

2. AMENDMENT/MODIFICATION NO. 83	3. EFFECTIVE DATE 28-Aug-2017	4. REQUISITION/PURCHASE REQ. NO. 1300201205-0001	5. PROJECT NO. (If applicable) N/A
6. ISSUED BY CODE	N00421	7. ADMINISTERED BY (If other than Item 6) CODE	S2404A

NAVAIR Aircraft Division Pax River 21983 BUNDY ROAD, Bldg 441 Patuxent River MD 20670 brenda.d.jackson@navy.mil 301-757-3323	DCMA Manassas 14501 George Carter Way, 2nd Floor Chantilly VA 20151 SCD: C
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8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State, and Zip Code) ManTech Advanced Systems International, Inc. 2251 Corporate Park Drive Herndon VA 20171	9A. AMENDMENT OF SOLICITATION NO.  9B. DATED (SEE ITEM 11)  10A. MODIFICATION OF CONTRACT/ORDER NO. N00178-04-D-4080-M802 10B. DATED (SEE ITEM 13) 26-Jun-2007
CAGE CODE      5N741      FACILITY CODE	[X]

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers  is extended,  is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning one (1) copy of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)  
SEE SECTION G

**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

(*)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
[ ]	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
[ ]	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
[X]	D. OTHER (Specify type of modification and authority) FAR 43.103(a)

E. IMPORTANT: Contractor  is not,  is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)  
**SEE PAGE 2**

15A. NAME AND TITLE OF SIGNER (Type or print)  [Redacted] Executive Director, Contracts	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)  Donna L Voithoffer, Contracting Officer
15B. CONTRACTOR/OFFEROR  [Redacted] (Signature of person authorized to sign)	16B. UNITED STATES OF AMERICA  BY <u>/s/Donna L Voithoffer</u> (Signature of Contracting Officer)
15C. DATE SIGNED  25-Aug-2017	16C. DATE SIGNED  28-Aug-2017

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**GENERAL INFORMATION**

The purpose of this modification is to de-obligate funding. A conformed copy of this Task Order is attached to this modification for informational purposes only.

The Line of Accounting information is hereby changed as follows:

The total amount of funds obligated to the task is hereby decreased from [REDACTED] by [REDACTED]

CLIN/SLIN	Type Of Fund	From (\$)	By (\$)	To (\$)
650015	RDT&E	[REDACTED]	[REDACTED]	[REDACTED]

The total value of the order is hereby increased from [REDACTED] to [REDACTED]

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**SECTION B SUPPLIES OR SERVICES AND PRICES**

CLIN - SUPPLIES OR SERVICES

For Cost Type Items:

Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
1000	R425	Engineering support of AIR-5.1.6 in accordance with the PWS (base year) (WCF)	1.0	LO	██████████	██████████	██████████
100001	R425	Funding in support of CLIN 1000 (WCF)					
100002	R425	Funding in support of CLIN 1000 (WCF)					
100003	R425	Funding in support of CLIN 1000 (WCF)					
100004	R425	Funding in support of CLIN 1000 (WCF)					
100005	R425	Funding in support of CLIN 1000 (WCF)					
100006	R425	Funding in support of CLIN 1000 (WCF)					
100007	R425	Funding in support of CLIN 1000 (WCF)					
100008	R425	Funding in support of CLIN 1000 (WCF)					
100009	R425	Funding in support of CLIN 1000 (WCF)					
100010	R425	Funding in support of CLIN 1000 (WCF)					
100011	R425	Funding in support of CLIN 1000 (WCF)					
100012	R425	Funding in support of CLIN 1000 (WCF)					
100013	R425	Funding in support of CLIN 1000 (WCF)					
100014	R425	Funding in support of CLIN 1000 (WCF)					
100015	R425	Funding in support of CLIN 1000 (WCF)					
100016	R425	Funding in support of CLIN 1000 (WCF)					
100017	R425	Funding in support of CLIN 1000 (WCF)					
100018	R425	Funding in support of CLIN 1000 (WCF)					
100019	R425	Funding in support of CLIN 1000 (WCF)					
100020	R425	Funding in support of CLIN 1000 (WCF)					
100021	R425	Funding in support of CLIN 1000 (WCF)					
100022	R425	Funding in support of CLIN 1000 (WCF)					
100023	R425	Funding in support of CLIN 1000 (WCF)					
100024	R425	Funding in support of CLIN 1000 (WCF)					
100025	R425	Funding in support of CLIN 1000 (WCF)					
100026	R425	Funding in support of CLIN 1000 (WCF)					
100027	R425	Funding in support of CLIN 1000 (WCF)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
100028	R425	Funding in support of CLIN 1000 (WCF)					
100029	R425	Funding in support of CLIN 1000 (WCF)					
100030	R425	Funding in support of CLIN 1000 (WCF)					
100031	R425	Funding in support of CLIN 1000 (WCF)					
100032	R425	Funding in support of CLIN 1000 (WCF)					
100033	R425	Funding in support of CLIN 1000 (WCF)					
100034	R425	Funding in support of CLIN 1000 (WCF)					
100035	R425	Funding in support of CLIN 1000 (WCF)					
100036	R425	Funding in support of CLIN 1000 (WCF)					
100037	R425	Funding in support of CLIN 1000 (WCF)					
100038	R425	Funding in support of CLIN 1000 (WCF)					
100039	R425	Funding in support of CLIN 1000 (WCF)					
100040	R425	Funding in support of CLIN 1000 (WCF)					
100041	R425	Funding in support of CLIN 1000 (WCF)					
100042	R425	Funding in support of CLIN 1000 (WCF)					
100043	R425	Funding in support of CLIN 1000 (WCF)					
100044	R425	Funding in support of CLIN 1000 (WCF)					
100045	R425	Funding in support of CLIN 1000 (WCF)					
100046	R425	Funding in support of CLIN 1000 (WCF)					
100047	R425	Funding in support of CLIN 1000 (WCF)					
100048	R425	Funding in support of CLIN 1000 (WCF)					
100049	R425	Funding in support of CLIN 1000 (WCF)					
100050	R425	Funding in support of CLIN 1000 (WCF)					
100051	R425	Funding in support of CLIN 1000 (WCF)					
100052	R425	Funding in support of CLIN 1000 (WCF)					
100053	R425	Funding in support of CLIN 1000 (WCF)					
100054	R425	Funding in support of CLIN 1000 (WCF)					
100055	R425	Funding in support of CLIN 1000 (WCF)					
100056	R425	Funding in support of CLIN 1000 (WCF)					
100057	R425	Funding in support of CLIN 1000 (WCF)					
100058	R425	Funding in support of CLIN 1000 (WCF)					
100059	R425	Funding in support of CLIN 1000 (WCF)					
100060	R425	Funding in support of CLIN 1000 (WCF)					
100061	R425	Funding in support of CLIN 1000 (WCF)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
100062	R425	Funding in support of CLIN 1000 (WCF)					
100063	R425	Funding in support of CLIN 1000 (WCF)					
100064	R425	Funding in support of CLIN 1000 (WCF)					
100065	R425	Funding in support of CLIN 1000 (WCF)					
100066	R425	Funding in support of CLIN 1000 (WCF)					
100067	R425	Funding in support of CLIN 1000 (WCF)					
100068	R425	Funding in support of CLIN 1000 (WCF)					
100069	R425	Funding in support of CLIN 1000 (WCF)					
100070	R425	Funding in support of CLIN 1000 (WCF)					
100071	R425	Funding in support of CLIN 1000 (WCF)					
100072	R425	Funding in support of CLIN 1000 (WCF)					
100073	R425	Funding in support of CLIN 1000 (WCF)					
1100	R425	Engineering support of AIR-5.1.6 in accordance with the PWS (option year 1) (WCF)	1.0	LO			
110001	R425	Funding in support of CLIN 1100 (WCF)					
110002	R425	Funding in support of CLIN 1100 (WCF)					
110003	R425	Funding in support of CLIN 1100 (WCF)					
110004	R425	Funding in support of CLIN 1100 (WCF)					
110005	R425	Funding in support of CLIN 1100 (WCF)					
110006	R425	Funding in support of CLIN 1100 (WCF)					
110007	R425	Funding in support of CLIN 1100 (WCF)					
110008	R425	Funding in support of CLIN 1100 (WCF)					
110009	R425	Funding in support of CLIN 1100 (WCF)					
110010	R425	Funding in support of CLIN 1100 (WCF)					
110011	R425	Funding in support of CLIN 1100 (WCF)					
110012	R425	Funding in support of CLIN 1100 (WCF)					
110013	R425	Funding in support of CLIN 1100 (WCF)					
110014	R425	Funding in support of CLIN 1100 (WCF)					
110015	R425	Funding in support of CLIN 1100 (WCF)					
110016	R425	Funding in support of CLIN 1100 (WCF)					
110017	R425	Funding in support of CLIN 1100 (WCF)					
110018	R425	Funding in support of CLIN 1100 (WCF)					
110019	R425	Funding in support of CLIN 1100 (WCF)					
110020	R425	Funding in support of CLIN 1100 (WCF)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
110021	R425	Funding in support of CLIN 1100 (WCF)					
110022	R425	Funding in support of CLIN 1100 (WCF)					
110023	R425	Funding in support of CLIN 1100 (WCF)					
110024	R425	Funding in support of CLIN 1100 (WCF)					
110025	R425	Funding in support of CLIN 1100 (WCF)					
110026	R425	Funding in support of CLIN 1100 (WCF)					
110027	R425	Funding in support of CLIN 1100 (WCF)					
110028	R425	Funding in support of CLIN 1100 (WCF)					
110029	R425	Funding in support of CLIN 1100 (WCF)					
110030	R425	Funding in support of CLIN 1100 (WCF)					
110031	R425	Funding in support of CLIN 1100 (WCF)					
110032	R425	Funding in support of CLIN 1100 (WCF)					
110033	R425	Funding in support of CLIN 1100 (WCF)					
110034	R425	Funding in support of CLIN 1100 (WCF)					
110035	R425	Funding in support of CLIN 1100 (WCF)					
110036	R425	Funding in support of CLIN 1100 (WCF)					
110037	R425	Funding in support of CLIN 1100 (WCF)					
110038	R425	Funding in support of CLIN 1100 (WCF)					
110039	R425	Funding in support of CLIN 1100 (WCF)					
110040	R425	Funding in support of CLIN 1100 (WCF)					
110041	R425	Funding in support of CLIN 1100 (WCF)					
110042	R425	Funding in support of CLIN 1100 (WCF)					
110043	R425	Funding in support of CLIN 1100 (WCF)					
110044	R425	Funding in support of CLIN 1100 (WCF)					
110045	R425	Funding in support of CLIN 1100 (WCF)					
110046	R425	Funding in support of CLIN 1100 (WCF)					
110047	R425	Funding in support of CLIN 1100 (WCF)					
110048	R425	Funding in support of CLIN 1100 (WCF)					
110049	R425	Funding in support of CLIN 1100 (WCF)					
110050	R425	Funding in support of CLIN 1100 (WCF)					
110051	R425	Funding in support of CLIN 1100 (WCF)					
110052	R425	Funding in support of CLIN 1100 (WCF)					
110053	R425	Funding in support of CLIN 1100 (WCF)					
110054	R425	Funding in support of CLIN 1100 (WCF)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
110055	R425	Funding in support of CLIN 1100 (WCF)					
110056	R425	Funding in support of CLIN 1100 (WCF)					
110057	R425	Funding in support of CLIN 1100 (WCF)					
110058	R425	Funding in support of CLIN 1100 (WCF)					
110059	R425	Funding in support of CLIN 1100 (WCF)					
110060	R425	Funding in support of CLIN 1100 (WCF)					
110061	R425	Funding in support of CLIN 1100 (WCF)					
110062	R425	Funding in support of CLIN 1100 (WCF)					
110063	R425	Funding in support of CLIN 1100 (WCF)					
110064	R425	Funding in support of CLIN 1100 (WCF)					
110065	R425	Funding in support of CLIN 1100 (WCF)					
110066	R425	Funding in support of CLIN 1100 (WCF)					
110067	R425	Funding in support of CLIN 1100 (WCF)					
110068	R425	Funding in support of CLIN 1100 (WCF)					
110069	R425	Funding in support of CLIN 1100 (WCF)					
110070	R425	Funding in support of CLIN 1100 (WCF)					
110071	R425	Funding in support of CLIN 1100 (WCF)					
110072	R425	Funding in support of CLIN 1100 (WCF)					
110073	R425	Funding in support of CLIN 1100 (WCF)					
110074	R425	Funding in support of CLIN 1100 (WCF)					
110075	R425	Funding in support of CLIN 1100 (WCF)					
110076	R425	Funding in support of CLIN 1100 (WCF)					
110077	R425	Funding in support of CLIN 1100 (WCF)					
110078	R425	Funding in support of CLIN 1100 (WCF)					
110079	R425	Funding in support of CLIN 1100 (WCF)					
110080	R425	Funding in support of CLIN 1100 (WCF)					
110081	R425	Funding in support of CLIN 1100 (WCF)					
110082	R425	Funding in support of CLIN 1100 (WCF)					
110083	R425	Funding in support of CLIN 1100 (WCF)					
110084	R425	Funding in support of CLIN 1100 (WCF)					
110085	R425	Funding in support of CLIN 1100 (WCF)					
110086	R425	Funding in support of CLIN 1100 (WCF)					
110087	R425	Funding in support of CLIN 1100 (WCF)					
110088	R425	Funding in support of CLIN 1100 (WCF)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
110089	R425	Funding in support of CLIN 1100 (WCF)					
110090	R425	Funding in support of CLIN 1100 (WCF)					

For FFP Items:

Item	PSC	Supplies/Services	Qty	Unit	Unit Price	Total Price
2000	R425	Data in support of CLIN 1000 (WCF)	1.0	LO	\$0.00	\$0.00
2100	R425	Data in support of CLIN 1100 (WCF)	1.0	LO	\$0.00	\$0.00

For ODC Items:

Item	PSC	Supplies/Services	Qty	Unit	Est. Cost
3000	R425	Travel, material, and NMCI cost in support of CLIN 1000 (WCF)	1.0	LO	██████████
300001	R425	Funding in support of CLIN 3000 (WCF)			
300002	R425	Funding in support of CLIN 3000 (WCF)			
300003	R425	Funding in support of CLIN 3000 (WCF)			
300004	R425	Funding in support of CLIN 3000 (WCF)			
300005	R425	Funding in support of CLIN 3000 (WCF)			
300006	R425	Funding in support of CLIN 3000 (WCF)			
300007	R425	Funding in support of CLIN 3000 (WCF)			
300008	R425	Funding in support of CLIN 3000 (WCF)			
300009	R425	Funding in support of CLIN 3000 (WCF)			
300010	R425	Funding in support of CLIN 3000 (WCF)			
300011	R425	Funding in support of CLIN 3000 (WCF)			
300012	R425	Funding in support of CLIN 3000 (WCF)			
300013	R425	Funds realigned to SLIN 100037 (WCF)			
300014	R425	Funding in support of CLIN 3000 (WCF)			
300015	R425	Funding in support of CLIN 3000 (WCF)			
300016	R425	Funding in support of CLIN 3000 (WCF)			
300017	R425	Funding in support of CLIN 3000 (WCF)			
300018	R425	Funding in support of CLIN 3000 (WCF)			
300019	R425	Funding in support of CLIN 3000 (WCF)			
300020	R425	Funding in support of CLIN 3000 (WCF)			
300021	R425	Funding in support of CLIN 3000 (WCF)			
300022	R425	Funding in support of CLIN 3000 (WCF)			



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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost
300023	R425	Funding in support of CLIN 3000 (WCF)			
300024	R425	Funding in support of CLIN 3000 (WCF)			
300025	R425	Funding in support of CLIN 3000 (WCF)			
300026	R425	Funding in support of CLIN 3000 (WCF)			
300027	R425	Funding in support of CLIN 3000 (WCF)			
300028	R425	Funding in support of CLIN 3000 (RDT&E)			
3100	R425	Travel, material, and NMCI cost in support of CLIN 1100 (WCF)	1.0	LO	
310001	R425	Funding in support of CLIN 3100 (WCF)			
310002	R425	Funding in support of CLIN 3100 (WCF)			
310003	R425	Funding in support of CLIN 3100 (WCF)			
310004	R425	Funding in support of CLIN 3100 (WCF)			
310005	R425	Funding in support of CLIN 3100 (WCF)			
310006	R425	Funding in support of CLIN 3100 (WCF)			
310007	R425	Funding in support of CLIN 3100 (WCF)			
310008	R425	Funding in support of CLIN 3100 (WCF)			
310009	R425	Funding in support of CLIN 3100 (WCF)			
310010	R425	Funding in support of CLIN 3100 (WCF)			
310011	R425	Funding in support of CLIN 3100 (WCF)			
310012	R425	Funding in support of CLIN 3100 (WCF)			
310013	R425	Funding in support of CLIN 3100 (WCF)			
310014	R425	Funding in support of CLIN 3100 (WCF)			
310015	R425	Funding in support of CLIN 3100 (WCF)			
310016	R425	Funding in support of CLIN 3100 (WCF)			
310017	R425	Funding in support of CLIN 3100 (WCF)			
310018	R425	Funding in support of CLIN 3100 (WCF)			
310019	R425	Funding in support of CLIN 3100 (WCF)			
310020	R425	Funding in support of CLIN 3100 (WCF)			
310021	R425	Funding in support of CLIN 3100 (WCF)			
310022	R425	Funding in support of CLIN 3100 (WCF)			
310023	R425	Funding in support of CLIN 3100 (WCF)			
310024	R425	Funding in support of CLIN 3100 (WCF)			
310025	R425	Funding in support of CLIN 3100 (WCF)			
310026	R425	Funding in support of CLIN 3100 (WCF)			
310027	R425	Funding in support of CLIN 3100 (WCF)			

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost
310028	R425	Funding in support of CLIN 3100 (WCF)			
310029	R425	Funding in support of CLIN 3100 (WCF)			
310030	R425	Funding in support of CLIN 3100 (WCF)			
310031	R425	Funding in support of CLIN 3100 (WCF)			
310032	R425	Funding in support of CLIN 3100 (WCF)			
310033	R425	Funding in support of CLIN 3100 (WCF)			
310034	R425	Funding in support of CLIN 3100 (WCF)			
310035	R425	Funding in support of CLIN 3100 (WCF)			
310036	R425	Funding in support of CLIN 3100 (WCF)			
310037	R425	Funding in support of CLIN 3100 (WCF)			
310038	R425	Funding in support of CLIN 3100 (WCF)			

For Cost Type Items:

Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
4300	R425	Engineering support of AIR-5.1.6 in accordance with the PWS (option year 2) (WCF)	1.0	LO			
430001	R425	Funding in support of CLIN 4300 (WCF)					
430002	R425	Funding in support of CLIN 4300 (WCF)					
430003	R425	Funding in support of CLIN 4300 (WCF)					
430004	R425	Funding in support of CLIN 4300 (WCF)					
430005	R425	Funding in support of CLIN 4300 (WCF)					
430006	R425	Funding in support of CLIN 4300 (WCF)					
430007	R425	Funding in support of CLIN 4300 (WCF)					
430008	R425	Funding in support of CLIN 4300 (WCF)					
430009	R425	Funding in support of CLIN 4300 (WCF)					
430010	R425	Funding in support of CLIN 4300 (WCF)					
430011	R425	Funding in support of CLIN 4300 (WCF)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
430012	R425	Funding in support of CLIN 4300 (WCF)					
430013	R425	Funding in support of CLIN 4300 (WCF)					
430014	R425	Funding in support of CLIN 4300 (WCF)					
430015	R425	Funding in support of CLIN 4300 (WCF)					
430016	R425	Funding in support of CLIN 4300 (WCF)					
430017	R425	Funding in support of CLIN 4300 (WCF)					
430018	R425	Funding in support of CLIN 4300 (WCF)					
430019	R425	Funding in support of CLIN 4300 (WCF)					
430020	R425	Funding in support of CLIN 4300 (WCF)					
430021	R425	Funding in support of CLIN 4300 (WCF)					
430022	R425	Funding in support of CLIN 4300 (WCF)					
430023	R425	Funding in support of CLIN 4300 (WCF)					
430024	R425	Funding in support of CLIN 4300 (WCF)					
430025	R425	Funding in support of CLIN 4300 (WCF)					
430026	R425	Funding in support of CLIN 4300 (WCF)					
430027	R425	Funding in support of CLIN 4300 (WCF)					
430028	R425	Funding in support of CLIN 4300 (WCF)					
430029	R425	Funding in support of CLIN 4300 (WCF)					
430030	R425	Funding in support of CLIN 4300 (WCF)					
430031	R425	Funding in support of CLIN 4300 (WCF)					
430032	R425	Funding in support of CLIN 4300 (WCF)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
430033	R425	Funding in support of CLIN 4300 (WCF)					
430034	R425	Funding in support of CLIN 4300 (WCF)					
430035	R425	Funding in support of CLIN 4300 (WCF)					
430036	R425	Funding in support of CLIN 4300 (WCF)					
430037	R425	Funding in support of CLIN 4300 (WCF)					
430038	R425	Funding in support of CLIN 4300 (WCF)					
430039	R425	Funding in support of CLIN 4300 (WCF)					
430040	R425	Funding in support of CLIN 4300 (WCF)					
430041	R425	Funding in Support of CLIN 4300 (WCF)					
430042	R425	Funding in Support of CLIN 4300 (WCF)					
430043	R425	Funding in Support of CLIN 4300 (WCF)					
430044	R425	Funding in Support of CLIN 4300 (WCF)					
430045	R425	Funding in Support of CLIN 4300 (WCF)					
430046	R425	Funding in Support of CLIN 4300 (WCF)					
430047	R425	Funding in Support of CLIN 4300 (WCF)					
430048	R425	Funding in Support of CLIN 4300 (WCF)					
430049	R425	Funding in Support of CLIN 4300 (WCF)					
430050	R425	Funding in Support of CLIN 4300 (WCF)					
430051	R425	Funding in Support of CLIN 4300 (WCF)					
430052	R425	Funding in Support of CLIN 4300 (WCF)					
430053	R425	Funding in Support of CLIN 4300 (WCF)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
430054	R425	Funding in Support of CLIN 4300 (WCF)					
430055	R425	Funding in Support of CLIN 4300 (WCF)					
430056	R425	Funding in Support of CLIN 4300 (WCF)					
430057	R425	Funding in Support of CLIN 4300 (WCF)					
430058	R425	Funding in Support of CLIN 4300 (WCF)					
430059	R425	Funding in Support of CLIN 4300 (WCF)					
430060	R425	Funding in Support of CLIN 4300 (WCF)					
430061	R425	Funding in Support of CLIN 4300 (WCF)					
430062	R425	Funding in Support of CLIN 4300 (WCF)					
430063	R425	Funding in Support of CLIN 4300 (WCF)					
430064	R425	Funding in Support of CLIN 4300 (WCF)					
430065	R425	Funding in Support of CLIN 4300 (WCF)					
430066	R425	Funding in Support of CLIN 4300 (WCF)					
430067	R425	Funding in Support of CLIN 4300 (WCF)					
430068	R425	Funding in Support of CLIN 4300 (WCF)					
430069	R425	Funding in Support of CLIN 4300 (WCF)					
430070	R425	Funding in Support of CLIN 4300 (WCF)					
430071	R425	Funding in Support of CLIN 4300 (WCF)					
430072	R425	Funding in Support of CLIN 4300 (WCF)					
430073	R425	Funding in Support of CLIN 4300 (RDT&E)					
430074	R425	Funding in Support of CLIN 4300 (RDT&E)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
430075	R425	Funding in Support of CLIN 4300 (Fund Type - OTHER)					
430076	R425	Funding in Support of CLIN 4300 (Fund Type - OTHER)					
430077	R425	Funding in Support of CLIN 4300 (RDT&E)					
430078	R425	Funding in Support of CLIN 4300 (RDT&E)					
430079	R425	Funding in Support of CLIN 4300 (WCF)					
430080	R425	Funding in Support of CLIN 4300 (WCF)					
430081	R425	Funding in Support of CLIN 4300 (O&MN,N)					
430082	R425	Funding in Support of CLIN 4300 (O&MN,N)					
430083	R425	Funding in Support of CLIN 4300 (RDT&E)					
430084	R425	Funding in Support of CLIN 4300 (RDT&E)					
430085	R425	Funding in Support of CLIN 4300 (Fund Type - OTHER)					
430086	R425	Funding in Support of CLIN 4300 (Fund Type - OTHER)					
430087	R425	Funding in Support of CLIN 4300 (Fund Type - OTHER)					
430088	R425	Funding in Support of CLIN 4300 (RDT&E)					
430089	R425	Funding in Support of CLIN 4300 (RDT&E)					
430090	R425	Funding in Support of CLIN 4300 (FMS Case #PK-P-SAV)					
430091	R425	Funding in Support of CLIN 4300 (WCF)					
430092	R425	Funding in Support of CLIN 4300 (RDT&E)					
430093	R425	Funding in Support of CLIN 4300 (WCF)					
430094	R425	Funding in Support of CLIN 4300 (O&MN,N)					
430095	R425	Funding in Support of CLIN 4300 (FMS Case #PK-P-SAV)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
430096	R425	Funding in Support of CLIN 4300 (FMS Case #AT-P-BBO)					
430097	R425	Funding in Support of CLIN 4300 (RDT&E)					
4400	R425	Engineering support of AIR-5.1.6 in accordance with the PWS (option year 3) (WCF)	1.0	LO			
440001	R425	Funding in support of CLIN 4400 (O&MN,N)					
440002	R425	Funding in support of CLIN 4400 (O&MN,N)					
440003	R425	Funding in support of CLIN 4400 (RDT&E)					
440004	R425	Funding in support of CLIN 4400 (RDT&E)					
440005	R425	Funding in support of CLIN 4400 (RDT&E)					
440006	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440007	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440008	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440009	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440010	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440011	R425	Funding in support of CLIN 4400 (WCF)					
440012	R425	Funding in support of CLIN 4400 (WCF)					
440013	R425	Funding in support of CLIN 4400 (WCF)					
440014	R425	Funding in support of CLIN 4400 (WCF)					
440015	R425	Funding in support of CLIN 4400 (WCF)					
440016	R425	Funding in support of CLIN 4400 (WCF)					
440017	R425	Funding in support of CLIN 4400 (WCF)					
440018	R425	Funding in support of CLIN 4400 (WCF)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
440019	R425	Funding in support of CLIN 4400 (WCF)					
440020	R425	Funding in support of CLIN 4400 (FMS Case #TW-P-SEG)					
440021	R425	Funding in support of CLIN 4400 (RDT&E)					
440022	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440023	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440024	R425	Funding in support of CLIN 4400 (O&MN,N)					
440025	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440026	R425	Funding in support of CLIN 4400 (RDT&E)					
440027	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440028	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440029	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440030	R425	Funding in support of CLIN 4400 (RDT&E)					
440031	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440032	R425	Funding in support of CLIN 4400 (RDT&E)					
440033	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440034	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440035	R425	Funding in support of CLIN 4400 (O&MN,N)					
440036	R425	Funding in support of CLIN 4400 (RDT&E)					
440037	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440038	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440039	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					



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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
440040	R425	Funding in support of CLIN 4400 (RDT&E)					
440041	R425	Funding in support of CLIN 4400 (RDT&E)					
440042	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440043	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440044	R425	Funding in support of CLIN 4400 (RDT&E)					
440045	R425	Funding in support of CLIN 4400 (RDT&E)					
440046	R425	Funding in support of CLIN 4400 (RDT&E)					
440047	R425	Funding in support of CLIN 4400 (Fund Type - OTHER)					
440048	R425	Funding in support of CLIN 4400 (RDT&E)					
440049	R425	Funding in support of CLIN 4400 (RDT&E)					
440050	R425	Funding in support of CLIN 4400 (RDT&E)					
440051	R425	Funding in support of CLIN 4400 (RDT&E)					
440052	R425	Funding in support of CLIN 4400 (WCF)					
440053	R425	Funding in support of CLIN 4400 (RDT&E)					
440054	R425	Funding in support of CLIN 4400 (WCF)					
440055	R425	Funding in support of CLIN 4400 (RDT&E)					
440056	R425	Funding in support of CLIN 4400 (PANMC)					
440057	R425	Funding in support of CLIN 4400 (FMS)					
440058	R425	Funding in support of CLIN 4400 (RDT&E)					
440059	R425	Funding in support of CLIN 4400 (APN)					
440060	R425	Funding in support of CLIN 4400 (RDT&E)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
440061	R425	Funding in support of CLIN 4400 (RDT&E)					
440062	R425	Funding in support of CLIN 4400 (RDT&E)					
440063	R425	Funding in support of CLIN 4400 (RDT&E)					
440064	R425	Funding in support of CLIN 4400 (O&MN,N)					
440065	R425	Funding in support of CLIN 4400 (O&MN,N)					
440066	R425	Funding in support of CLIN 4400 (FMS)					
440067	R425	Funding in support of CLIN 4400 (WCF)					
440068	R425	Funding in support of CLIN 4400 (WCF)					
440069	R425	Funding in support of CLIN 4400 (WCF)					
440070	R425	Funding in support of CLIN 4400 (WCF)					
440071	R425	Funding in support of CLIN 4400 (WCF)					
440072	R425	Funding in support of CLIN 4400 (RDT&E)					
440073	R425	Funding in support of CLIN 4400 (WCF)					
4500	R425	Engineering support of AIR-5.1.6 in accordance with the PWS (option year 4) (WCF)	1.0	LO			
450001	R425	Funding in support of CLIN 4500 (RDT&E)					
450002	R425	Funding in support of CLIN 4500 (RDT&E)					
450003	R425	Funding in support of CLIN 4500 (WCF)					
450004	R425	Funding in support of CLIN 4500 (FMS)					
450005	R425	Funding in support of CLIN 4500 (WCF)					
450006	R425	Funding in support of CLIN 4500 (RDT&E)					
450007	R425	Funding in support of CLIN 4500 (FMS)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
450008	R425	Funding in support of CLIN 4500 (PANMC)					
450009	R425	Funding in support of CLIN 4500 (RDT&E)					
450010	R425	Funding in support of CLIN 4500 (APN)					
450011	R425	Funding in support of CLIN 4500 (APN)					
450012	R425	Funding in support of CLIN 4500 (WCF)					
450013	R425	Funding in support of CLIN 4500 (WCF)					
450014	R425	Funding in support of CLIN 4500 (RDT&E)					
450015	R425	Funding in support of CLIN 4500 (Fund Type - OTHER)					
450016	R425	Funding in support of CLIN 4500 (Fund Type - OTHER)					
450017	R425	Funding in support of CLIN 4500 (Fund Type - OTHER)					
450018	R425	Funding in support of CLIN 4500 (O&MN,N)					
450019	R425	Funding in support of CLIN 4500 (APN)					
450020	R425	Funding in support of CLIN 4500 (APN)					
450021	R425	Funding in support of CLIN 4500 (APN)					
450022	R425	Funding in support of CLIN 4500 (APN)					
450023	R425	Funding in support of CLIN 4500 (WCF)					
450024	R425	Funding in support of CLIN 4500 (APN)					
450025	R425	Funding in support of CLIN 4500 (APN)					
450026	R425	Funding in support of CLIN 4500 (RDT&E)					
450027	R425	Funding in support of CLIN 4500 (O&MN,N)					
450028	R425	Funding in support of CLIN 4500 (APN)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
450029	R425	Funding in support of CLIN 4500 (RDT&E)					
450030	R425	Funding in support of CLIN 4500 (APN)					
450031	R425	Funding in support of CLIN 4500 (APN)					
450032	R425	Funding in support of CLIN 4500 (WCF)					
450033	R425	Funding in support of CLIN 4500 (APN)					
450034	R425	Funding in support of CLIN 4500 (APN)					
450035	R425	Funding in support of CLIN 4500 (APN)					
450036	R425	Funding in support of CLIN 4500 (RDT&E)					
450037	R425	Funding in support of CLIN 4500 (O&MN,N)					
450038	R425	Funding in support of CLIN 4500 (RDT&E)					
450039	R425	Funding in support of CLIN 4500 (APN)					
450040	R425	Funding in support of CLIN 4500 (RDT&E)					
450041	R425	Funding in support of CLIN 4500 (APN)					
450042	R425	Funding in support of CLIN 4500 (O&MN,N)					
450043	R425	Funding in support of CLIN 4500 (O&MN,N)					
450044	R425	Funding in support of CLIN 4500 (RDT&E)					
450045	R425	Funding in support of CLIN 4500 (RDT&E)					
450046	R425	Funding in support of CLIN 4500 (FMS)					
450047	R425	Funding in support of CLIN 4500 (FMS)					
450048	R425	Funding in support of CLIN 4500 (RDT&E)					
450049	R425	Funding in support of CLIN 4500 (APN)					

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
450050	R425	Funding in support of CLIN 4500 (RDT&E)					
450051	R425	Funding in support of CLIN 4500 (RDT&E)					
450052	R425	Funding in support of CLIN 4500 (RDT&E)					
450053	R425	Funding in support of CLIN 4500 (RDT&E)					
450054	R425	Funding in support of CLIN 4500 (WCF)					
450055	R425	Funding in support of CLIN 4500 (RDT&E)					
450056	R425	Funding in support of CLIN 4500 (APN)					
450057	R425	Funding in support of CLIN 4500 (RDT&E)					
450058	R425	Funding in support of CLIN 4500 (RDT&E)					
450059	R425	Funding in support of CLIN 4500 (APN)					
450060	R425	Funding in support of CLIN 4500 (O&MN,N)					
450061	R425	Funding in support of CLIN 4500 (O&MN,N)					
450062	R425	Funding in support of CLIN 4500 (RDT&E)					
450063	R425	Funding in support of CLIN 4500 (Fund Type - OTHER)					
450064	R425	Funding in support of CLIN 4500 (APN)					
450065	R425	Funding in support of CLIN 4500 (O&MN,N)					

For FFP Items:


Item	PSC	Supplies/Services	Qty	Unit	Unit Price	Total Price
5300	R425	Data in support of CLIN 4300 (WCF)	1.0	LO	\$0.00	\$0.00
5400	R425	Data in support of CLIN 4400 (WCF)	1.0	LO	\$0.00	\$0.00
5500	R425	Data in support of CLIN 4500 (WCF)	1.0	LO	\$0.00	\$0.00

For ODC Items:


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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost
6300	R425	Travel, material, and NMCI cost in support of CLIN 4300 (WCF)	1.0	LO	██████████
630001	R425	Funding in support of CLIN 6300 (WCF)			
630002	R425	Funding in support of CLIN 6300 (WCF)			
630003	R425	Funding in support of CLIN 6300 (WCF)			
630004	R425	Funding in support of CLIN 6300 (WCF)			
630005	R425	Funding in support of CLIN 6300 (WCF)			
630006	R425	Funding in support of CLIN 6300 (WCF)			
630007	R425	Funding in support of CLIN 6300 (WCF)			
630008	R425	Funding in support of CLIN 6300 (WCF)			
630009	R425	Funding in support of CLIN 6300 (WCF)			
630010	R425	Funding in support of CLIN 6300 (WCF)			
630011	R425	Funding in support of CLIN 6300 (WCF)			
630012	R425	Funding in support of CLIN 6300 (WCF)			
630013	R425	Funding in support of CLIN 6300 (WCF)			
630014	R425	Funding in support of CLIN 6300 (WCF)			
630015	R425	Funding in support of CLIN 6300 (WCF)			
630016	R425	Funding in support of CLIN 6300 (WCF)			
630017	R425	Funding in support of CLIN 6300 (WCF)			
630018	R425	Funding in support of CLIN 6300 (WCF)			
630019	R425	Funding in support of CLIN 6300 (WCF)			
630020	R425	Funding in support of CLIN 6300 (WCF)			
630021	R425	Funding in support of CLIN 6300 (WCF)			
630022	R425	Funding in support of CLIN 6300 (WCF)			
630023	R425	Funding in support of CLIN 6300 (WCF)			
630024	R425	Funding in support of CLIN 6300 (WCF)			
630025	R425	Funding in support of CLIN 6300 (WCF)			
630026	R425	Funding in support of CLIN 6300 (WCF)			
630027	R425	Funding in support of CLIN 6300 (WCF)			
630028	R425	Funding in support of CLIN 6300 (WCF)			
630029	R425	Funding in support of CLIN 6300 (WCF)			
630030	R425	Funding in support of CLIN 6300 (WCF)			
630031	R425	Funding in support of CLIN 6300 (WCF)			
630032	R425	Funding in support of CLIN 6300 (WCF)			

