F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1408	1984-061-B	COOK	12	1
ILLINOIS PROJECT BRM-6003(345)				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR
PROPOSED LOCAL AGENCY IMPROVEMENT
FEDERAL-AID PROJECT

INDEX OF SHEETS

1 TITLE SHEET
2 SUMMARY OF QUANTITIES
3 GENERAL NOTES
4 TYPICAL SECTIONS & DETAILS
5 PLAN & PROFILE
6-11 BRIDGE PLANS
12 CROSS SECTIONS

SCALE		
	PLAN	1 INCH = 20 FEET
	PROFILE, HORIZONTAL	1 INCH = 20 FEET
	PROFILE, VERTICAL	1 INCH = 2 FEET
	CROSS-SECTIONS, HORIZONTAL	1 INCH = 5 FEET
	CROSS-SECTIONS, VERTICAL	1 INCH = 2 FEET

F.A.U. ROUTE 1408 (BROOKFIELD AVENUE)

STATE SECTION 1984-061B

VILLAGE SECTION 84-00096-00-BR

PROJECT BRM-6003(345)

COOK COUNTY

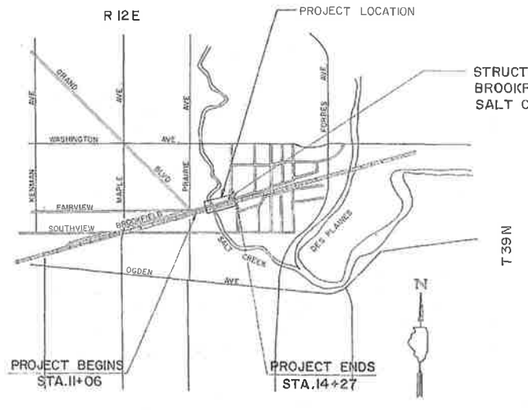
VILLAGE OF BROOKFIELD

JOB NO. C-91-245-84

STANDARDS

HIGHWAY STANDARDS REQUIRED

1686-4	STANDARD SYMBOLS AND ABBREVIATIONS
2130-9	CONCRETE CURB AND COMBINATION CURB AND GUTTER
1603-4	STANDARD DESIGN FOR INLET, TYPE A
1538-5	CATCH BASIN TYPE C
1527-9	MANHOLE TYPE A
2354-1	PRECAST REINFORCED CONCRETE FLAT SLAB TOP FOR MANHOLES, CATCH BASINS, AND VALVE VAULTS
2213-4	STANDARD DESIGN FRAME AND LIDS TYPE 1
2220-3	STANDARD DESIGN FRAME AND GRATES TYPE 11
2298-7	TRAFFIC CONTROL DEVICES
2299-10	TRAFFIC CONTROL DEVICES
2300-3	FLAGGER TRAFFIC CONTROL SIGN
2382-1 & 2	BRIDGE APPROACH PAVEMENT



LOCATION MAP

STRUCTURE NO. 016-6665
BROOKFIELD AVE. OVER
SALT CREEK, COOK COUNTY

NET LENGTH OF IMPROVEMENT: 321 FT. = .0607 MI.

DESIGN DESIGNATION

330(06) COLLECTOR 3.10 (FLEX.-20)

0 05 10 1" = 5'
0 50 100 1" = 50

0 05 10 1" = 2'
0 50 100 1" = 20'

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.

PLANS PREPARED BY:

CONSULTING ENGINEERS

CONTRACT NO. _____

BEFORE STARTING CONSTRUCTION
CALL J.U.L.I.E. 1-800-892-0123
FOR UTILITY LOCATIONS

APPROVED _____ 19__
LOCAL AGENCY OFFICAL

PASSED _____ 19__
DISTRICT ENGINEER OF LOCAL ROADS & STREETS

APPROVED _____ 19__
DISTRICT ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FEDERAL AID DESIGN ENGINEER R.A. MUSE (312) 884-4233

VILLAGE SECTION NO. 84-00096-00-BR

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1408	1984-066-B	COOK	12	2
BRK				
FED. ROAD DIST. NO. 2	ILLINOIS	FEDERAL AID PROJECT	BRM-6001(345)	

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE 1000	CONSTRUCTION TYPE CODE X080	FUNDING PARTICIPATION			
201001	TREE REMOVAL (6 TO 15 INCH DIAMETER)	IN DIA	100	100					
202001	EARTH EXCAVATION	CU YD	400	400					
209001	POROUS GRANULAR EMBANKMENT	TON	178	178					
210001	TRENCH BACKFILL	CU YD	10	10					
213012	SUB BASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	1,040	1,040					
216003	TOPSOIL PLACEMENT, 4"	SQ YD	350	350					
300003	BITUMINOUS BASE COURSE 6"	SQ YD	500	500					
406001	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	70	70					
406003	AGGREGATE (PRIME COAT)	TON	1	1					
406007	BITUMINOUS CONCRETE BINDER COURSE	TON	60	60					
406013	BITUMINOUS CONCRETE SURFACE COURSE MIXTURE D CLASS I	TON	117	90	27				
408013	PROTECTIVE COAT	SQ YD	225	105	120				
501016	REMOVAL OF EXISTING SUPERSTRUCTURES	L SUM	1		1				
501024	CONCRETE REMOVAL	CU YD	16		16				
501029	EXPANSION BOLTS 3/4 INCH	EACH	53		53				
504003	CLASS X CONCRETE	CU YD	80.8		80.8				
505004	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	3,450		3,450				
507004	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	2,280		2,280				
508006	ALUMINUM RAILING TYPE L	LIN FT	95		95				
512001	REINFORCEMENT BARS	POUND	6,940	6,940					
512002	REINFORCEMENT BARS, EPOXY COATED	POUND	8,320		8,320				
514001	NAME PLATES	EACH	1		1				
603005	STORM SEWERS TYPE 1 12"	LIN FT	40	40					
612079	CATCH BASINS, TYPE C, TYPE 11 FRAME AND GRATE	EACH	1	1					
612184	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1					
612368	INLETS, TYPE A, TYPE 11 FRAME AND GRATE	EACH	1	1					
616030	COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.12	LIN FT	475	475					
617005	COMBINATION CURB AND GUTTER REMOVAL	LIN FT	340	340					
617006	SIDEWALK REMOVAL	SQ FT	800	800					
624002	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	1,060	1,060					
629103	CHAIN LINK FENCE REMOVAL	LIN FT	80	80					
633002	WOOD GUARD RAIL REMOVAL	LIN FT	50	50					
644001	SODDING	SQ YD	350	350					
644002	SUPPLEMENTAL WATERING	UNIT	2	2					
644003	NITROGEN FERTILIZER NUTRIENT	POUND	6	6					
644004	PHOSPHORUS FERTILIZER NUTRIENT	POUND	4	4					
644005	POTASSIUM FERTILIZER NUTRIENT	POUND	3	3					
646004	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4					
648017	TRAFFIC CONTROL AND PROTECTION	L SUM	1		1				
650001	MOBILIZATION	L SUM	1		1				
661302	UNIT DUCT, 3-600VXLP #8 1" POLYETHYLENE	LIN FT	80	80					
662001	TRENCH AND BACKFILL	LIN FT	70	70					
665001	LIGHT POLE FOUNDATION	EACH	1	1					
L02201	POLE FOUNDATION, REMOVED	EACH	1	1					
L02719	LIGHT STANDARD	EACH	1	1					
T50102	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	LIN FT	740	740					
X06346	PAVEMENT MARKING REMOVAL	LIN FT	75	75					
XA0012	BRIDGE APPROACH PAVEMENT (STANDARD 2302)	SQ YD	125	125					

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE 1000	CONSTRUCTION TYPE CODE X080	FUNDING PARTICIPATION			
X50313	PREFORMED JOINT SEAL 2-1/2"	LIN FT	38		38				
X62926	CHAIN LINK FENCE, 4' SPECIAL	LIN FT	70	70					
XZ1265	BITUMINOUS MIXTURE FOR PATCHING POTHOLES (COLD MIX)	TON	10	10					
XZ1266	BITUMINOUS MIXTURE FOR PATCHING POTHOLES (HOT MIX)	TON	10	10					
XZ1361	EPOXY CRACK SEALING	LIN FT	60		60				
Z10191	DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED	EACH	8	8					
Z10375	REPAIR CONCRETE STRUCTURES	SQ FT	90		90				
Z10536	WATERPROOFING MEMBRANE SYSTEM	SQ YD	320		320				

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656

VILLAGE OF BROOKFIELD

SUMMARY OF QUANTITIES

DESIGN: T.Z.
DRAWN: J.V.K.
CHECKED: G.W.H.

DATE: 1-30-85
SCALE: NONE
FILE NO: 2715

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1408	1984-061-B	COOK	12	3
STA.	TO STA.			
FED. ROAD DIST. NO. 9	ILLINOIS	FEDERAL AID PROJECT	BRM-6003(345)	

GENERAL NOTES

1. ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARDS OF THE DEPARTMENT AS SHOWN ON THE COVER SHEET OF THESE PLANS.

