

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(107) BR	LASALLE	24	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 66844	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PROPOSED  
HIGHWAY PLANS**

F.A.P. ROUTE 649 (IL 17)  
SECTION (107) BR  
PROJECT ACF-0649(016)  
LASALLE COUNTY  
C-93-117-08

REPLACEMENT OF THE EXISTING STRUCTURE OVER THE  
SOUTH BRANCH OF MOON CREEK WITH TRIPLE PRECAST BOX CULVERT  
0.8 MILES E. OF OLD IL 179

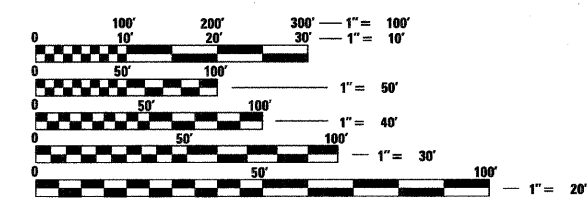
**INDEX OF SHEETS**

- 1 COVER SHEET
- 2 GENERAL NOTES AND COMMITMENTS
- 3 SUMMARY OF QUANTITIES
- 4 TYPICAL SECTIONS
- 5 SCHEDULE OF QUANTITIES
- 6 TIE POINTS
- 7-8 PLAN AND PROFILE
- 9-10 MAINTENANCE OF TRAFFIC
- 11 RIGHT OF WAY PLAN
- 12-18 CULVERT PLANS
- 19 ROADWAY DETAILS
- 20-24 CROSS SECTIONS

**HIGHWAY STANDARDS**

- 000001-05 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-01 AREAS OF REINFORCEMENT BARS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 280001-04 TEMPORARY EROSION CONTROL SYSTEMS
- 482011-03 HMA SHLD. STRIPS/SHLDS. WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
- 515001-02 NAME PLATE FOR BRIDGES
- 630001-07 STEEL PLATE BEAM GUARDRAIL
- 630101-07 GUARDRAIL MOUNTED ON EXISTING CULVERTS
- 630201-05 PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
- 630301-04 SHOULDER WIDENING FOR TYPE I (SPECIAL) GUARDRAIL TERMINALS
- 635006-02 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 635011-01 REFLECTOR MARKER AND MOUNTING DETAILS
- 666001 RIGHT OF WAY MARKERS
- 667101 PERMANENT SURVEY MARKERS
- 701001-01 OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 4.5 m (15') AWAY
- 701006-02 OFF-ROAD OPERATIONS, 2L, 2W, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
- 701311-02 LANE CLOSURE, 2L, 2W, MOVING OPERATIONS-DAY ONLY
- 701321-09 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
- 701326-02 LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
- 701901 TRAFFIC CONTROL DEVICES
- 704001-04 TEMPORARY CONCRETE BARRIER
- 781001-02 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

MICROFILMED \_\_\_\_\_  
REEL NUMBER \_\_\_\_\_  
AWARDED \_\_\_\_\_  
RESIDENT ENGINEER \_\_\_\_\_  
AS BUILT CHANGES WERE MADE  
ON THE FOLLOWING SHEETS \_\_\_\_\_

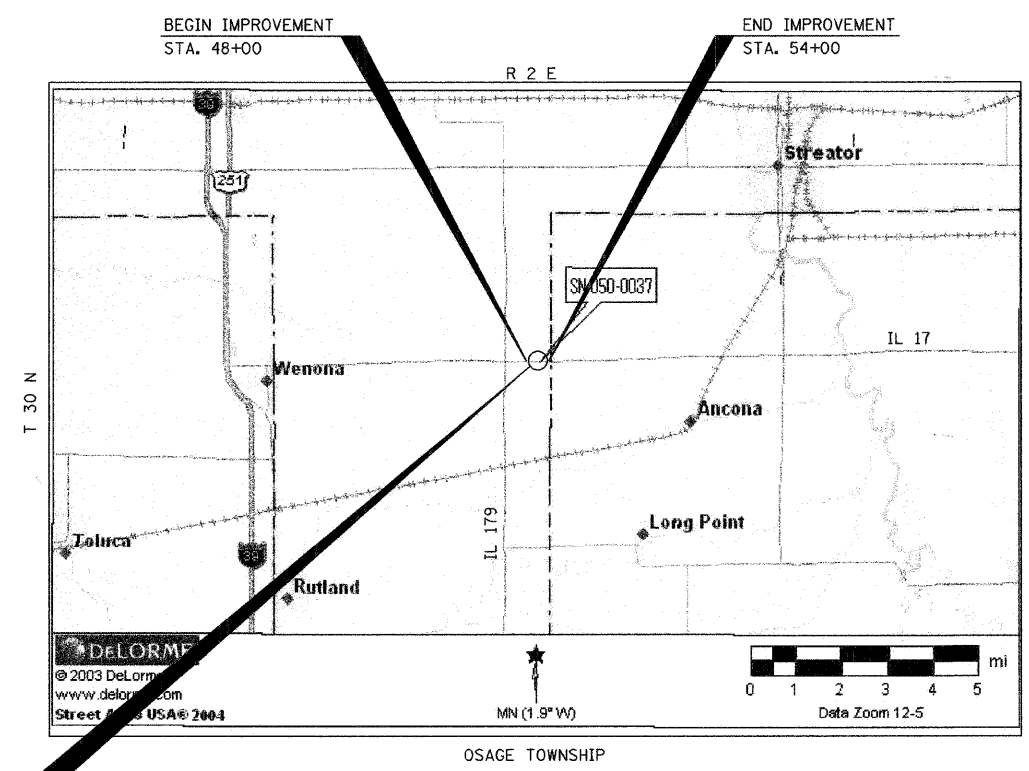


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

**PROJECT ENGINEER: JOE KANNEL**  
**UNIT CHIEF: MICHELE LINDEMANN**  
  
DISTRICT 3 NO. (815) 434-6131  
  
**CONTRACT NO. 66844**

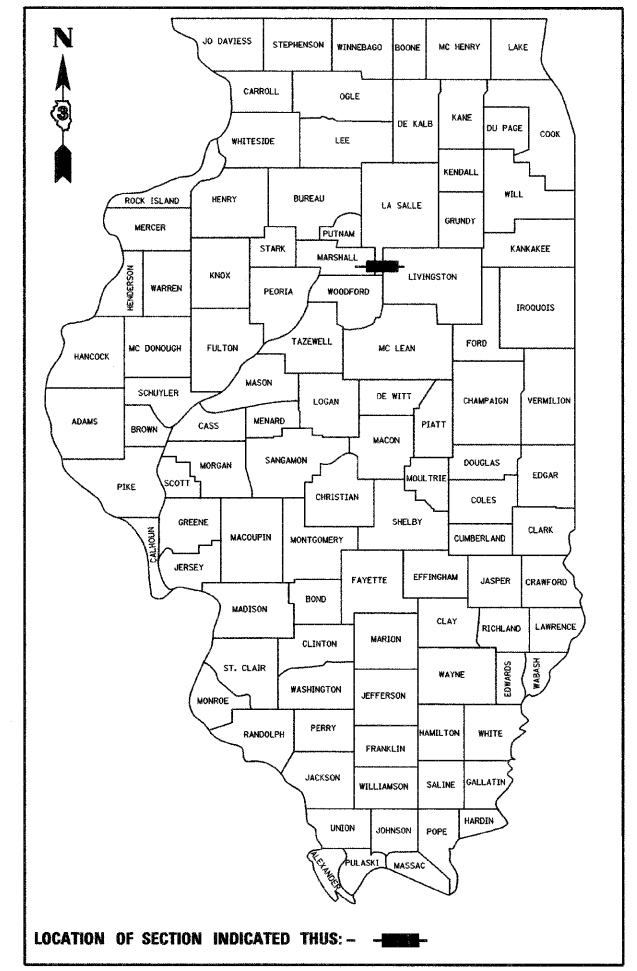
STA. 50+98  
TRIPLE 11'x7' PRECAST  
CONCRETE BOX CULVERT  
EXISTING S.N. 050-0037  
PROPOSED S.N. 050-2044



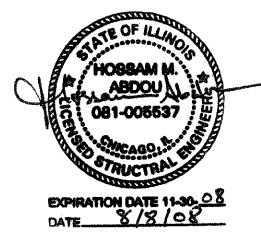
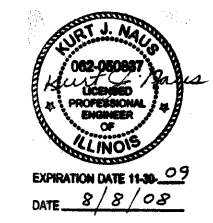
**LOCATION MAP**  
SCALE: NTS

GROSS LENGTH = 600 FT. = 0.114 MI.  
NET LENGTH = 600 FT. = 0.114 MI.

**P-93-012-04**  
**D-93-080-08**



**FUNCTIONAL CLASSIFICATION**  
**MINOR ARTERIAL (RURAL)**  
F.A.P. ROUTE 649 (IL 17)  
2009 ADT = 2,200  
P.V. = 84.2% S.U. = 7.3% M.U. = 8.5%



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
SUBMITTED Aug. 11 20 08  
George Degen  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
October 3, 20 08  
Eric E. Haran  
ENGINEER OF DESIGN AND ENVIRONMENT  
October 3, 20 08  
Christine M. Reed  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**benesch**  
alfred benesch & company  
Engineers • Surveyors • Planners  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450  
Job # 3938.01

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**



**SUMMARY OF QUANTITIES**

CONSTRUCTION TYPE CODE: X088-2A			
80% FEDERAL / 20% STATE			
CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	6
20200100	EARTH EXCAVATION	CU YD	845
20400800	FURNISHED EXCAVATION	CU YD	670
20700220	POROUS GRANULAR EMBANKMENT	CU YD	596
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	398
25000200	SEEDING, CLASS 2	ACRE	0.75
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	54
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	54
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	54
25100115	MULCH, METHOD 2	ACRE	0.75
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	59
28000300	TEMPORARY DITCH CHECKS	EACH	8
28000400	PERIMETER EROSION BARRIER	FOOT	1,226
28100107	STONE RIPRAP, CLASS A4	SQ YD	115
28200200	FILTER FABRIC	SQ YD	99
31100300	SUB-BASE GRANULAR MATERIAL, TYPE A 4"	SQ YD	211
35501326	HOT-MIX ASPHALT BASE COURSE, 10 1/2"	SQ YD	203
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	440
40600300	AGGREGATE (PRIME COAT)	TON	9
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	0.5
40600525	LEVELING BINDER (HAND METHOD), N50	TON	0.9
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	87
40600895	CONSTRUCTING TEST STRIP	EACH	2
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	320
40600990	TEMPORARY RAMP	SQ YD	27
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	175
44000100	PAVEMENT REMOVAL	SQ YD	203
44004250	PAVED SHOULDER REMOVAL	SQ YD	33
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	27
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	930
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	428
50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU YD	398
51500100	NAME PLATES	EACH	1
54001000	BOX CULVERT END SECTIONS	EACH	2

CONSTRUCTION TYPE CODE: X088-2A			
80% FEDERAL / 20% STATE			
CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	587.5
63000025	STEEL PLATE BEAM GUARD RAIL, ATTACHED TO STRUCTURES	FOOT	80
63100169	TRAFFIC BARRIER TERMINAL, TYPE 1(SPECIAL) FLARED	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	668
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	8
66700205	PERMANENT SURVEY MARKERS, TYPE I	EACH	1
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	84
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	156
70300625	TEMPORARY PAINT PAVEMENT MARKING LINE 4"	FOOT	3,120
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1,040
70400100	TEMPORARY CONCRETE BARRIER	FOOT	370
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	367
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1,560
78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	195
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	10
78200410	GUARDRAIL MARKERS, TYPE A	EACH	10
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
78300100	PAVEMENT MARKING REMOVAL	SQ FT	618
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	10
X0323988	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	327
Z0005215	BITUMINOUS STABILIZATION 6" AT STEEL PLATE BEAM GUARD RAIL	SQ YD	302
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
X5402110	PRECAST CONCRETE BOX CULVERT 11' X 7'	FOOT	178

\* SPECIALTY ITEM

**benesch**

alfred benesch & company  
 Engineers • Surveyors • Planners  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-565-0450  
 Job # 3938.01

FILE NAME =  
 ...D366844-sh1-S00.dgn

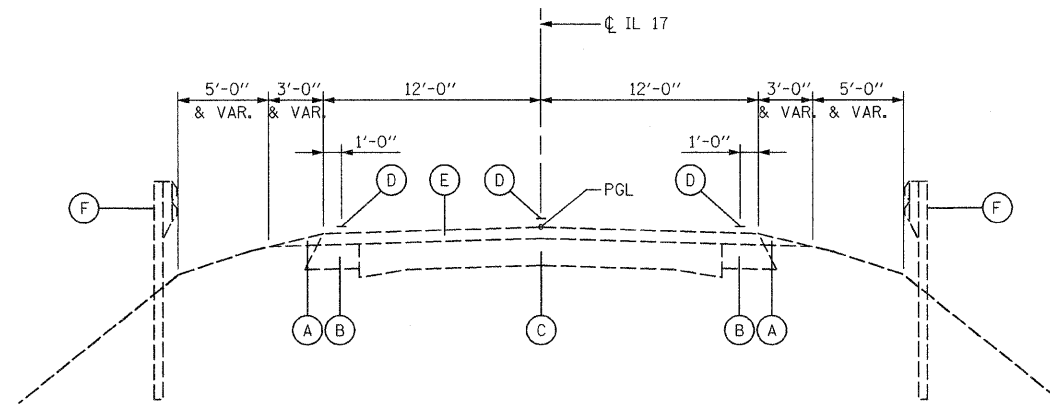
USER NAME = #USER#	DESIGNED - KJN	REVISED -
PLOT SCALE = #SCALE#	DRAWN - KJN	REVISED -
PLOT DATE = 08/08/2008	CHECKED - HMA	REVISED -
	DATE - 8/7/08	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

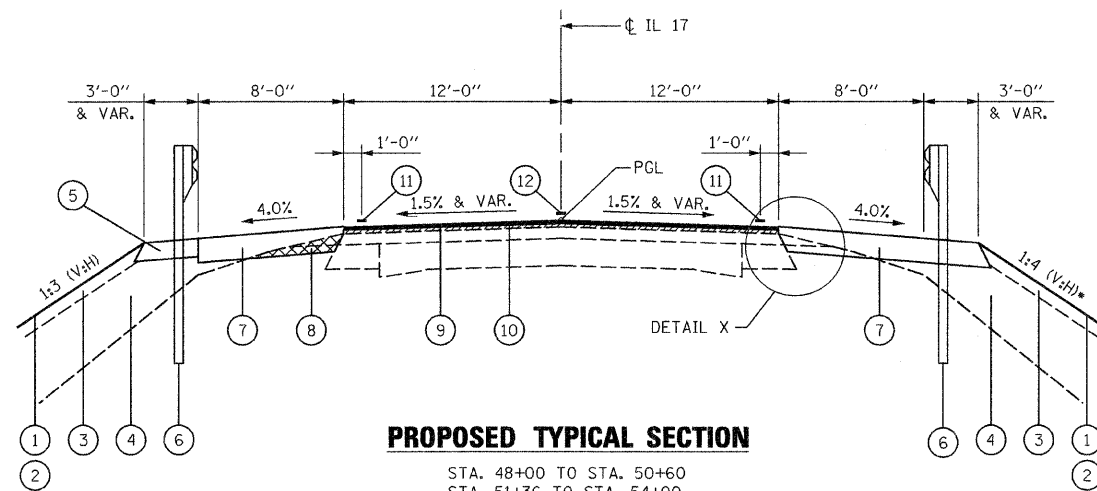
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(107) BR	LASALLE	24	3
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 66844	



**EXISTING TYPICAL SECTION**

STA. 48+00 TO STA. 54+00

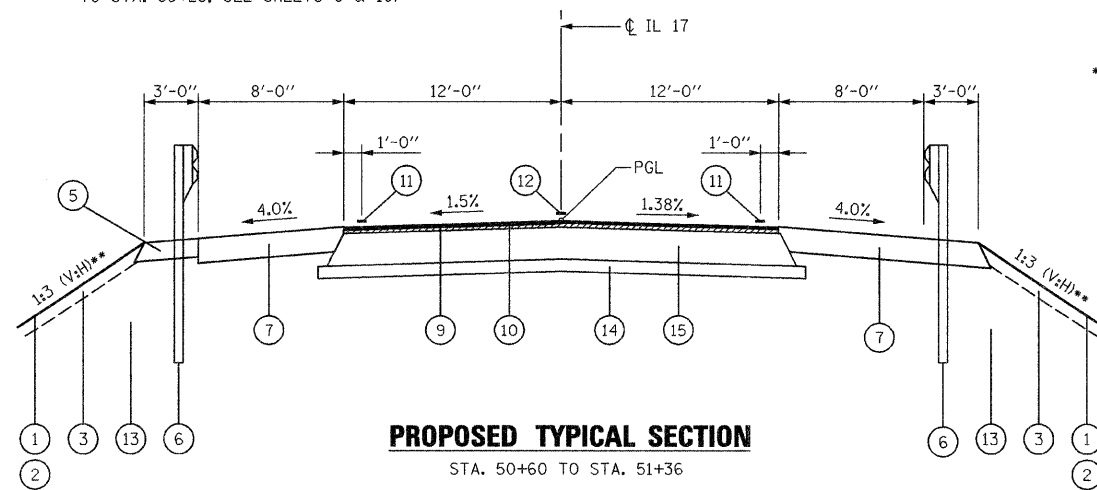
EXISTING BRIDGE OMISSION  
S.N. 050-0037  
STA. 50+78.50 TO STA. 51+17.50



**PROPOSED TYPICAL SECTION**

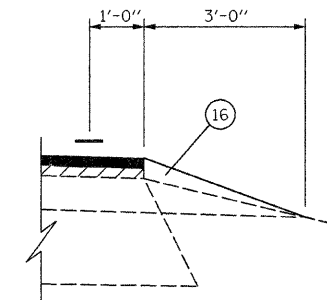
STA. 48+00 TO STA. 50+60  
STA. 51+36 TO STA. 54+00

⊠ EARTH EXCAVATION FOR HMA SHOULDER  
PLACEMENT PRIOR TO STAGE I - STA. 48+61  
TO STA. 53+25, SEE SHEETS 9 & 10



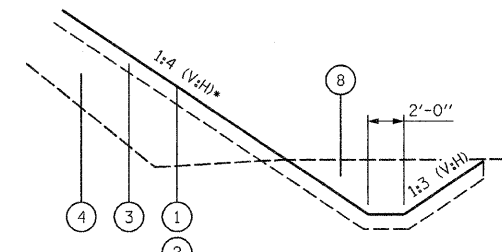
**PROPOSED TYPICAL SECTION**

STA. 50+60 TO STA. 51+36



**DETAIL X**

3' AGGREGATE WEDGE SHOULDER, TYPE B  
TO BE PLACED OUTSIDE OF PROPOSED HMA  
SHOULDER LIMITS (TYP. EACH SHOULDER).  
SEE SHEETS 7 & 8 FOR LOCATIONS.



