5.2 MANAGED NETWORK SERVICES (MNS)

Qwest's Networx MNS provides a comprehensive, integrated package of products and services that offers complete solutions for managing data, voice, and video networks for the Government.

Qwest will provide a fully featured Managed Network Services (MNS) offering. Qwest's comprehensive MNS suite provides design, engineering, implementation, Operating System (OS) configuration maintenance, fault management, real-time reporting, 24x7x365 monitoring and total Agency coverage for Simple Network Management Protocol (SNMP)-enabled SEDs. Qwest's MNS is protocol and transport agnostic and is available to work in conjunction with all transport network types such as Internet Protocol Service (IPS), Asynchronous Transfer Mode Service (ATMS), Frame Relay Service (FRS), Private Line Service (PLS), Premises-based IP VPN Services (PBIP-VPNS), Network Based Internet Protocol VPN (NBIP-VPNS), Voice Over Internet Protocol Transport Services (VoIPTS) and SONET Services (SONETS), where MNS certified SEDs are deployed.

[redacted]

[redacted]

Qwest provides skilled MNS engineers to manage the health of the network, including design and engineering, implementation, and network monitoring and maintenance components. Qwest MNS currently supports both domestic and international installations, including commercial and Government customers at the Local, State and Federal levels.

5.2.1 Technical Approach to Managed Network Services Delivery (L.34.1.5.1)

Qwest provides a comprehensive, integrated package of services that offers complete solutions for managing SNMP-enabled data, voice, and video networks. Qwest's MNS is backed by a highly skilled team of experts spanning end-to-end functions. MNS provides Agencies with a true Single Point of Contact (SPOC) for all technology management issues concerning an Agency's network. [redacted] Qwest's technical approach is based on established industry principles and standards such as the Open Systems Interconnect (OSI) model, International Telecommunications Standardization Sector (ITU-T), Telecommunications Management Network (TMN) and Fault-Management, Configuration Management, Accounting, Performance and Security (FCAPS). Qwest relies on the Network Reliability and Interoperability Council (NRIC) for best practices in our planning and network management activities.

5.2.1.1 Approach to Managed Network Services Delivery (L.34.1.5.1(a))

Qwest's approach to service delivery includes the following foundation: geographically diverse Network Operations Centers (NOCs), state-of-the-art management tools, robust device management capabilities, security compliance, well established processes and procedures, and a highly skilled team.

[redacted]

Qwest's MNS includes 24x7x365 monitoring and notification. If faults are indicated based on reporting from an Element Management System (EMS), the NOC staff will be notified and will take timely remediation steps. [redacted]

State of the Art Management Tools: Qwest uses a suite of network management tools [redacted] to ensure network performance that consistently meets Agency expectations.

[redacted]

Tool	Description
[redacted]	[redacted]

[redacted]

Qwest's Alarm and Trouble Ticketing Service uses industry standard alarm thresholds. [redacted] If a threshold is violated, [redacted] will propagate to the NOC along with automated notification email(s) or text page(s) to designated parties.

[redacted] Qwest fully complies with all mandatory stipulated and narrative features, capabilities, and interface requirements for MNS. [redacted]

Capability	Description
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Capability	Description
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

5.2.1.2 Benefits of Managed Network Services Technical Approach (L.34.1.5.1(b))

From our years of experience managing emerging technologies, we recognize the value of preventing problems through lab testing,

interoperability testing, and configuration management, methods, and procedures. ***Figure 5.2.1-3*** summarizes the benefits of the Qwest's MNS.

Figure 5.2.1-3 Qwest Team MNS Features. Qwest delivers MNS efficiently and confidently with considerable experience, skills, and proven processes to assure full Agency satisfaction.

Features	Benefits	Substantiation
Assigned SME for Each Agency	[redacted]	[redacted]
Skilled Staff with Engineering Discipline and Bench Strength	[redacted]	[redacted]
Extensive Agency Experience	[redacted]	[redacted]
Solution Extensibility	[redacted]	[redacted]
Proactive Approach to Low-Level Performance Degradation Detection	[redacted]	[redacted]
Management of Multi-Carrier Networks	[redacted]	[redacted]
Qwest Control Networx Portal	[redacted]	[redacted]

Note: "Total Customer Agency" refers to a legal document signed by an authorized Agency representative giving Qwest the ability to work on the Agency's behalf to resolve troubles with other suppliers.

Federal Enterprise Architecture (FEA) goals and the benefits of the Qwest MNS service are summarized in ***Figure 5.2.1-4***.

Figure 5.2.1-4. Qwest's MNS Solutions Meets FEA Objectives

FEA Goals	The Qwest MNS Service
Improve Utilization of Government Information Resources	By providing the Government Agency with an outsourced solution for designing, managing, maintaining, and troubleshooting the network architecture, Government resources can focus on Agency core missions. These refocused resources can be redirected to more strategic endeavors, such as optimizing the use of technology to deliver today's primary services and forward-planning for tomorrow's needs.
Enhance Cost Savings and Avoidance	Enables the Government to reduce ongoing investment in indirect operating costs (for example, salaries, benefits, real estate, network support applications, and training). By partnering with Qwest as an experienced Managed Network Services provider, the Government will be able to leverage Qwest's years of technical expertise and commercial best practices.
Increase Cross-Agency and Inter-Government Collaboration	Qwest MNS can provide increased network and device up-time. This increased up-time is a critical component of any Agency's ability to effectively communicate with outside clients and other Government Agencies.

5.2.1.3 Solutions to Managed Network Service Solution Problems (L.34.1.5.1(c))

Qwest's approach to MNS was developed with the knowledge that Agencies will have diverse environments that need to be managed under a unified framework. Successful MNS implementations must address the following three categories of problems shown in [redacted]

[redacted]

Potential Problem	Solution
[redacted]	[redacted]

Potential Problem	Solution
[redacted]	[redacted]

5.2.2 Satisfaction of Managed Network Service Performance Requirements (L.34.1.5.2)

Qwest meets the thresholds for all KPIs with our MNS solution. The following sections further describe how Qwest monitors, measures and validates our performance against the Acceptable Quality Levels (AQLs) required for MNS.

5.2.2.1 Managed Network Services Quality of Service (L.34.1.5.2(a))

Qwest's performance is fully compliant with the Government's requirement. ***Figure 5.2.2-1*** summarizes our support for MNS performance requirements.

Figure 5.2.2-1. Key Performance Indicators and Performance Standards

Key Performance Indicator (KPI)	Service Level	Performance Standard (Threshold)	(AQL)	Qwest Performance Metrics
Availability (Network End-to-End)	Routine	99.9%	≥ 99.9%	[redacted]
Time to Restore (TTR)	Without Dispatch	4 hours	≤ 4 hours	[redacted]
	With Dispatch	8 hours	≤ 8 hours	[redacted]

The Key Performance Indicators and Performance Standards are within our current intervals for Time to Restore and Availability. [redacted] The experience of the NOC staff in working with other carriers (via Total Customer Agency), network elements, and SEDs repair, along with the knowledge gained from managing the Agency's Network allows us to reduce the confusion and finger pointing factor acting as the customer's agent, and on the customers behalf, regardless of the problem.

5.2.2.2 Approach for Monitoring and Measuring Managed Network Services (L.34.1.5.2(b))

Implementation Management and Maintenance: Qwest will provide fully integrated management and maintenance for Agencies including access, transport, SEDs, and security management. In the following sub-sections, we describe our integrated approach.

Continuous Network Monitoring: Qwest MNS engineers and systems monitor Agency networks 24x7x365 to ensure optimum performance and to quickly detect, isolate, and repair faults using Simple Network Management Protocols (SNMP) and device Management Information Base (MIB). This information will be available to the Agency as actionable data, e.g. trouble tickets, reports, etc. or as raw trap and polling information. Qwest

[redacted] All of this data is correlated, filtered, and analyzed automatically. [redacted]

The first step in monitoring Agencies' networks is to collect or capture the management data stored in the devices. The stored data/values are then used in the following ways:

- The data (polls and device traps) are correlated and filtered to determine the nature and level of faults and discard irrelevant traps
- Trigger the fault management process
- Compare against stored thresholds and baseline information during the performance management process for predictive capacity and failure forecasting
- Assemble the online reports

The mechanism used by MNS to collect the network management data from covered devices is SNMP polling. When an Agency device does not respond to polling, or when the values returned by Agency devices exceed predefined thresholds, a fault condition is assumed. [redacted] Monitoring also includes the detection of faults by receiving and processing device traps.

Qwest will only poll devices that are SNMP enabled and configured in the MNS system. [redacted]

[redacted]

Filtering and Correlation: MNS uses filters to look at a single source of Network Management Information (NMI), such as a router, switch, server,

or application agent. Filtering rules are applied to check for thresholds, amounts of change, or other factors. [redacted]

Configuration Management: Configuration Management encompasses the provisioning process and the configuration fault management process. These processes ensure configuration integrity for the Agency. [redacted]

Qwest will also manage all IP address and schemas across the Agency's network [redacted]

Qwest will make changes to the configuration on an Agency device as specified by the Agency. The changed configuration will be developed by Qwest based on information provided by the Agency.

Configuration Fault Management: Qwest protects Agencies against configuration corruption and unwanted/unauthorized configuration changes by routinely backing up device configurations. [redacted]

[redacted] Qwest will identify and alert MNS engineers of any configuration changes. Once a new configuration is validated it will replace the previously stored configuration.

We will restore previous device configuration states as required. If the current configuration is lost due to hardware failure, we will restore the previous configuration. We always store a copy of the last "known good" configuration for a device.

If a network issue is caused by requested configuration provisioning activities, Qwest will restore the previous configuration to the device. MNS engineers will work with the Agency to analyze the consequences of a requested configuration change.

[redacted] Configuration Fault Management Process, details the process used for configuration fault management:

Online Reporting: Qwest provides a full suite of reporting capabilities to Agencies using industry-leading reporting platforms. Network reports are automated and available via the Qwest Control Networx Portal. Qwest MNS engineers also use these reports to evaluate the performance of Agency networks. Reports are organized from a high level view of a network down to the smallest component, thus providing the varied level of detail required by the Agency.

Standard Reports: Qwest will provide real-time access to Networx [redacted] In addition to this information, Qwest will also provide the following standard reports to all Agencies:

[redacted]

[redacted]

Standard Router/Switch Reports

[redacted]

Qwest MNS supports industry standard SNMP devices. This "open" design allows the Agency maximum flexibility when implementing Qwest MNS. Qwest MNS will comply with the specific standards and recommendations identified in the Agency task order. Additionally, Qwest MNS will comply with all appropriate standards for any underlying Networx access and transport service.

Network Profiling: The inventory database, topology maps, and drawings are available online and are updated each time there is a change in the network. Changes include adding, moving, or removing a device from MNS; the addition or removal of a connection or protocol (interface or sub-interface); and changes in device or connection information, such as IP addressing, bandwidth, filtering, and traffic prioritization schemes. [redacted]

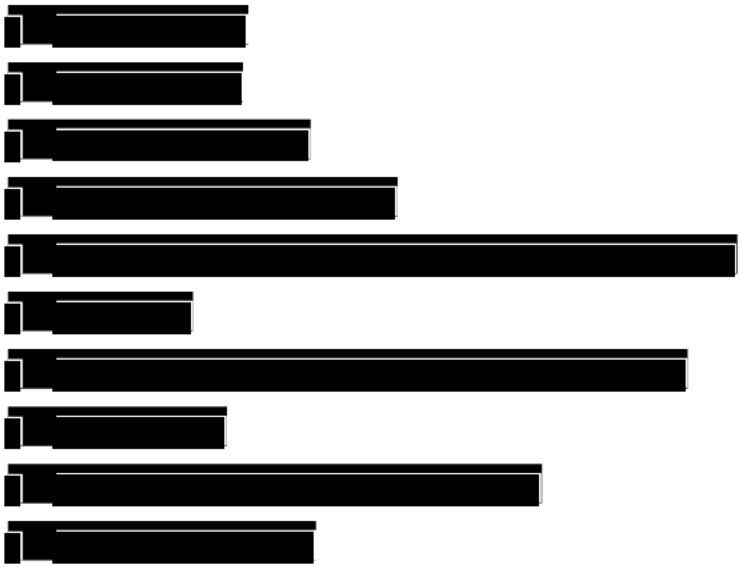


Figure 5.2.3-2 identifies the features that Qwest is offering to the Government. Qwest fully complies with all mandatory stipulated and narrative features, capabilities, and interface requirements for MNS. The text in the following table is intended to provide the technical description required per L.34.1.5.2(b), and does not limit or caveat Qwest's compliance in any way.

Figure 5.2.3-2 Features of Qwest's MNS

Feature	Benefit	Substantiation
Government Furnished Property (GFP) Maintenance		
Agency-Specific NOC		
Network Testing		

Feature	Benefit	Substantiation
	[redacted]	[redacted]

5.2.2.3 Verification of Managed Network Services (L.34.1.5.2(c))

Data Integrity Analysis: Qwest has procedures in place to ensure that the source data, as well as the repository of source data, is protected through restricted access and redundant databases. [redacted]

Root Cause Assessment: Any time a breach of any of the performance levels Qwest measures occurs, Qwest will review and determine the root cause for the issue and document the findings in a Reason For Outage report. [redacted] Utilizing our proven carrier grade tools and engineering capabilities, Qwest ensures that performance is restored and proactive preventative actions are taken.

Resolution: Once an alarm has broken an established performance threshold, system initiated tests will be performed to identify where the trouble ticket should be routed (e.g., SED support, Network Support, etc.). [redacted] Once prioritized, the trouble ticket is sent to an engineer for resolution action. Once we execute on the resolution path and corrective action is completed, performance measures have stabilized and

returned to service levels acceptable to the Agency, the trouble ticket will be closed.

5.2.2.4 Managed Network Services Performance Level Improvements (L.34.1.5.2(d))

[redacted]

5.2.2.5 Additional Managed Network Services Performance Metrics (L.34.1.5.2(e))

[redacted]

5.2.3 Satisfaction of Managed Network Service Specifications (L.34.1.5.3)

Qwest's MNS solution is designed to take advantage of the various efficiencies created by the development and implementation of a uniform service delivery approach. Qwest acknowledges that Agencies may require customized elements in the service delivery process to accommodate special considerations of the Agency's network or internal communication needs. The following sections detail Qwest's technical approach to meeting MNS requirements, including our demonstrated ability to offer MNS.

5.2.3.1 Satisfaction of Managed Network Service Requirements (L.34.1.5.3(a))

Qwest's MNS provides a broad range of design, engineering, implementation, monitoring, proactive troubleshooting, and reporting capabilities including the software tools used to enable the MNS NOC to monitor multi-carrier access, transport components, and SEDs. Qwest has provided this service to commercial, state, local, and federal Government customers for over a decade. Qwest currently manages customer networks located around the world [redacted] The networks

managed are multi-carrier, multi-technology in topography. [redacted] This is carrier-grade network management for the Agency.