2. STATIONS AND OFFSETS FOR DRAINAGE STRUCTURES ARE GIVEN FROM THE BASELINE TO THE CENTER OF THE STRUCTURE.

3. ALL UNDERGROUND UTILITY LOCATIONS, INCLUDING SANITARY SEWERS, STORM SEWERS, WATER MAINS AND THEIR SERVICE LINES, SHOWN ON THE PLANS ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE THE RESPECTIVE UTILITY COMPANIES FIELD LOCATE ALL UTILITIES AND ADJUST OR RELOCATE THESE UTILITIES AS NECESSARY PRIOR TO STARTING CONSTRUCTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. THE CONTRACTOR SHALL NOTIFY ALL PUBLIC AND PRIVATE UTILITIES BEFORE STARTING CONSTRUCTION INCLUDING:

A. COMMONWEALTH EDISON COMPANY
POST OFFICE BOX 767
CHICAGO, ILLINOIS 60690
ATTENTION: K. NEHEC

B. NORTHERN ILLINOIS GAS COMPANY
POST OFFICE BOX 190
AURORA, ILLINOIS 60507
ATTENTION: RUSSELL STEGMAN - SUPERVISING ENGINEER

C. ILLINOIS BELL TELEPHONE COMPANY
225 WEST RANDOLPH STREET - 18F
CHICAGO, ILLINOIS 60606
ATTENTION: VINCE HARVEY

4. DURING THE CONSTRUCTION OPERATION WHEN ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF DITCHES, GUTTERS, OR DRAINAGE STRUCTURES SO THE NATURAL FLOW OF WATER OR EFFLUENT IS OBSTRUCTED, THE MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF THE CONSTRUCTION OPERATIONS ALL SANITARY SEWERS AND DRAINAGE STRUCTURES SHALL BE FREE FROM ALL DIRT AND DEBRIS. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN EXISTING FIELD CONDITIONS PRIOR TO BIDDING ON THIS PROJECT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR FAILURE TO VERIFY EXISTING DIMENSIONS OR CONDITIONS.

6. THE CONTRACTOR SHALL LIMIT HIS CONSTRUCTION ACTIVITIES TO THE WORK AREAS DESIGNATED ON THE PLANS. ANY DAMAGE TO AREAS OUTSIDE OF THESE LIMITS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE TO THE SATISFACTION OF THE ENGINEER.

7. FRAME ELEVATIONS ARE GIVEN ONLY TO ASSIST IN DETERMINING THE APPROXIMATE OVERALL HEIGHT OF THE STRUCTURE. FRAMES ON ALL NEW STRUCTURES WILL BE ADJUSTED TO THE FINAL ELEVATION OF THE AREA IN WHICH THEY ARE LOCATED AS PART OF THE STRUCTURE COST.

8. SAW CUTTING OF REMOVAL ITEMS AS NOTED ON THE PLANS, SPECIFIED IN ARTICLE 617.02 AND 617.03 OF THE STANDARD SPECIFICATIONS, OR AS DIRECTED BY THE ENGINEER SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE ITEM BEING REMOVED AND NO EXTRA COMPENSATION WILL BE ALLOWED.

9. ALL EXISTING STORM SEWERS AND/OR CULVERT PIPES TO BE ABANDONED SHALL BE SECURELY SEALED WITH CONCRETE OR BRICK MASONRY WHEN DIRECTED BY THE ENGINEER AS INCIDENTAL TO THE CONTRACT.

10. FRAMES, LIDS AND GRATES OF EXISTING CATCH BASINS, INLETS, MANHOLES AND VALVE VAULTS WHICH ARE TO BE ABANDONED OR REPLACED IN THIS PROJECT SHALL BE SALVAGED AND REMAIN THE PROPERTY OF THE CITY. THE CONTRACTOR SHALL STORE THESE CASTINGS ON THE JOB SITE AT LOCATIONS DESIGNATED BY THE ENGINEER AS INCIDENTAL TO THE CONTRACT.

11. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL SECTION OR SUBSECTION MONUMENTS OR PROPERTY OR REFERENCE MARKERS UNTIL THE CITY, ITS AGENT OR AN AUTHORIZED SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATIONS.

12. THE CONTRACTOR SHALL COOPERATE WITH THE CITY IN ANY UNDERGROUND UTILITY CONSTRUCTION WHICH THE CITY MAY WANT TO PLACE DURING THE CONTRACTOR'S OPERATIONS.

13. EXPENSE INVOLVED IN CONNECTING PROPOSED STORM SEWER TO EXISTING STORM SEWER OR PROPOSED STORM SEWER TO EXISTING STORM SEWER STRUCTURES OR PROPOSED STORM SEWER STRUCTURES TO EXISTING STORM SEWER WITH A CONCRETE COLLAR OR AS SPECIFIED BY THE ENGINEER SHALL BE CONSIDERED INCIDENTAL TO THE ITEM BEING CONNECTED.

14. PROTECTIVE COAT SHALL BE APPLIED TO ALL GUTTER FLAGS, FACE AND TOP OF CURB AND GUTTER, SIDEWALKS, INSIDE FACE OF PARAPET AND DRIVEWAYS IN ACCORDANCE WITH ARTICLE 616.10 OF THE STANDARD SPECIFICATIONS.

15. STORM SEWER SHALL BE BACKFILLED IN ACCORDANCE WITH ARTICLE 603.08, METHOD 1 ONLY.

16. SODDING SHALL BE PLACED ON ALL DISTURBED AREAS AS DIRECTED BY THE ENGINEER INCLUDING FERTILIZER NUTRIENTS. SUPPLEMENTAL WATERING WHICH IS TO BE USED AFTER THE INITIAL WATERING (AS SPECIFIED AND AS DIRECTED BY THE ENGINEER) SHALL BE USED AT THE RATE OF 10 GALLONS PER SQUARE YARD OF SODDING. SODDED SLOPES WHICH ARE 2:1 OR STEEPER SHALL BE STAKED.

17. USE A FERTILIZER WITH AN ANALYSIS OF 10-6-4 OR SIMILAR 5-3-2 RATIO AT THE FOLLOWING RATE PER ACRE: NITROGEN FERTILIZER NUTRIENT, 80 LBS.; PHOSPHORUS FERTILIZER NUTRIENT, 48 LBS.; POTASSIUM FERTILIZER NUTRIENT, 32 LBS.

18. WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY OUTLETS AND CONNECTIONS FOR ALL PRIVATE OR PUBLIC DRAINS, SEWERS OR CATCH BASINS, HE SHALL PROVIDE FACILITIES TO TAKE IN ALL STORM WATER WHICH WILL BE RECEIVED BY THESE DRAINS AND SEWERS AND DISCHARGE THE SAME. HE SHALL PROVIDE AND MAINTAIN AN EFFICIENT PUMPING PLANT, IF NECESSARY, AND A TEMPORARY OUTLET AND BE PREPARED AT ALL TIMES TO DISPOSE OF THE WATER RECEIVED FROM THESE TEMPORARY CONNECTIONS UNTIL SUCH TIME AS THE PERMANENT CONNECTIONS WITH SEWERS ARE BUILT AND IN SERVICE. THIS WORK WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

19. THE CONTRACTOR SHALL EXERCISE CARE AND TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION OF TREES AND BUSHES NOT TO BE REMOVED, AND PROPERTY, AS INDICATED IN ARTICLE 107.19 OF THE STANDARD SPECIFICATIONS.

20. THE CONTRACTOR SHALL SAW CUT THE EXISTING PAVEMENT TO 1-1/2 INCH MIN. DEPTH AT THE LIMITS OF CONSTRUCTION TO FORM A NEAT, VERTICAL JOINT FOR THE PROPOSED PAVEMENT. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO "EARTH EXCAVATION."

Kerba Group, Inc.
CONSULTING ENGINEERS
5400 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656

