9-23-05 Letting, Item 068

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

CONTRACT NO. 83790

INDEX OF SHEETS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROJECT LOCATED IN VILLAGE OF LAKE BLUFF

DESIGN DESIGNATION

	ADT (2003)	POSTED SPEED	DESIGN SPEED
MOFFET ROAD	1700	25 MPH	25 MPH
	ADT (2030)		
	3000		

PROPOSED IMPROVEMENT

THE PROJECT INVOLVES THE RECONSTRUCTION OF SN 049-6801 MOFFETT ROAD BRIDGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED LOCAL AGENCY IMPROVEMENT

FAU ROUTE 2758 (MOFFETT ROAD) OVER DRAINAGE RAVINE

VILLAGE OF LAKE BLUFF

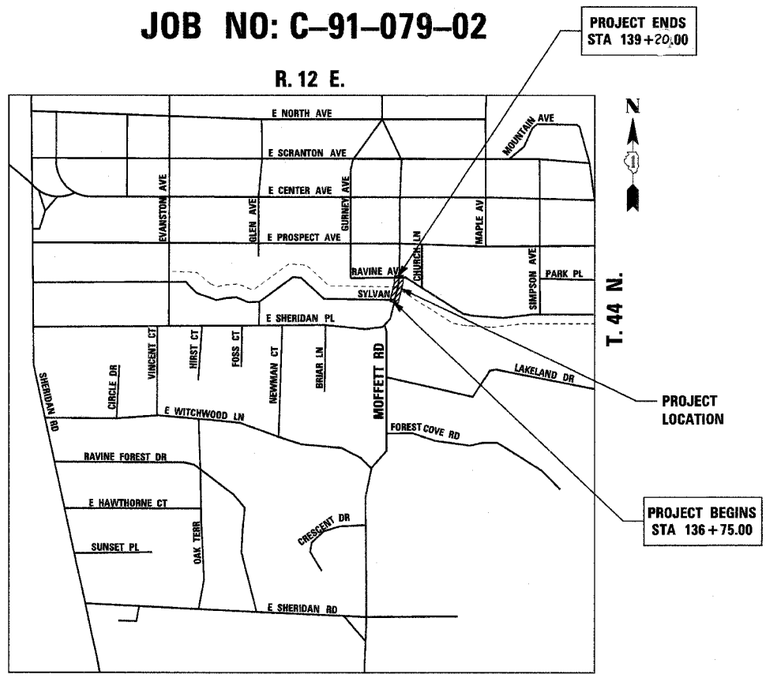
SECTION 02-00025-00-BR

PROJECT NO.: BRM-8003 (182)

BRIDGE REPLACEMENT

LAKE COUNTY

JOB NO: C-91-079-02

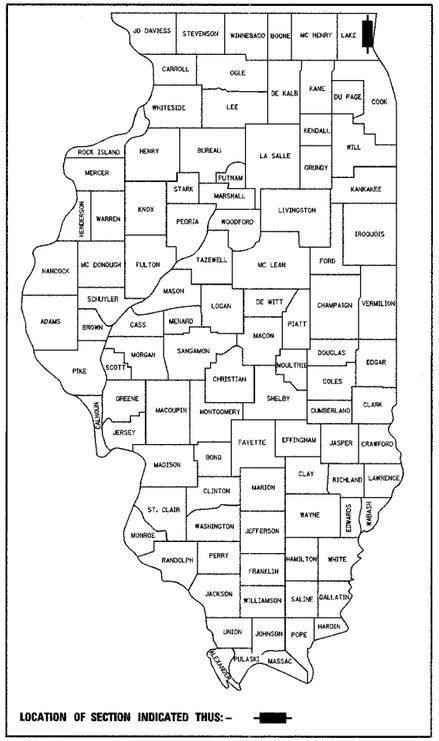


NOT TO SCALE

LAKE BLUFF TOWNSHIP

GROSS LENGTH OF PROJECT = ~~245~~ FT. = 0.05 MI.

NET LENGTH OF PROJECT = ~~245~~ FT. = 0.05 MI.



LOCATION OF SECTION INDICATED THUS: –

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED February 18, 20 05
Gary S. Hall
VILLAGE OF LAKE BLUFF

APPROVED February 24, 20 05
Robert Lindsey
BUREAU CHIEF OF LOCAL ROADS AND STREETS

APPROVED February 24, 20 05
Dino O'Neal, AP
DISTRICT ENGINEER

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

CONTRACT NO. 83790

DONALD A. JAKESCH 062-039374 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Signed Donald A. Jakesch
Donald A. Jakesch, P.E., IL Lic. No. 062-039374
Expires 11-30-2005
Date 02-11-05

PREPARED BY: T.Y. LIN INTERNATIONAL, INC.
DISTRICT ONE FEDERAL AID PROGRAM ENGINEER CHARLES F. RIDDLE (847) 705-4406

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

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F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	02-00025-00-BR	LAKE	40	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83790

PLAN: DATE | BY | SURVEYED, PLOTTED, ALIGNMENT CHECKED, GRADES CHECKED, CADD FILE NAME | NOTE BOOK | NO.

PROFILE: DATE | BY | SURVEYED, PLOTTED, GRADES CHECKED, CADD FILE NAME, STRUCTURE NO(S)/HS CHKD | NOTE BOOK | NO.

GENERAL NOTES:

1. THE CONTRACTOR SHALL MAINTAIN ALL ROADWAYS OPEN TO TRAFFIC AS SHOWN PER THE MAINTENANCE OF TRAFFIC DETAILS.
2. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL J.U.L.I.E. AT (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, CABLE, AND GAS FACILITIES (48 HOURS NOTIFICATION IS REQUIRED). CONTACT VILLAGE ENGINEER, VILLAGE OF LAKE BLUFF AT (847) 234-0774 FOR WATER, SEWER AND VILLAGE ELECTRIC LOCATIONS.
3. THE CONTRACTOR SHALL NOT BE ALLOWED TO ERECT A YARD OR FIELD OFFICE ON VILLAGE RIGHT-OF-WAY OR PROPERTY WITHOUT WRITTEN PERMISSION FROM THE VILLAGE.
4. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE PROPER CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.
5. ALL ELEVATIONS REFER TO U.S.G.S. MEAN SEA LEVEL DATUM 1929.
6. NO WORK SHALL COMMENCE UNTIL TRAFFIC CONTROL REQUIREMENTS AND EROSION CONTROL MEASURES ARE MET.
7. ALL UTILITIES, SCHOOL DISTRICTS, PARK DISTRICT, LOCAL POLICE, AND FIRE DEPARTMENTS SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
8. UNLESS AUTHORIZED BY THE ENGINEER, ALL EXISTING ACCESS POINTS SHALL BE MAINTAINED AT ALL TIMES BY THE CONTRACTOR.
9. BOXED ITEMS ARE INCLUDED IN THIS CONTRACT AND SHALL NOT BE PAID FOR SEPARATELY UNDER ANY ITEM OF WORK.
10. TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND SHALL BE PROTECTED UNDER THE PROVISIONS OF ARTICLE 201.05 OF THE STANDARD SPECIFICATIONS.
11. ALL LIMBS, BRANCHES, AND OTHER DEBRIS RESULTING FROM THIS WORK SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS OWN EXPENSE OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY.

12. ALL CLEARING, REMOVAL OF BUSHES, HEDGES AND TREES UNDER SIX (6) INCHES IN DIAMETER WILL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR EARTH EXCAVATION.

13. DURING THE CONSTRUCTION, THE CONTRACTOR WILL BE REQUIRED, AT HIS EXPENSE, TO HAVE AVAILABLE A WATER TRUCK OR SIMILAR EQUIPMENT TO CONTROL DUST. IF NECESSARY, THE CONTRACTOR SHALL BE REQUIRED TO CONTROL DUST DURING NON-WORKING HOURS.
14. THE CONTRACTOR MUST MAKE PRIOR ARRANGEMENTS WITH THE VILLAGE OF LAKE BLUFF WATER DEPARTMENT PRIOR TO THE USE OF ANY FIRE HYDRANT. HYDRANT METERS AND RPZ'S MUST BE USED. CONTACT THE ENGINEERING DEPARTMENT AT (847) 234-0774.

15. ALL OPEN EXCAVATIONS MUST BE ADEQUATELY COVERED (STEEL PLATED) OR FILLED IN AT THE END OF EACH DAY. NO OPEN EXCAVATIONS ARE ALLOWED OVERNIGHT. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF THE ITEM REQUIRING EXCAVATION.

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND CLEAN UP OF MUD AND OTHER DEBRIS TRACKED ON ALL STREETS LEADING TO THE PROJECT SITE CAUSED BY THE CONSTRUCTION OPERATIONS. THE CLEAN UP IS AT THE DISCRETION OF AND MUST BE DONE TO THE SATISFACTION OF THE VILLAGE ENGINEER.
17. WORKING HOURS. THE CONTRACTOR SHALL OBSERVE WORKING HOURS PER VILLAGE ORDINANCES:

    - 7 AM TO 7 PM MONDAY TO FRIDAY
    - 8 AM TO 5 PM SATURDAY
    - NO WORK SUNDAYS OR NATIONAL HOLIDAYS

    PER VILLAGE CODE NO WORK BEFORE 7 AM INCLUDES NO STARTUP, ENGINE WARMUP OR IDLE, GENERATOR OR COMPRESSOR RUNNING OR ANY OTHER ACTIVITY. THIS ORDINANCE WILL BE STRICTLY ENFORCED BY THE VILLAGE.

18. STARTING DATE: UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE ALLOWED ACCESS TO THE SITE PRIOR TO JULY 5, 2005. THIS INCLUDES NO SITE PREPARATION, TEMPORARY FENCING, FIELD OFFICES, TRAILERS, ETC.

INDEX OF STATE STANDARDS

STD. NO.	TITLE
000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-02	TEMPORARY EROSION CONTROL SYSTEM
420401-05	BRIDGE APPROACH PAVEMENT
424001-04	CURB RAMPS FOR SIDEWALKS
515001-02	NAME PLATE FOR BRIDGES
601101-00	CONCRETE HEADWALL FOR PIPE DRAIN
602001-00	CATCH BASIN, TYPE A
602401-00	MANHOLE, TYPE A
602701-00	CAST IRON STEPS
604001-02	FRAME AND LIDS, TYPE 1
604036-01	GRATE, TYPE 8
604051-01	FRAME AND GRATE, TYPE 11
606001-02	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701801-03	LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
702001-05	TRAFFIC CONTROL DEVICES
704001-02	TEMPORARY CONCRETE BARRIER
720001-00	SIGN PANEL MOUNTING DETAILS
720006-00	SIGN PANEL ERECTION DETAILS
720011-00	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
729001-00	APPLICATION OF TYPE A AND TYPE B METAL POSTS
BLR-21-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

INDEX OF SHEETS

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MOFFETT ROAD BRIDGE
OVER DRAINAGE RAVINE
GENERAL NOTES, STATE STANDARDS AND INDEX OF SHEETS

SCALE: NONE | DRAWN BY: BK

DATE: 02-02-05 | CHECKED BY: DAJ

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	02-00025-00-BR	LAKE	40	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83790

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	H10 ROADWAY I000-2A	H10 STRUCTURAL X081-2A	07C Y060 VILLAGE OF LAKE BLUFF
*	20100110	TREE REMOVAL 6 TO 15 UNITS	UNIT	73	73		
*	20100210	TREE REMOVAL > 15 UNITS	UNIT	42	42		
*	20101100	TREE TRUNK PROTECTION	EACH	9	9		
	20200100	EARTH EXCAVATION	CU YD	712	712		
	20700220	POROUS GRANULAR EMBANKMENT	CU YD	351		351	
	20800150	TRENCH BACKFILL	CU YD	378	221		157
	21101615	TOP SOIL, FURNISH AND PLACE, 4 INCH	SQ YD	325	325		
*	25001100	SEEDING, CLASS 3 (SPECIAL)	ACRE	0.1	0.1		
*	25000400	NITROGEN FERTILIZER NUTRIENT	LBS	7	7		
*	25000500	PHOSPHORUS FERTILIZER NUTRIENT	LBS	7	7		
*	25000600	POTASSIUM FERTILIZER NUTRIENT	LBS	7	7		
*	25100630	EROSION CONTROL BLANKET	SQ YD	243	243		
*	25200110	SODDING, SALT TOLERANT	SQ YD	82	82		
	28100105	STONE RIP RAP, CLASS A3	SQ YD	410	410		
	28100109	STONE RIP RAP, CLASS A5	SQ YD	542	542		
	28200200	FILTER FABRIC	SQ YD	952	952		
	31101200	SUB-BASE GRANULAR MATERIAL, TYPE B, 4 INCH	SQ YD	52	52		
	40400705	AGGREGATE, SPECIAL	TON	4	4		
	40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	0.2	0.2		
	40800040	INCIDENTAL BITUMINOUS SURFACING	TON	2	2		
	42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	202	202		
	42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	43	43		
	42300300	PORTLAND CEMENT CONCRETE DRIVEWAY, 7-INCH	SQ YD	20	20		
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	SQ FT	107	107		
	44000011	BITUMINOUS SURFACE REMOVAL, 4 INCH	SQ YD	329	329		
	44000100	PAVEMENT REMOVAL	SQ YD	187	187		
	44000500	COMBINATION CURB AND GUTTER REMOVAL	FT	176	176		
	44000600	SIDEWALK REMOVAL	SQ FT	429	429		
	44200120	PAVEMENT PATCHING, TYPE II, 10 INCH	SQ YD	70	70		
	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1	
	50104400	CONCRETE HEADWALL REMOVAL	EACH	2	2		
	50200100	STRUCTURE EXCAVATION	CU YD	384		384	
	50300100	FLOOR DRAINS	EACH	6		6	
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	195.1		195.1	
	50300260	BRIDGE DECK GROOVING	SQ YD	300		300	
	50300300	PROTECTIVE COAT	SQ YD	810	291	519	
	50300310	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12		12	
	50400805	F&E PP CON I-BM 36 INCH	FOOT	662		662	
	50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	551		551	
	50800105	REINFORCEMENT BARS	POUND	15140		15140	
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	60690		60690	
	51500100	NAME PLATES	EACH	1		1	
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	71		71	

* - SPECIALTY ITEM

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	H10 ROADWAY I000-2A	H10 STRUCTURAL X081-2A	07C Y060 VILLAGE OF LAKE BLUFF
	60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	2		2	
	60102005	PIPE DRAINS, 12-INCH, (SPECIAL)	FOOT	150	150		
	60108200	PIPE UNDERDRAINS, 6 INCH, (SPECIAL)	FOOT	30		30	
	60201105	CATCH BASINS, TYPE A, 4 FT DIAMETER, TYPE 11 FRAME AND GRATE	EACH	4	4		
	60207605	CATCH BASINS, TYPE C, TYPE 8 GRATE	EACH	1	1		
	60218400	MANHOLES, TYPE A, 4 FT DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2	2		
	60221000	MANHOLES, TYPE A, 5 FT DIAMETER, TYPE 1 FRAME, OPEN LID	EACH	1	1		
	60228110	MANHOLES, SANITARY, 4 FT DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1			1
	60228120	MANHOLES, SANITARY, 5 FT DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2			2
	60500040	REMOVING MANHOLES	EACH	2	1		1
	60500050	REMOVING CATCH BASINS	EACH	4	4		
	60603800	COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.12	FT	166	166		
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	7	7		
	67100100	MOBILIZATION	L SUM	1	1		
*	70101800	TRAFFIC CONTROL AND PROTECTION, SPECIAL	L SUM	1	1		
*	72000100	SIGN PANEL - TYPE 1	SQ FT	16	16		
*	72400310	REMOVE SIGN PANEL - TYPE 1	SQ FT	9	9		
*	72900100	METAL POST, TYPE A	FT	50	50		
*	78005110	EPOXY PAVEMENT MARKING, LINE 4 INCH	FT	375	375		
*	78005130	EPOXY PAVEMENT MARKING, LINE 6 INCH	FT	322	322		
*	78005180	EPOXY PAVEMENT MARKING, LINE 24 INCH	FT	63	63		
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	4	4		
*	78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	6	6		
	550A0340	STORM SEWER, CLASS A, TYPE 2, 12 INCH	FT	114	114		
	550A0380	STORM SEWER, CLASS A, TYPE 2, 18 INCH	FT	65	65		
*	A2006416	QUERCUS ALBA (WHITE OAK), 2 INCH CALIPER, BALLED AND BURLAPPED	EACH	3	3		
*	A2007116	QUERCUS ALBA (RED OAK), 2 INCH CALIPER, BALLED AND BURLAPPED	EACH	3	3		
	X0323202	SANITARY SEWER, DUCTILE IRON, 16 INCH	FT	31			31
	X0323204	SANITARY SEWER, DUCTILE IRON, 20 INCH	FT	175			175
	X0323830	DRAINAGE SCUPPERS, DS-11	EACH	4		4	
	X0504200	CONCRETE HEADWALL	EACH	2	2		
	X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX C, N50	TON	38	38		
	X4066614	BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19.0, N50	TON	48	48		
	XX001429	FORM LINER TEXTURED SURFACE	SQ YD	123			123
	XX004647	ARCHITECTURAL CONCRETE	CU YD	9.7			9.7
	XX005713	ORNAMENTAL RAILING	FOOT	230		230	
	Z0002600	BAR SPLICERS	EACH	80		80	
	Z0008236	DRILLED SHAFT IN SOIL, 36 INCH	FOOT	322		322	
△	Z0076600	TRAINEES	HOURS	500	500		
	XX006223	PERIMETER EROSION BARRIER, MODIFIED	FT	657	657		
	XX006224	COATING SYSTEM FOR CONCRETE	SQ FT	4000			4000
	XX006225	CONCRETE STRUCTURES, SPECIAL	CU YD	161.6		161.6	

* - SPECIALTY ITEM

△ - Y080

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MOFFETT ROAD BRIDGE

OVER DRAINAGE RAVINE

SUMMARY OF QUANTITIES

SCALE: NONE

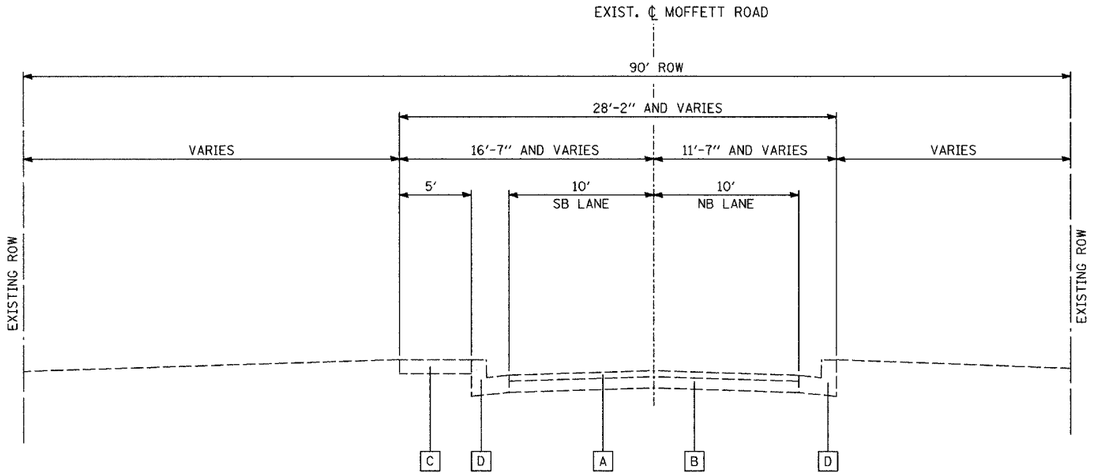
DRAWN BY: BK

DATE: 02-02-05

CHECKED BY: DAJ

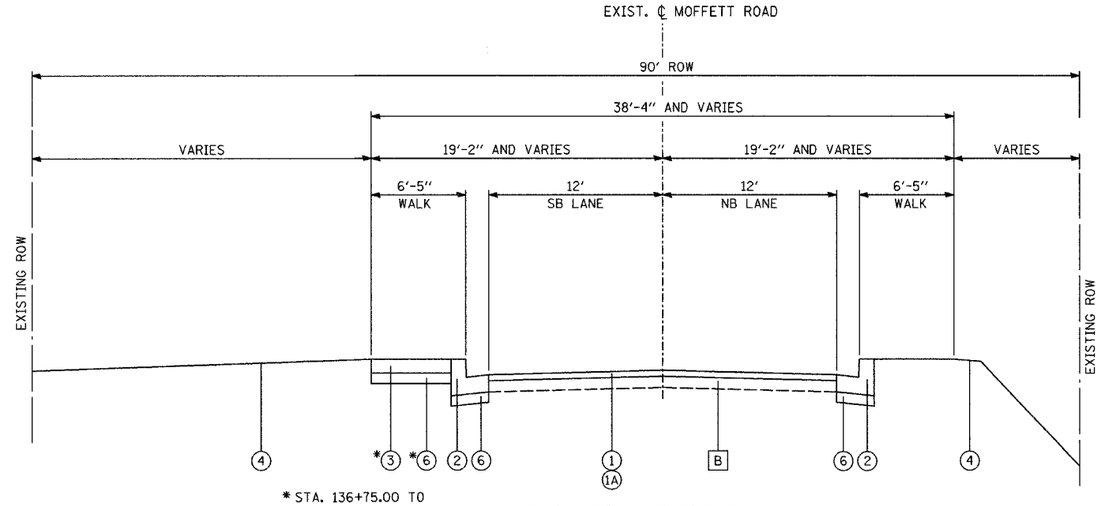
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	02-00025-00-BR	LAKE	40	4
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83790



EXISTING MOFFETT ROAD

STA. 136+75.00 TO STA. 137+50.00
STA. 138+62.80 TO STA. 139+20.00

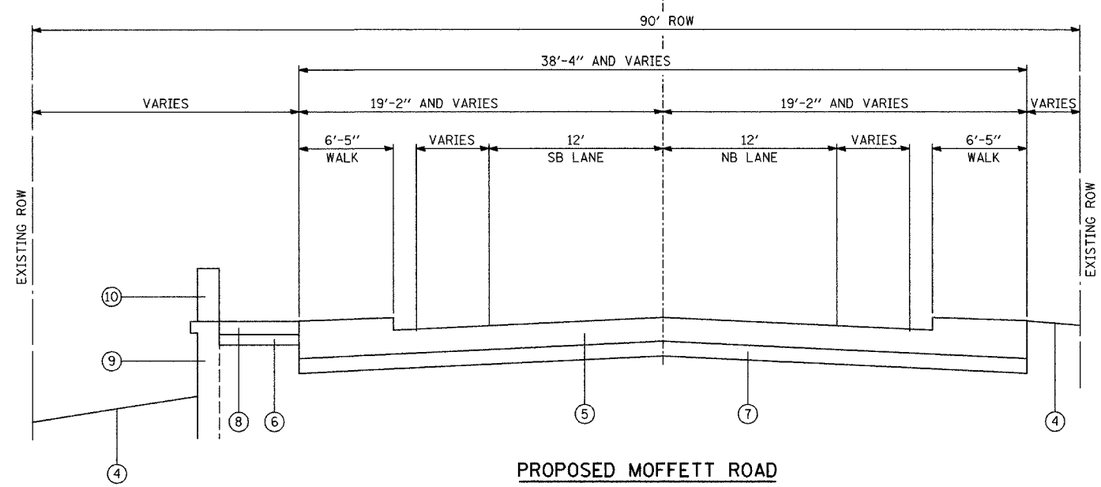


* STA. 136+75.00 TO STA. 137+25.47 ONLY

PROPOSED MOFFETT ROAD

STA. 136+75.00 TO STA. 137+25.47
STA. 138+83.88 TO STA. 139+20.00

PROPOSED BRIDGE
STA. 137+49.47 TO STA. 138+63.63
SEE STRUCTURAL PLANS



PROPOSED MOFFETT ROAD

STA. 137+25.47 TO STA. 137+49.47
STA. 138+63.63 TO STA. 138+83.88

EXISTING LEGEND:

- [A] BITUMINOUS CONCRETE (4")
- [B] AGGREGATE BASE (±7")
- [C] CONCRETE SIDEWALK
- [D] CONCRETE CURB AND GUTTER (TYPE M-6.12 SOUTH AND TYPE M-2.12 NORTH OF BRIDGE)

BITUMINOUS MIXTURE REQUIREMENT

PAID ITEM	AC TYPE	V0105	RAP%
BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX C, N 50	PG 64-22	4%@ 50GYR	15%
BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19, N 50	PG 58-22	4%@ 50GYR	25%
INCIDENTAL BITUMINOUS SURFACE (BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX C, N 50)	PG 64-22	4%@ 50GYR	15%

PROPOSED LEGEND:

- (1) BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, 1¾"
- (1A) BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, 2¼"
- (2) CONCRETE CURB AND GUTTER TYPE B-6.12
- (3) PCC SIDEWALK, 5"
- (4) TOPSOIL 4" AND SODDING, SALT TOLERANT OR TOPSOIL 4", SEEDING CLASS III WITH EROSION CONTROL BLANKET
- (5) BRIDGE APPROACH PAVEMENT, SPECIAL
- (6) SUBBASE GRANULAR MATERIAL TYPE B, 4"
- (7) SUBBASE GRANULAR MATERIAL TYPE A, 4"- INCLUDED WITH BRIDGE APPROACH PAVEMENT (SPECIAL)
- (8) AGGREGATE, SPECIAL, 6"
- (9) RETAINING WALL (SEE STRUCTURAL PLANS)
- (10) ARCHITECTURAL CONCRETE

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MOFFETT ROAD BRIDGE
OVER DRAINAGE RAVINE

EXISTING AND PROPOSED TYPICAL SECTIONS

SCALE: NONE
DRAWN BY: BK
DATE: 02-02-05
CHECKED BY: DAJ

PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, GRADES CHECKED, CADD FILE NAME, NOTE BOOK, NO.

PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, CADD FILE NAME, STRUCTURE NO(S)/MMS CHKD, NOTE BOOK, NO.

BY — DATE

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	02-00025-00-BR	LAKE	40	5

STA. TO STA.

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

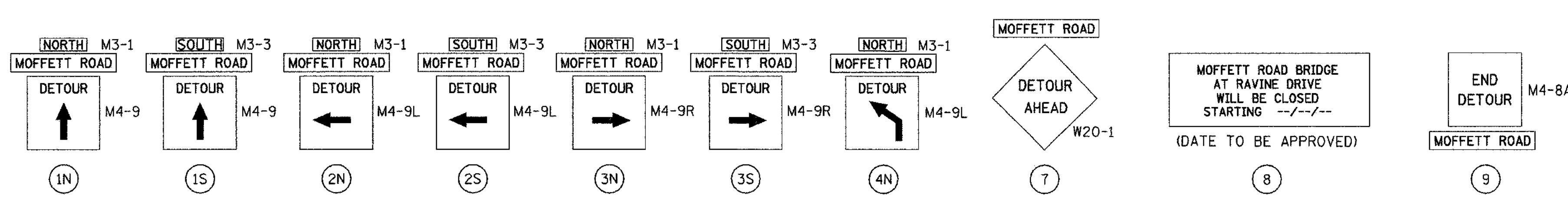
CONTRACT NO. 83790

DETOUR SIGN SCHEDULE

SIGN	MUTCD DESIGNATION	SIZE	QUANTITY
DETOUR (up arrow)	M4-9	30In X 24In	3
DETOUR (left arrow)	M4-9L	30In X 24In	5
DETOUR (right arrow)	M4-9R	30In X 24In	6
DETOUR (bent arrow)	M4-9L	30In X 24In	1
MOFFETT ROAD BRIDGE AT RAVINE DRIVE WILL BE CLOSED STARTING --/--/--	SPECIAL	84 In X 24In	3
DETOUR AHEAD	W20-2	48In X 48In	3
NORTH	M3-1	24In X 12In	8
SOUTH	M3-3	24In X 12In	7
MOFFETT ROAD	NONE	36In X 12In	21
END DETOUR	M4-8A	30In X 24In	3
ROAD CLOSED AHEAD	W20-3(0)	36In X 36In	4
NO CONSTRUCTION TRAFFIC	NONE	36In X 36In	2

NOTES:

1. ALL DETOUR SIGNS SHALL BE IN ORANGE COLOR BACKGROUND WITH BLACK LETTERS.
2. FOLLOW LATEST MUTCD MANUAL AND IDOT STANDARDS FOR DETOUR SIGNS AND MAINTENANCE OF TRAFFIC SIGNS.
3. THE COST OF THE DETOUR SIGNING SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, SPECIAL.
4. SIDEWALK CLOSURE SIGNING SHALL BE PER STANDARD 701801, AND INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, SPECIAL.



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MOFFETT ROAD BRIDGE
OVER DRAINAGE RAVINE

MAINTENANCE OF TRAFFIC
DETOUR PLAN

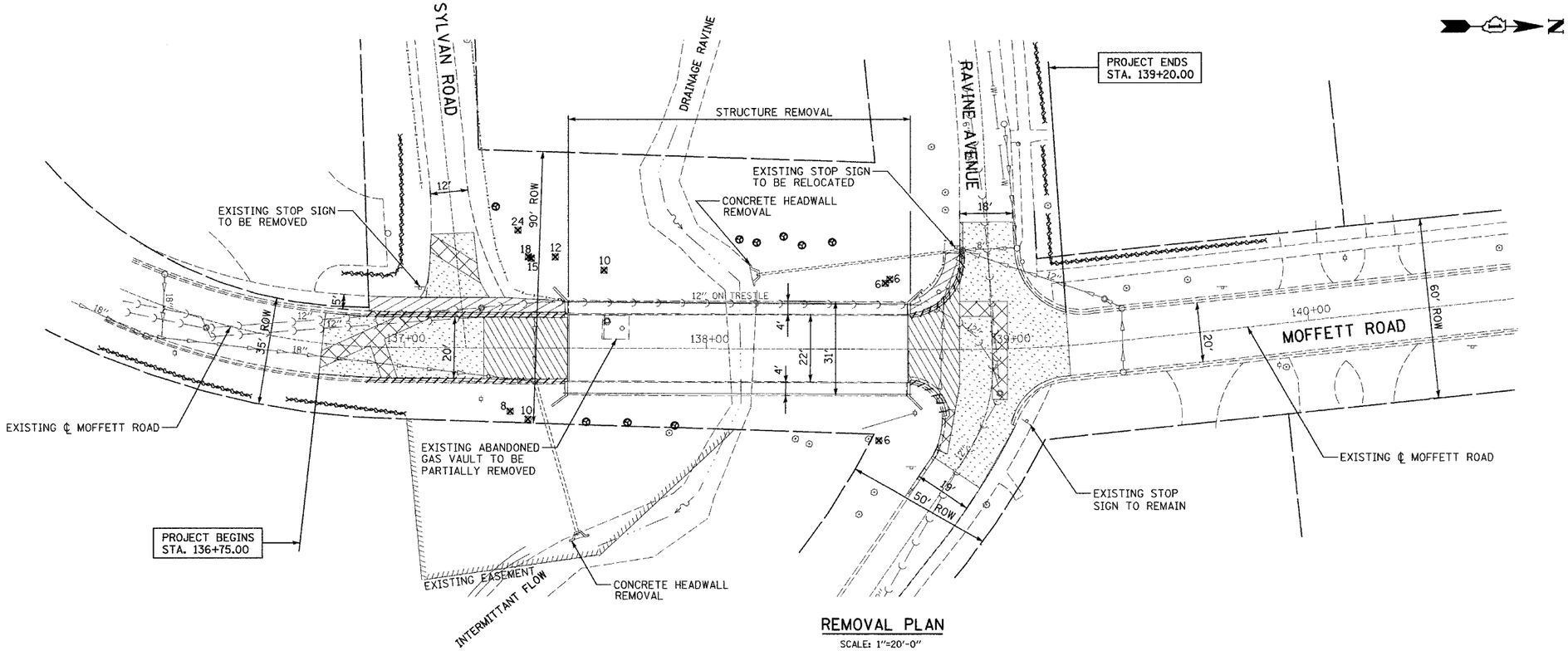
The VILLAGE of LAKE BLUFF 1895

SCALE: NONE DRAWN BY: BK

DATE: 02-02-05 CHECKED BY: DAJ

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	02-00025-00-BR	LAKE	40	6
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83790



REMOVAL PLAN

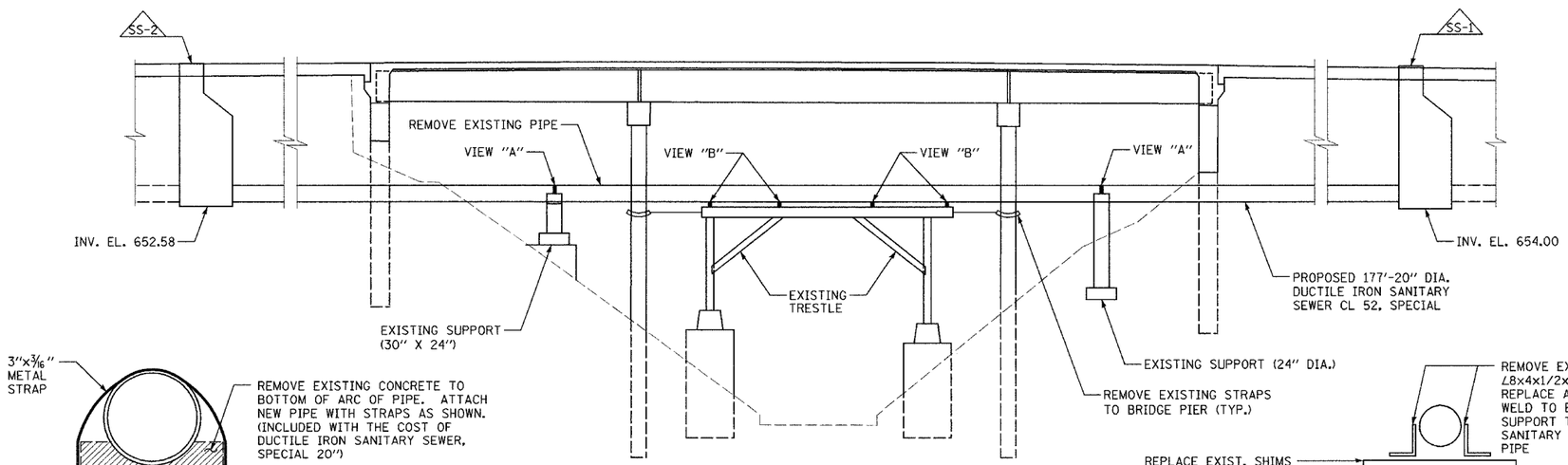
SCALE: 1"=20'-0"

