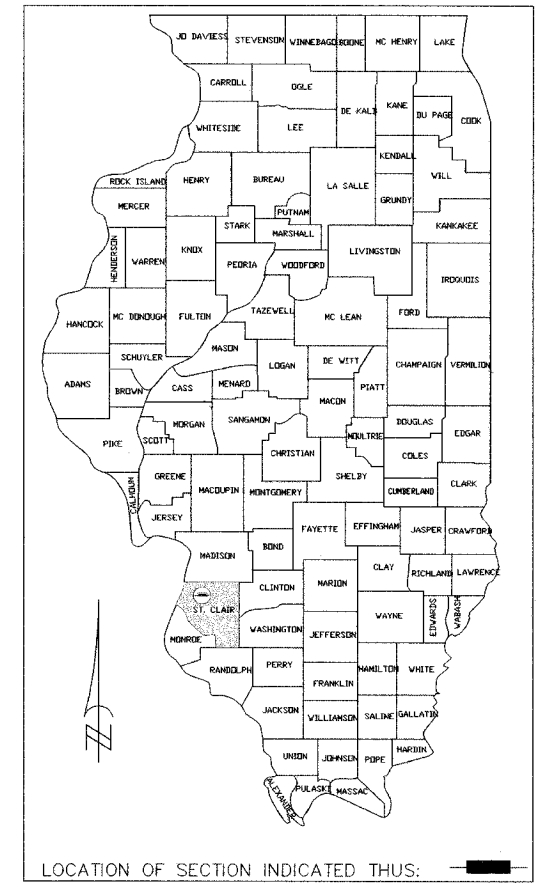


SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	CH 34	ST. CLAIR	1 OF 22
FHWA REG. NO. 7 ILLINOIS		PROJ: BRM-5011(188)	
FEDERAL AID PROJECT		CONTRACT 97280	

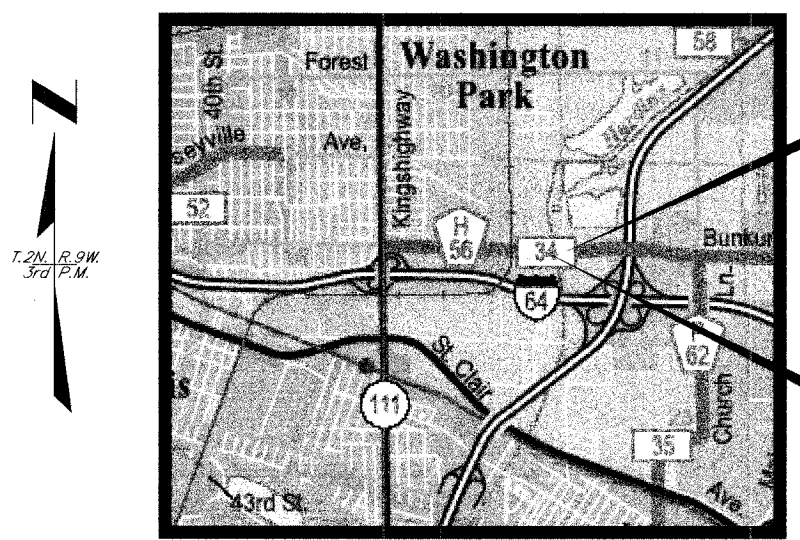
- INDEX TO SHEETS
- 1 COVER SHEET
 - 2 GENERAL NOTES, TYPICAL SECTIONS
 - 3-4 PLAN AND PROFILE
 - 5 R.O.W. & EASEMENTS
 - 6 PIPE & INLET DETAILS
 - 7 LEVEE DETAILS
 - 8 TEMPORARY ACCESS ROAD DETAILS
 - 9 RELOCATED GATE POSTS AND GATE DETAILS
 - 10 GENERAL PLAN & ELEVATION
 - 11 SUPERSTRUCTURE
 - 12 PPC DECK BEAM DETAILS
 - 13 ABUTMENT
 - 14 BRIDGE RAILING
 - 15 NAME PLATE
 - 16 PILE DETAILS
 - 17-22 CROSS SECTIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
LOCAL AGENCY IMPROVEMENT
FEDERAL AID B.R.R.P. PROJECT
FAU ROUTE 9160
BUNKUM ROAD (COUNTY HIGHWAY 34)
PROJECT NO. BRM-5011(188)
JOB NO. C-98-338-04
ST. CLAIR COUNTY
SECTION 02-00161-02-BR



SUMMARY OF QUANTITIES X081-2A

CODE NO.	ITEM	UNIT	QUANTITY
20200100	EARTH EXCAVATION	CU YD	880
20300100	CHANNEL EXCAVATION	CU YD	97
20400800	FURNISHED EXCAVATION	CU YD	4830
25000300	SEEDING, CLASS 3	ACRE	1.4
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	126
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	126
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	126
25100115	MULCH, METHOD 2	ACRE	1.4
28000300	TEMPORARY DITCH CHECKS	EACH	3
28000500	INLET AND PIPE PROTECTION	EACH	3
28000900	FENCE (EROSION CONTROL)	FOOT	715
28100707	STONE DUMPED RIPRAP, CLASS A4	SQ YD	333
28200200	FILTER FABRIC	SQ YD	333
Δ 30200650	PROCESSING MODIFIED SOILS 12"	SQ YD	2122
Δ 30201500	LIME	TON	59
Δ 40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	41.1
Δ 40701801	HOT-MIX ASPHALT PAVEMENT (FULL DEPTH), 6"	SQ YD	369
Δ 40701866	HOT-MIX ASPHALT PAVEMENT (FULL DEPTH), 9 1/4"	SQ YD	1959
Δ 44000100	PAVEMENT REMOVAL	SQ YD	2122
Δ 48100500	AGGREGATE SHOULDERS, TYPE A 6"	SQ YD	1293
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
* 50105210	REMOVE EXISTING CULVERTS	FOOT	250
50300225	CONCRETE STRUCTURES	CU YD	25.4
50300280	CONCRETE ENCASEMENT	CU YD	4.0
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	2640
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2700
50901050	STEEL RAILING TYPE SM	FOOT	160
51201600	FURNISHING STEEL PILES HP 12 X 53	FOOT	1100
51202305	DRIVING PILES	FOOT	1100
51203600	TEST PILE STEEL HP 12 X 53	EACH	1
51204650	PILE SHOES	EACH	12
51500100	NAME PLATES	EACH	1
54213870	STEEL END SECTIONS 15"	EACH	3
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	293.3
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	800
60100955	PIPE DRAINS 15"	FOOT	390
60218400	MANHOLES, TYPE A, 4' DIA, TYPE 1 FRAME, CLOSED LID	EACH	2
60801015	FLAP GATE 15"	EACH	3
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
* 63100169	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)	EACH	4
66700205	PERMANENT SURVEY MARKERS, TYPE 1	EACH	4
* 67100100	MOBILIZATION	L SUM	1
* 70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
Δ 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1842
* 78201000	TERMINAL MARKER-DIRECT APPLIED	EACH	4
* X0301872	RELOCATE EXISTING SIGN STRUCTURE	L SUM	1
* X0329905	RELOCATE GATE POSTS AND GATE	EACH	3
* XX004374	TEMPORARY ACCESS ROAD	SQ YD	424
** Z0076600	TRAINEES	HOUR	500

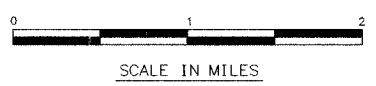


SECTION 02-00161-02-BR
ENDS STATION 207+37.00

PROPOSED STRUCTURE IS AN
80 FT. LONG, SINGLE SPAN,
PRECAST-PRESTRESSED
CONCRETE DECK BEAM
STRUCTURE ON HP 12X53
STEEL PILING. THE DECK
BEAMS ARE 33" IN DEPTH.

SECTION 02-00161-02-BR
BEGINS STATION 199+21.00

TOTAL LENGTH OF PROJECT = 816 ft : 0.154 MILE



ROADWAY CLASSIFICATION : MINOR ARTERIAL
CURRENT ADT : 1413
DESIGN SPEED : 50 MPH
DESIGN FREQUENCY : 20 YEAR

STANDARDS

000001-04	631032-03
280001-03	635006-02
515001-02	667101
542401	702001-06
602401-01	BLR 21-6
604001-02	

CALL JOINT UTILITY LOCATING INFORMATION FOR
EXCAVATORS (J.U.L.I.E.) BEFORE DIGGING 800-892-0123

CANTEN TOWNSHIP T.2N., R.9W.
S.E. 1/4 OF THE N.E. 1/4 SECTION 15
N.E. 1/4 OF THE S.E. 1/4 SECTION 15

March 13, 2007

These plans were prepared by me or by a full-time member of my staff working under my personal supervision.



Darrell Cates

DARRELL I. CATES, P.E.
County Engineer
License Number 062-042908
License Expiration Date: November 30, 2007

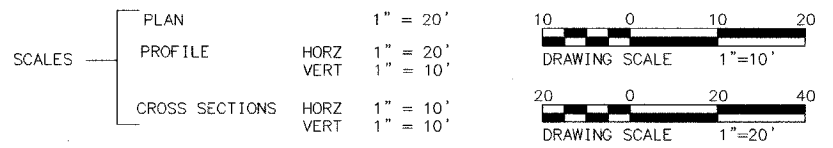
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED March 13, 2007
Darrell Cates
LOCAL AGENCY OFFICIAL

PASSED 3-19, 2007
Deanne Oberlin
DISTRICT ENGINEER OF LOCAL ROADS & STREETS

Releasing for Bid March 19, 2007
Based on Limited Review
Mary C. Lamie
Mary C. Lamie, PE
DEPUTY DIRECTOR OF HIGHWAYS, REGION FIVE ENGINEER

PLOT DATE: 3/07



GENERAL NOTES

- UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SAID UTILITIES SHALL BE LOCATED PRIOR TO GRADING OR CONSTRUCTION OF IMPROVEMENTS.
- ALL MATERIALS DEEMED SALVAGEABLE BY THE ENGINEER SHALL REMAIN THE PROPERTY OF ST. CLAIR COUNTY. ALL OTHER MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR, AT HIS OWN EXPENSE.
- THE FOLLOWING ITEMS AND ESTIMATED QUANTITIES SHALL BE USED THROUGHOUT THIS PROJECT:
 1.4 ACRE, SEEDING CLASS 3; 126 POUND, NITROGEN FERTILIZER NUTRIENT; 126 POUND PHOSPHOROUS FERTILIZER NUTRIENT; 126 POUND, POTASSIUM FERTILIZER NUTRIENT; 1.4 ACRE, MULCH, METHOD 2; 715 FOOT, FENCE (EROSION CONTROL); 59 TON, LIME; 41.1 TON HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70; 369 SQ.YDS., HOT-MIX ASPHALT PAVEMENT (FULL DEPTH), 6"; 1959 SQ.YDS., HOT-MIX ASPHALT PAVEMENT (FULL DEPTH), 9 1/4"; 1293 SQ.YD., AGGREGATE SHOULDERS, TYPE A 6";
- SEEDING DATES:
 SPRING -- MARCH 1 TO JUNE 1 FALL -- AUGUST 1 TO NOVEMBER 15
 SEEDING WILL NOT BE PERMITTED OUTSIDE THE LIMITS SHOWN ABOVE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. FERTILIZER NUTRIENTS SHALL BE APPLIED AT THE RATE OF 270 POUNDS PER ACRE. THE PERCENT OF THE TOTAL WEIGHT OF THE READY MIX MATERIAL SHALL BE 33%, % NITROGEN, 33%, % PHOSPHORIC ACID AND 33%, % WATER SOLUBLE POTASH. MULCH SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE.
- THE FOLLOWING UTILITY COMPANIES MAY HAVE FACILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION.

SBC 203 GOETHE ST. 1ST FLOOR COLLINSVILLE, IL 62234 (618) 346-6422	AMEREN U.E. 500 EAST BROADWAY EAST ST. LOUIS, IL 62201 (618) 482-2238	CENTERPOINT ENERGY 4500 WEST 61ST ST. LITTLE ROCK, AR 72209 (501) 377-4614
---	--	---
- THE FOLLOWING FACTORS WERE USED TO DETERMINE THE REQUIRED AMOUNT OF MATERIALS NEEDED.

LIME	55 LBS/(SQ YD)(FT)
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	112 LBS/SQYD/IN THICK
- THE CONTRACTOR SHALL NOT BE ALLOWED TO SET THE DECK BEAMS UNTIL THE STEEL RAILING HAS BEEN DELIVERED TO THE JOB SITE OR TO THE CONTRACTORS YARD. PROOF OF SUCH DELIVERY MUST BE PRESENTED TO THE ENGINEER, AT HIS REQUEST, PRIOR TO THE PLACEMENT OF THE BEAMS.
- THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

LOCATION	BRIDGE DECK	MAIN LINE	MAIN LINE	MAIN LINE
MIXTURE USE	SURFACE COURSE	FULL DEPTH, LOWER BINDER	FULL DEPTH, TOP BINDER	FULL DEPTH, SURFACE
AC/PG	PG 64-22	PG 64-22	PG 64-22	PG 64-22
RAP % (MAX)	10%	15%	15%	10%
DESIGN AIR VOIDS	4.0% @ Ndes=70	4.0% @ Ndes=70	4.0% @ Ndes=70	4.0% @ Ndes=70
MIX COMPOSITION (GRADATION MIXTURE)	IL-9.5/IL-12.5	IL-19.0	IL-19.0	IL-9.5/IL-12.5
FRICTION AGG.	MIXTURE C			MIXTURE C
MIXTURE WEIGHT	112.0 lb/sq yd/in	112.0 lb/sq yd/in	112.0 lb/sq yd/in	112.0 lb/sq yd/in

FLEXIBLE PAVEMENT STRUCTURAL DESIGN INFORMATION

STRUCTURAL DESIGN TRAFFIC: YEAR = 2015
 PV = 1114 SU = 238 MU = 134
 ROAD CLASSIFICATION: CLASS III
 PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE:
 P = 50% S = 50% M = 50%
 TRAFFIC FACTOR: ACTUAL TF = 0.78 AC TYPE = PG
 AC GRADE: BINDER = PG64-22 SURFACE = PG64-22
 SUBGRADE SUPPORT RATING: SSR = FAIR
 (STA 199+21 TO 207+37)

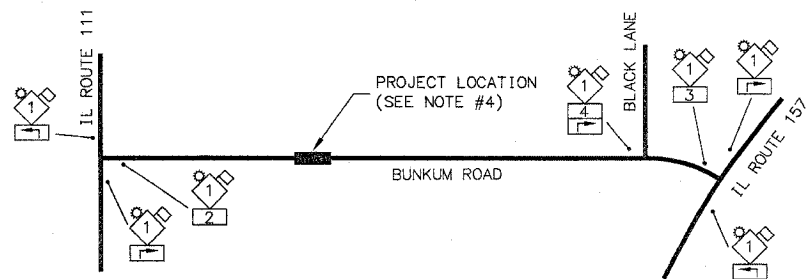
TRAFFIC CONTROL PLAN

NOTES

- TYPE A FLASHING WARNING LIGHTS SHALL BE USED ON EACH ADVANCE WARNING SIGN.
- ALL ADVANCE WARNING SIGNS SHALL BE A MINIMUM OF 48" x 48" AND HAVE A BLACK LEGEND ON AN ORANGE REFLECTORIZED BACKGROUND.
- ALL TYPE III BARRICADES SHALL HAVE TWO TYPE A FLASHING WARNING LIGHTS MOUNTED ON TOP OF EACH BARRICADE.
- SEE STANDARD BLR 21 FOR TRAFFIC CONTROL DETAIL AT THE BRIDGE LOCATION.

LEGEND

- ROAD CLOSED AHEAD W20-3(0)
- SUPPLEMENTAL PLATE: 1 MILE
- SUPPLEMENTAL PLATE: 2 MILES
- SUPPLEMENTAL PLATE: 1.5 MILES



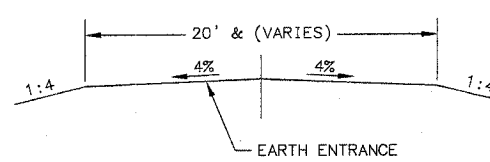
	INITIALS	DATE
DESIGNED	WES	11/04
CHECKED		
DRAWN	WES	11/04
CHECKED		
PREPARED BY	ST. CLAIR COUNTY	

DRAWING FILE: general notes and typical sections.dwg

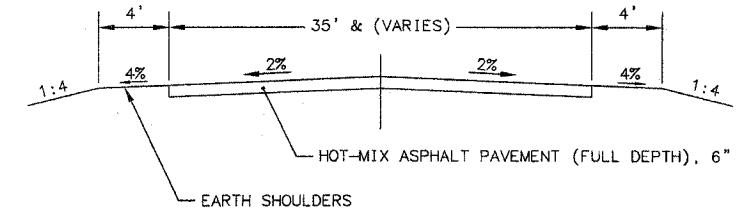
SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	CH 34	ST. CLAIR	2 OF 22
FHWA REG. NO. 7 ILLINOIS		PROJ: BRM-5011(188)	
GEN NOTES & TYP SECT		CONTRACT 97280	

EARTHWORK SCHEDULE

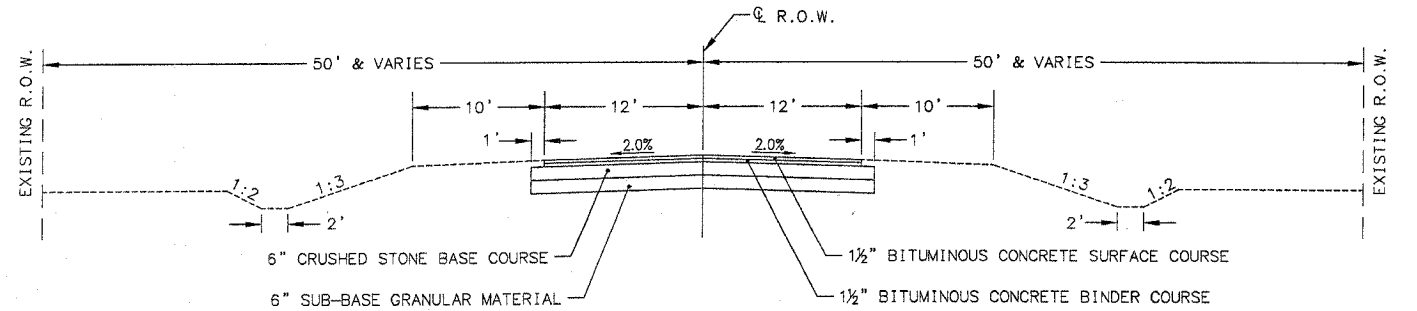
LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	ROADWAY EXCAVATION	RIPRAP EXCAVATION	EXCAVATION ADJUSTED FOR SHRINKAGE (25%)	EMBANKMENT	EARTHWORK BALANCE
	CUBIC YARDS	CUBIC YARDS	CUBIC YARDS	CUBIC YARDS	CUBIC YARDS	CUBIC YARDS	CUBIC YARDS
STA.199+21 - STA.207+37	880	97	884	204	1549	6379	-4830



TYPICAL SECTION OF FIELD ENTRANCE
(STA 205+87.00 RT)

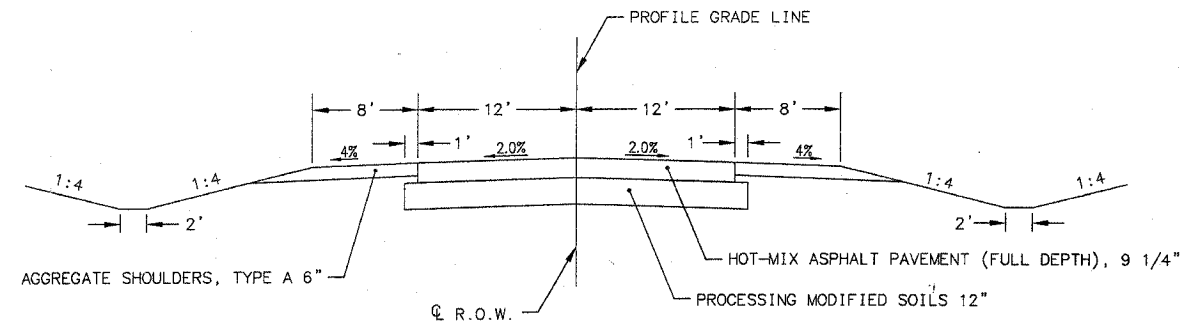


TYPICAL SECTION OF COMMERCIAL ENTRANCE
(STA 205+64.39 LT)



EXISTING TYPICAL SECTION

STA. 199+21.00 TO STA. 207+37.00



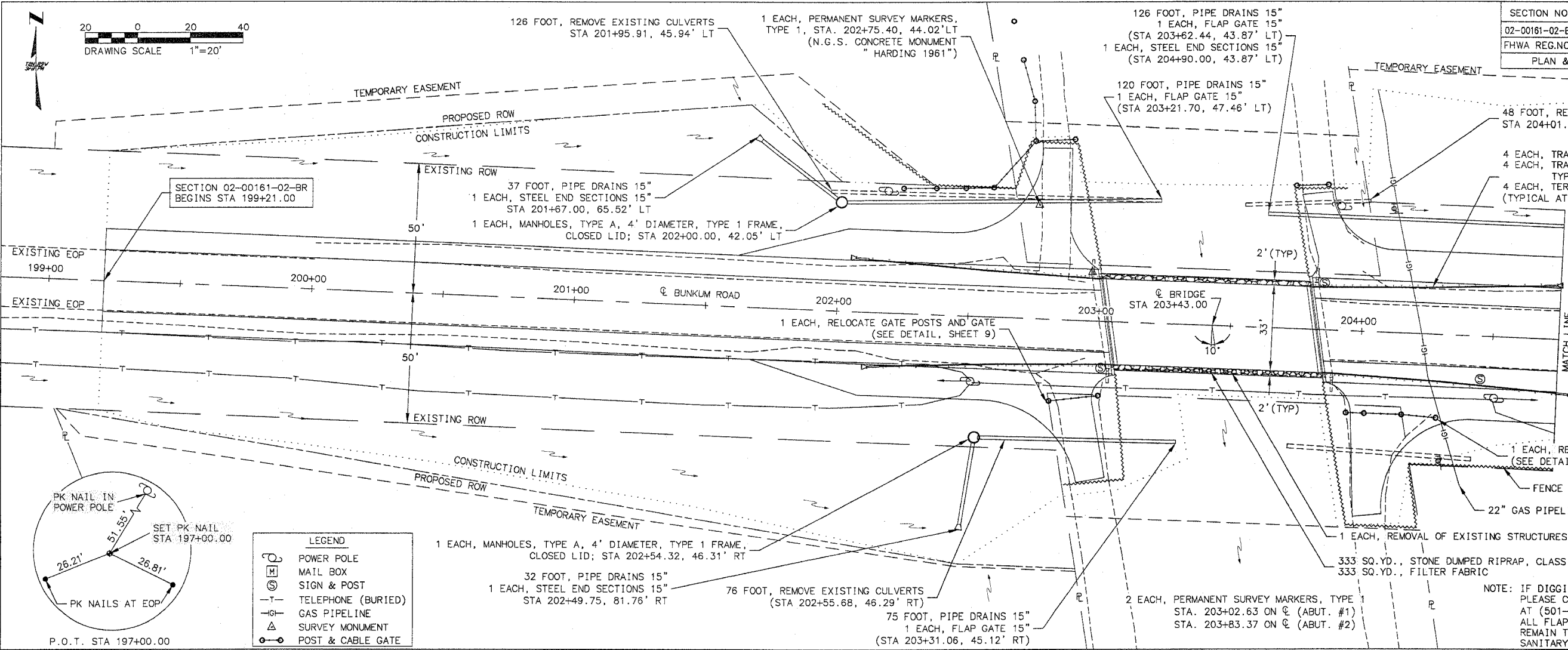
PROPOSED TYPICAL SECTION

STA. 199+21.00 TO STA. 203+02.23
 STA. 203+83.77 TO STA. 207+37.00

NOTES:

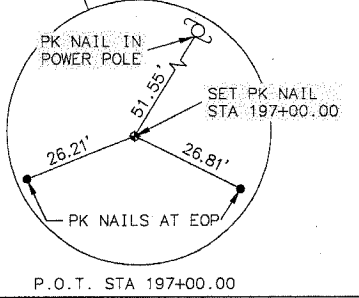
- WARP FROM THE EXISTING SECTION TO THE PROPOSED TEMPLATE IN 30 ft. STA 199+21.00 - STA 199+51.00
- WARP FROM THE PROPOSED TEMPLATE TO THE EXISTING SECTION IN 30 ft. STA 207+07.00 - STA 207+37.00

SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	CH 34	ST. CLAIR	3 OF 22
FHWA REG.NO.7		ILLINOIS	PROJ: BRM-5011(188)
PLAN & PROFILE		CONTRACT 97280	



NOTE: 1) SEE SHEET 6 FOR PIPE DRAIN AND INLET DETAILS.
 2) SEE SHEET 7 FOR DETAILS OF LEVEE ACCESS & SHOULDER WIDENING.

