

Puerto Rico Bridge Initiative Attachment B – Proposed Middle Mile Service Offerings

PRBI will provide services for both broadband service providers/ISPs, as well as Community Anchor Institutions, Critical Community facilities and those which serve vulnerable populations. The Puerto Rico Bridge Initiative's initial service listing and pricing are provided on the table in the following page.

These services will be reviewed periodically by the Steering Committee, who may recommend the inclusion of additional services, or modification of fees in special situations. The Steering Committee is also responsible for the establishment of an incentive program, which may include discounts off the fees, for the furthering of the goals of the Recovery Act. The Steering Committee will refer to the Broadband Map of Puerto Rico and the State Broadband Plan in their incentive plan development.

The services PRBI will provide are:

Bridge Ocean Transit for Broadband Providers (MPLS), this service provides (a) an MPLS loop to the NAP of the Americas where it can connect to backbone providers, and (b) a connection to the peering fabric of the bridge. All broadband providers are required to provide a 25% discount off their broadband services fees to all Critical Anchor Institutions. Providers may also seek additional discounts via the Steering Committee by proposing projects that will benefit unserved communities, Community Anchor Institutions, critical community facilities and vulnerable populations. Broadband providers also must:

- Fully peer its networks with the peering fabric.
- use the transit bandwidth primarily for broadband service traffic
- Adhere to the principles contained in the FCC's Broadband Policy Statement (FCC 05-151 adopted Aug. 5, 2005).
- Ensure neutral traffic routing, and not favor any lawful Internet applications or content over others.
- Display its network management policies in a prominent location on their web page and provide notice to customers of changes to their policies.
- Describe any business practices or technical mechanism they employ other than standard best efforts Internet delivery to allocate capacity; differentiate among applications, providers, or sources; limit usage; and manage or block access to illegal or harmful content.
- Use the State Broadband Map to extend Broadband coverage to unserved areas of Puerto Rico.

Bridge Ocean Transit for Public and Non-Critical Anchor Institutions. PRBI, in concert with the Steering Committee, will assign priorities of the use of the transit capacity and peering bandwidth by public institutions. This service will be provided to government agencies that seek to provide content for Puerto Rico residents, and have bandwidth requirements that will be used to serve primarily Community Anchor Institutions, Critical Community facilities and to vulnerable populations of Puerto Rico.

Bridge Ocean Transit for Community Anchor Institutions, Critical Community facilities and those serving the vulnerable populations. PRBI, in concert with the Steering Committee, will assign priorities of the use of the transit capacity and peering bandwidth by private institutions that serve primarily Community Anchor Institutions, Critical Community facilities and vulnerable population of Puerto Rico.

Bridge Peering in Puerto Rico only, PRBI, in concert with the Steering Committee, will allow selected access to peering for private and public organizations which provide content for Puerto Rico residents which is determined to serve Puerto Rico vulnerable populations, provides education, health or public safety, or which otherwise is determined to further the Recovery Act goals.

Wireless Intra-Island Transit to Critical Hub Datacenter via Virtual Spans, The PRBI Ocean and Peering services are provided via the Critical Hub Data Center in San Juan. The Wireless Intra-Island Transit will allow those providers, institutions, or agencies access to these services via a wireless connection.

Puerto Rico Bridge Initiative

Attachment B – Proposed Middle Mile Service Offerings

Service Offering	Distance Band or Point to Point	Minimum Peak Load Network Bandwidth	Monthly Pricing (\$)	Other
Bridge Ocean Transit for Broadband Providers (MPLS)				
	Point to Point, w/ M-Peering			Service to be provided to culcively to Broadband provider to offer broadband services primarily. Bandwidth is 0% guaranteed.
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
Bridge Ocean Transit for Public and non-Critical Anchor Institutions				
	Point to Point, w/ M-Peering			Services to be provided to government that are also Non Critical Anchor Institutions. I.e.. Treasury, Ports Auth., Gov. Banks, etc. Will be over sold at a rate of 5 to 1. To be provided to organizations that have been approved by the Steering Committee & Bridge Management
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
	Point to Point, w/ M-Peering			
Bridge Ocean Transit for Community Anchor Institutions, Critical community facilities and those serving the vulnerable populations				
	Point to Point			Service to this institutions and organizations will be over sold at a rate of 5 to 1. To be provided to organizations that have been approved by the Steering Committee & Bridge Management
	Point to Point			
	Point to Point			
	Point to Point			
	Point to Point			
	Point to Point			
	Point to Point			
	Point to Point			
	Point to Point			
	Point to Point			
Bridge Peering in Puerto Rico only				
	Local-Peering			To be provided to organizations that have been approved by the Steering Committee & Bridge Management
	Local-Peering			
Wireless Intralands Transit to Critical Hub Datacenter via Virtual Spans				
	Point to Point, Wireless			This service is instrumental for ISP located in remote areas, to be able to reach hi levels of bandwidths. Allowing all ISP reach large hubs of bandwidth a fraction of the costs.
	Point to Point, Wireless			
	Point to Point, Wireless			
	Point to Point, Wireless			

*M.P.L.N.B.C = Minimum Peak Load Network Bandwidth Capacity

Puerto Rico Bridge Initiative

ATTACHMENT C – COMPETITOR TABLE – MIDDLE MILE

Service Areas: Island of Puerto Rico, Vieques & Culebra							
Middle Mile Services Provider	Tech Platform	Service Tier	P-t-P	Min Peak Load Network Bandwidth Capacity	Price per month (\$)	Local Loop Include	Other Comments
<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 5px;">Service Areas: Island of Puerto Rico, Vieques & Culebra</div> <div style="border: 1px solid black; width: 40px; height: 40px; background-color: black; margin-right: 10px;"></div> </div>	Copper/ Fiber Hybrid	10Mb Enet	Yes	10Mb	10,000	Yes	
	Copper/ Fiber Hybrid	DS3	Yes	45Mb	N/A	Yes	
	Fiber	STM1	Yes	155Mb	N/A	Yes	
	Fiber	STM4	Yes	620Mb	N/A	Yes	

Puerto Rico Bridge Initiative

Middle Mile Services Provider	Tech Platform	Service Tier	P-t-P	Load Network Bandwidth Capacity	Price per month (\$)	Local Loop Include	Other Comments
<div style="writing-mode: vertical-rl; transform: rotate(180deg);">Service Areas: Island of Puerto Rico, Vieques & Culebra</div> <div style="background-color: black; width: 50px; height: 20px; margin: 0 auto;"></div>	Fiber	STM1 Protected 5year	Yes			No	
	Fiber	STM1 5 year	Yes			No	
	Fiber	STM4 Protected 5 year	Yes			No	
	Fiber	STM4 5 year	Yes			No	
<div style="background-color: black; width: 50px; height: 20px; margin: 0 auto;"></div>	Copper	100Mb	Yes		N/A	No	
	Fiber	500Mb	Yes		N/A	No	
	Fiber	700Mb	Yes		N/A	No	
	Fiber	1000 Mb	Yes		N/A	No	

Puerto Rico Bridge Initiative

Middle Mile Services Provider	Tech Platform	Service Tier	P-t-P	Load Network Bandwidth Capacity	Price per month (\$)	Local Loop Include	Other Comments
Service Areas: Island of Puerto Rico, Vieques & Culebra [Redacted]	Coax	DS3 Protected	Yes	[Redacted]	[Redacted]	No	[Redacted]
	Fiber	STM-1 Protected	Yes	[Redacted]	[Redacted]	No	
	Fiber	STM-4 Protected	Yes	[Redacted]	[Redacted]	No	
	Fiber	STM-12 Protected	Yes	[Redacted]	[Redacted]	No	

Puerto Rico Bridge Initiative

ATTACHMENT C – COMPETITOR TABLE – MIDDLE MILE

The implementation of the PRBI will allow Critical Hub to offer transit services to all local ISPs at significant lower cost (██████████), regardless of how much bandwidth they buy, compared to the costs charged by all middle mile operators today between Puerto Rico and the Mainland. PRBI will be providing Ocean Transit from Puerto Rico to the ██████████. In the tables above there is a list of providers that currently offer similar service to what PRBI will offer in Puerto Rico. The PRBI will allow broadband providers to connect their networks to networks at the ██████████, the closest and largest Internet hub to Puerto Rico. By providing this transit service we are helping all local broadband providers to lower their bandwidth cost which now stand between ██████ and ██████████. Today, there are two main alternatives for bandwidth between Puerto Rico and the mainland: one is satellite service; the other service via submarine fiber optic cables. Costs associated with satellite service are very high, and the performance and limited types of content that can be delivered effectively via satellite makes this option inappropriate for broadband traffic. Fiber optic cables that cross the Atlantic Ocean and Caribbean Sea provide a much more reliable service. Today we find in operation the following cables (continued on next page):

Puerto Rico Bridge Initiative



Question 27 Affordability

The following pages show 5 quotations from 2 different vendors of submarine cable backhaul services from Florida to Puerto Rico. [REDACTED] provided four separate quotations. [REDACTED] provided one quote with prices for [REDACTED] with local loop included. Below is a summary:

Type of circuit	Bandwidth provided	Monthly Recurring Charge	Local Loop Puerto Rico	Local Loop Florida	Cross Connect	Price per Meg
TELEFONICA DE EMPRESAS						
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
COLUMBUS NETWORK						
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
PUERTO RICO BRIDGE INITIATIVE, if funded						
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

**Prices in ITALICS are estimated*

As showed on this table, if the Puerto Rico Bridge Initiative was funded, ISP customers would be able to purchase backhaul transit at very affordable rates. PRBI services would be fully protected and redundant, unlike linear circuit (as quoted) which typically encounter service interruptions a few times each year. Service interruption durations range from several minutes to several days.

In regards to the Puerto Rico Local Loop costs, there is a noticeable difference between the pricing offered by PRBI and the other two vendors. This is due to the fact that the submarine cable systems only sell framed services, such as [REDACTED], etc. These services required framed local loops, which are priced based on distance between the backhaul provider site and the ISP site. The PRBI services will be Ethernet based. Therefore, ISPs will be able to acquire Ethernet backhaul services, which are not distance sensitive. We used pricing from Centennial for this comparison. [REDACTED] providers, all with similar pricing structures.

Price Quotation



Telefonica Empresas de Puerto Rico
"Turning Customers into Fans"

Commercial Contact:

[Redacted]

Engineering Contact:

[Redacted]

TO 

DATE

July 29, 2009

Address	Qty	Description	Price / Unit	NRC	MRC
[Redacted]	1	[Redacted]	[Redacted]	[Redacted]	[Redacted]

Notes:

[Redacted notes]

My signature in the space provided below recognizes that I am an authorized person of Customer who accepts and agrees with the terms, conditions, and commitments under this proposal. The execution of this document constitutes a binding commitment between the parties.

Authorized Signature

Name

Title

Date

Terms and Conditions

[Redacted terms and conditions]

Price Quotation

Telefonica Empresas de Puerto Rico
"Turning Customers into Fans"



Una compañía de la Multinacional Española Telefonica

Commercial Contact:

[Redacted]

Engineering Contact:

[Redacted]



DATE

July 29, 2009

Access

Address	Qty	Description	Price / Unit	NRC	MRC
[Redacted]		[Redacted]	[Redacted]	[Redacted]	[Redacted]

Notes:

[Redacted]

My signature in the space provided below recognizes that I am an authorized person of Customer who accepts and agrees with the terms, conditions, and commitments under this proposal. The execution of this document constitutes a binding commitment between the parties.

Authorized Signature

Name

Title

Date

[Redacted Signature Area]

Price Quotation

Telefonica

Empresas

Una compañía de la multinacional
Española Telefonica

Telefonica Empresas de Puerto Rico
"Turning Customers into Fans"

Commercial Contact:

[Redacted]

Engineering Contact:

[Redacted]

TO 

DATE

July 29, 2009

Access

Address	Qty	Description	Price / Unit	NRC	MRC
[Redacted]	1	[Redacted]	[Redacted]	[Redacted]	[Redacted]

Notes:

[Redacted notes]

My signature in the space provided below recognizes that I am an authorized person of Customer who accepts and agrees with the terms, conditions, and commitments under this proposal. The execution of this document constitutes a binding commitment between the parties.

Authorized Signature

Name

Title

Date

Terms and Conditions

[Redacted terms and conditions]

Price Quotation



Telefonica Empresas de Puerto Rico
"Turning Customers into Fans"

Commercial Contact:

[Redacted]

Engineering Contact:

[Redacted]

TO 

DATE July 29, 2009

Access					
Address	Qty	Description	Price / Unit	NRC	MRC
[Redacted]		[Redacted]	[Redacted]	[Redacted]	[Redacted]

Notes:

[Redacted notes]

My signature in the space provided below recognizes that I am an authorized person of Customer who accepts and agrees with the terms, conditions, and commitments under this proposal. The execution of this document constitutes a binding commitment between the parties.

Authorized Signature _____ Name _____ Title _____ Date _____

Terms and Conditions
[Redacted terms and conditions]

Budgetary Proposal

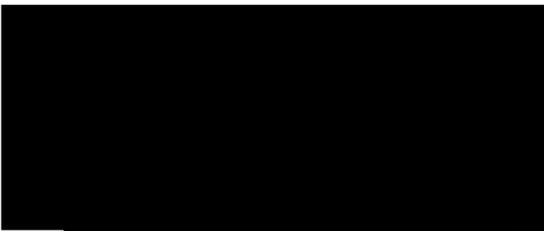
Customer: [Redacted]
Date Prepared: June 12, 2009

Budgetary Pricing:

Product	Product Capacity	Description	Term	Monthly Recurring Charge	Deposit	Activation Charge
Backhaul	[Redacted]	[Redacted]	12 months	[Redacted]	[Redacted]	[Redacted]
Backhaul	[Redacted]	[Redacted]	36 months	[Redacted]	[Redacted]	[Redacted]
Backhaul	[Redacted]	[Redacted]	12 months	[Redacted]	[Redacted]	[Redacted]
Backhaul	[Redacted]	[Redacted]	36 months	[Redacted]	[Redacted]	[Redacted]
Wet Lease	[Redacted]	[Redacted]	12 months	[Redacted]	[Redacted]	[Redacted]
Wet Lease	[Redacted]	[Redacted]	36 months	[Redacted]	[Redacted]	[Redacted]
Wet Lease	[Redacted]	[Redacted]	12 months	[Redacted]	[Redacted]	[Redacted]
Wet Lease	[Redacted]	[Redacted]	36 months	[Redacted]	[Redacted]	[Redacted]

Special Conditions:

[Redacted]



Budgetary Proposal

General Terms:

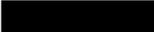
All charges contained in this proposal are budgetary, subject to change and contingent upon availability. Final charges will be provided upon Customer's written acceptance of the Final Proposal or applicable contracts.

Charges exclude any taxes that may apply.

Delivery will be executed within 30 to 45 business days of order, upon confirmation of availability.

Customer termination of the services prior to contract term is subject to charges equal to the sum of the remaining MRCs due during the term.

The provision of the services described in this proposal is subject to compliance with applicable laws and regulations. Customer is responsible to acquire and hold any and all licenses, permits, or other permissions required by local jurisdictions to obtain, use, or resell the capacity described in this proposal.

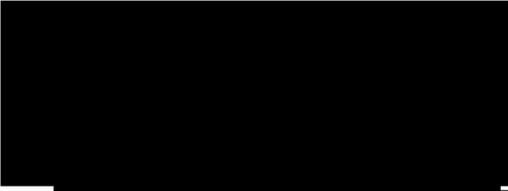
"Acceptance" of the services shall be deemed to have occurred upon the earlier of: (i)  receipt of the signed Acceptance Form from Customer; (ii) Customer's use of the services for a purpose other than testing; or (iii) seventy-two (72) hours after the RFS Date.

If the services do not meet the specifications, Customer must return the acceptance form to  within seventy-two (72) hours after the RFS Date, together with a detailed written explanation of its claim and a written copy of its test results, otherwise Acceptance shall be deemed to have occurred.

The provision or renewal of the services to Customer is contingent upon the creditworthiness of Customer. Amounts invoiced and not paid upon due date shall incur late payment charges of 1.5% per month. These charges begin on the first day following the due date and continue until the date of such amount is paid in full.

In the event the services described in this proposal cannot be provided due to regulatory conditions, legal requirements or other conditions or circumstances beyond the reasonable control of , then  may elect not to provide the affected services or capacity, in whole or in part, and shall have no liability for failure to provide such affected services or capacity.

The pricing and terms reflected in this document are proprietary to  and constitute confidential information and may not be disclosed to third parties.



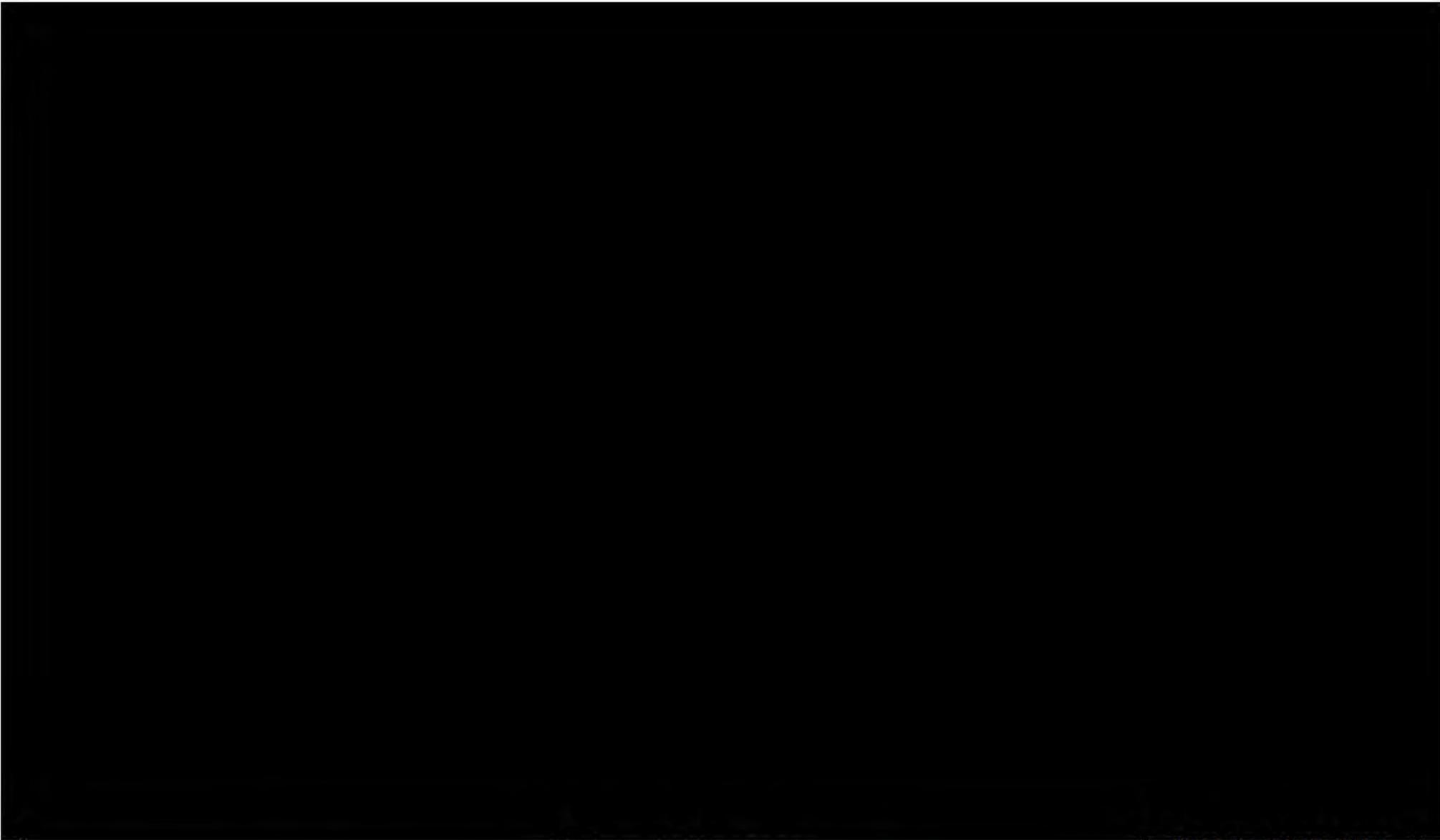
Budgetary Proposal

Expiration of the Proposal

All charges and terms set forth in this proposal will be valid for **30** days from the date of this proposal. All pricing and terms set forth in this proposal supersede any and all prior pricing and terms, whether verbal or written.

CN Signature

Client Acceptance



Network Diagram

PUERTO RICO
BRIDGE INITIATIVE



Property of Critical Hub
Networks, inc.

Aug 14, 2009 Page 1 of 3

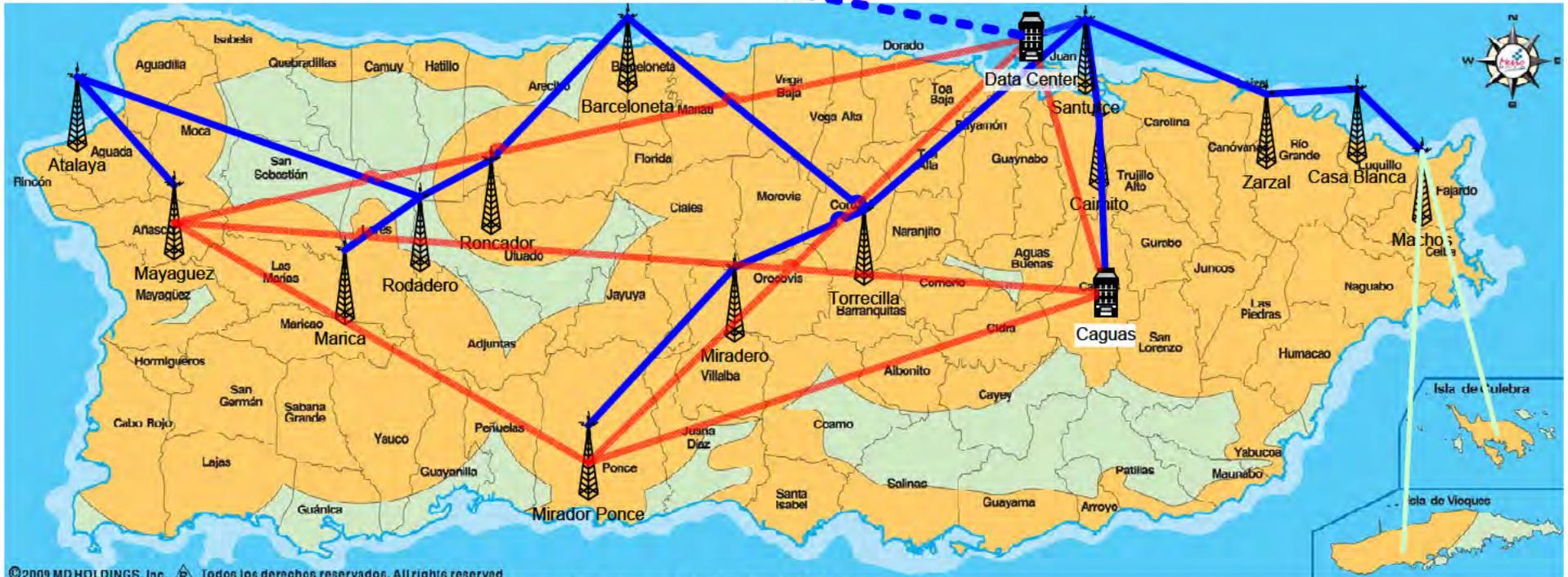
Network Diagram.vsd

cmarazzi@caribe.net

Confidential and Proprietary: Disclose and distribute only to RUS & NTIA employees and authorized persons working for NTIA & RUS Disclosure outside of NTIA & RUS is prohibited without authorization.

Fiber & Wireless Middle-Mile

STM64 Protected Circuit to Miami Florida



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NOTE: While we are aware of the existence of Unserved areas, no state level data is available.

Legend:

- Current Fiber Optic Link
- Grant Funded Licensed Wireless P-t-P Link
- ISP Provided Loop
- - - Grant Funded STM64 Protected Circuit

Partner coverage areas

- Underserved Last-Mile service areas currently with Wireless & DSL availability*
- Underserved Last-Mile service areas currently with DSL only availability*

*DSL service is advertised as being available islandwide. However, at least 200,000 household have no access to telephone infrastructure, and many are found to be in areas too far from the CO to receive DSL services. The incumbent telephone company does not publicly provide the information about where they do and do not have service.

Network Diagram

PUERTO RICO
BRIDGE INITIATIVE



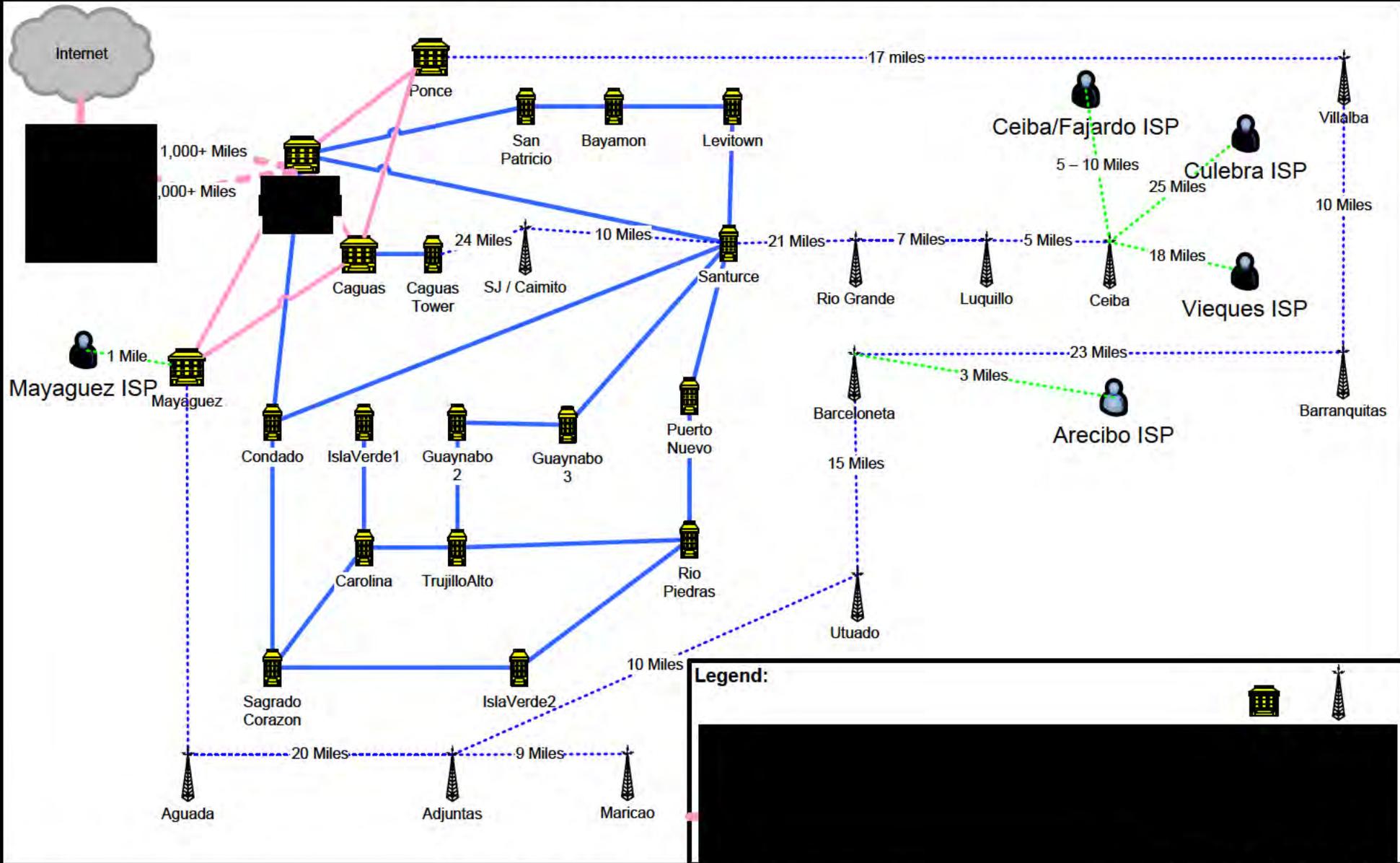
Property of Critical Hub Networks, inc.

17-Aug-09 Page 2 of 3

Network Diagram.vsd

cmarazzi@caribe.net

Intra-Island Wireless & Fiber Network, (current & future)



Puerto Rico Network Diagram



Property of Critical Hub Networks, Inc.

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Network Diagram.vsd

cmarazzi@caribe.net

Network Design and Implementation Plan Certification (to be complete for projects requesting more than \$1 million in federal assistance)

**U.S. Department of Agriculture and U.S. Department of Commerce
BIP and BTOP Program**

We the undersigned, certify that the proposed broadband system will work as described in the System Design and Network Diagram sections, and can deliver the proposed services outlined in the Service Offerings Section. Moreover, the system, as designed, can meet the proposed build-out timeframe based on the resources designated in Project Viability Section, and will be substantially complete in two years, and complete within three years.

8/4/09
(Date)

[Signature]
(Authorized Representative's Signature)

Carlo Marozzi
Name:

President
Title:

August 4, 2009
(Date)

[Signature]
(Certifying Engineer's Signature)



Jose M. Ramos Santiago
Name:

Electrical Engineering
Title:

Puerto Rico Bridge Initiative - Attachment E – Project Plan (Key Phases and Milestones)

Time	Qtr	List All Relevant Milestones	Support for Reasonableness / Data Point
Year 0			
Year 1			
Year 2			

Year
3



The following are the key challenges that the PRB may encounter with the timely completion of the project:



37. Management Team Resumes:

Critical Hub Networks, Inc. has assembled a team of experienced professionals for this project, with diverse backgrounds in engineering, telecommunications, network management and administration, project management and grant administration.

