



**STATE OF TENNESSEE**  
**DEPARTMENT OF HEALTH**  
ANDREW JOHNSON TOWER, 5TH FLOOR  
710 JAMES ROBERTSON PARKWAY  
NASHVILLE, TENNESSEE 37243

**BILL LEE**  
GOVERNOR

**LISA PIERCEY, MD, MBA, FAAP**  
COMMISSIONER

July 13, 2020

Krista Lee Carsner, Director  
Fiscal Review Committee  
Suite G-102, Cordell Hull Building  
425 5<sup>th</sup> Avenue North  
Nashville, TN 37243

Mike Perry, Chief Procurement Officer  
Central Procurement Office, Department of General Services  
22<sup>nd</sup> Floor, Tennessee Tower  
312 Rosa L. Parks Avenue  
Nashville, TN 37243

Dear Director Carsner and CPO Perry:

The Department of Health, Division of Community Health Services requests approval to amend a contract with Document Storage Systems, Inc. (DSS) that was competitively bid by RFP in 2014 to create an electronic health record system. This amendment to the contract will remove scope items which the contractor has been unable to deliver during the contract term and will reduce the dollar amount by \$2,871,890.48 to reflect the de-scoped items.

The electronic health record system houses patient records and replaces our aging legacy system that performs scheduling, registration, and billing functions for our 100 local health departments located throughout the state. The scope of work in the contract is extremely complex with multiple interfaces that link to several stand-alone programs. Throughout the contract period, the contractor and State have met unforeseen delays requiring additional programming and reconfigurations of the existing software. The contractor was unable to complete some scope items, and we believe it is in the State's best interest to amend the contract to reflect the work completed.

Thank you for your consideration of this contract amendment.

Sincerely,

A handwritten signature in blue ink that reads "Lisa Piercey".

Lisa Piercey, MD, MBA, FAAP  
Commissioner

Supplemental Documentation Required for  
Fiscal Review Committee

*Contact Name:	John Webb	*Contact Phone:	615-741-3886			
*Presenter's name(s):	Alexa Witcher, Lindsay Oliveras, Brandon Corbin					
Edison Contract Number: <i>(if applicable)</i>	43621	RFS Number: <i>(if applicable)</i>	34301-13214			
*Original or Proposed Contract Begin Date:	9/15/2014	*Current or Proposed End Date:	9/14/2020			
Current Request Amendment Number: <i>(if applicable)</i>	4					
Proposed Amendment Effective Date: <i>(if applicable)</i>	9/13/2020					
*Department Submitting:	Department of Health					
*Division:	Community Health Services					
*Date Submitted:	7/13/2020					
*Submitted Within Sixty (60) days:	Yes					
<i>If not, explain:</i>						
*Contract Vendor Name:	Document Storage Systems, Inc.					
*Current or Proposed Maximum Liability:	\$12,281,780.39					
*Estimated Total Spend for Commodities:	N/A					
<b>*Current or Proposed Contract Allocation by Fiscal Year: (as Shown on Most Current Fully Executed Contract Summary Sheet)</b>						
FY15	FY16	FY17	FY18	FY19	FY20	FY21
\$2,426,950	\$2,739,959	\$514,310.80	\$914,685	\$4,953,234.59	\$500,960.70	\$231,680.30
<b>*Current Total Expenditures by Fiscal Year of Contract: (attach backup documentation from Edison)</b>						
FY15	FY16	FY17	FY18	FY19	FY20	FY21
\$750,035.84	\$1,221,972	\$1,113,107.61	\$1,633,554.85	\$3,253,960.01	\$889,014.38	\$0.00
<b>IF Contract Allocation has been greater than Contract Expenditures, please give the reasons and explain where surplus funds were spent:</b>				For the first two years of the contract, the original allocation was greater than expenditures due to unanticipated delays in the training and rollout process. The allocation was higher in FY19 due to interoperability delays.		
<b>IF surplus funds have been carried forward, please give the reasons and provide the authority for the carry forward provision:</b>				Due to the delays in the schedule, we requested and received authority via Section 36, Item 1 of the appropriations bill each year to carry forward money.		
<b>IF Contract Expenditures</b>				The expenditures in FY17, 18 and 20		

Supplemental Documentation Required for  
Fiscal Review Committee

exceeded Contract Allocation, please give the reasons and explain how funding was acquired to pay the overage:		were covered by the funds unspent in FY15, 16 and 19.	
<b>*Contract Funding Source/Amount:</b>			
State:	100%	Federal:	
<i>Interdepartmental:</i>		<i>Other:</i>	
If "other" please define:			
If "interdepartmental" please define:			
Dates of All Previous Amendments or Revisions: <i>(if applicable)</i>		Brief Description of Actions in Previous Amendments or Revisions: <i>(if applicable)</i>	
7/1/2017		Maximum liability increase from \$6,724,647.35 to \$7,474,647.35, an increase of \$750,000.	
9/5/2018		Amended the scope to support the addition of software to integrate patient scheduling, registration and billing functionalities to the current electronic medical record. Maximum liability increase from \$7,474,647.35 to \$12,018,505.39, an increase of \$4,543,858.04.	
9/14/2019		Extended term by one year and added \$263,275.00 for support and maintenance for the last year of the contract.	
Method of Original Award: <i>(if applicable)</i>		RFP	
*What were the projected costs of the service for the entire term of the contract prior to contract award? How was this cost determined?		The original contract award was for \$6,724,647.35, and that figure was determined by the contractor bid via the RFP process.	
*List number of other potential vendors who could provide this good or service; efforts to identify other competitive procurement alternatives; and the reason(s) a sole-source contract is in the best interest of the State.		The current contract is coming to a close. The State and contractor agreed that not all scope items would be completed by the end of the contract term. The State decided that amending the contract to remove the incomplete scope items and reduce the maximum liability	

Supplemental Documentation Required for  
Fiscal Review Committee

	is in the State's best interest.
--	----------------------------------

Unit	Voucher	Invoice	Remit Supp	Name	Gross Amt	Reference	Pymnt Date
34301	00667134	INV-10433	0000180461	Document Storage Systems Inc	\$ 196,825.32	0001507659	3/27/2015
34301	00667135	INV-10448	0000180461	Document Storage Systems Inc	\$ 194,586.92	0001507659	3/27/2015
34301	00679842	INV-10564	0000180461	Document Storage Systems Inc	\$ 125,973.60	0001591181	5/22/2015
34301	00687497	INV-10566	0000180461	Document Storage Systems Inc	\$ 232,650.00	0001605447	6/3/2015
					<b>\$ 750,035.84</b>		
34301	00699013	INV-10713	0000180461	Document Storage Systems Inc	\$ 450,030.00	0001703784	8/10/2015
34301	00784030	INV-10917	0000180461	Document Storage Systems Inc	\$ 450,030.00	0002096136	5/16/2016
34301	00784031	SO-10634	0000180461	Document Storage Systems Inc	\$ 58,912.00	0002096136	5/16/2016
34301	00784032	INV-11521	0000180461	Document Storage Systems Inc	\$ 263,000.00	0002096136	5/16/2016
					<b>\$ 1,221,972.00</b>		
34301	00875200	INV-12131	0000180461	Document Storage Systems Inc	\$ 238,828.00	0002549252	4/4/2017
34301	00875201	INV-12178	0000180461	Document Storage Systems Inc	\$ 225,015.00	0002549252	4/4/2017
34301	00895853	INV-12521	0000180461	Document Storage Systems Inc	\$ 225,015.00	0002664919	6/22/2017
34301	00895856	INV-12524	0000180461	Document Storage Systems Inc	\$ 117,970.00	0002664919	6/22/2017
34301	00895851	INV-12364	0000180461	Document Storage Systems Inc	\$ 306,279.61	0002664919	6/22/2017
					<b>\$ 1,113,107.61</b>		
34301	00901905	INV-12560	0000180461	Document Storage Systems Inc	\$ 180,993.60	0002713084	7/26/2017
34301	00935913	INV-12699	0000180461	Document Storage Systems Inc	\$ 509,840.75	0002860478	11/9/2017
34301	00963472	INV-12977	0000180461	Document Storage Systems Inc	\$ 87,664.25	0003006526	2/23/2018
34301	00963471	INV-12976	0000180461	Document Storage Systems Inc	\$ 450,030.00	0003016939	3/2/2018
34301	00973953	INV-13200	0000180461	Document Storage Systems Inc	\$ 342,225.00	0003076811	4/13/2018
34301	00999155	INV-13302	0000180461	Document Storage Systems Inc	\$ 62,801.25	0003167825	6/15/2018
				<b>\$ 2,080,561.25</b>	<b>\$ 1,633,554.85</b>		
34301	01018109	INV-13348	0000180461	Document Storage Systems Inc	\$ 117,970.00	0003263634	8/22/2018
34301	01026728	INV-13487	0000180461	Document Storage Systems Inc	\$ 450,030.00	0003287501	9/12/2018
34301	01037186	INV-13575	0000180461	Document Storage Systems Inc	\$ 660,443.34	0003353293	10/25/2018
34301	01035027	INV-13349	0000180461	Document Storage Systems Inc	\$ 510,030.00	0003353293	10/25/2018
34301	01045961	INV-13777	0000180461	Document Storage Systems Inc	\$ 28,754.17	0003403285	11/30/2018
34301	01055294	INV-13185	0000180461	Document Storage Systems Inc	\$ 62,801.25	0003419832	12/12/2018
34301	01050653	INV-13827	0000180461	Document Storage Systems Inc	\$ 80,271.90	0003435107	12/19/2018
34301	01063175	INV-13942	0000180461	Document Storage Systems Inc	\$ 618,936.09	0003486085	1/30/2019
34301	01077886	INV-14037	0000180461	Document Storage Systems Inc	\$ 28,754.17	0003543591	3/11/2019
34301	01082326	INV-14122	0000180461	Document Storage Systems Inc	\$ 28,754.17	0003573077	3/29/2019
34301	01100869	INV-14194	0000180461	Document Storage Systems Inc	\$ 96,839.92	0003651680	5/20/2019

34301	01106598	INV-14282	0000180461	Document Storage Systems Inc	\$ 570,375.00	0003685875	6/13/2019
				<b>\$ 2,824,222.61</b>	<b>\$ 3,253,960.01</b>		
34301	01117663	INV-14340	0000180461	Document Storage Systems Inc	\$ 72,668.51	0003721536	7/5/2019
34301	01132590	INV-14272	0000180461	Document Storage Systems Inc	\$ 28,754.17	0003770443	8/14/2019
34301	01140519	INV-14434	0000180461	Document Storage Systems Inc	\$ 28,754.17	0003805273	9/6/2019
34301	01147524	INV-14396	0000180461	Document Storage Systems Inc	\$ 96,839.92	0003838094	9/27/2019
34301	01148924	INV-14486	0000180461	Document Storage Systems Inc	\$ 18,551.08	0003850430	10/4/2019
34301	01164387	INV-14725	0000180461	Document Storage Systems Inc	\$ 286,041.28	0003913279	11/15/2019
34301	01185078	INV-14801	0000180461	Document Storage Systems Inc	\$ 156,000.00	0004014429	1/29/2020
34301	01228871	INV-14940	0000180461	Document Storage Systems Inc	\$ 131,637.50	0004183613	6/5/2020
34301	01227256	INV-15176	0000180461	Document Storage Systems Inc	\$ 69,767.75	0004185310	6/8/2020
					<b>\$ 559,114.28</b>	<b>\$ 889,014.38</b>	

### Amendment Technology

Subject: 34201 13214 EPI Amd Request

Review/Edit Approvers

### Amendment Technology

Amendment Technology: 2499:Approved [View/Hide Comments](#)

Amendment Technology

Approved

✓ Rachel Hardaway  
Agency Forms Approver  
07/09/20 - 9:46 AM

Approved

✓ Kevin Wlack  
CPO Tech Forms Approver  
07/09/20 - 1:35 PM

Skipped

✗ Lindsay Oliveras  
Agency Forms Approver  
07/09/20 - 9:45 AM

Comments

OK

# Amendment Request

This request form is not required for amendments to grant contracts. Upload the completed document and route for approvals by selecting the Amendment Request e-Form in Edison. For additional guidance, please see the e-Forms Job Aid available online at the following: <https://www.teamtn.gov/cpo/learning-development/cpo-job-aids.html>.

**APPROVED**

CHIEF PROCUREMENT OFFICER

DATE

<b>Agency request tracking #</b>	34301-13214	
<b>1. Procuring Agency</b>	Department of Health	
<b>2. Contractor</b>	Document Storage Systems, Inc.	
<b>3. Edison contract ID #</b>	43621	
<b>4. Proposed amendment #</b>	4	
<b>5. Contract's Original Effective Date</b>	9/15/2014	
<b>6. Current end date</b>	9/14/2020	
<b>7. Proposed end date</b>	9/14/2020	
<b>8. Current Maximum Liability or Estimated Liability</b>	\$ 12,281,780.39	
<b>9. Proposed Maximum Liability or Estimated Liability</b>	\$ 9,409,889.91	
<b>10. Strategic Technology Solutions Pre-Approval Endorsement Request</b> – information technology service (N/A to THDA)	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Attached	
<b>11. eHealth Pre-Approval Endorsement Request</b> – health-related professional, pharmaceutical, laboratory, or imaging	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Attached	
<b>12. Human Resources Pre-Approval Endorsement Request</b> – state employee training service	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Attached	
<b>13. Explain why the proposed amendment is needed</b>	<p>The contractor was unable to complete some scope items due to unforeseen delays and programming issues. The Department felt it was in the State's best interest to amend the contract to reflect the work completed and reduce the maximum liability to reflect the scope items that are not completed.</p>	
<b>14. If the amendment involves a change in Scope, describe efforts to identify reasonable, competitive, procurement alternatives to amending the contract.</b>		

<b>Agency request tracking #</b>	<b>34301-13214</b>
<b>The scope is being reduced to reflect the work that was able to be completed by the contractor within the term of the contract. No additional scope items have been added.</b>	
<b>Signature of Agency head or authorized designee, title of signatory, and date</b> (the authorized designee may sign his or her own name if indicated on the Signature Certification and Authorization document)	



## CONTRACT AMENDMENT COVER SHEET

<b>Agency Tracking #</b> 34301-13214	<b>Edison ID</b> 43621	<b>Contract #</b> FA1543621	<b>Amendment #</b> 4		
<b>Contractor Legal Entity Name</b> Document Storage Systems, Inc.			<b>Edison Vendor ID</b> 180461		
<b>Amendment Purpose &amp; Effect(s)</b> Reduce scope items and maximum liability					
<b>Amendment Changes Contract End Date:</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<b>End Date:</b> September 14, 2020			
<b>TOTAL Contract Amount INCREASE or DECREASE per this Amendment (zero if N/A):</b> <b>-\$2,871,890.48</b>					
<b>Funding —</b>					
<b>FY</b>	<b>State</b>	<b>Federal</b>	<b>Interdepartmental</b>	<b>Other</b>	<b>TOTAL Contract Amount</b>
15	\$750,035.84				\$750,035.84
16	\$1,221,972.00				\$1,221,972.00
17	\$1,113,107.61				\$1,113,107.61
18	\$1,633,554.85				\$1,633,554.85
19	\$3,253,960.01				\$3,253,960.01
20	\$889,014.38				\$889,014.38
21	\$548,245.22				\$548,245.22
<b>TOTAL:</b>	<b>\$9,409,889.91</b>				<b>\$9,409,889.91</b>
<b>Budget Officer Confirmation:</b> There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations.			<i>CPO USE</i>		
<b>Speed Chart (optional)</b> HL000016172		<b>Account Code (optional)</b> 600455			

## AMENDMENT 4 OF CONTRACT 43621

This Amendment is made and entered by and between the State of Tennessee, Department of Health, hereinafter referred to as the "State" and Document Storage Systems, Inc., hereinafter referred to as the "Contractor." For good and valuable consideration, the sufficiency of which is hereby acknowledged, it is mutually understood and agreed by and between said, undersigned contracting parties that the subject contract is hereby amended as follows:

1. Contract section A.5 (g) Interface Design is deleted in its entirety and replaced with Contract section A.5 (g)

g. 1. Interface Design Deliverable. The Contractor shall create an Interface Design deliverable that includes the following interfaces for EPI v1.0:

- PTBMIS Registration to [REDACTED]
- [REDACTED] to and from the TDH Master Patient Index (MPI)
- [REDACTED] to SIIS to report immunizations administered
- [REDACTED] to STARLIMS, via the State's selected EDI engine, to send lab orders
- STARLIMS to [REDACTED] via the Cloverleaf EDI engine, to return lab results (for labs ordered via EPI v1.0)
- [REDACTED] to LabCorp to send lab orders
- LabCorp to [REDACTED] to return lab results (for labs ordered via EPI v1.0)
- [REDACTED] to PTBMIS for billing and reporting

The Interface Design shall also include the designs for:

- EDI and the data protocols for the EDI layer
- Parsing data payloads, arriving via HL7 messages, to the appropriate shared files via FileMan
- Plan for handling HL7 errors.

2. Interface Implementation. The Contractor shall implement the following interfaces:

- PTBMIS Registration to [REDACTED]
- [REDACTED] to and from the TDH Master Patient Index (MPI)

2. Contract section A.5 aa is deleted in its entirety and replaced with the following:

aa. Final Project Report. The Contractor shall create a Final Project Report summarizing project activities, lessons learned, and recommended next steps. The Final Project Report shall be submitted to the State Project Director for approval no later than fifteen (15) business days prior to the Contract End Date.

3. Contract sections A.11.c, 11d, 11e, 11f and 11g are deleted in its entirety

4. Contract section A.11.h is deleted in its entirety and replaced with the following:

"h. Data Migration.

1. Demographic Data Migration. Contractor shall provide the State with data migration specifications for demographic data. The migration of demographic data shall be limited to the following: (i) Patient Name (First, Last, Middle Initial) – text; (ii) Date of birth in the following format MM/DD/YYYY; (iii) Patient current Address – text; (iv) Patient Birth Sex (M=Male, F= Female, Unknown= UNK); (v) Ethnicity - Following OMB guidance; (vi) Race – Following OMB guidance; (vii) Social Security # - Format

(123-45-6789); (viii) MPI# - Format TBD; (ix) Last visit date in the following format MM/DD/YYYY; and (x) Last Clinic visit location – text as identified in vxVista file (collectively, the "Demographic Data").

5. Contract section C.1. is deleted in its entirety and replaced with the following:

"C.1. Maximum Liability. In no event shall the maximum liability of the State under this Contract exceed Nine Million Four Hundred Nine Thousand Eight Hundred Eighty-Nine Dollars and Ninety-One Cents (\$9,409,889.91). The payment rates in section C.3 shall constitute the entire compensation due the Contractor for all service and Contractor obligations hereunder regardless of the difficulty, materials or equipment required. The payment rates include, but are not limited to, all applicable taxes, fees, overheads, and all other direct and indirect costs incurred or to be incurred by the Contractor.

The Contractor is not entitled to be paid the maximum liability for any period under the Contract or any extensions of the Contract for work not requested by the State. The maximum liability represents available funds for payment to the Contractor and does not guarantee payment of any such funds to the Contractor under this Contract unless the State requests work and the Contractor performs said work. In which case, the Contractor shall be paid in accordance with the payment rates detailed in section C.3. The State is under no obligation to request work from the Contractor in any specific dollar amounts or to request any work at all from the Contractor during any period of this Contract."

6. Contract section C.3. is deleted in its entirety and replaced with the following:

"C.3. Payment Methodology. The Contractor shall be compensated based on the payment rates herein for units of service authorized by the State in a total amount not to exceed the Contract Maximum Liability established in section C.1.

- a. The Contractor's compensation shall be contingent upon the satisfactory completion of units, milestones, or increments of service defined in section A.
- b. The Contractor shall be compensated for said units, milestones, or increments of service based upon the following payment rates:

Service Description	Amount (per compensable increment)
<p>Completion and State approval of the following Deliverables:</p> <ul style="list-style-type: none"> <li>• Deliverable #2: Project WBS and Schedule – <i>as detailed in Contract Section A.5.c.(1)(i)</i></li> <li>• Deliverable #3: Resource Management Plan – <i>as detailed in Contract Section A.5.c.(1)(ii)</i></li> <li>• Deliverable #4: Risk Management Plan - <i>as detailed in Contract Section A.5.c.(1)(iii)</i></li> <li>• Deliverable #5: Issue Management Plan - <i>as detailed in Contract Section A.5.c.(1)(iv)</i></li> <li>• Deliverable #6: Change Management Plan - <i>as detailed in Contract Section A.5.c.(1)(v)</i></li> <li>• Deliverable #7: Configuration Management Plan – <i>as detailed in Contract Section A.5.c.(1)(vi)</i></li> <li>• Deliverable #8: Release Management Plan – <i>as detailed in Contract Section A.5.c.(1)(vii)</i></li> <li>• Deliverable #9: ICD-9 to ICD-10 Conversion Plan – <i>as detailed in Contract Section A.5.c.(2)</i></li> </ul>	<p><b>\$ 450,030.00</b> <i>10% of the Total Implementation Cost</i></p>
<p>Completion and State approval of the following Deliverables:</p> <ul style="list-style-type: none"> <li>• Deliverable #13: Requirements Verification and Specification – <i>as detailed in Contract Section A.5.e.</i></li> <li>• Deliverable #14: Application Design – <i>as detailed in Contract Section A.5.f.</i></li> <li>• Deliverable #15: Interface Design – <i>as detailed in Contract Section A.5.g.</i></li> <li>• Deliverable #16: Data Migration Plan – <i>as detailed in Contract Section A.5.h.</i></li> </ul>	<p><b>\$ 450,030.00</b> <i>10% of the Total Implementation Cost</i></p>

Service Description	Amount (per compensable increment)
Completion and State approval of the following Deliverables: <ul style="list-style-type: none"> <li>• Deliverable #20: Implementation Plan – as detailed in Contract Section A.5.k.</li> <li>• Deliverable #22: Operations Manual – as detailed in Contract Section A.5.m.</li> <li>• Deliverable #23: Backup and Recovery Plan – as detailed in Contract Section A.5.n.</li> <li>• Deliverable #24: Contingency of Operations Plan – as detailed in Contract Section A.5.o.</li> <li>• Deliverable #25: Software Test Results Document – as detailed in Contract Section A.5.r.</li> </ul>	<b>\$ 225,015.00</b> 5% of the Total Implementation Cost
Completion and State approval of the following Deliverables: <ul style="list-style-type: none"> <li>• Deliverable #21: Knowledge Transfer Plan – as detailed in Contract Section A.5.l.</li> <li>• Deliverable #26: Training Material and trained trainers – as detailed in Contract Section A.5.s.</li> <li>• Deliverable #27: User Acceptance Testing (UAT) – as detailed in Contract Section A.5.t.</li> </ul>	<b>\$ 225,015.00</b> 5% of the Total Implementation Cost
Completion and State approval of EPI v1.0 Pilot Implementation, Phase One Rollout Post as indicated by written State approval of the Post-Implementation Assessment Report – as detailed in Contract Section A.5.u.(5)	<b>\$ 225,015.00</b> 5% of the Total Implementation Cost
Completion and State approval of EPI v1.0 Pilot Implementation, Phase Two Rollout as indicated by written State approval of the Post-Implementation Assessment Report – as detailed in Contract Section A.5.v.	<b>\$ 225,015.00</b> 5% of the Total Implementation Cost
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, Upper Cumberland Region (UCR) as indicated by written State approval of the Post-Implementation Assessment Report – as detailed in Contract Section A.5.w.	<b>\$ 450,030.00</b> 10% of the Total Implementation Cost
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, East Region as indicated by written State approval of the Post-Implementation Assessment Report – as detailed in Contract Section A.5.w.	<b>\$ 450,030.00</b> 10% of the Total Implementation Cost
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, Southeast Region and Hamilton County as indicated by written State approval of the Post-Implementation Assessment Report – as detailed in Contract Section A.5.w.	<b>\$ 450,030.00</b> 10% of the Total Implementation Cost
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, Mid Cumberland Region– as detailed in Contract Section A.5.w.	<b>\$ 450,030.00</b> 10% of the Total Implementation Cost
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, South Central Region as indicated by written State approval of the Post-Implementation Assessment Report – as detailed in Contract Section A.5.w.	<b>\$ 450,030.00</b> 10% of the Total Implementation Cost
Upon execution of Amendment 4 of Contract 43621	<b>\$225,015.00</b>
State approval of the Final Project Report –as detailed in Contract Section A.5.aa	<b>\$225,015.00</b>

<b>Service Description</b>	<b>Amount (per compensable increment)</b>
Software Licenses Delivered <ul style="list-style-type: none"> <li>• [REDACTED] Registration and Scheduling Software [REDACTED]</li> <li>• [REDACTED] Patient Account Management System Software [REDACTED]</li> <li>• PilotFish XCS eiPlatform (PilotFish)</li> </ul>	<b>\$ 660,443.34</b>
Delivery of Release 1 to the State <ul style="list-style-type: none"> <li>• vxPAMS and [REDACTED] Add-ons – as detailed in Contract Section A.11b.</li> </ul>	<b>\$168,071.28</b>
Data Migration – as detailed in Contract Section A.11h. <ul style="list-style-type: none"> <li>• Upon Delivery of the Migration Data Fields and Specifications</li> </ul>	<b>\$ 106,206.00</b>
Maintenance and Support – as detailed in Contract Section A.11 (j). <ul style="list-style-type: none"> <li>• July 1, 2019 – September 14, 2020</li> <li>• Upon the commencement of the maintenance and support period</li> </ul>	<b>\$ 177,011.00</b>

<b>Service Description</b>	<b>Amount (per compensable increment)</b>					
	<b>Contract Year One</b>	<b>Contract Year Two</b>	<b>Contract Year Three</b>	<b>Contract Year Four</b>	<b>Contract Year Five</b>	<b>Contract Year Six</b>
<b>Support and Maintenance<sup>1</sup> – as detailed in Contract Section A.5.x.</b>	\$ 0.00 per year	\$ 227,850.00 per year	\$ 239,243.00 per year	\$ 251,205.00 per year	\$ 263,275.00 per year	\$ 271,173.00 per year
<b>Service Description</b>	<b>Amount (per compensable increment)</b>					
<b>Emergency Support and Maintenance – as detailed in Contract Section A.5.y.</b>	\$ 130.00 per hour	\$ 136.50 per hour	\$ 143.33 per hour	\$ 150.50 per hour	\$ 158.03 per hour	\$162.77 per hour
<b>Modification and Enhancement Requests (MERs) – as detailed in Contract Section A.5.z.</b>	\$ 130.00 per hour	\$ 136.50 per hour	\$ 143.33 per hour	\$ 150.50 per hour	\$ 158.03 per hour	\$162.77 per year
<b>Optional Expansion Phase – as detailed in Contract Section A.9.</b>	\$ 130.00 per hour	\$ 136.50 per hour	\$ 143.32 per hour	\$ 150.50 per hour	\$ 158.03 per hour	\$ 162.77 per year

<sup>1</sup> No Support and Maintenance fee shall be accumulated or invoiced by the Contractor until the EPI v1.0 is deployed and active in the pilot location. Support and Maintenance fees for Contract Year One will be paid by the State proportionally based on date of implementation. Contract Year One Support and Maintenance fees shall be invoiced by the Contractor in quarterly installments. Support and Maintenance fees for all other contract years awarded under the Contract shall be invoiced by the Contractor in equal quarterly installments each equal to one-quarter the yearly contract amount

provided that the combined quarterly invoices do not exceed the yearly contracted amount. Quarterly installments for all Support and Maintenance fees shall correspond with the State's fiscal calendar year.

- c. The Contractor shall be compensated for modification and enhancements requested and performed pursuant to Contract Section A.5.z. without a formal amendment of this contract based upon the payment rates detailed in the Modifications and Enhancements Requests portion of Contract Section C.3.b above and as agreed pursuant to said Section A.5.z., PROVIDED THAT compensation to the Contractor for such modification and enhancement work shall not exceed seven percent (7 %) of the Total Implementation Amount in C.3.b. above. If, at any point during the Contract period, the State determines that the cost of necessary Professional Services work would exceed said maximum amount, the State may amend this Contract to address the need.

Required Approvals. The State is not bound by this Amendment until it is signed by the contract parties and approved by appropriate officials in accordance with applicable Tennessee laws and regulations (depending upon the specifics of this contract, said officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).

Amendment Effective Date. The revisions set forth herein shall be effective June 1, 2020. All other terms and conditions of this Contract not expressly amended herein shall remain in full force and effect.

**IN WITNESS WHEREOF,**

**DOCUMENT STORAGE SYSTEMS, INC.:**

---

**SIGNATURE**

**DATE**

---

**PRINTED NAME AND TITLE OF SIGNATORY (above)**

**DEPARTMENT OF HEALTH:**

---

**LISA PIERCEY, MD, MBA, FAAP, COMMISSIONER**

**DATE**



## CONTRACT AMENDMENT COVER SHEET

<b>Agency Tracking #</b> 34301-13214	<b>Edison ID</b> 43621	<b>Contract #</b> FA1543621	<b>Amendment #</b> 3		
<b>Contractor Legal Entity Name</b> Document Storage Systems, Inc.			<b>Edison Vendor ID</b> 180461		
<b>Amendment Purpose &amp; Effect(s)</b> Add funding for Support and Maintenance only; extend term for 6 <sup>th</sup> year					
<b>Amendment Changes Contract End Date:</b> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		<b>End Date:</b> September 14, 2020			
<b>TOTAL Contract Amount INCREASE or DECREASE per this Amendment</b> (zero if N/A):			<b>+\$ 263,275.00</b>		
<b>Funding —</b>					
<b>FY</b>	<b>State</b>	<b>Federal</b>	<b>Interdepartmental</b>	<b>Other</b>	<b>TOTAL Contract Amount</b>
15	\$2,426,950.00				\$2,426,950.00
16	\$2,739,959.00				\$2,739,959.00
17	\$514,310.80				\$514,310.80
18	\$914,685.00				\$914,685.00
19	\$4,953,234.59				\$4,953,234.59
20	\$500,960.70				\$500,960.70
21	\$231,680.30				\$231,680.30
<b>TOTAL:</b>	<b>\$12,281,780.39</b>				<b>\$12,281,780.39</b>
<b>Budget Officer Confirmation:</b> There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations.  Eric Gerhard Bucholz			<i>CPO USE</i>  FA1543621-03		
<b>Speed Chart</b> (optional) HL000016172		<b>Account Code</b> (optional) 600455			

**AMENDMENT 3  
OF CONTRACT 43621**

This Amendment is made and entered by and between the State of Tennessee, Department of Health, hereinafter referred to as the "State" and Document Storage Systems, Inc., hereinafter referred to as the "Contractor." For good and valuable consideration, the sufficiency of which is hereby acknowledged, it is mutually understood and agreed by and between said, undersigned contracting parties that the subject contract is hereby amended as follows:

1. Contract section B is deleted in its entirety and replaced with the following:

**B. CONTRACT PERIOD:**

This Contract shall be effective for the period beginning September 15, 2014, and ending on September 14, 2020. The Contractor hereby acknowledges and affirms that the State shall have no obligation for services rendered by the Contractor which were not performed within this specified contract period.

2. Contract section C.1. is deleted in its entirety and replaced with the following:

C.1. **Maximum Liability.** In no event shall the maximum liability of the State under this Contract exceed Twelve Million Two Hundred Eighty-One Thousand Seven Hundred Eighty Dollars and Thirty-Nine Cents (\$12,281,780.39). The payment rates in section C.3 shall constitute the entire compensation due the Contractor for all service and Contractor obligations hereunder regardless of the difficulty, materials or equipment required. The payment rates include, but are not limited to, all applicable taxes, fees, overheads, and all other direct and indirect costs incurred or to be incurred by the Contractor.

The Contractor is not entitled to be paid the maximum liability for any period under the Contract or any extensions of the Contract for work not requested by the State. The maximum liability represents available funds for payment to the Contractor and does not guarantee payment of any such funds to the Contractor under this Contract unless the State requests work and the Contractor performs said work. In which case, the Contractor shall be paid in accordance with the payment rates detailed in section C.3. The State is under no obligation to request work from the Contractor in any specific dollar amounts or to request any work at all from the Contractor during any period of this Contract.

3. Contract section C.3. is deleted in its entirety and replaced with the following:

C.3. **Payment Methodology.** The Contractor shall be compensated based on the payment rates herein for units of service authorized by the State in a total amount not to exceed the Contract Maximum Liability established in section C.1.

- a. The Contractor's compensation shall be contingent upon the satisfactory completion of units, milestones, or increments of service defined in section A.
- b. The Contractor shall be compensated for said units, milestones, or increments of service based upon the following payment rates:

Service Description	Amount (per compensable increment)
<p>Completion and State approval of the following Deliverables:</p> <ul style="list-style-type: none"> <li>• Deliverable #2: Project WBS and Schedule – as detailed in Contract Section A.5.c.(1)(i)</li> <li>• Deliverable #3: Resource Management Plan – as detailed in Contract Section A.5.c.(1)(ii)</li> <li>• Deliverable #4: Risk Management Plan - as detailed in Contract Section A.5.c.(1)(iii)</li> <li>• Deliverable #5: Issue Management Plan - as detailed in Contract Section A.5.c.(1)(iv)</li> <li>• Deliverable #6: Change Management Plan - as detailed in Contract Section A.5.c.(1)(v)</li> <li>• Deliverable #7: Configuration Management Plan – as detailed in Contract Section A.5.c.(1)(vi)</li> <li>• Deliverable #8: Release Management Plan – as detailed in Contract Section A.5.c.(1)(vii)</li> <li>• Deliverable #9: ICD-9 to ICD-10 Conversion Plan – as detailed in Contract Section A.5.c.(2)</li> </ul>	<p><b>\$ 450,030.00</b> 10% of the Total Implementation Cost</p>
<p>Completion and State approval of the following Deliverables:</p> <ul style="list-style-type: none"> <li>• Deliverable #13: Requirements Verification and Specification – as detailed in Contract Section A.5.e.</li> <li>• Deliverable #14: Application Design – as detailed in Contract Section A.5.f.</li> <li>• Deliverable #15: Interface Design – as detailed in Contract Section A.5.g.</li> <li>• Deliverable #16: Data Migration Plan – as detailed in Contract Section A.5.h.</li> </ul>	<p><b>\$ 450,030.00</b> 10% of the Total Implementation Cost</p>
<p>Completion and State approval of the following Deliverables:</p> <ul style="list-style-type: none"> <li>• Deliverable #20: Implementation Plan – as detailed in Contract Section A.5.k.</li> <li>• Deliverable #22: Operations Manual – as detailed in Contract Section A.5.m.</li> <li>• Deliverable #23: Backup and Recovery Plan – as detailed in Contract Section A.5.n.</li> <li>• Deliverable #24: Contingency of Operations Plan – as detailed in Contract Section A.5.o.</li> <li>• Deliverable #25: Software Test Results Document – as detailed in Contract Section A.5.r.</li> </ul>	<p><b>\$ 225,015.00</b> 5% of the Total Implementation Cost</p>
<p>Completion and State approval of the following Deliverables:</p> <ul style="list-style-type: none"> <li>• Deliverable #21: Knowledge Transfer Plan – as detailed in Contract Section A.5.l.</li> <li>• Deliverable #26: Training Material and trained trainers – as detailed in Contract Section A.5.s.</li> <li>• Deliverable #27: User Acceptance Testing (UAT) – as detailed in Contract Section A.5.t.</li> </ul>	<p><b>\$ 225,015.00</b> 5% of the Total Implementation Cost</p>
<p>Completion and State approval of EPI v1.0 Pilot Implementation, Phase One Rollout Post as indicated by written State approval of the Post-Implementation Assessment Report – as detailed in Contract Section A.5.u.(5)</p>	<p><b>\$ 225,015.00</b> 5% of the Total Implementation Cost</p>
<p>Completion and State approval of EPI v1.0 Pilot Implementation, Phase Two Rollout as indicated by written State approval of the Post-Implementation Assessment Report – as detailed in Contract Section A.5.v.</p>	<p><b>\$ 225,015.00</b> 5% of the Total Implementation Cost</p>
<p>Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, Upper Cumberland Region (UCR) as indicated by written State approval of the Post-Implementation Assessment Report – as detailed in Contract Section A.5.w.</p>	<p><b>\$ 450,030.00</b> 10% of the Total Implementation Cost</p>

Service Description	Amount (per compensable increment)
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, East Region as indicated by written State approval of the Post-Implementation Assessment Report – as detailed in Contract Section A.5.w.	<b>\$ 450,030.00</b> 10% of the Total Implementation Cost
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, Southeast Region and Hamilton County as indicated by written State approval of the Post-Implementation Assessment Report – as detailed in Contract Section A.5.w.	<b>\$ 450,030.00</b> 10% of the Total Implementation Cost
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, Mid Cumberland Region and Davidson County – as detailed in Contract Section A.5.w.	<b>\$ 450,030.00</b> 10% of the Total Implementation Cost
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, South Central Region as indicated by written State approval of the Post-Implementation Assessment Report – as detailed in Contract Section A.5.w.	<b>\$ 450,030.00</b> 10% of the Total Implementation Cost
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, West Region, Madison County, and Shelby County as indicated by written State approval of the Post-Implementation Assessment Report – as detailed in Contract Section A.5.w.	<b>\$ 450,030.00</b> 10% of the Total Implementation Cost
Software Licenses Delivered <ul style="list-style-type: none"> <li>• [REDACTED] Registration and Scheduling Software [REDACTED]</li> <li>• [REDACTED] Patient Account Management System Software [REDACTED]</li> <li>• PilotFish XCS eiPlatform (PilotFish)</li> </ul>	\$ 660,443.34
Software Approved for Release to Production <ul style="list-style-type: none"> <li>• [REDACTED] Registration and Scheduling Software [REDACTED]</li> <li>• [REDACTED] Patient Account Management System Software [REDACTED]</li> <li>• PilotFish XCS eiPlatform (PilotFish)</li> </ul>	\$330,221.67
Software Implemented On a Per Clinic Basis (Maximum of 119 Clinics) <ul style="list-style-type: none"> <li>• [REDACTED]® Reglstration and Scheduling Software [REDACTED]</li> <li>• [REDACTED] Patient Account Management System Software [REDACTED]</li> <li>• PilotFish XCS eiPlatform (PilotFish)</li> </ul>	\$ 8,324.92 / Clinic
Delivery of Release 1 to the State <ul style="list-style-type: none"> <li>• [REDACTED] and [REDACTED] – Add-ons – as detailed in Contract Section A.11(b).</li> </ul>	\$ 376,566.33
Delivery of Release 2 to the State <ul style="list-style-type: none"> <li>• [REDACTED] and [REDACTED] – Add-ons – as detailed in Contract Section A.11(b).</li> </ul>	\$ 376,566.33
Delivery of Release 3 to the State <ul style="list-style-type: none"> <li>• [REDACTED] and [REDACTED] – Add-ons – as detailed in Contract Section A.11(b).</li> </ul>	\$ 376,566.34
Overall Project Management – as detailed in Contract Section A.11(c) <ul style="list-style-type: none"> <li>• Invoiced Monthly</li> </ul>	\$ 28,754.17 / month
Technical Installation of Software – as detailed in Contract Section A.11(d). <ul style="list-style-type: none"> <li>• Upon Contractor's Completion of Deliverable</li> </ul>	\$ 41,427.00

<b>Service Description</b>	<b>Amount (per compensable increment)</b>
Configuration of the Software – as detailed in Contract Section A.11(e). <ul style="list-style-type: none"> <li>Upon Contractor's Completion of Deliverable</li> </ul>	\$ 82,998.00
Training: Train-the-Trainer – as detailed in Contract Section A.11(f). <ul style="list-style-type: none"> <li>Upon Contractor's Completion of Deliverable</li> </ul>	\$ 27,666.00
Trainer Mentoring and Go-Live Support Program – as detailed in Contract Section A.11(g). <ul style="list-style-type: none"> <li>Upon Contractor's Completion of Deliverable</li> </ul>	\$ 41,498.00
Data Migration – as detailed in Contract Section A.11(h). <ul style="list-style-type: none"> <li>Upon Delivery of the Migration Data Fields and Specifications</li> </ul>	\$ 212,412.00
Data Migration – as detailed in Contract Section A.11(h). <ul style="list-style-type: none"> <li>Upon Completion of Final Production Run</li> </ul>	\$ 21,241.20 / Region
Maintenance and Support – as detailed in Contract Section A.11(j). <ul style="list-style-type: none"> <li>July 1, 2019 – September 14, 2020</li> <li>Upon the commencement of the maintenance and support period</li> </ul>	\$ 177,011.00

<b>Service Description</b>	<b>Amount (per compensable increment)</b>					
	<b>Contract Year One</b>	<b>Contract Year Two</b>	<b>Contract Year Three</b>	<b>Contract Year Four</b>	<b>Contract Year Five</b>	<b>Contract Year Six</b>
<b>Support and Maintenance<sup>1</sup></b> – as detailed in Contract Section A.5.x.	\$ 0.00 per year	\$ 227,850.00 per year	\$ 239,243.00 per year	\$ 251,205.00 per year	\$ 263,275.00 per year	\$ 271,173.00 per year
<b>Service Description</b>	<b>Amount (per compensable increment)</b>					
<b>Emergency Support and Maintenance</b> – as detailed in Contract Section A.5.y.	\$ 130.00 per hour	\$ 136.50 per hour	\$ 143.33 per hour	\$ 150.50 per hour	\$ 158.03 per hour	\$162.77 per hour
<b>Modification and Enhancement Requests (MERs)</b> – as detailed in Contract Section A.5.z.	\$ 130.00 per hour	\$ 136.50 per hour	\$ 143.33 per hour	\$ 150.50 per hour	\$ 158.03 per hour	\$162.77 per year
<b>Optional Expansion Phase</b> – as detailed in Contract Section A.9.	\$ 130.00 per hour	\$ 136.50 per hour	\$ 143.32 per hour	\$ 150.50 per hour	\$ 158.03 per hour	\$ 162.77 per year

<sup>1</sup> No Support and Maintenance fee shall be accumulated or invoiced by the Contractor until the EPI v1.0 is deployed and active in the pilot location. Support and Maintenance fees for Contract Year One will be paid by the State proportionally based on date of implementation. Contract Year One Support and Maintenance fees shall be invoiced by the Contractor in quarterly installments. Support and Maintenance fees for all other contract years awarded under the Contract shall be invoiced by the Contractor in equal quarterly installments each equal to one-

quarter the yearly contract amount provided that the combined quarterly invoices do not exceed the yearly contracted amount. Quarterly installments for all Support and Maintenance fees shall correspond with the State's fiscal calendar year.

- c. The Contractor shall be compensated for modification and enhancements requested and performed pursuant to Contract Section A.5.z. without a formal amendment of this contract based upon the payment rates detailed in the Modifications and Enhancements Requests portion of Contract Section C.3.b above and as agreed pursuant to said Section A.5.z., PROVIDED THAT compensation to the Contractor for such modification and enhancement work shall not exceed seven percent (7 %) of the Total Implementation Amount in C.3.b. above. If, at any point during the Contract period, the State determines that the cost of necessary Professional Services work would exceed said maximum amount, the State may amend this Contract to address the need.

Required Approvals. The State is not bound by this Amendment until it is signed by the contract parties and approved by appropriate officials in accordance with applicable Tennessee laws and regulations (depending upon the specifics of this contract, said officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).

Amendment Effective Date. The revisions set forth herein shall be effective September 14, 2019. All other terms and conditions of this Contract not expressly amended herein shall remain in full force and effect.

IN WITNESS WHEREOF,

DOCUMENT STORAGE SYSTEMS, INC.:

*Mark Byers* \_\_\_\_\_ *8/22/2019*  
 SIGNATURE DATE

MARK BYERS, PRESIDENT

PRINTED NAME AND TITLE OF SIGNATORY (above)

TENNESSEE DEPARTMENT OF HEALTH:

**Lisa Piercey MD-LO**

Digitally signed by Lisa Piercey MD-LO  
 DN: cn=Lisa Piercey MD-LO, o, ou,  
 email=Lindsay.R.Oliveras@tn.gov, c=US  
 Date: 2019.08.29 09:29:14 -05'00'

LISA PIERCEY, MD, MBA, FAAP, COMMISSIONER

DATE



## CONTRACT AMENDMENT COVER SHEET

<b>Agency Tracking #</b> 34301-13214	<b>Edison ID</b> 43621	<b>Contract #</b> FA1543621	<b>Amendment #</b> 2		
<b>Contractor Legal Entity Name</b> Document Storage Systems, Inc.			<b>Edison Vendor ID</b> 180461		
<b>Amendment Purpose &amp; Effect(s)</b> This amendment will support the addition of software to replace the legacy NetSmart system Patient Tracking Billing Management Information System (PTBMIS) with a new Scheduling, Registration and Billing system that will be integrated with our current electronic medical record.					
<b>Amendment Changes Contract End Date:</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<b>End Date:</b> 9/14/2019			
<b>TOTAL Contract Amount INCREASE or DECREASE per this Amendment</b> (zero if N/A):			<b>\$ 4,543,858.04</b>		
<b>Funding —</b>					
<b>FY</b>	<b>State</b>	<b>Federal</b>	<b>Interdepartmental</b>	<b>Other</b>	<b>TOTAL Contract Amount</b>
15	\$2,426,950.00				\$2,426,950.00
16	\$2,739,959.00				\$2,739,959.00
17	\$514,310.80				\$514,310.80
18	\$914,685.00				\$914,685.00
19	\$4,953,234.59				\$4,953,234.59
20	\$469,366.00				\$469,366.00
<b>TOTAL:</b>	<b>\$12,018,505.39</b>				<b>\$12,018,505.39</b>
<b>American Recovery and Reinvestment Act (ARRA) Funding:</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
<b>Budget Officer Confirmation:</b> There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations.			<i>CPO USE</i>		
 <small>Digitally signed by Adeniyi R. Bakare          DN: cn=Adeniyi R. Bakare, o=Tennessee          Department of Health, ou=Division of          Administrative Services,          email=Adeniyi.Bakare@tn.gov, c=US          Date: 2018.08.31 09:25:18 -05'00'          Adobe Acrobat DC version: 2015.006.30448</small>					
<b>Speed Chart (optional)</b> HL000016172		<b>Account Code (optional)</b> 70803000			

**AMENDMENT 2  
TO CONTRACT FA 1543621**

This Amendment is made and entered by and between the State of Tennessee, Department of Health, hereinafter referred to as the "State" and Document Storage Systems, Inc., hereinafter referred to as the "Contractor." For good and valuable consideration, the sufficiency of which is hereby acknowledged, it is mutually understood and agreed by and between said, undersigned contracting parties that the subject contract is hereby amended as follows:

1. The following is added as Contract Section A.10.(6).

"6) Proprietary Software – Notwithstanding anything to the contrary in this Contract and subject to the State's payment of the software license fees listed in Section C.3, Contractor hereby grants to the State:

- a. a perpetual, nonexclusive, nontransferable, nonsublicensable license to install, use, and execute the [REDACTED] Patient Account Management System [REDACTED], [REDACTED] Registration and Scheduling System [REDACTED] software, and the Add-On Features (as defined Section A.11(b) below) for its own internal business purposes and in accordance with the terms and conditions set forth in Attachment H (Proprietary Software License Terms); and
- b. a limited, personal, nonexclusive, nontransferable license to install, use, and execute the PilotFish XCS eiPlatform ("PilotFish") on equipment owned or leased by the State all in accordance with the terms and conditions set forth in Attachment H (Proprietary Software License Terms).

The Contractor and the State hereby acknowledge and agree that vxPAMS, ForSite2020, PilotFish, and the Add-On Features are not open source software and shall not be considered FOSS. Further, the Contractor and the State hereby agree that the terms and conditions of the Apache 2.0 License and the OSEHRA Licensing Terms, including but not limited to any other open source licensing agreements, shall not apply to the State's use of [REDACTED] PilotFish, and the Add-On Features."

2. The following is added as Contract Section A.11.

"A.11. Additional Services Description. The Contractor shall provide the State with additional components and/or modules for the State's EPI v2.0 initiative by providing the State with the patient account management, registration, and scheduling systems described below. Notwithstanding anything to the contrary in the Contract, the State hereby acknowledges and hereby agrees that the services and systems to be provided by the Contractor pursuant to this Section A.11 are contingent on, and subject to, the State's completion of its installation of the EPI v1.0 rollout in each region, including completion of all implementation prerequisites required to permit the Contractor to provide the services and install the systems described below. For clarification, the services and systems to be provided by Contractor pursuant to Section A.11 shall be delivered on a region-by-region basis as the State completes its installation of the EPI v1.0 rollout in a region; provided, however, that Contractor shall not be responsible for any delays to project schedules and timelines resulting from delays resulting from the EPI v1.0 Statewide Rollout.

a. Products. Subject to Section A.10(6), Contractor shall provide the State with the following:

1. [REDACTED] [REDACTED] is a "rules-based" enterprise-wide registration and scheduling solution used in multi-site deployments. Features include but are not limited to: (i) time-zone specific registration and scheduling; (ii) rules-based design that is configurable by the site; (iii) revenue, clinical, and scheduling rules that provide error-free scheduling of clinics, and diagnostic appointments; (iv)

collection of all necessary registration data; and (v) leverages current VistA visit functionality.

2. [REDACTED] [REDACTED] is fully integrated with VistA, is dependent upon the currently installed file structures at the State, and eliminates the need for HL7 billing interfaces between [REDACTED] and [REDACTED]. [REDACTED] was developed in 2005 as an integral portion of the overall [REDACTED] solution that utilizes the file structures, operating systems, and hardware of the State's current investment. [REDACTED] provides a full range of billing and accounts receivable functions including but not limited to: (i) patient billing for Medicare, Medicaid, private insurance payers, and self-pay; (ii) provides a sliding fee option; (iii) supports ANSI X12 transactions (Electronic billing - 837I, 837P, 837D; Electronic remittance advice – 835; Also supports the manual bill, statement and payment and adjustment posting); (iv) direct patient payment and receipt generation; and (v) revenue, payment, and adjustment posting to the general ledger.
  3. PilotFish. The PilotFish XCS eiPlatform is an integration server that leverages application server technology, web services and industry XML standards to enable seamless interfacing of disparate systems regardless of their platform, operating system, data format or communications portal.
- b. Add-Ons. The Contractor shall provide the State with certain additional add-on features and functionality to the [REDACTED] and [REDACTED] products ("Add-On Features"). The State will provide Contractor with the Add-On Features requirements list describing the features, functionality, and other requests related to [REDACTED] and [REDACTED] within thirty (30) days of the Amendment Effective Date. The Add-On Features are limited to a defined level of effort (LOE), as determined by Contractor, which shall not exceed nine-thousand (9,000) hours. The LOE of 9,000 hours includes, but is not limited to, all hours related to requirements, development, design, product management, quality assurance, and/or documentation of the Add-On Features. Within thirty (30) days of Contractor's receipt of the Add-On Features requirements list, Contractor will provide the State with a written statement describing in reasonable detail the: (i) estimated number of hours required to provide the Add-On Features (as submitted by the State); (ii) the number of hours that exceed the LOE of 9,000 hours, if applicable; (iii) estimated cost to provide the features and functionality that exceed the LOE of 9,000 hours; and (iv) recommended features and functionality to exclude so that the LOE does not exceed 9,000 hours. If the Add-On Features exceeds an LOE of nine-thousand (9,000) hours, then the State and Contractor hereby agree to prioritize the features and functionality requested on the Add-On Features requirements list to ensure the LOE does not exceed nine-thousand (9,000) hours and that EPI 2.0 initiative Go-Live date of June 30, 2019 is not delayed. In addition to the factors above, prioritization of features and functionality shall be based on: (v) the LOE relative to remaining LOE hours; (vi) whether the feature or request being outside of EPI v2.0 initiative functionality; and (vii) other factors as mutually determined by the parties. Upon receipt of Contractor's written statement, the State and Contractor shall meet to discuss and finalize the Add-On Features requirements list by November 15, 2018. The Add-On Features shall be delivered in approximately three (3) releases. Each release shall be deemed to be delivered upon Contractor's delivery of the release into a download/upload area designated by the State. Each release shall provide a detailed listing of all functionality contained in such release. Any defects reported in a release shall be remediated without using any hours from the 9,000 hour pool. These defects shall be delivered in patches to the current release and not held until delivery of the next release. For purposes of this Section A.11(b), a "defect" means any failure of the applicable Add-On Feature(s) to operate in accordance with or otherwise conform to the acceptance criteria associated with the applicable requirement as mutually agreed upon by the parties.

- c. Overall Project Management. The Contractor shall designate a single project manager to serve as the Contractor's primary point of contact for all activities and issues under this Section A.11. The Contractor shall ensure that its project management team provides sufficient management of the project to ensure that all project activities are performed efficiently, accurately, and on schedule. The Contractor project manager(s) shall coordinate as necessary with the State Project Director to ensure that Contractor activities are managed consistently with overall Contract requirements. The Contractor project manager(s) must be located at the Tennessee Department of Health Central Office for a total of no less than 18 weeks. For purposes of on-site presence, a "week" is defined as Monday – Friday and includes Contractor project manager's reasonable travel time to and from the Tennessee Department of Health Central Office. The State will provide the Contractor project manager(s) the following: (i) desk space, (ii) hardware, (iii) desktop phone, (iv) access to the internet, and (v) other items and/or services as reasonably requested by the Contractor project manager(s) to carry out its obligations under this contract. If, during the term of this Contract, the Contractor project manager(s) or other personnel that are assigned on a full-time basis under this Contract should resign, be terminated by Contractor, promoted, take a leave of absence, or if the State requests that such project manager(s) or such other personnel no longer work on this Contract, then the Contractor shall fill the vacant position, within thirty (30) calendar days from the date such personnel leaves his/her position with the Contractor or being barred from working on this contract by the State, with a qualified replacement approved by the State. For the purpose of this Section, the term "qualified" means that the proposed replacement personnel possess comparable experience and training as the Contractor personnel being replaced. Without limiting the foregoing, during the forty-eight (48) hour period immediately following any resignation, termination, promotion, or leave of absence of the project manager(s) or other full-time personnel, or request on the part of the State that the project manager(s) or other full-time personnel be removed from the project the parties shall meet to discuss the foregoing events and any alternative solutions.
- d. Technical Installation of Software. Contractor shall provide installation of [REDACTED] and PilotFish into the State's test environment and assist with the installation into the UAT environment, training environment, and production environment. The installation and configuration shall be performed in a combination of on-site services to be performed by the State and remote services to be performed by the Contractor. State will be responsible for procuring all server infrastructure, including virtual machines, required for proper installation and configuration of the foregoing. The Contractor shall provide the State with detailed specifications to assist State with its procurement. Contractor shall provide two (2) technical resources for an estimated three (3) weeks.
- e. Configuration of the Software.
1. [REDACTED] Configuration. [REDACTED] configuration under this Section A.11 is limited to training the State-designated "super-users" in the following areas: (i) end-user functions, which includes demonstration and discussion of each end-user function; and (ii) configuration tables, including training on each field within each configuration table. There are approximately 35 registration tables and 40 scheduling tables. Configuration training shall be provided using a local database loaded on each training computer. The State will provide the computers. The State will provide each attendee a hard copy of the Contractor provided [REDACTED] End-User Training Guide and the Registration and Scheduling Code Table Manuals prior to commencement of the configuration training. Upon completion of the configuration training, Contractor shall monitor the code table building process to ensure [REDACTED] s being configured by the State to meet its needs. Once the State has completed the code table building process, Contractor shall assist the State with its final systems testing. Configuration training shall occur over a three (3) week period at times and

locations to be mutually agreed upon by the parties. The Contractor shall provide two (2) configuration trainers.