**DITCH DETAIL**

- \* FRONT SLOPE SHALL BE 1:3 (V:H) BEHIND GUARD RAIL.
- \*\* TRANSITION SLOPE TO 1:2 (V:H) BEHIND THE CULVERT WINGWALLS AND HEADWALL. SEE CULVERT PLANS FOR DETAILS.

PROPOSED CULVERT LIMITS  
S.N. 050-2044  
STA. 50+78.50 TO STA. 51+17.50

**LEGEND**

- (A) EXISTING AGGREGATE WEDGE
- (B) EXISTING BITUMINOUS BASE COURSE WIDENING, 9"
- (C) EXISTING 9-6 1/2-9 P.C.C. PAVEMENT
- (D) EXISTING PAVEMENT MARKING
- (E) EXISTING BITUMINOUS OVERLAY
- (F) EXISTING GUARD RAIL TO BE REMOVED
- (1) SEEDING, CLASS 2
- (2) MULCH, METHOD 2
- (3) VEGETATION SUSTAINING SOIL (INCLUDED IN FURNISHED EXCAVATION)
- (4) FURNISHED EXCAVATION
- (5) BITUMINOUS STABILIZATION 6" AT STEEL PLATE BEAM GUARD RAIL
- (6) STEEL PLATE BEAM GUARD RAIL, TYPE A (SEE SHEETS 5 & 8 FOR LIMITS)
- (7) HOT-MIX ASPHALT SHOULDERS, 8" (INCLUDES HMA STABILIZATION ON SOUTH SHOULDER)
- (8) EARTH EXCAVATION
- (9) LEVELING BINDER (MACHINE METHOD), N50, 3/4"
- (10) HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50, 1 1/2"
- (11) PAINT PAVEMENT MARKING - LINE, 4" SOLID WHITE
- (12) PAINT PAVEMENT MARKING - LINE, 6" DASHED YELLOW
- (13) POROUS GRANULAR EMBANKMENT (SEE SHEET 17 FOR DETAILS)
- (14) SUB-BASE GRANULAR MATERIAL, TYPE A 4"
- (15) HOT-MIX ASPHALT BASE COURSE, 10 1/2"
- (16) AGGREGATE WEDGE SHOULDER, TYPE B

**MIX DESIGN TABLE**

	HMA LEVEL BINDER	HMA SURFACE	HMA BASE COURSE	HMA SHOULDER (TOP LIFT)	HMA SHOULDER (BOT. LIFT)	HMA STABILIZATION
PG GRADE	PG64-22	PG64-22	PG64-22	PG58-22	PG58-22	PG58-22
MAX % RAP ALLOWABLE (2)	25%	15%	25%	15%	50%	50%
DESIGN AIR VOIDS	4.0% @ N50	4.0% @ N50	4.0% @ N50	3.0% @ N50	3.0% @ N50	2.0% @ N30
MIXTURE COMPOSITION	IL 9.5	IL 12.5 OR IL 9.5	IL 19.0	IL 12.5 OR IL 9.5	IL 19.0	BAM
FRICTION AGGREGATE		MIXTURE C		MIXTURE C		
DENSITY TEST METHOD	SATISFACTION OF ENGINEER	CORES/NUCLEAR	CORES/NUCLEAR	(1)	(1)	SATISFACTION OF ENGINEER

- (1) MATERIAL SHALL BE COMPACTED TO 93.0-97.4 PERCENT OF THE MAXIMUM THEORETICAL DENSITY, EXCEPT THAT WHEN PLACED AS FIRST LIFT ON AN UNIMPROVED SUBGRADE, THE MINIMUM PERCENT COMPACTION SHALL BE 92.0 PERCENT. THE MAXIMUM THEORETICAL DENSITY SHALL BE DETERMINED FROM THE MOVING AVERAGE AS SPECIFIED IN THE QC/QA SPECIFICATION.
- (2) IF RAP PERCENTAGE IS DIFFERENT THAN LISTED ABOVE, THE PG GRADE MAY NEED TO BE ADJUSTED. THIS WILL BE DETERMINED BY THE ENGINEER.

**benesch**  
alfred benesch & company  
Engineers • Surveyors • Planners  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0460  
Job # 3838.01

**SCHEDULE OF QUANTITIES**

PAVEMENT AND SHOULDERS																
LOCATION	LENGTH	SUB-BASE GRAN. MAT., TYPE A, 4"	HMA BSE. CSE., 10 1/2"	BIT. MAT. (PR. CT.)	AGG. (PR. CT.)	MIXT. FOR CRACKS, JTS. & FLGWYS.	LEVEL. BINDER (H.M.)	LEVEL. BINDER (M.M)	HMA SURF. REM. BUTT JT.	TEMP. RAMP	HMA SURF. CSE.	PVMT. REM.	PAVED SHLDR. REM.	AGG. WEDGE SHLDR., TYPE B	HMA SHLDR. 8"	BIT. STAB. 6" AT SPBGR
	FOOT	SQ YD	SQ YD	GAL	TON	TON	TON	TON	SQ YD	SQ YD	TON	SQ YD	SQ YD	TON	SQ YD	SQ YD
<b>PAVEMENT AREA:</b>																
47+10 TO 48+00	90			38.40	0.96	0.02	0.12	10.08	160	13.33	20.16					
48+00 TO 50+60	260			110.94	2.78	0.21	0.35	29.12			58.24					
50+60 TO 51+36	76	211.11	202.67	32.42	0.82			8.51			17.02	202.67				
51+36 TO 54+00	264			112.64	2.82	0.21	0.35	29.57			59.14					
54+00 TO 54+90	90			38.40	0.96	0.02	0.12	10.08	160	13.33	20.16					
<b>SHOULDER AREA:</b>																
RIGHT SIDE	780												32.89	13.83	552.47	
LEFT SIDE	780			106.30										12.88	377.09	301.80
<b>TOTAL</b>		211.11	202.67	439.10	8.34	0.46	0.94	87.36	320	26.66	174.72	202.67	32.89	26.71	929.56	301.80

RIGHT-OF-WAY MARKERS	
LOCATION	EACH
<b>RIGHT SIDE:</b>	
48+00, 40' RT.	1
48+50.63, 55' RT.	1
53+25, 55' RT.	1
53+75, 41.23' RT.	1
<b>LEFT SIDE:</b>	
50+00, 50' LT.	1
50+50, 55' LT.	1
51+50, 55' LT.	1
52+00, 50' LT.	1
<b>TOTAL</b>	<b>8</b>

EARTHWORK				
LOCATION	EARTH EXCAV.	EARTH EXCAV. ADJUSTED FOR SHRINKAGE*	EMBKMT.	EARTHWORK BAL. WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD
47+00 TO 48+00				
48+00 TO 49+00	54.35	40.76	150.22	-109.46
49+00 TO 50+00	104.19	78.14	287.46	-209.32
50+00 TO 50+60	105.88	79.41	147.08	-67.67
50+60 TO 51+36	348.62	261.46	314.70	-53.24
51+36 TO 52+00	79.13	59.35	120.63	-61.28
52+00 TO 53+00	106.69	80.02	190.98	-110.96
53+00 TO 54+00	44.78	33.59	92.30	-58.71
54+00 TO 55+00				
<b>TOTAL</b>	<b>843.64</b>	<b>632.73</b>	<b>1303.37</b>	<b>-670.64</b>

\* QUANTITY OF EARTH EXCAVATION ADJUSTED FOR A SHRINKAGE FACTOR OF 25%.

POROUS GRANULAR EMBANKMENT			
LOCATION	POROUS GRANULAR EMBANKMENT	POROUS GRANULAR EMBK., SPEC.	REM. & DISP. OF UNSUIT. MAT'L.
	CU YD	CU YD	CU YD
BELOW CULVERT		398.04	398.04
CULVERT SIDES	414.36		
ABOVE CULVERT	181.89		
<b>TOTAL</b>	<b>596.25</b>	<b>398.04</b>	<b>398.04</b>

TRAFFIC CONTROL				
LOCATION	TEMP. CONC. BARRIER	RELOCATE TEMP. CONC. BARRIER	IMPACT ATTEN., TEMP.	IMPACT ATTEN., RELOC.
	FOOT	FOOT	EACH	EACH
49+15 TO 52+81	366.83	366.83	2	2
<b>TOTAL</b>	<b>366.83</b>	<b>366.83</b>	<b>2</b>	<b>2</b>

TEMPORARY EROSION CONTROL			
LOCATION	TEMP. EROS. CONTROL SEEDING	PERIMETER EROSION BARRIER	TEMP. DITCH CHECKS
	POUND	FOOT	EACH
RIGHT SIDE	33	610	4
LEFT SIDE	26	616	4
<b>TOTAL</b>	<b>59</b>	<b>1226</b>	<b>8</b>

PERMANENT SURVEY MARKERS, TYPE I		
STATION (ON CL IL 17)	DESCRIPTION	EACH
52+05.55	P.C.	1

SEEDING AND FERTILIZER					
LOCATION	SEEDING CLASS 2	MULCH, METHOD 2	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT
	ACRE	ACRE	POUND	POUND	POUND
RIGHT SIDE	0.33	0.33	29.70	29.70	29.70
LEFT SIDE	0.26	0.26	23.40	23.40	23.40
<b>TOTAL</b>	<b>0.59</b>	<b>0.59</b>	<b>53.10</b>	<b>53.10</b>	<b>53.10</b>

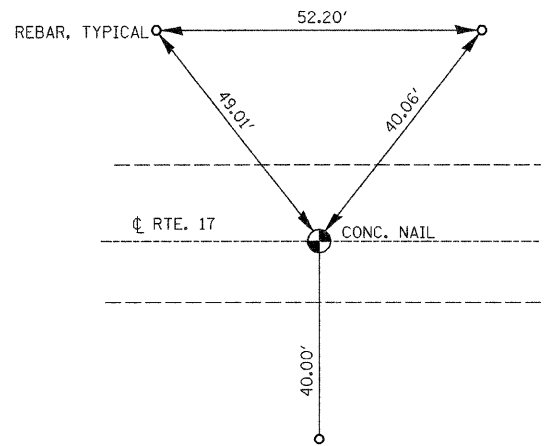
GUARDRAIL						
LOCATION	GUARDRAIL REMOVAL	SPBGR, TYPE A	SPBGR, ATTACHED TO STRUCTURES	TBT TYPE 1, SPECIAL (FLARED)	GUARDRAIL MARKERS, TYPE A	TERMINAL MARKER-DJR. APPLIED
	FOOT	FOOT	FOOT	EACH	EACH	EACH
<b>RIGHT SIDE:</b>						
48+75.59 TO 50+79.85	204.26					
48+46.67 TO 48+96.67				1		1
48+96.67 TO 50+77.92		181.25			3	
50+77.92 TO 51+18.09			40.17			
51+18.09 TO 52+30.59		112.50			2	
52+30.59 TO 52+80.59				1		1
51+16.42 TO 52+45.58	129.16					
<b>LEFT SIDE:</b>						
49+50.65 TO 50+79.81	129.16					
49+15.42 TO 49+65.42				1		1
49+65.42 TO 50+77.92		112.50			2	
50+77.92 TO 51+18.09			40.17			
51+18.09 TO 52+99.34		181.25			3	
52+99.34 TO 53+49.34				1		1
51+16.67 TO 53+21.42	204.75					
<b>TOTAL</b>	<b>667.33</b>	<b>587.50</b>	<b>80.34</b>	<b>4</b>	<b>10</b>	<b>4</b>

PAVEMENT MARKING					
LOCATION	LENGTH	PAINT PVMT. MKG. WHITE 4"	PAINT PVMT. MKG. YELLOW 6"	RAISED REFL. PVMT. MKR.	PVMT. MKG. REMOVAL
	FOOT	FOOT	FOOT	EACH	SQ FT
47+10 TO 54+90	780	1560	195	10	618
<b>TOTAL</b>	<b>780</b>	<b>1560</b>	<b>195</b>	<b>10</b>	<b>618</b>

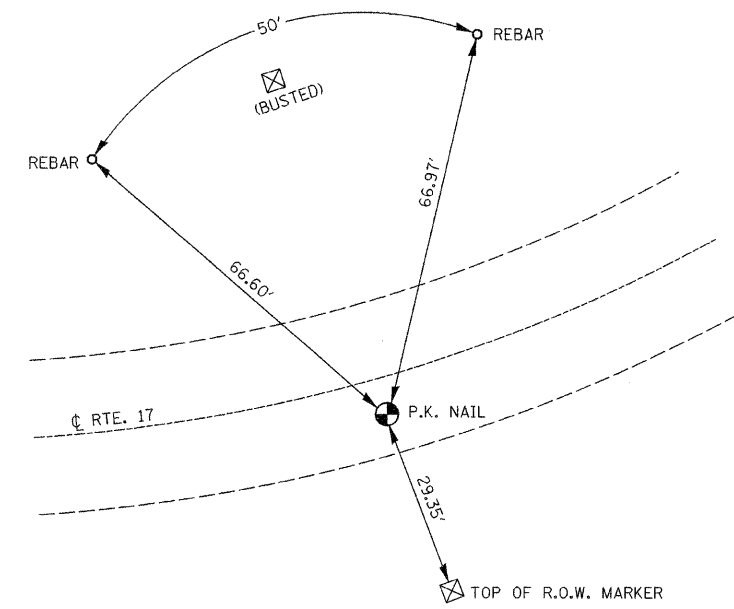
TEMPORARY PAVEMENT MARKING					
LOCATION	LENGTH	TEMP. PVMT. MKG. WHITE 4"	SHORT TERM PVMT. MKG.	WORK ZONE PVMT. MKG. REMOVAL	RAISED REFL. PVMT. MKG. REMOVAL
	FOOT	FOOT	FOOT	SQ FT	EACH
47+10 TO 54+90	780	3120	156	1040	10
<b>TOTAL</b>	<b>780</b>	<b>3120</b>	<b>156</b>	<b>1040</b>	<b>10</b>

TREE REMOVAL (6 TO 15 UNITS DIA.)	
LOCATION	UNITS
50+60.83, 46.34' LT.	6

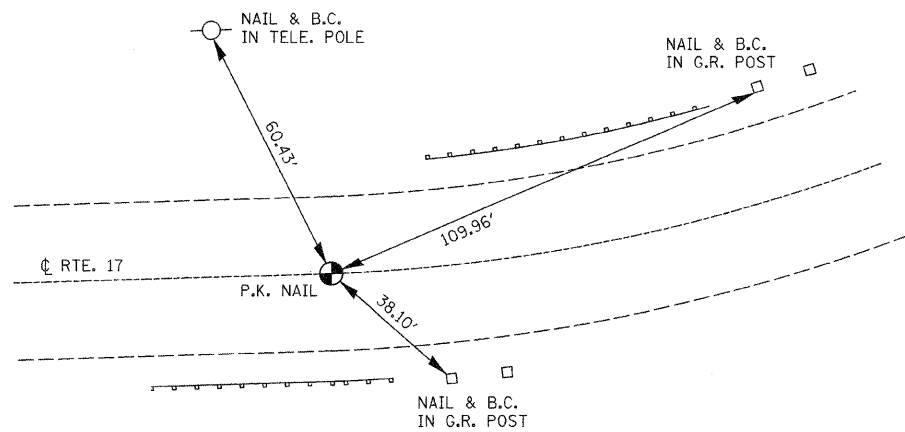
**benesch**  
 alfred benesch & company  
 Engineers • Surveyors • Planners  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-565-0450  
 Job # 3838.01



**P.K. NAIL ON CL RTE. 17**  
**P.O.T. STA. 39 + 53.918**

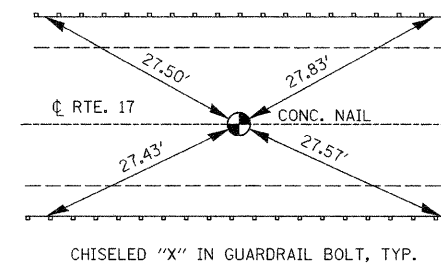


**P.K. NAIL S. OF CL RTE. 17**  
**P.I. STA. 56 + 00.00**



**P.K. NAIL ON CL RTE. 17**  
**P.C. STA. 52 + 05.55**

THE P.K. NAIL ON CL RTE. 17 SHALL BE REPLACED WITH A PERMANENT SURVEY MARKER, TYPE I.



