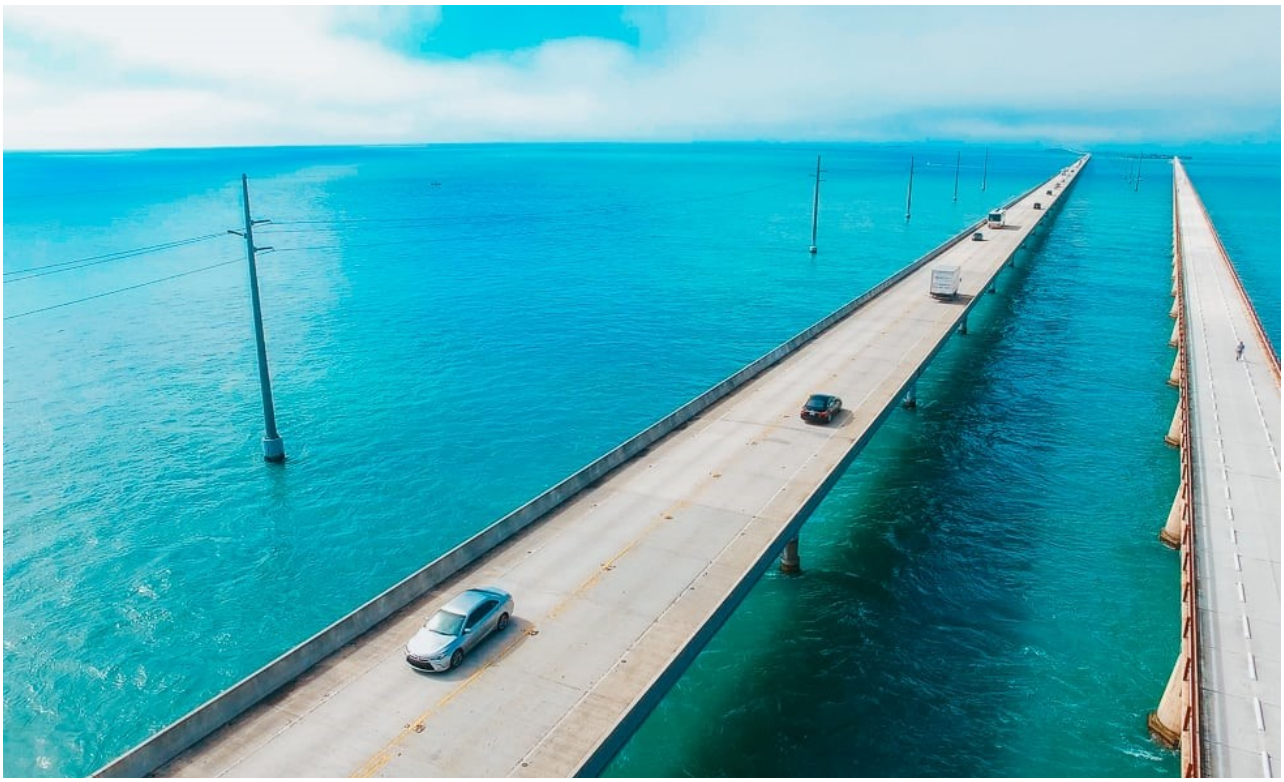
Office of Maintenance

Fiscal Year 2022

Annual Bridge Inventory Report



Office of Maintenance
Bruno Vasconcelos, P.E.

Table of Contents

2022 Annual Bridge Inventory Report

Introduction

This report on Florida's bridge inventory represents a "snapshot" of the ever-changing bridge inventory database. Presented here are various ways to view the bridge inventory that are used in the bridge management industry. The objective of this report is to inform the public of bridge inventory characteristics and conditions that are used to measure progress in managing the inventory, and to present the current state of the bridge inventory.

This report divides the inventory into groups that are responsible for maintaining (preserving) the bridges. The largest group includes all bridges maintained by the **Florida Department of Transportation (FDOT)**, divided into the seven geographic districts and Florida's Turnpike Enterprise. The next largest maintenance responsibility group is that of **county** governments. The FDOT hires consulting engineers to inspect and rate county bridges, while the responsibility for maintaining the bridges remains with the individual county government. The next maintenance responsibility group includes **city and town** governments. Like the county bridges, FDOT hires consulting engineers to inspect most of the city and town maintained bridges. Maintenance of the remainder of the inventory is done by state agencies other than the FDOT, other local agencies, the federal government, railroads, private citizens and organizations. Throughout the report the color scheme used above will be used to represent **FDOT, county,** and **city and town** bridge inventory to better facilitate comparisons.

This report presents the bridge inventory by various characteristics (number of bridges, age, structure types, and deck areas) and conditions (overall structural condition, structurally deficient bridges, posted and closed bridges, and functionally obsolete bridges). Simple cost comparisons are also presented for an idea of how much bridge inventory the Florida taxpayer benefits from.

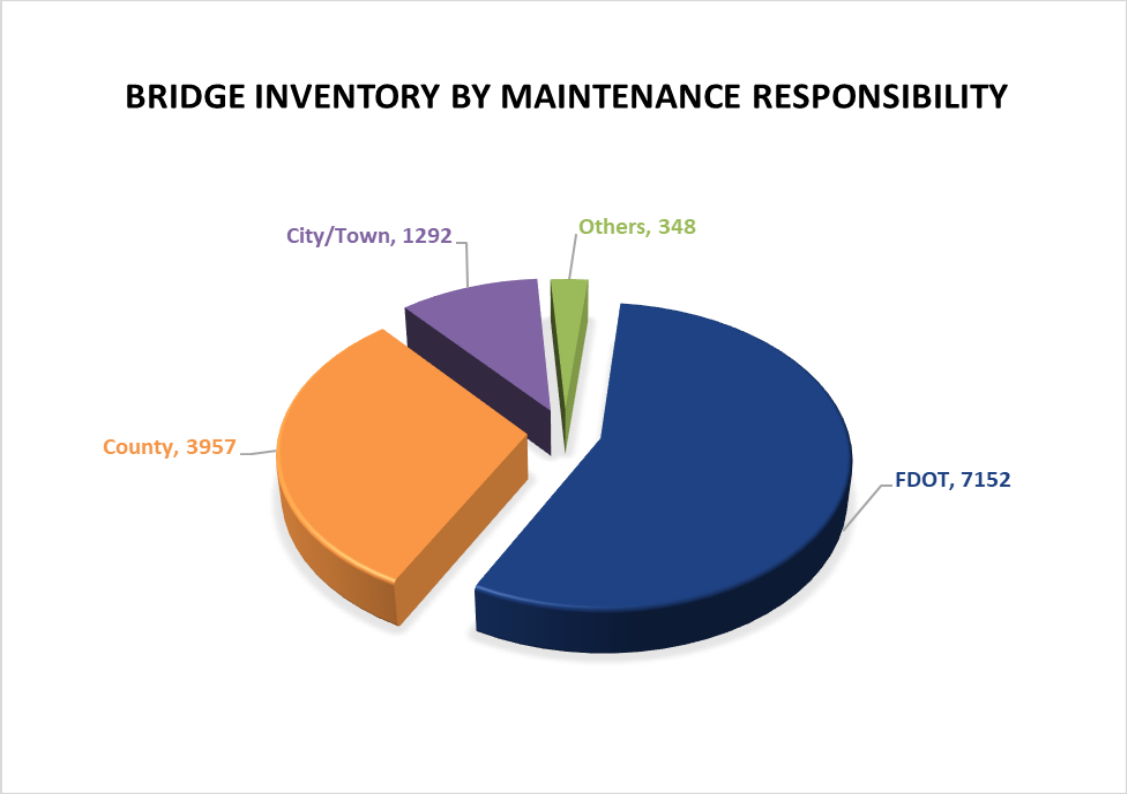


Figure 1: Bridge Inventory by Maintenance Responsibility

Number of Bridges

Currently there are **12,745 bridge structures** accounted for in the FDOT Bridge Management System. The FDOT has maintenance responsibility for about **56%**. County governments maintain roughly **31%**, city and towns maintain **10%** and the remaining **2.5%** are maintained by others (see Figure 1).

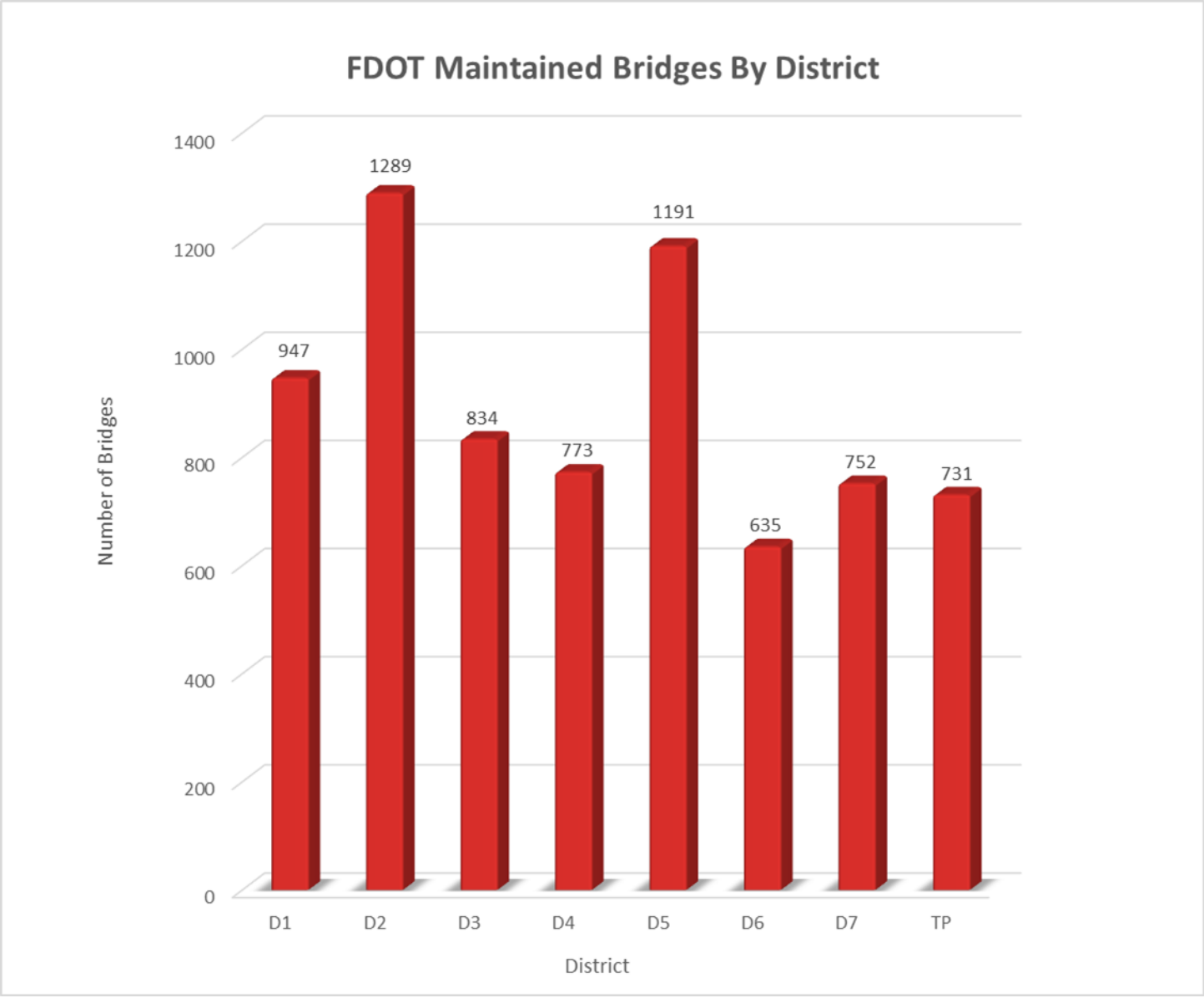


Figure 2: FDOT Bridges by District

Age of Bridges

While the industry is now designing bridges to last for 100 years, most bridges built in the past were designed for a service life of 50 years. Looking at bridge age is the most common and simplest method of forecasting long-term budget requirements. This might lead one to conclude that bridges constructed before 1960 are at the end of the service life. Fortunately, advances in material science, design practices, and construction methods, along with a generally favorable climate, inspection and maintenance practices have contributed in many bridges functioning well past their original design life, despite the tremendous growth in traffic volume over the years. The strategy of bridge maintenance is to leverage these advances using an aggressive maintenance program to extend the useful life of the bridges, thereby minimizing the need to replace a large number of bridges within a short time period (see Table 1).

For the bridges maintained by FDOT, approximately an eighth were constructed prior to 1960, about a third were constructed in the 1960's and 1970's, while slightly more than half of Department owned bridges having been built since 1980.

An examination of the distribution of the decade of construction by FDOT District, for the FDOT maintained bridges show that the older bridge populations are concentrated in the rural and older urban areas, as one would expect. While expansion and growth in South Florida has led to relatively younger bridge inventories for Districts 4 & 6, and the Turnpike, one would anticipate that the older bridge inventories, especially in Districts 1 and 2, would require a larger share of resources as their bridges reach the end of their service life.

Statewide Bridge Inventory By Decade Built

	FDOT	County	City / Town	Other State	Other Local	Federal	Others	Total
>1930s	141	89	43	1	0	4	0	278
1940s	193	126	18	2	0	0	0	339
1950s	535	432	140	11	0	0	1	1119
1960s	1306	754	193	19	6	0	2	2280
1970s	1209	479	281	4	10	0	8	1991
1980s	872	480	217	15	7	0	15	1606
1990s	892	628	160	39	9	0	22	1750
2000s	970	497	135	59	8	0	10	1679
2010s	865	408	87	21	43	0	23	1447
2020s	165	64	18	3	3	0	3	256
Total	7148	3957	1292	174	86	4	84	12745

