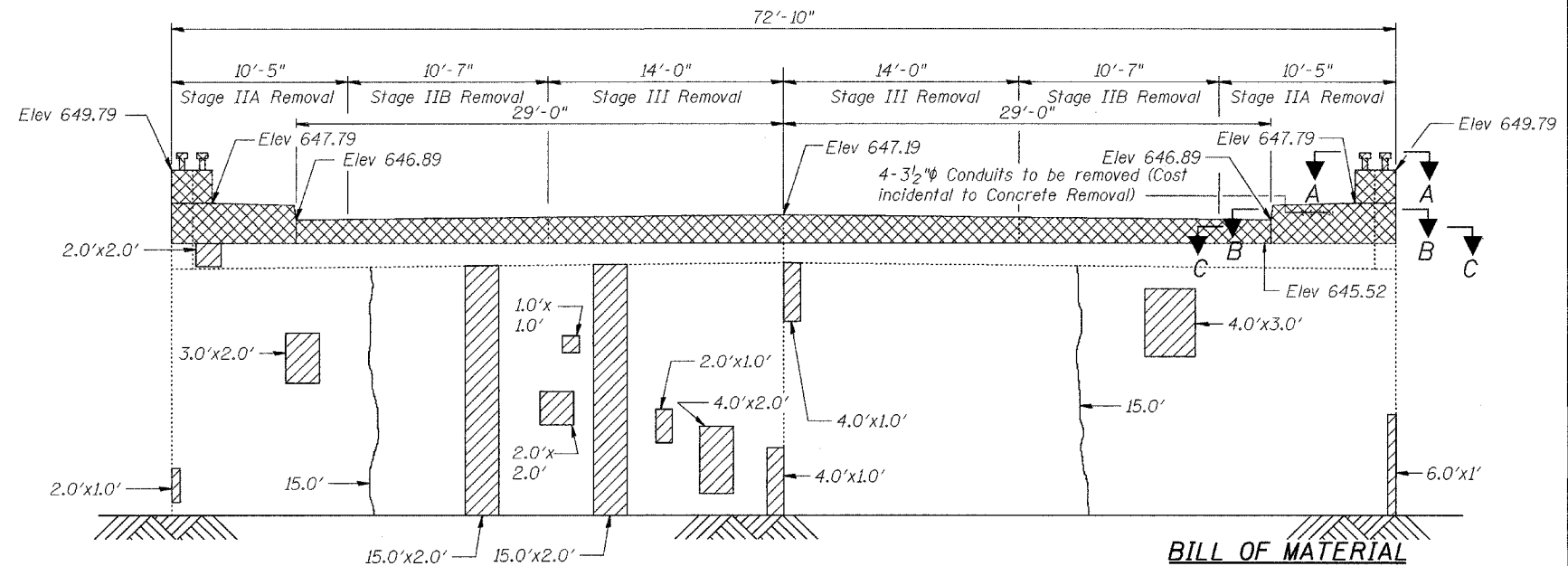
SECTION C-C

DESIGNED	BPS
CHECKED	KFA
DRAWN	BPS
CHECKED	GSP



NORTH ABUTMENT ELEVATION

(Looking North)



SOUTH ABUTMENT ELEVATION

(Looking South)

NOTES

1. Repair areas shown are the areas of deterioration based on visual inspection dated 10/25/04. The actual area to be repaired shall be as directed by the Engineer.
2. Variations in the quantities shall not be cause for additional compensation, however the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
3. Existing Reinforcement extending into removed areas shall be blast cleaned, straightened and incorporated into new construction. Cost included with "Concrete Removal". Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with "Concrete Removal".

