04-24-2015 LETTING ITEM 101

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1)I-1	ALEXANDER	5	1
	ILLINOIS	CONTRACT NO. 78456		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAI ROUTE 57 (SOUTHBOUND) *(I-57)*
SECTION (2-1)I-1

BEARING REPLACEMENTS
ALEXANDER COUNTY

C-99-021-15

D-99-016-15

LOCATION OF SECTION INDICATED THUS: –

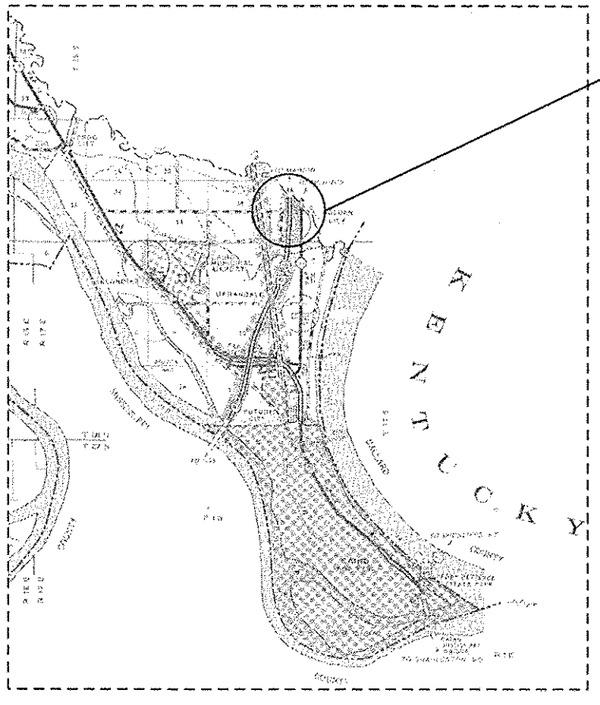
I-57 TRAFFIC DATA

2014 ADT = 10000 (ONE WAY)
WITH 46.5% TRUCKS

TOWNSHIP

ALEXANDER COUNTY UNIT
ROAD DISTRICT

FOR INDEX OF SHEETS, SEE SHEET NO. 2



IMPROVEMENT LOCATION
STRUCTURE 002-0002
I-57 SB OVER TR 163B (GOLDEN LILLY)

GROSS LENGTH = 1690.17 FT. = 0.320 MILE
NET LENGTH = 1690.17 FT. = 0.320 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Jan 30 20 15
Jeffrey L Keirn
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
Mar 20 20 15
John D. Baranzelli, P.E. for
ENGINEER OF DESIGN AND ENVIRONMENT
Mar 20 20 15
Omar Osman P.E. for
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

DESIGN ENGINEER: ADRIAN ADAMS (618) 351-5262
PROJECT ENGINEER: DAVID PICHE (618) 351-5227

CONTRACT NO. 78456

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES

1) IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16 THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 101.16 REGARDLESS IF TRACK MOUNTED OR WHEELED.

2) COMMITMENTS: NONE AS OF JANUARY 30, 2015.

INDEX OF SHEETS

STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
701101-04	OFF-RD OPERATIONS, MULTILANE, 15' TO 24'' FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701400-08	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701406-09	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701901-04	TRAFFIC CONTROL DEVICES

Prepared By: _____ DISTRICT STUDIES & PLANS ENGINEER

Examined By: _____ DISTRICT LAND ACQUISITION ENGINEER

Examined By: _____ DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: _____ DISTRICT OPERATIONS ENGINEER

Examined By: _____ DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By: _____ DISTRICT CONSTRUCTION ENGINEER

Examined By: _____ DISTRICT MATERIALS ENGINEER

FILE NAME = c:\pw_work\pwidot\adamsam\d0423921\78456-sht-plan.dgn	USER NAME = adamsam	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
$MODELNAME$	PLOT DATE = 1/22/2015	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS, AND STANDARDS