Table 1: Statewide Inventory by Decade of Construction

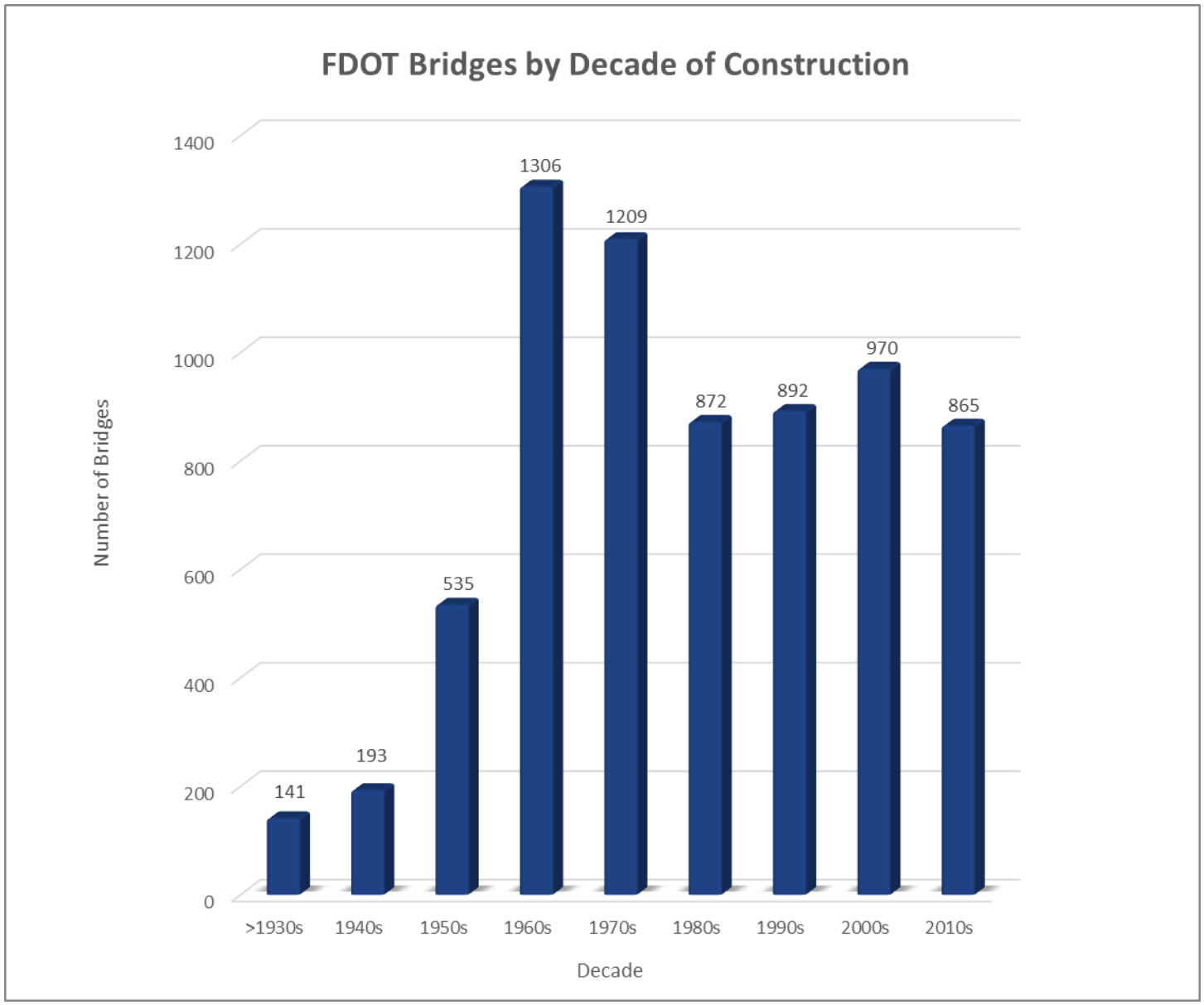


Figure 3: FDOT Bridges by Decade

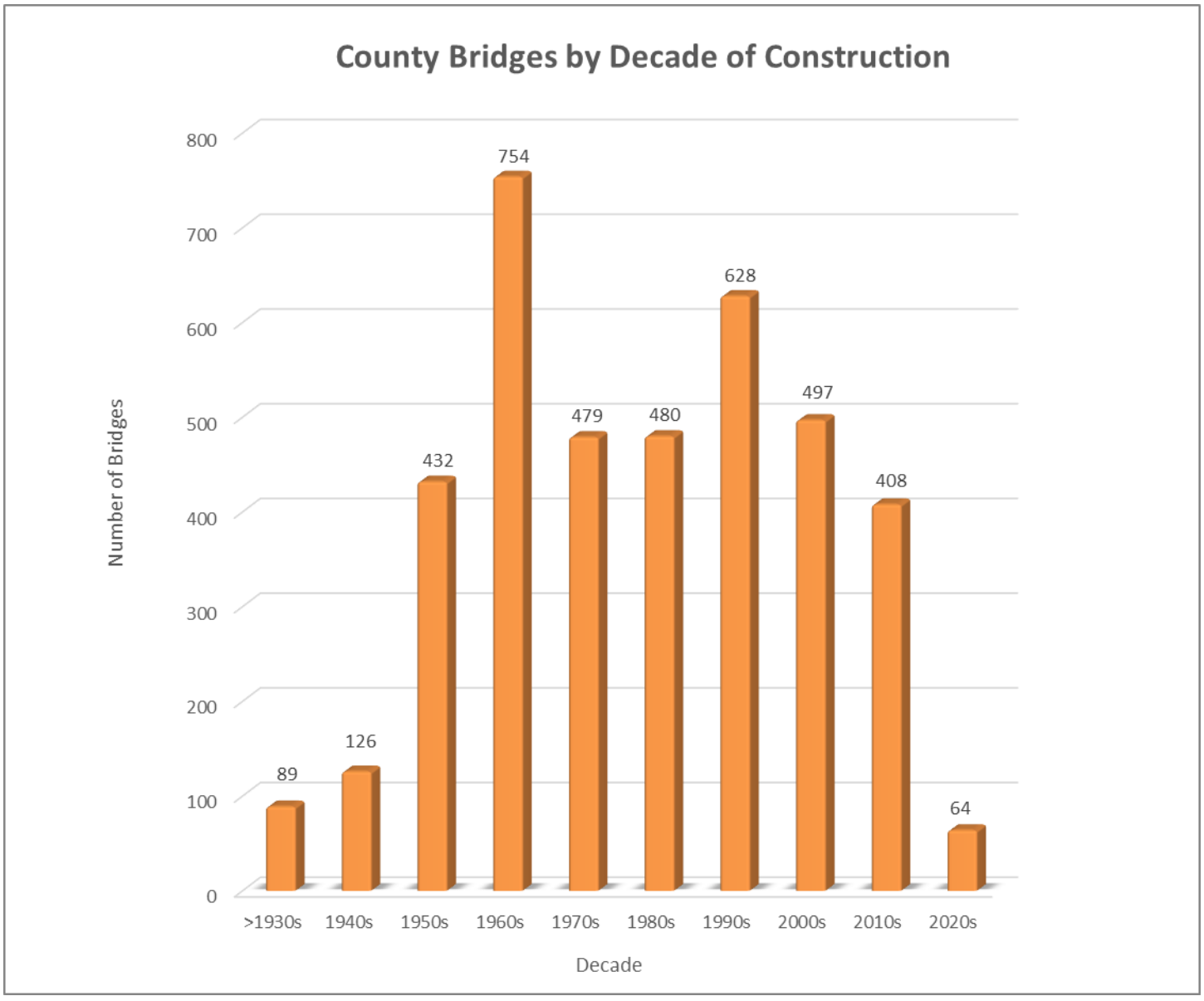


Figure 4: County Bridges by Decade

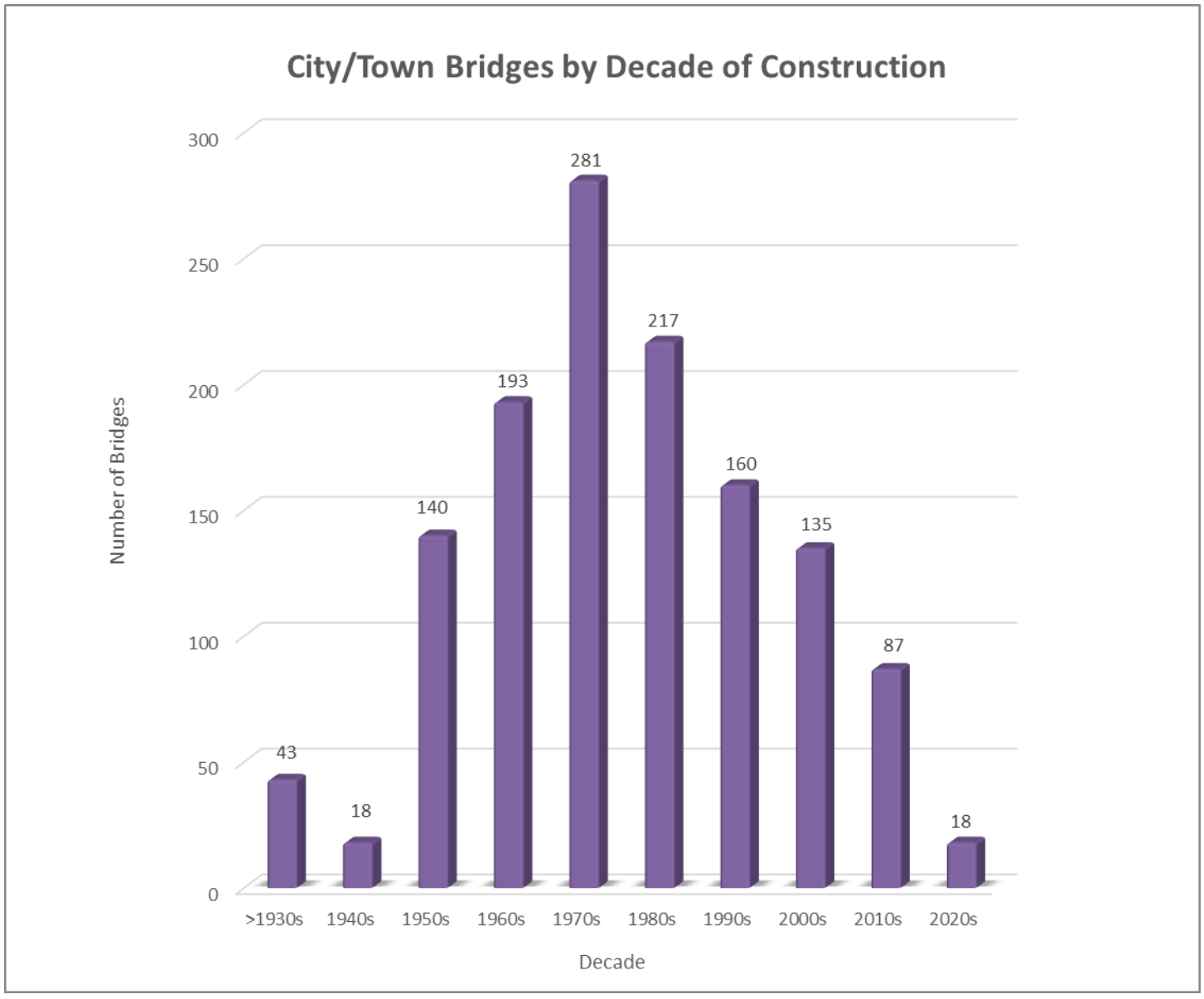


Figure 5: City/Town Bridge by Decade

Types of Bridge Superstructures

With the exception of historic, gateway, or "signature" bridges, the type of bridge superstructure is generally of little interest to most people. However, the superstructure type is the most common method used by bridge engineers to categorize bridges. Superstructures are the unsupported component of a bridge that carries the intended loads across the span opening. Superstructure types are generally described by their structural configuration along with their material of construction. A brief description of some of the broadest “types” of bridge superstructures is listed below. The material of construction is generally concrete, steel, or timber. For recording purposes, these superstructure and material types have been reduced to twelve specific categories with a thirteenth (other) category for unusual and seldom used superstructure types.

Culverts

A culvert is typically a buried drainage structure. When the overall opening of the culvert is at least 20 feet it is considered a bridge by the Federal Government, and hence is treated like a bridge for inspection and maintenance purposes.

Slabs

These would include both Reinforced Concrete Slabs and Prestressed Concrete Slabs. These superstructure types are characterized by having a generally constant, rectangular cross-section using concrete as the main building component.

Beams and Girders

Most of the bridges in Florida can be considered as beam or girder bridges. These superstructure types are composed of either singular or groups of individual linear elements positioned either in the direction of traffic or transverse to the direction of traffic. The categories used for this type include Reinforced Concrete Beam, Prestressed Concrete Beam, Steel Beam, Timber Beam, Reinforced Concrete Box, Prestressed Concrete Box, Steel Box, and Movable Spans.

Trusses

The members of a truss work in either tension or compression. Bending is assumed not to occur in this type of bridge superstructure. The external loads from the deck and traffic are applied only at the joints of a truss.

Movables

The general classification known as movable bridge includes the specific superstructure type describing the way it moves. This could be either a bascule, swing, or lift bridge. The movable bridge can either stand alone, or include fixed approach spans.

NOTE: For graphing purposes reinforced concrete is abbreviated as RC and prestressed concrete as PSC.

Statewide Bridge Inventory by Superstructure Type								
	FDOT	County	City / Town	Other State	Other Local	Federal	Others	Total
RC Slab	801	641	217	14	9	0	4	1686
PSC Slab	313	774	469	21	14	4	11	1606
RC Beam	97	145	67	3	0	0	1	313
PSC Beam	3721	719	201	19	12	0	54	4726
Steel Beam	669	156	29	36	7	0	6	903
Timber Beam	1	298	19	31	0	0	0	349
RC Box	3	1	1	0	0	0	0	5
PSC Box	159	4	0	0	0	0	0	163
Steel Box	155	9	4	1	0	0	1	170
Truss	3	12	2	36	2	0	0	55
Movable	88	40	8	1	0	0	1	138
Culvert	1131	1103	255	3	41	0	6	2539
Other	11	55	20	9	1	0	0	96
Total	7152	3957	1292	174	86	4	84	12749