LEGEND:

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

20 0 20 40

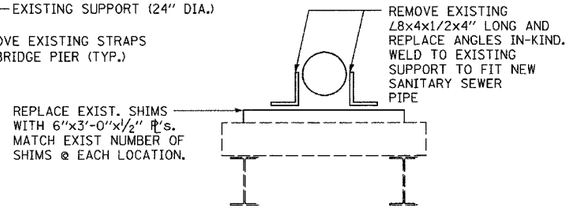
SCALE: 1" = 20'-0"



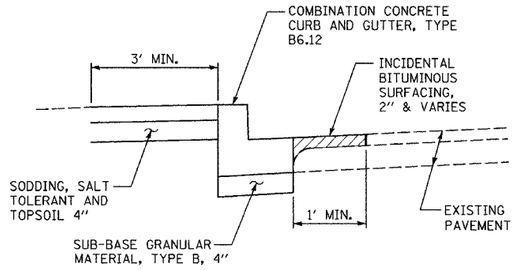
SANITARY SEWER TRESTLE

LOOKING EAST
NOT TO SCALE

VIEW "A"
EXISTING CONCRETE PIERS



VIEW "B"
STEEL PIERS



CURB AND GUTTER INSTALLATION DETAIL

NOT TO SCALE

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MOFFETT ROAD BRIDGE
OVER DRAINAGE RAVINE

REMOVAL PLAN AND DETAILS

SCALE: AS SHOWN
DRAWN BY: BK
DATE: 02-02-05
CHECKED BY: DAJ

PLAN — DESIGNED, PLOTTED, QUANTITY CHECKED, ALIGNMENT, GRADES CHECKED, CADD FILE NAME, NOTE BOOK, NO., BY, DATE

PROFILE — DESIGNED, PLOTTED, GRADES CHECKED, ALIGNMENT, STRUCTURE NO(S), CADD FILE NAME, NOTE BOOK, NO., BY, DATE

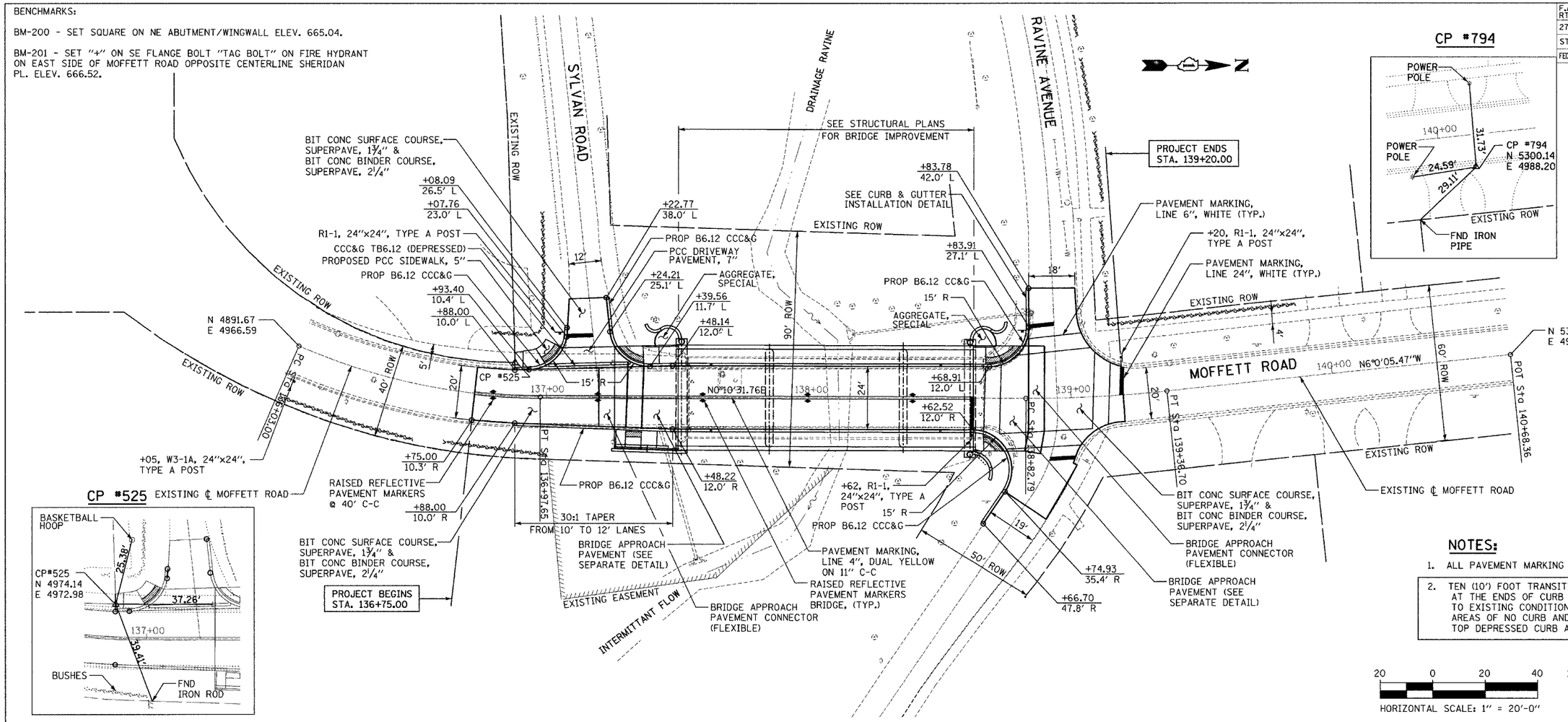
BENCHMARKS:

BM-200 - SET SQUARE ON NE ABUTMENT/WINGWALL ELEV. 665.04.

BM-201 - SET "+" ON SE FLANGE BOLT "TAG BOLT" ON FIRE HYDRANT ON EAST SIDE OF MOFFETT ROAD OPPOSITE CENTERLINE SHERIDAN PL. ELEV. 666.52.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	02-00025-00-BR	LAKE	40	7
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83790



CP #525 EXISTING ℄ MOFFETT ROAD

CP #794

CURVE 1

P.I. STA= 136+51.01
(N 4935.61; E 4985.93)
Δ= 23°34'44"
D= 24°54'40"
R= 230.0'
T= 48.01'
L= 94.65'
E= 4.96'
P.C. STA= 136+03.00
(N 4891.67; E 4966.59)
P.T. STA= 136+97.65
(N 4983.61; E 4986.07)

CURVE 2

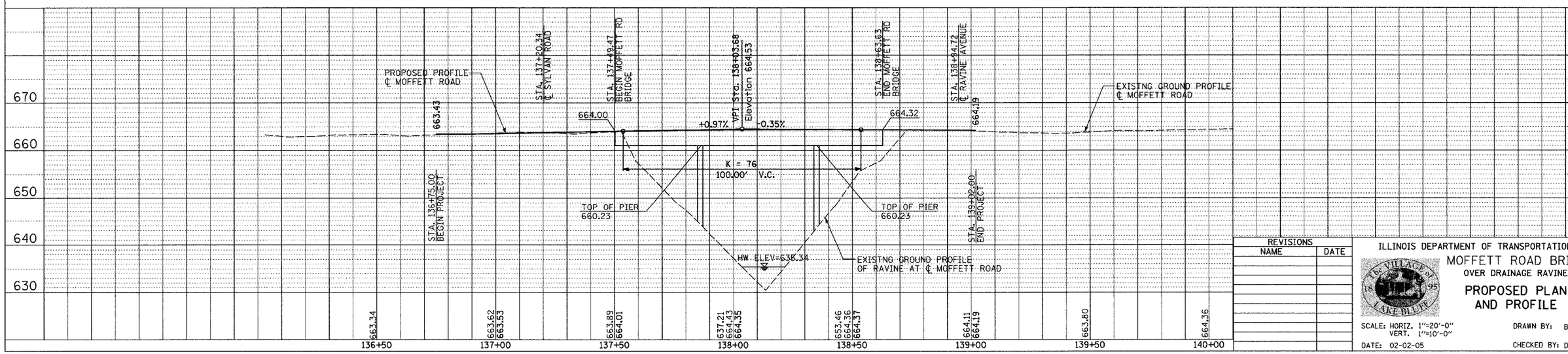
P.I. STA= 139+09.77
(N 5195.73; E 4986.72)
Δ= 6°10'37"
D= 11°27'33"
R= 500.0'
T= 26.98'
L= 53.90'
E= 0.73'
P.C. STA= 138+82.79
(N 5168.75; E 4986.64)
P.T. STA= 139+36.70
(N 5222.56; E 4983.90)

NOTES:

1. ALL PAVEMENT MARKING TO BE EPOXY PAINT.
2. TEN (10') FOOT TRANSITIONS SHALL BE USED AT THE ENDS OF CURB AND GUTTER SECTIONS TO EXISTING CONDITIONS. TRANSITIONS IN AREAS OF NO CURB AND GUTTER SHALL BE TOP DEPRESSED CURB AND GUTTER SECTION.

HORIZONTAL SCALE: 1" = 20'-0"

VERTICAL SCALE: 1" = 10'-0"



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MOFFETT ROAD BRIDGE
OVER DRAINAGE RAVINE

PROPOSED PLAN AND PROFILE

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

DRAWN BY: BK

DATE: 02-02-05

CHECKED BY: DAJ

PLAN — SURVEYED, PLOTTED, DRAWN, CHECKED, ALIGN. & R/W CHECKED, CADD FILE NAME, NOTE BOOK, NO., BY, DATE

PROFILE — SURVEYED, PLOTTED, DRAWN, CHECKED, GRADES CHECKED, STRUCTURE NOTATIONS CHKD

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

STRUCTURES

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

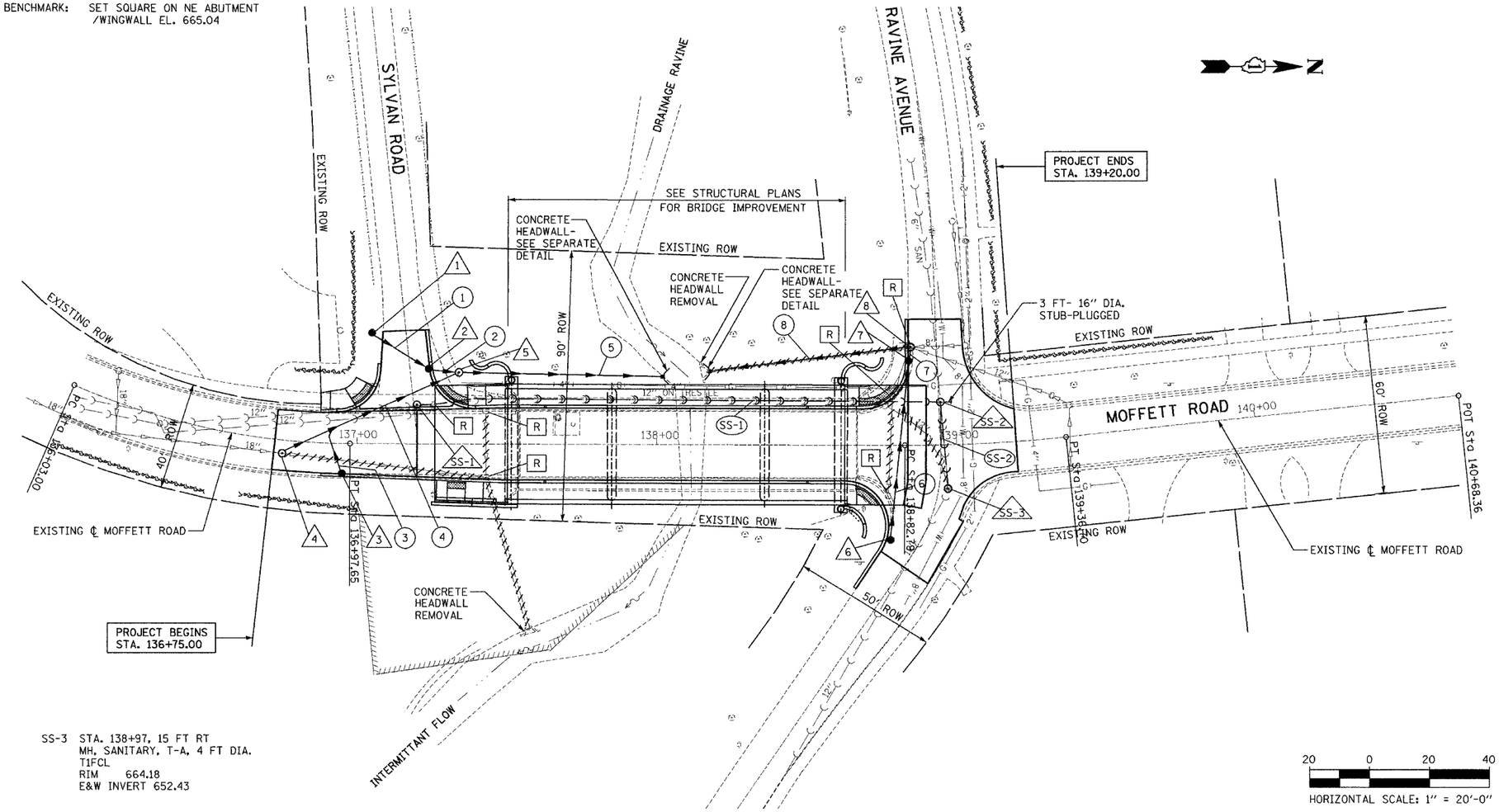
8 STA. 138+83, 33 FT LT
MH, T-A, 5 FT DIA.
T1FOL
RIM 664.16
N INVERT 660.61
NE INVERT 658.66
E INVERT 658.61
S INVERT 658.61

SS-1 STA. 137+20, 13 FT LT
MH, SANITARY, T-A, 5 FT DIA.
T1FCL
RIM 663.62
S INVERT 654.00
SSE INVERT 654.00

SS-2 STA. 138+95, 14.3 FT LT
MH, SANITARY, T-A, 5 FT DIA.
T1FCL
RIM 664.18
N,S & E INVERT 652.58
W INVERT (6") 652.60

SS-3 STA. 138+97, 15 FT RT
MH, SANITARY, T-A, 4 FT DIA.
T1FCL
RIM 664.18
E&W INVERT 652.43

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



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

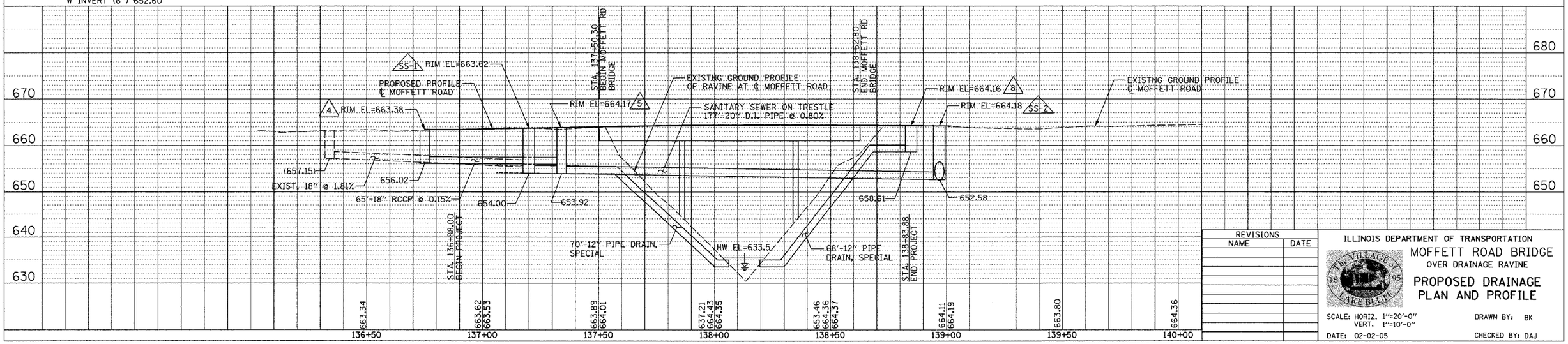
8 PIPE DRAIN, SPECIAL
12" DIA.
73 FT
0 CY TB

SS-1 SAN SEWER, DIP, CL 52, SPECIAL
20" DIA.
177 FT @ 0.80%
102 CY TB

SS-2 SAN SEWER, DIP, CL 52
16" DIA.
28 FT @ 0.54%
55 CY TB

HORIZONTAL SCALE: 1" = 20'-0"

VERTICAL SCALE: 1" = 10'-0"



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"

DRAWN BY: BK

DATE: 02-02-05

CHECKED BY: DAJ

PLAN
DATE
BY
SURVEYED
PLOTTED
DRAWN
CHECKED
ALIGNMENT CHECKED
CADD FILE NAME
NOTE BOOK
NO.

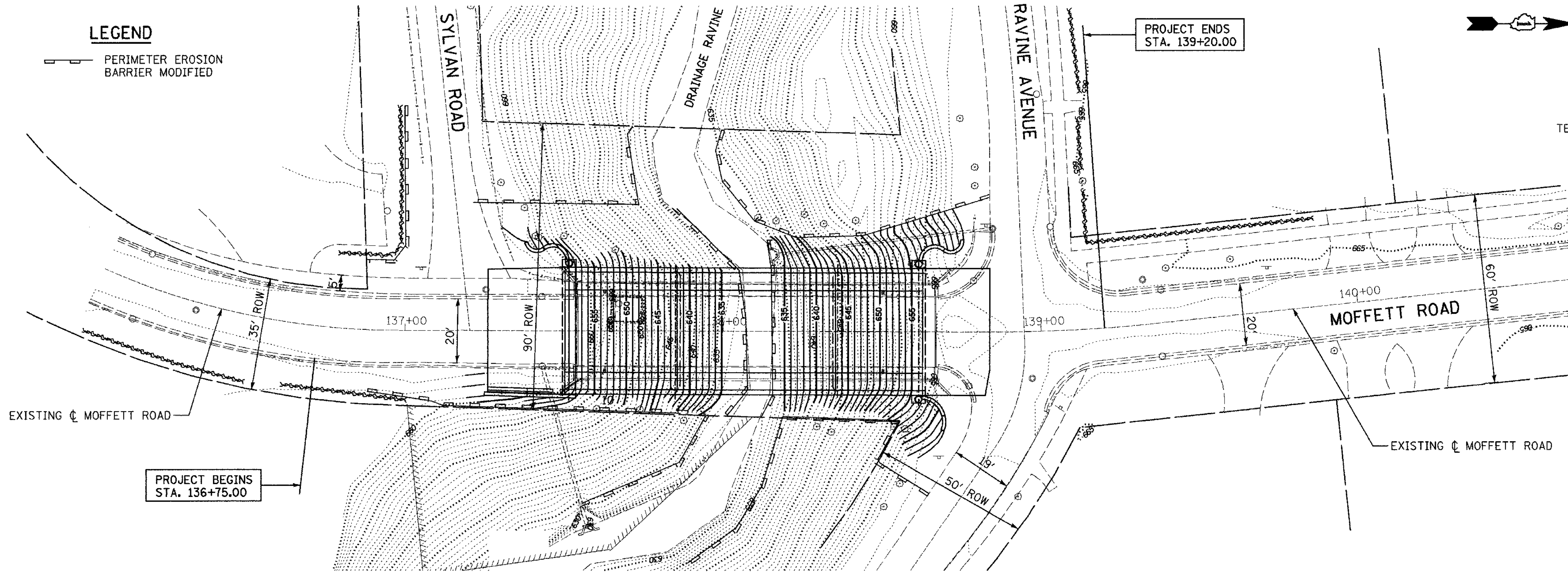
PROFILE
SURVEYED
PLOTTED
DRAWN
CHECKED
ALIGNMENT CHECKED
NOTE BOOK
NO.
STRUCTURE NO(S).

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	02-00025-00-BR	LAKE	40	9
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

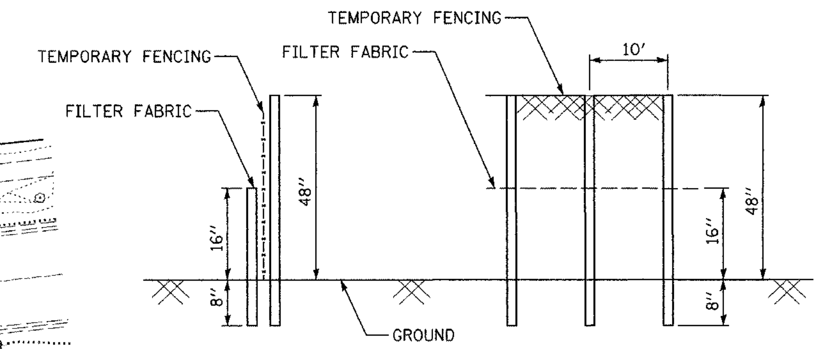
CONTRACT NO. 83790

LEGEND

PERIMETER EROSION BARRIER MODIFIED



GRADING PLAN

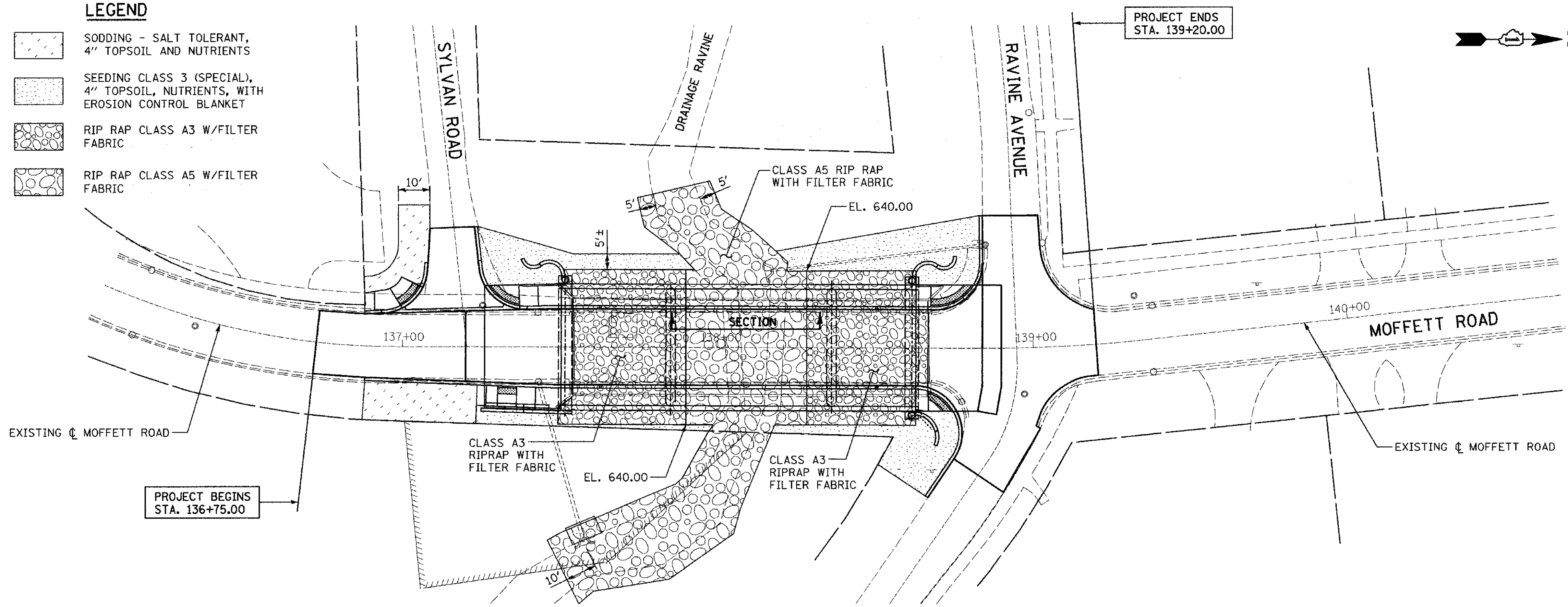


PERIMETER EROSION BARRIER, MODIFIED DETAIL

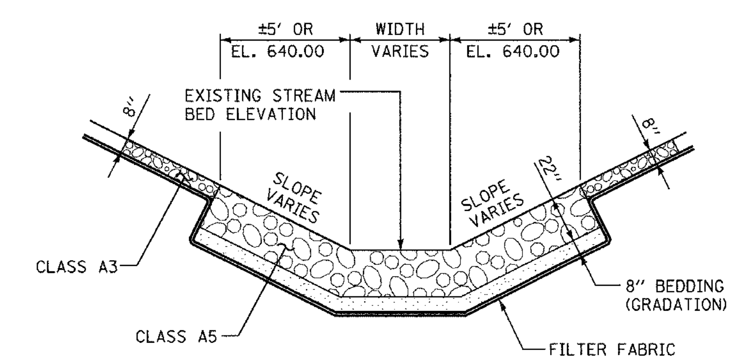
1. TEMPORARY FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES.
2. FILTER FABRIC SHALL BE FASTENED SECURELY TO THE TEMPORARY FENCE WITH WIRE TIES.

LEGEND

- SODDING - SALT TOLERANT, 4" TOPSOIL AND NUTRIENTS
- SEEDING CLASS 3 (SPECIAL), 4" TOPSOIL, NUTRIENTS, WITH EROSION CONTROL BLANKET
- RIP RAP CLASS A3 W/FILTER FABRIC
- RIP RAP CLASS A5 W/FILTER FABRIC



LANDSCAPING PLAN



SECTION CLASS A5 RIPRAP

SCALE: 1" = 20'-0"

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MOFFETT ROAD BRIDGE
OVER DRAINAGE RAVINE

GRADING AND LANDSCAPING PLAN

SCALE: 1"=20'-0" DRAWN BY: BK

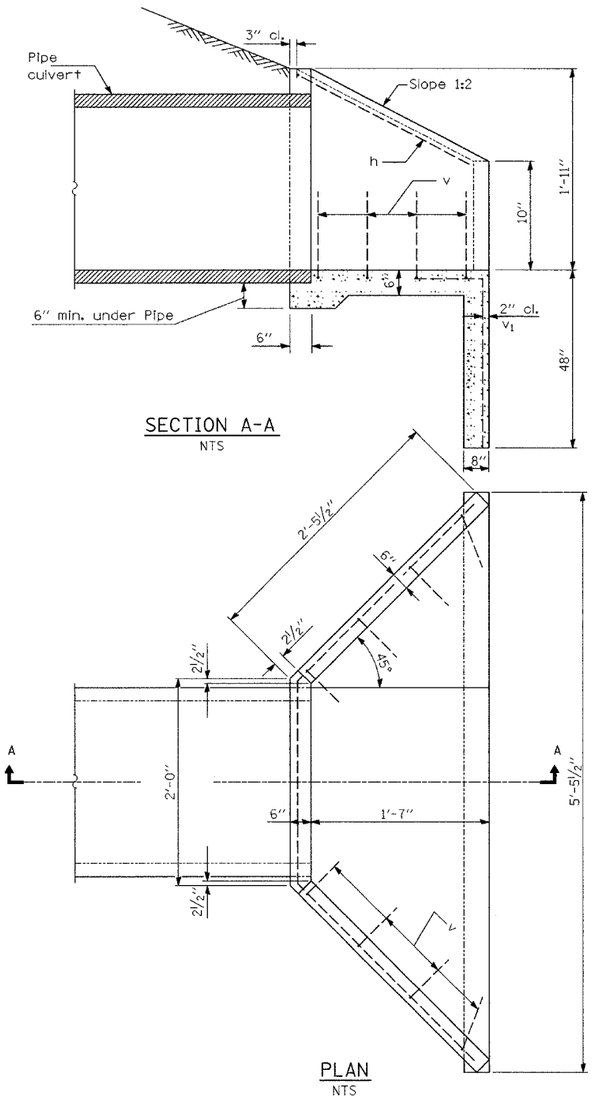
DATE: 02-02-05 CHECKED BY: DAJ

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	02-00025-00-BR	LAKE	40	10
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83790

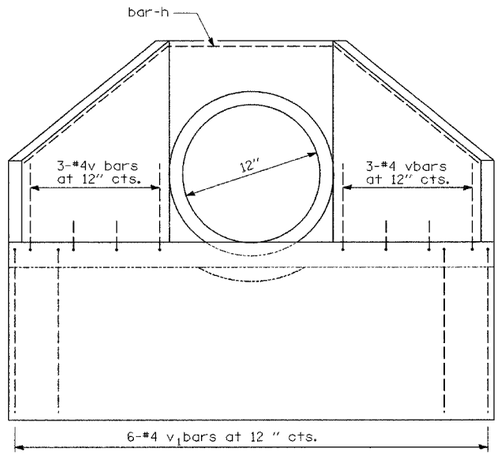
PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, R.O.W. CHECKED, CADD FILE NAME, NOTE BOOK, NO., BY, DATE

PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, ALL NOTED, STRUCTURE NOTATIONS CHKD, NOTE BOOK, NO., BY, DATE

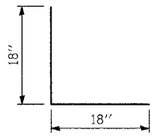


SECTION A-A
NTS

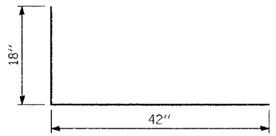
PLAN
NTS



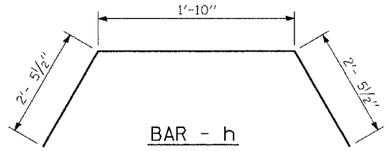
END VIEW
NTS



BAR v



BAR v_1



BAR - h
Bend in field
one required in each headwall

BILL OF MATERIAL

Bar	No.	Size	Length	Weight (lbs)
h	1 *	#4	6'-9"	5
v	6 *	#4	3'-0"	12
v_1	6 *	#4	5'-0"	20

* FOR 1 HEADWALL

THE VOLUME OF CONCRETE PER HEADWALL IS 0.45 CU YDS.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MOFFETT ROAD BRIDGE
OVER DRAINAGE RAVINE

CONCRETE HEADWALL, SPECIAL DETAILS

SCALE:

DRAWN BY: SP

DATE: 02-02-05

CHECKED BY:

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.

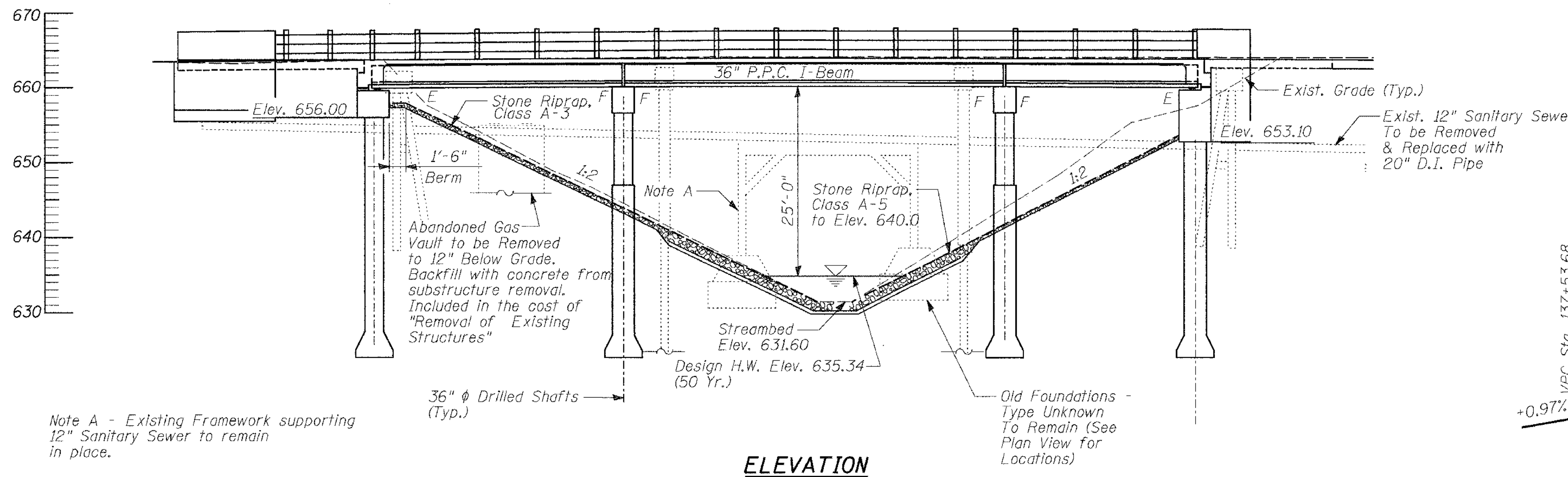
Salvage: None.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

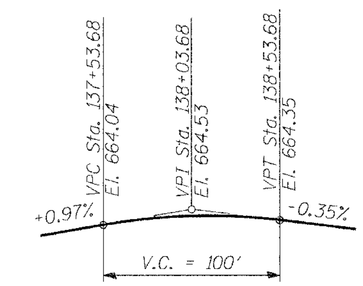
CONTRACT 83790

SHEET NO. 1
30 SHEETS



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

ELEVATION



PROFILE GRADE
(along ℄ roadway)

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface

DESIGN SPECIFICATIONS
AASHTO 2002 Standard Specifications for Highway Bridges, 17th Edition

DESIGN STRESSES

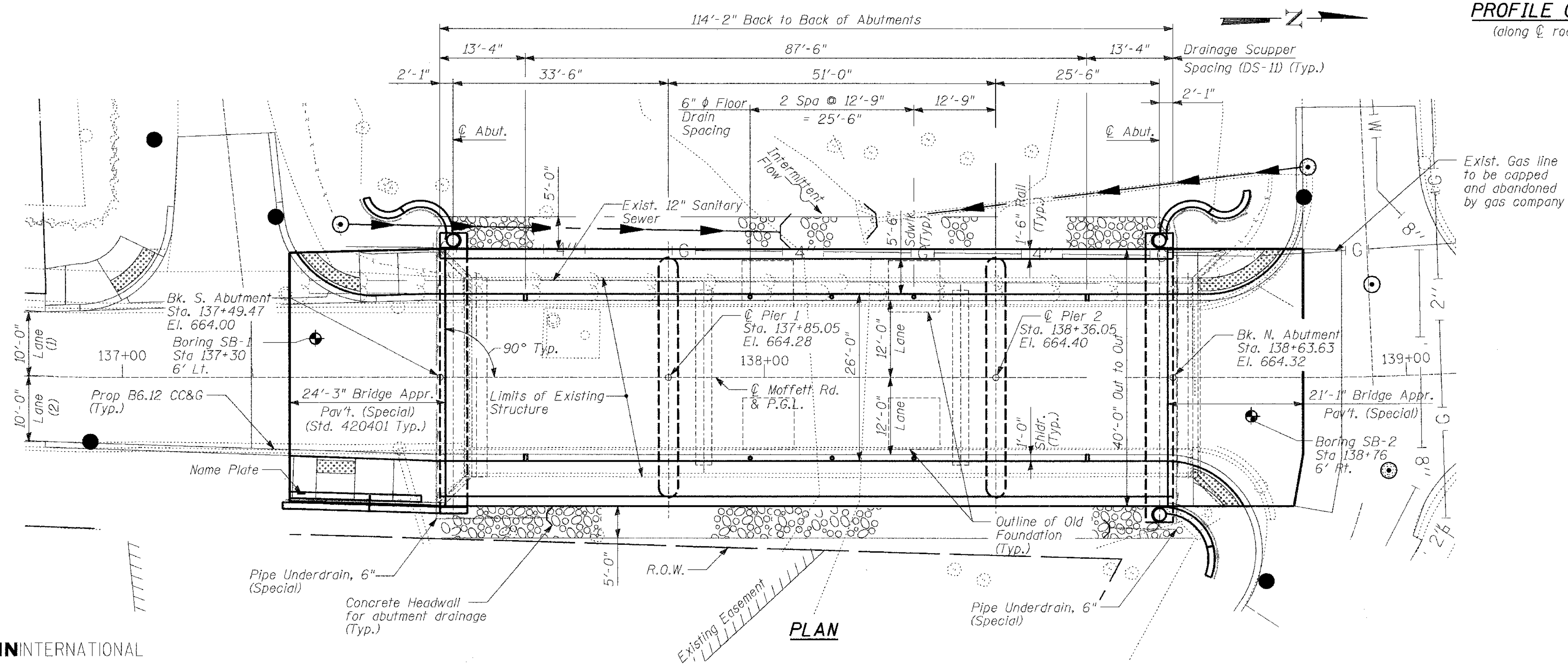
FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

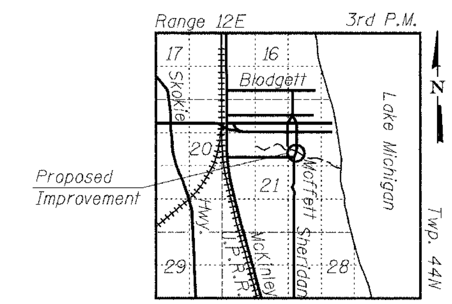
PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
f's = 270,000 psi (½" ϕ low lax. strands)
fsi = 201,960 psi (½" ϕ low lax. strands)

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



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."

