# Technical Memorandum

TO:

TED LINCKS

FROM:

HDR ENGINEERING, INC.

DATE:

December 28,1992

SUBJECT: S.R. 39 WIDENING, STRUCTURES

STATE PROJECT NUMBERS 14110-1503

W.P.I. NUMBERS 7115925 & 7113335

FAP NUMBER F-321-1(4)



#### A. Description of Existing Structures

Along the S.R. 39 corridor between I-4 in Hillsborough County and U.S. 301 in Pasco County there are four (4) structures on record with the Florida Department of Transportation having a bridge number. From south to north these four structures are:

#### Bridge Number 100036:

This bridge, crossing Blackwater Creek, is located in Section No. 10200 of S.R. 39 at Mile Post 8.573 in Hillsborough County. The 162-foot long structure has six spans of approximately 27 feet. The bridge was constructed in 1915 and had two arches spanning 53.5 feet. In 1941 the bridge was rehabilitated using only the existing substructure, resulting in the current six span structure. The bridge was designed for an H-15 vehicle as specified in the State Road Department Design Specifications of 1937.

The substructure consists of solid wall-type concrete piers on a spread footing. superstructure includes 21-inch Wide Flange (59 pound) steel girders spaced at 5.5 feet with a seven inch reinforced concrete deck.

The most recent inspection report is dated August 21, 1990. The overall ratings are:

Substructure Overall Rating Superstructure Overall Rating Deck Overall Rating Approach Roadway Overall Rating 7 7 Channel Overall Rating

PAGE 1 T558V001.WP1

A structural rating of 7 in the inspection report is described to be:

"GOOD CONDITION - Some minor problems. Minor maintenance may be needed."

Functionally, the structure is obsolete because of its narrow width of 24 feet between curbs. In addition, the traffic railing does not meet the current standards.

#### Bridge Number 100037:

This structure is just north of bridge number 100036, crossing part of the floodplain of the Blackwater Creek in Hillsborough County. The culvert is located in Section 10200 at Mile Post 8.729 of S.R. 39. The total length of the structure is 45 feet and consists of three 15-foot arches. Its purpose is to handle any overflow from Blackwater Creek and normally the structure is dry. The culvert was constructed in 1914 as a three arch structure.

The Last inspection report is dated August 16, 1990. In this report the culvert received the following overall ratings:

Culvert Overall Rating - 7
Approach Roadway Overall Rating - 8
Channel Overall Rating - 8

A structural Mwating of 8 in the inspection report is described to be:

"VERY GOOD CONDITION - No problems noted."

Functionally the structure is obsolete because of its narrow width of 24 feet between curbs. In addition, the traffic railing does not meet the current standards.

### Bridge Number 100038:

This is a three bay culvert across the Heron Branch in Section 10200 at Mile Post 10.000 of S.R. 39 in Hillsborough County. This culvert was constructed in 1941 and has been rehabilitated by the Florida Department of Transportation in 1988. The rehabilitation work consisted of lengthening the structure to meet recent standards that require the head walls to be 30 feet from the outside lane edge in a 55-MPH zone. Current standards (January, 1992) require a 36-foot clear zone.

The last inspection report is dated August 24, 1987. In this report the culvert gets the following overall ratings:

Culvert Overall Rating	-	8
Approach Roadway Overall Rating	-	8
Channel Overall Rating	-	7

#### Bridge Number 140007:

This is a bridge across the Hillsborough River in Pasco County. The structure was constructed in 1947 and is located in Section 14110 at Mile Post 1.585 of S.R. 39. The structure has 21 spans of 15 feet resulting in an overall structure length of 315.5 feet. The substructure consists of pile bents. Each pile bent has five timber piles, spaced at six feet, topped by a 1.83-foot square cap. The superstructure is a 13-inch deep flat slab structure. The bridge was designed for an H-20 vehicle as specified in the 1944 edition of the AASHTO Standard Specifications for Highway Bridges.

The most resent inspection report is dated September 11, 1991. The overall ratings are:

Substructure Overall Rating	-	7
Superstructure Overall Rating	-	7
Deck Overall Rating	-	7
Approach Roadway Overall Rating	-	8
Channel Overall Rating	· <b>-</b>	8

Some of the timber piles are starting to show signs of rot but are in surprisingly good shape after 40 years of service.

Functionally, the structure is obsolete because of its narrow width of 26 feet between curbs. The traffic railing does not meet current standards.

#### B. Structure Alternatives.

There are two major alternatives that can be considered for the structures that are part of this project. These options are:

- 1. Widening the existing structures.
- 2. Replace the existing structures with new ones.

## 1. Bridge Widening:

All structures are getting rather old as mentioned in the "Description of Existing Structures":

- most parts of the bridge over the Blackwater Creek are 51 years old with some of the substructure being 77 years old;
- the culvert over the Blackwater Creek Overflow is 77 years old; and
- the bridge over the Hillsborough River was constructed in 1947 making it 45 years old.

All structures received a good rating in the latest Bridge Inspection Report. Their age, however, and structural items such as timber piles, do not justify a bridge widening. These bridges will require major repairs in the near future. In a project such as this one, where lanes need to be added to improve the level of service, a widening of the existing structure, with a live expectancy of about 10 to 15 years, should not be considered.

#### 2. Bridge Replacement:

A variety of structure types can be considered as bridge replacements. A phased construction scheme would be possible for all of these structures making the maintenance of traffic during construction relatively easy. During the first construction phase, traffic can continue using the existing structure while the new bridge is being constructed next to the existing bridge. During the second phase, traffic will be on the new structure while the old bridge is being demolished or widened and a new structure is constructed in its place.

#### **Substructure Alternatives:**

- a. Piles that are integrally connected with the superstructure (usually a flat slab). This solution is not very popular with the construction industry. The support system for the form work of the flat slab is rather complicated and is easier to accomplish when a pile cap is used.
- b. Pile bents. In the past these have proven to be a very economical solution for low level water crossings. It is expected that an 18-inch or 20-inch prestressed concrete pile will be used for this project. It is not expected that 24-inch piles will be needed unless corrosive environment is found.
- c. Pier type substructures are only economical for high level structures and can be omitted from further consideration. This is also true for a wall-type substructure on a spread footing as was used for the existing Blackwater Creek Bridge. These structures are very expensive to construct since the site at each pier needs to be drained temporarily in order to construct the foundation.

Based on the above discussion it is recommended that only a pile bent substructure be considered. Piles to be used are 18-inch or 20-inch reinforced concrete piles, unless the corrosiveness of the environment would make the use of 24-inch piles mandatory.

## **Superstructure Alternatives:**

- a. Flat Slab Structure. This could be a very good solution in areas where clearance plays a major role and short spans are not objectionable. For the Hillsborough River Bridge the clearance will not be a problem and the deeper precast concrete options will definitely be more economical. For Blackwater Creek, clearance may be an issue and at this location a flat slab may be an option worth considering.
- b. Precast Prestressed Girders. For this project Types II, III and IV could be considered, depending on the length of the bridge, the required clearances, the cost of the substructure, etc. For the Hillsborough River, for instance, it is possible that the type IV alternate may be the most economical solution, whereas Type II girders could be the best solution for the Blackwater Creek structure.

- c. Precast Concrete Slab Option. Approximately four years ago this alternate was approved again for use on projects in the State of Florida. The required transverse post-tensioning and the fact that no voids are allowed in the section, however, make this a rather expensive solution. It is recommended that this alternate not be given further consideration.
- d. Steel Girder Alternate. In the past, this option has proven to be a less economical solution than the precast concrete girder options for this type of structure (relatively short spans). The State of Florida has a policy prohibiting the use of steel structures where the vertical clearance over water is less than 24 feet. Based on this policy and on the historical cost record, it was decided not to consider this alternate further.

The above alternates will now be addressed in more detail for the individual sites.

## Bridges over Blackwater Creek and Relief Channel.

It is proposed to replace these two structures by one set of twin bridges. These replacement structures will have to provide the same or larger water opening as the two existing structures combined.

The overall length of the current Blackwater Creek bridge is approximately 162 feet and the structure over the relief channel has an overall length of 45 feet. The new structures need to have an overall length of at least 207 feet in order to provide an equal water opening. The proposed overall length of the new structure will be 210 feet.

With this overall length the following span arrangements can be considered:

- A: Five interior spans of 32.0 feet and end spans of 25.0 feet
- B: Four interior spans of 37.5 feet and end spans of 30.0 feet
- C: Three interior spans of 46.0 feet and end spans of 36.0 feet
- D: Five spans of 42.0 feet
- E: Four spans of 52.5 feet
- F: Three spans of 70.0 feet
- G: Two spans of 105.0 feet

The span layouts "A" through "C" are for a continuous flat slab superstructure on a pile bent substructure. For span layouts "D" and "E" Type II prestressed girders are used, whereas Type III prestressed girders are used for span layout "F". Both alternates utilize a pile bent substructure. The last span layout "G" is possible with a Type IV prestressed girder.

The costs of the various options are shown in tables I-A through I-G of the Appendix A summary of the cost of the seven alternates is listed below:

Alt.	Description	Total Cost	Cost per Sq. Ft.	Ratio	Rank
Α	Flat Slab (L=32.0 Ft.)	\$931,113	\$51.86	130%	5
В	Flat Slab (L=37.5 Ft.)	\$960,684	\$53.51	134%	6
С	Flat Slab (L=42.0 Ft.)	\$1,124,913	\$62.65	157%	7
D	Type II Beams (L=42.0 Ft.)	\$742,282	\$41.34	104%	2
Е	Type II Beams (L=52.5 Ft.)	\$716,033	\$39.88	100%	1
F	Type III Beams (L=60.0 Ft.)	\$780,181	\$43.45	109%	3
G	Type IV Beams (L=105 Ft.)	\$894.042	\$49.79	125%	4

Alternates "D" and "E" are clearly more economical than the other options. Choosing between these two options could be left until the structures are actually designed. We would like to recommend, however, that option "E" be considered for design.

Records indicate that most of the initial maintenance on structures is done on the pilings in the form of pile jackets. For a relatively small expense (approximately \$50,000) one pile bent could be eliminated by choosing alternate "F" instead of "E" or "D". This would reduce the number of piles with future maintenance risks.

The bridge/culvert over the Relief Channel of the Blackwater Creek has a unique rustic facia finish and is of some historic value. Possible ways to preserving the facia are:

### 1. Preserve all of existing structure.

This solution would require the new roadways to be located on either side of the old structure. This creates an open space between the roadways and could serve as a pic-nic area, with the old bridge serving as a "monument" in this roadside park.

### 2. Widen the existing structure to one side only.

On the side where the roadway would be widened, the facia would be removed and not be restored. This probably would be the most feasible solution to preserve some of the features of the old structure. The inspection report appears to indicate that the culvert structure itself is still in good shape and continued use appears to be feasible.

## 3. Widening the structure to one or both sides, preserving the facia completely.

This would require the careful separation of the facia from the existing structure. This could possibly be accomplished by cutting the culvert and its foundation somewhere behind the facia wall. Moving the facia wall without damaging it will be the problem that needs to be resolved. The wall is approximately 70 feet long and, once disconnected from the main culvert structure, will weigh in the order of 85 tons. One could imagine a steel frame that is attached to the wall to keep all parts rigidly in place and some strategically place lifting points. The wall could then be lifted and placed in its new position. If the new structure would be another culvert the old facia could be made a part of this structure. If a bridge would replace the existing culvert, the facia could still be placed on its own foundation and in the end make it all look like a culvert where in reality it is "covering up" a bridge that, most likely, will have only one span.

If lifting of the wall would prove to be a bit too much for a standard crane, one could consider sliding or rolling the wall assembly to its new location. This would require a few sliding/roller beams, maybe one at each arch spring point. Suggested rollers are the so called "Hillman" rollers. Greased timber might give a good sliding solution.

### Bridges over Upland Areas.

For some of the upland areas it may be necessary to provide structures to allow wildlife to pass underneath S.R. 39. Criteria set forth by Hillsborough County indicate that structures with an overall length of approximately 180 feet will be required. The exact locations of these crossings will be identified during the design phase through coordination with the Florida Game and Freshwater Fish Commission and Hillsborough County Environmental Land Acquisition and Protection Program. The structural options will be very similar to the ones that were discussed for the Blackwater Creek crossing: a flat slab bridge and Type II, III, and IV precast concrete girder alternates.

With the 180-foot overall length the following span arrangements can be considered:

- A: Four interior spans of 32.0 feet and end spans of 26.0 feet
- B: Three interior spans of 39.0 feet and end spans of 31.5 feet
- C: Two interior spans of 50.0 feet and end spans of 40.0 feet
- D: Four spans of 45.0 feet
- E: Three spans of 60.0 feet
- F: Two spans of 90.0 feet

The span layouts "A" through "C" are for a continuous flat slab superstructure. For span layouts "D", "E", and "F" prestressed girders Type II, III, and IV respectively are used. All alternates utilize a pile bent substructure.

The costs of the various options are shown in tables II-A through II-F (see Appendix). A summary of the cost for the six alternates is listed below:

Alt.	Description	Total Cost	Cost per Sq. Ft.	Ratio	Rank
Α	Flat Slab (L=32.0 Ft.)	\$824,666	\$53.58	126%	4
В	Flat Slab (L=39.0 Ft.)	\$896,331	\$58.24	137%	5
С	Flat Slab (L=50.0 Ft.)	\$1,021,172	\$66.35	157%	6
D	Type II Beams (L=45.0 Ft.)	\$652,068	\$42.37	100%	1
Е	Type III Beams (L=60.0 Ft.)	\$679,067	\$44.12	104%	2
F	Type IV Beams (L=90.0 Ft.)	\$716,926	\$46.58	110%	3

Alternates "D" and "E" are clearly more economical than the other options. Even option "F" could be considered, because of the smaller number of substructure components required, having benefits for future maintenance. Choosing between these three options could be left until the structures are actually designed. We would like to recommend, however, that option "E" be considered for design.

#### Bridge over Big Ditch.

Currently S.R. 39 crosses Big Ditch on a culvert. The possible replacement structure could be as long as 520 feet. This maximum length is derived from the Hillsborough County guidelines for the provision of wildlife corridors at wetland crossings. The 520-foot dimension will be used to make a comparative study of the alternate structures. The options for Big Ditch are very similar to the ones that were discussed for the Blackwater Creek crossing: a flat slab structure and Type II, III, and IV precast concrete girder alternates.

With the 520-foot overall length the following span arrangements can be considered:

- A: Sixteen spans of 32.5 feet
- B: Thirteen spans of 40.0 feet
- C: Ten spans of 52.0 feet
- D: Ten spans of 52.0 feet
- E: Eight spans of 65.0 feet
- F: Six spans of 86.67 feet

The span layouts "A" through "C" are for a continuous flat slab superstructure. For span layouts "D", "E", and "F" prestressed girders Type II, III, and IV respectively are used. All alternates utilize a pile bent substructure.

The costs of the various options are shown in tables III-A through III-F (see Appendix). A summary of the cost of the six alternates is listed on the following page.

Alternates "D" and "E" are clearly more economical than the other options. Even option "F" should be considered, because of the smaller number of substructure components required, having benefits for future maintenance. Choosing between these three options could be left until the structures are actually designed. We would like to recommend, however, that option "E" be considered for design.

Alt.	Description	Total Cost	Cost per Sq. Ft.	Ratio	Rank
Α	Flat Slab (L=32.5 Ft.)	\$1,954,234	\$43.95	134%	4
В	Flat Slab (L=40.0 Ft.)	\$2,121,809	\$47.72	145%	5
С	Flat Slab (L=52.0 Ft.)	\$2,482,923	\$55.85	170%	6
D	Type II Beams (L=52.0 Ft.)	\$1,458,875	\$32.81	100%	1
Е	Type III Beams (L=65.0 Ft.)	\$1,516,186	\$34.10	104%	2
F	Type IV Beams (L=86.7 Ft.)	\$1,655,301	\$37.23	113%	3

## Bridge over the Hillsborough River.

The overall length of the current structure is 315.5 feet. Replacing this bridge with twin structures of about the same overall length, would result in an overall length for the new bridges of 320 feet.

The flat slab option was not economical for the shorter Blackwater Creek structures and is therefore not considered for the Hillsborough River crossing.

	Alt.	Description	Total Cost	Cost per Sq. Ft.	Ratio	Rank
	A	Type II Beams (L=40.0 Ft.)	\$1,422,497	\$51.99	104%	3
	В	Type II Beams (L=45.7 Ft.)	\$1,386,917	\$50.69	101%	2
	С	Type II Beams (L=53.3 Ft.)	\$1,370,495	\$50.09	100%	1
7	⇒D	Type III Beams (L=64.0 Ft.)	\$1,426,132	\$52.12	104%	.4
	Е	Type III Beams (L=80.0 Ft.)	\$1,513,749	\$55.33	110%	5
	F	Type IV Beams (L=80.0 Ft.)	\$1,518,306	\$55.49	111%	6
	G	Type IV Beams (L=106.7 Ft.)	\$1,640,146	\$59.95	120%	7

There is a spread of approximately 10% in the cost of the first six options. The option with Type IV girders and the long span turns out to be quite a bit more expensive and should be excluded from further consideration. The other six options, however, should all be studied in the design phase.

For these bridges it should also be emphasized that a slightly more expensive structure with longer spans should be selected over a less expensive structure with short spans. In this case the choice could fall on option "D" with the Type III girders and 64-foot spans. Having three or two less bents than options "B" and "C" respectively is worth the extra cost in order to reduce future maintenance problems.

b. For the 320-long bridge a considerable area of floodplain needs to be filled with embankment, which brings us to this and the next two options. To reduce the area affected by new embankment, a longer bridge for the southbound structure, spanning the floodplain between the 25-year storm elevations, could be considered. This would substantially reduce the length of the new embankment and only the existing embankment needs to be widened to accommodate the wider northbound roadway. The length of the southbound structure would be in the range of 2240 feet, while the overall length of the northbound structure remains at 320 feet and thus the effective hydraulic bridge opening does not change. The spans for each structure should be the same in order for the pile bents to line up.

The cost of the various options has been shown in tables V-A through V-G of the Appendix. Included in the cost for the various alternates of the Hillsborough River crossing is the cost for excavation and embankment as shown in table V-H.

A summary of the cost of the seven alternates is listed below:

Alt.	Description	Total Cost	Cost per Sq. Ft.	Ratio	Rank
Α	Type II Beams (L=40.0 Ft.)	\$4,312,390	\$39.40	102%	3
В	Type II Beams (L=45.7 Ft.)	\$4,217,597	\$38.54	100%	1
С	Type II Beams (L=53.3 Ft.)	\$4,274,974	\$39.06	101%	2
D	Type III Beams (L=64.0 Ft.)	\$4,757,281	\$43.47	113%	4
Е	Type III Beams (L=80.0 Ft.)	\$5,377,356	\$49.14	127%	6
F	Type IV Beams (L=80.0 Ft.)	\$5,325,214	\$48.66	126%	5
G	Type IV Beams (L=106.7 Ft.)	\$6,331,776	\$57.86	150%	7

There is a spread of approximately 13% in the cost of the first four options. The option with the longer Type III and Type IV girders turn out to be quite a bit more expensive. The 80-foot Type IV girder, however, should still be considered, having the longer spans and a lower number of pile bents. The 80-foot Type III and 107-foot Type IV should be dropped from further studies.

c. A third option, requiring approximately the same amount of bridge deck as the previous one, might be more attractive. In this case both structures are made equally long. Making the northbound structure longer and the southbound bridge shorter would result in a larger hydraulic bridge opening (this needs to be studied if this alternate is considered). The area required for new embankment is approximately the same as that required for the previous option and will partly be mitigated by removal of some of the old embankment on the existing alignment.

The cost of the various options are shown in tables VI-A through VI-G of the Appendix. Included in the cost for the various alternates of the Hillsborough River crossing is the cost for excavation and embankment as shown in table V-H. Note that the material from the old embankment is used in the new embankment.

A summary of the cost of the seven alternates is an listed below:

Alt.	Description	Total Cost	Cost per Sq. Ft.	Ratio	Rank
A	Type II Beams (L=40.0 Ft.)	\$3,904,295	\$35.68	107%	4
В	Type II Beams (L=45.7 Ft.)	\$3,736,338	\$34.14	103%	2
С	Type II Beams (L=53.3 Ft.)	\$3,644,988	\$33.31	100%	1
D	Type III Beams (L=64.0 Ft.)	\$3,898,506	\$35.62	107%	3
Е	Type III Beams (L=80.0 Ft.)	\$4,206,225	\$38.43	115%	6
F	Type IV Beams (L=80.0 Ft.)	\$4,194,152	\$38.32	115%	5
G	Type IV Beams (L=106.7 Ft.)	\$4,619,564	\$42.21	127%	7

There is a spread of approximately 15% in the cost of the first six alternates. Alternate "E" and "F" with the longer Type III and Type IV girders respectively, are on the high end of this range. The 80-foot Type IV girder should still be a strong contender, however, having the longer spans and a lower number of pile bents. The 107-foot Type IV should be dropped from further studies.

d. The last option would cross all of the floodplain on structure. This would require an overall bridge length of 2244 feet. All of the old embankment would have to be excavated and no new embankment would be required. This, obviously, increases the hydraulic opening considerably and should be studied for down stream impacts.

The cost of the various alternates has been shown in tables VII-A through VII-G of the Appendix. Included in the cost for the various alternates of the Hillsborough River crossing is the cost for excavation of the old embankment as shown in table V-H of the Appendix.

A summary of the cost of the seven alternates is an listed below:

Alt.	Description	Total Cost	Cost per Sq. Ft.	Ratio	Rank
Α	Type II Beams (L=40.0 Ft.)	\$6,499,793	\$33.94	108%	4
В	Type II Beams (L=45.7 Ft.)	\$6,199,456	\$32.37	103%	2
С	Type II Beams (L=53.3 Ft.)	\$6,033,182	\$31.50	100%	1
D	Type III Beams (L=64.0 Ft.)	\$6,484,580	\$33.86	107%	3
Е	Type III Beams (L=80.0 Ft.)	\$7,012,401	\$36.61	116%	6
F	Type IV Beams (L=80.0 Ft.)	\$6,983,697	\$36.46	116%	5
G	Type IV Beams (L=106.7 Ft.)	\$7,798,182	\$40.72	129%	7

There is a spread of approximately 16% in the cost of the first six alternates. Alternate "E" and "F" with the longer Type III and Type IV girders respectively, are on the high end of this range. The 80-foot Type IV girder should still be a strong contender, however, having the longer spans and a lower number of pile bents. The 107-foot Type IV should be dropped from further studies.

In order to see what the impact on the cost of the four different options is, the costs for the 80-foot Type IV girder (alternate "F") have been put together in the following table:

Description	Deck Area	Total Cost	Cost per Sq. Foot	Difference	Ratio
NB: 320 Ft. SB: 320 Ft.	27,360 SF	\$1,518,306	\$55.49	\$0	0%
NB: 320 Ft. SB: 2240 Ft.	109,440 SF	\$5,325,214	\$48.66	\$3,806,908	351%
NB: 1280 Ft. SB: 1280 Ft.	109,440 SF	\$4,194,152	\$38.32	\$2,675,846	276%
NB: 2240 Ft. SB: 2240 Ft.	191,520 SF	\$6,983,697	\$36.46	\$5,465,391	460%

Obviously, the option with the short overall bridge length is the most economical solution. If, environmentally, this is not a desirable situation, the next best solution would be the one with two equally long structures. This would require approximately \$2.5 million more. The 2240-foot long structure results in the most expensive option and is approximately \$5.5 million dollars more than the first option.

# **APPENDIX**

# **COST**

# **ESTIMATES**

# \_\_\_\_SUMMARY

	S.R. 39 - BRIDGE OVER BLACKWATER CREEK							
	FLAT SLAB (L=32 FEET)	130%	\$51.86 /SF	\$931,113				
	FLAT SLAB (L=37.5 FEET)	134%	\$53.51 /SF	\$960,684				
I-C	FLAT SLAB (L=46 FEET)	157%	\$62.65 /SF	\$1,124,913				
	TYPE II BEAM (L=42 FEET)	104%	\$41.34 /SF	\$742,282				
I-E	TYPE II BEAMS (L=52.5 FEET)	100%	\$39.88 /SF	\$716,033				
	TYPE III BEAMS (L=70 FEET)	109%	\$43.45 /SF	\$780,181				
I-G	TYPE IV BEAM (L=105 FEET)	125%	\$49.79 /SF	\$894,042				

	S.R. 39 - BRIDGE OVER UPLAND AREAS (180 FT)						
	FLAT SLAB (L=32 FEET)	126%	\$53.58	/SF	\$824,666		
II-B	FLAT SLAB (L=39 FEET)	137%	\$58.24	/SF	\$896,331		
	FLAT SLAB (L=50 FEET)	157%	\$66.35	/SF S	\$1,021,172		
II-D	TYPE II BEAM (L=45 FEET)	100%	\$42.37	/SF	\$652,068		
	TYPE III BEAM (L=60 FEET)	104%	\$44.12	/SF	\$679,067		
II-F	TYPE IV BEAM (L=90 FEET)	110%	\$46.58	/SF	\$716,926		

	S.R. 39 - BRIDGE OVER BIG	DITCH	(520 FT)	
	FLAT SLAB (L=32.5 FEET)	134%	\$43.95 /SF	\$1,954,234
III-B	FLAT SLAB (L=40 FEET)	145%	\$47.72 /SF	\$2,121,809
	FLAT SLAB (L=52 FEET)	170%	\$55.85 /SF	\$2,482,923
	TYPE II BEAM (L=52 FEET)	100%	\$32.81 /SF	\$1,458,875
	TYPE III BEAM (L=65 FEET)	104%	\$34.10 /SF	\$1,516,186
III-F	TYPE IV BEAM (L=86.7 FEET)	113%	\$37.23 /SF	\$1,655,301

	(320 FT)			
	TYPE II BEAM (L=40 FEET)		\$51.99 /SF	\$1,422,497
	TYPE II BEAM (L=45.7 FEET)	101%	\$50.69 /SF	\$1,386,917
	TYPE II BEAM (L=53.3 FEET)	100%	\$50.09 /SF	\$1,370,495
	TYPE III BEAM (L=64 FEET)	104%	\$52.12 /SF	\$1,426,132
	TYPE III BEAM (L=80 FEET)	110%	\$55.33 /SF	\$1,513,749
	TYPE IV BEAM (L=80 FEET)	111%	\$55.49 /SF	\$1,518,306
IV-G	TYPE IV BEAM (L=106.7 FEET)	120%	\$59.95 /SF	\$1,640,146

	S.R. 39 - BRIDGE OVER HILL	SBORO	UGH RIVER	(320-2240)
	TYPE II BEAM (L=40 FEET)	102%	\$39.40 /SF	\$4,312,390
V-B	TYPE II BEAM (L=45.7 FEET)	100%	\$38.54 /SF	\$4,217,597
	TYPE II BEAM (L=53.3 FEET)	101%	\$39.06 /SF	\$4,274,974
	TYPE III BEAM (L=64 FEET)	113%	\$43.47 /SF	\$4,757,281
	TYPE III BEAM (L=80 FEET)	127%	\$49.14 /SF	\$5,377,356
	TYPE IV BEAM (L=80 FEET)	126%	\$48.66 /SF	\$5,325,214
V-G	TYPE IV BEAM (L=106.7 FEET)	150%	\$57.86 /SF	\$6,331,776

S.R. 39 - BRIDGE OVER HILL	SBORO	JGH RIVER	(1280 FT)
VI-A   TYPE II BEAM (L=40 FEET)	107%	\$35.68 /SF	\$3,904,295
VI-B TYPE II BEAM (L=45.7 FEET)	103%	\$34.14 /SF	\$3,736,338
VI-C TYPE II BEAM (L=53.3 FEET)	100%	\$33.31 /SF	\$3,644,988
VI-D TYPE III BEAM (L=64 FEET)	107%	\$35.62 /SF	\$3,898,506
VI-E TYPE III BEAM (L=80 FEET)	115%	\$38.43 /SF	\$4,206,225
VI-F TYPE IV BEAM (L=80 FEET)	115%	\$38.32 /SF	\$4,194,152
VI-G TYPE IV BEAM (L=106.7 FEET)	127%	\$42.21 /SF	\$4,619,564