LEGEND

- Area to be Removed
- Area Requiring Formed Concrete Repair
- Length Requiring Epoxy Crack Sealing

BILL OF MATERIAL

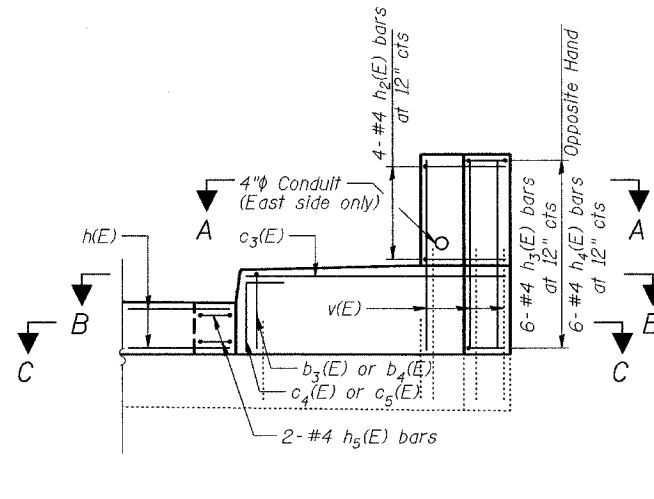
Item	Unit	Quantity
Concrete Removal	Cu Yd	11.0
Formed Concrete Repair (Depth Equal to or Less than 5")	Sq Ft	500
Epoxy Crack Sealing	Foot	110
Bearing Pad Adjustment	Each	32
Formed Concrete Repair (Depth Greater Than 5")	Sq. Ft.	150

ABUTMENT REMOVAL AND REPAIR
WOLF RD. OVER PALATINE RD.
F.A.P. RTE. 305 SECT. 2004-108 BR
COOK COUNTY
STATION
STRUCTURE NO. 016-0680

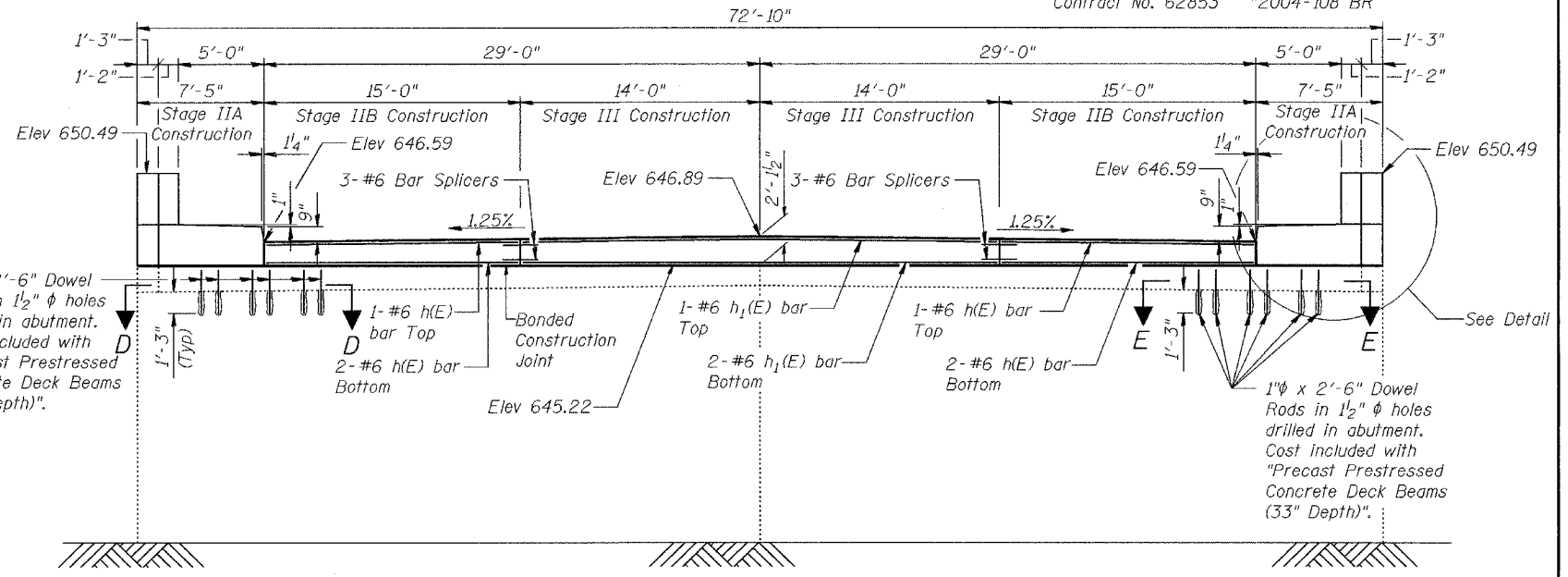
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
c ₃ (E)	8	#5	7'-0"	
c ₄ (E)	4	#5	2'-10"	
c ₅ (E)	4	#5	2'-6"	
b ₃ (E)	10	#5	4'-9"	
b ₄ (E)	10	#5	4'-1"	
h(E)	12	#6	14'-8"	
h ₁ (E)	6	#6	27'-8"	
h ₂ (E)	16	#4	5'-3"	
h ₃ (E)	12	#4	7'-3"	
h ₄ (E)	12	#4	5'-11"	
h ₅ (E)	8	#4	4'-7"	
v(E)	20	#6	5'-0"	
Item	Unit	Quantity		
Concrete Superstructure	Cu Yd	12.7		
Reinforcement Bars, Epoxy Coated	Pound	1,030		
Bar Splicers	Each	12		