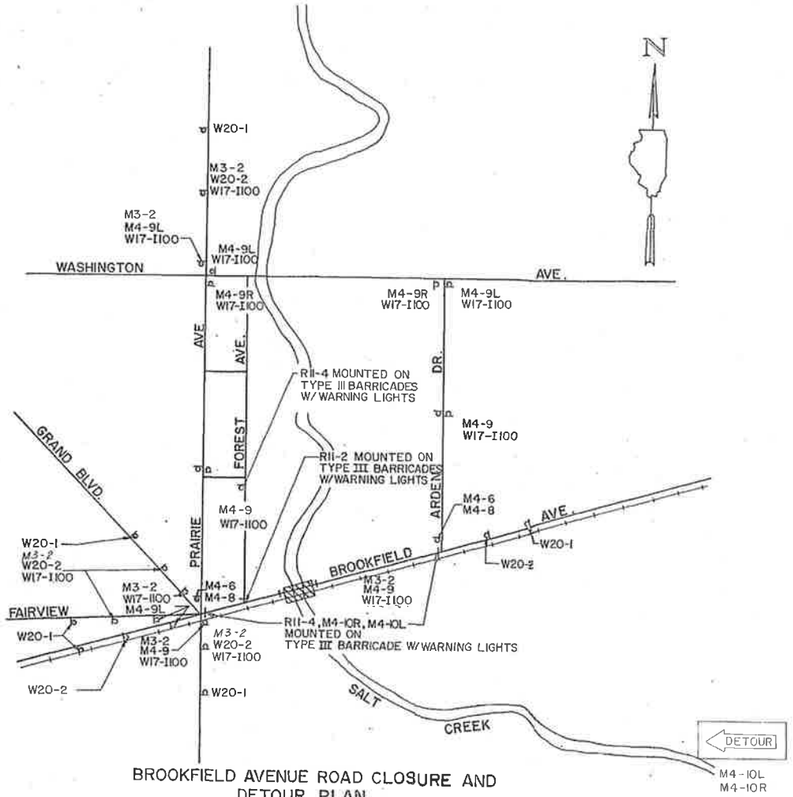
VILLAGE OF BROOKFIELD

GENERAL NOTES

DESIGN: F.Z.
DRAWN: JVK
CHECKED: GWH

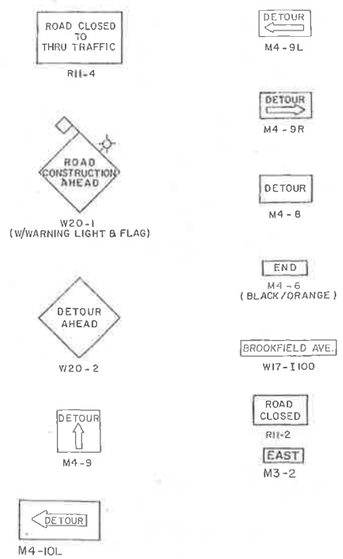
DATE: 2-6-86
SCALE: NONE
FILE NO.: 2715

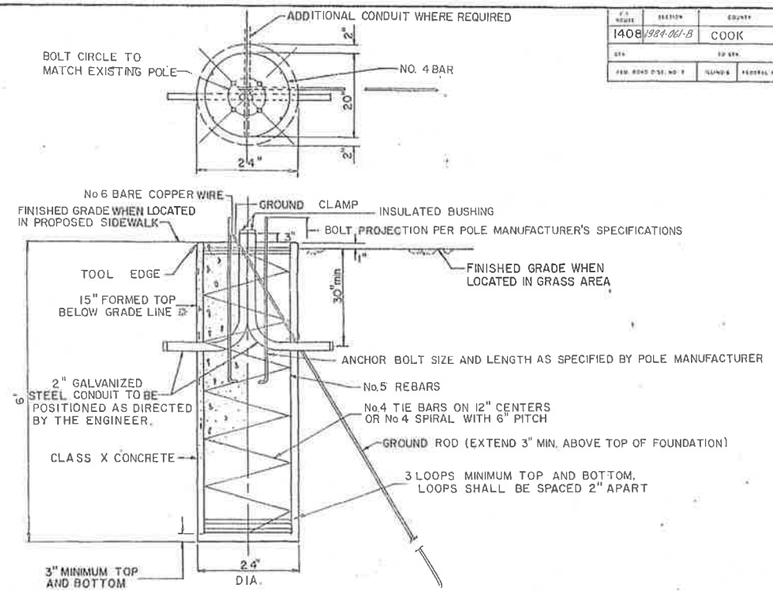
F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1408	1984-061-B	COOK	12	4
STA.	TO STA.			
FED. ROAD DIST. NO. 9	ILLINOIS	FEDERAL AID PROJECT	BRH-1003(615)	



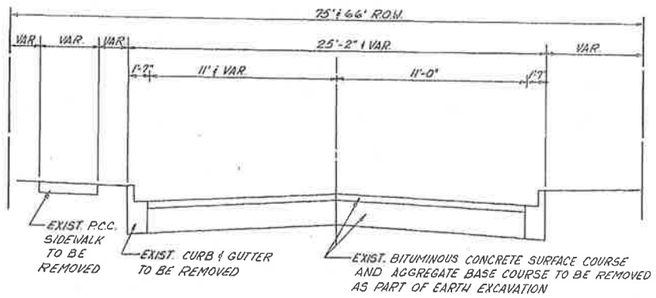
BROOKFIELD AVENUE ROAD CLOSURE AND DETOUR PLAN

DETOUR SIGN LEGEND

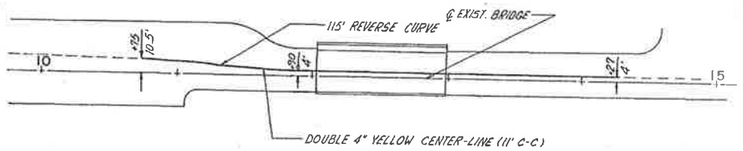




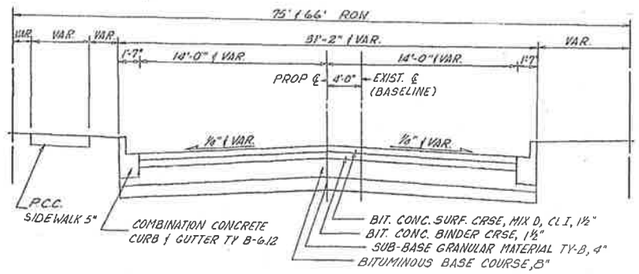
LIGHTING POLE FOUNDATION DETAIL



EXISTING TYPICAL ROADWAY SECTION



PAVEMENT MARKING DETAIL



PROPOSED TYPICAL ROADWAY SECTION

DATA FOR STRUCTURAL DESIGN OF PAVEMENT (CLASS II STREET)

DESIGN PERIOD: 20 YEARS (2006)

STRUCTURAL DESIGN TRAFFIC:
P.V. = 2,695 S.U. = 28 M.U. = 28

MINIMUM SOIL SUPPORT (I.B.R.) = 3.0

TRAFFIC FACTOR (T.F.) = 0.141

REQUIRED STRUCTURAL NUMBER (D_t) = 3.1

PAVEMENT STRUCTURAL MATERIALS:
SURFACE COURSE CLASS I; a_1 = 0.40
BITUMINOUS BASE COURSE a_2 = 0.33
SUB-BASE GRAN-MATERIAL, TY. B; a_3 = 0.11

PROPOSED STRUCTURAL NUMBER (D_t) = 3.62

GEWALTNEY GROUP, LTD.
CONSULTING ENGINEERS

VILLAGE OF BROOKFIELD

TYPICAL SECTIONS
DETAILS

DESIGN: T.Z.
DRAWN: JVK
CHECKED: G.W.H.

DATE: 1-30-86
SCALE: NONE
FILE NO: 2715

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1408	1984-061-B	COOK	12	5
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FEDERAL AID PROJECT	BRM-6003(345)	

N. SIDE CURB & GUTTER CURVE DATA (BOTH CURVES)
Δ = 38° 20' 00"
D = 132° 39' 35"
T = 15.01'
R = 43.19'
L = 28.90'

SEE SHEET NO'S. 6 TO 11 FOR BRIDGE PLANS

BASELINE = CENTERLINE OF EXIST. BRIDGE. ALL OFFSETS SHOWN ARE FROM BASELINE. P.K. NAILS ARE LOCATED ON THE BASELINE AT STA. 10+97 AND STA. 14+56

CARE SHALL BE EXERCISED WHEN REMOVING SIDEWALKS AT WINGWALLS TO PREVENT DAMAGE TO THE WINGWALLS

BEGIN CONSTRUCTION STA. 11+06

END CONSTRUCTION STA. 14+27

STA. 11+75, 26 RT.

UNIT DUCT, 3-#00 VYLP #8 1" POLYETHYLENE

P.C.C. SIDEWALK, 5"

CHAIN LINK FENCE, 4' SPECIAL

CHAIN LINK FENCE REMOVAL

SALT CREEK

STA. 13+15, 18.8 LT.
A-11
FL = 618.51
INV = 616.50 (S)

6" COMB.

P.C.C. SIDEWALK, 5"

18" COMB.

21" COMB.

SS-1
28'-12" @ 1.00%
T.B.F. = 10 CY

APPROACH SLAB

T.B.T.

12" STORM

GS-1
12'-12" @ 20.0%

COMB. CONC. CURB & GUTTER - B - 6.12 (TYP.)

STA. 13+15, 10.8' RT.
C-11
FL = 618.51
INV. = 616.20 (N)
INV. = 615.00 (S)

STA. 13+15, 23' RT.
CONSTRUCT MH. A-1C (4' DIA.) OVER EXIST. M.H.
T.F. = 617.00
INV = 609.90 (E & W)
INV = 612.60 (N)

B. M. "□" ON TOP OF SOUTHWEST WINGWALL SALT CREEK AUTO BRIDGE ELEV. 618.56

STA. 11+82 to STA. 12+02
BRIDGE APPROACH PAVEMENT (STD. 2382-1)
62.5 Sq. Yds. REINFORCMENT STEEL = 3470 LBS

STA. 12+98 to STA. 13+18
BRIDGE APPROACH PAVEMENT (STD. 2382-1)
62.5 Sq. Yds. REINFORCEMENT STEEL = 3470 LBS

REINFORCEMENT TYPICAL FOR BOTH APPROACHES

BOTTOM REINFORCEMENT:
TRANSVERSE #5 - 2 x 20 x 14'-3" = 595 LBS
LONGITUDINAL #7 - 7+7+51 x 19'-0" = 2,625 LBS
TOP REINFORCEMENT:
TRANSVERSE #4 - 5 x 11'-5" = 50 LBS
LONGITUDINAL #4 - 23 x 19'-6" = 300 LBS
TOTAL/END 3,170 LBS

ROADWAY LEGEND

- CURB & GUTTER REMOVAL, SIDEWALK REMOVAL
- PROPOSED PAVEMENT, PROPOSED SIDEWALK
- PROPOSED ELECTRIC CABLE IN UNIT DUCT
- LIGHT STANDARD TO BE MOVED

