

CIVIL ACTION NO. 21-01455

UNITED STATES DISTRICT COURT FOR
THE DISTRICT OF NEW JERSEY

ELMO RIVADENEIRA

Petitioner,

v.

JONATHAN GRAMP, WARDEN, NJSP
RESPONDENT.

AMENDED TRAVERSE BRIEF

**WITH EXHIBITS AND APPENDIX
IN SUPPORT OF THIS FILING**

ELMO RIVADENEIRA
886424-C / 746575
P.O. BOX 861
TRENTON, NEW JERSEY 08625

TABLE OF CONTENTS

TABLE OF AUTHORITIES	viii
INDEX TO APPENDIX	xi
INDEX TO EXHIBIT BOOK	xx
PRELIMINARY STATEMENT	1
PROCEDURAL HISTORY	4
TRAVERSE REPLY	5
I. GROUND ONE: AEDPA RELIEF IS NECESSARY DUE TO THE STATE COURT'S UNREASONABLE REJECTION OF A BRADY VIOLATION INVOLVING SUPPRESSED EVIDENCE OF INNOCENT DNA TRANSFER AND A PATTERN OF PROSECUTORIAL DECEPTION STEMMING FROM AN UNREASONABLE APPLICATION OF LAW AND FLAWED FACTUAL DETERMINATION (LINKED CASES)	5
A. Introduction and Summary of Argument	5
B. Counter-Statement of Facts	9
1. Investigation and the Circuitous Path to Identifying Petitioner	10
2. The A.T. Case and the State Court's Flawed Narrative	12
a. The Mischaracterization of the Victim's Voice Description	13
b. The Omission of the Exculpatory Glove DNA and the Uncritical Acceptance of Weak Circumstantial Evidence	13
c. Creation of a Fictitious Geographic Link	14
d. The Court's Oversimplification of the Stocking DNA	14
e. Uncritical Recitation of the Cancinos/Letter Testimony	16
3. The State's Disclosures and Omissions Within the Joint Investigative Framework	16
C. The State Court's Unreasonable Determination of the Facts	18
1. The Court Unreasonably Rejected the Existence of the Joint Investigation, Thereby Ignoring the State's Brady Obligations Under Clearly Established Federal Law	19
2. The Court Unreasonably Found Suppression Was "Never Substantiated," Ignoring a Record Replete with Evidence of the State's Active Deception	22

3. The Court Unreasonably Determined the Factual Relevance and Materiality of the Suppressed Evidence	28
4. The Court Unreasonably Characterized the Stocking DNA as “Compelling,” Ignoring its Scientific Unreliability and the State’s Suppression of Exculpatory Context	30
5. The Court Unreasonably Minimized the Suppressed Evidence’s Materiality by Relying on a Distorted Factual Narrative	32
6. The Court Unreasonably Adopted the State’s Shifting Narrative of Falsehoods Regarding the K.R. Evidence	35
a. Factual Background of the K.R. Case	35
b. The Prejudicial Impact: Strategic Paralysis and a Tainted Defense ..	35
i. The Original Lie and the Court’s First Error (The Scarf)	36
ii. The New Lie and the Court’s Second Error (The Car)	37
7. Summary of Section C: The Court’s Adjudication Was Premised on a Pattern of Factual Findings Divorced from the Record	38
D. The State Court’s Decision Was Contrary To, or Involved an Unreasonable Application of, Clearly Established Federal Law	39
1. Governing Clearly Established Federal Law	40
2. Unreasonable Application of Law Regarding Suppression	41
3. Unreasonable Application of Law Regarding Materiality	43
4. Unreasonable Application of Holmes v. South Carolina	43
5. The PCR Court’s Admissibility Ruling Was an Unreasonable Application of Holmes v. South Carolina, Built Upon a Tainted and Factually Erroneous Foundation	44
a. The Court’s Deference to the Prior Trial Court Ruling Was Objectively Unreasonable	45
b. The Court’s Independent Finding of Inadmissibility Was a Cascade of Errors	48
i. The Court Erroneously Applied the Inapplicable “Alternative Suspect” Standard	50
ii. The Correct Framework Under State v. Garfole Establishes Admissibility and Demonstrates a Multi-Faceted Attack on the State’s Case ..	50
c. The Admissibility Ruling and Brady Violation Rendered the Trial Fundamentally Unfair	53

6. Summary of Section D: The Court Unreasonably Applied Clearly Established Federal Law	54
E. The Brady Violation: Suppression of Exculpatory and Impeaching Evidence	55
1. The Suppressed and Misrepresented Evidence Was Favorable to the Defense	55
2. The State Suppressed the Favorable Evidence	57
3. Materiality: The Suppressed Evidence, Juxtaposed with the State’s Flawed Stocking DNA, Obliterates Confidence in the Verdict	60
a. Suppressed Evidence Was Fully Admissible For Defensive Use	61
b. The Stocking DNA: An Inherently Unreliable Pillar for Conviction, Its Weaknesses Obscured by Suppressed Context	61
i. The General Scientific Unreliability of “Touch” DNA – A Matter Demanding Judicial Notice	62
ii. Specific Flaws of the Stocking DNA Evidence in Rivadeneira’s Case	64
c. The Synergistic Impact: How the Suppressed Evidence Would Have Shattered the State’s Case	66
d. Omnibus Summary on Materiality	68
F. Petitioner’s Claims Are Fully Exhausted and Ripe for Federal Review on the Merits	70
1. Brady Violation Stemming from the Withheld H.T. Investigation Evidence Was Fully Exhausted	73
a. State Courts Were Fairly Presented with the Claim Regarding the Suppressed H.T. “Crawford Report” and the Prosecutor’s Deception About the Attacker’s Description	73
b. The State Courts Were Fairly Presented with the Claim Regarding the H.T. Lab Report and the Misrepresentation of Forensic Evidence	74
2. The Claim Regarding the Withheld Context of the N.W. Investigation and Its Impeachment Value Was Fully Exhausted	75
3. Claim Regarding the Withheld K.R. Lab Report and the State’s Deception Was Fully Exhausted	76
4. Claim that the State’s Cumulative Pattern of Deception Caused Unconstitutional Strategic Paralysis Was Fully Exhausted	77

5. Summary: The Substance of Petitioner’s Federal Claims Was Fully Exhausted Throughout All Levels of State Court Review	78
G. Conclusion: The Constitution Demands Rectification of a Verdict Secured by a Campaign of Deception and Compounded Judicial Error	80
II. GROUND TWO: PETITIONER WAS DENIED HIS SIXTH AMENDMENT RIGHT TO THE EFFECTIVE ASSISTANCE OF COUNSEL	83
A. Introduction	83
B. Counsel’s Deficient Performance and Resulting Prejudice	83
1. Failure to Investigate Alex Cancinos and the Viable Third-Party Guilt Defense	83
a. Deficient Performance	83
b. Prejudice	85
2. Failure to Investigate the Linked N.W., H.T., and K.R. Attacks	86
a. Deficient Performance	86
b. Prejudice	87
3. Failure to Investigate the Veracity of the “Burnt Letter”	88
a. Deficient Performance	88
b. Prejudice	89
4. Failure to Rebut the State’s Prejudicial Characterization of the Lost Stocking DNA	90
a. Deficient Performance	90
b. Prejudice	91
5. Failure to Meaningfully Consult with and Utilize a Forensic/DNA Expert	91
a. Deficient Performance	91
b. Prejudice	93
6. Conclusion: The State Court’s Decision Was an Unreasonable Application of Law and Fact, as the Cumulative Effect of Counsel’s Errors Manufactured a False Narrative of Guilt	97

III. GROUND THREE: AEDPA RELIEF IS NECESSARY DUE TO THE STATE COURT’S UNREASONABLE REJECTION OF A BRADY VIOLATION INVOLVING CONCLUSIVE SPERM DNA (EXCLUDING PETITIONER AND IDENTIFYING AN UNKNOWN MALE PERPETRATOR)—EVIDENCE SUPPRESSED UNTIL FEDERAL HABEAS AND ERRONEOUSLY DEEMED “NOT NEW” BY STATE BASED ON THE COURT’S ACCEPTANCE OF PROSECUTORIAL MISREPRESENTATIONS AND RELIANCE ON A PHANTOM DOCUMENT STEMMING FROM AN UNREASONABLE APPLICATION OF LAW AND FLAWED FACTUAL DETERMINATIONS	99
A. Introduction and Summary of Argument	99
B. Counter-Statement of Facts	104
1. Trial Facts and the State Court’s Flawed Narrative	105
2. The Suppressed Exculpatory Evidence: The Overalls and the 2011 Bode Report	107
C. The State Court’s Unreasonable Factual Determinations Regarding the Suppressed Sperm DNA	112
1. Finding: 2011 Report Contained No “New” Information	113
2. Unreasonable Finding: Information Was “Known to Defendant” / “Presented to Jury”	114
3. Unreasonable Reliance on a “Phantom” 2006 Bode Report	116
4. Unreasonable Failure to Appreciate the Misleading Nature of the Trial Stipulation	118
5. Unreasonable Minimization of Materiality	118
6. The State Court’s Unreasonable Findings: A Direct Result of Reliance on the Prosecution’s Multi-Layered Misrepresentations	122
7. Summary of Section C: The Court’s Factual Determinations Were Objectively Unreasonable	126
D. The State Court’s Decision Was Contrary To, or Involved an Unreasonable Application of, Clearly Established Federal Law Regarding the Suppressed Sperm DNA	127
1. Application of Brady’s Favorability and Suppression Prongs under § 2254(d)(1)	127
2. Application of Brady’s Materiality Prong under § 2254(d)(1)	130

3. Summary of Section D: The Court Unreasonably Applied Brady and Kyles	131
E. The Brady Violation: Suppression of Definitive Exculpatory Sperm DNA	132
1. Favorability: The Suppressed 2011 Bode Y-STR Report Was Conclusively Exculpatory and Impeaching	132
a. Exculpatory Nature: The Overalls Link the Crime to an Unknown Male, Not Rivadeneira	132
b. Impeachment Value: Exposing the Prosecution’s Deception and Clarifying Forensic Significance	134
c. Summary: Favorability Beyond Dispute	136
2. Suppression: The State Concealed the Dispositive 2011 Y-STR Report	137
a. District Court’s Recognition of Suppression and the Prosecution’s Silence	138
b. The Prosecution’s Direct Possession and Control Pre-Trial	139
c. Summary: Suppression Established	140
3. Materiality: The Suppressed Definitive Sperm DNA, Juxtaposed with the State’s Flawed Stocking DNA, Obliterates Confidence in the Verdict	140
a. Introduction to Materiality	141
b. The Suppressed Overalls-Sperm DNA: A Game-Changer Concealed	141
c. The Stocking DNA: An Inherently Unreliable Pillar for Conviction. Its Weaknesses Obscured by Suppressed Context and Judicial Misapprehension	143
i. The General Scientific Unreliability of “Touch” DNA – A Matter Demanding Judicial Notice	144
ii. Specific Flaws of the Stocking DNA Evidence in Rivadeneira’s Case	145
iii. The State Courts’ Unreasonable Factual Findings Compounded the Error	147
d. The Synergistic Impact: Suppressed Truth Exposes Presented Falsehood	147
e. Omnibus Summary on Materiality: The Cumulative Effect of All Suppressed Evidence and the State’s Misconduct Demonstrates Profound Materiality	148

F. Conclusion: The Constitution Demands Rectification of a Verdict Secured by Concealed Truth and Compounded Judicial Error	150
IV. GROUND FOUR: AN EVIDENTIARY HEARING IS REQUIRED TO RESOLVE THE GRAVE FACTUAL DISPUTES AND CONSTITUTIONAL CLAIMS RAISED HEREIN	154

TABLE OF AUTHORITIES

	Page(s)
U.S. SUPREME COURT CASES	
<i>Banks v. Dretke</i> , 540 U.S. 668 (2004)	passim
<i>Brady v. Maryland</i> , 373 U.S. 83 (1963)	passim
<i>Brumfield v. Cain</i> , 576 U.S. 305 (2015)	19, 112
<i>Gray v. Netherland</i> , 518 U.S. 152 (1996)	70
<i>Harrington v. Richter</i> , 562 U.S. 86 (2011)	29, 54, 82, 132, 153
<i>Hinton v. Alabama</i> , 571 U.S. 263 (2014)	91
<i>Holmes v. South Carolina</i> , 547 U.S. 319 (2006)	passim
<i>Kyles v. Whitley</i> , 514 U.S. 419 (1995)	passim
<i>Lafler v. Cooper</i> , 566 U.S. 156 (2012)	88, 98
<i>Miller-El v. Cockrell</i> , 537 U.S. 322 (2003)	19, 112
<i>Rhines v. Weber</i> , 544 U.S. 269 (2005)	2, 117, 138
<i>Romano v. Oklahoma</i> , 512 U.S. 1 (1994)	53
<i>Rompilla v. Beard</i> , 545 U.S. 374 (2005)	85, 87
<i>Schrirro v. Landigan</i> , 550 U.S. 465 (2007)	154
<i>Strickland v. Washington</i> , 466 U.S. 668 (1984)	passim
<i>Strickler v. Greene</i> , 527 U.S. 263 (1999)	passim
<i>Wilson v. Sellers</i> , 138 S. Ct. 1188 (2018)	45
<i>Wood v. Allen</i> , 558 U.S. 290 (2010)	18
<i>Yee v. Escondido</i> , 503 U.S. 519 (1992)	70

	Page(s)
FEDERAL COURT OF APPEALS & DISTRICT CASES	
<i>Bailey v. Lafler</i> , 753 F. App'x 352 (6th Cir. 2018)	40
<i>Bailey v. Lafler</i> , 209 F. Supp. 3d 955 (W.D. Mich. 2016)	40

<i>Cook v. Nogan</i> , 2016 U.S. Dist. LEXIS 162338 (D.N.J. 2016)	51
<i>Dennis v. Sec'y, Pa. Dep't of Corr.</i> , 834 F.3d 263 (3d Cir. 2016)	55, 67, 68, 132
<i>United States v. Kauffman</i> , 109 F.3d 186 (3d Cir. 1997)	93
<i>United States v. Pelullo</i> , 399 F.3d 197 (3d Cir. 2005)	42
<i>United States v. Risha</i> , 445 F.3d 298 (3d Cir. 2006)	19
<i>United States v. Shaffer</i> , 789 F.2d 682 (9th Cir. 1986)	42
<i>United States v. Stevens</i> , 935 F.2d 1380 (3d Cir. 1991)	49
<i>United States v. Travillion</i> , 759 F.3d 281 (3d Cir. 2014)	91

STATE CASES	Page(s)
<i>State v. Cofield</i> , 127 N.J. 328 (1992)	46, 48
<i>State v. Cook</i> , 179 N.J. 533 (2004)	49, 51
<i>State v. Cope</i> , 224 N.J. 530 (2016)	50, 68
<i>State v. Cox</i> , No. 37206-5-III (Wash. Ct. App. Apr. 20, 2021)	68
<i>State v. Garfole</i> , 76 N.J. 445 (1978)	50, 51, 52, 53, 61
<i>State v. Jimenez</i> , 175 N.J. 475 (2003)	50
<i>State v. Koedatich</i> , 112 N.J. 225 (1988)	50
<i>State v. Parson</i> , 341 N.J. Super. 448 (App. Div. 2001)	49
<i>State v. Rivadeneira</i> , No. A-1033-09T4 (App. Div.)	20
<i>State v. Rivadeneira</i> , No. A-3348-11T3 (App. Div. May 4, 2016)	10, 104
<i>State v. Rivadeneira</i> , No. A-5573-17T1 (App. Div. May 19, 2020)	passim
<i>State v. Rivadeneira</i> , Nos. A-2968-21, A1043-22 (App. Div. Jan. 9, 2024)	passim
<i>State v. Weaver</i> , 219 N.J. 131 (2014)	49

STATUTES & RULES	Page(s)
28 U.S.C. § 2254(d)	passim
N.J. Court Rule 1:4-8(a)	24
N.J.R.E. 404(b)	passim
Rule 8(a), Rules Governing Section 2254 Cases	154

OTHER AUTHORITIES	Page(s)
National Institute of Standards and Technology, NIST IR 8503 (Excerpts): Forensic DNA Interpretation and Human Factors: Improving Practice Through a Systems Approach (May 2024). Includes Sections 5, 6, 7, and 13 (Exhibit A)	passim
Criminal Legal News Report: “Touch-Transfer DNA Remains Misunderstood and Still Poses High Risk of Wrongful Conviction” by J.D. Schmidt (Dec. 15, 2024) (Exhibit B)	63, 121, 144
The Justice Gap Report: “How misuse of DNA evidence has led to miscarriages of justice” by Peter Gill (Jan. 27, 2017) (Exhibit C)	64, 121, 144
The Guardian Investigative Series: “DNA in the dock: how flawed techniques send innocent people to prison” by Nicola Davis (Oct. 2, 2017) (Exhibit D)	64, 121, 144
Criminal Legal News Report: “Lack of Academic Research in U.S. on Secondary DNA Transfer Affects Criminal Defendants” by Steve Horn (Oct. 14, 2019) (Exhibit E)	64, 121, 144

INDEX TO APPENDIX

VOLUME I (Pa 1 to Pa 200)

Bode Technology Report (9/15/11).....	Pa 1
Police Report (Overalls Transfer to Bode).....	Pa 4
Photo of Overalls.....	Pa 5
Secure Movement Receipt (HCPO – 5/19/05).....	Pa 6
NJSP Evidence Return Receipt.....	Pa 7
NJSP Criminalistics Laboratory Report (5/31/05).....	Pa 8
Excerpt of Trial Transcript (9/29/2011).....	Pa 9
Excerpt of Trial Transcript (10/04/2011).....	Pa 21
Affirmation from Prosecutor John Mulkeen.....	Pa 32
Grand Jury Transcript (2/07/2007).....	Pa 40
Grand Jury Transcript (2/21/2007).....	Pa 133
Grand Jury Transcript (2/28/2007).....	Pa 140
Grand Jury Transcript (04/16/2009).....	Pa 168

VOLUME II (Pa 201 to Pa 400)

Grand Jury Transcript (04/16/2009) (Continued).....	Pa 201
Appellate Division Decision A-1033-09T4 (Decided 8/3/2010).....	Pa 235
Appellate Division Decision A-5573-17T1 (Decided 5/19/2020).....	Pa 246
Pro Se Brief to Appellate Division (First PCR Appeal).....	Pa 276
Pro Se Brief to PCR Trial Court (First PCR).....	Pa 303
Pro Se Brief to NJ Supreme Court (First PCR Appeal).....	Pa 324

Transcript of PCR Oral Arguments (09/12/2019).....	Pa 340
Transcript of PCR Oral Arguments (08/08/2019).....	Pa 380
VOLUME III (Pa 401 to Pa 600)	
Transcript of PCR Oral Arguments (08/08/2019) (Continued).....	Pa 401
U.S. District Court of NJ Decision and Order (Decided 2/23/22).....	Pa 454
Appellate Division Decision (Decided 5/4/16).....	Pa 458
Bode Technology Y-STR DNA Report (9/15/11).....	Pa 463
NJSP Forensic Y-STR DNA Report (1/5/08).....	Pa 466
NJSP Criminalistics DNA Report (5/31/05).....	Pa 474
NJSP Forensic DNA Report (7/14/05).....	Pa 489
NJSP Forensic DNA Report (11/2/05).....	Pa 507
NJSP Forensic DNA Report (10/5/06).....	Pa 514
Defense Counsel's Discovery Request to Prosecution regarding Missing Discovery (3/29/11).....	Pa 519
Defendant's Pro Se Letter to Counsel Requesting Expert and Investigation (7/6/11)...	Pa 526
Letter from Defense Counsel to Public Defender's Office Requesting Funds for DNA Expert (7/7/11).....	Pa 527
Defendant's Pro Se Letter to Counsel regarding Missing Discovery (8/1/11).....	Pa 529
Defense Counsel's Transmittal of Discovery to Expert Dr. Richard Saferstein (8/11/11)	Pa 530
Dr. Richard Saferstein's Expert Review Letter / Declination of Assistance (9/23/11)...	Pa 532
Prosecution's Requests to NJSP Office of Forensic Sciences for DNA Data (2007-2008)	Pa 533
Defense Counsel's Correspondence to Defendant regarding Discovery Status.....	Pa 537
Discovery Receipt and Inventory - Nerissa W. Case (2/1/11).....	Pa 538
Defense Counsel Correspondence to Defendant regarding Missing Discovery (3/8/11)	Pa 539

Discovery Inventory List for AT and NW Cases (4/11/11).....	Pa 540
Defense Counsel Correspondence to Defendant regarding Missing Discovery and DNA (7/19/11).....	Pa 541
Defense Counsel Correspondence to Defendant regarding State's Motion to Join (8/10/11).....	Pa 543
Defense Counsel Correspondence to Defendant regarding OPD Approval of DNA Expert (8/11/11).....	Pa 544
Defense Counsel Correspondence to Defendant regarding Missing FBI Discovery (8/17/11).....	Pa 545
Defense Counsel Correspondence to Defendant regarding Missing Discovery in AT Case (8/22/11).....	Pa 546
Defense Counsel Correspondence to Defendant regarding Proposed Order (8/25/11) ..	Pa 547
Defense Counsel Correspondence to Defendant regarding Plea Offer (8/25/11).....	Pa 548
Defense Counsel Correspondence to Defendant regarding Prosecution's Correspondence (9/6/11).....	Pa 549
Prosecution Email to Defense Counsel regarding Missing Discovery (9/7/11).....	Pa 550
Prosecution Email regarding Special Appointment as Acting Attorney General for Defendant's Prosecution.....	Pa 551
FedEx Receipt: NY OCME DNA Records (HT Case, FB 04221) to NJ Prosecutor (8/15/11).....	Pa 552
NY OCME Certification of Discovery and DNA Records (HT Case) (8/15/11).....	Pa 553
NJ Prosecutor's Email Request to NY OCME for Discovery (HT Case) (8/3/11).....	Pa 554
Defense Trial Witness List (9/20/11).....	Pa 558
State's Trial Witness List (9/20/11).....	Pa 560
NJ Prosecutor's Email to New York District Attorney (8/24/12).....	Pa 563
New York District Attorney's Email to NJ Prosecutor (8/24/12).....	Pa 564
Defense Counsel Correspondence to Defendant regarding Transfer of Trial File to OPD (7/2/12).....	Pa 565

Defense Counsel Correspondence to Defendant regarding Motion for Reduction of Sentence (3/14/12).....	Pa 567
Discovery Inventory List for AT Case (8/25/11).....	Pa 568
Evidence Log for AT Case (1/12/07).....	Pa 570
Sexual Assault Examination Report: Evidence Collection (Victim AT) (5/18/05).....	Pa 578
Receipt for Sexual Assault Examination Evidence (5/18/05).....	Pa 592
Investigative Report: Formal Statement of Victim AT (5/18/05).....	Pa 593
Investigative Report: Blue Latex Glove Recovery and Video Surveillance Review.....	Pa 598
Investigative Report: Impounding of White Toyota.....	Pa 600

VOLUME IV (Pa 601 to Pa 800)

Investigative Report: Processing Crime Scene (Victim AT); Recovery of Nylon Stocking and White Toyota (5/18/05).....	Pa 601
Supplemental Report: Interview with Victim AT's Family; Collection of Eric Flores' Buccal Swabs (5/19/05).....	Pa 606
Investigative Report: Forensic Processing of 1986 White Toyota Celica (5/19/05).....	Pa 608
Supplemental Report: Victim AT Identification of Drop-off Area and Identification of Tony Batista's Vehicle (5/25/05).....	Pa 610
Supplemental Report: Evidence Retrieval and Forensic Enhancement of Surveillance Tapes by FBI and MSNBC (6/1/05).....	Pa 612
Supplemental Report: General Motors Technical Assistance in Vehicle Identification (6/9/05).....	Pa 614
Supplemental Report: Investigative Tips and Leads; Interview with Johan Carrasco regarding Suspect Sketch (7/21/05).....	Pa 618
Memorandum: Formal Request for Y-STR DNA Analysis by Bode Technology Group (3/6/06).....	Pa 627
Supplemental Report: Chain of Custody; Hand-Delivery of Overalls to Bode Technology for Y-STR Testing (5/25/06).....	Pa 629

Secure Movement Receipt: Transfer of Rape Kit, Overalls, and Nylon Stocking for Laboratory Testing (5/19/05).....	Pa 631
Supplemental Report: Arrest and Processing of Defendant Elmo Rivadeneira (10/13/06)	Pa 632
Supplemental Investigation Report: NJSP Criminalistics Report regarding Fiber and Hair Analysis (10/29/08).....	Pa 633
Supplemental Report: Retrieval, and Inventory of Evidence from HCPO Vault for Pre-Trial Purposes (9/1/11).....	Pa 635
NYPD Complaint Report: HT Case (West 28th St. Assault); Description of Suspect (9/15/04).....	Pa 638
NYPD Follow-Up Report: Recovery and Forensic Printing of Suspect's Cellular Phone (HT Case) (9/16/04).....	Pa 641
NYPD Follow-Up Report: Identification of Subject Dean Crawford through Photo Manager (10/7/04).....	Pa 642
NYPD Follow-Up Report: Contact with Emily Carpenter (Cell Phone SIM Card Owner) and Victim Nerissa Wharton (NW) (9/21/04).....	Pa 643
NYPD Follow-Up Report: Photo Array Viewing; Victim NW Identification of Dean Crawford as Attacker (10/9/04).....	Pa 650
NYPD Follow-Up Report: Nextel Cellular Search and Subpoena Request for Phone Serial # 919TDA9278 (10/12/05).....	Pa 653
NYPD Follow-Up Report: Vouchering and Forensic Fingerprint Testing of Cell Phone Battery (10/12/05).....	Pa 662
HCPO Investigative Reports: Victim NW Identification of Alex Cancinos (1/23/07) FBI Photo Array, misc. arrest reports.....	Pa 671
Supplemental Report: Interview of Victim NW in North Carolina; Positive ID of Alex Cancinos and No Identification of Elmo Rivadeneira (2/22/07).....	Pa 690
Supplemental Investigation Reports: Coordination of Joint Investigation Hudson County Prosecutor's Office, FBI, and NYPD (12/17/04).....	Pa 692
Investigative Report: Identification of Drop-off Location for Victim NW (9/11/06)....	Pa 761
Investigative Report: Chain of Custody; Transfer of Recovered Cellular Phone from NYPD to HCPO to FBI (9/22/06).....	Pa 767
Joint Investigative Report: Identification of HT Cell Phone Ownership; Elmo Rivadeneira Identified in Investigation (9/24/06).....	Pa 772

NYPD Voluntary Disclosure Form (VDF): Investigation into HT Case.....	Pa 775
FBI Investigative Report: Identification and Search of Defendant's Vehicles (9/26/06). .	Pa 781
Supplemental Investigation Report: Joint Investigation Progress Report.....	Pa 784
Investigation Report into Defendant's Vehicles (9/26/06).....	Pa 785
Defendant's Arrest and Processing (9/28/06).....	Pa 787
Joint Investigation Team into Defendant's Arrest and Custodial Interview of Defendant (9/27-28/06).....	Pa 788
Affidavit by Detective for Search Warrant elaborating on Joint Investigation Team.....	Pa 791
Report: Joint Investigation Team Executed Search Warrant on Defendant's Home (9/29/06).....	Pa 793
Search Warrant Inventory Sheet; New York Warrant and Movement Receipt.....	Pa 795
Forensic Sketch of Attacker: NYPD Investigation.....	Pa 800

VOLUME V (Pa 801 to Pa 1000)

Defendant provides informed consent and voluntary submission of DNA buccal swabs to investigators (10/3/06).....	Pa 801
FBI Joint Investigation Report: Interview of Defendant's girlfriend (10/2/06).....	Pa 802
Defendant's buccal swabs transported to DNA Unit in New Jersey (10/4/06).....	Pa 803
VICAP Report: Joint investigation analysis by FBI, New York and New Jersey (10/4/06)	Pa 804
Investigation report: Interview of Defendant's girlfriend.....	Pa 812
Arrest report for Defendant on AT case (10/13/06).....	Pa 814
Investigation report into Defendant's garage (10/26/06).....	Pa 815
Forensic Processing of white SUV connected to Defendant (10/30/06).....	Pa 816
Analysis of H.T cell phone (10/30/06) and evidence receipt.....	Pa 817
FBI Joint Investigation report and forensic processing of Cadillac connected to Defendant.....	Pa 822

FBI and Joint Investigation report: collection of trace evidence in connected cases	Pa 829
Cover sheet from FBI investigation into Defendant's cell phone (12/12/06)	Pa 830
May 12, 2017 Filed Notice; Orders	Pa 831
Letter/email, OPD and Elmo (2/21/17 to 5/19/17)	Pa 837
Letters, OPD and Elmo (7/5/17 to 12/6/17)	Pa 840
Second PCR Petition (filed 1/22/19)	Pa 852
Letter from OPD (3/11/19)	Pa 857
Letter from OPD, Order (7/12/19 to 10/4/19)	Pa 858
Subsequent Post-Conviction Petition (3/30/22)	Pa 862
Notice to Appeal w/moving papers and Orders	Pa 879
Notice of Motion for Limited Remand (9/7/22)	Pa 905
Letter from H.C. Crim. Case Man. (1/22/19)	Pa 915
NJSP Forensic DNA Report (11/2/05)	Pa 916
Letter to H.C. Crim. Case Man. (4/4/19)	Pa 919
Letter to H.C. Crim. Case Man. (9/25/20)	Pa 921
Federal Court Docket Sheet (2:21-cv-01455)	Pa 923
Judgment of Conviction	Pa 925
Certification of Elmo	Pa 929
Motion for New Trial (w/moving papers)	Pa 930
Prosecution's response to Motion for Limited Remand	Pa 947
Motion to Amend Appeal with July 29, 2022 Order	Pa 955
Appellate Div. Denial to Amend	Pa 958
Notice to Appeal July 29, 2022 Order	Pa 959

Excerpts of Trial Transcript (09/28/11).....	Pa 965
Excerpts of Trial Transcript (10/05/11).....	Pa 983
Defendant's Brief regarding Newly Discovered Evidence (Re: 2011 Bode Y-STR DNA Report) (Subsequent PCR).....	Pa 988
VOLUME VI (Pa 1001 to Pa 1200)	
Defendant's Brief regarding Brady Claim (Re: 2011 Bode Y-STR DNA Report) (Subsequent PCR).....	Pa 1050
Defendant's Reply Brief regarding Newly Discovered Evidence (Re: 2011 Bode Y-STR DNA Report).....	Pa 1103
Defendant's Reply Brief regarding Brady Claim (Re: 2011 Bode Y-STR DNA Report)	Pa 1114
Notice of Petition for Certification to the NJ Supreme Court (Re: 2011 Bode Y-STR DNA Report).....	Pa 1139
NYPD Complaint Report: HT Case; Suspect Description and Incident Details (09/15/04).....	Pa 1140
NYPD Follow-Up Report HT case: Identification of Subject Dean Crawford through Photo Manager (10/07/04).....	Pa 1143
New York OCME Forensic DNA Laboratory Analysis Hand-Notes (HT Case Cell Phone - FB04-2261).....	Pa 1144
New York OCME Forensic DNA Laboratory Report (HT Case Cell Phone) (12/30/04)	Pa 1146
Supplemental Report: Interview of Victim NW; Positive Identification of Alex Cancinos and Non-Identification of Defendant Elmo Rivadeneira (02/22/07).....	Pa 1151
NYPD Follow-Up Report: Photo Array Viewing; Victim NW Identification of Dean Crawford as Attacker (10/09/04).....	Pa 1153
NYPD Complaint Report: KR Case; Suspect Description and Scarf Recovery (Det. Savino 06/24/05).....	Pa 1154
NYPD Supplemental Complaint Report: KR Case; Suspect Description, Vehicle Identification (Cadillac), and Scarf Recovery (Det. Savino - 06/24/05).....	Pa 1158
Correspondence from Prosecution regarding Discovery of New DNA Evidence and Withdrawal of Extended Plea Offer (08/19/11).....	Pa 1161

Correspondence from Defense Counsel to Defendant regarding Discovery of New DNA Evidence and Withdrawal of Plea Offer.....	Pa 1163
Affidavit of New York District Attorney regarding Defendant's DNA on Scarf (KR Case)	Pa 1165
New York Forensic DNA Laboratory Report, Scarf (KR Case) (01/18/06).....	Pa 1168
New York Forensic DNA Laboratory Report, Scarf (KR Case) (01/14/09).....	Pa 1173
New York Forensic DNA Laboratory Report, Scarf (KR Case) (07/26/13).....	Pa 1176
Certification of Defendant Elmo Rivadeneira.....	Pa 1178
New York Forensic DNA Laboratory Report, Scarf (KR Case) (01/18/06).....	Pa 1180
New York Forensic DNA Laboratory Report, Scarf (KR Case) (01/14/09).....	Pa 1185
New York Forensic DNA Laboratory Report, Scarf (KR Case) (07/26/13).....	Pa 1188
New York Forensic DNA Laboratory Report, Scarf, and Cadillac Swabs, N32637 (KR Case) (01/13/09).....	Pa 1192
Evidence Packaging and Crime-Scene Swab Examination Worksheets, Cadillac, N432637 (12/14/06).....	Pa 1198

VOLUME VII (Pa 1201 to Pa 1269)

Evidence Packaging and Crime-Scene Swab Examination Worksheets, Cadillac, N432637 (12/14/06) (Continued).....	Pa 1201
New York Forensic DNA Laboratory Report, Scarf (KR Case) (07/25/13)).....	Pa 1204
Supplemental Investigation Report Post-Defendant's Arrest.....	Pa 1210
Defendant's Brief for Certification to the New Jersey Supreme Court (Re: 2011 Bode Y-STR DNA Report).....	Pa 1212
New Jersey Supreme Court Order Denying Certification.....	Pa 1233
State's Response Brief to Defendant's Motion for New Trial.....	Pa 1234
State's Response Brief to Defendant's Brady Claim (Re: 2011 Bode Y-STR DNA Report).....	Pa 1246

INDEX TO EXHIBIT BOOK

Exhibit	Document Description	Page
A	<i>National Institute of Standards and Technology</i> , NIST IR 8503 (Excerpts): Forensic DNA Interpretation and Human Factors: Improving Practice Through a Systems Approach (May 2024). Includes Sections 5, 6, 7, and 13.	Exh. A-1
B	<i>Criminal Legal News</i> Report: “Touch-Transfer DNA Remains Misunderstood and Still Poses High Risk of Wrongful Conviction” by J.D. Schmidt (Dec. 15, 2024).	Exh. B-1
C	<i>The Justice Gap</i> Report: “How misuse of DNA evidence has led to miscarriages of justice” by Peter Gill (Jan. 27, 2017).	Exh. C-1
D	<i>The Guardian</i> Investigative Series: “DNA in the dock: how flawed techniques send innocent people to prison” by Nicola Davis (Oct. 2, 2017).	Exh. D-1
E	<i>Criminal Legal News</i> Report: “Lack of Academic Research in U.S. on Secondary DNA Transfer Affects Criminal Defendants” by Steve Horn (Oct. 14, 2019).	Exh. E-1

PRELIMINARY STATEMENT

The State would have this Court believe that Elmo Rivadeneira received a fair trial. That claim rests on three fictions the state courts adopted as fact:

First Fiction: A prosecutor who obtained definitive DNA evidence—showing sperm from an unknown male perpetrator on the perpetrator's own overalls, excluding both Rivadeneira and the victim's boyfriend while generating the Y-STR DNA profile of that perpetrator—somehow fulfilled his constitutional duty by *hiding that report* and allowing his expert to testify that no semen was found, in order to secure a conviction untroubled by inconvenient truths.

Second Fiction: A prosecutor who knew Rivadeneira's easily-transferred skin cell DNA was found at a separate, interconnected crime scene—left there by a six-foot white male with blue eyes independently identified by two separate victims as Dean Crawford—somehow acted properly by *concealing* this documented proof of innocent DNA transfer. Instead, he argued to the jury that finding Rivadeneira's skin cell DNA on a lost, soiled stocking proved guilt beyond reasonable doubt, while suppressing the devastating fact that the actual perpetrator (Crawford) was the known accomplice of the State's own star witness, Alex Cancinos—a man with unrestricted access to Rivadeneira's belongings at their shared workplace.

Third Fiction: Trial counsel who failed to investigate any of this—who received a useless one-paragraph DNA expert report three days after trial began, who never discovered that his client's DNA was innocently transferred by the actual perpetrators, and who never exposed that the State's star witness was the accomplice of the man who proved innocent DNA transfer was real—somehow provided effective assistance.

The state courts called these fictions "reasonable." They characterized ambiguous touch DNA from a lost stocking—scientifically incapable of establishing when, how, or by what

activity it was deposited—as "compelling evidence." They dismissed definitive sperm DNA from the attacker's own clothing that excluded Rivadeneira and identified another perpetrator as immaterial. They invented a narrative that a 2006 laboratory report contained findings that were scientifically impossible to obtain until the 2011 comparison—five years after the report. They did this despite the federal District Court explicitly questioning the prosecutor's claim that the 2006 report (never produced to any court) contained the same information as the withheld 2011 report, noting the prosecution "does not analyze the differences" and that "the exact contents of the 2006 report" remain "unclear." That same court found the claims "potentially meritorious" and granted a stay under Rhines v. Weber, implicitly recognizing the 2011 report's non-disclosure. Yet the state courts adopted the State's scientifically impossible narrative anyway.

