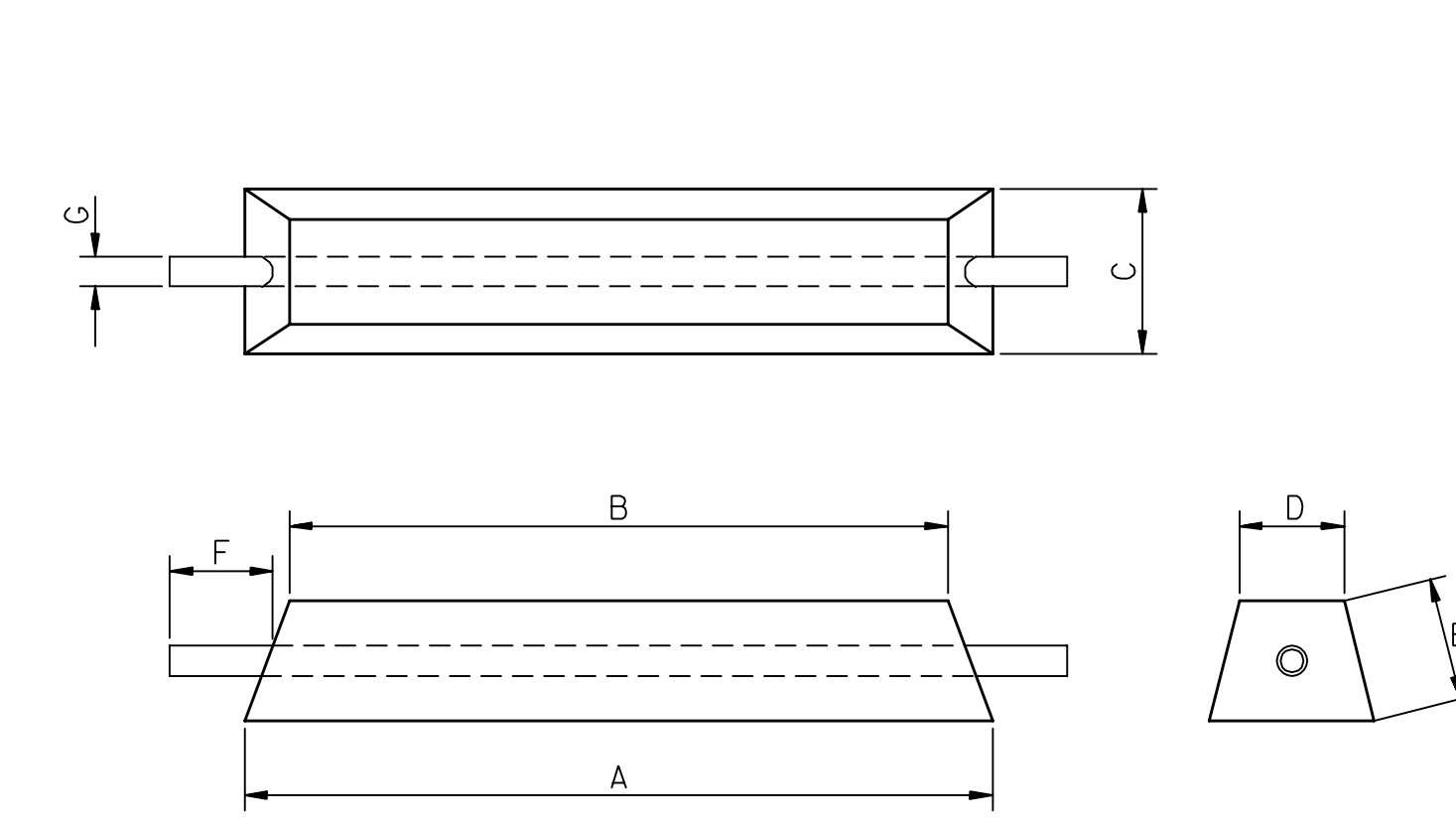
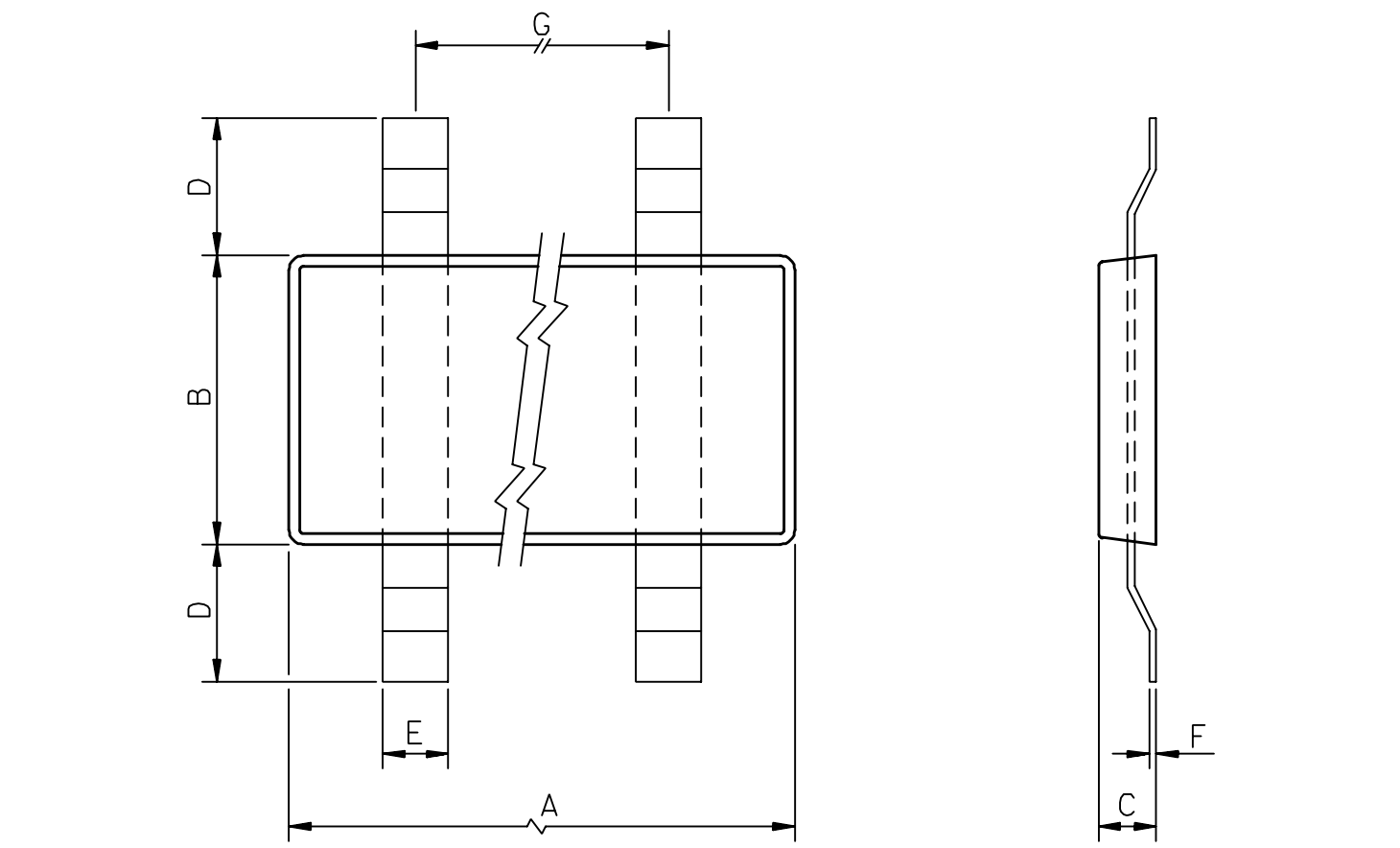
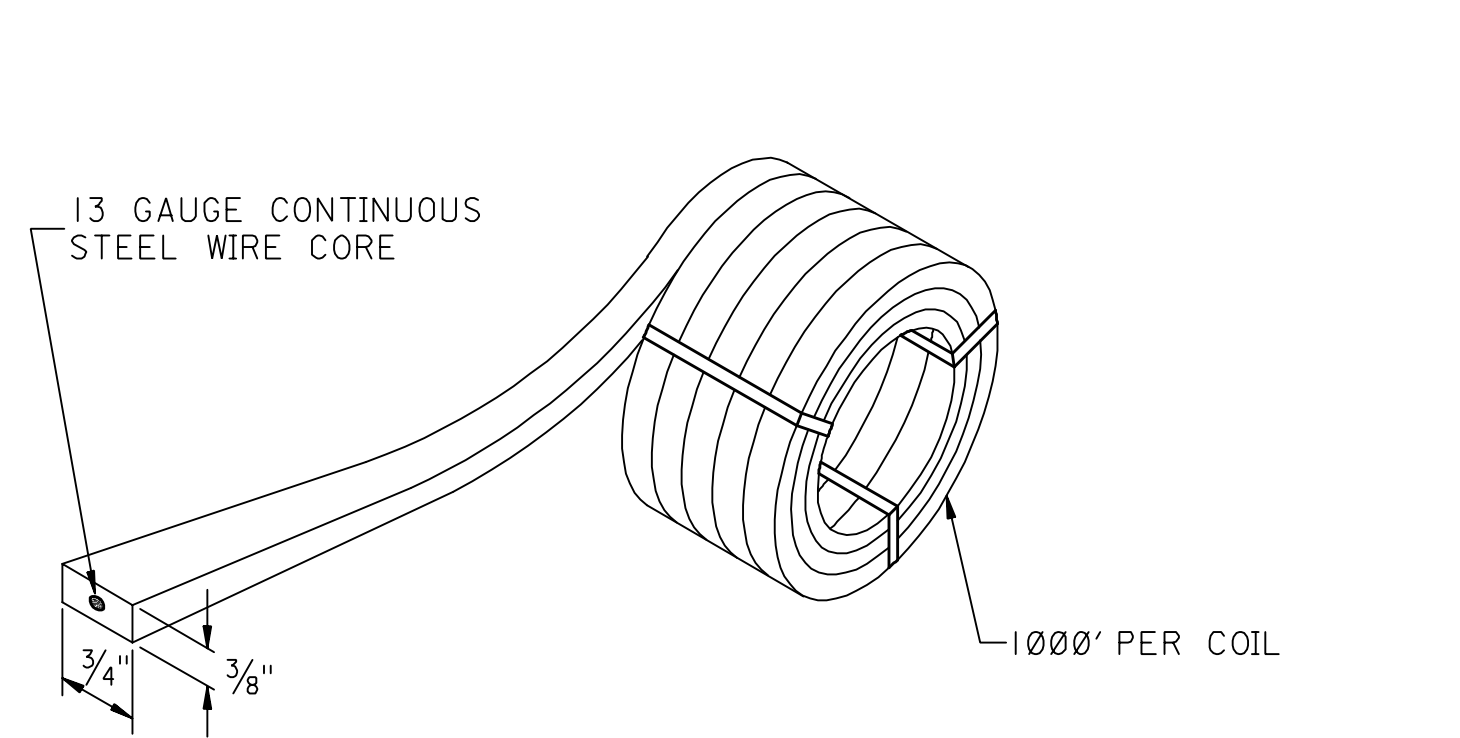