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost
630033	R425	Funding in support of CLIN 6300 (WCF)			
630034	R425	Funding in support of CLIN 6300 (WCF)			
630035	R425	Funding in support of CLIN 6300 (RDT&E)			
630036	R425	Funding in support of CLIN 6300 (Fund Type - OTHER)			
630037	R425	Funding in support of CLIN 6300 (Fund Type - OTHER)			
630038	R425	Funding in support of CLIN 6300 (FMS Case #PK-P-SAV)			
630039	R425	Funding in support of CLIN 6300 (FMS Case #AT-P-BBO)			
6400	R425	Travel, material, and NMCI cost in support of CLIN 4400 (WCF)	1.0	LO	
640001	R425	Funding in support of CLIN 6400 (O&MN,N)			
640002	R425	Funding in support of CLIN 6400 (Fund Type - OTHER)			
640003	R425	Funding in support of CLIN 6400 (Fund Type - OTHER)			
640004	R425	Funding in support of CLIN 6400 (WCF)			
640005	R425	Funding in support of CLIN 6400 (WCF)			
640006	R425	Funding in support of CLIN 6400 (WCF)			
640007	R425	Funding in support of CLIN 6400 (WCF)			
640008	R425	Funding in support of CLIN 6400 (Fund Type - OTHER)			
640009	R425	Funding in support of CLIN 6400 (O&MN,N)			
640010	R425	Funding in support of CLIN 6400 (Fund Type - OTHER)			
640011	R425	Funding in support of CLIN 6400 (Fund Type - OTHER)			
640012	R425	Funding in support of CLIN 6400 (Fund Type - OTHER)			
640013	R425	Funding in support of CLIN 6400 (Fund Type - OTHER)			
640014	R425	Funding in support of CLIN 6400 (Fund Type - OTHER)			
640015	R425	Funding in support of CLIN 6400 (Fund Type - OTHER)			
640016	R425	Funding in support of CLIN 6400 (O&MN,N)			
640017	R425	Funding in support of CLIN 6400 (RDT&E)			
640018	R425	Funding in support of CLIN 6400 (Fund Type - OTHER)			
640019	R425	Funding in support of CLIN 6400 (RDT&E)			
640020	R425	Funding in support of CLIN 6400 (RDT&E)			
640021	R425	Funding in support of CLIN 6400 (RDT&E)			
640022	R425	Funding in support of CLIN 6400 (RDT&E)			
640023	R425	Funding in support of CLIN 6400 (RDT&E)			
640024	R425	Funding in support of CLIN 6400 (WCF)			
640028	R425	Funding in support of CLIN 6400 (PANMC)			
640029	R425	Funding in support of CLIN 6400 (RDT&E)			

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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost
640030	R425	Funding in support of CLIN 6400 (APN)			
640031	R425	Funding in support of CLIN 6400 (RDT&E)			
640032	R425	Funding in support of CLIN 6400 (RDT&E)			
640033	R425	Funding in support of CLIN 6400 (WCF)			
6500	R425	Travel, material, and NMCI cost in support of CLIN 4500 (WCF)	1.0	LO	
650001	R425	Travel, material, and NMCI cost in support of CLIN 4500 (RDT&E)			
650002	R425	Travel, material, and NMCI cost in support of CLIN 4500 (WCF)			
650003	R425	Travel, material, and NMCI cost in support of CLIN 4500 (RDT&E)			
650004	R425	Travel, material, and NMCI cost in support of CLIN 4500 (PANMC)			
650005	R425	Travel, material, and NMCI cost in support of CLIN 4500 (RDT&E)			
650006	R425	Travel, material, and NMCI cost in support of CLIN 4500 (APN)			
650007	R425	Travel, material, and NMCI cost in support of CLIN 4500 (APN)			
650008	R425	Travel, material, and NMCI cost in support of CLIN 4500 (WCF)			
650009	R425	Travel, material, and NMCI cost in support of CLIN 4500 (WCF)			
650010	R425	Travel, material, and NMCI cost in support of CLIN 4500 (RDT&E)			
650011	R425	Travel, material, and NMCI cost in support of CLIN 4500 (Fund Type - OTHER)			
650012	R425	Travel, material, and NMCI cost in support of CLIN 4500 (APN)			
650013	R425	Travel, material, and NMCI cost in support of CLIN 4500 (O&MN,N)			
650014	R425	Travel, material, and NMCI cost in support of CLIN 4500 (APN)			
650015	R425	Travel, material, and NMCI cost in support of CLIN 4500 (RDT&E)			
650016	R425	Travel, material, and NMCI cost in support of CLIN 4500 (APN)			
650017	R425	Travel, material, and NMCI cost in support of CLIN 4500 (WCF)			
650018	R425	Travel, material, and NMCI cost in support of CLIN 4500 (APN)			
650019	R425	Travel, material, and NMCI cost in support of CLIN 4500 (APN)			
650020	R425	Travel, material, and NMCI cost in support of CLIN 4500 (APN)			
650021	R425	Travel, material, and NMCI cost in support of CLIN 4500 (APN)			
650022	R425	Travel, material, and NMCI cost in support of CLIN 4500 (RDT&E)			
650023	R425	Travel, material, and NMCI cost in support of CLIN 4500 (FMS)			
650024	R425	Travel, material, and NMCI cost in support of CLIN 4500 (RDT&E)			
650025	R425	Travel, material, and NMCI cost in support of CLIN 4500 (APN)			
650026	R425	Travel, material, and NMCI cost in support of CLIN 4500 (RDT&E)			
650027	R425	Travel, material, and NMCI cost in support of CLIN 4500 (RDT&E)			
650028	R425	Travel, material, and NMCI cost in support of CLIN 4500 (RDT&E)			



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Item	PSC	Supplies/Services	Qty	Unit	Est. Cost
650029	R425	Travel, material, and NMCI cost in support of CLIN 4500 (WCF)			
650030	R425	Travel, material, and NMCI cost in support of CLIN 4500 (O&MN,N)			

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## SECTION C DESCRIPTIONS AND SPECIFICATIONS

### PERFORMANCE BASED WORK STATEMENT

#### 1.0 BACKGROUND

1.1 The Naval Air Systems Command tasks the Naval Air Warfare Center Aircraft Division (NAWCAD) to perform test and evaluation engineering, which includes research and development, systems analysis and engineering, prototyping, and integration of warfare systems into Naval Aircraft and aviation subsystems. The NAWCAD has engineering responsibility for programs such as the Joint Strike Fighter, F/A-18, EA-6B, AV-8B, V-22, T-45, tactical reconnaissance, and unmanned air vehicles. Other systems, subsystems and engineering processes that the NAWCAD supports include E-2C, UH-1, AH-1, SH-60, HH-60, CH-53, MH-53, CH-46, H-46, shore based aircraft (C-130), KC-130, EP-3, P-3, S-3, ES-3, T-34, Tactical Air Combat Training System (TACTS), Air Traffic Control (ATC) and landing systems, integrated tactical decision aids, aircraft/weapon integration/separation testing, and other externally directed programs. NAWCAD supports joint service programs in addition to Joint Strike Fighter (JSF), such as LH-X and the Joint Precision Approach and Landing System (JPALS). NAWCAD also supports test and evaluation of customer systems such as Federal Aviation Administration (FAA) satellite navigation systems and avionics certification, NASA, Air Force, Army and foreign government vehicles and systems. Responsibilities also include support to NAVAIR for programmatic as required.

1.2 The Manned and Unmanned Air Vehicle Evaluation Division (AIR 5.1.6) integrates, tests and evaluates: Aircraft Flying Qualities and performance, propulsion systems; mechanical systems, air vehicle subsystems, structures, shipboard interoperability, air traffic control and landing systems; and mission planning systems. AIR 5.1.6 conducts tests and evaluations for: aircraft and related systems, aircraft interoperability, carrier & shipboard compatibility and evaluates the service suitability and specification compliance of aircraft systems and components tested. The principal focus is support of Integrated Program Teams (IPT), Externally Directed Teams and Enterprise Teams. Test engineers lead and manage the T&E efforts and are responsible for design, documentation, and maintaining the currency of the T&E process, for identification of critical program test elements; for ensuring engineering veracity of the test data; for definition of functional requirements for future test facilities, equipment, and instrumentation requirements and integrating these requirements into facility improvement plans. Test engineers support the IPT through participation in the development of system specifications and program T&E planning documents and product functional requirements; in the evaluation and assessment of test results and determination of system performance, mission suitability, and readiness for the user; and in translation test data into design improvement and deficiency corrections. AIR 5.1.6 also develops new test and evaluation data acquisition and analysis procedures and methods.

1.3 AIR 5.1.6 specifically provides and accomplishes:

1.3.1 AEROMECHANICS AND FLIGHT CONTROLS T&E: The people, processes and facilities necessary for Teams to conduct fixed and rotary wing aircraft ground and flight test in the areas of stability and control, flight controls, performance, structures, loads, flutter, and dynamics.

1.3.2 AIR VEHICLE/STORE COMPATIBILITY T&E: The people, processes, and facilities necessary for Teams to determine air vehicle/store compatibility of all fixed and rotary wing aircraft armament systems, their externally and internally carried stores, and items which are released or dispensed for the aircraft. Systems tested include armament release and control systems, stores suspension and release equipment, internal and external guns, towed and powered targets, air-launched weapons, air-launched expendables, and jettisonable pods. Types of work include physical/electrical/structural interface, form fit and function flight captive carriage tests, weapon separation tests, ballistic accuracy tests, fragment hazard analysis, generation of safe escape data weapon delivery parameters, Tactical Manual weapons descriptions, development of weapon employment data, and Tactical Manual engineering support.

1.3.3 SHIP SUITABILITY AND LANDING SYSTEMS T&E: The people, processes, and facilities necessary for Teams to conduct tests to determine air vehicle compatibility with shipboard operating environments, shipboard launch and recovery systems, and shipboard and shore based air traffic control and landing systems. The support includes aircraft handling qualities and performance characteristics, structural and functional integrity, and aircraft compatibility with launch and recovery equipment for manned and unmanned, conventional and V/STOL, fixed and rotary wing aircraft. Air Traffic and Control and Landing System support includes RDT&E and certification of sea-based air traffic control and landing systems; satellite-based systems, compatibility of manned and unmanned air

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vehicles and related aircraft avionics subsystems. Aircraft evaluations include approach handling qualities, engine/approach power performance, avionics receivers, data processors, sensors, automatic flight control systems, takeoff and landing cockpit displays, landing systems data links, radar transponders, antenna performance and total integrated system performance.

1.3.4 INSTALLED PROPULSION, POWER, AND MECHANICAL SYSTEMS T&E: The people, processes, and facilities necessary for Teams to plan and conduct tests and report test results on fixed and rotary wing aircraft propulsion, power and mechanical systems. Testing includes systems/subsystems as installed in the aircraft. These systems include: inlet, engine, exhaust, and control systems and the interfaces of the propulsion systems with the air vehicle, hydraulic systems, fuel systems, pneumatic systems, environmental/avionics conditioning systems, auxiliary power systems, drive systems, gear box systems, internal and external cargo systems, aerial refueling systems and ram air turbine systems.

## 2.0 SCOPE

2.1 The contractor shall provide for program/project management, science/engineering/technology development, design and integration support, prototyping, hardware, and software development, test planning, test support, test reporting and laboratory maintenance/operations services in support of the Test & Evaluation Engineering Department.

2.2 The contractor shall perform independent analyses and technical studies and provide engineering and technical services in the area of Hardware-in-the-loop (HITL) test, Installed System Test (IST), Ground and Flight test and integrated systems test to develop/assess the air vehicle Flying Qualities, Performance, Ship Suitability, Stores Compatibility, aircraft delivered weapon ballistics, Safe Escape operability, and weapons compatibility and suitability. Some of the systems/subsystems evaluated include: flight, electrical power, propulsion, mechanical, vehicle subsystems, support systems, and systems external to the aircraft such as air traffic control and landing systems, catapult launching interfaces, and arrested landing gear.

## 3.0 TASK STATEMENTS

The contractor shall accomplish work as specified in this PBSOW. Performance of this work shall be measured in accordance with the Performance requirements Summary Matrix / Quality Assurance Surveillance Plan (Attachment 3).

Functional areas to be supported under this contract are described in the sections below.

### 3.1 PROGRAM/PROJECT MANAGEMENT

3.1.1 Perform program/project management services (e.g. planning, scheduling, reporting, etc.) in support of systems development and flight research and development, test and evaluation.

3.1.2 Make recommendations for development, review, and/or updates of program management plans in accordance with directives, budgets, implementation requirements, and program schedules.

3.1.3 Provide financial tracking of program/project cost data, resource analysis, and procurement monitoring services (CDRL A002).

3.1.4 Provide program and project services such as scheduling events, program planning, cost, schedule, and performance coordination.

3.1.5 Develop, review, and update technical requirements in support of testing planning and reporting efforts. This shall include: consideration of test processes and objectives, data acquisition, reduction, and analysis, and test documentation/test resource requirement development.

3.1.6 Provide long term planning for technical and engineering support requirements and test capability development.

3.1.7 Develop, establish and maintain the collected test data. This includes: test data, reliability data, financial profiles, and other information relating to life cycle support during testing.

3.1.8 Attend meetings/conferences with government personnel to gather information to support program/project

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requirements. Specific meeting/conference attendance requirements will be defined in individual delivery orders.

3.1.9 Generate and produce presentation materials (including viewgraphs and other briefing materials) to support program/project requirements.

3.1.10 Provide engineering and test program support services including Contract Data Requirements List (CDRL) tracking, software/hardware documentation maintenance, technical and engineering coordination/control (e.g., POA&M development, test/program sequence definition, organization of necessary support assets, etc.), library operations, and computer network operations and maintenance

### 3.2 TEST ENGINEERING/TECHNOLOGY DEVELOPMENT, DESIGN AND INTEGRATION

3.2.1 Perform technical studies and analyses for advanced testing philosophies. The contractor shall provide recommendations on specific approaches, test facilities requirements and equipment/system requirements.

3.2.2 Perform technical studies, analyses, and planning to develop test methods.

3.2.3 Evaluate aircraft systems, aircraft systems support, and test and evaluation equipment/system upgrades and modifications for capability, efficiency, and life expectancy.

3.2.4 Inspect and analyze equipment components within a system to define and analyze characteristics for system enhancement/development/integration.

3.2.5 Define hardware and software interface requirements between aircraft to be tested and test laboratories. The contractor shall develop plans for integrating new or modified capabilities and systems which consider implementation schedules, cost, and resource allocations.

3.2.6 Provide system development and integration services for hardware and equipment components.

3.2.7 Install, move, modify and operate aircraft systems and aircraft systems support equipment during system integration/upgrades. The contractor shall develop documentation/documentation updates to reflect final configurations.

3.2.8 Provide software development and integration services for test and evaluation efforts and mission planning development.

3.2.9 Develop software applications based on existing multi-purpose software.

3.2.10 Develop original software applications in support of avionics simulation models and test and evaluation.

3.2.11 Develop software requirements; perform software development planning and flow-charting.

3.2.12 Generate software code, conduct test operations including installation and debugging, and provide software-related documentation (e.g. code, flow charts, logic diagrams, etc.).

3.2.13 Demonstrate and provide training on the operation and maintenance of software developed under this contract.

### 3.3 TEST PLANNING

3.3.1 Analyze test requirements and financial constraints and develop and prepare recommended test plans.

3.3.2 Recommend resources and equipment/materials to support aircraft and airframe testing. The contractor shall investigate, analyze, and define weapon systems/platform requirements to support testing.

3.3.3 Recommend government quality control/assurance procedures and standard operating procedures in accordance with test plan requirements and/or program/project life cycle requirements.

3.3.4 Provide mission planning services to analyze, design, develop, implement and initialize aviation mission planning systems for various aircraft (e.g. F-35, F/A-18, V-22, E-2C, P-8, UAVs, etc.) to improve operational capability, enhance user access to current and future tactical mission planning tools and maximize operational and training flight safety for specific test flights.

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3.3.4.1 Provide mission planning services to Fleet units for training and initialize aviation mission planning systems for various aircraft (e.g. AV-8B, F/A-18, V-22, E-2C, P-8, UAVs, etc.)

3.3.5 Document and provide recommendations to perform maintenance engineering, analytical, and technical support in the program initiation, demonstration and validation, engineering development, production, and fleet introduction phases of aircraft life support and environmental systems.

### 3.4 TEST SUPPORT

3.4.1 Provide test execution, management, and test data analysis services.

3.4.2 Design, develop, fabricate and modify off-the-shelf or specialized state-of-the-art test equipment, system components, cable harnesses, connections, breakout boxes, peculiar test equipment, data and fiber optic links, and other interfaces necessary to conduct testing and simulation.

3.4.2.1 Test and evaluate equipment and systems utilizing computer interfaces and develop equipment/system specific training on test methodology.

3.4.3 Provide services for test and evaluation of crew systems integration aspects of new and modified airborne weapon systems.

3.4.4 Provide engineering and technical services during pretest, test, and post-test activities. This shall include collecting, reducing and analyzing ground/flight test/simulation flight test data and providing statistical analyses.

3.4.5 Prepare draft test reports, messages. Develop and maintain documentation such as deficiency reports, equipment and facility user manuals, avionics hardware, software and facility architecture documentation.

### 3.5 MAINTENANCE/OPERATIONS SUPPORT

3.5.1 Perform system (e.g. avionics, test, etc.), subsystem, equipment, and component maintenance, and calibration in accordance with Government and original equipment manufacturer (OEM) standards. The contractor shall investigate and determine alternative repair methods and sources.

3.5.2 Perform test data file maintenance and verification.

3.5.2.1 Analyze, examine, document and maintain software configurations.

3.5.2.2 Perform software support such as installing version upgrades and new releases in accordance with Government procedures and manufacturers' documentation.

3.5.3 Operate test equipment, instrumentation, facility and aircraft systems during laboratory/ground tests.

3.5.3.1 Perform technical and research and development engineering services for ground and flight testing of aircraft systems and system upgrade/modification. The contractor shall provide services to support operations management and maintenance and repair aircraft systems

3.5.4 Maintain NAWCAD laboratory support areas, specialized test equipment, instrumentation, off-the-shelf test equipment and peculiar test equipment.

3.5.4.1 Maintain cable harnesses, instrumentation connections and other interfaces (hardware, fiber optic, coaxial, etc.) integral to articles under test.

3.5.5 Review for requirements conformance, alert government personnel of any discrepancies, and assemble equipment received from commercial vendors and/or other government activities.

### 3.6 FLEET PRODUCTS

Provide weapon employment support which is concentrated in the areas of efficient, cost effective compilation of specific aircraft and weapons test data, and the selective use of the data to produce accurate weapon planning

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information for the fleet. Provide technical and research and development engineering services to achieve maximum combat readiness in the employment of tactical aircraft. The specific tasks for fulfilling those requirements are:

3.6.1 Attend Naval Aircraft Technical Information Publication (NATIP) and/or Joint Munitions Effectiveness Manual (JMEM) preliminary conferences with government personnel and provide technical inputs as required. Identify and document requirements and problems or deficiencies in technical information currently appearing in NATIP, or proposed new NATIP/JMEM including Foreign Military Sales (FMS) Series, and/or JMEM.

3.6.2 Provide a technical review and analysis of aeroballistic and related technical requirements. The technical analysis shall include common data package weapon listings and specific ballistic application tabular information and graphic data (or software package) in accordance with approved NATIP/JMEM pre-conference documentation.

3.6.3 Compile all NATIP and/or JMEM change/revision items relating to ordnance limitations and recommendations. This task will include preparation of a draft technical report of final ordnance loadings/limitations as applicable, including revised or modified charts and tables.

3.6.4 Review changed/revised manuals during production to validate incorporation of the changes. The contractor shall prepare draft Department notes.

3.6.5 Perform software/system research, design, development, test and evaluation engineering to develop, test, evaluate, assess, and maintain government-owned automated weapon planning and delivery tools. This task encompasses the research and development required to incorporate and maintain carriage, release, jettison, ballistics, applied fuzing, and safe escape technical data applicable to all aircraft types/models. Establishing a software engineering environment to conduct and/or support all software application systems research and development efforts. Attending and/or conduct, as appropriate, all technical and programmatic meetings and reviews required in support of the aforementioned tasks. Complying with established configuration management procedures, correct identified deficiencies, and report results. Providing inputs to test and evaluation efforts. At task completion, all data and informational elements generated by the contractor shall be considered sole property of the government.

3.6.6 Provide analytical and engineering expertise in support of gunfire control initiatives. The contractor shall investigate adding capability to existing systems for newly developed rounds. This task includes computing modeling coefficients for newly developed rounds, implementing these new coefficients within gunfire control systems, developing exterior ballistics components and/or assessing component proposals. The contractor shall report all technical results.

### 3.7 SOURCE DATA

3.7.1 Review, evaluate, analyze arena warhead/fragmentation characterization test plans and provide recommendations. The contractor shall evaluate test plans to determine the validity of proposed procedures for defining parameters necessary for safe escape analyses in accordance with approved modeling procedures. The contractor shall conduct analysis of arena test results and develop a fragmentation characterization data package for use in determining aircraft safe escape. The contractor shall also compile, verify, validate, and format aircraft, weapon and warhead technical data for entry into existing government-owned mathematical models used to compute the probability of tactical hazard and then document the results.

3.7.2 Compile, verify, validate, and format weapon aeroballistic test data for entry into existing government-owned mathematical equations and computer programs. This effort includes development of ballistic modeling parameters for unguided air-launched ordnance and guided weapons. The contractor shall conduct validation/verification exercises on the modeling parameters to ensure accuracy. The contractor shall prepare a final data package containing complete analysis results, conclusions, and recommendations.

3.7.3 Identify and monitor sources of information which may result in changes to the ordnance limitation sections of aircraft NATIPs. These include, but are not limited to, NAVAIRSYSCOM clearance messages, fleet Interim Rapid Change recommendations, and results of separation tests. The contractor shall evaluate the information and prepare/recommend a change.

3.7.4 Set up a repository for continuous accountability of all NATIP change and revision inputs, including fleet change recommendations, changes due to NAVAIRSYSCOM clearance messages; inclusion/deletion of weapons; correction of vague, ambiguous or incorrect text which may generate changes to NATIPs with the exception of ballistics data. Maintain and continuously update the repository. The contractor shall prepare draft Department Notes

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on the status of this effort.

### 3.8 TECHNOLOGY DEVELOPMENT AND EVALUATION

3.8.1 Perform software/system research, design, development, test and evaluation engineering to develop, test, evaluate, assess, and maintain information management, government-owned modeling and simulation software required to support ballistics and safe escape tasks. This task encompasses the research and development required to develop, enhance and maintain required models and source data, carriage, release, jettison, ballistics, applied fuzing, and safe escape models. The contractor shall comply with established configuration management procedures, correct identified deficiencies, and report results. The contractor shall also comply with established configuration management procedures, correct identified deficiencies, and report results.

3.8.2 Provide system engineering support to include efforts related to system integration, specifications/requirements definition, Test and Evaluation Master Plan (TEMP) development/revisions, technical reviews/team meetings, technology insertion, business re-engineering processes, and joint aircraft/store integration and certification. The task encompasses associated risk assessments and cost analysis to evaluate implementation and affordability.

### 3.9 RDT&E OF AIRCRAFT ARMAMENT SYSTEMS AND INTERFACES

3.9.1 Determine operability and suitability of aircraft armament control systems, compatibility of those systems with ordnance and interfaces, and compatibility of interfaces and ordnance. In the case of flight tests, the contractor shall prepare flight cards to be used by the government test team to brief aircrew. The contractor shall summarize weekly activity in the form of draft Team Notes.

3.9.2 Conduct evaluations that include considerations of electrical, mechanical and information transfer characteristics of integrated systems as well as specification compliance and ability of armament systems to release ordnance. Results of evaluations shall be incorporated in draft technical reports.

3.9.3 Develop armament system mechanical, electrical, and electronic devices and interfaces that are required to determine operability and suitability of aircraft armament control systems, compatibility of those systems with ordnance and interfaces, and compatibility of interfaces and ordnance. These functions shall include researching of aircraft system technical publications, development of schematics or sketches, use of standard aircraft electronic test equipment, and knowledge of basic mechanical hardware to produce the devices and interfaces. Descriptions of the interfaces and devices shall be prepared in the form of draft Department notes.

### 3.10 RELEASE HARDWARE, WEAPONS, AND ORDNANCE RDT&E

3.10.1 Evaluate the suitability of release hardware (pylons, racks, adapters), weapons, ordnance, and accessories to function safely and effectively in the operational environment, to determine specification compliance of delivered hardware, and/or to derive ballistic/weapon delivery accuracy results. In the case of flight tests, the contractor shall prepare draft flight cards to be used by the government test team to brief the aircrew. The contractor shall prepare summaries of weekly test activity in the form of draft Team Notes.

3.10.2 Evaluate results of flight tests conducted for aircraft/stores certification. The evaluation process shall include analysis of flight film, video, and any recorded or transmitted data, data reduction, editing/titling of film, structural analyses, and preparation of all test data for archives. At the end of tests, incorporate the results of evaluations in draft technical reports.

### 3.11 ARMAMENT CONTROL SYSTEMS TECHNOLOGY

3.11.1 Perform technical and engineering tasks in support of RDT&E of armament control systems/stores management systems (ACS/SMS) and weapons/stores for foreign and domestic aircraft. The contractor shall generate and/or review documents relating to ACS/SMS and weapons/stores acquisition programs including specifications, statements of work, systems and interface design documents, test and evaluation master plans, test plans, and final reports.

3.11.2 Attend conferences with government personnel and provide technical inputs relating to aircraft ACS/SMS and weapons/stores to present recommended improvements and corrections of specifications, standards, and manuals and to present the results of analyses conducted on assigned tasks. At the end of these conferences, the contractor shall submit conference/trip reports.

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3.11.3 Perform technical and engineering tasks related to ACS/SMS test benches. These test benches shall include the Ordnance F/A-18 ground test aircraft, MIL-STD-1760 test bench, Aircraft Armament System Simulation Engineering Test Station (AASSETS), and P-3 Maverick/SLAM test bench. The support tasks shall include some maintenance, instrumentation, and operational support during tests. Results shall be submitted in a written report.

3.11.4 Perform tasks related to the Ordnance weapons files. These tasks shall include researching the weapons' electrical and mechanical interfaces, comprehensive descriptions, a full history of weapon development, mass properties, and current authorized aircraft. Provide all data in sufficient detail for inclusion into technical documents.

### 3.12 STRUCTURAL INVESTIGATION

3.12.1 Perform engineering and technical tasks in support of the development, test and evaluation of military aircraft and weapon systems. The contractor shall collect, reduce and analyze structural test data and prepare recommended structural analysis technical reports which will be used by the government engineers to determine the flight worthiness of weapons and weapon systems.

3.12.2 Attend and participate in conferences with government engineers related to aircraft weapons structural compatibility test and evaluation to present recommended improvements and corrections of specifications, standards and manuals and to present the results of analyses conducted on assigned tasks. At the end of these conferences, the contractor shall submit conference/trip reports.

### 3.13 SATELLITE NAVIGATION (SATNAV), AIR TRAFFIC CONTROL AND LANDING SYSTEMS (ATCAL) SUPPORT

3.13.1 Test and Evaluation. The contractor shall provide test and evaluation support for SATNAV/ATCAL systems and products for testing to include bench, System Integration Laboratory (SIL), Hardware-in-the-loop (HITL), Manned Flight Simulator (MFS) / ACETEF, Installed System Test (IST), field, aircraft ground and flight testing.

3.13.1.1 Test Planning. The contractor shall provide both informal (customer format) and formal (NAWCAD format) test planning products for specified test evolutions. Test planning includes the analysis and definition of test requirements, scope, processes, procedures and objectives; the acquisition, reduction and analysis of test data; and the development of test resource requirements. The contractor shall provide engineering and technical assistance to investigate, analyze, and define air vehicle, avionics, ground/ship system, hardware and software, prototypes, flight test resources and other equipment/material requirements to accommodate test plan requirements.

3.13.1.2 Test Conduct. The contractor shall support test conduct including pre-test, test, and post-test activities for all types of testing from simulations, integration check-outs, through SIL, HITL, IST, and field/ flight test. Support flight testing to include scheduling support, test subject support, data monitoring and collection, test conduct, briefings/ debriefings, data analysis, and reporting. The contractor shall maintain data/ flight logs and support acquisition and transfer of data post-test.

3.13.1.3 Flight Support. The contractor shall provide for the leased use of commercial light aircraft for those tests requiring commercial flight support. The contractor shall support the acquisition of required equipment, hardware and software to support flight test objectives. The contractor shall support aircraft modifications in accordance with FAA airworthiness directives. The contractor shall support leased aircraft flight tests in accordance with approved NAWCAD Test Plan restrictions, limitations, and requirements.

3.13.1.4 Test Support. The contractor shall assess all required test support activities, tools, and process and develop and implement plans for improving and modifying them to meet future test requirements and efficiency goals.

3.13.1.5 Data Analysis and Reporting. The contractor shall analyze test data and compare against Verification Requirement Correlation Matrices (VRCM) and other test exit criteria. Analytical methods shall be documented. Data analysis software including source code shall be deliverable to the Government. When required, the contractor shall report results of testing within 24 hours through a Quick Look Report. Provide technical inputs or complete narratives of final test reports and messages. Based on observed test deficiencies, the contractor shall generate System Trouble Reports (STRs) for inclusion in the project Configuration Management (CM) data base.

3.13.1.6 Simulation and Stimulation. The contractor shall support simulation and stimulation tools to enable the



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complete testing and demonstration of SATNAV/ATCALs systems. Overall development should strive for maximum reuse throughout all test and evaluation phases from SIL, HITL, IST and Flight Test. All developed simulation and stimulation products shall be deliverable to the Government including source code.

3.13.2 System Prototyping. The contractor shall provide for rapid prototyping systems, hardware and software, and platform integration to support technology development and demonstration. Prototype systems shall be NAPIE compatible unless otherwise specified in the TDL.

3.13.2.1 Prototype Hardware. As required by the project, the contractor shall procure the necessary prototype hardware to support prototyping efforts. Specification and requirements compliance shall be assessed. Prototype hardware includes commercial systems, military systems, ship and ground facilities.

3.13.2.2 Software Development. The contractor shall provide for software development in accordance with research and development objectives. The software may be part of an algorithm demonstration or as an embedded function of an integrated system. Software development standards, policies and procedures shall be specified per the task requirements in the TDL. As required, the contractor must be able to demonstrate compliance with ISO, SEI, and/or RTCA DO-178 software quality assurance standards. All developed software products shall be deliverable to the Government including source code.

3.13.2.3 Product Verification. The contractor shall conduct product verification for all delivered prototype software and hardware. Product verification simulations and tools shall be procured/developed as necessary. Off-line simulations shall fully complement installed systems. The contractor shall coordinate requirements for product verification to ensure the appropriate tools and capabilities are available. Product verification analyses and reports shall accompany system/ component delivery and/or integration with host systems.

3.13.2.4 Integration Support. As required, the contractor shall procure, design, fabricate, and/or install interconnect cabling, mounting fixtures, and other modifications necessary to accommodate prototype system integration with the host laboratory, simulation, facility, and/or air vehicle. The contractor shall develop laboratory (e.g. SIL, HITL, MFS), facility, ship and/or aircraft interface control documents, installation layouts, interconnect and wiring diagrams, and user manuals.

3.13.2.5 Configuration Management. The contractor shall support the configuration management of prototype hardware and software. This configuration management will be coordinated with overall SATNAV/ATCALs test and evaluation asset management. The contractor shall maintain a Configuration Management tracking tool as approved by the Government for each project. Configuration Control Boards (CCBs) shall be held as necessary during the product RDT&E evolution.

3.13.3 Science and Technology. The contractor shall perform research, design, development, test and evaluation engineering to support SATNAV/ATCALs science and technology development, insertion, demonstration, and assessment.

3.13.3.1 Technology Development and Demonstration. The contractor shall assess applicable SATNAV/ATCALs technologies requiring maturation and/or propose technical areas for broad S&T development. The contractor shall develop plans to develop the technologies and demonstrate them in a relevant fleet environment, such as aboard ship or on a Naval or customer aircraft. The contractor shall assist in the demonstration, analysis, and data reporting of each relevant technology.

3.13.3.2 Technology Insertion. The contractor shall assess candidate technologies for insertion into Navy or customer standard air vehicles, systems, avionics, ships, and ground facilities. The contractor shall assist in the planning and conduct of technology insertion activities including acquisition of relevant hardware, software, and integrated systems.

3.13.3.3 Technology, Process, and System Attribute. The contractor shall assess applicable SATNAV/ATCALs technologies to determine key technologies, processes and system attributes (TPSA's) requiring science and technology development.

3.13.3.4 Technology Readiness Level. Each TPSA shall be assessed according to the standard technology readiness level (TRL) scale. Risk shall be assessed and a plan for reducing risk developed with focused demonstrations.

3.13.4 Certification. The contractor shall perform design, development, test and evaluation engineering to support

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instrument flight certification of SATNAV/ATCALs equipment, avionics, facilities, and integrations for multiple customers including the Navy and FAA.

3.13.4.1 Certification Requirements Validation. The contractor shall support the verification and validation of certification requirements as published in Navy, FAA, RTCA, ICAO, and other documents. Results of the verification and validation process shall be documented in accordance with customer requirements

3.13.4.2 Validation Forum Interface. When performing validation of commercial or military standards, the contractor shall participate in the commercial (RTCA, ICAO, AEEC) or military forums as authorized by the customer. The contractor shall participate in and coordinate feedback to the relevant standards forum.

3.13.4.3 Certification Process Engineering. The contractor shall provide engineering and technical services to support the certification process. This includes analysis of certification requirements and associated test procedures, designing validation tests and procedures, conducting tests of candidate equipment using stimulators / simulators, and performing validation field and flight tests as required.

3.13.4.4 Validation Tool Development. In order to support the certification engineering tasks, the contractor shall assess existing validation tools and recommend modifications, new procurements and/or developments to meet requirements. The contractor shall assist in the requirements generation, design, development, implementation, integration, testing, maintenance and support of the selected validation tools.

3.13.4.5 Certification Standards and Processes. The contractor shall develop certification standards and process documentation. Documentation may include both cross referencing with existing standards as well as generation of new requirements per the mission, requirements, and systems engineering analyses.

3.13.5 Program Support. The contractor shall provide program, engineering, and technical support through all phases of SATNAV/ ATCALs programs including science and technology, system concept, development, implementation, integration, developmental T&E, certification, and fleet support.

3.13.5.1 Team Leader Support. The contractor shall support the SATNAV/ATCALs AIR-5.1.6 project coordinator and team lead. The contractor shall provide for engineering and technical services to support the execution and management of each of these functions. The contractor shall develop inputs to SATNAV/ATC IPT planning documentation to ensure conformance with established directives, budgets, implementation requirements, available resources and program schedules.

#### 4.0 GOVERNMENT FURNISHED FACILITIES AND EQUIPMENT

4.1 Government Furnished and Accessible Facilities: The Government will provide access to facilities in which to perform applicable statement of work requirements. These facilities are located Naval Air Warfare Center Aircraft Division, Patuxent River, MD.

4.2 Government Furnished Equipment: The Government will provide RDT&E ADP equipment and previously developed in house and publicly available software at the Government facilities to perform software development, data reduction and analysis, and related tasks as applicable to statement of work requirements. The Government will provide all office furniture (i.e. tables, chairs, file cabinets, etc.) required to execute the tasks for those who will be located at the Government facility.

#### 5.0 TRAVEL

5.1 The contractor may be required to travel off site to provide support services. All trips taken by contractor personnel shall be in accordance with the Joint Travel Regulations.

#### 6.0 MATERIAL

6.1 The contractor shall provide material, equipment and other items (e.g., incidental specialized parts, repair items, etc.) which are necessary or integral to the performance of technical and engineering services under this contract. All material requirements will be authorized and approved by the Task Order Manager.

#### 7.0 NAVY MARINE CORP INTRANET (NMCI)

7.1 This contract requires the use of and access to Department of Navy (DoN) Information Technology (IT)

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Resources by contractor personnel for contract performance. Applicable DoN IT Resources for performance of this contract shall be procured from the NMCI Contractor pursuant to the authority on NMCI Contract # N00024-00-D-6000, clause 5.2 “Ordering.”

7.2 The contractor shall procure the NMCI Services as identified in individual tasks for contract performance.

7.3 Upon contract award, the contractor shall obtain written authorization from the Contracting Officer executing this contract, prior to ordering directly from the NMCI contractor. No NMCI Order may be placed without prior written authorization of the Contracting Officer. Any NMCI order exceeding the written authorization of the Contracting Officer shall be treated as an unallowable cost pursuant to FAR Part 31.

7.4 The procurement of NMCI services shall be charged in accordance with the contractor’s disclosed or established cost practice. If a direct charge, the Government shall reimburse the contractor for the placement of NMCI orders including applicable indirect burdens (general and administrative, etc.), excluding profit or fee.

## 8.0 SECURITY REQUIREMENTS

8.1 All contractor personnel supporting tasks under this order must have or be able to obtain a security clearance that is appropriate for the position and services provided under this PBSOW. (Refer to DD Form 254)

8.2 Only U.S. citizens may perform under this PBSOW. Any person having had a security clearance revoked for any reason shall be ineligible to perform under this PBSOW. All contractor personnel supporting tasking under this PBSOW must be able to obtain an appropriate security clearance.

8.3 Identification Badges: Contractor identification badges shall be issued by the Government to on-site contractor personnel and must be visible at all times while contractor employees are at NAVAIR sites. The contractor must furnish all requested information required to facilitate issuance of identifications badges and must conform to applicable regulations concerning the use and possession of the badges. The contractor shall be responsible for ensuring that all identification badges issued to contractor employees are returned to the Security Department at NAVAIR within 48 hours following the completion of the contract relocation, or termination of an employee, or upon the request of the Contracting Officer.

8.4 Identification of Contractor Personnel: Corporation affiliation shall be references on all written documentation that refers to contractor personnel. This is required for internal and external communications. Similarly, the contractor affiliation shall be identified when answering phone calls, and at the beginning of any meeting or conference where contractor personnel are in attendance.