Reinforcement bars designated (E) shall be Epoxy Coated.

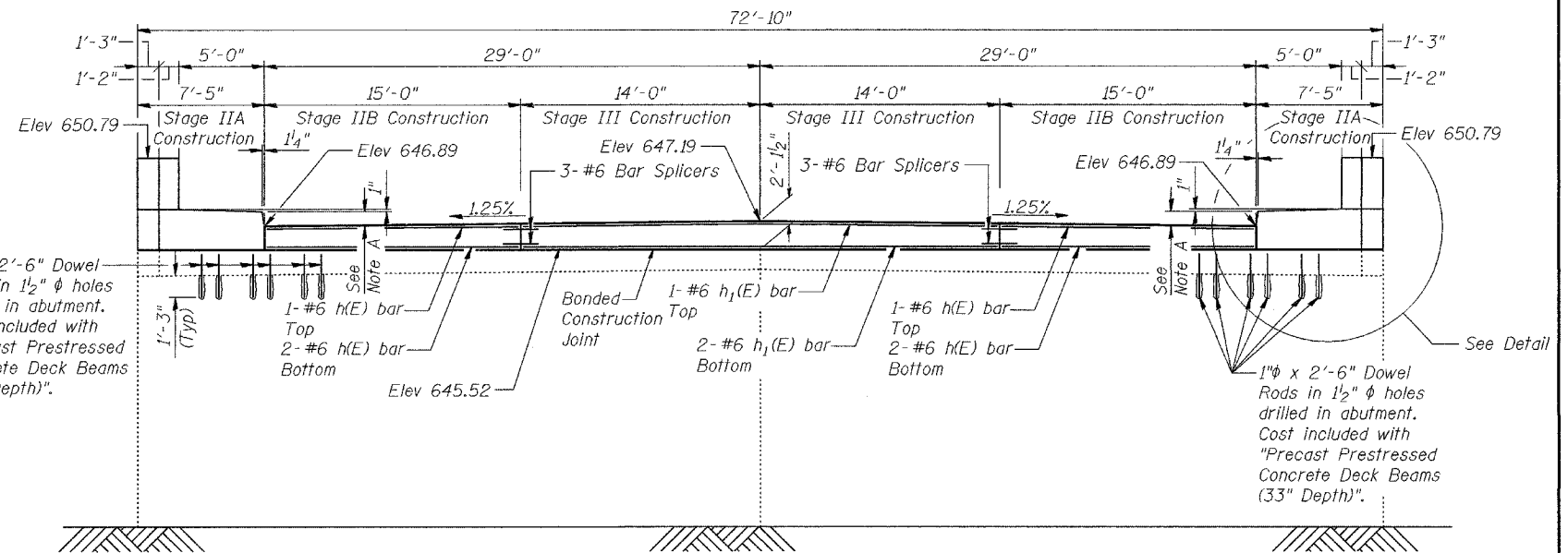


DETAIL



NORTH ABUTMENT ELEVATION

(Looking North)

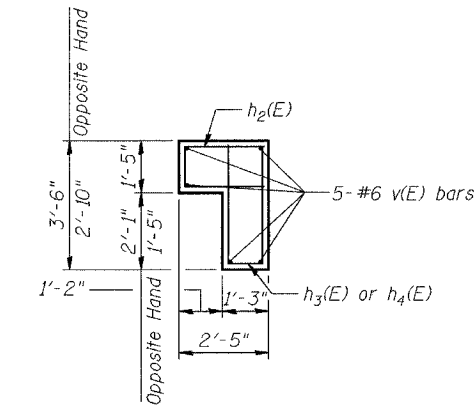


SOUTH ABUTMENT ELEVATION