PROPOSED N. SIDE TOP OF CURB PROFILE

+1.02% | -0.7 %

PROPOSED CENTERLINE PROFILE | EXISTING CENTERLINE PROFILE

+0.09% | -0.36% | -0.26%

PROPOSED S. SIDE TOP OF CURB PROFILE

+0.70 % | -0.36 %

618.10 618.08 618.20 618.46 618.78 618.98 618.80 618.63 618.43 618.22 618.03 617.89 617.62 618.60 618.53 618.53 618.70 618.72 618.74 618.74 618.78 618.76 618.72 618.78 618.57 618.60 618.59 618.68 618.37 618.48 618.12 618.41 618.15 618.34 618.14 618.28 617.98 618.21 618.14 618.14 618.09 618.00 618.09 618.25 618.40 618.60 618.80 618.98 618.61 618.52 618.43 618.34 618.25 618.16 618.54

10 +25.00 +50.00 +75.00 11 +25.00 +50.00 +75.00 12 13 +25.00 +50.00 +75.00 14 +25.00 +50.00 +75.00 15

618 620 618

PLAN: SURVEYED | DRAWN | PLOTTED | CAUSES CHECKED | B.M.'S NOTED | SUBSEQUENT ADDITIONS OR VOID | NOTE BOOK | NO. | BY | DATE

PROFILE: SURVEYED | DRAWN | PLOTTED | CAUSES CHECKED | B.M.'S NOTED | SUBSEQUENT ADDITIONS OR VOID | NOTE BOOK | NO. | BY | DATE

Cloriba Group, Inc.
CONSULTING ENGINEERS
5007 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656

VILLAGE OF BROOKFIELD
BROOKFIELD AVE.

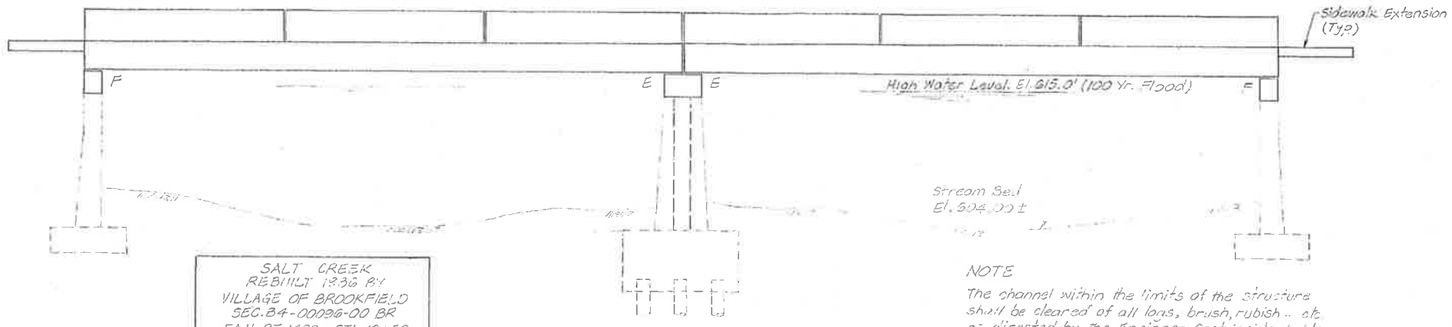
PLAN AND PROFILE

DESIGN: T.Z.
DRAWN: J.V.K.
CHECKED: G.N.H.
DATE: 1-30-86
SCALE: 1"-20'
FILE NO.: 2715

PLATE 1-SINGLE PLAN AND PROFILE

BENCH MARK: □ on S.W. conc. wingwall. El. 618.56

EXISTING BRIDGE: 2 span R.C. thru girder @ #3'-0" concrete deck, 24'-0" Roadway & walkway on R.C. closed abutments & two column pier. Contractor to remove existing superstructure and portion of substructure. No Salvage.

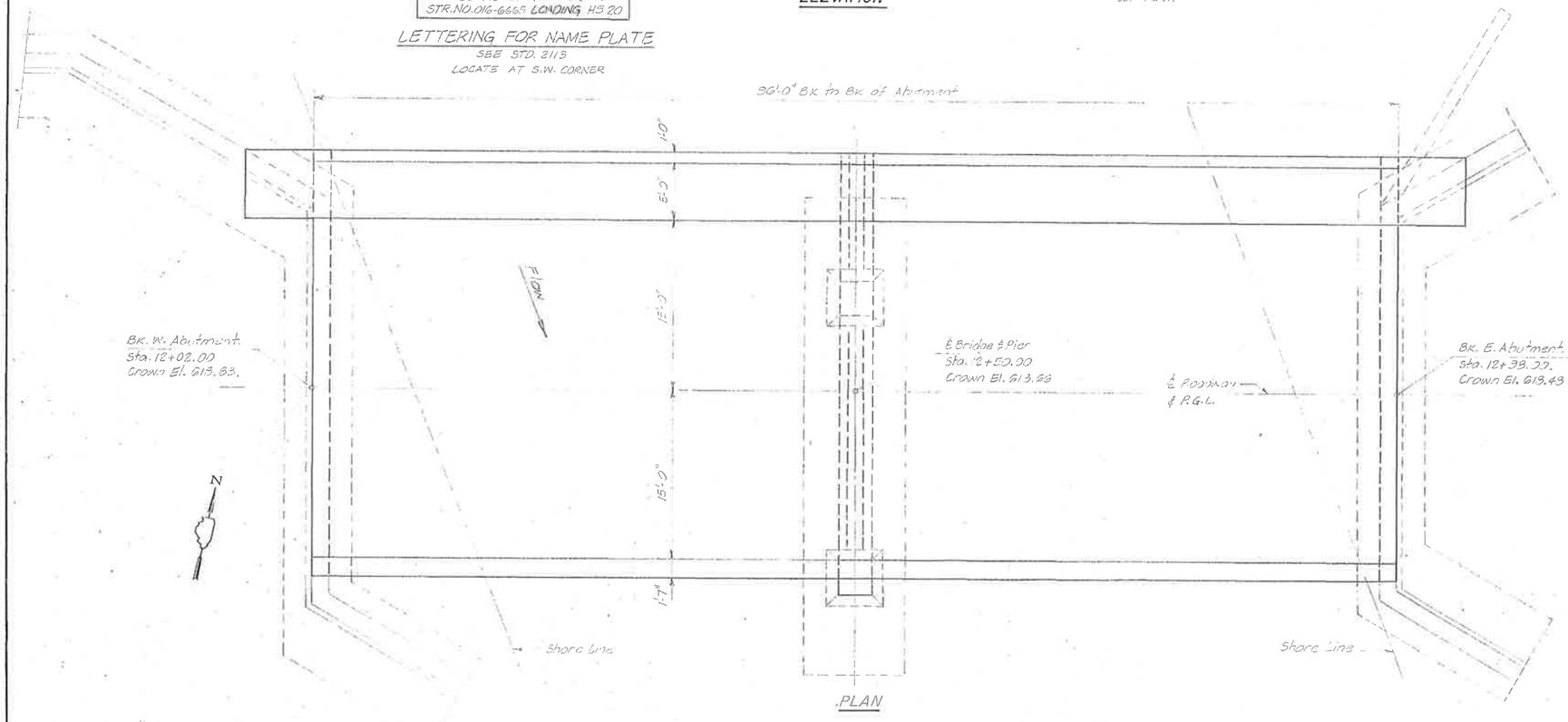


ELEVATION

SALT CREEK
REBUILT 1936 BY
VILLAGE OF BROOKFIELD
SEC. 84-00096-00 BR
F.A.U. RT. 1408 STA. 12+50
PROJ. NO. BRM 6003(345)
STR. NO. 016-6665 LOADING HS 20

LETTERING FOR NAME PLATE
SEE STD. 2115
LOCATE AT S.W. CORNER

NOTE
The channel within the limits of the structure shall be cleared of all logs, brush, rubish .. etc. as directed by the Engineer. Cost incidental to contract.



PLAN

PROFILE GRADE

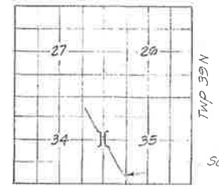
DESIGN STRESSES

FIELD UNITS		PRECAST PRESTRESSED UNITS	
f_c =	1200 PSI	f_c' =	5000 PSI
f_s =	24,000 PSI	f_{ci}' =	4000 PSI
n =	9	f_s' =	270,000 PSI (½" ϕ strand)
f_o =	20,000 PSI (Str.)	f_{si} =	183,000 PSI

Loading HS 20 (New superstructure only)

I certify that this bridge superstructure design is structurally adequate and economical for the design loading shown on the plans. The design complies with the current A.A.S.H.T.O. Specifications.

