



Wichita CHEMICAL AND TESTING *Laboratories*

CC: 2 Eby Const. Co.
2 Black & Veatch

Principals Are MEMBERS OF:
AMERICAN CHEMICAL SOCIETY
AMERICAN SOCIETY FOR TESTING MATERIALS
AMERICAN SOCIETY OF CIVIL ENGINEERS
ASS'N OF ASPHALT PAVING TECHNOLOGISTS
LICENSED PROFESSIONAL ENGINEERS

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS
1428 N. MOSLEY AVE. PHONE HOBAR1 4-3948
WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 809194
Bridge 4 (Refer to This Number)
Wichita, Kansas
Location: _____
Contractor: Martin K. Eby, Contractor
Architect: Black & Veatch
Owner: City of Wichita
Date Submitted at Lab: 9-12-55- Late for 28 day break

Date: September 15 1955
Report No. BCC # 26
Specimens _____
Made by: Contractor
Structure: Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P.S.I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 6308 (12-d)	8-12	3 1/2	1385	1755	611	26.2	4252	DS-AF	31	0	Unknown
							Required 28 day strength: 3500				

READY-MIXED CONCRETE
Furnished by
Walt Keeler Company, Inc.

TYPE FRACTURE: RC-regular cone; VS-vertical shear; DS-diagonal shear; HS-horizontal rupture; MB-mortar bond failure;

Brand of Cement Monarch

AF-aggregate failure.

Admixture Amber Air

WICHITA CHEMICAL & TESTING LABORATORIES

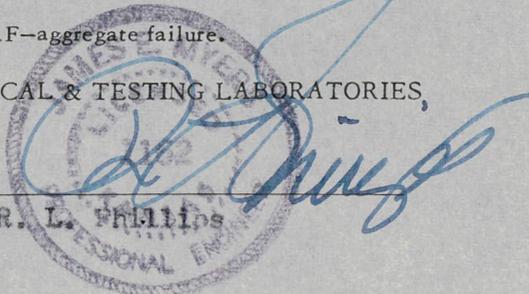
Fine Aggregate Keeler

By _____

Coarse Aggregate Moline

R. L. Phillips

Mixed Aggregate None





CO: 200
2000
2000

Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS
1428 N. HOESLY AVE.
PHONE NUMBER 4-3948
WICHITA, KANSAS

Licensed Professional
Engineers
ASIN OF ASSELT
AMERICAN SOCIETY OF
TESTING MATERIALS
AMERICAN SOCIETY FOR
CIVIL ENGINEERS
MEMBER OF
AMERICAN CHEMICAL
SOCIETY

FLEXURE AND COMPRESSION TEST REPORT

Date: Lab. No.
 Report No. (Refer to this number)
 Specimens
 Made by
 Structure

Date Submitted Lab.
 Owner
 Location
 Project

EXAMINATION NUMBER	DATE MADE	SCUMPS LITCHES	FINE AGGREGATE	COARSE AGGREGATE	MIXTURE		COMPRESSIVE STRENGTH P.S.I.	TYPE SPECIMEN	AGE IN DAYS	LIMITS OVERALL CONCRETE	REMARKS AND LOCATION OF TEST
					CEMENT	TOTAL WATER					

REGISTERED CONCRETE
TESTED BY
WILLIAMS COMPANY, INC.

TYPE BRACKET: VS - vertical shear DS - diagonal shear HS - horizontal rupture MB - mortar bond failure

Kind of Cement
 Aggregate
 Course Aggregate
 Mixed Aggregate

WICHITA CHEMICAL TESTING LABORATORIES





CC: 2-Eby Constr. Co.
2-Black & Veatch

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ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS
1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 809138
Bridge 4 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Construction Co.
Architect: Black & Veatch
Owner: City of Wichita
Date Submitted at Lab: 8-17-55

Date: September 12, 1955
Report No. EOC #25
Specimens
Made by: Contractor
Structure: Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P.S.I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 5768 (#12-b)	8-12	3-1/2	1385	1755	611	26.2	4394	DS-AF	28	23	Pier #9 @ 3:30 P.M.
			Required 28 day strength:				3500 P.S.I.	READY-MIXED CONCRETE Furnished by Walt Keeler Company, Inc.			

TYPE FRACTURE: RC-regular cone; VS-vertical shear; DS-diagonal shear; HS-horizontal rupture; MB-mortar bond failure;

Brand of Cement Monarch

Admixture Amber Air

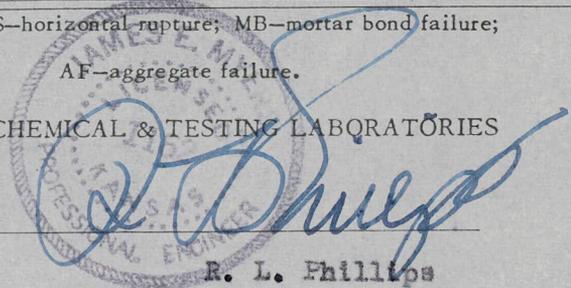
Fine Aggregate Keeler

Coarse Aggregate Moline

Mixed Aggregate None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips





Wichita Chemical and Testing Laboratories

Members of:
 AMERICAN CHEMICAL SOCIETY
 AMERICAN SOCIETY FOR TESTING MATERIALS
 AMERICAN SOCIETY OF CIVIL ENGINEERS
 ASSN. OF ASPHALT PAVING TECHNOLOGISTS
 LICENSED PROFESSIONAL ENGINEERS

RESEARCH ON MANUFACTURING PROBLEMS
 ANALYTICAL CHEMISTRY - BACTERIOLOGICAL - TESTING ENGINEERING
 1425 N. MOSLEY AVE. PHONE NO. 4-2748
 WICHITA 4, KANSAS

FLUXURE AND COMPRESSION TEST REPORT

Date Submitted as Lab. No. _____
 Client: _____
 Address: _____
 Location: _____
 Project: _____
 Report No. _____
 Date: _____

Specimen Number	DATE MADE	BLIND INCHES	FINE AGGREGATE	MIXTURE		COMPRESSIVE STRENGTH P.S.I.	TYPE STRUCTURE	AGE IN DAYS	TEST CONDITIONS	REMARKS AND LOCATION OF TEST
				COARSE	WATER					
101-102 (4-1-5)	6-12	4-12	100	011	011	4000	Beam	28	Standard	Test on 6" x 12" x 12"

Ready-mixed concrete furnished by **Watt Keeler Company, Inc.**

Wichita Chemical and Testing Laboratories
 1425 N. Mosley Ave. Wichita 4, Kansas
 Phone No. 4-2748



CC: 2-Eby Constr. Co.
2-Black & Veatch

Wichita CHEMICAL AND TESTING Laboratories

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RESEARCH ON MANUFACTURING PROBLEMS
1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossings Lab. No. 809326
Bridge 4 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Construction Co.
Architect: Black & Veatch
Owner: City of Wichita
Date Submitted at Lab: 8-22-55

Date August 24, 1955
Report No. BCC #24
Specimens
Made by: Contractor
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 5904 (12C)	8-12	3-1/2	1385	1755	611	26.2	3757	RC-AF	10	0	Pier 9 - Bridge 4
Required 28 day strength:							3500 P.S.I.				

READY-MIXED CONCRETE
Furnished by
Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement Monarch
Admixture Ambor Air
Fine Aggregate Keeler
Coarse Aggregate Moline
Mixed Aggregate None

WICHITA CHEMICAL & TESTING LABORATORIES

By [Signature]
R. L. Phillips



CC: ~~2-Eby Constr. Co.~~
~~2-Black & Veatch~~

Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
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File: 1

1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

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FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossings Lab. No. 808274
Water Transmission Lines- Contr. #3 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Boy Constr.
Architect: Black & Veatch, Cons. Engrs.
Owner: City of Wichita
Date Submitted at Lab: 8-17-55

Date August 22, 1955
Report No. BOC #23
Specimens
Made by: Contractor
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour	
			Fine Aggregate	Coarse Aggregate	Cement	Total Water						
No. 5767 (12-A)	8-12	3-1/2	1385	1755	611	26.2	3581	DS-MB	7	2	Pier #9 @ 3:30 P.M.	
Required 28 day strength:							3500 P.S.I.					
Class of Concrete "B"												

READY-MIXED CONCRETE
Furnished by
Wall Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

AF—aggregate failure.

Admixture Amber Air

WICHITA CHEMICAL & TESTING LABORATORIES

Fine Aggregate Keeler

By R. L. Phillips

Coarse Aggregate Moline

Mixed Aggregate None



CC: 2-Eby Constr. Co.
2-Black & Veatch

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File: 1

1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossings Lab. No. 807071
Water Transmission Lines Contr. #5 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch, Cons. Engrs.
Owner: City of Wichita
Date Submitted at Lab: 7-5-55 (Late for 7 day break)

Date July 8, 1955
Report No. EOG #21
Specimens
Made by: Contractor
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour	
			Fine Aggregate	Coarse Aggregate	Cement	Total Water						
No. 5140 (10D)	5-57	3"	1385	1755	611	26.2	5700	RC-AF	8	0	North Abutment Slab @ ?	
No. 5141 (11D)	6-8	3"	1385	1755	611	26.2	4623	RC-AF	28	1	Pier #1 @ 5:00 P.M.	
Required 28 day strengths:							3500 P.S.I.					
Class of Concrete "B"												
READY-MIXED CONCRETE Furnished by Watt Keeler Company, Inc.												

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

AF—aggregate failure.

Admixture Amber Air

WICHITA CHEMICAL & TESTING LABORATORIES

Fine Aggregate Keeler

By _____

Coarse Aggregate Moline Limestone 1"

R. L. Phillips

Mixed Aggregate None



WICHITA CHEMICAL AND TESTING LABORATORIES

ANALYTICAL CHEMIST • BACTERIOLOGIST • TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS
1428 N. MOBILE AVE.
PHONIC HOVAL 4-2942
WICHITA, KANSAS

AMERICAN SOCIETY OF
TESTING MATERIALS
AMERICAN SOCIETY OF
METEOROLOGICAL ENGINEERS
AMERICAN SOCIETY OF
MECHANICAL ENGINEERS
AMERICAN SOCIETY OF
CIVIL ENGINEERS
AMERICAN SOCIETY OF
ELECTRICAL ENGINEERS
AMERICAN SOCIETY OF
HEATING, REFRIGERATING
AND AIR CONDITIONING
ENGINEERS
AMERICAN SOCIETY OF
MECHANICAL ENGINEERS
AMERICAN SOCIETY OF
METEOROLOGICAL ENGINEERS

FLXURE AND COMPRESSION TEST REPORT

Date: July 18, 1938
Specimen No.: 1007
Specimen: 1007
Material: 1007
Prepared by: 1007
Date Submitted at Lab: 1007

Specimen No.	Date Made	Type	Compressive Strength P.S.I.	MILLIMETERS			Date	Specimen
				Total	Moisture	Temperature		
1007	7-18-38	1007	4500	100	100	100	1007	1007
1008	7-18-38	1008	4500	100	100	100	1008	1008

REWORKED SPECIMEN
FURNISHED BY
Watt Keeler Company, Inc.

TYPE OF SPECIMEN: 1007
TESTING METHOD: 1007
TESTING ENGINEER: 1007
TESTING DATE: 1007
TESTING LOCATION: 1007
TESTING EQUIPMENT: 1007
TESTING RESULTS: 1007
TESTING COMMENTS: 1007



CC: 2-Eby Constr. Co.
2-Black & Veatch

Wichita CHEMICAL AND TESTING Laboratories

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1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

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ASS'N OF ASPHALT PAVING TECHNOLOGISTS
LICENSED PROFESSIONAL ENGINEERS

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 806181
Water Transmission Lines (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch, Cons. Engrs.
Owner:
Date Submitted at Lab: 5-23-55

Date June 20, 1955
Report No. 300 #19
Specimens
Made by: Contractor
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 4326 (9-b)	5-20	3"	1385	1755	611	26.2	3670	BS-MB	28	25	Expansion Pier Bridge 4 1/2
No. 4611 (1)	6-3	-	1385	1755	611	26.2	3722	RC-AF	8	0	Water Line - Reservoir
No. 4664 (11-a)	6-9	-	1385	1755	611	26.2	3195	RC-AF	7	2	Br. #3 Pier 1
No. 4665 (11-b)	6-9	-	1385	1755	611	26.2	2878	RC-MB	7	2	Br. #3 Pier 1
No. 4666 (11-c)	6-9	-	1385	1755	611	26.2	3283	DS-MB	7	2	Br. #3 Pier 1
No. 4667 (9-d)	6-20	-	1385	1755	611	26.2	4800	RC-MB	28	3	Br. #4 Pier 6
Required 28 day strength Class of Concrete "B"							3500 P.S.I.	READY-MIXED CONCRETE Furnished by Walt Keeler Company, Inc.			