Information Technology Security: The Department of the Navy (DON) Automated Data Processing (ADP) Security Program outlined in OPNAVINST 5239.1B, or the most current version of this instruction, applies to all efforts under this contract.

The security requirements are specified in accordance with the DD Form 254 (Attachment 2).

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## **SECTION D PACKAGING AND MARKING**

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## **SECTION E INSPECTION AND ACCEPTANCE**

Clauses specified in Section E of the Seaport-e Basic Contract are incorporated into this order if applicable. Inspection and Acceptance shall be in accordance with Section E of the Seaport-e Basic Contract.

See Attachment 3 for the Quality Assurance Surveillance Plan.

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## SECTION F DELIVERABLES OR PERFORMANCE

The periods of performance for the following Items are as follows:

1000	7/7/2007 - 5/31/2008
1100	6/1/2008 - 3/31/2009
2000	7/7/2007 - 5/31/2008
2100	6/1/2008 - 3/31/2009
3000	7/7/2007 - 5/31/2008
3100	6/1/2008 - 3/31/2009
4300	4/1/2009 - 3/31/2010
4400	4/1/2010 - 3/31/2011
4500	4/1/2011 - 3/31/2012
5300	4/1/2009 - 3/31/2010
5400	4/1/2010 - 3/31/2011
5500	4/1/2011 - 3/31/2012
6300	4/1/2009 - 3/31/2010
6400	4/1/2010 - 3/31/2011
6500	4/1/2011 - 3/31/2012

## CLIN - DELIVERIES OR PERFORMANCE

The periods of performance for the following Items are as follows:

1000	7/7/2007 - 5/31/2008
1100	6/1/2008 - 3/31/2009
2000	7/7/2007 - 5/31/2008
2100	6/1/2008 - 3/31/2009
3000	7/7/2007 - 5/31/2008
3100	6/1/2008 - 3/31/2009
4300	4/1/2009 - 3/31/2010
4400	4/1/2010 - 3/31/2011
4500	4/1/2011 - 3/31/2012
5300	4/1/2009 - 3/31/2010
5400	4/1/2010 - 3/31/2011
5500	4/1/2011 - 3/31/2012
6300	4/1/2009 - 3/31/2010
6400	4/1/2010 - 3/31/2011
6500	4/1/2011 - 3/31/2012

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#### F-1 Task Order Options

(b) The Government may extend the term of this order by written notice to the Contractor within 5 days of the end of the current period of performance; provided, that the Government gives the Contractor a preliminary written notice of its intent to extend at least 30 days before the end of the current period of performance. The preliminary notice does not commit the Government to an extension.

(c) If the Government exercises this option, the extended order shall be considered to include this option provision.

(d) The total duration of this order, including the exercise of any options under this clause, shall not exceed 5 years.

#### 5252.247-9505 TECHNICAL DATA AND INFORMATION (NAVAIR) (FEB 1995)

Technical Data and Information shall be delivered in accordance with the requirements of the Contract Data Requirements List, DD Form 1423, Exhibit A and B, attached hereto, and the following:

(a) The contractor shall concurrently deliver technical data and information per DD Form 1423, Blocks 12 and 13 (date of first/subsequent submission) to all activities listed in Block 14 of the DD Form 1423 (distribution and addresses) for each item. Complete addresses for the abbreviations in Block 14 are shown in paragraph (g) below. Additionally, the technical data shall be delivered to the following cognizant codes, who are listed in Block 6 of the DD Form 1423.

(1) PCO, Code 25173.

(2) ACO, Code N/A.

(b) Partial delivery of data is not acceptable unless specifically authorized on the DD Form 1423, or unless approved in writing by the PCO.

(c) The Government review period provided on the DD Form 1423 for each item commences upon receipt of all required data by the technical activity designated in Block 6.

(d) A copy of all other correspondence addressed to the Contracting Officer relating to data item requirements (i.e., status of delivery) shall also be provided to the codes reflected above and the technical activity responsible for the data item per Block 6, if not one of the activities listed above.

#### SOLICITATION NO.

N00024-07-R-3167

(e) The PCO reserves the right to issue unilateral modifications to change the destination codes and addresses for all technical data and information at no additional cost to the Government.

(f) Unless otherwise specified in writing, rejected data items shall be resubmitted within thirty (30) days after receipt of notice of rejection.

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(g) DD Form 1423, Block 14 Mailing Address:

Code 5.1.6

Manned and Unmanned Air Vehicle Evaluation Division

21960 Nickles Road

Patuxent River, MD 20670



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## SECTION G CONTRACT ADMINISTRATION DATA

Task Order Manager

[REDACTED]  
21960 Nickles Road  
Patuxent River, MD 20670-1539  
[REDACTED]  
[REDACTED]

Clauses specified in Section G of the Seaport-e Basic Contract are incorporated into this order if applicable.

### **5252.204-9503 EXPEDITING CONTRACT CLOSEOUT (NAVAIR) (JAN 2007)**

(a) As part of the negotiated fixed price or total estimated amount of this contract, both the Government and the Contractor have agreed to waive any entitlement that otherwise might accrue to either party in any residual dollar amount of \$1,000 or less at the time of final contract closeout. The term "residual dollar amount" shall include all money that would otherwise be owed to either party at the end of the contract, except that, amounts connected in any way with taxation, allegations of fraud and/or antitrust violations shall be excluded. For purposes of determining residual dollar amounts, offsets of money owed by one party against money that would otherwise be paid by that party might be considered to the extent permitted by law.

(b) This agreement to waive entitlement to residual dollar amounts has been considered by both parties. It is agreed that the administrative costs for either party associated with collecting such small dollar amounts could exceed the amount to be recovered.

### **5252.232-9516 ALLOTMENT OF FUNDS - INCREMENTALLY FUNDED COST-REIMBURSEMENT**

#### **CONTRACT OTHER THAN COST-SHARING CONTRACT (APR 1985)**

For the purposes of paragraph (b) of the "Limitation of Funds" clause of this contract-

(a) the amount available for payment and allotted to this incrementally funded contract is to be determined

(b) the items covered by such amount are Item(s) 1000, 1100, 3000, 3100, 4300, 4400, 4500, 6300, 6400, and 6500

(c) the period of performance for which it is estimated the allotted amount will cover is to be determined

### **252.246-7000 MATERIAL INSPECTION AND RECEIVING REPORT (MAR 2003)**

(a) At the time of each delivery of supplies or services under this contract, the Contractor shall prepare and furnish to the Government a material inspection and receiving report in the manner and to the extent required by Appendix F, Material Inspection and Receiving Report, of the Defense FAR Supplement.

(b) Contractor submission of the material inspection and receiving information required by Appendix F of the Defense FAR Supplement by using the Wide Area WorkFlow-Receipt and Acceptance (WAWF-RA) electronic form (see paragraph (b)(1) of the clause at 252.232-7003) fulfills the requirement for a material inspection and receiving report (DD Form 250).

### **252.232-7003 ELECTRONIC SUBMISSION OF PAYMENT REQUESTS (MAY 2006)**

(a) Definitions. As used in this clause--

(1) Contract financing payment and invoice payment have the meanings given in section 32.001 of the Federal Acquisition Regulation.

(2) Electronic form means any automated system that transmits information electronically from the initiating system to all affected systems. Facsimile, e-mail, and scanned documents are not acceptable electronic forms for submission of payment requests. However, scanned documents are acceptable when they are part of a submission of a payment request made using one of the electronic forms provided for in paragraph (b) of this clause.

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(3) Payment request means any request for contract financing payment or invoice payment submitted by the Contractor under this contract.

(b) Except as provided in paragraph (c) of this clause, the Contractor shall submit payment requests using one of the following electronic forms:

(1) Wide Area WorkFlow-Receipt and Acceptance (WAWF-RA). Information regarding WAWF-RA is available on the Internet at <https://wawf.eb.mil>.

(2) Web Invoicing System (WInS). Information regarding WInS is available on the Internet at <https://ecweb.dfas.mil>.

(3) American National Standards Institute (ANSI) X.12 electronic data interchange (EDI) formats.

(i) Information regarding EDI formats is available on the Internet at <http://www.X12.org>.

(ii) EDI implementation guides are available on the Internet at <http://www.dod.mil/dfas/>.

(4) Another electronic form authorized by the Contracting Officer.

(c) If the Contractor is unable to submit a payment request in electronic form, or DoD is unable to receive a payment request in electronic form, the Contractor shall submit the payment request using a method mutually agreed to by the Contractor, the Contracting Officer, the contract administration office, and the payment office.

(d) In addition to the requirements of this clause, the Contractor shall meet the requirements of the appropriate payment clauses in this contract when submitting payments requests.

#### 5252.232-9510 PAYMENT OF FIXED FEE (NAVAIR) (OCT 2005)

(a) The fixed fee, as specified in Section B of this contract, subject to any adjustment required by other provisions of this contract, will be paid in installments. The fixed fee will be paid not more frequently than monthly based on the allowable cost. The amount of each such installment shall be in the same ratio to the total fixed fee as the net direct labor hours expended during the installment period is to direct labor hours

specified in the clause entitled "Level of Effort". Payment shall be made in accordance with FAR Clauses 52.216-7, "Allowable Cost and Payment", and 52.216-8, "Fixed Fee".

(b) In the event of termination of the work in accordance with the FAR Clause 52.232-22, "Limitation of Funds", the fixed fee shall be redetermined by mutual agreement equitably to reflect the reduction of the work performed. The amount by which such fixed fee is less than or exceeds payments previously made on account of fee, shall be paid to (or repaid by) the contractor.

(c) The balance of the fixed fee shall be payable in accordance with other clauses of this contract.

(d) For indefinite delivery type contracts the terms of this clause apply to each delivery/task order there under.

#### 5252.232-9513 INVOICING INSTRUCTIONS AND PAYMENT (WAWF INSTRUCTIONS) (MAR 2006)

(a) Invoices for goods received or services rendered under this contract shall be submitted electronically through Wide Area Work Flow – Receipt and Acceptance (WAWF):

(1) The vendor shall self-register at the web site <https://wawf.eb.mil>. Vendor training is available on the Internet at <http://www.wawftraining.com>. Additional support can be obtained by calling the NAVY WAWF Assistance Line: 1-800-559-WAWF (9293).

(2) WAWF Vendor "Quick Reference" Guides are located at the following web site: <http://www.acquisition.navy.mil/navyaos/content/view/full/3521>

(3) Select the invoice type within WAWF as specified below. Back up documentation (such as timesheets, etc.) can be included and attached to the invoice in WAWF. Attachments created in any Microsoft Office product are

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attachable to the invoice in WAWF. Total limit for the size of files per invoice is 5 megabytes.

(b) The following information, regarding invoice routing DODAAC's, must be entered for completion of the invoice in WAWF:

WAWF Invoice Type: Access the following web site for information on invoice types:

[http://www.wawftraining.com/courses/\\_content\\_package/content\\_files/menuTree.html](http://www.wawftraining.com/courses/_content_package/content_files/menuTree.html)

Click on Vendor, then Determine Type of Document to Create.

Issuing Office DODAAC: N00421

Admin Office DODAAC: S2404

Inspector DODAAC (if applicable): N00421

Ship To DODAAC (for Combo),

Service Acceptor DODAAC (for 2 in 1), N00421

Service Approver DODAAC (for Final Cost Voucher) (if applicable) N00421

Acceptor DODAAC (if applicable): N00421

Local Processing Office (LPO –if applicable):

DCAA Office DODAAC (Cost Voucher Approver – if applicable): HAA47F

Paying Office DODAAC: HQ0338

(c) The contractor shall submit invoices / cost vouchers for payment per contract terms. Contractors approved by DCAA for direct billing will not process vouchers through DCAA, but may submit directly to DFAS. Final voucher submission will be approved by the ACO.

(d) The Government shall process invoices / cost vouchers for payment per contract terms.

(e) For each invoice / cost voucher submitted for payment, the contractor shall also email the WAWF automated invoice notice directly to the following points of contact:

Name	Email	Phone	Role
██████████	████████████████████	██████████	TOM

**5252.232-9516 ALLOTMENT OF FUNDS- INCREMENTALLY FUNDED COST-REIMBURSEMENT CONTRACT OTHER THAN COST-SHARING CONTRACT (NAVAIR) (JUL 1985) - ALT I (OCT 2005)**

Substitute the following paragraph (a) for the basic paragraph (a):

(a) The amount available for payment and allotted to this incrementally funded contract for

Option Year 4

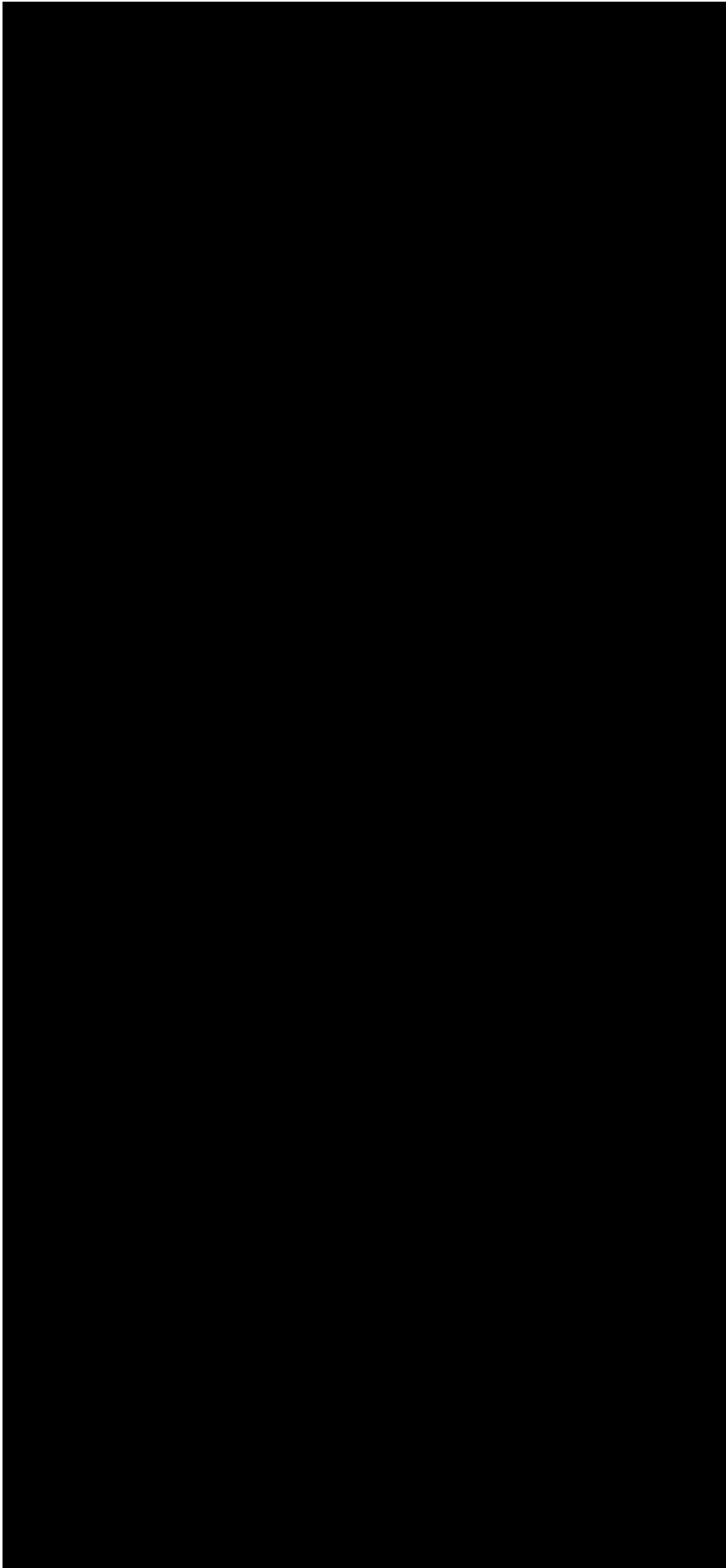
Funded Cost	████████████████████
Funded Fee	
<b>Total Funds</b>	

(b) the items covered by such amount in Option Year 4 are Item(s) CLIN 4500 and CLIN 6500; and

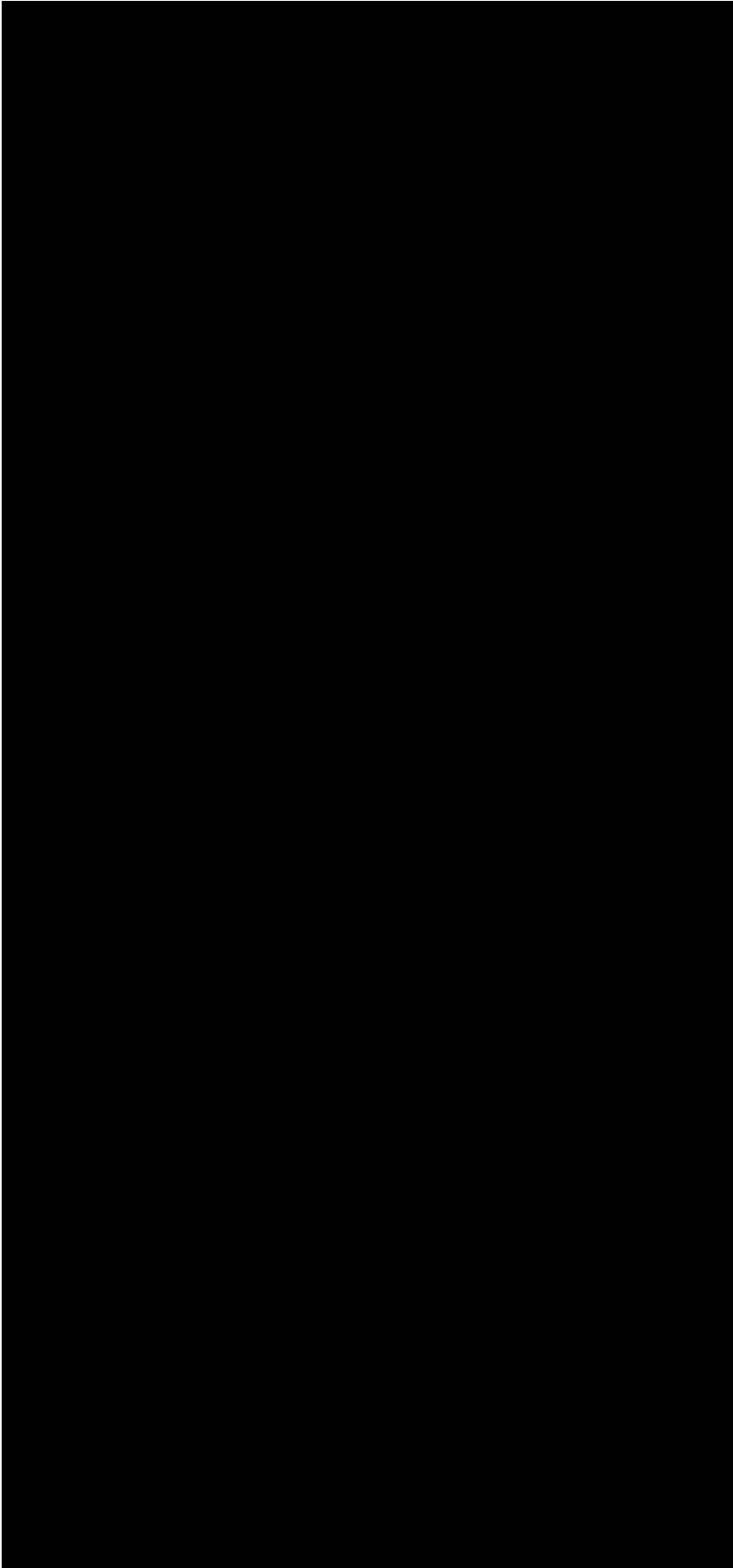
(c) the period of performance for which it is estimated the allotted amount will cover is through 26 March 2012



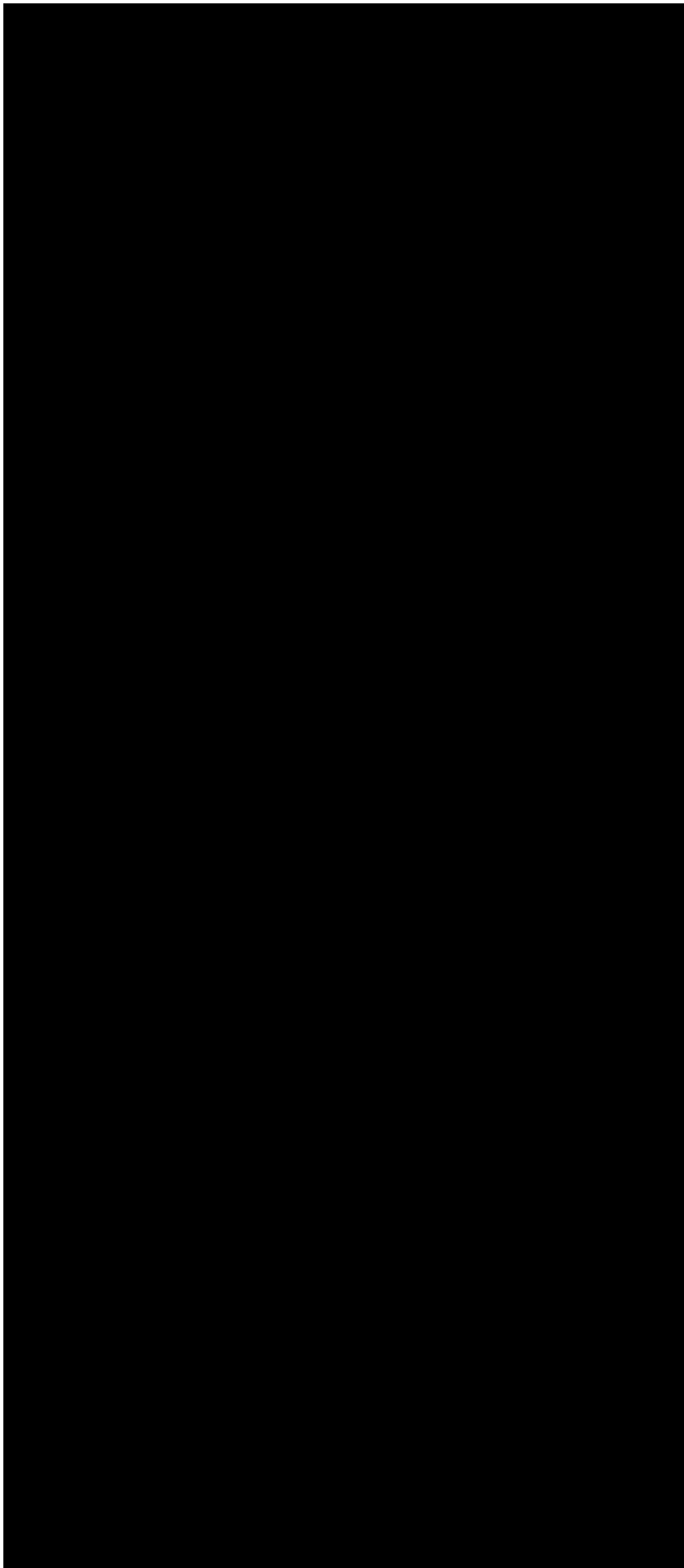
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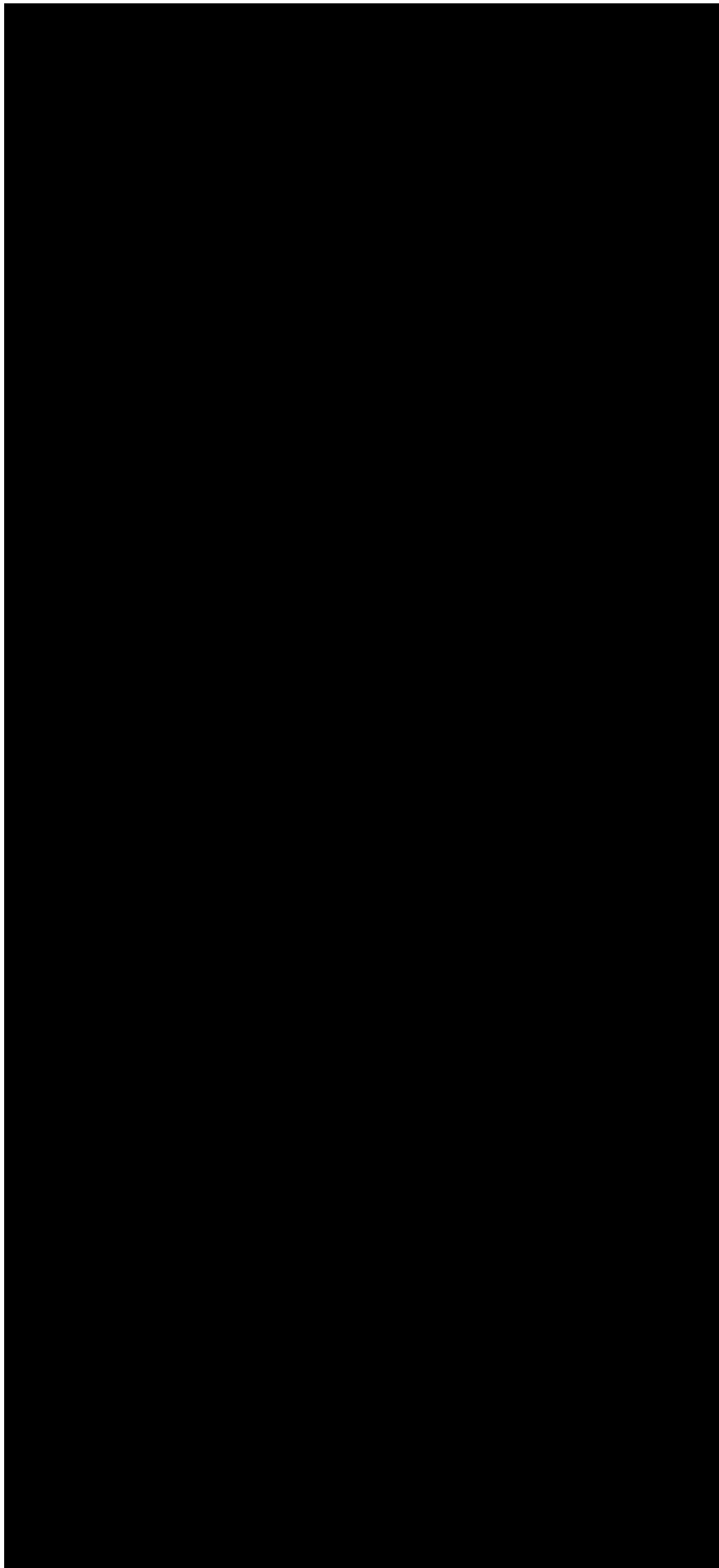
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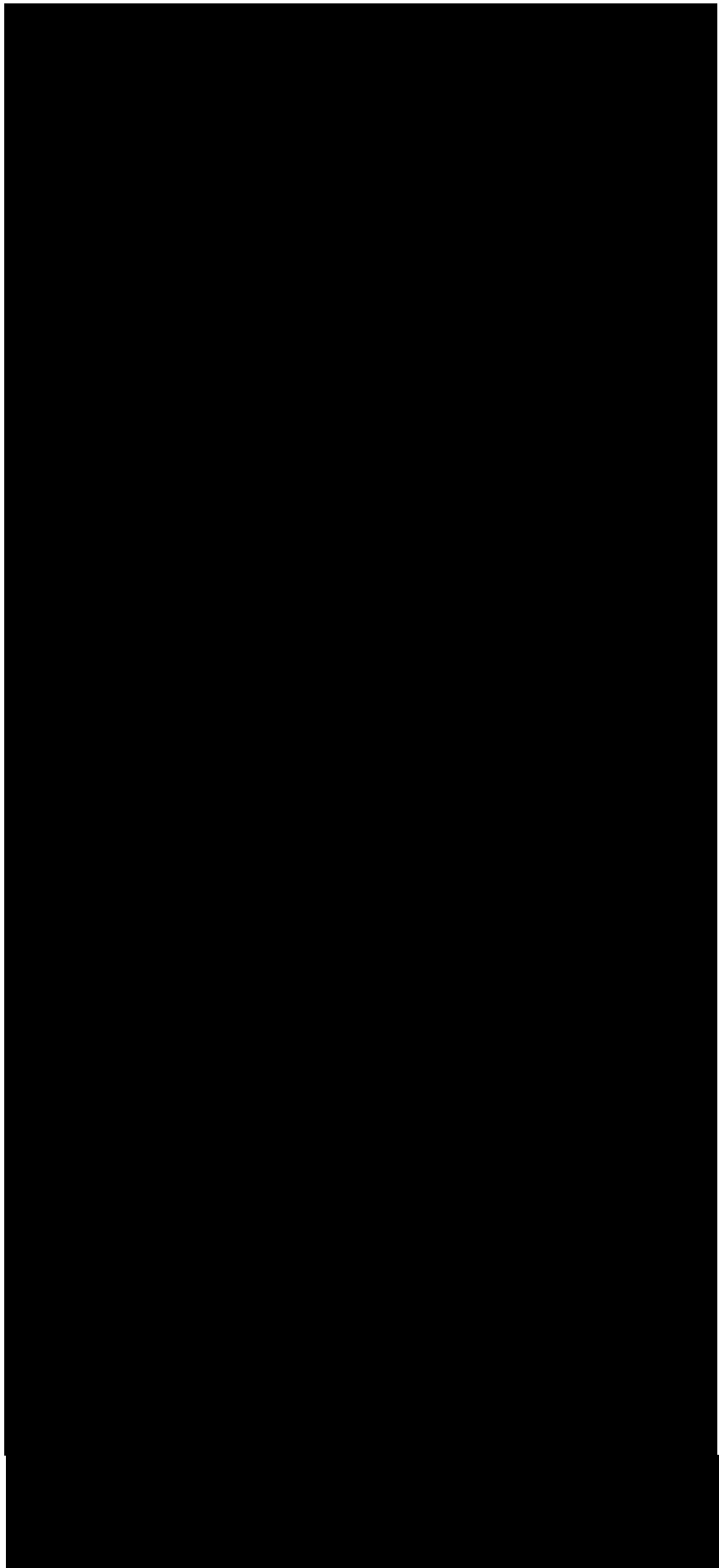


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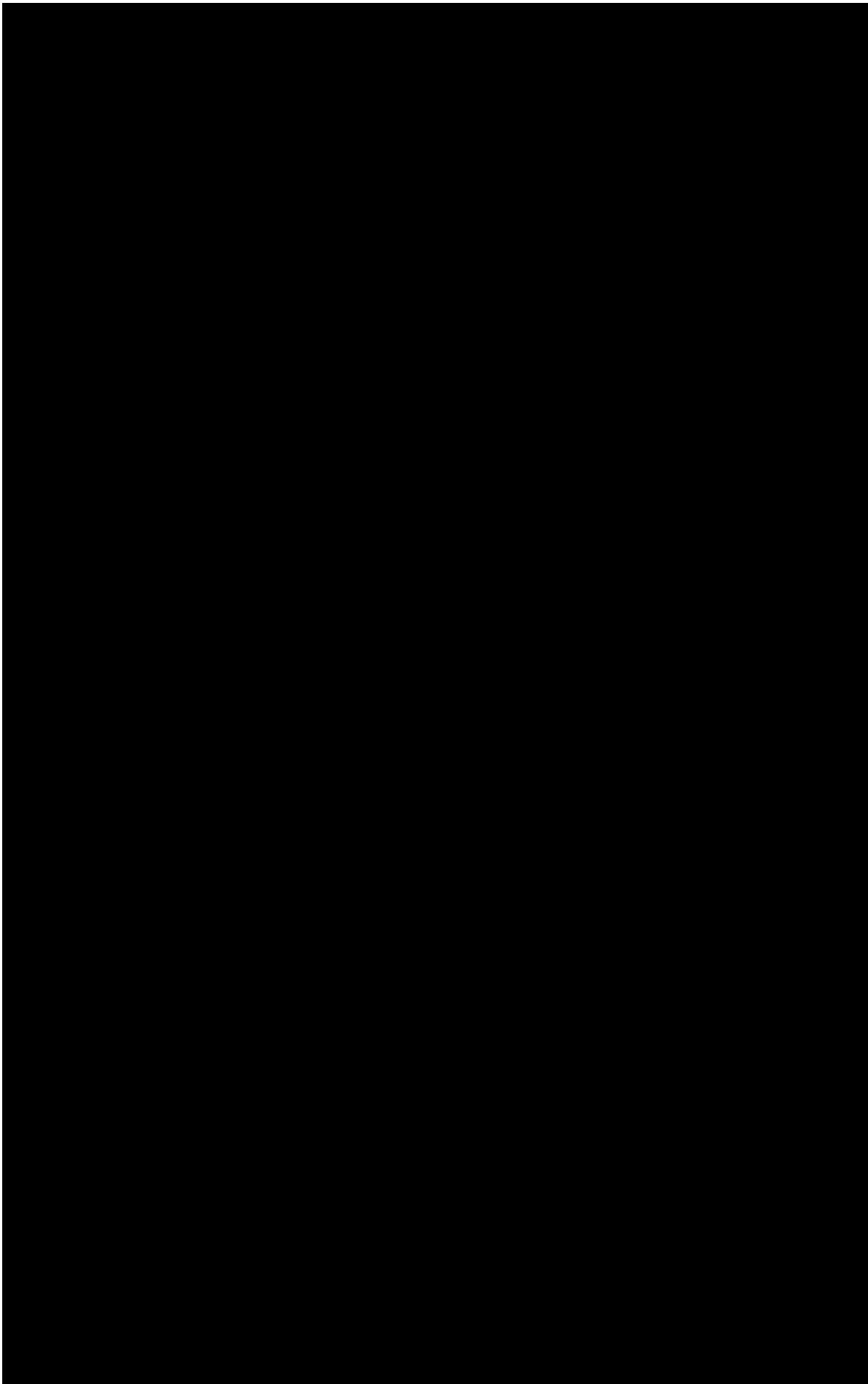




