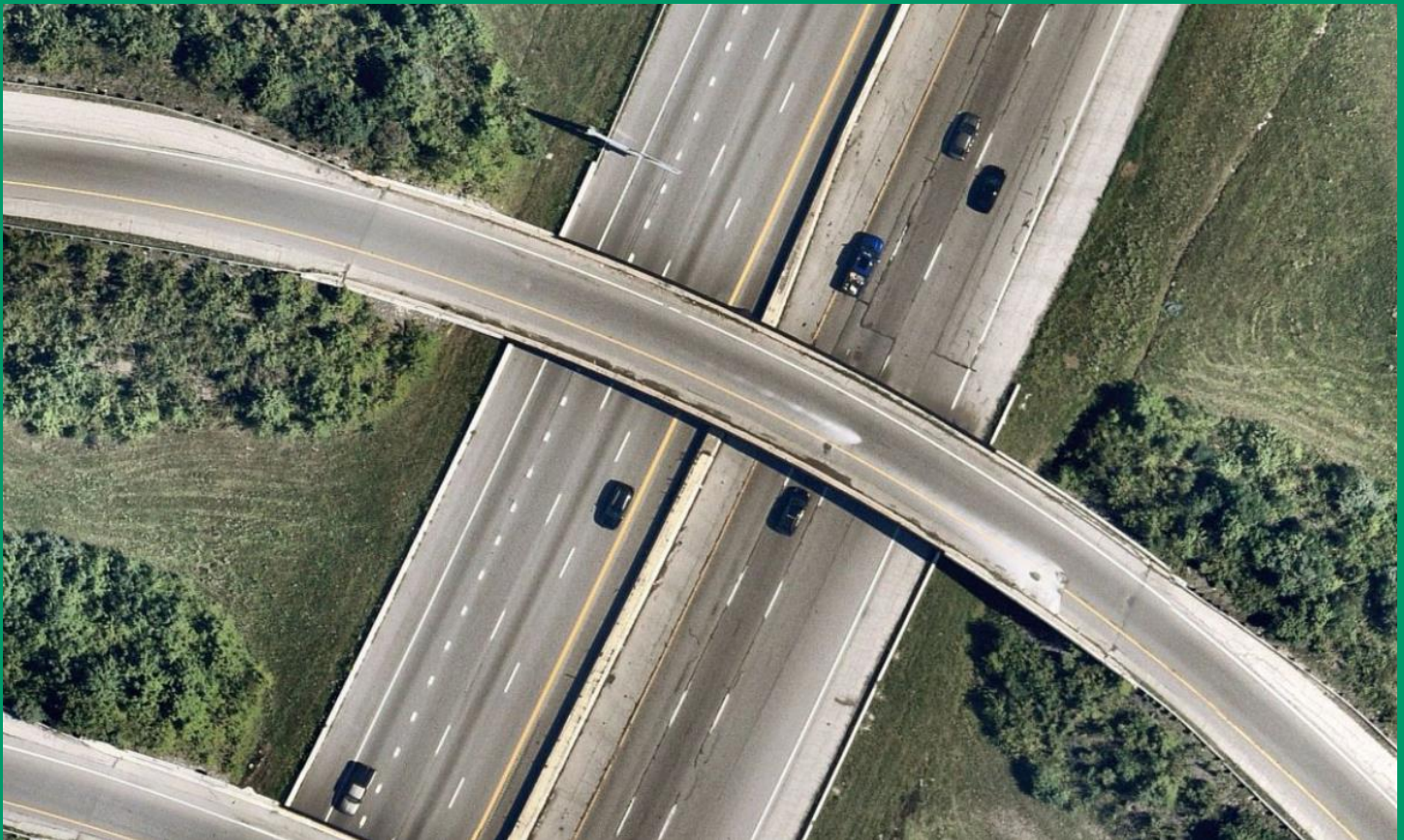


FRA-071-28.294 (SFN 2511224)
STRUCTURE ESTIMATED QUANTITIES
FRA-071/270-28.27/25.99A - PID No. 105435
IR-71 under RAMP O (IR-71 NB to IR-270 WB)
Columbus, Franklin County



Submitted to:
Ohio Department of Transportation, District 6
September 2024

CALC:	SLL	DATE:	6/17/2024
CHECKED:	EA	DATE:	6/20/2024

ESTIMATED QUANTITIES					STRUCTURE FILE NUMBER: 2511224				
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTRUCTURE	GENERAL	SEE SHEET
202	11203	LS	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	
202	22900	135	SY	APPROACH SLAB REMOVED				135	
202	23500	1,031	SY	WEARING COURSE REMOVED				1,031	
203	35110	78	CY	GRANULAR MATERIAL, TYPE B	78				
SPECIAL	20365000	2	EACH	SETTLEMENT PLATFORM	2				
503	11101	LS	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	LS				
503	21100	160	CY	UNCLASSIFIED EXCAVATION		160			
505	11100	LS	LS	PILE DRIVING EQUIPMENT MOBILIZATION				LS	
507	00500	3,850	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	3,850				
507	00550	4,070	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	4,070				
507	00700	1,050	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		1,050			
507	00750	1,125	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		1,125			
509	10000	96,438	LB	EPOXY COATED REINFORCING STEEL	13,180	13,800	69,458		
509	30020	7,498	FT	NO.4 DEFORMED GFRP REINFORCEMENT			7,498		
511	33500	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2				
511	34446	250	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			250		
511	34450	73	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			73		
511	41012	30	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		30			
511	44112	85	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	85				
511	46512	154	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	112	42			
512	10100	1,072	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	126	102	489	355	
512	33000	34	SY	TYPE 2 WATERPROOFING	34				
513	10300	227,000	LB	STRUCTURAL STEEL MEMBERS, LEVEL 5			227,000		
513	20000	2,862	EACH	WELDED STUD SHEAR CONNECTORS			2,862		
514	00060	11,000	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			11,000		
514	00066	11,000	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			11,000		
516	10010	75	FT	ARMORLESS PREFORMED JOINT SEAL				75	
516	13600	172	SF	1" PREFORMED EXPANSION JOINT FILLER				172	
516	13900	154	SF	2" PREFORMED EXPANSION JOINT FILLER				154	
516	14020	76	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	76				
516	44201	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN	8				
				(14"x16"x3.607" WITH 15"x20"x1.5" LOAD PLATE)					
516	44201	4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN		4			
				(14.75"x18"x3.128" WITH 15.75"x26"x1.5" LOAD PLATE)					
518	20000	65	SY	PREFABRICATED GEOCOMPOSITE DRAIN	65				
518	21200	12	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	12				
518	40000	157	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	157				

