

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

FOR INDEX OF SHEETS, SEE SHEET NO. 2

SCALES

PLAN
PROFILE HORIZ.
PROFILE VERT.
CROSS SECTION

FAU ROUTE 3565
ILL ROUTE 171/ARCHER AVE.
SECTION 46 (SB-28VB-2)R-85

COOK COUNTY
CSI-447-86

MUNICIPALITIES INVOLVED:
VILLAGE OF SUMMIT
VILLAGE OF BEDFORD PARK

FOR INFORMATION ONLY

1927 (97) MAJOR 6 50 (PCC-20)

PREPARED AND RECOMMENDED BY
RACKOFF-EADS
CONSULTING ENGINEERS
CHICAGO, ILL.



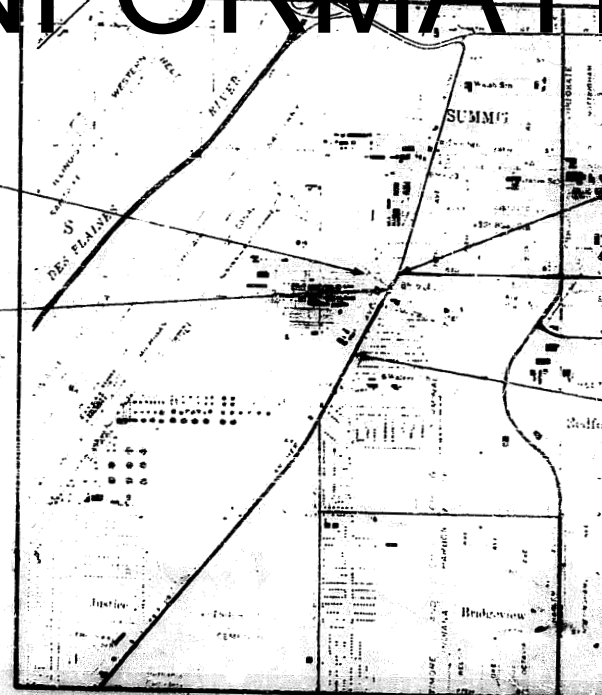
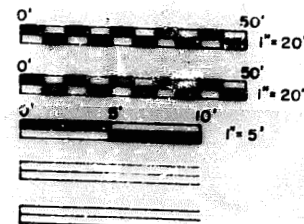
FOR UNDERGROUND UTILITY
LOCATION CALL
J.U.L.I.E.
1-800-892-0123
TOLL FREE

PLAN

PROFILE HORIZ.

PROFILE VERT.

CROSS SECTION



IMPROVEMENT BEGINS:
STA. 0+00
SOUTHWEST SERVICE ROAD

IMPROVEMENT BEGINS:
STA. 10+30
ARCHER AVENUE

IMPROVEMENT ENDS:
STA. 24+73
ARCHER AVENUE

PROPOSED IMPROVEMENT CONSISTS OF:

RECONSTRUCTION AND WIDENING OF THE PAVEMENT ON
ARCHER AVE, RECONSTRUCTION OF SOUTHWEST SERVICE ROAD
AND STRUCTURE, STRUCTURE OVER C.P. & W.R.R. SPUR
RECONSTRUCTION OF STRUCTURE OVER C.P. & W.R.R. SPUR

NET LENGTH OF SECTION

ARCHER AVENUE 1942.00 LF = 0.368 MILES
SOUTHWEST SERVICE ROAD 1205.65 LF = 0.228 MILES
3147.65 LF = 0.596 MILES

GROSS LENGTH OF PROJECT = 3147.65 FT. = 0.596 MILES

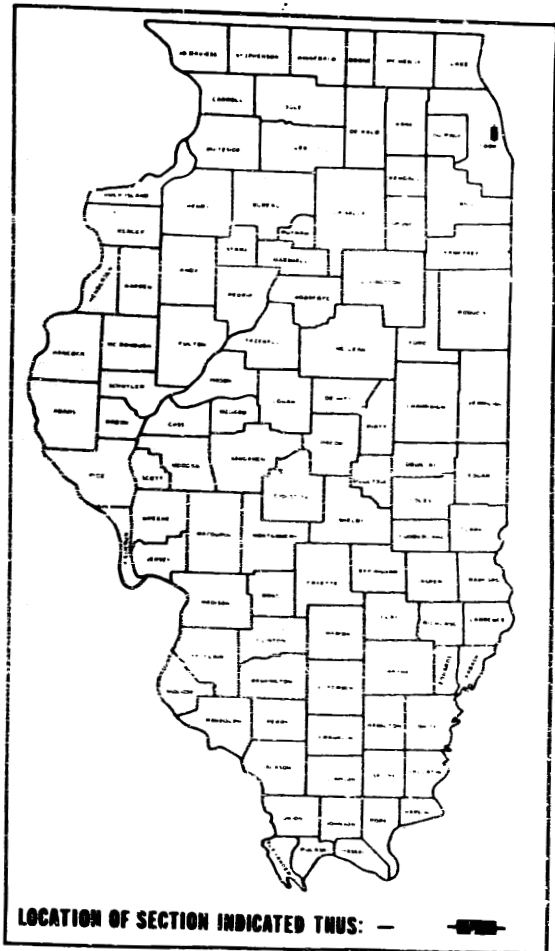
LOCATION MAP

CONTRACT NO. 80034

COUNTY SECTION F.A. ROUTE (FAU 3565)
COOK 46 (SB-28VB-2)R-85 ILL ROUTE 171/ARCHER AVE.

FA RTE	SECTION #	COUNTY	TOTAL SHEETS	SHEET NO.
FAU-3565		COOK	75	1
* 46 SB-28VB-2)R-85 PROJECT ILL-171				

P-91-522-85



LOCATION OF SECTION INDICATED THUS: — — — — —

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 5-15 1987
EXAMINED 5-22 1987
PASSED 5-22 1987
APPROVED 5-16 1987

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LEGEND

—x—x—x—	FENCE LINE
•	RIGHT OF WAY MARKER
—R.O.W.—	EXISTING RIGHT OF WAY LINE
—C—C—	EXISTING STORM SEWER
— — — — —	PIPE LINES
— — — — —	GAS
— — — — —	WATER
— — — — —	OIL
—•—•—•—•—	GUARD RAIL
—)---(—	EXISTING CULVERT
□	EXISTING INLET, INLET TO BE ADJUSTED, OR INLET TO BE RECONSTRUCTED
○	EXISTING CATCH BASIN, CATCH BASIN TO BE ADJUSTED, OR CATCH BASIN TO BE RECONSTRUCTED
—E—	UNDERGROUND ELECTRIC CABLE
⊐	EXISTING FIRE HYDRANT, OR FIRE HYDRANT TO BE ADJUSTED
⊠	EXISTING LIGHT STANDARD, OR LIGHT STANDARD TO BE ADJUSTED
⊞	EXISTING HOUSE SERVICE BOX OR HOUSE METER VAULT, OR HOUSE SERVICE BOX OR HOUSE METER VAULT TO BE ADJUSTED
⊕	PROPOSED CATCH BASIN

FOR INFORMATION ONLY

DATE	STANDARDS
1514-5	CONCRETE TYPE A AND B
1557-9	PAVEMENT TYPE C
1558-5	PAVEMENT TYPE C
1656-4	PAVEMENT TYPE C
2113-2	PAVEMENT TYPE C
2130-9	CONCRETE CURB AND GUTTER CONCRETE CURB
2205	P.C.C. CURB WITH INTERLOCKING CONCRETE
2213-4	PAVEMENT TYPE C
2217-3	PAVEMENT TYPE C
2220-4	PAVEMENT TYPE C
2223-3	PAVEMENT TYPE C
2228-1	TYPICAL DETOUR PLAN
2235-10	PAVEMENT TYPE C
2300-5	PAVEMENT TYPE C
2305	PAVEMENT TYPE C
2306	TYPICAL PAVEMENT
U-1	TYPICAL PAVEMENT
U-2	TYPICAL PAVEMENT
U-4	TYPICAL PAVEMENT
U-5	TYPICAL PAVEMENT
2354-1	PAVEMENT TYPE C

PREPARED BY RACKOFF - EADS
CHICAGO, ILLINOIS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

FAU-3565 (ILL-171)

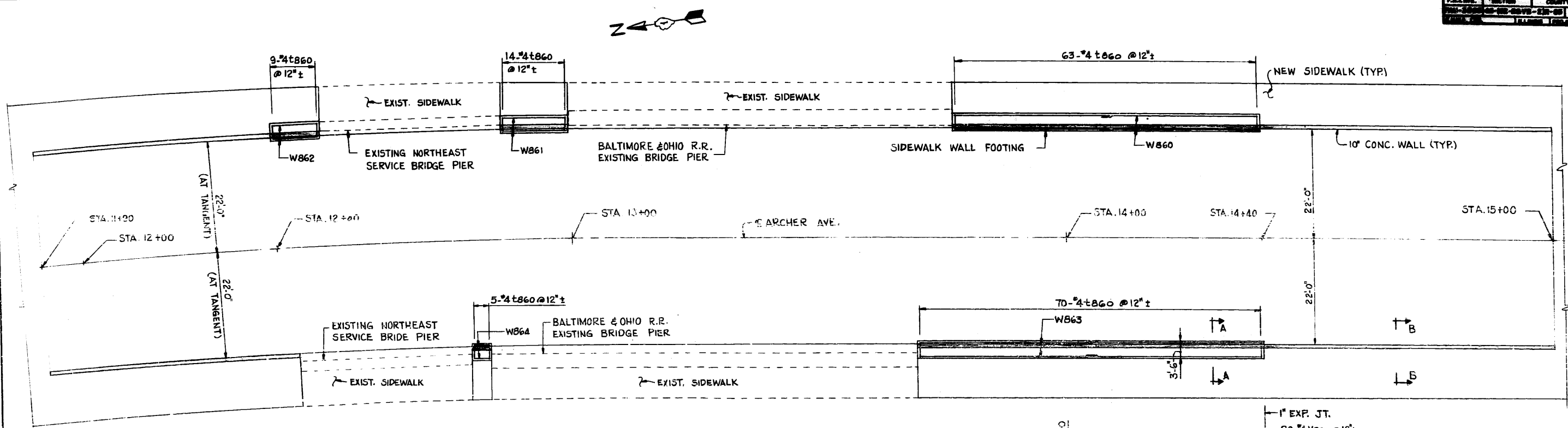
ARCHER AVE.

INDEX OF SHEETS

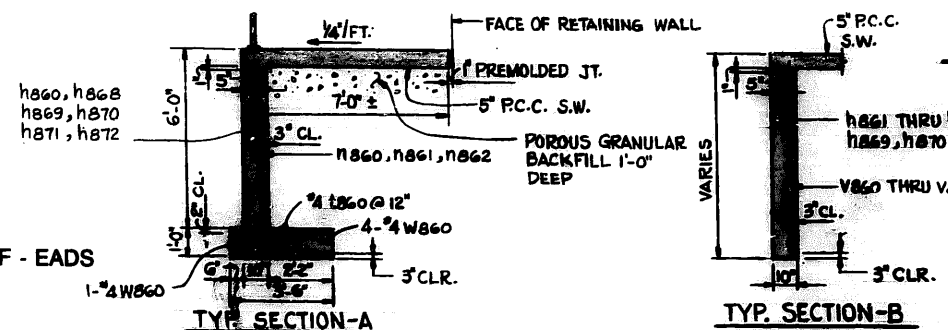
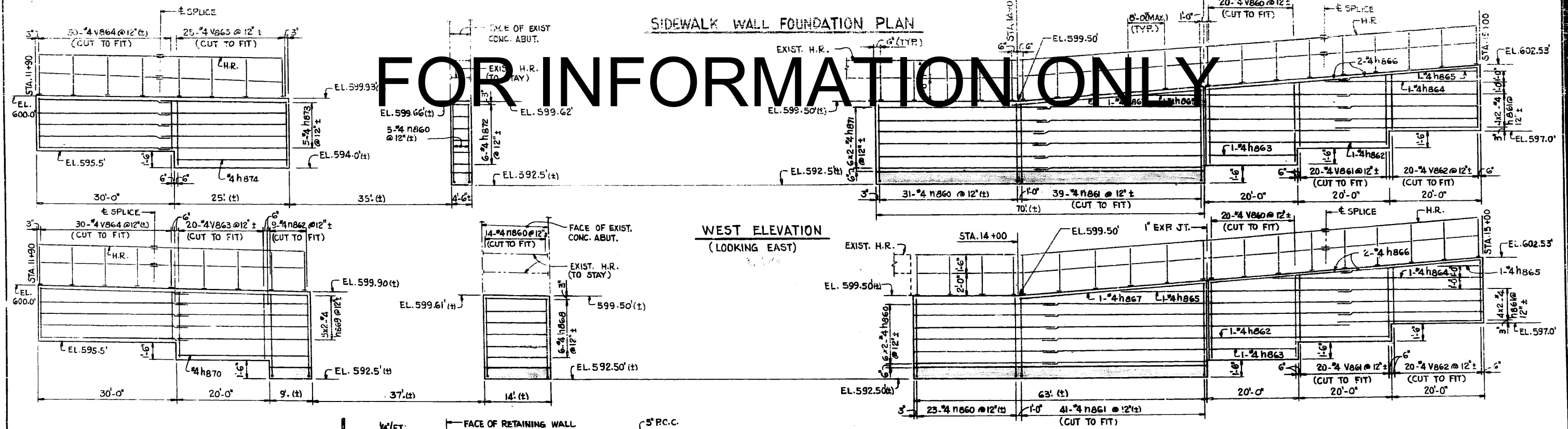
SCALE VERT. DRAWN BY Y.P.G.

HORIZ. CHECKED BY Y.P.G.

DATE 5-11-87 Rev. 501



FOR INFORMATION ONLY

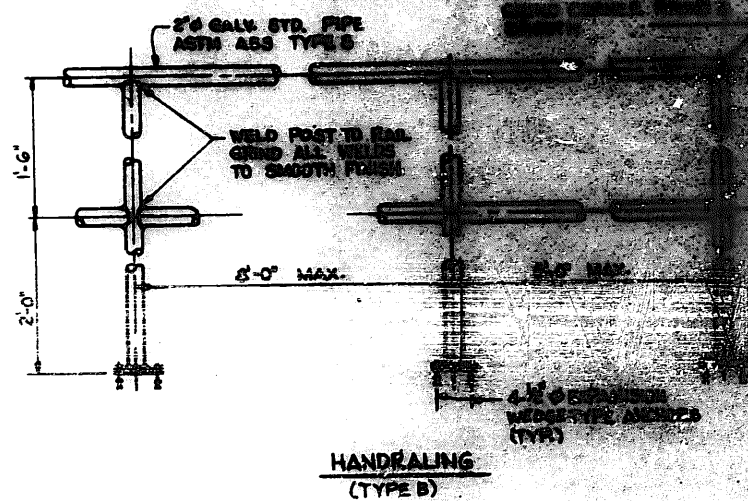


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CHICAGO, ILLINOIS

NOTE
1. WORK THIS DWG. WITH DWG. HANDRAILING AND
REINFORCEMENT No. 27.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SIDEWALK WALL FOUNDATION
FAU-3565 (ILL 171)
COOK COUNTY
SCALE VERT
HORIZ
DATE 5-8-87
DRAWN BY S.I.
CHECKED BY



FOR INFORMATION ONLY

ITEM	UNIT	QUANTITY
REINFORCEMENT BARS	LBS	4215
FLAT IRON CONCRETE	CU YDS	81
CONCRETE FORMWORK	CU YDS	505
FORM BRACING	CU YDS	100
FORM STRIPS	LIN. FT.	875
CONCRETE CURB	CU YDS	505

GENERAL NOTES

DESIGN SPECIFICATIONS:

American Association of State Highway and Transportation
Officials Standard Specifications for Highway Bridges
1983, 1984 AND 1985 Interim Specifications.

CONSTRUCTION SPECIFICATIONS:

Illinois Standard Specifications for Road and Bridges
Construction adopted October 1st, 1986 and Supplemental
Specifications adopted October 1st, 1990.

DESIGN STRESSES:

Concrete:
Substructure - $f_c' = 3500$ PSI
Superstructure - $f_c' = 5000$ PSI for precast concrete deck
 $f_c' = 4000$ PSI for precast concrete deck

Reinforcing steel:
Substructure - $f_y = 60,000$ PSI
Superstructure - $f_y = 270,000$ PSI
 $f_y = 189,000$ PSI
Allowable maximum soil bearing pressure = 12,000 psf

DESIGN LOADINGS:

Future wearing surface = 25 PSF
Live load = A.A.S.H.T.O. HS20-44
Soil pressure = 40 PCF Equivalent fluid pressure for retaining wall
(active pressure)
= 50 PSF Equivalent fluid pressure for abutment
(pressure at rest)

DESIGN METHOD:

Strength design method.

PRESTRESSING STEEL:

Uncoated stress-relieved strands, 1/2" Grade 270.

EXISTING ELECTRICAL CABLE:

Contractor must verify location of existing electrical
cable before removing existing concrete structure. See
sheet 16 OF 75 for the location.

EXISTING WATER MAIN:

Contractor must verify location of existing 8" water main
before driving sheet piles and excavation for removing
existing concrete abutment foundation. See sheet 5-2
for the location.

