F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
454	04-00070-00-BR	SCHUYLER	30	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 93499		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR
PROPOSED LOCAL AGENCY IMPROVEMENTS
HIGHWAY BRIDGE PROGRAM
AMERICAN RECOVERY & REINVESTMENT ACT

INDEX OF SHEETS

STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
515001-03	NAME PLATE FOR BRIDGES
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
601101-01	CONCRETE HEADWALLS FOR PIPE DRAIN
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
666001-01	RIGHT OF WAY MARKERS
701901-01	TRAFFIC CONTROL DEVICES
B.L.R. 21-8	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
B.L.R. 26-2	STEEL PLATE BEAM GUARDRAIL 27½" HEIGHT
B.L.R. 27-1	TRAFFIC BARRIER TERMINAL TYPE 5A

	Scale	
PLAN	0 – 50 – 100	1" = 50'
PROFILE HORIZ.	0 – 50 – 100	1" = 50'
PROFILE VERT.	0 – 5 – 10	1" = 5'
CROSS SECTIONS HORIZ.	0 – 10 – 20	1" = 10'
CROSS SECTIONS VERT.	0 – 5 – 10	1" = 5'

LOCATION OF SECTION INDICATED THUS:-

CH 8 / FAS ROUTE 454
SECTION 04-00070-00-BR
SCHUYLER COUNTY
PROJECT BRS-ARA-0454(104)
JOB NUMBER C-96-202-10

UTILITIES

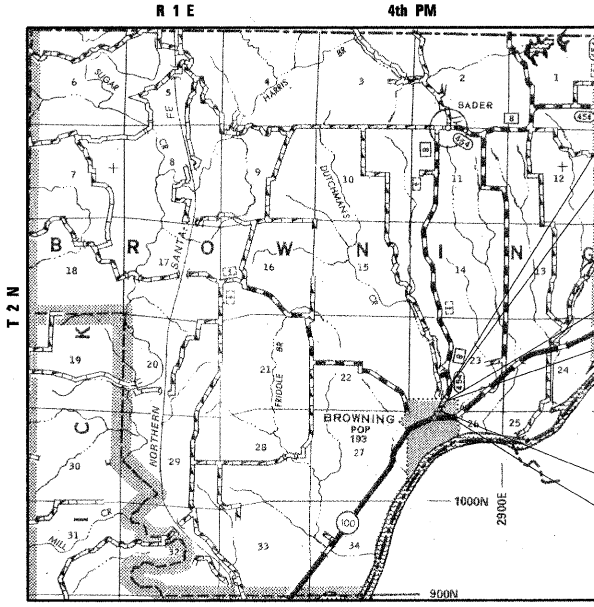
AMEREN CIPS
AT&T
SPOON RIVER ELECTRIC COOPERATIVE
VILLAGE OF BROWNING

0 – 100' – 200' – 300'	1" = 100'
0 – 10' – 20' – 30'	1" = 10'
0 – 50' – 100'	1" = 50'
0 – 50' – 100'	1" = 40'
0 – 50' – 100'	1" = 30'
0 – 50' – 100'	1" = 20'

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

0 – 1 – 2
APPROXIMATE SCALE IN MILES



STA. 9+40.00
END IMPROVEMENTS
SECTION 04-00070-00-BR

EXISTING STRUCTURE
SN 085-3081
TWO SPAN REINFORCED CONCRETE DECK W/STEEL WF BEAMS ON CLOSED TIMBER ABUTMENTS AND A TIMBER PILE BENT PIER (62'-0" LENGTH X 23'-0" WIDE) TO BE REMOVED.

PROPOSED STRUCTURE
SN 085-3055
SINGLE SPAN CONCRETE DECK ON ROLLED I-BEAMS ON REINFORCED CONCRETE INTEGRAL ABUTMENTS (82'-0" LENGTH X 30'-0" WIDE).

STA. 0+00.00
BEGIN IMPROVEMENTS
SECTION 04-00070-00-BR

LOCATION MAP

NET LENGTH OF PROJECT = 540.00 FEET = 0.178 MILES

DESIGN DESIGNATION

MINOR COLLECTOR: ADT = 650
DESIGN SPEED: 40 MPH

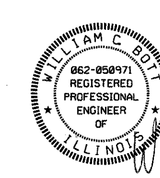
APPROVED September 11 2009
David L. [signature]
COUNTY ENGINEER

PASSED October 14 2009
Terence H. Fortain [signature]
DISTRICT SIX ENGINEER OF LOCAL ROADS & STREETS

PASSED October 13 2009
Ron [signature]
DISTRICT SIX ENGINEER OF CONSTRUCTION

Releasing For Bid Based on Limited Review October 14 2009
Roger L. Driskell [signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



William C. Bott 09/11/09

EXPIRES: 11/30/09

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER
PROJECT MANAGER

CONTRACT NO. 93499

G&B PROJECT: 07258

COMPUTER FILE NO.	PROJECT 07258
07258-sht-cover.dgn	9/11/09 - MDS

GREENE & BRADFORD, INC. OF SPRINGFIELD
CONSULTING ENGINEERS
3501 CONSTITUTION DRIVE
SPRINGFIELD, ILLINOIS 62711-7007
PROFESSIONAL DESIGN FIRM NO. 184-001179
PROFESSIONAL & STRUCTURAL ENGINEERING CORPORATION
(217) 793-8844, (217) 793-6227 (F), E-MAIL - cad@greeneandbradford.com

PLOT DATE = 9/11/2009 10:28:02 AM
FILE NAME = J:\07258\CADD\CADsheets\07258-sht-cover.dgn
MODEL = Default
PLOT SCALE = 50.0000 ' / in.
PLOT DRIVER = V8i_TDS700_PS_LOCAL.pltcfg
OPERATOR = marks

SUMMARY OF QUANTITIES

	PAY ITEM	ITEM	UNIT	TOTAL
*	20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	45
	20100210	TREE REMOVAL (OVER 15 UNTIS DIAMETER)	UNIT	54
	20100500	TREE REMOVAL, ACRES	ACRE	0.2
	20200100	EARTH EXCAVATION	CU YD	870
	20300100	CHANNEL EXCAVATION	CU YD	650
	20400800	FURNISHED EXCAVATION	CU YD	3,412
	20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	117
*	25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	1.4
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	420
	28000305	TEMPORARY DITCH CHECKS	FOOT	48
	28000400	PERIMETER EROSION BARRIER	FOOT	1,117
	28100207	STONE RIPRAP, CLASS A4	TON	315
	28200200	FILTER FABRIC	SQ YD	475
	35101400	AGGREGATE BASE COURSE, TYPE B	TON	1,630
*	42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	200
	48101200	AGGREGATE SHOULDERS, TYPE B	TON	168
	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
	50200100	STRUCTURE EXCAVATION	CU YD	118
	50300225	CONCRETE STRUCTURES	CU YD	31.2
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	88.8
	50300260	BRIDGE DECK GROOVING	SQ YD	274
	50300300	PROTECTIVE COAT	SQ YD	300
	50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
	50500505	STUD SHEAR CONNECTORS	EACH	930
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	21,600
	50800515	BAR SPLICERS	EACH	62
Δ	50900205	STEEL RAILING, TYPE S1	FOOT	164
	51200957	FURNISHING METAL SHELL PILES 12" X 0.25"	FOOT	410
	51202305	DRIVING PILES	FOOT	410
	51203200	TEST PILE METAL SHELLS	EACH	1

SUMMARY OF QUANTITIES

	PAY ITEM	ITEM	UNIT	TOTAL
*	51500100	NAME PLATES	EACH	1
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	66
Δ	63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	25
*	60109580	PIPE UNDERDRAINS FOR STRUCTURES, 4"	FOOT	132
Δ	63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
Δ	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	EACH	4
	63200310	GUARDRAIL REMOVAL	FOOT	175
	66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	11
	67100100	MOBILIZATION	L SUM	1
*	70101700	TRAFFIC CONTROL AND PROTECTION	L SUM	1
Δ *	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1

* SPECIAL PROVISION
Δ SPECIALTY ITEMS

CONSTRUCTION TYPE CODE: X071-2A

GENERAL NOTES

1. WHEN SECTION OR SUB-SECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER OR AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
2. ALL PLAN ELEVATIONS REPRESENT USGS DATUM.
3. SEE SPECIAL PROVISIONS FOR SEEDING RATES.
4. THE FOLLOWING APPLICATIONS RATES WERE USED IN THE DEVELOPMENT OF PLAN QUANTITIES:

COARSE AGGREGATE	2.05 TON / CU YD
STONE RIPRAP, CLASS A4	1.5 TON / CU YD

GREENE & BRADFORD, INC.

FILE NAME = J:\07258\CADD\CADsheets\07258-sht-SQQ.dgn	USER NAME = franky	DESIGNED - WCB	REVISED - 9/10/09 IDOT REVIEW	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES AND GENERAL NOTES	F.A.S RTE. 454	SECTION 04-00070-00-BR	COUNTY SCHUYLER
	PLOT SCALE = 50.0000 ' / in.	DRAWN - MDS	REVISED -					TOTAL SHEETS 30
		CHECKED - WCB	REVISED -					SHEET NO. 2
G&B PROJECT: 07258	PLOT DATE = 9/18/2009	DATE - 6/17/09	REVISED -		SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS	FED. AID PROJECT BRS-0454(103)	CONTRACT NO. 93499

PLOT DRIVER = V8i_TDS700_PS_LOCAL.pltcfg

PAVEMENT DESIGN DATA

THE FINAL PAVEMENT DESIGN WILL BE BUILT IN TWO PHASES. PHASE 1 WILL BE CONSTRUCTED UNDER THIS PROJECT. PHASE 2 WILL BE FUTURE CONSTRUCTION.

CLASS III ROADWAY
DESIGN PERIOD : 20 YEARS
STRUCTURAL DESIGN TRAFFIC (SDT):
- YEAR = 2019
- PV = 664
- SU = 53
- MU = 38

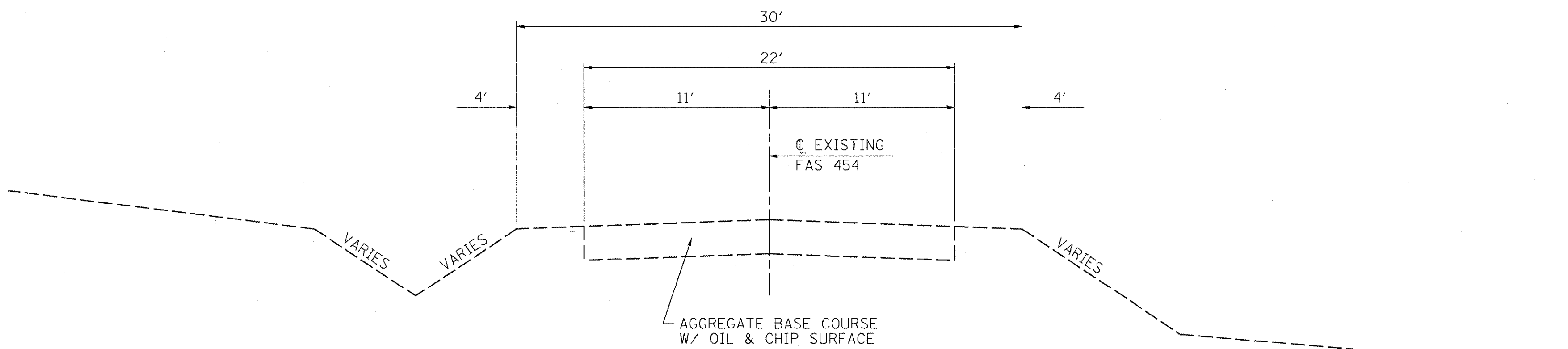
TRAFFIC FACTOR (TF) = 0.2049
MINIMUM SOIL SUPPORT : E_{RI} = 3

PAVEMENT PROVIDED:

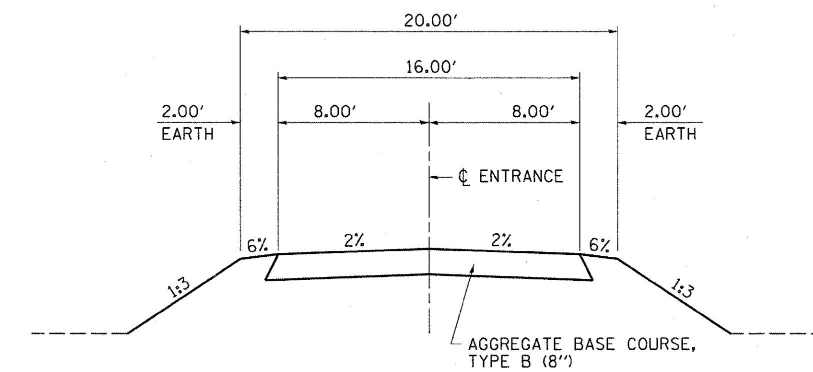
PHASE 1:
- 12" AGGREGATE BASE COURSE, TYPE B
- A-3 BITUMINOUS SURFACE TREATMENT (BY OTHERS)

PHASE 2:
- 1 1/2" HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50
- 3 1/2" HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50

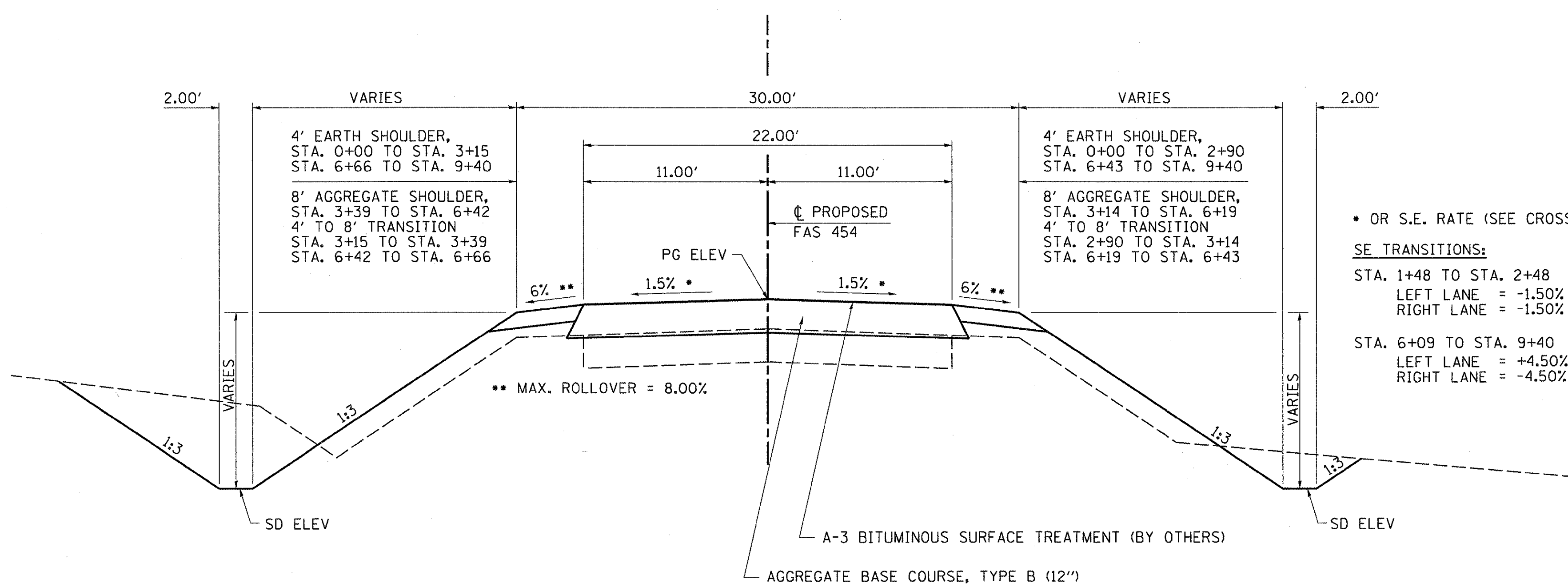
HOT-MIX ASPHALT MIXTURE REQUIREMENTS			
ITEM	AGGREGATE COMPOSITION	ASPHALT GRADE	VOIDS
HMA BINDER COURSE	IL-19.0	PG 64 -22	4.0% @ N50
HMA SURFACE COURSE	IL-9.5 or 12.5 Mix "C"	PG 64 -22	4.0% @ N50



EXISTING TYPICAL ROADWAY SECTION



PROPOSED TYPICAL ENTRANCE SECTION



• OR S.E. RATE (SEE CROSS SECTIONS)

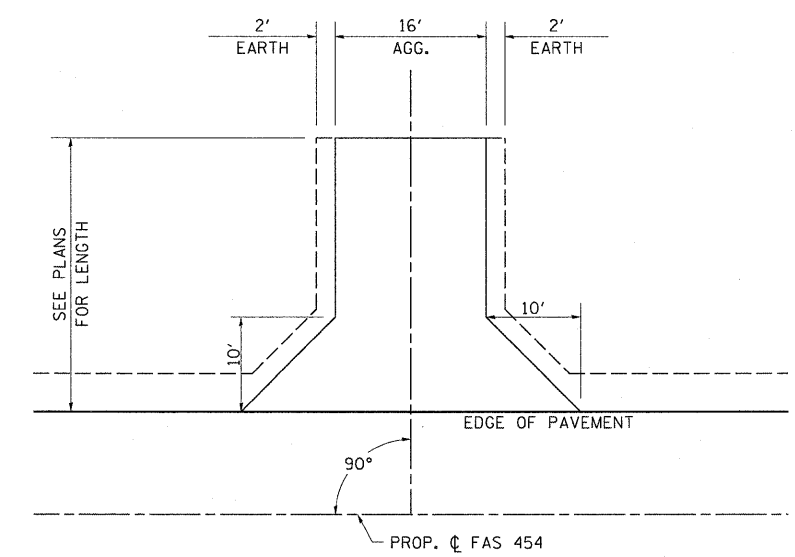
SE TRANSITIONS:

STA. 1+48 TO STA. 2+48
- LEFT LANE = -1.50% TO +4.50%
- RIGHT LANE = -1.50% TO -4.50%

STA. 6+09 TO STA. 9+40
- LEFT LANE = +4.50% TO -5.02%
- RIGHT LANE = -4.50% TO +3.80%

EXISTING TYPICAL ROADWAY SECTION

BRIDGE OMISSION:
STA. 4+38.00 TO STA. 5+20.00



PROPOSED TYPICAL ENTRANCE DETAIL

GREENE & BRADFORD, INC.
OF SPRINGFIELD

FILE NAME =	USER NAME = frankv	DESIGNED - WCB	REVISED -
J:\07258\CADD\CADsheets\07258-sht-typical.dgn		DRAWN - MDS	REVISED -
	PLOT SCALE = 50.0000 '/ in.	CHECKED - WCB	REVISED -
G&B PROJECT: 07258	PLOT DATE = 9/18/2009	DATE - 7/10/39	REVISED -

PLOT DRIVER = V8i_TDS700_PS_LOCAL_IDOT.pltcfg

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS AND DETAILS

SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
454	04-00070-00-BR	SCHUYLER	30	3
		CONTRACT NO. 93499		

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT BRS-0454(103)

PAVEMENT SCHEDULE

LOCATION	AGGREGATE BASE COURSE, TYPE B (TON)	AGGREGATE SHOULDERS, TYPE B (TON)
STA. 0+00 TO STA. 4+38	765	
LT. STA. 3+00, PE	130	
RT. STA. 2+90 TO RT. STA. 4+33		44
LT. STA. 3+15 TO LT. STA. 4+45		40
RT. STA. 5+14 TO RT. STA. 6+43		40
STA. 5+20 TO STA. 9+40	735	
LT. STA. 5+23 TO LT. STA. 6+66		44
TOTALS	1630	168

TREE REMOVAL SCHEDULE

	6 TO 15 UNITS DIA. (UNIT)	OVER 15 UNITS DIA. (UNIT)	ACRES (ACRE)
STA. 2+33, 38' LT.	15		
STA. 2+38, 27' RT.	15		
STA. 2+57, 33' LT.	15		
STA. 5+52, 42' LT.		18	
STA. 6+09, 29' LT.		36	
STA. 2+51 RT. TO STA. 5+73 RT.			0.1
STA. 5+19 LT. TO STA. 6+21 LT.			0.1
TOTALS	45	54	0.2

SEEDING AND EROSION CONTROL SCHEDULE

LOCATION	SEEDING, CLASS 2 (SPECIAL) (ACRE)	TEMPORARY EROSION CONTROL SEEDING (3 APPLICATIONS) (POUND)	TEMPORARY DITCH CHECKS (EACH)	PERIMETER EROSION BARRIER (FOOT)
STA. 0+00, 35' RT. TO STA. 4+19, 43' LT.				410
LT. STA. 0+00 TO LT. STA. 2+92	0.21	63		
RT. STA. 0+00 TO RT. STA. 4+53	0.27	81		
LT. STA. 0+50			1	
STA. 2+68, 46' LT. TO STA. 2+76, 126' LT.				80
LT. STA. 3+08 TO LT. STA. 4+76	0.12	36		
STA. 3+25, 118' LT. TO STA. 3+31, 48' LT.				70
LT. STA. 3+50			1	
STA. 4+19, 43' RT. TO STA. 4+30, 19' RT.				26
STA. 4+25, 48' LT. TO STA. 4+58, 42' LT.				34
STA. 4+45, 19' LT. TO STA. 4+58, 52' LT.				35
RT. STA. 4+87 TO RT. STA. 9+40	0.27	81		
STA. 5+04, 48' RT. TO STA. 5+14, 19' RT.				30
STA. 5+04, 48' RT. TO STA. 9+40, 28' RT.				432
LT. STA. 5+05 TO LT. STA. 9+40	0.40	120		
LT. STA. 5+50			1	
LT. STA. 8+50			1	
PRIVATE ENTRANCE, LT. STA. 3+00	0.13	39		
TOTALS	1.40	420	4	1117

RIGHT-OF-WAY MARKER SCHEDULE

LOCATION	FUR. AND ERECT. RIGHT-OF-WAY MARKERS (EACH)
STA. 0-73.59, 37.18' RT.	1
STA. 0-23.10, 27.93' LT.	1
STA. 2+23.42, 50' LT.	1
STA. 2+57.80, 36.98' RT.	1
STA. 2+58.12, 45' LT.	1
STA. 4+25, 50' LT.	1
STA. 5+25, 65' LT.	1
STA. 6+33.64, 65' LT.	1
STA. 6+33.64, 50' RT.	1
STA. 8+00, 30' RT.	1
STA. 9+75, 30' LT.	1
TOTALS	11

EARTHWORK SCHEDULE

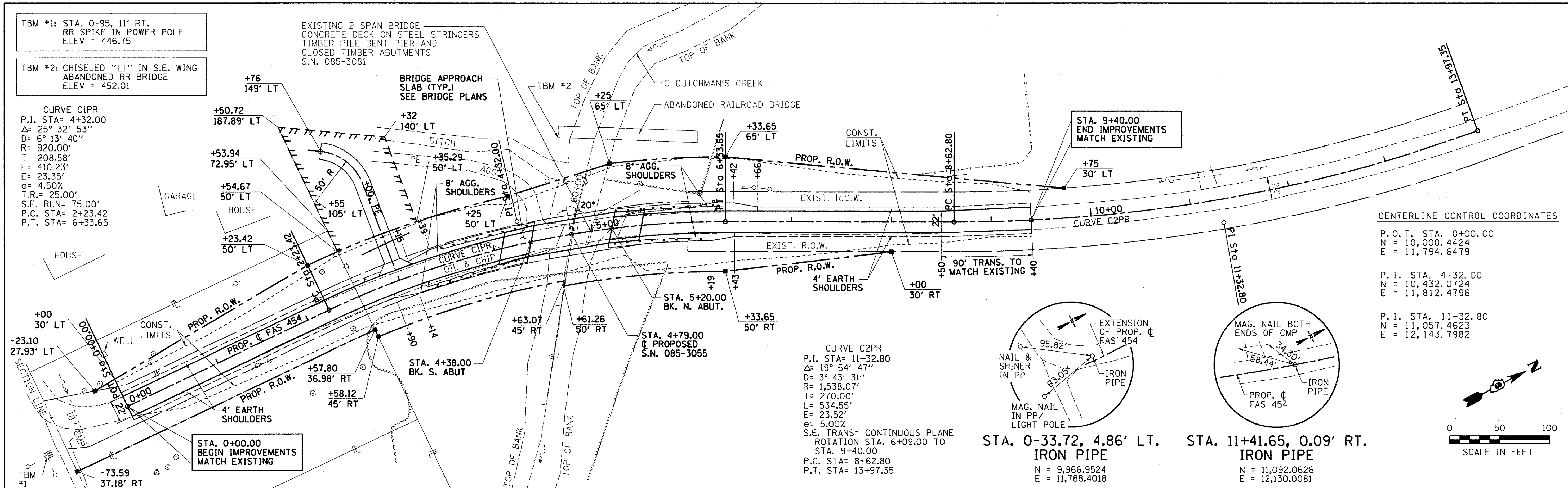
LOCATION	EARTH EXCAVATION (UNADJUSTED) (CUT) (CU YD)	CHANNEL EXCAVATION (CU YD)	EXCAVATION (ADJUSTED FOR 25% SHRINKAGE) (CU YD)	EMBANKMENT (FILL) (CU YD)	FURNISHED EXCAVATION (CU YD)
STA. 0+00 TO STA. 9+40	870	650	1140	4432	3292
(INCLUDES PRIVATE ENTRANCE STA. 3+00 LT.)					
NORTH ABUTMENT CONE				120	120
TOTALS	870	650	1140	4552	3412 *

