6-17-05 Letting, Item 237

CONTRACT NO. 64954

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	1

INDEX OF SHEETS

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000001-04	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
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442101-05	CLASS B PATCHES
542101	REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERTS 375 mm (15") THRU 900 mm (36") DIA. AT RIGHT ANGLES WITH ROADWAY
542301	PRECAST REINFORCED CONCRETE FLARED END SECTION
542401	METAL END SECTIONS FOR PIPE CULVERTS
666001	RIGHT OF WAY MARKERS
701201-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

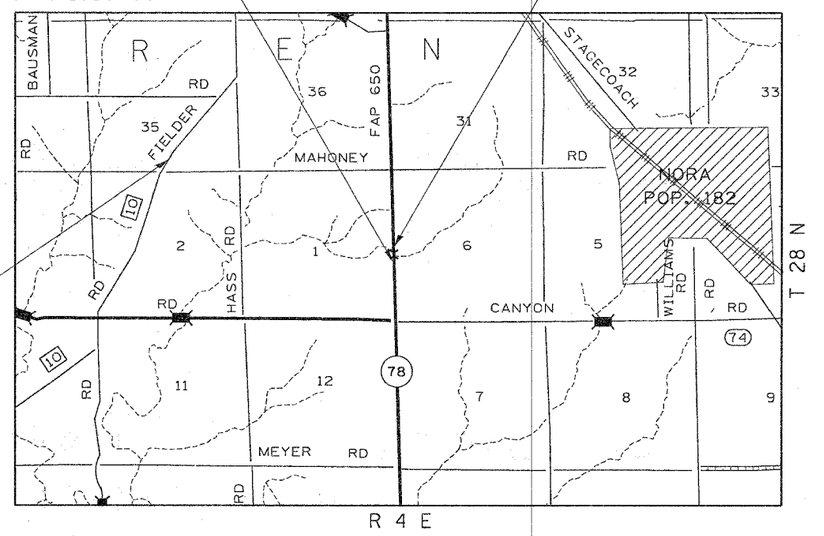
FAP ROUTE 650 (IL 78)
SECTION 104-T-1

JO DAVIESS COUNTY

C-92-088-05

IMPROVEMENT BEGINS STA. 1050+00

IMPROVEMENT ENDS STA. 1055+00



36' PIPE CULVERT , CLASS A, TYPE 1 24"
1.2 MILES NORTH OF CANYON RD ON FIELDER RD
2 EACH END SECTIONS 24"

JO DAVIESS COUNTY
WARREN TOWNSHIP, SECTIONS 1, 6

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

GROSS LENGTH OF IMPROVEMENT = 500' = 0.095 MILES
NET LENGTH OF IMPROVEMENT = 500' = 0.095 MILES

D-92-107-03

LOCATION OF SECTION INDICATED THUS: –

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 30 2005
Gregory L. Mountjoy
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 13, 2005
Mike Stine
ENGINEER OF DESIGN AND ENVIRONMENT

May 13, 2005
Victor Modaras
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

CONTRACT NO. 64954

PLANS ENGINEER ROBERT WAGNER

SENIOR ENGINEER THOMAS HALLA
PHONE (815)-284-5993

GENERAL NOTES

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 650 (IL 78)	104-T-1	JoDaviess	24	2
FED ROAD DIST. NO.	ILLINOIS	PROJECT		
Contract #64954				

Program #5 (Arch. Size) Enlarge 200% Enlarge 107%

See cross sections for special ditches and backslopes.

The final top 100 mm (four inches) of soil in any right-of-way area disturbed by the Contractor must be capable of supporting vegetation. The soil must be from the A horizon (zero to 2' deep) of soil profiles of local soils.

It is estimated that 636 cubic yards of earth will be hauled to the job from outside the project limits. A shrinkage factor of 25% has been used.

The Contractor shall seed all disturbed areas within the project limits. Seeding Class 4 or 6 (modified) shall be used, except in front of properties where the grass will be mowed, then use Seeding, Class 1 (modified). Class 6 (modified) shall be used on front slopes and ditch bottoms. Class 4 shall be used behind Type A gutter, on all backslopes and areas behind the backslope, and beyond the toe of front slope on fill sections without ditches.

Fertilizer Nutrients shall be applied at the rate specified in Sections 250 and 252 of the Standard Specifications. This shall be included in the cost of the SEEDING or SODDING.

When mulch with emulsified asphalt is applied, it will be the contractor's responsibility to cover or protect all traffic signs, guardrail and curbs. Any signs, guardrail or curbs which become covered with asphaltic material shall be cleaned by the Contractor at his own expense.

Previously pugmilled stockpiles of "Type A" older than 1 month will not be approved for use until a moisture check is run to verify moisture content. Material shipped to projects without being tested will not be accepted.

Placement and compaction of Trench Backfill for AR culverts shall conform to Section 502.10 of the Standard Specifications except that the material shall be compacted to a minimum of 95% of standard laboratory density. The entire excavation within 2' outside of each shoulder shall be backfilled with Trench Backfill material. The pay limits for Trench Backfill shall extend from 2' outside each vertical culvert wall at the base of the culvert floor and shall extend vertically to the bottom of the proposed subgrade. This work shall be included in the unit price per Cubic Yard for TRENCH BACKFILL.

Except for the top 75 mm (3"), all aggregate bases and subbases 300 mm (12") in thickness shall be constructed of aggregate gradation CA-2. If the specified thickness exceeds 300 mm (12"), the bases or subbases shall be constructed of topsize 150 mm (6") breaker-run crushed stone with 70% to 90% by weight, passing the 4" sieve and 15% to 40% by weight, passing the 50 mm (2") size sieve, except for the top 75 mm (3"). The breaker-run crushed stone shall be reasonably uniformly graded from coarse to fine and be taken from a quarry ledge capable of producing Class "D" quality aggregate. The top 75 mm (3") shall be gradation CA-6 or CA-10 regardless of thickness. The water necessary to achieve compaction in all but the top 75 mm (3") layer may be added after the subbase or base course is placed on the grade.

All mandatory joint sealing for Class A, Class B, and Class B (Hinge Jointed) patches as shown on the plans will not be measured for payment. Optional sawing of the joint for the sealant reservoir will not be measured for payment.

Before removing existing fence from an area that contains livestock, the Contractor shall erect, along the proposed right of way and temporary easement lines, a temporary fence or wire meeting the approval of the engineer. The cost of arranging work herein specified and erecting any temporary will be paid for as temporary fence.

For all concrete patching that will not be resurfaced, the concrete shall be struck off flush with the existing pavement surface at each end of the patch.

The Engineer reserves the right to check all patches for smoothness by the use of a 10' rolling straight edge set to a 3/16" tolerance in the wheel paths. Any patch areas higher than 3/16" must be ground smooth with an approved grinding device consisting of multiple saws. The use of bushhammer or other impact devices will not be permitted. Any patch with depressions greater than 3/16" shall be repaired in a manner approved by the Engineer.

The mandatory saw cuts for pavement patching are:

Class B Patch: Cut two transverse saw cuts outlining the patch and one transverse pressure relief saw cut. The longitudinal edges of the patch shall be cut full depth. When the patch is adjacent to a pcc shoulder, two saw cuts along the shoulder will be required.

The mandatory saw cuts will be paid for at the contract unit price per Meter (Foot) for SAW CUTS.

The Contractor will be required to furnish 140 mm (5 1/2") high brass stencils as approved by the Engineer and install stationing at 250' intervals. Stationing shall be placed on both lanes of 2-lane highways and on the outside lanes in both directions on 4-lane highways. The stations shall be placed 150 mm (6") inside the pavement marking edge so they can be read from the shoulder. This work will be included in the cost of the final pavement surface.

A Nationwide 404 Permit has been issued for this project and the conditions of that permit must be adhered to.

The boring logs for this structure indicate that groundwater levels may encroach on the construction limits of this culvert. It shall be the responsibility of the contractor to control the ground water and divert the stream flow during construction in order to keep the construction area free of water. The method of controlling the water shall be subject to approval of the Engineer and the cost shall be included in the contract unit price for Precast Concrete Box Culverts.

Delineators shall be placed at the end section of AR Culvert on Fiedler Road. This work will be paid for at the contract unit price each for DELINEATORS.

Pavement Marking shall be done according to Standard 780001, except as follows:

1. All words, such as ONLY, shall be 2.4 m (8 feet) high.
2. All non-freeway arrows shall be the large size.
3. The distance between yellow no-passing lines shall be 200 mm (8"), not 180 mm (7") as shown in the detail of Typical Lane and Edge Lines.

GENERAL NOTES

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 650 (IL 78)	104-T-1	JoDaviess	24	3
FED ROAD DIST. NO.	ILLINOIS	PROJECT		
Contract #64954				

Right-of-way markers will be erected with the back face of the marker on the right-of-way line unless the new right-of-way line has been surveyed and pinned, in which instance the right-of-way markers will be erected 300 mm (12 inches) inside the new right-of-way line.

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. A minimum of 48 hours advance notice is required for non-emergency work. The JULIE number is 800-892-0123. The following listed utilities located within the project limits or immediately adjacent to the project construction limits are members of JULIE:

Mediacom
Verizon
McLeod USA
Commonwealth Edison Co.
Nicor Gas Co.

Program #5 (Arch. Size) Enlarge 200% Enlarge 107%

Following are the known utilities located within the project limits or immediately adjacent to the project construction limits which are not members of JULIE and should be notified individually by the contractor:

Mr. Dennis Schultz
IDOT – District 2
819 Depot Ave.
Dixon, IL 61021

CADD data will be available to Contractors and Consultants working on this project. This information will be provided upon request as MicroStation CADD files and Geopak coordinate geometry files ONLY. If data is required in other formats it will be your responsibility to make these conversions. If any discrepancy or inconsistency arises between the electronic data and the information on the hard copy, the information on the hard copy should be used. Contact the District's Project Engineer to request these files.

Salvage existing delineators within the project limits and place one at the end of each end of the new box culvert.

The Resident Engineer, prior to closing the road and after the project is finished, shall contact the corresponding Township and the JoDaviess County Engineer to video tape the following roads: From IL 78, west on Canyon Road 2 miles, northeast of Fielder Road 3.9 miles to Warren, then east on Galena Ave. 0.2 mile, then north on Bellevue Ave. for 0.2 mile to intersection with IL 78.

The Contractor shall only use state routes and marked detour routes for hauling materials and equipment. There will be no exceptions unless written permission is given from a jurisdiction, Township or County. A record of this authorization shall be given to the Resident Engineer.

The Contractor will not be allowed to set up a yard or field office on State property without written permission from the Department.

Where section or sub-section monuments are encountered, the Engineer shall be notified before such monuments are removed. The Contractor shall protect and carefully preserve all monuments or otherwise reference their location. The Contractor will be responsible for having an authorized surveyor re-establish any section or sub-section monuments destroyed by his operations.

Only those trees designated by the Engineer shall be removed.
The Contractor shall protect all remaining trees from damage due to his operations.

The following quantities have been estimated for the good neighbor policy as needed:
40600810 Bituminous Surface Course Mix C, Class 1, Type 1 N50 – 200 Tons
48101200 Aggregate Shoulders, Type B – 208 Tons
40600200 Bituminous Materials (Price Cost) – 2.62 Tons

The 24" diameter riveted drain tube located under Fiedler Road 1.2 miles north of Canyon Road shall be replaced prior to any work being done on IL 78. Removal and disposal of existing pipe and headwall, site preparation and grading, trench backfill, and 3" bituminous patch shall all be included in the price for PIPE CULVERTS, CLASS D, TYPE 1, 24". Ditches in the immediate area of the end sections shall be graded and shaped to drain, seeded, and shall be included within the above listed pay item.

Delineators shall be installed as shown in Standard 635001, except that the post shall be rotated 180° and only metal-backed delineators shall be permitted.

Delineators shall be placed at the ends of approach guardrail terminal sections, and at each headwall or end section of AR Culverts. This work will be paid for at the contract unit price each for DELINEATORS.

The following Mixture Requirements are applicable for this project:

Mixture Uses(s):			
PG:			
RAP%: (Max)			
Design Air Voids			
Mixture Composition (Gradation Mixture)			
Friction Aggregate			
20 Year ESAL			

Completion Date: September 1, 2005. The project shall have pavement, shoulders and striping completed prior to opening to traffic. The Contractor will be allowed 15 additional working days after September 1, 2005 to complete earthwork, rip rap, seeding, etc.

The existing culvert can not be filled, but the floor can stay in place after remainder of culvert has been removed.

Permanent Survey Marker, Type II shall be installed prior to construction beginning on the project. Markers shall be cast-in-place.

A patching detail has been included in the plans. Care shall be taken not to disturb the existing outside ten feet of the patch subgrade. If necessary, the Contractor shall make provisions to make the final saw cut immediately prior to preparing the patch. Any additional length of patch required to reach undisturbed areas shall be at the Contractor's expense.

GENERAL NOTES

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 650 (IL 78)	104-T-1	JoDaviess	24	4
FED ROAD DIST. NO.	ILLINOIS	PROJECT		
Contract #64954				

A quantity of temporary seeding has been included in the contract and shall be used at the discretion of the Resident Engineer.

Pavement patching shall be in accordance with Article 442. The finished pavement shall be grooved with approved tining equipment. The pavement shall be stamped with the current year and stationing. Joints shall be sawed and sealed.

A quantity of Rock Excavation has been included in the event that rock is encountered during excavation.

Cleaning and shaping of channel shall be included in the cost of Stone Rip Rap A5.

Program #5
(Arch. Size)
Enlarge
200%
Enlarge 107%

The applicable portions of Article 105.07 of the Standard Specification shall apply except for the following. The Contractor shall be responsible to locate the vertical depths of the underground utilities which may interfere with construction operations. This work will not be measured or paid for separately, but shall be considered as included in the unit bid price for the item of construction involved.

Per SB 699(90 day utility relocation law) - Once right of way is clear to award the project, a notice will be sent to the utility companies instructing them to have their facilities relocated within 90 days. Estimated date relocation complete = Letting Date+135 days

CONTRACT NO. 64954

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SUMMARY OF QUANTITIES

	CODE NUMBER	PAY ITEM	UNIT	Y007 TOTAL QUANTITY	100% STATE
*	A2006514	TREE, QUERCUS BICOLOR 1-3/4"CALIPER BALLED & BURLAPPED	EACH	4	
	20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	30	
	20200100	EARTH EXCAVATION	CU YD	1414	
	20200200	ROCK EXCAVATION	CU YD	5	
	20400800	FURNISHED EXCAVATION	CU YD	636	
	20800150	TRENCH BACKFILL	CU YD	789	
	25000310	SEEDING, CLASS 4	ACRE	0.1	
	25001830	SEEDING, CLASS 6 (MODIFIED)	ACRE	0.6	
	25100115	MULCH, METHOD 2	ACRE	0.7	
	25002300	TEMPORARY SEEDING	ACRE	0.7	
	28000300	TEMPORARY DITCH CHECKS	EACH	8	
	28000400	PERIMETER EROSION BARRIER	FOOT	1134	
	28100109	STONE RIPRAP, CLASS A5	SQ YD	436	
	28200300	FILTER FABRIC	SQ YD	436	
	31100910	SUB-BASE GRANULAR MATERIAL, TYPE A, 12"	SQ. YD.	264	
	40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	3	
	X4066414	BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE MIX C , N50	TON	200	
	44201013	CLASS B PATCHES, TYPE IV, 13"	SQ YD	266	
	44213100	PAVEMENT FABRIC	SQ YD	266	
	44213200	SAW CUTS	FOOT	120	
	48101200	AGGREGATE SHOULDERS, TYPE B	TON	280.0	
	50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1	
	54001001	BOX CULVERT END SECTION , CULVERT NO. 1	EACH	4	
	54010807	PRECAST CONCRETE BOX CULVERT 8' X 7'	FOOT	240	
	542D0229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	36	
	54213459	END SECTIONS 24"	EACH	2	
	63200310	GUARDRAIL REMOVAL	FOOT	556	
	63500105	DELINEATORS	EACH	2	
	66411900	TEMPORARY FENCE	FOOT	1018	
	66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	9	
	66700305	PERMANENT SURVEY MARKER TYPE II	EACH	2	
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2	
	67100100	MOBILIZATION	L SUM	1	
	X7013015	TRAFFIC CONTROL FOR ROAD CLOSURE	L SUM	1	
	*78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1400	
	28100209	STONE RIP RAP CLASS A5	TON	45	
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	
	Z0017200	DOWEL BARS	EACH	96	
	Z0075300	TIE BARS	EACH	46	

* SPECIALTY ITEMS

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USER NAME = goffjl

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT.
HORIZ.
DATE

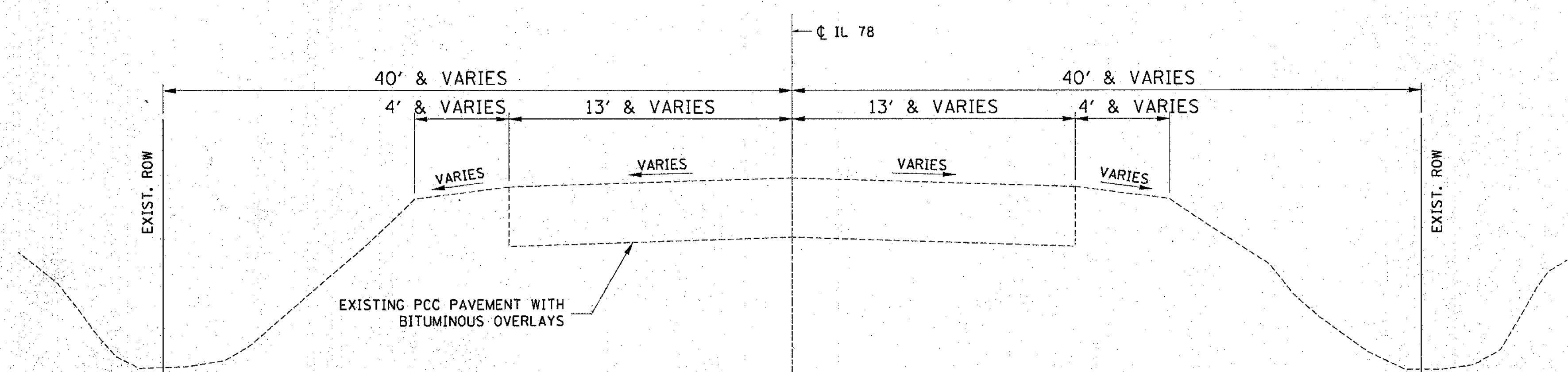
DRAWN BY
CHECKED BY

SUMMARY OF QUANTITIES

CONTRACT NO. 64954

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING TYPICAL SECTION



STA. 1050 + 00.00 TO STA. 1054 + 50.00

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. HORIZ.