**P.K. NAIL @ CL RTE. 17**  
**P.O.T. STA. 50 + 97.99**

**benesch**

alfred benesch & company  
 Engineers • Surveyors • Planners  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-995-0450  
 Job # 3838.01

FILE NAME = ...D366844-sh1-ATB.dgn	USER NAME = #USER#	DESIGNED - HMA	REVISED -
		DRAWN - HMA	REVISED -
	PLOT SCALE = #SCALE#	CHECKED - KJN	REVISED -
	PLOT DATE = 08/07/2008	DATE - 8/7/08	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

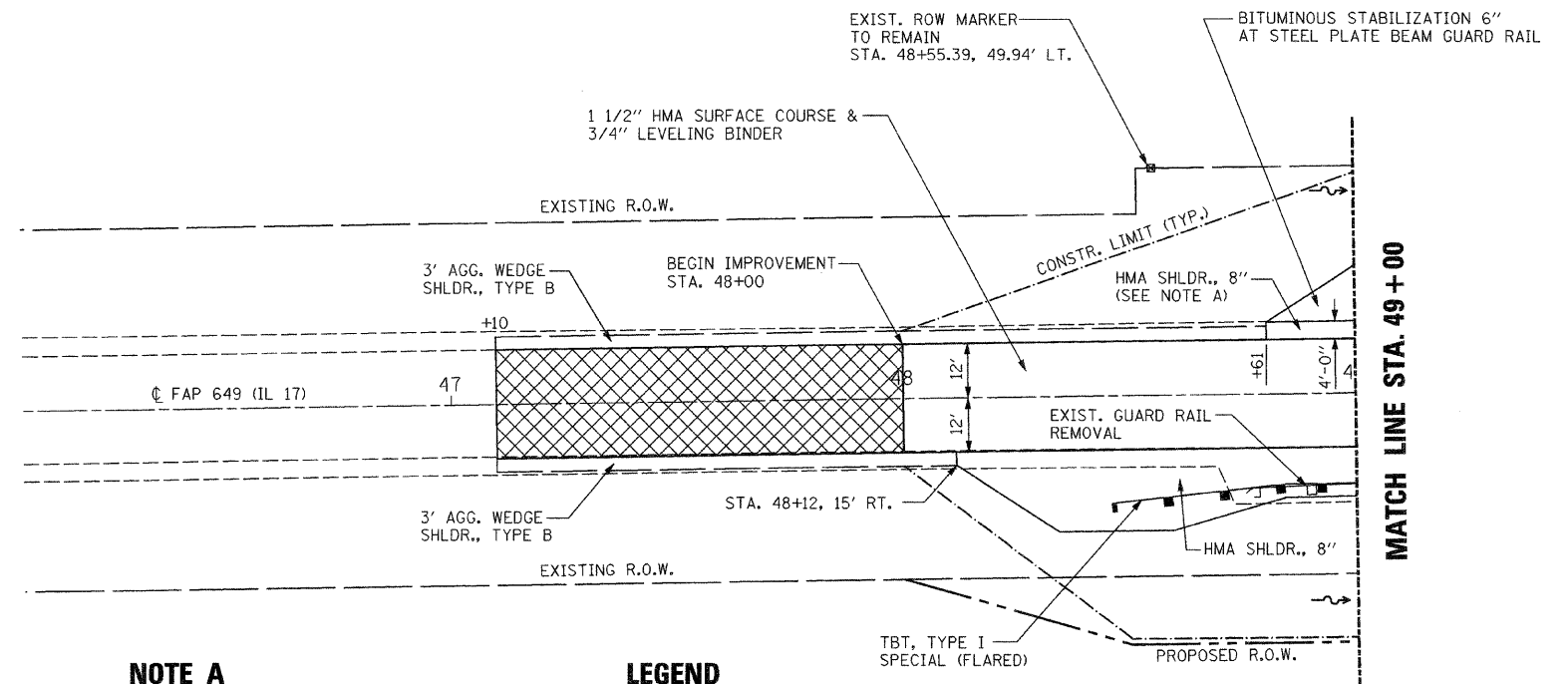
**TIE POINTS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

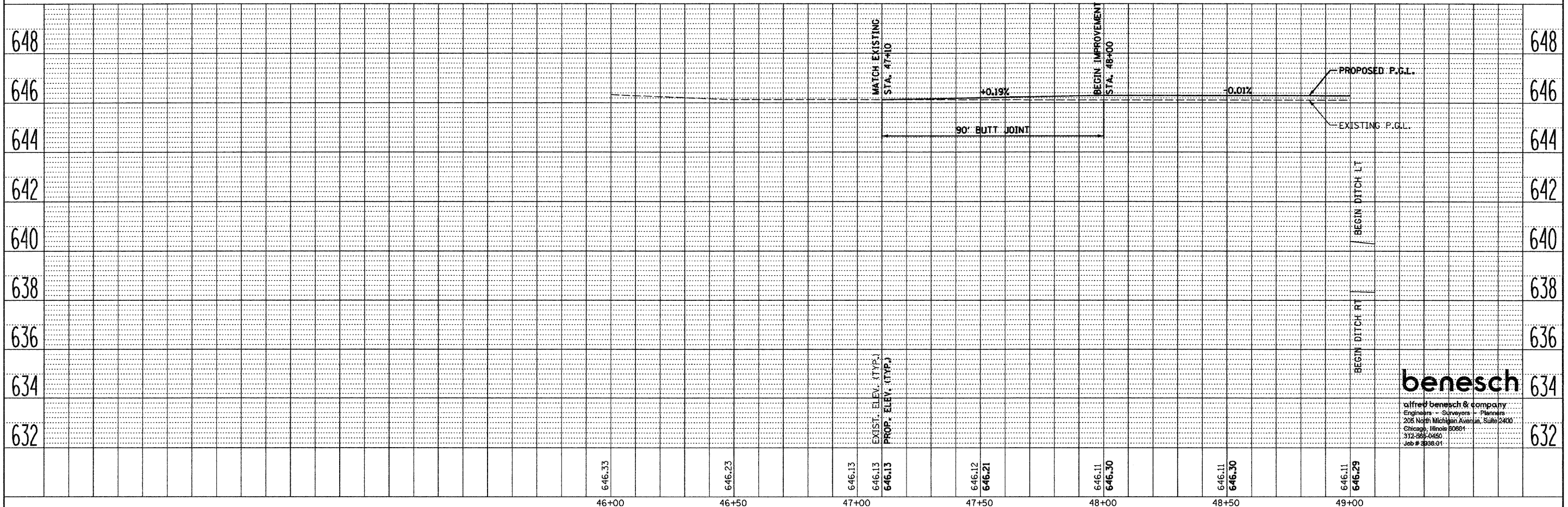
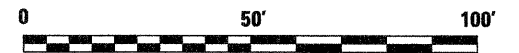
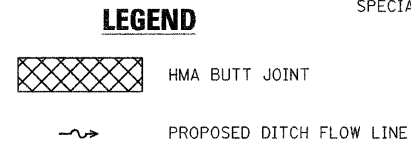
F.A.P. RTE. 649	SECTION (107) BR	COUNTY LASALLE	TOTAL SHEETS 24	SHEET NO. 6
CONTRACT NO. 66844				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	DATE
	PLOTTED	BY
	NOTES CHECKED	
	STRUCTURE NOTATIONS OK'D	
	NO. _____	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS OK'D	
	NO. _____	



**NOTE A**  
FOR STAGE CONSTRUCTION OF THE SHOULDER, SEE SHEET NO. 9.



**benesch**  
alfred benesch & company  
Engineers - Surveyors - Planners  
208 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-266-0450  
Job # 003801









FILE NAME = ...D366844-sht-plnpr-fl.dgn	USER NAME = #USER#	DESIGNED - KJN	REVISED -	<b>STATE OF ILLINOIS</b>	<b>PLAN AND PROFILE</b>	F.A.P. RT# 649	SECTION (107) BR	COUNTY LASALLE	TOTAL SHEETS 24	SHEET NO. 7
PLOT SCALE = #SCALE#	DATE = 8/7/08	DRAWN - KJN/HMA	REVISED -	<b>DEPARTMENT OF TRANSPORTATION</b>	SCALE: 1" = 40'	SHEET NO. 2 OF 2 SHEETS		STA. 47+10 TO STA. 49+00		CONTRACT NO. 66844
PLOT DATE = 08/07/2008		CHECKED - HMA	REVISED -		ILLINOIS FED. AID PROJECT					

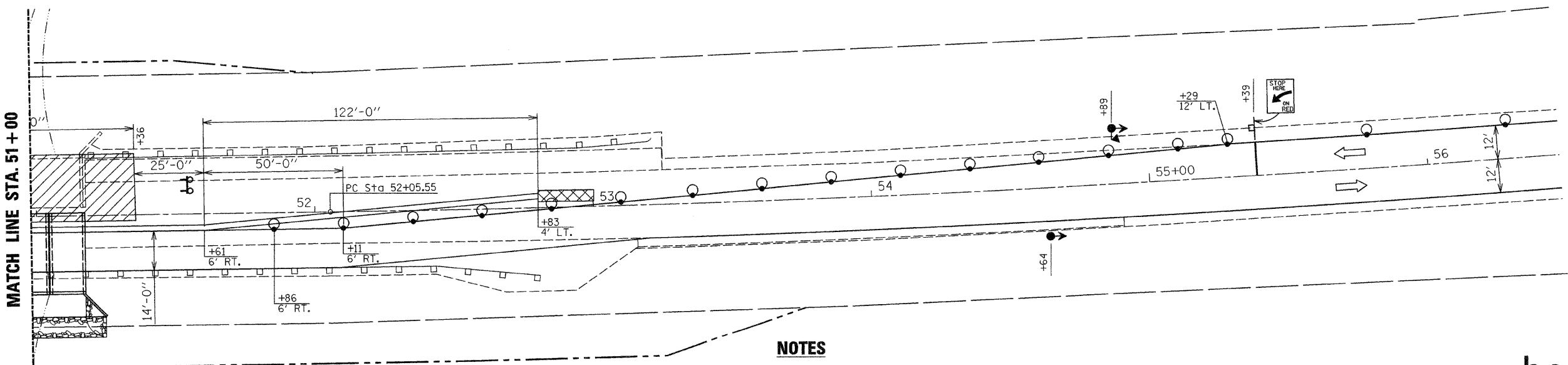
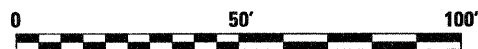
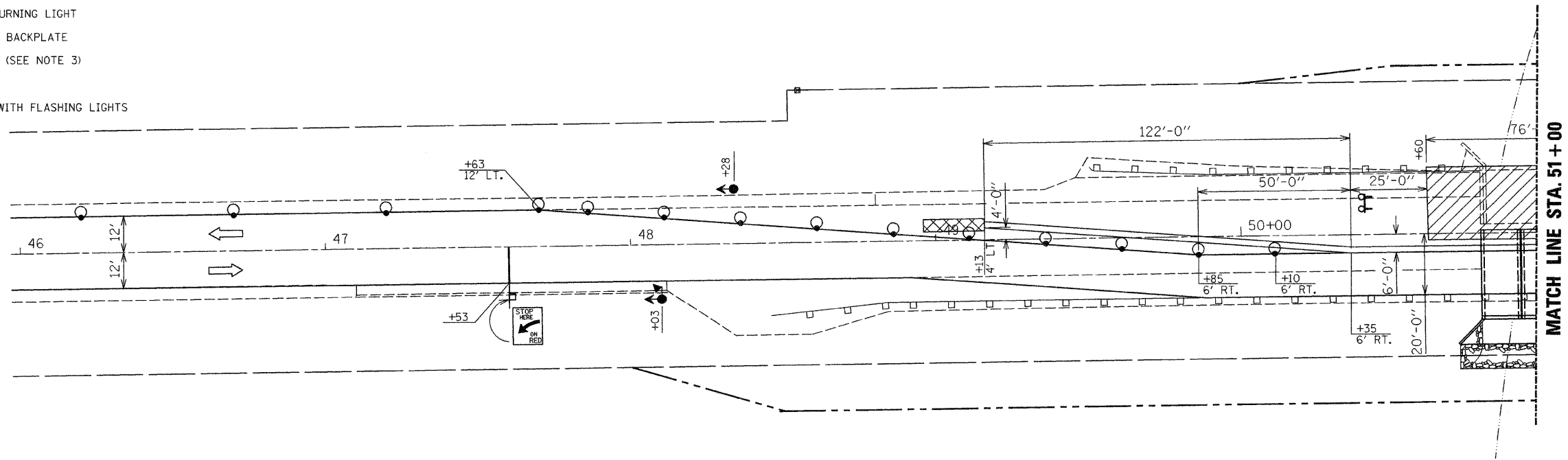






**LEGEND**

-  WORK AREA
-  IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3
-  TEMPORARY CONCRETE BARRIER
-  DRUM WITH STEADY BURNING LIGHT
-  TRAFFIC SIGNAL WITH BACKPLATE
-  MICROWAVE DETECTOR (SEE NOTE 3)
-  SIGN
-  TYPE III BARRICADE WITH FLASHING LIGHTS



**NOTES**

1. SEE HIGHWAY STANDARD 701321 FOR ADDITIONAL TRAFFIC CONTROL INFORMATION.
2. TEMPORARY BRIDGE TRAFFIC SIGNALS, CONCRETE BARRIER, AND IMPACT ATTENUATORS WILL BE PAID FOR SEPARATELY.
3. SEE SPECIAL PROVISION "TEMPORARY BRIDGE TRAFFIC SIGNALS (STANDARD 701316 OR 701321)" REGARDING MICROWAVE DETECTORS.

**benesch**

alfred benesch & company  
 Engineers • Surveyors • Planners  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-565-0450  
 Job # 3838.01

FILE NAME = ...D366844-sh1-staging2.dgn	USER NAME = #USER#	DESIGNED - HMA	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MAINTENANCE OF TRAFFIC - STAGE II</b>	F.A.P. RTE. 649	SECTION (107) BR	COUNTY LASALLE	TOTAL SHEETS 24	SHEET NO. 10		
PLOT SCALE = #SCALE#	CHECKED - KJN	REVISIED -	REVISIED -			SCALE: 1" = 40'	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.	CONTRACT NO. 66844		
PLOT DATE = 08/07/2008	DATE - 8/7/08	REVISIED -	REVISIED -			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT						

S.E. 1/4 OF SEC. 13, T.30N., R.2E. OF THE 3RD P.M.