The senior management team members include: Carlo Marazzi – President, Project Director; Hector Lopez – Engineering Manager; Dr. Carlos A. Marazzi – Consultant, Telecommunication Engineering; Dr. Rosa J. Santiago – Consultant, Steering Committee; and Dr. Pablo Rivera – Consultant, Grant Administration and Budgeting.

Summary of Previous Project Experience

Caribe.Net (Critical Hub Networks' ISP), was Puerto Rico's first ISP and has been offering Internet service continuously since 1995. Some of our previous project experience includes:

ISP Operations: Caribe.Net was founded in 1994 as Puerto Rico's first ISP. Since then, Caribe.Net has provided Internet services to consumer, wholesale and corporate customers. Caribe.Net's successful operations were acquired in a multimillion dollar acquisition by PSINet in 1999. Caribe.Net was reacquired by its original founders in 2001. Caribe.Net has been managed by the same senior management team for 15 years. The Puerto Rico Bridge Initiative will rely on our expertise in sales, provisioning, network operations, customer service, and general ISP operations.

Fiber optic Submarine Cable Experience: From 1999 to 2003, acquired three (3) fiber optic undersea/submarine circuits with the following carriers: Sprint, Centennial Puerto Rico and New World Networks, Inc. Total value of all circuits exceeded \$6 million dollars. All circuits were successfully activated and were used for backhaul to the Internet backbone in Florida. Two of those circuits remain in operations today.

Telecommunication Experience: Prior to Caribe.Net's creation, its management conducted feasibility studies throughout Latin American and the Caribbean for fiber optic submarine cables. They also designed strategic plans and direct studies for telephone network expansions and supervised construction and installation of internal & external plant expansion.

Peering: Since 1999, Caribe.Net has established successful peering relationships with ISP networks in Puerto Rico as well as with global Internet content and network providers.

Collaboration with ISPs: From 1996 until today, Caribe.Net has collaborated with other service providers to encourage growth of the Internet in Puerto Rico. This includes our Virtual ISP services which offers access to our existing network infrastructure. More than 20 ISPs have utilized this service since its inception. We've also provided consulting services to competing ISPs. In 1996, Caribe.Net successfully provided engineering, IP network design and Internet access to Coqui.Net. Coqui.Net is currently the ISP of Puerto Rico's incumbent LEC, the Puerto Rico Telephone Company. In 1997, Caribe.Net assisted TRICOM, a telecommunication company in the Dominican Republic, with the creation, implementation and operation of an ISP.

Carlo Marazzi

Carlo Marazzi, President and founder of Critical Hub Networks, Inc (d/b/a Caribe.Net), has 18 years of experience in planning, design, implementation, management and operations of voice and data telecommunication networks. Marazzi is also the founder of VOZ, Puerto Rico's first VOIP provider. Previous work experience also includes PSINet and AMAZI Systems.

Marazzi is an IP expert with experience in the following: TCP/IP, IPX/SPX, SLIP, PPP, NetBEUI, Fast/Gigabit Ethernet, SMTP/POP3/IMAP/LDAP, FTP, Telnet, SNMP, RMON, WINS, DHCP, DNS, Frame Relay, ATM, T1, DS3, OC3, STM1, xDSL, OSPF, BGP, RIP/RIP2, MPLS, EIGRP, RTP, VPN, SIP, AAA, IOS, HP Openview, Unix/Linux/ Solaris, SQL/MYSQL, NT/2000, MRTG, DUDE, Navis Access, TAOS, RouterOS. He has worked extensively with carrier class routers, switches, VOIP soft switches, multiplexers, channel banks, CSU/DSU, repeaters, gateways, session border controllers, firewalls, RF access equipment, wireless and wired CPE equipment, carrier billing, provisioning, testing and monitoring systems.

His background and experience includes:

- Founder of Caribe.Net, Puerto Rico's first Internet Service Provider and the first publically-accessible IP network in the island. He is responsible for overall operations of Caribe.Net, including R&D, sales, strategic planning, network operations, and customer service. He has successfully managed and supervised projects with over 35 team members.
- Negotiated various mergers & acquisitions (M&A) on behalf of Caribe.Net, including the multimillion dollar sale of Caribe.Net to PSINet in 1999, the multimillion dollar acquisition of Caribe.Net by Critical Hub Networks, Inc. in 2001, the M&A of several Puerto Rico ISPs.
- Successfully converted/implemented PSINet's redundant IP network design specifications in Puerto Rico using Frame Relay and Core/Regional/Leaf next-generation topology.
- Negotiated the \$3M acquisition of an irrefutable rights of use (IRU) on an undersea fiber optic cable systems for interconnection of Caribe.Net's network to Tier 1 transit providers.
- Responsible for the RF design, development, and implementation of a wireless IP broadband network. Utilized mesh, point-to-point, point-to-multipoint topologies.
- Negotiated agreements and collaborated with telecom and IP providers including Puerto Rico Telephone, Centennial, Sprint, PSINet, Arcos, Internap, iBasis, Columbus and Teleglobe.
- Implemented Puerto Rico's first carrier class next generation VOIP network. This included designing, specifying, and evaluating hardware and software solutions; management of configuration, operations and maintenance of network; negotiations with vendors and suppliers; product development; implementation of effective billing systems.
- For the Presidents of the Puerto Rico Senate and House, offered advice in the preparation of legislation for the creation of the Junta Reglamentadora de Telecomunicaciones.
- For TRICOM, designed, developed and implemented plans to develop an Internet Service Provider for the telephone company in the Dominican Republic.

Marazzi has served as an expert witness on Internet technologies, is a founding member of the Internet Society of Puerto Rico, and has received awards for his work in IP communications. Marazzi holds a BS in Electrical Engineering and an AS in Computer Engineering from the University of Hartford. He is a Certified Novell Administrator/Engineer (CNA/CNE) and a Digium Certified Asterisk Professional (dCAP).

Ricardo Mediavilla

Dr. Ricardo Mediavilla is a Telecommunications Engineer (PE License #7054) with a 30 year career in the planning, design, research and development of telecommunications networks, and in teaching.

Among the many projects he has been involved, are:

- For the Office of the Comptroller of Puerto Rico, analyzed bid specifications, design, architecture, and bid evaluation results for PRTC's NGDLC (Next Generation Digital Loop Carrier) project;
- As part of an NSF sponsored research project, developed an automatic test station for characterizing the synchronization performance of SONET networks;
- For AT&T Bell Laboratories, performed synchronization planning for telecommunication networks, including synchronization of SONET networks, and advised AT&T in defining its strategic position in synchronization standards. Two U.S. patents resulted from this effort;
- For AT&T Bell Laboratories, did research, analysis and design related to phase lock loop modeling and simulation, modeling of SONET network jitter accumulation, wrote clock specifications and performance test plans;
- For Motorola, led a design team for a new paging UHF receiver, and developed new subroutines and algorithms for the plant computerized RF test systems
- As Director of the Planning Division the Puerto Rico Communications Authority, was responsible for the planning of telecommunications networks, traffic forecasts and network designs.

Mediavilla has taught at the University of Puerto Rico School of Engineering in Mayagüez, at Inter-American University, and is currently a Professor in the Electronics Department of the Bayamón campus of the University of Puerto Rico, where he teaches courses related to microwaves, data communication networks and digital transmission systems.

He was a Visiting Professor at AT&T Bell Laboratories in Merrimack Valley, MA; and a Fellow of the US Army CENTACS Summer Faculty Research Program at the Tuskegee Institute, Alabama.

Mediavilla holds a PhD in Electrical Engineering from Rensselaer Polytechnic Institute; a MSEE from Georgia Institute of Technology, and a BSEE - Magna Cum Laude from the University of Puerto Rico, Mayaguez Campus.

[Redacted]

[Redacted]

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- [Redacted]
- [Redacted]

[Redacted]

[Redacted]

Eduardo Lopez

Eduardo Lopez is an Industrial Engineer with over 25 years of experience in information system design, process engineering, facility design and management, and in teaching. He has worked as independent consultant for the last 15 years. Prior to that, he worked with TEAM Consultants in San Juan, Puerto Rico; AT&T Bell Laboratories in Naperville, Illinois; Memorex/Telex in Hato Rey, Puerto Rico; and the University of Puerto Rico in Mayaguez, Puerto Rico.

Some of the services and projects which Rivera has been involved include:

- Provided consulting services for telecommunication sector restructuring to the Minister of Planning in El Salvador.
- Provided consulting to the Puerto Rico Telecommunications Regulatory Commission on the development of quality of service criteria and objectives
- For the Government of Venezuela, provided consulting and strategic planning for the privatization of the Venezuelan Telephone Company
- Conducted a feasibility study for the Puerto Rico Communications Authority on the construction of a submarine fiber optic cable between Puerto Rico, Vieques, Culebra and St. Thomas
- Conducted a feasibility study on the construction of a submarine fiber optic cable between Puerto Rico and Venezuela
- For AT&T Bell Laboratories in Illinois, responsible for the integration of software features for the number 1 Packet Switching System (1PSS), including feature integration coordination, planning, testing and software validation. Included work on X.25 and X.75 protocols, and on the Real Time Measurement Display Feature
- Provided process design, improvement and decentralization for the Supplies Warehouse, Fixed Assets and Library Departments of the Office of the Administration of the Courts.
- Performed process reengineering and facility layout planning for the Puerto Rico Court Clerk Office's courthouses.
- Project Manager and consultant for facility planning and design for various pharmaceutical corporations, including Janssen, McNeil Consumers, Eli Lilly, Baxter Healthcare, and Squibb Manufacturing

In addition to consulting, Lopez also presents various graduate and undergraduate courses at the Interamerican University and Universidad Politecnica de Puerto Rico.

Lopez holds a BS Industrial Engineering, Magna Cum Laude, from the University of Puerto Rico at Mayaguez, and a MS Industrial Engineering from the University of Michigan at Ann Arbor.

Carlos A. Marazzi, PhD.

Dr. Carlos A. Marazzi is a Telecommunications Engineer (PE License #8508) with a 45 year career in the planning, design, research and development of telecommunications networks, and in teaching. He was Telecommunications Expert for the World Bank, Washington, DC; Telecommunications Project Director for Latin America for Arthur D. Little, Inc., MA; Vice President of the Puerto Rico Communications Authority; Design Engineer at IBM Corporation, NY; Instrumentation Engineer at the Atomic Energy Commission, CA; President and Senior Telecommunications Consultant at TEAM Consultants, Puerto Rico; and founder and Project Manager at Metrodata, Inc., Puerto Rico.

Some of the projects he performed are:

- For Metrodata Inc., designed the work process and managed the development of the first cartographic database of addresses of all of Puerto Rico, which was expanded for use by the Electric Energy Authority for the creation of its Geographic Information Systems.
- For Metrodata Inc., designed and managed the development of the first road map of Puerto Rico completely drawn and published in the island. In collaboration with the Cartography Office of the Highway Authority of Puerto Rico, responsible for preparation and printing of the first Official Highway Map of PR done entirely in the island. Other maps and cartographic products, including detailed maps of municipalities, print and digitized cartographic collections which continue to be continuously updated.
- For the Interamerican Development Bank, directed a feasibility study of the TCS-1 submarine cable with fiber optics for TELECOM-Colombia; TCS-2 for Puerto Rico and Venezuela, and the PR-Vieques/Culebra cables.
- For several telecommunications regulatory agencies, designed programs to measure quality of telecommunication service; specified criteria for such programs.
- For several telephone companies, designed strategic plans for the expansion of the networks; directed master studies for the development of telephone networks; and supervised the construction and installation of internal and external plant expansion.
- For the US Trade and Development Agency of the US Department of Commerce, led market studies of wired and wireless services throughout Latin America.
- For the governments of El Salvador, Colombia and Venezuela, prepared and evaluated terms of reference and conditions for the privatization of their telephone companies.
- For the Presidents of the Puerto Rico Senate and House, offered advice in the preparation of legislation for the creation of the Junta Reglamentadora de las Telecomunicaciones.
- Evaluated organizational effectiveness and made recommendations for the improvement of management processes in several telephone companies in Latin America.

Dr. Marazzi has presented graduate and undergraduate courses at various universities; and has developed professional development programs for engineering associations and telecommunication companies. He has published in professional peer reviewed journals, and has presented at many national and international telecommunication conferences.

Dr. Marazzi holds a PhD in Electrical Engineering from the Imperial College of Science and Technology, University of London, England; a MSEE from Colorado State University, and a BSEE from the Technische Universität, Darmstadt, Germany.

Rosa J. Santiago

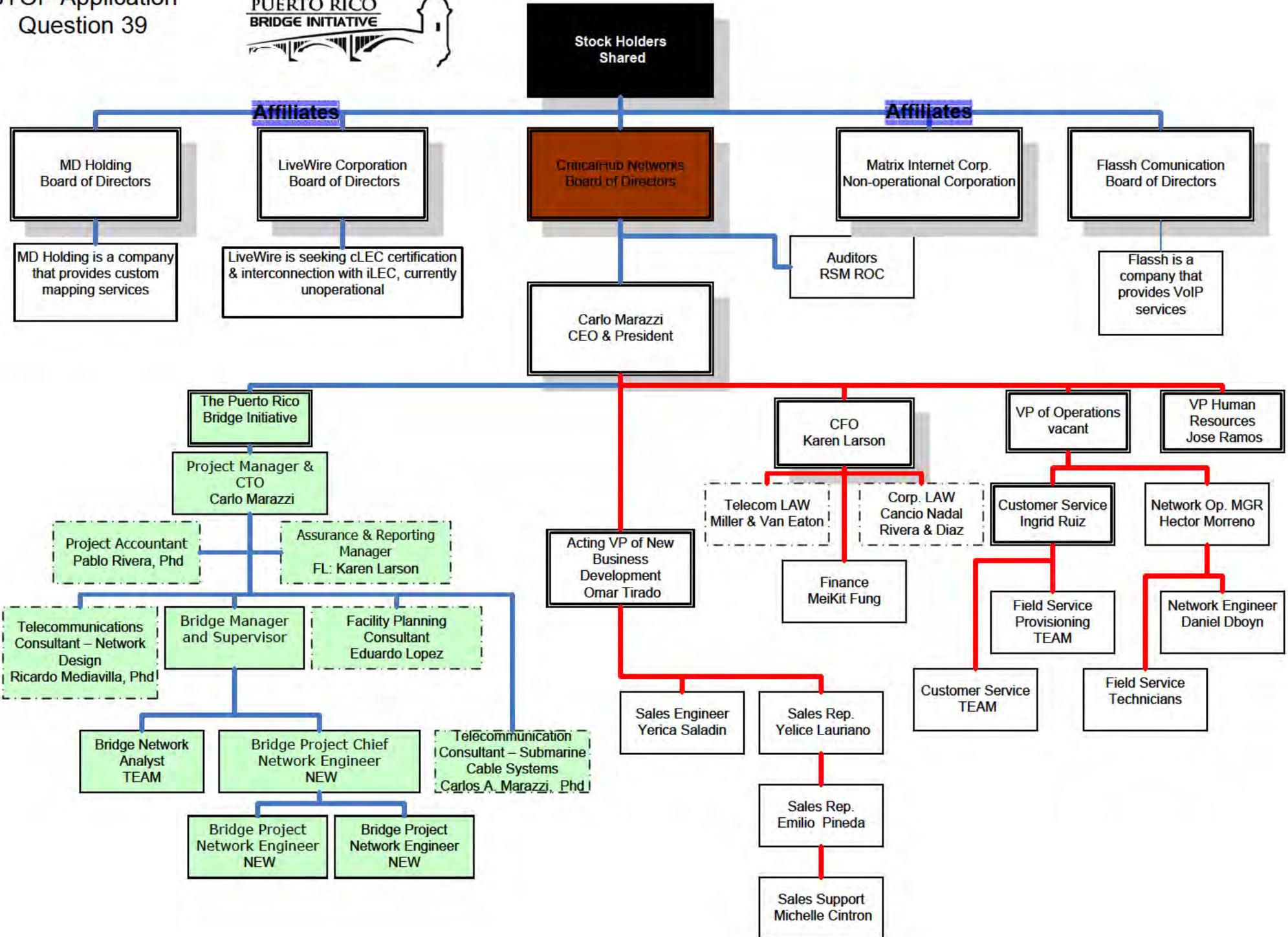
Dr. Rosa J. Santiago has over 35 years of experience in organizational development consulting, specifically in organizational analysis, visioning, restructuring, and in the planning and management of change projects.

She has designed and carried out planning and development projects for a variety of organizations, including educational, community-based, public, and private in the United States, Central America and Puerto Rico. She has provided technical assistance for the identification and documentation of organizational problems; the development of innovative, consensual solutions, including new policies, work processes and organizational structures; the design and implementation of staff development programs using a variety of client-centered and data-driven approaches; and the development of recommendations for restructuring organizations. In addition, she has provided technical assistance during the implementation of her recommendations. She has done this successfully by providing sensitive support for the development of empowered organizational leadership and visioning, and collaborative planning and project management, to support the process of change. Some of the tools she uses are:

- Organizational and problem analysis: gathering data through individual and group interviews, focus groups, observations and surveys; analyzing work processes and structures vis a vis vision and mission frameworks; facilitating collaborative planning through policy feedback forums, and systems analysis;
- Facilitating sensitive group analysis of current paradigms and mental models, and providing assistance for the development of new perspectives and mental models, and new organizational structures to support them;
- Facilitating strategic, long-range, and program planning;
- Evaluating programs using quantitative and qualitative methodologies;
- Facilitation and support for teams and team work, including adoption of total quality management practices, high performance team practices, project management systems; and analysis and design of systems and procedures;
- Facilitating the establishment of operational audit systems for effectiveness and efficiency;
- Facilitating and developing Boards for community based organizations;
- Designing and supporting implementation of effective staff development programs and systems.

Santiago has a Doctorate in Administration, Policy and Training from Boston University. She also has Master degrees from the University of California at Berkeley (Political Philosophy), and the University of London (History). Her Bachelors degree in Political Science, Magna Cum Laude, is from the University of Puerto Rico.

BTOP Application
Question 39



CANCIO, NADAL, RIVERA & DÍAZ, P.S.C.
ATTORNEYS AND COUNSELLORS AT LAW

August 5, 2009

Administrator
Rural Utilities Service
U.S. Department of Agriculture
Washington, D.C. 20250-1500

Assistant Secretary
National Telecommunications and Information Administration
U.S. Department of Commerce
Washington, D.C. 20230

Re: Critical Hub Networks, Inc. - Broadband Technology Opportunities Program

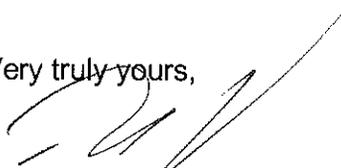
Dear Sir:

We are special counsel for Critical Hub Networks, Inc. (the "Applicant"). In such capacity, we acted as counsel to the Applicant in connection with its ability to apply to the Broadband Initiatives Program and/or the Broadband Technology Opportunities Program and in the review of the grant agreement, as referenced in the Notice of Funds Availability.

We are of the opinion that:

- a. The Applicant is a duly organized and existing corporation under the laws of the Commonwealth of Puerto Rico.
- b. The Applicant has corporate power: (1) to execute and deliver the grant agreement; and (2) to perform all acts required to be done by it under said agreement.
- c. No legal proceedings have been instituted or are pending against the Applicant, the outcome of which would adversely affect the Applicant's ability to perform the duties under the grant agreement, and there are no judgments against the Applicant which would adversely affect the Applicant's ability to perform the duties under the grant agreement.

Very truly yours,



Rubén M. Medina Lugo

c: *Mr. Carlo Marazzi*
Mrs. Karen Marazzi

226373.1



ESTADO LIBRE ASOCIADO DE PUERTO RICO
DEPARTAMENTO DE EDUCACIÓN

OFICINA DE GERENCIA DE CONOCIMIENTO,
TECNOLOGÍA Y TRANSFORMACIÓN

August 5, 2009

Mr. Carlo Marazzi, President
Critical Hub Networks, Corp.
PO Box 11278
San Juan, Puerto Rico 00910

Re: Endorsement of the Construction of the "Puerto Rico Bridge Initiative".

Dear Mr. Marazzi,

The Puerto Rico Department of Education is the primary Local and State Education Agency in Puerto Rico, serving over 526,000 students and their families in 1,546 schools, with 45,260 teachers. Many of these schools are located in areas that are unserved or underserved by high-speed internet service.

The lack of high speed broadband networks in Puerto Rico and limited service available in many geographic areas limits our possibilities of accessing all students and teachers through digital networks with electronic books and articles, curricular resources, distance learning, webinars, real-time observation of scientific experiments and historical events, and many other opportunities that define education in the twenty first century.

The Department is actively working in developing twenty first century content for students and teachers. And thus, we endorse Critical Hub Network's proposed project, The Puerto Rico Bridge Initiative (PRBI) that will provide access to high-speed broadband for all areas of Puerto Rico, served, unserved and underserved at a fraction of the slower services available now, and deep discounts for educational institutions and libraries, through sixteen competing service providers.

The Puerto Rico Bridge Initiative is the kind of infrastructure support our Department needs to ensure that none of our students and teachers are left outside the quality digital content we will provide. And it comes at an important point in our history, when it will harness the power of the Internet to support our efforts for world-class education, as well as enable structural changes in education and in our economy.

Cordially yours,



Guillermo Pierluisi Berr
Chief Knowledge Officer
pierluisig@de.gobierno.pr
787-383-3252

P.O. Box 190759, Puerto Rico 00919-0759 • Tel. : (787) 383-3252 Ext: 3027, FAX: (787) 754-7195

El Departamento de Educación no discrimina por razón de raza, color, género, nacimiento, origen nacional, condición social, ideas políticas o religiosas, edad o impedimento en sus actividades, servicios educativos y oportunidades de empleo.

DETAIL OF PROJECT COSTS

ATTACHMENT G

Puerto Rico Bridge Initiative

Critical Hub Networks, Inc

SERVICE AREA or COMMON NETWORK FACILITIES:	Eligibility (Yes/No)		Unit Cost	# Units	Total Cost	*Support of Reasonableness
NETWORK & ACCESS EQUIPMENT (Continued)						
Switching	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Routing	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Transport	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Access	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Other	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
OUTSIDE PLANT						
Cables	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Conduits	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Towers	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
BUILDINGS						
Improv. & Renovations	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

SERVICE AREA or COMMON NETWORK FACILITIES:		Eligibility (Yes/No)				*Support of Reasonableness
BUILDINGS						
Improv & Renovations	Security System	Yes				3rd part quote
	High Efficiency Power Generation	Yes				3rd part quote
	UPS N+1 75KVA 208V Online	Yes				3rd part quote
	Cage Construction - Data Center	Yes				3rd part quote
	Office Space Preparations	Yes				3rd part quote
Other	Wireless Tower acquisition	Yes				3rd part quote
	Wireless Main Site	Yes				industry benchmark
	Data Center Space LOP	Yes				industry benchmark
	Temp.Office Space	Yes				industry benchmark
SYSTEMS						
Billing Support System						
Customer Care System						
OPERATING EQUIPMENT						
Vehicles	Transportation Costs	Yes				industry benchmark
Office Equipment / Furniture	PBX & Phone	Yes				3rd part quote
	Desktop PCs	Yes				3rd part quote & estimates
	Mobile Tough PCs	Yes				3rd part quote & estimates
Office Equipment / Furniture						
PROFESSIONAL SERVICES						
Eng. Design	Engineering Design	Yes				industry benchmark
Project Management	Project Manager & CTO	Yes				industry standard
	Bridge Project Chief Net. Engineer	Yes				industry standard

SERVICE AREA or COMMON NETWORK FACILITIES:		Eligibility (Yes/No)	Unit Cost	# Units	Total Cost	*Support of Reasonableness
PROFESSIONAL SERVICES (continued)						
Project Management	Bridge Manager and Supervisor	Yes				industry standard
	Bridge Project Network Engineer	Yes				industry standard
	Bridge Project Network Engineer	Yes				industry standard
	Bridge Analyst	Yes				industry standard
	Bridge Analyst	Yes				industry standard
	Bridge Analyst	Yes				industry standard
	Compliance, Contracting, Reporting	Yes				industry standard
	Indirect costs	Yes				industry standard
Consulting	LAW:TELECOM	Yes				industry standard
	LAW:CORP: Corporate	Yes				industry standard
	FIN:AUDIT	Yes				industry standard
	FIN:AUDIT	Yes				industry standard
	Telecom, Network & Planning	Yes				industry standard
	Portal Designer	Yes				industry standard
	Software Engineer	Yes				industry standard
	Underserved census verification	Yes				Amount invoiced
Other	SJU - MIA Air Fair	Yes				Established by GSA
	Stay at Miami	Yes				Established by GSA
	Car Rental @ Miami	Yes				Established by GSA
	Per Diam	Yes				Established by GSA
TESTING						
Network Elements	Fiber Certification Meter	Yes				3rd part quote
	Network Certification Meter	Yes				3rd part quote
	Copper Certification Meter	Yes				3rd part quote
	Professional GPS	Yes				3rd part quote
IT System Elements						

SERVICE AREA or COMMON NETWORK FACILITIES:	Eligibility (Yes/No)	Unit Cost	# Units	Total Cost	*Support of Reasonableness
TESTING					
User Devices					
Test Generators					
Lab Furnishings					
Servers / Computers					
OTHER UPFRONT COSTS					
Site Preparation					
Other					

***see Supplementary Information #3 for details on reasonableness of each item**

RSM! ROC & Company

Certified Public Accountants & Consultants

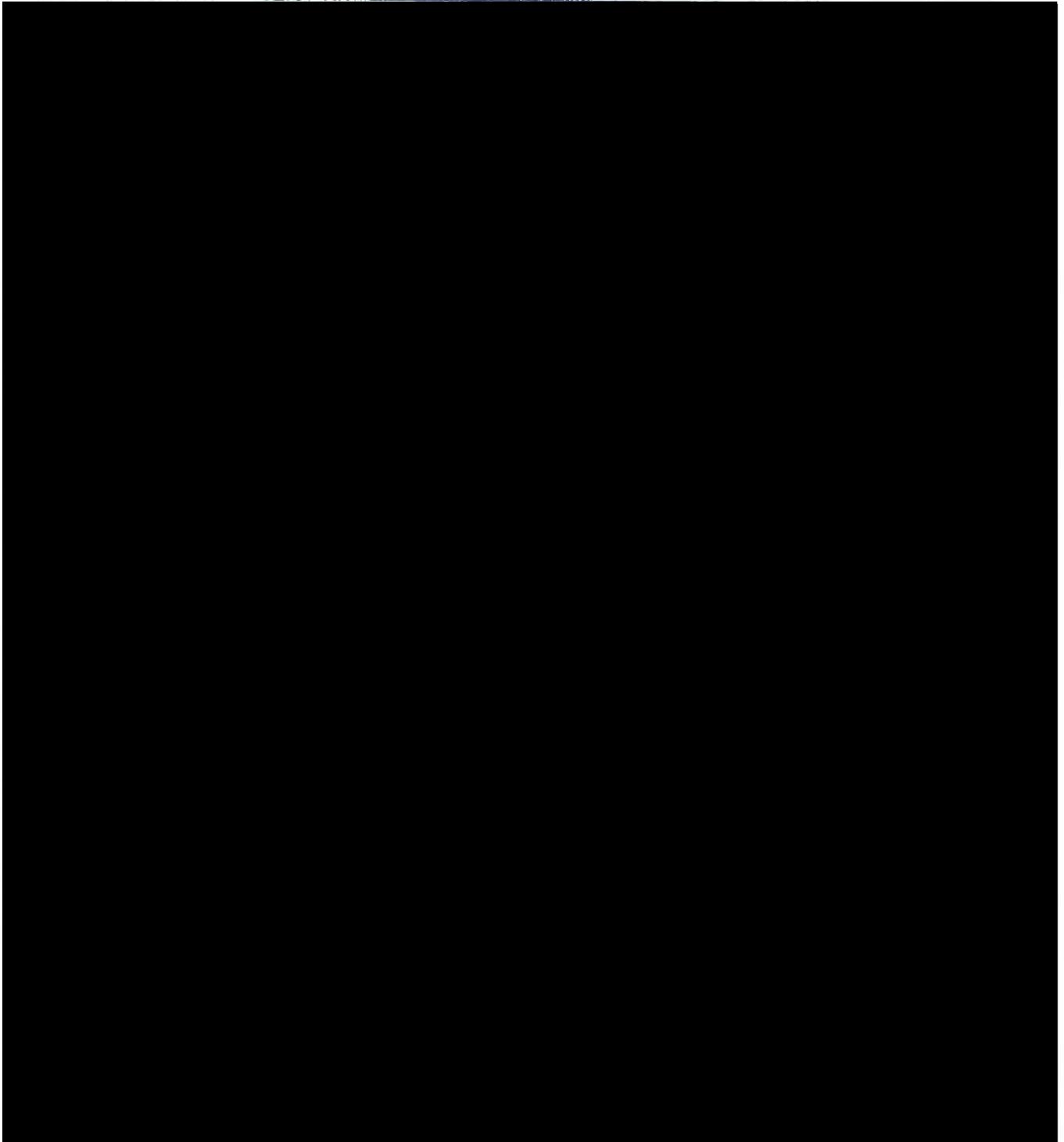
Critical Hub Networks, Inc.