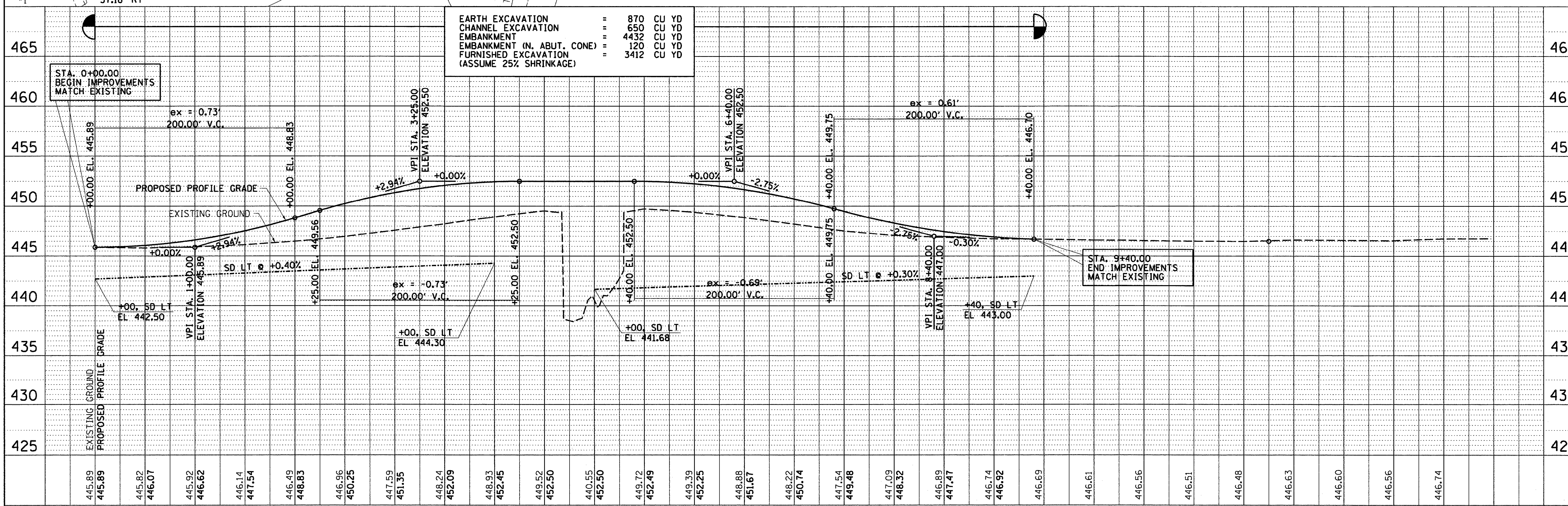
* ASSUMES 100% CHANNEL EXCAVATION SUITABLE FOR EMBANKMENT CONSTRUCTION.

GUARD RAIL AND TRAFFIC BARRIER TERMINAL SCHEDULE

LOCATION	GUARDRAIL REMOVAL (FOOT)	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS (FOOT)	TRAFFIC BARRIER TERMINAL, TYPE 5A (EACH)	TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT) (EACH)	TERMINAL MARKER - DIRECT APPLIED (EACH)
SE CORNER EXISTING BRIDGE	87.5				
NW CORNER EXISTING BRIDGE	87.5				
SE CORNER PROPOSED BRIDGE		12.5	1	1	1
SW CORNER PROPOSED BRIDGE			1	1	1
NE CORNER PROPOSED BRIDGE			1	1	1
NW CORNER PROPOSED BRIDGE		12.5	1	1	1
TOTALS	175	25	4	4	4

NOTE: GUARDRAIL REMOVAL LENGTH INCLUDES TRAFFIC BARRIER TERMINALS


TBM #1: STA. 0-95, 11' RT.
RR SPIKE IN POWER POLE
ELEV = 446.75
TBM #2: CHISELED "□" IN S.E. WING
ABANDONED RR BRIDGE
ELEV = 452.01
CURVE C1PR
P.I. STA= 4+32.00
Δ= 25° 32' 53"
D= 6° 13' 40"
R= 920.00'
T= 208.58'
L= 410.23'
E= 23.35'
e= 4.50%
T.R.= 25.00'
S.E. RUN= 75.00'
P.C. STA= 2+23.42
P.T. STA= 6+33.65
EXISTING 2 SPAN BRIDGE
CONCRETE DECK ON STEEL STRINGERS
TIMBER PILE BENT PIER AND
CLOSED TIMBER ABUTMENTS
S.N. 085-3081
BRIDGE APPROACH
SLAB (TYP.)
SEE BRIDGE PLANS
TBM #2
℄ DUTCHMAN'S CREEK
ABANDONED RAILROAD BRIDGE
TOP OF BANK
GARAGE
HOUSE
WELL
SECTION LINE
CONST. LIMITS
PROP. R.O.W.
PROP. ℄ FAS 454
EXIST. R.O.W.
8' AGG. SHOULDERS
4' EARTH SHOULDERS
CURVE C1PR
OIL & CHIP
DITCH
STA. 0+00.00
BEGIN IMPROVEMENTS
MATCH EXISTING
STA. 4+38.00
BK. S. ABUT
STA. 4+79.00
℄ PROPOSED
S.N. 085-3055
STA. 5+20.00
BK. N. ABUT.
STA. 9+40.00
END IMPROVEMENTS
MATCH EXISTING
90' TRANS. TO
MATCH EXISTING
CURVE C2PR
P.I. STA= 11+32.80
Δ= 19° 54' 47"
D= 3° 43' 31"
R= 1,538.07'
T= 270.00'
L= 534.55'
E= 23.52'
e= 5.00%
S.E. TRANS= CONTINUOUS PLANE
ROTATION STA. 6+09.00 TO
STA. 9+40.00
P.C. STA= 8+62.80
P.T. STA= 13+97.35
CENTERLINE CONTROL COORDINATES
P.O.T. STA. 0+00.00
N = 10,000.4424
E = 11,794.6479
P.I. STA. 4+32.00
N = 10,432.0724
E = 11,812.4796
P.I. STA. 11+32.80
N = 11,057.4623
E = 12,143.7982
STA. 0-33.72, 4.86' LT.
IRON PIPE
N = 9,966.9524
E = 11,788.4018
STA. 11+41.65, 0.09' RT.
IRON PIPE
N = 11,092.0626
E = 12,130.0081
SCALE IN FEET


EARTH EXCAVATION = 870 CU YD
CHANNEL EXCAVATION = 650 CU YD
EMBANKMENT = 4432 CU YD
EMBANKMENT (N. ABUT. CONE) = 120 CU YD
FURNISHED EXCAVATION = 3412 CU YD
(ASSUME 25% SHRINKAGE)
STA. 0+00.00
BEGIN IMPROVEMENTS
MATCH EXISTING
STA. 9+40.00
END IMPROVEMENTS
MATCH EXISTING
PROPOSED PROFILE GRADE
EXISTING GROUND
VPI STA. 1+00.00 ELEVATION 445.89
VPI STA. 3+25.00 ELEVATION 452.50
VPI STA. 6+40.00 ELEVATION 452.50
VPI STA. 8+40.00 ELEVATION 447.00
ex = 0.73' 200.00' V.C.
ex = -0.73' 200.00' V.C.
ex = -0.69' 200.00' V.C.
ex = 0.61' 200.00' V.C.
+0.00%
+2.94%
-2.75%
-0.30%
SD LT @ +0.40%
SD LT @ +0.30%
+00, SD LT EL 442.50
+00, SD LT EL 444.30
+00, SD LT EL 441.68
+40, SD LT EL 443.00
EXISTING GROUND
PROPOSED PROFILE GRADE
425 430 435 440 445 450 455 460 465
0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00

FILE NAME = J:\07258\CADD\CADsheets\07258-sht-plnprof.dgn	USER NAME = frankv	DESIGNED - DG	REVISED - 9/10/09 IDOT REVIEW	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	PLOT SCALE = 50.0000 ' / in.	CHECKED - WCB	REVISED -	
G&B PROJECT: 07258	PLOT DATE = 9/18/2009	DRAWN - MDS	REVISED -	
		DATE - 9/30/08	REVISED -	

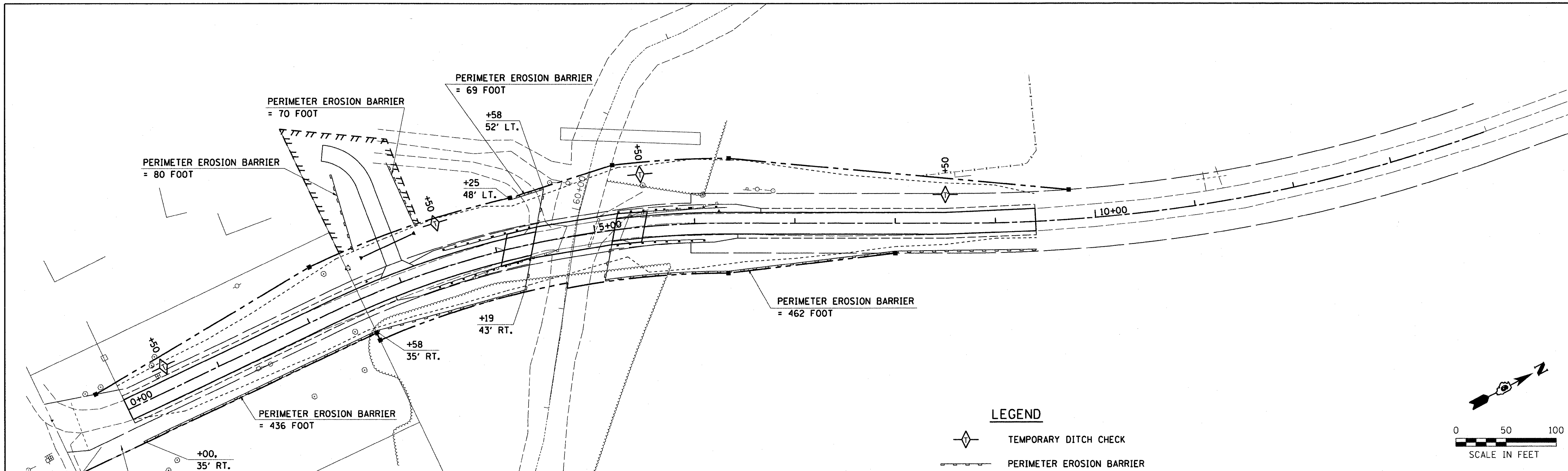
PLAN AND PROFILE

SCALE: 1" = 50' | SHEET NO. 1 OF 1 SHEETS | STA. 0+00 TO STA. 14+50

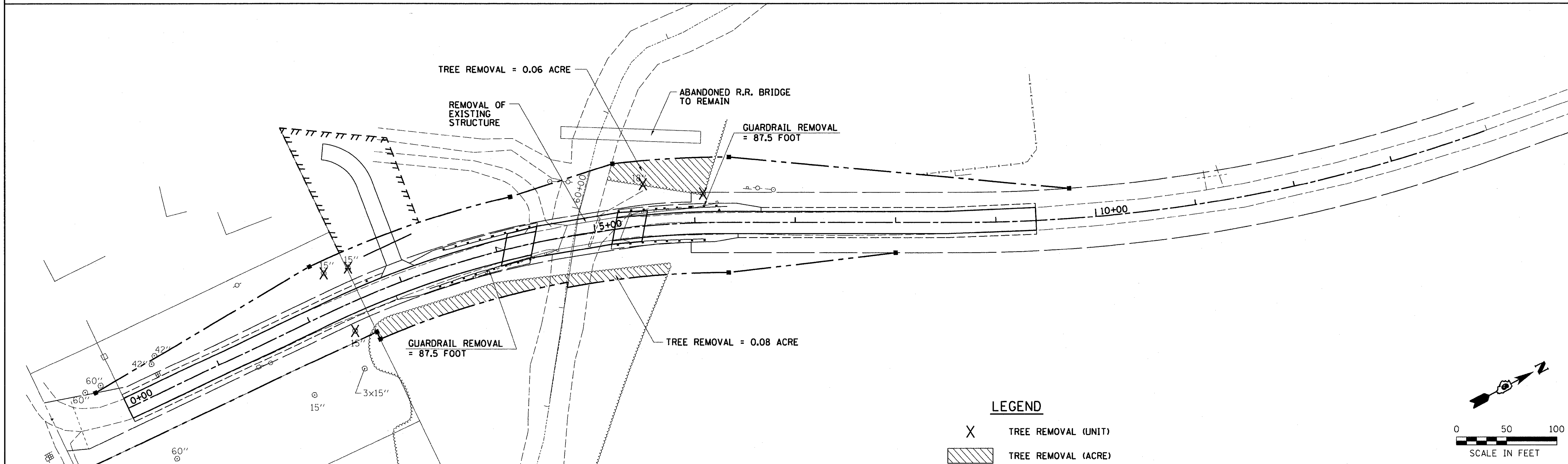
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
454	04-00070-00-BR	SCHUYLER	30	5
		CONTRACT NO. 93499		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BRS-0454(103)		

PLOT DRIVER = V8i_TDS700_PS_LOCAL_IDOT.pltcfg

GREENE & BRADFORD, INC. OF SPRINGFIELD



EROSION CONTROL PLAN



REMOVAL AND ADJUSTMENT PLAN

GREENE & BRADFORD, INC. OF SPRINGFIELD
CONSULTING ENGINEERS
3501 CONSTITUTION DRIVE
SPRINGFIELD, ILLINOIS 62711-7007
PROFESSIONAL DESIGN FIRM NO. 184-001179
PROFESSIONAL & STRUCTURAL ENGINEERING CORPORATION
(217) 793-8844, (217) 793-6227 (F), E-MAIL - cad@greeneandbradford.com

FILE NAME = J:\07258\CADD\CADsheets\07258-sht-rem.dgn	USER NAME = frankv	DESIGNED - WCB	REVISED -
		DRAWN - MDS	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED - WCB	REVISED -
G&B PROJECT: 07258	PLOT DATE = 9/18/2009	DATE - 9/16/08	REVISED -

PLOT DRIVER = V8i_TDS700_PS_LOCAL_IDOT.pltcfg

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL & REMOVAL AND ADJUSTMENT PLANS

SCALE: 1" = 50' | SHEET NO. 1 OF 1 SHEETS | STA. 0+00 TO STA. 11+75

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
454	04-00070-00-BR	SCHUYLER	30	6
		CONTRACT NO. 93499		

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT BRS-0454(103)

RIGHT OF WAY PLAT

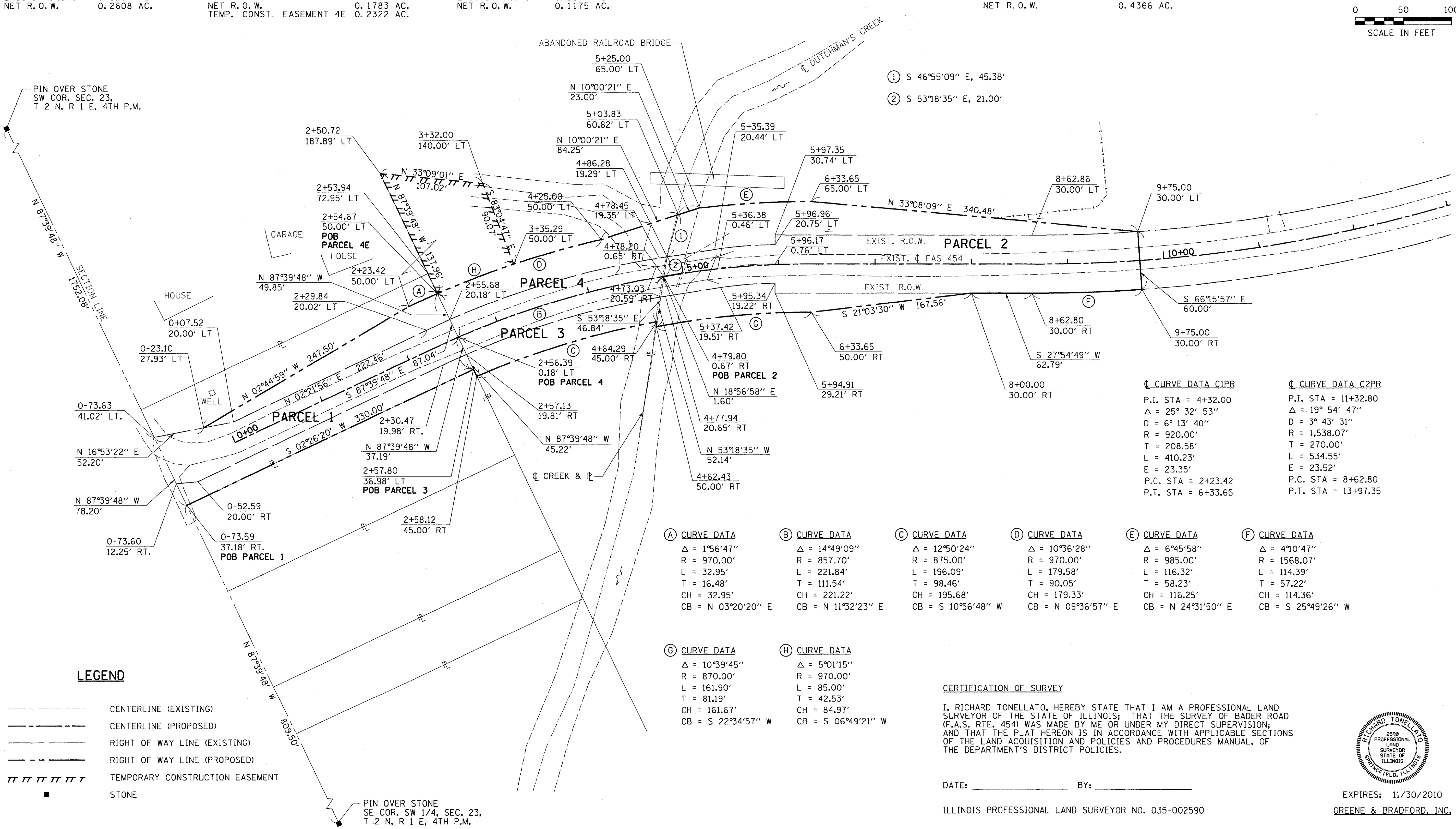
SW 1/4, SECTION 23, T2N, R1E, 4th P.M.

PARCEL 1		
VILLAGE OF BROWNING		
PROP. R.O.W.	0.5815 AC.	
EXIST. R.O.W.	0.3207 AC.	
NET R.O.W.	0.2608 AC.	

PARCEL 4	
VIRGIL & MARSHA HAMM	
PROP. R.O.W.	0.2837 AC.
EXIST. R.O.W.	0.1054 AC.
NET R.O.W.	0.1783 AC.
TEMP. CONST. EASEMENT 4E	0.2322 AC.

PARCEL 3	
VIRGIL & MARSHA HAMM	
PROP. R.O.W.	0.2173 AC.
EXIST. R.O.W.	0.0998 AC
NET R.O.W.	0.1175 AC.

PARCEL 2	
BURTON FARMS INC.	
PROP. R.O.W.	1.0551 AC.
EXIST. R.O.W.	0.6185 AC.
NET R.O.W.	0.4366 AC.



℄ CURVE DATA C1PR

P.I. STA = 4+32.00
Δ = 25° 32' 53"
D = 6° 13' 40"
R = 920.00'
T = 208.58'
L = 410.23'
E = 23.35'
P.C. STA = 2+23.42
P.T. STA = 6+33.65

℄ CURVE DATA C2PR

P.I. STA = 11+32.80
Δ = 19° 54' 47"
D = 3° 43' 31"
R = 1,538.07'
T = 270.00'
L = 534.55'
E = 23.52'
P.C. STA = 8+62.80
P.T. STA = 13+97.35

	Ⓐ CURVE DATA	Ⓑ CURVE DATA	Ⓒ CURVE DATA	Ⓓ CURVE DATA	Ⓔ CURVE DATA	Ⓕ CURVE DATA	Ⓖ CURVE DATA	Ⓗ CURVE DATA
Δ	1°56'47"	14°49'09"	12°50'24"	10°36'28"	6°45'58"	4°10'47"	10°39'45"	5°01'15"
R	970.00'	857.70'	875.00'	970.00'	985.00'	1568.07'	870.00'	970.00'
L	32.95'	221.84'	196.09'	179.58'	116.32'	114.39'	161.90'	85.00'
T	16.48'	111.54'	98.46'	90.05'	58.23'	57.22'	81.19'	42.53'
CH	32.95'	221.22'	195.68'	179.33'	116.25'	114.36'	161.67'	84.97'
CB	N 03°20'20" E	N 11°32'23" E	S 10°56'48" W	N 09°36'57" E	N 24°31'50" E	S 25°49'26" W	S 22°34'57" W	S 06°49'21" W

LEGEND

- CENTERLINE (EXISTING)
- CENTERLINE (PROPOSED)
- RIGHT OF WAY LINE (EXISTING)
- RIGHT OF WAY LINE (PROPOSED)
- TT TT TT TT TT T TEMPORARY CONSTRUCTION EASEMENT
- ■ STONE

CERTIFICATION OF SURVEY

I, RICHARD TONELLATO, HEREBY STATE THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS; THAT THE SURVEY OF BADER ROAD (F.A.S. RTE. 454) WAS MADE BY ME OR UNDER MY DIRECT SUPERVISION; AND THAT THE PLAT HEREON IS IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE LAND ACQUISITION AND POLICIES AND PROCEDURES MANUAL, OF THE DEPARTMENT'S DISTRICT POLICIES.

DATE: ________________ BY: ________________

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-002590

RICHARD TONELLATO 2590 PROFESSIONAL LAND SURVEYOR STATE OF ILLINOIS SPRINGFIELD, ILLINOIS

EXPIRES: 11/30/2010

GREENE & BRADFORD, INC.