STATE OF ILLINOIS — PHILLIP D. FREY — 081-004826 — CHICAGO, ILLINOIS — LICENSED STRUCTURAL ENGINEER

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

Date 2/23/05

(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.

TYLIN INTERNATIONAL

DESIGNED	SP, DR
CHECKED	SP
DRAWN	SP, DR
CHECKED	PF
DATE	12-22-2004

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.
2758	•	LAKE	40	12
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. - 2
30 - SHEETS
CONTRACT 83790
• 02-00025-00-BR

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M31, M42, or M53 Grade 60.

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

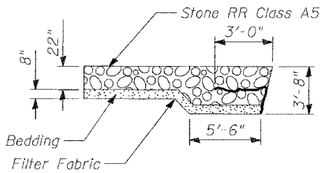
All construction joints shall be bonded.

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".

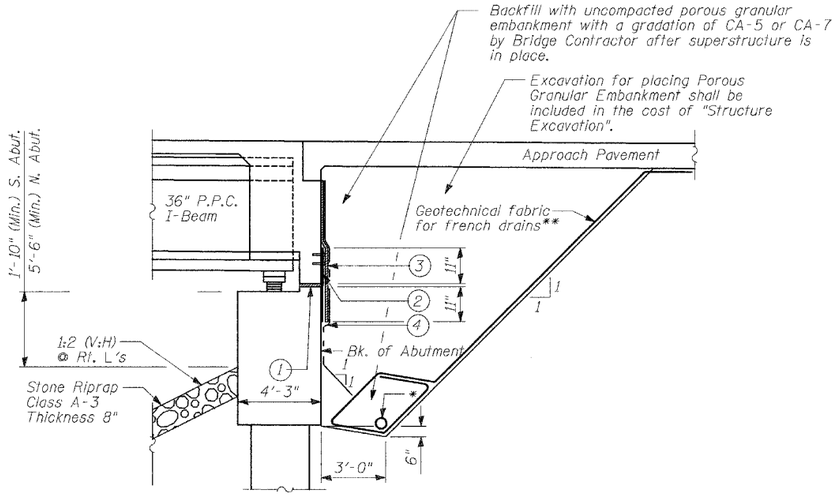
INDEX OF SHEETS

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
POROUS GRANULAR EMBANKMENT	CU YD		351	351
BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	202		202
REMOVAL OF EXISTING STRUCTURES	EACH	1		1
STRUCTURE EXCAVATION	CU YD		384	384
FLOOR DRAINS	EACH	6		6
CONCRETE STRUCTURES, SPECIAL	CU YD		161.6	161.6
CONCRETE SUPERSTRUCTURE	CU YD	195		195
BRIDGE DECK GROOVING	SQ YD	300		300
PROTECTIVE COAT	SQ YD	519		519
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12		12
F&E PP CON I-BM 36"	FOOT	662		662
FURNISHING & ERECTING STRUCTURAL STEEL	POUND	551		551
REINFORCEMENT BARS	POUND		15,140	15,140
REINFORCEMENT BARS, EPOXY COATED	POUND	34130	26560	60,690
NAME PLATES	EACH	1		1
GEOCOMPOSITE WALL DRAIN	SQ YD		71	71
PIPE UNDERDRAINS, 6" (SPECIAL)	FOOT		30	30
COATING SYSTEM FOR CONCRETE	SQ FT	1627	2373	4,000
DRAINAGE SCUPPERS, DS-11	EACH	4		4
FORM LINER TEXTURED SURFACE	SQ YD		123	123
ORNAMENTAL RAILING	FOOT	230		230
BAR SPLICERS	EACH	80		80
DRILLED SHAFT IN SOIL, 36"	FOOT		322	322
ARCHITECTURAL CONCRETE	CU YD		9.7	9.7



RIPRAP ANCHOR DETAIL



SECTION THRU SEMI-INTEGRAL ABUTMENT

** Included in the cost of "Porous Granular Embankment".

* A 6" ϕ perforated drain pipe shall be situated at the bottom of an approximate 2'x2' area of porous granular embankment. The 2'x2' area shall be wrapped completely in geotechnical fabric for french drains. The pipe, porous granular material, and geotechnical fabric for french drains shall be included in the cost of Concrete Structures, Special. Pipes shall drain onto concrete headwalls (Article 601.05 of the Std. Specifications and Highway Std. 601101).

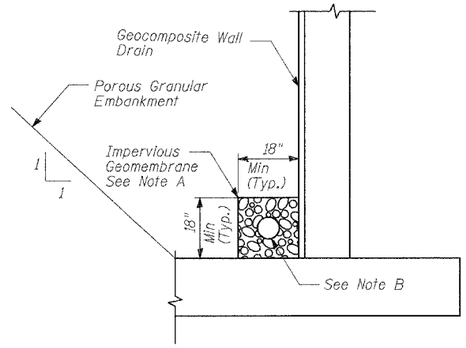
(1) 2" Preformed Joint Filler (Section 1051 of the Standard Specifications) bonded to abutment cap with approved adhesive (full width of cap)

(2) Fabric Reinforced Elastomeric Mat (See Special Provisions). Fabric mat shall be 24" wide and attached full width to the abutment cap with a $\frac{3}{8}$" x 5" steel plate and $\frac{1}{2}$" ϕ studs with nuts and washers at 12" cts.

(3) 2" Preformed Joint Filler (Section 1051 of the Standard Specifications) bonded to the superstructure (full width of cap)

(4) Geocomposite Wall Drain (Section 591 of the Standard Specifications - full width of cap).

Items (1) (2) (3) & (4) shall be included in the cost of Concrete Superstructure



SECTION THRU ABUTMENT WINGWALLS AND CANTILEVER RETAINING WALLS

Note A
Cost included with Geocomposite Wall Drain

Note B:
6" Perforated pipe drain according to Section 601 of the Standard Specifications, encased in 18" of CA-5 or CA-7 course aggregate. Cost included with Concrete Structures, Special.

STATION 138+06.55
BUILT 200 BY
VILLAGE OF LAKE BLUFF
SEC. 02-00025-00-BR
F.A.U. RT. 2758
STR. NO. 049-6803 LOADING HS20

NAME PLATE
See Std. 515001

TYLIN INTERNATIONAL

DESIGNED	-	SP
CHECKED	-	PF
DRAWN	-	SP
CHECKED	-	PF

DATE: 02-23-2005

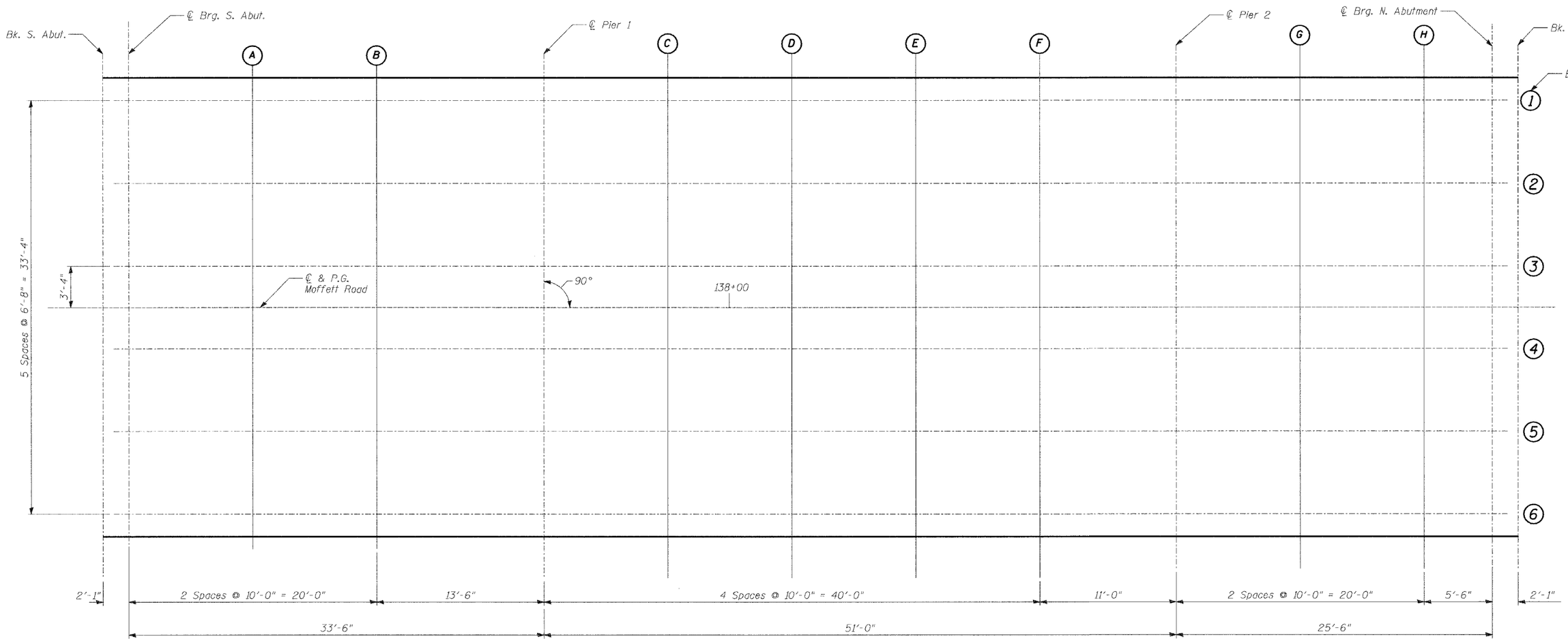
GENERAL NOTES/BILL OF MATERIAL

MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. Ø49-68Ø3

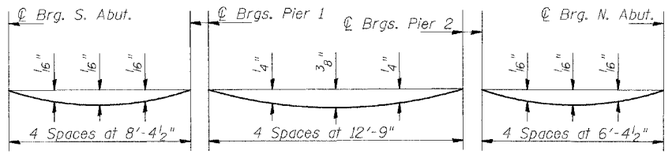
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	13
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. - 3
30 - SHEETS
CONTRACT 83790
• 02-00025-00-BR



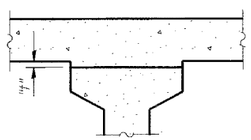
PLAN



DEAD LOAD DEFLECTION DIAGRAM

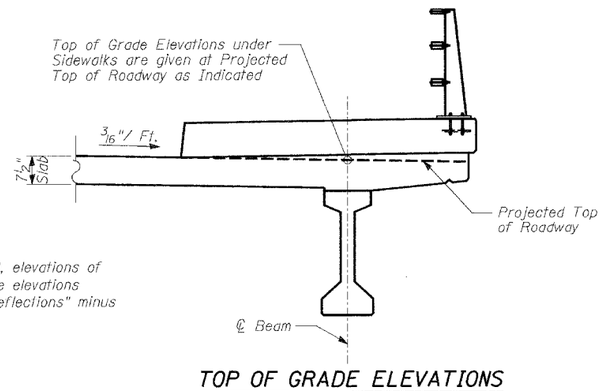
(Includes weight of concrete, excluding beams).

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 below.



To determine "t": After all precast prestressed beams have 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 Deflections" minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS



TOP OF GRADE ELEVATIONS UNDER SIDEWALK

TY·LIN INTERNATIONAL

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

DATE: 01-28-2005

TOP OF SLAB ELEVATIONS - LAYOUT

MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. Ø49-68Ø3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	*	LAKE	40	14
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

* 02-00025-00-BR

SHEET NO. - 4
30 - SHEETS
CONTRACT 83790

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF S. ABUT.	137+49.47	-16.67	663.744	663.744
℄ BRG. S. ABUT.	137+51.55	-16.67	663.764	663.764
A	137+61.55	-16.67	663.857	663.862
B	137+71.55	-16.67	663.937	663.943
℄ PIER 1	137+85.05	-16.67	664.024	664.024
C	137+95.05	-16.67	664.073	664.094
D	138+05.05	-16.67	664.109	664.141
E	138+15.05	-16.67	664.131	664.164
F	138+25.05	-16.67	664.141	664.164
℄ PIER 2	138+36.05	-16.67	664.136	664.136
G	138+46.05	-16.67	664.117	664.120
H	138+56.05	-16.67	664.086	664.088
℄ BRG. N. ABUT.	138+61.55	-16.67	664.067	664.067
BK. OF N. ABUT.	138+63.63	-16.67	664.060	664.060

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF S. ABUT.	137+49.47	-10.00	663.848	663.848
℄ BRG. S. ABUT.	137+51.55	-10.00	663.868	663.868
A	137+61.55	-10.00	663.961	663.967
B	137+71.55	-10.00	664.041	664.047
℄ PIER 1	137+85.05	-10.00	664.128	664.128
C	137+95.05	-10.00	664.177	664.199
D	138+05.05	-10.00	664.213	664.245
E	138+15.05	-10.00	664.235	664.269
F	138+25.05	-10.00	664.245	664.268
℄ PIER 2	138+36.05	-10.00	664.240	664.240
G	138+46.05	-10.00	664.222	664.224
H	138+56.05	-10.00	664.190	664.192
℄ BRG. N. ABUT.	138+61.55	-10.00	664.171	664.171
BK. OF N. ABUT.	138+63.63	-10.00	664.164	664.164

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF S. ABUT.	137+49.47	-3.33	663.952	663.952
℄ BRG. S. ABUT.	137+51.55	-3.33	663.972	663.972
A	137+61.55	-3.33	664.065	664.071
B	137+71.55	-3.33	664.145	664.152
℄ PIER 1	137+85.05	-3.33	664.232	664.232
C	137+95.05	-3.33	664.281	664.303
D	138+05.05	-3.33	664.317	664.350
E	138+15.05	-3.33	664.340	664.373
F	138+25.05	-3.33	664.349	664.372
℄ PIER 2	138+36.05	-3.33	664.344	664.344
G	138+46.05	-3.33	664.326	664.328
H	138+56.05	-3.33	664.295	664.296
℄ BRG. N. ABUT.	138+61.55	-3.33	664.275	664.275
BK. OF N. ABUT.	138+63.63	-3.33	664.268	664.268

℄ MOFFETT ROAD

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF S. ABUT.	137+49.47	0.00	664.004	664.004
℄ BRG. S. ABUT.	137+51.55	0.00	664.024	664.024
A	137+61.55	0.00	664.117	664.123
B	137+71.55	0.00	664.197	664.204
℄ PIER 1	137+85.05	0.00	664.284	664.284
C	137+95.05	0.00	664.333	664.355
D	138+05.05	0.00	664.369	664.402
E	138+15.05	0.00	664.392	664.425
F	138+25.05	0.00	664.401	664.424
℄ PIER 2	138+36.05	0.00	664.396	664.396
G	138+46.05	0.00	664.378	664.380
H	138+56.05	0.00	664.347	664.348
℄ BRG. N. ABUT.	138+61.55	0.00	664.327	664.327
BK. OF N. ABUT.	138+63.63	0.00	664.320	664.320

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF S. ABUT.	137+49.47	3.33	663.952	663.952
℄ BRG. S. ABUT.	137+51.55	3.33	663.972	663.972
A	137+61.55	3.33	664.065	664.071
B	137+71.55	3.33	664.145	664.152
℄ PIER 1	137+85.05	3.33	664.232	664.232
C	137+95.05	3.33	664.281	664.303
D	138+05.05	3.33	664.317	664.350
E	138+15.05	3.33	664.340	664.373
F	138+25.05	3.33	664.349	664.372
℄ PIER 2	138+36.05	3.33	664.344	664.344
G	138+46.05	3.33	664.326	664.328
H	138+56.05	3.33	664.295	664.296
℄ BRG. N. ABUT.	138+61.55	3.33	664.275	664.275
BK. OF N. ABUT.	138+63.63	3.33	664.268	664.268

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF S. ABUT.	137+49.47	10.00	663.848	663.848
℄ BRG. S. ABUT.	137+51.55	10.00	663.868	663.868
A	137+61.55	10.00	663.961	663.967
B	137+71.55	10.00	664.041	664.047
℄ PIER 1	137+85.05	10.00	664.128	664.128
C	137+95.05	10.00	664.177	664.199
D	138+05.05	10.00	664.213	664.245
E	138+15.05	10.00	664.235	664.269
F	138+25.05	10.00	664.245	664.268
℄ PIER 2	138+36.05	10.00	664.240	664.240
G	138+46.05	10.00	664.222	664.224
H	138+56.05	10.00	664.190	664.192
℄ BRG. N. ABUT.	138+61.55	10.00	664.171	664.171
BK. OF N. ABUT.	138+63.63	10.00	664.164	664.164

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF S. ABUT.	137+49.47	16.67	663.744	663.744
℄ BRG. S. ABUT.	137+51.55	16.67	663.764	663.764
A	137+61.55	16.67	663.857	663.862
B	137+71.55	16.67	663.937	663.943
℄ PIER 1	137+85.05	16.67	664.024	664.024
C	137+95.05	16.67	664.073	664.094
D	138+05.05	16.67	664.109	664.141
E	138+15.05	16.67	664.131	664.164
F	138+25.05	16.67	664.141	664.164
℄ PIER 2	138+36.05	16.67	664.136	664.136
G	138+46.05	16.67	664.117	664.120
H	138+56.05	16.67	664.086	664.088
℄ BRG. N. ABUT.	138+61.55	16.67	664.067	664.067
BK. OF N. ABUT.	138+63.63	16.67	664.060	664.060

TY-LIN INTERNATIONAL

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

DATE: 01-28-2005

TOP OF SLAB ELEVATIONS

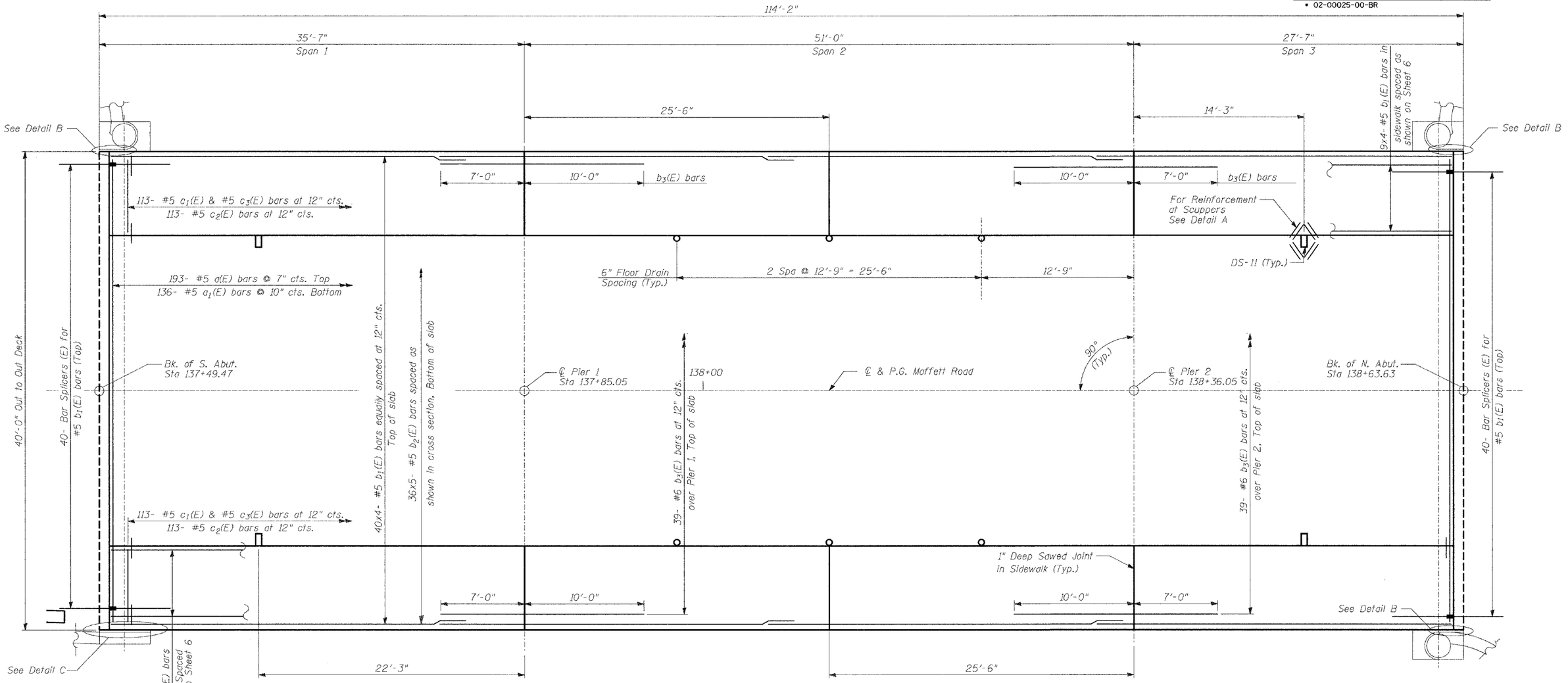
MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. Ø49-6ØØ3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

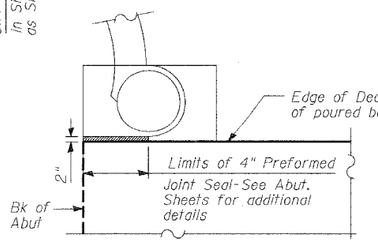
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	15
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

• 02-00025-00-BR

SHEET NO. - 5
30 - SHEETS
CONTRACT 83790

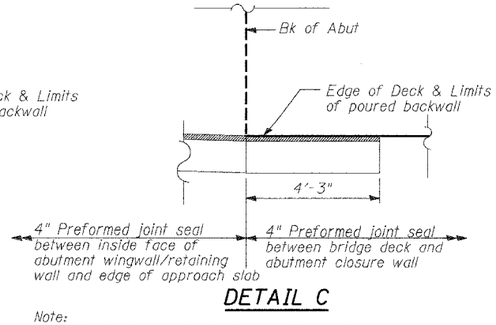


PLAN



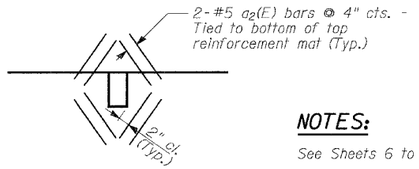
DETAIL B

South Abutment, west edge of deck shown, similar at North Abutment, west edge of deck and east edge of deck



DETAIL C

Note:
Work Details B and C with Sheets 16 and 18.



DETAIL A

Cut Longitudinal reinforcement to clear drainage scuppers.

NOTES:

See Sheets 6 to 10 for additional superstructure details.

For Bill of Material, See Sheet 6.

Bars indicated thus: 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

Reinforcement bars designated (E) shall be epoxy coated.

Minimum lap splice for #5 bars shall be 2'-2".

TY·LIN INTERNATIONAL

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

DATE: 02-23-2005

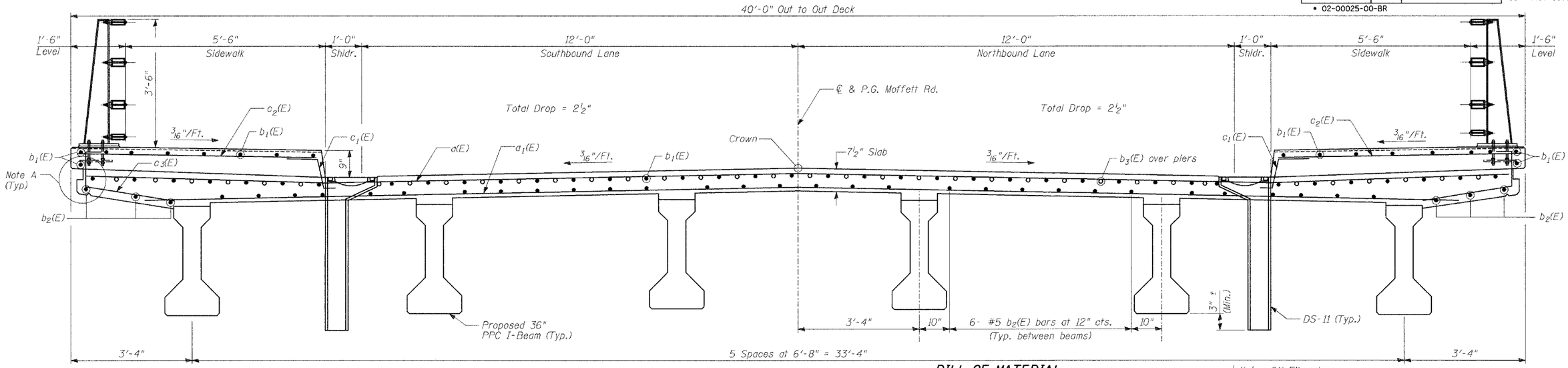
SUPERSTRUCTURE

MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. Ø49-68Ø3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	*	LAKE	40	16
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

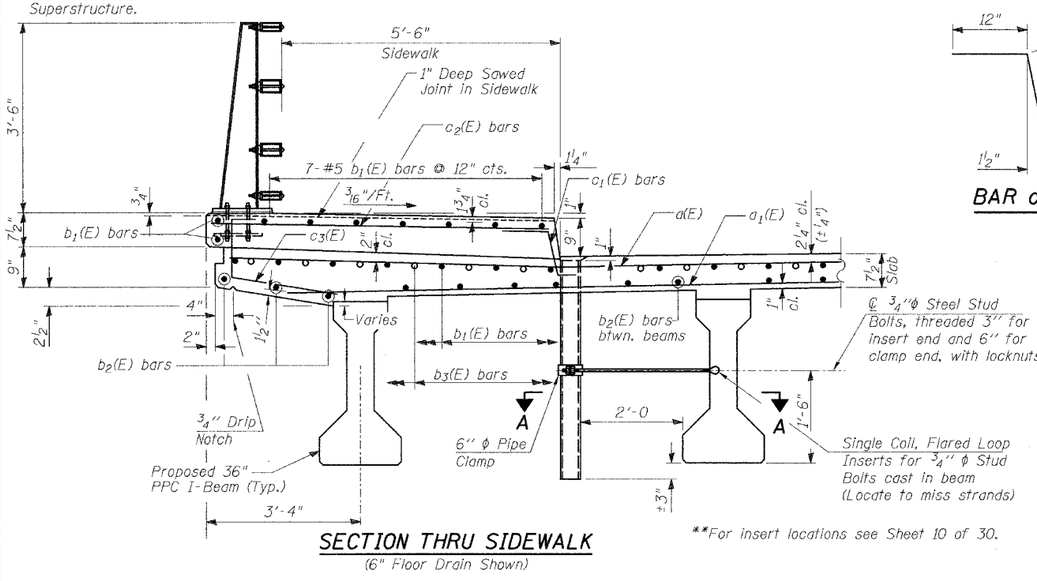
SHEET NO. - 6
30 - SHEETS
CONTRACT 83790
* 02-00025-00-BR



Note A:
For details of notch, See Sheet 26 of 30.
Cost is included with Concrete Superstructure.

SECTION THRU SUPERSTRUCTURE

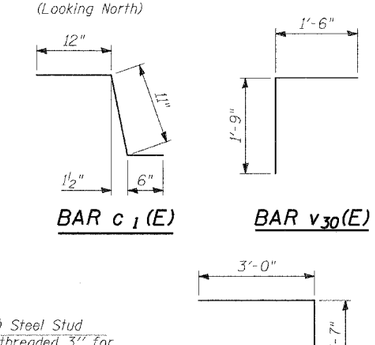
(Looking North)



**For insert locations see Sheet 10 of 30.

SECTION THRU SIDEWALK

(6" Floor Drain Shown)



BAR c_1 (E)

BAR v_{30}(E)

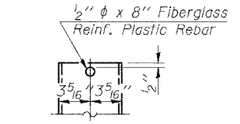
BAR s_{30}(E)

BAR c_3 (E)

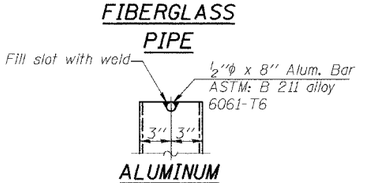
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a (E)	193	#5	39'-4"	
a_1(E)	136	#5	37'-10"	
a_2(E)	32	#5	1'-6"	
b_1(E)	232	#5	29'-8"	
b_2(E)	180	#5	24'-2"	
b_3(E)	78	#6	17'-0"	
c_1(E)	226	#5	2'-5"	
c_2(E)	226	#5	6'-8"	
c_3(E)	226	#5	3'-11"	
m_1(E)	32	#6	21'-0"	
m_2(E)	24	#6	8'-1"	
m_3(E)	40	#6	4'-10"	
m_4(E)	8	#6	2'-1"	
m_{10} (E)	40	#4	5'-10"	
m_{11} (E)	12	#8	5'-6"	
s_{30}(E)	72	#5	7'-7"	
s_{31}(E)	82	#4	9'-4"	
s_{32}(E)	70	#4	9'-8"	
u_1(E)	80	#5	3'-3"	
v_{30}(E)	80	#5	3'-3"	
Concrete Superstructure			CU YD	195
Reinforcement Bars, Epoxy Coated			POUND	34130
Bridge Deck Grooving			SQ YD	300
Protective Coat			SQ YD	519
Bar Splicers			EACH	80

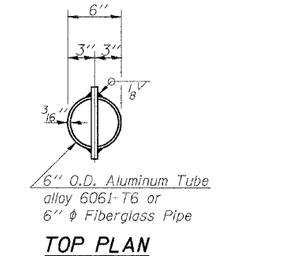
Notes:
Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete.
The clamping device and inserts shall be galvanized according to AASHTO M 232.



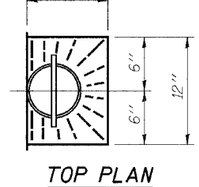
FIBERGLASS PIPE



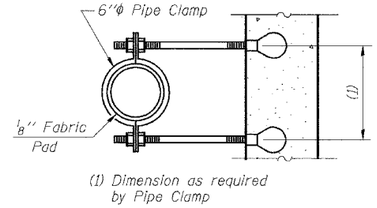
ALUMINUM TUBE



TOP PLAN
(Showing Aluminum Tube)



TOP PLAN



(1) Dimension as required by Pipe Clamp

SECTION A-A

Reinforcement Bars designated (E) shall be epoxy coated.