Design and Engineering: [redacted]

Using this information Qwest will develop, implement and manage an appropriate solution, based on customer location, access, transport, SEDs, and lifecycle management that will meet the Agency's performance and disaster recovery. These solutions will utilize all Qwest WAN products and services that are part of the Networx proposal. Qwest's current ability to manage across multiple-carriers utilizing total customer Agency agreements will provide the Agency with a comprehensive network management solution.

Qwest will certify all solution selected SEDs for MNS monitoring and management. Qwest will also integrate any MNS specific security requirements.

[redacted] Agency security requirements will be integral to the requirements and design process. Qwest will provide end-to-end project management from design through

service activation, including active coordination of installation and acceptance with Agency personnel.

All MNS services and access to Qwest located equipment will be covered by the Agency's security policy; this will include password and user permissions.

5.2.3.2 Proposed Enhancements for Managed Network Services (L.34.1.5.3(b))

[redacted]

5.2.3.3 Network Modifications Required for Managed Network Services (L.34.1.5.3(c))

Minor modifications will be configured as needed on Agency SEDs to build management connectivity to provision, implement, and manage for MNS. [redacted]

5.2.3.4 Experience with Managed Network Services Delivery (L.34.1.5.3(d)

Qwest brings decades of data network management experience, including eight years of providing direct MNS for complex customer environments, utilizing carrier grade tools, platforms and expertise. [redacted]

[redacted]

5.2.3.5 Managed Network Services Approach (L.34.1.5.3(e))

All MNS are provided by [redacted] which meet all Networx security and disaster recovery requirements.

Design and Engineering: [redacted]

[redacted]

***Implementation*:** Day 1 Services (Install/Turn Up) - Once complete, the SPOC would assist the Agency in formalizing the required documentation needed for the ordering and provisioning of the required services. Any additional information captured from the discovery meeting would be included in the documents, in addition to contact hierarchy for maintenance issues, device locations, IP, or other network specific addressing schemes. Once all the documentation has been completed, the SPOC would submit the implementation information to the MNS NOC for order processing. The associated order tracking IDs would then be sent to the SPOC in order to facilitate the order tracking and subsequent order status monitoring with the designated contact(s) within the Agency. [redacted]

[redacted] Once completely turned up, the provisioning orders would be submitted to support the generation of the Service Order Completion Notice (SOCN) to the Agency Designated Agency Representative and GSA.

***Management and Maintenance*:** Subsequent to the SOCN, the MNS NOC will closely monitor the network for fine tuning and modifications that might not have been detected within the previous network management framework. [redacted]

5.2.4 ICB CLIN Specific Agency Services

5.2.4.1 [redacted] CLIN 280290/280390 – Enterprise Reports Service Case Number 1

5.2.4.1.1 Enterprise Reporting Solution (ERS) - MRC

The reporting capabilities of the [redacted] contact center solution will be handled through Hosted ACD's historical, [redacted] via Enterprise Reporting solution, (ERS) applications. The [redacted] reporting requirement is to have comprehensive metrics on the performance of the call processing. The capture of "cradle to grave" information for each call is the ideal scenario; that is, the ability to capture and report on a call's activity from the time it is answered in the network until its termination in the IVR, call center or any other point in the call flow. With the combination of the call flow strategy design, and the base capabilities of the three mentioned Hosted ACD reporting applications, ERS will provide the required reporting capabilities.

5.2.4.1.2 Set up the following ERS service components - NRC

The ERS provides the following additions to the Qwest Hosted ACD reporting capabilities provided through [redacted]

[redacted]

[redacted] A report distribution mechanism, which allows reports to be accessed through a standard web browser, [redacted]

The ERS comprises two logically distinct subsystems:

***Collection & Database* Server (CDS):** The CDS provides an event capture and storage capability that supports the discrete, and in some cases aggregate, statistics that are required for the ERS reports. [redacted]

The CDS is made up of the following components:

- CDS database - The CDS database utilizes [redacted] to provide a repository for reporting information. In general, the database contains a primary table for each report type, [redacted] For reports that contain individual events, [redacted] the primary table contains an individual record for each collected event. [redacted]
  - The CDS database is administered through standard tools that are included with [redacted] The ERS software includes

dedicated purge and archive tools for the primary [redacted] tables.

- [redacted] The discrete database is fully defined including table and column names, data types, and descriptions.

[redacted]Database proxy The CDS database proxy provides a uniform interface to the database and protects it from potentially harmful requests, either intentional or unintentional. [redacted]

Report Delivery Server: The RDS provides the report distribution capability. It includes a web server that delivers reports on demand to web browsers running on [redacted] workstations. The RDS also includes a web application that obtains reporting data from the CDS database, and consolidates and formats the data for delivery to users' web browsers.

[redacted]Report Generator The Report Generator on the RDS is responsible for delivering formatted reports to users through a web browser interface. [redacted]

The Report Generator allows the user to select the required report type and prompts for additional parameters and options according to the report type. The Report Generator queries the appropriate CDS proxy for the

required information, formats the returned information, then returns a formatted report to the user's web browser. The formatted reports can be viewed on screen, saved on the user's PC, or sent to a printer.

- **Report admin server** In order to access the Report Generator, a user must be provisioned [redacted] in CME.
- **Web server** The browser interface provided by the Report Generator does not require any additional software to be installed on the user's PC.

Standard Report Types The available standard reports are:

[redacted]

The [redacted] Report identifies agent events that have occurred during the requested reporting period. This includes, but is not limited to, such events as agent login and logout, calls originated and received, and agent state transitions.

[redacted]

5.2.4.2 [redacted] CLIN 280290/280390 – WAS Hosting and Support Case Number 2

5.2.4.2.1 Hosted IVR Dedicated WAS Hosting Service - NRC

- The MRC customer pays for Hosted IVR "Dedicated WAS Hosting" includes:

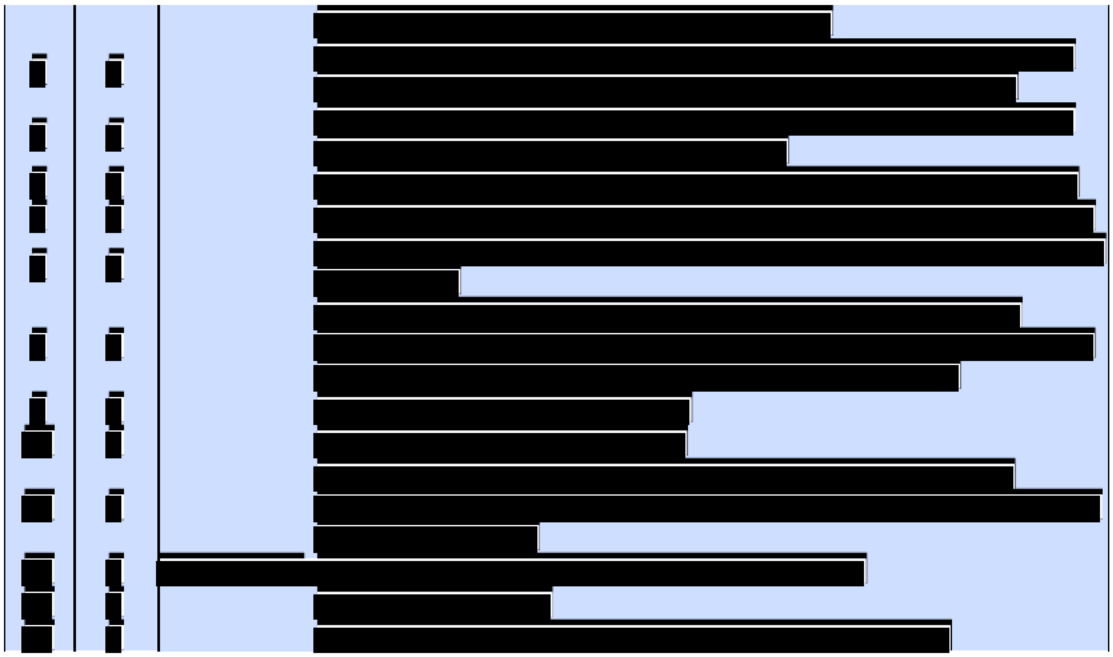
[redacted]

[redacted]

- Hosted IVR "Dedicated WAS Hosting" customers utilize shared hosting space, power, network, switching, firewall facilities.

5.2.4.2.2 Installation and set up of the WAS Server Configuration in the Qwest Cyber Centers - MRC

Ln #	Qty	Mfg Part #	Description
[redacted]			



5.2.4.3 ICB CLIN and Case Numbers

Table 5.2.4.3 Table of ICB CLIN and Case Numbers

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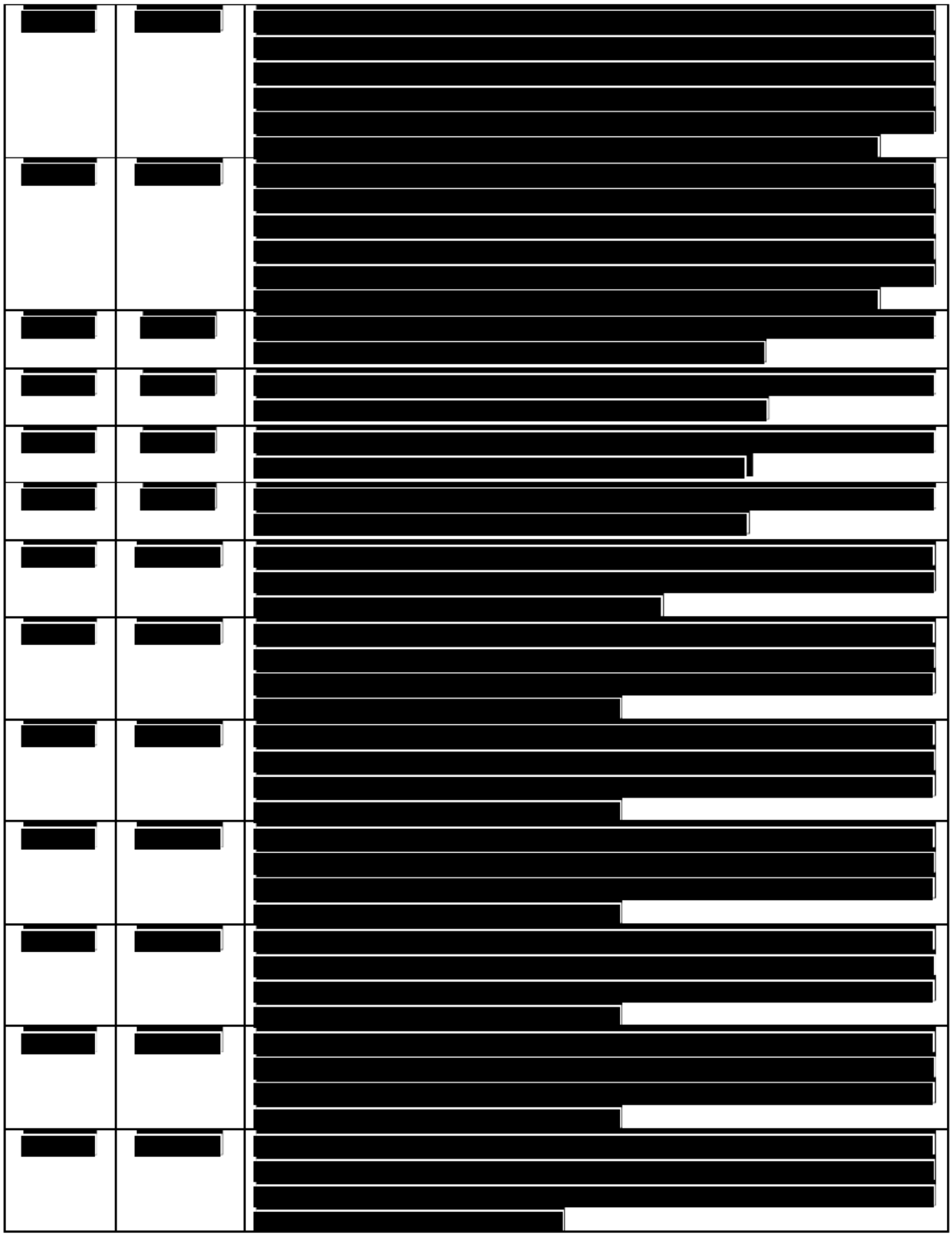