DATE

DRAWN BY

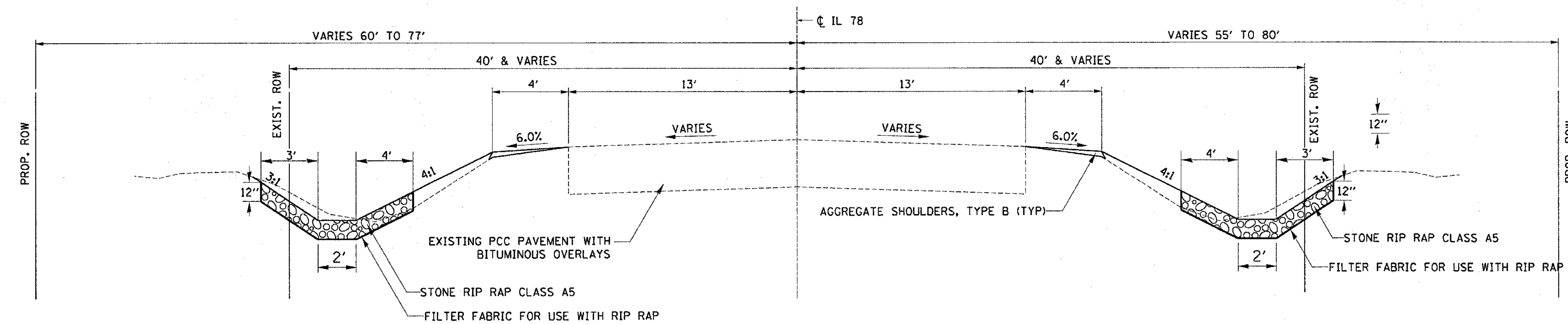
CHECKED BY

EXISTING TYPICAL SECTION

CONTRACT NO. 64954

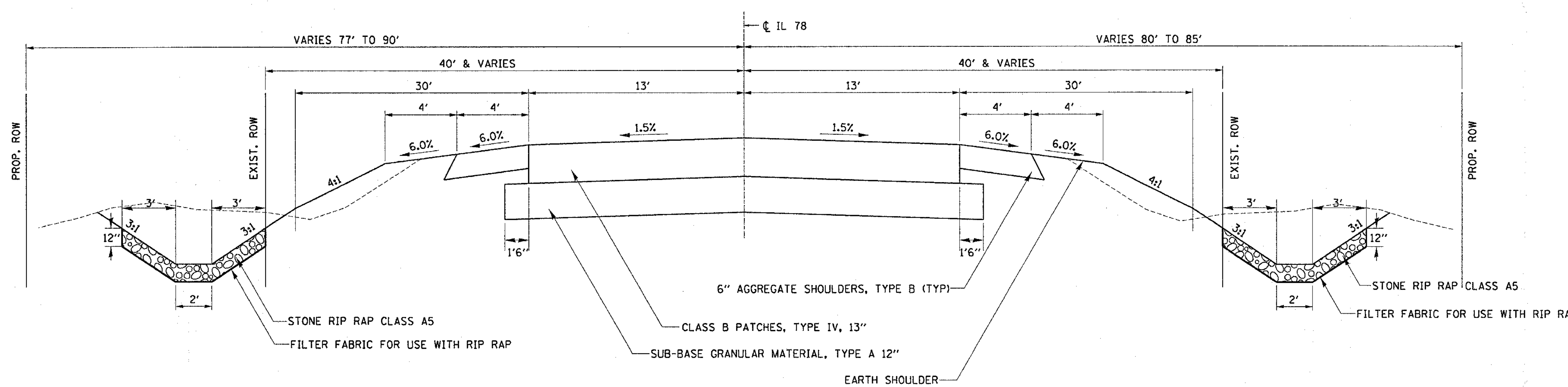
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	7
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PROPOSED TYPICAL SECTIONS



STA. 1050 + 50.00 TO STA. 1051 + 92.00

*NOTE: STONE RIP RAP, CLASS A5 STARTS AT STA. 1050+00.00



STA. 1051 + 92.00 TO STA. 1052 + 35.55

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT.
HORIZ.
DATE

DRAWN BY
CHECKED BY

PROPOSED TYPICAL SECTIONS

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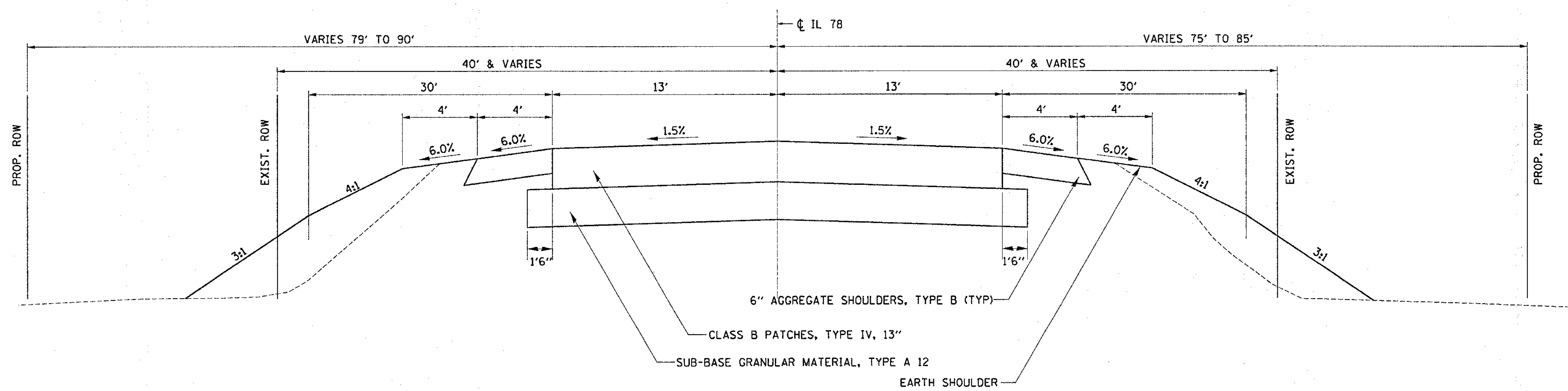
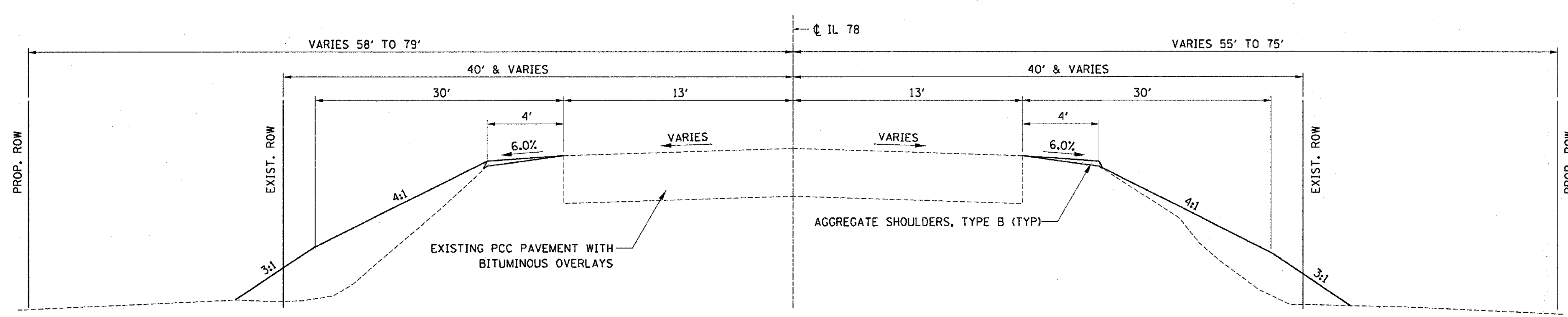
CONTRACT NO. 64954

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	8
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PROPOSED TYPICAL SECTIONS



STA. 1052 + 35.55 TO STA. 1052 + 84.00



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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

PROPOSED TYPICAL SECTIONS

CONTRACT NO. 64954

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	9
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

20100110 TREE REMOVAL, (6 TO 15 UNITS DIAMETER)

UNIT	LOCATION	OFFSET
15	1051 + 73	44' LT
15	1053 + 85	44' LT
30	**TOTAL**	

20800150 TRENCH BACKFILL

CU.YD.	LOCATION
789	1052 + 2 - 1052 + 74
789	**TOTAL**

25000310 SEEDING, CLASS 4

ACRE	LOCATION
0.1	1050 + 0 - 1055 + 0 LT & RT
0.1	**TOTAL**

25001830 SEEDING, CLASS 6 (MODIFIED)

ACRE	LOCATION
0.6	1050 + 0 - 1055 + 0 LT & RT
0.6	**TOTAL**

25002300 TEMPORARY SEEDING

ACRE	LOCATION
0.7	1050 + 0 - 1055 + 0 LT & RT
0.7	**TOTAL**

25100115 MULCH, METHOD 2

ACRE	LOCATION
0.7	SEE SEEDING SCHEDULE
0.7	**TOTAL**

28000300 TEMPORARY DITCH CHECK

EACH	LOCATION
8	105- + 0 - 1052 + 33 LT & RT
8	**TOTAL**

28000400 PERIMETER EROSION BARRIER

FOOT	LOCATION
567	1050 + 0 - 1055 + 0 LT
567	1050 + 0 - 1055 + 0 RT
1134	**TOTAL**

28100109 STONE RIP RAP, CLASS A5

SQ. YD.	LOCATION
218	1050 + 0 - 1052 + 45 LT
218	1050 + 0 - 1052 + 2 RT
436	**TOTAL**

28200100 FILTER FABRIC FOR USE WITH RIP RAP

SQ. YD.	LOCATION
436	SEE STONE RIP RAP DITCH SCHEDULE
436	**TOTAL**

31100200 SUB-BASE GRANULAR MATERIAL, TYPE A, 12"

SQ. YD.	LOCATION
264	1051 + 97 - 1052 + 79
264.0	**TOTAL**

44200162 CLASS B PATCHES, TYPE IV, 13"

SQ. YD.	LOCATION
266	1051 + 92 - 1052 + 84
266	**TOTAL**

44213100 PAVEMENT FABRIC

SQ. YD.	LOCATION
266	1051 + 92 - 1052 + 84
266	**TOTAL**

44213200 SAW CUTS

FOOT	LOCATION
24.0	1051 + 92
24.0	1052 + 84
24.0	Transverse Pressure Relief Saw Cut
24.0	1052 + 2
24.0	1052 + 74
120.0	**TOTAL**

48101200 AGGREGATE SHOULDERS, TYPE B

TON	LOCATION
72.0	1050 + 50 - 1054 + 0 LT & RT
72.0	**TOTAL**

50100300 REMOVAL OF EXISTING STRUCTURE NO.1

EACH	LOCATION
1	1052 + 51.99 8.75X8 MAIN LINE
1	**TOTAL**

542D0229 PIPE CULVERTS, CLASS D, TYPE I, 24"

FEET	LOCATION
36	1.2 MILES NORTH OF CANYON ROAD ON FIELDER ROAD
36	**TOTAL**

54213459 END SECTIONS 24"

EACH	LOCATION
2	1.2 MILES NORTH OF CANYON ROAD ON FIELDER ROAD
2	**TOTAL**

63200310 GUARDRAIL REMOVAL

FOOT	LOCATION
278	1050 + 82 - 1053 + 59 LT
278	1051 + 44 - 1054 + 21 RT
556	**TOTAL**

63500105 DELINEATORS

EACH	LOCATION
2	FIEDLER ROAD (@24"PIPE REPLACEMENT)
2	**TOTAL**

66411900 TEMPORARY FENCE

FEET	LOCATION
1018	1050 + 0 - 1055 + 0 LT & RT
1018	**TOTAL**

66600105 FURNISH AND ERECT RIGHT-OF-WAY MARKERS

EACH	LOCATION	
1	1050 + 0	42.80' LT
1	1050 + 50	65.00' LT
1	1052 + 0	100.00'LT
1	1053 + 0	100.00' LT
1	1054 + 50.00	46.00' LT
1	1050 + 0.00	40.00' RT
1	1051 50.00	100.00' RT
1	1053 + 0.00	100.00' RT
1	1054 + 50.00	40.00' RT
9	**TOTAL**	

66700305 PERMANENT SURVEY MARKER TYPE II

EACH	LOCATION	
1	1057 + 10.44	39.78 LT
1	1053 + 1.00	87.00 RT
2	**TOTAL**	

78001110 PAINT PAVEMENT MARKING LINE 4"

FOOT	LOCATION
700	1050 + 50 - 1054 + 0 WHITE EDGELINES
700	1050 + 50 - 1054 + 0 DBL YELLOW
1400	**TOTAL**

Z0017200 DOWEL BARS

EACH	LOCATION
96	1051 + 92 - 1052 + 84
96	**TOTAL**

Z0075300 TIE BARS

EACH	LOCATION
46	1051 + 92 - 1052 + 84 CENTERLINE
46	**TOTAL**

Z0005400 STONE RIP RAP CLASS A5

TON	LOCATION
22	1052 + 51 LT. END OF BOX
23	1052 + 16 RT. END OF BOX
45	**TOTAL**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. HORIZ.

DATE

DRAWN BY

CHECKED BY

SCHEDULE OF QUANTITIES

CONTRACT NO. 64954

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	10
STA.	TO STA.			
FED. ROAD DIST. NO. 2	ILLINOIS	FED. AID PROJECT		

PLAN AND PROFILE

LEGEND
- X — TREE REMOVAL
- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- TEMPORARY EASEMENT

PROPOSED 120' LONG DOUBLE 8' X 7' PRECAST CONCRETE BOX CULVERT WITH PRECAST END SECTIONS, STA 1052+33.72 SKEWED 15°00'00" LEFT FORWARD

DOUBLER FARMS, INC.
15-000-004-00

STA. 1052+49.26
57.98' LT

STONE RIP RAP CLASS A5

CLASS B PATCHES, TYPE IV, 13"

REMOVE EXISTING
FENCE, 234 LIN FT

OAKLAND CEMETERY
15-000-004-10

STONE RIP RAP CLASS A5

REMOVE EXISTING GUARDRAIL, 278 LIN FT

REMOVE EXISTING FENCE, 170 LIN FT

DERRYL & MARIBELL TROST TRUSTEES
15-000-005-00

EXISTING EDGE OF PAVEMENT

SOUTH CENTERLINE CONTROL
SET PK NAIL AT ℄
STA. 1038+54.87

P.E. +67.73

℄ IL ROUTE 78

F.E. +96.29

NORTH CENTERLINE CONTROL
SET PK NAIL AT ℄
STA. 1118+78.73

1045 1050 1055 1060

IL ROUTE 78

EXISTING EDGE OF SHOULDERS

STONE RIP RAP CLASS A5

AGGREGATE SHOULDERS, TYPE B

REMOVE EXISTING FENCE, 125 LIN FT

DOUBLER FARMS, INC.
11-000-079-00

AGGREGATE SHOULDERS, TYPE B

REMOVAL OF EXISTING STRUCTURE NO. 1

GUARDRAIL REMOVAL, 278 LIN FT

STA. 1052+18.20
57.96' RT

REMOVE EXISTING FENCE, 220 LIN FT

STONE RIP RAP CLASS A5

℄ OF WOLF CREEK

GARY BRINKMEIR
11-000-080-00
11-000-080-02

50 0 50 100
SCALE IN FEET

B.M. 78-1
STA. 1055+65.42, 45.15' LT
IRON ROD IN CONCRETE MONUMENT
ELEV. = 937.56

B.M. #442
SS PLUG IN CONC, W. ROW OF IL 78 N.
E 1/4 COR., SEC. 1 T28N R4E
ELEV. = 932.37

STA 1050+00 TO STA 1054+50

EARTH EXCAVATION = 1414
FURNISHED EXCAVATION = 636
WASTE = 0

STA. 1050+00.00
ELEV. 947.50

-9.00%

-11.00%

-10.00%

-14.00%

-17.65%

-22.47%

+4.48%

PROPOSED RIGHT DITCH

BEGIN PAVEMENT REMOVAL AND REPLACEMENT
STA. 1051+92.00

END PAVEMENT REMOVAL AND REPLACEMENT
STA. 1052+84.00

PI STA. 1051+00.00
ELEV. 936.50

PROPOSED LEFT DITCH

PI STA. 1051+50.00
ELEV. 932.50

PI STA. 1051+50.00
ELEV. 929.50

EXISTING CENTERLINE P.G.L.