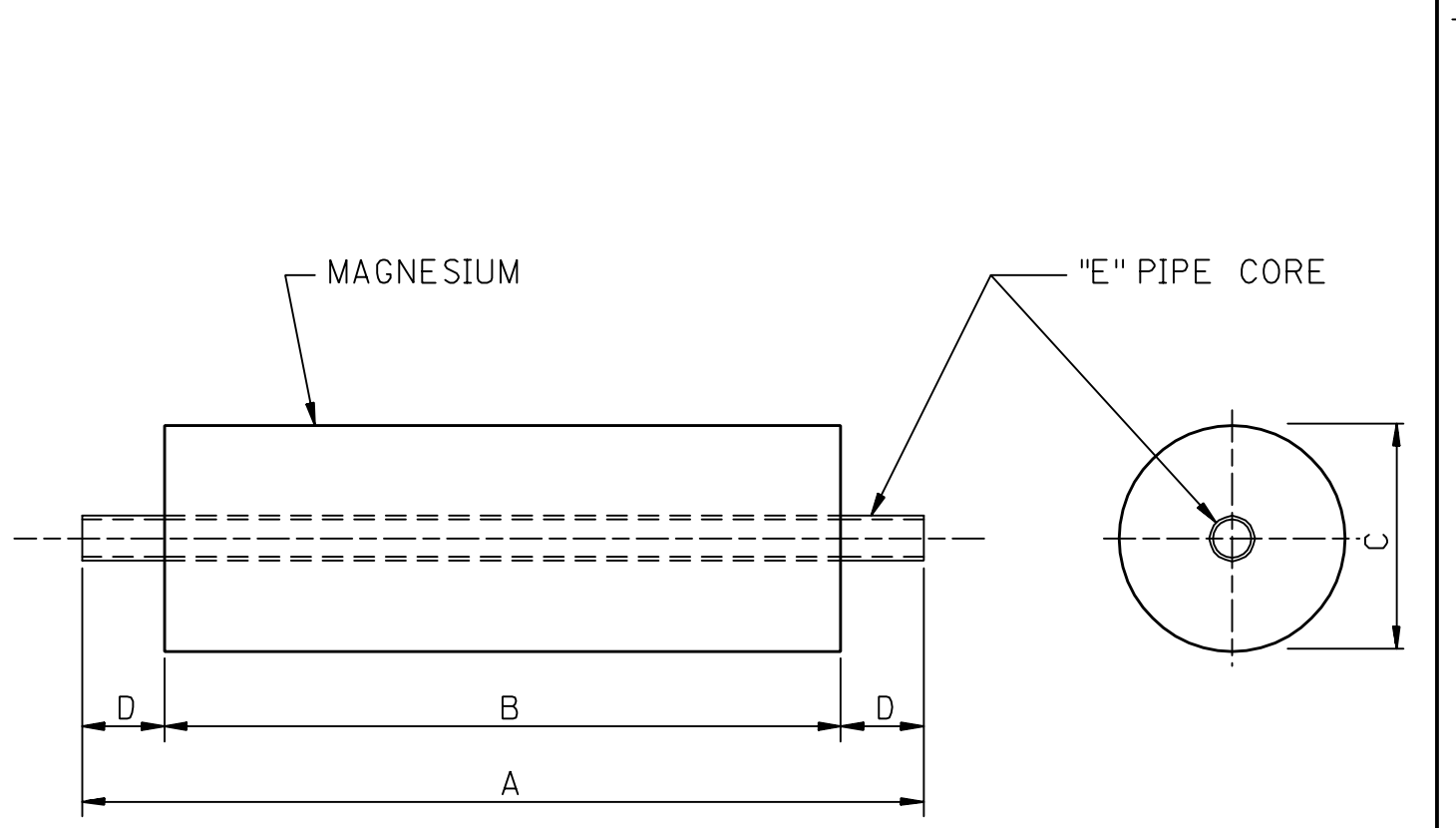
DETAIL-1 : GAL VALUM III ANODES								
SAPMM#	WEIGHT	A	B	C	D	E	F	G
1000073205	560 LBS.	96"	94 1/2"	9 1/2"	6 3/4"	8"	12"	2 1/2"
1000073288	279 LBS.	61"	60"	7 1/4"	6 1/4"	6 1/4"	6"	1"
1000073307	24 LBS.	60"	59"	2 1/2"	1 3/4"	2 1/2"	3"	3/4"



