

Bridge

During 1969, the Department initiated an annual bridge inspection program designed to insure that every bridge structure in the State will be inspected by qualified personnel each year. The Bridge Division was responsible for the preparation of an official "Bridge Inspection Manual" outlining the requirements of the program and giving details on the inspection procedures.

A brief training program for the inspectors assigned to each County Division Engineer was also conducted. Under the program the responsibility for inspections has been given to the Division Engineers. The Bridge Division will oversee the operations, and act as a consultant when requested.

The Bridge Division is also involved in the

July 1, 1968 - June 30, 1969
Structural Contracts - Bids Received

Contract	Co.	Design By	Description	Bridge No.	Length (Ft.)	Width (Ft.)	Total Bid Entire Contract	Bridge Div. Portion Only	
1	68-02-004	N.C.	D.S.H.D.	Bridge Replacement-Rd. 456	448	66	31	\$ 29,528	\$ 29,528
2	68-03-002	N.C.	D.S.H.D.	Bridge Replacement-Rd. 456(Multiplate Arch)	449	-	-	\$ 19,479	\$ 19,479
3	67-12-004	N.C.	D.S.H.D.	Bridge Replacement-Road 350(Multiplate Arch)	254	-	-	\$ 16,758	\$ 16,758
4	68-03-003	N.C.	D.S.H.D.	Bridge Replacement-Rd. 312	275	31	50	\$ 32,632	\$ 32,632
5	68-02-003	N.C.	D.S.H.D.	Bridge Replacement-Rd. 206	41	69	75	\$ 70,956	\$ 70,956
6	68-07-001	N.C.	D.S.H.D.	Augustine Cutoff Bridge Painting	585	-	-	\$ 41,880	\$ 41,880
7	68-06-002	S	D.S.H.D.	Rehoboth Beach Groins Ext.	-	-	-	\$127,050	\$127,050
8	68-06-001	N.C.	D.S.H.D.	Eleventh St. Bridge Deck Repairs	577	-	-	\$108,818	\$108,818
9	65-11-002	N.C.	D.S.H.D.	Stoney Batter Rd. & Bridge Replacement	187	46	50	\$199,700	\$ 60,460
10	68-09-020	All	D.S.H.D.	Bridge Painting (Statewide)	-	-	-	\$ 35,985	\$ 35,985
11	68-07-002	K&S	Goodkind & O'Dea	Milford By-Pass Boring Program	-	-	-	\$ 9,668	\$ 3,400
12	67-12-025	S	D.S.H.D.	Bridge Replacement-Rd. 419(Multiplate Arch)	569	-	-	\$ 40,360	\$ 40,360
13	68-09-017	K	D.S.H.D.	Bridge Replacement-Fd. 304	304C	71	32	\$ 51,130	\$ 51,130
14	67-12-007	K	D.S.H.D.	Little Creek Pump. Sta., Mosquito Control Program	-	-	-	\$ 88,815	\$ 88,815
15	65-10-004	K	D.S.H.D.	Camden to Rising Sun (Rd. Contract with Bridge Replacement)	29A	26	52	\$441,709	\$ 32,947
16	65-10-005	S	D.S.H.D.	Dagsboro to Clarks-ville (Rd. Contract with Bridge Widening	426	-	-	\$531,398	\$ 13,455

inspection and maintenance of existing bridges. The preliminary phase of the bridge inventory program, which was initiated in 1966, was completed during the year. Under this program basic data on each bridge was collected and recorded for future reference. The data will be updated as field changes are made.

The purpose of systematic periodic bridge inspections and additional inspection of bridges immediately following any natural or man-caused occurrence which might lessen the integrity of a bridge is to:

- (1) Provide an information base for immediate action to limit use of or to close to traffic any bridge which is revealed by inspection to be hazardous to public safety.
- (2) Determine the extent of any weakness or structural damage, critical or minor, resulting from normal deterioration or any other cause.
- (3) Develop a chronological record of periodic and special inspections listing bridge condition at time of each inspection.

Structural Contracts
(Continued)