2. Configuration. Configuration under this Section A.11 is limited to training the State-designated "super-users" in the following areas: (i) site surveys collecting required data, such as (NPI, TIN, Payor, etc.), fee schedules, contracts, and clearinghouse information; (ii) actual configuration (Contractor to configure vendor specific tables and parameters and State to configure customer specific tables and parameters) with State resource participation; (iii) post-configuration review to document required changes and instruction on how to maintain configuration; (iv) organization decisions for site needs regarding fatal/warning claim edits, canned messages, A/R types, financial classes, cost centers, adjustment reasons, reporting decisions (prior to go live). Each attendee will need a copy of the End-User Training Guide which will be provided to the trainees via download by the Contractor. Configuration training shall occur over a three (3) week period at times and locations to be mutually agreed upon by the parties. The Contractor shall provide two (2) configuration trainers.
3. PilotFish Configuration. PilotFish configuration under this Section A.11 is limited to the following integration points: (i) ADT outbound from (as defined in the current specifications); (ii) SIU outbound from (as defined in the current specifications); (iii) QBP^Q23 and RSP^K23 and A28 and A31 out/in (iv) 837 Professional, Institutional, and Dental outbound; (v) 270/271 or API to Availity; (vi) inbound A08; and (vii) GL outbound from in a flat file format. Any additional integration points requested by the State must be mutually agreed to by the parties and will be handled as a change request.

f. Training: Train-the-Trainer.

1. Train-the-Trainer is limited to training State-designated trainers in the following areas: (i) end-user functions, which includes demonstration and discussion of each end-user function. The training shall use as configured by the State in Section A.11(e)(1) above. Trainer to trainee ratio shall not exceed 1:6. The State shall provide each attendee with a hard copy of the Contractor provided End-User Training Guide prior to commencement of training. Contractor shall provide one (1) Train-the-Trainer session which will not exceed four (4) days. A session shall include two (2) trainers on-site. Training sessions may be recorded by the State and used solely for its internal training purposes. Training sessions will not be shared with any third party.
2. Training. Train-the-Trainer is limited to training State-designated trainers in the following areas: (i) add payor for electronic transmit; (ii) adjustment reasons; (iii) use of cost centers; (iv) setup of flat rates; (v) rate changes; and (vi) tips, techniques, and materials for State-designated trainers to train other end-users in the general operations for patient billing and payment posting to patient accounts. Trainer to trainee ratio shall not exceed 1:6. The State shall provide each attendee with a copy of the End-User Training Guide prior to commencement of training. Contractor shall provide one (1) Train-the-Trainer session which will not exceed four (4) days. A session shall include two (2) trainers on-site. Training sessions may be recorded by the State and used solely for its internal training purposes. Training sessions will not be shared with any third party.

- g. Trainer Mentoring and Go-Live Support Program. The Contractor shall provide the State with a Trainer Mentoring and Go-Live Support Program. Such program shall be limited to three (3) sessions (for each of ) which shall

not exceed four (4) days per session. Contractor shall provide one (1) trainer on-site per session. The Contractor and State shall work together to schedule each session to meet the needs of the State.

h. Data Migration.

1. Demographic Data Migration. Contractor shall provide the State with migration services from existing State servers to the [REDACTED] and VistA servers, as applicable, provided and maintained by the State. The migration of demographic data shall be limited to the following: (i) Patient Name (First, Last, Middle Initial) – text; (ii) Date of birth in the following format MM/DD/YYYY; (iii) Patient current Address – text; (iv) Patient Birth Sex (M=Male, F= Female, Unknown= UNK); (v) Ethnicity - Following OMB guidance; (vi) Race – Following OMB guidance; (vii) Social Security # - Format (123-45-6789); (viii) MPI# - Format TBD; (ix) Last visit date in the following format MM/DD/YYYY; and (x) Last Clinic visit location – text as identified in vxVistA file (collectively, the “Demographic Data”). Within sixty (60) calendar days of the Amendment Effective Date, the Contractor and State shall mutually agree to any additional Demographic Data fields to be included in the migration.

State will be responsible for performing a duplicate check on the Demographic Data which may include, but is not limited to, the following fields: (i) Patient Name (first, last, middle initial) – text; (ii) Date for birth in the following format MM/DD/YYYY; (iii) Patient current Address – text; (iv) Patient Birth Sex (M=Male, F= Female, Unknown= UNK); and (v) Social Security # - Format (123-45-6789). For clarification, Contractor shall not perform any duplicate check on the Demographic Data.

To preserve the integrity of the Master Person Index (“MPI”), Contractor and State shall perform the migration in accordance with the following:

- a. The State will provide Contractor with the agreed data and fields from all regional PTBMIS systems and upload such data and fields into the [REDACTED] and [REDACTED] servers, as applicable. All MPI links and systems identifiers must be included with each patient record with each patient being represented by exactly one import record.
- b. The migration of the Demographic Data, shall occur in three (3) Phases as follows: (1<sup>st</sup> Phase) Contractor (with assistance from State) shall test the technology used for the Demographic Data migration, (2<sup>nd</sup> Phase) Contractor shall supply the State with a list of exceptions for the purposes of data clean up by the State, and (3<sup>rd</sup> Phase) Contractor shall perform the final production run. After the State completes the foregoing clean-up effort, the PTBMIS data will be re-extracted by the State for the production migration.
- c. Once the production State PTBMIS demographic data is re-extracted, the State will queue up all new ADT messages (A04 & A08) for later transmission to the Contractor.
- d. During the production run, as each Demographic Data record is loaded into [REDACTED] the State’s MPI will be updated with the newly assigned [REDACTED] Medical Record Number (A31), as applicable.

- e. After the production run is complete, State will send all queued up ADT messages (A04 & A08) to [REDACTED] to be processed and the State's MPI will be updated with the newly assigned [REDACTED] Medical Record Number, as applicable.
- f. State will continue to send the ADT messages (A04 & A08) to ForSite2020 from each PTBMIS system until such time ForSite2020 goes into production for a given region.

For clarification, the Demographic Data migration shall not include any encounter level data and shall not include any Demographic Data for any patients that have not had an encounter within 5 years. There will be one (1) migration, for all PTBMIS [REDACTED] systems.

After the Demographic Data migration is complete, the scheduling data migration for the 119 clinics will commence. The State will provide a flat file to Contractor for the scheduling data migration for the 119 clinics. Such flat file will contain the following: i) appropriate patient identifiers; ii) appropriate [REDACTED] facility, site, and clinic codes; iii) appointment types appropriately mapped to [REDACTED] procedure codes; and iv) date and time. Contractor shall not perform conflict checking on migrated scheduling data. Contractor and State shall mutually agree to the flat file layout.

- 2. Account Balance Migration. Contractor shall provide the State with migration services from existing State servers to the [REDACTED] and [REDACTED] servers, as applicable, provided and maintained by the State. The migration of patient account balances shall be outlined in the Account Balance Migration Specifications to be agreed upon between Contractor and State within sixty (60) days of the Amendment Effective Date.

For clarification, the following items are deemed outside the scope of this migration: (i) zero balance accounts, and (ii) account balances that are not associated with Demographic Data migrated in Section A.11(h)(1) above.

- 3. All data migrated under Section A.11(h)(1)&(2) is owned by the State and, subject to Contractor's performance of the migration services set forth herein, the State will have full access to the data at all times (24x7x365). Additionally, all data must remain on the State's servers.
- i. Operating System/Essential Software Support. During the term of this Contract, the Contractor shall provide to the State any and all enhancements or updates twelve (12) months prior to the published vendor end of support date necessary to operate [REDACTED], Immunization Dashboard, Comprehensive Encounter Solution, and PilotFish on the currently in use versions of the operating system software, including any enhancements or updates to operate with currently in use versions of any required middleware or database software without requiring extended support by the manufacturer (i.e. Citrix [REDACTED], TomCat [REDACTED], etc.). For clarification, the Contractor will not be required to provide any enhancements or updates to the foregoing software in the event that the State's currently in use versions of the operating system software, including any middleware or database software, is no longer supported by the applicable manufacturer and/or vendor. Upon release of any operating system, middleware, and/or database patches impacting the Contractor's software, the Contractor will support and maintain the specified patch(s) to the operating system, middleware, and/or database components within ninety (90) days of the date the patch is released. The State shall provide Contractor, to the extent possible, with at least forty-five (45) days notice prior to the installation of such patch.

- j. Support and Maintenance. Contractor shall provide support and maintenance for [REDACTED] and [REDACTED] in accordance with Section A.5(x) and the Support and Maintenance Plan previously provided to the State by Contractor. Support and Maintenance for [REDACTED] and [REDACTED] shall commence upon the EPI v2.0 Go-Live date (fees will be prorated daily from actual commencement date through expiration of this Contract).
- k. Change Request, Modifications, and Enhancements. At the request of the State, the Contractor shall modify and enhance EPI v2.0 according to the Modification & Enhancement Request (MER) Process detailed in Section A.5(z)(1), (2), and (3) of this Contract.
- l. On-Site Presence. For purposes of on-site presence by Contractor's personnel, the services and deliverables described in this Section A.11 includes a total of fifty-four (54) weeks of on-site presence. A "week" is defined as Monday – Friday and includes Contractor's personnel's reasonable travel time to and from the State's on-site location. Each week of on-site presence is allocated on a per-personnel basis. Contractor shall not be obligated to incur any additional travel related expenses and/or costs beyond such amount.
- m. Assumptions. The services described above are based on the following assumptions:
  1. Development and configuration services associated with any non-clinical events for registration, scheduling, and/or billing is not included. Any requirements related to the State's definition of "care coordination" responsibilities are out the scope of this Section A.11.
  2. [REDACTED]s intended to be used as a standard billing and accounts receivable system for care delivered at the one hundred nineteen (119) State of Tennessee, Department of Health clinics.
  3. The technological infrastructure that can support the services and software being provided pursuant to this Section A.11 will exist or will be provided by the State at its sole cost and expense.

- 3. Contract Attachment F is deleted in its entirety and replaced with the following as Contract Section A.11.n.

"A.11.n. The Contractor must comply with the State's Enterprise Information Security Policies. This document is found at the following URL:  
<https://www.tn.gov/content/dam/tn/finance/documents/Enterprise-Information-Security-Policies-ISO-27002-Public.pdf>."

- 4. The following is added as Contract Section A.12.

"A.12. Warranty. As of the effective date of this Amendment, Contractor represents and warrants that the term of the warranty ("Warranty Period") shall be the greater of the Term of this Contract or any other warranty generally offered by Contractor, its suppliers, or manufacturers to customers of its goods or services. The goods or services provided under this Contract shall conform to the terms and conditions of this Contract throughout the Warranty Period. Any nonconformance of the goods or services to the terms and conditions of this Contract shall constitute a "Defect" and shall be considered "Defective." If Contractor receives notice of a Defect during the Warranty Period, then Contractor shall correct the Defect, at no additional charge.

Contractor represents and warrants that the State is authorized to possess and use all equipment, materials, software, and deliverables provided under this Contract.

Contractor represents and warrants that all goods or services provided under this Contract shall be provided in a timely and professional manner, by qualified and skilled individuals, and in conformity with standards generally accepted in Contractor's industry.

If Contractor fails to provide the goods or services as warranted, then Contractor will re-provide the goods or services at no additional charge. If Contractor is unable or unwilling to re-provide the goods or services as warranted, then the State shall be entitled to recover the fees paid to Contractor for the Defective goods or services. Any exercise of the State's rights under this Section shall not prejudice the State's rights to seek any other remedies available under this Contract or applicable law.

The State agrees that it shall initially pursue all remedies available under the Support and Maintenance Plan with Contractor."

5. Contract section C.1. is deleted in its entirety and replaced with the following:

"C.1. Maximum Liability. In no event shall the maximum liability of the State under this Contract exceed Twelve Million Eighteen Thousand Five Hundred Five Dollars and Thirty-Nine Cents (\$12,018,505.39). The payment rates in section C.3 shall constitute the entire compensation due the Contractor for all service and Contractor obligations hereunder regardless of the difficulty, materials or equipment required. The payment rates include, but are not limited to, all applicable taxes, fees, overheads, and all other direct and indirect costs incurred or to be incurred by the Contractor.

The Contractor is not entitled to be paid the maximum liability for any period under the Contract or any extensions of the Contract for work not requested by the State. The maximum liability represents available funds for payment to the Contractor and does not guarantee payment of any such funds to the Contractor under this Contract unless the State requests work and the Contractor performs said work. In which case, the Contractor shall be paid in accordance with the payment rates detailed in section C.3. The State is under no obligation to request work from the Contractor in any specific dollar amounts or to request any work at all from the Contractor during any period of this Contract."

6. Contract section C.3. is deleted in its entirety and replaced with the following:

"C.3. Payment Methodology. The Contractor shall be compensated based on the payment rates herein for units of service authorized by the State in a total amount not to exceed the Contract Maximum Liability established in section C.1.

- a. The Contractor's compensation shall be contingent upon the satisfactory completion of units, milestones, or increments of service defined in section A.
- b. The Contractor shall be compensated for said units, milestones, or increments of service based upon the following payment rates:

Service Description	Amount (per compensable Increment)
---------------------	--

<p>Completion and State approval of the following Deliverables:</p> <ul style="list-style-type: none"> <li>• Deliverable #2: Project WBS and Schedule – <i>as detailed in Contract Section A.5.c.(1)(i)</i></li> <li>• Deliverable #3: Resource Management Plan – <i>as detailed in Contract Section A.5.c.(1)(ii)</i></li> <li>• Deliverable #4: Risk Management Plan - <i>as detailed in Contract Section A.5.c.(1)(iii)</i></li> <li>• Deliverable #5: Issue Management Plan - <i>as detailed in Contract Section A.5.c.(1)(iv)</i></li> <li>• Deliverable #6: Change Management Plan - <i>as detailed in Contract Section A.5.c.(1)(v)</i></li> <li>• Deliverable #7: Configuration Management Plan – <i>as detailed in Contract Section A.5.c.(1)(vi)</i></li> <li>• Deliverable #8: Release Management Plan – <i>as detailed in Contract Section A.5.c.(1)(vii)</i></li> <li>• Deliverable #9: ICD-9 to ICD-10 Conversion Plan – <i>as detailed in Contract Section A.5.c.(2)</i></li> </ul>	<p><b>\$ 450,030.00</b>  10% of the Total  Implementation Cost</p>
<p>Completion and State approval of the following Deliverables:</p> <ul style="list-style-type: none"> <li>• Deliverable #13: Requirements Verification and Specification – <i>as detailed in Contract Section A.5.e.</i></li> <li>• Deliverable #14: Application Design – <i>as detailed in Contract Section A.5.f.</i></li> <li>• Deliverable #15: Interface Design – <i>as detailed in Contract Section A.5.g.</i></li> <li>• Deliverable #16: Data Migration Plan – <i>as detailed in Contract Section A.5.h.</i></li> </ul>	<p><b>\$ 450,030.00</b>  10% of the Total  Implementation Cost</p>

<b>Service Description</b>	<b>Amount (per compensable increment)</b>
Completion and State approval of the following Deliverables: <ul style="list-style-type: none"> <li>• Deliverable #20: Implementation Plan – <i>as detailed in Contract Section A.5.k.</i></li> <li>• Deliverable #22: Operations Manual – <i>as detailed in Contract Section A.5.m.</i></li> <li>• Deliverable #23: Backup and Recovery Plan – <i>as detailed in Contract Section A.5.n.</i></li> <li>• Deliverable #24: Contingency of Operations Plan – <i>as detailed in Contract Section A.5.o.</i></li> <li>• Deliverable #25: Software Test Results Document – <i>as detailed in Contract Section A.5.r.</i></li> </ul>	<b>\$ 225,015.00</b> <i>5% of the Total Implementation Cost</i>
Completion and State approval of the following Deliverables: <ul style="list-style-type: none"> <li>• Deliverable #21: Knowledge Transfer Plan – <i>as detailed in Contract Section A.5.l.</i></li> <li>• Deliverable #26: Training Material and trained trainers – <i>as detailed in Contract Section A.5.s.</i></li> <li>• Deliverable #27: User Acceptance Testing (UAT) – <i>as detailed in Contract Section A.5.t.</i></li> </ul>	<b>\$ 225,015.00</b> <i>5% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Phase One Rollout Post as indicated by written State approval of the Post-Implementation Assessment Report – <i>as detailed in Contract Section A.5.u.(5)</i>	<b>\$ 225,015.00</b> <i>5% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Phase Two Rollout as indicated by written State approval of the Post-Implementation Assessment Report – <i>as detailed in Contract Section A.5.v.</i>	<b>\$ 225,015.00</b> <i>5% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, Upper Cumberland Region (UCR) as indicated by written State approval of the Post-Implementation Assessment Report – <i>as detailed in Contract Section A.5.w.</i>	<b>\$ 450,030.00</b> <i>10% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, East Region as indicated by written State approval of the Post-Implementation Assessment Report – <i>as detailed in Contract Section A.5.w.</i>	<b>\$ 450,030.00</b> <i>10% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, Southeast Region and Hamilton County as indicated by written State approval of the Post-Implementation Assessment Report – <i>as detailed in Contract Section A.5.w.</i>	<b>\$ 450,030.00</b> <i>10% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, Mid Cumberland Region and Davidson County – <i>as detailed in Contract Section A.5.w.</i>	<b>\$ 450,030.00</b> <i>10% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, South Central Region as indicated by written State approval of the Post-Implementation Assessment Report – <i>as detailed in Contract Section A.5.w.</i>	<b>\$ 450,030.00</b> <i>10% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, West Region, Madison County, and Shelby County as indicated by written State approval of the Post-Implementation Assessment Report – <i>as detailed in Contract Section A.5.w.</i>	<b>\$ 450,030.00</b> <i>10% of the Total Implementation Cost</i>

Service Description	Amount (per compensable increment)
Software Licenses Delivered <ul style="list-style-type: none"> <li>• [REDACTED] Registration and Scheduling Software [REDACTED]</li> <li>• [REDACTED] Patient Account Management System Software [REDACTED]</li> <li>• PilotFish XCS eiPlatform (PilotFish)</li> </ul>	\$ 660,443.34
Software Approved for Release to Production <ul style="list-style-type: none"> <li>• [REDACTED] Registration and Scheduling Software [REDACTED]</li> <li>• [REDACTED] Patient Account Management System Software [REDACTED]</li> <li>• PilotFish XCS eiPlatform (PilotFish)</li> </ul>	\$330,221.67
Software Implemented On a Per Clinic Basis (Maximum of 119 Clinics) <ul style="list-style-type: none"> <li>• [REDACTED] Registration and Scheduling Software [REDACTED]</li> <li>• [REDACTED] Patient Account Management System Software [REDACTED]</li> <li>• PilotFish XCS eiPlatform (PilotFish)</li> </ul>	\$ 8,324.92 / Clinic
Delivery of Release 1 to the State <ul style="list-style-type: none"> <li>• [REDACTED] and [REDACTED] – Add-ons – as detailed in Contract Section A.11(b).</li> </ul>	\$ 376,566.33
Delivery of Release 2 to the State <ul style="list-style-type: none"> <li>• [REDACTED] and [REDACTED] – Add-ons – as detailed in Contract Section A.11(b).</li> </ul>	\$ 376,566.33
Delivery of Release 3 to the State <ul style="list-style-type: none"> <li>• [REDACTED] and [REDACTED] – Add-ons – as detailed in Contract Section A.11(b).</li> </ul>	\$ 376,566.34
Overall Project Management – as detailed in Contract Section A.11(c) <ul style="list-style-type: none"> <li>• Invoiced Monthly</li> </ul>	\$ 28,754.17 / month
Technical Installation of Software – as detailed in Contract Section A.11(d). <ul style="list-style-type: none"> <li>• Upon Contractor's Completion of Deliverable</li> </ul>	\$ 41,427.00
Configuration of the Software – as detailed in Contract Section A.11(e). <ul style="list-style-type: none"> <li>• Upon Contractor's Completion of Deliverable</li> </ul>	\$ 82,998.00
Training: Train-the-Trainer – as detailed in Contract Section A.11(f). <ul style="list-style-type: none"> <li>• Upon Contractor's Completion of Deliverable</li> </ul>	\$ 27,666.00
Trainer Mentoring and Go-Live Support Program – as detailed in Contract Section A.11(g). <ul style="list-style-type: none"> <li>• Upon Contractor's Completion of Deliverable</li> </ul>	\$ 41,498.00
Data Migration – as detailed in Contract Section A.11(h). <ul style="list-style-type: none"> <li>• Upon Delivery of the Migration Data Fields and Specifications</li> </ul>	\$ 212,412.00

Data Migration – as detailed in Contract Section A.11(h). <ul style="list-style-type: none"> <li>Upon Completion of Final Production Run</li> </ul>	\$ 21,241.20 / Region
Maintenance and Support – as detailed in Contract Section A.11(j). <ul style="list-style-type: none"> <li>July 1, 2019 – September 14, 2019 (prorated from start date to end of contract)</li> <li>Upon the commencement of the maintenance and support period</li> </ul>	\$ 177,011.00

Service Description	Amount (per compensable increment)				
	Contract Year One	Contract Year Two	Contract Year Three	Contract Year Four	Contract Year Five
Support and Maintenance <sup>1</sup> – as detailed in Contract Section A.5.x.	\$ 0.00 per year	\$ 227,850.00 per year	\$ 239,243.00 per year	\$ 251,205.00 per year	\$ 263,275.00 per year
Service Description	Amount (per compensable increment)				
Emergency Support and Maintenance – as detailed in Contract Section A.5.y.	\$ 130.00 per hour	\$ 136.50 per hour	\$ 143.33 per hour	\$ 150.50 per hour	\$ 158.03 per hour
Modification and Enhancement Requests (MERs) – as detailed in Contract Section A.5.z.	\$ 130.00 per hour	\$ 136.50 per hour	\$ 143.33 per hour	\$ 150.50 per hour	\$ 158.03 per hour
Optional Expansion Phase – as detailed in Contract Section A.9.	\$ 130.00 per hour	\$ 136.50 per hour	\$ 143.32 per hour	\$ 150.50 per hour	\$ 158.03 per hour

<sup>1</sup> No Support and Maintenance fee shall be accumulated or invoiced by the Contractor until the EPI v1.0 is deployed and active in the pilot location. Support and Maintenance fees for Contract Year One will be paid by the State proportionally based on date of implementation. Contract Year One Support and Maintenance fees shall be invoiced by the Contractor in quarterly installments. Support and Maintenance fees for all other contract years awarded under the Contract shall be invoiced by the Contractor in equal quarterly installments each equal to one-quarter the yearly contract amount provided that the combined quarterly invoices do not exceed the yearly contracted amount. Quarterly installments for all Support and Maintenance fees shall correspond with the State's fiscal calendar year.

- c. The Contractor shall be compensated for modification and enhancements requested and performed pursuant to Contract Section A.5.z. without a formal amendment of this contract based upon the payment rates detailed in the Modifications and Enhancements Requests portion of Contract Section C.3.b above and as agreed pursuant to said Section A.5.z., PROVIDED THAT compensation to the Contractor for such modification and enhancement work shall not exceed seven percent (7 %) of the Total Implementation Amount in C.3.b. above. If, at any point during the Contract period, the State determines that the cost of necessary Professional Services work would exceed said maximum amount, the State may amend this Contract to address the need.

7. The following is added as Contract Section D.22.

“D.22. Iran Divestment Act. The requirements of Tenn. Code Ann. § 12-12-101 et.seq., addressing contracting with persons as defined at T.C.A. §12-12-103(5) that engage in investment activities in Iran, shall be a material provision of this Contract. The Contractor certifies, under penalty of perjury, that to the best of its knowledge and belief that it is not on the list created pursuant to Tenn. Code Ann. § 12-12-106.”

8. The following is added as Contract Section D.23.

- "D.23. Major Procurement Contract Sales and Use Tax. Pursuant to Tenn. Code Ann. § 4-39-102 and to the extent applicable, the Contractor and the Contractor's subcontractors shall remit sales and use taxes on the sales of goods or services that are made by the Contractor or the Contractor's subcontractors and that are subject to tax."
9. The following is added as Contract Section E.13.
- "E.13. Software License Warranty. Contractor grants a license to the State to use all software provided under this Contract in the course of the State's business and purposes."
10. The following is added as Contract Section E.14.
- "E.14. Software Support and Maintenance Warranty. Contractor shall provide to the State all software upgrades, modifications, bug fixes, or other improvements in its software that it makes generally available to its customers."
11. Required Approvals. The State is not bound by this Amendment until it is signed by the contract parties and approved by appropriate officials in accordance with applicable Tennessee laws and regulations (depending upon the specifics of this contract, said officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).
12. Amendment Effective Date. The revisions set forth herein shall be effective September 5, 2018. All other terms and conditions of this Contract not expressly amended herein shall remain in full force and effect.

**IN WITNESS WHEREOF,**

**DOCUMENT STORAGE SYSTEMS, INC.:**

*Mark Byers* *8/30/18*  
 \_\_\_\_\_  
 SIGNATURE DATE

*MARK BYERS/PRESIDENT*  
 \_\_\_\_\_  
 PRINTED NAME AND TITLE OF SIGNATORY (above)

**DEPARTMENT OF HEALTH:**

**John J. Dreyzehner - BS**

Digitally signed by John J. Dreyzehner - BS  
 DN: cn=John J. Dreyzehner - BS, o, ou,  
 email=Brandon.C.Silby@tn.gov, c=US  
 Date: 2018.08.31 10:46:01 -05'00'

\_\_\_\_\_  
**JOHN J. DREYZEHNER, COMMISSIONER**

**DATE**

## **EXHIBIT A**

## **ATTACHMENT H**

### **PROPRIETARY SOFTWARE LICENSE TERMS**

For purposes of the [REDACTED] Patient Account Management System, [REDACTED] Registration and Scheduling System software and the Add-On Features (hereinafter, the "Proprietary Software") supplied by Document Storage Systems, Inc. ("Contractor"), the following provisions shall apply:

1. The State may use the Proprietary Software only for the State's own internal business purposes. The State shall not: (a) use the Proprietary Software to process or permit the software to process data for any third party; (b) use the Proprietary Software in operation of a service bureau; or (c) unless otherwise agreed to, permit any subsidiaries, affiliated entities, or third parties to use the Proprietary Software.
2. The Contractor or its suppliers retain all right, title, and interest to the Proprietary Software, including all derivative works and all copies thereof and no right, title, and interest to the Proprietary Software, or any intellectual property in the Proprietary Software, is transferred to the State.
3. The State agrees not to modify or reverse assemble, decompile, or otherwise attempt to derive source code from the Proprietary Software.
4. The State will use commercially reasonable efforts to safeguard the confidentiality of the Proprietary Software. The State will not disclose, in whole or in part, any item of the Proprietary Software to any individual, entity, or other person, except those State personnel who agree as a condition of employment that (a) require access for the State's authorized use of the Proprietary Software, (b) agree in writing to comply with the use and non-disclosure provisions no less restrictive than those set forth herein, and (c) are not competitors of the Contractor.
5. NEITHER THE CONTRACTOR NOR ITS SUPPLIERS SHALL BE LIABLE TO THE STATE FOR ANY GENERAL, SPECIAL, DIRECT, INDIRECT, CONSEQUENTIAL, INCIDENTAL, PUNITIVE, OR OTHER DAMAGES ARISING OUT OF THE LICENSE AND/OR USE OF THE PROPRIETARY SOFTWARE.
6. THE CONTRACTOR MAKES NO REPRESENTATION OR WARRANTY WITH RESPECT TO THE PROPRIETARY SOFTWARE, EXPRESS OR IMPLIED, AND SPECIFICALLY EXCLUDES THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
7. The State acknowledges that the Proprietary Software is subject to restrictions and controls imposed under the U.S. Export Administration Act. The State certifies that neither the Proprietary Software nor any direct product thereof is being or will be acquired, shipped, transferred, or re-exported, directly or indirectly, into any country prohibited under the U.S. Export Administration Act.

**PROPRIETARY SOFTWARE LICENSE TERMS**

For purposes of the products (hereinafter, the “PilotFish Products”) supplied by Applied PilotFish Healthcare Integration, Inc. (“PilotFish”), the following provisions shall apply:

The terms and condition below are the minimum terms and conditions governing the use of the PilotFish Products. Where they conflict with the Agreement, the more restrictive terms and conditions herein apply.

1. Definitions:

- a. “End-User” or “You” – State of Tennessee, Department of Health.
- b. “Licensor” – Document Storage Systems, Inc. (“DSS”)
- c. “PilotFish Product(s)” – Program materials of Applied PilotFish Healthcare Integration, Inc. consisting of computer program(s) in obfuscated object code form and related user documentation. The PilotFish Products include: (i) XCS eiConsole (“eiConsole”), (ii) XCS eiPlatform (“eiPlatform”), and (iii) XCS eiDashboard (“eiDashboard”).
- d. “DSS Product(s)” – Program materials of DSS consisting of computer program(s) in object code form and related user documentation. The DSS Products include:
- e. “DSS Product Interfaces” – Interfaces to and from DSS Products that are developed by DSS using the XCS eiConsole for deployment on the XCS eiPlatform.
- f. “XCS eiPlatform Restricted License” – An End-User License to install the XCS eiPlatform for the limited purpose of running DSS Product Interfaces developed by DSS (hereinafter “Restricted License”).
- g. “Product License” – This End-User License Agreement covering DSS’s and Applied PilotFish Healthcare Integration, Inc.’s products.
- h. “PilotFish Maintenance Agreement” – The standard version of Applied PilotFish Healthcare Integration, Inc.’s Maintenance Agreement covering certain technical services furnished to End-Users in connection with the Products, including (without limitation) error correction, maintenance, further programming releases, and special options to receive available enhancements, as in effect from time to time.

2. Grant of Non-Exclusive Rights:

- a. Subject to compliance by You the End-User with the terms hereof, Licensor hereby grants a personal, nonexclusive, nontransferable license to install, use, and executed the PilotFish Products on equipment owned or leased by You as specified in Section 3 below.
- b. Subject only to the right and license expressly granted herein, all right, title, and interest in and to the PilotFish Products, including all associated intellectual property rights, are and shall remain with Applied PilotFish Healthcare Integration, Inc.

- c. Licensor's grant to End-User does not include any right to grant sublicenses or otherwise transfer such rights.
- d. No exclusive right of any kind in and to the PilotFish Products is granted to End-User.

3. License Types, Quantities Licensed and Approved Installations.

a.

Quantity Licensed	License Type, Description and Approved Installation
1	XCS eiConsole Concurrent Use License – End-User may install the XCS eiConsole on an unlimited number of single user computers, but simultaneous operation of the software shall be limited to the Quantity Licensed.
1	XCS eiPlatform Restricted License – End-User may install an instance of the XCS eiPlatform on a production server of the designated size and on test and hot backup servers as required for the limited purpose of running DSS Product Interfaces developed using the XCS eiConsole by DSS. End-User shall not run interfaces on the XCS eiPlatform that do not have DSS Products as endpoints.
1	XCS eiDashboard Production Server License (Enterprise Edition) – End-User may install an instance of the XCS eiDashboard on one production server of the designated size for each of the quantity licensed and on test and backup servers as required.
2	XCS eiDashboard Single eiPlatform Monitor – End-User may install the XCS eiDashboard co-located on an eiPlatform Instance for the purpose of monitoring that eiPlatform Instance.

- b. End-User shall not reverse assemble, reverse compile, or reverse engineer the PilotFish Products.
- c. End-User may copy the licensed PilotFish Products as necessary for archival, disaster recovery, and back-up purposes.



## CONTRACT AMENDMENT COVER SHEET

<b>Agency Tracking #</b> 34301-13215	<b>Edison ID</b> 43621	<b>Contract #</b> FA1543621	<b>Amendment #</b> 1		
<b>Contractor Legal Entity Name</b> Document Storage Systems, Inc.			<b>Edison Vendor ID</b> 180461		
<b>Amendment Purpose &amp; Effect(s)</b> Increase maximum liability					
<b>Amendment Changes Contract End Date:</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<b>End Date:</b>			
<b>TOTAL Contract Amount INCREASE or DECREASE per this Amendment (zero if N/A):</b>			<b>\$ 750,000.00</b>		
<b>Funding —</b>					
<b>FY</b>	<b>State</b>	<b>Federal</b>	<b>Interdepartmental</b>	<b>Other</b>	<b>TOTAL Contract Amount</b>
2015	\$2,426,950.00				\$2,426,950.00
2016	\$2,739,959.00				\$2,739,959.00
2017	\$514,310.80				\$514,310.80
2018	\$914,685.00				\$914,685.00
2019	\$878,742.55				\$878,742.55
<b>TOTAL:</b>	<b>\$7,474,647.35</b>				<b>\$7,474,647.35</b>
<b>American Recovery and Reinvestment Act (ARRA) Funding:</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
<b>Budget Officer Confirmation:</b> There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations.   Digitally signed by Adeniyi Bakare DN: cn=Adeniyi Bakare, o=Department of Health, ou=Division of Administrative Services, email=Adeniyi.Bakare@tn.gov, c=US Date: 2017.06.15 11:09:07 -05'00'		<b>CPO USE</b>  <b>FA154362101</b>			
<b>Speed Chart (optional)</b>		<b>Account Code (optional)</b>			

**AMENDMENT 1  
OF CONTRACT FA 1543621**

This Amendment is made and entered by and between the State of Tennessee, Department of Health, hereinafter referred to as the "State" and Document Storage Systems, Inc. hereinafter referred to as the "Contractor." For good and valuable consideration, the sufficiency of which is hereby acknowledged, it is mutually understood and agreed by and between said, undersigned contracting parties that the subject contract is hereby amended as follows:

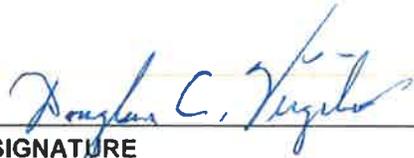
1. Contract section C1 is deleted in its entirety and replaced with the following:

C.1. **Maximum Liability.** In no event shall the maximum liability of the State under this Contract exceed Seven Million Four Hundred Seventy-four Thousand Six Hundred Forty-seven dollars and thirty-five cents (\$7,474,647.35). The payment rates in section C.3 shall constitute the entire compensation due the Contractor for all service and Contractor obligations hereunder regardless of the difficulty, materials or equipment required. The payment rates include, but are not limited to, all applicable taxes, fees, overheads, and all other direct and indirect costs incurred or to be incurred by the Contractor. The Contractor is not entitled to be paid the maximum liability for any period under the Contract or any extensions of the Contract for work not requested by the State. The maximum liability represents available funds for payment to the Contractor and does not guarantee payment of any such funds to the Contractor under this Contract unless the State requests work and the Contractor performs said work. In which case, the Contractor shall be paid in accordance with the payment rates detailed in section C.3. The State is under no obligation to request work from the Contractor in any specific dollar amounts or to request any work at all from the Contractor during any period of this Contract.

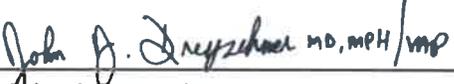
The revisions set forth herein shall be effective July 1, 2017. All other terms and conditions of this Contract not expressly amended herein shall remain in full force and effect.

**IN WITNESS WHEREOF,**

**Document Storage Systems, Inc.**

	7-18-17
SIGNATURE	DATE
<hr/>	
DOUGLAS C. VIRGILIO DEPUTY CFO	
PRINTED NAME AND TITLE OF SIGNATORY (above)	

**Department of Health:**

	07/19/2017
John J. Dreyzehner, MD, MPH	DATE
Commissioner	

**CONTRACT**

(fee-for-service contract with an individual, business, non-profit, or governmental entity of another state)

<b>Begin Date</b> September 15, 2014	<b>End Date</b> September 14, 2019	<b>Agency Tracking #</b> 34301-13214	<b>Edison Record ID</b> 43621		
<b>Contractor Legal Entity Name</b> Document Storage Systems, Inc.			<b>Edison Vendor ID</b> 180461		
<b>Service Caption</b> (one line only) Electronic Health Record					
<b>Subrecipient or Vendor</b> <input type="checkbox"/> Subrecipient <input checked="" type="checkbox"/> Vendor		<b>CFDA #</b>			
<b>Funding —</b>					
<b>FY</b>	<b>State</b>	<b>Federal</b>	<b>Interdepartmental</b>	<b>Other</b>	<b>TOTAL Contract Amount</b>
2015	\$2,426,950.00				\$2,426,950.00
2016	\$2,739,959.00				\$2,739,959.00
2017	\$514,310.80				\$514,310.80
2018	\$539,685.00				\$539,685.00
2019	\$503,742.55				\$503,742.55
<b>TOTAL:</b>	<b>\$6,724,647.35</b>				<b>\$6,724,647.35</b>
<b>American Recovery and Reinvestment Act (ARRA) Funding:</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
<b>Ownership/Control</b>					
<input type="checkbox"/> African American <input type="checkbox"/> Asian <input type="checkbox"/> Hispanic <input type="checkbox"/> Native American <input type="checkbox"/> Female <input type="checkbox"/> Person w/Disability <input checked="" type="checkbox"/> Small Business <input type="checkbox"/> Government <input type="checkbox"/> NOT Minority/Disadvantaged <input type="checkbox"/> Other:					
<b>Selection Method &amp; Process Summary</b> (mark the correct response to confirm the associated summary)					
<input checked="" type="checkbox"/> RFP		The procurement process was completed in accordance with the approved RFP document and associated regulations.			
<input type="checkbox"/> Competitive Negotiation		The predefined, competitive, impartial, negotiation process was completed in accordance with the associated, approved procedures and evaluation criteria.			
<input type="checkbox"/> Alternative Competitive Method		The predefined, competitive, impartial, procurement process was completed in accordance with the associated, approved procedures and evaluation criteria.			
<input type="checkbox"/> Non-Competitive Negotiation		The non-competitive contractor selection was completed as approved, and the procurement process included a negotiation of best possible terms & price.			
<input type="checkbox"/> Other		The contractor selection was directed by law, court order, settlement agreement, or resulted from the state making the same agreement with <u>all</u> interested parties or <u>all</u> parties in a predetermined "class."			
<b>Budget Officer Confirmation:</b> There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations.			OCR USE – FA		
			<b>FA1543621</b>		
<b>Speed Chart</b> (optional)		<b>Account Code</b> (optional)			



**CONTRACT  
BETWEEN THE STATE OF TENNESSEE,  
DEPARTMENT OF HEALTH  
AND  
DOCUMENT STORAGE SYSTEMS, INC.**

This Contract, by and between the State of Tennessee, Department of Health, hereinafter referred to as the "State" and Document Storage Systems, Inc., hereinafter referred to as the "Contractor," is for the provision of a statewide Electronic Health Record (EHR) that includes a single record for each patient and includes interoperability with PTBMIS, the State Lab and other lab providers as designated by the State, Master Patient Index (MPI), and the State's Immunization Registry, as further defined in the "SCOPE OF SERVICES."

The Contractor is a For-Profit Corporation  
Contractor Place of Incorporation or Organization: Missouri  
Contractor Edison Registration ID # 0000180461

**A. SCOPE OF SERVICES:**

- A.1. The Contractor shall provide all service and deliverables as required, described, and detailed herein and shall meet all service and delivery timelines as specified by this Contract.
- A.2. Service Definitions. Following are key definitions related to specific services requested in this Contract. Contract Attachment B –Glossary of Terms and Acronyms contains additional terms and acronyms used by the State related to the services requested in this Contract.
- a. **"ANSI"** means the American National Standards Institute, an organization that oversees the creation, promulgation, and use of thousands of norms and guidelines that directly impact businesses in nearly every sector;
  - b. **"Contractor's VistA Solution"** means the Contractor's Free Open Source Software (FOSS) version of VistA as it exists at the time of execution of this Contract;
  - c. **"CPRS (Computerized Patient Record System)"** means the graphical user interface to VistA that allows health care providers to review and update a patient's electronic medical health record (EHR);
  - d. **"Days"** shall mean calendar days unless otherwise stated in the Contract Section;
  - e. **"Defect"** means a condition in the product which does not meet requirements or end-user expectations (which may not be specified but are reasonable);
  - f. **"Deliverables"** means the set of products to be delivered to the State by the Contractor to fulfill the terms of this Contract;
  - g. **"EHR (Electronic Health Record)"** means a collection of patient health information, typically including patient demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data and radiology reports, that allows streamlining of clinicians' workflow and the ability to generate a complete record of patient encounters;
  - h. **"EPI"** means the Electronic Public-Health Information initiative, a multi-year effort that will replace all of the functions of the current PTBMIS; add a statewide Electronic Health Record (EHR); add interoperability with Surveillance systems; and use interoperability to connect with other healthcare organizations;
  - i. **"EPI v1.0"** means the project initiated by TDH in order to implement a statewide Electronic Health Record (EHR). EPI v1.0 is the first project of the EPI initiative;



- j. **"FOSS (Free Open Source Software)"** means programs that have licenses that allow users to freely run the program for any purpose, modify the program as they want, and also to freely distribute copies of either the original version or their own modified version;
- k. **"HL7 (Health Level 7, International)"** means an ANSI Standards Developing Organization (SDO) that authors and maintains standards for healthcare data interoperability (which includes messages, documents, and service processes data formats and vocabulary);
- l. **"Hours"** means sequential hours unless otherwise stated in the Contract Section;
- m. **"Interoperability"** means the use of National (ANSI/ISO) standards for messages, documents and services, formats, and vocabulary;
- n. **"ISO"** means the International Organization for Standardization, the world's largest developer of voluntary International Standards and a network of national standards bodies;
- o. **Limited Basis"** as stated in Section A.5.v. and A.5.w. means any instance where CPRS is not working in a local Health Department and the issue cannot be resolved remotely.
- p. **"Master Patient Index (MPI)"** means the system that indexes all of a patient's identifiers and links them to a single identifier. Will interface with EPI v1.0 via standard HL7 messaging;
- q. **Modification and Enhancement Request (MER)** means a request made by the State in writing to the Contractor to modify or enhance EPI v1.0;
- r. **"NetSmart"** means the vendor contracted by the State for the maintenance and support of PTBMIS;
- s. **"ONC"** means the Office of the National Coordinator for Health Information Technology, a federal entity charged with coordinating nationwide efforts to implement and use health information technology and the electronic exchange of health information;
- t. **"OEHRA"** means the Open Source Electronic Health Record Alliance, Inc., a not-for-profit organization founded by the Department of Veterans Affairs (VA) to establish a federated EHR information system. OEHRA is focused on establishing a code repository to enable developer collaboration and contribution to architectural and Web-based enhancements of the VA's VistA electronic health record;
- u. **"Other Lab Providers"** means a private laboratory contracted by the State of Tennessee Department of Health that performs a wide range of clinical lab testing.
- v. **"Pilot"** means the deployment of EPI v1.0 in all of the locations in the Northeast Region (NER) and Sullivan County (SUL);
- w. **"Project Steering Committee (or PSC)"** means the governing body for the EPI v1.0 project, comprised of the Executive/Business Sponsors and designated stakeholders, that provides overall guidance as needed to assure the program/project meets the stated goals and objectives;
- x. **"PTBMIS"** means the Patient Tracking and Billing Management Information System, the system currently in use by the State as the patient management system;
- y. **"Public Health Emergency"** means an emergency event determined by TDH to impact EPI v1.0 in such a manner to require Emergency Support and Maintenance (see A.5.y.);
- z. **"Requirements Traceability Matrix"** means the matrix set forth in RFP Attachment 6.2 – Section D, which contains the requirements for EPI v1.0;
- aa. **"SIIS"** means the State Immunization Information System, a statewide registry that serves as a



single source of immunization records for all Tennessee residents;

- bb. **“STARLIMS”** means the State’s Laboratory Information System, which supports the State’s Central Lab located in Nashville TN;
- cc. **“State Lab”** means the Department of Health’s Public Health Clinical Laboratory that performs a wide range of clinical lab testing. The State Lab is housed in Nashville in a dedicated state of the art facility;
- dd. **“TDH”** means the Tennessee Department of Health including all Regional Offices, Metro and Rural County Health Departments, and the Central Office;
- ee. **“TDH Central Office”** means offices located at 710 James Robertson Parkway, Andrew Johnson Tower, Nashville, TN, 37243;
- ff. **“Third-Tier Technical Support”** means the Contractor will provide necessary information technology support services to diagnose and repair defects;
- gg. **“TWIS”** means the Tennessee Web Immunization System, which provides web-based access to SIIS;

hh. [REDACTED]

ii. [REDACTED]” means software programming that serves to extend the capabilities or features, or the data accessibility, of a [REDACTED] Package. A [REDACTED] Extension is dependent on the presence of its related [REDACTED] Package(s) in order to fully function. An Extension is the most complex form of a group of programming enhancements commonly termed Add-ons, comprising snap-ins, plug-ins, extensions, and themes. Similar to a Plug-in, however Extensions usually have a broader range of capability or functions

jj. [REDACTED] **Infrastructure**” means the hardware, software, and network components required to operate EPI;

kk. [REDACTED] **Package**” means a collection of related application computer programs of dependent functionality and relatively high complexity, which share a mostly common user interface, and some ability to smoothly exchange data with each other. [REDACTED] Packages are categorized into three broad types of utility – Clinical, Financial, and Administrative. Each category has many separate [REDACTED] Packages, each addressing the needs of specific business or clinical users. A [REDACTED] Package is analogous to a Software Suite.

A.3. Service Goals. The goal is to achieve a statewide Electronic Health Record (EHR) that includes a single record for each patient and includes interoperability with PTBMIS, the State Lab and other lab provider as designated by the State, and the State’s Immunization Registry as set forth in this contract. The EHR will enable TDH to reduce the dependence on paper patient charts and provide a central repository of patient health information across the State that can be used for population health reporting and tracking.

In order to achieve these goals, the State has established the following key milestones for EPI v1.0:

EPI v1.0 Milestone	Description	Target Date
Pilot Implementation, Phase One Rollout	Deployment of EPI v1.0 functionality at a single location in the Northeast Region (NER). See Contract Section A.5.u.	2/17/2015
Pilot Implementation, Phase Two Rollout	Deployment of EPI v1.0 functionality at all of the locations in the Northeast Region (NER) and Sullivan County (SUL). See Contract Section A.5.v.	4/30/2015



EPI v1.0 Milestone	Description	Target Date
Statewide Implementation	Deployment of EPI v1.0 at the remaining locations throughout the State, by region. See Contract Section A.5.w.	3/31/2016

A.4. Service Recipients. Service recipients are Tennessee citizens seeking health services via the public health clinics throughout the State.

A.5. Service Description. The Contractor shall deliver the services outlined herein.

- a. Kickoff Meeting and Presentation. The Contractor shall participate in a State-led Kickoff Meeting. The purpose of the Kickoff Meeting shall be to introduce the Contractor to State project stakeholders, and ensure agreement regarding project objectives, roles and responsibilities, strategy, and known risks. The Contractor shall prepare and deliver a presentation for the kickoff meeting that synthesizes their approach to the overall project, provides high level milestones, and introduces the Contractor team.
- b. Start-up / Incoming Transition. The Contractor shall coordinate with the State to plan and implement a complete transition to the Contractor's support model. This Transition shall include, but is not limited to:
  - Orientation program to introduce State personnel, programs, and users to the Contractor's team, tools, methodologies, and business processes
  - State transition of historic project knowledge assets to the Contractor
  - Review and evaluation of the Contractor's current support services
  - Contractor completion of all applicable government-approved privacy and security training.
- c. Project Management and Reporting. The Contractor shall designate a single Project Manager to serve as the Contractor's primary point of contact for all activities and issues. The Contractor shall ensure that its Project Manager provides sufficient management of the project to ensure that all project activities are performed efficiently, accurately, and on schedule. The Contractor Project Manager shall coordinate as necessary with the State Project Director to ensure that Contractor activities are managed consistently with overall Contract requirements.

The Contractor Project Manager shall ensure timely and accurate submission of project management deliverables to the State Project Director as listed below:

- (1) Project Management Plan. The Contractor shall work with the State Project Director to develop a master Project Management Plan that describes the approach, activities, stages, duration, risks, and implementation for all Project work. The State will be responsible for the master Project Management Plan. The Contractor shall prepare and provide to the State Project Director the following for inclusion in the master Project Management Plan:
  - (i) Work Breakdown Structure (WBS) and Project Schedule – lists the work packages to be performed for the project, and a schedule baseline that will be used as a reference point for managing project progress as it pertains to schedule and timeline
  - (ii) Resource Management Plan - how the Contractor will maintain a pool of resources for the project, what skills sets are available, vacation time, hiring/firing of Contract personnel.
  - (iii) Risk Management Plan – potential project risks, mitigation strategies, and risk management processes.



- (iv) Issue Management Plan – a plan for documenting, tracking, and reporting issues, including the process for elevating issues for joint management decision by the Contractor and the State.
- (v) Change Management Plan – a proposed plan for managing project changes including, but not limited to: processes; scope; resources; and implementation.
- (vi) Configuration Management Plan –procedures for version control for all deliverables and artifacts, including configurations, documentation, executables, execution plans (including rollback) and system source code. The Plan shall include a process to ensure the status of all existing deliverables is known; that only approved versions are released for production use; that prior released versions can be recreated; and that changes are made to released deliverables only when authorized by the State.
- (vii) Release Management Plan (RMP) – outlining procedures for release and deployment of system components, including details on how the Contractor will manage the release of all software upgrades to EPI v1.0.

The RMP shall include, at a minimum, the following components:

- The Contractor’s System Development Life Cycle (SDLC) for modifying, testing, and installing changes to EPI v1.0, including the roles and responsibilities of the Contractor and the State in the installation of releases in the test and production environments
  - Identification and definition of the development and testing environments to be used by the Contractor and the State, including Contractor and State access requirements to said environments. All development work shall be conducted in the State’s technical environment
  - Approach for monitoring, planning, and installing upgrades to the Contractor’s [REDACTED] Solution deployed in EPI v1.0
  - Plan for installing emergency “break-fix” changes
- (2) ICD-9 to ICD-10 Conversion Plan. The Contractor shall create and submit a draft ICD-9 conversion to ICD-10 Plan that details how the EPI v1.0 solution will meet ICD-10 requirements by the deadline imposed by Federal mandates. The plan shall then be updated every quarter throughout the entire term of the Contract and executed once the U.S. converts to these new classification and coding standards.
- (3) Weekly Status Report. The Contractor shall prepare and submit to the State Project Director a Weekly Status Report. The report shall contain a synopsis of the status of activities; outstanding issues and expected resolution dates; expended level of effort/burn rate; and key risks/issues. Items to be tracked in this report will include, at a minimum, open technical questions, requests for information, schedule for resources for the coming week and requests for documentation.
- (4) Monthly Progress Report. The Contractor shall prepare and submit to the Project Steering Committee a Monthly Progress Report throughout the Contract duration. Monthly Progress Reports shall contain, at a minimum:



- Progress towards project milestones
- Explanations of schedule variances relative to the previous month's progress report and the baseline schedule and cost projections
- Updates on implementations
- Status of deliverables
- Action Items and status
- Status of Modification and Enhancement Requests (MERs)

(5) The Contractor shall track progress against the Project Schedule and shall report progress in the Weekly Status Report. The report shall include, at a minimum, an assessment of progress against plan, and any slipped or slipping tasks. For any planned tasks that are not worked or completed during the reporting period, the Contractor shall include an explanation of the failure to meet the schedule and detailed plans to overcome the failure and prevent its recurrence.

(6) Outgoing Transition Plan. The Contractor shall create and deliver a draft Outgoing Transition Plan within six (6) months of the Contract Beginning date. The Contractor shall update the draft Plan every six (6) months. A final Outgoing Transition Plan shall be prepared and delivered to the State no later than three (3) calendar months prior to the Contract Ending Date.

The Outgoing Transition Plan shall describe how the Contractor will assist the State in planning and implementing a complete transition in the months before and at the expiration of the Contract. This shall include formal coordination with State staff and successor staff and management.

The Outgoing Transition Plan shall include, but is not limited to:

- Transfer of software licenses
- Transfer of all system documentation to include all documents prepared pursuant to this Contract and any other documents required to operate, maintain and administer EPI v1.0
- Transfer of source code, to include all versions, maintenance updates, and patches
- Disposition of Contractor purchased TDH owned assets, including facilities, equipment, furniture, phone lines, and computer equipment
- Return of all State keys, ID/access cards, and security codes

d. Infrastructure Architecture Design (IAD). The Contractor shall review the current architecture for PTBMIS; and shall work with the State to configure and design an infrastructure architecture that will support a statewide, enterprise deployment of EPI v1.0. The Contractor shall work with the appropriate State resources to create the following components of the IAD.

(1) Enterprise Architecture. The Contractor shall:

- (i) Review and develop an enterprise architecture overview of the current-state of the:
  - PTBMIS Architecture
  - Ancillary systems, including SIIS, STARLIMS, MPI
- (ii) Analyze and design a standard Open System Interconnection (layered OSI) model for enterprise interoperability
- (iii) Conduct an evaluation of third-party solutions needed to meet the requirements of EPI v1.0

(2) Server Architecture. The Contractor shall conduct an analysis of the server groups that are required for EPI v1.0 to include: Gateway, EDI, [REDACTED],



Citrix, PTBMIS [REDACTED] Load Balancing (physical or virtual), vendor portal, and MPI servers. The Contractor shall perform an analysis of the appropriate load balancing and performance optimization for the server architecture to support EPI v1.0.

- (3) Database Architecture. The Contractor shall create a Master Data Management (MDM) plan that documents all of the data elements for the EPI v1.0 solution. The Contractor shall prepare and deliver to the State the recommended non-proprietary data model design.
- (4) Network Architecture. The Contractor shall create a network architecture for EPI v1.0 using Unified Modeling Language (UML), Archimate, or another State-approved modeling language, that includes the Metropolitan and Rural Regions, and that accommodates both federated and stand-alone co-site and regional operations in the event of a network connection failure.

The Contractor is responsible for ensuring that the proposed design and eventual implementation is compliant with the State technology architecture and product standards in effect at the time the RFP resulting in this contract was issued (Attachment G). Typically, all exceptions should be dealt with during the procurement process (See RFP Attachment 6.9., Exception Requests to State Standards – Prior to Proposal Submission). If a need arises during the project for an additional standards exception, the Contractor shall submit a written request through the State's established exception review process. The State will review the request and provide a written disposition on the request. If the State denies the request, the Contractor shall implement an acceptable solution at no additional cost to the State. Also see Contract Section E.12.

The State will procure and support hardware to support EPI v1.0.

- e. Requirements Verification and Specification. The Contractor shall work with State project team members, as identified by the State, to verify the requirements outlined in RFP Attachment 6.7., Requirements Matrix and to map and document the extent that the Contractor's [REDACTED] solution meets each requirement. The Contractor shall use its responses to RFP Attachment 6.7., Requirements Matrix for the verification process. The Contractor shall document any necessary requirements changes or requirement gaps identified as a result of the requirements verification process.

The Contractor shall prepare and deliver to the State for review and approval a Requirements Verification and Specification deliverable that includes:

- (1) Recommendations for improvements to the requirements included in EPI v1.0 based on the requirements for the Contractor's [REDACTED] solution to interoperate with PTBMIS during the Pilot Implementation, Phase One Rollout
- (2) Business Requirements Specifications, which detail the specific features and functions of each requirement which can be utilized by the State as a means of preparing User Acceptance Testing (UAT) for the Pilot Implementation, Phase One Rollout
- (3) A Requirements Traceability Matrix specifically for EPI v1.0, which contains:
  - the requirements from RFP Attachment 6.7., Requirements Matrix and documentation of any changes or gaps identified during the requirements verification process
  - cross-reference of each requirement to the Business Requirements Specifications

The Contractor shall not proceed with the Pilot Implementation, Phase One Rollout phase until the Requirements Verification and Specification deliverable is completed and accepted, in writing, by the State.