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

AF—aggregate failure.

Admixture Amber Air

WICHITA CHEMICAL & TESTING LABORATORIES

Fine Aggregate Keeler

By R. L. Phillips

Coarse Aggregate Moline Limestone 1"

Mixed Aggregate None



WICHITA AND CHEMICAL TESTING LABORATORIES

ANALYTICAL CHEMISTS • BACTERIOLOGISTS • TESTING ENGINEERS
 RESEARCH ON MANUFACTURING PROBLEMS
 JOHN H. MOSELEY AVE.
 WICHITA, KANSAS

Graduate in
 American Chemical Society
 American Society for Testing Materials
 American Society of Civil Engineers
 American Institute of Chemical Engineers
 American Institute of Mining and Metallurgical Engineers
 American Institute of Electrical Engineers
 American Institute of Mechanical Engineers
 American Institute of Refrigeration Engineers

FLEXURE AND COMPRESSION TEST REPORT

Date of Test: _____
 Report No.: _____
 Specimens: _____
 Made by: _____
 Machine: _____
 Location: _____
 Condition: _____
 Application: _____
 Date Submitted: _____

Specimen No.	Date	Type	Elongation	Tensile Strength	MIXTURE			Date Made	Remarks
					Total Weight	Loss of Weight	Percentage		
10-1	10-1-37	10-1	10-1	10-1	10-1	10-1	10-1	10-1	10-1
10-2	10-1-37	10-2	10-2	10-2	10-2	10-2	10-2	10-2	10-2
10-3	10-1-37	10-3	10-3	10-3	10-3	10-3	10-3	10-3	10-3
10-4	10-1-37	10-4	10-4	10-4	10-4	10-4	10-4	10-4	10-4
10-5	10-1-37	10-5	10-5	10-5	10-5	10-5	10-5	10-5	10-5
10-6	10-1-37	10-6	10-6	10-6	10-6	10-6	10-6	10-6	10-6

RECOMMENDED CONCRETE
 Furnished by
Wells-Keefer Company, Inc.

10-1-37 - 10-1-37 - 10-1-37 - 10-1-37 - 10-1-37 - 10-1-37 - 10-1-37 - 10-1-37 - 10-1-37 - 10-1-37

WICHITA CHEMICAL TESTING LABORATORIES





CC: 2-Eby Constr. Co.
2-Black & Veatch

Wichita CHEMICAL AND TESTING *Laboratories*

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LICENSED PROFESSIONAL ENGINEERS

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS

File: 1

1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 806148
Water Transmission Lines (Refer to This Number)
Location: Wichita to Halshead
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch
Owner: W. T. Eby
Date Submitted at Lab: 6-14-55

Date June 15, 1955
Report No. 300 #18
Specimens
Made by: Contractor
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour	
			Fine Aggregate	Coarse Aggregate	Cement	Total Water						
No. 4668 (7-D)	5-5	-	1385	1755	611	26.2	2582	RC-MB	40	0	South Abut. Walls Br. 4	
No. 4669 (8-D)	5-16	-	1385	1755	611	26.2	5100	RC-AF	29	0	Br. 4 - Pier 6 Ftg.	
Required 28 day strength:							3500 P.S.I.					
Class of Concrete "B"												

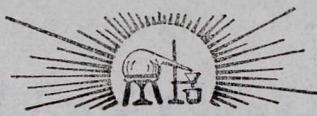
READY-MIXED CONCRETE
Furnished by
Wait Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch
Admixture Amber Air
Fine Aggregate Keeler
Coarse Aggregate Moline Limestone 1"
Mixed Aggregate None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips
R. L. Phillips



CC: 2-Lby Constr. Co.
2-Black & Veatch

Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
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LICENSED PROFESSIONAL ENGINEERS

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 806118
(Refer to This Number)

Date June 13, 1955

Report No. 30-G #17

Location: Wichita, Kansas

Specimens

Contractor: Martin E. Lby Constr. Co.

Made by: Contractor

Architect: Black & Veatch, Cons. Engrs.

Structure Bridge

Owner:

Date Submitted at Lab: 5-18-55

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 4250 (#6-b)	5-16	2"	1385	1755	611	26.2	4659	RC-AF	28	26	Pier #6 Footings of Bridge #4
Required 28 day strength:						3500 P.S.I.					
Class of Concrete #B"											

READY-MIXED CONCRETE
Furnished by
Walt Hecker Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

AF—aggregate failure.

Admixture Amber Air

WICHITA CHEMICAL & TESTING LABORATORIES

Fine Aggregate Keeler

By R. L. Phillips

Coarse Aggregate Moline Limestone 1"

R. L. Phillips

Mixed Aggregate None



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2-Black & Veatch

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WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 805076-B
(Refer to This Number)

Date June 3, 1955

Report No. DDC #16

Specimens

Made by: Contractor

Structure Bridge

Location: Wichita, Kansas

Contractor: Martin K. Eby Constr. Co.

Architect: Black & Veatch, Cons. Engrs.

Owner:

Date Submitted at Lab: 5-6-55

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour	
			Fine Aggregate	Coarse Aggregate	Cement	Total Water						
*No. 4123 (#4d)	4-8	3"	1385	1755	611	26.2	3846	DS-MB	28	0	South Abutment Walls of Bridge #2	
* Our records do not indicate that you have received a copy of this specimen report.												
No. 4125 (#7b)	5-5	3"	1385	1755	611	26.2	2808	DS-MB	28	27	South Abutment Walls of Bridge #4	
No. 4419 (#10a)	5-27	3"	1385	1755	611	26.2	3775	RC-MB	7	3	North Abutment Wall Slab	
Class of Concrete "B"							Required 28 day strength:		3500 P.S.I.		READY-MIXED CONCRETE Furnished by Wall Keeler Company, Inc.	

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

AF—aggregate failure.

Admixture Water Air

WICHITA CHEMICAL & TESTING LABORATORIES

Fine Aggregate Keeler

By R. L. Phillips

Coarse Aggregate Moline Limestone 1"

R. L. Phillips

Mixed Aggregate None



CO: ...
Wichita & Kansas

Wichita CHEMICAL AND TESTING Laboratories

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RESEARCH ON MANUFACTURING PROBLEMS
1423 N. HOBBLEY AVE.
PHONE HOBBLEY 4-3042
WICHITA & KANSAS

MEMBER OF
AMERICAN CHEMICAL
SOCETY
AMERICAN SOCIETY FOR
TESTING MATERIALS
AMERICAN SOCIETY OF
CIVIL ENGINEERS
AMERICAN SOCIETY OF
STEEL ENGINEERS
AMERICAN SOCIETY OF
METALS

FLXURE AND COMPRESSION TEST REPORT

Project: ...
Location: ...
Contractor: ...
Fabricator: ...
Owner: ...
Date Submitted at Lab: ...

Specimens: ...
Mode of Test: ...
Structure: ...
Report No.: ...
Date: ...

Specimen Number	Date	Temp. (F)	MIXTURE			Tensile Strength (P.S.I.)	Type of Fracture	Area in Square Inches	Days Retained in Conditions	Remarks and Location of Specimen
			Flow	Coarse Aggregate	Finer Aggregate					
...	
...	
...	

TYPE FRACTURE: RC - regular cone; VS - vertical shear; DS - diagonal shear; MB - mortar bond failure

WICHITA CHEMICAL & TESTING LABORATORIES

BY: _____



CC: 2-By Constr. Co.
Black & Veatch

Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS

File: 1

Principals Are
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AMERICAN CHEMICAL SOCIETY
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AMERICAN SOCIETY OF CIVIL ENGINEERS
ASS'N OF ASPHALT PAVING TECHNOLOGISTS
LICENSED PROFESSIONAL ENGINEERS

1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossings Lab. No. 805282
(Refer to This Number)

Date May 31, 1955

Report No. 100 #15

Specimens

Made by: Contractor

Structure Bridge

Location: Bentley, Kansas

Contractor: Martin K. By Constr. Co.

Architect: Black & Veatch, Cons. Engrs.

Owner: ---

Date Submitted at Lab: 5-28-55

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour	
			Fine Aggregate	Coarse Aggregate	Cement	Total Water						
No. 4413 (9-0)	5-20	-	1385	1755	611	26.2	2388	RC-MB	8	0	Expansion Pier Bridge #4	
No. 441B (6-D)	4-28	-	1385	1755	611	26.2	1779	RC-MB	30	0	Abut. Slab Downstairs @ 4:00 PM	
Required 28 day strength:							3500 P.S.I.					

READY-MIXED CONCRETE
Furnished by
Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

AF—aggregate failure.

Admixture Amber Air

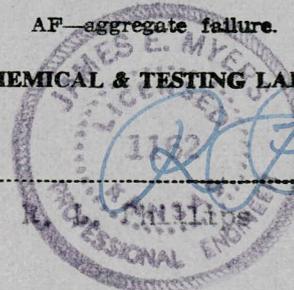
WICHITA CHEMICAL & TESTING LABORATORIES

Fine Aggregate Keeler

By [Signature]

Coarse Aggregate Moline Limestone 1"

Mixed Aggregate None





Wichita
CHEMICAL
AND
TESTING
Laboratories

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1122 N. MOBILE AVE.
PHONE HO 5-4322
WICHITA 4, KANSAS

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TESTING MATERIALS
AMERICAN SOCIETY OF
METEOROLOGICAL ENGINEERS
AMERICAN SOCIETY OF
APPLIED PHYSICISTS
AMERICAN SOCIETY OF
MECHANICAL ENGINEERS
AMERICAN SOCIETY OF
ELECTRICAL ENGINEERS
AMERICAN SOCIETY OF
HEATING, REFRIGERATING
AND AIR-CONDITIONING
ENGINEERS

FLUXURE AND COMPRESSION TEST REPORT

Project: _____
Location: _____
Contractor: _____
Attention: _____
Owner: _____
Date Submitted at Lab: _____
Date: _____
Report No.: _____
Specimens: _____
Made by: _____
Store: _____

EXAMINER NUMBER	DATE MADE	SILICA (GRMS)	MILITARY			Tensile Strength (P.S.I.)	Type Fracture	Age In Days	Remarks and location of test
			Aluminum	Copper	Steel				

TYPE: FLUXURE; RC - tensile; V2 - vertical shear; D2 - diagonal shear; H2 - horizontal rupture; W2 - corner bond failure

WICHITA CHEMICAL & TESTING LABORATORIES





CC:2-Eby Constr. Co.
~~Black & Veatch~~

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 1428 N. MOSLEY AVE. PHONE HO BART 4-3948
 WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 805251
9th & Big River (Refer to This Number)
 Location: Wichita, Kansas
 Contractor: Martin K. Eby, Constr.
 Architect: Black & Veatch
 Owner:
 Date Submitted at Lab: 4-29-55

Date May 27, 1955
 Report No. ECC #11
 Specimens
 Made by: Barley
 Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 4051 (6-B)	4-28	2-1/2	1385	1755	611	Gal. 26.2	3002	RC-MB	28	27	Abut. Slab - Downstairs @ 4:00 P.M.
No. 4325 (9-A)	5-20	3"	1385	1755	611	26.2	3564	RC-MB	7	4	Expansion Pier Bridge 4 -
Required 28 day strength:						3500 P.S.I.					
Class of Concrete "B"											

READY-MIXED CONCRETE
 Furnished by
 Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

AF—aggregate failure.

Admixture Amber Air

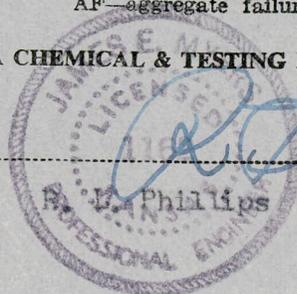
WICHITA CHEMICAL & TESTING LABORATORIES

Fine Aggregate Keeler

By [Signature]

Coarse Aggregate Moline Limestone #1

Mixed Aggregate None





CC: 2-Eby Constr. Co.
2-Black & Veatch

Wichita CHEMICAL AND TESTING Laboratories

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1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

File: 1

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FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 805221
9th & Big River (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch
Owner: ---
Date Submitted at Lab: 5-18-55

Date May 25, 1955
Report No. 800 #13
Specimens
Made by: Billy Doppe
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 4249 (8E)	5-16	2"	1385	1755	611	26.2 Gal.	4748	RC-AF	7	5	Pier #6 Footing of Bridge #4
No. 4310 (8C)	5-16	3"	1385	1755	611	26.2	4058	DS-AF	7	0	Footing for Pier #6 Bridge #4
Required 28 day strength:						3500 P.S.I.					
Class of Concrete "B"											

READY-MIXED CONCRETE
Furnished by
Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

AF—aggregate failure.