Most remarkably, the Respondent now asks this Court to affirm these fictions under AEDPA's deferential standard—as if deference requires blindness to scientific impossibility, as if "reasonableness" tolerates findings that contradict undisputed facts, as if a conviction secured through documented suppression and deception deserves the imprimatur of federal approval.

This brief is detailed because the State's deception was layered, and AEDPA's standard is unforgiving. To obtain relief, Petitioner must prove the state courts' adjudication was not merely wrong but "objectively unreasonable"—that their factual findings were so divorced from the record, and their legal conclusions so contrary to clearly established Supreme Court precedent, that no fairminded jurist could agree with them.

That burden demands precision. It requires showing not just that evidence was suppressed, but documenting the prosecutor's specific lies about that evidence. Not just that counsel was ineffective, but tracing exactly how his failures flowed from the prosecutor's deceptions. Not just that the verdict is unreliable, but demonstrating through scientific authority

why the evidence the jury heard (touch DNA) was meaningless and the evidence they never heard (sperm DNA on the overalls) was dispositive.

The structure of this brief reflects that burden. Each Ground begins with an introduction and summary of the argument explaining the constitutional violation and providing a roadmap to the detailed analysis that follows. Each section is designed to be read either comprehensively or as a reference tool—allowing this Court to verify every assertion against pinpoint record citations.

What follows is not a disagreement about credibility or competing inferences. It is proof—through the State's own files, through scientific impossibility, through documented lies—that this conviction rests on suppression and deception. The prosecutor obtained definitive proof of innocence and buried it. He knew concrete evidence showed innocent DNA transfer by the actual perpetrators and argued the opposite. Defense counsel, operating in the darkness created by these lies, surrendered without a fight.

The question before this Court is whether AEDPA's deference extends to factual findings that defy science, logic, and the documented record—whether "reasonableness" means anything when a state court adopts demonstrable falsehoods to uphold a conviction secured through suppression. The Constitution answers no. So must this Court.

PROCEDURAL HISTORY¹

The full procedural history of this matter is extensive and has been thoroughly set forth in the recent state court filing (see **Pa1001-1005**). For the sake of judicial economy and to avoid unnecessary repetition in this already voluminous traverse brief, Petitioner will not restate that entire history herein.

Petitioner further relies upon the detailed procedural history as presented in his *Amended Petition for a Writ of Habeas Corpus* filed on December 9, 2024 (ECF No. 25), as well as the history outlined in the Respondent's Answer unless otherwise opposed. Relevant procedural facts will be addressed as necessary within the substantive legal argument of each Ground.

¹ Citations to the record are abbreviated as follows:

For the documents filed by the Respondents on May 14, 2021 (ECF No. 6), this brief adopts the following citation format to correspond with the official Court Docket:

- "**Ra**" refers to the Respondents' Appendix, containing part of the state court record (ECF No. 6, Attachment 15 through 28)
- **Citations to transcripts** refer to the specific hearings as identified and filed in the Court Docket (ECF No. 6):
 - "1T" refers to N.J.R.E. 404(b) hearing dated 8/16/11 (Att. 2).
 - "2T" refers to N.J.R.E. 104 hearing dated 9/20/11 (Att. 1).
 - "3T" refers to Trial transcript dated 9/27/11 (Att. 7).
 - "4T" refers to Trial transcript dated 9/28/11 (Att. 8).
 - "5T" refers to Trial transcript dated 9/29/11 (Att. 9).
 - "6T" refers to Trial transcript dated 10/4/11 (Att. 10).
 - "7T" refers to Trial transcript dated 10/5/11 (Att. 11).
 - "8T" refers to New Trial Motion hearing dated 2/3/12 (Att. 12).
 - "9T" refers to Sentencing transcript dated 2/17/12 (Att. 13).
 - "10T" refers to PCR oral argument dated 2/1/18 (Att. 3).
 - "11T" refers to Remand PCR oral argument dated 8/8/19 (Att. 5).
 - "12T" refers to Remand PCR oral argument dated 9/12/19 (Att. 4).
- "**Pa**" refers to the Petitioner's Appendix. The documents contained therein are part of the state court record and were presented or referenced during the state court proceedings. This appendix is filed contemporaneously with this Amended Traverse Reply Brief.

TRAVERSE REPLY

I. GROUND ONE

AEDPA RELIEF IS NECESSARY DUE TO THE STATE COURT'S UNREASONABLE REJECTION OF A BRADY VIOLATION INVOLVING SUPPRESSED EVIDENCE OF *INNOCENT DNA TRANSFER* AND A PATTERN OF PROSECUTORIAL DECEPTION STEMMING FROM AN UNREASONABLE APPLICATION OF LAW AND FLAWED FACTUAL DETERMINATION (Raised Below: See Section F *infra*, for a complete analysis demonstrating all claims herein were fully exhausted in state court.)

A. INTRODUCTION AND SUMMARY OF ARGUMENT

The conviction of Elmo Rivadeneira in the A.T. case rests on the State's claim that his skin cell DNA on a lost stocking proves guilt beyond a reasonable doubt. But the State concealed the fatal flaw in that argument: Mr. Rivadeneira's skin cell DNA was also found at the scene of a separate, similar, and interconnected attack (the H.T. case) where he demonstrably was not the perpetrator—the actual assailant was a six-foot white male with blue eyes identified by his victim as Dean Crawford. The prosecutor knew from his own investigation that Mr. Rivadeneira's DNA had been innocently transferred to that H.T. crime scene by the real perpetrator, yet he argued to the A.T. jury that the identical type of DNA evidence—transferable skin cells—proved guilt beyond a reasonable doubt.

The prosecutor concealed a devastating link established by the victims themselves. The victim in the N.W. case independently identified Dean Crawford as her attacker—the very same man identified by the H.T. victim. Crucially, the N.W. victim also identified the State's star witness, Alex Cancinos, as Crawford's accomplice. This confirmed that Cancinos was operating in a criminal partnership with the very man who left Mr. Rivadeneira's DNA at the H.T. scene. Because Cancinos had unrestricted access to Mr. Rivadeneira's belongings at their shared workplace, this proven partnership established the exact mechanism for innocent transfer the prosecutor hid from the jury.

The prosecution compounded this suppression by falsely claiming Mr. Rivadeneira's DNA matched evidence in yet another case (the K.R. case)—a lie used to withdraw a plea offer. When trial counsel, paralyzed by these lies, moved to exclude this evidence, the State allowed it—burying proof that the prosecution's own investigation had demonstrated *innocent DNA transfer* was not theoretical but factually documented, and that their key corroborating witness was the accomplice of the man who proved it.

The A.T. Case and the Linked Investigations

Mr. Rivadeneira stands convicted of the May 17, 2005 sexual assault of A.T. in North Bergen, New Jersey (the "A.T. case" or "instant case"). His identification as a suspect did not come from evidence tied directly to that crime. Instead, it resulted from a two-year, multi-jurisdictional investigation into three other sexual assaults: the July 2, 2004 attack on N.W. in Elizabeth, New Jersey; the September 15, 2004 attempted abduction of H.T. in New York City; and the June 24, 2006 assault on K.R. spanning New York and New Jersey. These cases—referred to throughout as the "H.T.," "N.W.," and "K.R." investigations—were physically and forensically linked by a stolen SIM card and DNA evidence. Authorities operated under the theory that a single perpetrator committed all attacks. The evidence the State suppressed from these linked investigations forms the core of this Brady violation.

Why Relief is Required Under AEDPA

This habeas petition seeks relief under 28 U.S.C. § 2254(d) because the state court's denial of this Brady claim was built on objectively unreasonable factual findings and an equally flawed application of clearly established federal law. The May 19, 2020 Appellate Division decision rejected the Brady violation through four critical errors:

First, the court invented a fiction that no joint investigation existed—despite the trial prosecutor's sworn affirmation, the lead detective's grand jury testimony, prior judicial findings explicitly recognizing the inter-agency cooperation, and the undisputed fact that Mr. Rivadeneira's identification came entirely from cross-jurisdictional evidence the State itself relied upon.

Second, the court ignored a documented pattern of prosecutorial deception that created "strategic paralysis"—false representations about forensic evidence, fabricated witness descriptions, and lies about DNA matches that forced the defense to treat powerfully exculpatory evidence as toxic.

Third, the PCR court dismissed the concrete forensic and physical links between cases as a mere "theory"—despite the State's own physical evidence and investigation establishing those connections and the prosecutor's admission that "but for the cell phone in the H.T. case, we would never have solved the A.T. case."

Fourth, the court characterized ambiguous touch DNA from a lost, soiled stocking as "compelling evidence"—while simultaneously dismissing as immaterial the suppressed proof that this same type of DNA evidence was demonstrably innocently transferred in a linked case, and ignoring the well-established scientific limitations of skin cell DNA authoritatively detailed in the 2024 NIST Report *infra*.

These are not findings upon which fairminded jurists could disagree. They demonstrably conflict with the record and demand federal intervention.

Structure of This Ground

This Ground is detailed because AEDPA demands it and because the State's deception was layered. To obtain relief, Petitioner must prove the state court's adjudication was not merely

wrong but objectively unreasonable—that their factual findings were divorced from the record and their legal conclusions contrary to clearly established Supreme Court precedent. What follows is organized to serve as a navigation tool.

- **Section B** establishes the factual baseline through pinpoint record citations, correcting the state court's flawed narrative and providing the evidentiary anchor that allows this Court to independently verify each claim of unreasonableness.
- **Section C** proves the state court made six categories of unreasonable factual determinations under § 2254(d)(2)—from rejecting the existence of the joint investigation despite overwhelming evidence, to characterizing scientifically unreliable touch DNA as "compelling" while dismissing definitive proof of innocent transfer.
- **Section D** demonstrates how these unreasonable factual findings led directly to five unreasonable applications of clearly established federal law under § 2254(d)(1)—including misapplying Kyles v. Whitley's disclosure duties, ignoring Banks v. Dretke's prohibition on prosecutorial deception, and committing the exact circular reasoning Holmes v. South Carolina forbids by using the prosecution's case strength to exclude third-party guilt evidence.
- **Section E** synthesizes these errors to prove the complete Brady violation, establishing that the suppressed evidence was unequivocally favorable, that suppression occurred through multiple means including active misrepresentation, and that the evidence was profoundly material—creating a reasonable probability of a different outcome when assessed cumulatively as Kyles demands.

- **Section F** demonstrates exhaustion by proving every claim was fairly presented to the state courts at every level, making this a proper review of state court unreasonableness rather than a presentation of new federal claims.

What This Ground Proves

What follows is *not* a disagreement about witness credibility or competing inferences from ambiguous evidence. It is proof—documented in the State's own files, in sworn testimony, and in the scientific record—that the state court's findings cannot survive scrutiny under § 2254(d). The court rejected the existence of a joint investigation the prosecutor himself affirmed under oath. It characterized scientifically unreliable touch DNA as "compelling" while dismissing definitive exclusions and proof of innocent transfer as immaterial. It accepted prosecutorial falsehoods that created strategic paralysis, then faulted the defense for the paralysis those lies caused.

These are not judgment calls upon which fairminded jurists could disagree—they are findings so divorced from the record that federal intervention is required. The cumulative weight of the record evidence, viewed in its totality, compels the conclusion that this conviction was secured through suppression and deception, and no reasonable jurist could conclude otherwise.

The sections that follow provide the detailed roadmap proving that conclusion.

B. COUNTER-STATEMENT OF FACTS

The last reasoned state court decision addressing the specific Brady claim here is the Appellate Division's opinion dated May 19, 2020. State v. Rivadeneira, No. A-5573-17T1 (App. Div. May 19, 2020) (**Pa246-275**).² Petitioner does *not* adopt the statement of facts as recited

² Citations to "Pa" are to the Petitioner's Appendix. As defined in footnote 1, *supra*, the documents contained therein are part of the state court record and were presented or referenced during the state court proceedings.

within that decision, as the court conducted no independent factual review and instead incorporated the same flawed narrative from the 2016 direct appeal opinion (State v. Rivadeneira, No. A-3348-11T3 (App. Div. May 4, 2016)) (**Pa458-462**), thereby repeating numerous errors that the PCR court failed to address, despite petitioner bringing them to its attention (**10T 37:13-25**). This section provides a corrected factual narrative, beginning with the multi-jurisdictional investigation that formed the entire basis for petitioner's arrest, followed by a necessary correction of the numerous factual errors the state court adopted in its summary of the trial evidence, and concluding with a roadmap of the State's pattern of suppression and misrepresentation.

1. Investigation and the Circuitous Path to Identifying Petitioner

Mr. Rivadeneira's arrest on September 28, 2006, was not the result of any direct evidence from the A.T. crime scene. Instead, it was the culmination of a two-year joint investigation by New Jersey (Hudson County Prosecutor's Office), New York (NYPD, Manhattan DA), and FBI authorities into a series of unsolved sexual assaults spanning both states (**Pa63-70, Pa135-138, Pa147-148, Pa172-Pa179, Pa214, Pa788**). The existence of this joint effort is indisputable—a foundational fact demonstrated by the entire documentary and operational history of the case. This integrated approach is woven throughout the police reports, affidavits in support of warrants (see generally **Pa632-830**), and the grand jury minutes (**Pa63-70, Pa135-138, Pa147-148, Pa172-Pa179, Pa214**). The reports, in particular, chronicle the seamless integration of the agencies: they shared files and evidence, held joint strategy meetings to coordinate efforts, formed a composite team to investigate leads, and ultimately executed the arrest as a single, unified team (**Pa788**). This operational reality—with a New Jersey detective retrieving evidence from New York to be analyzed by the FBI (**Pa767-770**)—was later officially acknowledged

through sworn testimony. The lead detective, Lt. Domanski, confirmed to the Grand Jury that his office "worked very closely" with its New York and federal counterparts (**Pa64-65**), and the trial prosecutor not only affirmed under oath that "[t]his prosecution began as a joint investigation" (**Pa32-39**), but later conceded on the record that "[b]ut for the cell phone in the H. T. case, we would never have solved the A. T. case" (**1T 49:20-22**).

The task force's shared theory of a single perpetrator (**Pa806**) was cemented by the physical evidence that explicitly connected these three cases:

- **The N.W. Attack (Elizabeth, NJ - July 2, 2004)**: The victim, N.W., was kidnapped and raped by two men. Her cell phone SIM card was stolen during the assault (**Pa135-136; Pa175-179; Pa202-203, Pa739-747**).
- **The H.T. Attack (New York, NY - Sept 15, 2004)**: The victim, H.T., fought off an attempted abduction. During the struggle, the attacker dropped a cell phone which H.T. recovered and turned over to police (**Pa65-66, Pa642**).
- **The A.T. Attack (North Bergen, NJ - May 17, 2005)**: The instant case, a black stocking was recovered near the victim's release location. The specific facts of the A.T. attack, and the state court's flawed recitation thereof, are detailed in **Section B.2 *infra***.

The investigation's critical breakthrough, and the sole path that led to Mr. Rivadeneira, was the analysis of the cell phone dropped by the H.T. attacker in New York (**1T 10:22-11:18, 49:19**); (**Pa68-70**). That analysis revealed two crucial pieces of evidence that bridged jurisdictions: first, the New York cell phone contained the SIM card stolen from the New Jersey victim, N.W., directly linking the New York and New Jersey attacks (**Pa135-136, Pa694-695, Pa739**). Second, it contained the DNA of an unknown male (**Pa66**). The primary forensic link to the instant case

was established when this unknown male DNA profile from the H.T. attacker's cell phone was found to match the major DNA profile on a black stocking recovered from the A.T. case (**Pa70**).

This cross-jurisdictional DNA hit did not identify the petitioner, as Rivadeneira's DNA was not in any database (**Pa33**). Investigators only identified Mr. Rivadeneira after a lengthy (2 year), circuitous investigation to trace the ownership of the H.T. attacker's phone (**Pa65-70, Pa177-179; (1T 10:22-11:18)**). After New York detectives in 2004 concluded that the phone could not be traced to an owner, the investigation stalled (**Pa653**). It was not until September 2006 that Lt. Domanski, a New Jersey Detective, retained the H.T. attacker's cell phone from New York authorities and turned it over to the Newark FBI field office (**Pa767-770**), who then traced the phone to a repair shop in Pennsylvania (**Pa66**). This ultimately led them to a former girlfriend of Mr. Rivadeneira in New Jersey, who confirmed she had given the phone to him, at a certain point, in 2002 (**Pa67-68**). It was only after this trail—entirely extrinsic to the A.T. crime itself—that authorities identified Mr. Rivadeneira as a person of interest. Rivadeneira consented to provide his DNA (**Pa801**) and it was found to match the profiles from the H.T. phone and the A.T. stocking (**Pa70**). Thus, the State's entire case was predicated on the interconnectedness of these crimes (**1T 10:22-11:18, 49:19**), a fact central to the Brady violation at issue. The full scope of this cooperation and the State's duty to disclose the resulting evidence, which is unreasonably rejected by the state court, is detailed further in **Sections C.1 and E.2 *infra***.

2. The A.T. Case and the State Court's Flawed Narrative

On the night of May 17, 2005, the victim, A.T., was kidnapped and assaulted by an assailant wearing a stocking mask (**5T 126:10**) and blue latex gloves (**5T 138:8**). The attacker, described by A.T. as "American" (**5T 160:4-6**), forced her into a dark, boat-size car (**5T 116:13-20**), drove her to deserted locations, and sexually assaulted her multiple times (**5T 119:9-120:15**,

121:17, 123:11, 125:2, 127:23, 131:14) before taking her clothing and forcing her to wear a pair of his own blue denim "Winnie the Pooh" overalls (**5T 141:4-16, 145:3-6**). He then released her in a lot in Newark, where police later recovered a black sheer stocking (**6T 7:18-8:8**). A blue latex glove was also found near the initial abduction site (**6T 122:24**). The State's case was built entirely on a patchwork of circumstantial evidence from this incident (**1T 41:10-15**), the strength of which was artificially inflated by the state court's flawed factual summary.

The Appellate Division in its May 19, 2020 decision, State v. Rivadeneira, No. A-5573-17T1 (**Pa246-275**), repeated a flawed summary of the trial record that inflated the strength of the State's case by misstating facts and omitting critical exculpatory details:

a. The Mischaracterization of the Victim's Voice Description

The Appellate Division misrepresented A.T.'s testimony by stating she described the attacker as having one "very distinctive voice" (Rivadeneira, No. A-5573-17T1, slip op. at 4) (**Pa249**). This finding is *not* supported by the record. A.T. actually described three distinct vocal patterns: a loud one when angry, a low-pitched voice when nice, and a "Kermit the Frog" voice when talking to himself (**5T 134:25-135:5**). In contrast, it was Mr. Rivadeneira's ex-girlfriend, Lauren Teicher, who testified that he had a "very distinct, low tone, raspy" voice (**5T 51:6**). The court's summary misleadingly conflated these separate testimonies, and crucially, ignored that A.T. never identified Mr. Rivadeneira as her attacker by his voice or any other means (**6T 119:20-22**), (**7T 6:16**).

b. The Omission of the Exculpatory Glove DNA and the Uncritical Acceptance of Weak Circumstantial Evidence

While the court noted a blue latex glove was found near the abduction site (Rivadeneira, No. A-5573-17T1, slip op. at 5) (**Pa250**), its summary completely omitted the exculpatory fact

that DNA testing excluded Mr. Rivadeneira as a contributor to the male DNA profile found on that glove (**4T 130:14-22**).

The court further highlighted the perpetrator's use of Black and Mild cigars (Rivadeneira, No. A-5573-17T1, slip op. at 4–5) (**Pa249–250**), yet failed to acknowledge two critical points: first, that trial testimony never established the petitioner was smoking that brand at the time of the incident—only that he had smoked it years prior on occasions; and second, that testimony (and a stipulation) also confirmed the brand's general popularity, rendering this alleged preference of minimal probative value (**5T 160:16–161:7**), (**6T 117:3–7**), (**7T 62:7–10**).

c. Creation of a Fictitious Geographic Link

The assailant drove A.T. to an auto body repair facility in Newark for her release—"International Auto Body," located at 166 Clifford Street in Newark, New Jersey (**6T 6:8-7:18**), (**5T 62:24-63:14**). The court's summary then asserted a direct link between Mr. Rivadeneira and the Newark release location through his employer, stating there was "a business relationship with defendant's employer" (Rivadeneira, No. A-5573-17T1, slip op. at 5) (**Pa250**). This finding is *baseless* and directly contradicted by the trial testimony of Mr. Rivadeneira's employer (**5T 54:22-59:19**) and the owner of the actual release location (**5T 67:10-22**). This factual error is so profound it appears to have been created by the appellate court itself, as *not* even the prosecutor or investigators claimed that such a specific business link existed (**7T 28:22-29:2, 35:8-79:13**); (**Pa600 to Pa611**).

d. The Court's Oversimplification of the Stocking DNA

The centerpiece of the State's case was a black stocking. The summary adopted by the Appellate Division—that the stocking "proved to have the victim's DNA on the outside and defendant's DNA on the inside" (Rivadeneira, No. A-5573-17T1, slip op. at 5) (**Pa250**)—is a gross oversimplification that is directly contradicted by the trial record. The State's own experts

established the stocking was found dirty and soiled (**4T 17:1-6, 36:14-25**), and the DNA evidence derived from it was from skin cells (**4T 17:1-10, 25:23-26:3**), containing a complex mixture from at least two to four people (**4T 89:11-24, 92:6-7, 93:6-7, 108:17-20**). In fact, more DNA was found on the outside of the stocking compared to the inside, which held an equal amount of DNA from its contributors (**4T 71:18-72:12, 73:17-74:3**).

Regarding the victim, the prosecutor admitted the expert could not definitively say her DNA was on the stocking (**7T 50:13-15**); rather, she could not be excluded from the mixtures on *either side* (**4T 70:5-7; 73:3-24**); (**Pa490, Pa917**) with probabilities the expert agreed were "not high under DNA standards" (**4T 101:12-19**), ranging from one in thousands on the inside to one in millions on the outside (**4T 71:25-72:3; 107:14-108:8**); (**Pa490, Pa917**). Similarly, Mr. Rivadeneira could not be excluded from the inside mixture, with probabilities in the millions (**4T 129:14-130:3**), yet was identified as the major donor on the outside with probabilities in the quadrillions (**4T 125:2-12**).

This single, ambiguous piece of evidence stood alone, devoid of any corroboration: Mr. Rivadeneira's DNA was found nowhere else (**6T 117:15-118:1**), (**7T 6:1-11**); no saliva, sweat, or hair was on the stocking despite the prolonged, strenuous assault (**7T 11:11-13:25**); the victim never identified him (**7T 6:16-7:1**); extensive searches of his home and vehicle revealed nothing incriminating (**5T 180:13-24**); he had no connection to the release location (**7T 28:22-29:2**); and crucially, the prosecution lost the stocking before trial, preventing any examination by the defense or jury (**6T 31:16-32:21**), (**7T 4:21-5:6**). The appellate court failed to consider these facts in light of the well-known scientific limitations of "touch" skin cell DNA evidence, the legal significance of which is discussed in **Sections C.5 and E.3.b *infra***.

e. Uncritical Recitation of the Cancinos/Letter Testimony

Finally, the Appellate Division in 2020 recounted testimony from Alex Cancinos regarding an alleged jailhouse letter (Rivadeneira, No. A-5573-17T1, slip op. at 5-6) (**Pa250-251**). The court's uncritical summary failed to acknowledge that this evidence was plagued with credibility issues: the letter was conveniently burned by Cancinos (**6T 81:3-8**), Cancinos received a dismissal of his own rape charges in exchange for his testimony (**5T 27:22-28:12, 29:14-19**), (**6T 66:18-68:12, 100:4-14**), and his stated motive was to manipulate Mr. Rivadeneira's girlfriend, who could not conclusively verify the handwriting (**5T 22:13-14, 96:15-97:12**), (**6T 95:24-96:23**).

The state court's reliance on this flawed factual narrative and its impact is detailed comprehensively in **Section C.5 *infra***.

3. The State's Disclosures and Omissions Within the Joint Investigative Framework

As established in **Section B.1 *supra***, the prosecution of Mr. Rivadeneira arose from a multi-agency investigation involving New Jersey, New York, and federal authorities. This joint structure placed the State in constructive possession of all materials generated across the related cases. The disclosures and omissions outlined below reflect how the prosecution's selective presentation of that shared evidence shaped the factual record available to the defense.

- **Withheld Identification of Dean Crawford (H.T.):** The prosecution did *not* disclose that H.T. identified Dean Crawford (**Pa1143**)—the same individual named by N.W. in New Jersey—as her attacker (**Pa176, Pa1153**). This placed Crawford at the scene where petitioner's DNA was found on a discarded phone (**Pa515**), supporting innocent transfer and third-party guilt. This dual identification by victims in separate states—H.T. in New York and N.W. in New Jersey—was devastating proof that Crawford was not a phantom

alternative suspect but a verified perpetrator operating across jurisdictions, yet the State concealed this corroboration from the jury.

- **Undisclosed Connection Between Cancinos and Crawford (N.W./H.T.):** The State's key witness, Alex Cancinos (**6T 68:25**), was Crawford's known accomplice in the N.W. case (see **Pa199, Pa1151-1153, Pa671-678 in conjunction with Pa176, Pa1153**). The withheld H.T. identification (**Pa1143**) tied Cancinos to the man who left petitioner's DNA behind, undermining his credibility and exposing a motive to deflect blame.
- **Misrepresentation of Physical Description (H.T.):** The prosecution repeatedly claimed that petitioner matched the description of the H.T. assailant (**1T 11:17-18, 12:1-2, 38:20-21, 28:17-20; (Pa180)**)—despite knowing petitioner does *not* match the description (**10T 52:19-21**) and that H.T., who informed police she could identify her attacker (**Pa1141**), consistently described her attacker as a six-foot-tall white male with blue eyes (**Pa1140-1143**), identified Dean Crawford (**Pa1143**), and did not identify petitioner in a live lineup (**Pa780**). The State distorted this record to create the illusion of a match, even providing the defense with a report falsely claiming H.T. described her attacker as simply Hispanic (**Pa695**).
- **Mischaracterization of DNA Origin (H.T.):** Petitioner's skin cell DNA on the H.T. phone (**Pa1144**) was described to the defense and presented to the Grand Jury as "blood" (**Pa66, Pa70, Pa1163**). This misrepresentation, contradicted by the actual lab reports showing epithelial (skin) cells (**Pa1144**), elevated a benign forensic trace into a false narrative of direct involvement.
- **False DNA Claim Used to Withdraw Plea (K.R.):** Although the K.R. case had no physical link to the others, the prosecution claimed petitioner's DNA was found on the attacker's scarf that was used to blindfold the victim (**Pa1161-Pa1163, Pa1167**). Lab reports consistently

showed no match and in fact explicitly excluded Rivadeneira on every test (**Pa1173, Pa1185, Pa1188**). This assertion was used to withdraw a plea offer (**Pa1162**) and portray the broader investigation as inculpatory.

- **Strategic Impact on Defense:** Based on these representations, defense counsel expressed concern about "opening the door" to the linked cases and limited cross-examination of Cancinos (**5T 28:3-5**). The trial court validated this fear, first warning counsel (**1T 51:7-14**) and then restricting this line of questioning (**6T 67:17-20**). The jury never heard the suppressed context: that petitioner's DNA was left at the H.T. scene by a six-foot white male with blue eyes—identified as the accomplice of the State's witness Alex Cancinos.

Though evidence of the suppression is documented in the record, the State court failed to reach the constitutional conclusions it compelled. **Section C *infra*** demonstrates its unreasonable determination of the facts under § 2254(d)(2); **Section D *infra*** establishes its unreasonable application of clearly established federal law under § 2254(d)(1); and **Section E *infra*** presents the full Brady violation—covering suppression, constructive possession, materiality, and the impact on trial fairness.

C. THE STATE COURT'S UNREASONABLE DETERMINATION OF THE FACTS

A federal court may grant habeas relief if a state court's adjudication of a claim "resulted in a decision that was based on an unreasonable determination of the facts in light of the evidence presented in the State court proceeding." 28 U.S.C. § 2254(d)(2). This standard is demanding. A state court's factual finding is not unreasonable "merely because the federal habeas court would have reached a different conclusion in the first instance." Wood v. Allen, 558 U.S. 290, 301 (2010). However, deference does not mean abdication. A state court's finding is objectively unreasonable when it is based on a "plainly erroneous" view of the evidence or when

it ignores significant, uncontradicted evidence in the record. See Brumfield v. Cain, 576 U.S. 305, 314 (2015). As the Supreme Court has made clear, a federal court can "conclude the decision was unreasonable or that the factual premise was incorrect by clear and convincing evidence." Miller-El v. Cockrell, 537 U.S. 322, 340 (2003). The state court's denial of Mr. Rivadeneira's Brady claim meets this high standard, as it rests upon a series of factual findings that are not just incorrect, but are objectively unreasonable when measured against the overwhelming and undisputed evidence in the record.

The analysis below references both the official sworn instruments through which these facts were presented to state courts (**detailed comprehensively in Section F *infra***) and the underlying investigative reports that validate those sworn statements. This dual approach demonstrates not only what the state courts were told by the State's own officers, but why their rejection of those admissions was objectively unreasonable—they dismissed facts the government's own files irrefutably confirm. A complete analysis demonstrating that all claims herein were fully exhausted and preserved in state court is provided in **Section F *infra***.

1. The Court Unreasonably Rejected the Existence of the Joint Investigation, Thereby Ignoring the State's *Brady* Obligations Under Clearly Established Federal Law

Under the Due Process Clause, the State's duty to disclose favorable evidence under Brady v. Maryland is *not* limited to the prosecutor's direct possession but extends to information "known to the others acting on the government's behalf in the case, including the police." Kyles v. Whitley, 514 U.S. 419, 437 (1995). This principle of constructive knowledge applies across jurisdictional lines when agencies engage in a joint investigation. See United States v. Risha, 445 F.3d 298, 303 (3d Cir. 2006). The state court's failure to recognize the existence of the joint investigation in this case was a foundational factual error that allowed it to improperly limit the

State's constitutional obligations. The court's unreasonable application of the law stemming from this error will be detailed in **Section D *infra***.

The state court's adjudication was anchored in its unreasonable factual determination that no legally significant joint investigation existed. This error was particularly egregious because the defense established the joint investigation by relying on the State's own primary, official instruments: sworn statements and prior judicial findings. The court found that the New Jersey prosecutor had no Brady obligation to turn over reports prepared by New York or FBI authorities, dismissing the trial prosecutor's own sworn affirmation detailing the joint effort as merely "inartful in his words" (Rivadeneira, No. A-5573-17T1, slip op. at 12, n.6) (**Pa257**). This finding is patently unreasonable, as the existence of a joint investigation was never in dispute and was, in fact, established by every piece of relevant evidence in the record.

First, the defense relied upon the sworn affirmation of the trial prosecutor, John Mulkeen. While submitted in a different procedural context, this affirmation contained a dispositive factual admission, stating explicitly: "This prosecution began as a joint investigation between my office and local, state, and federal agencies, including the New York County District Attorney's Office, into a series of kidnappings and sexual assaults... It was believed that the same man was responsible..." (**Pa32-33**).

Second, the defense relied on the sworn Grand Jury testimony of the lead New Jersey detective, Lt. George Domanski, which corroborated the joint nature of the investigation. He testified that his office "worked very closely with New York City Police Department... and the New York County District Attorney's Office" on the linked cases (**Pa64-65**).

Third, the defense relied on a prior interlocutory appeal decision (State v. Rivadeneira, No. A-1033-09T4), which contained judicially recognized facts based on testimony at an

evidentiary hearing that detailed the extensive inter-agency cooperation (**Pa237-238**), further cementing the joint investigation as a settled matter long before the PCR proceedings.

Fourth, the undisputed physical and investigative trail makes the existence of a joint operation undeniable. The entire basis for petitioner's arrest was evidence that bridged jurisdictions: a cell phone from a New York crime (H.T.) (**Pa63-70**) contained a SIM card from a New Jersey crime (N.W.) (**Pa135-137, Pa203, Pa653, Pa694-695, Pa742**) and was forensically linked via DNA to the New Jersey crime at issue (A.T.) (**Pa70, Pa148**).³ It was a New Jersey detective who retrieved this phone from New York authorities and gave it to the FBI to trace (**Pa767-770**). The petitioner's arrest itself was a "joint operation by detectives from the Hudson County Prosecutor's Office and The New York City Police Department's Special Victim's Division" as well as the FBI (**Pa788**). This was not a mere "transfer of information"; it was an intermingled, coordinated, and joint effort from start to finish (see **Section B.1 supra**), a fact reflected in every police report, affidavit, and warrant that forms the factual basis for the primary instruments the defense relied upon.⁴ The State's own trial prosecutor admitted as much during the N.J.R.E. 404(b) hearing, stating unequivocally on the record: "But for the cell phone in the H. T. case, we would never have solved the A. T. case" (**1T 49:20-22**).

The unreasonableness of the court's finding is made undeniable by the fact that the joint nature of the investigation was so obvious it was acknowledged as a given during the PCR proceedings. The State *never* once denied that a joint investigation occurred; its arguments focused solely on disputing its legal obligations stemming from that cooperation. The PCR court

³ This physical bridge (the SIM card) was reinforced by a testimonial bridge that the State court ignored: both the H.T. victim (NY) and the N.W. victim (NJ) identified the same man, Dean Crawford, as their attacker. The investigation was 'joint' not just because the evidence crossed state lines, but because the perpetrator identified by victims in both jurisdictions was the same person.

⁴ See generally Pa632-830 containing the underlying investigative reports for the primary instruments, a reliance demonstrated in the state court record, See, e.g., Pa308-310, Pa323, Pa334.

itself stated on the record that the New Jersey prosecutor's office was "working hand in hand with the DA's office," adding, "No doubt, no doubt. I think no one would dispute that they were both interested in the same perpetrator" (**10T 14:12-21**). For the appellate court to then issue a formal written decision that directly contradicts the overwhelming, unrefuted evidence from the State's own agents is the very definition of an unreasonable determination of the facts under 28 U.S.C. § 2254(d)(2).

2. The Court Unreasonably Found Suppression Was "Never Substantiated," Ignoring a Record Replete with Evidence of the State's Active Deception

The State's duty under Brady is not merely passive; it includes a duty of candor. The Supreme Court has clearly established that "the defense can rely on the truthfulness and completeness of the prosecutor's representations." Strickler v. Greene, 527 U.S. 263, 284 n.23 (1999). When the State actively misleads the defense about the nature of evidence, it is a form of suppression that is "incompatible with a scheme of justice." Banks v. Dretke, 540 U.S. 668, 694 (2004). The state court here failed to grapple with this principle, instead making an unreasonable factual finding that ignored both the State's active deception and the very record before it.

The Appellate Division dismissed petitioner's claim with a confounding and illogical footnote, stating: "Although defendant claimed he only became aware of the evidence after he was tried and convicted in New Jersey and extradited to New York..., the claim was never substantiated by competent evidence in the record and the reports from the New York authorities all predate the trial" (Rivadeneira, No. A-5573-17T1, slip op. at 12, n.6) (**Pa257**).

This finding is objectively unreasonable because it is baseless under any of its three possible interpretations: a procedural critique, a substantive one, or a hypothetical claim of attorney negligence. The court's observation that the reports "predate the trial" is legally

irrelevant to a Brady claim; for evidence to be suppressed, it must, by definition, exist before or during the trial.

First, to the extent the court's finding was a procedural critique—that petitioner failed to substantiate *when* he received the documents—it is directly contradicted by the record. PCR counsel explained on the record, at the judge's own prompting, that the documents were obtained during discovery proceedings in New York after petitioner's extradition following the A.T. conviction (**10T 23:7-12**). Furthermore, petitioner's *pro se* brief, which was adopted by counsel (**Ra15, Ra315**),⁵ served as a certification to the court detailing precisely how and when he came upon the information (**Pa285**; **(Ra357)**). For the appellate court to ignore these on-the-record explanations is unreasonable.

Second, and more fundamentally, to the extent the court was questioning the substance of the suppression claim, its focus is misplaced. The core constitutional issue is not *when* petitioner discovered the State's lies, but that the State lied in the first place, thereby suppressing the truth at the time of trial. The court's finding creates an impossible and illogical Catch-22: it faults the petitioner for not having the exculpatory reports in the trial record when the very reason for their absence was the State's unconstitutional suppression and misrepresentation of their contents. It is an objectively unreasonable analysis that punishes the victim of a constitutional violation for the violation itself.

Third, even if the court's cryptic finding was meant to imply a third, unstated angle—that the reports *were* in the defense trial file but were overlooked by negligent counsel—this hypothetical is both factually impossible and legally unavailing. If this were true, the claim would simply shift from a Brady violation to one of Ineffective Assistance of Counsel (**a claim**

⁵ Citations to "Ra" are to the Respondent's Appendix, which contains the state court record as filed by the Respondents. See footnote 1, *supra*.

addressed in Ground Two *infra*). However, this "kick the can" argument is foreclosed by the record. Petitioner was represented by the Office of the Public Defender (OPD) throughout his trial and appellate proceedings. Subsequent PCR and appellate counsel from the OPD, who had control of the original trial file, adopted the claim that the reports were missing. By signing and filing briefs advancing this claim, counsel was certifying under New Jersey Court Rule 1:4-8(a) and their ethical duties of candor that they had conducted a reasonable inquiry and the factual allegation had evidentiary support. PCR counsel forcefully argued this point on the record, stating, "There was no strategy here because the defense was *not* provided with that information" (**12T 37:22-24**). The OPD's adoption of this claim, both in writing and in oral argument, serves as an implicit confirmation that their review of their own file confirmed the reports were never there.