GREENE & BRADFORD, INC. OF SPRINGFIELD

FILE NAME	USER NAME = frankv	DESIGNED - DG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RIGHT OF WAY PLANS		F.A.S. RTE. 454	SECTION 04-00070-00-BR	COUNTY SCHUYLER	TOTAL SHEETS 30	SHEET NO. 7
J:\07258\CADD\CADsheets\07258-sht-rowplan.dgn	PLOT SCALE = 50.0000 ' / in.	DRAWN - MDS	REVISED -		PROJECT BRS-0454(103)	JOB NO.			CONTRACT NO. 93499		
G&B PROJECT: 07258	PLOT DATE = 9/18/2009	CHECKED - RT	REVISED -		SCALE: 1"=50'	SHEET NO. 1 OF 2 SHEETS	STA. 0-73.63 TO STA. 9+75.00	FED. ROAD DIST. NO. ILLINOIS	FED. AID PROJECT BRS-0454(103)		
		DATE - 7/06/09	REVISED -								

PLOT DRIVER = V8i_TDS700_PS_LOCAL_IDOT.pltcfg

RIGHT OF WAY PLAT

LEGAL DESCRIPTIONS

PARCEL 1

PART OF OUTLOT 5 OF ASSESSOR'S SUBDIVISION OF THE SOUTHWEST QUARTER OF SECTION 23, TOWNSHIP 2 NORTH, RANGE 1 EAST OF THE FOURTH PRINCIPAL MERIDIAN; DESCRIBED MORE PARTICULARLY AS FOLLOWS:

COMMENCING AT AN IRON PIN OVER A STONE MARKING THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF THE AFOREMENTIONED SECTION 23, THENCE NORTH 87 DEGREES 39 MINUTES 48 SECONDS WEST ALONG THE SECTION LINE A DISTANCE OF 809.50 FEET TO THE TRUE POINT OF BEGINNING, THENCE CONTINUING NORTH 87 DEGREES 39 MINUTES 48 SECONDS WEST ALONG THE SECTION LINE A DISTANCE OF 78.20 FEET, THENCE NORTH 16 DEGREES 53 MINUTES 22 SECONDS EAST, 52.20 FEET, THENCE NORTH 02 DEGREES 44 MINUTES 59 SECONDS WEST, 247.50 FEET TO A POINT MARKING THE BEGINNING OF A 970.00 FOOT RADIUS, TANGENT CURVE TO THE RIGHT, THENCE NORTHERLY 32.95 FEET ALONG SAID CURVE HAVING A LONG CHORD THAT BEARS NORTH 03 DEGREES 20 MINUTES 20 SECONDS EAST FOR A DISTANCE OF 32.95 FEET TO A POINT ON THE NORTH LINE OF THE AFOREMENTIONED OUTLOT 5, THENCE SOUTH 87 DEGREES 39 MINUTES 48 SECONDS EAST ALONG SAID NORTH LINE A DISTANCE OF 87.04 FEET, THENCE SOUTH 02 DEGREES 26 MINUTES 20 SECONDS WEST 330.00 FEET TO THE TRUE POINT OF BEGINNING. SAID PARCEL CONTAINS 0.5815 ACRE, MORE OR LESS OF WHICH 0.3207 ACRE IS WITHIN THE EXISTING RIGHT-OF-WAY OF COUNTY ROAD, ALL IN THE COUNTY OF SCHUYLER, STATE OF ILLINOIS.

PARCEL 2

PART OF THE SOUTHWEST QUARTER OF SECTION 23, TOWNSHIP 2 NORTH, RANGE 1 EAST OF THE FOURTH PRINCIPAL MERIDIAN; DESCRIBED MORE PARTICULARLY AS FOLLOWS:

COMMENCING AT AN IRON PIN OVER A STONE MARKING THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF THE AFOREMENTIONED SECTION 23, THENCE NORTH 87 DEGREES 39 MINUTES 48 SECONDS WEST ALONG THE SECTION LINE A DISTANCE OF 809.50 FEET, THENCE NORTH 02 DEGREES 26 MINUTES 20 SECONDS EAST 330.00 FEET, THENCE NORTH 87 DEGREES 39 MINUTES 48 SECONDS WEST 37.19 FEET TO THE CENTER OF A TOWNSHIP ROAD, THENCE NORTHEASTERLY 221.84 FEET ALONG SAID CENTER OF A TOWNSHIP ROAD WITH A 857.70 FOOT RADIUS CURVE TO THE RIGHT HAVING A LONG CHORD THAT BEARS NORTH 11 DEGREES 32 MINUTES 23 SECONDS EAST FOR A DISTANCE OF 221.22 FEET, THENCE NORTH 18 DEGREES 56 MINUTES 58 SECONDS EAST ALONG SAID CENTER OF A TOWNSHIP ROAD A DISTANCE OF 1.60 FEET TO THE CENTER OF DUTCHMAN'S CREEK, BEING THE TRUE POINT OF BEGINNING, THENCE NORTH 53 DEGREES 18 MINUTES 35 SECONDS WEST 21.00 FEET ALONG SAID CREEK, THENCE NORTH 46 DEGREES 55 MINUTES 09 SECONDS WEST 45.38 FEET ALONG SAID CREEK, THENCE NORTH 10 DEGREES 00 MINUTES 21 SECONDS EAST 23.00 FEET TO A POINT MARKING THE BEGINNING OF A 985.00 FOOT RADIUS. NON-TANGENT CURVE TO THE RIGHT, THENCE NORTHEASTERLY 116.32 FEET ALONG SAID CURVE HAVING A LONG CHORD THAT BEARS NORTH 24 DEGREES 31 MINUTES 50 SECONDS EAST FOR A DISTANCE OF 116.25 FEET, THENCE NORTH 33 DEGREES 08 MINUTES 09 SECONDS EAST 340.48 FEET, THENCE SOUTH 66 DEGREES 15 MINUTES 57 SECONDS EAST 60.00 FEET TO A POINT MARKING THE BEGINNING OF A 1,568.07 FOOT RADIUS, NON-TANGENT CURVE TO THE RIGHT, THENCE SOUTHWESTERLY 114.39 FEET ALONG SAID CURVE HAVING A LONG CHORD THAT BEARS SOUTH 25 DEGREES 49 MINUTES 26 SECONDS WEST FOR A DISTANCE OF 114.36 FEET, THENCE SOUTH 27 DEGREES 54 MINUTES 49 SECONDS WEST 62.79 FEET, THENCE SOUTH 21 DEGREES 03 MINUTES 30 SECONDS WEST 167.56 FEET TO A POINT MARKING THE BEGINNING OF A 870.00 FOOT RADIUS NON-TANGENT CURVE TO THE LEFT, THENCE SOUTHWESTERLY 161.90 FEET ALONG SAID CURVE HAVING A LONG CHORD THAT BEARS SOUTH 22 DEGREES 34 MINUTES 57 SECONDS WEST FOR A DISTANCE OF 161.67 FEET TO THE CENTER OF DUTCHMAN'S CREEK, THENCE NORTH 53 DEGREES 18 MINUTES 35 SECONDS WEST 52.14 FEET TO THE TRUE POINT OF BEGINNING. SAID PARCEL CONTAINS 1.0551 ACRES, MORE OR LESS OF WHICH 0.6185 ACRE IS WITHIN THE EXISTING RIGHT-OF-WAY OF COUNTY ROAD, ALL IN THE COUNTY OF SCHUYLER, STATE OF ILLINOIS.

PARCEL 3

PART OF THE SOUTHWEST QUARTER OF SECTION 23, TOWNSHIP 2 NORTH, RANGE 1 EAST OF THE FOURTH PRINCIPAL MERIDIAN; DESCRIBED MORE PARTICULARLY AS FOLLOWS:

COMMENCING AT AN IRON PIN OVER A STONE MARKING THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF THE AFOREMENTIONED SECTION 23, THENCE NORTH 87 DEGREES 39 MINUTES 48 SECONDS WEST ALONG THE SECTION LINE A DISTANCE OF 809.50 FEET, THENCE NORTH 02 DEGREES 26 MINUTES 20 SECONDS EAST 330.00 FEET TO THE TRUE POINT OF BEGINNING, THENCE NORTH 87 DEGREES 39 MINUTES 48 SECONDS WEST 37.19 FEET TO THE CENTER OF A TOWNSHIP ROAD, THENCE NORTHEASTERLY 221.84 FEET ALONG SAID CENTER OF A TOWNSHIP ROAD WITH A 857.70 FOOT RADIUS, NON-TANGENT CURVE TO THE RIGHT HAVING A LONG CHORD THAT BEARS NORTH 11 DEGREES 32 MINUTES 23 SECONDS EAST FOR A DISTANCE OF 221.22 FEET, THENCE NORTH 18 DEGREES 56 MINUTES 58 SECONDS EAST A DISTANCE OF 1.60 FEET, THENCE SOUTH 53 DEGREES 18 MINUTES 35 SECONDS EAST ALONG THE CENTER OF A CREEK A DISTANCE OF 46.84 FEET, THENCE SOUTHWESTERLY 196.09 FEET ALONG A 875.00 FOOT RADIUS, NON-TANGENT CURVE TO THE LEFT HAVING A LONG CHORD THAT BEARS SOUTH 10 DEGREES 56 MINUTES 48 SECONDS WEST FOR A DISTANCE OF 195.68 FEET, THENCE NORTH 87 DEGREES 39 MINUTES 48 SECONDS WEST 8.03 FEET TO THE TRUE POINT OF BEGINNING. SAID PARCEL CONTAINS 0.2173 ACRE, MORE OR LESS OF WHICH 0.0998 ACRE IS WITHIN THE EXISTING RIGHT-OF-WAY OF COUNTY ROAD, ALL IN THE COUNTY OF SCHUYLER, STATE OF ILLINOIS.

PARCEL 4

PART OF THE SOUTHWEST QUARTER OF SECTION 23, TOWNSHIP 2 NORTH, RANGE 1 EAST OF THE FOURTH PRINCIPAL MERIDIAN; DESCRIBED MORE PARTICULARLY AS FOLLOWS:

COMMENCING AT AN IRON PIN OVER A STONE MARKING THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF THE AFOREMENTIONED SECTION 23, THENCE NORTH 87 DEGREES 39 MINUTES 48 SECONDS WEST ALONG THE SECTION LINE A DISTANCE OF 809.50 FEET, THENCE NORTH 02 DEGREES 26 MINUTES 20 SECONDS EAST 330.00 FEET, THENCE NORTH 87 DEGREES 39 MINUTES 48 SECONDS WEST 37.19 FEET TO THE CENTER OF A TOWNSHIP ROAD BEING THE TRUE POINT OF BEGINNING, THENCE NORTH 87 DEGREES 39 MINUTES 48 SECONDS WEST 49.85 FEET TO A POINT MARKING THE BEGINNING OF A 970.00 FOOT RADIUS. NON-TANGENT CURVE TO THE RIGHT, THENCE NORTHEASTERLY 179.58 FEET ALONG SAID CURVE HAVING A LONG CHORD THAT BEARS NORTH 09 DEGREES 36 MINUTES 57 SECONDS EAST FOR A DISTANCE OF 179.33 FEET, THENCE NORTH 10 DEGREES 00 MINUTES 21 SECONDS EAST 84.25 FEET TO THE CENTER OF DUTCHMAN'S CREEK, THENCE SOUTH 46 DEGREES 55 MINUTES 09 SECONDS EAST 45.38 FEET ALONG THE CENTER OF SAID CREEK, THENCE SOUTH 53 DEGREES 18 MINUTES 35 SECONDS EAST 21.00 FEET ALONG THE CENTER OF SAID CREEK TO THE CENTER OF A TOWNSHIP ROAD, THENCE SOUTH 18 DEGREES 56 MINUTES 58 SECONDS WEST A DISTANCE OF 1.60 FEET, THENCE SOUTHWESTERLY 221.84 FEET ALONG SAID CENTER OF A TOWNSHIP ROAD WITH A 857.70 FOOT RADIUS, NON-TANGENT CURVE TO THE LEFT HAVING A LONG CHORD THAT BEARS SOUTH 11 DEGREES 32 MINUTES 23 SECONDS WEST FOR A DISTANCE OF 221.22 FEET TO THE TRUE POINT OF BEGINNING. SAID PARCEL CONTAINS 0.2837 ACRES, MORE OR LESS OF WHICH 0.1054 ACRE IS WITHIN THE EXISTING RIGHT-OF-WAY OF COUNTY ROAD, ALL IN THE COUNTY OF SCHUYLER, STATE OF ILLINOIS.

PARCEL 4E

PART OF THE SOUTHWEST QUARTER OF SECTION 23, TOWNSHIP 2 NORTH, RANGE 1 EAST OF THE FOURTH PRINCIPAL MERIDIAN; DESCRIBED MORE PARTICULARLY AS FOLLOWS:

COMMENCING AT AN IRON PIN OVER A STONE MARKING THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF THE AFOREMENTIONED SECTION 23, THENCE NORTH 87 DEGREES 39 MINUTES 48 SECONDS WEST ALONG THE SECTION LINE A DISTANCE OF 809.50 FEET, THENCE NORTH 02 DEGREES 26 MINUTES 20 SECONDS EAST 330.00 FEET, THENCE NORTH 87 DEGREES 39 MINUTES 48 SECONDS WEST 87.04 FEET TO THE TRUE POINT OF BEGINNING, THENCE NORTH 87 DEGREES 39 MINUTES 48 SECONDS WEST 137.96 FEET, THENCE NORTH 33 DEGREES 09 MINUTES 01 SECONDS EAST 107.02 FEET, THENCE SOUTH 83 DEGREES 04 MINUTES 47 SECONDS EAST 90.07 FEET TO A POINT MARKING THE BEGINNING OF A 970.00 FOOT RADIUS. NON-TANGENT CURVE TO THE LEFT, THENCE SOUTHWESTERLY 85.00 FEET ALONG SAID CURVE HAVING A LONG CHORD THAT BEARS SOUTH 06 DEGREES 49 MINUTES 21 SECONDS WEST FOR A DISTANCE OF 84.97 FEET TO THE TRUE POINT OF BEGINNING. SAID PARCEL CONTAINS 0.2322 ACRE, MORE OR LESS, ALL IN THE COUNTY OF SCHUYLER, STATE OF ILLINOIS.

CERTIFICATION OF SURVEY

I, RICHARD TONELLATO, HEREBY STATE THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS; THAT THE SURVEY OF BADER ROAD (F.A.S. RTE. 454) WAS MADE BY ME OR UNDER MY DIRECT SUPERVISION; AND THAT THE PLAT HEREON IS IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE LAND ACQUISITION AND POLICIES AND PROCEDURES MANUAL, OF THE DEPARTMENT'S DISTRICT POLICIES.

DATE: ________________ BY: ________________

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-002590

RICHARD TONELLATO 2590 PROFESSIONAL LAND SURVEYOR STATE OF ILLINOIS SPRINGFIELD, ILLINOIS

EXPIRES: 11/30/2010

GREENE & BRADFORD, INC.

GREENE & BRADFORD, INC. OF SPRINGFIELD

FILE NAME= J:\07258\CADD\CADsheets\07258-sht-rowplan.dgn	USER NAME = frankv	DESIGNED - DG	REVISED -
		DRAWN - MDS	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED - RT	REVISED -
G&B PROJECT: 07258	PLOT DATE = 9/18/2009	DATE - 7/06/09	REVISED -

PLOT DRIVER = V8i_TDS700_PS_LOCAL_IDOT.pltcfg

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

	PROJECT BRS-0454(103)	JOB NO.
SCALE: 1"=50'	SHEET NO. 2 OF 2 SHEETS	STA. TO STA.

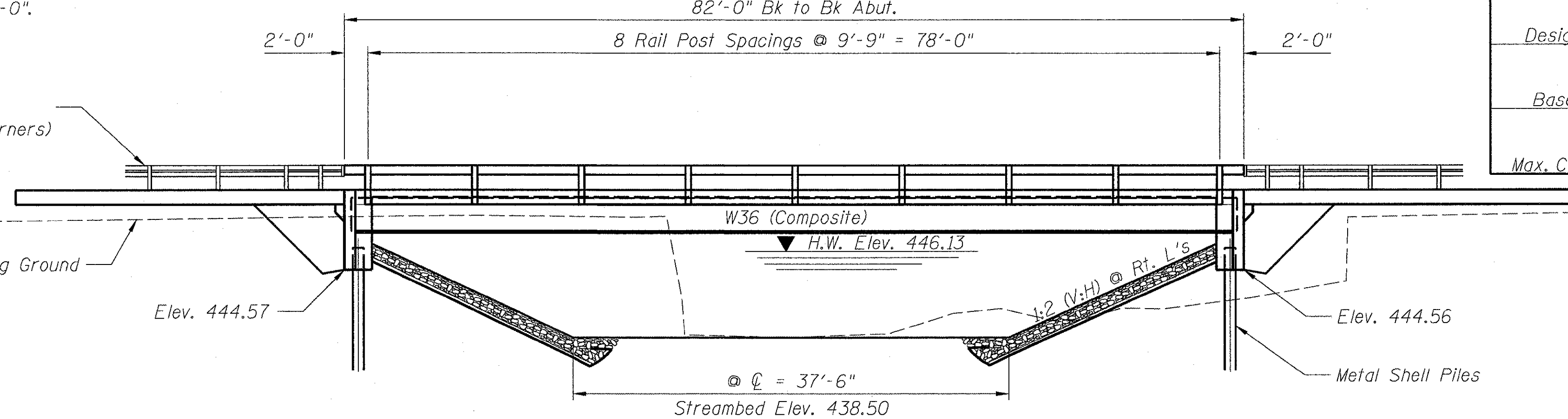
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
454	04-00070-00-BR	SCHUYLER	30	8
		CONTRACT NO. 93499		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BRS-0454(103)		

Benchmarks: BM #1 Sta. 0+53, 30' Rt. RR Spike in Power Pole, Elev. = 446.75
BM #2 Chiseled "□" in S.E. Wing Abandoned RR Bridge, Elev. = 452.01

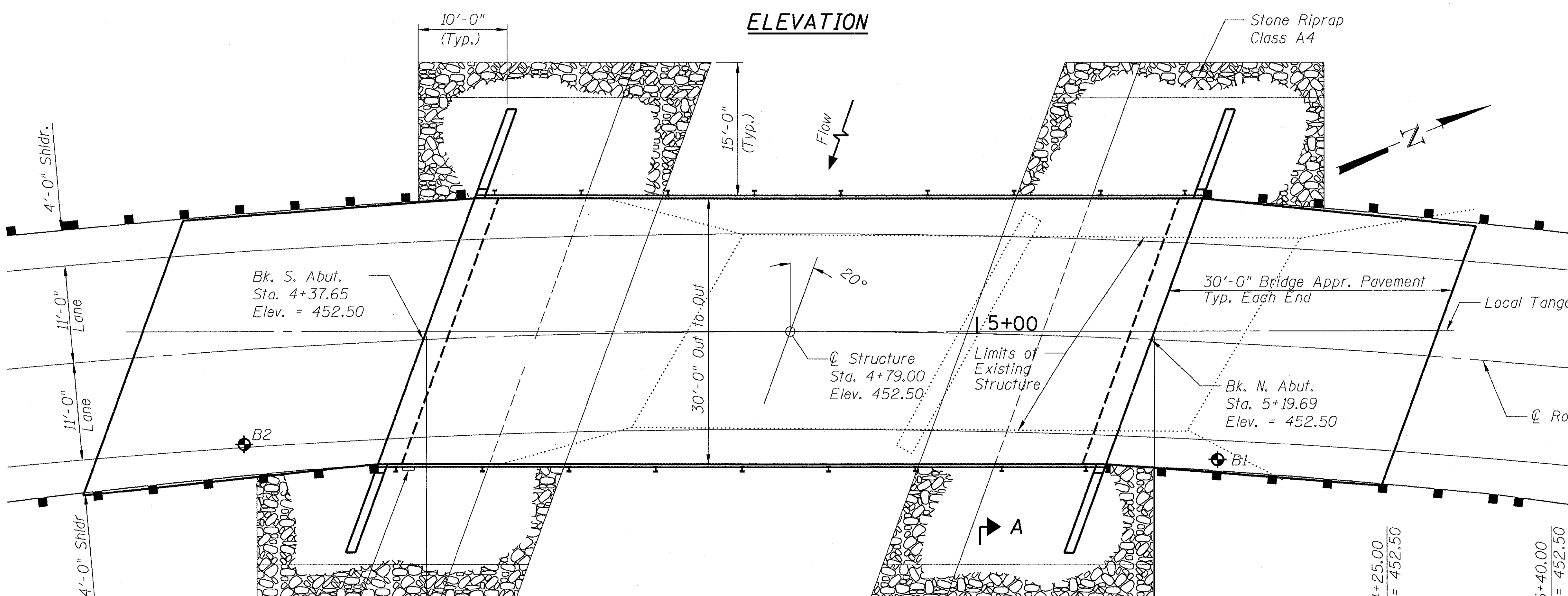
Existing Structure: S.N. 085-3081, Originally built in 1935 as section 6-B-MFT. The original structure consisted of a two-span reinforced concrete deck with steel WF beams on closed timber abutments and a timber pile bent pier. The back to back abutment length is 62'-0" and out to out deck width is 23'-0".

No Salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



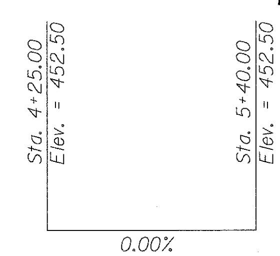
ELEVATION



Indicates boring location

PLAN

Note: See sheet 2 of 17 for section A-A.



PROFILE GRADE
(Along ℄ Roadway)

WATERWAY INFORMATION

Drainage Area = 4.00 sq. mi.			Existing Low Grade Elevation 446.50 ft. @ Sta. 9+81.00 / Proposed Low Grade Elevation 446.50 ft. @ Sta. 9+95.00								
	Freq. Year		Discharge (cfs) Exist.	Discharge (cfs) Prop.	Opening (sq ft) Exist.	Opening (sq ft) Prop.	Natural H.W.E.	Head - (ft.) Exist.	Head - (ft.) Prop.	Headwater Elevation Exist.	Headwater Elevation Prop.
		Bridge	1806	1806	329.7	402.6					
		Over-the-Road	0	0	0.0	0.0					
Design	30	Total	1806	1806	329.7	402.6	446.13	0.34	0.28	446.47	446.41
		Bridge	2302.5	2302.5	332.2	410.8					
		Over-the-Road	179.5	179.5	104.5	104.5					
Base	100	Total	2482	2482	436.7	515.3	446.25	0.59	0.47	446.84	446.72
		Bridge	3035.4	3035.4	344.6	425.9					
		Over-the-Road	394.6	394.6	187.0	187.0					
Max. Calc.	500	Total	3430	3430	531.6	612.9	446.47	1.18	0.90	447.65	447.37

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu Yd	-	116.4	116.4
Stone Riprap, Class A4	Ton	-	315	315
Removal of Existing Structures	Each	-	-	1
Structure Excavation	Cu Yd	-	118	118
Protective Coat	Sq Yd	300	-	300
Concrete Structures	Cu Yd	-	31.2	31.2
Concrete Superstructure	Cu Yd	88.8	-	88.8
Bridge Deck Grooving	Sq Yd	274	-	274
Furnishing and Erecting Structural Steel	L Sum	1	-	1
Stud Shear Connectors	Each	930	-	930
Reinforcement Bars, Epoxy Coated	Pound	17,200	4,400	21,600
Steel Railing, Type S1	Foot	164	-	164
Furnishing Metal Shell Piles 12" ϕ x 0.25"	Foot	-	410	410
Driving Piles	Foot	-	410	410
Test Pile Metal Shells	Each	-	1	1
Name Plates	Each	1	-	1
Bar Splicers	Each	62	-	62
Geocomposite Wall Drain	Sq Yd	-	66.0	66.0
Pipe Underdrains for Structure, 4"	Foot	-	132	132
Filter Fabric	Sq Yd	-	475	475
Bridge Approach Pavement (Special)	Sq Yd	200	-	200

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2007 AASHTO LRFD Bridge Design Specifications with 2008 Interims

DESIGN STRESSES
FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50 Structural Steel)

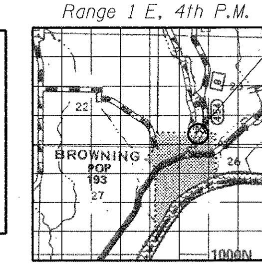
SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Bedrock Acceleration Coefficient (A) = 0.046g
Site Coefficient (S) = 1.0

DESIGN SCOUR ELEVATION	N & S Abut.
	444.56

DUTCHMAN'S CREEK
BUILT 20 BY
SCHUYLER COUNTY
SECTION 04-00070-00-BR
F.A.S. RTE 454 STATION 4+79.00
S.N. 085-3055
LOADING HL-93

NAME PLATE
See Std. 515001

Range 1 E. 4th P.M.



LOCATION SKETCH

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS

DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

STATE OF ILLINOIS
MICHAEL J. TRELLO
NUMBER 081-006334
LICENSED STRUCTURAL ENGINEER

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 requirements of the current A.A.S.H.T.O. L.R.F.D. Bridge Design Specifications.