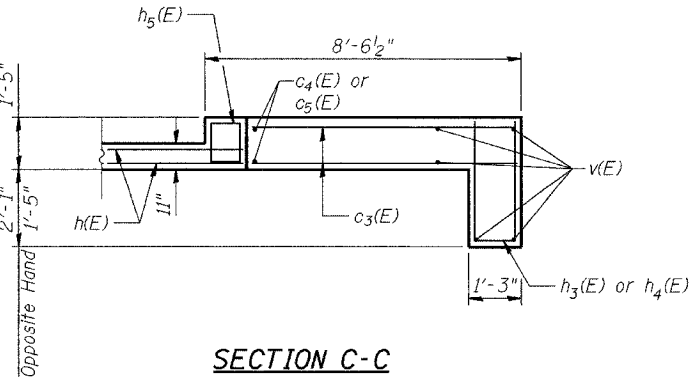
(Looking South)

Note A: Varies from 5" @ Sta 949+64.58 to 6 1/2" @ Sta 949+66.0

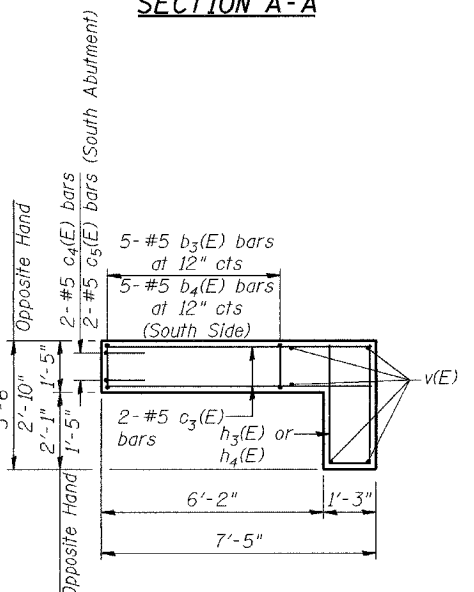
Note:
For section thru Hatch Block
See Sheet 6