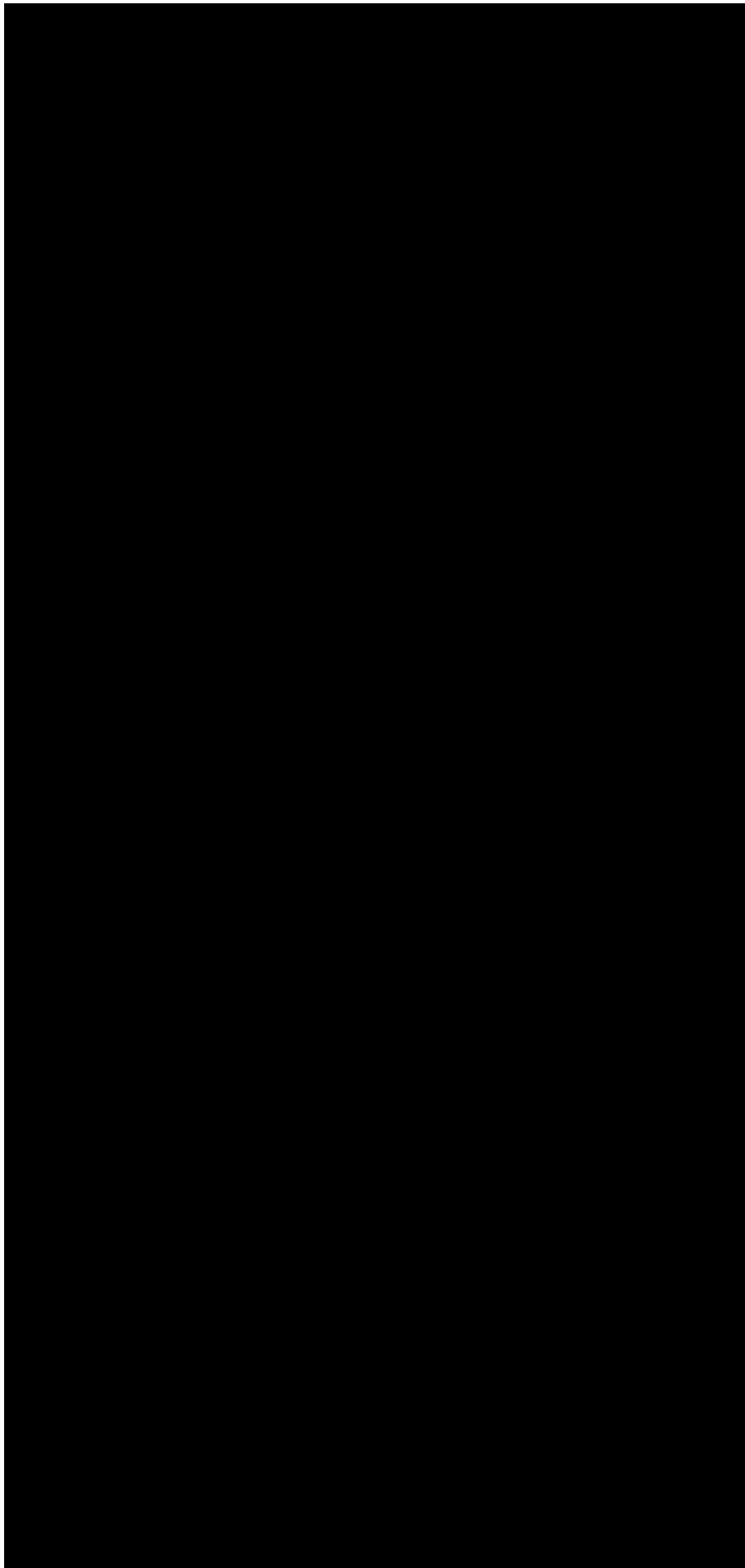
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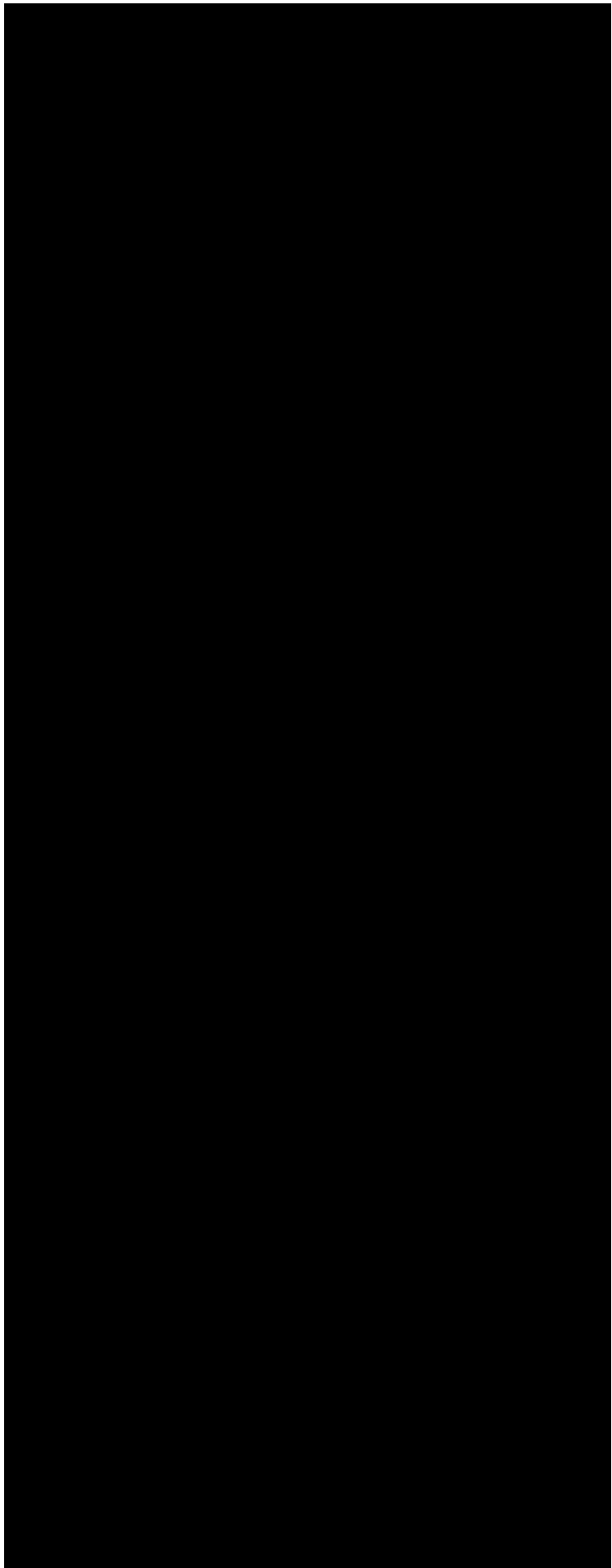
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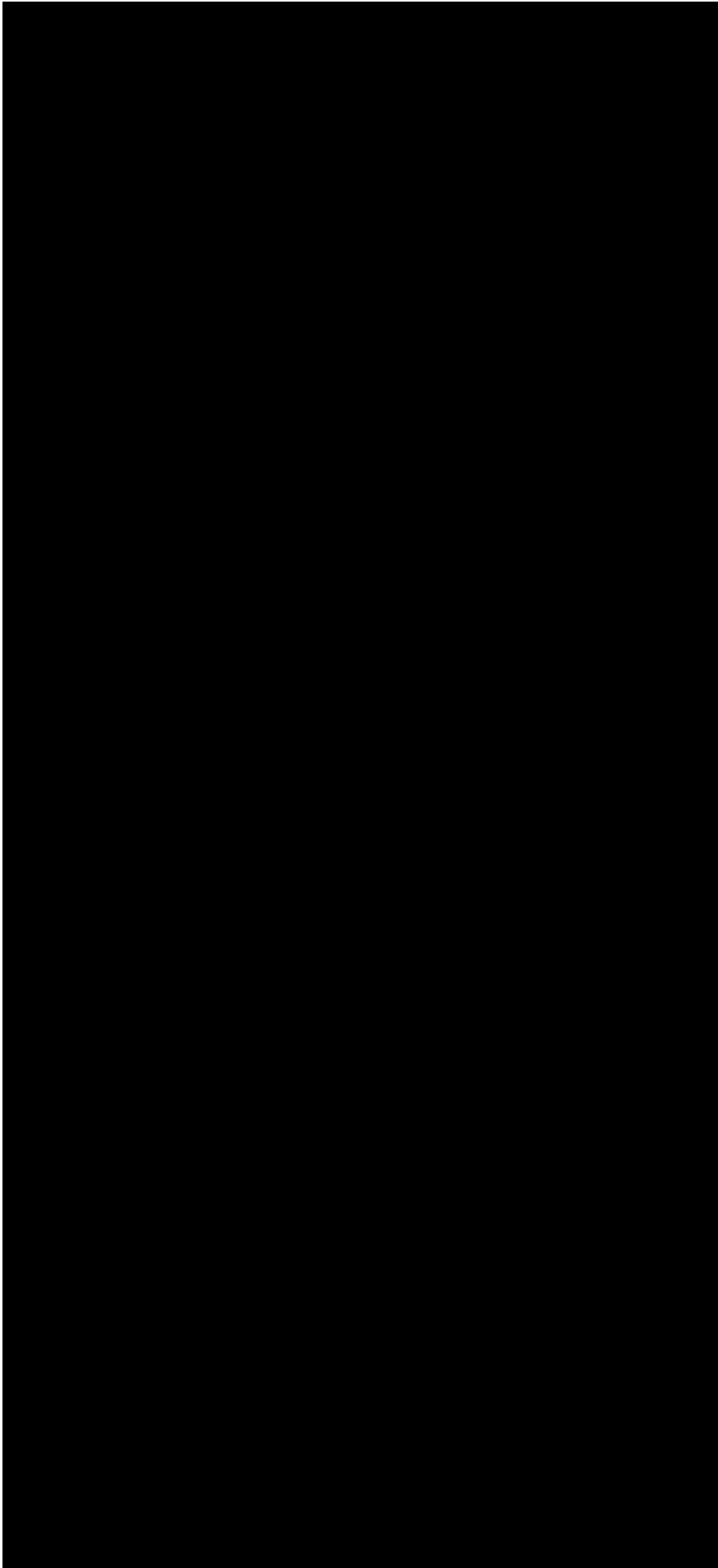
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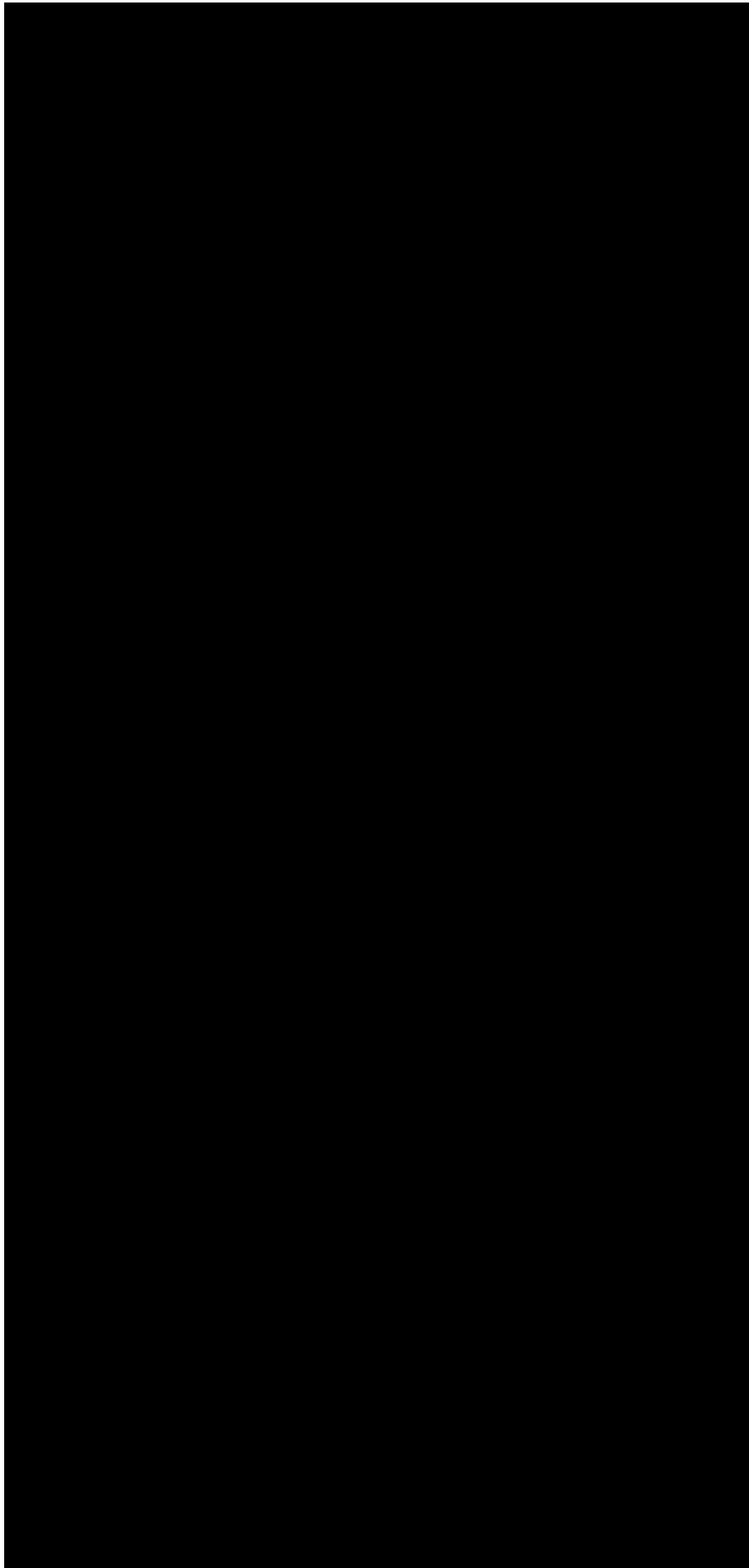
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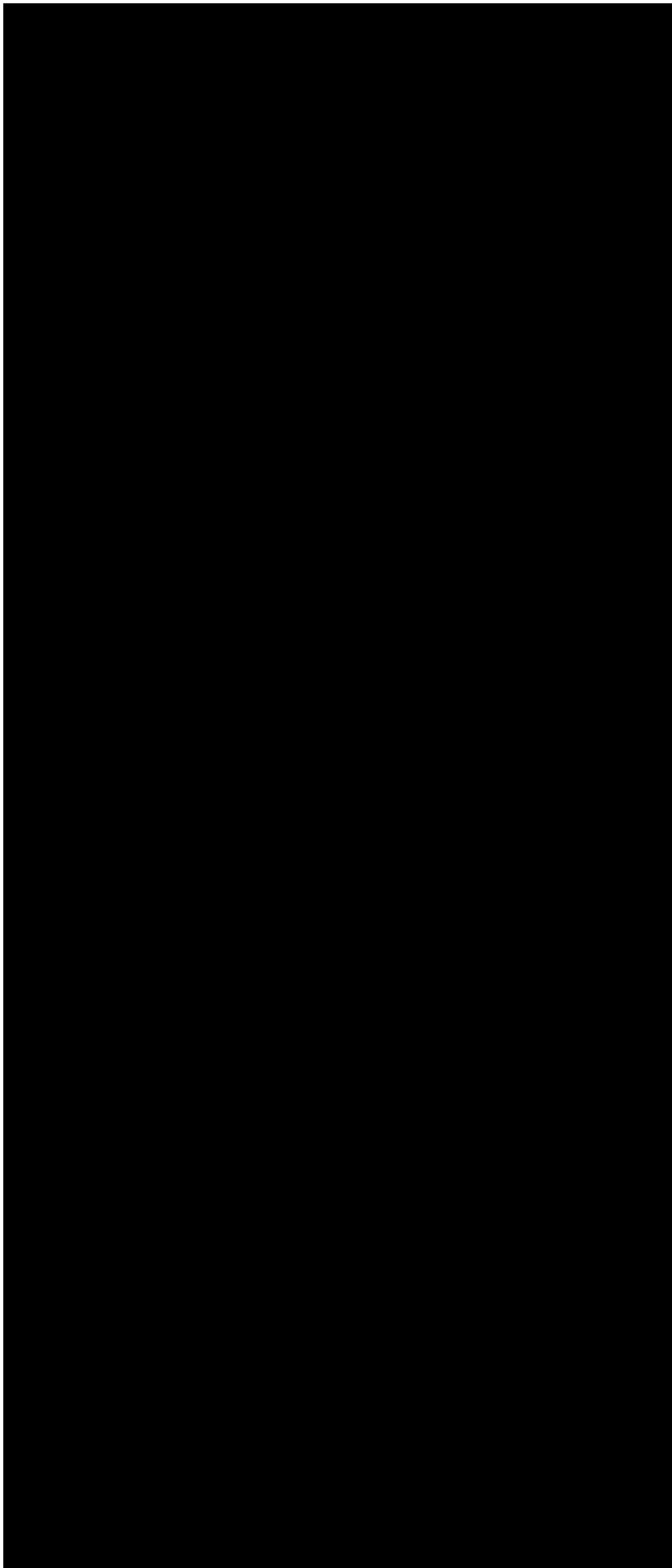
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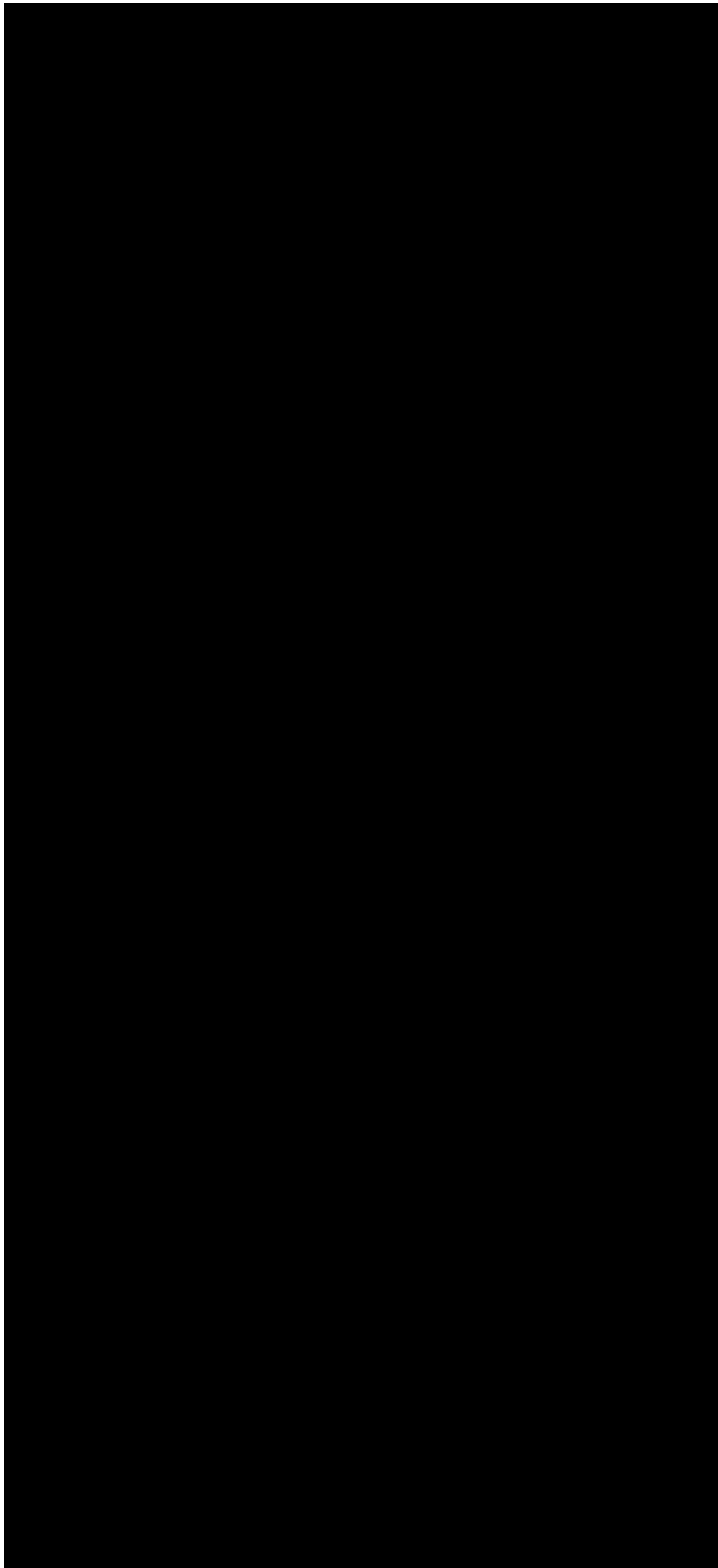
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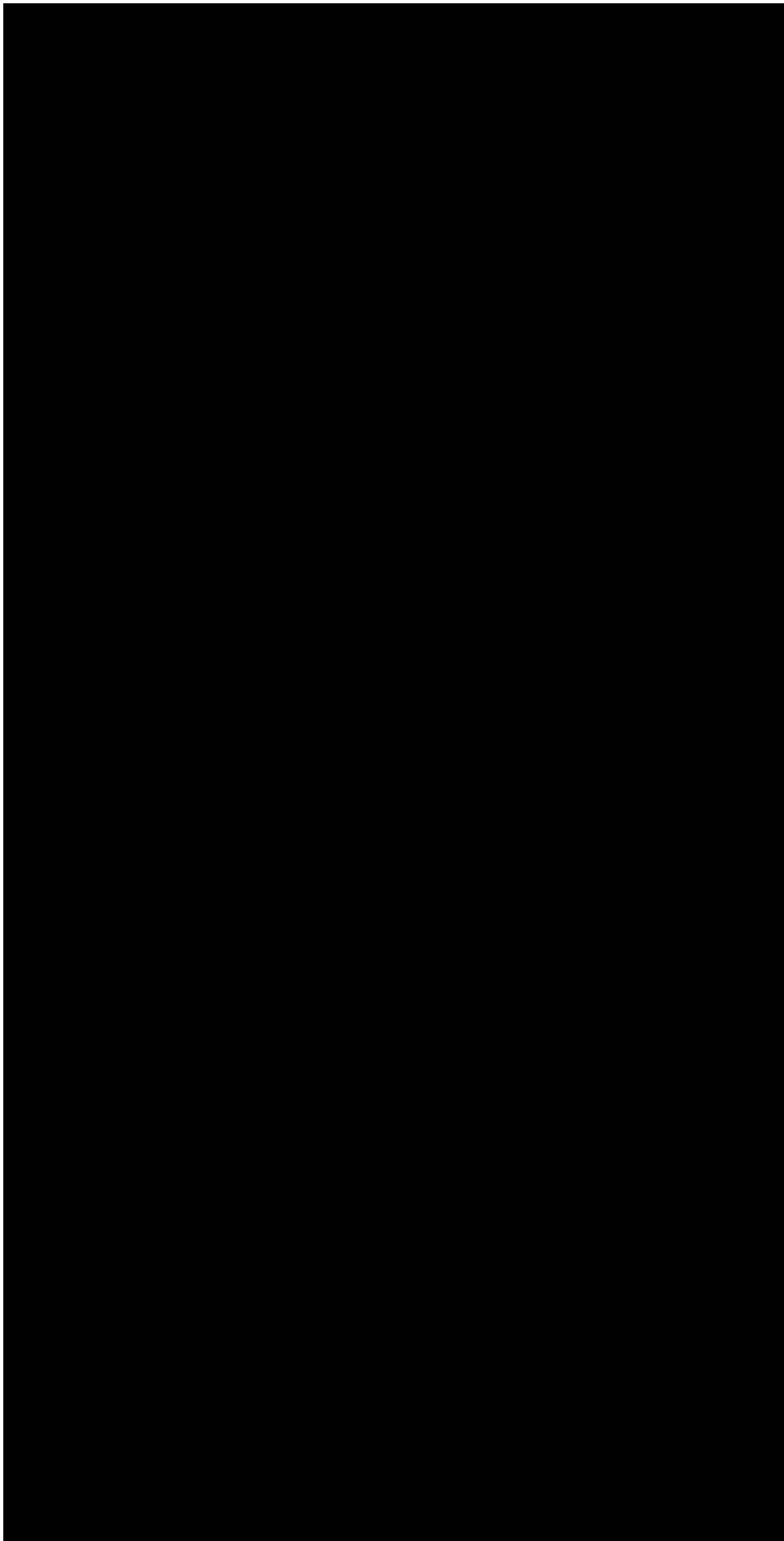


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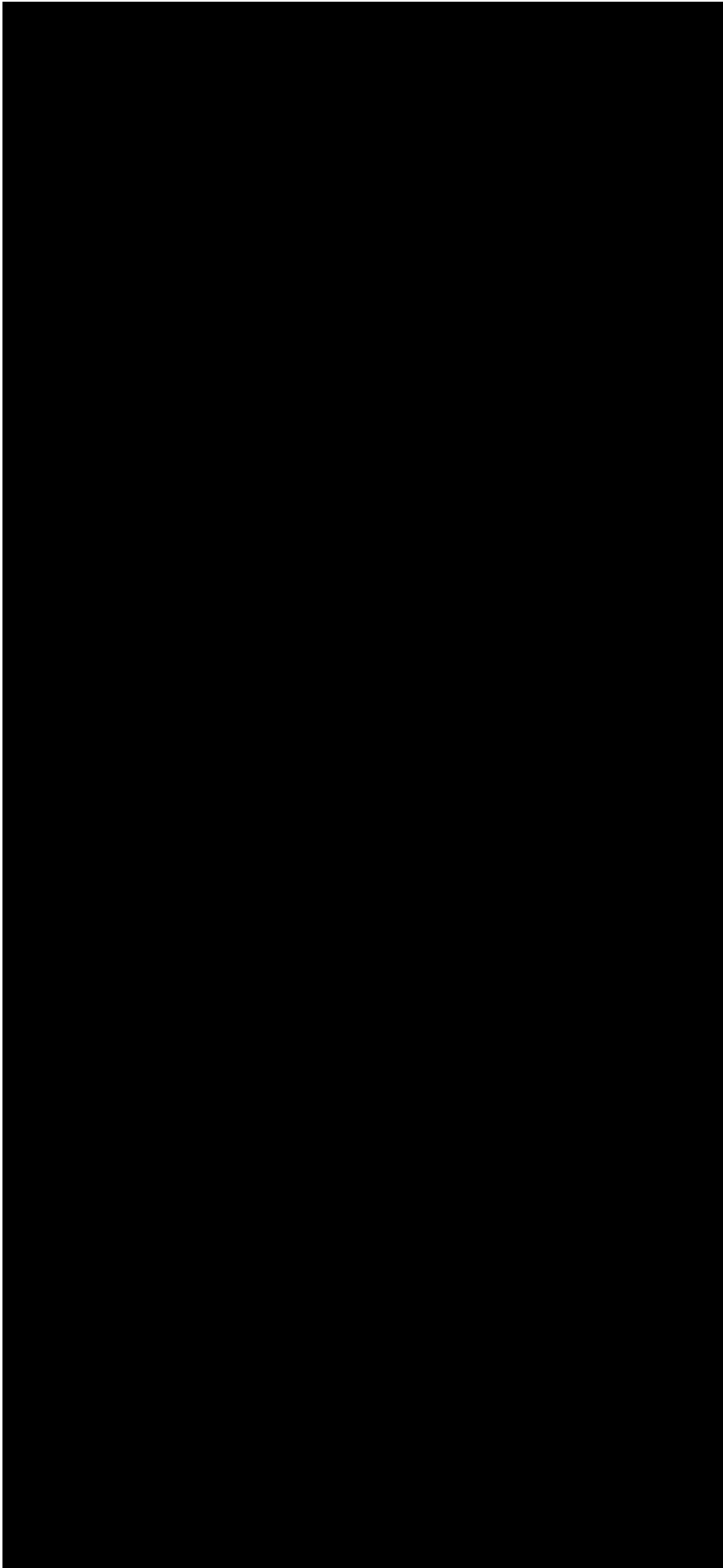




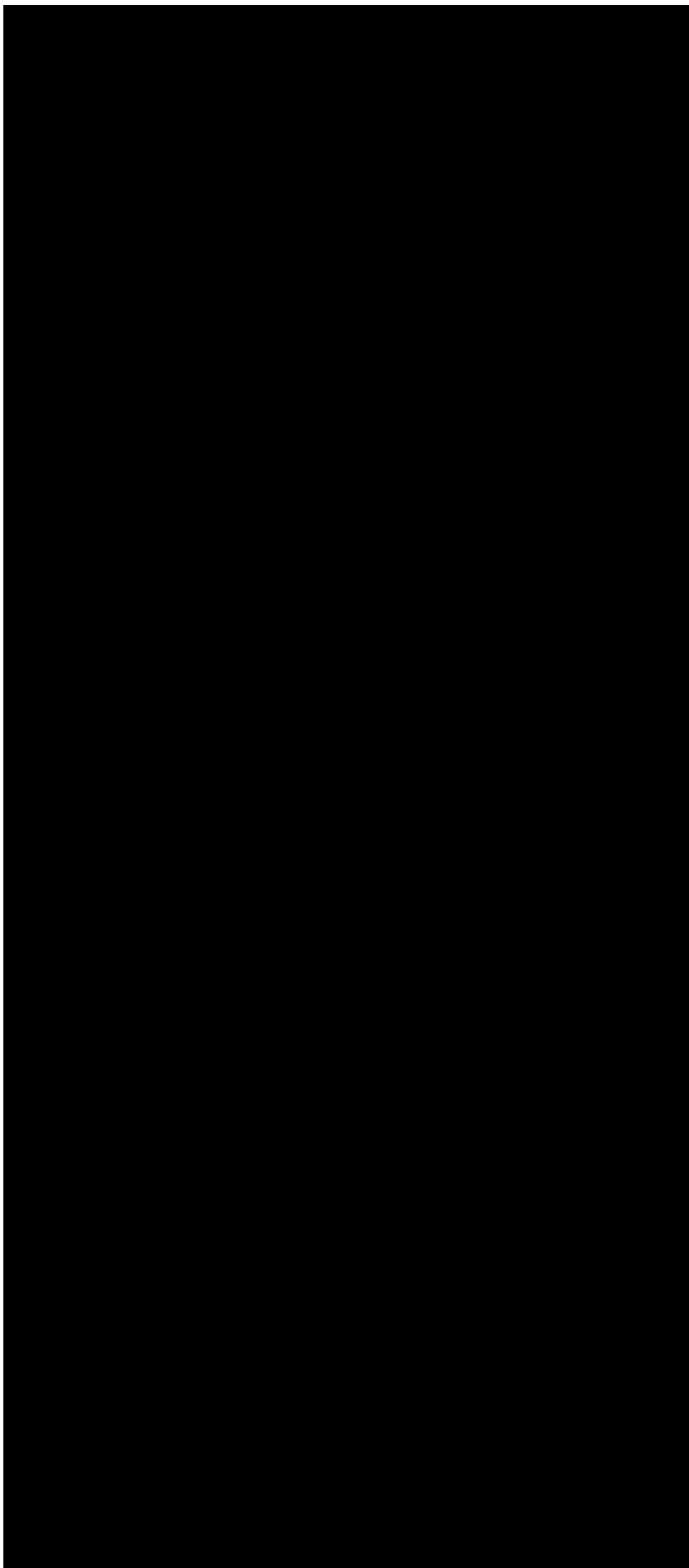
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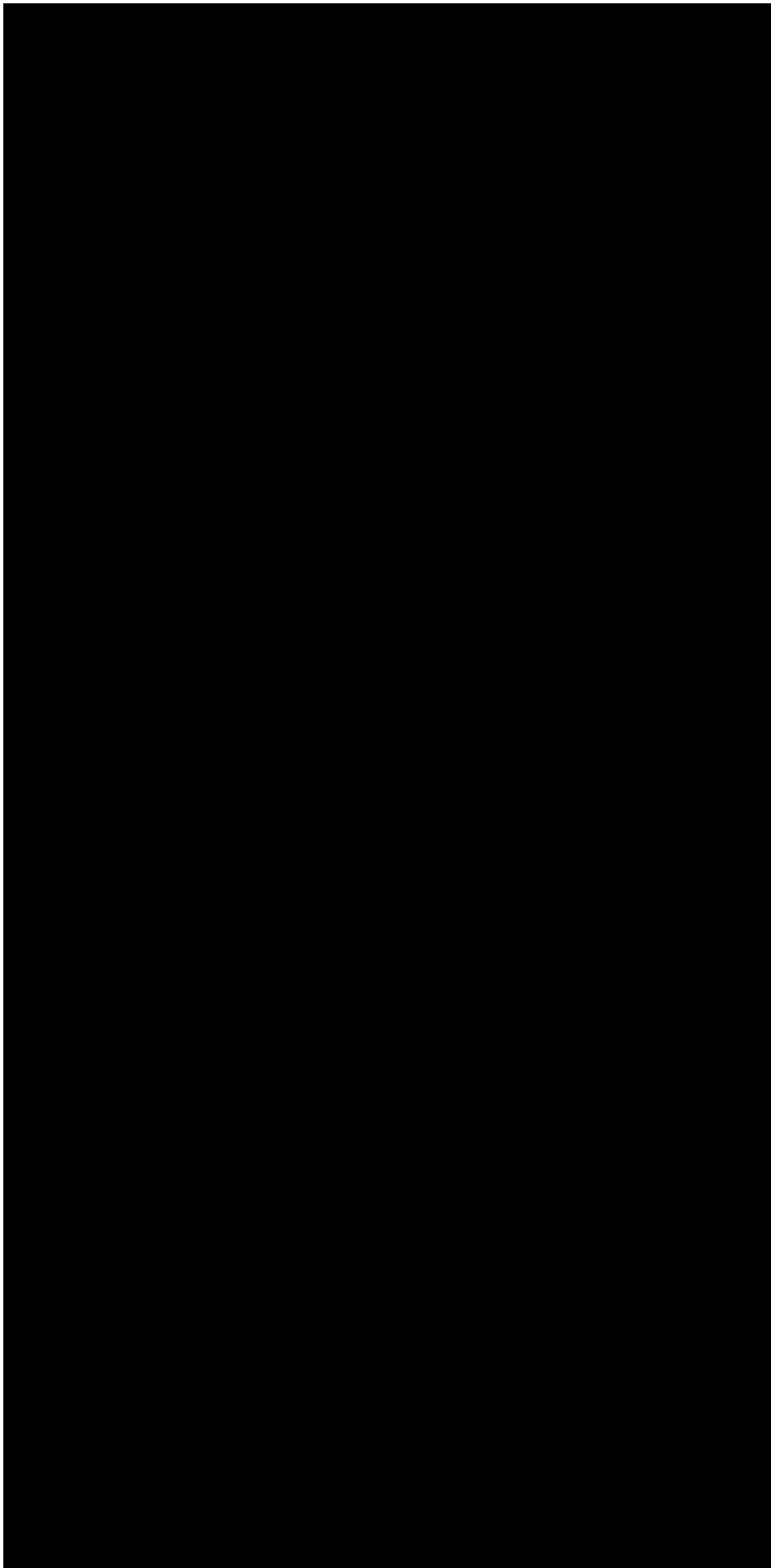
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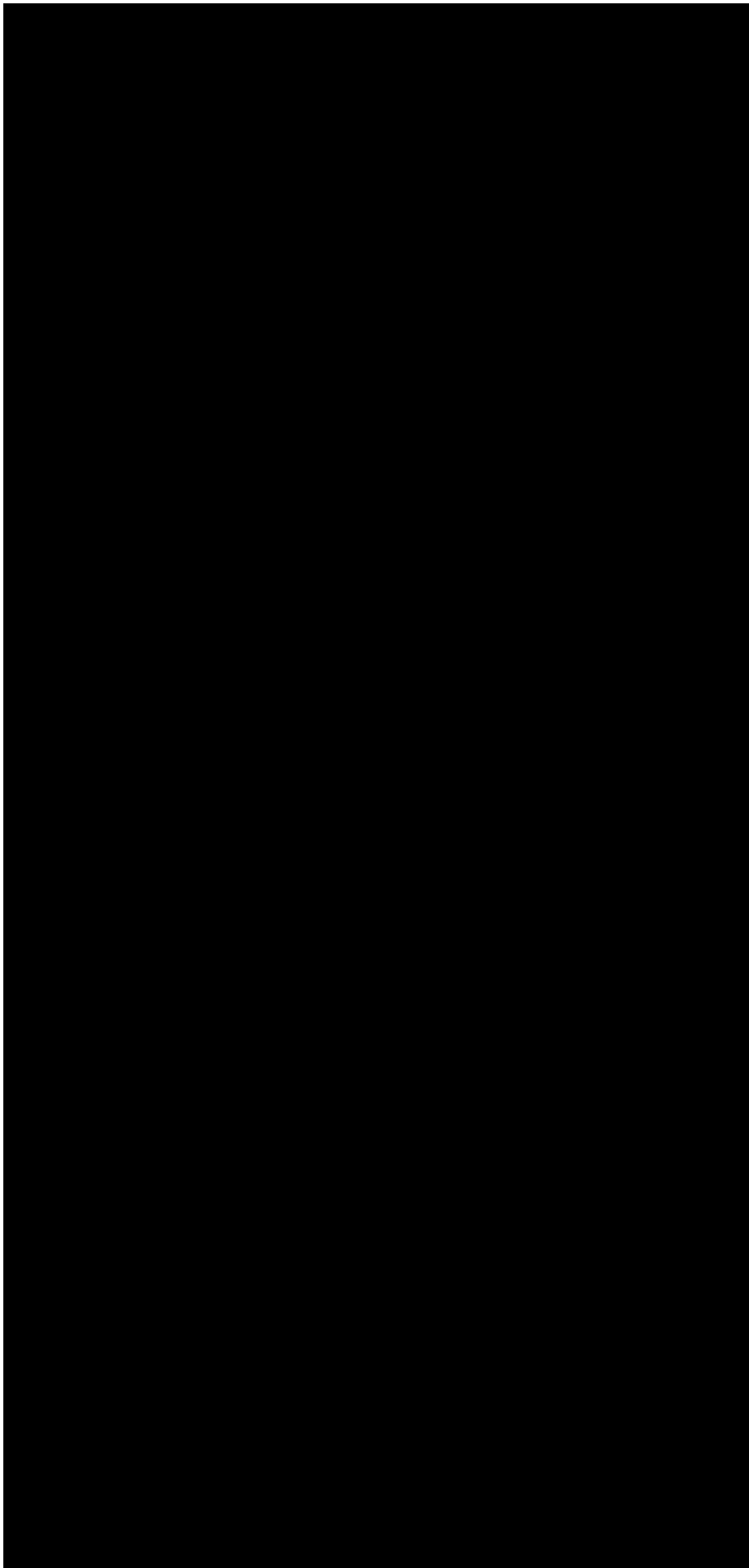
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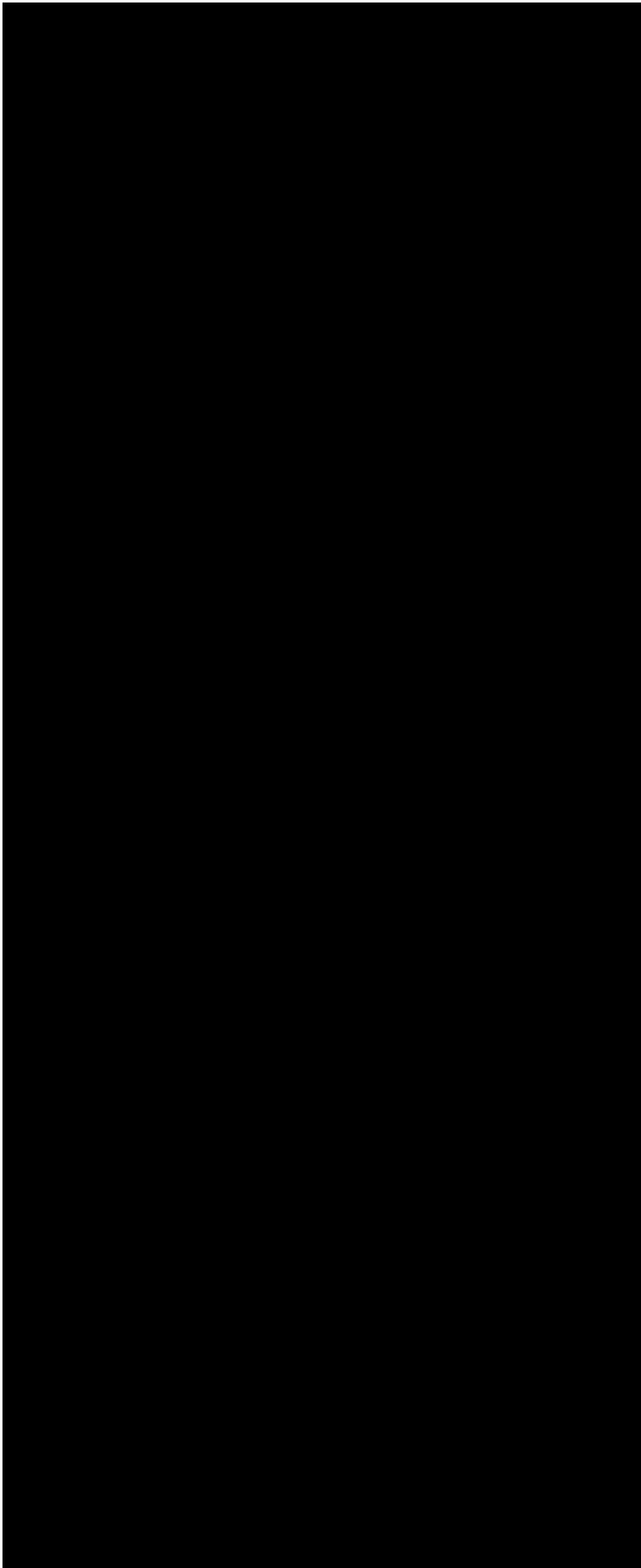
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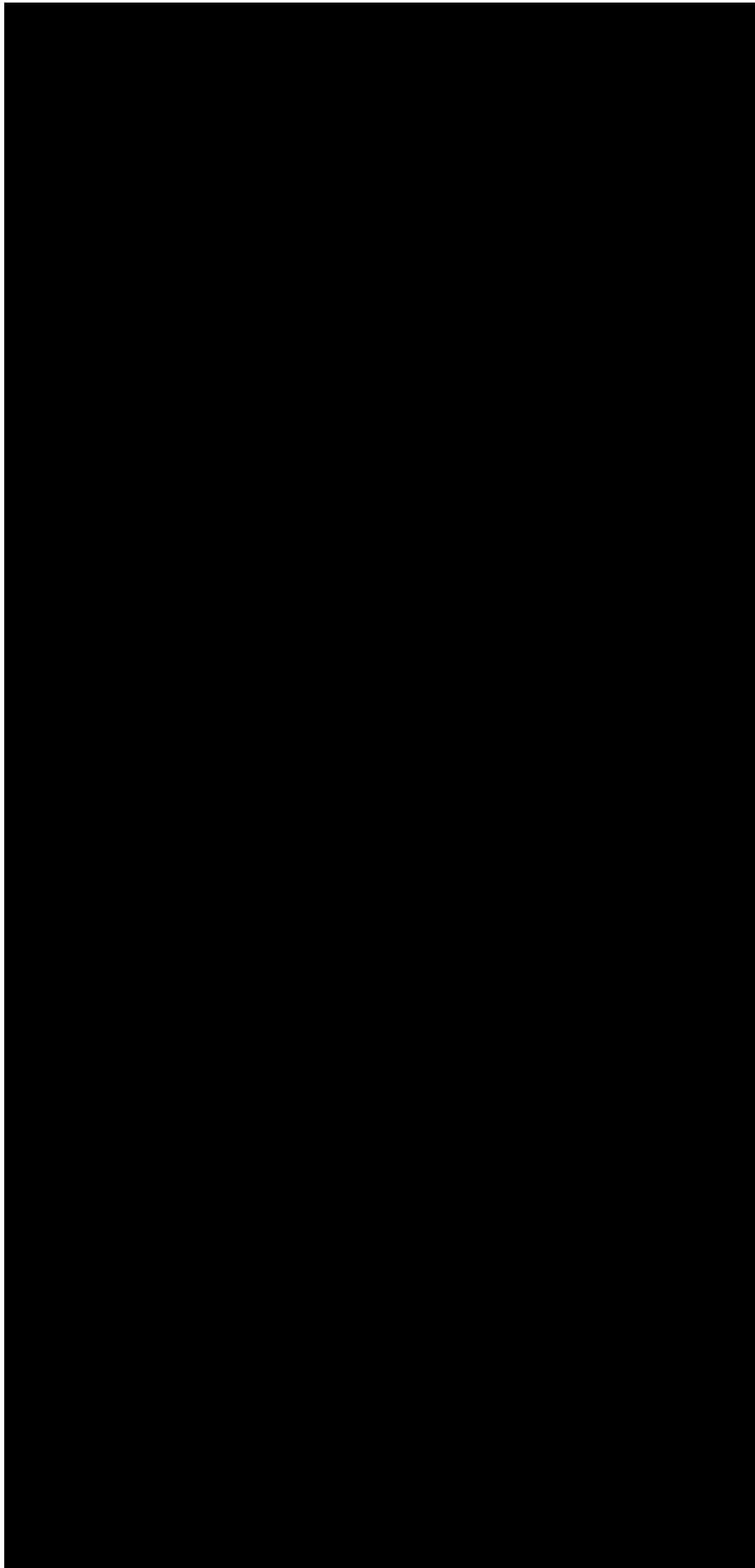
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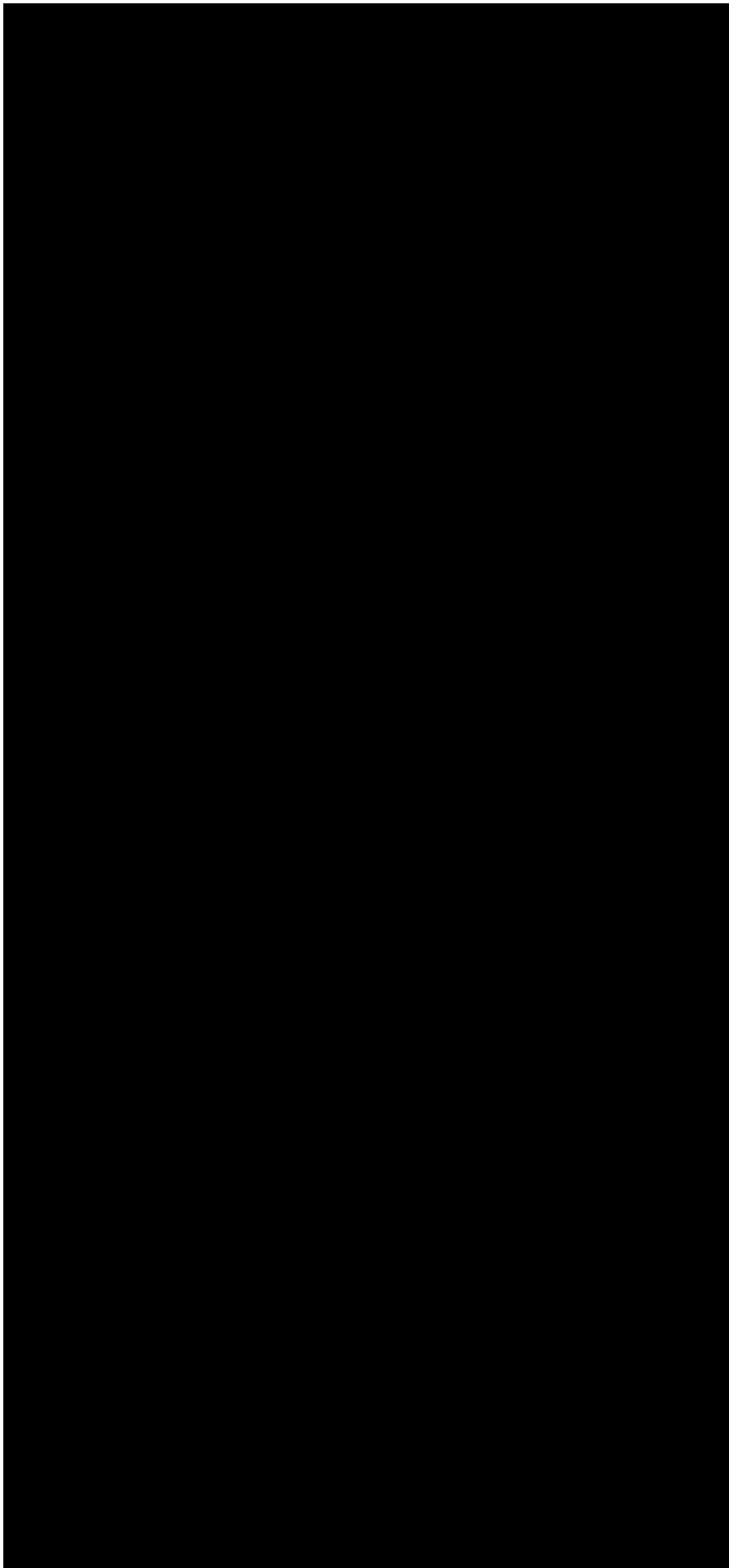
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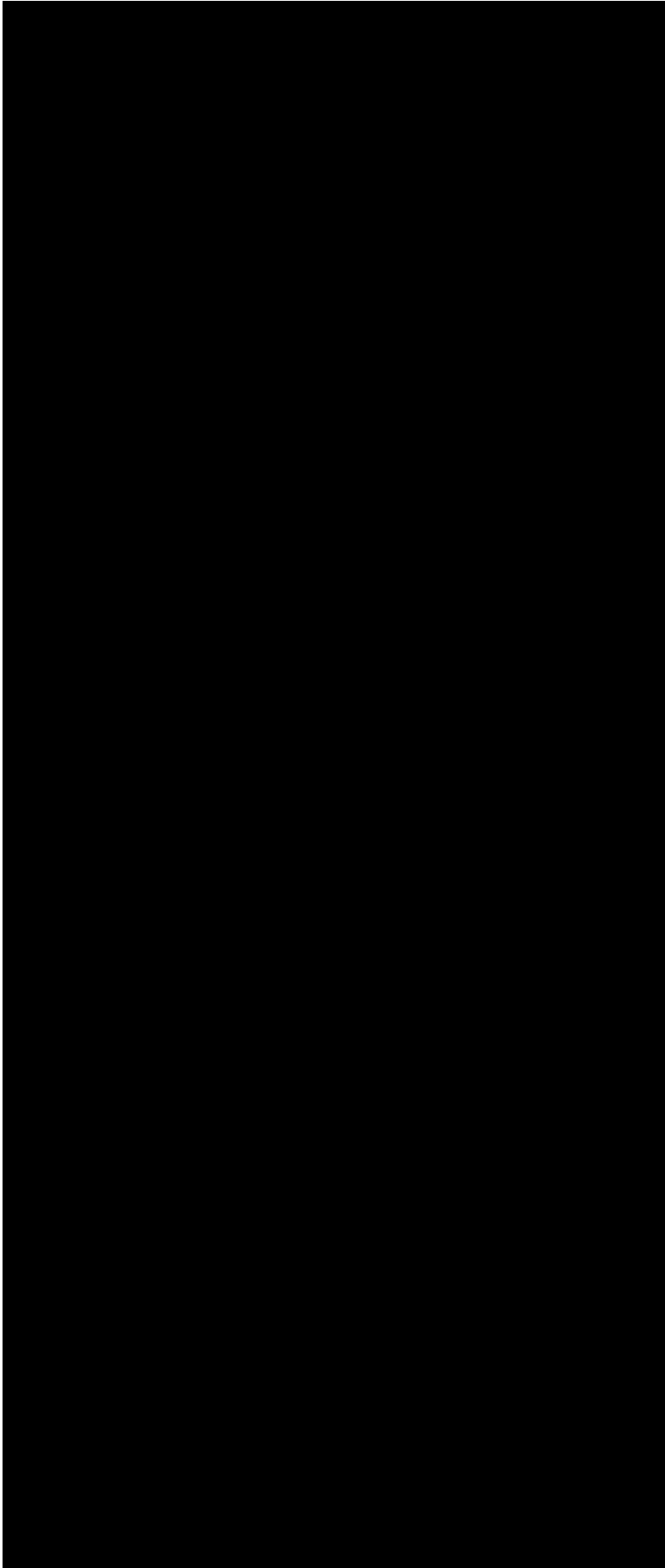


