

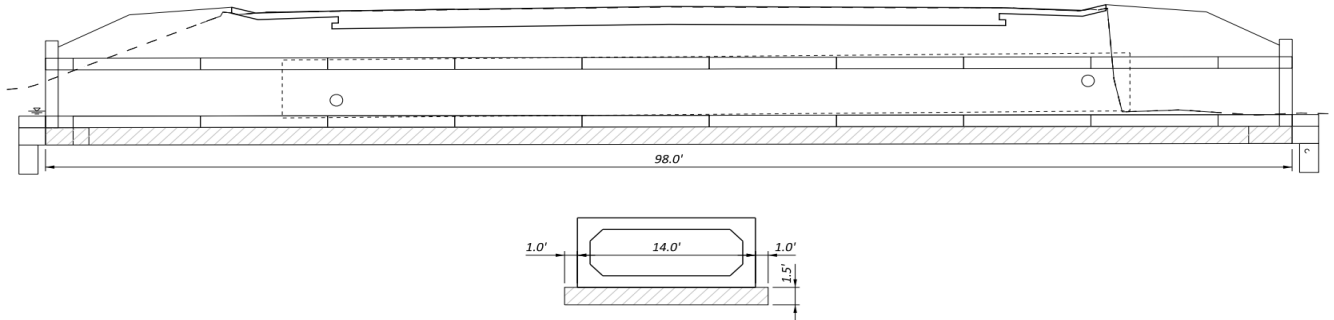
**INDEX TO STRUCTURE ESTIMATED QUANTITY CALCULATIONS**  
**BRIDGE NO. MAH-422-8.352**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>SHEET</b>
201-11001	STRUCTURE REMOVED, AS PER PLAN	1
203-10000	EXCAVATION	1
203-35110	GRANULAR MATERIAL, TYPE B 703.16	1
204-50000	GEOTEXTILE FABRIC, TYPE D	1
503-11100	COFFERDAMS AND EXCAVATION BRACING	1
503-21300	UNCLASSIFIED EXCAVATION (WINGWALL FOOTING)	1
509-10000	EPOXY COATED STEEL REINFORCEMENT	1
511-46010	CLASS QC1 CONCRETE, RETAINING/WINGWALL, NOT INCLUDING FOOTING	2
511-46510	CLASS QC1 CONCRETE, FOOTING	2
511-46610	CLASS QC1 CONCRETE, HEADWALL	3
512-10100	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	3
512-33000	TYPE 2 WATERPROOFING	3
516-13600	1" PREFORMED EXPANSION JOINT FILLER	4
518-21200	POROUS BACKFILL WITH GEOTEXTILE FABRIC	4
601-32100	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	4
611-95601	12'-0" X 4'-0" CONDUIT, TYPE A, 706.05, AS PER PLAN	4

ITEM 202 11001 STRUCTURE REMOVED, AS PER PLAN

LUMP SUM

ITEM 203 10000 EXCAVATION



$(16' \times 1.5') \times 98' \times 1/27 = 87.111 \text{ CY}$

87 CY

ITEM 203 35110 GRANULAR MATERIAL, TYPE B 703.16

87 CY

ITEM 204 50000 GEOTEXTILE FABRIC, TYPE D

$98' \times 16' \times 1/9 = 174.222 \text{ SY}$

174 CY

ITEM 503 11100 COFFERDAMS AND EXCAVATION BRACING

LUMP SUM

ITEM 503 21300 UNCLASSIFIED EXCAVATION (WINGWALL FOOTING)