- f. Application Design. The Contractor shall be responsible for the fully functional design of EPI v1.0. The Contractor shall create and deliver to the State design documentation that shall include, at a minimum, the following:
- EPI v1.0 requirements as documented in the State-Approved Requirements Verification and Specification deliverable (Deliverable 13), including reporting requirements
  - User Interface Design (UID), describing how EPI v1.0 will look to end users and how it will function
  - Security Design, including: all Security Requirements described in Contract Attachment D - Security Requirements ; any design specifications needed to meet the Business Associate Agreement, or "BAA," (Contract Attachment E); and the State's Enterprise Information Security Policies (Contract Attachment F)
  - Migration and integration of CPRS templates previously customized by the State with State of TN-specific public health content

The Contractor shall participate in a Design Review in order to present the initial design of all software components, software configuration items, and State-customized CPRS templates that will comprise the EPI v1.0 functionality. The Contractor shall submit the Design Review documents to the State for review and approval.

- g. Interface Design. The Contractor shall create an Interface Design deliverable that includes the following interfaces for EPI v1.0:

- PTBMIS Registration to [REDACTED]
- [REDACTED] to and from the TDH Master Patient Index (MPI)
- [REDACTED] to SIIS to report immunizations administered
- [REDACTED] to STARLIMS, via the State's selected EDI engine, to send lab orders
- STARLIMS to [REDACTED] via the Cloverleaf EDI engine, to return lab results (for labs ordered via EPI v1.0)
- [REDACTED] to LabCorp to send lab orders
- LabCorp to [REDACTED] to return lab results (for labs ordered via EPI v1.0)
- [REDACTED] to PTBMIS for billing and reporting

The Contractor shall design the interfaces according to the requirements contained in Contract Attachment C – EPI v1. Interoperability Requirements.

The Interface Design shall also include the designs for:

- EDI and the data protocols for the EDI layer
- Parsing data payloads, arriving via HL7 messages, to the appropriate shared files via FileMan
- Plan for handling HL7 errors.

- h. Data Migration Plan. The Contractor shall work with the State and the current PTBMIS Vendor to develop a plan that describes the strategy, approach, and design for migrating existing patient data from PTBMIS to EPI v1.0. The Data Migration Plan shall include a strategy that addresses the phased deployment of EPI v1.0, and shall include analysis for the migration of the following PTBMIS data, at a minimum:
- Current and historical electronic records for medications dispensing
  - Medication orders
  - Medication administration records
  - Patient demographic
  - Diagnoses
  - Lab results.



The Data Migration Plan shall describe how data that exists for a patient in more than one region will be identified, inspected, and combined, if necessary, into a single patient record without duplication in EPI v1.0. The Contractor shall also review the MPI data integrity, in the context of HL7 interfaces and messaging, and shall include in the Data Migration Plan recommended changes to remediate the risks associated with incorrect data migration.

- i. Test Plan. The Contractor shall develop and deliver a plan describing how the Contractor will coordinate, manage, and conduct thorough testing of the EPI v1.0 solution prior to delivery to the State for User Acceptance Testing (UAT). The Plan shall include, at a minimum, testing all functionality, reports, correspondence, notices, and interfaces. Documentation of the inputs, outputs, problems identified, and corrections made shall be required, in the form of a functional test results document. Functional testing shall be performed by the Contractor on each module of the Project. Individual sets of test data and test plans shall be created by the Contractor to completely test internal conditions of the module

The Test Plan will include preparations required for system testing, including at a minimum:

- Creating the appropriate test environment(s)
- Installing EPI v1.0 in the test environment
- Installing and configuring any automated testing tools/packages

The Test Plan shall describe how the Contractor will perform the following:

- (1) Functional Testing. Documentation of the inputs, outputs, problems identified, and corrections made shall be required, in the form of a functional test results document. Functional testing shall be performed by the Contractor on each module/program. Individual sets of test data and test plans shall be created by the Contractor to completely test internal conditions of the module/program. Successful functional testing occurs when the module's test plan is completed without failure.
- (2) System and Integration Testing. The Contractor shall fully test all software to ensure that it meets requirements and to demonstrate the functionality and performance characteristics before the start of User Acceptance Testing. The system tests shall actively use all of the functions, test all interfaces, and process all types of input. The Contractor shall include specific types of test cases and transactions in the test, as specified by the State.

The State will develop a User Acceptance Test (UAT) Plan and test scenarios, and will conduct UAT Testing. The Contractor shall be required to work with the State to facilitate and coordinate the execution of UAT in the designated test environment. The Contractor shall include the recommended processes and procedures for UAT in the Test Plan.

- j. Defect Tracking Log. The Contractor shall develop and maintain a Defect Tracking Log which shall include at a minimum, for each Defect:
- Unique tracking number
  - Short name and description of the Defect
  - Reference to test condition that identified the defect
  - Date Defect identified
  - Tester
  - Disposition (e.g., Not a Defect, Fixed, Re-tested Successfully, etc.)
  - Severity Level (e.g., Level-2), if appropriate
  - Description of changes made to correct defect

The Contractor shall correct all defects as directed by and at the State's sole discretion. The Contractor shall deliver a daily Defect Tracking report to the Project Director upon



commencement of UAT. The Defect Tracking Report shall be based on data recorded in a defect tracking tool.

The Contractor shall maintain the Defect Tracking Log for the duration of the Contract.

- k. Implementation Plan. The Contractor shall create an Implementation Plan to describe its overall approach to implementation. The Implementation Plan shall describe, at a minimum, the following:
- Implementation preparation for data migration, security preparation, staff training, personnel assignments, and level of resources required for each area
  - Objectives and approach for components requiring installation, including utilization of the WAN, Intranet, Extranet and Internet
  - Site preparation, addressing site-specific requirements and plans
  - Confirmation of the training schedule
  - Manual support procedures
  - Backup and recovery procedures
  - Contingency approach
- l. Knowledge Transfer Plan. The Contractor shall prepare and deliver a Knowledge Transfer Plan for transitioning operations and maintenance activities to the State. The Plan shall include recommendations for training; any tools required for the State to support EPI v1.0; and the number and types of staff the State will need to support EPI v1.0.
- m. Operations Manual. The Contractor shall develop an Operations Manual, which features clear organization of content, easy to understand language, useful graphic presentations, and a thorough index and glossary. The Operations Manual shall provide State technical staff the knowledge to efficiently operate and update the System independent of Contractor assistance. The Operations Manual shall address the view of the System required by technical users. It shall provide an understanding of the application, database design and file structures, relationships between programs, security, troubleshooting, special constraints, procedures for data recovery, and other operational guidelines.

The Operations Manual shall cover all aspects of the technical operation of the System including configurability, logic and business rules and shall include the following topics, as applicable:

- Package Configuration (Globals, Routines and Directory structures)
- Package Dependencies (Comprehensive dependency models including patch versions as installed and approved by State acceptance)
- Package Patch Procedures
- OSEHRA Certification Process(es)
- Extract Transform and Load (ETL) Programs and Processes
- Application start-up/shut-down procedures
- Application backup, recovery, and restart procedures
- Data dictionary structure and maintenance procedure
- Database logical and physical organization and maintenance procedures
- HIPAA Compliance and Necessary Maintenance thereof (e.g., what data elements are PHI? How is their protection guaranteed in the system?)
- Patient Safety Assurance Provisions
- Audit and testing procedures
- System data input, error checking, error correction, and data validation procedures
- User help procedures and features
- System troubleshooting and system tuning procedures and features
- System administration functions, such as code management and copy file management



- On-line and batch processing procedures
- Unique processing procedures
- System interface processing (X12, HL7, Proprietary)
- System command mode operations
- Job scheduling
- Job cycles (daily, weekly, monthly, quarterly, annual, and special)
- Report generation procedures

The Operations Manual shall include overviews of the application, system structure, any required administrative tasks, major processing, required interfaces, or required maintenance schedules. The Operations Manual shall also describe the overall process schedule and processing cycles, including dependencies, files accessed, critical sequencing, timing criteria, and operating instructions for each process and process step consistent with the chosen environment. The Operations Manual shall also include, by processing cycle, a list of jobs that are mandatory to be run as scheduled and an explanation of what to expect (impact) if a job is not run. The Operations Manual shall also include a list of jobs that can be deferred and the instructions for running them at a later date and a list of jobs that can be run using concatenated files from multiple days. The Operations Manual shall include descriptions of special date files, parameter files, and other control files, including their purpose, procedures for creating them, and specific jobs and programs that use them.

- n. Backup and Recovery Plan. The Contractor shall create a Backup and Recovery Plan that supports multiple environments, failover environments and Disaster Recovery. In order to prevent loss of data, the Contractor shall develop and implement recovery procedures, including the process for restoring data to its original or prior form. The Contractor's plan shall include requirements for off-site storage of the Project application and data with the vendor that the State contracts with for offsite storage. The Contractor shall work with the State to coordinate with the offsite storage vendor.

The Contractor shall describe roll back data migrations or data interface implementations, if necessary, to return EPI v1.0 to original the hardware/software/network/security state. Describe steps to be taken, timeframes, risks and issues.

The Contractor shall perform tests to validate the backup and recovery procedures; and shall participate in disaster recovery test requested by the State.

The Contractor shall keep this plan current with any changes, approved in writing by the State, throughout the duration of the Contract.

- o. Contingency of Operations Plan. The Contractor shall develop and submit a Contingency of Operations Plan to specify planning for the remediation of specific systems, equipment, software, and/or operations in the event of critical impact resulting from natural, accidental or intentional events. The Contingency Operations Plan shall document the Contractor's plans and procedures to maintain State support and shall include, but not be limited to the following:
- Description of the Contractor's emergency management procedures and policy
  - Description of how the Contractor will account for their employees during an emergency
  - Planned temporary work locations or alternate Facilities
  - How the Contractor will communicate with the State during emergencies
  - List of primary and alternate Contractor points of contact, each with primary and alternate telephone numbers and e-mail addresses
  - Procedures for protecting the State furnished equipment (if any)
  - Procedures for safeguarding sensitive and/or classified State information (if applicable)



- p. Construct EPI v1.0. The Contractor shall develop and build the EPI v1.0 software, in accordance with the plans and requirements specified in Contract Section A.5.d. through A.5.f. All new [REDACTED] Extensions or Packages for EPI v1.0 shall be built in accordance with OSEHRA standards, where they exist. The State may, at its discretion and on a timeline approved by the State, require the Contractor to submit new EPI v1.0 Extensions or Packages to OSEHRA for certification.

All construction work shall occur in the State's technical environment as further defined in the Release Management Plan (Contract Section A.5.c.(1)(vii)) and Configuration Management Plan (Contract Section A.5.c.(1)(vi)).

Each program or configuration shall be thoroughly documented, to ensure traceability, by mapping the requirements to the design, the design to the code, and the requirements to the test cases for functional, system and integration testing.

The Contractor shall create documentation of code which shall be reviewed during code walkthroughs with the State at the State's sole discretion. The Contractor shall document decisions, issues and action items that result from code walkthroughs with the State. The Contractor shall document and submit source code, executable object code, and instructions to maintain/fix code issues after development is complete

- q. Construct Interfaces. The Contractor shall construct each interface, as defined in Contract Section A.5.g. and the State-approved Interface Design (Deliverable 15). The Contractor shall not be responsible for modifying legacy State applications, such as PTBMIS. However, the Contractor shall be responsible for working with the State and related business partners to construct and test interfaces. The Contractor shall also work the State for the creation of Trading Partner Agreement (TPA) requirements for the interfaces to include data elements, error handling processes, reconciliation, and escalation procedures.

All construction work shall occur in the State's technical environment as further defined in the Release Management Plan (Contract Section A.5.(1)(vii)) and Configuration Management Plan (Contract Section A.5.c.(1)(vi)).

All interfaces shall be thoroughly documented, to ensure traceability, by mapping the requirements to the design, the design to the code, and the requirements to the test cases for functional, system and integration testing.

The Contractor shall create documentation of interfaces which shall be reviewed during code walkthroughs with the State at the State's sole discretion. The Contractor shall document decisions, issues and action items that result from walkthroughs with the State. The Contractor shall document and submit source code, executable object code, and instructions to maintain/fix interface issues after development is complete

- r. Conduct Testing. The Contractor shall perform all functional, system, and integration testing of EPI v1.0, including interfaces and data migration, in accordance with Contract Section A.5.i. and the State-approved Test Plan (Deliverable 17). The Contractor shall be responsible for all aspects of the system and integration testing. The Contractor shall perform testing of all interfaces, with the interaction and involvement of State personnel responsible for each interface. State staff shall actively provide input and feedback during the plan's development. All testing shall be performed in the State's technical environment as further defined in the Release Management Plan (Contract Section A.5.(1)(vii).)

The Contractor shall prepare a Software Test Results Document. The software test results document shall include all information necessary for the State to review and validate that the test has been successfully executed in accordance with the approved Test Plan. If deemed acceptable by the State, the State will approve the Software Test Results Document in writing, which shall signal the initiation of User Acceptance Testing.



- s. Training. The Contractor shall prepare and deliver to the State the following training components:
- (1) Training Material. The Contractor shall develop and deliver to the State Train-the-Trainer material for the final EPI v1.0 functionality as approved by the State. Training material shall be prepared using State-standard Microsoft Office products.
  - (2) Train-the-Trainer Training. The Contractor shall train State-designated EPI v1.0 Trainers using the Training Material developed in A.5.s.(1).
  - (3) Help Content. The Contractor shall develop and deliver content for the Help functions of EPI v1.0.

The Contractor shall deliver the training components to the State at least ninety (90) calendar days prior to Pilot Implementation, Phase One Rollout as specified in the Project Schedule.

- t. User Acceptance Testing (UAT). The State will develop the UAT Test Plan and test scenarios. The Contractor shall provide dedicated support for User Acceptance Testing, including installation of EPI v1.0 to the State-approved UAT environment; application and technical assistance during UAT; and correction of defects identified during UAT. The Contractor will record and track defects identified by the State using the Defect Tracking Log (Deliverable 18). When all defects have been corrected and UAT is deemed completed by the State, the State will approve User Acceptance Testing in writing, which shall signal the commencement of the Pilot Implementation, Phase One Rollout phase of the project.
- u. Pilot Implementation, Phase One Rollout. This phase is the implementation of the EPI v1.0 statewide, enterprise technical architecture and the deployment of EPI v1.0 in the TDH Central Office and in one location in the Northeast Pilot Region. The State will select the location for this phase of the project, at its sole discretion, and will confirm the location in the Northeast Regions with the Contractor within seven (7) calendar days of the Contract Period Beginning Date (Contract Section B).
- (1) Build Enterprise Technical Architecture. The Contractor shall work with TDH and the Office for Information Resources (OIR) to build and validate the enterprise architecture to support EPI v1.0.
  - (2) Pre-Implementation Assessment. The Contractor shall work with the State to conduct an assessment of the selected pilot location. Said assessment will require the Contractor to conduct a site visit to the location and to:
    - identify the business processes performed at the location, including any unique processes; validate the EPI v1.0 solution against those business processes; and identify potential changes to the current processes
    - identify hardware, software, and any unique functional requirements for the location
    - analyze and determine how the TDH instance of PTBMIS in the location's region will interface/integrate with [REDACTED]
  - (3) Migrate Production Data. The Contractor shall work with the State to migrate data into EPI v1.0, and test the results of the migration, in accordance with the State-approved Data Migration Plan (Deliverable 16).
  - (4) Install EPI v1.0. The Contractor shall work with the State to install EPI v1.0 in accordance with the State-approved Implementation Plan (Deliverable 20). For this activity, the Contractor shall maintain, operate, and provide dedicated



support staff for one calendar week before and one calendar week after implementation.

- (5) Post-Implementation Assessment. The Contractor shall monitor the Pilot Implementation, Phase One Rollout and shall prepare and deliver to the State a Post-Implementation Assessment report which shall describe any issues encountered during implementation; actions taken to remediate those issues; and lessons learned from the implementation. The State will review the Assessment and, if acceptable, will provide approval in writing. Upon State approval, Pilot Implementation, Phase Two Rollout will commence.

- v. Pilot Implementation, Phase Two Rollout. The Contractor shall repeat the activities outlined in Contract Section A.5.u. (1), (3), (4) and (5) for the remaining locations in the Northeast and Sullivan County Regions, including the creation of a Pre-Implementation Assessment for each region, highlighting any unique requirements of each location. On-site pre-implementation assessments in accordance with Section A.5.u.(2) may be requested by the State on a limited basis.

The Contractor shall monitor the progress of the rollout; and provide regular updates to the Project Director in the Weekly Status Report and as needed. Upon completion of the Phase Two Rollout, the Contractor shall prepare and deliver a Post-Implementation Assessment. The State will review the Assessment and, if acceptable, will provide approval in writing. Upon State approval, Pilot Implementation, Phase Two Rollout will commence.

- w. EPI v1.0 Statewide Rollout. The Contractor shall repeat the activities outlined in Contract Section A.5.u. (1), (3), (4) and (5) for the remaining locations of the State, including the creation of a Pre-Implementation Assessment for each region, highlighting any unique requirements of each location. On-site pre-implementation assessments in accordance with Section A.5.u.(2) may be requested by the State on a limited basis.

The Contractor shall monitor the progress of the rollout; and provide regular updates to the Project Director in the Weekly Status Report and as needed. Upon completion of Statewide Rollout, the Contractor shall prepare and deliver a Post-Implementation Assessment including, from a statewide rollout view, all of the items listed in A.5.u.(5). The State will review the Assessment and, if acceptable, will provide approval in writing.

- x. Support and Maintenance. The Contractor shall provide support and maintenance for EPI v1.0 that will commence with the State's acceptance and written approval of the Post-Implementation Assessment report for Pilot Implementation, Phase One Rollout (per Contract Section A.5.u.(5) and will continue throughout the Contract. The Contractor shall provide direct, third-tier technical support for and shall maintain the operational readiness, interoperability, and conformance to specifications and requirements of EPI v1.0.

The Contractor shall deliver to the State for review and approval a Support and Maintenance Plan that describes how the Contractor will provide the support and maintenance services outlined in this Contract. The Support and Maintenance Plan shall include a description the organizational structure that the Contractor will establish to provide said services.

The Contractor shall, at a minimum:

- (1) Make appropriate Contractor support resources available to the State between 7:00 A.M. and 4:30 P.M. Central Time, Monday through Friday, except State holidays, to provide the services described and detailed in this section



- (2) Diagnose and resolve problems reported by the State that have not been diagnosed and resolved at lower levels of support within the State. The State will determine the severity level of each reported problem. The levels and the corresponding Service Level Goals are indicated below:

Severity Level	Description	Service Level Goal
Level-1	Problem has an immediate impact on a majority of end users' ability to access and/or use the system. Generally involves multiple users across multiple sites at the same time. The Contractor shall address system outages or severely degraded services immediately	Within one (1) hour from the time a severity Level-1 problem is reported to the Contractor, the Contractor shall assign dedicated resources as required to solve the problem. The Contractor shall provide a status update to the State's Technical Contact (identified in Section E.2.) or his/her designee every two (2) hours until the problem is resolved. The goal for Level-1 issues is to have the problem resolved within two (2) hours; otherwise, the issue shall be escalated to the Contractor's Chief Product Officer or the Contractor's equivalent senior management.
Level-2	Problem has a high impact on most users; must be resolved quickly; and can occur at any time. Under these circumstances, the State will not be able to perform its core mission because the software is unusable or unstable	Within four (4) hours from the time a Level-2 problem is reported to the Contractor, the Contractor shall assign dedicated resources as required to solve the problem. The Contractor shall provide a status update to the State's Technical Contact (identified in Section E.2.) or his/her designee every eight (8) hours for the first 24 hours of the incident; then every 24 hours thereafter until the problem is resolved. The goal for Level-2 issues is to have the problem resolved within eight (8) hours; otherwise, the issue shall be escalated to the Contractor's senior management
Level-3	Problem can occur at any time and is either high impact with moderate urgency, or extremely urgent but with moderate impact. Under these circumstances, the ability of the software to support business processes is diminished. For example, a software process causes frequent, unpredictable, system-wide slowdown, and must be restarted to resume acceptable performance	Within 24 hours from the time a severity Level-3 problem is reported to the Contractor, the Contractor shall assign resources to solve the problem within a mutually agreed upon timeframe. The Contractor shall provide a status update to the State's Technical Contact (identified in Section E.2.) or his/her designee every 48 hours until the problem is resolved or a workaround provided or a fix scheduled for a future date or release
Level-4	Problem has a moderate impact and is moderately urgent. These circumstances create conditions that inconvenience users of the EPI	The Contractor shall work with the State Project Director to determine resources that the Contractor shall assign and when; and the frequency of updates on the status of the problem or fix.

The Contractor shall provide the State with Service Level reports on a quarterly basis. The Service Level reports will provide the time, severity level, description, acknowledgement time, and resolution time for each incident logged during the reporting period. The reports will also show actual Service Level performance as compared to Service level goals.

- (3) Maintain the operational readiness of EPI v1.0 within the current State systems environment by identifying and communicating problems or issues to the State, making necessary adjustments and repairs as directed by the State.

y. Emergency Support and Maintenance. Upon and during public health emergencies declared by the Commissioner of the Tennessee Department of Health, the Contractor shall provide 7 X 24 x 365 support for the duration of the emergency as requested by the State. The Contractor shall be compensated for services provided pursuant to this



contract section, as requested and approved by the State, at the rates outlined in Contract Section C.3.b.

- z. Modifications and Enhancements. At the request of the State, the Contractor shall modify and enhance EPI v1.0 according to the Modification & Enhancement Request (MER) Process described herein.

The Contractor shall build all new VistA Extensions or Packages for EPI v1.0 in accordance with OSEHRA standards, where they exist. The State may, at its discretion and on a timeline approved by the State, require the Contractor to submit new Extensions or Packages to OSEHRA for certification.

- (1) The State will request Modifications and Enhancements in writing to define the purpose and scope of the Modification or Enhancement. A Modification and Enhancement Request, or "MER," will include:
  - Requestor name and role
  - Brief description
  - Reason or justification
  - Requirements and specifications
  - Request for a cost estimate, approximate time (hours) and resources necessary to complete the modification or enhancement
  - Requested or mandated delivery date
  
- (2) The Contractor shall prepare an Estimate for the MER. Said Estimate shall include:
  - Total Fixed Cost to deliver the Modification or Enhancement - the cost shall be based on the Contractor's estimate of the total number of hours required to deliver the Modification or Enhancement and the payment rates specified in Contract Section C.3. The Total Fixed Cost shall represent the maximum amount that the State will compensate the Contractor for the Modification or Enhancement.
  - The estimated delivery date of the Modification or Enhancement.
  - The impact of delivering the Modification or Enhancement on EPI operations and activities.
  
- (3) The State, at its sole discretion, may accept or reject the Contractor's Estimate.
  - (i) If the State agrees to the Contractor's Estimate, the State shall provide acceptance in writing, which authorizes the Contractor to begin work according to the MER.
  - (ii) If the State does not agree to the Contractor's Estimate, the State may:
    - Elect not to proceed with the Modification or Enhancement;
    - Negotiate the Estimate with the Contractor;
    - Revise the MER to provide additional information to clarify the scope of the request.

The Contractor shall not begin work on any MER without the State's written acceptance of the Contractor's Estimate.

The State, at its sole discretion, will determine the prioritization of the MER work.

- (4) The Contractor shall modify EPI v1.0 according to the MER, and shall thoroughly test the modifications.
  - (i) The Contractor shall prepare and provide to the State documented instructions for deploying the Modification or Enhancement to the State's



production environment per the State-accepted Release Management Plan and Configuration Management Plan.

- (ii) The Contractor shall prepare and provide to the State new or updated system and user documentation related to the Modification or Enhancement.
  - (iii) The Contractor shall work with the designated State project team member to coordinate with PTBMIS and other support vendors on any changes that affect those systems.
- (5) The State will test the delivered Modification or Enhancement to ensure that:
- The Modification or Enhancement completely provides the functions as required by the MER
  - The Modification or Enhancement has no deficiencies in documentation
  - The Modification or Enhancement has no defects in efficiency or performance.

The State, at its sole discretion, will determine acceptance of the Modification or Enhancement, and will indicate its acceptance or non-acceptance to the Contractor in writing within thirty (30) days of installation to the State's environment.

- (6) The Contractor shall coordinate with the State to implement Modifications and Enhancements according to the State-approved Release Management Plan (see Contract Section A.5.c.(1)(vii)) and Configuration Management Plan (Contract Section A.5.c.(1)(vi)).

aa. Final Project Report. The Contractor shall create a Final Project Report summarizing project activities, lessons learned, and recommended next steps. The Final Project Report shall be submitted to the State Project Director no later than fifteen (15) business days prior to the Contract End Date.

A.6. Service Reporting. The Contractor shall deliver reports related to services provided pursuant to this Contract as described in Contract Sections A.5. and A.7.

A.7. Service Deliverables.

#	Deliverable	Contract Section(s)	Delivery Date
1	Kickoff Meeting Presentation	A.5.a.	Within seven (7) calendar days after the Contract Period Beginning Date*
2	Work Breakdown Structure and Project Schedule	A.5.c.(1)(i)	Within thirty (30) calendar days of the Contract Period Beginning Date*
3	Resource Management Plan	A.5.c.(1)(ii)	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
4	Risk Management Plan	A.5.c.(1)(iii)	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
5	Issue Management Plan	A.5.c.(1)(iv)	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
6	Change Management Plan	A.5.c.(1)(v)	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
7	Configuration Management Plan	A.5.c.(1)(vi)	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule



#	Deliverable	Contract Section(s)	Delivery Date
8	Release Management Plan	A.5.c.(1)(vii)	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
9	ICD-9 to ICD-10 Conversion Plan	A.5.c.(2)	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
10	Weekly Status Reports	A.5.c.(3) A.5.c.(5)	No later than the close of business on the first business day of the week
11	Monthly Progress Report	A.5.c.(4)	No later than the 10 <sup>th</sup> of the month
12	Infrastructure Architecture Design (IAD)	A.5.d.	Within thirty (30) calendar days of the Contract Period Beginning Date*
13	Requirements Verification and Specification	A.5.e.	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
14	Application Design documents	A.5.f.	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
15	Interface Design	A.5.g.	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
16	Data Migration Plan	A.5.h.	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
17	Test Plan	A.5.i.	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
18	Defect Tracking Log	A.5.j.	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
19	Defect Tracking Reports	A.5.j.	Daily upon commencement of User Acceptance Testing (UAT)
20	Implementation Plan	A.5.k.	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
21	Knowledge Transfer Plan	A.5.l.	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
22	Operations Manual	A.5.m.	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
23	Backup and Recovery Plan	A.5.n.	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
24	Contingency of Operations Plan	A.5.o.	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
25	Software Test Results Document	A.5.r.	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
26	Training materials and trained trainers	A.5.s.	At least thirty (90) calendar days prior to the Pilot Implementation, Phase One Rollout
27	User Acceptance Testing (UAT)	A.5.t.	As mutually agreed upon by the State and Contractor and in accordance with the Project Schedule
28	Pre-Implementation Assessment, for selected location and Central Office	A.5.u.(2) A.5.v. A.5.w.	At least thirty (30) calendar days prior to each phase rollout date according to the State-approved Project Schedule
29	Post Implementation Assessment Report	A.5.u.(5) A.5.v. A.5.w.	Within thirty (30) calendar days of the actual phase rollout date



#	Deliverable	Contract Section(s)	Delivery Date
30	Outgoing Transition Plan	A.5.c.(6)	Draft – Within six (6) months of Contract Period Beginning Date* Updates – every six (6) months Final – no later than three (3) calendar months prior to Contract Period Ending Date*
31	Support and Maintenance Plan	A.5.x.	Within sixty (60) calendar days of the Contract Period Beginning Date*
32	Final Project Report	A.5.aa.	No later than fifteen (15) business days prior to the Contract Period End Date
33	Quarterly Service Level Reports	A.5.x.(2)	Quarterly upon commencement of Support and Maintenance

\*Contract Period Begin Date and Contract Period End Date are included in Contract Section B.

A.8. Inspection and Acceptance. Acceptance of the work and deliverables outlined above will be made by the State or its authorized representation. The State will make the final determination in terms of acceptance of the work being performed under this Contract.

A.9. Optional Expansion Phase: The State is considering expansion of EPI v1.0 to include the State of Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS).

During the Expansion Phase, which would not begin before completion of EPI v1.0, Phase 2 Statewide Rollout, the Contractor shall design, develop, and implement the components and changes that will result in an integrated or partially integrated Electronic Health Record (EHR) to support 24-hour x 7 x 365, psychiatric in-patient hospital services across four regional Mental Health institutes.

During the design, development, and implementation of EPI v1.0, and at the State's sole discretion and direction, the Contractor shall factor in the potential for the expansion and ensure the design of EPI v1.0 provides flexibility for said expansion. Should the State elect to pursue the Expansion Phase, the State will meet with the Contractor to discuss business and technical requirements for the expanded system, and it is expected that the Contractor will actively participate in early planning discussion regarding the feasibility and potential approaches for this expansion. Based on that information, the Contractor will use the hourly rates included in Contract Section C.3. to develop a cost estimate.

The Expansion Phase is an optional component of this contract and it will be at the State's discretion to use the Contractor for this phase. The State's decision shall be final.

A.10. Software Licenses.

- 1) All software products which are to be provided by Contractor for the Contractor [REDACTED] Solution or CPRS system (collectively, the "Software Solution") may be used by the State in perpetuity without the payment of on-going license fees, except as provided in Section A.5(d)(2) of this Contract regarding [REDACTED] licensing fees. The Contractor shall conform to all of the terms and conditions of the Apache 2.0 License and the OSEHRA Licensing Terms in providing the Software Solution to the State. The Software Solutions and any other deliverables provided by the Contractor to the State pursuant to this Contract or amendment thereto shall be considered FOSS.
- 2) Open Source: The Software Solution and any software products provided by Contractor under this Contract shall be open source software, except as provided in Section A.5(d)(2) of this Contract regarding [REDACTED] licensing fees, and made available as set forth in the Apache 2.0 license and of the OSEHRA Licensing Terms, as follows:
  - a. The Apache 2.0 License: <http://www.apache.org/licenses/LICENSE-2.0.html>; and
  - b. The OSEHRA Licensing Terms: <http://www.osehra.org/content/licensing-terms>.



- c. The Contractor agrees that, notwithstanding Term and Condition Number Five (5) of the Apache 2.0 License Agreement referenced above, the Contractor agrees that the Software Solution shall be under the terms and conditions of the Apache 2.0 License and the OSEHRA Licensing Terms without any additional terms and conditions and that the Apache 2.0 and OSEHRA License Terms and Conditions shall supersede any terms and conditions which may contradict those Terms and Conditions.
- 3) EPI v.1.0: The State shall be granted a fully paid-up, non-exclusive, royalty-free, perpetual license to use, execute, reproduce, display, perform, adapt, prepare derivatives, and distribute, either electronically or otherwise, copies of the software documentation, or any derivative or components thereof, as necessary to enjoy full use of the Software Solution, or any component thereof, in accordance with the terms and conditions of the Apache 2.0 License and the OSEHRA Licensing Terms. The State or other parties may distribute the Software Solution, in whole or in part, as FOSS.
- 4) Right to Purchase Additional Software – The State may elect to purchase additional software components/modules, to complement the integration of the existing collection of software components/modules to rapidly changing technology.

Should the State procure this additional software from the Contractor, the Contractor shall offer to the State the better of (i) the same discount rate off the current list price on the additional software components, as it was offered for the initial software components or (ii) lowest price offered to other customers. NOTHING IN THIS AGREEMENT SHALL BE CONSTRUED TO PROHIBIT THE STATE FROM PURCHASING COMPATIBLE SOFTWARE FROM ANY SOURCE AND REQUIRING CONTRACTOR TO INTEGRATE SUCH SOFTWARE INTO THE SOFTWARE SOLUTION AS AN ENHANCED DELIVERABLE UNDER A CHANGE ORDER.

- 5) Licensed Documentation – The State shall have the option to require the Contractor to deliver, at Contractor's expense, if commercially available:
  - a) one (1) hard copy and one (1) master electronic copy of the documentation of the Software Solution, in a specified format for delivery to the State; or
  - b) hard copies of the Software Documentation by type of license in a quantity to be specified by the State.

## **B. CONTRACT PERIOD:**

This Contract shall be effective for the period beginning September 15, 2014, and ending on September 14, 2019. The Contractor hereby acknowledges and affirms that the State shall have no obligation for services rendered by the Contractor which were not performed within this specified contract period.

## **C. PAYMENT TERMS AND CONDITIONS:**

- C.1. Maximum Liability. In no event shall the maximum liability of the State under this Contract exceed Six Million Seven Hundred Twenty-four Thousand Six Hundred Forty-seven dollars and thirty-five cents (\$6,724,647.35). The payment rates in section C.3 shall constitute the entire compensation due the Contractor for all service and Contractor obligations hereunder regardless of the difficulty, materials or equipment required. The payment rates include, but are not limited to, all applicable taxes, fees, overheads, and all other direct and indirect costs incurred or to be incurred by the Contractor.

The Contractor is not entitled to be paid the maximum liability for any period under the Contract or



any extensions of the Contract for work not requested by the State. The maximum liability represents available funds for payment to the Contractor and does not guarantee payment of any such funds to the Contractor under this Contract unless the State requests work and the Contractor performs said work. In which case, the Contractor shall be paid in accordance with the payment rates detailed in section C.3. The State is under no obligation to request work from the Contractor in any specific dollar amounts or to request any work at all from the Contractor during any period of this Contract.

- C.2. Compensation Firm. The payment rates and the maximum liability of the State under this Contract are firm for the duration of the Contract and are not subject to escalation for any reason unless amended.
- C.3. Payment Methodology. The Contractor shall be compensated based on the payment rates herein for units of service authorized by the State in a total amount not to exceed the Contract Maximum Liability established in section C.1.
- a. The Contractor's compensation shall be contingent upon the satisfactory completion of units, milestones, or increments of service defined in section A.
  - b. The Contractor shall be compensated for said units, milestones, or increments of service based upon the following payment rates:

Service Description	Amount (per compensable increment)
Completion and State approval of the following Deliverables: <ul style="list-style-type: none"> <li>• Deliverable #2: Project WBS and Schedule – as detailed in Contract Section A.5.c.(1)(i)</li> <li>• Deliverable #3: Resource Management Plan – as detailed in Contract Section A.5.c.(1)(ii)</li> <li>• Deliverable #4: Risk Management Plan - as detailed in Contract Section A.5.c.(1)(iii)</li> <li>• Deliverable #5: Issue Management Plan - as detailed in Contract Section A.5.c.(1)(iv)</li> <li>• Deliverable #6: Change Management Plan - as detailed in Contract Section A.5.c.(1)(v)</li> <li>• Deliverable #7: Configuration Management Plan – as detailed in Contract Section A.5.c.(1)(vi)</li> <li>• Deliverable #8: Release Management Plan – as detailed in Contract Section A.5.c.(1)(vii)</li> <li>• Deliverable #9: ICD-9 to ICD-10 Conversion Plan – as detailed in Contract Section A.5.c.(2)</li> </ul>	<b>\$ 450,030.00</b> 10% of the Total Implementation Cost
Completion and State approval of the following Deliverables: <ul style="list-style-type: none"> <li>• Deliverable #13: Requirements Verification and Specification – as detailed in Contract Section A.5.e.</li> <li>• Deliverable #14: Application Design – as detailed in Contract Section A.5.f.</li> <li>• Deliverable #15: Interface Design – as detailed in Contract Section A.5.g.</li> <li>• Deliverable #16: Data Migration Plan – as detailed in Contract Section A.5.h.</li> </ul>	<b>\$ 450,030.00</b> 10% of the Total Implementation Cost



Service Description	Amount (per compensable increment)
Completion and State approval of the following Deliverables: <ul style="list-style-type: none"> <li>• Deliverable #20: Implementation Plan – <i>as detailed in Contract Section A.5.k.</i></li> <li>• Deliverable #22: Operations Manual – <i>as detailed in Contract Section A.5.m.</i></li> <li>• Deliverable #23: Backup and Recovery Plan – <i>as detailed in Contract Section A.5.n.</i></li> <li>• Deliverable #24: Contingency of Operations Plan – <i>as detailed in Contract Section A.5.o.</i></li> <li>• Deliverable #25: Software Test Results Document – <i>as detailed in Contract Section A.5.r.</i></li> </ul>	<b>\$ 225,015.00</b> <i>5% of the Total Implementation Cost</i>
Completion and State approval of the following Deliverables: <ul style="list-style-type: none"> <li>• Deliverable #21: Knowledge Transfer Plan – <i>as detailed in Contract Section A.5.l.</i></li> <li>• Deliverable #26: Training Material and trained trainers – <i>as detailed in Contract Section A.5.s.</i></li> <li>• Deliverable #27: User Acceptance Testing (UAT) – <i>as detailed in Contract Section A.5.t.</i></li> </ul>	<b>\$ 225,015.00</b> <i>5% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Phase One Rollout Post as indicated by written State approval of the Post-Implementation Assessment Report – <i>as detailed in Contract Section A.5.u.(5)</i>	<b>\$ 225,015.00</b> <i>5% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Phase Two Rollout as indicated by written State approval of the Post-Implementation Assessment Report – <i>as detailed in Contract Section A.5.v.</i>	<b>\$ 225,015.00</b> <i>5% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, Upper Cumberland Region (UCR) as indicated by written State approval of the Post-Implementation Assessment Report – <i>as detailed in Contract Section A.5.w.</i>	<b>\$ 450,030.00</b> <i>10% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, East Region as indicated by written State approval of the Post-Implementation Assessment Report – <i>as detailed in Contract Section A.5.w.</i>	<b>\$ 450,030.00</b> <i>10% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, Southeast Region and Hamilton County as indicated by written State approval of the Post-Implementation Assessment Report – <i>as detailed in Contract Section A.5.w.</i>	<b>\$ 450,030.00</b> <i>10% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, Mid Cumberland Region and Davidson County – <i>as detailed in Contract Section A.5.w.</i>	<b>\$ 450,030.00</b> <i>10% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, South Central Region as indicated by written State approval of the Post-Implementation Assessment Report – <i>as detailed in Contract Section A.5.w.</i>	<b>\$ 450,030.00</b> <i>10% of the Total Implementation Cost</i>
Completion and State approval of EPI v1.0 Pilot Implementation, Statewide Rollout, West Region, Madison County, and Shelby County as indicated by written State approval of the Post-Implementation Assessment Report – <i>as detailed in Contract Section A.5.w.</i>	<b>\$ 450,030.00</b> <i>10% of the Total Implementation Cost</i>
<b>Total Implementation Amount</b>	<b>\$ 4,500,300.00</b>

Service Description	Amount (per compensable increment)				
	Contract Year One	Contract Year Two	Contract Year Three	Contract Year Four	Contract Year Five
<b>Support and Maintenance<sup>1</sup></b> – <i>as detailed in Contract Section A.5.x.</i>	\$ 0.00 per year	\$ 227,850.00 per year	\$ 239,243.00 per year	\$ 251,205.00 per year	\$ 263,275.00 per year



Service Description	Amount				
	(per compensable increment)				
<b>Emergency Support and Maintenance</b> – as detailed in Contract Section A.5.y.	\$ 130.00 per hour	\$ 136.50 per hour	\$ 143.33 per hour	\$ 150.50 per hour	\$ 158.03 per hour
<b>Modification and Enhancement Requests (MERs)</b> – as detailed in Contract Section A.5.z.	\$ 130.00 per hour	\$ 136.50 per hour	\$ 143.33 per hour	\$ 150.50 per hour	\$ 158.03 per hour
<b>Optional Expansion Phase</b> – as detailed in Contract Section A.9.	\$ 130.00 per hour	\$ 136.50 per hour	\$ 143.32 per hour	\$ 150.50 per hour	\$ 158.03 per hour

<sup>1</sup> No Support and Maintenance fee shall be accumulated or invoiced by the Contractor until the EPI v1.0 is deployed and active in the pilot location. Support and Maintenance fees for Contract Year One will be paid by the State proportionally based on date of implementation. Contract Year One Support and Maintenance fees shall be invoiced by the Contractor in quarterly installments. Support and Maintenance fees for all other contract years awarded under the Contract shall be invoiced by the Contractor in equal quarterly installments each equal to one-quarter the yearly contract amount provided that the combined quarterly invoices do not exceed the yearly contracted amount. Quarterly installments for all Support and Maintenance fees shall correspond with the State's fiscal calendar year.

- c. The Contractor shall be compensated for modification and enhancements requested and performed pursuant to Contract Section A.5.z. without a formal amendment of this contract based upon the payment rates detailed in the Modifications and Enhancements Requests portion of Contract Section C.3.b above and as agreed pursuant to said Section A.5.z., PROVIDED THAT compensation to the Contractor for such modification and enhancement work shall not exceed seven percent (7 %) of the Total Implementation Amount in C.3.b. above. If, at any point during the Contract period, the State determines that the cost of necessary Professional Services work would exceed said maximum amount, the State may amend this Contract to address the need.

C.4. Travel Compensation. The Contractor shall not be compensated or reimbursed for travel, meals, or lodging.

C.5. Invoice Requirements. The Contractor shall invoice the State only for completed increments of service and for the amount stipulated in section C.3, above, and present said invoices no more often than monthly, with all necessary supporting documentation, to:

Carole Sumner, Director of Administrative Services  
 Tennessee Department of Health – Information Technology Services  
 Andrew Johnson Tower – 6<sup>th</sup> Floor  
 710 James Robertson Parkway  
 Nashville, TN 37243

- a. Each invoice shall clearly and accurately detail all of the following required information
- b. (calculations must be extended and totaled correctly).

- (1) Invoice Number (assigned by the Contractor)
- (2) Invoice Date
- (3) Contract Number (assigned by the State)
- (4) Customer Account Name: TN Department of Health – Community Health Services
- (5) Customer Account Number (assigned by the Contractor to the above-referenced Customer)
- (6) Contractor Name
- (7) Contractor Tennessee Edison Registration ID Number Referenced in Preamble of this Contract
- (8) Contractor Contact for Invoice Questions (name, phone, and/or fax)
- (9) Contractor Remittance Address



- (10) Description of Delivered Service
- (11) Complete Itemization of Charges, which shall detail the following:
  - i. Service or Milestone Description (including name & title as applicable) of each service invoiced
  - ii. Number of Completed Units, Increments, Hours, or Days as applicable, of each service invoiced
  - iii. Applicable Payment Rate (as stipulated in Section C.3.) of each service invoiced
  - iv. Amount Due by Service
  - v. Total Amount Due for the invoice period

c. The Contractor understands and agrees that an invoice under this Contract shall:

- (1) include only charges for service described in Contract Section A and in accordance with payment terms and conditions set forth in Contract Section C;
- (2) only be submitted for completed service and shall not include any charge for future work;
- (3) not include sales tax or shipping charges; and
- (4) initiate the timeframe for payment (and any discounts) only when the State is in receipt of the invoice, and the invoice meets the minimum requirements of this section C.5.

C.6. Payment of Invoice. A payment by the State shall not prejudice the State's right to object to or question any payment, invoice, or matter in relation thereto. A payment by the State shall not be construed as acceptance of any part of the work or service provided or as approval of any amount invoiced.

C.7. Invoice Reductions. The Contractor's invoice shall be subject to reduction for amounts included in any invoice or payment theretofore made which are determined by the State, on the basis of audits conducted in accordance with the terms of this Contract, not to constitute proper remuneration for compensable services.

C.8. Deductions. The State reserves the right to deduct from amounts, which are or shall become due and payable to the Contractor under this or any contract between the Contractor and the State of Tennessee any amounts, which are or shall become due and payable to the State of Tennessee by the Contractor.

C.9. Prerequisite Documentation. The Contractor shall not invoice the State under this Contract until the State has received the following documentation properly completed.

- a. The Contractor shall complete, sign, and present to the State an "Authorization Agreement for Automatic Deposit (ACH Credits) Form" provided by the State. By doing so, the Contractor acknowledges and agrees that, once said form is received by the State, all payments to the Contractor, under this or any other contract the Contractor has with the State of Tennessee shall be made by Automated Clearing House (ACH).
- b. The Contractor shall complete, sign, and present to the State a "Substitute W-9 Form" provided by the State. The taxpayer identification number detailed by said form must agree with the Contractor's Federal Employer Identification Number or Tennessee Edison Registration ID referenced in this Contract.

#### **D. STANDARD TERMS AND CONDITIONS:**

D.1. Required Approvals. The State is not bound by this Contract until it is signed by the contract parties and approved by appropriate officials in accordance with applicable Tennessee laws and regulations (depending upon the specifics of this contract, said officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).



- D.2. Modification and Amendment. This Contract may be modified only by a written amendment signed by all parties hereto and approved by both the officials who approved the base contract and, depending upon the specifics of the contract as amended, any additional officials required by Tennessee laws and regulations (said officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).
- D.3. Termination for Convenience. The State may terminate this Contract without cause for any reason. Said termination shall not be deemed a breach of contract by the State. The State shall give the Contractor at least thirty (30) days written notice before the effective termination date. The Contractor shall be entitled to compensation for satisfactory, authorized service completed as of the termination date, but in no event shall the State be liable to the Contractor for compensation for any service which has not been rendered. Upon such termination, the Contractor shall have no right to any actual general, special, incidental, consequential, or any other damages whatsoever of any description or amount.
- D.4. Termination for Cause. If the Contractor fails to properly perform its obligations under this Contract in a timely or proper manner, or if the Contractor violates any terms of this Contract, the State shall have the right to immediately terminate the Contract and withhold payments in excess of fair compensation for completed services. Notwithstanding the above, the Contractor shall not be relieved of liability to the State for damages sustained by virtue of any breach of this Contract by the Contractor.
- D.5. Subcontracting. The Contractor shall not assign this Contract or enter into a subcontract for any of the services performed under this Contract without obtaining the prior written approval of the State. If such subcontracts are approved by the State, each shall contain, at a minimum, sections of this Contract below pertaining to "Conflicts of Interest," "Nondiscrimination," and "Records" (as identified by the section headings). Notwithstanding any use of approved subcontractors, the Contractor shall be the prime contractor and shall be responsible for all work performed.
- D.6. Conflicts of Interest. The Contractor warrants that no part of the total Contract Amount shall be paid directly or indirectly to an employee or official of the State of Tennessee as wages, compensation, or gifts in exchange for acting as an officer, agent, employee, subcontractor, or consultant to the Contractor in connection with any work contemplated or performed relative to this Contract.

The Contractor acknowledges, understands, and agrees that this Contract shall be null and void if the Contractor is, or within the past six months has been, an employee of the State of Tennessee or if the Contractor is an entity in which a controlling interest is held by an individual who is, or within the past six months has been, an employee of the State of Tennessee.

- D.7. Nondiscrimination. The Contractor hereby agrees, warrants, and assures that no person shall be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination in the performance of this Contract or in the employment practices of the Contractor on the grounds of handicap or disability, age, race, color, religion, sex, national origin, or any other classification protected by Federal, Tennessee State constitutional, or statutory law. The Contractor shall, upon request, show proof of such nondiscrimination and shall post in conspicuous places, available to all employees and applicants, notices of nondiscrimination.
- D.8. Prohibition of Illegal Immigrants. The requirements of Tenn. Code Ann. § 12-3-309, addressing the use of illegal immigrants in the performance of any Contract to supply goods or services to the state of Tennessee, shall be a material provision of this Contract, a breach of which shall be grounds for monetary and other penalties, up to and including termination of this Contract.
- a. The Contractor hereby agrees that the Contractor shall not knowingly utilize the services of an illegal immigrant in the performance of this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant in the performance of this Contract. The Contractor shall submit an attestation, in writing,



by submitting to the State a completed and signed copy of the document at Attachment A, hereto, semi-annually during the period of this Contract. Such attestations shall be maintained by the Contractor and made available to state officials upon request.

- b. Prior to the use of any subcontractor in the performance of this Contract, and semi-annually thereafter, during the period of this Contract, the Contractor shall obtain and retain a current, written attestation that the subcontractor shall not knowingly utilize the services of an illegal immigrant to perform work relative to this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant to perform work relative to this Contract. Attestations obtained from such subcontractors shall be maintained by the Contractor and made available to state officials upon request.
  - c. The Contractor shall maintain records for all personnel used in the performance of this Contract. Said records shall be subject to review and random inspection at any reasonable time upon reasonable notice by the State.
  - d. The Contractor understands and agrees that failure to comply with this section will be subject to the sanctions of Tenn. Code Ann. § 12-3-309 for acts or omissions occurring after its effective date.
  - e. For purposes of this Contract, "illegal immigrant" shall be defined as any person who is not either a United States citizen, a Lawful Permanent Resident, or a person whose physical presence in the United States is authorized or allowed by the federal Department of Homeland Security and who, under federal immigration laws and/or regulations, is authorized to be employed in the U.S. or is otherwise authorized to provide services under the Contract.
- D.9. Records. The Contractor shall maintain documentation for all charges under this Contract. The books, records, and documents of the Contractor, insofar as they relate to work performed or money received under this Contract, shall be maintained for a period of three (3) full years from the date of the final payment and shall be subject to audit at any reasonable time and upon reasonable notice by the State, the Comptroller of the Treasury, or their duly appointed representatives. The financial statements shall be prepared in accordance with generally accepted accounting principles.
- D.10. Monitoring. The Contractor's activities conducted and records maintained pursuant to this Contract shall be subject to monitoring and evaluation by the State, the Comptroller of the Treasury, or their duly appointed representatives.
- D.11. Progress Reports. The Contractor shall submit brief, periodic, progress reports to the State as requested.
- D.12. Strict Performance. Failure by any party to this Contract to insist in any one or more cases upon the strict performance of any of the terms, covenants, conditions, or provisions of this Contract shall not be construed as a waiver or relinquishment of any such term, covenant, condition, or provision. No term or condition of this Contract shall be held to be waived, modified, or deleted except by a written amendment signed by the parties hereto.
- D.13. Independent Contractor. The parties hereto, in the performance of this Contract, shall not act as employees, partners, joint venturers, or associates of one another. It is expressly acknowledged by the parties hereto that such parties are independent contracting entities and that nothing in this Contract shall be construed to create an employer/employee relationship or to allow either to exercise control or direction over the manner or method by which the other transacts its business affairs or provides its usual services. The employees or agents of one party shall not be deemed or construed to be the employees or agents of the other party for any purpose whatsoever.

The Contractor, being an independent contractor and not an employee of the State, agrees to carry adequate public liability and other appropriate forms of insurance, including adequate public



liability and other appropriate forms of insurance on the Contractor's employees, and to pay all applicable taxes incident to this Contract.

- D.14. State Liability. The State shall have no liability except as specifically provided in this Contract.
- D.15. Force Majeure. The obligations of the parties to this Contract are subject to prevention by causes beyond the parties' control that could not be avoided by the exercise of due care including, but not limited to, natural disasters, riots, wars, epidemics, or any other similar cause.
- D.16. State and Federal Compliance. The Contractor shall comply with all applicable State and Federal laws and regulations in the performance of this Contract.
- D.17. Governing Law. This Contract shall be governed by and construed in accordance with the laws of the State of Tennessee. The Contractor agrees that it will be subject to the exclusive jurisdiction of the courts of the State of Tennessee in actions that may arise under this Contract. The Contractor acknowledges and agrees that any rights or claims against the State of Tennessee or its employees hereunder, and any remedies arising therefrom, shall be subject to and limited to those rights and remedies, if any, available under Tenn. Code Ann. § 9-8-101 – 9-8-407.
- D.18. Completeness. This Contract is complete and contains the entire understanding between the parties relating to the subject matter contained herein, including all the terms and conditions of the parties' agreement. This Contract supersedes any and all prior understandings, representations, negotiations, and agreements between the parties relating hereto, whether written or oral.
- D.19. Severability. If any terms and conditions of this Contract are held to be invalid or unenforceable as a matter of law, the other terms and conditions hereof shall not be affected thereby and shall remain in full force and effect. To this end, the terms and conditions of this Contract are declared severable.
- D.20. Headings. Section headings of this Contract are for reference purposes only and shall not be construed as part of this Contract.
- D.21. HIPAA Compliance. The State and Contractor shall comply with obligations under the Health Insurance Portability and Accountability Act of 1996 (HIPAA), Health Information Technology for Economic and Clinical Health (HITECH) Act and any other relevant laws and regulations regarding privacy (collectively the "Privacy Rules").
- a. Contractor warrants to the State that it is familiar with the requirements of the Privacy Rules, and will comply with all applicable requirements in the course of this Contract.
  - b. Contractor warrants that it will cooperate with the State, including cooperation and coordination with State privacy officials and other compliance officers required by the Privacy Rules, in the course of performance of the Contract so that both parties will be in compliance with the Privacy Rules.
  - c. The State and the Contractor will sign documents, including but not limited to business associate agreements, as required by the Privacy Rules and that are reasonably necessary to keep the State and Contractor in compliance with the Privacy Rules. This provision shall not apply if information received or delivered by the parties under this Contract is NOT "protected health information" as defined by the Privacy Rules, or if the Privacy Rules permit the parties to receive or deliver such information without entering into a business associate agreement or signing another such document.
  - d. The Contractor will indemnify the State and hold it harmless for any violation by the Contractor or its subcontractors of the Privacy Rules. This includes the costs of responding to a breach of protected health information, the costs of responding to a



government enforcement action related to the breach, and any fines, penalties, or damages paid by the State because of the violation.

**E. SPECIAL TERMS AND CONDITIONS:**

- E.1. Conflicting Terms and Conditions. Should any of these special terms and conditions conflict with any other terms and conditions of this Contract, these special terms and conditions shall control.
- E.2. Communications and Contacts. All instructions, notices, consents, demands, or other communications required or contemplated by this Contract shall be in writing and shall be made by certified, first class mail, return receipt requested and postage prepaid, by overnight courier service with an asset tracking system, or by EMAIL or facsimile transmission with recipient confirmation. Any such communications, regardless of method of transmission, shall be addressed to the respective party at the appropriate mailing address, facsimile number, or EMAIL address as set forth below or to that of such other party or address, as may be hereafter specified by written notice.

The State:

General

Mike Newman, CIO  
Tennessee Department of Health  
Andrew Johnson Tower – 6<sup>th</sup> Floor  
710 James Robertson Parkway  
Nashville, TN 37243  
[Mike.Newman@tn.gov](mailto:Mike.Newman@tn.gov)  
Telephone # (615) 253-5417

Technical Matters

Marsha Sumner, Deputy CIO  
Tennessee Department of Health – Information Technology Services Division  
Andrew Johnson Tower – 6<sup>th</sup> Floor  
710 James Robertson Parkway  
Nashville, TN 37243  
[Marsha.Sumner@tn.gov](mailto:Marsha.Sumner@tn.gov)  
Telephone # (615) 741-7176

The Contractor:

Ron Byers, VP/General Counsel  
Document Storage Systems, Inc.  
12575 U.S. Highway One, Suite 200  
Juno Beach, FL 33408  
[rbyers@dssinc.com](mailto:rbyers@dssinc.com)  
Telephone # (561) 284-7838  
FAX # (561) 227-0208

All instructions, notices, consents, demands, or other communications shall be considered effectively given upon receipt or recipient confirmation as may be required.