S.R. 39 - BRIDGE OVER HILL	SBOROU	JGH RIVER	(2240 FT)
VII-A TYPE II BEAM (L=40 FEET)	108%	\$33.94 /SF	\$6,499,793
VII-B TYPE II BEAM (L=45.7 FEET)	103%	\$32.37 /SF	\$6,199,456
VII-C TYPE II BEAM (L=53.3 FEET)	100%	\$31.50 /SF	\$6,033,182
VII-D TYPE III BEAM (L=64 FEET)	107%	\$33.86 /SF	\$6,484,580
VII-E TYPE III BEAM (L=80 FEET)	116%	\$36.61 /SF	\$7,012,401
VII-F TYPE IV BEAM (L=80 FEET)	116%	\$36.46 /SF	\$6,983,697
VII-G TYPE IV BEAM (L=106.7 FEET)	129%	\$40.72 /SF	\$7,798,182

Depth	S.R. 39 - BRIDGE	OVER	BLACK	WATE	R CF	REEK
1.0 BASIS OF CALCULATIONS for FLAT SLAB (L=32 FEET)   Roadway Width						
Roadway Width						
Overall Deck Width Overall Bridge Length Number of Spans and Span Length(s)         32.0 Feet         42.8 Feet per Bridge)           Superstructure Type Substructure Type Pile Bents w/ Substructure         Flat Slab, Pile Bents w/ Pile Bont m/ Pile Bont m/ Pin Ind in						
Overall Bridge Length Number of Spans						
Number of Spans and Span Length(s)			•	42.6	reet p	per Briage)
and Span Length(s) Superstructure Type Substructure Type Substructure Type Substructure Type Substructure Number of Bents A) Piles Size Size Size Size Size Size Size Size	1			2.0		
Superstructure Type Substructure Type Substructure Type Substructure Type Pile Bents w/ 18.0 inches thick 18.0 - inch piles	ij -	_		-	Foot	
Substructure Type						s thick
2.0 QUANTITY CÂLCULATIONS   2.1 Substructure   Number of Bents   16   a) Piles   Size   18.0 Inches   Number per Bent   5   and   Length per Pile   80.0 Feet   Total Pile Length   6240 Feet   b) Bent Caps   Per Bent:   Depth   27.0 Inches   LL= 275.4   Length   42.8 Feet   Total Volume   171.0 CYrds   C) End Bents (Backwall & Wingwalls)   Per End Bent:   Depth   0.0 Inches   DL= 184.4   Length   0.0 Feet   LL= 124.5   Length   0.0 Feet   DL= 184.4   Length   0.0 Feet   DL						
2.1 Substructure   Number of Bents   16   a) Piles   Size   18.0 Inches   Size   Number per Bent   5   and   4   in end bents			100 117	10.0		. piico
Number of Bents   16     a) Piles     Size						
Size	Number of Bents	16				
Number per Bent	a) Piles					
Number per Bent	Size	18.0	Inches	80	Ton C	apacity
Total Pile Length   6240 Feet		5	and			
b)   Bent Caps   Width   36.0   Inches   DL =   377.8		80.0	Feet			
Width   36.0   Inches   DL = 377.8   Depth   27.0   Inches   LL = 275.4	_	6240	Feet			
Depth		_				
Length						
Total Volume c) End Bents (Backwall & Wingwalls) Width Depth Depth Depth Depth Depth Denth Do Feet Dength Do O Feet Dength Do O CYrds  2.2 Superstructure Number of Spans Girders Girders Girder Length Do Deet Do Deet Do Deet Do Deet Do Diaphragms Width Depth Do Diaphragms Width Depth Dept					LL=	275.4
c) End Bents (Backwall & Wingwalls)     Width						
Width Depth         0.0 Inches         DL =         184.4           Depth Length         0.0 Feet         LL =         124.5           Length Total Volume         0.0 CYrds         2           2.2 Superstructure         Number of Spans         5         2           Number of Spans Girders         5         2         2           Span Length         32.0 Feet         25.0 Feet         32.0 Feet           a) Girders Per Span Girders Per Span Girder Length         0.0 Feet         0.0 Feet         0.0 Feet           b) Diaphragms         Width Girder Length         0.0 Feet         0.0 Feet           b) Diaphragms         Width Girder Length         0.0 Inches         0.0 Inches           Length Depth Girders         0.0 Inches         0.0 Inches         0.0 Inches           Length Girders Girders Girders Total Volume Girders Gird						
Depth		_	,			
Length						
Total Volume   2.2 Superstructure   Number of Spans   5   2   Span Length   32.0 Feet   25.0 Feet   32.0 Feet	•				LL=	124.5
Number of Spans   5   2						
Number of Spans   5   2		0.0	Crras			
Span Length   32.0 Feet   25.0 Feet   a) Girders   Girders per Span   0   0   0   Girder Length   0.0 Feet   0.0 Feet   Total Girder Length   0.0 Feet   0.0 Feet   b) Diaphragms   Width   0.0 Inches   Depth   0.0 Inches   Length   0.0 Feet   Total Volume   0.0 CYrds   c) Deck   Width   85.5 Feet   Depth   18.0 Inches   Length   210.0 Feet   Total Volume   997.5 CYrds   d) Traffic Barrier   Total Length   840.0 Feet   e) Expansion Joints   Total Length   171.0 Feet   3.0 COST ESTIMATE   Files   6240.0 LF x   \$40 = \$249,600   Substructure Concrete   97.5 CY x   \$425 = \$72,675   Superstructure Concrete   997.5 CY x   \$425 = \$72,675   Superstructure Concrete   997.5 CY x   \$425 = \$423,938   Prestressed Girders   0.0 LF x   \$0 = \$0   Traffic Railing   840.0 LF x   \$40 = \$33,600   Expansion Joints   171.0 LF x   \$300 = \$51,300   Structure Demolition   LS   \$100,000   TOTAL COST = \$931,113	•	E		2		
a) Girders Girders per Span Girder Length Total Girder Length Diaphragms Width Depth	•	-	Foot	_	East	
Girders per Span   0   0   0		52.0	i eet	23.0	ı eet	
Girder Length		0		0		
Total Girder Length b) Diaphragms Width Depth Depth Depth Vo.0 Inches Length Vo.0 Feet Total Volume C) Deck Width S5.5 Feet Depth Seet Total Volume S97.5 CYrds  d) Traffic Barrier Total Length Seet Piles Total Length Total Length Total Length Substructure Concrete Superstructure Concrete Superstructure Concrete Superstructure Concrete Since Cyrds Substructure Concrete Superstructure Conc		_	Feet	_	Feet	
b) Diaphragms     Width						
Width       0.0 Inches         Depth       0.0 Inches         Length       0.0 Feet         Total Volume       0.0 CYrds         c) Deck       Width         Width       85.5 Feet         Depth       18.0 Inches         Length       210.0 Feet         Total Volume       997.5 CYrds         d) Traffic Barrier       Total Length         Total Length       840.0 Feet         e) Expansion Joints       171.0 Feet         3.0 COST ESTIMATE         Piles       6240.0 LF x       \$40 =       \$249,600         Substructure Concrete       171.0 CY x       \$425 =       \$72,675         Superstructure Concrete       997.5 CY x       \$425 =       \$423,938         Prestressed Girders       0.0 LF x       \$0 =       \$0         Traffic Railing       840.0 LF x       \$40 =       \$33,600         Expansion Joints       171.0 LF x       \$300 =       \$51,300         Structure Demolition       LS       \$100,000         TOTAL COST =       \$931,113	<u> </u>					
Length Total Volume  C) Deck Width B5.5 Feet Depth 18.0 Inches Length Total Volume 997.5 CYrds  d) Traffic Barrier Total Length Expansion Joints Total Length 171.0 Feet  3.0 COST ESTIMATE  Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 171.0 CY x \$425 = \$72,675 Superstructure Concrete 997.5 CY x \$425 = \$423,938 Prestressed Girders 0.0 LF x \$0 = \$0 Traffic Railing 840.0 LF x \$40 = \$33,600 Expansion Joints 171.0 LF x \$300 = \$51,300  Structure Demolition  LS \$100,000		0.0	Inches			
Total Volume       0.0 CYrds         c) Deck       Width       85.5 Feet         Width       18.0 Inches         Length       210.0 Feet         Total Volume       997.5 CYrds         d) Traffic Barrier       Total Length       840.0 Feet         e) Expansion Joints       171.0 Feet         3.0 COST ESTIMATE         Piles       6240.0 LF x       \$40 =       \$249,600         Substructure Concrete       171.0 CY x       \$425 =       \$72,675         Superstructure Concrete       997.5 CY x       \$425 =       \$423,938         Prestressed Girders       0.0 LF x       \$0 =       \$0         Traffic Railing       840.0 LF x       \$40 =       \$33,600         Expansion Joints       171.0 LF x       \$30 =       \$51,300         Structure Demolition       LS       \$100,000         TOTAL COST       \$931,113	Depth	0.0	Inches			
c) Deck     Width	Length	0.0	Feet			
Width		0.0	CYrds			
Depth	•					
Length       210.0 Feet         Total Volume       997.5 CYrds         d) Traffic Barrier       840.0 Feet         Total Length       840.0 Feet         e) Expansion Joints       171.0 Feet         3.0 COST ESTIMATE       171.0 Feet         Piles       6240.0 LF x       \$40 =       \$249,600         Substructure Concrete       171.0 CY x       \$425 =       \$72,675         Superstructure Concrete       997.5 CY x       \$425 =       \$423,938         Prestressed Girders       0.0 LF x       \$0 =       \$0         Traffic Railing       840.0 LF x       \$40 =       \$33,600         Expansion Joints       171.0 LF x       \$300 =       \$51,300         Structure Demolition       LS       \$100,000         TOTAL COST =       \$931,113						
Total Volume 997.5 CYrds d) Traffic Barrier     Total Length 840.0 Feet e) Expansion Joints     Total Length 171.0 Feet  3.0 COST ESTIMATE  Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 171.0 CY x \$425 = \$72,675 Superstructure Concrete 997.5 CY x \$425 = \$423,938 Prestressed Girders 0.0 LF x \$0 = \$0 Traffic Railing 840.0 LF x \$0 = \$33,600 Expansion Joints 171.0 LF x \$300 = \$51,300  Structure Demolition  LS \$100,000 TOTAL COST = \$931,113						
d) Traffic Barrier						ĺ
Total Length 840.0 Feet e) Expansion Joints		997.5	CYrds			
e) Expansion Joints	,		_			
Total Length       171.0 Feet         3.0 COST ESTIMATE         Piles       6240.0 LF x       \$40 =       \$249,600         Substructure Concrete       171.0 CY x       \$425 =       \$72,675         Superstructure Concrete       997.5 CY x       \$425 =       \$423,938         Prestressed Girders       0.0 LF x       \$0 =       \$0         Traffic Railing       840.0 LF x       \$40 =       \$33,600         Expansion Joints       171.0 LF x       \$300 =       \$51,300         Structure Demolition       LS       \$100,000         TOTAL COST =       \$931,113		840.0	Feet			
3.0 COST ESTIMATE         Piles       6240.0 LF x       \$40 =       \$249,600         Substructure Concrete       171.0 CY x       \$425 =       \$72,675         Superstructure Concrete       997.5 CY x       \$425 =       \$423,938         Prestressed Girders       0.0 LF x       \$0 =       \$0         Traffic Railing       840.0 LF x       \$40 =       \$33,600         Expansion Joints       171.0 LF x       \$300 =       \$51,300         Structure Demolition         LS       \$100,000         TOTAL COST =       \$931,113	•					
Piles       6240.0 LF x       \$40 =       \$249,600         Substructure Concrete       171.0 CY x       \$425 =       \$72,675         Superstructure Concrete       997.5 CY x       \$425 =       \$423,938         Prestressed Girders       0.0 LF x       \$0 =       \$0         Traffic Railing       840.0 LF x       \$40 =       \$33,600         Expansion Joints       171.0 LF x       \$300 =       \$51,300         Structure Demolition       LS       \$100,000         TOTAL COST =       \$931,113	l otal Length	171.0	⊢eet			
Substructure Concrete       171.0 CY x       \$425 =       \$72,675         Superstructure Concrete       997.5 CY x       \$425 =       \$423,938         Prestressed Girders       0.0 LF x       \$0 =       \$0         Traffic Railing       840.0 LF x       \$40 =       \$33,600         Expansion Joints       171.0 LF x       \$300 =       \$51,300         Structure Demolition         LS       \$100,000         TOTAL COST =       \$931,113	······································	6040.0	15	<b>#</b> 40	<del></del> -	0040 000
Superstructure Concrete       997.5 CY x       \$425 =       \$423,938         Prestressed Girders       0.0 LF x       \$0 =       \$0         Traffic Railing       840.0 LF x       \$40 =       \$33,600         Expansion Joints       171.0 LF x       \$300 =       \$51,300         Structure Demolition       LS       \$100,000         TOTAL COST =       \$931,113						ll l
Prestressed Girders       0.0 LF x       \$0 =       \$0         Traffic Railing       840.0 LF x       \$40 =       \$33,600         Expansion Joints       171.0 LF x       \$300 =       \$51,300         Structure Demolition         LS       \$100,000         TOTAL COST =       \$931,113						. 11
Traffic Railing       840.0 LF x       \$40 =       \$33,600         Expansion Joints       171.0 LF x       \$300 =       \$51,300         Structure Demolition       LS       \$100,000         TOTAL COST =       \$931,113						· il
Expansion Joints 171.0 LF x \$300 = \$51,300  Structure Demolition LS \$100,000  TOTAL COST = \$931,113						· 1
Structure Demolition LS \$100,000  TOTAL COST = \$931,113						
TOTAL COST = \$931,113	באףמווסוטוו טטווונס	17 1.0	<b></b> ∧	φουυ	_	φ51,300
TOTAL COST = \$931,113	Structure Demolition		1.5			\$100,000
- · · · · · · · · · · · · · · · · · · ·	The state of the s			COST	=	
						\$51.86

S.R. 39 - BRIDGE	S.R. 39 - BRIDGE OVER BLACKWATER CREEK					
	TABLE					
QUANTITY CALCU	JLATION ONC 4==	AND C	OST ES	TIMA	TE	
1.0 BASIS OF CALCULATI Roadway Width	UNS IOF	FLAT 5				
Overall Deck Width		5 Feet (			s per Bridge	
Overall Bridge Length		) Feet	42.0	reet	per Bridge)	
Number of Spans		and	2 @	1		
and Span Length(s)	_	Feet		Feet		
Superstructure Type	Flat Sla				es thick	
Substructure Type		ents w/			h piles	
2.0 QUANTITY CALCULAT	IONS					
2.1 Substructure						
Number of Bents	- 14	ļ				
a) Piles						
Size	18.0	) Inches			Capacity	
Number per Bent	5		4	in en	d bents	
Length per Pile		) Feet			i	
Total Pile Length	5440	) Feet		_		
b) Bent Caps Width	00.0	\   m = h = -		Per B		
-		Inches		DL=		
Depth Length		Inches Feet		LL=	293.2	
Volume		CYrds				
c) End Bents (Backwall &				Dor E	nd Bent:	
Width	_	Inches		DL=		
Depth		Feet		LL=	133.9	
Length		Feet			100.9	
Volume		CYrds				
2.2 Superstructure						
Number of Spans	4		2			
Span Length	37.5	Feet	30.0	Feet		
a) Girders						
Girders per Span	0		0			
Girder Length	0.0	Feet	0.0	Feet		
Total Girder Length	0.0	Feet				
b) Diaphragms						
Width		Inches				
Depth		Inches				
Length		Feet				
Volume	0.0	CYrds				
c) Deck	<b>^-</b> -	<b>-</b>				
Width		Feet				
Depth Length		Inches				
Volume	210.0				i	
d) Traffic Barrier	1163.8	Ciras			ļ	
Total Length	840.0	Feet				
e) Expansion Joints	<del>04</del> 0.0	ı eet				
Total Length	171.0	Feet				
3.0 COST ESTIMATE			7 7			
Piles	5440.0	LF x	\$40		\$217,600	
Substructure Concrete	149.6		\$425	=	\$63,591	
Superstructure Concrete	1163.8		\$425		\$494,594	
Prestressed Girders		LF x	\$0	=	\$0	
Traffic Railing	840.0		\$40	=	\$33,600	
Expansion Joints	171.0		\$300	=	\$51,300	
Structure Demolition		LS			\$100,000	
		TOTAL			\$960,684	
		COST	PER SF	=	\$53.51	

S.R. 39 – BRIDGE	OVER	BLACE	WATE	R C	REEK
	TABLE	I-C			
QUANTITY CALCU	JLATION	AND C	OST ES	TIM	ATE
1.0 BASIS OF CALCULATION					
Roadway Width		Feet			es per Bridge
Overall Deck Width		Feet (	42.8	Feet	t per Bridge)
Overall Bridge Length		Feet			
Number of Spans	3@		2@		
and Span Length(s)		Feet	36.0		
Superstructure Type	Flat Sla				es thick
Substructure Type 2.0 QUANTITY CALCULATI	Pile Be	nts w/	18.0	-ınd	ch piles
2.1 Substructure	UNS				
Number of Bents	12	)			
a) Piles	12	•			
Size	18.0	Inches	20	Ton	Capacity
Number per Bent	70.0				nd bents
Length per Pile	-	Feet	4	III EI	iu benis
Total Pile Length		Feet			
b) Bent Caps	02 <del>7</del> 0	. 661		Pari	Bent:
Width	36.0	Inches		DL=	
Depth		Inches		LL=	
Length		Feet		LL-	309.4
Volume		CYrds			ļ
c) End Bents (Backwall &				Dor I	End Bent:
Width		Inches		DL=	1
Depth		Feet		LL=	1
Length		Feet		LL-	143.9
Volume		CYrds			
2.2 Superstructure	0.0	Onus			
Number of Spans	3		2		
Span Length	-	Feet	36.0	Foot	
a) Girders	40.0	1 661	50.0	ı eet	
Girders per Span	0		0		
Girder Length	0.0		•	Feet	
Total Girder Length		Feet	0.0		
b) Diaphragms	0.0				
Width	0.0	Inches			
Depth		Inches			
Length		Feet			
Volume		CYrds			
c) Deck	0.0	J 1143			
Width	85.5	Feet			
Depth		inches			
Length	210.0				
Volume	1496.3				
d) Traffic Barrier	1730.3	Ullus			-
Total Length	840.0	Feet			İ
e) Expansion Joints	J <del>4</del> 0.0	ו ככו			
Total Length	171.0	Feet			
3.0 COST ESTIMATE	17 1.0				
Piles	6240.0	IF v	\$40		\$249,600
Substructure Concrete	128.3		\$425	=	\$249,600 \$54,506
Superstructure Concrete	1496.3		\$425	=	\$635,906
Prestressed Girders		LF x	\$425 \$0		\$035,906
Traffic Railing	840.0		\$40	=	\$33,600
Expansion Joints	171.0		\$300	=	
Expansion conte	171.0		φουυ	=	\$51,300
Structure Demolition		LS			\$100 000
On dotale Demonition	1	TOTAL	COST		\$100,000
				=	\$1,124,913
		CO311	PER SF	=	\$62.65

S.R. 39 - BRIDGE	OVER	BLACE	<b>WATE</b>	R CF	REEK
	TABLE				
QUANTITY CALCU					
1.0 BASIS OF CALCULATION					
Roadway Width		Feet			per Bridge
Overall Deck Width Overall Bridge Length	210.0	Feet (	42.8	reet	oer Bridge)
Number of Spans	5 @				
and Span Length(s)	_	Feet			
Superstructure Type		w/ Deck	8.0	inche	s thick
Substructure Type	Pile Be			-inch	n piles
2.0 QUANTITY CALCULATION	ONS				
2.1 Substructure					
Number of Bents	12				
a) Piles Size	10 0	Inches	90	Ton C	`anaaitu
Number per Bent	10.0				apacity bents
Length per Pile	-	Feet	7	iii eiic	Delic
Total Pile Length		Feet			
b) Bent Caps		. = -		Per B	ent:
Width	36.0	Inches	,	DL=	357.5
Depth	27.0	Inches		LL=	302.4
Length		Feet			
Total Volume		CYrds			
c) End Bents (Backwall &					nd Bent:
Width		Inches Feet		DL= LL=	
Depth Length		Feet		LL=	151.2
Total Volume		CYrds			
2.2 Superstructure	04.0	Ollus			
Number of Spans	5				1
Span Length	42.0	Feet			
a) Girders					
Girders per Span	5		9.00	Feet	
Girder Length		Feet			
Total Girder Length	2062.5				
<ul><li>b) Diaphragms (2 @ inter Width</li></ul>		•			
Depth		Inches Inches			
Length		Feet			
Total Volume		CYrds			
c) Deck		0 ,, 40			
Width	85.5	Feet			
Depth		Inches			
Length	210.0				
Total Volume	443.3	CYrds			
d) Traffic Barrier		<b>-</b> .			
Total Length	840.0	reet			
e) Expansion Joints Total Longth	171 0	Foot			Ì
Total Length 3.0 COST ESTIMATE	171.0	reel			
Piles	4640.0	LF x	\$40	=	\$185,600
Substructure Concrete		CY x	\$425	=	\$69,303
Superstructure Concrete	493.3		\$425		\$209,667
Prestressed Girders	2062.5		\$45	=	\$92,813
Traffic Railing	840.0		\$40	=	\$33,600
Expansion Joints	171.0	LF x	\$300	=	\$51,300
<b>.</b>					
Structure Demolition		LS	0007		\$100,000
			COST		\$742,282
<u> </u>		CU31	PER SF	=	\$41.34

S.R. 39 - BRIDGE	OVER	BLACK	WATE	R CR	EEK
	TABLE	I-E			
QUANTITY CALCU					
1.0 BASIS OF CALCULATION					
Roadway Width Overall Deck Width		Feet			per Bridge
Overall Bridge Length		Feet ( Feet	42.8	reet p	er Bridge)
Number of Spans	4 @				
and Span Length(s)	_	Feet			
Superstructure Type		w/ Deck	8.0	inches	s thick
Substructure Type	Pile Bei			-inch	
2.0 QUANTITY CALCULATI	ONS	······································			
2.1 Substructure					
Number of Bents	10				
a) Piles	400				
Size		Inches			apacity
Number per Bent Length per Pile	5 80 0	and Feet	4	in end	bents
Total Pile Length	3840				
b) Bent Caps	3040	reet		Per Be	nt:
Width	36.0	Inches		DL=	451.4
Depth		Inches		LL=	320.5
Length		Feet			020.0
Total Volume	106.9	CYrds			
c) End Bents (Backwall &	Wingwa	lls)		Per En	id Bent:
Width	-	Inches		DL=	282.6
Depth	4.0	Feet		LL=	160.2
Length		Feet			
Total Volume	34.8	CYrds			
2.2 Superstructure					j
Number of Spans	4				
Span Length	52.5	Feet			
a) Girders		•	7.05	<b>-</b>	
Girders per Span Girder Length	6 51 9	@ Feet	7.25	reet	
Total Girder Length	2484.0				
b) Diaphragms (2 @ inter					
Width		, Inches			
Depth		Inches			
Length	36.3	Feet			
Total Volume	40.3	CYrds			Î
c) Deck					
Width	85.5				
Depth		Inches			
Length	210.0				
Total Volume	443.3	CYrds			
d) Traffic Barrier	0.40.5				
Total Length	840.0	reet			
e) Expansion Joints	474.0	T4			
Total Length 3.0 COST ESTIMATE	171.0	reet			
Piles	3840.0	IF v	\$40		\$153,600
Substructure Concrete	141.7		\$425	=	\$60,218
Superstructure Concrete	483.6		\$425		\$205,535
Prestressed Girders	2484.0		\$45	=	\$111,780
Traffic Railing	840.0		\$40	=	\$33,600
Expansion Joints	171.0		\$300	=	\$51,300
•					, , , , ,
Structure Demolition		LS			\$100,000
		TOTAL		=	\$716,033
		COST F	PER SF		\$39.88

S.R. 39 - BRIDGE			WATE	R CF	REEK
	TABLE				
QUANTITY CALCU					
1.0 BASIS OF CALCULATION					
Roadway Width		Feet			s per Bridge
Overall Deck Width		Feet (	42.8	Feet p	oer Bridge)
Overall Bridge Length	210.0				
Number of Spans	3@				
and Span Length(s)		Feet		:	- Al-:-1.
Superstructure Type Substructure Type		w/ Deck			s thick
2.0 QUANTITY CALCULATI	Pile Ber	ils w/	10.0	-inch	plies
2.1 Substructure	ONS			······································	
Number of Bents	8				
a) Piles	·				
Size	18.0	Inches	80	Ton C	apacity
Number per Bent		and			bents
Length per Pile	-	Feet	•	0	
Total Pile Length	4000	Feet			
b) Bent Caps				Per B	ent:
Width	36.0	Inches		DL=	
Depth		Inches		LL=	337.0
Length		Feet			337.3
Total Volume		CYrds			
c) End Bents (Backwall &				Per Er	nd Bent:
Width		Inches		DL=	403.3
Depth		Feet		LL=	168.5
Length	62.8	Feet			.00.0
Total Volume		CYrds			
2.2 Superstructure					
Number of Spans	3				
Span Length	70.0	Feet			
a) Girders					
Girders per Span	6	@	7.25	Feet	
Girder Length	69.3	Feet			li i
Total Girder Length	2493.0	Feet			
b) Diaphragms (2 @ inter	ior bents	)			
Width		Inches			i
Depth	38.0	Inches			
Length	36.3	Feet			
Total Volume	38.3	CYrds			1
c) Deck		•			
Width	85.5	Feet			
Depth	8.0	Inches			
Length	210.0				
Total Volume	443.3	CYrds			
d) Traffic Barrier					
Total Length	840.0	Feet			
e) Expansion Joints					
Total Length	171.0	Feet			
3.0 COST ESTIMATE					
Piles	4000.0		\$40	=	\$160,000
Substructure Concrete	132.0		\$425		\$56,092
Superstructure Concrete	481.6		\$425		\$204,679
Prestressed Girders	2493.0		\$70		\$174,510
Traffic Railing	840.0		\$40	=	\$33,600
Expansion Joints	171.0	LF x	\$300	=	\$51,300
<b>.</b>					
Structure Demolition		LS	000=		\$100,000
		TOTAL			\$780,181
		COST F	'ER SF	=	\$43.45

S.R. 39 - BRIDGE	OVER BLACK	WATER CRF	EK
	TABLE I-G		
QUANTITY CALCU			
1.0 BASIS OF CALCULATION	ONS for TYPE IV	BEAM (L=105	FEET)
Roadway Width	80.0 Feet	3 Lanes p	
Overall Deck Width	85.5 Feet (	42.8 Feet pe	r Bridge)
Overall Bridge Length	210.0 Feet		
Number of Spans	2@_		
and Span Length(s)	105.0 Feet		
Superstructure Type	Type IV w/ Deck		
Substructure Type	Pile Bents w/	18.0 —inch p	iles
2.0 QUANTITY CALCULATI 2.1 Substructure	UNS		
Number of Bents	6		
a) Piles	0		
Size	18.0 Inches	80 Ton Car	agaity.
Number per Bent	10.0 inches	6 in end b	
Length per Pile	80.0 Feet	o in ena b	eiio
Total Pile Length	4160 Feet		
b) Bent Caps		Per Ben	t:
Width	36.0 Inches	DL=	1210.1
Depth	27.0 Inches	LL=	354.2
Length	42.8 Feet		
Total Volume	64.1 CYrds	•	
c) End Bents (Backwall &	Wingwalls)	Per End	Bent:
Width	12.0 Inches	DL=	680.1
Depth	5.5 Feet	LL=	177.1
Length	64.8 Feet		
Total Volume	52.8 CYrds		
2.2 Superstructure			
Number of Spans	2		
Span Length	105.0 Feet		
a) Girders			
Girders per Span	7 @	6.00 Feet	
Girder Length	104.3 Feet		ll l
Total Girder Length	2919.0 Feet		
<ul><li>b) Diaphragms (2 @ inter Width</li></ul>	,		
	9.0 Inches		
Depth Length	45.0 Inches		i
Total Volume	36.0 Feet 30.0 CYrds		
c) Deck	30.0 Citas		j
Width	85.5 Feet		
Depth	8.0 Inches		
Length	210.0 Feet		
Total Volume	443.3 CYrds		
d) Traffic Barrier			
Total Length	840.0 Feet		
e) Expansion Joints			
Total Length	171.0 Feet		
3.0 COST ESTIMATE			
Piles	4160.0 LF x	\$40 =	\$166,400
Substructure Concrete	116.9 CY x	\$425 =	\$49,676
Superstructure Concrete	473.3 CY x		\$201,167
Prestressed Girders	2919.0 LF x		\$291,900
Traffic Railing	840.0 LF x	\$40 =	\$33,600
-			
Expansion Joints	171.0 LF x	\$300 =	\$51,300
Structure Demolition	LS		\$100,000
	TOTAL (		894,042
	COST PI	ER SF =	\$49.79