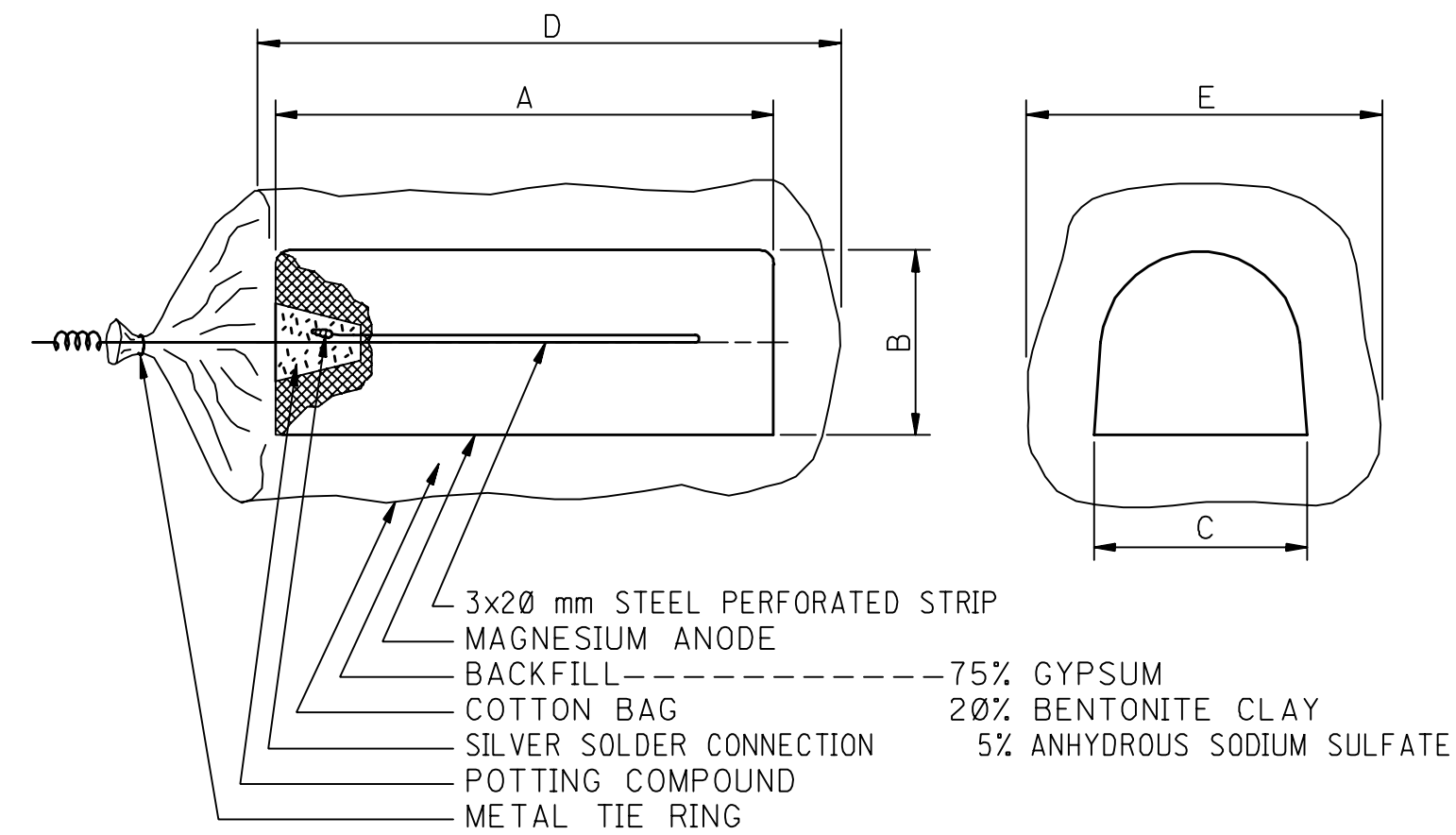
DETAIL-2 : GALVANIC ANODES										
SAPMM#	MATERIAL	WEIGHT	A	B	C	D	E	F	G	
1000073201	ALUMINUM	140 LBS.	72"	8"	3"	2"	2"	1 1/4"	36"	
1000073203	ALUMINUM	76 LBS.	48"	4"	4"	2"	2"	1/4"	24"	
1000073413	ZINC	23 LBS.	12"	6"	1 1/4"	2"	2"	1/4"	6"	



