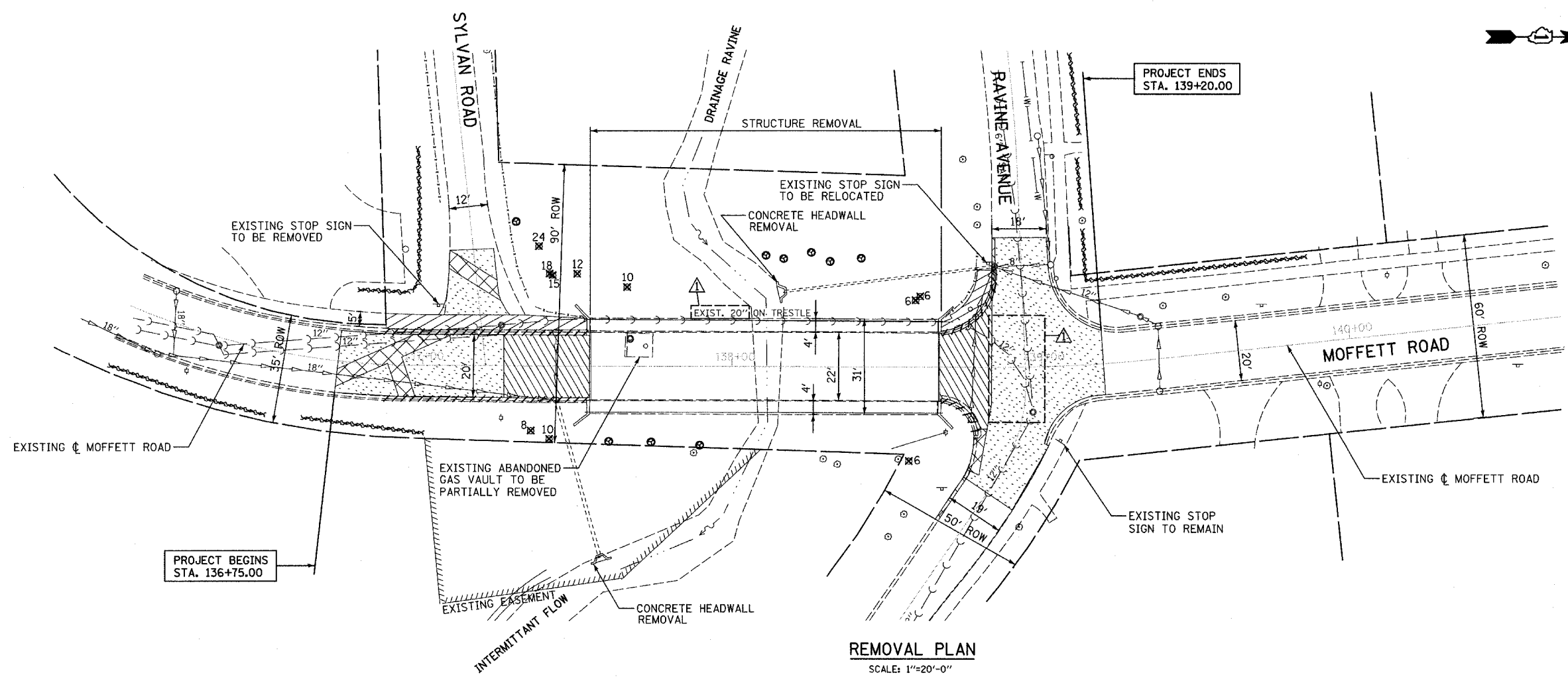
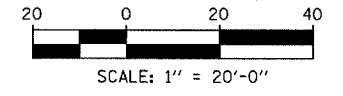




F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	D2-00025-00-BR	LAKE	40	6
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83790				



- LEGEND:**
- PAVEMENT REMOVAL
  - PAVEMENT REMOVAL AND PAVEMENT PATCHING, TYPE II, 10"
  - SIDEWALK REMOVAL
  - BITUMINOUS SURFACE REMOVAL, 4"
  - COMB CONC CURB & GUTTER REMOVAL
  - TREE PROTECTION
  - TREE REMOVAL (UNITS) (NO UNIT SHOWN = <6)



PLAN

DATE	BY

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

PROFILE

DATE	BY

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

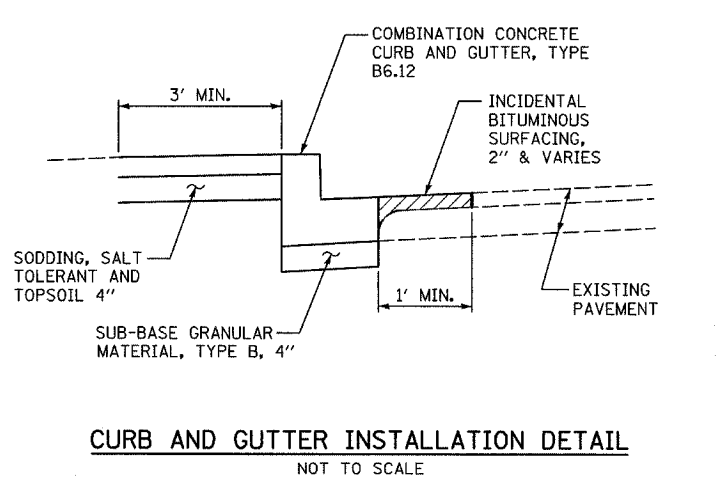
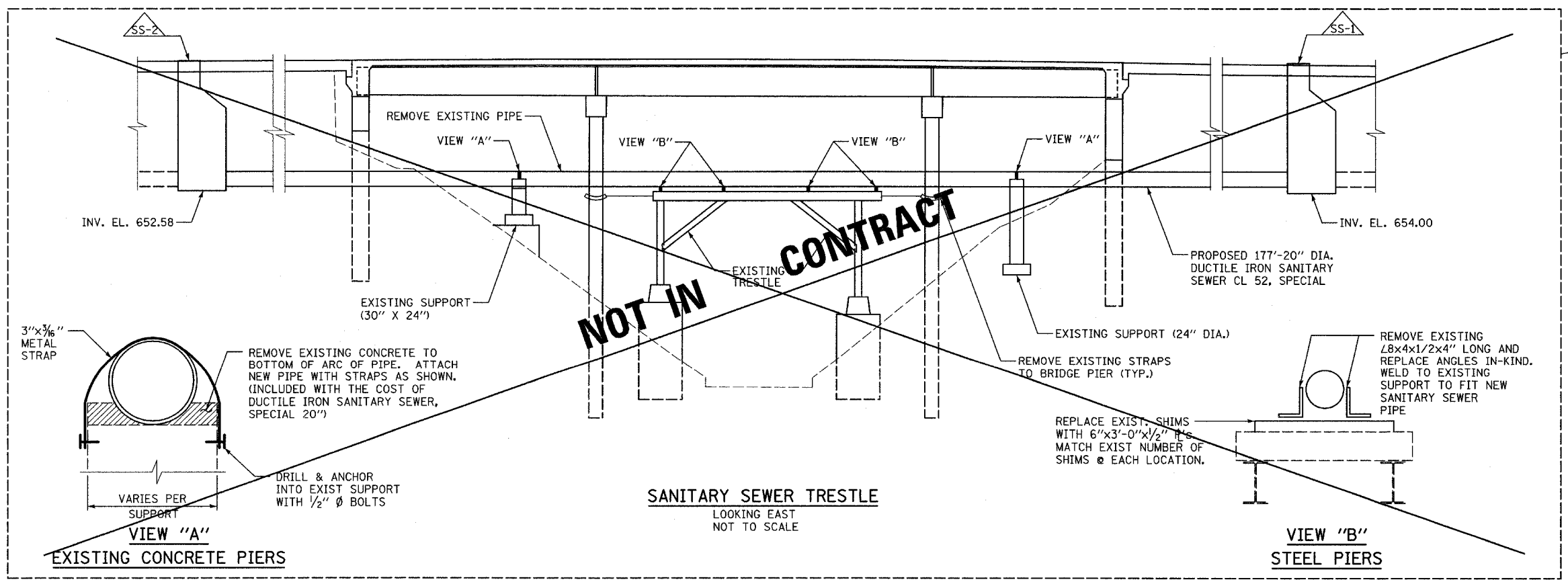
DATE: \_\_\_\_\_ BY: \_\_\_\_\_

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

DATE: \_\_\_\_\_ BY: \_\_\_\_\_



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**MOFFETT ROAD BRIDGE OVER DRAINAGE RAVINE**  
**REMOVAL PLAN AND DETAILS**