Expires: 11/30/10 Signed 9/18/09 Dated

GENERAL PLAN AND ELEVATION
F.A.S. ROUTE 454 OVER
DUTCHMAN'S CREEK
SECTION 04-00070-00-BR
SCHUYLER COUNTY
STATION 4+79.00
S.N. 085-3055

SHEET NO. 1	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17 SHEETS	454	04-00070-00-BR	SCHUYLER	30	9
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

G&B PROJECT: - PLOT DRIVER = V8i_TDS700_PS_LOCAL_IDOT.pltcfg
FILE NAME = J:\07258\CADD\CADsheets\SN 085-3055\0853055-07258-Sht-GPE.dgn
PLOT DATE = 9/18/2009 PLOT SCALE = 8:4 '/' / in. USER NAME = franky

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts ¾" in. ϕ, holes 15/16" in. ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 71,660 lbs.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

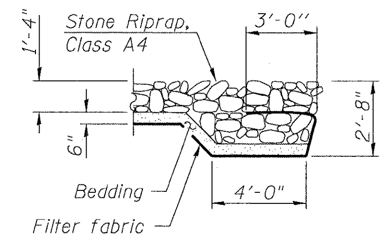
Reinforcement bars designated (E) shall be epoxy coated.

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provision for "Cleaning and Painting New Metal Structures".

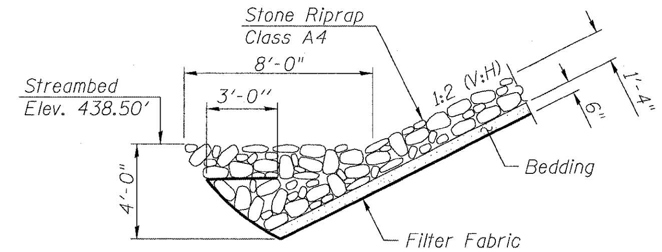
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

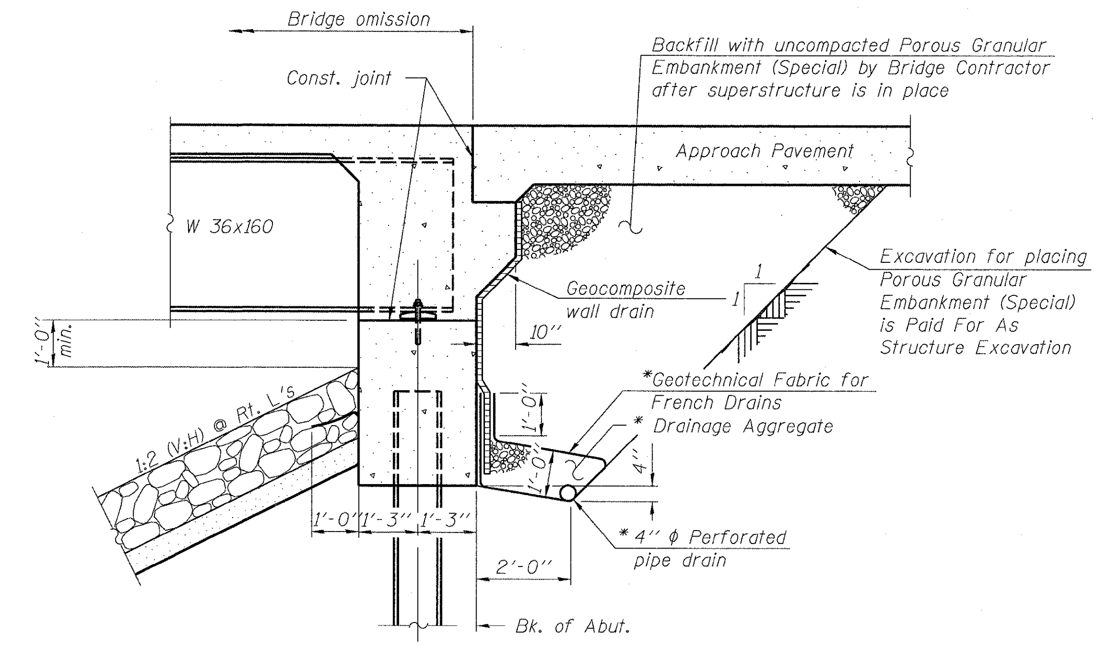
IDNR/OWR has issued permit DS2008073 for the construction of this project.



SECTION A-A



STONE RIPRAP ANCHOR DETAIL



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

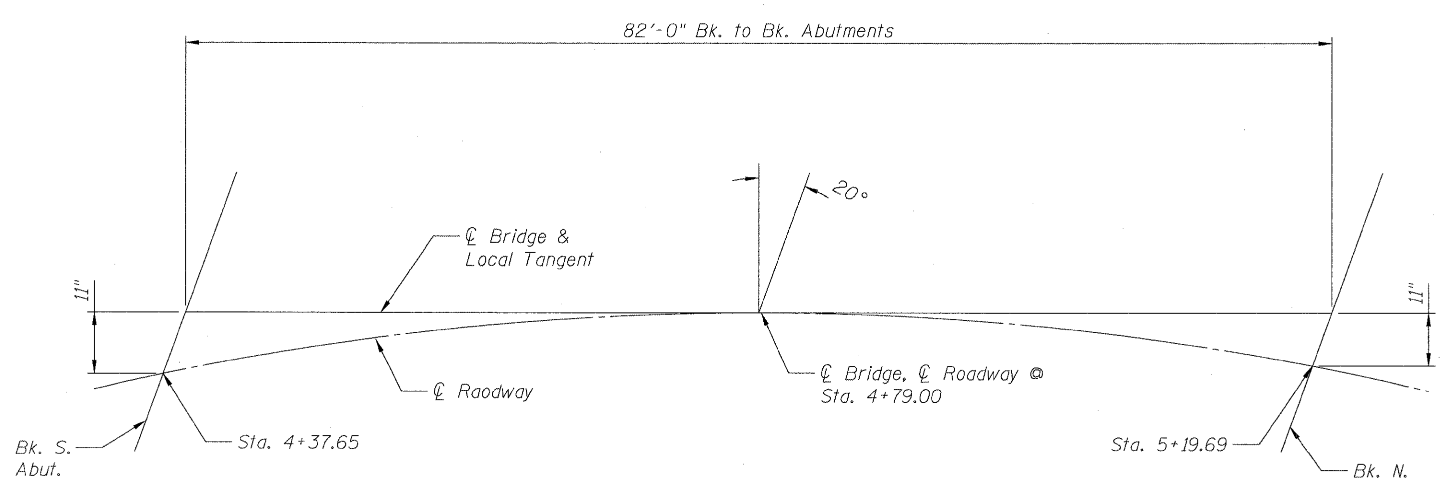
Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See article 601.05 of the Standard Specifications and Highway Standard 601101).

* Included in the cost of Pipe Underdrains for Structures, 4"

CURVE DATA

PI Sta. = 4+32.00
Δ = 25°32'53"
D = 6° 13'40"
T = 208.58'
L = 410.23'
R = 920.00'
E = 23.35'
e = 4.50%
TR = 25.00'
SE Run= 75.00'
PC Sta. = 2+23.42
PT Sta. = 6+33.65

INDEX OF SHEETS



OFFSET SKETCH

GENERAL DATA
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
SCHUYLER COUNTY
STATION 4+79.00
S.N. 085-3055

GREENE & BRADFORD, INC. OF SPRINGFIELD
CONSULTING ENGINEERS

DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

SHEET NO. 2	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17 SHEETS	454	04-00070-00-BR	SCHUYLER	30	10
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS FED. AID PROJECT			

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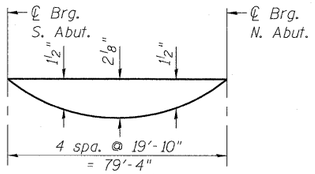
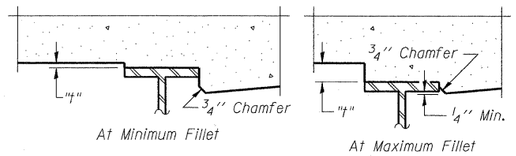
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DEAD LOAD DEFLECTION DIAGRAM

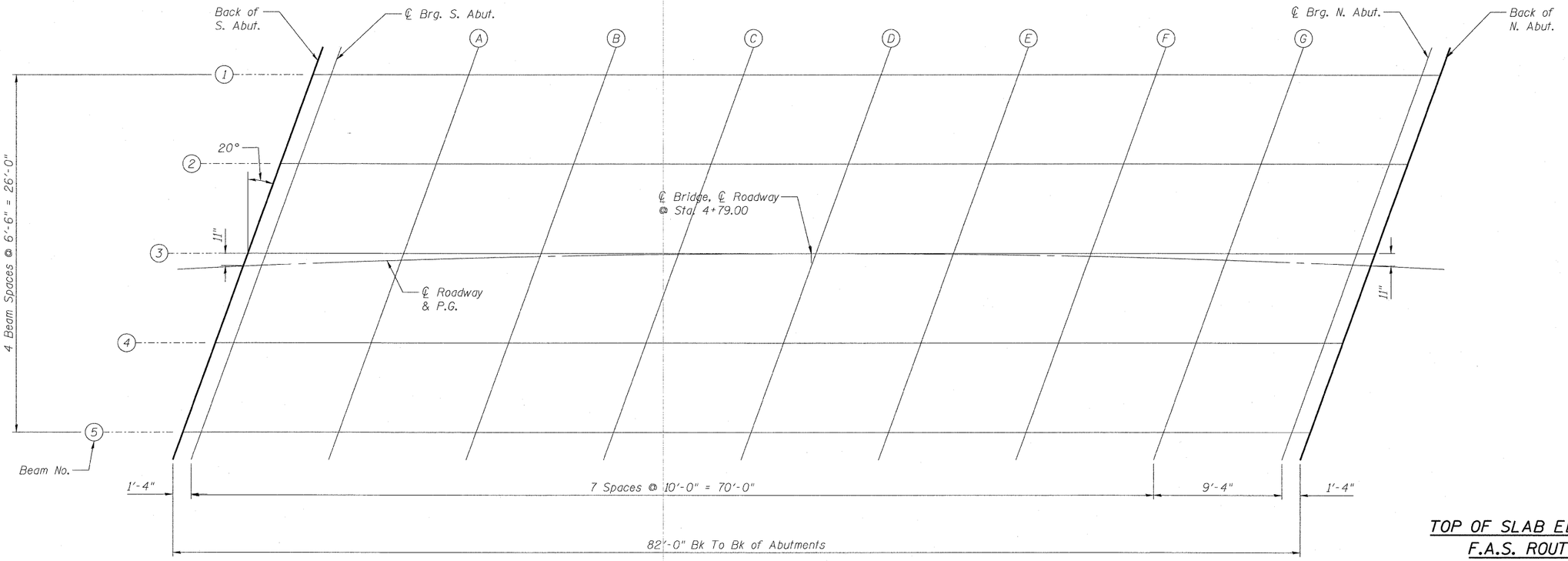
(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 4 of 17.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet 4 of 17, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



PLAN

TOP OF SLAB ELEVATIONS
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
SCHUYLER COUNTY
STATION 4+79.00
S.N. 085-3055

GREENE & BRADFORD, INC.
OF SPRINGFIELD
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320 CONSTITUTION DRIVE
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DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

G&B PROJECT: -
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PLOT SCALE = 4:2 '/ in.
USER NAME = franky

SHEET NO. 3	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17 SHEETS	454	04-00070-00-BR	SCHUYLER	30	11
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. Of S. Abut.	04+43.25	-13.70	453.117	453.117
CL Brg. S. Abut	04+44.57	-13.65	453.114	453.114
A	04+54.42	-13.33	453.100	453.170
B	04+64.27	-13.12	453.090	453.218
C	04+74.13	-13.01	453.085	453.250
D	04+83.99	-13.01	453.085	453.264
E	04+93.85	-13.12	453.090	453.254
F	05+03.71	-13.34	453.100	453.224
G	05+13.56	-13.66	453.115	453.180
CL Brg. N. Abut.	05+22.75	-14.06	453.133	453.133
Bk. Of N. Abut.	05+24.06	-14.12	453.135	453.135

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. Of S. Abut.	04+40.66	-7.31	452.829	452.829
CL Brg. S. Abut	04+41.98	-7.25	452.826	452.826
A	04+51.90	-6.90	452.811	452.881
B	04+61.82	-6.66	452.800	452.927
C	04+71.75	-6.53	452.794	452.959
D	04+81.68	-6.50	452.793	452.971
E	04+91.61	-6.59	452.797	452.960
F	05+01.54	-6.78	452.805	452.929
G	05+11.46	-7.08	452.819	452.884
CL Brg. N. Abut.	05+20.71	-7.45	452.835	452.835
Bk. Of N. Abut.	05+22.03	-7.51	452.838	452.838

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. Of S. Abut.	04+38.03	-0.91	452.541	452.541
CL Brg. S. Abut	04+39.36	-0.85	452.538	452.538
A	04+49.34	-0.48	452.522	452.592
B	04+59.34	-0.21	452.509	452.637
C	04+69.33	-0.05	452.502	452.667
D	04+79.33	0.00	452.500	452.678
E	04+89.33	-0.06	452.503	452.666
F	04+99.33	-0.22	452.510	452.634
G	05+09.32	-0.50	452.523	452.588
CL Brg. N. Abut.	05+18.64	-0.85	452.538	452.538
Bk. Of N. Abut.	05+19.97	-0.91	452.541	452.541

CENTERLINE AND P.G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. Of S. Abut.	04+37.65	0.00	452.500	452.500
CL Brg. S. Abut	04+39.00	0.00	452.500	452.500
A	04+49.15	0.00	452.500	452.570
B	04+59.25	0.00	452.500	452.628
C	04+69.31	0.00	452.500	452.665
D	04+79.33	0.00	452.500	452.678
E	04+89.31	0.00	452.500	452.663
F	04+99.25	0.00	452.500	452.624
G	05+09.16	0.00	452.500	452.565
CL Brg. N. Abut.	05+18.37	0.00	452.500	452.500
Bk. Of N. Abut.	05+19.69	0.00	452.500	452.500

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. Of S. Abut.	04+35.36	5.47	452.254	452.254
CL Brg. S. Abut	04+36.70	5.53	452.251	452.251
A	04+46.75	5.94	452.233	452.303
B	04+56.82	6.23	452.220	452.347
C	04+66.88	6.42	452.211	452.376
D	04+76.95	6.50	452.208	452.386
E	04+87.02	6.47	452.209	452.372
F	04+97.09	6.32	452.216	452.340
G	05+07.16	6.07	452.227	452.292
CL Brg. N. Abut.	05+16.55	5.74	452.242	452.242
Bk. Of N. Abut.	05+17.89	5.68	452.244	452.244

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. Of S. Abut.	04+32.65	11.85	451.967	451.967
CL Brg. S. Abut	04+34.00	11.91	451.964	451.964
A	04+44.13	12.35	451.944	452.014
B	04+54.26	12.67	451.930	452.057
C	04+64.40	12.89	451.920	452.085
D	04+74.54	12.99	451.915	452.094
E	04+84.68	12.98	451.916	452.079
F	04+94.82	12.87	451.921	452.045
G	05+04.96	12.64	451.931	451.996
CL Brg. N. Abut.	05+14.42	12.33	451.945	451.945
Bk. Of N. Abut.	05+15.77	12.28	451.947	451.947

GREENE & BRADFORD, INC.
OF SPRINGFIELD
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PROFESSIONAL & STRUCTURAL ENGINEERING CORPORATION
(217) 793-2844, (217) 793-5227 (FAX) E-MAIL - cadgreenebradford.com

DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

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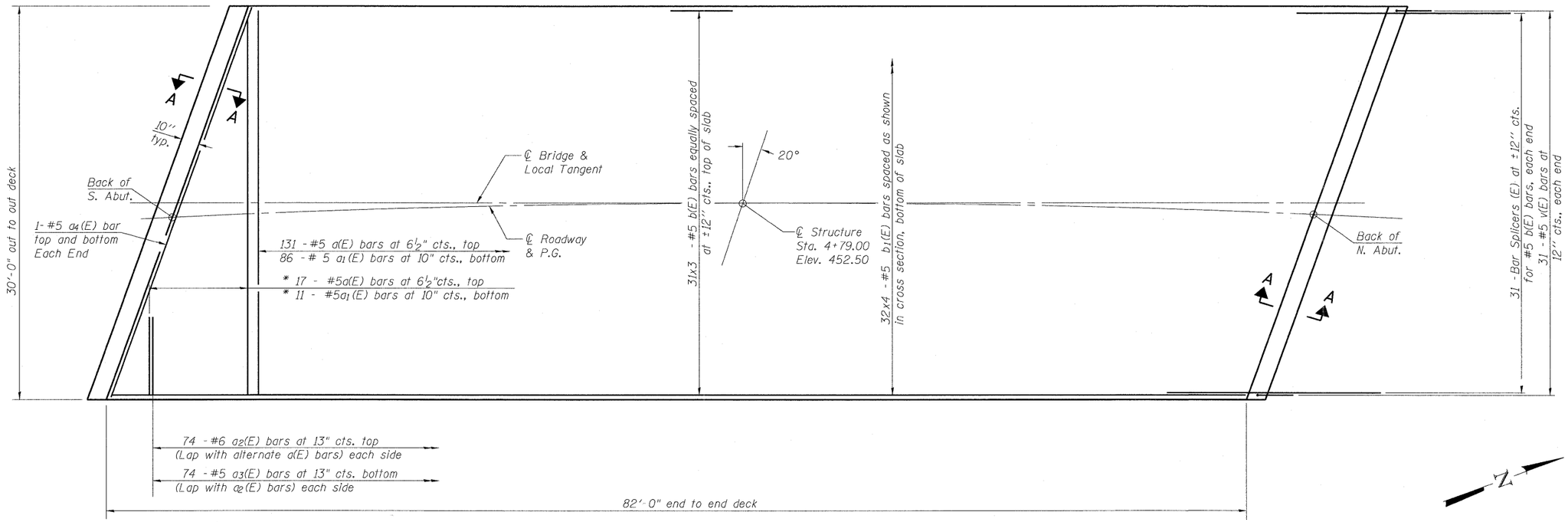
TOP OF SLAB ELEVATIONS
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
SCHUYLER COUNTY
STATION 4+79.00
S.N. 085-3055

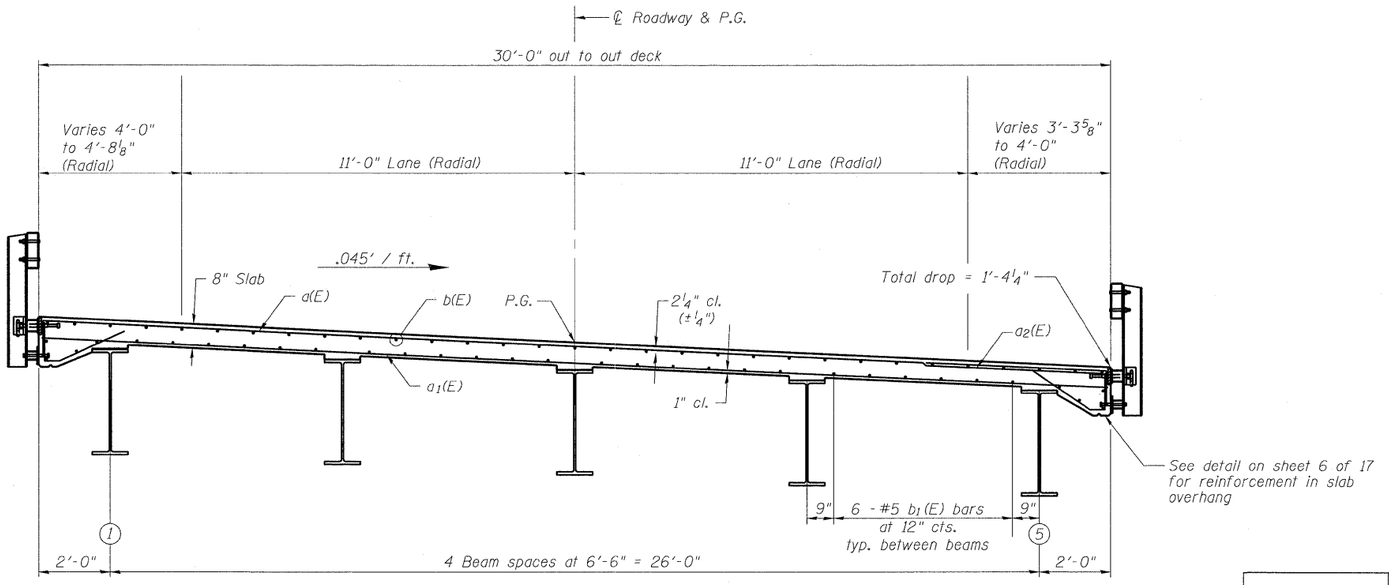
SHEET NO. 4	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17 SHEETS	454	04-00070-00-BR	SCHUYLER	30	12
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* Order a(E) and a_1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.



PLAN



CROSS SECTION
(Looking North)

Notes:
See Sheet 6 of 17 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

See Sheet 6 of 17 for Section A-A.
See Sheet 15 of 17 for Bar Splicer Details.