S.R. 39 - BRIDGE	OVER	UPLAN	D ARE	AS		
	TABLE	II-A				
QUANTITY CALCULATION AND COST ESTIMATE						
1.0 BASIS OF CALCULATION						
Roadway Width		) Feet			s per Bridge	
Overall Deck Width		Feet (	42.8	Feet	per Bridge)	
Overall Bridge Length		) Feet				
Number of Spans	_	and	2@			
and Span Length(s)		Feet		Feet		
Superstructure Type	Flat Sla				s thick	
Substructure Type		nts w/	18.0	-incl	h piles	
2.0 QUANTITY CALCULATI	ONS	<del></del>				
2.1 Substructure						
Number of Bents	14	+				
a) Piles	40.0					
Size		Inches			Capacity	
Number per Bent	5		4	in en	d bents	
Length per Pile		Feet				
Total Pile Length	5440	Feet				
b) Bent Caps	00.0			Per B		
Width		Inches		DL=		
Depth		Inches		LL=	275.4	
Length		Feet				
Volume		CYrds				
c) End Bents (Backwall &	•	,			nd Bent:	
Width		Inches	•	DL=	190.1	
Depth		Feet		LL=	126.4	
Length		Feet				
Volume	0.0	CYrds				
2.2 Superstructure			_			
Number of Spans	20.0		2			
Span Length a) Girders	32.0	Feet	26.0	reet		
•	•		^			
Girders per Span Girder Length	0	Feet	0	<b></b>		
Total Girder Length		Feet	0.0	Feet		
b) Diaphragms	0.0	reet				
Width	0.0	Inches				
Depth		Inches				
Length		Feet				
Volume		CYrds				
c) Deck	0.0	OTIUS				
Width	QFF	Feet				
Depth		Inches				
Length	180.0					
Volume		CYrds				
d) Traffic Barrier	0.00,0	Offus				
Total Length	720.0	Foot				
e) Expansion Joints	120.0	י בבו				
Total Length	171.0	Foct				
3.0 COST ESTIMATE	171.0	ı eet				
Piles	5440.0	IF v	\$40		\$217,600	
Substructure Concrete	149.6		\$425	=	\$63,591	
Superstructure Concrete	855.0		\$425	=	\$363,375	
Prestressed Girders		LF x	\$ <del>425</del>	=	\$303,375 \$0	
Traffic Railing	720.0		\$40		\$28,800	
Expansion Joints	171.0		\$300	=	\$28,800 \$51,300	
Expansion dollits	17 1.0	LI X	<b>4300</b>	_	φο 1,300	
Structure Demolition		LS			\$100,000	
Structure Demontion		TOTAL	COST		\$824,666	
		COST F		=	\$53.58	
		- 0001 F	<u> </u>		φυυ.50	

S.R. 39 - BRIDGE			ND ARE	4S	
	TABLE		007 507		
QUANTITY CALCU 1.0 BASIS OF CALCULATION					
Roadway Width		Feet			s per Bridge
Overall Deck Width		Feet (			per Bridge)
Overall Bridge Length		Feet	72.0		per Bridge,
Number of Spans	3@		2@		
and Span Length(s)	39.0	Feet	31.5	Feet	
Superstructure Type	Flat Sla		22.0	inche	s thick
Substructure Type		nts w/	18.0	-incl	n piles
2.0 QUANTITY CALCULAT	IONS		···-		
2.1 Substructure	40				
Number of Bents a) Piles	12				
Size	18.0	Inches	90	Ton C	Capacity
Number per Bent	10.0				d bents
Length per Pile	-	Feet	7	iii eiid	a Dellis
Total Pile Length		Feet			
b) Bent Caps				Per B	ent:
Width	36.0	Inches		DL=	534.4
Depth	27.0	Inches		LL=	295.9
Length		Feet			
Volume		CYrds			
c) End Bents (Backwall &					nd Bent:
Width		Inches		DL=	254.8
Depth Length		Feet Feet		LL=	137.7
Volume		CYrds			
2.2 Superstructure	0.0	Citus			
Number of Spans	3		2		
Span Length	_	Feet	31.5	Feet	
a) Girders					
Girders per Span	0		0		
Girder Length		Feet	0.0	Feet	
Total Girder Length	0.0	Feet			
b) Diaphragms					
Width		Inches			
Depth Length		Inches Feet			į
Volume		CYrds			
c) Deck	0.0	Ollus			ĺ
Width	85.5	Feet			
Depth		Inches			
Length	180.0				
Volume	1045.0				
d) Traffic Barrier					
Total Length	720.0	Feet			Įį.
e) Expansion Joints		_			ii ii
Total Length	171.0	Feet			
3.0 COST ESTIMATE	E440.0	15	<b>**</b>		0017 005
Piles Substructure Concrete	5440.0		\$40 \$405	=	\$217,600
Superstructure Concrete	128.3 1045.0		\$425 \$425	=	\$54,506 \$444 125
Prestressed Girders		LF x	\$425 \$0	=	\$444,125 \$0
Traffic Railing	720.0		\$40	=	\$28,800
Expansion Joints	171.0		\$300	=	\$51,300
		^	<del>+</del>		70.,000
Structure Demolition		LS			\$100,000
		TOTAL		=	\$896,331
		COST	PER SF	=	\$58.24

S.R. 39 - BRIDGE	OVER	UPLAN	ID ARE	AS	<del></del>
	TABLE	II-C			
QUANTITY CALCU	JLATION	AND C	OST EST	<b>IMA</b>	TE
1.0 BASIS OF CALCULATION	ONS for	FLAT SI	LAB (L=	50 F	EET)
Roadway Width		) Feet			es per Bridge
Overall Deck Width		Feet (	42.8	Fee	t per Bridge)
Overall Bridge Length		Feet			
Number of Spans	2@	-	2@		
and Span Length(s)		Feet	40.0		
Superstructure Type	Flat Sla	•			es thick
Substructure Type 2.0 QUANTITY CALCULAT		nts w/	18.0	-inc	ch piles
2.1 Substructure	IUNS				
Number of Bents	10	`			
a) Piles		,			
Size	18.0	Inches	80	Ton	Capacity
Number per Bent	8				nd bents
Length per Pile	_	) Feet	-	III CI	id bellis
Total Pile Length		Feet			
b) Bent Caps				Per I	Bent:
. Width	36.0	Inches		DL=	
Depth	27.0	Inches		LL=	
Length	42.8	Feet			
Volume		CYrds			
c) End Bents (Backwall &	& Wingwa	alls)		Per I	End Bent:
Width	0.0	Inches		DL=	376.0
Depth	0.0	Feet		LL=	149.0
Length		Feet			
Volume	0.0	CYrds			
2.2 Superstructure					
Number of Spans	2		2		
Span Length	50.0	Feet	40.0	Feet	
a) Girders	_		_		
Girders per Span	0		0		
Girder Length		Feet	0.0	Feet	
Total Girder Length	0.0	Feet			
b) Diaphragms Width	0.0	Inches			
Depth		Inches Inches			
Length		Feet			
Volume		CYrds			İ
c) Deck	0.0	Ciius			
Width	85.5	Feet			
Depth		Inches			
Length	180.0				
Volume		CYrds			
d) Traffic Barrier	. 555.6	J.143			}
Total Length	720.0	Feet			
e) Expansion Joints	. 20.0				
Total Length	171.0	Feet			
3.0 COST ESTIMATE					
Piles	5760.0	LF x	\$40	=	\$230,400
Substructure Concrete		CY x	\$425	=	\$45,422
Superstructure Concrete	1330.0		\$425	=	\$565,250
Prestressed Girders		LF x	\$0	=	\$0
Traffic Railing	720.0	LF x	\$40	=	\$28,800
Expansion Joints	171.0	LF x	\$300	=	\$51,300
-					
Structure Demolition		LS			\$100,000
		TOTAL		=	\$1,021,172
		COST	PER SF	=	\$66.35

S.R. 39 - BRIDGE	OVER	UPLAN	D ARE	AS	
	TABLE	II-D			
QUANTITY CALCU	JLATION	AND CO	OST EST	IMAT	E
1.0 BASIS OF CALCULATION	ONS for	TYPE II	BEAM (L	=45	FEET)
Roadway Width	80.0	Feet	3	Lanes	s per Bridge
Overall Deck Width	85.5	5 Feet (	42.8	Feet	per Bridge)
Overall Bridge Length	180.0	Feet			,
Number of Spans	4 @	Ò			
and Span Length(s)	45.0	) Feet			
Superstructure Type		w/ Deck	8.0	inche	s thick
Substructure Type	Pile Be	nts w/	18.0	-incl	n piles
2.0 QUANTITY CALCULATI	ONS				
2.1 Substructure					-
Number of Bents	10	)			
a) Piles					
Size		Inches			Capacity
Number per Bent			4	in end	d bents
Length per Pile		Feet			
Total Pile Length	3840	) Feet			
b) Bent Caps				Per B	
Width		Inches		DL=	
Depth		Inches		LL=	307.8
Length		Feet			
Total Volume		CYrds			
c) End Bents (Backwall &	_	•			nd Bent:
Width		Inches		DL=	
Depth		Feet		LL=	153.9
Length		Feet			
Total Volume	34.8	CYrds			
2.2 Superstructure					
Number of Spans	4 - 0				
Span Length a) Girders	45.0	Feet			
Girders per Span	E		0.00	E+	
Girder Length	44.9	@ Feet	9.00	reet	
Total Girder Length	1770.0				
b) Diaphragms (2 @ inte					
Width		Inches			
Depth		Inches			
Length		Feet			
Total Volume		CYrds			
c) Deck	<del>7</del> 0.0	Unius			
Width	85.5	Feet			
Depth		Inches			
Length	180.0				
Total Volume		CYrds			
d) Traffic Barrier	550.0	J 1143			
Total Length	720.0	Feet			
e) Expansion Joints	, 20.0	. 550			
Total Length	171.0	Feet			
3.0 COST ESTIMATE		·			
Piles	3840.0	LF x	\$40	=	\$153,600
Substructure Concrete		CY x	\$425	=	\$60,218
Superstructure Concrete		CY x	\$425	=	\$178,500
Prestressed Girders	1770.0		\$45	=	\$79,650
Traffic Railing		LF x	\$40	=	\$28,800
Expansion Joints	171.0		\$300	=	\$51,300
•					,
Structure Demolition		LS			\$100,000
		TOTAL	COST	=	\$652,068
		COST F	PER SF		\$42.37

S.R. 39 - BRIDGE	OVER UPLAN	ID AREAS			
TABLE II-E					
QUANTITY CALCU					
1.0 BASIS OF CALCULATION					
Roadway Width	80.0 Feet		es per Bridge		
Overall Deck Width	85.5 Feet (	42.8 Fee	t per Bridge)		
Overall Bridge Length	180.0 Feet	-			
Number of Spans	3 @				
and Span Length(s)	60.0 Feet	. 00 imak	nes thick		
Superstructure Type Substructure Type	Type III w/ Deck Pile Bents w/				
2.0 QUANTITY CALCULATI		18.0 – in	cripiles		
2.1 Substructure	0110	<del></del>			
Number of Bents	8				
a) Piles	_				
Size	18.0 Inches	80 Ton	Capacity		
Number per Bent	6 and		nd bents		
Length per Pile	80.0 Feet				
Total Pile Length	3520 Feet				
b) Bent Caps		. ••	Bent:		
Width	36.0 Inches	DL=			
Depth	27.0 Inches	LL=	= 328.3		
Length	42.8 Feet				
Total Volume	85.5 CYrds	_			
c) End Bents (Backwall &			End Bent:		
Width	12.0 Inches	DL=	0 .2.0		
Depth Length	5.0 Feet 62.8 Feet	LL=	= 164.2		
Total Volume	46.5 CYrds				
2.2 Superstructure	40.5 Offus				
Number of Spans	3				
Span Length	60.0 Feet				
a) Girders					
Girders per Span	5 @	9.00 Feet	t		
Girder Length	59.3 Feet				
Total Girder Length	1777.5 Feet				
b) Diaphragms (2 @ inter	rior bents)				
Width	9.0 Inches				
Depth	38.0 Inches				
Length	36.0 Feet				
Total Volume	38.0 CYrds				
c) Deck	0= = = ·				
Width	85.5 Feet				
Depth	8.0 Inches				
Length Total Valuma	180.0 Feet				
Total Volume d) Traffic Barrier	380.0 CYrds				
α) Traπic Barner Total Length	720.0 Feet				
e) Expansion Joints	120.0 Feet				
Total Length	171.0 Feet				
3.0 COST ESTIMATE	171.01 eet				
Piles	3520.0 LF x	\$40 =	\$140,800		
Substructure Concrete	132.0 CY x	\$425 =	\$56,092		
Superstructure Concrete	418.0 CY x	\$425 =	\$177,650		
Prestressed Girders	1777.5 LF x	\$70 =	\$124,425		
Traffic Railing	720.0 LF x	\$40 =	\$28,800		
Expansion Joints	171.0 LF x	\$300 =	\$51,300		
•		•	. ,		
Structure Demolition	LS		\$100,000		
	TOTAL	COST =	\$679,067		
	COST	PER SF =	\$44.12		

S.R. 39 - BRIDGE	OVER	UPLAN	D AREA	AS	
	TABLE			<u></u>	
QUANTITY CALCU			ST EST	IMATE	<u>=</u>
1.0 BASIS OF CALCULATION	ONS for	TYPE IV	BEAM (	=90	FEET)
Roadway Width		) Feet			per Bridge
Overall Deck Width		Feet (			er Bridge)
Overall Bridge Length		) Feet			· · · · · · · · · · · · · · · · · · ·
Number of Spans	2@	)			
and Span Length(s)	_	Feet			
Superstructure Type	Type I\	/ w/ Deck	8.0	inches	sthick
Substructure Type	Pile Be			-inch	
2.0 QUANTITY CALCULATI					<u> </u>
2.1 Substructure					
Number of Bents	6	;			
a) Piles	_				
Size	18.0	Inches	80	Ton C	apacity
Number per Bent	8				bents
Length per Pile	_	Feet	•	0	Denis
Total Pile Length		Feet			
b) Bent Caps	2000			Per Be	ent:
Width	36.0	Inches		DL=	900.4
Depth		Inches		LL=	348.3
Length		Feet			040.0
Total Volume		CYrds			
c) End Bents (Backwall &				Per Fr	d Bent:
Width		Inches		DL=	525.3
Depth		Feet		LL=	174.2
Length		Feet		LL=	174.2
Total Volume		CYrds			
2.2 Superstructure	52.0	Ollus			
Number of Spans	2				
Span Length	_	Feet			
a) Girders	30.0	i eet			
Girders per Span	5	@	9.00	=+	
Girder Length		Feet	9.00 1	eet	
Total Girder Length	1785.0				
b) Diaphragms (2 @ inter					
Width		nches			
Depth		Inches			
Length		Feet			
Total Volume	30.0	CYrds			
c) Deck	95 F	East			
Width		Feet			
Depth		Inches			[
Length	180.0				
Total Volume	380.0	CYrds			ļļ
d) Traffic Barrier	700 0	<b>-</b>			
Total Length	720.0	reet			ļ
e) Expansion Joints					ļ
Total Length	171.0	reet			
3.0 COST ESTIMATE	0000	<del></del>			
Piles	3360.0		\$40	=	\$134,400
Substructure Concrete		CY x	\$425	=	\$49,676
Superstructure Concrete	410.0		\$425	=	\$174,250
Prestressed Girders	1785.0		\$100		\$178,500
Traffic Railing	720.0		\$40	=	\$28,800
Expansion Joints	171.0	LF x	\$300	=	\$51,300
Structure Demolition		LS			\$100,000
		TOTAL C		=	\$716,926
		COST PI	R SF		\$46.58

S.R. 39 - BRIDGE	<b>OVER</b>	BIG DI	ТСН		
	TABLE	III-A			
QUANTITY CALCU					
1.0 BASIS OF CALCULATION					
Roadway Width		Feet			s per Bridge
Overall Deck Width		Feet (	42.8	Feet	per Bridge)
Overall Bridge Length		Feet			
Number of Spans	16@				
and Span Length(s)		Feet	40.0	t	
Superstructure Type Substructure Type	Flat Sla Pile Be				es thick
2.0 QUANTITY CALCULATI		iis w/	10.0	-inc	h piles
2.1 Substructure	0110	· · · · · · · · · · · · · · · · · · ·			
Number of Bents	34				
a) Piles	01				
Size	18.0	Inches	80	Ton (	Capacity
Number per Bent	5				d bents
Length per Pile	80.0	Feet	•		
Total Pile Length	13440	Feet			
b) Bent Caps				Per B	Bent:
Width	36.0	Inches		DL=	383.1
Depth	27.0	Inches		LL=	278.6
Length	42.8	Feet			
Volume	363.4	CYrds			·
c) End Bents (Backwall &	k Wingwa	ills)		Per E	nd Bent:
Width		Inches		DL=	226.8
Depth		Feet		LL=	139.3
Length		Feet			
Volume	0.0	CYrds			
2.2 Superstructure					
Number of Spans	16				
Span Length	32.5	Feet			
a) Girders					
Girders per Span	0				
Girder Length		Feet			
Total Girder Length	0.0	Feet			1
b) Diaphragms Width	0.0	l			
Depth		Inches			
Length		Inches Feet			İ
Volume		CYrds			
c) Deck	0.0	Cilus			ľ
Width	85.5	Feet			
Depth		Inches			
Length	520.0				
Volume	2470.0				
d) Traffic Barrier	2470.0	01140			
Total Length	2080.0	Feet			
e) Expansion Joints	2000.0				ll l
Total Length	427.5	Feet			
3.0 COST ESTIMATE					
Piles	13440	LF x	\$40	=	\$537,600
Substructure Concrete	363.4		\$425	=	\$154,434
Superstructure Concrete	2470.0		\$425	=	\$1,049,750
Prestressed Girders		LF x	\$0	=	\$0
Traffic Railing	2080.0	LF x	\$40	=	\$83,200
Expansion Joints	427.5	LF x	\$300	=	\$128,250
Structure Demolition		LS			\$1,000
		TOTAL			\$1,954,234
		COST F	PER SF	=	\$43.95

S.R. 39 - BRIDGE	OVER	BIG D	ТСН	·· · · · · · · · · · · · · · · · · · ·	
	TABLE	III-B			
QUANTITY CALCU					
1.0 BASIS OF CALCULATION					
Roadway Width		Feet			s per Bridge
Overall Deck Width		Feet (	42.8	Feet	oer Bridge)
Overall Bridge Length		Feet			
Number of Spans	13 @				
and Span Length(s)		) Feet	00.0		- 11 * 1
Superstructure Type	Flat Sla				s thick
Substructure Type 2.0 QUANTITY CALCULATI		nts w/	10.0	-inct	plies
2.1 Substructure	ONS				
Number of Bents	28	3			
a) Piles	_	•			
Size	18.0	Inches	80	Ton C	apacity
Number per Bent		and			bents
Length per Pile	80.0	Feet			
Total Pile Length	13120	) Feet			
b) Bent Caps				Per B	ent:
Width	36.0	Inches		DL=	547.0
Depth	27.0	Inches		LL=	298.1
Length	42.8	Feet			
Volume		CYrds			}
c) End Bents (Backwall &				Per Ei	nd Bent:
Width		Inches		DL=	
Depth		Feet		LL=	149.0
Length		Feet			
Volume	0.0	CYrds			l
2.2 Superstructure	40				
Number of Spans	13				
Span Length a) Girders	40.0	Feet			
Girders per Span	0				
Girder Length	_	Feet			
Total Girder Length		Feet			
b) Diaphragms	0.0				
Width	0.0	Inches			
Depth		Inches			
Length		Feet			
Volume		CYrds			Į.
c) Deck					
Width	85.5	Feet			-
Depth	22.0	Inches			
Length	520.0	Feet			
Volume	3018.9	CYrds			
d) Traffic Barrier					
Total Length	2080.0	Feet			
<ul><li>e) Expansion Joints</li></ul>					
Total Length	342.0	Feet			
3.0 COST ESTIMATE					
Piles	13120		\$40	=	\$524,800
Substructure Concrete		CY x	\$425	=	\$127,181
Superstructure Concrete	3018.9		\$425	=	\$1,283,028
Prestressed Girders		LF x	\$0	=	\$0
Traffic Railing	2080.0		\$40	=	\$83,200
Expansion Joints	342.0	LF X	\$300	=	\$102,600
Structure Demolition		LS			64 000
Structure Demontion		TOTAL	COST		\$1,000
			PER SF	= :	\$2,121,809
		UUSI I	LN OF	_=	\$47.72

S.R. 39 - BRIDGE	OVER	BIG DI	TCH		
	TABLE	III-C	<del></del>		
QUANTITY CALCU					
1.0 BASIS OF CALCULATION					
Roadway Width		) Feet			s per Bridge
Overall Deck Width		Feet (	42.8	Feet <sub> </sub>	per Bridge)
Overall Bridge Length		) Feet			
Number of Spans	10 @				
and Span Length(s)		) Feet	00.0	i !- ·	- Abiala
Superstructure Type	Flat Sla	•			s thick
Substructure Type 2.0 QUANTITY CALCULATI	Pile Be	116 W/	10.0	-mcr	n piles
2.1 Substructure	ONS		<del></del>		
Number of Bents	22	)			
a) Piles		-			ı
Size	18.0	Inches	80	Ton C	apacity
Number per Bent	8	_			d bents
Length per Pile	80.0	Feet	·		
Total Pile Length	13440	Feet			
b) Bent Caps				Per B	ent:
Width	36.0	Inches		DL=	
Depth		Inches		LL=	319.1
Length		Feet			
Volume		CYrds		_	
c) End Bents (Backwall &					nd Bent:
Width		Inches		DL=	475.8
Depth		Feet		LL=	159.6
Length		Feet			
Volume	0.0	CYrds			
2.2 Superstructure	40				
Number of Spans	10				Ĭ.
Span Length a) Girders	52.0	Feet			
Girders per Span	0				
Girder Length	-	Feet			-
Total Girder Length		Feet			
b) Diaphragms	0.0				
Width	0.0	Inches			
Depth		Inches			
Length		Feet			
Volume		CYrds			
c) Deck	2.0	• <del></del>			
Width	85.5	Feet			
Depth		Inches			#
Length	520.0	Feet			
Volume	3842.2	CYrds			
d) Traffic Barrier					
Total Length	2080.0	Feet			
e) Expansion Joints					
Total Length	256.5	Feet			
3.0 COST ESTIMATE					
Piles	13440		\$40	=	\$537,600
Substructure Concrete		CY x	\$425	=	\$99,928
Superstructure Concrete	3842.2		\$425	=	\$1,632,944
Prestressed Girders		LF x	\$0	=	\$0
Traffic Railing	2080.0		\$40	=	\$83,200
Expansion Joints	256.5	LF X	\$500	=	\$128,250
Structure Demo-Hales					<b>64</b> 000
Structure Demolition		LS	COST		\$1,000
		TOTAL			\$2,482,923
		LOOPI	PER SF	=	\$55.85

S.R. 39 - BRIDGE			ТСН		
	TABLE				
QUANTITY CALCU					
1.0 BASIS OF CALCULATIO					
Roadway Width		Feet			s per Bridge
Overall Deck Width		Feet (	42.8	reet	per Bridge)
Overall Bridge Length	520.0	reet			
Number of Spans and Span Length(s)	10 @ 52.0	Foot			
Superstructure Type		w/ Deck	8.0	inche	es thick
Substructure Type	Pile Ber				h piles
2.0 QUANTITY CALCULATION		165 VV/	10.0	1110	ii piies
2.1 Substructure	0110				
Number of Bents	22				
a) Piles					
Size	18.0	Inches	80	Ton (	Capacity
Number per Bent	5				d bents
Length per Pile	80.0	Feet			ļ
Total Pile Length	8640	Feet			
b) Bent Caps				Per B	Bent:
Width	36.0	Inches		DL=	447.7
Depth		inches		LL=	319.1
Length	42.8	Feet			
Total Volume		CYrds			
c) End Bents (Backwall &				Per E	nd Bent:
Width		Inches		DL=	
Depth		Feet		LL=	159.6
Length	58.8				
Total Volume	34.8	CYrds			
2.2 Superstructure					
Number of Spans	10				
Span Length	52.0	reet			
a) Girders	•		7.05	<b></b>	ł
Girders per Span	6 51.3	@ Foot	7.25	reet	
Girder Length Total Girder Length	6150.0				
b) Diaphragms (2 @ inter					
Width		) Inches			
Depth		Inches			
Length	36.3				
Total Volume		CYrds			
c) Deck	100.7	J , 140			
Width	85.5	Feet			
Depth		Inches			. ]
Length	520.0				
Total Volume	1097.8				
d) Traffic Barrier					
Total Length	2080.0	Feet			ļ
e) Expansion Joints					
Total Length	256.5	Feet			
3.0 COST ESTIMATE					
Piles	8640		\$40		\$345,600
Substructure Concrete	269.9		\$425		\$114,724
Superstructure Concrete	1198.5		\$425		\$509,351
Prestressed Girders	6150.0		\$45		\$276,750
Traffic Railing	2080.0		\$40	=	\$83,200
Expansion Joints	256.5	LF x	\$500	=	\$128,250
0					64 665
Structure Demolition	:	LS	000=		\$1,000
		TOTAL			\$1,458,875
		CUST	PER SF	=	\$32.81