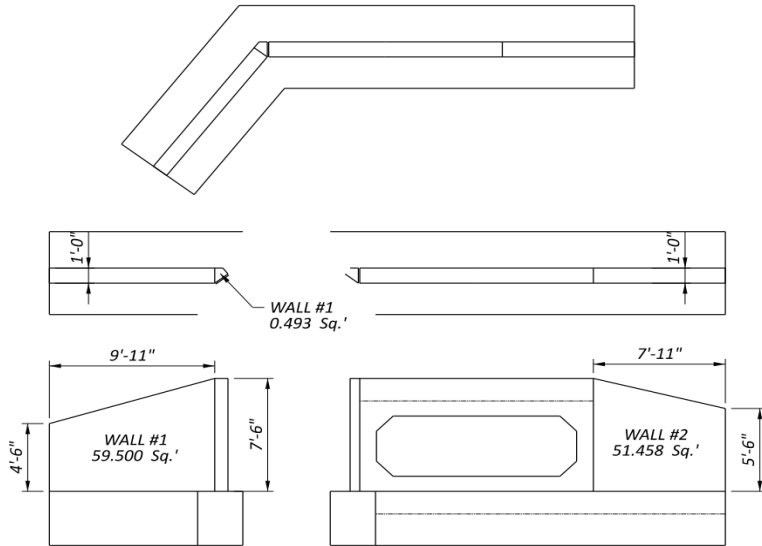
LUMP SUM

ITEM 509 10000 EPOXY COATED STEEL REINFORCEMENT

CARRIED FROM SHEET P.40/40

3534 LB

ITEM 511 46010 CLASS QC1 CONCRETE, RETAINING/WINGWALL, NOT INCLUDING FOOTING  
 (AREAS BY CADD)

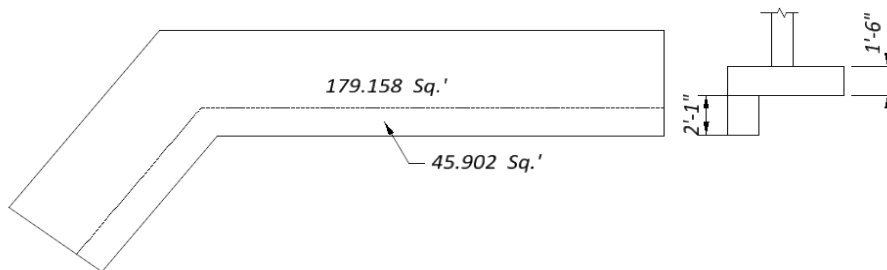


WALL #1  
 $2 \times (1 \times 59.5 \text{ SF}) + (.493 \times 7.5') = 126.395 \text{ CF}$   
 WALL #2  
 $2 \times (1 \times 51.458 \text{ SF}) = 102.916 \text{ CF}$   
**TOTAL = 229.311 CF**

$229.311 \times 1/27 = 8.493 \text{ CY}$

9 CY

ITEM 511 46510 CLASS QC1 CONCRETE, FOOTING  
 (AREAS BY CADD)



$(179.158 \text{ SF} \times 1.5) \times 1/27 = 9.95322 \text{ CY}$   
 $(45.902 \text{ SF} \times 2.083) \times 1/27 = 3.54125 \text{ CY}$   
 $(2.083' \times 1.0' \times 14) \times 1/27 = 1.08007 \text{ CY}$   
**14.5746 CY**

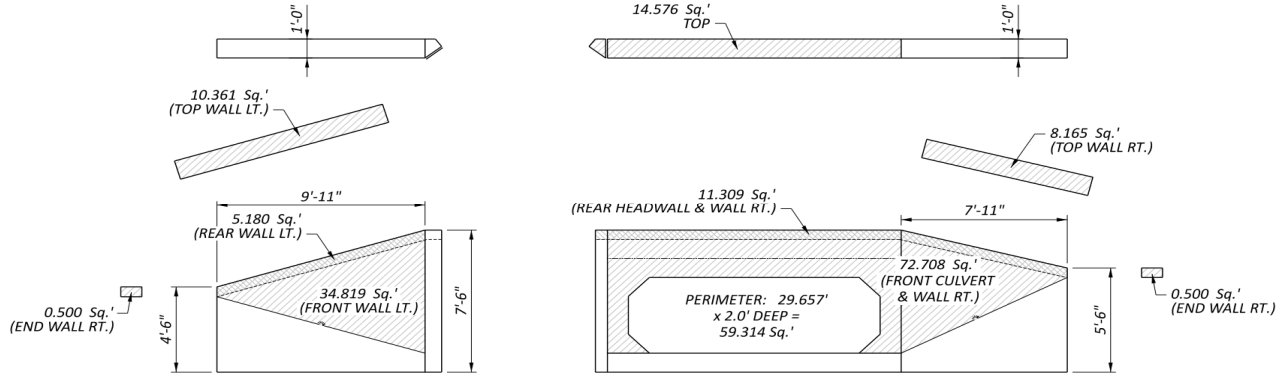
15 CY

ITEM 511 46610 CLASS QC1 CONCRETE, HEADWALL  
 (AREAS BY CADD)