1:1

1:1

PROPOSED DOUBLE 8' X 7' PRECAST CONCRETE BOX CULVERT
STA. 1052+33.72
DOWNSTREAM INV=916.25
UPSTREAM INV=916.75

STA. 1052+07.26
ELEV. 916.75

EXISTING 8.75' X 8.0' BOX CULVERT
STA. 1052+52.00
DOWNSTREAM INV=917.04

DESIGN HIGH WATER
ELEV.=923.27

STA. 1052+42.07
ELEV. 916.25

955 950 945 940 935 930 925 920 915

963.32 962.99 962.54 961.88 960.97 959.74 958.17 956.30 954.14 951.67 948.97 946.11 943.04 939.96 937.22 935.20 934.04 933.51 933.47 933.91 934.88 936.51 938.51 940.67 942.91 945.17 947.41 949.66 951.92 954.16 956.39 958.64

1045+00 1046+00 1047+00 1048+00 1049+00 1050+00 1051+00 1052+00 1053+00 1054+00 1055+00 1056+00 1057+00 1058+00 1059+00 1060+00

PLAN
NOTE BOOK
NO.
CORRECTED
PLOTTED
ALIGNMENT CHECKED
MAP REVISED
CADD FILE NAME
BY
DATE

PROFILE
NOTE BOOK
NO.
CORRECTED
PLOTTED
GRADES CHECKED
MAP REVISED
STRUCTURE NOTATIONS ORD
BY
DATE

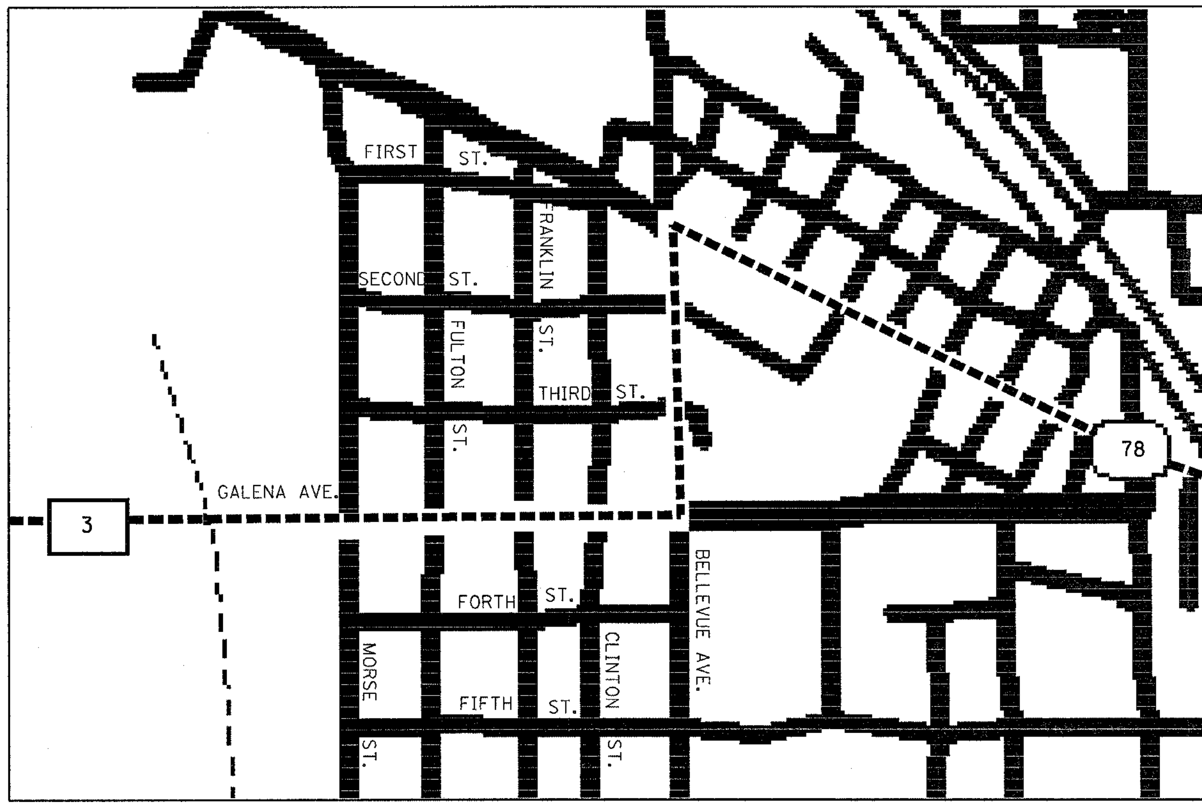
COMPANY NAME: #COMPANY_NAME#
PROJECT CONTACT: #PROJECT_CONTACT#
CLIENT: #CLIENT#
Tue Mar 29 08:08:22 2005
#FILE#

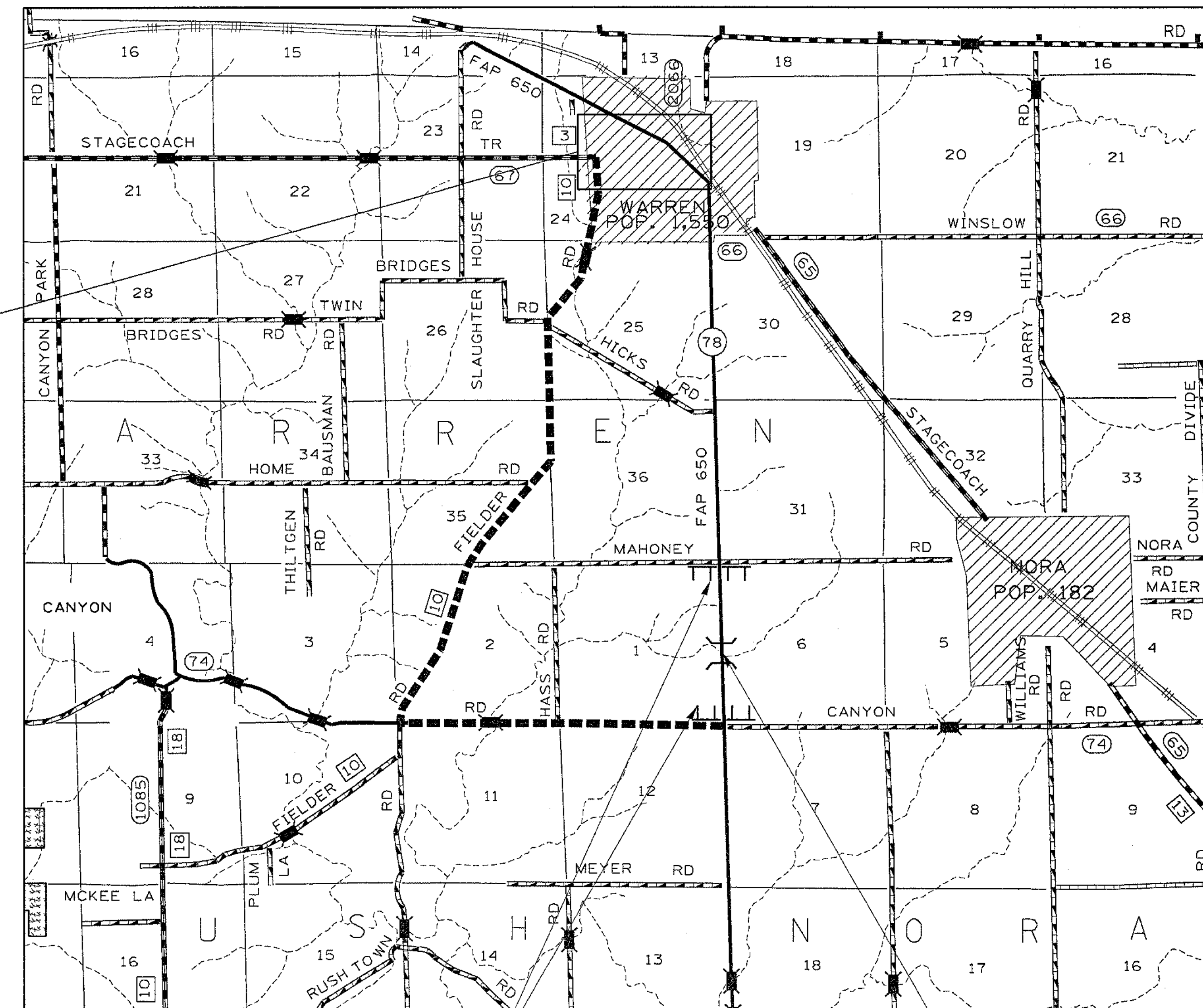
PLAN AND PROFILE

CONTRACT NO. 64954

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	11
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DETOUR MAP & TRAFFIC CONTROL





SIGNING ACCORDING TO TC FOR ROAD CLOSURE

PROPOSED STRUCTURE

= DETOUR ROUTE

PLOT DATE = Tue Mar 29 14:52:04 2005
FILE NAME = c:\projects\p2107031\d107703cvr.dgn
PLOT SCALE = 50.0000 ' / IN.
REFERENCE = REF

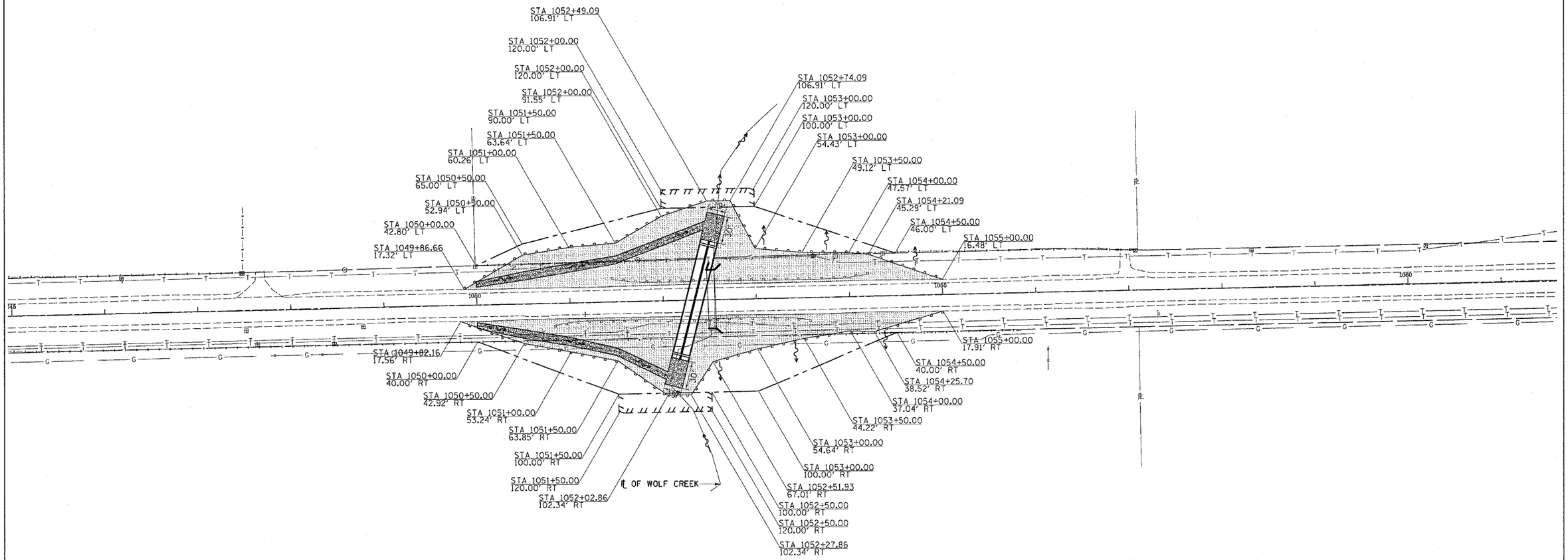
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. HORIZ.
DATE

DRAWN BY
CHECKED BY

DETOUR MAP & TRAFFIC CONTROL



CONTRACT NO. 64954

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	12

STA. TO STA.

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

EROSION CONTROL, SEEDING, & R.O.W. DETAILS

LEGEND

⊠	R.O.W. MARKER
——— - -	PROPOSED RIGHT-OF-WAY
——— ———	EXISTING RIGHT-OF-WAY
TT TT TT TT	TEMPORARY EASEMENT
▩	RIP RAP
—□—□—□—	PERIMETER EROSION BARRIER
▦	SEEDING (SEE DETAIL)

SEEDING DETAIL

PLOT DATE = Tue Mar 29 14:52:39 2005
FILE NAME = c:\projects\p210703\d10703er.dgn
PLOT SCALE = 50.0000 ' / IN.
REFERENCE = REF

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT.
HORIZ.
DATE

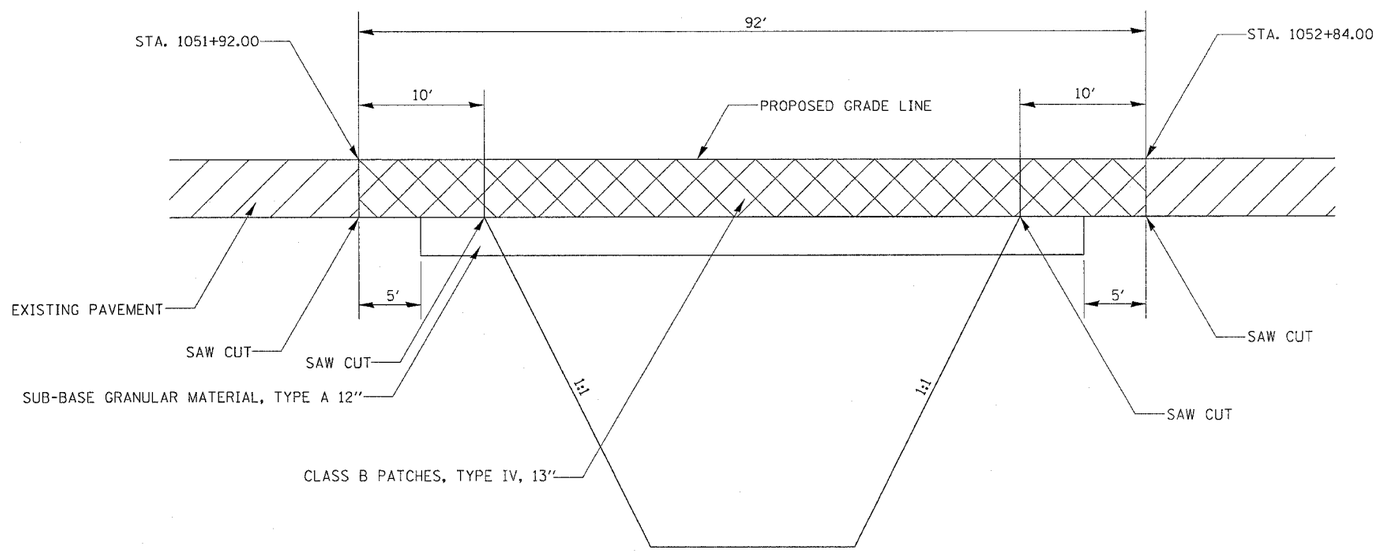
DRAWN BY
CHECKED BY

EROSION CONTROL, SEEDING, & R.O.W. DETAILS

CONTRACT NO. 64954

F.A. P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	13
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PATCH DETAILS