**PARCEL 3UR0001**

**PATRICK D. GUYON, et al.**

TOTAL HOLDING = 122.031 AC.±  
 TOTAL R.O.W. REQUIRED = 0.238 AC.± (10,353 SQ.FT.)  
 AREA IN EXIST. R.O.W. = 0.221 AC (9,603 SQ.FT.)  
 NET R.O.W. REQUIRED = 0.017 AC.± (750 SQ.FT.)  
 REMAINDER = 121.793 AC.±

**PARCEL 3UR0002**

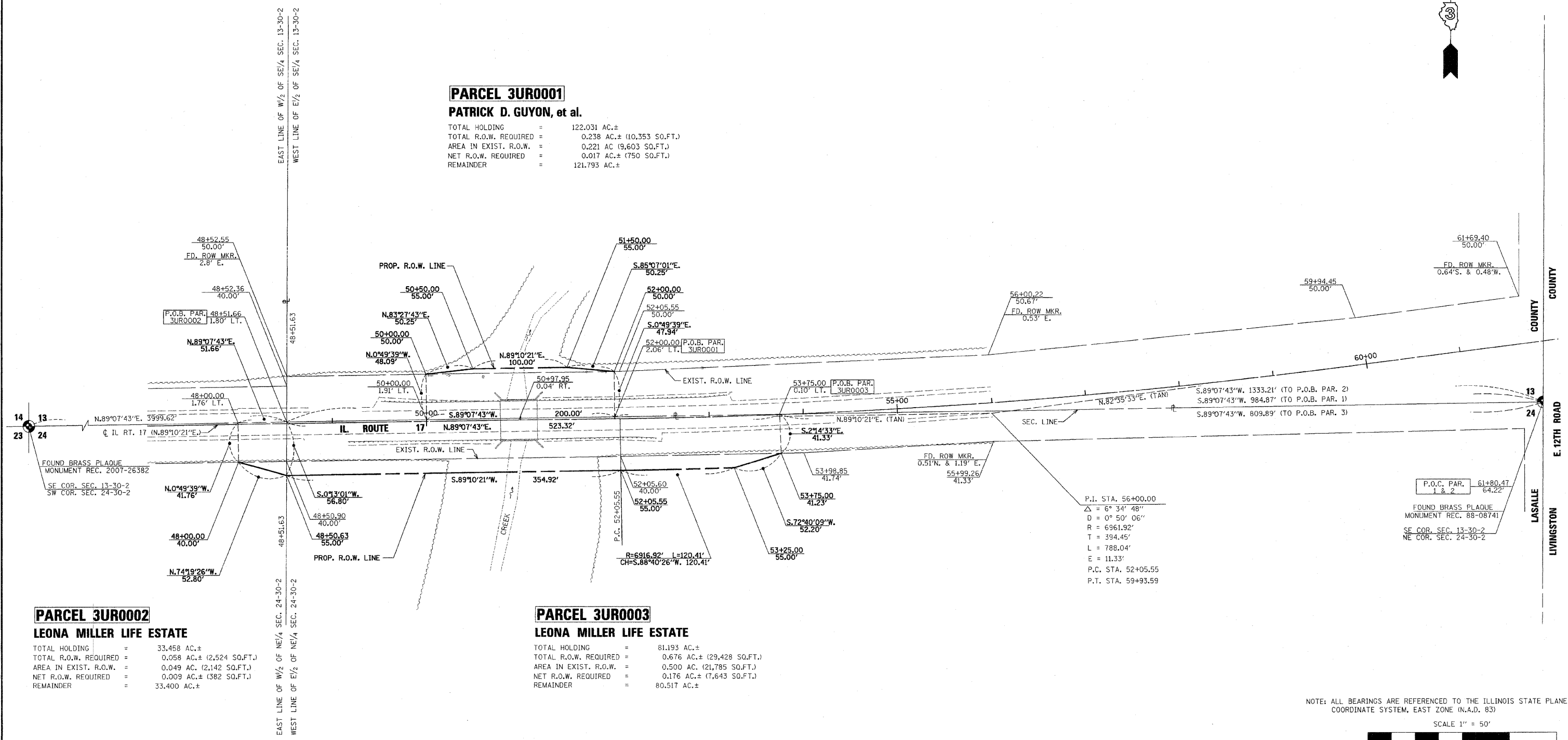
**LEONA MILLER LIFE ESTATE**

TOTAL HOLDING = 33.458 AC.±  
 TOTAL R.O.W. REQUIRED = 0.058 AC.± (2,524 SQ.FT.)  
 AREA IN EXIST. R.O.W. = 0.049 AC. (2,142 SQ.FT.)  
 NET R.O.W. REQUIRED = 0.009 AC.± (382 SQ.FT.)  
 REMAINDER = 33.400 AC.±

**PARCEL 3UR0003**

**LEONA MILLER LIFE ESTATE**

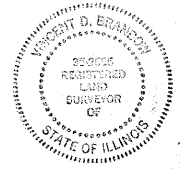
TOTAL HOLDING = 81.193 AC.±  
 TOTAL R.O.W. REQUIRED = 0.676 AC.± (29,428 SQ.FT.)  
 AREA IN EXIST. R.O.W. = 0.500 AC. (21,785 SQ.FT.)  
 NET R.O.W. REQUIRED = 0.176 AC.± (7,643 SQ.FT.)  
 REMAINDER = 80.517 AC.±



I VINCENT D. BRANDOW, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF PROPOSED F.A.P. 649 (IL. RTE. 17) WAS MADE BY RENWICK & ASSOCIATES, INC. UNDER MY DIRECTION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

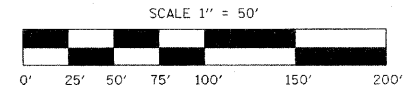
DATE: 12-13-07

*Vincent D. Brandow*  
 ILLINOIS PROFESSIONAL LAND SURVEYOR  
 NO. 2655  
 11-30-08  
 EXPIRATION DATE



N.E. 1/4 OF SEC. 24, T.30N., R.2E. OF THE 3RD P.M.

NOTE: ALL BEARINGS ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (N.A.D. 83)



RIGHT OF WAY PLANS	
ROUTE	F.A.P. 649 (IL ROUTE 17)
SECTION	107BR
PROJECT	
COUNTY	LASALLE
JOB NUMBER	R-93-009-07
STATION	47+00 TO 56+00
SHEET	1 OF 1 SCALE 1" = 50'

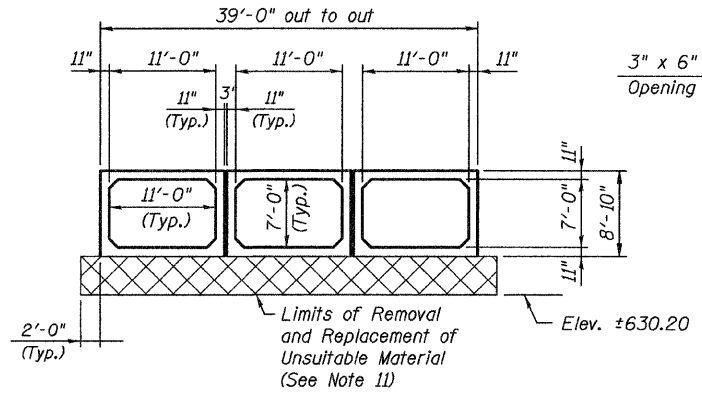
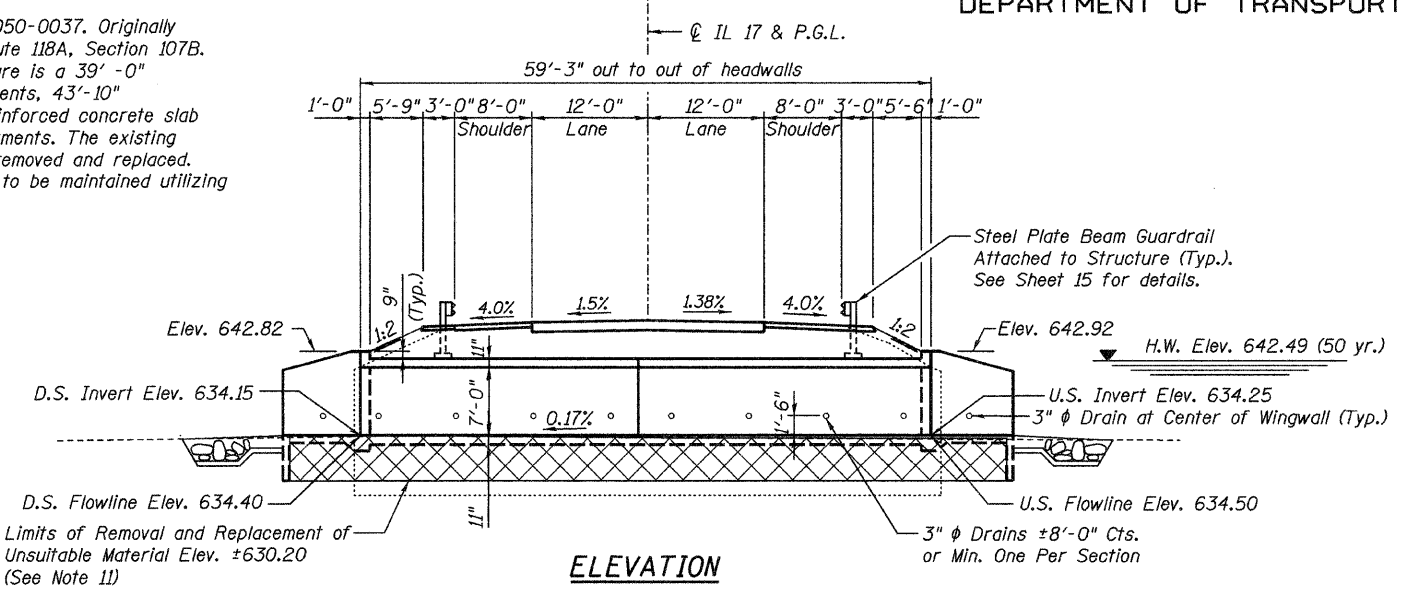
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 51
F.A.P. 649	(107) BR	LASALLE	24	12	57 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Bench Mark: Chiseled "□" on NE WW Sta. 51+17.71  
23.35 Lt. Elevation 645.40.

Existing Structure: S.N. 050-0037. Originally built in 1939 as Route 118A, Section 107B. The existing structure is a 39'-0" back-to-back abutments, 43'-10" out-to-out deck, reinforced concrete slab deck on closed abutments. The existing structure is to be removed and replaced. One lane of traffic to be maintained utilizing stage construction.

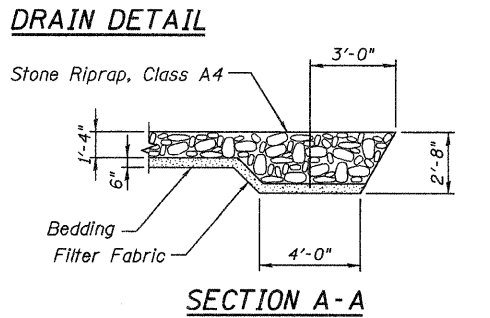
No salvage.



Contract # 66844

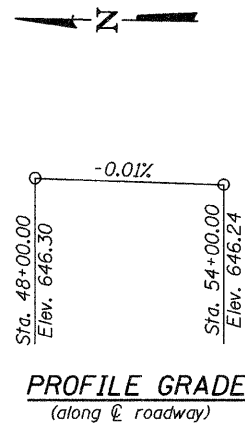
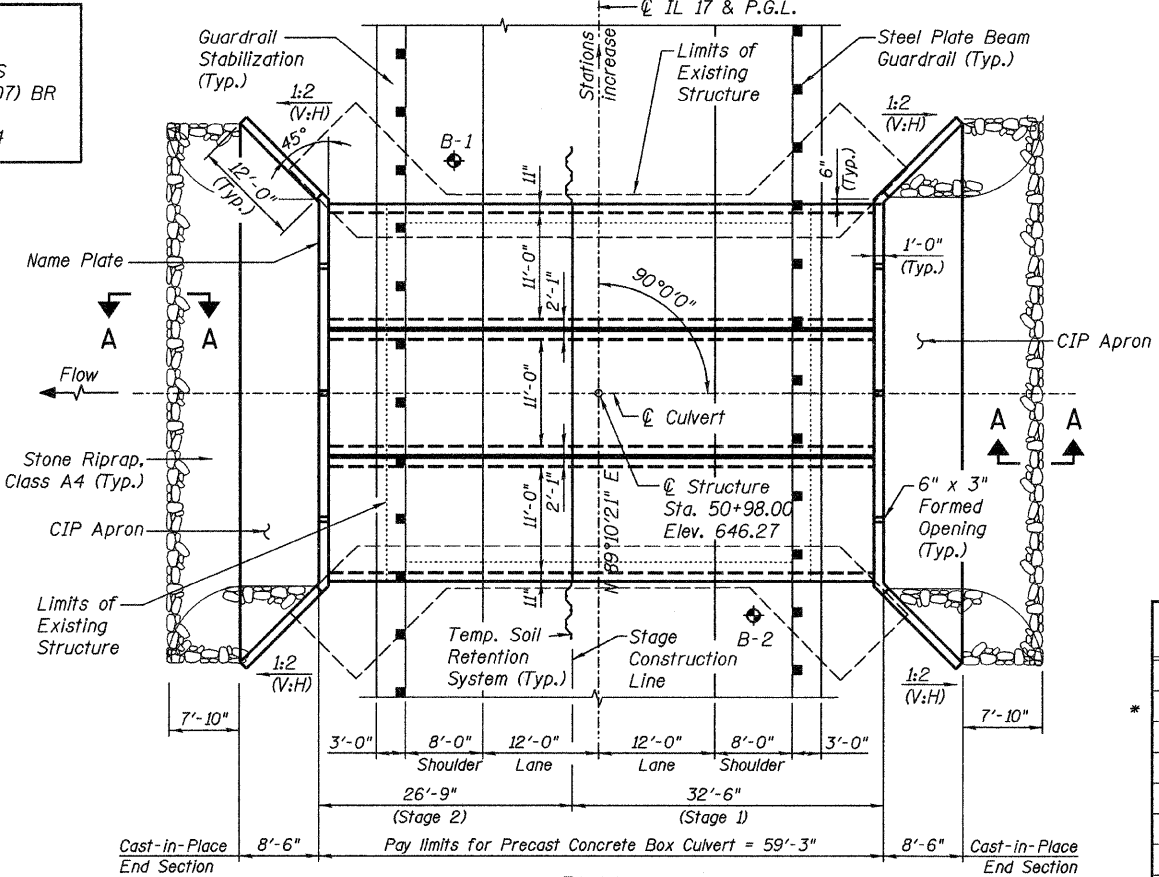
Drainage Aggregate (CA-18) full length of both headwalls. To be placed by Grading Contractor. Cost included with Precast Concrete Box Culvert.

Geotechnical Fabric for French Drains. To be placed by Grading Contractor. Cost included with Precast Concrete Box Culvert.



STATION 50+98  
BUILT 20 BY  
STATE OF ILLINOIS  
F.A.P. RT. 649 SEC. (107) BR  
LOADING HS20  
STR. NO. 050-2044

**NAME PLATE**  
See Std. 515001



**WATERWAY INFORMATION - DISTRICT APPROVED**

Drainage Area = 7.5 mi<sup>2</sup> (P) & (E) Low Grade Elev. 644.80 ft. @ Sta. 56+00.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater E.L.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	742	246	231	641.85	0.3	0.1	642.11	641.99
Base	100	1177	246	231	642.49	0.6	0.4	643.07	642.91
Overtopping									
Max. Calc.	500	1828	246	231	643.20	1.0	1.0	644.23	644.18

DESIGNED -	MRB
CHECKED -	HMA
DRAWN -	VH
CHECKED -	MRB

DESIGN SCOUR ELEV.	US	DS
	631.2	631.1

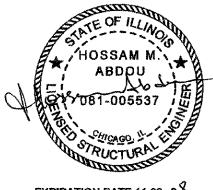
**GENERAL NOTES**

- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See special provision.
- Reinforcement bars designated (E) shall be epoxy coated.
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
- Precast Concrete Box Culvert sections shall conform to the requirements of Article 540.06 of the Standard Specifications and the applicable requirements of AASHTO M 259.
- Lifting holes shall be filled with concrete plugs and mastic after box sections are in place.
- Class SI Concrete shall be used for cast-in-place concrete.
- Exposed edges shall be beveled 3/4".
- For backfilling and embankment see standard specifications.
- Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.
- Precast End Sections are not allowed.
- The material used to replace the unsuitable material removed below the bottom of the proposed precast concrete box culvert and cast-in-place concrete aprons shall be cleaned crushed material CA-1 on the bottom 2'-6" layer and CA-7 on the top 6" layer and shall be paid for as "Porous Granular Embankment, Special".

**TOTAL BILL OF MATERIAL**

Item	Unit	Total
POROUS GRANULAR EMBANKMENT	CU YD	596
* POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	398
STONE RIPRAP, CLASS A4	SQ YD	115
FILTER FABRIC	SQ YD	99
REMOVAL OF EXISTING STRUCTURES	EACH	1
STRUCTURE EXCAVATION	CU YD	428
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU YD	398
NAME PLATES	EACH	1
BOX CULVERT END SECTIONS	EACH	2
* TEMPORARY SOIL RETENTION SYSTEM	SQ FT	327
* PRECAST CONCRETE BOX CULVERT 11' X 7'	FOOT	178

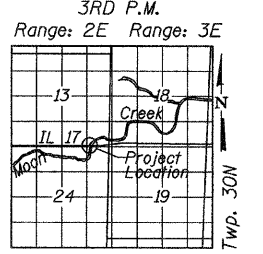
\* See Special Provision.