Admixture Amber Air

WICHITA CHEMICAL & TESTING LABORATORIES

Fine Aggregate Keeler

By R. L. Phillips

Coarse Aggregate Moline Limestone #1

R. L. Phillips, ENG.

Mixed Aggregate None



Wichita CHEMICAL AND TESTING Laboratories

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RESEARCH ON MANUFACTURING PROBLEMS
1435 W. MONROE AVE.,
PHOENIX, ARIZONA
WICHITA, KANSAS

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SOCIETY
AMERICAN SOCIETY FOR
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AMERICAN SOCIETY OF
QUALITY ENGINEERS
ASSOCIATION OF
PLASTIC TECHNOLOGISTS
LABORATORY PROFESSIONALS
ASSOCIATION

EXPERIMENTAL AND COMPRESSION TEST REPORT

Project No. _____ Lab. No. _____
 Location _____
 Condition _____
 Material _____
 Date Submitted at Lab. _____
 Report No. _____
 Specimen _____
 Made by _____
 Shipped by _____

EXPERIMENT NUMBER	DATE MADE	SLUMP INCHES	SIXTINE				Comments	Type Specimen	Age in Days	Date and Location of Test
			Time Aggregate	Flow Aggregate	Flow Cement	Total Water				

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WICHITA CHEMICAL AND TESTING LABORATORIES
 1435 W. MONROE AVE., PHOENIX, ARIZONA
 WICHITA, KANSAS



CC: 2-Eby Constr. Co.
~~2-Black & Veatch~~

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File: 1

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FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 805173
 (Refer to This Number)
9th & Big River
 Location: Wichita, Kansas
 Contractor: Martin K. Eby Constr.
 Architect: Black & Veatch
 Owner: W. T. T.
 Date Submitted at Lab: 4-22-55

Date May 19, 1955
 Report No. ECC #11
 Specimens
 Made by: Burley
 Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour	
			Fine Aggregate	Coarse Aggregate	Cement	Total Water						
No. 3924	4-20	4"	1385	1755	611	Gal. 26.2	3687	RC-MB	28	26	Abutment-Upstream	
Required 28 day strength:							3500 P.S.I.					

READY-MIXED CONCRETE
 Furnished by
 Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

AF—aggregate failure.

Admixture Amber Air

WICHITA CHEMICAL & TESTING LABORATORIES

Fine Aggregate Keeler

By [Signature]

Coarse Aggregate Moline Limestone 1"

Mixed Aggregate None



Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
WORKS ON MANUFACTURING PROBLEMS
1225 W. MOSELEY AVE.
PHONE NUMBER 4-3043
WICHITA 4, KANSAS

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AMERICAN SOCIETY FOR TESTING MATERIALS
AMERICAN SOCIETY OF METALS
AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASSOCIATION OF APPLIED POLYMER SCIENTISTS
INTERNATIONAL FEDERATION OF TESTING ENGINEERS

TESTING AND COMPRESSION TEST REPORT

Date: 10/15/54
Report No: 100-101
Specimens: 3
Made by: [unclear]
Machine: [unclear]

Project: [unclear]
Location: [unclear]
Condition: [unclear]
Analysis: [unclear]
Device: [unclear]
Date Submitted at Lab: [unclear]

SPECIMEN NO.	DATE MADE	LOADING RATE	TEST SIZE	APPLIED			COMPRESSION SPECIMEN NO.	TEST NO.	TENSILE STRENGTH	TENSILE ELONGATION	TENSILE MODULUS	TENSILE REDUCTION OF AREA
				LOAD	TIME	STRESS						
100-101-1	10/15/54	1000	1/2"	1000	10	1000	1000	1000	1000	1000	1000	1000
100-101-2	10/15/54	1000	1/2"	1000	10	1000	1000	1000	1000	1000	1000	1000
100-101-3	10/15/54	1000	1/2"	1000	10	1000	1000	1000	1000	1000	1000	1000

Wichita Chemical & Testing Laboratories
1225 W. Mosley Ave.
Wichita 4, Kansas

WICHITA CHEMICAL & TESTING LABORATORIES





CC: 2-Eby Constr. Co.
2-Black & Veatch

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RESEARCH ON MANUFACTURING PROBLEMS
1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 805191
9th & Big River (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch
Owner: - - -
Date Submitted at Lab: 5-16-55

Date May 19, 1955
Report No. HO 112
Specimens
Made by: Burley Kinney
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 4201 (7c)	5-5	3"	1385	1755	611	Gal. 26.2	1761	RC-MB	14	3	South Abutment Wall of Bridge #4
Required 28 day strength:							3500 P.S.I.				
READY-MIXED CONCRETE Furnished by Walt Keeler Company, Inc.											

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

Admixture Amber Air

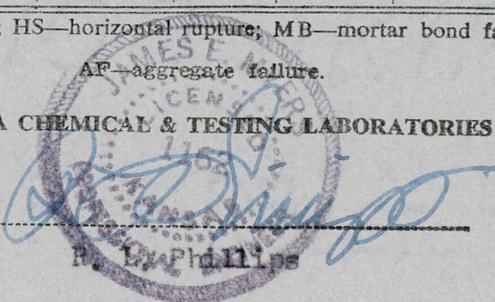
Fine Aggregate Keeler

Coarse Aggregate Moline Limestone #1

Mixed Aggregate None

WICHITA CHEMICAL & TESTING LABORATORIES

By [Signature]





CC: 2-Eby Constr. Co.
2-Black & Veatch

Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS

File: 1

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WICHITA 4, KANSAS

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ASS'N OF ASPHALT PAVING TECHNOLOGISTS
LICENSED PROFESSIONAL ENGINEERS

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 805114
9th & Big River (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch
Owner: T.T.T.
Date Submitted at Lab: 5-6-55

Date May 16, 1955
Report No. BOC #10
Specimens
Made by: Mr. Kinney
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour	
			Fine Aggregate	Coarse Aggregate	Cement	Total Water						
No. 4124 (7a)	5-5-	3"	1385	1755	611	26.2	1832	DS-MB	7	6	South Abutment Walls of Bridge #4 (P.M.)	
Required 28 day strength:							3500 P.S.I.					
<p style="color: red; text-align: center;">READY-MIXED CONCRETE Furnished by Walt Keeler Company, Inc.</p>												

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

AF—aggregate failure.

Admixture Amber Air

WICHITA CHEMICAL & TESTING LABORATORIES

Fine Aggregate Keeler

By R. L. Phillips

Coarse Aggregate Moline Limestone 1"

R. L. Phillips

Mixed Aggregate None



Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
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1438 N. MOBLEY AVE. PHOENIX HOUSE # 2212
WICHITA 2, KANSAS

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- AMERICAN SOCIETY FOR TESTING MATERIALS
- AMERICAN SOCIETY OF CIVIL ENGINEERS
- LABORATORY OF APPLIED CHEMISTRY
- REGISTERED PROFESSIONAL ENGINEER

FLUXURE AND COMPRESSION TEST REPORT

Date Submitted to Lab: _____
 Name of Client: _____
 Location: _____
 Contractor: _____
 Architect: _____
 Engineer: _____
 Date Submitted to Lab: _____

Project No. _____
 Report No. _____
 Specimens _____
 Made by _____
 Structure _____

STATION NUMBER	DATE MADE	SUMP	TYPE	MIXTURE			Compressive Strength P.S.I.	Type Fracture	Age in Days	Type Lab. Used	Remarks and location of Port
				Concrete Aggregate	Cement	Total Water					

READY-MIXED CONCRETE
Wichita Concrete Co., Inc.

TYPE FRACTURE: KO—regular cone, VS—vertical shear, US—angular shear, H2—horizontal rupture, M2—moran bond failure.

Blind of Cement _____
 Aggregate _____
 Fine Aggregate _____
 Coarse Aggregate _____
 Mixed Aggregate _____

WICHITA CHEMICAL AND TESTING LABORATORIES

By _____



CC: 2-Eby Constr. Co.
2-Black & Veatch

Wichita CHEMICAL AND TESTING Laboratories

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WICHITA 4, KANSAS

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LICENSED PROFESSIONAL ENGINEERS

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 805061
9th & Big River (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch
Owner: Wichita, Kansas
Date Submitted at Lab: 5-5-55 & 4-12-55 & 4-29-55

Date May 11, 1955
Report No. ECG #9
Specimens
Made by: Mr. Kinney & Burley
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 4108 (6-C)	4-28	3"	1385	1755	611	26.2	1557	RC-MB	2	0	South Abutment Slab of Bridge #4
No. 3774 (4-B)	4-8	4"	1385	1755	611	26.2	4606	DS-MB	28	24	Abutment - Down Stairs
No. 4050 (6-A)	4-28	2-1/2"	1385	1755	611	26.2	1902	RC-MB	7	6	Abutment - Down Stairs
Required 28 day strength:							3500 P.S.I.				
<p style="color: red; text-align: center;">READY-MIXED CONCRETE Furnished by Walt Keeler Company, Inc.</p>											

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

AF—aggregate failure.

Admixture Amber Air

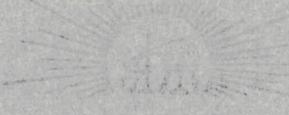
WICHITA CHEMICAL & TESTING LABORATORIES

Fine Aggregate Walt Keeler

By R. L. Phillips

Coarse Aggregate Moline Limestone 1"

Mixed Aggregate None



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WICHITA, KANSAS

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KANSAS SOCIETY OF ENGINEERS
KANSAS SOCIETY OF PHYSICISTS
KANSAS SOCIETY OF METALLURGISTS
KANSAS SOCIETY OF MECHANICAL ENGINEERS

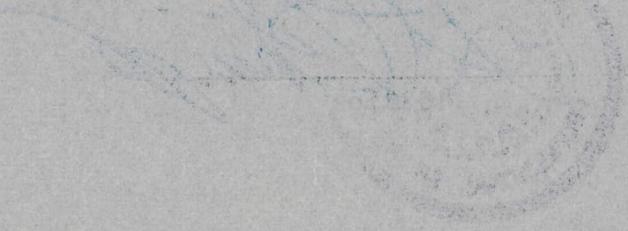
FLUEBLE AND COMPRESSION TEST REPORT

Project: _____
 Location: _____
 Contractor: _____
 Architect: _____
 Owner: _____
 Date Submitted to Lab: _____
 Report No.: _____
 Specimens: _____
 Make and Model: _____
 Remarks: _____

Specimen No.	Description	Material	Specimen Size	Temperature	Pressure	Volume	Density	Specific Gravity	Moisture	Ash	Sulfur	Phosphorus	Nitrogen	Chlorine	Sulfate	Silica	Alumina	Iron Oxide	Calcium Oxide	Magnesia	Loss on Ignition	Remarks	
																							Wt. %
1
2
3

These results are based on the analysis of the specimens as received and are not to be used for any other purpose.

WICHITA CHEMICAL AND TESTING LABORATORIES



PROJECT: Ozarkland Crossing Project 21-55

LOCATION: Wichita, Kansas

ENGINEER/ARCHITECT: Black & Veatch

CONTRACTOR: Marlin F. Day Constr. Co.

Wichita AND Laboratories

CHEMICAL AND TESTING
CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 005022
(REFER TO THIS NUMBER)
DATE 5-4-55
BATCH PLANT Walt Kaylor Co.
WEATHER 74-81-18

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.			AGGREGATE DATA			FIELD TESTS			
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE	COARSE AGGREGATE	FREE WATER	ABSORPTION	TIME CHECKED
1	65	4-1/2 Yd.	10:15 AM	B-3500	1100	1735	611	*		5.92%	0.8%	-1.24%	2.7%	10:30 AM
2	5A	1-1/2 Yd.	10:30 AM	B-3500	1100	1735	611	*		5.92%	0.8%	-1.24%	2.7%	10:30

THEORETICAL BATCH WEIGHTS (DRY)

FINE AGG:	<u>Keeler Sand</u>	TYPE	AMOUNT
COARSE AGG:	<u>Rolling Stone</u>		<u>1735</u>
CEMENT:	<u>Lowry</u>		<u>611</u>
SPECIAL:	<u>City Water</u>		<u>28.0 gal/yd.</u>
ADMIX:	<u>Anchor Air</u>		<u>1/2 oz/sk.</u>

START: 10:00 A.M. STOP: 11:00 A.M.