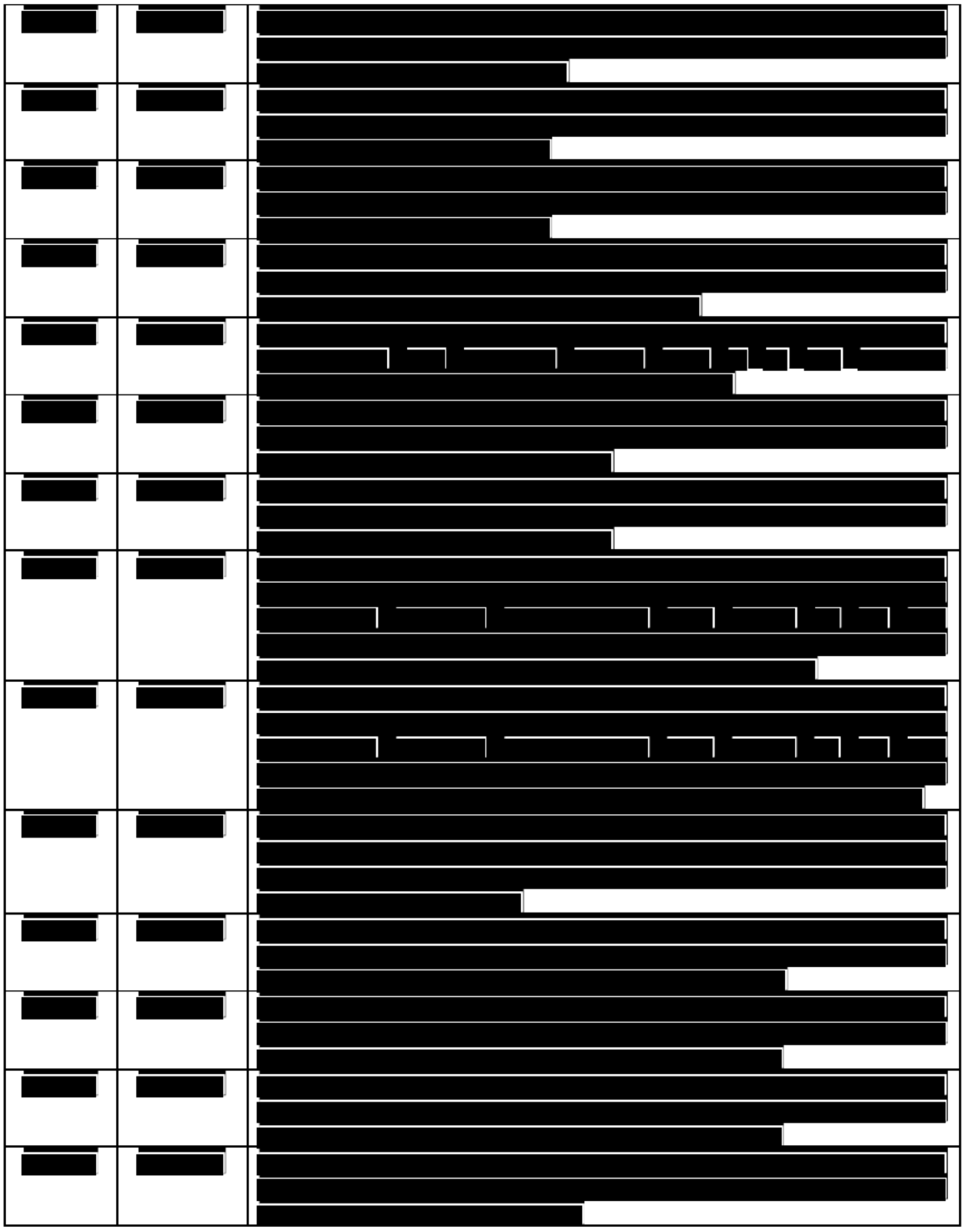

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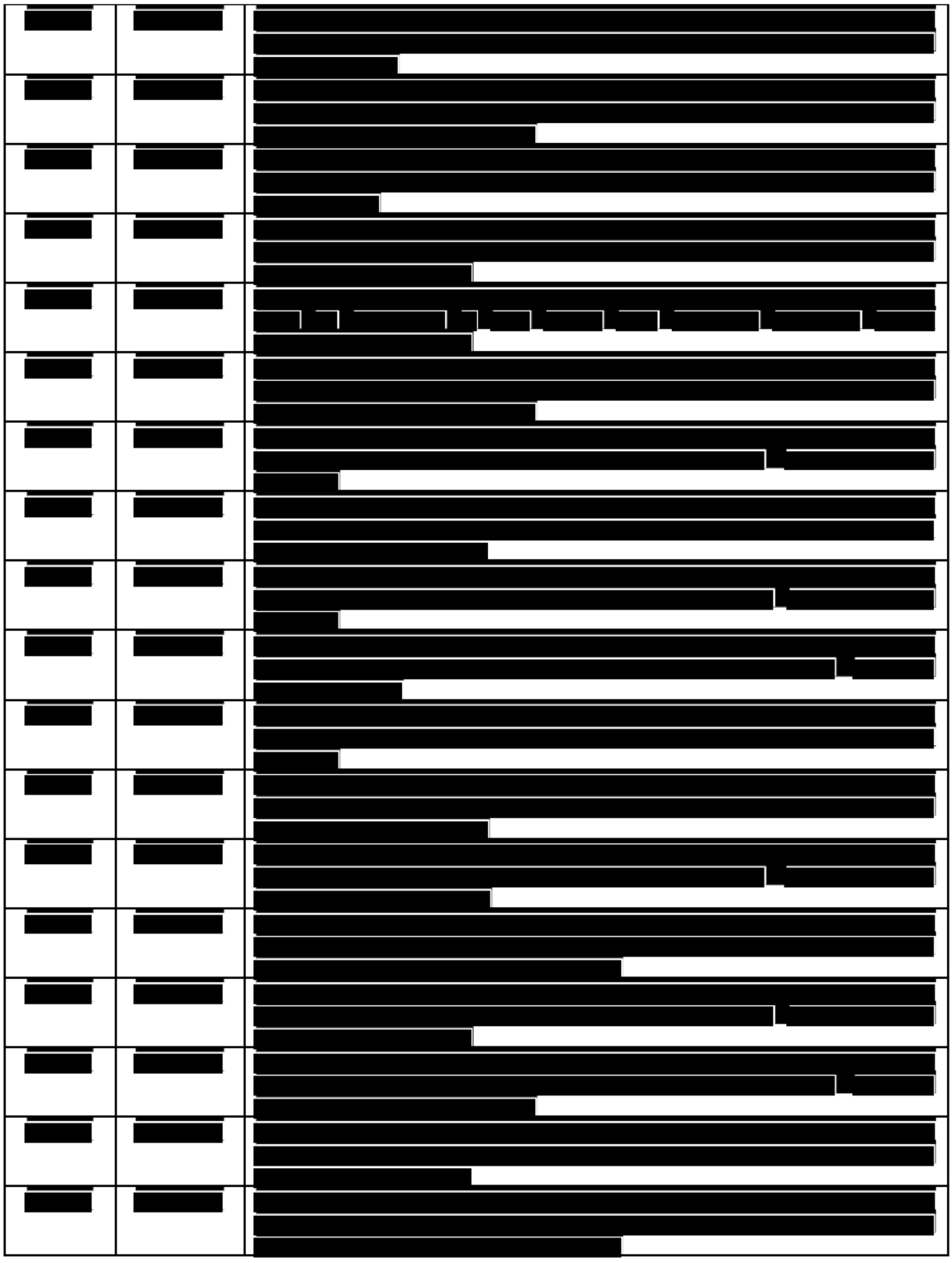

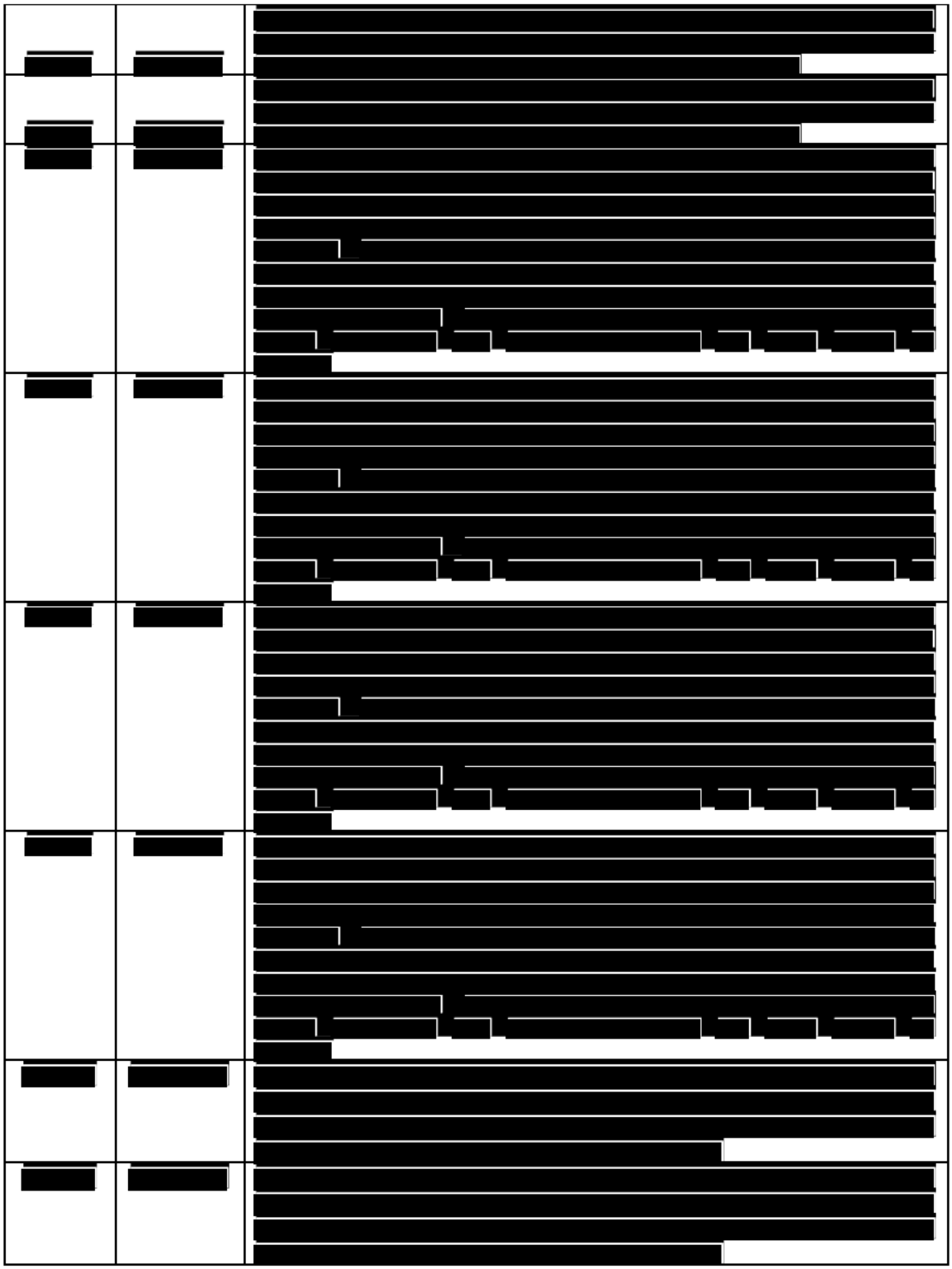

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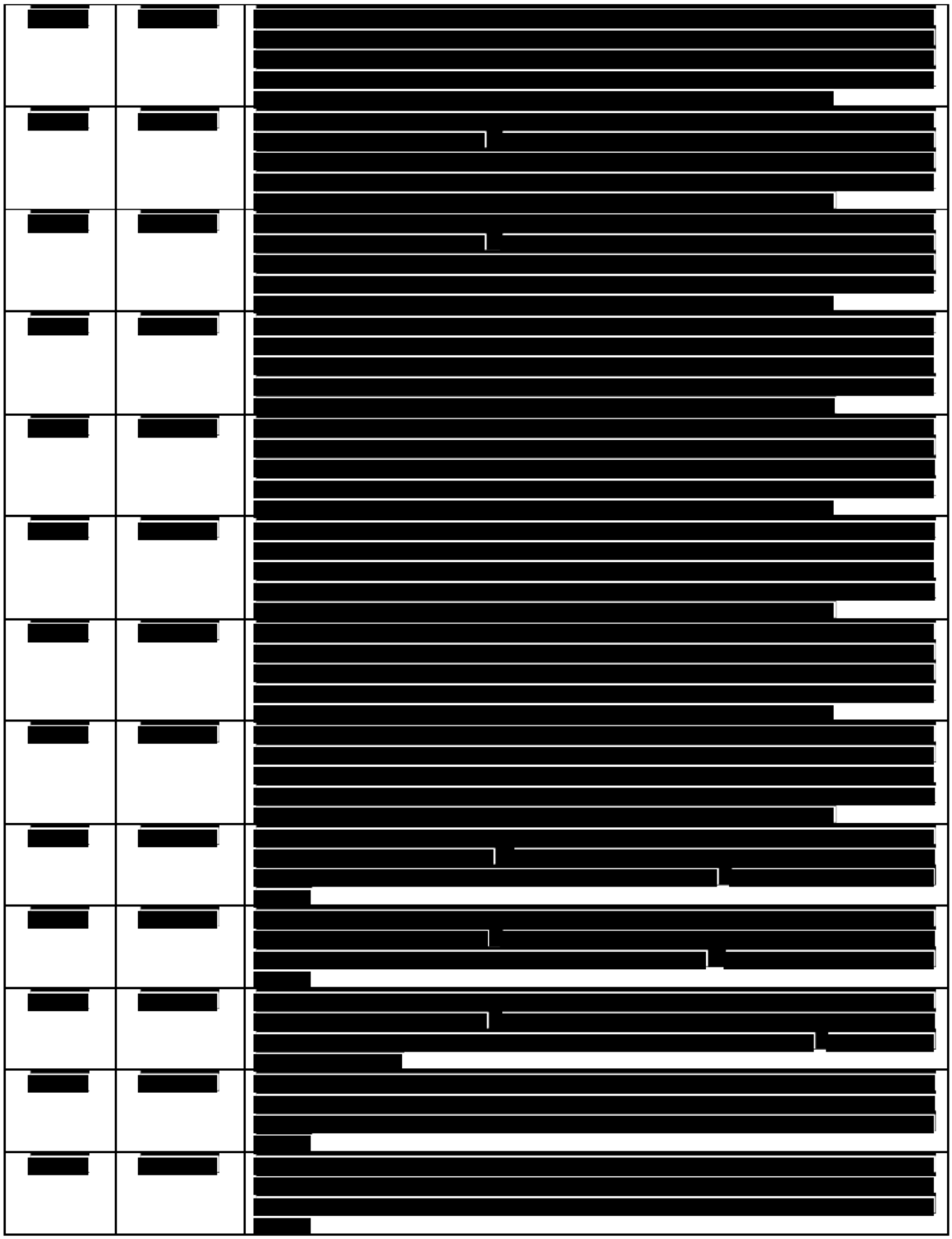