EXISTING STRUCTURE DATA, SN.016-2544

F.A.G.M. Proj. 3(1)
S.B.I. Rte 4A (F.A. Rte. 5)
Sec. 46-V-B-2, Cook County
Sheets 20/29, 23/29 thru 25/29 } A rigid frame type concrete
structure with a horizontal
span of 18 feet, retaining
walls and cheek walls ad-
joining the bridge.

CONCRETE CHAMFERS:

All exposed concrete corners shall have 3/4 inch chamfers
unless otherwise shown in the plans.

BORING DATA:

See proposal for boring data.

STEEL SHEET PILES:

Steel sheet piles shall conform to the requirements
of A.A.S.H.T.O. M 22J (ASTM A 572) Grade 50.

REINFORCEMENT BARS:

Reinforcement bars shall conform to the requirements
of A.A.S.H.T.O. M31, M42 or M53 Grade 60.

STRUCTURE REMOVAL:

Existing concrete deck, abutment, fences, parapet walls, approach slabs
and retaining walls, including all footings to be completely
removed in stages.

Dimension of existing concrete substructure are uncertain.
Where these drawings show such portions, they are shown
for illustrative purpose only and are not supposed to
represent actual dimensions.

CONSTRUCTION NOTE:

- The demolition of existing structures and the erection of
new abutment, retaining wall and concrete deck, etc., shall
be performed without disrupting railroad traffic.
If the disruption of railroad traffic can not be avoided,
the contractor must obtain the permission in advance
from Corn Products (a unit of C.P.C. International, Inc.).
- Backfilling behind the abutments shall be done after the
backfilling in front of the abutment is completed.
- No backfilling behind the abutment shall be done until the deck beams
have been erected and anchor rods grouted including the hatched
area of the abutment on detail sheet No. 5-11. The backfill
shall be carried up simultaneously at each abutment, and at
no time shall the fill at one end be more than 2 feet higher
than at the other.

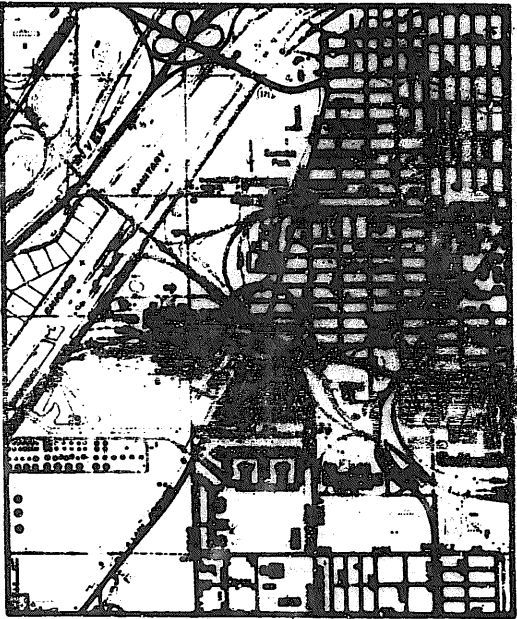
EXISTING SEWER LINE:

Contractor shall verify the location of existing sewer
line with the CORN PRODUCTS COMPANY before the demolition
of the existing bridge abutment & retaining walls.

TOTAL BILL OF MATERIAL				
ITEM	UNIT	SUPER STRUCTURE	SUB STRUCTURE	TOTAL
REINFORCEMENT BARS	POUNDS	—	53,910	53,910
REINFORCEMENT BARS (EPOXY COATED)	POUNDS	2,860	10,973	13,833
CLASS "X" CONCRETE	CU YD	35.0	786.5	821.5
PROTECTIVE COAT *	SQ YD	192	—	192
REMOVAL OF EXISTING STRUCTURES	L SUM	—	—	0.5
PEDESTRIAN RAIL	LIN. FT.	46	182	228
STRUCTURE EXCAVATION	CU YD	—	3500	3500
GEO. COMPOSITE WALL DRAIN SYSTEM	SQ YD	—	630	630
TEMPORARY SHEET PILING	SQ FT	—	6560	6560
SHEET PILING SPECIAL	SQ FT	—	900	900
PRECAST PRESTRESSED CONCRETE DECK BEAMS SPECIAL (11" DEPTH)	SQ FT	1,460.3	—	1,460.3
POROUS GRANULAR EMBANKMENT	CU YD	—	1,933	1,933
PIPE UNDERDRAIN PER CS/APB	LIN. FT.	—	273	273
NAME PLATES	EACH	1	—	1
STEEL PLATE BEAM GUARDRAIL REMOVAL	LIN. FT.	—	—	320
CHAINLINK FENCE TO BE REMOVED AND RE-ERECTED	LIN. FT.	—	—	540

* FOR PARAPETS AND SIDEWALK.

FOR INFORMATION ONLY



LOCATION MAP

STATION 17+94.45
BUILT 188 BY
STATE OF ILLINOIS
RTE. FAU-3565, SEC 46 (SB-28VB-21R-85)
LOADING HS20
SN.016-2544

NAME PLATE
(See Standard 2113)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

James J. Rayburn
Illinois Department of Transportation



Shoofy, K. Jan

PREPARED BY RACKOFF - EADS
CHICAGO, ILLINOIS

BM 3:
BRIDGE DISK 5-130
100' NORTH OF SUMMIT CITY LIMITS, SIGN SET VERTICALLY IN
SOUTHEAST FACE OF NORTHEAST CONCRETE ABUTMENT OF BALTIMORE
AND OHIO R.R. OVERHEAD BRIDGE OVER HIGHWAY.
10' WESTWARD OF SOUTHWEST END OF ABUTMENT AND 2.9' ABOVE
SIDEWALK. EL. 602.679' USC & GS.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL NOTES, QUANTITIES

ILL 17: ARCHER AVE. OVER CP & W.R.R.
STRUCTURE NO. 016-2544

SCALE VERT
HORIZ
DATE 5-1-87
DRAWN BY L. S.
CHECKED BY S. J.
Rev 6-10-87

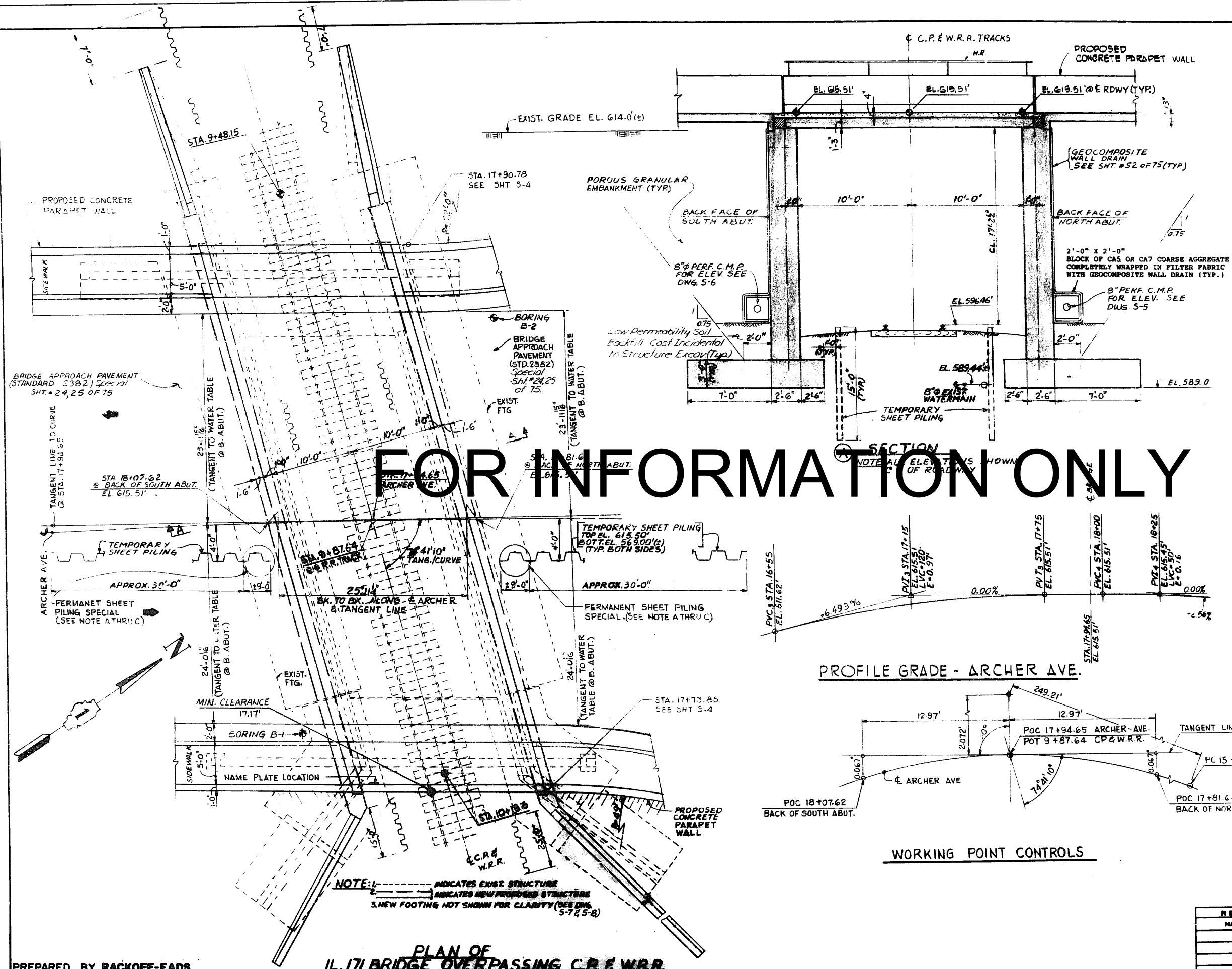
TOP ELEVATIONS OF R.R. TRACK

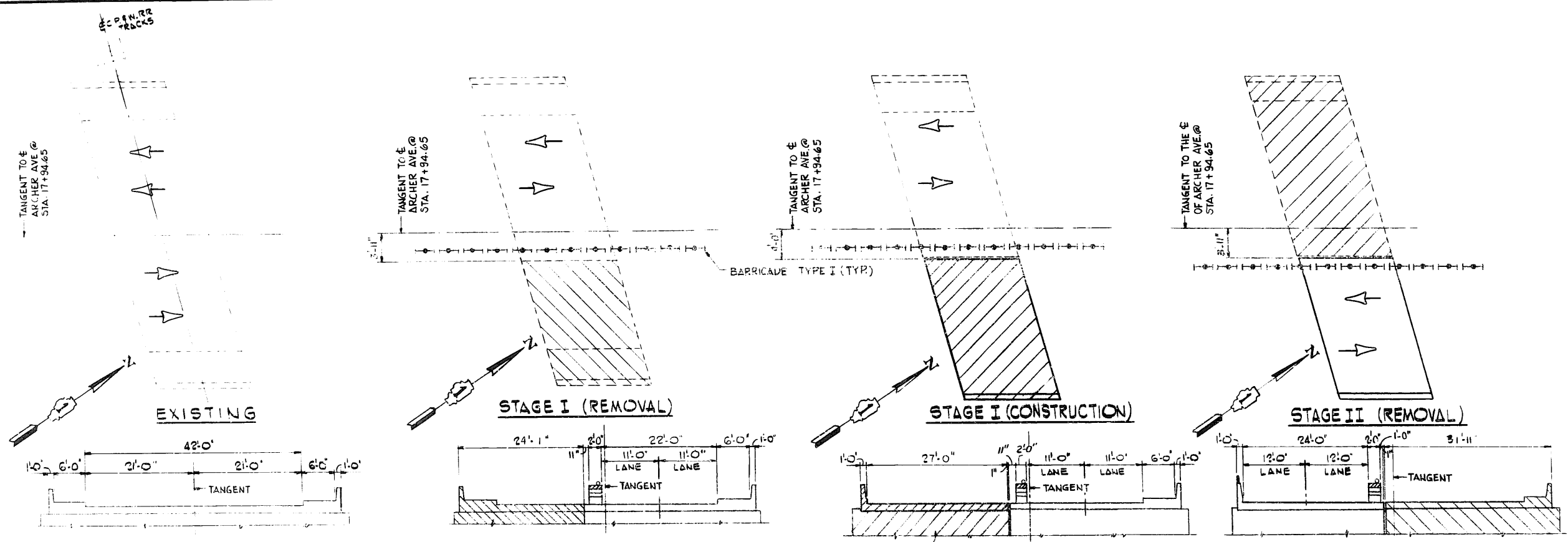
STATION	ELEVATION	REMARKS
7+48.15	596.599	0+00 SOUTHWEST CORNER OF ARGO BL 60-3
7+98.15	596.609	
8+48.15	596.440	
8+98.15	596.559	
9+48.15	596.399	
9+87.64	596.420	
10+18.15	596.450	
11+18.15	596.689	
12+18.15	596.919	
13+18.15	597.049	

CURVE DATA	
FI	STA. 19+07.80
Δ	2°46'13" LT
P	0°22'56"
T	362.34
L	724.53
R	14985.00'
E	4.38'
P.C.	STA. 15+45.46
P.T.	STA. 22+69.99

- PERMANENT SHEET PILING SPECIAL NOTES:**
- A. INSTALL SHEET PILES TO RESIST SOIL & SURCHARGE LATERAL PRESSURE LOADS DURING STAGE I EXCAVATION & THE REMOVAL OF EXISTING STRUCTURE AS APPROVED BY THE ENGINEER. CONSTRUCT STAGE I ABUTMENT, WINGWALL & SUPERSTRUCTURE.
 - B. SHEET PILING TO BE CUT-OFF AT THE BOTTOM OF NEW FOOTING PRIOR TO CONSTRUCTION STAGE II ABUTMENT.
 - C. CONTRACTOR SHALL PROVIDE MEANS OF RESISTING STAGE I BACKFILL AS APPROVED BY THE ENGINEER, UNTIL STAGE II ABUTMENT IS CONSTRUCTED. COST INCIDENTAL TO CLASS 'X' CONCRETE.