SCALE: AS SHOWN

DATE: 02-02-05

DRAWN BY: BK

CHECKED BY: DAJ

NOT IN CONTRACT

STRUCTURES

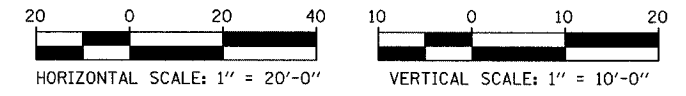
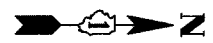
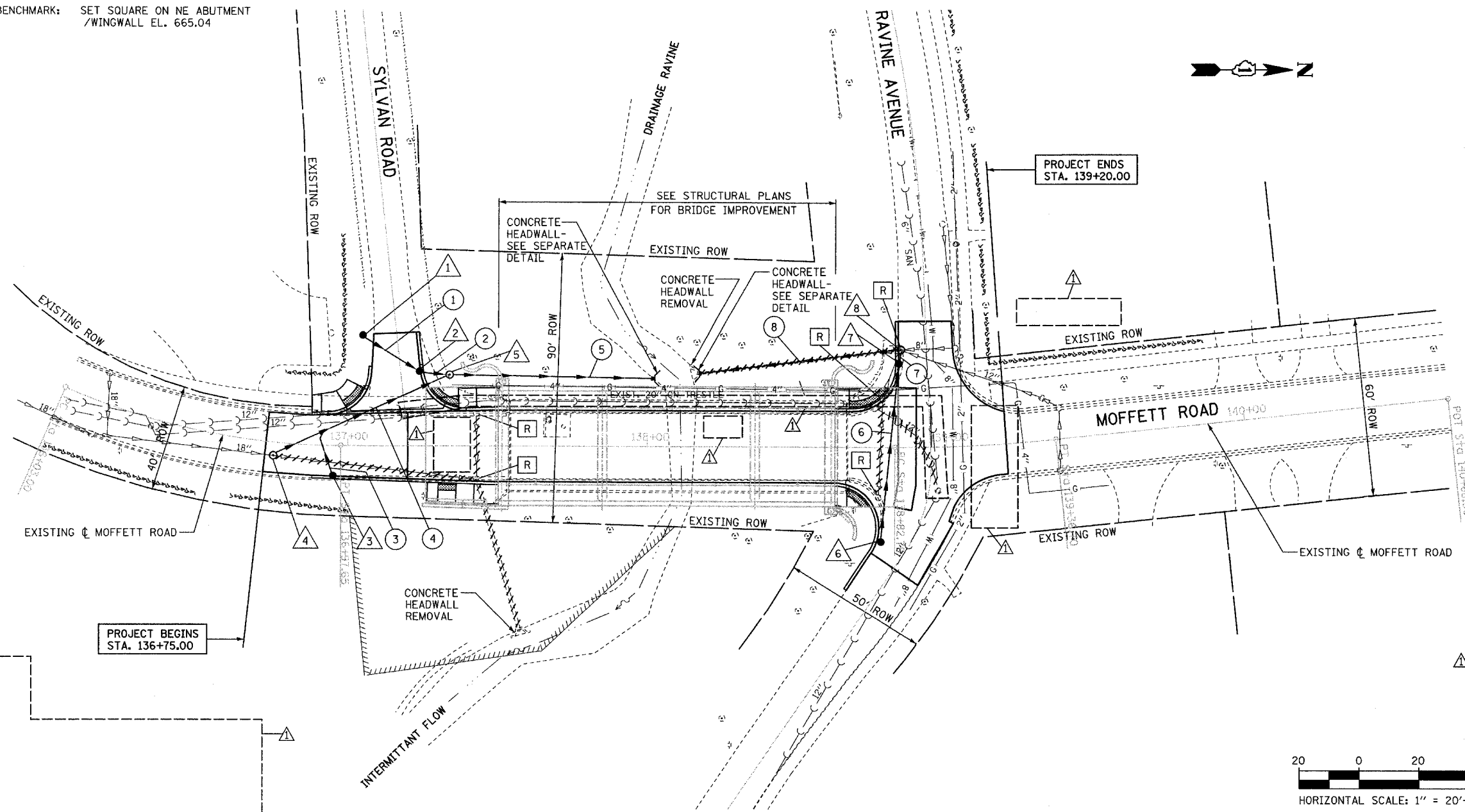
BENCHMARK: SET SQUARE ON NE ABUTMENT / WINGWALL EL. 665.04

- 1 STA. 137+05, 37 FT LT CB, T-C, 2 FT DIA. T8G RIM 663.21 INVERT 656.50
- 2 STA. 137+24, 25 FT LT CB, T-A, 4 FT DIA. T11 F&G RIM 663.51 INVERT 656.10
- 3 STA. 136+95, 10 FT RT CB, T-A, 4 FT DIA. T11 F&G RIM 663.24 INVERT 656.25
- 4 STA. 136+75, 4 FT RT MH, T-A, 4 FT DIA. T1FCL RIM 663.38 INVERT 656.02
- 5 STA. 137+34, 24 FT LT MH, T-A, 4 FT DIA. T1FCL RIM 664.17 SE INVERT 655.92 S INVERT 655.92 N INVERT 653.92
- 6 STA. 138+78, 32 FT RT CB, T-A, 4 FT DIA. T11 F&G RIM 663.79 INVERT 659.16
- 7 STA. 138+83, 24 FT LT CB, T-A, 4 FT DIA. T11 F&G RIM 663.96 INVERT 658.77
- 8 STA. 138+83, 33 FT LT MH, T-A, 5 FT DIA. T1FOL RIM 664.16 N INVERT 660.61 NE INVERT 658.66 E INVERT 658.61 S INVERT 658.61

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	02-00025-00-BR	LAKE	40	8
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT
CONTRACT NO. 83790				

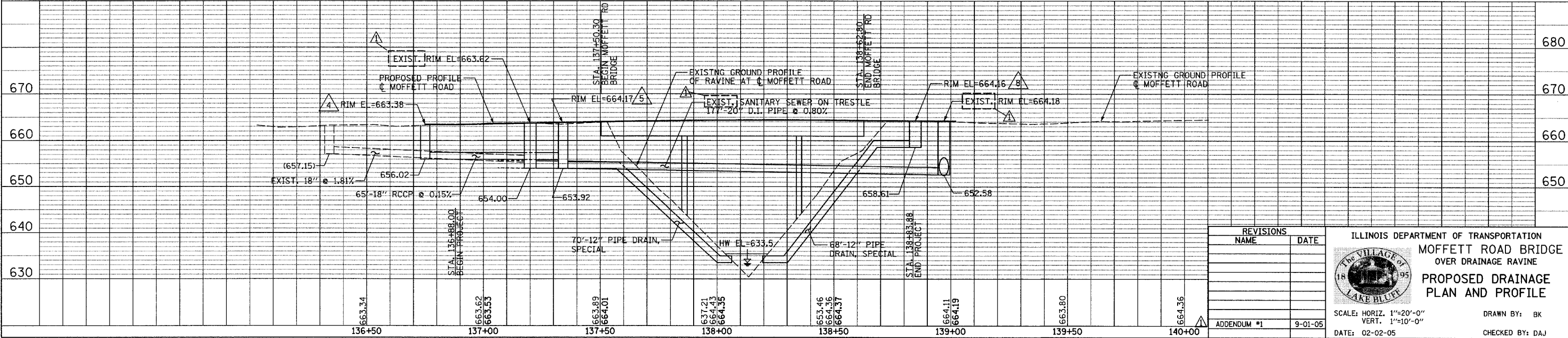
PIPE

- 1 SS, RCCP, TY 2 12" DIA. 20 FT @ 2.00% 22 CY TB
- 2 SS, RCCP, TY 2 12" DIA. 9 FT @ 2.00% 10 CY TB
- 3 SS, RCCP, TY 2 12" DIA. 14 FT @ 2.00% 11 CY TB
- 4 SS, RCCP, TY 2 18" DIA. 65 FT @ 0.15% 101 CY TB
- 5 PIPE DRAIN, SPECIAL 12" DIA. 77 FT 27 CY TB
- 6 SS, RCCP, TY 2 12" DIA. 63 FT @ 1.00% 44 CY TB
- 7 SS, RCCP, TY 2 12" DIA. 8 FT @ 2.00% 6 CY TB
- 8 PIPE DRAIN, SPECIAL 12" DIA. 73 FT 0 CY TB



DATE	BY	REVISION

DATE	BY	REVISION



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**MOFFETT ROAD BRIDGE OVER DRAINAGE RAVINE**  
**PROPOSED DRAINAGE PLAN AND PROFILE**

SCALE: HORIZ. 1"=20'-0"  
 VERT. 1"=10'-0"

DATE: 02-02-05

DRAWN BY: BK  
 CHECKED BY: DAJ

Benchmark: Set Square on NE abutment/wingwall El. 665.04

Existing Structure: S.N. 049-6801. Built in 1964 as Moffett Road Bridge Section 44-12-1B-CA (Part 1B) (County) and Section 8B-CS (Part 1B) (Village). 3-Span P.P.C. deck on open abutments. 114'-9" Back to Back of Abutments, 31'-0" Out of Out Deck. Structure is to be removed. Traffic will be detoured during construction.

Salvage: None.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
2758	02-00025-00-BR	LAKE	40	11	30 SHEETS
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

CONTRACT 83790

**LOADING HS20-44**

Allow 50#/sq. ft. for future wearing surface

**DESIGN SPECIFICATIONS**

AASHTO 2002 Standard Specifications for Highway Bridges, 17th Edition

**DESIGN STRESSES**

**FIELD UNITS**

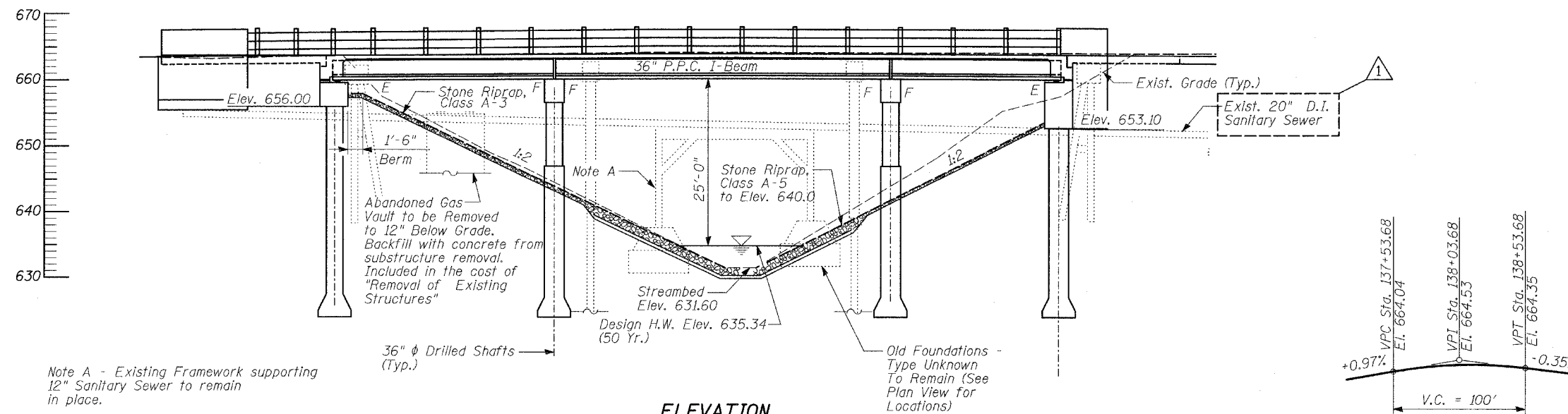
$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)