BAR s_{31}(E)

BAR s_{32}(E)

BAR u_1(E)

TYLIN INTERNATIONAL

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

DATE: 02-23-2005

SUPERSTRUCTURE DETAILS 1

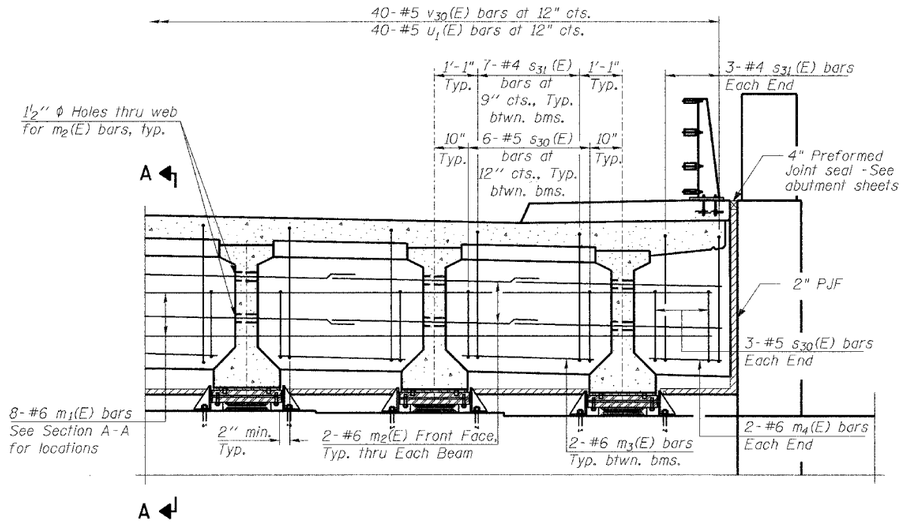
MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. 049-6803

structure\plot\sheet2.dgn 02/23/05 07:38:49 PM

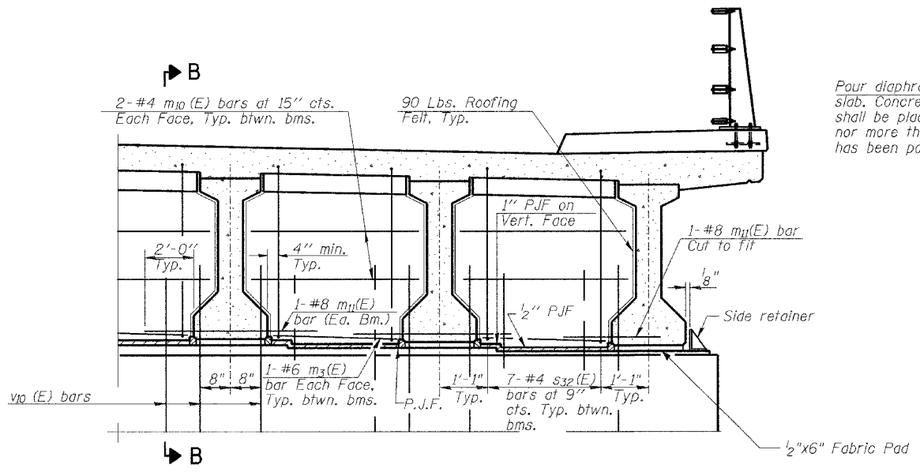
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	*	LAKE	40	17
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. - 7
30 - SHEETS
CONTRACT 83790
* 02-00025-00-BR



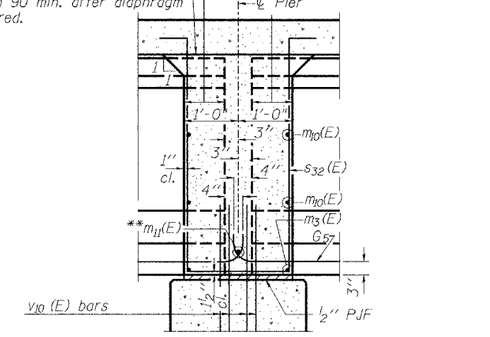
DIAPHRAGM ELEVATION AT N. & S. ABUTMENT



DIAPHRAGM ELEVATION AT PIERS 1 & 2

Pour diaphragm flush with bott. of slab. Concrete in slab above this line shall be placed not less than 45 min. nor more than 90 min. after diaphragm has been poured.

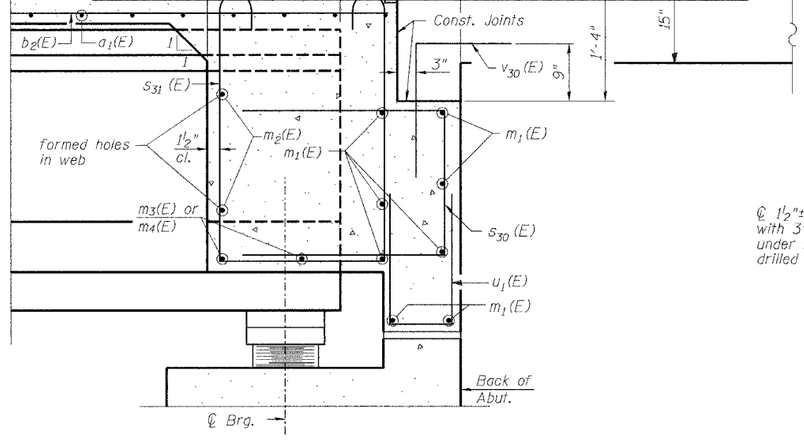
Roofing felt shall be bonded to side of beam embedded into diaphragm.



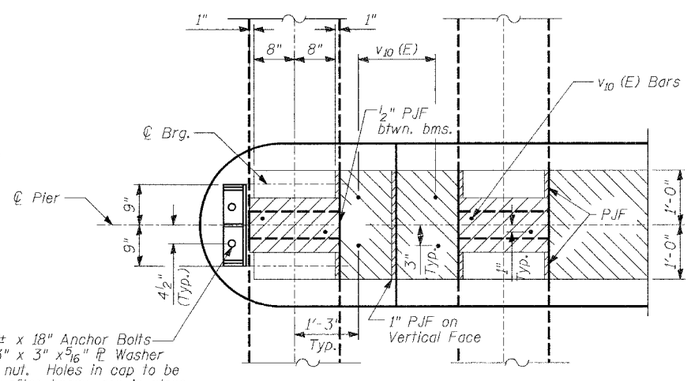
SECTION B-B

Dimensions along ℄ of beam, except as shown.

**Tie $m_{11}(E)$ bar with No. 9 wire tightly fastened to prevent any movement between bars

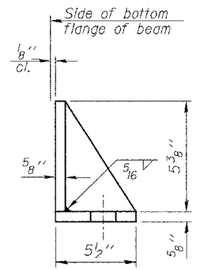


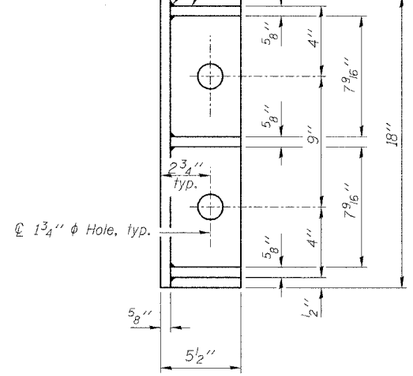
SECTION A-A



PLAN AT PIER

See Sheets 19-20 for locations of $v_{10}(E)$ bars





SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

MIN. BAR LAP

#6 bar = 2'-9"

Notes:
Reinforcement bars in diaphragm are billed with superstructure on Sheet 6 of 30.
Concrete in diaphragm is included with Concrete Superstructure on Sheet 6 of 30.
For details of bars $s_{30}(E)$, $s_{31}(E)$ and $s_{32}(E)$ see Sheet 6 of 29.
The $s_{30}(E)$, $s_{31}(E)$ and $s_{32}(E)$ bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
Cost of 90 Lb. roofing felt is included with Concrete Superstructure.
The side retainer shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Paid for as Furnishing & Erecting Structural Steel
See Sheet 21 of 30 for anchor bolt details.

TY·LIN INTERNATIONAL

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

DATE: 02-23-2005

SUPERSTRUCTURE DETAILS 2

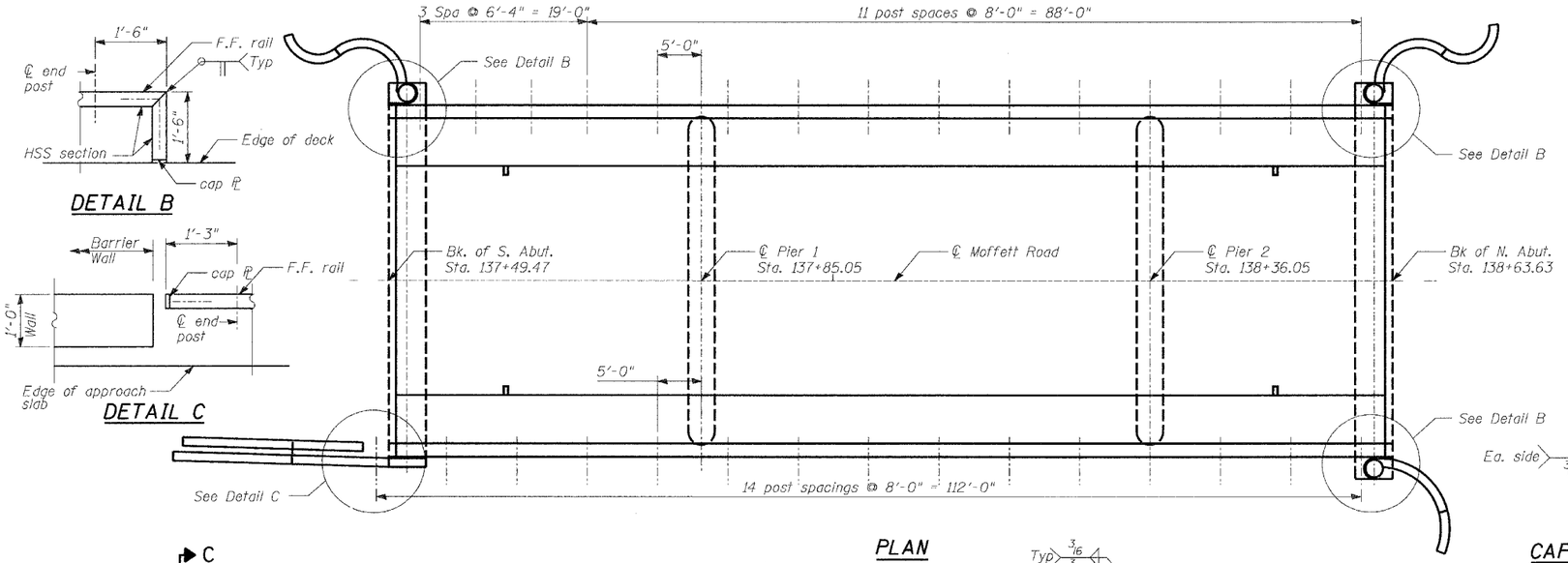
MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. 049-6803

...\structural\sheets\str2.dgn 02/23/05 11:34:34 PM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	18
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT-		

SHEET NO. - 8
30 - SHEETS
CONTRACT 83790
• 02-00025-00-BR



PLAN

DETAIL B

DETAIL C

NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500, Grade B, Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0°F.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36.

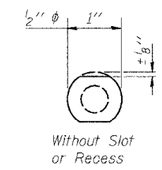
Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164.

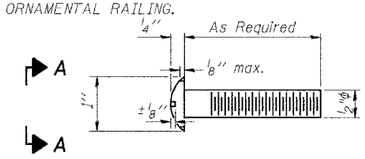
All bolts, nuts and washers shall be galvanized according to AASHTO M111 and ASTM A385. All other rail elements including railing, posts, splices, plates and wire mesh shall be galvanized and powder coated per the Special Provisions.

No field drilling of the HSS sections will be permitted.

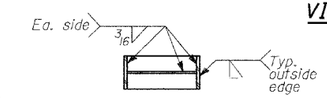
All welding shall be done in accordance with AWS D1.5 Bridge Welding Code. Use min. size unless noted.

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for ORNAMENTAL RAILING.



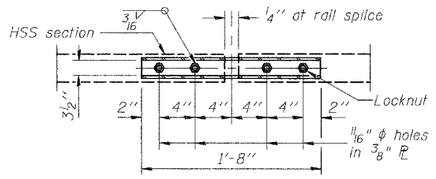


DETAIL OF ½" ϕ ROUND HEAD BOLTS

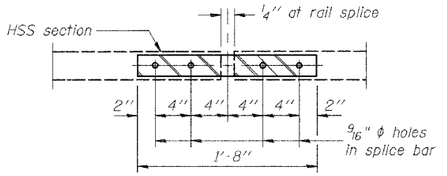


CAP ℄ DETAIL

VIEW A-A



VIEW B-B

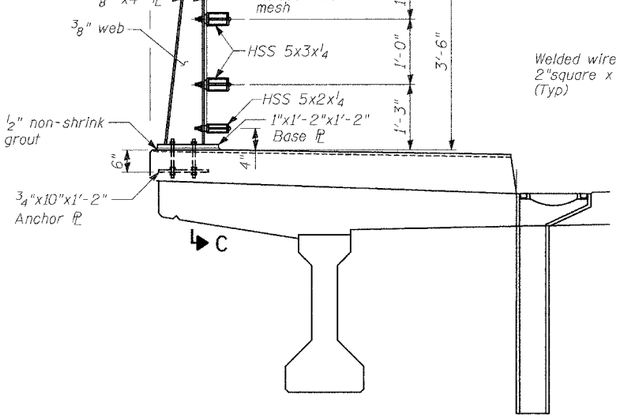


VIEW D-D

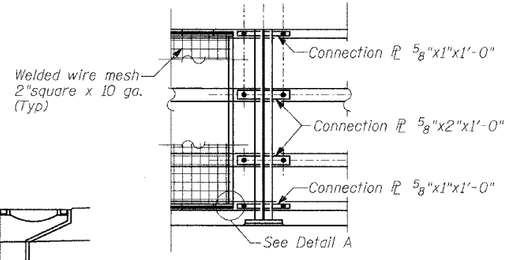
SECTIONS AT RAIL SPLICE
(For HSS 5x2)

(1) ½" ϕ x 6½" round head bolts (with slot or approved recess in head) with locknut and flat washer. 5/8" ϕ holes in HSS, shop drilled

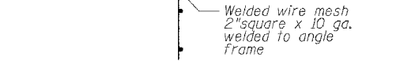
SECTION AT RAIL SPLICE
(For HSS 5x3)



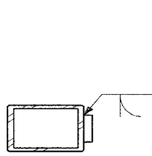
SECTION THRU RAIL



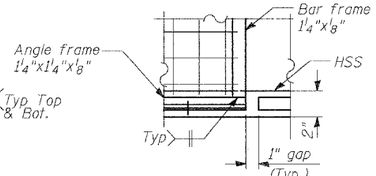
SECTION C-C



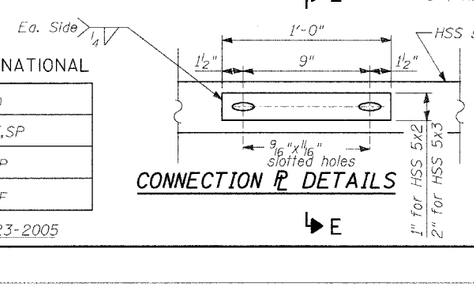
WIRE MESH CONN. AT TOP & BOT. RAIL
(Top rail shown. mirror for bot. rail)



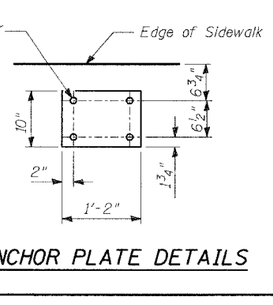
SECTION E-E



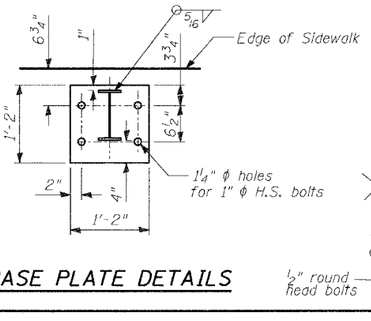
DETAIL A



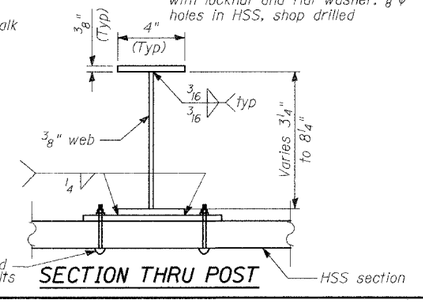
CONNECTION ℄ DETAILS



ANCHOR PLATE DETAILS



BASE PLATE DETAILS



SECTION THRU POST

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Ornamental Railing	Foot	230'-0"

TYLIN INTERNATIONAL

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

DATE: 02-23-2005

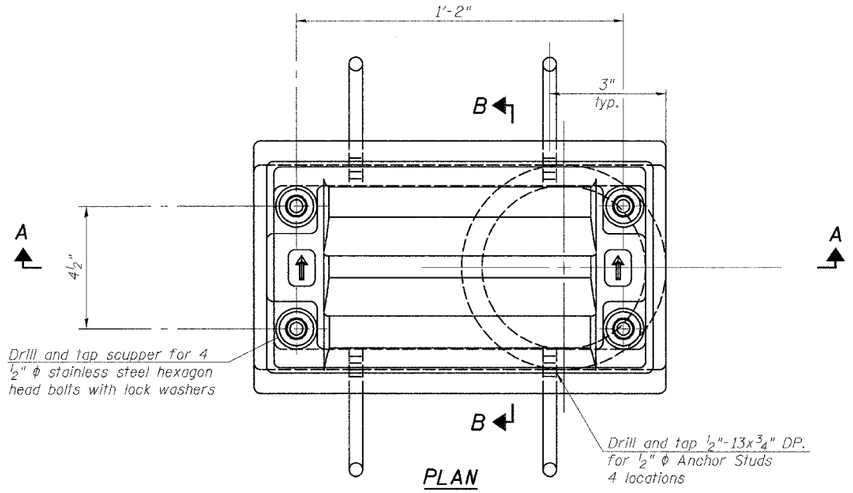
RAILING DETAILS

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

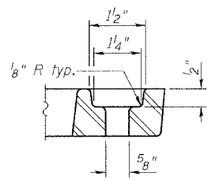
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	19
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

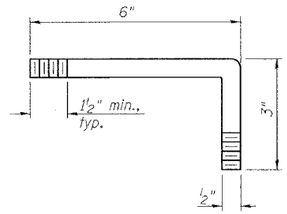
SHEET NO. -9
30 - SHEETS
CONTRACT 83790
• 02-00025-00-BR



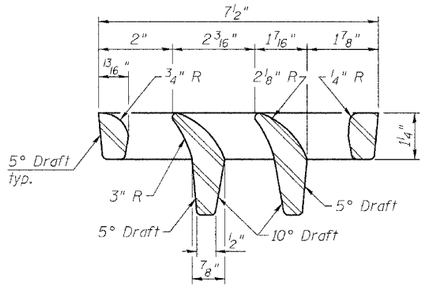
PLAN



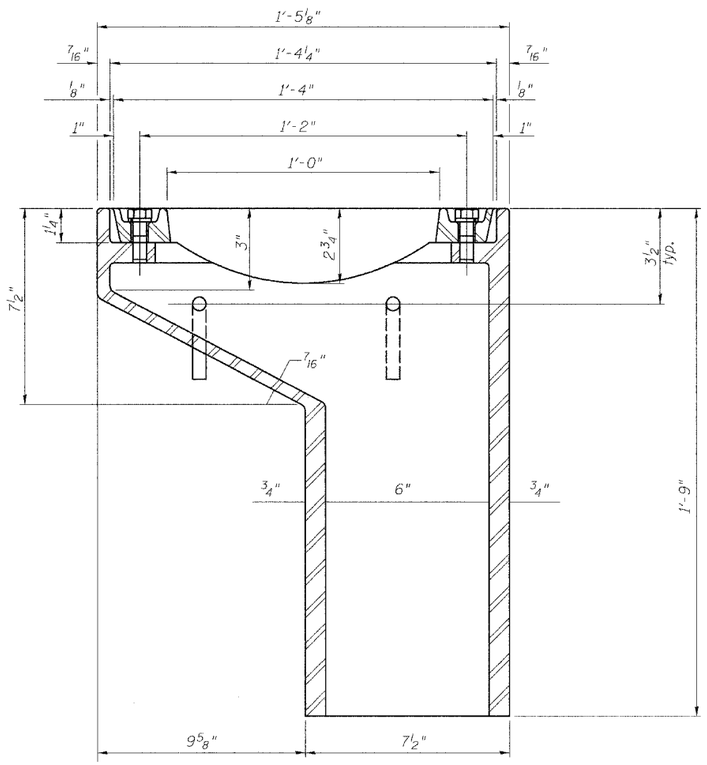
BOLT HOLE DETAIL



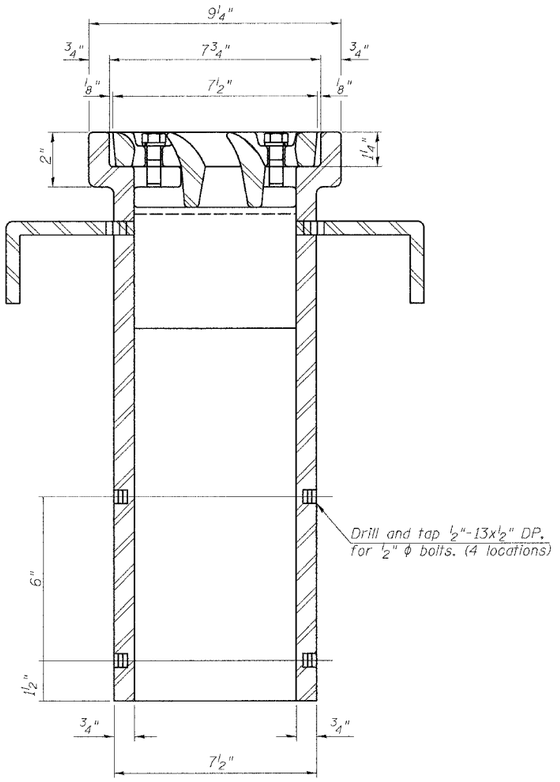
ANCHOR STUD DETAIL



VANE GRATE DETAIL



SECTION A-A



SECTION B-B

Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	4

TYLIN INTERNATIONAL

DESIGNED	-	SP
CHECKED	-	SP
DRAWN	-	SP
CHECKED	-	

DATE: 02-23-2005

STEEL DRAINAGE SCUPPER

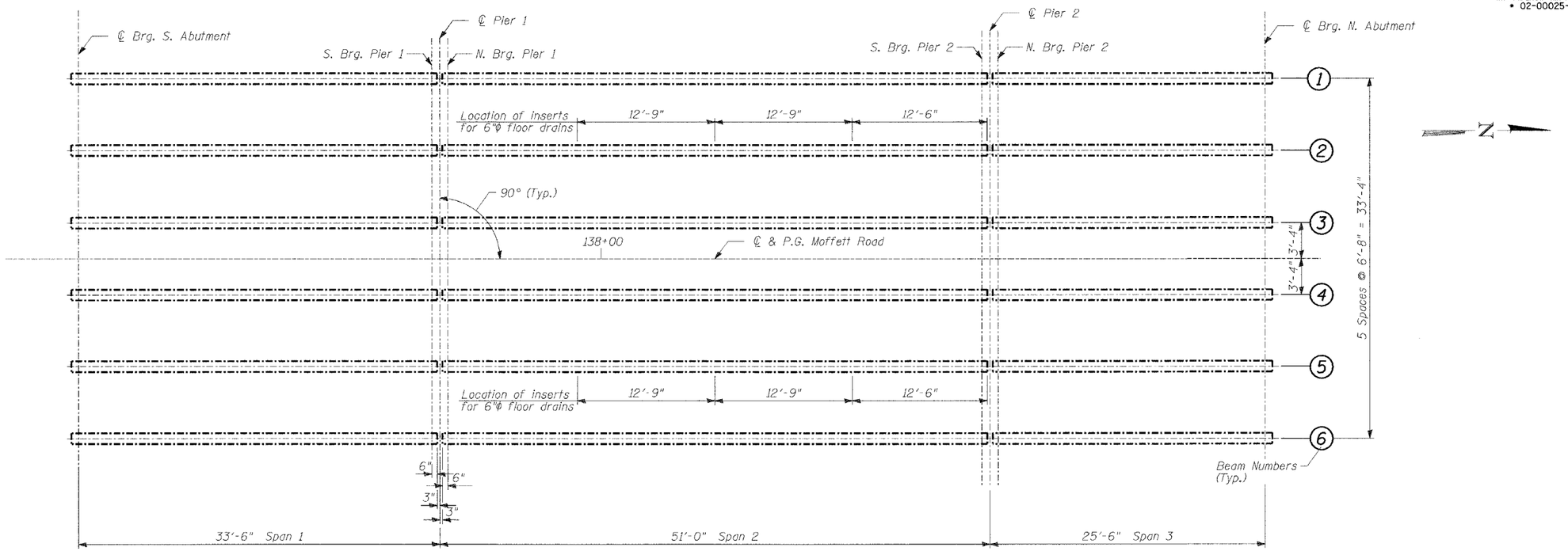
MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. 049-6803

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	20
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

• 02-00025-00-BR

SHEET NO. 10
30 - SHEETS
CONTRACT 83790



PLAN

INTERIOR BEAM MOMENT TABLE						
		0.4 Sp. #1	Pier 1	0.5 Sp. #2	Pier 2	0.6 Sp. #3
I	(in^4)	48,648		48,648		48,648
I'	(in^4)	167,637		167,637		167,637
S_b	(in^3)	3,165		3,165		3,165
S_b'	(in^3)	5,850		5,850		5,850
S_t	(in^3)	2,358		2,358		2,358
S_t'	(in^3)	24,556		24,556		24,556
D_L	(k/')	1.02		1.02		1.02
M_{DL}	('k)	137		332		80
s_{DL}	(k/')	0.70	0.70	0.70	0.70	0.70
M_{SDL}	('k)	39	137	97	123	5
M_{LL}	('k)	170	161	223	186	114
M (Imp)	('k)	51	47	62	56	34

INTERIOR BEAM REACTION TABLE							
		S. Abut.	Pier 1 Span 1	Pier 1 Span 2	Pier 2 Span 2	Pier 2 Span 3	N. Abut.
R_{DL}	(k)	17.1	17.1	26.0	26.0	13.0	13.0
R_{SDL}	(k)	7.6	17.0	17.0	15.6	15.6	4.1
R_{LL}	(k)	29.9	20.2	20.2	20.6	20.6	26.7
Imp.	(k)	8.9	4.8	4.8	5.1	5.1	8.0
R (Total)	(k)	63.5	59.1	68.0	67.3	54.3	51.8

I and I' are the moment of inertia and composite moment of inertia of the beam section.
S_b and S_b' are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.
S_t and S_t' are the non-composite and composite section modulus for the top fiber of the prestressed beam.

NOTES:
See Sheets 11 to 13 for Beam details.

TY·LIN INTERNATIONAL

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

DATE: 01-28-2005

FRAMING PLAN

MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. Ø49-6803

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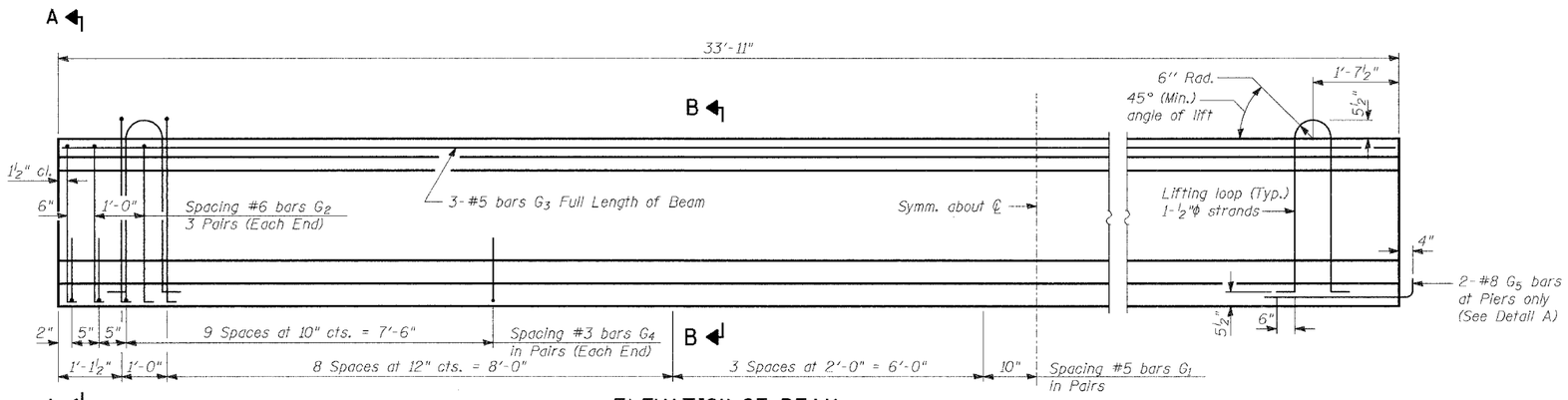
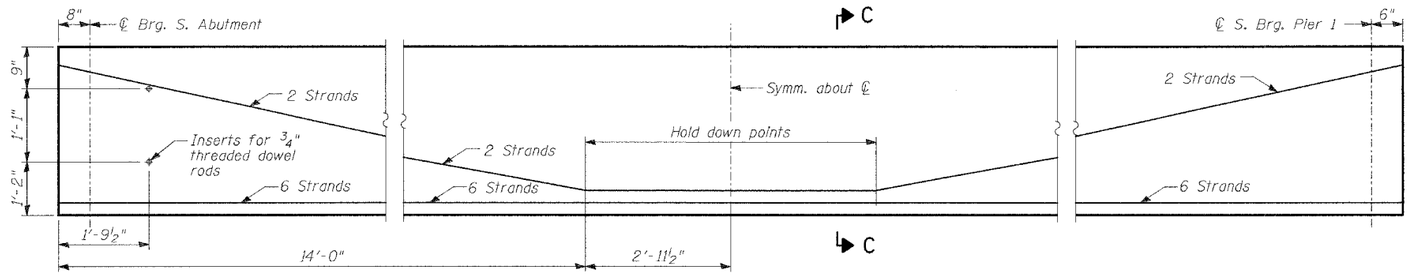
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	21
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

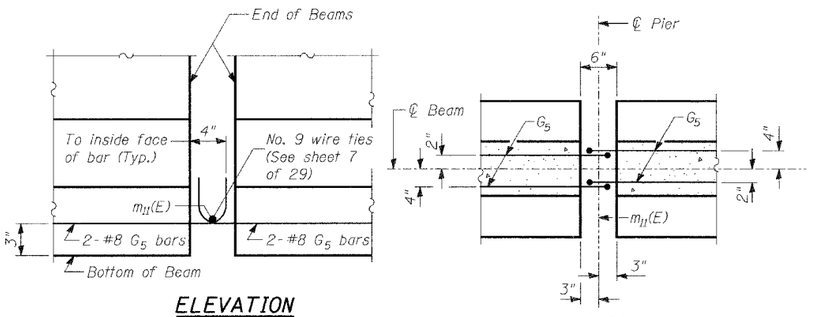
SHEET NO. -11
30- SHEETS
CONTRACT 83790
• 02-00025-00-BR



ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)



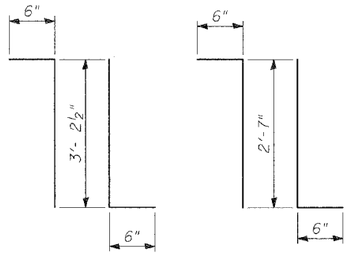
ELEVATION OF BEAM
(Showing Prestressing Steel)



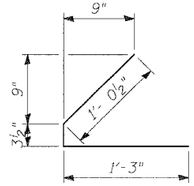
ELEVATION

PLAN

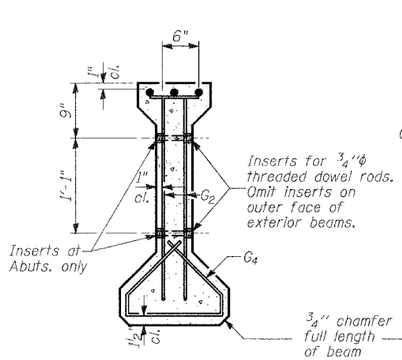
DETAIL "A"



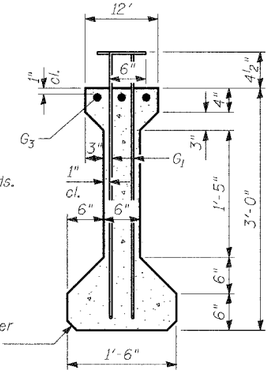
BAR G1 BAR G2



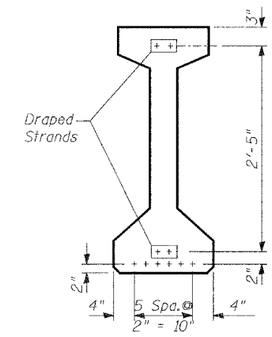
BAR G4



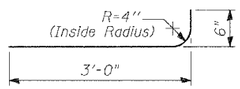
SECTION A-A



SECTION B-B



SECTION C-C



BAR G5

** BAR LIST

Bar	No.	Size	Length	Shape
G1	52	#5	4'-2½"	7L
G2	12	#6	3'-7"	7L
G3	3	#5	33'-7"	—
G4	48	#3	2'-7"	L
G5	2	#8	3'-6"	U

** For one beam only.

NOTES

1. All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per foot of "Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36 in."
2. Inserts for ¾"ϕ threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.
3. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
4. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.
5. Non-prestressing steel shall conform to AASHTO designation M-31, M-42 or M-53 Grade 60.
6. Lifting loops shall be 1 -½"ϕ- 270 ksi strand, as shown.
7. Required release strength, f'ci, shall be 5,000 psi.
8. Reinforcement bars designated (E) shall be epoxy coated.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	Ft.	203'-6"

TYLIN INTERNATIONAL

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

DATE: 01-28-2005

BEAM DETAILS - SPAN 1

MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. Ø49-68Ø3

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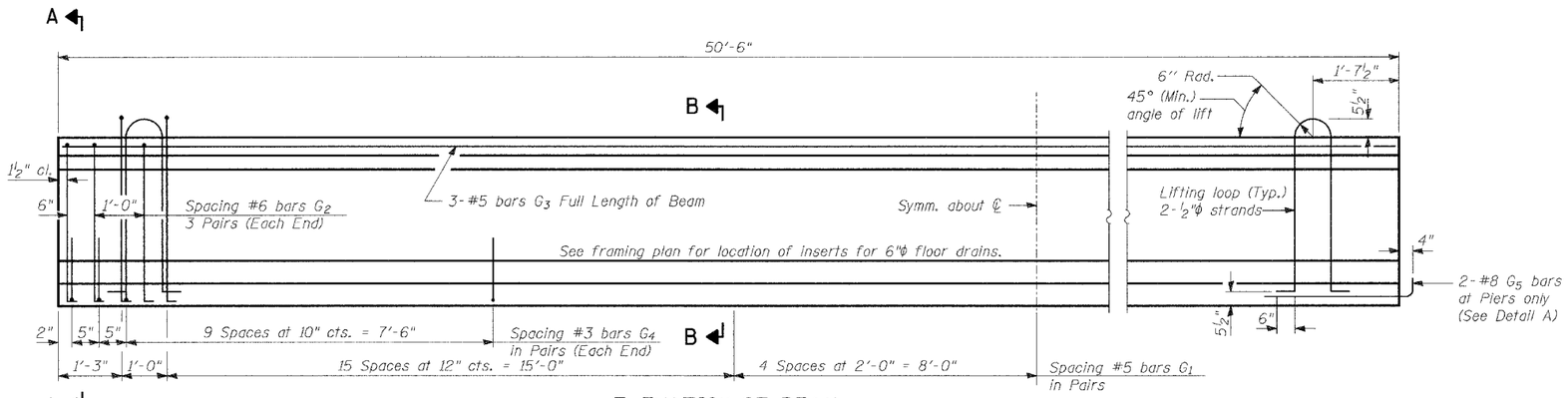
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

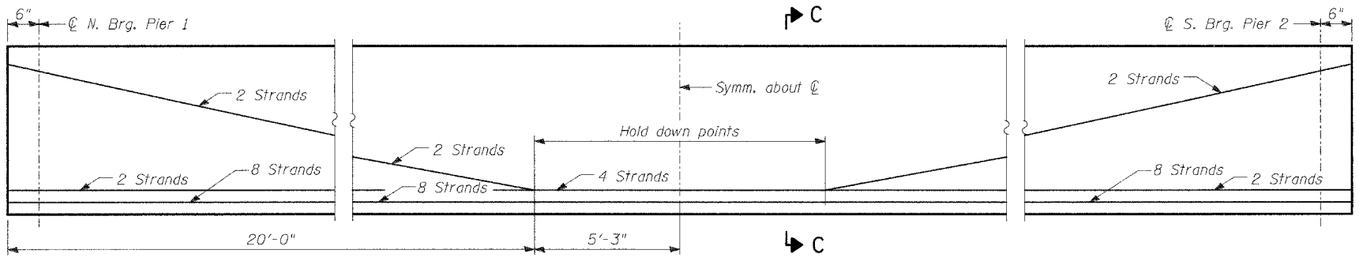
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	22
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

• 02-00025-00-BR

SHEET NO. -12
30- SHEETS
CONTRACT 83790



ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)



ELEVATION OF BEAM
(Showing Prestressing Steel)

ELEVATION

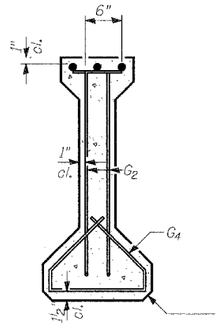
PLAN

DETAIL "A"

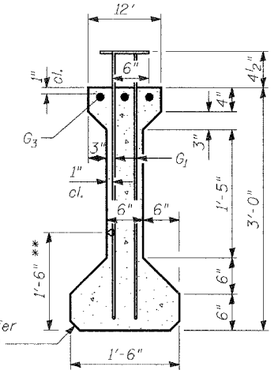
BAR G1

BAR G2

BAR G4

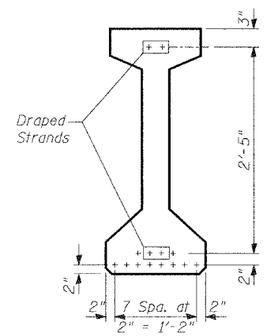


SECTION A-A

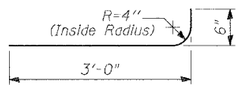


SECTION B-B

** Location of insert for 6"ϕ floor drain. For additional details see sht 6 of 30.



SECTION C-C



BAR G5

* BAR LIST (1)

Bar	No.	Size	Length	Shape
G1	82	#5	4'-2½"	7L
G2	12	#6	3'-7"	7L
G3	3	#5	50'-2"	—
G4	48	#3	2'-7"	⊂
G5	4	#8	3'-6"	⊃

(1) For one beam only.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	Ft.	303'-0"

NOTES

1. All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per foot of "Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36 in."
2. Inserts for ¾"ϕ threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.
3. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
4. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.
5. Non-prestressing steel shall conform to AASHTO designation M-31, M-42 or M-53 Grade 60.
6. Lifting loops shall be 2 - ½"ϕ - 270 ksi strand, as shown.
7. Required release strength, f'ci, shall be 5,000 psi.
8. Reinforcement bars designated (E) shall be epoxy coated.