NOTE: IF DIGGING WITHIN 50' OF THE GAS LINE, PLEASE CONTACT CENTERPOINT ENERGY AT (501-377-4614)
 ALL FLAP GATES THAT ARE SALVABLE SHALL REMAIN THE PROPERTY OF THE METRO EAST SANITARY DISTRICT.



LEGEND	
	POWER POLE
	MAIL BOX
	SIGN & POST
	TELEPHONE (BURIED)
	GAS PIPELINE
	SURVEY MONUMENT
	POST & CABLE GATE

PROFILE SCALE: VERTICAL: 1"=10'
 HORIZONTAL: 1"=20'

PVI STA = 199+97.00
 PVI ELEV = 420.17
 A.D. = 1.55%
 K = 98

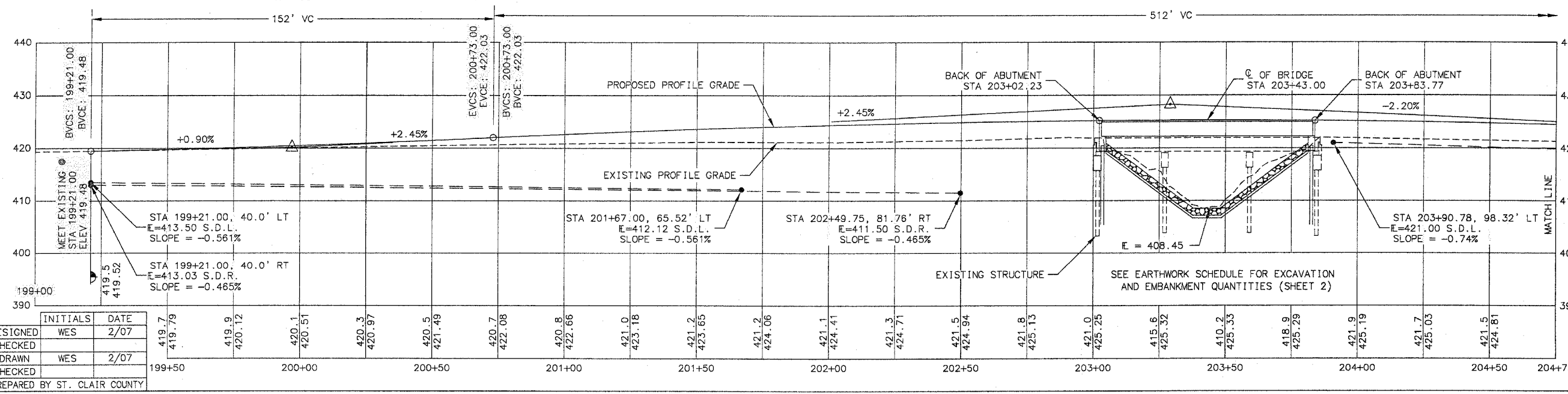
TBM: NAIL IN POWER POLE
 STA 202+17.71; 45.53' LT
 ELEV = 420.23

BM: NGS BRASS TAB IN WINGWALL
 STA 202+96.66; 18.94' LT
 ELEV = 422.49

PVI STA = 203+29.00
 PVI ELEV = 428.30
 A.D. = -4.65%
 K = 110

TBM: RR SPIKE IN POWER POLE
 STA 203+90.26; 46.48' LT
 ELEV = 423.31

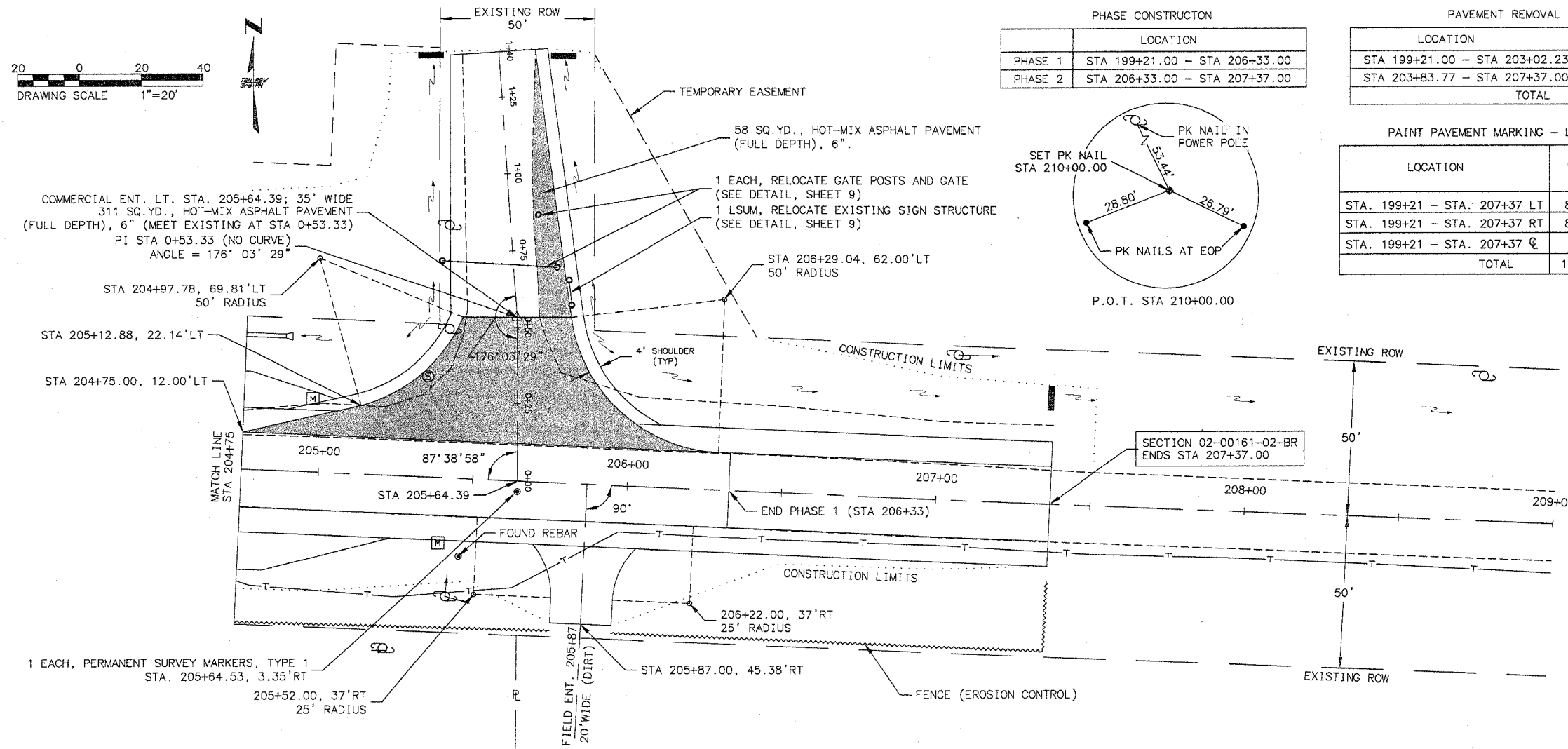
S.D.L. = SPECIAL DITCH LEFT
 S.D.R. = SPECIAL DITCH RIGHT



DRAWING FILE: PLAN&PROFILE.dwg

INITIALS	DATE
DESIGNED WES	2/07
CHECKED	
DRAWN WES	2/07
CHECKED	
PREPARED BY ST. CLAIR COUNTY	

SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	CH 34	ST. CLAIR	4 OF 22
FHWA REG.NO.7 ILLINOIS		PROJ: BRM-5011(188)	
PLAN & PROFILE		CONTRACT 97280	



PHASE CONSTRUCTION	
PHASE	LOCATION
PHASE 1	STA 199+21.00 - STA 206+33.00
PHASE 2	STA 206+33.00 - STA 207+37.00

PAVEMENT REMOVAL	
LOCATION	QUANTITY
STA 199+21.00 - STA 203+02.23	1101 SQ. YD.
STA 203+83.77 - STA 207+37.00	1021 SQ. YD.
TOTAL	2122 SQ. YD.

PAINT PAVEMENT MARKING - LINE 4"		
LOCATION	SOLID WHITE (FT)	SKIP DASH YELLOW (FT) 10'-30'
STA. 199+21 - STA. 207+37 LT	816 FT	
STA. 199+21 - STA. 207+37 RT	816 FT	
STA. 199+21 - STA. 207+37 C		210 FT
TOTAL	1632 FT	210 FT

FENCE (EROSION CONTROL)		
FROM STA. 201+91, 79' LT TO STA. 202+34, 50' LT TO STA. 202+66, 50' LT TO STA. 202+71, 68' LT TO STA. 202+89, 68' LT TO STA. 203+00, 20' LT		170 FT
FROM STA. 203+79, 20' LT TO STA. 203+72, 54' LT TO STA. 203+92, 55' LT		55 FT
FROM STA. 202+89, 63' RT TO STA. 203+12, 60' RT TO STA. 203+07, 20' RT		64 FT
FROM STA. 203+86, 20' RT TO STA. 203+97, 74' RT TO STA. 204+24, 74' RT TO STA. 204+20, 50' RT TO STA. 205+77, 45' RT		263 FT
FROM STA. 205+97, 48' RT TO STA. 207+37, 48' RT TO STA. 207+37, 25' RT		163 FT
TOTAL		715 FT

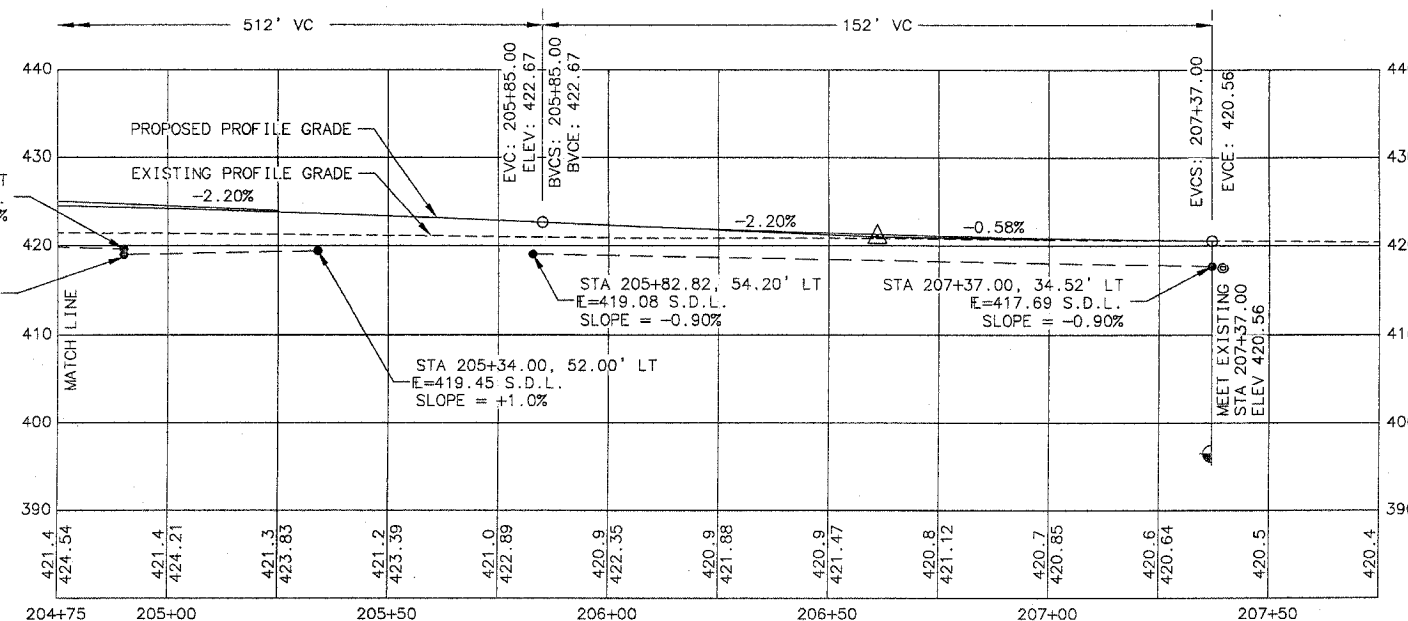
TEMPORARY DITCH CHECKS		
STA. 205+31, 138' LT		1 EACH
STA. 205+74, 139' LT		1 EACH
STA. 207+36, 34' LT		1 EACH
TOTAL		3 EACH

INLET & PIPE PROTECTION		
STA. 201+67, 65.52' LT		1 EACH
STA. 202+50, 81.76' RT		1 EACH
STA. 204+90, 43.87' LT		1 EACH
TOTAL		3 EACH

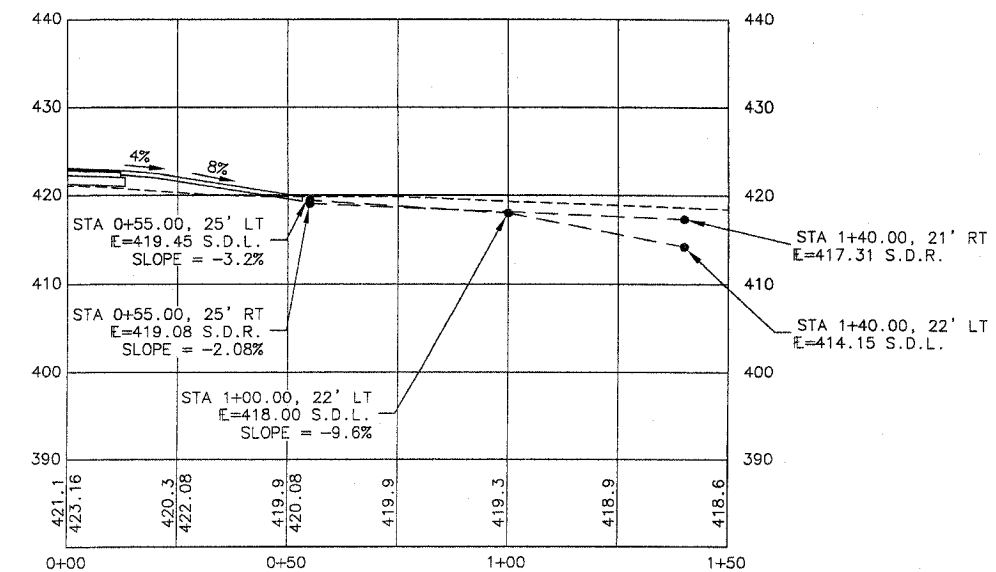
PROFILE SCALE: VERTICAL: 1"=10'
HORIZONTAL: 1"=20'

PVI STA = 203+29.00
PVI ELEV = 428.30
A.D. = -4.65
K = 110

PVI STA = 206+61.00
PVI ELEV = 421.00
A.D. = 1.62
K = 94



PROFILE OF COMMERCIAL ENT LT. STA. 205+64.39 35' WIDE (6" BITUMINOUS), WITH SPECIAL DITCHES LT. & RT.



DRAWING FILE: PLAN&PROFILE.dwg

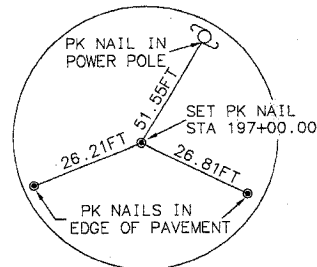
	INITIALS	DATE
DESIGNED	WES	2/07
CHECKED		
DRAWN	WES	2/07
CHECKED		

PREPARED BY ST. CLAIR COUNTY

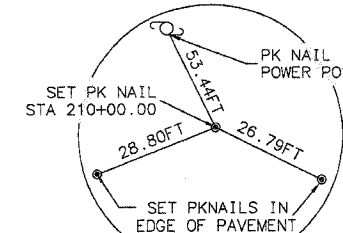
SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	CH 34	ST. CLAIR	5 OF 22
FHWA REG.NO.7	ILLINOIS	PROJ. BRM-5011(188)	
ROW & EASEMENTS	CONTRACT 97280		

RIGHT OF-WAY PLAN SHEET BUNKUM ROAD, C.H. 34

SECTION 02-00161-02-BR
PART OF THE EAST HALF OF SECTION 15,
AND PART OF THE WEST HALF OF SECTION 14,
TOWNSHIP 2 NORTH, RANGE 9 WEST,
OF THE THIRD PRINCIPAL MERIDIAN,
ST. CLAIR COUNTY, ILLINOIS



P.O.T. STA 197+00.00



P.O.T. STA 210+00.00



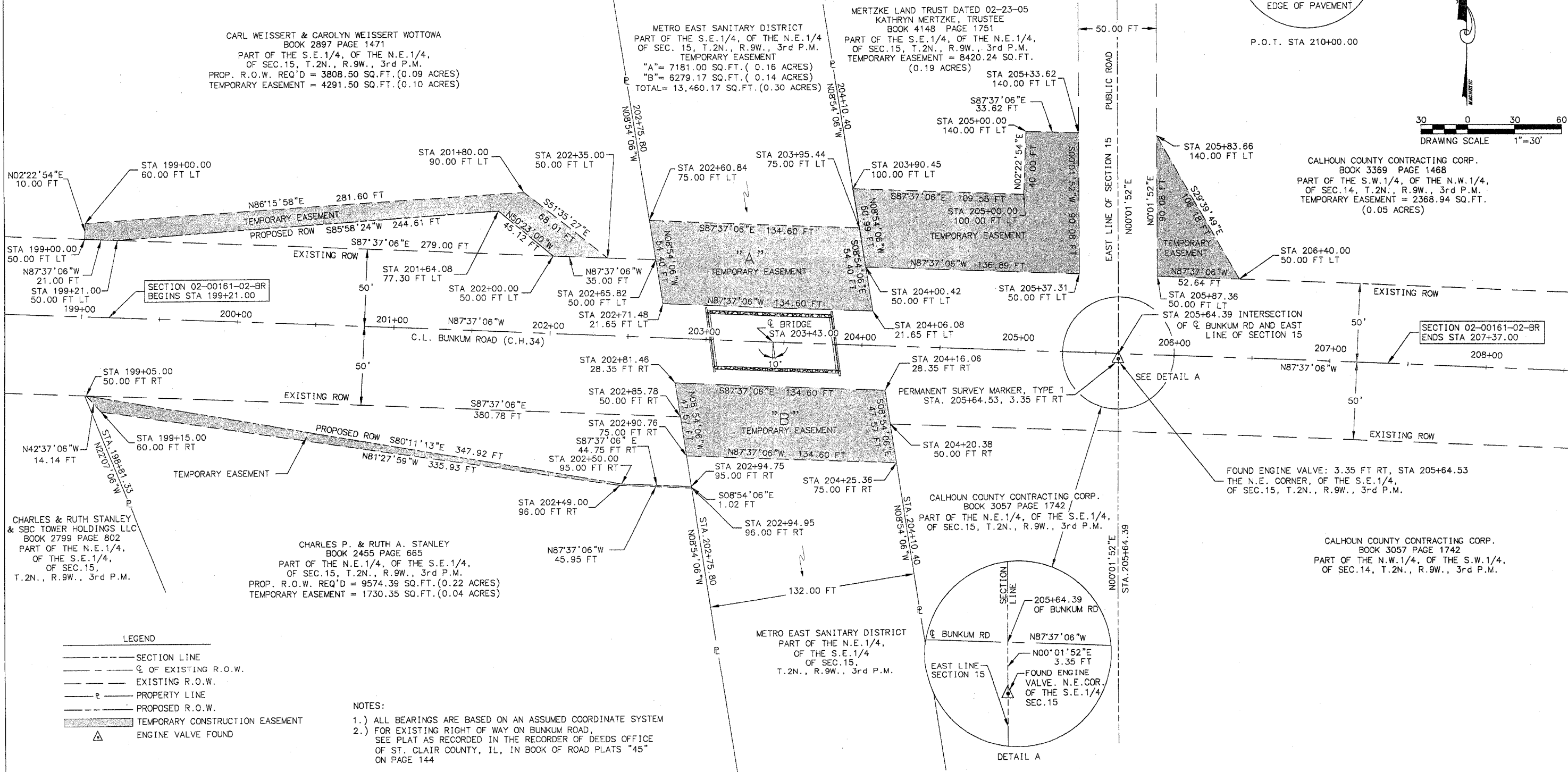
30 0 30 60
DRAWING SCALE 1"=30'

CARL WEISSERT & CAROLYN WEISSERT WOTTOWA
BOOK 2897 PAGE 1471
PART OF THE S.E.1/4, OF THE N.E.1/4,
OF SEC.15, T.2N., R.9W., 3rd P.M.
PROP. R.O.W. REQ'D = 3808.50 SQ.FT. (0.09 ACRES)
TEMPORARY EASEMENT = 4291.50 SQ.FT. (0.10 ACRES)

METRO EAST SANITARY DISTRICT
PART OF THE S.E.1/4, OF THE N.E.1/4
OF SEC. 15, T.2N., R.9W., 3rd P.M.
TEMPORARY EASEMENT
"A" = 7181.00 SQ.FT. (0.16 ACRES)
"B" = 6279.17 SQ.FT. (0.14 ACRES)
TOTAL = 13,460.17 SQ.FT. (0.30 ACRES)

MERTZKE LAND TRUST DATED 02-23-05
KATHRYN MERTZKE, TRUSTEE
BOOK 4148 PAGE 1751
PART OF THE S.E.1/4, OF THE N.E.1/4,
OF SEC.15, T.2N., R.9W., 3rd P.M.
TEMPORARY EASEMENT = 8420.24 SQ.FT.
(0.19 ACRES)

CALHOUN COUNTY CONTRACTING CORP.
BOOK 3369 PAGE 1468
PART OF THE S.W.1/4, OF THE N.W.1/4,
OF SEC.14, T.2N., R.9W., 3rd P.M.
TEMPORARY EASEMENT = 2368.94 SQ.FT.
(0.05 ACRES)



CHARLES & RUTH STANLEY & SBC TOWER HOLDINGS LLC
BOOK 2799 PAGE 802
PART OF THE N.E.1/4,
OF THE S.E.1/4,
OF SEC.15,
T.2N., R.9W., 3rd P.M.

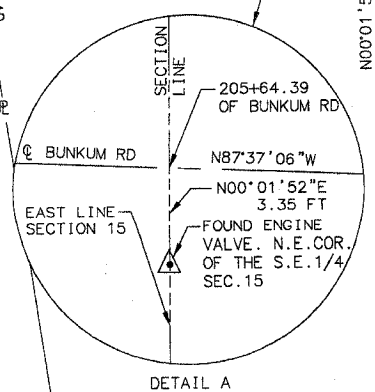
CHARLES P. & RUTH A. STANLEY
BOOK 2455 PAGE 665
PART OF THE N.E.1/4, OF THE S.E.1/4,
OF SEC.15, T.2N., R.9W., 3rd P.M.
PROP. R.O.W. REQ'D = 9574.39 SQ.FT. (0.22 ACRES)
TEMPORARY EASEMENT = 1730.35 SQ.FT. (0.04 ACRES)

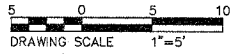
CALHOUN COUNTY CONTRACTING CORP.
BOOK 3057 PAGE 1742
PART OF THE N.E.1/4, OF THE S.E.1/4,
OF SEC.15, T.2N., R.9W., 3rd P.M.