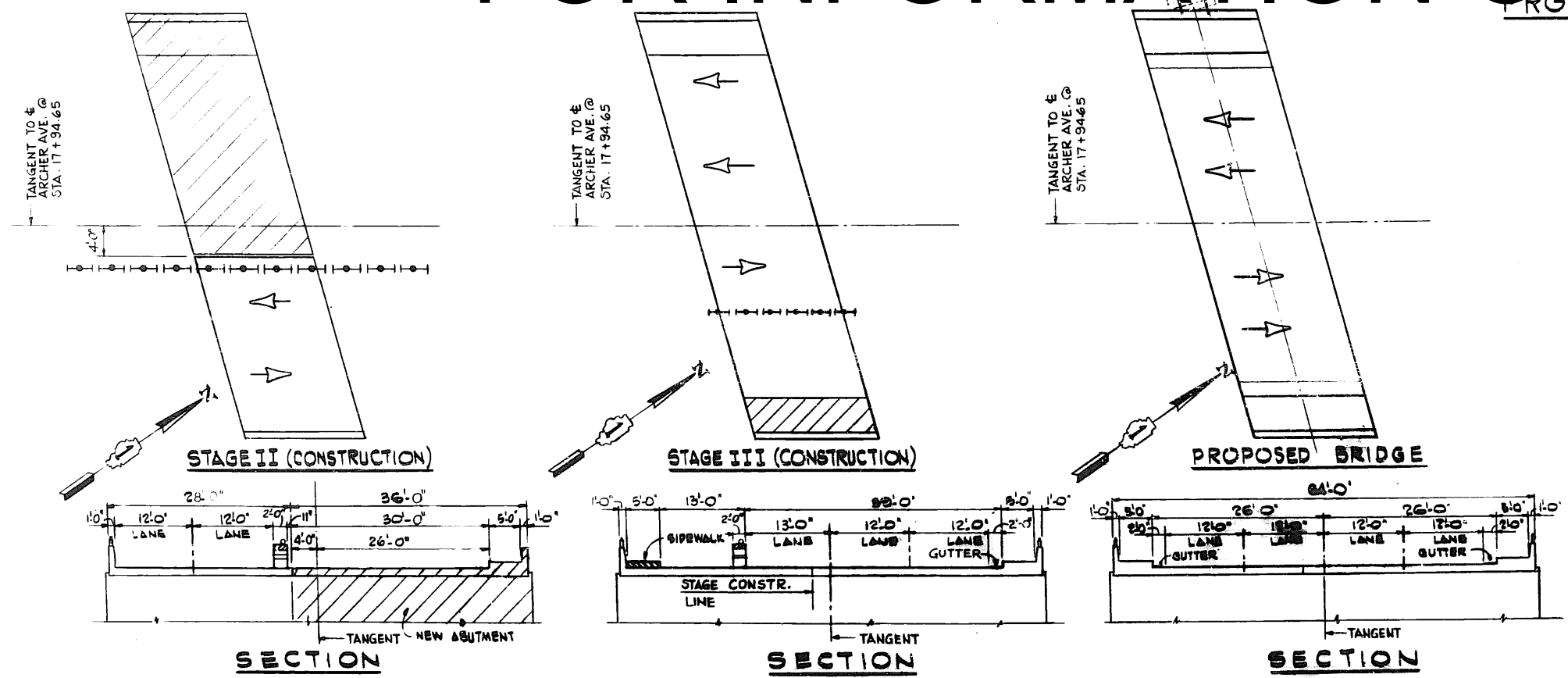
FOR INFORMATION ONLY





FOR INFORMATION ONLY

PROPOSED SEQUENCE OF WORK



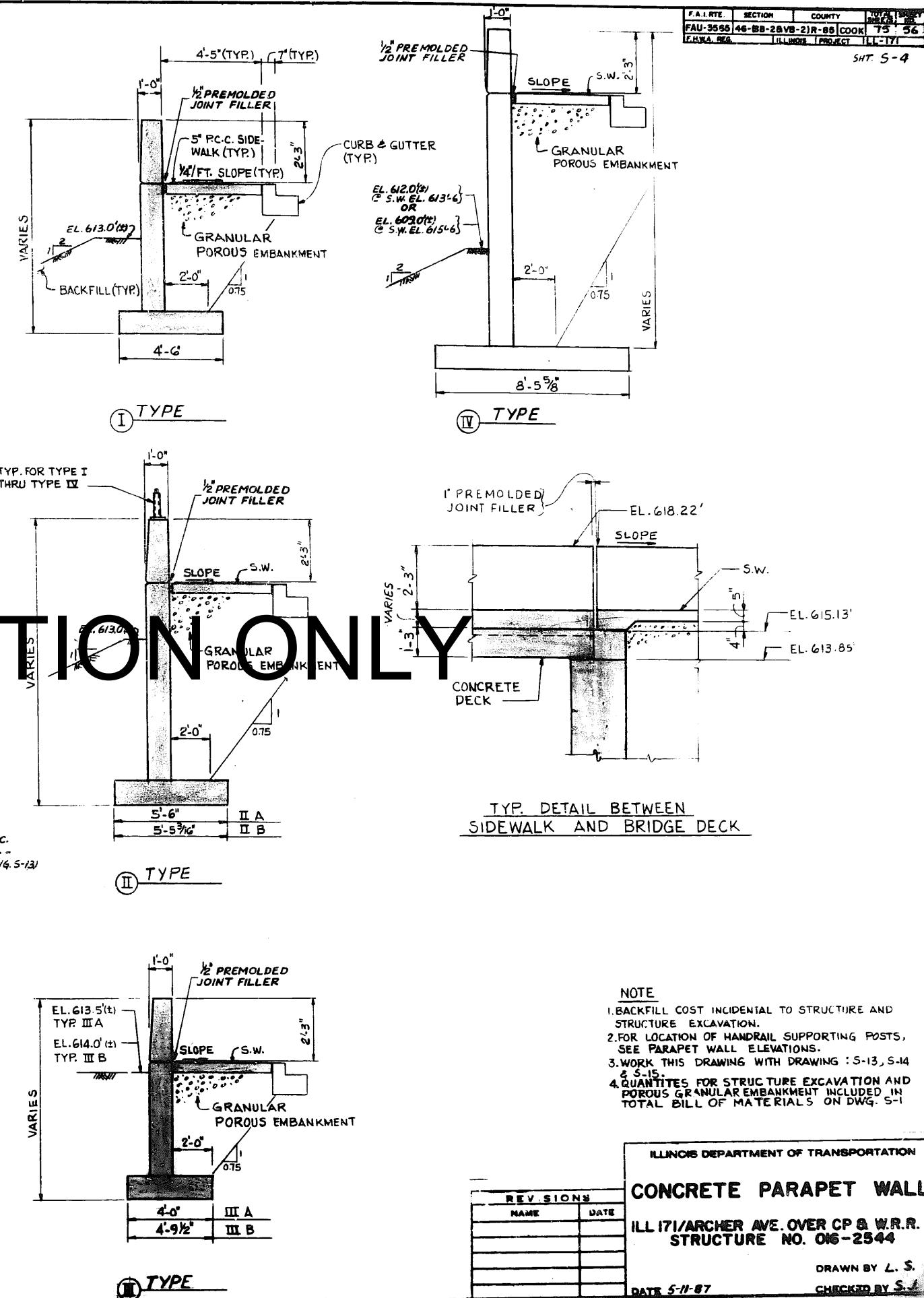
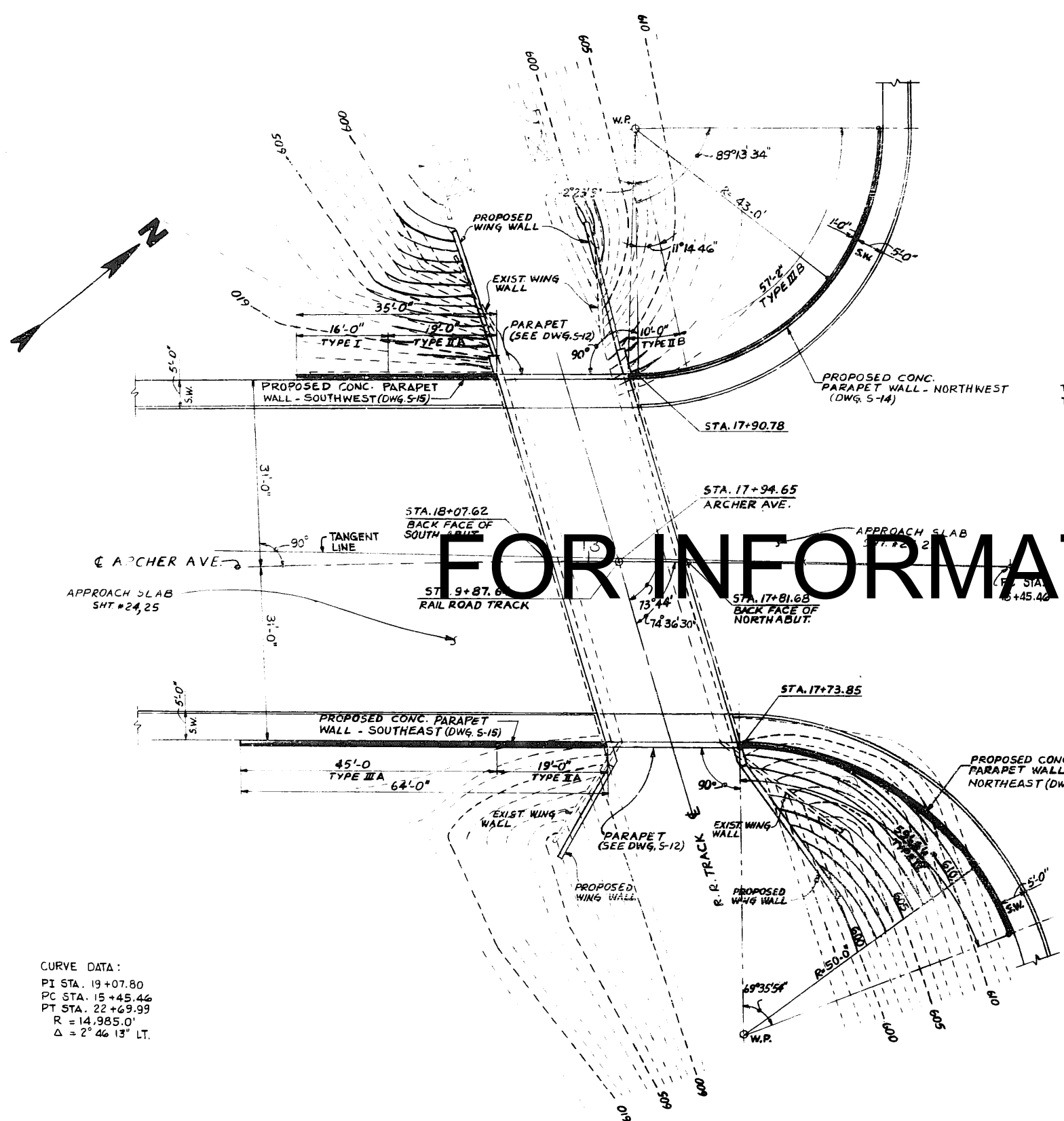
- STAGE I**
1. INSTALL TEMPORARY TYPE I BARRICADES BETWEEN NORTH AND SOUTHBOUND TRAFFIC.
 2. CLOSE TWO LANES OF EXISTING NORTHBOUND TRAFFIC.
 3. REVERSE ONE LANE OF SOUTHBOUND TRAFFIC TO MAKE ONE LANE NORTHBOUND AND ONE LANE SOUTHBOUND.
 4. REMOVE EAST SIDE OF BRIDGE SLAB, ABUTMENTS AND PARAPET UP TO 5'-11" FROM TANGENT LINE OF ROADWAY.
 5. CONSTRUCT NEW ABUTMENTS AND RETAINING WALLS. ERECT NEW SLAB UP TO 4'-0" FROM TANGENT LINE OF ROADWAY, WITHOUT SIDEWALK. CONSTRUCT PARAPET.
- STAGE II**
1. RELOCATE TEMPORARY TYPE I BARRICADES ON NEW CONCRETE SIDE.
 2. REVERSE NORTH AND SOUTHBOUND TRAFFIC FROM WEST SIDE OF ROAD TO NEWLY CONSTRUCTED SIDE ON EAST SIDE.
 3. REMOVE WEST SIDE OF BRIDGE SLAB, ABUTMENTS AND PARAPET.
- STAGE III**
1. REMOVE TYPE I BARRICADES AND PLACE TEMPORARY BARRICADE.
 2. REROUTE TRAFFIC WITH TWO SOUTHBOUND LANES AT WEST SIDE AND ONE NORTHBOUND LANE AT EAST SIDE OF ROADWAY.
 3. CAST SIDEWALK AT EAST SIDE OF BRIDGE.
 4. REMOVE TEMPORARY TYPE I BARRICADE AND OPEN EAST SIDE LANE OF NORTHBOUND TRAFFIC.
- NOTE:**
1. SOIL SHALL BE EXCAVATED BEHIND THE EXISTING ABUTMENTS PRIOR TO REMOVING THE EXISTING SUPERSTRUCTURE. COST INCIDENTAL.
 2. EXCAVATE A MINIMUM DEPTH OF 16'-0".
 3. ALL SECTIONS LOOKING SOUTH

PREPARED BY RACKOFF-EADS
CHICAGO, ILLINOIS

REVISIONS		DESCRIPTION
NAME	DATE	

ILLINOIS DEPARTMENT OF TRANSPORTATION
DEMOLITION & CONSTRUCTION
SEQUENCE DESCRIPTION
ILL. 171/ARCHER AVE. OVER C.P. & W.R.
STRUCTURE SN. 018-2544

DATE 5-7-87
DRAWN BY
CHECKED BY S.J.



- NOTE
1. BACKFILL COST INCIDENTAL TO STRUCTURE AND STRUCTURE EXCAVATION.
 2. FOR LOCATION OF HANDRAIL SUPPORTING POSTS, SEE PARAPET WALL ELEVATIONS.
 3. WORK THIS DRAWING WITH DRAWING S-13, S-14 & S-15.
 4. QUANTITIES FOR STRUCTURE EXCAVATION AND POROUS GRANULAR EMBANKMENT INCLUDED IN TOTAL BILL OF MATERIALS ON DWG. S-1

REV. SIONS	
NAME	DATE

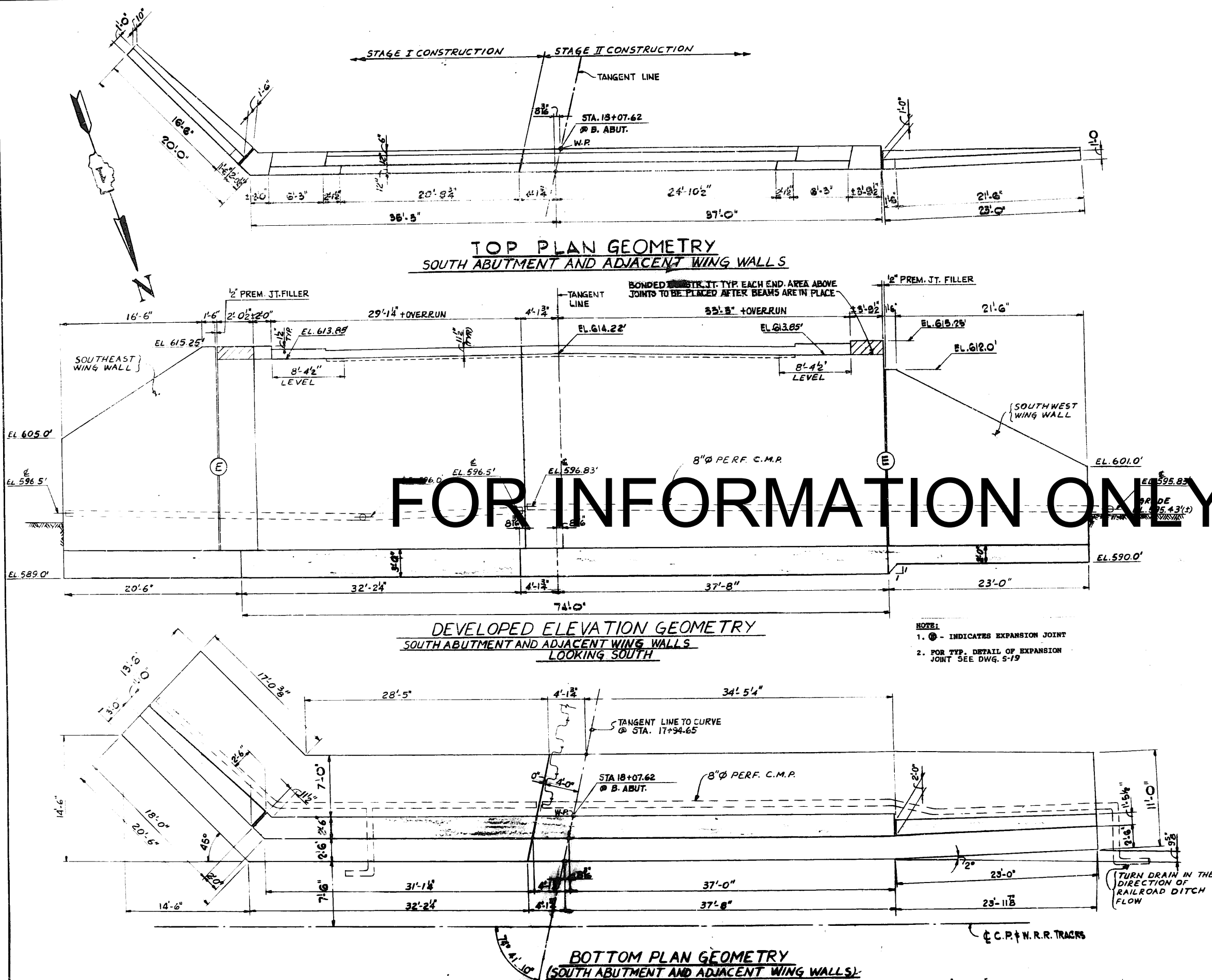
ILLINOIS DEPARTMENT OF TRANSPORTATION

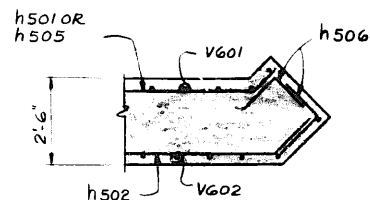
CONCRETE PARAPET WALL

ILL 171/ARCHER AVE. OVER CP & W.R.R.
STRUCTURE NO. 016-2544

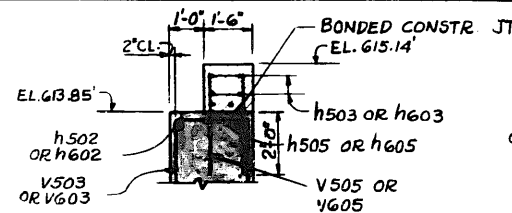
DATE 5-11-87

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CHECKED BY S. J.