Table 2: Statewide Inventory by Superstructure Type

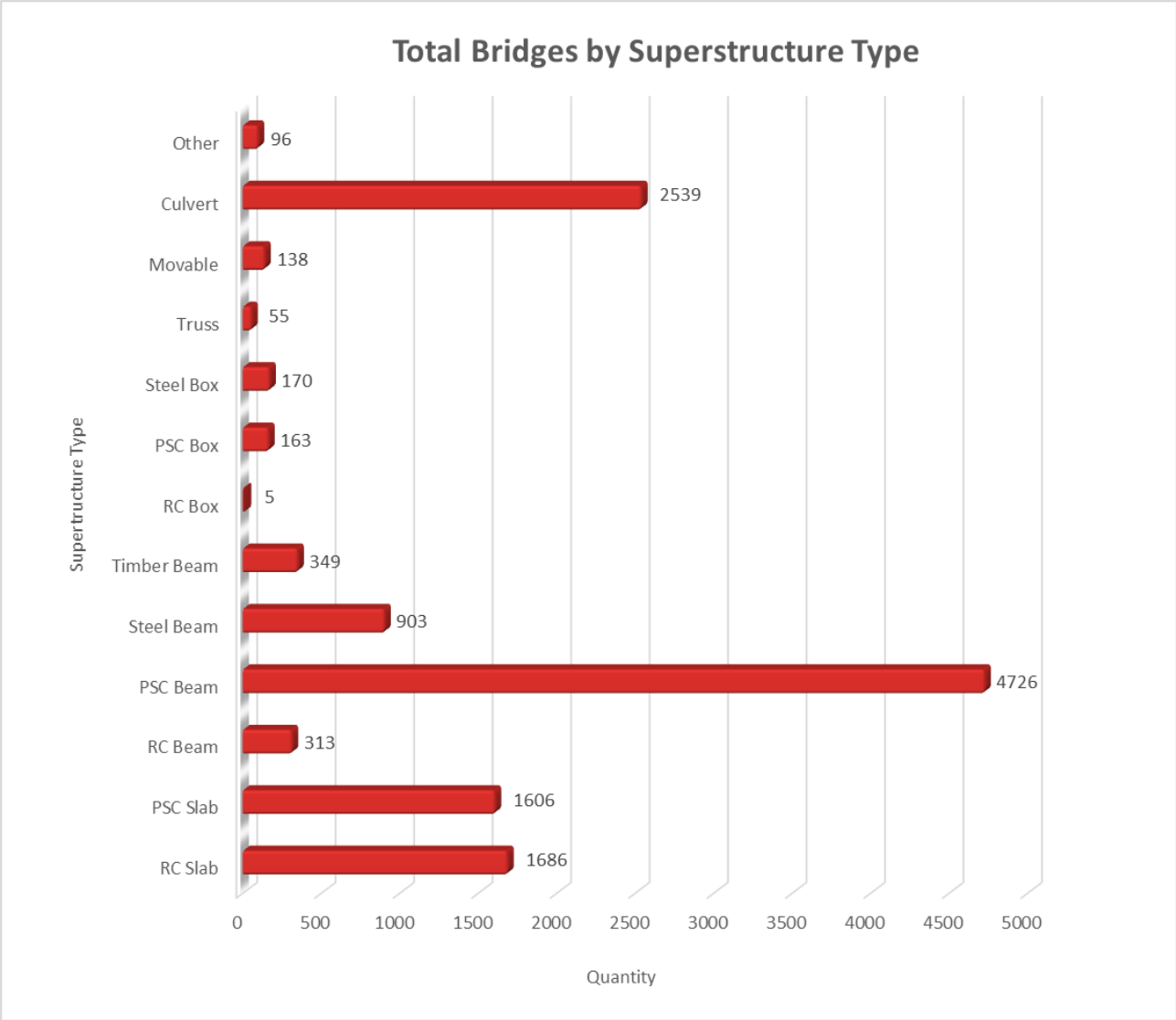


Figure 6: Bridges by Superstructure Type

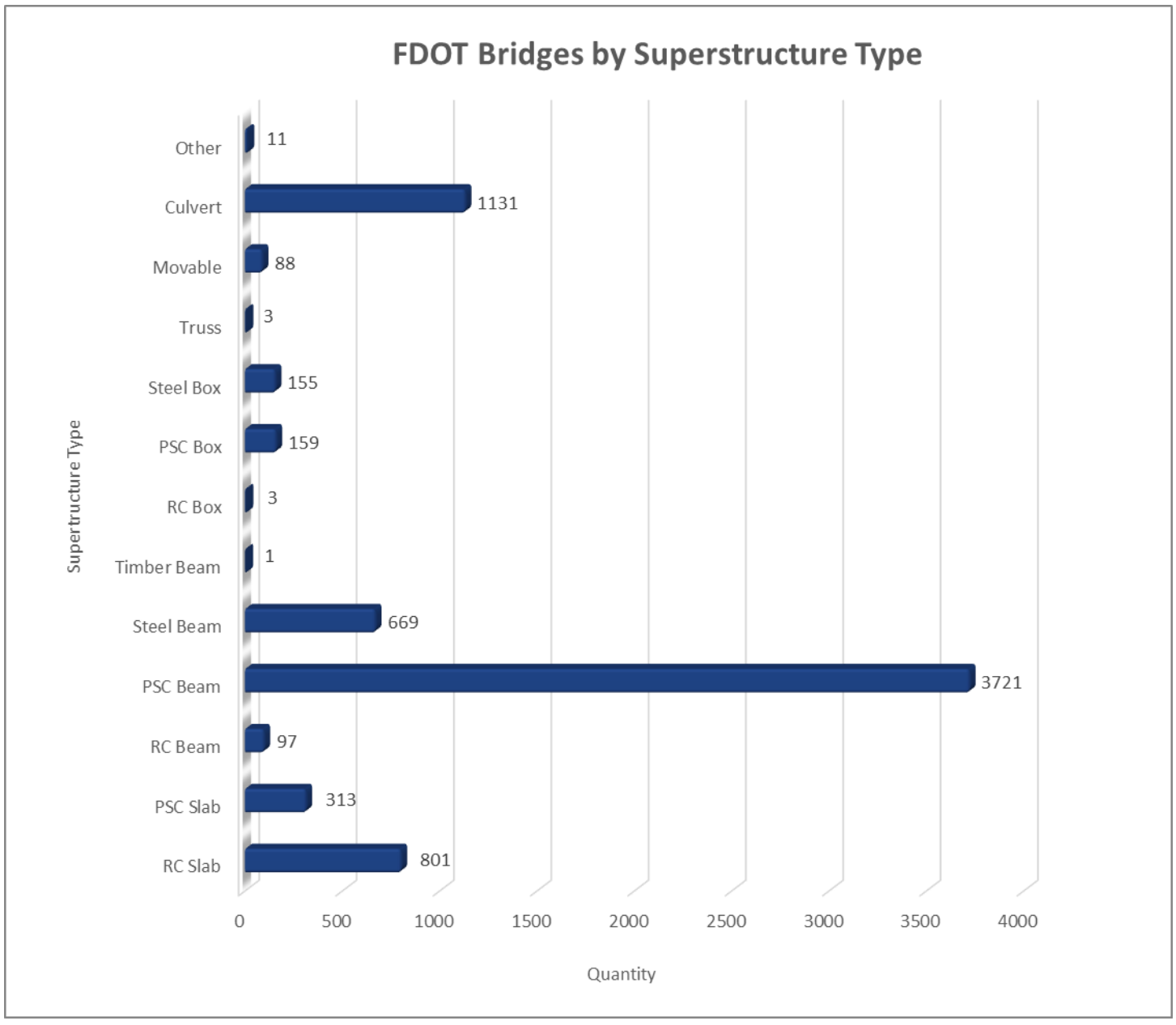


Figure 7: FDOT Bridges by Superstructure Type

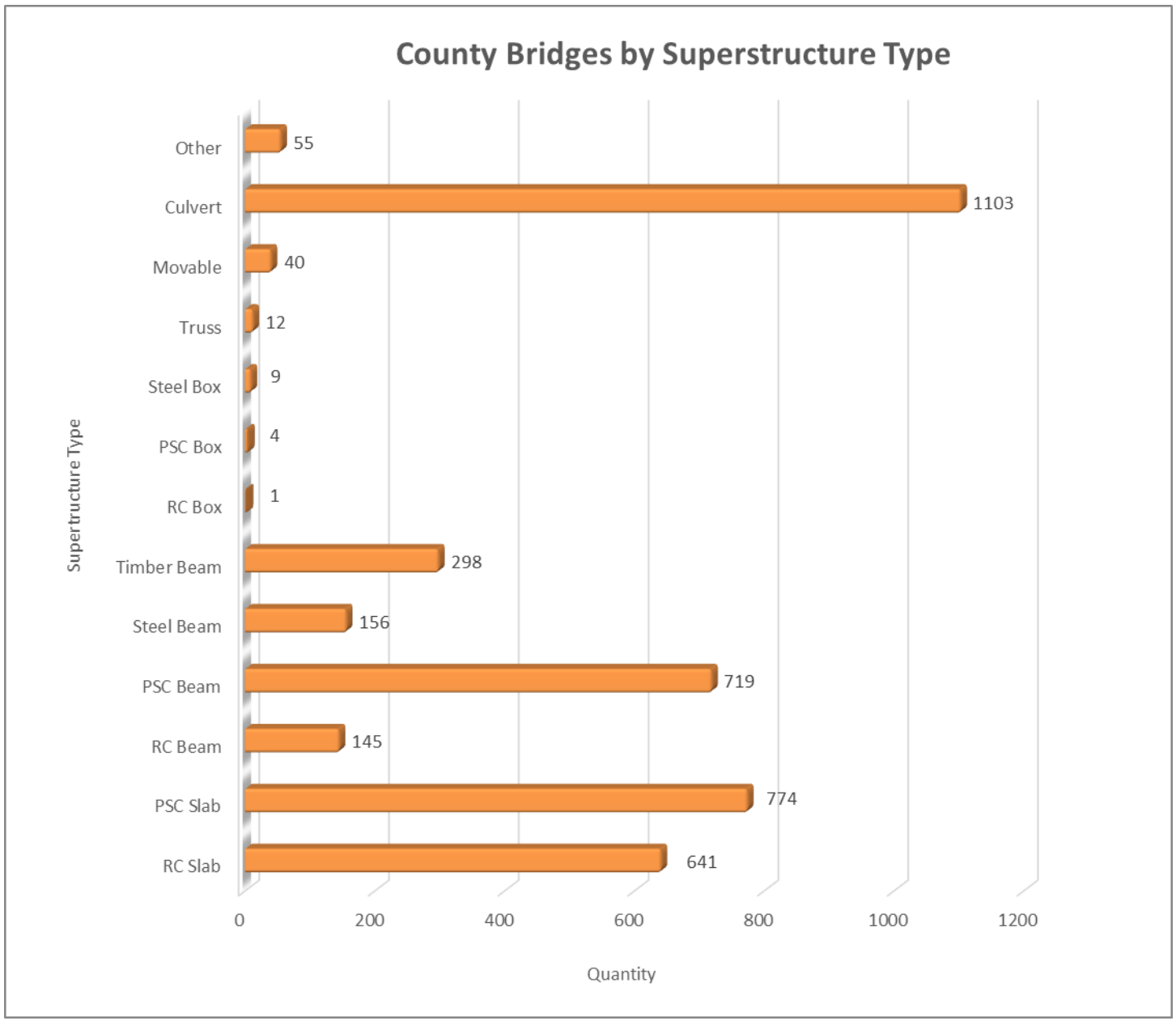


Figure 8: County Bridges by Superstructure Type

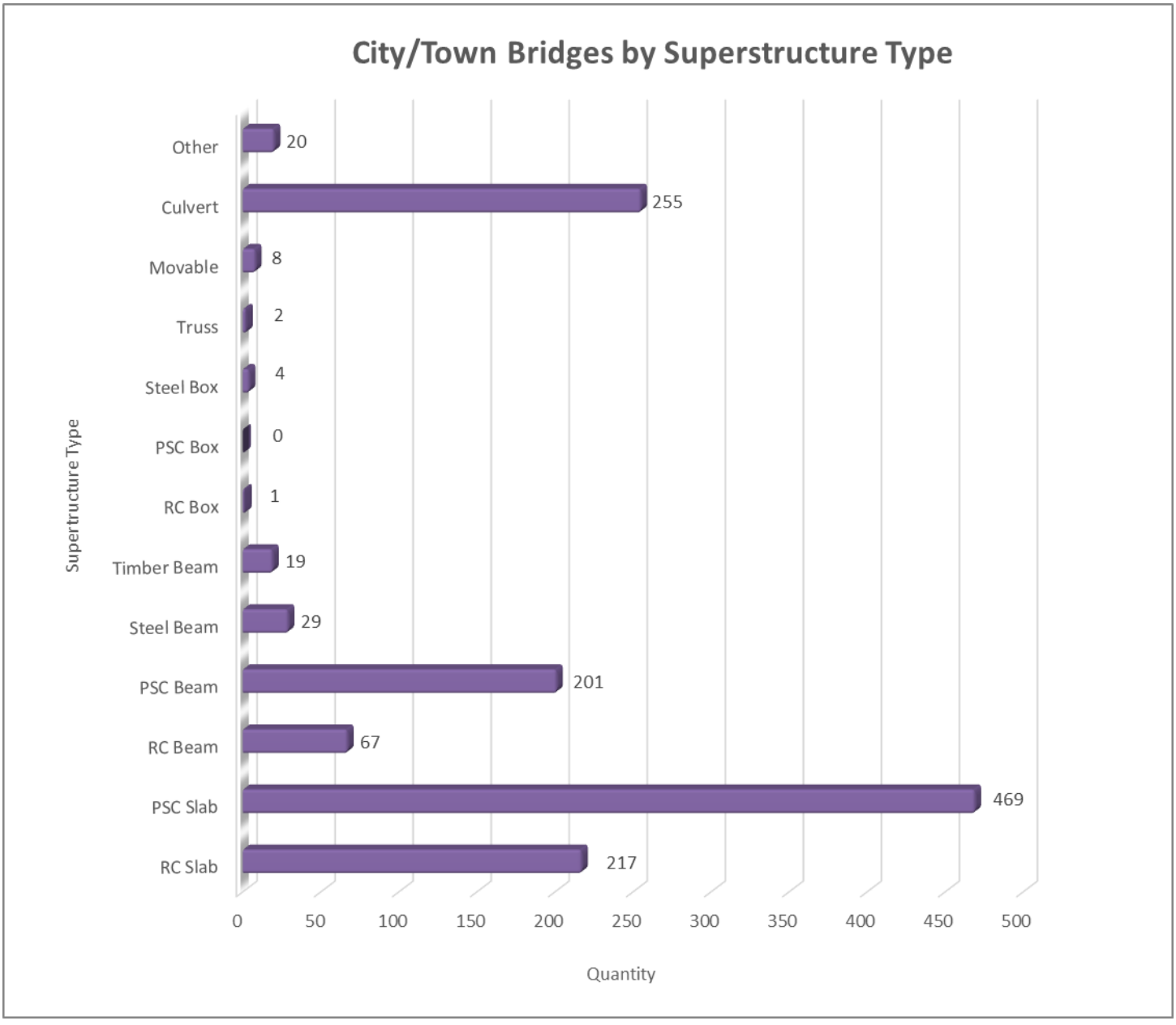
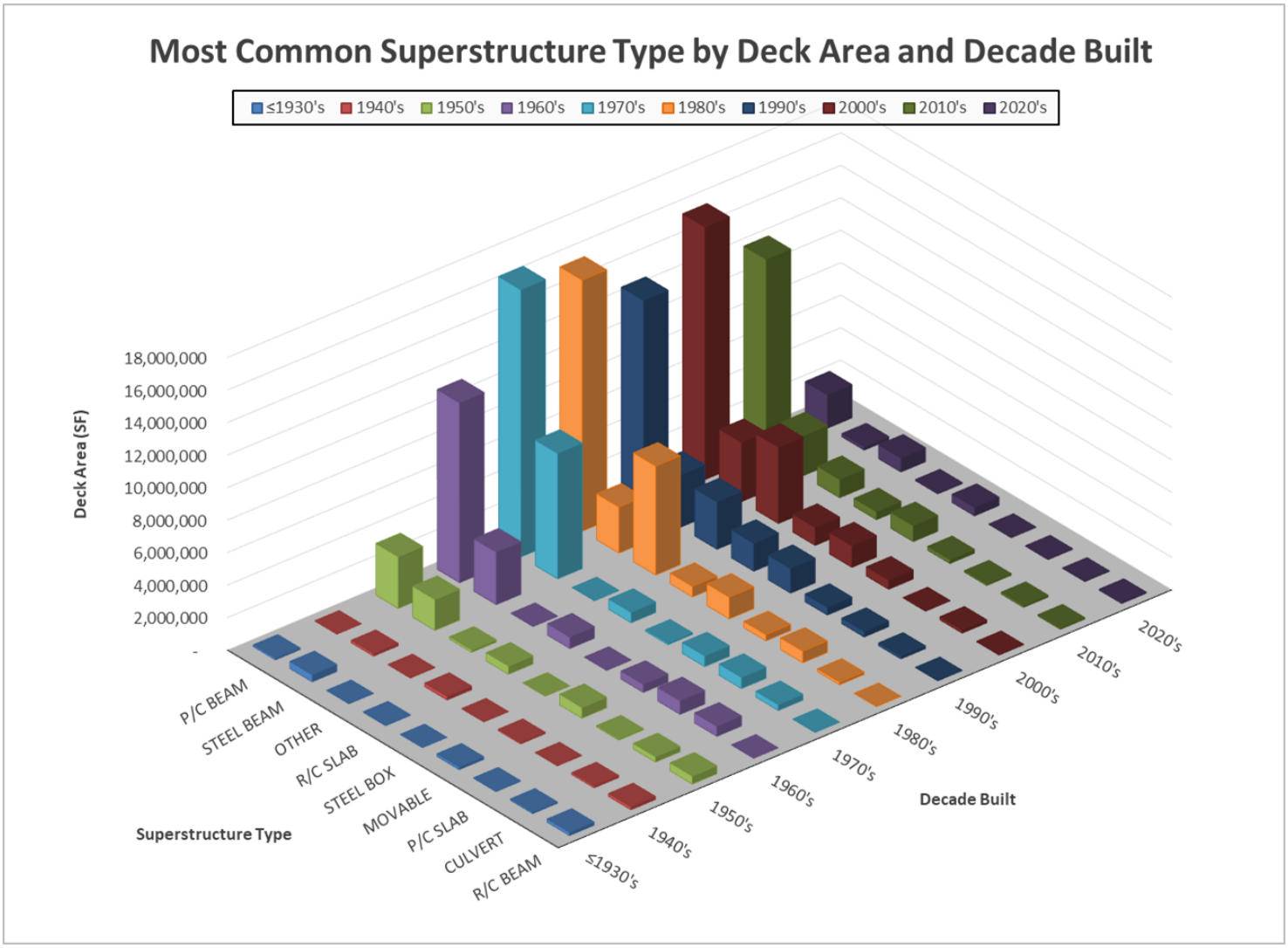


Figure 9: City/Town Bridges by Superstructure Type



NOTE: Due to their small quantities in the inventory Timber, Reinforced Concrete Boxes, Prestressed Concrete Boxes, and Truss bridges are not included in the graphical representations of this data.

Figure 10: Superstructure Types by Deck Area and Decade of Construction

Deck Area of the Bridge Inventory

Most bridges are one-of-a-kind structures. However, to simplify categorizing and evaluation, a method often used to compare bridges relies on the area of the deck or riding surface. Rather than listing bridges individually, this method groups bridges in ranges based on total deck area. Table 5 presents these deck area ranges by maintenance responsibility.

FDOT Bridges Statewide

The figure below presents bridges grouped by the deck area ranges (culverts and other miscellaneous structures are not included in this group). A little over 10% of FDOT bridge are 5,000 sq. ft. or less compared to roughly a quarter of state owned bridges having deck areas greater than 20,000 square feet.

County and City/Town Bridges

As one might expect, bridges maintained by county governments are generally smaller than those maintained by FDOT. The two thirds of statewide county bridges under 5,000 square feet while only about 7% of their bridges are over 20,000 sq. ft. For City/Town maintained bridges the percentage jumps all the way to almost 75% of bridges less than 5,000 square feet.