523	20001	3	EACH	DYNAMIC LOAD TESTING, AS PER PLAN	2	1			
523	20501	3	EACH	RESTRIKE, AS PER PLAN	2	1			
526	30010	249	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")				249	
526	90030	75	FT	TYPE C INSTALLATION				75	
601	21000	57	SY	CONCRETE SLOPE PROTECTION				57	
840	20000	4,175	SF	MECHANICALLY STABILIZED EARTH WALL				4,175	
840	21000	1,255	CY	WALL EXCAVATION				1,255	
840	22000	732	SY	FOUNDATION PREPARATION				732	
840	23000	3,036	CY	SELECT GRANULAR BACKFILL				3,036	
840	23001	488	CY	SELECT GRANULAR BACKFILL, AS PER PLAN				488	
840	23050	299	CY	NATURAL SOIL				299	
840	25010	753	FT	6" DRAINAGE PIPE, PERFORATED				753	
840	25020	17	FT	6" DRAINAGE PIPE, NON-PERFORATED				17	
840	26000	304	FT	CONCRETE COPING				304	
840	26050	4,175	SF	AESTHETIC SURFACE TREATMENT				4,175	
840	27000	5	DAY	ON-SITE ASSISTANCE				5	
840	28000	LS	LS	SGB INSPECTION AND COMPACTION TESTING				LS	
863	00100	2,421	SY	GEOGRID, TYPE P1	2,421				
867	00100	LS	LS	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL				LS	



Made by: SLL	Date: 6/10/24	Project No: P402200080
Checked by: EA	Date: 6/20/24	Sheet No: 3 of 56
Back Ck by:	Date:	
Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

202 Ext.: 11203 Unit: LS
Item Description: PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
Member Location :

PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT
SPAN, AS PER PLAN = LUMP

LUMP



Made by: SLL	Date: 6/6/24	Project No: P402200080
Checked by: EA	Date: 6/20/24	Sheet No: 4 of 56
Back Ck by:	Date:	
Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

202 Ext.: 22900 Unit: SY
Item Description: APPROACH SLAB REMOVED
Member Location :

Existing Rear Approach Slab Removed				
	Length	Width	Area	
From Basemap	25.00	24.50	612.50	
From Original Plans	25.00	24.00	600.00	
Average			606.25	
Existing Forward Approach Slab Removed				
From Basemap	24.98	24.35	608.35	
From Original Plans	25.00	24.00	600.00	
Average			604.17	
	Total	Total	1,210.42 SF	
			134.49 SY	
Total				134.49
TOTAL				135 SY



Made by: SLL	Date: 6/6/24	Project No: P402200080
Checked by: EA	Date: 6/6/24	Sheet No: 5 of 56
Back Ck by:	Date:	
Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

202 Ext.: 23500 Unit: SY
Item Description: WEARING COURSE REMOVED
Member Location :

Exisisting Wearing Course Removed						
From Original Plans						
	Begin STA.	End. STA.	Length	Width	Area	
Forward Approach			25.00	24.00	600.00	
Deck	1,823.86	1,554.76	269.10	30.00	8,073.00	
Rear Approach			25.00	24.00	600.00	
			Total		9,273.00	
				Total (SY)		1030
TOTAL						1031 SY



Made by: SLL	Date: 6/11/24	Project No: P402200080
Checked by: EA	Date: 6/20/24	Sheet No: 6 of 56
Back Ck by:	Date:	
Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

203 Ext.: 35110 Unit: CY
Item Description: GRANULAR MATERIAL, TYPE B
Member Location :

Location	Area	Width	Vol (CF)	Vol (CY)	Sheet	
RA Back	28.00	37.33	1,045.33	38.72	20	
FA Back	28.00	37.33	1,045.33	38.72	20	
Total				77.43		77.43
Total: 0.00						0.00 FT
TOTAL						78 CY



Made by: SLL	Date: 6/17/24	Project No: P402200080
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Back Ck by:	Date:	
Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

SPECIAL Ext.: 20365000 Unit: EACH
Item Description: SETTLEMENT PLATFORM
Member Location : _____

Settlement Platforms	
2 Per Bridge	Total 2.00
	2.00



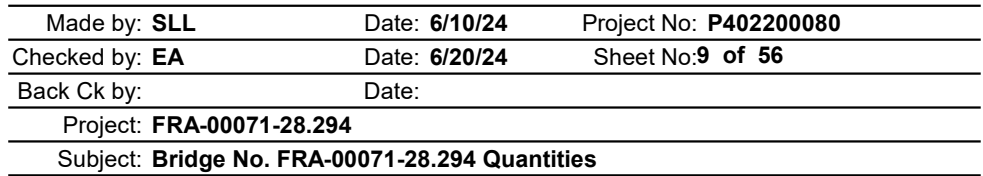
Made by: SLL	Date: 6/17/24	Project No: P402200080
Checked by: EA	Date: 6/20/24	Sheet No: 8 of 56
Back Ck by:	Date:	
Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