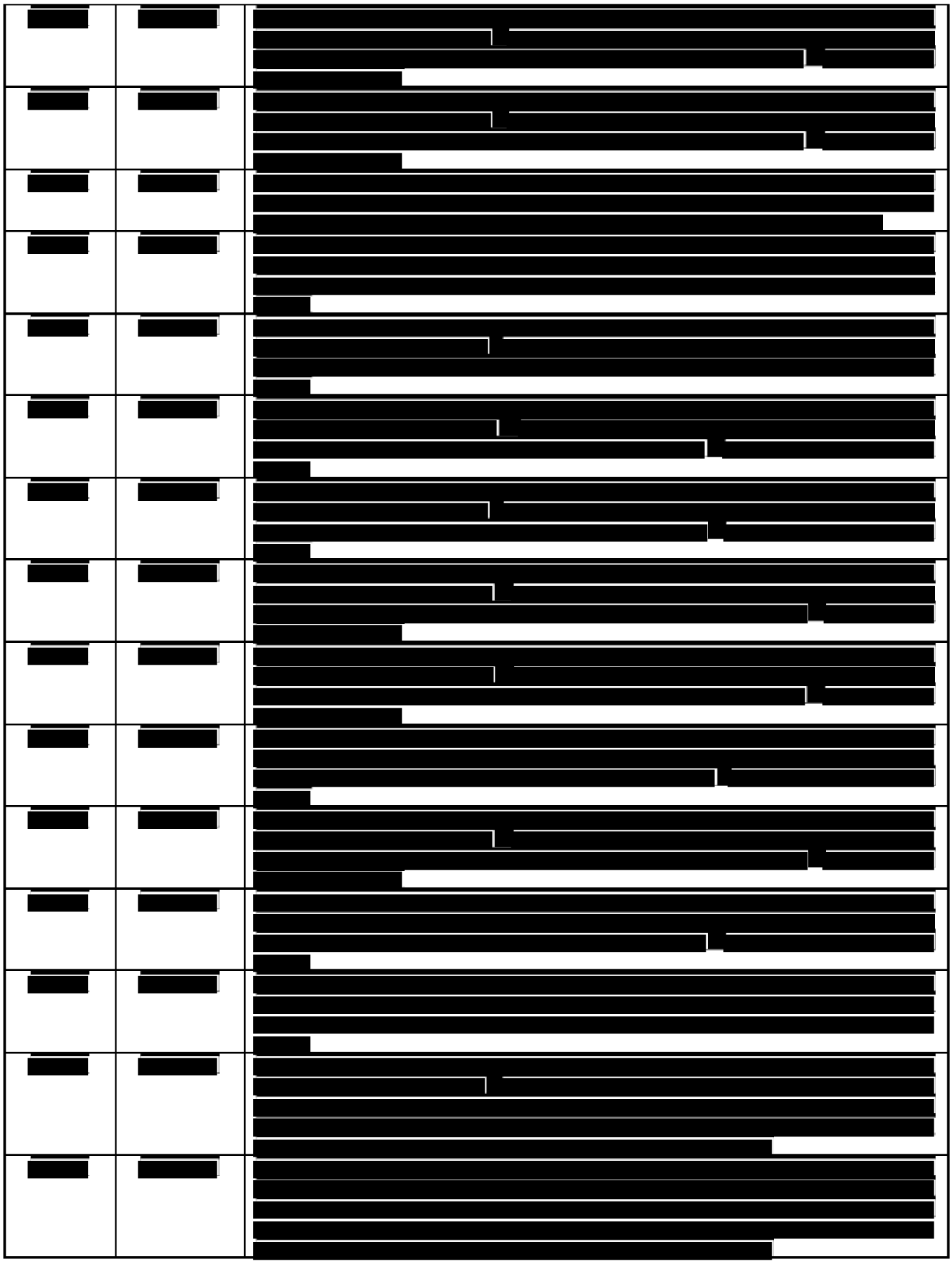

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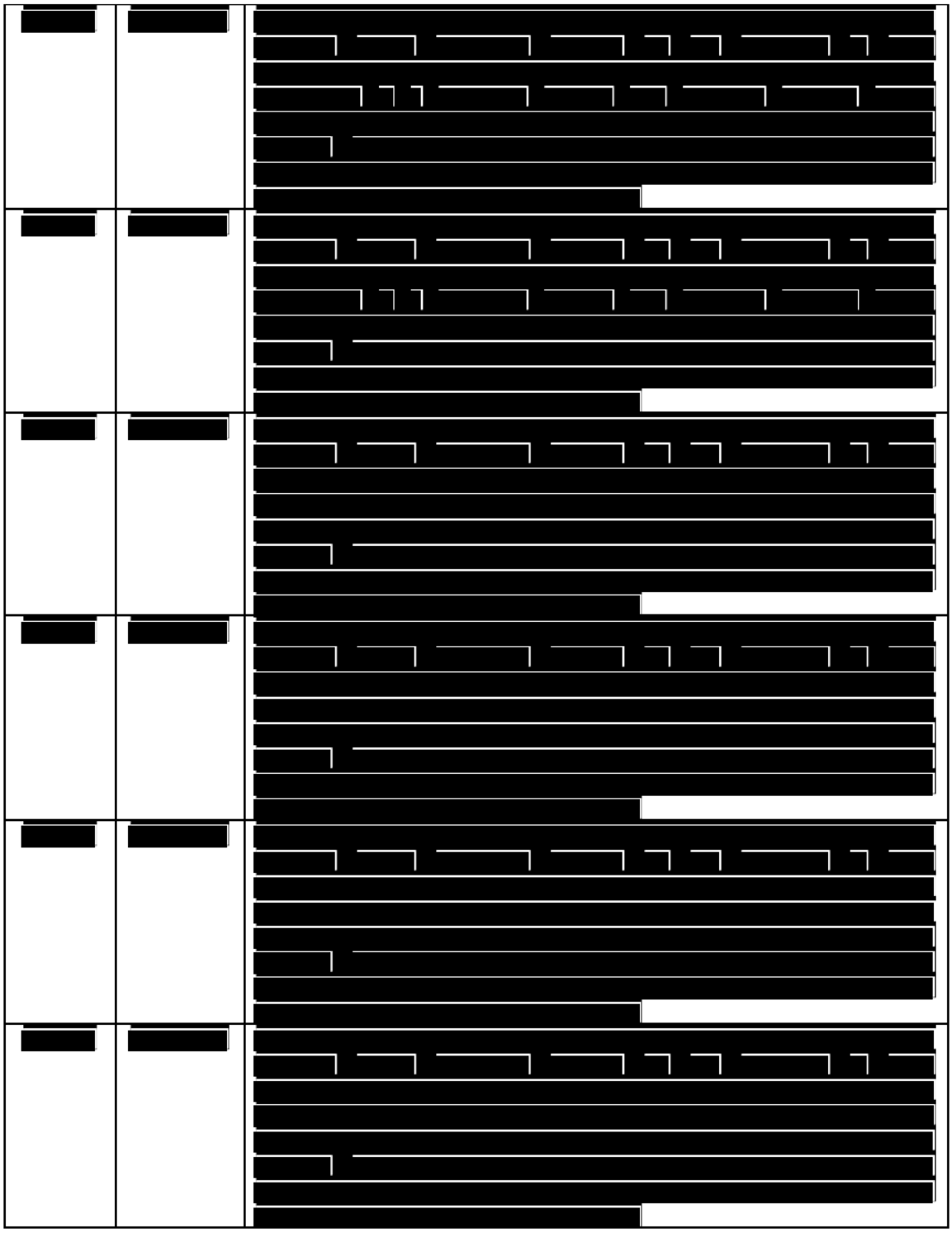