Financial Statements
May 31, 2008



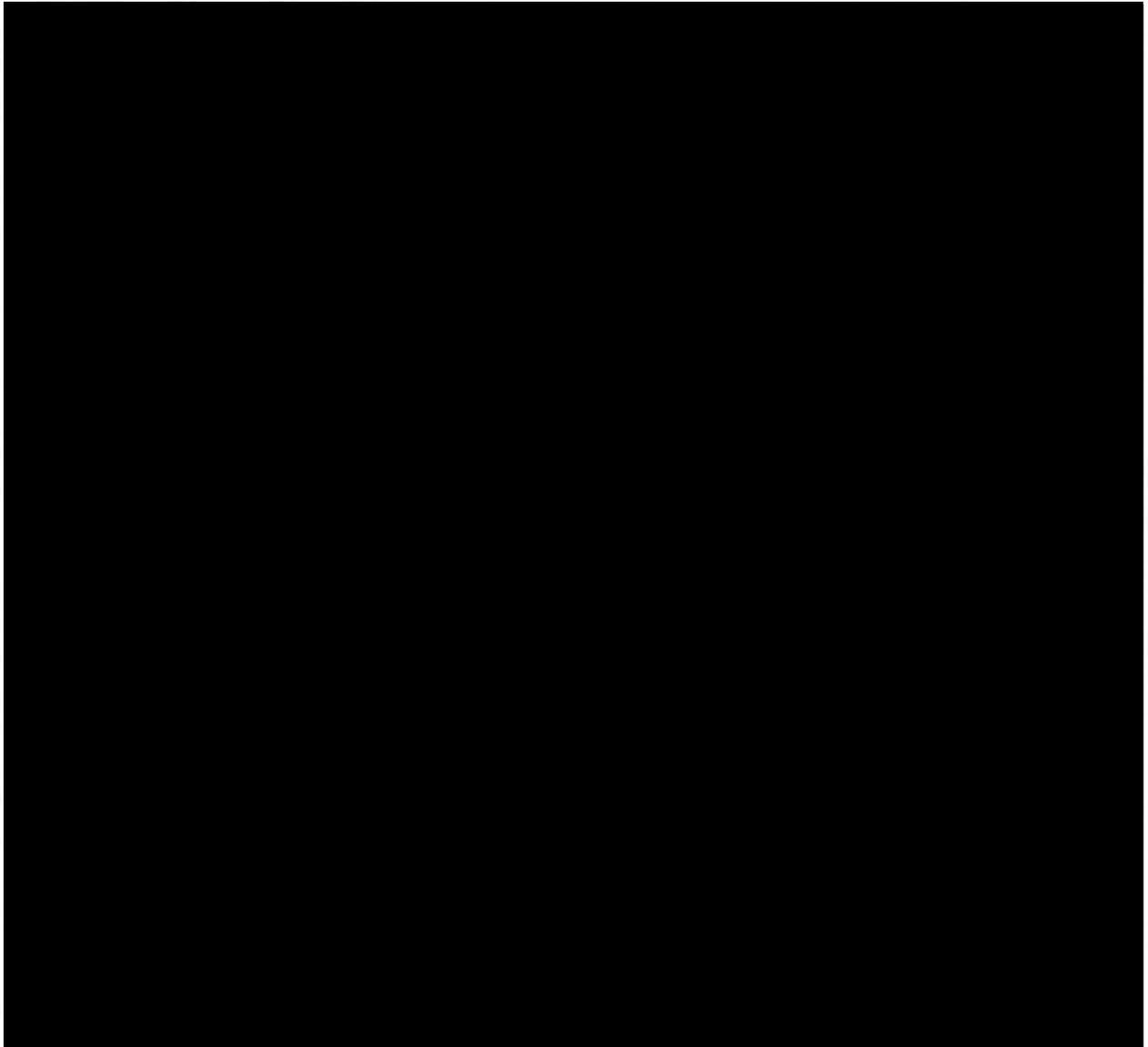
CRITICAL HUB NETWORKS, INC.

BALANCE SHEET
May 31, 2008



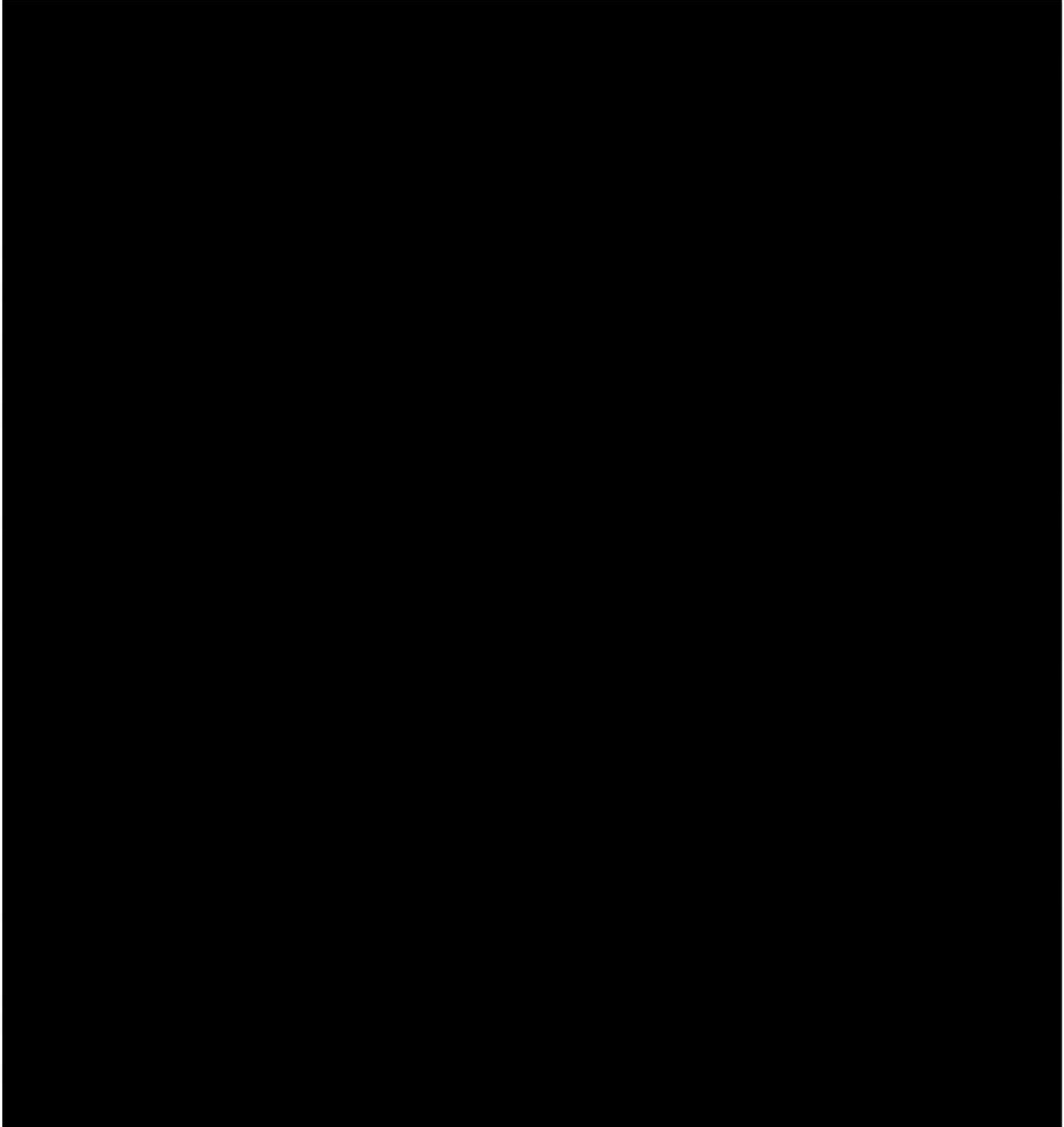
CRITICAL HUB NETWORKS, INC.

STATEMENT OF INCOME AND RETAINED EARNINGS
For the year ended May 31, 2008



CRITICAL HUB NETWORKS, INC.

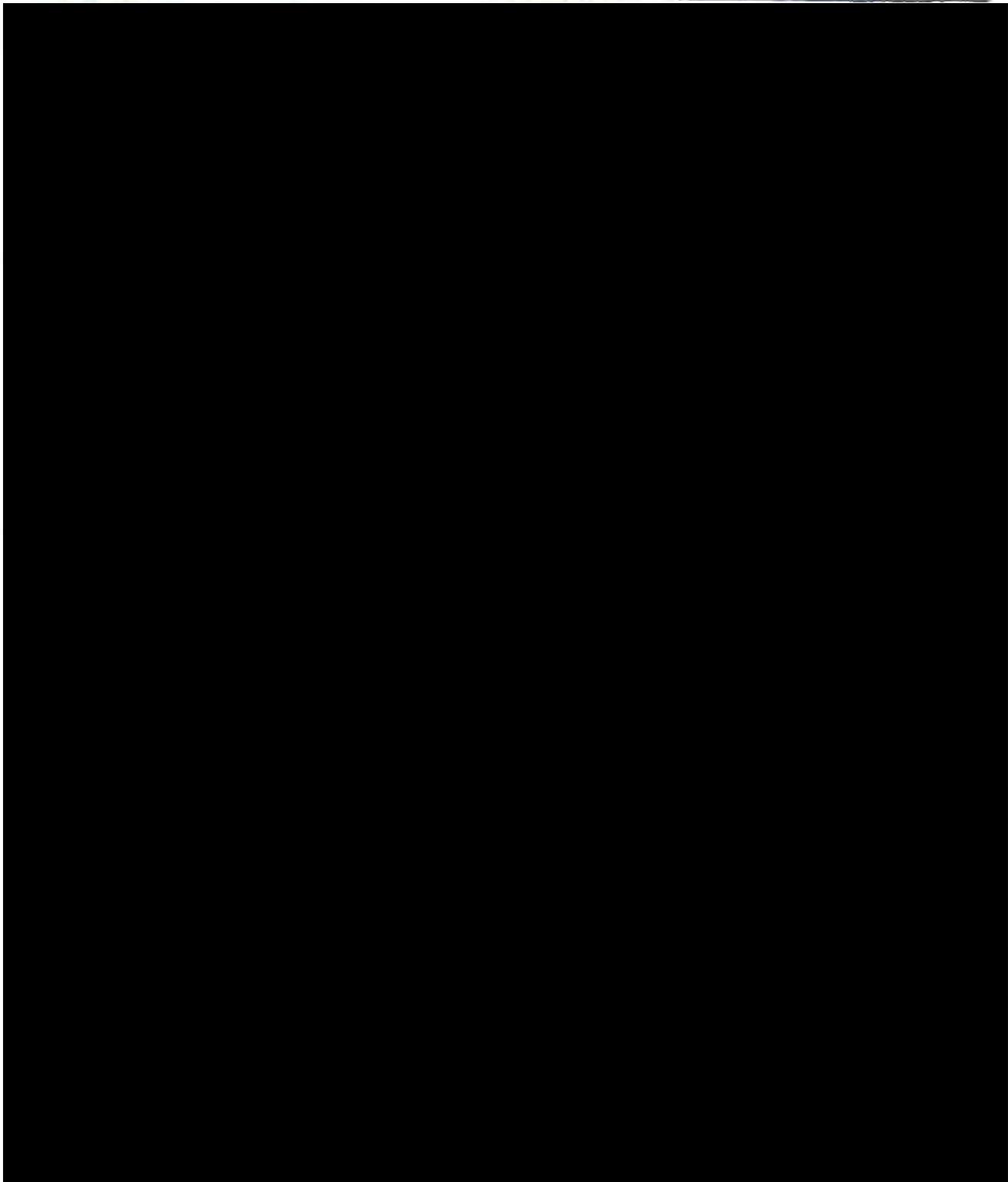
STATEMENT OF CASH FLOWS
For the year ended May 31, 2008



CRITICAL HUB NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS

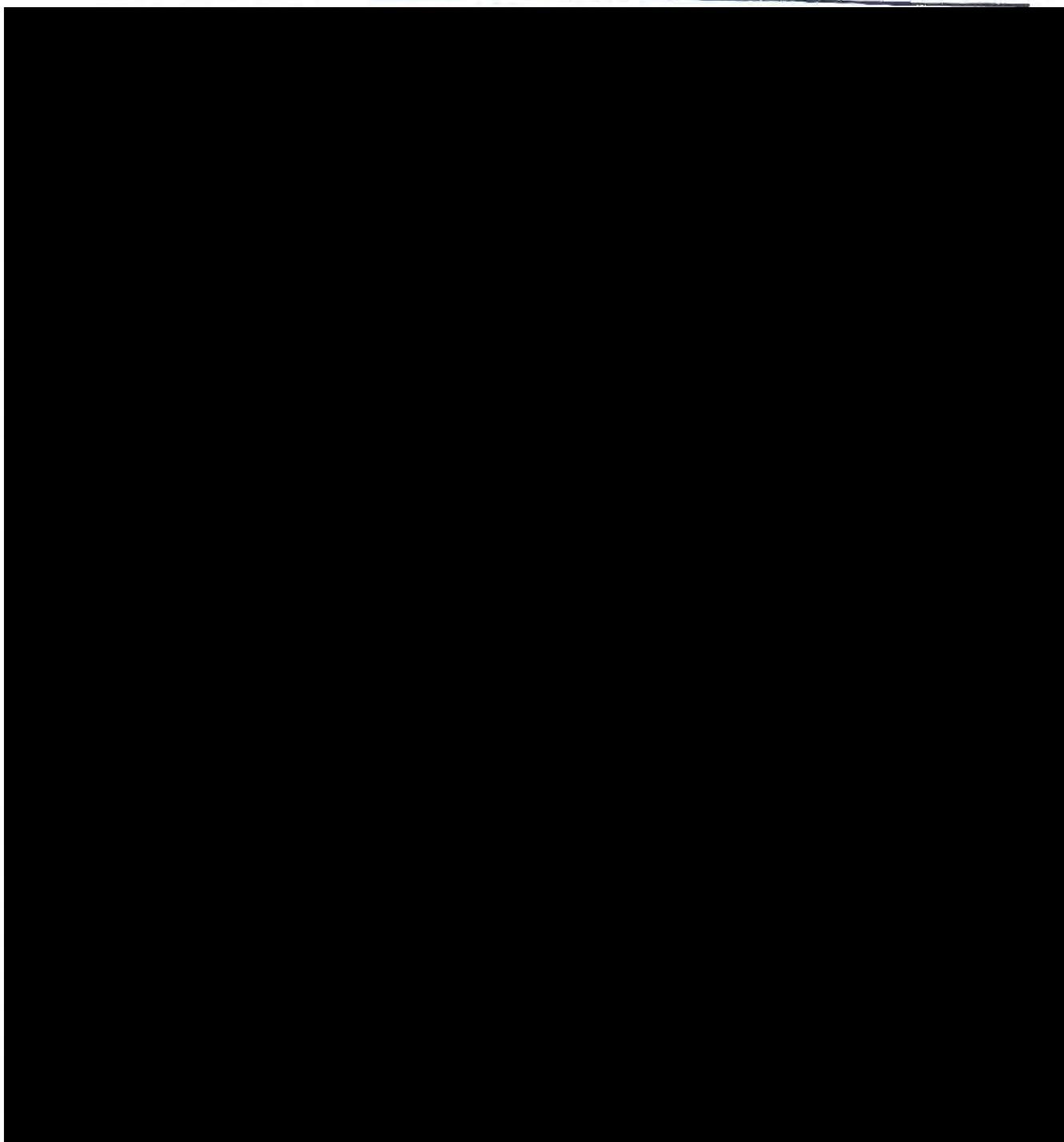
May 31, 2008



CRITICAL HUB NETWORKS, INC.

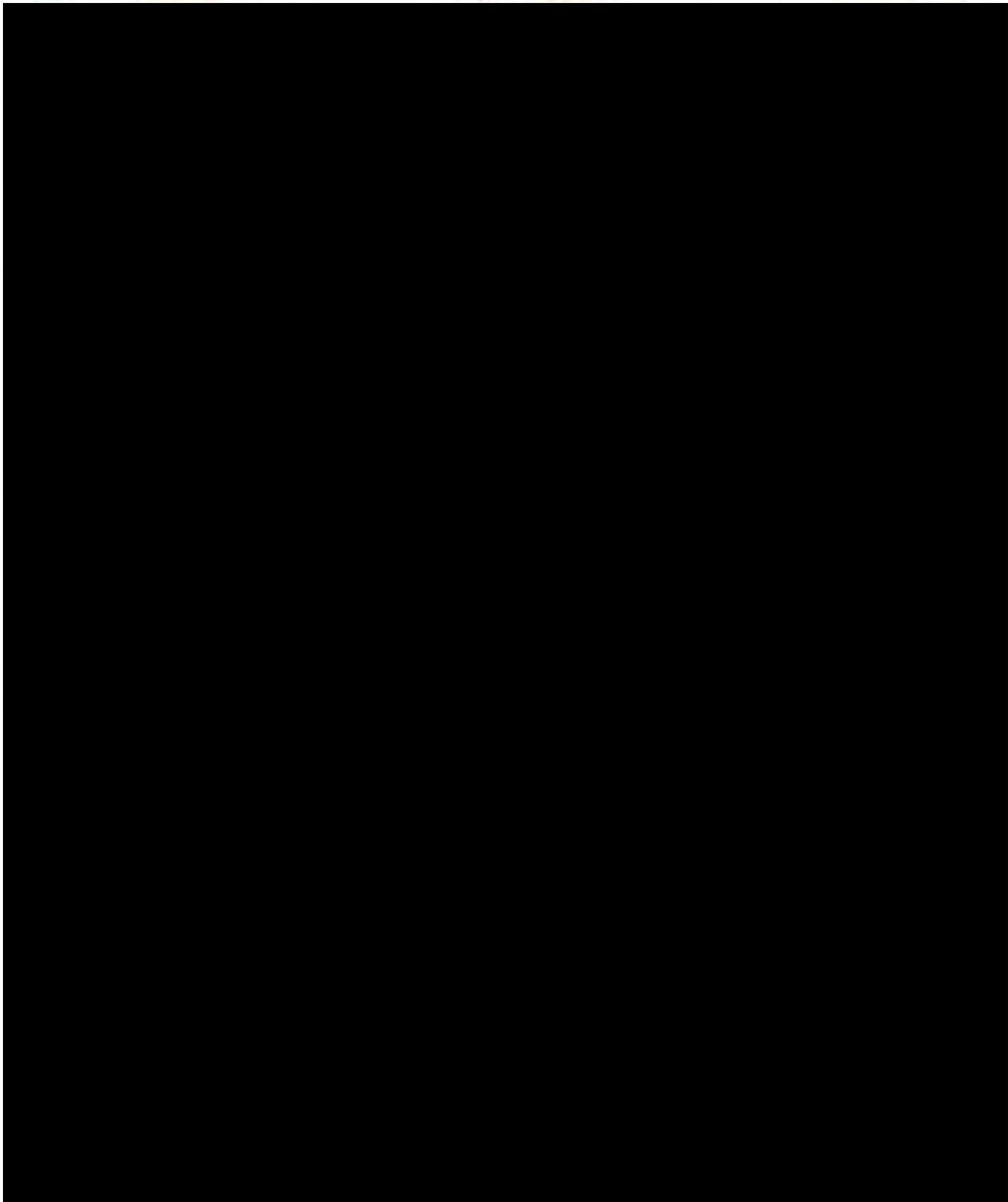
NOTES TO FINANCIAL STATEMENTS

May 31, 2008



CRITICAL HUB NETWORKS, INC.

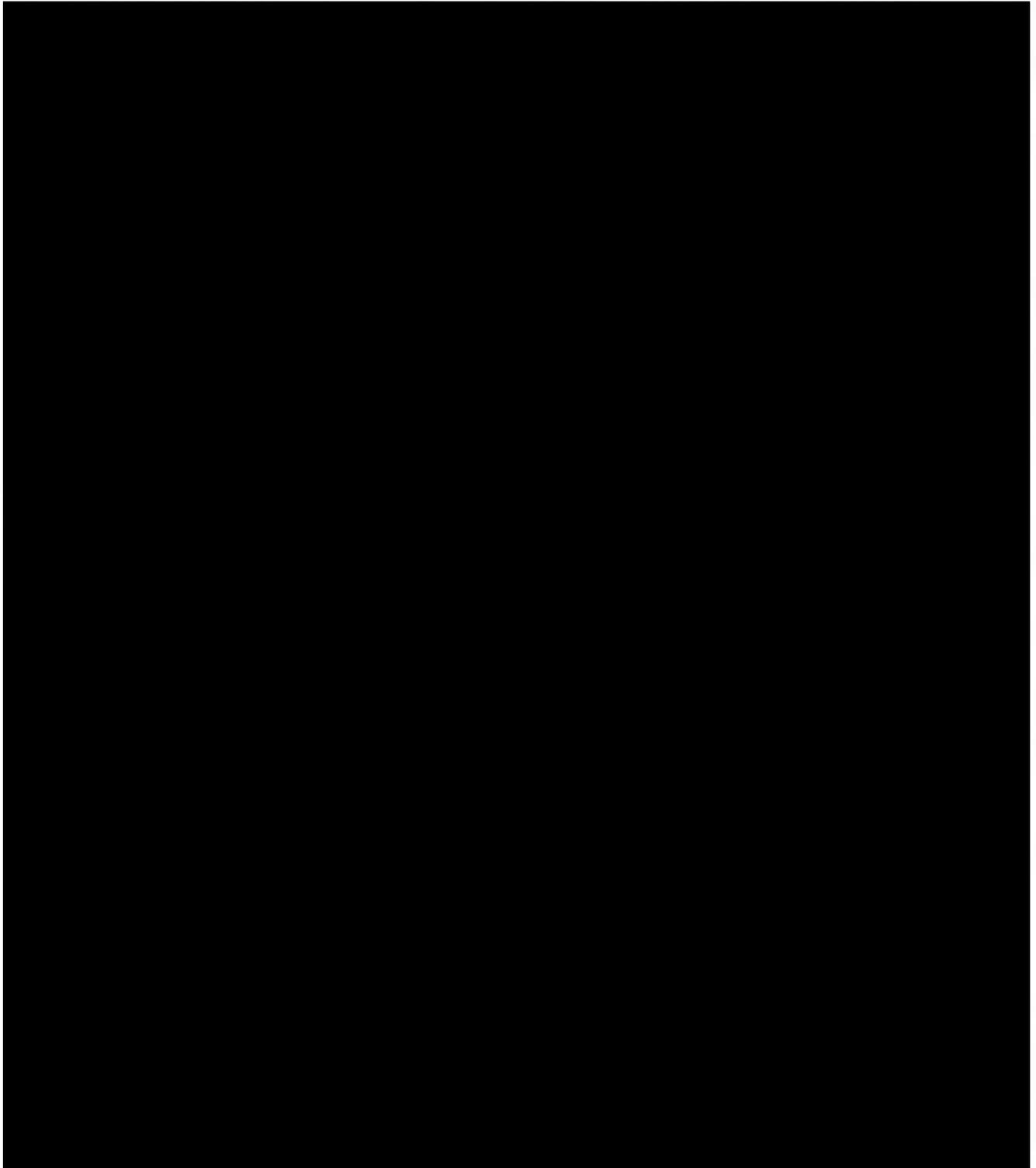
NOTES TO FINANCIAL STATEMENTS
May 31, 2008



CRITICAL HUB NETWORKS, INC.

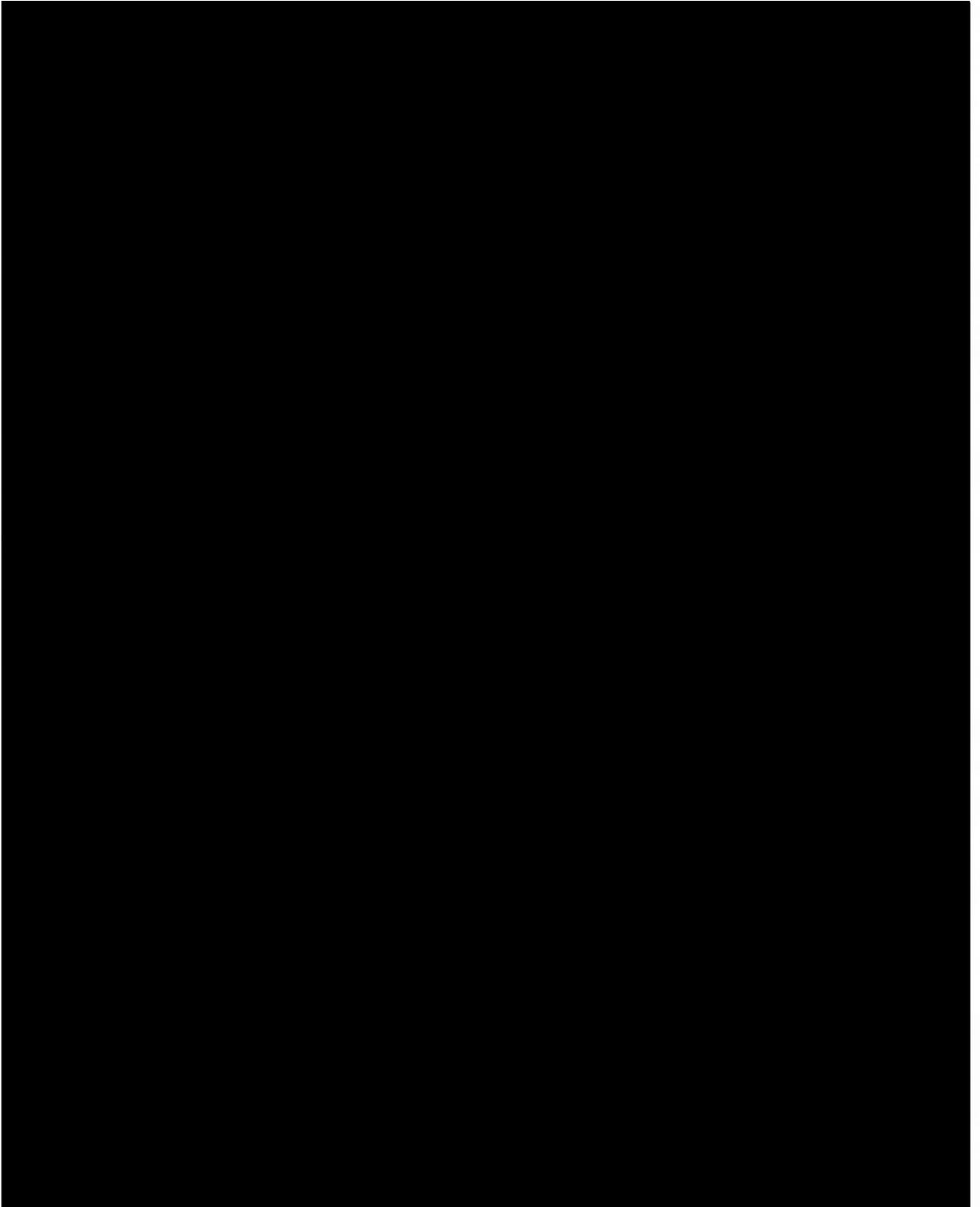
NOTES TO FINANCIAL STATEMENTS
May 31, 2008

5) Obligations under capital leases:



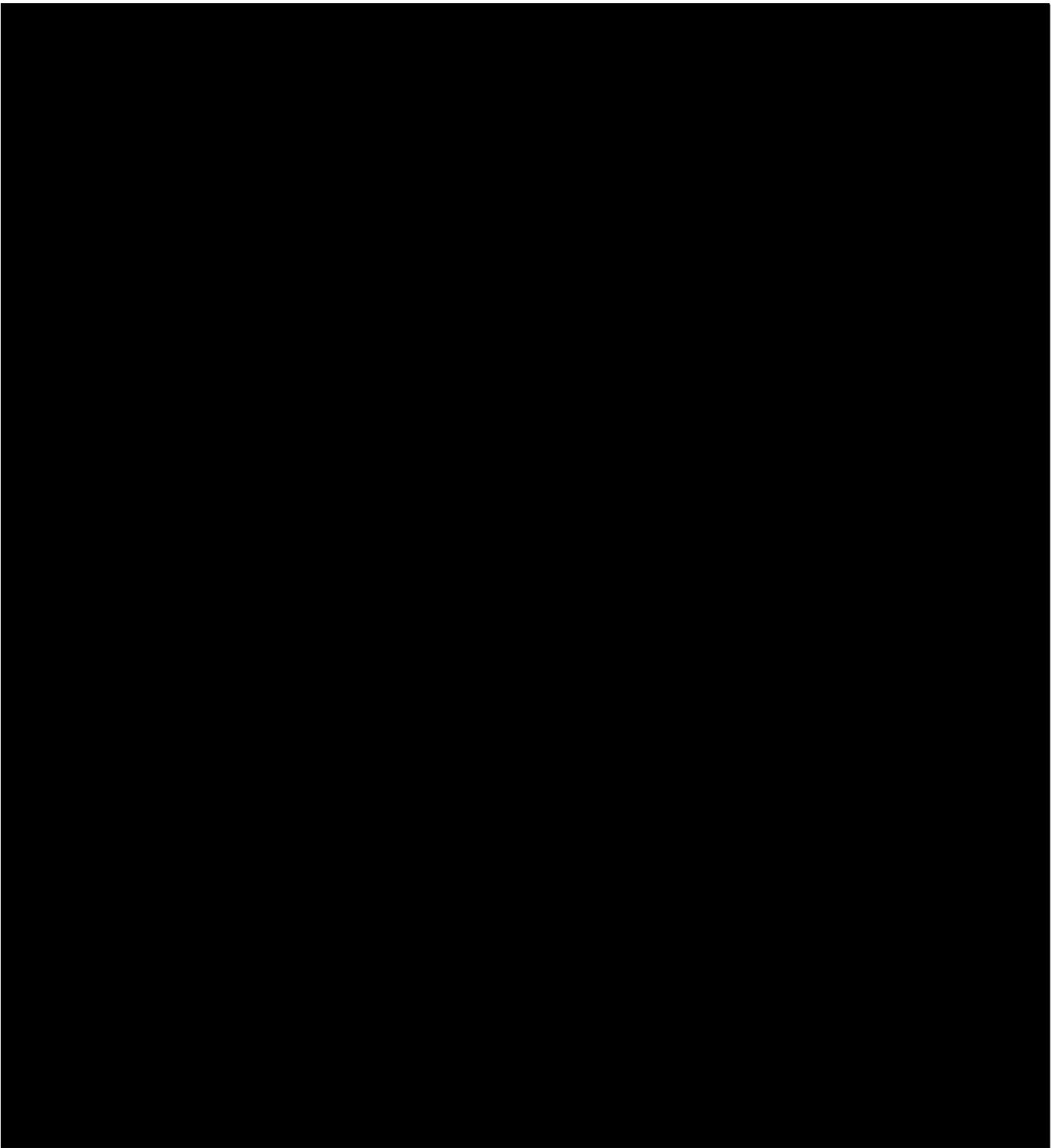
CRITICAL HUB NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS
May 31, 2008



CRITICAL HUB NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS
May 31, 2008



RSM! ROC & Company

Certified Public Accountants & Consultants

Critical Hub Networks, Inc.