Contract	Co.	Design By	Description	Bridge No.	Length (Ft.)	Width (Ft.)	Total Bid Entire Contract	Bridge Div. Portion Only	
17	68-12-013	N.C.	D.S.H.D.	Tyler McConnell Br. Painting	587	-	\$ 12,897	\$ 12,897	
18	67-10-024	K	D.S.H.D.	Rt. 9 (Road Contract with Bridge Widening)	11A 11B	- -	\$146,706 -	\$ 2,796 \$ 2,984	
19	64-01-016	N.C.	D.S.H.D.	S. Chapel Street Ext. Road Contract with Bridge	355	87	46	\$597,514	\$145,385
20	65-10-003	N.C.	D.S.H.D.	Rt. 72, Limestone Rd. to Milford Crossroads (Road contract with bridge widenings & Replacement with Multiplate Arch)	621 203 226 227	- - - -	- - - -	\$732,755	\$ 9,440 \$ 10,802 \$ 5,564 \$ 19,435
21	68-10-013	K	D.S.H.D.	Route 6, Maryland Line to Blackiston (Road Contract with Bridge Widening)	39A	-	-	\$101,552	\$ 1,000
22	69-03-001	S	D.S.H.D.	Rehoboth Beach Groins Removal	-	-	-	\$ 19,800	\$ 19,800
23	68-09-012	N.C.	D.S.H.D.	Bridge Replacement- Rd. 336(Multiplate Arch)	249	-	-	\$ 14,398	\$ 14,398
24	68-09-009	N.C.	D.S.H.D.	Bridge Replacement- Road 378 (with water control Str.)	308	36	38	\$ 82,630	\$ 82,630
25	65-07-011	N.C.	D.S.H.D.	New Castle Ave., Rogers Rd. to Heald St.(Signs & Walls)	-	-	-	\$1,136,276	\$ 110,561
26	68-12-005	N.C.	D.S.H.D.	Drainage Ramp "H" @B & O Underpass	-	-	-	\$ 35,767	\$ 21,825
27	68-07-005	N.C.	Greiner	I-495 Grading Stabilization & Structures (Stoney Creek)	-	-	-	\$1,428,829	\$ 486,303
TOTAL							\$6,154,990	\$1,719,473	

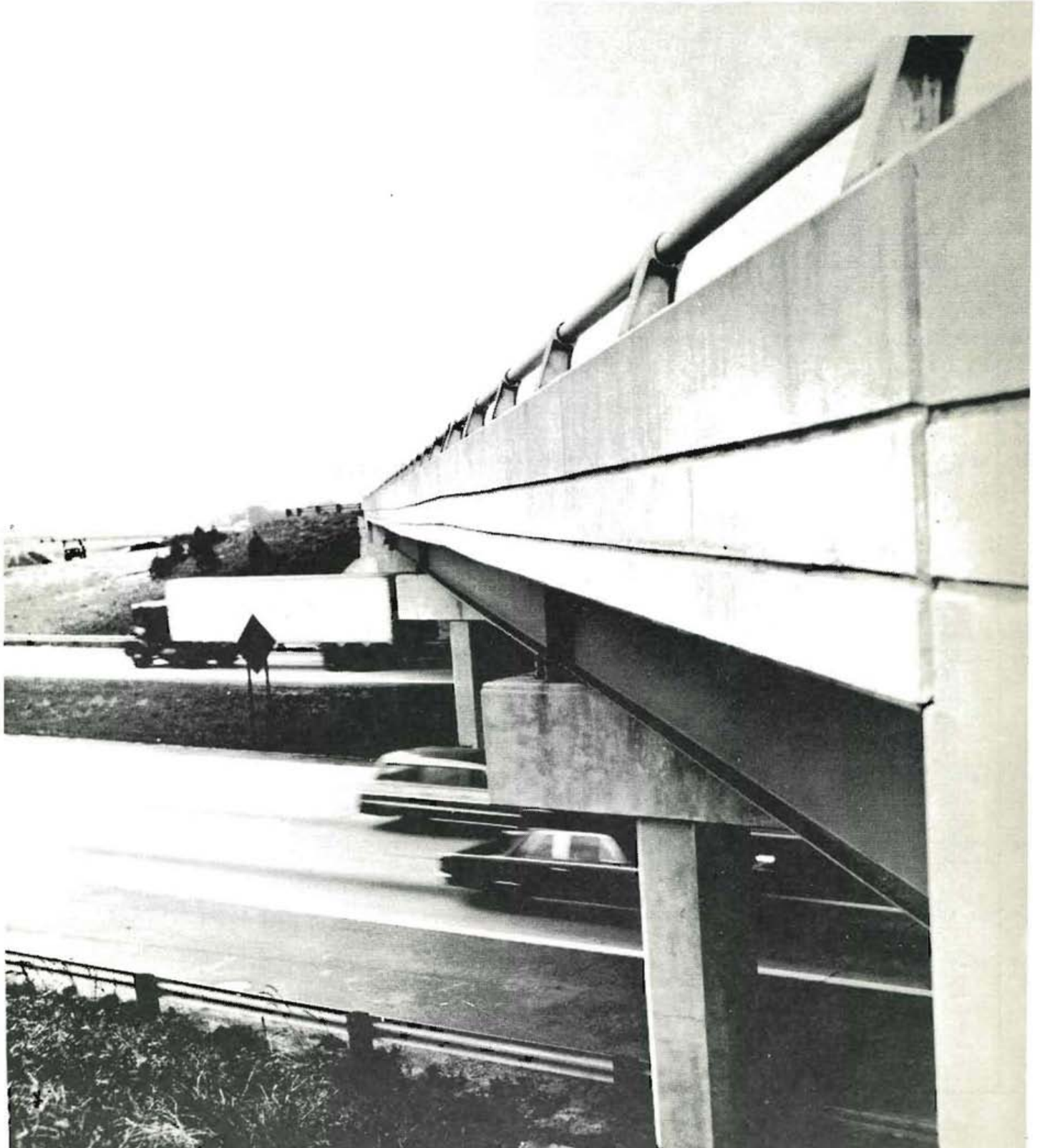
SUMMARY: (Bridge Division Only)
 Design by Department Forces: 25 projects, totaling \$1,229,770 (72%)
 Design by Consultants: 2 projects, totaling \$ 489,703 (28%)