Statewide Bridge Inventory By Deck Area

Area (S.F.)	FDOT	County	City/ Town	Other State	Other Local	Federal	Others	Total
≤ 1,000	10	424	105	77	1	0	2	619
1,000-2,500	167	748	336	53	10	4	8	1326
2,500-5,000	521	704	318	27	14	0	12	1596
5,000-7,500	908	319	104	4	7	0	12	1354
7,500-10,000	852	186	56	2	6	0	9	1111
10,000-20,000	1874	278	64	4	5	0	21	2246
20,000-40,000	949	120	30	2	0	0	7	1108
40,000-80,000	412	42	17	0	0	0	6	477
80,000-160,000	194	21	7	1	2	0	1	226
>160,000	134	12	0	1	0	0	0	147
Total	6021	2854	1037	171	45	4	78	10210

Table 3: Statewide Bridges by Deck Area

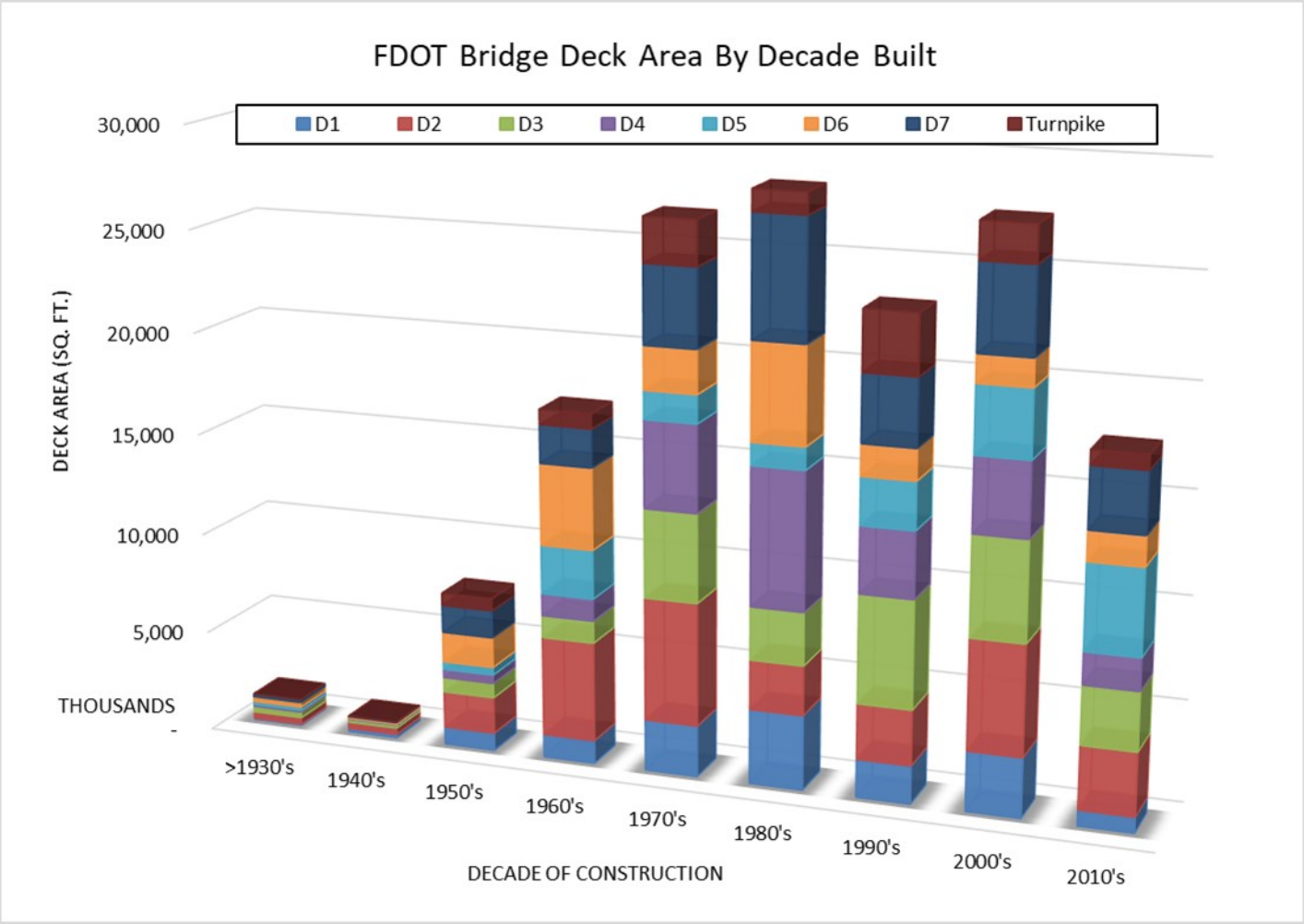


Figure 11: Total FDOT Bridge Deck Area Built by Decade

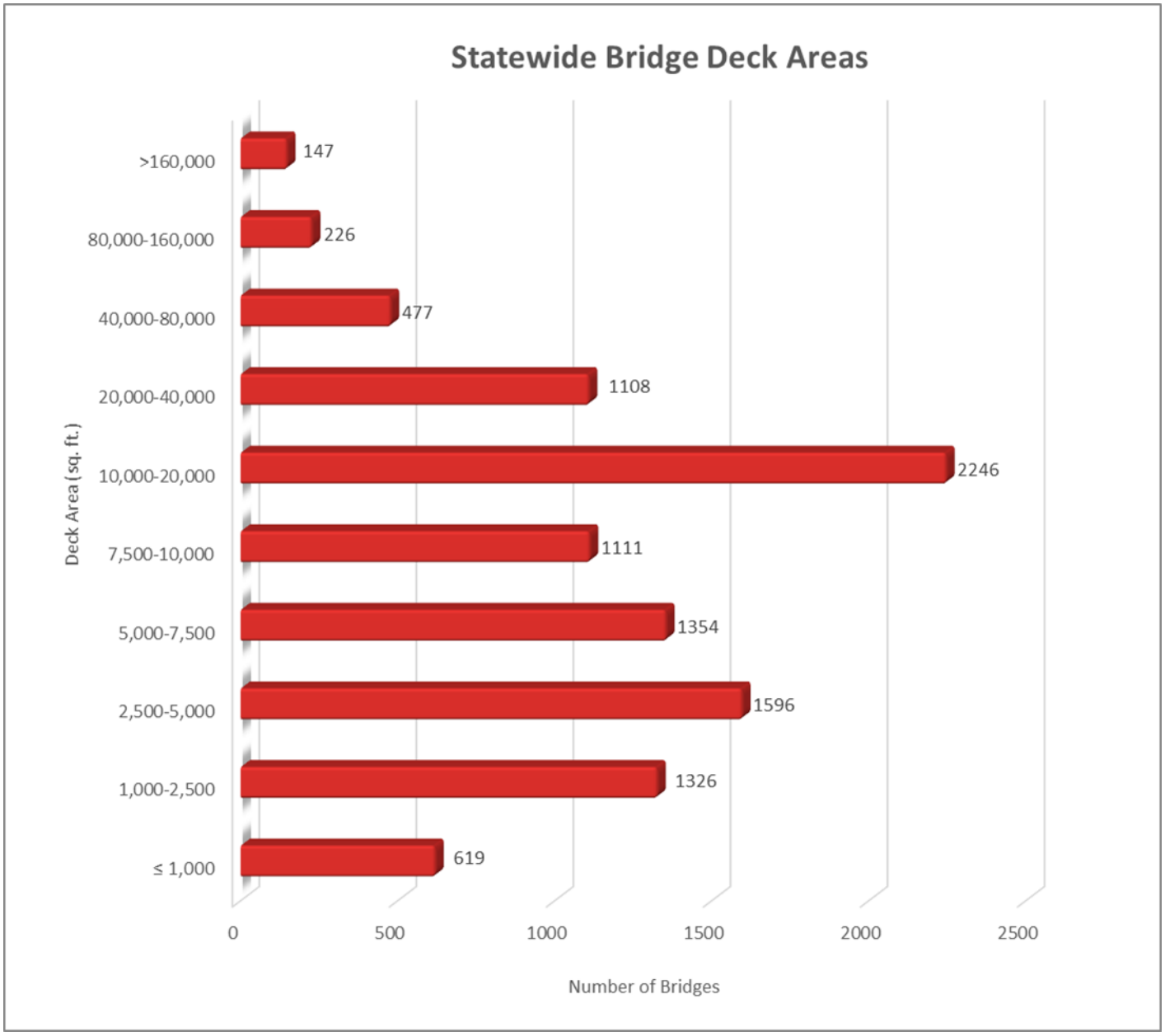


Figure 12: Statewide Deck Areas

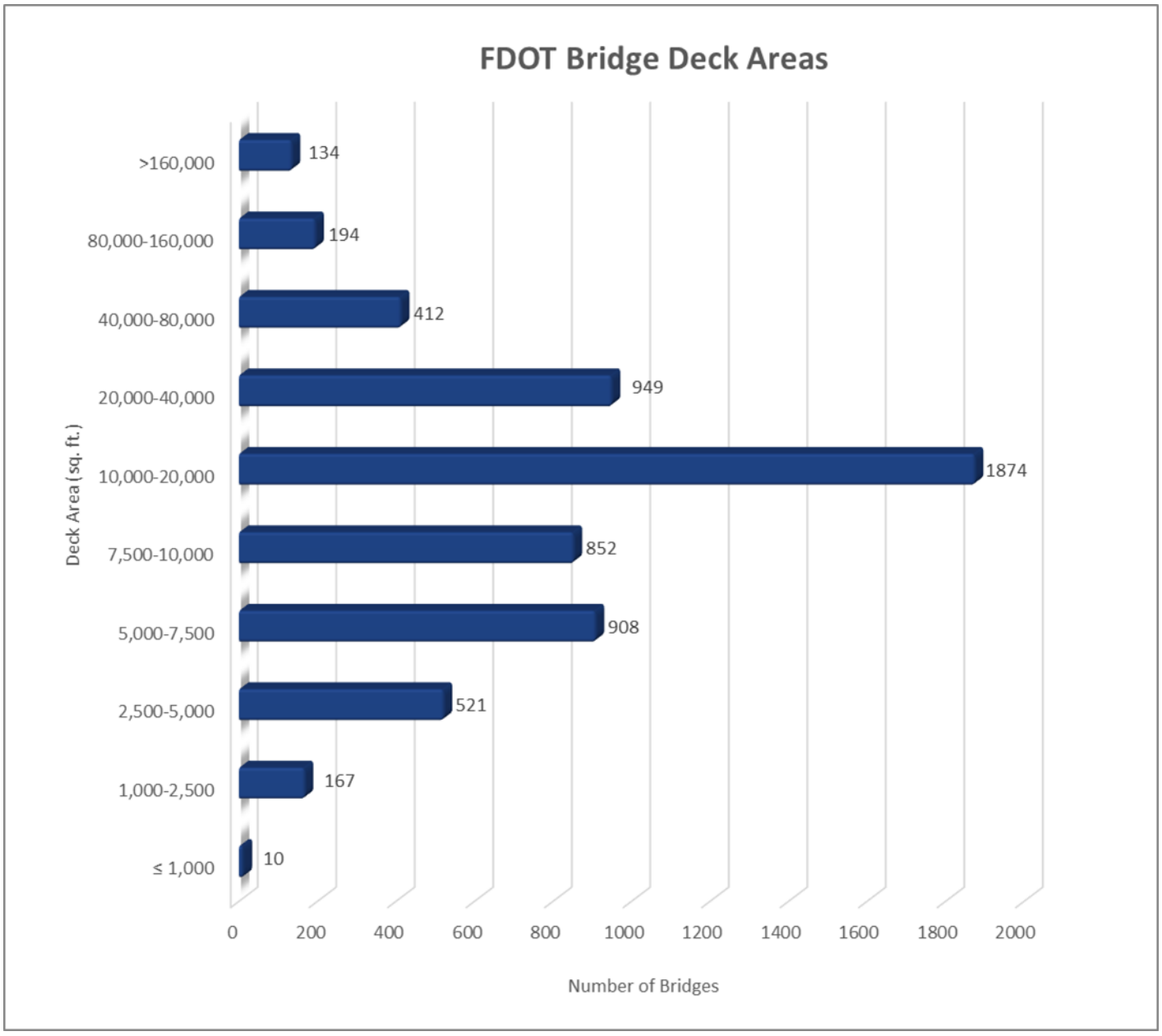


Figure 13: FDOT Bridge Deck Areas

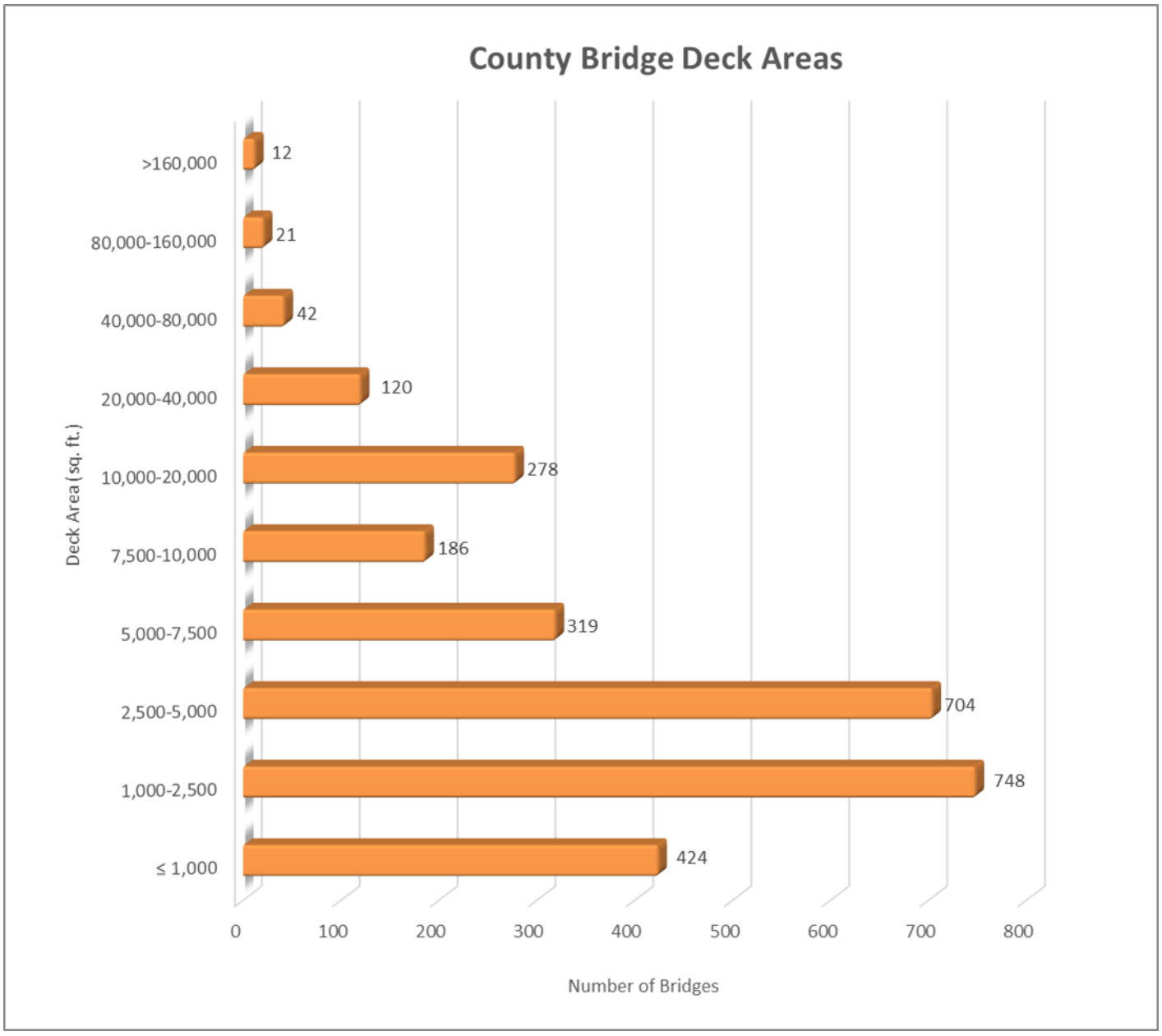


Figure 14: County Bridge Deck Areas

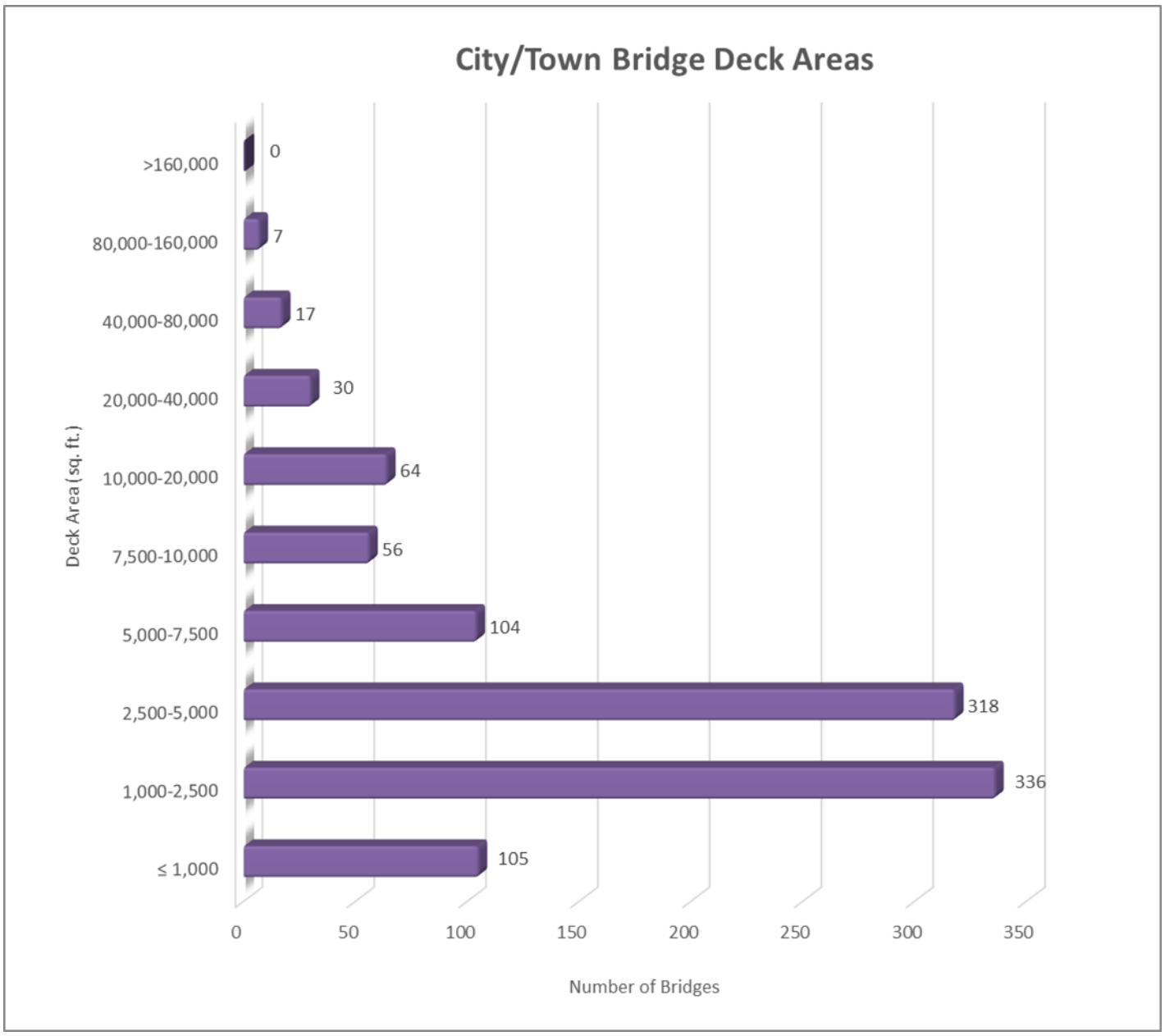


Figure 15: City/Town Bridge Deck Areas

Overall Structural Condition

Maintenance and repair activities performed in a timely manner keeps bridges in good condition, avoids more expensive repair or replacement costs in the future, and ensures that the bridges are safe for use by the public. The identification of bridge work needs generally begins with the bridge inspection. Like most states, Florida's bridge inspection program began in the late 1960's. Areas of emphasis have changed and expanded as new problems became apparent, as newer bridge types became more common, and as these newer bridges aged enough to require corrective actions. Guidelines for inspection condition rating have evolved to increase uniformity and consistency of inspections and today's program is much larger in scope than it's original version. Data collected from bridge inspections is critical to determine the most cost effective mix of preventive maintenance, routine maintenance, repair, rehabilitation, replacement, and other actions over the life of the bridges.