503 Ext.: 11101 Unit: LS
Item Description: COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN
Member Location :

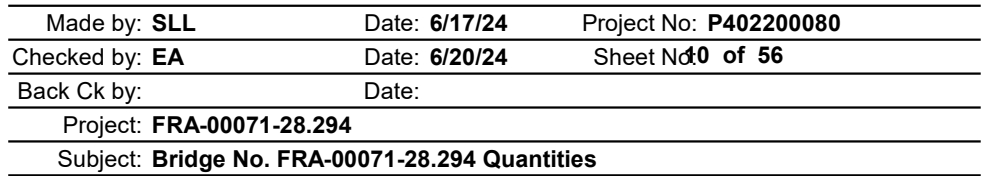
COFFERDAMS AND EXCAVATION BRACING LUMP

LUMP



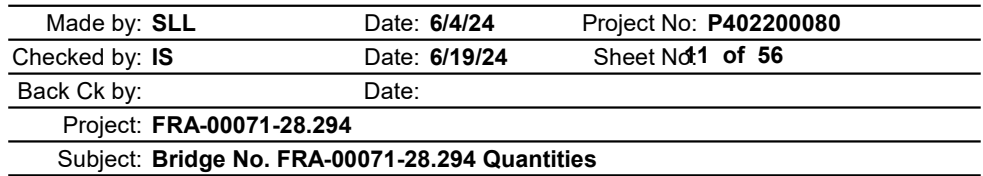
503 Ext.: 21100 Unit: CY
 Item Description: UNCLASSIFIED EXCAVATION, AS PER PLAN
 Member Location :

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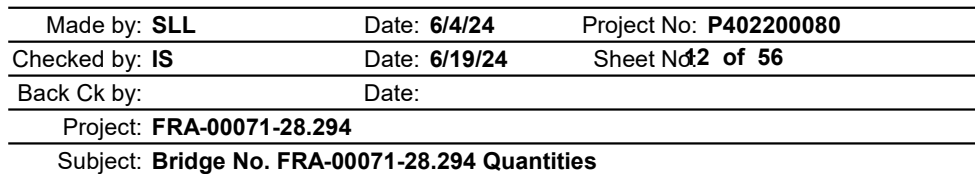
505 Ext.: 11100 Unit: LS
 Item Description: PILE DRIVING EQUIPMENT MOBILIZATION
 Member Location :

Printed: C:\Users\jacob\Desktop\TranSystems Projects\FRA-071_270-28.27_25.99A\Estimated Qty\FRA-00071-28.294 Quantity Calculations Ramp O_FINAL.xlsm



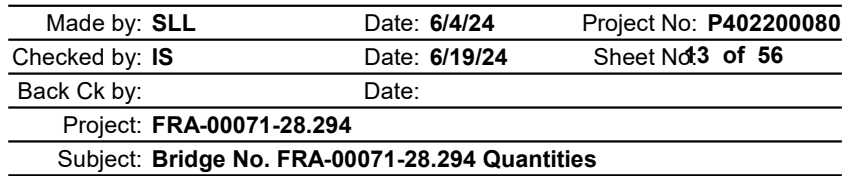
507 Ext.: 00500 Unit: FT
 Item Description: 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN
 Member Location :

Printed: C:\Users\jane43\Desktop\TranSystems Projects\FRA-071_270-28.27_25.99A\Estimated Qty\FRA-00071-28.294 Quantity Calculations Ramp O_FINAL.xlsm



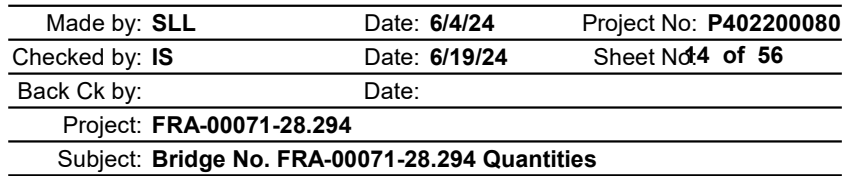
507 Ext.: 00550 Unit: FT
Item Description: 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED
Member Location :

Printed: C:\Users\jmc\Desktop\TranSystems Projects\FRA-071_270-28.27_25.99A\Estimated Qty\FRA-00071-28.294 Quantity Calculations Ramp O_FINAL.xlsm



507 Ext.: 00700 Unit: FT
 Item Description: 16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN
 Member Location :

Printed: C:\Users\B440\Desktop\TranSystems Projects\FRA-071_270-28.27_25.99A\Estimated Qty\FRA-00071-28.294 Quantity Calculations Ramp O_FINAL.xlsm



507 Ext.: E00750 Unit: FT
 Item Description: 16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED
 Member Location :

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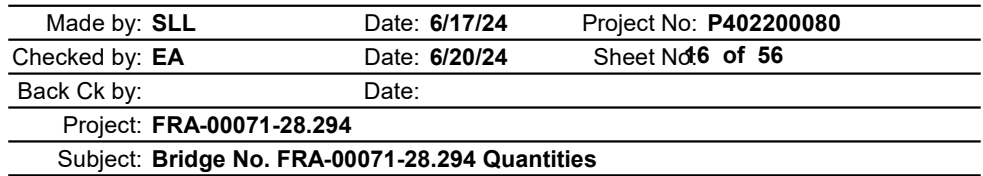


Made by: SLL	Date: 6/17/24	Project No: P402200080
Checked by: EA	Date: 6/20/24	Sheet No: 15 of 56
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Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