The State's suppression was not passive non-disclosure; it was a pattern of active deception that concealed the most critical exculpatory narrative available to the defense: that the petitioner's DNA could be, and was, innocently (or intentionally) transferred to a linked crime scene by the actual perpetrators. The specific evidence suppressed and misrepresented includes:

- **The Lie vs. The Truth (H.T. Attacker's Description)**: The State actively misrepresented that petitioner matched the description of the H.T. attacker, despite knowing that Rivadeneira (a 5 foot 7 inch tall Hispanic male with brown eyes) in no way fit that description (**10T 52:19-21**), (**11T 33:16-17**) and that H.T. viewed Rivadeneira in a live lineup and did *not* identify him (**Pa780**). At the N.J.R.E. 404(b) hearing, the prosecutor constructed a multi-layered deception to obscure the exculpatory nature of the H.T. investigation and falsely link petitioner to the crime. He began by vaguely asserting that the descriptions "match" (**1T 11:17-18**), despite no factual support that Rivadeneira matched the description. He then

fabricated a height of "five foot nine" (**1T 12:1-2**), which appears nowhere in the official reports, to make the attacker's description seem closer to Rivadeneira. Later, he falsely claimed that Rivadeneira "matched a general height description and general build" (**1T 38:20-21**), and ultimately asserted that the description "varies" from "five foot eight" to "six feet" (**1T 28:17-20**), creating the illusion of inconsistency where none existed. In reality, the *suppressed* New York police report (**Pa1143**) shows that the victim, H.T., consistently described her attacker as a white male with blue eyes (never changing her original height description (**Pa1141-1143**)) and that she then identified a man matching that very description—Dean Crawford (**Pa1143**). The official reports contain only one height: six feet (**Pa1140-1143**). There was no variation. Additionally, it was falsely testified to the New Jersey grand jury that Rivadeneira met the general description of the H.T. attacker (**Pa180**). The New Jersey police report provided to the defense falsely stated that H.T. had described her attacker as Hispanic (**Pa695**), further compounding the misrepresentation to the defense.

- **The Lie vs. The Truth (H.T. Forensic Evidence)**: The State actively misrepresented that petitioner's blood was found on the H.T. attacker's cell phone (**Pa66, Pa70**)—a falsehood designed to create the impression of direct involvement in a violent struggle. The prosecution consistently informed the defense that blood was found on the phone and successfully led the court to adopt the same false belief, as reflected in both its correspondence (**Pa1163**) and the 404(b) hearing (**1T 39:14-16**). Before the Grand Jury, the prosecutor elicited sworn testimony that "police found blood on the cell phone" (**Pa66, Pa70**). The truth, revealed in the *suppressed* OCME lab reports (**Pa1144-Pa1145**), was that the relevant mixed DNA profile—*sample 1C* (**Pa491, Pa515, Pa917**)—found on the phone connected to the stocking and Rivadeneira, was derived from epithelial cells (skin cells) (**Pa1144**). Given the phone's

history of prior ownership by petitioner, this finding was entirely innocuous. The State knew this, yet deliberately chose to present a more sinister—and false—narrative. This misrepresentation was so ingrained in the State's narrative that, years later, the PCR prosecutor continued the deception, falsely claiming to the PCR court during oral argument that the State “never said that there was blood on that cell phone” (**10T 42:15-20**) a claim directly contradicted by the Grand Jury record (**Pa66, Pa70**).

- **Suppression by Omission (The Crawford Link):** The State deliberately concealed the devastating link between its star witness, Alex Cancinos, and the actual perpetrator of the H.T. attack, Dean Crawford. The trial prosecutor's own Grand Jury presentation proves this was a calculated omission. He informed the Grand Jury that the victim in the N.W. case had identified Dean Crawford as one of her attackers (**Pa176**). However, when discussing the H.T. case, he deliberately *omitted* the fact that the H.T. victim had also identified the very same Dean Crawford (**see Pa64-Pa66, Pa173-Pa174—in conjunction with the withheld report—Pa1143**).⁶ The prosecutor's selective disclosure was a calculated deception: he revealed one victim's identification of Crawford (N.W.) to establish the linked-case theory that justified Mr. Rivadeneira's arrest, but suppressed the second victim's independent identification of the same man (H.T.) because that corroboration would have devastated his case by proving Crawford—not Rivadeneira—was the common perpetrator. This was not an oversight; it was a strategic choice to sever the connection between the two cases and hide the fact that the State's key witness Alex Cancinos (**6T 68:25**) was identified by N.W.

⁶ The significance of this omission cannot be overstated. By concealing H.T.'s identification of Crawford, the prosecutor hid the fact that two independent victims—separated by state lines and unaware of each other—had identified the same man. The mathematical probability of two unrelated victims in different states randomly selecting the same innocent third party (Crawford) is virtually zero. This double-identification transformed the 'Crawford Link' from a mere investigative theory into objectively corroborated fact.

(Pa199-Pa200, Pa1151-Pa1153) as the accomplice of the man who left petitioner's DNA on a disconnected cellphone at a linked crime scene (Pa1143, Pa65-66, Pa70).

- **The Lie vs. The Truth (K.R. Forensic Evidence):** The State claimed that Rivadeneira's DNA was on the K.R. scarf (Pa1161-Pa1163, Pa1167), a complete fabrication contradicted by their own lab reports which explicitly excluded him (Pa1173). This falsehood was part of a consistent pattern of misrepresenting evidence from the joint investigation to create a false narrative of guilt (the facts of the K.R. case are fully laid out in **Section C.6 *infra***).

This pattern of misconduct led directly to the defense's "strategic paralysis." The State's lies fundamentally altered the defense's trial strategy, forcing counsel to operate under the false belief that the other-crimes evidence was inculpatory. Had the defense been aware of the truth—that the evidence was powerfully exculpatory and pointed directly to third-party guilt as well as innocent (or intentional) DNA transfer—their strategy would have been completely different. Instead of seeking to exclude the evidence, they would have sought to introduce it. This paralysis is explicitly confirmed on the record. During a hearing, defense counsel argued that he "should be able to talk about the fact that [Cancinos] was identified by a rape victim [N.W.]... without the fear of opening the door to a New York [H.T.] abduction with a cell phone" (5T 28:3-5). This fear was validated by the trial court itself, which first warned counsel that "there is a possibility the door could be open to this type of evidence" (1T 51:12-14), and later barred the defense from specifying the nature of Cancinos's charge precisely because it would "unnecessarily raise[] the possibility that your client may also be charged in another similar crime to his prejudice" (6T 67:17-20). This sequence—a defense attorney articulating his fear based on State deception, a judge validating it with a warning, and then enforcing it with a ruling—is the most powerful

proof that the defense was deprived of the critical facts necessary to form a coherent trial strategy.

Finally, it is constitutionally irrelevant whether the trial prosecutor was personally aware of the full exculpatory nature of the suppressed evidence or was himself operating on misinformation provided by other agents within the joint investigation. The Supreme Court has made clear that "the individual prosecutor has a duty to learn of any favorable evidence known to the others acting on the government's behalf in the case, including the police." Kyles v. Whitley, 514 U.S. 419, 437 (1995). The prosecutor is the spokesperson for the State. Therefore, whether the pattern of deception was the result of a calculated trial strategy or a systemic failure within the multi-jurisdictional task force to share critical information, the result is the same: the State suppressed material, exculpatory evidence, and the petitioner was denied a fair trial. Therefore, the court's failure to recognize this active suppression and its calculated consequences is not merely an error; it is an unreasonable determination of the facts in light of the evidence presented. This foundational factual misapprehension directly paved the way for the unreasonable application of federal law that will be detailed in **Section D *infra*.**

3. The Court Unreasonably Determined the Factual Relevance and Materiality of the Suppressed Evidence

The state court's decision was further predicated on an unreasonable determination of fact regarding the relevance and materiality of the suppressed evidence. The court dismissed the exculpatory reports from the linked investigations, concluding they were immaterial to the A.T. conviction because they "exculpate defendant of the New York rapes, not A.T.'s" (Rivadeneira, No. A-5573-17T1, slip op. at 12, n.6) (**Pa257**). This finding is objectively unreasonable under 28 U.S.C. § 2254(d)(2) because it ignores the direct, undisputed factual links that the State itself established and relied upon to build its entire case against the petitioner. The court's conclusion

that the cases were factually distinct for the purpose of a Brady analysis is a direct contradiction of the foundational evidence of the State's own investigation. The State did not pursue petitioner based on a theory of separate, unrelated crimes; it pursued him precisely because the crimes were inextricably linked by physical and forensic evidence: the DNA link between the H.T. phone and the A.T. stocking (**Pa70, Pa214, Pa492, Pa515, Pa917**); the physical link of the N.W. SIM card inside the H.T. phone (**Pa135-137, Pa203, Pa653, Pa694-695, Pa742**); and the investigative link of the joint task force operating under the explicit theory that "the same man was responsible" (**Pa33, Pa806**). For the state court to disregard these foundational, undisputed facts—the very links the State used to justify its investigation and secure warrants and an indictment—is an unreasonable determination of the record. The State cannot be permitted to argue that the cases are linked when it serves the purpose of identifying a suspect and indicting him, only to have the court declare them factually irrelevant when that same link becomes powerfully exculpatory.

This foundational error was compounded by the PCR court during its flawed admissibility analysis, where it made the unreasonable factual finding that there was "no link" between the cases, dismissing the concrete evidence as a mere "theory" (**10T 6:5-10), (12T 22:24-25**). This finding is an unreasonable determination of the facts because it ignores the State's own evidence and the prior trial court's on-the-record finding that the evidence was, in fact, relevant (**1T 7:22-24**). The PCR court erred by failing to acknowledge that evidence which directly undermines a central premise of the State's investigation is inherently relevant and material to the charged offense—an oversight so fundamental it precludes any possibility of "fairminded disagreement." Harrington v. Richter, 562 U.S. 86, 101 (2011). This unreasonable factual determination directly led to the court's flawed legal conclusion on materiality and admissibility, the full scope of which will be analyzed in **Sections D.5 and E.3 *infra***.

4. The Court Unreasonably Characterized the Stocking DNA as "Compelling," Ignoring its Scientific Unreliability and the State's Suppression of Exculpatory Context

The state court's adjudication was critically flawed by an unreasonable determination of fact regarding the stocking DNA mixture—derived from skin cells (**4T 17:1-10, 25:23-26:3**)—which contained a complex profile from at least two to four individuals (**4T 89:11-24, 92:6-7, 93:6-7, 108:17-20**), and served as the State's sole forensic link to the petitioner. The Appellate Division characterized this evidence as "compelling uncontested evidence of defendant's guilt that is untainted by a third-party guilt defense" (*Rivadeneira*, No. A-5573-17T1, slip op. at 24) (**Pa273**). This finding is not merely an overstatement; it is an objectively unreasonable determination of the facts under § 2254(d)(2). It ignores the wealth of contradictory evidence in the trial record, demonstrates a fundamental misapprehension of the scientific limitations of "touch DNA," and fails to account for the State's suppression of the very evidence needed to place the stocking DNA in its proper, exculpatory context.

First, the court's finding that the evidence was "compelling" and "uncontested" is a direct contradiction of the trial record, as detailed in the *Counter-Statement of Facts, Section B.2.d supra*. The State's own experts established that the evidence was extraordinarily complex and fraught with anomalies inconsistent with the prosecution's theory. The court adopted a simplistic and factually incorrect narrative, stating the stocking "proved to have the victim's DNA on the outside and defendant's DNA on the inside" (*Id.* at 5) (**Pa250**). The sworn testimony established the opposite: petitioner's major DNA profile was found on the outside (**4T 124:8-125:12**), while he was only a potential minor contributor to the mixture on the inside (**4T 129:14-130:3**). Further distorting the record, the victim's DNA was not simply on the "outside"; she could not be excluded from the complex mixtures on *both* the *inside* and *outside* surfaces (**4T 70:5-7; 73:3-24**); (**Pa490, Pa917**), and with probabilities the State's expert conceded were "not high

under DNA standards" (**4T 101:12-19**). The stocking contained a mixture of DNA from at least two to four individuals (**4T 89:11-24, 92:6-7, 93:6-7, 108:17-20**), lacked any corroborating saliva, sweat, or hair from the petitioner despite the claim it was worn as a mask via strenuous, hours-long assault (**7T 11:11-13:25**), and was lost by the prosecution before trial, precluding any independent examination (**6T 31:16-32:21**). For the court to characterize such anomaly-ridden evidence as "compelling" is an unreasonable determination of the facts (**see Section B.2.d supra**).

This factual error is symptomatic of a deeper failure by the state courts to comprehend or acknowledge the well-established scientific limitations inherent in interpreting "touch" (skin cell) DNA. The leading U.S. scientific agency, *National Institute of Standards and Technology* ("NIST"), in its authoritative May 2024 report⁷ confirms that determining whether DNA was deposited directly or indirectly is "usually impossible" from the profile alone, and that even identifying a "major contributor" does not establish when, how, or by what activity the DNA was deposited. The state court's unqualified characterization of this inherently ambiguous evidence as "compelling" reflects an unreasonable determination divorced from scientific reality. A comprehensive analysis of these scientific principles, the documented wrongful convictions resulting from touch DNA misinterpretation, and the specific forensic anomalies in this case that render the stocking DNA profoundly unreliable, is presented in **Section E.3.b infra**, which demonstrates how the suppressed evidence revealing innocent DNA transfer serves as the critical missing context that obliterates the probative value of the State's sole forensic link to petitioner.

Crucially, the court's tunnel vision was only possible because it evaluated the ambiguous stocking DNA in an evidentiary vacuum created by the State's suppression. The NIST Report

⁷ See Exhibit A, attached to this traverse brief, for the selected excerpts of the 2024 NISTIR 8503 report cited hereafter.

emphasizes that "DNA results are only part of the overall case" and must be considered within the full context of all available information to avoid misleading interpretations (*Exhibit A*, **NISTIR 8503, p. 154**). By suppressing the evidence from the H.T. and N.W. investigations—which provided concrete, case-specific proof of the petitioner's DNA being innocently (or intentionally) transferred by the actual perpetrators of linked crimes—the State actively prevented a scientifically sound, contextual evaluation of the stocking DNA.

The court's unreasonable factual determination that the stocking DNA was "untainted by a third-party guilt defense" directly led to an unreasonable application of clearly established federal law. By using the perceived strength of the prosecution's (flawed) forensic case to exclude the relevance of the (suppressed) third-party guilt evidence, the court committed the exact error forbidden by the Supreme Court in Holmes v. South Carolina, 547 U.S. 319 (2006). This unreasonable application of law will be fully detailed in **Section D.4 *infra***.

The court's pattern of making unreasonable factual determinations extended well beyond its oversimplification of the stocking DNA, infecting its entire summary of the evidence, as will be detailed in the following section.

5. The Court Unreasonably Minimized the Suppressed Evidence's Materiality by Relying on a Distorted Factual Narrative

The state court's entire materiality analysis was predicated on a foundational—and objectively unreasonable—factual determination. In its decision, the court concluded that the suppressed evidence would not "shake the very foundation of the State's case" or "alter the earlier jury verdict" because the stocking DNA constituted "compelling and uncontested evidence of defendant's guilt that is untainted by a third-party guilt defense." (Rivadeneira, No. A-5573-17T1, slip op. at 28) (**Pa273**). This finding is itself an unreasonable determination of the facts under § 2254(d)(2). A court cannot conduct a reasonable assessment of materiality when its

analysis proceeds from a distorted, inaccurate, and incomplete understanding of the evidence. The court's minimization of the suppressed evidence's impact was only possible because it had already accepted an artificially strengthened version of the State's case, a view built upon a pattern of factual errors and omissions, as detailed in the *Counter-Statement of Facts, Section B supra*. These errors include:

- **The Court's Oversimplification of the Stocking DNA:** The court's characterization of the stocking DNA as "compelling" was based on its flawed "defendant's DNA inside, victim's outside" narrative (*Id.* at 5) (**Pa250**). As established in **Sections B.2.d and C.4 supra**, this finding ignored the complex, anomaly-ridden, and scientifically unreliable nature of the State's primary piece of forensic evidence.
- **The Mischaracterization of the Victim's Voice Description:** The court unreasonably found that A.T. described her attacker as having a "very distinctive voice" (*Id.* at 4) (**Pa249**), directly conflating her testimony of three different vocal patterns (**5T 134:25-135:5**) with another witness's description of the petitioner's voice. The court ignored the exculpatory fact that A.T. *never* identified the petitioner by his voice or any other form (**6T 119:20-22**), (**7T 6:16**).
- **The Omission of the Exculpatory Glove DNA:** In its summary of the evidence, the court noted the discovery of a blue latex glove near the abduction site (*Id.* at 5) (**Pa249-Pa250**) but completely omitted the critical, exculpatory fact that DNA testing on that glove explicitly excluded the petitioner as a contributor (**4T 130:14-22**).

- **The Creation of a Fictitious Geographic Link:** The court baselessly asserted a "business relationship" linking the petitioner to the release location⁸ (*Id.* at 5) (**Pa250**), a fact contradicted by the sworn trial testimony of both the petitioner's employer and the owner of the lot (**5T 54:22-59:23, 67:10-22**). A Fact further established in summation (**7T 28:22-29:2**).
- **The Uncritical Acceptance of Weak Circumstantial Evidence:** The court highlighted minor details like the "Black and Mild" cigars (*Id.* at 4) (**Pa250**) while ignoring testimony that confirmed the brand's general popularity, thereby minimizing its probative value (**7T 62:7-10**).
- **The Uncritical Recitation of the Cancinos/Letter Testimony:** The court recounted the testimony of Alex Cancinos regarding an alleged jailhouse letter (*Id.* at 5-6) (**Pa250-251**) without acknowledging any of the significant and undisputed credibility issues plaguing this testimony, including the fact that the letter was conveniently burned (**6T 81:3-8**) and that the witness received a dismissal of his own rape charges (N.W. attack) in exchange for his testimony (**5T 27:22-28:12**).

Collectively, these unreasonable determinations of fact demonstrate a fundamental failure by the state court to engage with the actual trial record. By constructing a flawed and artificially strengthened version of the State's case, the court was unable to properly assess the profound materiality of the suppressed Brady evidence at issue, the full scope of which will be analyzed in **Section E.3 *infra*.**

⁸ The appellate court's assertion of a "business relationship" was never put forth by any party, witness, or exhibit. It originated solely in the appellate opinion and is directly contradicted by the only testimony addressing the location.

6. The Court Unreasonably Adopted the State's Shifting Narrative of Falsehoods Regarding the K.R. Evidence

The state court's unreasonable determination of the facts extended fully to its handling of the K.R. case. While the K.R. attack was not forensically linked to the A.T. case like the H.T. and N.W. investigations, its relevance stems directly from the State's own joint investigation theory that a single perpetrator was responsible for all the attacks (**Pa33, Pa806**). It is for this reason that the facts of the K.R. case are introduced here: the State's handling of the K.R. evidence demonstrates a distinct pattern of bad faith and misrepresentation, which the state court unreasonably failed to scrutinize. The court's adjudication was infected by its uncritical acceptance of the State's original falsehoods and was compounded by its adoption of new, baseless claims invented by the prosecution during post-conviction review.

a. Factual Background of the K.R. Case

The K.R. attack involved a 26-year-old Asian woman who was kidnapped on June 24, 2006, in New York City. The perpetrator, described by K.R. as a 5'8" male with blue eyes, grabbed her from behind with a knife and forced her into a tan or light brown, four-door Cadillac with a cloth interior. He then drove her to Elizabeth, New Jersey, where he sexually assaulted her, placed her in the trunk, and assaulted her again before blindfolding her with his own black scarf and releasing her (**Pa1154-1160**).

b. The Prejudicial Impact: Strategic Paralysis and a Tainted Defense

The State's misrepresentation regarding the K.R. evidence was not a minor error; it was a tactical blow that fundamentally altered the defense's trial strategy. On August 19, 2011, the New Jersey prosecutor sent a letter withdrawing an extended 30-year plea offer, explicitly citing new information from the New York ADA that "[t]hey now have his DNA on a second case" (**Pa1161-1162**). The impact of this falsehood is proven by an August 25, 2011, letter from trial

counsel to the petitioner, which states that the New York prosecutor had informed him that in "The K.R. case: [Rivadeneira's] DNA [was] on the victim's scarf" (**Pa1163**).

This misinformation created a strategic paralysis, poisoning the defense's perception of all the linked cases and validating the fear of "opening the door." Believing the State possessed powerful evidence of guilt in the K.R. case, the defense was forced to wall off any inquiry into the linked investigations, for fear that doing so would allow the State to introduce this supposedly damning (but actually non-existent) DNA evidence. The court's failure to recognize this profound prejudicial impact was a foundational component of its unreasonable adjudication.

i. The Original Lie and the Court's First Error (The Scarf)

The State's bad faith began with the trial prosecutor, who in 2011 actively misrepresented to the defense that petitioner's DNA was on the K.R. scarf. This lie was told despite the State already possessing the January 14, 2009, OCME DNA report, which had explicitly *excluded* the petitioner for over two years (**Pa1185**). This falsehood persisted into the post-conviction proceedings, where the PCR prosecutor continued to argue the DNA was a match until confronted with the evidence. Once the original lie was exposed on the record, the PCR prosecutor, while looking at the preliminary January 13, 2009, OCME report (**Pa1192-1197**), misread the voucher numbers and immediately pivoted to a new, baseless claim, stating, "...it appears from DPA-104 (attached here as **Pa1192-1197**), they were actually from the car that K.R. was kidnapped in" (**10T 41:17-19**). This pattern—persisting in one falsehood until it becomes untenable, then immediately inventing another by misinterpreting the very documents that debunk the first lie—was completely ignored by the Appellate Division. Instead of recognizing this clear evidence of bad faith, the court laundered the State's original lie into a misleading narrative, stating: "New York authorities initially reported that defendant's DNA was discovered on a scarf... However, subsequent testing excluded defendant as a match to the scarf"

(State v. Rivadeneira, No. A-5573-17T1, slip op. at 7 (App. Div. May 19, 2020)) (**Pa252**)
(emphasis added).

This finding is an objectively unreasonable determination of the facts. The record is clear: there was no "subsequent testing" that changed an initial inculpatory result. The petitioner was excluded from the very first OCME test conducted in 2009 (**Pa1185**). The only actual subsequent test, a July 26, 2013, OCME report, did not correct a prior finding; it merely re-confirmed the original exclusion (**Pa1188**). The court's use of the phrase "subsequent testing" creates a complete fiction, inventing a narrative of a developing investigation where an initial "hit" was later clarified. This narrative improperly softens the State's outright, years-long falsehood and excuses its Brady violation by suggesting the truth was eventually revealed through normal police work, rather than having been suppressed and misrepresented from the outset (**Pa1161-1164**).

ii. The New Lie and the Court's Second Error (The Car)

The court's unreasonable review was further infected by its acceptance of the new falsehood advanced by the State during the PCR process. This theory, born from the prosecutor's on-the-record pivot, was never part of the original joint investigation's conclusions. The original investigation never positively identified the K.R. abduction vehicle. Instead, knowing the petitioner was a mechanic, the FBI located a similar car—a 1995 Cadillac Deville belonging to the sister of the petitioner's friend, Sean Mack—that they knew the petitioner had worked on and drove (**Pa822**). The FBI reports confirm they located this car (**Pa823-825**), swabbed it looking for the victim's (K.R.'s) DNA, and turned the swabs over to New York Detective Savino⁹ (**Pa826-828**) to be analyzed by New York's Forensic Lab, and they found no DNA linking K.R.

⁹ See Pa694-696, Pa1154, Pa1160 confirming Detective Savino is a New York detective and investigated the K.R. incident.

to the car (**Pa1192-1198**), and see the New York Crime Scene Swab Examination Worksheet (**Pa1199-1203**), which confirms that the voucher (*N432637*) mentioned in the New York report, (**Pa1197**), cited by the prosecutor at the PCR oral argument, was from the swabs taken from Rivadeneira friend's car (see **Pa826 in conjunction with Pa1198, and Pa1203**). The car was *definitively* cleared as a dead end, as its description (older model with key ignition, leather interior, distinctive TVs (**Pa822-825**)), also did not match K.R.'s description (newer model with keyless ignition, cloth interior (**Pa1160**)). The presence of the petitioner's DNA was expected and irrelevant.

The Appellate Division then adopted the prosecutor's new falsehood verbatim, stating, "Nonetheless, defendant's DNA was found inside the car in which K.R. was allegedly abducted "(Rivadeneira, No. A-5573-17T1, slip op. at 7) (**Pa252**) (emphasis added). For the court to adopt this claim while ignoring the dispositive facts established during the remand (**Ra875, Ra881-882**)—which proved the car tested was not the crime vehicle—is a profound and unreasonable factual error. This pattern of uncritically accepting the State's original falsehoods and then adopting its newly invented ones demonstrates an adjudication based on an unreasonable determination of the facts, requiring relief under § 2254(d)(2).

7. Summary of Section C: The Court's Adjudication Was Premised on a Pattern of Factual Findings Divorced from the Record

In sum, the state court's decision was not merely flawed; it was built upon a foundation of factual findings that are divorced from the reality of the record. This was not a case of weighing conflicting testimony or making credibility determinations deserving of deference. It was a case of a court consistently ignoring, misstating, and contradicting undisputed evidence, thereby rendering its adjudication objectively unreasonable under 28 U.S.C. § 2254(d)(2).

The court did not simply downplay the joint investigation; it defied a mountain of proof—from the prosecutor's own sworn affirmation to police reports and affidavits, and even its own on-the-record acknowledgements—to create a fiction that the agencies were not working together. It did not simply disagree with the defense's view of the stocking DNA; it adopted a factually impossible narrative that was directly contradicted by the State's own experts. It compounded this error by making the unreasonable factual finding that there was "no link" between the cases, ignoring the State's own forensic and physical evidence that established the connection. It did not simply question the relevance of the K.R. evidence; it uncritically parroted the State's shifting narrative of falsehoods, adopting lies about DNA on a scarf and in a car that were demonstrably false.

These are not findings upon which "fairminded jurists could disagree." They are findings that no fairminded jurist could possibly reach from the evidence presented. This complete breakdown in the factual review process is precisely what § 2254(d)(2) is designed to correct. It was this corrupted factual landscape that directly paved the way for the court's subsequent, and equally flawed, unreasonable application of clearly established federal law.

D. THE STATE COURT'S DECISION WAS CONTRARY TO, OR INVOLVED AN UNREASONABLE APPLICATION OF, CLEARLY ESTABLISHED FEDERAL LAW

The state court's denial of relief, built upon the unreasonable factual findings detailed in **Section C *supra***, resulted in an unreasonable application of clearly established Federal law, warranting relief under 28 U.S.C. § 2254(d)(1). The court's decision was not a simple misstep, but a multi-faceted failure to apply the core tenets of Brady v. Maryland and its progeny. Specifically, the court unreasonably misapplied the law defining the scope of the prosecution's

duty to disclose, the standard for materiality, and a defendant's fundamental right to present a complete defense by proffering evidence of third-party guilt.

Before detailing these specific unreasonable applications, it must be noted that the state court arguably failed to adjudicate the federal Brady claim "on the merits" at all, potentially warranting *de novo* review. The court's analysis was filtered through the distinct lens of New Jersey's standard for newly discovered evidence, while its cursory rejection of foundational Brady principles—such as the scope of the prosecutor's duty under Kyles—was relegated to a footnote. The court's observation in that footnote that the suppressed reports "predate the trial" (Rivadeneira, No. A-5573-17T1, slip op. at 12, n.6) (Pa257) is utterly irrelevant to a Brady analysis but is central to a state-law "newly discovered" claim, betraying the court's misapplication of the federal standard. By marginalizing the federal constitutional analysis, the state court effectively bypassed a merits adjudication, which may require this Court to review the claim anew.

Nonetheless, even under the deferential § 2254(d)(1) standard, the state court's decision was objectively unreasonable as it fundamentally misapplied the core tenets of Brady, Kyles, Strickler, Banks, and Holmes.

1. Governing Clearly Established Federal Law

The Supreme Court has clearly established that the prosecution has a fundamental duty under the Due Process Clause to disclose evidence favorable to an accused when that evidence is material to either guilt or punishment, irrespective of the good or bad faith of the prosecution. Brady v. Maryland, 373 U.S. 83, 87 (1963).¹⁰ This duty is not limited to evidence in the

¹⁰ The application of this duty to third-party guilt evidence under AEDPA is illustrated by Bailey v. Lafler, 209 F. Supp. 3d 955 (W.D. Mich. 2016). There, the District Court granted habeas relief, finding an unreasonable application of federal law where the State suppressed police reports supporting a third-party guilt defense. Although the Sixth Circuit later reversed that decision in Bailey v. Lafler, 753 F. App'x 352 (6th Cir. 2018), it did so solely

prosecutor's direct possession but extends to information "known to the others acting on the government's behalf in the case, including the police". Kyles v. Whitley, 514 U.S. 419, 437 (1995). Evidence is "favorable" if it is exculpatory or impeaching, Strickler v. Greene, 527 U.S. 263, 281-82 (1999), and the defense is entitled to rely on the prosecution's representations regarding such evidence. Banks v. Dretke, 540 U.S. 668, 698 (2004)). Evidence is "material" if there is a "reasonable probability that, had the evidence been disclosed to the defense, the result of the proceeding would have been different," a probability sufficient to "undermine confidence in the outcome" of the trial. Kyles, 514 U.S. at 433-34. Finally, a criminal defendant's constitutional right to present a complete defense is violated by evidence rules that arbitrarily exclude relevant evidence of third-party guilt, particularly when admissibility is made contingent on the perceived strength of the prosecution's case. Holmes v. South Carolina, 547 U.S. 319, 324, 330 (2006).

2. Unreasonable Application of Law Regarding Suppression

The state court's adjudication began with a foundational legal error: its unreasonable application of Kyles v. Whitley. In its 2020 decision, the court concluded that "the New Jersey prosecutor was not obligated to turn over reports prepared by the New York or FBI authorities" (Rivadeneira, No. A-5573-17T1, slip op. at 12, n.6) (Pa257). This conclusion was only possible because, as detailed in **Section C.1 *supra***, the court first made the unreasonable factual finding that no legally significant joint investigation existed. This was a direct and unreasonable application of Kyles, which establishes that the prosecutor's duty extends to all agents acting on

because the "link" between the crimes in that case was deemed "speculative" and based only on modus operandi. This distinction frames the instant claim: unlike in Bailey, the link here is not a theory but a forensic fact established by the State's own joint investigation (the DNA match between H.T. and A.T., and the N.W. SIM card). Because the factual weakness that saved the conviction in Bailey is absent here, the District Court's finding—that suppressing such evidence violates Brady—applies with dispositive force.

the government's behalf. The court ignored a mountain of undisputed evidence proving the joint investigation was not just a theory but an operational reality, including: the trial prosecutor's own sworn affirmation (**Pa32-39**); the lead detective's sworn grand jury testimony (**Pa64-65**); findings from a prior interlocutory appeal detailing the inter-agency cooperation via evidentiary hearing (**Pa235-245**); the undisputed cross-jurisdictional evidence trail documented in every police report and affidavit (**see generally Pa632-830**); and the direct involvement of the FBI and New York in the petitioner's arrest (**Pa788**). This was not a mere "transfer of information"; it was an intermingled, coordinated, and joint effort from start to finish. The unreasonableness of the court's finding is made undeniable by the fact that the joint investigation was so obvious it was acknowledged as a given during the PCR proceedings, where the State never denied it and the PCR court itself acknowledged the "hand in hand" cooperation (**10T 14:12-21**). By narrowly restricting the prosecutor's duty in the face of such overwhelming evidence, the court's decision was contrary to the core holding of Kyles.

Furthermore, the state court unreasonably failed to apply the principles of Banks and Strickler¹¹ by completely ignoring that the State's pattern of active misrepresentation constituted a distinct and egregious form of suppression. By falsely telling the defense the evidence from the linked cases was inculpatory (**see Section C.2 *supra***), the prosecution actively suppressed the truth. This form of deception is a recognized constitutional violation. See, simply for example, U.S. v. Pelullo, 399 F.3d 197, 213 (3d Cir. 2005) (citing U.S. v. Shaffer, 789 F.2d 682, 690 (9th Cir. 1986) for finding suppression where the government told the defense certain evidence would be of no value). The court's failure to address this clear violation was an unreasonable application of the law that resulted in profound prejudice, validating the strategic paralysis and the fear of

¹¹ Banks v. Dretke, 540 U.S. 668, 691 (2004) (State's duty to correct false evidence); and Strickler v. Greene, 527 U.S. 263, 283-84 (1999) (defense reliance is key to suppression).

opening the door that left the defense unable to counter the State's false narrative (**1T 43:3-14, 51:7-14**), (**5T 27:22-28:5**), (**6T 67:17-20**).

3. Unreasonable Application of Law Regarding Materiality

The state court's materiality analysis was fatally flawed because it proceeded from the unreasonable factual determination that the suppressed evidence was irrelevant to the A.T. case (**see Section C.3 *supra***). This led to an unreasonable application of the Kyles materiality standard, which requires a court to assess the cumulative impact of the suppressed evidence on the entire trial. The court failed to conduct this collective analysis, and its myopic focus on whether the evidence proved innocence in the other cases, rather than its impact on confidence in the A.T. verdict, was an unreasonable application of the law.

This error was compounded by the court's additional legal failures regarding the evidence's admissibility for defensive use, which are detailed in the sections that follow. A full analysis of the suppressed evidence's profound materiality—which shatters the State's DNA-centric case, and destroys its key witness will be presented in **Section E.3 *infra***.

4. Unreasonable Application of *Holmes v. South Carolina*

The state court's reasoning—particularly the Appellate Division's assertion that the stocking DNA constituted “compelling uncontested evidence of defendant's guilt that is untainted by a third-party guilt defense,” (Rivadeneira, No. A-5573-17T1, slip op. at 28) (**Pa273**)—is a textbook example of an unreasonable application of Holmes. The court improperly relied on the perceived strength of the prosecution's forensic evidence—evidence that, as demonstrated in **Section C.4 *supra***, was both vigorously contested and scientifically unreliable—as justification for dismissing the significance of the suppressed third-party guilt evidence.

Holmes explicitly condemns this circular logic, explaining that South Carolina's rule excluded third-party guilt evidence "when it does not raise a reasonable inference as to the defendant's own guilt," based solely on the strength of the prosecution's case. Holmes v. South Carolina, 547 U.S. 319, 324 (2006). The Court held this approach unconstitutional, emphasizing that such exclusion "offends a fundamental principle of justice" and violates the defendant's right to present a complete defense. *Id.* at 330.

The state court's analysis directly contravenes this clearly established federal law, which safeguards a defendant's constitutional right to present a complete defense regardless of the prosecution's perceived evidentiary strength. The unreasonableness of the state court's Holmes error is magnified by the nature of the suppressed evidence. The defense was not offering speculative third-party guilt based on similar M.O. or geographical proximity—the hallmarks of cases where courts properly exclude such evidence. Instead, the defense possessed two independent victim identifications of the same alternate suspect, Dean Crawford, in crimes already forensically linked to the charged offense. When evidence of third-party guilt is corroborated by multiple independent sources, its exclusion based on the 'strength' of the prosecution's case becomes not merely an error, but a constitutional inversion: the stronger the State's case appears, the more critical it becomes for the jury to hear that the appearance is an illusion created by suppression.

5. The PCR Court's Admissibility Ruling Was an Unreasonable Application of *Holmes v. South Carolina*, Built Upon a Tainted and Factually Erroneous Foundation

Since the admissibility of the suppressed evidence may be a threshold issue for this federal court, it is addressed here. While it must be noted that Brady imposes no admissibility requirement, the evidence was, in fact, fully admissible for defensive use—a possibility the trial court itself correctly recognized (**1T 43:3-14, 50:21-51:15**). Instead, it was the PCR court that

fundamentally misunderstood the applicable law, and the Appellate Division that blindly affirmed that error. This cascade of judicial missteps leaves the PCR court's flawed ruling as the last reasoned state-court decision on this pivotal constitutional question, making it the necessary focus of this Court's review. See Wilson v. Sellers, 138 S. Ct. 1188 (2018). This decision was not merely incorrect; it was an unreasonable application of clearly established federal law as articulated in Holmes v. South Carolina, 547 U.S. 319 (2006). The ruling's fatal flaw is that it was premised on a complete misunderstanding of the prior trial court record, a failure to analyze the evidence under the proper constitutional standard for defensive use, and an uncritical acceptance of a procedural history that was fundamentally tainted by the State's Brady violations.

a. The Court's Deference to the Prior Trial Court Ruling Was Objectively Unreasonable

The PCR court repeatedly justified its ruling by deferring to the original trial court's (Judge De Pascale's) pre-trial decision from the multi-motion hearing held on August 16, 2011, claiming the issue of admissibility had already been settled (**10T 61:17-62:4**). This deference was objectively unreasonable, as a meticulous review of that hearing (**1T**) reveals that the PCR court misunderstood what was decided, why it was decided, and what evidence was even at issue. The PCR court failed to grasp the critical distinction between the standards for prosecutorial and defensive use of other-crimes evidence—a distinction the trial judge himself recognized and explicitly articulated.