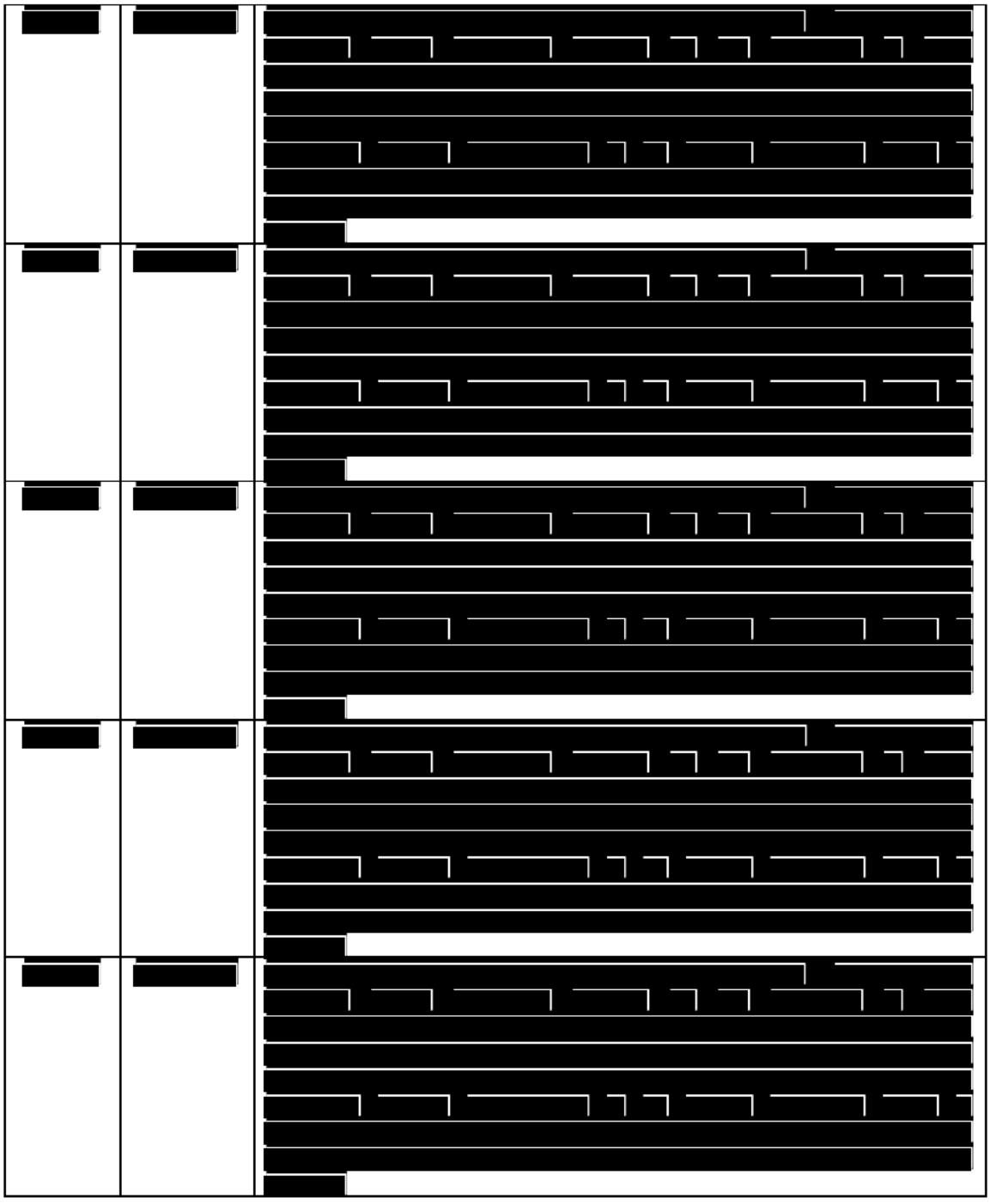

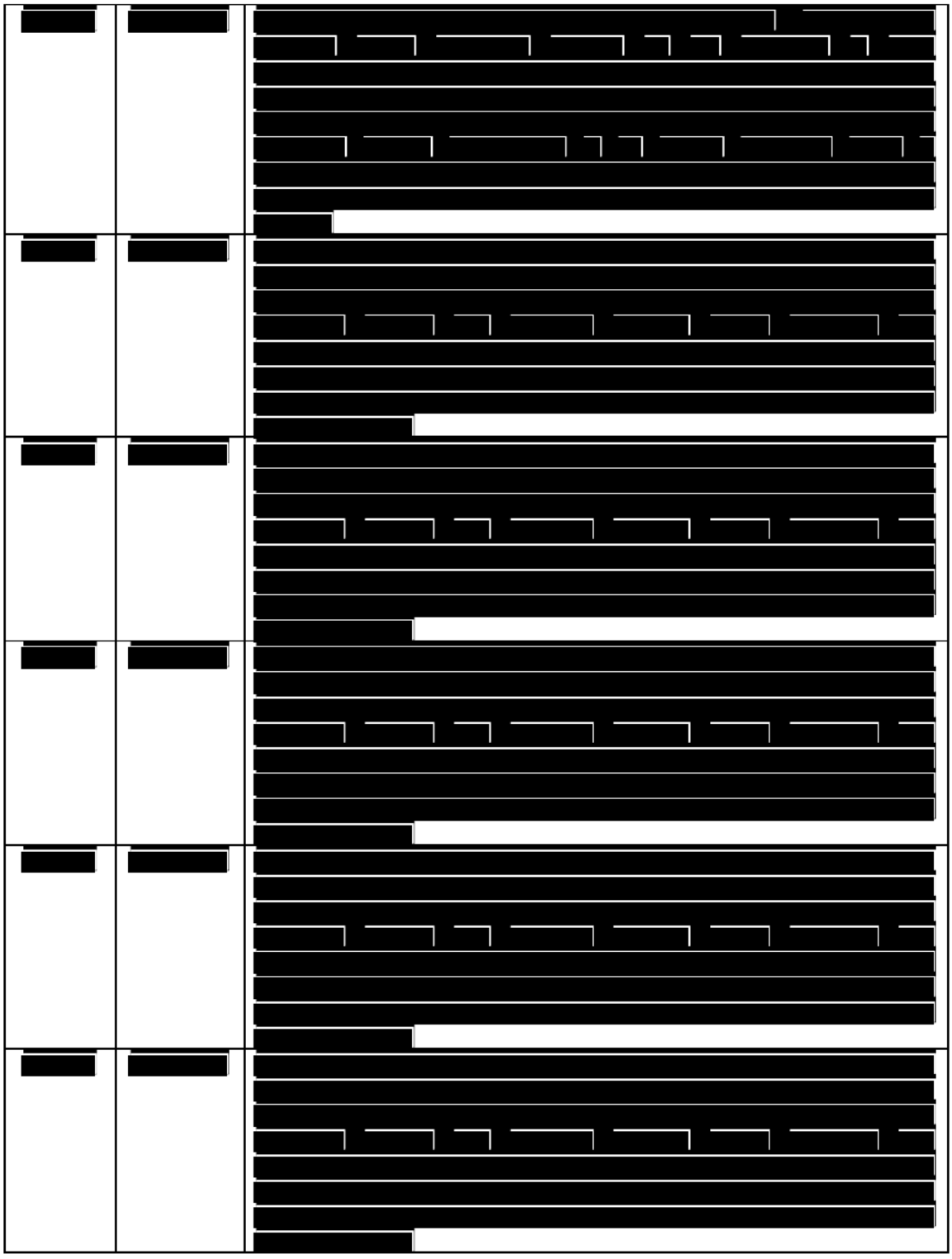

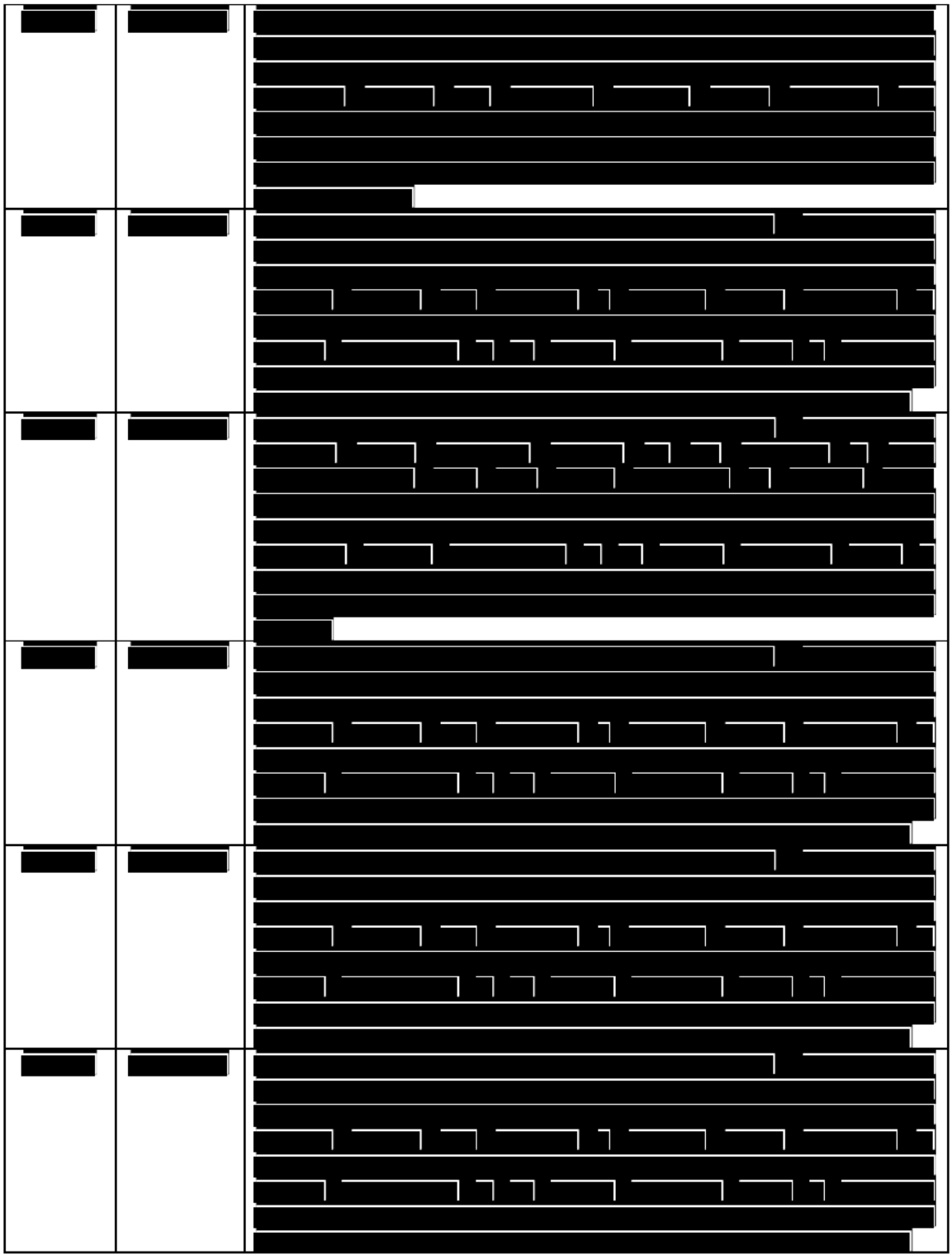

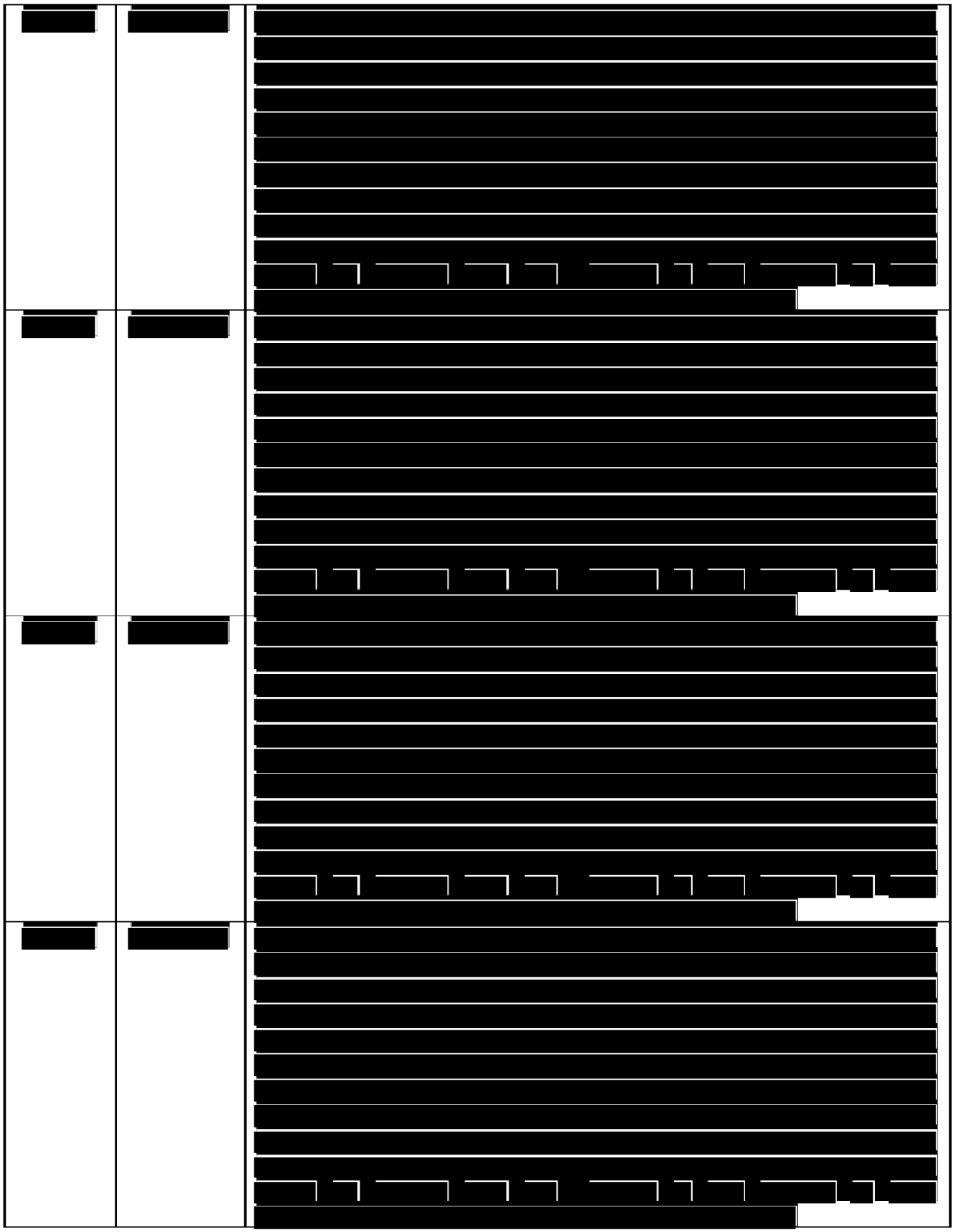

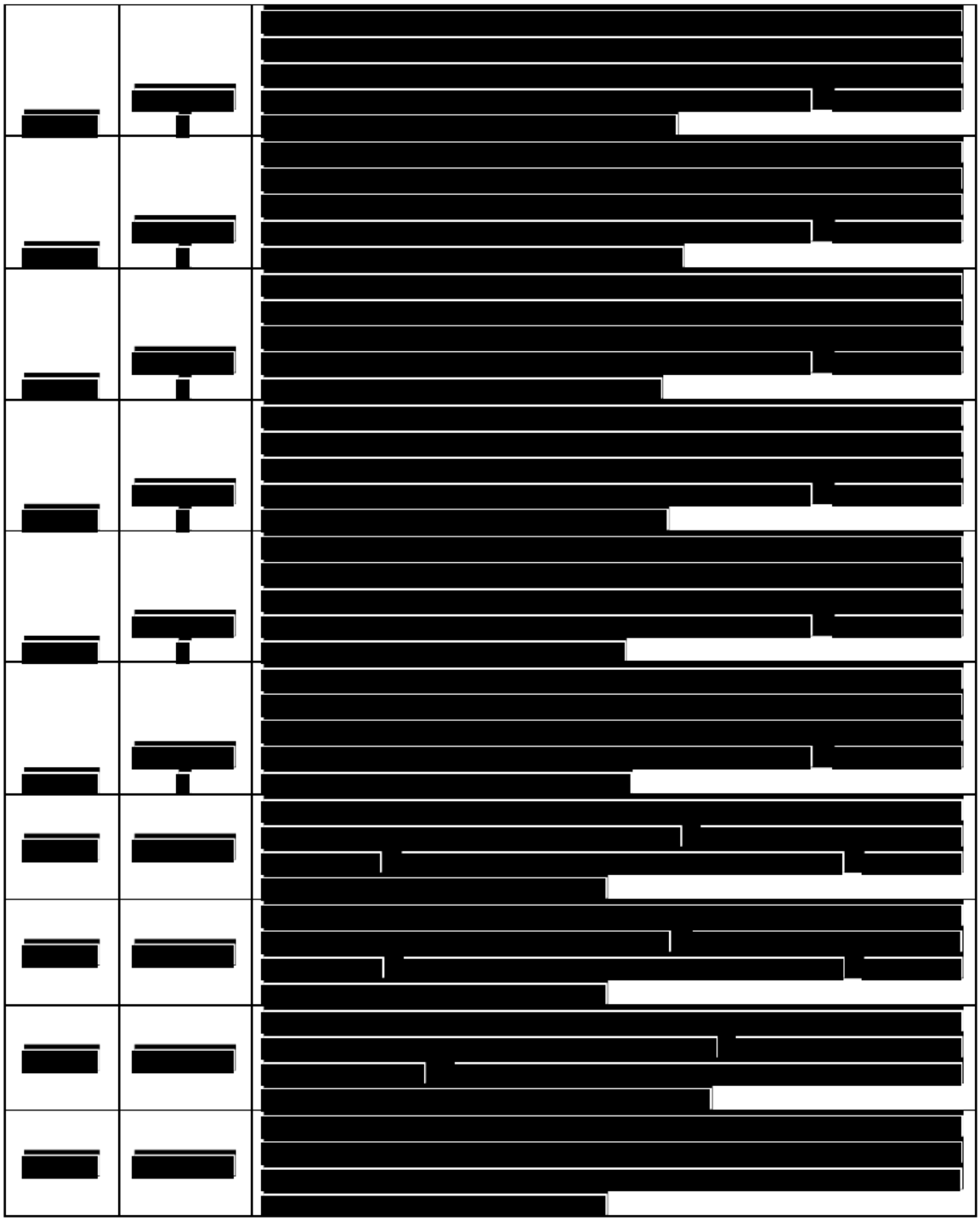

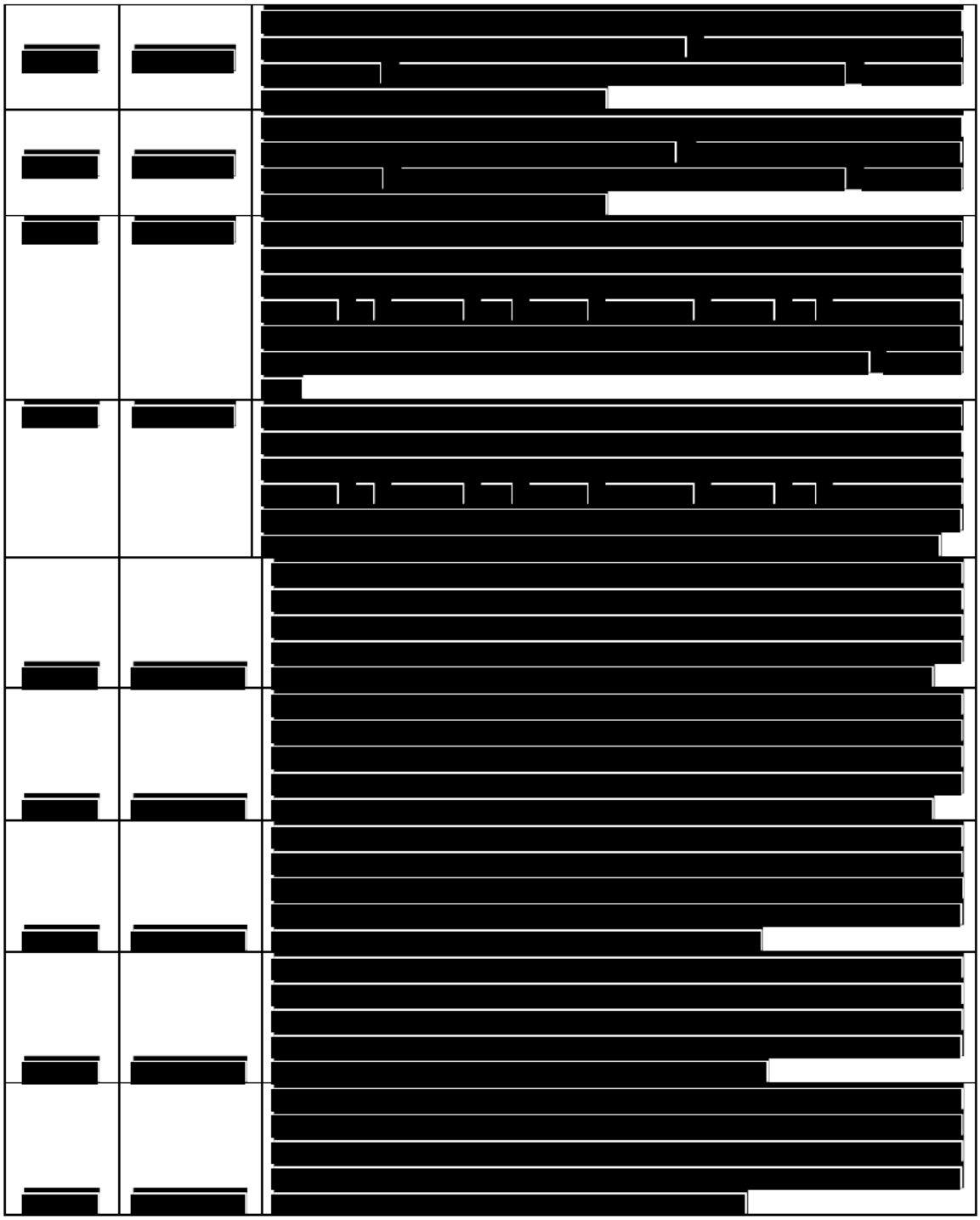