509 Ext.: 10000 Unit: LB
Item Description: EPOXY COATED STEEL REINFORCEMENT
Member Location :

Abutments			
Rear	6,778.00		
Forward	6,402.00	Abut	13180.0
Piers	13,800.00	Piers	13800.0
Superstructure			
Rear Dia	2,331.00		
Fwd Dia	2,331.00		
Deck Slab	53,606.00		
Railing	11,190.00	Super	69458.0
Total	96,438.00		
TOTAL		96438	LB



509 Ext.: 30020 Unit: FT
 Item Description: NO. 4 DEFORMED GFRP REINFORCEMENT
 Member Location :

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Made by: SLL	Date: 6/10/24	Project No: P402200080
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Back Ck by:	Date:	
Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

_____ 511 _____ Ext.: _____ 33500 _____ Unit: _____ EACH _____
Item Description: SEMI-INTEGRAL DIAPHRAGM GUIDE _____
Member Location : _____

Item	Count	Sheet		
Diaphragm Guide	2.00	19		
			Total	2.00
TOTAL				2 EACH



Made by: SLL	Date: 6/10/24	Project No: P402200080
Checked by: IS	Date: 6/19/24	Sheet No: 18 of 56
Back Ck by:	Date:	
Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

511 Ext.: 34446 Unit: CY
 Item Description: CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK
 Member Location :

Deck Concrete					
via Area from .dwg					
Transverse Section Area	Area	Length	Vol CF	Vol CY	
	31.17	181.49	5,657.03	209.52	
	Height	Width	Length	Vol CF	Vol CY
Transverse View Area Strips					
1	1.02	4.17	181.49	771.96	28.59
2	0.75	8.83	181.49	1,202.37	44.53
3	1.13	1.33	181.49	272.23	10.08
4	0.75	8.83	181.49	1,202.37	44.53
5	1.13	1.33	181.49	272.23	10.08
6	0.75	8.83	181.49	1,202.37	44.53
7	1.04	4.17	181.49	787.71	29.17
Total				211.53	211.5 CY
via Area from .dwg					
Diaphragm	Length	Area	Vol (CF)	Vol (CY)	
RA	3.00	172.51	517.53	19.17	
FA	3.00	172.97	518.91	19.22	
Total				38.39	38.4 CY
TOTAL					250 CY

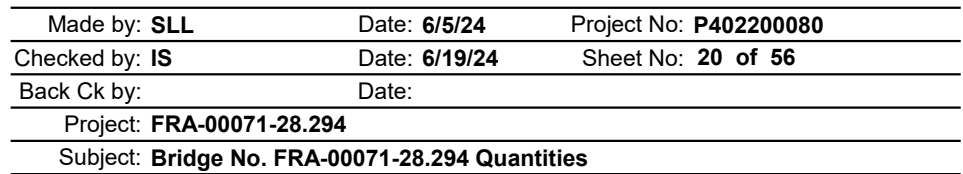


Made by: SLL	Date: 6/10/24	Project No: P402200080
Checked by: IS	Date: 6/19/24	Sheet No: 19 of 56
Back Ck by:	Date:	
Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

511 Ext.: 34450 Unit: CY
Item Description: CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)
Member Location :

Parapet Concrete					
Transverse Section Area	Area	Length	Vol CF	Vol CY	
	4.08	482.65	1,970.80	72.99	73
TOTAL					73 CY

[illegible]



Made by: SLL	Date: 6/11/24	Project No: P402200084
Checked by: IS	Date: 6/19/24	Sheet No: 21 of 56
Back Ck by:	Date:	
Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

511 Ext.: 44112 Unit: CY
 Item Description: CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING
 Member Location :

REAR ABUTMENT							
via calculation							
Piece	Length	Height	Area	Depth	Vol (CF)	Vol (CY)	
1	17.50	10.30	107.63	2.50	269.06	9.97	
2	4.50	10.30	46.35	3.25	150.64	5.58	
3	37.96	3.82	144.81	3.00	434.43	16.09	
4	4.54	8.70	39.51	3.25	128.42	4.76	
5	14.00	8.70	74.90	2.50	187.25	6.94	
Total						43.33	
Via Area from .dwg							
Piece	Length	Height	Area	Depth	Vol (CF)	Vol (CY)	
1.00			108.62	2.50	271.55	10.06	
2.00			44.83	3.25	145.70	5.40	
3.00			146.30	3.00	438.90	16.26	
4.00			41.46	3.25	134.75	4.99	
5.00			75.58	2.50	188.95	7.00	
Total						43.70	43.7
FORWARD ABUTMENT							
via calculation							
Piece	Length	Height	Area	Depth	Vol (CF)	Vol (CY)	
1	13.00	8.53	68.44	2.50	171.11	6.34	
2	4.50	8.53	38.38	3.25	124.75	4.62	
3	38.01	3.61	137.22	3.00	411.65	15.25	
4	4.49	10.05	45.12	3.25	146.64	5.43	
5	17.00	10.05	102.43	2.50	256.06	9.48	
Total						41.12	41.12
Via Area from .dwg							
Piece	Length	Height	Area	Depth	Vol (CF)	Vol (CY)	
1.00			68.57	2.50	171.43	6.35	
2.00			40.13	3.25	130.42	4.83	
3.00			137.36	3.00	412.08	15.26	
4.00			43.13	3.25	140.17	5.19	
5.00			102.32	2.50	255.80	9.47	
Total						41.11	
						TOTAL	85 CY

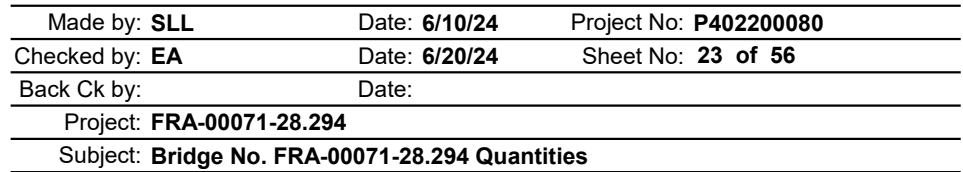


Made by: SLL	Date: 6/5/24	Project No: P402200080
Checked by: IS	Date: 6/19/24	Sheet No 22 of 56
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Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