The August 16, 2011, hearing involved a cascade of five distinct motions (**1T 3:7-14**), the sequence and specific legal basis of which are critical:

- **Motion 1: Defense Motion to Dismiss Indictment.** The defense first moved to dismiss the indictment, arguing it was tainted by prejudicial joinder in the Grand Jury (**1T 4:3-16**). The trial judge *denied* this motion for a crucial reason: he made an explicit on-the-record finding

that the evidence from the linked cases was relevant and admissible enough for that proceeding. His finding was unambiguous: "*there's little doubt that evidence relevant to each individual case would and will be admissible as to one or more of the other incidents in trial*" (**1T 7:22-24**). This established the trial court's baseline determination of the evidence's fundamental relevance, a finding the PCR court later ignored.

- **Motions 2, 3 & 4: The "Mega-Trial" Request.** The State then moved to join the N.W. indictment for a joint trial and introduce the H.T. case under N.J.R.E. 404(b). The defense countered with a motion to sever. Under New Jersey law, the decision on severance is controlled by the 404(b) analysis; if evidence of other crimes would be admissible in separate trials under State v. Cofield, 127 N.J. 328 (1992), a defendant suffers no additional prejudice from a joint trial. Here, the judge found the State's proffer failed the Cofield test holistically because the evidence lacked the "signature" quality necessary to be admissible for the specific purpose of proving identity. Because the evidence was inadmissible *against the petitioner* under the State's theory, its minimal probative value was substantially outweighed by its certain prejudice. The court therefore *granted severance* (**1T 25:21-23**). Notably, the N.W. case was *not* other crimes evidence, but an indicted charge against the Petitioner; the K.R. case was *never* requested to be introduced as other crimes evidence at any point.
- **Motion 5: The Final, Narrow 404(b) Motion.** After the court granted severance, the prosecutor made one final, specific motion to admit just the H.T. evidence into the standalone A.T. trial. This, too, was *denied* based on the same failure to satisfy the Cofield analysis for identity (**1T 50:21-25**).¹²

¹² To prevent any lingering prejudice before this Court, it must be noted that the other New Jersey charges (A.R., V.S., and N.W.) were ultimately dismissed by the prosecution on its own motion (Ra197). This serves as a tacit

The PCR court's later adjudication demonstrated a complete failure to grasp this procedural history. It unreasonably expanded the scope of these narrow rulings beyond their factual and legal boundaries. The evidence from the N.W. case and the K.R. case was *never* the subject of a final 404(b) admissibility ruling. For the PCR court to later claim that Judge De Pascale's decision barred the defensive use of evidence from the N.W. and K.R. cases was an unreasonable determination of the factual record of the prior proceedings (**1T**). The court was relying on a prior ruling that, for that evidence, *did not exist*.

Furthermore, the original 404(b) ruling on the H.T. evidence was fundamentally tainted by the State's Brady violation. Judge De Pascale was asked to rule on the prosecution's motion at a time when both the court and the defense were operating under the State-created *false* narrative that this evidence was inculpatory. The defense's motion to oppose the 404(b) evidence was the only rational strategy a competent attorney could pursue. The PCR court's later criticism that the defense now "wants it the other way" (**10T 6:20–7:14**) is a constitutionally perverse argument. The change in the defense's position is not a sign of hypocrisy; it is the most powerful evidence of the Brady violation's profound prejudice. The defense's strategic posture was not a choice—it was a necessity born of the State's deception. The court's later criticism of this posture is not just misguided; it is a constitutional inversion. The defense was forced to treat what was, in reality, powerfully exculpatory evidence as if it were poison. A ruling made under such false pretenses cannot serve as a legitimate basis for denying a defendant's constitutional right to present a defense once the truth is revealed.

Finally, and most critically, the PCR court failed to apply the correct legal standard because it ignored the trial judge's explicit recognition of the distinction between prosecutorial

admission by the State that its cases in those matters were weak and could not stand on their own, further isolating the A.T. conviction as an outlier built on suppressed evidence.

and defensive use of evidence. The trial judge's decision to exclude the H.T. evidence was a specific application of the Cofield test, finding that the risk of unfair prejudice to the petitioner outweighed the evidence's probative value for the State. This concern for prejudice becomes legally irrelevant when the defendant himself seeks to introduce the evidence as a shield. The evidence's relevance—which the trial judge already acknowledged on the record—is what controls for defensive use. The trial judge explicitly recognized this distinction and issued a direct warning to defense counsel. He stated that his ruling was limited to the State's direct case, giving "*fair warning to Counsel that there is not but one route to admissibility*" and that "*there is a possibility the door could be open to this type of evidence depending on the circumstances of the trial*" (**1T 51:7-14**). This on-the-record statement is an unambiguous acknowledgment that his ruling did not apply to defensive use. The PCR court's failure to grasp this fundamental legal distinction—a distinction the trial judge took pains to explain directly to the defense—is a manifest and unreasonable error.

b. The Court's Independent Finding of Inadmissibility Was a Cascade of Errors

When the PCR court was not deferring to a misunderstood prior ruling, it attempted its own legal analysis, which was an unreasonable application of Holmes. The court's conclusion that the evidence was inadmissible because it was "tangential," "confusing," and had "no link" was based on a flawed understanding of what constitutes a "link" or "relevant evidence" in this context. The court's logic was twisted and circular: it repeatedly dismissed the concrete evidence of the inter-case connection as a mere "theory" (**10T 6:5-10**), (**12T 22:24-23:16**) and then ignored that evidence to conclude there was no link.

The legal standard for admitting "other crimes" evidence defensively is significantly more permissive than the standard for admission against a defendant. The focus shifts from

preventing unfair prejudice to ensuring the defendant's constitutional right to present a complete defense. See Holmes v. South Carolina, 547 U.S. 319 (2006). Defensive evidence is admissible if it is relevant and its probative value is not substantially outweighed by risks like confusion. A key factor to prove lack of confusion is demonstrating a "link" between the other crime and the charged offense, such that the evidence tends to support the defendant's claim of innocence or third-party guilt. See State v. Weaver, 219 N.J. 131, 150-51 (2014). The evidence must do more than "show[] only a hostile or indecent event and leave[] its connection with the case charged to mere conjecture." State v. Cook, 179 N.J. 533, 566-67 (2005).

Unlike cases where links were deemed tenuous, the connection here is direct, substantial, and established by the State's own joint investigation. As detailed in **Sections B.1 and C.1 supra**, the cases were linked through: the DNA match between the H.T. phone and A.T. stocking; N.W.'s stolen SIM card found inside the H.T. attacker's phone; N.W.'s identification of both Cancinos (the State's A.T. witness) and Crawford (the H.T. attacker) as her assailants; and the joint task force's explicit theory that a single perpetrator committed all attacks. These concrete links—DNA, physical evidence, and witness identifications connecting key individuals across cases—far exceed the "mere conjecture" standard and align with cases where defensive other-crimes evidence was found admissible. See U.S. v. Stevens, 935 F.2d 1380, 1401 (3d Cir. 1991) (improperly excluded defensive evidence where evidence from one attack was found in the same area of the second, and the investigator concluded there was one attacker); Weaver, 219 N.J. at 158 (improperly excluded defensive evidence where the same gun linked the other crimes to the charged offense); State v. Parson, 341 N.J. Super 448, 458 (App. Div. 2001) (finding a testifying prosecution witness's similar crimes provided a sufficient link to show a motive to frame the defendant).

i. **The Court Erroneously Applied the Inapplicable "Alternative Suspect" Standard**

The judge's fundamental error was analyzing the defense's proffer through the wrong legal lens. As the record of the oral arguments shows (**12T 7:18-25, 13:12-14:6**), the PCR court *incorrectly* applied the standard from cases like State v. Koedatich, 112 N.J. 225 (1988), and State v. Jimenez, 175 N.J. 475 (2003). Those precedents apply to a fundamentally different scenario: a defendant attempting to implicate a previously cleared suspect based on mere conjecture—such as a gym teacher who simply drove a similar car (Koedatich, 112 N.J. at 305) or an individual owning a similar sweater (Jimenez, 175 N.J. at 486)—without any forensic evidence connecting them to the crime. That was not the scenario here. The defense's argument was rooted in the State's own foundational evidence: the concrete physical and forensic links that inextricably tied the separate crimes together before the petitioner was ever a suspect (**1T 49:20-22**). This link was *not* a "theory"; it was a fact established by the State's own investigation (see **Sections B.1 and C.1 *supra***).

ii. **The Correct Framework Under *State v. Garfole* Establishes Admissibility and Demonstrates a Multi-Faceted Attack on the State's Case**

The correct and controlling legal framework is found in State v. Garfole, 76 N.J. 445 (1978), a precedent consistently argued by the defense (**12T 33:12-16**); (**Ra25, Ra123; Ra350, Ra359, Ra862**). Reaffirmed in State v. Cope, 224 N.J. 530, 552 (2016), this standard holds that a court cannot bar third-party guilt evidence that "has a rational tendency to engender a reasonable doubt with respect to an essential feature of the State's case." A defendant need only show a "rational tendency to engender a reasonable doubt"; they do not have to prove a third party's culpability. *Id.* at 452-53.

The proper application of this standard is best understood by contrasting this case with State v. Cook, 179 N.J. 533 (2004). In Cook, the defendant sought to use his alibi for one murder to exonerate himself in another, attempting to adopt the authorities' own investigative theory that tentatively linked the crimes based on a psychological profile of "homicidal pathology." The New Jersey Supreme Court affirmed the exclusion because the connection was based only on "several general similarities"—originally born of behavioral profiling rather than forensic fact—and was therefore too speculative, requiring a confusing "mini-trial" to prove. *Id.* at 566-67. This very District Court recognized the State v. Cook standard when it reviewed that same case on habeas, finding Cook's third-party guilt theory too "attenuated." Cook v. Nogan, 2016 U.S. Dist. LEXIS 162338 (D.N.J. 2016).

This case is the inverse of Cook. Here, the link is not a speculative M.O.; it is grounded in concrete physical and forensic evidence. This is precisely the type of non-speculative connection the Cook court sought, satisfying the defensive standard established in Garfole. The defense sought to introduce this evidence not just to prove a straightforward chain of exclusion: Rivadeneira could not have committed the H.T. crime—he is not the six-foot white male with blue eyes that H.T. described and identified as Dean Crawford (**10T 52:19-21**); (**Pa1143, Pa780**). Rivadeneira could not have committed the N.W. crime—that victim identified Alex Cancinos and Dean Crawford, not Rivadeneira (**Pa175-176, Pa202, Pa1151-1153**). If Rivadeneira did not commit the linked crimes the State used to connect him to A.T., then he did not commit the A.T. crime.

But this evidence did more than establish a chain of exclusion. It attacked three essential features of the State's case simultaneously, satisfying Garfole's requirement that the evidence have "a rational tendency to engender a reasonable doubt":

First, it provided the mechanism of innocence the State concealed. Crawford—the actual H.T. perpetrator identified by the victim—left Rivadeneira's DNA at that crime scene (**Pa1143-1145**). This transformed innocent DNA transfer from theoretical defense into documented fact. The prosecutor himself admitted these cases were inextricably linked: "But for the cell phone in the H.T. case, we would never have solved the A.T. case" (**1T 49:20-22**). The State cannot use the H.T. evidence to identify Rivadeneira, then suppress the H.T. evidence proving someone else deposited his DNA there.

Second, it destroyed the State's key witness. The prosecution placed Cancinos at the center of the A.T. trial as its only corroborating witness (**6T 68:25**). The suppressed H.T. report revealed Cancinos was the identified accomplice of Crawford—the man who proved innocent DNA transfer was real (**Pa176, Pa1143**). Cancinos had direct access to Rivadeneira through their shared garage workspace (**Pa201**), establishing the transfer pathway. And Cancinos received dismissal of his own indictment for the N.W. kidnapping and rape—the very case linked to this one—for testifying about a conveniently "burned" letter (**5T 27:22-29:19; 6T 81:3-8**). This wasn't character impeachment—it was proof of motive to fabricate.

The PCR court mischaracterized this as an "alternative suspect" theory requiring speculation. It was the opposite. The defense pointed to victim identifications from the State's own investigation, established forensic and physical connections, and offered proof of the innocent transfer mechanism through documented workplace access. Every element was concrete, not speculative. This is precisely what Garfole demands: evidence with a rational tendency to create reasonable doubt about essential features of the State's case. The court found the evidence insufficiently probative because the State's case appeared strong. But that apparent strength existed only because the State suppressed the evidence revealing its weakness. By using

the case's perceived strength to exclude the evidence that would expose that strength as manufactured, the court committed the exact circular error Holmes v. South Carolina forbids—allowing the prosecution to bootstrap suppression into a barrier against the truth.

c. The Admissibility Ruling and *Brady* Violation Rendered the Trial Fundamentally Unfair

Because the evidence was suppressed, the trial court was never presented with the opportunity to rule on its admissibility for defensive use. The PCR court was therefore tasked with a critical constitutional analysis: determining whether this evidence would have been admissible had the defense been able to proffer it. The court failed in this task, misapplying the controlling legal standard and deferring to a trial ruling it fundamentally misunderstood.

The suppressed evidence was unequivocally admissible under the constitutional mandate of Holmes v. South Carolina and the parallel state standard established in State v. Garfole. As demonstrated in the preceding section, this evidence did not merely suggest a speculative “alternative suspect”; it provided a concrete mechanism of innocence, innocent DNA transfer, and destroyed the credibility of the State’s key corroborating witness. It satisfied the strict admissibility standards by creating a “rational tendency to engender a reasonable doubt” on the essential features of the State’s case.

By ignoring these dispositive facts, the PCR court committed the exact circular error forbidden by Holmes: it used the perceived strength of the State’s case—a perception only made possible by the suppression of this exculpatory evidence—to bar the very evidence that revealed the case’s fatal weaknesses. By affirming this flawed ruling, the state appellate court allowed the original constitutional harm to stand uncorrected. This failure to provide a remedy was so arbitrary and prejudicial as to violate due process. See Romano v. Oklahoma, 512 U.S. 1, 12-13

(1994). Therefore, the exclusion of this vital exculpatory evidence violated the petitioner's constitutional right to present a complete defense. See Holmes, 547 U.S. at 324.

6. Summary of Section D: The State Court Unreasonably Applied Clearly Established Federal Law

The state court's decision was not merely incorrect; it represents a fundamental breakdown of its duty to apply clearly established federal law. Each legal error was made possible only by the court's preceding unreasonable determination of the underlying facts. The court's misapplication of Kyles was not a technicality; it was a decision that validated the State's unconstitutional suppression of evidence from the joint investigation. Its failure to apply Banks and Strickler was not an oversight; it was a ruling that ignored the profound prejudice of the State's active deception, which paralyzed the defense and left it unable to challenge the State's false narrative. Finally, its misapplication of the Kyles materiality standard and its direct contravention of Holmes was not a simple disagreement; it was a decision that allowed a conviction to stand on scientifically questionable evidence while constitutionally barring the defense from presenting powerful proof of third-party guilt.

These are not harmless errors. They are unreasonable applications of law that worked a manifest injustice, producing a trial verdict unworthy of confidence. The errors are "so lacking in justification... beyond any possibility for fairminded disagreement," Harrington v. Richter, 562 U.S. 86, 103 (2011), and therefore overcome AEDPA's barrier, mandating federal intervention.

E. THE BRADY VIOLATION: SUPPRESSION OF EXCULPATORY AND IMPEACHING EVIDENCE

The prosecution's failure to disclose, and its active misrepresentation of, the exculpatory evidence from the joint investigation constitutes a clear violation of Brady v. Maryland, 373 U.S. 83 (1963). The suppressed evidence unequivocally satisfies all three prongs of the Brady analysis: it was favorable to the defense, it was suppressed by the State, and it was material to the outcome of the trial.

1. The Suppressed and Misrepresented Evidence Was Favorable to the Defense

The first prong of the Brady analysis requires that the suppressed evidence be favorable to the accused, either because it is exculpatory or because it is impeaching. See Dennis v. Sec'y, Pa. Dep't of Corr., 834 F.3d 263, 286 (3d Cir. 2016) (en banc). The evidence withheld and misrepresented by the prosecution regarding the linked investigations is overwhelmingly favorable, as it provides the defense with the tools to dismantle every pillar of the State's case.

The suppressed H.T. reports were profoundly exculpatory, as they established that a six-foot, white male with blue eyes (Dean Crawford) (**Pa1140-1143**)—a description petitioner does not match (**10T 52:19-21**)—was the actual perpetrator (**Pa1143**) who left petitioner's old disconnected cell phone (**Pa1211**), containing his skin cell DNA (**Pa1144**), at a New York crime scene that was physically and forensically linked to the New Jersey A.T. case (**Pa70, Pa148, Pa492, Pa515, Pa917**) (**further detailed in Sections B.1 and C.1 *supra***). This is not a speculative defense theory; it is a concrete, evidence-based example of *innocent DNA transfer* documented in the State's own hidden files. It is therefore highly favorable because it directly refutes the State's central argument that the mere presence of petitioner's DNA on the A.T. stocking proved his guilt (**7T 35:14-23, 41:25-42:1, 45:16, 46:14**).

The evidence concerning the N.W. attack, linked to H.T. via the stolen SIM card (**Pa135-137, Pa172-174, Pa203, Pa653, Pa694-695, Pa742**), provides further layers of favorable evidence. While the defense was aware of some superficial aspects (Cancinos's identification by N.W. (**Pa199-Pa200**) and the dismissal of his charges (**5T 27:22-28:12**)), its true, devastating favorability was effectively concealed by the State's suppression and misrepresentation of the related H.T. evidence. Viewed in its true context—a context hidden by the suppression of H.T.'s identification of Crawford (**Pa1143**)—this evidence is exceptionally favorable. It devastates the credibility of Alex Cancinos by revealing that he was identified as a rapist alongside the actual H.T. perpetrator (Crawford) (see **Pa176, Pa198-Pa200, Pa671-678, Pa1151-Pa1153** and **compare to suppressed report Pa1143**), the very man who left Rivadeneira's DNA at the H.T. scene. (**Pa65-66, Pa70, Pa1143, Pa491, Pa515, Pa917**).¹³

However, this potent favorability was neutered by the State's actions regarding H.T. Because the State suppressed H.T.'s identification of Crawford (**Pa1143**) and simultaneously misrepresented the H.T. evidence as inculpatory (falsely claiming Rivadeneira's blood (**Pa66, Pa70, Pa1163**) and description match (**1T 11:17-18, 12:1-2, 38:20-21, 28:17-20**); (**Pa180**))), the defense was trapped. They reasonably feared that probing the N.W. case would "open the door" to the supposedly damaging (but actually false) H.T. evidence (**5T 28:3-5**), (**1T 51:7-14**), (**6T 67:17-20**). Without knowing H.T. identified Crawford, the defense could not grasp or argue the full, devastating significance of N.W.'s identification of Cancinos with Crawford. Thus, the State's Brady violation concerning H.T. directly caused the suppression of the N.W. evidence's

¹³ The favorability of this evidence is exponential, not additive. The defense was not merely deprived of a name, but of the force multiplier of independent verification. A jury hearing that two separate women identified the same alternate suspect—who happened to be the accomplice of the State's only witness—would view the defense of third-party guilt not as a strategy, but as a likelihood.

true favorable nature and its powerful connection to exposing the State's flawed narrative. This evidence strongly suggests an alternative narrative involving individuals (Cancinos/Crawford) connected to both Mr. Rivadeneira and the linked crimes, further weakening the State's DNA-centric case and impeaching its key witness.

Finally, the State's active misrepresentation regarding the K.R. evidence—falsely claiming a DNA match on the scarf¹⁴ (**Pa1161-1163, Pa1167**) while withholding the exculpatory lab report (**Pa1173**)—is powerful impeachment evidence. As detailed in **Section C.6 supra**, this lie was used to withdraw a plea offer (**Pa1161-1162**) and poison the defense's perception of the case. Exposing this lie would have allowed the defense to attack the good faith and reliability of the entire joint investigation, suggesting a pattern of manipulating evidence to fit a predetermined narrative of petitioner's guilt.

Collectively, this suppressed and misrepresented evidence is the definition of favorable. It provides a scientifically plausible defense of innocent DNA transfer, destroys the credibility of the State's key witness, and impeaches the integrity of the prosecution's investigation. The state court's failure to recognize this, as detailed in **Section D.3 supra**, was an unreasonable application of law. The suppressed materials unequivocally satisfy Brady's first prong.

2. The State Suppressed the Favorable Evidence

The second prong of the Brady analysis requires a showing that the State suppressed favorable evidence, either willfully or inadvertently. Strickler v. Greene, 527 U.S. 263, 281-82 (1999). The record convincingly establishes that the prosecution team suppressed the critical, favorable evidence related to the joint investigation through multiple means: direct non-

¹⁴ The scarf was brought by the attacker, used to blindfold the victim during her release, and turned over to police (Pa1156, Pa1160, Pa1191—making the State's false DNA claim not just misleading, but profoundly prejudicial.

disclosure of key reports, active misrepresentation of the evidence's content, and a calculated obscuration of the evidence's true context, which created a strategic paralysis for the defense.

The State's duty to disclose was unequivocally established by the existence of the joint investigation. As detailed in **Sections B.1 and C.1 *supra***, the overwhelming and undisputed evidence proved that New Jersey, New York, and FBI authorities were engaged in a joint effort. This was not a mere theory, but an operational reality established by the trial prosecutor's own sworn affirmation (**Pa32-33**), the lead detective's sworn grand jury testimony (**Pa64-65**), findings from a prior interlocutory appeal (**Pa237-238**), the undisputed evidence trail documented in every police report, affidavit, and warrant (**see generally Pa632-830**), and the fact that the State never once denied the joint investigation's existence during the PCR proceedings, with the court itself acknowledging the cooperation (**10T 14:12-22**). The final, undeniable proof of this joint effort was the very evidence the State used to make the arrest: a cell phone from the physically connected H.T. case (**Pa63-70**), containing a SIM card from the physically connected N.W. case (**Pa135-137, Pa694-695, Pa742**), which was then forensically linked via DNA to the A.T. case (**Pa70, Pa148**). This undeniable joint effort meant that, under the clear mandate of Kyles v. Whitley, the New Jersey prosecutor was constitutionally responsible for all favorable evidence held by its investigative partners.

The State breached this duty through a multi-layered pattern of suppression:

- **Direct Non-Disclosure of Favorable Reports:** The State failed to turn over the actual reports containing the favorable evidence. This includes the NYPD reports documenting H.T.'s consistent description of her attacker as a six-foot, white male with blue eyes (Dean Crawford) (**Pa1143**), the OCME lab reports confirming the DNA on the H.T. phone was skin cells, not blood (**Pa1144–Pa1145**), and the OCME DNA reports explicitly excluding

petitioner from the K.R. scarf (**Pa1173**), (see also **Pa1185, Pa1188**). Notably, during the PCR proceedings, the State never claimed it had turned over these reports; its arguments focused solely on why their suppression was not legally significant. The state court's finding that this was "never substantiated" ignored petitioner's counsel's on-the-record explanation of when the documents were received (**10T 23:4-12**) and petitioner's PCR brief detailing the discovery (**Ra112**).

- **Active Misrepresentation of Evidence:** The suppression was not merely passive. As detailed in **Section C.2 supra**, the prosecution actively misled the defense by providing false information about this very evidence, transforming exculpatory facts into an inculpatory narrative. This included the false claims that petitioner's blood was on the H.T. phone (**Pa66, Pa70, Pa1163**), that he matched the H.T. attacker's description because they varied (**1T 11:17-18, 12:1-2, 38:20-21, 28:17-20**); (**Pa180**), and that his DNA was on the K.R. scarf (**Pa1161-1163, Pa1167**). Evidence of misleading the defense substantiates suppression. See Banks v. Dretke, 540 U.S. 668, 691 (2004) (State's duty to correct false evidence); and Strickler v. Greene, 527 U.S. 263, 283-84 (1999) (defense reliance is key to suppression).
- **Suppression Through Strategic Paralysis:** The State's most insidious act of suppression was its calculated concealment of the H.T./Crawford link, which, as explained in **Section E.1 supra**, effectively suppressed the true, devastating favorability of the N.W. evidence. The ultimate proof of this suppression is found in the defense's own actions on the record. By lying about the H.T. evidence, the State created a strategic trap that forced the defense to move for the severance and suppression of the very evidence that would have exonerated their client. This strategic paralysis, born of State misconduct, is a distinct and impactful

form of suppression, as evidenced by counsel's stated fear of "opening the door" and the court's subsequent rulings (**5T 27:22-28:5**), (**1T 51:7-14**), (**6T 67:17-20**).

The state court's finding that suppression was "never substantiated," as detailed in **Section C.2 supra**, was an unreasonable determination of the facts that is completely divorced from the reality of the record (Rivadeneira, No. A-5573-17T1, slip op. at 12, n.6) (**Pa257**). The court ignored the State's direct non-disclosure of reports, its pattern of active deception, and the strategic paralysis this misconduct forced upon the defense. The record is clear: the State possessed favorable evidence, it failed to disclose it, and it actively misrepresented its contents. The State's actions were not a mere oversight; they were a calculated campaign of concealment that directly subverted the adversarial process. Therefore, the suppression prong of the Brady analysis is unequivocally satisfied.

3. Materiality: The Suppressed Evidence, Juxtaposed with the State's Flawed Stocking DNA, Obliterates Confidence in the Verdict

The State's suppression of the favorable evidence from the joint investigation was profoundly material. Evidence is material under Brady "if there is a reasonable probability that, had the evidence been disclosed to the defense, the result of the proceeding would have been different." Kyles v. Whitley, 514 U.S. 419, 433-34 (1995). A "reasonable probability" is established when the suppression "undermines confidence in the outcome of the trial." *Id.* at 434. This standard does not require a defendant to prove that disclosure would have resulted in an acquittal, but rather asks whether the defendant received "a fair trial, understood as a trial resulting in a verdict worthy of confidence." *Id.*

The suppressed evidence here is precisely of that nature. Its disclosure would have armed the defense with an admissible, scientifically-grounded, and fact-based counter-narrative that

would have eviscerated the State's entire case, which rested precariously on a single piece of scientifically unreliable "touch" (skin cell) DNA from a lost stocking. The State's misconduct concealed the tools necessary to expose the stocking DNA as meaningless, to destroy the credibility of the State's key witness, and to present a viable third-party guilt defense, thereby shattering confidence in the jury's verdict.

a. Suppressed Evidence Was Fully Admissible For Defensive Use

A core component of the materiality analysis is understanding that the suppressed evidence would not have been a mere footnote in trial preparation, but would have been presented to the jury. As established in the comprehensive analysis in **Section D.5 *supra***, the suppressed evidence from the joint investigation was fully admissible for defensive use under the permissive constitutional standard that governs a defendant's right to present a complete defense (See Holmes v. South Carolina, 547 U.S. 319 (2006); State v. Garfole, 76 N.J. 445 (1978)). The state court's conclusion to the contrary was an unreasonable application of clearly established federal law. The trial court itself recognized the potential for defensive admissibility, explicitly warning counsel that its ruling against the State did not foreclose defensive use (**1T 51:7-14**). Therefore, the following materiality analysis proceeds from the firm legal and factual footing that the jury would have heard this powerful exculpatory evidence.

b. The Stocking DNA: An Inherently Unreliable Pillar for Conviction, Its Weaknesses Obscured by Suppressed Context

The materiality of the suppressed evidence is amplified when the profound unreliability of the State's sole presented forensic evidence—the stocking skin cell DNA—is fully appreciated. The state courts' uncritical acceptance of this stocking evidence as "compelling" (Rivadeneira, No. A-5573-17T1 (App. Div. May 19, 2020) (slip op. at 28) (**Pa273**)) was possible only by ignoring its inherent scientific limitations and the specific flaws manifest in this case, an

oversight compounded by the suppression of the very evidence that would have provided crucial context.

i. **The General Scientific Unreliability of "Touch" DNA – A Matter Demanding Judicial Notice**

The State asked the jury to convict based on "touch" skin cell DNA (**4T 17:1-10, 26:1-3, 88:20-23**), a type of evidence the scientific community recognizes as requiring extreme caution in its interpretation, a caution the state courts failed to even acknowledge.

- **Ubiquitous Transfer and Persistence:** Skin cells are shed constantly and transfer with remarkable ease, not only through direct contact (primary transfer) but also indirectly from person-to-object-to-person (secondary transfer) and even through multiple intermediaries (tertiary transfer). Consequently, an individual's DNA can be found on items they never touched or were never near during the commission of a crime. This DNA can also persist on surfaces for extended periods, offering no reliable indication of when it was deposited (see Exhibit A, NISTIR 8503 Report, p. 172 to p. 182).¹⁵
- **Source vs. Activity Distinction and Judicial Tunnel Vision:** As the *National Institute of Standards and Technology* (NIST) authoritatively detailed in its May 2024 report, NISTIR 8503: the mere identification of whose DNA is present (a source-level finding) provides no scientifically valid basis to conclude how or when that DNA was deposited, or what specific activity led to its presence (activity-level conclusions). The report explicitly states that determining if DNA was left directly or indirectly is "not possible" from the DNA profile alone (***Exhibit A, NISTIR 8503, p. 172***), and even a "major contributor" status does not mean that person was the last to touch an item or the primary actor (***Exhibit A, NISTIR***)

¹⁵ See Exhibit A, attached to this traverse brief, for the selected excerpts of the 2024 NISTIR 8503 report cited hereafter.

8503, p. 129). The state courts' simplistic "defendant's DNA inside, victim's outside" summary of the stocking evidence (*Rivadeneira*, No. A-5573-17T1, slip op. at 5) (**Pa250**) thus represents an improper leap to an activity-level conclusion, reflective of the "tunnel vision" that NIST warns against when forensic findings are not considered within the totality of evidence and with due regard to their limitations. Critically, the NISTIR 8503 Report mandates that "DNA results are only part of the overall case" and must be considered within the full context of all available information to avoid misleading interpretations (*Exhibit A, NISTIR 8503, p. 115, p. 116, p. 154, Recommendation 6.2*). By suppressing the exculpatory evidence, the State actively *prevented* such a scientifically sound, contextual evaluation.

- **Documented Wrongful Convictions and the Need for Judicial Notice:** The dangers of over-relying on uncorroborated touch skin cell DNA are tragically illustrated by numerous wrongful convictions.
 - For instance, in the case of **Annie Le** ("The Yale College Murder") (2009), DNA found on the victim's underwear waistband matched a convicted felon; however, this was a clear case of secondary transfer and long-term DNA persistence. The DNA belonged to a construction worker who had worked in the area years earlier and, critically, had been deceased for two years before the crime occurred, with the actual murderer later convicted (*see Exhibit B*).
 - **Lukis Anderson** (2012), a homeless man, was charged with murder after his DNA was innocently transferred to the victim's fingernails by paramedics who had treated him just hours earlier (*see Exhibit A, NISTIR 8503 Report, p. 115*); (*also see Exhibit B*).

- **David Butler** (2005), a taxi driver, was acquitted of murder when his defense demonstrated the plausibility of his DNA being innocently transferred to the victim, possibly from handled banknotes (see Exhibit C and Exhibit D).
- **Adam Scott** (2011) was wrongly implicated in a rape case due to accidental laboratory contamination, where a disposable plate used for his DNA sample in a prior incident was mistakenly reused when processing the victim's swabs (see Exhibit A, NISTIR 8503 Report, p. 115); (also see Exhibit C).
- Likewise, **Brian Shivers's** murder conviction ("Massereene Barracks Murder") (2013 acquittal) was overturned on retrial because the court concluded his DNA, found on a mobile phone, could have appeared there through an innocent touch or even secondary transfer, such as from a handshake (see Exhibit D).

These cases, and others, underscore the imperative for judicial scrutiny. This Court is urged to take *judicial notice* of these widely recognized scientific limitations and cautionary experiences, authoritatively detailed in ***Exhibits A, B, C, D, and E.***

ii. Specific Flaws of the Stocking DNA Evidence in Rivadeneira's Case

Beyond the general unreliability of skin cell DNA, the stocking evidence here was riddled with specific flaws and contradictions that were obscured by the State's suppression of exculpatory context, further undermining its probative value:

- **Compromised Evidence Integrity:** The reliability of the stocking DNA is severely compromised by significant evidence handling issues. Critically, the stocking itself was lost by the prosecution before trial and was never available for examination by the defense or the jury (6T 31:16-32:21, 51:4-7), (7T 4:21-5:6). It was discovered "generally soiled with cardboard like debris" on the ground (4T 17:1:6, 36:14-25); (Pa477) in a public area

approximately nine hours after the incident, creating a high potential for contamination. Furthermore, the evidence log revealed unaccounted time gaps in the chain of custody (**7T 16:2-16**, **(6T 47:1-51:7)**; (see **Pa503** and compare to **Pa631**), and other related evidence, such as the documented victim's cervical specimen box from the sexual assault kit (SAK), arrived at the forensic lab opened and missing the collected cervical specimens (**7T 16:2-16**); (see **Pa590**, **Pa592** and **3T 152:3-24** and compare to **4T 27:22-25** and **Pa474**), These lapses directly contradicted the prosecutor's adamant trial assertions of "zero evidence about contamination" (**7T 53:2, 53:15**), and raises serious concerns about the integrity of all related biological evidence.

- **Contradictory and Anomalous Forensic Findings:** The State's theory that the DNA was deposited during the commission of the crime is contradicted by the forensic findings themselves. Despite the victim's testimony that the attacker wore the stocking as a mask for a prolonged period (**5T 126:10**), was sweating profusely (**5T 127:5**), and spoke through it, forensic analysis found *no saliva, sweat, or hair* attributable to Mr. Rivadeneira (**7T 11:11-12:7**). The DNA that was found was a complex mixture from at least two, and possibly up to four, individuals (**4T 89:11-24, 92:7, 93:7**), (**7T 29:15-20**). Most anomalously, Mr. Rivadeneira's major DNA profile was found on the *outside* of the stocking (**4T 124:19-125:5**), with only a potential minor contribution to the *inside* mixture (**4T 129:22-130:3**), a pattern inconsistent with the State's theory of prolonged wear as a mask (**7T 14:18-15:2**). The victim's DNA could not be excluded from either side (**Pa490-917**); (**4T 70:5-7, 72:18-73:24, 107:14-108:8**), but with low statistical significance (**4T 101:12-19**).
- **Lack of Corroboration and Suppressed Proof of Innocent Transfer:** This single, ambiguous piece of touch skin cell DNA stood entirely uncorroborated. The victim never

identified Mr. Rivadeneira (**6T 119:20-22**), (**5T 160:4-6**). His DNA appeared nowhere else (**6T 117:15-118:1**), (**7T 6:1-12:7**). The State suppressed the mechanism of innocence. Their own investigation had already documented that Mr. Rivadeneira's skin cell DNA was innocently transferred to a crime scene where he was demonstrably not the perpetrator. At the H.T. attack in New York, his DNA was found on a cell phone dropped by a six-foot white male with blue eyes—Dean Crawford—individually identified by two separate victims as their attacker (**Pa1143-1145**, **Pa176**, **Pa199-201**). Crawford was the known accomplice of the State's star witness, Alex Cancinos, who worked alongside Mr. Rivadeneira in a shared garage storing cars, tools, and personal items (**Pa201**). Cancinos had unrestricted access to Mr. Rivadeneira's belongings. The State proved the pathway themselves: shared workspace with Rivadeneira → transferred to actual perpetrators (Cancinos/Crawford) → deposited at crime scene. What the prosecution presented to the jury as proof of guilt, their own suppressed files revealed as proof of transfer. Innocent DNA transfer wasn't theoretical—it was factually documented at a linked crime committed by the very men connected to their own witness.

c. **The Synergistic Impact: How the Suppressed Evidence Would Have Shattered the State's Case**

The materiality of the suppressed evidence is not merely additive; it is synergistic. Its disclosure would have fundamentally altered the evidentiary landscape by providing the crucial scientific and factual context against which the jury could—and likely would—have recognized the profound unreliability of the State's sole forensic evidence. Critically, the State's misconduct altered the entire course of the defense's trial preparation and strategy, a key consideration for materiality. As the Third Circuit, has held, "alterations in defense preparation and cross-

examination at trial are precisely the types of qualities that make evidence material under Brady."

Dennis v. Sec'y, Pa. Dep't of Corr., 834 F.3d 263, 308 (3d Cir. 2016) (en banc).

- **Altering Trial Preparation and Strategy (The Pattern of Deception):** The State's active misrepresentations regarding the linked investigations—the H.T., N.W., and K.R. cases—fundamentally altered the defense's trial strategy. The prosecution created a strategic paralysis by poisoning the defense's perception of all the linked cases, validating the fear of "opening the door" to supposedly damning evidence (**5T 28:3-5**), (**1T 51:7-14**), (**6T 67:17-20**).
- **The H.T. and N.W. Trap:** The State's primary deception involved the H.T. evidence, which it falsely painted as inculpatory by claiming petitioner's blood was on the cell phone (**Pa66, Pa70, Pa1163**) and that he matched the attacker's description (**1T 11:17-18, 12:1-2, 38:20-21, 28:17-20**); (**Pa180**). This lie directly forced the defense into seeking severance of the indictments and exclusion of the other-crimes evidence under N.J.R.E. 404(b). The defense reasonably feared that any attempt to probe the N.W. case to impeach Alex Cancinos would allow the State to introduce the supposedly devastating (but actually false) H.T. evidence (**5T 28:3-5**). This fear, validated by the trial court's own warnings (**1T 51:12-14**), completely neutralized the defense's ability to expose the exculpatory link between Cancinos and the actual H.T. perpetrator, Dean Crawford. The defense was forced to treat what was, in reality, powerfully exculpatory evidence as if it were inculpatory.
- **The K.R. Lie:** Compounding this, the State's lie about the K.R. scarf DNA—falsely claiming a match while withholding exclusionary reports (**Pa1161-1163, Pa1167, Pa1173, Pa1185**)—cemented this strategic paralysis. Believing the State possessed another powerful DNA "hit," the defense was forced to wall off any inquiry into the linked investigations. This alteration

of defense preparation, driven by a pattern of reliance on State falsehoods across all linked cases, alone can establish materiality under Brady. See Dennis, 834 F.3d at 311.