TYLIN INTERNATIONAL

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

DATE: 01-28-2005

BEAM DETAILS - SPAN 2

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

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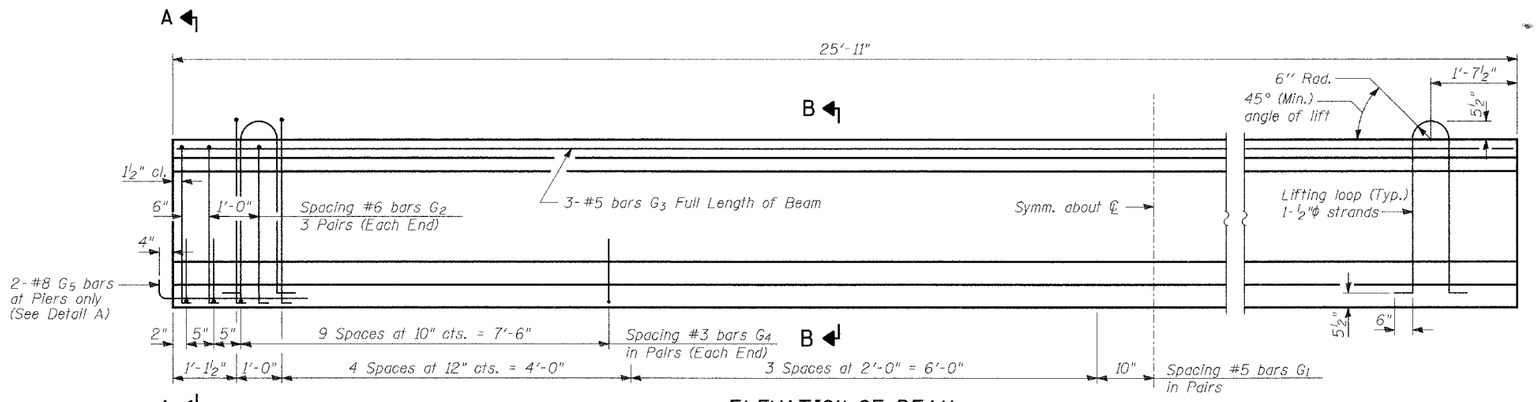
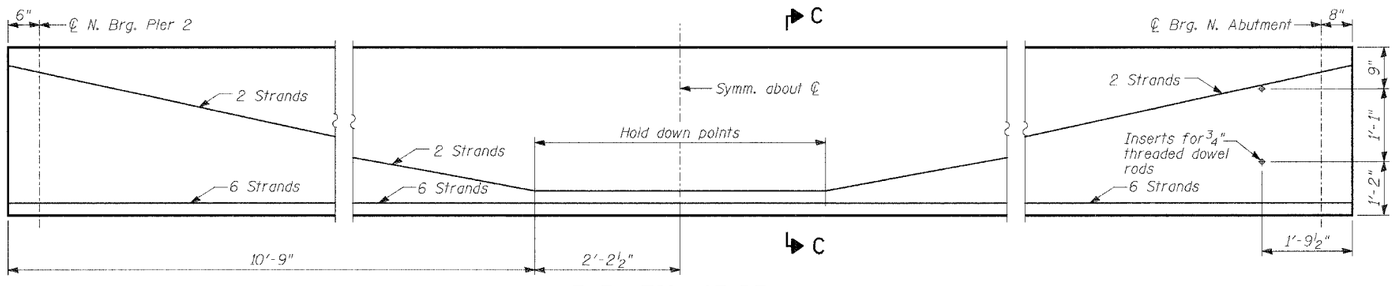
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	*	LAKE	40	23
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

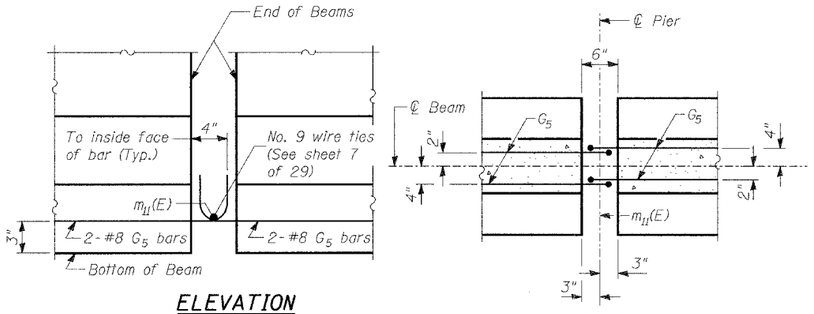
SHEET NO. - 13
30 - SHEETS
CONTRACT 83790
* 02-00025-00-BR



ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)



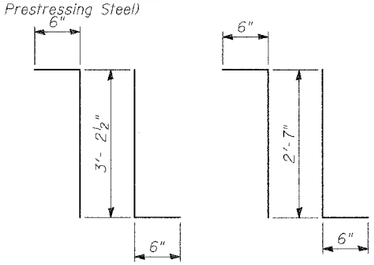
ELEVATION OF BEAM
(Showing Prestressing Steel)



ELEVATION

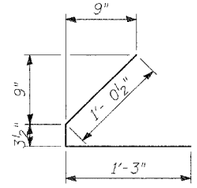
PLAN

DETAIL "A"

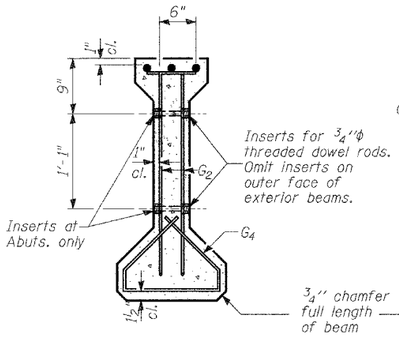


BAR G1

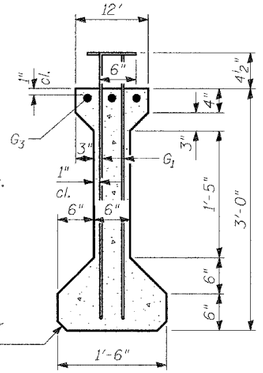
BAR G2



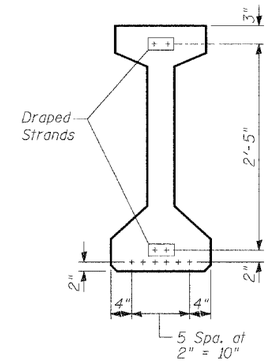
BAR G4



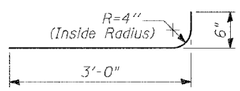
SECTION A-A



SECTION B-B



SECTION C-C



BAR G5

** BAR LIST

Bar	No.	Size	Length	Shape
G_1	36	#5	4'-2½"	7L
G_2	12	#6	3'-7"	7L
G_3	3	#5	25'-7"	——
G_4	48	#3	2'-7"	⊂
G_5	2	#8	3'-6"	⊂⊃

** For one beam only.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	Ft.	155'-6"

NOTES

1. All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per foot of "Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36 in."
2. Inserts for ¾"Φ threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.
3. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
4. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.
5. Non-prestressing steel shall conform to AASHTO designation M-31, M-42 or M-53 Grade 60.
6. Lifting loops shall be 1 -½"Φ- 270 ksi strands, as shown.
7. Required release strength, f'ci, shall be 5,000 psi.
8. Reinforcement bars designated (E) shall be epoxy coated.

TY·LIN INTERNATIONAL

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

DATE: 01-28-2005

BEAM DETAILS - SPAN 3

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

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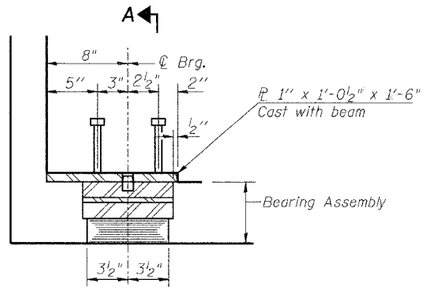
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	24
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -14
30- SHEETS
CONTRACT 83790
• 02-00025-00-BR



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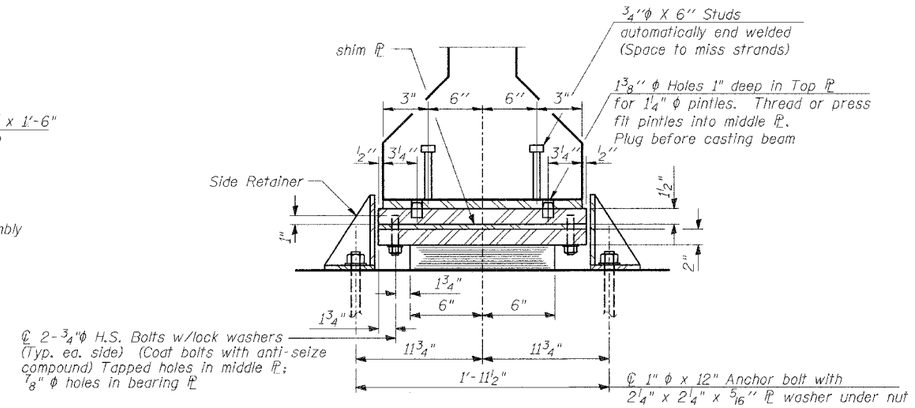
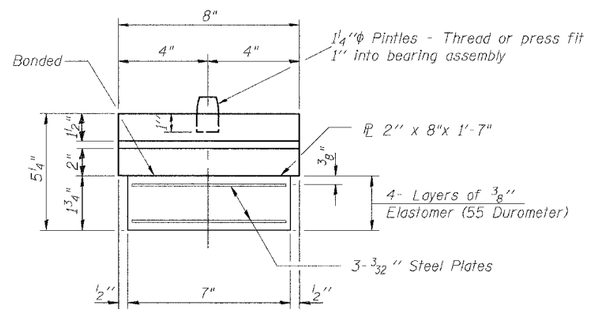


SECTION A-E

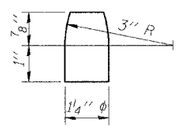
TYPE I ELASTOMERIC EXP. BRG.

Notes:
After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place.
See Sheet 21 of 30 for anchor bolt installation.

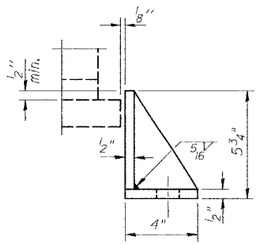


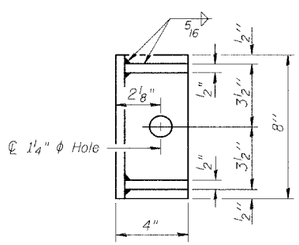
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



PINTLE





SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	12

TY·LIN INTERNATIONAL

DESIGNED	-	DE,SP
CHECKED	-	SP
DRAWN	-	SP
CHECKED	-	PF

DATE: 02-23-2005

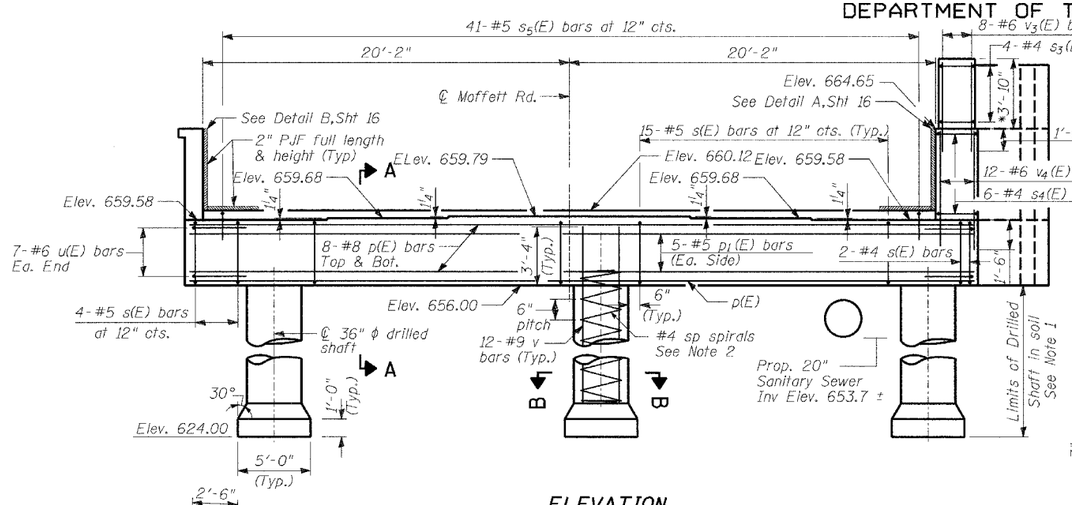
BEARING DETAILS

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

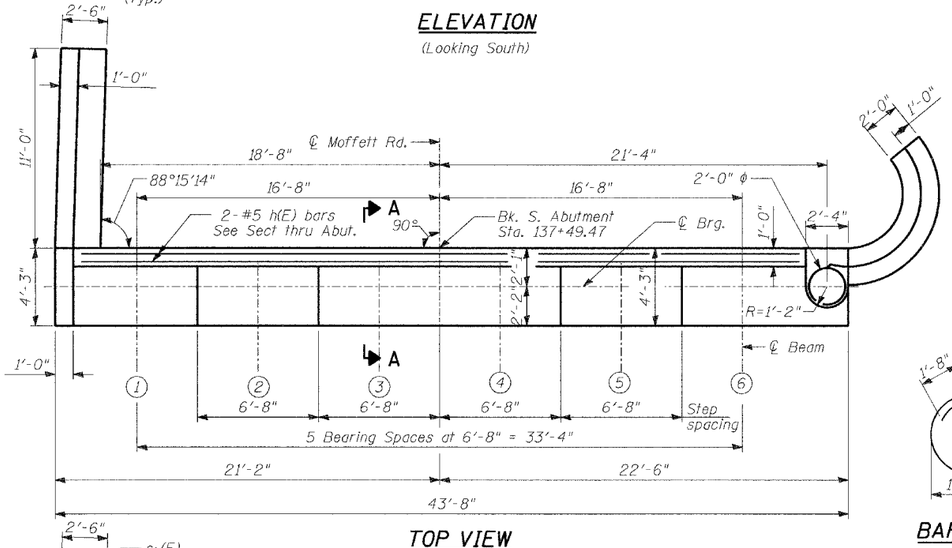
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	25
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

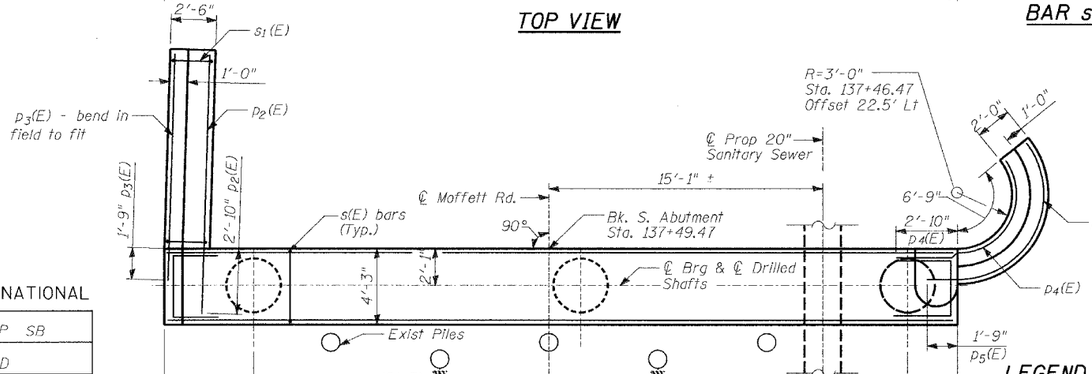
SHEET NO. - 15
30 - SHEETS
CONTRACT 83790
• 02-00025-00-BR



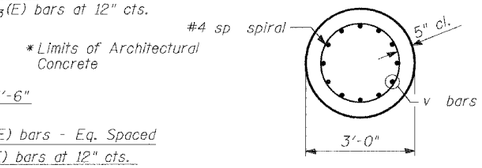
ELEVATION
(Looking South)



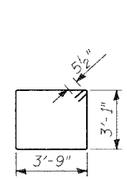
TOP VIEW



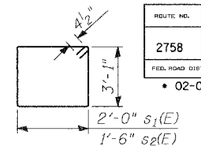
PLAN



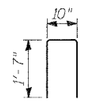
SECTION B-B



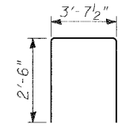
BAR s(E)



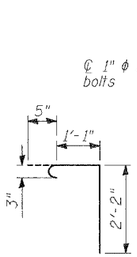
BAR s1(E), s2(E)



BAR s5(E)

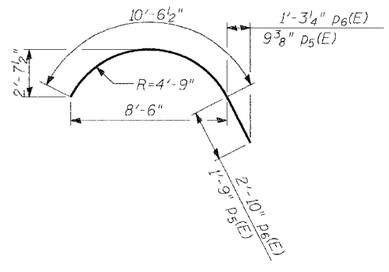


BAR u(E)

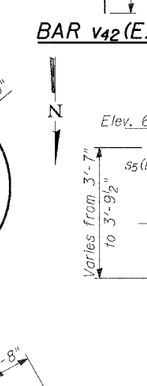


ANCHOR BOLT LAYOUT

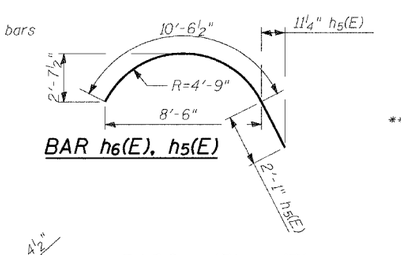
BAR v42(E)



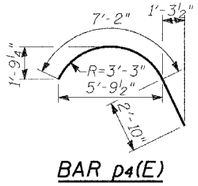
BARS p6(E), p5(E)



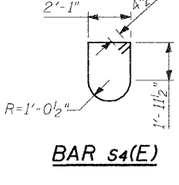
SECTION A-A



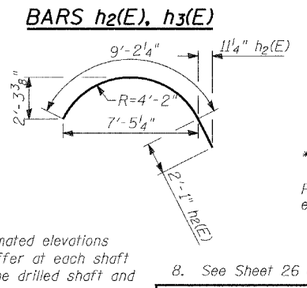
BAR h6(E), h5(E)



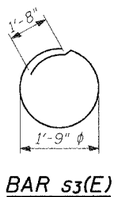
BAR p4(E)



BAR s4(E)



BARS h2(E), h3(E)



BAR s3(E)

LEGEND

Exist Vertical Pile
Exist Battered Pile

NOTES

1. 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.
2. Provide 1½ extra turns top and bottom of each drilled shaft. Extend spiral 2" into abutment cap. Provide min. 4-#4 spacers or equivalent.
3. Min. lap for spirals = 1'-8" .
4. Provide Temporary casing to Elev. 631. included in the cost for Drilled Shaft in Soil, 36".
5. Space reinforcement in cap to miss anchor bolts.
6. Pour steps monolithically with cap.
7. 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".
8. See Sheet 26 of 30 for Architectural Finish details.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	2	#5	40'-0"	
h_1(E)	17	#6	14'-11"	
h_2(E)	8	#6	11'-3¼ "	
h_3(E)	4	#4	9'- 2¼"	
h_4(E)	8	#4	3'- 6"	
h_5(E)	9	#6	12'-7½ "	
h_6(E)	4	#4	10'-6½"	
p (E)	16	#8	43'-4 "	
p_1(E)	10	#5	43'-4"	
p_2(E)	7	#7	13'-8"	
p_3(E)	4	#5	12'-7"	
p_4(E)	5	#7	10-0"	
p_5(E)	4	#5	12'-3½"	
p_6(E)	2	#7	13'-4½"	
s(E)	36	#5	14'-7"	
s_1(E)	15	#4	10'-11"	
s_2(E)	10	#4	9'-11"	
s_3(E)	4	#4	7'-2"	
s_4(E)	6	#4	10'-0¼"	
s_5(E)	41	#5	4'-0"	
v (E)	34	#5	6'-1"	
v_1(E)	20	#5	6'-2"	
v_2(E)	21	#4	4'-4"	
v_3(E)	8	#6	5'-2"	
v_4(E)	12	#6	6'-4"	
v_{42}(E)	27	#3	3'-8"	
u (E)	14	#6	8'-7½"	
** sp	3	#4	29'-6"	
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.

TY·LIN INTERNATIONAL

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

DATE: 02-23-2005

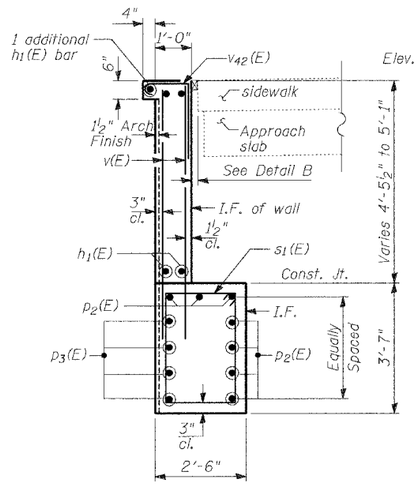
SOUTH ABUTMENT

MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. Ø49-68Ø3

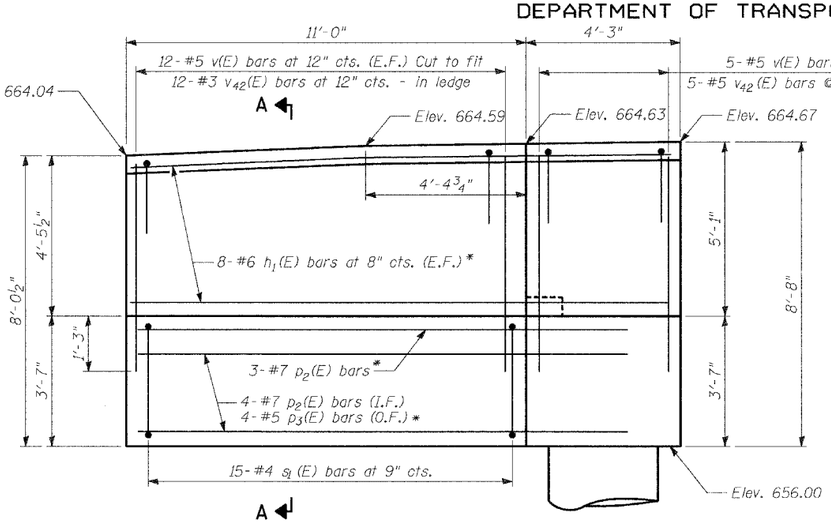
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	26
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. - 16
30 - SHEETS
CONTRACT 83790
• 02-00025-00-BR

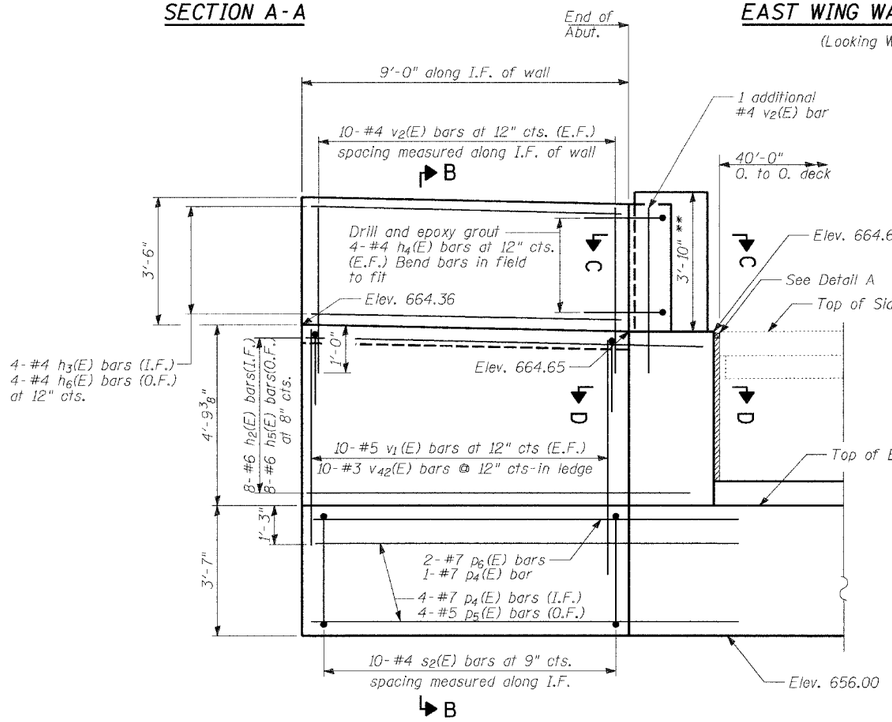


SECTION A-A



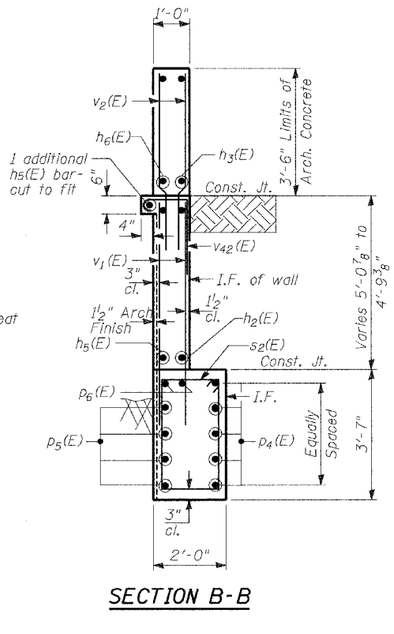
EAST WING WALL ELEVATION
(Looking West)

* Bend as needed in field

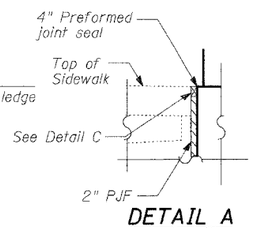


WEST WING WALL ELEVATION
(Looking Northwest)

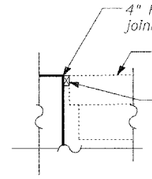
** Limits of Architectural Concrete



SECTION B-B

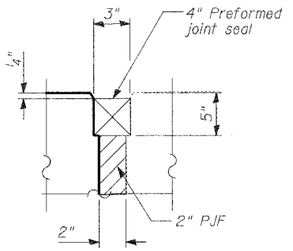


DETAIL A

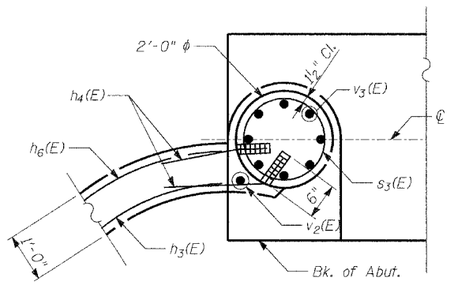


DETAIL B

Note:
4" Preformed joint seal shall be included in the cost of Concrete Structures,Special. Installation of the Preformed joint seal shall be in accordance with 503.10d of the Standard Specifications. Material shall be in accordance with Section 1053 of the Standard Specifications

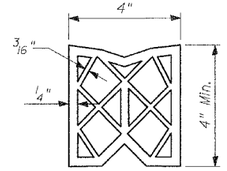


DETAIL C

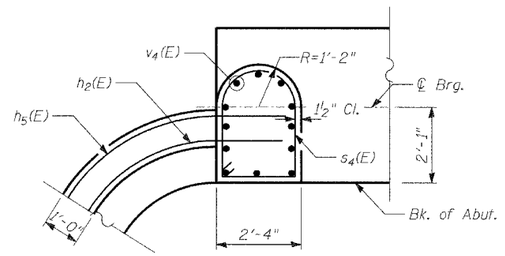


SECTION C-C

Note:
Epoxy grout bars in 6 inch deep minimum drilled holes according to Section 584 of the Standard Specifications. Cost shall be included in Concrete Structures, Special.



PREFORMED JOINT SEAL
NTS



SECTION D-D

NOTES

For Architectural finish, see Sheet 26.