511 Ext.: 46512 Unit: CY
 Item Description: CLASS QC1 CONCRETE WITH QC/QA, FOOTING
 Member Location :

Pier Conc					
	Height	Width	Length	Vol (CF)	Vol(CY)
Piece 1	3.50	11.00	11.00	423.50	15.69
Piece 2	3.50	9.00	9.00	283.50	10.50
Piece 3	3.50	11.00	11.00	423.50	15.69
Pile Hole	3.50	1.33 Dia.		-4.86	-0.18
Total from Pier:					41.69
Rear Abut Conc					
	Height	Width	Length	Vol (CF)	Vol(CY)
Piece 1	3.00	6.50	78.50	1,530.75	56.69
Forward Abut Conc					
	Height	Width	Length	Vol (CF)	Vol(CY)
Piece 1	3.00	6.50	77.00	1,501.50	55.61
Total from Abutments:					112.31
Piers					41.69
Abutments					112.31
TOTAL					154 CY



512 Ext.: 10100 Unit: SY
 Item Description: SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
 Member Location :

Printed: 9/10/2024 10:48 AM Desktop\TranSystems Projects\FRA-071_270-28.27_25.99A\Estimated Qty\FRA-00071-28.294 Quantity Calculations Ramp O_FINAL.xlsm



Made by: SLL	Date: 6/10/24	Project No: P402200080
Checked by: EA	Date: 6/20/24	Sheet No 24 of 56
Back Ck by:	Date:	
Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

_____ 512 _____ Ext.: _____ 33000 _____ Unit: _____ SY _____
Item Description: TYPE 2 WATERPROOFING _____
Member Location : _____

Location	Count	Width	Length	Area (SF)	Area (SY)	Sheet	
RA	2.00	3.00	5.23	31.35	3.48	15,16	
FA	2.00	3.00	5.02	30.12	3.35	17,18	
RA Diaph	1.00	3.00	40.61	121.84	13.54		
FA Diaph	1.00	3.00	40.67	122.00	13.56		
Total					33.92	SY	33.92
TOTAL							34 SY



Made by: SLL	Date: 6/5/24	Project No: P402200080
Checked by: IS	Date: 6/19/24	Sheet No 25 of 56
Back Ck by:	Date:	
Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

513 Ext.: 10300 Unit: LB
Item Description: STRUCTURAL STEEL MEMBERS, LEVEL 5
Member Location :

Member	Weight	
G1	47,271.09	
G2	47,267.21	
G3	47,262.04	
G4	47,259.45	
Bearing Stiffeners	596.98	
Intermediate Stiffeners	511.70	
Field Splices	7,604.53	
Crossframes	22,554.66	
Bolts	6,609.83	
Total	226,937.49	
		Rounded Total 227,000.00
Notes		
Crossframes include 4 Ls, 4 plates, 2 stiffeners per sheet 28/47		
Bolts are calculated as 3% of structural steel weight		
Bearing stiffeners included only above the pier per sheet 26/47		
Girder dimensions from sheet 26/47		
TOTAL		227000 LB



Made by: SLL	Date: 6/6/24	Project No: P402200080
Checked by: IS	Date: 6/19/24	Sheet No: 26 of 56
Back Ck by:	Date:	
Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

513 Ext.: 20000 Unit: EACH
Item Description: WELDED STUD SHEAR CONNECTORS
Member Location :

Girder 1	Location	Number	Girder 2	Location	Number	
	Y1	13.00		Y1	13.00	
	Y2	52.00		Y2	72.00	
	Y3			Y3		
	Y4	20.00		Y4	24.00	
	Y5	29.00		Y5	13.00	
	Y6	14.00		Y6	23.00	
	Y7			Y7		
	Y8	89.00		Y8	99.00	
Girder 3	Location	Number	Girder 4	Location	Number	
	Y1	13.00		Y1	23.00	
	Y2	72.00		Y2	57.00	
	Y3			Y3		
	Y4	24.00		Y4	23.00	
	Y5	13.00		Y5	17.00	
	Y6	23.00		Y6	24.00	
	Y7			Y7		
	Y8	99.00		Y8	105.00	
x3 total				2,862.00		
Total						2,862.00
TOTAL						2862 EACH



Made by: SLL	Date: 6/5/24	Project No: P402200080
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Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

514 Ext.: 00060 Unit: SF
 Item Description: FIELD PAINTING OF STRUCTURAL STEEL, INTERMEDIATE COAT
 Member Location :

Location	Count	Length	Width	Area	(SF)	
G1-4 Web	2.00	701.94	3.58	5,030.59		
G1-4 TF	2.00	701.94	0.10	146.24		
G1-4 TF	2.00	701.94	0.17	233.98		
G1-4 TF	1.00	701.94	1.29	906.68		
G1-4 BF	1.00	701.94	1.50	1,052.91		
G1-4 BF	1.00	701.94	1.46	1,023.67		
G1-4 BF	2.00	701.94	0.15	204.73		
G1-4 BF	2.00	701.94	0.17	233.98		
INT STIFF	24.00	3.58	0.58	50.17		
INT STIFF	12.00	3.58	0.04	1.79		
BRG STIFF	16.00	3.58	0.58	33.44		
BRG STIFF	8.00	3.58	0.07	2.09		
SQ GUS	108.00	1.33	1.33	192.00		
RECT GUS	108.00	1.33	0.83	120.00		
L TOP	27.00	9.17	2.00	495.00		
L BOT	27.00	9.17	2.00	495.00		
L LEFT	27.00	3.50	1.33	126.00		
L RIGHT	27.00	3.50	1.33	126.00		
CENTER	54.00	1.42	3.00	229.50		
				Total		10,703.77
say 11000				TOTAL		11000 SF