- **Undermining the Stocking DNA Inference:** Introducing admissible evidence that another man (Crawford) left petitioner's DNA at a linked crime scene (H.T.) (**Pa70, Pa1143-1144**) would have directly *countered* the assertion that finding petitioner's DNA on the A.T. stocking proved his guilt. This wasn't speculation; it was concrete proof from the State's own files demonstrating innocent DNA transfer involving the actual perpetrator of a linked crime. This transforms the stocking DNA from damning evidence to ambiguous trace evidence requiring significant corroboration—corroboration the State lacked.¹⁶
- **Destroying Cancinos's Credibility:** Presenting the full picture—that Alex Cancinos was identified by N.W. as a rapist alongside the actual H.T. perpetrator (Crawford) (**Pa176, Pa199-Pa200**), that N.W. excluded petitioner (**Pa1151**), and that Cancinos received dismissal of those charges for his testimony (**5T 27:22-28:12, 29:14-19**)—would have obliterated his credibility regarding the convenient, uncorroborated story of the burned letter (**6T 81:3-8**).

d. Omnibus Summary on Materiality

The State's case against Elmo Rivadeneira was built on a single, tenuous thread: ambiguous skin cell DNA from a lost, soiled stocking, interpreted without the crucial scientific context of its inherent limitations, and critically, without the context of the powerful, exculpatory

¹⁶ Petitioner cites *State v. Cox*, No. 37206-5-III (Wash. Ct. App. Apr. 20, 2021), not as binding precedent, but as persuasive authority illustrating that courts recognize the constitutional necessity of admitting evidence that provides a "mechanism of innocence" for DNA transfer. In *Cox*, the court reversed a conviction because the exclusion of evidence regarding non-sexual contact deprived the defendant of an "innocent explanation" for the presence of his DNA. The court held that preventing the defense from demonstrating that "DNA could be transferred through innocent, i.e., non-sexual contact" violated the constitutional right to present a defense. This principle aligns directly with binding New Jersey jurisprudence in *State v. Cope*, 224 N.J. 530 (2016), where the New Jersey Supreme Court similarly reversed a conviction because the trial court's exclusion of third-party guilt evidence violated the defendant's right to present a complete defense. Here, the State's suppression of the reports proving innocent transfer unconstitutionally stripped the defense of the "innocent explanation" that both *Cox* and *Cope* recognize as essential to a fair trial.

evidence the State actively suppressed. The materiality of suppressed evidence must be "considered collectively, not item by item." Kyles v. Whitley, 514 U.S. 419, 436 (1995).

The suppressed evidence from the H.T., N.W., and K.R. investigations was profoundly material in its own right. Its disclosure would have shattered the State's narrative by providing concrete proof of innocent DNA transfer, destroyed the credibility of the State's key corroborating witness, and exposed a pattern of prosecutorial deception that unconstitutionally paralyzed the defense's trial strategy. Confidence in the verdict is unequivocally undermined when this suppressed evidence is considered.

This profound materiality is magnified exponentially when the Court considers the full scope of the State's suppression under the cumulative assessment mandated by Brady and its progeny. As detailed in **Ground Three *infra*** of this Petition, the State also suppressed definitive, exculpatory *sperm* DNA evidence from the perpetrator's own overalls—evidence that conclusively excluded the petitioner and the victim's boyfriend while identifying the complete Y-STR profile of an unknown male perpetrator (**Pa463-465**). The fact that this evidence and the compelling evidence of innocent transfer pathways detailed in this Ground were uncovered at different, protracted stages—a direct consequence of the State's serial suppression and misrepresentations—does not lessen this Court's duty to evaluate their combined, devastating impact on the verdict's reliability. It is not Petitioner's fault that the truth was uncovered in piecemeal fashion; the blame lies squarely with the State's failure to meet its constitutional obligations.

This Court can and must now conduct the holistic, cumulative Brady review that the state courts, hampered by the State's piecemeal and reluctant disclosures, failed to perform. When the direct and devastating impact of the suppressed H.T./N.W. evidence is combined with the

definitive scientific exclusion from the perpetrator's *sperm* DNA detailed in Ground Three, and all of this is viewed against the backdrop of the scientifically unreliable nature of the stocking DNA itself and the prosecutorial deceptions, the conclusion is inescapable: confidence in this verdict is not merely undermined; it is obliterated. The Kyles standard for materiality is unequivocally met, demanding relief.

F. PETITIONER'S CLAIMS ARE FULLY EXHAUSTED AND RIPE FOR FEDERAL REVIEW ON THE MERITS

The State suggests that Petitioner's claims are unexhausted or procedurally defaulted, such an argument is without merit and must be rejected. The State's position improperly conflates the presentation of a constitutional claim with the articulation of every supporting detail or legal theory. The exhaustion requirement is not a procedural straitjacket; it requires only that the state courts were given a full and fair opportunity to consider the constitutional substance of the claim. The Supreme Court has established that exhaustion is satisfied when the "factual basis" and "constitutional nature" of the claim have been "fairly presented" to the state courts. See Gray v. Netherland, 518 U.S. 152, 162–63 (1996).

Crucially, once a federal claim's factual basis has been properly presented, a petitioner may advance new and more detailed legal arguments in federal court to support it without rendering the claim unexhausted. See Yee v. Escondido, 503 U.S. 519, 534 (1992). The substance of the Brady violation detailed in this petition was fairly presented at every level of the state judiciary. See:¹⁷

- **PCR Court Filings:** *Pro Se* PCR Br., Ra95-102, Ra113-122, Ra200, Ra223, Ra231, Ra235, Ra242; *Pro Se* Supp PCR Br., Ra846-863; Counsel PCR Br., Ra15, Ra19-39.

¹⁷ Citations to "Ra" are to the Respondent's Appendix, which contains the state court record as filed by the Respondents. See footnote 1, *supra*.

- **Appellate Court Filings:** *Pro Se* App. Br., Ra768, Ra770-786; Counsel App. Br., Ra340, Ra343-359; Counsel App. Supp. Br., Ra867-884; Ra891.
- **N.J. Supreme Court Filings:** *Pro Se* Pet. for Cert., Ra982-995; Counsel Pet. for Cert., Ra935-948.

This was first accomplished by presenting evidence of the joint investigation (**see Sections B.1 and C.1 *supra***). The State's duty thus established, Petitioner then detailed the specific exculpatory evidence that was suppressed and misrepresented. This petition now permissibly assembles the factual puzzle pieces that were already in the state court record—pieces the State's own misconduct prevented from being fully assembled below.

It is critical to note the strategic framework under which the evidence proving the joint investigation and the link between the cases was presented to the state courts. The defense strategically relied on primary, sworn instruments—such as the trial prosecutor's affirmation (**Pa32-33**), the lead detective's grand jury testimony establishing the joint investigation and the cross-jurisdictional links (**Pa63-70, Pa135-138, Pa147-148, Pa172-179, Pa214**), a prior interlocutory appeal decision in which a complete evidentiary hearing was held (**Pa237-238**), and the FBI's own VICAP report (**Ra608-611; (Pa804-807)**)—as the "best evidence" to establish these foundational facts. This was done in lieu of submitting the voluminous underlying investigative reports which formed the factual basis for these instruments, the existence of which the state courts were repeatedly made aware. See:

- **PCR Court Filings:** *Pro Se* PCR Br., Ra95-102, Ra117-118, Ra200, Ra223, Ra231, Ra235, Ra242; *Pro Se* Supp PCR Br., Ra848-850, Ra863; Counsel PCR Br., Ra15, Ra20-24.
- **Appellate Court Filings:** *Pro Se* App. Br., Ra768, Ra770-771, Ra775-779; Counsel App. Br., Ra346-348; Counsel App. Supp. Br., Ra870-871, Ra874.

- **N.J. Supreme Court Filings:** *Pro Se* Pet. for Cert., Ra982, Ra989-991; Counsel Pet. for Cert., Ra936, Ra941.
- **PCR Oral Arg:** 10T 14:12-21; 11T 4:8-14 in conjunction with 12T 3:10-4:11, 4:15-5:4.

The state court's decision to dismiss this primary evidence—for example, by deeming the prosecutor's sworn affirmation "inartful"¹⁸ (*Rivadeneira*, No. A-5573-17T1, slip op. at 12, n.6, **Pa257**)—was therefore an unreasonable determination of the facts as they were presented. The underlying reports (the "raw data") are now presented to this federal court not as a new, unexhausted claim, but to provide the complete factual record. This record irrefutably demonstrates that the primary instruments were valid and reliable, and it proves that the state court's rejection of the overwhelmingly established joint investigation and the concrete link between the cases—a link the PCR Court dismissed as a mere "theory" (**10T 6:5-10**), (**12T 22:24-25**) and the Appellate Division found immaterial (*Rivadeneira*, No. A-5573-17T1, slip op. at 12, n.6, **Pa257**)—was objectively unreasonable, satisfying the standard for relief under 28 U.S.C. § 2254(d)(2).

What follows may appear repetitive—and it is, deliberately so. The detailed citation blocks in each subsection demonstrate not merely that each claim component was "fairly presented," but that Petitioner raised these issues so consistently, across so many filings, and with such factual and legal specificity over five years of state court litigation, that any suggestion of procedural default is foreclosed. The State cannot credibly argue these claims are "new" when they permeate virtually every brief and oral argument from the PCR petition through appellate and supreme court review. Each citation block is designed to leave no room for doubt: these

¹⁸ The trial prosecutor did not oppose the affirmation's use and did not testify in post-conviction proceedings. The court's suggestion that he was merely "inartful in his words" was unsupported by any evidentiary hearing and contradicted the affirmation's plain language describing a joint investigation.

constitutional violations were repeatedly brought to the state courts' attention, and their denial of relief was a considered rejection on the merits—not a procedural oversight.

1. **Brady Violation Stemming from the Withheld H.T. Investigation Evidence Was Fully Exhausted**

The core of Petitioner's state court claim was that the State violated Brady by suppressing critical reports (**Ra249, Ra250-251**) from the linked H.T. investigation and actively misrepresenting their contents (**see Section C.2 supra**). This exact claim was consistently and vigorously litigated at every stage of the state court proceedings. See:

- **PCR Court Filings:** *Pro Se* PCR Br., Ra95-96, Ra113-118; *Pro Se* Supp PCR Br., Ra855-863; Counsel PCR Br., Ra15, Ra20-25, Ra27, Ra33.
- **Appellate Court Filings:** *Pro Se* App. Br., Ra768, Ra771-772, Ra777, Ra779-781; Counsel App. Br., Ra343, Ra347-348, Ra351-353, Ra356, Ra359; Counsel App. Supp. Br., Ra871, Ra877-Ra881, Ra891.
- **N.J. Supreme Court Filings:** *Pro Se* Pet. for Cert., Ra982, Ra987; Counsel Pet. for Cert., Ra941.
- **PCR Oral Arg:** 10T 44:24-45:9, 10T 52:15-21.

a. **State Courts Were Fairly Presented with the Claim Regarding the Suppressed H.T. "Crawford Report" and the Prosecutor's Deception About the Attacker's Description**

The state courts were explicitly and repeatedly presented with the central piece of suppressed evidence: the NYPD police report in which the H.T. victim described her attacker as a *white male with blue eyes* and identified Dean Crawford as that man (**Ra249, Ra24, Ra95-97, Ra115, Ra645**), her original *six-foot description* (**Ra247**) never varying (**Ra249**). It was consistently argued that this suppressed report proved the prosecutor engaged in a pattern of

active deception in violation of Brady. The state courts were shown, using the trial record itself, how the prosecutor advanced a multi-step deception to conceal the report's exculpatory nature:

- He began with the vague assertion that the descriptions "match" (**1T 11:17-18**).
- He then fabricated a completely unsupported height of "five foot nine" (**1T 12:1-2**).
- He later made the direct, false claim that the perpetrator "matched a general height description and general build" (**1T 38:20-21**).
- Finally, he compounded the deception by falsely claiming the description "varies" from "five foot eight" to "six feet," creating the illusion of an unreliable description where none existed (**1T 28:17-20**).

This specific pattern of prosecutorial deception was argued at every level. See:

- **PCR Court Filings:** *Pro Se* PCR Br., Ra95-97, Ra114-115, Ra249; Counsel PCR Br., Ra15, Ra21-24, Ra28, Ra33.
- **Appellate Court Filings:** *Pro Se* App. Br., Ra768, Ra771-772, Ra779-782; Counsel App. Br., Ra348, Ra352, Ra356, Ra645; Counsel Supp. Br., Ra877, 881.
- **N.J. Supreme Court Filings:** *Pro Se* Pet. for Cert., Ra982, Ra987; Counsel Pet. for Cert., Ra941.
- **PCR Oral Arg:** 10T 45:7-9.

b. **The State Courts Were Fairly Presented with the Claim Regarding the H.T. Lab Report and the Misrepresentation of Forensic Evidence.**

In addition to the descriptive report, Petitioner argued in the state courts that the State's Brady violation included misrepresenting the forensic findings from the H.T. case. The state courts were presented with the argument that the State falsely and repeatedly claimed Petitioner's "blood" was found on the H.T. attacker's cell phone (**Pa66, Pa70**)—implying his involvement in

a violent struggle. It was argued that this was a deliberate falsehood, as the suppressed lab reports proved the DNA was from innocuous epithelial (skin) cells (**Ra250-251**), a fact consistent with Petitioner's prior ownership of the old, disconnected phone (**Ra22, Ra356**). This critical distinction was fully litigated. See:

- **PCR Court Filings:** *Pro Se* PCR Br., Ra96, Ra114-115; Ra250-251, Counsel PCR Br., Ra15, Ra22, Ra28, Ra33.
- **Appellate Court Filings:** *Pro Se* App. Br., Ra768 Ra771-772, Ra779-780; Counsel App. Br., Ra351-353; Ra356, Ra640-641; Counsel Supp. Br., Ra881.
- **N.J. Supreme Court Filings:** *Pro Se* Pet. for Cert., Ra982, Ra992; Counsel Pet. for Cert., Ra941.
- **PCR Oral Arg:** 10T 52:15-18.

2. **The Claim Regarding the Withheld Context of the N.W. Investigation and Its Impeachment Value Was Fully Exhausted**

Petitioner argued to the state courts that the State's Brady violation regarding the H.T. investigation had a cascading effect, effectively suppressing the true exculpatory value of the N.W. investigation. The courts were presented with the fact that the N.W. victim had identified the State's key A.T. witness, Alex Cancinos, as one of her attackers (**Ra242**). It was further correlated that by suppressing the H.T. "Crawford Report," (**Ra249**) the State concealed the most critical impeachment evidence: that Cancinos was the identified accomplice of the six-foot white male with blue eyes (Dean Crawford)—the very man who left Petitioner's DNA at the linked H.T. crime scene (**see Section C.2 supra**). This suppressed link, it was argued, would have destroyed Cancinos's credibility and provided a powerful third-party guilt defense. The PCR

court demonstrated its understanding of this claim by summarizing it on the record (**10T 65:14-23**). See:

- **PCR Court Filings:** *Pro Se* PCR Br., Ra95-97, Ra101-103, Ra106, Ra114-115, Ra117-118, Ra121, Ra128; *Pro Se* Supp PCR Br., Ra859; Counsel PCR Br., Ra15, Ra23, Ra28, Ra33, Ra50-52.
- **Appellate Court Filings:** *Pro Se* App. Br., Ra768, Ra771-773, Ra780-786; Counsel App. Br., Ra343-345, Ra356-357, Ra359, Ra374-379; Counsel Supp. Br., Ra868-884.
- **N.J. Supreme Court Filings:** *Pro Se* Pet. for Cert., Ra982, Ra987-989; Counsel Pet. for Cert., Ra943-944, Ra946-947.

3. Claim Regarding the Withheld K.R. Lab Report and the State's Deception Was Fully Exhausted

The state courts were also fairly presented with the facts of the State's deception regarding the K.R. investigation. Petitioner argued that the State violated Brady by first suppressing the official 2009 lab report that explicitly excluded him as a DNA contributor to the K.R. scarf (**Ra262**), and then affirmatively lying that his DNA *was* on the scarf (**Ra231-234, Ra271**). Petitioner argued to the state courts that this specific misconduct was used to improperly withdraw a plea offer and severely prejudice the defense's trial preparation, a point established by reading the State's letter (**Ra231-232**) directly into the record at the PCR hearing (**10T 8:3-9:7**).

See:

- **PCR Court Filings:** *Pro Se* PCR Br., Ra100-101, Ra105, Ra113-115, Ra117-120, Ra262; *Pro Se* Supp PCR Br., Ra855-863; Counsel PCR Br., Ra15, Ra20-22, Ra28, Ra33.

- **Appellate Court Filings:** *Pro Se* App. Br., Ra768, Ra771-773, Ra778-786; Counsel App. Br., Ra343-344, Ra347-348, Ra350-352, Ra354-355, Ra358; Counsel Supp. Br., Ra868-869, Ra874-884.
- **N.J. Supreme Court Filings:** *Pro Se* Pet. for Cert., Ra982; Ra992-995; Counsel Pet. for Cert., Ra940-Ra947.
- **PCR Oral Arg:** 10T 8:3-16:9; 11T, 12T.

4. **Claim that the State's Cumulative Pattern of Deception Caused Unconstitutional Strategic Paralysis Was Fully Exhausted**

Finally, the state courts were presented with the overarching argument that the State's *entire pattern of deception* across the linked cases created a "strategic paralysis" that crippled the defense's preparation and trial strategy. It was consistently argued that the State's affirmative lie about the K.R. scarf DNA did not exist in a vacuum. Rather, it compounded the State's other lies regarding the H.T. investigation (the "blood" claim and the fabricated attacker's description). Petitioner argued that this cumulative misconduct validated the defense's fear of "opening the door" and forced counsel to abandon any inquiry into the linked cases, which were in reality powerfully exculpatory. This core constitutional injury was argued in the briefs and explicitly articulated during oral argument, where counsel stated, "There was no strategy here because the defense was not provided with that information" (**12T 37:19-38:2**). See:

- **PCR Court Filings:** *Pro Se* PCR Br., Ra106, Ra119-121, Ra128-131; *Pro Se* Supp PCR Br., Ra860; Counsel PCR Br., Ra15.
- **Appellate Court Filings:** *Pro Se* App. Br., Ra768, Ra773, Ra782-786; Counsel App. Br., Ra346.

- **N.J. Supreme Court Filings:** *Pro Se* Pet. for Cert., Ra982; Counsel Pet. for Cert., Ra940-948.

5. Summary: The Substance of Petitioner's Federal Claims Was Fully Exhausted Throughout All Levels of State Court Review

The record is unambiguous: the state courts, at every level, were presented with the complete factual foundation and constitutional substance of every claim asserted in this petition. This is not a case of a petitioner raising new facts. It is a case of a petitioner connecting the same factual dots that were presented to—and argued before—the PCR Court, the Appellate Division, and the New Jersey Supreme Court, as meticulously detailed in the preceding subsections. The arguments in this federal petition are the necessary and permissible elaboration of those same foundational claims.

The factual core of the innocent (or intentional) DNA transfer defense now before this Court was fully litigated at every state level. It was established by combining two key arguments: first, that the State fundamentally misrepresented the H.T. forensic evidence, falsely calling it "blood" when their own suppressed reports proved it was innocuous, easily-transferable skin cells (**see Section F.1.b *supra***); and second, that the actual perpetrator at that very crime scene was a *6-foot, white male with blue eyes* who did not match the petitioner (**see Section F.1.a *supra***). The inescapable conclusion presented to the state courts was that petitioner's DNA was transferred by the actual culprit. This was *not* merely a theory of innocence; it was argued as a theory of active framing—that the true perpetrator was "*using and leaving things behind that did not belong to him' in an effort to inculpate Mr. Rivadeneira.*" See:

- **PCR Court Filings:** *Pro Se* PCR Br., Ra120-121; Counsel PCR Br., Ra33.

- **Appellate Court Filings:** *Pro Se* App. Br., Ra783; Counsel App. Br., Ra344; Ra356; Counsel App. Supp. Br., Ra869.
- **N.J. Supreme Court Filings:** *Pro Se* Pet. for Cert., Ra982; Counsel Pet. for Cert., Ra938, Ra943-944.

Similarly, the state courts were presented with the facts establishing the devastating N.W. connection, arguing that the State's suppression of the Crawford identification concealed the truth that its star witness, Alex Cancinos, was the known accomplice of the very man tied to the innocently transferred DNA (**see Section F.2 *supra*.**)

Finally, it was consistently argued that the State's cumulative pattern of deception—from the lies about the H.T. and N.W. evidence to the outright fabrication about the K.R. scarf DNA used to improperly withdraw a plea offer (**see Section F.3 *supra***)—created a profound "strategic paralysis." The state courts were shown how this misconduct unconstitutionally crippled the defense, forcing counsel to abandon what were in reality powerfully exculpatory avenues of investigation for fear of "opening the door" to supposedly damning, but in fact non-existent, proof (**see Section F.4 *supra***).

The substance of the Brady violation—built upon innocent DNA transfer, third-party guilt, and a defense paralyzed by State-sponsored deception—was fairly and repeatedly presented. The state courts had a full and fair opportunity to correct the profound constitutional errors that occurred. Therefore, these claims satisfy the exhaustion requirement and are ripe for federal review on the merits.

**G. CONCLUSION: THE CONSTITUTION DEMANDS RECTIFICATION OF A
VERDICT SECURED BY A CAMPAIGN OF DECEPTION AND COMPOUNDED
JUDICIAL ERROR**

The conviction of Elmo Rivadeneira stands as a clear illustration of a judicial process fundamentally compromised by the State's calculated campaign of suppression and misrepresentation, and a state court's subsequent, objectively unreasonable failure to remedy that profound constitutional breach. This is not a case of nuanced interpretation or debatable error; it is a manifest instance where a verdict, achieved through deception and cemented by flawed judicial reasoning, warrants federal habeas corpus relief under 28 U.S.C. § 2254(d).

The linchpin of this injustice is the State's multi-faceted deception regarding the interconnected joint investigation. As this brief has painstakingly detailed, the State did not merely withhold evidence; it actively misrepresented its contents to create a false narrative of guilt. This included fabricating claims of petitioner's blood on the H.T. cell phone, misrepresenting the H.T. attacker's description, and lying about DNA matches on the K.R. scarf to poison plea negotiations and paralyze the defense. This misconduct unconstitutionally suppressed the truth: that the State's own files contained concrete proof of innocent DNA transfer pathways and devastating impeachment evidence against its key witness, Alex Cancinos.

In place of this suppressed truth, the State built its entire case on scientifically unreliable "touch" skin cell DNA from a lost, soiled stocking—evidence so inherently ambiguous it cannot establish how, when, or by what activity it was deposited. The inherent unreliability of this evidence—its susceptibility to innocent transfer and the impossibility of determining from the profile alone how or when it was deposited—was not only downplayed by the State but was critically misunderstood and unreasonably determined by the state appellate courts.

The state court's subsequent adjudication perpetuated this injustice. As demonstrated in **Section C *supra***, its decision rested upon multiple unreasonable determinations of fact (§

2254(d)(2)). The court defied a mountain of undisputed evidence—from the prosecutor's own sworn affirmation to the very nature of the investigation—to create a fiction that no joint investigation existed. It adopted a factually impossible narrative regarding the stocking DNA that was directly contradicted by the State's own experts. And it uncritically parroted the State's shifting narrative of falsehoods regarding the K.R. evidence—laundering the prosecutor's lie about DNA on a scarf (when lab reports explicitly excluded Rivadeneira) into a misleading story of "subsequent testing," then adopting a newly invented "car" theory contradicted by the investigation's own findings.

Furthermore, as shown in **Section D** *supra*, these flawed factual findings underpinned unreasonable applications of clearly established federal law (§ 2254(d)(1)). The court unreasonably applied Kyles v. Whitley by refusing to enforce the State's disclosure duties in a joint investigation. It unreasonably applied Banks v. Dretke and Strickler v. Greene by ignoring the profound prejudice of the State's active deception, which unconstitutionally paralyzed the defense. And it unreasonably applied Holmes v. South Carolina by using the flawed stocking DNA as a basis to dismiss the powerful, suppressed third-party guilt defense.

The materiality of this suppressed evidence, as detailed in **Section E.3** *supra*, is catastrophic to any notion of a fair trial. When the suppressed evidence of innocent DNA transfer (H.T. case) and witness culpability (N.W. case) is viewed collectively, as Kyles demands, confidence in the verdict is obliterated. This is magnified exponentially when considered alongside the definitive, exculpatory *sperm* DNA evidence detailed in **Ground Three** *infra*—evidence that conclusively excluded Petitioner from the perpetrator's own garment while identifying an unknown male assailant, yet was suppressed for nearly a decade.

AEDPA demands deference, but it does not demand blindness to manifest constitutional injustice. The state court's cascade of unreasonable factual findings and its consequent misapplication of clearly established federal law constitute precisely the "extreme malfunction" in the state criminal justice system that federal habeas review exists to correct. Harrington v. Richter, 562 U.S. 86, 102 (2011).

Elmo Rivadeneira was convicted not because the evidence pointed to his guilt, but because the State systematically hid the evidence that pointed to his innocence, while the judiciary failed to recognize the profound unreliability of what little the State did present. This is a fundamental betrayal of due process. The Constitution requires more. It requires a new trial, one where all the evidence, stripped of prosecutorial manipulation and judicial misapprehension, can finally illuminate the truth for an impartial jury.

The choice before this Court is stark: if the Court accepts the State's narrative—built on phantom reports, fabricated DNA matches, and the systematic concealment of proof pointing to another perpetrator—then this petition must be denied. But if the Court accepts the documented evidence laid bare in this brief, then the Constitution demands relief. Federal habeas review exists for precisely this situation: where state courts ratify a conviction secured not by evidence, but by deception. The writ must be granted.

II. GROUND TWO

PETITIONER WAS DENIED HIS SIXTH AMENDMENT RIGHT TO THE EFFECTIVE ASSISTANCE OF COUNSEL (Raised Below: Ra125-150, Ra351-380, Ra768, 982)¹⁹

A. INTRODUCTION

The Sixth Amendment guarantees effective assistance of counsel. Strickland v. Washington, 466 U.S. 668 (1984). Trial counsel rendered constitutionally ineffective assistance by abandoning the fundamental duty to investigate. This was not a single misstep—it was systemic collapse. Counsel failed to investigate leads Petitioner provided, accepted the State's lies without verification, ignored evidence of third-party guilt, and surrendered on the only scientific question that mattered. Each failure compounded the next, leaving the defense blind to powerful exculpatory evidence detailed in **Ground One *supra***.

The state court's denial unreasonably applied Strickland based on circular logic: it called the stocking DNA "damning" while ignoring that counsel's failures made weak evidence appear strong. This warrants relief under 28 U.S.C. § 2254(d). As this Ground relies upon the comprehensive factual record and scientific arguments set forth in **Ground One *supra***, they are incorporated herein by reference.

B. COUNSEL'S DEFICIENT PERFORMANCE AND RESULTING PREJUDICE

1. Failure to Investigate Alex Cancinos and the Viable Third-Party Guilt Defense (Raised Below: Ra370-379, Ra128-130, Ra140-150, Ra768, Ra982)

a. Deficient Performance

Counsel's primary and most egregious failure was complete abdication of the duty to investigate Alex Cancinos despite overwhelming, non-suppressed information demanding action.

¹⁹ Citations to "Ra" are to the Respondent's Appendix, which contains the state court record as filed by the Respondents. See footnote 1, *supra*.

- **First**, counsel ignored specific, actionable leads Petitioner provided identifying Cancinos as a viable third-party perpetrator: Cancinos shared access to the Kearny garage where both men worked (**Pa201**);²⁰ (**Ra206, Ra207-217, Ra272-273**)—a clear pathway for innocent DNA transfer; Cancinos was arrested driving a customer's 1995 Cadillac taken without permission from that garage around the time of the A.T. incident (**Ra206-217, Ra225**)—a vehicle similar to one seen on surveillance (**3T 71:14-72:3**); and Cancinos was working on another car just blocks from the A.T. abduction site (**Ra206-217**).
- **Second**, counsel knew the State's entire theory rested on linked crimes committed by a single perpetrator (see **Ground One Sections B.1 and C.1 *supra***), and he was aware of the staggering geographic link: the N.W. victim was raped in the exact same location described by A.T. and released only blocks away (**Ra235-241 compare with 5T 119:19-20**).
- **Third**, this dereliction became absolute when Petitioner's leads were validated by the police investigation itself: the N.W. victim identified Cancinos (**Pa1151-1152**) and a white male with blue eyes—Dean Crawford (**Pa176, Pa1153**)—as her attackers, while simultaneously excluding Petitioner (**Pa198-200, Pa671-678, Pa1151-1153**). This objective validation transformed counsel's duty from investigating a client's claim to pursuing a confirmed, evidence-based defense.
- **Fourth**, the duty became mandatory when the State, on the eve of trial, designated this same validated suspect as its key corroborating witness (**6T 68:25**), offering him dismissal of his own rape charges on the N.W. linked case (**5T 27:22-28:12, 29:14-19**) for testimony centered on a conveniently "burnt" letter (**6T 81:3-8**).

²⁰ Citations to "Pa" are to the Petitioner's Appendix. As defined in footnote 1, *supra*, the documents contained therein are part of the state court record and were presented or referenced during the state court proceedings.

Faced with a compromised witness, validated client leads, overwhelming geographic links, and destroyed evidence, any competent attorney's duty to conduct rigorous, independent investigation was absolute. Instead, counsel was strategically paralyzed by passive acceptance of the State's misrepresentations regarding the linked cases (**as detailed in Ground One Sections C.2, E.1, and E.2 *supra***). The duty to investigate is not discharged by accepting an adversary's representations. Rompilla v. Beard, 545 U.S. 374, 387 (2005). Counsel's failure to conduct essential verification, allowing defense strategy to be dictated by the State's unverified falsehoods, is precisely the type of passive dereliction that Strickland and Rompilla condemn.

b. Prejudice

This failure was profoundly prejudicial because it deprived Petitioner of his most powerful and coherent defense. A reasonable investigation, triggered by any of the red flags above, would have uncovered the suppressed Brady evidence from the linked investigations detailed in **Ground One *supra***. Armed with this truth, the defense could have destroyed Cancinos's credibility by proving he was the accomplice of Dean Crawford (**Pa1143**)—the man who actually left Petitioner's DNA at the H.T. scene (**as established in Ground One Sections E.1 and E.3 *supra***). This would have provided the jury with a concrete, fact-based narrative of third-party guilt and a scientifically plausible mechanism for innocent DNA transfer (see **Ground One Section E.3.b *supra***).

The state court's finding of no prejudice—reasoning that discrediting Cancinos "had no impact on the State's most damning evidence, the stocking," State v. Rivadeneira, No. A-5573-17T1, slip op. at 29 (App. Div. May 19, 2020) (**Pa274**)—was an unreasonable application of Strickland. It ignored that Cancinos provided the only significant corroborating evidence (consciousness of guilt) and that linking him to the actual perpetrator (Crawford (**Pa1143**))

directly undermines the State's entire interpretation of the stocking DNA, transforming it from a "silver bullet" into ambiguous touch skin cell DNA evidence (**see Ground One Section E.3.b supra**), thereby creating a reasonable probability of a different outcome sufficient to undermine confidence in the verdict.

2. Investigate the Linked N.W., H.T., and K.R. Attacks (Raised Below: Ra368-370, Ra130-132, Ra768, Ra982)

a. Deficient Performance

Counsel's ineffectiveness extended to wholesale failure to conduct any meaningful independent investigation into the linked N.W., H.T., and K.R. attacks, despite the prosecution building its entire identification theory upon them. Instead of fulfilling his role as a constitutionally mandated adversary, counsel passively accepted the prosecution's active misrepresentations about this evidence (**as detailed in Ground One Sections C.2, E.1, and E.2 supra**). A reasonably competent attorney has a fundamental duty to independently verify an adversary's crucial claims, not take them on faith.

Simple, direct steps would have exposed the deception:

- when the State claimed to the A.T. New Jersey Grand Jury that Petitioner's "blood" was on the H.T. phone (**Pa66, Pa70**), counsel should have demanded the OCME lab reports which proved it was non-probatative skin cells (**Pa1144**);
- when the State claimed to the A.T. New Jersey Grand Jury that Petitioner matched the H.T. attacker's description because they varied (**1T 11:17-18, 12:1-2, 38:20-21, 28:17-20**); (**Pa180**), counsel should have demanded the NYPD reports which proved H.T.'s description did *not* vary from her six-foot white male with blue eyes description (**Pa1140-1143**) and that she identified Dean Crawford (**Pa1143**);

- and when the State claimed that Petitioner's DNA was on the K.R. scarf (**Pa1161-1164**, **Pa1167**)—a lie used to withdraw a plea offer (**Pa1161-1164**)—counsel should have demanded the OCME lab report which confirmed Petitioner was explicitly excluded (**Pa1173**).

This failure to conduct basic due diligence, allowing the entire defense strategy to be dictated by the State's unverified falsehoods, is precisely the type of passive dereliction of duty that Strickland and its progeny condemn. Rompilla, 545 U.S. at 387.

b. Prejudice

The prejudice from this single, overarching failure was twofold and catastrophic. *First*, it created the "strategic paralysis" that crippled the entire trial defense (**see Ground One Sections C.2, E.1, E.2, and E.3 supra**). By uncritically accepting the State's lies that the linked cases were inculpatory, counsel was blinded to the powerful third-party guilt defense the true evidence provided. This foreclosed the ability to prove that Petitioner's DNA had been innocently left at the scene of a separate, similar, and interconnected attack (the H.T. case) by the actual perpetrator, Dean Crawford (**see Ground One Sections C.2, E.1, and E.3 supra**). But the suppressed truth was devastating: Crawford was identified by *two separate victims* as their attacker. The N.W. victim identified both Cancinos and Crawford as her rapists (**Pa176**, **Pa199-200**, **Pa1151-1153**). The H.T. victim independently identified this same Crawford (**Pa1143**). Two victims, different attacks, same perpetrator—and that perpetrator was the State's star witness's accomplice.

This evidence would have destroyed the State's case. It proved Petitioner's DNA was innocently transferred by the actual perpetrators, provided a scientifically plausible, evidence-based explanation for the presence of his DNA on the A.T. stocking—transforming it from

damning evidence into an ambiguous trace—and directly exposed Cancinos, the State's only witness, as the accomplice of the man who proved innocent transfer was real (**see Ground One Sections C.2, E.1, and E.3 *supra***). The jury never heard it because counsel believed the State's lies.

Second, counsel's failure directly caused the forfeiture of an extended plea agreement. The prosecution explicitly withdrew its extended 30-year plea offer based on the false K.R. scarf DNA claim (**see Ground One Section C.6 *supra***). Counsel's failure to investigate and expose this lie directly resulted in the loss of this plea opportunity, constituting clear prejudice under Lafler v. Cooper, 566 U.S. 156 (2012). The state court's dismissal of this claim, State v. Rivadeneira, No. A-5573-17T1, slip op. at 29 (**Pa274**), was an unreasonable application of Lafler, as it ignored the undisputed causal link between counsel's inaction and the withdrawn plea. The combination of these failures left Petitioner without a viable defense at trial (**see Ground One Section E.1, and E.3 *supra***) and without the option of a lesser sentence—a total collapse of effective representation.

3. Failure to Investigate the Veracity of the “Burnt Letter” (Raised Below: Ra366-368, Ra132, Ra768, Ra982)

a. Deficient Performance

Counsel's ineffectiveness was further demonstrated by failure to conduct any investigation into the authenticity of the so-called "burnt letter." The letter's story was inherently suspicious (**2T 33:4-47:25**), (**6T 66:17-68:25, 84:6-101:6**): its existence was claimed by a witness, Alex Cancinos, who had a powerful motive to lie (**6T 66:17-68:25**); conveniently destroyed the letter (**6T 81:3-8**); and the State offered no physical proof it ever existed—no envelope, no postmark, and no stamp to verify it was mailed from the jail.

The State's sole attempt at corroboration was a failure. While the prosecution presented Petitioner's ex-girlfriend to claim she saw the letter, cross-examination revealed she could not authenticate the handwriting and had been mistaken about his writing in the past (**5T 96:15-97:12, 98:16-22**). This confluence of red flags—a compromised witness, a failed authentication, and a complete lack of physical evidence—created an absolute duty for counsel to investigate its origin. The most basic step would have been to demand the Hudson County jail's mail logs, obtainable records that document all outgoing inmate correspondence, a step Petitioner explicitly requested (**Ra272-273, Ra225**). Counsel's failure to take this simple, cost-free step was not a strategic decision; it was a dereliction of his duty to challenge evidence that was already crumbling under its own weight, in clear violation of Strickland.

b. Prejudice

The prejudice from this failure was profound. The letter, however weakly supported, was the only evidence that gave Cancinos's testimony a veneer of credibility and provided the jury with a supposed admission of guilt (**6T 102:18-105:22**). Had counsel obtained the mail logs and proven that no such letter was ever sent from the jail, he would have done more than simply impeach a witness; he would have exposed the State's entire corroborating narrative as a fabrication.