Financial Statements
May 31, 2007 and 2006

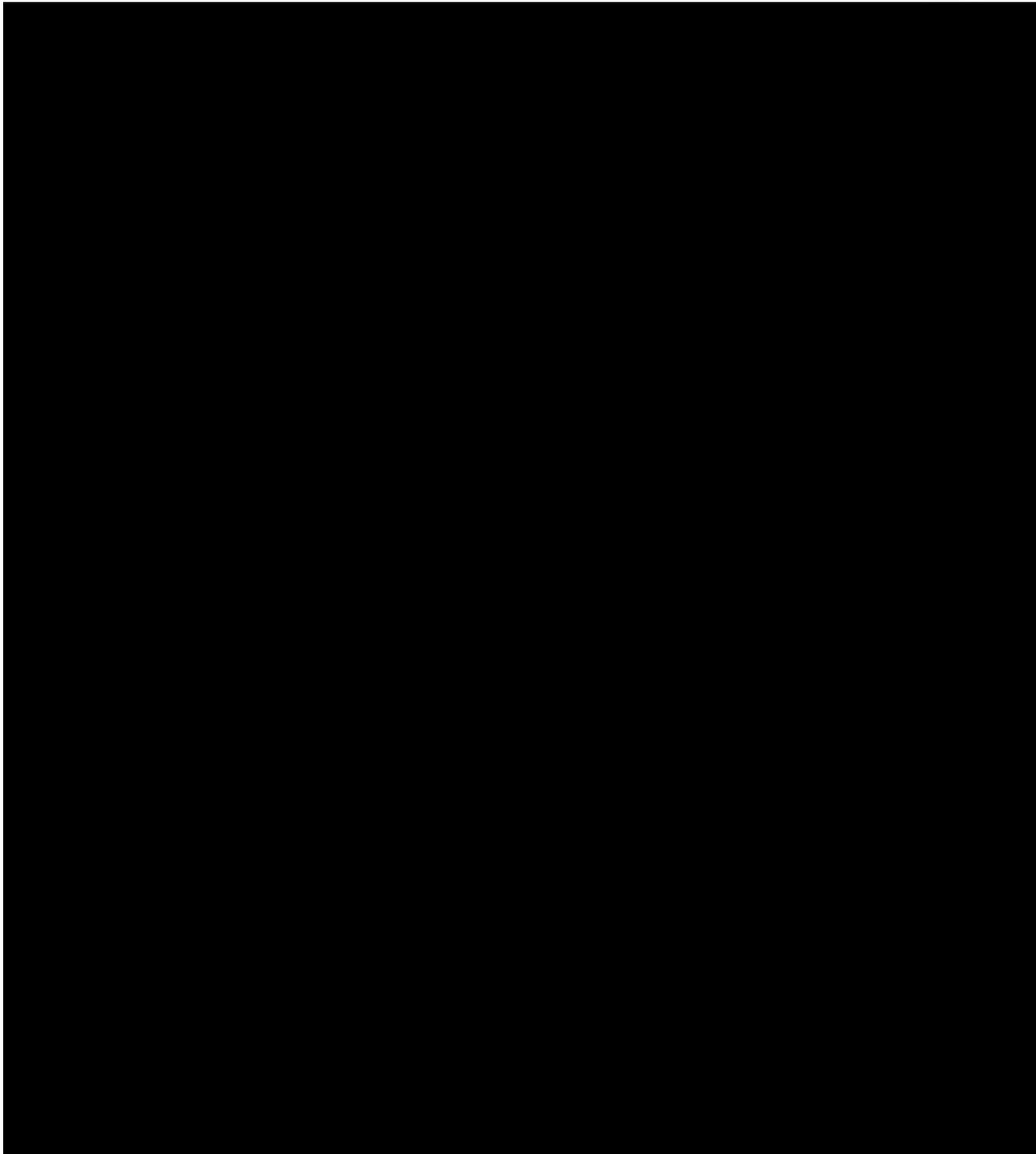


CRITICAL HUB NETWORKS, INC.

BALANCE SHEETS
May 31, 2007 and 2006

2007

2006



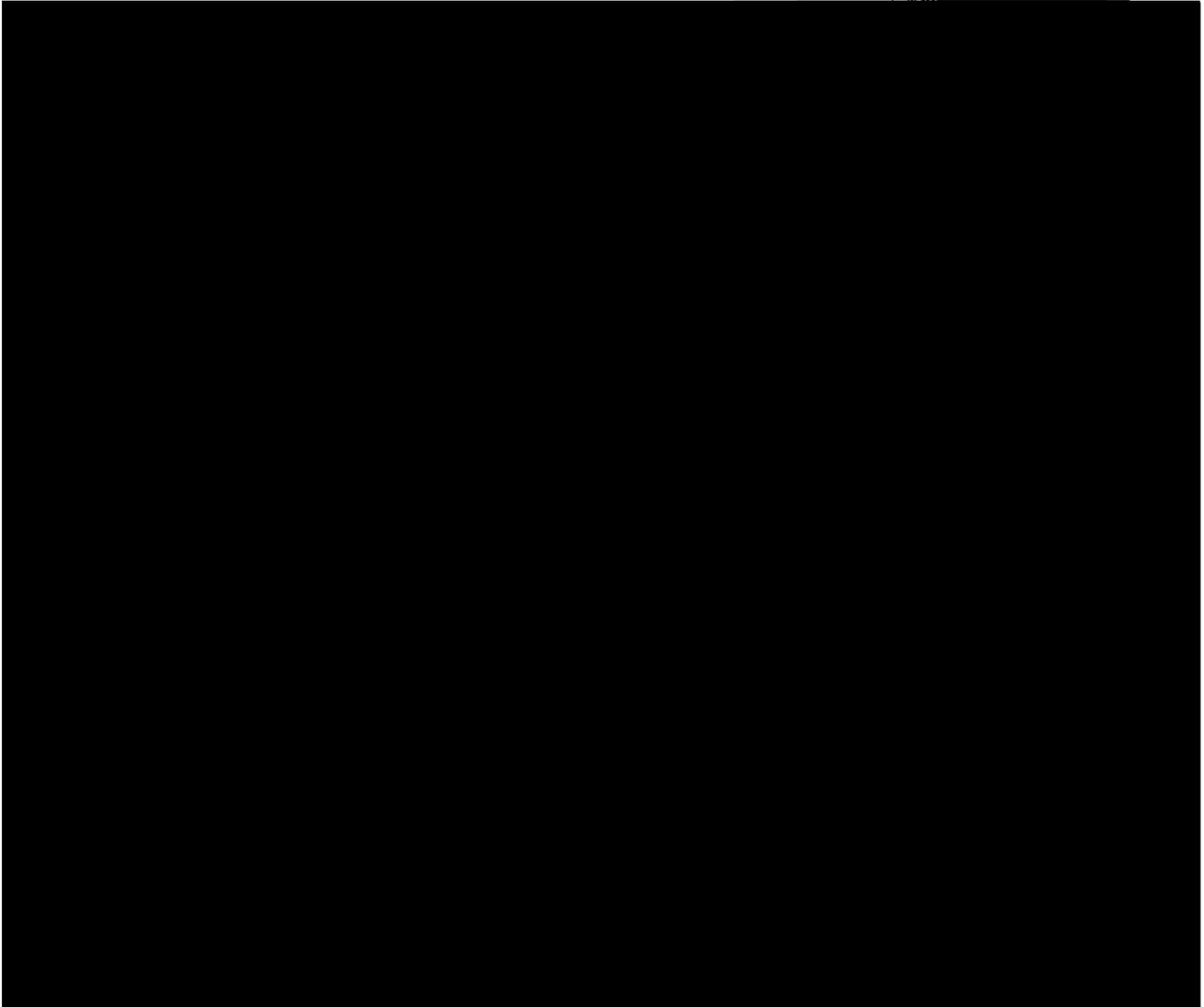
CRITICAL HUB NETWORKS, INC.

STATEMENTS OF INCOME AND RETAINED EARNINGS

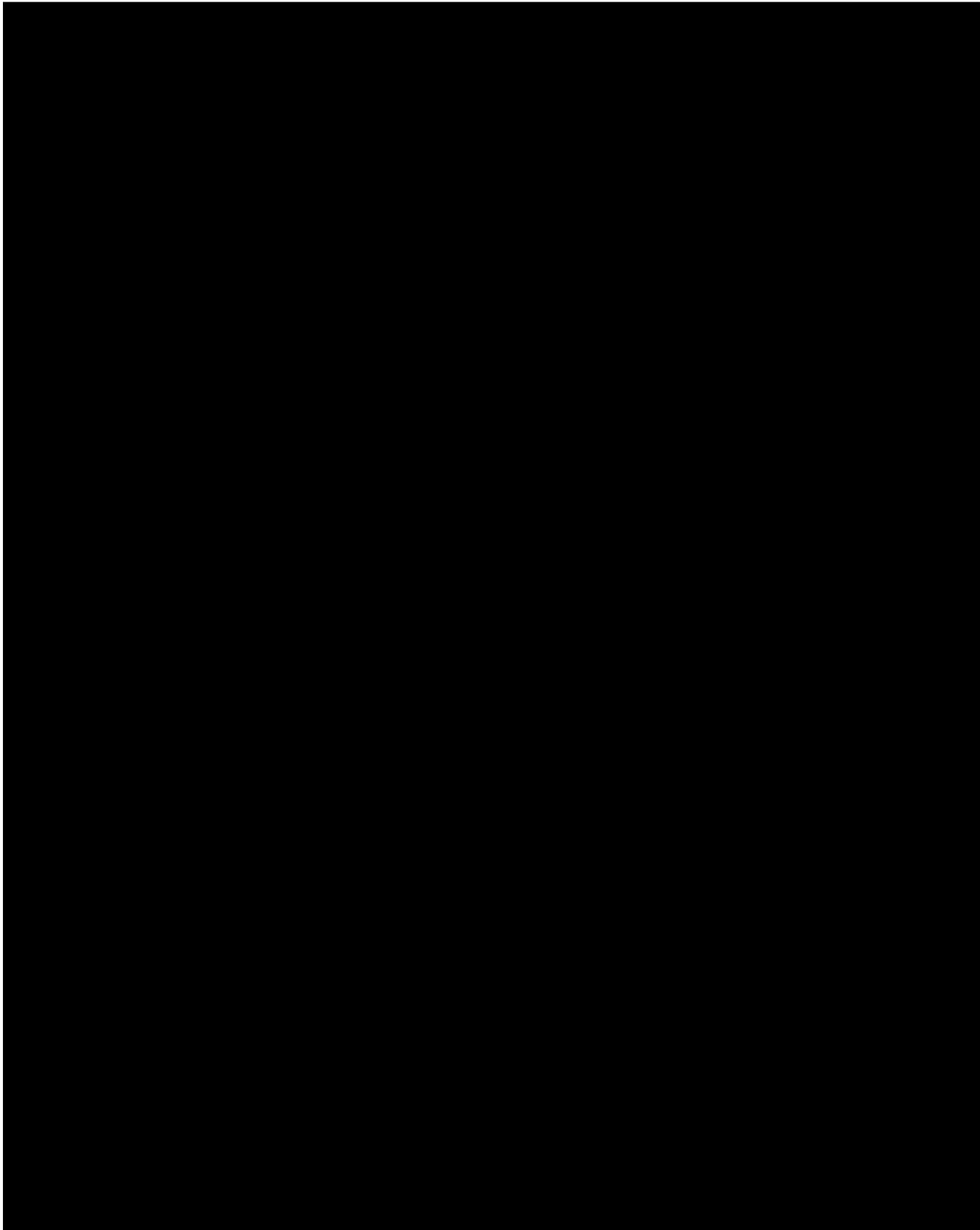
For the years ended May 31, 2007 and 2006

2007

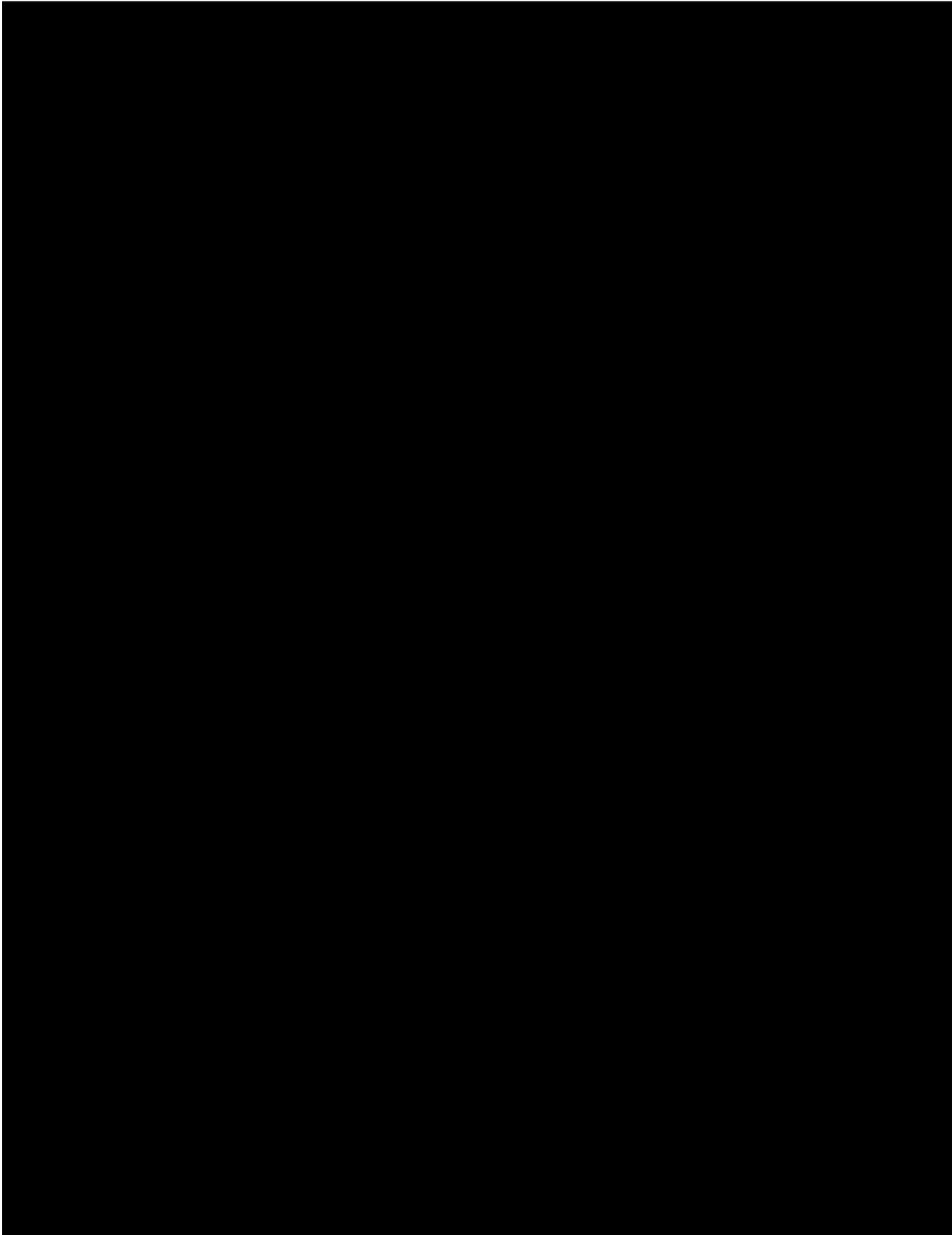
2006



CRITICAL HUB NETWORKS, INC.

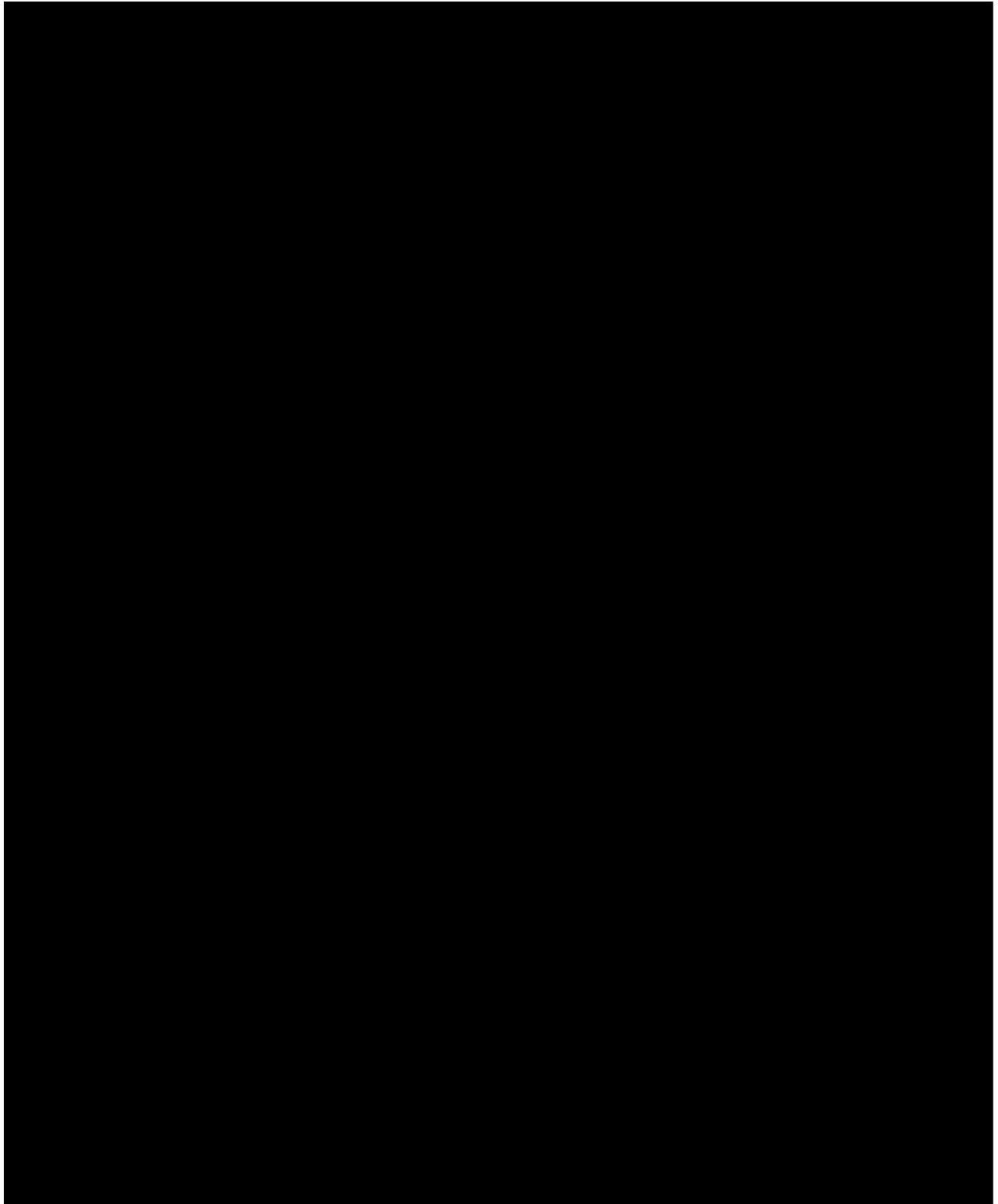


CRITICAL HUB NETWORKS, INC.



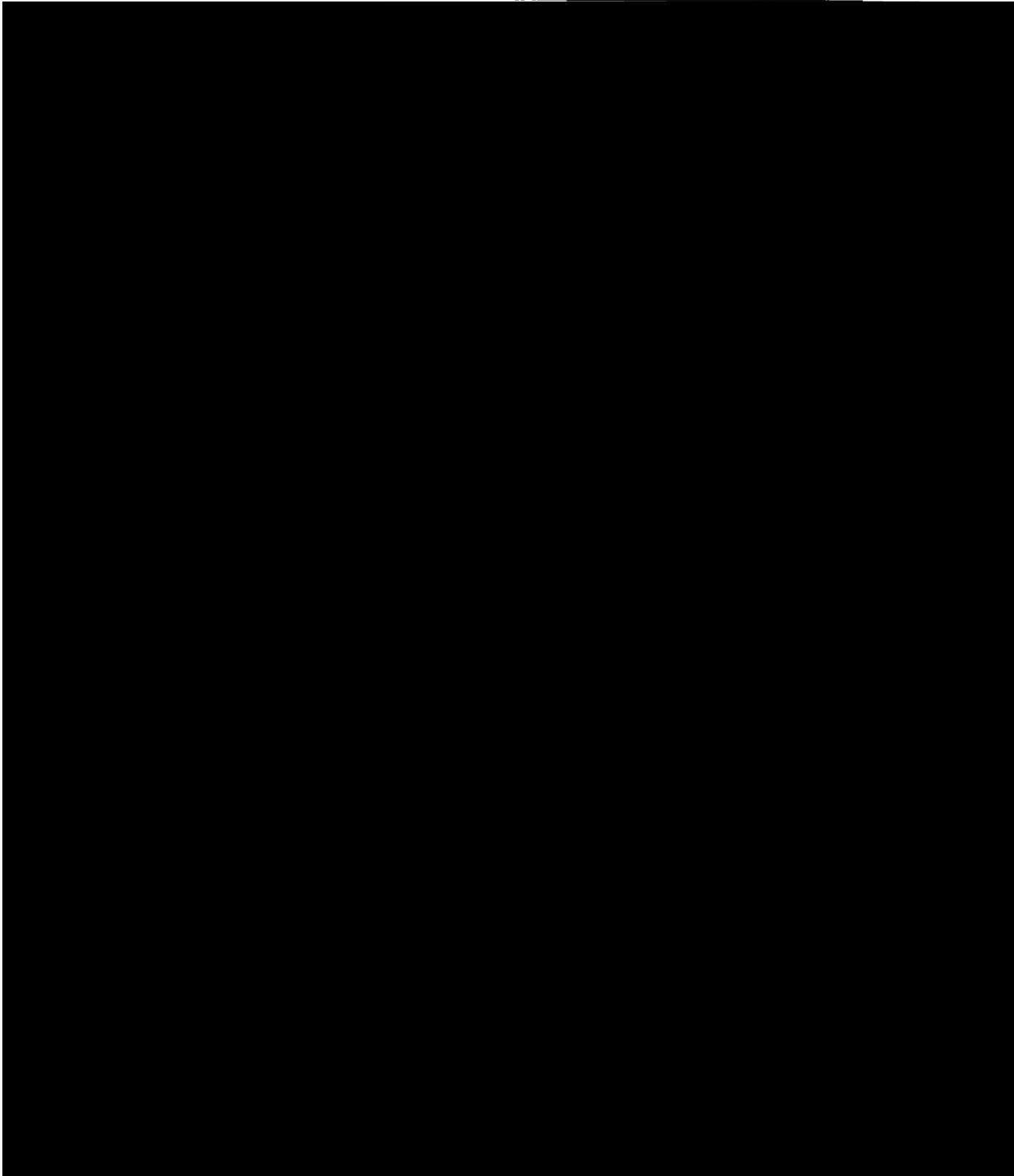
CRITICAL HUB NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS
May 31, 2007 and 2006



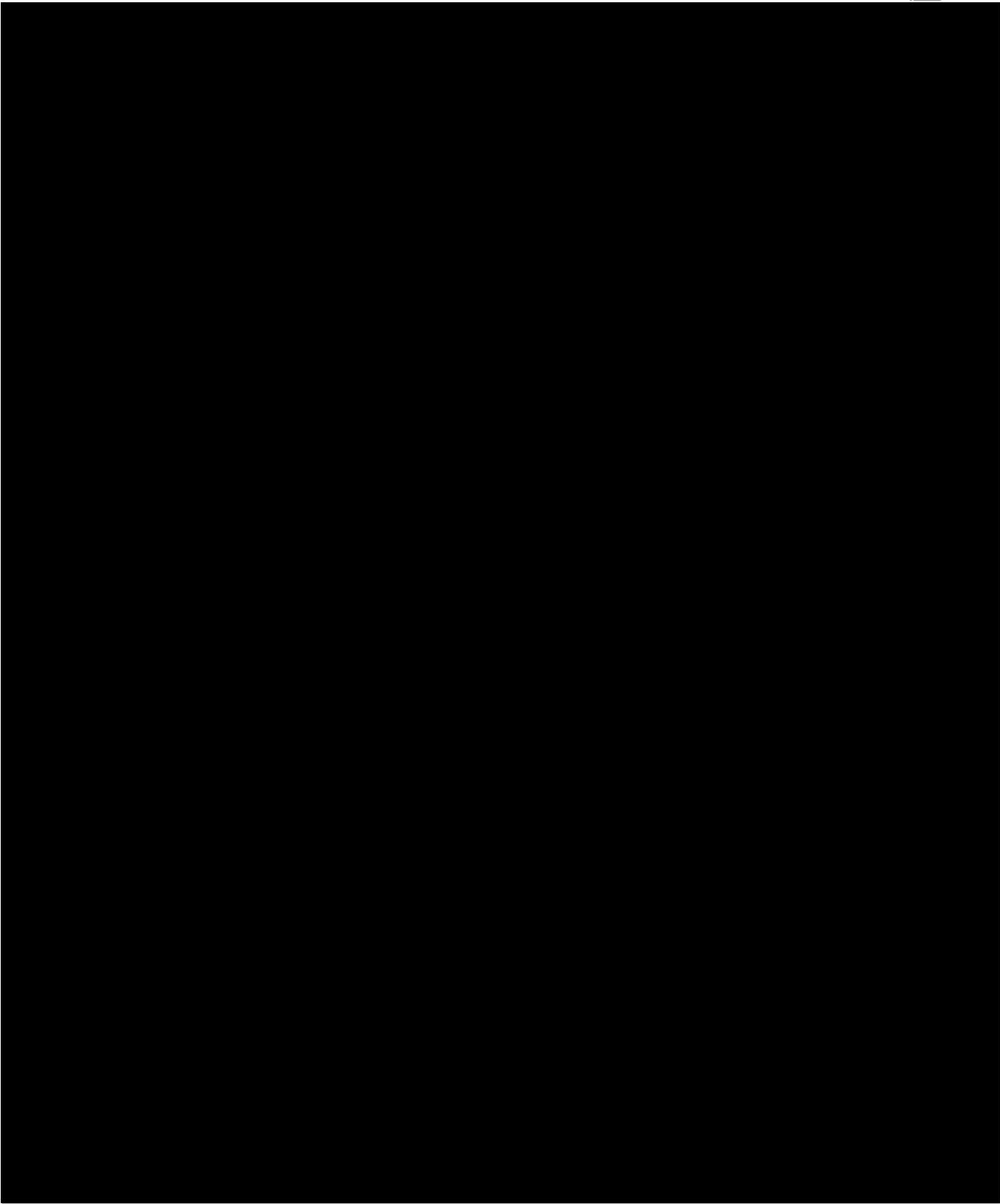
CRITICAL HUB NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS
May 31, 2007 and 2006



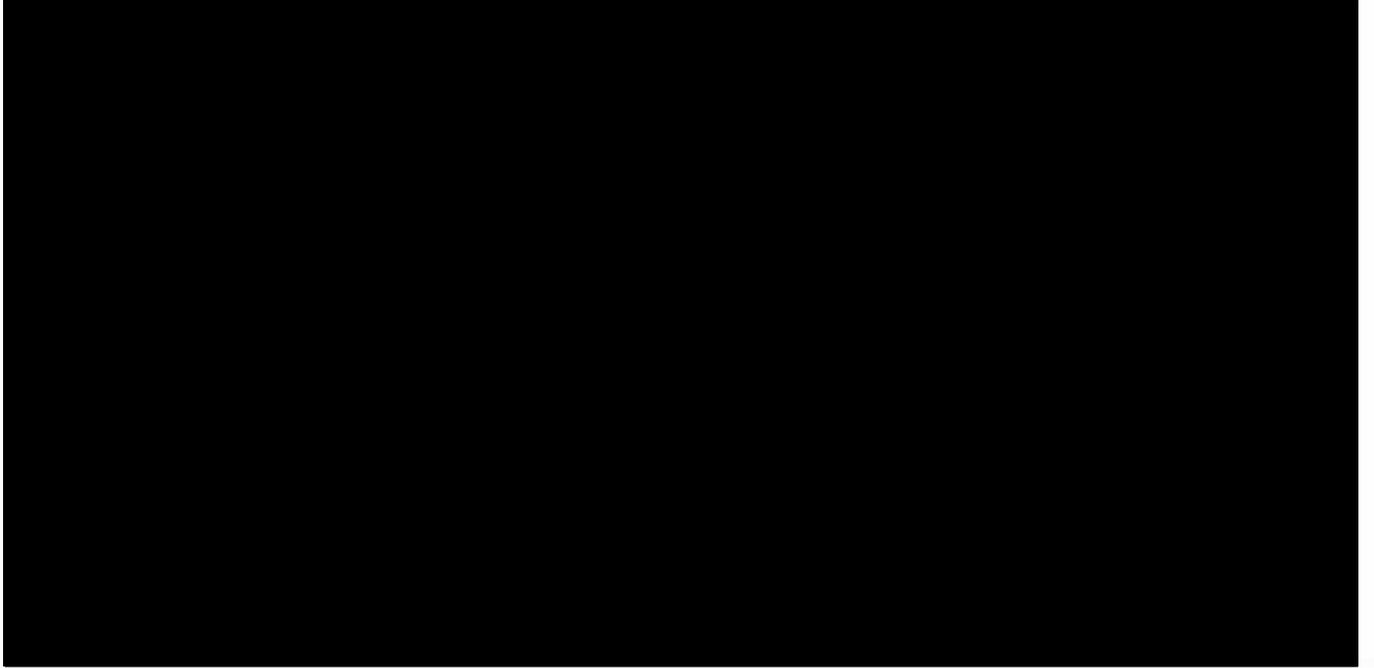
CRITICAL HUB NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS
May 31, 2007 and 2006



CRITICAL HUB NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS
May 31, 2007 and 2006



Q48. Broadband Subscriber Estimates (Attachment H)

The Puerto Rico Bridge Initiative has signed agreements with several Puerto Rico ISPs/broadband providers which commits them to using the PRBI network if it is funded and constructed. In addition, we have received letter of support from additional Puerto Rico ISPs/broadband providers. We are confident that the majority of these ISPs will use the PRBI if its funded. Due to the competitive nature of the BTOP grant program and the pending proposals for projects by other Puerto Rico ISPs/broadband providers gave us their verbal support, but were unable to provide a letter of support. Critical Hub Networks, Inc. also did not contact several ISPs, including Puerto Rico Telephone Company (PRTC), the incumbent telephone company/DSL provider, because we believe they would not initially support the project as it will create additional competition. If the project is funding, we will work to connect all ISPs to the PRBI, including PRTC.