MIN. BAR LAP
#5 bar = 2'-2"

SUPERSTRUCTURE
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
SCHUYLER COUNTY
STATION 4+79.00
S.N. 085-3055

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
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PROFESSIONAL & STRUCTURAL ENGINEERING CORPORATION
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DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

SHEET NO. 5	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

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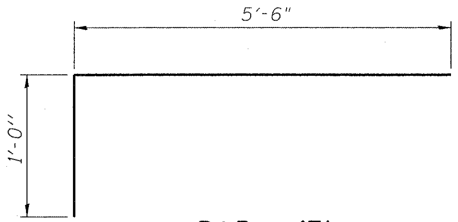
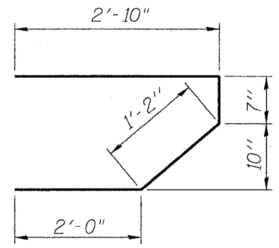
USER NAME = franky

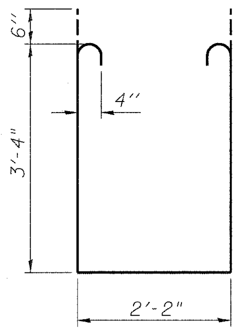
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



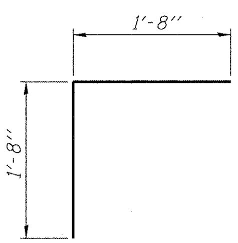
BAR a_2(E)



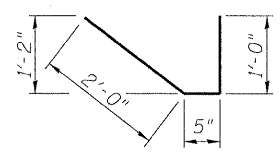
BAR s(E)



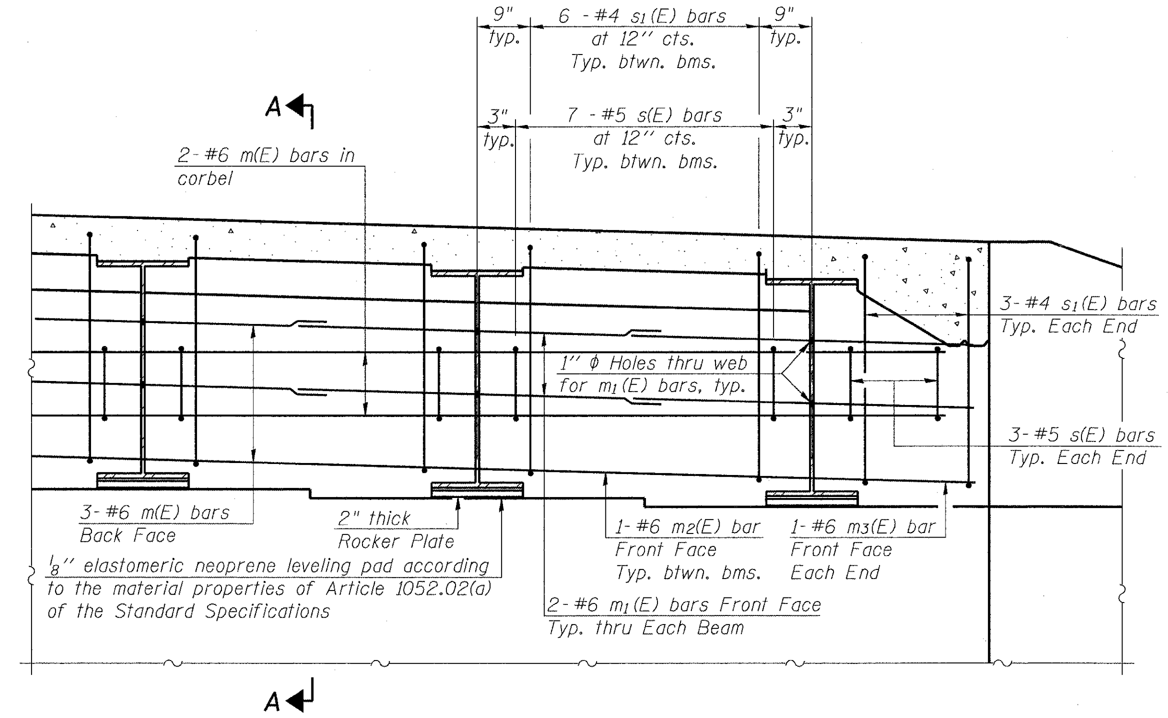
BAR s_1(E)



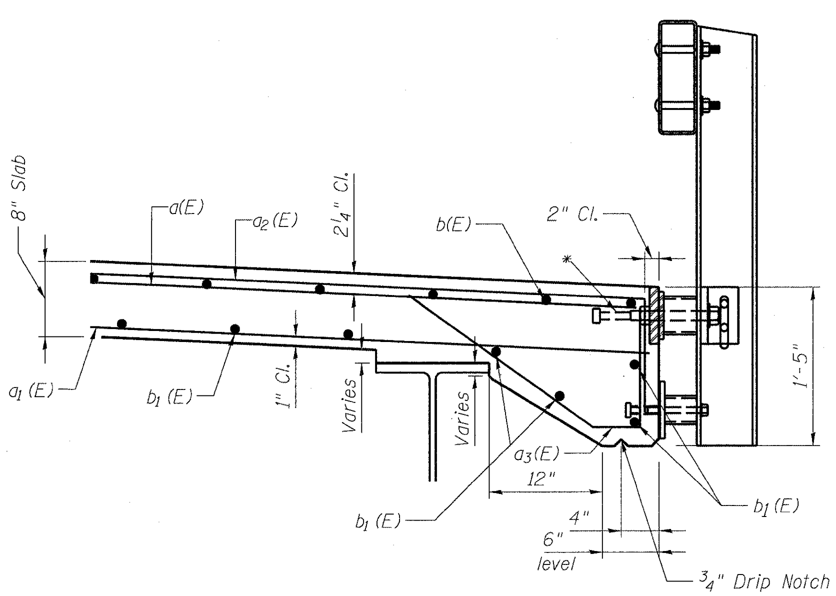
BAR v(E)



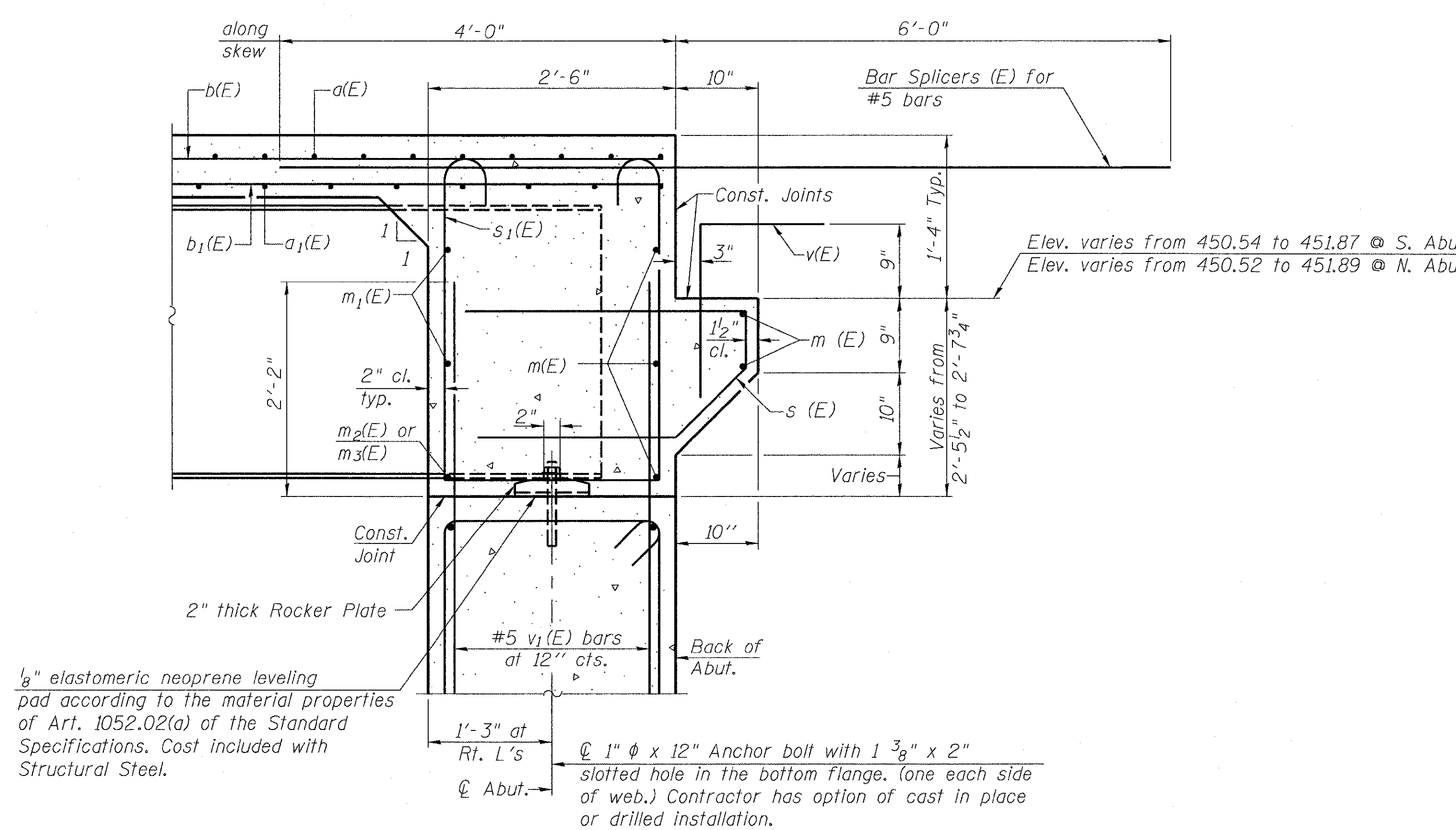
BAR a_3(E)



DIAPHRAGM ELEVATION AT ABUTMENT



SECTION THRU SLAB OVERHANG



SECTION A-A

Dimensions at right angles to abutment, except as shown.

Notes:

Reinforcement bars in diaphragm are billed with superstructure.

Concrete in diaphragm is included with Concrete Superstructure.

The s(E) and s_1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

* Reinforcement bars in the top of the deck may be placed with $1\frac{1}{2}$" minimum clearance in the area of the rail post anchor devices. The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

Protective coat shall be applied to the entire deck surface including sides.

MIN. BAR LAP

#5 bar = 2'-2"
#6 bar = 2'-9"

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	148	#5	29'-6"	——
a_1(E)	97	#5	29'-8"	——
a_2(E)	148	#6	6'-0"	——┐
a_3(E)	148	#5	3'-5"	╲┘
a_4(E)	4	#5	31'-7"	——
b(E)	93	#5	28'-9"	——
b_1(E)	128	#5	22'-3"	——
m(E)	10	#6	31'-7"	——
m_1(E)	20	#6	8'-8"	——
m_2(E)	8	#6	6'-3"	——
m_3(E)	4	#6	1'-9"	——
s(E)	68	#5	6'-7"	⊃
s_1(E)	60	#4	9'-10"	⊔
v(E)	62	#5	3'-4"	┌
Reinforcement Bars, Epoxy Coated			Pound	17,200
Concrete Superstructure			Cu. Yds.	88.8

Bars indicated thus 1 x 3 - #5 etc. indicates 1 line of bars with 3 lengths per line.

SUPERSTRUCTURE DETAILS
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
SCHUYLER COUNTY
STATION 4+79.00
S.N. 085-3055

GREENE & BRADFORD, INC. OF SPRINGFIELD
CONSULTING ENGINEERS
3501 CONSTITUTION DRIVE
SPRINGFIELD, ILLINOIS 62711-7007
PROFESSIONAL DESIGN FIRM NO. 184-000179
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DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

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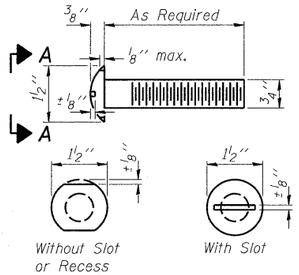
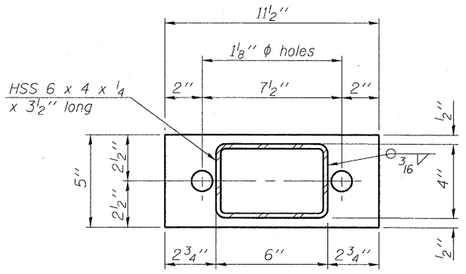
SI-DS1 10-1-08

SHEET NO. 6 / 17 SHEETS	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	454	04-00070-00-BR	SCHUYLER	30	14
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

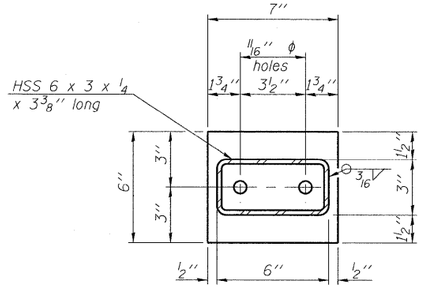
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



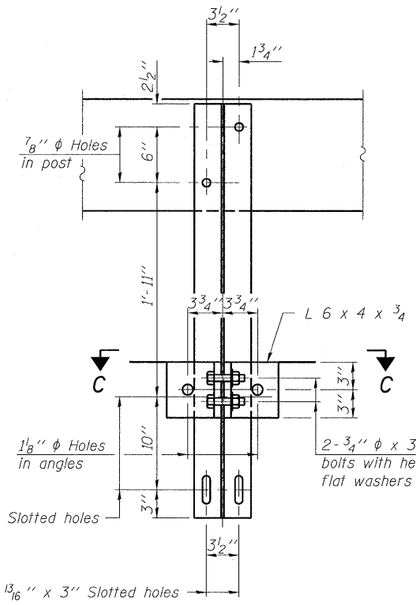
VIEW A-A
ROUND HEAD BOLT



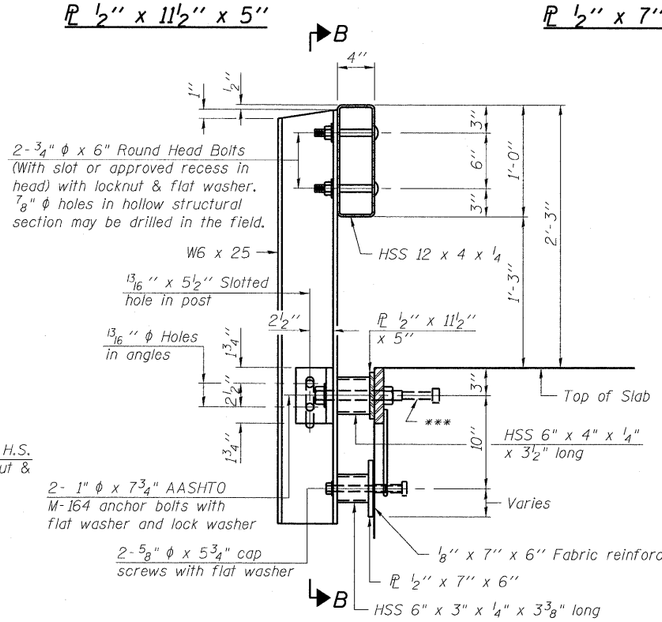
℄ 1/2" x 11 1/2" x 5"



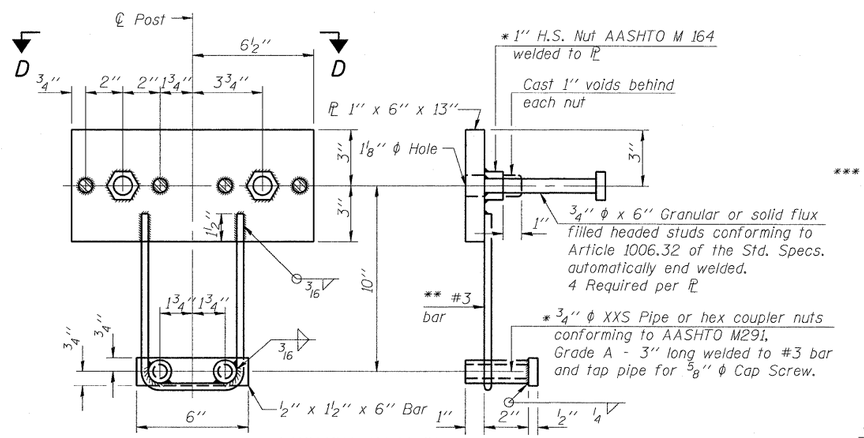
℄ 1/2" x 7" x 6"



SECTION B-B



SECTION AT RAILING POST



ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam.

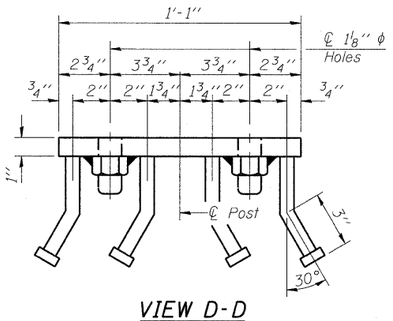
Notes:

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

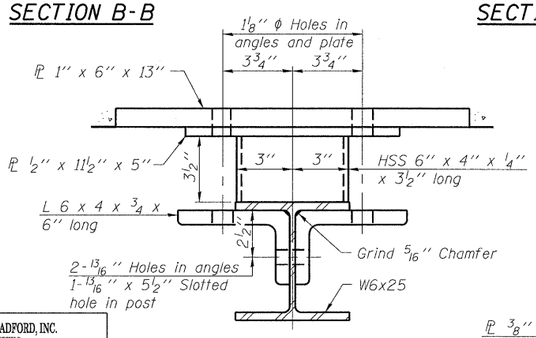
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

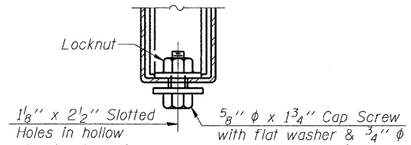


VIEW D-D

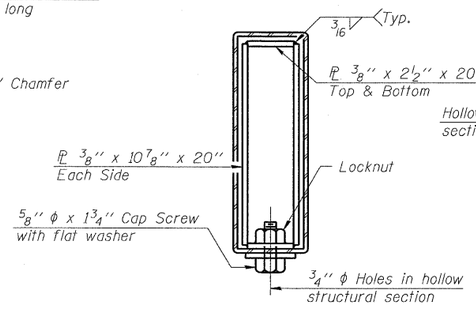


SECTION C-C

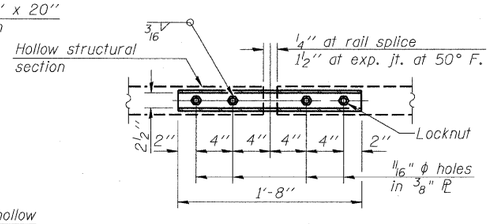
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



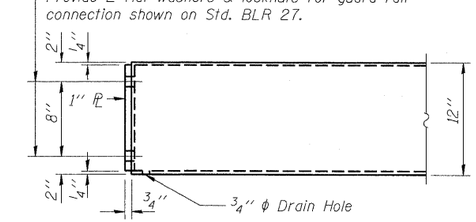
RAIL SPLICE CONNECTION AT EXPANSION JT.

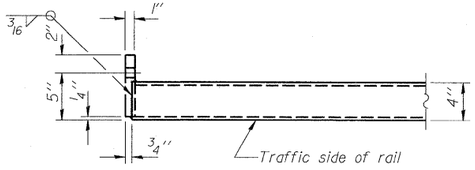


SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE ℄ TYPICAL





END OF RAIL DETAILS

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	164

STEEL RAILING, TYPE S-1
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
SCHUYLER COUNTY
STATION 4+79.00
S.N. 085-3055

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
350 CONSTITUTION DRIVE
SPRINGFIELD, ILLINOIS 62711-7001
PROFESSIONAL DESIGN FIRM NO. 184-001179
PROFESSIONAL & STRUCTURAL ENGINEERING CORPORATION
(217) 793-0841, (217) 793-5227 FILE MAIL: gb@greenebradford.com

DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

R-23A

10-1-08

(10'-9" Maximum Post Spacing)

SHEET NO. 7	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17 SHEETS	454	04-00070-00-BR	SCHUYLER	30	15
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

G&B PROJECT: -
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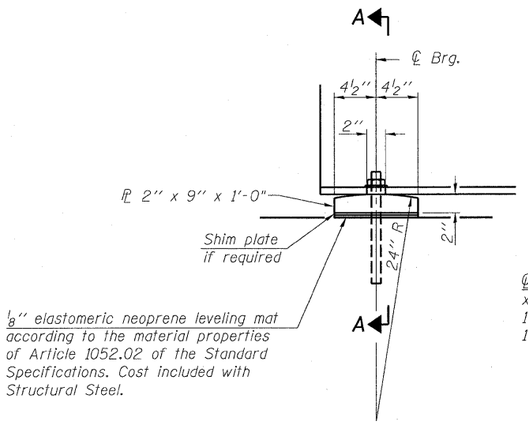
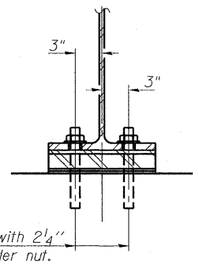
PLOT SCALE = 2:1 '1' / in.
USER NAME = frankv

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

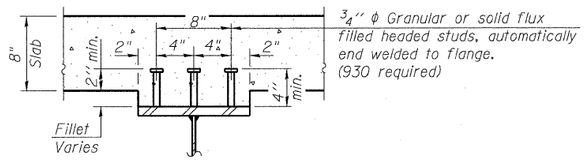


ELEVATION AT ABUTMENT

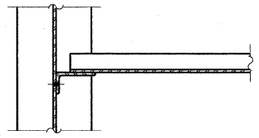


SECTION A-A

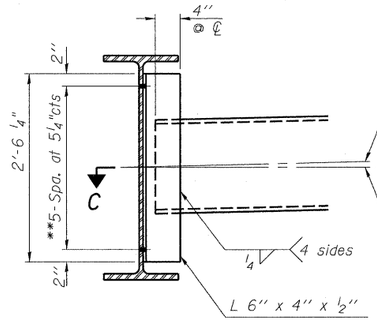
FIXED BEARING



SECTION B-B

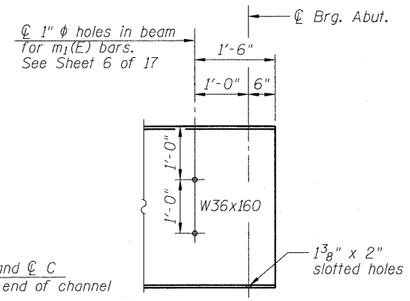


SECTION C-C



INTERIOR DIAPHRAGM D
20 Required

Note:
Two hardened washers required for each set of oversized holes.
*Alternate channel (C15x50) is permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.
The alternate, if utilized, shall be provided at no additional cost to the Department.
**¾" ϕ HS bolts, 15/16" ϕ holes



TYP. END OF BEAM ELEVATION

INTERIOR GIRDER MOMENT TABLE			0.5 Span
	I_s	(in^4)	9760
	$I_c(n)$	(in^4)	23,693
	$I_c(3n)$	(in^4)	18,329
	S_s	(in^3)	542
	$S_c(n)$	(in^3)	761
	$S_c(3n)$	(in^3)	716
	$DC1$	(k/')	0.855
	M_{DC1}	('k)	675.5
	$DC2$	(k/')	0.020
	M_{DC2}	('k)	15.8
	DW	(k/')	0.30
	M_{DW}	('k)	237.0
	M_{L+IM}	('k)	1179.8
	M_u (Strength I)	('k)	3284.3
*	$\phi_f M_n$	('k)	3847.6
	f_s DC1	(ksi)	15.0
	f_s DC2	(ksi)	0.26
	f_s DW	(ksi)	4.0
	f_s 1.3(L+IM)	(ksi)	24.2
	f_s (Service II)	(ksi)	43.5
	f_s (Total)(Strength I)	(ksi)	
**	V_f	(k)	27.2

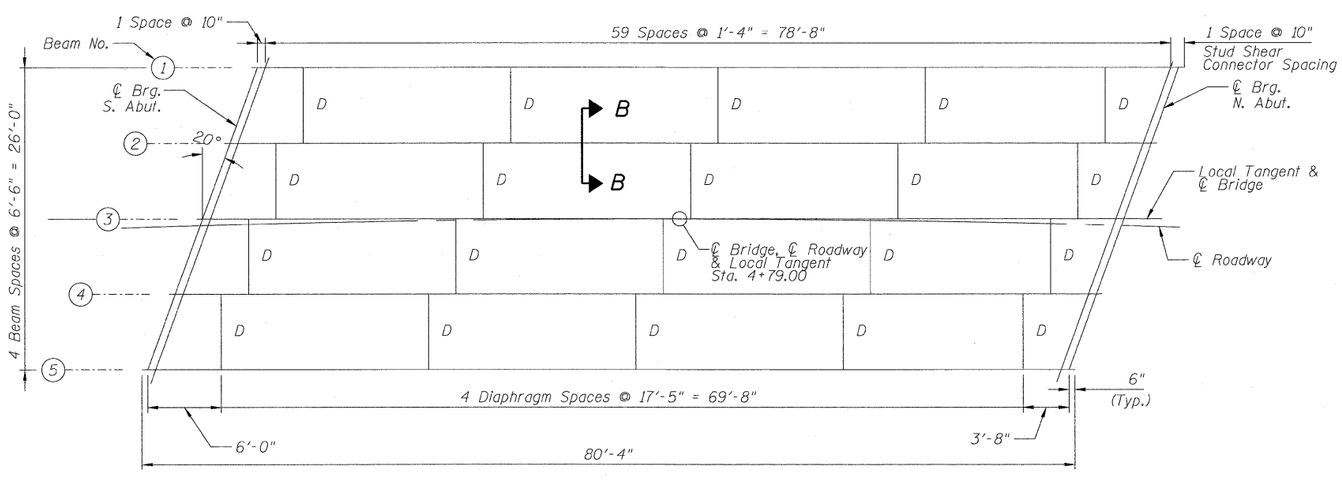
* Compact sections
** Non-Compact and slender sections

INTERIOR GIRDER REACTION TABLE		Abut.
R_{DC1}	(k)	34.0
R_{DC2}	(k)	0.80
R_{DW}	(k)	11.9
R_{L+IM}	(k)	85.3
R_{Total}	(k)	132.0

Notes:
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).
$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) due to short-term composite live loads ($in.^4$ and $in.^3$).
$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).
Z: Plastic Section Modulus of the steel section in non-composite areas. Omit line in Moment Table if not used in design calculations ($in.^3$).
$DC1$: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
$DC2$: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
M_u (Strength I): Factored design moment (kip-ft.).
$1.25\,(M_{DC1} + M_{DC2}) + 1.5\,M_{DW} + 1.75\,M_{L+IM}$
$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
$\phi_f M_{nc}$: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).
f_s (Service II): Sum of stresses as computed from the moments below (ksi).
$M_{DC1} + M_{DC2} + M_{DW} + 1.3\,M_{L+IM}$
f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.25\,(M_{DC1} + M_{DC2}) + 1.5\,M_{DW} + 1.75\,M_{L+IM}$
V_f: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



FRAMING PLAN
(All Beams W36x160 "NTR" - M270 GR. 50)

N

STRUCTURAL STEEL DETAILS
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
SCHUYLER COUNTY
STATION 4+79.00
S.N. 085-3055

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
350 CONSTITUTION DRIVE
SPRINGFIELD, ILLINOIS 62711-7007
PROFESSIONAL ENGINEERING CORPORATION
PROFESSIONAL & STRUCTURAL ENGINEERING CORPORATION
(217) 793-8944, (217) 793-5277 (FAX) E-MAIL - code@greenebradford.com

DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

SHEET NO. 8	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17 SHEETS	454	04-00070-00-BR	SCHUYLER	30	16
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

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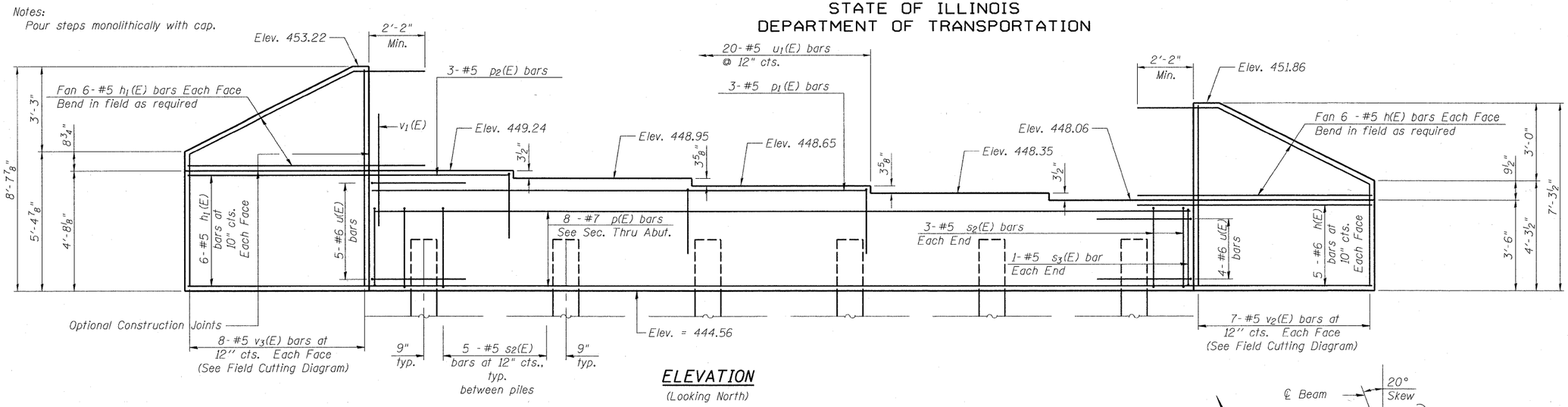
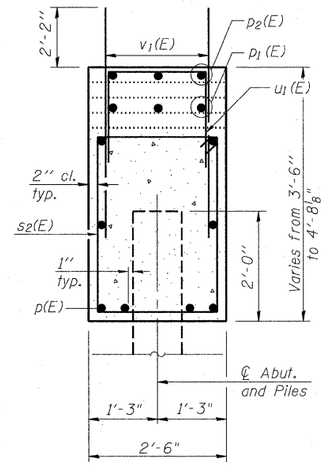
PLOT SCALE = 4:2.0000 '1' / in.
USER NAME = franky

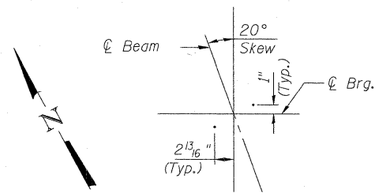
Notes:
Pour steps monolithically with cap.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION
(Looking North)



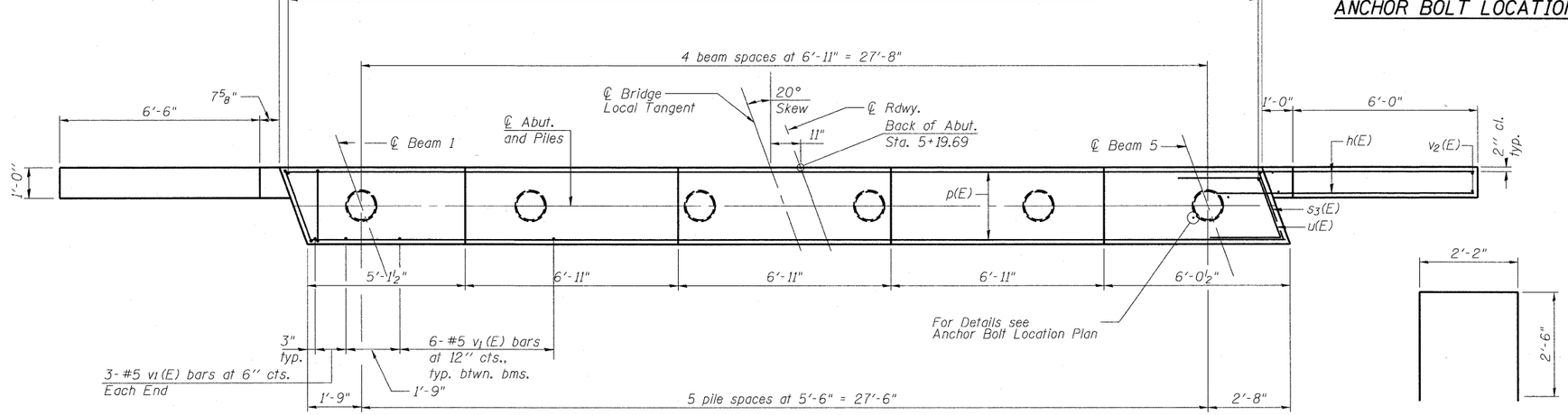


ANCHOR BOLT LOCATION PLAN

SEC. THRU ABUT.
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	22	#5	9'-2"	——
h_1(E)	24	#5	9'-8"	——
p(E)	8	#7	31'-7"	——
p_1(E)	3	#5	19'-0"	——
p_2(E)	3	#5	4'-9"	——
s_2(E)	31	#5	11'-5"	⌐
s_3(E)	2	#5	11'-9"	⌐
u(E)	9	#6	10'-2"	⌐¬
u_1(E)	20	#5	7'-2"	⌐¬
v_1(E)	63	#5	4'-4"	——
v_2(E)	7	#5	10'-10"	——
v_3(E)	8	#5	13'-5"	——
Structure Excavation		Cu. Yd.	59	
Concrete Structures		Cu. Yd.	15.6	
Reinforcement Bars, Epoxy Coated		Pound	2,200	
Furnishing -Metal Shell Piles, 12" ϕ x 0.25"		Foot	210	
Driving Piles		Foot	210	

For details of piles see sheet 13 of 17.

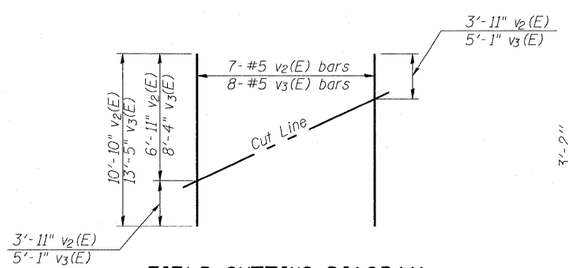


PLAN

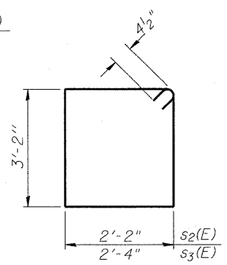
BAR u_1(E)

PILE DATA

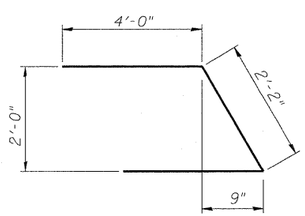
Type: Metal Shell - 12" Dia. x 0.25" wall
Nominal Required Bearing: 334 Kips
Factored Resistance Available: 167 Kips
Est. Length: 35'
No. Production Piles: 6
No. Test Piles: 0



FIELD CUTTING DIAGRAM
Order v_2(E) and v_3(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s_2(E) & s_3(E)



BAR u(E)

NORTH ABUTMENT
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
SCHUYLER COUNTY
STATION 4+79.00
S.N. 085-3055

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
300 CONSTITUTION DRIVE
SPRINGFIELD, ILLINOIS 62711-7007
PROFESSIONAL DESIGN FIRM NO. 184-001179
PROFESSIONAL & STRUCTURAL ENGINEERING CORPORATION
(217) 793-3884, (217) 793-3227 FX/E-MAIL - cadd@greenebradford.com

DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

SHEET NO. 9	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17 SHEETS	454	04-0070-00-BR	SCHUYLER	30	17
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

AI-L 10-1-08

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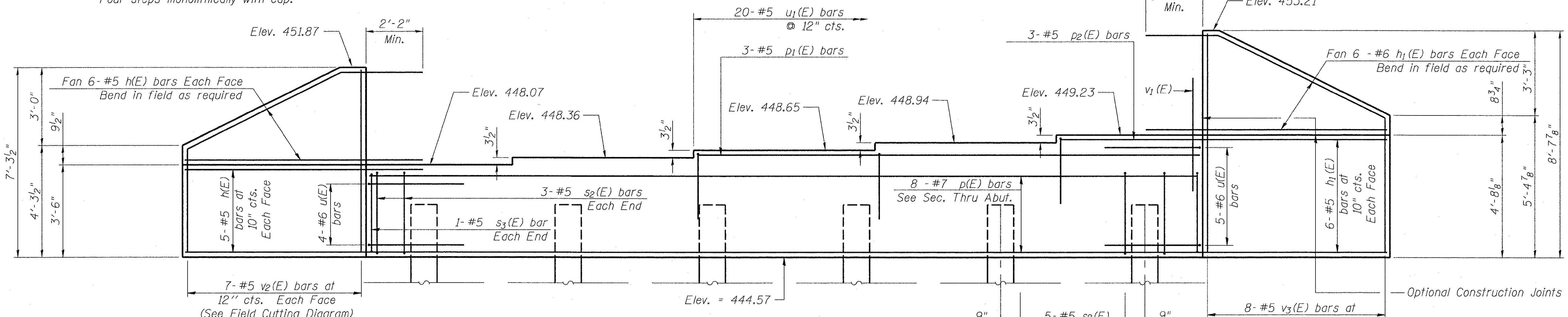
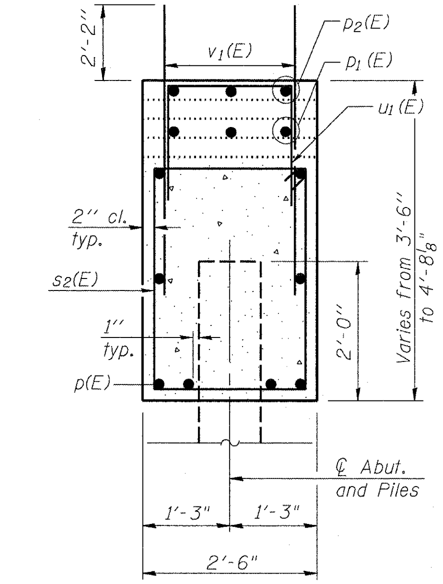
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

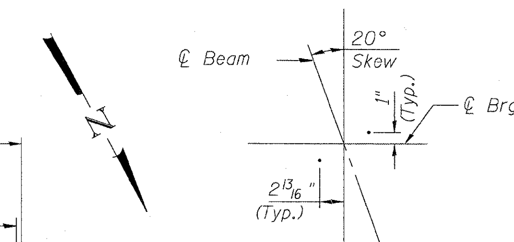
Notes:
Pour steps monolithically with cap.



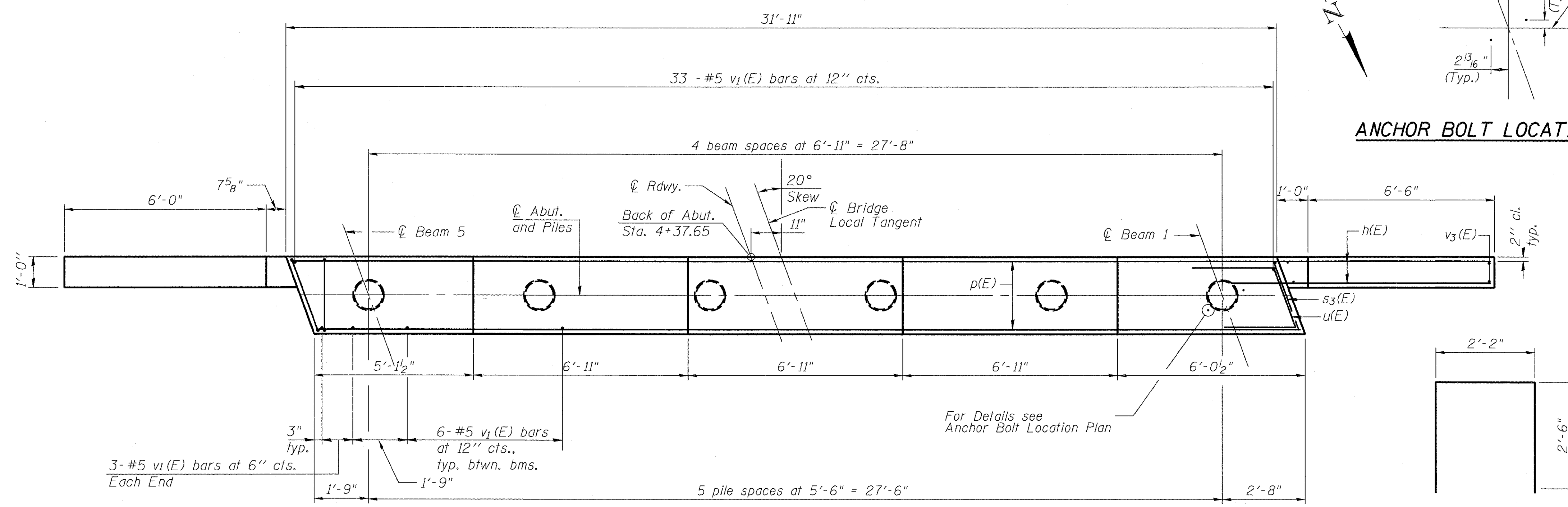
ELEVATION
(Looking South)



SEC. THRU ABUT.



ANCHOR BOLT LOCATION PLAN



PLAN

BAR $u_1(E)$

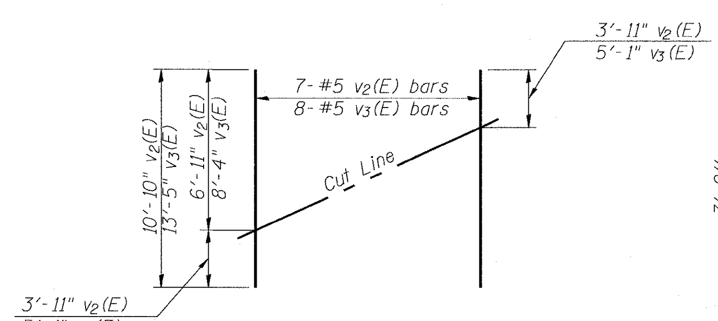
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	22	#5	9'-2"	straight
h_1(E)	24	#5	9'-8"	straight
p(E)	8	#7	31'-7"	straight
p_1(E)	3	#5	19'-0"	straight
p_2(E)	3	#5	4'-9"	straight
s_2(E)	31	#5	11'-5"	closed stirrup
s_3(E)	2	#5	11'-9"	closed stirrup
u(E)	9	#6	10'-2"	bent
u_1(E)	20	#5	7'-2"	U
v_1(E)	63	#5	4'-4"	straight
v_2(E)	7	#5	10'-10"	straight
v_3(E)	8	#5	13'-5"	straight
Structure Excavation			Cu. Yd.	59
Concrete Structures			Cu. Yd.	15.6
Reinforcement Bars, Epoxy Coated			Pound	2,200
Furnishing - Metal Shell Piles, 12" ϕ x 0.25"			Foot	200
Driving Piles			Foot	200
Test Pile, Metal Shells			Each	1

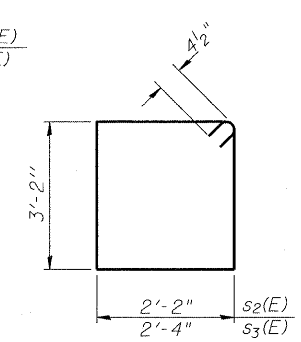
For details of piles see sheet 13 of 17.

PILE DATA

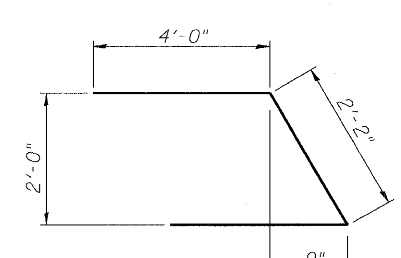
Type: Metal Shell - 12" Dia. x 0.25" wall
Nominal Required Bearing: 321 Kips
Factored Resistance Available: 161 Kips
Est. Length: 40'
No. Production Piles: 5
No. Test Piles: 1



FIELD CUTTING DIAGRAM
Order v_2(E) and v_3(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s_2(E) & s_3(E)



BAR u(E)

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS

DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

AI-L

10-1-08

SOUTH ABUTMENT
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
SCHUYLER COUNTY
STATION 4+79.00
S.N. 085-3055

SHEET NO. 10 / 17 SHEETS	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	454	04-0070-00-BR	SCHUYLER	30	18
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

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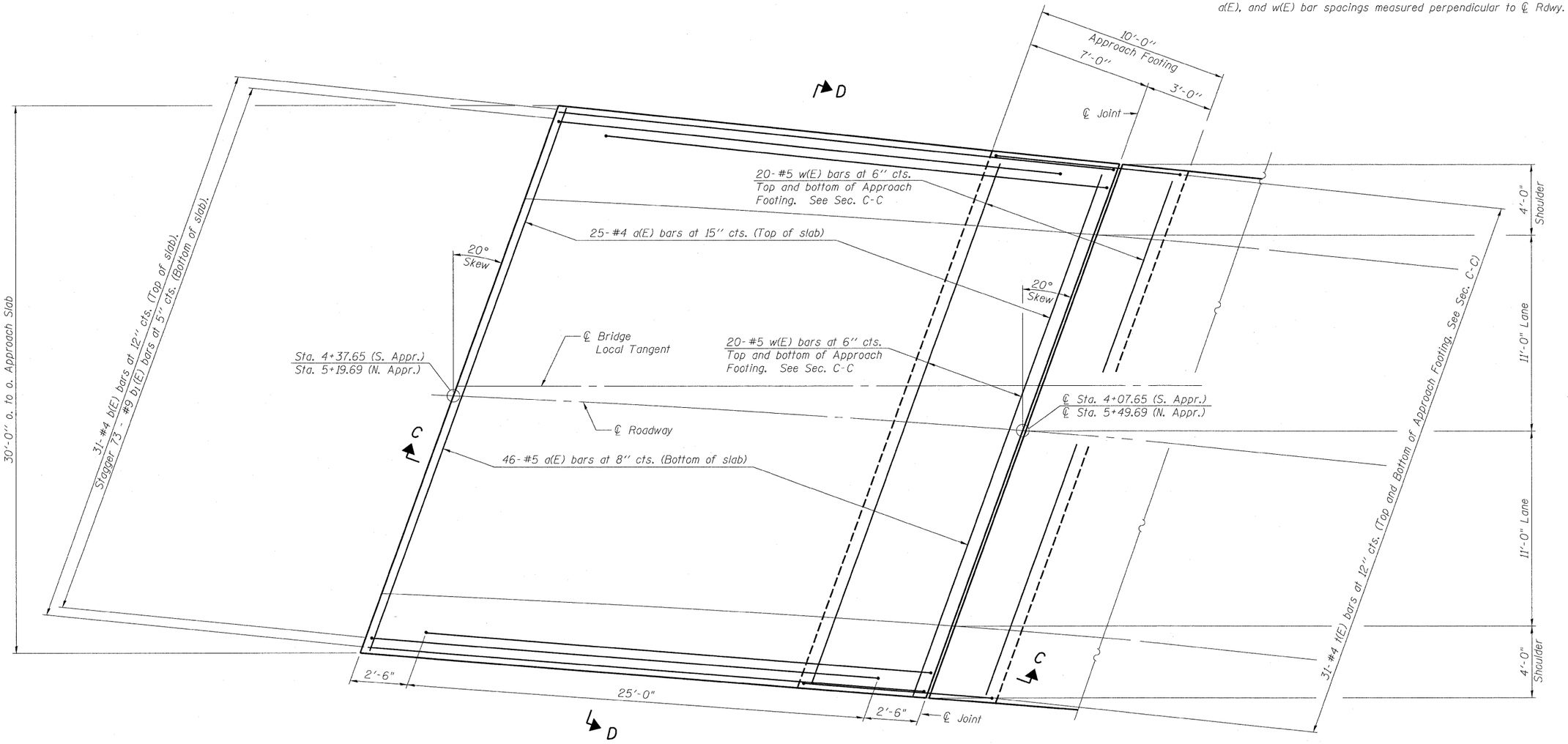
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 12 of 17 for Sections C-C & D-D.
d(E), and w(E) bar spacings measured perpendicular to ℄ Rdwy.



* Tilt #9 $b_1(E)$ bars as required to maintain clearance.

PLAN

(Sheet 1 of 2)

BRIDGE APPROACH SLAB DETAILS
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
SCHUYLER COUNTY
STATION 4+79.00
S.N. 085-3055

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
3508 CONSTITUTION DRIVE
SPRINGFIELD, ILLINOIS 62711-7007
PROFESSIONAL DESIGN FIRM NO. 184-00679
PROFESSIONAL & STRUCTURAL ENGINEERING CORPORATION
(217) 793-5844, (217) 793-5627 (FILE) FAX, - cadd@greenebradford.com

DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

SHEET NO. 11	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17 SHEETS	454	04-00070-00-BR	SCHUYLER	30	19
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

BA-L 10-31-08

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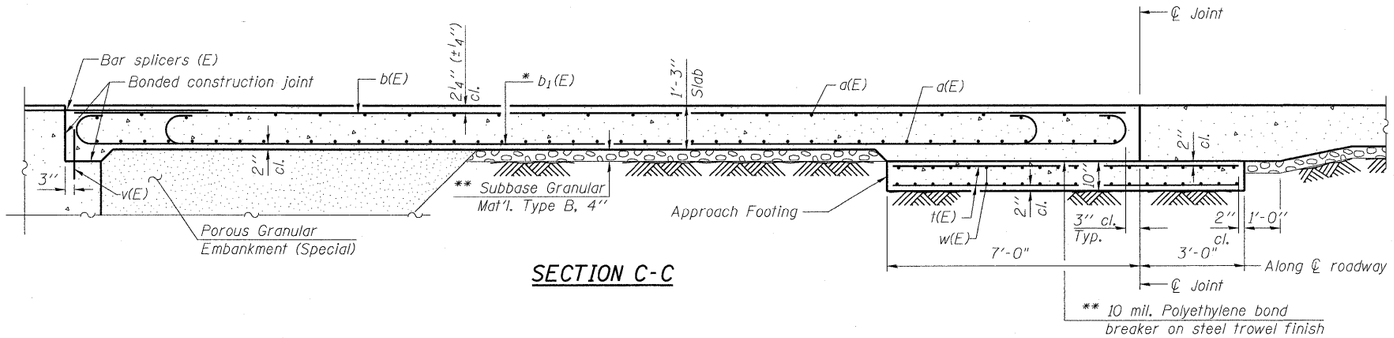
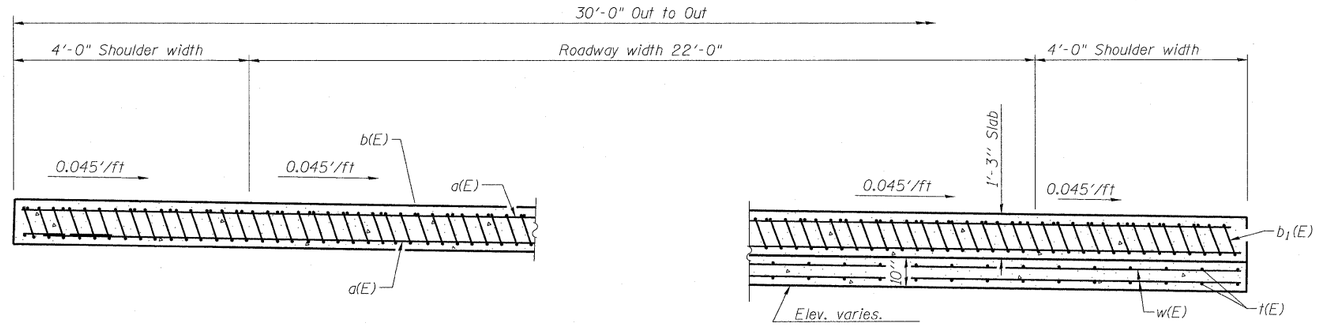
PLOT DATE = 9/18/2009 PLOT SCALE = 24.0000 '/ in. USER NAME = franky

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
Approach slab, approach footing and reinforcement shall be paid for as Bridge Approach Pavement (Special).
For v(E) bar details, see sheet 6 of 17.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 15 of 17.
Cost of excavation for approach footing included with Bridge Approach Pavement (Special).
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 17.