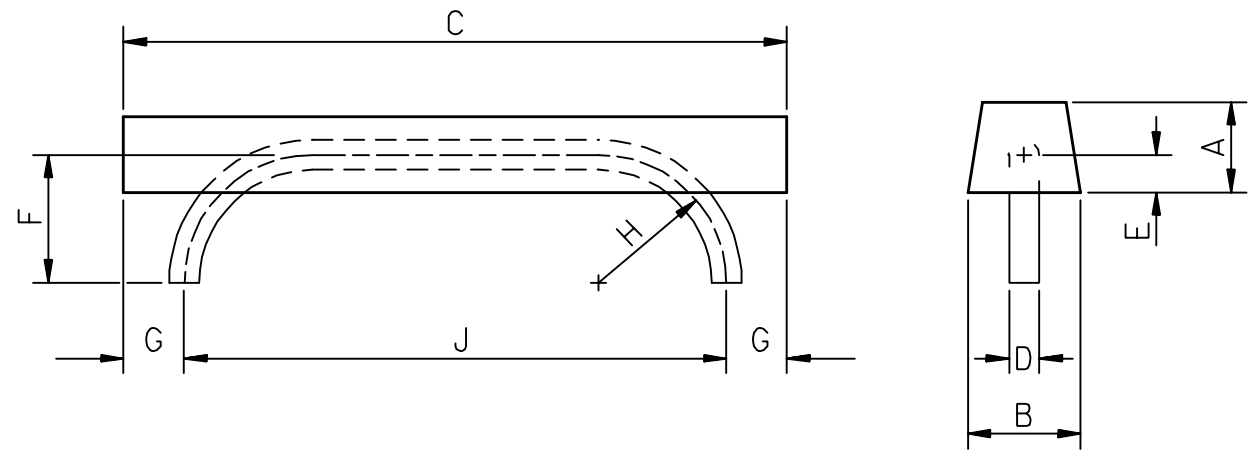
DETAIL-3 : MAGNESIUM RIBBON ANODE	
SAPMM#	WEIGHT
1000073334	0.23 LBS./FT.



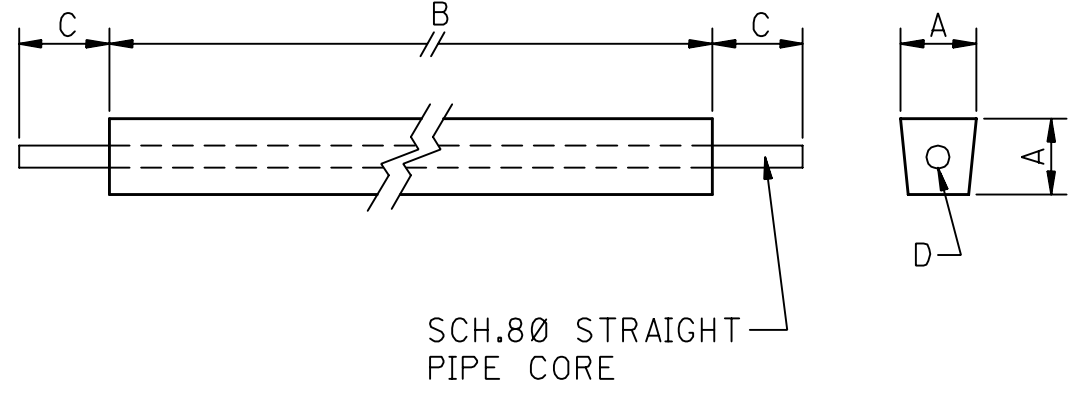
DETAIL-4 : MAGNESIUM ANODES					
SAPMM#	WEIGHT	A	B	C	E
1000073348	50 LBS.	18"	16"	8"	1"
1000073370	100 LBS.	34"	32"	8"	1"



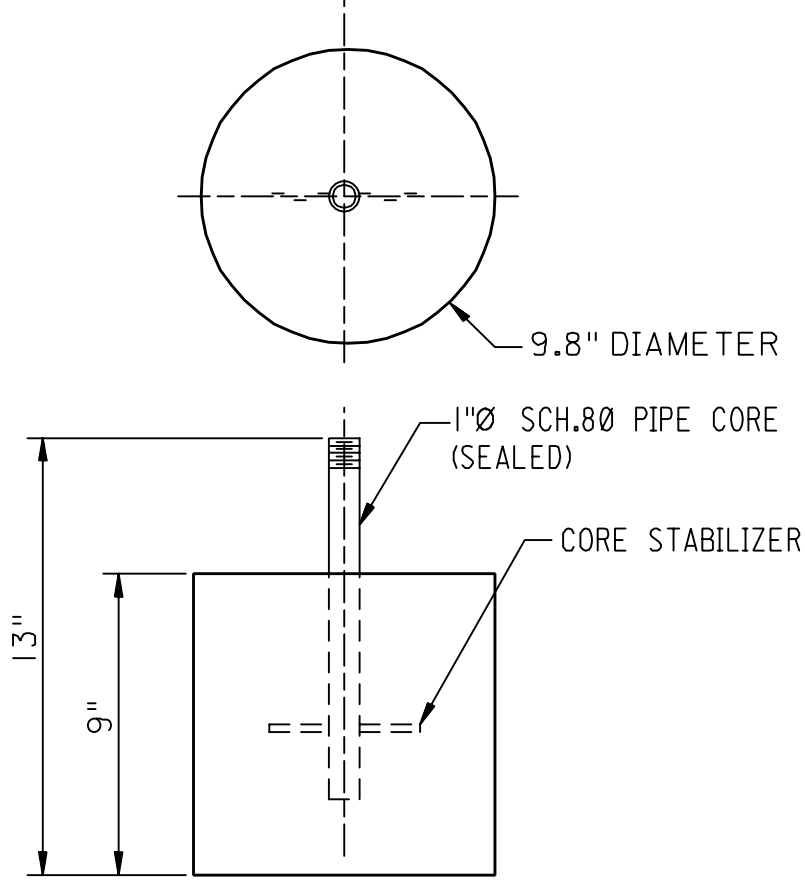
DETAIL-5 : PREPACKAGED MAGNESIUM ANODES						
SAPMM#	LEAD WIRE	BARE WEIGHT	A	B	C	E
1000073337	25-No.8 AWG STRANDED	60 LBS.	60"	4"	4"	8"
1000073343	25-No.8 AWG STRANDED	32 LBS.	21"	5 1/2"	4 1/2"	8"