**benesch**  
alfred benesch & company  
Engineers • Surveyors • Planners  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450  
Job # 3838.01

**GENERAL PLAN AND ELEVATION  
ILLINOIS 17 OVER SOUTH BRANCH  
OF MOON CREEK**

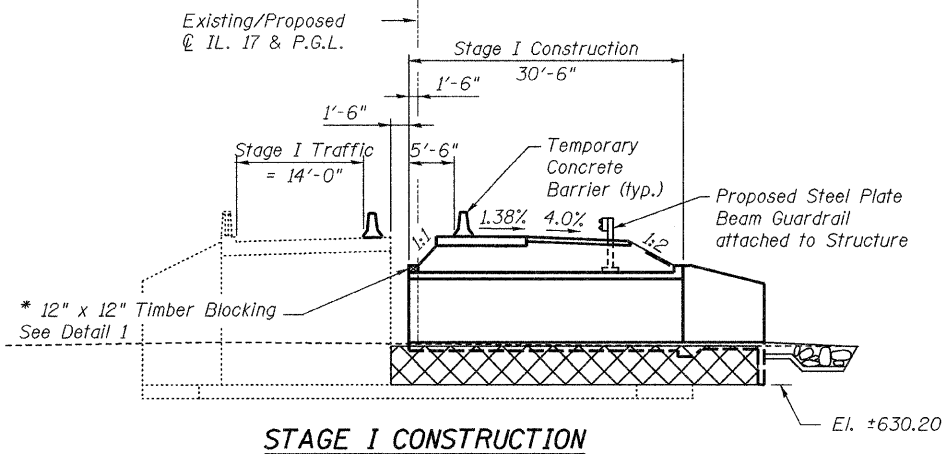
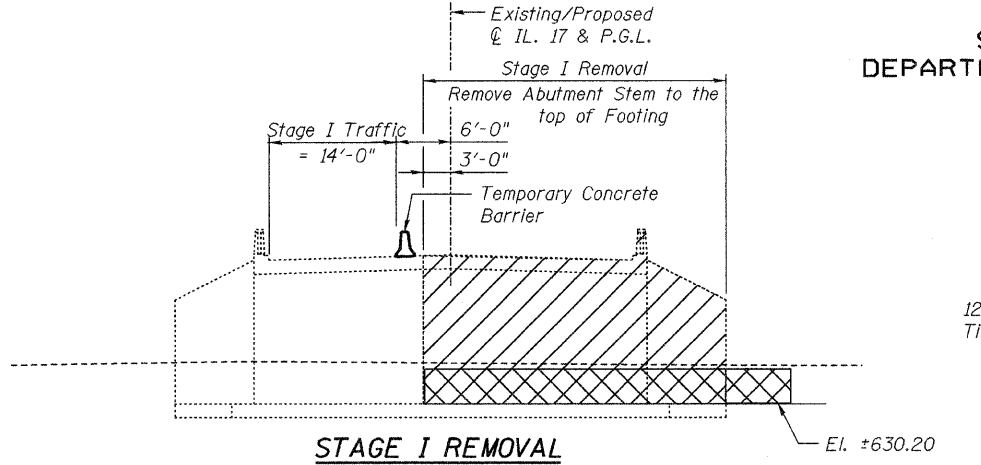
F.A.P. ROUTE 649 SEC. NO. (107) BR  
LASALLE COUNTY  
STATION 50+98.00  
STRUCTURE NO. 050-2044



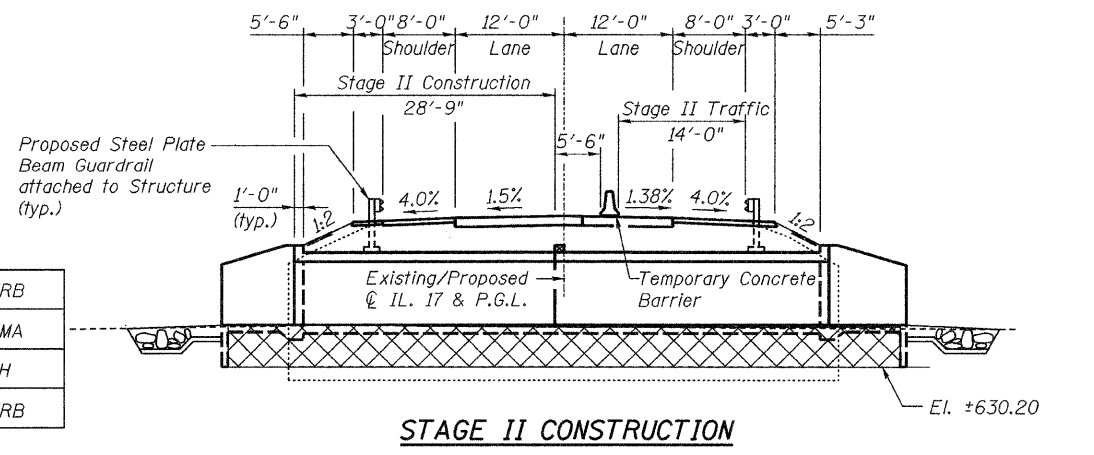
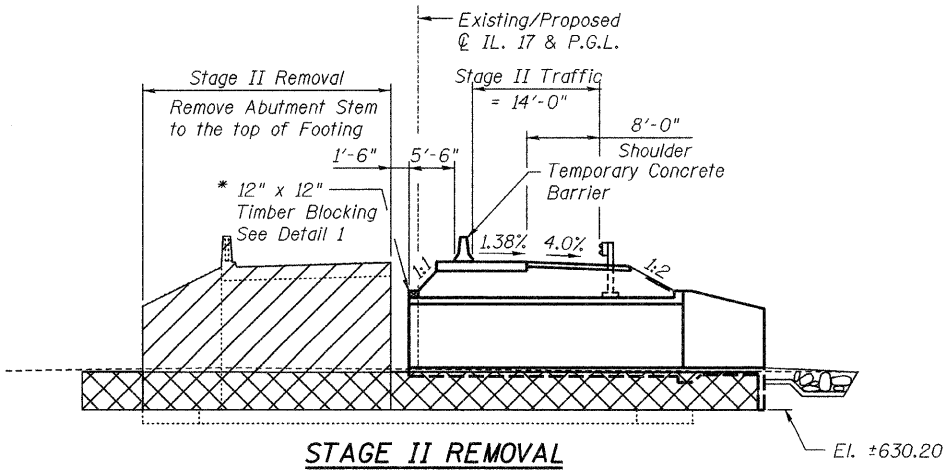
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. S2 S7 SHEETS
F.A.P. 649	(107) BR	LASALLE	24	13	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

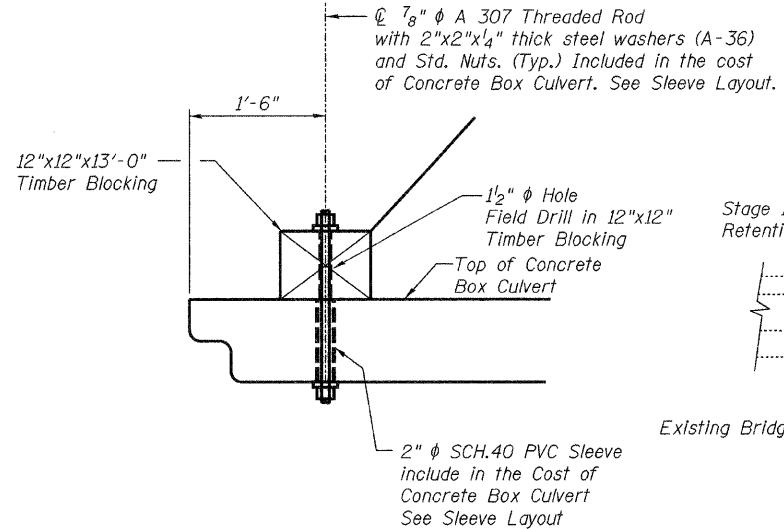
Contract # 66844



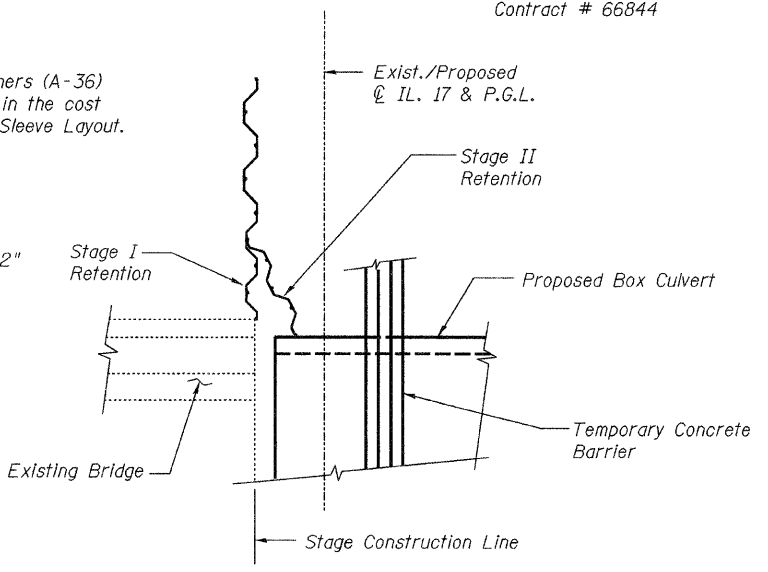
\* Cost included with Precast Concrete Box Culvert.



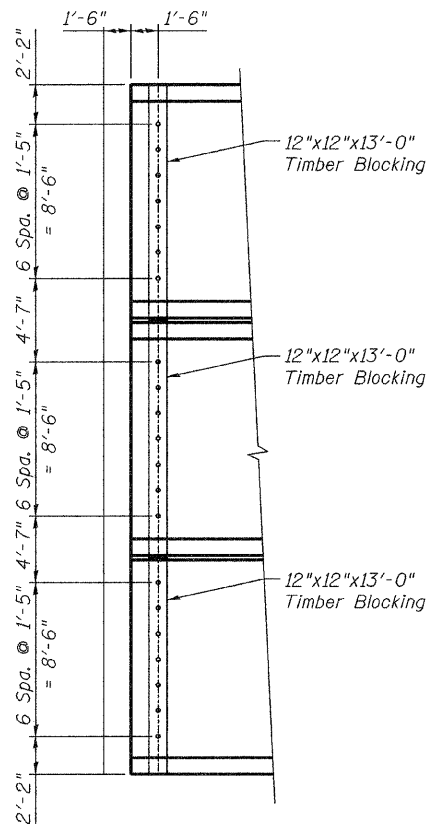
DESIGNED -	MRB
CHECKED -	HMA
DRAWN -	VH
CHECKED -	MRB



DETAIL 1



PART PLAN



SLEEVE LAYOUT

NOTE:  
For details of Temporary Concrete Barrier, see Sheet S3.

LEGEND

	Indicates Removal of Existing Structure.
	Indicates Removal and Replacement of Unsuitable Material.

**benesch**  
alfred benesch & company  
Engineers • Surveyors • Planners  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312.565-0450  
Job # 3838.01

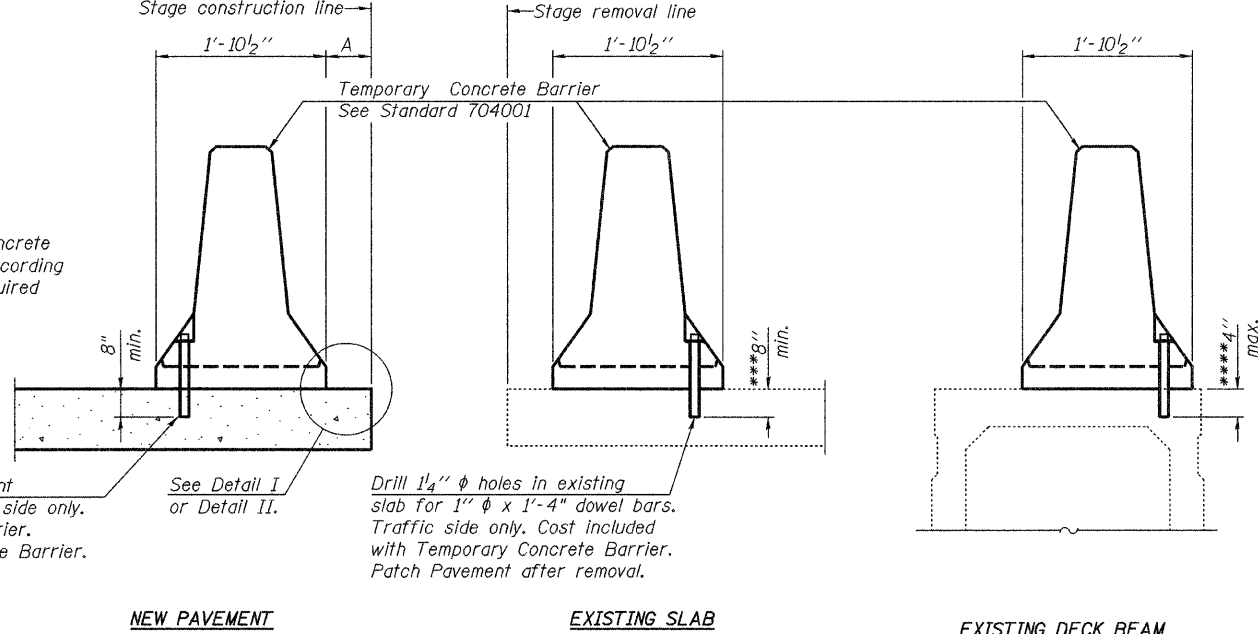
STAGE CONSTRUCTION  
ILLINOIS 17 OVER SOUTH BRANCH  
OF MOON CREEK  
F.A.P. ROUTE 649 SEC. NO. (107) BR  
LASALLE COUNTY  
STATION 50+98.00  
STRUCTURE NO. 050-2044

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. S3 S7 SHEETS
F.A.P. 649	(107) BR	LASALLE	24	14	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract # 66844

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



Drill 1/4"  $\phi$  holes in proposed pavement for 1"  $\phi$  x 1'-4" dowel bars. Traffic side only. Patch Pavement after removal of barrier. Cost included with Temporary Concrete Barrier.

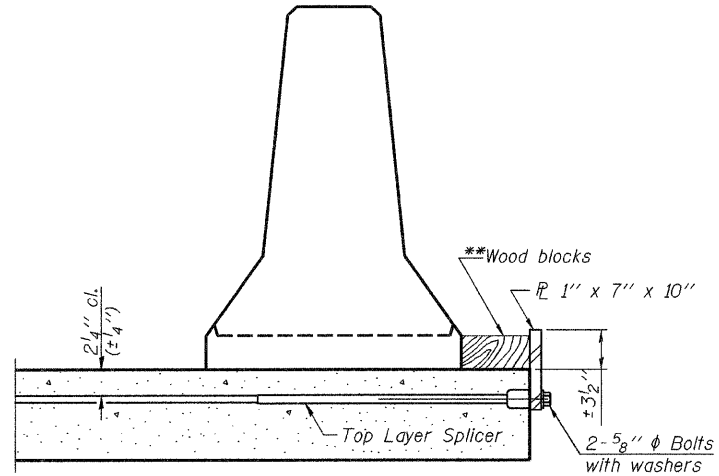
See Detail I or Detail II.

Drill 1/4"  $\phi$  holes in existing slab for 1"  $\phi$  x 1'-4" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier. Patch Pavement after removal.

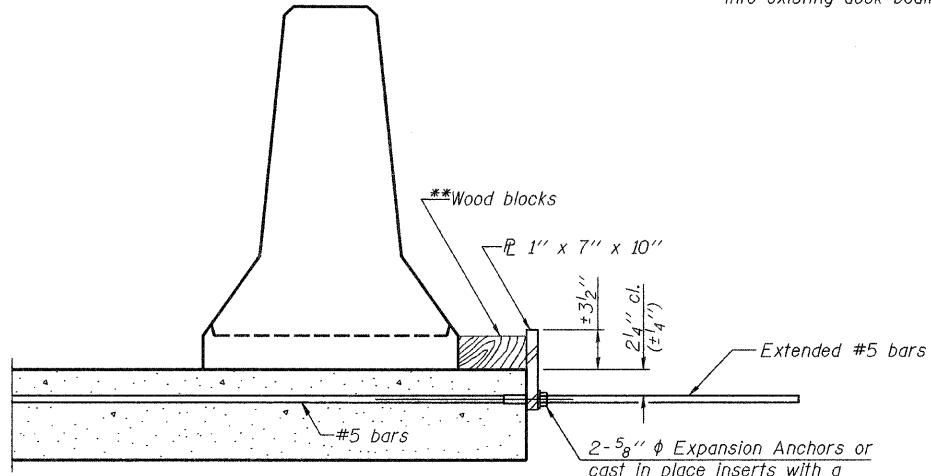
**NOTES:**  
Detail I - With Bar Splicer or Couplers: Connect one (1) 1"x7"x10" steel  $\bar{L}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.  
Detail II - With Extended Reinforcement Bars: Connect one (1) 1"x7"x10" steel  $\bar{L}$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.  
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

SECTION THRU SLAB OR PAVEMENT

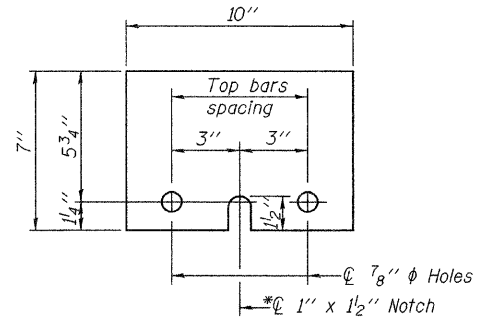
\*\*\*Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.  
\*\*\*\*If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER  $\bar{L}$  1" x 7" x 10"  
\* Required only with Detail II

\*\*Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

DESIGNED -	MRB
CHECKED -	HMA
DRAWN -	VH
CHECKED -	MRB

**benesch**  
alfred benesch & company  
Engineers • Surveyors • Planners  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450  
Job # 3638.01