CALHOUN COUNTY CONTRACTING CORP.
BOOK 3057 PAGE 1742
PART OF THE N.W.1/4, OF THE S.W.1/4,
OF SEC.14, T.2N., R.9W., 3rd P.M.

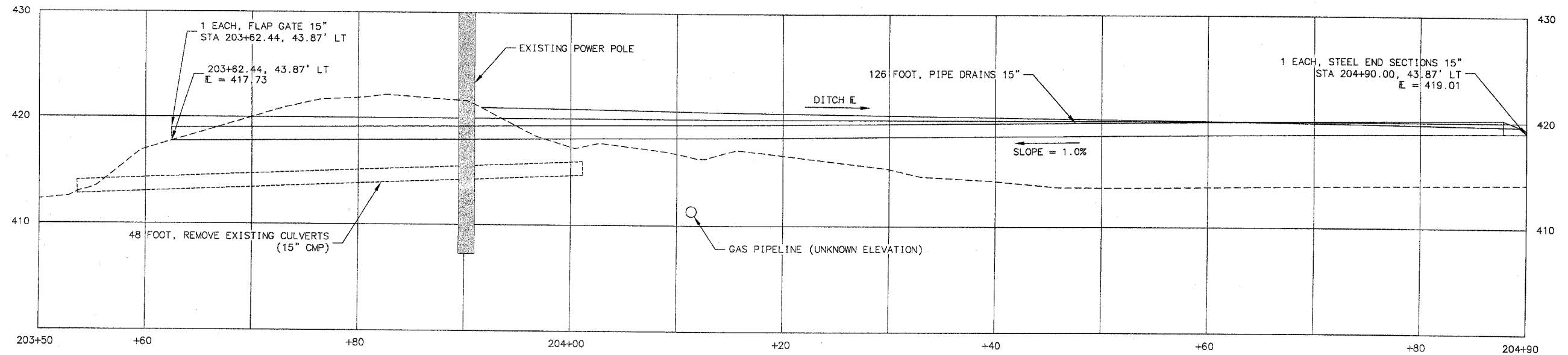
- LEGEND**
- SECTION LINE
 - C OF EXISTING R.O.W.
 - EXISTING R.O.W.
 - PROPERTY LINE
 - PROPOSED R.O.W.
 - TEMPORARY CONSTRUCTION EASEMENT
 - △ ENGINE VALVE FOUND

- NOTES:**
- 1.) ALL BEARINGS ARE BASED ON AN ASSUMED COORDINATE SYSTEM
 - 2.) FOR EXISTING RIGHT OF WAY ON BUNKUM ROAD, SEE PLAT AS RECORDED IN THE RECORDER OF DEEDS OFFICE OF ST. CLAIR COUNTY, IL, IN BOOK OF ROAD PLATS "45" ON PAGE 144

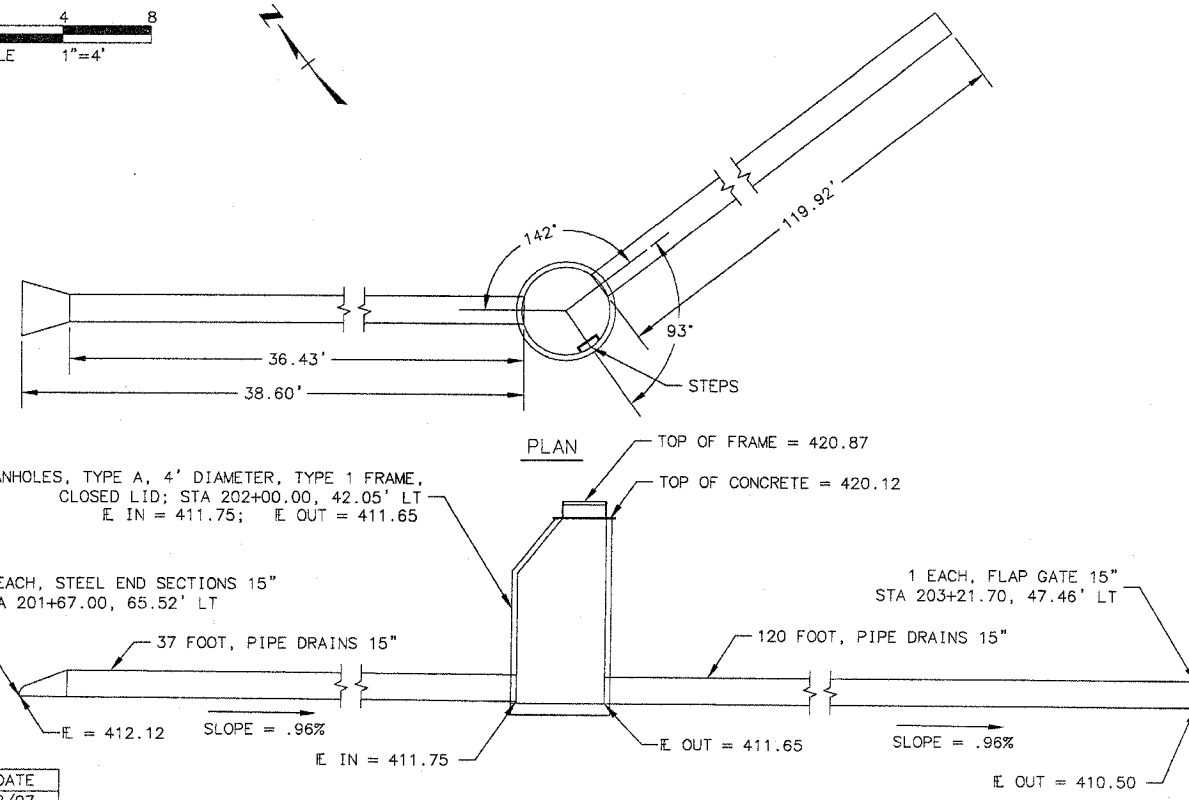
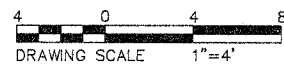




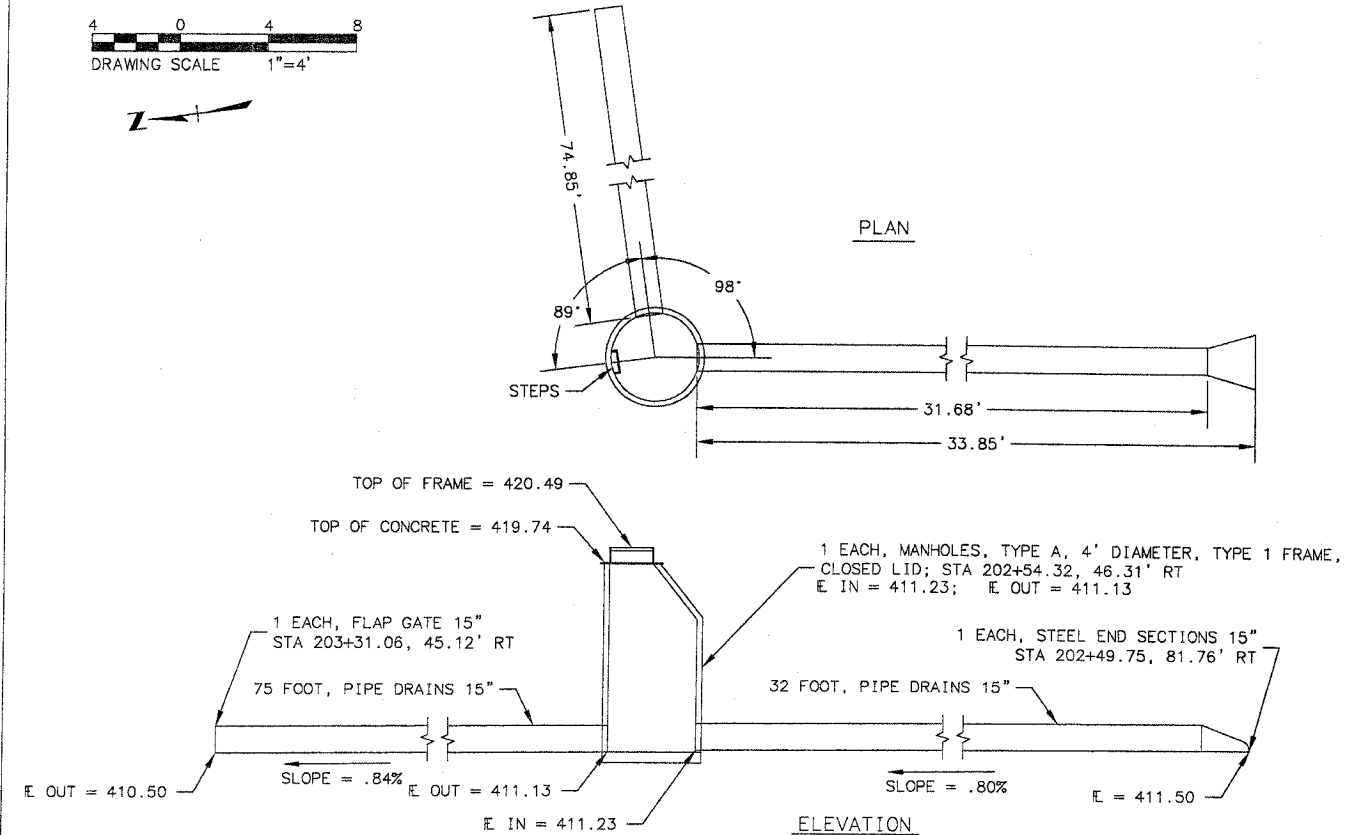
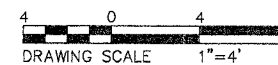
SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	CH 34	ST. CLAIR	6 OF 22
FHWA REG.NO.7		ILLINOIS	PROJ: BRM-5011(188)
PIPE & INLET DETAILS		CONTRACT 97280	



SECTION ALONG PIPE DRAIN
(STA 203+50 LT TO STA 204+90 LT)



PIPE DRAIN AND MANHOLE DETAILS
(STA 202+00.00 LT)



PIPE DRAIN AND MANHOLE DETAILS
(STA 202+54.32 RT)

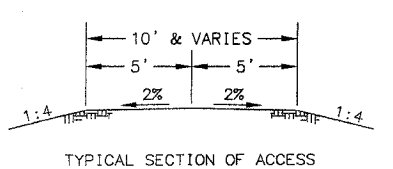
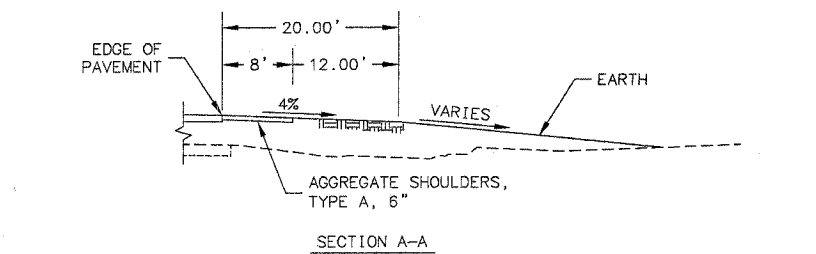
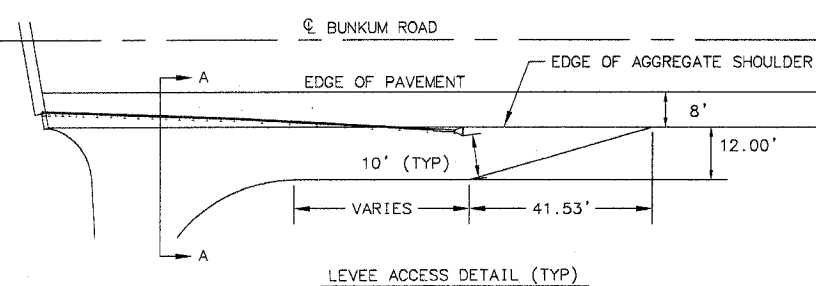
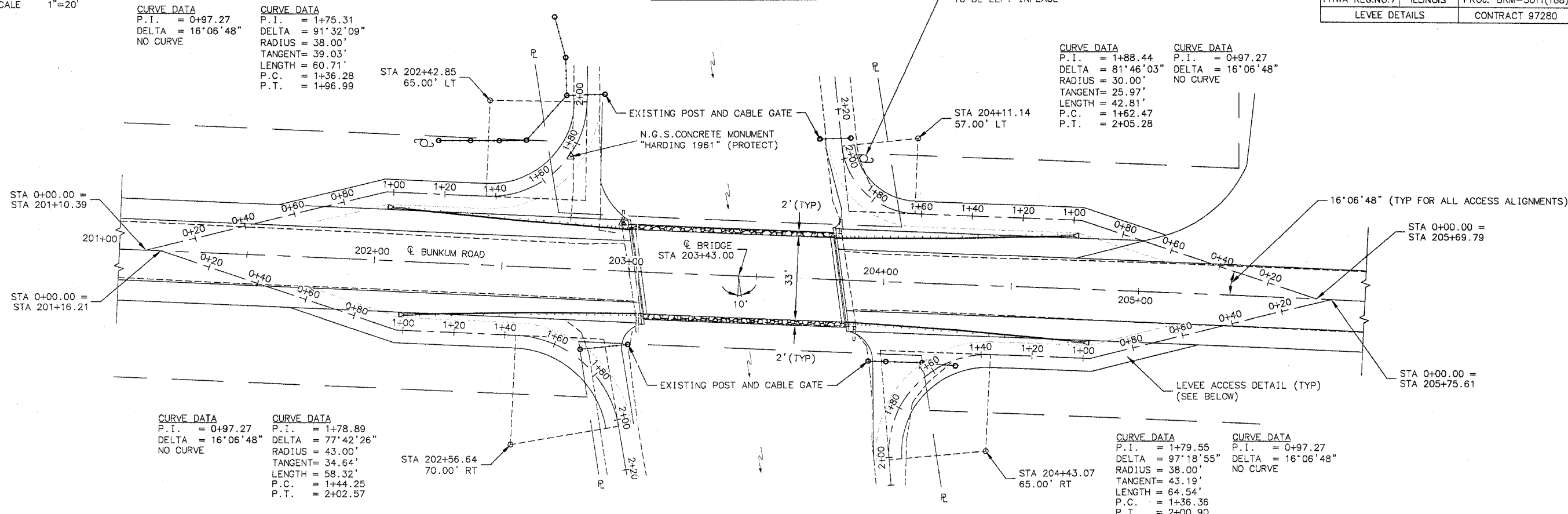
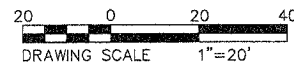
DRAWING FILE: PIPE DETAILS
PLOT DATE: 3/07

	INITIALS	DATE
DESIGNED	WES	2/07
CHECKED		
DRAWN	WES	2/07
CHECKED		

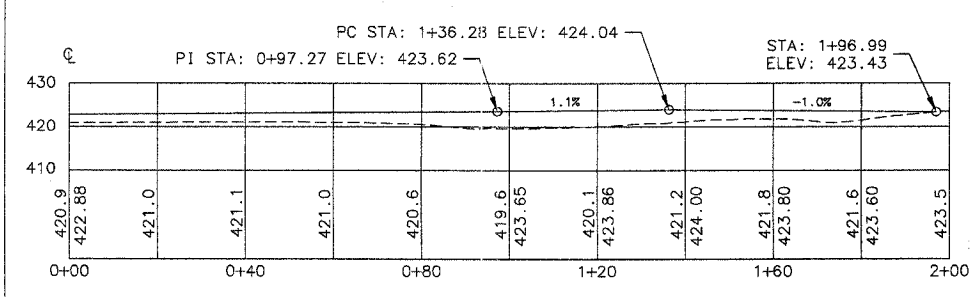
PREPARED BY ST. CLAIR COUNTY

SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	CH 34	ST. CLAIR	7 OF 22
FHWA REG.NO.7	ILLINOIS	PROJ: BRM-5011(188)	
LEVEE DETAILS		CONTRACT 97280	

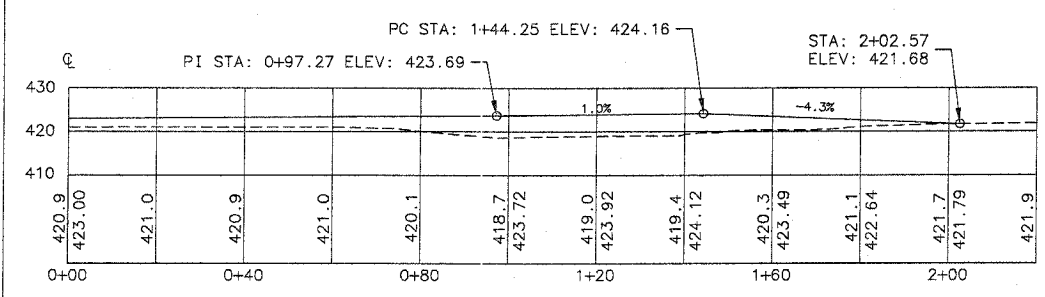
LEVEE DETAILS



PROFILE SCALE: VERTICAL: 1"=20'
HORIZONTAL: 1"=20'

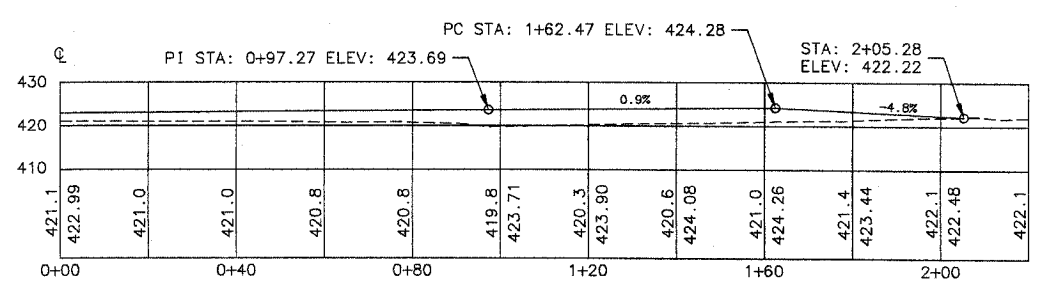


PROFILE OF NORTHWEST ACCESS

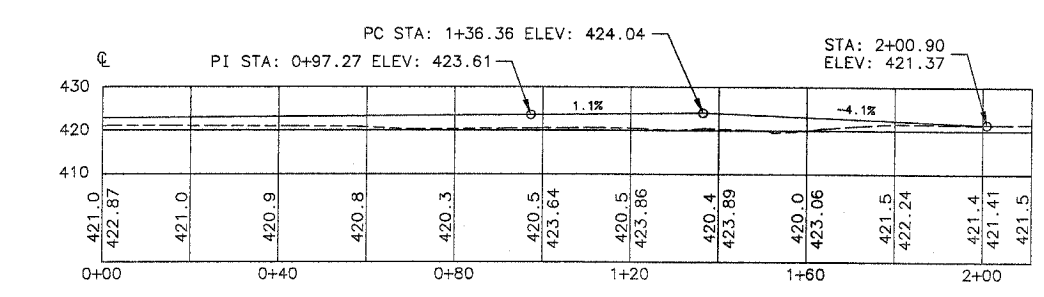


PROFILE OF SOUTHWEST ACCESS

LEVEE ACCESS PROFILES



PROFILE OF NORTHEAST ACCESS



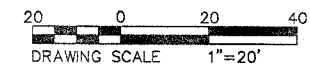
PROFILE OF SOUTHEAST ACCESS

PLOT DATE: 3/07
DRAWING FILE: LEVEE DETAILS.dwg
PREPARED BY ST. CLAIR COUNTY

	INITIALS	DATE
DESIGNED	WES	2/07
CHECKED		
DRAWN	WES	2/07
CHECKED		

SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	CH 34	ST. CLAIR	8 OF 22
FHWA REG.NO.7		ILLINOIS	PROJ: BRM-5011(188)
TEMPORARY ROAD		CONTRACT 97280	

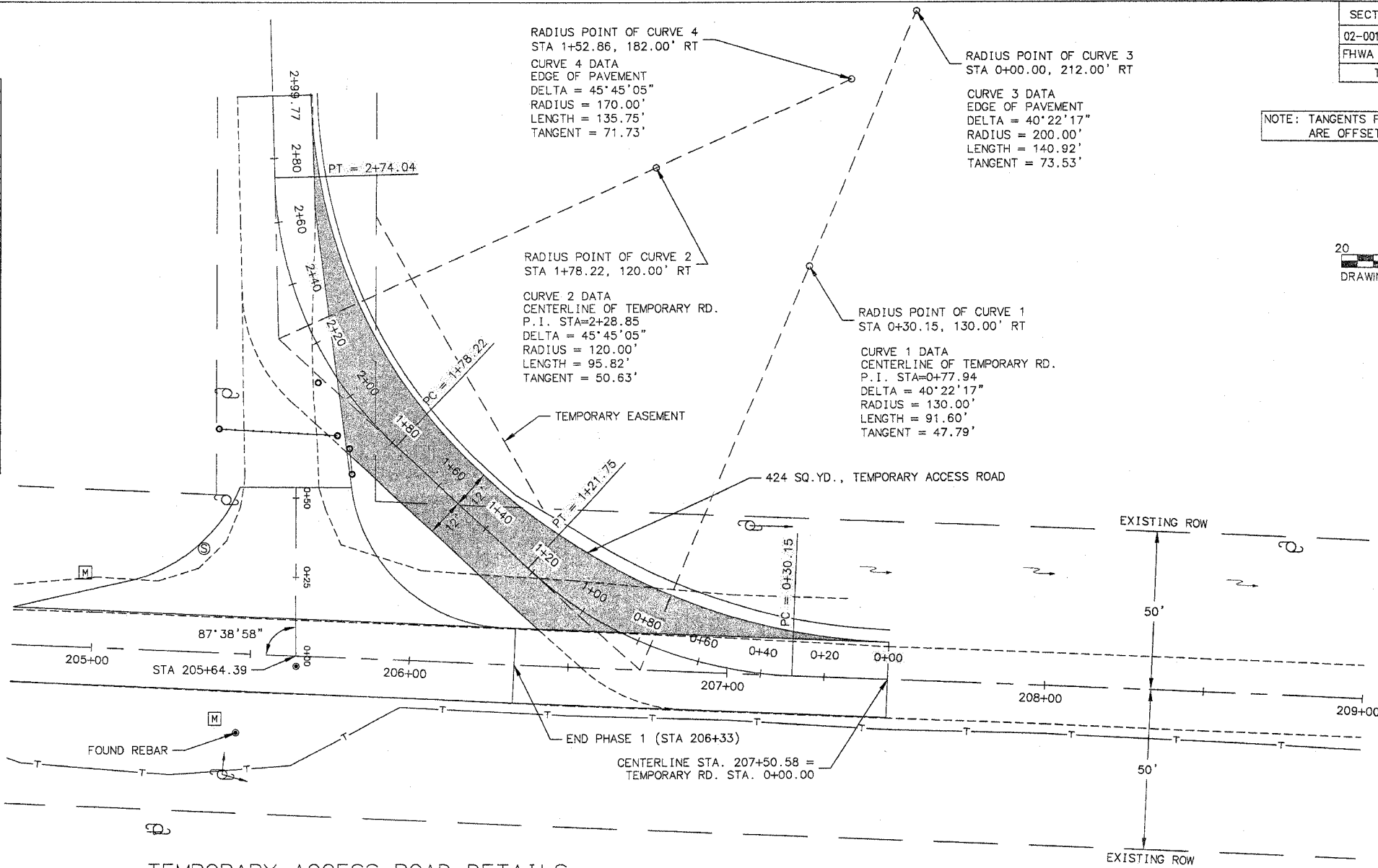
NOTE: TANGENTS FOR THE EDGE OF PAVEMENT CURVES ARE OFFSET 12' FROM THE CENTERLINE TANGENTS.