PLOT DATE = Tue Mar 29 14:52:06 2005
FILE NAME = c:\projects\c2107703\d107703sv.dgn
PLOT SCALE = 50.0000 ' / IN.
USER NAME = gprf.jl

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

PATCH DETAILS

SOIL BORING LOGS

CONTRACT NO. 64954

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	14
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 6/18/01

ROUTE IL 78 DESCRIPTION SLT-92-001-02 Slope failure on IL 78, .4 m. N. of Canyon Road LOGGED BY C. Jenkins

SECTION LOCATION Rush Twp. - SE, SEC. 1, TWP. 28N, RNG. 4E

COUNTY JoDaviess DRILLING METHOD Hollow Stem Auger HAMMER TYPE Diedrich Automatic

STRUCT. NO.
Station 289 + 74

BORING NO. B-1
Station 289 + 85
Offset 11.00ft Lt CL
Ground Surface Elev. 100.2 ft

Surface Water Elev. ft
Stream Bed Elev. 85.0 ft

Groundwater Elev.:
First Encounter None ft
Upon Completion None ft
After ___ Hrs. ft

Description	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt				
MEDIUM brown/tan SILTY LOAM			0.6 P	16
98.20				
STIFF tan/gray SILTY CLAY		2 / 3 / 4	1.9 S	23
96.20				
Same as above	-5	0 / 3 / 2	1.4 B	25
93.20				
MEDIUM tan/gray SILTY CLAY with GRAVEL		5 / 4 / 4	0.9 P	24
91.20	-10			
MEDIUM tan/gray SILTY CLAY with GRAVEL and SAND lenses		2 / 3 / 4	0.8 S	24
88.70				
MEDIUM gray/green CLAY		2 / 3 / 5	0.8 B	24
85.70	-15			
VERY STIFF black SILTY LOAM		2 / 3 / 5	2.3 S	26
83.20				
MEDIUM tan dirty weathered LIMESTONE		10 / 7 / 6		
81.20	-20			
VERY DENSE yellow weathered LIMESTONE		53 / 100/12" / PEN		
78.20				
End of Boring	-25			
	-30			
	-35			
	-40			

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)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

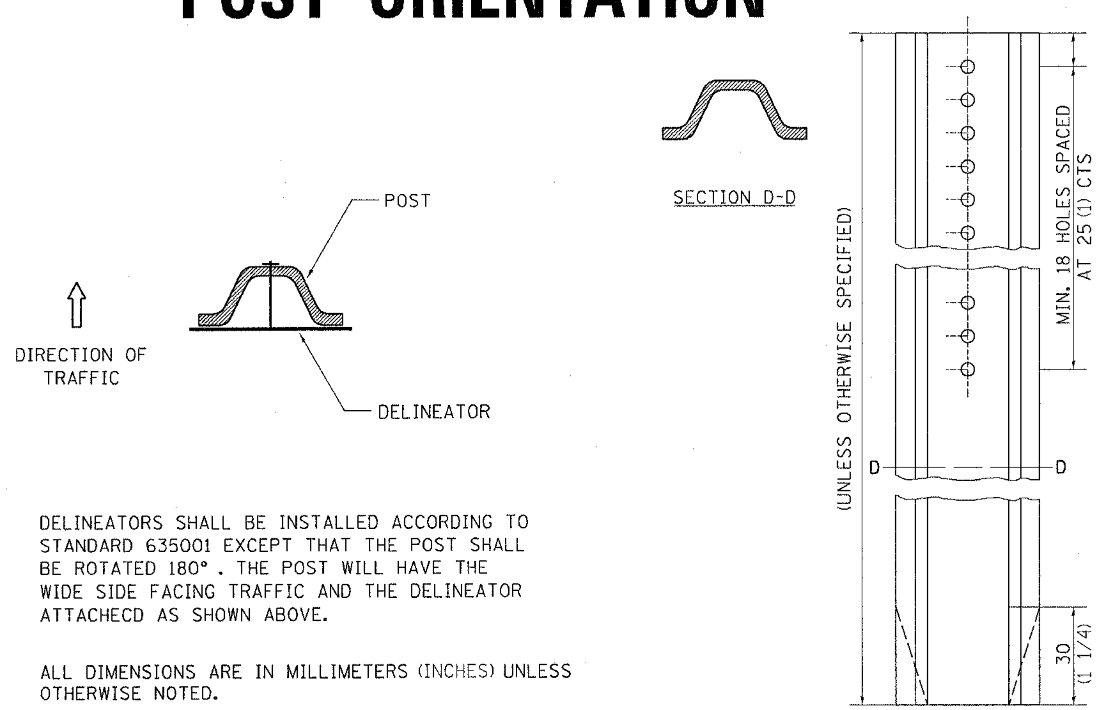
SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

SOIL BORING LOGS

PLOT DATE = Tue Mar 29 14:53:11 2005
FILE NAME = c:\projects\c2187203\d18720310logs.dgn
PLOT SCALE = 50.0000 ' / IN.
REFERENCE = REF

F.A.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	15
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DELINEATOR AND POST ORIENTATION



DELINEATORS SHALL BE INSTALLED ACCORDING TO STANDARD 635001 EXCEPT THAT THE POST SHALL BE ROTATED 180°. THE POST WILL HAVE THE WIDE SIDE FACING TRAFFIC AND THE DELINEATOR ATTACHECD AS SHOWN ABOVE.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

DELINEATOR AND POST ORIENTATION 37.4

REVISED 1-31-00

TREE REPLACEMENT SCHEDULE

SCIENTIFIC NAME	COMMON NAME	SIZE	UNIT	LOCATION	QUANTITY
TREE, QUERCUS BI COLOR	SWAMP WHITE OAK	1 3/4"	EACH	•	4

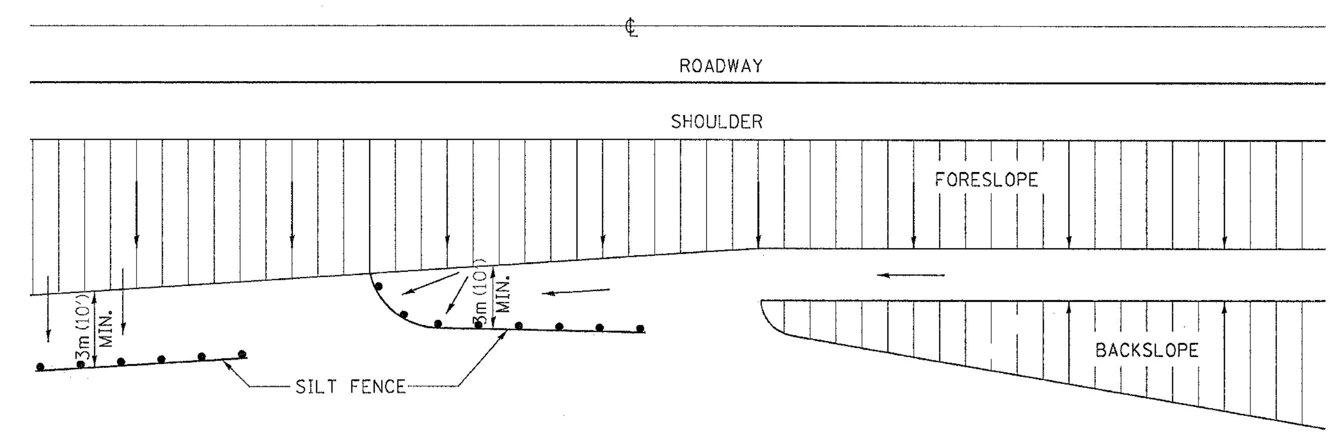
• LOCATION TO BE DETERMINED BY D-2 LANDSCAPE ENGINEER. PHONE (815)-284-5404

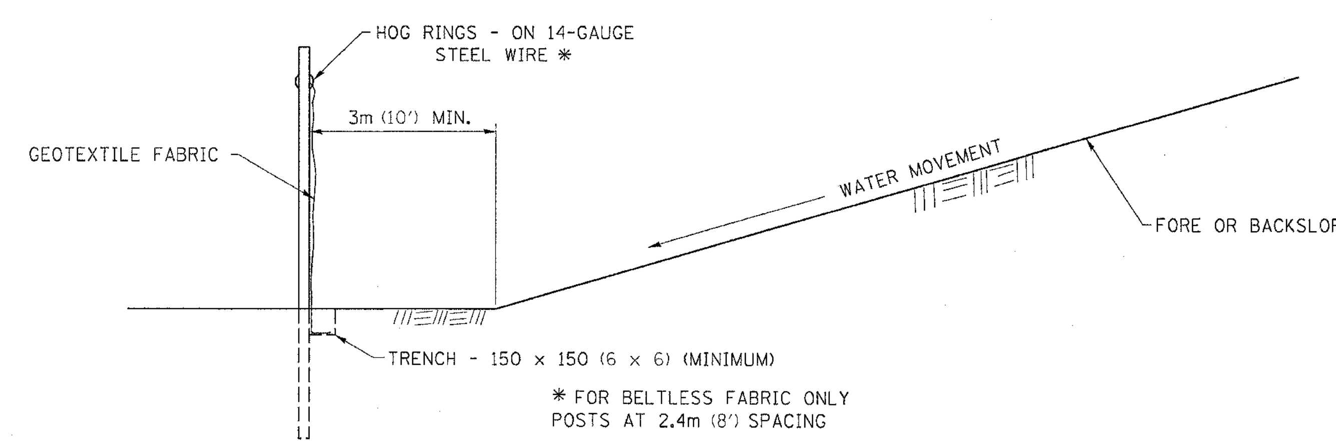
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

TREE REPLACEMENT SCHEDULE 90.4

REVISED 5-15-91

EROSION CONTROL DETAILS FOR SILT FENCE





DETAILS OF SILT FENCE

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

EROSION CONTROL DETAILS FOR SILT FENCE 29.2

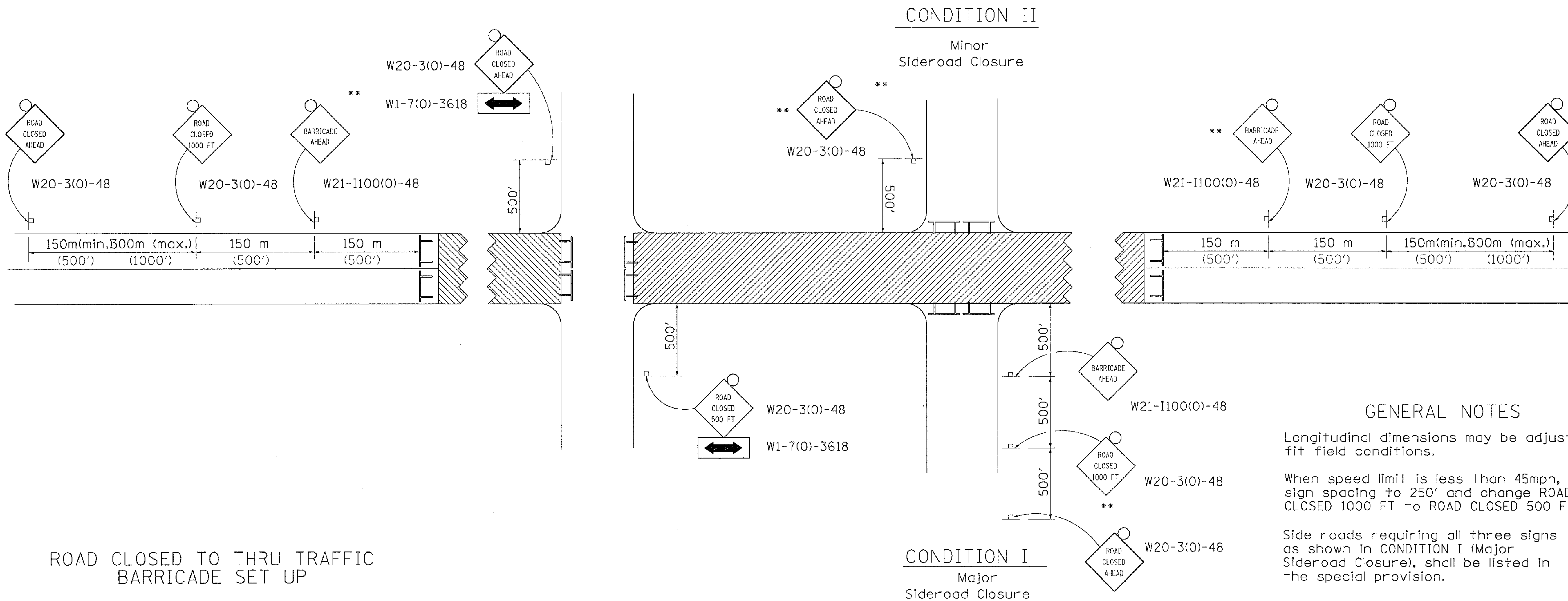
REVISED 10-22-01

PLOT DATE = Tue Mar 29 14:52:08 2005
FILE NAME = c:\projects\p2107703\d10703cvr.dgn
PLOT SCALE = 50.0000 ' / IN.
REFERENCE = REF

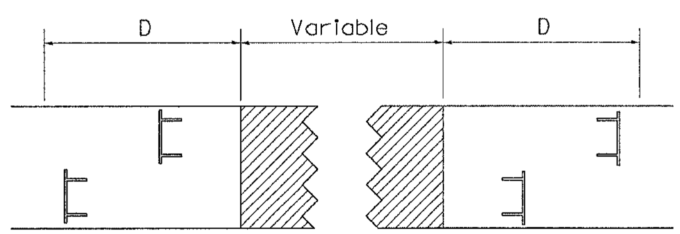
CONTRACT NO. 64954

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	16
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC CONTROL FOR ROAD CLOSURE



ROAD CLOSED TO THRU TRAFFIC BARRICADE SET UP



Type III Barricades and R11-4-4830 signs shall be as shown in "Road Closed To All Thru Traffic" detail on Highway Standard 702001. If the distance "D" exceeds 600 m (2000') an additional set of barricades and R11-4-4830 shall be placed at each end of the work area.

SYMBOLS

- Work area
- Type III Barricade with Flashers
- Sign with flashing light

GENERAL NOTES

Longitudinal dimensions may be adjusted to fit field conditions.

When speed limit is less than 45mph, change sign spacing to 250' and change ROAD CLOSED 1000 FT to ROAD CLOSED 500 FT.

Side roads requiring all three signs as shown in CONDITION I (Major Sideroad Closure), shall be listed in the special provision.

** Where local access is to be maintained, barricades are to be set up as shown in Road Closed to thru traffic.

Type III Barricades and R11-2-4830 signs shall be as shown in "Road Closed To All Traffic" detail on Highway Standard 702001.

All dimensions are in millimeters (inches) unless otherwise shown.