TIME INSPECTION AT PLANT

TOTAL CU. YDS. CHECKED _____

TOTAL CU. YDS. THIS PROJECT _____

COMPRESSION TEST DATA

TIME TAKEN _____

SLUMP: _____

TEST SPECIMEN NO. _____

YIELD: _____

POUR LOCATION: _____

ENTRAINED AIR: _____

PER INSPECTOR: _____



REMARKS: 0 * Concrete Keeler dry to job
also - water added there.

CC: 2-Day Constr.
2-Kaylor
1-Kroll

FILE # 1-1000

PAGE 1 OF 05



CC: 2-Eby Constr. Co.
2-Black & Veatch

Wichita CHEMICAL AND TESTING *Laboratories*

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS

1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

File: 1

Principals Are
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AMERICAN CHEMICAL SOCIETY
AMERICAN SOCIETY FOR TESTING MATERIALS
AMERICAN SOCIETY OF CIVIL ENGINEERS
ASS'N OF ASPHALT PAVING TECHNOLOGISTS
LICENSED PROFESSIONAL ENGINEERS

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 804312
9th & Big River (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr. Co.
Architect: Black & Veatch
Owner: _____
Date Submitted at Lab: 4-22, 4-27

Date April 28, 1955
Report No. WOC # 8
Specimens _____
Made by: Burley
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 3923 (5-A)	4-20	4"	1385	1755	611	26.2	2984	RC-MB	7	5	Abutment - Upstream
No. 4024 (5-C)	4-20	4"	1385	1755	611	26.2	3334	DS-MB	7	0	A & B Walls
No. 3637 (3-B)	3-31	4"	1385	1755	611	26.2	3510	DS&MB	28	24	Downstream Abut. Slab
No. 4025 (3-D)	3-31	4"	1385	1755	611	26.2	3318	RC-MB	28	1	A & B Wall
Required 28 day strength: 3500 P.S.I.											
Class of Concrete "B"											

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

AF—aggregate failure.

Admixture Amber Air

WICHITA CHEMICAL & TESTING LABORATORIES

Fine Aggregate Walt Keeler

By R. L. Phillips

Coarse Aggregate Moline Limestone 1"

R. L. Phillips

Mixed Aggregate None



CC

Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS
JAMES H. MUELLER, AVTL. PRIME NO. 44-A-343
WICHITA, KANSAS

Members of
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AMERICAN SOCIETY FOR TESTING MATERIALS
AMERICAN ELECTRICITY DIVISION
AMERICAN SOCIETY OF APPLIED PHYSICS
LICENSED PROFESSIONAL ENGINEERS

FLUORE AND COMPRESSION TEST REPORT

Project No. _____
 Location _____
 Manufacturer _____
 Operator _____
 Date Submitted to Lab. _____
 Date _____
 Report No. _____
 Specimens _____
 Machine _____
 Pressure _____

Specimen Number	Date	Specimen	Type of Test	Compressive Strength	MIXTURE			Remarks
					Water	Cement	Aggregate	
1								
2								
3								
4								

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WICHITA CHEMICAL AND TESTING LABORATORIES

By _____

PROJECT: Overhead Crossing Project #21-55

LOCATION: Wichita, Kansas - 13th & Big Ditch

ENGINEER/ARCHITECT: Mack & Voth

CONTRACTOR: Martin K. Day Constr. Co.

Wichita AND Laboratories

CHEMICAL AND TESTING

CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. R01292

(REFER TO THIS NUMBER)

DATE 4-21-55

BATCH PLANT: Mack Kooler Co.

WEATHER: Fair - 61F

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.			FINE AGGREGATE	COARSE AGGREGATE	FIELD TESTS			
					FINE AGG.	COARSE AGG.	CEMENT				WATER	(OTHER)	TIME CHECKED
1	M6	5 yds.	12:45 PM	B-3500	1385	1755	611	20.8	0.5%	0.0%	0.0%	2.7%	12:30 PM
2	M9	5 yds.	12:55	B-3500	1385	1755	611	20.8	0.5%	0.0%	0.0%	2.7%	12:30
3	66	5 yds.	1:45	B-3500	1385	1755	611	20.8	0.5%	0.0%	0.0%	2.7%	12:30
4	M6	5 yds.	2:05	B-3500	1385	1755	611	20.8	0.5%	0.0%	0.0%	2.7%	12:30
5	M9	5 yds.	2:40	B-3500	1385	1755	611	20.8	0.5%	0.0%	0.0%	2.7%	12:30
6	66	5 yds.	3:40	B-3500	1385	1755	611	20.8	0.5%	0.0%	0.0%	2.7%	12:30

THEORETICAL BATCH WEIGHTS (DRY)

TOTAL CU. YDS. CHECKED 30

FINE AGG: Keeler Sand 1325 AMOUNT

COARSE AGG: Moline 1/4 Stone 1755

CEMENT: Mortar 611

SPECIAL: City Water 28.0 gal.

ADMIX.: Amber Air 1/2 oz. ea.

TIME INSPECTION AT PLANT START 12:30 P.M. STOP 4:00 P.M.

TOTAL CU. YDS. THIS PROJECT

COMPRESSION TEST DATA

TIME TAKEN, SLUMP, TEST SPECIMEN NO., YIELD, POUR LOCATION, ENTRAINED AIR, PER INSPECTOR

REMARKS: [Signature]



CC: 2-Miller, 1-Kooler, 1-Phillips, 1-Hess



CC: 2-Eby Constr. Co.
2-Black & Veatch

Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS

1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

File: 1

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AMERICAN SOCIETY OF CIVIL ENGINEERS
ASS'N OF ASPHALT PAVING TECHNOLOGISTS
LICENSED PROFESSIONAL ENGINEERS

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 804190
9th & Big River
(Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr. Co.
Architect: Black & Veatch
Owner: _____
Date Submitted at Lab: 4-15-55

Date April 20, 1955
Report No. BOC #7
Specimens _____
Made by: Burley
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour	
			Fine Aggregate	Coarse Aggregate	Cement	Total Water						
No. 3828 (	4-8	4"	1272	1685	611	26.2	3053	RC-AF	7	1	Abutment Wall
			Required 28 day strength:				3500 P.S.I.					
			Class of Concrete "B"									

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch
Admixture Ambor Air
Fine Aggregate Walt Keeler
Coarse Aggregate Moline Limestone 1"
Mixed Aggregate None

AF—aggregate failure

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

PROJECT: Overhead Crossing Project #21-55

LAB. NO. 09154
(REFER TO THIS NUMBER)

LOCATION: Michita, Kansas

Michita
CHEMICAL
AND
TESTING
Laboratories

DATE 4-11-55

ENGINEER/ARCHITECT Black & Yeastek

BATCH PLANT Michita, Kansas

CONTRACTOR Worlin K. Day

WEATHER Partly Cloudy

CONCRETE BATCH PLANT INSPECTION LOG

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.			AGGREGATE DATA		FIELD TESTS						
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE	COARSE AGGREGATE	FREE WATER ABSORPTION	FREE WATER ABSORPTION	CHECKED	TIME	
1	44	5 yds.	8:00AM	B-3500	1385	1765	611	19.7		4.0%	0.05	0.55				
2	64	5 yds.	8:10	B-3500	1385	1765	611	19.7		4.0	0.6	0.5				
3	67	5 yds.	8:16	B-3500	1385	1765	611	19.7		4.0	0.6	0.5				
4	44	5 yds.	10:15	B-3500	1385	1765	611	19.7		4.0	0.6	0.5				
5	63	5 yds.	11:30	B-3500	1385	1765	611	19.7		4.0	0.6	0.5				
6	67	5 yds.	12:10PM	B-3500	1385	1765	611	19.7		4.0	0.6	0.5				

THEORETICAL BATCH WEIGHTS (DRY)

TYPE	AMOUNT
FINE AGG: <u>Keeler Sand</u>	<u>1325</u>
COARSE AGG: <u>Rolling Stone</u>	<u>1755</u>
CEMENT: <u>Monopack</u>	<u>611</u>
SPECIAL: <u>City Water</u>	<u>26.0</u>
ADMIX: <u>Anchor Mix</u>	<u>1/2 oz/sk.</u>

TOTAL CU. YDS. CHECKED 30

TOTAL CU. YDS. THIS PROJECT _____

COMPRESSION TEST DATA

TIME TAKEN: _____

SLUMP: _____

TEST SPECIMEN NO. _____

YIELD: _____

POUR LOCATION: _____

ENTRAINED AIR: _____

PER INSPECTOR: _____

REMARKS: _____





CC: 2-Eby Constr.
2-Black & Veatch

Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS

File: 1

1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

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ASS'N OF ASPHALT PAVING TECHNOLOGISTS
LICENSED PROFESSIONAL ENGINEERS

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 804028
9th & Big River
Location: Wichita, Kansas
Contractor: Martin K. Eby, Constr. Co.
Architect: Black & Veatch
Owner: ---
Date Submitted at Lab: 3-8-55

Date April 15, 1955
Report No. ENC #4
Specimens
Made by: Dapps
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 1-B (3306)	3-7-	3"	1272	1685	611	262	5718	DS-AF	28	27	West Abutment

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

AF—aggregate failure

Admixture Amber Air

WICHITA CHEMICAL & TESTING LABORATORIES

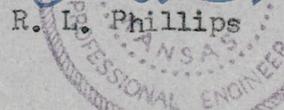
Fine Aggregate Walt Keeler

By R. L. Phillips

Coarse Aggregate Moline Limestone 1"

R. L. Phillips

Mixed Aggregate None



PROJECT: Overhead Cracking
 LOCATION: 13th & Big Ditch
 ENGINEER/ARCHITECT: Black & Veatch
 CONTRACTOR: Ray Concrete Co.

Wichita
 CHEMICAL AND LABORATORIES
 TESTING
 CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 801699
 (REFER TO THIS NUMBER)
 DATE: 4-2-55
 BATCH PLANT: Water Tower
 WEATHER: 74°F & Sunny

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.			AGGREGATE DATA			FIELD TESTS			
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE	COARSE AGGREGATE	FREE WATER	ABSORPTION	TIME CHECKED
1	58	5 yds.	7:00AM	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00 A.M.
2	64	5 yds.	7:05	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
3	50	5 yds.	7:15	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
4	65	5 yds.	7:20	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
5	58	5 yds.	9:25	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
6	64	5 yds.	9:45	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
7	50	5 yds.	10:00	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
8	58	5 yds.	10:50	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
9	49	5 yds.	11:00	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
10	64	5 yds.	11:10	B-3500	1380	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
11	50	5 yds.	11:30	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
12	58	5 yds.	12:05	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
13	49	5 yds.	12:25	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00

THEORETICAL BATCH WEIGHTS (DRY)

TYPE: Roller Sand AMOUNT: 1325
 TYPE: Roller Stone AMOUNT: 1755
 TYPE: Keypoh AMOUNT: 611
 TYPE: City Water AMOUNT: 28.0
 ADMIX.: _____
 TIME INSPECTION AT PLANT: _____
 START: 7:00 A.M. STOP: 12:30 P.M.

TOTAL CU. YDS. CHECKED _____
 TOTAL CU. YDS. THIS PROJECT _____
 COMPRESSION TEST DATA

TIME TAKEN _____
 SLUMP: _____
 TEST SPECIMEN NO. _____
 YIELD: _____
 POUR LOCATION: _____
 ENTRAINED AIR: _____
 PER INSPECTOR: _____

REMARKS: _____

 PLANT INSPECTOR

CC: 2-Roy Conrath
2-Roller
1-Kroll
1-Hess
 FILE _____ PAGE _____ OF _____

PROJECT: Overhead Concrete
 LOCATION: 19th & Big Ditch
 ENGINEER/ARCHITECT: Platt & Ventch
 CONTRACTOR: Iby Construction Co.