- E.3. Subject to Funds Availability. The Contract is subject to the appropriation and availability of State and/or Federal funds. In the event that the funds are not appropriated or are otherwise unavailable, the State reserves the right to terminate the Contract upon written notice to the Contractor. Said termination shall not be deemed a breach of Contract by the State. Upon receipt of the written notice, the Contractor shall cease all work associated with the Contract. Should such an event occur, the Contractor shall be entitled to compensation for all satisfactory and authorized services completed as of the termination date. Upon such termination, the



Contractor shall have no right to recover from the State any actual, general, special, incidental, consequential, or any other damages whatsoever of any description or amount.

- E.4. Tennessee Consolidated Retirement System. The Contractor acknowledges and understands that, subject to statutory exceptions contained in Tenn. Code Ann. § 8-36-801 – 823 the law governing the Tennessee Consolidated Retirement System (TCRS), provides that if a retired member of TCRS, or of any superseded system administered by TCRS, or of any local retirement fund established pursuant to Tenn. Code Ann. Title 8, Chapter 35, Part 3 accepts state employment, the member's retirement allowance is suspended during the period of the employment. Accordingly and notwithstanding any provision of this Contract to the contrary, the Contractor agrees that if it is later determined that the true nature of the working relationship between the Contractor and the State under this Contract is that of "employee/employer" and not that of an independent contractor, the Contractor, if a retired member of TCRS, may be required to repay to TCRS the amount of retirement benefits the Contractor received from TCRS during the period of this Contract.
- E.5. Tennessee Department of Revenue Registration. The Contractor shall be registered with the Department of Revenue for the collection of Tennessee sales and use tax. This registration requirement is a material requirement of this Contract.
- E.6. Confidentiality of Records. Strict standards of confidentiality of records and information shall be maintained in accordance with applicable state and federal law. All material and information, regardless of form, medium or method of communication, provided to the Contractor by the State or acquired by the Contractor on behalf of the State shall be regarded as confidential information in accordance with the provisions of applicable state and federal law, state and federal rules and regulations, departmental policy, and ethical standards. Such confidential information shall not be disclosed, and all necessary steps shall be taken by the Contractor to safeguard the confidentiality of such material or information in conformance with applicable state and federal law, state and federal rules and regulations, departmental policy, and ethical standards.

The Contractor's obligations under this section do not apply to information in the public domain; entering the public domain but not from a breach by the Contractor of this Contract; previously possessed by the Contractor without written obligations to the State to protect it; acquired by the Contractor without written restrictions against disclosure from a third party which, to the Contractor's knowledge, is free to disclose the information; independently developed by the Contractor without the use of the State's information; or, disclosed by the State to others without restrictions against disclosure. Nothing in this paragraph shall permit Contractor to disclose any information that is confidential under federal or state law or regulations, regardless of whether it has been disclosed or made available to the Contractor due to intentional or negligent actions or inactions of agents of the State or third parties.

It is expressly understood and agreed the obligations set forth in this section shall survive the termination of this Contract.

- E.7. Debarment and Suspension. The Contractor certifies, to the best of its knowledge and belief, that it, its current and future principals, its current and future subcontractors and their principals:
- a. are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department or agency;
  - b. have not within a three (3) year period preceding this Contract been convicted of, or had a civil judgment rendered against them from commission of fraud, or a criminal offence in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or grant under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;



- c. are not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses detailed in section b. of this certification; and
- d. have not within a three (3) year period preceding this Contract had one or more public transactions (federal, state, or local) terminated for cause or default.

The Contractor shall provide immediate written notice to the State if at any time it learns that there was an earlier failure to disclose information or that due to changed circumstances, its principals or the principals of its subcontractors are excluded or disqualified.

E.8. Incorporation of Additional Documents. Each of the following documents is included as a part of this Contract by reference. In the event of a discrepancy or ambiguity regarding the Contractor's duties, responsibilities, and performance under this Contract, these items shall govern in order of precedence below.

- a. this Contract document with any attachments or exhibits (excluding the items listed at subsections b. through e., below);
- b. any clarifications of or addenda to the Contractor's proposal seeking this Contract;
- c. the State solicitation, as may be amended, requesting proposals in competition for this Contract;
- d. any technical specifications provided to proposers during the procurement process to award this Contract;
- e. the Contractor's proposal seeking this Contract.

E.9. Copyrights and Patents. The Contractor agrees to indemnify and hold harmless the State of Tennessee as well as its officers, agents, and employees from and against any and all claims or suits which may be brought against the State for infringement of any laws regarding patents or copyrights which may arise from the Contractor's performance of this Contract. In any such action brought against the State, the Contractor shall satisfy and indemnify the State for the amount of any final judgment for infringement. The Contractor further agrees it shall be liable for the reasonable fees of attorneys for the State in the event such service is necessitated to enforce the terms of this Contract or otherwise enforce the obligations of the Contractor to the State. The State shall give the Contractor written notice of any such claim or suit and full right and opportunity to conduct the Contractor's own defense thereof.

E.10. Security Audit. The State may conduct audits of Contractor's compliance with the State's Enterprise Information Security Policy ("The Policy") or under this Contract, including those obligations imposed by Federal or State law, regulation or policy. The Policy, as may be periodically revised, can be located at the following link: <http://www.tn.gov/finance/oir/security/secpolicy.html>. The State's right to conduct security audits is independent of any other audit or monitoring required by this Contract. The timing and frequency of such audits shall be at the State's discretion and may, but not necessarily shall, be in response to a security incident.

- a. A security audit may include the following: (i) review of access logs, screen shots and other paper or electronic documentation relating to Contractor's compliance with the Policy. This may include review of documentation relevant to subcontractors or suppliers of security equipment and services used with respect to State data; (ii) physical inspection of controls such as door locks, file storage, communications systems, and employee identification procedures; and (iii) interviews of responsible technical and management personnel regarding security procedures.
- b. Contractor shall provide reports or additional information upon request of the state and access by the State or the State's designated staff to Contractor's facilities and/or any



location involved with providing services to the State or involved with processing or storing State data, and Contractor shall cooperate with State staff and audit requests submitted under this Section. Any confidential information of either party accessed or disclosed during the course of the security audit shall be treated as set forth under this Contract or federal or state law or regulations. Each party shall bear its own expenses incurred in the course of conducting this security audit. Contractor shall at its own expense promptly rectify any non-compliance with the Policy or other requirements identified by this security audit and provide proof to the State thereof.

E.11. Non-State Standard Products. In the event that the Contractor wishes to introduce non-State standard software or hardware components ("products") into the State's technology environment, in support of, or related to, the services the Contractor is providing under this Contract, the Contractor shall make a formal written request to the State prior to introducing the non-State Standard Products. Such a request is referred to as a "Non-State Standard Product Request."

- a. Non-State Standard Products are defined as:
  - Any software that is not listed and designated as Current in the Tennessee Enterprise Architecture, as amended; or
  - Any hardware that is not listed and designated as Current in, or is not compatible with standards listed in, the Tennessee Enterprise Architecture, as amended.
- b. The State's Department of Finance and Administration, Office for Information Resources (OIR), shall consider the Non-State Standard Product Request and shall render a written determination, in the State's best interest, to approve or disapprove the request. If OIR disapproves the request, the Contractor agrees to withdraw the request and substitute State Standard Products in place of the Non-State Standard Products, at no additional cost to the State.

E.12. Hold Harmless. The Contractor agrees to indemnify and hold harmless the State of Tennessee as well as its officers, agents, and employees from and against any and all claims, liabilities, losses, and causes of action which may arise, accrue, or result to any person, firm, corporation, or other entity which may be injured or damaged as a result of acts, omissions, or negligence on the part of the Contractor, its employees, or any person acting for or on its or their behalf relating to this Contract. The Contractor further agrees it shall be liable for the reasonable cost of attorneys for the State in the event such service is necessitated to enforce the terms of this Contract or otherwise enforce the obligations of the Contractor to the State.

In the event of any such suit or claim, the Contractor shall give the State immediate notice thereof and shall provide all assistance required by the State in the State's defense. The State shall give the Contractor written notice of any such claim or suit, and the Contractor shall have full right and obligation to conduct the Contractor's own defense thereof. Nothing contained herein shall be deemed to accord to the Contractor, through its attorney(s), the right to represent the State of Tennessee in any legal matter, such rights being governed by *Tennessee Code Annotated*, Section 8-6-106.

IN WITNESS WHEREOF,

Document Storage Systems, Inc.:

*Mark Byers*

CONTRACTORSIGNATURE

September 12, 2014

DATE





ATTACHMENT A

**ATTESTATION RE PERSONNEL USED IN CONTRACT PERFORMANCE**

<b>SUBJECT CONTRACT NUMBER:</b>	
<b>CONTRACTOR LEGAL ENTITY NAME:</b>	Document Storage Systems, Inc.
<b>FEDERAL EMPLOYER IDENTIFICATION NUMBER: (or Social Security Number)</b>	[REDACTED]

The Contractor, identified above, does hereby attest, certify, warrant, and assure that the Contractor shall not knowingly utilize the services of an illegal immigrant in the performance of this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant in the performance of this Contract.

*Mark Byers*

**CONTRACTOR SIGNATURE**

NOTICE: This attestation MUST be signed by an individual empowered to contractually bind the Contractor. If said individual is not the chief executive or president, this document shall attach evidence showing the individual's authority to contractually bind the Contractor.

Mark Byers / President

**PRINTED NAME AND TITLE OF SIGNATORY**

September 12, 2014

**DATE OF ATTESTATION**



## GLOSSARY OF TERMS AND ACRONYMS

Term / Acronym	Aliases	Definition
<b>ADPAC</b>	Automated Data Package Application Coordinator	CAC that specializes in certain [REDACTED] modules, such as Lab or Pharmacy
<b>BCMA</b>	Bar Code Medication Administration	A barcode system within the [REDACTED] system designed to prevent medication errors. The overall goals of BCMA are to improve accuracy, prevent errors, and generate online records of medication administration.
<b>BCCS</b>	Breast & Cervical Cancer Screening Program	A TDH program that provides breast & cervical cancer screening to eligible women and diagnostic follow up tests for those with suspicious results.
<b>Build Book</b>		<p>A document that details the procedures for installing equipment, systems, and/or software. It is developed in partnership with the State's OIR Division.</p> <p>The build book contains information such as: Parts inventory, Hardware assembly and configuration, Pre-installation considerations, Installation procedures, Hardware Installation procedures, Software configuration, System integration procedure.</p>
<b>CAC</b>	Clinical Application Coordinator	A CAC has specialized knowledge of both [REDACTED] and Clinical terms and operations. This allows them to guide, teach and support clinicians, IT experts, and others through design, adoption, tailoring and use of the [REDACTED] system.
<b>CCOW</b>	Clinical Context Object Workgroup	<p>In the context of health informatics, CCOW is an HL7 standard protocol designed to enable disparate applications to synchronize in real-time, and at the user-interface level. It is vendor-independent and allows applications to present information at the desktop and/or portal level in a unified way.</p> <p>Allows for the use of role-based security in [REDACTED]</p>
<b>CODB</b>	Central Office Database	A single central database where Health Department data collected in the 13 different regions is delivered nightly. This collective data is cleaned and utilized for error detecting and state reporting. Maintains patient level/ encounter level data.
<b>CSFP</b>	Commodity Supplemental Food Program	A federal program which works to improve the health of low-income pregnant and breastfeeding women, other new mothers up to one year postpartum, infants, children up to age six, and elderly people at least 60 years of age by supplementing their diets with nutritious USDA foods. Those who are also eligible for WIC must choose to participate in either CSFP or WIC. There are three counties offering the CSFP program in Tennessee.



**ATTACHMENT B –GLOSSARY OF TERMS AND ACRONYMS Continued**

Term / Acronym	Aliases	Definition
<b>CSS</b>	Children’s Special Services Program	A TDH program that provides comprehensive medical care for children with physical disabilities from birth to 21 years of age.
<b>CVX Codes</b>	Vaccine Administered Codes	Codes for vaccines administered that enable a common terminology between the healthcare professional and immunization registries at a local, state, or national level.
<b>ELR</b>	Electronic Lab Reporting	The electronic submission of laboratory results thought to be indicative of a reportable condition, disease, or event, using interoperability standards
<b>EPD&amp;T</b>	Early Periodic Screening, Diagnosis & Treatment Program  EP Program	A TDH program of checkups and health care services for children from birth until age 21 to detect and treat health problems.
<b>HUGS</b>	Helping Us Grow Successfully Program	A targeted case management program that provides home-based intervention services to pregnant and postpartum women, children birth through the age of five years, and their primary caregivers.
<b>ICD-9</b>	International Statistical Classification of Diseases, Ninth Revision	ICD-9 codes are 5-character alphanumeric designations given to every diagnosis, description of symptoms and cause of death. These classifications are developed, monitored and copyrighted by the World Health Organization (WHO).
<b>ICD-10</b>	International Statistical Classification of Diseases, Tenth Revision	ICD-10 codes are 7-character alphanumeric designations given to every diagnosis, description of symptoms and cause of death. ICD-10 must be implemented by all HIPAA “covered entities” by October 1, 2014.
<b>LOINC</b>	Logical Observation Identifiers Names and Codes (LOINC®)	Terminology for describing laboratory tests, measurements, and observations; developed and maintained by the Regenstrief Institute.
<b>Metros</b>	Metro Regions	Tennessee counties whose funding and business models are through the local county government, who then contracts with the state for certain required federal programs. There are 6 Metro Regions: Memphis/Shelby (MSR), Jackson/Madison (JMR), Nashville/Davidson (NDR), Chattanooga/Hamilton (CHR), Knoxville/Knox (KR), and Kingsport – Bristol/Sullivan (SUL).
<b>NDC</b>	National Drug Code	A three-segment number which serves as a universal product identifier for drugs.
<b>NEDSS</b>	National Electronic Disease Surveillance System	A secure online framework that allows healthcare professionals and government agencies to communicate about disease patterns and coordinate national response to outbreaks.
<b>NetTN</b>		Tennessee’s statewide production network

**ATTACHMENT B –GLOSSARY OF TERMS AND ACRONYMS Continued**



Term / Acronym	Aliases	Definition
<b>OIR</b>	Office of Information Resources	A division within the Tennessee Department of Finance and Administration responsible for providing direction, planning, resources, execution and coordination in managing the information systems needs of the State.
<b>Program codes</b>		<p>Services provided by TDH are organized by funding source(s) and type of service offering into ‘programs’, such as the ‘Immunizations program’, ‘TB program’, ‘Breast &amp; Cervical Cancer Screening program’, etc.</p> <p>When coding encounters, the individual services provided are tied to a program code, which is used for allocation of funds for clinics, regions, programs and subprograms.</p>
<b>RBRVS</b>	Resource Based Relative Value System	<p>A schema used to determine how much money medical providers should be paid. It is used by Medicare and many health organizations. RBRVS assigns procedures performed by a provider a relative value, which is adjusted by geographic region. This value is then multiplied by a fixed conversion factor, which changes annually, to determine the amount of payment.</p> <p>TDH uses RBRVS to allocate costs that cannot be directly charged to one or more public health programs.</p>
<b>Rural Regions</b>		<p>The non-Metro (<i>see Metros above</i>) counties are considered ‘rural’ counties for the purpose of TDH management. These counties are staffed by a combination of State and County employees and are grouped together into 7 ‘rural regions’, each overseen by a regional office (staffed by State employees). The 7 rural regions are: Northeast (NER), East (ETR), Southeast (SER), Upper Cumberland (UCR), Mid-Cumberland (MCR), South Central (SCR), and West (WRT).</p>
<b>RVU</b>	Relative Value Unit	A measure of value used in the Medicare reimbursement formula for provider services. ( <i>See RBRVS above</i> )
<b>SME</b>	Subject Matter Expert	A person who is an expert in a particular area or topic. Several teams of SMEs, aligned by public health program, have been identified to participate in requirements validation, user acceptance testing, and other project activities.
<b>SNOMED</b>	Systematized Nomenclature of Medicine	A systematic, computer-processable collection of medical terms. providing codes, terms, synonyms and definitions used in clinical documentation and reporting. It allows a consistent way to index, store, retrieve, and aggregate medical data across specialties and sites of care.
<b>Symphony Study</b>		A study commissioned by TDH in 2006 which outlined the requirements for a replacement and expansion of PTBMIS.
<b>TBSM</b>	Tennessee Business Solutions Methodology	A scalable methodology for information technology projects. TBSM includes both project management and business analysis projects and is consistent with both the Project Management Body of Knowledge (PMBOK) and the Business Analysis Body of Knowledge (BABOK).

**ATTACHMENT B –GLOSSARY OF TERMS AND ACRONYMS Continued**



Term / Acronym	Aliases	Definition
<b>VADS</b>	PHIN VADS Public Health Information Network Vocabulary Access & Distribution System	Provides standard vocabularies to CDC and its Public Health partners. A web-based enterprise vocabulary system for accessing, searching, and distributing vocabularies used in public health and clinical care practice. It promotes the use of standards-based vocabulary to support the exchange of consistent information among Public Health partners.
<b>WIC</b>	Women, Infants & Children Program Special Supplemental Nutrition Program	A federal program designed to provide supplemental food to low-income pregnant, postpartum and breastfeeding women, and infants and children until the age of five. The program provides a combination of nutrition education, supplemental foods, breastfeeding promotion and support, and referrals for health care.



## EPI v1.0 INTEROPERABILITY REQUIREMENTS

---



Tennessee Department of Health

# EPI v1.0 Interoperability Requirements

Final Revision, Tuesday, March 18, 2014



## Contents

**Authorization ..... Error! Bookmark not defined.**

D.9.01.500 - Patient Registration .....3

D.9.01.501 - Patient Registration .....6

D.9.01.502 - Bi-directional Patient Lab Order and Lab Order Results.....9

D.9.01.503 - Encounters - Patient Procedures and Services ..... 12

D.9.01.504 - Encounters ..... 14

D.9.01.505 - Immunizations ..... 16

D.9.01.506 - Immunizations ..... 17

D.9.01.507 - Physical Measures for WIC ..... 18

D.9.01.509 - Physical Measures for WIC ..... 20

D.9.01.510 - Patient Registration ..... 22

D.9.01.511 - Master Patient Index ..... 24

D.9.01.512 - Patient Registration ..... 26

D.9.01.513 - Patient Registration ..... 28

HL7 Messages Common to Interfaces ..... 30

    RDY^Z80..... 30

    ACK^J01 ..... 31

    ACK^Q05..... 31

    ACK^Q17..... 31

    QBP^Q11 ..... 31

    QBP^Q13 ..... 31

    QBP^Q15 ..... 31

    QBP^Q21 ..... 31



QBP^Q22 ..... 31

QBP^Q23 ..... 32

QBP^Q24 ..... 32

QBP^Q25 ..... 32

QCN^J01 ..... 32

QVR^Q17 ..... 32

RDY^K15 ..... 32

RSP^K11 ..... 32

RSP^K22 ..... 32

RSP^K23 ..... 32

RSP^K24 ..... 33

RSP^K25 ..... 33

RTB^K13 ..... 33

UDM^Q05 ..... 33



## D.9.01.500 - Patient Registration

Requirement ID	D.9.01.500	EPI Release:	EPI v1.0
Requirement	The system shall provide an interface from one or more PTBMIS systems to one or more EP [REDACTED] systems. The interface shall provide Health Level Seven compliant messaging to support patient registration.		
Rationale	Patient Registration All patients registered in PTBMIS are automatically registered in EPI Vista.		

INTERNAL

FROM	PTBMIS	HL7 message v2.5.1, Real time, high reliability ADT messaging.
TO	EPI [REDACTED]	
Guidance Documents	1) Trading Partner Agreement, 2) HL7 Messaging Standards.	

Table i - Message Types D.9.01.500

MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
ADT^A03	Discharge and/or end visit	ACK^A03	Response to ADT^A03 discharge and/or end visit
ADT^A04	Register a patient	ACK^A04	Response to ADT^A04 register a patient
ADT^A05	Pre-admit a patient	ACK^A05	Response to ADT^A05 pre-admit a patient
ADT^A08	Update patient information	ACK^A08	Response to ADT^A08 update patient information
ADT^A09	Patient departing - Tracking	ACK^A09	Response to ADT^A09 patient



MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
			departing - Tracking
ADT^A10	Patient arriving - Tracking	ACK^A10	Response to ADT^A10 patient arriving - Tracking
ADT^A11	Cancel admit and/or visit notification	ACK^A11	Response to ADT^A11 cancel admit and/or visit notification
ADT^A13	Cancel discharge and/or end visit	ACK^A13	Response to ADT^A13 cancel discharge and/or end visit
ADT^A24	Link patient information	ACK^A24	Response to ADT^A24 link patient information
ADT^A28	Add person information	ACK^A28	Response to ADT^A28 add person information
ADT^A29	Delete person information	ACK^A29	Response to ADT^A29 delete person information
ADT^A31	Update person information	ACK^A31	Response to ADT^A31 update person information
ADT^A32	Cancel patient arriving - Tracking	ACK^A32	Response to ADT^A32 cancel patient arriving - Tracking
ADT^A33	Cancel patient departing - Tracking	ACK^A33	Response to ADT^A33 cancel patient departing - Tracking
ADT^A37	Unlink patient information	ACK^A37	Response to ADT^A37 unlink patient information
ADT^A38	Cancel pre-admit	ACK^A38	Response to ADT^A38 cancel pre-admit
ADT^A40	Merge patient - Patient identifier list	ACK^A40	Response to ADT^A40 merge patient - Patient identifier list
ADT^A41	Merge account - Patient account number	ACK^A41	Response to ADT^A41 merge account - Patient account number
ADT^A42	Merge visit - Visit number	ACK^A42	Response to ADT^A42 merge visit - Visit Number



MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
ADT^A43	Move patient information - Patient identifier list	ACK^A43	Response to ADT^A43 move patient information - Patient identifier list
ADT^A44	Move account information - Patient account number	ACK^A44	Response to ADT^A44 move account information - Patient account number
ADT^A45	Move visit information - Visit number	ACK^A45	Response to ADT^A45 move visit information - Visit number
ADT^A47	Change patient identifier list	ACK^A47	Response to ADT^A47 change patient identifier list
ADT^A49	Change patient account number	ACK^A49	Response to ADT^A49 change patient account number
ADT^A50	Change visit number	ACK^A50	Response to ADT^A50 change visit number
ADT^A51	Change alternate visit ID	ACK^A51	Response to ADT^A51 change alternate visit ID
ADT^A60	Update allergy information	ACK^A60	Response to ADT^A60 update allergy information
ADT^A61	Change consulting doctor	ACK^A61	Response to ADT^A61 change consulting doctor
ADT^A62	Cancel change consulting doctor	ACK^A62	Response to ADT^A62 cancel change consulting doctor

END: D.9.01.500 (See below: HL7 Messages Common to Interfaces)



## D.9.01.501 - Patient Registration

Requirement ID	D.9.01.501	EPI Release:	EPI v1.0
Requirement	The system shall provide an interface from one or more EPI [REDACTED] systems to one or more PTBMIS systems. The interface shall provide Health Level Seven compliant messaging to support patient registration.		
Rationale	<p>Patient Registration</p> <p>Patients are registered in EP [REDACTED] when it queries PTBMIS. When a patient name is entered in EPI [REDACTED] a query is triggered and sent to PTBMIS requesting demographic information for the patient.</p>		

INTERNAL

FROM	PTBMIS	HL7 message v2.5.1, ADT - Real-time, high reliability query and response messages.
TO	EPI [REDACTED]	
Guidance Documents	1) Trading Partner Agreement, 2) HL7 Messaging Standards.	

Table ii-Message Types D.9.01.501

MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
ACK	Acknowledgment		
ADT^A03	Discharge and/or end visit	ACK^A03	Response to ADT^A03 discharge and/or end visit
ADT^A04	Register a patient	ACK^A04	Response to ADT^A04 register a patient
ADT^A05	Pre-admit a patient	ACK^A05	Response to ADT^A05 pre-admit a patient
ADT^A08	Update patient information	ACK^A08	Response to ADT^A08 update patient



MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
			information
ADT^A09	Patient departing - Tracking	ACK^A09	Response to ADT^A09 patient departing - Tracking
ADT^A10	Patient arriving - Tracking	ACK^A10	Response to ADT^A10 patient arriving - Tracking
ADT^A11	Cancel admit and/or visit notification	ACK^A11	Response to ADT^A11 cancel admit and/or visit notification
ADT^A13	Cancel discharge and/or end visit	ACK^A13	Response to ADT^A13 cancel discharge and/or end visit
ADT^A24	Link patient information	ACK^A24	Response to ADT^A24 link patient information
ADT^A28	Add person information	ACK^A28	Response to ADT^A28 add person information
ADT^A29	Delete person information	ACK^A29	Response to ADT^A29 delete person information
ADT^A31	Update person information	ACK^A31	Response to ADT^A31 update person information
ADT^A32	Cancel patient arriving - Tracking	ACK^A32	Response to ADT^A32 cancel patient arriving - Tracking
ADT^A33	Cancel patient departing - Tracking	ACK^A33	Response to ADT^A33 cancel patient departing - Tracking
ADT^A37	Unlink patient information	ACK^A37	Response to ADT^A37 unlink patient information
ADT^A38	Cancel pre-admit	ACK^A38	Response to ADT^A38 cancel pre-admit
ADT^A40	Merge patient - Patient identifier list	ACK^A40	Response to ADT^A40 merge patient - Patient identifier list
ADT^A41	Merge account - Patient account number	ACK^A41	Response to ADT^A41 merge account - Patient account number
ADT^A42	Merge visit - Visit number	ACK^A42	Response to ADT^A42 merge visit - Visit Number
ADT^A43	Move patient information - Patient identifier list	ACK^A43	Response to ADT^A43 move patient information - Patient identifier list



MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
ADT^A44	Move account information - Patient account number	ACK^A44	Response to ADT^A44 move account information - Patient account number
ADT^A45	Move visit information - Visit number	ACK^A45	Response to ADT^A45 move visit information - Visit number
ADT^A47	Change patient identifier list	ACK^A47	Response to ADT^A47 change patient identifier list
ADT^A49	Change patient account number	ACK^A49	Response to ADT^A49 change patient account number
ADT^A50	Change visit number	ACK^A50	Response to ADT^A50 change visit number
ADT^A51	Change alternate visit ID	ACK^A51	Response to ADT^A51 change alternate visit ID
ADT^A60	Update allergy information	ACK^A60	Response to ADT^A60 update allergy information
ADT^A61	Change consulting doctor	ACK^A61	Response to ADT^A61 change consulting doctor
ADT^A62	Cancel change consulting doctor	ACK^A62	Response to ADT^A62 cancel change consulting doctor

END: D.9.01.501 (See below: HL7 Messages Common to Interfaces)



## D.9.01.502 - Bi-directional Patient Lab Order and Lab Order Results

Requirement ID	D.9.01.502	EPI Release:	EPI v1.0
Requirement	<p>The system shall provide an interface from one or more EPI [REDACTED] systems to one or more Laboratory Information Management Systems (LIMS). The interface shall provide Health Level Seven compliant messaging to support patient lab order requests and lab order results.</p>		
Rationale	<p>Bi-directional Patient Lab Order and Lab Order Results</p> <p>EPI [REDACTED] will accept HL7 lab result messages from one or more LIMS. EP [REDACTED] will send lab order messages to one or more LIMS. The messages will convey the appropriate information required to initiate a LIMS order and in return to update a patient's lab results in EP [REDACTED] and in PTBMIS. Regardless of an order's origin, upon return to the Department of Health results messages will be duplicated. When receiving lab results, the messages will be sent to both the EPI [REDACTED] patient record and to the PTBMIS patient record.</p>		

EXTERNAL

FROM	EPI VistA, LIMS	HL7 message v2.5.1, real time, high reliability ORU/ORL, ORU
TO	LIMS, EPI VistA	
Guidance Documents	<p>1) Trading Partner Agreement, 2) Implementation Guides: HL7 Version 2.5.1 Implementation Guide: S&amp;I Framework Lab Results Interface, Release 1-US Realm</p>	



HL7 Version 2.5.1 Implementation Guide: S&I Framework Laboratory Orders from EHR, Release 1 - US Realm
---

Table iii-Message Types D.9.01.502

MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
QSX^J02	Cancel subscription and/or acknowledge message	ACK^J02	Response to QSX^J02 cancel subscription
QSB^Q16	Create subscription	ACK^Q16	Response to QSB^Q16 create subscription
ORU^R01	Unsolicited transmission of an observation message	ACK^R01	Response to ORU^R01 unsolicited observation message
OUL^R21	Unsolicited laboratory observation		
OUL^R22	Unsolicited Specimen oriented observation message	ACK^R22	Response to OUL^R22 unsolicited Specimen oriented observation message
OUL^R23	Unsolicited specimen container oriented observation message	ACK^R23	Response to OUL^R23 unsolicited specimen container oriented observation message
OUL^R24	Unsolicited order oriented observation message	ACK^R24	Response to OUL^R24 unsolicited order oriented observation message
ORU^R30	Unsolicited point-of-care observation message without existing order	ACK^R30	Response to ORU^R30 unsolicited point-of-care observation message without existing order
ORU^R31	Unsolicited new point-of-care observation message - Search for an order	ACK^R31	Response to ORU^R31 unsolicited new point-of-care observation message - Search for an order
ORU^R32	Unsolicited pre-ordered point-of-care observation	ACK^R32	Response to ORU^R32 unsolicited pre-ordered point-of-care observation
OML^O21	Laboratory order	ORL^O22	Response to any OML, general laboratory order
OML^O33	Laboratory order for multiple orders related to a single specimen	ORL^O34	Response to OML^O33 laboratory order message to a multiple order related to single specimen
OML^O35	Laboratory order for multiple orders related to a single container of a	ORL^O36	Response to OML^O35 laboratory order message to a single container of a



MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
	specimen		specimen OML
RQC^I05	Request for patient clinical information - Response is RCI^I05	RCI^I05	Return clinical information
RQC^I06	Request and/or receipt of clinical data listing - Response is RCL^I06	RCL^I06	Response to request and/or receipt of clinical data listing query
REF^I12	Patient referral - Response is RRI^I12	RRI^I12	Response to REF^I12 patient referral
REF^I13	Modify patient referral - Response is RRI^I13	RRI^I13	Response to REF^I13 modify patient referral
REF^I14	Cancel patient referral - Response is RRI^I14	RRI^I14	Response to REF^I14 cancel patient referral
REF^I15	Request patient referral status RRI^I15	RRI^I15	Response to REF^I15 request patient referral status

END: D.9.01.502 (See below: HL7 Messages Common to Interfaces)



## D.9.01.503 - Encounters - Patient Procedures and Services

Requirement ID	D.9.01.503	EPI Release:	EPI v1.0
Requirement	The system shall provide an interface from one or more PTBMIS systems to one or more EP [REDACTED] systems. The interface shall provide Health Level Seven compliant messaging to support patient clinical encounter procedures and services.		
Rationale	<p>Encounters - Patient Procedures and Services</p> <p>When encounters are created in PTBMIS, HL7 messages are triggered and sent to EPI [REDACTED]. The messages convey patient encounter information to EPI [REDACTED]. (The messages are related to scenarios where encounters are created in PTBMIS then are subsequently updated by adding clinical encounter information in EPI [REDACTED].)</p>		

INTERNAL

FROM	PTBMIS	HL7 message v3.0, real time, average reliability.
TO	EP [REDACTED]	
Guidance Documents	<p>1) Trading Partner Agreement, 2) HL7 Version 3 Standard: Patient Administration (<i>a.k.a ADT - Admit, Discharge, and Transfer; Encounter Management; Administrative Registries</i>)</p> <p>NOTE: The messages in Table iv-Message Types D.9.01.503 are placeholders and refer to HL7 2.5.1 messages. The Department of Health does intend to use HL7 version 3.0 when the ANSI standards are published.</p>	

Table iv-Message Types D.9.01.503

MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
OMG^O19	General clinical order	ORG^O20	Response to OMG^O19 general clinical order



MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
RQC^I05	Request for patient clinical information - Response is RCI^I05	RCI^I05	Return clinical information
RQC^I06	Request and/or receipt of clinical data listing - Response is RCL^I06	RCL^I06	Response to request and/or receipt of clinical data listing query
REF^I12	Patient referral - Response is RRI^I12	RRI^I12	Response to REF^I12 patient referral
REF^I13	Modify patient referral - Response is RRI^I13	RRI^I13	Response to REF^I13 modify patient referral
REF^I14	Cancel patient referral - Response is RRI^I14	RRI^I14	Response to REF^I14 cancel patient referral
REF^I15	Request patient referral status RRI^I15	RRI^I15	Response to REF^I15 request patient referral status

END: D.9.01.503 (See below: HL7 Messages Common to Interfaces)



## D.9.01.504 - Encounters

Requirement ID	D.9.01.504	EPI Release:	EPI v1.0
Requirement	The system shall provide an interface from one or more EPI [REDACTED] systems to one or more PTBMIS systems. The interface shall provide Health Level Seven compliant messaging to support patient clinical encounter procedures and services.		
Rationale	<p>Encounters</p> <p>When patient encounter information is updated in EPI [REDACTED] HL7 messages are triggered and sent to PTBMIS. The messages convey patient encounter information. (The messages are related to scenarios where encounters are created in PTBMIS then are subsequently updated by adding clinical encounter information in EPI [REDACTED])</p>		

INTERNAL

FROM	EPI [REDACTED]	HL7 message v2.5.1, real time, average reliability possibly v3, v2 as a backup plan.
TO	PTBMIS	
Guidance Documents	<p>1) Trading Partner Agreement, 2) HL7 Version 3 Standard: Patient Administration (<i>a.k.a. ADT - Admit, Discharge, and Transfer; Encounter Management; Administrative Registries</i>)</p> <p>NOTE: The messages in Table v-Message Types D.9.01.504 are placeholders and refer to HL7 2.5.1 messages. The Department of Health does intend to use HL7 version 3.0 when the ANSI standards are published.</p>	

Table v-Message Types D.9.01.504

MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
OMG^O19	General clinical order	ORG^O20	Response to OMG^O19 general clinical order



RQC^I05	Request for patient clinical information - Response is RCI^I05	RCI^I05	Return clinical information
RQC^I06	Request and/or receipt of clinical data listing - Response is RCL^I06	RCL^I06	Response to request and/or receipt of clinical data listing query
REF^I12	Patient referral - Response is RRI^I12	RRI^I12	Response to REF^I12 patient referral
REF^I13	Modify patient referral - Response is RRI^I13	RRI^I13	Response to REF^I13 modify patient referral
REF^I14	Cancel patient referral - Response is RRI^I14	RRI^I14	Response to REF^I14 cancel patient referral
REF^I15	Request patient referral status RRI^I15	RRI^I15	Response to REF^I15 request patient referral status

END: D.9.01.504 (See below: HL7 Messages Common to Interfaces)



## D.9.01.505 - Immunizations

Requirement ID	D.9.01.505	EPI Release:	EPI v1.0
Requirement	The system shall provide an interface from one or more EPI [REDACTED] systems to the State Immunization Information System (SIIS). The interface shall provide Health Level Seven compliant messaging to support patient immunization records.		
Rationale	<p>Immunizations</p> <p>When patient immunization information is entered in EPI [REDACTED] HL7 messages are triggered and sent to the SIIS. The messages convey patient demographic and immunization information. Update only - Immunizations recorded in an EPI [REDACTED] health record are sent to the SIIS.</p>		

INTERNAL - EXTERNAL

FROM	SIIS	HL7 message v2.5.1, real time, average reliability, VXU message.
TO	EPI [REDACTED]	
Guidance Documents	1)Trading Partner Agreement with SIIS provider, 2) CDC Implementation Guide, 3) HL7 Messaging Standards.	

Table vi-Message Types D.9.01.505

MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
VXU^V04	Unsolicited vaccination record update	ACK^V04	Response to VXU^V04 unsolicited vaccination record update

END: D.9.01.505 (See below: HL7 Messages Common to Interfaces)



## D.9.01.506 - Immunizations

Requirement ID	D.9.01.506	EPI Release:	EPI v1.0
Requirement	The system shall provide an interface from the State Immunization Information System (SIIS) to one or more EPI [REDACTED] systems. The interface shall provide Health Level Seven compliant messaging to support responses to patient immunization queries.		
Rationale	<p>Immunizations</p> <p>EPI [REDACTED] will accept HL7 query responses from the SIIS. The messages convey information required to update a patient immunization in EPI [REDACTED].</p>		

INTERNAL - EXTERNAL

FROM	SIIS	HL7 message v2.5.1, real time, high reliability query and response messages and VXU messages.
TO	EPI [REDACTED]	
Guidance Documents	1)Trading Partner Agreement with SIIS provider, 2) CDC	

Table vii-Message Types D.9.01.506

MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
VXU^V04	Unsolicited vaccination record update	ACK^V04	Response to VXU^V04 unsolicited vaccination record update

END: D.9.01.506 (See below: HL7 Messages Common to Interfaces)



## D.9.01.507 - Physical Measures for WIC

Requirement ID	D.9.01.507	EPI Release:	EPI v1.0
Requirement	The system shall provide an interface from one or more EPI [REDACTED] systems to one or more WIC systems. The interface shall provide Health Level Seven compliant messaging to support WIC physical measures.		
Rationale	Physical Measures for WIC When physical measures for a WIC patient are entered into EPI [REDACTED] messages that convey the appropriate information required to update a WIC patient are triggered and sent to the WIC system.		

INTERNAL - EXTERNAL

FROM	EPI [REDACTED]	HL7 message v2.5.1, real time, high reliability 1) Query and Response, 2) ORU General Observation message.
TO	WIC	
Guidance Documents	1) Trading Partner Agreement, 2) HL7 Version 2.5.1 Implementation Guide: Height and Weight Report, Release 1 (US Realm) [HL7 Version 2.5.1: ORU^R01].	

Table viii-Message Types D.9.01.507

MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
ORU^R01	Unsolicited transmission of an observation message	ACK^R01	Response to ORU^R01 unsolicited observation message
REF^I12	Patient referral - Response is RRI^I12	RRI^I12	Response to REF^I12 patient referral
REF^I13	Modify patient referral - Response is RRI^I13	RRI^I13	Response to REF^I13 modify patient referral
REF^I14	Cancel patient referral - Response is RRI^I14	RRI^I14	Response to REF^I14 cancel patient referral



REF^I15	Request patient referral status RRI^I15	RRI^I15	Response to REF^I15 request patient referral status
---------	---	---------	---

END: D.9.01.507 (See below: HL7 Messages Common to Interfaces)



## D.9.01.509 - Physical Measures for WIC

Requirement ID	D.9.01.509	EPI Release:	EPI v1.0
Requirement	The system shall provide an interface from one or more WIC systems to one or more EPI [REDACTED] systems. The interface shall provide Health Level Seven compliant messaging to support WIC physical measures.		
Rationale	Physical Measures for WIC EPI [REDACTED] will accept HL7 messages containing queries for WIC physical measures. The messages convey the appropriate information required to request physical measures for a WIC patient in EPI [REDACTED]		

INTERNAL - EXTERNAL

FROM	WIC	HL7 message v2.5.1, real time, high reliability 1) Query and Response, 2) ORU General Observation message.
TO	EPI [REDACTED]	
Guidance Documents	1) Trading Partner Agreement, 2) HL7 Version 2.5.1 Implementation Guide: Height and Weight Report, Release 1 (US Realm) [HL7 Version 2.5.1: ORU^R01].	

Table ix-Message Types D.9.01.509

MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
ORU^R30	Unsolicited point-of-care observation message without existing order	ACK^R30	Response to ORU^R30 unsolicited point-of-care observation message without existing order
ORU^R31	Unsolicited new point-of-care observation message - Search for an order	ACK^R31	Response to ORU^R31 unsolicited new point-of-care observation message - Search for an order
ORU^R32	Unsolicited pre-ordered point-of-care	ACK^R32	Response to ORU^R32 unsolicited



	observation		pre-ordered point-of-care observation
QRY^R02	Query for results of observation		
REF^I12	Patient referral - Response is RRI^I12	RRI^I12	Response to REF^I12 patient referral
REF^I13	Modify patient referral - Response is RRI^I13	RRI^I13	Response to REF^I13 modify patient referral
REF^I14	Cancel patient referral - Response is RRI^I14	RRI^I14	Response to REF^I14 cancel patient referral
REF^I15	Request patient referral status RRI^I15	RRI^I15	Response to REF^I15 request patient referral status

END: D.9.01.509 (See below: HL7 Messages Common to Interfaces)



## D.9.01.510 - Patient Registration

Requirement ID	D.9.01.510	EPI Release:	EPI v1.0
Requirement	The system shall provide an interface from one or more EPI [REDACTED] systems to the Master Patient Index (MPI). The interface shall provide Health Level Seven compliant messaging to support patient demographics and identification.		
Rationale	<p>Patient Registration</p> <p>The interface will serve to maintain information related to a master patient index and patient health records. When patient registration information is saved in EPI [REDACTED] HL7 messages are triggered and sent to the MPI. The messages convey patient demographic data. This is required for all registrations and encounters.</p>		

INTERNAL

FROM	PTBMIS	HL7 message v2.5.1, real time, average reliability, ADT
TO	Master Patient Index	
Guidance Documents	1) Trading Partner Agreement with MPI provider, 2) HL7 Messaging Standards	

Table x-Message Types D.9.01.510

MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
ADT^A28	Add person information	ACK^A28	Response to ADT^A28 add person information
ADT^A31	Update person information	ACK^A31	Response to ADT^A31 update person information



ADT^A40	Merge patient - Patient identifier list	ACK^A40	Response to ADT^A40 merge patient - Patient identifier list
ADT^A41	Merge account - Patient account number	ACK^A41	Response to ADT^A41 merge account - Patient account number
ADT^A43	Move patient information - Patient identifier list	ACK^A43	Response to ADT^A43 move patient information - Patient identifier list
ADT^A44	Move account information - Patient account number	ACK^A44	Response to ADT^A44 move account information - Patient account number
ADT^A45	Move visit information - Visit number	ACK^A45	Response to ADT^A45 move visit information - Visit number
ADT^A47	Change patient identifier list	ACK^A47	Response to ADT^A47 change patient identifier list
ADT^A49	Change patient account number	ACK^A49	Response to ADT^A49 change patient account number

END: D.9.01.510 (See below: HL7 Messages Common to Interfaces)



## D.9.01.511 - Master Patient Index

Requirement ID	D.9.01.511	EPI Release:	EPI v1.0
Requirement	The system shall provide an interface from one or more PTBMIS systems to a Master Patient Index (MPI). The interface shall provide Health Level Seven compliant messaging to support patient demographics and identification.		
Rationale	<p>Master Patient Index</p> <p>When patient registration information is saved in PTBMIS, HL7 messages are triggered and sent to the MPI. The messages convey patient demographic data. This is required for all registrations and encounters.</p>		

### INTERNAL - EXTERNAL

FROM	PTBMIS	HL7 message v2.5.1, real time, average reliability.
TO	Master Patient Index	
Guidance Documents	1) Trading Partner Agreement with MPI provider, 2) HL7 Messaging Standards	

Table xi-Message Types D.9.01.511

MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
ADT^A28	Add person information	ACK^A28	Response to ADT^A28 add person information
ADT^A31	Update person information	ACK^A31	Response to ADT^A31 update person information
ADT^A40	Merge patient - Patient identifier list	ACK^A40	Response to ADT^A40 merge patient -



			Patient identifier list
ADT^A41	Merge account - Patient account number	ACK^A41	Response to ADT^A41 merge account - Patient account number
ADT^A43	Move patient information - Patient identifier list	ACK^A43	Response to ADT^A43 move patient information - Patient identifier list
ADT^A44	Move account information - Patient account number	ACK^A44	Response to ADT^A44 move account information - Patient account number
ADT^A45	Move visit information - Visit number	ACK^A45	Response to ADT^A45 move visit information - Visit number
ADT^A47	Change patient identifier list	ACK^A47	Response to ADT^A47 change patient identifier list
ADT^A49	Change patient account number	ACK^A49	Response to ADT^A49 change patient account number

END: D.9.01.511 (See below: HL7 Messages Common to Interfaces)



## D.9.01.512 - Patient Registration

Requirement ID	D.9.01.512	EPI Release:	EPI v1.0
Requirement	The system shall provide an interface from the Master Patient Index (MPI) to one or more PTBMIS systems. The interface shall provide Health Level Seven compliant messaging to support a Master Patient Index and patient demographics.		
Rationale	<p>Master Patient Index</p> <p>When the MPI receives a query from PTBMIS, a response with the requested patient demographic information is sent to PTBMIS.</p>		

INTERNAL - EXTERNAL

FROM	Master Patient Index	HL7 message v2.5.1, real time, average reliability.
TO	PTBMIS	
Guidance Documents	1) Trading Partner Agreement with MPI provider, 2) HL7 Messaging Standards	

Table xii-Message Types D.9.01.512

MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
ADT^A28	Add person information	ACK^A28	Response to ADT^A28 add person information
ADT^A31	Update person information	ACK^A31	Response to ADT^A31 update person information
ADT^A40	Merge patient - Patient identifier list	ACK^A40	Response to ADT^A40 merge patient - Patient identifier list



ADT^A41	Merge account - Patient account number	ACK^A41	Response to ADT^A41 merge account - Patient account number
ADT^A43	Move patient information - Patient identifier list	ACK^A43	Response to ADT^A43 move patient information - Patient identifier list
ADT^A44	Move account information - Patient account number	ACK^A44	Response to ADT^A44 move account information - Patient account number
ADT^A45	Move visit information - Visit number	ACK^A45	Response to ADT^A45 move visit information - Visit number
ADT^A47	Change patient identifier list	ACK^A47	Response to ADT^A47 change patient identifier list
ADT^A49	Change patient account number	ACK^A49	Response to ADT^A49 change patient account number

END: D.9.01.512 (See below: HL7 Messages Common to Interfaces)



## D.9.01.513 - Patient Registration

Requirement ID	D.9.01.513	EPI Release:	EPI v1.0
Requirement	The system shall provide an interface from the Master Patient Index (MPI) to one or more EPI [REDACTED] A systems. The interface shall provide Health Level Seven compliant messaging to support patient demographics.		
Rationale	<p>Master Patient Index</p> <p>When patient registration data is entered in EPI [REDACTED] HL7 messages are triggered and sent to the MPI. The messages convey patient demographic data.</p>		

INTERNAL - EXTERNAL

FROM	Master Patient Index	HL7 message v2.5.1, real time, average reliability.
TO	EPI [REDACTED]	
Guidance Documents	1) Trading Partner Agreement with MPI provider, 2) HL7 Messaging Standards	

Table xiii-Message Types D.9.01.513

MESSAGE TYPE	MESSAGE DESCRIPTION	MESSAGE TYPE	MESSAGE DESCRIPTION
ADT^A28	Add person information	ACK^A28	Response to ADT^A28 add person information
ADT^A31	Update person information	ACK^A31	Response to ADT^A31 update person information
ADT^A40	Merge patient - Patient identifier list	ACK^A40	Response to ADT^A40 merge patient - Patient identifier list
ADT^A41	Merge account - Patient account number	ACK^A41	Response to ADT^A41 merge account - Patient account number



ADT^A43	Move patient information - Patient identifier list	ACK^A43	Response to ADT^A43 move patient information - Patient identifier list
ADT^A44	Move account information - Patient account number	ACK^A44	Response to ADT^A44 move account information - Patient account number
ADT^A45	Move visit information - Visit number	ACK^A45	Response to ADT^A45 move visit information - Visit number
ADT^A47	Change patient identifier list	ACK^A47	Response to ADT^A47 change patient identifier list
ADT^A49	Change patient account number	ACK^A49	Response to ADT^A49 change patient account number

END: D.9.01.513 (See below: HL7 Messages Common to Interfaces)



## HL7 Messages Common to Interfaces

### RDY^Z80

RDY^Z80	Response to dispense information query	
Message Required by Interface	From	To
D.9.01.506	Immunization Registry	EPI [REDACTED]

The interfaces listed in this table will have the succeeding list of messages in common.

Message Required by Interface	From	To
D.9.01.500	PTBMIS	EPI [REDACTED]
D.9.01.501	PTBMIS	EPI [REDACTED]
D.9.01.502	EPI [REDACTED] LIMS	LIMS, EPI [REDACTED]
D.9.01.503	PTBMIS	EPI [REDACTED]
D.9.01.504	EPI [REDACTED]	PTBMIS
D.9.01.505	EPI [REDACTED]	Immunization Registry
D.9.01.506	Immunization Registry	EPI [REDACTED]
D.9.01.507	EPI [REDACTED]	WIC
D.9.01.509	WIC	EPI [REDACTED]
D.9.01.510	EPI [REDACTED]	Master Patient Index
D.9.01.511	PTBMIS	Master Patient Index



D.9.01.512	Master Patient Index	PTBMIS
D.9.01.513	Master Patient Index	EP [REDACTED]

### ACK^J01

ACK^J01	Response to QCN^J01 cancel general query
---------	--

### ACK^Q05

ACK^Q05	Response to UDM^Q05 unsolicited display message (this is a "query-like" message segment)
---------	--

### ACK^Q17

ACK^Q17	Response to QVR^Q17 query for previous events
---------	---

### QBP^Q11

QBP^Q11	Query by parameter and/or segment requesting an RSP^K11 segment pattern response (events vary)
---------	--

### QBP^Q13

QBP^Q13	Query by parameter requesting an RTB^K13 tabular response (events vary)
---------	---

### QBP^Q15

QBP^Q15	Query by parameter and/or display requesting display - Response is RDY^K15 (events vary)
---------	---

### QBP^Q21

QBP^Q21	Get person demographics (MPI) query by parameter and/or segment response is RSP^K21
---------	---

### QBP^Q22

QBP^Q22	Find candidates (MPI) query by parameter and/or segment
---------	---



	response is RSP^K22
--	---------------------

### QBP^Q23

QBP^Q23	Get corresponding identifiers (MPI) query by parameter and/or segment response is RSP^K23
---------	---

### QBP^Q24

QBP^Q24	Allocate identifiers (MPI) query by parameters segment - Response is RSP^K24
---------	--

### QBP^Q25

QBP^Q25	All Query personnel information for a personnel information response message
---------	--

### QCN^J01

QCN^J01	Cancel query with response acknowledgement ACK^J01
---------	--

### QVR^Q17

QVR^Q17	Query for previous events with response as general acknowledgement ACK^Q17
---------	--

### RDY^K15

RDY^K15	Response to Display QBP^Q15
---------	-----------------------------

### RSP^K11

RSP^K11	Response to QBP^Q11 segment pattern response
---------	--

### RSP^K22

RSP^K22	Response to QBP^Q22 find candidates (MPI) by parameter and/or segment query
---------	---

### RSP^K23

RSP^K23	Response to QBP^Q23 get corresponding identifiers (MPI) by
---------	--



	parameter and/or segment query
--	--------------------------------

### RSP^K24

RSP^K24	Response to QBP^Q24 allocate identifiers (MPI) by parameter and/or segment query
---------	--

### RSP^K25

RSP^K25	Response to QBP^Q25 personnel information by Segment
---------	--

### RTB^K13

RTB^K13	Response to QBP^Q13 tabular response
---------	--------------------------------------

### UDM^Q05

UDM^Q05	Unsolicited display message (this is a "query-like" segment) response is ACK^Q05
---------	--



## SECURITY REQUIREMENTS

Requirement ID	Requirement Description
BH.152	The system shall provide the ability to capture the signature from individuals without system access rights.
SC.02.01	The system shall allow an authorized administrator to set the inclusion or exclusion of auditable events in SC 02.03 based on organizational policy & operating.
SC.02.02	The system shall support logging to a common audit engine using the schema and transports specified in the Audit Log specification of IHE Audit Trails and Node Authentication (ATNA) Profile.
SC.02.04 <i>(this is duplicated in CCHIT Requirement(SC.02.05))</i>	The system shall provide authorized administrators with the capability to read all audit information from the audit records in one of the following two ways: 1) The system shall provide the audit records in a manner suitable for the user to interpret the information. The system shall provide the capability to generate reports based on ranges of system date and time that audit records were collected. 2) The system shall be able to export logs into text format in such a manner as to allow correlation based on time (e.g. UTC Synchronization).
SC.02.06	The system shall be able to support time synchronization using NTP/SNTP, and use this synchronized time in all security records of time.
SC.02.07	The system shall have the ability to format for export recorded time stamps using UTC based on ISO 8601. Example: "1994-11-05T13:15:30-05:00" corresponds to November 5, 1994, 8:15:30 am, US Eastern Standard Time.
SC.02.08	The system shall prohibit all users read access to the audit records, except those users that have been granted explicit read-access. The system shall protect the stored audit records from unauthorized deletion. The system shall prevent modifications to the audit records.
SC.03.01	The system shall authenticate the user before any access to Protected Resources (e.g. PHI) is allowed, including when not connected to a network (e.g. mobile devices).
SC.03.02	When passwords are used, the system shall support password strength rules that allow for minimum number of characters, and inclusion of alpha-numeric complexity.
SC.03.03	The system upon detection of inactivity of an interactive session shall prevent further viewing and access to the system by that session by terminating the session, or by initiating a session lock that remains in effect until the user reestablishes access using appropriate identification and authentication procedures. The inactivity timeout shall be configurable.
SC.03.04	The system shall enforce a limit of (configurable) consecutive invalid access attempts by a user. The system shall protect against further, possibly malicious, user authentication attempts using an appropriate mechanism (e.g. locks the account/node until released by an administrator, locks the account/node for a configurable time period, or delays the next login prompt according to a configurable delay algorithm).
SC.03.05	When passwords are used, the system shall provide an administrative function that resets passwords.
SC.03.06	When passwords are used, user accounts that have been reset by an administrator shall require the user to change the password at next successful logon.
SC.03.07	The system shall provide only limited feedback information to the user during the authentication.
SC.03.08	The system shall support case-insensitive usernames that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII).

**ATTACHMENT D – SECURITY REQUIREMENTS Continued**



Requirement ID	Requirement Description
SC.03.09	When passwords are used, the system shall allow an authenticated user to change their password consistent with password strength rules (SC 03.02).
SC.03.10	When passwords are used, the system shall support case-sensitive passwords that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII).
SC.03.11	When passwords are used, the system shall use either standards-based encryption, e.g., 3DES, AES, or standards-based hashing, e.g., SHA1 to store or transport passwords.
SC.03.12	When passwords are used, the system shall prevent the reuse of passwords previously used within a specific (configurable) timeframe (i.e., within the last X days, etc. - e.g. "last 180 days"), or shall prevent the reuse of a certain (configurable) number of the most recently used passwords (e.g. "last 5 passwords").
SC.03.13	The system shall support two-factor authentication in alignment with NIST 800-63 Level 3 Authentication. Note: This is to support the 21 CFR Parts 1300, 1304, et al. Electronic Prescriptions for Controlled Substances; Proposed Rule published on Friday, June 27, 2008, Federal Register / Vol. 73, No. 125.F11.
SC.04.01	The system shall include documentation that describes the patch (hot-fix) handling process the vendor will use for EHR, operating system and underlying tools (e.g. a specific web site for notification of new patches, an approved patch list, special instructions for installation, and post-installation test).
SC.04.02	The system shall include documentation that explains system error or performance messages to users and administrators, with the actions required.
SC.04.03	The system shall include documentation of product capacities (e.g. number of users, number of transactions per second, number of records, network load, etc.) and the baseline representative configurations assumed for these capacities (e.g. number or type of processors, server/workstation configuration and network capacity, etc).
SC.04.04	The system shall include documented procedures for product installation, start-up and/or connection.
SC.04.05	The system shall include documentation of the minimal privileges necessary for each service and protocol necessary to provide EHR functionality and/or serviceability.
SC.04.06	The system shall include documentation available to the customer stating whether or not there are known issues or conflicts with security services in at least the following service areas: antivirus, intrusion detection, malware eradication, host-based firewall and the resolution of that conflict (e.g. most systems should note that full virus scanning should be done outside of peak usage times and should exclude the databases.).
SC.04.07	If the system includes hardware, the system shall include documentation that covers the expected physical environment necessary for proper secure and reliable operation of the system including: electrical, HVAC, sterilization, and work area.
SC.04.08	The system shall include documentation that itemizes the services (e.g. PHP, web services) and network protocols/ports (e.g. HL-7, HTTP, FTP) that are necessary for proper operation and servicing of the system, including justification of the need for that service and protocol. This information may be used by the healthcare facility to properly configure their network defenses (firewalls and routers).
SC.04.09	The system shall include documentation that describes the steps needed to confirm that the system installation was properly completed and that the system is operational.
SC.04.10	The system shall include documentation available to the customer that provides guidelines for configuration and use of the security controls necessary to support secure and reliable operation of the system, including but not limited to: creation, modification, and deactivation of user accounts, management of roles, reset of passwords, configuration of password constraints, and audit logs.