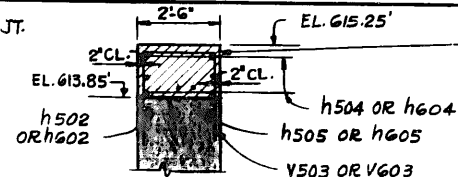




TYP WALL CORNER REINFORCMENT DETAIL

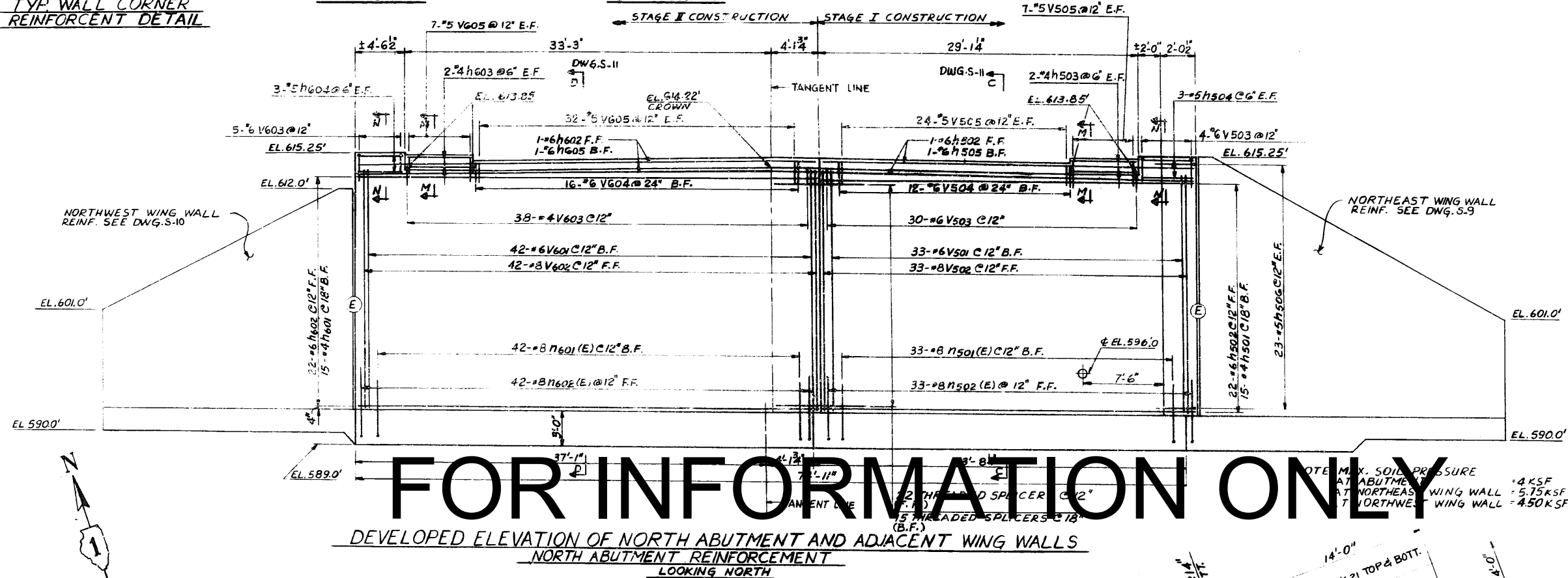


SECTION-M



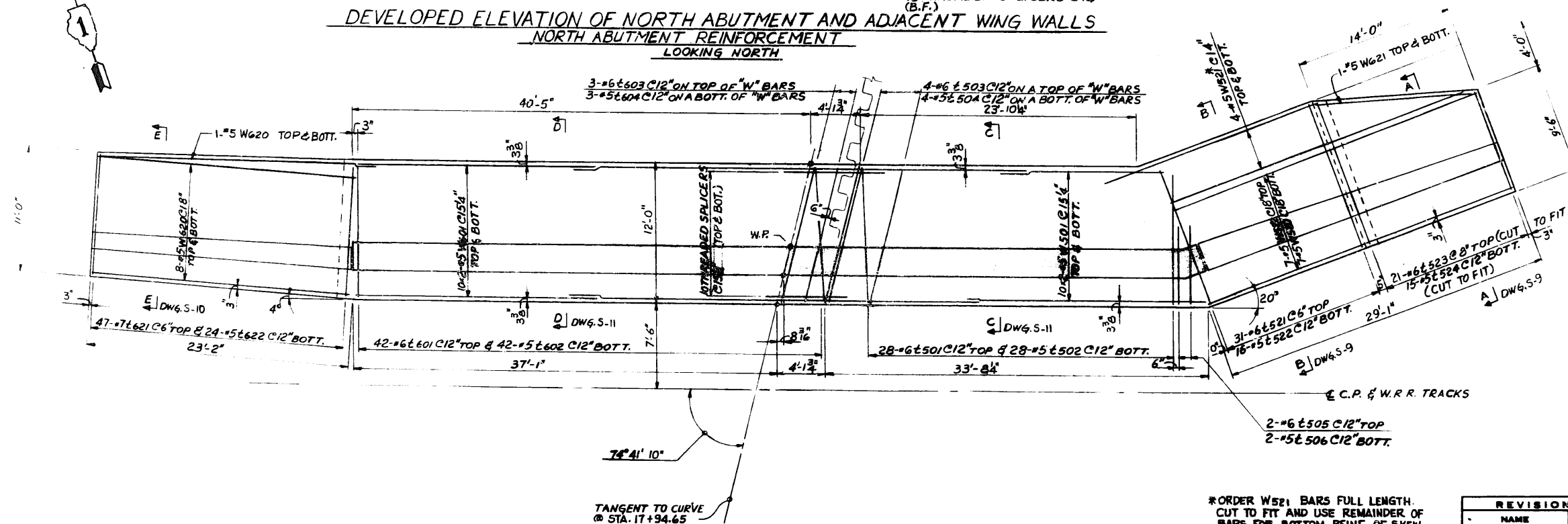
SECTION-N

HATCHED AREA TO BE POURED AFTER DECK BEAMS ARE IN-PLACE (TYP)



FOR INFORMATION ONLY

DEVELOPED ELEVATION OF NORTH ABUTMENT AND ADJACENT WING WALLS
NORTH ABUTMENT REINFORCEMENT
LOOKING NORTH



PREPARED BY RACKOFF - EADS
CHICAGO, ILLINOIS

BOTTOM PLAN REINFORCEMENT
(NORTH ABUTMENT AND ADJACENT WING WALLS)

*ORDER W521 BARS FULL LENGTH.
CUT TO FIT AND USE REMAINDER OF
BARS FOR BOTTOM REINF. OF SKEW
FOOTING AREA.

REVISIONS	
NAME	DATE

FAIRITE	SECTION	COUNTY	TOTAL SHEETS
FAU-3085	46-(SB-28VB-21R-85 COOK	ILLINOIS	75
FAIRITE	ILLINOIS PROJECT	ILL - 171	59

BILL OF MATERIALS

BAR	NO.	SIZE	LENGTH	SHAPE
h501	15	#4	31'-1"	
h502	24	#6	32'-7"	
h503	4	#4	6'-0"	
h504	6	#5	2'-6"	
h505	2	#6	31'-1"	
h506	46	#5	3'-0"	
h601	15	#4	42'-3"	
h602	24	#6	41'-7"	
h603	4	#4	6'-0"	
h604	6	#5	4'-3"	
h605	2	#6	42'-3"	
h501(E)	33	#8	9'-0"	
h502(E)	33	#8	7'-4"	
h601(E)	42	#8	9'-0"	
h602(E)	42	#8	7'-4"	

t501	28	#6	11'-8"	
t502	28	#5	11'-8"	
t503	4	#6	11'-9"	
t504	4	#5	11'-9"	
t505	2	#5	6'-6"	
t506	2	#5	6'-6"	
t521	31	#6	13'-2"	
t522	16	#5	13'-2"	
t523	21	#6	13'-2"	
t524	15	#5	13'-2"	
t601	42	#6	11'-8"	
t602	42	#5	11'-8"	
t621	47	#7	10'-8"	
t622	24	#5	10'-8"	

V501	33	#6	21'-6"	
V502	33	#8	21'-9"	
V503	34	#6	7'-2"	
V504	12	#6	2'-3"	
V505	62	#5	3'-0"	
V601	42	#6	21'-6"	
V602	42	#8	21'-9"	
V603	43	#6	7'-2"	
V604	16	#6	2'-3"	
V605	78	#5	3'-0"	

W501	44	#5	17'-9"	
W520	7	#5	28'-9"	
W521	8	#5	32'-0"	
W522	7	#5	29'-2"	
W601	44	#5	21'-6"	
W620	18	#5	23'-6"	
W621	2	#5	14'-3"	

ITEM	UNIT	QUANTITY
REINF. BARS, EPOXY COATED	LBS	3,272
REINF. BARS	LBS	19,906
CLASS "A" CONC.	CU YDS	334
STRUCTURE EXCAVATION	CU YDS	2,269
POROUS GRAN. EMBANKMENT	CU YDS	962

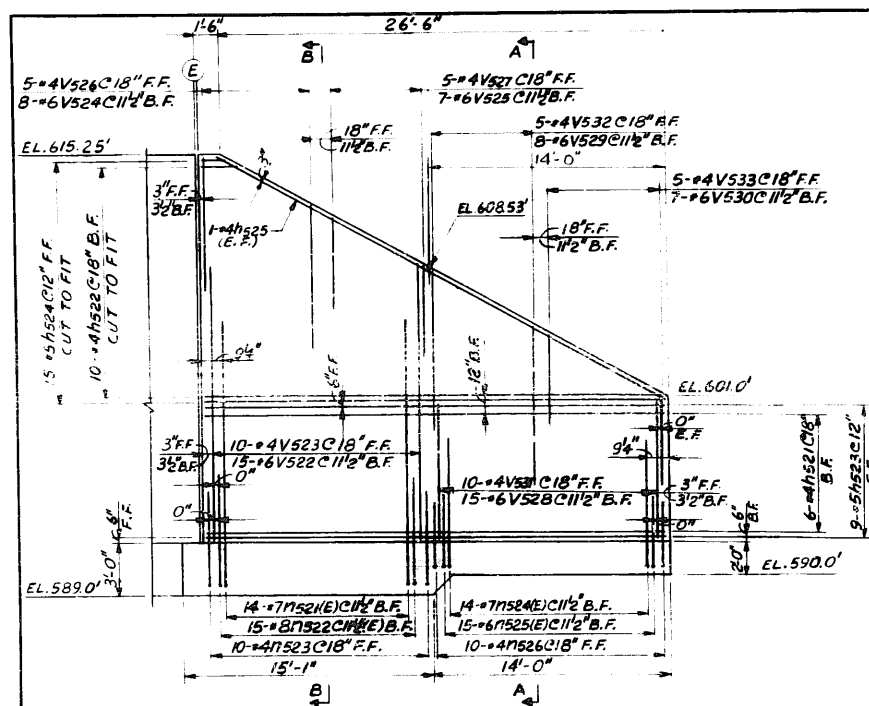
h501	29'-10"	1/3"	h502(E)	6'-0"	1/3"
h505	30'-10"	1/3"	h501(E)	7'-9"	1/3"
h502	30'-10"	1/3"	h601(E)	7'-9"	1/3"
h506	1'-6"	1/3"	V503	2'-6"	2'-6"
h504	1'-6"	1/3"	V603	2'-6"	2'-6"
			W520	11'-11"	11'-11"

(E)-INDICATES EPOXY COATED REBARS

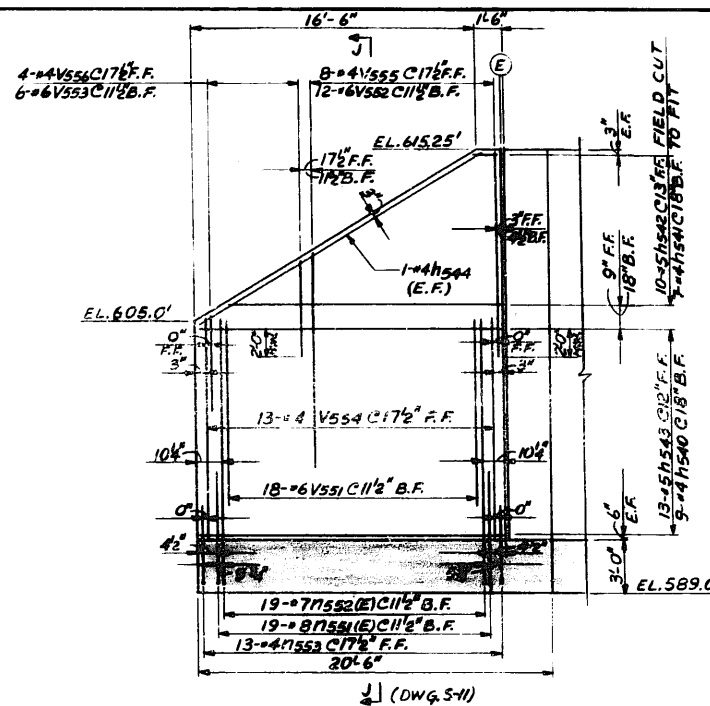
ILLINOIS DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT REINFORCEMENT
ILL 171/ARCHER AVE. OVER CP & W.R.R.
STRUCTURE NO. 016-2544

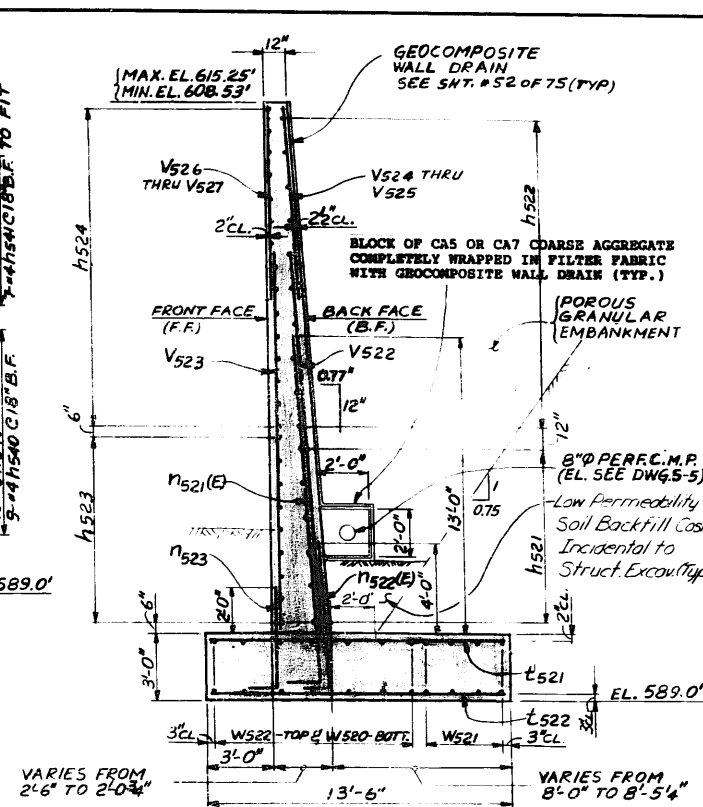
SCALE: VERT. HORIZ.
DATE: 5-11-87
DRAWN BY: L.S.
CHECKED BY: S.J.



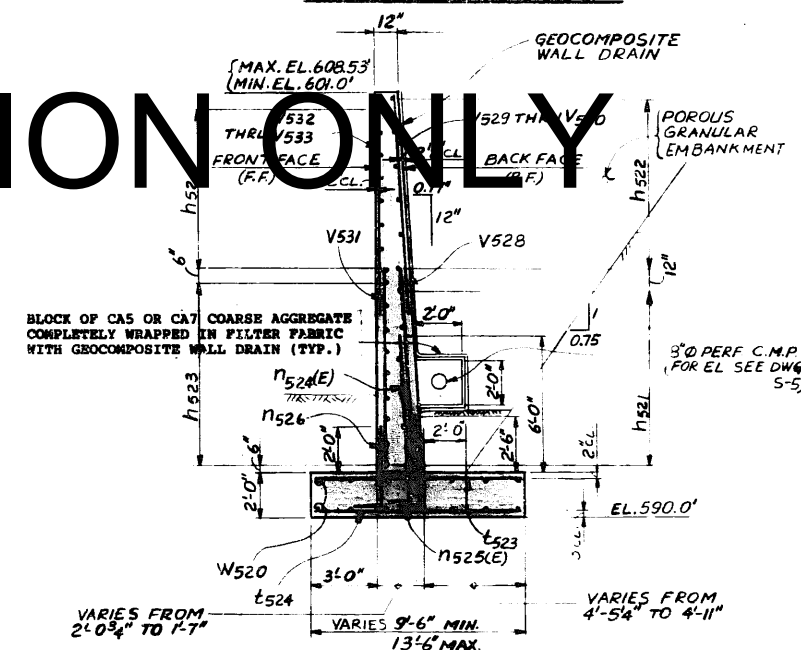
NORTHEAST WING WALL
LOOKING NORTH



SOUTHEAST WING WALL
LOOKING SOUTH



TYP. SECTION-B



TYP. SECTION-A

F A I R E E		SECTION		COUNT		TOTAL		SHEET	
FAU-3565		46-18-28VB-21R-85 COOK				75		61	
F.H.W.A. REG		ILLINOIS PROJECT				LL-17			
BILL OF MATERIALS									
SHT. 5-9									
BAR	NO	SIZE	LENGTH	SHAPE					
N521	6	#4	27'-8"						
N522	10	#4	27'-8"						
N523	9	#5	27'-8"						
N524	15	#5	27'-8"						
N525	2	#4	29'-8"						
N540	22	#4	17'-8"						
N541	7	#4	15'-8"						
N542	10	#5	17'-0"						
N543	13	#5	17'-8"						
N544	2	#4	19'-2"						
N521E	14	#7	17'-0"						
N522E	15	#8	8'-1"						
N523	10	#4	5'-6"						
N524E	14	#7	8'-6"						
N525E	15	#6	5'-3"						
N526	10	#4	4'-6"						
N551E	19	#8	8'-1"						
N552E	19	#7	1'-0"						
N553	13	#4	5'-6"						
V522	15	#6	16'-6"						
V523	10	#4	16'-6"						
V524	8	#6	8'-6"						
V525	7	#6	5'-0"						
V526	5	#4	8'-6"						
V527	5	#4	5'-3"						
V528	15	#6	9'-0"						
V529	8	#6	9'-3"						
V530	7	#6	5'-3"						
V531	10	#4	9'-0"						
V532	5	#4	9'-3"						
V533	5	#4	5'-3"						
V551	18	#6	11'-0"						
V552	12	#6	12'-0"						
V553	7	#6	5'-6"						
V554	13	#4	11'-0"						
V555	8	#4	12'-0"						
V556	5	#4	5'-9"						
ITEM			UNIT	QUANTITY					
REINF. BARS EPOXY COATED			LBS	2,242					
REINF. BARS			LBS	3,633					
CLASS "X" CONCRETE QUANTITY INCLUDED ON DWG. 5-7 & 5-8									

ITEM	UNIT	QUANTITY
REINF. BARS EPOXY COATED	LBS	2,242
REINF. BARS	LBS	3,633
CLASS "X" CONCRETE QUANTITY INCLUDED ON DWG. 5-7 & 5-8		

17521(E)	15' 9"	1' 3"	17524(E)	7' 9"	9"
17522(E)	6' 9"	1' 4"			
17523	4' 9"	9"			
17525(E)	4' 3"	12"			
17526	3' 9"	9"			

(E)-INDICATES EPOXY COATED REBAR S

PREPARED BY RACKOFF - EADS
CHICAGO, ILLINOIS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STAGE I NORTHEAST &
SOUTHEAST WING WALLS
REINFORCEMENT
ILL 171 ARCHER AVE. OVER CP & W.R.R.
STRUCTURE NO. 016-2544
SCALE: VERT. _____ DRAWN BY: L.S.
HORIZ. _____
DATE: 5-11-87 CHECKED BY: S.A.