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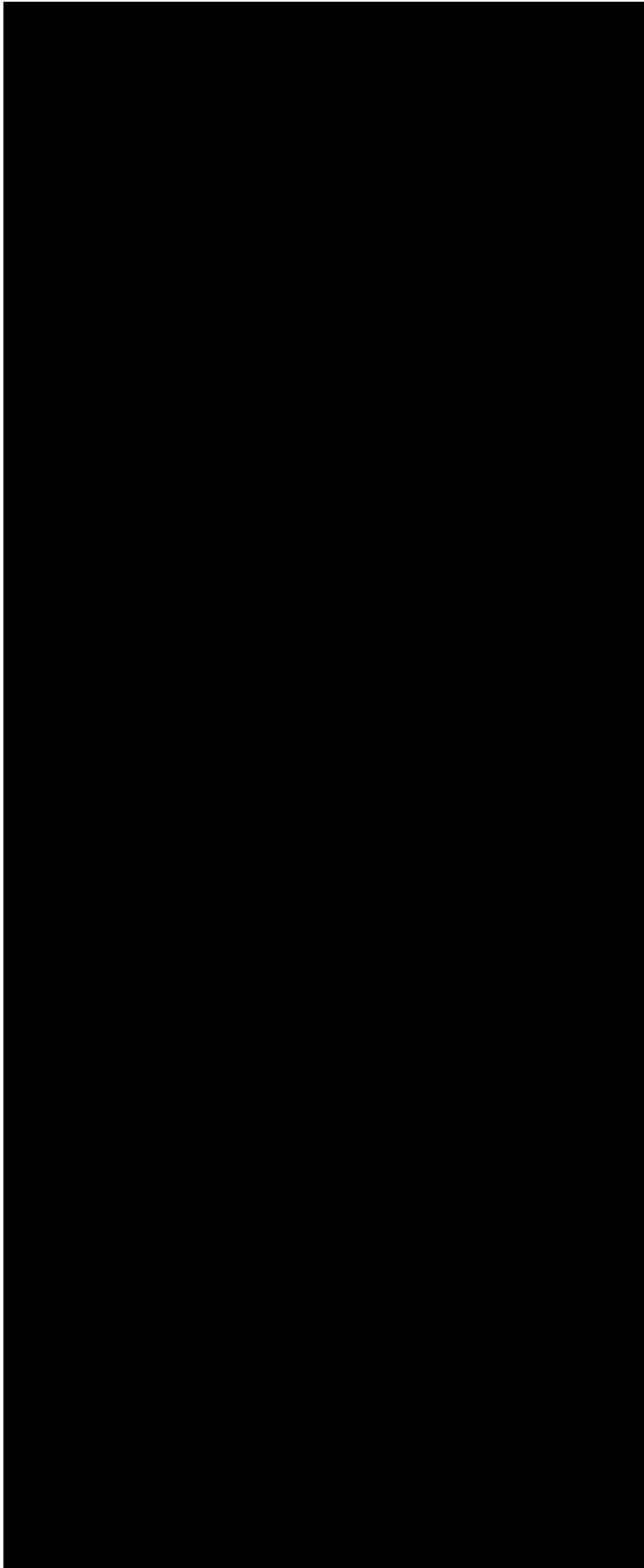




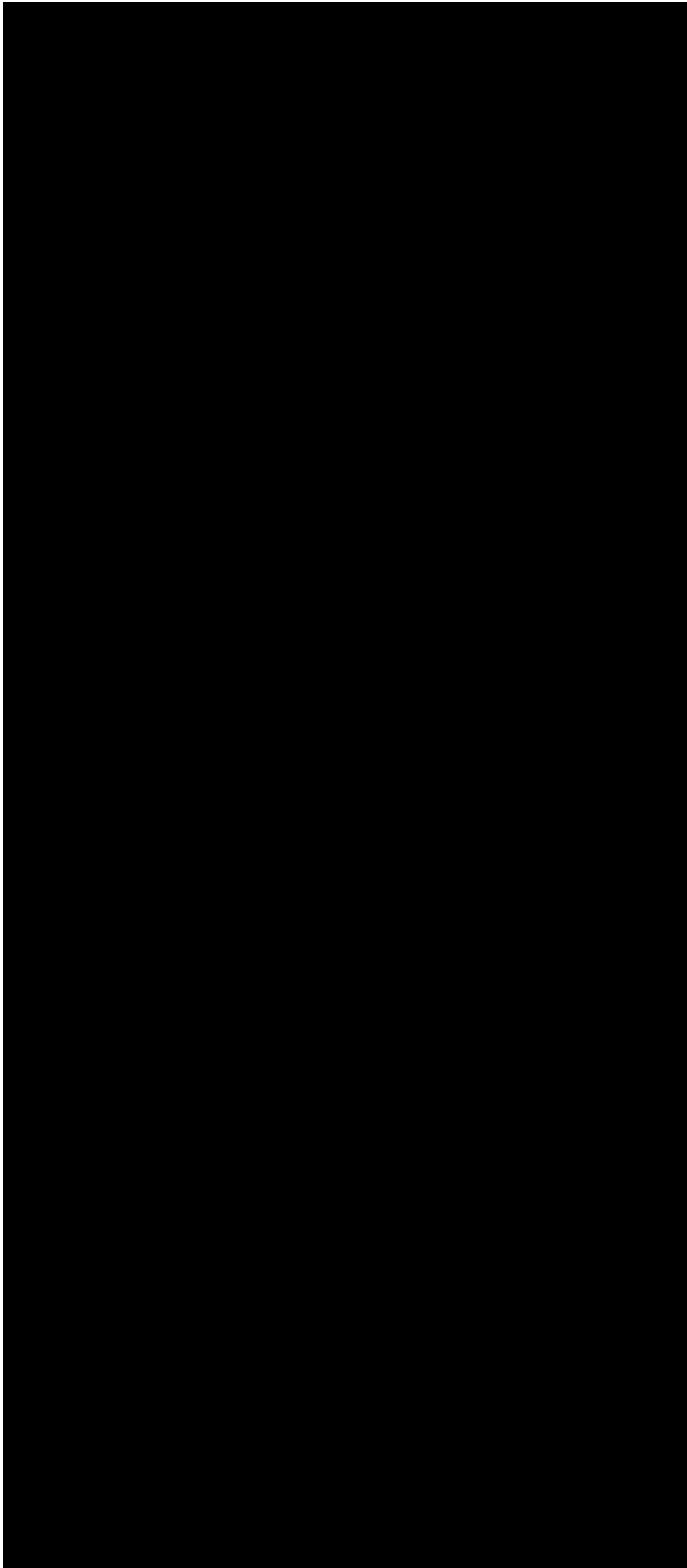
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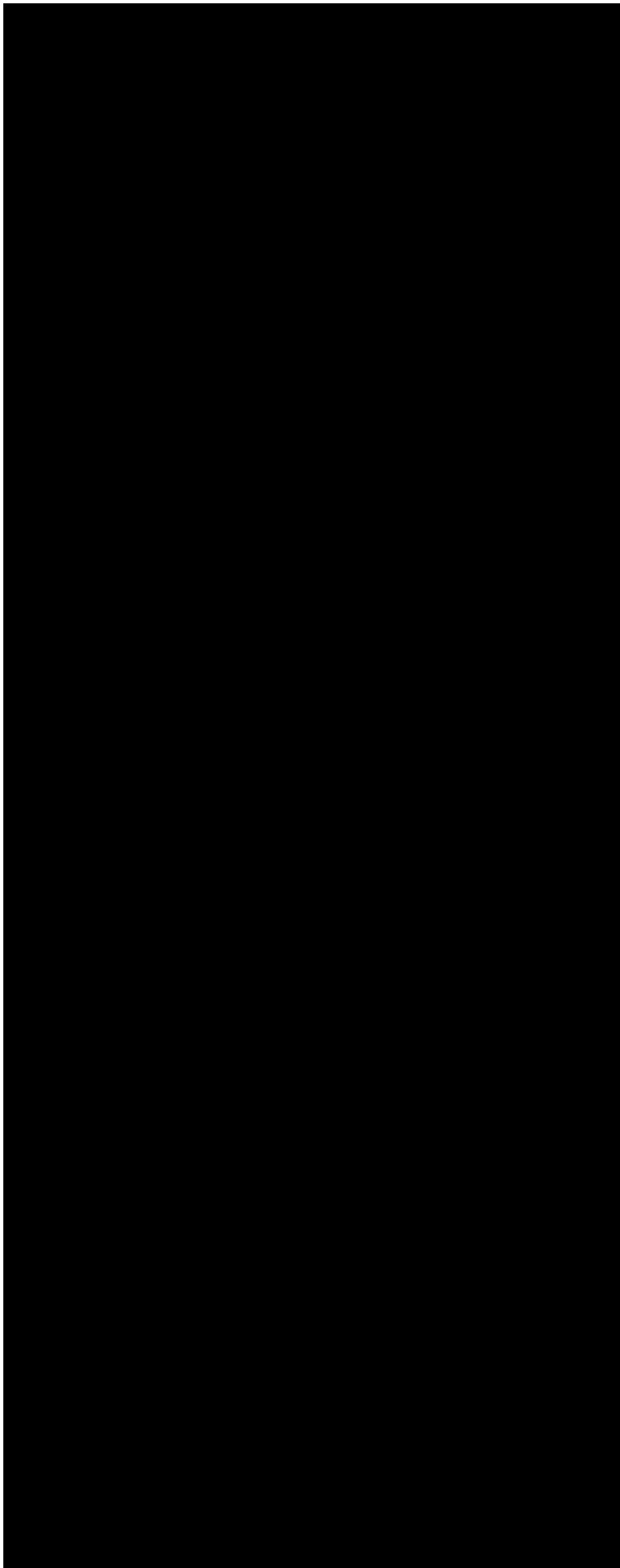
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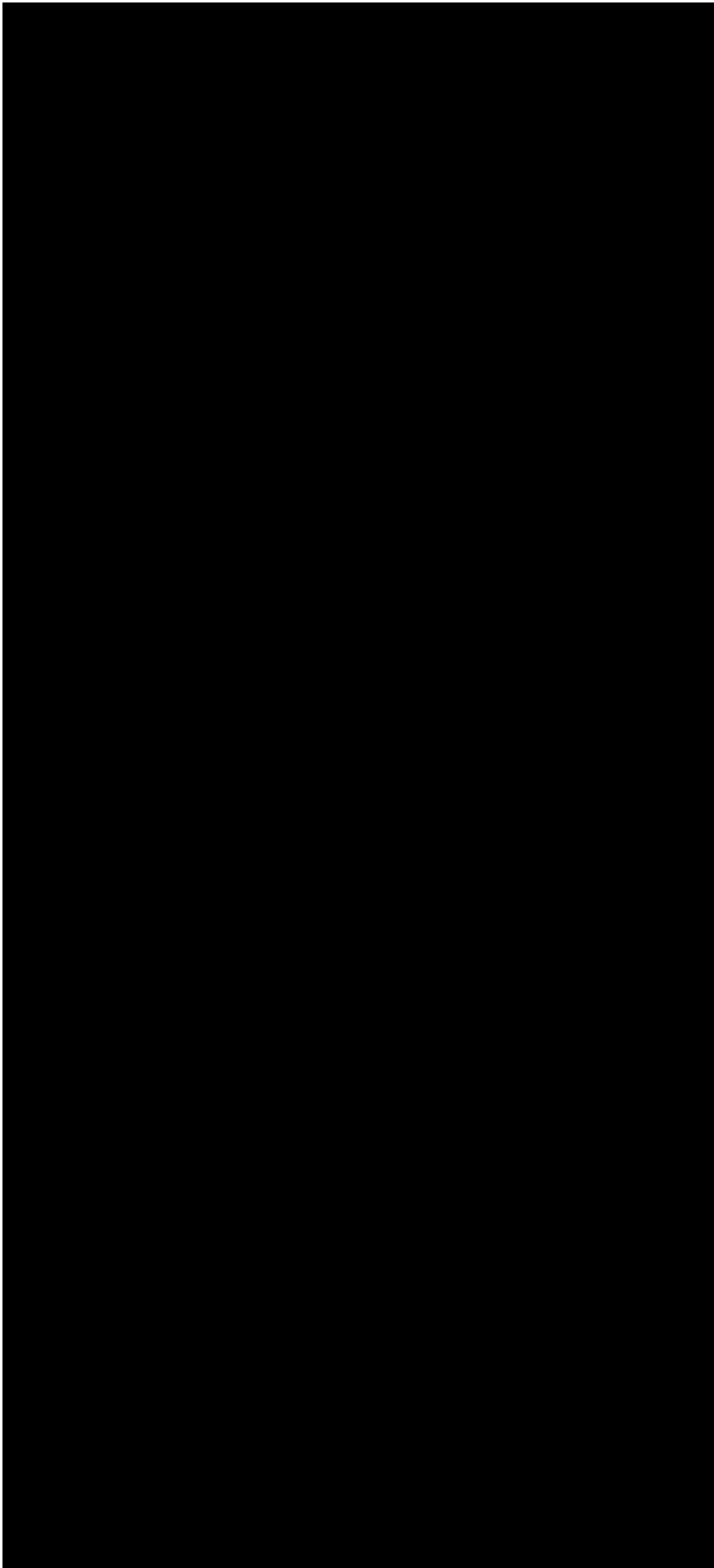
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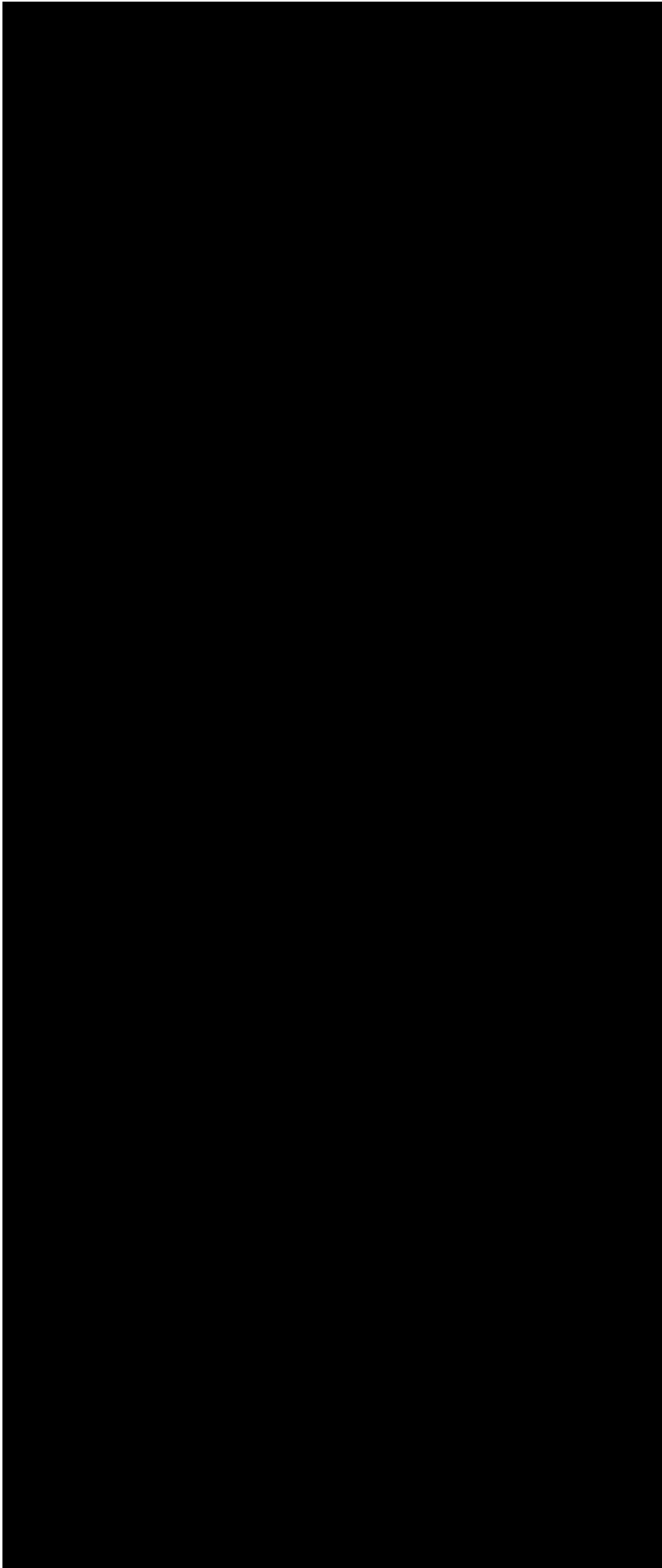
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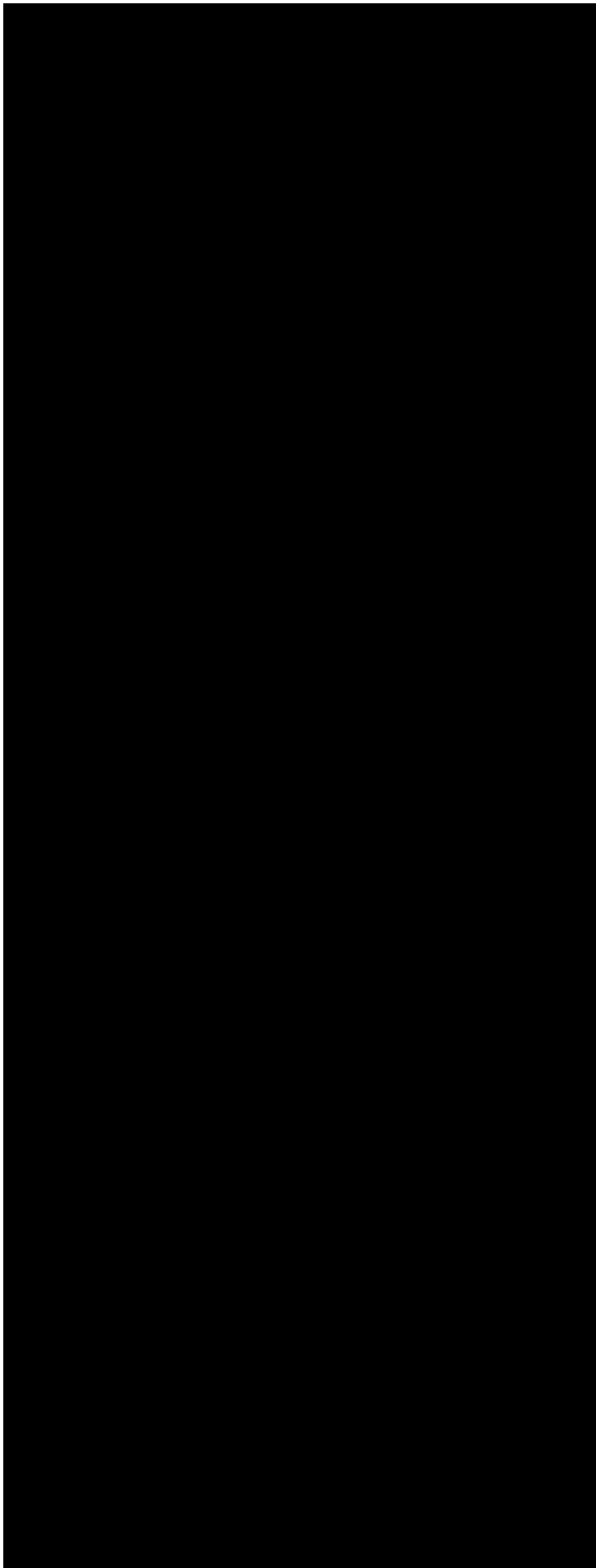
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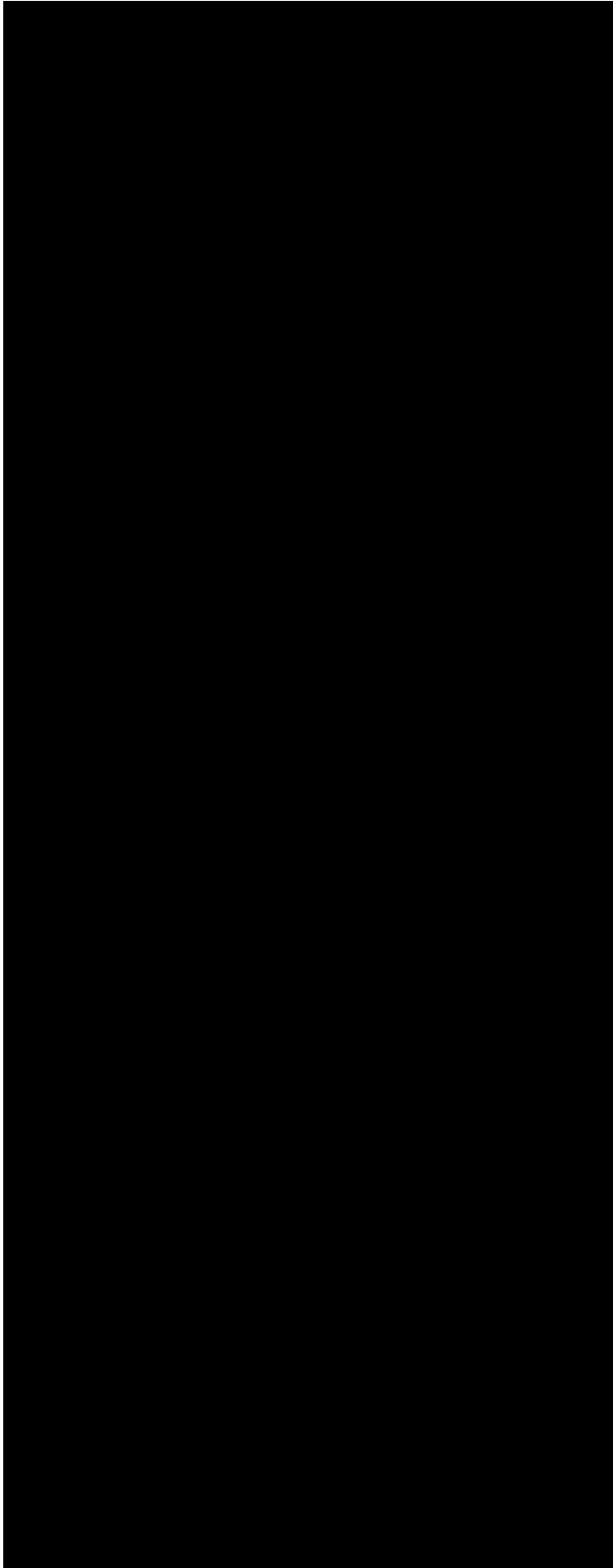
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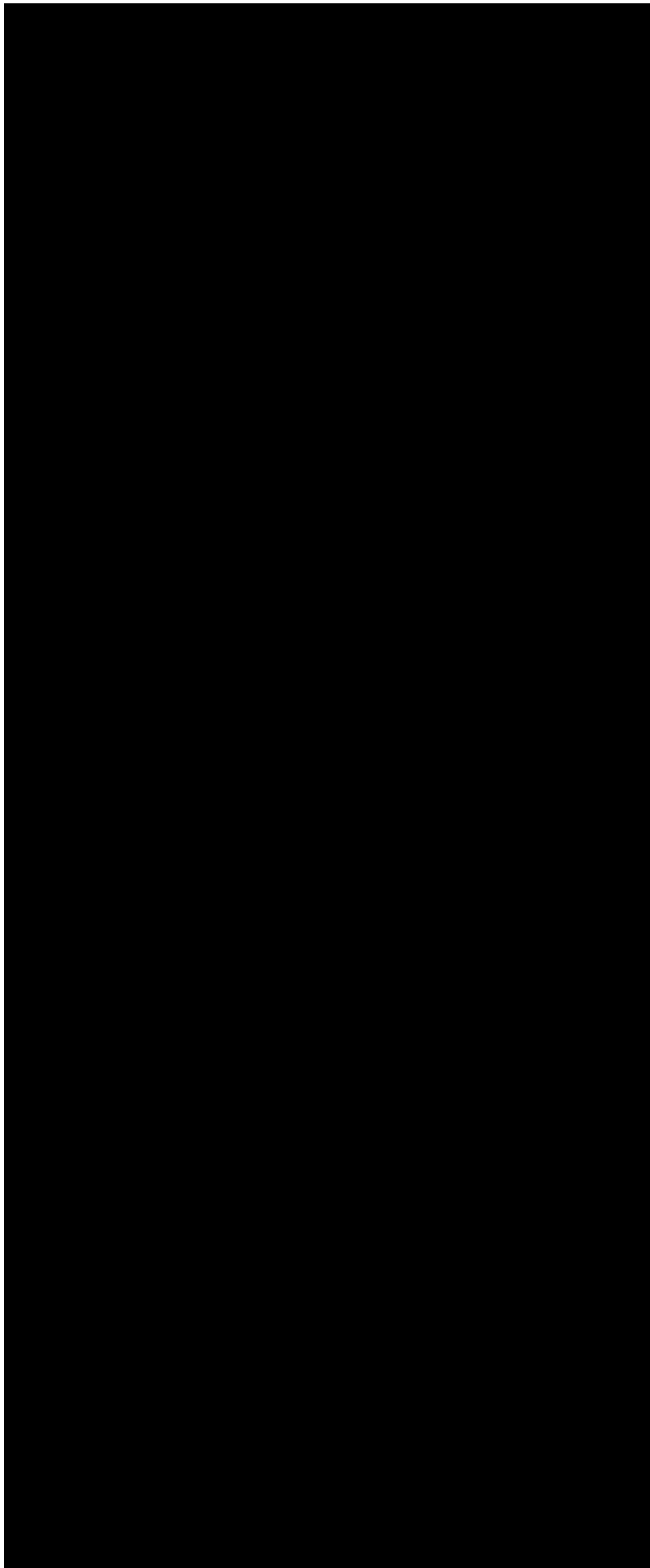