TABLE III	S.R. 39 - BRIDGE	OVER BIG DI	ТСН	
1.0 BASIS OF CALCULATIONS for TYPE III BEAM (L=65 FEET)   Roadway Width				
Roadway Width				
Overall Deck Width Overall Bridge Length Number of Spans and Span Length(s) Superstructure Type Superstructure Type Pile Bents w/ Pile Bents w/ Pile Bents w/ Size Number of Bents a) Piles Size Number per Bent Length per Pile Total Pile Length Bent Caps Width Depth Length Depth Length Depth Length Depth Length Depth San Length San Length San Length Diphragms (2 @ interior bents) Width San Depth San Depth San Depth San Depth San Length Diphragms (2 @ interior bents) Width San Depth San Depth San Depth San Depth San Depth San Length San Length San Length Depth San Length San Length San Length San Depth San Depth San Depth San Length San Length San Depth San				
Overall Bridge Length Number of Spans and Span Length(s) Superstructure Type				
Number of Spans and Span Length(s)   Superstructure Type   Type   Ill w/ Deck   Substructure Type   Type   Ill w/ Deck   Substructure Type   Type   Ill w/ Deck   Substructure   Substructure   Number of Bents   18	<b>()</b>		42.8 Feet per Br	idge)
and Span Length(s) Superstructure Type Substructure Type Substructure Type Pile Bents w/ 18.0 - inche piles  2.0 QUANTITY CALCULATIONS  2.1 Substructure Number of Bents A) Piles Size 18.0 Inches A in end bents  4 in end bents  Per Bent: Depth Size 18.0 Inches Depth Size 18.0 Inches Depth Size Size 18.0 Inches Size 18.0 Inches Size 18.0 Inches Size 18.0 Inches Size 18.0 Inches Size 18.0 Inches Size 18.0 Inches Size 18.0 Inches Size Size 18.0 Inches Size Size Size 18.0 Inches Size Size Size Size Size Size Size Size	,,			
Superstructure Type   Type   Ill w/ Deck   Substructure Type   Pile Bents w/   18.0 -inch piles		_		
Substructure Type				
2.0 QUANTITY CALCULATIONS				1
2.1 Substructure			18.0 - Inch piles	
Number of Bents   18   2   2   2   2   2   2   3   5   2   3   5   2   4   3   5   2   4   4   3   5   2   4   4   3   5   4   5   4   5   5   5   5   5   5		ONS		
a) Piles	-	40		
Size		10		
Number per Bent   6   and   4   in end bents		18 O Inches	80 Ton Canad	it.,
Length per Pile	1			
Total Pile Length   B320 Feet			4 in end bent	<b>&gt;</b>
b) Bent Caps				
Width   36.0 Inches   DL = 588.5	1	JULU I CCL	Per Rent	
Depth		36.0 Inches		588.5
Length				
c) End Bents (Backwall & Wingwalls) Width 12.0 Inches DL = 363.0 Depth 5.0 Feet LL = 166.6 Length 62.8 Feet Total Volume 46.5 CYrds  2.2 Superstructure Number of Spans 8 Span Length 65.0 Feet a) Girders Girder Spans 5 @ 9.00 Feet Girder Length 5140.0 Feet b) Diaphragms (2 @ interior bents) Width 9.0 Inches Depth 38.0 Inches Length 36.0 Feet Total Volume 101.3 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 520.0 Feet Total Volume 1097.8 CYrds d) Traffic Barrier Total Length 2080.0 Feet e) Expansion Joints Total Length 256.5 Feet  3.0 COST ESTIMATE  Piles 8320 LF x \$40 = \$332,800 Substructure Concrete 1199.1 CY x \$425 = \$101,514 Superstructure Concrete 1199.1 CY x \$425 = \$509,622 Prestressed Girders 5140.0 LF x \$70 = \$359,800 Traffic Railing 2080.0 LF x \$40 = \$83,200 Expansion Joints 256.5 LF x \$500 = \$128,250  Structure Demolition LS \$1,000	•			000.L
c) End Bents (Backwall & Wingwalls)     Width				
Width			Per End Be	nt:
Depth				1
Length   Total Volume   46.5 CYrds	Depth	5.0 Feet	. LL=	166.6
Total Volume	•	62.8 Feet		
Number of Spans   Span Length   65.0 Feet		46.5 CYrds		
Span Length   65.0 Feet	2.2 Superstructure			
a) Girders Girders per Span Girder Length Girder Length Fotal Girder Length Diaphragms (2 @ interior bents) Width Depth Sa.0 Inches Length Total Volume Fotal Volume  C) Deck Width S5.5 Feet Depth S0.0 Inches Length Fotal Volume Fotal Volume Fotal Volume Fotal Volume Fotal Volume Fotal Volume Fotal Volume Fotal Volume Fotal Volume Fotal Length Fotal Lengt	Number of Spans	8		
Girders per Span   5 @ 9.00 Feet	Span Length	65.0 Feet		
Girder Length 5140.0 Feet  Total Girder Length 5140.0 Feet  b) Diaphragms (2 @ interior bents)  Width 9.0 Inches  Depth 38.0 Inches  Length 36.0 Feet  Total Volume 101.3 CYrds  c) Deck  Width 85.5 Feet  Depth 8.0 Inches  Length 520.0 Feet  Total Volume 1097.8 CYrds  d) Traffic Barrier  Total Length 2080.0 Feet  e) Expansion Joints  Total Length 256.5 Feet  Substructure Concrete 238.9 CY x \$425 = \$101,514  Superstructure Concrete 1199.1 CY x \$425 = \$509,622  Prestressed Girders 5140.0 LF x \$70 = \$359,800  Traffic Railing 2080.0 Fex \$40 = \$83,200  Expansion Joints 256.5 LF x \$500 = \$128,250  Structure Demolition  LS \$1,000	a) Girders			
Total Girder Length 5140.0 Feet b) Diaphragms (2 @ interior bents)     Width 9.0 Inches     Depth 38.0 Inches     Length 36.0 Feet     Total Volume 101.3 CYrds c) Deck     Width 85.5 Feet     Depth 8.0 Inches     Length 520.0 Feet     Total Volume 1097.8 CYrds d) Traffic Barrier     Total Length 2080.0 Feet e) Expansion Joints     Total Length 256.5 Feet  Piles 8320 LF x \$40 = \$332,800 Substructure Concrete 238.9 CY x \$425 = \$101,514 Superstructure Concrete 1199.1 CY x \$425 = \$509,622 Prestressed Girders 5140.0 LF x \$70 = \$359,800 Traffic Railing 2080.0 LF x \$40 = \$83,200 Expansion Joints 256.5 LF x \$500 = \$128,250  Structure Demolition  LS \$1,000			9.00 Feet	
b) Diaphragms (2 @ interior bents)     Width		64.3 Feet		ĺ
Width   9.0 Inches	_			
Depth	, , ,	•		
Length Total Volume 101.3 CYrds  c) Deck Width 85.5 Feet Depth 8.0 Inches Length 520.0 Feet Total Volume 1097.8 CYrds  d) Traffic Barrier Total Length 2080.0 Feet e) Expansion Joints Total Length 256.5 Feet  3.0 COST ESTIMATE  Piles 8320 LF x \$40 = \$332,800 Substructure Concrete 238.9 CY x \$425 = \$101,514 Superstructure Concrete 1199.1 CY x \$425 = \$509,622 Prestressed Girders 5140.0 LF x \$70 = \$359,800 Traffic Railing 2080.0 LF x \$40 = \$83,200 Expansion Joints 256.5 LF x \$500 = \$128,250  Structure Demolition  LS \$1,000				ļ
Total Volume 101.3 CYrds  c) Deck    Width 85.5 Feet    Depth 8.0 Inches    Length 520.0 Feet    Total Volume 1097.8 CYrds  d) Traffic Barrier    Total Length 2080.0 Feet e) Expansion Joints    Total Length 256.5 Feet  3.0 COST ESTIMATE  Piles 8320 LF x \$40 = \$332,800 Substructure Concrete 238.9 CY x \$425 = \$101,514 Superstructure Concrete 1199.1 CY x \$425 = \$509,622 Prestressed Girders 5140.0 LF x \$70 = \$359,800 Traffic Railing 2080.0 LF x \$40 = \$83,200 Expansion Joints 256.5 LF x \$500 = \$128,250  Structure Demolition  LS \$1,000	•			
c) Deck     Width	_			
Width       85.5 Feet         Depth       8.0 Inches         Length       520.0 Feet         Total Volume       1097.8 CYrds         d) Traffic Barrier       Total Length         Total Length       2080.0 Feet         e) Expansion Joints       Total Length         Total Length       256.5 Feet         3.0 COST ESTIMATE         Piles       8320 LF x       \$40 =         Substructure Concrete       238.9 CY x       \$425 =       \$101,514         Superstructure Concrete       1199.1 CY x       \$425 =       \$509,622         Prestressed Girders       5140.0 LF x       \$70 =       \$359,800         Traffic Railing       2080.0 LF x       \$40 =       \$83,200         Expansion Joints       256.5 LF x       \$500 =       \$128,250         Structure Demolition       LS       \$1,000         TOTAL COST =       \$1,516,186		101.3 CYrds		
Depth	•	05.5.5		
Length 520.0 Feet Total Volume 1097.8 CYrds d) Traffic Barrier Total Length 2080.0 Feet e) Expansion Joints Total Length 256.5 Feet  3.0 COST ESTIMATE  Piles 8320 LF x \$40 = \$332,800 Substructure Concrete 238.9 CY x \$425 = \$101,514 Superstructure Concrete 1199.1 CY x \$425 = \$509,622 Prestressed Girders 5140.0 LF x \$70 = \$359,800 Traffic Railing 2080.0 LF x \$40 = \$83,200 Expansion Joints 256.5 LF x \$500 = \$128,250  Structure Demolition  LS \$1,000 TOTAL COST = \$1,516,186				
Total Volume  d) Traffic Barrier     Total Length     e) Expansion Joints     Total Length  256.5 Feet  3.0 COST ESTIMATE  Piles     Sazo LF x \$40 = \$332,800 Substructure Concrete 238.9 CY x \$425 = \$101,514 Superstructure Concrete 1199.1 CY x \$425 = \$509,622 Prestressed Girders 5140.0 LF x \$70 = \$359,800 Traffic Railing 2080.0 LF x \$40 = \$83,200 Expansion Joints  LS \$1,000  TOTAL COST = \$1,516,186				ii ii
d) Traffic Barrier				
Total Length 2080.0 Feet e) Expansion Joints Total Length 256.5 Feet  3.0 COST ESTIMATE  Piles 8320 LF x \$40 = \$332,800 Substructure Concrete 238.9 CY x \$425 = \$101,514 Superstructure Concrete 1199.1 CY x \$425 = \$509,622 Prestressed Girders 5140.0 LF x \$70 = \$359,800 Traffic Railing 2080.0 LF x \$40 = \$83,200 Expansion Joints 256.5 LF x \$500 = \$128,250  Structure Demolition  LS \$1,000 TOTAL COST = \$1,516,186		1097.8 CYrds		
e) Expansion Joints	,	0000 0 = -4		
Total Length         256.5 Feet           3.0 COST ESTIMATE         8320 LF x \$40 = \$332,800           Piles         8320 LF x \$425 = \$101,514           Substructure Concrete         238.9 CY x \$425 = \$509,622           Prestressed Girders         5140.0 LF x \$70 = \$359,800           Traffic Railing         2080.0 LF x \$40 = \$83,200           Expansion Joints         256.5 LF x \$500 = \$128,250           Structure Demolition         LS \$1,000           TOTAL COST = \$1,516,186		∠uōu.u reet		
3.0 COST ESTIMATE         Piles       8320 LF x       \$40 =       \$332,800         Substructure Concrete       238.9 CY x       \$425 =       \$101,514         Superstructure Concrete       1199.1 CY x       \$425 =       \$509,622         Prestressed Girders       5140.0 LF x       \$70 =       \$359,800         Traffic Railing       2080.0 LF x       \$40 =       \$83,200         Expansion Joints       256.5 LF x       \$500 =       \$128,250         Structure Demolition         LS       \$1,000         TOTAL COST =       \$1,516,186		OER F Ec-4		
Piles       8320 LF x       \$40 =       \$332,800         Substructure Concrete       238.9 CY x       \$425 =       \$101,514         Superstructure Concrete       1199.1 CY x       \$425 =       \$509,622         Prestressed Girders       5140.0 LF x       \$70 =       \$359,800         Traffic Railing       2080.0 LF x       \$40 =       \$83,200         Expansion Joints       256.5 LF x       \$500 =       \$128,250         Structure Demolition       LS       \$1,000         TOTAL COST =       \$1,516,186		∠50.5 Feet		
Substructure Concrete       238.9 CY x       \$425 =       \$101,514         Superstructure Concrete       1199.1 CY x       \$425 =       \$509,622         Prestressed Girders       5140.0 LF x       \$70 =       \$359,800         Traffic Railing       2080.0 LF x       \$40 =       \$83,200         Expansion Joints       256.5 LF x       \$500 =       \$128,250         Structure Demolition       LS       \$1,000         TOTAL COST =       \$1,516,186		8320 I E V	\$40 - \$2	32 800
Superstructure Concrete       1199.1 CY x       \$425 =       \$509,622         Prestressed Girders       5140.0 LF x       \$70 =       \$359,800         Traffic Railing       2080.0 LF x       \$40 =       \$83,200         Expansion Joints       256.5 LF x       \$500 =       \$128,250         Structure Demolition       LS       \$1,000         TOTAL COST =       \$1,516,186				
Prestressed Girders       5140.0 LF x       \$70 =       \$359,800         Traffic Railing       2080.0 LF x       \$40 =       \$83,200         Expansion Joints       256.5 LF x       \$500 =       \$128,250         Structure Demolition       LS       \$1,000         TOTAL COST =       \$1,516,186				
Traffic Railing       2080.0 LF x       \$40 =       \$83,200         Expansion Joints       256.5 LF x       \$500 =       \$128,250         Structure Demolition       LS       \$1,000         TOTAL COST =       \$1,516,186				
Expansion Joints 256.5 LF x \$500 = \$128,250  Structure Demolition LS \$1,000  TOTAL COST = \$1,516,186				- 11
Structure Demolition LS \$1,000  TOTAL COST = \$1,516,186				
TOTAL COST = \$1,516,186	ENPARISION CONTES	200.0 Li A	Ψ500 — Φ1.	_0,200
TOTAL COST = \$1,516,186	Structure Demolition	LS	9	\$1,000
	off a course Demonstrate			

					<del></del>
S.R. 39 - BRIDGE	OVER B		CH		
	TABLE I				
QUANTITY CALCU					
1.0 BASIS OF CALCULATION	ONS for T	YPE IV B	BEAM	(L=86	6.7 FEET)
Roadway Width	80.0 F				per Bridge
Overall Deck Width	85.5 F	eet (	42.8	Feet p	er Bridge)
Overall Bridge Length	520.0 F	eet			
Number of Spans	6@				
and Span Length(s)	86.7 F	eet			
Superstructure Type	Type IV v		8.0	inches	thick
Substructure Type	Pile Bent	s_w/	18.0	-inch	piles
2.0 QUANTITY CALCULATI	ONS				
2.1 Substructure					
Number of Bents	14				
a) Piles					
Size	18.0 lı	nches	80	Ton Ca	apacity
Number per Bent	8	and	5	in end	bents
Length per Pile	80.0 F	eet			
Total Pile Length	8480 F	eet			
b) Bent Caps			į	Per Be	ent:
Width	36.0 lr	nches		DL=	869.7
Depth	27.0 lr	nches		LL=	347.0
Length	42.8 F	eet			
Total Volume	149.6 C	Yrds			
c) End Bents (Backwall &	k Wingwalls	s) ·	1	Per En	d Bent:
´ Width	12.0 lr	,		DL=	503.5
Depth	5.0 F	eet		LL=	1
Length	62.8 F	eet			1, 0.0
Total Volume	46.5 C				
2.2 Superstructure		1140			-
Number of Spans	6				
Span Length	86.7 F	eet			į
a) Girders					
Girders per Span	5	@	9.00 F	-eet	
Girder Length	85.9 F		0.00 1		
Total Girder Length	5155.0 F				
b) Diaphragms (2 @ inter					
Width	9.0 lr	ches			
Depth	45.0 lr				
Length	36.0 F				
Total Volume	90.0 C				
c) Deck	90.0 <b>Q</b>	1143			į
Width	85.5 F	oot			
Depth	8.0 In				ļi ļį
Length	520.0 F				
Total Volume	1097.8 C				
d) Traffic Barrier	1097.60	iius			
	2020 0 5				
Total Length	2080.0 Fe	eel			
e) Expansion Joints	050 5 5	4			İ
Total Length	256.5 Fe	eet			
3.0 COST ESTIMATE	040011		<b></b>		0000 555
Piles	8480 LI		\$40	=	\$339,200
Substructure Concrete	196.1 C		\$425	=	\$83,345
Superstructure Concrete	1187.8 C		\$425		\$504,806
Prestressed Girders	5155.0 LF		\$100	=	\$515,500
Traffic Railing	2080.0 LF		\$40	=	\$83,200
Expansion Joints	256.5 LF	- x	\$500	=	\$128,250
<b>.</b> . <b>.</b>		_			
Structure Demolition	LS				\$1,000
		OTAL C		= \$	1,655,301
		OST PE	R SF	=	\$37.23

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S.R. 39 - BRIDGE	OVER HI	LLSB	OROU	GH	RIVER
0.11. 00 DI 110 GE	TABLE IV		<u> </u>	<u> </u>	III V L II
QUANTITY CALCU	LATION AN	ID CO	ST EST	IMA	TE
1.0 BASIS OF CALCULATION					
Roadway Width	80.0 F				es per Bridge
Overall Deck Width	85.5 F	•	42.8	Feet	per Bridge)
Overall Bridge Length Number of Spans	320.0 F	eet			
and Span Length(s)	8 @ 40.0 F	ioot			
Superstructure Type	Type II w/		8.0	inch	es thick
Substructure Type	Pile Bents				ch piles
2.0 QUANTITY CALCULATION		••,	10.0		on piles
2.1 Substructure					
Number of Bents	18				
a) Piles					
Size	18.0 lı	nches			Capacity
Number per Bent	5	and	4	in er	nd bents
Length per Pile	80.0 F				
Total Pile Length	7040 F	eet			_
b) Bent Caps Width	26.0.1				Bent:
Depth	36.0 lt			DL=	
Length	27.0 lr 42.8 F			LL=	298.1
Total Volume	192.4 C				
c) End Bents (Backwall &		1145		Par F	End Bent:
Width	12.0 lr	iches		DL=	
Depth	4.0 F			LL=	
Length	58.8 F				145.0
Total Volume	34.8 C				
2.2 Superstructure					
Number of Spans	8				
Span Length	40.0 F	eet			
a) Girders					
Girders per Span	5	@	9.00	Feet	
Girder Length	39.3 F				
Total Girder Length	3140.0 F	eet			
b) Diaphragms (2 @ inter Width	,				
Depth	9.0 lr				
Length	30.0 ir 36.0 F				
Total Volume	80.0 C				
c) Deck	00.0 0	1143			
Width	85.5 F	eet			
Depth	8.0 In				
Length	320.0 F				
Total Volume	675.6 C				
d) Traffic Barrier					
Total Length	1280.0 Fe	eet			
<ul><li>e) Expansion Joints</li></ul>					
Total Length	256.5 Fe	et			
3.0 COST ESTIMATE					
Piles	7040.0 LF		\$40	=	\$281,600
Substructure Concrete	227.2 C		\$425	=	\$96,556
Superstructure Concrete	755.6 C		\$425		\$321,111
Prestressed Girders	3140.0 LF		\$42 \$40		\$131,880
Traffic Railing	1280.0 LF		\$40	=	\$51,200
Expansion Joints Earthwork	256.5 LF LS		\$300	=	\$76,950
Structure Demolition	LS				\$313,200
Off dotate Defitolition			COST	=	\$150,000 <b>\$1,422,497</b>
			PER SF		\$51.99
	. ! C	<u> </u>	<u> </u>		Ψυ1.33

OUANTITY CALCULATION AND COST ESTIMATE	29-Dec-92	S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER					
Number of Bents   16	•		TABLE IV-B				
Number of Bents   16		QUANTITY CALC	ULATION AND CO	ST ESTIMA	TE		
Number of Bents   16		1.0 BASIS OF CALCULATI	ONS for TYPE II B	EAM (L=45	5.7 FEET)		
Number of Bents   16	~2D	Roadway Width	80.0 Feet				
Number of Bents   16		Overall Deck Width	85.5 Feet (	42.8 Fee	t per Bridge)		
Number of Bents   16		Overall Bridge Length	320.0 Feet				
Number of Bents   16		Number of Spans	7 @				
Number of Bents   16	16	and Span Length(s)	45.7 Feet				
Number of Bents   16	1 21×	Superstructure Type		8.0 inch	es thick		
Number of Bents   16	1451	Substructure Type		18.0 — inc	ch piles		
Number of Bents   16	101	2.0 QUANTITY CALCULAT	IONS				
a) Piles Size Number per Bent Length per Pile Total Pile Length b) Bent Caps Width Quert Cell Bents (Backwall & Wingwalls) Width Quert Total Volume Cell Superstructure Number of Spans Griders per Span Griders per Span Grider Length John Midth Quert Total (Grider Length A5.0 Feet Total (Singer per Span Grider Length A5.0 Feet Total (Grider Length A5.0 Feet Total Volume A5.0 Feet Total Volume Cell Bents Depth A5.0 Feet Total Grider Length A5.0 Feet Total Volume A5.0 Feet A5.0 Fee		2.1 Substructure	2-	-			
Size			16				
Number per Bent   5			v 2				
Length per Pile   R0.0 Feet   R0.240 Feet   Total Pile Length   R0.240 Feet   S0.0 Inches   Ll.   309.4	$\sum_{i=1}^{n} \frac{1}{i} \sum_{i=1}^{n} \frac{1}{i} \sum_{i$			80 Ton	Capacity		
Total Pile Length   5240 Feet   Per Bent:				/ 4 in ei	nd bents		
b) Bent Caps Width 36.0 Inches DL= 383.6 Depth 27.0 Inches LL= 309.4 Length 42.8 Feet Total Volume 171.0 CYrds c) End Bents (Backwall & Wingwalls) Width 12.0 Inches DL= 248.7 Depth 4.0 Feet LL= 154.7 Depth 4.0 Feet LL= 154.7 Total Volume 34.8 CYrds 2.2 Superstructure Number of Spans 7 Span Length 45.7 Feet a) Girders Girders per Span 5 @ 9.00 Feet Total Volume 314.5 Feet b) Diaphragms (2@ interior bents) Width 9.0 Inches Depth 30.0 Inches Length 36.0 Feet Total Volume 70.0 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 320.0 Feet Total Volume 675.6 CYrds d) Traffic Barrier Total Length 1280.0 Feet Total Length 250.5 Feet Superstructure Concrete 256.5 Feet 3.0 COST ESTIMATE Piles 6240.0 LF x \$40 = \$249.600 Substructure Concrete 256.5 CY x \$425 = \$316.859 Prestressed Girders 214.7 S LF x \$45 = \$141.637 Traffic Railing 1280.0 LF x \$40 = \$249.600 Substructure Concrete 274.6 CY x \$425 = \$316.859 Prestressed Girders 314.7 S LF x \$45 = \$141.637 Traffic Railing 1280.0 LF x \$40 = \$12.00 Expansion Joints 256.5 LF x \$313.200 Structure Demolition LS Structure Demolition Structure Demolition Structure 513.86.917			- //	55			
Width   36.0 Inches   DL=   383.6   Depth   27.0 Inches   LL=   309.4   Length   42.8 Feet   Total Volume   42.8 Feet   Total Volume   42.0 Inches   DL=   248.7   Depth   4.0 Feet   LL=   154.7   Length   4.0 Feet   LL=   154.7   Length   4.0 Feet   Total Volume   34.8 CYrds   2.2 Superstructure   Number of Spans   7   Span Length   45.7 Feet   a) Girders   Girder Length   45.7 Feet   a) Girders   Girder Length   45.0 Feet   Total Girder Length   3147.5 Feet   b) Diaphragms (2 @ interior bents)   Width   9.0 Inches   Depth   30.0 Inches   Depth   30.0 Inches   Length   35.0 Feet   Total Volume   70.0 CYrds   c) Deck   Width   85.5 Feet   Depth   8.0 Inches   Length   30.0 Feet   Total Volume   675.6 CYrds   d) Traffic Barrier   Total Length   1280.0 Feet   Total Length   256.5 Feet   3.0 COST ESTIMATE   Depth    256.5 Feet   255.5 Feet	1		( _6240_Feet				
Depth							
Length					L.		
Total Volume 171.0 CYrds c) End Bents (Backwall & Wingwalls) Width 12.0 Inches Depth 4.0 Feet LL= 248.7 Depth 58.8 Feet Total Volume 34.8 CYrds 2.2 Superstructure Number of Spans 7 Span Length 45.7 Feet a) Girders Girder Segram 5 @ 9.00 Feet Girder Length 3147.5 Feet b) Diaphragms (2 @ interior bents) Width 9.0 Inches Depth 30.0 Inches Length 36.0 Feet Total Volume 70.0 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 320.0 Feet Total Volume 675.6 CYrds d) Traffic Barrier Total Length 1280.0 Feet Expansion Joints Total Length 256.5 Feet  3.0 COST ESTIMATE Pies 6240.0 LF x \$40 = \$249,600 Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$316.859 Prestressed Girders 3147.5 LF x \$45 = \$141.637 Traffic Railing 1280.0 LF x \$40 = \$249,600 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313.200 Structure Demolition  SARN-EST	in in the second of the second	·		LL=	= 309.4		
c) End Bents (Backwall & Wingwalls) Width 12.0 Inches Depth 4.0 Feet Length 58.8 Feet Total Volume 34.8 CYrds  2.2 Superstructure Number of Spans 7 Span Length 45.7 Feet a) Girders Girders per Span 5 9.00 Feet Girder Length 45.0 Feet Total Girder Length 3147.5 Feet b) Diaphragms (2 @ interior bents) Width 9.0 Inches Depth 30.0 Inches Depth 30.0 Inches Length 36.0 Feet Total Volume 70.0 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 320.0 Feet Total Volume 75.6 CYrds d) Traffic Barrier Total Length 256.5 Feet  3.0 COST ESTIMATE  Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$814,637 Traffic Railing 1280.0 LF x \$40 = \$1,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition STOTAL COST = \$1,386,917	•	ı					
Width							
Depth			- /				
Length					1		
Total Volume   34.8 CYrds		•		LL=	154.7		
2.2 Superstructure		_					
Number of Spans   7   Span Length   45.7   Feet   a) Girders   Girders per Span   5	**		34.8 CTras				
Span Length   45.7 Feet     a) Girders     Girders per Span   5 @ 9.00 Feet     Girder Length   45.0 Feet     Total Girder Length   3147.5 Feet     Diaphragms (2 @ interior bents)     Width   9.0 Inches     Length   36.0 Feet     Total Volume   70.0 CYrds     C) Deck     Width   85.5 Feet     Depth   8.0 Inches     Length   320.0 Feet     Total Volume   675.6 CYrds     Of Traffic Barrier     Total Length   1280.0 Feet     Expansion Joints     Total Length   256.5 Feet     3.0 COST ESTIMATE     Piles   6240,0 LF x   \$40 = \$249,600     Substructure Concrete   205.8 CY x   \$425 = \$87,471     Superstructure Concrete   745.6 CY x   \$425 = \$316,859     Prestressed Girders   3147.5 LF x   \$45 = \$141,637     Traffic Railing   1280.0 LF x   \$40 = \$51,200     Expansion Joints   256.5 LF x   \$300 = \$76,950     Earthwork   LS   \$313,200     Structure Demolition   LS   \$150,000     TOTAL COST   \$1,386,917	٠٠ -	<u>-</u>	7				
a) Girders Girder Sper Span 5 @ 9.00 Feet Girder Length 45.0 Feet Total Girder Length 3147.5 Feet b) Diaphragms (2 @ interior bents) Width 9.0 Inches Depth 30.0 Inches Length 36.0 Feet Total Volume 70.0 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 320.0 Feet Total Volume 675.6 CYrds d) Traffic Barrier Total Length 1280.0 Feet e) Expansion Joints Total Length 256.5 Feet  3.0 COST ESTIMATE Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 745.6 CY x \$425 = \$37,471 Superstructure Concrete 745.6 CY x \$425 = \$316,859 Prestressed Girders 3147.5 LF x \$45 = \$141,637 Traffic Railing 1280.0 LF x \$40 = \$21,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000		•					
Girders per Span 5 @ 9.00 Feet Girder Length 45.0 Feet Total Girder Length 3147.5 Feet b) Diaphragms (2 @ interior bents) Width 9.0 Inches Depth 30.0 Inches Length 36.0 Feet Total Volume 70.0 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 320.0 Feet Total Volume 675.6 CYrds d) Traffic Barrier Total Length 1280.0 Feet e) Expansion Joints Total Length 256.5 Feet  3.0 COST ESTIMATE Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200  TOTAL COST = \$1,386,917			45.7 Feet				
Girder Length   347.5   Feet		•	5	9 00 Foot			
Total Girder Length 3147.5 Feet b) Diaphragms (2 @ interior bents) Width 9.0 Inches Depth 30.0 Inches Length 36.0 Feet Total Volume 70.0 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 320.0 Feet Total Volume 675.6 CYrds d) Traffic Barrier Total Length 1280.0 Feet e) Expansion Joints Total Length 256.5 Feet 3.0 COST ESTIMATE Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$87,471 Traffic Railing 1280.0 LF x \$40 = \$249,600 Substructure Concrete 745.6 CY x \$425 = \$141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$3132,000 Structure Demolition LS \$150,000				3.00 Teet			
b) Diaphragms (2 @ interior bents) Width 9.0 Inches Depth 30.0 Inches Length 36.0 Feet Total Volume 70.0 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 320.0 Feet Total Volume 675.6 CYrds d) Traffic Barrier Total Length 1280.0 Feet e) Expansion Joints Total Length 256.5 Feet  3.0 COST ESTIMATE Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$814,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Expansion Joints 256.5 LF x \$300 = \$76,950 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000				•			
Width   9.0 Inches   Depth   30.0 Inches   Length   36.0 Feet   Total Volume   70.0 CYrds   C) Deck   Width   85.5 Feet   Depth   8.0 Inches   Length   320.0 Feet   Total Volume   675.6 CYrds   d) Traffic Barrier   Total Length   1280.0 Feet   e) Expansion Joints   Total Length   256.5 Feet   S.0 COST ESTIMATE   Piles   6240.0 LF x   \$40 = \$249,600   Substructure Concrete   205.8 CY x   \$425 = \$87,471   Superstructure Concrete   745.6 CY x   \$425 = \$87,471   Superstructure Concrete   745.6 CY x   \$425 = \$141,637   Traffic Railing   1280.0 LF x   \$40 = \$51,200   Expansion Joints   256.5 LF x   \$300 = \$76,950   Earthwork   LS   \$313,200   Structure Demolition   LS   \$150,000   TOTAL COST = \$1,386,917							
Depth   30.0 Inches   Length   36.0 Feet   Total Volume   70.0 CYrds			•				
Length Total Volume 70.0 CYrds  c) Deck  Width 85.5 Feet Depth 8.0 Inches Length 320.0 Feet Total Volume 675.6 CYrds  d) Traffic Barrier Total Length 1280.0 Feet e) Expansion Joints Total Length 256.5 Feet  3.0 COST ESTIMATE  Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$814,637 Traffic Railing 1280.0 LF x \$40 = \$141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000							
Total Volume c) Deck Width Depth B.0 Inches Length Total Volume 675.6 CYrds d) Traffic Barrier Total Length 1280.0 Feet e) Expansion Joints Total Length 256.5 Feet  3.0 COST ESTIMATE Piles Substructure Concrete Prestressed Girders Prestressed Girders Prestressed Girders Total Length Substructure Concrete Prestressed Girders Total Length Superstructure Concrete Prestressed Girders Total Length Substructure Concrete Total Length Substructure Concrete Total Length Substructure Concrete Total Length Substructure Concrete Total Length Substructure Concrete Total Length Substructure Concrete Total Length Substructure Concrete Total Length Substructure Concrete Total Length Substructure Concrete Total Length Substructure Concrete Total Volume Substructure Concrete Total Volume Substructure Concrete Total Volume Substructure Concrete Total Volume Substructure Concrete Total Volume Substructure Concrete Total Volume Total Column Total C							
c) Deck     Width	·						
Width   85.5 Feet   Depth   8.0 Inches   Length   320.0 Feet   Total Volume   675.6 CYrds	,				Į.		
Depth 8.0 Inches Length 320.0 Feet Total Volume 675.6 CYrds d) Traffic Barrier Total Length 1280.0 Feet e) Expansion Joints Total Length 256.5 Feet  3.0 COST ESTIMATE  Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$316,859 Prestressed Girders 3147.5 LF x \$45 = \$141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000			85.5 Feet				
Length 320.0 Feet Total Volume 675.6 CYrds d) Traffic Barrier Total Length 1280.0 Feet e) Expansion Joints Total Length 256.5 Feet  3.0 COST ESTIMATE  Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$316,859 Prestressed Girders 3147.5 LF x \$45 = \$141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000							
Total Volume 675.6 CYrds d) Traffic Barrier     Total Length 1280.0 Feet e) Expansion Joints     Total Length 256.5 Feet  3.0 COST ESTIMATE  Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$316,859 Prestressed Girders 3147.5 LF x \$45 = \$141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000		•					
d) Traffic Barrier		•			1		
Total Length 1280.0 Feet  e) Expansion Joints  Total Length 256.5 Feet  3.0 COST ESTIMATE  Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$316,859 Prestressed Girders 3147.5 LF x \$45 = \$141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000  TOTAL COST = \$1,386,917	· .				#		
e) Expansion Joints  Total Length 256.5 Feet  3.0 COST ESTIMATE  Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$316,859 Prestressed Girders 3147.5 LF x \$45 = \$141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000  S.R.39-EST		•	1280.0 Feet				
Total Length 256.5 Feet  3.0 COST ESTIMATE  Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$316,859 Prestressed Girders 3147.5 LF x \$45 = \$141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000							
Piles 6240.0 LF x \$40 = \$249,600 Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$316,859 Prestressed Girders 3147.5 LF x \$45 = \$141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000		Total Length	256.5 Feet				
Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$316,859 Prestressed Girders 3147.5 LF x \$45 = \$141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000  S.R.39-EST  Superstructure Concrete 745.6 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$316,859 S141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Structure Demolition LS \$313,200 Structure Demolition LS \$150,000		3.0 COST ESTIMATE	(724)				
Substructure Concrete 205.8 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$316,859 Prestressed Girders 3147.5 LF x \$45 = \$141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000  S.R.39-EST  Superstructure Concrete 745.6 CY x \$425 = \$87,471 Superstructure Concrete 745.6 CY x \$425 = \$316,859 S141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Structure Demolition LS \$313,200 Structure Demolition LS \$150,000				\$40 =	\$249,600		
Prestressed Girders 3147.5 LF x \$45 = \$141,637 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000  S.R.39-EST  TOTAL COST = \$1,386,917				\$425 <b>=</b>	. 11		
Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000  S.R.39-EST TOTAL COST = \$1,386,917		•			\$316,859		
Expansion Joints 256.5 LF x \$300 = \$76,950 Earthwork LS \$313,200 Structure Demolition LS \$150,000  S.R.39-EST TOTAL COST = \$1,386,917							
Earthwork LS \$313,200 Structure Demolition LS \$150,000  S.R.39-EST TOTAL COST = \$1,386,917					\$51,200		
Structure Demolition LS \$150,000  S.R.39-EST TOTAL COST = \$1,386,917				\$300 =			
S.R.39-EST TOTAL COST = \$1,386,917							
		Structure Demolition					
COST PER SF = \$50.69	S.R.39~ EST						
			COST	PER SF =	\$50.69		