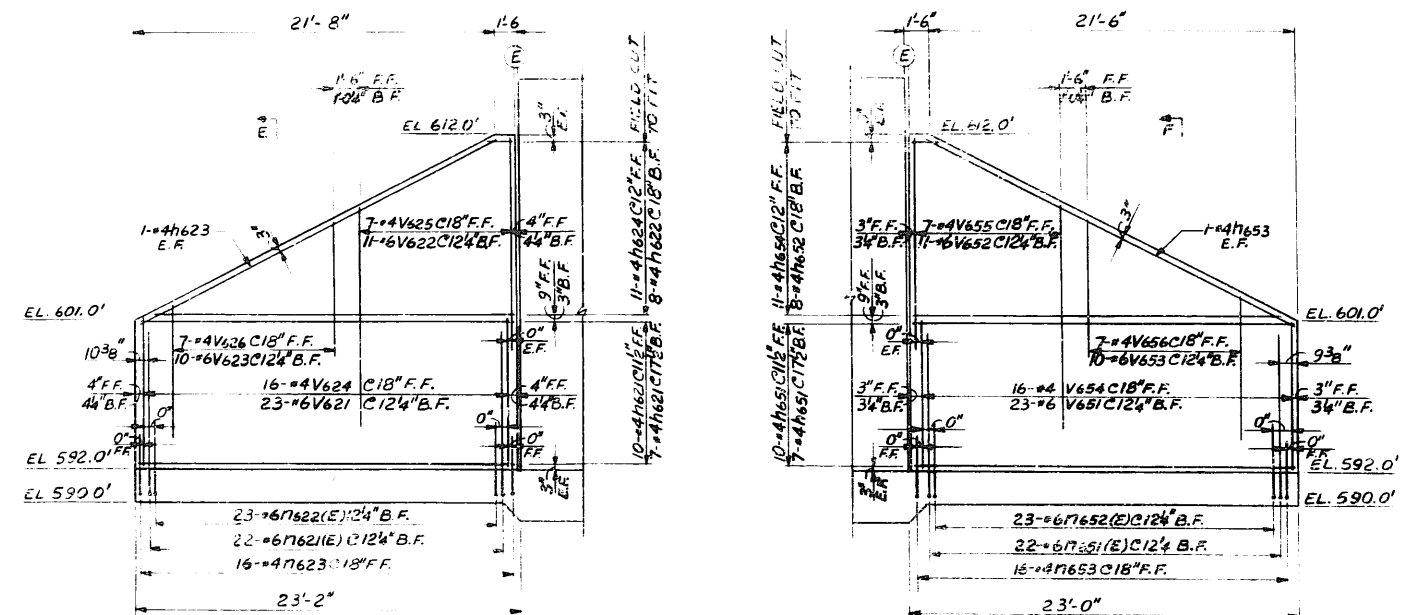
BILL OF MATERIALS

BAR	NO	SIZE	LENGTH	SHAPE
h621	17	#4	22'-9"	
h622	8	#4	22'-2"	
h623	2	#4	24'-2"	
h624	11	#4	21'-6"	
h651	17	#4	22'-7"	
h652	8	#4	22'-0"	
h653	2	#4	24'-0"	
h654	11	#4	21'-3"	
h621(E)	22	#6	11'-3"	
h622(E)	23	#6	5'-3"	
h623	16	#4	4'-6"	
h651(E)	22	#6	11'-3"	
h652(E)	23	#6	5'-3"	
h653	16	#4	4'-6"	
V621	23	#6	9'-0"	
V622	11	#6	12'-9"	
V623	10	#6	8'-0"	
V624	16	#4	9'-0"	
V625	7	#4	12'-9"	
V626	7	#4	8'-3"	
V651	23	#6	9'-0"	
V652	11	#6	12'-9"	
V653	10	#6	8'-0"	
V654	16	#4	9'-0"	
V655	7	#6	12'-9"	
V656	7	#6	8'-3"	

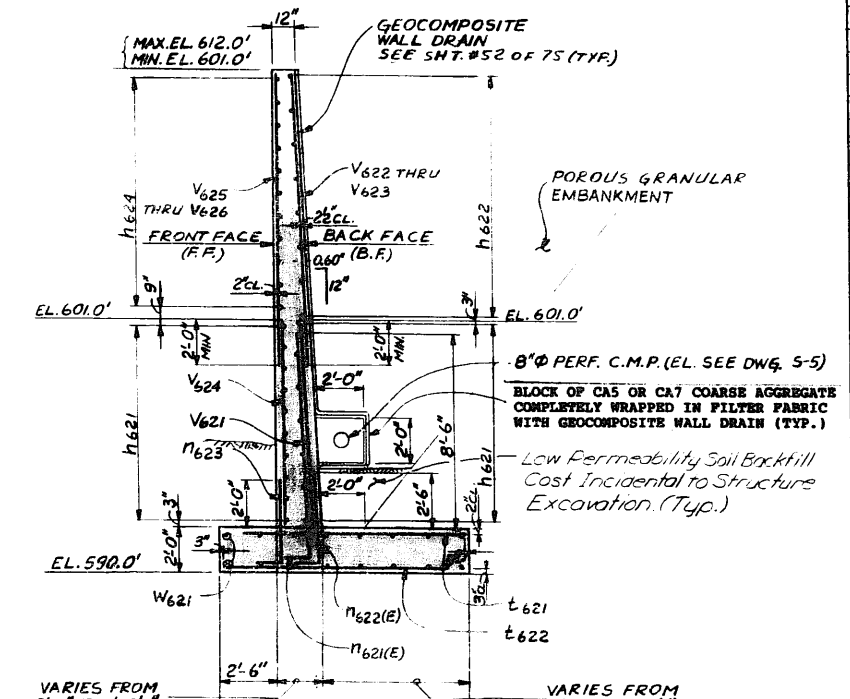
ITEM	UNIT	QUANTITY
REINF. BARS EPOXY COATED	LBS	1,106
REINF. BARS	LBS	3,021
CLASS "X" CONCRETE QUANTITY INCLUDED ON DWG. 5-7 & 5-8		

h621(E)	10'-3"	1'-0"
h651(E)	4'-3"	1'-0"
h622(E)	4'-3"	1'-0"
h652(E)	3'-3"	9"

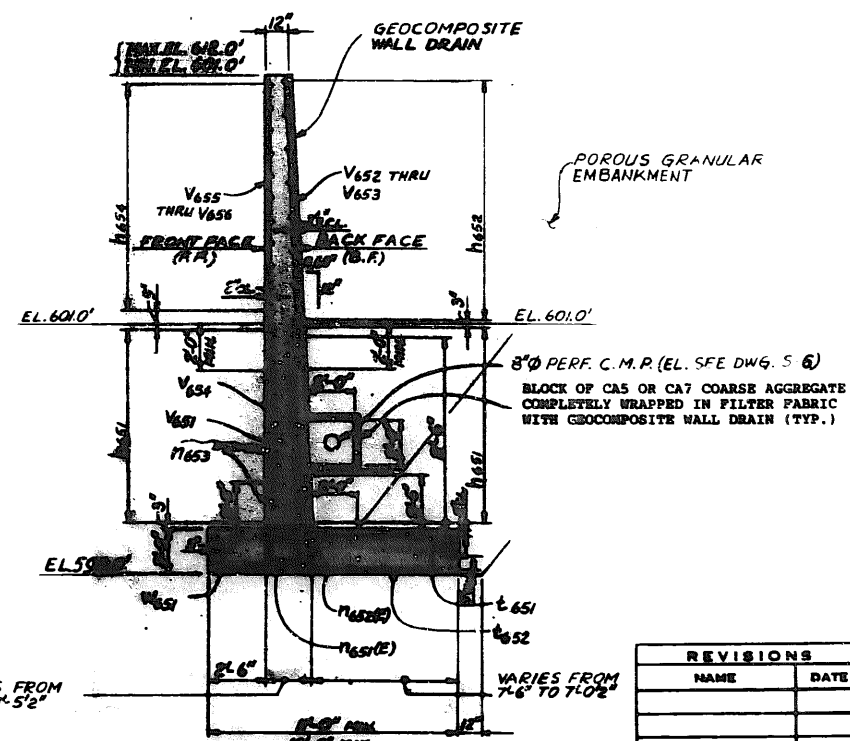
(E) - INDICATES EPOXY COATED REBARS



NORTH WEST WING WALL (LOOKING NORTH) ELEVATION REINFORCEMENT SOUTH WEST WING WALL (LOOKING SOUTH) ELEVATION REINFORCEMENT



TYP. SECTION - D

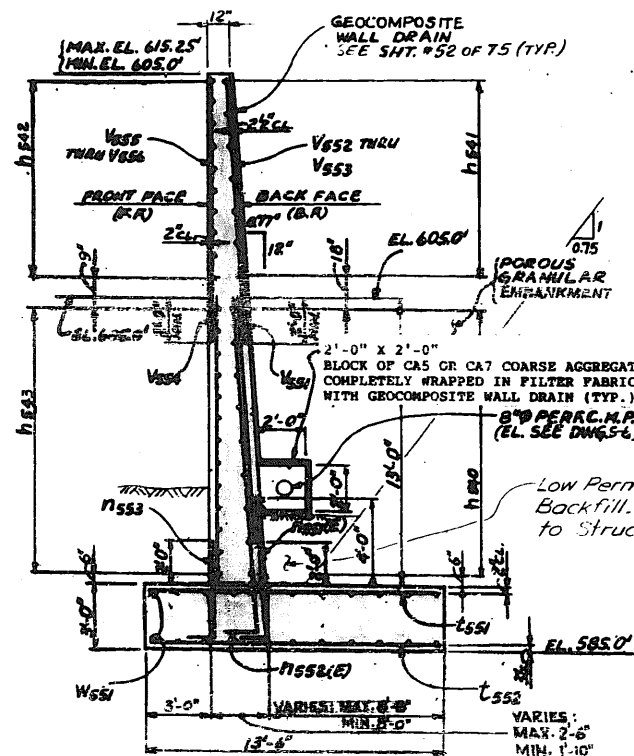


TYP. SECTION - F

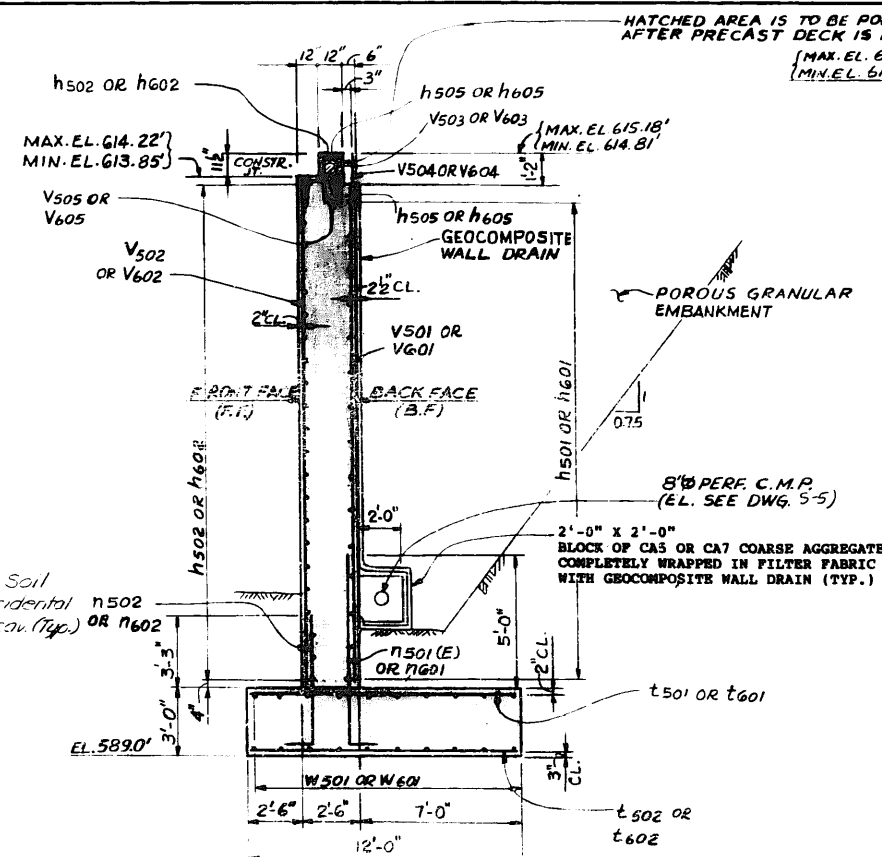
PREPARED BY RACKOFF - EADS
CHICAGO, ILLINOIS

REVISIONS	
NAME	DATE

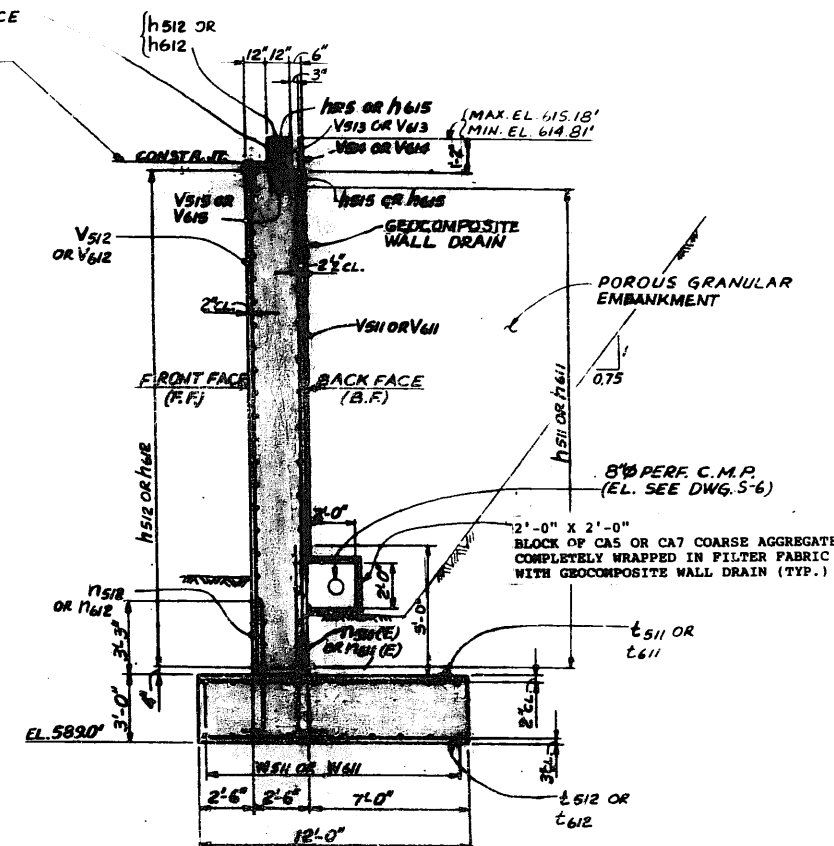
ILLINOIS DEPARTMENT OF TRANSPORTATION
STAGE II NORTHWEST & SOUTHWEST WING WALLS REINFORCEMENT
ILL 171/ARCHER AVE. OVER CP & W.R.R.
STRUCTURE NO. 046-2544
SCALE VERT HORIZ
DATE 5/1-87
DRAWN BY L. S.
CHECKED BY S. J.



TYP. SECTION-J



TYP. SECTION-C,D



TYP. SECTION-G,H

FOR INFORMATION ONLY

NOTE: ALL REBAR BEARING NUMBERS OF N-500'S ARE RELATED TO THE SECTION-C; ALL REBAR BEARING NUMBERS OF N-600'S ARE RELATED TO THE SECTION-D.