Made by: SLL	Date: 6/5/24	Project No: P402200080
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Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

514 Ext.: 00066 Unit: SF
 Item Description: FIELD PAINTING STRUCTURAL STEEL, FINISH COAT
 Member Location :

Location	Count	Length	Width	Area (SF)	
G1-4 Web	2.00	701.94	3.58	5,030.59	
G1-4 TF	2.00	701.94	0.10	146.24	
G1-4 TF	2.00	701.94	0.17	233.98	
G1-4 TF	1.00	701.94	1.29	906.68	
G1-4 BF	1.00	701.94	1.50	1,052.91	
G1-4 BF	1.00	701.94	1.46	1,023.67	
G1-4 BF	2.00	701.94	0.15	204.73	
G1-4 BF	2.00	701.94	0.17	233.98	
INT STIFF	24.00	3.58	0.58	50.17	
INT STIFF	12.00	3.58	0.04	1.79	
BRG STIFF	16.00	3.58	0.58	33.44	
BRG STIFF	8.00	3.58	0.07	2.09	
SQ GUS	96.00	1.33	1.33	170.67	
RECT GUS	96.00	1.33	0.83	106.67	
L TOP	96.00	10.17	0.50	488.00	
L BOT	96.00	10.17	0.33	325.33	
L LEFT	96.00	3.50	0.33	112.00	
L RIGHT	96.00	3.50	0.50	168.00	
CENTER	48.00	1.42	3.00	204.00	
				Total	10494.94
say 11000				TOTAL	11000 SF



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Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

516 Ext.: 10010 Unit: FT
Item Description: ARMORLESS PREFORMED JOINT SEAL
Member Location :

Width of Slab Along Skew		
FA	37.33	
RA	37.33	
Total	74.67	
		75 FT
TOTAL		75 FT



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Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

516 Ext.: 13600 Unit: SF
Item Description: 1" PREFORMED EXPANSION JOINT FILLER
Member Location :

Location	Height	Width	Area	Sheet	
RA Front	0.50	78.50	39.25	15	156
RA Back	0.50	78.50	39.25	15	
FA Front	0.50	77.00	38.50	17	
FA Back	0.50	77.00	38.50	17	
Railing			16.33	33	16
		Total	171.83		
TOTAL					172 SF



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Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

516 Ext.: 13900 Unit: SF
Item Description: 2" PREFORMED EXPANSION JOINT FILLER
Member Location :

Location	Count	Height	Width	Area	Sheet	
RA Left	1.00	5.81	2.50	14.52	15	
RA Right	1.00	5.74	2.50	14.35	15	
FA Left	1.00	5.76	2.50	14.40	17	
FA Right	1.00	5.78	2.50	14.45	17	
RA Dia M	1.00	8.00	3.00	24.00	35,36	
FA Dia Mid	1.00	8.00	3.00	24.00	35,36	105.73 Abutments
Railing	4.00	4.00	3.00	48	34	48.00 Super
Total				153.73		
TOTAL						154 SF



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Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

516 Ext.: 14020 Unit: FT
Item Description: SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL
Member Location :

See Sheet 35,36		
3' Width	Length	
RA	37.65	
FA	37.65	
Total	75.29	75 abutments
TOTAL		76 FT

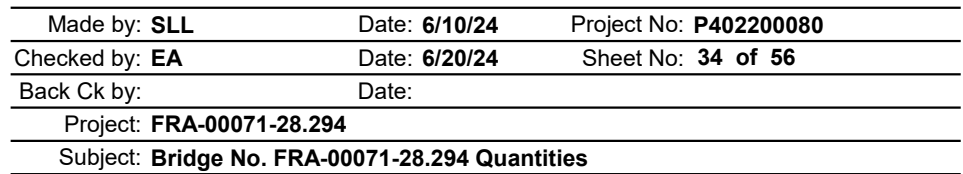


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Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

516 Ext.: 44201 Unit: EA
Item Description: ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN
Member Location :

Location	Quantity		
Rear Abut	4.00		
Fore Abut	4.00		
(From P.608)			
Total	8.00		
		Abutments	8.00
		TOTAL	8 EA



516 Ext.: 44201 Unit: EA
 Item Description: ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN
 Member Location :

Location	Quantity	
Pier	4.00	
(From P.609)		
Total	4.00	



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Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

518 Ext.: 20000 Unit: SY
Item Description: PREFABRICATED GEOCOMPOSITE DRAIN
Member Location :

Location	Height	Width	Area (SF)	Area (SY)	
RA Left	7.33	22.00	161.33	17.93	
RA Right	7.33	18.54	135.97	15.11	
FA Left	7.33	17.50	128.33	14.26	
FA Right	7.33	21.49	157.59	17.51	
Total				64.80	
TOTAL					65 SY



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Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

518 Ext.: 21200 Unit: CY
Item Description: POROUS BACKFILL WITH GEOTEXTILE FABRIC
Member Location :

Location	Length	Width	Depth	Vol (CF)	Vol (CY)	Sheet	
RA	22.00	1.00	1.00	22.00	0.81	15	
RA	37.96	3.00	1.00	113.88	4.22	15	
RA	18.54	1.00	1.00	18.54	0.69	15	
FA	17.50	1.00	1.00	17.50	0.65	17	
FA	38.01	3.00	1.00	114.03	4.22	17	
FA	21.49	1.00	1.00	21.49	0.80	17	
Total					11.39		11.39
TOTAL							12 CY