S.R. 39 - BRIDGE	OVER I	HILLSB	OROU	GH	RIVER
S.R. 39 - BRIDGE	TABLE	IV-C	<u> </u>	<u> </u>	THE LIT
QUANTITY CALCU	LATION A	AND CO	ST EST	IMA	TF
1.0 BASIS OF CALCULATION	NS for T	YPE II E	EAM (L	.=53	3.3 FEET)
Roadway Width	80.0	) Feet	3	Lan	es per Bridge
Overall Deck Width	85.5	Feet (			t per Bridge)
Overall Bridge Length	320.0	Feet			. 5,
Number of Spans	6 @	)			
and Span Length(s)	53.3	Feet			
Superstructure Type	Type II v	v/ Deck	8.0	inch	es thick
Substructure Type	Pile Ben	ts w/	18.0	-ind	ch piles
2.0 QUANTITY CALCULATION	ONS				
2.1 Substructure					
Number of Bents	14				
a) Piles					
Size	_	Inches			Capacity
Number per Bent	5		4	in er	nd bents
Length per Pile		Feet			
Total Pile Length	5440	Feet		_	_
b) Bent Caps	<b></b>				Bent:
Width		Inches		DL=	
Depth		Inches		LL=	320.5
Length		Feet			
Total Volume		CYrds		_	
c) End Bents (Backwall &	_	,			End Bent:
Width		Inches			285.7
Depth		Feet		LL=	160.2
Length		Feet			
Total Volume	34.8	CYrds			
2.2 Superstructure	_				
Number of Spans	50.0				
Span Length	53.3	Feet			
a) Girders	^	_	7.05		
Girders per Span	50.6	@ Feet	7.25	reet	
Girder Length Total Girder Length					
b) Diaphragms (2 @ inter	3786.0	reet			-
Width	,	laabaa			
		Inches			
Depth Length		Inches Feet			
Total Volume		CYrds			
c) Deck	60.4	Ciras			
Width	9E E	East			
Depth		Feet Inches			
Length	320.0				
Total Volume		CYrds			
d) Traffic Barrier	0.610	Onus			
Total Length	1280.0	Foot			
e) Expansion Joints	1200.0	reet			
Total Length	OEE F	Foct			
3.0 COST ESTIMATE	256.5	1.661	<del></del>		
Piles	5440.0	IFv	\$40	=	\$217,600
Substructure Concrete	184.4		\$425	=	\$217,000
Superstructure Concrete	736.0		\$425		\$312,788
Prestressed Girders	3786.0		\$45	=	\$170,370
Traffic Railing	1280.0		\$40	=	\$170,370
Expansion Joints	256.5		\$300	=	\$51,200 \$76,950
Earthwork		LS	ΨΟΟΟ	_	\$313,200
Structure Demolition		LS			\$150,000
Chastale Demonion		TOTAL	COST	=	\$1,370,495
		COST		=	\$50.09
			· · · · ·		Ψυυ.υσ

S.R. 39 - BRIDGE	<b>OVER HILLSE</b>	BOROUGH	RIVER
	TABLE IV-D		
QUANTITY CALCU	LATION AND CO	OST ESTIMA	ATE
1.0 BASIS OF CALCULATION			
Roadway Width	80.0 Feet		nes per Bridge
Overall Deck Width	85.5 Feet (	42.8 Fe	et per Bridge)
Overall Bridge Length	320.0 Feet		
Number of Spans	5@		
and Span Length(s)	64.0 Feet		
Superstructure Type	Type III w/ Deck		hes thick
Substructure Type	Pile Bents w/	18.0 — ir	nch piles
2.0 QUANTITY CALCULATION	ONS		
2.1 Substructure	40		
Number of Bents	12		
a) Piles	40.0 (	00 T	
Size	18.0 Inches		n Capacity
Number per Bent	6 and	4 in 6	end bents
Length per Pile	80.0 Feet		
Total Pile Length	5440 Feet	5	
b) Bent Caps	0001		Bent:
Width	36.0 Inches		
Depth	27.0 Inches	LL	= 332.1
Length	42.8 Feet		
Total Volume	128.3 CYrds	_	
c) End Bents (Backwall &			End Bent:
Width	12.0 Inches	DL	
Depth	4.8 Feet	LL	= 166.1
Length	62.0 Feet		
Total Volume	44.1 CYrds		
2.2 Superstructure	_		
Number of Spans	5		
Span Length	64.0 Feet		
a) Girders	5 6	0.00 5	
Girders per Span Girder Length	5 @ 63.3 Feet	9.00 Fee	PI .
Total Girder Length	3162.5 Feet		
b) Diaphragms (2 @ inter			
Width	9.0 Inches		
Depth			
Length	38.0 Inches 36.0 Feet		
Total Volume	63.3 CYrds		
c) Deck	os.s Citas		
Width	OF F Foot		
Depth	85.5 Feet 8.0 Inches		
Length	320.0 Feet		
Total Volume	675.6 CYrds		
d) Traffic Barrier	U/3.0 CTIQS		ļ
Total Length	1280.0 Feet		
e) Expansion Joints	1200.0 Feet		
Total Length	171.0 Feet		
3.0 COST ESTIMATE	17 1.0 Feet		
Piles	5440.0 LF x	<b>\$40</b> -	\$017 COO
Substructure Concrete	172.3 CY x	\$40 = \$425 =	T=,000
Superstructure Concrete	738.9 CY x		+ · - ,
Prestressed Girders	3162.5 LF x	\$425 = \$70 =	+ + · · , = = -
Traffic Railing	1280.0 LF x	\$70 =	T
Expansion Joints	171.0 LF X	\$40 = \$500 =	+- 1,=
Earthwork	LS	\$500 =	\$85,500
Structure Demolition	LS		\$313,200
Structure Demontion		.COST =	\$150,000
			7 . ,
· · · · · · · · · · · · · · · · · · ·	10031	PER SF =	\$52.12

TABLE IV - E	S.R. 39 - BRIDGE	S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER					
1.0 BASIS OF CALCULATIONS for TYPE III BEAM (L=80 FEET)   Roadway Width		TABLE I	V-E				
Roadway Width	QUANTITY CALCU	LATION A	AND CC	ST EST	IMAT	TE	
Overall Deck Width Overall Bridge Length Number of Spans and Span Length(s)         85.5 Feet ( 320.0 Feet         42.8 Feet per Bridge)           Superstructure Type Substructure Type         80.0 Feet Type III w/ Deck Pile Bents w/ Pile Bents w/ 18.0 −inch piles         8.0 inches thick 18.0 −inch piles           2.0 QUANTITY CALCULATIONS         10 18.0 −inch piles         10 18.0 −inch piles           2.1 Substructure Number of Bents Size         18.0 Inches 8 and Length per Pile 80.0 Feet Total Pile Length         80 Ton Capacity 4 in end bents           Number per Bent Length Prile 10.9 Pert 10.9							
Overall Bridge Length   Number of Spans   A @   80.0 Feet   Superstructure Type   Type   Ill w/ Deck   Substructure Type   Type   Ill w/ Deck   18.0 -inch piles							
Number of Spans	1			42.8	Feet	per Bridge)	
and Span Length(s) Superstructure Type Substructure Type Substructure Type Substructure Type Pile Bents w/ 10 a) Piles Size Number of Bents Number per Bent Length per Pile Bent Sprecomment Length per Pile Length 42.8 Feet Total Pile Length 42.8 Feet Total Volume 106.9 CYrds c) End Bents (Backwall & Wingwalls) Width 12.0 Inches Depth 4.8 Feet Length 62.0 Feet Total Volume 44.1 CYrds 2.2 Superstructure Number of Spans Span Length 79.3 Feet Total Girder Length 79.3 Feet Total Girder Length 36.0 Inches Depth 36.0 Inches Depth 4.8 Feet Length 42.8 Feet Total Volume 106.9 CYrds c) End Bents (Backwall & Wingwalls) Width 80.0 Feet a) Girders Girders per Span 7 @ 6.00 Feet Total Girder Length 79.3 Feet Total Girder Length 4438.0 Feet b) Diaphragms (2 @ interior bents) Width 85.5 Feet Depth 36.0 Inches Length 36.0 Feet Total Volume 50.7 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 320.0 Feet Total Length 1280.0 Feet Total Length 1280.0 Feet  Total Length 1280.0 Feet  Total Length 171.0 Feet  3.0 COST ESTIMATE  Piles Size 18.0 Inches Size 80 Ton Capacity A in end bents  80 Ton Capacity A in end bents  Per Bent: DL= 801.4 LL= 343.4 LL= 343.4 LL= 343.4 LL= 343.4 LL= 343.4 LL= 343.4 LL= 343.4 LL= 343.4 LL= 345.4 LL= 171.7 Displace Per End Bent: DL= 466.9 LL= 171.7 Displace D							
Superstructure Type		_					
Substructure Type							
2.0 QUANTITY CÂLCULATIONS  2.1 Substructure Number of Bents a) Piles Size 18.0 Inches Number per Bent Length per Pile Total Pile Length 15760 Feet Bent Caps Width 36.0 Inches Length Length 106.9 CYrds C) End Bents (Backwall & Wingwalls) Width 12.0 Inches Depth Length 12.0 Inches Depth 12.0 Inches Depth 12.0 Inches Depth 12.0 Inches Depth 12.0 Inches Depth 12.0 Inches Depth 12.0 Inches Depth 12.0 Inches Depth 12.0 Inches Depth 12.0 Inches Depth 13.0 Feet Total Volume 14.1 CYrds  2.2 Superstructure Number of Spans 14 Span Length 17.7 Feet Sirders per Span 15 Girders Length 17 Total Girder Length 17 Total Girder Length 18 Depth 18 Length 19.0 Inches Length 18.0 Inches Leng							
2.1 Substructure			s w/	18.0	-inc	h piles	
Number of Bents   10   a)   Piles		UNS					
a) Piles Size Size Number per Bent Length per Pile Nidth Size Nidth Seet Total Pile Length Size Nidth Seet Total Pile Length Size Nidth Seet Total Pile Length Size Size Number per Bent Size Number per Bent Size Size Number seet Size Size Number seet Size Size Size Size Size Size Size Size		40					
Size	· · · · · · · · · · · · · · · · · · ·	10					
Number per Bent	•	400	Imahaa	90	T /	Oit	
Length per Pile			_				
Total Pile Length   5760 Feet		-		4	ın en	a pents	
b) Bent Caps     Width						ł	
Width   Depth   27.0   Inches   LL = 343.4		5/60	Leet		Der F	2	
Depth		3E V	Inches				
Length Total Volume 106.9 CYrds c) End Bents (Backwall & Wingwalls) Width 12.0 Inches DL= 466.9 Depth 4.8 Feet LL= 171.7 Length 62.0 Feet Total Volume 44.1 CYrds  2.2 Superstructure Number of Spans 4 Span Length 79.3 Feet Total Girder Length 4438.0 Feet Bilder Total Girder Length 4438.0 Feet Diaphragms (2 @ interior bents) Width 9.0 Inches Depth 38.0 Inches Length 36.0 Feet Total Volume 50.7 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 320.0 Feet Total Volume 675.6 CYrds d) Traffic Barrier Total Length 1280.0 Feet Expansion Joints Total Length 171.0 Feet  3.0 COST ESTIMATE  Piles 5760.0 LF x \$40 = \$230,400 Substructure Concrete 150.9 CY x \$425 = \$64,145 Superstructure Concrete 726.2 CY x \$425 = \$308,644 Prestressed Girders 4438.0 LF x \$70 = \$310,660 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 171.0 LF x \$500 = \$85,500 Expansion Joints 171.0 LF x \$500 = \$85,500 Expansion Joints LS \$150,000 TOTAL COST = \$1,513,749	•						
Total Volume					LL=	343.4	
c) End Bents (Backwall & Wingwalls) Width 12.0 Inches Depth 4.8 Feet Length 62.0 Feet Total Volume 44.1 CYrds  2.2 Superstructure Number of Spans 4 Span Length 80.0 Feet Girders per Span 7 @ 6.00 Feet Girder Length 79.3 Feet Total Girder Length 4438.0 Feet b) Diaphragms (2 @ interior bents) Width 9.0 Inches Depth 38.0 Inches Length 36.0 Feet Total Volume 50.7 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 320.0 Feet Total Volume 675.6 CYrds d) Traffic Barrier Total Length 1280.0 Feet e) Expansion Joints Total Length 171.0 Feet  3.0 COST ESTIMATE  Piles 5760.0 LF x \$40 = \$230,400 Substructure Concrete 150.9 CY x \$425 = \$64,145 Superstructure Concrete 726.2 CY x \$425 = \$308,644 Prestressed Girders 4438.0 LF x \$70 = \$310,660 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 171.0 LF x \$500 = \$85,500 Expansion Joints 171.0 LF x \$500 = \$85,500 Expansion Joints 171.0 LF x \$500 = \$85,500 Expansion Joints 171.0 LF x \$500 = \$85,500 Expansion Joints 171.0 LF x \$500 = \$85,500 Expansion Joints 171.0 LF x \$500 = \$85,500 Expansion Joints 171.0 LF x \$500 = \$85,500 Expansion Joints 171.0 LF x \$500 = \$85,500 Expansion Joints 171.0 LF x \$500 = \$85,500 Expansion Joints 171.0 LF x \$500 = \$85,500	•						
Width					Dar E	ad Banti	
Depth	•	•	•				
Length Total Volume 44.1 CYrds  2.2 Superstructure  Number of Spans 4 Span Length 80.0 Feet  a) Girders Girder Sers Span 7 @ 6.00 Feet Girder Length 79.3 Feet Total Girder Length 4438.0 Feet  b) Diaphragms (2 @ interior bents) Width 9.0 Inches Depth 38.0 Inches Length 36.0 Feet Total Volume 50.7 CYrds  c) Deck Width 85.5 Feet Depth 8.0 Inches Length 320.0 Feet Total Volume 675.6 CYrds  d) Traffic Barrier Total Length 1280.0 Feet e) Expansion Joints Total Length 5760.0 LF x \$40 = \$230,400 Substructure Concrete 150.9 CY x \$425 = \$64,145 Superstructure Concrete 726.2 CY x \$425 = \$308,644 Prestressed Girders 4438.0 LF x \$70 = \$310,660 Traffic Railing 1280.0 LF x \$40 = \$5,500 Expansion Joints 171.0 LF x \$500 = \$85,500 Expansion Joints 171.0 LF x \$500 = \$85,500 Expansion Joints LS \$150,000  TOTAL COST = \$1,513,749							
Total Volume	•				LL-	1/1./	
2.2 Superstructure  Number of Spans							
Number of Spans   4   Span Length   80.0 Feet		77.1	Ollus				
Span Length		Λ					
a) Girders Girders per Span 7 @ 6.00 Feet Girder Length 79.3 Feet Total Girder Length 4438.0 Feet b) Diaphragms (2 @ interior bents) Width 9.0 Inches Depth 38.0 Inches Length 36.0 Feet Total Volume 50.7 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 320.0 Feet Total Volume 675.6 CYrds d) Traffic Barrier Total Length 1280.0 Feet e) Expansion Joints Total Length 171.0 Feet  3.0 COST ESTIMATE  Piles 5760.0 LF x \$40 = \$230,400 Substructure Concrete 150.9 CY x \$425 = \$64,145 Superstructure Concrete 726.2 CY x \$425 = \$308,644 Prestressed Girders 4438.0 LF x \$70 = \$310,660 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 171.0 LF x \$500 = \$85,500 Earthwork LS \$313,200 Structure Demolition  TOTAL COST = \$1,513,749		-	Feet				
Girders per Span   7		00.0					
Girder Length	· ·	7	ര	6.00	Feet		
Total Girder Length		-	_	0.00			
b) Diaphragms (2 @ interior bents)     Width		4438.0	Feet				
Width       9.0 Inches         Depth       38.0 Inches         Length       36.0 Feet         Total Volume       50.7 CYrds         c) Deck       Width         Width       85.5 Feet         Depth       8.0 Inches         Length       320.0 Feet         Total Volume       675.6 CYrds         d) Traffic Barrier       Total Length         Total Length       1280.0 Feet         e) Expansion Joints       171.0 Feet         3.0 COST ESTIMATE         Piles       5760.0 LF x       \$40 =       \$230,400         Substructure Concrete       150.9 CY x       \$425 =       \$64,145         Superstructure Concrete       726.2 CY x       \$425 =       \$308,644         Prestressed Girders       4438.0 LF x       \$70 =       \$310,660         Traffic Railing       1280.0 LF x       \$40 =       \$51,200         Expansion Joints       171.0 LF x       \$500 =       \$85,500         Earthwork       LS       \$313,200         Structure Demolition       TOTAL COST =       \$1,513,749							
Length Total Volume 50.7 CYrds  c) Deck Width B5.5 Feet Depth B.0 Inches Length Total Volume 675.6 CYrds  d) Traffic Barrier Total Length 1280.0 Feet e) Expansion Joints Total Length 171.0 Feet  3.0 COST ESTIMATE  Piles Substructure Concrete 150.9 CY x \$40 = \$230,400 Substructure Concrete 726.2 CY x \$425 = \$64,145 Superstructure Concrete 726.2 CY x \$425 = \$308,644 Prestressed Girders 4438.0 LF x \$70 = \$310,660 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 171.0 LF x \$500 = \$85,500 Earthwork LS \$313,200 Structure Demolition  LS TOTAL COST = \$1,513,749	,		Inches				
Length Total Volume 50.7 CYrds  c) Deck Width B5.5 Feet Depth B.0 Inches Length Total Volume 675.6 CYrds  d) Traffic Barrier Total Length 1280.0 Feet e) Expansion Joints Total Length 171.0 Feet  3.0 COST ESTIMATE  Piles Substructure Concrete 150.9 CY x \$40 = \$230,400 Substructure Concrete 726.2 CY x \$425 = \$64,145 Superstructure Concrete 726.2 CY x \$425 = \$308,644 Prestressed Girders 4438.0 LF x \$70 = \$310,660 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 171.0 LF x \$500 = \$85,500 Earthwork LS \$313,200 Structure Demolition  LS TOTAL COST = \$1,513,749	Depth	38.0	Inches				
Total Volume 50.7 CYrds  c) Deck     Width 85.5 Feet     Depth 8.0 Inches     Length 320.0 Feet     Total Volume 675.6 CYrds  d) Traffic Barrier     Total Length 1280.0 Feet e) Expansion Joints     Total Length 171.0 Feet  3.0 COST ESTIMATE  Piles 5760.0 LF x \$40 = \$230,400 Substructure Concrete 150.9 CY x \$425 = \$64,145 Superstructure Concrete 726.2 CY x \$425 = \$308,644 Prestressed Girders 4438.0 LF x \$70 = \$310,660 Traffic Railing 1280.0 LF x \$40 = \$51,200 Expansion Joints 171.0 LF x \$500 = \$85,500 Earthwork LS \$313,200 Structure Demolition  LS \$150,000							
c) Deck     Width							
Width       85.5 Feet         Depth       8.0 Inches         Length       320.0 Feet         Total Volume       675.6 CYrds         d) Traffic Barrier       1280.0 Feet         Total Length       1280.0 Feet         e) Expansion Joints       171.0 Feet         3.0 COST ESTIMATE       5760.0 LF x       \$40 =       \$230,400         Substructure Concrete       150.9 CY x       \$425 =       \$64,145         Superstructure Concrete       726.2 CY x       \$425 =       \$308,644         Prestressed Girders       4438.0 LF x       \$70 =       \$310,660         Traffic Railing       1280.0 LF x       \$40 =       \$51,200         Expansion Joints       171.0 LF x       \$500 =       \$85,500         Earthwork       LS       \$313,200         Structure Demolition       LS       \$150,000						ĺ	
Depth	•	85.5	Feet				
Length       320.0 Feet         Total Volume       675.6 CYrds         d) Traffic Barrier       1280.0 Feet         Total Length       1280.0 Feet         e) Expansion Joints       171.0 Feet         3.0 COST ESTIMATE         Piles       5760.0 LF x       \$40 =       \$230,400         Substructure Concrete       150.9 CY x       \$425 =       \$64,145         Superstructure Concrete       726.2 CY x       \$425 =       \$308,644         Prestressed Girders       4438.0 LF x       \$70 =       \$310,660         Traffic Railing       1280.0 LF x       \$40 =       \$51,200         Expansion Joints       171.0 LF x       \$500 =       \$85,500         Earthwork       LS       \$313,200         Structure Demolition       LS       \$150,000         TOTAL COST =       \$1,513,749	Depth						
Total Volume d) Traffic Barrier Total Length e) Expansion Joints Total Length  171.0 Feet  3.0 COST ESTIMATE  Piles Substructure Concrete Superstructure Concrete Prestressed Girders Traffic Railing Expansion Joints  Expansion Joints Earthwork Structure Demolition  Total Length  171.0 Feet  171.0 Feet  171.0 Feet  172.0 CY x \$40 = \$230,400  \$443.0 LF x \$40 = \$64,145  \$443.0 LF x \$40 = \$310,660  \$443.0 LF x \$70 = \$310,660  \$170.0 LF x \$40 = \$51,200  \$170.0 LF x \$500 = \$85,500  \$170.0 LS \$313,200  \$170.0 LS \$150,000	•						
d) Traffic Barrier     Total Length						H	
Total Length e) Expansion Joints Total Length 171.0 Feet  3.0 COST ESTIMATE  Piles Substructure Concrete Superstructure Concrete Prestressed Girders Traffic Railing Expansion Joints Expansion Joints Earthwork Structure Demolition  1280.0 Feet 171.0 Feet 171.0 Feet 172.0 CY x \$40 = \$230,400 172.0 CY x \$425 = \$64,145 172.0 CY x \$425 = \$308,644 173.0 CY x \$425 = \$308,644 174.0 CY x \$40 = \$310,660 174.0 CY x \$40 = \$51,200 175.0 CY x \$40 = \$51,200						Į.	
e) Expansion Joints	•	1280.0	Feet			.	
Total Length         171.0 Feet           3.0 COST ESTIMATE         5760.0 LF x \$40 = \$230,400           Piles         5760.0 LF x \$425 = \$64,145           Substructure Concrete         150.9 CY x \$425 = \$64,145           Superstructure Concrete         726.2 CY x \$425 = \$308,644           Prestressed Girders         4438.0 LF x \$70 = \$310,660           Traffic Railing         1280.0 LF x \$40 = \$51,200           Expansion Joints         171.0 LF x \$500 = \$85,500           Earthwork         LS \$313,200           Structure Demolition         LS \$150,000           TOTAL COST = \$1,513,749		-					
3.0 COST ESTIMATE         Piles       5760.0 LF x       \$40 =       \$230,400         Substructure Concrete       150.9 CY x       \$425 =       \$64,145         Superstructure Concrete       726.2 CY x       \$425 =       \$308,644         Prestressed Girders       4438.0 LF x       \$70 =       \$310,660         Traffic Railing       1280.0 LF x       \$40 =       \$51,200         Expansion Joints       171.0 LF x       \$500 =       \$85,500         Earthwork       LS       \$313,200         Structure Demolition       LS       \$150,000         TOTAL COST       \$1,513,749	•	171.0	Feet				
Substructure Concrete       150.9 CY x       \$425 =       \$64,145         Superstructure Concrete       726.2 CY x       \$425 =       \$308,644         Prestressed Girders       4438.0 LF x       \$70 =       \$310,660         Traffic Railing       1280.0 LF x       \$40 =       \$51,200         Expansion Joints       171.0 LF x       \$500 =       \$85,500         Earthwork       LS       \$313,200         Structure Demolition       LS       \$150,000         TOTAL COST       =       \$1,513,749							
Substructure Concrete       150.9 CY x       \$425 =       \$64,145         Superstructure Concrete       726.2 CY x       \$425 =       \$308,644         Prestressed Girders       4438.0 LF x       \$70 =       \$310,660         Traffic Railing       1280.0 LF x       \$40 =       \$51,200         Expansion Joints       171.0 LF x       \$500 =       \$85,500         Earthwork       LS       \$313,200         Structure Demolition       LS       \$150,000         TOTAL COST       =       \$1,513,749	Piles	5760.0	LF x	\$40	=	\$230,400	
Superstructure Concrete       726.2 CY x       \$425 =       \$308,644         Prestressed Girders       4438.0 LF x       \$70 =       \$310,660         Traffic Railing       1280.0 LF x       \$40 =       \$51,200         Expansion Joints       171.0 LF x       \$500 =       \$85,500         Earthwork       LS       \$313,200         Structure Demolition       LS       \$150,000         TOTAL COST       \$1,513,749	Substructure Concrete	150.9	CY x		=		
Prestressed Girders       4438.0 LF x       \$70 =       \$310,660         Traffic Railing       1280.0 LF x       \$40 =       \$51,200         Expansion Joints       171.0 LF x       \$500 =       \$85,500         Earthwork       LS       \$313,200         Structure Demolition       LS       \$150,000         TOTAL COST       \$1,513,749	Superstructure Concrete	726.2	CY x		=		
Traffic Railing       1280.0 LF x       \$40 =       \$51,200         Expansion Joints       171.0 LF x       \$500 =       \$85,500         Earthwork       LS       \$313,200         Structure Demolition       LS       \$150,000         TOTAL COST       =       \$1,513,749	· · · · · · · · · · · · · · · · · · ·	4438.0	LF x	\$70	=	11	
Expansion Joints       171.0 LF x \$500 = \$85,500         Earthwork       LS \$313,200         Structure Demolition       LS \$150,000         TOTAL COST = \$1,513,749	Traffic Railing						
Earthwork         LS         \$313,200           Structure Demolition         LS         \$150,000           TOTAL COST         = \$1,513,749					=	11	
Structure Demolition LS \$150,000 TOTAL COST = \$1,513,749							
TOTAL COST = \$1,513,749	Structure Demolition		LS				
			TOTAL	COST	=		
					=	\$55.33	