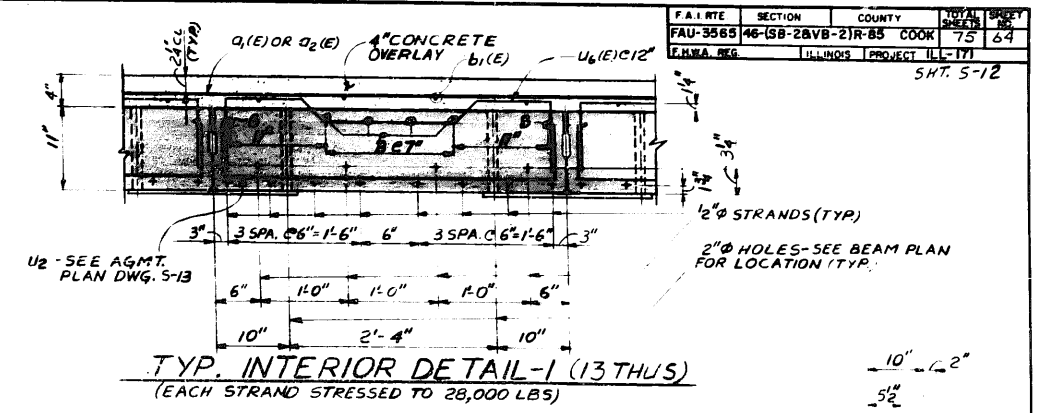
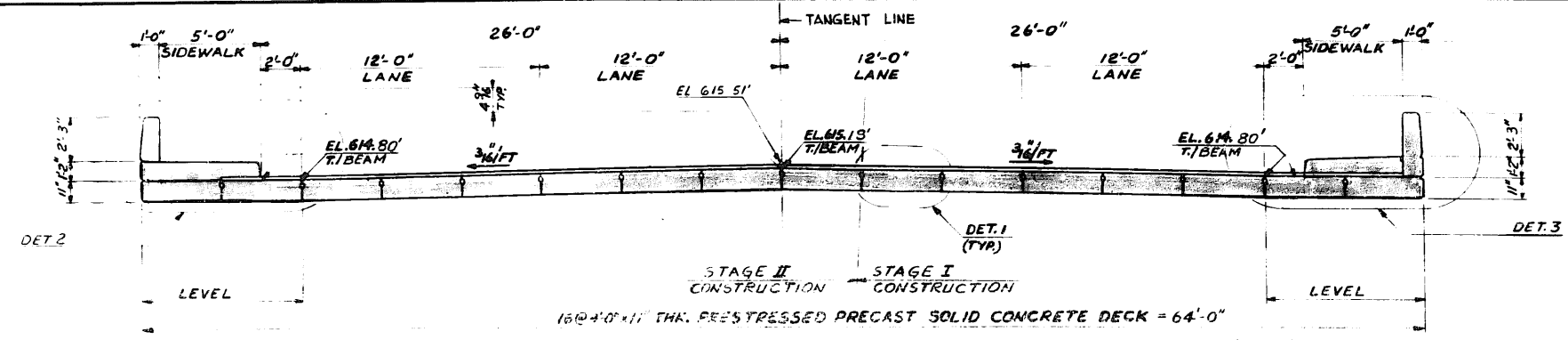
NOTE: ALL REBAR BEARING NUMBERS OF N-500'S ARE RELATED TO THE SECTION-G; ALL REBAR BEARING NUMBERS OF N-600'S ARE RELATED TO THE SECTION-H.

NOTE FOR SECTIONS J, C, D, G, H: BACKFILL COST IS INCIDENTAL TO STRUCTURE & STRUCTURE EXCAVATION.

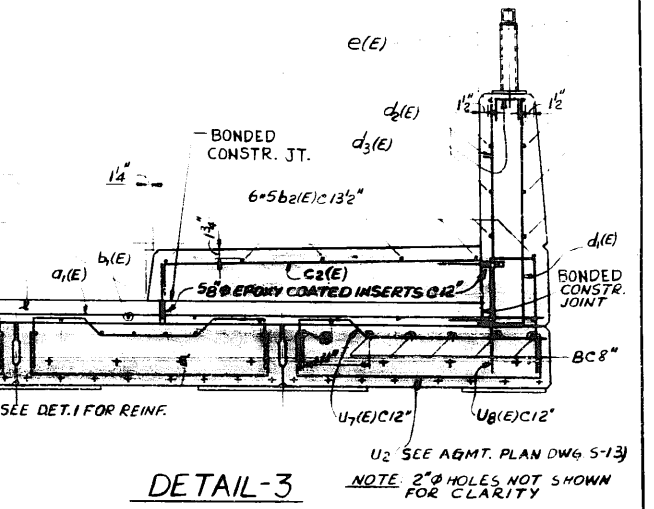
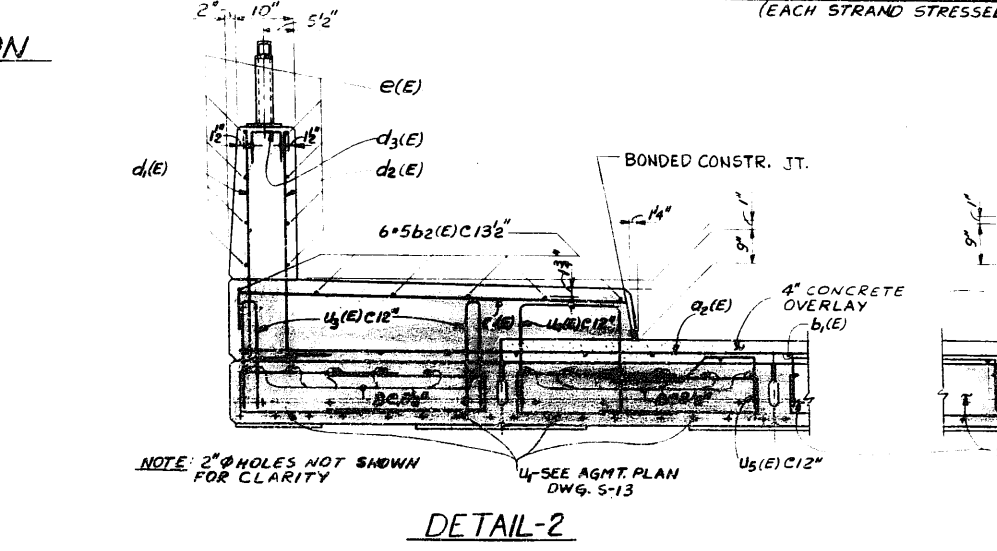
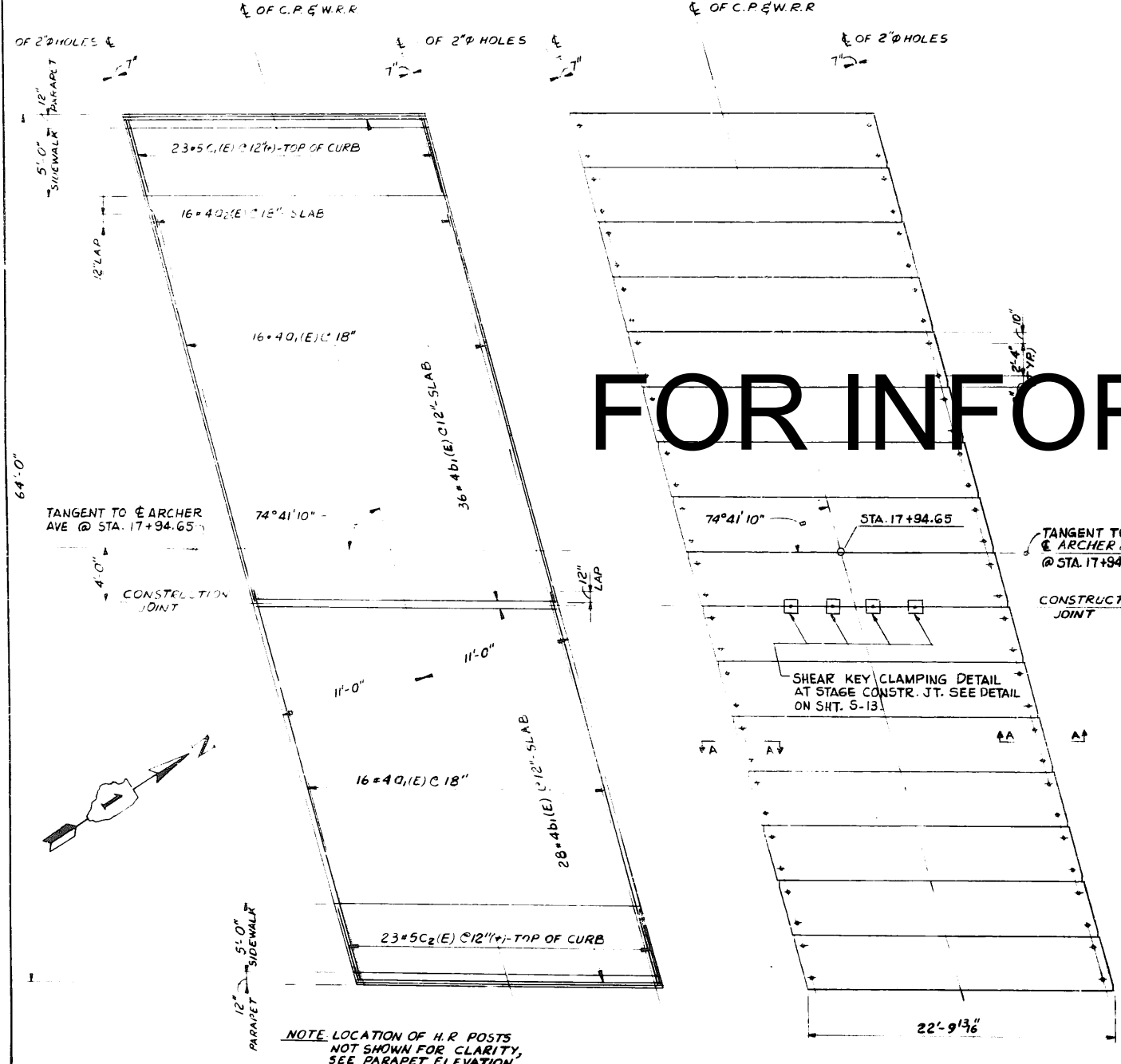
PREPARED BY RACKOFF - EADS
CHICAGO, ILLINOIS

REVISIONS	
NAME	DATE

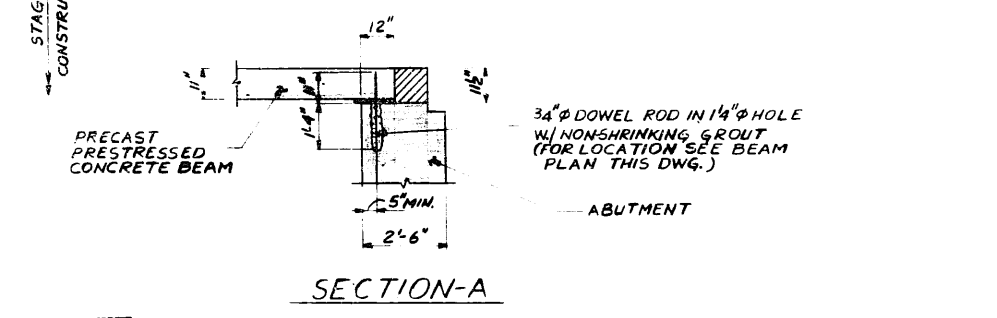
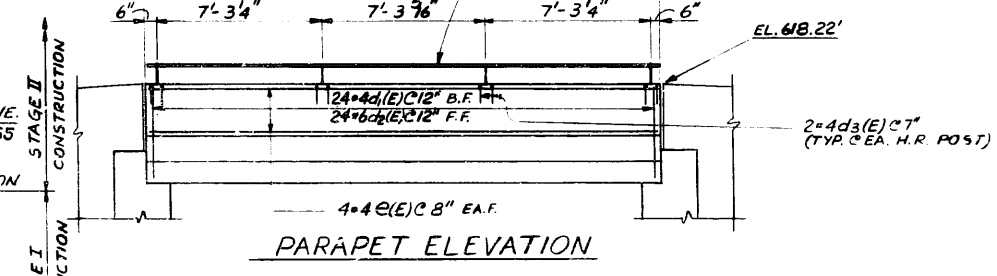
ILLINOIS DEPARTMENT OF TRANSPORTATION
ABUTMENTS AND MISCELLANEOUS
CROSS SECTIONS
ILL 171 ARCHER AVE. OVER CP & W.R.R.
STRUCTURE NO. 016-2544
SCALE VERT. HORIZ.
DATE 5-11-87
DRAWN BY L.S.
CHECKED BY S.J.



TYPICAL TRANSVERSE CROSS SECTION
(LOOKING NORTHEAST)



FOR INFORMATION ONLY



BILL OF MATERIALS

BAR	NO	SIZE	LENGTH	SHAPE
Q1(E)	32	#4	30'-0"	
Q2(E)	16	#4	8'-2"	
b1(E)	64	#4	22'-5"	
b2(E)	12	#5	22'-5"	
C1(E)	23	#5	6'-2"	
C2(E)	23	#5	5'-3"	
d1(E)	48	#4	4'-3"	
d2(E)	48	#6	4'-6"	
d3(E)	16	#4	2'-0"	
E(E)	32	#4	11'-1"	
ITEM				UNIT
REINF. BARS EPOXY COATED				LBS
				2,860
CROSS X CONCRETE				CU. YDS
				35

BAR	SHAPE	A	B
C1(E)		9"	5'-7"
C2(E)		6"	4'-9"
C3(E)		7"	3'-8"
C4(E)		10"	3'-8"
C5(E)		9"	6'-2"

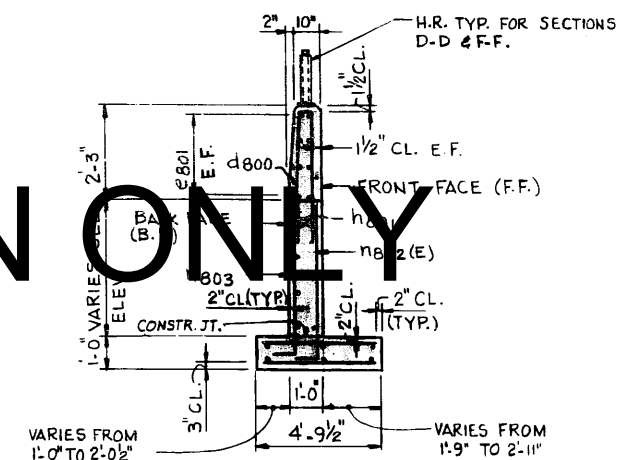
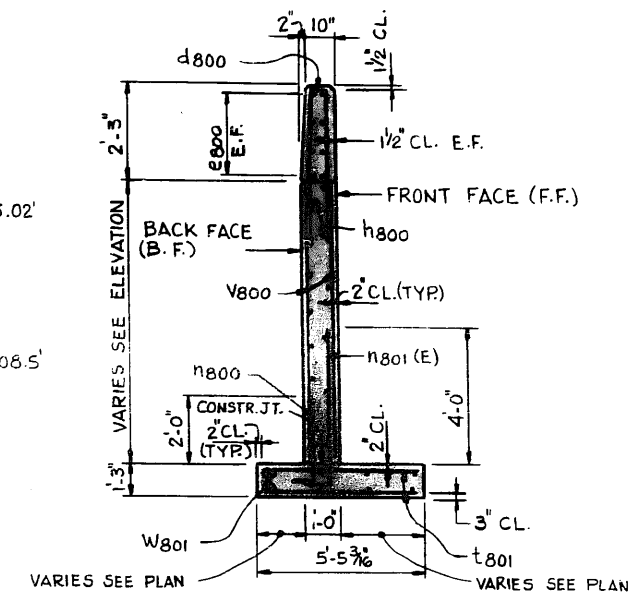
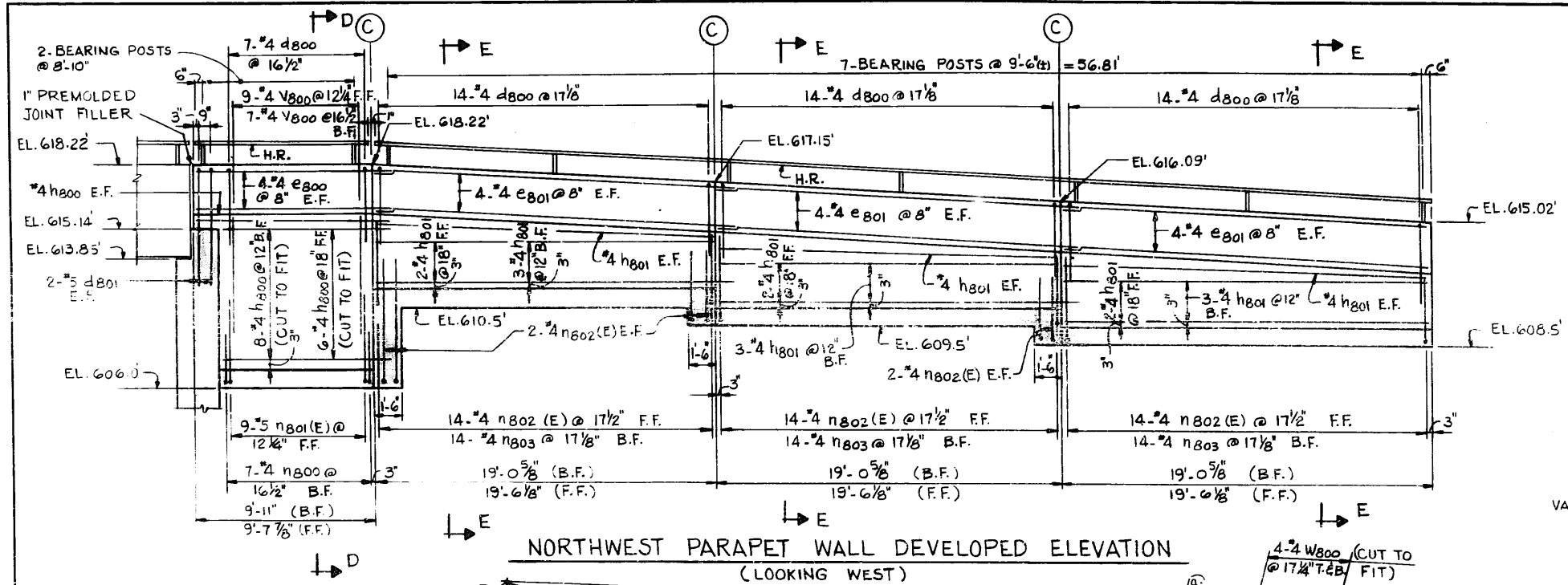
(E)-INDICATES EPOXY COATED REBARS

- NOTES**
- REINFORCEMENT SHALL BE EPOXY COATED.
 - ALL REINFORCING WHICH EXTENDS OUT OF PRESTRESSED CONCRETE BOX BEAMS SHALL BE EPOXY COATED.
 - PLACE ALL BOTTOM STIRRUPS ON TOP OF BOTTOM LAYER OF STRANDS.
 - THE CORN OF ALL "U" BARS ARE INCIDENTAL TO PRESTRESSED PRECAST CONCRETE DECK.
 - PRECAST CONCRETE DECKS HAVE BEEN ERECTED 1-1/4" HOLES SHALL BE DRILLED INTO ABUTMENT AND 3/4" DOWEL RODS GROUTED IN PLACE AND ALLOW TO CURE 24 HRS. PRIOR TO GROUTING OTHER DECK.
 - REINFORCEMENT SHALL BE EPOXY COATED.
 - REINFORCEMENT SHALL BE EPOXY COATED FOR 12 INTERIOR DECK BEAMS - 5/8" UNIFORM REINFORCEMENT CAGES FOR 2 OUTSIDE DECK BEAMS - 1/16" 0 DECK BEAMS.
 - WORK SHALL BE DONE WITH SHEET 8-13.