This would have allowed the defense to argue that Cancinos—a known associate of the actual perpetrator, Dean Crawford (**as established in Ground One *supra***)—not only lied on the stand but also likely forged the letter himself and showed it to the ex-girlfriend to create a false witness. The state appellate court's finding of no prejudice was an unreasonable application of Strickland because it myopically focused on the stocking DNA while ignoring that the letter was the very tool the State used to convince the jury that the DNA was sinister. State v. Rivadeneira,

No. A-5573-17T1, slip op. at 29 (**Pa274**). Exposing the State's key piece of corroboration as a fraud would have shattered the credibility of its entire case, creating a reasonable probability of a different outcome.

4. Failure to Rebut the State's Prejudicial Characterization of the Lost Stocking DNA (Raised Below: Ra365-366, Ra134-135, Ra768, Ra982)

a. Deficient Performance

Counsel's ineffectiveness was starkly demonstrated by his failure to present a known and viable defense to rebut the State's prejudicial characterization of its primary forensic evidence—a piece of a stocking that the State subsequently lost, leaving only a photograph for the jury (**6T 31:16-32:21**), (**7T 4:21-5:6**). The loss of this critical evidence was profoundly prejudicial in itself, as it prevented the defense from examining whether the fragment could have even been pulled over a face as a mask (**7T 15:24**). In this evidentiary vacuum, the prosecutor weaponized the item during summation, framing it as inherently sinister by stating to the jury:

"Why would a man's DNA be on the stocking? The evidence hasn't shown the Defendant has some proclivity to wear women's clothes as a social hobby. Ladies and gentlemen, if a man wears a stocking, odds are, it's to conceal his identity when he's committing a crime or, as in this case, a bunch of brutal horrific crimes." (**7T 39:23-40:4**).

This direct challenge, made in the absence of the actual evidence, created an absolute duty for defense counsel to provide the jury with a counter-narrative. Counsel possessed the exact "reasonable explanation" the prosecutor dared the jury to find: he knew Petitioner commonly wore such stockings on his head as a cap to protect his scalp while working on cars in the Kearny garage, a use consistent with the evidence being a mere fragment. Yet, despite the prosecutor's direct challenge, counsel failed to introduce any of this evidence (**Ra272-273**). Allowing the State's inflammatory and unanswered question to be the final word on a critical piece of lost evidence is a complete breakdown in representation.

b. Prejudice

The prejudice resulting from this failure was profound. The jury was left with nothing but the prosecutor's sinister and speculative theory. By failing to offer the innocent explanation, counsel allowed the jury to believe that no such explanation existed, effectively stipulating to the prosecutor's prejudicial characterization.

Presenting the evidence of Petitioner's habit would have done more than offer an alternative; it would have provided a plausible, non-criminal context that fit the limited physical evidence far better than the State's theory.²¹ It would have directly answered the prosecutor's challenge and neutralized its prejudicial impact. The state court's conclusion that other errors had "no impact on the State's most damning evidence, the stocking," State v. Rivadeneira, No. A-5573-17T1, slip op. at 29 (App. Div. May 19, 2020) (**Pa274**), was an unreasonable determination. Counsel's failure to provide the "reasonable explanation" for the lost evidence is precisely what cemented the prosecutor's speculation as "damning" in the minds of the jury, fatally undermining confidence in the verdict.

5. Failure to Meaningfully Consult with and Utilize a Forensic/DNA Expert (Raised Below: Ra362-365, Ra135-138, Ra768, Ra982)

a. Deficient Performance

The Sixth Amendment demands that when a defense hinges on complex forensic evidence, counsel has a fundamental duty to seek and meaningfully engage with a qualified expert. Hinton v. Alabama, 571 U.S. 263, 274 (2014). Trial counsel's performance here was not a mere oversight but a knowing and catastrophic failure to investigate key evidence—an abdication of duty so complete that it undermined the adversarial process itself. United States v.

²¹ This was the only case involving a stocking; in all others, the perpetrator used different methods to conceal identity. Its presence here does not establish authorship or pattern.

Travillion, 759 F.3d 281, 289-90 (3d Cir. 2014). This was a total surrender on the only scientific question that mattered.

The timeline of counsel's inaction, verified by his own correspondence, reveals a staggering level of neglect:

- *July 7, 2011*—nearly five years following Petitioner's arrest—counsel wrote to the Public Defender's Office to request funds for a DNA expert. That letter is the cornerstone of this claim. In it, counsel admits he is fully aware that: (1) the stocking DNA is the "strongest physical evidence working against the defendant," and (2) he made a direct "reference to the 'DNA evidence from a cell phone dropped by a would-be assailant in a New York assault case'" (**Ra226**). This proves counsel knew the entire case hinged on defeating the DNA evidence via a specific, fact-based innocent transfer defense.
- After the OPD promptly approved the request on *July 27, 2011*, removing any excuse of institutional delay (**Ra227**), counsel gave his expert a clear, written directive. In his *August 19, 2011, letter*, he explicitly instructed Dr. Richard Saferstein: "As you can see, other items were tested besides the subject stocking. My client and I respectfully request that you review the same..." (**Ra228-229**). In that same letter, counsel made a critical promise, acknowledging that a paper report was not enough: "Obviously there will be testimony by the State Police Laboratory's personnel regarding the DNA. I will be contacting you in the near future to discuss these matters." (**Ra229**).
- Counsel broke that promise and abandoned his own directive. He *never* had that discussion. The result was a useless, "one paragraph report" dated *September 23, 2011*—three days after the trial had already begun—which was completely non-responsive to his instructions. The report ignored the "other items," was limited to a scientifically useless "source-level" finding

on the stocking, and offered nothing to support the very real innocent transfer defense (**Ra230**). Upon receiving this inadequate report mid-trial, counsel did nothing. He did not challenge his own expert's failure, did not ask for a continuance, and knowingly proceeded to trial with no scientific support because he could not reach the expert, who was undergoing a colonoscopy (**Ra272-273, Ra206**).

b. Prejudice

The failure to investigate and present expert testimony constitutes ineffective assistance when it prejudices the defense. United States v. Kauffman, 109 F.3d 186, 190 (3d Cir. 1997). Here, the prejudice was absolute and dispositive. Counsel's surrender allowed the State to present a scientifically impossible narrative to the jury as an infallible fact. The trial transcripts prove that counsel knew the scientific arguments that could have won the case, but his failure to present an expert left those arguments hollow and unsupported, allowing the prosecution to ridicule them into oblivion.

In his closing, defense counsel weakly gestured at the defense an expert would have provided, asking the jury, "Why isn't his saliva or his sweat or his hair on it?" and noting, "...most of the DNA was found on the outside of the stocking... I am not sure if that makes sense..." (7T 13:21-15:10). A competently engaged expert would have given these questions the force of scientific certainty, transforming them from mere speculation into an irrefutable, evidence-based argument that:

- **The State's Methodology Was Designed to Obscure, Not Reveal, the Truth.** An expert would have first attacked the State's crude and non-specific testing method. He would have explained that the serologist failed to conduct any targeted, "pinpoint" analysis. A proper scientific inquiry, especially in light of the victim's testimony that the attacker was "sweating

profusely" (**5T 127:5**) and talking extensively (**7T 12:1-7**), would involve specifically testing the area corresponding to a wearer's mouth for saliva, or the fabric for sweat. Instead, the analyst employed a crude swabbing of the entire "inside" and "outside" surfaces for skin cells (**4T 17:1-18:8, 26:2-3**). An expert would have testified that this method was guaranteed only to find a general mixture of skin cells if present, but was scientifically incapable of determining the context, activity, or timeline of their deposit.

- **The DNA's Location Was Scientifically Illogical and Proved Innocent Transfer.** An expert would have then explained that even this flawed methodology produced results that refute the State's theory. The laws of biology and physics dictate that if the stocking were worn as a mask for hours by a person sweating and talking, the vast majority of the perpetrator's genetic material—shed skin cells, sweat, saliva—would be concentrated on the inside. The victim's DNA, deposited during a struggle, would be primarily on the outside. The State's finding of the opposite—the strongest mixture of skin cell DNA from both Petitioner and the victim on the outside (**4T 73:17-74:8, 124:24-125:12**), with almost nothing inside (**4T 71:18-72:12, 101:18-19, 129:14-130:3**)—is a scientific refutation of the State's narrative.²² The prosecutor's simplistic "maybe it was inside-out" theory (**7T 48:19-23**) is defeated by the evidence itself. Even if the stocking was worn reversed, the pattern still makes no biological sense. Reversing orientation doesn't eliminate the physical law that prolonged facial contact deposits concentrated DNA on whichever surface touches the face. If worn inside-out, the current "inside" (now touching the face) would show heavy

²² Regarding the victim, the prosecutor admitted the expert could not definitively say her DNA was on the stocking (**7T 50:13-15**); rather, she could not be excluded from the mixtures on either side (**4T 70:5-7; 73:3-24**); (**Pa490, Pa917**) with probabilities the expert agreed were "not high under DNA standards" (**4T 101:12-19**), ranging from one in thousands on the inside to one in millions on the outside (**4T 71:25-72:3; 107:14-108:8**); (**Pa490, Pa917**). Similarly, Mr. Rivadeneira could not be excluded from the inside mixture, with probabilities in the millions (**4T 129:14-130:3**), yet was identified as the major donor on the outside with probabilities in the quadrillions (**4T 125:2-12**).

perpetrator DNA while the current "outside" (now exposed during struggle) would show victim DNA. Instead, the evidence shows heavy concentration on *one side only*—regardless of which side that is. This single-surface concentration is *inconsistent* with mask-wearing under any orientation but perfectly consistent with the stocking contacting a single contaminated surface where multiple people's DNA was already present—the definition of secondary transfer, especially considering that the stocking contained a complex mixture from at least two to four people (**4T 89:11-24, 92:6-7, 93:6-7, 108:17-20**).

- **The critical point:** Biology doesn't care about orientation. Hours of mask-wearing creates DNA deposition on *both sides* in predictable patterns based on which surface contacts skin and which surface is exposed. The actual evidence—heavy DNA concentration from multiple contributors on *one side only*—proves the State's mask theory is impossible under either interpretation.
- **Moreover, even accepting that Petitioner's DNA was the "major contributor" on the outside,** the NIST Report explicitly warns that this source-level finding cannot support the State's activity-level conclusion. As NIST makes clear, identifying someone as a "major contributor" *does not establish* that person was the last to touch an item, the primary actor, or even when the DNA was deposited. (***Exhibit A, NISTIR 8503, p. 129***). The State's entire theory rests on the fallacy that DNA location and quantity prove activity—a premise forensic science rejects.
- **The lopsided mixture on one side is powerful scientific evidence:** it proves the stocking contacted a surface where skin cells from multiple people—including both Petitioner and the victim—were already present. This is textbook innocent secondary transfer, not mask-wearing.

- **The Foundational Evidence Was Unreliable and Incomplete.** Finally, an expert would have underscored the unreliability of the State's entire case by highlighting that the stocking itself was lost by the prosecution before trial, preventing any independent examination or the kind of pinpoint testing a real investigation would have required (**6T 31:16-32:21**).

Because counsel failed to present this testimony, the prosecutor masterfully exploited the scientific vacuum, telling the jury to ignore the physical evidence by arguing, "The bottom line is, that doesn't matter. We just need to know who's DNA is on the stocking" (**7T 48:19-23**). This is the pinnacle of prejudice: the prosecutor used counsel's failure as a weapon to advance a scientifically and legally bankrupt argument. An expert would have destroyed this fallacy on the stand, explaining to the jury, as detailed in **Ground One Section E.3.b supra**, the critical distinction between a useless source-level finding (whose DNA might be present) and a necessary activity-level conclusion (how it got there). He would have educated them on the well-documented unreliability of uncorroborated "touch" skin cell DNA and shown that the prosecutor's "bottom line" was, in fact, scientific nonsense.

The state court's rejection of this claim was predicated on this same flawed logic. The Appellate Division concluded there was no prejudice because "even the defense DNA expert agreed with the findings of the State's experts." State v. Rivadeneira, No. A-5573-17T1, slip op. at 29 (**Pa274**). This was an unreasonable determination of the facts under 28 U.S.C. § 2254(d)(2), as the court ignored that the expert's "agreement" was on the useless source-level finding while he completely failed to conduct the necessary activity-level analysis, despite counsel's directive. By treating a non-responsive, superficial report as a meaningful consultation, the court unreasonably ignored the documented record of counsel's failure, leading to an unreasonable application of Strickland under § 2254(d)(1).

The state court's conclusion that the DNA was "damning" was itself an unreasonable determination of the facts and an unreasonable application of Strickland, as it was only possible because the court, like the jury, never heard the expert testimony that would have revealed the State's narrative to be scientifically absurd. This was not a minor error; it was a complete failure that extinguished the only viable path to acquittal, destroying any and all confidence in the verdict. Strickland, 466 U.S. at 694.

6. Conclusion: The State Court's Decision Was an Unreasonable Application of Law and Fact, as the Cumulative Effect of Counsel's Errors Manufactured a False Narrative of Guilt

The state court's rejection of Petitioner's Ineffective assistance of counsel claim rests entirely on a flawed premise: the supposedly "damning" nature of the stocking DNA. This conclusion is not merely incorrect; it is an unreasonable *feedback loop*, born from the very constitutional failures it overlooks. The stocking evidence only appeared "damning" because trial counsel's systemic breakdown of representation allowed the State to construct a veneer of guilt around it, a veneer that a competent investigation would have shattered. This circular reasoning is an unreasonable application of Strickland v. Washington, 466 U.S. 668 (1984), and warrants habeas relief.

The trial was not rendered fundamentally unfair by a single error, but by a cascade of failures that synergistically crippled the adversarial process. Each failure directly contributed to the artificial weight of the State's DNA evidence:

- It was counsel's failure to investigate Alex Cancinos and Dean Crawford that allowed the State to present an accused rapist as its key corroborating witness, while hiding the true perpetrator who provided the concrete mechanism for innocent DNA transfer.

- It was counsel's passive acceptance of the State's falsehoods about the linked cases that paralyzed the defense, blinding it to exculpatory evidence and directly causing the forfeiture of a favorable plea deal under Lafler v. Cooper, 566 U.S. 156 (2012).
- It was counsel's failure to investigate the "burnt letter" that allowed the State to prop up its compromised witness with a story whose fraudulent origins could have been exposed with a simple request for jail mail logs.
- It was counsel's failure to consult with the retained DNA expert that allowed the prosecution to present a scientifically impossible narrative—where DNA inexplicably appeared on the outside of the stocking—as infallible fact, and to mock the defense's scientifically valid questions into oblivion.

The state court unreasonably fixated on the outcome—the DNA on the stocking—while ignoring the process that defined it. The stocking was “damning” only because counsel’s failures left the jury with no other conclusion. A competent defense would have transformed that stocking from a symbol of guilt into proof of the State’s flawed theory. It would have shown that the State’s star witness was the accomplice of the man who left the Petitioner’s DNA at another similar and linked attack, and that the physical evidence was far more consistent with innocent transfer than with the commission of a crime.

By failing to see that counsel’s errors are what gave the State’s evidence its “damning” character, the state court engaged in an unreasonable application of Strickland’s prejudice prong. The cumulative effect of these errors, combined with the clear prejudice from the lost plea, destroyed any possibility of a fair trial. The writ must be granted.

III. GROUND THREE

AEDPA RELIEF IS NECESSARY DUE TO THE STATE COURT'S UNREASONABLE REJECTION OF A BRADY VIOLATION INVOLVING CONCLUSIVE SPERM DNA (EXCLUDING PETITIONER AND IDENTIFYING AN UNKNOWN MALE PERPETRATOR)—EVIDENCE SUPPRESSED UNTIL FEDERAL HABEAS AND ERRONEOUSLY DEEMED "NOT NEW" BY STATE BASED ON THE COURT'S ACCEPTANCE OF PROSECUTORIAL MISREPRESENTATIONS AND RELIANCE ON A PHANTOM DOCUMENT STEMMING FROM AN UNREASONABLE APPLICATION OF LAW AND FLAWED FACTUAL DETERMINATIONS (Raised Below: Pa998-1049, Pa1103-1113, Pa1050-1102, Pa1114-1125, Pa1212-1232)²³

A. INTRODUCTION AND SUMMARY OF ARGUMENT

Just days before Elmo Rivadeneira's trial began, the prosecutor obtained a DNA report that should have ended the case.

On September 15, 2011—twelve days before jury selection—Bode Technology delivered its Y-STR DNA analysis of *sperm* recovered from the perpetrator's own overalls, the blue denim "Winnie the Pooh" garment he forced the victim to wear after the assault. The findings were definitive and devastating to the prosecution: Elmo Rivadeneira was conclusively excluded as a contributor to the perpetrator's sperm DNA. So was the victim's boyfriend. Instead, the analysis generated the complete genetic profile of an unknown male perpetrator—scientific proof, derived from the most probative biological evidence in any sexual assault case, that someone else committed this crime.

The prosecutor buried it. He never disclosed the report to the defense. He never corrected his own expert, who testified at trial that no semen was found on the overalls—a statement he knew was false. Instead, he presented a carefully crafted stipulation referencing a vague 2006 analysis of a generic "stain," creating the illusion of disclosure while actively concealing the

²³ Citations to "Pa" are to the Petitioner's Appendix. As defined in footnote 1, *supra*, the documents contained therein are part of the state court record and were presented or referenced during the state court proceedings.

exculpatory 2011 findings. The jury never heard that sperm was found. They never heard about the exclusions. They never heard about the unknown male's DNA profile. The defense never knew to ask.

For nearly a decade, this evidence remained hidden. It surfaced only during federal habeas proceedings in 2021, after a court order. Even then, the State fought to minimize its significance, claiming the 2011 report merely “supplemented” a 2006 Bode document that allegedly contained the same findings. But the 2006 report describing those findings is a phantom—the State has never produced it because it cannot. The critical findings in the 2011 report—excluding Rivadeneira and the victim's boyfriend while identifying an unknown male profile—relied on reference profiles that were not developed until 2008 and a specific comparison the prosecutor did not request until September 2011.

The Overalls Evidence and What the Jury Never Heard

The Winnie the Pooh overalls were the perpetrator's own garment—retrieved from his trunk and forced onto the victim immediately after the assaults when he took all her clothing. The victim testified she was nude underneath when he made her wear them, creating a direct pathway for transfer of the perpetrator's biological evidence. She was still wearing these overalls when found by police, who took them directly into custody, establishing an unbroken chain.

The State's forensic expert tested the overalls in 2005 and testified at trial that her chemical screening for semen was negative. Defense counsel, operating without the 2011 report, focused his cross-examination and closing argument on an untested hair found on the overalls—a weak, speculative point wholly inconsistent with possessing definitive scientific proof that his client was excluded from the perpetrator's sperm DNA.

The jury heard the State's expert say no semen was found. They heard a stipulation about a 2006 analysis of a "stain" that supposedly showed Rivadeneira was excluded from a DNA mixture. What they didn't hear was that twelve days before trial, Y-STR DNA testing definitively excluded both Rivadeneira and the victim's boyfriend from sperm discovered on the overalls, and yielded the complete genetic profile of an unknown male perpetrator.

The contrast between what the jury convicted on and what they never heard is stark: ambiguous touch DNA from a lost, soiled stocking found 9 hours later in a public area—scientifically incapable of establishing when, how, or by what activity it was deposited—versus definitive sperm DNA from the perpetrator's own garment, taken directly into custody, conclusively excluding the defendant and identifying unknown perpetrator.

Why Relief is Required Under AEDPA

This habeas petition seeks relief under 28 U.S.C. § 2254(d) because the state court's denial of this Brady claim rested on factual findings that defy both science and the documented record. The January 9, 2024 Appellate Division decision rejected the claim through several critical errors:

The court found the 2011 report contained no "new" information because a 2006 report supposedly contained the same findings—a factual impossibility it adopted directly from the prosecution. This is scientifically impossible. The 2011 report's definitive exclusions required a September 2011 comparison analysis using DNA reference profiles that did not exist until 2008. Before that comparison, the evidence was merely raw, uncompered data—forensically meaningless. The court's finding requires believing that definitive exclusions were somehow known five years before the scientific analysis that made them knowable was performed.

The court found the information was "known to defendant" and "presented to the jury" despite trial counsel's closing argument demonstrating complete ignorance of the findings, the absence of any reference to sperm DNA in the trial record, and a stipulation that actively concealed rather than disclosed the truth.

The court relied on an impossible "phantom" 2006 Bode report the State has never produced—and did so despite the federal District Court explicitly questioning this very claim. The federal district court saw through the deception. When the State claimed the 2011 report duplicated a 2006 analysis, the Honorable Kevin McNulty, U.S.D.J., observed pointedly: "The exact contents of the 2006 report, and how they substantively differ from the 2011 report, are unclear. Respondents' opposition does not analyze the differences." (ECF No. 22 at 3). That judicial skepticism was well-founded—the State couldn't produce the phantom report or explain the scientific impossibility of its claims. Yet the State recycled the same argument to the state courts, which uncritically adopted it without demanding the purported document or confronting the timeline problem.

Most remarkably, the court characterized ambiguous touch DNA from a lost stocking as "compelling" while dismissing definitive sperm DNA from the perpetrator's clothing as immaterial—invertigating the hierarchy of forensic evidence and ignoring the scientific principles governing DNA interpretation.

These are not findings upon which fairminded jurists could disagree. They rest on a factual narrative that defies the laws of time and science.

Structure of This Ground

This Ground is detailed because proving these findings were unreasonable requires demonstrating not just that they were wrong, but that they were scientifically impossible and

contrary to the undisputed record. What follows is organized to serve both as a comprehensive argument and as a reference tool.

- **Section B** establishes the factual baseline, correcting the state court's flawed narrative about the overall evidence and documenting the suppressed 2011 Bode report's actual findings through the trial record and forensic reports.
- **Section C** proves the state court made seven categories of unreasonable factual determinations under § 2254(d)(2)—from finding the 2011 report contained no "new" information despite the immutable scientific timeline, to characterizing touch DNA as "compelling" while dismissing sperm DNA as immaterial, to relying on an impossible phantom 2006 report in the face of federal judicial skepticism.
- **Section D** demonstrates how these unreasonable factual findings led to unreasonable applications of Brady's favorability, suppression, and materiality standards under § 2254(d)(1)—showing the court's legal errors flowed directly from its scientific and factual misapprehensions.
- **Section E** synthesizes these errors to prove the complete Brady violation, establishing that the suppressed sperm DNA evidence was unequivocally favorable, that suppression occurred through multiple means including active misrepresentation, and that the evidence was profoundly material when assessed against the scientifically unreliable stocking DNA the jury actually heard.

What This Ground Proves

What follows is not a disagreement about the weight of evidence or the credibility of witnesses. It is proof—through scientific impossibility, through the State's own files, through documented lies—that the state court's findings cannot be reconciled with reality. The court

accepted a narrative requiring belief that DNA comparison results existed before the comparison was performed, before the reference profiles necessary for comparison were created, and before the prosecutor requested the analysis. It characterized the most probative biological evidence in a sexual assault case—sperm DNA from the perpetrator's own garment—as immaterial while elevating ambiguous touch DNA to "compelling" status.

When a prosecutor obtains definitive scientific proof excluding the defendant from the perpetrator's sperm DNA twelve days before trial, conceals it, allows false testimony that no semen was found, and secures a conviction on ambiguous touch DNA—and when state courts uphold that conviction by adopting findings that require ignoring the laws of time and science—federal intervention is not discretionary. It is constitutionally mandated.

The sections that follow provide the detailed roadmap proving that conclusion.

B. COUNTER-STATEMENT OF FACTS

The last reasoned state court decision addressing the specific Brady claim here is the Appellate Division's opinion dated January 9, 2024. State v. Rivadeneira, Nos. A-2968-21, A-1043-22 (App. Div. Jan. 9, 2024) (**Pa1126-1138**).²⁴ Petitioner does not adopt the statement of facts as recited within that decision, as the Appellate Division in 2024 conducted no independent factual review and instead copied and pasted the verbatim factual summary from the 2016 direct appeal opinion, State v. Rivadeneira, No. A-3348-11T3 (App. Div. May 4, 2016) (**Pa458-462**), thereby incorporating and perpetuating its numerous errors.²⁵

²⁴ Citations to "Pa" are to the Petitioner's Appendix. As defined in footnote 1, *supra*, the documents contained therein are part of the state court record and were presented or referenced during the state court proceedings.

²⁵ Petitioner notes that the Brady claims in Ground One and Ground Three were adjudicated at different times, resulting in separate appellate decisions (dated May 19, 2020, and January 9, 2024, respectively). However, because the 2024 court uncritically adopted the same flawed factual summary from the 2016 direct appeal opinion as the 2020 court did, Petitioner incorporates the factual corrections established in Ground One by reference rather than

1. Trial Facts and the State Court's Flawed Narrative

The 2024 decision repeated verbatim the factually flawed trial narrative from 2016 decision, now appearing at (**Pa1127-1129**). These errors have been comprehensively corrected with full record citations in **Ground One Section B.2 *supra***, which is incorporated herein by reference. Specifically:

- The 2024 court repeated the mischaracterization of A.T.'s voice description (slip op. at 3) (**Pa1128**), which is clearly incorrect because A.T. described three distinct vocal patterns, not one "very distinctive voice," and never identified Rivadeneira by voice. **See Ground One Section B.2.a *supra***;
- The 2024 court repeated the omission of exculpatory glove DNA evidence (slip op. at 3) (**Pa1128**), which is clearly incorrect because DNA testing excluded Rivadeneira from the male profile on the glove found at the scene (**4T 130:14-22**). **See Ground One Section B.2.b *supra***;
- The 2024 court repeated the emphasis on Black and Mild cigars (slip op. at 2-3) (**Pa1127-1128**) while omitting that the brand's general popularity minimized its probative value (**7T 62:7-10**). **See Ground One Section B.2.b *supra***;
- The 2024 court repeated the fictitious "business relationship" claim linking Rivadeneira to the release location (slip op. at 3) (**Pa1128**), which is clearly incorrect because trial testimony from both Rivadeneira's employer (**5T 54:22-59:23**) and the lot owner (**5T 67:10-22**)

repeating them in full, focusing this section instead on the specific facts regarding the "Winnie the Pooh" overalls and the suppressed 2011 Bode Y-STR report.

contradicted this assertion, and the prosecution never made this argument²⁶ (**7T 28:22-29:2**).

See Ground One Section B.2.c *supra*;

- The 2024 court repeated the oversimplification that the stocking "proved to have the victim's DNA on the outside and defendant's DNA on the inside" (slip op. at 3) (**Pa1128**), which is clearly incorrect because the State's own experts established a complex mixture from at least two to four people (**4T 89:11-24, 92:6-7, 93:6-7, 108:17-20**), where the victim could not be excluded from either side (**4T 70:5-7; 73:3-24**) and Rivadeneira's major profile was found on the *outside* (**4T 124:8-125:12**) with only a potential minor contribution *inside* (**4T 129:14-130:3**). **See Ground One Section B.2.d *supra*;**
- The 2024 court repeated the uncritical recitation of Cancinos's testimony (slip op. at 4) (**Pa1129**) while omitting the credibility issues: the burned letter (**6T 81:3-8**), the dismissal of Cancinos's own rape charges (**5T 27:22-28:12**), and the unverified handwriting (**5T 96:15-97:12**). **See Ground One Section B.2.e *supra*;** and
- The 2024 decision also repeated the assertion that the victim was forced to wear "white overalls" (slip op. at 3) (**Pa1128**) (*repeating the 2016 error Pa459*). This is clearly incorrect because A.T. consistently testified the perpetrator forced her to wear blue denim "Winnie the Pooh" overalls (size 18) belonging to him (**5T 141:4-11**). This misstatement concerns the central piece of physical evidence in this Brady claim—the garment from which the definitive exculpatory sperm DNA was recovered.

The state court's repeated reliance on this flawed factual narrative forms the basis of the unreasonable adjudication detailed comprehensively in **Section C *infra***.

²⁶ The appellate court's assertion of a "business relationship" was never put forth by any party, witness, or exhibit. It originated solely in the appellate opinion and is directly contradicted by the only testimony addressing the location.

2. The Suppressed Exculpatory Evidence: The Overalls and the 2011 Bode Report

The Winnie the Pooh overalls represent a critical nexus between the victim, the perpetrator, and the suppressed exculpatory evidence central to this Brady claim. The following facts, drawn from the record, detail the history and analysis of this crucial piece of evidence:

- **The Victim's Account:** Alexis T. testified consistently at trial that on May 17, 2005, after the sexual assaults concluded and after the perpetrator had taken all her clothing and personal items, he forced her to put on a pair of blue denim "Winnie the Pooh" overalls (size 18) that belonged to him²⁷ (**5T 141:4-11**). She stated the perpetrator retrieved these overalls from the trunk of his car shortly before releasing her into an abandoned vehicle in a Newark lot (**Pa596-597, Pa600-611**). These were the overalls she was still wearing when found and taken to the hospital (**3T 64:9-18**).
- **Initial Forensic Examination (NJSP Lab - MacDonald):** On May 31, 2005, New Jersey State Police ("NJSP") Forensic Scientist Cortney MacDonald examined the overalls (HCPO Item#3/NJSP Lab Item #2) (**Pa477, Pa481**). MacDonald testified that her chemical test (acid phosphatase) for the presence of "semen" on "the entire overall inside and outside" yielded "negative" results (**4T 23:8-13**). This initial negative finding for semen is critical, as it contrasts sharply with the later, more sensitive Y-STR DNA analysis by Bode Technology which definitively identified sperm (a cellular element of semen, signifying the presence of semen) (**Pa463-465**). She observed a stain on the inside crotch area which tested positive for the presence of blood (**4T 23:9-10**). She cut out this stain (designated Specimen #2-1) for DNA analysis. She also swabbed the straps of the overalls (designated Specimen #2-2) to

²⁷ This is in direct contrast to the state appellate court's summary, which, as noted in Section B.1, *supra*, erroneously described these as "white overalls." This misstatement regarding the central piece of physical evidence in this Brady claim is one of several foundational factual errors in the state court's narrative.

attempt to identify the primary wearer (**4T 23:9-23, 24:2-5**). MacDonald noted finding a hair with a root on the overalls during her examination. She testified she did not submit this hair for DNA testing because, in her assessment, a single hair typically lacked sufficient material for profiling (**4T 34:13-24**). Specimens #2-1 (stain) and #2-2 (strap swab) were forwarded to the NJSP DNA Unit; the overalls themselves were returned to evidence storage (**4T 24:2-5**); (**Pa478**).

- **Initial STR DNA Analysis (NJSP Lab - Schiffner/Nezezon)**: The subsequent analysis of Specimen #2-1 (the bloodstain) by the NJSP DNA Unit yielded limited, exclusionary results. On July 14, 2005, NJSP Forensic Scientist Linnea Schiffner performed STR DNA analysis on the bloodstain (Specimen #2-1). She testified it yielded a mixed DNA profile suitable only for “exclusionary purposes” and that the victim, Alexis T., was excluded as a contributor (**4T 79:24-80:3**). On cross-examination, Schiffner testified, contrary to MacDonald, that a single hair with a root could potentially generate a DNA profile, but confirmed she performed no tests on the hair found on the overalls (**4T 99:9-100:7**). On October 5-6, 2006, after Elmo Rivadeneira became a suspect and provided a buccal swab (Specimen #7) (**4T 118:2-119:16**), NJSP Forensic Scientist Theresa Nezezon compared his STR DNA profile to the mixed profile from the bloodstain (Specimen #2-1) (**4T 121:1-122:15**). Nezezon testified that Elmo Rivadeneira was excluded as a contributor to the DNA from the bloodstain (**4T 130:10-13**). Nezezon also confirmed she did not test the hair or the overalls themselves (**4T 136:15-21**). (Note: Analysis of the strap swab (Specimen #2-2) yielded no results.).

- **The Misleading Trial Stipulation (Referencing Purported 2006 Bode Analysis)**: During the trial, the following stipulation, authored by the prosecution (**6T 110:18**)—the accuracy and completeness of which are challenged herein based on subsequently revealed evidence—

was read to the jury: "You have heard testimony about the Defendant and victim being excluded as a contributor to the mixed profile from a stain identified on the overalls, item 2-1, by the New Jersey State Police Lab. The parties are stipulating that the Hudson County Prosecutor's Office submitted a separate portion of the stain to the Bode Technology Laboratory in Virginia. In July 2006, the Bode Lab concluded the stain was a mixture containing the DNA of two men. The Defendant was excluded as a contributor from the mixed DNA profile found" (**6T 118:2-12**). This stipulation is profoundly misleading. It refers only to a purported July 2006 analysis of a generic "stain"—conflating it with the NJSP Specimen 2-1 bloodstain—and critically predates the distinct September 2011 Bode Y-STR analysis performed on the sperm fraction recovered directly from the overalls themselves. Crucially, it omits all mention of the 2011 report's dispositive findings: the definitive presence of sperm (contradicting MacDonald's trial testimony), the exclusion of the victim's boyfriend (Eric Flores), and the identification of an unknown male Y-STR profile—facts that were only knowable after the development of relevant comparison DNA profiles for Rivadeneira and Flores in 2008 (**Pa463, Pa466, Pa470-73**) and the specific September 2011 comparison request by the prosecutor (**Pa463-465**).

- **Closing Arguments:** The prosecution argued the perpetrator came prepared with the overalls (**7T 73:23-24**) and rhetorically asked about the DNA mixture on the stain: "whose DNA was this? Who Knows?" (**7T 67:7-12**). The defense argued the State failed to test potentially crucial evidence, specifically the hair with root found on the overalls (**7T 9:8-20, 30:13-14**). Neither side mentioned, because the defense was unaware due to the State's suppression, the existence of sperm DNA on the overalls or any Y-STR results from that sperm.

- **Discovery of 2011 Bode Report During Federal Habeas Proceedings:** The 2011 Bode Technology Report was not produced to the defense until June 23, 2021, during federal habeas corpus proceedings (Civ. No. 21-1455 (KM)), following a court order compelling the prosecution to provide its files. The U.S. District Court subsequently granted a stay and abeyance, acknowledging the report had not previously been produced and the potential merit of the claim arising from it (**Pa454-457, Pa923-924**).
- **The Suppressed 2011 Bode Technology Y-STR Report:** This report is the linchpin of the Brady violation (**Pa463-465**).
 - **Origin:** The report, dated September 15, 2011, was addressed to Hudson County Assistant Prosecutor John R. Mulkeen (**Pa463**). It resulted from a specific comparison request made by Prosecutor Mulkeen to Bode Technology on September 9, 2011—just 18 days before Mr. Rivadeneira's trial commenced (**Pa465**).
 - **Analysis:** Bode Technology conducted Y-STR DNA analysis on the sperm fraction (SF) obtained from the overalls (Bode Sample 2S06-038-01/HCPO Item #3). This targeted male-specific DNA from sperm cells, a distinct and far more probative analysis in a sexual assault case than the STR testing performed by NJSP on the bloodstain.
 - **Findings (Crucial):** The report, authored by Senior DNA Analyst Susan Bach, MFS, stated the Y-STR profile from the sperm fraction was consistent with a mixture of at least two individuals. Its crucial conclusion was: "The individuals associated with Specimen No. 5 (Buccal Control (O)) and Specimen No. 7 (Buccal Control (S), Elmo Rivadeneira) are excluded as possible contributors to the Y-STR profiles obtained from the sperm fraction (SF)... of sample 2S06-038-01" (**Pa463-467, Pa503**). The analysis successfully generated a complete Y-STR DNA profile (at 11 of 11 tested loci for the primary

contributor (**Pa465**) from the sperm fraction, identifying the genetic profile of the unknown male perpetrator. This profile definitively did *not* match Elmo Rivadeneira or Eric Flores. These findings were dependent on the September 2011 comparison, as the necessary DNA profiles for Rivadeneira and Flores were *not* available for such Y-STR comparison prior to 2008 (**Pa463, Pa466, Pa470-473**).

Table 1: Summary of Key 2011 Bode Y-STR DNA Report Findings (Overalls - Sperm Fraction)

LOCUS	2S06-038-01 Overalls SF (Sperm Fraction)	Specimen No. 5 Boyfriend (Eric Flores)	Specimen No. 7 Petitioner (Elmo Rivadeneira)
DYS391	"10,11"	10	10
DYS389I	13	13	12
DYS439	12	12	11
DYS389II	30	32	30
DYS438	11	8	10
DYS437	14	14	16
DYS19	15	13	14
DYS392	11	11	11
DYS393	"13,14"	13	13
DYS390	21	25	22
DYS385a/b	"15,16 "	"16,17"	"13,14"

This table starkly illustrates the scientific reality concealed from the defense and the jury: the sperm DNA on the perpetrator's overalls did not originate from Mr. Rivadeneira or the victim's boyfriend, but from an unknown male(s).²⁸

C. THE STATE COURT'S UNREASONABLE FACTUAL DETERMINATIONS REGARDING THE SUPPRESSED SPERM DNA

Under 28 U.S.C. § 2254(d)(2), federal habeas relief is required when a state court's adjudication rests on factual findings that are "objectively unreasonable" in light of the evidence. While deference is required, it "does not mean abdication." *Miller-El v. Cockrell*, 537 U.S. 322, 340 (2003). A state court's finding is unreasonable when it is based on a "plainly erroneous" view of the evidence or ignores the clear record. *Brumfield v. Cain*, 576 U.S. 305, 314 (2015).