TYPICAL APPLICATION FOR ROAD CLOSURE

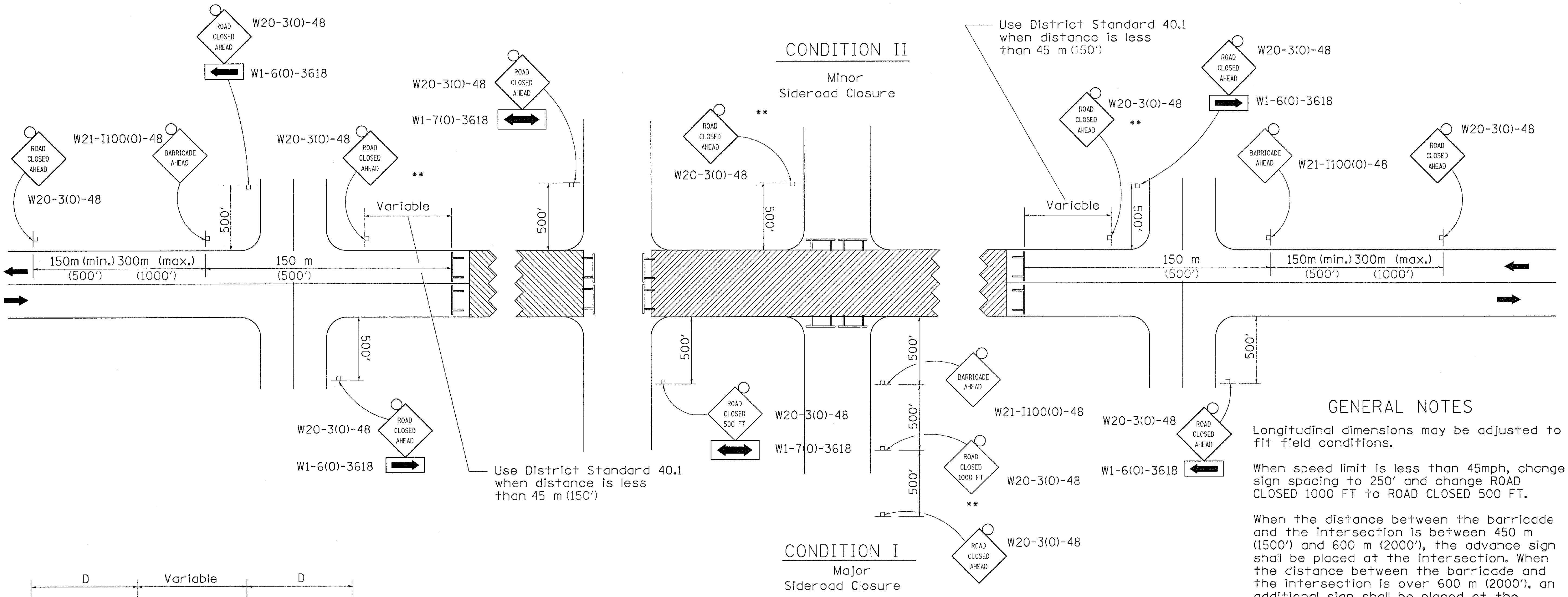
PLOT DATE = Tue Mar 29 14:52:05 2005
FILE NAME = c:\projects\p2107703\d107703cvr.dgn
PLOT SCALE = 50.0000 ' / IN.
REFERENCE = REF

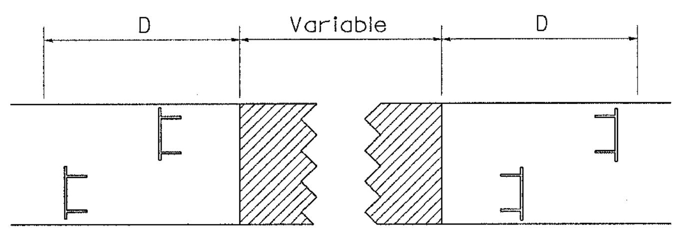
REVISED 10-20-04

CONTRACT NO. 64954

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC CONTROL FOR ROAD CLOSURE





Type III Barricades and R11-4-4830 signs shall be as shown in "Road Closed To All Thru Traffic" detail on Highway Standard 702001. If the distance "D" exceeds 600 m (2000') an additional set of barricades and R11-4-4830 shall be placed at each end of the work area.

SYMBOLS

- Work area
- Type III Barricade with Flashers
- Sign with flashing light

All dimensions are in millimeters (inches) unless otherwise shown.

GENERAL NOTES

Longitudinal dimensions may be adjusted to fit field conditions.

When speed limit is less than 45mph, change sign spacing to 250' and change ROAD CLOSED 1000 FT to ROAD CLOSED 500 FT.

When the distance between the barricade and the intersection is between 450 m (1500') and 600 m (2000'), the advance sign shall be placed at the intersection. When the distance between the barricade and the intersection is over 600 m (2000'), an additional sign shall be placed at the intersection. The additional sign shall give the distance to the barricade in miles or fractions of a mile.

Side roads requiring all three signs as shown in CONDITION I (Major Sideroad Closure), shall be listed in the special provision.

** Where local access is to be maintained, barricades are to be set up as shown above in Road Closed to thru traffic.

Type III Barricades and R11-2-4830 signs shall be as shown in "Road Closed To All Traffic" detail on Highway Standard 702001.

TYPICAL APPLICATION
FOR ROAD CLOSURE
WITH SIDE ROAD WITHIN
150' OF CLOSURE

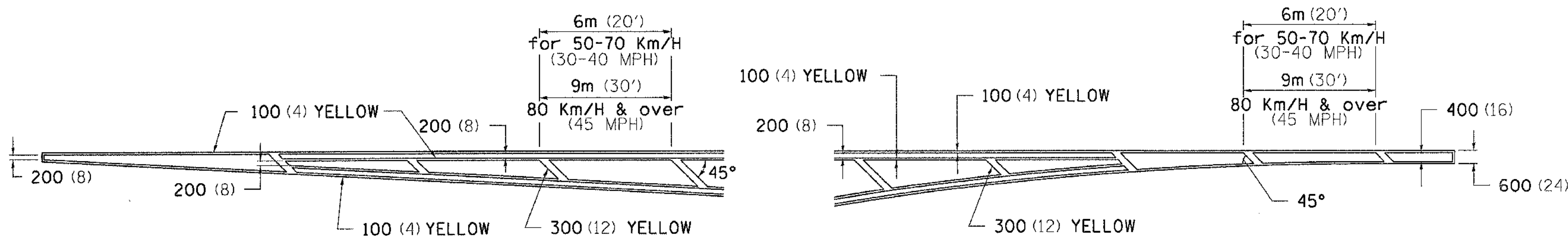
PLOT DATE = Tue Mar 29 14:52:05 2005
FILE NAME = c:\projects\p2107703\d107703cvr.dgn
PLOT SCALE = 50.0000 ' / IN.
REFERENCE = REF

CONTRACT NO. 64954

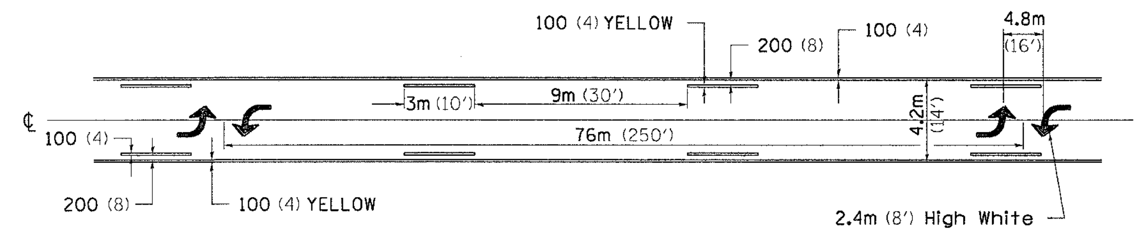
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	18
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TYPICAL PAVEMENT MARKINGS

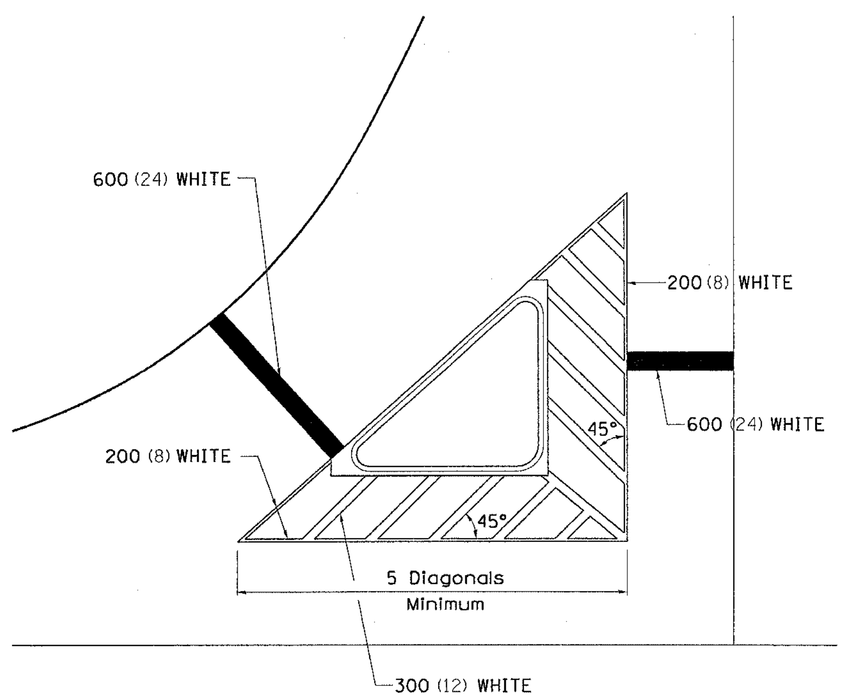
TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



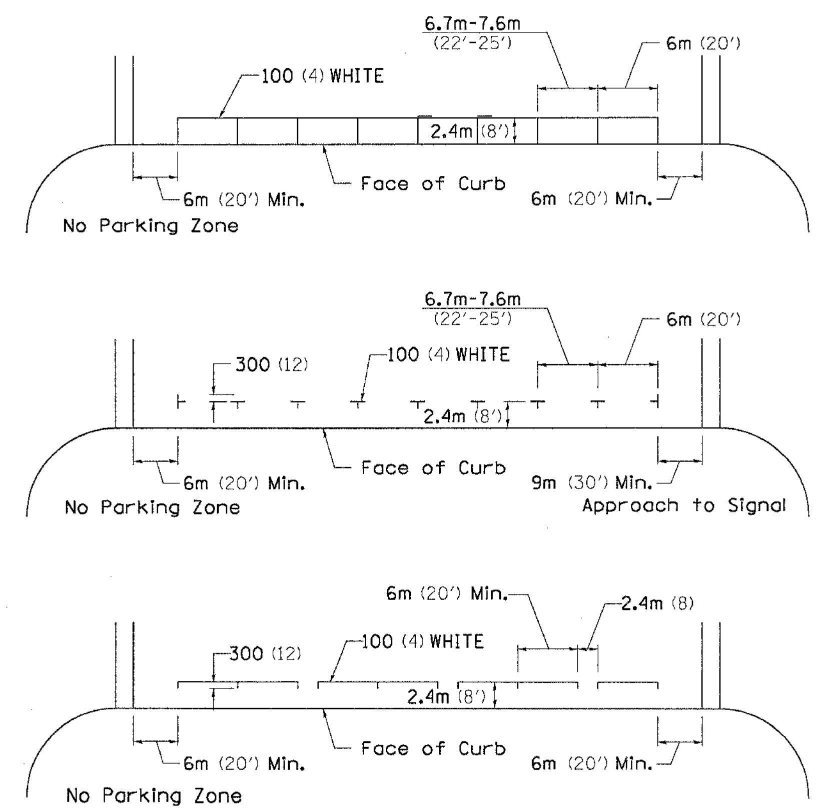
MEDIAN PAVEMENT MARKING



TYPICAL ISLAND OFFSET SHOULDER WIDTH



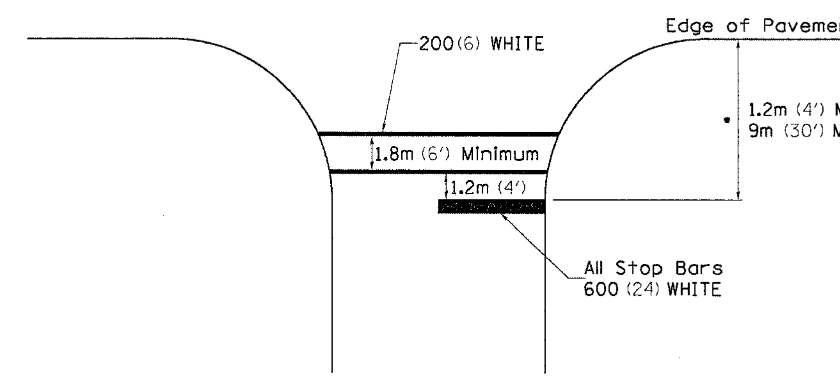
TYPICAL PARKING SPACING



•• ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

STANDARD CROSSWALK MARKING

See Schedules for Locations



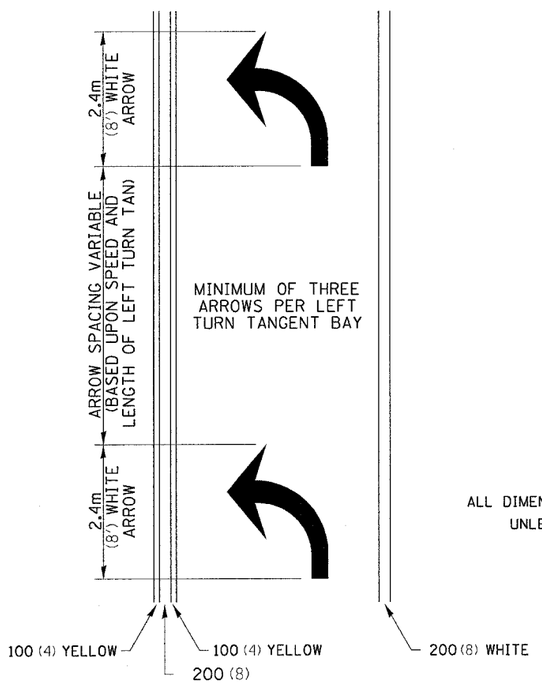
• Distance to the nearest edge of the intersecting roadway in the absence of a marked crosswalk.

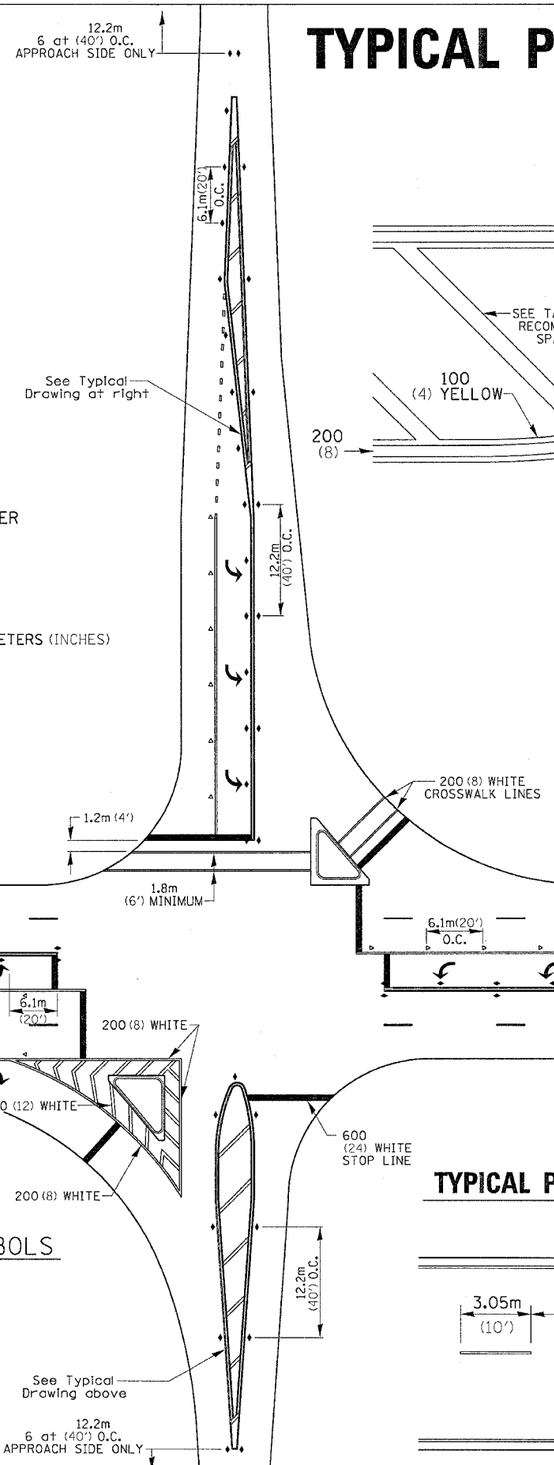
CONTRACT NO. 64954

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	19
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TYPICAL PAVEMENT MARKINGS

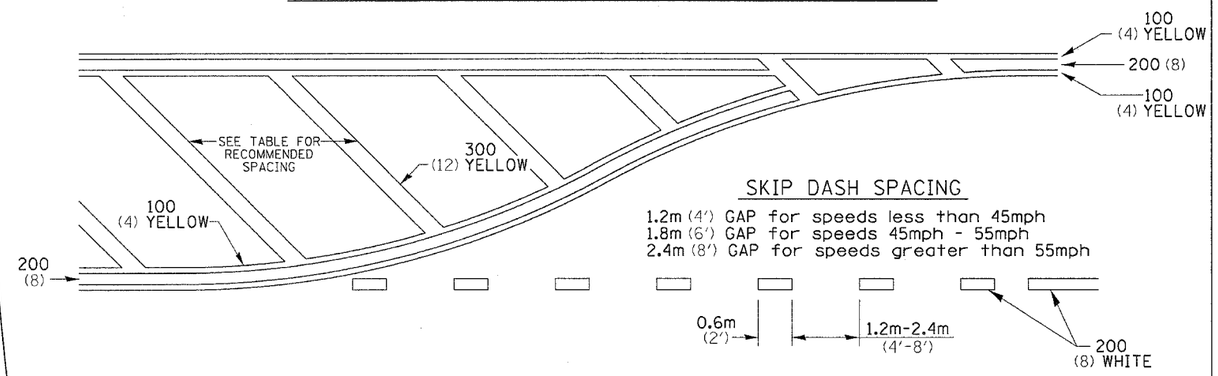
ARROW LAYOUT





ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

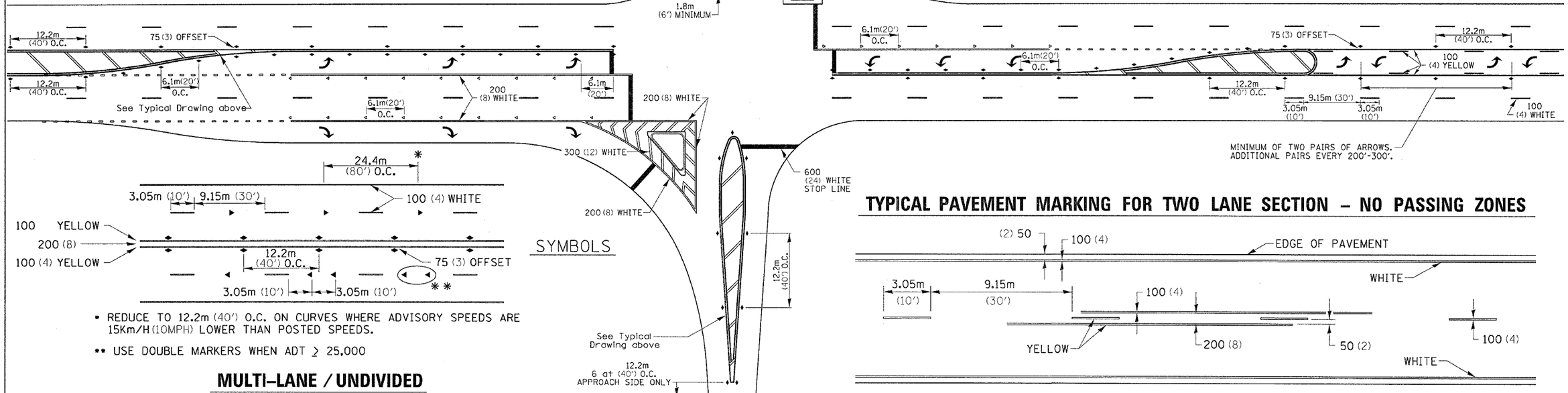
TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



RECOMMENDED SPACING BETWEEN DIAGONALS (IN FEET)

Speed Limit Range	Continuous Median Area	Intersection Channelization	Objects (Islands)
less than 50Km/H (30MPH)	15.3m (50')	4.53m (15')	3.05m (10')
50-60Km/H (30-40MPH)	22.9m (75')	6.1m (20')	4.53m (15')
70Km/H (45MPH) & over	22.9m (75')	9.05m (30')	6.1m (20')

NOTE: if the spacing recommended in the Table does not permit at least five diagonal lines in the area being marked, the spacing from the next lowest speed range should be used. The recommended spacing is measured parallel to the pavement center line.