Wichita
 CHEMICAL AND LABORATORIES
 TESTING
 CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 901099
 (REFER TO THIS NUMBER)
 DATE: 4-2-55
 BATCH PLANT: Walt Koster
 WEATHER: Partly Sunny

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.			AGGREGATE DATA			FIELD TESTS			
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE	COARSE AGGREGATE	FREE WATER	ABSORPTION	TIME CHECKED
1	50	5 yds.	7:00 A.M.	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00 A.M.
2	66	5 yds.	7:05	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
3	50	5 yds.	7:15	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
4	65	5 yds.	7:20	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
5	58	5 yds.	7:25	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
6	66	5 yds.	7:45	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
7	50	5 yds.	10:00	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
8	58	5 yds.	10:50	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
9	69	5 yds.	11:00	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
10	66	5 yds.	11:10	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
11	50	5 yds.	11:30	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
12	58	5 yds.	12:05	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
13	69	5 yds.	12:25	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00

THEORETICAL BATCH WEIGHTS (DRY)

TOTAL CU. YDS. CHECKED _____
 TOTAL CU. YDS. THIS PROJECT _____

TYPE AMOUNT
 FINE AGG: Koeler Sand 1325
 COARSE AGG: Rolling Stone 1755
 CEMENT: Koncrak 611
 SPECIAL: City Water 28.6
 ADMIX: _____
 TIME INSPECTION AT PLANT
 START 7:00 A.M. STOP 12:30

COMPRESSION TEST DATA

TIME TAKEN _____
 SLUMP: _____
 TEST SPECIMEN NO. _____
 YIELD: _____
 POUR LOCATION: _____
 ENTRAINED AIR: _____
 PER INSPECTOR: _____



REMARKS: _____
 PLANT INSPECTOR

CC: 2-Boyer Constr.
2-Keller
1-Kroll
1-Horn



CC: 2-Eby Constr.
2-Black & Veatch

Wichita CHEMICAL AND TESTING *Laboratories*

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ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS
1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 304085
9th & Big River
(Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr. Co.
Architect: Black & Veatch
Owner: _____
Date Submitted at Lab: 4-4-55

Date April 8, 1955
Report No. 300 #5
Specimens _____
Made by: Burley Kinney
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 3636 (No. 3A)	3-31	4"	1272	1685	611	262	2511	DS-MB	7	3	Downstream Abut. Slab.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch

AF—aggregate failure.

Admixture Amber Air

WICHITA CHEMICAL & TESTING LABORATORIES

Fine Aggregate Walt Keeler

By _____

Coarse Aggregate Moline Limestone 1"

R. L. Phillips

Mixed Aggregate None

PROJECT: Overhead Crossing - Proj. #21-55
 LOCATION: Wichita, Kansas
 ENGINEER/ARCHITECT: Wade & Voth
 CONTRACTOR: By Concrete Co.

Wichita
 CHEMICAL AND LABORATORIES
 TESTING
 CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 103272
 (REFER TO THIS NUMBER)
 DATE: 3-21-55
 BATCH PLANT: Wade Keeler
 WEATHER: Partly Cloudy

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.			AGGREGATE DATA			FIELD TESTS			
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE	COARSE AGGREGATE	TIME CHECKED		
1	52	5 yds.	9:50	B-35C0	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
2	44	5 yds.	10:05	B-35C0	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
3	62	5 yds.	10:30	B-35C0	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
4	59	5 yds.	11:10	B-35C0	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
5	44	5 yds.	11:40	B-35C0	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
6	62	5 yds.	11:50	B-35C0	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
7	53	5 yds.	12:30	B-35C0	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
8	44	5 yds.	12:55	B-35C0	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
9	62	5 yds.	1:15	B-35C0	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30

THEORETICAL BATCH WEIGHTS (DRY)

TYPE AMOUNT

FINE AGG: Keeler Sand 1395

COARSE AGG: Rolling Stone 1770

CEMENT: Koncrete 611

SPECIAL: City Water 28.0

ADMIX: _____

TIME INSPECTION AT PLANT

START 9:30 A.M. STOP 1:30 P.M.

TOTAL CU. YDS. CHECKED 45-2/2

TOTAL CU. YDS. THIS PROJECT _____

COMPRESSION TEST DATA

TIME TAKEN _____

SLUMP: _____

TEST SPECIMEN NO. _____

YIELD: _____

POUR LOCATION: _____

ENTRAINED AIR: _____

PER INSPECTOR: _____

REMARKS: _____


 JAMES E. MYERS
 LICENSED PROFESSIONAL ENGINEER
 No. 1182
 State of Kansas

CC: 2-Bby Construction Co.

FILE 1-1182

PROJECT: Overhead Crossing Proj.

CHEMICAL AND LABORATORIES

LAB. NO. 803327
(REFER TO THIS NUMBER)

LOCATION: Waller, Kansas

TESTING

DATE March 21, 1955

ENGINEER/ARCHITECT: Black & Veatch

CONCRETE BATCH PLANT INSPECTION LOG

BATCH PLANT Kalt Keeler Co.

CONTRACTOR: Walter F. Day Constr. Co.

WEATHER Clear - Cool

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.				AGGREGATE DATA				FIELD TESTS	
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE	COARSE AGGREGATE	FREE WATER	ABSORPTION	FREE WATER	ABSORPTION	TIME CHECKED
1	56	5 yds.	10:40	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	10:30 A.M.
2	51	5 yds.	10:50	B-2500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	10:30
3	56	5 yds.	12:10	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	10:30
4	51	5 yds.	12:20	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	10:30
5	57	3 1/2 yds.	1:15	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	10:30

THEORETICAL BATCH WEIGHTS (DRY)

TOTAL CU. YDS. CHECKED 23 1/2

TYPE AMOUNT

FINE AGG: Keeler Sand 1395

COARSE AGG: Collins Stone 1770

CEMENT: Cement 611

SPECIAL: Water 28.0

ADMIX: Amber Air 2 1/2 oz/sk.

TIME INSPECTION AT PLANT

START 10:30 STOP 1:00 P.M.

TOTAL CU. YDS. THIS PROJECT _____

COMPRESSION TEST DATA

TIME TAKEN _____

SLUMP: _____

TEST SPECIMEN NO. _____

YIELD: _____

POUR LOCATION: _____

ENTRAINED AIR: _____

PER INSPECTOR: _____



REMARKS: _____

PLANT INSPECTOR: _____

CC: 2-My Constr.

2-Office

1-Base

1-Knoell

FILE _____

PAGE _____ OF _____



CC:2-Eby Construction
2-Black & Veatch

Wichita CHEMICAL AND TESTING Laboratories

Principals Are
MEMBERS OF:
AMERICAN CHEMICAL SOCIETY
AMERICAN SOCIETY FOR TESTING MATERIALS
AMERICAN SOCIETY OF CIVIL ENGINEERS
ASS'N OF ASPHALT PAVING TECHNOLOGISTS
LICENSED PROFESSIONAL ENGINEERS

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS

File:1

1428 N. MOSLEY AVE. PHONE HOBAR 4-3948
WICHITA 4, KANSAS

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 803269
9th & Big River (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Construction Co.
Architect: Black & Veatch
Owner:
Date Submitted at Lab:

Date March 25, 1955
Report No. MCC-#2
Specimens
Made by: Kenney
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 2A	3-17	4"	1272	1685	611	262	4128	DS-AF	7		East Abut. Slab

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

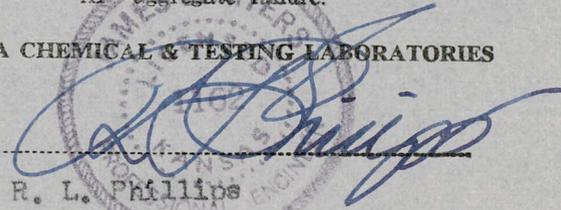
Brand of Cement Monarch

AF—aggregate failure.

Admixture Amber-Air

WICHITA CHEMICAL & TESTING LABORATORIES

Fine Aggregate Walt Keeler

By 

Coarse Aggregate Moline Limestone 1"

R. L. Phillips

Mixed Aggregate None



CC: 2-By Constr.
2-Black & Veatch

Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS

File: 1

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ASS'N OF ASPHALT PAVING TECHNOLOGISTS
LICENSED PROFESSIONAL ENGINEERS

1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 803284
9th & Big River (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. By, Constr. Co.
Architect: Black & Veatch
Owner: _____
Date Submitted at Lab: 3-25-55

Date March 25, 1955
Report No. 200-43
Specimens _____
Made by: Kennay
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 20	3-17	4"	1272	1685	611	262	3213	DS-MB	8	0	Abutment Slab @ 11:00 A.M.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement Monarch
Admixture Water-Air
Fine Aggregate Walt Keeler
Coarse Aggregate Moline Limestone 1"
Mixed Aggregate None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips
R. L. Phillips

PROJECT: Overhead Dorrwing Project #21-55
 LOCATION: Wichita, Kansas
 ENGINEER/ARCHITECT: Mark A. Vortch
 CONTRACTOR: Ray Construction Co.

Wichita
 CHEMICAL AND LABORATORIES
 TESTING
 CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 809272
 (REFER TO THIS NUMBER)
 DATE March 24, 1955
 BATCH PLANT Walt Keeler
 WEATHER Fair & Cool

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.				AGGREGATE DATA			FIELD TESTS	TIME CHECKED	
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE	COARSE AGGREGATE			AGGREGATE ABSORPTION
1	53	5 yds.	9:50	B-2500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
2	64	5 yds.	10:05	B-2500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
3	62	5 yds.	10:30	B-2500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
4	53	5 yds.	11:10	B-2500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
5	64	5 yds.	11:45	B-2500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
6	62	5 yds.	11:50	B-2500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
7	53	5 yds.	12:30	B-2500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
8	64	5 yds.	12:55	B-2500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
9	62	5 yds.	1:15	B-2500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30

THEORETICAL BATCH WEIGHTS (DRY)

TOTAL CU. YDS. CHECKED 45-2/2
 TOTAL CU. YDS. THIS PROJECT _____

FINE AGG: Kooler Sand AMOUNT 1395
 COARSE AGG: Rolling Stone AMOUNT 1770
 CEMENT: Rematch AMOUNT 611
 SPECIAL: City Water AMOUNT 28.0
 ADMIX: _____
 TIME INSPECTION AT PLANT _____
 START 9:30 A.M. STOP 1:30 P.M.

COMPRESSION TEST DATA

TIME TAKEN _____
 SLUMP: _____
 TEST SPECIMEN NO. _____
 YIELD: _____
 POUR LOCATION: _____
 ENTRAINED AIR: _____
 PER INSPECTOR: _____

REMARKS:

[Signature]
 JAMES E. M...
 PROFESSIONAL ENGINEER
 STATE OF KANSAS
 No. 1162

CC: 2-Dry Constr.
2-Keeper
1-Kroll
1-Hess
 FILE 1 PAGE _____ OF _____

PROJECT: Overhead Crossing Proj. #23-55

LOCATION: Winton, Kansas

ENGINEER/ARCHITECT: Black & Veatch

CONTRACTOR: Harold K. Day Const. Co.

Wichita
CHEMICAL AND LABORATORIES
TESTING

CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 603153
(REFER TO THIS NUMBER)

DATE March 17, 1955

BATCH PLANT Holt Keeler

WEATHER Cloudy & Cool

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.			AGGREGATE DATA			FIELD TESTS			
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE ABSORPTION		COARSE AGGREGATE FREE WATER	AGGREGATE ABSORPTION	
1	5A	5 yds.	8:20	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	8:00AM
2	51	5 yds.	8:30	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	8:00
3	58	5 yds.	8:35	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	8:00
4	49	5 yds.	9:00	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	8:00
5	5A	5 yds.	9:10	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	8:00

THEORETICAL BATCH WEIGHTS (DRY)

TYPE: Keeler Sand AMOUNT: 1325
 FINE AGG: Moline Stone AMOUNT: 1755
 COARSE AGG: Wichita AMOUNT: 611
 CEMENT: City Water AMOUNT: 28.0
 SPECIAL: Water
 ADMIX: Water AMOUNT: 1/2 oz/dk.
 TIME INSPECTION AT PLANT
 START 8:00 A.M. STOP 10:00 A.M.