TEMPORARY ACCESS ROAD LAYOUT

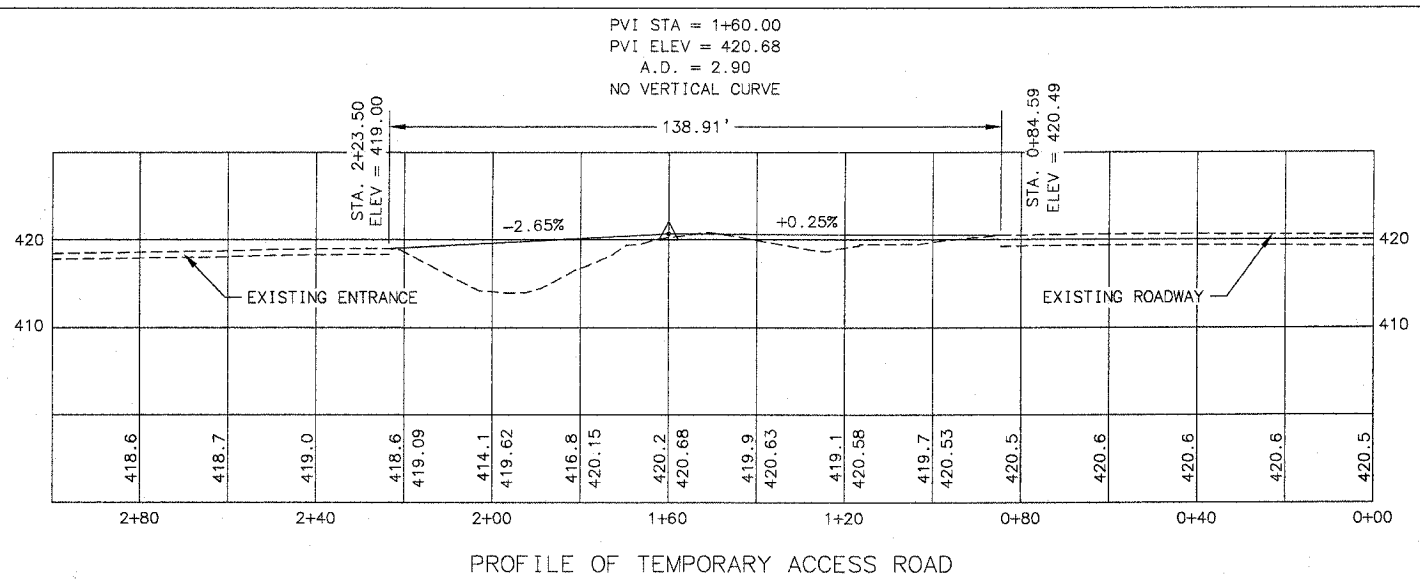
ELEV. EOP	EDGE OF PAVEMENT LT (FT)	CENTERLINE STATION	PROFILE GRADE	EDGE OF PAVEMENT RT (FT)	ELEV. EOP
EXISTING ROAD		0+00.00	420.52*	12.00	420.17
EXISTING ROAD		0+20.00	420.58*	13.00	420.24
EXISTING ROAD		0+40.00	420.62*	15.47	420.23
EXISTING ROAD		0+60.00	420.61*	17.00	420.20
EXISTING ROAD		0+80.00	420.52*	17.34	420.20
EXISTING ROAD		1+00.00	420.53	16.52	420.20
420.33	12.00	1+20.00	420.58	14.52	420.28
420.38	12.00	1+40.00	420.63	12.35	420.37
420.43	12.00	1+60.00	420.68	12.19	420.43
419.90	12.00	1+80.00	420.15	14.27	419.85
419.57	12.00	2+00.00	419.62	16.33	419.28
EXISTING ROAD		2+20.00	419.09*	17.24	418.73
EXISTING ROAD		2+40.00	418.97*	17.02	418.55
EXISTING ROAD		2+60.00	418.73*	15.67	418.40
EXISTING ROAD		2+80.00	418.87*	13.20	418.38
EXISTING ROAD		3+00.00	418.58*	12.00	418.22

* ELEVATION OF EXISTING ROADWAY

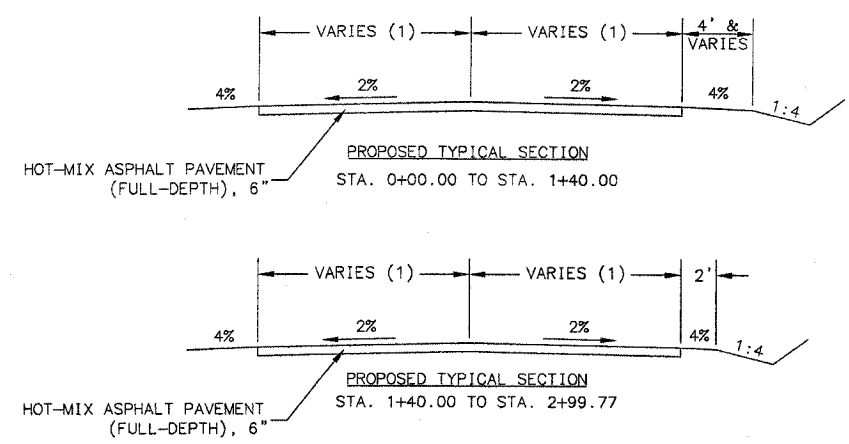


TEMPORARY ACCESS ROAD DETAILS

PROFILE SCALE: VERTICAL: 1"=10'
HORIZONTAL: 1"=20'



PROFILE OF TEMPORARY ACCESS ROAD



TEMPORARY ACCESS ROAD SECTIONS

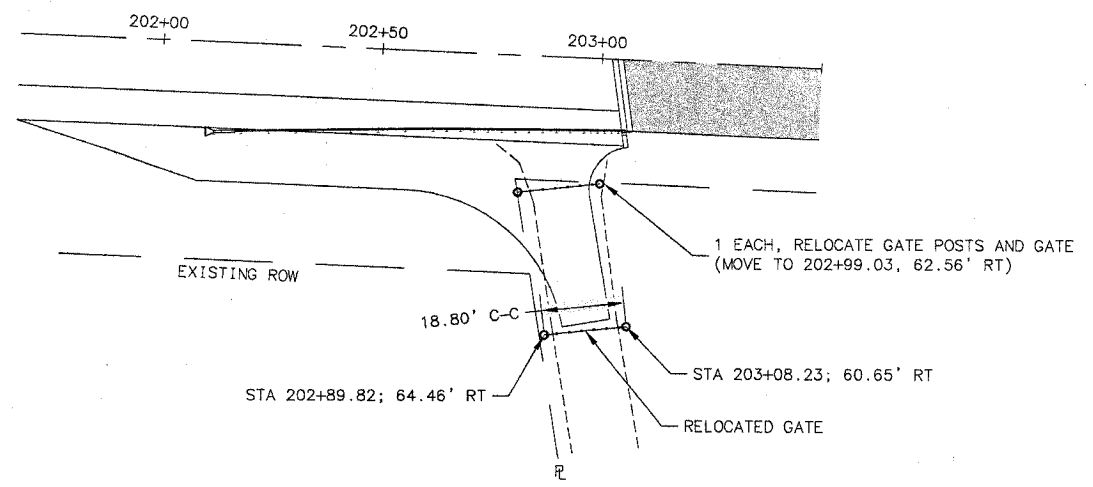
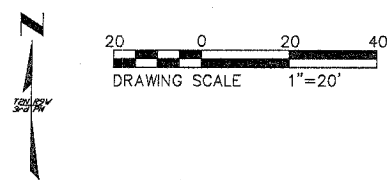
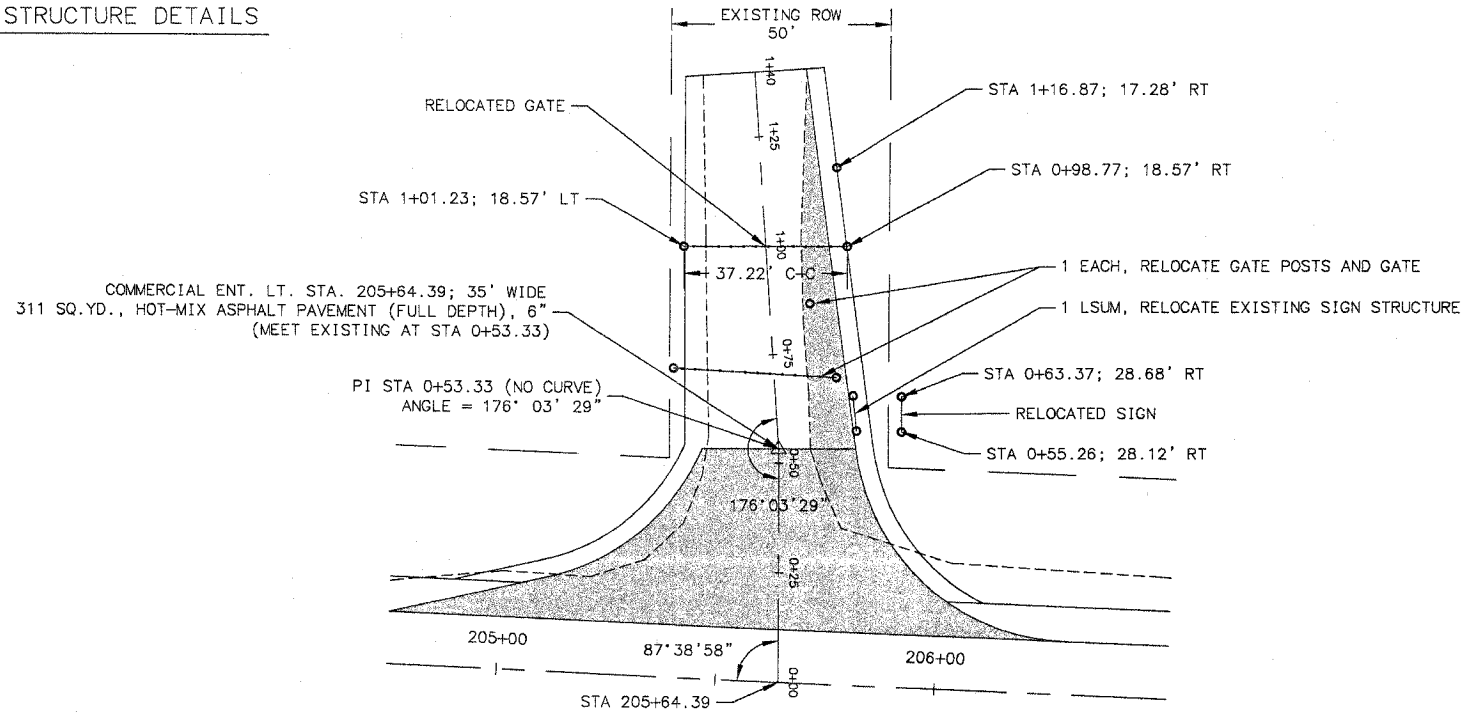
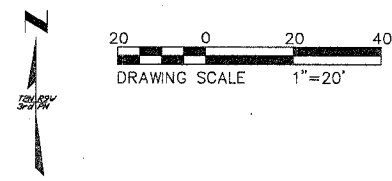
NOTE: 1: SEE TEMPORARY ACCESS ROAD LAYOUT FOR VARYING ROADWAY WIDTHS
2: TRANSITION RIGHT SHOULDER FROM 4' TO 2' FROM STA 1+20 TO STA 1+40

DRAWING FILE: TEMPORARY ROAD.dwg

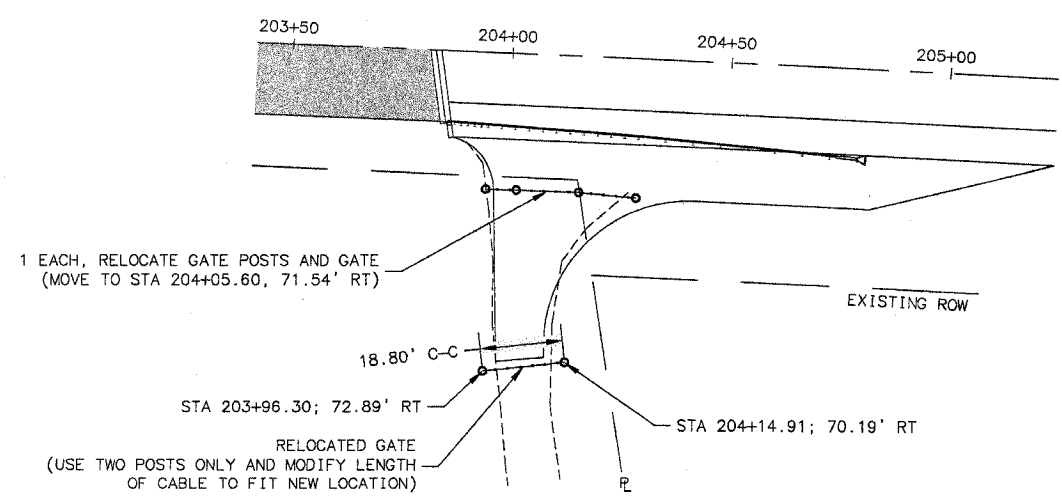
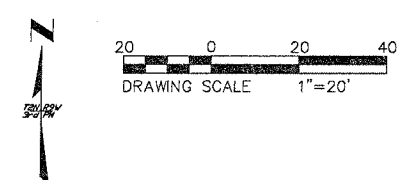
	INITIALS	DATE
DESIGNED	WES	2/07
CHECKED		
DRAWN	WES	2/07
CHECKED		
PREPARED BY ST. CLAIR COUNTY		

SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	CH 34	ST. CLAIR	9 OF 22
FHWA REG.NO.7	ILLINOIS	PROJ: BRM-5011(188)	
RELOCATION DETAILS		CONTRACT 97280	

RELOCATED GATE POSTS AND GATE DETAILS
 RELOCATED EXISTING SIGN STRUCTURE DETAILS



RELOCATED GATE 202+99.03 RT



RELOCATED GATE 204+05.60 RT

PLOT DATE: 3/07 DRAWING FILE: GATE & SIGN DETAILS.dwg

	INITIALS	DATE
DESIGNED	WES	3/07
CHECKED		
DRAWN	WES	3/07
CHECKED		
PREPARED BY ST. CLAIR COUNTY		

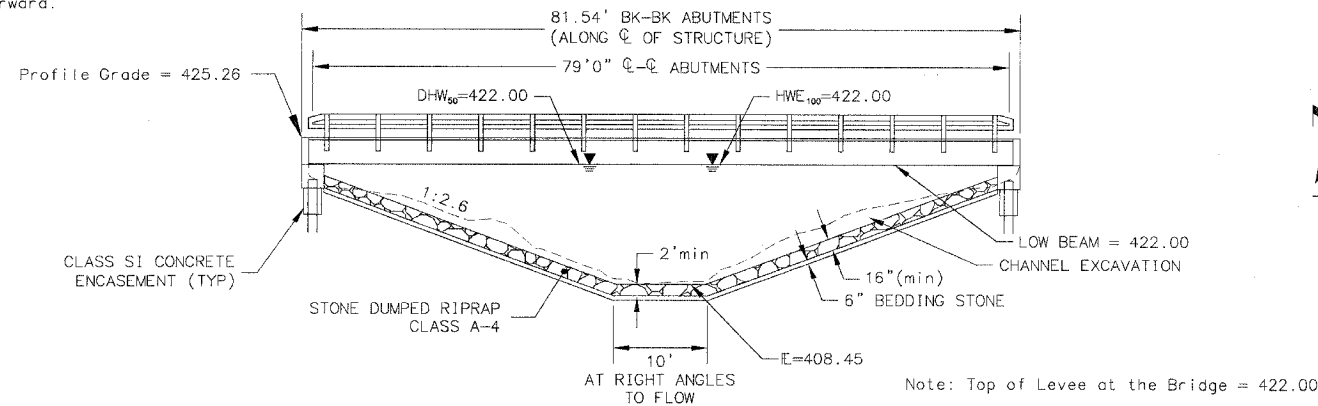
B.M.: N.G.S. BRASS TAB IN N.W. WING WALL
 STA. 202+96.66; 18.94' LT.
 ELEV. 422.49

Description: PPC Deck Beams(33" Deep).
 Pile Bent Spill Thru Abutments.
 Skew 10' Rt Forward.

EXISTING STRUCTURE NO. 082-3000
 IS A THREE SPAN 86'-5" LONG STRUCTURE WITH A CONCRETE DECK,
 CONCRETE SIDEWALKS, STEEL I-BEAMS, AND ABUTMENTS AND PIERS ON
 16" PRECAST CONCRETE PILING. THE STRUCTURE WIDTH IS 36'-4".
 THE CONSTRUCTION DATE IS 1956.

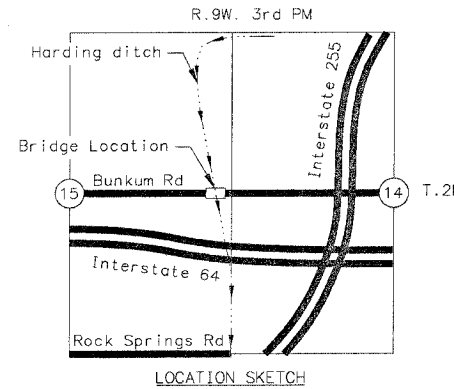
SALVAGE: ALL MATERIALS REQUIRED TO BE REMOVED WHICH ARE
 CONSIDERED SALVAGABLE BY THE ENGINEER SHALL REMAIN THE
 PROPERTY OF THE COUNTY. ALL OTHERS SHALL BE DISPOSED OF
 BY THE CONTRACTOR AT HIS OWN EXPENSE.

SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	CH 34	ST. CLAIR	10 OF 22
FHWA REG. NO. 7		ILLINOIS	PROJ: BRM-5011(188)
GENERAL PLAN & ELEV		CONTRACT 97280	



ELEVATION

PGE = PROFILE GRADE ELEVATION
 TCE = TOP OF CAP ELEVATION



LOCATION SKETCH

GENERAL NOTES

1. THE CONTRACTOR SHALL DRIVE TEST PILES TO 110% OF THE NOMINAL REQUIRED BEARING SPECIFIED IN PRODUCTION LOCATIONS AT THE SUBSTRUCTURES SPECIFIED OR APPROVED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF THE PILES.
2. REFER TO THE SPECIAL PROVISIONS FOR BORING LOG INFORMATION.
3. A CORROSION INHIBITOR SHALL BE USED IN THE CONCRETE FOR THE PRECAST, PRESTRESSED CONCRETE DECK BEAMS, ACCORDING TO ARTICLE 1020.05(b)(12) OF THE STANDARD SPECIFICATIONS.
4. RAILING SHALL BE IN ACCORDANCE WITH SECTION 509 OF THE STANDARD SPECIFICATIONS, EXCEPT AS NOTED ON THE PLANS, AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR STEEL BRIDGE RAILING, TYPE SM WHICH PRICE SHALL INCLUDE THE COST OF FURNISHING AND ERECTING.
5. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A706 GRADE 60 (1L MODIFIED). SEE SPECIAL PROVISIONS.
6. THE COST OF STRUCTURE EXCAVATION SHALL BE CONSIDERED INCLUDED IN THE COST OF CONCRETE STRUCTURES.
7. DECK BEAM 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 SAND BLASTING THE KEYWAY AREAS BETWEEN THE TOP OF THE BEAM AND THE BOTTOM EDGE OF THE KEY.
8. IN ADDITION TO ALL OTHER REQUIREMENTS OF SECTION 512 OF THE STANDARD SPECIFICATIONS, SPLICES FOR STEEL H PILES SHALL DEVELOP FULL CAPACITY OF THE STEEL'S CROSS SECTIONAL AREA OF THE PILE FOR TENSION, SHEAR AND BENDING FORCES. ONE APPROVED METHOD OF ACHIEVING THIS REQUIREMENT IS FULL PENETRATION BUTT WELDING OF THE ENTIRE CROSS SECTION. OTHER TYPES OF SPLICES MEETING THE FULL CAPACITY REQUIREMENT MAY BE ALLOWED SUBJECT TO THE APPROVAL OF THE ENGINEER. ANY PROPOSAL BY THE CONTRACTOR TO USE AN ALTERNATE SPLICE METHOD MUST INCLUDE ADEQUATE DOCUMENTATION DEMONSTRATING THE FULL TENSION, SHEAR AND BENDING CAPACITIES WILL BE MET. APPROPRIATE WELDER QUALIFICATIONS WILL BE REQUIRED FOR THE POSITIONS AND PROCEDURES USED IN SPLICING ALL PILES. NONDESTRUCTIVE TESTING OF COMPLETED WELDS WILL BE LIMITED TO VISUAL INSPECTION.
9. LAYOUT OF SLOPE PROTECTION SYSTEM MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
10. BACKFILL BEHIND THE ABUTMENTS SHALL BE PLACED AFTER THE SUPERSTRUCTURE IS IN PLACE AND THE DOWEL RODS GROUTED.

DESIGN SPECIFICATIONS

2002 AASHTO, HS-20 LOADING,
 LOAD FACTOR DESIGN.
 ALLOW 25 PSF FOR FUTURE WEARING SURFACE.

SEISMIC DATA

S.P.C. = B
 A = 0.110
 S = 1/1.0

PILE DATA (2-ABUTS)

PILE TYPE & SIZE: HP 12 x 53
 NOMINAL REQUIRED BEARING: 418 KIPS
 ALLOWABLE RESISTANCE AVAILABLE: 139 KIPS
 ESTIMATED LENGTH: ABUT. #1 = 100'
 ABUT. #2 = 100'
 NUMBER OF PRODUCTION PILES = 11
 NUMBER OF TEST PILES: 1 (Located in Abut.#1)

INDEX OF SHEETS

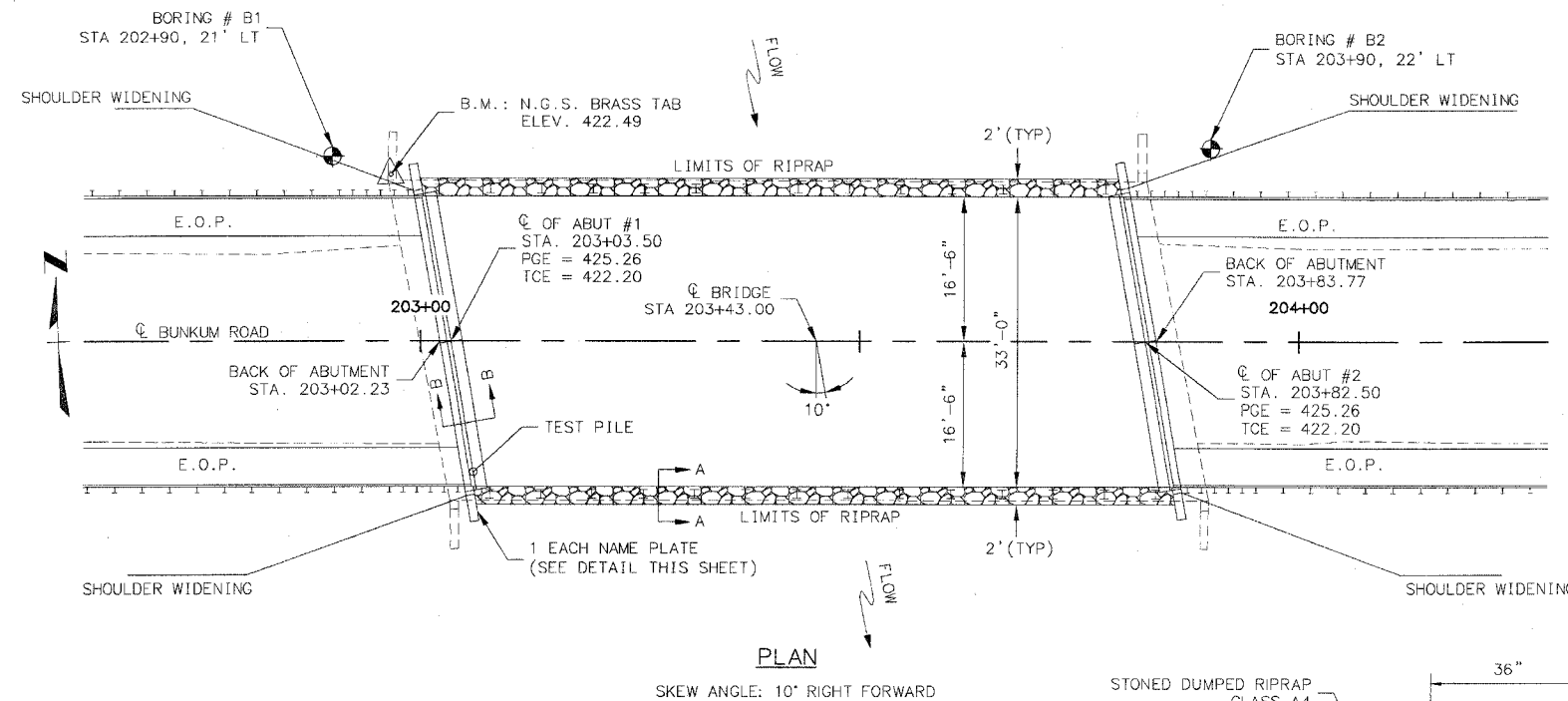
10. GENERAL PLAN & ELEVATION
11. SUPERSTRUCTURE DETAILS
12. P.C.C. DECK BEAM DETAILS
13. ABUTMENT DETAILS
14. STANDARD CR-TSM
15. STANDARD CN
16. STANDARD CX-1