R 12 E



LOCATION SKETCH

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1408	1984-061-B	COOK	12	6
STA.	TO STA.			
FED. ROAD DIST. NO. 9	ILLINOIS	FEDERAL AID PROJECT BRM-6003(345)		

Sheet 1 of 6

GENERAL NOTES:

1. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variation. 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 chage 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.
2. Expansion joints which are not cast in the precast unit shall be fabricated and erected in accordance with Article 503.07(c) of the Standard Specifications and are included in quantity of structural steel.
3. All structural steel shall be shop painted with the zinc-silicate and vinyl paint system. Studs shall not be painted.
4. Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60, and shall be epoxy coated.
5. The back of new cap at the abutment shall be waterproofed in accordance with ART. 503.11 of the Standard Specifications.
6. Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 Lbs., and ¾" ϕ x 12" hooked bolts.
7. The top surface of the beams shall be finished in accordance with Article 505.06 of the Standard Specification except that the surface shall not be roughened by broaming. 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 ¼".
8. A Calcium Nitrite Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast pre-stressed concrete deck beams.
9. Exist. name plates to be removed and delivered to the village of Brookfield. Cost incidental.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER STRUCT.	SUB-STRUCT.	TOTAL
Removal of existing Superstructure	L.S.	1		1
Concrete Removal	Cu. Yds.		16.0	16.0
Precast Prestressed Conc. Deck Bm.	Sq. Ft.	3450		3450
Class "A" Concrete	Cu. Yds.	43	37.8	80.8
Reinforcement Bars Epoxy Coat.	Lbs.	4330	3900	8230
Metal Handrail (Al. type 4)	Lin. Ft.	95		95
Expansion Bolts	Each.		53	53
Epoxy Crack Sealing	Lin. Ft.		60	60
Repair Concrete Structure	Sq. Ft.		90	90
Bit. Surface course Class I	Tons.	27		27
Water proofing Membrane System	Sq. Yds.	320		320
Structural Steel	Lbs.	2280		2280
Preformed Joint Sealer 2½"	Lin. Ft.	38		38
Name Plates	Each	1		1
Protective Coat	Sq. Yds.	120		120

* These quantities are approximate and must be verified in the field prior to construction.

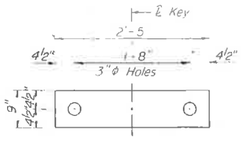
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
GENERAL PLAN AND ELEVATION
BROOKFIELD AVE. OVER SALT CREEK
PROJECT NO. BRM. 6003(345)
FAU ROUTE 1408 SEC. 84-00096-00 BR
STRUCTURE NO. 016-6665
COOK COUNTY

DESIGNED BY J.J DRAWN BY M.K
DATE FEB. 86 CHECKED BY J.J

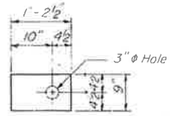
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1408	1984BR	COOK	12	7
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT BRM-6003(345)		

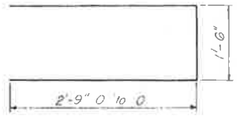
SHEET NO. 2 OF 6 SHEETS



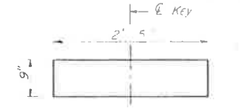
FABRIC BEARING PAD
(Interior)



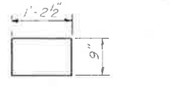
FABRIC BEARING PAD
(Exterior)



U BAR

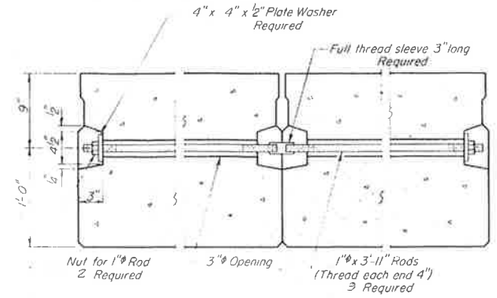


GRAPHITED ASBESTOS BEARING PAD
(Interior)

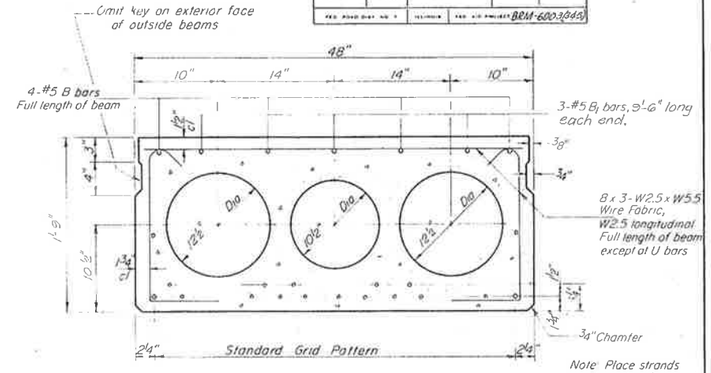


GRAPHITED ASBESTOS BEARING PAD
(Exterior)

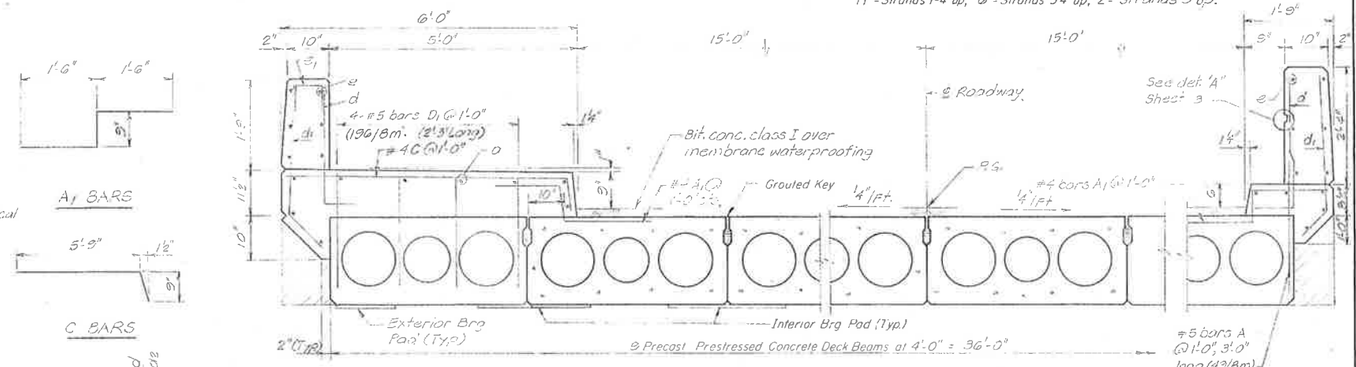
NOTE: See sheet #3 for superstructure details.



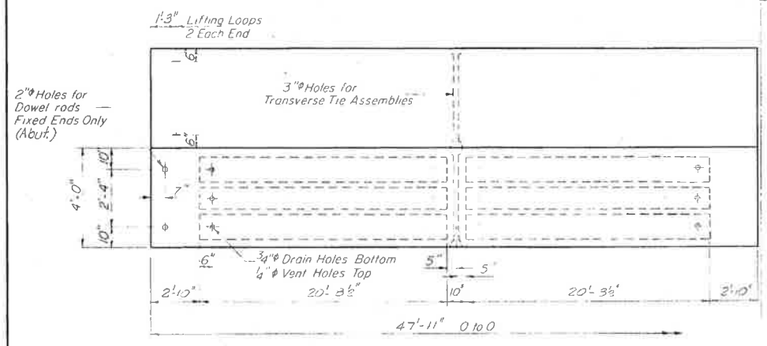
TYPICAL TRANSVERSE TIE ASSEMBLY



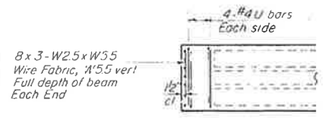
TYPICAL SECTION
19 - ½"ϕ Strands, Each Strand Stressed to 28,900 Lbs.
11 - Strands 1¾" up, 6 - Strands 3¼" up, 2 - Strands 9" up.



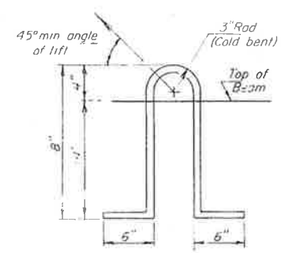
CROSS SECTION



PLAN



END PLAN



LIFTING LOOP DETAIL

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a	56	#5	25'-0"	
a1	12	#6	30-0	
b	8	#5	5'-9"	
b1	6	#5	35'-2"	
c	86	#4	6'-4"	
d	102	#5	3'-0"	
d1	204	#4	3'-6"	
d2	102	#5	3'-6"	
e	72	#4	15'-8"	
e1	28	#4	2'-6"	
Precast Prestressed Concrete Deck Beams			Sq. Ft.	3,450
Class K Concrete			Cu. Yd.	43.0
Reinforcement bars Epoxy Coat.			Lbs.	4,330
Preformed Joint Sealer 2½"			L.F.	38
Water proofing Membrane System			Sq. Yds	320
Bit. Surface course Class I			Tons	27.0
Protective Coat			Sq. Yds.	120

NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq in.

Lifting loops shall be ⅞" diameter, 6 x 25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 33,000 lbs or 3-½"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.

Reinforcement bars shall conform to AASHTO M 31 or M 53, Grade 60.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two ½" 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.

A Calcium Nitrite Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.

Required Release Strength, f'ci, shall be 4000 psi.

An equal substitution of the low-relaxation strands for the stress-relieved strands will be permitted.

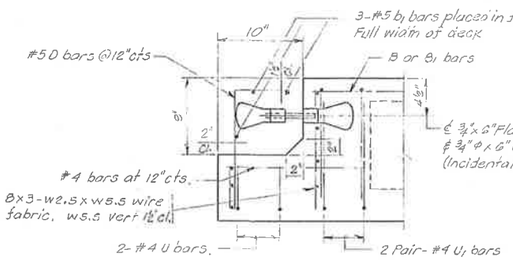
Bars A, A1, D, D1 to be cast with precast prestressed beams and shall be epoxy coated.

DESIGNED	J. J
CHECKED	
DRAWN	M. K.