**PRECAST PRESTRESSED UNITS**

$f'_c = 6,000$  psi  
 $f'_{ci} = 5,000$  psi  
 $f'_s = 270,000$  psi ( $\frac{1}{2}$ "  $\phi$  low lax. strands)  
 $f_{si} = 201,960$  psi ( $\frac{1}{2}$ "  $\phi$  low lax. strands)

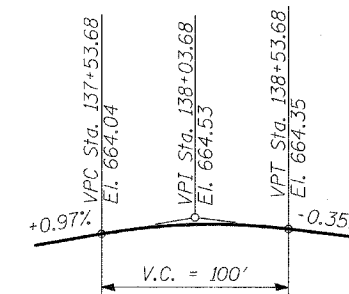
**SEISMIC DATA**

Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 3.5%  
Site Coefficient (S) = 1.0

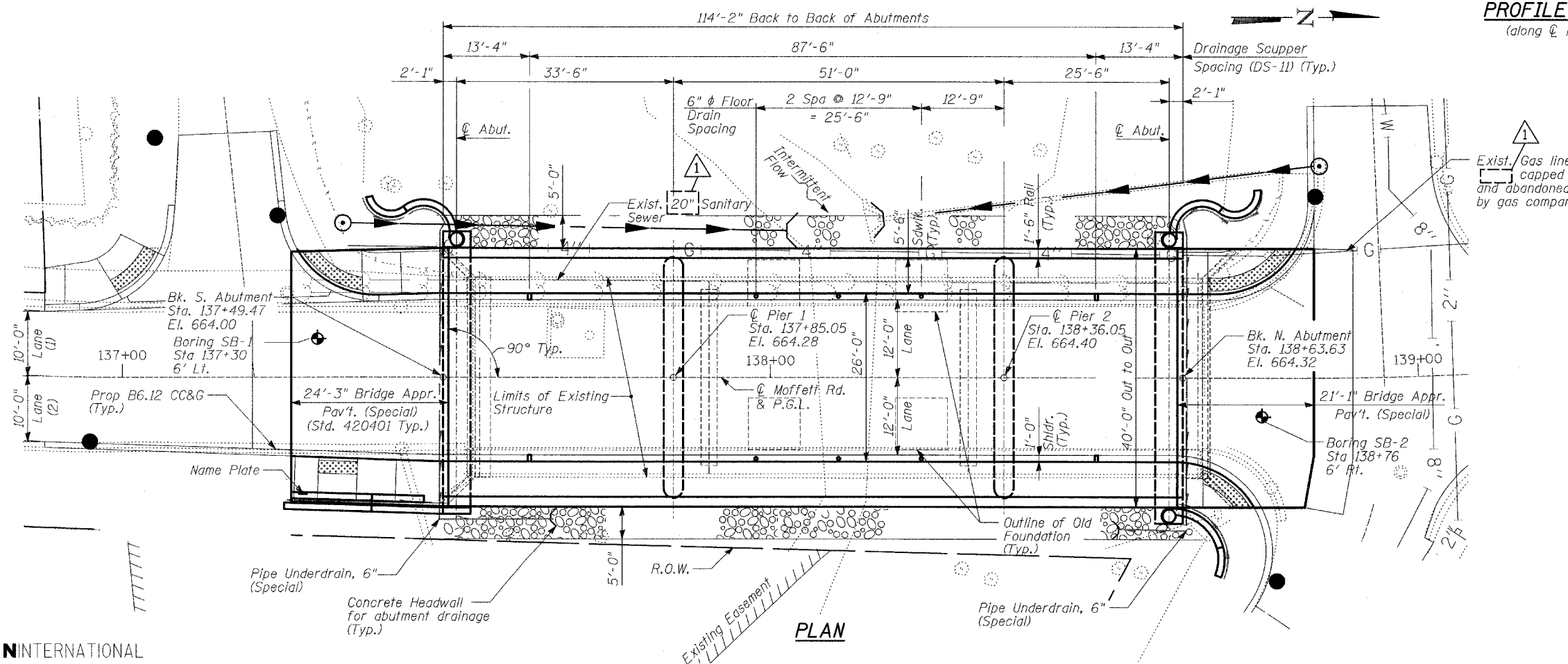


Note A - Existing Framework supporting 12" Sanitary Sewer to remain in place.

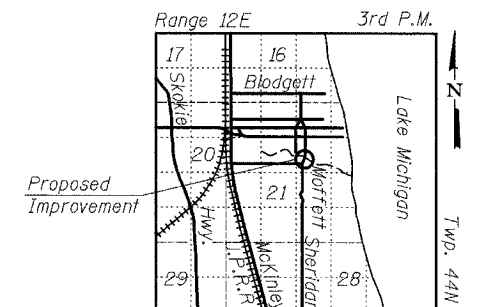
**ELEVATION**



**PROFILE GRADE**  
(along  $\phi$  roadway)



**PLAN**



**LOCATION SKETCH**

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 the structure and complies with requirements of the current "AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES."



Signed Phillip D. Frey  
Phillip D. Frey, S.E. II, Lic. No. 081-004826  
Expires 11-30-2005.

Date 2/23/05

TYLIN INTERNATIONAL

DESIGNED	SP, DR
CHECKED	SP
DRAWN	SP, DR
CHECKED	PF

DATE 12-22-2004

(1) Lane width varies from 10'-0" at Sta. 137+88.00 to 12'-0" at Sta. 137+48.14.

(2) Lane width varies from 10'-0" at Sta. 137+88.00 to 12'-0" at Sta. 137+48.21.