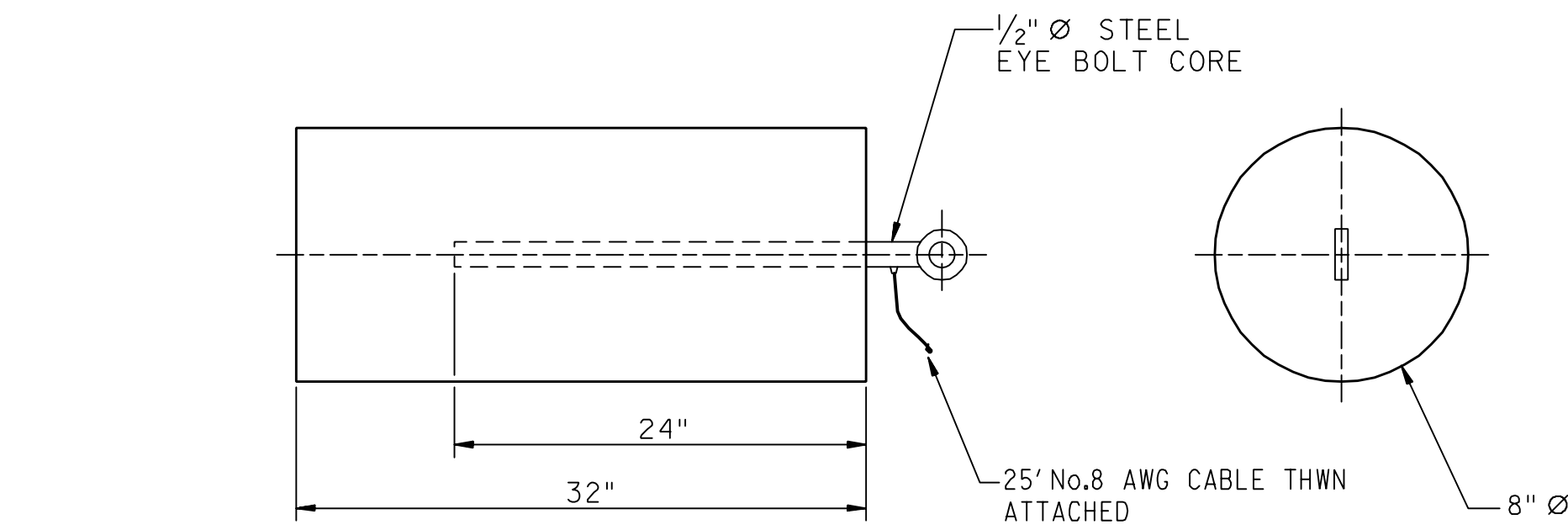
DETAIL-6 : COW HORN GALVANIC ANODES										
SAPMM#	WEIGHT	A	B	C	D	E	F	G	H	J
1000073207	639 LBS.	8"	8"	120"	2 1/4"	4"	20"	6"	20"	108"
DC	1380 LBS.	11"	11"	120"	4"	5 1/2"	20"	6"	20"	108"



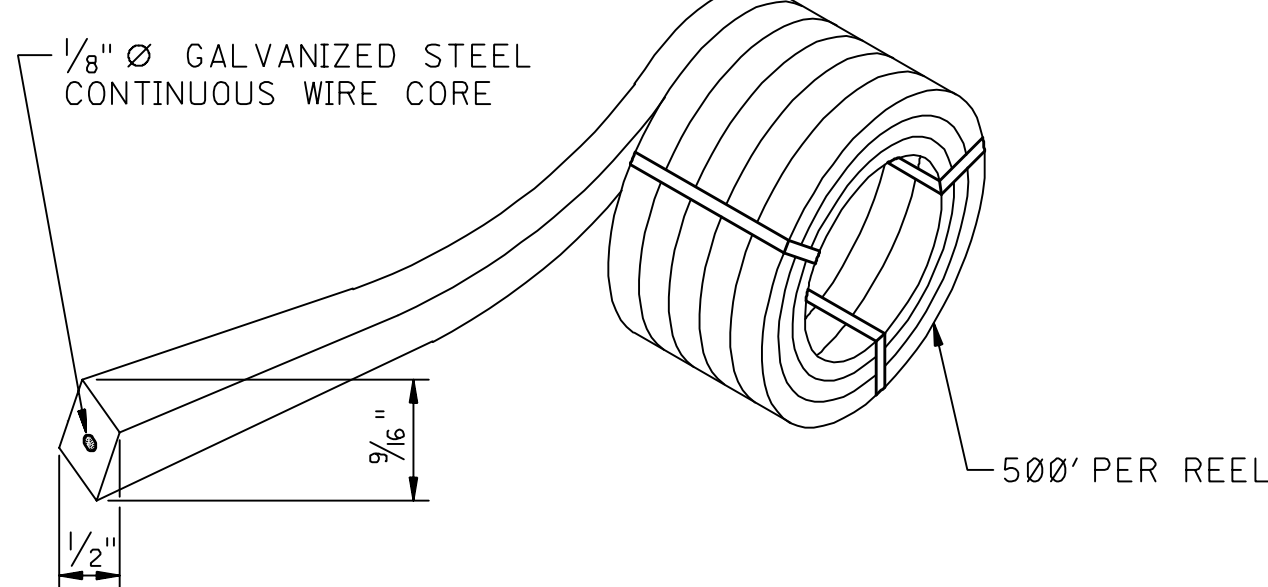
DETAIL-7 : GALVANIC ANODES				
SAPMM#	WEIGHT	A	B	D
DC	639 LBS.	8"	120"	12"
1000073251	1380 LBS.	11"	120"	12"