TOTAL CU. YDS. CHECKED _____

TOTAL CU. YDS. THIS PROJECT _____

COMPRESSION TEST DATA

TIME TAKEN _____

SLUMP: _____

TEST SPECIMEN NO. _____

YIELD: _____

POUR LOCATION: _____

ENTRAINED AIR: _____

PER INSPECTOR: _____

REMARKS:

[Signature]
 PLANT INSPECTOR


CC: 2-By
2-Keeler
1-Here
1-Kroll
 FILE 1



CC: 2-Eby Constr.
2-Black & Veatch

Wichita CHEMICAL AND TESTING *Laboratories*

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AMERICAN SOCIETY FOR TESTING MATERIALS
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LICENSED PROFESSIONAL ENGINEERS

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS
1428 N. MOSLEY AVE. PHONE HO BART 4-3948
WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossings Lab. No. 803146
9th & Big River (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Construction Co.
Architect: Black & Veatch
Owner:
Date Submitted at Lab: 3-2-55 & 3-14-55

Date: March 15, 1955
Report No. 800 - #1
Specimens
Made by: Doppe
Structure

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 1A	3-7	3"	1272	1685	611	262	4005	RC-MB	7	6	West Abutment
No. 1C	3-7	3"	1272	1685	611	262	4270	RC-MB	7	1	West Abutment

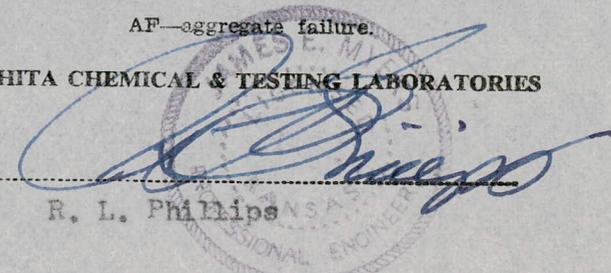
TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure;

Brand of Cement Monarch
Admixture Amber Air
Fine Aggregate Walt Keeler
Coarse Aggregate Noline Limestone 1"
Mixed Aggregate None

AF—aggregate failure.

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips



PROJECT: Overhead Crossing Project #21-85
 LOCATION: Wichita, Kansas, Const. No. 5
 ENGINEER/ARCHITECT: Black & Veatch
 CONTRACTOR: Wichita K. Bly Construction Co.

Wichita
CHEMICAL AND LABORATORIES
 TESTING

CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 00254
 (REFER TO THIS NUMBER)
 DATE March 14, 1955
 BATCH PLANT Wichita K. Bly Const. Co.
 WEATHER Partly Cloudy

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.			AGGREGATE DATA			FIELD TESTS	TIME CHECKED		
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE FREE WATER			COARSE AGGREGATE FREE WATER	ABSORPTION
1	43	5 yds.	12:25pm	B-2500	1395	1765	611	20.6		4.5%	0.8%	0.5%	2.7%	11:45am
2	57	5 yds.	12:45	B-2500	1395	1765	611	20.6		4.5%	0.8%	0.5%	2.7%	11:45
3	59	5 yds.	1:30	B-2500	1395	1765	611	20.6		4.5%	0.8%	0.5%	2.7%	11:45
4	43	5 yds.	1:50	B-2500	1395	1765	611	20.6		4.5%	0.8%	0.5%	2.7%	11:45
5	57	5 yds.	2:10	B-2500	1395	1765	611	20.6		4.5%	0.8%	0.5%	2.7%	11:45

THEORETICAL BATCH WEIGHTS (DRY)

TYPE AMOUNT

FINE AGG: Keeler Sand 1395
 COARSE AGG: Wichita 1 1/2 1765
 CEMENT: Wichita 611
 SPECIAL: City Water 20.6
 ADMIX.: Anchor Air 1/2 oz./cy.
 TIME INSPECTION AT PLANT
 START 11:30 A.M. STOP 5:30 P.M.

TOTAL CU. YDS. CHECKED 25

TOTAL CU. YDS. THIS PROJECT 97

COMPRESSION TEST DATA

TIME TAKEN _____
 SLUMP: _____
 TEST SPECIMEN NO. _____
 YIELD: _____
 POUR LOCATION: _____
 ENTRAINED AIR: _____
 PER INSPECTOR: _____

REMARKS:

[Handwritten Signature]
 PLANT INSPECTOR

CC: 2-Bly Const.
2-Keeler
1-Rochell 1-Moss
 FILE 1

BLACK & VEATCH
CONSULTING ENGINEERS

TEL. WESTPORT 7474

4706 BROADWAY
KANSAS CITY 2, MISSOURI

March 8, 1955

Subject: Wichita, Kansas
Water Transmission Mains
Overhead Crossings
Contract No. 5
Project 2155, G5.1

Martin K. Eby Construction Co., Inc.
610 North Main Street
Wichita, Kansas

Attention Mr. I. S. Barnett

Gentlemen:

The concrete mix design and aggregate sieve analyses for the concrete aggregate you propose to use for subject contract are both satisfactory. Since this mix is identical to the one being used at the water treatment plant, we are hereby approving it, although since it does contain an admixture, it is somewhat different than was actually contemplated for this particular contract. However, the air entraining concrete should be perfectly satisfactory for the construction under this contract and is, therefore, approved.

Very truly yours,

BLACK & VEATCH

L. W. Weller

LWW:fl

cc J. J. Knoll w/enc.
R. H. Hess w/enc.

C

O

P

Y

4708 BROADWAY
KANASAS CITY 21, MISSOURI

January 15, 1957

Subject: 42 Highways, Kansas
Kansas Commission on State
Highway Planning
Contract No. 1
Project 42-1

Arthur E. Cox Construction Co., Inc.
600 North Main Street
Wichita, Kansas

Attention: Mr. E. J. Barrett

Dear Sir:

The contract for design and engineering plans for the
construction of two highways in the State of Kansas
and the State of Oklahoma is hereby awarded to the
lowest responsible bidder. The contract is for the
design and engineering of the two highways, including
all necessary surveys, plans, specifications, and
contract documents. The contract is for a lump sum
price and the contractor shall be responsible for
obtaining all necessary permits and approvals.
Your approval.

C

O

P

Y

BLACK & VEATCH

W. W. Walker
11

MADE IN U.S.A.



CC: 6-By Constr. Co.

Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS

File: 1

RESEARCH ON MANUFACTURING PROBLEMS

1428 N. MOSLEY AVE. PHONE HOBART 4-3948

WICHITA 4, KANSAS

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 AMERICAN SOCIETY OF CIVIL ENGINEERS
 ASSOCIATION OF ASPHALT PAVING TECHNOLOGISTS
 LICENSED PROFESSIONAL ENGINEERS

March 1, 1955

Date (November 30, 1953)

Aggr. Report No. DWT - A

LAB NUMBER 803002 - b
 (Refer to this Number)

REPORT ON CONCRETE AGGREGATE

City of Wichita

Overhead Crossings Water & Transmission Line

Contract No. 5 - Project 21-55

Contractor: Wichita B. Boy Construction Co. Project:

610 North Main

Wichita, Kansas

Location: Wichita

Sample taken by: Lab. Inspector from batch Plant Stockpile @ 3:00 P.M.

Date: 11-5-53

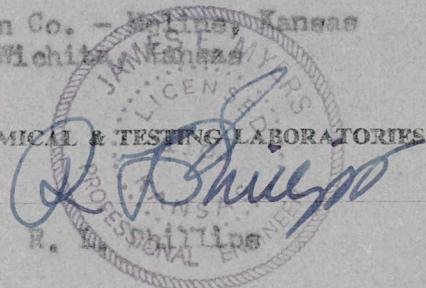
Car or sample number	GRADING, Percent Retained									% Ret.	IMPURITIES				
	sieve number										Organic Matter	Silt	Clay Lumps, Shale	Unsound Particles	Coal Sticks, Etc.
	1"	3/4"	1/2"	3/8"	#4	#8	#16	#50	#100	ASTM C140	ASTM P-200 ASTM C117	ASTM C142 AASHTO T10	ASTM C88 *	ASTM C123	
<u>COARSE AGGREGATE:</u> Moline Stone (1")	1.6	32.1	67.2	79.4	90.1	93.8	96.8	98.0	98.2	-	1.2	0	-	0	
Specs. (par. 2-4) (Page 2-3) & ASTM C33-52T	0-10	15-50	40-75	-	90-100	-	-	-	-	-	1.5	0.25 & 1.0	12% 5cy	1.0	
<u>FINE AGGREGATE:</u> Keeler Concrete Sand	0	0	0	0.4	2.3	9.5	27.2	87.5	97.6	O.K. No. 1	1.2	0.2	-	0	
Specs. (Par. 2-3) (Pg. 2-2) & ASTM C33-52T	-	-	-	-	0-5	-	-	70-80	92-98	Type I	3.0	1.0	-	0.5	
	<u>ADDITIONAL AGGREGATE DATA</u>									<u>ASTM C127-128</u>		<u>Absorption</u>			
	<u>Bulk Spec. Grav.</u>			<u>Sat'd. Spec. Grav.</u>			<u>App. Spec. Grav.</u>								
1" Stone	2.64			2.52			2.71			2.7%					
Keeler Sand	2.55			2.58			2.60			0.9%					

Remarks: Sources: Moline Stone - Concrete Materials & Construction Co. - Moline, Kansas
 Concrete Sand - The Walt Keeler Concrete Co. - Wichita, Kansas

* Reported as separate analysis.

WICHITA CHEMICAL & TESTING LABORATORIES

By



AGGREGATE MEET REQUIREMENTS ABOVE

(Soundness Tests & Mortar Strength will follow when completed.)

WICHITA STATE UNIVERSITY
DEPARTMENT OF CHEMISTRY
ANALYTICAL CHEMISTRY
RESEARCH ON AIR POLLUTION PROBLEMS
BAR N. WOJCIK AVE.
WICHITA, KANSAS

MEMBERS OF
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 ENVIRONMENTAL HEALTH
 PHYSICISTS
 AMERICAN SOCIETY OF
 ENVIRONMENTAL TOXICOLOGISTS
 AMERICAN SOCIETY OF
 ENVIRONMENTAL SCIENTISTS

Date of Report: _____
 Report No.: _____
 Lab. No.: _____
 Name of Client: _____

REPORT ON ANALYSIS

This report was prepared for the purpose of determining the concentration of the following substances in the sample submitted for analysis:

Sample No.	Substance	Concentration		Remarks
		mg/l	%	
1	Lead	0.05	0.001	
1	Cadmium	0.01	0.0002	
1	Copper	0.10	0.002	
1	Zinc	0.50	0.01	
1	Iron	1.00	0.02	
1	Manganese	0.05	0.001	
1	Nickel	0.02	0.0004	
1	Chromium	0.01	0.0002	
1	Vanadium	0.005	0.0001	
1	Selenium	0.002	0.00004	
1	Barium	0.01	0.0002	
1	Strontium	0.005	0.0001	
1	Calcium	0.10	0.002	
1	Magnesium	0.05	0.001	
1	Sulfur	0.01	0.0002	
1	Phosphorus	0.005	0.0001	
1	Fluorine	0.002	0.00004	
1	Chlorine	0.01	0.0002	
1	Bromine	0.005	0.0001	
1	Iodine	0.002	0.00004	
1	Mercury	0.001	0.00002	
1	Silver	0.005	0.0001	
1	Gold	0.001	0.00002	
1	Platinum	0.0005	0.00001	
1	Palladium	0.0005	0.00001	
1	Rhodium	0.0005	0.00001	
1	Ruthenium	0.0005	0.00001	
1	Rhenium	0.0005	0.00001	
1	Osmium	0.0005	0.00001	
1	Iridium	0.0005	0.00001	
1	Scandium	0.0005	0.00001	
1	Titanium	0.001	0.00002	
1	Vanadium	0.0005	0.00001	
1	Chromium	0.001	0.00002	
1	Manganese	0.0005	0.00001	
1	Iron	0.001	0.00002	
1	Cobalt	0.0005	0.00001	
1	Nickel	0.001	0.00002	
1	Copper	0.001	0.00002	
1	Zinc	0.001	0.00002	
1	Lead	0.001	0.00002	
1	Barium	0.0005	0.00001	
1	Strontium	0.0005	0.00001	
1	Calcium	0.001	0.00002	
1	Magnesium	0.0005	0.00001	
1	Sulfur	0.001	0.00002	
1	Phosphorus	0.0005	0.00001	
1	Fluorine	0.0005	0.00001	
1	Chlorine	0.001	0.00002	
1	Bromine	0.0005	0.00001	
1	Iodine	0.0005	0.00001	
1	Mercury	0.0005	0.00001	
1	Silver	0.0005	0.00001	
1	Gold	0.0005	0.00001	
1	Platinum	0.0005	0.00001	
1	Palladium	0.0005	0.00001	
1	Rhodium	0.0005	0.00001	
1	Ruthenium	0.0005	0.00001	
1	Rhenium	0.0005	0.00001	
1	Osmium	0.0005	0.00001	
1	Iridium	0.0005	0.00001	
1	Scandium	0.0005	0.00001	
1	Titanium	0.0005	0.00001	
1	Vanadium	0.0005	0.00001	
1	Chromium	0.0005	0.00001	
1	Manganese	0.0005	0.00001	
1	Iron	0.0005	0.00001	
1	Cobalt	0.0005	0.00001	
1	Nickel	0.0005	0.00001	
1	Copper	0.0005	0.00001	
1	Zinc	0.0005	0.00001	
1	Lead	0.0005	0.00001	
1	Barium	0.0005	0.00001	
1	Strontium	0.0005	0.00001	
1	Calcium	0.0005	0.00001	
1	Magnesium	0.0005	0.00001	
1	Sulfur	0.0005	0.00001	
1	Phosphorus	0.0005	0.00001	
1	Fluorine	0.0005	0.00001	
1	Chlorine	0.0005	0.00001	
1	Bromine	0.0005	0.00001	
1	Iodine	0.0005	0.00001	
1	Mercury	0.0005	0.00001	
1	Silver	0.0005	0.00001	
1	Gold	0.0005	0.00001	
1	Platinum	0.0005	0.00001	
1	Palladium	0.0005	0.00001	
1	Rhodium	0.0005	0.00001	
1	Ruthenium	0.0005	0.00001	
1	Rhenium	0.0005	0.00001	
1	Osmium	0.0005	0.00001	
1	Iridium	0.0005	0.00001	
1	Scandium	0.0005	0.00001	
1	Titanium	0.0005	0.00001	
1	Vanadium	0.0005	0.00001	
1	Chromium	0.0005	0.00001	
1	Manganese	0.0005	0.00001	
1	Iron	0.0005	0.00001	
1	Cobalt	0.0005	0.00001	
1	Nickel	0.0005	0.00001	
1	Copper	0.0005	0.00001	
1	Zinc	0.0005	0.00001	
1	Lead	0.0005	0.00001	
1	Barium	0.0005	0.00001	
1	Strontium	0.0005	0.00001	
1	Calcium	0.0005	0.00001	
1	Magnesium	0.0005	0.00001	
1	Sulfur	0.0005	0.00001	
1	Phosphorus	0.0005	0.00001	
1	Fluorine	0.0005	0.00001	
1	Chlorine	0.0005	0.00001	
1	Bromine	0.0005	0.00001	
1	Iodine	0.0005	0.00001	
1	Mercury	0.0005	0.00001	
1	Silver	0.0005	0.00001	
1	Gold	0.0005	0.00001	
1	Platinum	0.0005	0.00001	
1	Palladium	0.0005	0.00001	
1	Rhodium	0.0005	0.00001	
1	Ruthenium	0.0005	0.00001	
1	Rhenium	0.0005	0.00001	
1	Osmium	0.0005	0.00001	
1	Iridium	0.0005	0.00001	
1	Scandium	0.0005	0.00001	
1	Titanium	0.0005	0.00001	
1	Vanadium	0.0005	0.00001	
1	Chromium	0.0005	0.00001	
1	Manganese	0.0005	0.00001	
1	Iron	0.0005	0.00001	
1	Cobalt	0.0005	0.00001	
1	Nickel	0.0005	0.00001	
1	Copper	0.0005	0.00001	
1	Zinc	0.0005	0.00001	
1	Lead	0.0005	0.00001	
1	Barium	0.0005	0.00001	
1	Strontium	0.0005	0.00001	
1	Calcium	0.0005	0.00001	
1	Magnesium	0.0005	0.00001	
1	Sulfur	0.0005	0.00001	
1	Phosphorus	0.0005	0.00001	
1	Fluorine	0.0005	0.00001	
1	Chlorine	0.0005	0.00001	
1	Bromine	0.0005	0.00001	
1	Iodine	0.0005	0.00001	
1	Mercury	0.0005	0.00001	
1	Silver	0.0005	0.00001	
1	Gold	0.0005	0.00001	
1	Platinum	0.0005	0.00001	
1	Palladium	0.0005	0.00001	
1	Rhodium	0.0005	0.00001	
1	Ruthenium	0.0005	0.00001	
1	Rhenium	0.0005	0.00001	
1	Osmium	0.0005	0.00001	
1	Iridium	0.0005	0.00001	
1	Scandium	0.0005	0.00001	
1	Titanium	0.0005	0.00001	
1	Vanadium	0.0005	0.00001	
1	Chromium	0.0005	0.00001	
1	Manganese	0.0005	0.00001	
1	Iron	0.0005	0.00001	
1	Cobalt	0.0005	0.00001	
1	Nickel	0.0005	0.00001	
1	Copper	0.0005	0.00001	
1	Zinc	0.0005	0.00001	
1	Lead	0.0005	0.00001	
1	Barium	0.0005	0.00001	
1	Strontium	0.0005	0.00001	
1	Calcium	0.0005	0.00001	
1	Magnesium	0.0005	0.00001	
1	Sulfur	0.0005	0.00001	
1	Phosphorus	0.0005	0.00001	
1	Fluorine	0.0005	0.00001	
1	Chlorine	0.0005	0.00001	
1	Bromine	0.0005	0.00001	
1	Iodine	0.0005	0.00001	
1	Mercury	0.0005	0.00001	
1	Silver	0.0005	0.00001	
1	Gold	0.0005	0.00001	
1	Platinum	0.0005	0.00001	
1	Palladium	0.0005	0.00001	
1	Rhodium	0.0005	0.00001	
1	Ruthenium	0.0005	0.00001	
1	Rhenium	0.0005	0.00001	
1	Osmium	0.0005	0.00001	
1	Iridium	0.0005	0.00001	
1	Scandium	0.0005	0.00001	
1	Titanium	0.0005	0.00001	
1	Vanadium	0.0005	0.00001	
1	Chromium	0.0005	0.00001	
1	Manganese	0.0005	0.00001	
1	Iron	0.0005	0.00001	
1	Cobalt	0.0005	0.00001	
1	Nickel	0.0005	0.00001	
1	Copper	0.0005	0.00001	
1	Zinc	0.0005	0.00001	
1	Lead	0.0005	0.00001	
1	Barium	0.0005	0.00001	
1	Strontium	0.0005	0.00001	
1	Calcium	0.0005	0.00001	
1	Magnesium	0.0005	0.00001	
1	Sulfur	0.0005	0.00001	
1	Phosphorus	0.0005	0.00001	
1	Fluorine	0.0005	0.00001	
1	Chlorine	0.0005	0.00001	
1	Bromine	0.0005	0.00001	
1	Iodine	0.0005	0.00001	
1	Mercury	0.0005	0.00001	
1	Silver	0.0005	0.00001	
1	Gold	0.0005	0.00001	
1	Platinum	0.0005	0.00001	
1	Palladium	0.0005	0.00001	
1	Rhodium	0.0005	0.00001	
1	Ruthenium	0.0005	0.00001	
1	Rhenium	0.0005	0.00001	
1	Osmium	0.0005	0.00001	
1	Iridium	0.0005	0.00001	
1	Scandium	0.0005	0.00001	
1	Titanium	0.0005	0.00001	
1	Vanadium	0.0005	0.00001	
1	Chromium	0.0005	0.00001	
1	Manganese	0.0005	0.00001	
1	Iron	0.0005	0.00001	
1	Cobalt	0.0005	0.00001	
1	Nickel	0.0005	0.00001	
1	Copper	0.0005	0.00001	
1	Zinc	0.00		



CC: 6-By Constr. Co.

LAB NUMBER 603002-2 (Refer to this Number)

Wichita

CHEMICAL AND TESTING

Laboratories

Actual Lab. Batch Mix

WICHITA 4, KANSAS

File: 1

PRELIMINARY DESIGN DATA

DAILY LOG OF CONCRETING OPERATION

Identical Mix to Contract 13 to be used on this project.

Type Mix: 6.5 SACK- GLASS WDR MIX

Date: March 1, 1955 (December 8, 1953)

Weather

Class of Concrete: Class B - 3500 P.S.I. @ 28 da

Slump Ordered: 3 inch max.

Nominal Mix: 1: 2.0: 2.76

Maximum Water: 5.5 gal./sk. cmt.

Batch Wts., Lbs.

Dry Basis: Cmt. 611 FA 1972 CA 1605

Project: Overhead Crossings, Water Transmission Contract No. 5, City of Wichita Line

Contractor: Martin K. By Construction Co.

Structure: Waterworks Project 21-55

Black & Veatch, Consulting Engineers

Fine Aggregate (FA): Holt Keeler Concrete Sand

Coarse Aggregate (CA): Holine Limestone 1"

COMPUTATION FOR ACTUAL BATCH PROPORTIONS—WEIGHTS MOIST AS USED

Table with columns for TIME MOISTURE TEST MADE, No. 1 per ONE YARD, No. 2 per ONE SACK, and Actual. Rows include FA, CA, Total Free water, Added at Mixer, Total Water, Gal./sk. cement, Slump, and Entrained air.

YIELD CALCULATIONS

Table with columns for Test Cylinder Nos., Wt./cu. ft., Wt./cu. yd., Vol., Yield, and Actual Cement Content. Includes data for 7-day and 28-day tests.

Sieve Analysis of Aggregates

Table with columns for Sieve, Coarse, and Fine. Rows include Sieve Opening (2 inch to No. 100) and F M values.

Concreting Started..... Finished.....

No. Batches Delivered..... Batch Vol.....

Ticket Nos.....

Concrete laid..... cu. yds.

Cement Used: 6.5 per yd. sks. Brand: Monarch

ADMIX: "Amber-Air" (NVR) sks. Brand: National Sales

Remarks: See Lab. No. 611043 for aggregate tests. Admix:

1/2 oz. per sack. Mix very workable. Aggregate Ratio

by wt: 43% Sand, 57% Rock

*mfr. - Wichita, Kansas

WICHITA CHEMICAL & TESTING LABORATORIES 1428 N. MOSLEY AVE. PHONE HOBART 4-3948

% P200 WASH

Coarse: 1.2

Fine: 1.2

FORM 505

By: [Signature]

R. L. Phillips

BLACK & VEATCH
CONSULTING ENGINEERS

TEL. WESTPORT 7474

4706 BROADWAY
KANSAS CITY 2, MISSOURI

March 8, 1955

Subject: Wichita, Kansas
Water Transmission Main
Contract No. 5
Overhead Crossing
Project 2155, G5.1

C
Martin K. Eby Construction Co., Inc.
610 North Main Street
Wichita 5, Kansas

O
Attention Mr. I. S. Barnett

Gentlemen:

P
We are enclosing two copies each of Solar Aircraft Company shop drawings 01-9081, 01-9083, 01-9084, 01-9085, 01-9086 and 01-9087, covering the expansion joints for the subject contract. These drawings are approved so far as layout and dimensions of the joints are concerned.

Y
By letter of February 11 we requested that Solar confirm in writing that their joints will act in such a manner as not to impose a thrust load of more than 117,000 lbs. against the anchors. In this same letter we also requested that Solar provide us with stress diagram showing the distribution and magnitude of the stresses around the bellows in these joints and that Solar also provide us with a statement as to the period of time for which they will guarantee these joints under the actual operating conditions on this job.

It is imperative that this information be furnished to us at once by Solar's home office. This information must be in writing and should be signed either by Solar's chief engineer or by some other responsible official of the company. It will not be satisfactory for Solar to have their Kansas City representative pass along this information, either by word of mouth or by letter from the Kansas City representative, since they do not maintain an engineering staff in Kansas City and since their local representatives are not technical experts on expansion joints.

We believe that Solar should be in a position to furnish this information at once, since in the case of the stress diagrams, at least, it was requested immediately following the letting on this contract. We will expect

Martin K. Eby Construction Co., Inc.
Page 2

March 8, 1955

to receive a signed letter from Solar, through your office, covering these points by not later than the 19th of March.

Very truly yours,

BLACK & VEATCH

LW:f1

L. W. Weller

cc J. J. Knollw/enc.
R. H. Hess w/enc.

Weller

Fidelity Union Skin

MADE IN U.S.A.

C
O
P
Y

March 2, 1955

Black & Veatch Co., Inc.

Page 2

As noted in a signed letter from Dallas, through your office, covering those details by not later than the 15th of March.

Very truly yours,

BLACK & VEATCH

L. R. Walker

Encl.

Black

cc J. L. Williams
cc R. E. Bass

Richard Nixon

MADE IN U.S.A.