Although bridges contain many separate elements they are grouped into three major components: the deck, which supports vehicles or pedestrians; the superstructure which supports the deck; and the substructure which functions to transfer the superstructure loads to the ground. Bridge inspectors assign a numerical condition rating to each of the components, from 0 being the worst to 9 being the best. The Overall Condition Rating for a bridge represents the component with the lowest rating.

The ratings are also divided into four categories.

- Excellent ≥ 8
- Good = 6 to 7
- Fair = 5
- Poor ≤ 4

Bridge culverts use the same scale, except there is only one overall component. When a channel is present a similar rating system is also used; channel ratings are not presented in this report.

Approximately **95% of the FDOT** maintained bridges are in excellent or good condition. The percentage for other ownership groups are: **79% for County bridges**, **82% for City/Town bridges**, and 74.17% for Other Agencies.

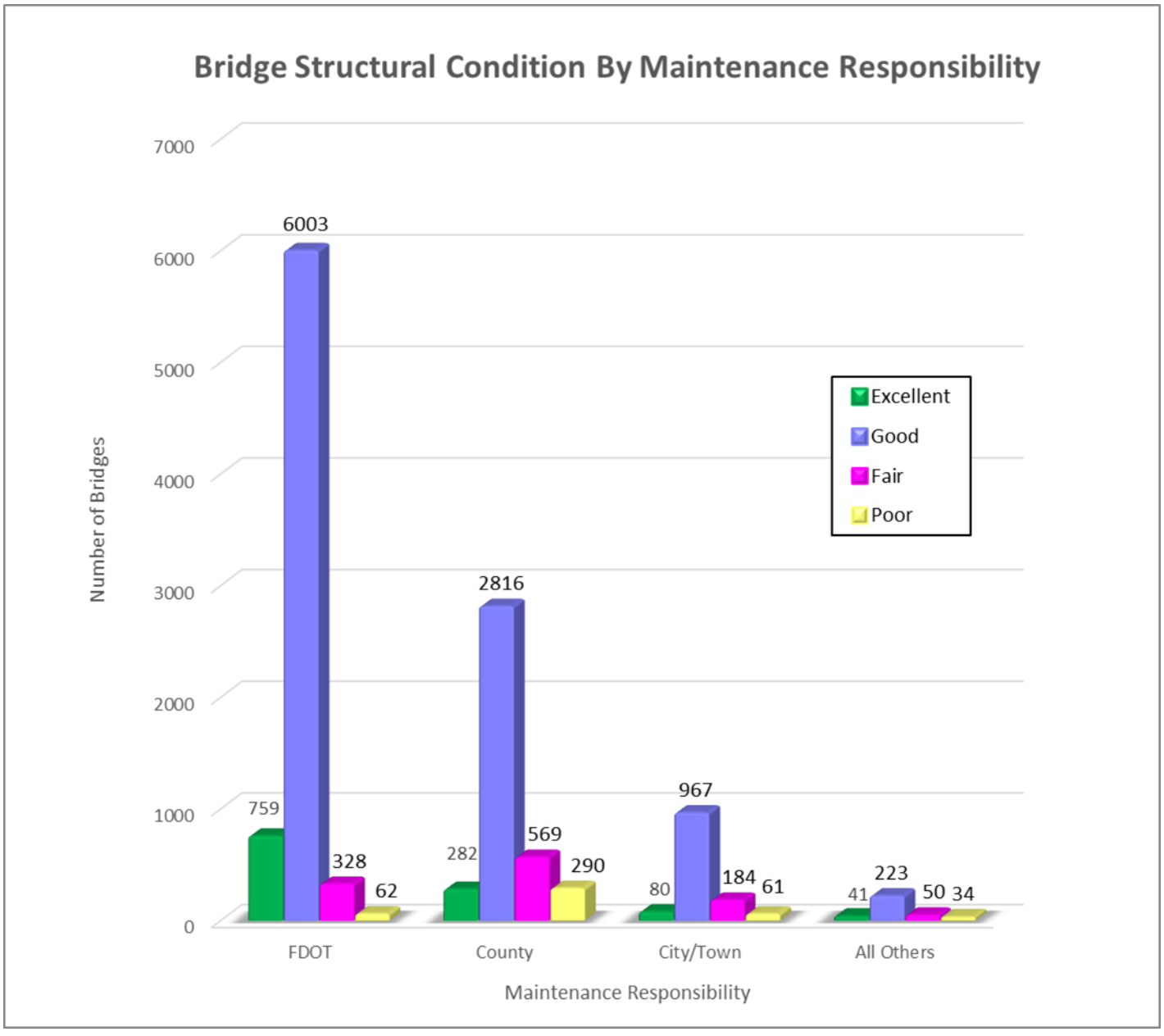


Figure 16: Bridge Condition by Maintenance Responsibility

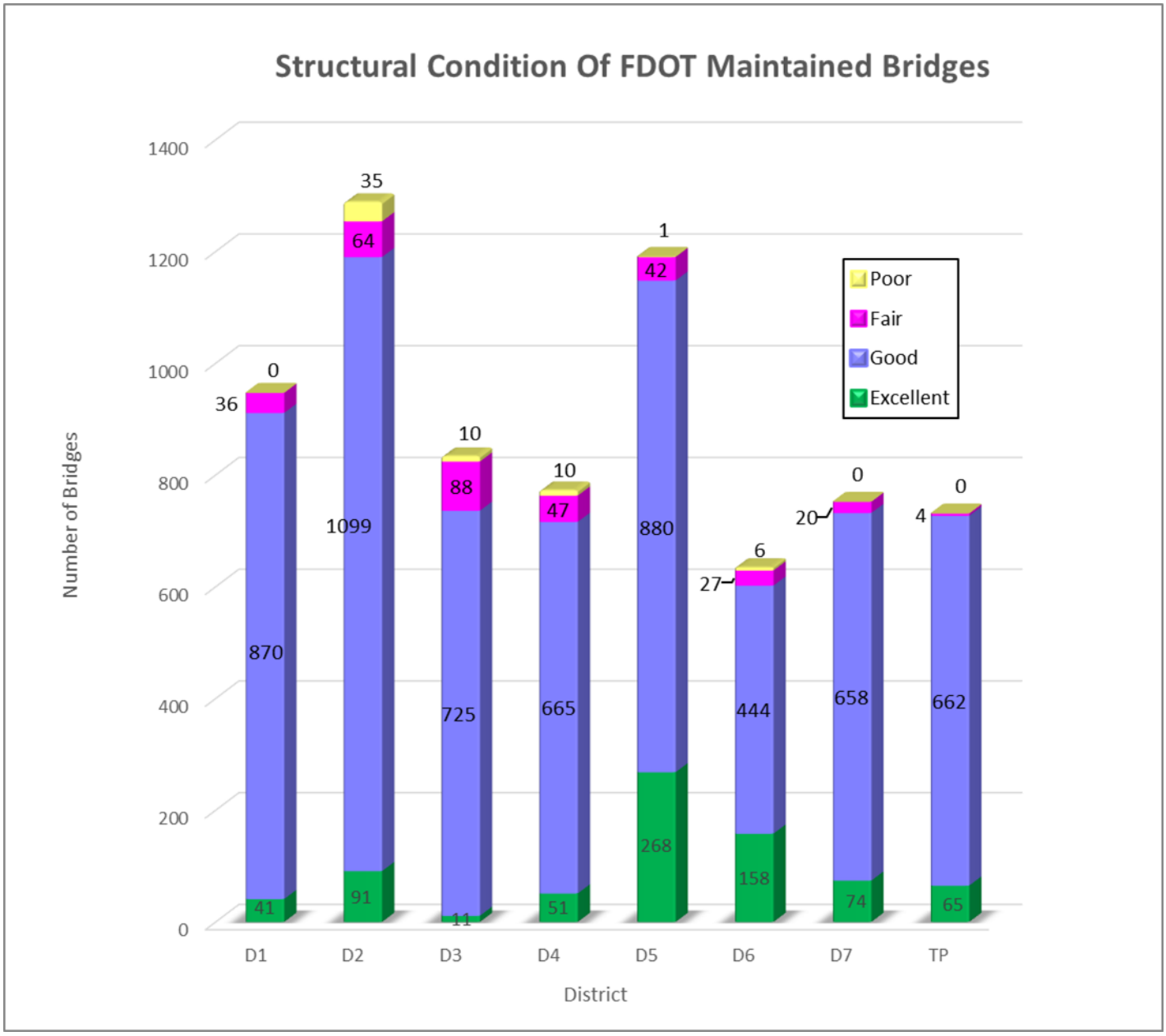


Figure 17: Condition of FDOT Maintained Bridges

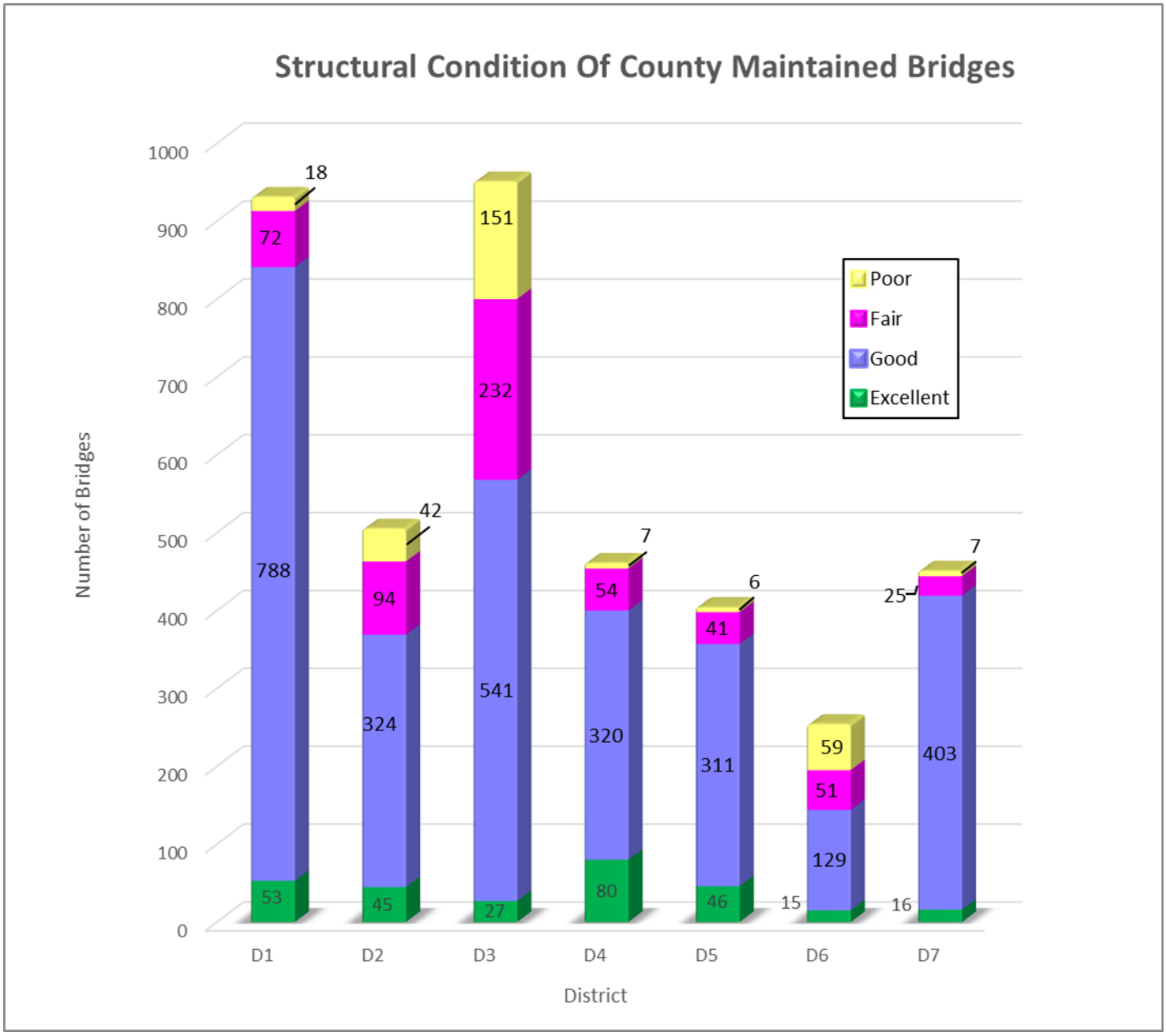


Figure 18: Condition of County Maintained Bridges

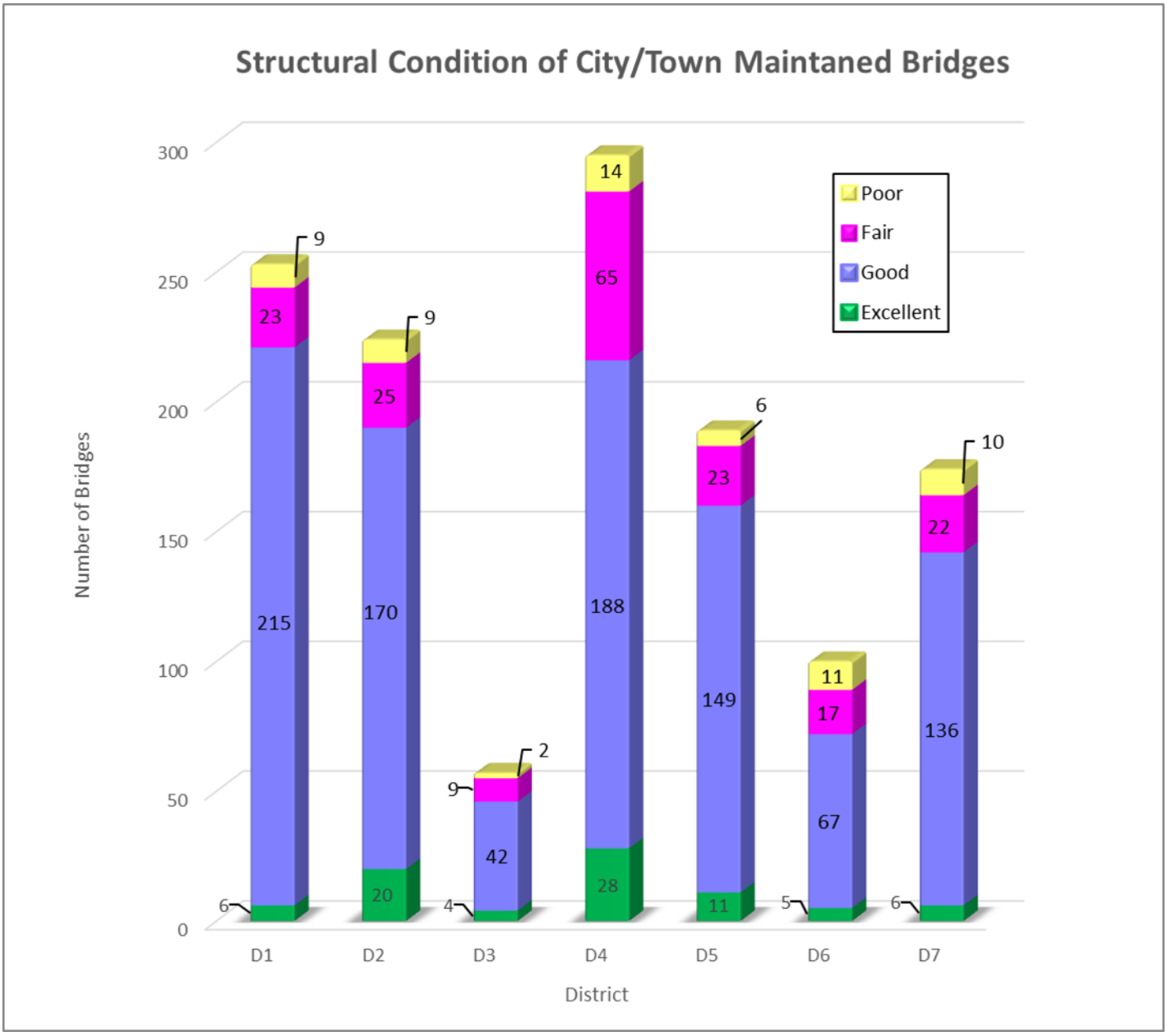


Figure 19: Condition of City/Town Maintained Bridges

FHWA Bridge Performance Measures

In compliance with the Federal Highway Administration (FHWA) mandate for all states, the FDOT created and implemented a Transportation Asset Management Plan (TAMP). Part of the TAMP is to identify the statewide average condition of all bridges on the National Highway System. This condition is divided into three groups called "Good", "Fair", and "Poor". The conditions use the National Bridge Inventory (NBI) rating system explained in the prior subsection. The condition group, Good, is defined as bridges with an overall NBI condition rating of 7 or above. The condition group, Fair, is defined as bridges with an overall NBI condition rating of 5, or 6. And Poor is defined as an overall condition rating of 4 or less.