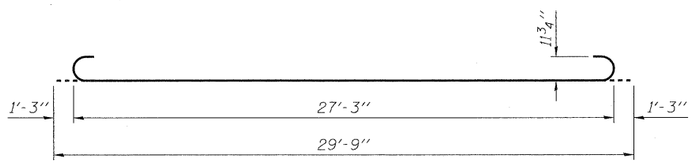
SECTION C-C



NEAR ABUTMENT

AT APPROACH FOOTING

SECTION D-D
(See Plan for dimensions not shown)



BAR $b_1(E)$

* Tilt #9 $b_1(E)$ bars as required to maintain clearance.

** Cost included with Bridge Approach Pavement (Special).

TWO APPROACHES
BILL OF MATERIAL
(For information Only)

Bar	No.	Size	Length	Shape
a(E)	142	#4	31'-7"	——
b(E)	62	#4	29'-8"	——
$b_1(E)$	146	#9	29'-9"	⊂——⊃
t(E)	124	#4	10'-4"	——
w(E)	80	#5	31'-7"	——
Approach Slab Concrete			Cu. Yd.	88.7
Approach Footing Concrete			Cu. Yd.	18.5
Reinforcement Bars, Epoxy Coated			Pound	22,480

(Sheet 2 of 2)
BRIDGE APPROACH SLAB DETAILS
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
SCHUYLER COUNTY
STATION 4+79.00
S.N. 085-3055

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
1000 SOUTH 6TH STREET
SPRINGFIELD, ILLINOIS 62701-1007
PROFESSIONAL DESIGN FIRM NO. 184-00079
PROFESSIONAL & STRUCTURAL ENGINEERING CORPORATION
(217) 793-3944, (217) 793-5221 (FL) E-MAIL - cadg@greenebradford.com

DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

SHEET NO. 12	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17 SHEETS	454	04-00070-00-BR	SCHUYLER	30	20
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

BA-L 10-31-08

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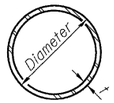
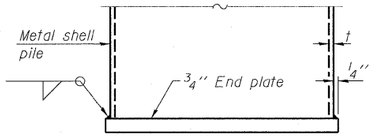
USER NAME = frankv

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

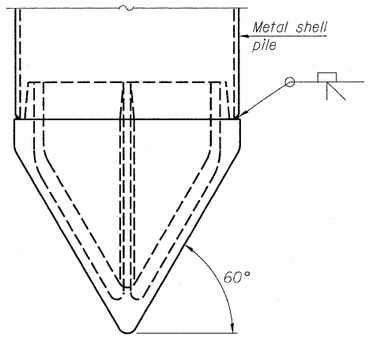


METAL SHELL PILE TABLE

Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume ($yd.^3$/ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



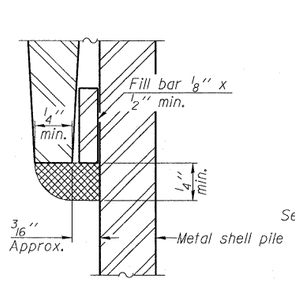
END PLATE ATTACHMENT



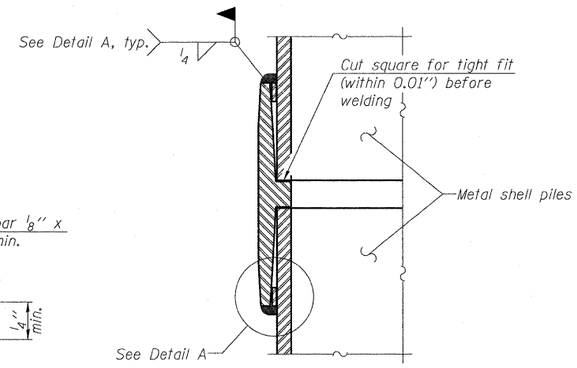
Note A:
When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.

METAL SHELL PILE SHOE ATTACHMENT

(See Note A)

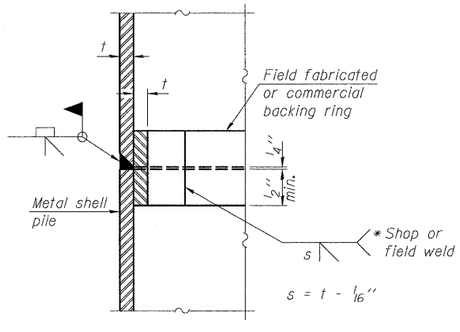


DETAIL A



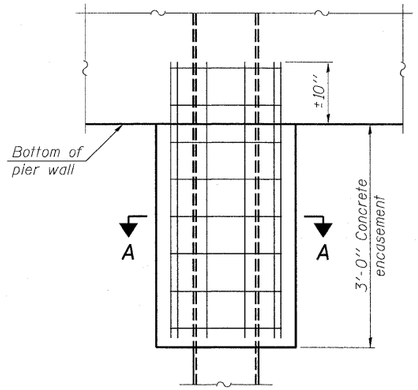
Notes:
The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE

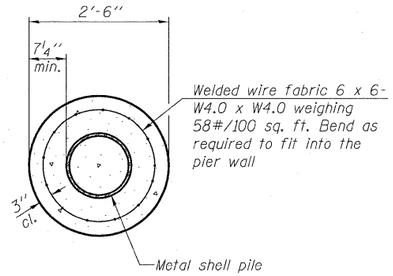


COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



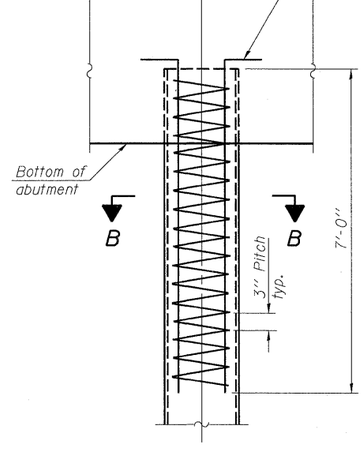
ELEVATION



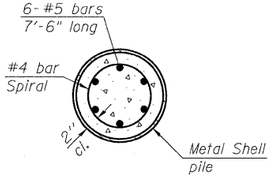
SECTION A-A

Note:
Forms for encasement may be omitted when soil conditions permit.

CONCRETE ENCASEMENT AT PIERS



ELEVATION



SECTION B-B

METAL SHELL REINFORCEMENT AT ABUTMENTS

Note:
The metal shell piles shall be according to ASTM A 252 Grade 3.

F-MS

10-1-08

PILE DATA
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
SCHUYLER COUNTY
STATION 4+79.00
S.N. 085-3055

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
36/CONSTITUTION DRIVE
SPRINGFIELD, ILLINOIS 62711-7000
PROFESSIONAL DESIGN FIRM 184.001379
PROFESSIONAL SERVICE INDUSTRY ENGINEERING CORPORATION
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DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

SHEET NO. 13	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17 SHEETS	454	04-00070-00-BR	SCHUYLER	30	21
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

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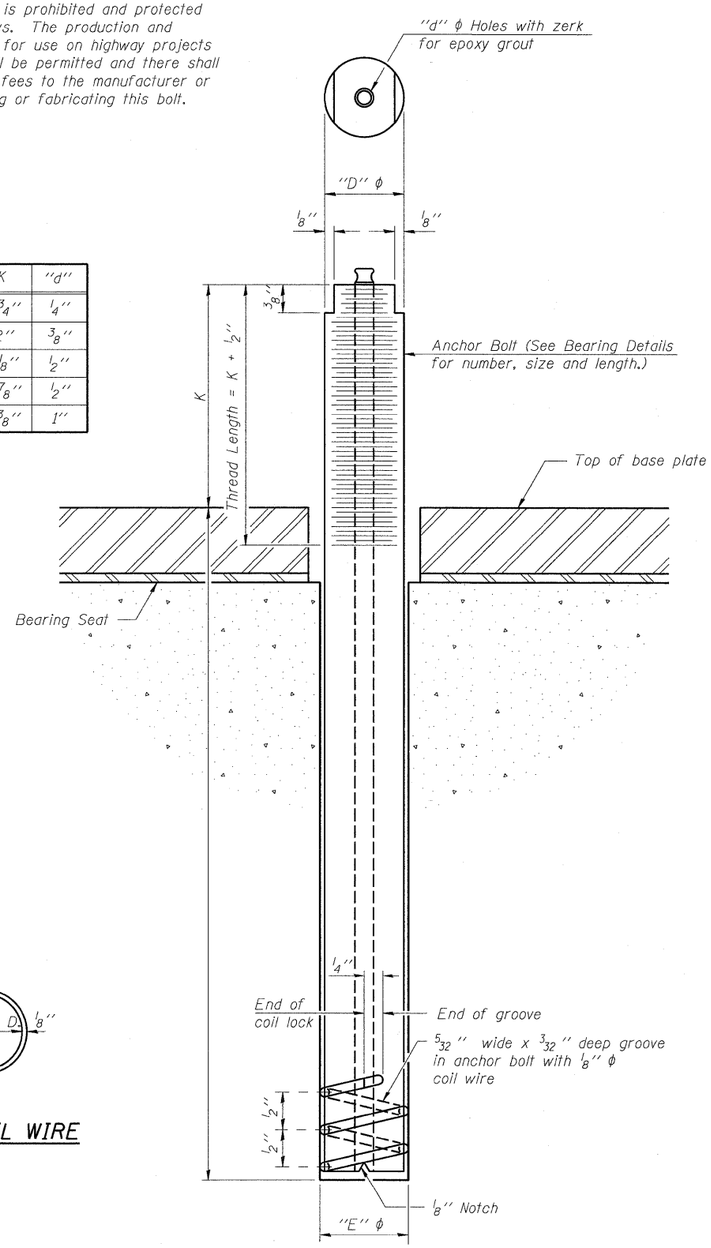
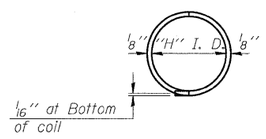
PLOT DATE = 9/18/2009
PLOT SCALE = 4:2 '/ in.
USER NAME = franky

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.

2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. *A threaded rod stud with nut and washer of the type specified.*
2. *A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.*

Location	Type
Abutments	A307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
2501 CONSTITUTION DRIVE
SPRINGFIELD, ILLINOIS 62711-7007
PROFESSIONAL DESIGN FIRM NO. 184-00679
PROFESSIONAL STRUCTURAL ENGINEERING CORPORATION
(217) 793-8844, (217) 793-9227 FILE-MAIL - coolby@greenebradford.com

DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

G&B PROJECT: -
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PLOT SCALE = 2:1 '1' / in.
USER NAME = frankv

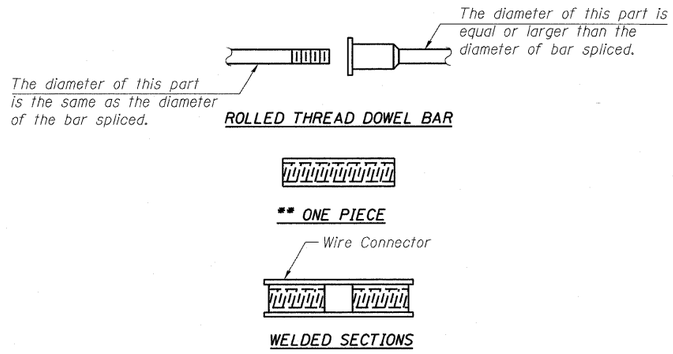
ANCHOR BOLT DETAILS FOR BEARINGS F.A.S. ROUTE 454 SECTION 04-00070-00-BR SCHUYLER COUNTY STATION 4+79.00 S.N. 085-3055

ABB-1

10-22-04

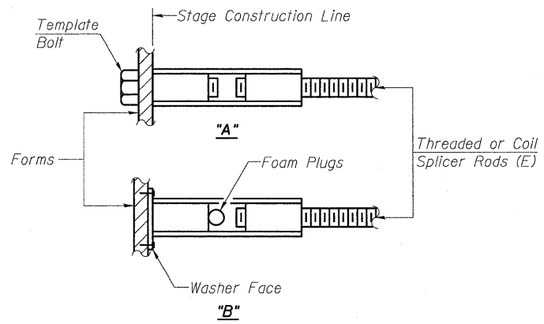
SHEET NO. 14	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17 SHEETS	454	04-00070-00-BR	SCHUYLER	30	22
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

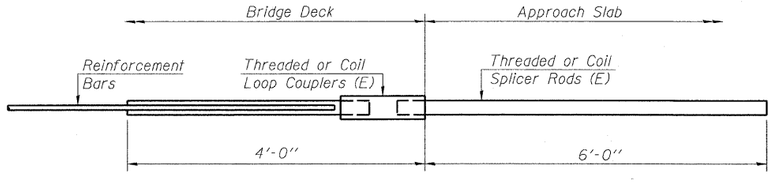
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$

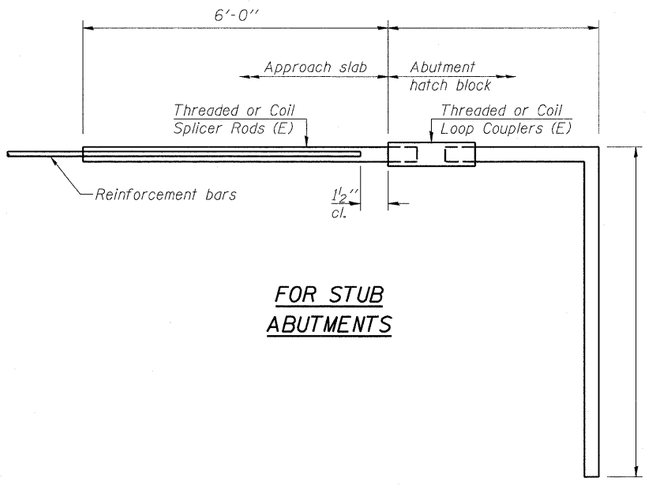
Where f_y = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



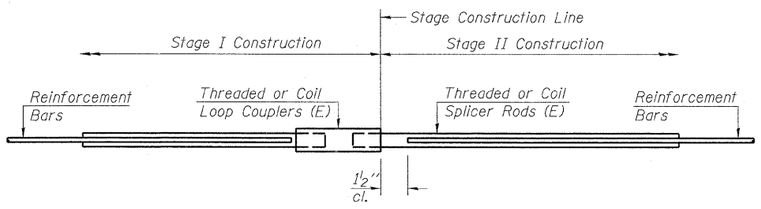
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 62



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location

BAR SPLICER ASSEMBLY DETAILS
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
SCHUYLER COUNTY
STATION 4+79.00
S.N. 085-3055

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
3500 CONSTITUTION DRIVE
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PROFESSIONAL DESIGN FIRM - 184-001005
PROFESSIONAL & STRUCTURAL ENGINEERING CORPORATION
(217) 793-8944, (217) 793-3227 (FAX) E-MAIL - ooc@greeneandbradford.com

DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

SHEET NO. 15	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17 SHEETS	454	04-00070-00-BR	SCHUYLER	30	23
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

BSD-1

10-1-08

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PLOT DATE = 9/18/2009
PLOT SCALE = 4:2 '1' / in.
USER NAME = franky

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Proffesional Se ces Industries Inc
480 North Street
Springfield, IL 62704
Telephone: 217-544-6663
Fax: 217-544-6418

LOG OF BORING B-1

Sheet 1 of 2

PSI Job No.: 020-45041
Project: Proposed Bridge Relocation
Location: Bader Road (Station 176+10)
Sec 6B-M. F. T.
Schuyler County, Illinois

Drilling Method: 3 1/4" Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: Automatic
Boring Location: 30' N of NE bridge abutment
10' E of cenrer line of Bader Rd.

WATER LEVELS
While Drilling 13.5 feet
Upon completion 12 feet
- - -

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 12" (N value)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @ Moisture PL LL; STRENGTH, tsf Qu Qp	Additional Remarks
						Appoximate Surface Elev.: 98.6 ft					
95	0					Surface: Medium vegetation (organics to -5")	ML				
	5			1	14	Brown/gray clayey SILT, trace sand, fine to medium, firm to stiff		2-3-4 N=7	23		Qu = 1.0 tsf
90	10			2	12		ML	1-3-4 N=7	17		
				3	15			1-1-1 N=2	18		
				4	18	Brown silty CLAY, few sand, fine to medium	CL-ML	0-1-1 N=2	25		
85	15			5	18	Gray fine SAND, trace silty clay	SP-SC	0-0-0 N=0			
				6	18			0-0-0 N=0			
80	20			7	18	Gray silty CLAY, few sand, fine to medium, stiff	CL-ML	0-0-0 N=0	25		Qu = 1.0 tsf
				8	18	Brown sandy CLAY, soft	CLS	0-0-0 N=0	24		
75	25			9	18	Gray silty CLAY, stiff		0-0-2 N=2	30		Qu = 1.2 tsf
				10	18			0-0-0 N=0	35		Qu = 1.2 tsf

Continued Next Page

Completion Depth: 46.5 ft
Date Boring Started: 5/6/04
Date Boring Completed: 5/6/04
Logged By: Jon McGrath
Drilling Contractor: PSI

Sample Types: Auger Cutting, Split-Spoon, Rock Core, Shelby Tube, Hand Auger

Remarks: Benchmark: Southwest corner of bridge deck, on top of concrete edge, marked with red paint

The stratification lines represent approximate boundaries. The transition may be gradual.

Proffesional Se ces Industries Inc
480 North Street
Springfield, IL 62704
Telephone: 217-544-6663
Fax: 217-544-6418

LOG OF BORING B-1

Sheet 2 of 2

PSI Job No.: 020-45041
Project: Proposed Bridge Relocation
Location: Bader Road (Station 176+10)
Sec 6B-M. F. T.
Schuyler County, Illinois

Drilling Method: 3 1/4" Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: Automatic
Boring Location: 30' N of NE bridge abutment
10' E of cenrer line of Bader Rd.

WATER LEVELS
While Drilling 13.5 feet
Upon completion 12 feet
- - -

Elevation, (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 12" (N value)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @ Moisture PL LL; STRENGTH, tsf Qu Qp	Additional Remarks
70	25			11	18	Gray silty CLAY, stiff		0-2-1 N=3	29		Qu = 1.4 tsf
	30			12	18		CL-ML	0-1-2 N=3	29		Qu = 1.4 tsf
65	35			13	18			1-2-2 N=4	27		Qu = 1.6 tsf
				14	18			1-2-2 N=4	29		Qu = 1.4 tsf
60	40			15	18	Gray course GRAVEL, dense consistency	GP	2-7-38 N=45			
				16	18	Gray fine to course SAND, very dense consistency	SW	27-22-28 N=50	10		>>4.5
55	45			17	18	Grey SHALE, very hard Auger refusal and end of boring @ 46.5'	SHALE	21-42-31 N=73	7		>>4.5

Completion Depth: 46.5 ft
Date Boring Started: 5/6/04
Date Boring Completed: 5/6/04
Logged By: Jon McGrath
Drilling Contractor: PSI

Sample Types: Auger Cutting, Split-Spoon, Rock Core, Shelby Tube, Hand Auger

Remarks: Benchmark: Southwest corner of bridge deck, on top of concrete edge, marked with red paint

The stratification lines represent approximate boundaries. The transition may be gradual.

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
3500 CONSTITUTION DRIVE
SPRINGFIELD, ILLINOIS 62703-7437
PROFESSIONAL DESIGN FIRM - 184-001078
PROFESSIONAL & STRUCTURAL ENGINEERING CORPORATION
(217) 793-3844, (217) 793-3227 (FX), E-MAIL - ccdegreeandbradford.com

DESIGNED NIEWINSKI
CHECKED TRELLO
DRAWN VERENSKI
CHECKED TRELLO

G&B PROJECT: -
PLOT DRIVER = V8i_TDS700_PS_LOCAL_IDOT.pltcfg
FILE NAME = J:\07258\CADD\CADsheets\SN 085-3055\0853055-07258-Sht-Bore.dgn
PLOT DATE = 9/18/2009
PLOT SCALE = 0:1 '=' / in.
USER NAME = franky

BORING LOGS
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
STATION 4+79.00
SCHUYLER COUNTY
S.N. 085-3055

SHEET NO. 16	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17 SHEETS	454	04-00070-00-BR	SCHUYLER	30	24
			CONTRACT NO. 93499		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Proffesional Se. ..es Industries Inc
480 North Street
Springfield, IL 62704
Telephone: 217-544-6663
Fax: 217-544-6418

LOG OF BORING B-2

Sheet 1 of 2

PSI Job No.: 020-45041
Project: Proposed Bridge Relocation
Location: Bader Road (Station 176+10)
Sec 6B-M. F. T.
Schuyler County, Illinois

Drilling Method: 3 1/4" Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: Automatic
Boring Location: 18' S of SE bridge abutment
6' E of centrer line of Bader Rd.

WATER LEVELS
While Drilling 11 feet
Upon completion 10.5 feet
- - -

Elevation, (feet)	Depth, (feet)	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 12" (N Value)	Moisture, %	Additional Remarks
				Appoximate Surface Elev.: 98.9 ft				
98	0	1	10	SURFACE: bituminous concrete to -5"	ASPHALT			
				Brown silty CLAY, few sand, fine to coarse, trace crushed stone	CL-ML	2-3-3 N=6	19	Qu = 1.0 tsf
				Brown silty CLAY, few sand, fine				
95	5	2	10			1-2-3 N=5	23	
		3	15		CL-ML	1-1-1 N=2	18	
90	10	4	18			0-1-2 N=3	35	Qu = 0.8 tsf
				Dark gray/brown silty CLAY, trace organics, trace sand fine to medium, firm to stiff				
		5	18			0-2-1 N=3	26	Qu = 1.0 tsf
85	15	6	18		CL-ML	0-1-1 N=2	26	Qu = 0.9 tsf
		7	18	Brown silty CLAY, some sand, fine to medium, stiff		0-0-0 N=0	25	Qu = 1.0 tsf
80	20	8	18		CL-ML	0-0-0 N=0	27	
		9	18	Gray silty CLAY, trace sand, fine to coarse, firm to stiff		0-2-2 N=4	30	Qu = 0.9 tsf
75	25	10	18			0-0-1 N=1	35	Qu = 0.8 tsf

Continued Next Page

STANDARD PENETRATION TEST DATA
N in blows/ft @
Moisture PL LL (1 25 50)
STRENGTH, tsf
Qu Qp (0 2.0 4.0)

Completion Depth: 49.5 ft
Date Boring Started: 5/7/04
Date Boring Completed: 5/7/04
Logged By: Jon McGrath
Drilling Contractor: PSI

Sample Types:
Auger Cutting, Shelby Tube, Split-Spoon, Hand Auger, Rock Core

Remarks: Benchmark: Southwest corner of bridge deck, on top of concrete edge, marked with red paint

The stratification lines represent approximate boundaries. The transition may be gradual.

Proffesional Se. ..es Industries Inc
480 North Street
Springfield, IL 62704
Telephone: 217-544-6663
Fax: 217-544-6418

LOG OF BORING B-2

Sheet 2 of 2

PSI Job No.: 020-45041
Project: Proposed Bridge Relocation
Location: Bader Road (Station 176+10)
Sec 6B-M. F. T.
Schuyler County, Illinois

Drilling Method: 3 1/4" Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: Automatic
Boring Location: 18' S of SE bridge abutment
6' E of centrer line of Bader Rd.