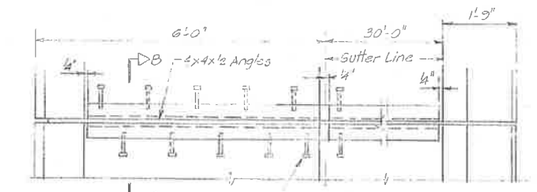
SUPERSTRUCTURE
BROOKFIELD AVE. OVER SALT CREEK
PROJECT NO. BRM. 6003(345)
FAU ROUTE 1408 SEC. 84-00096-00 BR
STRUCTURE NO. 016-6665
COOK COUNTY

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1408	(384-061-B	COOK	12	8
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FEDERAL AID PROJECT	BRM-6003(345)	

Sheet 3 of 6

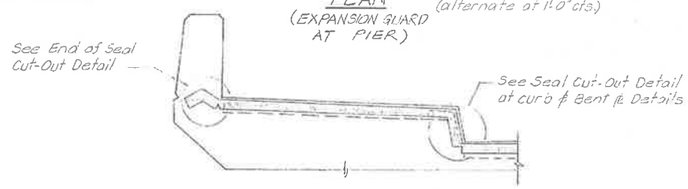


END OF BEAM AT PIER

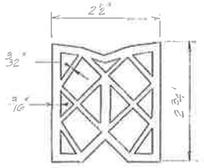


NOTE: Cut retainer bars in sidewalk 6" short of sidewalk face.

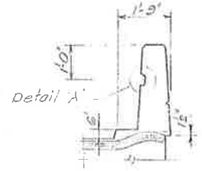
PLAN
(EXPANSION GUARD AT PIER)



SECTION AT SIDEWALK

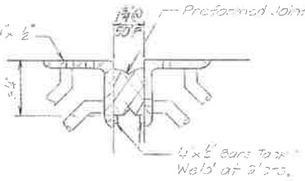


PREFORMED JOINT SEAL 2½"

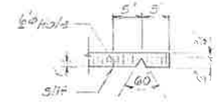


SECTION AT CURB

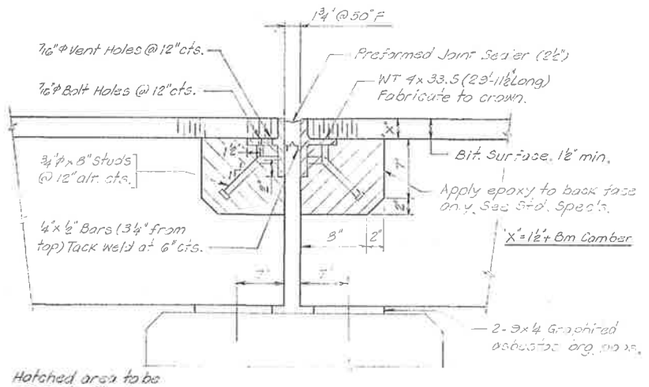
DETAIL 'A'
Full length of Parapet



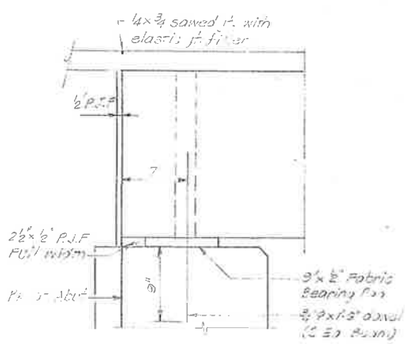
SECTION B-B



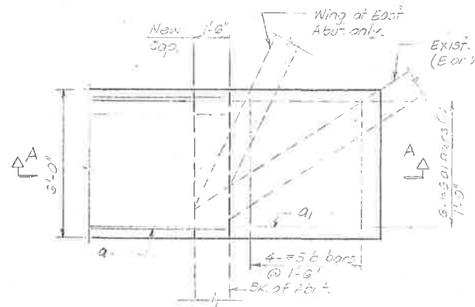
END OF SEAL CUT OUT



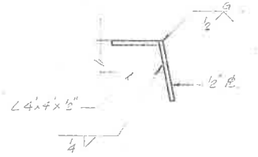
SECTION AT PIER



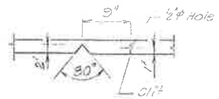
SECTION AT ABUTMENT
(Approach slab not shown)



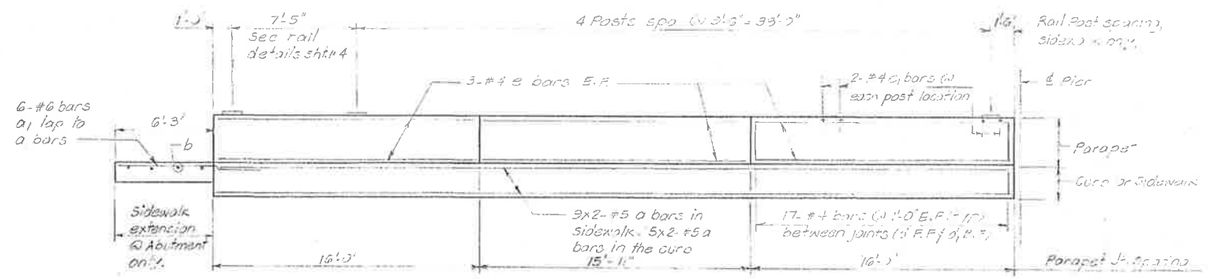
PLAN AT ABUTMENT
E. Abutment shown, W. Abutment similar.



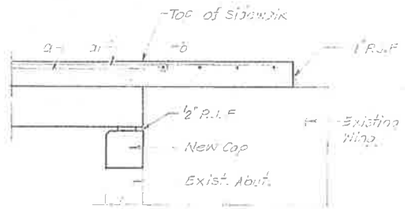
BENT ℄ DETAIL



SEAL CUT-OUT AT CURB



ELEVATION



SECTION A-A

NOTE: Work this sheet with sheet #2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS

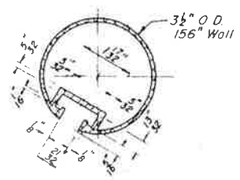
BROOKFIELD AVE. OVER SALT CREEK
PROJECT NO. BRM. 6003(345)
FAU ROUTE 1408 SEC. 84-00096-00 BR
STRUCTURE NO. 016-6665
COUNTY

DESIGNED BY J.J. DRAWN BY M.K.
DATE FEB. 85 CHECKED BY J.J.

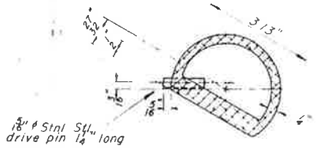
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1408	1984-061-B	COOK	12	9
STA.		SUB SEC		
FED. ROAD DIST. NO.	ILLINOIS	FEDERAL AID PROJECT	BRM-6003(345)	

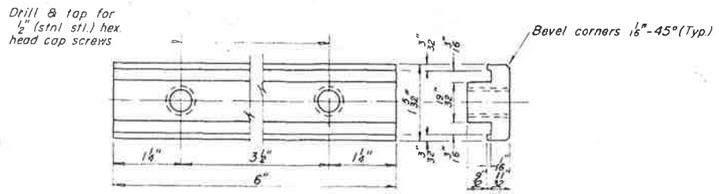
Sheet 4 of 6



SECTION THRU TOP RAIL



SECTION THRU SPLICE
TOP RAIL



RAIL POST CLAMP BAR
For Top Rail

NOTES:

All Posts shall be normal to parapet

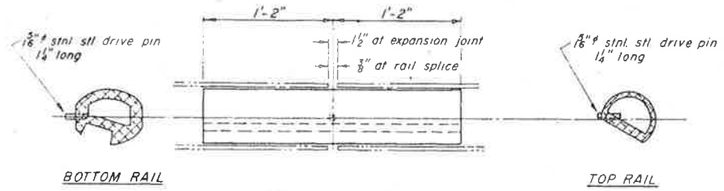
All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.

All joints in rail shall be spliced per detail.

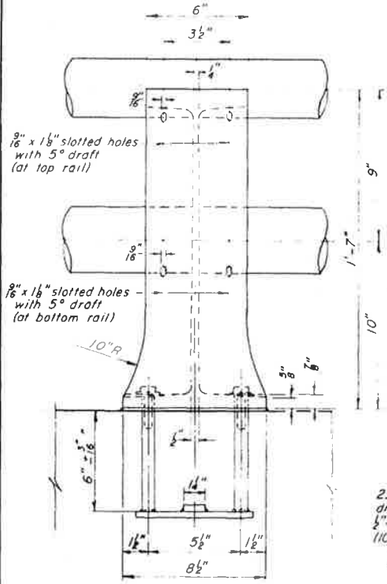
Provide 1-⅛" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade - high spots shall be ground and low spots shimmed.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for ALUMINUM RAILING, TYPE L.

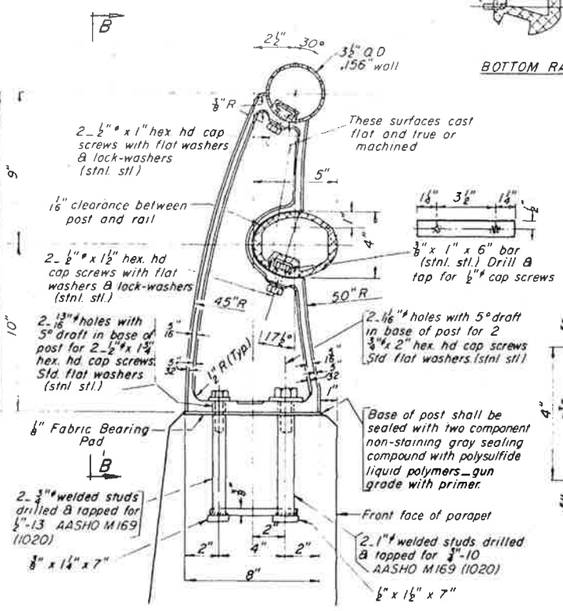
Aluminum alloy rail shall conform to ASTM B 221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.