ADDENDUM #1 9-01-05

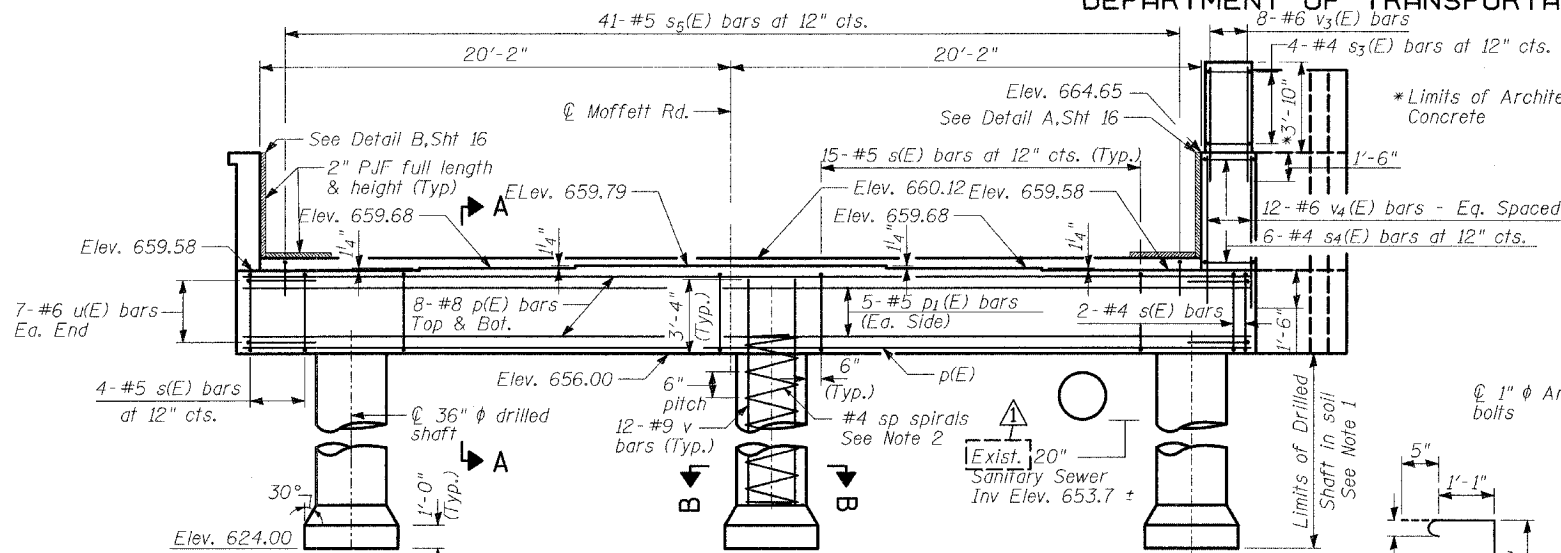
**GENERAL PLAN AND ELEVATION**

MOFFETT ROAD OVER  
DRAINAGE RAVINE  
FAU 2758  
LAKE COUNTY  
S.N. 049-6803

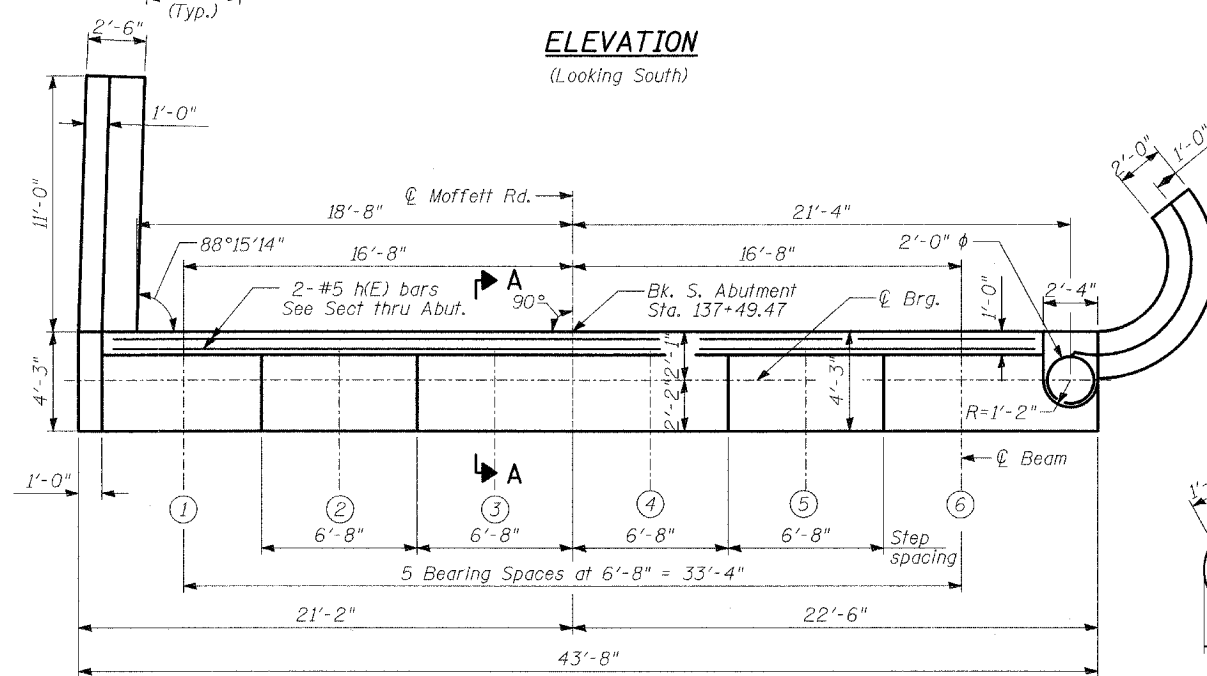
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. -15
2758		LAKE	40	25	30 SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT 83790		

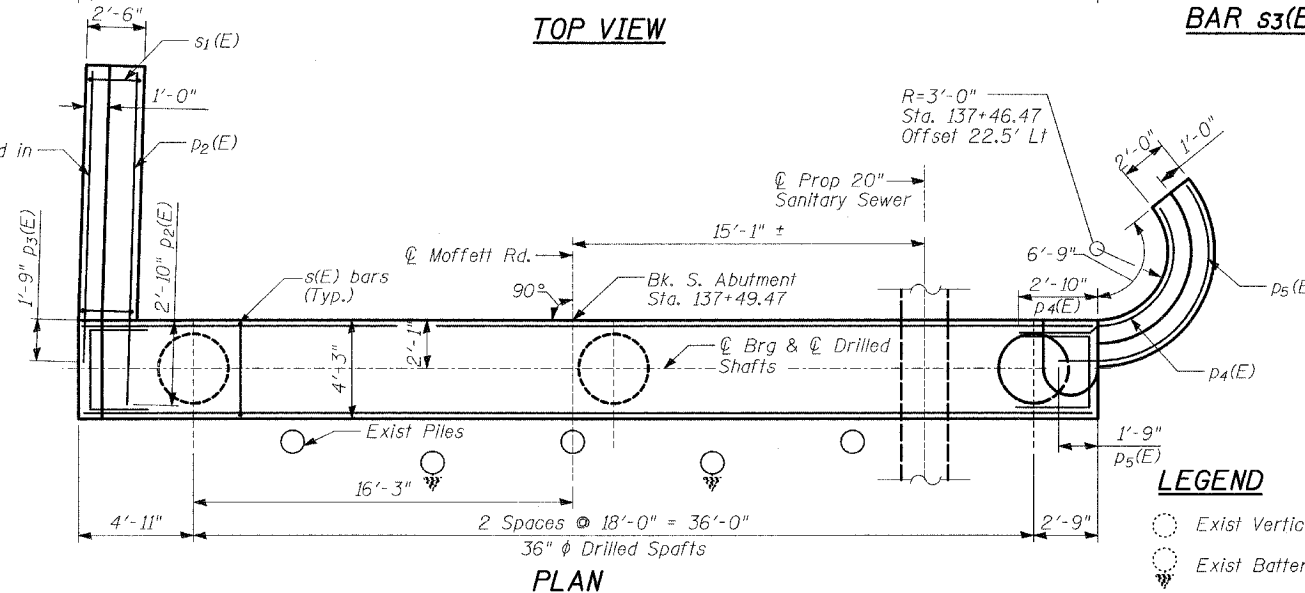
02-00025-00-BR **BILL OF MATERIAL**



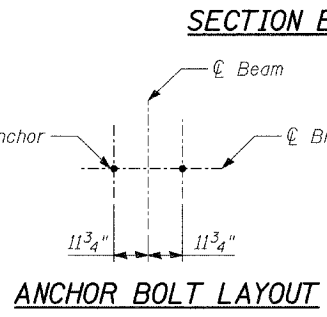
**ELEVATION**  
(Looking South)



**TOP VIEW**

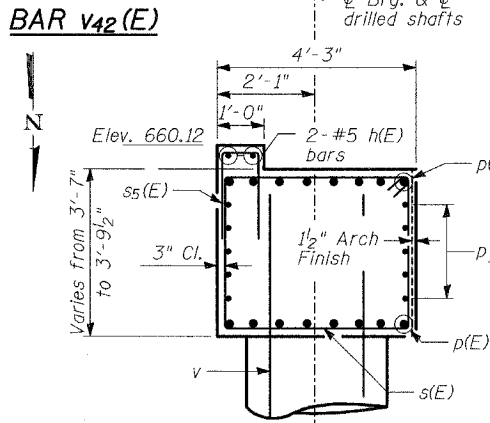


**PLAN**

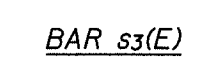


**SECTION B-B**

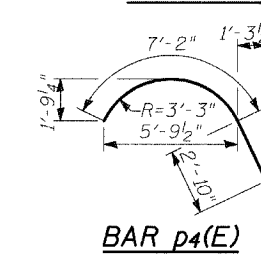
**ANCHOR BOLT LAYOUT**



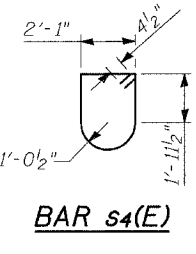
**SECTION A-A**



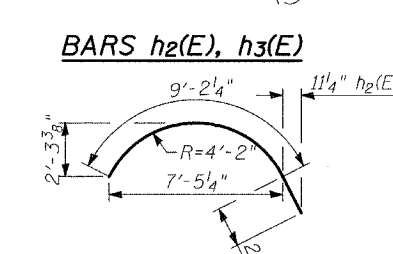
**BAR s3(E)**



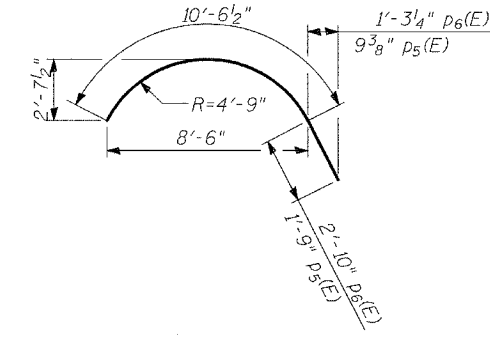
**BAR p4(E)**



**BAR s4(E)**



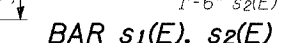
**BARS h2(E), h3(E)**



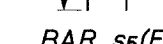
**BARS p6(E), p5(E)**



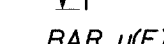
**BAR s(E)**



**BAR s1(E), s2(E)**



**BAR s5(E)**



**BAR u(E)**

Bar	No.	Size	Length	Shape
h(E)	2	#5	40'-0"	—
h1(E)	17	#6	14'-11"	—
h2(E)	8	#6	11'-3 1/4"	—
h3(E)	4	#4	9'-2 1/4"	—
h4(E)	8	#4	3'-6"	—
h5(E)	9	#6	12'-7 1/2"	—
h6(E)	4	#4	10'-6 1/2"	—
p(E)	16	#8	43'-4"	—
p1(E)	10	#5	43'-4"	—
p2(E)	7	#7	13'-8"	—
p3(E)	4	#5	12'-7"	—
p4(E)	5	#7	10'-0"	—
p5(E)	4	#5	12'-3 1/2"	—
p6(E)	2	#7	13'-4 1/2"	—
s(E)	36	#5	14'-7"	□
s1(E)	15	#4	10'-11"	□
s2(E)	10	#4	9'-11"	□
s3(E)	4	#4	7'-2"	□
s4(E)	6	#4	10'-0 1/4"	□
s5(E)	41	#5	4'-0"	□
v(E)	34	#5	6'-1"	—
v1(E)	20	#5	6'-2"	—
v2(E)	21	#4	4'-4"	—
v3(E)	8	#6	5'-2"	—
v4(E)	12	#6	6'-4"	—
v42(E)	27	#3	3'-8"	—
u(E)	14	#6	8'-7 1/2"	□
sp	3	#4	29'-6"	wwww
v	36	#9	32'-8"	—
Concrete Structures, Special		Cu Yd	38.7	
Reinforcement Bars, Epoxy Coated		Pound	5360	
Reinforcement Bars		Pound	4845	
Structure Excavation		Cu Yd	126	
Porous Granular Embankment		Cu Yd	93	
Drilled Shaft in Soil, 36"		Foot	96	
Architectural Concrete		Cu Yd	1.6	

\*\* Length is height of spiral.  
Reinforcement bars designated (E) shall be epoxy coated.