* REDUCE TO 12.2m (40') O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 15Km/H (10MPH) LOWER THAN POSTED SPEEDS.

** USE DOUBLE MARKERS WHEN ADT ≥ 25,000

MULTI-LANE / UNDIVIDED

TYPICAL PAVEMENT MARKING FOR TWO LANE SECTION - NO PASSING ZONES

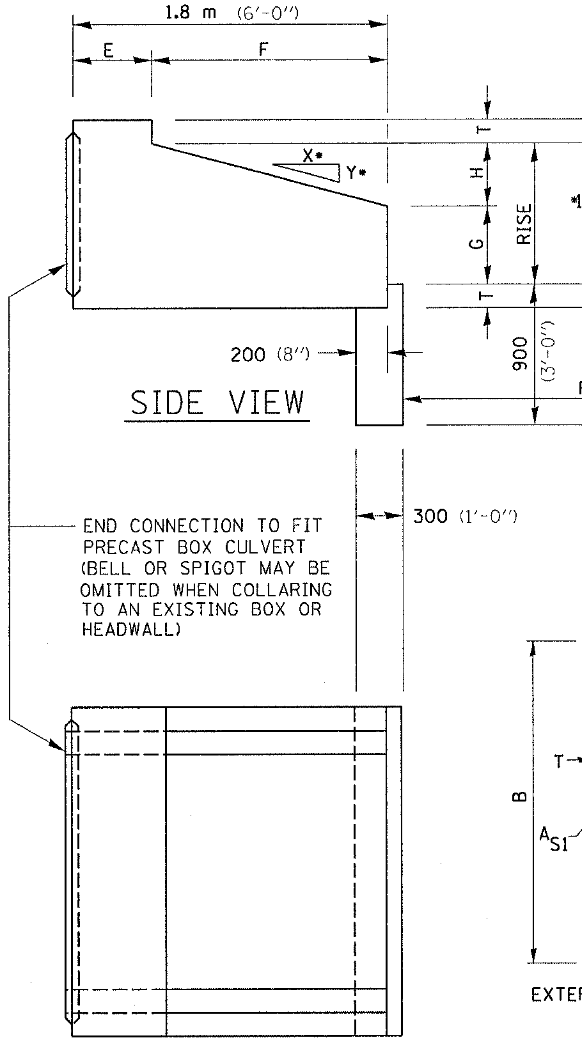
PLOT DATE = Tue Mar 29 14:52:04 2005
FILE NAME = c:\projects\k2107703\d107705sm-dgn
PLOT SCALE = 50.0000 ' / IN.
REFERENCE = REF

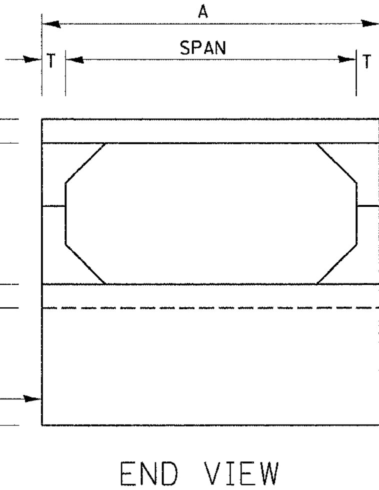
REVISED 10-15-04

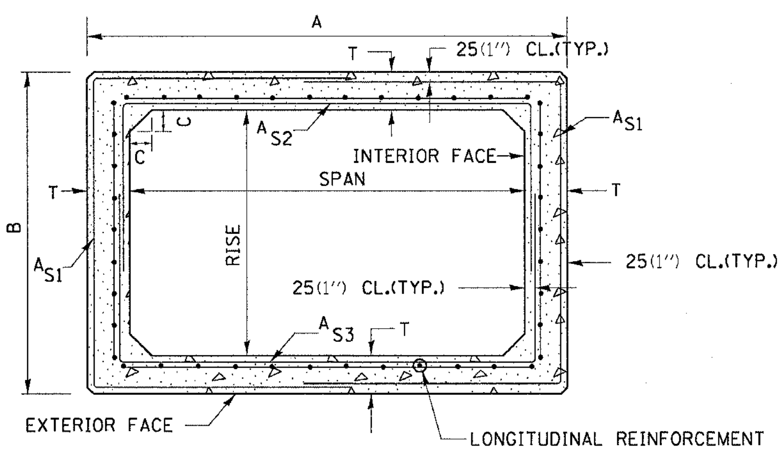
CONTRACT NO. 64954

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	JO DAVIESS	24	20
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DETAIL OF PRECAST CONCRETE BOX CULVERTS AND END SECTIONS







CROSS-SECTION

GENERAL NOTES

PRECAST CONCRETE BOX CULVERTS AND PRECAST CONCRETE BOX CULVERT END SECTIONS

THIS WORK CONSISTS OF FURNISHING AND INSTALLING PRECAST BOX CULVERTS AND BOX CULVERT END SECTIONS AS SHOWN ON THE PLANS AND SPECIFIED HEREIN.

IF THE EARTH COVER IS 600 (2 ft) OR MORE, THE PRECAST CONCRETE BOX CULVERT SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C789 EXCEPT THAT THE AGGREGATE SHALL CONFORM TO THE REQUIREMENTS OF ARTICLES 1003.02 AND 1004.02 OF THE STANDARD SPECIFICATIONS, WITH THE EXCEPTION OF A GRADATION.

IF THE EARTH COVER IS LESS THAN 600 (2 ft), THE PRECAST BOX CULVERT BARREL SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C850 AND THE END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C789. WITH THE EXCEPTION OF GRADATION, THE AGGREGATE SHALL CONFORM TO THE REQUIREMENTS OF ARTICLES 1003.02 AND 1004.02 OF THE STANDARD SPECIFICATIONS.

ALL APPLICABLE REQUIREMENTS OF ARTICLE 540 OF THE STANDARD SPECIFICATIONS.

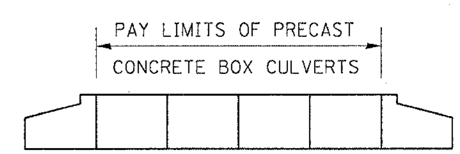
THE EXCAVATION AND BACKFILLING FOR PRECAST CONCRETE BOX CULVERT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 502 OF THE STANDARD SPECIFICATIONS EXCEPT A LAYER OF POROUS GRANULAR BACKFILL, AT LEAST 150 (6") IN THICKNESS, SHALL BE PLACED BELOW THE ELEVATION OF THE BOTTOM OF THE BOX. THE POROUS GRANULAR BACKFILL SHALL BE PLACED TO EXTEND AT LEAST 600 (2 ft) EACH SIDE OF THE BOX. THE PRECAST CONCRETE BOX CULVERT SHALL BE LAID IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF ARTICLE 542.04 (d) OF THE STANDARD SPECIFICATIONS

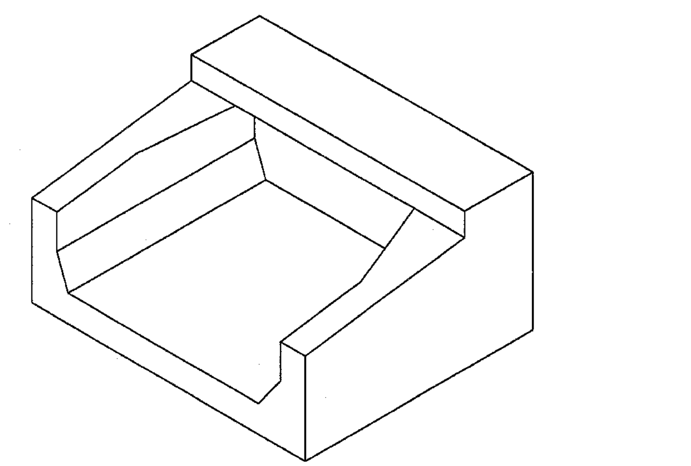
SHOP PLANS FOR THE PRECAST CONCRETE BOX CULVERT SECTIONS AND THE END SECTIONS SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 504.04 (a) OF THE STANDARD SPECIFICATIONS.

THE PRECAST CONCRETE BOX CULVERT EXCLUDING END SECTIONS WILL BE MEASURED ON A METER (LINEAL FOOT) BASIC. THE PRECAST BOX CULVERT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER METER (LINEAL FOOT) FOR PRECAST CONCRETE BOX CULVERT, OF THE SIZE SPECIFIED, AND INCLUDES POROUS GRADULAR BACKFILL EXCAVATION EXCEPT EXCAVATION OF ROCK AND/OR UNSTABLE OR UNSUITABLE MATERIAL BELOW BEDDING GRADE

THE PRECAST CONCRETE BOX CULVERT END SECTION WILL BE MEASURED ON AN EACH BASIS. THE END SECTIONS WILL BE PAID FOR AT THE CONCTRACT UNIT PRICE EACH FOR BOX CULVERT END SECTIONS, OF THE CULVERT NUMBER SPECIFIED, AND INCLUDE EXCAVATION, TOEWALL AND COLLARS.

• ALL DIMENSIONS SHOULD BE VERIFIED WITH SUPPLIER.





ISOMETRIC VIEW

DIMENSIONS (FOR ASTM C789) *

SPAN X RISE (ft) meter	T mm (INCHES)	A mm (FT.-IN.)	B mm (FT.-IN.)	C mm (INCHES)	E mm (FT.-IN.)	F mm (FT.-IN.)	G mm (FT.-IN.)	H mm (FT.-IN.)	SLOPE (X : Y)
0.6 x 0.6 (2'x2')	100 (4)	800 (2-8)	800 (2-8)	100 (4)	900 (3-0)	900 (3-0)	300 (1-0)	300 (1-0)	1:3
0.9 x 0.6 (3'x2')	100 (4)	1100 (3-8)	800 (2-8)	100 (4)	900 (3-0)	900 (3-0)	300 (1-0)	300 (1-0)	1:3
0.9 x 0.75 (3'x2.5')	100 (4)	1100 (3-8)	950 (3-2)	100 (4)	900 (3-0)	900 (3-0)	375 (1-3)	375 (1-3)	1:3
0.9 x 0.9 (3'x3')	100 (4)	1100 (3-8)	1100 (3-8)	100 (4)	600 (2-0)	1200 (4-0)	500 (1-8)	400 (1-4)	1:3
1.2 x 0.6 (4'x2')	125 (5)	1450 (4-10)	850 (2-10)	125 (5)	900 (3-0)	900 (3-0)	300 (1-0)	300 (1-0)	1:3
1.2 x 0.9 (4'x3')	125 (5)	1450 (4-10)	1150 (3-10)	125 (5)	600 (2-0)	1200 (4-0)	500 (1-8)	400 (1-4)	1:3
1.2 x 1.2 (4'x4')	125 (5)	1450 (4-10)	1450 (4-10)	125 (5)	600 (2-0)	1200 (4-0)	600 (2-0)	600 (2-0)	1:2
1.5 x 0.6 (5'x2')	150 (6)	1800 (6-0)	900 (3-0)	150 (6)	900 (3-0)	900 (3-0)	300 (1-0)	300 (1-0)	1:3
1.5 x 0.9 (5'x3')	150 (6)	1800 (6-0)	1200 (4-0)	150 (6)	600 (2-0)	1200 (4-0)	500 (1-8)	400 (1-4)	1:3
1.5 x 1.2 (5'x4')	150 (6)	1800 (6-0)	1500 (5-0)	150 (6)	600 (2-0)	1200 (4-0)	600 (2-0)	600 (2-0)	1:2
1.5 x 1.5 (5'x5')	150 (6)	1800 (6-0)	1800 (6-0)	150 (6)	600 (2-0)	1200 (4-0)	900 (3-0)	600 (2-0)	1:3
1.8 x 0.6 (6'x2')	175 (7)	2150 (7-2)	950 (3-2)	175 (7)	900 (3-0)	900 (3-0)	300 (1-0)	300 (1-0)	1:3
1.8 x 0.9 (6'x3')	175 (7)	2150 (7-2)	1250 (4-2)	175 (7)	600 (2-0)	1200 (4-0)	500 (1-8)	400 (1-4)	1:3
1.8 x 1.2 (6'x4')	175 (7)	2150 (7-2)	1550 (5-2)	175 (7)	600 (2-0)	1200 (4-0)	600 (2-0)	600 (2-0)	1:2
1.8 x 1.5 (6'x5')	175 (7)	2150 (7-2)	1850 (6-2)	175 (7)	600 (2-0)	1200 (4-0)	900 (3-0)	600 (2-0)	1:2
1.8 x 1.8 (6'x6')	175 (7)	2150 (7-2)	2150 (7-2)	175 (7)	600 (2-0)	1200 (4-0)	1200 (4-0)	600 (2-0)	1:2