RAIL SPLICE

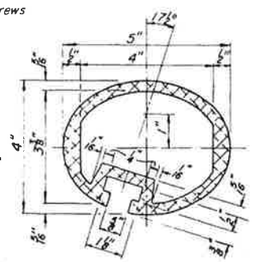


VIEW B-B

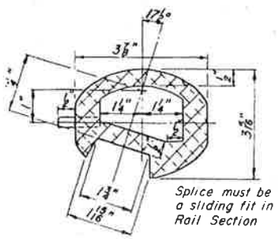


SECTION A-A

RAIL POST DETAILS

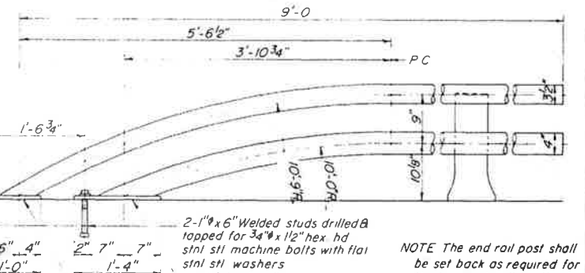


SEC. THRU ELLIPTICAL RAIL SECTION

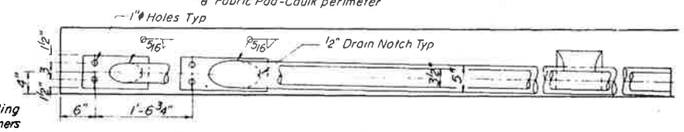


Splice must be a sliding fit in Rail Section

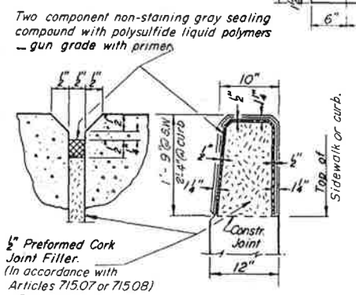
SEC. THRU SPLICE



NOTE The end rail post shall be set back as required for the terminal rail section.



RAIL TERMINAL SECTION



PARAPET JOINT DETAIL

BILL of MATERIALS

Item	Unit	Quantity
ALUMINUM RAILING, TYPE L	Lin. Ft.	95

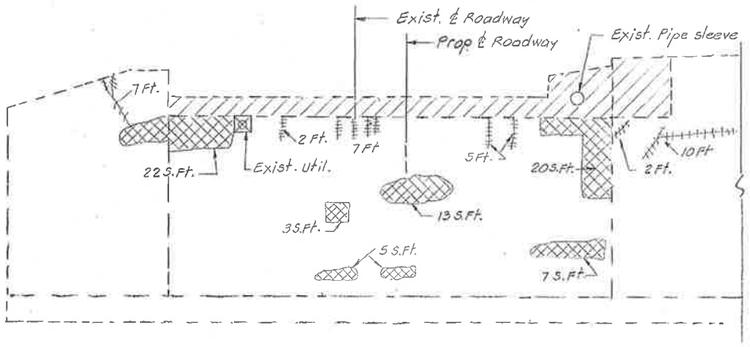
TYPE L
ALUMINUM RAILING

BROOKFIELD AVE. OVER SALT CREEK
PROJECT NO. BRM. 6003(345)
FAU ROUTE 1408 SEC. 84-00096-00 BR
STRUCTURE NO. 016-6665
COOK COUNTY
DESIGNED BY J.J. DRAWN BY M.K.
DATE FEB. 86 CHECKED BY J.J.

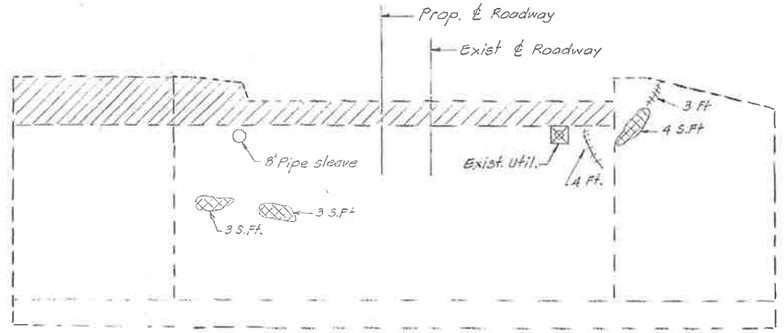
Clarke Environmental Consulting Engineers

U.S. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1408	1984-061-B		12	10
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FEDERAL AID PROJECT BRM-6003(345)		

Sheet 5 of 6

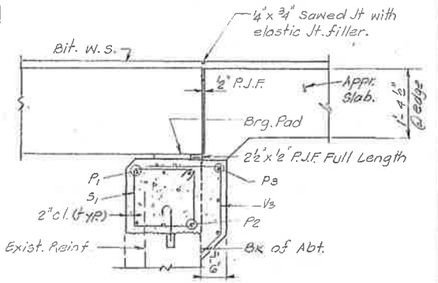


ELEVATION
Exist. W. Abut.

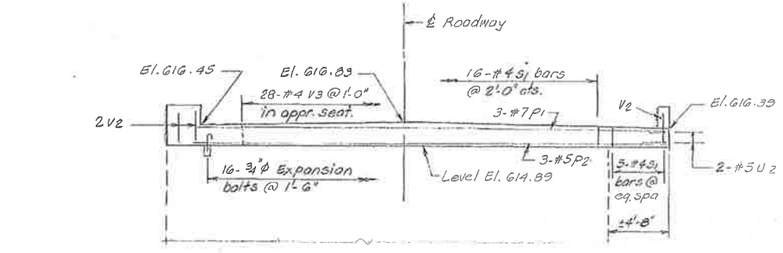


ELEVATION
Exist. E. Abut.

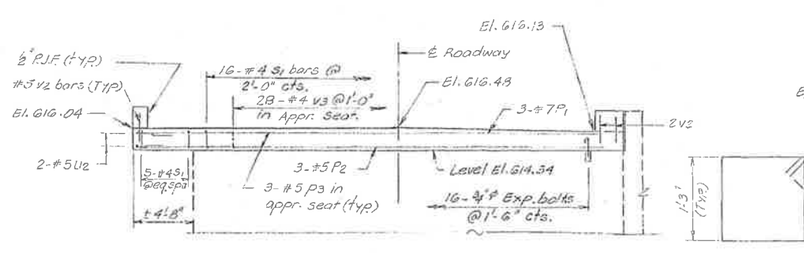
NOTES:
1. Existing utility will be relocated by others prior to construction
2. +++ Indicates cracks to be sealed.
3. Cross hatched areas indicate portions of exist. structure to be repaired
4. Hatched areas indicate portions of existing abutments and wing wall to be removed down to elevation 614.54 @ E. Abut. & 614.89 @ W. Abut. Removal shall be done by using a hammer drill or light duty pneumatic hammer
5. Existing abutment steel to be cleaned and embeded into new cap. Wing wall steel to be cut
6. Concrete above new cap to be poured after beams are in place. See cross section sheet #2.
7. Before pouring new cap the top of existing abutment shall be cleaned and all loose material removed. Cleaning shall be done by air or water blasting.



SECTION A-A



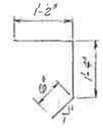
ELEVATION
New cap @ W. Abut.



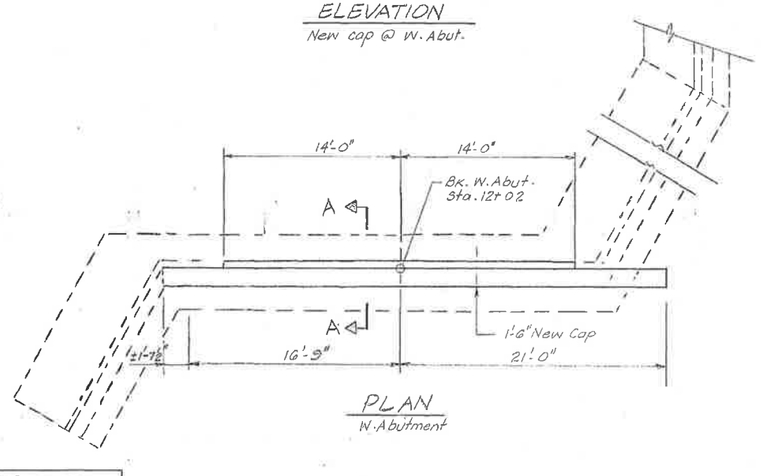
ELEVATION
New cap @ E. Abut.