ADDENDUM #1 9-01-05

8. See Sheet 26 of 30 for Architectural Finish details.

**TYLIN INTERNATIONAL**  
DESIGNED - SP SB  
CHECKED - AD  
DRAWN - SP SB  
CHECKED - PF  
DATE: 02-23-2005

- NOTES**
- The quantities and detailing are based on the estimated elevations shown on the plans. The actual elevations may differ at each shaft and corresponding adjustments shall be made to the drilled shaft and reinforcement quantities and payment limits.
  - Provide 1/2 extra turns top and bottom of each drilled shaft. Extend spiral 2" into abutment cap. Provide min. 4-#4 spacers or equivalent.
  - Min. lap for spirals = 1'-8" .
  - Provide Temporary casing to Elev. 631, included in the cost for Drilled Shaft in Soil, 36".
  - Space reinforcement in cap to miss anchor bolts.
  - Pour steps monolithically with cap.
  - Contractor shall be responsible for the design, installation, and subsequent removal of any temporary embankment or support system as required to provide equipment access for drilled shaft installation. Cost shall be included in the unit price for Drilled Shaft in Soil, 36".

- LEGEND**
- Exist Vertical Pile
  - Exist Battered Pile

**SOUTH ABUTMENT**  
MOFFETT ROAD OVER  
DRAINAGE RAVINE  
FAU 2758  
LAKE COUNTY  
S.N. 049-6803

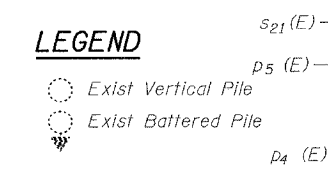
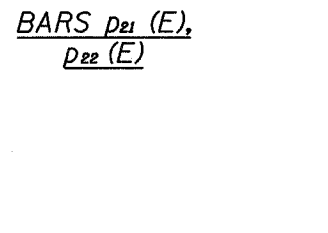
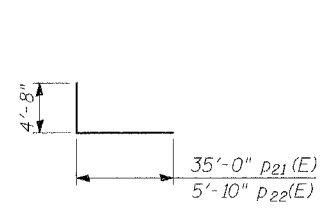
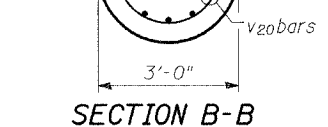
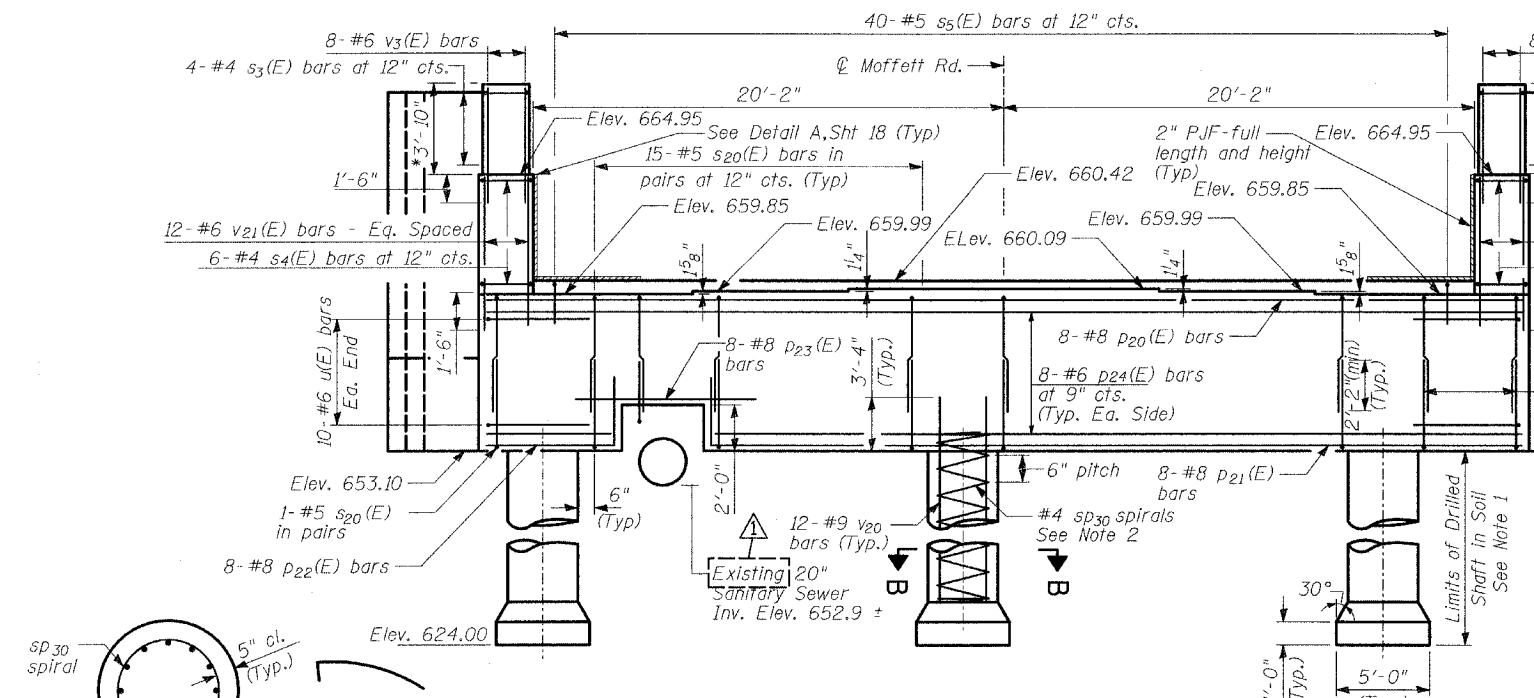


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	*	LAKE	40	27
SHEET NO. - 17				
30 SHEETS				
CONTRACT 83790				
02-00025-00-BR				

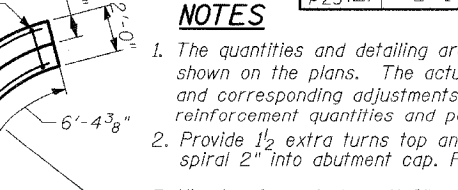
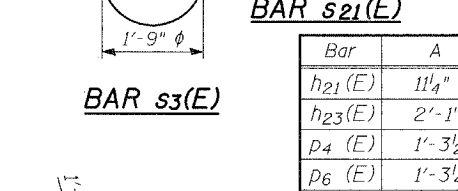
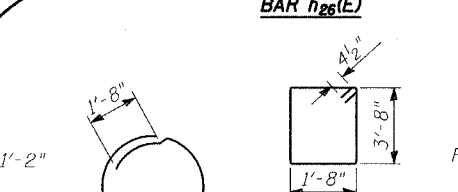
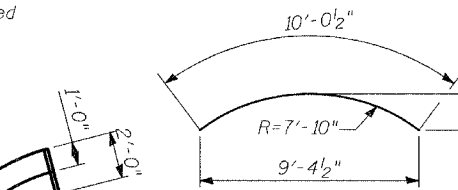
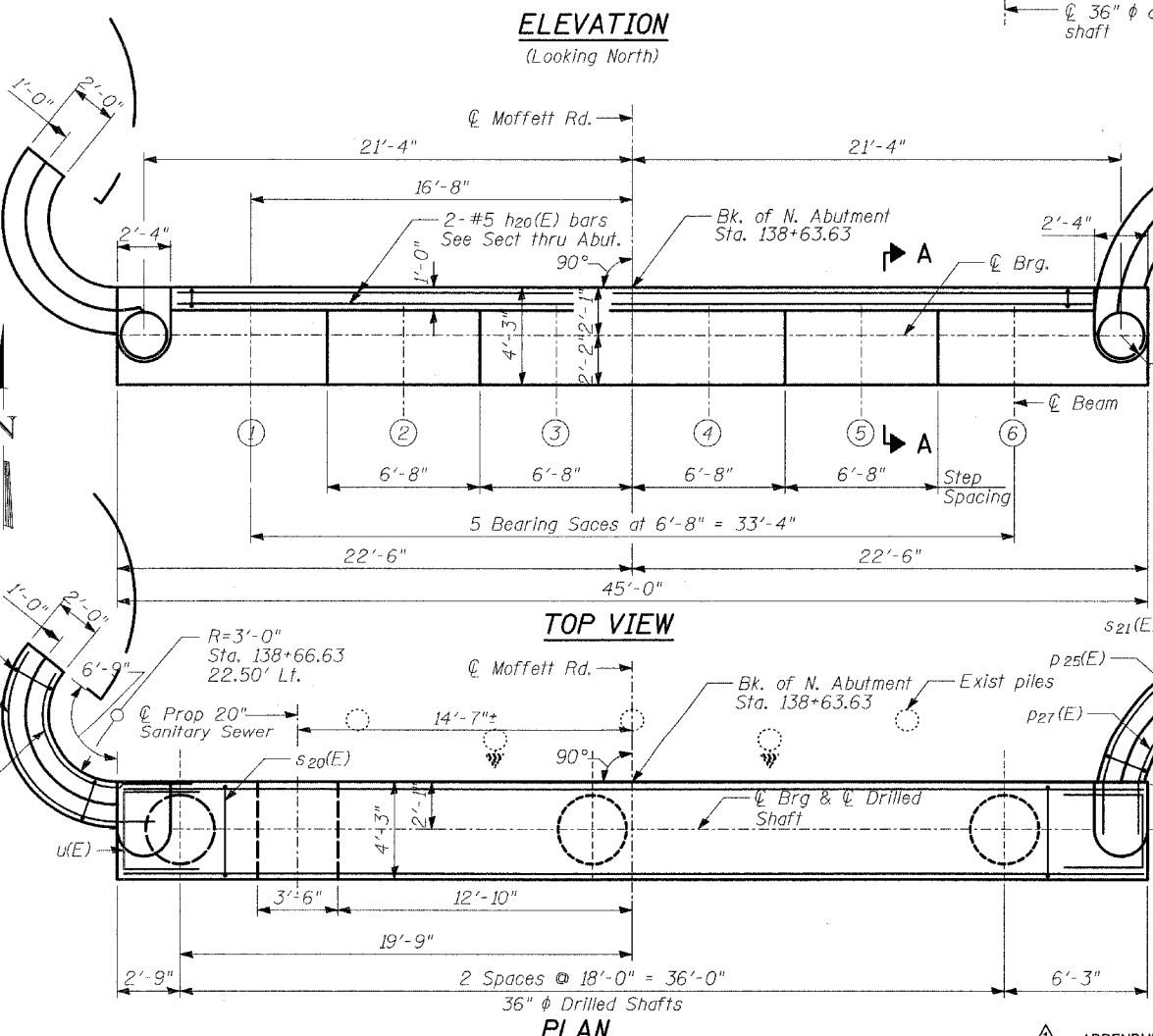
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h3 (E)	4	#4	9'-2 1/4"	U
h4 (E)	16	#4	3'-6"	U
h6 (E)	4	#4	10'-6 1/2"	U
h20(E)	2	#5	40'-0"	U
h21 (E)	11	#7	11'-6 1/2"	U
h22(E)	12	#5	12'-10"	U
h23(E)	11	#7	11'-5 1/4"	U
h24(E)	12	#5	9'-6"	U
h25(E)	4	#4	8'-8"	U
h26(E)	4	#4	10'-0 1/2"	U
p4 (E)	6	#7	10'-0"	U
p5 (E)	5	#7	12'-3 1/2"	U
p20 (E)	8	#8	44'-8"	U
p21 (E)	8	#8	39'-8"	U
p22 (E)	8	#8	10'-6"	U
p23 (E)	8	#8	9'-0"	U
p24 (E)	16	#6	44'-8"	U
p25 (E)	7	#7	11'-4"	U
p26 (E)	1	#7	9'-3"	U
p27 (E)	5	#5	8'-3 1/2"	U
s3 (E)	8	#4	7'-2"	O
s4 (E)	12	#4	10'-0 1/4"	O
s5 (E)	40	#5	4'-0"	O
s20 (E)	72	#5	12'-9"	O
s21 (E)	20	#4	11'-5"	O
v2 (E)	42	#4	4'-4"	U
v3 (E)	16	#6	5'-2"	U
v20 (E)	40	#5	8'-11"	U
v21 (E)	24	#6	6'-5"	U
v42 (E)	20	#3	3'-8"	U
u (E)	20	#6	8'-7 1/2"	U
sp30	3	#4	26'-7"	W
v20	36	#9	30'-0"	U
Concrete Structures, Spectral				
			Cu Yd	62.5
Reinforcement Bars, Epoxy Coated				
			Pound	7270
Reinforcement Bars				
			Pound	4450
Structure Excavation				
			Cu Yd	117
Porous Granular Embankment				
			Cu Yd	183
Drilled Shaft in Soil, 36"				
			Foot	87.3
Architectural Concrete				
			Cu Yd	3.3