WATER LEVELS
While Drilling 11 feet
Upon completion 10.5 feet
- - -

Elevation, (feet)	Depth, (feet)	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 12" (N Value)	Moisture, %	Additional Remarks
25	0	11	18	Gray silty CLAY, trace sand, fine to coarse, firm to stiff	CL-ML	0-3-2 N=5	29	Qu = 1.0 tsf
70	30	12	18			1-2-1 N=3	35	Qu = 1.0 tsf
		13	18	Gray silty CLAY, trace sand, fine to medium, very stiff		3-4-6 N=10	32	
65	35	14	18		CL-ML	3-3-3 N=6	25	Qu = 2.1 tsf
		15	18	Gray silty CLAY, firm		2-2-3 N=5	32	Qu = 0.8 tsf
60	40	16	18		CL-ML	2-3-3 N=6	24	
		17	18	Brown medium to course SAND, few fine gravel, very dense consistency		10-20-23 N=43	9	
55	45	18	18		SWG	6-10-27 N=37	13	>>*
		19	5	Gray SHALE, very hard		50/5"		>>*
50	50	20	5		SHALE	50/5"	13	>>*
				Auger refusal and end of boring @ -49.5'				

STANDARD PENETRATION TEST DATA
N in blows/ft @
Moisture PL LL (1 25 50)
STRENGTH, tsf
Qu Qp (0 2.0 4.0)

Completion Depth: 49.5 ft
Date Boring Started: 5/7/04
Date Boring Completed: 5/7/04
Logged By: Jon McGrath
Drilling Contractor: PSI

Sample Types:
Auger Cutting, Shelby Tube, Split-Spoon, Hand Auger, Rock Core

Remarks: Benchmark: Southwest corner of bridge deck, on top of concrete edge, marked with red paint

The stratification lines represent approximate boundaries. The transition may be gradual.

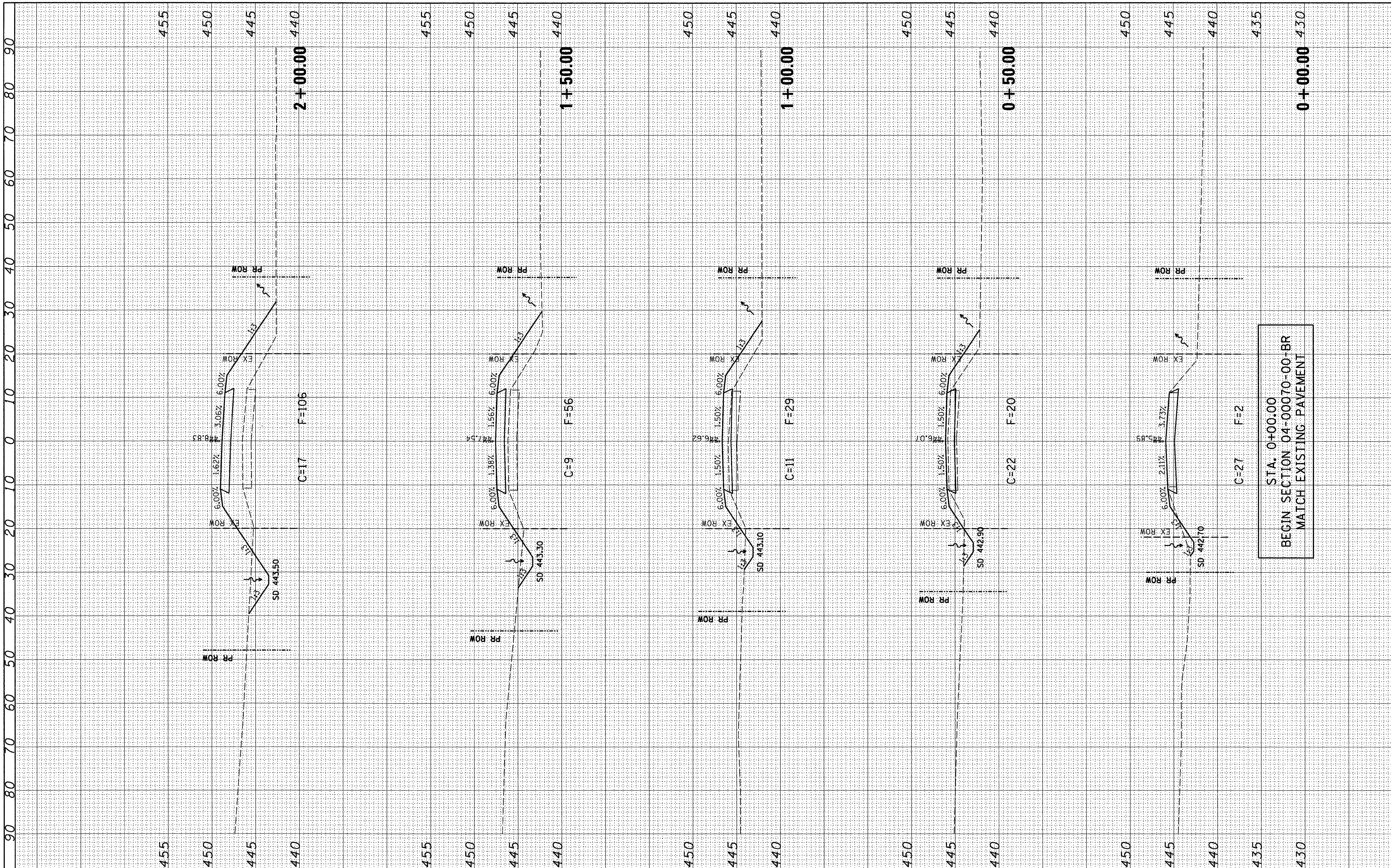
GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
350 CONSTITUTION DRIVE
SPRINGFIELD, ILLINOIS 62711-7007
PROFESSIONAL DESIGN FIRM NO. 184-000179
PROFESSIONAL SURVEYING CORPORATION
(217) 793-5844, (217) 793-5277 (FAX) E-MAIL - address@greenebradford.com

DESIGNED	NIEWINSKI
CHECKED	TRELLO
DRAWN	VERENSKI
CHECKED	TRELLO

C&B PROJECT: -
PLOT DRIVER = V8i_IDS700_PS_LOCAL_IDOT.pltcfg
FILE NAME = J:\07258\CADD\CADsheets\SN 085-3055\0853055-07258-Sht-Bore.dgn
PLOT DATE = 9/18/2009
PLOT SCALE = 01 '=' / in.
USER NAME = franky

BORING LOGS
F.A.S. ROUTE 454
SECTION 04-00070-00-BR
STATION 4+79.00
SCHUYLER COUNTY
S.N. 085-3055

SHEET NO. 17	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17 SHEETS	454	04-00070-00-BR	SCHUYLER	30	25
			CONTRACT NO.	93499	
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



GREENE & BRADFORD, INC. OF SPRINGFIELD

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G&B PROJECT: 07258	PLOT DATE = 9/18/2009	DATE - 7/14/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAS 454 - CROSS SECTIONS

SCALE: 1" = 10' | SHEET NO. 1 OF 5 SHEETS | STA. 0+00.00 TO STA. 2+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
454	04-00070-00-BR	SCHUYLER	30	26
		CONTRACT NO. 93499		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BRS-0454(103)		

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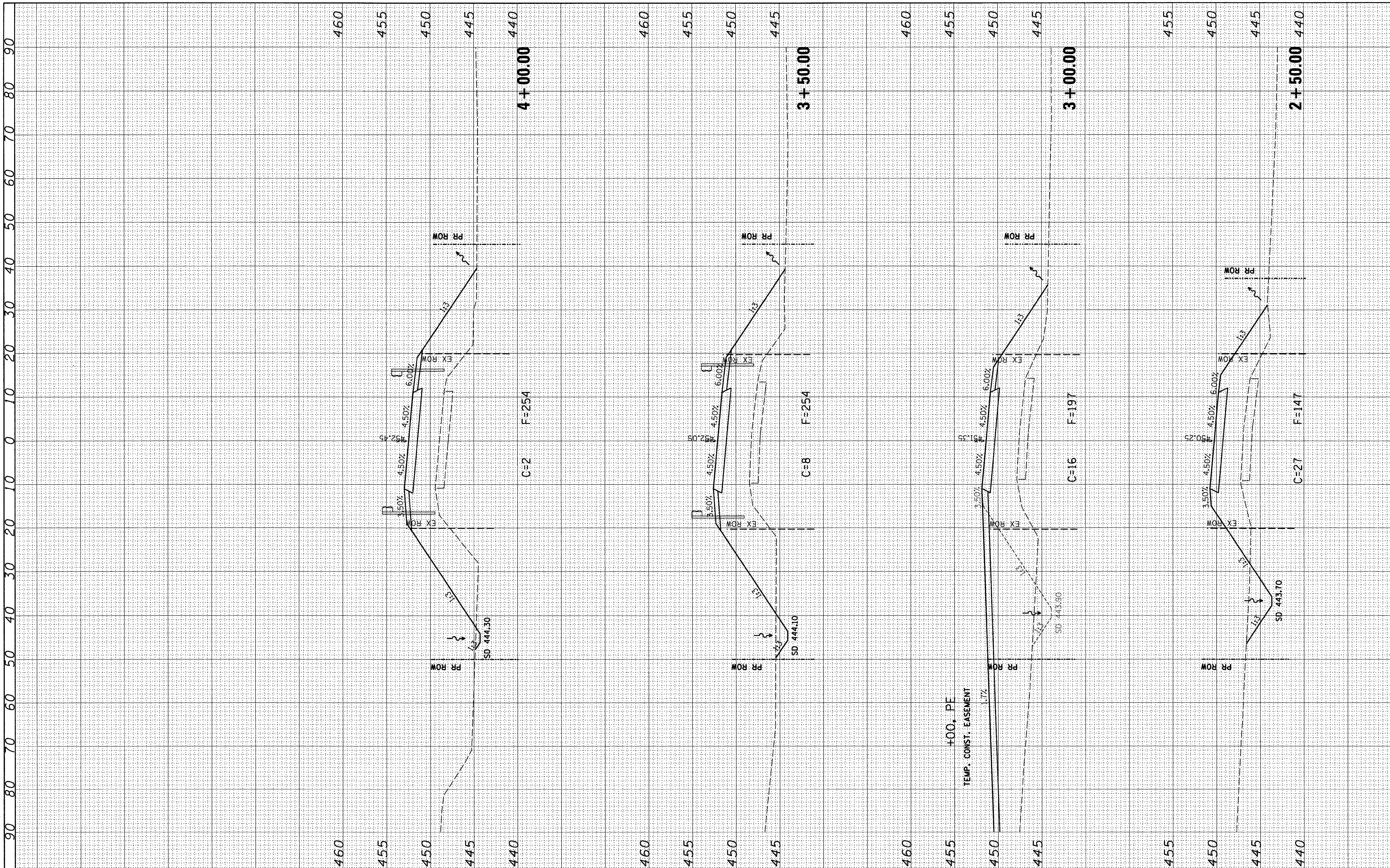

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	PLOT SCALE = 10.0000 ' / in.	DRAWN - MDS	REVISED -		
G&B PROJECT: 07258	PLOT DATE = 9/18/2009	CHECKED - WCB	REVISED -		SCALE: 1" = 10' SHEET NO. 2 OF 5 SHEETS STA. 2+50.00 TO STA. 4+00.00
		DATE - 7/14/09	REVISED -		

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
454	04-00070-00-BR	SCHUYLER	30	27
		CONTRACT NO. 93499		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BRS-0454(103)		

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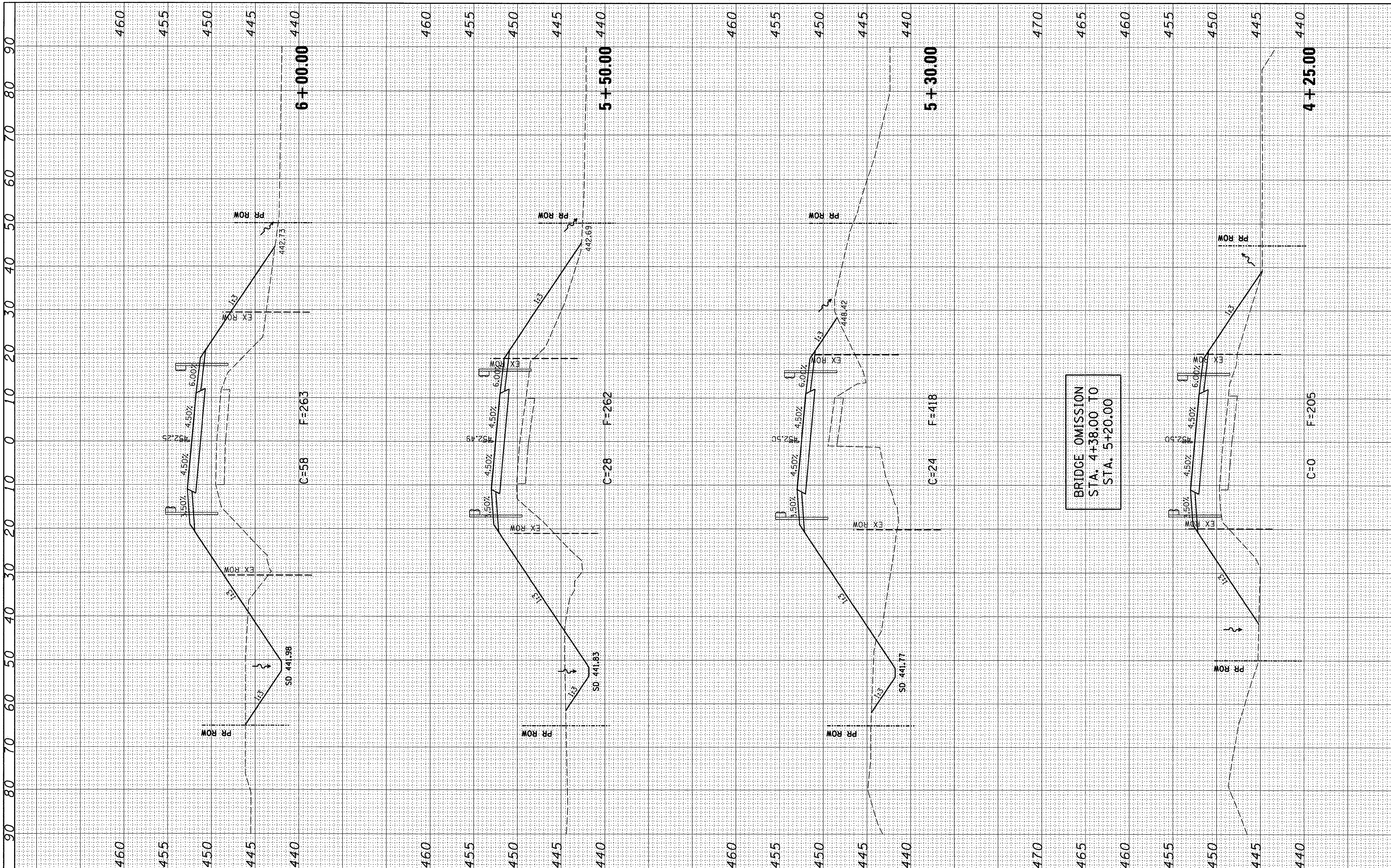

GREENE & BRADFORD, INC.

FILE NAME = J:\07258\CADD\CADsheets\07258-sht-xssht.dgn	USER NAME = frankv	DESIGNED - WCB	REVISED -
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G&B PROJECT: 07258	PLOT DATE = 9/18/2009	DATE - 7/14/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAS 454 - CROSS SECTIONS

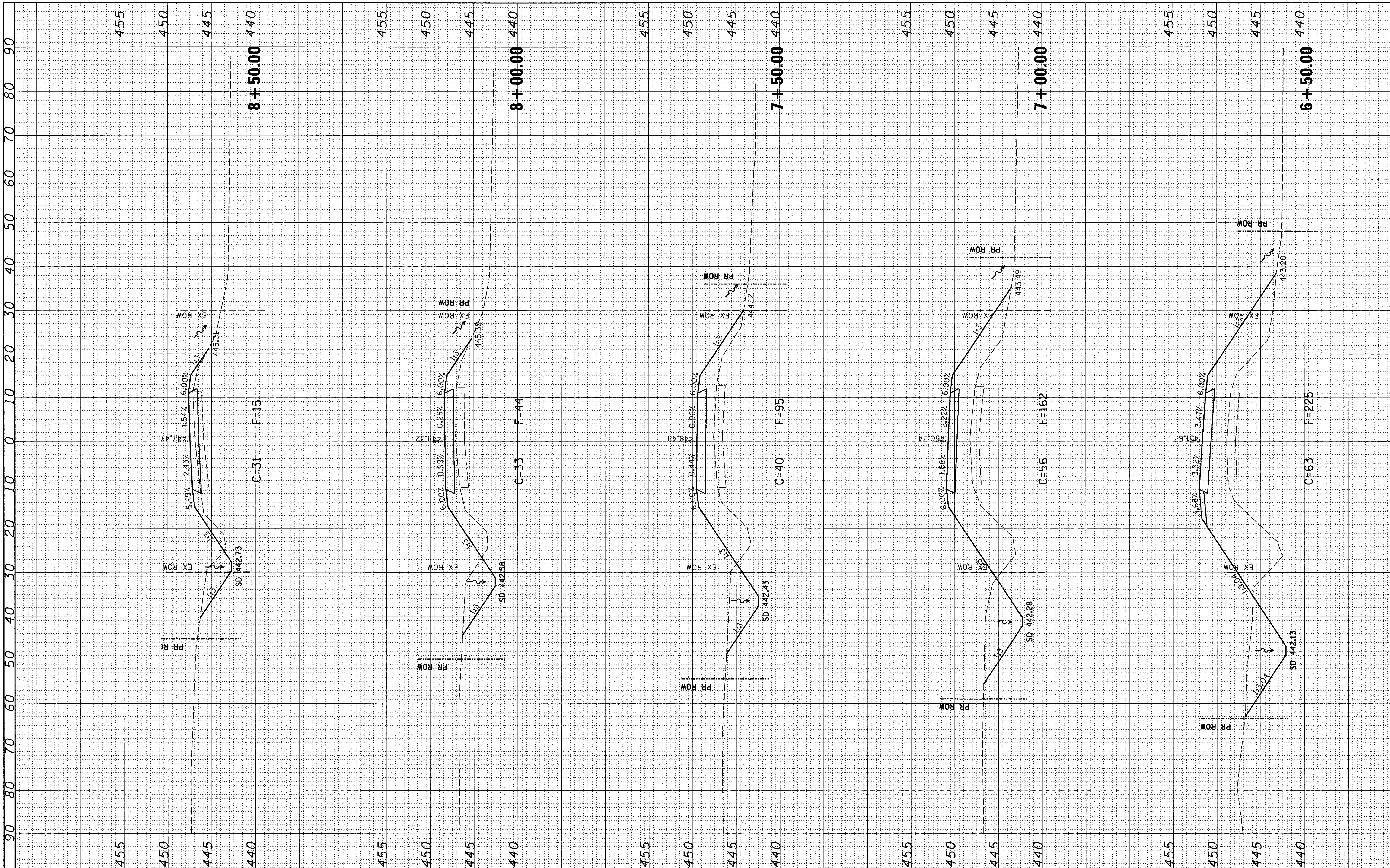
SCALE: 1" = 10' | SHEET NO. 3 OF 5 SHEETS | STA. 4+25.00 TO STA. 6+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
454	04-00070-00-BR	SCHUYLER	30	28

CONTRACT NO. 93499

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT BRS-0454(103)

PLOT DRIVER = V8i_TDS700_PS_LOCAL_IDOT.pltcfg



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	PLOT SCALE = 10.0000 ' / in.	CHECKED - WCB	REVISED -	
G&B PROJECT: 07258	PLOT DATE = 9/18/2009	DATE - 7/14/09	REVISED -	

FAS 454 - CROSS SECTIONS

SCALE: 1" = 10' | SHEET NO. 4 OF 5 SHEETS | STA. 6+50.00 TO STA. 8+50.00

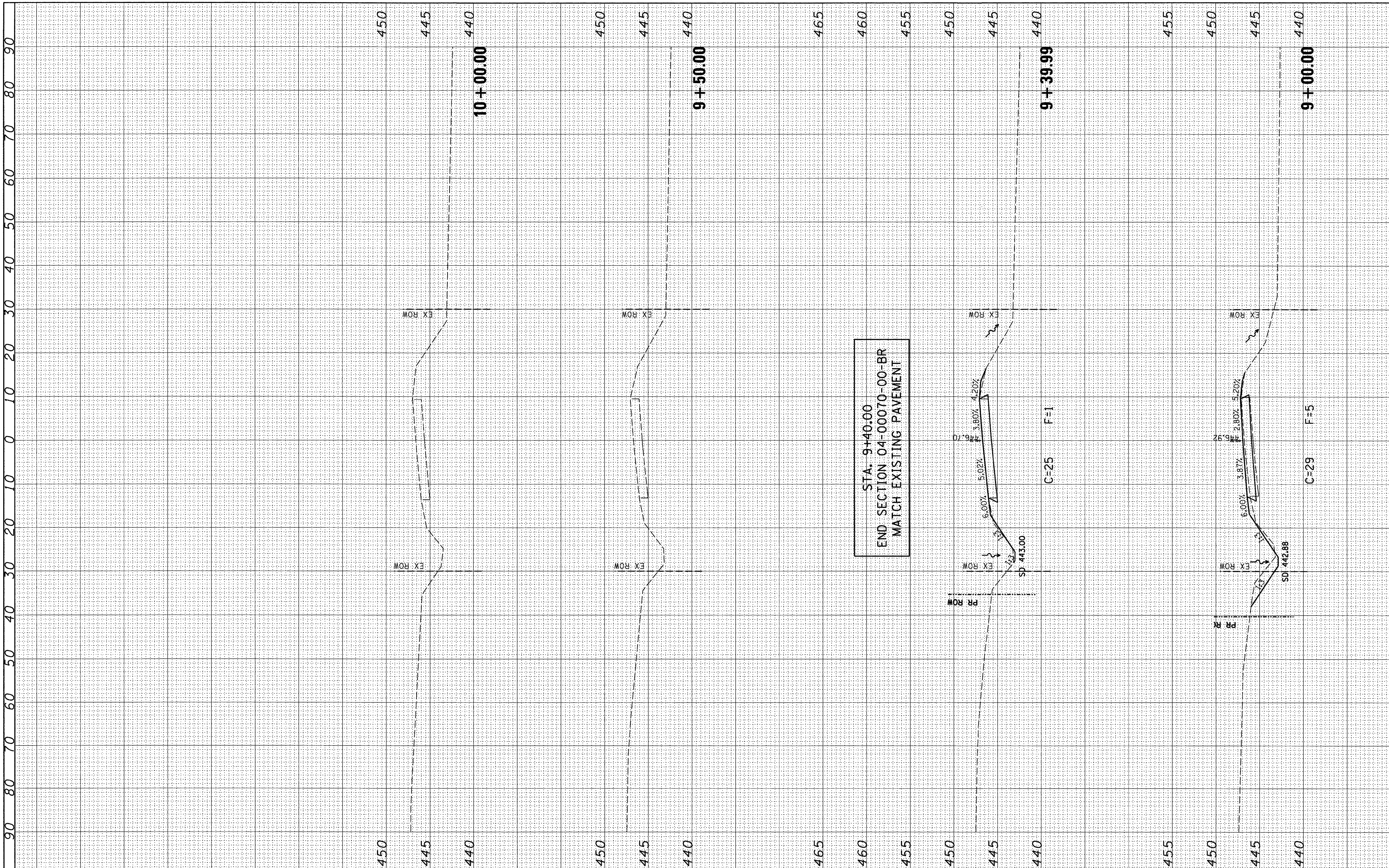
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
454	04-00070-00-BR	SCHUYLER	30	29

CONTRACT NO. 93499

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT BRS-0454(103)

PLOT DRIVER = V8_TDS700_PS_LOCAL_IDOT.pltcfg

GREENE & BRADFORD, INC.



FINAL SURVEY	
SURVEYED	
PLOTTED	
NOTE BOOK	TEMPLATE
NO.	AREAS
	AREAS CHECKED

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

GREENE & BRADFORD, INC.

FILE NAME = J:\07258\CADD\CADsheets\07258-sht-xssht.dgn	USER NAME = frankv	DESIGNED - WCB	REVISED -
		DRAWN - MDS	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED - WCB	REVISED -
G&B PROJECT: 07258	PLOT DATE = 9/18/2009	DATE - 7/14/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAS 454 – CROSS SECTIONS

SCALE: 1" = 10' | SHEET NO. 5 OF 5 SHEETS | STA. 9+00.00 TO STA. 10+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
454	04-00070-00-BR	SCHUYLER	30	30
		CONTRACT NO. 93499		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BRS-0454(103)		

PLOT DRIVER = V8i_TDS700_PS_LOCAL_IDOT.pltcfg