SPAN X RISE (ft) meter	T mm (INCHES)	A mm (FT.-IN.)	B mm (FT.-IN.)	C mm (INCHES)	E mm (FT.-IN.)	F mm (FT.-IN.)	G mm (FT.-IN.)	H mm (FT.-IN.)	SLOPE (X : Y)
2.1 x 0.9 (7'X3')	200 (8)	2500 (8-4)	1300 (4-4)	200 (8)	600 (2-0)	1200 (4-0)	300 (1-0)	600 (2-0)	1:2
2.1 x 1.2 (7'x4')	200 (8)	2500 (8-4)	1600 (5-4)	200 (8)	600 (2-0)	1200 (4-0)	600 (2-0)	600 (2-0)	1:2
2.1 x 1.5 (7'x5')	200 (8)	2500 (8-4)	1900 (6-4)	200 (8)	600 (2-0)	1200 (4-0)	900 (3-0)	600 (2-0)	1:2
2.1 x 1.8 (7'x6')	200 (8)	2500 (8-4)	2200 (7-4)	200 (8)	600 (2-0)	1200 (4-0)	1200 (4-0)	600 (2-0)	1:2
2.1 x 2.1 (7'x7')	200 (8)	2500 (8-4)	2500 (8-4)	200 (8)	600 (2-0)	1200 (4-0)	1500 (5-0)	600 (2-0)	1:2
2.4 x 0.9 (8'x3')	200 (8)	2800 (9-4)	1300 (4-4)	200 (8)	600 (2-0)	1200 (4-0)	300 (1-0)	600 (2-0)	1:2
2.4 x 1.2 (8'x4')	200 (8)	2800 (9-4)	1600 (5-4)	200 (8)	600 (2-0)	1200 (4-0)	600 (2-0)	600 (2-0)	1:2
2.4 x 1.5 (8'x5')	200 (8)	2800 (9-4)	1900 (6-4)	200 (8)	600 (2-0)	1200 (4-0)	900 (3-0)	600 (2-0)	1:2
2.4 x 1.8 (8'x6')	200 (8)	2800 (9-4)	2200 (7-4)	200 (8)	600 (2-0)	1200 (4-0)	1200 (4-0)	600 (2-0)	1:2
2.4 x 2.1 (8'x7')	200 (8)	2800 (9-4)	2500 (8-4)	200 (8)	600 (2-0)	1200 (4-0)	1500 (5-0)	600 (2-0)	1:2
2.4 x 2.4 (8'x8')	200 (8)	2800 (9-4)	2800 (9-4)	200 (8)	600 (2-0)	1200 (4-0)	1800 (6-0)	600 (2-0)	1:2
2.7 x 0.9 (9'x3')	225 (9)	3150 (10-6)	1350 (4-6)	225 (9)	600 (2-0)	1200 (4-0)	300 (1-0)	600 (2-0)	1:2
2.7 x 1.2 (9'x4')	225 (9)	3150 (10-6)	1650 (5-6)	225 (9)	600 (2-0)	1200 (4-0)	600 (2-0)	600 (2-0)	1:2
2.7 x 1.5 (9'x5')	225 (9)	3150 (10-6)	1950 (6-6)	225 (9)	600 (2-0)	1200 (4-0)	900 (3-0)	600 (2-0)	1:2
2.7 x 1.8 (9'x6')	225 (9)	3150 (10-6)	2250 (7-6)	225 (9)	600 (2-0)	1200 (4-0)	1200 (4-0)	600 (2-0)	1:2
2.7 x 2.1 (9'x7')	225 (9)	3150 (10-6)	2600 (8-6)	225 (9)	600 (2-0)	1200 (4-0)	1500 (5-0)	600 (2-0)	1:2

SPAN X RISE (ft) meter	T mm (INCHES)	A mm (FT.-IN.)	B mm (FT.-IN.)	C mm (INCHES)	E mm (FT.-IN.)	F mm (FT.-IN.)	G mm (FT.-IN.)	H mm (FT.-IN.)	SLOPE (X : Y)
2.7 x 2.4 (9'x8')	225 (9)	3150 (10-6)	2900 (9-6)	225 (9)	600 (2-0)	1200 (4-0)	1800 (6-0)	600 (2-0)	1:2
2.7 x 2.7 (9'x9')	225 (9)	3150 (10-6)	3150 (10-6)	225 (9)	600 (2-0)	1200 (4-0)	2100 (7-0)	600 (2-0)	1:2
3.0 x 0.9 (10'x3')	255 (10)	3550 (11-8)	1425 (4-8)	250 (10)	600 (2-0)	1200 (4-0)	500 (1-8)	400 (1-4)	1:3
3.0 x 1.2 (10'x4')	255 (10)	3550 (11-8)	1725 (5-8)	250 (10)	600 (2-0)	1200 (4-0)	300 (1-0)	600 (2-0)	1:2
3.0 x 1.5 (10'x5')	255 (10)	3550 (11-8)	2025 (6-8)	250 (10)	600 (2-0)	1200 (4-0)	600 (2-0)	600 (2-0)	1:2
3.0 x 1.8 (10'x6')	255 (10)	3550 (11-8)	2350 (7-8)	250 (10)	600 (2-0)	1200 (4-0)	900 (3-0)	600 (2-0)	1:2
3.0 x 2.1 (10'x7')	255 (10)	3550 (11-8)	2650 (8-8)	250 (10)	600 (2-0)	1200 (4-0)	1500 (5-0)	600 (2-0)	1:2
3.0 x 2.4 (10'x8')	255 (10)	3550 (11-8)	2950 (9-8)	250 (10)	600 (2-0)	1200 (4-0)	1800 (6-0)	600 (2-0)	1:2
3.0 x 2.7 (10'x9')	255 (10)	3550 (11-8)	3250 (10-8)	250 (10)	600 (2-0)	1200 (4-0)	2100 (7-0)	600 (2-0)	1:2
3.0 x 3.0 (10'x10')	255 (10)	3550 (11-8)	3550 (11-8)	250 (10)	600 (2-0)	1200 (4-0)	2400 (8-0)	600 (2-0)	1:2
3.3 x 0.9 (11'x3')	280 (11)	3900 (12-10)	1475 (4-10)	275 (11)	600 (2-0)	1200 (4-0)	300 (1-0)	600 (2-0)	1:2
3.3 x 1.2 (11'x4')	280 (11)	3900 (12-10)	1775 (5-10)	275 (11)	600 (2-0)	1200 (4-0)	600 (2-0)	600 (2-0)	1:2
3.3 x 1.5 (11'x5')	280 (11)	3900 (12-10)	2075 (6-10)	275 (11)	600 (2-0)	1200 (4-0)	900 (3-0)	600 (2-0)	1:2
3.3 x 1.8 (11'x6')	280 (11)	3900 (12-10)	2400 (7-10)	275 (11)	600 (2-0)	1200 (4-0)	1200 (4-0)	600 (2-0)	1:2
3.3 x 2.1 (11'x7')	280 (11)	3900 (12-10)	2700 (8-10)	275 (11)	600 (2-0)	1200 (4-0)	1500 (5-0)	600 (2-0)	1:2
3.3 x 2.4 (11'x8')	280 (11)	3900 (12-10)	3000 (9-10)	275 (11)	600 (2-0)	1200 (4-0)	1800 (6-0)	600 (2-0)	1:2

SPAN X RISE (ft) meter	T mm (INCHES)	A mm (FT.-IN.)	B mm (FT.-IN.)	C mm (INCHES)	E mm (FT.-IN.)	F mm (FT.-IN.)	G mm (FT.-IN.)	H mm (FT.-IN.)	SLOPE (X : Y)
3.3 x 2.7 (11'x9')	280 (11)	3900 (12-10)	3300 (10-10)	275 (11)	600 (2-0)	1200 (4-0)	2100 (7-0)	600 (2-0)	1:2
3.3 x 3.0 (11'x10')	280 (11)	3900 (12-10)	3600 (11-10)	275 (11)	600 (2-0)	1200 (4-0)	2400 (8-0)	600 (2-0)	1:2
3.3 x 3.3 (11'x11')	280 (11)	3900 (12-10)	3900 (12-10)	275 (11)	600 (2-0)	1200 (4-0)	2700 (9-0)	600 (2-0)	1:2
3.6 x 0.9 (12'x3')	300 (12)	4250 (14-0)	1525 (5-0)	300 (1-0)	600 (2-0)	1200 (4-0)	300 (1-0)	600 (2-0)	1:2
3.6 x 1.2 (12'x4')	300 (12)	4250 (14-0)	1825 (6-0)	300 (1-0)	600 (2-0)	1200 (4-0)	600 (2-0)	600 (2-0)	1:2
3.6 x 1.5 (12'x5')	300 (12)	4250 (14-0)	2125 (7-0)	300 (1-0)	600 (2-0)	1200 (4-0)	900 (3-0)	600 (2-0)	1:2
3.6 x 1.8 (12'x6')	300 (12)	4250 (14-0)	2425 (8-0)	300 (1-0)	600 (2-0)	1200 (4-0)	1200 (4-0)	600 (2-0)	1:2
3.6 x 2.1 (12'x7')	300 (12)	4250 (14-0)	2725 (9-0)	300 (1-0)	600 (2-0)	1200 (4-0)	1500 (5-0)	600 (2-0)	1:2
3.6 x 2.4 (12'x8')	300 (12)	4250 (14-0)	3025 (10-0)	300 (1-0)	600 (2-0)	1200 (4-0)	1800 (6-0)	600 (2-0)	1:2

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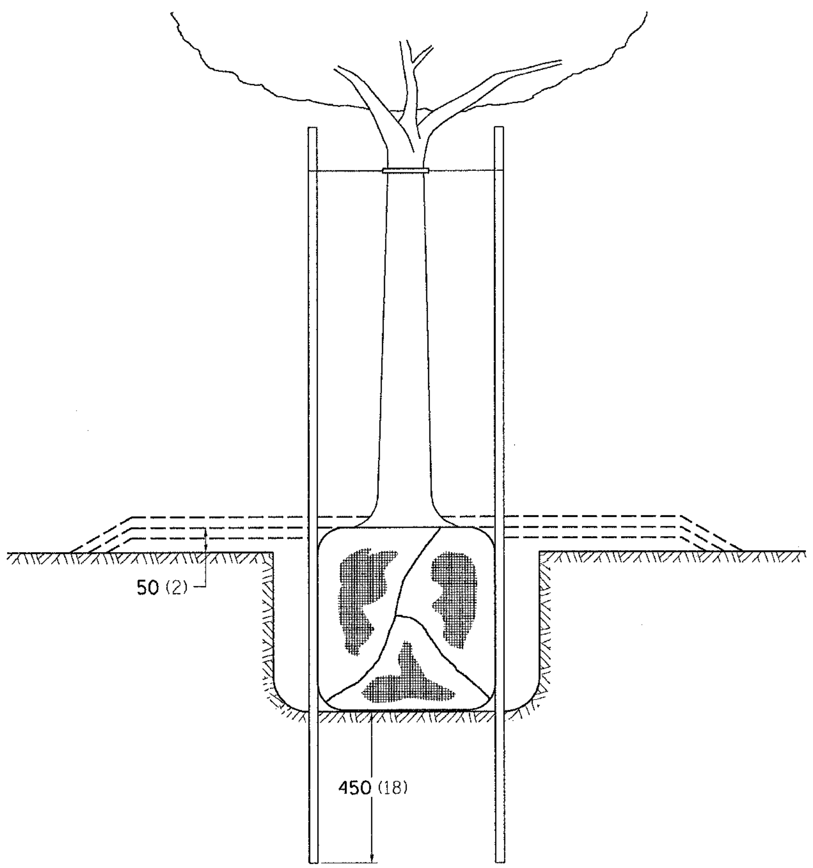
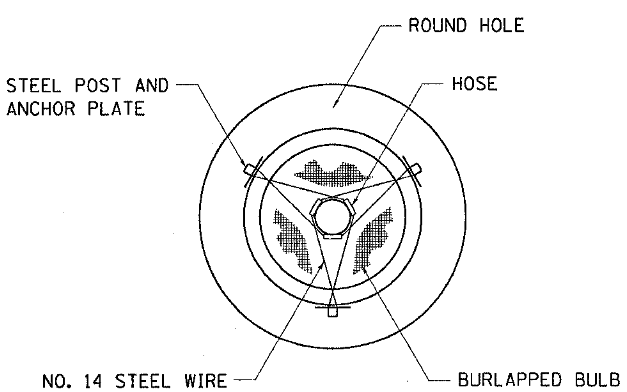
DETAILS OF PLANTING AND BRACING TREES

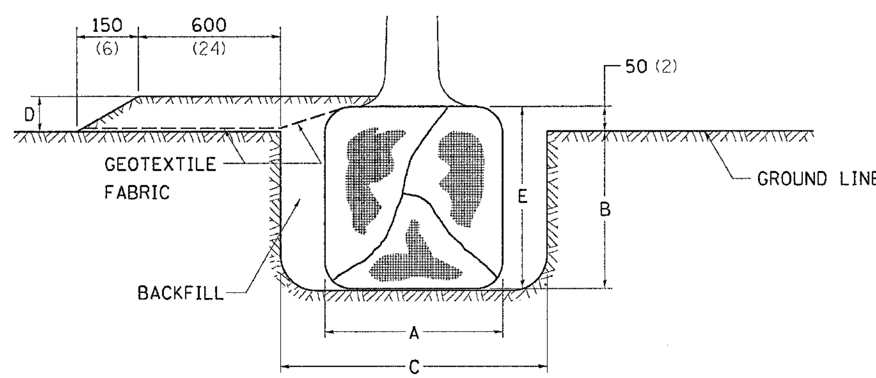
SMALL	A	B	C	D	E	F
TREE SIZE	DIAMETER OF BALL OR ROOT SYS.	DEPTH OF HOLE EXCAVATION	WIDTH OF HOLE EXCAVATION	THICKNESS OF MULCH COVER	DEPTH OF BALL OR ROOT SYS.	VOLUME OF MULCH COVER m^3 (CU. YDS.)
1.5-1.8m (5'-6')	400 (16)	250 (10)	750 (30)	100 (4)	300 (12)	0.41 (0.54)
1.5-1.8m (5'-6') BB	400 (16)	250 (10)	750 (30)	100 (4)	300 (12)	0.41 (0.54)
1.8-2.0m (6'-7') BB	450 (18)	300 (12)	750 (30)	100 (4)	350 (14)	0.41 (0.54)
2.0-2.4m (7'-8') BB	500 (20)	275 (11)	750 (30)	100 (4)	325 (13)	0.41 (0.54)
2.4-3.0m (8'-10') BB	600 (24)	350 (14)	900 (36)	100 (4)	400 (16)	0.47 (0.61)
3.0-3.6m (10'-12') BB	650 (26)	375 (15)	900 (36)	100 (4)	425 (17)	0.47 (0.61)

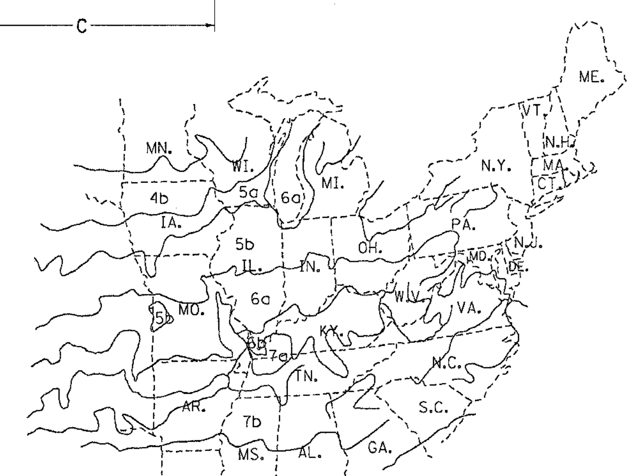
LARGE	A	B	C	D	E	F
TREE SIZE	DIAMETER OF BALL OR ROOT SYS.	DEPTH OF HOLE EXCAVATION	WIDTH OF HOLE EXCAVATION	THICKNESS OF MULCH COVER	DEPTH OF BALL OR ROOT SYS.	VOLUME OF MULCH COVER m^3 (CU. YDS.)
0-50 (0-2)	500 (20)	275 (11)	900 (36)	100 (4)	325 (13)	0.47 (0.61)
50-65 (2-2½)BB	600 (24)	350 (14)	1200 (48)	100 (4)	400 (16)	0.60 (0.78)
65-75 (2½-3)BB	700 (28)	425 (17)	1200 (48)	100 (4)	475 (19)	0.60 (0.78)
75-90 (3-3½) BB	800 (32)	425 (17)	1500 (60)	100 (4)	475 (19)	0.73 (0.96)
90-100 (3½-4) BB	900 (36)	500 (20)	1500 (60)	100 (4)	550 (22)	0.73 (0.96)
100-115 (4-4½) BB	1000 (40)	550 (22)	1800 (72)	100 (4)	600 (24)	0.89 (1.16)
115-125 (4½-5) BB	1100 (44)	600 (24)	1800 (72)	100 (4)	650 (26)	0.89 (1.16)
125-140 (5-5½) BB	1200 (48)	675 (27)	2100 (84)	100 (4)	725 (29)	1.06 (1.38)