S.R. 39 - BRIDGE	OVER H	HILLSB	OROU	GH	RIVER
	TABLE	IV-F			
QUANTITY CALCU	LATION A	AND CO	ST EST	IMAT	re
1.0 BASIS OF CALCULATION					
Roadway Width		Feet			es per Bridge
Overall Deck Width		Feet (	42.8	Feet	per Bridge)
Overall Bridge Length		) Feet			
Number of Spans	4@				
and Span Length(s)		Feet		: t	41-1-1-
Superstructure Type Substructure Type	Type IV				es thick
2.0 QUANTITY CALCULATION		is w/	10.0	-inc	h piles
2.1 Substructure	0110				
Number of Bents	10	)			
a) Piles					
Size	18.0	Inches	80	Ton (	Capacity
Number per Bent	8				d bents
Length per Pile	80.0	Feet	_		
Total Pile Length	5920	Feet			
b) Bent Caps				Per E	Bent:
Width	36.0	Inches		DL=	808.2
Depth		Inches		LL=	343.4
Length	42.8	Feet			
Total Volume		CYrds	*		
c) End Bents (Backwall &				Per E	nd Bent:
Width ·		Inches		DL=	
Depth		Feet		LL=	171.7
Length		Feet			
Total Volume	52.8	CYrds			
2.2 Superstructure	_				
Number of Spans	4				
Span Length	80.0	Feet			
a) Girders Girders per Span		<b>@</b>	0.00	<b></b>	
Girder Length	5 70 3	@ Feet	9.00	reet	
Total Girder Length	3170.0				
b) Diaphragms (2 @ inter		1 661			
Width	•	Inches			
Depth		Inches			
Length		Feet			j
Total Volume		CYrds			
c) Deck					
Width	85.5	Feet			1
Depth		Inches			
Length	320.0				
Total Volume		CYrds			#
d) Traffic Barrier					-
Total Length	1280.0	Feet			
e) Expansion Joints					1
Total Length	171.0	Feet			
3.0 COST ESTIMATE					
Piles	5920.0		\$40	=	\$236,800
Substructure Concrete	159.6		\$425	=	\$67,845
Superstructure Concrete	735.6		\$425	=	\$312,611
Prestressed Girders	3170.0		\$95	=	\$301,150
Traffic Railing	1280.0		\$40	=	\$51,200
Expansion Joints	171.0		\$500	=	\$85,500
Earthwork		LS			\$313,200
Structure Demolition		LS	000-		\$150,000
		TOTAL		=	\$1,518,306
		CUST	PER SF	=	\$55.49

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S.R. 39 - BRIDGE	OVER	HLLSB	OHOU	GH	RIVER
	TABLE				
QUANTITY CALCU					
1.0 BASIS OF CALCULATION					
Roadway Width		Feet			es per Bridge
Overall Deck Width	85.5	Feet (	42.8	Feet	per Bridge)
Overall Bridge Length	320.0	) Feet			
Number of Spans	3 @	)			
and Span Length(s)	106.7	Feet			
Superstructure Type	Type IV	w/ Deck	8.0	inch	es thick
Substructure Type	Pile Ben				h piles
2.0 QUANTITY CALCULATION			10.0		on piles
2.1 Substructure					
Number of Bents	8	1			•
a) Piles	·	•			
Size	100	Inches	00	Τ	O
1		Inches			Capacity
Number per Bent	10		6	ın er	nd bents
Length per Pile		Feet			
Total Pile Length	5760	Feet			
b) Bent Caps				Per I	Bent:
Width		Inches		DL=	1228.2
Depth	27.0	Inches		LL=	354.9
Length	42.8	Feet			
Total Volume	85.5	CYrds			
c) End Bents (Backwall &	Wingwall	s)		Per F	End Bent:
Width	_	Inches		DL=	
Depth		Feet		LL=	
Length		Feet		L.L.—	177.4
Total Volume		CYrds			
	52.0	Citas			
2.2 Superstructure	•				
Number of Spans	3				
Span Length	106.7	reet			
a) Girders		_			İ
Girders per Span	7	@	6.00	Feet	
Girder Length	105.9				
Total Girder Length	4448.5	Feet			
b) Diaphragms (2 @ interi	or bents)				
Width	9.0	Inches			
Depth	45.0	Inches			
Length	36.0	Feet			
Total Volume	45.0	CYrds			
c) Deck		<del></del>			
Width	25.5	Feet			
Depth		Inches			
•					
Length Total Volume	320.0				
Total Volume	6/5.6	CYrds			
d) Traffic Barrier		_			
Total Length	1280.0	Feet			
<ul><li>e) Expansion Joints</li></ul>					
Total Length	171.0	Feet			
3.0 COST ESTIMATE					
Piles	5760.0	LF x	\$40	=	\$230,400
Substructure Concrete		CY x	\$425	=	\$58,760
Superstructure Concrete	720.6		\$425		\$306,236
Prestressed Girders	4448.5		\$100		\$444,850
Traffic Railing	1280.0		\$40	=	\$51,200
Expansion Joints	171.0		\$500		
Earthwork		LF X LS	φουυ	=	\$85,500
					\$313,200
Structure Demolition		LS	000=		\$150,000
		TOTAL		=	\$1,640,146
		COST F	'ER SF	=	\$59.95

S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER								
	TABLE IV-H							
QUANTITY CALCUL	LATION A	ND CO	ST ESTI	MAT	E			
4.0 EARTH WORK								
Area of Old Section	400.0	SqFeet						
Area of New Section	1500.0	SqFeet						
Length of Old Fill	1920.0	Feet						
Length of New Fill	1920.0	Feet						
Old Fill to be Excavated	0.0	Feet						
Amount of Excavation	0	CYrds						
Amount of New Fill	78300	CYrds						
Earth Work Cost								
Excavation	0	CYx	\$3.00	=	\$0			
New Embankment	78300	CY x	\$4.00	=	\$313,200			
		TOTAL	COST	=	\$313,200			

S.R.39 - EST

Applin b)

S.R. 39 - BRIDGE	OVER H	III I SB	OROUG	3H R	IVFR
<u> </u>	TABLE		01100		
QUANTITY CALCU	LATION A	AND CO	ST ESTI	MATE	
1.0 BASIS OF CALCULATIO					
Roadway Width		Feet			s per Bridge
Overall Deck Width		Feet (			per Bridge)
Overall Bridge Length Number of Spans	320.0 8 @	Ft and and	22 <b>4</b> 0.0 56 @		
and Span Length(s)	_	Feet	_	, Feet	
Superstructure Type	Type II w				es thick
Substructure Type	Pile Ben				h piles
2.0 QUANTITY CALCULATION		,		,,,,	рсо
2.1 Substructure					
Number of Bents	9	and	57	•	
a) Piles					
Size		Inches			Capacity
Number per Bent	_	and	4	in en	d bents
Length per Pile		Feet			
Total Pile Length	26080	reet			
b) Bent Caps Width	26.0	Inches		Per E	
Depth		Inches		DL= LL=	
Length		Feet		LL=	298.1
Total Volume		CYrds			
c) End Bents (Backwall &				Per F	nd Bent:
Width	•	Inches		DL=	
Depth		Feet		LL=	
Length	58.8	Feet			
Total Volume	34.8	CYrds			
2.2 Superstructure					
Number of Spans	8	and	56		
Span Length	40.0	Feet			
a) Girders					
Girders per Span	5	_	9.00	Feet	
Girder Length		Feet			
Total Girder Length	25120.0	Feet			ı
b) Diaphragms (2 @ inter	•				
Width	0.0	Inches			
Depth		Inches			
Length Total Volume		Feet			i
c) Deck	155.0	CYrds			
Width	40 B	Feet			
Depth		Inches			
Length	320.0	and	2240.0	Feet	
Total Volume	2702.2			1 601	
d) Traffic Barrier	_, 0	01140			
Total Length	5120.0	Feet			
e) Expansion Joints					
Total Length	769.5	Feet			
3.0 COST ESTIMATE					
Piles	26080	LF x	\$40	=	\$1,043,200
Substructure Concrete	740.2		\$425		\$314,581
Superstructure Concrete	2857.2		\$425	=	\$1,214,319
Prestressed Girders	25120		\$42		\$1,055,040
Traffic Railing	5120.0		\$40		\$204,800
Expansion Joints	769.5		\$300	=	\$230,850
Earthwork		LS '			\$99,600
Structure Demolition		LS	0007		\$150,000
		TOTAL		_=	\$4,312,390
		COST	EK SF	<u>=</u>	\$39.40

S.R. 39 - BRIDGE			DROUG	iH R	IVER
	TABLE				
QUANTITY CALCU	LATION A	AND COS	ST ESTI	MATE	
1.0 BASIS OF CALCULATIO					
Roadway Width Overall Deck Width		Feet /			s per Bridge
II .		Feet (			per Bridge)
Overall Bridge Length		Ft and			
Number of Spans and Span Length(s)	7 @ 45 7	e and Feet	49 @	Feet	
Superstructure Type		/ Deck			es thick
Substructure Type	Pile Bent				h piles
2.0 QUANTITY CALCULATION			10.0		ii piies
2.1 Substructure					
Number of Bents	8	and	50		
a) Piles					
Size	18.0	Inches	80	Ton (	Capacity
Number per Bent	5	and			d bents
Length per Pile	80.0	Feet			
Total Pile Length	22880	Feet			
b) Bent Caps				Per B	ent:
Width		Inches		DL=	
Depth		Inches		LL=	309.4
Length		Feet			
Total Volume		CYrds			
c) End Bents (Backwall &	•	•			nd Bent:
Width		Inches		DL=	
Depth		Feet		LL=	154.7
Length		Feet			
Total Volume	34.8	CYrds			
2.2 Superstructure	-		40		
Number of Spans	7 45 7	and Feet	49		
Span Length a) Girders	45.7	reel			
Girders per Span	5	@	9.00	Foot	
Girder Length		Feet	3.00	ı eet	
Total Girder Length					
b) Diaphragms (2 @ inter					
Width	•	Inches			
Depth		Inches			
Length		Feet			
Total Volume		CYrds			
c) Deck					
Width	42.8	Feet			
Depth	8.0	Inches			ļ
Length	320.0	and	2240.0	Feet	
Total Volume	2702.2	CYrds			
d) Traffic Barrier					
Total Length	5120.0	Feet			
e) Expansion Joints					
Total Length	769.5	Feet			
3.0 COST ESTIMATE					
Piles	22880		\$40	= .	\$915,200
Substructure Concrete	654.7		\$425		\$278,243
Superstructure Concrete	2837.2		\$425		\$1,205,812
Prestressed Girders	25180		\$45		\$1,133,093
Traffic Railing	5120.0		\$40	=	\$204,799
Expansion Joints	769.5		\$300	=	\$230,850
Earthwork		LS			\$99,600
Structure Demolition		LS	000=		\$150,000
		TOTAL		_=	\$4,217,597
<u></u>		COST P	EK SF		\$38.54

S.R. 39 - BRIDGE	OVER H	IILLSB(	DROUG	3H F	RIVER
	TABLE				
QUANTITY CALCU	LATION A	AND COS	ST ESTI	MATI	Ε
1.0 BASIS OF CALCULATION	ONS for T	YPE II B	EAM (L:	=53.	3 FEET)
Roadway Width	80.0	Feet	3	Lane	es per Bridge
Overall Deck Width	85.5	Feet (			per Bridge)
Overall Bridge Length		Ft and			
Number of Spans	6@				•
and Span Length(s)	_	Feet	_	Feet	•
Superstructure Type		/ Deck			es thick
Substructure Type	Pile Bent	IS W/	18.0	- Inc	on piles
2.0 QUANTITY CALCULATION	UNS				
2.1 Substructure					
Number of Bents	7	and	43		
a) Piles					_
Size	18.0	Inches			Capacity
Number per Bent	-	and	4	in er	nd bents
Length per Pile	80.0	Feet			
Total Pile Length	19680	Feet			
b) Bent Caps				Per E	Bent:
Width	36.0	Inches		DL=	457.5
Depth	27.0	Inches		LL=	320.5
Length	42.8	Feet			320.0
Total Volume		CYrds			
c) End Bents (Backwall &				Dor E	End Bent:
Width	_	Inches			
Depth				DL=	
		Feet		LL=	160.2
Length		Feet			
Total Volume	34.8	CYrds			
2.2 Superstructure	_				i
Number of Spans	6		42		
Span Length	53.3	Feet			
a) Girders					
Girders per Span	6	_	7.25	Feet	
Girder Length		Feet			
Total Girder Length		Feet	•		
b) Diaphragms (2 @ inter	ior bents)				
Width	9.0	Inches			
Depth	30.0	Inches			
Length	36.3	Feet			
Total Volume		CYrds			
c) Deck					
Width	49 R	Feet			
Depth		Inches			
Length	320.0	and	2240.0	Foot	
Total Volume			ZZ4U.U	reet	
	2702.2	Onas			
d) Traffic Barrier	E400 0	<b>-</b>			
Total Length	5120.0	reet			
e) Expansion Joints		_			
Total Length	769.5	reet			
3.0 COST ESTIMATE					
Piles	19680		\$40		\$787,200
Substructure Concrete	569.2		\$425		\$241,906
Superstructure Concrete	2818.0	CY x	\$425	=	\$1,197,659
Prestressed Girders	30288	LF x	\$45	=	\$1,362,960
Traffic Railing	5120.0		\$40		\$204,800
Expansion Joints	769.5		\$300		\$230,850
Earthwork		LS	<del>+000</del>		\$99,600
Structure Demolition		LS			\$150,000
off dotate Defilontion		TOTAL	COST		
				=	\$4,274,974
		COST F	EH SF	=	\$39.06

S.R. 39 - BRIDGE						
OLIANITITY OAL OLI	TABLE		AT =AT.			
QUANTITY CALCU	LATION A	AND CO	STESTI	MATI	E	
1.0 BASIS OF CALCULATION Roadway Width		Feet				
Overall Deck Width		Feet (			es per Bridge	
Overall Bridge Length		Ft and			per Bridge)	
Number of Spans	5 @					
and Span Length(s)	_	Feet	_	Feet		
Superstructure Type	Type III v				es thick	
	Pile Ben				ch piles	
2.0 QUANTITY CALCULATION		₩/	10.0	- 1110	in plies	
2.1 Substructure						
Number of Bents	6	and	36			
a) Piles						
Size	18.0	Inches	80	Ton	Capacity	
Number per Bent	6	_			nd bents	
Length per Pile	80.0	Feet				
Total Pile Length	19520	Feet				
b) Bent Caps				Per E	Bent:	
Width	36.0	Inches		DL=	580.5	
Depth	27.0	Inches		LL=	332.1	
Length	42.8	Feet				
Total Volume		CYrds				
c) End Bents (Backwall &	Wingwall	s)		Per E	End Bent:	
Width	12.0	Inches		DL=	356.5	
Depth	4.8	Feet		LL=	166.1	
Length	62.0	Feet			•	
Total Volume	44.1	CYrds				
2.2 Superstructure						
Number of Spans	5		35			
Span Length	64.0	Feet				
a) Girders						
Girders per Span	5	_ @	9.00	Feet		
Girder Length		Feet				
Total Girder Length	25300.0	Feet				
b) Diaphragms (2 @ inter						
Width		Inches				
Depth		Inches				
Length		Feet				
Total Volume	120.3	CYrds				
c) Deck	40.0					
Width		Feet				
Depth		inches	0040.0	Ee-4		
Length Total Volume	320.0 2702.2	and	2240.0	reet		
d) Traffic Barrier	2/02.2	OTIOS				
Total Length	5100 O	Foct				
e) Expansion Joints	5120.0	reet				
Total Length	684.0	Fact				
3.0 COST ESTIMATE	004.0	1 661				
Piles	19520	IFv	\$40		\$780,800	
Substructure Concrete	492.9		\$425	=	\$209,495	
Superstructure Concrete	2822.6		\$425		\$1,199,586	
Prestressed Girders	25300		\$70		\$1,771,000	
Traffic Railing	5120.0		\$40		\$204,800	
Expansion Joints	684.0		\$500	=	\$342,000	
Earthwork		LS	ΨΟΟΟ		\$99,600	
Structure Demolition		LS			\$150,000	
		TOTAL	COST		\$4,757,281	
			PER SF	=	\$43.47	

S.R. 39 - BRIDGE	OVER H	HILLSB	OROUG	SH F	RIVER
	TABLE	V-E			
QUANTITY CALCU	LATION A	AND CO	ST ESTI	MAT	E
1.0 BASIS OF CALCULATION					
Roadway Width		Feet			es per Bridge
Overall Deck Width		Feet (	42.8		t per Bridge)
Overall Bridge Length		) Ft and			
Number of Spans		and			
and Span Length(s) Superstructure Type		Feet		Feet	-
Substructure Type	Pile Beni	w/ Deck			es thick
2.0 QUANTITY CALCULATION		is w/	10.0	-inc	ch piles
2.1 Substructure	0110				
Number of Bents	5	and	29		
a) Piles					
Size	18.0	Inches	80	Ton	Capacity
Number per Bent	8				nd bents
Length per Pile	80.0	Feet			
Total Pile Length	20480	Feet			
b) Bent Caps				Per E	Bent:
Width		Inches		DL=	801.4
Depth		Inches		LL=	343.4
Length		Feet			
Total Volume		CYrds			
c) End Bents (Backwall &	_				End Bent:
Width		Inches		DL=	
Depth		Feet		LL=	171.7
Length Total Volume		Feet			
2.2 Superstructure	44.1	CYrds			
Number of Spans	4	and	28		
Span Length	•	Feet	20		
a) Girders	00.0	1 001			
Girders per Span	7	@	6.00	Feet	
Girder Length	-	Feet	0.00		
Total Girder Length	35504.0	Feet			
b) Diaphragms (2 @ inter	ior bents)				
Width	9.0	Inches			Ì
Depth	38.0	Inches			
Length		Feet			
Total Volume	95.0	CYrds			
c) Deck					
Width		Feet			
Depth		Inches	0015		
Length Total Volume	320.0	and	2240.0	reet	
	2702.2	Cyras			
d) Traffic Barrier	E100 0	C4			
Total Length e) Expansion Joints	5120.0	reet			ll l
Total Length	513.0	East			ľ
3.0 COST ESTIMATE	310.0	reet			
Piles	20480	IFx	\$40		\$819,200
Substructure Concrete	407.4		\$425		\$173,157
Superstructure Concrete	2797.2		\$425		\$1,188,819
Prestressed Girders	35504		\$70		\$2,485,280
Traffic Railing	5120.0		\$40		\$204,800
Expansion Joints	513.0		\$500	=	\$256,500
Earthwork		LS	•		\$99,600
Structure Demolition		LS			\$150,000
		TOTAL		=	\$5,377,356
		COST F	PER SF		\$49.14

0.0.00	A				
S.R. 39 — BRIDGE	OVER	HILLSB	OROUG	SH F	RIVER
	TABLE				
QUANTITY CALCU	LATION	AND CC	ST ESTI	MAT	E
1.0 BASIS OF CALCULATION					
Roadway Width		) Feet	3	Lan	es per Bridge
Overall Deck Width	85.5	Feet (	42.8	Fee	t per Bridge)
Overall Bridge Length	320.0	) Ft and	2240.0	) Fee	t
Number of Spans	4 @	anc	28 @	)	
and Span Length(s)	80.0	Feet	_	Fee	t
Superstructure Type	Type IV	w/ Deck	8.0	inch	es thick
Substructure Type	Pile Ben				ch piles
2.0 QUANTITY CALCULATION		<del></del>			on piles
2.1 Substructure		<del> </del>	<del></del>		<del></del>
Number of Bents	5	and	1 29	,	
a) Piles	•	and	23	,	
Size	10.0	Inches	90	т	Commoite
					Capacity
Number per Bent	3		5	in ei	nd bents
Length per Pile		Feet			
Total Pile Length	20800	) Feet			
b) Bent Caps				Per	Bent:
Width		Inches		DL=	= 808.2
Depth	27.0	Inches		LL=	= 343.4
Length	42.8	Feet			
Total Volume	363.4	CYrds		•	
c) End Bents (Backwall &	Wingwall	s)		Perl	End Bent:
´ Width	_	Inches		DL=	
Depth		Feet		LL=	
Length		Feet			
Total Volume		CYrds			
2.2 Superstructure	52.0	Citus			
	4	1	00		
Number of Spans	90.0		28		
Span Length	80.0	Feet			
a) Girders	_	_			
Girders per Span	5	_	9.00	Feet	
Girder Length		Feet			
Total Girder Length	25360.0	Feet			
b) Diaphragms (2 @ inter	,				
Width		Inches			
Depth		Inches			
Length	36.0	Feet			
Total Volume	112.5	CYrds			
c) Deck					
Width	42.8	Feet			
Depth		Inches			
Length	320.0		2240.0	Feet	
Total Volume	2702.2		<b></b> -70.0		
d) Traffic Barrier	_, 02	J 1143			
Total Length	5120.0	Foot			
e) Expansion Joints	5120.0	, <del></del>			!
	E40.0	East.			
Total Length 3.0 COST ESTIMATE	513.0	reet			
*	00000				4555
Piles	20800		\$40		\$832,000
Substructure Concrete	416.1		\$425		\$176,857
Superstructure Concrete	2814.7		\$425		\$1,196,257
Prestressed Girders	25360	LF x	\$95	=	\$2,409,200
Traffic Railing	5120.0	LF x	\$40	=	\$204,800
Expansion Joints	513.0		\$500	=	\$256,500
Earthwork		LS	, <del>-</del>		\$99,600
Structure Demolition		LS			\$150,000
		TOTAL	COST		\$5,325,214
			PER SF		
		10001	EN OF		\$48.66

S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER					
	TABLE	V-G			
QUANTITY CALCU	LATION A	AND CC	ST ESTI	MATI	=
1.0 BASIS OF CALCULATION	NS for T	YPE IV	BEAM (L	=10	6.7 FEET)
Roadway Width		Feet			es per Bridge
Overall Deck Width	85.5	Feet (			per Bridge)
Overall Bridge Length		) Ft and			
Number of Spans	3 @	and	1 21@	)	
and Span Length(s)	106.7	7 Feet	_	Feet	
Superstructure Type	Type IV	w/ Deck	8.0	inch	es thick
Substructure Type	Pile Ben	ts w/	18.0	-inc	h piles
2.0 QUANTITY CALCULATION	ONS				
2.1 Substructure					
Number of Bents	4	and	i 22	2	
a) Piles					
Size	18.0	) Inches	80	Ton	Capacity
Number per Bent	10		6	in en	d bents
Length per Pile	80.0	) Feet			
Total Pile Length	19520	) Feet			
b) Bent Caps		_		Per E	
Width		Inches		DL=	
Depth		Inches		LL=	354.9
Length		Feet			
Total Volume		CYrds			
c) End Bents (Backwall &	_	•			nd Bent:
Width		Inches		DL=	
Depth		Feet		LL=	177.4
Length		Feet			
Total Volume	52.8	CYrds			
2.2 Superstructure					
Number of Spans	3		21		
Span Length	106.7	Feet			
a) Girders		_			
Girders per Span	7	_	6.00	Feet	
Girder Length	105.9				
Total Girder Length	35588.0	Feet			
b) Diaphragms (2 @ inter	,				
Width		Inches			
Depth		Inches			
Length		Feet			
Total Volume	82.5	CYrds			
c) Deck					
Width		Feet			
Depth		Inches	2012		
Length	320.0		2240.0	reet	
Total Volume	2702.2	CYrds			
d) Traffic Barrier	E400.0				
Total Length	5120.0	reet			
e) Expansion Joints					
Total Length	427.5	reet			
3.0 COST ESTIMATE	40500	1	<b>*</b> · · ·		<b>A-00</b> 000
Piles Substructure Concrete	19520		\$40	=	\$780,800
	330.6		\$425		\$140,520
Superstructure Concrete Prestressed Girders	2784.7		\$425		\$1,183,507
	35588		\$100		\$3,558,800
Traffic Railing	5120.0		\$40 \$500		\$204,800
Expansion Joints Earthwork	427.5		\$500	=	\$213,750
Structure Demolition		LS			\$99,600
Structure Demoillion		LS	COCT		\$150,000
		TOTAL		<u>=</u>	\$6,331,776
		CUST	PER SF	=	<b>\$57.86</b>

## S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER TABLE V-H QUANTITY CALCULATION AND COST ESTIMATE 4.0 EARTH WORK Area of Old Section 400.0 SqFeet Area of New Section 750.0 SqFeet Length of Old Fill 1920.0 Feet Length of New Fill 1920.0 Feet Old Fill to be Excavated 0.0 Feet Amount of Excavation 0 CYrds Amount of New Fill 24900 CYrds **Earth Work Cost** Excavation 0 CY x \$3.00 = New Embankment 24900 CY x \$4.00 = \$99,600 TOTAL COST \$99,600

S.R.39-EST

	Jim of Ji						
OLIANITITY CALCU	TABLE VI-A	OT FOTU.					
QUANTITY CALCU	DLATION AND CO	STESTIM	ATE				
1.0 BASIS OF CALCULATION							
Roadway Width	80.0 Feet		nes per Bridge				
Overall Deck Width	85.5 Feet (	42.8 Fe	et per Bridge)				
Overall Bridge Length	1280.0 Feet						
Number of Spans	32 @						
and Span Length(s)	40.0 Feet						
Superstructure Type	Type II w/ Deck		hes thick				
Substructure Type	Pile Bents w/	18.0 −iı	nch piles				
2.0 QUANTITY CALCULATI	ONS						
2.1 Substructure	00						
Number of Bents	66						
a) Piles	4001						
Size	18.0 Inches		n Capacity				
Number per Bent	5 and	4 in 6	end bents				
Length per Pile	80.0 Feet						
Total Pile Length	26240 Feet						
b) Bent Caps			Bent:				
Width	36.0 Inches	DL					
Depth	27.0 Inches	LL	= 298.1				
Length	42.8 Feet						
Total Volume	705.4 CYrds						
c) End Bents (Backwall &	k Wingwalls)	Per	End Bent:				
Width	12.0 Inches	DL	= 228.6				
Depth	4.0 Feet	LL	= 149.0				
Length	58.8 Feet						
Total Volume	34.8 CYrds						
2.2 Superstructure							
Number of Spans	32						
Span Length	40.0 Feet						
a) Girders							
Girders per Span	5 @	9.00 Fee	et				
Girder Length	39.3 Feet						
Total Girder Length	12560.0 Feet						
b) Diaphragms (2 @ inter	rior bents)						
Width	9.0 Inches						
Depth	30.0 Inches						
Length	36.0 Feet		1				
Total Volume	320.0 CYrds		ĺ				
c) Deck							
Width	85.5 Feet		6				
Depth	8.0 Inches						
Length	1280.0 Feet						
Total Volume	2702.2 CYrds		ļ				
d) Traffic Barrier			l l				
Total Length	5120.0 Feet						
e) Expansion Joints	0.20.0.000						
Total Length	769.5 Feet						
3.0 COST ESTIMATE							
Piles	26240 LF x	\$40 =	\$1,049,600				
Substructure Concrete	740.2 CY x	\$425 =					
Superstructure Concrete	3022.2 CY x	\$425 <b>=</b>	H				
Prestressed Girders	12560 LF x	\$42 =	I				
Traffic Railing	5120.0 LF x	\$40 =	H				
Expansion Joints	769.5 LF x	\$300 =	\$230,850				
Earthwork	LS	Ψ500 =	\$142,500				
Structure Demolition	LS		\$150,000				
C. Coldio Demonion	TOTAL	COST -					
		COSI =	\$3,904,295				