S1 BARS

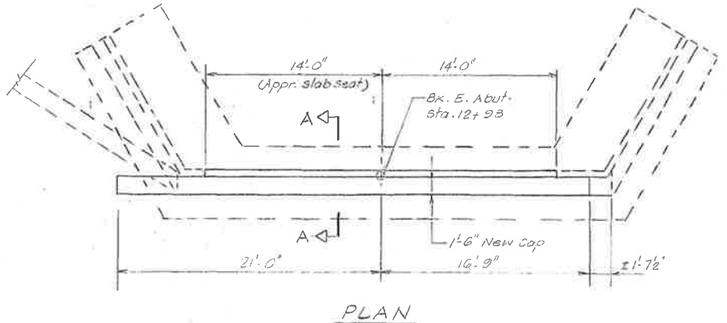
U2 BARS



V3 BARS



PLAN
W. Abutment



PLAN
E. Abutment

BILL OF MATERIAL
(TWO ABUTMENT)

BAR	NO	SIZE	LENGTH	SHAPE
P1	6	#7	38'-6"	—
P2	6	#5	38'-6"	—
P3	6	#5	23'-9"	—
S1	42	#4	5'-9"	⊐
U2	4	#5	4'-6"	⊐
V2	6	#5	3'-0"	—
V3	56	#4	3'-0"	⊐
Class X Concrete			Cu. Yds.	9.8
Reinforcement Bars			Lbs.	1250
Concrete Removal			Cu. Yds.	14.0
Expansion bolts 3/4"ϕ			Each	32.0
Repair Concrete Structures			Sq. Ft.	80.0
Epoxy Crack Sealing			Lin. Ft.	40.0

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENTS

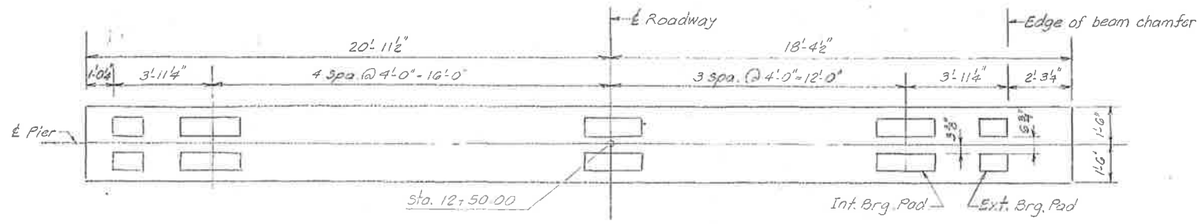
BROOKFIELD AVE. OVER SALT CREEK
PROJECT NO. BRM. 6003(345)
FAU ROUTE 1408 SEC. 84-00096-00BR
STRUCTURE NO. 016-6665
COOK COUNTY

DESIGNED BY DRAWN BY
DATE CHECKED BY

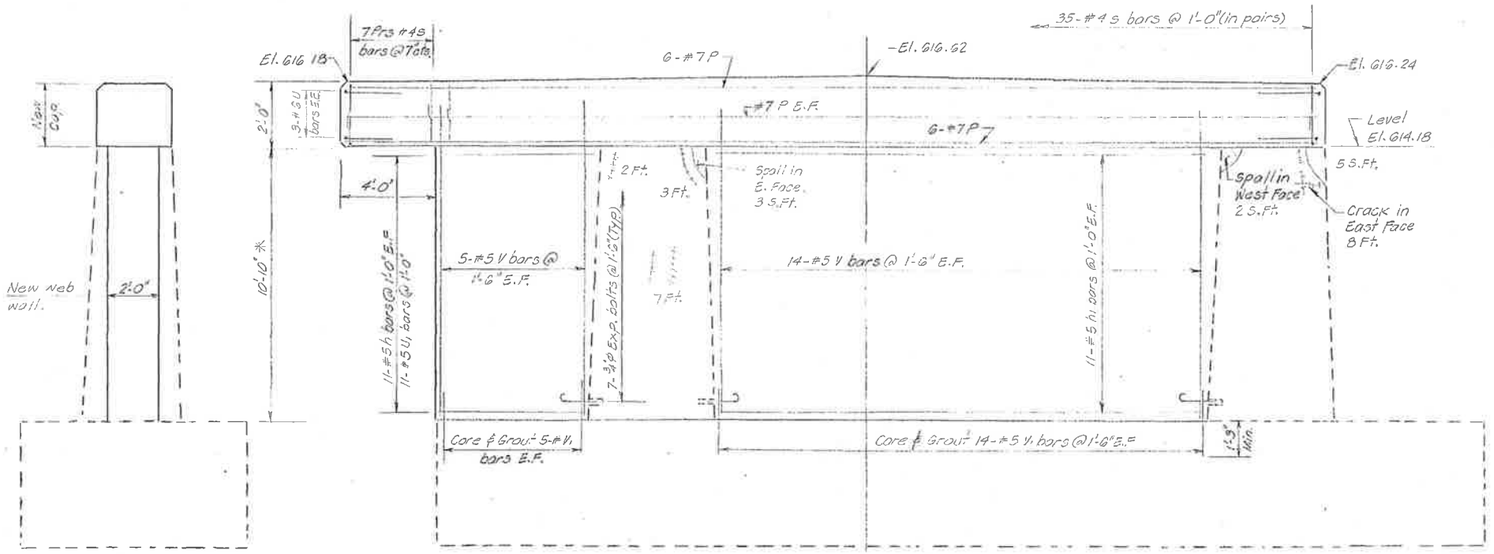
Cierbia Group, Inc.
CONSULTING ENGINEERS
Chicago, Illinois

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1408	1984-061-B	COOK	12	11
STA.	TO STA.			
FED. ROAD DIST. NO. 9	ILLINOIS	FEDERAL AID PROJECT BRM-6003(345)		

Sheet 6 of 6



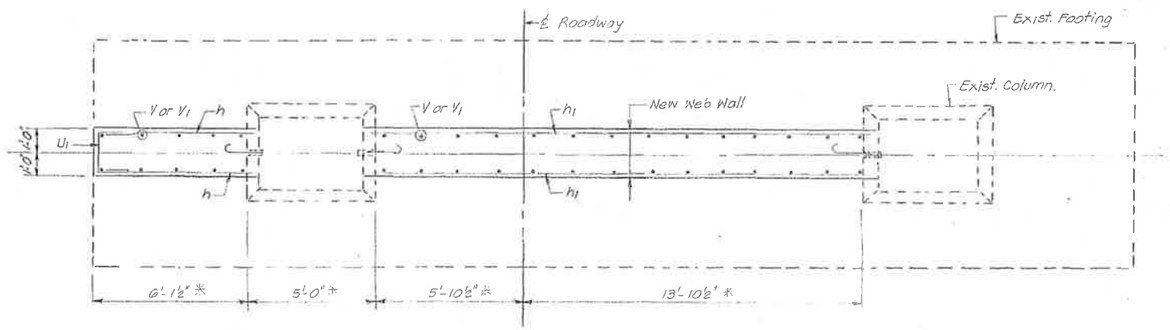
TOP PLAN



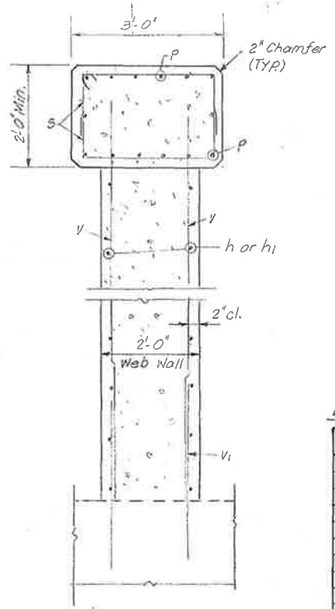
* To be verified in the field.

ELEVATION
Looking East

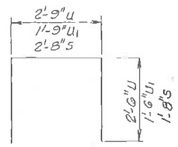
END VIEW



PLAN
Showing Reinf. in web wall



SECTION
Through cap & web wall



U, U1 & S BARS

NOTES:

1. Existing columns to be removed down to elev. 614.18. Existing vert. steel to be cleaned and embeded into new concrete.
2. Hatched area indicates portions of existing structure to be repaired.
3. ⁎ Indicates cracks to be sealed.

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h	11	#5	6'-0"	—
h1	22	#5	19'-6"	—
P	14	#7	39'-0"	—
S	84	#4	6'-0"	□
U	6	#6	7'-9"	⊐
U1	11	#5	4'-9"	⊐
V	38	#5	12'-0"	—
V1	38	#5	3'-0"	—

Class "X" Concrete	Cu. Yds	28
Reinforcement Bars, Epoxy Coat	Lbs.	2650
Expansion Bolts ¾" ϕ	Ea.	21
Concrete Removal	Cu. Yds	2
Repair Concrete Structures	Sq. Ft.	10
Epoxy Crack Sealing	Lin. Ft.	20

CG Case Group, Inc.
CONSULTING ENGINEERS
Chicago Illinois

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER

BROOKFIELD AVE. OVER SALT CREEK
PROJECT NO. BRM. 6003(345)
FAU ROUTE 1408 SEC. 84-00096-00BR
STRUCTURE NO. 016-6665
COOK COUNTY

DESIGNED BY J.J DRAWN BY M.A.K.
DATE FEB. 86 CHECKED BY J.J.

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1408	1988-061-B	COOK	12	12
STA 10+00		TO STA 15+00		
FED. ROAD DIST. NO. 9	ILLINOIS	FEDERAL AID PROJECT BRM-6003(049)		

FINAL SURVEY — SURVEYED — BY — DATE — PLOTTED — TEMPLATE — NOTE BOOK — PAGES — NO. — CHECKED

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