The performance measures required in the TAMP are:

1) Percentage of bridges on the NHS, measured by total deck area, with an overall condition rating of Good (as defined above);
2) Percentage of bridges on the NHS, measured by total deck area, with an overall condition rating of Poor (as defined above).

Table 4 shows the results of these measures for each district, the Turnpike, and overall statewide values.

FHWA Performance Measures									
	District 1	District 2	District 3	District 4	District 5	District 6	District 7	Turnpike	Statewide
Total Bridge Deck Area (sq. ft.) on the National Highway System (NHS)	11,736,160	20,661,676	14,291,146	16,377,489	19,272,928	20,494,406	23,904,628	9,599,069	136,337,502
Bridges on the NHS with an Overall Bridge Condition NBI Rating ≥7 (Deck Area)	7,789,773	10,863,135	5,263,628	10,981,572	12,838,844	10,405,892	17,009,980	7,501,550	82,654,373
Bridges on the NHS with an Overall Bridge Condition NBI Rating ≤4 (Deck Area)	0	219,438	287,563	159,141	6,152	13,315	0	0	685,608
Percent of NHS Bridges with Overall Bridge Condition NBI Rating ≥7	66.37%	52.58%	36.83%	67.05%	66.62%	50.77%	71.16%	78.15%	60.62%
Percent of NHS Bridges with Overall Bridge Condition NBI Rating ≤4	0.00%	1.06%	2.01%	0.97%	0.03%	0.06%	0.00%	0.00%	0.50%

Table 4: FHWA Performance Measures

Structurally Deficient Bridges

Following FHWA's definition of structurally deficient (SD) bridges FDOT can identify bridges that need to be monitored and/or repaired. A bridge can have structural deterioration but not be considered structurally deficient, mostly due to the material safety factors and conservatism inherent in bridge design practices. The FHWA defines a structurally deficient bridge to have a **poor** rating (as defined above) for the deck, superstructure, or substructure component, or culvert. Additionally, if the bridge is weight restricted to traffic it is also considered to be structurally deficient. FDOT's work program requires that structurally deficient bridges, once identified, have corrective actions (repair, rehabilitation, or replacement) initiated within six years. The fact that a bridge is "structurally deficient" does not imply that it is likely to collapse or that it is unsafe. If the condition deteriorates to a point where safety is a concern the bridge will be closed to the public.

Currently less than 4% of the overall bridge inventory are considered structurally deficient with roughly **64%** being under **county responsibility**. **FDOT** has maintenance responsibility of about **14% of the SD bridges** in the state. Refer to Figure 21 for a presentation of structurally deficient bridges, by district, for each of the maintenance group.

Structurally Deficient (SD) Bridges								
	FDOT	County	City/ Town	Other State	Local	Federal	Others	Total
District 1	0	18	11	1	0	0	0	30
District 2	35	42	9	1	0	0	0	87
District 3	10	151	2	30	0	0	0	193
District 4	10	7	14	1	0	0	0	32
District 5	1	6	6	0	0	0	0	13
District 6	6	59	11	0	0	0	0	76
District 7	0	7	10	1	0	0	0	18
Turnpike	0	0	0	0	0	0	0	0
Statewide	62	290	63	34	0	0	0	449

Table 5: Statewide Structurally Deficient Bridges

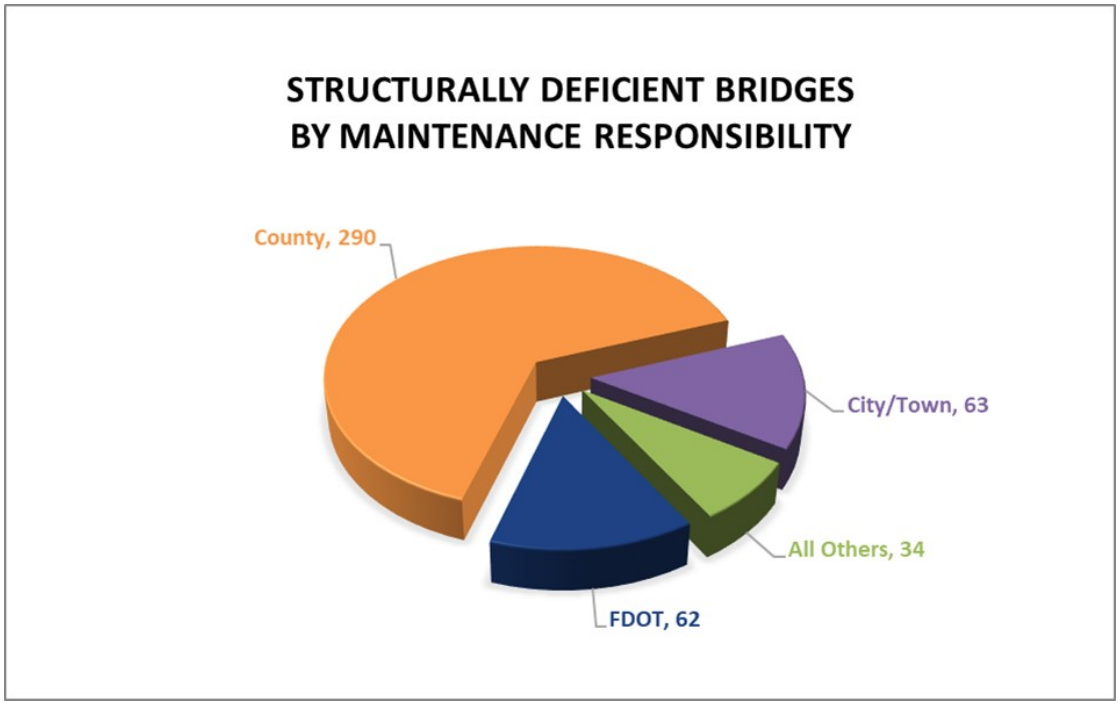


Figure 20: SD by Maintenance Responsibility

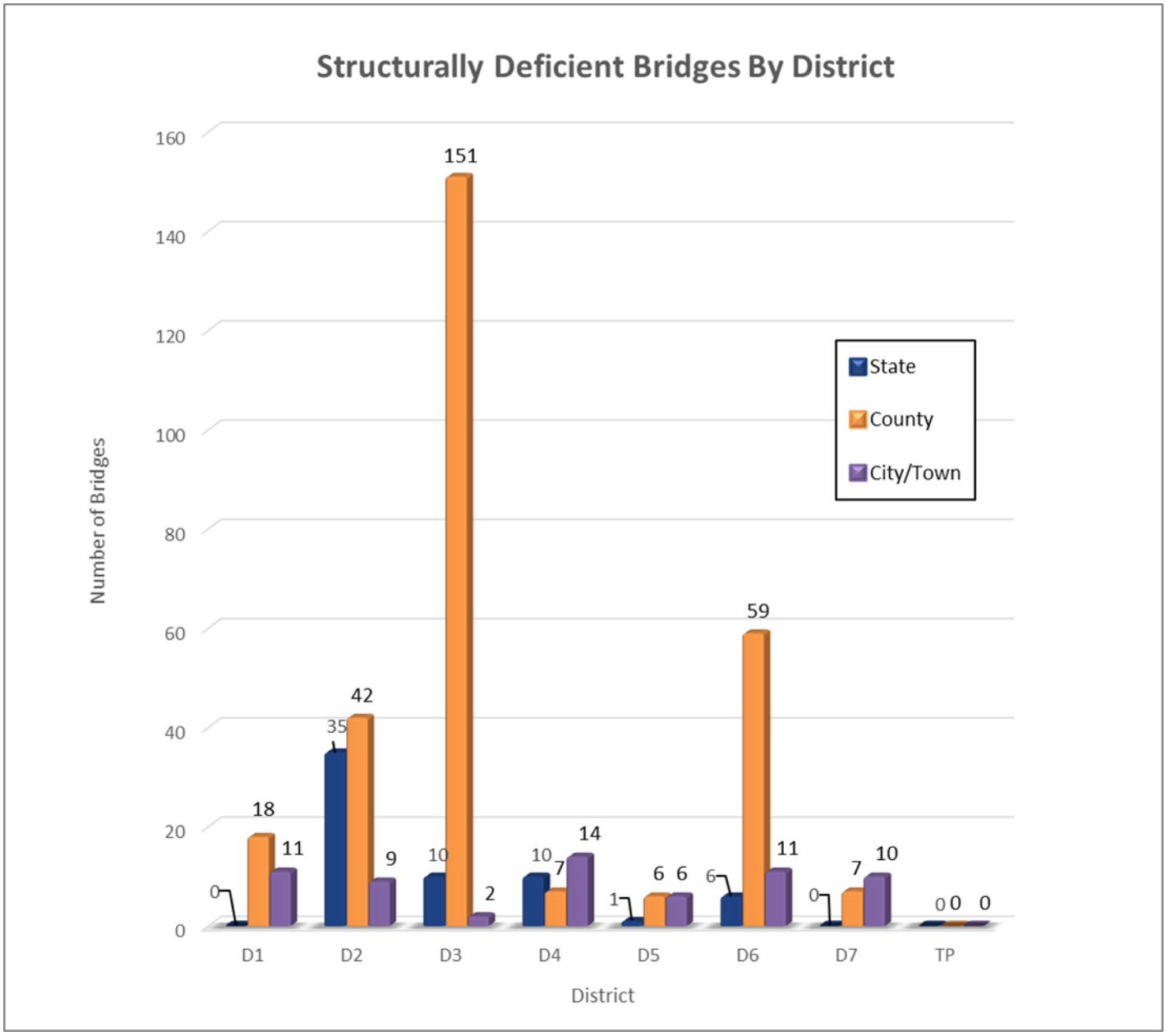


Figure 21: SD Bridges by District

Posted and Closed Bridges

The operational status of a bridge indicates whether the bridge is open to all traffic, closed to all traffic, or posted for some sort of traffic restriction. Posting restrictions generally refer to gross vehicular weights of truck traffic and it typically caused by the inability of individual bridge members to adequately carry the applied legal loads. The inability to carry these loads can be the result of either advanced structural deterioration with loss of material strength, obsolete member proportions, or a combination of these two factors. Older bridges were typically designed for smaller loads than today's standards would require, and as a result, the member sizes are often smaller than what would be designed today. Like structurally deficient bridges, posted bridges receive the highest priority in the FDOT Bridge Work Plan. Construction to replace the bridge or rehabilitation to strengthen the bridge must be initiated within six years from the time the posting requirement is first determined.

There are currently **892 posted or closed bridges** in Florida, with **County Governments** having maintenance responsibility for over **two-thirds of the total**. **City and Town Governments** are responsible for the maintenance of about a **quarter of the total**, while the **FDOT** is typically responsible for less than **2% of the posted or closings**. The number of posted County bridges is much greater than the number of structurally deficient County bridges, which indicated that the majority of County bridge posting restrictions are caused by obsolete design, rather than advanced structural deterioration.