REVISIONS

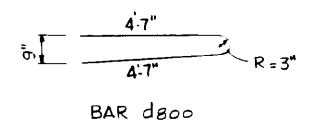
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DECK PLAN, CROSS SECTIONS AND DETAILS
ILL 171/ARCHER AVE. OVER C.P. & W.R.R.
STRUCTURE SN. 016-2544
DRAWN BY L.S.
CHECKED BY S.J.
DATE 5-11-87

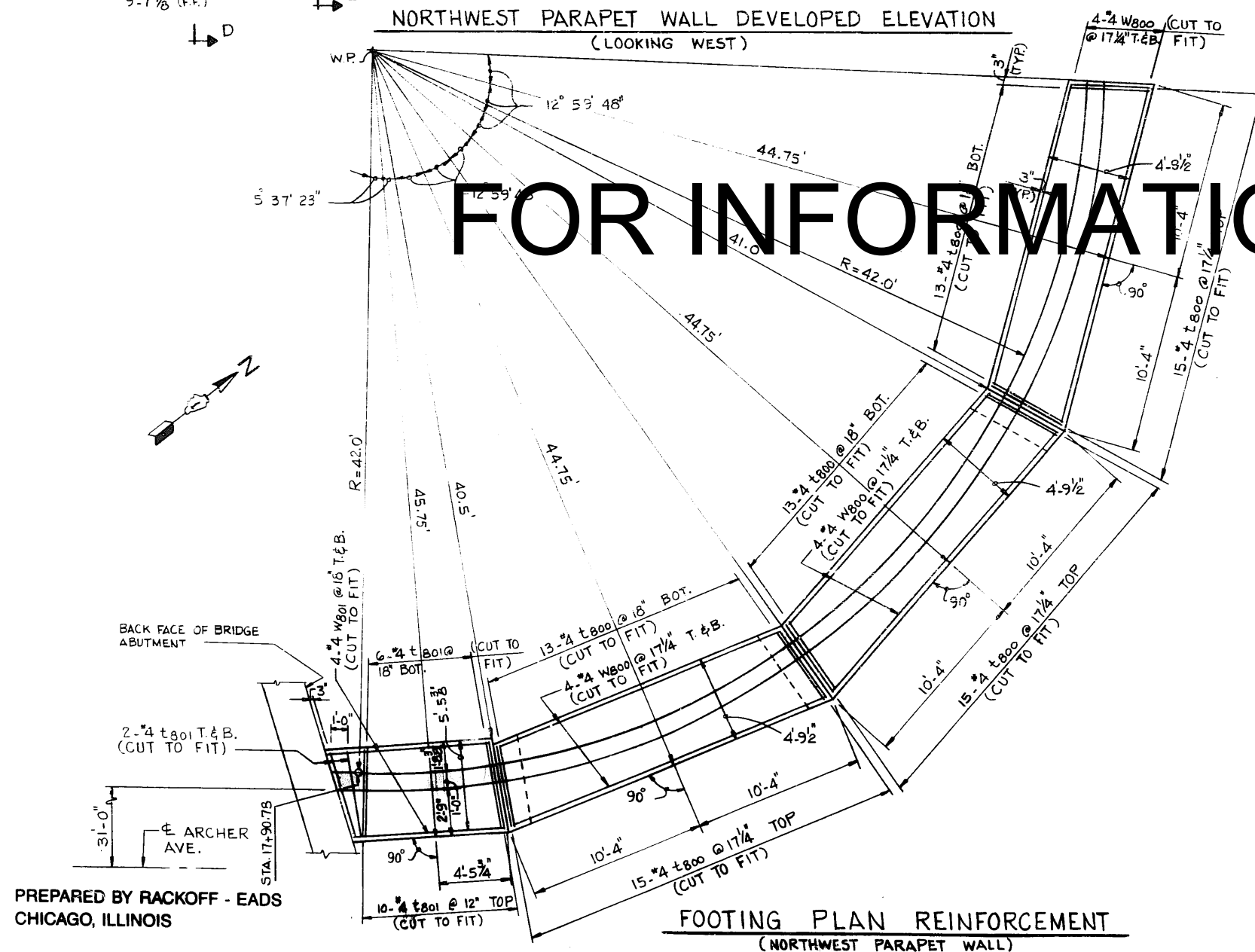


F.A.I. INC.		SECTION		COUNTRY	
PAU-3045		40-22-23VE		23-85	
P.A.M. INC.		FLAVOR		PRODUCT 11-171	
SHT. 5/3					
BILL OF MATERIALS					
BAR	NO.	SIZE	LENGTH	SHAPE	
d800	49	#4	9'-9"		
d801	4	#5	7'-4"		
e800	8	#4	10'-8"		
e801	16	#4	20'-1"		
e802	8	#4	19'-7"		
h800	16	#4	9'-7"		
h801	21	#4	19'-6"		
n800	7	#4	3'-7"		
n801(E)	9	#5	5'-8"		
n802(E)	42	#4	4'-11"		
n803	42	#4	4'-11"		
t800	84	#4	4'-5"		
t801	16	#4	5'-1"		
v800	16	#4	8'-6"		
w800	24	#4	20'-4"		
w801	8	#4	9'-4"		
ITEM			UNIT	QUANTITY	
REINFORCEMENT BARS			LBS	2040.	
REINFORCEMENT BARS (EPOXY COATED)			LBS	190.	
CLASS "X" CONCRETE			CU. YDS.	31.	

BAR	A	B	SHAPE
d801	6'-9"	7"	
n800	3'-0"	7"	
n801(E)	5'-0"	8"	
n802(E)	4'-4"	7"	
n803	4'-4"	7"	



NOTE:
 (C) - INDICATES CONTRACTION JOINT (FOR TYP. DETAIL SEE DWG. S-19)



PREPARED BY RACKOFF - EADS
CHICAGO, ILLINOIS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

NORTHWEST PARAPET
WALL

ILL 171 ARCHER AVE. OVER CP & W.R.R.
STRUCTURE NO. 016-2544

SCALE: VERT
HORIZ

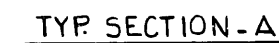
DATE 5-11-87

DRAWN BY S.I.

CHECKED BY J.J.

BAR	A	B	SHAPE
d701	5'-5"	7"	
d702	5'-5"	7"	
n700	3'-0"	8"	
n701(E)	4'-11"	10"	
n702	7'-3"	8"	
n703(E)	3'-8"	8"	
n704	3'-8"	8"	
n705	3'-9"	8"	
n706(E)	6'-7"	8"	
n707	6'-7"	8"	

REVISIONS	
NAME	DATE



PREPARED BY RACKOFF - EADS
CHICAGO, ILLINOIS

ILLINOIS DEPARTMENT OF TRANSPORTATION
SOUTHEAST AND SOUTHWEST
PARAPET WALL

ILL 171 ARCHER AVE. OVER CP & W.R.
STRUCTURE NO. 016-2544

SCALE: VERT
HORIZ
DATE 5-11-87

DRAWN BY S.I.
CHECKED BY S.I.

NOTES

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 Pedestrian Railing.

Hollow structural steel tubing 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 M183.

Notes

All posts, railing, splices, anchor devices and bent plates shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. All bolts, nuts and washers shall be galvanized in accordance with AASHTO M-232.

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.

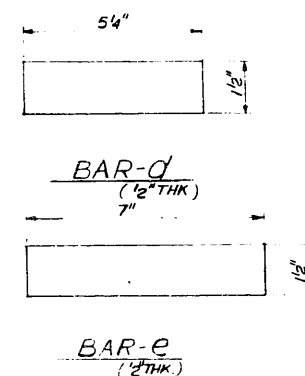
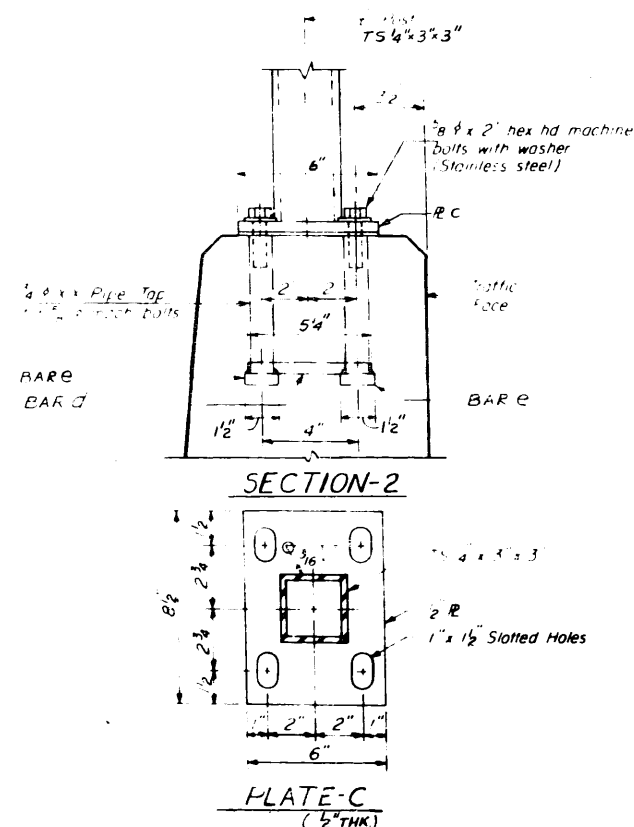
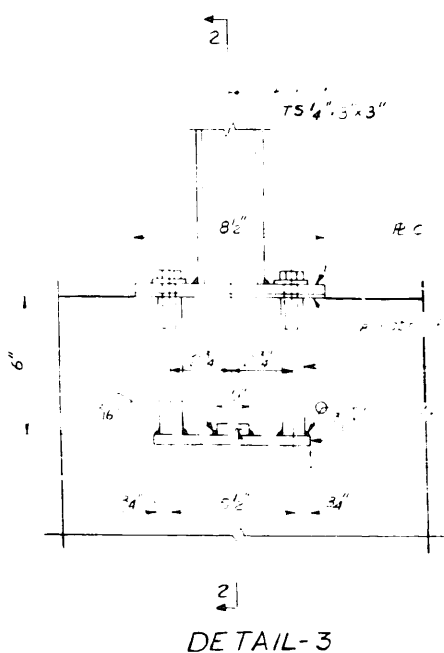
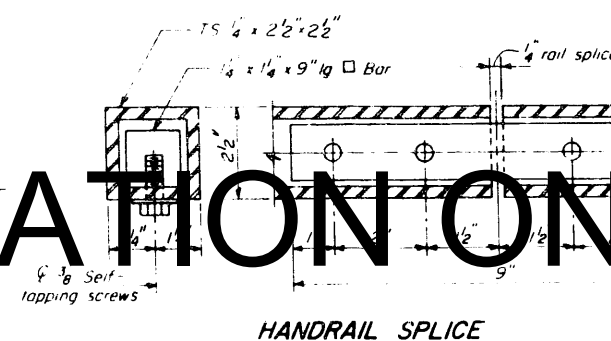
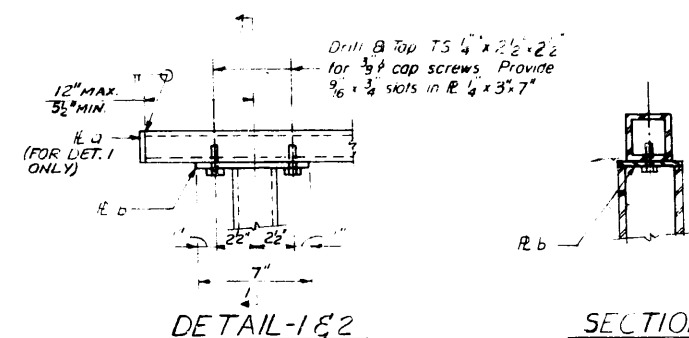
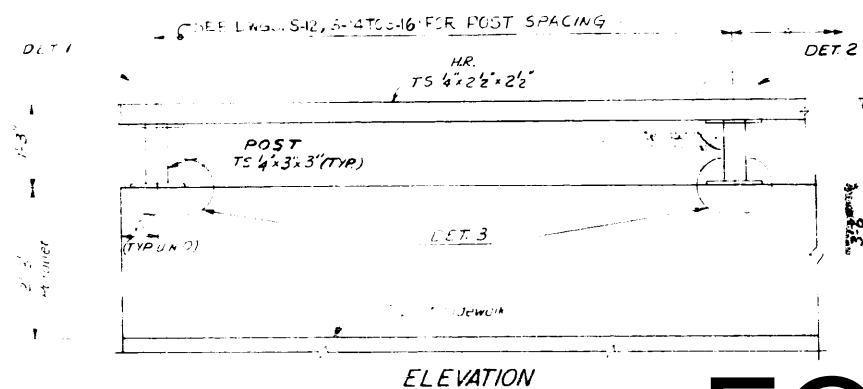
BILL OF MATERIAL

ITEM	QUANTITY
Pedestrian Railing	228.0

REVISIONS

NAME	DATE

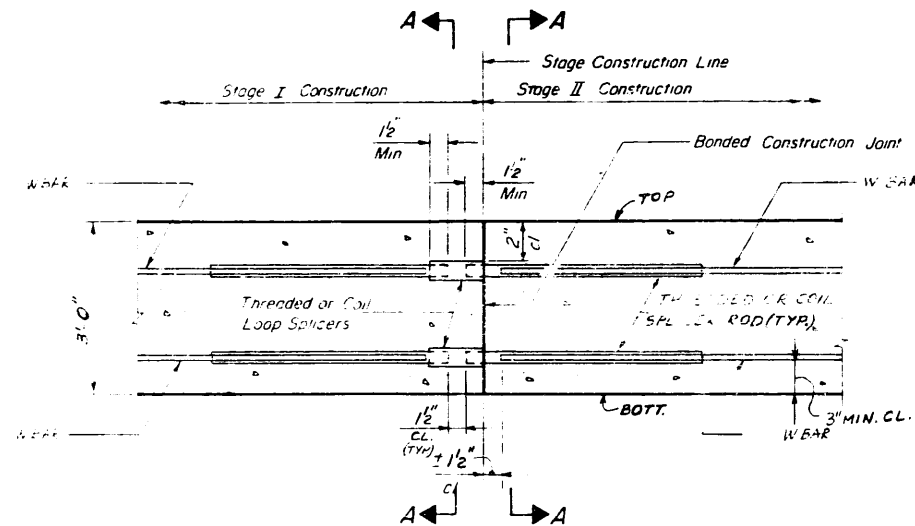
ILLINOIS DEPARTMENT OF TRANSPORTATION	
PEDESTRIAN RAIL	
ILL 171/ARCHER AVE. OVER CP & W.R.R.	
STRUCTURE NO. 016-2544	
SCALE	VERT. 1"=4'
DATE	5-17-87
DRAWN BY	
CHECKED BY	



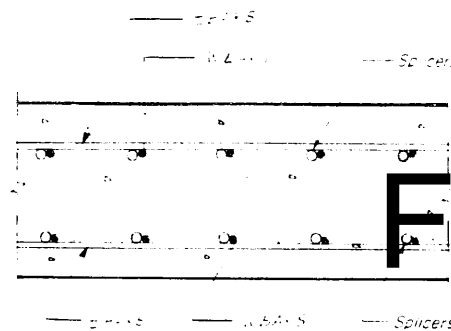
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.L.R.T.E.	SECTION	COUNTY	NO. OF SHEETS	SHEET NO.
PAU-5808	46-88-28V8-2M-88	COOK	75	70
F.H.W.A. ILL.	ILLINOIS	PROJECT ILL-171		

SHT 5-18



SECTION THRU FOOTING
OF ABUTMENT
(TRANSVERSE REIN. NOT SHOWN FOR CLARITY)



SECTION A-A

SPLICER DETAILS

(NO. OF SPLICER RODS
REQ'D @ NORTH & SOUTH
ABUTMENT = 80)

THIS SPLICER BAR IS THE
SAME DIAMETER AS THE
BAR SPLICED.