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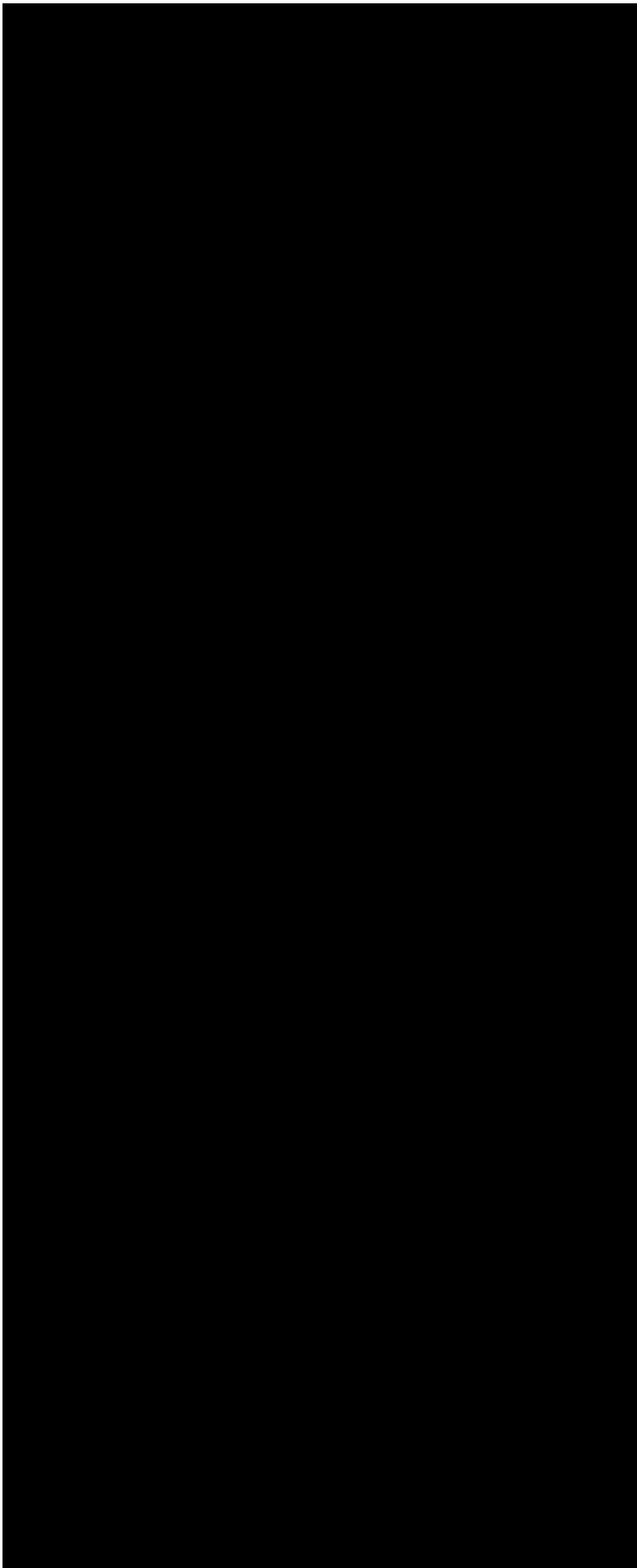




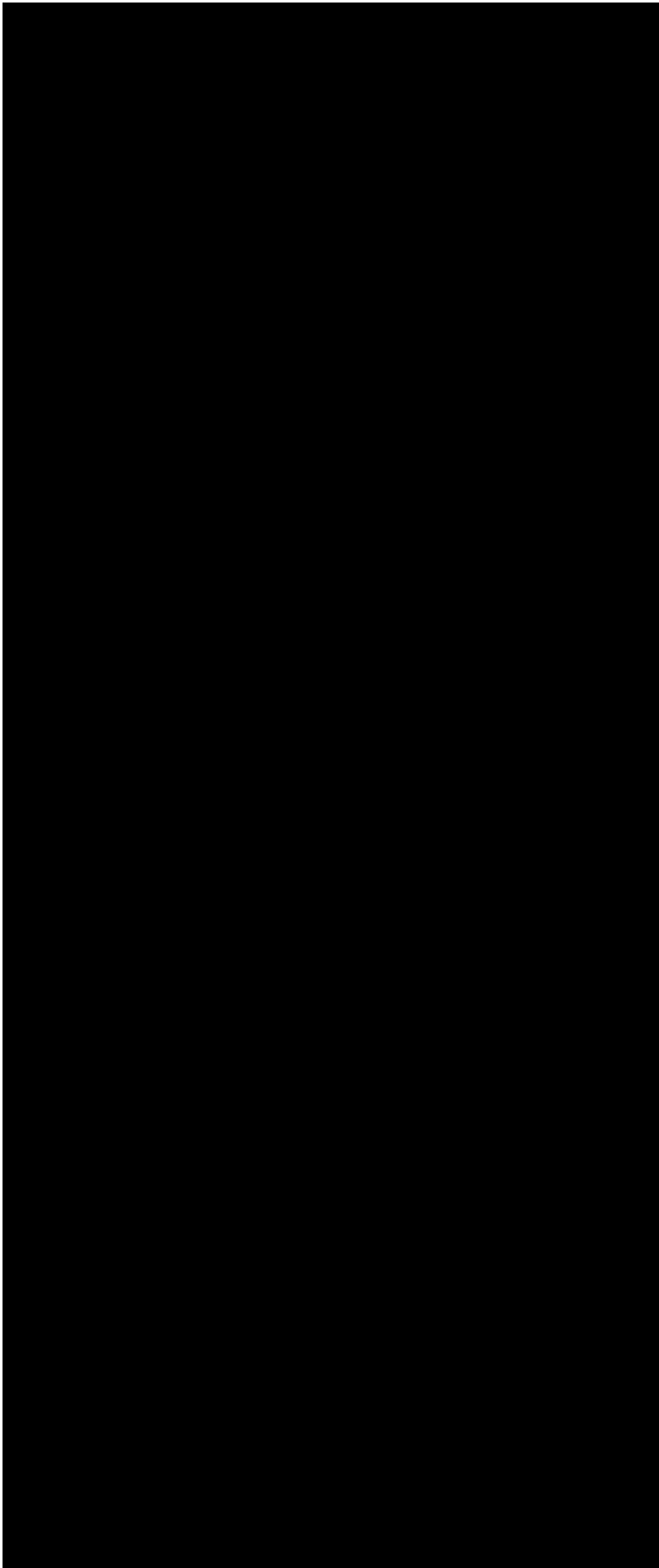
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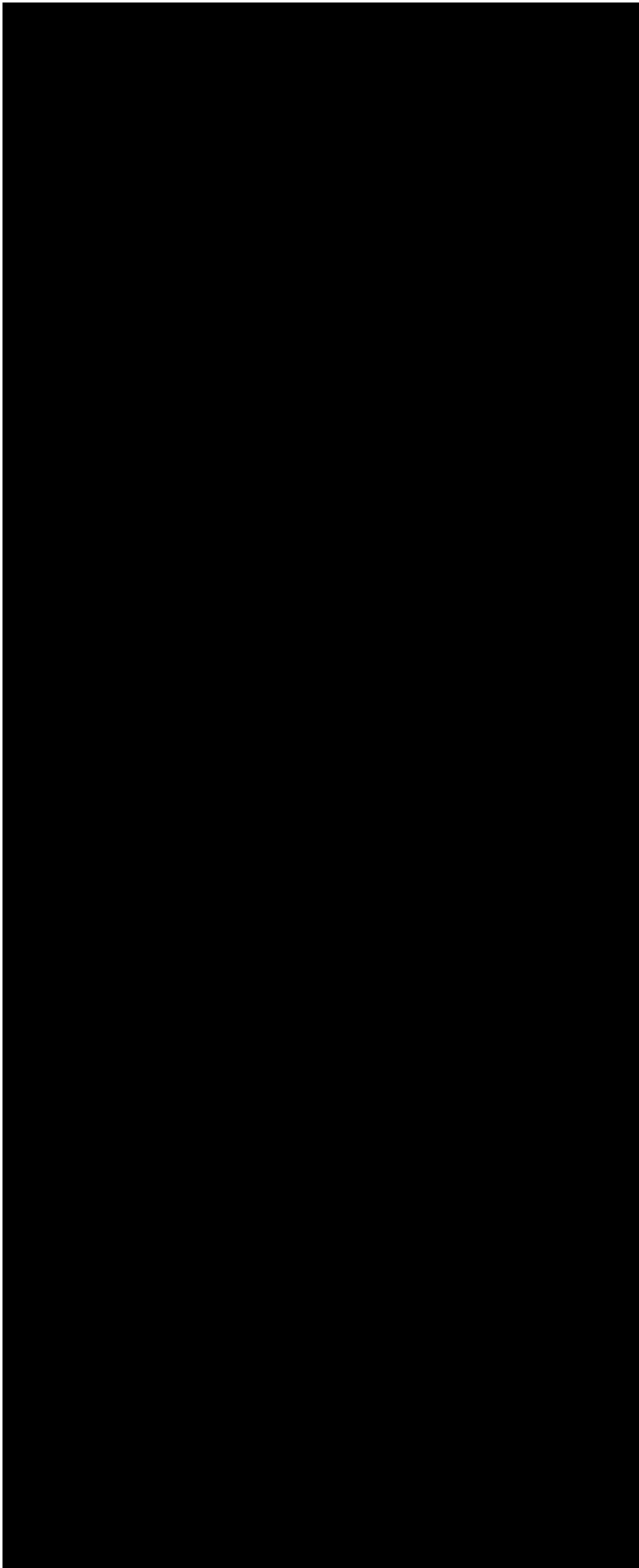
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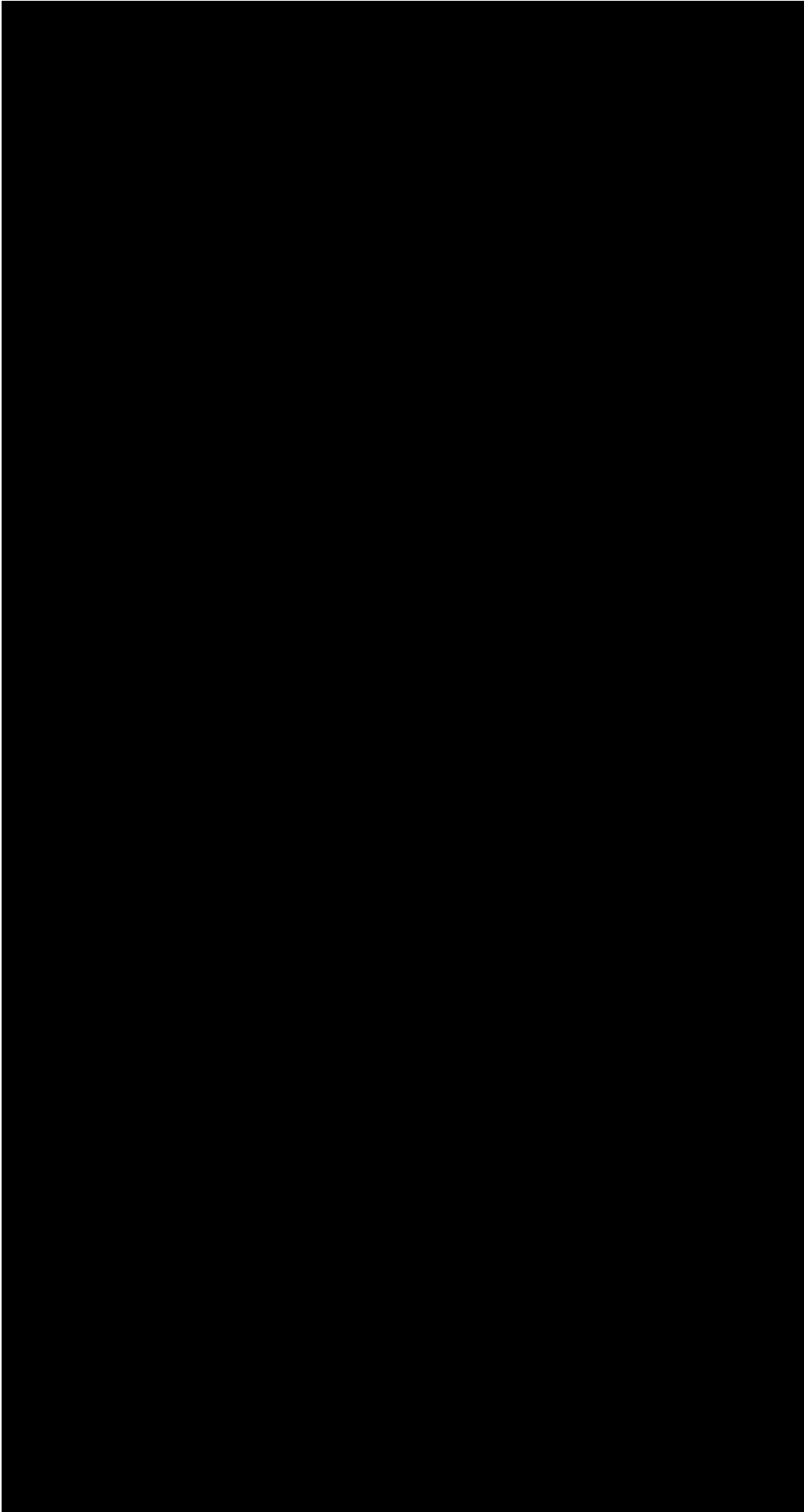
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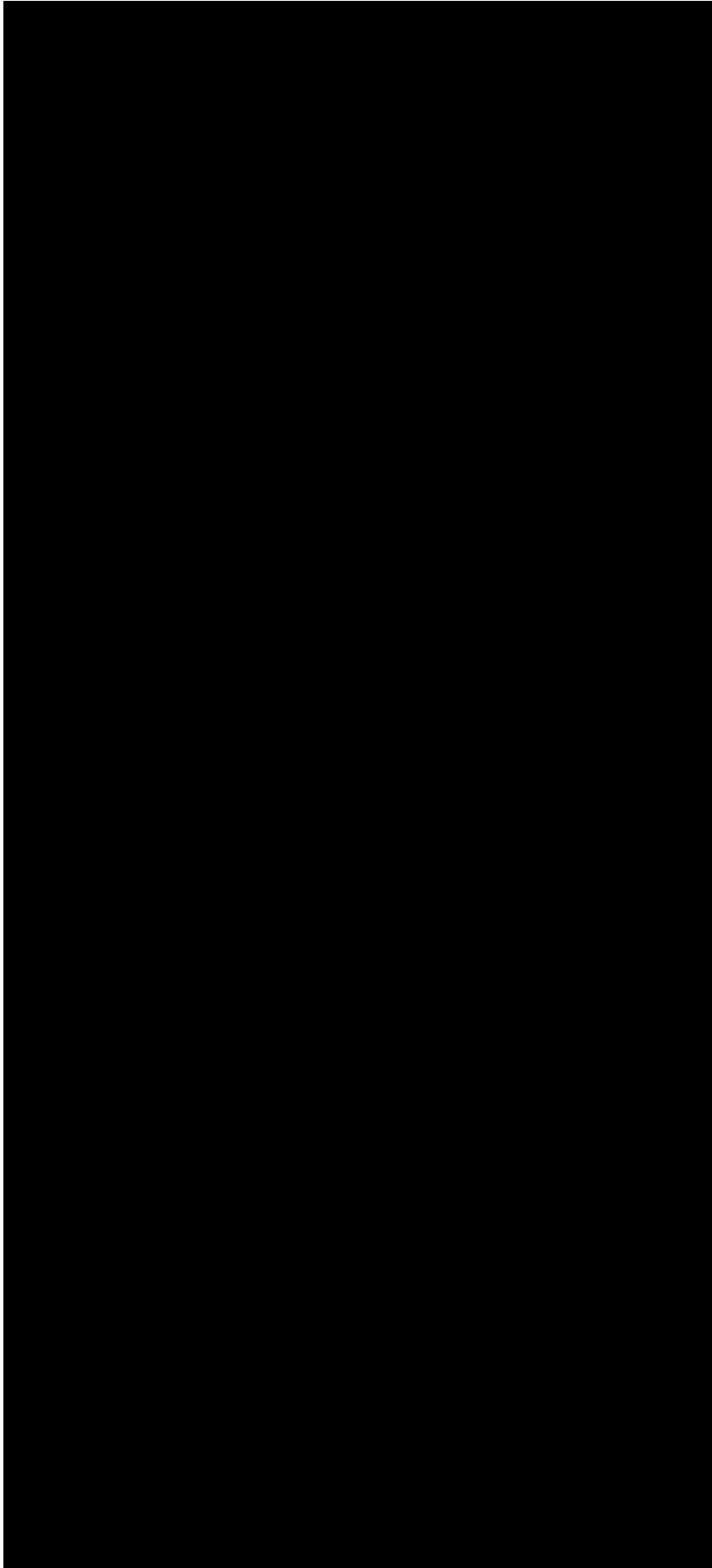
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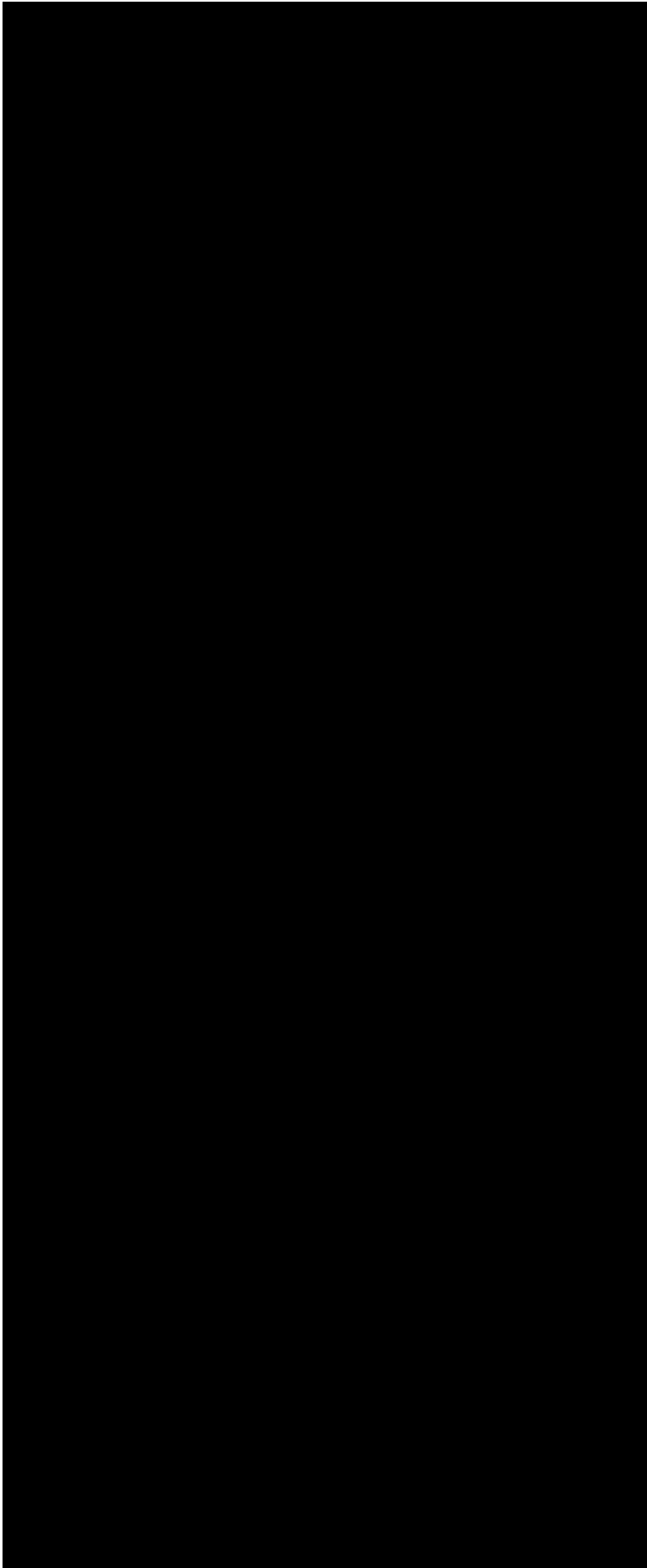
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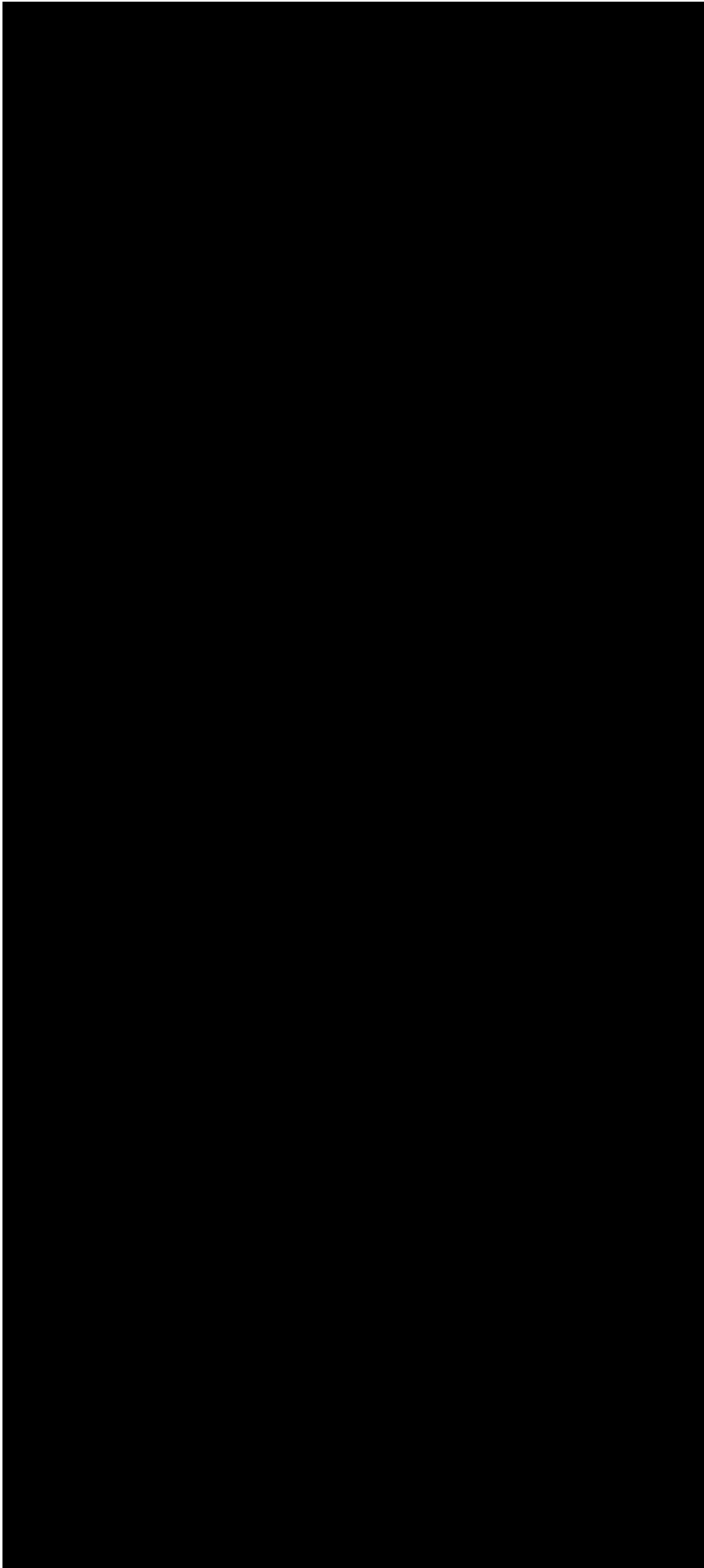
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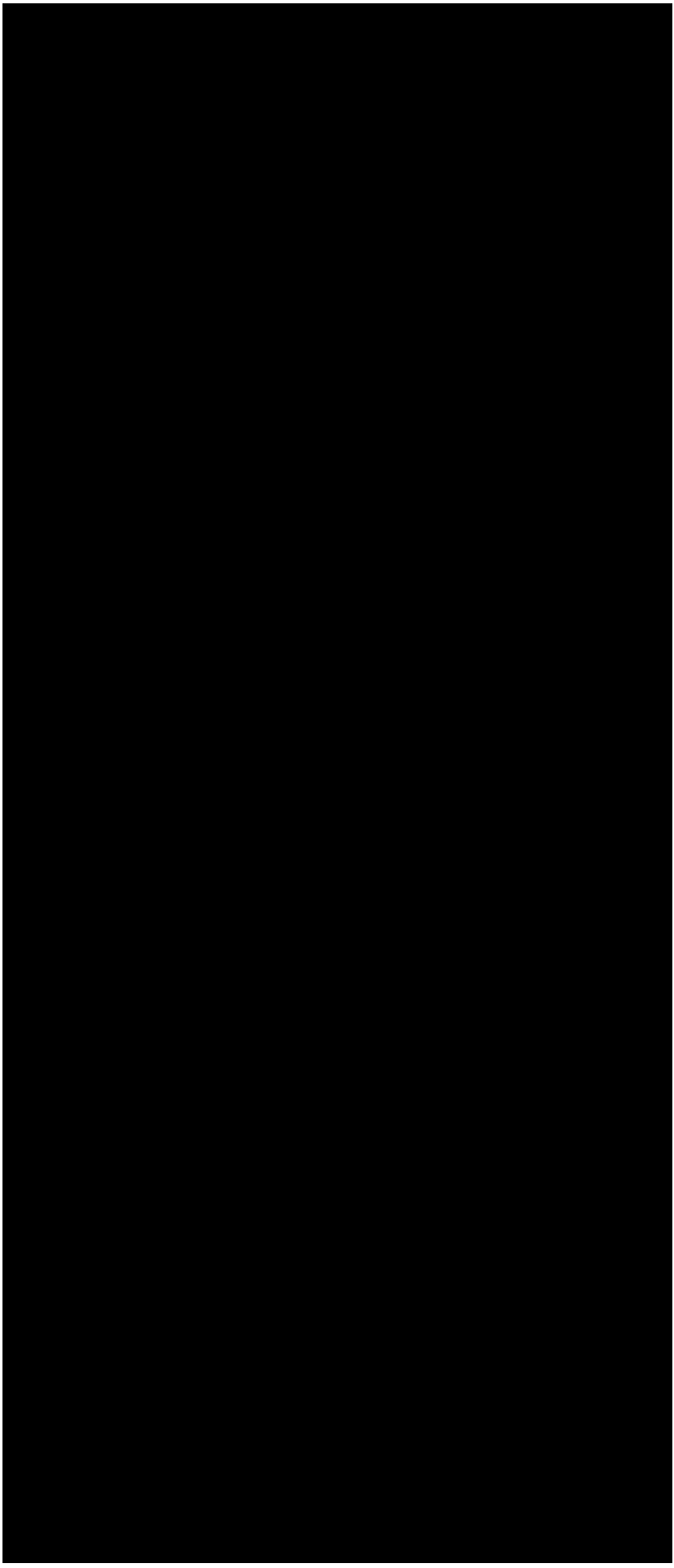