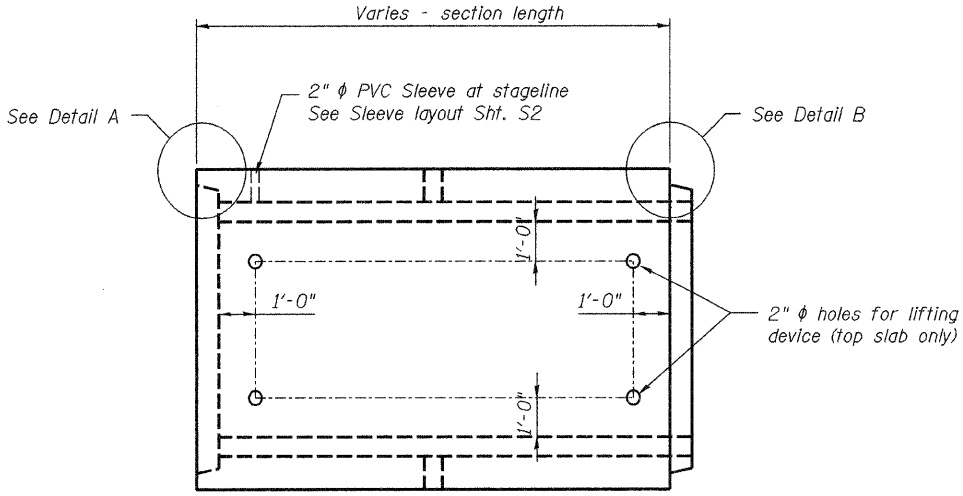
TEMPORARY CONCRETE BARRIER  
FOR STAGE CONSTRUCTION  
ILLINOIS 17 OVER SOUTH BRANCH  
OF MOON CREEK  
F.A.P. ROUTE 649 SEC. NO. (107) BR  
LASALLE COUNTY  
STATION 50+98.00  
STRUCTURE NO. 050-2044

...150-2044-66844-14-TempBarrier.dgn  
15:47:32  
08\07\2008

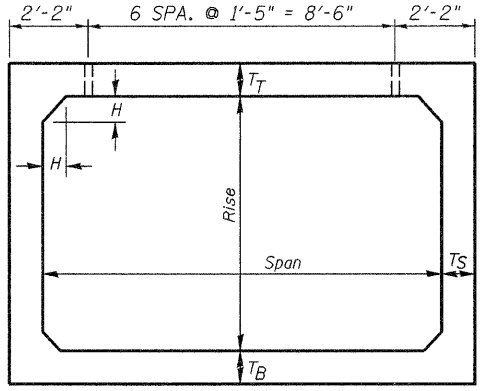
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. S4 S7 SHEETS
F.A.P. 649	(107) BR	LASALLE	24	15	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract # 66844

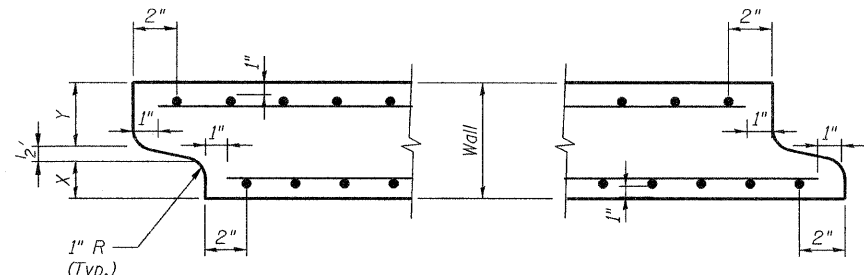


Note: Location of lifting holes may be varied as needed to clear reinforcement.



Note: The haunch dimension h, is equal to the wall thickness t<sub>s</sub>.

TYPICAL BOX SECTION



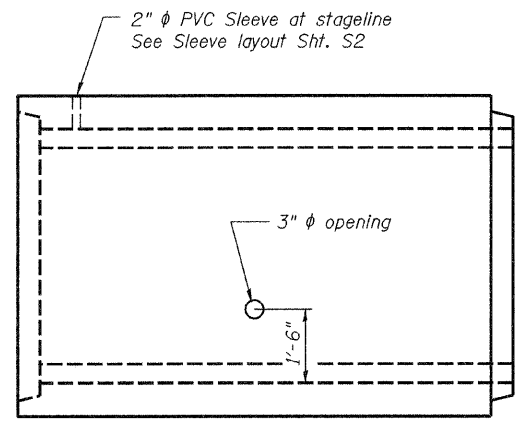
DETAIL A  
(typ. inlet end)

DETAIL B  
(typ. outlet end)

End detail is subject to variation by fabricator.

Note: Inlet and Outlet ends shall be compatible.

PLAN

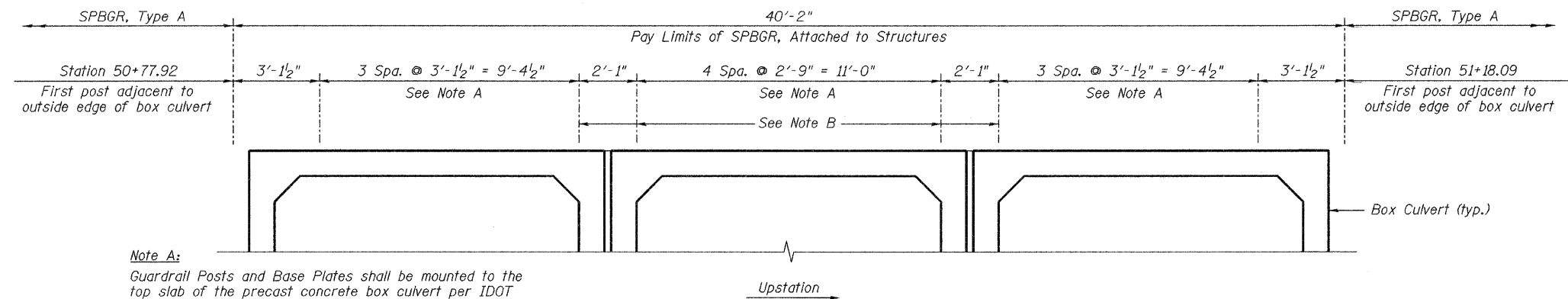


ELEVATION

Span, Feet	T <sub>T</sub> , inches		T <sub>B</sub> , inches		T <sub>S</sub> , inches	
	M 259	M 273	M 259	M 273	M 259	M 273
3	4	7	4	6	4	4
4	5	7½	5	6	5	5
5	6	8	6	7	6	6
6	7	8	7	7	7	7
7	8	8	8	8	8	8
8	8	8	8	8	8	8
9	9	9	9	9	9	9
10	10	10	10	10	10	10
11	11	11	11	11	11	11
12	12	12	12	12	12	12

TYPICAL THICKNESSES

GENERAL NOTES:  
Minimum cover for box culverts shall be 6".



Note A:  
Guardrail Posts and Base Plates shall be mounted to the top slab of the precast concrete box culvert per IDOT Highway Standard 630101-07 (Case IV) unless noted otherwise.

Note B:  
The Base Plates shall be anchored to the top slab of the box culvert using 4 - 1" dia. Anchor Bolts & Expansion Shells or Multi-Unit type with standard washer. The minimum embedment into the concrete shall be 12". Cost is included with "SPBGR, Attached to Structures".

GUARDRAIL ATTACHED TO STRUCTURES  
POST & BASE PLATE LAYOUT

DESIGNED -	MRB
CHECKED -	HMA
DRAWN -	VH
CHECKED -	MRB

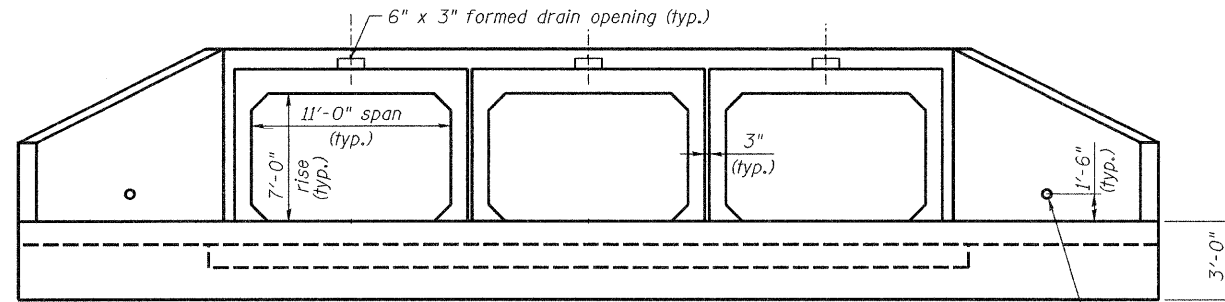
**benesch**  
alfred benesch & company  
Engineers • Surveyors • Planners  
206 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450  
Job # 3838.01

PRECAST CONCRETE BOX SECTION  
ILLINOIS 17 OVER SOUTH BRANCH  
OF MOON CREEK  
F.A.P. ROUTE 649 SEC. NO. (107) BR  
LASALLE COUNTY  
STATION 50+98.00  
STRUCTURE NO. 050-2044

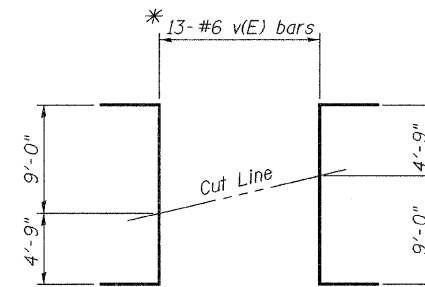
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 649	SECTION (107) BR	COUNTY LASALLE	TOTAL SHEETS 24	SHEET NO. 16	SHEET NO. S5 S7 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract # 66844

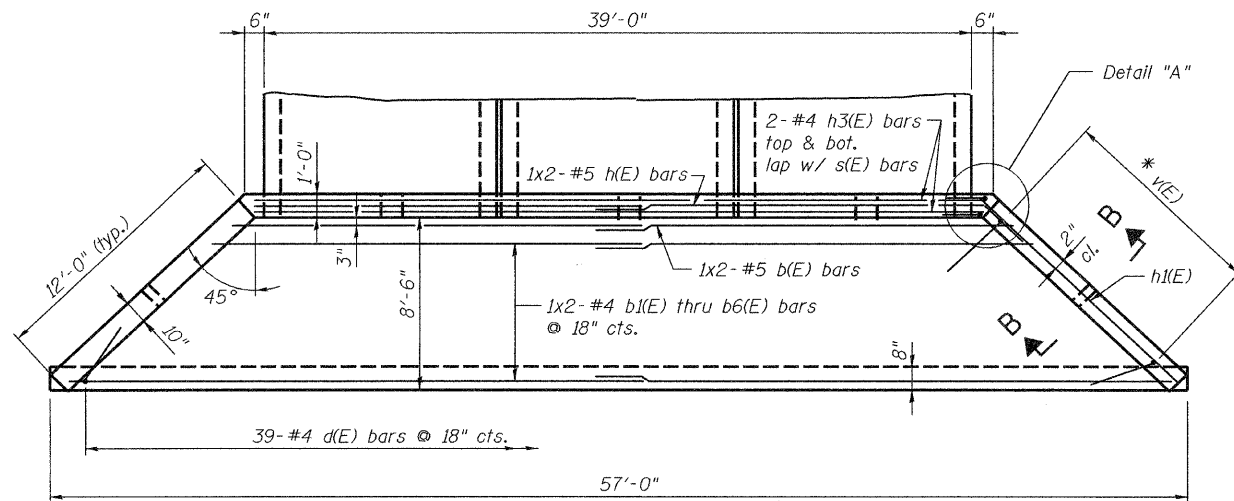


END ELEVATION

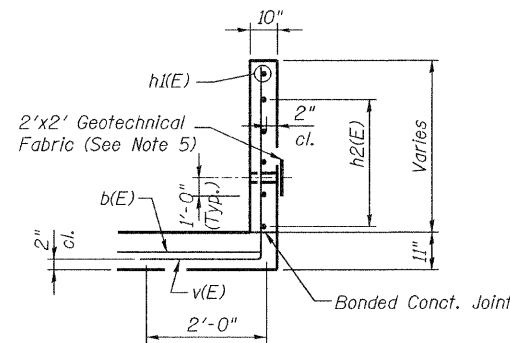


FIELD CUTTING DIAGRAM

\* Order v(E) bars full length.  
Cut to fit as shown and use remainder of bars in other side of apron.



PLAN

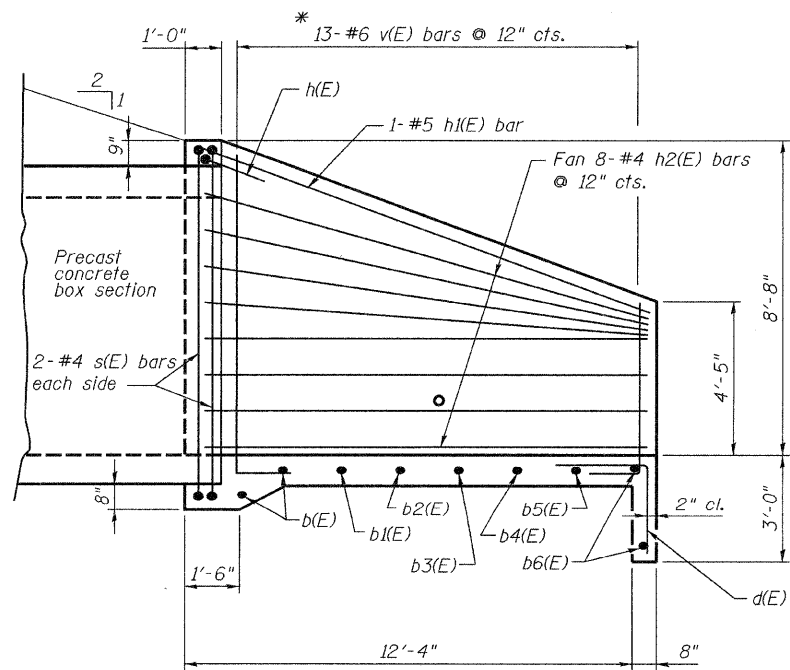


SECTION B-B

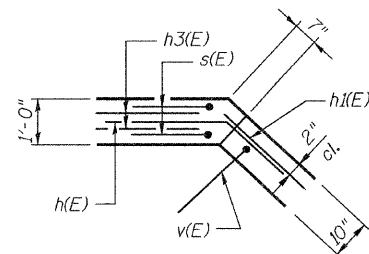
BILL OF MATERIAL \*\*

Bar	Size	No.	Length	Shape	
b(E)	#5	8	21'-3"	—	
b1(E)	#4	4	22'-6"	—	
b2(E)	#4	4	24'-0"	—	
b3(E)	#4	4	25'-6"	—	
b4(E)	#4	4	27'-0"	—	
b5(E)	#4	4	28'-5"	—	
b6(E)	#4	8	29'-9"	—	
d(E)	#4	78	5'-4"	└	
h(E)	#5	4	24'-0"	└	
h1(E)	#5	4	12'-9"	—	
h2(E)	#4	32	12'-0"	—	
h3(E)	#4	8	39'-0"	—	
s(E)	#4	8	15'-10"	└	
v(E)	#6	52	17'-9"	└	
Item				Unit	Total
Class SI Concrete				C.Y.	49.7
Reinforcement Bars, Epoxy Coated				Lbs.	3,050

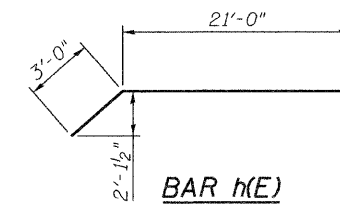
\*\* For two aprons. The quantities shown are for information only.



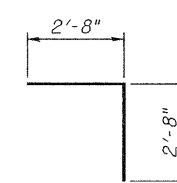
HALF SIDE ELEVATION



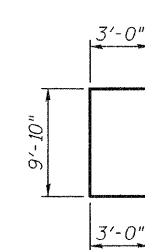
DETAIL "A"



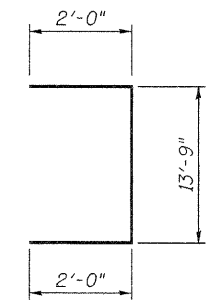
BAR h(E)



BAR d(E)



BAR s(E)



BAR v(E)

MIN. BAR LAP  
#4 - 1'-8"  
#5 - 2'-2"

NOTES:

1. Class SI concrete shall be used throughout.
2. Exposed edges shall be beveled 3/4".
3. Bars indicated thus 1x2-#4 etc. indicates 1 line of bars with 2 lengths per line.
4. All construction joints shall be bonded.
5. Cover 3" φ weep holes with geotechnical fabric for box culvert end section and precast box culvert.