Below is a summary of Puerto Rico's ISPs, their level of commitment to the PRBI, and their last-mile broadband coverage areas.

AeroNet Network – Wireless Broadband Provider. AeroNet has one of the largest wireless networks on the island, and they have signed an agreement to connect to the PRBI once its constructed.

AWS Communications - Wireless Broadband Provider. AWS is also the owners and operators of 27 towers located on the island interior, many in rural and underserved areas. In addition to renting tower access to other ISPs, AWS also offers custom broadband services, including services to rural and unserved areas which cannot be reached by traditional broadband service providers. AWS has signed an agreement to connect to the PRBI once its constructed.

Ayustar – Wireless Broadband Provider. Ayustar offers broadband services in the San Juan and Caguas municipalities. Ayustar has been operating for over 10 years.

Caribe.Net – Wireless and in-building DSL Provider. PRBI is a project of Critical Hub Networks, owners of Caribe.Net. Founded in 1994 as Puerto Rico's first ISP, Caribe.Net will use the PRBI to provide service to its own customers as well. Caribe.Net has a base of broadband customers that will benefit immediately from this infrastructure. Caribe.Net will also deploy infrastructure to offer broadband services into unserved & underserved areas of Puerto Rico it has yet to discover. Caribe.Net offers broadband services in San Juan, Bayamon, Guaynabo, Carolina, Toa Baja, Trujillo Alto, Caguas, Mayaguez and Ponce.

CibucoNet – Wireless Broadband Provider. CibucoNet offers broadband access to rural, hard to reach areas of Puerto Rico, including communities in the municipalities of Morovis, Corozal, Naranjito and Orocovis.

Culebra.Net – Wireless Broadband Provider. Culebra.Net offers service on the island of Culebra. They are able to provide access to 100 households on the island via 1Mb connection they have through a Puerto Rico ISP through a microwave connection from Fajardo to Culebra. They pay over \$2,500 per month for their Internet backhaul & transit costs. Culebra.Net has signed an agreement to connect to the PRBI once its constructed.

XAirNet (also known as Expert Networks) – Wireless Broadband Provider. XAirNet provides broadband services in the area of Arecibo, Camuy, Hatillo, and Bajadero. They are struggling with the high cost of bandwidth.

Choice Cable – Cable TV/Broadband Provider. One of the islands three cable TV providers, their licensed service area provides access to some of the more economically depressed areas of Puerto Rico. Choice offers broadband & cable services in the municipalities of Quebradillas, Isabela, Aguadilla, Moca, Aguada, Rincon, Añasco, Las Marias, Mayaguez, Las Marias, Maricao, Hormigueros, Cabo Rojo, Lajas, San German, Sabana Grande, Guanica, Yauco, Adjuntas, Peñuelas, Ponce, Jayuya, Juana Diaz, Villalba, Coamo, Santa Isabel, Guayama, Arroyo, Patillas and Maunabo. They do not provide broadband service to their entire licensed service area yet, but are planning to expand their network into rural and unserved communities.

PRW.Net – DSL Broadband Provider. PRW.Net offers DSL services through the network of the Puerto Rico Telephone Company (PRTC), the incumbent local exchange carrier (iLEC). PRW.Net uses a DSL loop for the last mile, and their own network Internet network for transit to the backbone. PRW is the last remaining ISP to resell PRTC DSL loops, and PRTC no longer offers this service to ISPs. PRW.Net’s DSL coverage area is PRTC’s entire DSL coverage area. PRTC advertises service in the entire island, however they advise you when you apply for service if they can or cannot provide the services to your home. According to comments submitted by PRTC to the NTIA and RUS in April 13, 2009, PRTC stated that “approximately 200,000 households have no access whatsoever to telephone service due primarily to a lack of infrastructure”¹. PRW is planning a large network deployment of last-mile equipment. PRW.Net has signed an agreement to connect to the PRBI once its constructed.

XSkyNet - Wireless Broadband Provider. XSkyNet offers service in the small coastal towns of Las Piedras, Humacao, and Yabucoa. They are very interest in connecting to the PRBI network.

Voz de Puerto Rico – Wired/Wireless Broadband Provider. Voz is a broadband provider that specializes in Voice over IP services. They offer broadband services via wireless and wired T1/DS3 circuits for residential and business users. Voz has signed an agreement to connect to the PRBI once its constructed.

PRTC/Coqui.Net – DSL Broadband Provider. Puerto Rico Telephone Company (PRTC) is the incumbent local exchange carrier/telephone company of Puerto Rico. They are also owners of Coqui.Net, an Internet Service Provider. PRTC offers DSL services (“DMAX”). PRTC also owns CLARO, a cellular phone company which offers mobile wireless broadband services as well. PRBI did not seek yet PRTC’s support, as we understand they are preparing to apply for funding from RUS/NTIA and we believe they would not initially support the project as it will create additional competition. We are confident that they will connect to the PRBI.

WorldNet – CLEC/DSL Broadband Provider. WorldNet has shown interest in the PRBI project. They offer DSL broadband services (“Naked DSL”). They are collocated in many central offices (CO’s) of the iLEC, and they purchase access to unbundled copper pairs. We are confident that they will connect to the PRBI.

¹ <http://www.ntia.doc.gov/broadbandgrants/comments/7A93.pdf>

Liberty Cable - Cable TV/Broadband Provider. Liberty is the second largest cable TV provider of Puerto Rico. PRBI did not seek their support, as we know they are preparing to apply for funding from RUS/NTIA. However as soon as we are awarded the grant, we will be contacting them and emphatically seek their participation.

OneLink – Cable TV/Broadband Provider. OneLink is the largest Cable TV operator in Puerto Rico, serving the San Juan metropolitan area. PRBI did not seek yet their support, as they cover a predominantly urban area and we understand they are preparing to apply for funding from RUS/NTIA. However as soon as we are awarded the grant, we will be contacting them and emphatically seek their participation. We are confident that they will connect to the PRBI.

Centennial Communications – Mobile Wireless Broadband Provider (CDMA). Centennial is the largest cLEC of Puerto Rico. Centennial offers broadband services via their mobile CDMA technology. Due to their pending acquisition by AT&T, they were unable to discuss the project with us at this time. However as soon as we are awarded the grant, we will be contacting them, and we will emphatically seek their participation.

WinPR – Wireless Broadband Provider. WinPR offers broadband service in the following municipalities: Bayamon, Caguas, Canovanas, Carolina, Cataño, Corozal, Gurabo, Juncos, Las Piedras, Loiza, Naranjito, Rio Grande, San Juan, Toa Alta, Trujillo Alto, Viejo San Juan.

Department of Education. The Department of Education, who serves over 526,000 students with 45,260 teachers, has endorsed the PRBI, and is interested in using the PRBI infrastructure to deliver content to classrooms throughout Puerto Rico. PRBI will be working with them on a Virtual Classroom project.

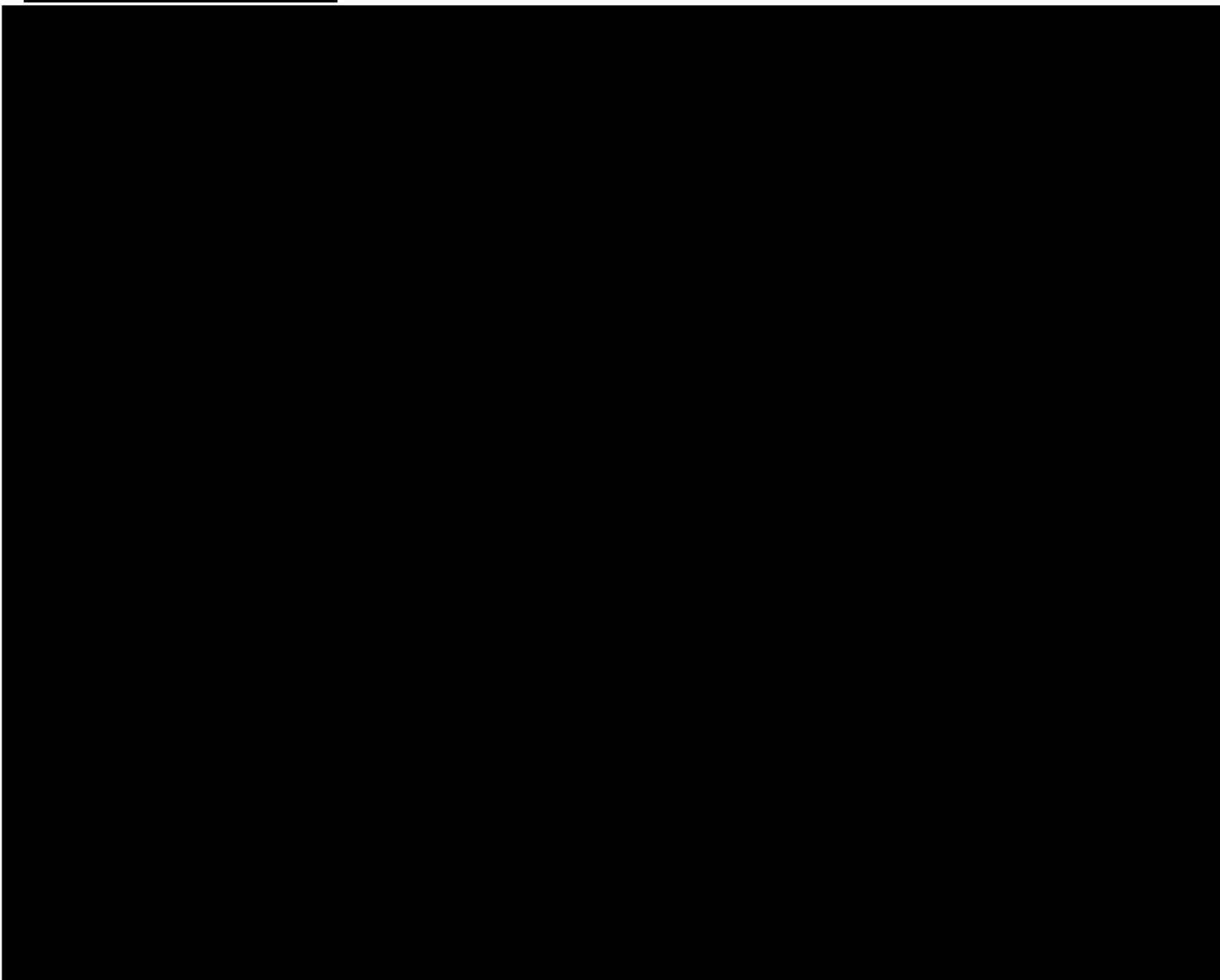
Broadband Subscriber Estimates & Attachment H. Our broadband subscriber estimates are based on reports and data provided by all broadband service providers that have showed interest in the project. Due to the clear economic savings, and the increased competition the PRBI will bring to ISPs in the island, we are very confident that the majority of ISPs will connect to the PRBI. We are also very encouraged that the restrictions we have put on the ISPs, including a the 25% discount to Health Care Providers, Education, and Community Anchor Institutions, as well as the Network Openness requirements have not been a deterrent for any ISP to use the PRBI.

ATTACHMENT H

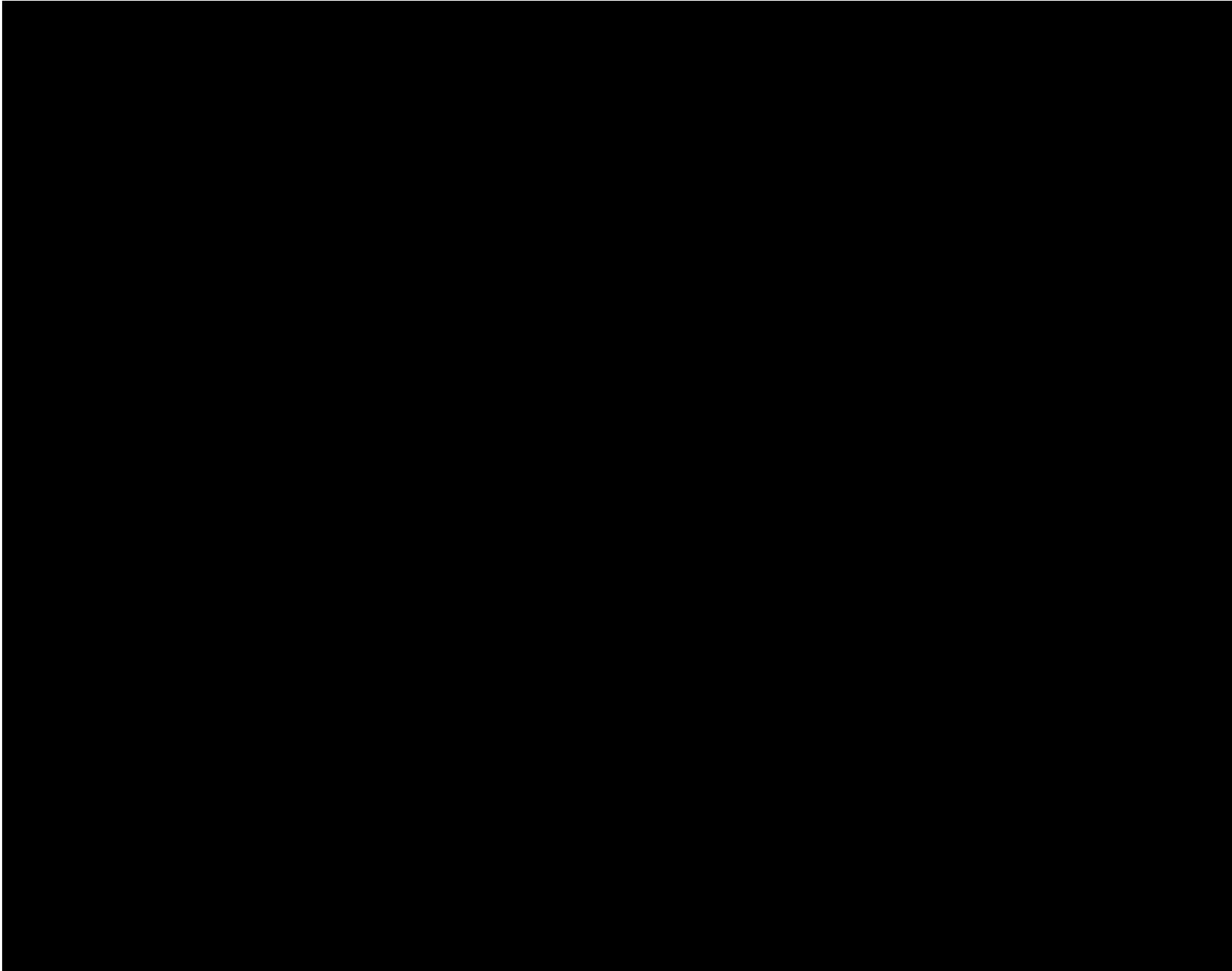
Household Subscribers	Year 0	Year 1				Year 2				Year 3				Year 4				Year 5			
		Qtr. 1	Qtr. 2	Qtr. 3	Qtr. 4																
<i>Service Type #1</i>																					
Bridge Transit for Broadband Providers (MPLS)																					
Net add-ons*	0	0	0	6	1	8	40	28	29	6	20	257	20	20	21	22	24	25	26	27	29
Cumulative subscribers*	0	0	0	6	7	15	55	83	112	118	138	395	415	435	456	478	502	527	553	580	609
<i>Service Type #2</i>																					
Bridge Transit for Public and non-Critical Anchor Institutions																					
Net add-ons*	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative subscribers*	0	0	0	0	1	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
<i>Service Type #3</i>																					
Bridge Transit for Community Anchor Institutions, Critical community facilities and those serving the vulnerable populations																					
Net add-ons*	0	0	0	15	6	10	17	19	33	2	34	31	0	0	1	1	0	0	2	0	0
Cumulative subscribers*	0	0	0	15	21	31	48	67	100	102	136	167	167	167	168	169	169	169	171	171	171
<i>Service Type #4</i>																					
Bridge Peering in Puerto Rico only																					
Net add-ons*	0	0	0	5	3	3	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Cumulative subscribers*	0	0	0	5	8	11	12	13	14	15	16	17	17	17	17	17	17	17	17	17	17

* in thousands

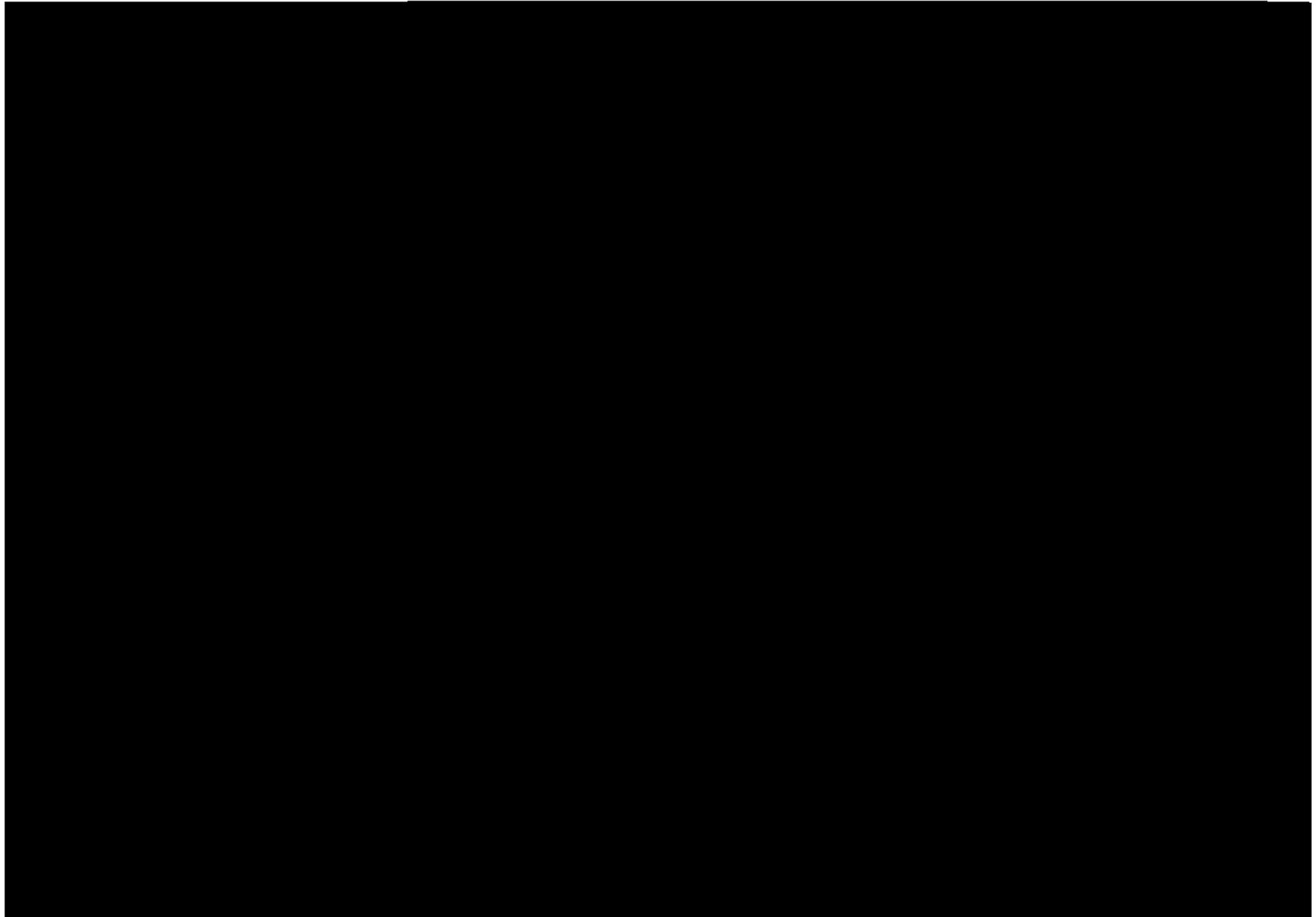
Income Statement



Balance Sheet

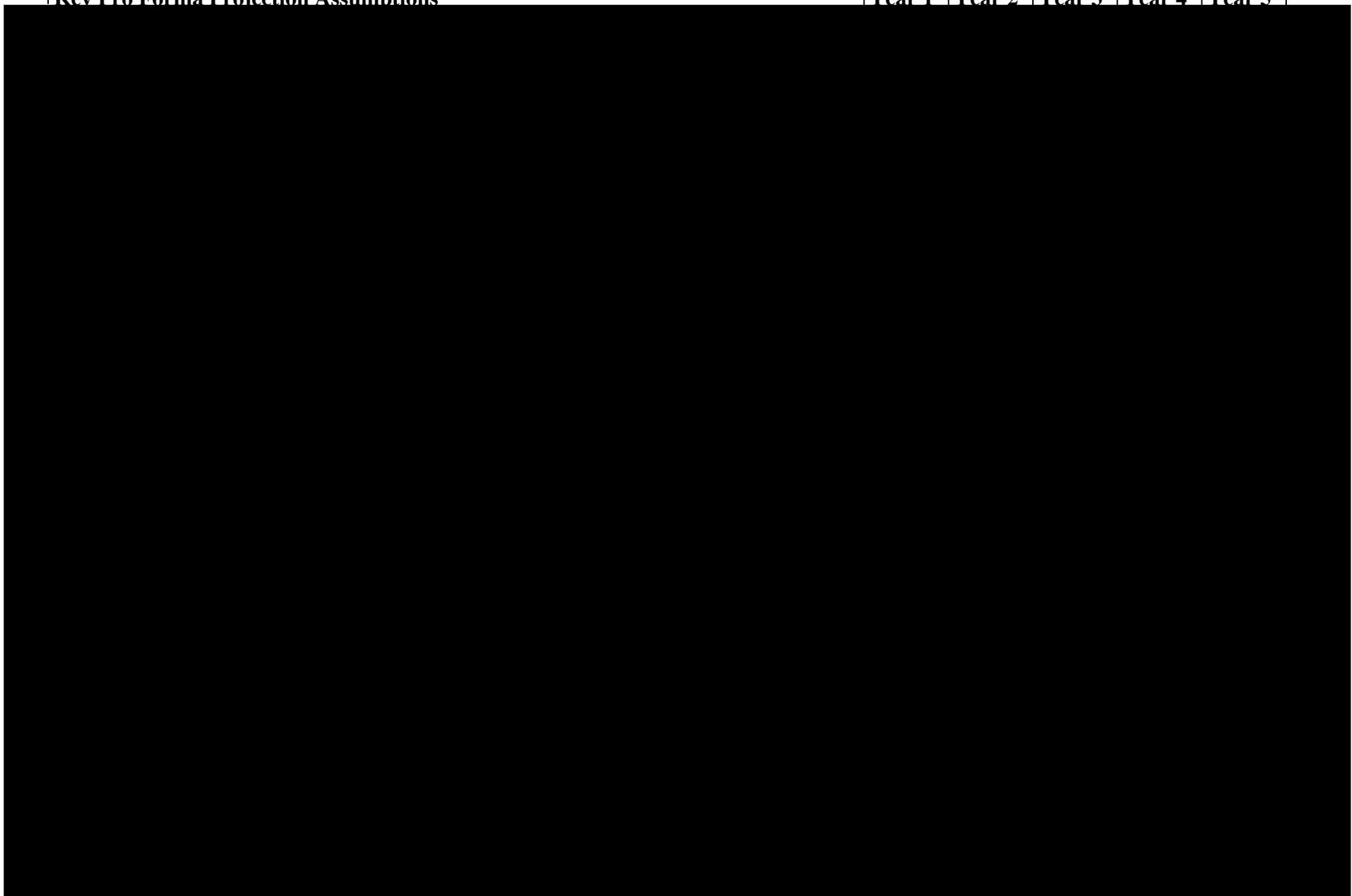


Statement of Cash Flows



Puerto Rico Bridge Initiative – Question 50

Key Pro Forma Projection Assumptions	Year 1	Year 2	Year 3	Year 4	Year 5
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Certification Requirements for BTOP

U.S. Department of Commerce
Broadband Technology Opportunities Program

I certify that I am the duly authorized representative of the applicant organization, and that I have been authorized to submit the attached application on its behalf. A copy of the applicant organization's authorization for me to submit this application as its official representative is on file in the applicant's office, and I am identified as the applicant organization's Authorized Organization Representative (AOR) in the Central Contractor Registration database. By signing this certification, I certify that the statements contained in the application are true, complete, and accurate to the best of my knowledge, and that if an award is made, the applicant organization will comply with all applicable award terms and conditions.

8/4/09
(Date)


(Authorized Representative's Signature)

Carlo Marozzi
Name:
President
Title:

**Broadband Infrastructure Application
Submission to RUS (BIP) and NTIA (BTOP)**

Certification Requirements BTOP

**U.S. Department of Commerce
Broadband Technology Opportunities Program**

(i) I certify that I am authorized to submit this grant application on behalf of the eligible entity(ies) listed on this application, that I have examined this application, that all of the information and responses in this application, including certifications, and forms submitted, all of which are part of this grant application, are material representations of fact and true and correct to the best of my knowledge, that the entity(ies) that is requesting grant funding pursuant to this application and any subgrantees and subcontractors will comply with the terms, conditions, purposes, and federal requirements of the grant program; that no kickbacks were paid to anyone; and that a false, fictitious, or fraudulent statements or claims on this application are grounds for denial or termination of a grant award, and/or possible punishment by a fine or imprisonment as provided in 18 U.S.C. § 1001 and civil violations of the False Claims Act.

(ii) I certify that the entity(ies) I represent have and will comply with all applicable federal, state, and local laws, rules, regulations, ordinances, codes, orders and programmatic rules and requirements relating to the project. I acknowledge that failure to do so may result in rejection or deobligation of the grant or loan award. I acknowledge that failure to comply with all federal and program rules could result in civil or criminal prosecution by the appropriate law enforcement authorities.

(iii) If requesting BTOP funding, I certify that the entity(ies) I represent has and will comply with all applicable administrative and federal statutory, regulatory, and policy requirements set forth in the DOC Pre-Award Notification, published in the Federal Register on February 11, 2008 (73 FR 7696), as amended; DOC Financial Assistance Standard Terms and Conditions (Mar. 8, 2009); DOC American Recovery and Reinvestment Act Award Terms (April 9, 2009); and any Special Award Terms and Conditions that are included by the Grants Officer in the award."

8/4/09
(Date)


(Authorized Representative's Signature)

Carlo Marazzi
Name
President
Title

ASSURANCES - CONSTRUCTION PROGRAMS

OMB Approval No. 4040-0009
Expiration Date 07/30/2010

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681 1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333) regarding labor standards for federally-assisted construction subagreements.
14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq).
18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

*SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL 	*TITLE President	
*APPLICANT ORGANIZATION Critical Hub Networks, Inc.	*DATE SUBMITTED 08-05-2009	

CERTIFICATION REGARDING LOBBYING

Applicants should also review the instructions for certification included in the regulations before completing this form. Signature on this form provides for compliance with certification requirements under 15 CFR Part 28, "New Restrictions on Lobbying." The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of Commerce determines to award the covered transaction, grant, or cooperative agreement.

LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 15 CFR Part 28, for persons entering into a grant, cooperative agreement or contract over \$100,000 or a loan or loan guarantee over \$150,000 as defined at 15 CFR Part 28, Sections 28.105 and 28.110, the applicant certifies that to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification.

NAME OF APPLICANT

Critical Hub Networks, Inc.