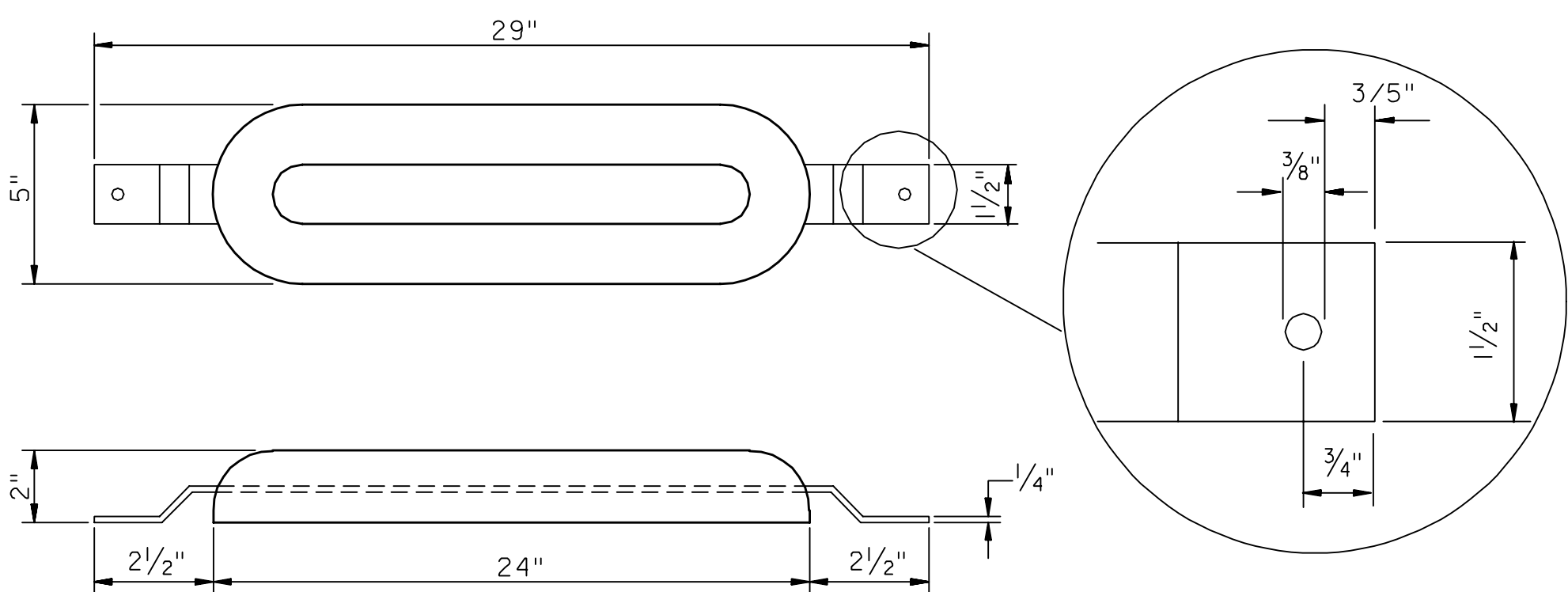
DETAIL-8 : ALUMINUM ANODE		
SAPMM#	ANODE NET WEIGHT	WEIGHT WITH CORE
1000073257	47 LBS.	49 LBS.



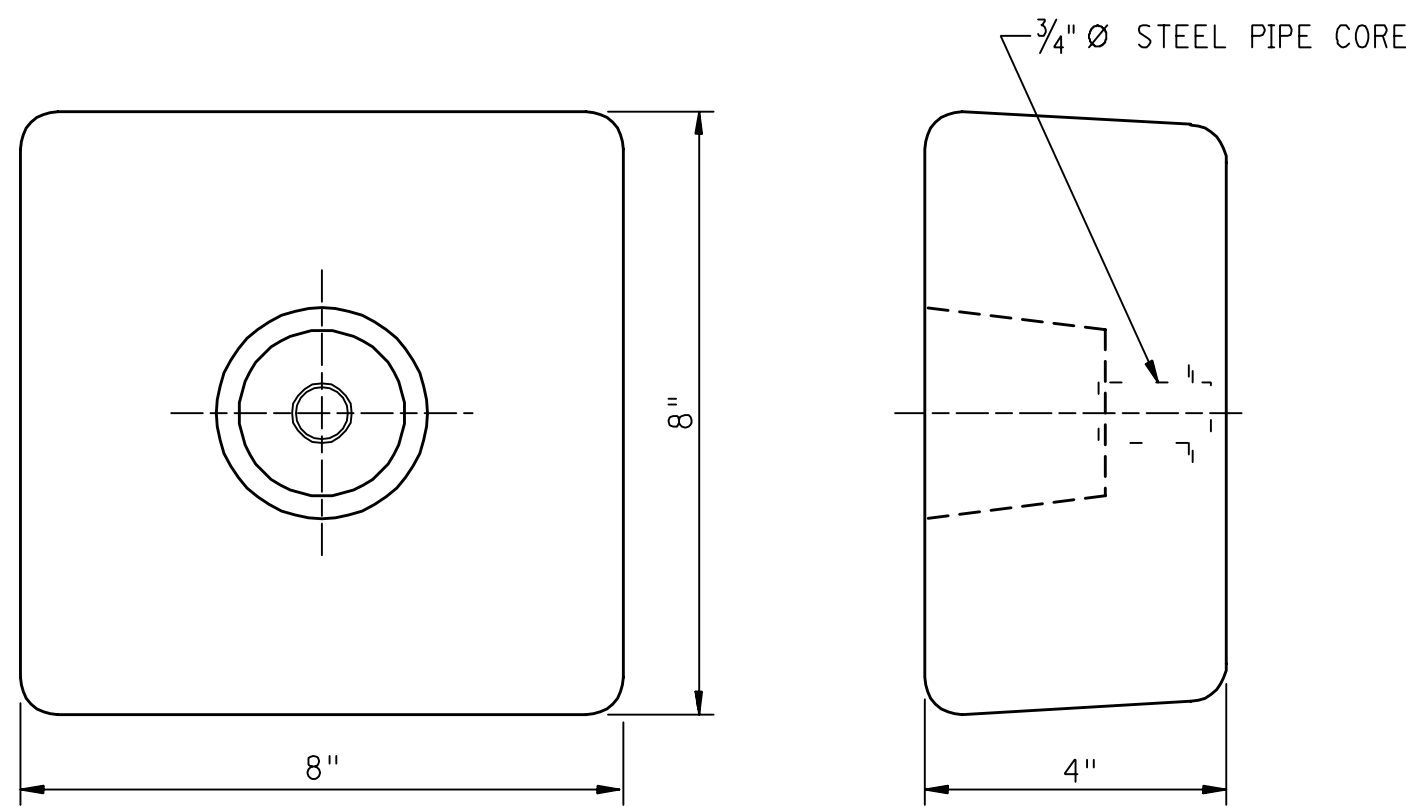
DETAIL-9 : MAGNESIUM ANODE WITH STEEL EYEBOLT CORE	
SAPMM#	WEIGHT
1000073382	100 LBS.