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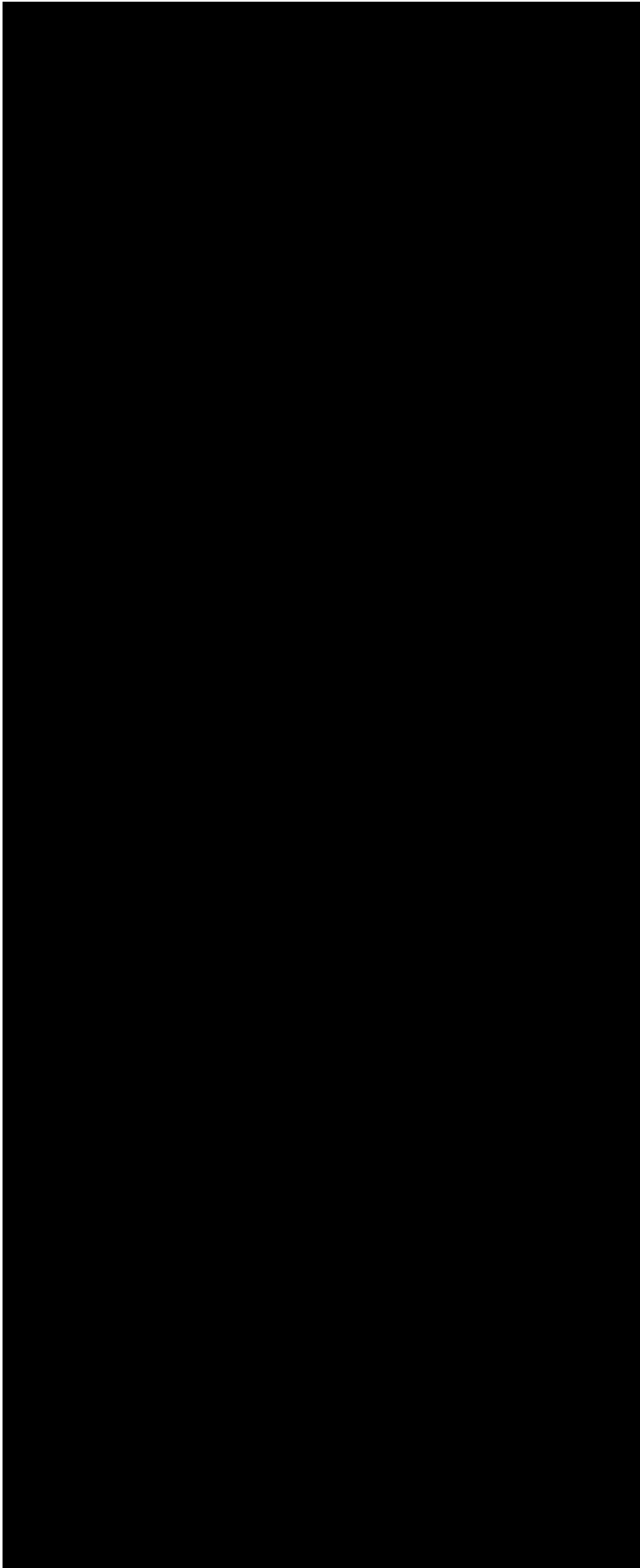
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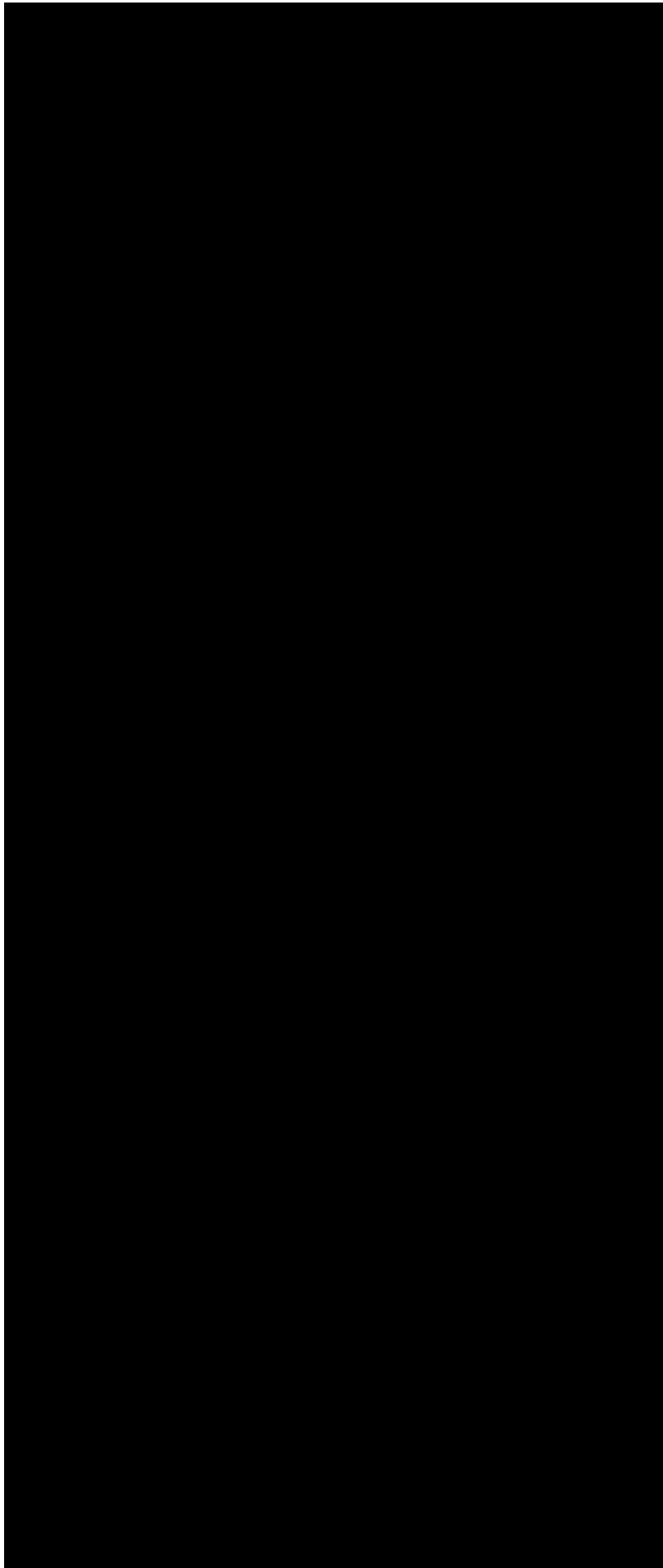
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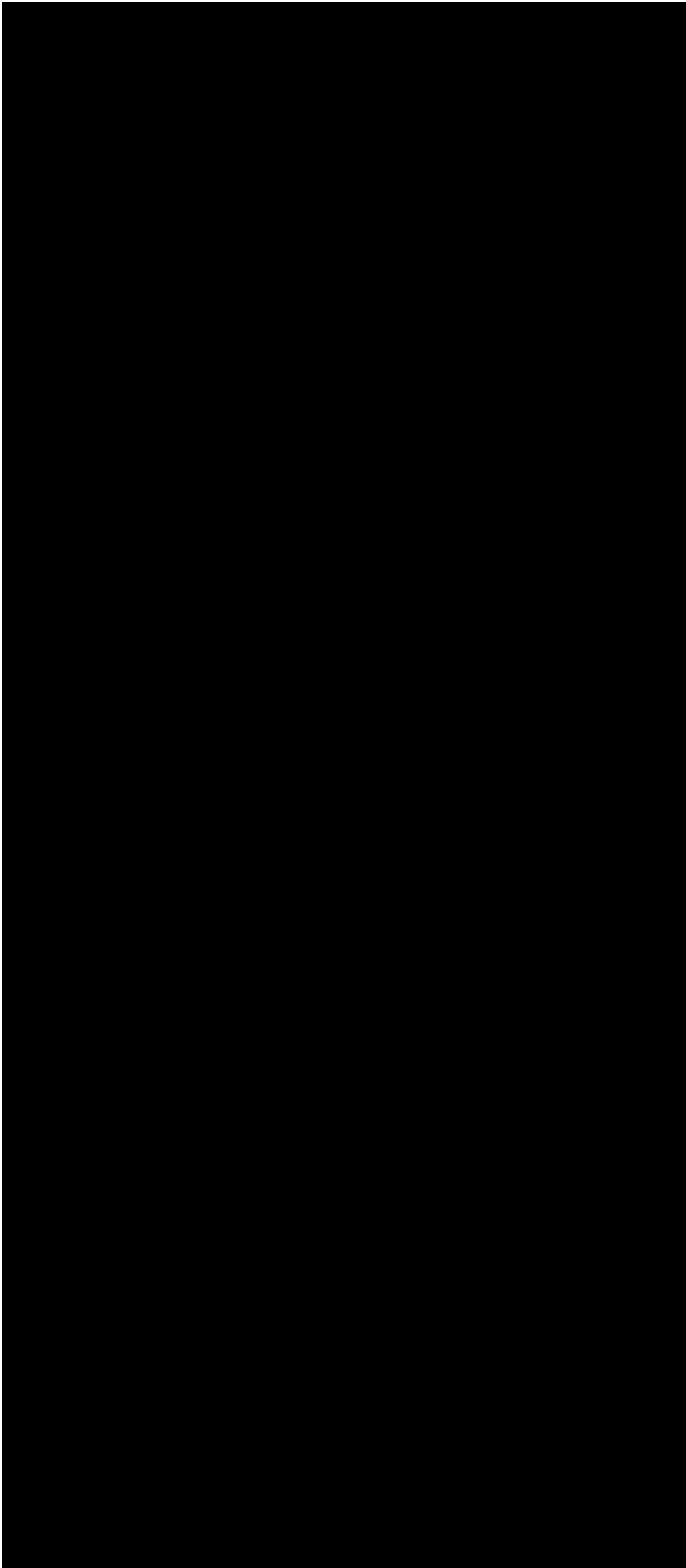
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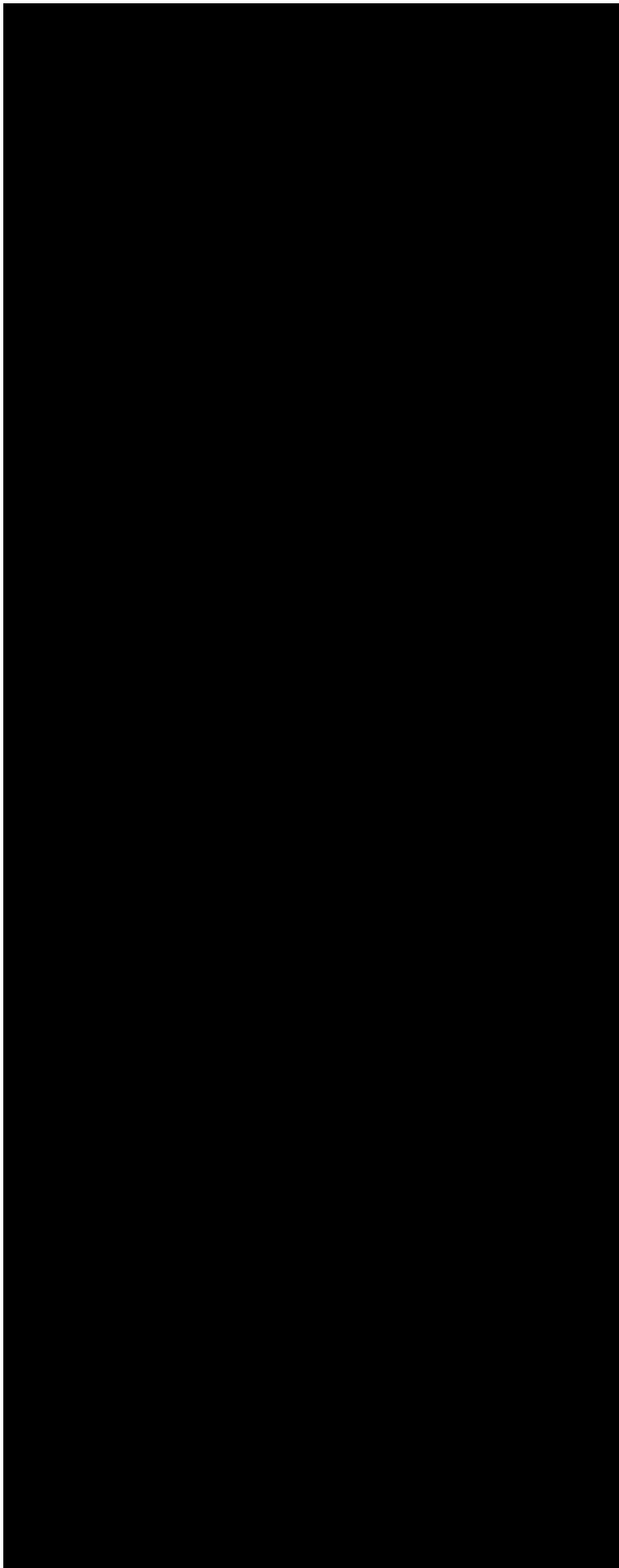
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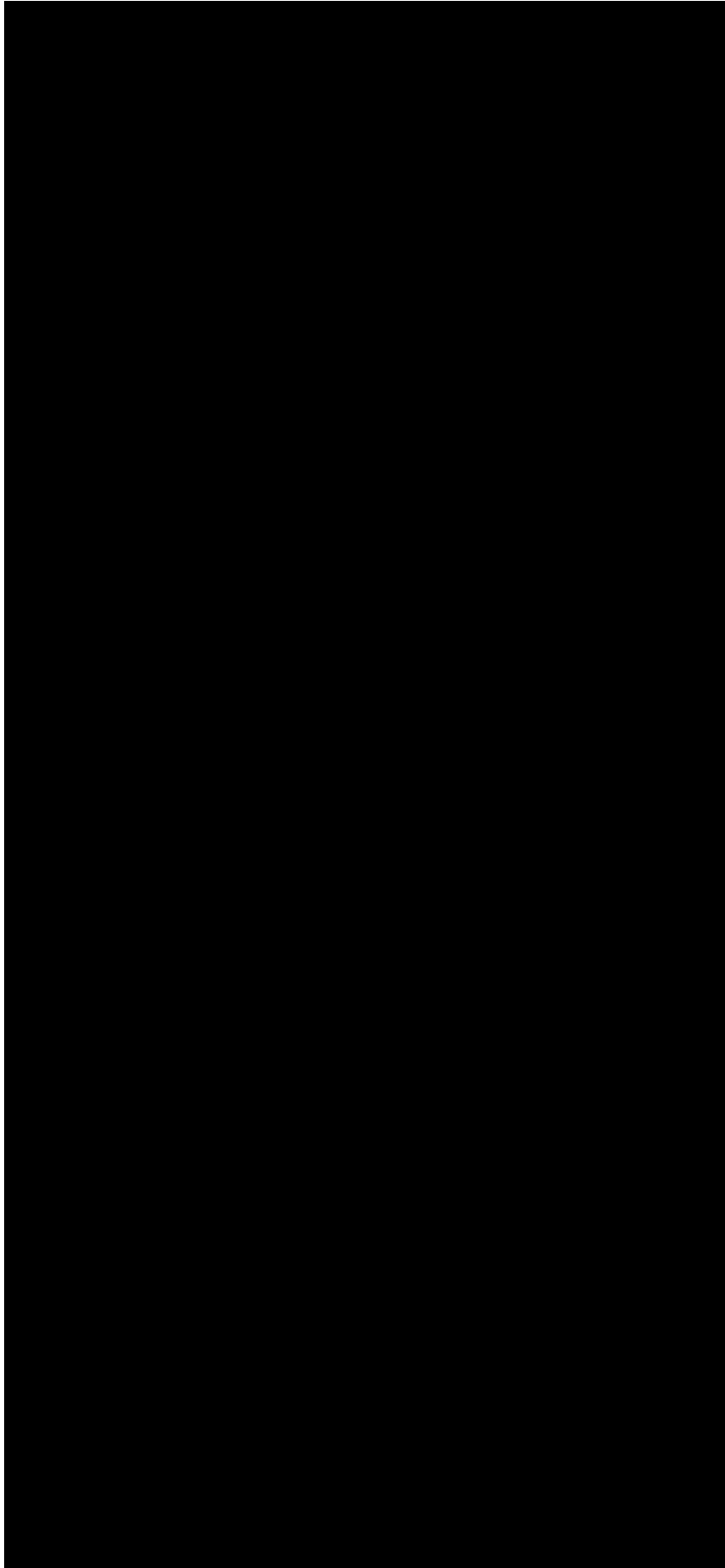
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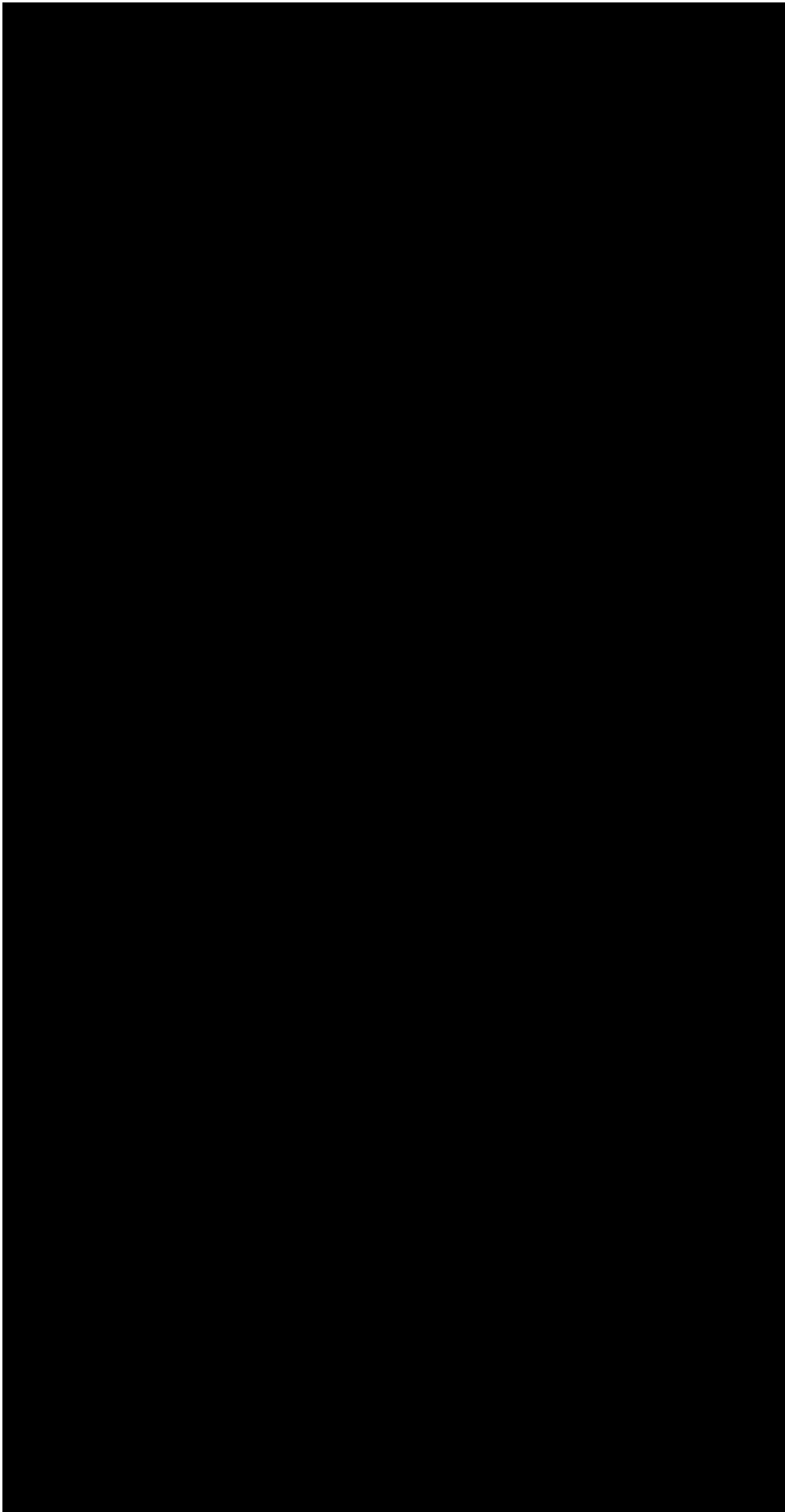


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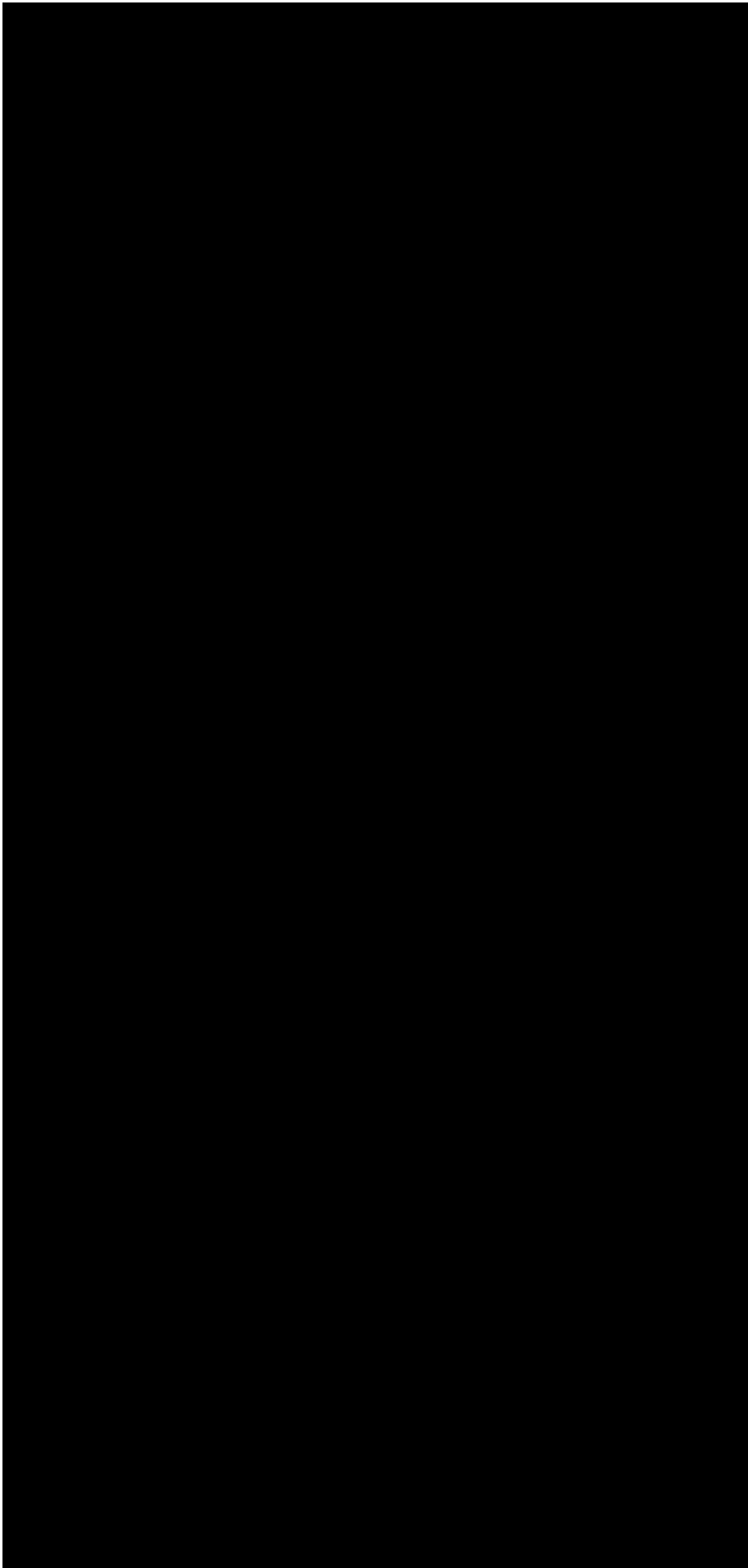




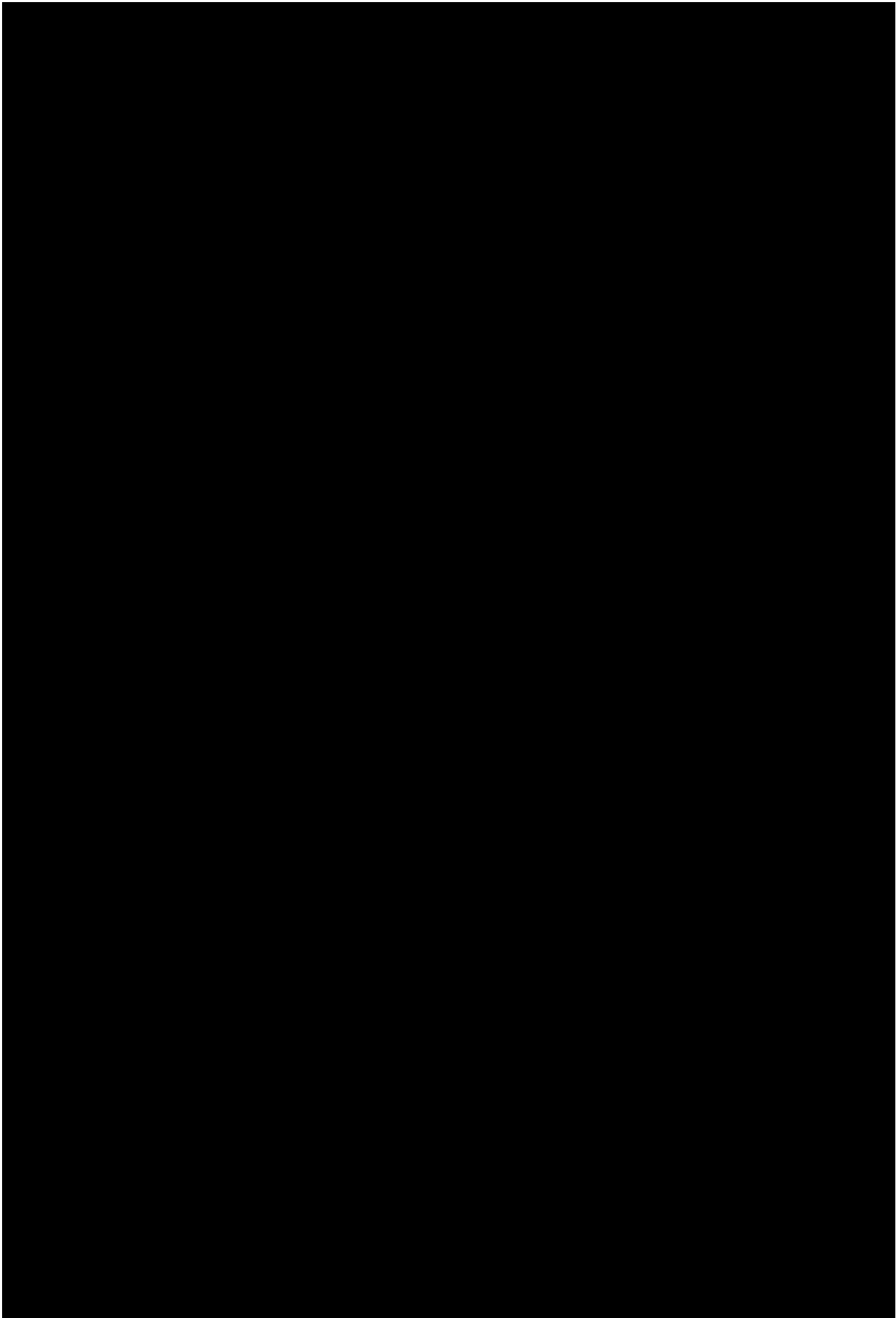
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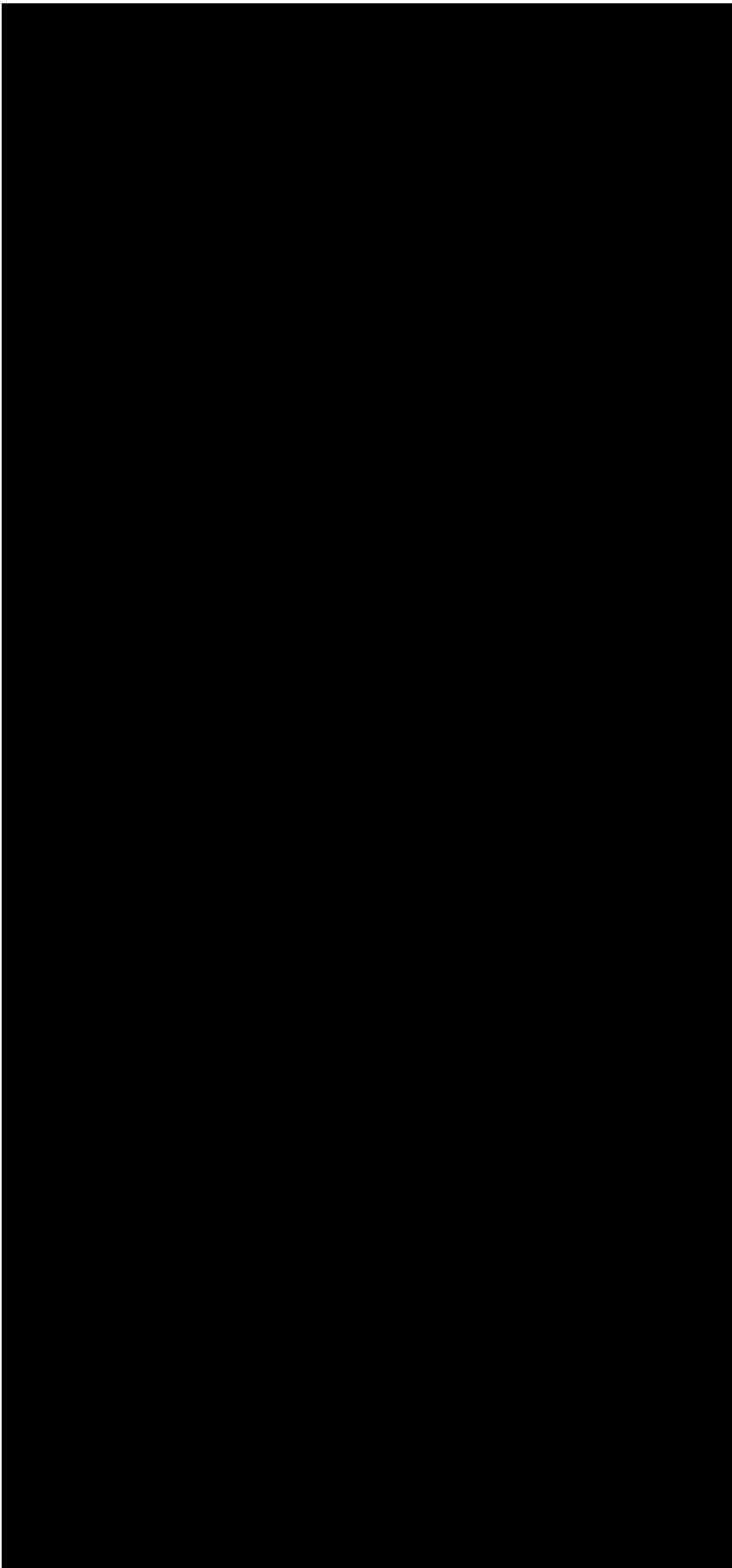
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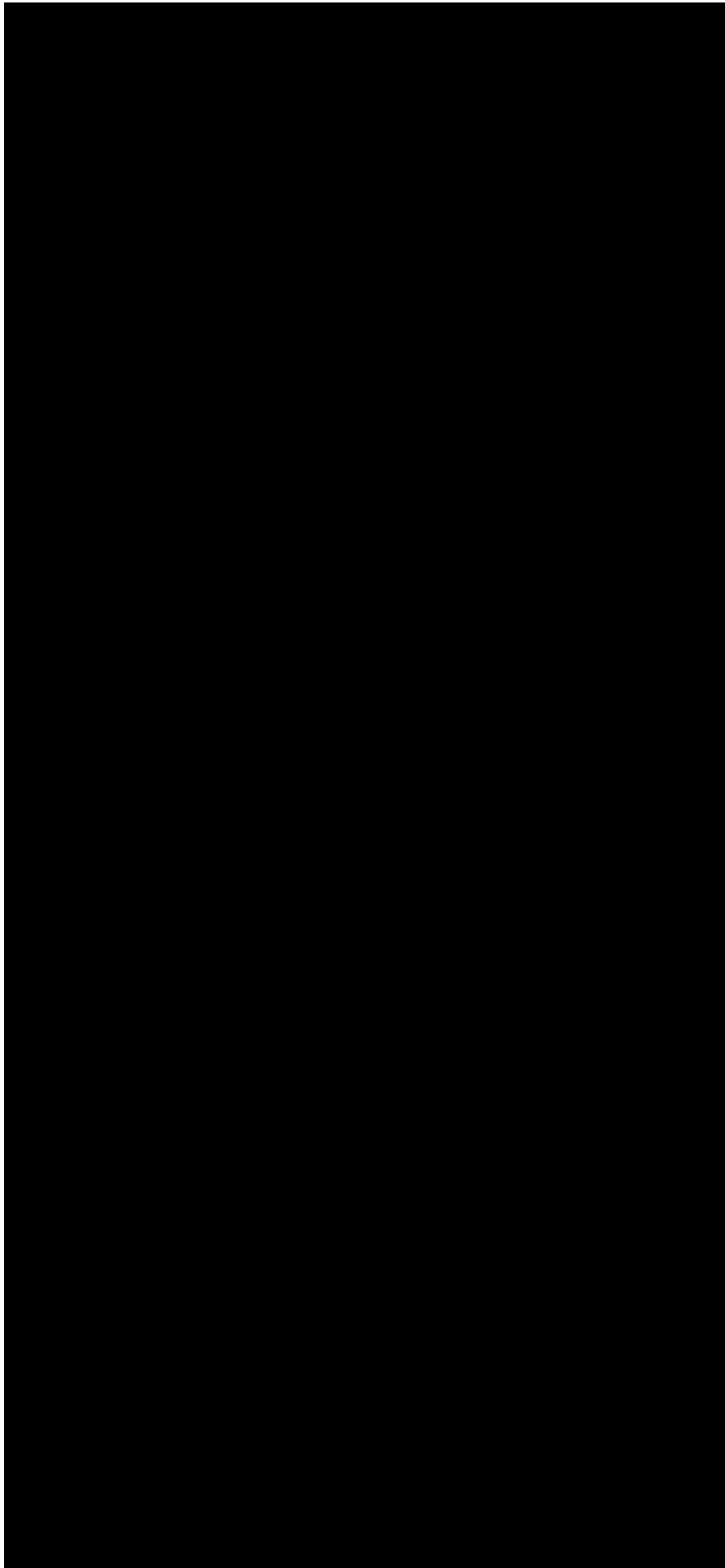
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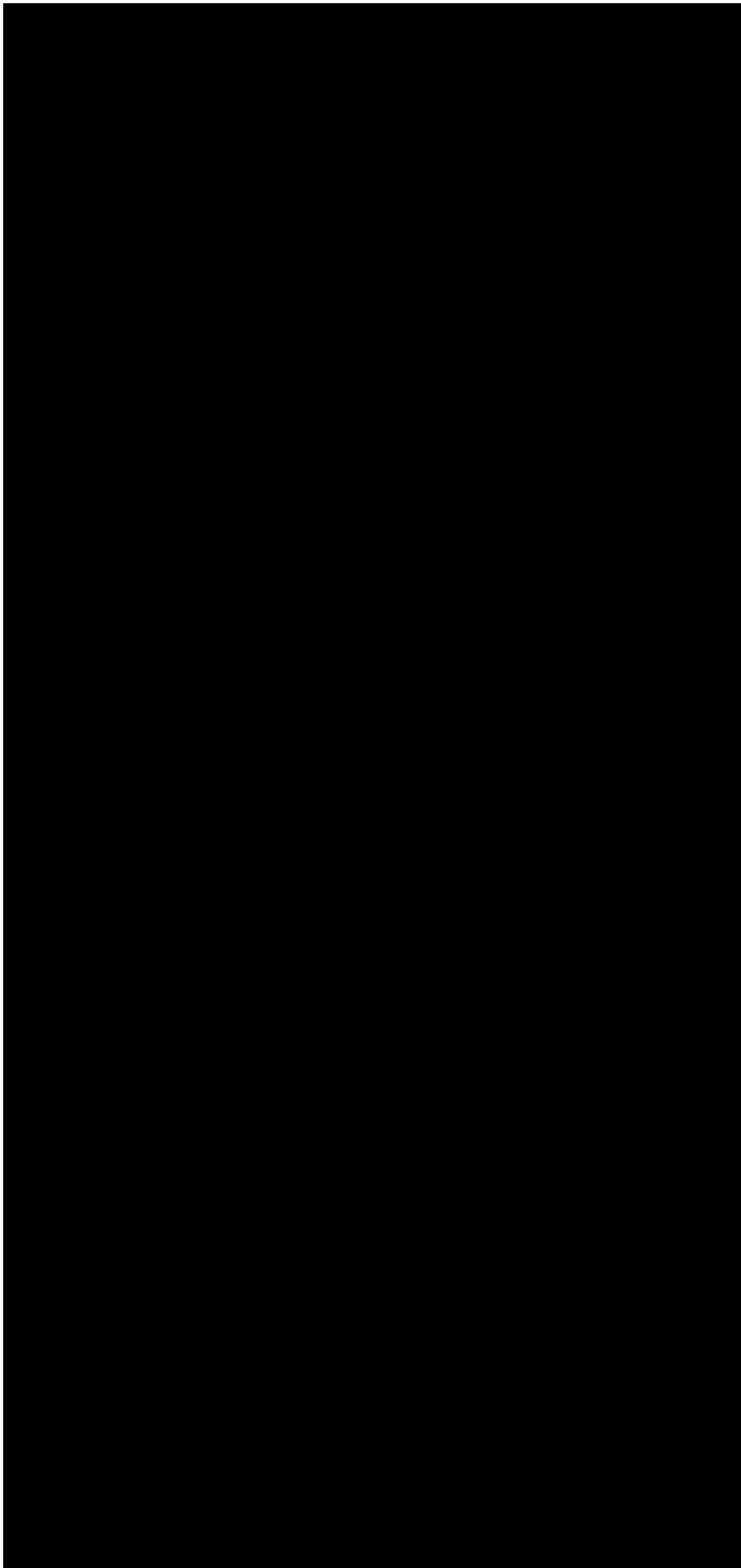
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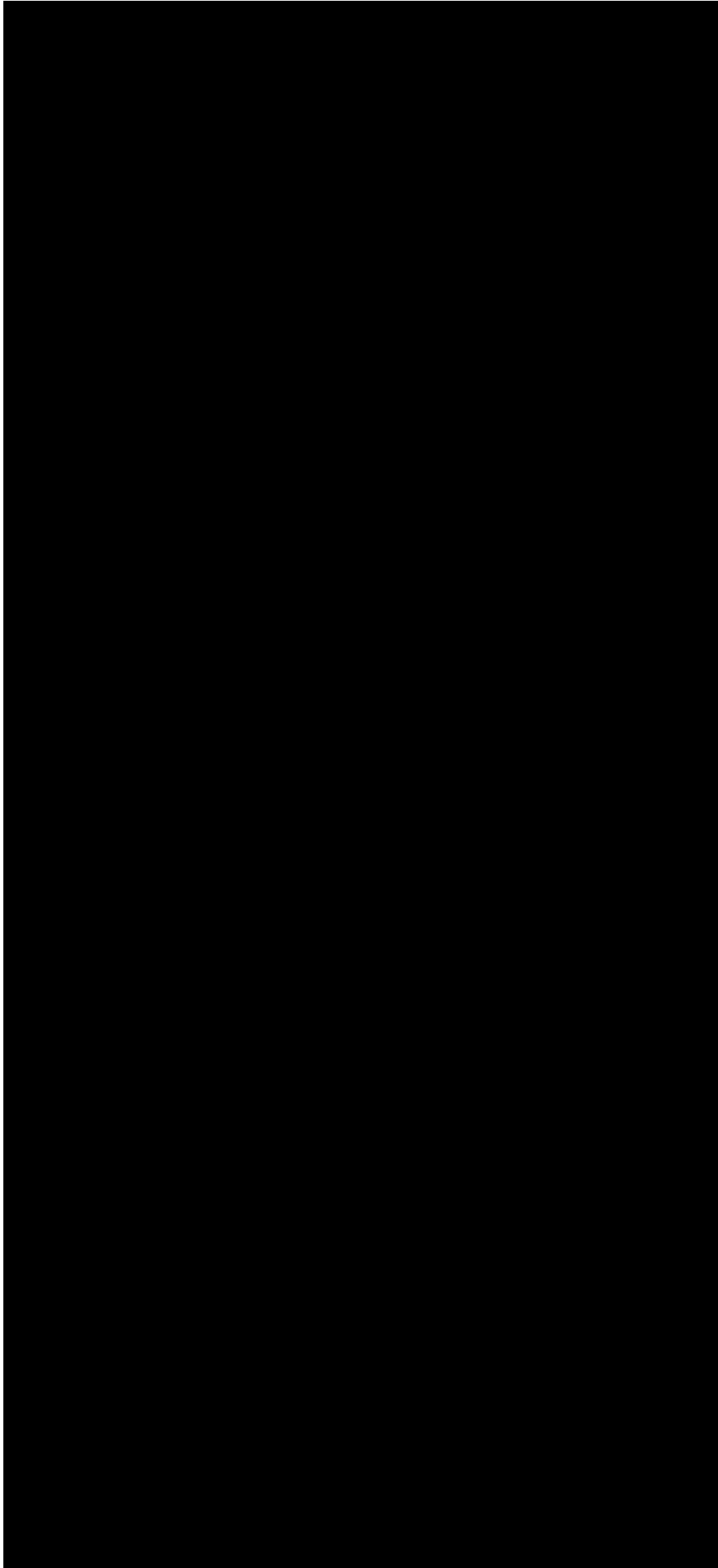
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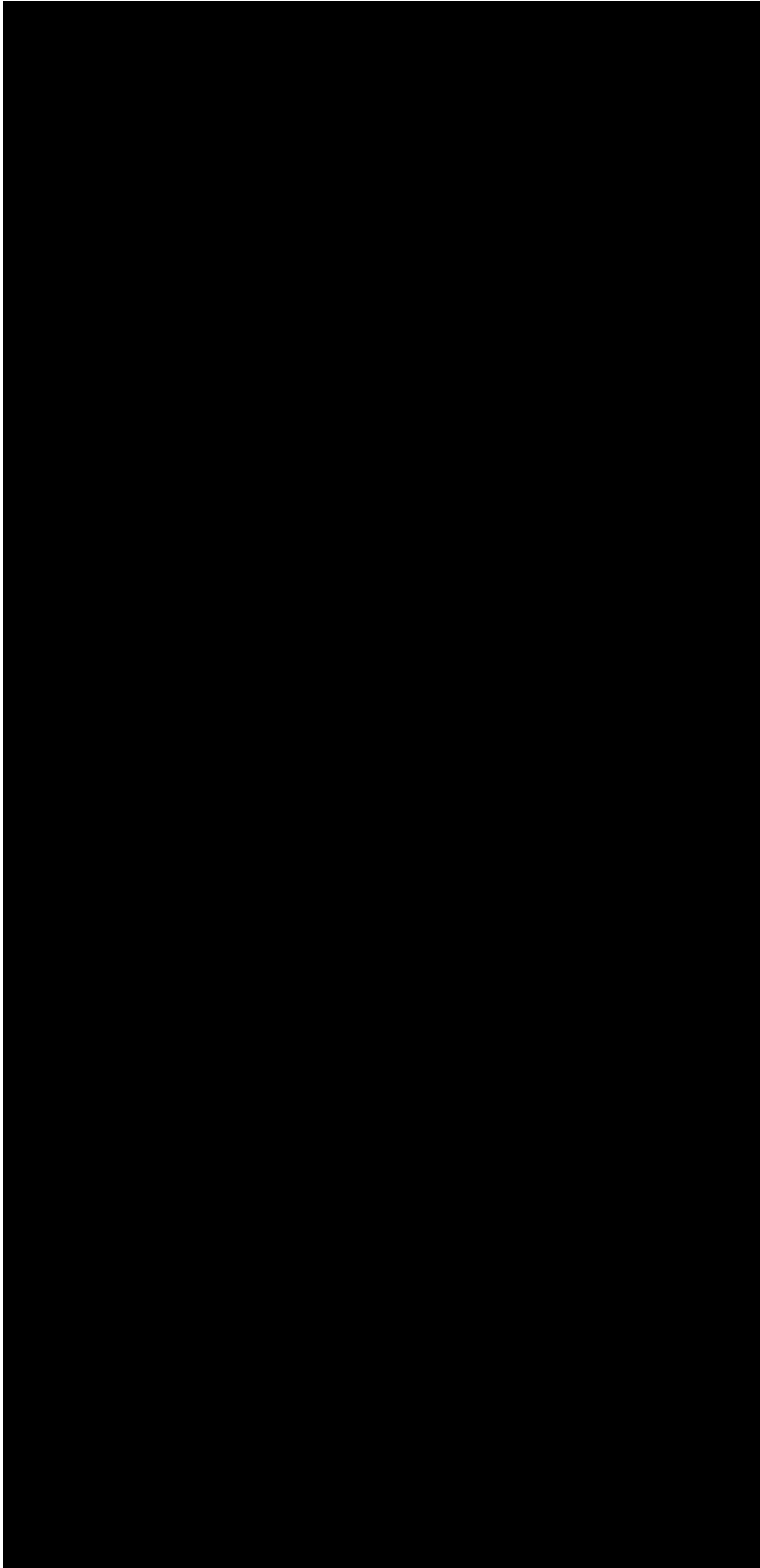
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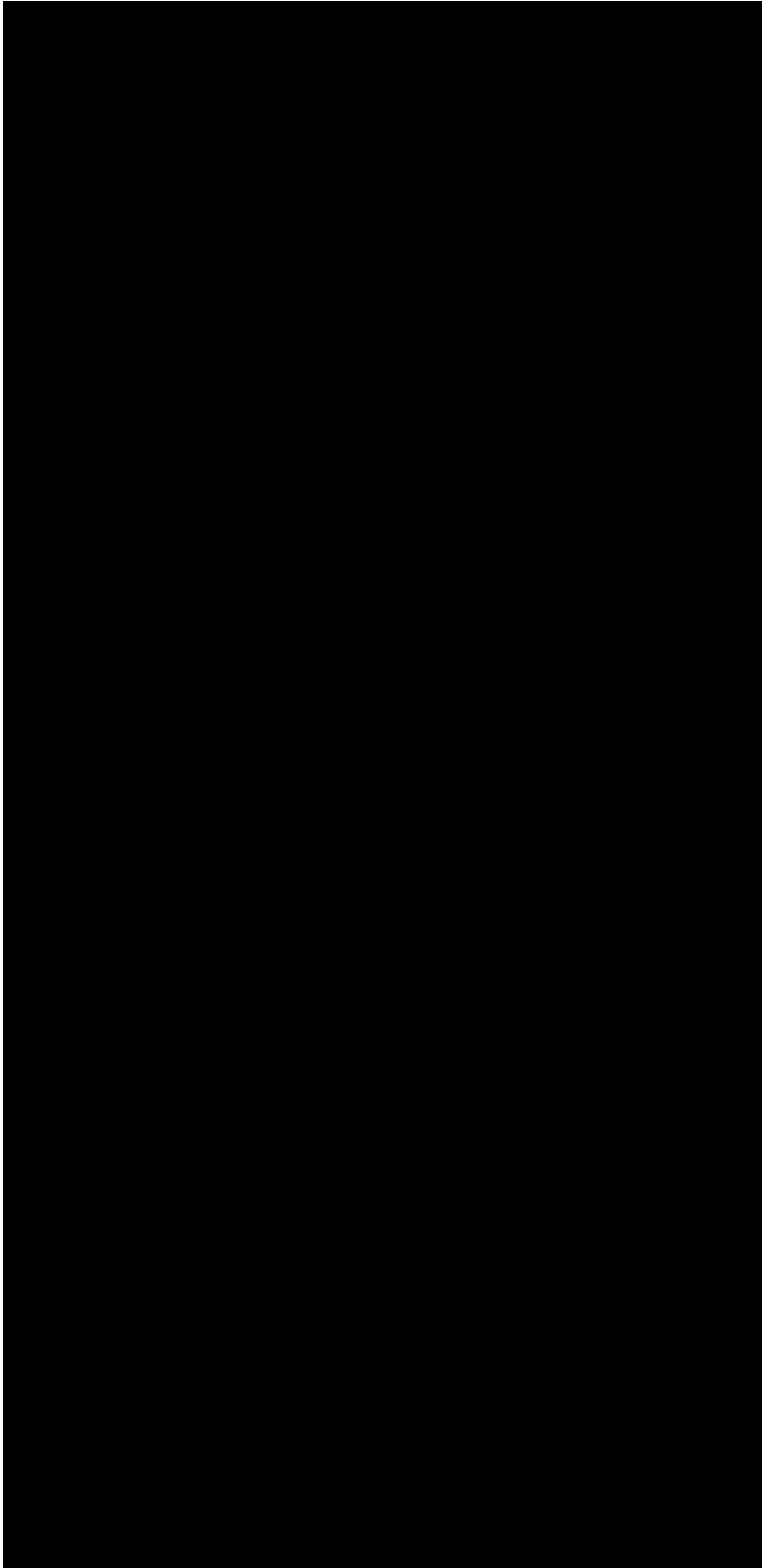