**benesch**  
alfred benesch & company  
Engineers • Surveyors • Planners  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450  
Job # 3638.01

CAST IN PLACE APRON DETAILS  
ILLINOIS 17 OVER SOUTH BRANCH  
OF MOON CREEK  
F.A.P. ROUTE 649 SEC. NO. (107) BR  
LASALLE COUNTY  
STATION 50+98.00  
STRUCTURE NO. 050-2044

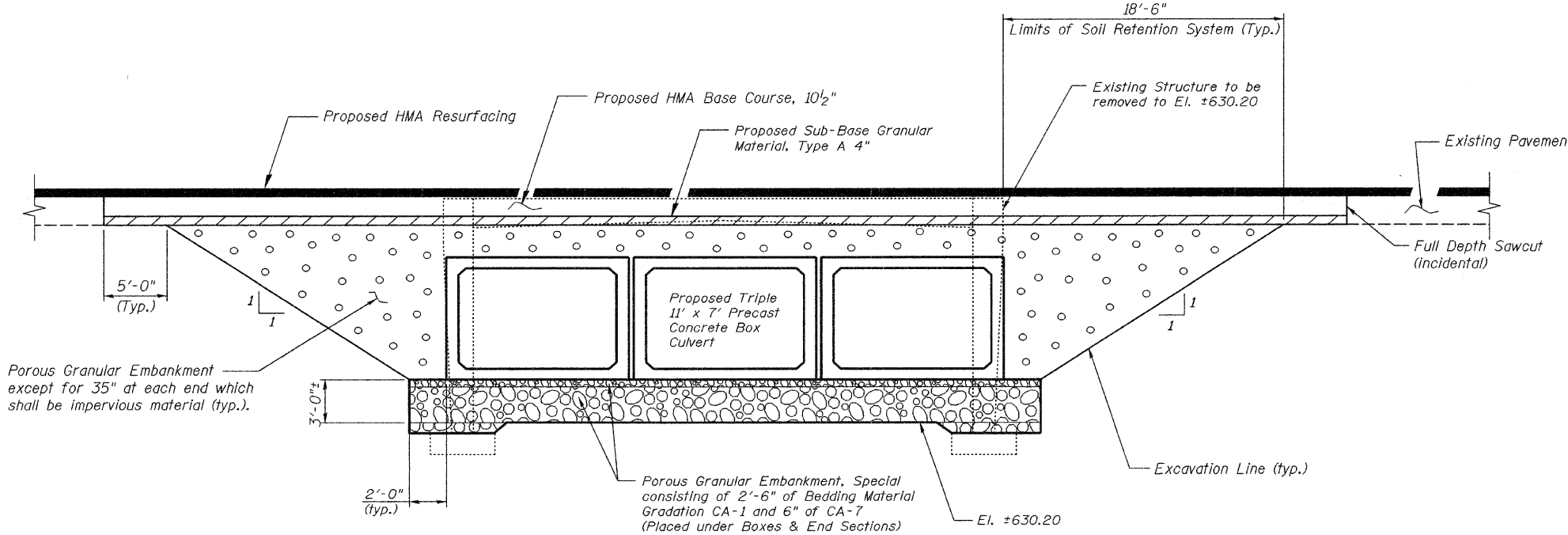
DESIGNED -	MRB
CHECKED -	HMA
DRAWN -	VH
CHECKED -	MRB



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. S6 S7 SHEETS
F.A.P. 649	(107) BR	LASALLE	24	17	
FED. RD. DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract # 66844



SECTION THROUGH PRECAST BOX CULVERT

DESIGNED -	MRB
CHECKED -	HMA
DRAWN -	VH
CHECKED -	MRB

**benesch**  
alfred benesch & company  
Engineers • Surveyors • Planners  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450  
Job # 3838.01

SECTION THROUGH BOX CULVERT  
ILLINOIS 17 OVER SOUTH BRANCH  
OF MOON CREEK  
F.A.P. ROUTE 649 SEC. NO. (107) BR  
LASALLE COUNTY  
STATION 50+98.00  
STRUCTURE NO. 050-2044

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 649	(107) BR	LASALLE	24	18
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 57  
57 SHEETS

Contract # 66844



SOIL BORING LOG

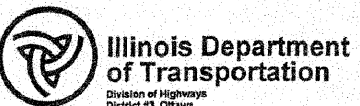
Page 1 of 1  
Date 4/6/95

ROUTE FAP Route 651 (IL 17) DESCRIPTION Over Moon Creek LOGGED BY Keith Whittington  
SECTION (107)BR LOCATION NE 1/4, SEC. 24, TWP. 30N, RNG. 2E, 3<sup>rd</sup> PM  
COUNTY LaSalle DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	BORING NO.	DEPTH	LOC	UCS	M	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	Hrs.	DEPTH	LOC	UCS	M
050-0037	1	(ft)	(ft)	(tsf)	(%)	ft	ft	ft	ft	ft	ft		(ft)	(ft)	(tsf)	(%)
						635.20				625.7			27-86/12"		1.5	4.4
		642.20		4												
				4	1.5	20.9										
				8	P											
				3									100/4.5"			
		638.70		3	1.5	20.5										
				5	P	5.6										
		637.70														
				4												
				4	2.0	11.2										
				5	P											
				4												
				4	1.0	10.3										
				10	P											
		632.70														
				3												
				3	0.6	29.6										
				4	B											
		630.20														
				4												
				9		4.5										
				13												
		627.70														
				12												
				28		6.5										
				52												
		625.20														

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
BBS, from 137 (Rev. 8-99)

DESIGNED -	MRB
CHECKED -	HMA
DRAWN -	VH
CHECKED -	MRB



SOIL BORING LOG

Page 1 of 1  
Date 4/6/95

ROUTE FAP Route 651 (IL 17) DESCRIPTION Over Moon Creek LOGGED BY Keith Whittington  
SECTION (107)BR LOCATION NE 1/4, SEC. 24, TWP. 30N, RNG. 2E, 3<sup>rd</sup> PM  
COUNTY LaSalle DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	BORING NO.	DEPTH	LOC	UCS	M	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	Hrs.	DEPTH	LOC	UCS	M
050-0037	2	(ft)	(ft)	(tsf)	(%)	ft	ft	ft	ft	ft	ft		(ft)	(ft)	(tsf)	(%)
						635.20				625.7						
		642.20		3												
				4	1.0	20.7										
				5	P											
				5									100/4.5"			
		638.20		4	2.0	22.2										
				5	P											
		632.70														
				3												
				5	1.5	11.5										
				5	P											
				3												
				5	2.0	9.8										
				5	P											
		627.70														
				2												
				2	0.2	22.4										
				3	B											
				2												
				5												
				8												
		627.70														
				43-64/9"												
						4.7										

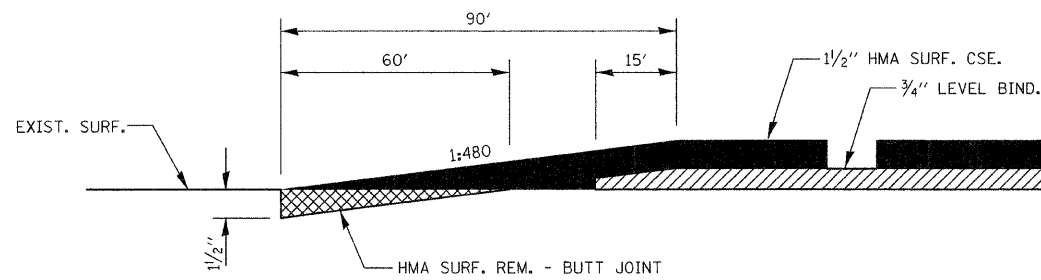
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
BBS, from 137 (Rev. 8-99)

benesch

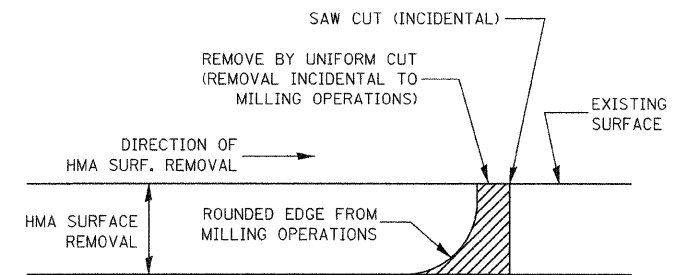
alfred benesch & company  
Engineers • Surveyors • Planners  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450  
Job # 3638.01

SOIL BORING LOGS  
ILLINOIS 17 OVER SOUTH BRANCH  
OF MOON CREEK  
F.A.P. ROUTE 649 SEC. NO. (107) BR  
LASALLE COUNTY  
STATION 50+98.00  
STRUCTURE NO. 050-2044

08\07\2008 15:48:08 ...\\50-2044-66844-18-1-Logs.dgn

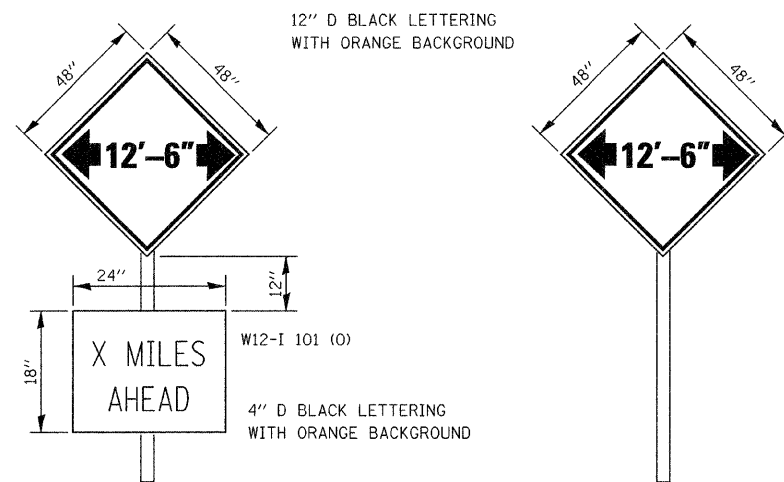


**BUTT JOINT DETAIL**



NOTE:  
WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL

**HMA DETAIL AT BUTT JOINTS**

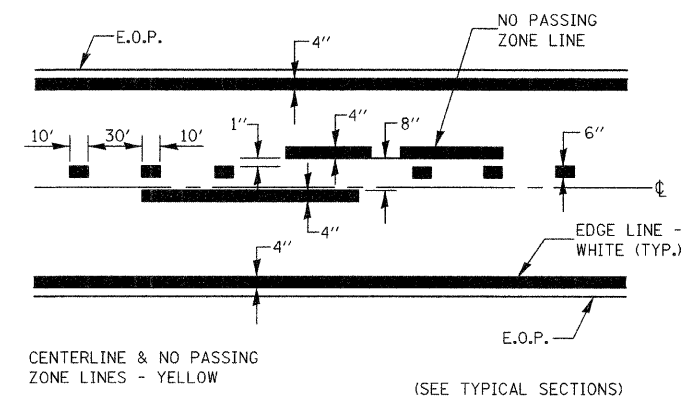


TO BE POST MOUNTED AS SHOWN ELSEWHERE IN THE PLANS.  
THE ENGINEER WILL NOTIFY DISTRICT 3 BUREAU OF OPERATIONS 14 CALENDAR DAYS PRIOR TO INSTALLING ANY TRAFFIC CONTROL DEVICES THAT WILL RESTRICT THE PAVEMENT WIDTH.  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO MEET THIS REQUIREMENT.  
COST OF SUPPLYING, INSTALLING, MAINTAINING AND REMOVING WIDTH RESTRICTION SIGNS SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL AND PROTECTION PAY ITEMS.

**LOCATIONS**

WB IL 17 AT IL 23, 1 MILE AHEAD  
EB IL 17 AT IL 251, 10 MILES AHEAD  
EB & WB IL 17, 250 FEET AFTER ROAD CONSTRUCTION AHEAD SIGNS, 1/4 MILE AHEAD

**WIDTH RESTRICTION SIGNING DETAILS**



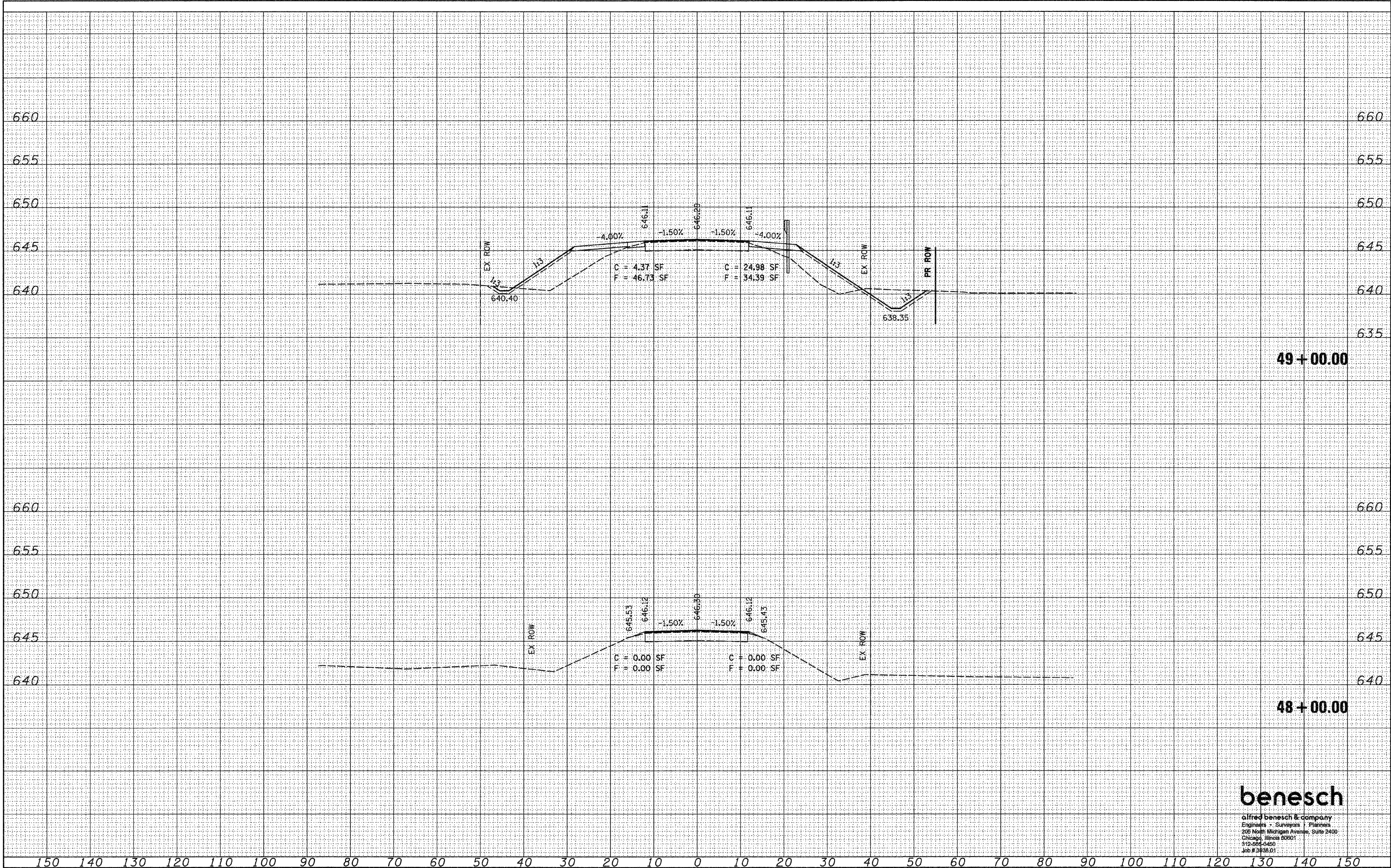
**PAVEMENT MARKING**

**benesch**  
alfred benesch & company  
Engineers • Surveyors • Planners  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-865-0450  
Job # 3838.01

FILE NAME = ...D366844-sh-t-details.dgn	USER NAME = #USER#	DESIGNED - HMA	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ROADWAY DETAILS</b>			F.A.P. RTE. 649	SECTION (107) BR	COUNTY LASALLE	TOTAL SHEETS 24	SHEET NO. 19
PLOT SCALE = #SCALE#	CHECKED - KJN	REVISIED -	REVISIED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	CONTRACT NO. 66844			
PLOT DATE = 08/07/2008	DATE - 8/7/08	REVISIED -	REVISIED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							

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

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



FILE NAME = ... \0366944-shr-xsh.tldgn  
 USER NAME = \*USER\*  
 PLOT SCALE = \*SCALE\*  
 PLOT DATE = 08/07/2008