C

O

P

Y

1428 N. MOSLEY AVE. *Problems Encountered*

BATCH PLANT CHECK NO. 12

HOBART 4-3946

PROJECT: Water Pipeline
 LOCATION: 9th & Lawrence Street
 ENGINEER/ARCHITECT: Mark & Veitch
 CONTRACTOR: Marlin K. Ray Concrete Co.

Wichita
CHEMICAL AND LABORATORIES
 TESTING
 CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 107088
 (REFER TO THIS NUMBER)
 DATE March 7, 1955
 BATCH PLANT Wichita Ready Concrete Co.
 WEATHER Fair-41F

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.			AGGREGATE DATA			FIELD TESTS	TIME CHECKED		
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE			COARSE AGGREGATE	FREE WATER	ABSORPTION
1	53	5 yds.	11:15 AM	B-3500	1365	1755	611	23.2		3.0	0.08	0.08	2.7%	10:30 AM
2	52	5 yds.	11:20	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
3	47	5 yds.	11:24	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
4	52	5 yds.	12:53 PM	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
5	53	5 yds.	1:19	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
6	47	5 yds.	1:28	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
7	52	5 yds.	2:05	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
8	53	5 yds.	2:25	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
9	47	5 yds.	2:55	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
10	43	5 yds.	3:40	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30

THEORETICAL BATCH WEIGHTS (DRY)

TOTAL CU. YDS. CHECKED 50

TOTAL CU. YDS. THIS PROJECT

FINE AGG: Eastern sand AMOUNT 1225
 COARSE AGG: Walling stone AMOUNT 1755
 CEMENT: Wanamah AMOUNT 611
 SPECIAL: City Water AMOUNT 28.0
 ADMIX: Anchor Air AMOUNT 1/2 oz./yd.
 TIME INSPECTION AT PLANT
 START 10:15 AM STOP 3:00 P.M.

COMPRESSION TEST DATA

TIME TAKEN: 2:00 P.M.
 SLUMP: 3"
 TEST SPECIMEN NO. 1A & 1B
 YIELD: _____
 POUR LOCATION: South Abertown
 ENTRAINED AIR: _____
 PER INSPECTOR: Doggs

REMARKS: Check of 10:30 P.M.



CC: 2-Doggs Constr.
2-Keller
1-Kroll
1-Keller
 FILE 1 OF _____

PROJECT: Overhead Garage Project No. 23-55
 LOCATION: Wichita, Kansas, Condr. No. 5
 ENGINEER/ARCHITECT: Blair & Veitch
 CONTRACTOR: Walter K. By

Wichita Laboratories
 CHEMICAL AND TESTING
 CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 802056
 (REFER TO THIS NUMBER)
 DATE: March 2, 1955
 BATCH PLANT: Wichita Garage
 WEATHER: Clear & Warm

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.				AGGREGATE DATA				FIELD TESTS	TIME CHECKED
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE	COARSE AGGREGATE	FREE WATER			ABSORPTION	FREE WATER	ABSORPTION
1	52	5 yds.	12:00	3500	1700	1400	560	20.0		5.0	0.8	1.0	2.7	12:00
2	58	5 yds.	12:10	3500	1700	1400	560	20.0		5.0	0.8	1.0	2.7	12:00
3	59	2 yds.	3:05	3500	1700	1400	560	18.0		5.0	0.8	1.0	2.7	12:00

RTTB The Tremble Mix Co. has been informed that the mix on this project is to be
 Class 42-3500 P.S.I. as prescribed by Blair & Veitch for the West Treatment
 Plant. Project. Contractor has been supplied with copies of the mix, and
 all concrete in the future will be so designed.

THEORETICAL BATCH WEIGHTS (DRY)

FINE AGG:	_____	TYPE	_____	AMOUNT	_____
COARSE AGG:	_____		_____		_____
CEMENT:	_____		_____		_____
SPECIAL:	_____		_____		_____
ADMIX:	_____		_____		_____
TIME INSPECTION AT PLANT	_____		_____		_____
START <u>12:00 Noon</u>					STOP <u>3:00 P.M.</u>

TOTAL CU. YDS. CHECKED 12

TOTAL CU. YDS. THIS PROJECT 12

COMPRESSION TEST DATA

TIME TAKEN _____

SLUMP: _____

TEST SPECIMEN NO. _____

YIELD: _____

POUR LOCATION: _____

ENTRAINED AIR: _____

PER INSPECTOR: _____

REMARKS:

PLANT INSPECTOR: [Signature]

CC: 2-Bly Concr.
2-Roller
1-Froill
1-Ross
1

FILE _____ PAGE _____ OF _____

MARTIN K. EBY CONSTRUCTION CO., INC.

610 NORTH MAIN

AMHERST 7-1371

WICHITA 5, KANSAS

March 2, 1955

Black & Veatch
4706 Broadway
Kansas City, Missouri

Re: Overhead Crossings,
Contract No. 5,
Wichita, Kansas.

Gentlemen:

We enclose four (4) copies of design mix of concrete as prepared by the Wichita Chemical & Testing Laboratory for the above referenced project.

Also included is four (4) copies of the sieve analysis for the coarse and fine aggregate being used by the Walt Keeler Company in this concrete. We propose to use the same concrete design mix as is being used on the Water Treatment Plant addition here in Wichita, which concrete is also being furnished by the Walt Keeler Company.

These are for your approval.

Sincerely yours,

MARTIN K. EBY CONSTRUCTION CO., INC.

BY

I. S. Barnett
I. S. Barnett

ISB/bk
Enclosures
cc Mr. Knoll
file
B. Dopps



GENERAL CONTRACTORS

EXCAVATION CONTRACTORS

INCORPORATED IN COLORADO, KANSAS, MISSOURI, NEBRASKA, NEW MEXICO AND OKLAHOMA



CC: 6-By Constr. Co.

Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS

File: 1

RESEARCH ON MANUFACTURING PROBLEMS

1428 N. MOSLEY AVE. PHONE HOBART 4-3948

WICHITA 4, KANSAS

PRINCIPALS ARE

- MEMBERS OF:
- AMERICAN CHEMICAL SOCIETY
- AMERICAN SOCIETY FOR TESTING MATERIALS
- AMERICAN SOCIETY OF CIVIL ENGINEERS
- ASSOCIATION OF ASPHALT PAVING TECHNOLOGISTS
- LICENSED PROFESSIONAL ENGINEERS

March 1, 1955

Date (November 30, 1953)

Aggr. Report No. DWT - A

LAB NUMBER 803002 - b
(Refer to this Number)

REPORT ON CONCRETE AGGREGATE

City of Wichita

Overhead Crossings Water & Transmission Line

Contract No. 5 - Project 21-55

Contractor: Martin K. Eby Construction Co. Project:

610 North Main

Wichita, Kansas

Engineer:

Location: Wichita

Sample taken by: Lab. Inspector from batch Plant at Site Time: 3:00 P.M.

Date: 11-5-53

Car or sample number	GRADING, Percent Retained								% Ret.	IMPURITIES							
	sieve number									Organic Matter	Silt	Clay Lumps, Shale	Unsound Particles	Coal Sticks, Etc.			
COARSE AGGREGATE:																	
<u>Moline Stone (1")</u>	1.6	32.1	67.2	79.4	90.1	93.8	96.8	98.0	98.2	-	1.2	T10	-	0			
Specs. (par. 2-4) (Page 2-3) & ASTM C33-52T	0-10	15-50	40-75	-	90-100	-					1.5	0	8.25 & 1.0	12% 5cy	1.0		
FINE AGGREGATE:																	
<u>Keeler Concrete Sand</u>	0	0	0	0.4	2.3	9.5	27.2	87.5	97.6	O.K. No.1	1.2	0.2	-	0			
Specs. (Par. 2-3) (Pg. 2-2) & ASTM C33-52T	-	-	-	-	0-5	-	-	70-88	92-98	Type I	3.0	1.0	-	0.5			
	ADDITIONAL AGGREGATE DATA									ASTM C127-128		Absorption					
	<u>Bulk Spec. Grav.</u>				<u>Sat'd. Spec. Grav.</u>					<u>App. Spec. Grav.</u>							
1" Stone	2.64				2.52					2.71		2.7%					
Keeler Sand	2.55				2.58					2.60		0.9%					

Remarks: Sources: Moline Stone - Concrete Materials & Construction Co. - Moline, Kansas
Concrete Sand - The Walt Keeler Concrete Co. - Wichita

* Reported as separate analysis.

WICHITA CHEMICAL & TESTING LABORATORIES

AGGREGATE MEET REQUIREMENTS ABOVE

By

R. Phillips
R. Phillips
PROFESSIONAL ENGINEER

(Soundness Tests & Mortar Strength will follow when completed.)

CHEMISTRY

ANALYTICAL

TESTING

RESEARCH ON AMPHIPHILIC POLYMERS

PHYSICAL CHEMISTRY

KANSAS

UNIVERSITY

LABORATORY

REPORT

NO. 1

DATE

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CC: 6-Eby Constr. Co.

LAB NUMBER 803002 - 8
(Refer to this Number)

Wichita

CHEMICAL AND TESTING

Laboratories

Actual Lab. Batch Mix

WICHITA 4, KANSAS

File: 1

PRELIMINARY DESIGN DATA

DAILY LOG OF CONCRETING OPERATION

Identical Mix to Contract 13 to be used on this project.

Type Mix: 6.5 SACK- CLASS B MIX

Date: March 1, 1955 (December 8, 1953)

Project: Overhead Crossings, Water Transmission Contract No. 5, City of Wichita Line

Weather:

Contractor: Martin K. Eby Construction Co.

Class of Concrete: Class B - 3500 P.S.I. @ 28 da

Structure: Waterworks Project 21-55

Slump Ordered: 3 inch max.

Black & Veatch, Consulting Engineers

Nominal Mix: 1: 2.00 : 2.76

Fine Aggregate (FA): Walt Keeler Concrete Sand

Maximum Water: 5.5 gal./sk. cmt.

Coarse Aggregate (CA): Holine Limestone 1"

Batch Wts., Lbs. Dry Basis: Cmt. 611 FA 1272 CA 1685

COMPUTATION FOR ACTUAL BATCH PROPORTIONS—WEIGHTS MOIST AS USED

TIME MOISTURE TEST MADE

	No. 1 per CBS YARD			No. 2 per CBS SACK		
	% Moisture	Free Water	Actual Batch Wts.	% Moisture	Free Water	Actual
FA	0	None lb.	1272 lb.	0	None lb.	195 lb.
CA	0	None lb.	1685 lb.	0	None lb.	259 lb.
Total Free water						
Added at Mixer		262 lb.	31.5 gal.		40.3 lb.	4.85 gal.
Total Water		262 lb.	31.5 gal.		40.3 lb.	4.85 gal.
Gal./sk. cement			4.85			4.85
Slump			3 inch			3 inch
Entrained air:			4.1%			4.1%

YIELD CALCULATIONS

Test Cylinder Nos:	Wt./cu. ft.	Wt./cu. yd.	Vol.	Yield	Actual Cement Content
For 7-day tests: <u>DW-1,3,5,7</u>					
For 28-day tests: <u>DW-2,4,6,8</u>	141.0 lb.	3090 lb.	27.0 cf.	100.0%	6.5 sks./yd.

Sieve Analysis of Aggregates

Sieve	Coarse	Fine
Opening	% Ret.	% Ret.
2 inch		
1 1/2 inch	0	
1 inch	1.6	
3/4 inch	32.1	0
1/2 inch	67.2	0
3/8 inch	79.4	0.4
No. 4	90.2	2.3
No. 8	93.8	9.5
No. 10		
No. 16	96.8	27.2
No. 20	97.9	55.6
No. 30		
No. 40		
No. 50	98.0	87.5
No. 100	98.2	97.6
F M	6.86	2.80

Concreting Started..... Finished.....
 No. Batches Delivered..... Batch Vol.....
 Ticket Nos.
 Concrete laid cu. yds.
 Cement Used 6.5 per yd. sks. Brand Monarch
 ADMIX: "Amber-Air" (NVR) sks. Brand National Sales*
 Remarks: See Lab. No. 611043 for aggregate tests. Admix 1/2 oz. per sack. Mix very workable. Aggregate Ratio by wt: 43% Sand, 57% Rock
*mfr. - Wichita, Kansas

WICHITA CHEMICAL & TESTING LABORATORIES
1428 N. MOSLEY AVE. PHONE HOBART 4-3948

% P200 WASH

MIX MEETS PROPORTION REQUIREMENTS.

Coarse: 1.2

By: *[Signature]*

Fine: 1.2

FORM 505