DESIGN STRESSES

f'c = 3500 psi
 fy = 60,000 psi

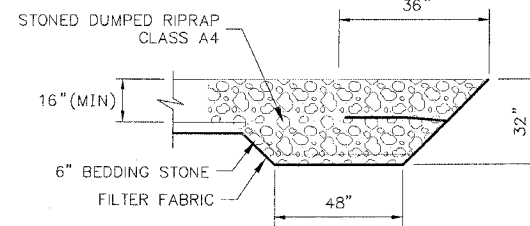
TOTAL BILL OF MATERIALS (STRUCTURE)

ITEM	UNIT	SUPER	SUB	TOTAL
CHANNEL EXCAVATION	CU YD			97
STONE DUMPED RIPRAP, CLASS A4	SQ YD			333
FILTER FABRIC	SQ YD			333
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	41.1		41.1
REMOVAL OF EXISTING STRUCTURES	EACH			1
CONCRETE STRUCTURES	CU YD		25.4	25.4
PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	2640		2640
REINFORCEMENT BARS, EPOXY COATED	POUND		2700	2700
STEEL RAILING, TYPE SM	FOOT	160		160
FURNISHING STEEL PILES HP 12x53	FOOT		1100	1100
DRIVING PILES	FOOT		1100	1100
TEST PILE STEEL HP12x53	EACH		1	1
CONCRETE ENCASUREMENT	CU YD		4.0	4.0
NAME PLATES	EACH			1
WATERPROOFING MEMBRANE SYSTEM	SQ YD	293.3		293.3
PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	800		800
PILE SHOES	EACH		12	12

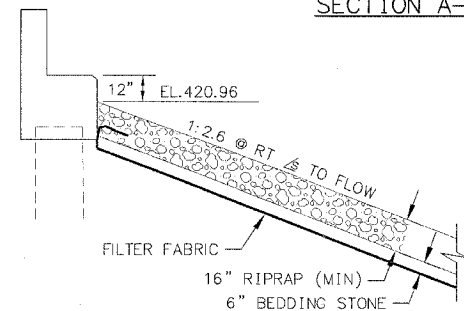


PLAN

SKEW ANGLE: 10' RIGHT FORWARD



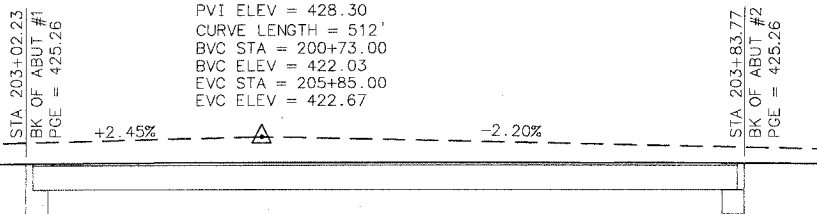
SECTION A-A



SECTION B-B

PROPOSED PROFILE ALONG C OF STRUCTURE

PVI STA = 203+29.00
 PVI ELEV = 428.30
 CURVE LENGTH = 512'
 BVC STA = 200+73.00
 BVC ELEV = 422.03
 EVC STA = 205+85.00
 EVC ELEV = 422.67



LETTERING FOR NAME PLATE

(STANDARD CN)
 LOCATE NAME PLATE AT S.W. WINGWALL
 CORNER OF BRIDGE (SEE STD. 515001)

HARDING DITCH
 BUILT 200_ BY
 ST. CLAIR COUNTY
 SEC. 02-00161-02-BR
 FAU ROUTE 9160
 PROJECT: BRM-5011(188)
 STA. 203+43.00
 STR. NO. 082-3100
 LOADING HS-20

INITIALS	DATE
DESIGNED WS	10/04
CHECKED RB	6/05
DRAWN WS	10/04
CHECKED RB	6/05

PREPARED BY ST. CLAIR COUNTY

WATERWAY INFORMATION

DRAINAGE AREA = 7.723 sq.mi. LOW GRADE ELEVATION = 416.1 @ STA 194+58.00

FLOOD FREQUENCY (year)	FLOWRATE Q (cfs)	OPENING (sq.ft.)		NATURAL H.W.E.		HEAD (ft.)		HEADWATER ELEVATION	
		EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED
DESIGN 50	2209*	326	630	422.0	0.00	0.00	422.0	422.0	
BASE 100	2209*	326	630	422.0	0.00	0.00	422.0	422.0	
OVERTOPPING <10	2209*	326	630	422.0	0.00	0.00	422.0	422.0	
MAX. CALC. 100	2209*	326	630	422.0	0.00	0.00	422.0	422.0	

ADDITIONAL OVER-THE-ROAD FLOW AREA:

* LEVEE CAPACITY AT ELEV. 422.00 = 2209 cfs
 TOP OF LEVEE ELEV. AT THE BRIDGE = 422.0

Q_{25yr} = 1038 cfs
 Q_{50yr} = 1891 cfs
 Q_{100yr} = 2520 cfs

Q_{25yr} = 3358 cfs
 Q_{50yr} = 4013 cfs
 Q_{100yr} = 4665 cfs

GENERAL PLAN & ELEVATION

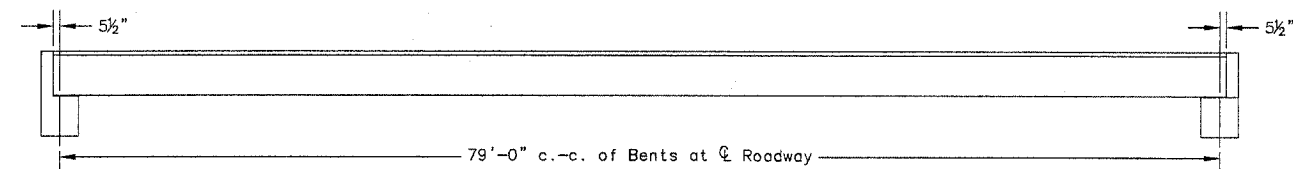
C.H. 34
 OVER HARDING DITCH
 SECTION 02-00161-02-BR
 ST. CLAIR COUNTY
 STATION 203+43.00
 S.N. 082-3100

I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THIS BRIDGE DESIGN IS STRUCTURALLY ADEQUATE FOR THE DESIGN LOADING SHOWN ON THE PLANS. THE DESIGN IS AN ECONOMICAL ONE FOR THE STYLE OF STRUCTURE AND COMPLIES WITH THE REQUIREMENTS OF THE CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

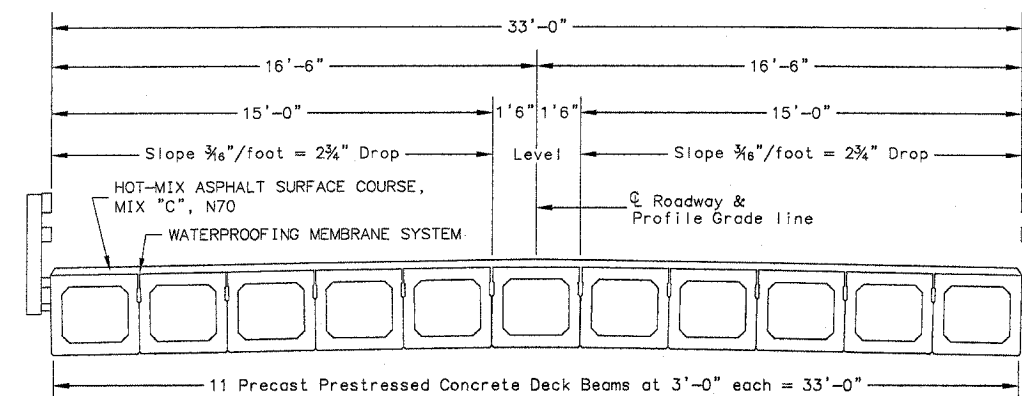
Robert A. Bruckner
 Robert A. Bruckner, S.E.
 LICENSE NO. 081-004669
 LICENSE EXPIRATION DATE: NOVEMBER 30, 2006

DRAWING FILE: Gen Plan and Elev.dwg

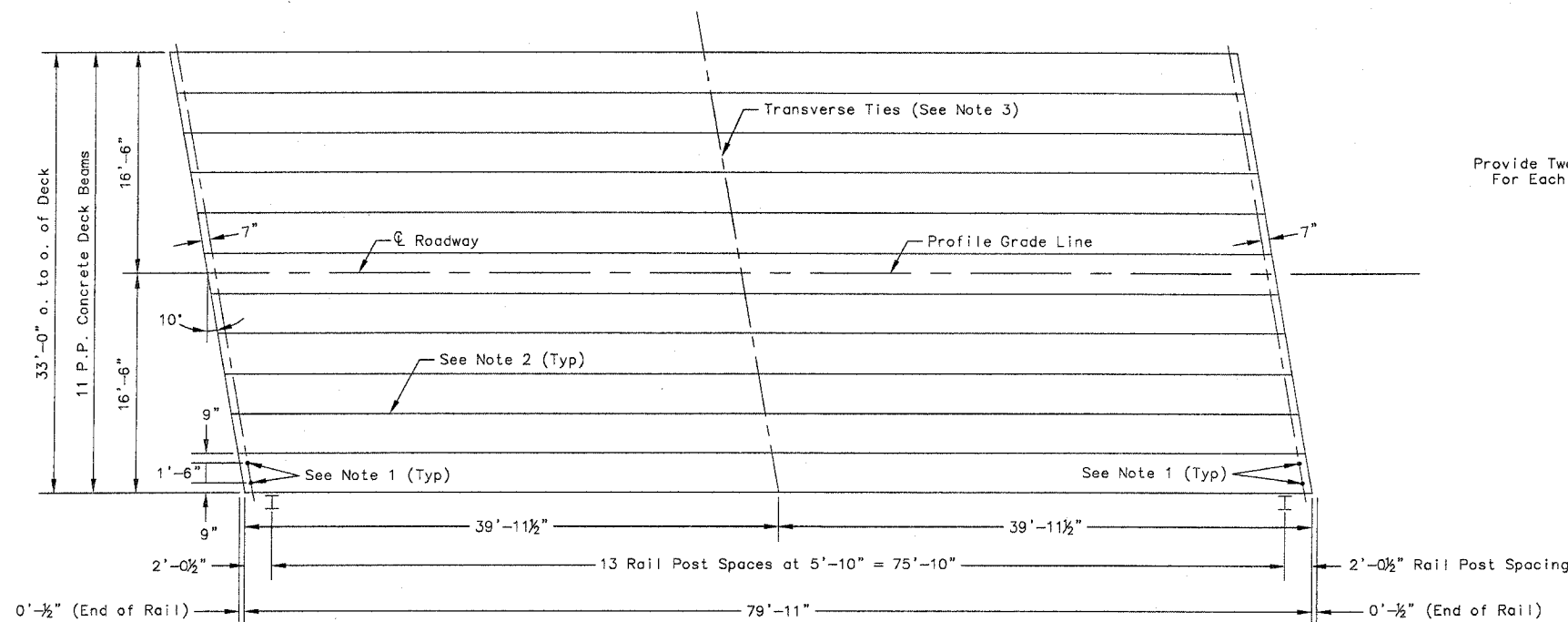
SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	CH 34	ST. CLAIR	11 OF 22
FHWA REG. NO. 7 ILLINOIS		PROJ: BRM-5011(188)	
SUPERSTRUCTURE		CONTRACT 97280	



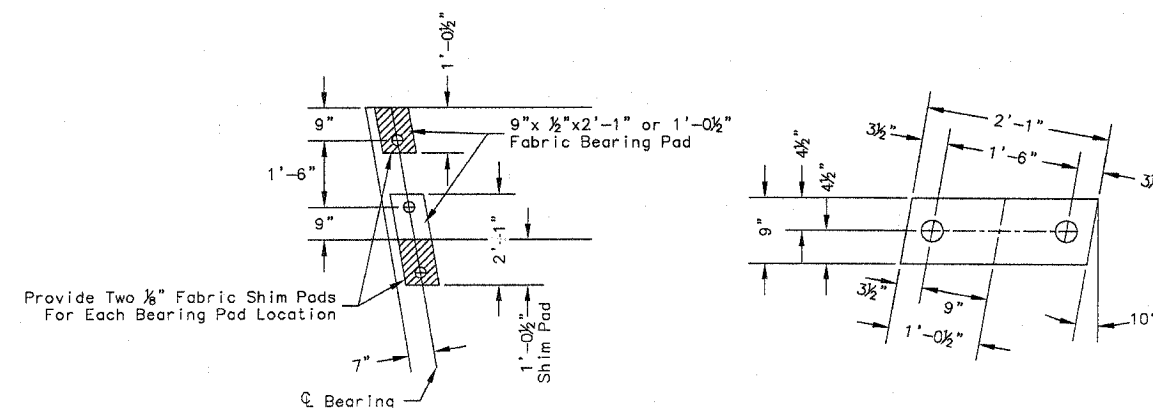
TYPICAL ELEVATION



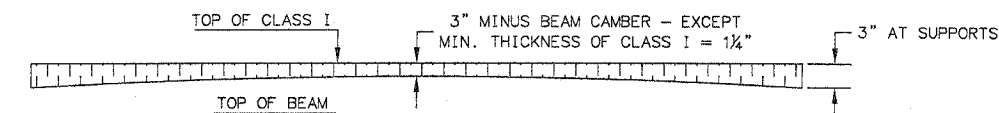
CROSS SECTION



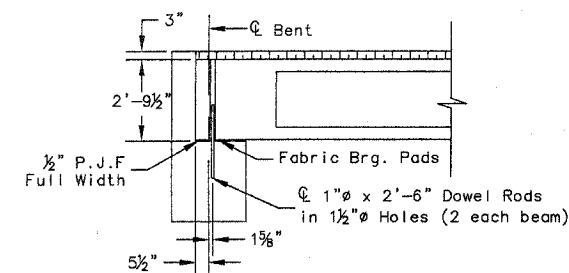
PLAN



1/2" FABRIC BRG. PAD DETAILS



PROFILE OF OVERLAY



SECTION AT ABUTS.
(ALONG C BEAMS)

QUANTITIES FOR ONE SPAN

P.P. CONC. DK. BM. 33" DP.	2640 SQ FT
STEEL RAILING, TYPE SM	160 FT
HMA SC "C" N70	41.1 TONS
WATERPROOFING MEMBRANE SYSTEM	293.3 SQ YD

P.P.C. DECK BEAM SUPERSTRUCTURE

33' RDWY.	33' BMS.
80' SPAN	10' SKEW RT

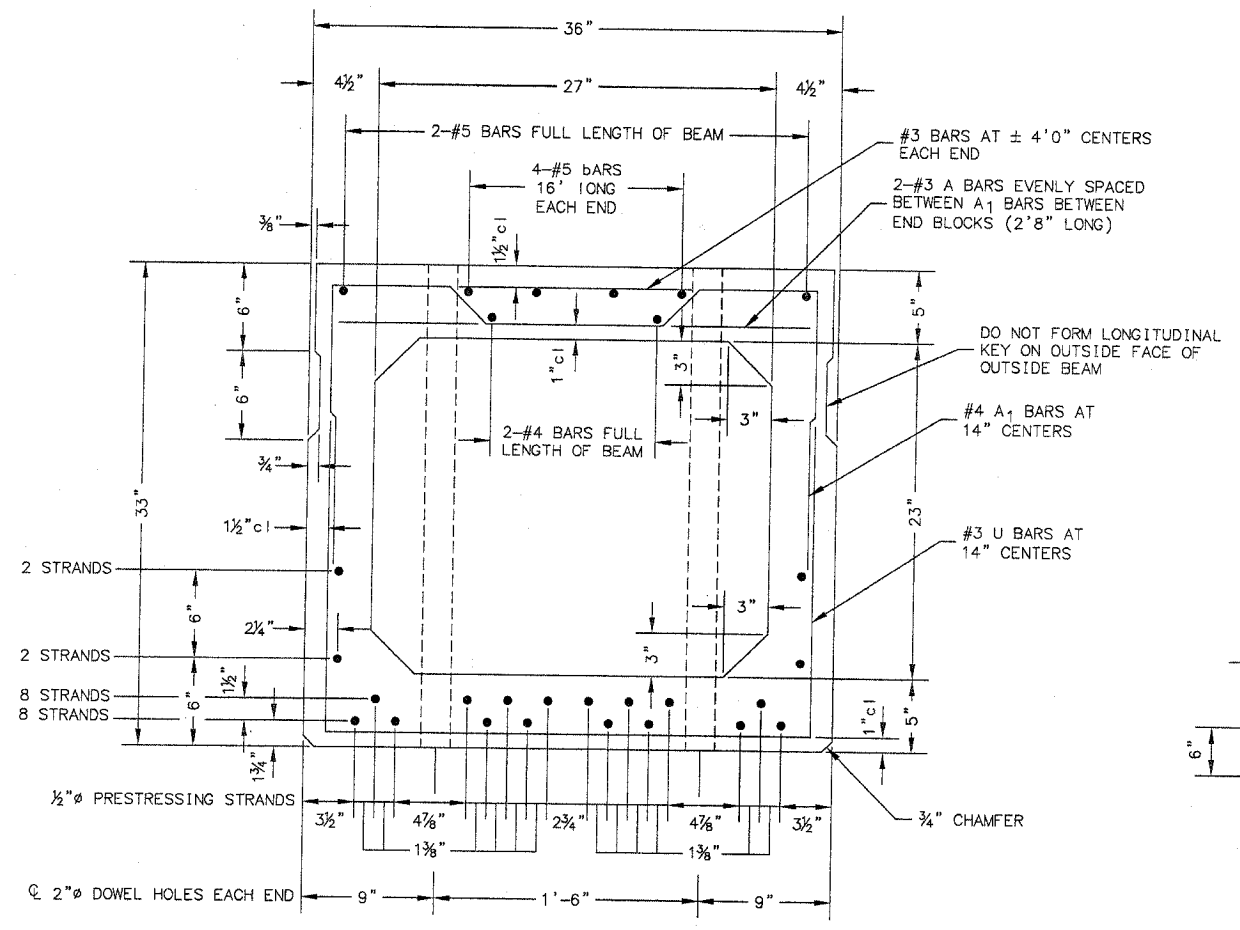
NOTES

- AFTER BEAMS HAVE BEEN ERECTED, HOLES SHALL BE DRILLED INTO SUBSTRUCTURE AND ANCHOR DOWELS PLACED. DOWEL HOLES SHALL BE FILLED WITH NON-SHRINK GROUT TO TOP OF BEAM AND ALLOWED TO CURE MIN. 24 HRS. PRIOR TO GROUTING THE SHEAR KEYS.
- LONGITUDINAL KEYS SHALL BE GROUTED.
- THE 1" Ø RODS IN THE TRANSVERSE TIE ASSEMBLY SHALL BE TIGHTENED TO A SNUG FIT AND THE THREADS SET. POCKETS THAT RECEIVE TRANSVERSE TIE BAR OUTSIDE SHALL BE FILLED WITH GROUT AFTER TRANSVERSE TIE ASSEMBLY IS IN PLACE.

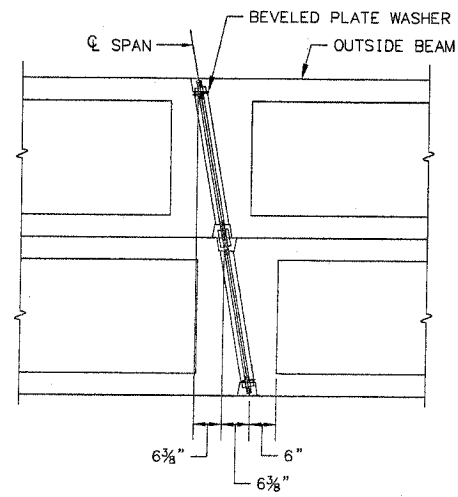
INITIALS	DATE
DESIGNED WES	7/04
CHECKED	
DRAWN WES	7/04
CHECKED	
PREPARED BY ST. CLAIR COUNTY	
CADD DRAWING FILE: superstr	

PLOT DATE: 3/07

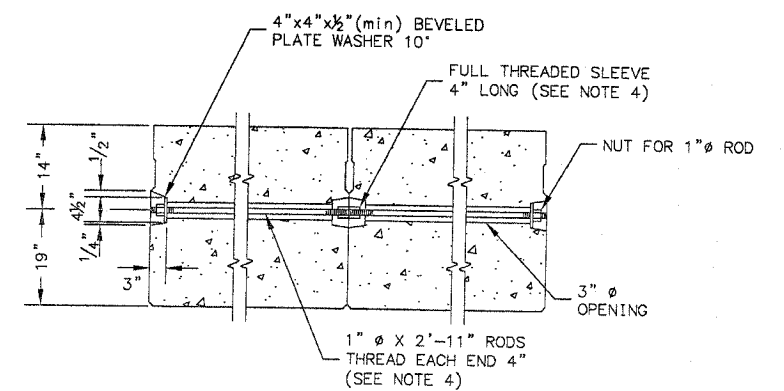
SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	C.H.34	ST. CLAIR	12 of 22
FHWA REG.NO.7	ILLINOIS	PROJ: BRM-5011(188)	
PPC DECK BEAM DETAILS	CONTRACT 97280		



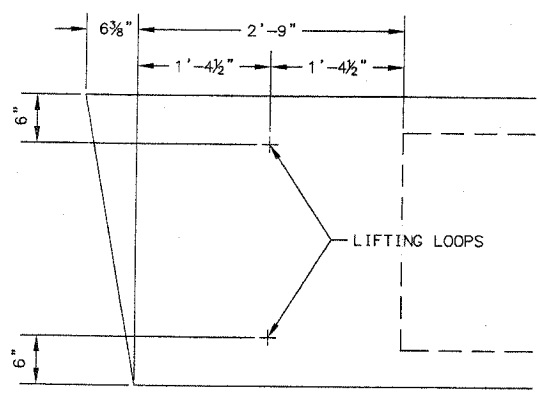
CROSS SECTION
(80' SPAN)



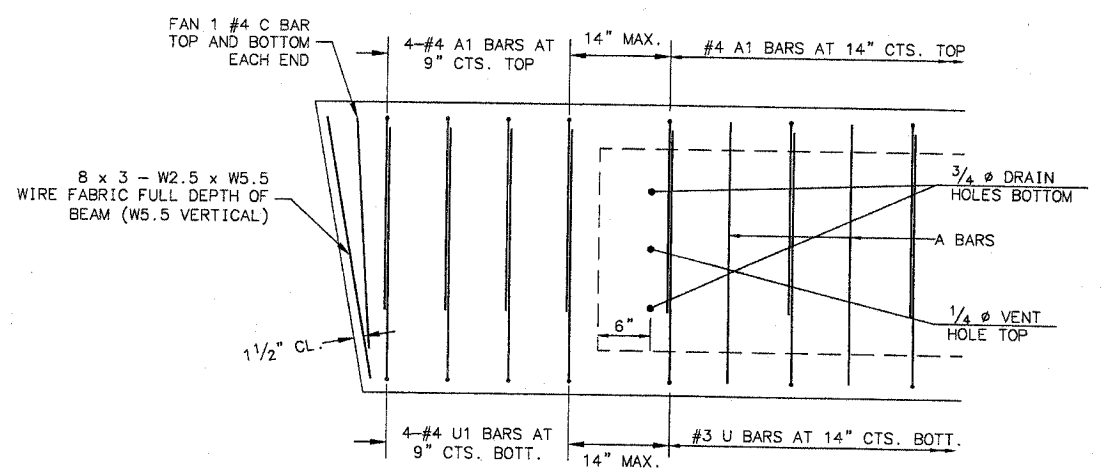
TRANSVERSE TIE ASSEMBLY
PARTIAL PLAN



SECTION ALONG
TRANSVERSE TIE ASSEMBLY



END BLOCK DETAIL
EACH BEAM SHALL HAVE FOUR LIFTING LOOPS, TWO AT EACH END OF BEAM CAST IN LOCATIONS SHOWN ABOVE. LOOPS SHALL BE BURNED OFF AFTER BEAMS HAVE BEEN ERECTED.