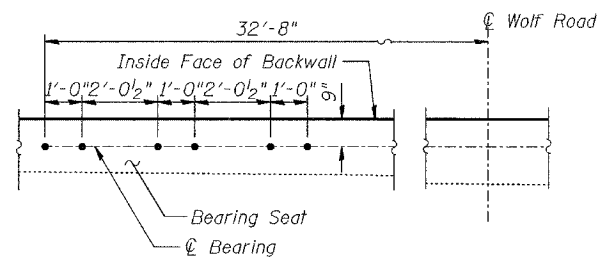
SECTION A-A



SECTION C-C

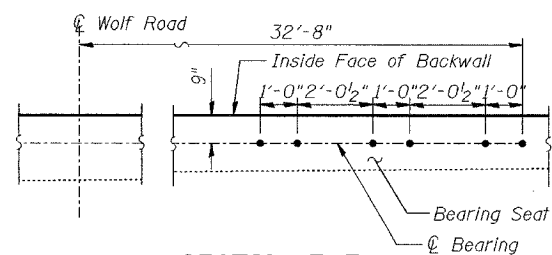


SECTION B-B



SECTION D-D

(South Abutment similar)

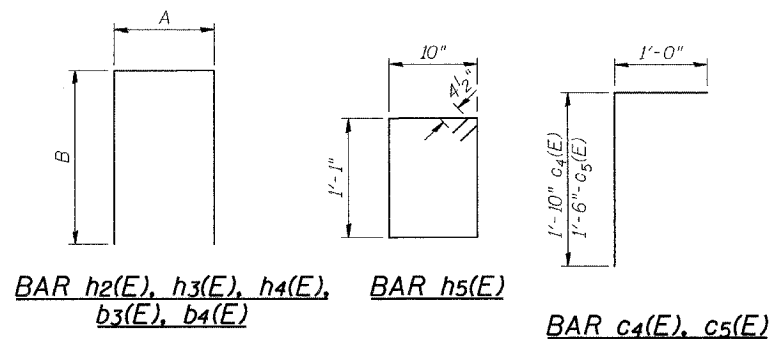


SECTION E-E

(South Abutment similar)

BAR DIMENSIONS

Bar Name	A	B
h ₂ (E)	1'-1"	2'-1"
h ₃ (E)	11"	3'-2"
h ₄ (E)	11"	2'-6"
b ₃ (E)	1'-1"	1'-10"
b ₄ (E)	1'-1"	1'-6"



DESIGNED	BPS
CHECKED	KFA
DRAWN	BPS
CHECKED	GSP

ABUTMENTS
WOLF RD. OVER PALATINE RD.
F.A.P. RTE. 305 SECT. 2004-108 BR
COOK COUNTY
STATION
STRUCTURE NO. 016-0680

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 305	*	Cook	72	72
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 14
14 SHEETS

Contract No. 62853 *2004-108 BR

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:

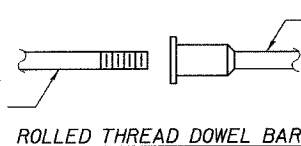
- ① Minimum Capacity = $1.25 \times f_y \times A_f$
(Tension in kips)
- ② Minimum *Pull-out Strength = $1.25 \times f_{s_{allow}} \times A_f$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_f = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

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	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

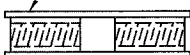
Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