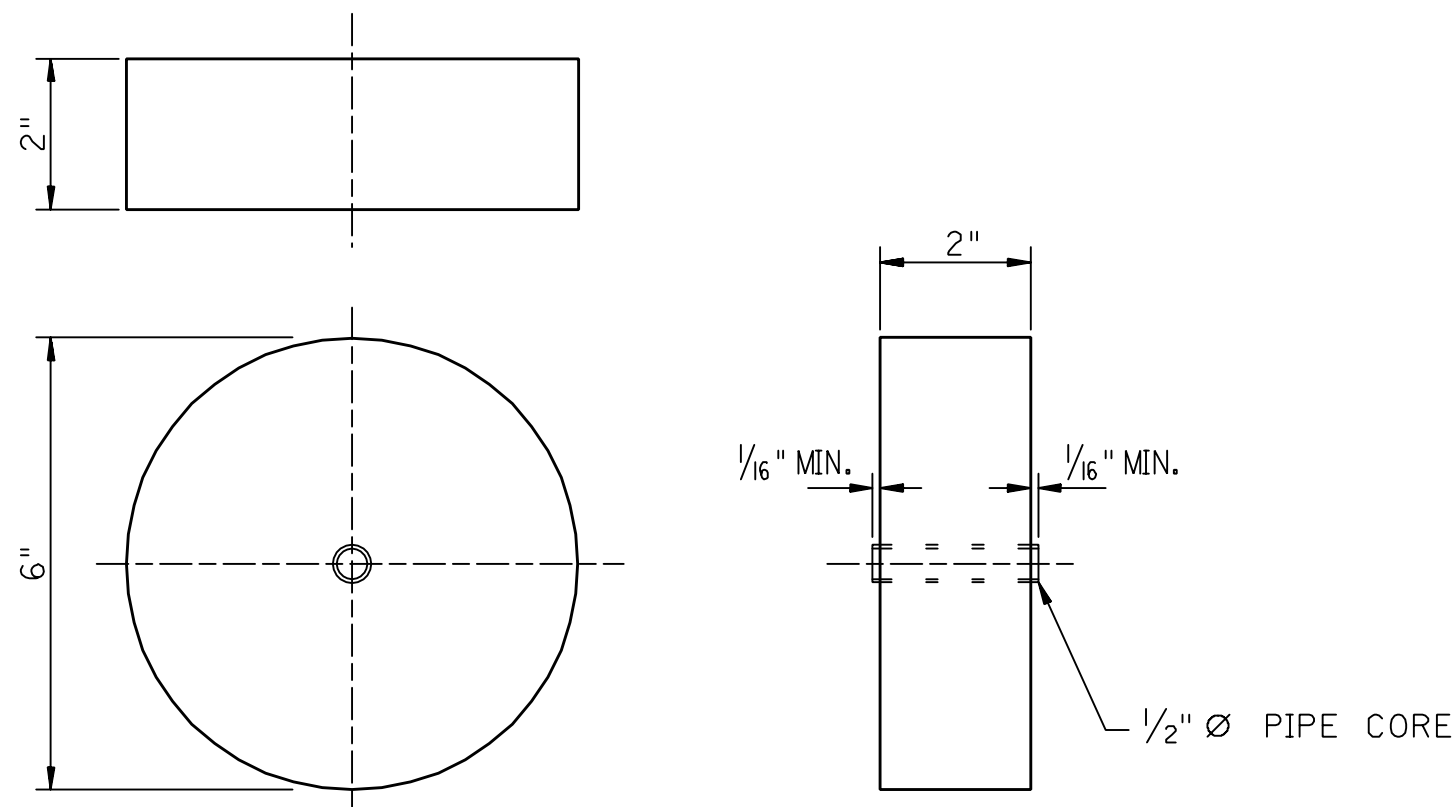
DETAIL-10 : ZINC RIBBON ANODE	
SAPMM#	WEIGHT
1000073385	0.6 LBS./FT.



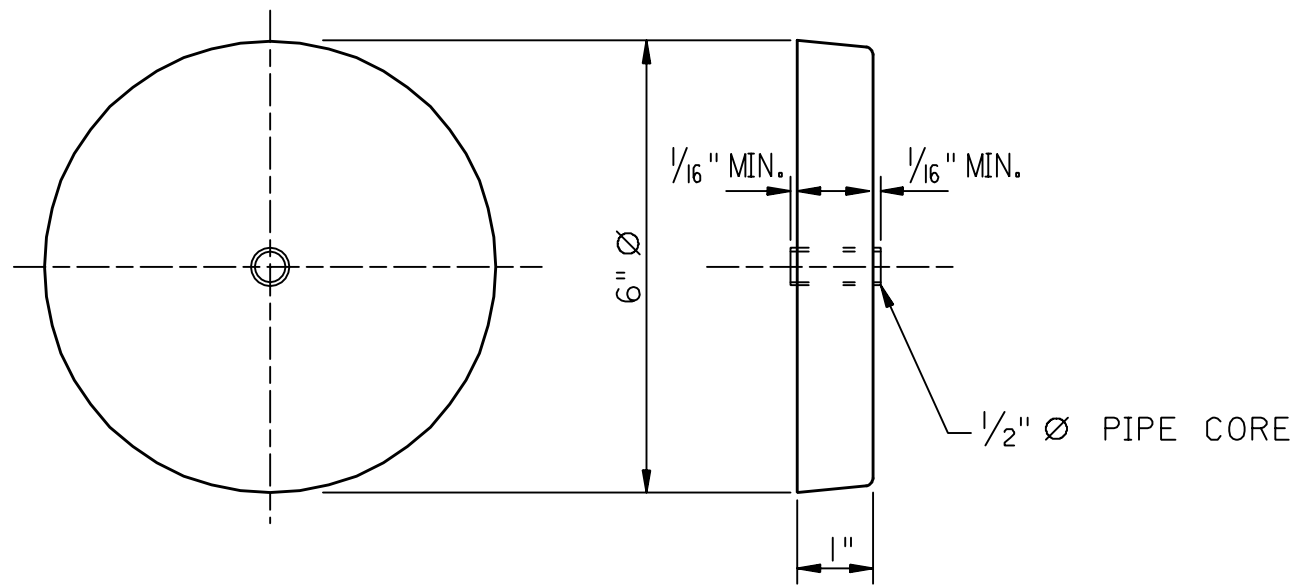
DETAIL-11 : GALVANIC ANODE	
SAPMM#	WEIGHT
1000073199	23 LBS.