Rolled Thread Dowel Bar

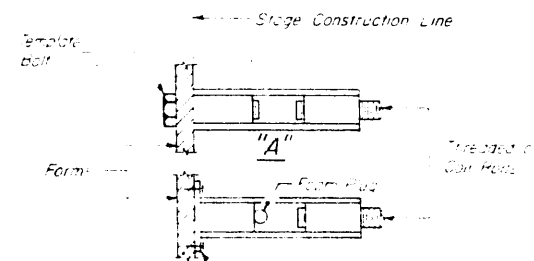
"ONE PIECE"

Wire Connector

WELDED SECTIONS

SPLICER ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM
A563, Grade C, D or BH may be used



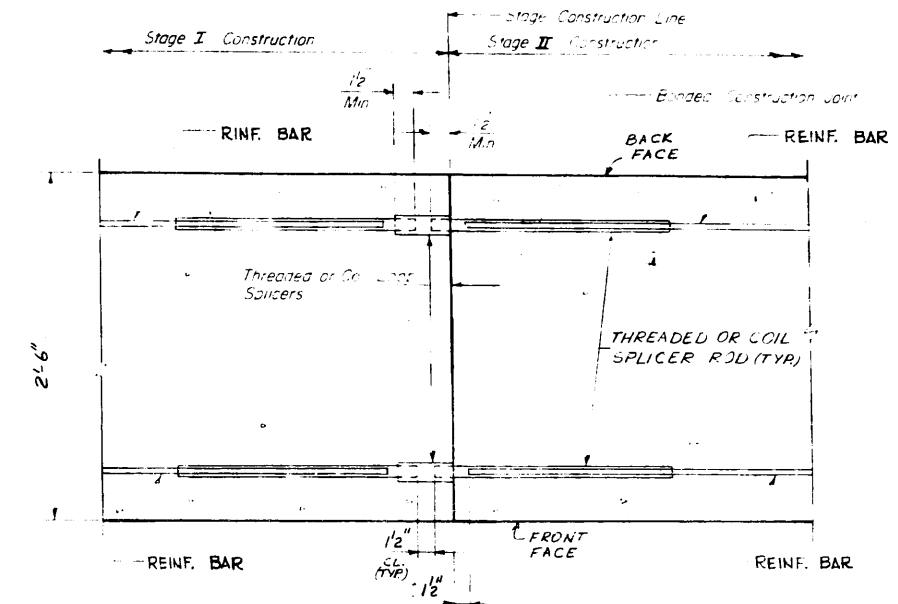
INSTALLATION AND SETTING METHODS

- Set splicer by means of a template bolt
- Set splicer by nailing to wood forms or cementing to steel forms

NOTES

- Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 25 percent of the yield strength of the lapped reinforcement bars
 - Steel Splicer rods shall be of minimum 50 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal or greater than that of the lapped reinforcement bars
 - Splicer rods shall extend minimum 1/2 inches into the couplers
 - Reinforcement bars shall be lapped and tied to the splicer rods
 - Splicer (coupler) assembly in the slab shall be evenly coated in accordance with 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 splicer (coupler) assembly satisfies the following requirements:
 - Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
 - Minimum Pull-out Strength = $1.25 \times f_{s_{100}} \times A_t$
(Tension in kips)
 Where f_y = yield strength of lapped reinforcement bars in k.s.
 $f_{s_{100}}$ = Allowable tensile stress in lapped reinforcement bars in k.s. (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars
 * 28 day concrete
- Typical Splicer (Coupler) Assembly Sizes

#5 bar lap with 3/8" Splicer (Coupler) x 2" O" Splicer Rods	Minimum Capacity = 23.0 kips-tension Minimum Pull-out Strength = 9.2 kips-tension
#6 bar lap with 7/8" Splicer (Coupler) x 2 1/4" Splicer Rods	Minimum Capacity = 33.1 kips-tension Minimum Pull-out Strength = 13.3 kips-tension
#4 bar lap with 5/8" Splicer (Coupler) x 1 1/8" Splicer Rods	Minimum Capacity = 16.2 Kips-tension Minimum Pull-out Strength 6.5 Kips-tension



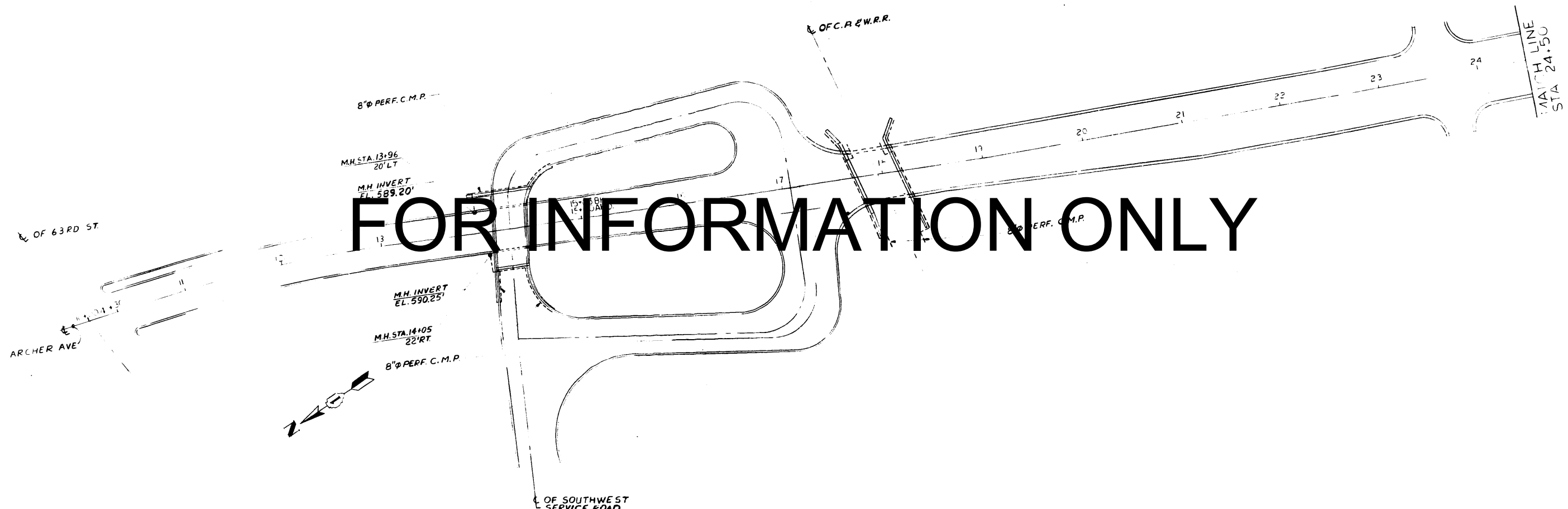
SECTION THRU ABUTMENT STEM
(VERTICAL REIN. NOT SHOWN FOR CLARITY
2" O" SPLICER RODS REQ'D @
NORTH & SOUTH ABUTMENT = 148)

2. COST OF BAR SPLICERS AND SPLICER'S RODS IS INCIDENTAL TO
REINFORCEMENT BARS.

**CLEARANCE TO SPLICER SHALL BE THE SAME AS CLEARANCE TO REINF. BARS.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION	
BAR SPLICER (COUPLER) DETAILS AT STAGE CONSTRUCTION	
ILL 171 ARCHER AVE. OVER CP & W.R.R. STRUCTURE NO. 016-2544	
DATE 5-11-87	DRAWN BY CHECKED BY

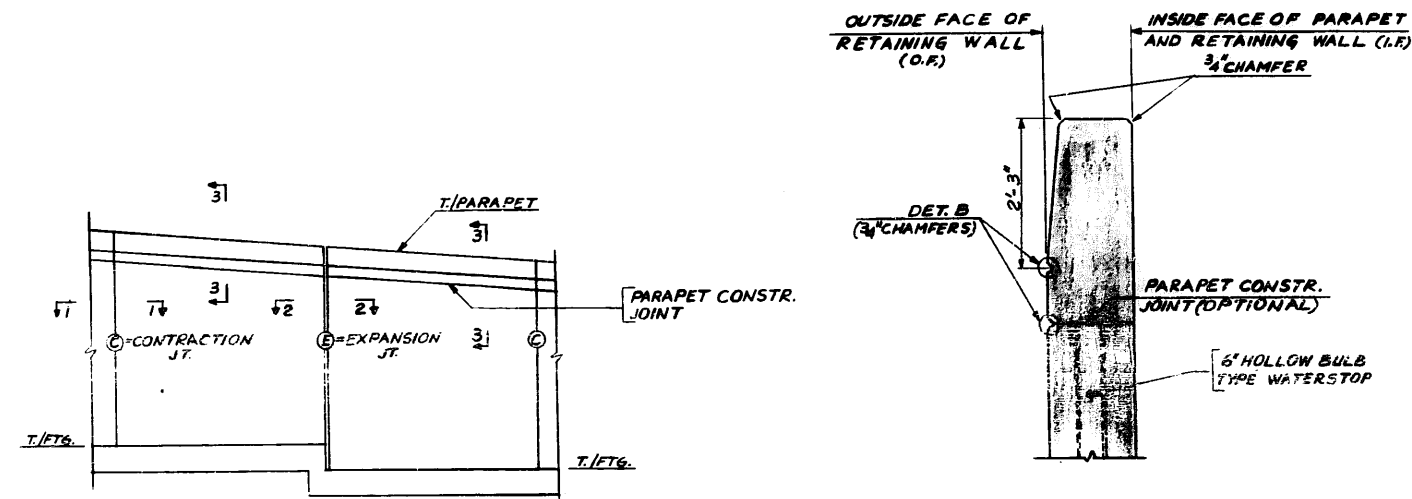


FOR INFORMATION ONLY

PREPARED BY RACKOFF-EADS
CHICAGO, ILLINOIS

REVISIONS	
NAME	DATE

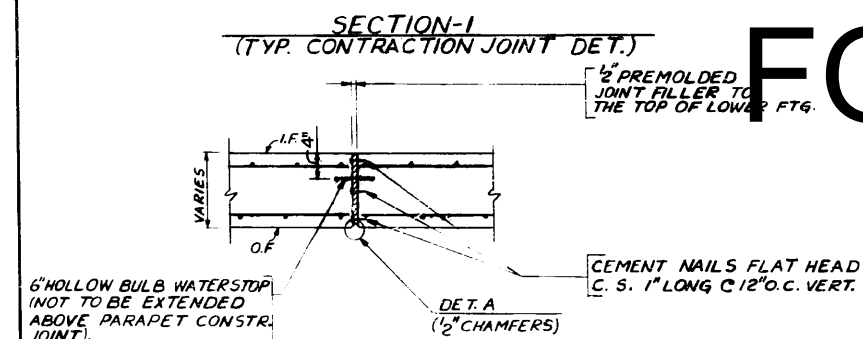
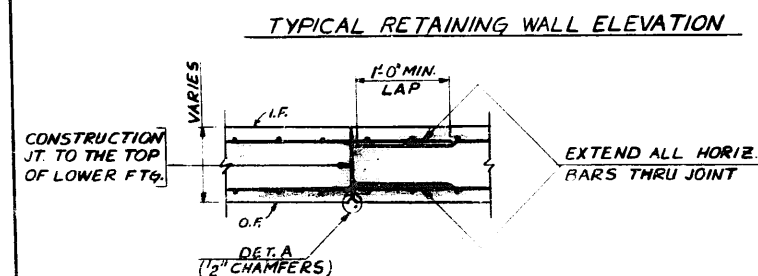
ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN OF DRAINAGE OF
SOUTHWEST SERVICE BRIDGE
STRUCTURE SNO.016-2543 AND
ILL. 17 ARCHER AVE. OVER CP & W.R.R.
STRUCTURE NO.016-2544
PHASE I CONSTRUCTION
SCALE: VERT. DRAWN BY L.S.
 HORIZ. CHECKED BY S.J.
DATE 5-1-87



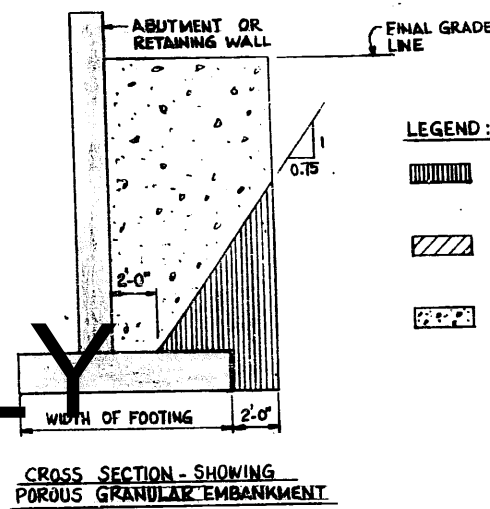
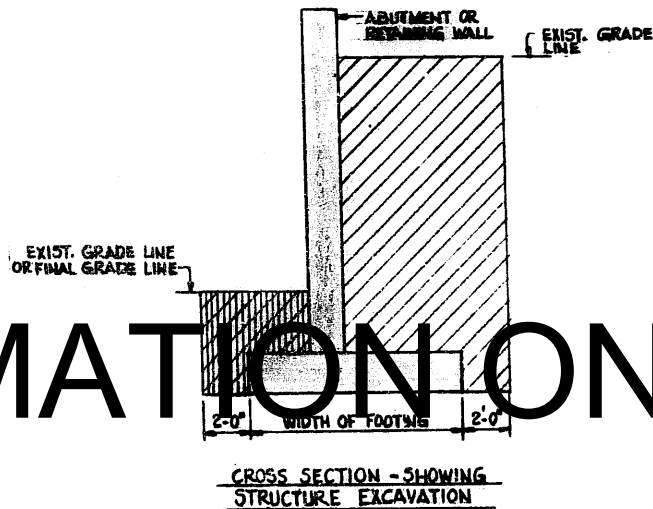
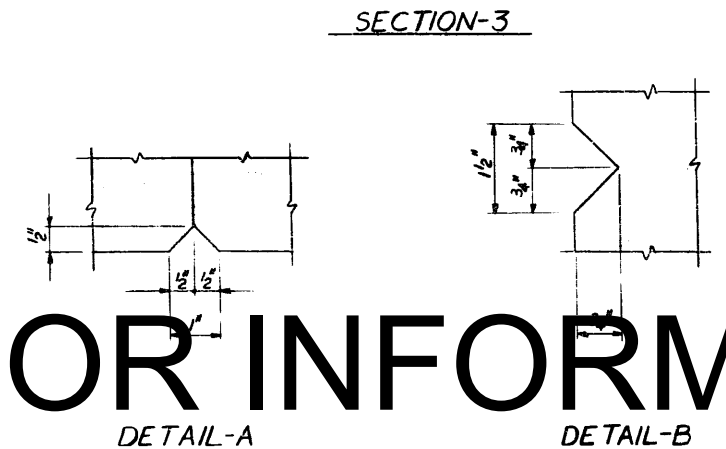
REINFORCEMENT LAP TABLE
(UNLESS SHOWN OTHERWISE)

SIZE	LAP
#4	1'-0"
#5	2'-2"
#6	2'-7"
#7	3'-5"
#8	4'-0"
#9	5'-5"

- RETAINING WALL NOTES:
1. EXPANSION AND CONTRACTION JOINTS: ALL LABOR AND MATERIALS, INCLUDING HOLLOW BULB TYPE WATERSTOPS, PREMOULDED JOINT FILLER, CEMENT NAILS, ETC. SHALL BE CONSIDERED INCIDENTAL TO THE COST OF CLASS X CONCRETE.
 2. JOINTS IN FOOTING: CONSTRUCTION JOINTS IN FOOTING SHALL BE DETERMINED BY THE ENGINEER BUT PLACED NOT CLOSER THAN 5'-0" FROM EXPANSION JOINT IN WALL. NO EXPANSION JOINTS ARE ALLOWED IN FOOTING.



FOR INFORMATION ONLY



- LEGEND:
- EARTH BACKFILL, COST INCIDENTAL TO STRUCTURE AND STRUCTURE EXCAVATION
 - STRUCTURE EXCAVATION
 - POROUS GRANULAR EMBANKMENT

REVISIONS	
NAME	DATE