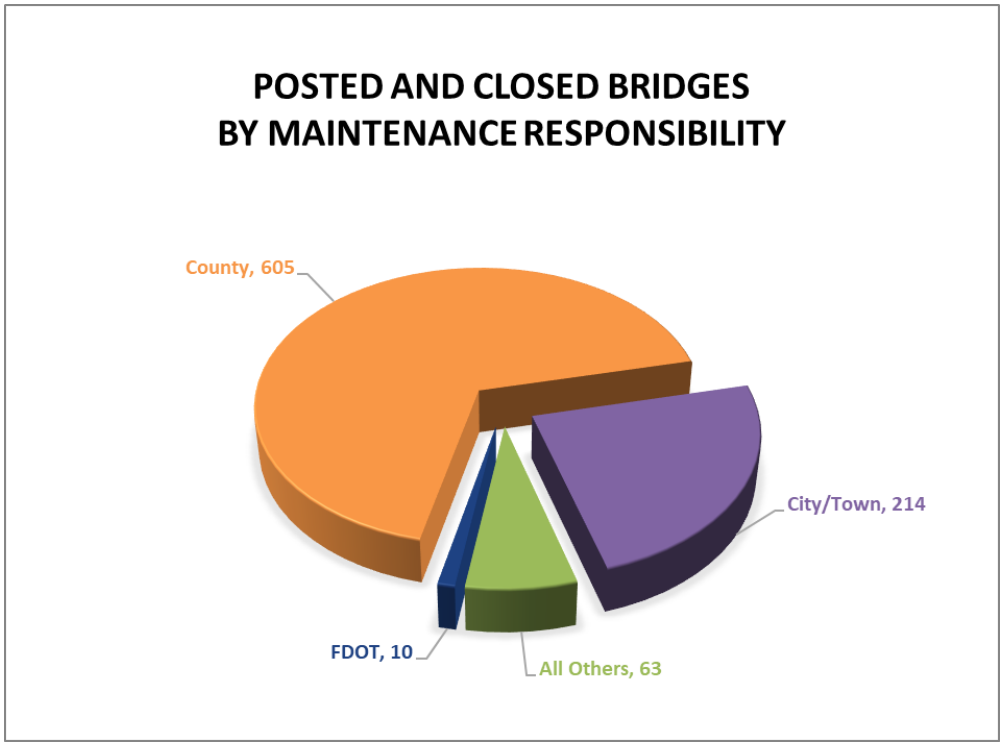


Figure 22: Posted and Closed Bridges by Maintenance Responsibility

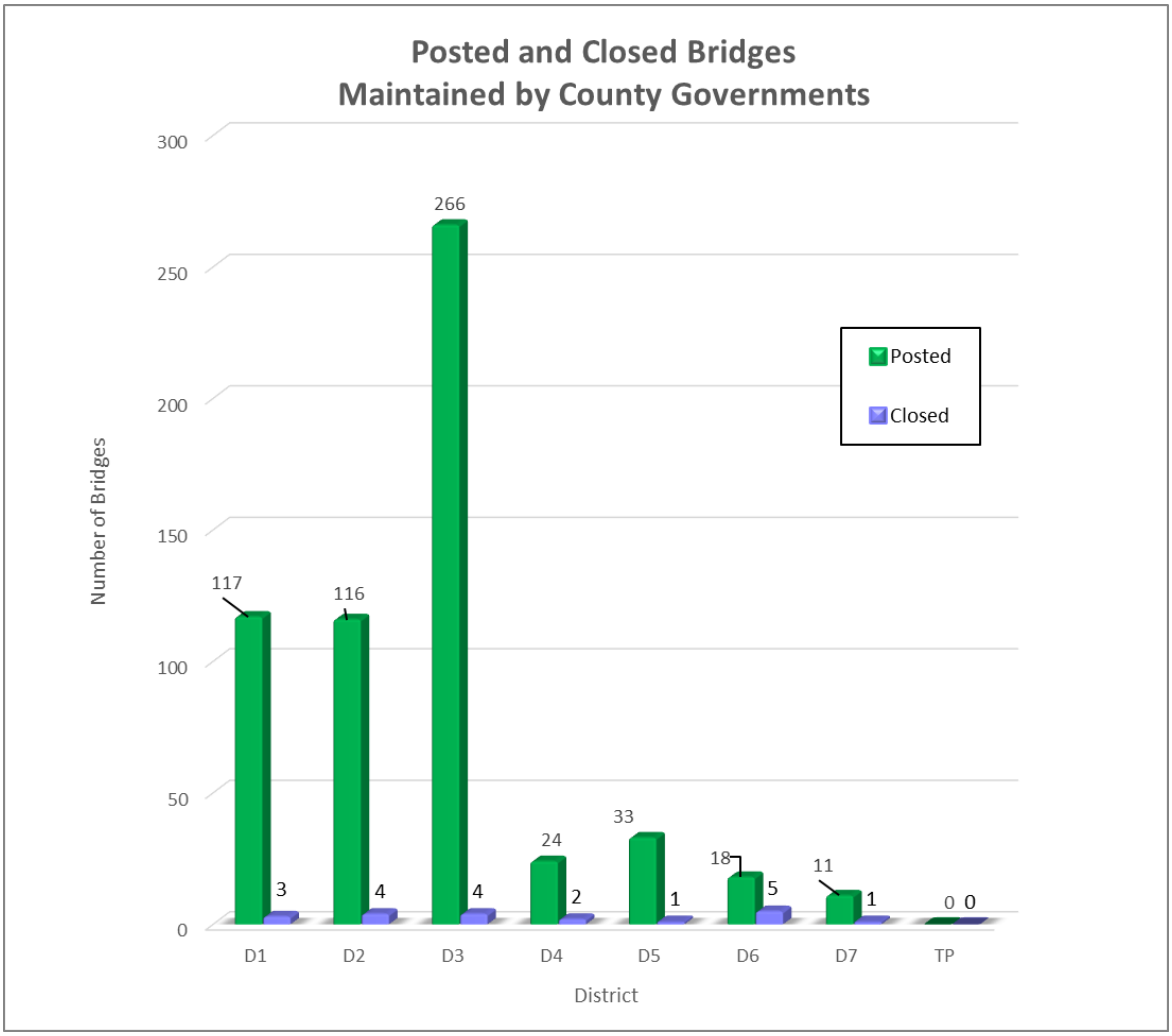


Figure 23: Posted and Closed County Bridges by District

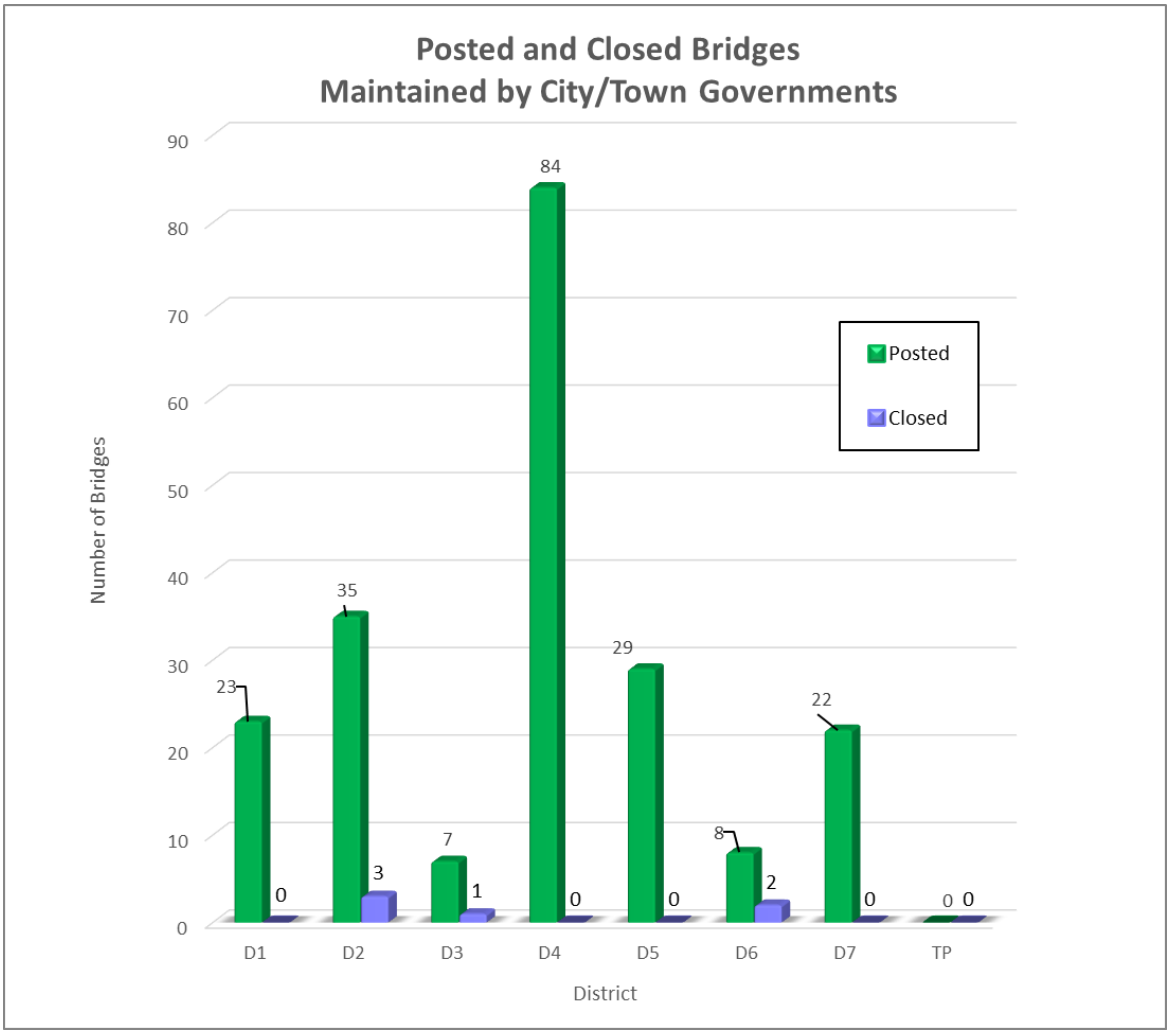


Figure 24: Posted and Closed City/Town Bridges by District

Functionally Obsolete Bridges

Again using FHWA definitions FDOT can identify functionally obsolete (FO) bridges. Functional obsolescence attempts to appraise the level of service a bridge provides in relation to the level of service for the highway the bridge is located on. A functionally obsolete bridge is one that was built to standards that are not used today. Typically they are bridges that do not have adequate lane widths, shoulder widths, or vertical clearances to serve current traffic demand, or those that may be occasionally flooded. These bridges are not automatically rated as structurally deficient, nor are they inherently unsafe.

The following five criteria determine the FO status:

1) *Deck Geometry* — the curb-to-curb width of the bridge deck as it relates to number of traffic lanes, traffic volume, and highway classification
2) *Vertical and Horizontal Under Clearances* — unrestricted clearances as related to highway classification
3) *Approach Roadway Alignment* — the inspector's subjective appraisal of the need to reduce vehicle operating speed as the bridge is approached from the highway
4) *Structural Evaluation* — Considers the numerical condition ratings for the deck, superstructure, or substructure bridge component, or for the culvert; load carrying capacity; and traffic volume
5) *Waterway Adequacy* — The inspector's subjective appraisal of the bridge site's ability to accommodate the flow of flood water

Currently about **13% of the total bridge inventory** is considered functionally obsolete. The **FDOT** has maintenance responsibility for over **44% of all FO bridges** (see Figure 26). Refer to Figure 27 for a presentation of functionally obsolete bridges, by district, for each of the three maintenance groups.

NOTE: The term Functionally Obsolete is no longer recognized by the FHWA but is presented herein for historical purposes.

Functionally Obsolete Bridges (FO) Bridges								
	FDOT	County	City/ Town	Other State	Local	Federal	Others	Total
District 1	66	150	81	6	4	0	0	307
District 2	209	52	27	7	0	0	1	296
District 3	41	111	8	31	1	0	1	193
District 4	44	76	64	3	0	0	0	187
District 5	105	50	48	7	1	0	15	226
District 6	153	63	25	1	0	0	0	242
District 7	74	74	36	0	7	0	1	192
Turnpike	66	0	0	0	0	0	0	66
Statewide	758	576	289	55	13	0	18	1709

Table 6: Statewide Functionally Obsolete Bridges

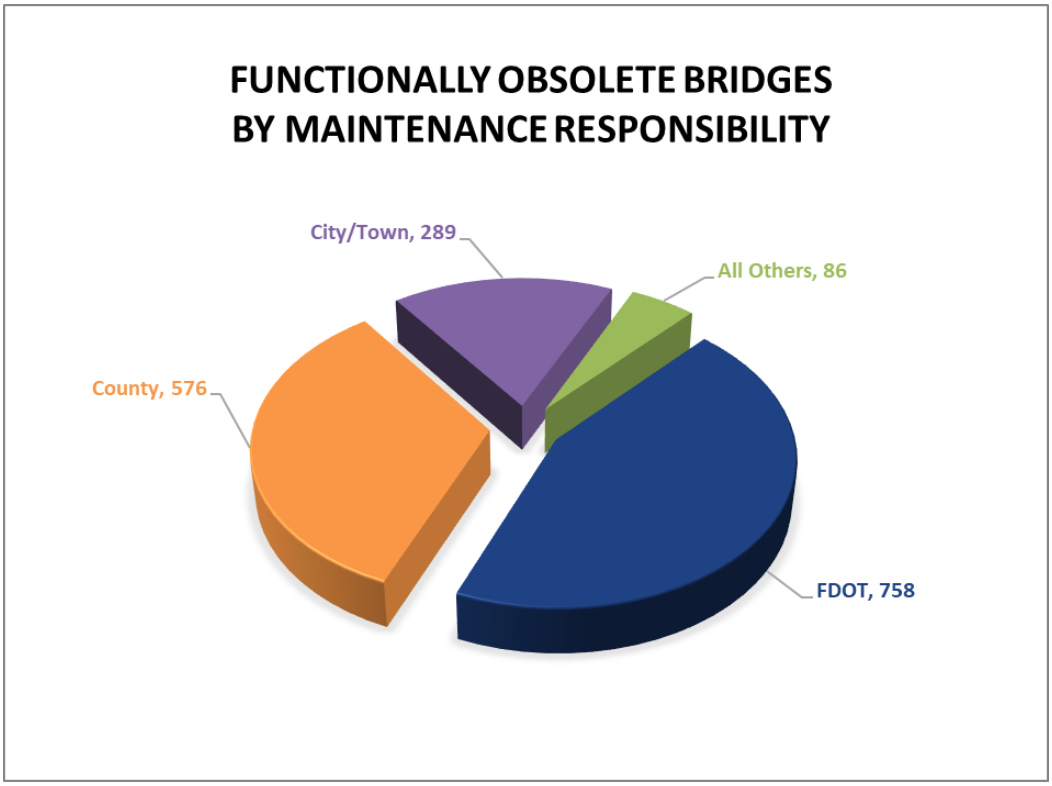


Figure 25: FO Bridges by Maintenance Responsibility

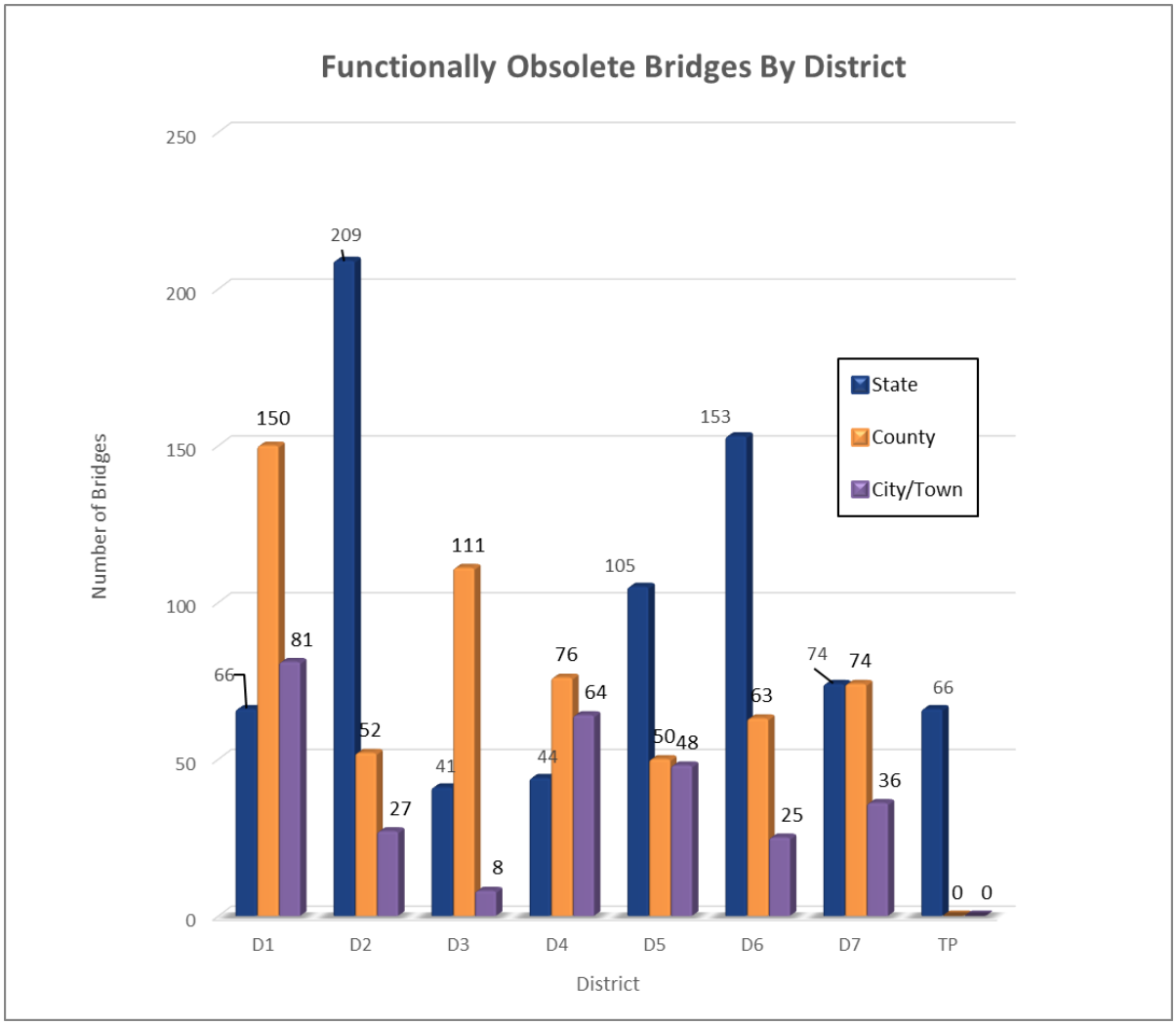


Figure 26: State-owned FO Bridges by District

Conclusion

One of FDOT's main goals is the protection of the public's investment in transportation and bridges represent a significant portion of that investment. To best do this FDOT inspects, load rates, repairs, rehabilitates, and replaces bridges in addition to on-going routine maintenance activities. An awareness and understanding of the state of the bridge inventory can be used to help identify performance goals, establish resource requirements, and measure progress on meeting the above goals. Through aggressive preventive maintenance, the strategy is to leverage advances in material science, design practices, and construction methods to extend the useful life of the bridges, thereby minimizing the need to replace a large number of bridges within a short time period. The challenge is to determine the most cost effective mix of preventive maintenance, routine maintenance, repair, rehabilitation, replacement, and other actions over the life of the bridges. With nearly half of the state's bridge inventory having been built prior to 1980 aging bridges will become a concern in the future.

Florida's bridges are generally in good condition, with those maintained by the FDOT in better condition than those maintained by local governments or others. The most serious threat to bridges in Florida is the corrosion of steel reinforced concrete substructures in coastal regions. Much has been learned in recent years about corrosion in marine environments, affecting material specifications and design practices that helps new bridges built today. However, the older bridges in the coastal regions are beginning to require careful evaluation and extensive corrective actions. On-going research will continue to provide useful information to help meet this challenge. Other challenges include: confronting the increasingly extensive environmental and public health issues related to protective coatings for steel bridges with lead based paint; completing the statewide bridge scour evaluation program to identify scour critical bridges (bridges that could fail during floods) and to provide scour countermeasures as corrective action where required; to stay on top of movable bridge maintenance and rehabilitation; and to improve preventive maintenance on the large population of bridges built during the 1960's and 1970's.