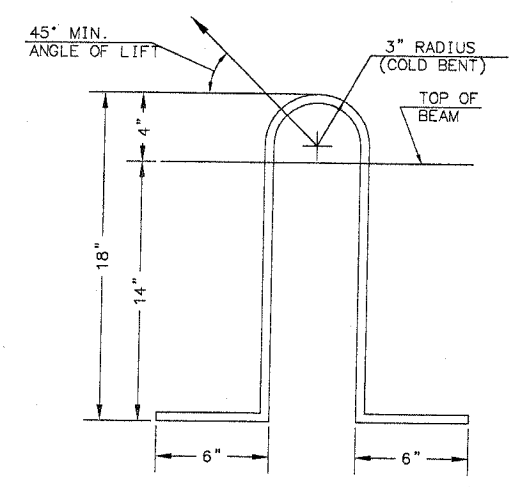


END REINFORCEMENT

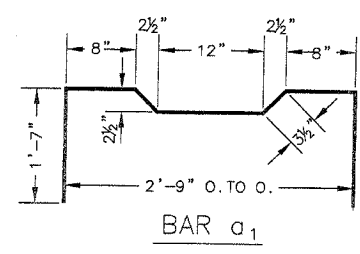
NOTES

- PRESTRESSING STEEL SHALL BE UNCOATED HIGH STRENGTH, STRESS RELIEVED 7-WIRE STRAND, GRADE 270.
- THE NOMINAL DIAMETER SHALL BE 1/2" AND THE NOMINAL CROSS-SECTIONAL AREA SHALL BE 0.153 SQUARE INCHES.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A706 GRADE 60 (IL MODIFIED)
- ON 0', 5' and 10' SKEWS, ALTERNATE APPROVED TRANSVERSE TIE RODS OF INCREASED SEGMENTAL LENGTH ARE ACCEPTABLE.
- RAIL POST ANCHOR DEVICES SHALL BE CAST INTO OUTSIDE BEAM AS ELSEWHERE SPECIFIED.
- WHEN WATERPROOFING MEMBRANE SYSTEM IS SPECIFIED THE TOP SURFACE OF THE BEAMS SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 504.06 OF THE STANDARD SPECIFICATIONS 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".
- LOW RELAXATION STRANDS MAY BE SUBSTITUTED FOR THE STRESS RELIEVED STRANDS. THE INITIAL PRESTRESSING FORCE APPLIED TO EACH STRAND SHALL BE THE SAME AS FOR THE STRESS RELIEVED STRANDS (28900 LBS).
- 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 THE TOP OF THE BEAM AND THE BOTTOM EDGE OF THE KEY.

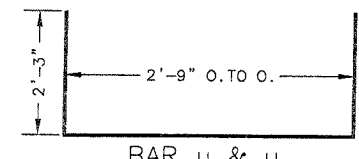
REQUIRED
RELEASE STRENGTH
f'ci = 4,000 psi



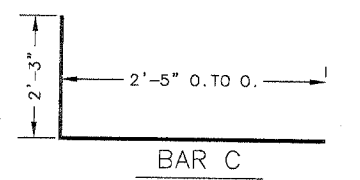
LIFTING LOOP DETAIL
LIFTING LOOPS SHALL BE 3, 1/2" Ø - 270 ksi STRANDS, AS SHOWN. ALTERNATE APPROVED LIFTING DEVICES ARE ALSO ACCEPTABLE.



BAR a₁



BAR u & u₁



BAR C

DESIGN STRESSES

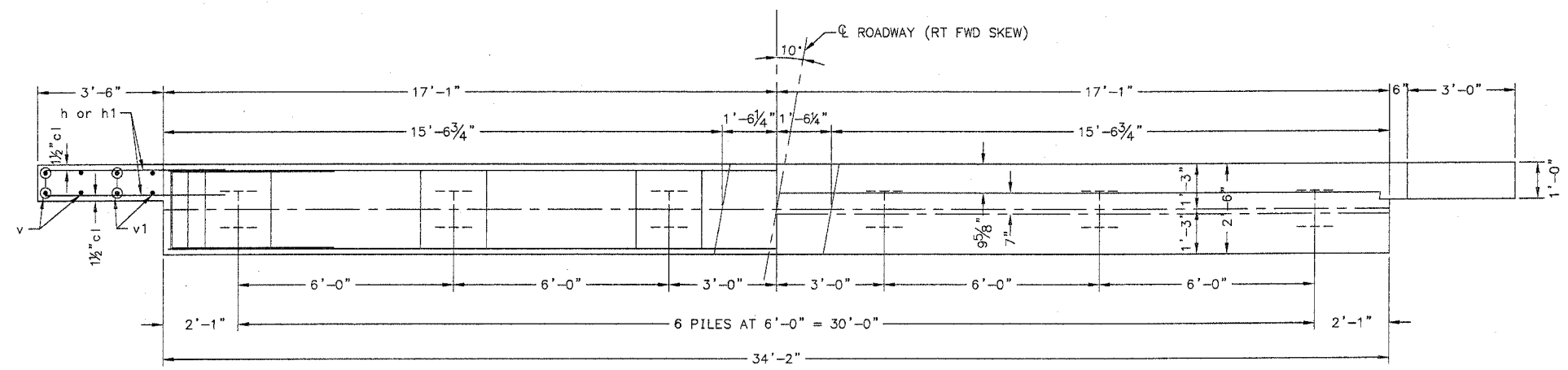
- f'c = 5,000 psi
- f'ci = 4,000 psi
- f's = 270,000 psi (1/2" Ø STRAND)
- f'si = 189,000 psi (1/2" Ø STRAND)
- fy = 60,000 psi

INITIALS	DATE
DESIGNED WES	7/04
CHECKED	
DRAWN WES	7/04
CHECKED	
PREPARED BY ST. CLAIR COUNTY	
CADD DRAWING FILE:DECK BMS	

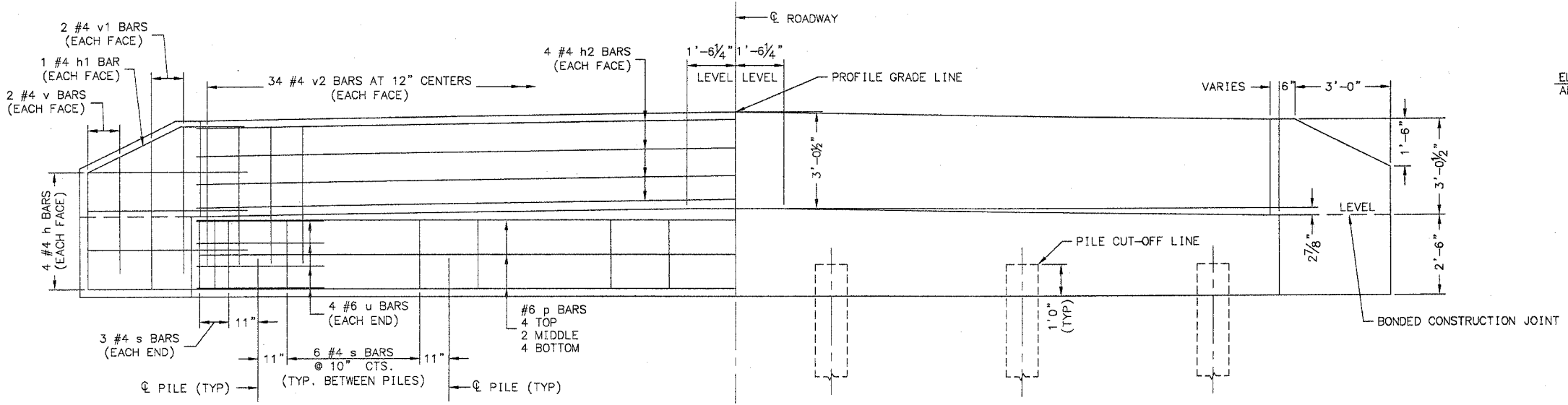
P.P.C. DECK BEAM DETAILS
33' ROADWAY
33" x 36" BEAMS

PLOT DATE: 3/07

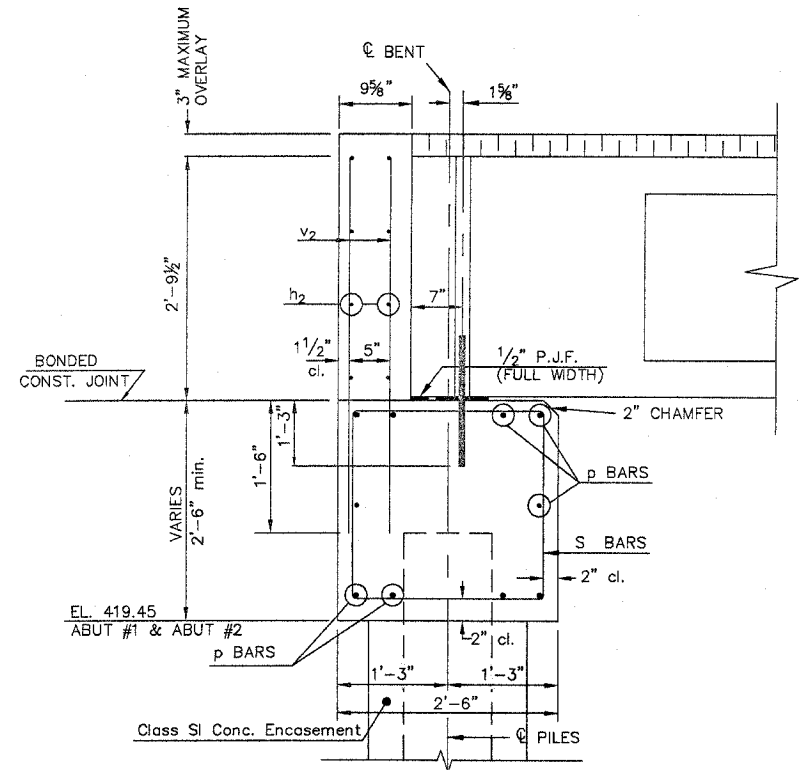
SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	C.H.34	ST. CLAIR	13 of 22
FHWA REG.NO.7	ILLINOIS	PROJ: BRM-5011(188)	
ABUTMENT DETAILS		CONTRACT 97280	



PLAN



ELEVATION



SECTION THRU ABUTMENT
(AT RIGHT ANGLES)

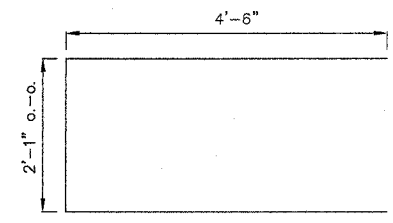
BILL OF MATERIAL FOR ONE ABUTMENT

Bar	No.	Size	Length	Shape
h	16	#4	5'-0"	—
h ₁	4	#4	5'-3"	—
h ₂	8	#4	33'-10"	—
p	10	#6	33'-10"	—
s	36	#4	9'-5"	□
u	8	#6	11'-1"	□
v	8	#4	3'-8"	—
v ₁	8	#4	4'-8"	—
v ₂	68	#4	4'-2"	—
CONCRETE STRUCTURES			12.7 CU YD	
REINFORCEMENT BARS, EPOXY COATED			1350 LBS	

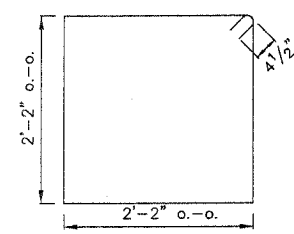
- NOTES
1. THE BACKWALL AND THE PORTION OF THE WINGWALLS ABOVE THE BONDED CONSTRUCTION JOINT SHALL BE CAST AGAINST THE IN-PLACE BEAMS.
 2. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A706 GRADE 60 (IL MODIFIED)
 3. ALL REINFORCEMENT BARS SHOWN SHALL BE EPOXY COATED

DESIGN STRESS
f_c = 3,500 psi
f_y = 60,000 psi

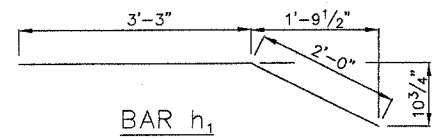
MAXIMUM PILE LOAD
80' SPAN = 54 TONS



BAR u



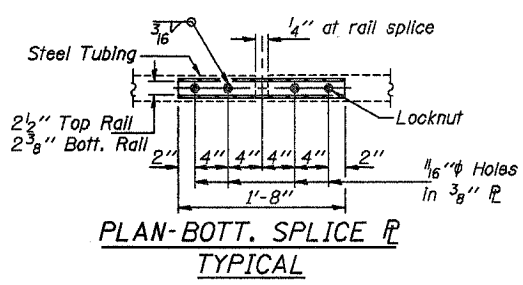
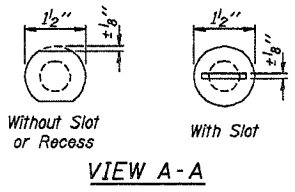
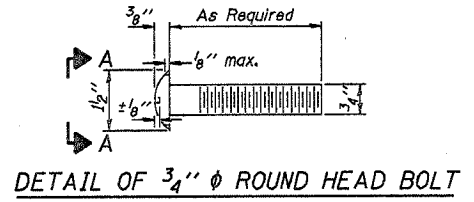
BAR s



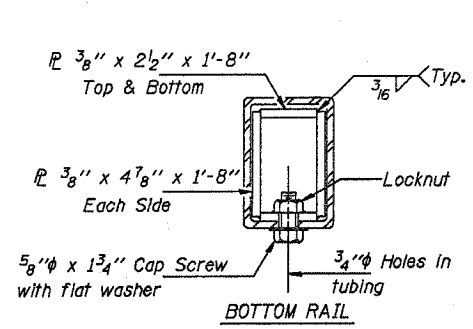
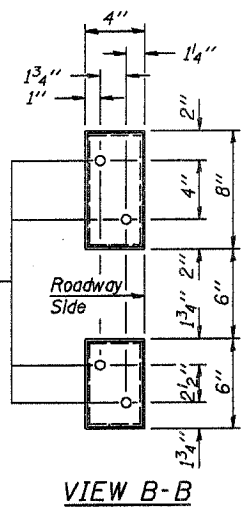
BAR h₁

PLOT DATE: 3/07	INITIALS	DATE
	DESIGNED WES	7/04
	CHECKED	
	DRAWN WES	7/04
	CHECKED	
PREPARED BY ST. CLAIR COUNTY		
CADD DRAWING FILE: ABUTMENT		

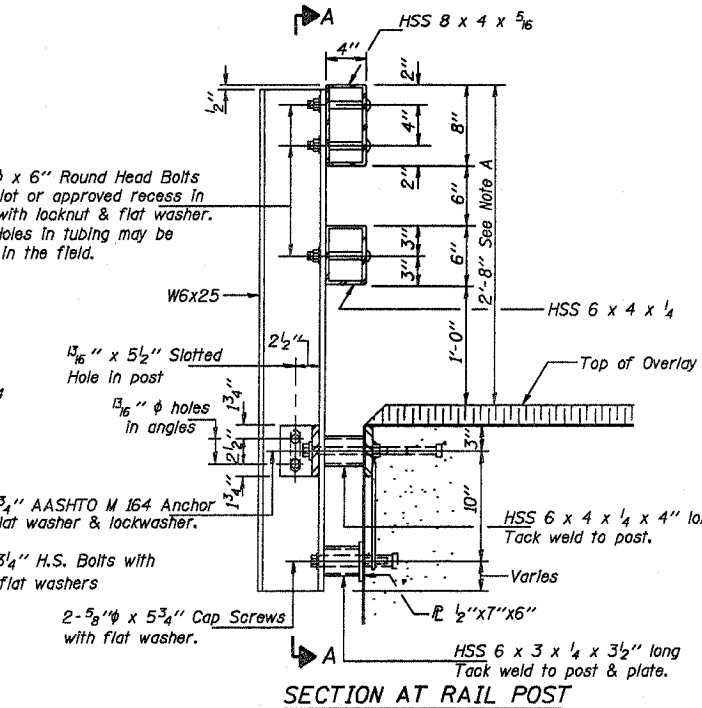
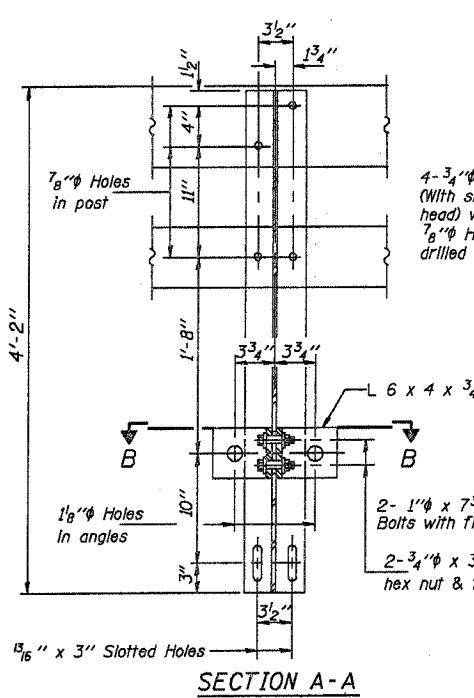
P.P.C. DECK BEAMS	
PILE BENT ABUTMENT	
33' RDWY.	33" BMS.
10° SKEW RT. FWD	



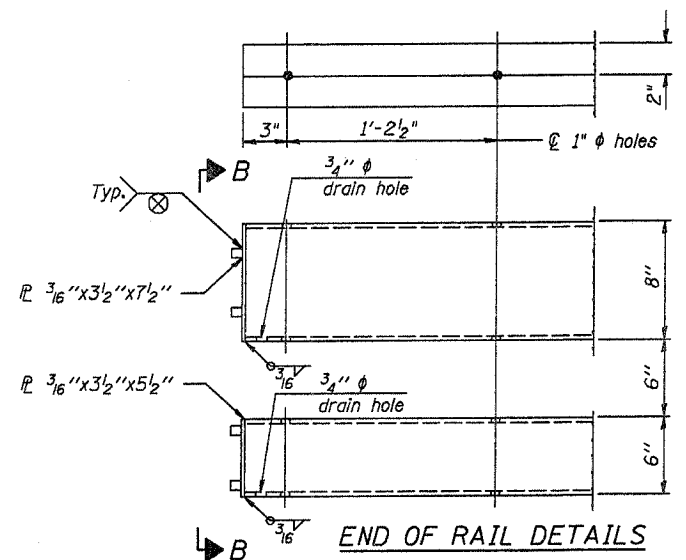
4 - 5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032



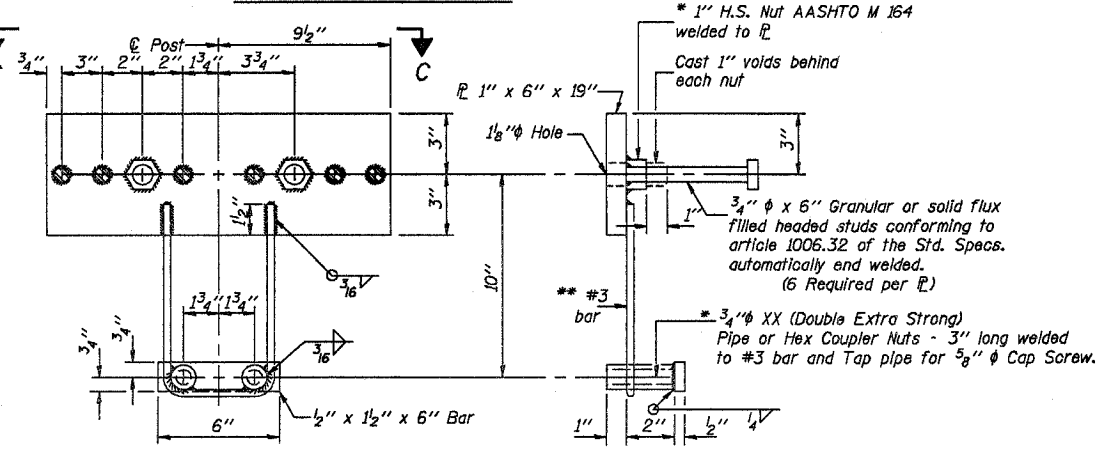
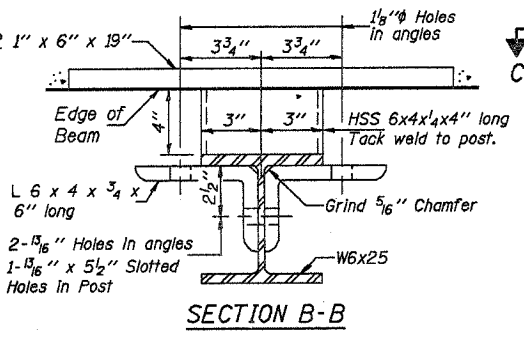
SECTIONS AT RAIL SPLICE



Note A: Where no overlay is to be provided, adjust top of rail to lay parallel to grade 2'-10" max. above top of beam

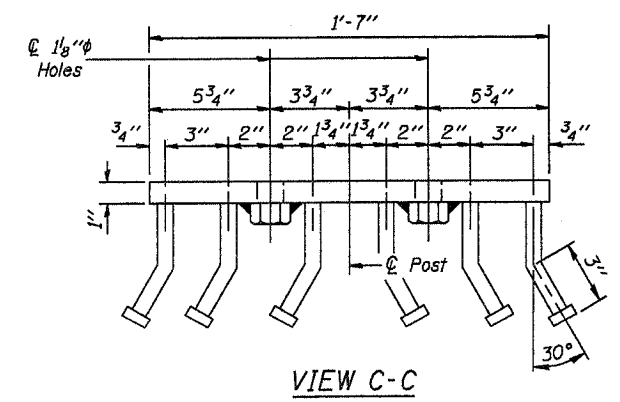


END OF RAIL DETAILS

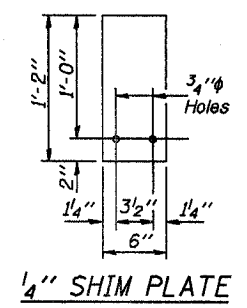


ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.
 ** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



VIEW C-C



1/4" SHIM PLATE

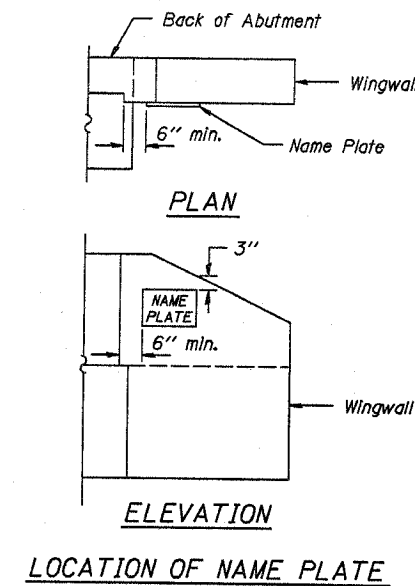
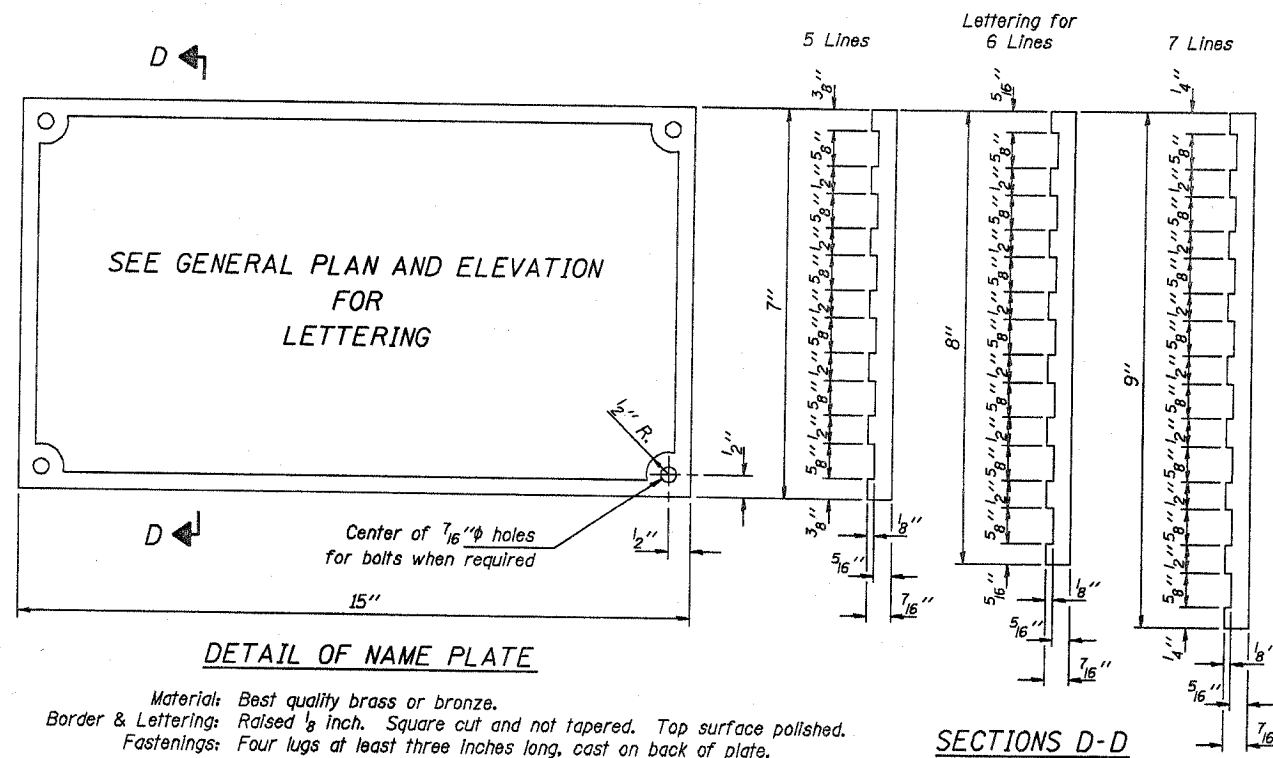
NOTES

Hollow structural steel tubing 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 and angles shall conform to AASHTO M 270, Grade 50.
 Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which 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, anchor devices and angles 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 RAILING, TYPE SM.
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with STEEL BRIDGE RAIL, TYPE SM.
 The 1/2" x 7" x 6" plates that come in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place 1/8" fabric bearing pads between the plates and concrete.
 The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.
 The Maximum allowable rail post spacing shall be 6'-3".