SCALE: _____ SHEET __ OF __ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-I)I-1	ALEXANDER	5	2
		CONTRACT NO. 78456		
		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES

			Alexander
			FAI 57, I-57
			100% STATE
			RURAL
CODE NUMBER	ITEM DESCRIPTION	UNIT	BRIDGE
			0014
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	84
52100520	ANCHOR BOLTS, 1"	EACH	336
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2
67100100	MOBILIZATION	L SUM	1
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
X7010410	SPEED DISPLAY TRAILER	CAL MO	2
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	84

FILE NAME =	USER NAME = $USER$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITES	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pw_work\pwidot\ademsam\d2423921\78456-sht-plan.dgn		DRAWN -	REVISED -			57	12-1)1-1	ALEXANDER	5	3
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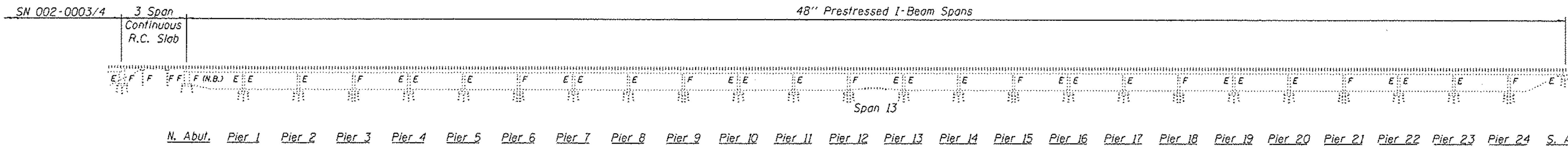
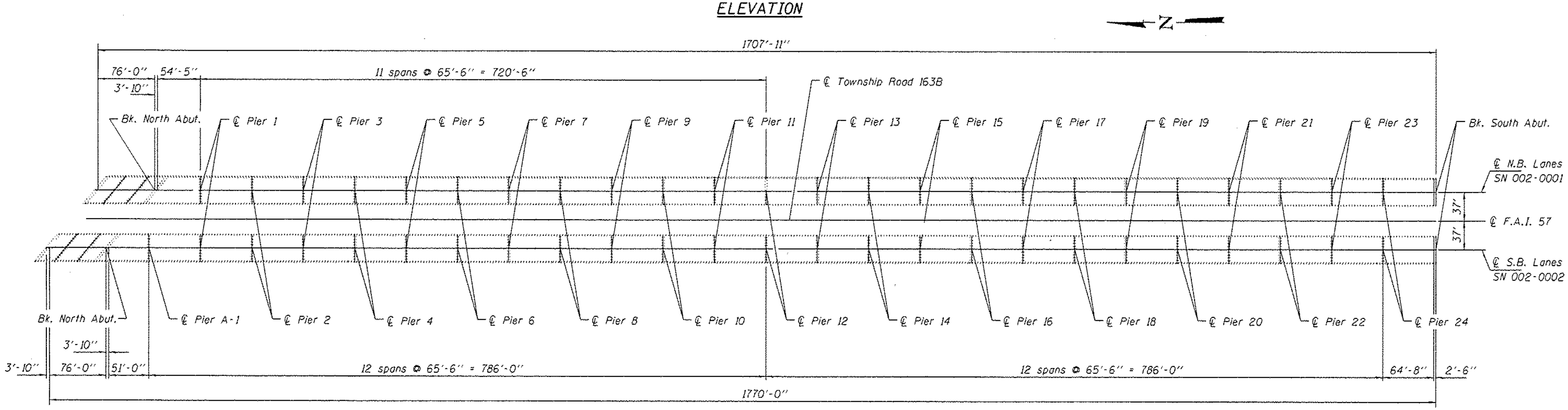
$MODELNAME$	PLOT DATE = 1/29/2015	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA, TO STA.			ILLINOIS FED. AID PROJECT		

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.