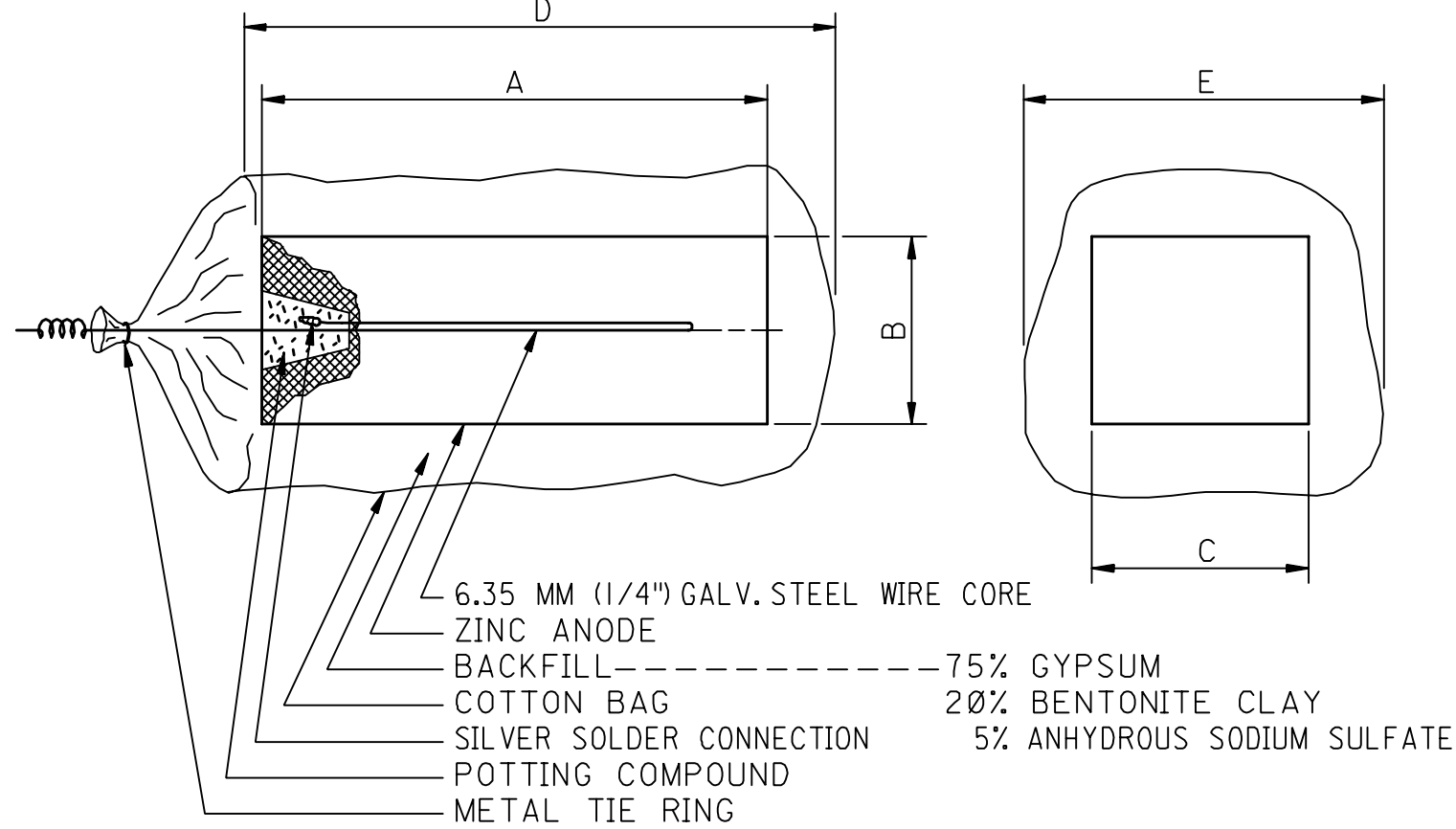
DETAIL-12 : MAGNESIUM ANODE	
SAPMM#	WEIGHT
1000073345	15 LBS.



DETAIL-13 : ZINC ANODE	
SAPMM#	WEIGHT
1000073389	14 LBS.



DETAIL-14 : ZINC DISC ANODE	
SAPMM#	WEIGHT
1000073415	7 LBS.



DETAIL-15 : ZINC REFERENCE ANODE					
SAPMM#	LEAD WIRE	A	B	C	E
1000073411	300-No.8 AWG STRANDED	12"	1 3/8"	1 3/8"	16"

- NOTES:
1. GALVANIC ANODES SHOWN IN DETAIL NOS. 1, 4, 5, 6, 7, 8, 9 & 15 CAN BE OF CIRCULAR, SQUARE OR TRAPEZOIDAL CROSS SECTIONAL AREAS. THE ANODE LENGTH MUST REMAIN THE SAME AS LISTED.
 2. INSERT STEEL TUBE TO BE DESCALED, DEGREASED AND BLAST CLEAN TO SA-2 1/2-ACC. TO ISO-8501-1 PRIOR TO CASTING. STEEL INSERT MAY ALSO BE GALVANIZED.
 3. FOR DETAIL-5: THE DIMENSIONS ARE MINIMUM VALUES FOR THE ANODE CORE AND ITEMS "D" AND "E".

REFERENCE DRAWINGS

DWG. CONTROL FOR J.O.	

DRAWING RESPONSIBILITY: CATHODIC PROTECTION STD. COMMITTEE

SCALE: NONE

REVISION VALIDATION

THIS REVISION NO. 02 IS COVERED, FOR ALL APPROVAL AND CERTIFICATION REQUIREMENTS, PER SAEP-334, UNDER DRAWING COMPLETION CERTIFICATE NO:

7/14/20-0504-02

DESIGN CERTIFICATION	REVIEW FOR KEY DRAWINGS	OTHER
(DESIGN AGENCY)	(SAUDI ARAMCO)	
ENGG./DATE	CERTIFIED BY/DATE	CONST.AGENCY/DATE
	OPERATIONS/DATE	BY/DATE

REV.NO./DATE: 02 MAY2004

REVISION DESCRIPTION: CHANGED SAMSS NOS TO SAP MM NOS.

JOB ORDER/EWO NO.

THIS REVISION IS NOT TO BE USED FOR CONSTRUCTION UNTIL CERTIFIED AND DATED

SAUDI ARABIAN OIL COMPANY

GALVANIC ANODES

DETAILS

STD. DWG. SAUDI ARABIA

PLANT NO. INDEX DRAWING NUMBER SHIT. NO. REV. NO.

990 X AA-036389 001 02