The state court's denial of Mr. Rivadeneira's Brady claim was predicated upon a series of objectively unreasonable factual determinations under 28 U.S.C. § 2254(d)(2). Notably, this federal district Court had already recognized the State's failure to disclose the 2011 Bode Y-STR report and questioned the prosecution's reliance on a phantom 2006 document (**Pa455-456**)—yet the state court simply ignored that adverse finding. These errors were not isolated—they formed a pattern of judicial misapprehension rooted in the court's uncritical adoption of the prosecution's misleading narrative, its failure to confront the evidentiary record, and its reliance on a report that could not, chronologically, have contained the 2011 findings. Most critically, the court failed to grasp the immutable timeline establishing the scientific impossibility of prior knowledge of the 2011 report's exculpatory conclusions—findings that only became knowable through a specific comparison analysis conducted in September 2011.

²⁸ "SF" denotes Sperm Fraction. Alleles for Boyfriend and Rivadeneira are from 2008 NJSP YFiler kit data provided for comparison (see Pa465).

1. Finding: 2011 Report Contained No "New" Information

The Appellate Division's denial rested fundamentally on the unreasonable factual determination that the suppressed September 2011 Bode Y-STR sperm report contained no "new" information, incorrectly concluding that its core findings were supposedly "already known to defendant" and "presented to the jury" (*Rivadeneira*, Nos. A-2968-21, A-1043-22, slip op. at 11) (**Pa1136**). This conclusion, forming the basis for finding the PCR petition time-barred and the Brady claim unmeritorious, is demonstrably false and utterly ignores the immutable timeline of the evidence. The court's error lies in its fundamental mischaracterization of the 2011 report's contents and its conflation with prior, distinct, and far less probative testing—including an uncritical reliance on a supposed 2006 Bode report that the State has never produced and which, given the timeline, could not have contained these specific findings.

The 2011 Bode report detailed Y-STR analysis on the sperm fraction recovered from the perpetrator's overalls (Item #3) (**Pa463-465**). This was a distinct and far more probative analysis in a sexual assault case than the general STR testing performed by New Jersey State Police Laboratory on a bloodstain (Specimen #2-1) (**4T 23:9-24:5, 79:24-80:3, 130:10-13**). This Y-STR analysis yielded uniquely powerful findings that were scientifically impossible to ascertain prior to the specific comparison analysis conducted in September 2011. Before this date, the sample from the overalls was merely raw, uncompare data—an unknown profile, definitively not exculpatory because there was literally nothing to compare it against. The dispositive results, entirely dependent on that September 2011 comparison by Bode Technology included: (1) the definitive exclusion of both Mr. Rivadeneira and the victim's boyfriend (Eric Flores) as contributors to the sperm DNA (**Pa463-467, Pa503**), and (2) the successful generation of a complete Y-STR DNA profile of an unknown male perpetrator (**Pa465**). Crucially, these specific, powerfully exculpatory results were only obtainable, and thus only became "newly discovered"

information, via the specific Y-STR comparison analysis performed at the prosecutor's direct request to Bode Technology in September 2011 (**Pa463**). Critically, the Y-STR DNA reference profiles for Mr. Rivadeneira and Mr. Flores—the essential tools for any meaningful comparison—were not even developed until 2008 (**Pa463, Pa466, Pa470-473**). Therefore, until the September 2011 comparison was executed, the identity of the sperm contributor(s) on the overalls, relative to Mr. Rivadeneira and Mr. Flores, was simply unknown; its exculpatory nature could not have existed or been known.

The 2011 Bode report did not merely reconfirm an earlier exclusion of Mr. Rivadeneira from a generic "stain"; it provided entirely new dimensions of exculpatory proof: the exclusion of the boyfriend (**Pa463-467; Pa503**) (eliminating the State's suggested alternative source), the positive identification of sperm (**Pa463-465**) (contradicting earlier trial testimony (**4T 23:8-13**)), and the genetic fingerprint of an unknown perpetrator from that sperm (**Pa465**). The state court's failure to recognize these critical distinctions—in sample type (sperm from overalls *vs.* bloodstain from Specimen 2-1 from overalls), technology (highly specific Y-STR *vs.* general STR), the paramount temporal necessity of the September 2011 comparison for the results to exist as exculpatory data, and the actual, multi-faceted results (boyfriend exclusion, unknown perpetrator profile identification)—constitutes an objectively unreasonable determination of fact under § 2254(d)(2). The 2011 report provided profoundly "new" and significantly more exculpatory information than any prior testing, rendering the court's time-bar conclusion and its dismissal of the evidence's novelty objectively unsustainable.

2. Unreasonable Finding: Information Was "Known to Defendant" / "Presented to Jury"

The state court further erred by unreasonably determining that the critical information from the 2011 Bode report was "known to defendant" and effectively "presented to the jury"

(Rivadeneira, Nos. A-2968-21, A-1043-22, slip op. at 11) (**Pa1136**), thereby attempting to negate the suppression element of the Brady claim. This finding crumbles under the weight of the record.

The trial record is devoid of any indication that the defense was aware of the 2011 Bode report's actual, dispositive findings. Trial counsel's closing argument, which focused narrowly on an untested hair found on the overalls (**7T 9:8-25, 30:13-14**), is wholly inconsistent with possessing the far more potent evidence of sperm DNA definitively excluding his client (**Pa463-465**), definitively excluding the victim's boyfriend (**Pa463-467, Pa503**), and identifying an unknown male perpetrator (**Pa465**). No competent defense attorney, armed with such definitive scientific proof of innocence and third-party guilt, would relegate it to silence while highlighting a minor, speculative piece of untested evidence, a single hair found on the overalls (**7T 9:8-20, 30:13-14**).

Furthermore, the affirmatively misleading trial stipulation actively prevented the defense from having true, informed awareness of the actual Bode findings. This stipulation, authored by the prosecution (**6T 110:18**), presented outdated, inaccurate, and critically incomplete information, deliberately omitting the crucial 2011 findings derived from the Y-STR analysis of the sperm fraction. Specifically, the stipulation inaccurately referenced only a purported "July 2006" analysis of a generic "stain"—conflating it with the NJSP Specimen 2-1 bloodstain (**4T 23:9-24:5, 79:24-80:3, 130:10-13**)—falsely suggesting that in July 2006, the lab knew the contributors were individuals other than the defendant (**6T 118:2-12**). Crucially, this was a scientific impossibility: the definitive exclusions of Mr. Rivadeneira and the victim's boyfriend, and the identification of the unknown male profile from sperm, were entirely dependent on the September 2011 comparison, which utilized reference profiles only created in 2008 (**Pa463**,

Pa466, Pa470-473). Until that 2011 comparison was executed, the DNA profile(s) on the overalls were simply of unknown origin relative to Rivadeneira and Flores, and thus not exculpatory in their absence. By presenting a temporally inaccurate summary and omitting the specific, dispositive Y-STR results from the sperm fraction, the State, through this stipulation, actively obscured the truth. The court's failure to appreciate how this stipulation served as an instrument of concealment, rather than disclosure, demonstrates the unreasonableness of its conclusion that the vital information from the 2011 report was truly "known" or "presented" to the defense or the jury. Indeed, nowhere in the trial record—not in opening statements (3T), during the cross-examination of the State's forensic experts (MacDonald, Schiffner, Nezezon) (4T), or in closing arguments (7T)—were the specific, dispositive Y-STR DNA results from the overalls' sperm fraction ever revealed.

3. Unreasonable Reliance on a "Phantom" 2006 Bode Report

A cornerstone of the State's misleading narrative, uncritically adopted by the state court, was its baffling reliance on a supposed 2006 Bode report that allegedly contained the same information as the 2011 report (**Pa1242, Pa1260**). This 2006 report is a phantom document the State has *never* produced, despite its centrality to the State's argument and the court's finding that the 2011 information was not new. The court's acceptance of this non-existent report as a factual underpinning for its decision represents an egregious and unreasonable determination of the facts under § 2254(d)(2).

The prosecution's post-trial insistence that the 2011 Bode report merely "supplements" this phantom 2006 report is a transparent distortion, demonstrably false when confronted with the unassailable timeline. In July 2006, Mr. Rivadeneira was not even a suspect (**Pa771, Pa788**); his Y-STR DNA profile, along with that of the victim's boyfriend, Eric Flores, was not developed

until January 2008 (**Pa463, Pa466, Pa470-473**). Thus, the critical comparison results detailed in the September 2011 Bode report—the "smoking gun" exclusions of both men from the sperm DNA and the identification of the unknown male perpetrator's profile—were scientifically impossible to achieve in 2006. The 2006 analysis, lacking these essential comparison profiles and the specific prosecutorial directive for Y-STR comparison on the sperm fraction (which occurred in September 2011), could not have yielded these dispositive findings. The State's attempt to diminish the 2011 report by anchoring it to a limited (and misrepresented) 2006 analysis of a different sample type (a generic "stain" *versus* sperm) is a continued effort to uphold a conviction obtained through suppression, an effort the court unreasonably validated—despite the fact that the United States District Court had already found the 2011 Bode report was never disclosed to the defense (**Pa454-457**). In granting a stay under Rhines v. Weber, 544 U.S. 269 (2005), the federal judge made that finding explicit and described the Brady claim as “potentially meritorious” (**Pa456**). But the federal court didn’t stop there—it directly called out the prosecution’s attempt to equate the 2011 report with a supposed 2006 Bode report, noting that the State failed to produce the 2006 document or offer any comparison between the two. The judge emphasized that “the exact contents of the 2006 report, and how they substantively differ from the 2011 report, are unclear,” and that the State’s opposition “does not analyze the differences.” (**Pa456**). This wasn’t a minor oversight—it was a central contradiction that the state court never addressed. Instead, it adopted the prosecution’s narrative without scrutiny, ignored the federal court’s documented concern, and never reconciled its conclusion with a prior judicial finding of suppression. What’s worse, the prosecution recycled the same unsupported claim before the state court—after it had already been flagged by the federal judge—and the state court accepted it without question. That silence speaks volumes. It confirms that the state court’s factual

determination under § 2254(d)(2) was not just flawed—it was objectively unreasonable. See **Section E.2 *infra***, for a full discussion of the federal court's suppression finding.

4. Unreasonable Failure to Appreciate the Misleading Nature of the Trial Stipulation

The state court's unreasonable factual findings are further evidenced by its profound failure to appreciate the affirmatively misleading nature of the trial stipulation concerning the overall evidence. Rather than serving as a vehicle for disclosure, the stipulation was expertly crafted to obscure the truth about the September 2011 Bode Y-STR report's critical findings. As extensively detailed in **Section C.2 *supra***, this stipulation misleadingly referred to a "July 2006" Bode analysis of a generic "stain," (**6T 118:2-12**) omitting any mention of the 2011 Y-STR analysis of the sperm fraction, and falsely attributing dispositive conclusions to a scientifically impossible prior date. The court's failure to recognize this deliberate deception and its impact on the defense's knowledge and trial strategy constitutes an unreasonable determination of fact.

5. Unreasonable Minimization of Materiality

Implicit in its dismissal of both the PCR petition and the new trial motion, the state court unreasonably minimized the profound materiality of the suppressed 2011 Bode Y-STR sperm DNA evidence. By accepting the prosecutor's distorted narrative and failing to appreciate the unique, dispositive findings only revealed by the September 2011 comparison —the definitive identification of sperm (**Pa463-465**), the use of highly specific Y-STR technology, the conclusive exclusion of the victim's boyfriend (Eric Flores) (**Pa463-467, Pa503**), and the generation of a complete Y-STR profile of an unknown male perpetrator from that sperm (**Pa465**)—the court failed to grasp how this evidence fundamentally differed from, and would have shattered reliance on, the weak, ambiguous stocking skin cell DNA that formed the sole basis for Mr. Rivadeneira's conviction. The stark contrast in probative value, and the power of the suppressed evidence

(specifically the results dependent on the 2011 analysis) to reshape the entire trial narrative, was tragically lost on the state court. That failure of perspective extended beyond the court's treatment of the suppressed sperm DNA—it infected its entire understanding of the forensic and circumstantial record. What follows is a detailed analysis of how the court mischaracterized the stocking DNA, ignored the scientific limitations of touch DNA, and made a series of unreasonable factual determinations that distorted the trial narrative and inflated the State's case.

The state appellate courts' adjudication of Petitioner's claims was critically flawed by an unreasonable determination of fact regarding the DNA evidence recovered from the black nylon stocking—the State's sole forensic link to Rivadeneira. This error, repeated across multiple appellate reviews, demonstrates judicial tunnel vision, stemming from a fundamental misunderstanding of the trial evidence and a disregard for the inherent scientific limitations of skin cell DNA. Specifically, the Appellate Division, in its January 9, 2024 decision, erroneously summarized: "Near the spot where the victim was released, the police found a black sheer stocking which, upon being tested, proved to have the victim's DNA on the outside and defendant's DNA on the inside." (Rivadeneira, Nos. A-2968-21, A-1043-22, slip op. at 3) (**Pa1128**). This judicial "finding" is not a mere paraphrasing but a direct contradiction of the sworn trial testimony.

The State's own experts established that Mr. Rivadeneira's DNA was the "major DNA profile obtained" from the outside surface of the stocking (Specimen 3-1) (**4T 125:2-12**), while he merely "cannot be excluded as a partial contributor" to the mixed DNA profile from the inside surface (Specimen 3-2) (**4T 129:14-130:3**). Furthermore, the victim, Alexis T., "could not be excluded" as a possible contributor, albeit with low statistical significance (**4T 101:12-19**), to the DNA mixtures on *both* the outside (Specimen 3-1) and the inside (Specimen 3-2) of the stocking

(4T 70:5-7, 73-3-24); this was a complex mixture from at least two, possibly up to four, individuals (4T 89:11-24, 92:6-7; 93:6-7, 108:17-20), and notably lacked any corroborating saliva, sweat, or hair from Mr. Rivadeneira (7T 11:11-13:25) despite allegations of prolonged wear as a mask during a strenuous assault (5T 127:5). The appellate court's persistent misstatement of these key facts constitutes an objectively unreasonable determination of the record under § 2254(d)(2).

This factual error is symptomatic of a deeper failure by the state courts to comprehend or acknowledge the well-established scientific limitations inherent in interpreting "touch" (skin cell) DNA, especially from an item described as "generally soiled with cardboard like debris" (4T 17:1-6, 36:14-25) and recovered from an uncontrolled environment. *The National Institute of Standards and Technology* ("NIST"), in its authoritative May 2024 report, confirms that determining whether DNA was deposited directly or indirectly is "usually impossible" from the profile alone, and that even identifying a "major contributor" does not establish when, how, or by what activity the DNA was deposited (*Exhibit A, NISTIR 8503, pp. 129, 172*).²⁹ The state court's unqualified characterization of this inherently ambiguous evidence as "compelling" reflects an unreasonable determination divorced from scientific reality.

Crucially, the court's tunnel vision was only possible because it evaluated the ambiguous stocking DNA in an evidentiary vacuum created by the State's suppression. The NIST Report emphasizes that "DNA results are only part of the overall case" and must be considered within the full context of all available information to avoid misleading interpretations (*Exhibit A, NISTIR 8503, p. 154*). By suppressing the definitive overall-sperm DNA evidence detailed in this Ground—which conclusively excluded Petitioner and the victim's boyfriend while

²⁹ See Exhibit A, attached to this traverse brief, for the selected excerpts of the 2024 NISTIR 8503 report cited hereafter.

identifying an unknown male perpetrator (**Pa463-467, Pa503**)—the State actively prevented a scientifically sound, contextual evaluation of the stocking DNA. This suppression was further compounded by the concealment of evidence detailed in **Ground One *supra*** showing that Petitioner's skin cell DNA was innocently transferred to a linked crime scene by the actual perpetrator, Dean Crawford, providing concrete proof that such transfer was not theoretical but factually documented in the State's own files.

A comprehensive analysis of the scientific principles governing touch DNA interpretation, the documented wrongful convictions resulting from its misuse, and the specific forensic anomalies in this case that render the stocking DNA profoundly unreliable is presented in **Section E.3.c *infra***. That section demonstrates how the suppressed overalls-sperm DNA evidence—combined with the innocent transfer evidence from **Ground One *supra***—serves as the critical missing context that obliterates the probative value of the State's sole forensic link to Petitioner. This Court is, again, urged to take judicial notice of these widely recognized scientific limitations, authoritatively detailed in the 2024 NISTIR 8503 Report (**Exhibit A**) and the materials at **Exhibits B, C, D and E**.

The state court's pattern of making unreasonable factual determinations extended well beyond its oversimplification of the stocking DNA, infecting its entire summary of the evidence. These errors include the unreasonable omission of the exculpatory DNA exclusion from the blue latex glove found at the scene (**4T 130:14-22**); mischaracterizing the victim's description of the perpetrator's three distinct voices (**5T 134:25-135:5**); repeating the erroneous finding that the perpetrator used "white overalls"; creating a non-existent geographic link between Mr. Rivadeneira and the release location that was never argued by the prosecution (**7T 28:22-29:2**); highlighting the weak circumstantial evidence of a popular cigar brand (**5T 129:3-14**); and

uncritically accepting testimony regarding an alleged jailhouse letter while ignoring its significant credibility issues (**6T 81:3-8, 66:18-68:12, 100:4-14**). (For the detailed factual basis and pinpoint citations supporting these corrections, see Counter-Statement of Facts, **Ground Three Section B.1 *supra*, and Ground One Section B.2 *supra***). Collectively, these unreasonable determinations of fact demonstrate a fundamental failure by the state court to engage with the actual trial record. This created a distorted and inflated view of the State's circumstantial case, which played a broader role in its flawed analysis by causing it to improperly assess the profound materiality of the suppressed Brady evidence at issue.

These compounded errors—ranging from the mischaracterization of stocking DNA to the suppression of definitive sperm DNA and the distortion of key circumstantial facts—collectively demonstrate how the state court's factual findings were not simply flawed, but objectively unreasonable under § 2254(d)(2). The consequences of this failure shaped a trial narrative that would have been fundamentally different had the suppressed evidence been disclosed and properly weighed. A comprehensive, multi-part analysis of the suppressed 2011 Bode Y-STR report and its materiality under Kyles v. Whitley, 514 U.S. 419 (1995), will be presented in **Section E.3 *infra***.

6. The State Court's Unreasonable Findings: A Direct Result of Reliance on the Prosecution's Multi-Layered Misrepresentations

The unreasonableness of the state court's factual findings and subsequent legal conclusions, as detailed above, appears to stem directly from an uncritical acceptance of the prosecution's arguments, which, as exemplified by the State's Response Brief during PCR proceedings *and again repeated before this Court*, contained multiple layers of factual distortion and misleading inferences regarding the DNA evidence. The court's reliance on this flawed narrative directly invalidates its decision. These misrepresentations created a smokescreen that

the state court failed to penetrate, leading directly to its unreasonable factual findings. Each distortion, while perhaps appearing minor in isolation to a court not rigorously scrutinizing the record, contributed to a larger, fundamentally flawed narrative that the 2011 report was neither new nor significant. The prosecution further compounded its initial misrepresentations with the following specific misleading claims, which the state court appears to have adopted without critical scrutiny, thereby making unreasonable factual determinations:

- **Misleading Claim 1: Falsely Attributing 2011 Sperm Report Findings to Specimen 2-1.**

The prosecution falsely claimed the 2011 Bode report excluded Rivadeneira from "specimen 2-1 the overalls" (**Pa1242, Pa1259-1260**)—a direct factual misrepresentation designed to minimize the report's significance. The 2011 Bode report analyzed only the overalls themselves, Bode Sample 2S06-038-01 (HCPO Item #3), specifically testing the sperm fraction (SF) and epithelial fraction (EF) directly from that garment (**Pa463-465**); the report *never* mentions "Specimen 2-1" anywhere. Specimen 2-1 was a completely different sample: a cutout bloodstain from the overalls that was tested years earlier (2005-2006) by the New Jersey State Police Crime Lab, not by Bode Technology (**4T 23:9-24:5, 79:24-80:3, 121:1-122:15, 130:10-13**). Bode Technology, a private Virginia lab, *never* examined Specimen 2-1. By falsely linking the 2011 Bode report to Specimen 2-1, the prosecution misleadingly conflated the dispositive 2011 sperm DNA findings with earlier, less probative bloodstain testing, thereby obscuring the report's true exculpatory power.

- **Misleading Claim 2: Falsely Implying Nezezon Testified About 2011 Sperm Findings via Specimen 2-1.** Immediately after falsely linking the 2011 report's exclusion finding to Specimen 2-1, the prosecution discussed Theresa Nezezon's testimony (**Pa1242, Pa1259-1260**). Since Nezezon did analyze for comparison purposes Specimen 2-1 (**4T 121:1-122:15**,

130:10-13, 136:15-21), the prosecution created the misleading impression that Nezezon had testified about, or corroborated, the findings of the 2011 Bode report. This is false. Nezezon testified in 2011 based only on her own 2006 NJSP STR analysis of the Specimen 2-1 bloodstain (**4T 121:16-122:16**). She had no involvement with, and her testimony did not address, the separate 2011 Bode Y-STR analysis of the sperm fraction or its significantly different findings (boyfriend exclusion, unknown male profile from sperm—results impossible before the 2008 reference profiles and the September 2011 comparison) (**Pa463-473**). The PCR prosecutor deliberately conflated these distinct tests, labs, and samples to create the false illusion that the 2011 report's exculpatory findings were covered by Nezezon's testimony.

- **Misleading Claim 3: Misrepresenting the Scope of Nezezon's Testimony.** The prosecution compounded the previous point by claiming Nezezon testified Mr. Rivadeneira was excluded generally "from the overalls" (**Pa1242, Pa1259-1260**). This inaccurately broadens her actual testimony. Nezezon testified only about excluding Appellant from the specific Specimen 2-1 bloodstain (**4T 130:10-13**), confirming she did not test other parts of the overalls (**4T 121:1-122:15, 136:15-21**). This false generalization wrongly suggested the jury heard comprehensive exclusion testimony regarding the overalls, masking the true significance of the suppressed 2011 Bode sperm DNA results (**Pa463-465**) (which specifically required the September 2011 comparison for their exculpatory value to become known).
- **Misleading Claim 4 (related to Phantom Report): Invoking a Phantom 2006 Bode Report.** The prosecution then referenced the trial stipulation about exclusion from "the stain" (**6T 118:2-12**) and asserted, "This conclusion was included in a 2006 Bode Lab report," further claiming the 2011 report was merely "supplemental" to it (**Pa1260**). As established in

Sections C.2, C.3, and C.4 *supra*, this relies on a "phantom" 2006 Bode report the State has never produced and which could not, given the timeline (no 2008 reference profiles, no September 2011 specific Y-STR comparison request), contain the 2011 report's key findings.

- **Misleading Claim 5: Baseless "Due Diligence" Argument.** The prosecution baselessly asserted that Rivadeneira "made no reasonable effort to search or obtain" the 2011 report (**Pa1256-1257**). This ignores the documented fact that the State actively suppressed it. The report was commissioned directly by the trial prosecutor mere days before trial (**Pa463**) and actively withheld until federal habeas proceedings, nearly a decade later (**Pa455-456**). Attributing fault to the defense for not discovering evidence the State actively concealed is fundamentally contrary to Brady.
- **Misleading Claim 6: Reliance on Inaccurate Factual Assertions Regarding Other Evidence.** The prosecution's brief relied on significant factual inaccuracies regarding the surrounding evidence to bolster the conviction and minimize the suppressed report, which the court seemingly accepted without correction. Specifically, the State incorrectly claimed the stocking was found "near the car he had used to abduct her" (**Pa1243**). This assertion is directly contradicted by the record, which shows the stocking was found hours later, soiled (**Pa600-611**); (**4T 17:1-6, 36:14-25**), in the driveway of the lot where the victim was abandoned inside an entirely different vehicle (a white 2-door Toyota Celica) (**Pa600-611**); (**5T 141:4-145:6**), not the "boat sized" dark-colored 4-door abduction car (**5T 116:11-17**). Similarly, the claim regarding Appellant's "connections to... the lot where the victim was released"³⁰ was explicitly refuted by trial testimony showing no such link existed *via* his employer (**7T 28:22-29:2**), (**5T 54:22-59:19**), (**5T 67:10-22**); (**Pa600 to Pa611**).

³⁰ The PCR prosecutor—who was not involved in the original trial—appears to have adopted this claim directly from the appellate opinion, repeating it without verifying its accuracy against the trial record. The appellate court's

The state court's failure to recognize and reject these specific, interwoven layers of PCR prosecutorial misrepresentation—instead apparently adopting the State's narrative that minimized the 2011 report and exaggerated the significance or accuracy of other evidence—demonstrates an unreasonable determination of the facts under § 2254(d)(2). This flawed factual understanding, particularly regarding the unassailable timeline and the scientific impossibility of the 2011 findings being known or exculpatory in 2006, led directly to an unreasonable application of Brady's suppression and materiality standards. An adjudication built upon such a thoroughly distorted factual foundation cannot be sustained.

7. Summary of Section C: The Court's Factual Determinations Were Objectively Unreasonable

In sum, the state court's decision denying relief regarding the suppressed 2011 Bode Y-STR sperm report was predicated on objectively unreasonable determinations of fact under 28 U.S.C. § 2254(d)(2). The court failed to recognize the unique, powerful, and truly "new" nature of the suppressed report's findings—findings entirely dependent on the September 2011 comparison analysis, which itself relied on reference profiles unavailable until 2008. It ignored concrete evidence of active suppression, including the prosecution's failure to disclose the report, its active misleading of the defense and jury *via* the trial stipulation (as comprehensively detailed in **Section C.2 and C.4 *supra***, which falsely implied the relevant information was from 2006), and its allowance of uncorrected testimony from Ms. MacDonald that no semen was found on the overalls (**4T 23:8-13**), despite possessing the 2011 Bode report definitively identifying *sperm* (**Pa463-465**). The court compounded these egregious errors by relying on an impossible 2006 Bode report advanced by the PCR prosecutor and by unreasonably minimizing the profound

assertion of a "business relationship" was never advanced by any party, witness, or exhibit, and is directly contradicted by the only testimony addressing the location. (See Section B.1 *supra*)

materiality of the suppressed evidence. These factual findings are not ones upon which fairminded jurists could disagree; they demonstrably conflict with the record evidence presented. While AEDPA requires deference, it cannot salvage factual determinations so clearly contradicted by the record, especially when those determinations ignore the fundamental timeline that renders the State's narrative scientifically and legally impossible. These unreasonable factual determinations directly paved the way for an unreasonable application of clearly established federal law, as will be detailed in **Section D *infra***, and form the undeniable basis of the Brady violation established in **Section E *infra***.

D. THE STATE COURT'S DECISION WAS CONTRARY TO, OR INVOLVED AN UNREASONABLE APPLICATION OF, CLEARLY ESTABLISHED FEDERAL LAW REGARDING THE SUPPRESSED SPERM DNA

The state court's denial of relief, built upon the unreasonable factual findings detailed in **Section C *supra***, resulted in an unreasonable application of clearly established Federal law, namely Brady v. Maryland, 373 U.S. 83 (1963), and its progeny establishing the State's duty to disclose favorable, material evidence. This failure warrants relief under 28 U.S.C. § 2254(d)(1). The court's profound misapprehension of the facts—particularly its blindness to the immutable timeline demonstrating the 2011 report's definitive findings were scientifically new and unknowable earlier—directly caused its misapplication of Brady's core tenets.

1. Application of Brady's Favorability and Suppression Prongs under § 2254(d)(1)

The state court unreasonably applied Brady's suppression standard by concluding the 2011 Bode Y-STR sperm report was not suppressed because its (mischaracterized and conflated) information was supposedly known to the defense. This erroneous legal conclusion was inextricably intertwined with the unreasonable factual findings discussed in **Section C *supra***. Specifically, the court failed to recognize the actively misleading nature of the trial stipulation,

its reliance on the phantom 2006 Bode report narrative, and its overlooking of the direct contradiction between Ms. MacDonald's trial testimony of "no semen" (**4T 23:8-13**) and the suppressed 2011 Bode report's definitive finding of sperm (**Pa463-465**).

The court failed to properly apply the core principle of Brady and Kyles v. Whitley, 514 U.S. 419 (1995), that the State has an affirmative and unwavering duty to disclose specific favorable evidence within its possession—namely, the actual September 2011 Bode Y-STR sperm report—not merely to provide a misleading, incomplete, and temporally inaccurate summary via a stipulation that obscured more than it revealed. It wrongly accepted the prosecutor's argument that prior, limited information (itself misrepresented by the stipulation concerning a purported 2006 analysis of a "stain") excused the duty to disclose the distinctly different and far more powerful findings of the later 2011 Y-STR sperm analysis. As comprehensively detailed in **Section C supra**, these definitive findings were scientifically impossible to obtain before the September 2011 comparison using reference profiles created in 2008 (**Pa463, Pa466, Pa470-473**), rendering any claim of prior knowledge baseless.

The evidence contained in the 2011 report was unequivocally favorable, being both exculpatory (definitively excluding Mr. Rivadeneira and the victim's boyfriend (Eric Flores) as contributors to the sperm DNA; and identifying an unknown male perpetrator from sperm on the perpetrator's overalls—all findings dependent on the September 2011 comparison) and impeaching (directly contradicting trial testimony about the absence of sperm). The court's failure to recognize this, driven by its profound factual errors about the timeline and the inherent nature of the evidence (as established in **Section C supra**), led to an unreasonable application of Brady's favorability and suppression prongs.

For the sake of brevity, and to clearly demonstrate the stark differences between what was known or misrepresented through the stipulation versus what was actually concealed in the 2011 report, the comparison is summarized again here:

Table 2: Comparative Analysis of NJSP vs. Suppressed Bode 2011 Findings on Overalls Evidence

Feature	NJSP Analysis (2005-2006 – Disclosed/Stipulated in Part)	Suppressed 2011 Bode Y-STR Report (Undisclosed)
Item Analyzed	Specimen 2-1 (cutout bloodstain from overalls)	Overalls (HCPO Item #3 / Bode Sample 2S06-038-01)
Sample Type	Bloodstain	Sperm Fraction (SF)
Technology	STR DNA Analysis	Y-STR DNA Analysis (male-specific)
Sperm Presence	MacDonald testified negative for semen (acid phos.) (4T 23-8 to 13)	Sperm definitively identified (Pa463 to Pa465)
Petitioner Exclusion	Excluded from bloodstain mixture	Excluded from sperm DNA mixture
Victim's Boyfriend (Flores) Exclusion	Not addressed for this overall sample	Excluded from sperm DNA mixture
Unknown Male Profile	Not identified from this sample	Unknown Male Y-STR profile identified from sperm
Date of Definitive Findings	Exclusion from bloodstain known 2006	"Sept. 2011 (post-2008 profile development & specific Sept. 2011 comparison, as detailed in C <i>supra</i>)"

As established in the comprehensive analysis in **Section C *supra***, the 2011 Bode Y-STR report, with its definitive exclusion of Petitioner and the victim's boyfriend from the perpetrator's

sperm DNA and identification of an unknown male profile from that sperm, is unequivocally favorable evidence that was actively suppressed by the State. The court's factual determination that the 2011 report was not "new" or that its essence was adequately conveyed by the misleading stipulation is, therefore, objectively unreasonable, leading directly to an unreasonable application of the law regarding suppression.

A comprehensive demonstration of how the factual record establishes favorability and suppression under Brady is detailed in **Section E.1 and E.2 *infra***, building upon the nucleus arguments established in **Section C *supra***.

2. Application of Brady's Materiality Prong under § 2254(d)(1)

The state court also unreasonably applied the Kyles materiality standard by finding, in essence, that the suppressed 2011 report would not likely have changed the trial's outcome. This conclusion, again, flowed directly from the unreasonable factual determinations discussed in **Section C *supra***, particularly the conflation of the 2011 Y-STR sperm report with earlier, different testing; the failure to address the "no sperm" contradiction; and the gross minimization of the sperm DNA's significance—errors facilitated by the court's uncritical acceptance of the misleading narrative presented through the trial stipulation and perpetuated by the PCR prosecutor (see **Section C.6 *supra***).

The court's factual misunderstanding of the evidence—specifically, its profound failure to grasp that the September 2011 comparison created new, potent exculpatory information that could not have been known previously (as extensively explained in **Section C *supra***)—fatally infected its materiality analysis. The court failed to assess the actual impact of the specific suppressed evidence—the definitive Y-STR sperm exclusion of Petitioner and the victim's boyfriend, the identification of the unknown perpetrator's Y-STR profile from that sperm (results

entirely dependent on the September 2011 comparison using the 2008 DNA profiles), and the crucial proof that sperm was present on the overalls contrary to Ms. MacDonald's trial testimony (**4T 23-8 to 13**)—as required by Kyles. It failed to consider how this powerful scientific evidence would devastate the State's case, which rested precariously on weak and ambiguous skin cell DNA, expose the prosecution's misleading trial tactics (including the use of the deceptive stipulation, as detailed in **Section C.2 and C.4 supra**), and provide the defense with potent, scientifically grounded proof of innocence and third-party guilt. The court unreasonably ignored the high probability that this suppressed evidence, accurately presented, would undermine confidence in the verdict.

A full demonstration of this profound materiality is presented in **Section E.3 infra**.

3. Summary of Section D: The Court Unreasonably Applied *Brady* and *Kyles*

The state court's adjudication, built upon the unreasonable factual findings detailed in **Section C supra** resulted in an unreasonable application of clearly established Federal law (Brady v. Maryland and its progeny) under 28 U.S.C. § 2254(d)(1). The court unreasonably applied Brady's favorability and suppression prongs by accepting the prosecutor's misleading narrative—a narrative founded on the fiction of a 2006 report containing the 2011 findings, an impossibility given the evidentiary timeline (as meticulously detailed in **Section C.1 supra**)—and thereby ignoring the State's failure to disclose the specific, highly exculpatory 2011 Bode Y-STR sperm report in its possession. It further unreasonably applied Brady's materiality prong by failing to grasp how the suppressed *sperm DNA* evidence—specifically the dispositive results dependent on the September 2011 comparison—fundamentally undermined confidence in the verdict, particularly when contrasted with the weak, ambiguous stocking skin cell DNA that formed the sole basis of conviction. This failure to correctly identify and apply Brady's core

tenets, driven by unreasonable factual conclusions about what was known and when, constitutes an error "so lacking in justification... beyond any possibility for fairminded disagreement".

Harrington v. Richter, 562 U.S. 86, 101 (2011). As detailed in **Section E infra**, this unreasonable application of law overcomes AEDPA's deference and mandates federal intervention.

E. THE BRADY VIOLATION: SUPPRESSION OF DEFINITIVE EXCULPATORY SPERM DNA

The prosecution's failure to disclose the exculpatory 2011 Bode Technology Y-STR sperm DNA report constitutes a blatant and egregious violation of Brady v. Maryland, 373 U.S. 83 (1963), and its progeny, warranting a new trial for Elmo Rivadeneira. This suppressed evidence unequivocally satisfies all three prongs of the Brady analysis.

1. Favorability: The Suppressed 2011 Bode Y-STR Report Was Conclusively Exculpatory and Impeaching

The first prong of the Brady analysis requires that the suppressed evidence be favorable to the accused, either because it is exculpatory or because it is impeaching. Brady, 373 U.S. at 87; see also Dennis v. Sec'y, Pa. Dep't of Corr., 834 F.3d 263, 286 (3d Cir. 2016) (en banc). The suppressed 2011 Bode Lab report, which conclusively established that Elmo Rivadeneira's DNA was *excluded* from the perpetrator's sperm DNA profile recovered from the crotch of the perpetrator's overalls, is powerfully favorable evidence on both counts. As extensively detailed in **Section C supra**, this report provided unique, dispositive findings impossible to ascertain prior to its September 2011 comparison.

a. Exculpatory Nature: The Overalls Link the Crime to an Unknown Male, Not Rivadeneira

The Winnie the Pooh overalls are inextricably linked to the perpetrator and the crime itself. Alexis T. testified the perpetrator retrieved them from his trunk and forced her to wear them immediately following the assaults (**Pa596-597, Pa627-630**). Crucially, the victim testified

she was nude underneath the overalls when the perpetrator forced her to wear them (**5T 123:8, 134:13, 140:18-141:11, 144:2-145:6**), thereby creating a direct and highly probable pathway for the transfer of the perpetrator's sexual fluid and DNA. Therefore, biological evidence found on these overalls, particularly sperm DNA, carries immense probative weight regarding the identity of the assailant.

The 2011 Bode report's Y-STR analysis of the sperm fraction found on these overalls yielded three critical exculpatory findings (possible only via the Sept. 2011 comparison using later-developed reference profiles):

- **Exclusion of Rivadeneira:** It definitively excluded Elmo Rivadeneira as a possible contributor to the sperm DNA profile (**Pa463-467**). This directly contradicts the State's theory that he was the perpetrator.
- **Exclusion of Boyfriend:** It also definitively excluded the victim's known consensual partner, her boyfriend Eric Flores, as a contributor (**Pa463-467, Pa503**). This eliminates a potential alternative explanation for the male DNA that the prosecution itself hinted at during trial (this point will be discussed further later).
- **Identification of Unknown Male:** The analysis successfully generated a complete Y-STR DNA profile of the actual perpetrator(s)—an unknown male whose identity does not match Elmo Rivadeneira or the victim's boyfriend (**Pa465**).