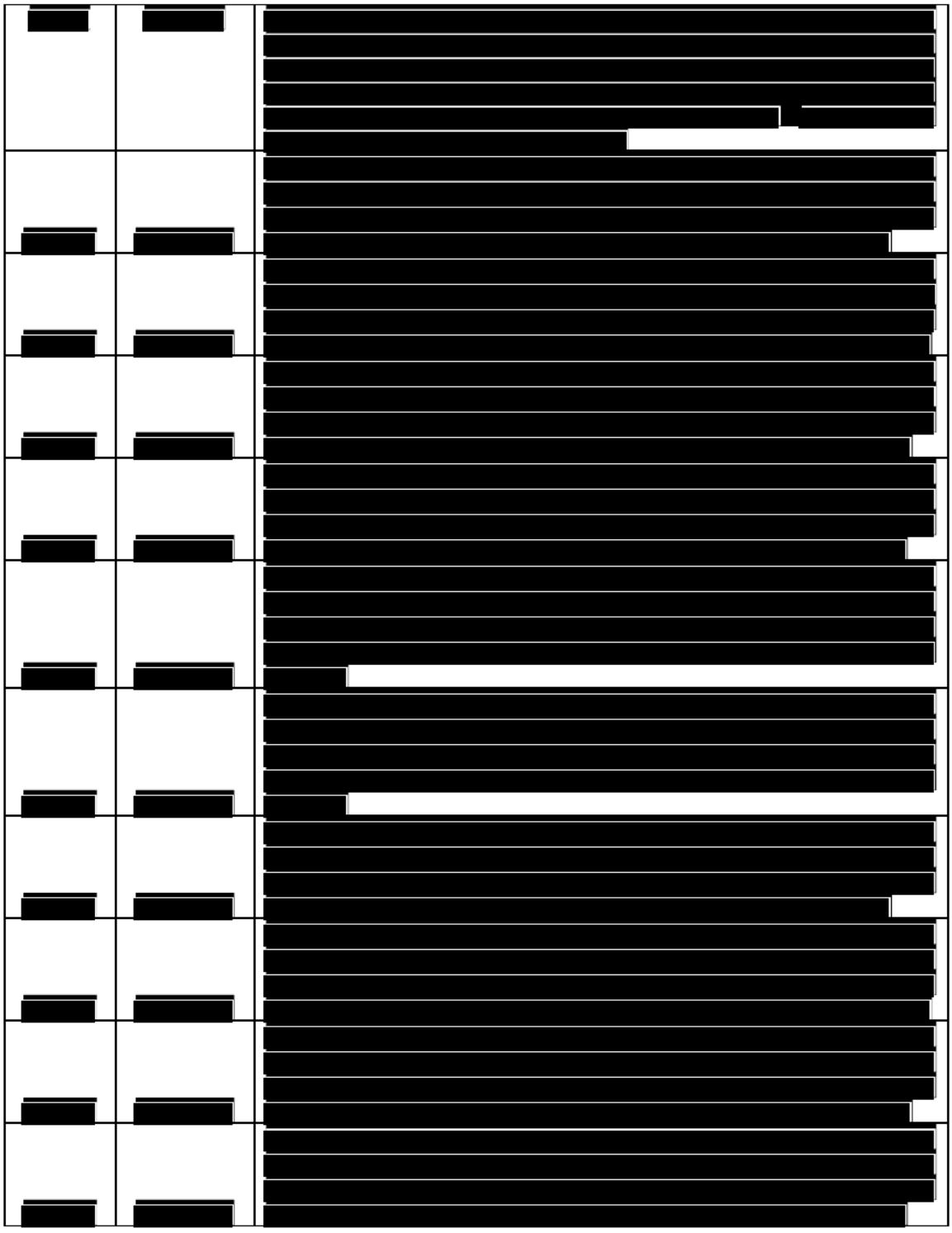

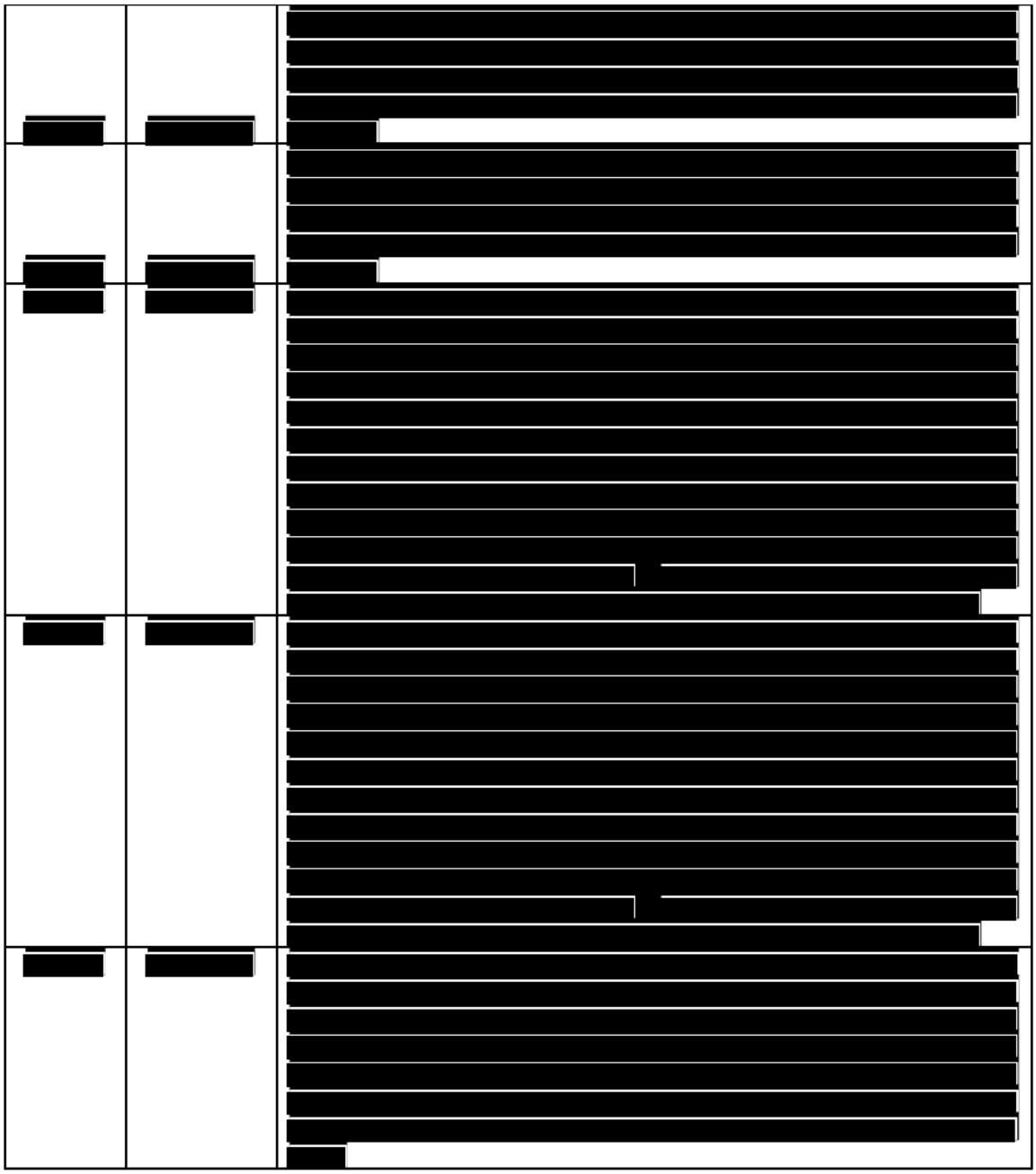

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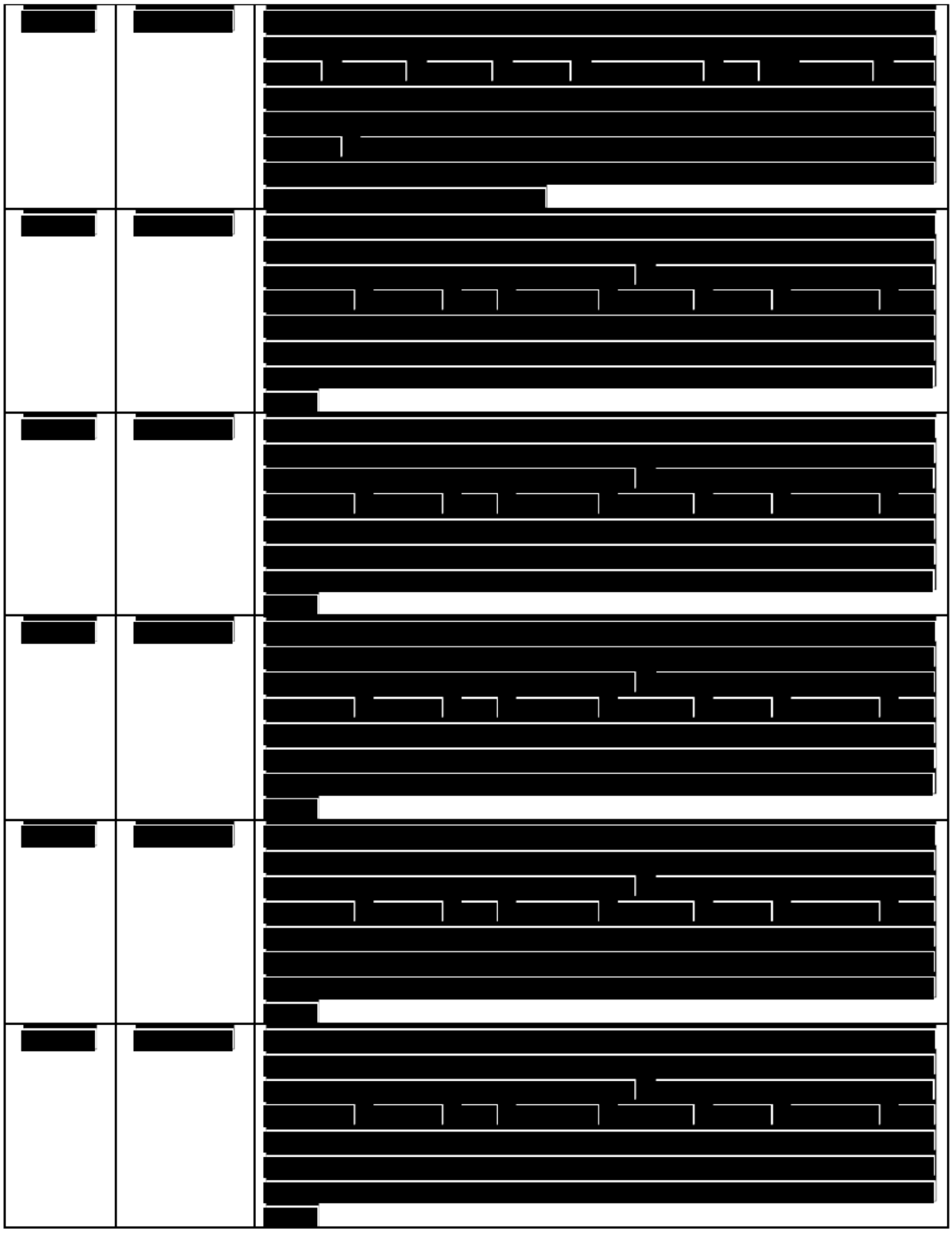

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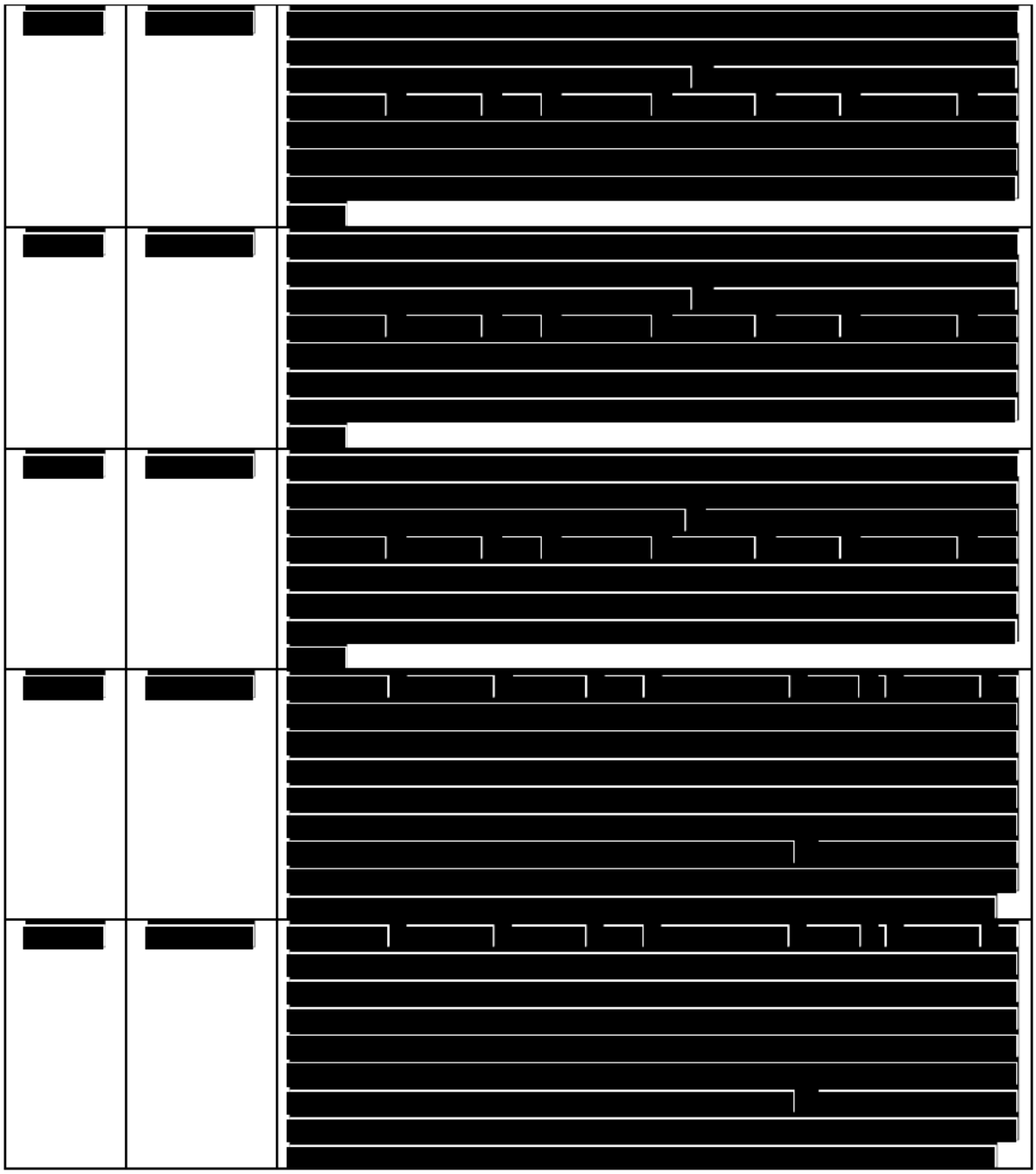