## ATTACHMENT D – SECURITY REQUIREMENTS Continued



Requirement ID	Requirement Description
SC.05.01	The software used to install and update the system, independent of the mode or method of conveyance, shall be certified free of malevolent software (“malware”). Vendor may self-certify compliance with this standard through procedures that make use of commercial malware scanning software.
SC.05.02	The system shall be configurable to prevent corruption or loss of data already accepted into the system in the event of a system failure (e.g. integrating with a UPS, etc.).
SC.06.01	The system shall support protection of confidentiality of all Protected Health Information (PHI) delivered over the Internet or other known open networks via encryption using triple-DES (3DES) or the Advanced Encryption Standard (AES) and an open protocol such as TLS, SSL, IPSec, XML encryptions, or S/MIME or their successors.
SC.06.02	When passwords are used, the system shall not display passwords while being entered.
SC.06.03	For systems that provide access to PHI through a web browser interface (i.e. HTML over HTTP) shall include the capability to encrypt the data communicated over the network via SSL (HTML over HTTPS). Note: Web browser interfaces are often used beyond the perimeter of the protected enterprise network
SC.06.04	The system shall support protection of integrity of all Protected Health Information (PHI) delivered over the Internet or other known open networks via SHA1 hashing and an open protocol such as TLS, SSL, IPSec, XML digital signature, or S/MIME or their successors.
SC.06.05	The system shall support ensuring the authenticity of remote nodes (mutual node authentication) when communicating Protected Health Information (PHI) over the Internet or other known open networks using an open protocol (e.g. TLS, SSL, IPSec, XML sig, S/MIME).
SC.06.06	The system, when storing PHI on any device intended to be portable/removable (e.g. thumb-drives, CD-ROM, PDA, Notebook), shall support use of a standards based encrypted format using triple-DES (3DES), or the Advanced Encryption Standard (AES), or their successors.
SC.06.07	The system, prior to access to any PHI, shall display a configurable warning or login banner (e.g. "The system should only be accessed by authorized users"). In the event that a system does not support pre-login capabilities, the system shall display the banner immediately following authorization.
SC.07.01	The system shall be able to communicate identity information across domains and web services using standards based user authentication and access control.
SC.07.02	When the system uses HITSP TP13 (IHE XDS) as a Document Consumer, the system shall be able to use the TP13 “Document Integrity” option. This may be a configurable parameter or may be enabled at all times.
SC.08.01	The system shall be able to generate a backup copy of the application data, security credentials, and log/audit files.
SC.08.02	The system restore functionality shall result in a fully operational and secure state. This state shall include the restoration of the application data, security credentials, and log/audit files to their previous state.
SC.08.03	If the system claims to be available 24x7 then the system shall have ability to run a backup concurrently with the operation of the application.



## **BUSINESS ASSOCIATE AGREEMENT AND SERVICE LEVEL AGREEMENT**

THIS BUSINESS ASSOCIATE AGREEMENT (hereinafter agreement) is between Tennessee Department of Health (hereinafter Covered Entity) and **Document Storage System, Inc. AND CONTRACT #** (hereinafter Business Associate). Covered Entity and Business Associate may be referred to herein individually as "Party" or collectively as "Parties."

### **BACKGROUND**

Covered Entity acknowledges that it is subject to the Privacy Rule (45 C.F.R. Parts 160 and 164) promulgated by the United States Department of Health and Human Services pursuant to the Health Insurance Portability and Accountability Act of 1996 (HIPAA), Public Law 104-191.

**Business Associate acknowledges that effective February 17, 2010, the American Recovery and Reinvestment Act of 2009 (Pub. L. 111-5), pursuant to Title XIII of Division A and Title IV of Division B, entitled the "Health Information Technology for Economic and Clinical Health" (HITECH) Act, which modifies the HIPAA Privacy and Security Rules, subjects and obligates the Business Associate to protect patient health information to the same extent and manner as the Covered Entity under the Privacy Rule (45 C.F.R. Parts 160 and 164) promulgated by the United States Department of Health and Human Services pursuant to the Health Insurance Portability and Accountability Act of 1996 (HIPAA), Public Law 104-191. 45 C.F.R. §§ 164.308, 164.310, 164.312, and 164.316 shall apply to a business associate of a covered entity in the same manner that these sections apply to the covered entity.**

In the course of executing Service Contracts, Business Associate may come into contact with, use, or disclose Protected Health Information (PHI) (defined in Section 1.7 below). Said Service Contracts are hereby incorporated by reference and shall be taken and considered as a part of this document the same as if fully set out herein. In accordance with the federal privacy regulations set forth at 45 C.F.R. Part 160 and Part 164, Subparts A and E, which require Covered Entity to have a written contract with each of its Business Associates, the Parties wish to establish satisfactory assurances that Business Associate will appropriately safeguard PHI and, therefore, execute this Agreement.

### **1. DEFINITIONS**

1.1. Terms used, but not otherwise defined, in this Agreement shall have the same meaning as those terms in 45 C.F.R. §§ 160.103, 164.304, 164.501 and 164.504.

1.2. "Breach" shall mean the unauthorized acquisition, access, use, or disclosure of protected health information which compromises the security or privacy of the protected health information except where an unauthorized person to whom such information is disclosed would not reasonably have been able to retain such information. 42 U.S.C.A. § 17921.

1.3. "Breach of the security system" under T.C.A. § 47-18-2107 means unauthorized acquisition of unencrypted computerized data that materially compromises the security of confidentiality or integrity of personal information maintained by the information holder.

1.4. "Designated Record Set" shall have the meaning set out in its definition at 45 C.F.R. § 164.501.

1.5. "Electronic Health Record" shall have the same meaning as set forth in the HITECH Act, "Electronic Protected Health Information" shall have the same meaning as set forth in 45 C.F.R. § 160.103, limited to the information that the Business Associate creates, receives, maintains, or transmits for or on behalf of the Covered Entity.

**ATTACHMENT E - BUSINESS ASSOCIATE AGREEMENT AND SERVICE LEVEL AGREEMENT  
(cont)**

---



1.6. "Health Care Operations" shall have the meaning set out in its definition at 45 C.F.R. § 164.501.

1.7. "Individual" shall have the same meaning as the term "individual" in 45 C.F.R. § 164.501 and shall include a person who qualifies as a personal representative in accordance with 45 C.F.R. § 164.502(g).

1.8. "Information Holder" means any person or business that conducts business in this state, or any agency of the state of Tennessee or any of the political subdivisions, that owns or stores computerized data that includes personal information. T.C.A. § 47-18-2107(a)(2).

1.9. "Personal Information" means an individual's first name or first initial and last name, in combination with any one (1) or more of the following data elements, when either the name or the data elements are not encrypted: social security number, drivers license number, or account number, credit or debit card number; in combination with required security code, access code, or password that would permit access to an individual's financial account. T.C.A. § 47-18-2107(a)(3)(A)

1.10. "Privacy Officer" shall have the meaning as set out in its definition at 45 C.F.R. § 164.530(a) (1).

1.11. "Privacy Rule" shall mean the Standards for Privacy for Individually Identifiable Health Information at 45 C.F.R. Part 160 and Part 164, subparts A and E.

1.12. "Protected Health Information" shall have the same meaning as the term "protected health information" in 45 C.F.R. § 164.501, limited to the information created or received by Business Associate from or on behalf of Covered Entity.

1.13. "Required By Law" shall have the same meaning as the term "required by law" in 45 C.F.R. § 164.501.

1.14. "Secretary" shall mean the Secretary of the Department of Health and Human Services or his/her designee.

1.15 "Security Event" shall mean an immediately reportable subset of security incidents which would include:

a) a suspected penetration of Business Associate's information system of which the Business Associate becomes aware but for which it is not able to verify within FORTY-EIGHT (48) HOURS (of the time the Business Associate became aware of the suspected incident) that PHI or other confidential data was not accessed, stolen, used, disclosed, modified, or destroyed;

b) any indication, evidence, or other security documentation that the Business Associate's network resources, including, but not limited to, software, network routers, firewalls, database and application servers, intrusion detection systems or other security appliances, may have been damaged, modified, taken over by proxy, or otherwise compromised, for which Business Associate cannot refute the indication within FORTY-EIGHT (48) HOURS of the time the Business Associate became aware of such indication;

c) a breach of the security of the Business Associate's information system(s)(see definition 1.3 above), by unauthorized acquisition, including, but not limited to, access to or use, disclosure, modification or destruction, of unencrypted computerized data and which incident materially compromises the security, confidentiality, or integrity of PHI; and/or

d) the unauthorized acquisition, including, but not limited to, access to or use,

## **ATTACHMENT E - BUSINESS ASSOCIATE AGREEMENT AND SERVICE LEVEL AGREEMENT (cont)**



disclosure, modification or destruction, of unencrypted PHI or other confidential information of the Covered Entity by an employee or authorized user of Business Associate's system(s) which materially compromises the security, confidentiality, or integrity of PHI or other confidential information of the Covered Entity.

e) a security incident involving 500 or more patients shall be reported to HHS immediately and a security incident involving less than 500 patients shall be reported to HHS annually.

1.16. "Security Incident" shall mean the attempt or successful unauthorized access, use, disclosure, modification, or destruction of information or interference with system operations in an information system.

1.17. "Security Rule" shall mean the Security Standards for the Protection of Electronic Protected Health Information" at 45 C.F.R. Parts 160 and 164, Subparts A and C.

1.18. "Services Agreement" shall mean any present or future agreements, either written or oral, between Covered Entity and Business Associate under which Business Associate provides services to the covered entity which involves the use or disclosure of Protected Health Information. The services Agreement is amended by and incorporates the terms of the business associate agreement.

1.19. "Unsecured Protected Health Information" is protected health information that is not rendered unusable, unreadable or indecipherable to unauthorized individuals through the use of a technology or methodology specified by the Secretary in the guidance issued under 42 U.S.C.A. § 17932(h)(2) decoding of the data is also taken, the parties shall treat the acquisition as a breach for purposes of determining appropriate response.

If data acquired (including but not limited to access to or use, disclosure, modification or destruction of such data) is in encrypted format but the decryption key which would allow the decoding of the data is also taken, the parties shall treat the acquisition as a breach for purposes of determining appropriate response.

### **2. OBLIGATIONS AND ACTIVITIES OF BUSINESS ASSOCIATE (Privacy Rule)**

2.1. Business Associate agrees to fully comply with the requirements under the Privacy Rule applicable to "business associates," as that term is defined in the Privacy Rule and not use or further disclose Protected Health Information other than as permitted or required by this Agreement, Service Contracts as required by law. In case of any conflict between this Agreement and Service Contracts, this Agreement shall govern.

2.2. Business Associate agrees to implement administrative, including policies, physical, and technical safeguards that reasonably and appropriately protect the confidentiality, integrity, and availability of any PHI, including EPHI, that it creates, receives, maintains, or that it transmits on behalf of the covered entity to prevent use or disclosure of PHI other than as provided for by this Agreement. Said safeguards shall include, but are not limited to, requiring employees to agree to use or disclose PHI only as permitted or required by this Agreement and taking related disciplinary actions for inappropriate use or disclosure as necessary.

2.3 Business Associate shall, following a breach of unsecured PHI, as defined in the HITECH Act, immediately notify the Covered Entity pursuant to the terms of 45 C.F.R. § 164.410, cooperate in the Covered Entity's analysis procedures, including risk assessment, if requested. A breach shall be treated as discovered by the Business Associate as of the first day on which such breach is known or should have been known or, by exercising reasonable diligence, would have been known to Business Associate. Business Associate will provide notification to the Covered Entity without unreasonable delay and in no event later than twenty-four (24) hours of any suspected or actual breach of security, intrusion, or unauthorized use or disclosure. Such notification will contain the elements required in 45 C.F.R. § 164.410; and



## **ATTACHMENT E - BUSINESS ASSOCIATE AGREEMENT AND SERVICE LEVEL AGREEMENT (cont)**

---

2.4 Business Associate shall, pursuant to the HITECH Act and its implementing regulations, comply with all additional applicable requirements of the Privacy Rule, including those contained in 45 C.F.R. §§ 164.502(e) and 164.504(e)(1)(ii), at such time as the requirements become applicable to Business Associates. Business Associate will not accept payment in exchange for PHI, subject to the exceptions contained in the HITECH Act, without a valid authorization from the applicable patient/individual. Business associate shall not engage in any communication which might be considered marketing under the HITECH Act. Further, business Associate shall, pursuant to the HITECH Act and its implementing regulations, comply with applicable requirements of the Security Rule, contained in 45 C.F.R. §§ 164.308, 164.310, 164.312 and 164.316, at such time as the requirements are applicable to Business Associates.

2.5 Business Associate shall within ten (10) days of a written request from the Covered Entity and its agents or subcontractors allow the Covered Entity to conduct a reasonable inspection of the facility, systems, books, records agreements, policies and procedures relating to the use, or disclosure of protected health information pursuant to this Agreement for the purpose of monitoring compliance with the terms of this Agreement.

2.6. Business Associate shall require any agent, including a subcontractor, to whom it provides PHI received from, created or received by, Business Associate on behalf of Covered Entity or that carries out any duties for the Business Associate involving the use, custody, disclosure, creation of, or access to PHI, to agree, by written contract with Business Associate, to the same restrictions and conditions that apply through this Agreement to Business Associate with respect to such information.

2.7. Business Associate agrees to mitigate, to the extent practicable, any harmful effect that is known to Business Associate of a use or disclosure of PHI by Business Associate in violation of the requirements of this Agreement. Business Associate agrees to require its employees, agents, and subcontractors to immediately report, to Business Associate, any use or disclosure of Protected Health Information in violation of this Agreement, and to report to Covered Entity any use or disclosure of the PHI not provided by or agreed upon in this Agreement.

2.8. If Business Associate receives PHI from Covered Entity in a Designated Record Set, then Business Associate agrees to provide access, at the request of Covered Entity, to PHI in a Designated Record Set, to Covered Entity or, as directed by covered Entity, to an Individual in order to meet the requirements under 45 C.F.R. § 164.524, provided that Business Associate shall have at least thirty (30) days from Covered Entity's notice to provide access to, or deliver such information.

2.9. If Business Associate receives Protected Health Information from Covered Entity in a Designated Record Set, then Business Associate agrees to make any amendments to Protected Health Information in a Designated Record Set that the Covered Entity directs or agrees to pursuant to the 45 C.F.R. §164.526 at the request of Covered Entity or an Individual, and in the time and manner designated by Covered Entity, provided that Business Associate shall have at least thirty (30) days from Covered Entity notice to make an amendment.

2.10. Business Associate agrees to make its internal practices, books, and records including policies and procedures and Protected Health Information, relating to the use and disclosure of PHI received from, created by or received by Business Associate on behalf of, Covered Entity available to the Covered Entity or to the Secretary of the United States Department of Health in Human Services or the Secretary's designee, in a time and manner designated by the Covered Entity or the Secretary, for purposes of determining Covered Entity's or Business Associate's compliance with the Privacy Rule.

2.11. Business Associate agrees to document disclosures of PHI and information related to such disclosures as would be required for Covered Entity to respond to a request by an Individual for an accounting of disclosure of PHI in accordance with 45 C.F.R. §164.528.

## **ATTACHMENT E - BUSINESS ASSOCIATE AGREEMENT AND SERVICE LEVEL AGREEMENT (cont)**

---



2.12. Business Associate agrees to provide Covered Entity or an Individual, in time and manner designated by Covered Entity, information collected in accordance with this Agreement, to permit Covered Entity to respond to a request by an Individual for and accounting of disclosures of Protected Health Information in accordance with 45 C.F.R. § 164.528, provided that Business Associate shall have at least thirty (30) days from Covered Entity notice to provide access to, or deliver such information which shall include, at minimum, (a) date of the disclosure; (b) name of the third party to whom the Protected Health Information was disclosed and, if known, the address of the third party; (c) brief description of the disclosed information; and (d) brief explanation of the purpose and basis for such disclosure.

2.13. Business Associate agrees it must limit any use, disclosure, or request for use or disclosure of PHI to the minimum amount necessary to accomplish the intended purpose of the use, disclosure, or request in accordance with the requirements of the Privacy Rule. Business Associate understands and agrees that the definition of "minimum necessary" has not been established by HHS guidance and shall keep itself informed of guidance issued by the Secretary with respect to what constitutes "minimum necessary."

2.14. Business Associate agrees it must use reasonable efforts to limit any use, disclosure, or request for use of disclosure of PHI to the minimum amount necessary to accomplish the intended purpose of the use, disclosure, or request in accordance with the requirements of the Privacy Rule.

2.15. Covered Entity may, pursuant to the Privacy Rule, reasonably rely on any requested disclosure as the minimum necessary for the stated purpose when the information is requested by Business Associate.

2.16. Business Associate acknowledges that if Business Associate is also a covered entity, as defined by the Privacy Rule, Business Associate is required, independent of Business Associate's obligations under this Agreement, to comply with the Privacy Rule's minimum necessary requirements when making any request for PHI from Covered Entity.

2.17. Business Associate agrees to adequately and properly maintain all Protected Health Information received from, or created or received on behalf of, Covered Entity, document subsequent uses and disclosures of such information by Business Associate as may be deemed necessary and appropriate by the Covered Entity, and provide Covered Entity with reasonable access to examine and copy such records and documents during normal business hours of Business Associate.

2.18. Business Associate agrees that Covered Entity may at any time review Business Associate's privacy policies and procedures to determine whether they are consistent with Covered Entity's policies, procedures, and privacy practices, and shall promptly notify Business Associate in writing regarding any modifications Covered Entity may reasonably believe are needed in order to meet Covered Entities requirements.

2.19. If Business Associate receives a request from an individual for a copy of the individual's Protected Health Information, and the Protected Health Information is in the sole possession of the Business Associate, Business Associate will provide the requested copies to the individual and notify the Covered Entity of such action. If Business Associate receives a request for PHI in the possession of the Covered Entity, or receives a request to exercise other individual rights as set forth in the Privacy Rule, Business Associate shall notify Covered Entity of such request and forward the request to Covered Entity. Business Associate shall then assist Covered Entity in responding to the request.

2.20. Business Associate agrees to fully cooperate in good faith with and to assist Covered Entity in complying with the requirements of the Privacy Rule

### **3. OBLIGATIONS AND ACTIVITIES OF BUSINESS ASSOCIATE (Security Rule)**

3.1. Business Associate agrees to fully comply with the requirements under the Security Rule applicable to "business associates" as such terms is defined in the Security Rule. In case of any conflict between this Agreement and Service Contracts, this agreement shall govern.

**ATTACHMENT E - BUSINESS ASSOCIATE AGREEMENT AND SERVICE LEVEL AGREEMENT  
(cont)**



3.2. Business Associate Agrees to implement administrative, physical, and technical safeguards that reasonably and appropriately protect the confidentiality integrity, and availability of the electronic PHI that it creates, receives, maintains, or transmits on behalf of the covered entity as required by the Security Rule. This includes specifically, but not limited to, the utilization of technology commercially available at the time to the Business Associate to protect the Covered Entity's PHI against any reasonably anticipated threats or hazards. The Business Associate understands that it has an affirmative duty to perform a regular review or assessment of security risks, conduct active risk management and supply best efforts to assure that only authorized persons and devices access its computing systems and information storage, and that only authorized transactions are allowed. The Business Associate will maintain appropriate documentation of its compliance with the Security Rule.

3.3. Business Associate shall ensure that any agent, including a subcontractor, to whom it provides electronic PHI received from, maintained, or created for Covered Entity or that carries out any duties for the Business Associate involving the use, custody, disclosure, creation of, or access to PHI supplied by Covered Entity, shall execute a bilateral contract (or the appropriate equivalent if the agent is a government entity) with Business Associate, incorporating the same restrictions and conditions in this Agreement with Business Associate regarding PHI.

3.4. Tennessee Consumer Notice of System Breach. Business Associate understands that the Covered Entity is an "information holder" (as may be Business Associate) under the terms of T.C.A. § 47-18-2107, and that in the event of a breach of the Business Associate's security system as defined by that statute and Definition 1.7 of this agreement, the Business Associate shall indemnify and hold the Covered Entity harmless for expenses and/or damages related to the breach. Such obligations shall include, but is not limited to, the mailed notifications to any Tennessee resident whose personal information is reasonably believed to have been acquired by an unauthorized individual. In the event that the Business Associate discovers circumstances requiring notification of more than a thousand (1,000) persons at one time, the person shall also notify, without unreasonable delay, all consumer reporting agencies and credit bureaus that compile and maintain files on consumers on a nationwide basis, as defined by 15 U.S.C. §1681a, of the timing distribution and content of the notices. Substitute notice as defined T.C.A. § 47-18-2107(e)(2) and (3), shall not be permitted except as approved in writing in advance by the Covered Entity. The parties agree that PHI includes data elements in addition to those included by "personal information" under T.C.A. § 47-18-2107, and agree that Business Associate's responsibilities under this paragraph shall include all PHI and PII.

3.5. Reporting of Security Incidents. The Business Associate shall track all security incidents as defined by HIPAA. The Business Associate shall reasonably use its own vulnerability assessment of damage potential and monitoring to define levels of Security Incidents and responses for Business Associate's operations. However, the Business Associate shall expediently notify the Covered Entity's Privacy Officer of any Security Incident which would constitute a Security Event as defined by this Agreement, including any "breach of the security of the system" under T.C.A. § 47-18-2107, in a preliminary report within two (2) business days of any unauthorized acquisition including, but not limited to, use, disclosure, modification, or destruction of PHI by an employee or otherwise authorized user of its system of which it becomes aware with a full report of the incident not less than five (5) business days of the time it became aware of the incident.

3.5.1 Business Associate shall identify in writing key contact persons for administration, data processing, Marketing, Information Systems and Audit Reporting within thirty (30) days of execution of this Agreement. Business Associate shall notify Covered Entity of any reduction of in-house staff persons during the term of this Agreement in writing within ten (10) business days.

3.6 Contact for Security Event Notice. Notification for the purposes of Sections 2.7, 3.4 and 3.5 shall be in writing made by certified mail or overnight parcel within two (2) business days of the event, with supplemental notification by facsimile and/or telephone as soon as practicable, to the designated Privacy Official of the Covered Entity in accordance to 8.5 Notices and Communications.

## **ATTACHMENT E - BUSINESS ASSOCIATE AGREEMENT AND SERVICE LEVEL AGREEMENT (cont)**



3.7 Security Compliance Review upon Request. Business Associate agrees to make its internal practices, books, and records, including policies and procedures relating to the security of electronic PHI received from, created by or received by Business Associate on behalf of Covered Entity, available to the Covered Entity or to the Secretary of the United States Department of Health in Human Services or the Secretary's designee, in a time and manner designated by the requester, for purposes of determining Covered Entity's or Business Associate's compliance with the Security Rule. 3.8 Cooperation in Security Compliance. Business Associate agrees to fully cooperate in good faith and to assist Covered Entity in complying with the requirements of the Security Rule.

### **4. PERMITTED USES AND DISCLOSURES BY BUSINESS ASSOCIATE**

4.1. Except as otherwise limited in this Agreement, Business Associate may use or disclose PHI to perform functions, activities, or services for, or on behalf of, Covered Entity as specified in Service Contracts, provided that such use or disclosure would not violate the Privacy Rule if done by Covered Entity.

4.2. Except as otherwise limited in this Agreement, Business Associate may use Protected Health Information as required for Business Associate's proper management and administration or to carry out the legal responsibilities of the Business Associate. In the event a party to this Agreement receives a subpoena, court order, or other demand for the information in this Agreement, the receiving party shall immediately inform the other party in writing concerning the demand.

4.3. Except as otherwise limited in this Agreement, Business Associate may disclose Protected Health Information for the proper management and administration of the Business Associate, provided that disclosures are required by law, or provided that, if Business Associate discloses any Protected Health Information to a third party for such a purpose, Business Associate shall enter into a written agreement with such third party requiring the third party to: (a) maintain the confidentiality of Protected Health Information and not to use or further disclose such information except as Required By Law or for the purpose for which it was disclosed, and (b) notify Business Associate of any instances in which it becomes aware in which the confidentiality of the Protected Health Information is breached.

4.4. Except as otherwise limited in this Agreement, Business Associate may use Protected Health Information to provide Data Aggregation services to Covered Entity as permitted by 42 C.F.R. § 164.504(e)(2)(l)(B).

### **5. OBLIGATIONS OF COVERED ENTITY**

5.1. Covered Entity shall provide Business Associate with the notice of privacy practices that Covered Entity produces in accordance with 45 C.F.R. § 164.520, as well as any changes to such notice.

5.2. Covered Entity shall provide Business Associate with any changes in, or revocation of, permission by an Individual to use or disclose Protected Health Information, if such changes affect Business Associate's permitted or required uses.

5.3. Covered Entity shall notify Business Associate of any restriction to the use or disclosure of Protected Health Information that Covered Entity has agreed to in accordance with 45 C.F.R. § 164.522, to the extent that such restriction may affect Business Associate's use of Protected Health Information.

### **6. PERMISSIBLE REQUESTS BY COVERED ENTITY**

6.1. Covered Entity shall not request Business Associate to use or disclose Protected Health Information in any manner that would not be permissible under the Privacy Rule if done by Covered Entity.

### **7. TERM AND TERMINATION**

## **ATTACHMENT E - BUSINESS ASSOCIATE AGREEMENT AND SERVICE LEVEL AGREEMENT (cont)**

---



7.1. Term. This Agreement shall be effective as of the date on which it is signed by both parties and shall terminate when all of the Protected Health Information provided by Covered Entity to Business Associate, or created or received by Business Associate on behalf of Covered Entity, is destroyed or returned to Covered Entity, or, if it is infeasible to return or destroy Protected Health Information, Section 7.3 below shall apply. 7.2. Termination for Cause.

7.2.1. This Agreement authorizes and Business Associate acknowledges and agrees Covered Entity shall have the right to immediately terminate this Agreement and Service Contracts in the event Business Associate fails to comply with, or violates a material provision of, requirements of the Privacy Rule or this Agreement.

7.2.2. Upon Covered Entity's knowledge of a material breach by Business Associate,

7.2.2.1. Covered Entity shall, whenever practicable, provide a reasonable opportunity for Business Associate to remedy the breach or end the violation.

7.2.2.2. If Business Associate has breached a material term of this Agreement and remedy is not possible or if Business Associate does not remedy a curable breach or end the violation within a reasonable time as specified by, and at the sole discretion of, Covered Entity, Covered Entity may immediately terminate this Agreement and Service Contracts.

7.2.2.3. If neither remedy nor termination is feasible, Covered Entity shall report the violation to the Secretary of the United States Department of Health in Human Services or the Secretary's designee.

7.3. Effect of Termination.

7.3.1. Except as provided in Section 7.3.2 below, upon termination of this Agreement, for any reason, Business Associate shall return or destroy all Protected Health Information received from Covered Entity, or created or received by Business Associate on behalf of, Covered Entity. This provision shall apply to Protected Health Information that is in the possession of subcontractors or agents of Business Associate. Business Associate shall retain no copies of the Protected Health Information.

7.3.2. In the event that Business Associate determines that returning or destroying the Protected Health Information is not feasible, Business Associate shall provide to Covered Entity notification of the conditions that make return or destruction unfeasible. Upon mutual agreement of the Parties that return or destruction of Protected Health Information is unfeasible, Business Associate shall extend the protections of this Agreement to such Protected Health Information and limit further uses and disclosures of such Protected Health Information to those purposes that make the return or destruction unfeasible, for so long as Business Associate maintains such Protected Health Information.

## **8. MISCELLANEOUS**

8.1. Regulatory Reference. A reference in this Agreement to a section in the Privacy Rule means the section as in effect or as amended.

8.2. Amendment. The Parties agree to take such action as is necessary to amend this Agreement from time to time as is necessary for Covered Entity to comply with the requirements of the Privacy Rule and the Health Insurance Portability and Accountability Act, Public Law 104-191. Business Associate and Covered Entity shall comply with any amendment to the Privacy Rule, the Health Insurance Portability and Accountability Act, Public Law 104-191, and related regulations upon the effective date of such amendment, regardless of whether this Agreement has been formally amended.

8.3. Survival. The respective rights and obligations of Business Associate under Section 7.3. of this agreement shall survive the termination of this Agreement.

**ATTACHMENT E - BUSINESS ASSOCIATE AGREEMENT AND SERVICE LEVEL AGREEMENT  
(cont)**



8.4. Interpretation. Any ambiguity in this Agreement shall be resolved in favor of a meaning that permits Covered Entity to comply with the Privacy Rule.

8.5. Notices and Communications. All instructions, notices, consents, demands, or other communications required or contemplated by this Agreement shall be in writing and shall be delivered by hand, by facsimile transmission, by overnight courier service, or by first class mail, postage prepaid, addressed to the respective party at the appropriate facsimile number or address as set forth below, or to such other party, facsimile number, or address as may be hereafter specified by written notice.

**COVERED ENTITY:**

**TENNESSEE DEPARTMENT OF HEALTH  
TIMOTHY GREGORY, PRIVACY OFFICER  
425 5<sup>TH</sup> AVE N (6<sup>TH</sup> FLOOR-CHB)  
NASHVILLE, TN 37243  
Telephone: 615-741-1969  
Fax: 615-253-3926**

**TENNESSEE DEPARTMENT OF HEALTH  
RICKY TYLER, SECURITY OFFICER  
425 5<sup>TH</sup> AVE N (6<sup>TH</sup> FLOOR-CHB)  
NASHVILLE, TN 37243  
Telephone: 615-741-0899  
Fax: 615-253-3926**

**BUSINESS ASSOCIATE:**

**DOCUMENT STORAGE SYSTEMS, INC.  
RON BYERS, VP/GENERAL COUNSEL,  
12575 US HWY 1 SUITE 200  
JUNO BEACH, FL 33408  
Telephone: 561-284-7838  
Fax: 561-227-0208**

All instructions, notices, consents, demands, or other communications shall be considered effectively given as of the date of hand delivery; as of the date specified for overnight courier service delivery; as of three (3) business days after the date of mailing; or on the day the facsimile transmission is received mechanically by the facsimile machine at the receiving location and receipt is verbally confirmed by the sender.

8.6. Strict Compliance. No failure by any Party to insist upon strict compliance with any term or provision of this Agreement, to exercise any option, to enforce any right, or to seek any remedy upon any default of any other Party shall affect, or constitute a waiver of, any Party's right to insist upon such strict compliance, exercise that option, enforce that right, or seek that remedy with respect to that default or any prior, contemporaneous, or subsequent default. No custom or practice of the Parties at variance with any provision of this Agreement shall affect, or constitute a waiver of, any Party's right to demand strict compliance with all provisions of this Agreement.

8.7. Severability. With respect to any provision of this Agreement finally determined by a court of competent jurisdiction to be unenforceable, such court shall have jurisdiction to reform such provision so that it is enforceable to the maximum extent permitted by applicable law, and the Parties shall abide by such court's determination. In the event that any provision of this Agreement cannot be reformed, such provision shall be deemed to be severed from this Agreement, but every other provision of this Agreement shall remain in full force and effect.

8.8. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Tennessee.

8.9. Compensation. There shall be **no** remuneration for performance under this HIPAA Business Associate Agreement except as specifically provided by, in, and through, contractual relationships referenced herein.





## ENTEPRISE INFORMATION SECURITY POLICIES

---



# Enterprise Information Security Policies



**State of Tennessee**  
**Department of Finance and Administration**  
**Office for Information Resources**  
Information Security Program

*Document Version 1.6 – April 4, 2008*



## Table of Contents

	<u>Page</u>
<b>1. EXECUTIVE SUMMARY</b>	<b>1</b>
<b>2. INTRODUCTION</b>	<b>3</b>
Scope (2.1)	4
Authority (2.2)	4
Exceptions (2.3)	5
Review (2.4)	5
Document Format (2.5)	6
Policy Maintenance (2.6)	6
<b>3. GENERAL INFORMATION SECURITY POLICY</b>	<b>7</b>
<b>4. ORGANIZATIONAL SECURITY POLICY</b>	<b>9</b>
Information Security Infrastructure (4.1)	9
Incident Response Policy (4.2)	9
Incident Response Plan (4.3)	10
<b>5. ASSET CLASSIFICATION AND CONTROL POLICY</b>	<b>11</b>
Accountability of Assets (5.1)	11
Data Classification (5.2)	11
Public Data Classification Control (5.2.1)	11
Confidential Data Classification Control (5.2.2)	11
<b>6. PERSONNEL SECURITY POLICY</b>	<b>13</b>
Personnel Background Investigation (6.1)	13
Acceptable Use Policy (6.2)	13
<b>7. PHYSICAL AND ENVIRONMENTAL SECURITY POLICY</b>	<b>14</b>
Secure Areas (7.1)	14
Physical Security Perimeter (7.1.1)	14
Equipment Security (7.2)	14
Equipment Placement and Protection (7.2.1)	14
Power Supplies (7.2.2)	14
Cabling Security (7.2.3)	15
General Security Controls (7.3)	15
Clear Screen Policy (7.3.1)	15
<b>8. COMMUNICATIONS AND OPERATIONS MANAGEMENT POLICY</b>	<b>16</b>
Operational Procedures and Responsibilities (8.1)	16
Documentation of Operating Procedures (8.1.1)	16



Operational Change Control (8.1.2)	16
Segmentation and Layered Security (8.1.3)	16
Segregation of Duties (8.1.4)	16
Separation of Development and Production Facilities (8.1.5)	16
Production Environment Access Control (8.1.6)	16
System Planning and Acceptance (8.2)	17
System Acceptance (8.2.1)	17
Capacity Planning (8.3)	17
Software Control (8.4)	17
Authorized and Licensed Software (8.4.1)	17
Malicious Software Control (8.4.2)	17
Compromised System Policy (8.4.2.1)	17
Patch Management Control (8.4.3)	17
Media Handling and Security (8.4.4)	17
Application Control (8.4.5)	17
Media Disposal and Reuse (8.5)	18
<b>9. ACCESS CONTROL POLICY</b>	<b>19</b>
Access Control Rules (9.1)	19
User Access Management (9.2)	19
User Registration and Authorization (9.2.1)	19
Loss of User Privilege (9.2.1.1)	19
User Privilege Control (9.2.2)	19
User Identification and Authorization (9.2.3)	20
User Account Lockout (9.2.4)	20
User Password Management (9.2.5)	20
Review of User Access Rights (9.2.6)	20
Network Access Control (9.3)	20
User Authentication for Network Connections (9.3.1)	20
Segregation in Networks (9.3.2)	20
Enterprise Interconnectivity Requirements (9.3.3)	21
Operating System Access Control (9.4)	21
Session Time Outs (9.4.1)	21
Password Management System (9.4.2)	21
Use of Shared Technology Resources (9.4.3)	21
Logon Banner (9.4.4)	21
Mobile and Workstation Computing (9.5)	21
Mobile Computing Policy (9.5.1)	21
Workstation Computing Policy (9.5.2)	21
Monitoring System Access and Use (9.6)	21
Event Logging (9.6.1)	21
Clock Synchronization (9.6.2)	22
<b>10. SYSTEMS DEVELOPMENT AND MAINTENANCE POLICY</b>	<b>23</b>
<b>11. COMPLIANCE POLICY</b>	<b>24</b>
Compliance with Legal Requirements (11.1)	24



Applicable Legislation (11.1.1)	24
Data Protection and Privacy (11.1.2)	24
Data Breach and Disclosure (11.1.3)	24
Internal Compliance Matrix (11.2)	24
<b>12. BUSINESS CONTINUITY MANAGEMENT POLICY</b>	<b>25</b>
<b>13. VERSION HISTORY</b>	<b>26</b>
<b>14. TERMS AND DEFINITIONS</b>	<b>27</b>
<b>15. APPENDICES 28</b>	



## 1. EXECUTIVE SUMMARY

The main purpose of this document is to define the information security policies of the State of Tennessee along with the organization and framework/structure required to communicate, implement and support these policies. Information is an asset, which like any other asset owned by the State of Tennessee, has significant value to the stakeholders of the State. Information security is a critical component that is required to enable and ensure the availability, integrity and confidentiality of data, network and processing resources required for the State of Tennessee to perform its business and operational practices. This policy document has been developed to establish and uphold the minimum requirements that are necessary to protect information resources (assets) against unavailability, unauthorized or unintentional access, modification, destruction or disclosure as set forth by the Information Systems Council (ISC) of the State of Tennessee.

The scope of this document is intended to cover any information asset owned, leased or controlled by the State of Tennessee and the methodologies and practices of external entities that require access to the State of Tennessee's information resources. This document seeks to protect:

- All desktop computing systems, servers, data storage devices, communication systems, firewalls, routers, switches, hubs, personal digital assistants (PDAs) and mobile devices (computing platforms) owned by the State of Tennessee where lawfully permitted.
- Any computing platforms, operating system software, middleware or application software under the control of third parties that connect in any way to the State of Tennessee's enterprise computing or telecommunications network.
- All data, information, knowledge, documents, presentations, databases or other information resource stored on the State of Tennessee's computing platforms and/or transferred by the State's enterprise network.

This document applies to all full- and part-time employees of the State of Tennessee and all third parties, contractors or vendors who work on State premises or remotely connect their computing platforms to the State of Tennessee's computing platforms.

By establishing the appropriate policy framework and utilizing a documented policy development process that includes all stakeholders, the State envisions maximum voluntary compliance. The policy development and implementation process includes an impact analysis, input from Agency IT professionals and approval by the Chief Information Security Officer (CISO) and executive management team within the Office for Information Resources, Department of Finance and Administration.



All information resources and any information system owned by the State of Tennessee shall be protected from unauthorized disclosure, use, modification or destruction in a manner commensurate with their value, sensitivity and criticality to the business and operation of the state government and those they serve. Access to information technology assets will be granted using the principle of least privilege.

All of the approved policies will support the requirements of the Information Systems Council of the State of Tennessee as well as the General Information Security Policy of the State of Tennessee.



## 2. INTRODUCTION

### The Information Security Challenge

Information technology (IT) solutions are driven by the demands of our daily business activities. The ability to procure efficient communication, IT resources and business processes at a low cost is a foundational component of successful IT programs. This integration moves quickly to align itself with the “just in time” requirements of the business. Given the growth demands of the business along with the associated time sensitive integration strategies, we are presented with new risks at every turn. Organizations will frequently take risks in order to meet those time sensitive business requirements, sometimes cutting out existing processes which could introduce delays, or bypassing process requirements all together to keep up with the demand of the customers whom they serve. This practice, also known as risk management, is a component of any successful business. Modern enterprises will implement risk management and/or information security programs to mitigate these risks.

The State of Tennessee has recognized the need and put the information security programs to work. One of the main goals of any successful information security program is to protect the organization’s revenues, resources, and reputation. This is accomplished through several means. Some examples are implementing risk management methodologies, security architectures, control frameworks and security policy to list a few.

Security policy is a foundational component of any successful security program. The Enterprise Information Security Policies for the State of Tennessee are based on the International Standards Organization (ISO) 17799 standard framework. The policies are designed to comply with applicable laws and regulations; however, if there is a conflict, applicable laws and regulations will take precedence. The policies included in this document are to be considered the minimum requirements for providing a secure operational environment.



### **Scope (2.1)**

The scope of this document is intended to cover any information asset owned, leased or controlled by the State of Tennessee and the methodologies and practices of external entities that require access to the State of Tennessee's information resources. This document seeks to protect:

- All desktop computing systems, servers, data storage devices, communication systems, firewalls, routers, switches, hubs, personal digital assistants (PDAs) and mobile devices (computing platforms) controlled by the State of Tennessee where lawfully permitted.
- Any computing platforms, operating system software, middleware or application software under the control of the State of Tennessee, or by third parties, operated on behalf of the State of Tennessee that connect in any way to the State's enterprise computing or telecommunications network.
- All data, information, knowledge, documents, presentations, databases or other information resource stored on the State of Tennessee's computing platforms and/or transferred by the State's enterprise network.

All full- and part-time employees of the State of Tennessee and all third parties, contractors, or vendors who work on State premises or remotely connect their computing platforms to the State of Tennessee's computing platforms shall adhere to the policies and requirements set forth in this document.

### **Authority (2.2)**

The Information Systems Council (ISC) has authorized the Department of Finance and Administration, Office for Information Resources (OIR) to establish and enforce policy and statewide standards as they are related to information security. These policies and standards include, but are not limited to, network and Internet access, any computing platform attached to the State's enterprise network and any wired or wireless technology attached to the State's enterprise network. The Office for Information Resources is responsible and authorized by the ISC to perform audits on any device that attaches to the State of Tennessee's enterprise network.

Reference:

*Tennessee Code Annotated, Section 4-3-5501, effective, May 10, 1994*  
*ISC Information Resource Policies, Policy 1.00*  
*ISC Information Resource Policies, Policy 13.00*



**Exceptions (2.3)**

All exceptions to any of the security policies shall be reviewed by the Security Advisory Council (SAC) and approved by the Chief Information Security Officer. The exception request process and form can be found in the appendix of this document.

**Review (2.4)**

Review of this document takes place within the Security Advisory Council sessions and will occur on a semi-annual basis at a minimum. Document review can also be requested by sending a request to the OIR Security Management Team.

The official policy document and supporting documentation will be published on the OIR intranet site located at:

<http://intranet.state.tn.us/finance/oir/security/policy.html>



**Document Format (2.5)**

This document generally follows the International Standards Organization (ISO) 17799 standard framework for information technology security management. Each section starts with a high-level policy statement for the domain that is discussed in that section. The high-level policy statement is followed by the objectives of the section. More detailed or specific policy statements follow the objectives. The MINIMUM COMPLIANCE REQUIREMENTS category contains the minimum requirements for compliance criteria that are global and apply to all systems or platforms across the entire enterprise. Finally, the section closes with a description of responsibilities for the Office for Information Resources, agencies and individuals.

**X. Section Name**

*High-level policy statement for section*

**OBJECTIVES:**

**Policy Name(x.x)**

*Policy statement.*

**Sub-Policy Name(x.x.x)**

*Sub-policy statement.*

**Policy Name(x.x)**

*Policy statement.*

**Policy Maintenance (2.6)**

All policies will be maintained in accordance with the OIR policy process documentation. See the Security Policy Development and Implementation Process located in the appendix of this document.



### 3. GENERAL INFORMATION SECURITY POLICY

*All information resources and information systems owned by the State of Tennessee shall be protected from unauthorized disclosure, use, modification or destruction in a manner consistent with their value, sensitivity and criticality to the business and operation of the state government and those it serves. The State of Tennessee shall institute an information security program to define the overall information security policy and direction.*

#### **OBJECTIVES:**

- Ensure that the State of Tennessee's information resources are adequately and appropriately protected against unavailability, unauthorized access, modification, destruction or disclosure as required by the Information Systems Council of the State of Tennessee.
- Ensure that the State of Tennessee provisions an information security program to uphold the State of Tennessee's information security requirements.
- Ensure that authorized access to the State of Tennessee's information resources is appropriately provisioned.
- Prevent disruption of business processes or service delivery caused by information security inadequacies.
- Ensure that the information security posture of the State of Tennessee is appropriately, efficiently and effectively communicated to the stakeholders of the State of Tennessee.
- Define and assign responsibilities for protecting information technology resources.

#### **RESPONSIBILITIES:**

##### ***OIR***

OIR is responsible for establishing and maintaining a statewide information security policy and security program. OIR will ensure that any information processing system attached to the State of Tennessee's enterprise network and managed by OIR, or on behalf of OIR, is compliant with this policy document. OIR will ensure that this policy document and any subsequent additions, changes or deletions are communicated appropriately to all agencies of State government.

##### ***Agency***

Agencies are responsible for ensuring that any information processing system attached to the State of Tennessee's enterprise network and managed by the agency, or on behalf of the agency, is compliant with this policy document. Agencies are responsible for developing and implementing procedures and operations processes that support the goals and objectives of this policy document. Agencies may develop agency-specific policy documents provided the minimum requirements set forth in this document are met. Agencies are responsible for communicating this policy document throughout the agency.



***Users***

Users are responsible for adhering to statewide and agency policies, standards, procedures and guidelines pertaining to information security.



#### 4. ORGANIZATIONAL SECURITY POLICY

*The State of Tennessee shall maintain an organization within the Office for Information Resources (OIR) that is directly responsible for the direction and strategy of the information security program within the State of Tennessee and for all agencies of Tennessee state government. This group shall be led by the Chief Information Security Officer (CISO) who is ultimately responsible for the direction of the program and for reporting on the State's security posture to the Chief Information Officer (CIO) of the State of Tennessee. Each state agency shall appoint an information security "point of contact" (POC).*

##### **OBJECTIVES:**

- Ensure that the State of Tennessee provisions an information security organization, led by a Chief Information Security Officer, to support the State of Tennessee's information security requirements.
- Ensure that the information security program can adequately address the requirements set forth by the Information Systems Council.
- Ensure that the State of Tennessee provisions an information Security Incident Response Team with appropriate resources to exercise the State of Tennessee's information security incident response plan when appropriate.
- Ensure that agencies designate a knowledgeable information security "point of contact" (POC), in accordance with the Information Systems Council's "Information Resource Policies" requirements. This POC will act as the central communications figure regarding information security within the agency.

##### **Information Security Infrastructure (4.1)**

*OIR Security Management shall initiate and control an enterprise information security architecture that includes, but is not limited to, a policy framework, an organizational and communication framework and a security technology framework.*

##### **Incident Response Policy (4.2)**

*The State of Tennessee shall establish an information Security Incident Response Team (SIRT). The SIRT will ensure that the State of Tennessee can efficiently and effectively communicate information security incidents to the proper stakeholders and respondents of the State. The SIRT members will be appointed based on their position and capabilities within the organization. Each agency shall designate an information security "point of contact" (POC), in accordance with the Information Systems Council's "Information Resource Policies" requirements. This POC will act as the central communications figure regarding security incidents within the agency. The POCs shall have responsibility for incident escalations, actions and authority for the administrative oversight of security for the information technology resources under the agency's control. The POC within each agency will*



*participate as a member of the SIRT. The CISO of the State of Tennessee will appoint members from within OIR to participate in the SIRT.*

### **Incident Response Plan (4.3)**

*See the appendix of this document.*

## **RESPONSIBILITIES:**

### ***OIR***

OIR is responsible for the establishment of the information security organization as well as the appointment of a Chief Information Security Officer (CISO). The CISO is responsible for the fostering, leadership and communication of the State of Tennessee's enterprise security program. The CISO shall establish a Security Advisory Council (SAC). As Chair of the Security Advisory Council (SAC), the CISO will ensure that the proper representatives are appointed to the SAC and will lead the SAC's efforts to develop, implement and maintain an information security program for the State of Tennessee. The CISO will chair the SIRT and ensure that it will be appropriately staffed and provisioned, organized, maintained, and will include a representative from each agency. The CISO will also ensure that an information security response plan is developed, maintained, and distributed to all agencies.

### ***Agency***

Agencies are responsible for appointing an information security POC. In accordance with ISC policies, the agency POC will have the responsibility and authority for the administrative oversight of security for information resources under the agency's control. The POC shall be available to work with the SIRT and knowledgeable of the information incident response plan. Further, agencies will ensure that the agency POC participates in the "Tennessee Agency Security Advisory Group" chaired by the CISO.

### ***Users***

Users are responsible for reporting suspected or known security violations to the agency's POC and for following instructions pertaining to specific incidents as provided by SIRT members.



## 5. ASSET CLASSIFICATION AND CONTROL POLICY

*All information resource assets owned by the State of Tennessee shall be classified in accordance with the requirements set forth within this section in order to ensure that they receive an appropriate level of protection from unauthorized disclosure, use, modification or destruction. Classified assets shall be protected in a manner consistent with their value, sensitivity and criticality to the business and operation of the state government and those it serves or as specified by any superseding State or Federal law or regulation.*

### **Accountability of Assets (5.1)**

*All information resource assets owned by the State of Tennessee shall be accounted for and have a designated custodian. Custodians shall be identified for all information resource assets by each State agency, and the responsibility for the maintenance of appropriate controls, or stewardship, shall be assigned for the assets under the agency's control. Accountability shall remain with the designated custodian of the asset.*

### **Data Classification (5.2)**

*Data stored or transferred by information resource assets owned by the State of Tennessee shall be classified according to the definition of "Personal Information" or "Confidential Records" as specified by applicable State and/or Federal law and regulations to indicate the need, priorities and degree of protection it will receive. At a minimum data shall be classified as public or confidential.*

#### **Public Data Classification Control (5.2.1)**

*Data classified as public shall be protected from unauthorized modification or destruction.*

#### **Confidential Data Classification Control (5.2.2)**

*Data classified as confidential shall be protected from unauthorized disclosure, use, modification or destruction.*

## **RESPONSIBILITIES:**

### **OIR**

OIR is responsible for the development and maintenance of the statewide information resources asset classification requirements. OIR shall identify asset custodians for the information resources under their direct control. OIR asset custodians shall classify the assets under their control at the time the assets are assigned or created. Asset classification and maintenance can be delegated to an asset steward supervised by the asset custodian.



***Agency***

Agencies are responsible for identifying asset custodians for the resources under their direct control. Agency asset custodians shall classify the assets under their direct control at the time the assets are assigned or created. Asset classification and maintenance can be delegated to an asset steward supervised by the asset custodian.

***Users***

Users shall responsibly work with the assets they are assigned and due care shall be taken to protect any mobile computing asset from theft or destruction. Users shall not provide access to information resource assets without obtaining authorization from the asset custodian.



**6. PERSONNEL SECURITY POLICY**  
**Personnel Background Investigation (6.1)**  
Under Development

**Acceptable Use Policy (6.2)**

See the appendix of this document.



## 7. PHYSICAL AND ENVIRONMENTAL SECURITY POLICY

*Physical access to the State of Tennessee's information resource assets and infrastructure will be restricted to individuals who require that access to perform their job function.*

### **OBJECTIVES:**

- To prevent unauthorized access, damage or interference to State of Tennessee premises and information.
- To prevent loss, damage or compromise of processing equipment or network components.

### **Secure Areas (7.1)**

*Critical/sensitive business information processing facilities shall be housed in secure areas, protected by a defined security perimeter, with appropriate security barriers and entry controls that protect them from unauthorized access, damage and/or interference.*

#### **Physical Security Perimeter (7.1.1)**

*All critical/sensitive enterprise processing facilities shall have multiple layers of physical security. Each layer shall be independent and separate of the preceding and/or following layer(s).*

*All other processing facilities shall have, at a minimum, a single security perimeter protecting it from unauthorized access, damage and/or interference.*

### **Equipment Security (7.2)**

*Processing equipment shall be sited or protected to reduce the risks from environmental threats and hazards, and to reduce the opportunities for unauthorized access.*

#### **Equipment Placement and Protection (7.2.1)**

*Equipment shall be located in secured areas. Equipment located in areas where the State of Tennessee is unable to maintain a secure perimeter shall be locked in a secured cabinet with access controlled by the State of Tennessee. Secured cabinets or facilities shall support further segregation within the State of Tennessee's Information Technology (IT) organization based on role and responsibility.*

#### **Power Supplies (7.2.2)**

*Infrastructure and related computing equipment shall be protected from power failures and other electrical anomalies.*



### **Cabling Security (7.2.3)**

*Power and telecommunications cabling carrying data or supporting information services shall be protected from unauthorized interception or damage.*

### **General Security Controls (7.3)**

*Information shall be protected from disclosure to, modification or theft by unauthorized persons.*

#### **Clear Screen Policy (7.3.1)**

*All endpoints that provide access to Information Processing Systems shall be configured so that a screen-saver, with password protection engaged, or other lock-down mechanism that prevents unauthorized viewing of screen information or unauthorized access to the system shall automatically be implemented if the system has been left unattended.*

*All computing platforms with attached displays shall be oriented away from direct line of sight from unauthorized viewers.*

## **RESPONSIBILITIES**

### ***OIR***

OIR is responsible for developing requirements and guidelines for physical access to enterprise information resource assets and infrastructure. OIR will ensure that appropriate protective mechanisms are installed to restrict access to the enterprise information resource assets and infrastructure, in coordination with appropriate departments. Further, OIR will ensure physical access to enterprise assets is monitored, and unauthorized access is reported to management or the proper authorities.

### ***Agency***

Agencies are responsible for implementing practices and procedures and installing protective mechanisms to ensure local information assets are protected from unauthorized access. Agencies are also responsible for ensuring that physical access to agency hosted assets is monitored and that unauthorized access is reported to management or the proper authorities.

### ***Users***

Users should report any suspicious activity or persons to management or the proper authorities. Users should also refrain from behaviors that could compromise the physical protection of information technology resources such as willful assistance without proper identification, tailgating through doors or sharing facility access keys or codes.



## 8. COMMUNICATIONS AND OPERATIONS MANAGEMENT POLICY

*All agencies of the State of Tennessee shall document and maintain standard security operating procedures and configurations for their respective operating environments.*

### **OBJECTIVES:**

- Reduce the risk of liability for the unauthorized usage of unlicensed software and minimize the threat of exposure due to software weaknesses and/or configurations.
- Prevent the automated propagation of malicious code and contamination of sterile environments attached to the enterprise network.
- Ensure that media resources containing sensitive data are sanitized before transferal or reuse and that they are destroyed when decommissioned and not selected for reuse or transfer.
- Protect critical state information resource assets, including hardware, software and data from unauthorized use, misuse, or destruction.