tion thus enabling detection of progressive changes.

- (4) Enable bridge maintenance to be programmed more effectively through early detection of structural deficiencies by which the public investment in the highway system will be safeguarded and

repair costs minimized.

Through inspection and careful analysis of the facts obtained by the inspection will disclose the true condition of a bridge, but only adequate maintenance will guarantee uninterrupted traffic flow with maximum safety. The latter actually is the ultimate goal of the bridge inspection program.



Road Design

The Highway Department has had under various stages of design a total of 47 different projects totaling an estimated construction cost of 123,358,264.46. Twenty-two of these were handled by Department staff while 25 were awarded to consultants.

The staff design work is listed below:

NAME	Amount (Estimated)
McKennans Church Road	\$ 874,650.95
Lebanon Road	446,000.00
Road 562 West of Bridgeville	140,000.00
Road 76-Rt. 24 to Packing House Cr.	335,272.58
12th Street-Wilmington	350,000.00
Existing Dover Bypass	900,000.00
Intersect. Improvts.-Kent Co.	138,000.00
Intersect. Improvts.-New Cstle.Co.	99,200.00
Delaware Rt.24-Millsboro Pond	
Bridge Approaches	215,390.56
Road 331-Millsboro to Dagsboro	177,501.72
Road 545-U.S.13 to Rd. 594	211,238.49
Rt.896, Newark to Md. Line	760,000.00
Rt.14-Rt.16 to Milford Bypass	2,690,000.00
Kirkwood Hwy.-Intersect. Impvrt.	126,754.15
Rt. 896-I-95 to Chrysler Plant	759,209.18
Rt.9-New Castle to Rd.381	439,437.79
Silverside Road	850,000.00
Bridgeville Drainage	74,000.00
Red Mill Road	250,000.00
Rt.26, Dagsboro to Shift Ox	
Corner	400,000.00
Rd.70, Laurel to U.S.13	31,445.84
Old Mill Road-Kent Co.	166,329.25
U.S. 13- St. Georges to Mem-	
orial Drive	214,053.50
Hercules Road	250,000.00
Shipley Road	858,780.45
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	\$11,757,264.46

Projects which were under design by various consultants totaling \$111,601,000.00 are listed in the chart.

PROJECTS UNDER DESIGN BY THE DEPARTMENT.

I-495, Christiana Interchange to I-95	55,000,000.00
I-95, Drainage-Baynard Blvd. Route 141, I-95 to Prices Corner Interchange	36,000.00
Route 141, Lancaster Pike to Concord Pike	16,000,000.00
Linden Hill Road, Polly Drum- mond Hill Road to Limestone Road	17,500,000.00
Harmony Road, Stanton-Ogletown Road to Kirkwood Highway	1,800,000.00
Centerville Road, Kirkwood High- way to Lancaster Pike	2,200,000.00
Elkton Road, Maryland Line to Newark	900,000.00
Barksdale Road, B&O Railroad to Maryland Line	1,334,000.00
Lancaster Ave. (Wilmington), Greenhill Avenue to South duPont Road	160,000.00
I-95, Landscaping	250,000.00
Delaware Avenue (Wilmington) Landscaping	350,000.00
	29,000.00
SUBURBAN DEVELOPMENT	
Brack-Ex	230,000.00
Richardson Park-Elmhurst	600,000.00
Bellefonte	160,000.00
Skyline Drive	74,000.00
Penn Rose	107,000.00
Delaware State College, Circumferential Road	170,000.00
Route 14, Milford Bypass	6,000,000.00
U.S.113 Connector, Frederica to Camden	6,500,000.00
Route 14, Fenwick Island to Bethany Beach	1,700,000.00
Route 24, Bridge 516 to Route 14	401,000.00
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TOTAL ESTIMATED COSTS	\$111,601,000.00