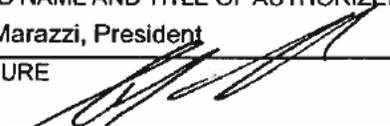
AWARD NUMBER AND/OR PROJECT NAME

Puerto Rico Bridge Initiative

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Carlo Marazzi, President

SIGNATURE



DATE

8/3/09

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure)

<p>1. Type of Federal Action: a. contract <u>b</u> b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance</p>	<p>2. Status of Federal Action: a. bid/offer/application <u>a</u> b. initial award c. post-award</p>	<p>3. Report Type: a. initial filing <u>a</u> b. material change</p> <p>For material change only: Year _____ quarter _____ Date of last report _____</p>
<p>4. Name and Address of Reporting Entity: <u>X</u> Prime _____ Subawardee Tier _____, if Known: Critical Hub Networks, Inc. PO Box 11278 San Juan, Puerto Rico 00910</p> <p>Congressional District, if known: PR At-large</p>	<p>5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:</p> <p>Congressional District, if known:</p>	
<p>6. Federal Department/Agency: U.S. Department of Commerce National Telecommunications and Information Administration</p>	<p>7. Federal Program Name/Description: Broadband Technology Opportunities Program (BTOP)</p> <p>CFDA Number, if applicable: <u>11.557</u></p>	
<p>8. Federal Action Number, if known: unknown</p>	<p>9. Award Amount, if known: \$ unknown</p>	
<p>10. a. Name and Address of Lobbying Registrant <i>(if individual, last name, first name, MI):</i></p> <p>none</p>	<p>b. Individuals Performing Services <i>(including address if different from No. 10a)</i> <i>(last name, first name, MI):</i></p>	
<p>11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.</p>	<p>Signature: </p> <p>Print Name: <u>Carlo Marazzi</u> Title: <u>President</u></p> <p>Telephone No.: <u>(787) 728-9000</u> Date: <u>August 4, 2009</u></p>	
<p>Federal Use Only</p>	<p>Authorized for Local Reproduction Standard Form - LLL (Rev. 7-97)</p>	

CERTIFICATION REGARDING LOBBYING LOWER TIER COVERED TRANSACTIONS

Applicants should review the instructions for certification included in the regulations before completing this form. Signature on this form provides for compliance with certification requirements under 15 CFR Part 28, "New Restrictions on Lobbying."

LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 15 CFR Part 28, for persons entering into a grant, cooperative agreement or contract over \$100,000 or a loan or loan guarantee over \$150,000 as defined at 15 CFR Part 28, Sections 28.105 and 28.110, the applicant certifies that to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

In any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

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NAME OF APPLICANT

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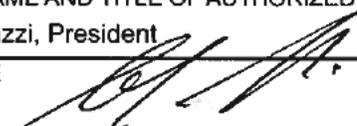
AWARD NUMBER AND/OR PROJECT NAME

Puerto Rico Bridge Initiative

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Carlo Marazzi, President

SIGNATURE



DATE

8/3/09

Supplemental Information 1 Appendix A

Memorandum of Understanding with:

[REDACTED]

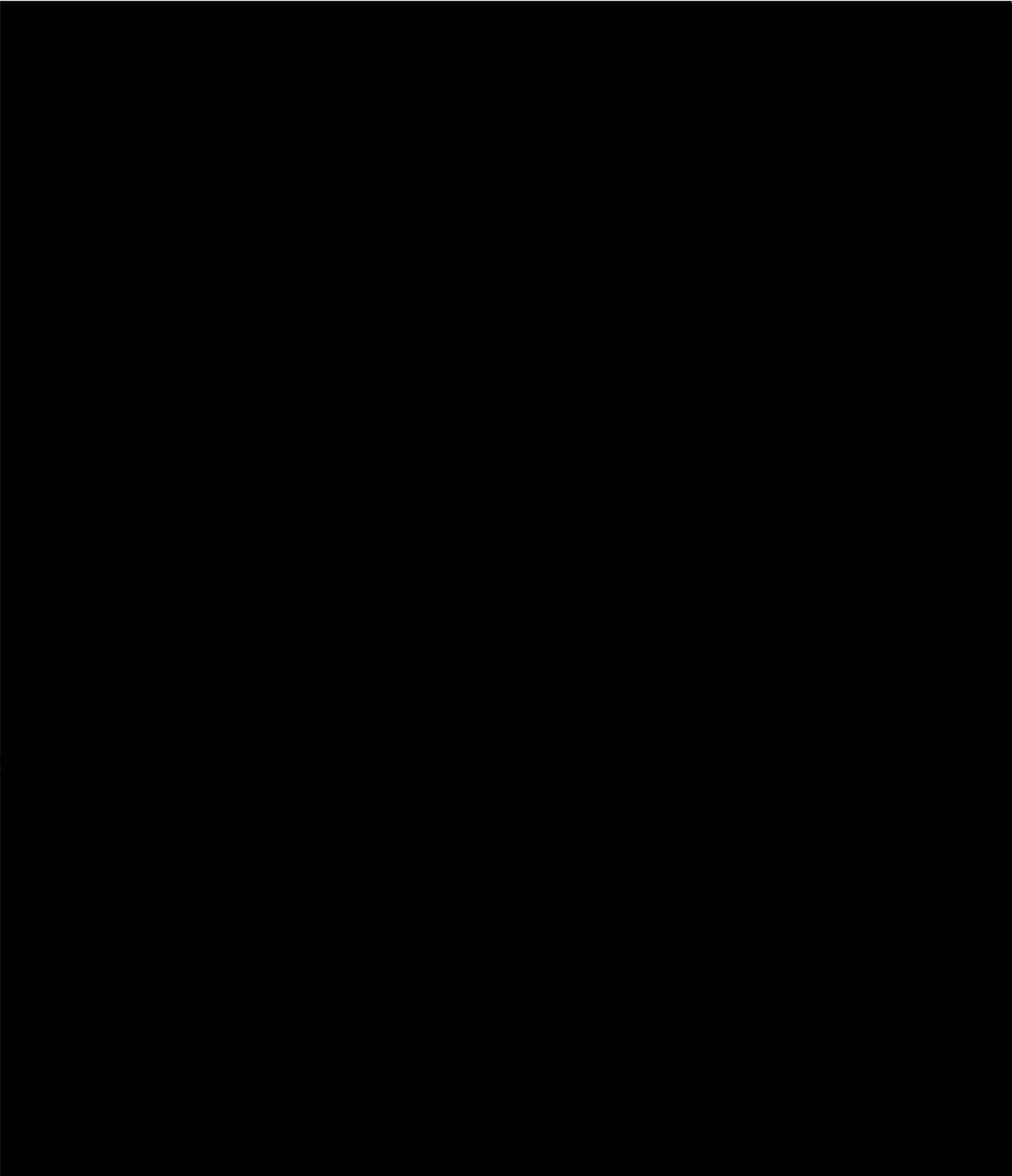
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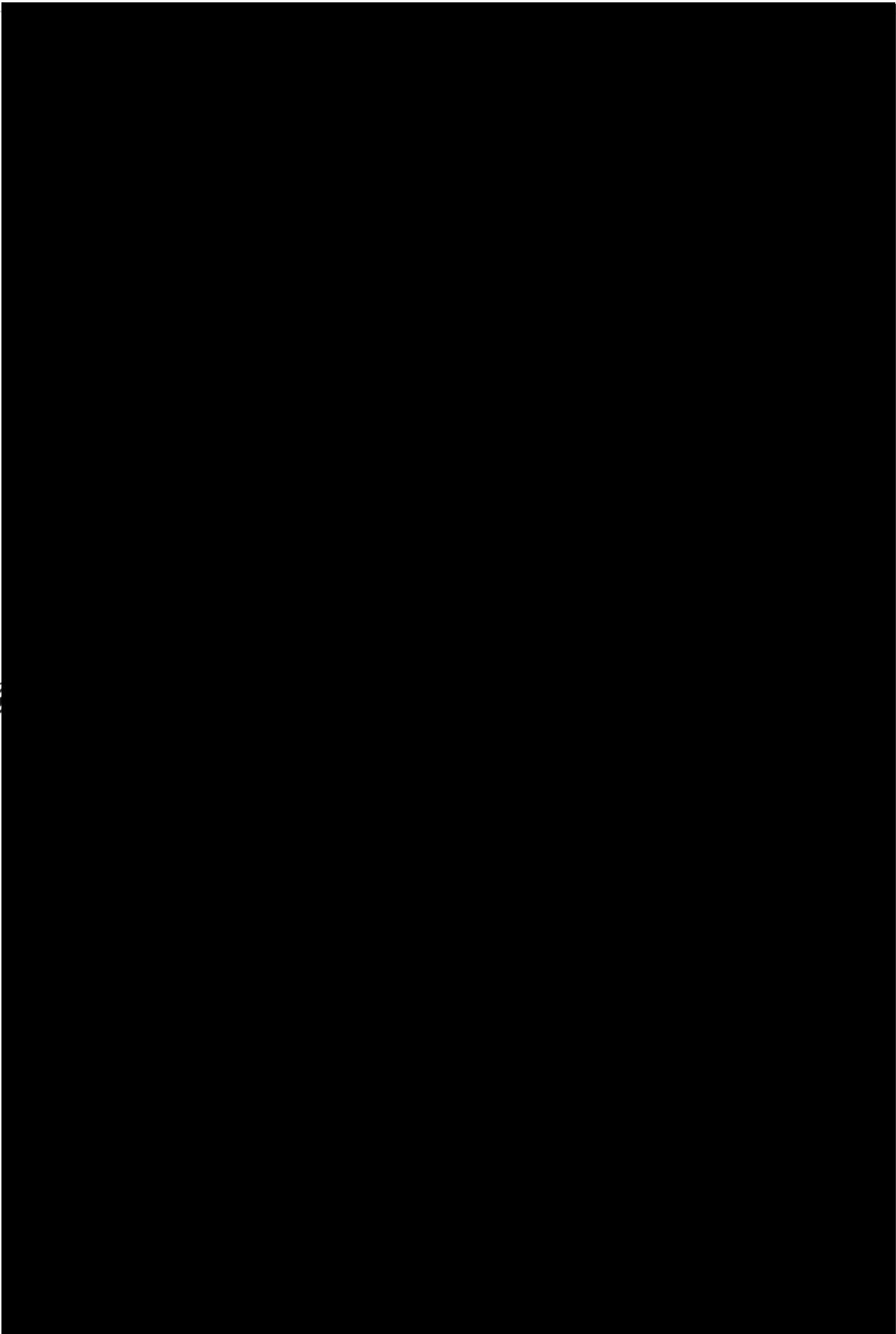
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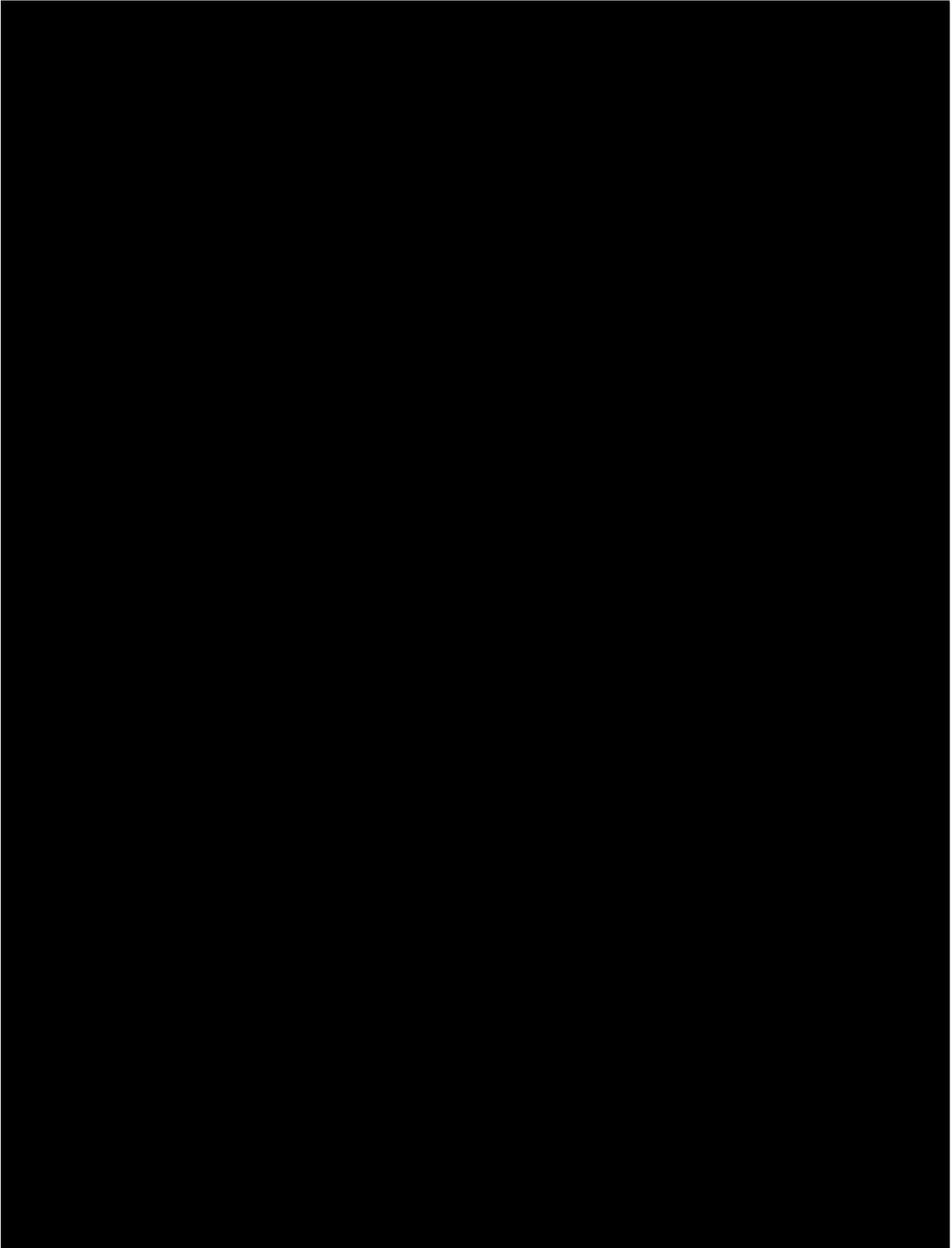
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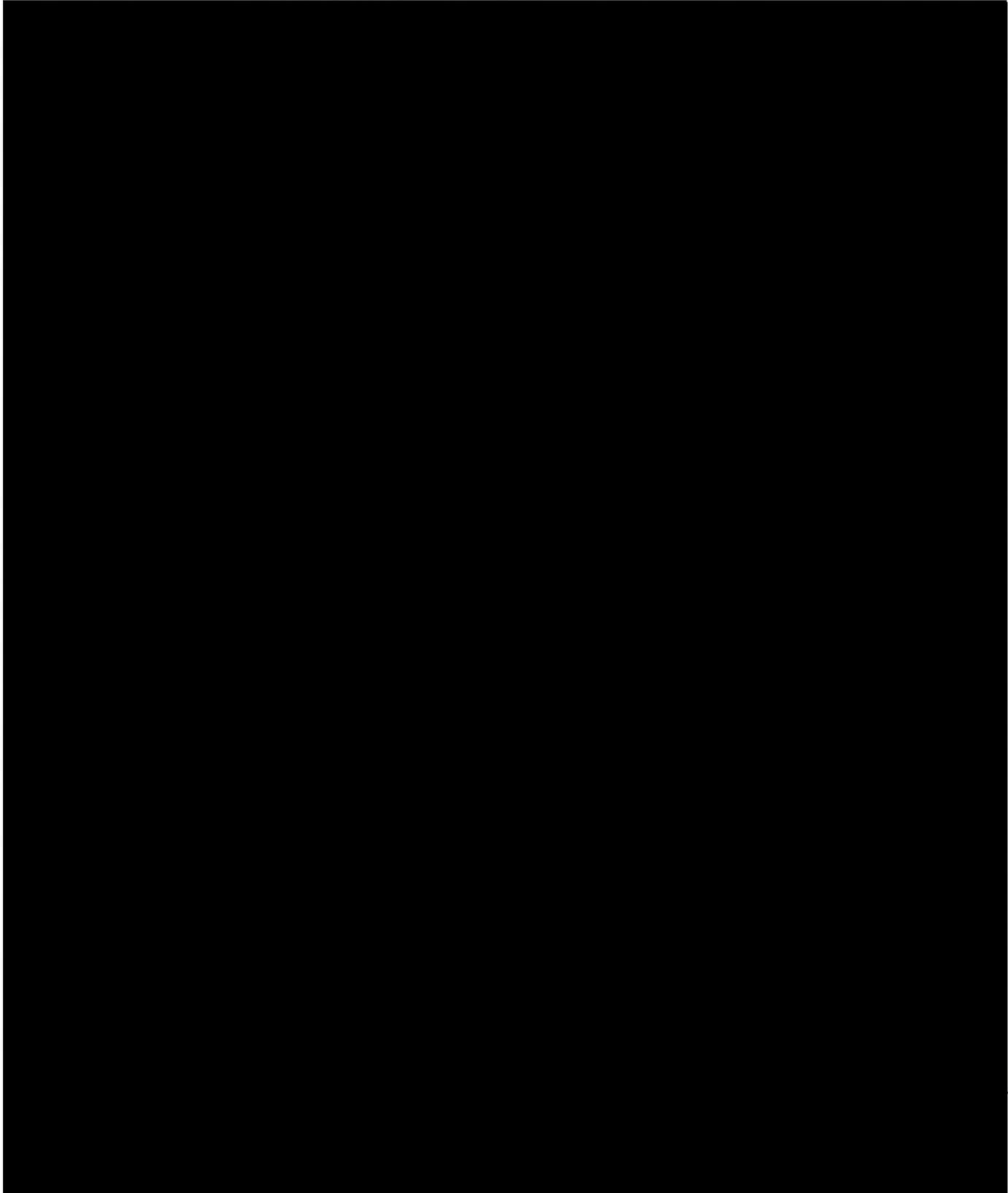


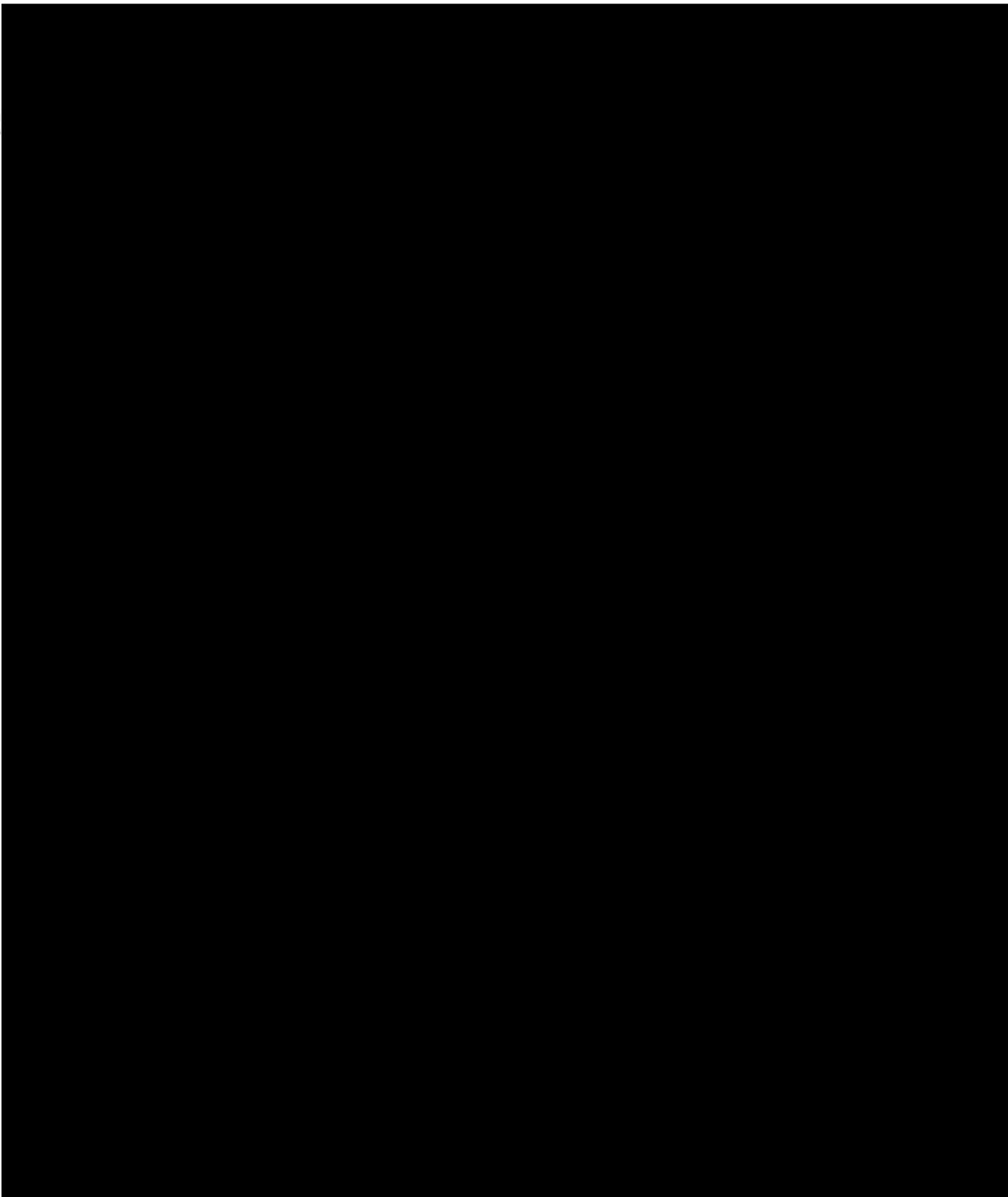


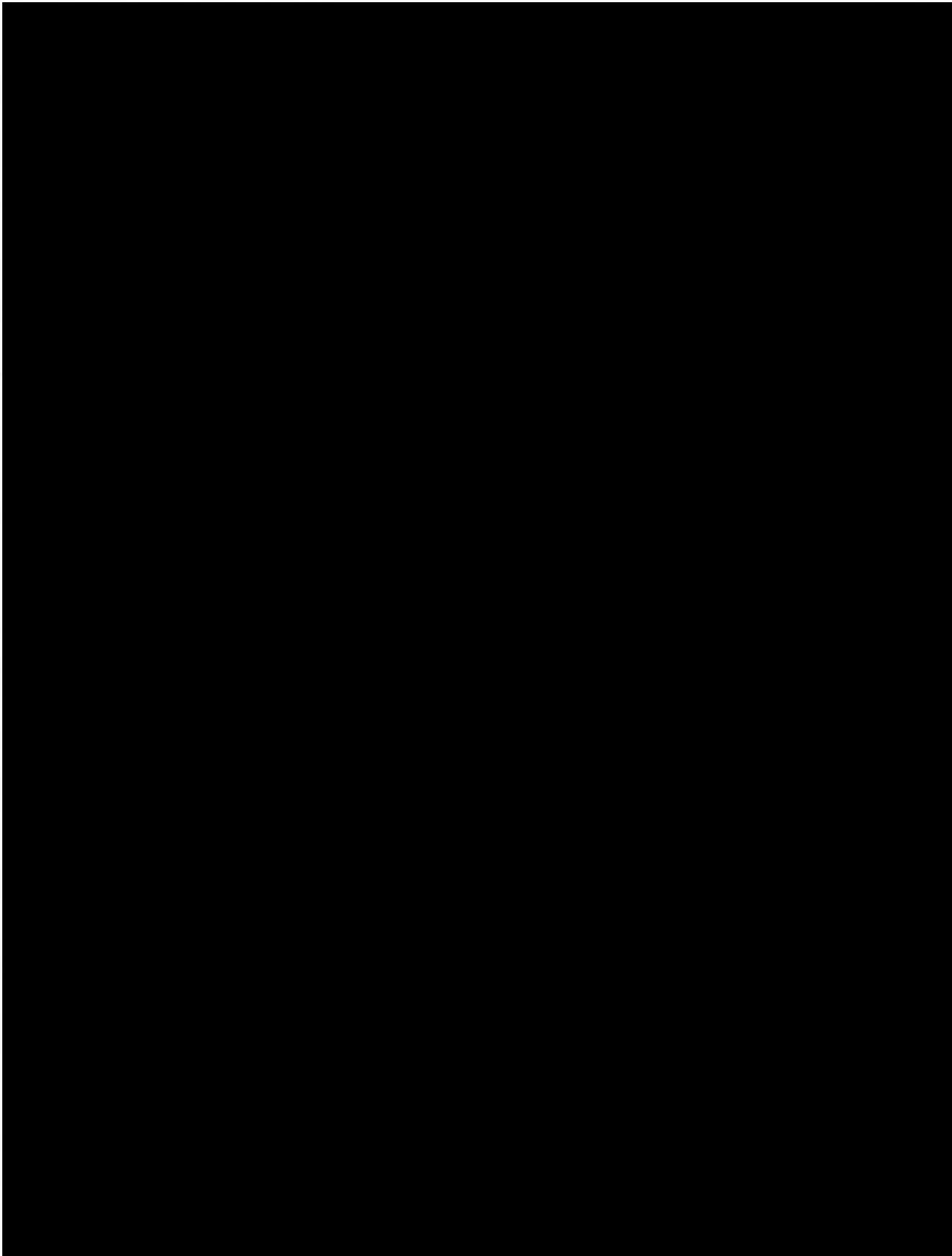
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**PUERTO RICO BRIDGE INITIATIVE
MEMORANDUM OF UNDERSTANDING**