TYLIN INTERNATIONAL

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

DATE: 02-23-2005

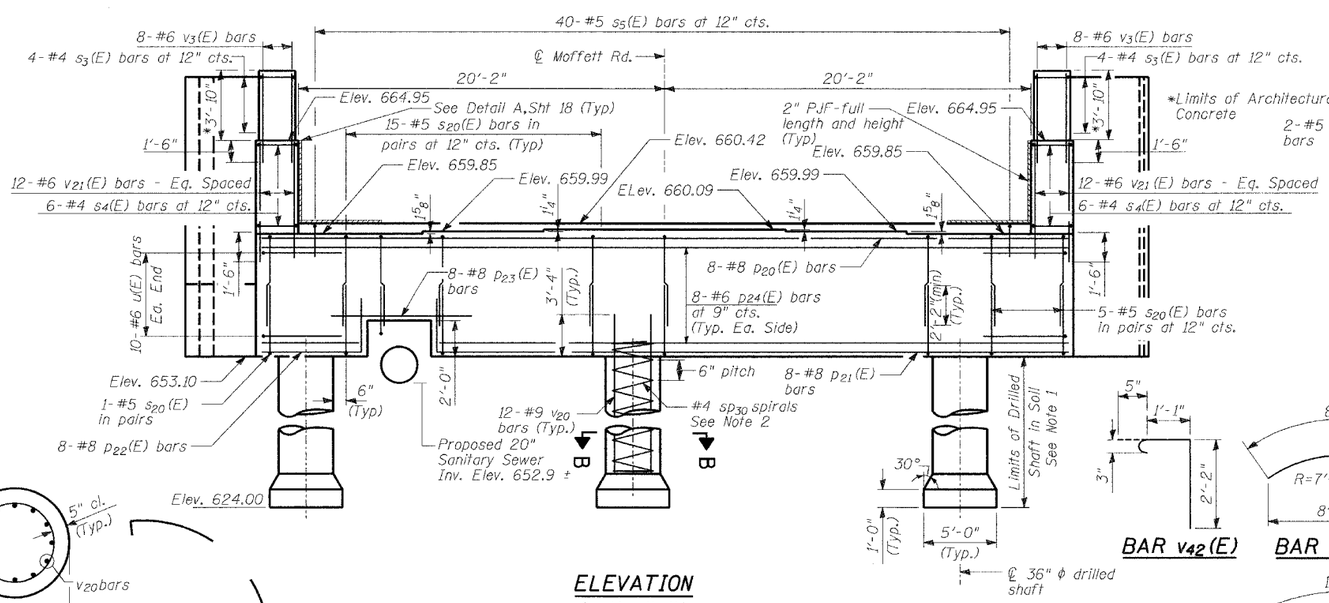
SOUTH ABUTMENT DETAILS

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

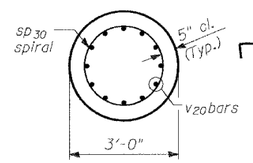
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	27
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

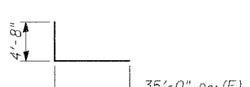
SHEET NO. 17
30 - SHEETS
CONTRACT 83790
• 02-00025-00-BR



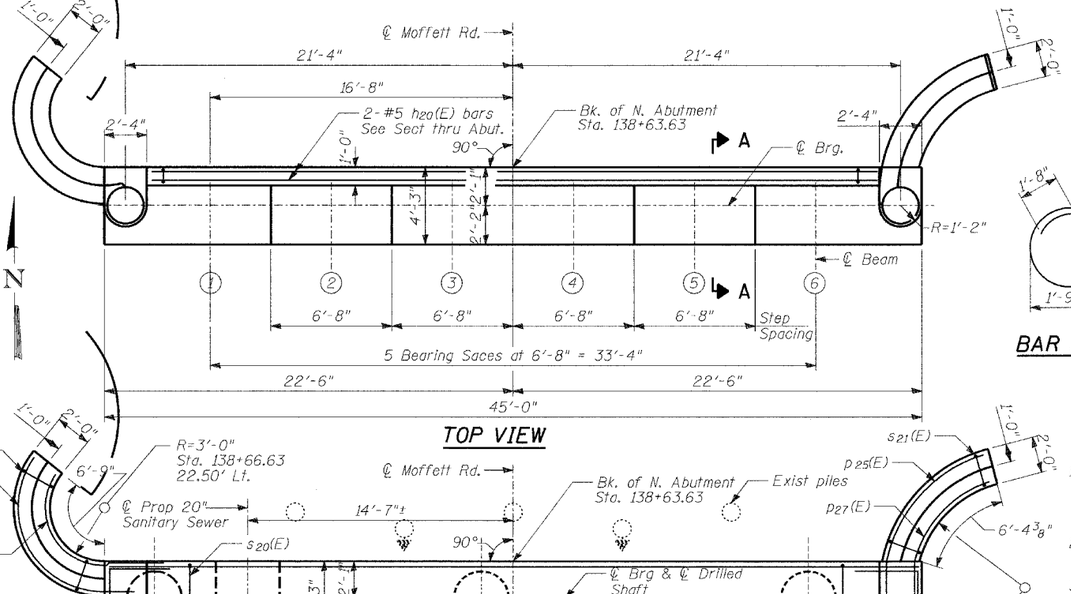
ELEVATION
(Looking North)



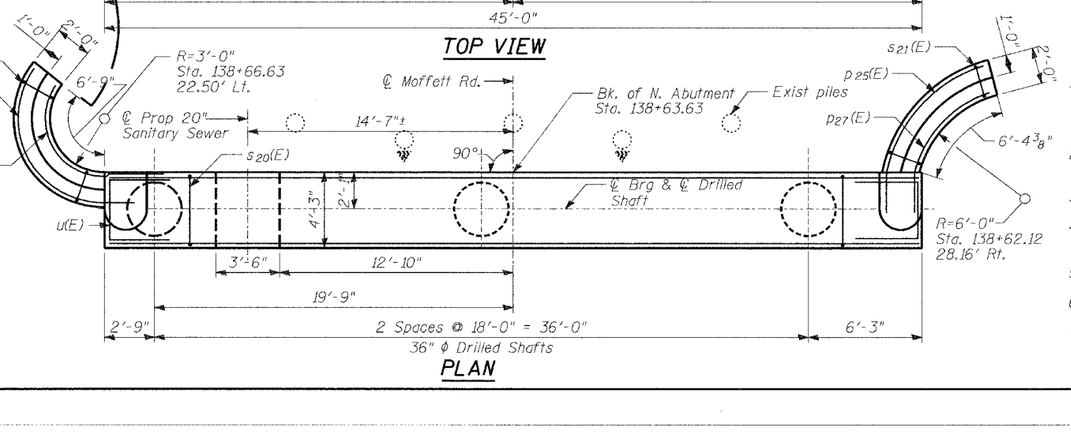
SECTION B-B



BARS p21 (E), p22 (E)



TOP VIEW



PLAN

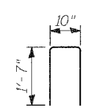
LEGEND

- Exist Vertical Pile
- Exist Battered Pile

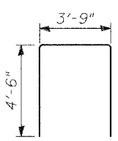
TY·LIN INTERNATIONAL

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

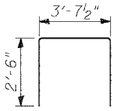
DATE: 02-23-2005



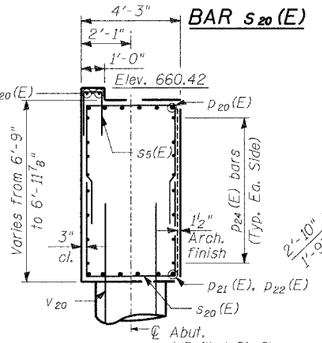
BAR s1(E)



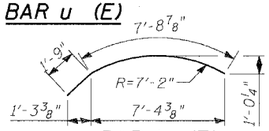
BAR s20(E)



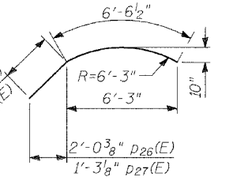
BAR u (E)



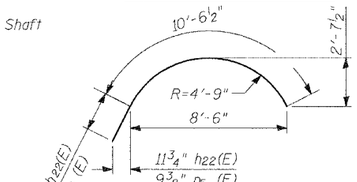
SECTION A-A



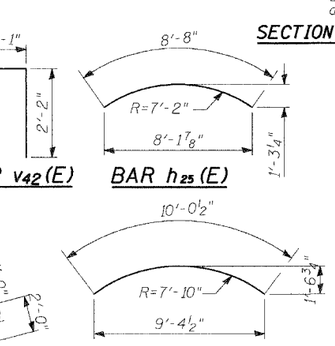
BAR h24 (E)



BARS p26 (E), p27 (E)



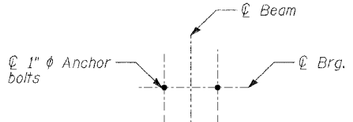
BARS h22 (E), p5 (E)



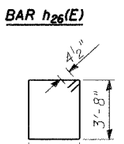
BAR h25 (E)

BAR v42(E)

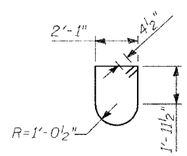
BAR h26(E)



ANCHOR BOLT LAYOUT



BAR s21(E)



BAR s4(E)

BAR s3(E)

Bar	A	B	C	D	E	F
h_{21} (E)	11¼"	2'-2"	7'-6¼"	R=4'-2"	2'-4½"	9'-4½"
h_{23} (E)	2'-1"	2'-10"	8'-2¼"	R=7'-10"	1'-1⅞"	8'-7½"
p_4 (E)	1'-3½"	2'-10"	5'-9½"	R=3'-3"	1'-9¼"	7'-2"
p_6 (E)	1'-3¼"	2'-10"	8'-6"	R=4'-9"	2'-7½"	10'-6½"
p_{25} (E)	2'-1"	2'-10"	8'-1"	R=7'-9"	1'-1⅝"	8'-6"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_3 (E)	4	#4	9'-2¼"	
h_4 (E)	16	#4	3'-6"	
h_6 (E)	4	#4	10'-6½"	
h_{20}(E)	2	#5	40'-0"	
h_{21}(E)	11	#7	11'-6½"	
h_{22}(E)	12	#5	12'-10"	
h_{23}(E)	11	#7	11'-5¼"	
h_{24}(E)	12	#5	9'-6"	
h_{25}(E)	4	#4	8'-8"	
h_{26}(E)	4	#4	10'-0½"	
p_4 (E)	6	#7	10'-0"	
p_5 (E)	2	#7	13'-4½"	
p_5 (E)	5	#7	12'-3½"	
p_{20}(E)	8	#8	44'-8"	
p_{21}(E)	8	#8	39'-8"	
p_{22}(E)	8	#8	10'-6"	
p_{23}(E)	8	#8	9'-0"	
p_{24}(E)	16	#6	44-8"	
p_{25}(E)	7	#7	11'-4"	
p_{26}(E)	1	#7	9'-3"	
p_{27}(E)	5	#5	8'-3½"	
s_3(E)	8	#4	7'-2"	
s_4(E)	12	#4	10'-0¼"	
s_5(E)	40	#5	4'-0"	
s_{20}(E)	72	#5	12'-9"	
s_{21}(E)	20	#4	11'-5"	
v_2(E)	42	#4	4'-4"	
v_3(E)	16	#6	5'-2"	
v_{20}(E)	40	#5	8'-11"	
v_{21}(E)	24	#6	6'-5"	
v_{42}(E)	20	#3	3'-8"	
u (E)	20	#6	8'-7½"	
** sp30	3	#4	26'-7"	
v_{20}	36	#9	30'-0"	
Concrete Structures, Special		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	

** Length is height of spiral.

Reinforcement bars designated (E) shall be epoxy coated.

NOTES

1. 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.
2. Provide 1½ extra turns top and bottom of each drilled shaft. Extend spiral 2" into abutment cap. Provide min. 4-#4 spacers or equivalent.
3. Min. lap for spirals = 1'-8".
4. Provide Temporary casing to Elev. 631, included in the cost for Drilled Shaft in Soil, 36".
5. Space reinforcement in cap to miss anchor bolts.
6. Pour steps monolithically with cap.
7. 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".

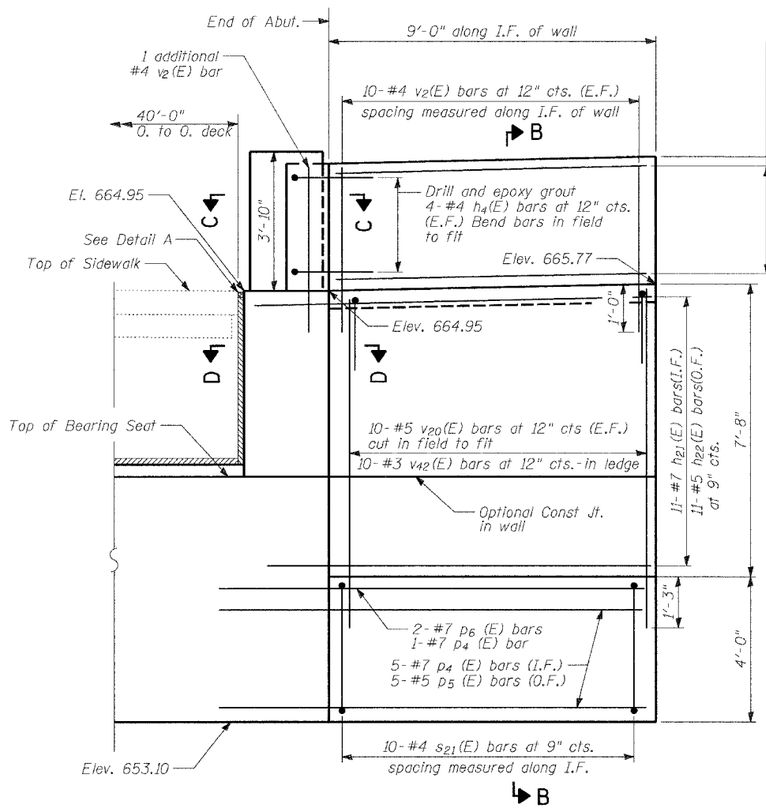
NORTH ABUTMENT

MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. Ø49-68Ø3

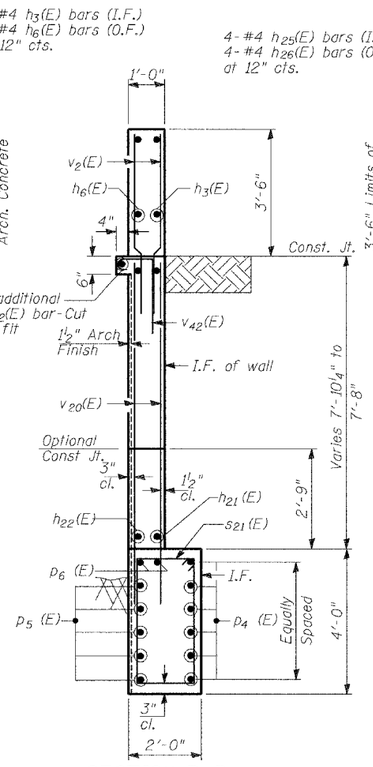
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	28
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

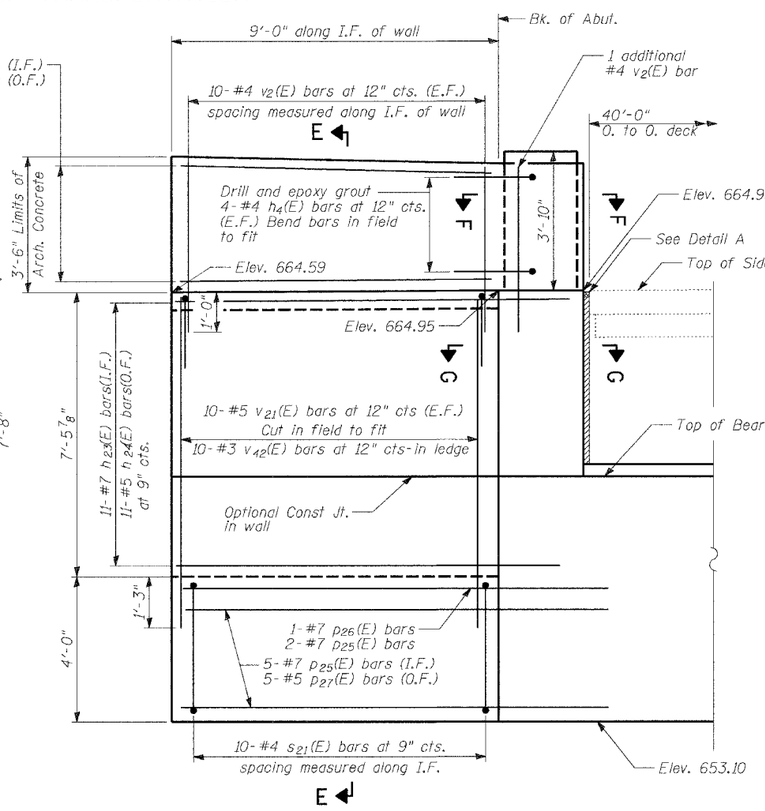
SHEET NO. - 18
30 - SHEETS
CONTRACT 83790
• 02-00025-00-BR



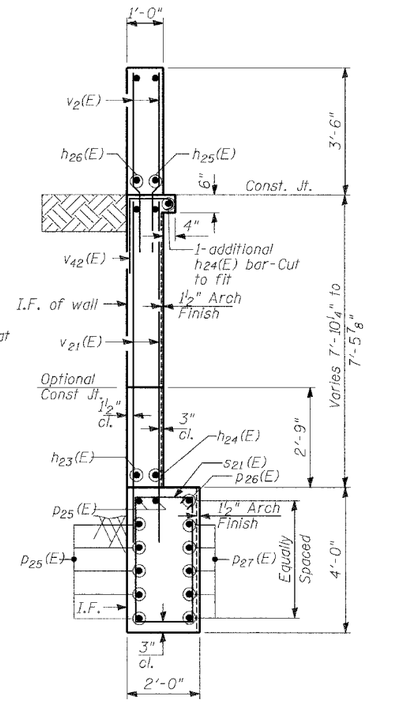
WEST WING WALL ELEVATION
(Looking Southwest)



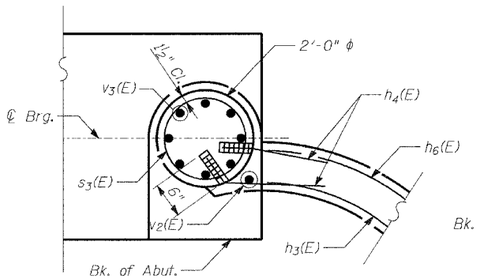
SECTION B-B



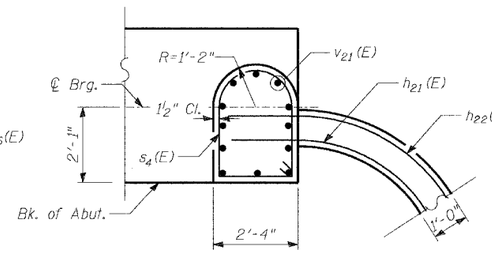
EAST WING WALL ELEVATION
(Looking Southeast)



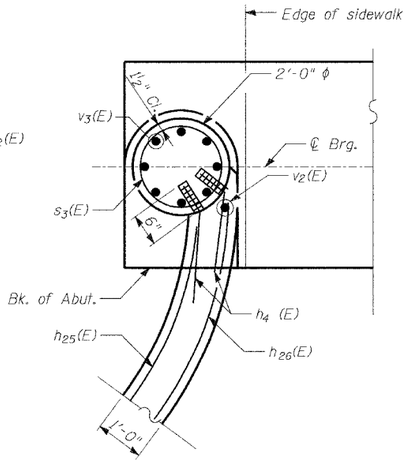
SECTION E-E



SECTION C-C

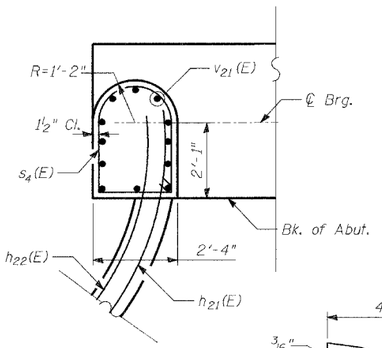


SECTION D-D

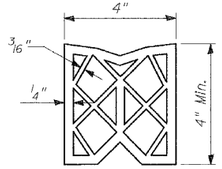


SECTION F-F

Note:
Epoxy grout bars in 6 inch deep minimum drilled holes according to Section 584 of the Standard Specifications. Cost shall be included in Concrete Structures, Special.

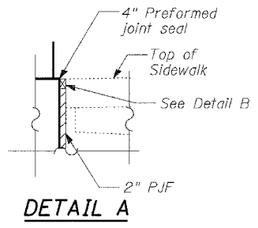


SECTION G-G

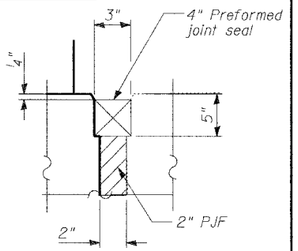


PREFORMED JOINT SEAL

NOTES
For Architectural finish, see Sheet 26.



DETAIL A



DETAIL B

Note:
4" Preformed joint seal shall be included in the cost of Concrete Structures, Special. Installation of the Preformed joint seal shall be in accordance with 503.10d of the Standard Specifications. Material shall be in accordance with Section 1053 of the Standard Specifications

TY·LIN INTERNATIONAL

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

DATE: 02-23-2005

NORTH ABUTMENT DETAILS

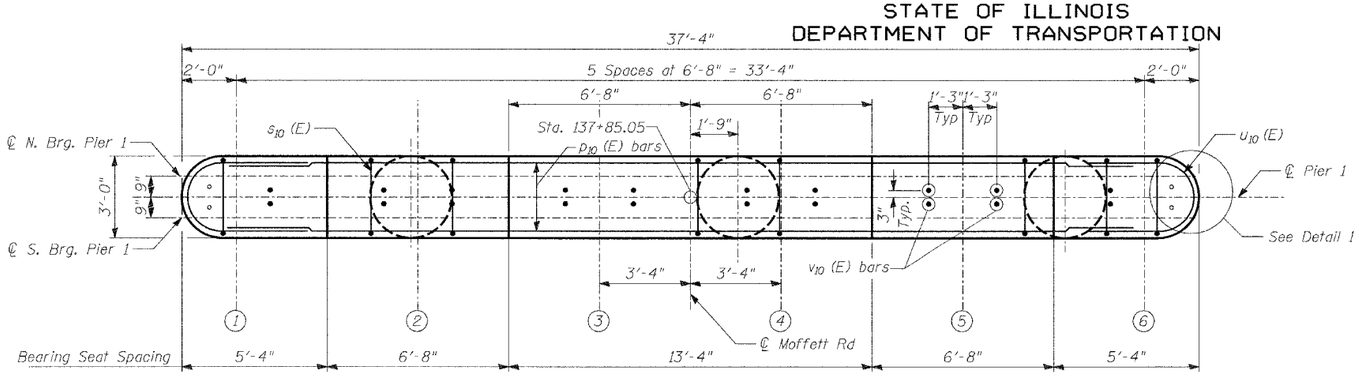
MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. Ø49-68Ø3

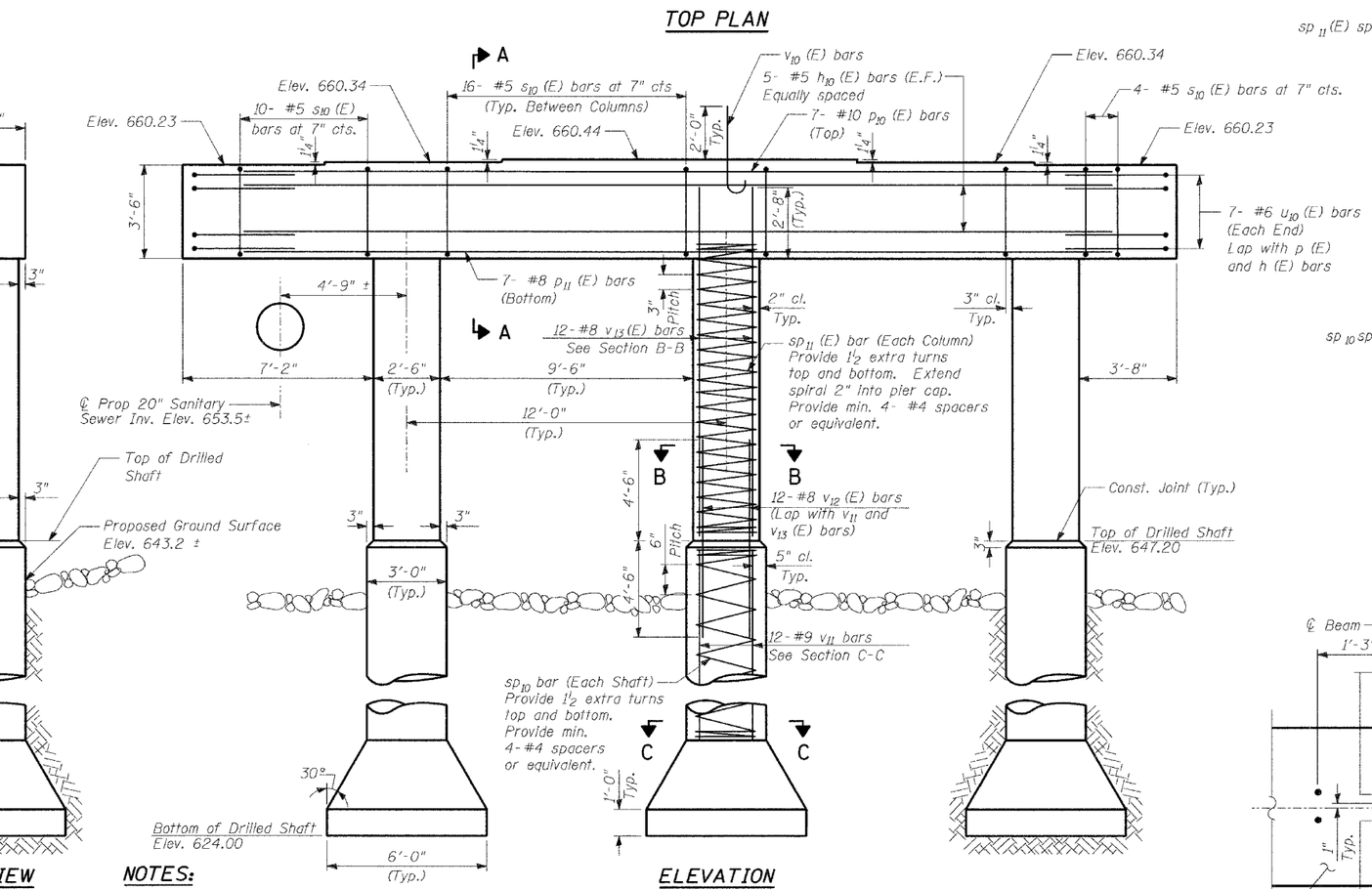
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

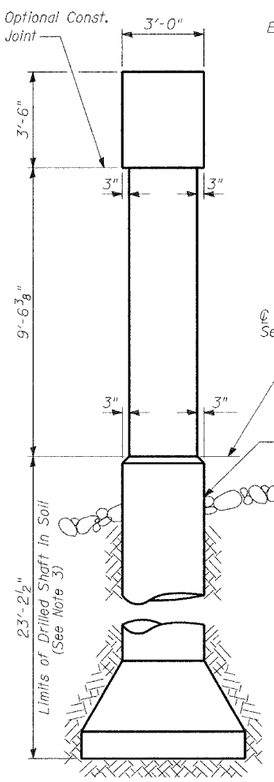
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	29
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. -19
30 - SHEETS
CONTRACT 83790
• 02-00025-00-BR

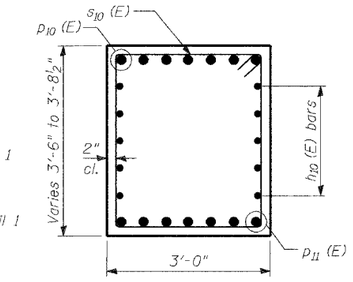
TOP PLAN



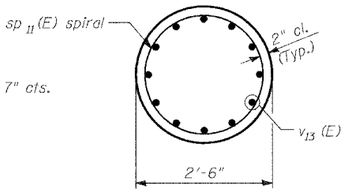




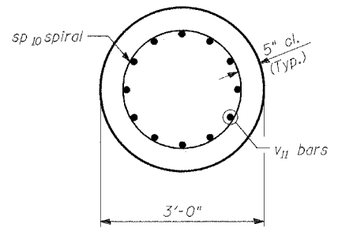
END VIEW



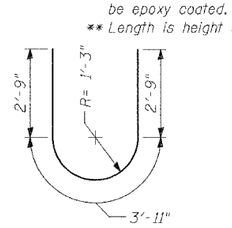
SECTION A-A



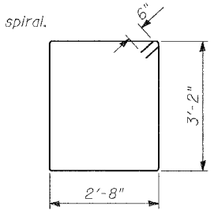
SECTION B-B



SECTION C-C



BAR u_{10} (E)

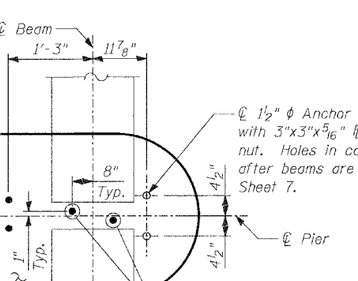


BAR s_{10} (E)

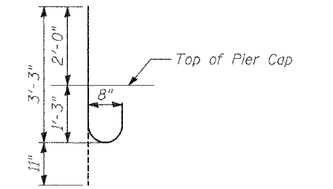
BILL OF MATERIAL

	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"	
**	sp_{11} (E)	3	#4	9'-7"	
	u_{10} (E)	14	#6	9'-5"	
	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	20.6
	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.



DETAIL 1
(Detail applicable at Beam 1 by rotation)



BAR v_{10} (E)

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".

ELEVATION
(Looking North)

TYLIN INTERNATIONAL

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

DATE: 02-23-2005

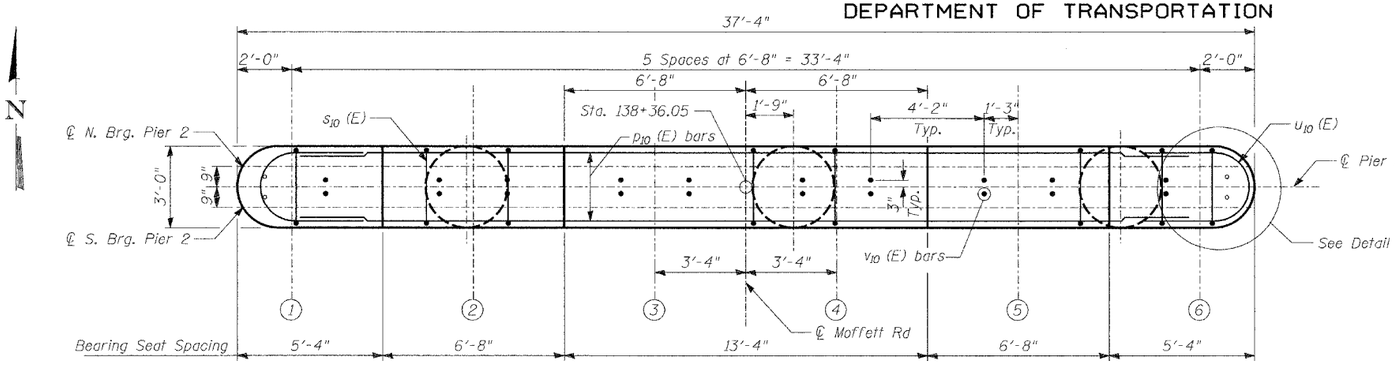
PIER 1

MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. Ø49-68Ø3

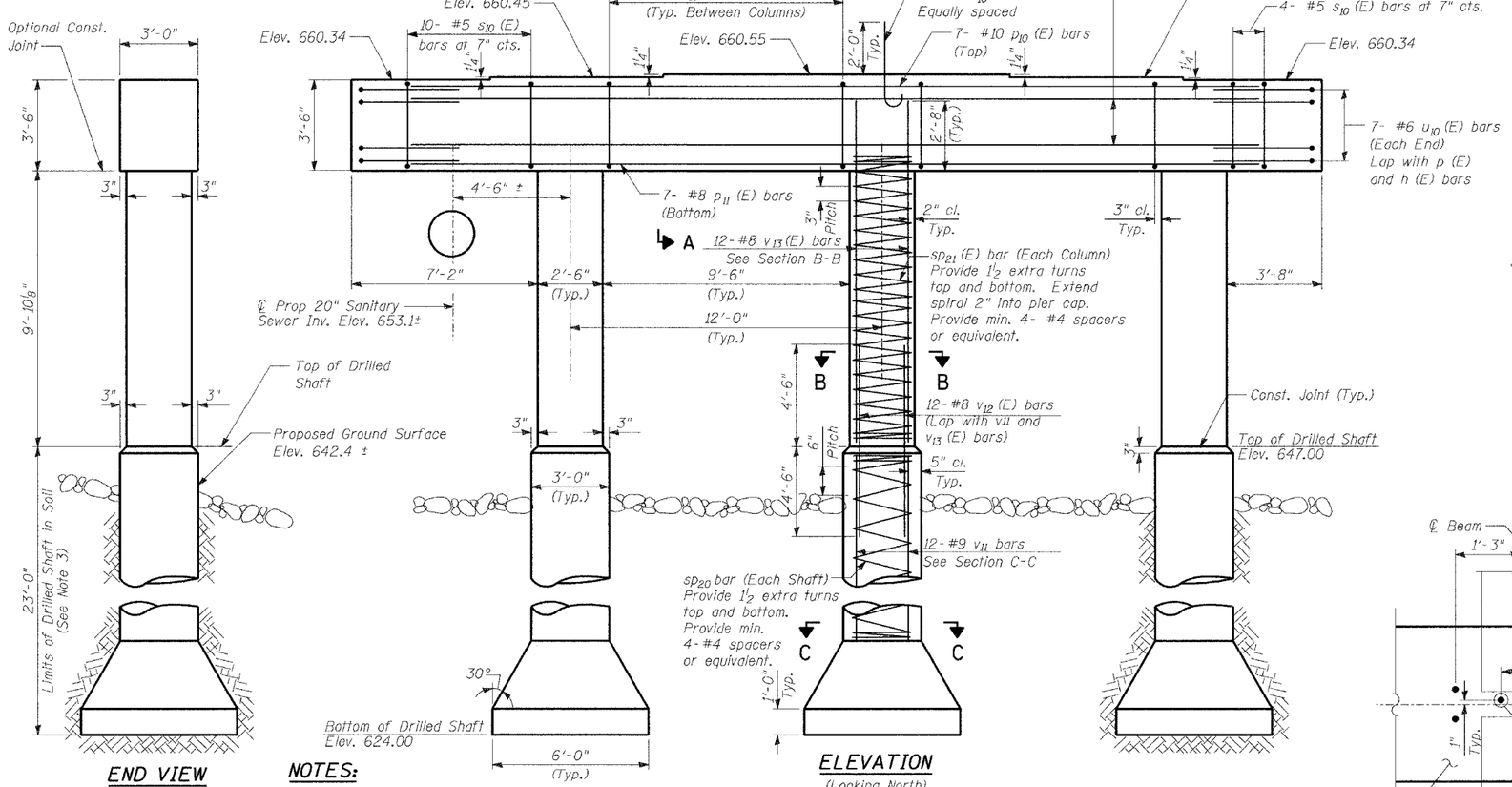
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	30
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. -20
30- SHEETS
CONTRACT 83790
• 02-00025-00-BR

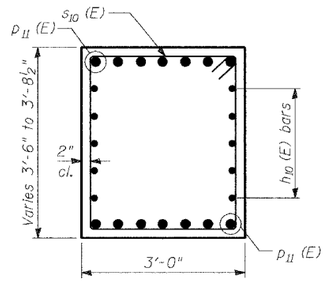


TOP PLAN

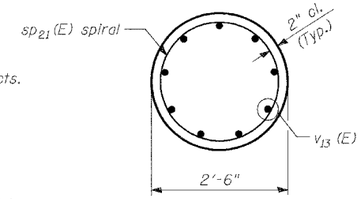


END VIEW

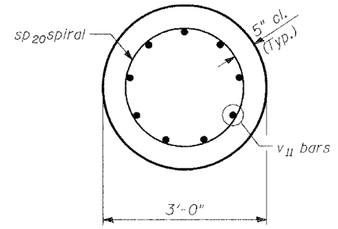
ELEVATION
(Looking North)



SECTION A-A



SECTION B-B

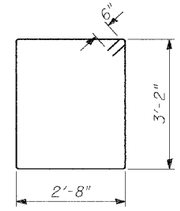


SECTION C-C

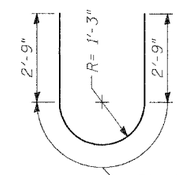
BILL OF MATERIAL

	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"	
**	sp_{21} (E)	3	#4	9'-11"	
	u_{10} (E)	14	#6	9'-5"	
	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

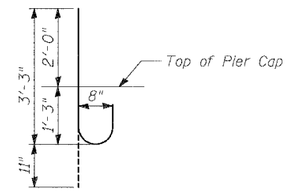
Reinforcement Bars designated (E) shall be epoxy coated.
** Length is height of spiral.