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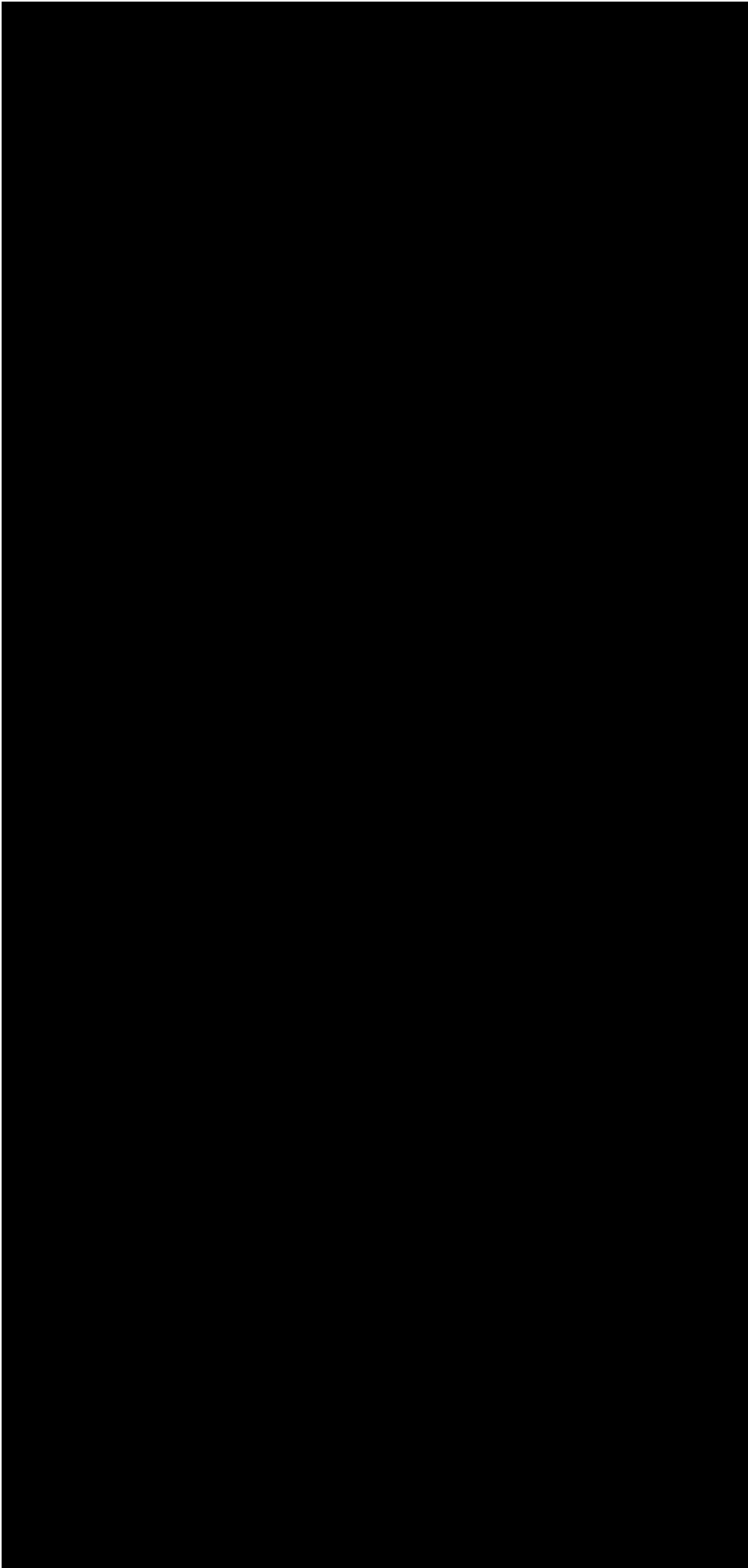
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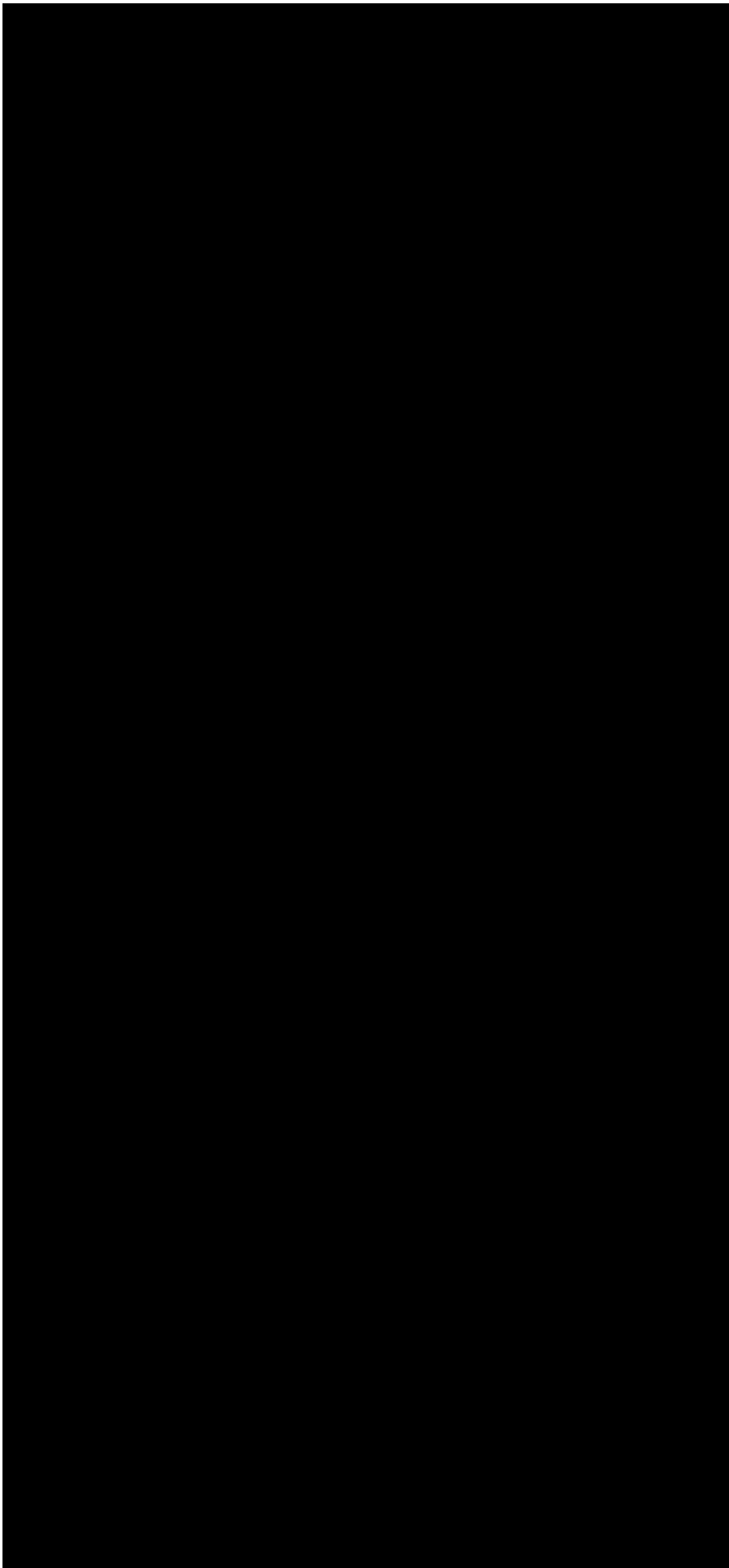
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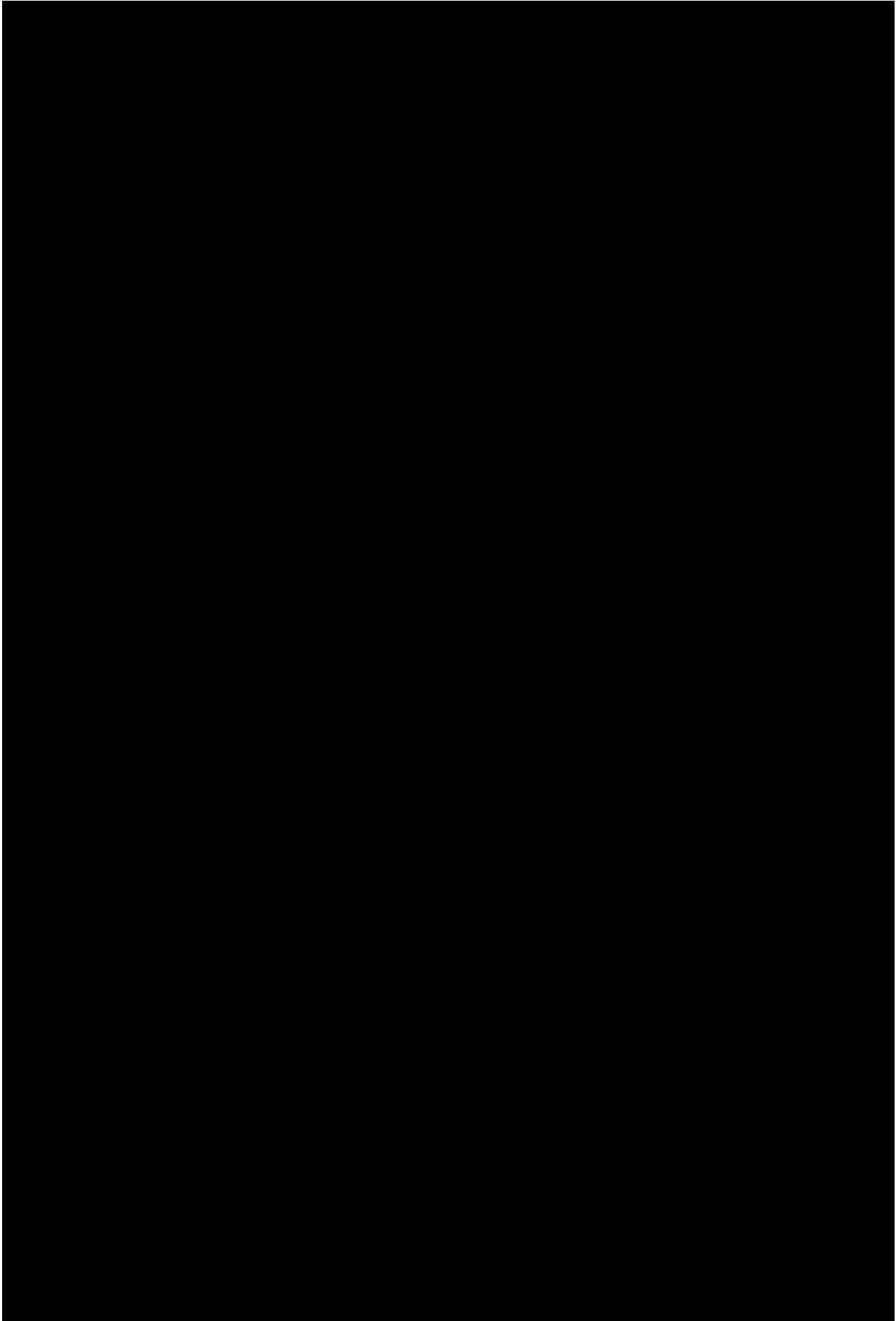
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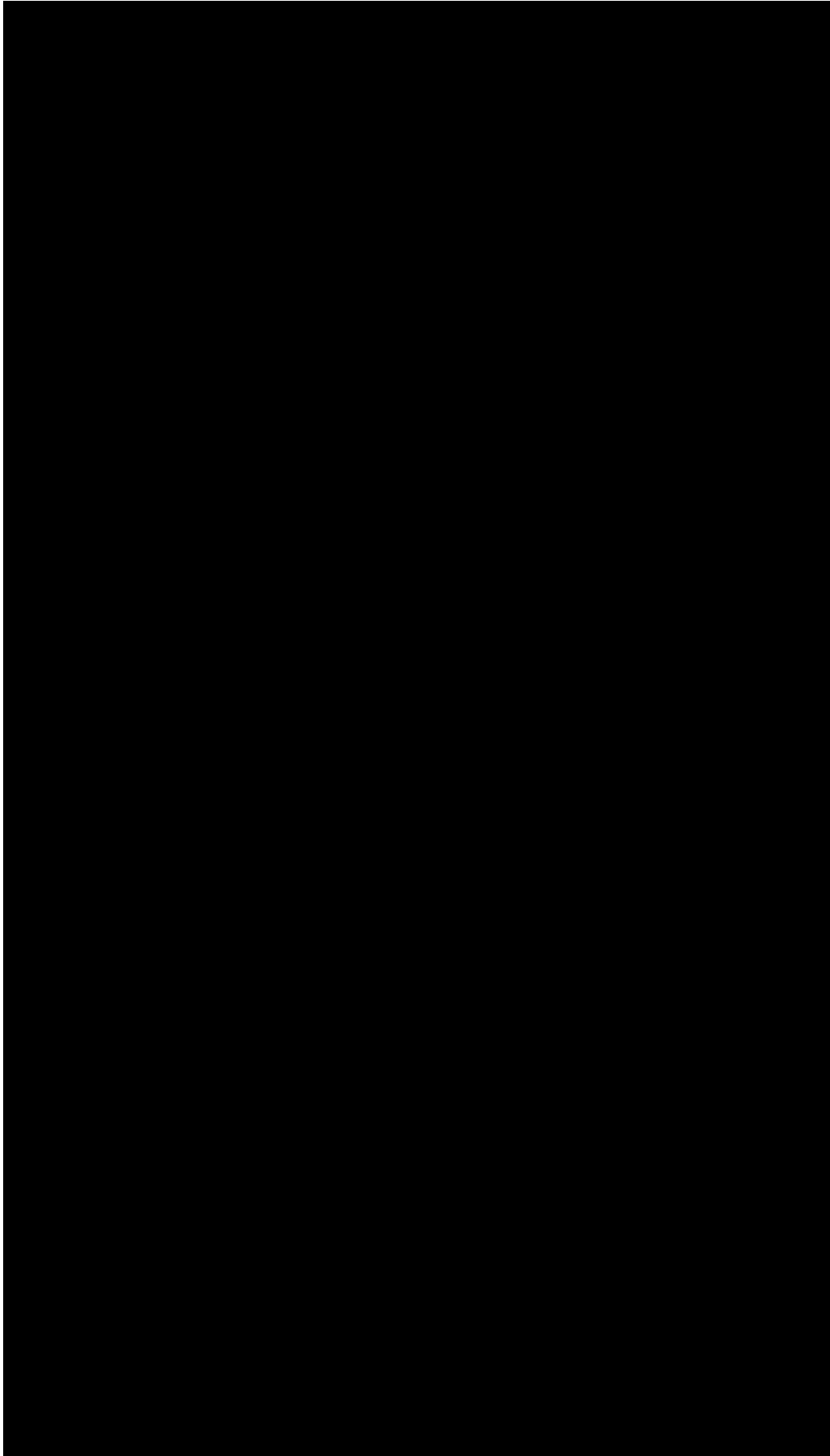
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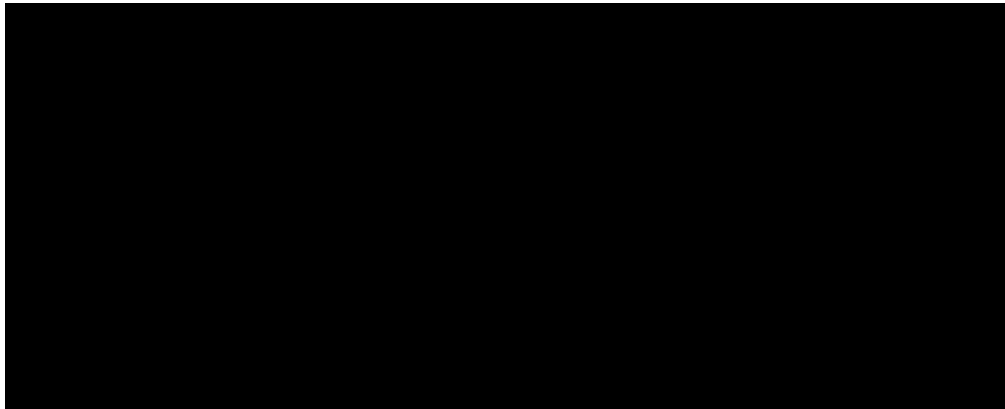
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## SECTION H SPECIAL CONTRACT REQUIREMENTS

### 5252.211-9502 GOVERNMENT INSTALLATION WORK SCHEDULE (NAVAIR) (OCT 2005)

(a) The Holidays applicable to this contract are: New Year's Day, Martin Luther King's Birthday, President's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, and Christmas Day.

(b) In the event that the contractor is prevented from performance as the result of an Executive Order or an administrative leave determination that applies to the using activity, such time may be charged to the contract as a direct cost provided such charges are consistent with the contractor's accounting practices. In the event that any of the above holidays occur on a Saturday or Sunday, then such holiday shall be observed as they are by the assigned Government employees at the using activity.

### 5252.227-9501 INVENTION DISCLOSURES AND REPORTS (NAVAIR) (MAY 1998)

(a) In accordance with the requirements of the Patent Rights clause of this contract, the contractor shall submit "Report of Inventions and Subcontracts" (DD Form 882) along with written disclosure of inventions to the designated Contract Administrator.

(b) The Contract Administrator will forward such reports and disclosures directly to the appropriate Patent Counsel, designated below, for review and recommendations, after which the reports will be returned to the Contract Administrator.

Name and address of Patent Counsel:

Mark Glut

Bldg 435

47076 Liljencrantz Road

Patuxent River, MD 20670

(301) 757-0587

(c) The above designated Patent Counsel will represent the Procurement Contracting Officer with regard to invention reporting matters arising under this contract.

(d) A copy of each report and disclosure shall be forwarded to the Procuring Contracting Officer.

(e) The contractor shall furnish the Contracting Officer a final report within three (3) months after completion of the contracted work listing all subject inventions or certifying that there were no such inventions, and listing all subcontracts at any tier containing a patent rights clause or certifying that there were no such subcontracts.

### 5252.232-9509 REIMBURSEMENT OF TRAVEL, PER DIEM, AND SPECIAL MATERIAL COSTS

#### (NAVAIR) (MAR 2000)

(a) Area of Travel. Performance under this contract may require travel by contractor personnel. If travel, domestic or overseas, is required, the contractor is responsible for making all necessary arrangements for its personnel. These include but are not limited to: medical examinations, immunizations, passports/visas/etc., and security clearances. All contractor personnel required to perform work on any U.S. Navy vessel shall obtain boarding authorization from the Commanding Officer of the vessel before boarding.

(b) Travel Policy. The Government will reimburse the contractor for allowable travel costs incurred by the contractor in performance of the contract in accordance with FAR Subpart 31.2. Travel required for tasks assigned under this contract shall be governed in accordance with: Federal Travel Regulations, prescribed by the General Services Administration for travel in the conterminous 48 United States, (hereinafter the FTR);



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Joint Travel Regulation, Volume 2, DoD Civilian Personnel, Appendix A, prescribed by the Department of Defense, for travel in Alaska, Hawaii, The Commonwealth of Puerto Rico, and territories and possessions of the United States (hereinafter JTR); and Standardized Regulations (Government Civilians, Foreign Areas), Section 925, "Maximum Travel Per Diem Allowances for Foreign Areas," prescribed by the Department of State, for travel in areas not covered in the FTR or JTR (hereinafter the SR).

(c) Travel. Travel and subsistence are authorized for travel beyond a fifty-mile radius of the contractor's office whenever a task assignment requires work to be accomplished at a temporary alternate worksite. No travel or subsistence shall be charged for work performed within a fifty-mile radius of the contractor's office. The contractor shall not be paid for travel or subsistence for contractor personnel who reside in the metropolitan area in which the tasks are being performed. Travel performed for personal convenience, in conjunction with personal recreation, or daily travel to and from work at the contractor's facility will not be reimbursed.

(1) For travel costs other than described in paragraph (c) above, the contractor shall be paid on the basis of actual amount paid to the extent that such travel is necessary for the performance of services under the contract and is authorized by the COR in writing.

(2) When transportation by privately owned conveyance is authorized, the contractor shall be paid on a mileage basis not to exceed the applicable Government transportation rate as contained in the FTR, JTR or SR. Authorization for the use of privately owned conveyance shall be indicated in the basic contract. Distances traveled between points shall be shown on invoices as listed in standard highway mileage guides. Reimbursement will not exceed the mileage shown in the standard highway mileage guides.

(3) The contractor agrees, in the performance of necessary travel, to use the lowest cost mode commensurate with the requirements of the mission as set forth in the basic contract and in accordance with food traffic management principles. When it is necessary to use air or rail travel, the contractor agrees to use coach, tourist class, or similar accommodations to the extent consistent with the successful and economical accomplishment of the mission for which the travel is being performed.

(4) The contractor's invoices shall include receipts or other evidence substantiating actual costs incurred for authorized travel. In no event will such payments exceed the rates of common carriers.

(d) Vehicle and/or Truck Rentals. The contractor shall be reimbursed for actual rental/lease of special vehicles and/or trucks (i.e., of a type not normally used by the contractor in the conduct of its business) only if authorized in the basic contract or upon approval by the COR. Reimbursement of such rental shall be made based on actual amounts paid by the contractor. Use of rental/lease costs of vehicles and/or trucks that are of a type normally used by the contractor in the conduct of its business are not subject to reimbursement.

(e) Car Rental. The contractor shall be reimbursed for car rental, exclusive of mileage charges, as authorized in the basic contract or upon approval by the COR, when the services are required to be performed beyond the normal commuting distance from the contractor's facilities. Car rental for a team on TDY at one site will be allowed for a minimum of four (4) persons per car, provided that such number or greater comprise the

TDY team.

(f) Per Diem. The contractor shall not be paid for per diem for contractor personnel who reside in the metropolitan areas in which the tasks are being performed. Per Diem shall not be paid on services performed within a fifty-mile radius of the contractor's home office or the contractor's local office. Per Diem is authorized for contractor personnel beyond a fifty-mile radius of the contractor's home or local offices whenever a task assigned requires work to be done at a temporary alternate worksite. Per Diem shall be paid to the contractor only to the extent that overnight stay is necessary and authorized under this contract. The authorized per diem rate shall be the same as the prevailing per diem in the worksite locality. These rates will be based on rates contained in the FTR, JTR or SR. The applicable rate is authorized at a flat seventy-five (75%) percent on the day of departure from contractor's home or local office, and on the day of return. Reimbursement to the contractor for per diem shall be limited to actual payments to per diem defined herein. The contractor shall provide actual payments of per diem defined herein. The contractor shall provide supporting documentation for per diem expenses as evidence of actual payment.

(g) Shipboard Stays. Whenever work assignments require temporary duty aboard a Government ship, the contractor will be reimbursed at the per diem rates identified in paragraph C8101.2C or C81181.3B(6) of the Department of Defense Joint Travel Regulations, Volume II.

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(h) Special Material. "Special material" includes only the costs of material, supplies, or services which is peculiar to the ordered data and which is not suitable for use in the course of the contractor's normal business. It shall be furnished pursuant to specific authorization approved by the COR. The contractor will be required to support all material costs claimed by its costs less any applicable discounts. "Special materials" include, but are not limited to, graphic reproduction expenses, or technical illustrative or design requirements needing special processing.

## 5252.242-9502 TECHNICAL DIRECTION (NAVAIR) (APR 2011)

(a) Definition. Technical Direction Letters (TDLs) are a means of communication between the Contracting Officer's Representative (COR) or SeaPort-e Task Order Manager (TOM), and the contractor to answer technical questions, provide technical clarification, and give technical direction regarding the content of the Statement of Work (SOW) of a Contract, Order, or Agreement; herein after referred to as contract.

(i) "Technical Direction" means "clarification of contractual requirements or direction of a technical nature, within the context of the SOW of the contract."

(b) Scope. The Defense Federal Acquisition Regulation Supplement (DFARS) 201.602-2 states that the Contracting Officer may designate qualified personnel as a COR. In this capacity, the COR or TOM may provide Technical Direction to the contractor, so long as the Technical Direction does not make any commitment or change that affects price, quality, quantity, delivery, or other terms and conditions of the contract. This Technical Direction shall be provided consistent with the limitations specified below.

(c) Limitations. When necessary, Technical Direction concerning details of requirements set forth in the contract, shall be given through issuance of TDLs prepared by the COR or TOM subject to the following limitations.

(i) The TDL, and any subsequent amendments to the TDL, shall be in writing and signed by both the COR or TOM, and the Contracting Officer prior to issuance of the TDL to the contractor. Written TDLs are the only medium permitted for use when technical direction communication is required. Any other means of communication (including such things as Contractor Service Request Letters, Authorization Letters, or Material Budget Letters) are not permissible means of communicating technical direction during contract performance.

(ii) In the event of an urgent situation, the COR/TOM may issue the TDL directly to the contractor prior to obtaining the Contracting Officer's signature.

(iii) Each TDL issued is subject to the terms and conditions of the contract and shall not be used to assign new work, direct a change to the quality or quantity of supplies and/or services delivered, change the delivery date(s) or period of performance of the contract, or change any other conditions of the contract. TDLs shall only provide additional clarification and direction regarding technical issues. In the event of a conflict between a TDL and the contract, the contract shall take precedence.

(iv) Issuance of TDLs shall not incur an increase or decrease to the contract price, estimated contract amount (including fee), or contract funding, as applicable. Additionally, TDLs shall not provide clarification or direction of a technical nature that would require the use of existing funds on the contract beyond the period of performance or delivery date for which the funds were obligated.

(v) TDLs shall provide specific Technical Direction to the contractor only for work specified in the SOW and previously negotiated in the contract. TDLs shall not require new contract deliverables that may cause the contractor to incur additional costs.

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(vi) When, in the opinion of the contractor, a TDL calls for effort outside the terms and conditions of the contract or available funding, the contractor shall notify the Contracting Officer in writing, with a copy to the COR or TOM, within two (2) working days of having received the Technical Direction. The contractor shall undertake no performance to comply with the TDL until the matter has been resolved by the Contracting Officer through a contract modification or other appropriate action.

(vii) If the contractor undertakes work associated with a TDL that is considered to be outside the scope of the contract, the contractor does so at its own risk and is not subject to recover any costs and fee or profit associated with the scope of effort.

**5252.242-9515 RESTRICTION ON THE DIRECT CHARGING OF MATERIAL (NAVAIR) (JUL 1998)**

(a) The term “material” includes supplies, materials, parts, equipment, hardware and Information Technology (IT) resources including equipment, services and software. This is a service contract and the procurement of material of any kind that are not incidental to and necessary for contract performance may be determined to be unallowable costs pursuant to FAR Part 31. No materials may be acquired under the contract without the prior written authorization of the Contracting Officer’s Representative (COR). IT resources may not be procured under the material line item of this contract unless the approvals required by Department of Defense purchasing procedures have been obtained. Any material provided by the contractor is subject to the requirements of the Federal Acquisition Regulation (FAR), the Defense Federal Acquisition Regulation Supplement (DFARS), and applicable Department of the Navy regulations and instructions.

(b) Prior written approval of the COR shall be required for all purchases of materials. If the contractor’s proposal submitted for a task order includes a list of materials with associated prices, then the COR’s acceptance of the contractor’s proposal shall constitute written approval of those purchases.

(c) The costs of general purpose business expenses required for the conduct of the contractor’s normal business operations will not be considered an allowable direct cost in the performance of this contract. General purpose business expenses include, but are not limited to, the cost for items such as telephones and telephone charges, reproduction machines, word processing equipment, personal computers and other office equipment and office supplies.

**5252.243-9504 AUTHORIZED CHANGES ONLY BY THE CONTRACTING OFFICER (NAVAIR) (JAN 1992)**

(a) Except as specified in paragraph (b) below, no order, statement, or conduct of Government personnel who visit the contractor’s facilities or in any other manner communicates with contractor personnel during the performance of this contract shall constitute a change under the “Changes” clause of this contract.

(b) The contractor shall not comply with any order, direction or request of Government personnel unless it is issued in writing and signed by the Contracting Officer, or is pursuant to specific authority otherwise included as a part of this contract.

(c) The Contracting Officer is the only person authorized to approve changes in any of the requirements of this contract and notwithstanding provisions contained elsewhere in this contract, the said authority remains solely the Contracting Officer’s. In the event the contractor effects any change at the direction of any person other than the Contracting Officer, the change will be considered to have been made without authority and no adjustment will be made in the contract price to cover any increase in charges incurred as a result thereof.

The address and telephone number of the Contracting Officer is: Paul B.Campbell, 301-757-9717, paul.campbell@navy.mil

**5252.237-9501 ADDITION OR SUBSTITUTION OF KEY PERSONNEL (SERVICES) (NAVAIR)(OCT 2005)**

(a) A requirement of this contract is to maintain stability of personnel proposed in order to provide quality services. The contractor agrees to assign only those key personnel whose resumes were submitted and approved, and who are necessary to fulfill the requirements of the effort. The contractor agrees to assign to any effort requiring non-key

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personnel only personnel who meet or exceed the applicable labor category descriptions. No substitution or addition of personnel shall be made except in accordance with this clause.

(b) If personnel for whatever reason become unavailable for work under the contract for a continuous period exceeding thirty (30) working days, or are expected to devote substantially less effort to the work than indicated in the proposal, the contractor shall propose a substitution to such personnel, in accordance with paragraph (d) below.

(c) The contractor agrees that during the first 12 months of the contract, no key personnel substitutions or additions will be made unless necessitated by compelling reasons including, but not limited to: an individual's illness, death, termination of employment, declining an offer of employment (for those individuals proposed as contingent hires), or family friendly leave. In such an event, the contractor must promptly provide the information required by paragraph (d) below to the Contracting Officer for approval prior to the substitution or addition of key personnel.

(d) All proposed substitutions shall be submitted, in writing, to the Contracting Officer at least fifteen (15) days (thirty (30) days if a security clearance must be obtained) prior to the proposed substitution. Each request shall provide a detailed explanation of the circumstances necessitating the proposed substitution, a complete resume for the proposed substitute, information regarding the full financial impact of the change, and any other information required by the Contracting Officer to approve or disapprove the proposed substitution. All proposed substitutes (no matter when they are proposed during the performance period) shall have qualifications that are equal to or higher than the qualifications of the person being replaced.

(e) In the event a requirement to increase the specified level of effort for a designated labor category, but not the overall level of effort of the contract occurs, the offeror shall submit to the Contracting Officer a written request for approval to add personnel to the designated labor category. The information required is the same as that required in paragraph (d) above. The additional personnel shall have qualifications greater than or equal to at least one (1) of the individuals proposed for the designated labor category.

(f) The Contracting Officer shall evaluate requests for substitution and addition of personnel and promptly notify the offeror, in writing, of whether the request is approved or disapproved.

(g) If the Contracting Officer determines that suitable and timely replacement of personnel who have been reassigned, terminated or have otherwise become unavailable to perform under the contract is not reasonably forthcoming or that the resultant reduction of productive effort would impair the successful completion of the contract or the task order, the contract may be terminated by the Contracting Officer for default or for the convenience of the Government, as appropriate. Alternatively, at the Contracting Officer's discretion, if the Contracting Officer finds the contractor to be at fault for the condition, he may equitably adjust (downward) the contract price or fixed fee to compensate the Government for any delay, loss or damage as a result of the contractor's action.

(h) Noncompliance with the provisions of this clause will be considered a material breach of the terms and conditions of the contract for which the Government may seek any and all appropriate remedies including Termination for Default pursuant to FAR Clause 52.249-6, Alt IV, "Termination (Cost-Reimbursement)".

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## SECTION I CONTRACT CLAUSES

### 5252.201-9500 GOVERNMENT POINTS OF CONTACT (OCT 2005)

- (a) The TOM for this contract is [REDACTED]
- (b) The TOM will provide technical direction and discussion, as relating, but not limited to the specification and/or statement of work, and will monitor the progress and quality of contractor performance.
- (c) The TOM is not an Administrative Contracting Officer and does not have authority to take any action, either directly or indirectly, that would change the pricing, quantity, quality, place of performance, delivery schedule, or any other terms and conditions of the contract (or delivery/task order), or to direct the accomplishment of effort which goes beyond the scope of the statement of work in the contract (or delivery/task order). When, in the opinion of the contractor, the TPOC requests any of the aforementioned changes, the contractor shall promptly notify the Contracting Officer (or ordering officer, for delivery/task orders) in writing. If the contractor believes or interprets any action by the TOM to be a change to the contract, the contractor will promptly notify the Contracting Officer in writing. Any failure by the contractor to notify the Contracting Officer in writing of any changes is an admission that the contractor is working at its own risk on a voluntary basis. No action shall be taken by the contractor under such direction until the Contracting Officer (or ordering officer) has issued a modification to the contract (or delivery/task order) concerning the subject change(s) or has otherwise resolved the issue.

### 52.217-5 EVALUATION OF OPTIONS (JUL 1990)

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

### 52.216-8 FIXED FEE (MAR 1997)

- (a) The Government shall pay the Contractor for performing this contract the fixed fee specified in the Schedule.
- (b) Payment of the fixed fee shall be made as specified in the Schedule; provided, that after payment of 85 percent of the fixed fee, the Contracting Officer may withhold further payment of fee until a reserve is set aside in an amount that the Contracting Officer considers necessary to protect the Government's interest. This reserve shall not exceed 15 percent of the total fixed fee or \$100,000, whichever is less. The Contracting Officer shall release 75 percent of all fee withholds under this contract after receipt of the certified final indirect cost rate proposal covering the year of physical completion of this contract, provided the Contractor has satisfied all other contract terms and conditions, including the submission of the final patent and royalty reports, and is not delinquent in submitting final vouchers on prior years' settlements. The Contracting Officer may release up to 90 percent of the fee withholds under this contract based on the Contractor's past performance related to the submission and settlement of final indirect cost rate proposals.

### 52.217-8 OPTION TO EXTEND SERVICES (NOV 1999)

The Government may require continued performance of any services within the limits and at the rates specified in the contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised more than once, but the total extension of performance hereunder shall not exceed 6 months. The Contracting Officer may exercise the option by written notice to the Contractor within 30 days.

### 5252.204-9504 DISCLOSURE OF CONTRACT INFORMATION (JAN 2007)

- (a) The Contractor shall not release to anyone outside the Contractor's organization any unclassified information (e.g., announcement of contract award), regardless of medium (e.g., film, tape, document), pertaining to any part of this contract or any program related to this contract, unless the Contracting Officer has given prior written approval.

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(b) Requests for approval shall identify the specific information to be released, the medium to be used, and the purpose for the release. The Contractor shall submit its request to the Contracting Officer at least ten (10) days before the proposed date for release.

(c) The Contractor agrees to include a similar requirement in each subcontract under this contract. Subcontractors shall submit requests for authorization to release through the prime contractor to the Contracting Officer.

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## **SECTION J LIST OF ATTACHMENTS**

Exhibit A- Contract Data Requirements List

Attachment 1- DD254, Contract Security Classification Specification

Attachment 2- TOM Appointment Letter

Attachment 3- Quality Assurance Surveillance Plan