DESIGNED	- SB, SP
CHECKED	- SP, AD
DRAWN	- SB, SP
CHECKED	- PF

DATE: 02-23-2005



Bar	A	B	C	D	E	F
h21 (E)	11 1/4"	2'-2"	7'-6 1/4"	R=4'-2"	2'-4 1/2"	9'-4 1/2"
h23 (E)	2'-1"	2'-10"	8'-2 1/4"	R=7'-10"	1'-1 7/8"	8'-7 1/2"
p4 (E)	1'-3 1/2"	2'-10"	5'-9 1/2"	R=3'-3"	1'-9 1/4"	7'-2"
p6 (E)	1'-3 1/4"	2'-10"	8'-6"	R=4'-9"	2'-7 1/2"	10'-6 1/2"
p25 (E)	2'-1"	2'-10"	8'-1"	R=7'-9"	1'-1 5/8"	8'-6"

ADDENDUM #1 9-01-05

**NOTES**

- The quantities and detailing are based on the estimated elevations shown on the plans. The actual elevations may differ at each shaft and corresponding adjustments shall be made to the drilled shaft and reinforcement quantities and payment limits.
- Provide 1/2 extra turns top and bottom of each drilled shaft. Extend spiral 2" into abutment cap. Provide min. 4-#4 spacers or equivalent.
- Min. lap for spirals = 1'-8"
- Provide Temporary casing to Elev. 631, included in the cost for Drilled Shaft in Soil, 36".
- Space reinforcement in cap to miss anchor bolts.
- Pour steps monolithically with cap.
- Contractor shall be responsible for the design, installation, and subsequent removal of any temporary embankment or support system as required to provide equipment access for drilled shaft installation. Cost shall be included in the unit price for Drilled Shaft in Soil, 36".

**NORTH ABUTMENT**  
MOFFETT ROAD OVER  
DRAINAGE RAVINE  
FAU 2758  
LAKE COUNTY  
S.N. 049-6803

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. -19
2758	*	LAKE	40	29	30 SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT 83790		

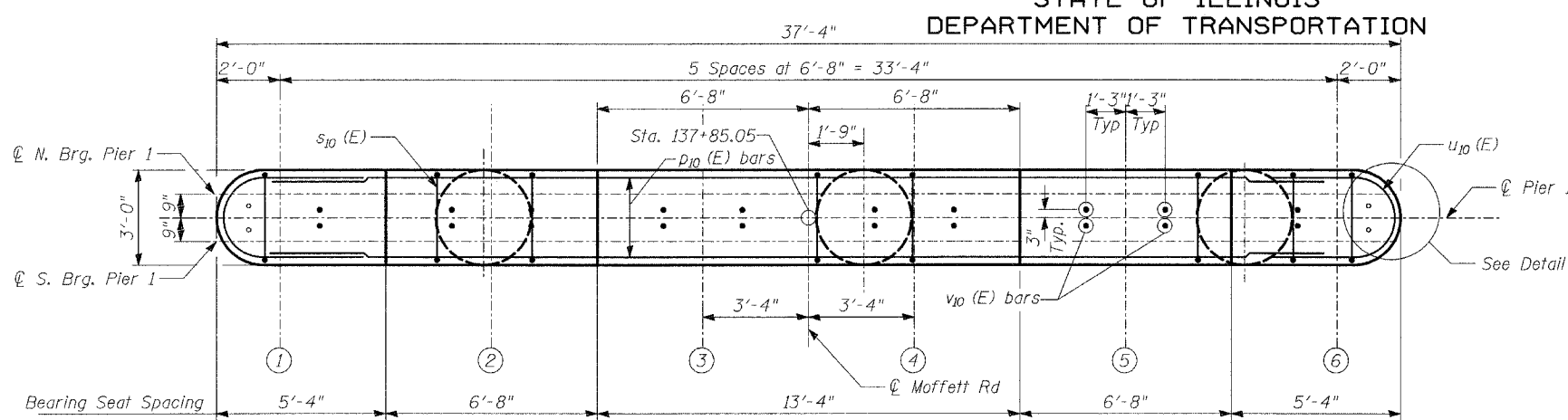
02-00025-00-BR

**BILL OF MATERIAL**

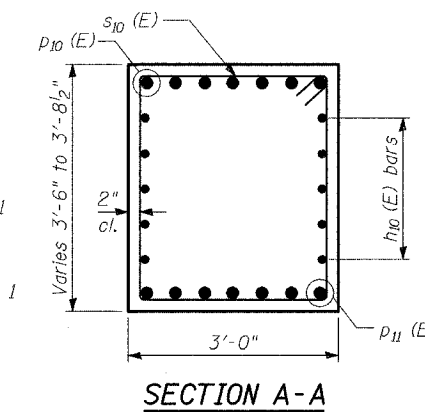
Bar	No.	Size	Length	Shape
$h_{10}(E)$	10	#5	34'-4"	—
$p_{10}(E)$	7	#10	34'-4"	—
$p_{11}(E)$	7	#8	34'-4"	—
$s_{10}(E)$	46	#5	8'-4"	□
** $sp_{10}$	3	#4	19'-8"	WWWWW
** $sp_{11}(E)$	3	#4	9'-7"	WWWWW
$u_{10}(E)$	14	#6	9'-5"	U
$v_{10}(E)$	32	#8	4'-2"	J
$v_{11}$	36	#9	19'-1"	—
$v_{12}(E)$	36	#8	9'-0"	—
$v_{13}(E)$	36	#8	12'-0"	—
Concrete Structures, Special		CU YD	20.6	
Drilled Shaft in Soil, 36"		FT	69.6	
Reinforcement Bars		POUND	2930	
Reinforcement Bars, Epoxy Coated		POUND	5590	

Reinforcement Bars designated (E) shall be epoxy coated.