COST PER SF =

\$35.68

S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER

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S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER					
	TABLE \				
QUANTITY CALCU	LATION A	ND CO	ST ESTI	MAT	E
1.0 BASIS OF CALCULATIO					
Roadway Width		Feet			s per Bridge
Overall Deck Width		Feet (	42.8	Feet	per Bridge)
Overall Bridge Length	1280.0				ě.
Number of Spans	28 @				
and Span Length(s)		Feet	0.0		
Superstructure Type	Type II w				es thick
Substructure Type 2.0 QUANTITY CALCULATION	Pile Bent	S W/	18.0	- inc	h piles
2.1 Substructure	UNS				
Number of Bents	58				
a) Piles	30				
Size	18.0	Inches	80.	Ton	Capacity
Number per Bent	5	_			Capacity d bents
Length per Pile	_	Feet	→,	iii eii	d bells
Total Pile Length	23040				
b) Bent Caps				oer F	Bent:
Width	36.0	inches	•	DL=	
Depth		Inches		LL=	
Length		Feet			000
Total Volume	619.9	CYrds			
c) End Bents (Backwall &			F	er E	nd Bent:
´ Width	_	Ínches		DL=	
Depth	4.0	Feet		LL=	154.7
Length	58.8	Feet			
Total Volume	34.8	CYrds			
2.2 Superstructure					
Number of Spans	28				
Span Length	45.7	Feet			
a) Girders					
Girders per Span	5	_ @	9.00 F	-eet	
Girder Length	45.0				
Total Girder Length	12590.0	Feet			
b) Diaphragms (2 @ inter	,				
Width		Inches			
Depth		Inches			
Length	36.0				
Total Volume	280.0	CYrds			
c) Deck	0F F	E+			
Width	85.5				
Depth Length	1280.0	Inches Feet			
Total Volume	2702.2				
d) Traffic Barrier	21,02.2	Onus			
Total Length	5120.0	Feet			
e) Expansion Joints	0.20.0	. eet			
Total Length	684.0	Feet			
3.0 COST ESTIMATE	229		<del>-</del>		
Piles	23040	LF x	\$40	=	\$921,600
Substructure Concrete	654.7		\$425	=	\$278,243
Superstructure Concrete	2982.2	CY x	\$425	=	\$1,267,445
Prestressed Girders	12590	LF x	\$45	=	\$566,550
Traffic Railing	5120.0		\$40	=	\$204,800
Expansion Joints	684.0		\$300	=	\$205,200
Earthwork		LS			\$142,500
Structure Demolition		LS			\$150,000
			COST	=	\$3,736,338
		COST	PER SF	=	\$34.14

S.R. 39 - BRIDGE						
OLIANITITY CALCU	TABLE VI-C	OCT FOTIMA	·-			
QUANTITY CALCU 1.0 BASIS OF CALCULATION						
Roadway Width	80.0 Feet	<del> </del>	es per Bridge			
Overall Deck Width	85.5 Feet		per Bridge)			
Overall Bridge Length	1280.0 Feet	1 42.01 661	. per bridge)			
Number of Spans	24 @					
and Span Length(s)	53.3 Feet					
Superstructure Type	Type II w/ Deci	c 8.0 inch	es thick			
Substructure Type	Pile Bents w/	18.0 — inc				
2.0 QUANTITY CALCULATI						
2.1 Substructure	· · · · · · · · · · · · · · · · · · ·					
Number of Bents	50					
a) Piles						
Size	18.0 Inche		Capacity			
Number per Bent	5 and	d 4 in er	nd bents			
Length per Pile	80.0 Feet					
Total Pile Length	19840 Feet					
b) Bent Caps			Bent:			
Width	36.0 Inche		i i			
Depth	27.0 Inche	s LL=	320.5			
Length	42.8 Feet					
Total Volume	534.4 CYrds					
c) End Bents (Backwall &			End Bent:			
Width	12.0 Inche		!			
Depth	4.0 Feet	LL=	160.2			
Length Total Volume	58.8 Feet 34.8 CYrds					
2.2 Superstructure	34.6 C 11u	•				
Number of Spans	24					
Span Length	53.3 Feet					
a) Girders	00.01 661					
Girders per Span	6 @	7.25 Feet				
Girder Length	52.6 Feet	7.20 . 000				
Total Girder Length	15144.0 Feet					
b) Diaphragms (2 @ inte						
Width	9.0 Inche	s				
Depth	30.0 Inche	s				
Length	36.3 Feet					
Total Volume	241.7 CYrds	;				
c) Deck						
Width	85.5 Feet					
Depth	8.0 Inche	s				
Length	1280.0 Feet					
Total Volume	2702.2 CYrds	;				
d) Traffic Barrier						
Total Length	5120.0 Feet		1			
e) Expansion Joints						
Total Length	598.5 Feet					
3.0 COST ESTIMATE	400101=					
Piles	19840 LF x	\$40 =	\$793,600			
Substructure Concrete	569.2 CY x	\$425 =	\$241,906			
Superstructure Concrete	2943.9 CY x	\$425 <b>=</b>	\$1,251,153			
Prestressed Girders	15144 LF x	\$45 =	\$681,480			
Traffic Railing	5120.0 LF x	\$40 =	\$204,800			
Expansion Joints	598.5 LF x	\$300 =	\$179,550 \$140,500			
Earthwork	LS		\$142,500			
Structure Demolition	LS	AL COST	\$150,000			
		AL COST = T PER SF =	\$3,644,988 \$33.31			
		IILN OF =	φυυ.υ Ι			

S.R. 39 - BRIDGE	OVER H	III I SR	POLIC	2H I	DIVED
S.H. 39 - BRIDGE	TABLE \		אטטונ	an i	NIVEN
OLIANITITY CALCUL		-	T = 0.T		
QUANTITY CALCUI					
1.0 BASIS OF CALCULATIO					
Roadway Width		Feet			s per Bridge
Overall Deck Width	85.5	Feet (	42.8	Feet	per Bridge)
Overall Bridge Length	1280.0	Feet			
Number of Spans	20 @				
and Span Length(s)	64.0	Feet			
, , ,	Type III w	v/ Deck	8.0	inche	es thick
	Pile Bent		18.0	-inc	h piles
2.0 QUANTITY CALCULATION		,			pc
2.1 Substructure	5,10		<del></del>		
Number of Bents	42				
a) Piles	72				
,	40.0	lmahaa	00	T /	Camanitu
Size		Inches			Capacity
Number per Bent	_	and	4	ın en	d bents
Length per Pile		Feet			
Total Pile Length	19840	Feet			
b) Bent Caps				Per E	Bent:
Width	36.0	Inches		DL=	580.5
Depth	27.0	Inches		LL=	332.1
Length	42.8	Feet			
Total Volume	448.9	CYrds			
c) End Bents (Backwall &			1	Par F	nd Bent:
Width	_	Inches		DL=	
		Feet		LL=	
Depth				LL=	166.1
Length	62.0				
Total Volume	44.1	CYrds			
2.2 Superstructure					
Number of Spans	20				
Span Length	64.0	Feet			
a) Girders					
Girders per Span	5	@	9.00	Feet	
Girder Length	63.3	Feet			
Total Girder Length	12650.0	Feet			
b) Diaphragms (2 @ inter					
Width	,	Inches			
Depth		Inches			
Length	36.0				
Total Volume		CYrds			
	255.5	Onus			i
c) Deck	0==	C-c+			
Width	85.5				
Depth		Inches			
Length	1280.0				
Total Volume	2702.2	CYrds			
d) Traffic Barrier					İ
Total Length	5120.0	Feet			
e) Expansion Joints					
Total Length	513.0	Feet			
3.0 COST ESTIMATE		·			
Piles	19840	IF v	\$40	=	\$793,600
Substructure Concrete	492.9		\$425	=	\$209,495
Superstructure Concrete	2955.6		\$425	=	\$1,256,111
Prestressed Girders	12650		\$70	=	\$885,500
Traffic Railing	5120.0		\$40	=	\$204,800
Expansion Joints	513.0		\$500	=	\$256,500
Earthwork		LS			\$142,500
Structure Demolition		LS			\$150,000
		TOTAL	COST	=	\$3,898,506
		COST F		_	\$35.62

S.R. 39 - BRIDGE	OVER H	IILLSBO	DROUG	GH	RIVER
0.11. 00 21.112 02	TABLE \		31100	<u> </u>	
QUANTITY CALCU			ST EST	IMA1	ΓE
1.0 BASIS OF CALCULATION					
Roadway Width		Feet			s per Bridge
Overall Deck Width	85.5	Feet (			per Bridge)
Overall Bridge Length	1280.0	•			
Number of Spans	16@	i			
and Span Length(s)	_	Feet			
Superstructure Type	Type III v	v/ Deck	8.0	inch	es thick
Substructure Type	Pile Bent		18.0	-inc	h piles
2.0 QUANTITY CALCULATION	ONS				
2.1 Substructure					
Number of Bents	34				
a) Piles					
Size	18.0	Inches			Capacity
Number per Bent	_	and	4	in en	d bents
Length per Pile		Feet			
Total Pile Length	21120	Feet			
b) Bent Caps					Bent:
Width		Inches		DL=	
Depth		Inches		LL=	343.4
Length		Feet			
Total Volume		CYrds			
c) End Bents (Backwall &					nd Bent:
Width		Inches		DL=	
Depth		Feet		LL=	171.7
Length		Feet			
Total Volume	44.1	CYrds			
2.2 Superstructure					
Number of Spans	16				
Span Length	80.0	Feet			
a) Girders	_	_			ļ
Girders per Span	7	_ @	6.00	Feet	
Girder Length		Feet			
Total Girder Length		reet			
b) Diaphragms (2 @ inter	•				
Width		Inches			
Depth		Inches			
Length		Feet			
Total Volume	202.7	CYrds			
c) Deck	05.5	<b>-</b>			
Width		Feet			
Depth Longth		Inches			
Length	1280.0				
Total Volume	2702.2	∪†ras			
d) Traffic Barrier	E400.0	Foct			
Total Length	5120.0	reet			
e) Expansion Joints	407 5	East			
Total Length 3.0 COST ESTIMATE	427.5	reet			
Piles	21120	15 0	640		\$944 900
Substructure Concrete	407.4		\$40 \$425	=	\$844,800 \$173,157
Superstructure Concrete	2904.9		\$425		\$1,234,578
Prestressed Girders	17752		\$425 \$70		\$1,234,576
Traffic Railing	5120.0		\$70 \$40	=	\$1,242,840
	427.5		\$ <del>4</del> 0	=	\$204,800
Expansion Joints Earthwork		LF X LS	φουυ	=	1
Structure Demolition		LS LS			\$142,500 \$150,000
Structure Demoiltion		TOTAL	COST		\$150,000 \$4,206,225
		COST F		=	\$4,206,225 \$38.43
		LOCAL P	LN SE		φυ <b>υ.</b> το

S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER					
	TABLE V				
QUANTITY CALCU	LATION A	ND CO	ST ESTI	MAT	re
1.0 BASIS OF CALCULATION					
Roadway Width		Feet			es per Bridge
Overall Deck Width		Feet (	42.8	Feet	per Bridge)
Overall Bridge Length	1280.0				
Number of Spans	16@				
and Span Length(s)		Feet			
Superstructure Type	Type IV v				es thick
Substructure Type	Pile Bent	s w/	18.0	-inc	h piles
2.0 QUANTITY CALCULATION	ONS				
2.1 Substructure	• •				
Number of Bents	34				
a) Piles	40.0			-	
Size		Inches			Capacity
Number per Bent	8		51	n en	d bents
Length per Pile		Feet			
Total Pile Length	21280	reet		n	
b) Bent Caps	00.0	lm = l			Bent:
Width		Inches		DL=	
Depth		Inches		LL=	343.4
Length		Feet			
Total Volume		CYrds			
c) End Bents (Backwall &	•	,			End Bent:
Width		Inches		DL=	
Depth		Feet		LL=	171.7
Length Tatal Values		Feet			
Total Volume	52.8	CYrds			
2.2 Superstructure	40				
Number of Spans	16	Feet			
Span Length a) Girders	60.0	reet			
Girders Girders per Span	5	<u>@</u>	9.00	=oot	
Girders per Spari Girder Length	_	@ Feet	9.00 1	eet	
Total Girder Length	12680.0				
b) Diaphragms (2 @ inter		i eet			
Width	•	Inches			
Depth		Inches			
Length		Feet			
Total Volume		CYrds			į
c) Deck	270.0	J 1143			
Width	85.5	Feet			
Depth		Inches			
Length	1280.0				
Total Volume	2702.2				
d) Traffic Barrier	-102.2	J 1143			
Total Length	5120.0	Feet			]
e) Expansion Joints	5 , 20.0				
Total Length	427.5	Feet			
3.0 COST ESTIMATE	,.0				
Piles	21280	LF x	\$40	=	\$851,200
Substructure Concrete	416.1		\$425	=	\$176,857
Superstructure Concrete	2942.2		\$425	=	\$1,250,444
Prestressed Girders	12680		\$95	=	\$1,204,600
Traffic Railing	5120.0		\$40	=	\$204,800
Expansion Joints	427.5		\$500	=	\$213,750
Earthwork		LS	4000	•	\$142,500
Structure Demolition		LS			\$150,000
			COST	=	\$4,194,152
			PER SF		\$38.32

S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER					
QUANTITY CALCU	TABLE		et Eet	13467	re
1.0 BASIS OF CALCULATION	DNS for T	YPF IV I	SFAM /		ne 7 FFFT)
Roadway Width		Feet			es per Bridge
Overall Deck Width		Feet (			per Bridge)
Overall Bridge Length	1280.0	•			po. 2go,
Number of Spans	12 @				
and Span Length(s)	106.7	Feet			
Superstructure Type	Type IV v	v/ Deck	8.0	inch	es thick
Substructure Type	Pile Bent		18.0	-inc	h piles
2.0 QUANTITY CALCULATI	ONS				•
2.1 Substructure					
Number of Bents	26				
a) Piles				_	
Size		Inches			Capacity
Number per Bent	10		6	ın en	d bents
Length per Pile		Feet			
Total Pile Length b) Bent Caps	20160	reet		D F	S 4 -
Width	36 A	Inches			Bent:
Depth		Inches		DL= LL=	
Length		Feet		LL=	354.9
Total Volume		CYrds			
c) End Bents (Backwall &				Por F	End Bent:
Width	_	Inches		DL=	
Depth		Feet		LL=	
Length		Feet			1//
Total Volume		CYrds			
2.2 Superstructure					
Number of Spans	12				
Span Length	106.7	Feet			
a) Girders					
Girders per Span	7	@	6.00	Feet	
Girder Length	105.9				
Total Girder Length	17794.0	Feet			
b) Diaphragms (2 @ inter	•				
Width	9.0	Inches			
Depth		Inches			
Length		Feet			
Total Volume	180.0	CYrds			
c) Deck					
Width	85.5				ĺ
Depth Longth		Inches			ļ
Length Total Volume	1280.0 2702.2				
d) Traffic Barrier	2102.2	Ciras			
Total Length	5120.0	Foot			
e) Expansion Joints	3120.0	reet			
Total Length	342.0	Foot			
3.0 COST ESTIMATE	042.0	1 661			
Piles	20160	LF x	\$40		\$806,400
Substructure Concrete	330.6		\$425	_	\$140,520
Superstructure Concrete	2882.2		\$425	=	\$1,224,944
Prestressed Girders	17794		\$100	=	\$1,779,400
Traffic Railing	5120.0		\$40	=	\$204,800
Expansion Joints	342.0		\$500	=	\$171,000
Earthwork		LS			\$142,500
Structure Demolition		LS			\$150,000
		TOTAL		=	\$4,619,564
		COST	PER SF	=	\$42.21

## S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER TABLE VI-H **QUANTITY CALCULATION AND COST ESTIMATE** 4.0 EARTH WORK Area of Old Section 400.0 SqFeet Area of New Section 1500.0 SqFeet Length of Old Fill 1920.0 Feet Length of New Fill 960.0 Feet Old Fill to be Excavated 960.0 Feet Amount of Excavation 14300 CYrds (To be used in New Fill) Amount of New Fill 24900 CYrds Earth Work Cost Excavation 14300 CY x \$3.00 \$42,900 New Embankment 24900 CY x \$4.00 \$99,600 TOTAL COST \$142,500

S.R.39-EST

5.K. 39 - BRIDGE			UNUU	αп	NIVER
	TABLE V				···
QUANTITY CALCU	LATION A	ND CO	ST EST	IMA	ΓE
1.0 BASIS OF CALCULATION	ONS for T	YPE II E	BEAM (L	=40	FEET)
Roadway Width		Feet			es per Bridge
Overall Deck Width	85.5	Feet (			per Bridge)
Overall Bridge Length	2240.0	•			p =
Number of Spans	56 @				
and Span Length(s)	_	Feet			
Superstructure Type	Type II w		9.0	i	aa thial
					es thick
Substructure Type	Pile Bent	S W/	10.0	-inc	h piles
2.0 QUANTITY CALCULATI	UNS				
2.1 Substructure					
Number of Bents	114				
a) Piles					
Size	18.0	inches	80	Ton	Capacity
Number per Bent	5	and	4	in en	d bents
Length per Pile	80.0	Feet			
Total Pile Length	45440	Feet			
b) Bent Caps				Per E	Bent:
. Width	36.0	Inches		DL=	343.4
Depth		Inches		LL=	
Length		Feet			200.1
Total Volume		CYrds			
c) End Bents (Backwall &				D r	Total Dank
Width	•	,			End Bent:
		Inches		DL=	
Depth		Feet		LL=	149.0
Length		Feet			
Total Volume	34.8	CYrds			•
2.2 Superstructure					
Number of Spans	56				
Span Length	40.0	Feet			
a) Girders					
Girders per Span	5	@	9.00	Feet	
Girder Length	39.3	Feet			
Total Girder Length	21980.0				
b) Diaphragms (2 @ inter					
Width	•	Inches			
Depth		Inches			
Length		Feet			
Total Volume	560.0	CYrds			
c) Deck					
Width	85.5	Feet			
Depth	8.0	Inches			
Length	2240.0	Feet			
Total Volume	4728.9	CYrds			
d) Traffic Barrier					
Total Length	8960.0	Feet			
e) Expansion Joints					
Total Length	1282.5	Foot			
3.0 COST ESTIMATE	1202.0	1 001		<del></del>	
Piles	45440	I E v	\$40		¢1 917 600
				=	\$1,817,600
Substructure Concrete	1253.2		\$425	=	\$532,606 \$0.047,778
Superstructure Concrete	5288.9		\$425	=	\$2,247,778
Prestressed Girders	21980		\$42	=	\$923,160
Traffic Railing	8960.0		\$40	=	\$358,400
Expansion Joints	1282.5		\$300	=	\$384,750
Earthwork		LS			\$85,500
Structure Demolition		LS			\$150,000
		TOTAL	COST	=	\$6,499,793
			PER SF	=	\$33.94