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



** ONE PIECE

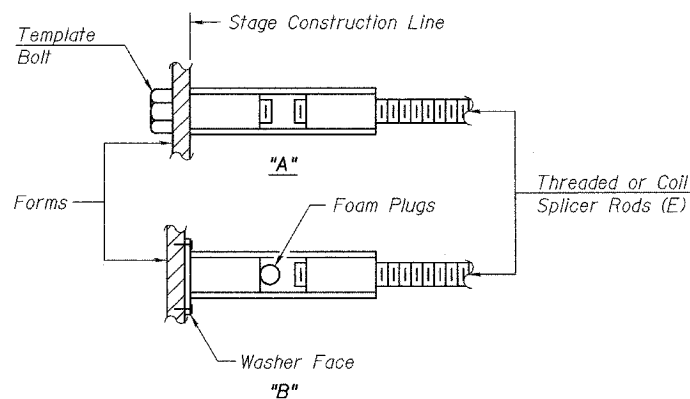
Wire Connector



WELDED SECTIONS

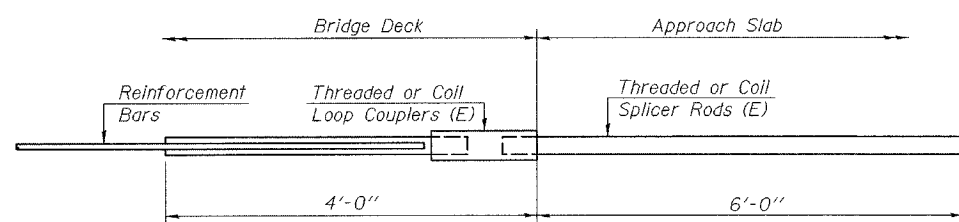
BAR SPLICER ASSEMBLY ALTERNATIVES

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



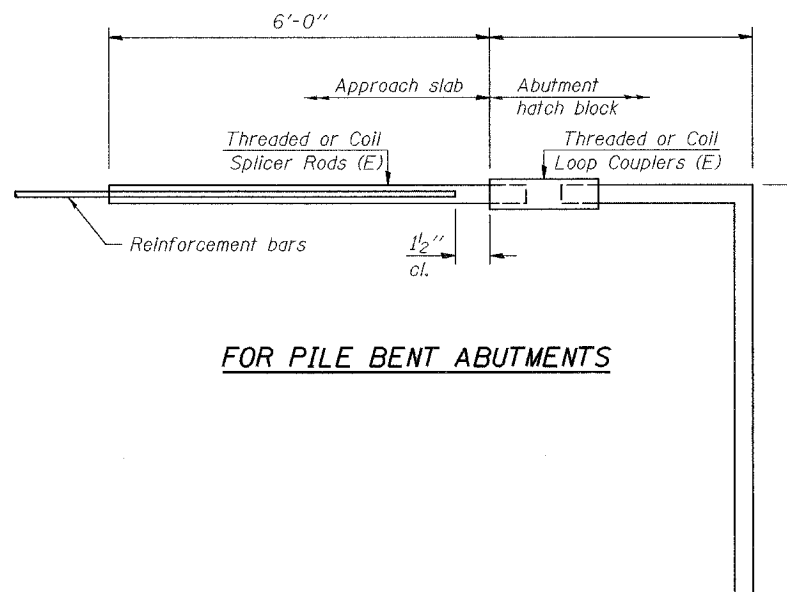
INSTALLATION AND SETTING METHODS

"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.



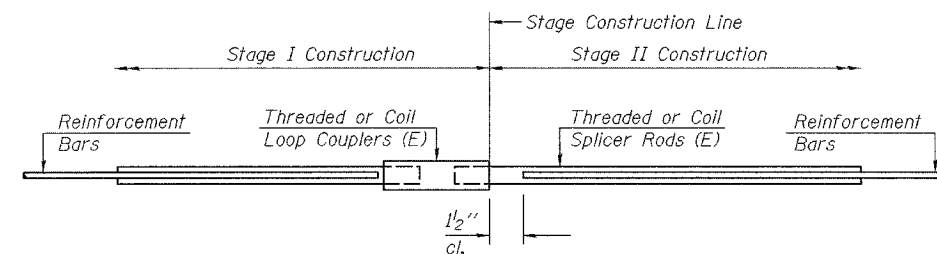
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	9.2 kips - tension
No. Required =	



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	9.2 kips - tension
No. Required =	



STANDARD

Bar Size	No. Assemblies Required	Location
4	136	Deck
6	6	N Abut
6	6	S Abut

DESIGNED	BPS
CHECKED	KFA
DRAWN	BPS
CHECKED	GSP

BSD-1 9-01-03

BAR SPLICER ASSEMBLY DETAILS
WOLF RD. OVER PALATINE RD.
F.A.P. RTE. 305 SECT. 2004-108 BR
COOK COUNTY
STATION 950+00.00
STRUCTURE NO. 016-0680