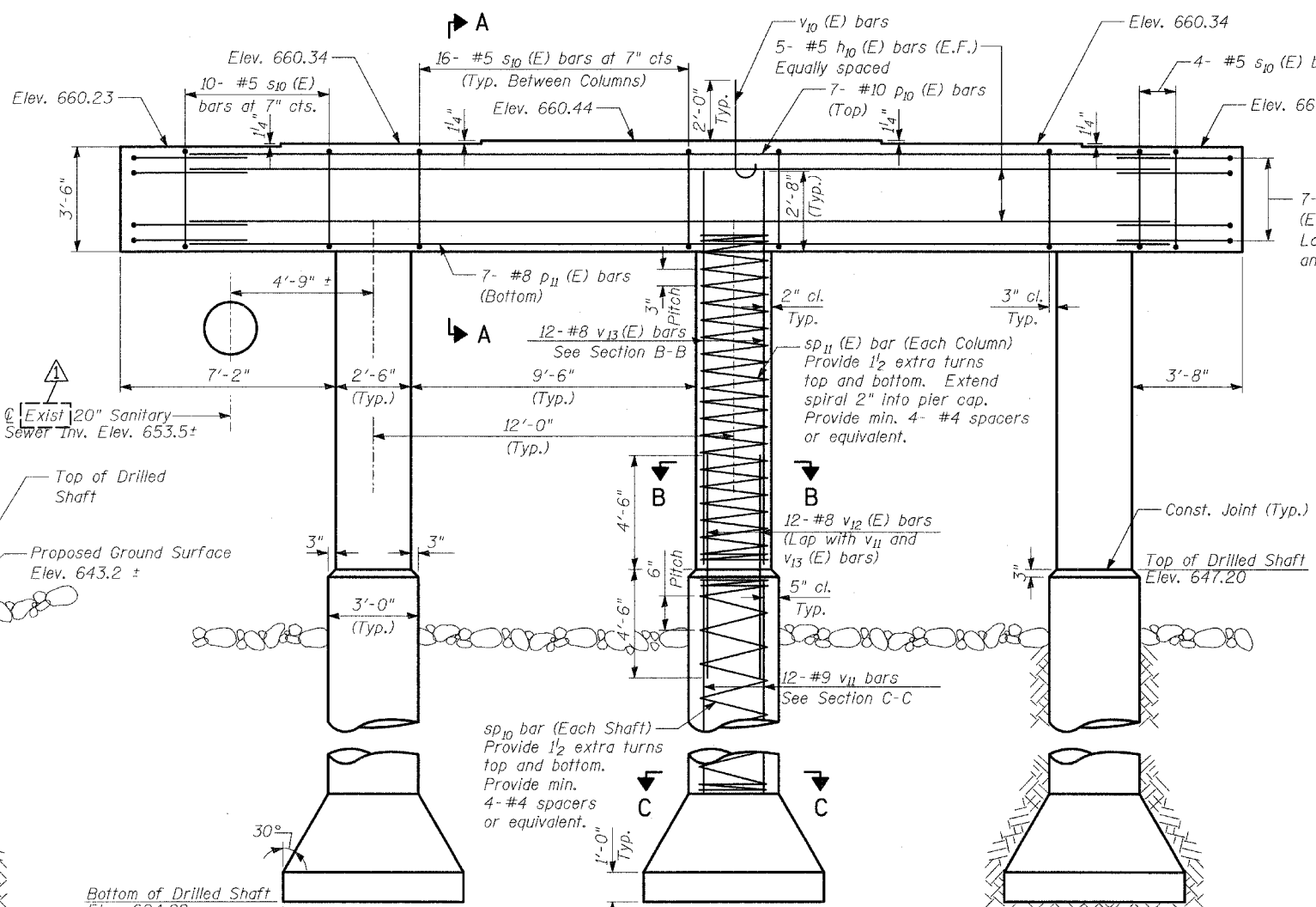
\*\* Length is height of spiral.



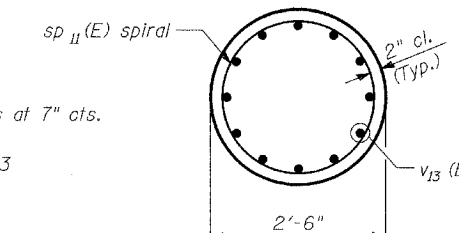
**TOP PLAN**



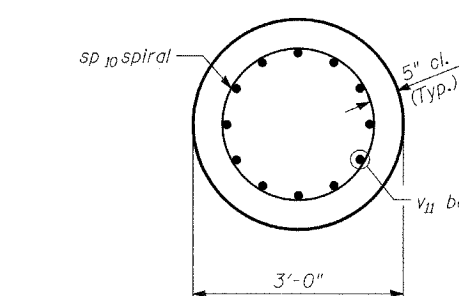
**SECTION A-A**



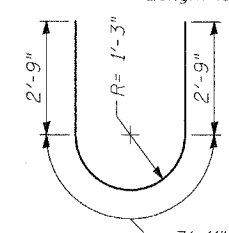
**ELEVATION**  
(Looking North)



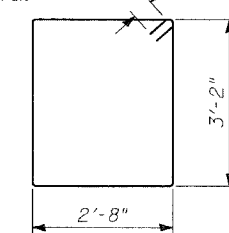
**SECTION B-B**



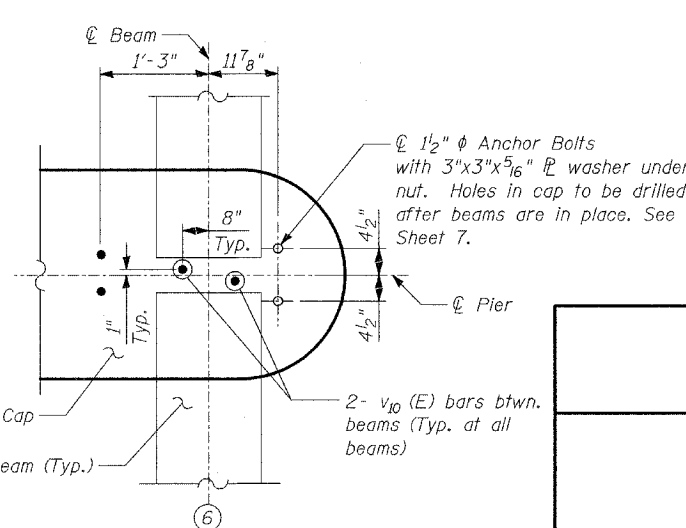
**SECTION C-C**



**BAR u10(E)**

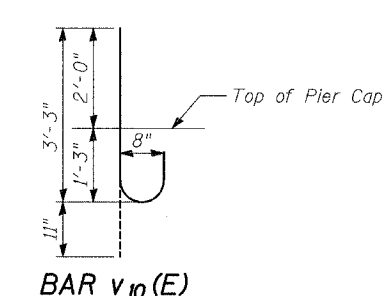


**BAR s10(E)**



**DETAIL 1**

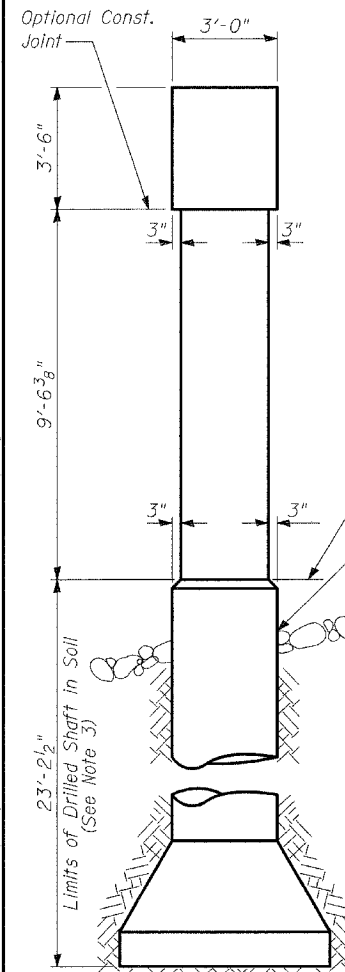
(Detail applicable at Beam 1 by rotation)



**BAR v10(E)**

**PIER 1**

MOFFETT ROAD OVER  
DRAINAGE RAVINE  
FAU 2758  
LAKE COUNTY  
S.N. 049-6803



**END VIEW**

**NOTES:**

1. Cast steps monolithically with cap.
2. Space cap reinforcement to miss anchor bolts.
3. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.
4. Provide temporary casing to Elevation 631.00, included in the cost for Drilled Shaft in Soil.
5. Minimum lap for spirals = 1'-8"
6. Contractor shall be responsible for the design, installation, and subsequent removal of any temporary embankment or support system as required to provide equipment access for drilled shaft installation. Cost shall be included in the unit price for Drilled Shaft in Soil, 36".

**TYLIN INTERNATIONAL**

DESIGNED	- SP
CHECKED	- AD
DRAWN	- DE
CHECKED	- PF

DATE: 02-23-2005

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

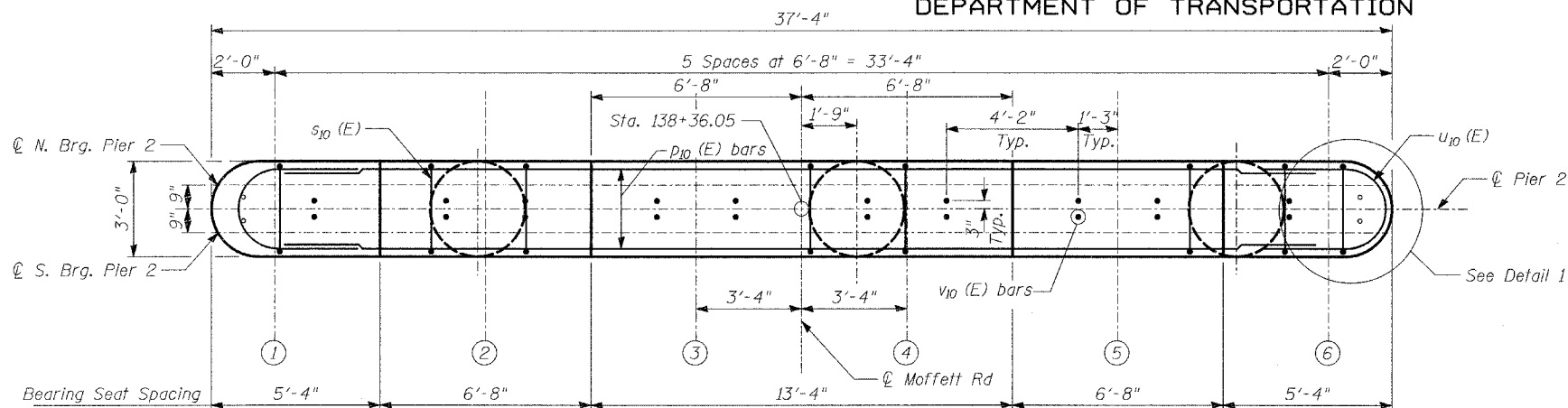
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 20
2758	*	LAKE	40	30	30 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT 83790		