Illinois Department of Transportation
 PASSED APRIL 4, 2005
 Thomas J. ...
 Engineer of Bridge Design
 APPROVED APRIL 4, 2005
 ...
 Engineer of Bridges and Structures

STEEL BRIDGE RAIL, TYPE SM
 STANDARD CR-TSM

SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	CH 34	ST. CLAIR	15 OF 22
FHWA REG.NO.7	ILLINOIS	PROJ: BRM-5011(188)	
CONTRACT 97280			



Illinois Department of Transportation

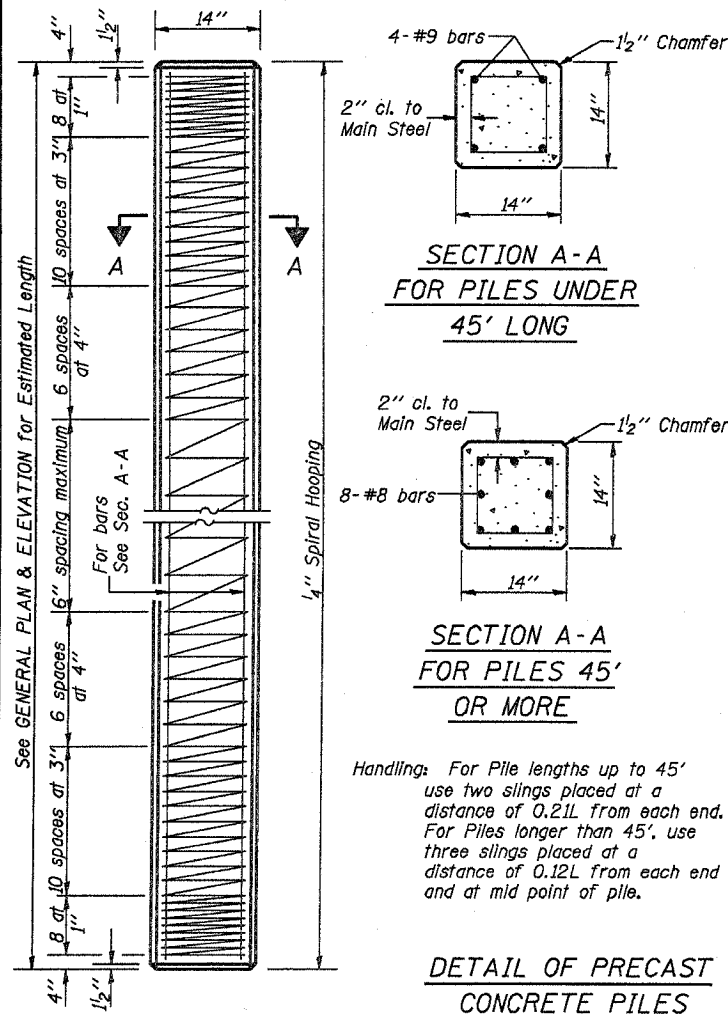
PASSED APRIL 4, 2005
Thomas J. Nemas
 Engineer of Bridge Design

APPROVED APRIL 4, 2005
Ralph E. Anderson
 Engineer of Bridges and Structures

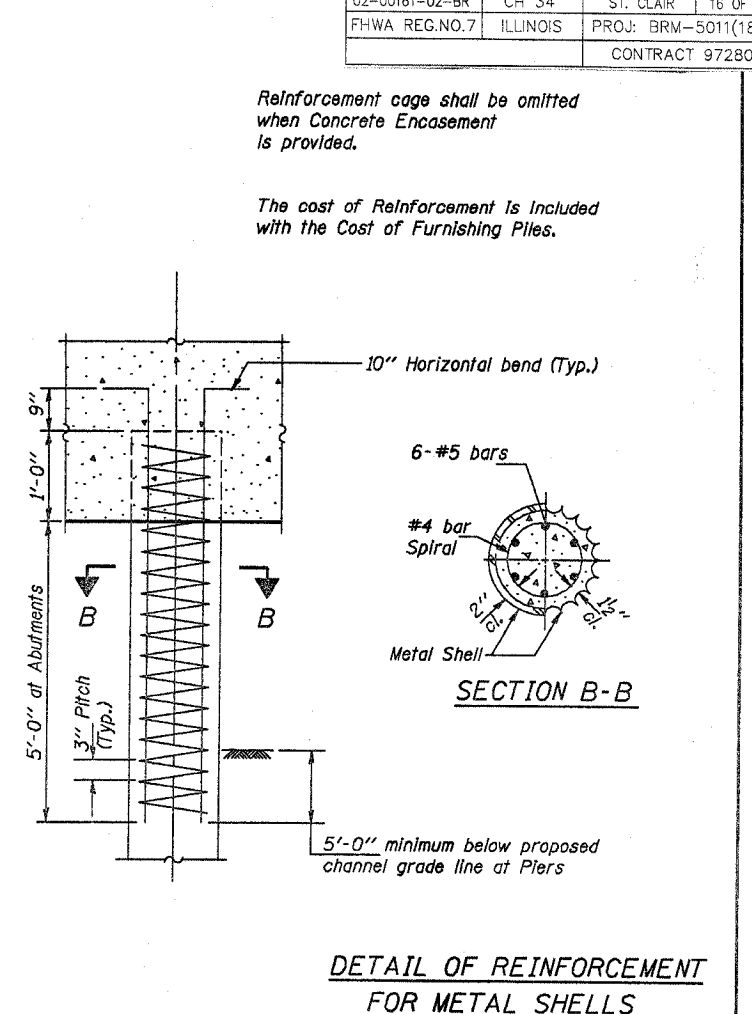
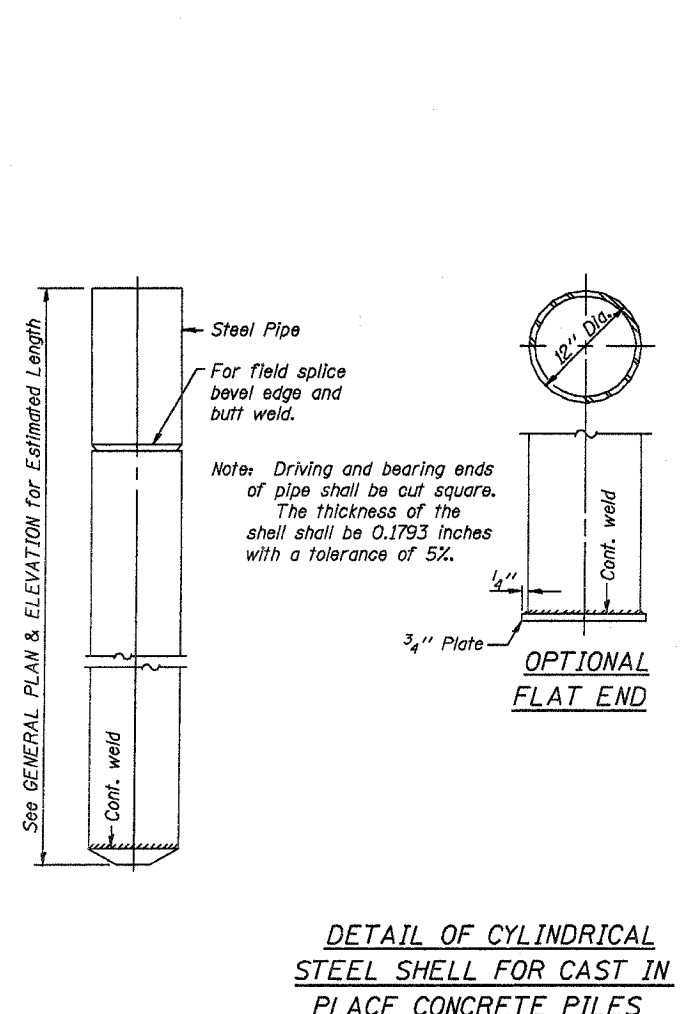
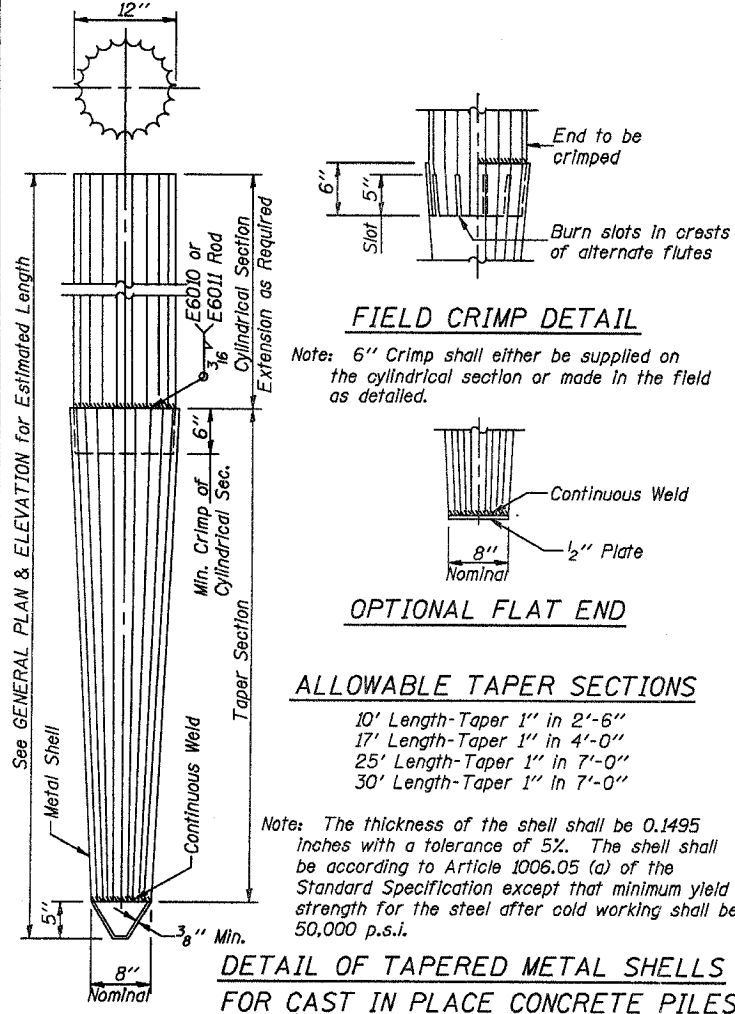
ISSUED 7-1-88

NAME PLATE
 STANDARD CN

SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	CH 34	ST. CLAIR	16 OF 22
FHWA REG.NO.7	ILLINOIS	PROJ: BRM-5011(188)	
			CONTRACT 97280

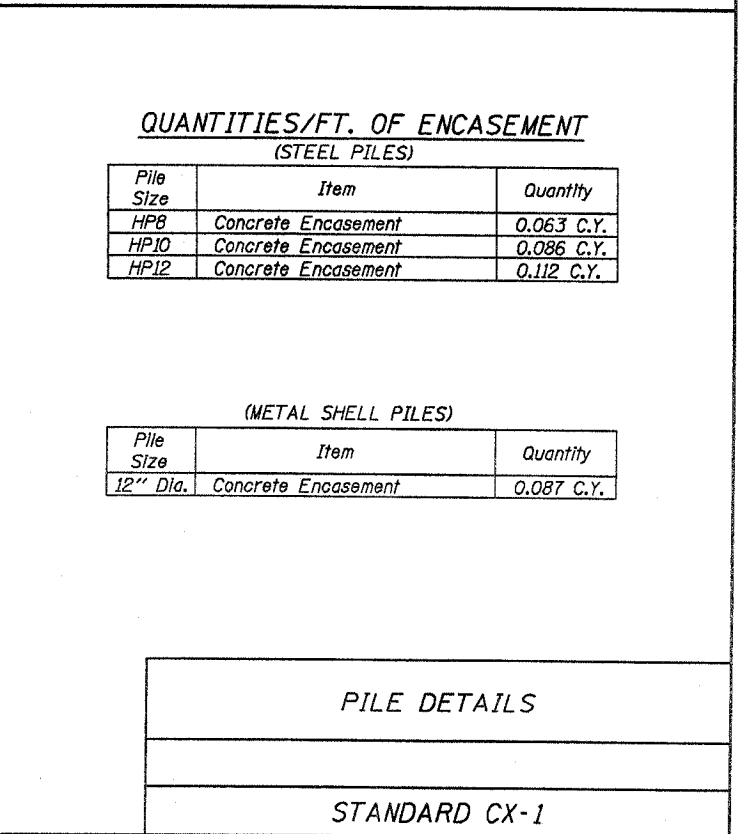
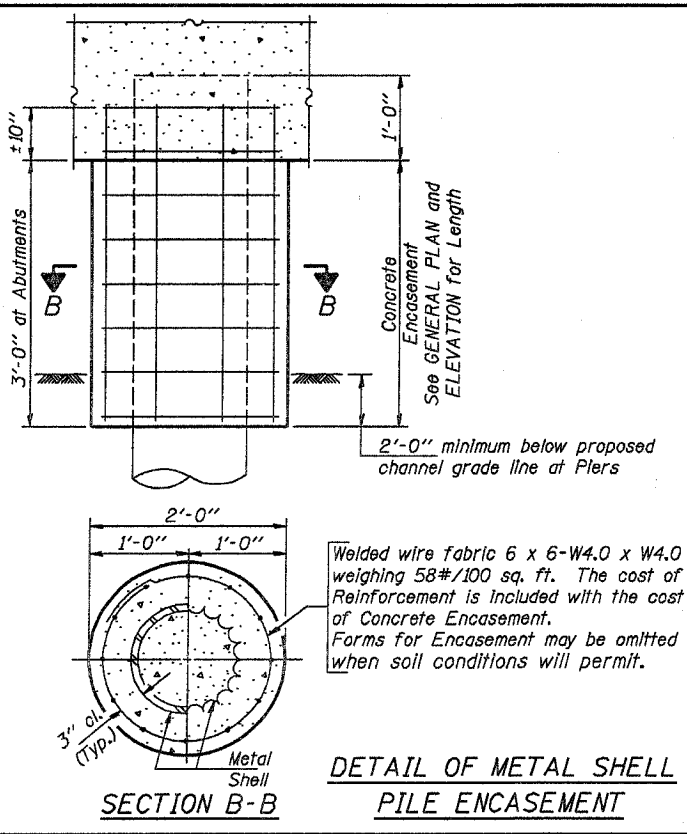
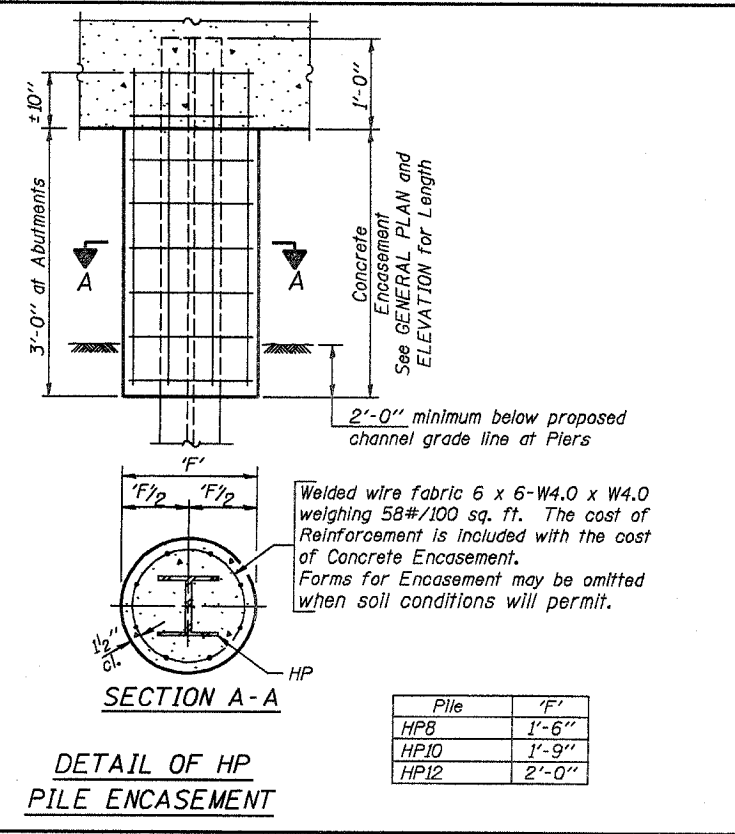
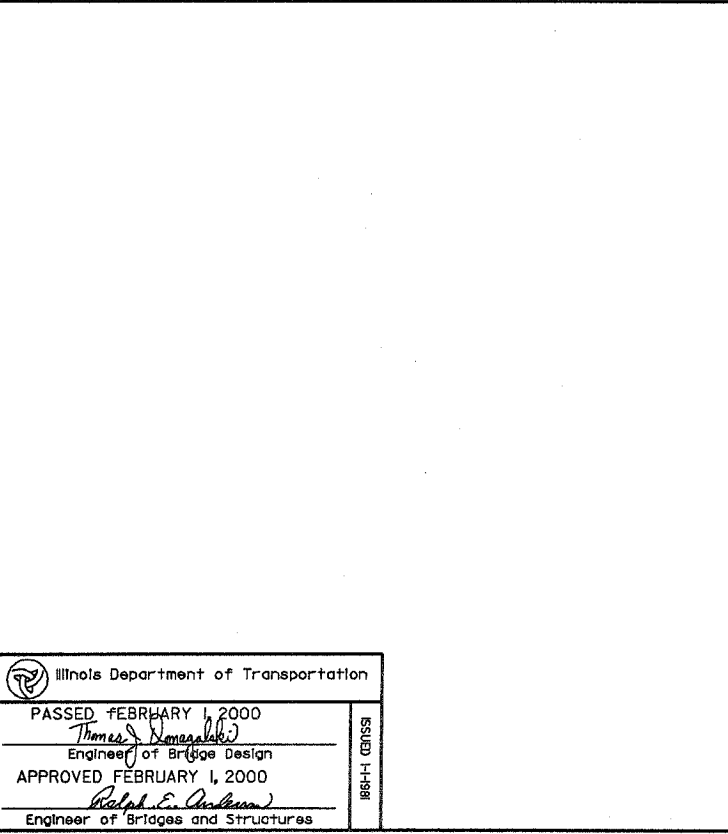


Handling: For Pile lengths up to 45' use two slings placed at a distance of 0.21L from each end. For Piles longer than 45', use three slings placed at a distance of 0.12L from each end and at mid point of pile.



Reinforcement cage shall be omitted when Concrete Encasement is provided.

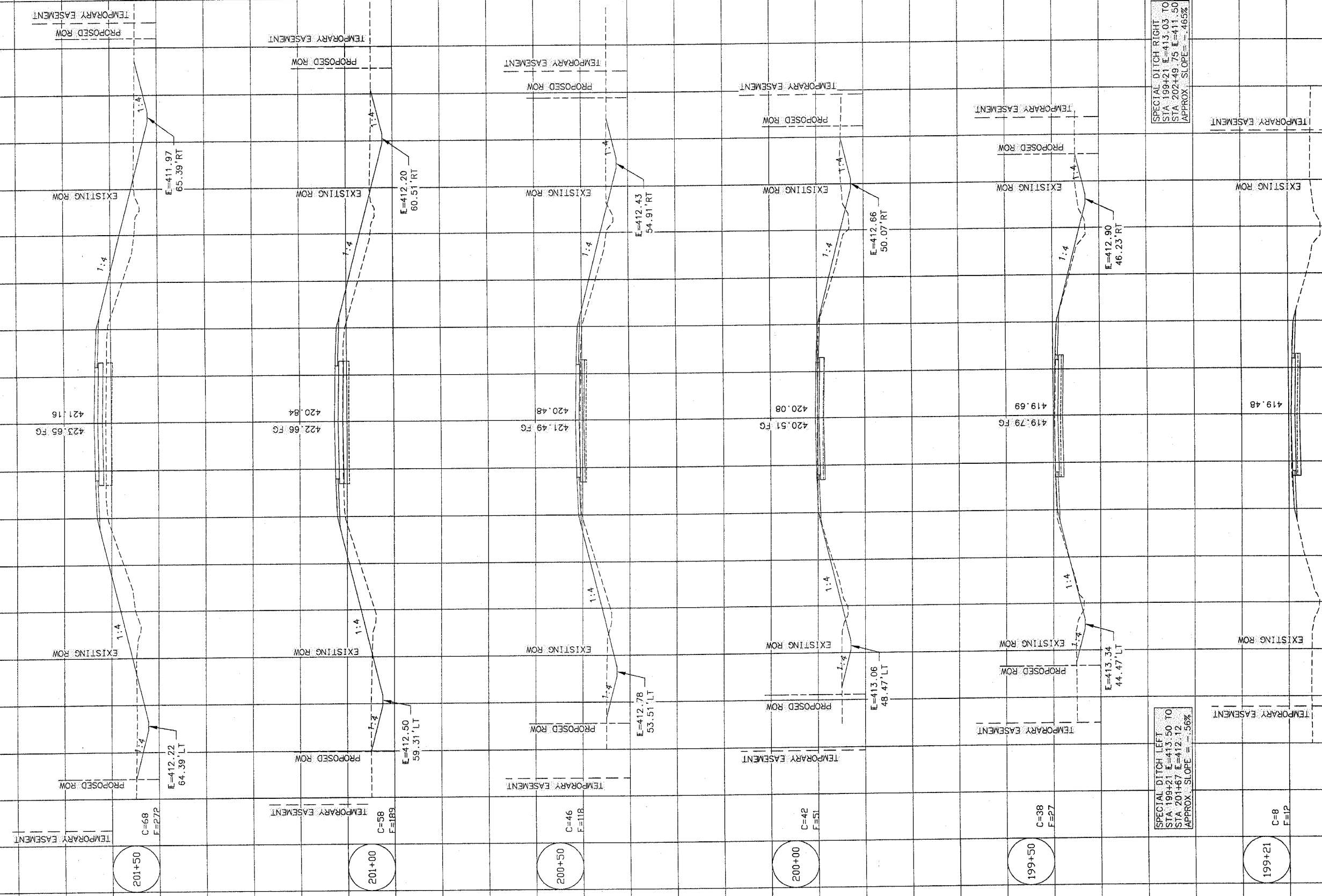
The cost of Reinforcement is included with the Cost of Furnishing Piles.