Comments on this report should be directed to:

Bruno Vasconcelos

FDOT Office of Maintenance

Telephone: (850) 410-5808

E-mail: Bruno.Vasconcelos@dot.state.fl.us

Appendix 1:
Tables Used for Graphs

Found in the following section are the tables used for the creation of the graphs found throughout the report. The tables are presented separately to declutter the report but are kept in their own section for transparency, clarity, and completion. Some bridge maintenance groups have very insignificant numbers of bridges relative to the entirety of the statewide inventory and those totals are best expressed in the complete tables.

Bridge Inventory by Decade Built																
	FDOT	County	City / Town	Other State	Other Local	Federal	Others	Total	FDOT	County	ity / Tow	Other State	Other Local	Federal	Others	Total
	District 1								District 2							
>1930s	20	9	5	0	0	0	0	34	53	14	4	0	0	0	0	71
1940s	58	24	2	1	0	0	0	85	57	49	2	0	0	0	0	108
1950s	121	99	13	1	0	0	0	234	140	109	32	4	0	0	0	285
1960s	109	201	36	7	6	0	0	359	403	92	33	1	0	0	0	529
1970s	152	131	83	0	3	0	0	369	190	39	31	0	0	0	1	261
1980s	176	131	48	1	5	0	0	361	45	48	28	0	0	0	0	121
1990s	138	126	27	6	8	0	0	305	96	45	28	2	0	0	0	171
2000s	97	105	22	4	1	0	0	229	145	57	38	3	0	0	1	244
2010s	65	96	14	5	1	0	0	181	149	43	19	1	0	0	0	212
2020s	11	9	3	0	1	0	0	24	11	9	9	1	0	0	0	30
Total	947	931	253	25	25	0	0	2181	1289	505	224	12	0	0	2	2032
	District 3								District 4							
>1930s	10	24	0	1	0	0	0	35	4	4	5	0	0	0	0	13
1940s	46	30	2	1	0	0	0	79	1	2	4	0	0	0	0	7
1950s	71	129	4	1	0	0	1	206	33	32	56	5	0	0	0	126
1960s	100	144	5	4	0	0	0	253	70	63	54	4	0	0	1	192
1970s	284	83	8	3	2	0	0	380	145	71	66	0	0	0	0	282
1980s	58	60	8	12	0	0	1	139	225	69	53	1	0	0	0	348
1990s	103	184	11	27	0	0	0	325	99	105	17	1	0	0	0	222
2000s	68	153	10	42	1	0	0	274	124	65	18	8	0	0	0	215
2010s	79	126	6	8	0	0	0	219	67	43	20	1	0	0	1	132
2020s	15	18	3	2	0	0	1	39	5	7	2	0	0	0	0	14
Total	834	951	57	101	3	0	3	1949	773	461	295	20	0	0	2	1551
	District 5								District 6							
>1930s	24	10	5	0	0	0	0	39	3	18	10	0	0	4	0	35
1940s	11	10	2	0	0	0	0	23	10	7	3	0	0	0	0	20
1950s	48	24	5	0	0	0	0	77	46	22	13	0	0	0	0	81
1960s	196	59	10	0	0	0	1	266	213	97	18	2	0	0	0	330
1970s	129	34	54	1	0	0	7	225	72	32	16	0	0	0	0	120
1980s	74	76	41	1	0	0	14	206	64	25	18	0	0	0	0	107
1990s	149	64	28	3	0	0	22	266	48	14	10	0	0	0	0	72
2000s	230	56	25	2	4	0	8	325	73	23	8	0	0	0	0	104
2010s	256	62	19	5	37	0	22	401	98	16	3	1	4	0	0	122
2020s	70	9	0	0	2	0	2	83	8	0	1	0	0	0	0	9
Total	1187	404	189	12	43	0	76	1911	635	254	100	3	4	4	0	1000
	District 7								Turnpike							
>1930s	27	10	14	0	0	0	0	51	0	0	0	0	0	0	0	0
1940s	10	4	3	0	0	0	0	17	0	0	0	0	0	0	0	0
1950s	30	17	17	0	0	0	0	64	46	0	0	0	0	0	0	46
1960s	103	98	37	1	0	0	0	239	112	0	0	0	0	0	0	112
1970s	109	89	23	0	5	0	0	226	128	0	0	0	0	0	0	128
1980s	167	71	21	0	2	0	0	261	63	0	0	0	0	0	0	63
1990s	63	90	39	0	1	0	0	193	196	0	0	0	0	0	0	196
2000s	122	38	14	0	2	0	1	177	111	0	0	0	0	0	0	111
2010s	101	22	6	0	1	0	0	130	50	0	0	0	0	0	0	50
2020s	20	12	0	0	0	0	0	32	25	0	0	0	0	0	0	25
Total	752	451	174	1	11	0	1	1390	731	0	0	0	0	0	0	731

NOTE: The number of FDOT bridges includes MDX and CFX bridges.

Table 7: Statewide Bridge Inventory by Decade of Construction

2022 Annual Bridge Inventory Report

Bridge Inventory By Deck Area																
	FDOT	County	City/ Town	Other State	Other Local	Federal	Others	Total	FDOT	County	ity/ Tow	Other State	Other Local	Federal	Others	Total
	District 1								District 3							
≤ 1,000	6	88	23	0	0	0	0	117	0	199	6	61	1	0	0	267
1,000-2,500	77	188	59	10	6	0	0	340	9	221	11	29	0	0	0	270
2,500-5,000	75	186	76	7	12	0	0	356	54	143	13	7	0	0	0	217
5,000-7,500	146	55	26	2	4	0	0	233	100	61	2	0	0	0	0	163
7,500-10,000	93	37	11	0	0	0	0	141	99	26	1	2	0	0	0	128
10,000-20,000	204	53	8	2	1	0	0	268	188	28	3	0	0	0	1	220
20,000-40,000	62	20	0	2	0	0	0	84	78	16	1	0	0	0	0	95
40,000-80,000	30	5	0	0	0	0	0	35	32	3	2	0	0	0	0	37
80,000-160,000	10	7	0	0	0	0	0	17	23	3	1	0	2	0	0	29
>160,000	13	2	0	1	0	0	0	16	26	0	0	0	0	0	0	26
Total	716	641	203	24	23	0	0	1607	609	700	40	99	3	0	1	1452
	District 2								District 4							
≤ 1,000	3	49	11	9	0	0	0	72	0	9	33	0	0	0	1	43
1,000-2,500	23	51	53	2	0	0	0	129	18	94	104	8	0	0	0	224
2,500-5,000	85	72	40	1	0	0	0	198	48	134	101	10	0	0	0	293
5,000-7,500	162	28	17	0	0	0	0	207	74	66	20	2	0	0	0	162
7,500-10,000	165	13	13	0	0	0	0	191	66	40	8	0	0	0	0	114
10,000-20,000	310	17	11	0	0	0	2	340	238	54	14	0	0	0	0	306
20,000-40,000	127	10	10	0	0	0	0	147	185	28	4	0	0	0	0	217
40,000-80,000	58	3	5	0	0	0	0	66	74	10	1	0	0	0	1	86
80,000-160,000	41	0	1	0	0	0	0	42	22	2	1	0	0	0	0	25
>160,000	20	1	0	0	0	0	0	21	17	2	0	0	0	0	0	19
Total	994	244	161	12	0	0	2	1413	742	439	286	20	0	0	2	1489
	District 5								District 7							
≤ 1,000	0	21	12	7	0	0	1	41	1	43	16	0	0	0	0	60
1,000-2,500	14	51	40	2	2	0	8	117	16	72	39	0	2	0	0	129
2,500-5,000	98	59	27	2	1	0	12	199	25	51	25	0	0	0	0	101
5,000-7,500	158	33	19	0	1	0	12	223	66	42	10	0	0	0	0	118
7,500-10,000	166	25	11	0	0	0	9	211	84	29	5	0	6	0	0	124
10,000-20,000	321	56	18	1	2	0	18	416	209	43	5	0	1	0	0	258
20,000-40,000	153	19	5	0	0	0	7	184	128	16	6	0	0	0	0	150
40,000-80,000	58	7	5	0	0	0	5	75	70	9	2	0	0	0	0	81
80,000-160,000	39	2	2	0	0	0	1	44	24	3	2	1	0	0	0	30
>160,000	16	0	0	0	0	0	0	16	18	3	0	0	0	0	0	21
Total	1023	273	139	12	6	0	73	1526	641	311	110	1	9	0	0	1072
	District 6								Turnpike							
≤ 1,000	0	15	4	0	0	0	0	19	0	0	0	0	0	0	0	0
1,000-2,500	7	71	30	2	0	4	0	114	3	0	0	0	0	0	0	3
2,500-5,000	64	59	36	0	1	0	0	160	72	0	0	0	0	0	0	72
5,000-7,500	72	34	10	0	2	0	0	118	130	0	0	0	0	0	0	130
7,500-10,000	61	16	7	0	0	0	0	84	118	0	0	0	0	0	0	118
10,000-20,000	181	27	5	1	1	0	0	215	223	0	0	0	0	0	0	223
20,000-40,000	126	11	4	0	0	0	0	141	90	0	0	0	0	0	0	90
40,000-80,000	70	5	2	0	0	0	0	77	20	0	0	0	0	0	0	20
80,000-160,000	31	4	0	0	0	0	0	35	4	0	0	0	0	0	0	4
>160,000	20	4	0	0	0	0	0	24	4	0	0	0	0	0	0	4
Total	632	246	98	3	4	4	0	987	664	0	0	0	0	0	0	664

Table 8: Statewide Bridge Inventory by Deck Area

Overall Structural Condition																
	FDOT	County	City / Town	Other State	Other Local	Federal	Others	Total	FDOT	County	City / Town	Other State	Other Local	Federal	Others	Total
	District 1								District 5							
Excellent	41	53	6	2	0	0	0	102	268	46	11	0	11	0	17	353
Good	870	788	215	19	22	0	0	1914	880	311	149	10	32	0	52	1434
Fair	36	72	23	3	3	0	0	137	42	41	23	2	0	0	7	115
Poor	0	18	9	1	0	0	0	28	1	6	6	0	0	0	0	13
Total	947	931	253	25	25	0	0	2181	1191	404	189	12	43	0	76	1915
	District 2								District 6							
Excellent	91	45	20	0	0	0	0	156	158	15	5	0	4	0	0	182
Good	1099	324	170	5	0	0	2	1600	444	129	67	2	0	4	0	646
Fair	64	94	25	6	0	0	0	189	27	51	17	1	0	0	0	96
Poor	35	42	9	1	0	0	0	87	6	59	11	0	0	0	0	76
Total	1289	505	224	12	0	0	2	2032	635	254	100	3	4	4	0	1000
	District 3								District 7							
Excellent	11	27	4	1	0	0	0	43	74	16	6	0	2	0	0	98
Good	725	541	42	48	0	0	2	1358	658	403	136	0	9	0	1	1207
Fair	88	232	9	22	3	0	1	355	20	25	22	0	0	0	0	67
Poor	10	151	2	30	0	0	0	193	0	7	10	1	0	0	0	18
Total	834	951	57	101	3	0	3	1949	752	451	174	1	11	0	1	1390
	District 4								Turnpike							
Excellent	51	80	28	4	0	0	0	163	65	0	0	0	0	0	0	65
Good	665	320	188	13	0	0	2	1188	662	0	0	0	0	0	0	662
Fair	47	54	65	2	0	0	0	168	4	0	0	0	0	0	0	4
Poor	10	7	14	1	0	0	0	32	0	0	0	0	0	0	0	0
Total	773	461	295	20	0	0	2	1551	731	0	0	0	0	0	0	731
									Statewide							
Excellent									759	282	80	7	17	0	17	1162
Good									6003	2816	967	97	63	4	59	10009
Fair									328	569	184	36	6	0	8	1131
Poor									62	290	61	34	0	0	0	447
Total									**7152**	**3957**	**1292**	**174**	**86**	**4**	**84**	**12749**

Table 9: Overall Statewide Bridge Condition

Statewide Posted and Closed Bridges																
	FDOT	County	City/ Town	Other State	Other Local	Federal	Others	Total	FDOT	County	City/ Town	Other State	Other Local	Federal	Others	Total
	District 1								District 5							
Posted	0	117	23	0	0	0	0	140	2	33	29	7	2	0	0	73
Closed	0	3	0	1	0	0	0	4	0	1	0	0	0	0	0	1
Total	0	120	23	1	0	0	0	144	2	34	29	7	2	0	0	74
	District 2								District 6							
Posted	2	116	35	6	0	0	0	159	0	18	8	0	0	0	0	26
Closed	0	4	3	1	0	0	0	8	4	5	2	0	0	0	0	11
Total	2	120	38	7	0	0	0	167	4	23	10	0	0	0	0	37
	District 3								District 7							
Posted	0	266	7	32	0	0	0	305	0	11	22	0	4	0	0	37
Closed	0	4	1	7	0	0	0	12	0	1	0	0	0	0	0	1
Total	0	270	8	39	0	0	0	317	0	12	22	0	4	0	0	38
	District 4								Turnpike							
Posted	1	24	84	2	0	0	0	111	0	0	0	0	0	0	0	0
Closed	1	2	0	0	0	0	1	4	0	0	0	0	0	0	0	0
Total	2	26	84	2	0	0	1	115	0	0	0	0	0	0	0	0
									Statewide							
								Posted	5	585	208	47	6	0	0	851
								Closed	5	20	6	9	0	0	1	41
								Total	**10**	**605**	**214**	**56**	**6**	**0**	**1**	**892**

Table 10: Statewide Posted and Closed Bridges

FDOT Bridge Deck Area (Square Feet)					
	Decade Constructed				
	≤1930's	1940's	1950's	1960's	1970's
R/C Slab	49,111	222,713	504,628	707,223	635,924
P/C Slab	39,593	-	70,321	835,776	684,931
R/C Beam	205,722	186,775	485,456	-	-
P/C Beam	109,151	-	3,181,964	11,072,419	16,444,005
Steel Beam	441,891	157,789	1,896,944	3,232,701	7,724,021
Timber Beam	-	-	-	986	-
R/C Box	-	-	-	14,294	51,600
P/C Box	-	-	-	-	-
Steel Box	-	-	-	-	94,340
Truss	223,224	-	428,255	250,860	-
Movable	163,176	83,019	654,954	491,944	659,397
Culvert	88,336	121,713	326,678	616,722	362,186
Other	13,937	20,048	133,130	-	-
Total	1,334,141	792,057	7,682,331	17,222,925	26,656,404

FDOT Bridge Deck Area (Square Feet)					
Decade Constructed					Total
1980's	1990's	2000's	2010's	2020's	
647,568	1,716,681	1,107,274	489,879	64,643	6,081,001
708,786	344,172	23,063	91,161	46,058	2,797,802
-	11,260	31,399	80,348	68,801	1,000,961
15,452,554	12,617,948	15,549,972	11,976,759	2,051,157	86,404,774
2,828,763	3,223,312	3,635,248	2,465,198	199,200	25,605,867
-	-	-	-	-	986
-	-	-	-	-	65,894
-	-	294,323	24,075	118,588	318,398
1,336,804	1,516,691	1,323,352	982,310	516,757	5,253,496
-	-	-	-	-	902,340
371,782	473,149	564,073	236,253	28,324	3,697,747
151,203	166,619	187,067	116,001	22,631	2,136,524
6,704,392	2,918,134	4,699,503	1,124,713	858,333	15,613,857
28,201,851	23,132,921	27,415,275	17,586,697	3,974,492	150,024,602

Table 11: Statewide Bridge Deck Area by Superstructure Type

FDOT Bridge Deack Area (sq. ft.)									
	District								
	D1	D2	D3	D4	D5	D6	D7	Turnpike	Total
>1930's	54,523	343,707	288,979	92,305	163,107	247,990	143,531	-	1,334,141
1940's	166,742	325,177	136,487	18,231	20,248	98,057	27,114	-	792,057
1950's	880,185	1,807,306	730,571	421,605	387,776	1,496,822	1,356,858	601,209	7,682,331
1960's	1,141,149	4,898,349	1,094,956	1,091,053	2,394,884	3,999,771	1,874,679	728,084	17,222,925
1970's	2,525,022	6,038,497	4,346,379	4,267,027	1,382,829	2,112,302	3,816,184	2,168,163	26,656,404
1980's	3,677,509	2,427,681	2,593,550	6,749,437	1,099,031	4,754,443	5,856,842	1,043,359	28,201,851
1990's	1,873,288	2,712,110	5,287,538	3,236,645	2,310,188	1,518,739	3,274,647	2,919,766	23,132,921
2000's	2,934,537	5,413,104	4,884,452	3,624,803	3,277,125	1,344,262	4,144,301	1,792,691	27,415,275
2010's	770,579	3,097,319	2,858,669	1,568,013	4,180,410	1,450,773	2,944,768	716,165	17,586,697
Total	14,023,534	27,063,250	22,221,581	21,069,119	15,215,598	17,023,159	23,438,923	9,969,437	150,024,602

Table 12: Statewide Bridge Deck Area by Decade of Construction