02-00025-00-BR

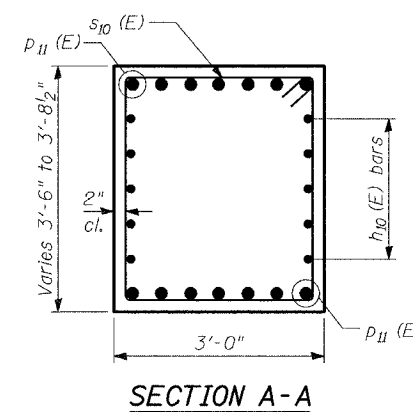
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$h_{10}(E)$	10	#5	34'-4"	—
$p_{10}(E)$	7	#10	34'-4"	—
$p_{11}(E)$	7	#8	34'-4"	—
$s_{10}(E)$	46	#5	8'-4"	□
$sp_{20}$	3	#4	19'-5"	WWWWW
$sp_{21}(E)$	3	#4	9'-11"	WWWWW
$u_{10}(E)$	14	#6	9'-5"	U
$v_{10}(E)$	32	#8	4'-2"	—
$v_{11}$	36	#9	19'-1"	—
$v_{12}(E)$	36	#8	9'-0"	—
$v_{13}(E)$	36	#8	12'-0"	—
Concrete Structures, Special		CU YD	20.8	
Drilled Shaft in Soil, 36"		FT	69	
Reinforcement Bars		POUND	2915	
Reinforcement Bars, Epoxy Coated		POUND	5600	

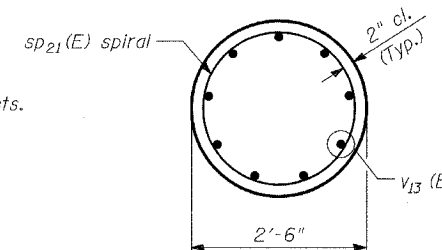
Reinforcement Bars designated (E) shall be epoxy coated.  
\*\* Length is height of spiral.



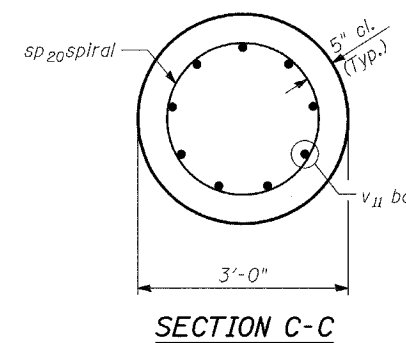
**TOP PLAN**



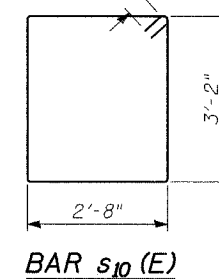
**SECTION A-A**



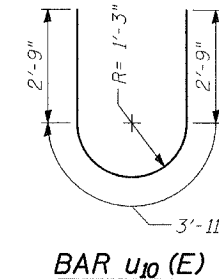
**SECTION B-B**



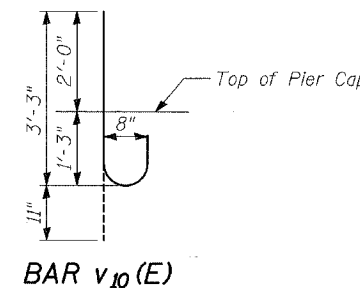
**SECTION C-C**



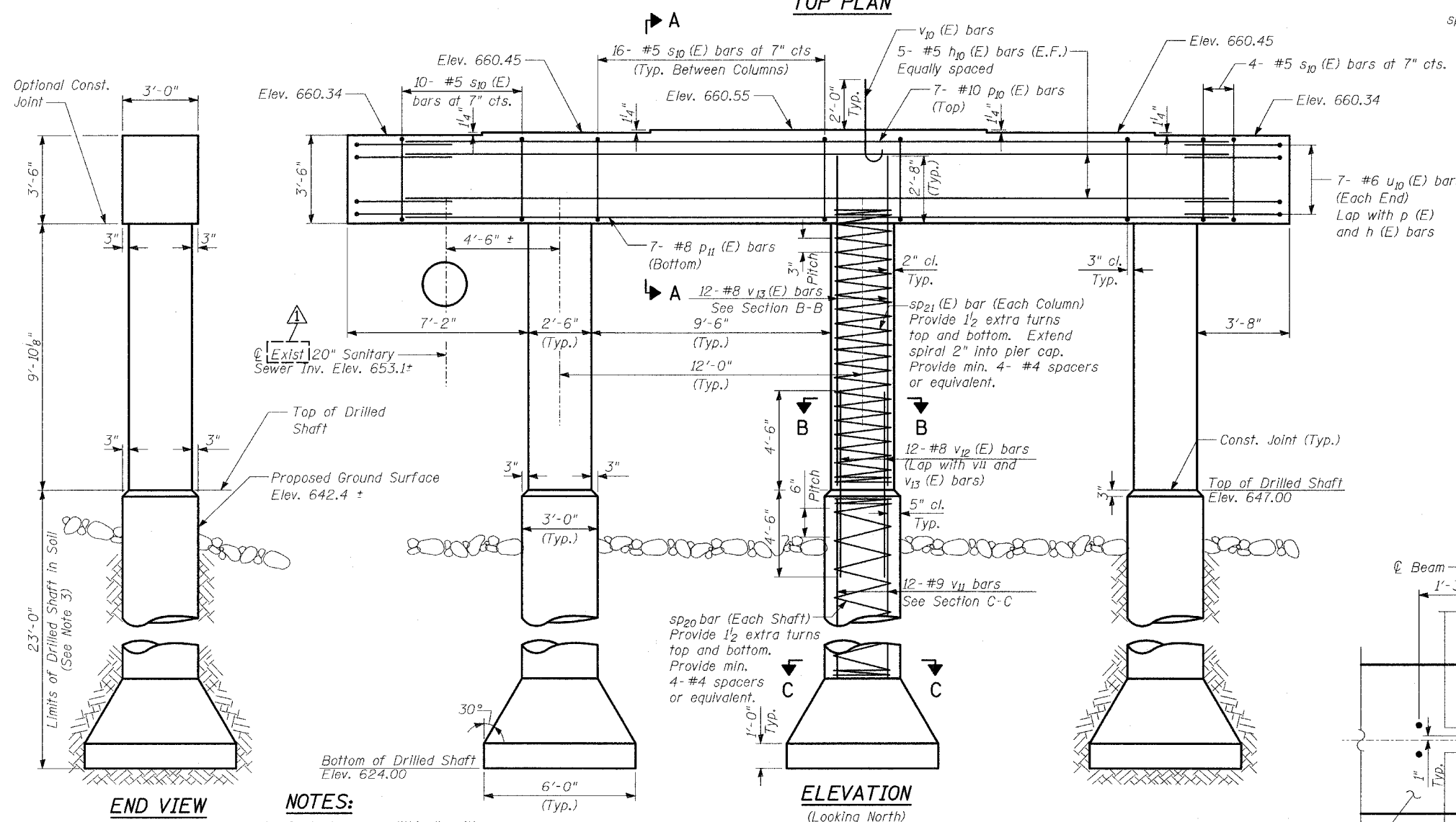
**BAR  $s_{10}(E)$**



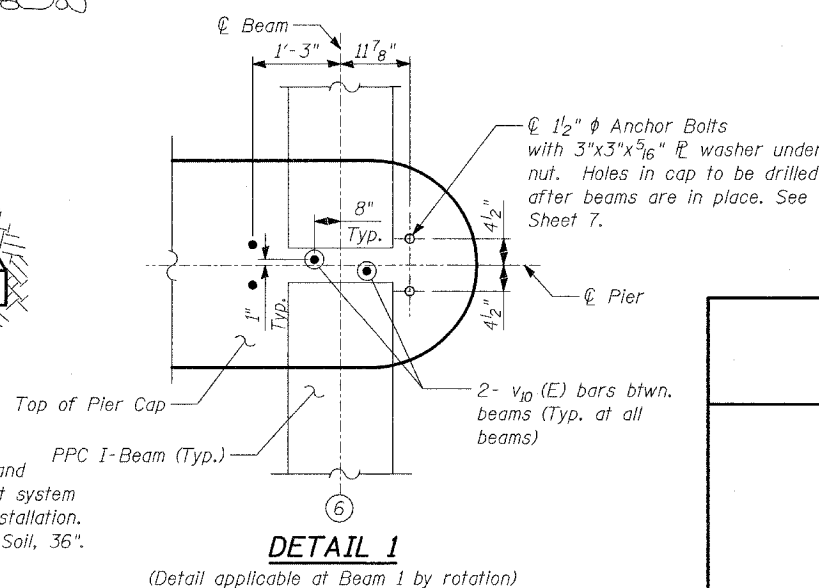
**BAR  $u_{10}(E)$**



**BAR  $v_{10}(E)$**



**ELEVATION**  
(Looking North)



**DETAIL 1**

(Detail applicable at Beam 1 by rotation)

**NOTES:**

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**TYLIN INTERNATIONAL**

DESIGNED	- SP
CHECKED	- AD
DRAWN	- DE
CHECKED	- PF

DATE: 02-23-2005

**PIER 2**

MOFFETT ROAD OVER  
DRAINAGE RAVINE  
FAU 2758  
LAKE COUNTY  
S.N. 049-6803