Illinois Department of Transportation
PASSED FEBRUARY 1, 2000
Theresa J. Demaschke
Engineer of Bridge Design
APPROVED FEBRUARY 1, 2000
Ralph E. Anderson
Engineer of Bridges and Structures

PLOT DATE: 3/07

SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	C.H.34	ST. CLAIR	17 of 22
FHWA REG. NO. 7	ILLINOIS	PROJ: BRM-5011(188)	
STA 199+20 TO 201+50		CONTRACT 97280	



SPECIAL DITCH RIGHT
 STA 199+21 E=413.03 TO
 STA 202+49.75 E=411.50
 APPROX. SLOPE = -.465%

SPECIAL DITCH LEFT
 STA 199+21 E=413.50 TO
 STA 201+67 E=412.12
 APPROX. SLOPE = -.56%

SCALE: VERTICAL 1"=10'
 HORIZONTAL 1"=10'

PLOT DATE: 3/07

SEE SHEET 20 FOR THE CROSS-SECTIONS OF THE COMMERCIAL ENTRANCE STA 205+64.39 LT.

205+00

AREA FORWARD
C=0
F=131
AREA BACK
C=0
F=122

Varies

EXISTING ROW

424.21 FG
421.41

1:4
EXISTING ROW

E=419.11
43.87' Lt

SPECIAL DITCH LEFT
STA 204+90.00: 43.87' Lt; E=419.01 TO
STA 205+34.00: 52.00' Lt E=419.45
APPROX. SLOPE = +1.0%

204+50

C=0
F=139

Varies

EXISTING ROW

424.81 FG

1:4
EXISTING ROW

E=420.14
49.00' Lt

SPECIAL DITCH LEFT
STA 204+90.00: 98.32' Lt; E=421.00 TO
STA 204+90.00: 49.00' Lt E=419.82
APPROX. SLOPE = -0.74%

204+00

C=0
F=136

Varies

EXISTING ROW

425.19 FG

EXISTING ROW

E=420.49
49.00' Lt

EXISTING 15" CULVERT

PROPOSED 15" PIPE DRAINS

-7.0%

BACK OF ABUTMENT #2 = 203+83.77

203+00

C=0
F=140

EXISTING ROW

425.25 FG

EXISTING ROW

202+50

C=0
F=136

EXISTING ROW

424.94 FG

EXISTING ROW

LEFT LEVEE ACCESS
O=0 CU.FT.
F=10221 CU.FT.
RIGHT LEVEE ACCESS
C=3880 CU.FT.
F=19142 CU.FT.

E=411.50
82.43' RT

1:1

PROPOSED ROW

410

202+00

C=0
F=127

AREA FORWARD
C=0
F=127
AREA BACK
C=50
F=315

EXISTING ROW

424.41 FG

EXISTING ROW

PROPOSED ROW

410

E=411.73
77.23' RT

1:1

PROPOSED ROW

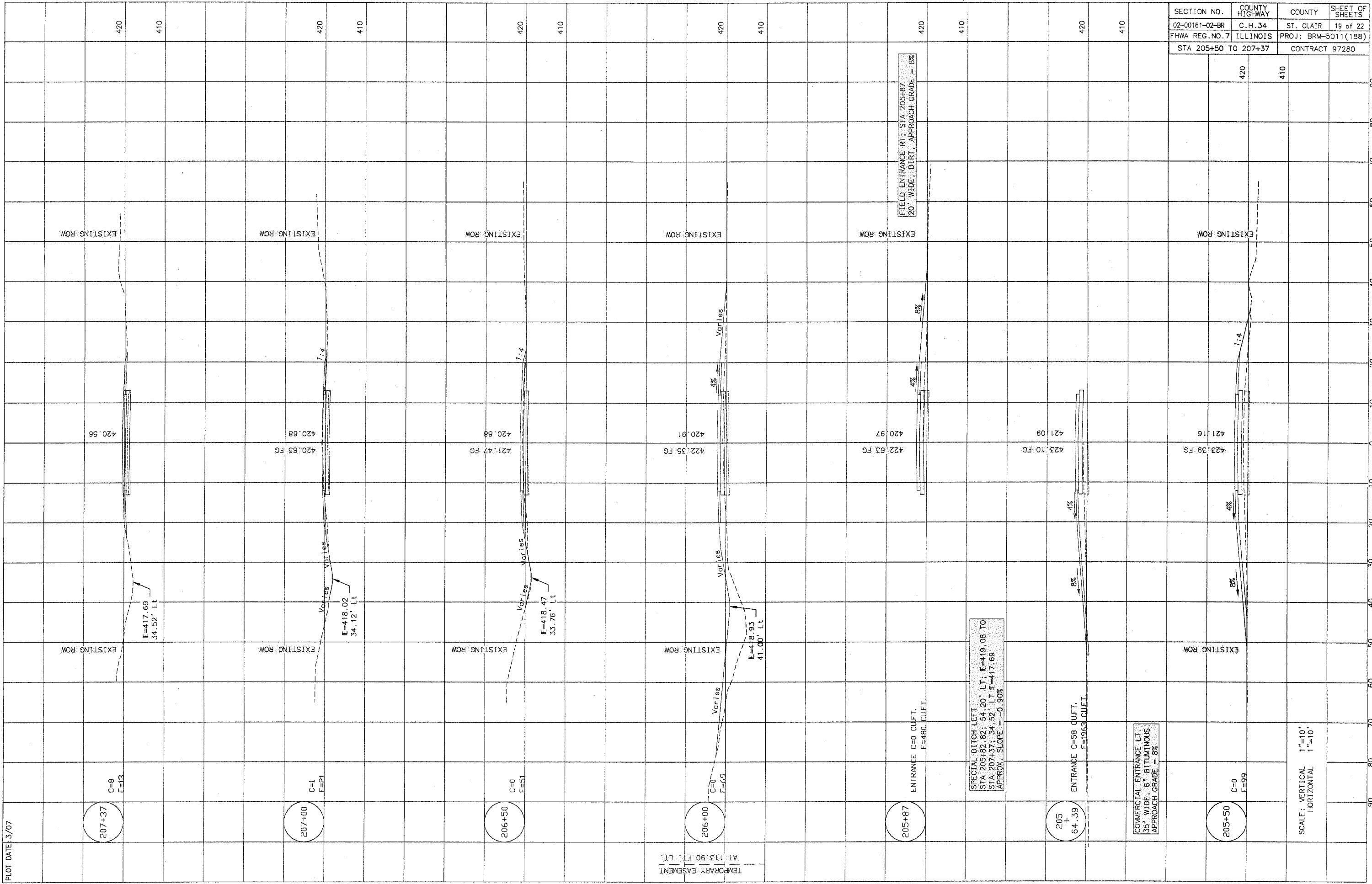
410

SCALE: VERTICAL
1"=10'
HORIZONTAL
1"=10'

SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	C.H.34	ST. CLAIR	18 of 22
FHWA REG. NO. 7	ILLINOIS	PROJ: BRM-5011(188)	
STA 202+00 TO 205+00		CONTRACT 97280	

90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90

PLOT DATE: 3/07



SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	C. H. 34	ST. CLAIR	19 of 22
FHWA REG. NO. 7		ILLINOIS	PROJ: BRM-5011(188)
STA 205+50 TO 207+37		CONTRACT 97280	

SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
420	420	410	

SCALE: VERTICAL 1"=10'
HORIZONTAL 1"=10'

207+37
C=8
E=13

207+00
C=1
E=21

206+50
C=0
E=51

206+00
C=0
E=69

205+87
ENTRANCE C=0 CUFT.
E=480 CUFT.

205 +
64.39
ENTRANCE C=58 CUFT.
E=1963 CUFT.

205+50
C=0
E=99

SPECIAL DITCH LEFT
STA. 205+82.82; 54.20' LT; E=419.08 TO
STA. 207+37; 34.52' LT E=417.69
APPROX. SLOPE = -0.90%

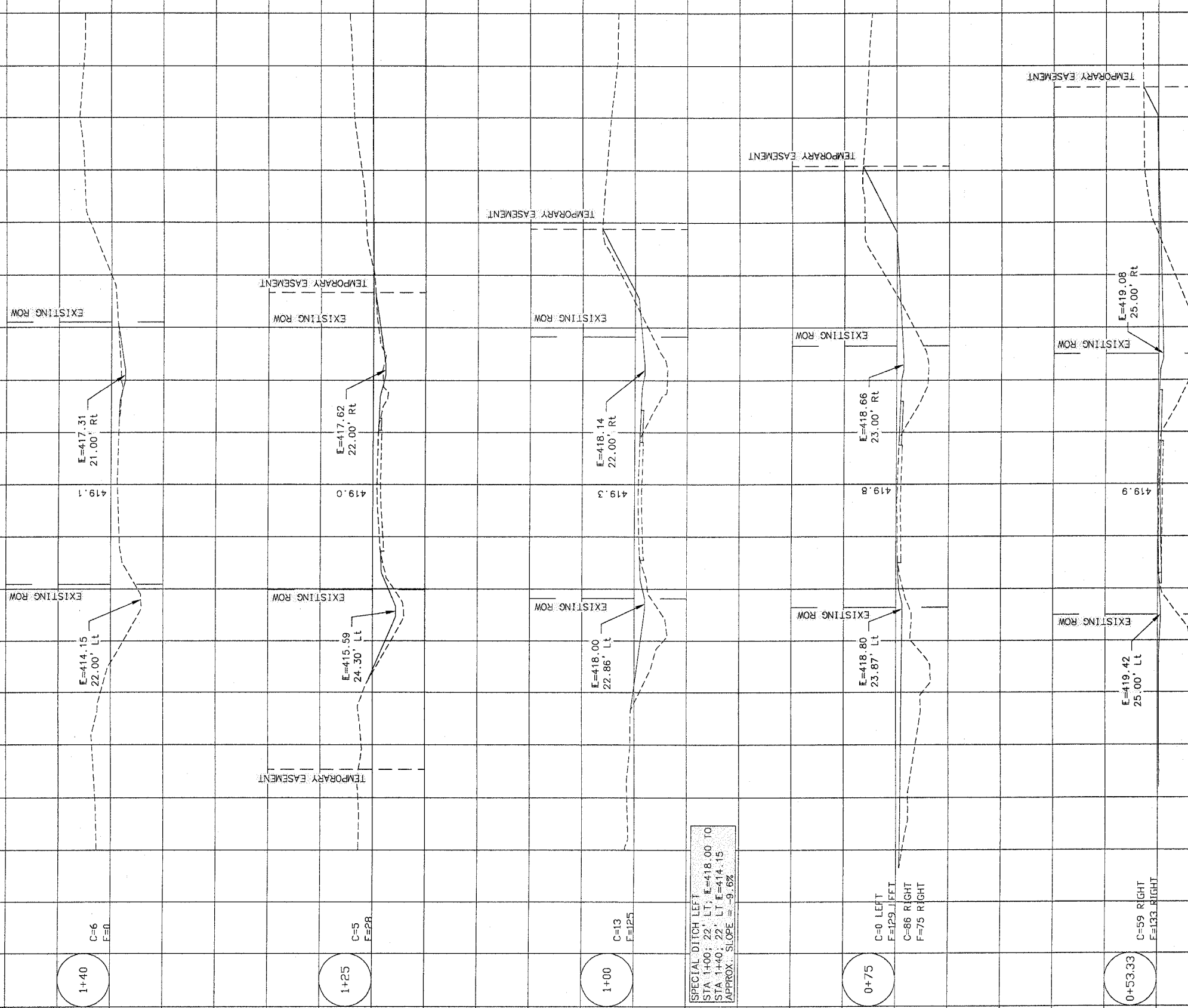
COMMERCIAL ENTRANCE LT.
35' WIDE, 6" BITUMINOUS,
APPROACH GRADE = 8%

FIELD ENTRANCE RT; STA. 205+87
20' WIDE, DIRT, APPROACH GRADE = 8%

TEMPORARY EASEMENT
AT 113.90 FT. LT.

PLOT DATE: 3/07

SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	C.H. 34	ST. CLAIR	20 of 22
FHWA REG. NO. 7	ILLINOIS	PROJ: BRM-5011(188)	
STA 0+53.33 TO 1+40		CONTRACT 97280	



1+40
C=6
F=0

1+25
C=5
F=28

1+00
C=13
F=125

0+75
C=0 LEFT
F=129 LEFT
C=86 RIGHT
F=75 RIGHT

0+53.33
C=59 RIGHT
F=133 RIGHT

SPECIAL DITCH LEFT
STA 0+55; 25' LT; E=419.45 TO
STA 1+40; 22' LT; E=418.00
APPROX. SLOPE = -3.2%

VOLUME OF EARTH FOR THE LEFT RADIUS IS
BETWEEN STA 205+00 (MAINLINE) AND STA
0+75 (ENTRANCE)

VOLUME OF EARTH FOR THE RIGHT RADIUS
IS BETWEEN STA 206+29 (MAINLINE) AND
STA 0+53.33 (ENTRANCE)

LEFT RADIUS OF ENTRANCE C=0
F=7453 CU.FT.
RIGHT RADIUS OF ENTRANCE C=2857 CU.FT.
F=2321 CU.FT.

VOLUME OF EARTH UNDER THE ENTRANCE
PAVEMENT BETWEEN E.O.P. (MAINLINE)
AND STA 0+53.33 (ENTRANCE)
C=58 CU.FT.; F=1963 CU.FT.

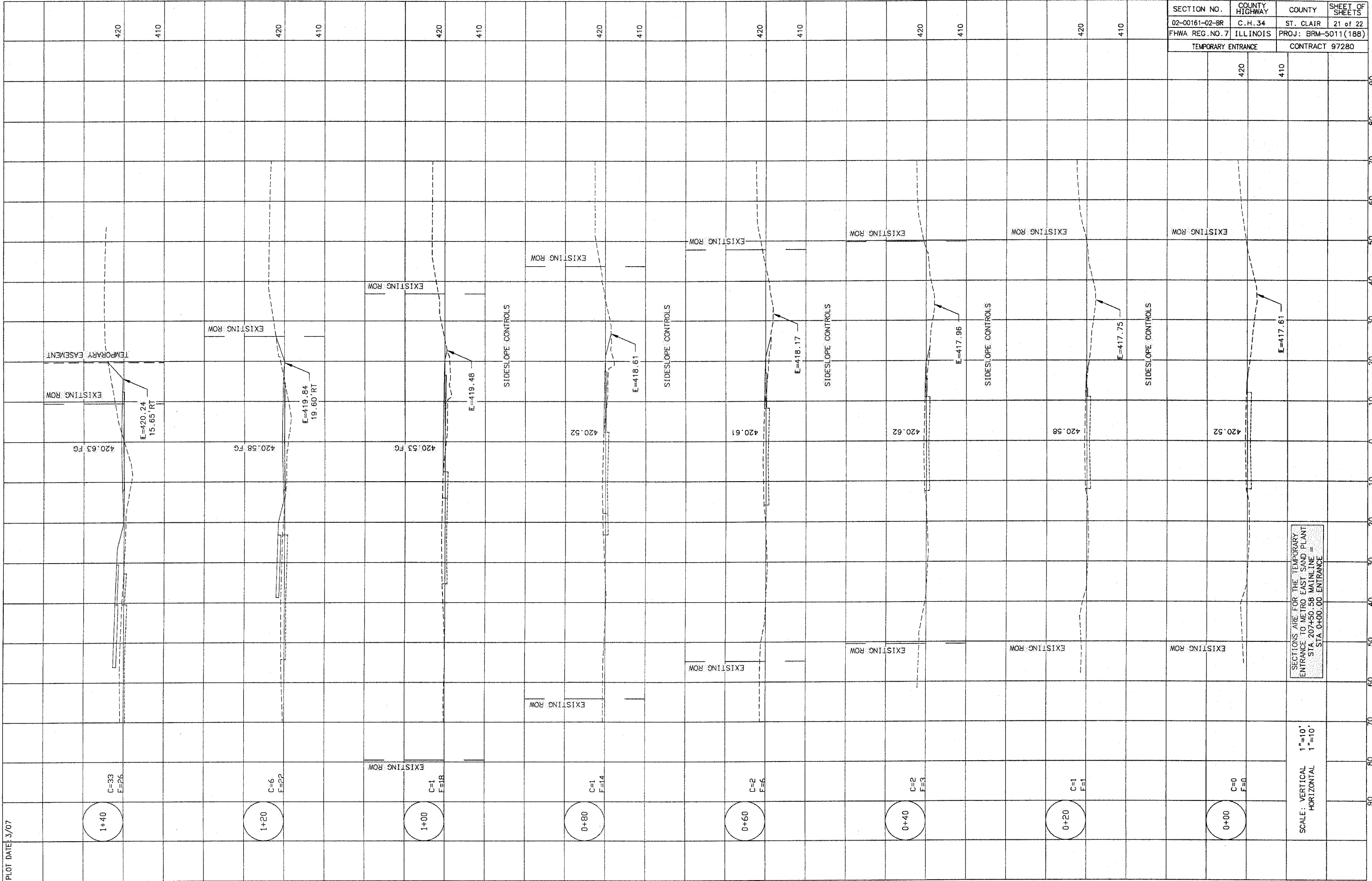
SPECIAL DITCH RIGHT
STA 0+55; 25' RT; E=419.08 TO
STA 1+40; 21' RT; E=417.31
APPROX. SLOPE = -2.08%

SECTIONS ARE FOR THE ENTRANCE
TO METRO EAST SAND PLANT
STA 205+64.39 LT

SCALE: VERTICAL 1"=10'
HORIZONTAL 1"=10'

90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90

SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	C.H. 34	ST. CLAIR	21 of 22
FHWA REG. NO. 7	ILLINOIS	PROJ: BRM-5011(188)	
TEMPORARY ENTRANCE		CONTRACT 97280	



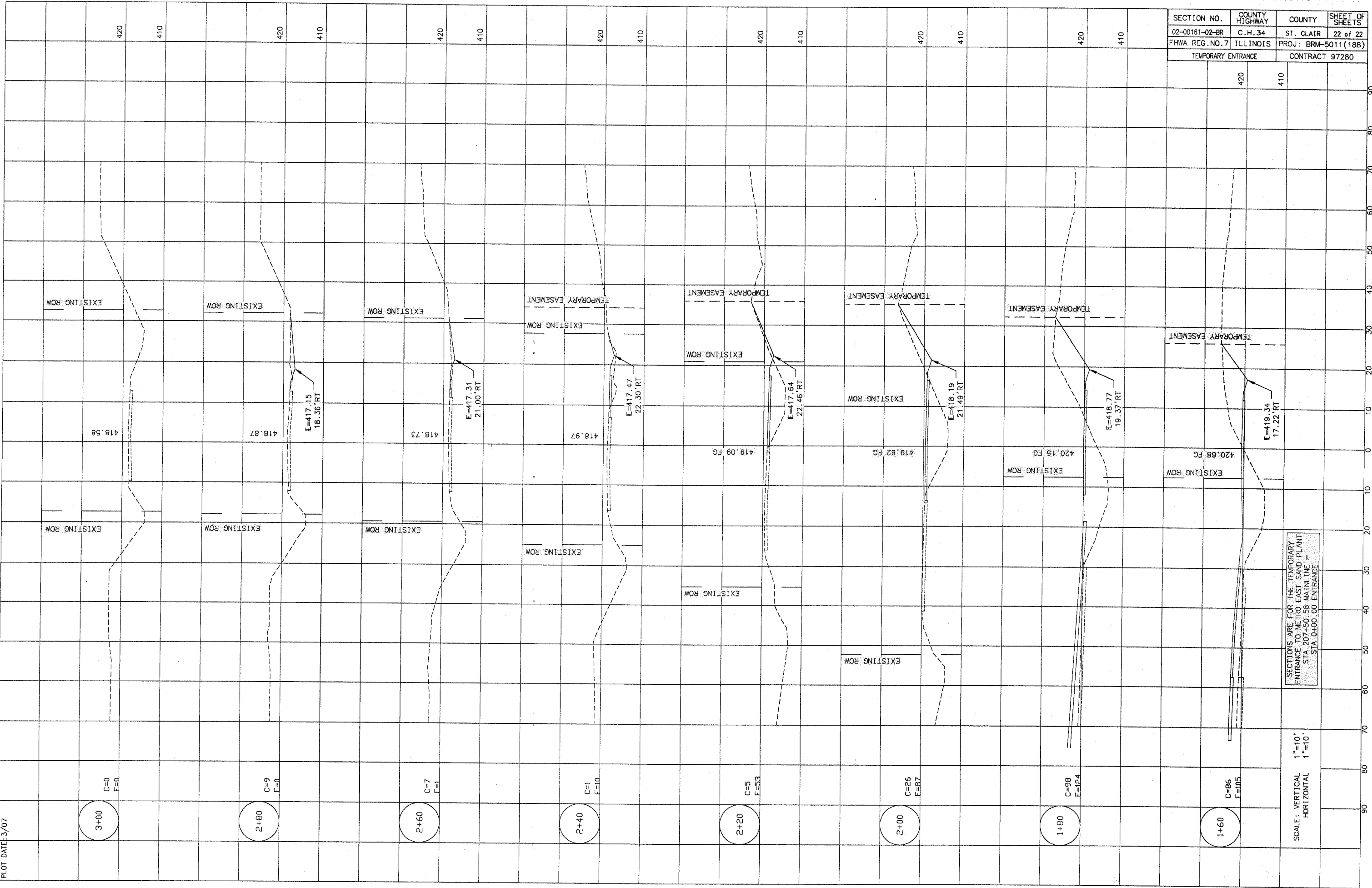
PLOT DATE: 3/07

SECTIONS ARE FOR THE TEMPORARY ENTRANCE TO METRO EAST SAND PLANT STA 207+50.58 MAINLINE = STA 0+00.00 ENTRANCE

SCALE: VERTICAL 1"=10'
HORIZONTAL 1"=10'

PLOT DATE: 3/07

SECTION NO.	COUNTY HIGHWAY	COUNTY	SHEET OF SHEETS
02-00161-02-BR	C. H. 34	ST. CLAIR	22 of 22
FHWA REG. NO. 7		ILLINOIS	PROJ: BRM-5011(188)
TEMPORARY ENTRANCE		CONTRACT 97280	



SECTIONS ARE FOR THE TEMPORARY
ENTRANCE TO METRO EAST SAND PLANT
STA. 207+50.58 MAINLINE
STA. 0+00.00 ENTRANCE

SCALE: VERTICAL 1"=10'
HORIZONTAL 1"=10'

3+00
C=0
F=0

2+80
C=9
F=0

2+60
C=7
F=1

2+40
C=1
F=10

2+20
C=5
F=53

2+00
C=26
F=87

1+80
C=98
F=124

1+60
C=86
F=105

418.58

418.87

418.73

418.97

419.09 FG

419.62 FG

420.15 FG

420.68 FG

EXISTING ROW

EXISTING ROW

EXISTING ROW

EXISTING ROW

EXISTING ROW

EXISTING ROW

EXISTING ROW

EXISTING ROW

E=417.15
18.36 RT

E=417.31
21.00 RT

E=417.47
22.30 RT

E=417.64
22.46 RT

E=418.19
21.49 RT

E=418.77
19.37 RT

E=419.34
17.22 RT

TEMPORARY EASEMENT

TEMPORARY EASEMENT

TEMPORARY EASEMENT

TEMPORARY EASEMENT

TEMPORARY EASEMENT

420

410

420

410

420

410

420

410

420

410

420

410

420

410

420

410

90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90