This evidence is inherently exculpatory because it points away from the defendant Mr. Rivadeneira and towards an unknown third party as the source of the most probative biological evidence (sperm) found on the perpetrator's own garment—his Winnie the Pooh overalls. The mere presence of sperm belonging to an unknown male on an item definitively linked to the perpetrator, regardless of the precise timing or circumstances of its deposition, conclusively

demonstrates that the true assailant is *not* Mr. Rivadeneira. This fundamentally shatters the prosecution's narrative, which rested solely on the problematic skin-cell DNA from the stocking—a stocking discovered soiled and dirty on the ground approximately nine hours after the attack (**4T 17:1-6, 36:14-25**); (**Pa600-602**). This type of DNA, being commonly shed and easily transferable, inherently carries limitations: its presence cannot definitively establish how, when, or for how long it was deposited. In stark contrast, the perpetrator's sperm DNA was found on his own overalls—an item immediately taken from the victim and given directly to the police, establishing a clear and unbroken chain of custody (**3T 64:9-18**); (**Pa570; Pa592**). The profound difference in probative value and contextual reliability between these two forms of DNA evidence highlights the fragility of the State's case and the immense significance of the suppressed evidence, a contrast more fully developed in **Section E.3 *infra***.

b. Impeachment Value: Exposing the Prosecution's Deception and Clarifying Forensic Significance

Beyond its direct exculpatory value, the 2011 Bode report is also favorable because it serves as powerful impeachment evidence against the prosecution's case presentation and conduct at trial:

- **Contradicts Expert Testimony:** The report directly contradicts the trial testimony of the State's own forensic expert, Cortney MacDonald, who testified that her tests for semen (acid phosphatase) on the overalls were negative (**4T 23:8-13**). The Bode analysis definitively found sperm (**Pa463-465**), revealing MacDonald's initial screening test was either inaccurate or insufficient, a fact the prosecution allowed to stand uncorrected before the jury while possessing contrary information.
- **Expose Misleading Objection Sustained:** The report exposes the misleading nature of the prosecutor's trial objection regarding the sperm on the victim's vaginal smear, Specimen 1-1

(which was *never* DNA tested (4T 97:12); (**Pa480; Pa489; Pa499**)). The prosecutor implied such a line of questioning by the defense would pierce the rape shield law, pointing to the boyfriend as the likely source of any sperm (specimen 1-1) (**4T 96:3-13**). However, as established in **Section C.1 *supra*** the suppressed 2011 Bode report definitively excluded the boyfriend from the sperm on the overalls (**Pa463-467, Pa503**). This exclusion makes it highly improbable that the boyfriend was the source of any sperm deposited during the assault itself. This suggests the prosecution may have deliberately misled the court and blocked a relevant line of inquiry for the defense while knowing the boyfriend was likely not the source of the sperm from the vaginal smear (Specimen 1-1).

- **Undermines Prosecutorial Narrative on Semen Absence:** The suppressed 2011 Bode report directly negates the prosecution's narrative, which minimized or denied the presence of sperm. The prosecutor explicitly argued to the jury that the perpetrator "wore condoms so as not to leave evidence" (7T 36:17) and implied that finding DNA (or semen) in the victim's cervix would be unexpected "if a condom is being used" (7T 36:18-22, 76:16-23). This prosecutorial emphasis on the absence of semen, designed to mislead the jury, stands in stark contrast to the suppressed Bode report's definitive finding of sperm on the perpetrator's overalls (**Pa463-465**). Crucially, the prosecution authorities themselves were aware that Alexis T. claimed the perpetrator possibly wore a condom, yet they nevertheless were still actively searching for sperm and trying to identify the male sperm donor from the perpetrator's overalls up until weeks before trial (**Pa463-465, Pa466, Pa473, Pa474-479, Pa480-481, Pa489, Pa498, Pa504, Pa514-515, Pa578-592, Pa627-628, Pa629-631**). The prosecutor's own action demonstrates the inherent relevance and probative value of semen in this sexual assault case. The suppressed report proves that the prosecution's claims or

implications of no semen were false and misleading, providing a powerful basis for impeachment. While the victim testified about possible condom use during some acts and that it was dark in the car and she “couldn’t see” (**5T 125:18-19**); and expressed uncertainty about ejaculation (**Pa582**), scientific understanding recognizes that victim perception can be impaired during trauma (**see Pa1034-1036**). Also, other cross transfer pathways existed in this case (e.g., the victim testified that she was forced to perform fellatio without a condom (**5T 125:4-17**), that the perpetrator masturbated (**5T 123:18-125:3**), inserted his fingers into her vagina (**Pa582**), and assaulted her multiple times (**5T 127:10-17, 131:13-133:12**).

Forensic science itself confirms that initial negative findings for semen may be inaccurate, as highlighted by various DNA exoneration cases (**see Pa1034-1036**). Thus, the definitive identification of sperm on the perpetrator's overalls, conclusively excluding both Mr. Rivadeneira and the victim's boyfriend, inherently points to an unknown male perpetrator, undermining the prosecution's implied narrative regardless of initial victim perceptions. The suppressed report thus provides crucial grounds to impeach the reliability of the State's forensic case presentation and suggests potential bad faith in their arguments and objections at trial.

c. Summary: Favorability Beyond Dispute

The suppressed 2011 Bode Lab Report, conclusively excluding Elmo Rivadeneira and the victim's boyfriend from the perpetrator's sperm DNA found on the perpetrator's overalls, while identifying an unknown male profile and impeaching the State's trial evidence and conduct, is undeniably favorable evidence under Brady. It directly challenges the prosecution's central theory, raises the strong probability of another perpetrator, and undermines the reliability of the DNA evidence used to convict Mr. Rivadeneira. The first prong of Brady is unequivocally satisfied.

2. Suppression: The State Concealed the Dispositive 2011 Y-STR Report

The second prong of the Brady analysis requires a showing that the State suppressed favorable evidence, either willfully or inadvertently. Strickler v. Greene, 527 U.S. 263, 281-82 (1999). The prosecution's duty to disclose extends to evidence in its possession, custody, or control. Kyles v. Whitley, 514 U.S. 419, 437 (1995). In this case, the suppression of the 2011 Bode Y-STR report is not merely alleged; it is unequivocally established by the State's own conduct, the inherent nature of the evidence, and prior judicial findings.

Significantly, throughout Post-Conviction Relief (PCR) proceedings, the PCR prosecutor at no point denied that the State had withheld the critical 2011 Bode Y-STR report. Nor did the Appellate Division, in its subsequent decision, ever find or conclude that the report was, in fact, turned over to the defense pre-trial. This fundamental non-dispute confirms suppression. Instead of contesting the fact of suppression, the PCR prosecutor advanced several arguments seeking to diminish the report's impact, contending:

- That Petitioner could have discovered it with due diligence (**Pa1256**);
- That it was not "new" (improperly conflating it with Specimen 2-1) (**Pa1242**, **Pa1259**);
- That it merely supplemented the misleadingly referenced 2006 analysis (**Pa1242**); and
- That its results were not material (**Pa1243**).

Crucially, as established in **Section C.1 supra** nothing prior to the September 2011 Bode report could have been exculpatory, as the evidence was merely raw, uncompared data. The definitive and exculpatory findings, which excluded Mr. Rivadeneira and identified an unknown male perpetrator, were scientifically impossible to ascertain until the specific comparison analysis was conducted in September 2011 (**Pa463-465**), leveraging reference profiles developed only in 2008 (**Pa463**), (**Pa466**), (**Pa470-473**). Thus, the withholding of this report directly

resulted in the suppression of truly "new" and powerfully exculpatory evidence. The State's active suppression of this critical report, through non-disclosure and the deployment of a misleading trial stipulation, has been exhaustively detailed in **Section C supra**, establishing that this evidence was not known to the defense and was actively concealed by the State. The following points further substantiate this undeniable suppression:

a. District Court's Recognition of Suppression and the Prosecution's Silence

The foundational fact establishing suppression is undisputed: the 2011 Bode Lab Report was not disclosed to the defense until June 23, 2021, nearly ten years after Mr. Rivadeneira's trial, and only as a result of an order issued during these very federal habeas corpus proceedings (Civ. No. 21-1455 (KM)) (**Pa454-457**), (**Pa923-924**). This non-disclosure, critical to the suppression prong of Brady, was explicitly recognized and validated by the U.S. District Court itself. The Honorable Kevin McNulty, U.S.D.J. explicitly found "good cause" for Petitioner's failure to earlier raise claims related to the 2011 report and deemed the claims "potentially meritorious," granting a stay and abeyance under Rhines v. Weber, 544 U.S. 269 (2005) (**Pa454-457**). The federal court's decision to grant this stay directly affirmed that the 2011 report was indeed unknown to the petitioner and contained potentially meritorious, and thus exculpatory, information that could not have been previously raised, thereby implicitly validating the core of Mr. Rivadeneira's suppression argument. The State's failure to contest this assertion of non-disclosure in federal court, and subsequently in state court where they had the opportunity and obligation to do so if the claim was false, further indicates their awareness of the suppression.

Compounding this, the federal District Court directly challenged the core of the State's deceptive strategy, a challenge the state court subsequently ignored. The Honorable Kevin McNulty, U.S.D.J. observed that while the State claimed the 2011 report was merely a "supplement" to a purported July 2006 report, "The exact contents of the 2006 report, and how

they substantively differ from the 2011 report, are unclear. Respondents' opposition does not analyze the differences" (**Pa456**). This judicial observation highlighted the State's fundamental failure to substantiate its claims that the 2011 report's information was somehow previously known or available. Despite this federal scrutiny, the prosecution, with audacious disregard, persisted with this same unsubstantiated argument before the state courts, which then unreasonably adopted it as fact (as detailed in **Section C.3 supra**). The State's refusal to present the phantom 2006 report for comparison, despite the federal District Court effectively asking for it, underscores their deliberate circumvention of judicial scrutiny. This strategic omission occurred precisely because the State understood that, given the established timeline, this unproduced report could not have contained the critical exculpatory information found in the later 2011 report. The state court's subsequent adoption of this unsubstantiated narrative, without itself demanding production or comparison of the phantom report, further demonstrates its unreasonable determination of fact.

b. The Prosecution's Direct Possession and Control Pre-Trial

The suppressed 2011 report was in the direct, actual possession and control of the trial prosecutor immediately before trial. The report itself confirms it resulted from a specific comparison request made by Hudson County Assistant Prosecutor John R. Mulkeen on September 9, 2011 (**Pa463**). The final report, dated September 15, 2011, was addressed directly "To: John R. Mulkeen" the trial prosecutor (**Pa463**). Mr. Rivadeneira's trial commenced just twelve days later, on September 27, 2011. This timeline proves unequivocally that the trial prosecutor had actual possession and knowledge of the report's critical exculpatory findings—the exclusion of both Elmo Rivadeneira and the victim's boyfriend from the perpetrator's sperm DNA (results dependent on the Sept. 2011 comparison)—before the trial began and certainly

while it was ongoing. The failure to disclose under these circumstances cannot be attributed to mere oversight.

c. **Summary: Suppression Established**

The prosecution possessed the highly exculpatory 2011 Bode Y-STR sperm report immediately before trial. They failed to disclose it, instead presenting a misleading stipulation and allowing incorrect testimony regarding no semen found on the overalls to stand uncorrected. The defense's trial strategy and the complete silence in the record confirm their unawareness. The State's subsequent pattern of evasion during PCR proceedings, including reliance on a "phantom" 2006 report, further points to deliberate concealment. The state court's finding that the information was not new or suppressed was based on an unreasonable determination of the facts (**see Section C supra**). Therefore, the suppression prong of Brady is clearly established.

3. **Materiality: The Suppressed Definitive Sperm DNA, Juxtaposed with the State's Flawed Stocking DNA, Obliterates Confidence in the Verdict**

The State's suppression of the 2011 Bode Technology Y-STR sperm DNA report was profoundly material, not merely as an isolated piece of withheld information, but as a linchpin that, if disclosed, would have caused the collapse of the State's entire theory of guilt. Evidence is material under Brady if there is a "reasonable probability that, had the evidence been disclosed to the defense, the result of the proceeding would have been different." Kyles v. Whitley, 514 U.S. 419, 433-34 (1995). Such a "reasonable probability" is established when the suppression "undermines confidence in the outcome of the trial" Kyles, 514 U.S. at 434. The suppressed overalls-sperm DNA—which definitively excluded Mr. Rivadeneira and the victim's known consensual partner (Eric Flores) while identifying an unknown male perpetrator's complete Y-STR profile—is precisely such evidence. Its disclosure would have eviscerated the State's case, laid bare its deceptive trial tactics, and armed the defense with irrefutable scientific proof

pointing to innocence and third-party guilt, thereby fundamentally altering the evidentiary landscape and shattering confidence in the jury's verdict.

a. Introduction to Materiality

The materiality standard does not demand that a defendant prove by a preponderance of the evidence that disclosure would have resulted in an acquittal. *Kyles*, 514 U.S. at 434. Rather, the inquiry is whether, in the absence of the suppressed evidence, the defendant received "a fair trial, understood as a trial resulting in a verdict worthy of confidence." *Id.* The suppressed 2011 Bode Y-STR report, containing definitive exculpatory science from the perpetrator's own garment, directly implicates the fairness of Mr. Rivadeneira's trial and the reliability of the verdict. Its concealment prevented the jury from considering the most probative biological evidence in a sexual assault case—sperm, compelling them instead to rely on ambiguous skin cell DNA fraught with scientific uncertainty.

b. The Suppressed Overalls-Sperm DNA: A Game-Changer Concealed

The singular piece of forensic evidence linking Mr. Rivadeneira to the crime was the contested skin cell DNA from a discarded stocking. The suppressed 2011 Bode report, concerning sperm DNA from the perpetrator's overalls (the garment the victim was forced to wear post-assault), was not merely an inconvenient detail for the State; it was a case-destroying revelation.

- **Shattering the State's Narrative:** The State's narrative hung precariously on the stocking DNA. The overalls-sperm DNA, by contrast, offered scientifically robust, high-probative value evidence directly tied to the assailant and the sexual nature of the crime. The definitive exclusion of Mr. Rivadeneira from this sperm; (**Pa463-467**), the exclusion of the victim's boyfriend; (**Pa463-467**), (**Pa503**), and the clear identification of an unknown male perpetrator's Y-STR profile (**Pa465**) would have provided an irrefutable counter-narrative,

directly negating the speculative inferences drawn from the stocking. The jury would have been confronted with unambiguous scientific proof pointing away from Mr. Rivadeneira and towards an unapprehended assailant.

- **Exposing Prosecutorial Deception:** The disclosure of the 2011 Bode report would have unmasked the State's duplicity. The jury heard State's expert Cortney MacDonald testify that her initial chemical test for semen on the overalls was negative (**4T 23:8-13**). The prosecution knowingly allowed this misleading testimony to stand, despite possessing the 2011 Bode report which, through more sensitive and specific Y-STR analysis of the sperm fraction, definitively identified sperm (**Pa463-465**). Furthermore, the trial stipulation regarding the overalls testing was an egregious act of misdirection. It selectively mentioned a purported and temporally impossible "July 2006" analysis of a generic "stain," (**6T 118:2-12**) thereby creating a false impression of disclosure while actively concealing the true, far more significant 2011 findings regarding sperm (**Pa463-465**), the boyfriend's exclusion; (**Pa463-467**), (**Pa503**), and the unknown perpetrator's Y-STR profile (**Pa465**). Unveiling this manipulation would have severely damaged the prosecution's credibility and the perceived integrity of its entire case.
- **Empowering a Transformed Defense (The True "Science and Math"):** The prosecution boldly asserted to the jury that their case was about "science and math" (**7T 41:25-42:1, 45:16, 46:14**). Had the 2011 Bode report been disclosed, the defense would have been empowered to turn this claim on its head, demonstrating that the State's "science and math" was a carefully curated illusion, reliant on ambiguous data while concealing dispositive facts. A defense expert, armed with the true overalls-sperm DNA findings, could have educated the jury on the profound difference in scientific weight between definitive sperm DNA from a

perpetrator's garment and speculative "touch" skin cell DNA from a discarded item. The defense could have then presented the actual compelling "science and math": the conclusive exclusion of Mr. Rivadeneira from the sperm; (**Pa463-467**), the exclusion of the known consensual partner; (**Pa463-467**), (**Pa503**), and the identification of an unknown male perpetrator (**Pa465**). This would have enabled a powerful third-party guilt defense, grounded not in conjecture but in the State's own suppressed scientific evidence, and would have fueled devastating cross-examinations that were impossible without this critical information.

c. **The Stocking DNA: An Inherently Unreliable Pillar for Conviction. Its Weaknesses Obscured by Suppressed Context and Judicial Misapprehension**

The materiality of the suppressed overalls-sperm DNA is further amplified when the profound unreliability of the State's sole presented forensic evidence—the stocking DNA—is fully appreciated. Indeed, as established in **Section C.5 supra**, the state courts' entire framework for evaluating the impact of any evidence, including the suppressed overalls-sperm DNA, was fundamentally skewed from the outset. Their analysis proceeded from an unreasonable determination of facts concerning this very stocking DNA—wherein they persistently mischaracterized its nature and disregarded its foundational scientific limitations—which directly led to an overstatement of its probative value and improperly minimized the materiality of the evidence the State suppressed. The state courts' uncritical acceptance of this stocking evidence as "compelling" (*Rivadeneira*, Nos. A-2968-21, A-1043-22, slip op. at 3) (**Pa1128**) was possible only by ignoring its inherent scientific limitations and the specific flaws manifest in this case, an oversight compounded by the suppression of the overalls evidence which would have provided crucial context.

i. **The General Scientific Unreliability of "Touch" DNA – A Matter Demanding Judicial Notice**

The scientific principles governing the interpretation of touch (skin cell) DNA evidence, and the documented wrongful convictions resulting from its misuse, have been comprehensively established in **Ground One Section E.3.b supra**, which is incorporated herein by reference. That analysis—grounded in the authoritative 2024 NIST Report and supported by ***Exhibits A through E***—demonstrates three foundational limitations the state courts failed to acknowledge:

First, skin cell DNA transfers ubiquitously through primary, secondary, and tertiary contact, can persist indefinitely on surfaces, and provides no scientifically reliable indication of when or how it was deposited (***Exhibit A, NISTIR 8503, pp. 172-182***).

Second, identifying *whose* DNA is present (source-level) cannot establish *how*, *when*, or by *what activity* it was deposited (activity-level). Even a "major contributor" finding does not establish last contact or primary involvement (***Exhibit A, NISTIR 8503, pp. 129, 172***). The state courts' reductive "defendant's DNA inside, victim's outside" characterization—repeated across multiple opinions—represents precisely the "tunnel vision" NIST warns against when forensic findings are divorced from contextual evaluation (***Exhibit A, NISTIR 8503, pp. 115-116, 154, Recommendation 6.2***).

Third, the tragic cases of Annie Le, Lukis Anderson, David Butler, Adam Scott, and Brian Shivers—detailed in **Ground One E.3.b.i supra** and documented in ***Exhibits A through E***—illustrate the catastrophic consequences of over-relying on uncorroborated touch DNA evidence. These are not academic hypotheticals; they are documented injustices resulting from the same analytical failures evident in this case.

The critical distinction here, however, is that the State's suppression created a compounding error: by concealing the definitive overall-sperm DNA, the prosecution actively

prevented the contextual evaluation NIST mandates, forcing the jury to assess the ambiguous stocking DNA in an evidentiary vacuum—a scenario forensic science warns directly against as conducive to tunnel vision and overstatement of limited findings.

ii. **Specific Flaws of the Stocking DNA Evidence in Rivadeneira's Case:**

Beyond these general scientific limitations, the stocking evidence here was riddled with case-specific flaws the state courts unreasonably ignored:

- **Compromised Evidence Integrity:** The stocking itself was lost by the prosecution before trial, precluding defense examination (**6T 31:16-32:21**), (**7T 4:21-5:6**). It was discovered "generally soiled with cardboard like debris" (**4T 17:1-6, 36:14-25**); (**Pa477**) in a public area nine hours post-incident, creating substantial contamination risk. Evidence logs revealed unaccounted chain-of-custody gaps (**7T 16:2-16**), (**6T 47:1-51:7**); (**Pa503, Pa631**), while related collected forensic (SAK) evidence arrived at the lab opened with missing cervical specimens (**7T 16:2-16**), (**3T 152:3-24**), (**4T 27:22-25**); (**Pa474, Pa590, Pa592**)—directly contradicting the prosecutor's trial assertion of "zero evidence about contamination" (**7T 53:2, 53:15**).
- **Contradictory Forensic Findings:** The DNA pattern contradicts the State's theory. Despite testimony that the attacker wore the stocking as a mask for prolonged periods while sweating profusely (**5T 126:10, 127:5**) and speaking through it, no saliva, sweat, or hair from Mr. Rivadeneira was found (**7T 11:11-12:7**). The DNA recovered represented a complex mixture from 2-4 individuals (**4T 89:11-24, 92:6-7, 93:6-7**), (**7T 29:15-20**). Most anomalously, Mr. Rivadeneira's major profile appeared on the *outside* (**4T 124:19-125:5**), with only potential minor contribution inside (**4T 129:22-130:3**)—the inverse of what prolonged facial wear would produce (**7T 14:18-15:2**). The victim could not be excluded from either surface, but

with low statistical significance (**4T 70:5-7, 72:18-73:24, 101:12-19, 107:14-108:8**); (**Pa490, Pa917**).

- **The Critical Distinction with Suppressed Evidence:** This single, ambiguous piece of touch DNA stood entirely uncorroborated. The victim never identified Mr. Rivadeneira (**6T 119:20-22**), and his DNA appeared nowhere else (**6T 117:15-118:1**), (**7T 6:1-12:7**). *This is where the State's suppression becomes dispositive.* The prosecution concealed definitive scientific proof that would have provided the necessary context: the overalls-sperm DNA, which *conclusively excluded* both Mr. Rivadeneira and the victim's boyfriend while identifying an unknown male perpetrator's complete Y-STR profile (**Pa463-467, Pa503**).

The contrast is stark and scientifically significant. Touch DNA from a lost, soiled stocking found hours later in a public area—with all its inherent limitations regarding transfer, persistence, and activity-level interpretation—cannot compete with sperm DNA recovered from the perpetrator's own garment, a garment the victim was forced to wear immediately post-assault and delivered directly to police, establishing unbroken custody (**3T 64:9-18**); (**Pa570, Pa592**). While **Ground One** *supra* established that innocent transfer of Mr. Rivadeneira's touch DNA was not theoretical but factually documented (via the H.T. phone evidence), *this Ground* establishes something even more powerful: definitive proof from the most probative biological evidence—sperm—that identifies a different perpetrator entirely.

The suppressed overalls-sperm DNA did not merely provide an "innocent explanation" for the stocking DNA; it *definitively proved* Mr. Rivadeneira did not commit this crime. By concealing this dispositive evidence, the State forced the jury to evaluate weak, ambiguous touch DNA as though it were the only forensic evidence, rather than a meaningless trace in light of definitive proof pointing to an unknown male assailant.

iii. **The State Courts' Unreasonable Factual Findings Compounded the Error**

The state courts' persistent mischaracterization of the stocking DNA—summarizing it as "defendant's DNA inside, victim's outside"—was not a harmless simplification. As detailed in **Sections B.1 and C.5 *supra***, this finding directly contradicted the trial testimony and demonstrated a fundamental failure to engage with the forensic complexity and scientific limitations of the evidence. This unreasonable determination of fact under § 2254(d)(2) infected the courts' entire materiality analysis, causing them to: (1) Overstate the probative value of the presented evidence (characterizing scientifically ambiguous touch DNA as "compelling"); (2) Understate the significance of the suppressed evidence (dismissing definitive sperm DNA exclusions as immaterial); and (3) Fail to conduct the contextual, cumulative assessment that both NIST standards and Brady/Kyles jurisprudence demand. This was not merely an error in weighing evidence—it was a structural failure to understand the scientific framework within which DNA evidence must be evaluated, leading directly to an unreasonable application of Brady's materiality standard.

d. **The Synergistic Impact: Suppressed Truth Exposes Presented Falsehood**

The materiality of the suppressed overalls-sperm DNA is not merely additive; it is synergistic. Its disclosure would have fundamentally altered the evidentiary landscape by providing the crucial scientific context against which the jury could—and likely would—have recognized the profound unreliability of the State's sole forensic evidence, the stocking skin cell DNA. The definitive, exculpatory nature of the sperm DNA (excluding Petitioner and the boyfriend, identifying an unknown male perpetrator) would have served as a powerful scientific anchor, exposing the stocking DNA's ambiguity, its susceptibility to innocent transfer, and the speculative nature of the State's activity-level inferences. Thus, the State's suppression did more

than just hide exculpatory evidence; it actively prevented a scientifically sound evaluation of its own presented evidence by removing the most crucial piece of forensic context. This forced the jury to assess the ambiguous stocking DNA in an evidentiary vacuum—a scenario that NIST and forensic best practices warn directly against, as it can lead to tunnel vision and the overstatement of limited findings.

e. **Omnibus Summary on Materiality: The Cumulative Effect of All Suppressed Evidence and the State's Misconduct Demonstrates Profound Materiality**

The State's case against Elmo Rivadeneira was built on a single, tenuous thread: ambiguous skin cell DNA from a lost, soiled stocking; (**5T 172:7-8**), (**6T 8:5-9, 42:19-22**), (**4T 17:1-6, 36:14-25**), interpreted without the crucial scientific context of its inherent limitations (**as detailed in E.3.c. *supra***), and critically, without the context of the definitive, exculpatory sperm DNA evidence from the perpetrator's overalls that the State actively suppressed. The withheld 2011 Bode Y-STR sperm DNA report—containing definitive evidence excluding Rivadeneira from the perpetrator's sperm; (**Pa463-467**), excluding the victim's boyfriend; (**Pa463-467, Pa503**), and identifying an unknown male perpetrator from the overalls (**Pa465**)—was profoundly material in its own right. As demonstrated above; (**see E.3.b *supra***), its disclosure would have shattered the State's narrative, exposed prosecutorial deception, armed the defense with powerful scientific proof of innocence and third-party guilt, and provided the necessary lens to see the stocking DNA for the unreliable evidence it truly was. Confidence in the verdict is unequivocally undermined when this suppressed evidence is considered. This profound materiality is magnified exponentially when the Court considers the full scope of the State's suppression under the cumulative assessment mandated by Brady and its progeny. The Supreme Court has unequivocally held that the materiality of suppressed evidence must be "considered collectively, not item by item." Kyles v. Whitley, 514 U.S. 419, 436 (1995). The fact that the

definitive overalls-sperm DNA evidence (the subject of this Ground) and the compelling evidence of innocent transfer pathways detailed in Ground One of this Petition were uncovered at different, protracted stages—a direct consequence of the State's serial suppression and misrepresentations—does not lessen this Court's duty to evaluate their combined, devastating impact on the verdict's reliability. It is not Petitioner's fault that the truth was uncovered in piecemeal fashion; the blame lies squarely with the State's failure to meet its constitutional obligations. As meticulously detailed in Ground One of this Petition, the State suppressed evidence from the linked H.T. investigation showing Petitioner's skin cell DNA was found on a cell phone dropped by the actual H.T. attacker, a six foot white male with blue eyes—Dean Crawford (*a man definitively not Mr. Rivadeneira*). This provided concrete, case-specific proof of Mr. Rivadeneira's DNA being innocently transferred to the scene of a separate, similar, and interconnected attack by a different perpetrator. Crucially, Crawford was not merely a theoretical alternate suspect—he was independently identified by two separate victims from two separate attacks in two different states. The H.T. victim in New York and the N.W. victim in New Jersey both identified Crawford. This dual identification provided scientific-grade corroboration that eliminated any possibility of misidentification or coincidence, transforming the innocent transfer defense from plausible to proven. Further suppressed evidence established that this same Dean Crawford was the accomplice of the State's key witness, Alex Cancinos, in the N.W. sexual assault, and that Cancinos had unrestricted access to Rivadeneira, creating a clear and compelling pathway for innocent DNA transfer. The prosecution's tunnel vision, which led them to champion the ambiguous stocking skin cell DNA as dispositive, was so profound that they not only suppressed the definitive exculpatory sperm DNA from the overalls but also, as detailed in Ground One, suppressed concrete evidence demonstrating Rivadeneira's DNA could be, and

was, innocently transferred by the actual perpetrators of linked crimes. Had the jury been aware of both the definitive exclusion from the overalls-sperm and these documented pathways for Rivadeneira's DNA to be innocently transferred by individuals linked to the State's own star witness, the stocking DNA would have been stripped of any conceivable inculpatory veneer and exposed as meaningless background noise. This Court can and must now conduct the holistic, cumulative Brady review that the state courts, hampered by the State's piecemeal and reluctant disclosures, failed to perform. Therefore, when the direct and devastating impact of the suppressed 2011 Bode Y-STR sperm DNA report is combined with the cumulative impact of other suppressed exculpatory evidence establishing concrete innocent explanations for the State's only linking evidence (**as detailed in Ground One *supra***), and all of this is viewed against the backdrop of the scientifically unreliable nature of the stocking DNA itself, the prosecutorial deceptions, and the state courts' unreasonable factual determinations (**as detailed in Section C *supra***), the conclusion is inescapable: confidence in this verdict is not merely undermined; it is obliterated. The Kyles standard for materiality is unequivocally met, demanding relief.

F. CONCLUSION: THE CONSTITUTION DEMANDS RECTIFICATION OF A VERDICT SECURED BY CONCEALED TRUTH AND COMPOUNDED JUDICIAL ERROR

The conviction of Elmo Rivadeneira stands as a clear illustration of a judicial process fundamentally compromised by the State's calculated suppression of dispositive truth and a state court's subsequent, objectively unreasonable failure to remedy that profound constitutional breach. This is not a case of nuanced interpretation or debatable error; it is a manifest instance where a verdict, achieved through deception and cemented by flawed judicial reasoning, warrants federal habeas corpus relief under 28 U.S.C. § 2254(d).

The linchpin of this injustice is the State's deliberate withholding of the September 15, 2011, Bode Technology Y-STR sperm DNA report—a report commissioned by the prosecution itself mere weeks before trial. This was no minor piece of evidence; it was a scientifically significant development. As this brief has painstakingly detailed, its findings, scientifically unattainable before that specific September 2011 comparison, conclusively excluded Mr. Rivadeneira and the victim's boyfriend from the sperm DNA recovered from the perpetrator's own overalls and, critically, generated the complete Y-STR DNA profile of an unknown male assailant. This evidence did not merely impeach; it strongly pointed to innocence.

In place of this definitive science, the State constructed its entire prosecution upon the treacherous and scientifically unsound pillar of "touch" skin cell DNA from a lost, soiled stocking. The inherent unreliability of this evidence—its susceptibility to ubiquitous and innocent transfer, the impossibility of determining how or when it was deposited from the profile alone—was not only downplayed by the State but was critically misunderstood and unreasonably determined by the state appellate courts. As argued in **Sections B.1, C.5, and E.3 *supra***, the state court's persistent oversimplification of this complex evidence into a simplistic, guilt-presumptive "defendant's DNA inside, victim's outside" narrative constitutes an objectively unreasonable determination of fact.

This judicial "tunnel vision," which ignored established scientific principles articulated with clarity by NIST, was fatally compounded because the court evaluated this ambiguous stocking skin cell DNA in an evidentiary vacuum, actively created by the State's suppression of the overalls-sperm DNA—the very evidence that would have provided the essential, scientifically sound context.

The State's deception was multi-layered: a misleading trial stipulation that presented outdated and irrelevant information as though it were comprehensive; the knowing allowance of its expert's uncorrected testimony that no semen was found on the overalls, despite possessing the 2011 Bode report confirming sperm's presence. These were not innocent mistakes but strategic maneuvers designed to secure a conviction untroubled by inconvenient truths.

The state court's subsequent adjudication perpetuated this injustice. Its finding that the 2011 overalls-sperm report was not "new," not truly "suppressed," or that its critical information was somehow conveyed to the defense, rests upon demonstrably false premises. Crucially, this includes its reliance on a mythical 2006 Bode report that the State has never produced and which, chronologically, could not have contained the exculpatory 2011 findings. The state court's persistence in this erroneous narrative is all the more striking given that this federal District Court had already called out the prosecution's phantom 2006 report. As detailed in **Section E.2.a supra**, Judge McNulty explicitly noted the State failed to produce the 2006 document or explain how it differed from the 2011 report—yet the state court adopted the prosecution's narrative anyway, without ever demanding the document. These unreasonable factual determinations, as detailed in **Section C supra**, directly paved the way for an unreasonable application of Brady v. Maryland and Kyles v. Whitley, as established in **Section D supra**.

The materiality of the suppressed overalls-sperm evidence, particularly when juxtaposed with a stocking DNA narrative already compromised by the court's own flawed factual assessment, is catastrophic to any notion of a fair trial (**Section E.3 supra**). Confidence in this verdict is not merely undermined; it is obliterated. The jury was never allowed to weigh the State's speculative case against the scientific certainty of an unknown male attacker identified via the perpetrator's own garment.

Consider the glaring disparity: had the identity of the unknown male's sperm DNA profile from the overalls been the initial discovery, he would have been the undeniable prime suspect, the evidence against him deemed overwhelming. Any attempt by that suspect to point to ambiguous skin cell DNA mixture on a discarded stocking as proof of innocence would have been correctly dismissed as scientifically feeble. Yet, for Mr. Rivadeneira, this inverted logic prevailed, solely because the State concealed the most powerful scientific evidence available.

AEDPA demands deference, but it does not demand blindness to manifest constitutional injustice. The state court's cascade of unreasonable factual findings—particularly its embrace of a narrative already flagged as problematic by the federal judiciary—and its consequent misapplication of clearly established federal law constitute precisely the "extreme malfunction" in the state criminal justice system that federal habeas review exists to correct. Harrington v. Richter, 562 U.S. 86, 102 (2011). Elmo Rivadeneira was convicted not because the evidence pointed to his guilt, but because the State systematically hid the evidence that pointed to his innocence and identified another, while the judiciary failed to recognize the profound unreliability of what little the State did present. This is a fundamental betrayal of due process.

The choice before this Court thus echoes the stark clarity Abraham Lincoln presented in a defense closing: if the Court accepts the prosecutor's narrative, built upon suppression and distortion—including reliance on a phantom and impossible 2006 lab report—then this petition must be denied. But if the Court accepts the documented evidence laid bare in this brief—evidence proving the State concealed definitive sperm DNA that excluded Petitioner and identified another, while simultaneously allowing false testimony that no sperm was found—then the Constitution demands this petition be granted. When a prosecutor obtains definitive scientific proof of innocence, conceals it through lies and misdirection, and secures a conviction on

evidence he knows is false—while state courts at every level ratify that deception—federal habeas relief is not discretionary. It is constitutional mandate.

IV. GROUND FOUR

AN EVIDENTIARY HEARING IS REQUIRED TO RESOLVE THE GRAVE FACTUAL DISPUTES AND CONSTITUTIONAL CLAIMS RAISED HEREIN

A petitioner is entitled to an evidentiary hearing on a federal habeas claim if his factual allegations, if proven true, would entitle him to relief. Schrivo v. Landrigan, 550 U.S. 465, 474 (2007). Where, as here, a petitioner has diligently developed the factual basis of his claims and has alleged facts that present a *prima facie* case for relief, a hearing is necessary to resolve disputed factual issues that are essential to the constitutional claims. Rule 8(a) of the Rules Governing Section 2254 Cases requires the court to determine if such a hearing is required. The extensive and well-pleaded factual allegations in this Traverse Reply brief demonstrate that a hearing is not only warranted but indispensable.

The state court record is rife with contradictions, omissions, and unresolved factual disputes created by the State's suppression and misrepresentation of evidence. A hearing is required to resolve, at minimum, the following critical issues:

The Scope of the Brady Violation in the Joint Investigation (Ground One): The state court's finding that no joint investigation existed is an unreasonable determination of the facts. A hearing is necessary to establish the full extent of the inter-agency cooperation and to determine what the New Jersey trial prosecutor knew, or should have known, about the powerfully exculpatory evidence held by his New York and FBI partners—specifically, the H.T. victim's identification of Dean Crawford and the true nature of the forensic evidence.

The Ineffectiveness of Trial Counsel (Ground Two): Petitioner's claim of ineffective assistance of counsel cannot be resolved without an evidentiary hearing. The state court made its

ruling without the benefit of testimony from trial counsel. A hearing is essential to question trial counsel regarding his failure to investigate Alex Cancinos, his failure to challenge the State's misrepresentations about the linked cases, and his catastrophic failure to meaningfully consult with a DNA expert to rebut the State's scientifically flawed narrative regarding the stocking DNA.

The Suppression of the Definitive 2011 Sperm DNA Report (Ground Three): This claim presents a stark factual dispute that goes to the heart of the trial's fairness. An evidentiary hearing is absolutely necessary to resolve the conflict between the suppressed September 2011 Bode Y-STR report and the State's reliance on a "phantom" 2006 document. The Court must hear testimony to determine precisely what information the trial prosecutor possessed pre-trial, why it was not disclosed, and why a misleading stipulation was presented to the jury in its place.

The resolution of these factual issues is not academic; it is dispositive of Petitioner's constitutional claims. Accordingly, an evidentiary hearing is required to ensure a just and proper adjudication of this meritorious petition.

Respectfully Submitted,



Elmo Rivadeneira
Petitioner-Pro Se

Dated: January 20, 2026