ELEVATION



PLAN

LICENSED STRUCTURAL ENGINEER
DAVID CARL. PUZEY
081-005470
SPRINGFIELD ILLINOIS
STATE OF ILLINOIS

EXPIRES 11-30-2016

TOTAL BILL OF MATERIAL

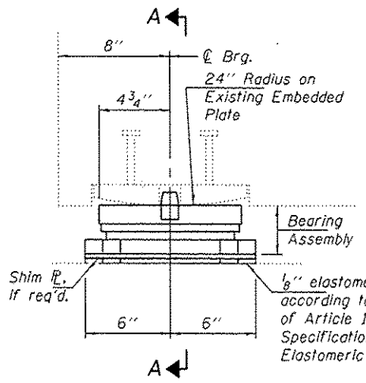
ITEM	UNIT	QUANTITY
* Elastomeric Bearing Assembly, Type II	Each	84
Jack and Remove Existing Bearings	Each	84
Anchor Bolts 1"ϕ	Each	336

* See sheet 2 of 2 for locations

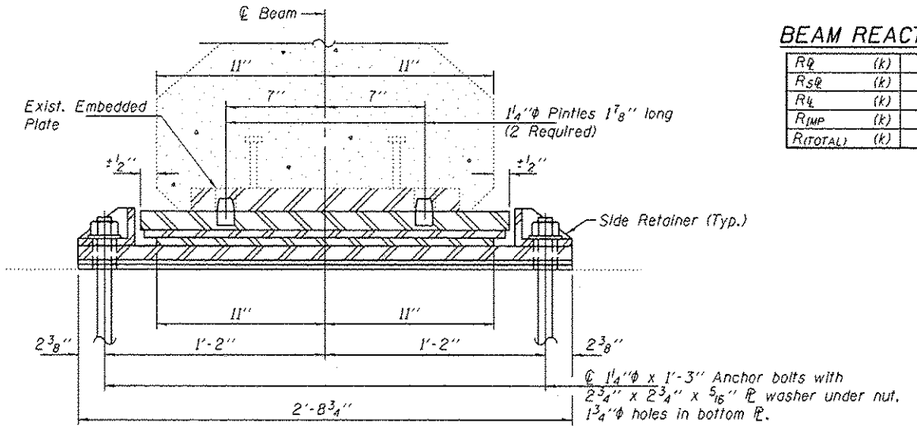
DESIGNED [signature]	EXAMINED [signature] ACTING ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 10, 2015	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED [signature]	PASSED [signature] ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED	
DRAWN baliva		REVISED	
CHECKED VHV AB			

PLAN AND ELEVATION
FAI 57 OVER TR 163B
SN 002-0002 (SB)
SHEET NO. 1 OF 2 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1I)-1	ALEXANDER	5	4
		CONTRACT NO. 78456		
	ILLINOIS FED. AID PROJECT			



ELEVATION AT BEARING



SECTION A-A

BEAM REACTIONS

$R_{℄}$	(k)	47
$R_{S℄}$	(k)	13
$R_{℄}$	(k)	40
R_{IMP}	(k)	11
$R_{(TOTAL)}$	(k)	111

Notes:
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 60 Tons.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

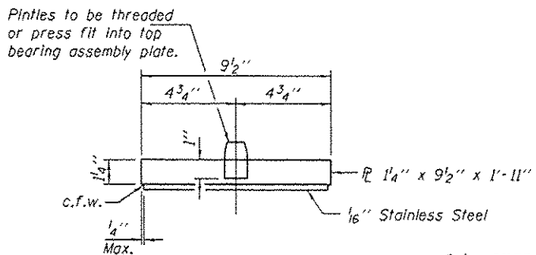
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