### **Operational Procedures and Responsibilities (8.1)**

*The operating procedures identified by the security policy shall be documented and maintained by the appropriate process owners.*

#### **Documentation of Operating Procedures (8.1.1)**

*Operating procedures relating to security shall be treated as formal documents and changes shall be authorized by management.*

#### **Operational Change Control (8.1.2)**

*Changes to information processing facilities and systems shall be controlled and monitored for security compliance. Formal management responsibilities and procedures shall exist to ensure satisfactory control of all changes to equipment, software, configurations or procedures that affect the security of the State of Tennessee's operational environment.*

*All written documentation generated by the change control policies shall be retained as evidence of compliance.*

#### **Segmentation and Layered Security (8.1.3)**

*The State of Tennessee's operational environment shall support segmentation and layered security technologies and configurations based on role, risk, sensitivity and access control rules.*

#### **Segregation of Duties (8.1.4)**

#### **Separation of Development and Production Facilities (8.1.5)**

#### **Production Environment Access Control (8.1.6)**

*Under Development*



## **System Planning and Acceptance (8.2)**

### **System Acceptance (8.2.1)**

*Under Development*

## **Capacity Planning (8.3)**

*Under Development*

## **Software Control (8.4)**

*All software installed within the State's operational environment shall support security mechanisms that provide data integrity, confidentiality and availability. Software shall support security event monitoring and audit ability.*

### **Authorized and Licensed Software (8.4.1)**

*Only licensed software procured through State of Tennessee contracts or software acquired with Office for Information Resources (OIR) involvement in the procurement process shall be installed in the State's environment. Software that does not require a purchase (i.e. General Public License, FreeWare, ShareWare) shall be approved as a State standard software product through the State's architecture standards approval process.*

### **Malicious Software Control (8.4.2)**

*All computing platforms that are attached to the State's enterprise technology infrastructure shall be protected from intentional or unintentional exposure to malicious software. Malicious software includes, but is not limited to, software viruses, worms, Trojan horses and/or logic bombs.*

#### **Compromised System Policy (8.4.2.1)**

*Any system found infected with "Rootkit" malicious software is considered fully compromised. Fully compromised systems shall be removed from the operational environment. OIR Security Management reserves the right to seize any compromised system for forensic analysis.*

### **Patch Management Control (8.4.3)**

*All applications and processing devices that are attached to the State's enterprise technology infrastructure shall be kept up to date with security related patches made available by the software or hardware vendor.*

### **Media Handling and Security (8.4.4)**

*Software licensed to the State of Tennessee shall be installed only on systems or devices covered by the license agreement.*

## **Application Control (8.4.5)**

*Under Development*



### **Media Disposal and Reuse (8.5)**

*All data storage devices (media) subject to transfer or reuse must be sanitized in accordance with the State of Tennessee's media reuse procedure or superseding State or Federal requirements. Media assets that are not subject to transfer or reuse must be destroyed in accordance with the State of Tennessee's media disposal procedures or in accordance with superseding State or Federal requirements.*

### **RESPONSIBILITIES:**

#### ***OIR***

OIR is responsible for maintaining network infrastructure and enterprise component software and operating system configurations with the latest release of security related updates compatible with the State's enterprise environment and will provide a means by which authentic, tested and approved security related software updates can be deployed and implemented by agencies across the enterprise. OIR will deploy and monitor security control devices to facilitate a means by which all processing devices attached to the enterprise network environment can be protected from intentional or unintentional exposure to malicious software. OIR will establish, maintain, and follow procedures to prevent the propagation of malicious code and/or system abuse. OIR will develop and maintain supporting guidelines and documentation and will ensure that contracts for standard software products and media destruction services are maintained. Finally, OIR will work with vendors/contractors (engaged through OIR) and who are responsible for non-state managed devices to ensure they understand and comply with these responsibilities.

#### ***Agency***

Agencies will establish agency policy and procedures for media disposal or reuse, including personally and/or contractor owned devices, and will ensure that any agency media disposal and reuse procedure complies with superseding State or Federal sanitizing requirements that may be specific for the agency. Agencies systems attached to the State of Tennessee's enterprise network will participate in enterprise patch management and malicious software control programs. Agencies will be responsible for testing patches prior to release in the agency's environment. Agencies will also ensure that all systems not able to participate in an automatic security related update process are kept up to date through an additional manual process. This process, along with the participating systems, must be documented and made available for periodic audit by the OIR Security Management Team. Agencies will utilize software products that have been approved as standard for the State of Tennessee. Finally, agencies will ensure vendors/contractors (engaged through the agency) who are responsible for non-state-managed devices understand and comply with these responsibilities.

#### ***Users***

Users are responsible for ensuring that devices assigned to them retain the ability to participate in automatic security software update environments (i.e. Disabling automatic enterprise configurations is prohibited). Users are to only utilize software products that have been approved as standard for the State of Tennessee, and they are to abstain from downloading unauthorized software or installing personally owned software.



## 9. ACCESS CONTROL POLICY

*Access to the State of Tennessee's information resources shall be granted consistent with the concept of least privilege. All information processing systems owned by the State of Tennessee shall have an appropriate role-based access control system that ensures only legitimate users and/or systems have access to data resources that they are explicitly authorized to use. All information processing systems shall have the capability to interact with the statewide access control environment. Access to any State of Tennessee information processing system is generally forbidden unless explicitly permitted.*

### **OBJECTIVES:**

- Ensure that authorized access to the State of Tennessee's information resources is appropriately provisioned.
- Ensure that unauthorized access to information resources is appropriately prevented.
- Minimize information technology risks through the use of access control methodologies and techniques.
- Ensure that a means to segment and control enterprise network traffic is implemented.
- Ensure that all interconnectivity between the State of Tennessee's enterprise network and any other network is provisioned securely.

### **Access Control Rules (9.1)**

*Access control rules and requirements to access the State of Tennessee's information resources shall be developed, documented and maintained by their respective resource owners. All agency specific-access control rules and requirements must be made available for audit by the Office for Information Resources (OIR) Security Management Team and in compliance with the State of Tennessee enterprise security policies. All enterprise access control rules and requirements must be approved by the OIR Security Management Team.*

### **User Access Management (9.2)**

*All State of Tennessee agencies shall develop, document and maintain user access and account management procedures. These procedures shall include, but are not limited to, new account provisioning, account transfer and/or job profile changes and account termination and/or de-provisioning.*

#### **User Registration and Authorization (9.2.1)**

##### **Loss of User Privilege (9.2.1.1)**

#### **User Privilege Control (9.2.2)**

*Under Development*



### **User Identification and Authorization (9.2.3)**

*At a minimum, user access to protected information resources requires the utilization of User Identification (UserID) and password that uniquely identifies the user. Sharing access credentials intended to authenticate and authorize a single user between any two or more individuals is prohibited.*

### **User Account Lockout (9.2.4)**

*Limits shall be set for the number of unsuccessful logins that can be attempted for a UserID.*

### **User Password Management (9.2.5)**

*Passwords assigned to users must be created and managed to protect against unauthorized discovery or usage and must meet the minimum password requirements.*

### **Review of User Access Rights (9.2.6)**

*Under Development*

## **Network Access Control (9.3)**

*The State of Tennessee's enterprise network shall be designed to provide the ability to segregate and control traffic between systems, connected devices and third party environments based on role, risk and sensitivity. The enterprise network will allow for specific services at all seven layers of the Open Systems Interconnection (OSI) model to be made available or filtered, depending on legitimate business need. All access and connectivity to the State of Tennessee's enterprise network must comply with the State of Tennessee's security requirements for enterprise network interconnectivity. All access and connectivity to the State of Tennessee's enterprise network shall be granted consistent with the concept of least privilege. Access and connectivity to the State of Tennessee's enterprise network is generally forbidden unless explicitly permitted.*

### **User Authentication for Network Connections (9.3.1)**

*Under Development*

### **Segregation in Networks (9.3.2)**

*All enterprise network architectures operated by, or on behalf of, the State of Tennessee shall be designed to support, at a minimum, separate public, "demilitarized" and private security zones based on role, risk and sensitivity. Bridging between separate security zones is strictly prohibited. All access between separate security zones shall be controlled by a security mechanism configured to deny all access by default unless explicitly authorized and approved by the OIR Security Management Team.*



### **Enterprise Interconnectivity Requirements (9.3.3)**

*All systems attached to the State of Tennessee's enterprise network shall comply with the security requirements for enterprise interconnectivity documentation.*

### **Operating System Access Control (9.4)**

#### **Session Time Outs (9.4.1)**

#### **Password Management System (9.4.2)**

#### **Use of Shared Technology Resources (9.4.3)**

*Under Development*

### **Logon Banner (9.4.4)**

*All systems and devices owned and operated by or on behalf of the State of Tennessee must display the State approved logon banner before the user logs in.*

### **Mobile and Workstation Computing (9.5)**

*All mobile and workstation computing platforms, including but not limited to desktops, laptops, hand-held devices, and portable storage media, shall be protected from unauthorized use, modification or destruction. Mobile and workstation computing platform capabilities shall be granted to individuals or entities that require such access and facilities to perform their specific job related duties. Confidential data assets shall not be stored on mobile and/or workstation computing platforms unless absolutely necessary.*

### **Mobile Computing Policy (9.5.1)**

*Mobile computing platforms shall be physically protected against theft when left unattended. Mobile computing platforms shall not store confidential data assets where it is not absolutely necessary to perform the specific job related duties. Storage of confidential data assets on a mobile computing platform must have approval from the asset custodian for such storage. Confidential data assets which have been authorized for mobile use must be encrypted while stored on mobile computing platforms.*

### **Workstation Computing Policy (9.5.2)**

*Workstation computing platforms shall be physically protected against theft when left unattended. Workstation computing platforms shall not store confidential data assets where it is not absolutely necessary to perform the specific job related duties. Storage of confidential data assets on a workstation computing platform must have approval from the asset custodian for such storage. Confidential data assets which have been authorized to be stored on the local workstation must be encrypted while stored on the workstation computing platform.*

### **Monitoring System Access and Use (9.6)**

#### **Event Logging (9.6.1)**



**Clock Synchronization (9.6.2)**  
*Under Development*

**RESPONSIBILITIES:**

***OIR***

OIR will ensure that all enterprise networks are provisioned and segmented with the appropriate levels of security in regards to role, risk and sensitivity. They will also develop, implement and maintain guidelines for password management and maintenance. OIR will ensure that all third parties are aware of and compliant with the State of Tennessee's Third Party Connectivity Agreement prior to the establishment of the interconnection. OIR is responsible for the management and processing of granting or rejecting third party interconnectivity requests. OIR shall ensure that due diligence and care is taken to fulfill any protection requirements of the mobile computing platforms for which OIR is responsible.

***Agency***

Agencies are responsible for implementing a process for identifying and documenting legitimate "need" for users to have access to the State of Tennessee's information resources. This process will include review and revalidation of existing users. Agencies will ensure that all requirements of a third party network connection to the State of Tennessee's enterprise network are presented to the OIR Security Management Team for review, approval or rejection prior to implementing the connection. Agencies shall ensure that due diligence and care is taken to fulfill any protection requirements of the mobile computing platforms for which each agency is responsible.

***Users***

Individual users are uniquely identified by their respective access credentials and are responsible for maintaining the confidentiality of those credentials. Users should refrain from using authentication credentials intended for the protection of State of Tennessee assets on personal computing platforms or non-State related websites.



**10. SYSTEMS DEVELOPMENT AND MAINTENANCE POLICY**  
**Systems Development and Maintenance Control Policy 10.0**  
*Under Development*



## 11. COMPLIANCE POLICY

*All State of Tennessee agencies must be compliant with this security policy document*

### Compliance with Legal Requirements (11.1)

*All State of Tennessee agencies must be compliant with any State or Federal regulatory requirements which supersede this policy document.*

#### Applicable Legislation (11.1.1)

*All State of Tennessee agencies must be compliant with any legislation enacted by the State of Tennessee in regards to the management of information resources on behalf of the State.*

#### Data Protection and Privacy (11.1.2)

*All State of Tennessee agency data custodians must ensure that all "Personal Information" data assets, as defined by applicable State and/or Federal law and regulations, are protected from unauthorized use, modification or disclosure.*

#### Data Breach and Disclosure (11.1.3)

*Any State of Tennessee agency that discovers a breach of the information security controls set forth in this document which results in disclosure of unencrypted "personal information" about persons to unauthorized third parties shall provide notice of the disclosure in accordance with TCA 47-18-2107(3)(A).*

### Internal Compliance Matrix (11.2)

See the Appendix of this document for the policy compliance matrix, which indicates the dates by which all agencies must be compliant with the relative policy components. Those agencies that can not meet the compliance deadline must file for an exception using the security policy exception process.



## 12. BUSINESS CONTINUITY MANAGEMENT POLICY

While Business Continuity Management is included in the International Standards Organization (ISO) 17799 standards, it is outside the scope of the security organization within OIR. Agencies are expected to collaborate with the State's administrative services agencies to ensure their ability to recover from any disaster and to maintain business operations.



### 13. VERSION HISTORY

Version 1.0 – May 10, 2006	<i>Initial draft review to agencies and SAC.</i>
Version 1.1 – June 27, 2006	<i>Fixed errors before official release.</i>
Version 1.2 – July 12, 2006	<i>Added policies 5.0, 5.1, 5.3, 5.3.1, 9.5, 9.5.1, 11.1, 11.1.1, 11.1.2, 11.1.3 for SAC review.</i>
Version 1.3 – July 26, 2006	<i>Made modifications as a result of the SAC and legal commentary to sections 1,2,5,9 and 11.</i>
Version 1.3 – August 15, 2006	<i>Minor adjustments to new policies introduced in v1.2 and v1.3, fixed spelling errors.</i>
Version 1.3 – September 14, 2006	<i>Version 1.3 approved for publication.</i>
Version 1.4 – August 8, 2007	<i>Minor wording changes throughout. Major wording changes to 9.5.</i>
Version 1.5 – January 8, 2008	<i>Minor wording changes to 9.5. Added policy 9.5.2.</i>
Version 1.6 – April 4, 2008	<i>Minor wording changes to 9.5.2.</i>



## 14. TERMS AND DEFINITIONS

See Appendix J

<http://www.intranet.state.tn.us/finance/oir/qa/stds/glossary/index.htm>



## 15. APPENDICES

- Appendix A Security Policy Development Process
- Appendix B Security Policy Development Process Flow Diagram
- Appendix C Security Policy Exception Process
- Appendix D Security Policy Exception Process Flow Diagram
- Appendix E Security Policy Action Request
- Appendix F NIST SP-800-47 (*Temporary Substitution for “Security Requirements for Enterprise Interconnectivity”*)
- Appendix G State of Tennessee Acceptable Use Policy
- Appendix H State of Tennessee Approved Login Banner
- Appendix I Security Policy Compliance Matrix
- Appendix J Glossary
- Appendix K Information Security Incident Response Plan
- Appendix L Third Party Access Agreement
- Appendix M IT Control Framework
- Appendix N Security Policy Exception Request Form



**STATE OF TENNESSEE ENTERPRISE TECHNOLOGY ARCHITECTURE STANDARD  
PRODUCTS**

---



## Enterprise Technology Architecture

### Standard Products

Version 3.04, May 2014

Submitted to:

State of Tennessee Office for Information Resources Executive Leadership Team

Executive Sponsor: Mark Bengel

State of Tennessee Chief Information Officer

Department of Finance and Administration

Office for Information Resources



# Technology Architecture Framework

The State of Tennessee Information Systems Council (ISC) has assigned the responsibility for the development of the State's Technology Architecture to the Office for Information Resources. The Technology Architecture is an integral part of the Enterprise Architecture and is the official publication documenting information technology products and standards.

Technology Architecture Standards are applicable to all state agencies (e.g., departments, boards, commissions, offices, and institutions of the state) and extend to vendors contracted to work for state agencies. Exceptions to Enterprise Architecture standards are governed by the Waiver/Exception process (see Appendix A).

The Technology Architecture establishes technical requirements which govern the planning, acquisition, use, and management of information technology resources. It organizes, classifies, and categorizes them in an orderly framework of Domains, Disciplines and Technology Areas. The concept of domains, disciplines and technology areas are aligned with the National Association of State Chief Information Officers (NASCIO) Enterprise Architecture Toolkit.



# Technology Architecture Domains

The Technology Architecture Domains are listed below with a brief description.

## *Application*

The Application Domain documents the languages, tools and utilities to design, build, deploy, operate and maintain the State's applications.

## *Collaboration*

The Collaboration Domain identifies standards and components that facilitate interaction of the workforce and promote group productivity.

## *Data*

The Data Domain addresses technology requirements for the storage and management of critical State data in electronic form.

## *Information*

The Information Domain addresses technology requirements for development and maintenance of areas requiring significant multi-agency coordination in the context of enterprise data and resource management.

## *Network*

The Network Domain documents the technology required to support the movement of electronic information and to support the voice, data and video infrastructures.

## *Platform*

The Platform Domain identifies technology hardware platforms and the related operating systems to support the current and future business requirements, standardizes configurations and defines host communications.

## *Security*

The Security Domain provides for integrating security services, mechanisms, objects and management functions, across multiple hardware and software platforms and networks.

## *Systems Management*

The Systems Management Domain defines the framework for efficient and effective management of the State's information processing environment, including monitoring and management of peripheral devices, processes for production systems, and the capability to recover the production environment in part or in whole.



# Technology Architecture Product Phases

The Technology Architecture Products component facilitates planning by identifying a lifecycle phase for each standard product. The phases are listed below with a brief description.

## *Emerging*

Technologies that, while possibly accepted as well utilized throughout the industry, are new to the enterprise. It is generally understood that emerging technologies be considered carefully before implementing in the enterprise-wide architecture. It is therefore recommended that, for initial implementation, emerging technologies be limited to smaller, non-mission-critical projects until it is proven that they can be integrated successfully into the existing enterprise architecture. Use of emerging technology products requires an approved standards exception.

## *Current*

Technologies that are the current standard for use within the enterprise, and tested and generally accepted as standard within the industry. These items comply with or support the principles listed for the discipline.

## *Twilight*

Technologies being phased out by the enterprise but not yet having an established end date.

## *Obsolete*

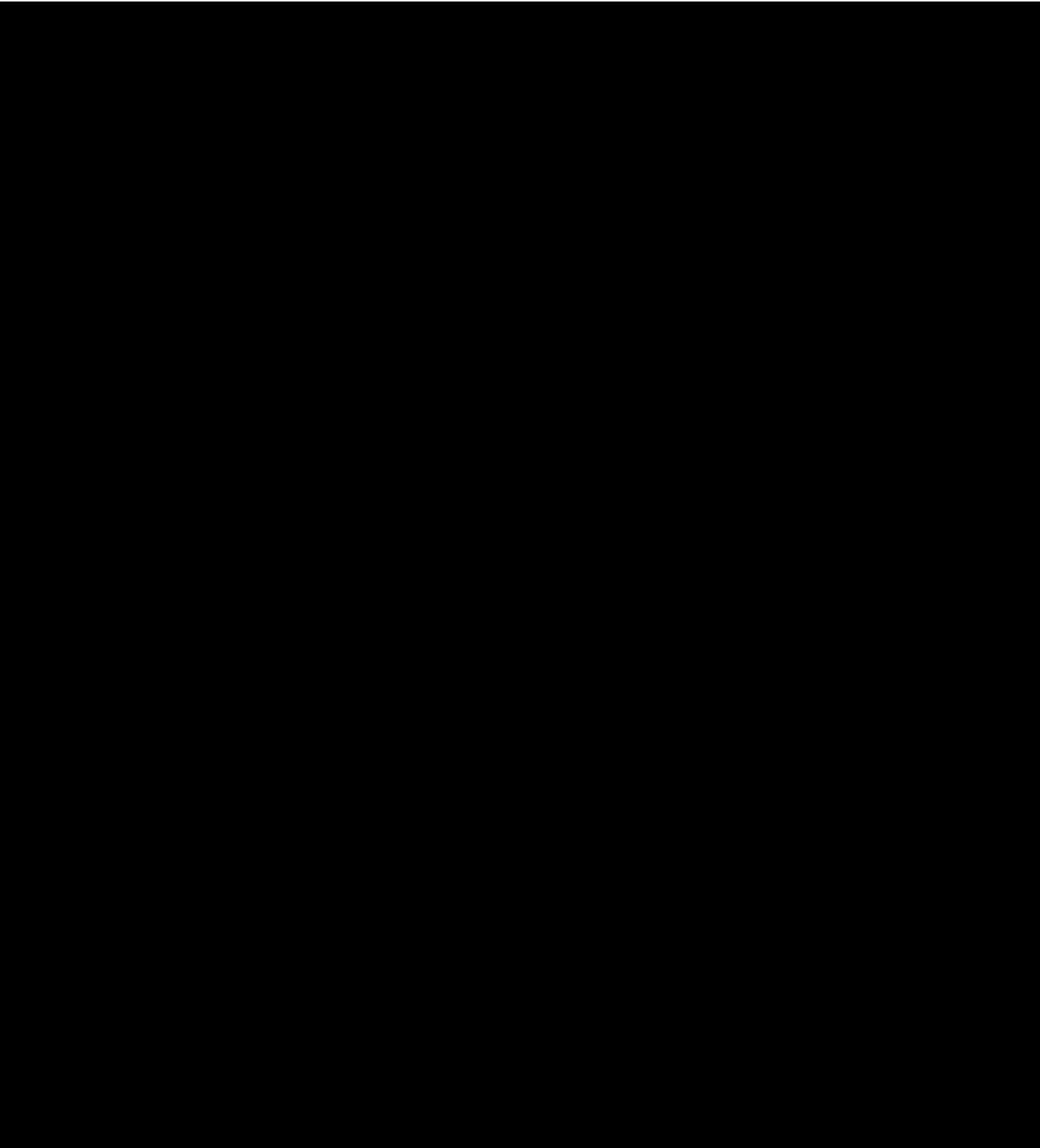
Technologies that have been phased out and cannot be used within the organization past a specific date.

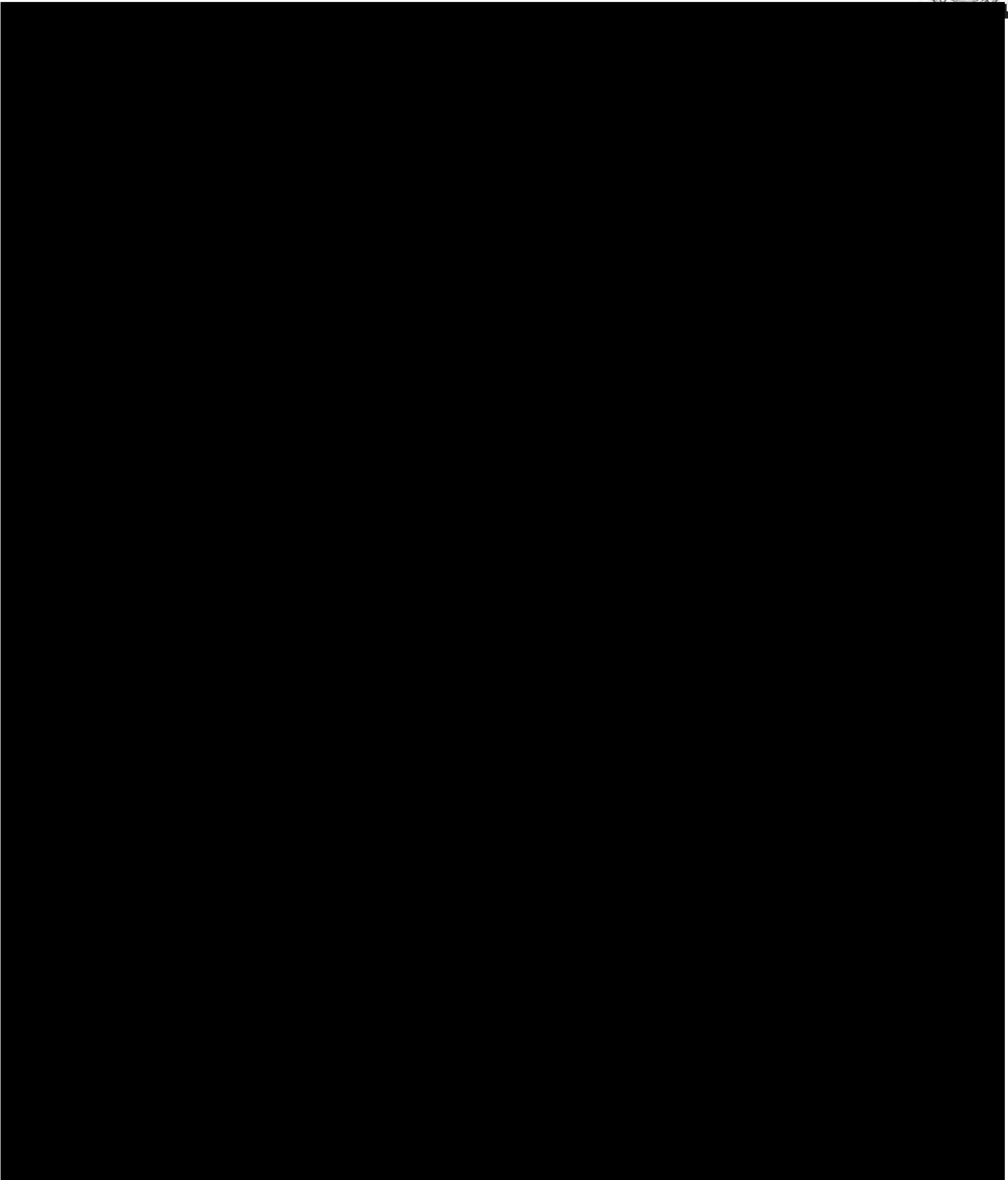
## *Removed*

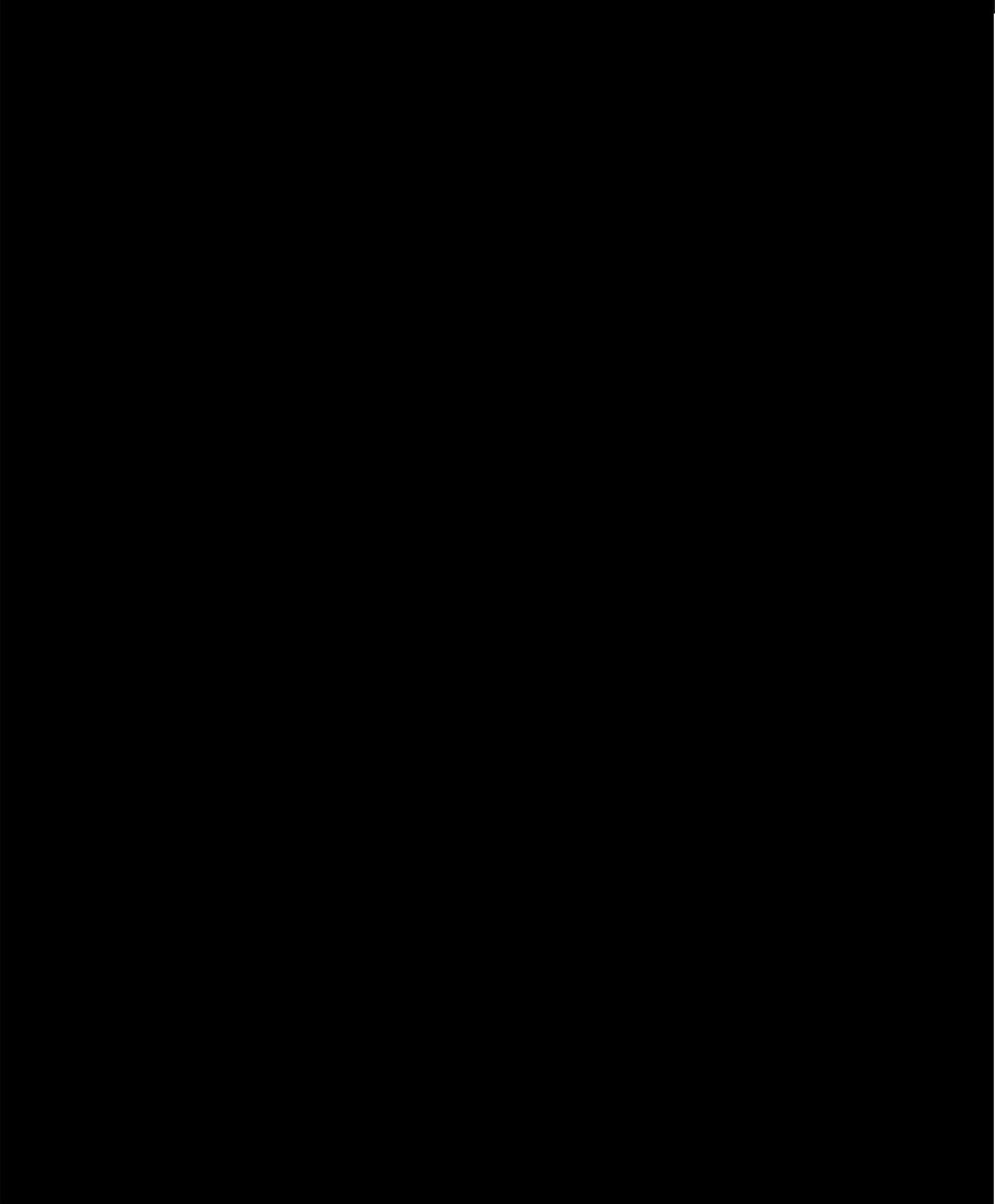
Items that are no longer part of the architecture (logically deleted)