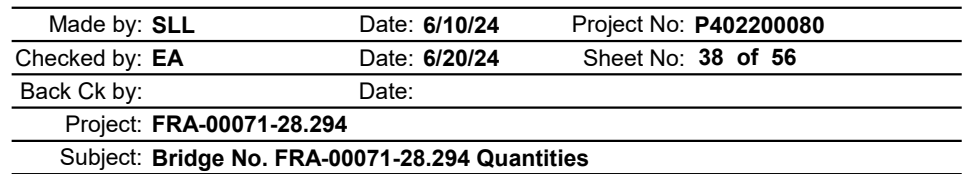


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Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

518 Ext.: 40000 Unit: FT
Item Description: 6" PERFORATED CORRUGATED PLASTIC PIPE
Member Location :

Location	Length	Sheet	
RA	23.00	15.00	
RA	56.00	15.00	
FA	56.00	17.00	
FA	22.00	17.00	
Total	157.00		157.00
TOTAL			157 FT

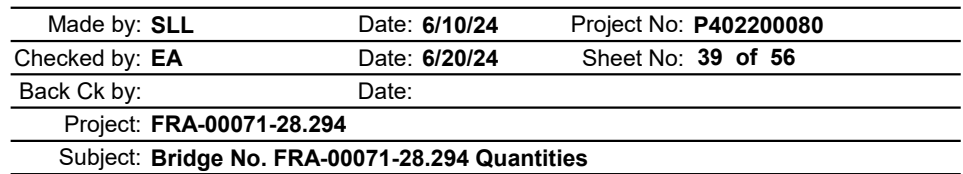


Item Description: DYNAMIC LOAD TESTING, AS PER PLAN

Member Location : _____

Location	Count
RA	1.00
FA	1.00
Pier	1.00
Total	3.00

*1 per substructure unit	Abut	2.00
	Pier	1.00
	TOTAL	3 EACH

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Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

526 Ext.: 30010 Unit: SY
Item Description: REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")
Member Location :

	Length (FT)	Width (FT)	Area (SF)	Area (SY)	
REAR APPROACH SLAB	29.91	37.33	1,116.69	124.08	
FORWARD APPROACH SLAB	29.99	37.33	1,119.81	124.42	
Total				248.50	248.50
TOTAL					249 SY



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Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

526 Ext.: 90030 Unit: FT
Item Description: TYPE C INSTALLATION
Member Location :

	Length (FT)	Sheet	
REAR SLEEPER SLAB	37.33	39	
FORWARD SLEEPER SLAB	37.33	39	
Total	74.67	Total	74.67
TOTAL			75 FT



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Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

601 Ext.: 21000 Unit: SY
Item Description: CONCRETE SLOPE PROTECTION
Member Location :

Location	Length	Width	Area (SF)	Area (SY)	Sheet	
RA	94.00	3.17	297.67	33.07	41,43	
FA	94.00	2.27	213.46	23.72	42,43	
Total				56.79		56.79
TOTAL						57 SY



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Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

840 Ext.: 20000 Unit: SF
Item Description: MECHANICALLY STABILIZED EARTH WALL
Member Location :

Mechanically Stabilized Earth Wall			
	Length	Height	Area
Rear MSE	144.63	14.90	1,994.41
Forward MSE	149.77	16.70	2,180.28
Total			4,174.70
TOTAL			4175 FT



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Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

840 Ext.: 21000 Unit: CY
 Item Description: WALL EXCAVATION
 Member Location :

Rear Abutment						
Length	Width	Area	Depth	Vol (CF)	Vol (CY)	
94.00	19.60	1,841.93	5.00	9,209.65	341.10	
50.63	27.16	1,374.72	5.00	6,873.61	254.58	
Forward Abutment						
Length	Width	Area	Depth	Vol (CF)	Vol (CY)	
94.00	23.34	2,193.96	4.50	9,872.82	365.66	
55.77	31.57	1,760.41	4.50	7,921.83	293.40	
Total					1254.74	1254.74
TOTAL						1255 FT



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Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

840 Ext.: 22000 Unit: SY
Item Description: FOUNDATION PREPARATION
Member Location :

Rear Abutment			
Length	Width	Area	
94.00	17.60	1,653.93	
50.63	25.16	1,273.47	
Forward Abutment			
Length	Width	Area	
94.00	21.34	2,005.49	
55.77	29.57	1,648.86	
Total		6,581.76 SF	
		731.31 SY	731.31
TOTAL			732 SY



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Bridge No. FRA-00071-28.294 Quantities

840 Ext.: 23000 Unit: CY
 Item Description: SELECT GRANULAR BACKFILL
 Member Location :

Rear Abutment						
	Length	Height	Area	Depth	Vol (CF)	Vol (CY)
Bot Trap	144.63	14.90	1,966.10	15.60	30,661.33	1136
Top Trap L	21.65	10.30	132.83	11.06	1,469.07	54
Top Trap R	18.92	8.70	103.68	12.31	1,276.24	47
Under RA	78.50	2.00	157.00	11.68	1,834.54	68
Forward Abutment						
	Length	Height	Area	Depth	Vol (CF)	Vol (CY)
Bot Trap	149.77	16.70	2,207.87	19.34	42,689.22	1,581.08
Top Trap L	17.91	8.53	97.30	11.25	1,094.57	40.54
Top Trap R	21.10	10.05	126.67	10.16	1,286.99	47.67
Under FA	77.00	2.00	154.00	10.70	1,648.57	61.06
Total						3,035.58
						3,035.58 CY
TOTAL						3036 CY



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Bridge No. FRA-00071-28.294 Quantities