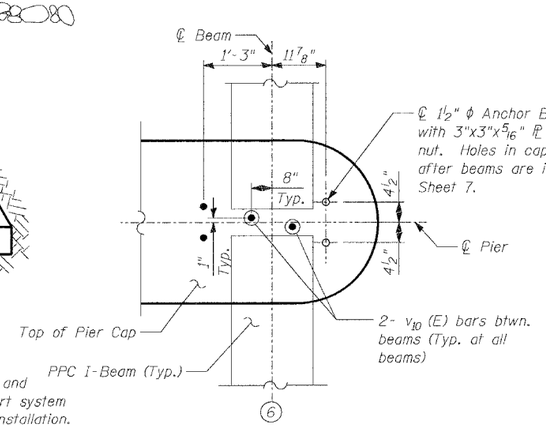
BAR s_{10} (E)



BAR u_{10} (E)



BAR v_{10} (E)



DETAIL 1
(Detail applicable at Beam 1 by rotation)

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 Elev. 631.00
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

PIER 2

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

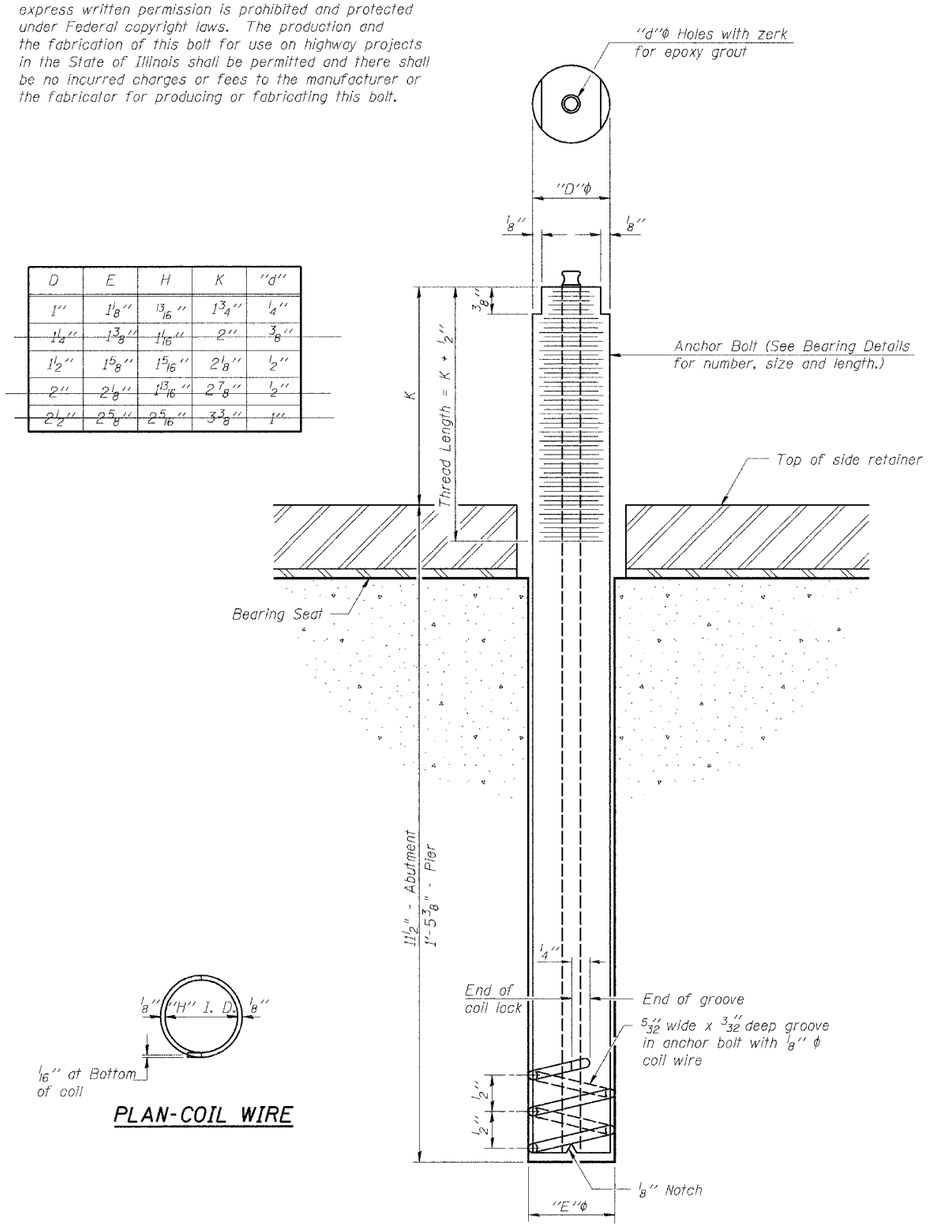
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	31
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

• 02-00025-00-BR

SHEET NO. -21
30- SHEETS
CONTRACT 83790

D	E	H	K	"d"
1"	$1\frac{1}{8}$"	$\frac{13}{16}$"	$1\frac{3}{4}$"	$\frac{1}{4}$"
$1\frac{1}{4}$"	$1\frac{3}{8}$"	$1\frac{1}{16}$"	2"	$\frac{3}{8}$"
$1\frac{1}{2}$"	$1\frac{5}{8}$"	$1\frac{5}{16}$"	$2\frac{1}{8}$"	$\frac{1}{2}$"
2"	$2\frac{1}{8}$"	$1\frac{13}{16}$"	$2\frac{7}{8}$"	$\frac{1}{2}$"
$2\frac{1}{2}$"	$2\frac{5}{8}$"	$2\frac{5}{16}$"	$3\frac{3}{8}$"	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
Abut	A307
Pier	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.

TY·LIN INTERNATIONAL

DESIGNED	- SP
CHECKED	- SP
DRAWN	- SP
CHECKED	- PF

DATE: 01-28-2005

ANCHOR BOLT DETAILS

MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. Ø49-68Ø3

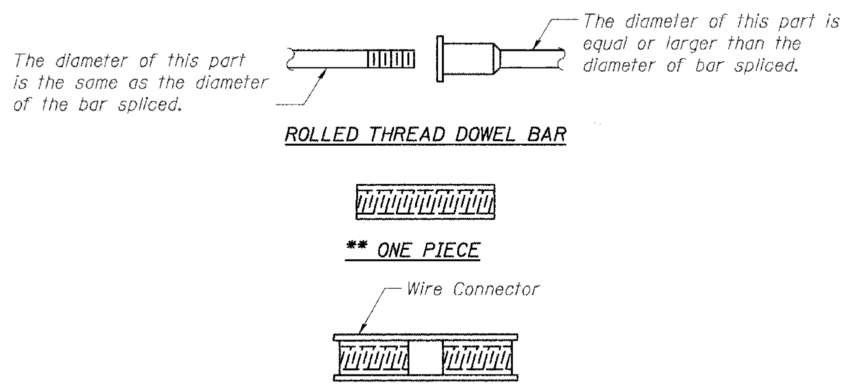
...\structural\moanchbolts.dgn 02/03/2005 01:23:04 PM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	32
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

• 02-00025-00-BR

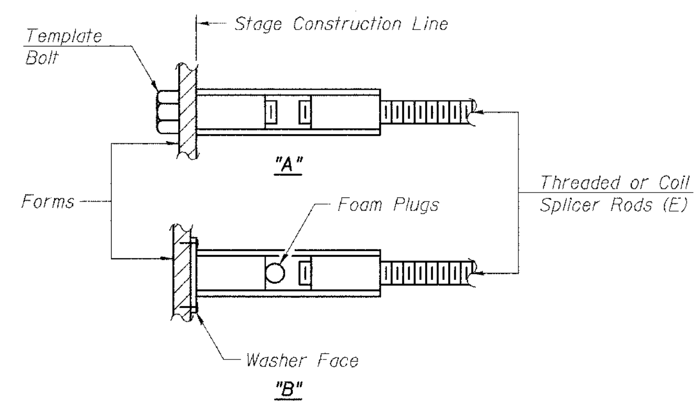
SHEET NO. -22
30- SHEETS
CONTRACT 83790

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:

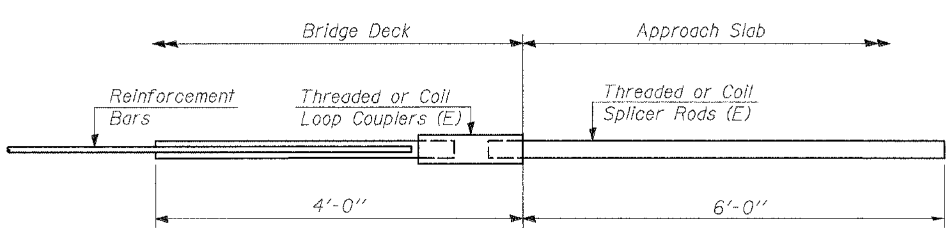
① Minimum Capacity (Tension in kips) $= 1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) $= 1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
		Strength Requirements	
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 80

TYLIN INTERNATIONAL

DESIGNED	- SP
CHECKED	- PF
DRAWN	- SP
CHECKED	- PF

DATE: 02-23-2005

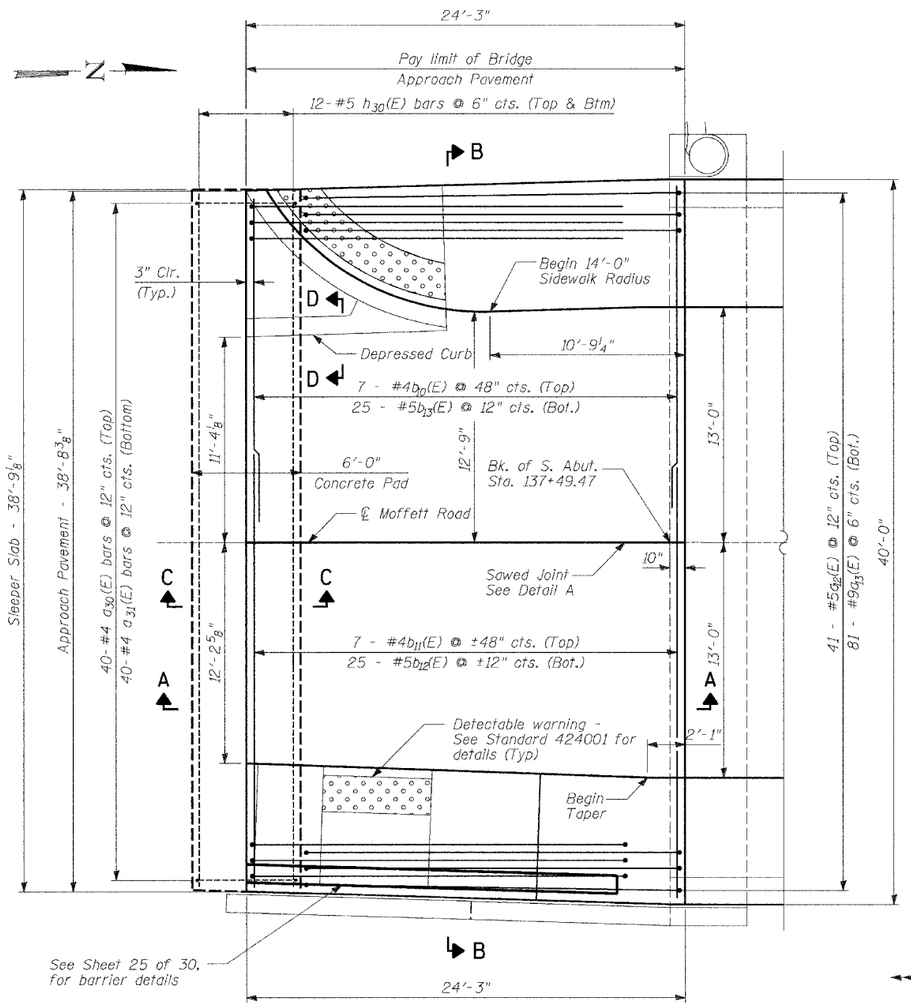
BAR SPLICER DETAILS

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

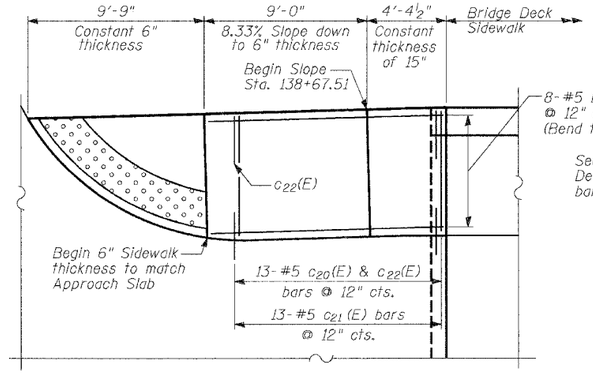
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

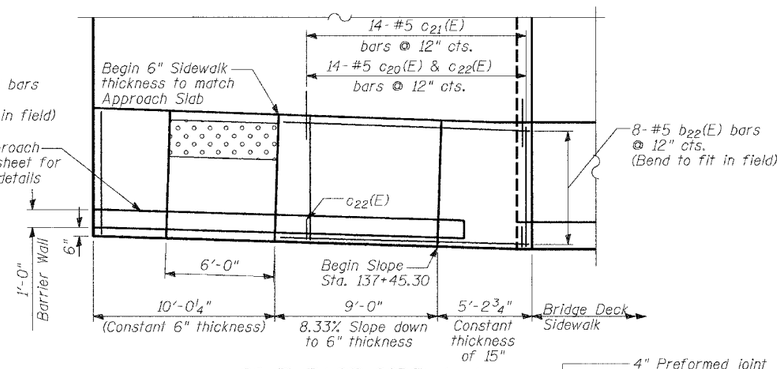
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	*	LAKE	40	33
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -23
30- SHEETS
CONTRACT 83790
* 02-00025-00-BR



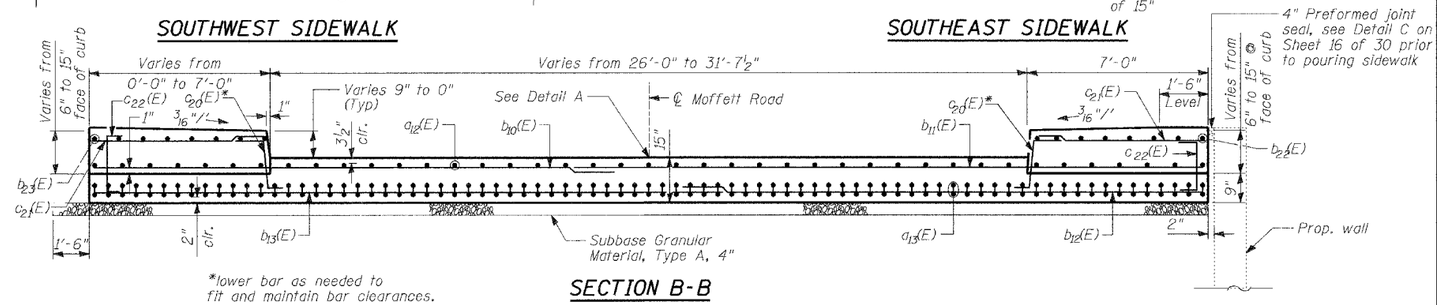
PLAN





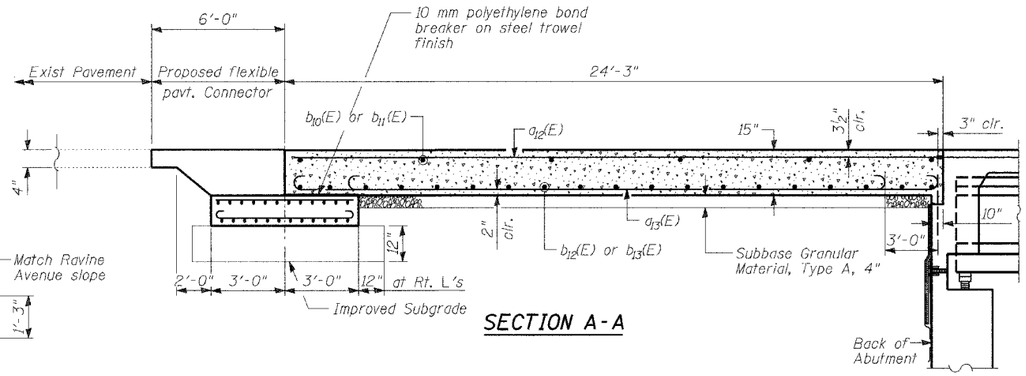
SOUTHWEST SIDEWALK

SOUTHEAST SIDEWALK

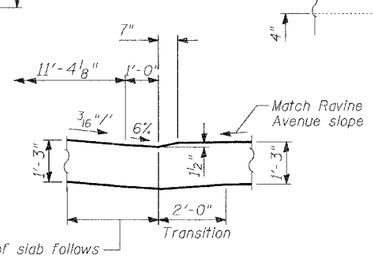


*lower bar as needed to fit and maintain bar clearances.

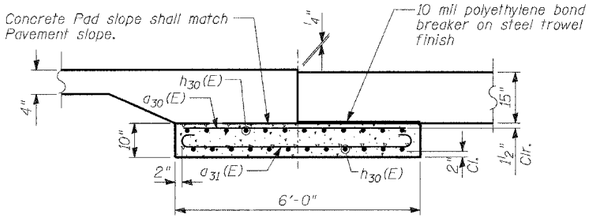
SECTION B-B



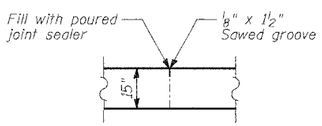
SECTION A-A



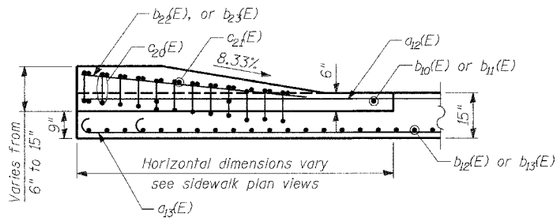
SECTION D-D



SECTION C-C



DETAIL A



SIDEWALK PROFILE

NOTES

The construction of the detectable warning detail in the sidewalk will be included in the unit price for Bridge Approach Pavement (Special).

Minimum lap for #4 bars is 1'-8" and #5 bars 2'-2".

TY·LIN INTERNATIONAL

DESIGNED	-	CM,DE
CHECKED	-	SP
DRAWN	-	CM,DE
CHECKED	-	PF

DATE: 02-23-2005

SOUTH APPROACH PAVEMENT

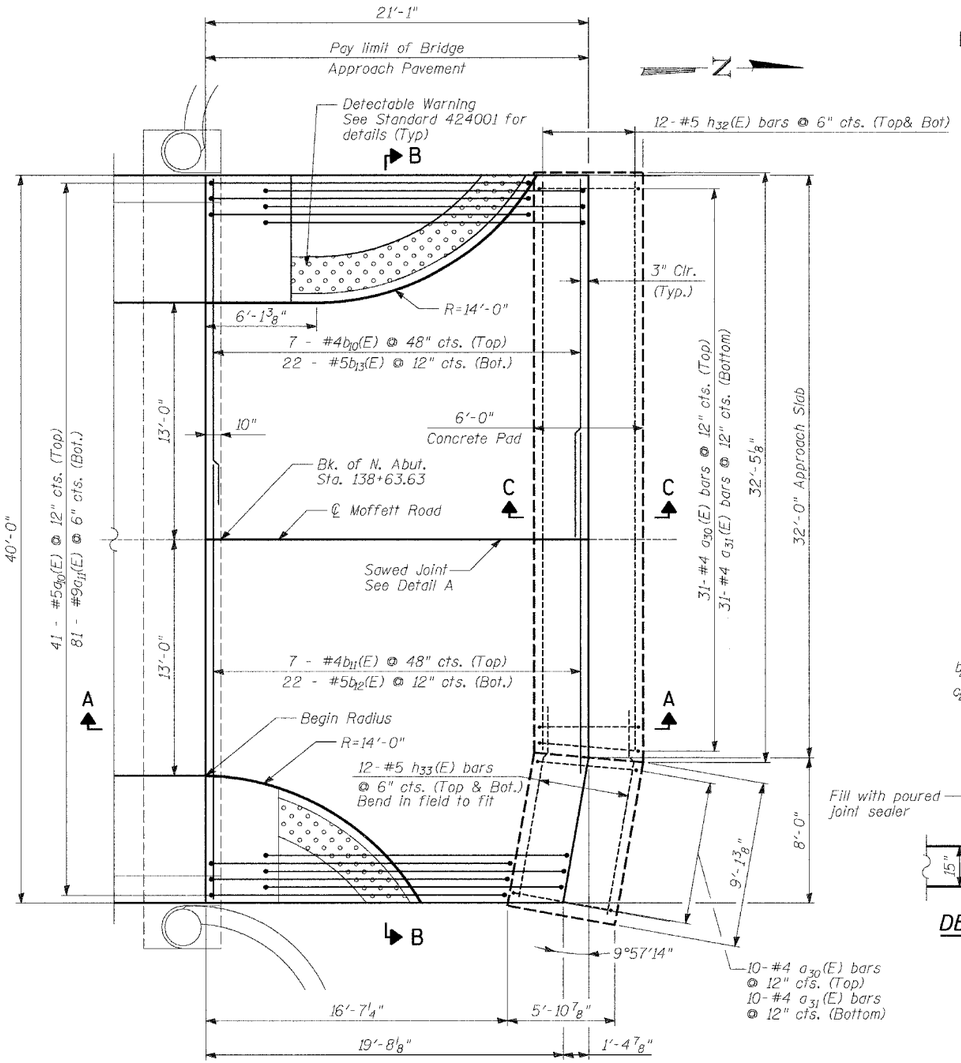
MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. 049-6803

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

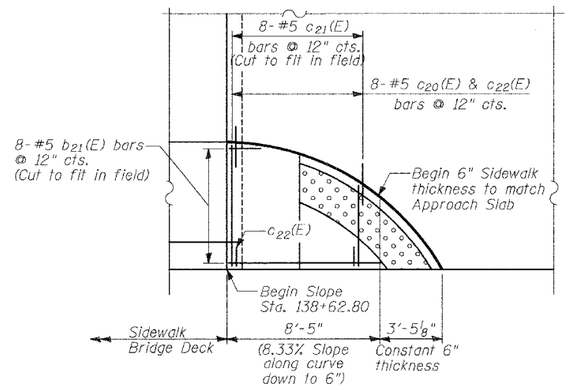
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	34
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

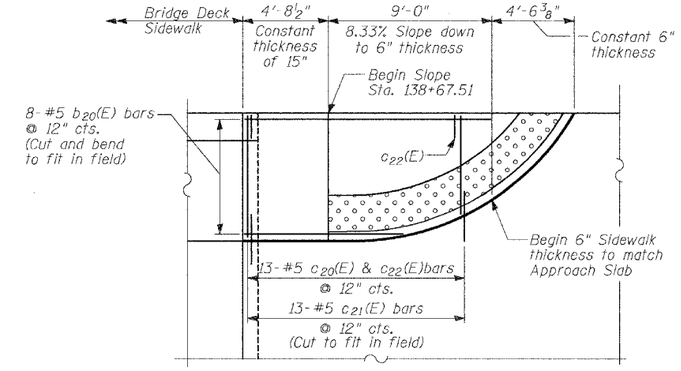
• 02-00025-00-BR

SHEET NO. - 24
30 - SHEETS
CONTRACT 83790



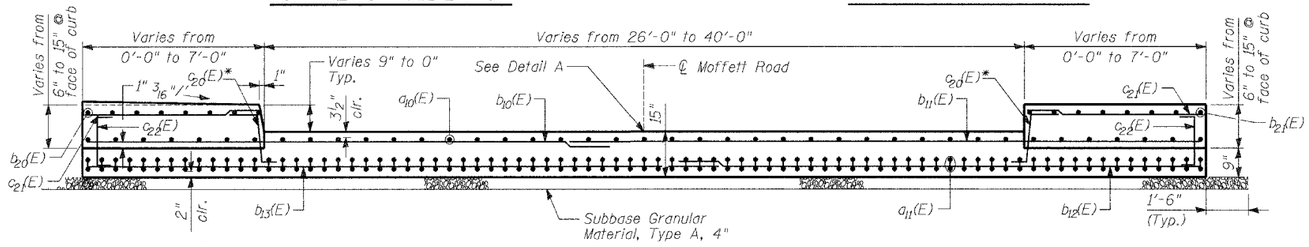
PLAN



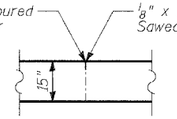


NORTHEAST SIDEWALK

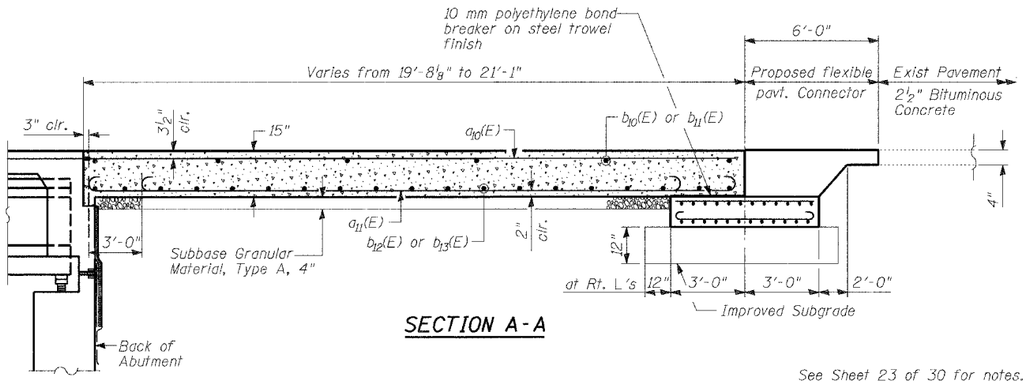
NORTHWEST SIDEWALK



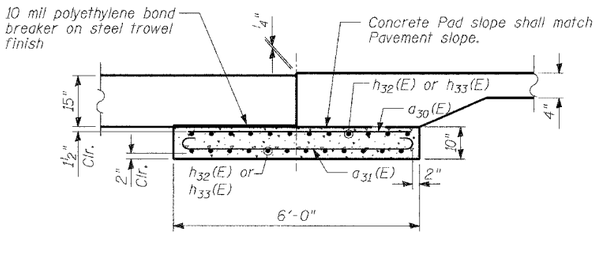
SECTION B-B



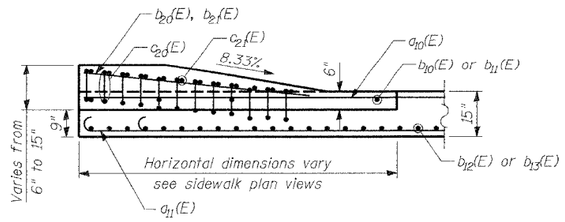
DETAIL A



SECTION A-A



SECTION C-C



SIDEWALK PROFILE

See Sheet 23 of 30 for notes.

TYLIN INTERNATIONAL

DESIGNED	- CM,DE
CHECKED	- SP
DRAWN	- CM,DE
CHECKED	- PF

DATE: 02-23-2005

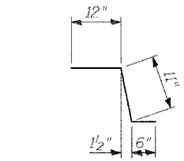
NORTH APPROACH PAVEMENT

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

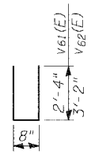
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	35
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -25
30 - SHEETS
CONTRACT 83790
• 02-00025-00-BR

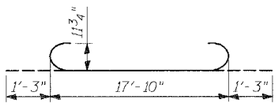


BAR c_{20}(E)

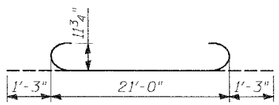
BAR v_{60}(E)



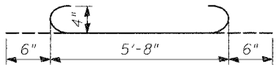
BARS v_{61}(E), v_{62}(E)



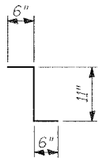
BAR a_{11}(E)



BAR a_{13}(E)



BAR a_{31}(E)



BAR c_{22}(E)

NORTH APPROACH BILL OF MATERIAL

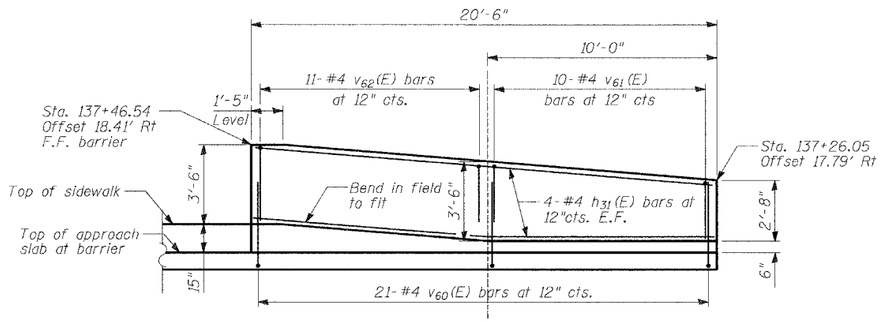
Bar	No.	Size	Length	Shape
a_{10}(E)	41	#5	20'-9"	
a_{11}(E)	81	#9	20'-4"	
a_{30}(E)	41	#4	5'-8"	
a_{31}(E)	41	#4	6'-8"	
b_{10}(E)	7	#4	17'-7"	
b_{11}(E)	7	#4	23'-7"	
b_{12}(E)	22	#5	17'-7"	
b_{13}(E)	22	#5	23'-7"	
b_{20}(E)	8	#5	13'-4"	
b_{21}(E)	8	#5	8'-3"	
c_{20}(E)	21	#5	2'-5"	
c_{21}(E)	21	#5	6'-8"	
c_{22}(E)	21	#5	1'-11"	
h_{32}(E)	24	#5	31'-8"	
h_{33}(E)	24	#5	17'-1"	
Reinforcement Bars, Epoxy Coated			POUND	9610
Bridge Approach Pavement (Special)			SQ YD	94

The volume of concrete for the sidewalk area is 5.7 CU YD.

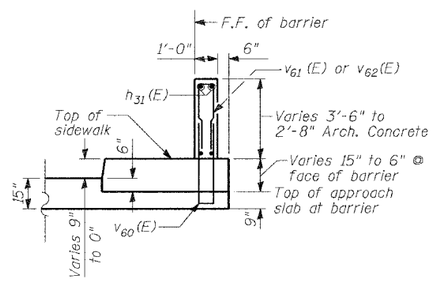
SOUTH APPROACH BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_{12}(E)	41	#5	23'-11"	
a_{13}(E)	81	#9	23'-6"	
a_{30}(E)	40	#4	5'-8"	
a_{31}(E)	40	#4	6'-8"	
b_{10}(E)	7	#4	17'-7"	
b_{11}(E)	7	#4	23'-7"	
b_{12}(E)	25	#5	17'-7"	
b_{13}(E)	25	#5	23'-7"	
b_{22}(E)	8	#5	13'-9"	
b_{23}(E)	8	#5	13'-0"	
c_{20}(E)	27	#5	2'-5"	
c_{21}(E)	27	#5	6'-8"	
c_{22}(E)	27	#5	1'-11"	
h_{30}(E)	24	#5	38'-6"	
h_{31}(E)	24	#4	20'-6"	
v_{60}(E)	21	#4	8'-0"	
v_{61}(E)	10	#4	5'-4"	
v_{62}(E)	11	#4	7'-0"	
Architectural Concrete			CU YD	2.4
Reinforcement Bars, Epoxy Coated			POUND	11300
Bridge Approach Pavement (Special)			SQ YD	108

The volume of concrete for the sidewalk area is 9.3 CU YD.



SOUTHEAST SIDEWALK BARRIER WALL
Offsets are to wall F.F.



SECTION THRU SOUTHEAST SIDEWALK AT BARRIER WALL

Note:
Minimum lap for #4 bars shall be 1'-8"

NOTES

Reinforcement Bars designated (E) shall be Epoxy Coated.

Reinforcement Bars in the above tables are included in the unit price for Bridge Approach Pavement (Special), See Special Provisions.

TY·LIN INTERNATIONAL

DESIGNED	- CM,DE
CHECKED	- SP
DRAWN	- CM,DE
CHECKED	- PF

DATE: 02-23-2005

APPROACH PAVEMENT DETAILS

MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. Ø49-68Ø3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	36
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. -26
30- SHEETS
CONTRACT 83790
• 02-00025-00-BR

BILL OF MATERIAL

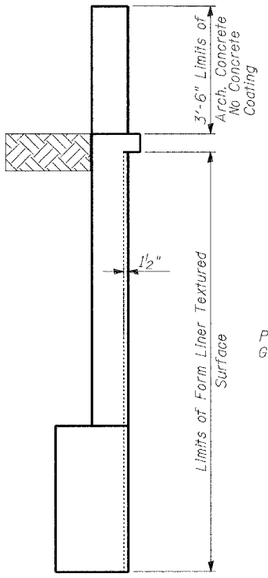
ITEM	UNIT	TOTAL
Form Liner Textured Surface	SQ YD	123
Coating System for Concrete	SQ FT	4000

All exposed surface of the piers and the abutments shall be coated, with the exception of the top of caps.