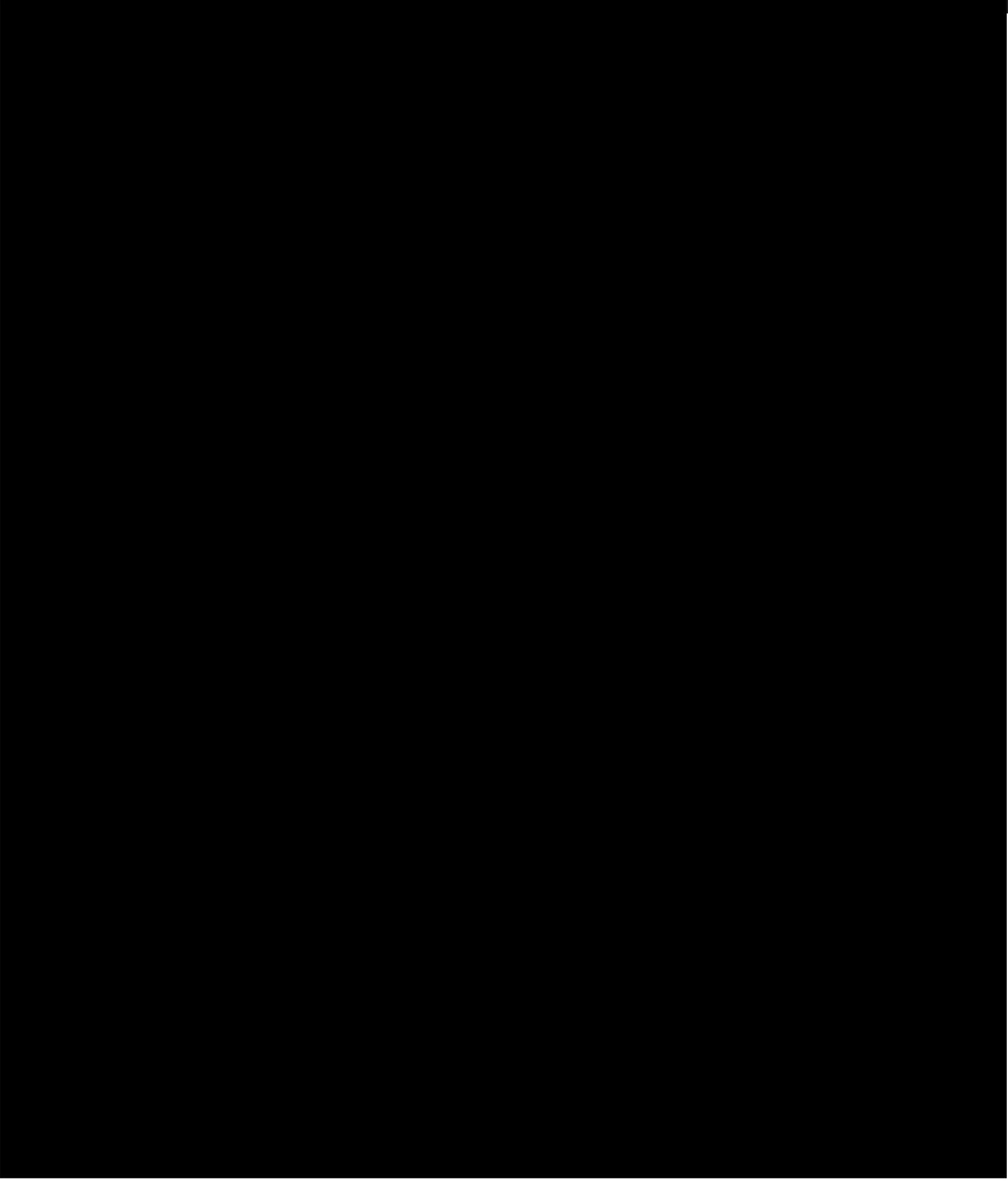


## Domain: Application



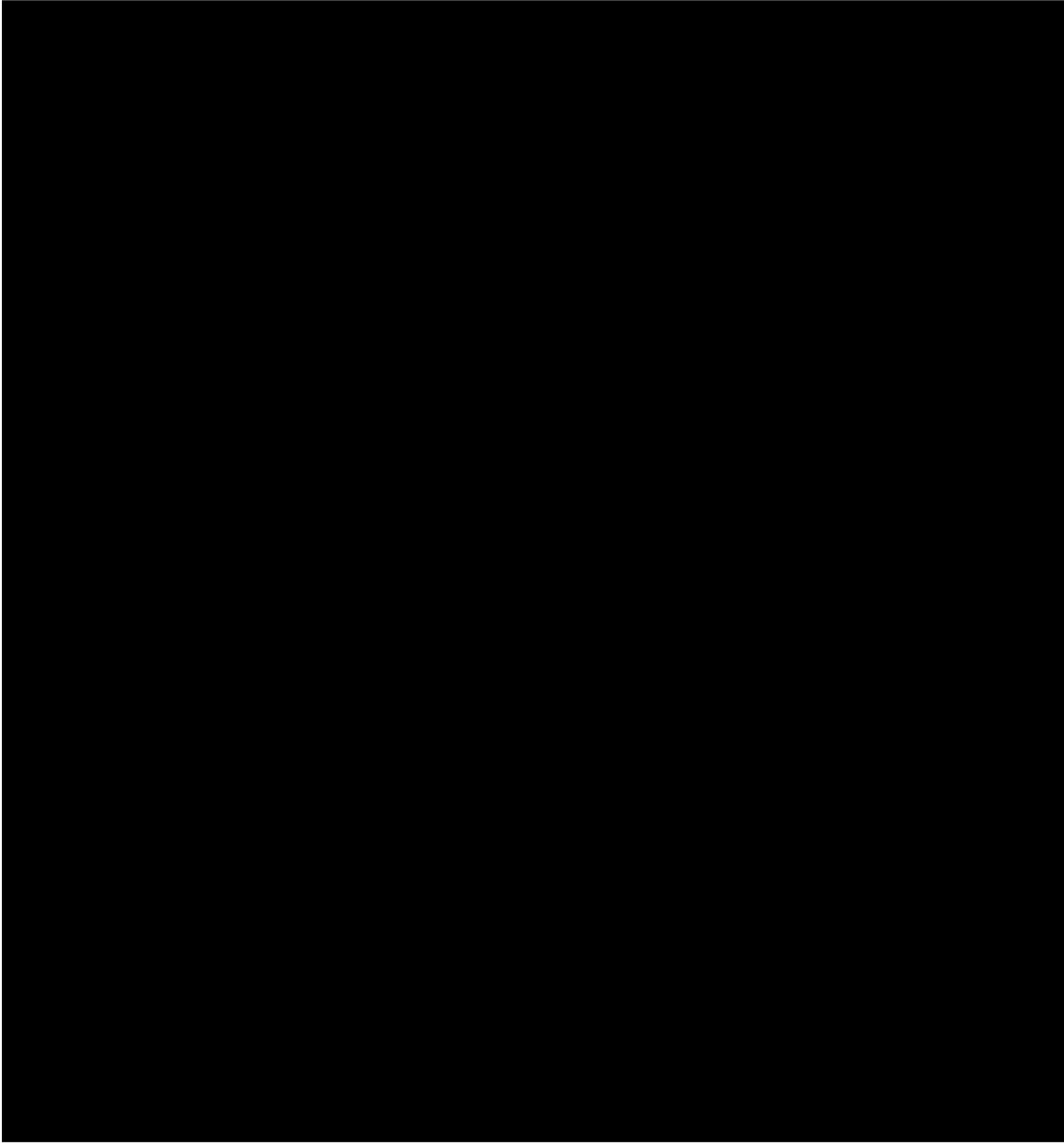


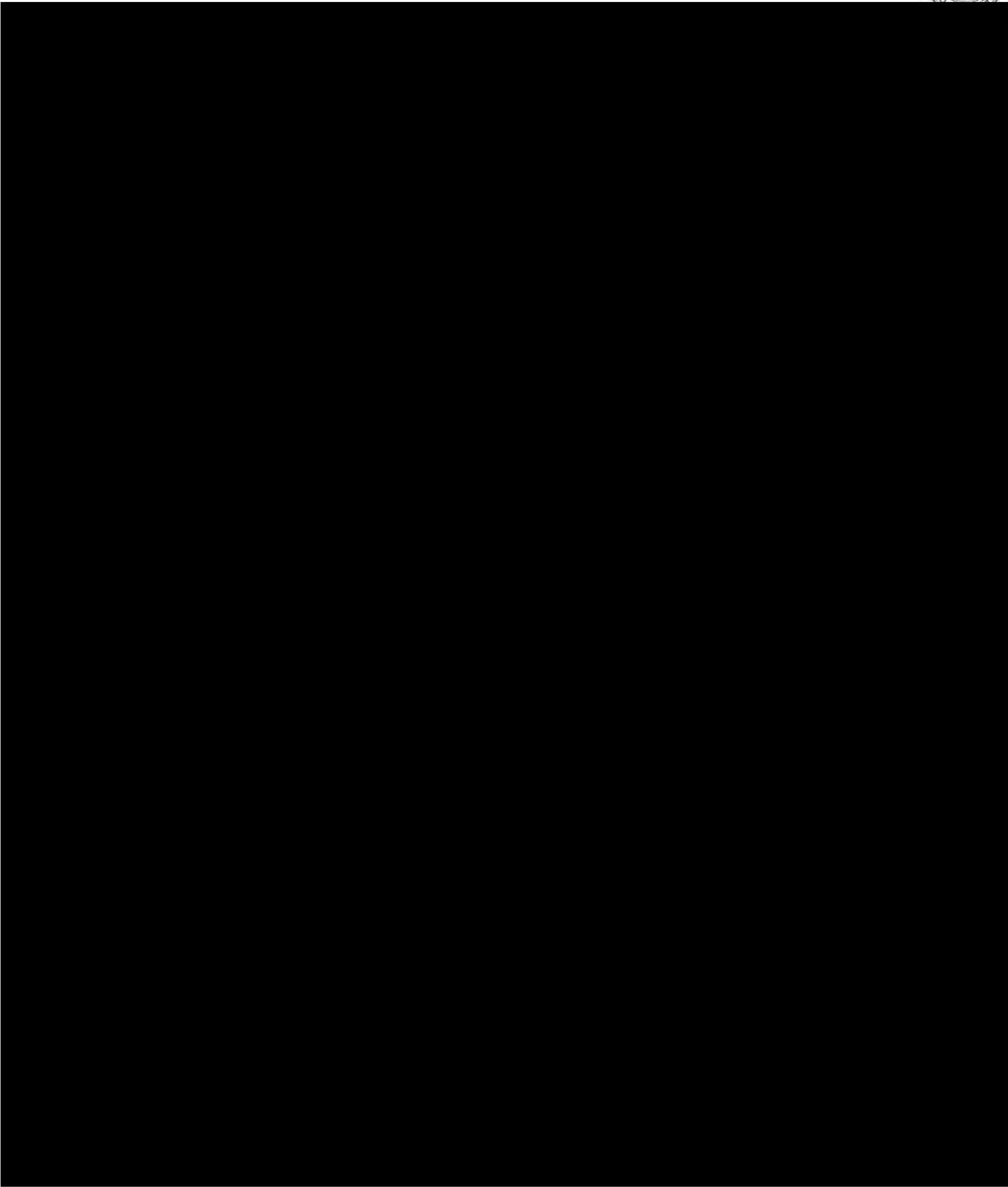


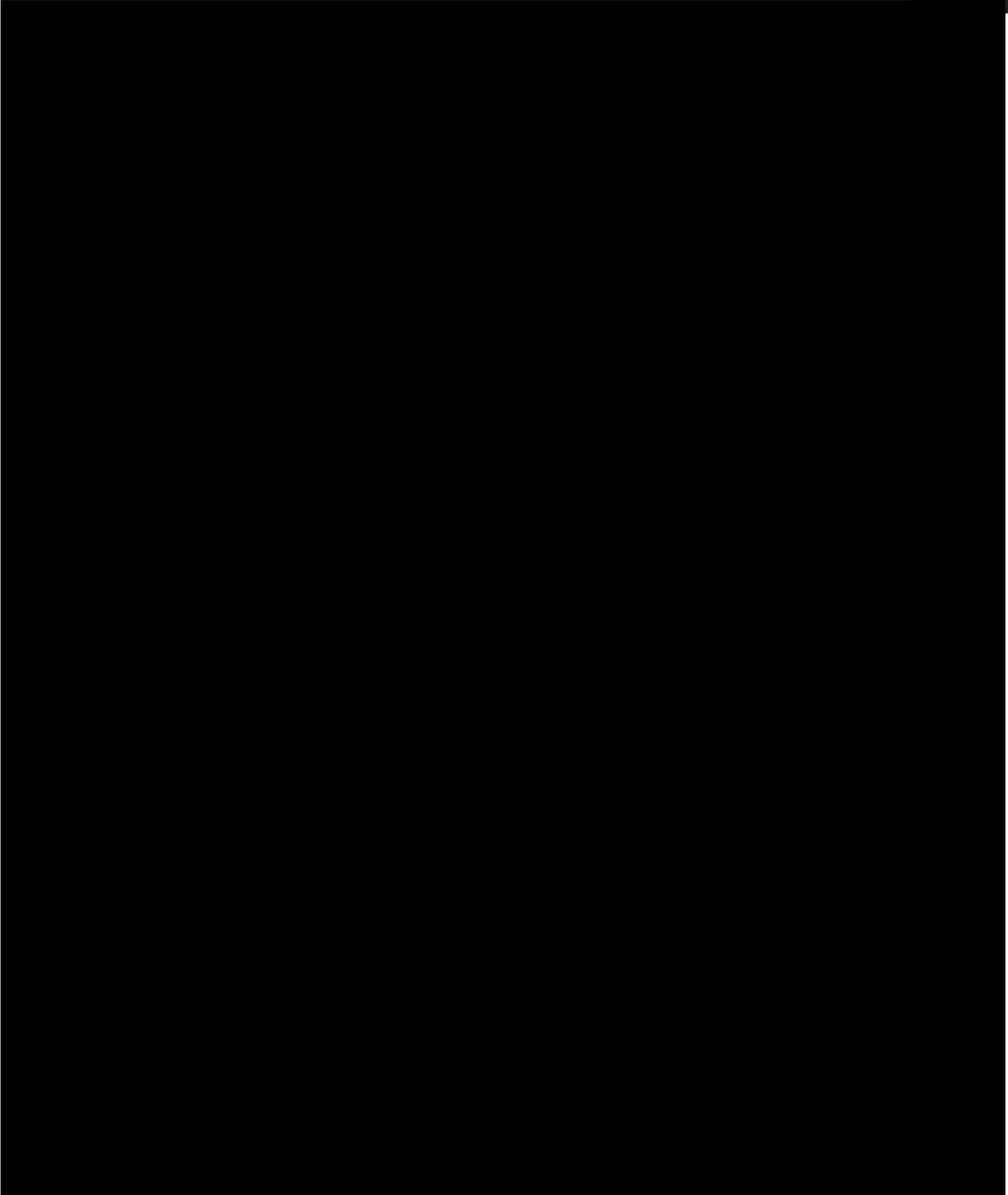


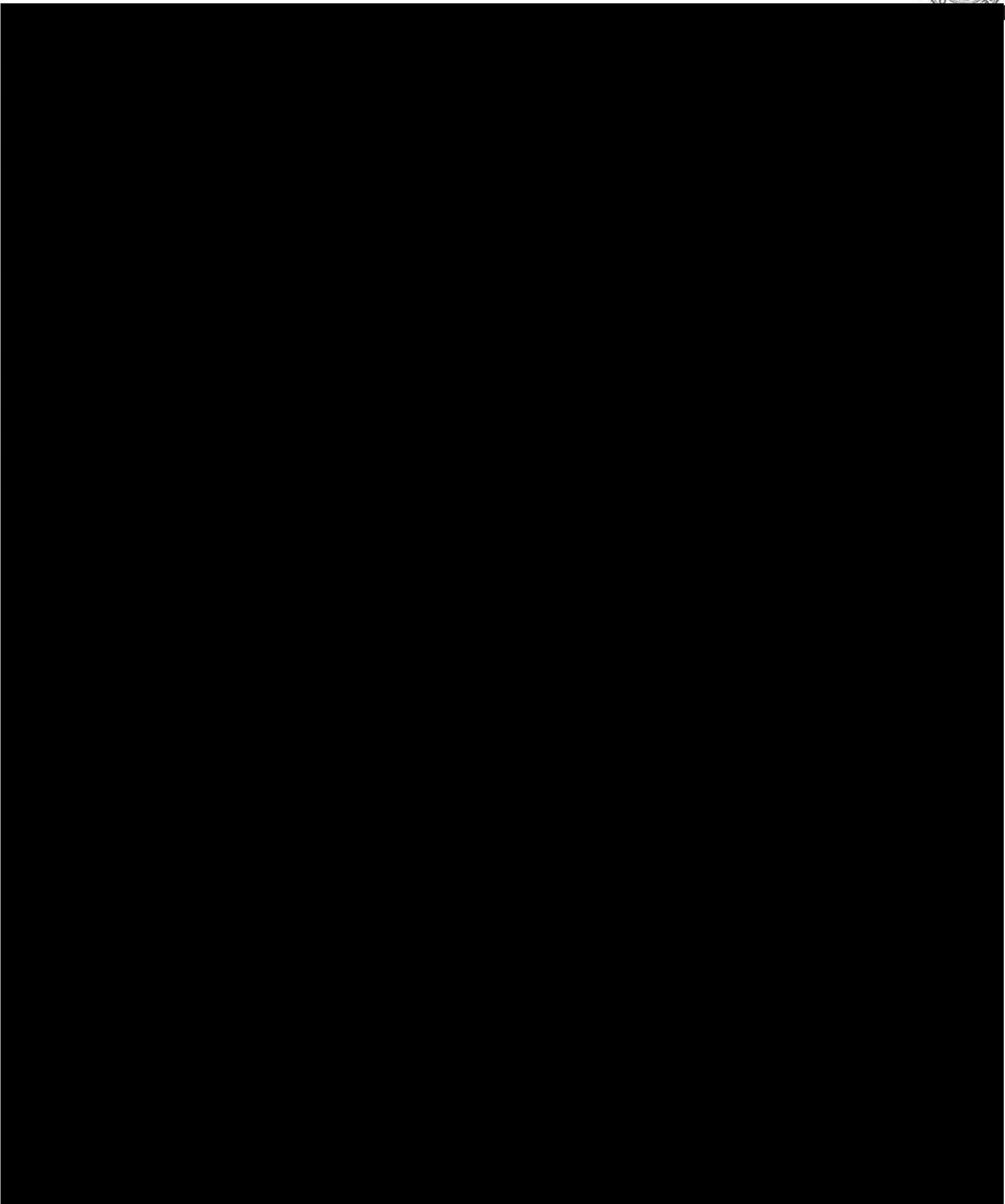


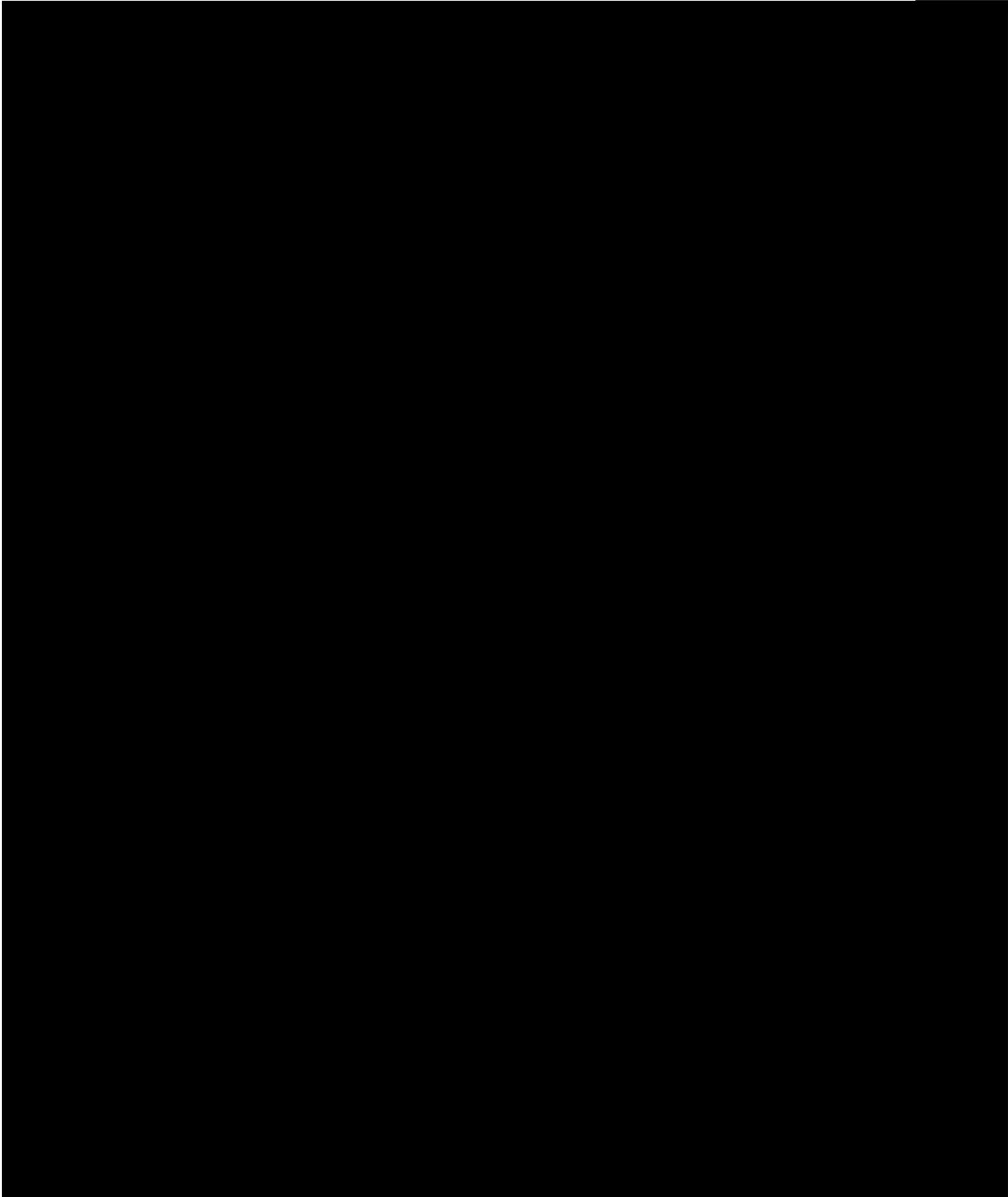
## Domain: Collaboration

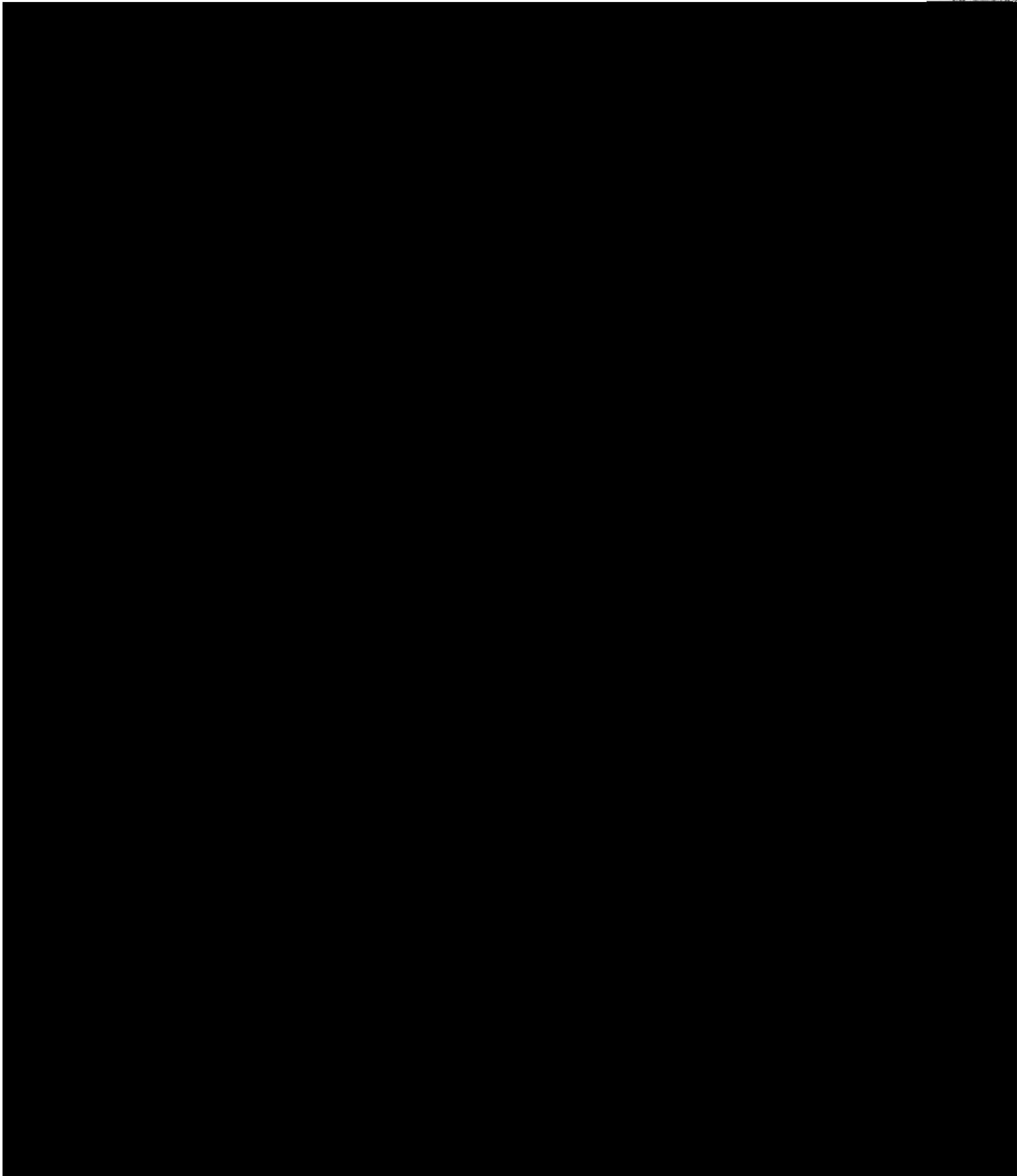


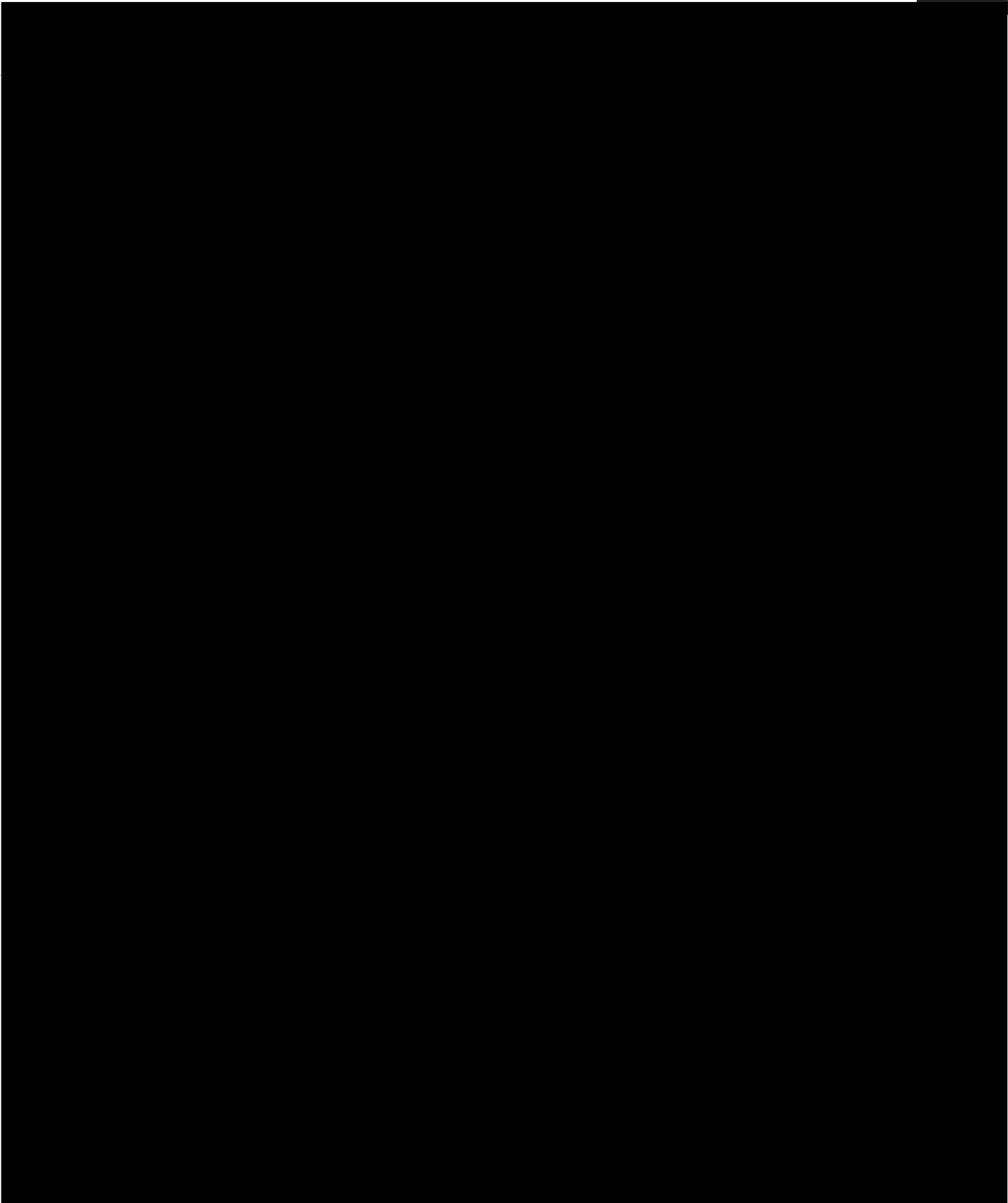


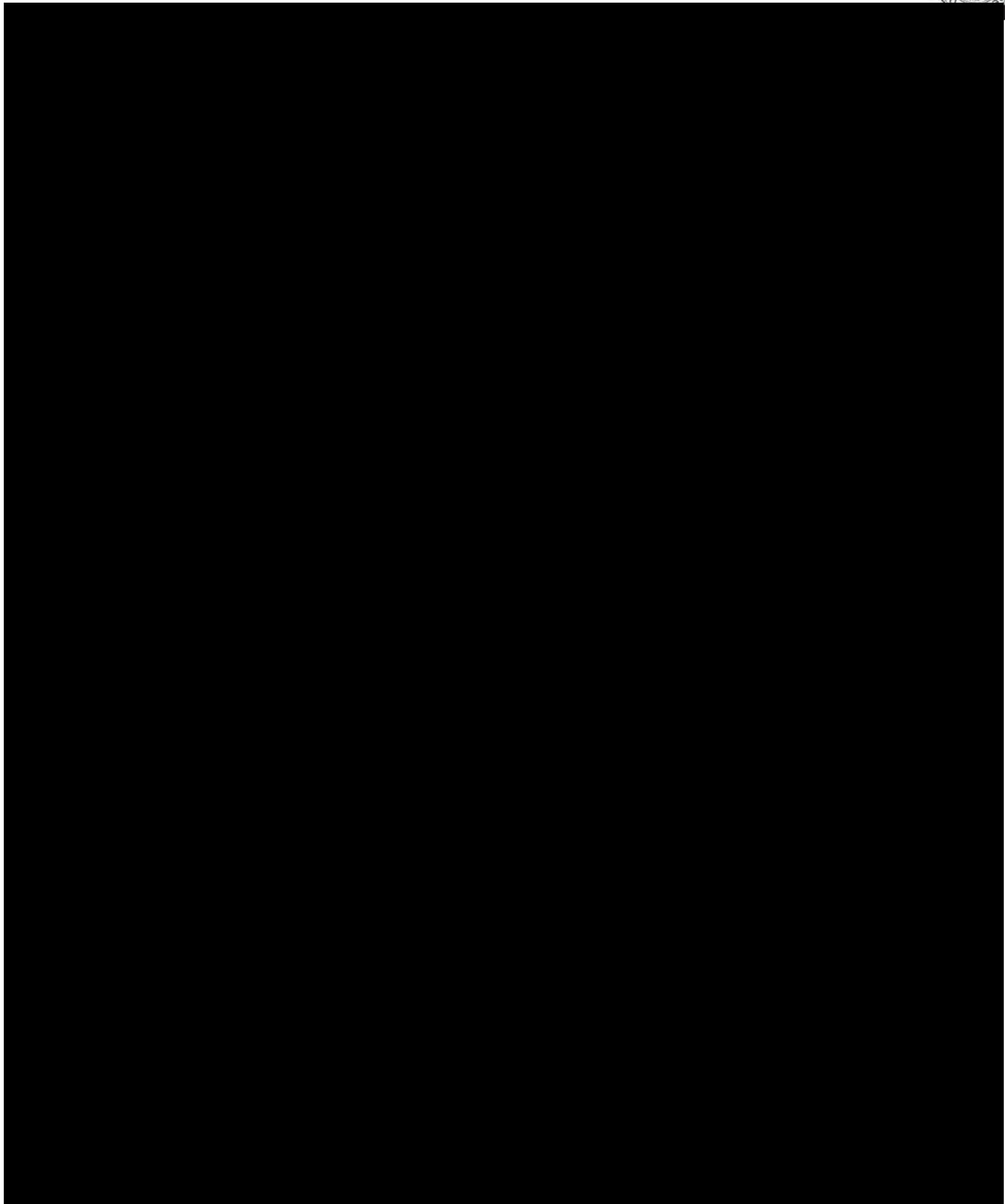




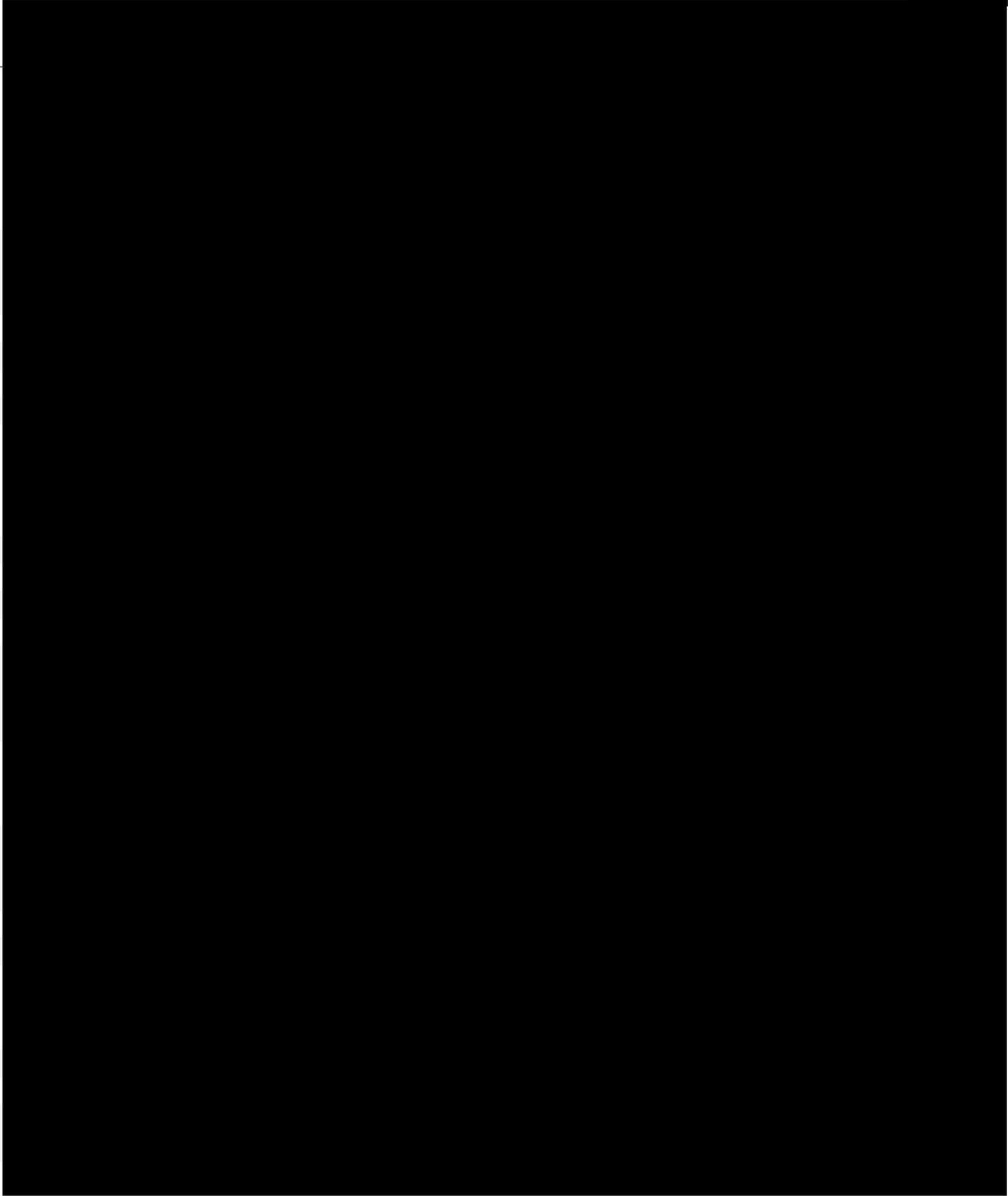


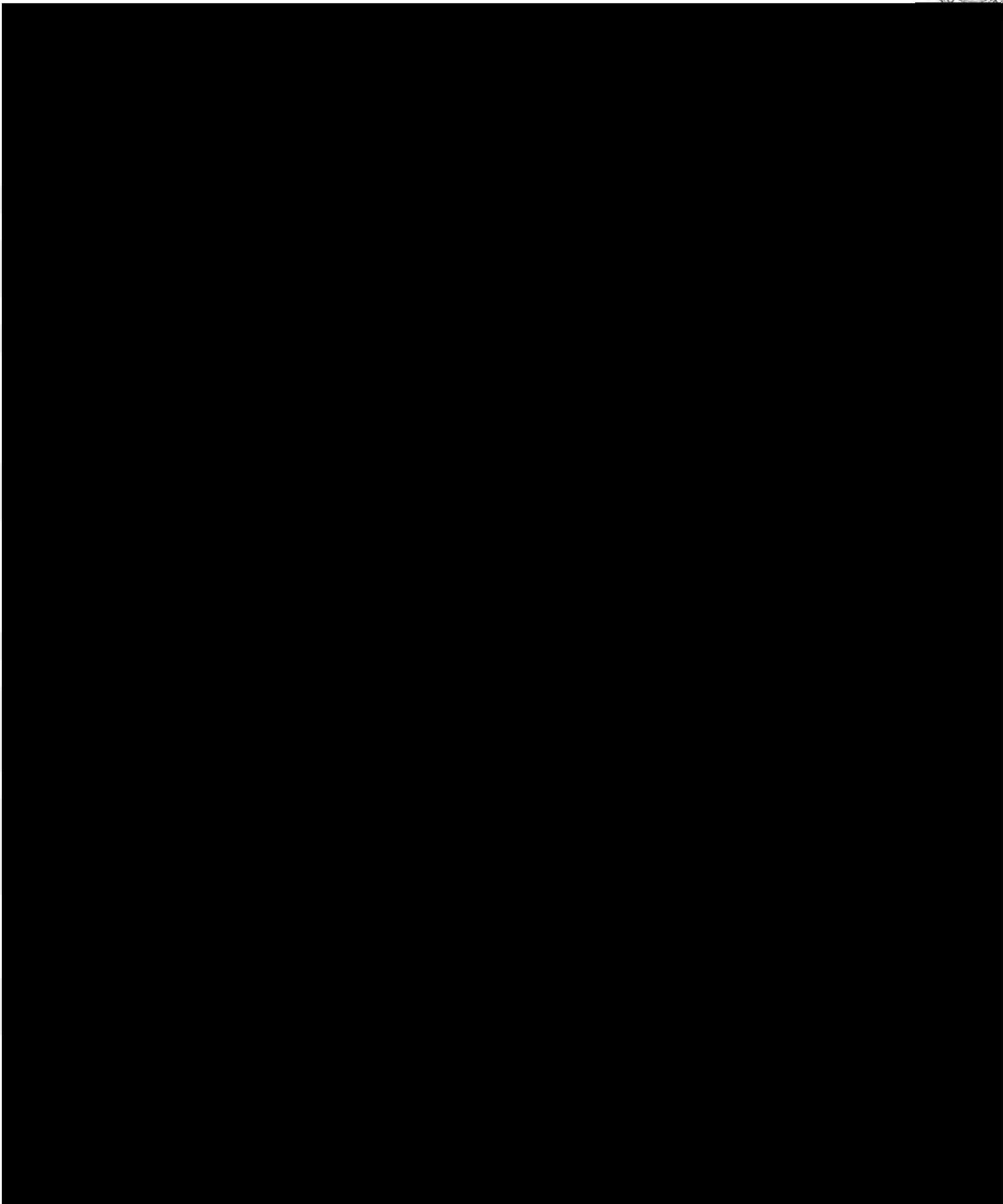








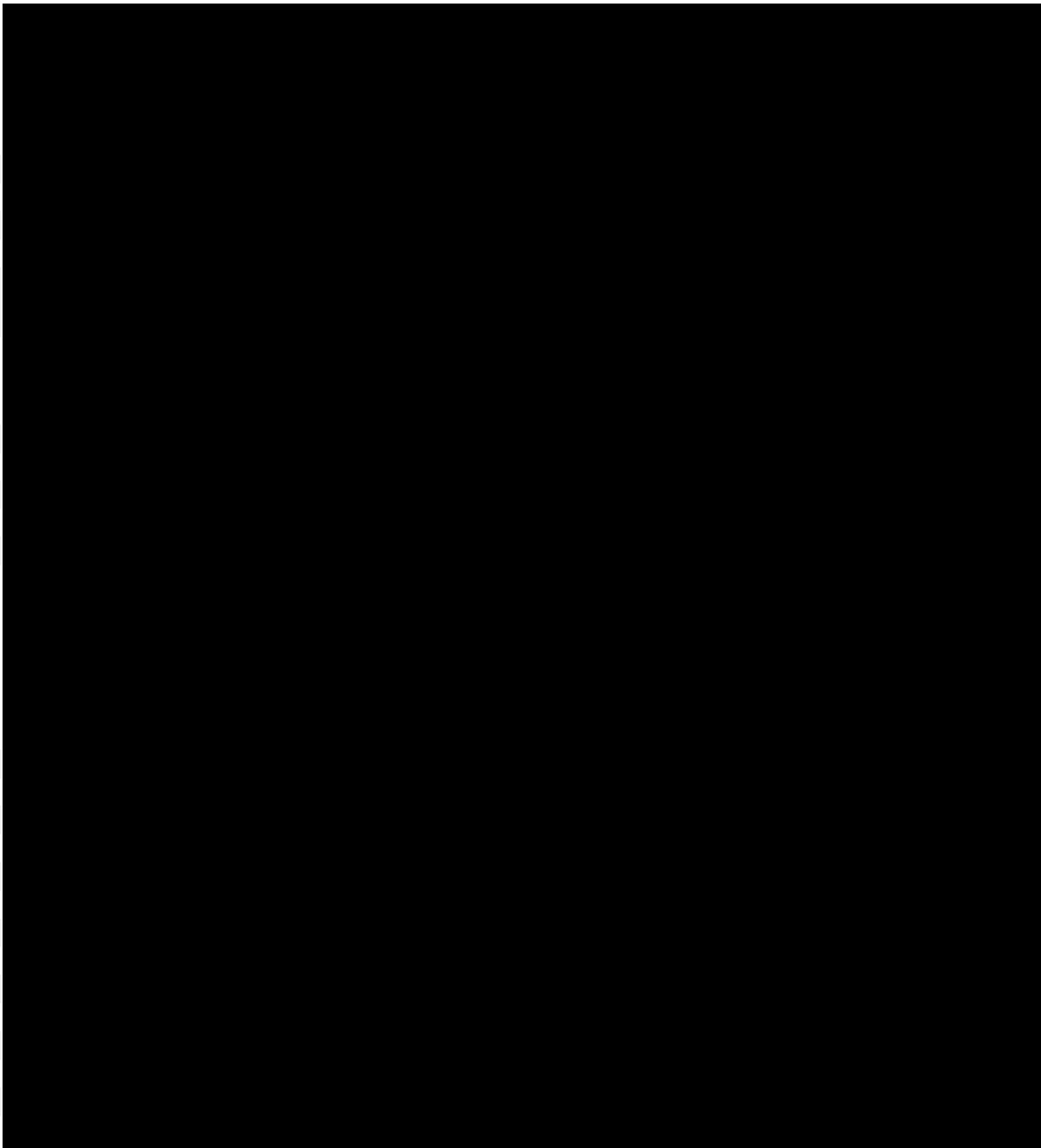


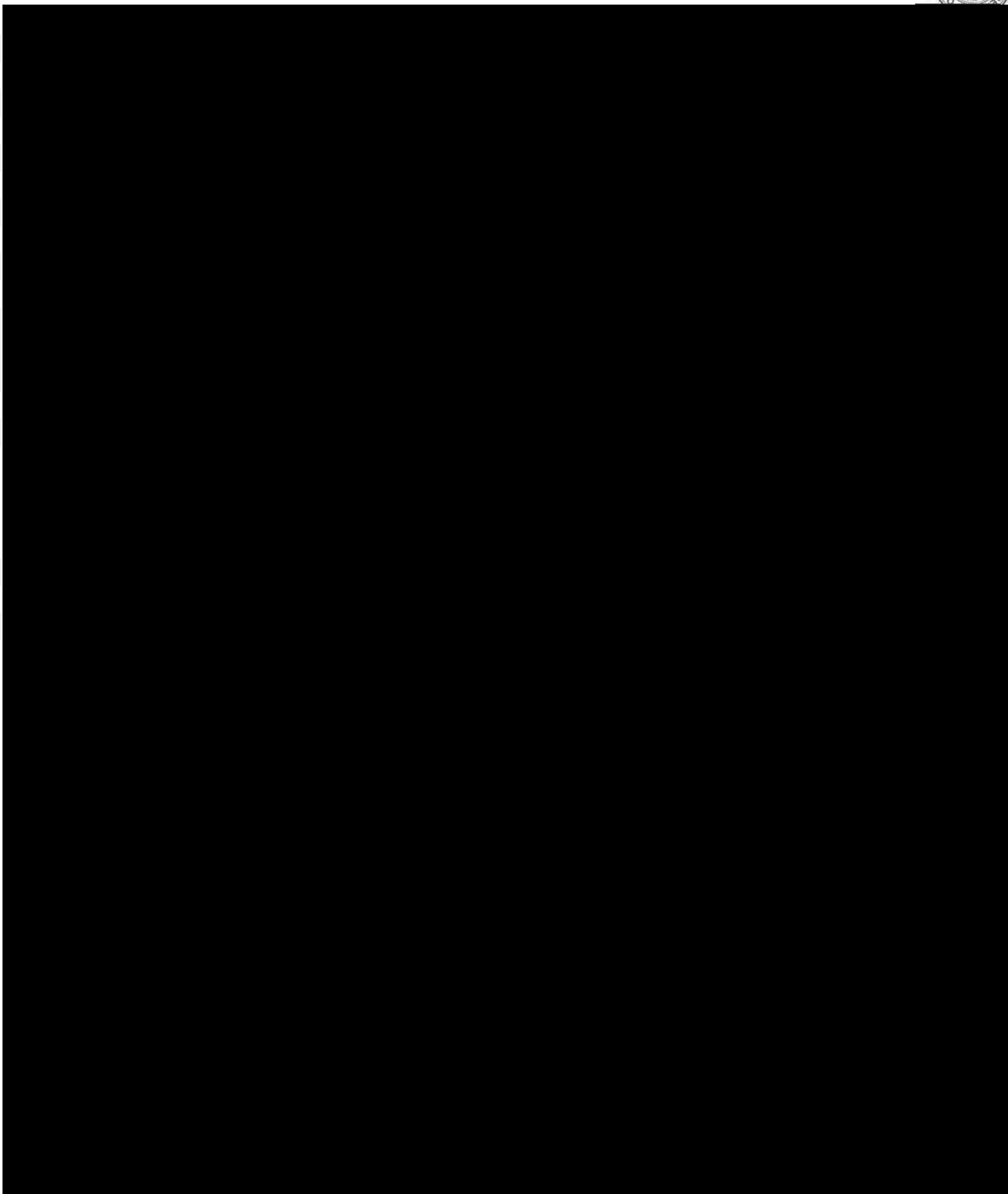


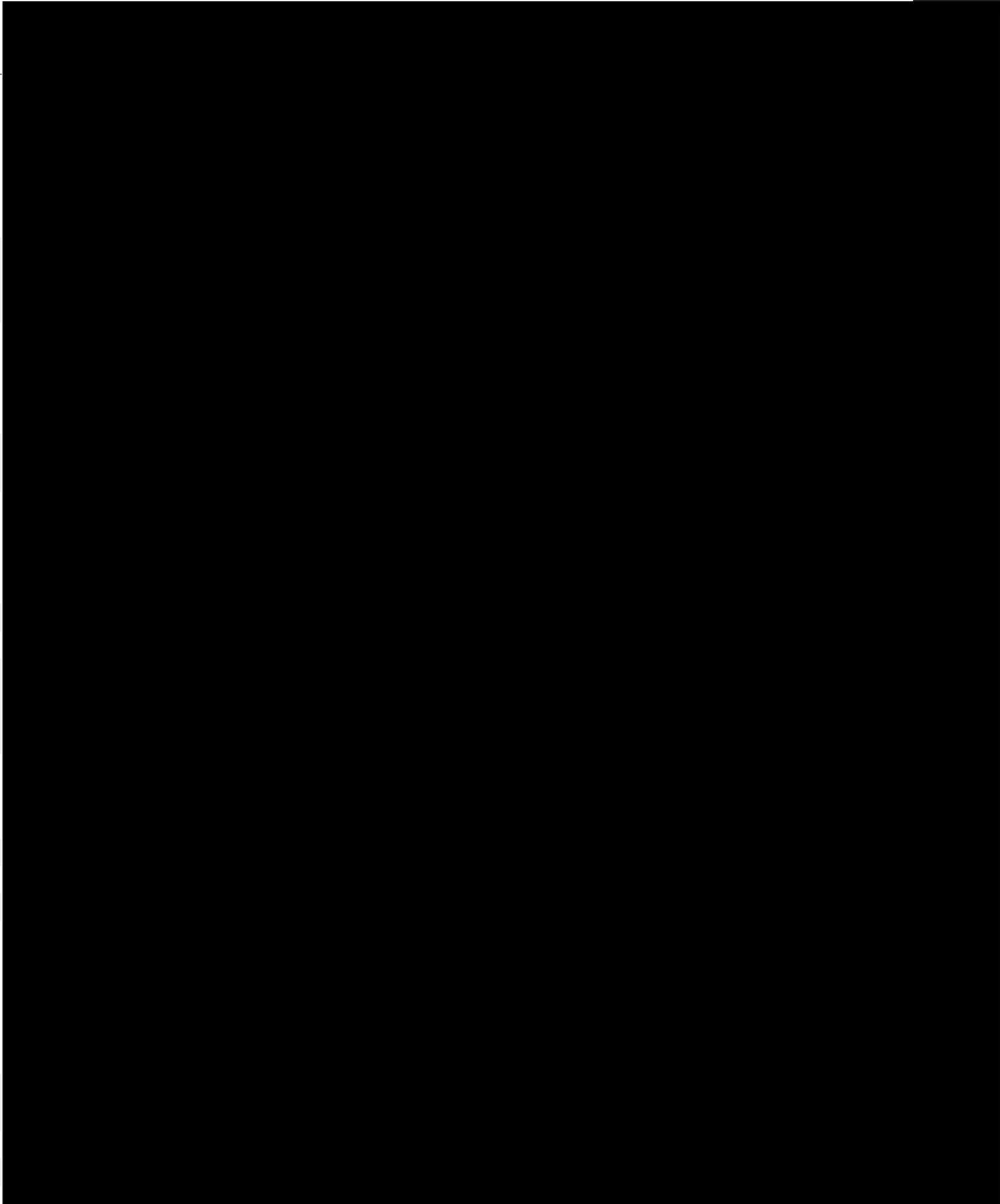


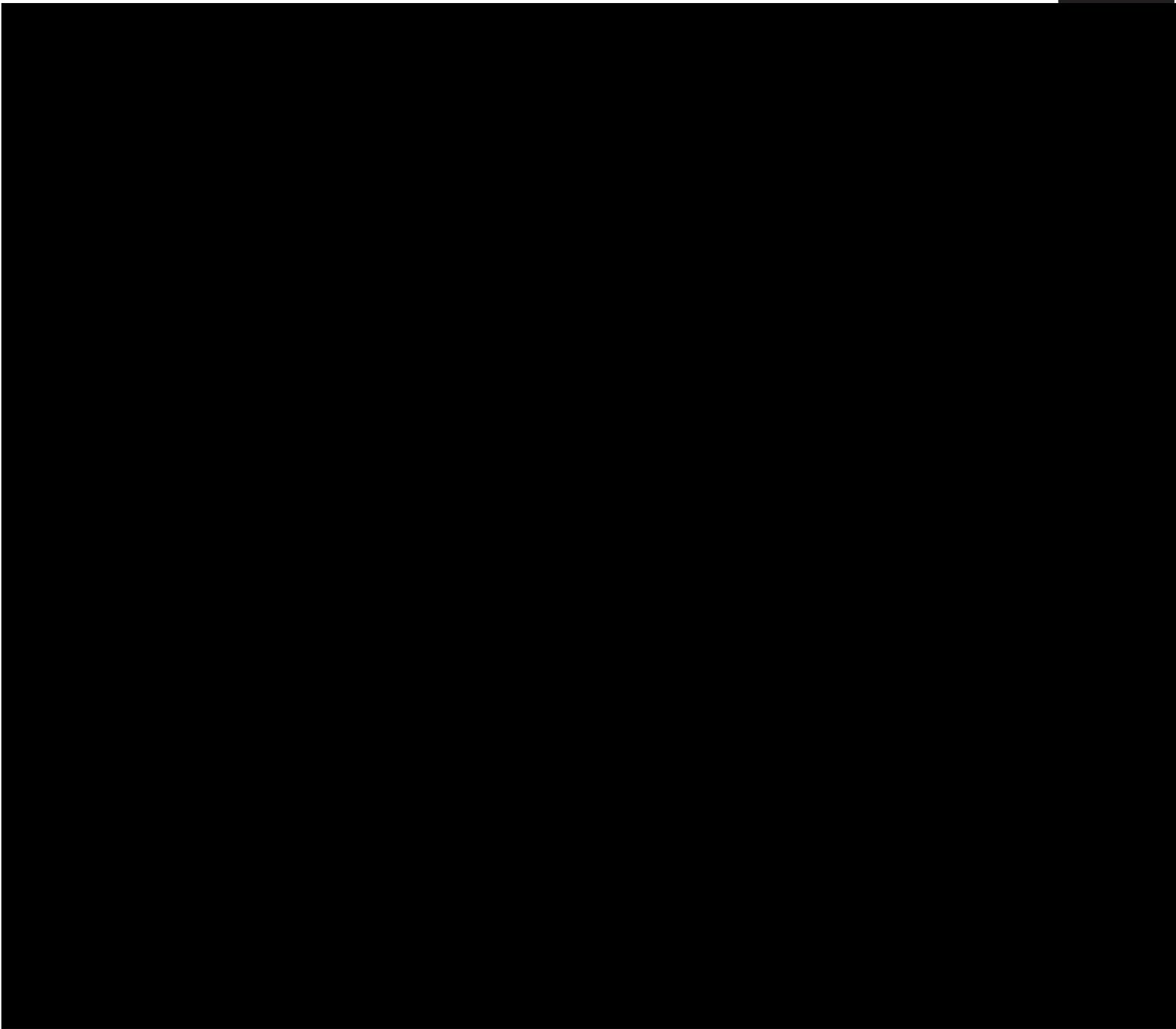


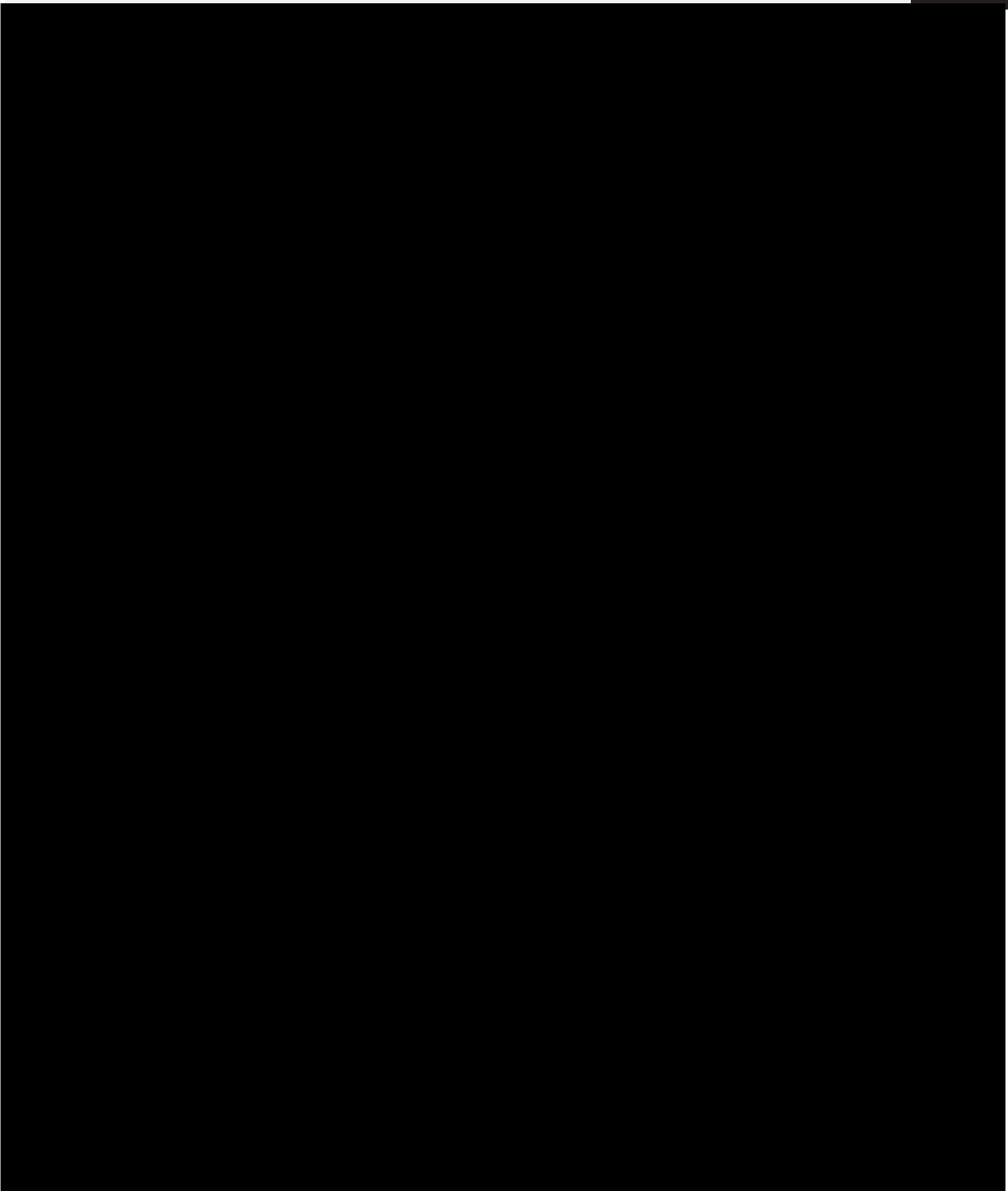
## Domain: Platform

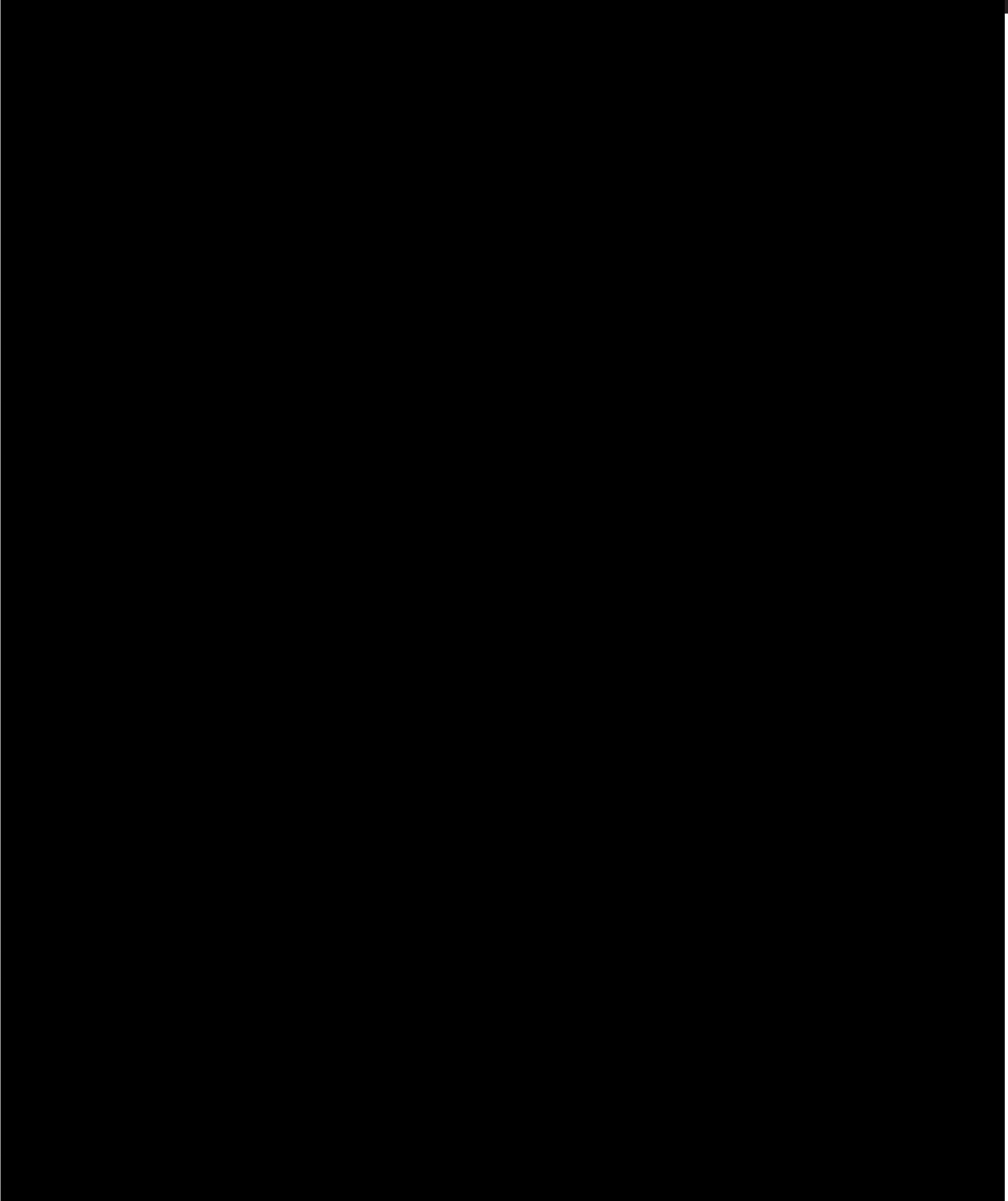


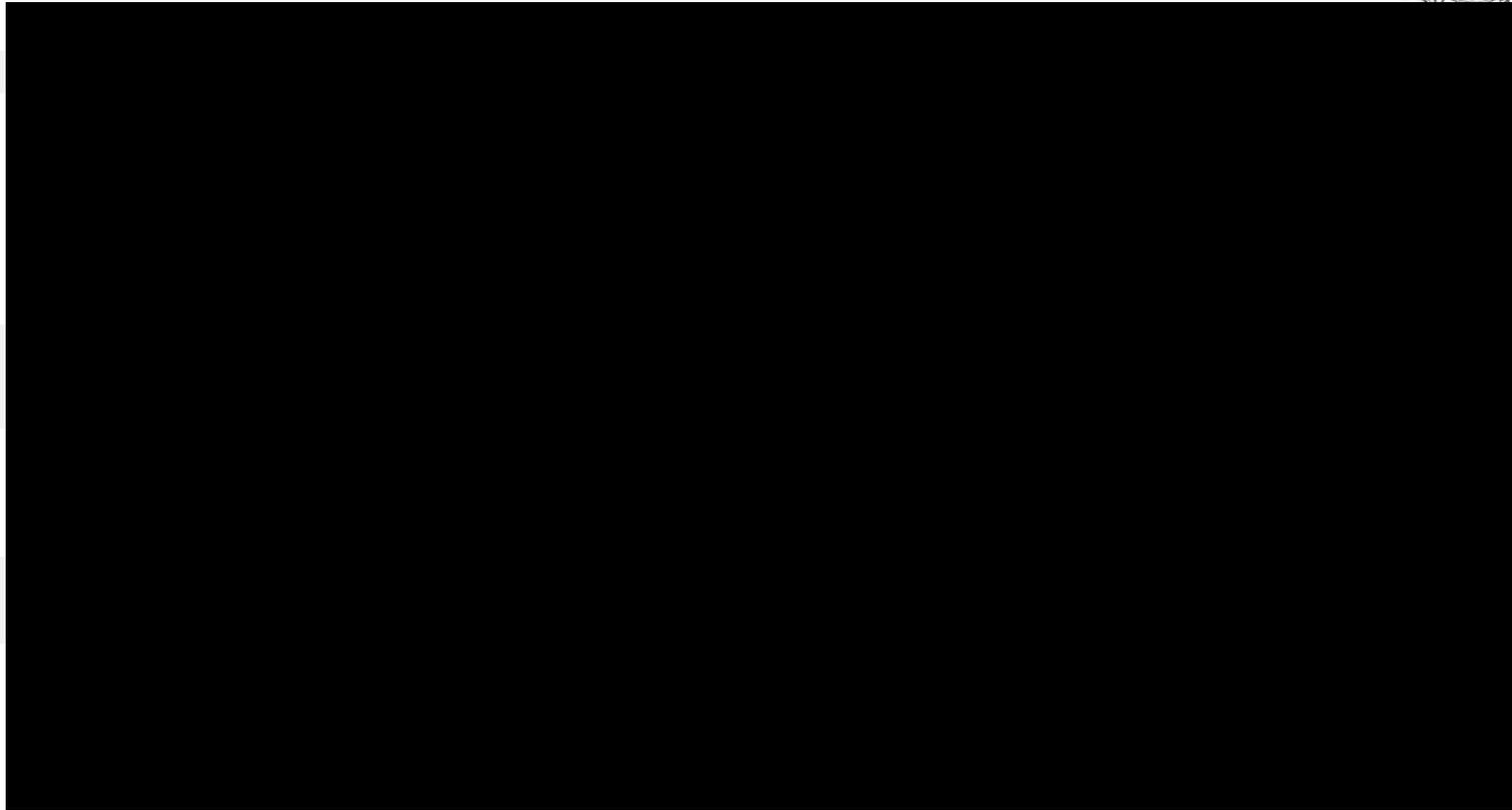














## **RFP ATTACHMENTS REFERENCED IN PRO FORMA CONTRACT**

1. RFP Attachment 6.2 – Section D
2. RFP Attachment 6.7 – Requirements Matrix
3. RFP Attachment 6.8 – Current State Systems
4. RFP Attachment 6.9 – Exception Requests to State Standards
5. RFP Attachment 6.10 – Exceptions to Tennessee Technology Architecture



**TECHNICAL RESPONSE & EVALUATION GUIDE**

**SECTION D: REQUIREMENTS MATRIX.** Respondent must provide its responses to this section in the Excel file provided for RFP Attachment 6.7. – Requirements Matrix, and must provide both an electronic submission of the file in Excel format, and a printed copy of the same Excel file in its proposal. (Do not submit these files in PDF format.) The Valid Response Codes for each requirement are shown below and on the first worksheet of the Excel workbook, “Instructions.” The Proposer must respond to ALL requirement items. Failure to enter a Response Code in the proper location will be deemed ‘No response.’

Valid Response Codes:

- A = Requirement is satisfied by the proposed FOSS solution as installed ‘out of the box’
- B = Requirement can be satisfied by the proposed FOSS solution with a modification, customization and/or configuration with no additional cost
- C = Requirement can be satisfied by the proposed FOSS solution with a modification, customization, and/or configuration at an additional, separate cost
- D = Requirement can be satisfied with a proprietary add-on, package, or module offered by the Respondent at an additional, separate cost
- NR = No response; Invalid response

The Solicitation Coordinator will assign the Raw Weighted Score for each requirement scoring item based on the Respondent’s Response Code as follows:

**A = 1                      B = 0                      C = 0                      D = 0                      NR = -1**

The Solicitation Coordinator will sum of the Raw Weighted Scores and transfer the Total Raw Weighted Score into this Requirements Evaluation Guide to calculate the section score.

<b>PROPOSER LEGAL ENTITY NAME:</b>	Document Storage Systems, Inc.
------------------------------------	--------------------------------

Proposal Page # (to be completed by Proposer)	Requirement Matrix Item	Total Raw Weighted Score
	<b>D.1.</b> Respond to each requirement in RFP Attachment 6.7., Requirements Matrix as instructed on the first worksheet of the Excel workbook, “Instructions.”. For this section, Respondent must provide its responses in the Excel file provided, and must provide both an electronic submission of the file in Excel format, and a printed copy of the same Excel file in its proposal. (Do not submit these files in PDF format.)	<b>291</b>

*The Solicitation Coordinator will use the Total Raw Weighted Score and the formula below to calculate the section score. All calculations will use and result in numbers rounded to two (2) places to the right of the decimal point.*

<b>Total Raw Weighted Score</b> <u>291</u>	<b>X 250</b>	<b>= SCORE:</b>	<b>177.00</b>
<b>Maximum Possible Raw Weighted Score</b> <u>411</u> <i>(i.e., 1 x the total number of Requirements)</i>	<i>(maximum possible score)</i>		

State Use – Evaluator Identification:

State Use – Solicitation Coordinator Signature, Printed Name & Date:

**Nancy Ternes**    8-8-14



---

**REQUIREMENTS MATRIX**

RFP # 34301-13214ATTACHMENT 6.7 - REQUIREMENTS MATRIX



Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	A1.0.5	The system shall provide a mechanism for capturing, viewing, and sharing patient and program information state wide.	A	1
EPI v1.0	A2.1.0	The system and all its components shall comply with state, regional & county standards for application, operating system, and telecommunication architecture.	A	1
EPI v1.0	A2.1.0.1	The system shall comply with approved standards for messaging, interfacing, communications, and interoperability.	A	1
EPI v1.0	A2.1.2	The system shall comply with Federal and State healthcare and public health standards.	A	1
EPI v1.0	A2.1.3	The system shall include standard code tables (e.g., ICD10, CPT4).	A	1
Unknown	A2.3.3	The system shall include an interface to existing public health EMRs and dental EMRs currently in use throughout the state.	C	0
Unknown	A2.3.5	The system shall have the ability to interact and exchange personal health information (PHI) data with external entities.	A	1
EPI v1.0	A2.3.6	The system shall be capable of exporting to Microsoft office applications and [REDACTED] data tables.	A	1
EPI v1.0	A2.9.14	The system shall include a means of system alerts and/or e-mail notifications for all users to communicate important system administration, operational, and clinical messages to individual users, user groups, or as a universal broadcast.	A	1
Unknown	E1.21	The system shall provide single sign-on access to appropriate systems in conjunction with the TDH SSO project.	A	1
EPI v1.0	A2.4.0.1	The system shall provide only one sign-on for the user to access any or all modules depending on appropriate role-based security and access permissions.	A	1
EPI v1.0	A2.4.2	The system shall permit role-based user changes: a) prior to sign-off (e-signature) b) after sign-off (amend and/or append only) with e-signature c) and provide date/time stamp for all changes.	A	1
EPI v1.0	A2.4.3.1	The system shall comply with the HIPAA Privacy and Security Rules.	A	1
Unknown	A2.4.5	The system shall provide secure and encrypted remote access.	A	1
EPI v1.0	A2.4.6	The system shall provide for recovering systems data when software changes have been made or new releases have been implemented.	A	1
EPI v1.0	A2.4.7	The system shall require users with multi-site permissions to select the site they are signing into at the time of sign-on.	A	1
EPI v1.0	A2.4.8	The system shall prevent required field bypass, except by a user with override exception permissions.	A	1
EPI v1.0	A2.4.9	The system shall create a HIPAA log of all accesses of personal health information (PHI) system wide.	C	0
EPI v1.0	E1.37	The system shall accommodate "on-call" personnel to update any patient record and force additional signons.	A	1
EPI v1.0	A2.5.1	The system shall provide capabilities for managing and authoring help content.	A	1



RFP # 34301-13214 ATTACHMENT 6.7 - REQUIREMENTS MATRIX

Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	A2.5.2	The system shall include the ability to auto-populate fields with default values.	A	1
EPI v1.0	A2.6.0	The system shall include the ability to print any screen application wide.	A	1
EPI v1.0	A2.6.1	The system shall include the ability to print any form from multiple locations and printers.	A	1
EPI v1.0	A2.6.5	The system shall allow printing of labels at the user's request.	A	1
EPI v1.0	A2.6.7	The system shall produce, on demand, provider instructions, health education, and pharmacy warnings and instructions.	A	1
Unknown	A2.6.8	The system may produce printed digitized diagnostic images.	C	0
EPI v1.0	E1.15	The system shall be capable of printing forms and instructions in multiple languages.	A	1
EPI v1.0	A2.7.1	The system shall include full database audit functionality.	A	1
Unknown	A2.8.0	The system shall include the ability to utilize portable devices for remote access, input, and display of system data and information.	A	1
EPI v1.0	A2.8.2.1	The system shall, when live connectivity is not available, provide for data capture and automated update to the system when connectivity is available.	C	0
Unknown	A2.8.4	The system shall utilize point of sale input devices.	C	0
EPI v1.0	A2.8.6	The system shall allow for scanning of documents.	A	1
Unknown	A2.8.6.1	The system may include the ability to capture patient photo for storage and display throughout the system.	A	1
Unknown	A2.8.7	The system shall interface with digital radiology devices to capture x-rays for storage, display, and printing.	D	0
Unknown	A2.8.7.1	The system shall transfer digital diagnostic images to transportable media such as CDs/DVDs.	D	0
Unknown	E1.50	The system may include the ability to upload a picture taken on an external device and add the image to the patient record.	A	1
Unknown	A2.9.10	The system may include touch screen technology.	C	0
EPI v1.0	A2.9.6.1	The system shall provide context-sensitive online help messages for each data prompt either automatically or at the request of the user.	A	1
EPI v1.0	A2.9.6.2	System error messages shall be displayed and explained in end-user terminology.	A	1
EPI v1.0	A2.9.6.3	The system shall automatically inform the user when conflicting data, functions, or processes occur.	A	1
EPI v1.0	A2.9.7	The system shall allow use of word-processing features system wide in all modules.	C	0
EPI v1.0	E1.20	The system shall provide links to key documents, clinical nursing protocols, standards of care, reference sites, and external web-based systems.	A	1
Unknown	E2.5	The system may provide a way for external providers to access limited data on any of their patients who have been seen in the Health Department.	A	1
EPI v1.0	A3.0.0	System help documentation shall be available online to all personnel.	A	1
EPI v1.0	A3.0.2.1	All training materials shall be role-based.	A	1
EPI v1.0	A3.0.3	The system shall include self-paced computer-based training (CBT) available on-demand to all personnel.	A	1

RFP # 34301-13214ATTACHMENT 6.7 - REQUIREMENTS MATRIX



Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	A3.0.7	Training content shall be updatable and synchronized with system and program modifications.	A	1
EPI v1.0	A4.0.0	System Documentation shall be available online.	A	1
EPI v1.0	A4.0.0.1	All system documentation shall be kept current to reflect system changes and modifications.	A	1
EPI v1.0	E2.10	The system shall include the ability to capture and display public health legal documents.	A	1
Unknown	A5.0.1	The system shall include or interface with a report writing tool or application.	A	1
EPI v1.0	A5.0.3	The system shall generate a report for the patient that includes what was done during the visit, what the patient needs to do, when the patient needs to come back, list of current medications, and patient education materials.	A	1
Unknown	A5.0.4	The system shall generate a report that displays disposition of patient appointments.	C	0
Unknown	E2.7	The system shall produce a portable emergency treatment sheet for patients.	A	1
EPI v1.0	A6.0.0	The system shall include or interface with a document management system.	A	1
EPI v1.0	A6.0.12	The system shall provide an archiving approach for clinical data.	A	1
Unknown	A6.0.13	The system shall provide automated letter generation for patients who are not "limited contact" or confidential.	C	0
Unknown	A6.0.3	The system may support data entry by optical scanning (optical character recognition (OCR)).	C	0
EPI v1.0	A6.0.4	The document management system shall include the ability to create and manage form letters.	A	1
EPI v1.0	A6.0.5	The system shall allow authorized users to create, edit, and alter form letters in multiple languages.	A	1
EPI v1.0	A6.0.6	The system shall print mailing labels.	C	0
Unknown	A6.0.7	The system shall include the ability to send and receive fax and e-mail communications and documents to and from both internal and external parties.	C	0
EPI v1.0	A6.0.8	The system shall incorporate HIPAA disclosure forms and other consent forms.	A	1
EPI v1.0	A6.0.9	The system shall receive documents in various formats and shall have the ability to store those documents electronically.	A	1
Unknown	E1.13	The system shall produce a report of automated letters that did not print and indicate the reason.	C	0
EPI v1.0	E1.49	The system shall include the ability for providers to add notes to standard form letters.	A	1
EPI v1.0	E1.55	The system shall include functionality to download a patient record or parts of a record to disk or other media.	A	1
Unknown	E2.8	The system shall include information from a Continuity of Care Document from outside providers in a patient record.	A	1
EPI v1.0	A7.0.1	The system shall include a disaster recovery and business continuity plan.	A	1



RFP # 34301-13214 ATTACHMENT 6.7 - REQUIREMENTS MATRIX

Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	B1.0.0	The system shall provide for the capture and retrieval of non-clinical patient information defined as: a. demographic data, b. financial data, c. Insurance data and d. unique patient identification	A	1
Unknown	B1.0.1	The system shall link directly from the patient name on the clinic schedule to the patient's registration screen and vice-versa	C	0
Unknown	B1.0.3.3	The system shall require identification of responsible parties and insurance plan eligibility and enrollment.	A	1
EPI v1.0	E1.10	The system shall display numbers in a standard format (separation with dash or slash), along with an online prompt for entry.	A	1
Unknown	E1.14	The system may receive death certificate notification from the VRISM system using standards and update the patient record with date of death.	C	0
EPI v1.0	E1.17	The system shall accommodate patients giving TDH permission to provide private health information to someone other than the patient.	A	1
EPI v1.0	E1.6	The system shall allow authorized personnel to flag client/patient records to indicate behavioral issues. This flag shall be outside the medical record.	A	1
Unknown	B1.1.0	The system shall provide for patients to be registered.	A	1
EPI v1.0	B1.1.1	The system shall associate the correct master patient index number with each patient.	C	0
Unknown	B1.1.1.1	The system shall search and retrieve patient information from the MPI (master patient index) using standards-based communications, and utilize that information to help register the patient.	A	1
Unknown	B1.1.10	The system shall warn the user of a potential duplicate as they register a patient.	A	1
Unknown	B1.1.11	The system may be capable of capturing images during registration and permanently associating the image(s) with the patient's data.	A	1
Unknown	B1.1.11.1	The system shall be capable of displaying the patient's photo on any patient-related display screen.	B	0
Unknown	B1.1.12	The system may provide methods for patient self-registration.	C	0
Unknown	B1.1.12.1	The system may offer self-entry of confidential sex questions and gender self-identification.	C	0
EPI v1.0	B1.1.13	The system shall capture whether the patient requires handicap accommodations and the type of handicap, necessary accommodations and means of communication.	A	1
EPI v1.0	B1.1.14	The system shall capture patient allergy information including type of allergy and type of reaction.	A	1
Unknown	B1.1.16	The system shall place the most important registration information on a single screen.	A	1
Unknown	B1.1.17	The system shall include the voter registration flag as a required field as registration starts.	C	0
EPI v1.0	B1.1.18.1	The system shall allow a user to mark or "flag" confidential demographic information for confidential patients.	A	1
EPI v1.0	B1.1.18.2	The system shall allow a user to remove the confidentiality flag or mark.	A	1
Unknown	B1.1.2	The system shall capture patient demographics during registration.	A	1

RFP # 34301-13214ATTACHMENT 6.7 - REQUIREMENTS MATRIX



Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	B1.1.2.1	The system shall be capable of storing and displaying historical addresses for the patient, multiple aliases for each patient, historical patient names, multiple phone numbers for the patient and multiple patient email addresses.	A	1
Unknown	B1.1.20	The system shall be capable of determining program qualification for WIC, 317 Vaccine Program, VFC (Vaccines For Children), CSFP, CSS, Senior Farmers Markets (non-CSFP sites).	C	0
Unknown	B1.1.21.1	The system shall provide the capability for tracking patients throughout the clinic.	A	1
EPI v1.0	B1.1.22	The system shall capture the patient's primary language and include an indicator as to whether or not the patient requires an interpreter.	A	1
Unknown	B1.1.3	The system shall be able to capture and display patient income and family size information.	A	1
Unknown	B1.1.3.1	The system shall store and display patient and insured names for third party payers.	A	1
Unknown	B1.1.5	The system shall maintain links to all family and household members.	C	0
Unknown	B1.1.5.1	The system shall maintain a unique identifier for a family and household.	C	0
Unknown	B1.1.5.2	The system shall accommodate any one individual registrant participating as a member of multiple families (households) either simultaneously or over time.	C	0
Unknown	B1.1.5.3	The system shall both associate and disassociate or delink individuals from families and households.	C	0
EPI v1.0	B1.1.7	The system shall distinguish and associate paper chart numbers by site.	C	0
Unknown	B1.1.8	The system shall allow the user to capture and display registration notes in a registration notes field.	A	1
Unknown	B1.1.8.2	The system shall allow the user to print patient registration notes.	A	1
Unknown	B1.1.8.3	The system's registration notes field size shall be flexible.	A	1
EPI v1.0	B1.1.9	The system shall merge duplicate records and unmerge merged duplicate records.	C	0
EPI v1.0	E1.11	The field to identify a patient or service as confidential/no contact/"limited contact" shall be a required field completed each time a patient registers, with no default value selected.	C	0
EPI v1.0	E1.12	The field identifying a patient or service as confidential shall be visible on all screens at all times.	C	0
Unknown	E1.2	The system shall require a child patient, qualified by age, to be associated to an adult parent or caregiver before registration is completed and care is provided.	C	0
Unknown	E1.23	The system shall require verification of VFC and 317 qualification at every visit.	C	0
Unknown	E1.24	The system shall provide help and guidelines to ensure the correct insurance status is selected for each patient.	A	1
Unknown	E1.29	When a patient indicates they would like to be a confidential patient, the system shall capture acknowledgement from the patient that they may be contacted in the event of a positive reportable disease or abnormal lab result.	A	1
EPI v1.0	E1.3	The system shall accommodate walk-in patients.	A	1
EPI v1.0	E1.36	The system shall capture key information when telephonic interpretation services, an in-house interpreter, or a sign language interpreter is used.	A	1