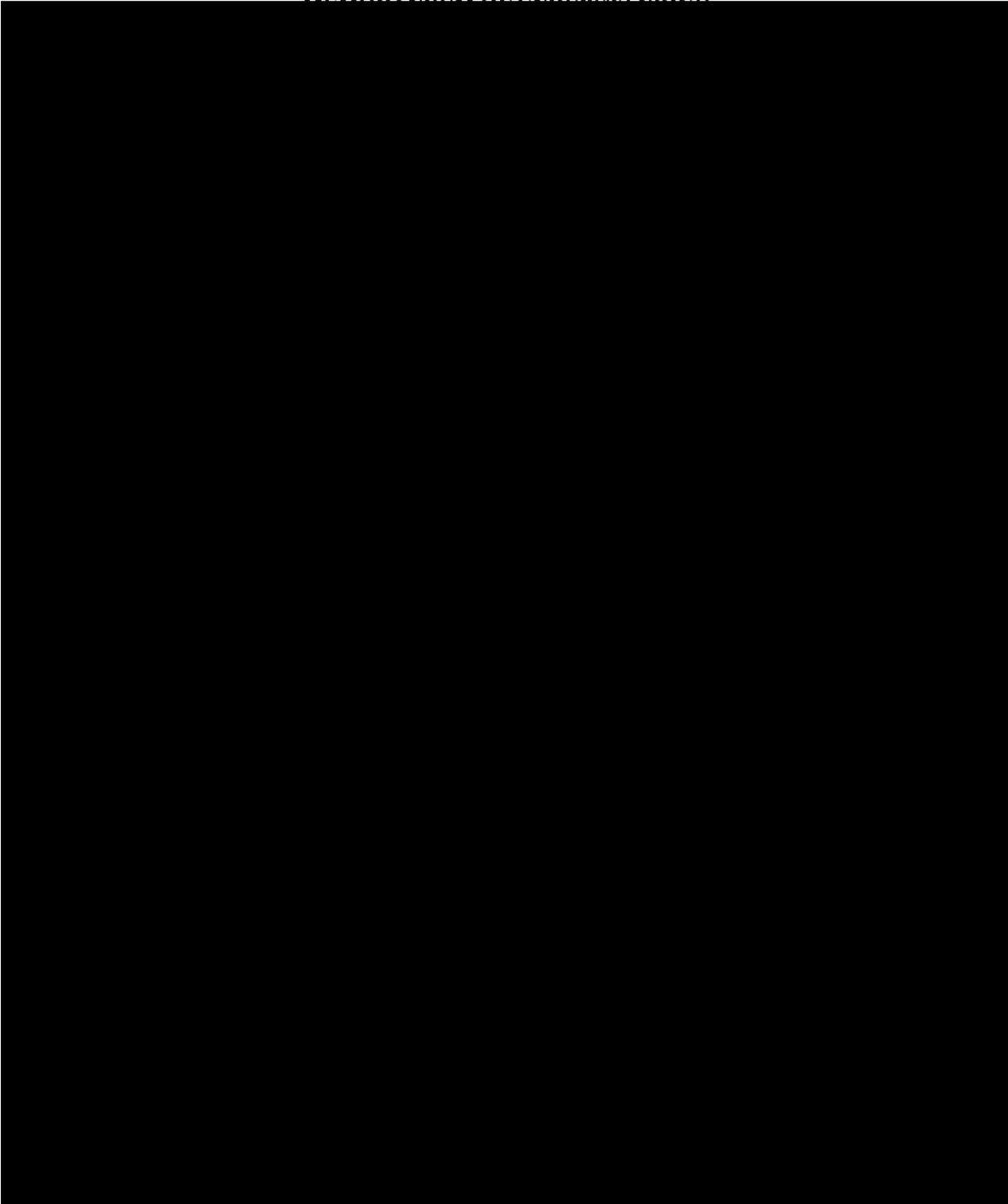






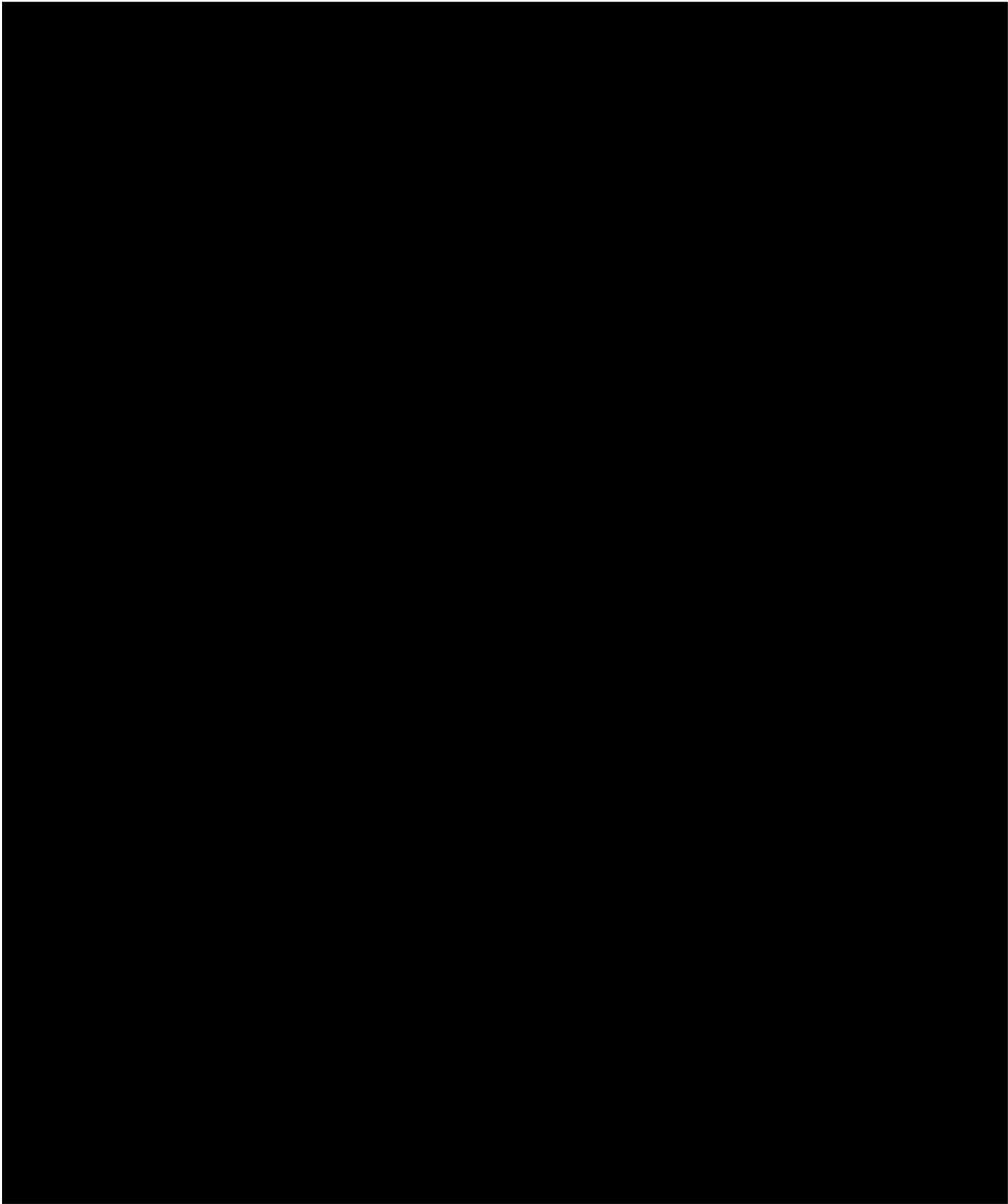
PUERTO RICO BRIDGE INITIATIVE

MEMORANDUM OF UNDERSTANDING

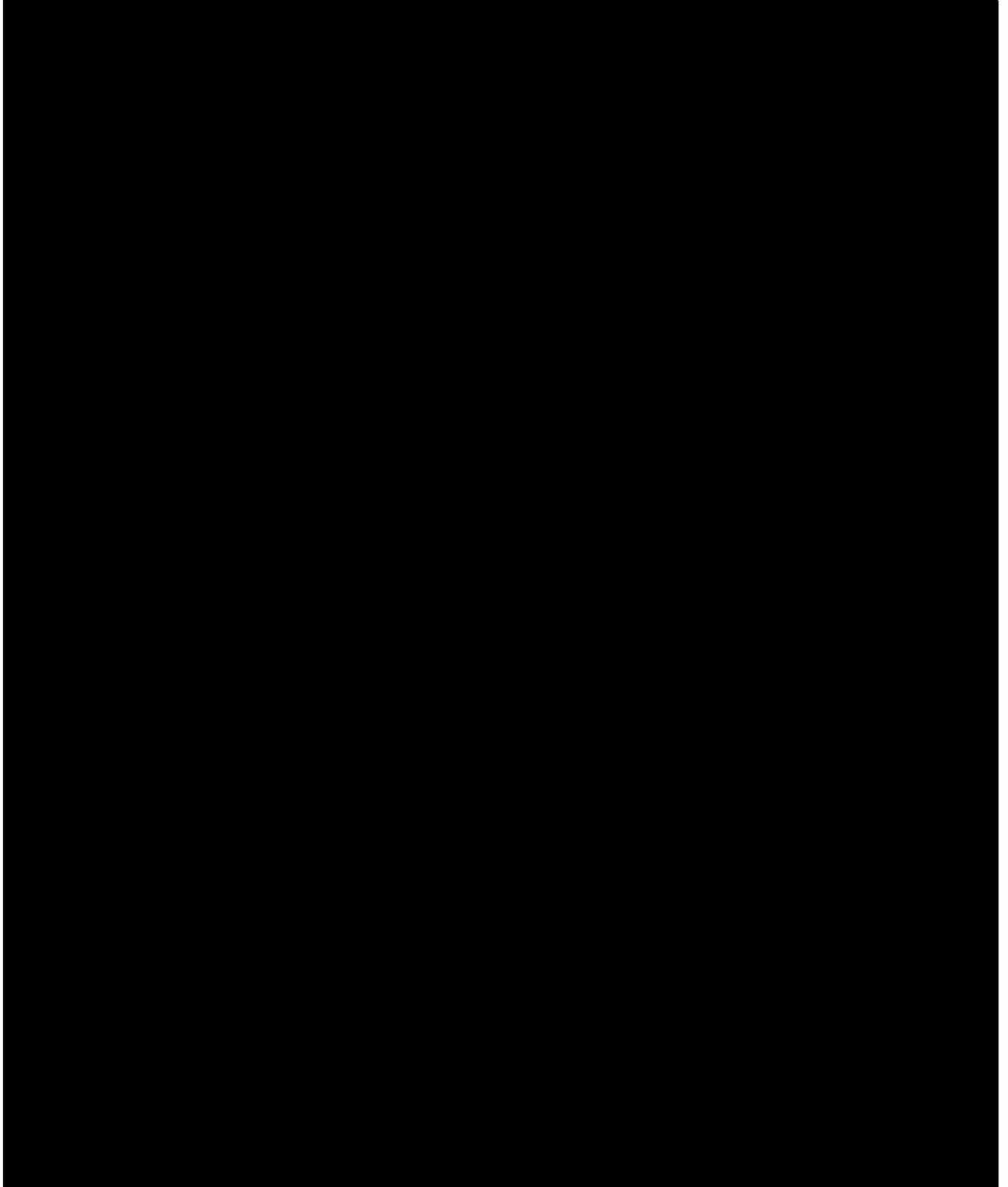


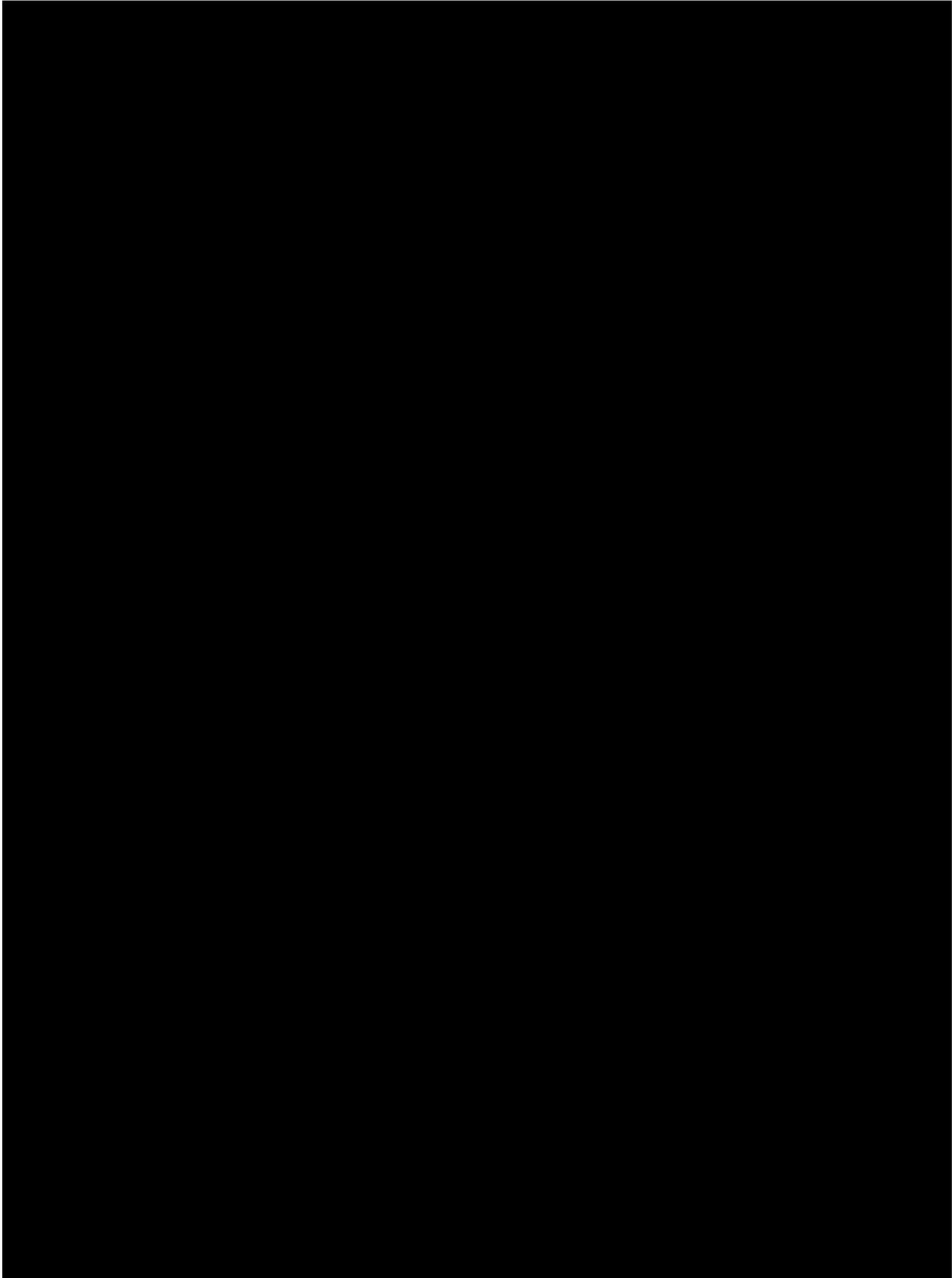


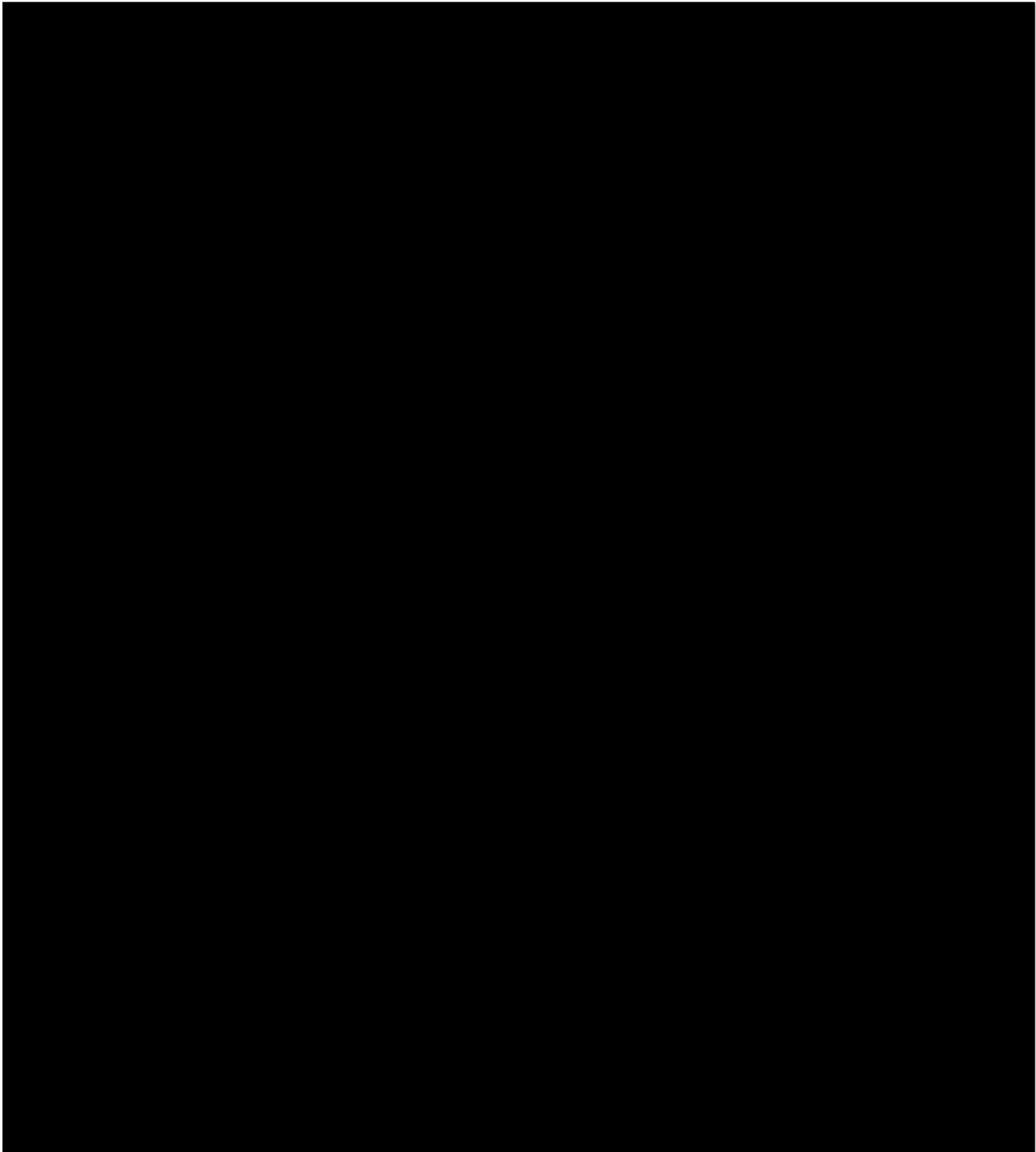
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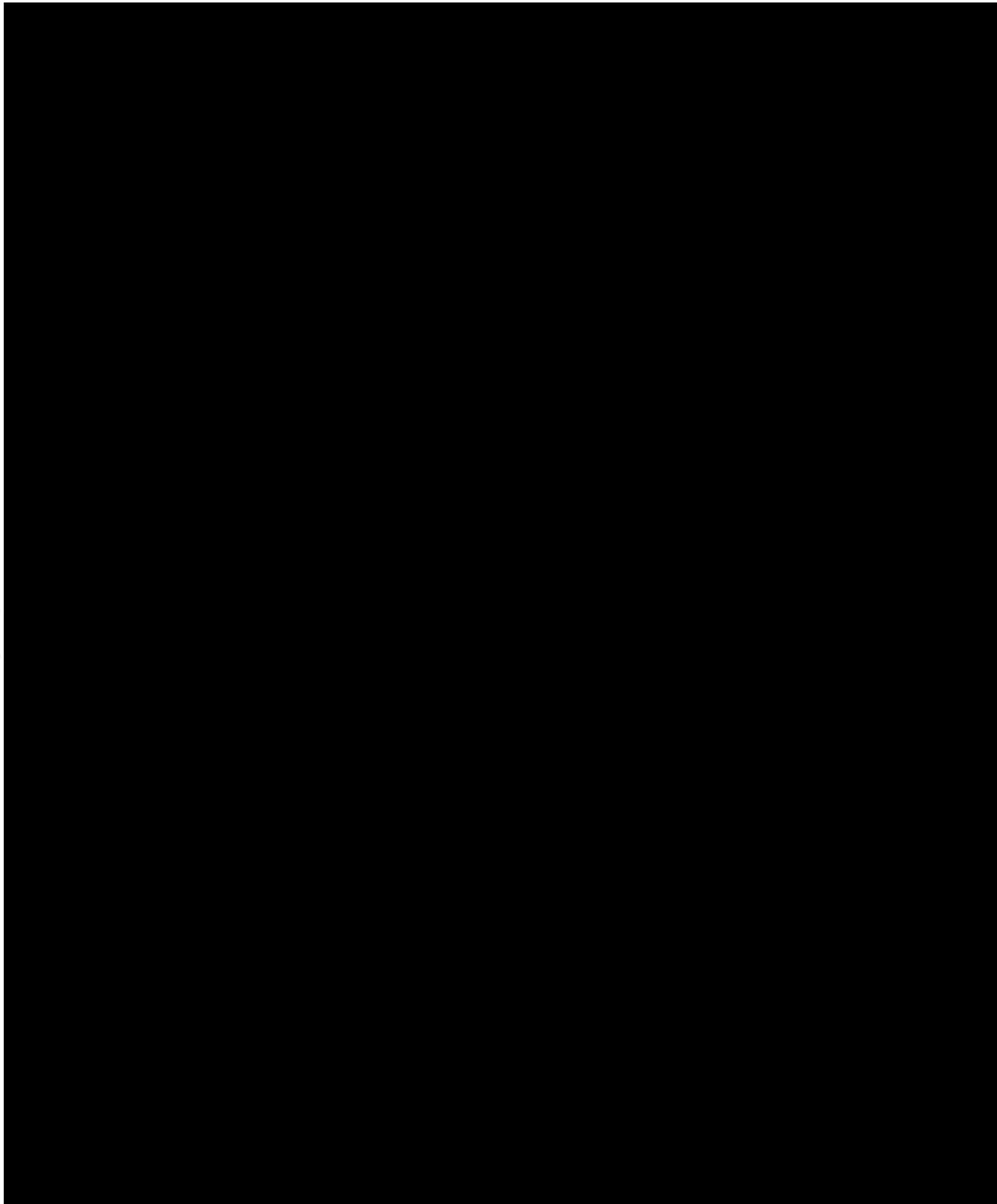
**PUERTO RICO BRIDGE INITIATIVE
MEMORANDUM OF UNDERSTANDING**





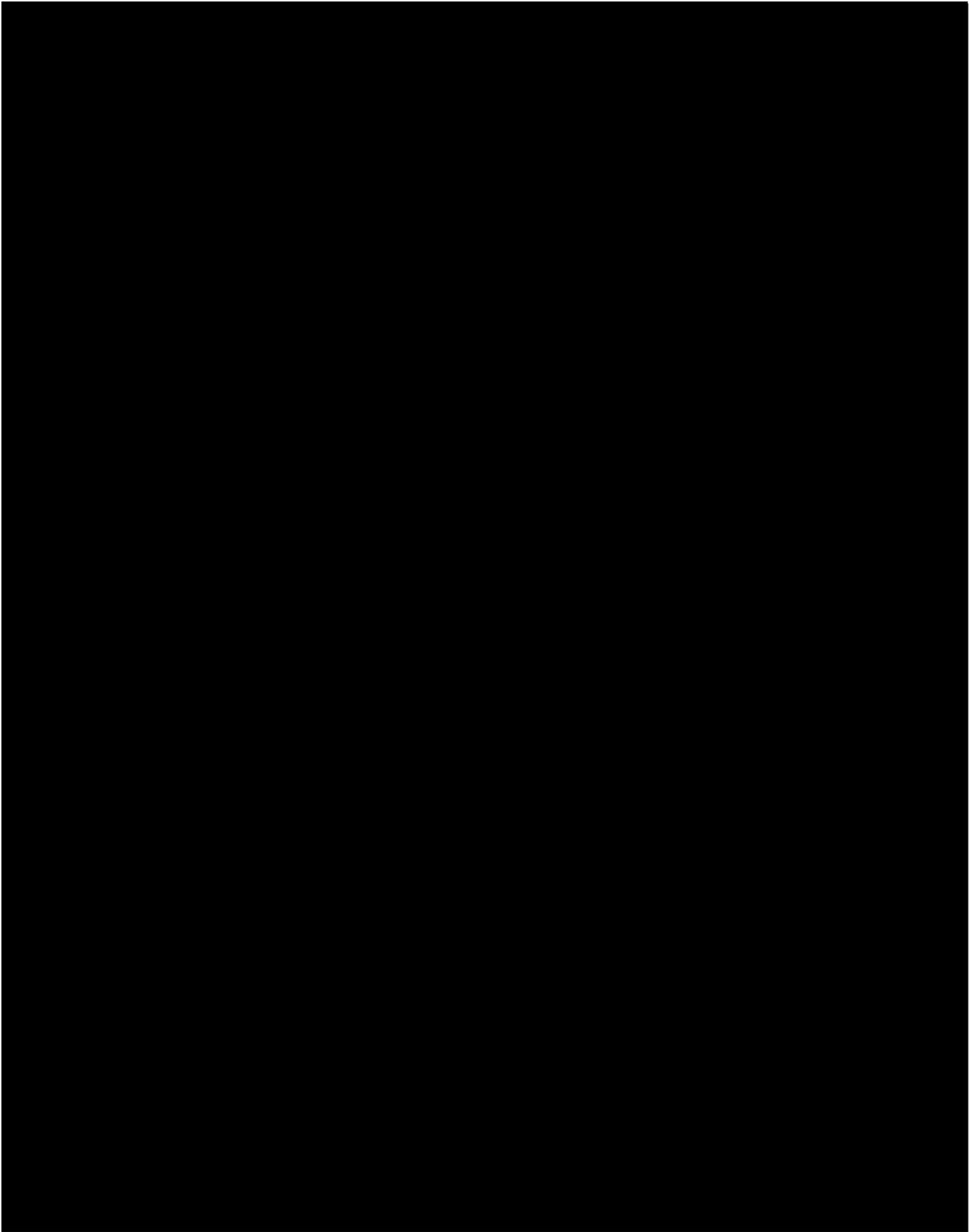


**PUERTO RICO BRIDGE INITIATIVE
MEMORANDUM OF UNDERSTANDING**



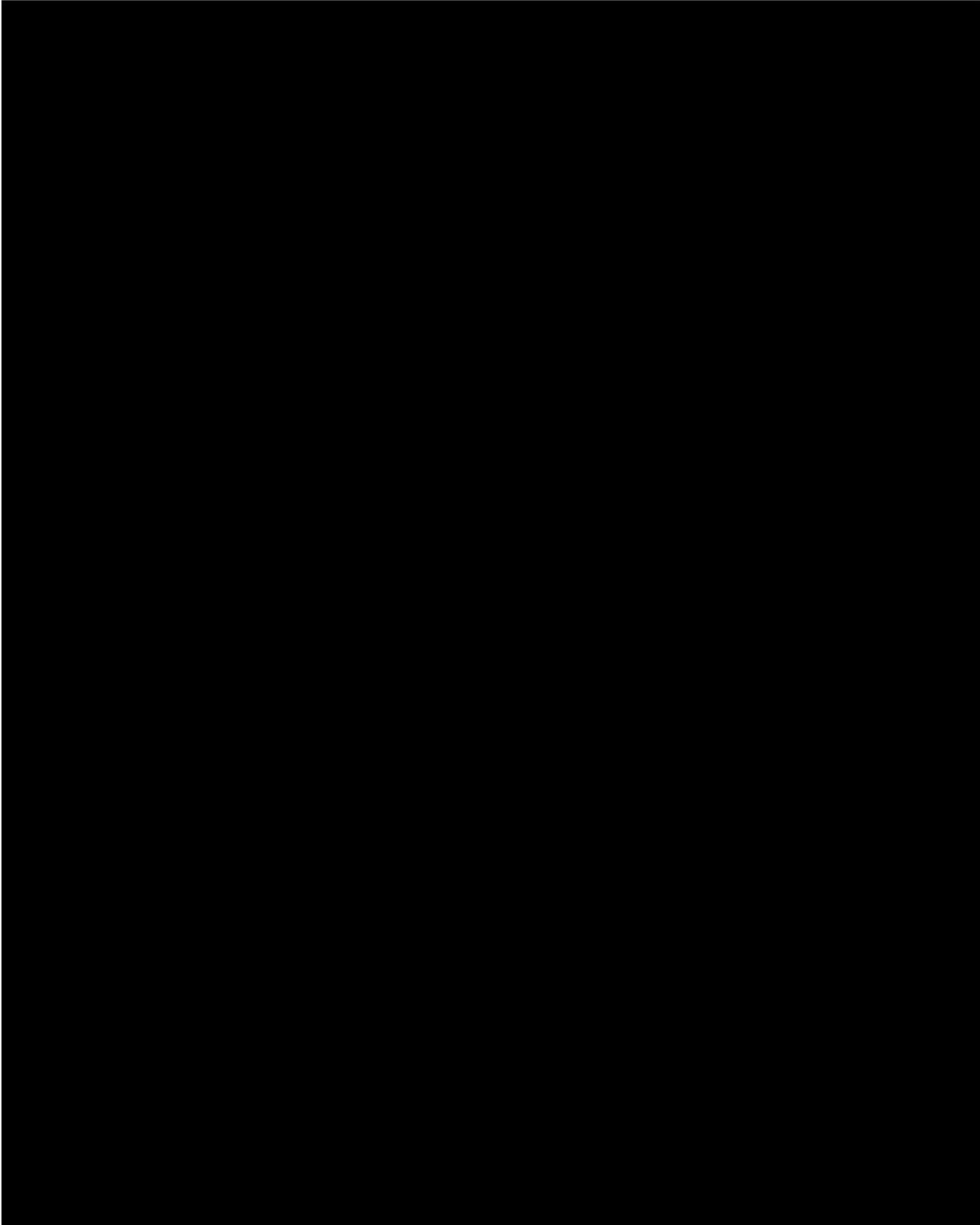
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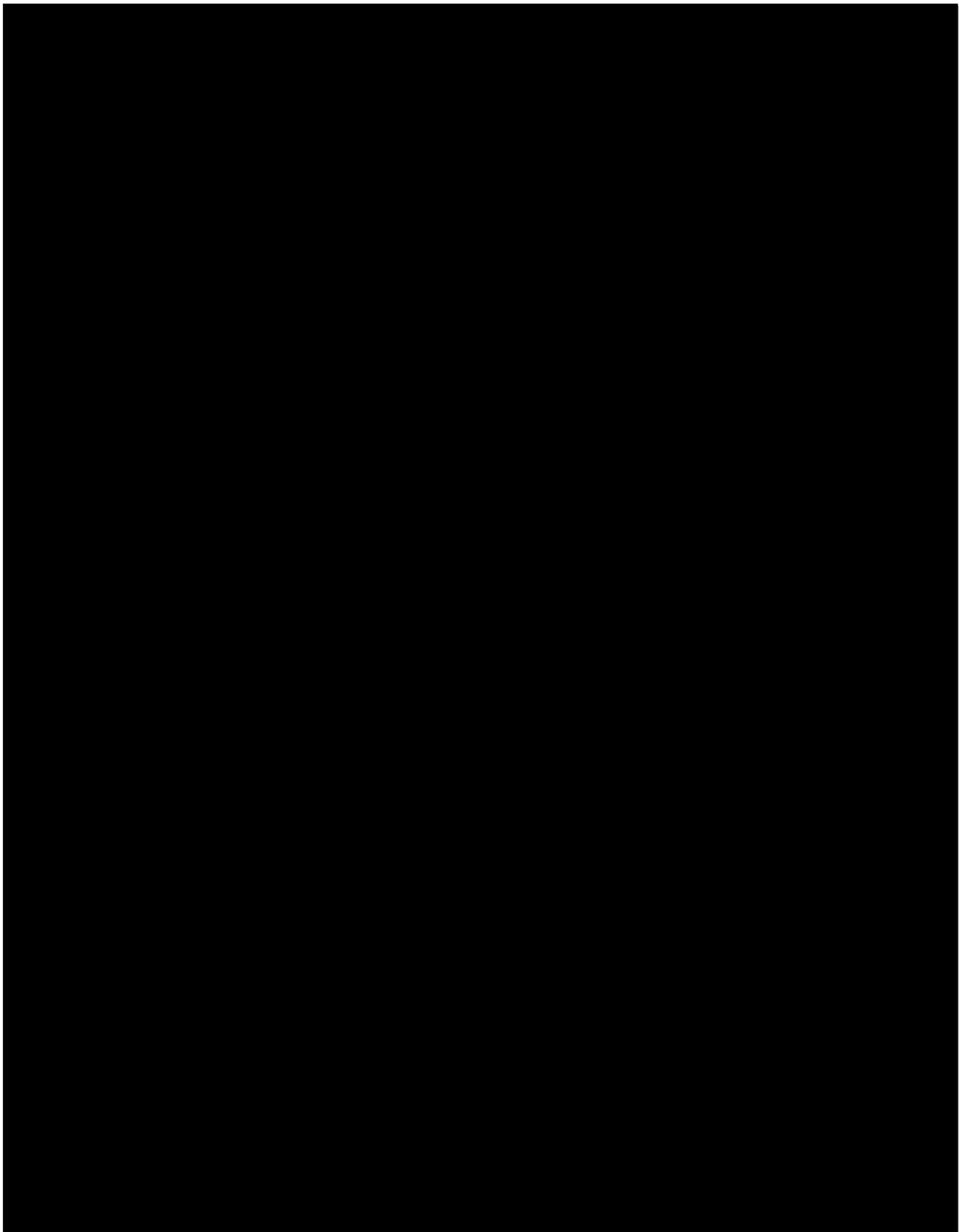
AM