840 Ext.: 23001 Unit: CY
 Item Description: SELECT GRANULAR BACKFILL, AS PER PLAN
 Member Location :

Forward Abutment						
Layer	Length	Width	Depth	Vol (CF)	Vol (CY)	
1	24.00	16.83	1.00	404.00	14.96	
2	28.50	33.00	1.00	940.50	34.83	
3	28.50	40.00	1.00	1,140.00	42.22	
4	28.50	39.50	1.00	1,125.75	41.69	
5	28.50	39.00	1.00	1,111.50	41.17	
6	29.00	39.00	1.00	1,131.00	41.89	
7	11.00	38.50	1.00	423.50	15.69	
8	8.00	38.50	1.00	308.00	11.41	
Total					243.86	243.86
Rear Abutment						
Layer	Length	Width	Depth	Vol (CF)	Vol (CY)	
1	24.00	16.83	1.00	404.00	14.96	
2	28.50	33.00	1.00	940.50	34.83	
3	28.50	40.00	1.00	1,140.00	42.22	
4	28.50	39.50	1.00	1,125.75	41.69	
5	28.50	39.00	1.00	1,111.50	41.17	
6	29.00	39.00	1.00	1,131.00	41.89	
7	11.00	38.50	1.00	423.50	15.69	
8	8.00	38.50	1.00	308.00	11.41	
Total					243.86	243.86
TOTAL						488 CY

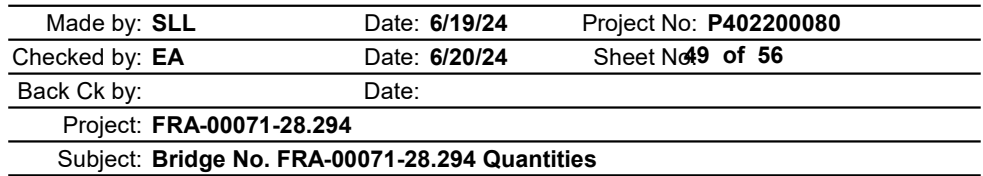


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Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

840 Ext.: 23050 Unit: CY
Item Description: NATURAL SOIL
Member Location :

Rear Abutment	Width	Depth	Length	Vol (CY)	
Right	64.00	2.00	15.75	74.68	
Left	58.00	2.00	15.75	67.68	
Forward Abutment					
Right	62.00	2.00	18.00	82.67	
Left	55.00	2.00	18.00	73.33	
Total				298.36	298.36
TOTAL				299	CY



840 Ext.: 25010 Unit: FT
 Item Description: 6" DRAINAGE PIPE, PERFORATED
 Member Location : _____

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Bridge No. FRA-00071-28.294 Quantities

840 Ext.: 25010 Unit: FT
Item Description: 6" DRAINAGE PIPE, NON-PERFORATED
Member Location :

6" Drainage Pipe, Non-Perforated		
Location	Length (FT)	Comments
RA	3.00	Left
RA	1.00	Right
FA	6.50	Left
FA	6.50	Right
Total	17.00	
		17.00
TOTAL		17 FT



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Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

840 Ext.: 26000 Unit: FT
Item Description: CONCRETE COPING
Member Location :

Concrete Coping		
	Length	FT
RA	147.00	
FA	157.00	
Total	304.00	304.00
TOTAL		304 FT



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Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

_____ 840 _____ Ext.: _____ 26050 _____ Unit: _____ SF _____
Item Description: AESTHETIC SURFACE TREATMENT
Member Location : _____

Aesthetic Surface Treatment				
	Length	Height	Area	
Rear MSE	144.63	14.90	1,994.41	
Forward MSE	149.77	16.70	2,180.28	
Total			4,174.70	4,174.70
TOTAL				4175 SF



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Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

840 Ext.: 27000 Unit: DAY
Item Description: ON-SITE ASSISTANCE
Member Location :

Total Days 5	5
TOTAL	5 DAY



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Bridge No. FRA-00071-28.294 Quantities

840 Ext.: 28000 Unit: LS
Item Description: SGB INSPECTION AND COMPACTION TESTING
Member Location :

SGB Inspection and Compaction Testing: Lump Sum	LS
TOTAL	LS



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Bridge No. FRA-00071-28.294 Quantities

863 Ext.: 00100 Unit: SY
 Item Description: GEOGRID, TYPE P1
 Member Location :

TYPE P1 GEOGRID REINFORCEMENT					
REAR ABUTMENT					
Layer	Length	Width	Area (SF)	Area (SY)	
1	27.75		0.00	0.00	Agg layer
2	36.50	23.00	839.50	93.28	Top
3	36.50	40.08	1,463.04	162.56	
4	36.50	47.06	1,717.78	190.86	
5	36.50	47.06	1,717.78	190.86	
6	36.50	47.06	1,717.78	190.86	
7	37.00	47.06	1,741.31	193.48	
8	19.50	47.06	917.72	101.97	
9	16.50	47.06	776.53	86.28	Bottom
TOTAL				1,210.16	1,210.16
FORWARD ABUTMENT					
Layer	Length	Width	Area (SF)	Area (SY)	
1	27.75		0.00	0.00	Agg layer
2	36.50	23.00	839.50	93.28	Top
3	36.50	40.08	1,463.04	162.56	
4	36.50	47.06	1,717.78	190.86	
5	36.50	47.06	1,717.78	190.86	
6	36.50	47.06	1,717.78	190.86	
7	37.00	47.06	1,741.31	193.48	
8	19.50	47.06	917.72	101.97	
9	16.50	47.06	776.53	86.28	Bottom
TOTAL				1,210.16	1,210.16
TOTAL					2421 SY



Made by: SLL	Date: 6/19/24	Project No: P402200080
Checked by: EA	Date: 6/20/24	Sheet No 56 of 56
Back Ck by:	Date:	
Project: FRA-00071-28.294		
Subject: Bridge No. FRA-00071-28.294 Quantities		

Bridge No. FRA-00071-28.294 Quantities

867 Ext.: 00100 Unit: LS
Item Description: TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL
Member Location :

Temporary Wire Faced Mechanically Stabilized Earth Wall: Lump Sum	LS
TOTAL	LS