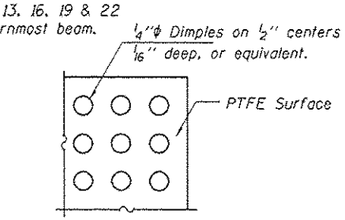
EXPANSION BEARING

S. Abut. & Each side of Piers 1, 4, 7, 10, 13, 16, 19 & 22
Every beam except Span 13, Pier 13, westernmost beam.

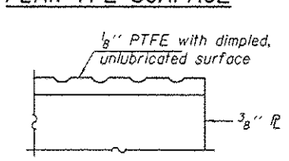


TOP BEARING ASSEMBLY

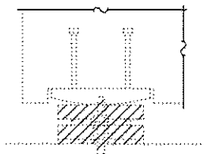
* 1/8" PTFE dimpled, unlubricated



PLAN-TFE SURFACE



SECTION THRU TFE



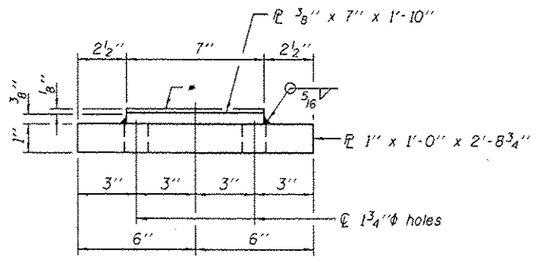
Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolts smooth & seal with epoxy. Cost included with Jack and Remove Existing Bearings.

EXISTING BEARING REMOVAL DETAILS

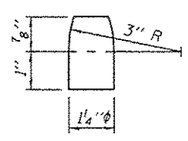
Note: Hatched area indicates removal of existing bearings.

JACK AND REMOVE EXISTING BEARING PROCEDURE

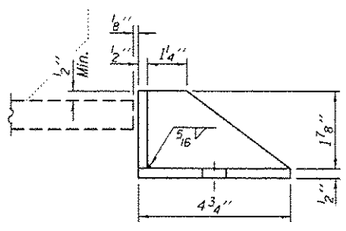
1. The Contractor shall submit for approval by the Engineer, plans for jacking prior to commencing any work at the bearings.
2. The maximum differential lift between beams at any one substructure unit shall be limited to 1/8 inch. If simultaneous jacking of all beams at a substructure unit is utilized, then the maximum total lift shall be limited to 1/4 inch.
3. Traffic shall be removed from the structure during the jacking operation including lifting or lowering the beams. Traffic shall not be allowed on the structure after lifting until the beams are shored in place.



BOTTOM BEARING ASSEMBLY

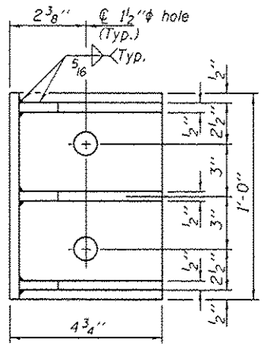


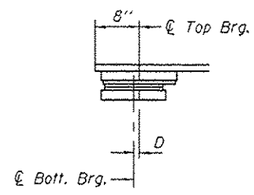
PINTLE



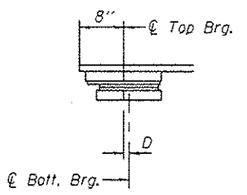
SIDE RETAINER

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





BELOW 50° F.
(Move bott. brg. away from fixed brg.)



ABOVE 50° F.
(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	84
Jack and Remove Existing Bearings	Each	84
Anchor Bolts 1"ϕ	Each	336

DESIGNED VHV	EXAMINED	Timothy A. Ahlgrim	DATE - MARCH 10, 2015	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT DETAILS SN 002-0002 (SB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED DAB		ACTING ENGINEER OF STRUCTURAL SERVICES				57	(2-1)1-1	ALEXANDER	5	5
DRAWN baliva	PASSED	A. Carl Tharp	REVISED		SHEET NO. 2 OF 2 SHEETS			CONTRACT NO. 78456		
CHECKED VHV DAB		ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED					ILLINOIS FED. AID PROJECT		