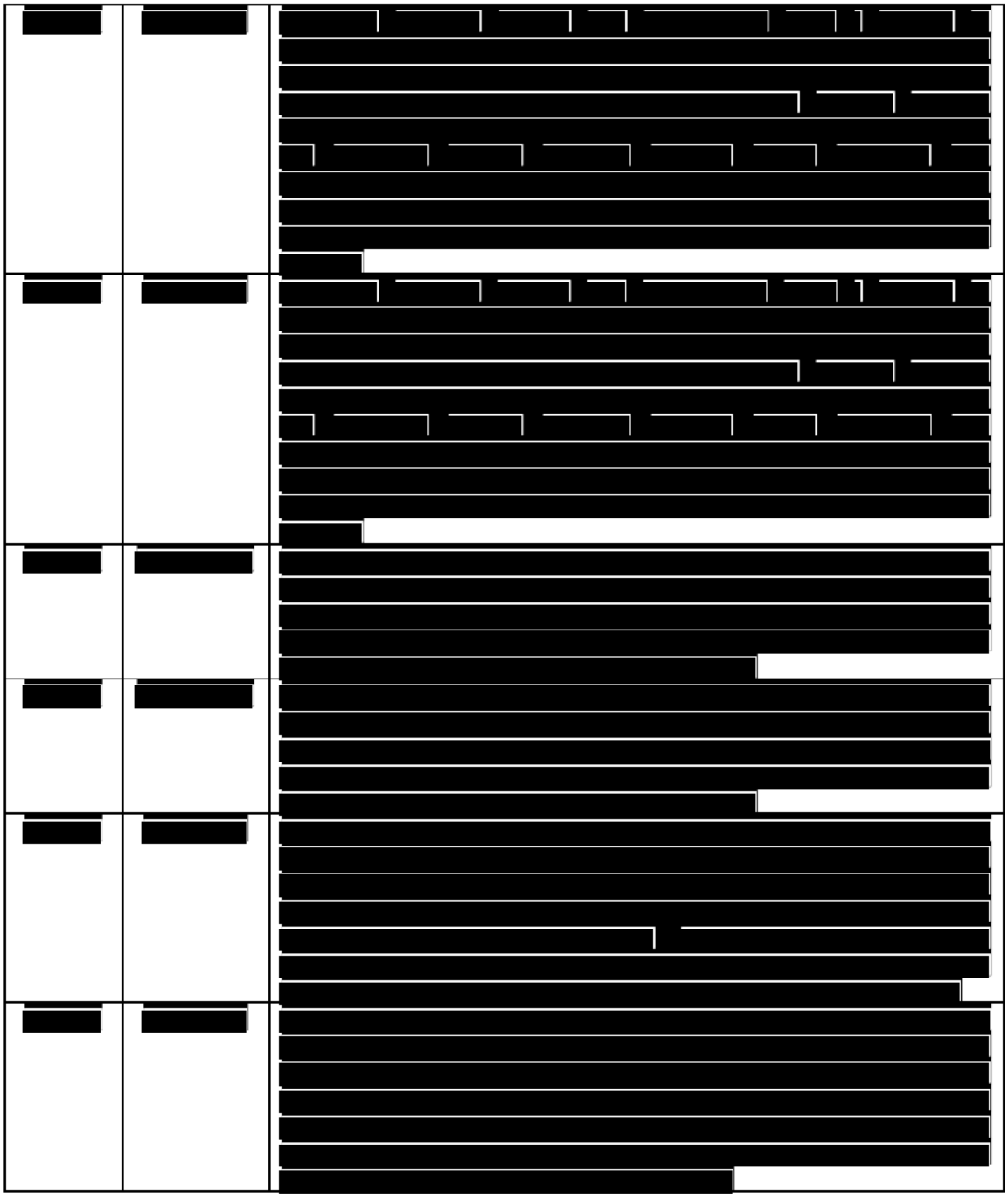

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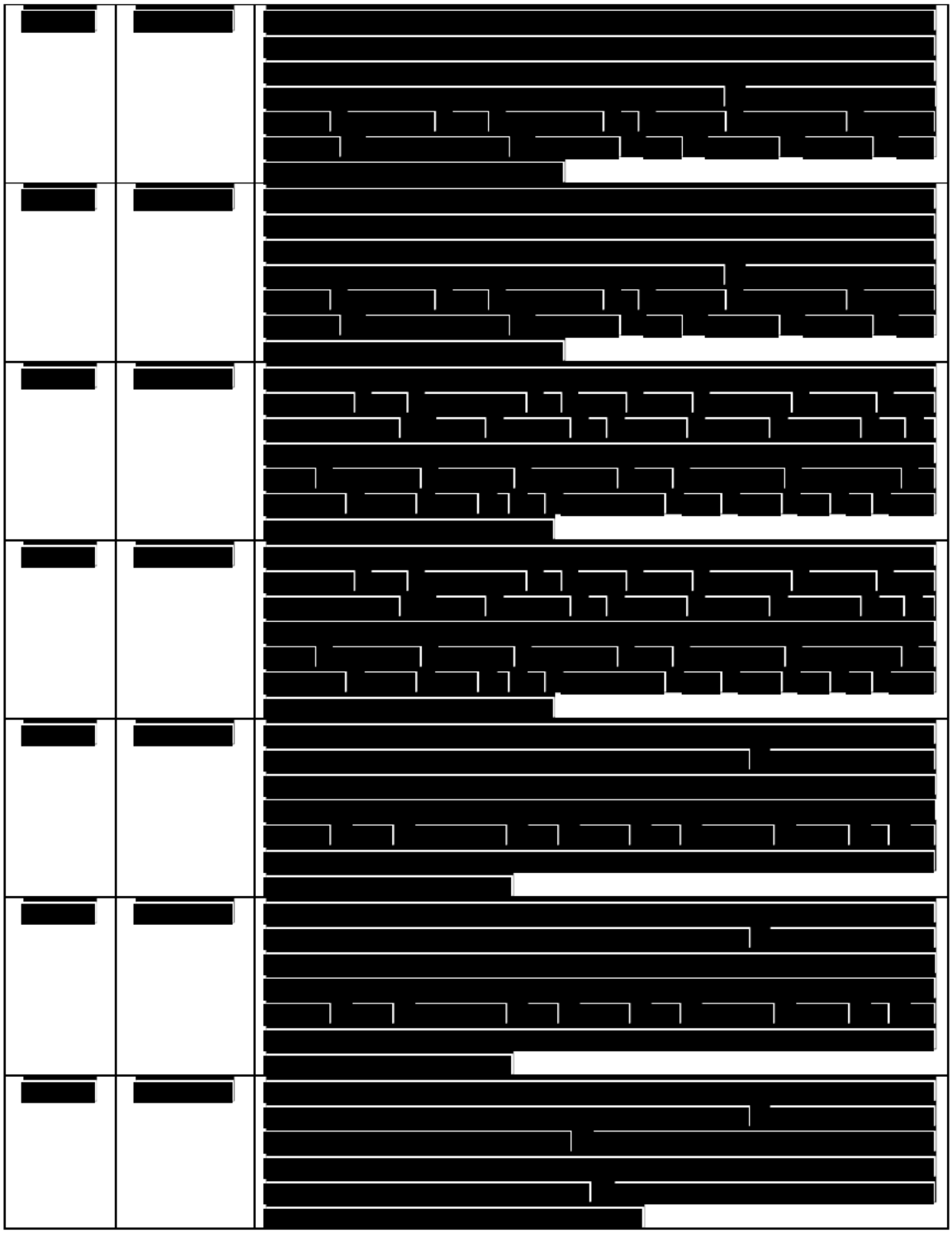

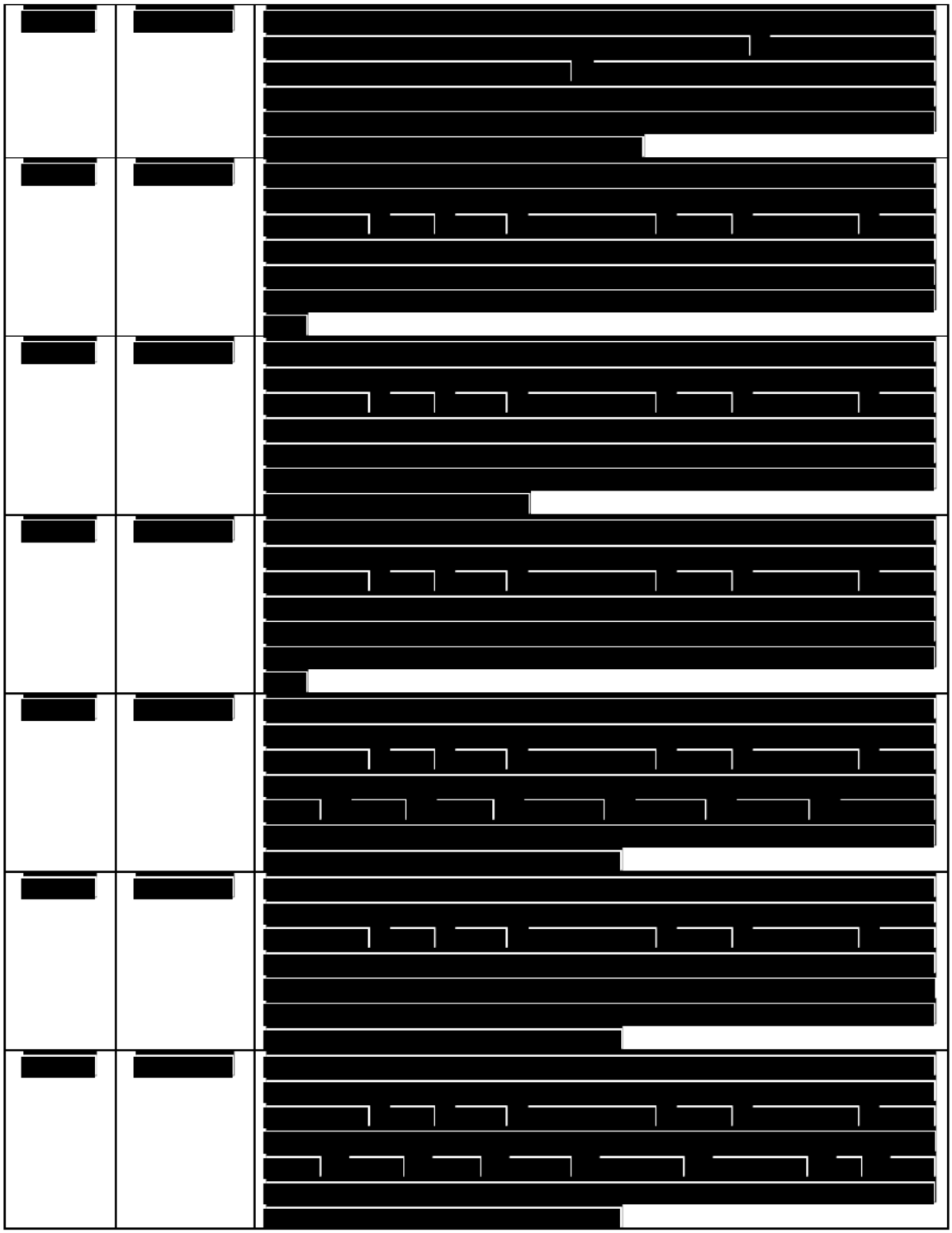

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5.2.4.4 Veterans Administration (VA) CLINs 280090/280190 - Nationwide Teleconferencing System (VANTS) [redacted]

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required audio conferencing functionality for the VA.

5.2.4.4.2 Veterans Administration (VA) - Nationwide Teleconferencing System (VANTS) PIV Cards (MNS) CLINs 280290 / 280390 Case Number 22536401

The VA VANTS requires the existing Web Portal server of the VANTS Avaya Meeting Exchange (MX) to be reconfigured to allow for subscriber and password validation to occur on the MX Conference Reservation Server (CRS) rather than how it is currently configured to validate via LDAP to the VA's GAL. The agency wide deployment of PIV cards for IT system security has rendered the LDAP method of user validation obsolete and prevents users from scheduling their own conference calls, which requires the VANTS operators to perform this function.

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5.2.4.5 Veterans Administration (VA) Office of Resolution Management (ORM) CLINs 280090/280190 - Nationwide Teleconferencing System

[redacted]

5.2.4.6 Department of Homeland Security (DHS) Office of Inspector General (OIG) CLINs 280290/280390 [redacted]

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5.2.4.7 Veterans Administration (VA) - Agency-Specific Network Operations Center (NOC)

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5.2.4.7.1 Veterans Administration (VA) - Agency-Specific Network Operations Center (NOC) CLIN 289003 [redacted]

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5.2.4.7.2 Veterans Administration (VA) - Agency-Specific Network Operations Center (NOC) CLIN 289003 [redacted]

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5.2.4.8 Managed Network Design and Engineering Services (MNS) – Veteran Affairs (VA) Office of Resolution Management (ORM) Call Monitoring Solution MRC CLIN 280101 [redacted]

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5.2.4.9 Veterans Administration (VA) CLINs 280290/280390 - Nationwide

[redacted]

5.2.4.10 Maryland Procurement Office (MPO) - Remotely Programmable

[redacted]

5.2.4.10.1 MPO ROADM – Connectionless Network: Agency specific

[redacted]

5.2.4.10.2 MPO ROADM – Government Furnished Property Maintenance;

[redacted]

5.2.4.10.3 MPO ROADM – Agency-Specific Network Operations Center

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5.2.4.11 Maryland Procurement Office (MPO) – Big Path Maintenance

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5.2.4.11.1 MPO Big Path Maintenance – Connectionless Network:

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5.2.4.11.2 MPO Big Path Maintenance – Connectionless Network:

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5.2.4.11.3 MPO Big Path Maintenance – Agency-Specific Network

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5.2.4.11.4 MPO Big Path Maintenance – Connectionless Network:

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5.2.4.11.5 MPO Big Path Maintenance – Connectionless Network:

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5.2.4.11.6 MPO Big Path Maintenance – Connectionless Network:

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5.2.4.11.7 MPO Big Path (BP) Maintenance Spares - Connectionless

[redacted]

5.2.4.11.8 MPO Big Path (BP) Maintenance - Connectionless Network:

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5.2.4.11.9 MPO Big Path (BP) Columbia Annex Expansion -

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5.2.4.11.10 MPO Custom Ethernet Solution (MNS) – Connection Oriented Network: Agency specific interfaces, software, and equipment to meet MPO EWAVE requirements; [redacted]

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5.2.4.11.11 MPO Big Path (BP) FANX Fiber Replacement (MNS) -

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5.2.4.11.12 MPO 2016 Fiber Maintenance (MNS) – Connectionless Network: Agency specific interfaces, software, and equipment to meet MPO solution requirements – NRC CLIN 280290 and MRC CLIN 280390 – Case Number 21899101

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5.2.4.12 Department of Homeland Security (DHS) Federal Air Marshals

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5.2.4.13 Managed Network Services (MNS) - Agency-Specific Network

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5.2.4.14 National Capital Planning Commission (NCPC) CLINs CLINs

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5.2.4.13.2 National Capital Planning Commission (NCPC) CLINs 280001/