DESIGNED -	AJP	REVISED -	
DRAWN -	AJP	REVISED -	
CHECKED -	KJN	REVISED -	
DATE -	8/7/08	REVISED -	

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

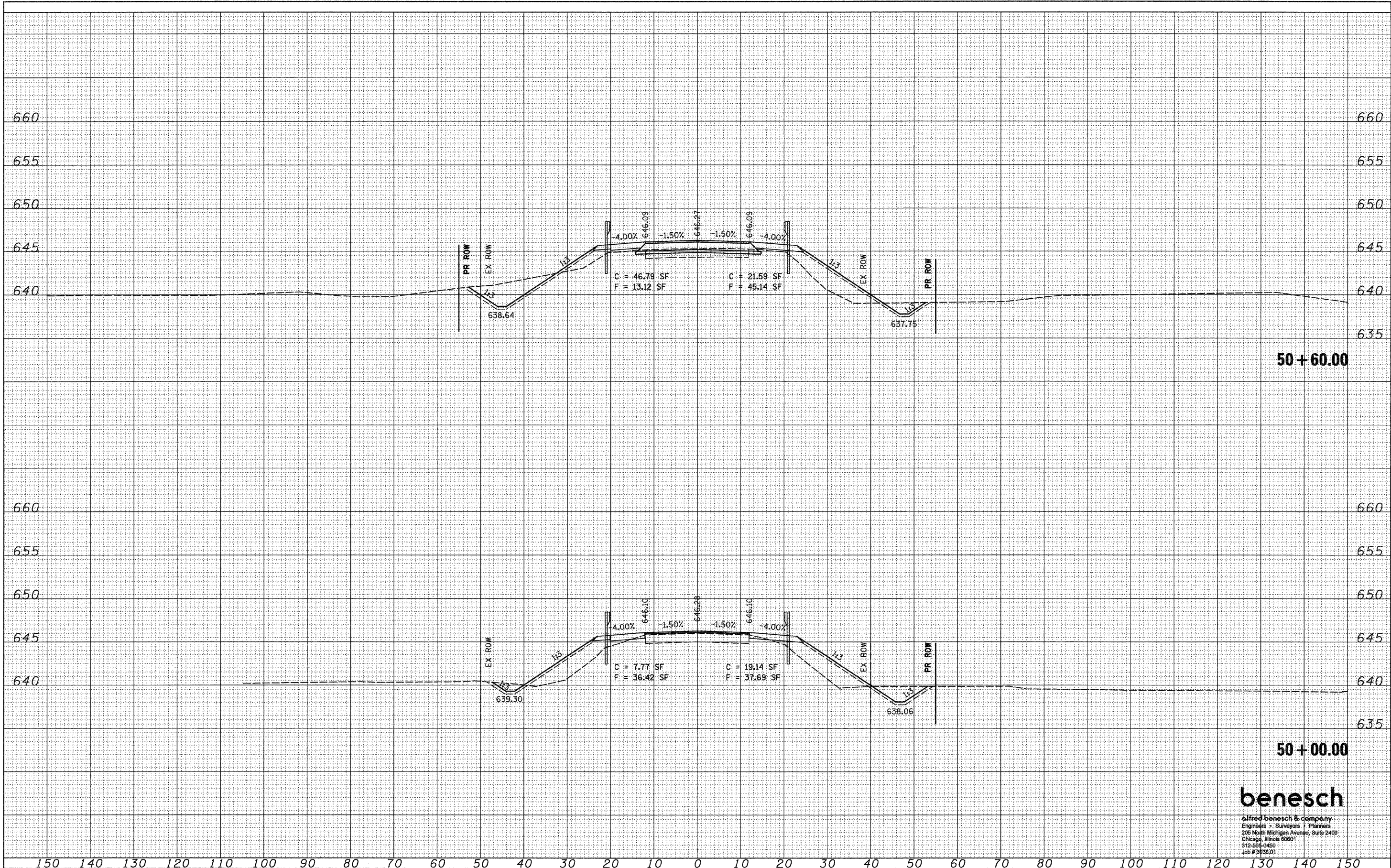
HORIZ. SCALE: 1"=10'  
 VERT. SCALE: 1"=5'  
 SHEET NO. 1 OF 5 SHEETS  
 STA. 48+00.00 TO STA. 49+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(107) BR	LASALLE	24	20
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 66844	

**benesch**  
 alfred benesch & company  
 Engineers • Surveyors • Planners  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-669-0450  
 Job # 3838.01

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

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



FILE NAME = ...\\0366844-sht-xssht2.dgn

USER NAME = #USER#	DESIGNED - AJP	REVISED -
PLOT SCALE = #SCALE#	DRAWN - AJP	REVISED -
PLOT DATE = 08/07/2008	CHECKED - KJN	REVISED -
	DATE - 8/7/08	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

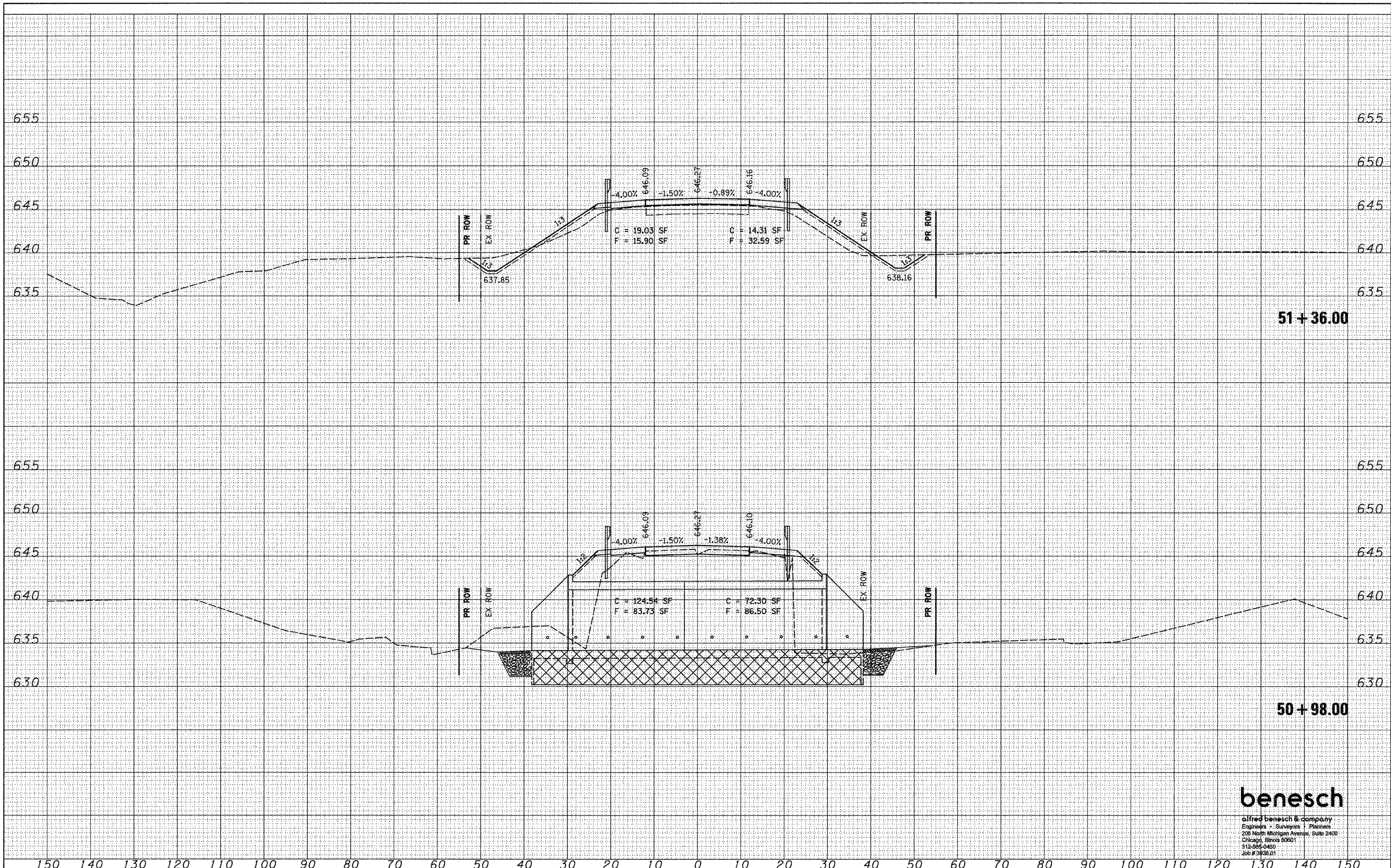
**CROSS SECTIONS**  
SCALE: HORIZ. 1"=10'  
VERT. 1"=5'  
SHEET NO. 2 OF 5 SHEETS  
STA. 50+00.00 TO STA. 50+60.00

F.A.P. RTE. 649	SECTION (107) BR	COUNTY LASALLE	TOTAL SHEETS 24	SHEET NO. 21
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 66844	

**benesch**  
alfred benesch & company  
Engineers - Surveyors - Planners  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-353-4450  
Job # 3838.01

FINAL SURVEY	DATE
SUBMITTED	BY
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

ORIGINAL SURVEY	DATE
SUBMITTED	BY
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



51 + 36.00

50 + 98.00

**benesch**

alfred benesch & company  
 Engineers - Surveyors - Planners  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-566-0460  
 Job # 3438.01

FILE NAME =	USER NAME = #USER#
... \0366844-sht-xssht3.dgn	
PLOT SCALE = #SCALE#	
PLOT DATE = 08/07/2008	

DESIGNED - AJP	REVISED -
DRAWN - AJP	REVISED -
CHECKED - KJN	REVISED -
DATE - 8/7/08	REVISED -

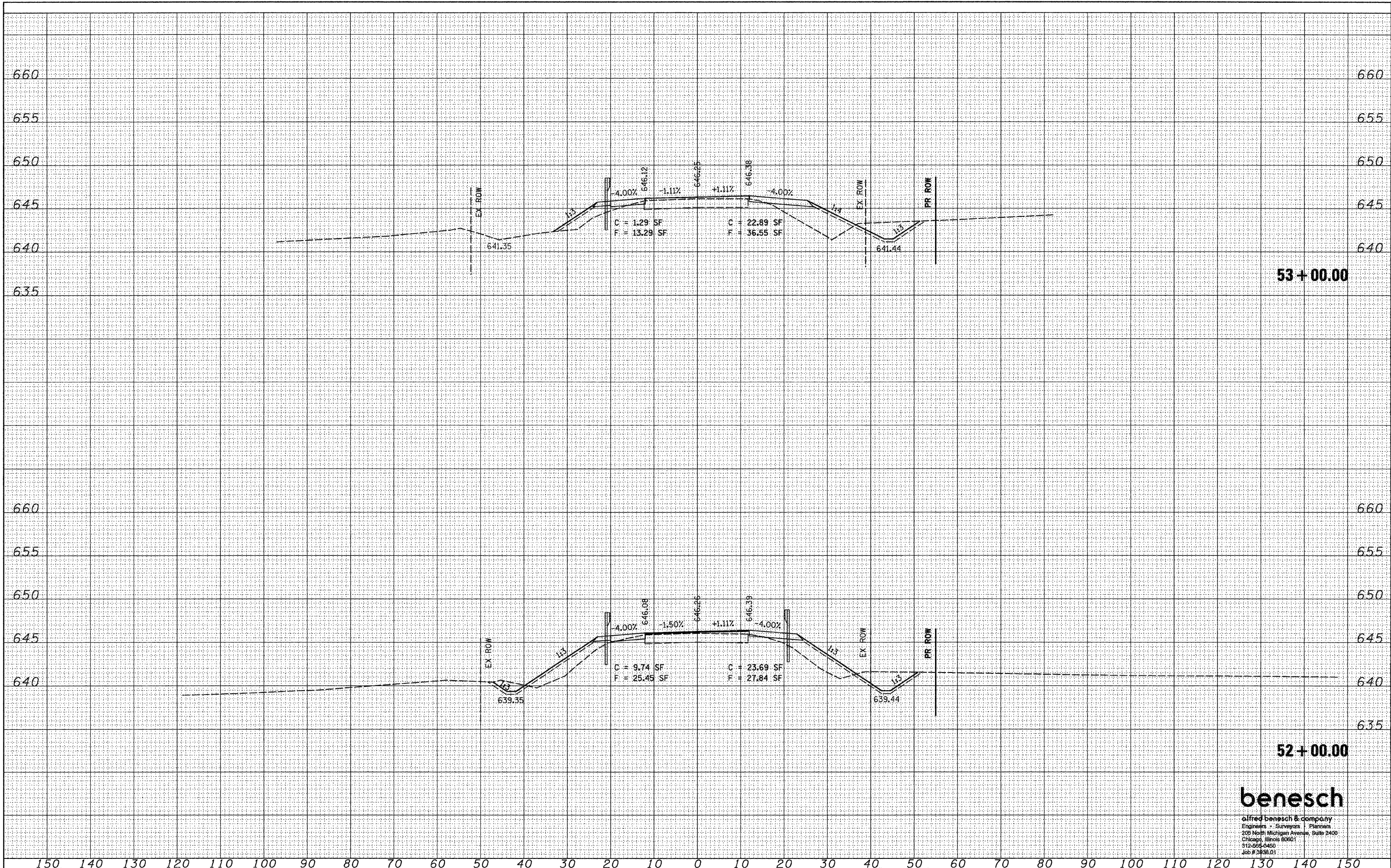
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 SCALE: HORIZ. 1"=10'  
 VERT. 1"=5'  
 SHEET NO. 3 OF 5 SHEETS  
 STA. 50+98.00 TO STA. 51+36.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(107) BR	LASALLE	24	22
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
CONTRACT NO. 66844				

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

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



FILE NAME = ...\\0366844\hht-xssht4.dgn  
 USER NAME = #USER#  
 PLOT SCALE = #SCALE#  
 PLOT DATE = 08/07/2008

DESIGNED -	AJP	REVISED -	
DRAWN -	AJP	REVISED -	
CHECKED -	KJN	REVISED -	
DATE -	8/7/08	REVISED -	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

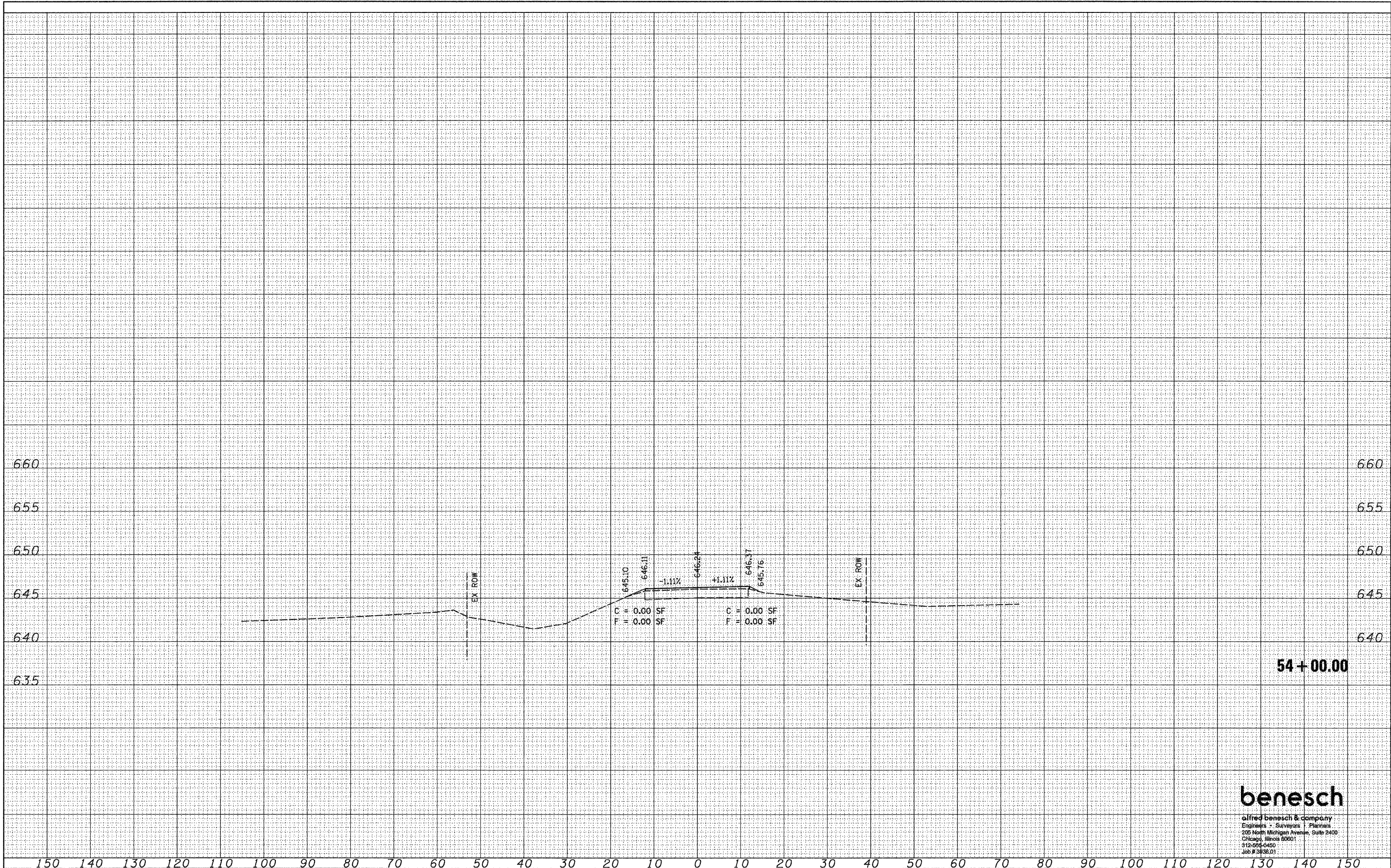
**CROSS SECTIONS**  
 SCALE: HORIZ. 1"=10' VERT. 1"=5'  
 SHEET NO. 4 OF 5 SHEETS STA. 52+00.00 TO STA. 53+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
649	(107) BR	LASALLE	24	23
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 66844	

**benesch**  
 alfred benesch & company  
 Engineers - Surveyors - Planners  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-255-4450  
 Job # 3838.01

FINAL SURVEY	SURVISED	DATE
NOTE BOOK	PLOTTED	BY
NO.	AREAS CHECKED	

ORIGINAL SURVEY	SURVISED	DATE
NOTE BOOK	PLOTTED	BY
NO.	AREAS CHECKED	



54+00.00

**benesch**

alfred benesch & company  
 Engineers - Surveyors - Planners  
 205 North Michigan Avenue, Suite 2400  
 Chicago, Illinois 60601  
 312-999-0450  
 Job # 3838.01

FILE NAME = ...0366844-ahf-xaht5.dgn	USER NAME = #USER#	DESIGNED - AJP	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b>	F.A.P. RTE. 649	SECTION (107) BR	COUNTY LASALLE	TOTAL SHEETS 24	SHEET NO. 24	
PLOT SCALE = #SCALE#	CHECKED - KJN	REVISED -	SCALE: HORIZ. 1"=10' VERT. 1"=5'			SHEET NO. 5 OF 5 SHEETS	STA. 54+00.00 TO STA. 54+00.00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 66844	
PLOT DATE = 08/07/2008	DATE - 8/7/08	REVISED -									