RFP # 34301-13214ATTACHMENT 6.7 - REQUIREMENTS MATRIX

Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	E1.42	The system shall allow the name and contact information of the patient's primary care provider (PCP) to be recorded in the patient record.	A	1
Unknown	E1.5	The system shall allow members of a household who are not related to be linked and unlinked.	C	0
EPI v1.0	E1.54	The system shall allow an encounter, a patient, or a service to be flagged as confidential.	C	0
Unknown	E3.0	The requirement to associate an adult parent or caregiver to a child patient shall have role-based override capabilities.	C	0
Unknown	E3.2	In the event the registration process is interrupted, the system shall allow for the registration process to be resumed at any point.	A	1
EPI v1.0	B1.2.1	The system shall perform automatic searches within the patient master index.	A	1
Unknown	B1.2.1.1	The system shall be capable of searching newly or partially registered patients so that the full registration process can be resumed and completed.	A	1
EPI v1.0	B1.2.1.2	The system shall provide for name search by combinations of patient demographic data entered.	A	1
EPI v1.0	B1.2.1.7	The system shall require a search of existing patients before creation of a new patient.	A	1
EPI v1.0	B1.2.3.1	The system shall accommodate name and marital status change in compliance with state, federal, and local privacy guidelines.	A	1
EPI v1.0	B1.2.4	The system shall allow users to display patient lists comprised of data elements selected by the user.	C	0
EPI v1.0	E1.1	The system shall include a way to indicate a patient is in DCS protective custody.	A	1
EPI v1.0	B10.1.0	The system shall receive positive lab results for reportable diseases and flag the patient record for follow-up.	A	1
EPI v1.0	B10.2.0	The system shall receive negative lab results for reportable diseases and generate notifications for public health patients with regard for confidential and limited contact patients.	A	1
EPI v1.0	B10.3.0	The system shall capture Federally-required data elements.	A	1
Unknown	B11.1.0	The system shall capture and provide information that will assist in the planning, development, and implementation of community health education programs and activities.	C	0
Unknown	B11.1.2	The system may provide reports and data capture that assist community health representatives with analysis and interpretation of community education endeavors while assisting in the preparation of future endeavors.	C	0
Unknown	B11.3.1	The system shall produce a report and provide the means to identify the certificates for which fees have been collected.	C	0
Unknown	B11.3.2	The system shall update the Master Patient Index (MPI) based on data received from vital records regarding births and deaths.	A	1
Unknown	B11.4.0	The system shall generate administrative encounters for non-patient transactions and fee collection.	A	1



RFP # 34301-13214ATTACHMENT 6.7 - REQUIREMENTS MATRIX

Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
Unknown	B11.5.0	The system shall print receipts for environmental, vital records, and other non-clinical, administrative fees collected if these fees are collected via the new EPI system.	C	0
Unknown	B11.5.1	The system shall account for environmental, vital records, and other non-clinical, administrative fees in the daily cash drawer.	C	0
Unknown	B12.0.0	The system shall manage TennCare Outreach Activities.	C	0
Unknown	B12.1	The system may receive TennCare Referrals Electronically (Children and Prenatal).	C	0
Unknown	B12.4.0	The system shall provide data to report TENnderCare, EPSD&T, and prenatal outreach activities.	C	0
Unknown	E2.9	The system may transmit a list to the TennCare system of patients who have received an EPSD&T exam from the Health Department.	A	1
EPI v1.0	B13.0.1	The system shall allow creation and maintenance of a central repository of standard and customizable chart templates with associated clinical notes templates and scripts.	A	1
EPI v1.0	B13.0.2	The system shall be capable of scanning clinical documentation and medical records (paper charts) into patient FMRs with centralized control of the processes and rules.	A	1
EPI v1.0	B13.0.4	The system shall include a clinical rules engine with clinical decision support capabilities for patient care protocols and standards of care that determines the flow and required data for state wide clinical documentation in the FMR	A	1
EPI v1.0	B13.0.5	The system shall allow authorized users to update templates and rules as changes in standards of care and protocols occur.	A	1
EPI v1.0	B13.0.5.1	The system shall keep a log of changes to templates including dates and reasons that will be accessible to the clinical application coordinators (CACs).	A	1
Unknown	B13.0.6	The system shall include program-specific case management tools that are customizable.	A	1
EPI v1.0	B13.0.7	The system shall provide tools for state-wide patient tracking needs with the ability to create custom patient tracking parameters.	C	0
Unknown	B2.0.1	The system shall protect WIC proof of income, proof of residence data, and proof of identification from overwrite.	A	1
Unknown	B2.0.10	The system shall be capable of transmitting food package information for printing of WIC vouchers or loading of WIC EBT cards.	C	0
EPI v1.0	B2.0.11	The system shall allow entry of actual date of measures.	A	1
Unknown	B2.0.2	The system shall include the ability to limit specific certification codes to specific WIC statuses.	C	0



RFP # 34301-13214ATTACHMENT 6.7 - REQUIREMENTS MATRIX

Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
Unknown	B2.0.4	The system shall include the ability to provide role-based security for voucher issuance, registration only, voucher printing, food ticket printing, or any combination of user responsibilities.	A	1
Unknown	B2.0.5	The system may include the ability to match a Food Stamp extract file for WIC- and CSFP- eligible persons.	C	0
Unknown	B2.0.6	The system shall be capable of interfacing with an EBT (Electronic Benefit Transfer) system for WIC voucher issuance.	C	0
Unknown	B2.0.7	The system shall provide data to assist with the identification and documentation of invalid WIC voucher redemption.	C	0
Unknown	E1.7	The system shall allow Verifications of Certification (VOCs) to be scanned into the system and associated with the patient record.	A	1
Unknown	E1.8	The system shall include the capability to print Verifications of Certification (VOCs) for WIC participants, using standardized language as required.	A	1
Unknown	E2.13	The system shall capture the data required for reporting of WIC processing standards.	A	1
EPI v1.0	B2.1.0	The system shall capture patient information obtained via nutritional interviews conducted by qualified provider.	A	1
EPI v1.0	B2.1.1	The system shall capture the number of cigarettes smoked per day if patient is a smoker.	A	1
EPI v1.0	B2.1.2	The system shall include additional data fields for capturing breastfeeding data.	A	1
Unknown	B2.10.0	The system shall track inventory for CSFP and WIC Formula.	A	1
Unknown	B2.11.0	The system shall be capable of generating group encounters.	A	1
Unknown	B2.11.1	The system shall be capable of creating encounters and scheduling WIC education classes for either groups or individuals.	A	1
Unknown	B2.11.2	The system shall generate individual encounters for group activities.	A	1
Unknown	B2.11.4	The system shall be capable of providing data to print WIC vouchers for WIC patients scheduled and registered for a WIC group encounter automatically.	A	1
Unknown	E1.9	The system's group encounter functionality shall allow a disposition code and more than one program code to be assigned to that group of encounters.	A	1

RFP # 34301-13214ATTACHMENT 6.7 - REQUIREMENTS MATRIX



Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	B2.2.0	The system shall capture pregnancy outcomes for single and multiple births.	A	1
Unknown	B2.3.0	The system shall assign WIC and CSFP Certification Codes consistent with the national standard, including the ability for the provider to update responses and resubmit.	A	1
Unknown	B2.4.0	The system shall calculate Commodity Supplemental Foods Program (CSFP) food package benefits.	C	0
Unknown	B2.4.1	The system shall allow customization of CSFP and WIC food packages.	C	0
Unknown	B2.4.2	The system shall include the ability to limit or link specific food packages to specific WIC statuses.	C	0
Unknown	E2.12	The system may suggest possible WIC groups for a patient.	B	0
Unknown	B2.5.0	The system shall provide data to print WIC Vouchers consistent with established guidelines.	C	0
Unknown	B2.5.1	The system shall allow update of notes for all participants in a group encounter.	A	1
Unknown	B2.5.1.1	The system shall generate individual encounters for patients included in a group encounter.	A	1
Unknown	E1.4	The system shall allow for WIC vouchers to be printed remotely, including from mobile WIC clinics.	C	0
Unknown	B2.9.0	The system shall produce a "No Show" Report based on scheduled certification dates.	A	1
Unknown	B2.9.1	The system may produce automated reminders and follow-up letters for WIC patients to be recertified every 90 days.	C	0
Unknown	B3.1.0	The system shall maintain appointment profiles, including the ability to apply resource availability during appointment scheduling.	D	0
Unknown	B3.1.1	The system shall include the ability to schedule appointments for either individuals, all members of a household, or both.	A	1
Unknown	B3.1.2	The system may have the flexibility to offer ways for patients to schedule their own appointments.	C	0
Unknown	B3.1.3	The system shall be capable of displaying and printing clinic schedules, and schedules by provider, type of visit, or scheduled resource.	A	1
Unknown	B3.2.0.1	The system shall generate encounters that match the type of appointment scheduled or activity.	A	1
Unknown	B3.2.1	The system shall be capable of printing encounter labels that may include a bar code for the current visit to aid in accessing electronic record and other patient data during the visit.	C	0
EPI v1.0	B3.2.2	The system shall print encounter forms for use during the visit when needed.	A	1
EPI v1.0	B3.2.3	The system shall allow authorized users to create additional encounter templates.	A	1
EPI v1.0	B3.3.1	The system shall link existing paper chart numbers with the patient's record number.	C	0

RFP # 34301-13214ATTACHMENT 6.7 - REQUIREMENTS MATRIX



Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	B3.5.0	The system shall capture the existing paper chart(s) location(s).	A	1
Unknown	B3.7.1	The system shall be capable of calculating the sliding scale by program.	A	1
Unknown	B3.7.2	The system shall capture insurance plan information.	A	1
Unknown	B3.7.3	The system shall perform the daily cash collection reconciliation.	A	1
Unknown	B3.7.3.1	The daily cash collection shall be available on demand.	A	1
Unknown	B3.7.3.2	The daily cash collection CD shall be date and time stamped on cash receipts.	A	1
Unknown	B3.7.3.3	The deposit of the CD shall be flexible to include mid-day deposits and date and time stamps.	A	1
Unknown	B3.7.4	The system shall print the daily CD deposit form and perform electronic data exchange with the bank.	C	0
Unknown	B3.7.5	The system shall be capable of concurrent display, printing, and viewing of a ledger while creating customizable views of the patient ledger and while maintaining a patient ledger archive (based on RDA requirements)	C	0
Unknown	B3.7.6	The system shall display and print account balances with itemization.	A	1
Unknown	B3.7.7	The system shall provide patient billing flexibility to accommodate confidential patients and services.	B	0
Unknown	E1.51	The system shall accommodate different costs for the same procedure.	A	1
Unknown	E1.52	The system shall accommodate different payment rates for the same procedure.	A	1
Unknown	E2.1	The system shall provide a means of replicating the existing Cash Drawer report functionality, including the ability to print both test and production versions of the report.	C	0
Unknown	B3.8.0	The system shall allow fee collection and initiate transactions based on the type of service.	C	0
Unknown	B3.8.1	The system shall generate patient charges based on finalized encounters in the EMR.	A	1
Unknown	B3.8.10	The system shall be capable of automatically generating a minimum fee based on services provided.	A	1
Unknown	B3.8.11	The system shall allow for default charge override based on role-based security.	A	1
Unknown	B3.8.2	The system shall automatically apply the sliding scale and view sliding scale adjustments by program.	C	0
Unknown	B3.8.3	The system shall accept and record different payment methods.	A	1
Unknown	B3.8.4	The system shall apply payments to balances due by co-site.	A	1
Unknown	B3.8.5	The system shall print receipts and/or send them electronically for payments and record keeping.	C	0



RFP # 34301-13214 ATTACHMENT 6.7 - REQUIREMENTS MATRIX

Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
Unknown	B3.9.0	The system may produce a Patient Flow Analysis Report that documents patient wait times, provider busy and free time, and assist with clinic efficiency.	D	0
Unknown	B3.9.1	The system may provide date and time stamp of the patient visit as customized by sites or regions.	C	0
Unknown	B3.9.2	The system may provide data on patient flow by provider and type of services within one day of the actual visits that can be exported for analysis.	C	0
Unknown	B4.1.0	The system shall post payments and adjustments.	A	1
Unknown	B4.1.1	The system shall display and print aged receivables reports with specified parameters.	A	1
Unknown	B4.10.0	The system shall receive and post Electronic Remittance Advice.	A	1
Unknown	B4.11.0	The system shall maintain Patient Billing History.	A	1
EPI v1.0	B4.12.1	The system shall provide a mechanism for entering telephonic, email or other contact data and notes.	A	1
EPI v1.0	B4.12.2	The system shall allow users to create reports of automated and manual patient contacts.	A	1
Unknown	E1.31	The system may provide the ability to set an alert on a patient record indicating why a patient has been called into the Health Department.	A	1
EPI v1.0	B4.15.1	The system shall provide inventory tracking of medications and immunizations via bar code scanning.	A	1
EPI v1.0	B4.15.2	The system shall provide automated inventory control for all medical supplies.	D	0
Unknown	B4.2.0	The system shall generate claims for payment.	A	1
Unknown	B4.2.0.1	The system shall submit claims for payment to third party payers in electronic form or in paper form upon request.	A	1
Unknown	B4.2.1	The system shall analyze COB (coordination of benefits) and be able to submit subsequent third party payer claims.	A	1
Unknown	B4.3.0	The system shall generate patient bills.	A	1
Unknown	B4.3.1	The system shall print patient bills by: a) selected detail b) site, region or statewide c) selected frequency d) service/program	A	1



RFP # 34301-13214 ATTACHMENT 6.7 - REQUIREMENTS MATRIX

Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
Unknown	B4.3.2	The system shall print patient bills that display: a) statement date b) date of service c) program and/or clinic service <del>d) patient charges and patient balance</del>	A	1
Unknown	B4.5.0	The system shall process claims originating from external referrals.	A	1
Unknown	B4.5.1	The system shall perform automated review of claims submitted for payment.	A	1
Unknown	B4.5.2	The system shall allow authorized users to approve payment and submit claims to Edison, <del>using appropriate standards and ensuring HIPAA compliance.</del>	A	1
Unknown	B4.5.3	The system shall enable authorized users to review and approve codes for rejected claims.	A	1
Unknown	B4.5.4	The system shall produce and send electronic remittance advice (RA) that are standards based <del>and HIPAA compliant.</del>	A	1
Unknown	E1.56	The system shall manage pre-authorization requests and approvals.	A	1
Unknown	E2.14	The system shall submit adjudicated claims in conjunction with Edison's processing schedule.	A	1
EPI v1.0	B4.6.0	The system shall provide Regional Quality Improvement reporting using criteria determined by <del>the State QI Director.</del>	C	0
EPI v1.0	B4.6.3	The system shall produce reports for detailed analysis, accessible to local, regional and state <del>supervisory teams by provider, co-site, county, region, or state-wide.</del>	C	0
Unknown	B4.6.4	The system shall include built-in quality improvement tools within the EMR that allow record flagging, include random selection by user criteria, automatically queue the charts for the individual performing the assessment, and allow sorting of flagged charts as defined by user <del>criteria.</del>	C	0
EPI v1.0	B4.9.0	The system shall provide data used to produce Monthly RVU and Labor Distribution Reports.	C	0
Unknown	B5.1.2	The system shall allow creation of an invoice to an external entity.	A	1
EPI v1.0	B5.10.0	The system shall provide data to allocate federal, state, and local program monies based on county RVU percentages.	C	0
EPI v1.0	B5.3.0	The system shall accept updates to the Medicare RBRVS Table.	A	1
EPI v1.0	B5.3.1	The system shall utilize the same RBRVS table state-wide.	A	1
Unknown	B5.4.1	The system shall associate cost centers (user code or speed chart) with program codes.	A	1
EPI v1.0	B5.4.2	The system shall calculate RVUs based on procedure codes and RBRVS tables.	A	1

RFP # 34301-13214ATTACHMENT 6.7 - REQUIREMENTS MATRIX



Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	E2.2	The system shall require program codes to be assigned to each procedure at the time service is rendered.	A	1
Unknown	E2.3	The system shall include the ability to validate program codes against procedure code, provider and pavor.	C	0
EPI v1.0	B5.5.0	The system shall calculate RVU percentages by site and by program monthly.	C	0
Unknown	B5.8.0	The system shall submit cash drawer (CD) receipts and all other revenue to the state's accounting system (Edison).	C	0
Unknown	E2.15	The system may provide data directly to the iNovah Cashier system as part of the daily cash reconciliation process.	C	0
EPI v1.0	B6.0.0	The system shall include the ability to process electronic lab orders and results using HL7 standards.	A	1
EPI v1.0	E1.45	The system shall alert the provider to overdue blood work and screening tests.	C	0
EPI v1.0	E3.1	The system shall accommodate entry of in-house lab results.	A	1
EPI v1.0	B6.1.1	The system shall display all pending and completed lab orders and results in the patient's medical record.	A	1
EPI v1.0	B6.1.2	The system shall print labels for lab specimens taken at a specific clinic or Department of Health contracted site.	A	1
EPI v1.0	E1.30	The system shall capture information about the site a swab was taken from for lab tests.	A	1
EPI v1.0	B6.2.1	The system shall receive and update the patient's electronic medical record (EMR) with the results and produce electronic notification to the provider.	A	1
EPI v1.0	E1.33	The system shall capture, store and display syphilis titer data.	A	1
EPI v1.0	E1.34	The system shall capture, store and display all lab results, including date collected and date reported.	A	1
EPI v1.0	E1.35	The system shall provide the ability to trace multiple lab results to a single specimen.	A	1
Unknown	E2.6	The system shall import data from the Neometrics and Vital Records systems for child patients.	A	1
EPI v1.0	B7.0.0	The system shall include a medication dispensary module with an inventory tracking component.	A	1
EPI v1.0	B7.0.3	The system shall display and print a patient's medication profile, including supplements and both internally and externally obtained medications.	A	1
Unknown	E1.38	The system shall accommodate the use of prescription assistance programs.	C	0

RFP # 34301-13214 ATTACHMENT 6.7 - REQUIREMENTS MATRIX



Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	E1.46	If a provider prescribes a controlled substance, the system shall prompt the provider to check <del>the Controlled Substance Database before completing the order.</del>	A	1
EPI v1.0	E1.59	The system shall include Long-Acting Reversible Contraceptives (LARCs) in the patient's medication list.	A	1
EPI v1.0	B7.1.1	The system shall provide alerts and reminders for short inventory (non-Federal immunization stock) to regional pharmacy staff, county nurse supervisor and/or designee, regional immunization program manager, and other personnel as needed.	B	0
EPI v1.0	B7.2.1	The system shall capture entry of multiple prescriptions for a single patient, including EPT (Expedited Partner-Delivered Treatment for STDs).	A	1
EPI v1.0	E1.32	The system shall capture whether Expedited Patient-Delivered Treatment (EPT) was offered, and whether it was accepted.	A	1
Unknown	B7.3.1	The system shall provide standard point of sale transactions for TennCare patients.	B	0
Unknown	B7.3.2	The system shall electronic pharmacy claims to TennCare at the point of sale.	B	0
Unknown	B7.3.3	The system shall generate charges to be included in fees for the current visit, or for refills only, for self-pay and TennCare patients.	A	1
EPI v1.0	B7.4.0	The system shall check medication interaction and produce alerts for drug-drug, drug-disease, drug-allergy interactions.	A	1
EPI v1.0	B7.5.0	The system shall provide data on pharmacy and vaccine inventory and usage by site, by provider, and by region.	A	1
Unknown	B8.0.0.3	The system shall support temporary, off-site clinic operations, such as for back-to-school shot clinics.	A	1
Unknown	B8.1.1	The system shall accommodate WIC appointment scheduling based on WIC program requirements.	A	1
Unknown	B8.1.2	The system may generate automated TennCare presumptive eligibility transactions.	B	0
EPI v1.0	B8.1.3.1	The system shall accommodate documentation of prenatal visit information, including the ability to track weeks gestation.	A	1
EPI v1.0	E1.57	The system shall generate a prenatal patient report.	A	1
EPI v1.0	B8.10.1	The system shall capture well baby and well child exams.	A	1
Unknown	B8.10.2	The system shall perform standards-based data exchange of EPSD&T data with TennCare.	C	0

RFP # 34301-13214ATTACHMENT 6.7 - REQUIREMENTS MATRIX



Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	B8.10.3	The system shall allow a user to scan in immunization history records and associate them with the patient's electronic file, making them available for viewing on demand.	A	1
Unknown	B8.10.4	The system shall perform case management for HUGS encounters and permit remote data entry for HUGS home visits.	A	1
Unknown	B8.10.6	The system shall perform standards-based automated data exchange between the EMR and Neometrics newborn screening system to determine the status and the results of neo-natal screening.	C	0
EPI v1.0	B8.10.7	The system shall capture measures and clinical documentation required and necessary to produce automated growth charts.	A	1
EPI v1.0	E1.16	When a child patient is identified as being in State custody during registration, the system shall have alerts and reminders in place to help ensure DCS scheduling requirements are met.	A	1
EPI v1.0	E1.47	If growth chart functionality is not available in the system, an interface shall be provided to the current Automated Growth Chart (AGC) system.	A	1
Unknown	E1.48	The system may provide a means of electronically sending a standard primary care provider (PCP) letter to DCS or a private provider.	A	1
EPI v1.0	B8.11.1	The system shall capture patient data entered by the provider as clinical documentation during patient visits.	A	1
EPI v1.0	B8.11.10	The system shall include automated patient care alerts and reminders for providers.	A	1
Unknown	B8.11.11	The system shall capture digitized patient signatures for required forms.	D	0
Unknown	B8.11.12	The system shall display context-sensitive links to other EMR data and functions, including menus and/or system navigation tools.	A	1
Unknown	B8.11.15	The system shall capture, display and print digital diagnostic images.	C	0
EPI v1.0	B8.11.16	The system shall produce graphical displays and printouts of longitudinal patient data.	A	1
EPI v1.0	B8.11.17	The system shall capture pre-formatted as well as free-form text provider notes.	A	1
Unknown	B8.11.18	The system shall provide a way to authorize, send, and receive remote requests for release of EMR data.	A	1
EPI v1.0	B8.11.19	The system shall provide the ability to print any or all portions of a patient's record.	A	1
EPI v1.0	B8.11.2	The system shall capture provider orders for diagnostic procedures.	A	1
Unknown	B8.11.21	The system shall provide tools and methods to assist in performing quality review by flagging charts for MD review, queuing random selection of charts for MD review, managing provider alerts for review cycles.	C	0

RFP # 34301-13214ATTACHMENT 6.7 - REQUIREMENTS MATRIX



Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	B8.11.22	The system shall provide the capability of creating customized templates to comply with clinical documentation requirements as specified in statewide protocols and standards of care.	A	1
EPI v1.0	B8.11.3	The system shall capture provider orders for patient medications and immunizations.	A	1
EPI v1.0	B8.11.3.1	The system shall display or produce a printed medical administration record (MAR) for all patient medications.	A	1
Unknown	B8.11.4	The system may execute e-prescription standard transactions based on providers orders.	A	1
EPI v1.0	B8.11.6	The system shall provide the ability to access and print medication reference information.	A	1
EPI v1.0	B8.11.7	The system shall display diagnostic results and provide access to diagnostic assistance tools.	A	1
EPI v1.0	B8.11.8	The system shall assist with accurate coding of visits by allowing users to search for codes using natural language.	A	1
EPI v1.0	B8.11.9	The system shall permit the provider to finalize encounters with electronic signatures.	A	1
EPI v1.0	E1.39	The system shall allow multiple providers to record services during a single patient visit.	A	1
EPI v1.0	E1.41	The system shall include a way to indicate a patient opting to act against medical advice (AMA) and obtain a patient's acknowledgement.	A	1
EPI v1.0	E1.43	The system shall allow providers to make notes within clinical reminders.	A	1
Unknown	E1.44	The system may allow a provider to create a treatment and disease management plans for a patient.	A	1
Unknown	B8.2.0	The system shall manage breast and cervical cancer screening (BCCS) patients.	A	1
Unknown	B8.2.2	The system shall manage open cycle recertification for BCCS patients.	A	1
Unknown	B8.2.2.1	The system shall produce alerts to BCCS case managers to assist with the open cycle recertification process.	A	1
Unknown	B8.2.5	The system shall capture data for MDE (minimum data elements) reports for BCCS.	A	1
Unknown	B8.3.0	The system shall provide scheduling capabilities for various Children's Special Services (CSS) clinics.	D	0



RFP # 34301-13214 ATTACHMENT 6.7 - REQUIREMENTS MATRIX

Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
Unknown	B8.3.1.2	The system's case management function shall allow for use of protocols and standards of <del>care producing alerts and reminders to case managers for compliance with those standards.</del>	A	1
EPI v1.0	B8.3.1.3	The system shall provide exception reports of failures to comply with protocols and standards of care.	A	1
Unknown	B8.3.3	The system shall allow tracking of patient referrals and screenings.	A	1
Unknown	B8.4.1.1	The system shall allow for both scanned and traditional data entry of individual permission forms returned for school-based and community dental screening programs.	A	1
Unknown	B8.4.2	The system shall include the ability to access the TennCare verification site to identify children who are eligible for dental care through TennCare.	C	0
Unknown	B8.4.2.1	The system shall capture individual encounter data on children seen through the school-based dental program.	A	1
Unknown	B8.4.2.2	The system shall collect and provide data for reports of TennCare and non-TennCare services and treatments provided through school-based and community dental screening programs.	C	0
Unknown	B8.4.2.3	The system shall allow the user to capture dental preventive services through a group encounter.	C	0
Unknown	E2.17	The system shall allow entry of data from school dental projects after completion of the event.	C	0
Unknown	B8.5.0	The system shall manage dental clinic services provided in public health clinics for pediatric <del>patients, indigent patients, emergency adult visits, and comprehensive adult dental care.</del>	A	1
Unknown	B8.5.2	The system's dental EMR shall accommodate electronic charting of dental encounters.	A	1
Unknown	B8.5.3	The system shall provide the capability of capturing and displaying digitized dental radiological images.	A	1
Unknown	B8.5.4	The system shall produce and electronically transmit dental claims to third party payers and <del>provide the ability to check eligibility for specific treatments for specific teeth.</del>	A	1
Unknown	B8.5.5	The system shall create dental clinic schedules for scheduling of individual appointments.	A	1
Unknown	B8.5.6	The dental module(s) shall interface with the medical module(s) within the system.	A	1
Unknown	B8.6.0	The system shall comply with standards for reporting, tracking, and managing communicable diseases and shall interoperate with disease surveillance systems.	A	1

RFP # 34301-13214ATTACHMENT 6.7 - REQUIREMENTS MATRIX



Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	B8.6.1	The system shall maintain diagnostic test records.	A	1
EPI v1.0	B8.6.4	The system shall track patient treatments.	A	1
EPI v1.0	B8.6.5	The system shall capture tuberculosis (TB) case information and provide access to related medical record information.	A	1
Unknown	B8.6.6	The system shall interface with the CareWare system to exchange data for public health patients being seen in the Ryan White program.	C	0
EPI v1.0	B8.7.1	The system shall collect all required Title X data for the FPAR (Family Planning Annual Report).	A	1
EPI v1.0	B8.7.1.1	The system shall provide data for Family Planning continuation reports.	A	1
EPI v1.0	B8.7.2	The system shall provide for completion of the family planning patient education checklist.	A	1
EPI v1.0	B8.7.4	For voluntary sterilization, the system shall track both the date of consent and the date of procedure. <del>Constraint: procedure shall occur 31-180 days after consent is signed.</del>	B	0
EPI v1.0	E1.58	The system shall provide a means of alerting providers when a patient's Long-Acting Reversible Contraceptive (LARC) is close to expiration.	A	1
Unknown	B8.9.1	The system shall utilize standards-based messaging to interface with any existing EMR applications that are currently utilized within the state's public health system.	A	1
Unknown	B8.9.2	The system shall perform standards-based automated data exchange with RHIOs, HIEs, and SNOs.	C	0
EPI v1.0	B8.9.3	The system shall provide for encounter charting with templates customized for each public health program.	A	1
Unknown	B8.9.4	The system shall interface with any currently-used disease management applications.	C	0
Unknown	B8.9.5	The system may automatically alert the provider to "enroll" a patient into disease management based on lab results.	A	1
EPI v1.0	B8.9.5.1	The system shall require a quality review of abnormal results.	A	1
Unknown	B9.0.0	The system shall communicate in near-real time with the State's Immunization Registry, using standards as appropriate.	C	0
EPI v1.0	B9.0.1	The system shall provide updates to the State immunization registry using HL7 2.5.1 protocols and LOINC codes as appropriate.	A	1

RFP # 34301-13214ATTACHMENT 6.7 - REQUIREMENTS MATRIX



Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	E1.18	The system shall include authorized users the ability to allow medically-required vaccines to be provided at no charge, regardless of the patient's ability to qualify for a Federal vaccine program.	C	0
Unknown	E1.22	The system shall keep patient immunization records current by obtaining data from the Immunization Registry.	C	0
EPI v1.0	E1.25	The system shall capture declination of immunization, including documenting that the patient was counseled but declined to receive the immunization.	A	1
EPI v1.0	E1.26	The system shall capture the correct CVX code for each immunization administered.	A	1
Unknown	E1.27	The system shall use the immunization decision tree to limit the selections available to the provider.	C	0
EPI v1.0	E1.28	The system shall prompt the provider to assess immunization status during each encounter.	A	1
EPI v1.0	B9.3.0	The system shall allow the user to access the Immunization Registry for Federal immunization inventory management and immunization certificates, including those assessed using the Immunization Certification Validation Tool (ICVT).	C	0
EPI v1.0	B9.4.1	The system shall automatically print a new immunization record for a patient whenever a new immunization is administered.	A	1
EPI v1.0	B9.4.2	The system shall be capable of generating and displaying immunization reports by site.	A	1
Unknown	E2.11	When a vaccine is administered from the Federal vaccine inventory, the system shall add information to the patient record via barcode scanning of the vaccine stock.	A	1
Unknown	C1.1.1.1	The system shall allow scheduling by clinic or provider.	A	1
Unknown	C1.1.1.2	The system shall have a search ahead feature for the next available open date by appointment or visit type.	A	1
Unknown	C1.1.10.1	System shall accept annual updates to federal poverty guidelines.	A	1
Unknown	C1.1.10.2	System shall compare patient's income and number of family members against a predetermined formula to set the fee scale.	A	1
Unknown	C1.1.10.3	The system shall support multiple fee scales used by different public health programs.	A	1
Unknown	C1.1.11	The system shall support producing bills and receipts for payment on demand.	A	1
Unknown	C1.1.13	The system shall interface with external systems for the purpose of health information exchange (HIE).	A	1
Unknown	C1.1.14	The system shall capture and manage relevant contract data.	A	1
Unknown	C1.1.15	The system shall interface to external electronic claims information systems.	A	1



RFP # 34301-13214 ATTACHMENT 6.7 - REQUIREMENTS MATRIX

Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
EPI v1.0	C1.1.16	The system shall provide ad hoc reporting that allows users to run reports without technical intervention.	A	1
EPI v1.0	C1.1.21	The system shall provide disease management functionality.	A	1
EPI v1.0	C1.1.22	The system shall display allergy information on all appropriate windows.	A	1
Unknown	C1.1.4.1	The system shall perform real-time automated insurance eligibility verification or interface with an automated service that performs real-time verification.	A	1
Unknown	C1.1.5	The system may provide computer-based patient education functionality.	C	0
Unknown	C1.1.5.1	The system may update the patient record indicating education track completed, and capture patient's level of comprehension.	C	0
EPI v1.0	C1.10.1	The system shall support the WHO growth chart and track growth history.	A	1
Unknown	C1.10.2	The system shall check for dual WIC participation statewide each time an appointment is scheduled, a patient is seen at registration, and when WIC vouchers are printed.	C	0
Unknown	C1.10.4	The WIC & CSFP module(s) shall be integrated with Immunization Systems, Patient Encounter, Patient Scheduling, and Inventory Management.	A	1
Unknown	C1.10.6	The system shall provide and receive data as necessary to support WIC vendor management systems.	C	0
Unknown	C1.15.5	The system shall provide data for detailed reporting on disease management program effectiveness.	A	1
Unknown	C1.2.10	The system shall be capable of conducting interactions with external medical registries other than the immunization registry.	A	1
Unknown	C1.3.2.1	The system may include automated contact capabilities.	A	1



RFP # 34301-13214 ATTACHMENT 6.7 - REQUIREMENTS MATRIX

Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
Unknown	C1.3.3	System shall have unique or customizable codes to facilitate planning and tracking outreach <del>activity contacts and outcome results.</del>	A	1
Unknown	C1.4.1.3	The system shall set timed alerts by patient for eligibility (re-)certification for various public health programs.	A	1
EPI v1.0	C1.4.2.1	The system shall restrict the ability to overwrite case management notes.	A	1
EPI v1.0	C1.4.2.2	The system shall limit access to case management notes to a specified group of users.	A	1
EPI v1.0	C1.4.3	The system shall maintain customizable case management notes.	A	1
Unknown	C1.5.1	The system may transmit and process both internal and external e-prescriptions.	D	0
EPI v1.0	C1.5.12	The system shall include centralized formulary management.	A	1
EPI v1.0	C1.5.4	The system shall support current barcode technology.	A	1
EPI v1.0	C1.5.7	System shall provide utilization warnings.	A	1
EPI v1.0	C1.5.9	The system shall provide medical alerts to providers.	A	1
EPI v1.0	E2.16	The system shall produce drug information sheets for patients.	A	1
Unknown	C1.6.1	System shall perform electronic code scrubbing to reduce rejected claims, claims delays, and <del>assure accurate reimbursement.</del>	A	1
EPI v1.0	C1.9.10	The system shall provide prompts alerting the user to required fields.	A	1
EPI v1.0	C1.9.12	The system shall interface with the EMR to manage clinical documentation that has been <del>imaged using Clinical Document Architecture (CDA) Standards wherever applicable.</del>	A	1
EPI v1.0	C1.9.5	The system shall search for documents using multiple search criteria.	A	1
EPI v1.0	C1.9.6	The system shall provide the ability to scan double-sided and multiple-page documents.	A	1
EPI v1.0	C11.0.2	The system shall provide computer-based training that can be customized by authorized users.	A	1
Unknown	C3.0.2	The system shall have the ability to query other public health records.	C	0
EPI v1.0	C3.0.3	The system shall be designed with clinical data architecture (CDA), HL7, LOINC, SNOMED CT, and all applicable healthcare data and messaging standards functionality to support clinical <del>data encoding at the points of data capture and standards-based exchange of data</del>	A	1
EPI v1.0	C3.0.6	The system shall provide a date and time stamp of providers accessing the record.	A	1
Unknown	C5.0.1	The system shall communicate with disease surveillance systems and share pertinent <del>information where possible.</del>	C	0
Unknown	C5.0.2	The system shall eliminate multiple repeat data entry into multiple CDC systems and the EMR <del>as much as possible.</del>	A	1
Unknown	C5.5.1	The system shall capture and provide a mechanism to electronically report blood lead exposure <del>data to the Lead program.</del>	C	0
Unknown	C5.6.1	The system may interface and exchange confidential data from the EMR with eHARS, PRISM, CareWare, Ryan White Eligibility System (RWES) and EvalWeb.	C	0

RFP # 34301-13214ATTACHMENT 6.7 - REQUIREMENTS MATRIX



Release	ID	Description	Proposer Response Code	State Use Only: Raw Weighted
Unknown	C6.0.0	The system shall provide or interface with existing GIS systems in the delivery of public health services, and for analysis of public health data.	C	0
Unknown	C6.0.2	The system shall interface with multiple GIS systems for the purpose of better understanding geographical relationships that affect health outcomes, public health risks, disease transmission, access to health care, and other public health concerns.	C	0
Unknown	C6.0.3	All mailing address fields throughout the system shall comply with state geocoding standards.	C	0
EPI v1.0	C7.2.0	The system shall provide full multi-version (2.2 and up) HL7 messaging capability.	A	1
EPI v1.0	C7.3.0	The system shall support both 7.3XML & ebXML or later versions.	C	0
EPI v1.0	E2.4	The system shall send procedure and program code data to the billing system, as well as the centralized reporting system (CODB).	A	1
<b>Total Raw Weighted Score</b>				<b>291</b>



## CURRENT STATE SYSTEMS

### Patient Tracking and Billing Management Information System (PTBMIS)

**Technical Platform:**

██████████ servers running ██████████  
 ██████████ for idatabasing software  
 COBOL programming language

**Location of system:**

Tennessee Data Center, Tennessee regional health office, Metro data center, Metro regional health office

**Description:**

PTBMIS was installed in TN in 1989. PTBMIS is a proprietary product of NetSmart.

PTBMIS operates as 13 separate instances on 13 separate ██████████ servers, each connected to a Central Office ██████████ PTBMIS server in Nashville, TN. The 13 regional nodes transmit selected, and in some cases aggregate PTBMIS data to the central office weekly; but are not inter-connected and do not share data.

Each clinic has primarily PCs using terminal emulation to patient data within the clinic's region.

There are approximately 3,000\* users of PTBMIS (\*as of August 2013)

### Patient Tracking and Billing Management Information System (PTBMIS)

**Technical Platform:**

██████████ servers running ██████████  
 ██████████ for idatabasing software  
 COBOL programming language

**Location of system:**

Tennessee Data Center, Tennessee regional health office, Metro data center, Metro regional health office

**Description:**

PTBMIS was installed in TN in 1989. PTBMIS is a proprietary product of NetSmart.

PTBMIS operates as 13 separate instances on 13 separate ██████████ servers, each connected to a Central Office ██████████ PTBMIS server in Nashville, TN. The 13 regional nodes transmit aggregate PTBMIS data to the central office weekly; but are not inter-connected and do not share data.

Each clinic has primarily PCs using terminal emulation to patient data within the clinic's region.

There are approximately 3,000\* users of PTBMIS (\*as of August 2013)

### TN Master Patient Index

**Technical Platform:**

██████████ servers running ██████████  
 ██████████ for idatabasing software  
 COBOL programming language

**Location of system:**

Tennessee Data Center

### State Immunization Information System

**Technical Platform:**

██████████ servers running ██████████  
 ██████████ for idatabasing software  
 COBOL programming language



**Location of system:** Tennessee Data Center

### StarLIMS

**Technical Platform:** [REDACTED] server  
[REDACTED] database backend  
Vendor provided client front end

**Location of system:** Tennessee Data Center

**Description:** Starlims is a Lab Information Systems software used for tracking lab samples and test results, as well as for reporting. There are approximately 100 users of Starlims between Nashville, Jackson, Knoxville and Memphis who access the Starlims software via Terminal Services on the servers running at the State Datacenter.

## RFP ATTACHMENT 6.8. – CURRENT STATE SYSTEMS Continued

### Cloverleaf

**Technical Platform:** [REDACTED]

**Location of system:** Tennessee Data Center

**Description:** The system is using Cloverleaf software for accepting, routing and processing electronic HL7 messages containing laboratory and clinical content.



## EXCEPTION REQUESTS TO STATE STANDARD–PRIOR TO PROPOSAL SUBMISSION

### 6.9.1 Exception Requests to State Standards

The use of non-State standard products (software products, hardware products, and/or communications protocols) in the proposed solution is an exception request to State standards. State-standard Product Components are listed and designated as “Current” in the *Tennessee Enterprise Architecture*.

Non-State standard products are defined as:

- Any software that is not listed and designated as Current in the *Tennessee Enterprise Architecture*; or
- Any hardware that is not listed and designated as Current in, or is not compatible with standards listed in the *Tennessee Enterprise Architecture*.

The State’s goal is to limit the proliferation of non-standard technologies. Non-standard technologies present an undue burden on the State in terms of additional training, maintenance and operational costs that the State would otherwise not incur. Therefore, the State encourages vendors to propose solutions that use State standard products.

The services requested through this RFP should be provided within the technical environment and State standards described by the *Tennessee Enterprise Architecture*.

The proposed solution must either fully comply with the State’s Architecture, or exception(s) to State standards should be requested, as described in the following sections.

**IMPORTANT NOTE:** in the event that there is no Domain, Discipline, Technology, or Product Component covering the product that the vendor would like to use (i.e., there is no current State standard for the product), this still constitutes an exception, and the vendor should request an exception request to use the product in question.

Exception request(s) to use non-State standard product(s) in the proposed solution must be approved in writing by the Department of Finance and Administration, Office for Information Resources (OIR).

### 6.9.2 Submission and Approval/Disapproval

Exception requests to State standard products should be submitted in writing and received by the State no later than the Written Comments Deadline detailed in the RFP Section 2, Schedule of Events. For each non-State standard product, the written information shall describe why the State standard product will not support the solution, the functionality that the exception product provides, and how the exception product will be used in the proposed solution. Provide this information by completing and submitting the table in RFP Attachment 6.10., Exceptions to Tennessee Technology Architecture no later than the Written Comments Deadline.

**Requesting and receiving approval of non-State standard product(s) prior to submission of the Proposal will eliminate the risk of disqualification for proposing the product(s).**

1. Proposals that include non-State standard product(s), which were submitted to the State as a Written Comment and approved, will not be disqualified for proposing the approved non-State standard product(s).

**RFP ATTACHMENT 6.9.EXCEPTION REQUESTS TO STATE STANDARD–PRIOR TO PROPOSAL SUBMISSION Continued**



2. Proposals that include non-State standard product(s), which were submitted to the State as a Written Comment and disapproved, will be disqualified for proposing the disapproved non-State standard product(s); unless the Proposer will agree, through a written clarification response, to replace the disapproved product(s) with product(s) approved by OIR, at no additional cost to the State.
3. For Proposals that include non-State standard product(s), which were not submitted to the State as a Written Question and approved as an exception, OIR will evaluate the proposed product(s) on a case by case basis. The decision to allow or disallow such products shall be at OIR's sole discretion and shall be documented through a written clarification. If product(s) are disallowed, the Proposal will be disqualified, unless the Proposer will agree, through a written clarification response, to replace the disapproved product(s) with product(s) approved by OIR, at no additional cost to the State.

A list of the approved and disapproved exception requests to State standard products submitted in writing and received by the State no later than the Written Comments Deadline will be published as an amendment to the RFP.

Approval of non-State standard product(s) grants permission for any Proposal to include the product(s); i.e., use of an approved non-State standard product is not limited to the vendor that submitted the written request for approval.



EXCEPTIONS TO TENNESSEE TECHNOLOGY ARCHITECTURE

The State of Tennessee operates upon the concept of a standard Technology Architecture to provide a safe, consistent, dependable environment for IT solutions. New products and exceptions are considered, but not without research and confidence that exceptions will not jeopardize the safety and dependability of Tennessee's technical environment.

Please use the form below to indicate any deviations from Tennessee's technical standards that the bid solution will necessitate or request for waiver in the event a standard does not exist. Reference the "Technology Architecture Product Standards" section of Technology Architecture and enter the standard product in the first column, the full name of the product requested, and the reason why the state standard product will not support the bid solution. If a standard does not exist in the Technology Architecture, enter the full name of the product requested for the waiver, and the reason the product is needed as part of the vendor's solution. In addition to the "Reason" described above, also include a description of the functionality provided by the non-standard product, and how the non-standard product will be used.

Table with 3 columns: Standard Product as listed, Exception Requested, Reason State Standard Won't Support Solution (or) Reason Product is Needed / Functionality Provided / How the Product Will Be Used. Rows include Database Management System, Application Server Area, and Unspecified Technology Area.



		Open Vista servers.
Data Movement Technology Area	WinSCP	The State Standard does not currently include an application or tool for secure file transfer. The team proposes the addition of WinSCP or other suitable SFTP client. WinSCP is used to facilitate the secure movement and transfer of data between development and integration test servers and remote servers.
Data Movement Technology Area	Mirth	The State Standard does not currently include an application or tool for Data Movement using an integration engine that provides support for standards based transport of healthcare data. The team proposes the addition of Mirth for the Open Vista endpoint. Section A.5.g of the States RFP requires development and support of 5 interfaces between TN EPI and 5 existing external systems. Section A.5.g identifies the use of Cloverleaf for interfaces into and out of the STARLIMS lab system endpoint. No changes are needed or planned on the remote end of any interfaced systems including STARLIMS. An exception for Mirth is requested to provide the local integration tool capabilities to VistA. Mirth is proposed by the team to interface to Open Vista and is a low cost, open source solution that is commonly installed with Open Vista. Mirth interface engine can be installed on the Open Vista server and is used to provide inbound and outbound interfaces to and from Open VistA. For TN, Mirth integration engine will provide needed functionality to connect Open Vista to the States existing systems.
Web Application Development Tool Technology Area		The State Architecture Standard does not currently include this particular Web Application Development Tool Technology Area. Section A.5.d.1 of the States RFP specifically lists the use of Intersystems [REDACTED] as the database management server. [REDACTED] Integrated Development Environment (IDE) tool is the preferred tool for development, testing and prototyping on [REDACTED] based applications.
There is 1 "Current" tool listed in the Web Application Development Tool Technology Area	Microsoft Visual .NET 2010	The State Architecture Standard does not currently include this particular Web Application Development Tool Technology Area. The current supported version is Visual Studio .NET 2008. Care Vue development is currently done using Visual Studio .NET 2010 and 2008 is not supported for new development or new builds.
There are 4 "Current" tools listed in the Functional Testing Area	SilkTest	Medsphere has developed a large number of test scripts using a format that is



		compatible with SilkTest and SmartBear. Redevelopment of all regression test scripts would not be cost effective and would take considerable effort and time if the current tools are not compatible. An exception is requested for SilkTest, in the event the 4 existing tools do not provide same capability or are not compatible with the existing test scripts.
There are 5 "Current" languages listed in the Languages Technology Area		The State Standard does not currently include this particular language. Section 1.1 of the States RFP requires the use of Free Open Source Software (FOSS) version of [REDACTED] that has been certified by the Office of the National Coordinator (ONC) for TN EPI v1.0. The FOSS Open Vista software based solution will utilizes [REDACTED] to deliver requirements for the States EPI solution as part of current and future features and enhancements especially in areas related to calling external services and interfaces.
There are 5 "Current" languages listed in the Languages Technology Area	M	The State Standard does not currently include this particular language. Section 1.1 of the States RFP requires the use of Free Open Source Software (FOSS) version of [REDACTED] hat has been certified by the Office of the National Coordinator (ONC) for TN EPI v1.0. The FOSS Open Vista software based solution is developed primarily using the M language for the Kernel and all [REDACTED] applications. The out of the box solution provided by the team is based on the M language.
There are 5 "Current" languages listed in the Languages Technology Area	Delphi	The State Standard does not currently include this particular language. RFP Attachment 6.2 Section E.1.23 of the States RFP requires the incorporation of CPRS functionality for TN EPI v1.0. The Computerized Patient Record System (CPRS) clinical interfaces solution is developed primarily using Delphi language. The out of the box Care Vue solution provided by the team is based on CPRS and many components leverage the Delphi language. The Care Vue solution encapsulates CPRS and Delphi software using both C# and .NET (both on the States Approved Resources Architecture list). To the extent possible, any new enhancements will be developed using only C# and .NET, the exception is requested for completeness.



**RFP 34301-13214 EPI - Architecture Exceptions**

Standard Product as listed	Exception Requested	Reason State Standard Won't Support Solution (or) Reason Product is Needed / Functionality Provided / How the Product Will Be Used	State Response
There are 8 "Current" products listed in the Database Management System Technology Area	██████ Database	The State Standard does not currently include ██████ Database. Section A.5.d.1 of the States RFP specifically lists the use of Intersystems ██████ as the database management server ██████ derived solutions for the Veterans Administration (VA), Department of Defense (DoD) and Indian Health Service (IHS) all utilize ██████ Database Server for production support of their EHR core systems for its stability and product support. For the State of TN EPI system, ██████ will be used as the production database for the State EPI system core.	<b>APPROVED</b>
There are 3 "Current" products listed in the Application Server Area	Glassfish 3.1.2 or 4.0	The State Standard does not currently include Glassfish Open Source Application Server. [Proposed solution] utilizes automated software version updater software developed to run on the Glassfish server. The product will be used to provide continuous and automated software updates and distributions to user desktops for clinical staff using the TN EPI v1.0 system.	<b>DISAPPROVED</b> The State requires that commercial support be obtained for software that has a FOSS branch/fork. Community-supported branches/forks are not permitted for use in production systems. Oracle does not offer commercial versions or support for Glassfish.
Unspecified Technology Area	Putty	The State Standard does not currently include an application or tool for secure terminal emulation using SSH. The team proposes the addition of Putty or other suitable SSH client. Putty will be used to allow hospitals and clinics throughout the state of TN to connect to the TN Data Center and access the centrally hosted Open Vista servers.	<b>APPROVED</b>
Data Movement Technology Area	WinSCP	The State Standard does not currently include an application or tool for secure file transfer. The team proposes the addition of WinSCP or other suitable SFTP client. WinSCP is used to facilitate the secure movement and transfer of data between development and integration test servers and remote servers.	<b>APPROVED</b>



Standard Product as listed	Exception Requested	Reason State Standard Won't Support Solution (or) Reason Product is Needed / Functionality Provided / How the Product Will Be Used	State Response
Data Movement Technology Area	Mirth	<p>The State Standard does not currently include an application or tool for Data Movement using an integration engine that provides support for standards based transport of healthcare data. The team proposes the addition of Mirth for the Open Vista endpoint. Section A.5.g of the States RFP requires development and support of 5 interfaces between TN EPI and 5 existing external systems. Section A.5.g identifies the use of Cloverleaf for interfaces into and out of the STARLIMS lab system endpoint. No changes are needed or planned on the remote end of any interfaced systems including STARLIMS. An exception for Mirth is requested to provide the local integration tool capabilities to Vista. Mirth is proposed by the team to interface to Open Vista and is a low cost, open source solution that is commonly installed with Open [REDACTED]. Mirth interface engine can be installed on the Open Vista server and is used to provide inbound and outbound interfaces to and from Open [REDACTED]. For TN, Mirth integration engine will provide needed functionality to connect Open [REDACTED] to the States existing systems.</p>	<p><b>CONDITIONALLY APPROVED</b></p> <ol style="list-style-type: none"> <li>1. Use of the Mirth Connect module 3.x or later only is approved.</li> <li>2. Contractor must obtain a Mirth Connect Subscription, Platinum level, and maintain the subscription during the contract at no additional cost to the State.</li> <li>3. Contractor must provide training on the Mirth software to State staff prior to system turnover.</li> </ol>
Web Application Development Tool Technology Area	[REDACTED]	<p>The State Architecture Standard does not currently include this particular Web Application Development Tool Technology Area. Section A.5.d.1 of the States RFP specifically lists the use of [REDACTED] as the database management server. [REDACTED] Integrated Development Environment (IDE) tool is the preferred tool for development, testing and prototyping on [REDACTED] based applications.</p>	<p><b>CONDITIONALLY APPROVED</b></p> <p>Contractor must:</p> <ol style="list-style-type: none"> <li>1. Acquire licenses (if applicable) at no additional cost to the State and transfer licenses to the state at system turnover.</li> <li>2. Provide tool training to State staff prior to system turnover.</li> </ol>
There is 1 "Current" tool listed in the Web Application Development Tool Technology Area	Microsoft Visual (Studio) .NET 2010	<p>The State Architecture Standard does not currently include this particular Web Application Development Tool Technology Area. The current supported version is Visual Studio .NET 2008.</p>	<p><b>APPROVED</b></p>



Standard Product as listed	Exception Requested	Reason State Standard Won't Support Solution (or) Reason Product is Needed / Functionality Provided / How the Product Will Be Used	State Response
		[Solution] development is currently done using Visual Studio .NET 2010 and 2008 is not supported for new development or new builds.	
There are 4 "Current" tools listed in the Functional Testing Area	SilkTest	[Bidder] has developed a large number of test scripts using a format that is compatible with SilkTest and SmartBear. Redevelopment of all regression test scripts would not be cost effective and would take considerable effort and time if the current tools are not compatible. An exception is requested for SilkTest, in the event the 4 existing tools do not provide same capability or are not compatible with the existing test scripts.	<b>CONDITIONALLY APPROVED</b> Contractor must: 1. Acquire licenses at no additional cost to the State and transfer licenses to the state at system turnover. 2. Provide tool training to State staff prior to system turnover.
There are 5 "Current" languages listed in the Languages Technology Area	[REDACTED]	The State Standard does not currently include this particular language. Section 1.1 of the States RFP requires the use of Free Open Source Software (FOSS) version of [REDACTED] that has been certified by the Office of the National Coordinator (ONC) for TN EPI v1.0. The FOSS Open V [REDACTED] software based solution will utilize [REDACTED] deliver requirements for the States EPI solution as part of current and future features and enhancements especially in areas related to calling external services and interfaces.	<b>CONDITIONALLY APPROVED</b> Contractor must provide language training to State staff prior to system turnover.
There are 5 "Current" languages listed in the Languages Technology Area	M	The State Standard does not currently include this particular language. Section 1.1 of the States RFP requires the use of Free Open Source Software (FOSS) version of [REDACTED] that has been certified by the Office of the National Coordinator (ONC) for TN EPI v1.0. The FOSS Open [REDACTED] a software based solution is developed primarily using the M language for the Kernel and all VistA applications. The out of the box solution provided by the team is based on the M language.	<b>APPROVED</b>
There are 5 "Current" languages listed in the Languages Technology Area	Delphi	The State Standard does not currently include this particular language. RFP Attachment 6.2 Section E.1.23 of the States RFP requires the incorporation of CPRS functionality for TN EPI v1.0. The	<b>CONDITIONALLY APPROVED</b> Existing Delphi code that is encapsulated as described is grandfathered in. The Contractor



Standard Product as listed	Exception Requested	Reason State Standard Won't Support Solution (or) Reason Product is Needed / Functionality Provided / How the Product Will Be Used	State Response
		<p>Computerized Patient Record System (CPRS) clinical interfaces solution is developed primarily using Delphi language. The out of the box solution provided by the team is based on CPRS and many components leverage the Delphi language. The solution encapsulates CPRS and Delphi software using both C# and .NET (both on the States Approved Resources Architecture list). To the extent possible, any new enhancements will be developed using only C# and .NET, the exception is requested for completeness.</p>	<p>must obtain written approval from the State prior to adding any new Delphi code.</p>