1.0'D x 1.5'H x 14.0' W x 1/27 = 0.777778 CY

1 CY

ITEM 51210100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)  
 (AREAS BY CADD)



LEFT WALL

FRONT:	34.819	SF
REAR:	5.180	SF
TOP:	10.361	SF
END:	0.500	SF
<b>TOTAL</b>	<b>50.860</b>	<b>SF</b>

CULVERT FRONT, HEADWALL & RIGHT WALL

FRONT:	72.708	SF
REAR:	11.309	SF
HW TOP:	14.576	SF
WALL TOP:	8.165	SF
END:	0.500	SF
<b>CULVERT OPENING:</b>	<b>59.314</b>	<b>SF</b>
<b>TOTAL</b>	<b>166.572</b>	<b>SF</b>

2 x (50.860 SF + 166.572 SF) x 1/9 = 48.318 SY

49 SY

ITEM 512 33000 TYPE 2 WATERPROOFING

CULVERT SIDES:

2 x ((96'L x 7.5'H) + (2.0'W x 7.5'H)) = 1470.000 SF

CULVERT TOP:

96.0'L x (14'W + 2') = 112.000 SF

**1582.000 SF**

1582.000 x 1/9 = 175.778 SY

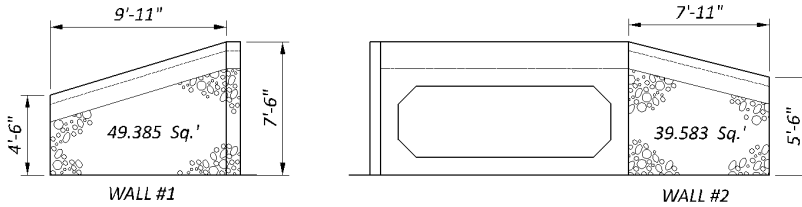
176 SY

ITEM 516 13600 1" PREFORMED EXPANSION JOINT FILLER

$2 \times (7.5'H \times 1.0'W) = 15.000 \text{ SF}$

15 SF

ITEM 518 21200 POROUS BACKFILL WITH GEOTEXTILE FABRIC  
 (AREAS BY CADD)



WALL 1

$49.385 \text{ SF} \times 1.5' \times 1/27 = 2.74361 \text{ CY}$

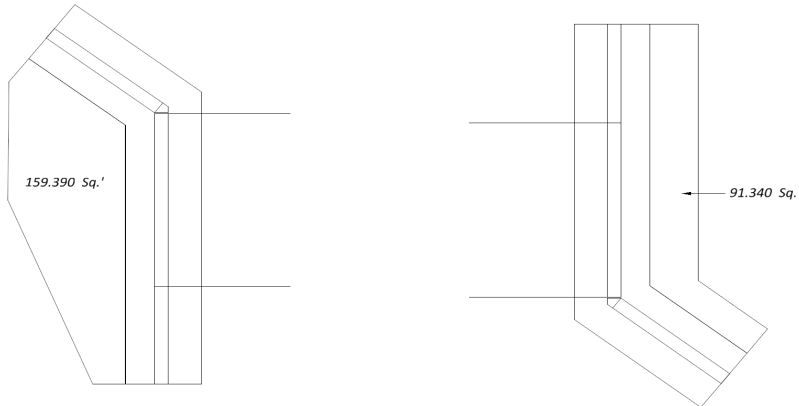
WALL 2

$39.583 \text{ SF} \times 1.5 \times 1/27 = 2.19906 \text{ CY}$

TOTAL = 4.94267 CY

5 CY

ITEM 601 32100 ROCK CHANNEL PROTECTION, TYPE B WITH FILTER  
 (AREAS BY CADD)



$(159.390 \text{ SF} + 91.340 \text{ SF}) \times 2.5'D \times 1/27 = 23.216 \text{ CY}$

23 CY

ITEM 611 95601 12'-0" X 4'-0" CONDUIT, TYPE A, 706.05, AS PER PLAN

98 FT