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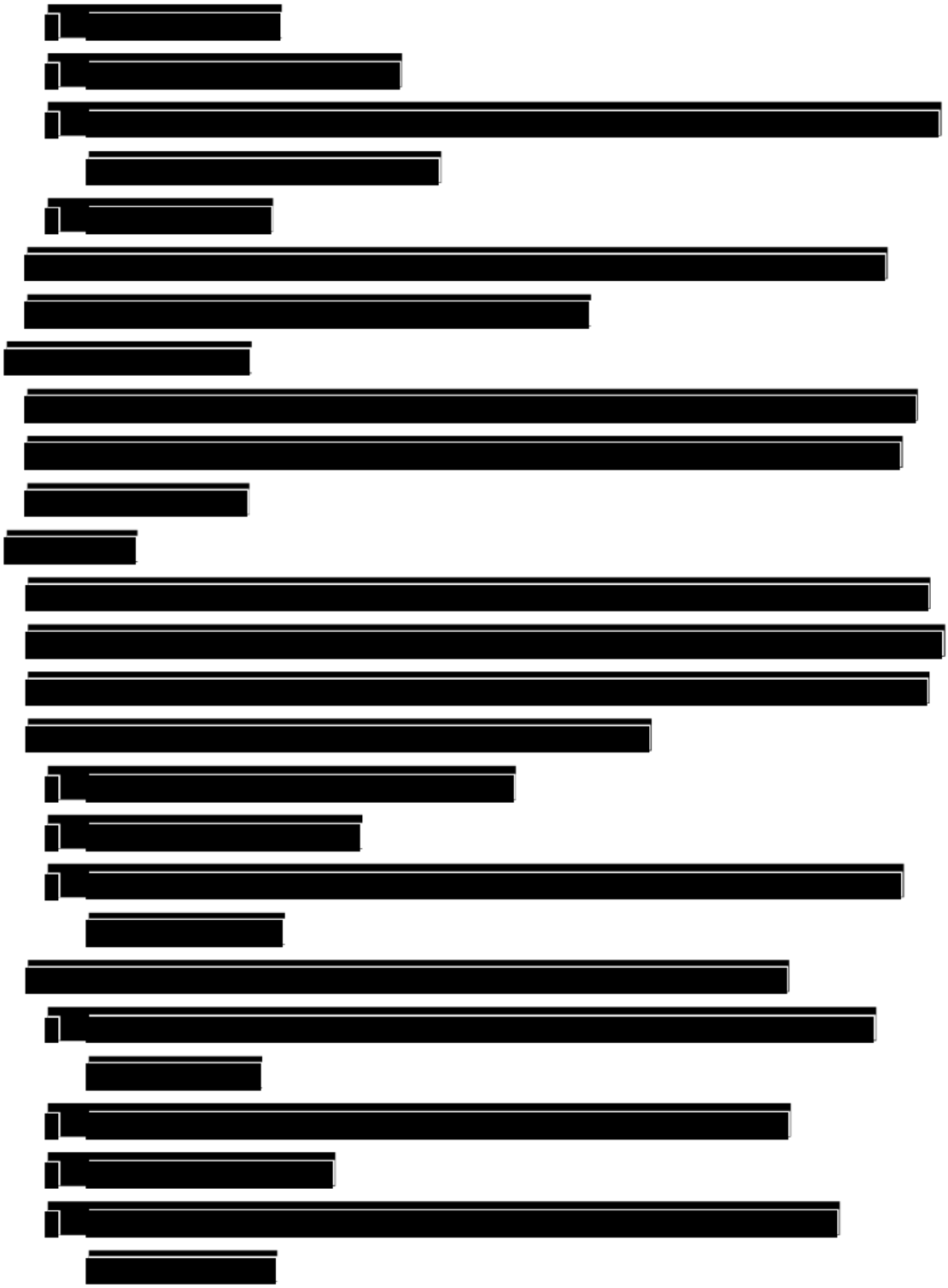

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5.2.4.13.3 National Capital Planning Commission (NCPC) CLINs 280001/

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5.2.4.14 Veterans Administration (VA) Office of Resolution Management

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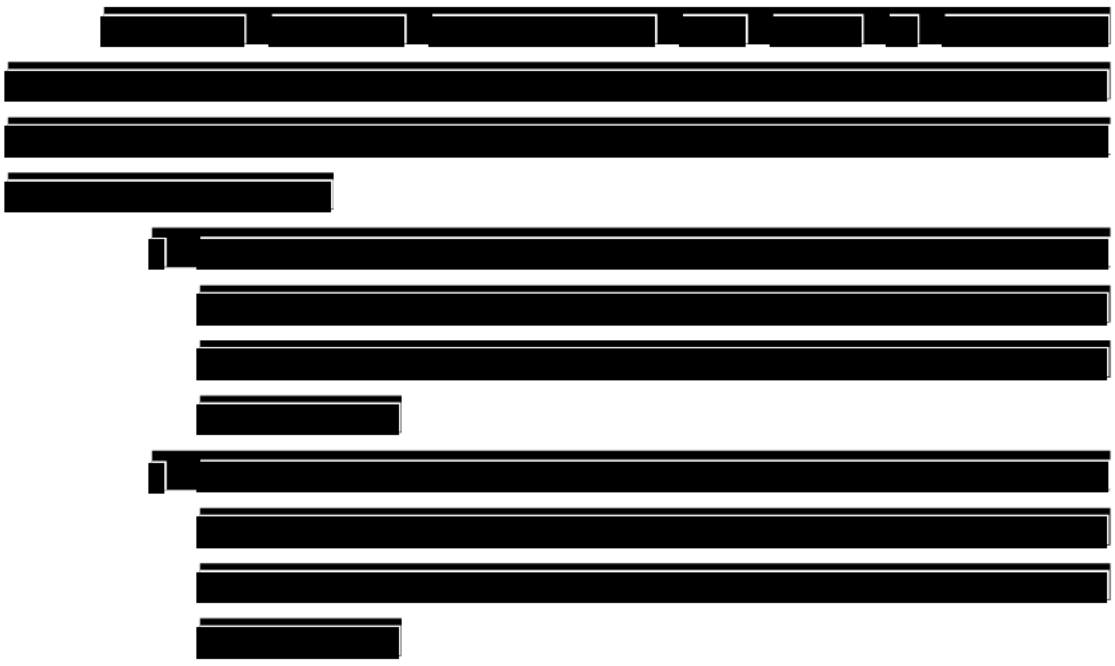

5.2.4.15 Veterans Administration (VA) Office of Resolution Management

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5.2.4.16 Occupational Safety and Health Review Commission (OSHRC)

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5.2.4.17 Social Security Administration Network (SSANet) Managed

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5.2.4.18 Social Security Administration Network (SSANet) Managed

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5.2.4.19 Social Security Administration Network (SSANet) Managed

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5.2.4.24 Social Security Administration Network (SSANet) Managed

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5.2.4.24.1 Social Security Administration Network (SSANet) Managed

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5.2.4.25 Veteran Affairs Nationwide Teleconferencing System (VANTS)

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5.2.4.25.1 Veteran Affairs Nationwide Teleconferencing System (VANTS)

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5.2.4.26 Veteran Affairs Nationwide Teleconferencing System (VANTS)

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5.2.4.26.1 Veteran Affairs Nationwide Teleconferencing System (VANTS)

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5.2.4.26.3 Veteran Affairs Nationwide Teleconferencing System (VANTS)

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5.2.4.29 Social Security Administration Network (SSANet) Managed

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5.2.4.27 Department of Veteran Affairs (Veterans Integrated Services

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5.2.4.29.1 Social Security Administration Network (SSANet) Managed

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5.2.4.29.3 Social Security Administration Network (SSANet) Managed

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5.2.4.29.4 Social Security Administration Network (SSANet) Managed

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5.2.4.29.5 Social Security Administration Network (SSANet) Managed Network Services (MNS) – Agency specific interfaces, software, and equipment to meet SOW requirements; NRC CLIN 280290 and MRC CLIN 280390 – Case Number 19217201

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5.2.4.30 Managed Network Services (MNS) – Managed Hosted VoIP NRC

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5.2.4.31 Managed Network Services (MNS) – IQ SIP Trunking NRC CLIN

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5.2.4.32 Managed Network Services (MNS) – Hosted VoIP and IQ SIP

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5.2.4.33 DISA Managed Network Services (MNS) - Agency-Specific

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5.2.4.34 Managed Network Services (MNS) DISA Wounded Warrior

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5.2.4.35 Managed Network Services (MNS) Agency-Specific

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CLIN 280290/280390, Case Number 219691001, NRC/MRC LAN Port Event Management and Monitoring MES

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5.2.4.36 Managed Network Services (MNS) Agency-Specific

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5.2.4.37 Managed Network Services (MNS) - Managed Network Design and Engineering MRC - CenturyLink's Networx DDoS Mitigation Service for an Agency at any CONUS location. CLINs 280001 and 280101. Case Numbers 22243001 - 22243010

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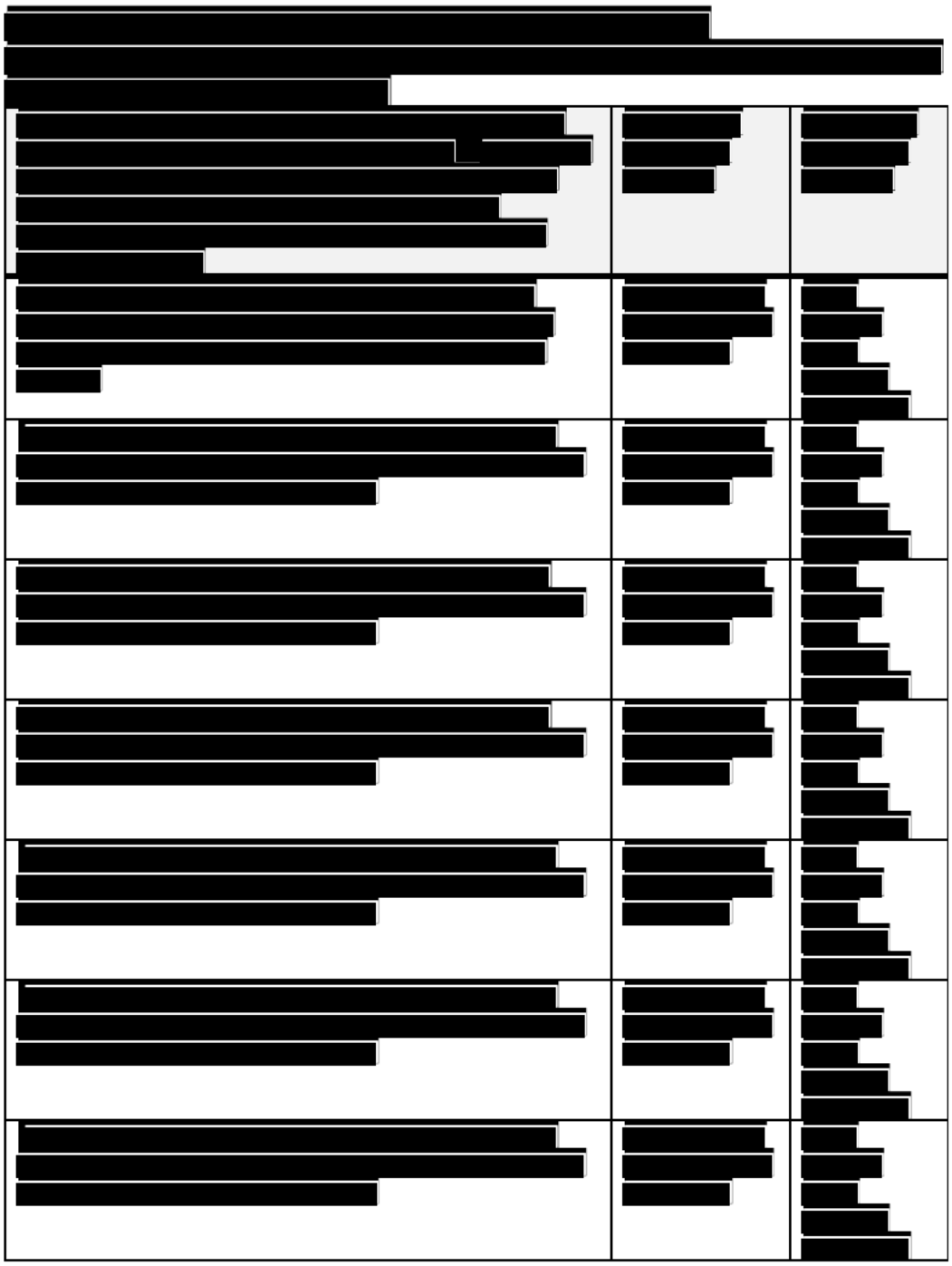
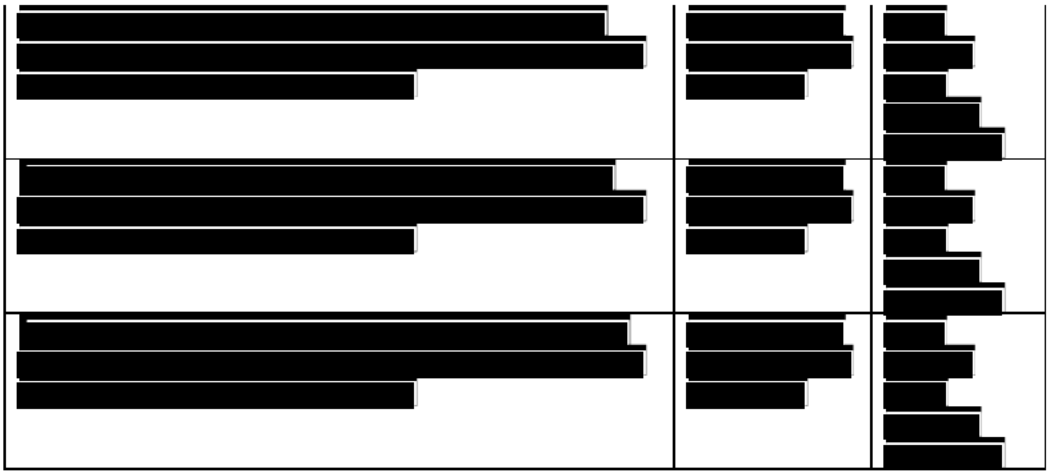
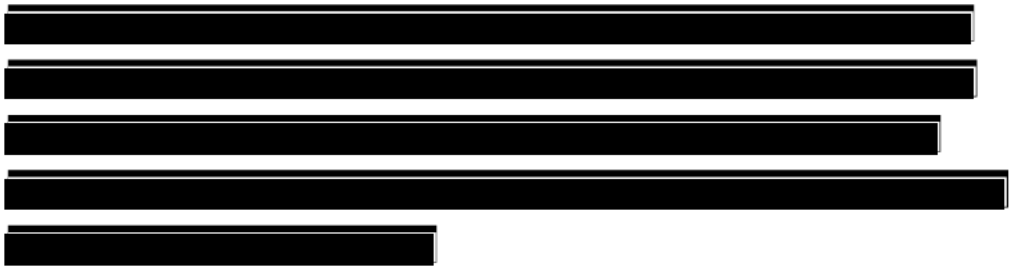




5.2.4.38 OPM Custom Ethernet Solution (MNS) – Connection Oriented Network: Agency specific interfaces, software, and equipment to meet OPM requirements; NRC CLIN 280090 and MRC CLIN 280190 – Case Number 22650001



The Office of Personnel Management (OPM) has requested a transport service that will incorporate the following functionality:

- Enables Layer 2 Ethernet Point-to-Point (Pt-to-Pt) network transport with dedicated bandwidth in granular steps from 5 to 1000Mbps
- Emulate a traditional Ethernet private line service while using physical Gigabit Ethernet interfaces to terminate Ethernet Pt-to-Pt service at the OPM specified Service Delivery Points (SDPs)

- Implemented onto a GigE port at the Provider Edge (PE) equipment and rate limited at the port to 800Mbps per OPM's specific bandwidth requirements
- The Ethernet transport service will be implemented with a Class of Service (CoS) of "Low" to enable the convergence of real time and non-real time applications on the same circuit path
- Management includes access arrangement and transport service upto, but not including, the customer GFE at the A and Z locations

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