S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER

TABLE VII—B	S.R. 39 - BRIDGE			OROU	GH	RIVER
1.0 BASIS OF CALCULATIONS for TYPE II BEAM (L=45.7 FEET)     Roadway Width	OHANTITY CALCU		_	OT FOT		
Roadway Width						
Overall Deck Width Overall Bridge Length Number of Spans and Span Length(s)         45.7 Feet Superstructure Type Pile Bernts w/ 18.0 -inch piles           Superstructure Type Pile Bernts w/ Substructure Type Pile Bernts w/ Substructure Type Pile Bernts w/ 18.0 -inch piles         8.0 inches thick 18.0 -inch piles           2.0 QUANTITY CALCULATIONS         100         a) Piles         80 Ton Capacity           Size Size 18.0 Inches Number of Bents Number per Bent Length Per Pile 30940 Feet Total Pile Length 38.0 Inches Length 27.0 Inches Length 42.8 Feet Total Volume 1068.8 CYrds         Per Bent: DL= 383.6 LL= 309.4           Depth 27.0 Inches Length 4.0 Feet Length 58.8 Feet Total Volume 34.8 CYrds         12.0 Inches Depth Length 58.8 Feet Total Volume 34.8 CYrds         DL= 248.7 LL= 154.7           2.2 Superstructure Number of Spans Girder Length 45.0 Feet Total Girder Length 45.0 Feet Total Girder Length 22032.5 Feet b) Diaphragms (2 @ interior bents) Width 9.0 Inches Length 36.0 Feet Total Volume 490.0 CYrds         9.00 Feet Seet Total Volume 490.0 CYrds           C) Deck Width 85.5 Feet Depth 8.0 Inches Length 2240.0 Feet Total Length 2240.0 Feet Total Length 240.0 Inches Length 250.0 Feet Total Length 250.0 Feet Total Length 250.0 Feet Total Length 250.0 Feet Total Length 250.0 Feet Total Length 250.0 Feet Superstructure Concrete 2518.9 CY x \$425 = \$469.015 Superstructure Concrete 5218.9 CY x \$425 = \$2.218.028 Prestressed Girders 22033 LF x \$45 = \$2.218.028 Prestressed Girders 22033 LF x \$45 = \$2.218.028 Prestressed Girders 22033 LF x \$45 = \$2.218.028 Prestructure Concrete \$218.9 CY x \$425 = \$469.015 Superstructure Concrete \$21						
Overall Bridge Length Number of Spans						
Number of Spans   49 @ and Span Length(s)   45.7 Feet	II			42.0	ree	per Bridge)
and Span Length(s) Superstructure Type Superstructure Type Size Robustructure Type Rills Bents w/ 2.0 QUANTITY CALCULATIONS 2.1 Substructure Number of Bents Number per Bent Length per Pile Total Pile Length Depth Length Depth Length Total Volume Robusber Total Volume Robusber Span Ridder Length Span Length Ridder Length Ridder Length Robusber	11 -					
Superstructure Type		_				
Substructure Type				8.0	inch	es thick
2.0 QUANTITY CALCULATIONS  2.1 Substructure  Number of Bents  Size  18.0 Inches  Number per Bent  Length per Pile  Total Pile Length  Bent Caps  Width  Depth  Length  Depth  Length  Size  18.0 Inches  Number per Bent  Source  Source  Number per Bent  Source  Bont Caps  Width  Source  Length  106.8 CYrds  C) End Bents (Backwall & Wingwalls)  Width  12.0 Inches  Depth  4.0 Feet  Length  58.8 Feet  Total Volume  Number of Spans  Span Length  Span Length  45.7 Feet  a) Girders  Girders per Span  Girder Length  145.0 Feet  Total Girder Length  2032.5 Feet  b) Diaphragms (2 @ interior bents)  Width  10.0 Inches  Length  30.0 Inches  Length  30.0 Inches  Length  30.0 Inches  Length  30.0 Inches  Length  30.0 Inches  Length  30.0 Feet  Total Volume  490.0 CYrds  c) Deck  Width  85.5 Feet  Depth  30.0 Inches  Length  2240.0 Feet  Total Volume  4728.9 CYrds  d) Traffic Barrier  Total Length  1111.5 Feet  3.0 COST ESTIMATE  Piles  Superstructure Concrete  518.9 CY x  \$40 = \$1,593,600  \$85,500  Expansion Joints  1111.5 LF x  \$300 = \$333,450  Expansion Joints  1111.5 LF x  \$300 = \$333,450  Expansion Joints  1111.5 LF x  \$300 = \$333,455  Earthwork  LS  \$85,500  TOTAL COST = \$6,199,456						
Number of Bents   100   a)   Piles			,			
a) Piles Size Size 18.0 Inches Number per Bent Length per Pile 80.0 Feet Total Pile Length 39840 Feet b) Bent Caps Width 36.0 Inches Length 42.8 Feet Total Volume 1068.8 CYrds c) End Bents (Backwall & Wingwalls) Width 12.0 Inches Length 45.7 Feet A) Girders Girders Girder Length 45.7 Feet a) Girders Girder Length 45.0 Feet Total Girder Length 45.0 Feet Total Girder Length 45.0 Feet Total Volume 45.0 Feet Total Volume 45.0 Feet Total Girder Length 45.0 Feet Total Girder Length 45.0 Feet Total Jolume 45.0 Feet Total Girder Length 45.0 Feet Total Girder Length 45.0 Feet Total Volume 45.0 Feet Total Width 45.0 Feet Total Width 45.0 Feet Total Girder Length 45.0 Feet Total Girder Length 45.0 Feet Total Volume 45.0 Feet Total Volume 470.0 CYrds c) Deck Width 45.0 Feet Total Volume 470.0 Feet Total Volume 470.0 Feet Total Volume 490.0 Feet Total Volume 490.0 Feet Total Length 80.0 Inches Length 2240.0 Feet Total Length 8960.0 Feet Total Length 1111.5 Feet  3.0 COST ESTIMATE  Piles 3840 LF x 44 in end bents 4 in end bents 4 in end bents 4 in end bents 4 in end bents 4 in end bents 4 in end bents 4 in end bents 4 in end bents 4 in end bents 4 in end bents 4 in end bents 4 in end bents  DL= 383.6  LL= 309.4  Fer End Bent: DL= 248.7  LL= 154.7  DL= 248.7  LL= 154.7  DL= 248.7  LL= 154.7  DL= 248.7  LL= 154.7  DL= 248.7  LL= 154.7  DL= 248.7  LL= 309.4  Fer End Bent: DL= 248.7  LL= 309.4  Fer End Bent: DL= 248.7  LL= 309.4  Fer End Bent: DL= 248.7  LL= 309.4  Fer End Bent: DL= 248.7  LL= 309.4  Fer End Bent: DL= 248.7  LL= 309.4  Fer End Bent: DL= 248.7  LL= 309.4  Fer End Bent: DL= 248.7  LL= 309.4  Fer End Bent: DL= 248.7  DL= 248.7  Ell- 154.7  Fer End Bent: DL= 248.7  LL= 154.7  DL= 248.7  Ell- 154.7  Fer End Bent: DL= 248.7  LL= 309.4  Fer End Bent: DL= 248.7  LL= 309.4  Fer End Bent: DL= 248.7  Ell- 154.7  Fer End Bent: DL= 248.7  Ell- 154.7  Fer End Bent: DL= 248.7  Ell- 154.7  Fer End Bent: DL= 248.7  Ell- 154.7  Fer End Bent: DL= 248.7  Ell- 154.7  Fer End Bent: DL= 248.7  Ell- 154.7  Fer End Bent: DL= 248.7  Ell-	2.1 Substructure					
Size	Number of Bents	100	)			
Number per Bent	a) Piles					
Length per Pile   39840 Feet	1 - 1 - 1	18.0	Inches			
Total Pile Length   39840 Feet   b)   Bent Caps   Per Bent:   Width   36.0 Inches   DL = 383.6   Depth   27.0 Inches   LL = 309.4   Length   42.8 Feet   Total Volume   1068.8 CYrds   CE   End Bents (Backwall & Wingwalls)   Per End Bent:   Width   12.0 Inches   DL = 248.7   Depth   4.0 Feet   LL = 154.7   Length   58.8 Feet   Total Volume   34.8 CYrds   CYrds   CYrds   CYrds   CE   CE   CE   CE   CE   CE   CE   C		_		4	in er	d bents
b) Bent Caps						
Width   36.0 Inches   DL = 383.6   Depth   27.0 Inches   LL = 309.4		39840	Feet		_	
Depth	•					1
Length Total Volume 1068.8 CYrds c) End Bents (Backwall & Wingwalls) Width 12.0 Inches DL= 248.7 Depth 4.0 Feet LL= 154.7 Length 58.8 Feet Total Volume 34.8 CYrds  2.2 Superstructure Number of Spans 49 Span Length 45.7 Feet a) Girders Girder Length 45.0 Feet Total Girder Length 45.0 Feet Total Girder Length 22032.5 Feet b) Diaphragms (2 @ interior bents) Width 9.0 Inches Length 30.0 Inches Length 36.0 Feet Total Volume 490.0 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 2240.0 Feet Total Length 240.0 Feet Total Length 250.0 Feet Total Length 8960.0 Feet Total Length 1111.5 Feet  3.0 COST ESTIMATE  Piles 39840 LF x \$40 = \$1,593,600 Substructure Concrete 1103.6 CY x \$425 = \$469,015 Superstructure Concrete 5218.9 CY x \$425 = \$469,015 Superstructure Concrete 5218.9 CY x \$45 = \$991,463 Traffic Railing 8960.0 LF x \$40 = \$338,400 Expansion Joints 1111.5 LF x \$300 = \$333,450 Earthwork LS \$85,500 Structure Demolition LS \$150,000	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
C) End Bents (Backwall & Wingwalls)  Width  12.0 Inches  Depth  4.0 Feet  Length  58.8 Feet  Total Volume  34.8 CYrds  2.2 Superstructure  Number of Spans  Girders per Span  Girders Length  Total Girder Length  2032.5 Feet  b) Diaphragms (2 @ interior bents)  Width  9.0 Inches  Length  36.0 Feet  Total Volume  490.0 CYrds  c) Deck  Width  85.5 Feet  Depth  30.0 Inches  Length  2240.0 Feet  Total Volume  4728.9 CYrds  3.0 COST ESTIMATE  Piles  39840 LF x  \$45 = \$40,000  Substructure Concrete  1103.6 CY x  \$45 = \$2,218,028  Prestressed Girders  22033 LF x  \$45 = \$991,463  Traffic Railing  8960.0 Fex  \$45 = \$44 = \$333,450  Expansion Joints  1111.5 LF x  \$300 = \$333,450  Expansion Joints  1111.5 LF x  \$40 = \$440,40  Expansio					LL=	309.4
c) End Bents (Backwall & Wingwalls)     Width						
Width						
Depth		-	•			
Length Total Volume 34.8 CYrds  2.2 Superstructure  Number of Spans 49 Span Length 45.7 Feet a) Girders Girders Per Span 5 9.00 Feet Girder Length 22032.5 Feet b) Diaphragms (2 @ interior bents) Width 9.0 Inches Length 36.0 Feet Total Volume 490.0 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 2240.0 Feet Total Volume 4728.9 CYrds d) Traffic Barrier Total Length 8960.0 Feet e) Expansion Joints Total Length 1111.5 Feet  3.0 COST ESTIMATE  Piles 39840 LF x \$40 = \$1,593,600 Substructure Concrete 1103.6 CY x \$425 = \$469,015 Superstructure Concrete 5218.9 CY x \$425 = \$2,218,028 Prestressed Girders 22033 LF x \$45 = \$991,463 Traffic Railing 8960.0 Fx \$40 = \$358,400 Expansion Joints 1111.5 LF x \$300 = \$333,450 Expansion Joints LS \$85,5000 Structure Demolition LS \$150,000						
Total Volume   34.8 CYrds	·				LL=	154.7
2.2 Superstructure  Number of Spans	. –					
Number of Spans   49   Span Length   45.7 Feet   a) Girders   Girders per Span   5 @ 9.00 Feet   Total Girder Length   45.0 Feet   Total Girder Length   22032.5 Feet   b) Diaphragms (2 @ interior bents)   Width   9.0 Inches   Depth   30.0 Inches   Length   36.0 Feet   Total Volume   490.0 CYrds   C) Deck   Width   85.5 Feet   Depth   8.0 Inches   Length   2240.0 Feet   Total Volume   4728.9 CYrds   d) Traffic Barrier   Total Length   8960.0 Feet   e) Expansion Joints   Total Length   1111.5 Feet   3.0 COST ESTIMATE   Piles   39840 LF x   \$40 = \$1,593,600   Substructure Concrete   1103.6 CY x   \$425 = \$469,015   Superstructure Concrete   5218.9 CY x   \$425 = \$2,218,028   Prestressed Girders   22033 LF x   \$45 = \$991,463   Traffic Railing   8960.0 LF x   \$40 = \$358,400   Expansion Joints   1111.5 LF x   \$300 = \$333,450   Earthwork   LS   \$85,500   Structure Demolition   LS   \$85,500   TOTAL COST = \$6,199,456   Structure Demolition   LS   \$150,000   TOTAL COST = \$6,199,456   Structure Demolition   Structure Demolition   Structure Demolition   Structure Demolition   Structure Demolition   Structure Demolition   Structure Demolition   Structure Demolition   Structure Demolition   Structure Demolition   Structure Demolition   Structure Demolition   Structure Demolitical Process   Structure Dem		34.8	CYras			
Span Length		40				
a) Girders Girders per Span 5 @ 9.00 Feet Girder Length 45.0 Feet Total Girder Length 22032.5 Feet b) Diaphragms (2 @ interior bents) Width 9.0 Inches Depth 30.0 Inches Length 36.0 Feet Total Volume 490.0 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 2240.0 Feet Total Volume 4728.9 CYrds d) Traffic Barrier Total Length 8960.0 Feet e) Expansion Joints Total Length 1111.5 Feet  3.0 COST ESTIMATE  Piles 39840 LF x \$40 = \$1,593,600 Substructure Concrete 1103.6 CY x \$425 = \$469,015 Superstructure Concrete 5218.9 CY x \$425 = \$2,218,028 Prestressed Girders 22033 LF x \$45 = \$991,463 Traffic Railing 8960.0 LF x \$40 = \$358,400 Expansion Joints 1111.5 LF x \$300 = \$333,450 Earthwork LS \$85,500 Structure Demolition  TOTAL COST = \$6,199,456						
Girders per Span   5 @ 9.00 Feet		75.7	1 661			
Girder Length		5	ര	9.00	Feet	
Total Girder Length 22032.5 Feet b) Diaphragms (2 @ interior bents)     Width 9.0 Inches     Depth 30.0 Inches     Length 36.0 Feet     Total Volume 490.0 CYrds c) Deck     Width 85.5 Feet     Depth 8.0 Inches     Length 2240.0 Feet     Total Volume 4728.9 CYrds d) Traffic Barrier     Total Length 8960.0 Feet e) Expansion Joints     Total Length 1111.5 Feet  3.0 COST ESTIMATE  Piles 39840 LF x \$40 = \$1,593,600 Substructure Concrete 1103.6 CY x \$425 = \$469,015 Superstructure Concrete 5218.9 CY x \$425 = \$2,218,028 Prestressed Girders 22033 LF x \$45 = \$991,463 Traffic Railing 8960.0 LF x \$40 = \$358,400 Expansion Joints 1111.5 LF x \$300 = \$333,450 Earthwork LS \$85,500 Structure Demolition LS \$150,000		_	_	0.00		
b) Diaphragms (2 @ interior bents)     Width	_					
Width       9.0 Inches         Depth       30.0 Inches         Length       36.0 Feet         Total Volume       490.0 CYrds         c) Deck       Width         Width       85.5 Feet         Depth       8.0 Inches         Length       2240.0 Feet         Total Volume       4728.9 CYrds         d) Traffic Barrier       Total Length         Total Length       8960.0 Feet         e) Expansion Joints       1111.5 Feet         3.0 COST ESTIMATE         Piles       39840 LF x       \$40 =       \$1,593,600         Substructure Concrete       1103.6 CY x       \$425 =       \$469,015         Superstructure Concrete       5218.9 CY x       \$425 =       \$2,218,028         Prestressed Girders       22033 LF x       \$45 =       \$991,463         Traffic Railing       8960.0 LF x       \$40 =       \$358,400         Expansion Joints       1111.5 LF x       \$300 =       \$333,450         Earthwork       LS       \$85,500         Structure Demolition       TOTAL COST =       \$6,199,456						
Length Total Volume 490.0 CYrds c) Deck Width 85.5 Feet Depth 8.0 Inches Length 70tal Volume 4728.9 CYrds d) Traffic Barrier Total Length 8960.0 Feet e) Expansion Joints Total Length 1111.5 Feet  3.0 COST ESTIMATE  Piles 39840 LF x \$40 = \$1,593,600 Substructure Concrete 1103.6 CY x \$425 = \$469,015 Superstructure Concrete 5218.9 CY x \$425 = \$2,218,028 Prestressed Girders 22033 LF x \$45 = \$991,463 Traffic Railing 8960.0 LF x \$40 = \$358,400 Expansion Joints 1111.5 LF x \$300 = \$333,450 Earthwork LS \$85,500 Structure Demolition  LS \$150,000		•	Inches			
Total Volume 490.0 CYrds  c) Deck     Width 85.5 Feet     Depth 8.0 Inches     Length 2240.0 Feet     Total Volume 4728.9 CYrds  d) Traffic Barrier     Total Length 8960.0 Feet e) Expansion Joints     Total Length 1111.5 Feet  3.0 COST ESTIMATE  Piles 39840 LF x \$40 = \$1,593,600 Substructure Concrete 1103.6 CY x \$425 = \$469,015 Superstructure Concrete 5218.9 CY x \$425 = \$2,218,028 Prestressed Girders 22033 LF x \$45 = \$991,463 Traffic Railing 8960.0 LF x \$40 = \$358,400 Expansion Joints 1111.5 LF x \$300 = \$333,450 Earthwork LS \$85,500 Structure Demolition  TOTAL COST = \$6,199,456	Depth	30.0	Inches			
c) Deck	Length	36.0	Feet			
Width		490.0	CYrds			
Depth	•					
Length Total Volume 4728.9 CYrds d) Traffic Barrier Total Length 8960.0 Feet e) Expansion Joints Total Length 1111.5 Feet  3.0 COST ESTIMATE  Piles Substructure Concrete 1103.6 CY x \$40 = \$1,593,600 Substructure Concrete 5218.9 CY x \$425 = \$469,015 Superstructure Concrete 5218.9 CY x \$425 = \$2,218,028 Prestressed Girders 22033 LF x \$45 = \$991,463 Traffic Railing 8960.0 LF x \$40 = \$358,400 Expansion Joints 1111.5 LF x \$300 = \$333,450 Earthwork LS \$85,500 Structure Demolition  TOTAL COST = \$6,199,456						
Total Volume 4728.9 CYrds d) Traffic Barrier     Total Length 8960.0 Feet e) Expansion Joints     Total Length 1111.5 Feet  3.0 COST ESTIMATE  Piles 39840 LF x \$40 = \$1,593,600 Substructure Concrete 1103.6 CY x \$425 = \$469,015 Superstructure Concrete 5218.9 CY x \$425 = \$2,218,028 Prestressed Girders 22033 LF x \$45 = \$991,463 Traffic Railing 8960.0 LF x \$40 = \$358,400 Expansion Joints 1111.5 LF x \$300 = \$333,450 Earthwork LS \$85,500 Structure Demolition LS \$150,000	•					
d) Traffic Barrier     Total Length						
Total Length e) Expansion Joints Total Length  1111.5 Feet  3.0 COST ESTIMATE  Piles Substructure Concrete Superstructure Concrete Prestressed Girders Traffic Railing Expansion Joints Earthwork Structure Demolition  8960.0 Feet  8960.0 Feet  1111.5 Feet  39840 LF x \$40 = \$1,593,600  \$100.0 CY x \$425 = \$469,015  \$218.9 CY x \$425 = \$2,218,028  \$2033 LF x \$45 = \$991,463  \$111.5 LF x \$40 = \$358,400  Expansion Joints LS \$85,500  \$150,000		4728.9	CYrds			
e) Expansion Joints						
Total Length         1111.5 Feet           3.0 COST ESTIMATE         39840 LF x \$40 = \$1,593,600           Piles         39840 LF x \$425 = \$469,015           Substructure Concrete         1103.6 CY x \$425 = \$469,015           Superstructure Concrete         5218.9 CY x \$425 = \$2,218,028           Prestressed Girders         22033 LF x \$45 = \$991,463           Traffic Railing         8960.0 LF x \$40 = \$358,400           Expansion Joints         1111.5 LF x \$300 = \$333,450           Earthwork         LS \$85,500           Structure Demolition         LS \$150,000           TOTAL COST = \$6,199,456		8960.0	Feet			
3.0 COST ESTIMATE         Piles       39840 LF x       \$40 =       \$1,593,600         Substructure Concrete       1103.6 CY x       \$425 =       \$469,015         Superstructure Concrete       5218.9 CY x       \$425 =       \$2,218,028         Prestressed Girders       22033 LF x       \$45 =       \$991,463         Traffic Railing       8960.0 LF x       \$40 =       \$358,400         Expansion Joints       1111.5 LF x       \$300 =       \$333,450         Earthwork       LS       \$85,500         Structure Demolition       LS       \$150,000         TOTAL COST       =       \$6,199,456	•	4444				1
Piles       39840 LF x       \$40 =       \$1,593,600         Substructure Concrete       1103.6 CY x       \$425 =       \$469,015         Superstructure Concrete       5218.9 CY x       \$425 =       \$2,218,028         Prestressed Girders       22033 LF x       \$45 =       \$991,463         Traffic Railing       8960.0 LF x       \$40 =       \$358,400         Expansion Joints       1111.5 LF x       \$300 =       \$333,450         Earthwork       LS       \$85,500         Structure Demolition       LS       \$150,000         TOTAL COST       =       \$6,199,456		1111.5	reet			
Substructure Concrete       1103.6 CY x       \$425 =       \$469,015         Superstructure Concrete       5218.9 CY x       \$425 =       \$2,218,028         Prestressed Girders       22033 LF x       \$45 =       \$991,463         Traffic Railing       8960.0 LF x       \$40 =       \$358,400         Expansion Joints       1111.5 LF x       \$300 =       \$333,450         Earthwork       LS       \$85,500         Structure Demolition       LS       \$150,000         TOTAL COST       =       \$6,199,456		20840	IE V	640		¢4 500 600
Superstructure Concrete       5218.9 CY x       \$425 =       \$2,218,028         Prestressed Girders       22033 LF x       \$45 =       \$991,463         Traffic Railing       8960.0 LF x       \$40 =       \$358,400         Expansion Joints       1111.5 LF x       \$300 =       \$333,450         Earthwork       LS       \$85,500         Structure Demolition       LS       \$150,000         TOTAL COST =       \$6,199,456						
Prestressed Girders       22033 LF x       \$45 =       \$991,463         Traffic Railing       8960.0 LF x       \$40 =       \$358,400         Expansion Joints       1111.5 LF x       \$300 =       \$333,450         Earthwork       LS       \$85,500         Structure Demolition       LS       \$150,000         TOTAL COST       =       \$6,199,456						· R
Traffic Railing       8960.0 LF x       \$40 =       \$358,400         Expansion Joints       1111.5 LF x       \$300 =       \$333,450         Earthwork       LS       \$85,500         Structure Demolition       LS       \$150,000         TOTAL COST       =       \$6,199,456	·					
Expansion Joints       1111.5 LF x       \$300 =       \$333,450         Earthwork       LS       \$85,500         Structure Demolition       LS       \$150,000         TOTAL COST       =       \$6,199,456						· II
Earthwork         LS         \$85,500           Structure Demolition         LS         \$150,000           TOTAL COST         = \$6,199,456						
Structure Demolition LS \$150,000 TOTAL COST = \$6,199,456				ΨΟΟΟ		
$TOTAL\ COST = \$6,199,456$						11
	C. Coldio Schlondon			COST		
						\$32.37

S.R. 39 – BRIDGE	S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER					
	TABLE					
QUANTITY CALCU	LATION A	AND CC	ST EST	IMA	re	
1.0 BASIS OF CALCULATION						
Roadway Width		Feet			s per Bridge	
Overall Deck Width		Feet (	42.8	Feet	per Bridge)	
Overall Bridge Length	2240.0					
Number of Spans	42 @					
and Span Length(s)		Feet				
Superstructure Type	Type il w				es thick	
Substructure Type 2.0 QUANTITY CALCULATI	Pile Bent	IS W/	18.0	-ınc	h piles	
2.1 Substructure	ONS					
Number of Bents	86					
a) Piles	00					
Size	18.0	Inches	80	Ton	Capacity	
Number per Bent	5				d bents	
Length per Pile	_	Feet	-		d bello	
Total Pile Length	34240					
b) Bent Caps				Per E	Bent:	
Width	36.0	Inches		DL=		
Depth		inches		LL=	ſ	
Length		Feet			52513	
Total Volume		CYrds				
c) End Bents (Backwall &				Per E	nd Bent:	
´ Width		Inches		DL=	ii	
Depth		Feet		LL=	N N	
Length		Feet				
Total Volume		CYrds				
2.2 Superstructure						
Number of Spans	42					
Span Length	53.3	Feet			Į.	
a) Girders					1	
Girders per Span	6	@	7.25	Feet		
Girder Length	52.6	Feet				
Total Girder Length	26502.0	Feet				
b) Diaphragms (2 @ inter	•					
Width		Inches				
Depth		Inches				
Length <sub>.</sub>		Feet				
Total Volume	422.9	CYrds				
c) Deck	_	_			#	
Width		Feet				
Depth		Inches				
Length	2240.0					
Total Volume	4728.9	CYrds				
d) Traffic Barrier	0000	-::				
Total Length	8960.0	reet				
e) Expansion Joints	040 =	<b>-</b>				
Total Length	940.5	reet				
3.0 COST ESTIMATE Piles	24040	IE v	640	-	\$4.000.000	
Substructure Concrete	34240		\$40 \$405	=	\$1,369,600	
	953.9 5151.8		\$425 \$425		\$405,424	
Superstructure Concrete Prestressed Girders	5151.8 26502		\$425 \$45		\$2,189,517	
Traffic Railing	8960.0		\$45 \$40	=	\$1,192,590 \$358,400	
	940.5			=	\$358,400 \$383,150	
Expansion Joints Earthwork		LF X LS	\$300	=	\$282,150 \$85,500	
Structure Demolition		LS LS			\$85,500	
Structure Demontion			COST	=	\$150,000 <b>\$6,033,182</b>	
			PER SF	<u> </u>	\$31.50	
		<u>  UUS  </u>	FERSE		φ31.50	

S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER					
	TABLE				
QUANTITY CALCU	LATION A	AND CO	STEST	IMA	IE
1.0 BASIS OF CALCULATION Roadway Width		Feet			
Overall Deck Width					es per Bridge
Overall Bridge Length	2240.0	Feet (	42.0	ree	: per Bridge)
Number of Spans	35 @				
and Span Length(s)	_	? ) Feet			
Superstructure Type	Type III v		8.0	inch	es thick
Substructure Type	Pile Ben				ch piles
2.0 QUANTITY CALCULATI		<del></del>	10.0		on pileo
2.1 Substructure			· · · · · · · · · · · · · · · · · · ·		
Number of Bents	72	)			
a) Piles					
Size	18.0	Inches	80	Ton	Capacity
Number per Bent	6	and			nd bents
Length per Pile	80.0	Feet			
Total Pile Length	34240	Feet			
b) Bent Caps				Per l	Bent:
Width		Inches		DL=	580.5
Depth		Inches		LL=	332.1
Length		Feet			
Total Volume		CYrds			
c) End Bents (Backwall &	•	•			End Bent:
Width		Inches		DL=	
Depth		Feet		LL=	166.1
Length		Feet			
Total Volume	44.1	CYrds			
2.2 Superstructure					
Number of Spans	35				
Span Length	64.0	Feet			
a) Girders	_				
Girders per Span	5	_	9.00	Feet	
Girder Length		Feet			
Total Girder Length	22137.5	reet			
b) Diaphragms (2 @ inter Width	,	Inches			
Depth		Inches Inches			
Length		Feet			
Total Volume		CYrds			
c) Deck	770.0	Ollus			
Width	85.5	Feet			
Depth		Inches			ļ
Length	2240.0		1.73		
Total Volume	4728.9				·
d) Traffic Barrier	20.0	2.140			ļ
Total Length	8960.0	Feet			
e) Expansion Joints	5550.0				
Total Length	855.0	Feet			
3.0 COST ESTIMATE					
Piles	34240	LF x	\$40	=	\$1,369,600
Substructure Concrete	813.6	CY x	\$425	=	\$345,760
Superstructure Concrete	5172.2	CY x	\$425	=	\$2,198,194
Prestressed Girders	22138	LF x	\$70	=	\$1,549,625
Traffic Railing	8960.0	LF x	\$40	=	\$358,400
Expansion Joints	855.0	LF x	\$500	=	\$427,500
Earthwork		LS			\$85,500
Structure Demolition	•	LS			\$150,000
		TOTAL	COST	=	\$6,484,580
		COST	PER SF	=	\$33.86

172

C P 20 PRIDGE	OVER	III I CD			חווערם
S.R. 39 - BRIDGE			OHOU	<u>ын</u>	HIVER
OLIANITITY OAL OL	TABLE		o= =o=		
QUANTITY CALCU	LATION A	AND CO	SIESI	IMA	IE
1.0 BASIS OF CALCULATION					
Roadway Width		Feet			es per Bridge
Overall Deck Width		Feet (	42.8	Feet	per Bridge)
Overall Bridge Length	2240.0				
Number of Spans	28 @	)			
and Span Length(s)	80.0	Feet			
Superstructure Type	Type III v	v/ Deck	8.0	inch	es thick
Substructure Type	Pile Bent	s w/	18.0	-inc	h piles
2.0 QUANTITY CALCULATI	ONS				•
2.1 Substructure					
Number of Bents	58				
a) Piles					
Size	18.0	Inches	80	Ton	Capacity
Number per Bent	8				d bents
Length per Pile	_	Feet	•		ia beino
Total Pile Length	36480				8
b) Bent Caps	20400	. 661		Por E	Bent:
Width	36.0	Inches		Per E	
Depth		Inches		LL=	
Length		Feet		LL=	343.4
Total Volume					
11		CYrds			
c) End Bents (Backwall &					End Bent:
Width		Inches		DL=	
Depth		Feet		LL=	171.7
Length		Feet			
Total Volume	44.1	CYrds	-		
2.2 Superstructure					
Number of Spans	28				
Span Length	80.0	Feet			
a) Girders					
Girders per Span	7	@	6.00	Feet	
Girder Length	79.3	Feet			
Total Girder Length	31066.0	Feet			
b) Diaphragms (2 @ inter	rior bents)				
Width	9.0	Inches			
Depth	38.0	Inches			
Length	36.0				
Total Volume		CYrds			
c) Deck					
Width	85.5	Feet			
Depth		Inches			
Length	2240.0				
Total Volume	4728.9				
d) Traffic Barrier	7120.3	Ullus			
Total Length	2060.0	East			
	8960.0	reel			į
e) Expansion Joints	604.0	□ at			1
Total Length	684.0	reet		-	
3.0 COST ESTIMATE	00400	1 -	<b>*</b> * * * * * * * * * * * * * * * * * *		01 450 000
Piles	36480		\$40	=	\$1,459,200
Substructure Concrete	663.9		\$425	=	\$282,170
Superstructure Concrete	5083.6		\$425	=	\$2,160,511
Prestressed Girders	31066		\$70	=	\$2,174,620
Traffic Railing	8960.0		\$40	=	\$358,400
Expansion Joints	684.0		\$500	=	\$342,000
Earthwork		LS			\$85,500
Structure Demolition		LS			\$150,000
		TOTAL	COST	=	\$7,012,401
		COST F	PER SF	=	\$36.61

S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER					
OLIANITITY CALCU	TABLE		OT EOT	184A-	rc-
QUANTITY CALCU	ONS for T	VDE IV	SEAM (	IMA L — R	NEEET\
Roadway Width		Feet			es per Bridge
Overall Deck Width		Feet (			per Bridge)
Overall Bridge Length	2240.0	•			por Briage,
Number of Spans	28 @				
and Span Length(s)		Feet			
Superstructure Type		w/ Deck	8.0	inch	es thick
Substructure Type	Pile Ben		18.0	-inc	h piles
2.0 QUANTITY CALCULATI	ONS				•
2.1 Substructure					
Number of Bents	58	3			
a) Piles				_	
Size		Inches			Capacity
Number per Bent	_	and	5	ın en	d bents
Length per Pile		Feet			
Total Pile Length b) Bent Caps	36640	reet		D F	
Width	36.0	Inches		Per E	
Depth		Inches		LL=	
Length		Feet		LL-	343.4
Total Volume		CYrds			
c) End Bents (Backwall &				Per F	End Bent:
Width		inches		DL=	
Depth		Feet		LL=	
Length		Feet			1, 1.,
Total Volume		CYrds			
2.2 Superstructure					
Number of Spans	28				
Span Length	80.0	Feet			
a) Girders					
Girders per Span	5	_	9.00	Feet	
Girder Length		Feet			
Total Girder Length		Feet			
b) Diaphragms (2 @ inter					
Width		Inches			
Depth		Inches			
Length Total Volume		Feet CYrds			
c) Deck	420.0	Offas			
Width	25 5	Feet			
Depth		Inches			
Length	2240.0				
Total Volume	4728.9				
d) Traffic Barrier					i
Total Length	8960.0	Feet			
e) Expansion Joints					·
Total Length	684.0	Feet			
3.0 COST ESTIMATE					
Piles	36640	LF x	\$40	=	\$1,465,600
Substructure Concrete	672.6	CY x	\$425	=	\$285,870
Superstructure Concrete	5148.9	CY x	\$425	=	\$2,188,278
Prestressed Girders	22190		<b>\$</b> 95	=	\$2,108,050
Traffic Railing	8960.0		\$40	=	\$358,400
Expansion Joints	684.0		\$500	=	\$342,000
Earthwork		LS			\$85,500
Structure Demolition		LS			\$150,000
		TOTAL		=	\$6,983,697
		COST P	ER SF	=	\$36.46

S.R. 39 - BRIDGE	OVER H	HLLSB	OROU	GH	RIVER
	TABLE		<b></b>		
QUANTITY CALCU					
1.0 BASIS OF CALCULATIO			·		
Roadway Width Overall Deck Width		Feet /			es per Bridge
1)		Feet (	42.8	reet	per Bridge)
Overall Bridge Length	2240.0				
Number of Spans	21@				
and Span Length(s)		Feet		: l.	Al-:-I-
Superstructure Type	Type IV v Pile Bent				es thick
Substructure Type 2.0 QUANTITY CALCULATION		ls w/	10.0	-ınc	h piles
2.1 Substructure	ONS				
Number of Bents	44				•
a) Piles					
Size	- 18.0	Inches	80	Ton	Capacity
Number per Bent	10.0				d bents
Length per Pile		Feet	U	С.	id Dellis
Total Pile Length	34560				
b) Bent Caps	2,000			Per F	Bent:
Width	36.0	Inches		DL=	
Depth		Inches		LL=	
Length		Feet			004.0
Total Volume		CYrds			
c) End Bents (Backwall &				Per F	End Bent:
Width		Inches		DL=	
Depth		Feet		LL=	
Length		Feet			
Total Volume		CYrds			
2.2 Superstructure					
Number of Spans	21				
Span Length	106.7	Feet			
a) Girders					
Girders per Span	7	@	6.00	Feet	
Girder Length	105.9				
Total Girder Length	31139.5	Feet			
b) Diaphragms (2 @ inter	ior bents)				
Width	9.0	Inches			
Depth	45.0	Inches			
Length	36.0	Feet			
Total Volume	315.0	CYrds			
c) Deck					
Width		Feet			
Depth		Inches			
Length	2240.0				
Total Volume	4728.9	CYrds			
d) Traffic Barrier					
Total Length	8960.0	Feet			
e) Expansion Joints					
Total Length	684.0	Feet			
3.0 COST ESTIMATE	2				
Piles	34560		\$40	=	\$1,382,400
Substructure Concrete	523.0		\$425	=	\$222,279
Superstructure Concrete	5043.9		\$425	=	\$2,143,653
Prestressed Girders	31139		\$100	=	\$3,113,950
Traffic Railing	8960.0		\$40	=	\$358,400
Expansion Joints	684.0		\$500	=	\$342,000
Earthwork		LS			\$85,500
Structure Demolition		LS			\$150,000
		TOTAL		=	\$7,798,182
		COST F	EH SF	=	\$40.72

S.R. 39 - BRIDGE OVER HILLSBOROUGH RIVER							
	TABLE VII-H						
QUANTITY CALCUI	QUANTITY CALCULATION AND COST ESTIMATE						
4.0 EARTH WORK							
Area of Old Section	400.0 SqFeet						
Area of New Section	1500.0 SqFeet			·			
Length of Old Fill	1920.0 Feet						
Length of New Fill	0.0 Feet						
Old Fill to be Excavated	1920.0 Feet						
Amount of Excavation	28500 CYrds						
Amount of New Fill	0 CYrds						
Earth Work Cost							
Excavation	28500 CY x	\$3.00	=	\$85,500			
New Embankment	0 CY x	\$4.00	=	\$0			
	TOTAL	COST		\$85,500			

S.R.39-EST