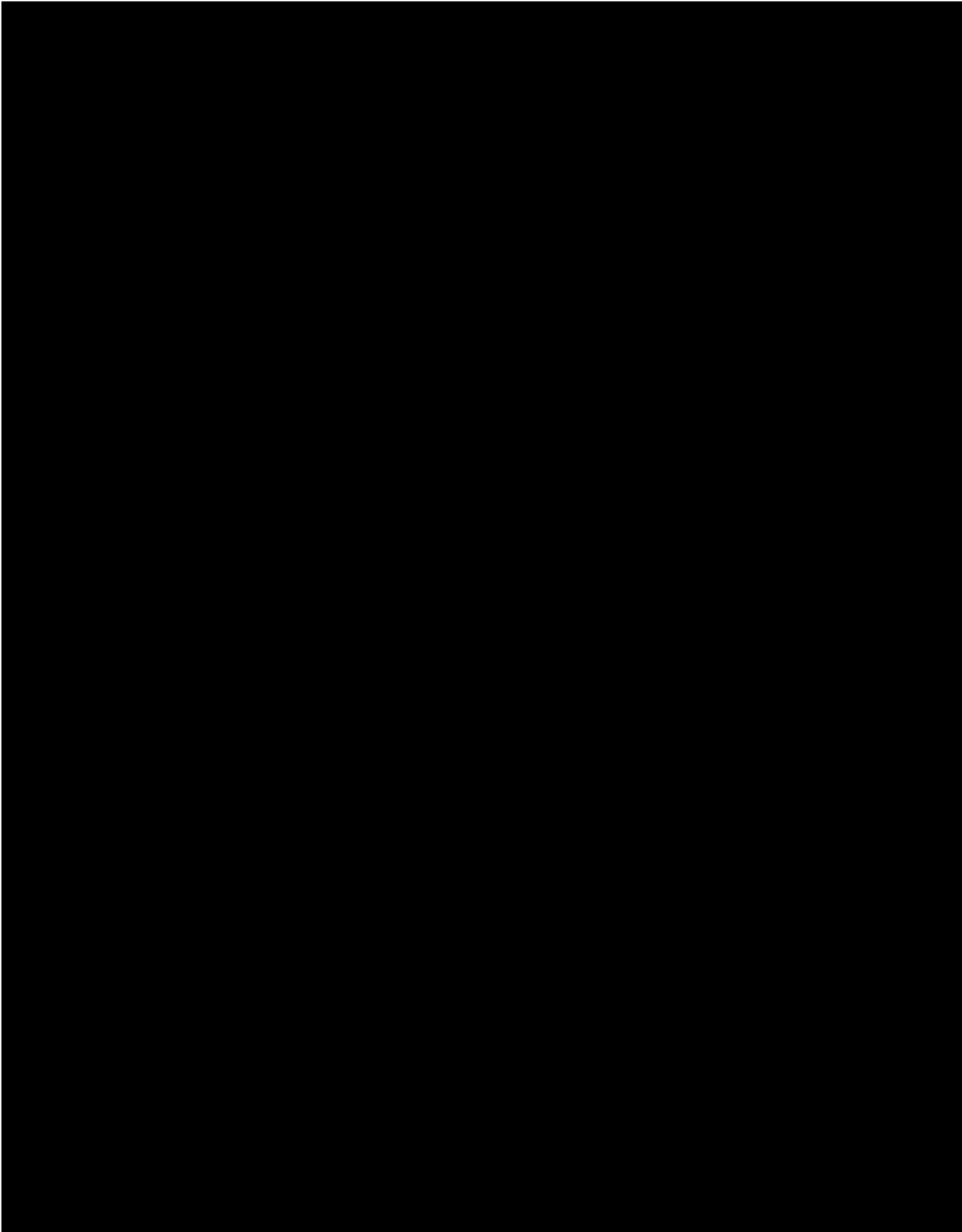


AMC

**PUERTO RICO BRIDGE INITIATIVE
MEMORANDUM OF UNDERSTANDING**







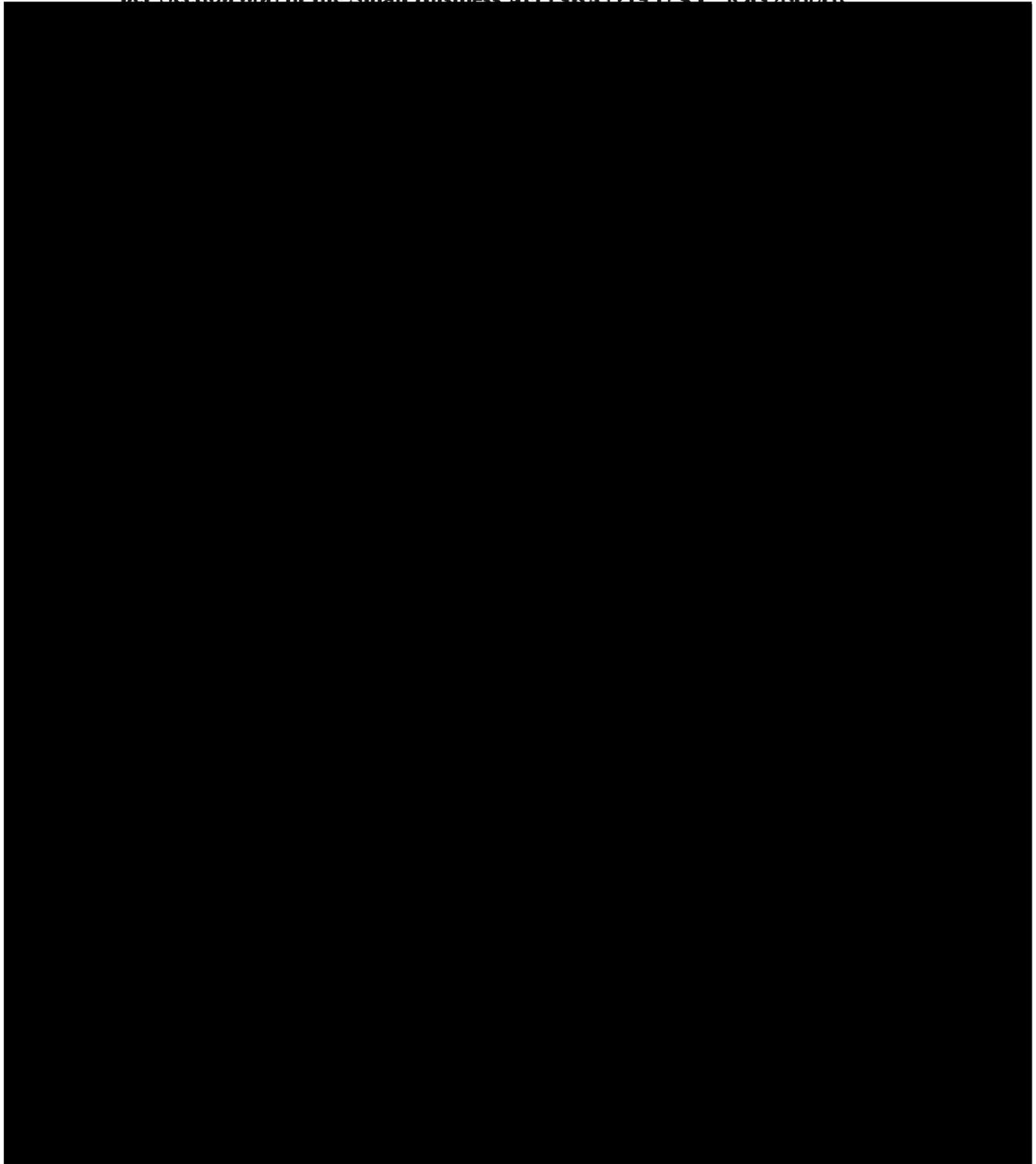
Supplemental Information 1: Appendix B

Small Business Enterprise and Socially and Economically Disadvantage Business
Enterprise Puerto Rico Bridge Initiative Partners Certification:

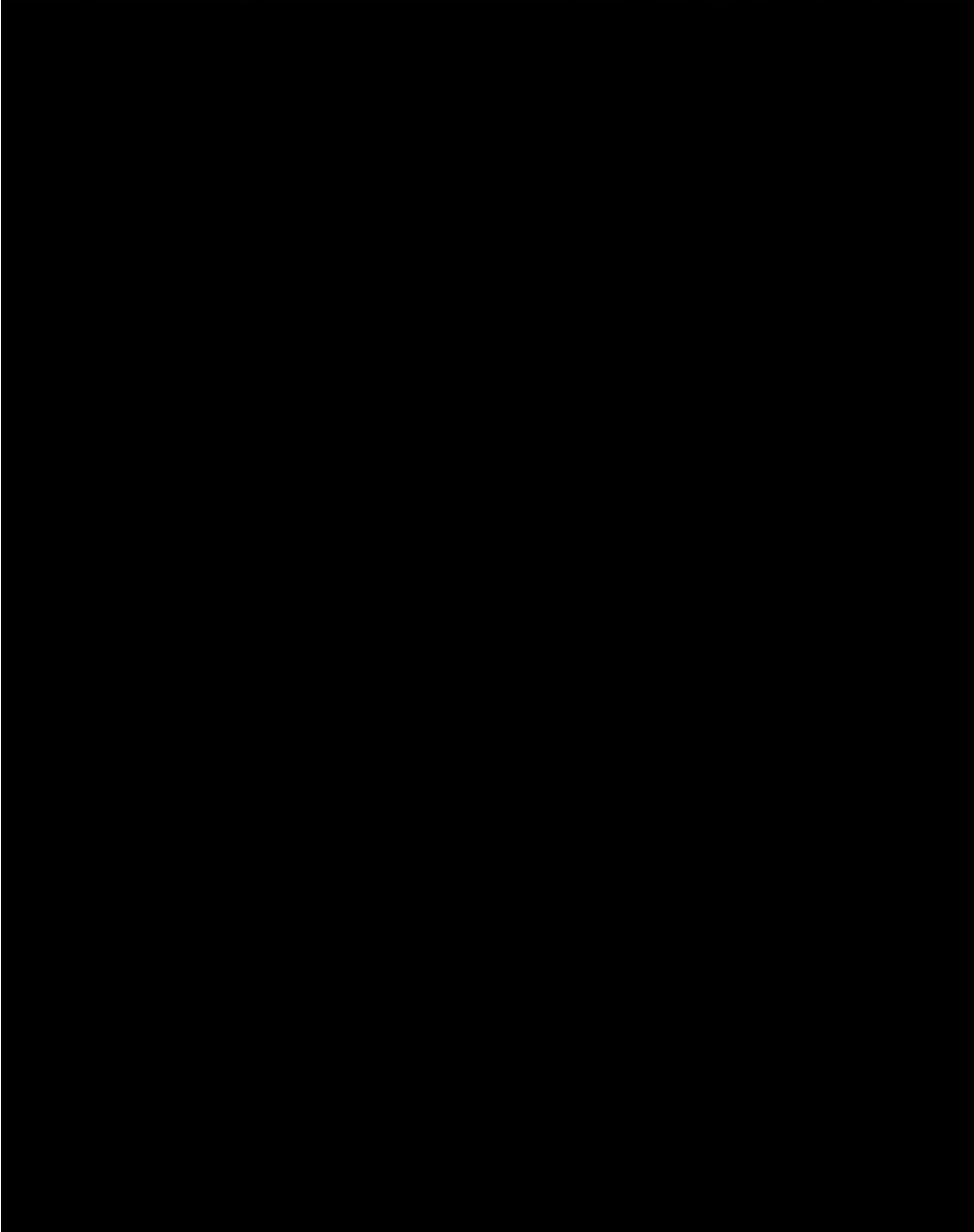
[REDACTED]

[REDACTED]

Self Certification
Socially and Economically Disadvantaged Small Business Concern
per Section 8(a) of the Small Business Act (SBA) (15 U.S.C. § 637(e)(4))



Self Certification
Socially and Economically Disadvantaged Small Business Concern
per Section 8(a) of the Small Business Act (SBA) (15 U.S.C. § 637(a)(4))



Supplemental Information 1: Appendix C

Puerto Rico Bridge Initiative Letters of Support by:

Department of Education of Puerto Rico.

AeroNet Wireless Broband Corp.

Ayustar Corp.

Culebra WirelessNet

XairNet Corp.

FLASSH Communication, Inc.

AWV Communications, Inc.

PRW.NET

Cibuco, Inc.

XSKYNET & OSNET Wireless Corp.



ESTADO LIBRE ASOCIADO DE PUERTO RICO
DEPARTAMENTO DE EDUCACIÓN

OFICINA DE GERENCIA DE CONOCIMIENTO,
TECNOLOGÍA Y TRANSFORMACIÓN

August 5, 2009

Mr. Carlo Marazzi, President
Critical Hub Networks, Corp.
PO Box 11278
San Juan, Puerto Rico 00910

Re: Endorsement of the Construction of the "Puerto Rico Bridge Initiative".

Dear Mr. Marazzi,

The Puerto Rico Department of Education is the primary Local and State Education Agency in Puerto Rico, serving over 526,000 students and their families in 1,546 schools, with 45,260 teachers. Many of these schools are located in areas that are unserved or underserved by high-speed internet service.

The lack of high speed broadband networks in Puerto Rico and limited service available in many geographic areas limits our possibilities of accessing all students and teachers through digital networks with electronic books and articles, curricular resources, distance learning, webinars, real-time observation of scientific experiments and historical events, and many other opportunities that define education in the twenty first century.

The Department is actively working in developing twenty first century content for students and teachers. And thus, we endorse Critical Hub Network's proposed project, The Puerto Rico Bridge Initiative (PRBI) that will provide access to high-speed broadband for all areas of Puerto Rico, served, unserved and underserved at a fraction of the slower services available now, and deep discounts for educational institutions and libraries, through sixteen competing service providers.

The Puerto Rico Bridge Initiative is the kind of infrastructure support our Department needs to ensure that none of our students and teachers are left outside the quality digital content we will provide. And it comes at an important point in our history, when it will harness the power of the Internet to support our efforts for world-class education, as well as enable structural changes in education and in our economy.

Cordially yours,



Guillermo Pierluisi Berr
Chief Knowledge Officer
pierluisig@de.gobierno.pr
787-383-3252

P.O. Box 190759, Puerto Rico 00919-0759 • Tel. : (787) 383-3252 Ext: 3027, FAX: (787) 754-7195

El Departamento de Educación no discrimina por razón de raza, color, género, nacimiento, origen nacional, condición social, ideas políticas o religiosas, edad o impedimento en sus actividades, servicios educativos y oportunidades de empleo.



Mr. Carlo Marazzi, President
Critical Hub Networks, Corp.
PO Box 11278
San Juan, Puerto Rico 00910

Re: Endorsement of the Construction of the "Broadband Bridge de Puerto Rico".

Dear Mr. Marazzi,

Aeronet Wireless Broadband Corp. is a organization whose primary interest is to become the provider of choice for every corporation looking for reliable and cost effective PTP connections and High Speed Dedicated Internet service in PR .

We would like to endorse the initiative by CriticalHub to create a Broadband Bridge to Puerto Rico.

The Broadband Bridge will allow all Internet Service Providers, both large and small, to increase the quality and bandwidth speeds available, while lowering the cost per megabit to all consumers of Puerto Rico.

The Broadband Bridge would also allow us to deploy new broadband services in rural and underserved areas of Puerto Rico, and to invest in helping the promote knowledge to individual with scarce resources. These efforts will help to eliminate the deep digital divide currently confronting the island of Puerto Rico.

We are confident that Critical Hub Networks will dedicate a significant portion of its efforts to bridging the digital divide and broadening the opportunities available to Puerto Rico residents. By making broadband services available to all residents throughout or island, and by increasing the usage of broadband through education and access to the technology, we will provide a needed "push" to Puerto Rico's struggling economy, empowering our citizens and increasing the potential of business collaboration and growth.

Cordially ,

A handwritten signature in black ink, appearing to read "Gino Villarini". The signature is written in a cursive style and is positioned above a horizontal line.

Gino Villarini
General Manager

AYUSTAR CORPORATION
P. O. BOX 16892
SAN JUAN, PR, 00908 - 6892
TEL: 787 330 3232 - FAX: 787 625 5193

Mr. Carlo Marazzi, President
Critical Hub Networks, Corp.
PO Box 11278
San Juan, Puerto Rico 00910

Re: Endorsement of the Construction of the "Broadband Bridge de Puerto Rico".

Dear Mr. Marazzi,

Ayustar Corp. is a FOR PROFIT organization, incorporated under the laws of Puerto Rico, whose primary interest is to be able to obtain Internet Bandwidth at competitive pricing to be able to serve Puerto Rico's citizens better.

We would like to endorse the initiative by CriticalHub to create a Broadband Bridge to Puerto Rico.

The Broadband Bridge will allow all Internet Service Providers, both large and small, to increase the quality and bandwidth speeds available, while lowering the cost per megabit to all consumers of Puerto Rico.

The Broadband Bridge would also allow us to deploy new broadband services in rural and underserved areas of Puerto Rico, and to invest in helping the promote knowledge to individual with scarce resources. These efforts will help to eliminate the deep digital divide currently confronting the island of Puerto Rico.

We are confident that Critical Hub Networks will dedicate a significant portion of its efforts to bridging the digital divide and broadening the opportunities available to Puerto Rico residents. By making broadband services available to all residents throughout or island, and by increasing the usage of broadband through education and access to the technology, we will provide a needed "push" to Puerto Rico's struggling economy, empowering our citizens and increasing the potential of business collaboration and growth.

Cordially yours,


Stefan Lechner
CEO Ayustar Corp.
slechner@ayustar.net
787 330 3232



Culebra WirelessNet
PO Box 98
Culebra, PR 00775
787-448-6050
sales@culebra.net

April 22, 2009

Mr. Carlo Marazzi, President
Critical Hub Networks, Corp.
PO Box 11278
San Juan PR 00910

Re: Endorsement of the Construction of the "Broadband Bridge de Puerto Rico".

Dear Mr. Marazzi,

Culebra WirelessNet is a private for profit organization whose primary goal is to provide the residents of the island of Culebra high speed internet access.

We would like to endorse the initiative of CriticalHub to create a Broadband Bridge to Puerto Rico.

The Broadband Bridge will allow all Internet Service Providers, both large and small, to increase the quality of bandwidth speeds available, while lowering the cost per megabit to all the consumers of Puerto Rico.

The Broadband Bridge would also allow us to deploy new broadband services in rural and underserved areas of Puerto Rico.

We are confident that Critical Hub Networks will dedicate a significant portion of its efforts to bridging the digital divide and broadening the opportunities available to Puerto Rico residents. By making broadband services available to all the residents, throughout our island, and increasing the usage of broadband through education and access to this technology, we will provide the "push" to Puerto Rico's struggling economy, empowering our citizens and increasing the potential of business collaboration and growth.

Cordially yours,


David Gonzalez
General Manager



April 23, 2009

Mr. Carlo Marazzi, President
Critical Hub Networks, Corp
P.O. Box 11278
San Juan, Puerto Rico 00910

Re: Endorsement of the Construction of the "Broadband Bridge of Puerto Rico".

Dear Mr. Marazzi,

Xairnet Corp. is a private, for profit organization whose primary interest is to provide Broadband Internet Services to rural areas in the north of Puerto Rico.

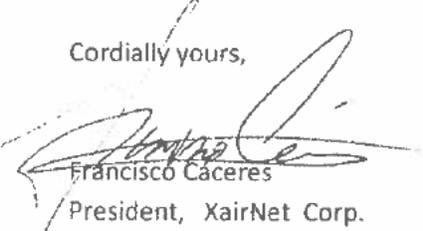
We would like to endorse the initiative by Critical Hub to create a Broadband Bridge to Puerto Rico.

The Broadband Bridge will allow all internet Service Providers, both large and small, to increase the quality and bandwidth speeds available, while lowering the cost per megabit to all consumers of Puerto Rico.

The Broadband Bridge would also allow us to deploy new broadband services in rural and underserved areas of Puerto Rico, and to invest in helping the promote knowledge to individual with scarce resources. These efforts will help to eliminate the deep digital divide currently confronting the island of Puerto Rico.

We are confident that Critical Hub Networks will dedicated a significant portion of its efforts to bridging the digital divide and broadening the opportunities available to Puerto Rico residents. By making broadband services available to all residents throughout or island, and by increasing the usage of broadband through education and access to the technology, we will provide a needed "push" to Puerto Rico's struggling economy, empowering our citizens and increasing the potential of business collaboration and growth.

Cordially yours,



Francisco Cáceres

President, XairNet Corp.

fcaceres@xsn.net



April 23, 2009

Mr. Carlo Marazzi, President
Critical Hub Networks, Corp.
PO Box 11278
San Juan, Puerto Rico 00910

Re: Endorsement of the Construction of the "Broadband Bridge de Puerto Rico".

Dear Mr. Marazzi,

FLASSH COMMUNICATIONS is a private, for profit organization whose primary interest is to provide broadband service and voice communications using VoIP in Puerto Rico.

We would like to endorse the initiative by CriticalHub to create a Broadband Bridge to Puerto Rico.

The Broadband Bridge will allow all Internet Service Providers, both large and small, to increase the quality and bandwidth speeds available, while lowering the cost per megabit to all consumers of Puerto Rico.

The Broadband Bridge would also allow us to deploy new broadband services in rural and underserved areas of Puerto Rico, and to invest in helping the promote knowledge to individual with scarce resources. These efforts will help to eliminate the deep digital divide currently confronting the island of Puerto Rico.

We are confident that Critical Hub Networks will dedicate a significant portion of its efforts to bridging the digital divide and broadening the opportunities available to Puerto Rico residents. By making broadband services available to all residents throughout or island, and by increasing the usage of broadband through education and access to the technology, we will provide a needed "push" to Puerto Rico's struggling economy, empowering our citizens and increasing the potential of business collaboration and growth.

Cordially yours,

Karen Larson
Vice President
787-723-1100

PO Box 19628
San Juan, Puerto Rico 00910

www.vozpr.com



May 4, 2009

Mr. Carlo Marazzi, President
Critical Hub Networks, Corp.
PO Box 11278
San Juan, Puerto Rico 00910

Re: Endorsement of the Construction of the "Broadband Bridge of Puerto Rico".

Dear Mr. Marazzi,

AWV Communications, Inc. is a private, for profit organization whose primary interest is to provide Internet and VoIP services to rural areas of Puerto Rico for residential and business clients that are presently underserved by primary TELCO's that can't reach out to provide services.

We would like to endorse the initiative by CriticalHub to create a Broadband Bridge to Puerto Rico.

The Broadband Bridge will allow all Internet Service Providers, both large and small, to increase the quality and bandwidth speeds available, while lowering the cost per megabit to all consumers of Puerto Rico.

The Broadband Bridge would also allow us to deploy new broadband services in rural and underserved areas of Puerto Rico, and to invest in helping the promote knowledge to individual with scarce resources. These efforts will help to eliminate the deep digital divide currently confronting the island of Puerto Rico.

We are confident that Critical Hub Networks will dedicate a significant portion of its efforts to bridging the digital divide and broadening the opportunities available to Puerto Rico residents. By making broadband services available to all residents throughout or island, and by increasing the usage of broadband through education and access to the technology, we will provide a needed "push" to Puerto Rico's struggling economy, empowering our citizens and increasing the potential of business collaboration and growth.

Cordially yours,


Angel W. Velazquez
Vice President
angel@awvcom.net
V (787) 655-1930

Broadband Internet Service Provider
Phone (787) 655-1930 • Fax (787) 860-9051
PO Box 1330 Fajardo, P R 00768-1330



PUERTO RICO WEBMASTERS

1259 Fernandez Juncos Ave. PO Box 9111
San Juan, PR 00907 San Juan, PR 00908
Tel 787-723-5000 Fax 787-722-6242
www.prw.net

May 4, 2009

Mr. Carlo Marazzi, President
Critical Hub Networks, Corp.
PO Box 11278
San Juan, Puerto Rico 00910

Re: **Endorsement of the Construction of the "Broadband Bridge de Puerto Rico"**

Dear Mr. Marazzi,

This letter is on behalf of Engineering Support Systems, Inc (ESS) DBA PRW.NET, a for-profit corporation in Puerto Rico that operates an Internet Service Provider (ISP). ESS offers Internet services to residential and commercial customers in Puerto Rico since 1998. It also offers data networking and software development services to local businesses since 1986.

After reviewing your proposed development plans, we would like to enthusiastically endorse the initiative by CriticalHub to create a Broadband Bridge to Puerto Rico. The Broadband Bridge would significantly accelerate to Internet penetration in the island and result in very positive effects to the local economy. It will allow all ISPs, both large and small, to increase the quality and bandwidth speeds available, while lowering the cost per megabit to all consumers of Puerto Rico.

The Broadband Bridge would also allow us to deploy new broadband services in rural and underserved areas of Puerto Rico, and to invest in helping the promote knowledge to individual with scarce resources. These efforts will help to eliminate the deep digital divide currently confronting the island of Puerto Rico.

We are confident that Critical Hub Networks will dedicate a significant portion of its efforts to bridging the digital divide and broadening the opportunities available to Puerto Rico residents. By making broadband services available to all residents throughout or island, and by increasing the usage of broadband through education and access to the technology, we will provide a needed "push" to Puerto Rico's struggling economy, empowering our citizens and increasing the potential of business collaboration and growth.

Sincerely,

A handwritten signature in black ink, appearing to read "Jesús Alvarez".

Jesús Alvarez
President
Email: jalvarez@prw.net
Tel: (787) 723-5000



HC 5 Box 10957 - Corozal, Puerto Rico 00783
Ph. (787) 227.0320

May 23, 2009

Mr. Carlo Marazzi, President
Critical Hub Networks, Corp.
PO Box 11278
San Juan, Puerto Rico 00910

Re: Endorsement of the Construction of the "Broadband Bridge de Puerto Rico".

Dear Mr. Marazzi,

Cibuconet, Inc. is a private, for profit organization whose primary interest is to provide broadband Internet services and related products to rural mountainous areas of Puerto Rico. We currently serve municipalities of: Corozal, Morovis, Naranjito, Barranquitas, Orocovis, Toa Alta, Comerío and currently expanding to other nearby areas.

We would like to endorse the initiative by CriticalHub to create a Broadband Bridge to Puerto Rico.

The Broadband Bridge will allow all Internet Service Providers, both large and small, to increase the quality and bandwidth speeds available, while lowering the cost per megabit to all consumers of Puerto Rico.

The Broadband Bridge would also allow us to deploy new broadband services in rural and underserved areas of Puerto Rico, and to invest in helping the promote knowledge to individual with scarce resources. These efforts will help to eliminate the deep digital divide currently confronting the island of Puerto Rico.

We are confident that Critical Hub Networks will dedicate a significant portion of its efforts to bridging the digital divide and broadening the opportunities available to Puerto Rico residents. By making broadband services available to all residents throughout or island, and by increasing the usage of broadband through education and access to the technology, we will provide a needed "push" to Puerto Rico's struggling economy, empowering our citizens and increasing the potential of business collaboration and growth.

Cordially yours,

A handwritten signature in black ink, appearing to read "JDC", with a stylized flourish extending to the right.

José D. Crespo de León
President
jose.crespo@cibuconet.com
787-427-8400



July 13, 2009

Mr. Carlo Marazzi, President
Critical Hub Networks, Corp.
PO Box 11278
San Juan, Puerto Rico 00910

Re: Endorsement of the Construction of the "Broadband Bridge de Puerto Rico".

Dear Mr. Marazzi,

XSKYNET & OSNET Wireless Corp. is a private, for profit organization whose primary interest is to provide broadband internet access to rural areas in the east of Puerto Rico. Our commitment it's provide quality and bandwidth services for those without any opportunities of other broadband services. We provide high bandwidth broadband solutions and cost effective prices.

We would like to endorse the initiative by CriticalHub to create a Broadband Bridge to Puerto Rico.

The Broadband Bridge will allow all Internet Service Providers, both large and small, to increase the quality and bandwidth speeds available, while lowering the cost per megabit to all consumers of Puerto Rico.

The Broadband Bridge would also allow us to deploy new broadband services in rural and underserved areas of Puerto Rico, and to invest in helping the promote knowledge to individual with scarce resources. These efforts will help to eliminate the deep digital divide currently confronting the island of Puerto Rico.

We are confident that Critical Hub Networks will dedicate a significant portion of its efforts to bridging the digital divide and broadening the opportunities available to Puerto Rico residents. By making broadband services available to all residents throughout or island, and by increasing the usage of broadband through education and access to the technology, we will provide a needed "push" to Puerto Rico's struggling economy, empowering our citizens and increasing the potential of business collaboration and growth.

Cordially yours,

A handwritten signature in black ink, appearing to read "Ivan Rivera", is written over a horizontal line.

Ivan Rivera
President
irivera@ittekpr.com
787-655-1919

AYUSTAR CORPORATION
P.O. BOX 16892
SAN JUAN, PR, 00908 - 6892
TEL: 787 330 3232 - FAX: 787 625 5193

Mr. Carlo Marazzi, President
Critical Hub Networks, Corp.
PO Box 11278
San Juan, Puerto Rico 00910

Re: Endorsement of the Construction of the "Broadband Bridge de Puerto Rico".

Dear Mr. Marazzi,

Ayustar Corp. is a FOR PROFIT organization, incorporated under the laws of Puerto Rico, whose primary interest is to be able to obtain Internet Bandwidth at competitive pricing to be able to serve Puerto Rico's citizens better.

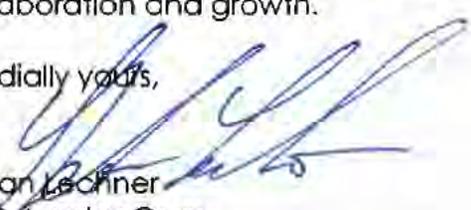
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We are confident that Critical Hub Networks will dedicate a significant portion of its efforts to bridging the digital divide and broadening the opportunities available to Puerto Rico residents. By making broadband services available to all residents throughout or island, and by increasing the usage of broadband through education and access to the technology, we will provide a needed "push" to Puerto Rico's struggling economy, empowering our citizens and increasing the potential of business collaboration and growth.

Cordially yours,



Stefan Lechner
CEO Ayustar Corp.
stechner@ayustar.net
787 330 3232