TREES SMALLER THAN 115 (4½) IN DIAMETER

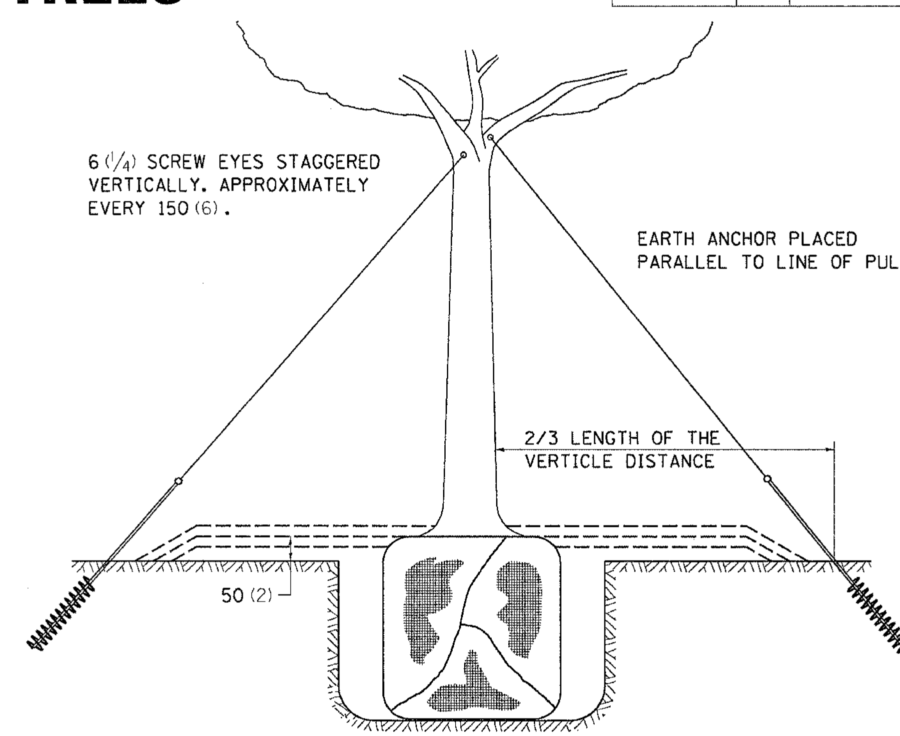




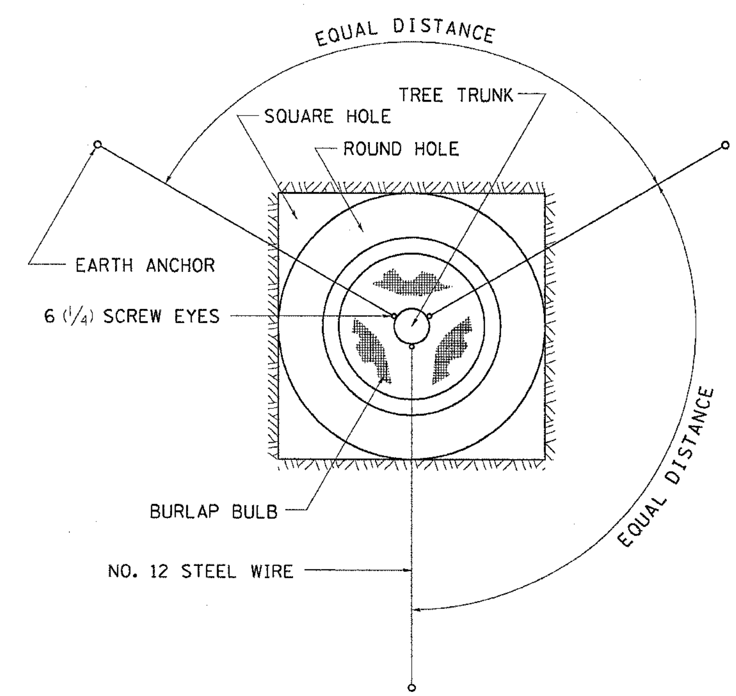


PLANT HARDINESS ZONE MAP

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
PUBLICATION NO. 814



TREES OVER 115 (4½) IN DIAMETER



ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

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PROJECT CONTACT: #PROJECT_CONTACT#
CLIENT: #CLIENT#
Tue Mar 29TIME8:48 2005
#FILE#

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	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

FINAL SURVEY		BY	DATE
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	AREAS		
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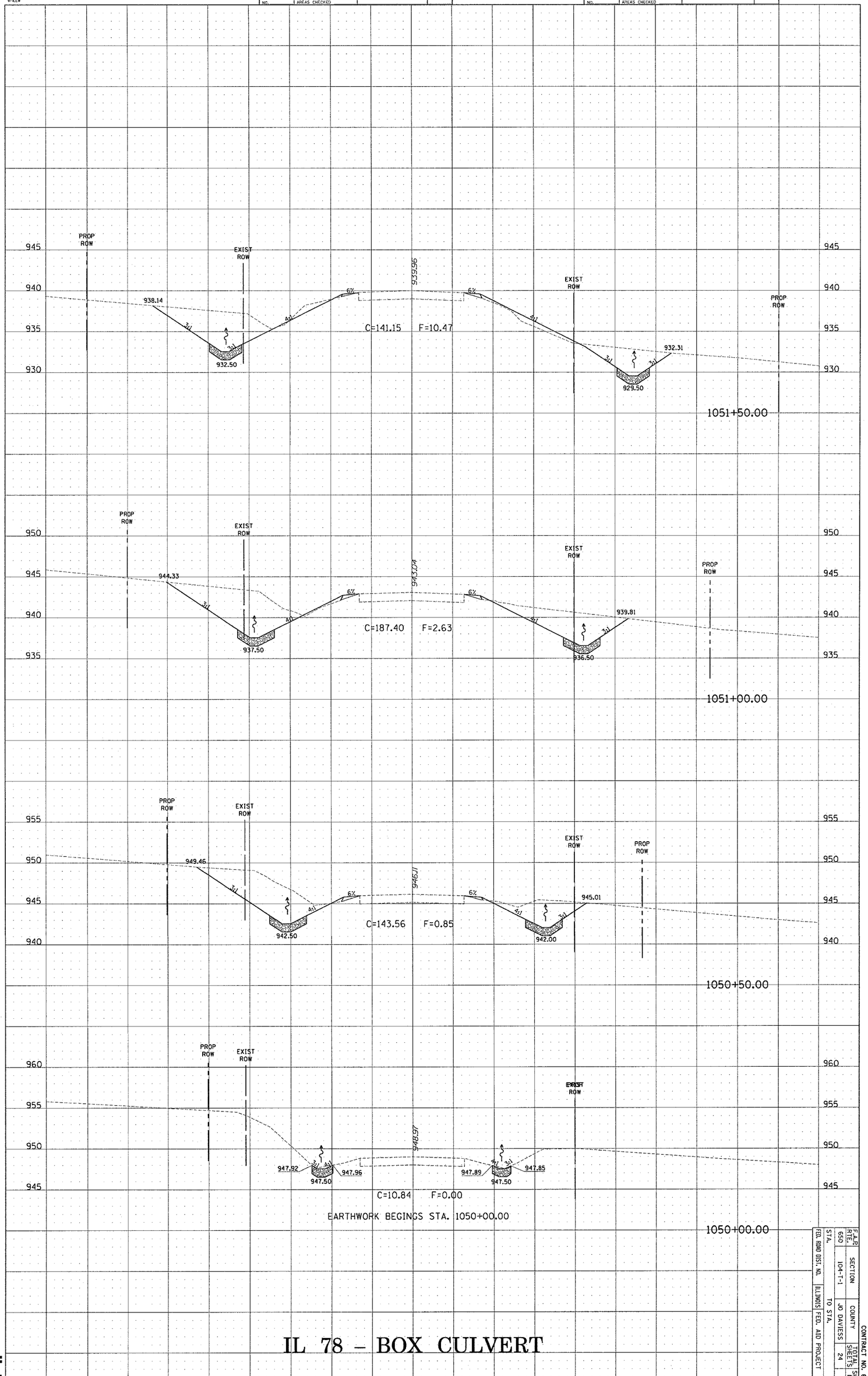

IL 78 – BOX CULVERT

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-T-1	40 DAVIESS	24	22

CONTRACT NO. 64954

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

STA. TO STA.

IL 78

COMPANY NAME: #COMPANY_NAME#
PROJECT CONTACT: #PROJECT_CONTACT#
CLIENT: #CLIENT#
Tue Mar 28 10:48:30 2006
#FILE#

ORIGINAL SURVEY		BY	DATE
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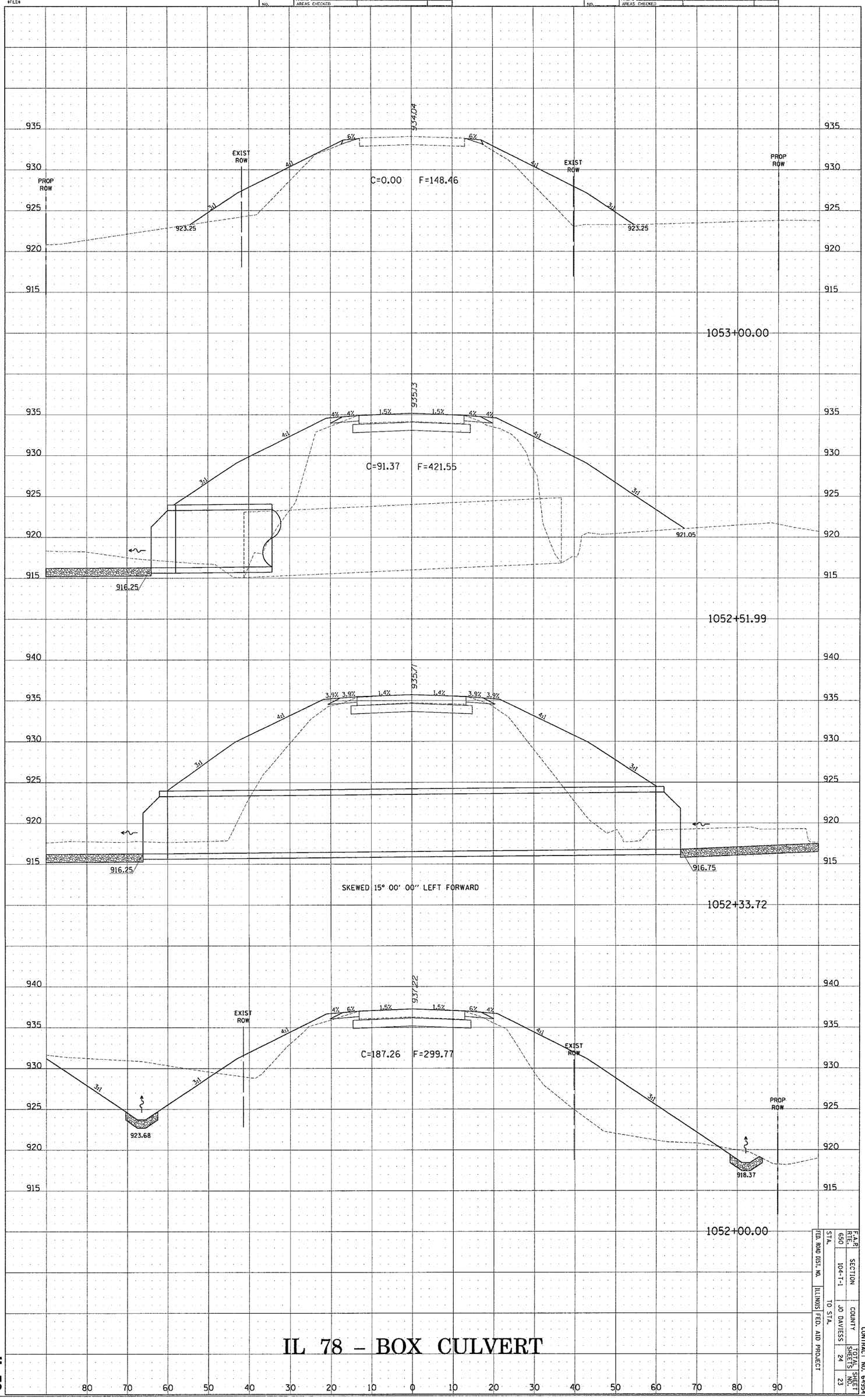
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

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



IL 78 – BOX CULVERT

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-1-1	JO DAVIESS	24	23

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

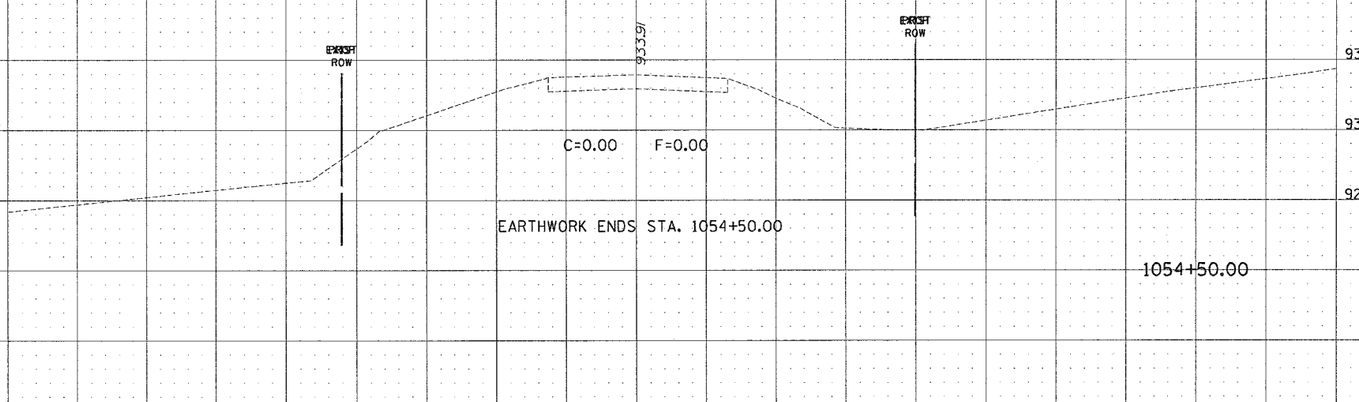
CONTRACT NO. 64954

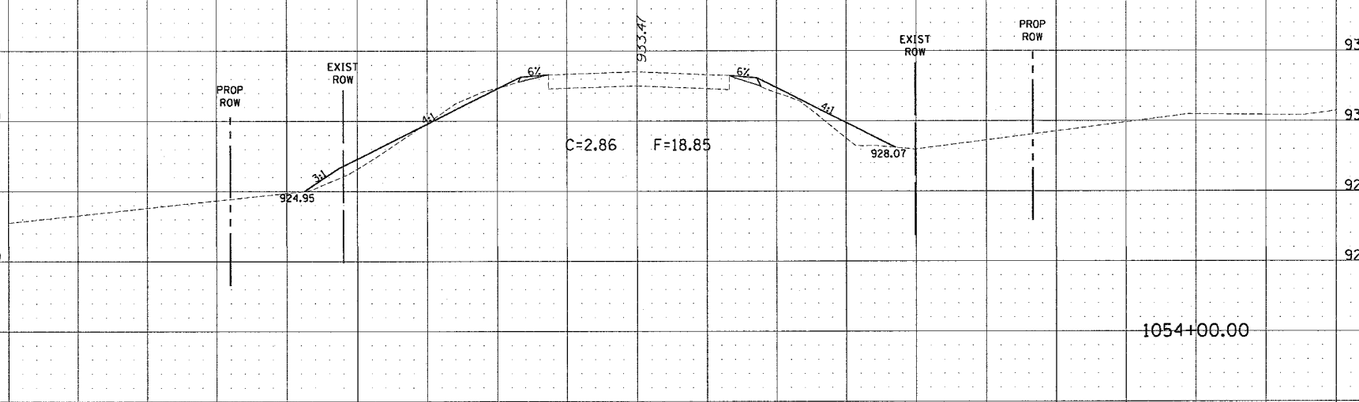
IL 78

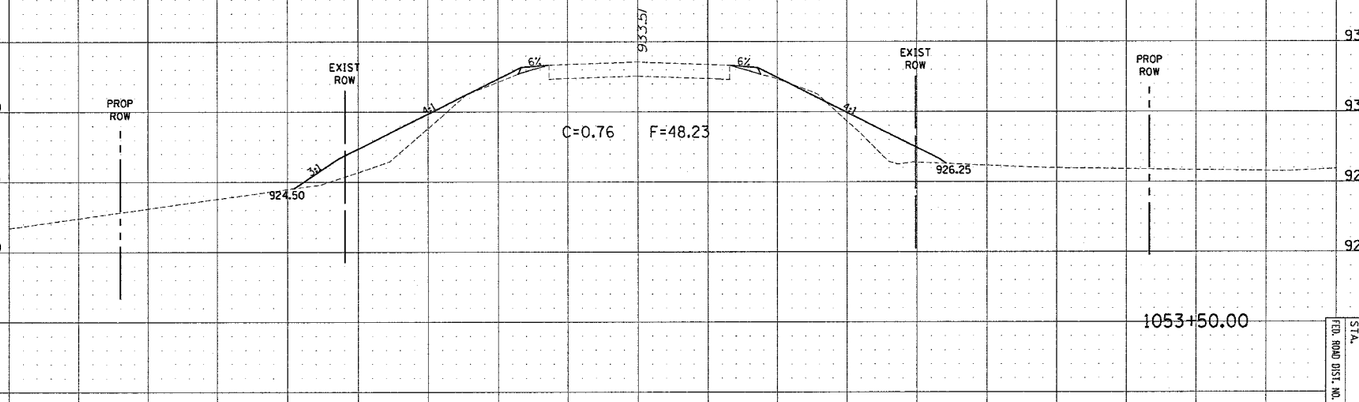
COMPANY NAME# #COMPANY_NAME#
PROJECT CONTACT: #PROJECT_CONTACT#
CLIENT: #CLIENT#
Tue Mar 29 08:53 2005
#FILE#

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

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







IL 78 – BOX CULVERT

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
650	104-1-1	JO DAVIESS	24	24
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 64954

IL 78

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