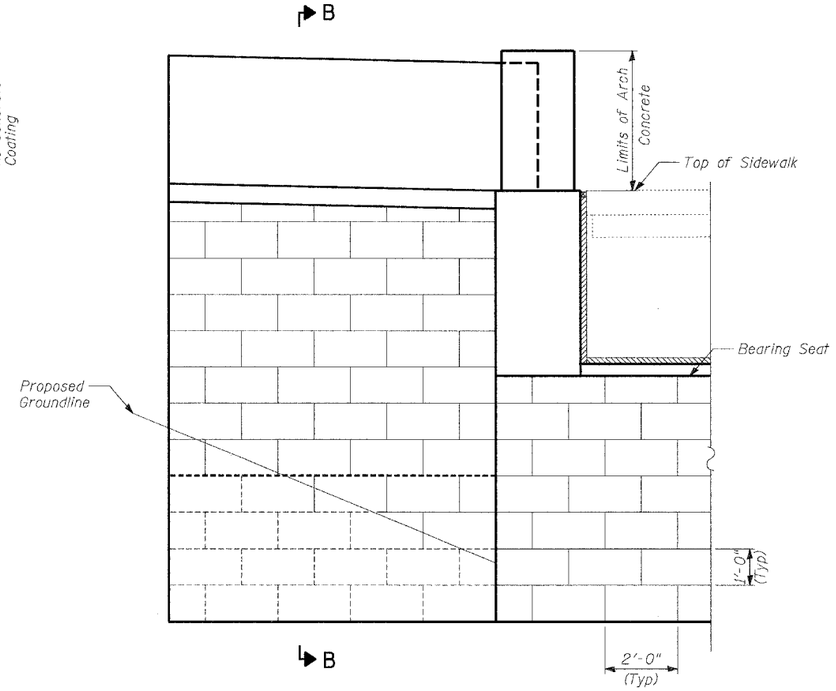
CONCRETE COATING

LOCATION	TOTAL (SQ FT)
North Abutment	535
North Abutment Retaining Walls	88
South Abutment	325
South Abutment Retaining Walls	147
Piers	1278
Deck Fascia	921
Fascia Beams	706

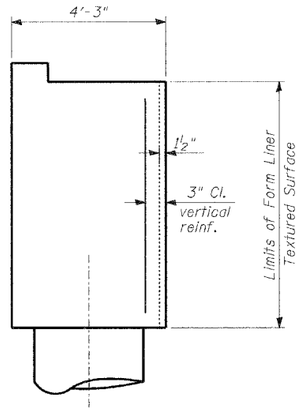
With the exception of the fascia beams, the color of the concrete coating shall be Cloud 57BR -See Special Provisions



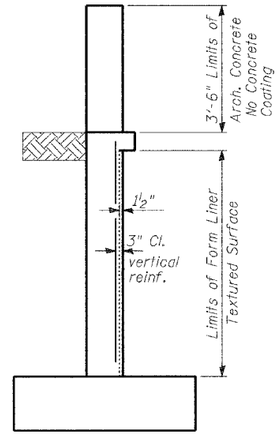
SECTION B-B



TYPICAL WINGWALL ELEVATION

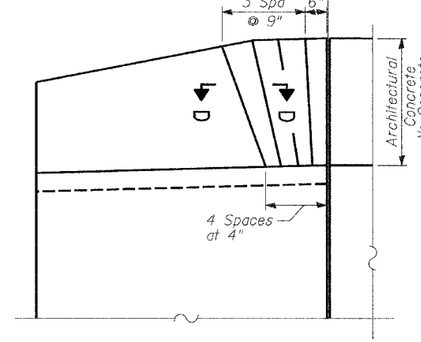


SECTION A-A

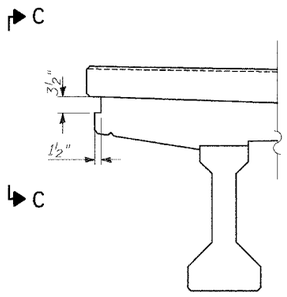


SECTION THRU RETAINING WALLS

Note: 3'-6" wall atop retaining wall not provided at South Abutment, East wall.

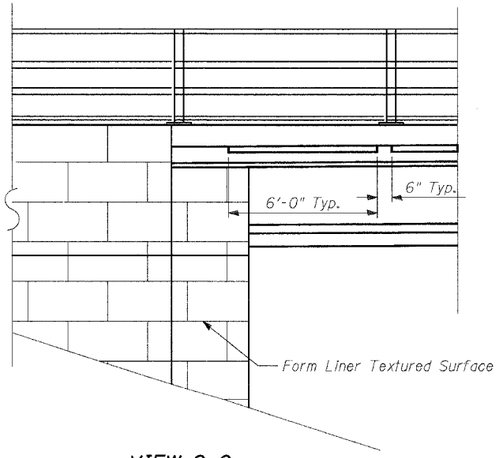


ELEVATION OF NORTH & SOUTH ABUTMENT RETAINING WALLS
(Above detail does not apply at South Abutment, East wall)

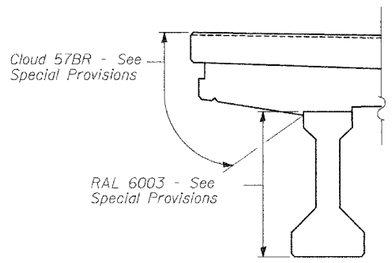


SECTION THRU DECK FASCIA

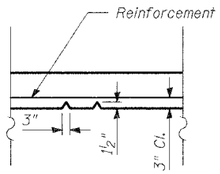
Note:
Cost of Relief treatment to deck fascia as shown shall be included in the unit price of Concrete Superstructure.



VIEW C-C
(Shown at South Abutment, East Face)



CONCRETE COATING OF FASCIA



SECTION D-D

Cost of architectural finish, as shown in "ELEVATION OF NORTH & SOUTH ABUTMENT RETAINING WALLS" shall be included in the unit price of Architectural Concrete.

TYLIN INTERNATIONAL

DESIGNED	-	SP
CHECKED	-	PF
DRAWN	-	SP
CHECKED	-	PF

DATE: 02-23-2005

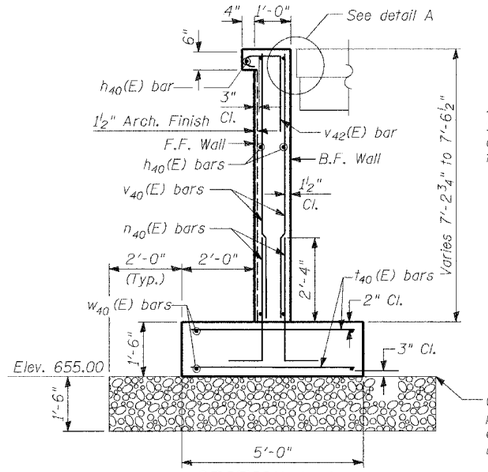
ARCHITECTURAL DETAILS

MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. Ø49-68Ø3

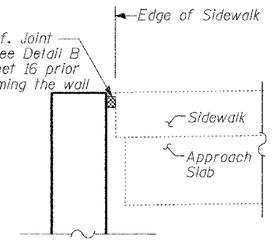
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	37
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. -27
30- SHEETS
CONTRACT 83790
• 02-00025-00-BR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



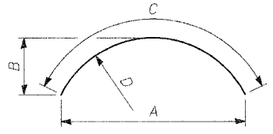
SECTION A-A



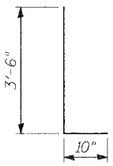
DETAIL A

Bar	A	B	C	D
h_{41}(E)	5'-1⅝"	1'-4¼"	6'-0"	R=3'-2"
h_{42}(E)	6'-3⅛"	1'-8"	7'-4"	R=3'-10"
h_{43}(E)	5'-1⅝"	1'-4¼"	6'-0"	R=3'-2"
h_{44}(E)	6'-3⅛"	1'-8"	7'-4"	R=3'-10"
w_{43}(E)	9'-6"	2'-7⅛"	11'-2"	R=5'-9"

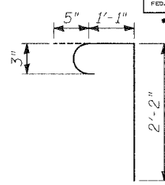
CURVED BAR TABLE



CURVED BAR DIAGRAM



BAR n_{40}(E)

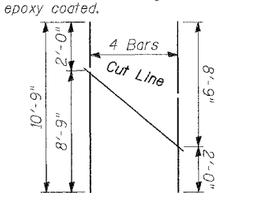


BAR v_{42}(E)

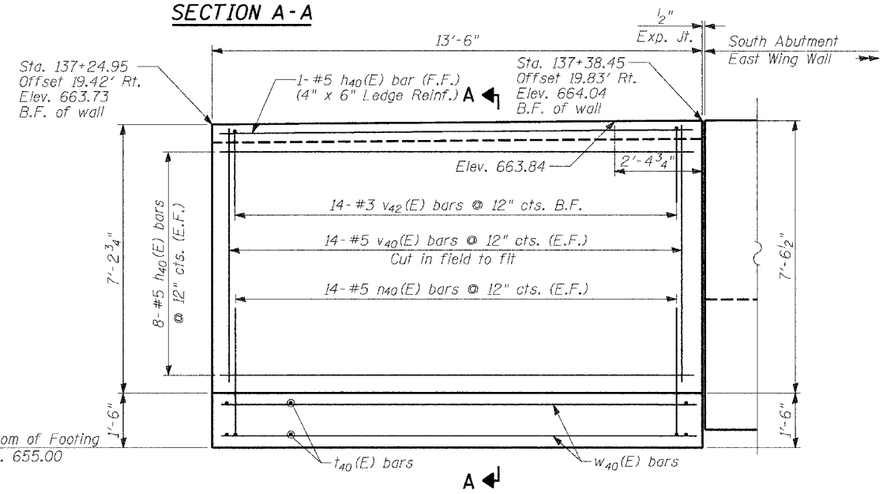
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_{40}(E)	17	#5	13'-2"	
h_{41}(E)	8	#5	6'-0"	
h_{42}(E)	7	#5	7'-4"	
h_{43}(E)	4	#4	6'-0"	
h_{44}(E)	4	#4	7'-4"	
n_{40}(E)	44	#5	4'-4"	
t_{40}(E)	28	#5	4'-8"	
t_{41}(E)	24	#5	5'-0"	
v_2 (E)	16	#4	4'-4"	
v_{40}(E)	28	#5	7'-2"	
v_{41}(E)	16	#5	6'-1"	
v_{42}(E)	21	#3	3'-8"	
w_{40}(E)	10	#5	13'-2"	
w_{41}(E)	4	#5	10'-9"	
w_{42}(E)	4	#5	8'-2"	
w_{43}(E)	2	#5	11'-2"	
Concrete Structures, Special		Cu Yd	11.1	
Architectural Concrete		Cu Yd	0.8	
Reinforcement Bars, Epoxy Coated		Pounds	1460	
Structure Excavation		Cu Yd	66	
Porous Granular Embankment		Cu Yd	44	

Reinforcement bars designated (E) shall be epoxy coated.

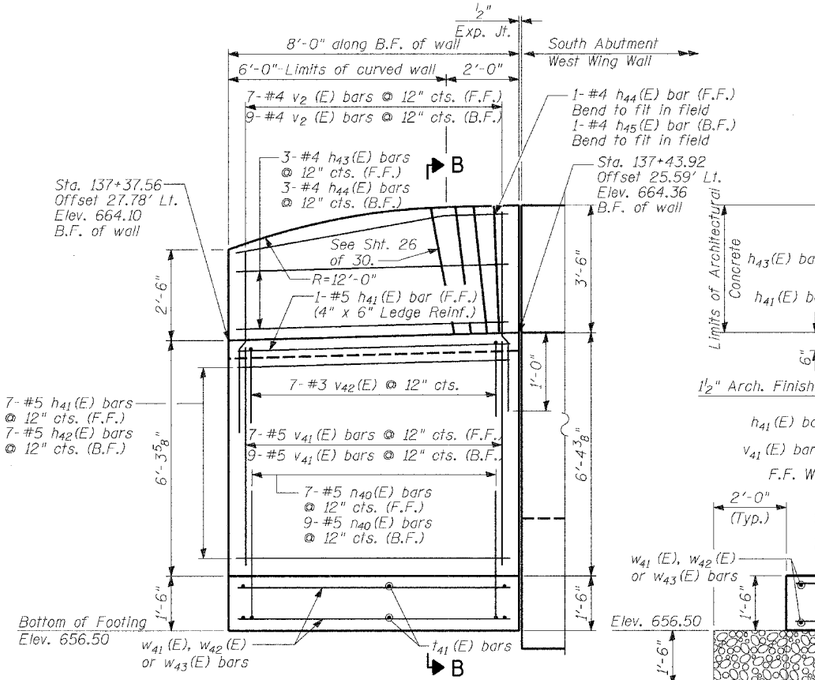


BAR w_{41}(E) BAR CUTTING DIAGRAM



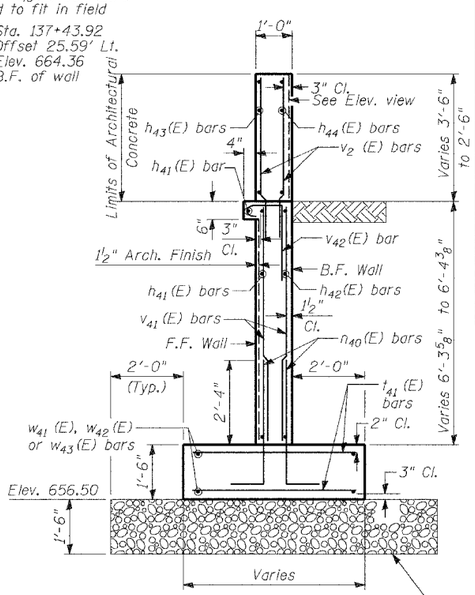
ELEVATION OF SOUTHEAST WALL

(Looking West)

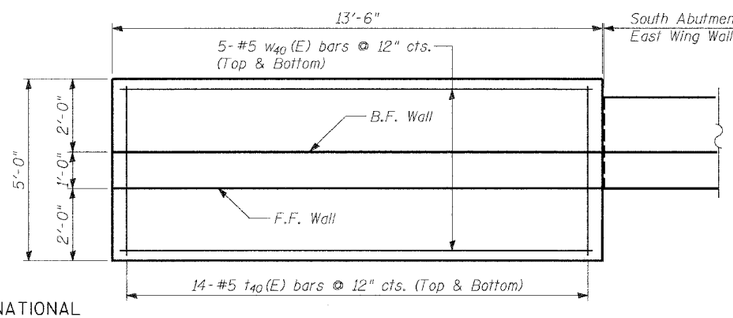


ELEVATION OF SOUTHWEST WALL

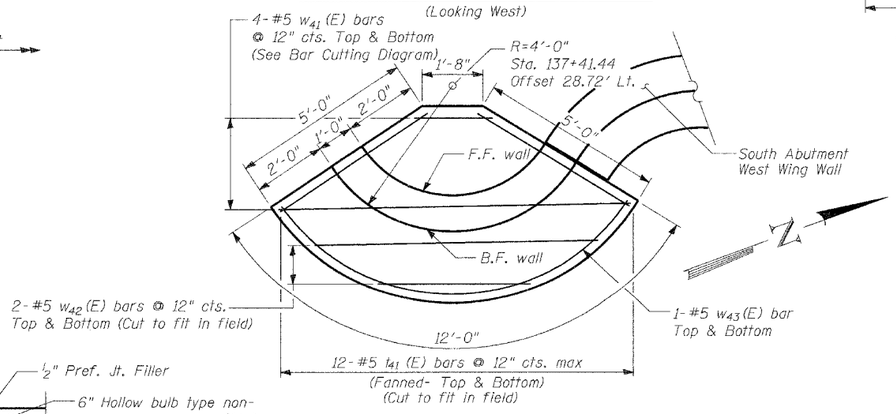
(Looking West)



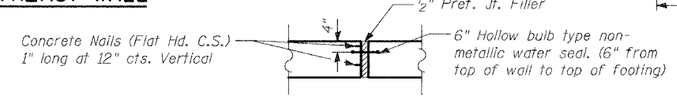
SECTION B-B



PLAN OF SOUTHEAST WALL



PLAN OF SOUTHWEST WALL



EXPANSION JOINT DETAIL

NOTES:

1. Stations and offsets for the Southeast and Southwest Walls are taken at the Back Face of wall.

For Architectural Finish, See Sheet 26 of 30.

TY·LIN INTERNATIONAL

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

DATE: 02-23-2005

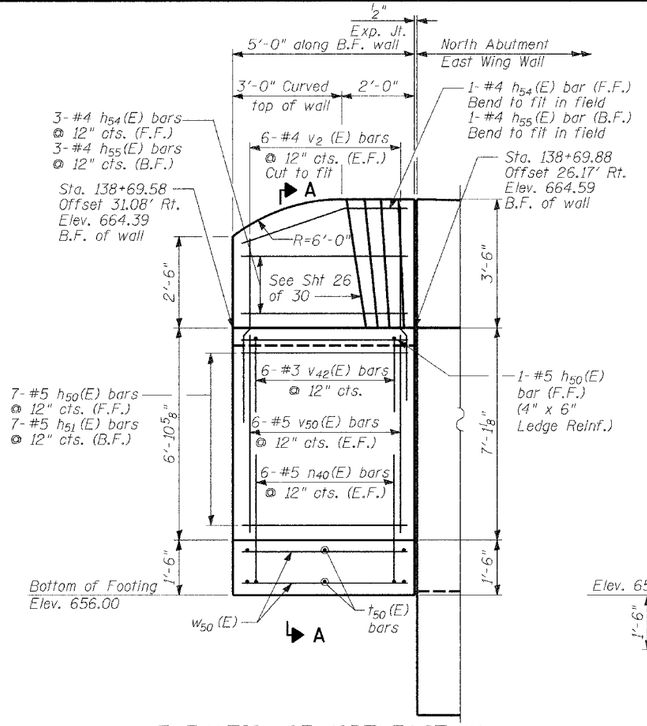
SOUTH ABUTMENT RETAINING WALLS

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

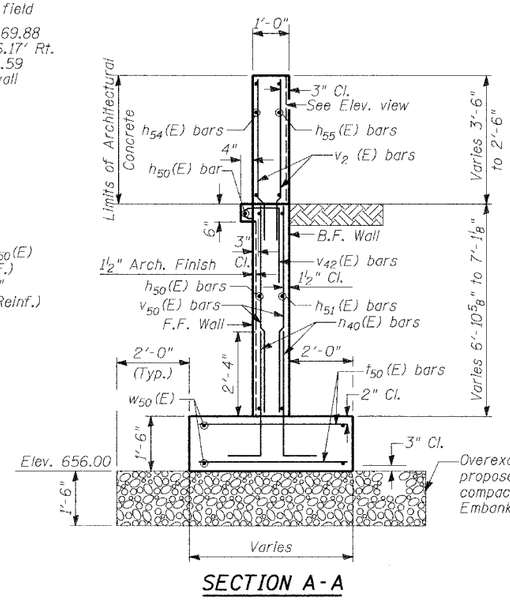
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	38
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

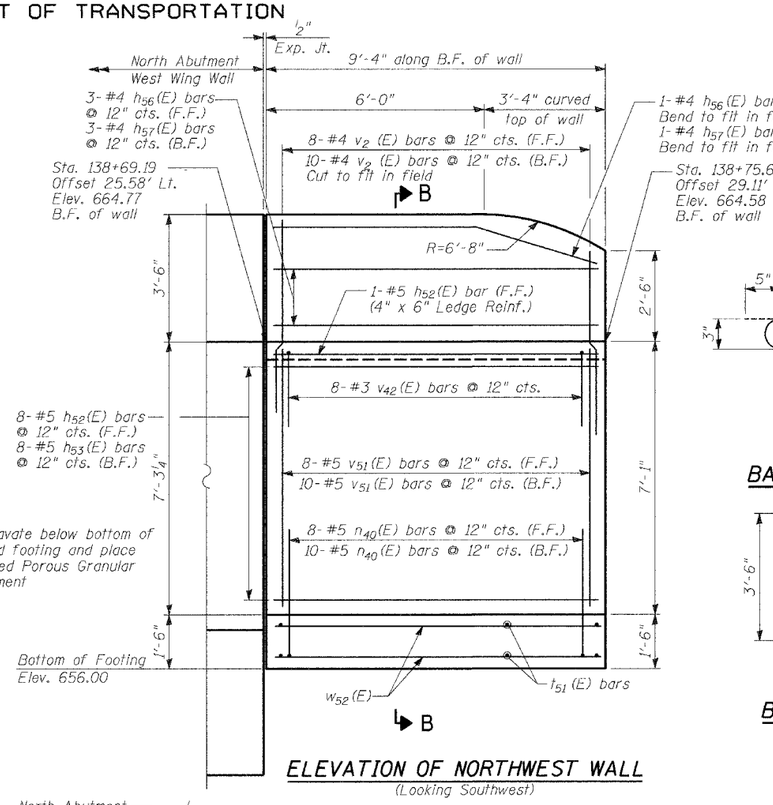
SHEET NO. -28
30 - SHEETS
CONTRACT 83790
• 02-00025-00-BR



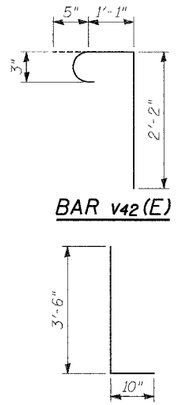
ELEVATION OF NORTHEAST WALL
(Looking South)



SECTION A-A



ELEVATION OF NORTHWEST WALL
(Looking Southwest)



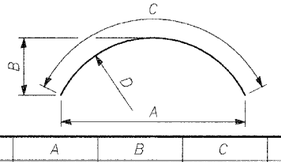
BAR v42(E)

BAR n40(E)

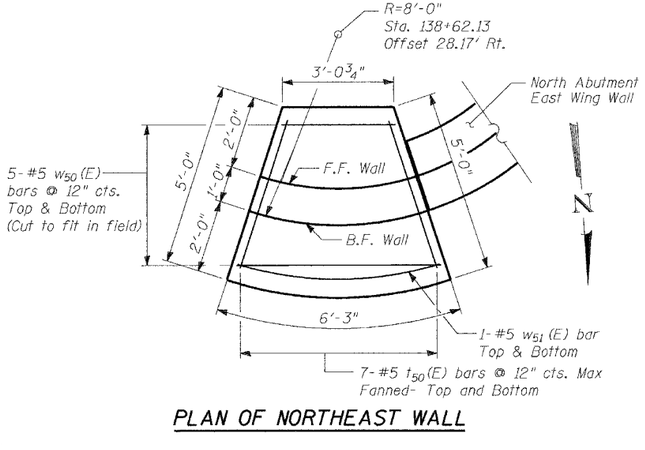
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{50}(E)$	8	#5	4'-1"	
$h_{51}(E)$	7	#5	4'-7"	
$h_{52}(E)$	9	#5	7'-0"	
$h_{53}(E)$	8	#5	8'-7"	
$h_{54}(E)$	4	#4	4'-1"	
$h_{55}(E)$	4	#4	4'-7"	
$h_{56}(E)$	4	#4	7'-0"	
$h_{57}(E)$	4	#4	8'-7"	
$n_{40}(E)$	30	#5	4'-4"	
$t_{50}(E)$	14	#5	4'-8"	
$t_{51}(E)$	32	#5	6'-3"	
v_2 (E)	30	#4	4'-4"	
$v_{42}(E)$	14	#3	3'-8"	
$v_{50}(E)$	12	#5	6'-8"	
$v_{51}(E)$	18	#5	6'-11"	
$w_{50}(E)$	10	#5	5'-8"	
$w_{51}(E)$	2	#5	5'-7"	
$w_{52}(E)$	14	#5	11'-8"	
$w_{53}(E)$	2	#5	15'-3"	
Concrete Structures		Cu Yd	7.9	
Architectural Concrete		Cu Yd	1.6	
Reinforcement Bars, Epoxy Coated		Pounds	1280	
Structure Excavation		Cu Yd	75	
Porous Granular Embankment		Cu Yd	31	

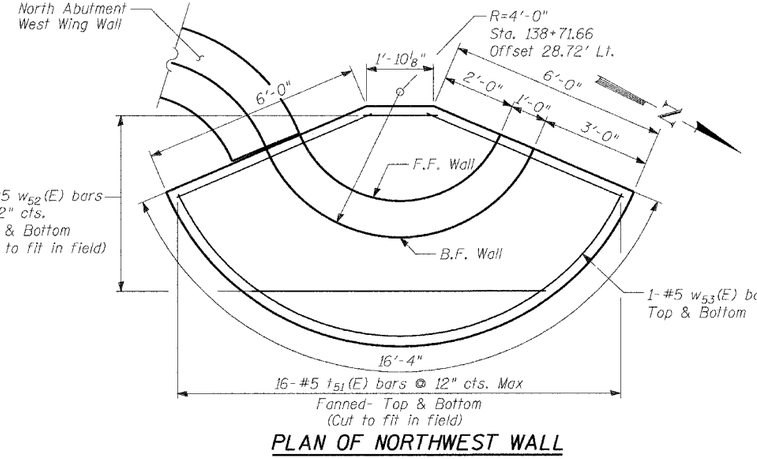
Reinforcement bars designated (E) shall be epoxy coated.



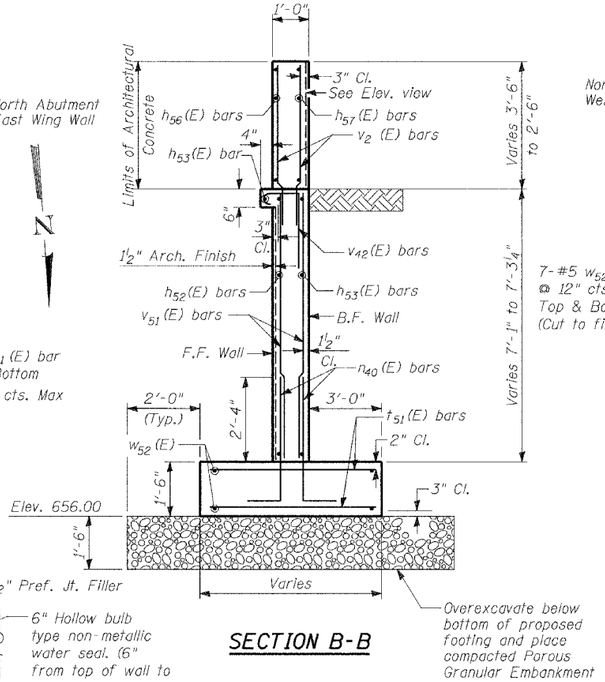
Bar	A	B	C	D
$h_{50}(E)$, $h_{54}(E)$	4'-3 1/4"	3 1/2"	4'-1"	R=7'-1 1/2"
$h_{51}(E)$, $h_{55}(E)$	4'-6 1/4"	4"	4'-7"	R=7'-10 1/2"
$h_{52}(E)$, $h_{56}(E)$	5'-8 1/4"	1'-9 1/4"	7'-0"	R=3'-2"
$h_{53}(E)$, $h_{57}(E)$	6'-10 7/8"	2'-2"	8'-7"	R=3'-10"
$w_{51}(E)$	5'-6 3/8"	4 7/8"	5'-7"	R=9'-6"
$w_{53}(E)$	12'-2 1/2"	3'-10 1/2"	15'-3"	R=6'-9"



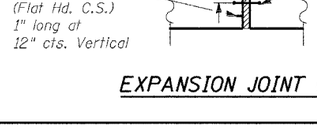
PLAN OF NORTHEAST WALL



PLAN OF NORTHWEST WALL



SECTION B-B



EXPANSION JOINT DETAIL

NOTES

For Architectural finish, see Sheet 26 of 30.

TYLIN INTERNATIONAL

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

DATE: 02-23-2005

NORTH ABUTMENT RETAINING WALLS

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	39
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 29
30 - SHEETS
CONTRACT 83790
• 02-00025-00-BR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SB-1

O'BRIEN & ASSOCIATES, INC.
CONSULTING ENGINEERS
1235 E. DAVIS ST./ARLINGTON HTS., IL 60005
(847)398-4144 • FAX(847) 398-2376

SOIL BORING LOG

PAGE 1 of 2
DATE April 27, 2004
LOGGED BY TOB
OBA JOB No. 03356

ROUTE FAP Rt. 330 DESCRIPTION Moffett Road Bridge Over Un-Named Ravine
SECTION 128 R-2 LOCATION Lake Bluff, Illinois
COUNTY Lake DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE D-120 Safety
STRUCT. NO. 049-6801
Station 137+50.47 to 183+60.80
BORING NO. SB-1
Station: 137+30
Offset: 6' Left
Ground Surface Elev. 663.7

Surface Water Elev. 632.2
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 620.7
Upon Completion Dry
After ____ Hrs. ____

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				5.0" ASPHALT, 8.0" CRUSHED STONE
	6			
	4			
	5	1.25P	15	CLAY LOAM-brown-stiff (A-6)
	4			
	6			
-5	7	1.5P	13	
	5			
	10			
	12	3.2B	16	CLAY-brown & gray- very stiff (A-6)
	5		116	
	8			
-10	10	3.1B	15	
	4			
	8			
	9	2.0B	15	
	5		114	CLAY-gray- stiff to very stiff (A-6)
	8			
-15	12	2.1B	15	
	5			
	8			
	10	1.4B	16	
	5		111	
	7			
-20	8	1.9B	16	
	5			CLAY-gray- stiff to very stiff (A-6)
	8			
-25	10	2.8B	16	
	7			
	8			
-30	11	1.9B	16	
	15			
	15			
-35	20	5.4B	14	CLAY-gray- very stiff to hard (A-6)
	6			
	10			
-40	21	4.3B	17	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR-No Recovery

SB-1

O'BRIEN & ASSOCIATES, INC.
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SOIL BORING LOG

PAGE 1 of 2
DATE April 27, 2004
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STRUCT. NO. 049-6801
Station 137+50.47 to 183+60.80
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Offset: 6' Left
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First Encounter 620.7
Upon Completion Dry
After ____ Hrs. ____

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				5.0" ASPHALT, 8.0" CRUSHED STONE
	6			
	4			
	5	1.25P	15	CLAY LOAM-brown-stiff (A-6)
	4			
	6			
-5	7	1.5P	13	
	5			
	10			
	12	3.2B	16	CLAY-brown & gray- very stiff (A-6)
	5		116	
	8			
-10	10	3.1B	15	
	4			
	8			
	9	2.0B	15	
	5		114	CLAY-gray- stiff to very stiff (A-6)
	8			
-15	12	2.1B	15	
	5			
	8			
	10	1.4B	16	
	5		111	
	7			
-20	8	1.9B	16	
	5			CLAY-gray- stiff to very stiff (A-6)
	8			
-25	10	2.8B	16	
	7			
	8			
-30	11	1.9B	16	
	15			
	15			
-35	20	5.4B	14	CLAY-gray- very stiff to hard (A-6)
	6			
	10			
-40	21	4.3B	17	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR-No Recovery

TYLIN INTERNATIONAL

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

DATE: 02-23-2005

BORING LOGS

MOFFETT ROAD OVER
DRAINAGE RAVINE
FAU 2758
LAKE COUNTY
S.N. Ø49-68Ø3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2758	•	LAKE	40	40
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

• 02-00025-00-BR

SHEET NO. -30
30- SHEETS
CONTRACT 83790

SB-2

O'BRIEN & ASSOCIATES, INC.
CONSULTING ENGINEERS

SOIL BORING LOG

PAGE 1 of 2
DATE April 28, 2004
LOGGED BY TOB
OBA JOB No. 03356

ROUTE FAP Rt. 330 DESCRIPTION Moffett Road Bridge Over Un-Named Ravine
SECTION 128 R-2 LOCATION Lake Bluff, Illinois
COUNTY Lake DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE D-120 Safety

STRUCT. NO. 049-6801
Station 137+50.47 to 183+60.80
BORING NO. SB-2
Station: 138+76
Offset: 6' Right
Ground Surface Elev. 664.3

Surface Water Elev. 632.2
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 638.3 ▼
Upon Completion 601.3 ▽
After ____ Hrs. ____

Description	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
5.5" ASPHALT				
CRUSHED STONE & CONCRETE-very dense (Fill)		21		
		50/5"		
			NP	5
		44/5"		
	-5		NP	6
		50/5"		
			NP	7
CRUSHED STONE SCREENINGS-very dense (Fill)		50/4"		
	-10		NP	10
CLAY-brown & gray-hard (CL)		8		*113*
		4		
		2	5.0B	15
CLAY-gray-very stiff to hard (CL)		7		*113*
		7		
	-15	10	2.7B	15
		3		*115*
		6		
		7	2.3B	16
		5		*117*
		8		
	-20	16	3.4B	14

Description	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY-gray-very stiff to hard (CL)		8		*115*
		10		
		16	2.75B	16
		12		*117*
		30	7.75B	14
	-25	32	NP	17
SILT-gray-very dense (A-4) ▼				
SAND-gray-medium dense (A-1-b)		14		
		13		
		14	NP	13
		9		
		10	NP	16
CLAY-gray-very stiff to hard (A-6)	-30	13	3.75B	14
		10		*116*
		17		
	-35	18	2.5B	15
		9		*114*
		13		
	-40	16	2.2B	16

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

SB-2

O'BRIEN & ASSOCIATES, INC.
CONSULTING ENGINEERS

SOIL BORING LOG

PAGE 2 of 2
DATE April 28, 2004
LOGGED BY TOB
OBA JOB No. 03356

ROUTE FAP Rt. 330 DESCRIPTION Moffett Road Bridge Over Un-Named Ravine
SECTION 128 R-2 LOCATION Lake Bluff, Illinois
COUNTY Lake DRILLING METHOD 3.25' Hollow Stem Auger HAMMER TYPE D-120 Safety

STRUCT. NO. 049-6801
Station 137+50.47 to 183+60.80
BORING NO. SB-2
Station: 138+76
Offset: 6' Right
Ground Surface Elev. 664.3

Surface Water Elev. 632.2
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 638.3 ▼
Upon Completion 601.3 ▽
After ____ Hrs. ____

Description	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY-gray-very stiff to hard (A-6)		6		*113*
		8		
	-45	13	2.7B	17
		10		*113*
		15		
Drillers Observation: Blow-in sands @ -50.0'	-50	17	4.6B	18
		10		*110*
		12		
	-55	16	4.5B	17
SILTY LOAM to SILT-gray-very dense (A-4)		65/5"		
	-60		NP	10

Description	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SILTY LOAM to SILT-gray-very dense (A-4) ▽		75/5"		
	-65		NP	14
End of Boring @ -65.0' Hollow Stem Augers D-120 Safety Hammer				
	-70			
	-75			
	-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

T.Y. LIN INTERNATIONAL

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

DATE: 02-23-2005

BORING LOGS

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