GLASSBORO PUBLIC SCHOOLS
GLASSBORO, NEW JERSEY

TO: Mark Silverstein

FROM: Scott Henry

DATE: October 12, 2017

RE: Agenda Item for October18, 2017

Recommend the board approve a contract with Statistical Forecasting, LLC to perform a demographic study for the Glassboro Public Schools. Cost of the contract is $5,500.00. Costs to be paid with general fund appropriations.

A Proposal

to Perform Demographic Services

for the

Glassboro Public Schools

Prepared: September 22, 2017

STATISTICAL FORECASTING LLC

www.statforecast.com
877-299-6412

Company Overview

Founded in 1998, Statistical Forecasting LLC ("Statistical Forecasting") has been providing school demographic services such as enrollment projections, computer mapping, re-districting, and geocoding for school districts in the New York/New Jersey metropolitan area for the past 19 years. Our demographic studies are very comprehensive and are highly accurate as evidenced by our low error rates and large number of returning clients. We have provided demographic services for nearly 100 districts in New Jersey. In addition, since 2006, we have been the demographic consultant to the New York City Public Schools, which is the largest school district in the country.

Statistical Forecasting is led by Richard S. Grip Ed.D., Executive Director, who possesses a doctorate in educational statistics and measurement from Rutgers University (NJ). His dissertation, *Prediction of Public School Enrollments Using the Modified Regression Technique,* received the Outstanding Dissertation Award from the Rutgers University Graduate School of Education in 1998. Dr. Grip has testified as an expert witness in school demography, has written papers in numerous journals such as *Population Research and Policy Review*, and has presented nationally and internationally for the Population Association of America, American Educational Research Association, American Association of School Administrators, and Association of American Geographers. A curriculum vitae has been provided in the Appendix.

Consultant Qualifications and References

As stated previously, Statistical Forecasting has completed demographic studies for approximately 100 school districts in the State of New Jersey. This is our specialty; this is the only type of work we do. To project enrollments, we use the cohort-survival ratio method, which is approved by the New Jersey Department of Education ("NJDOE"). The following table lists three similar projects that have been recently completed by our firm.

	Project #1	Project #2	Project #3
School District:	East Brunswick Public Schools (PK-12)	Linden Public Schools (PK-12)	Bridgewater-Raritan Regional School District (PK-12)
Year Completed	2014, 2017	2016	2014
Scope of Services:	Performed demographic study consisting of ten-year enrollment projections. Analyzed township housing starts, historical birth trends, and socio-economic/ demographic trends from the Census. Completed extensive housing turnover analysis looking at historical home sales and student yields per housing unit. Using GIS, an extensive array of maps was created showing student residences over time.	Performed demographic study consisting of ten-year enrollment projections. Disaggregated births by census tract and block to compute kindergarten students by elementary school attendance area. Student yields were computed by attendance area for apartments and townhouses, and districtwide by length of ownership for 1- to 4-family homes.	Performed demographic study consisting of five-year enrollment projections. Disaggregated births by census tract and block to compute kindergarten students by elementary school attendance area. Student yields were computed by attendance area by tabulating the number of children on each street and dividing by the total number of houses on that street.
Contact Representative Name:	Mr. Bernardo Giuliana Business Administrator/ Board Secretary	Ms. Kathleen Gaylord Business Administrator	Mr. Kenneth Starrs Business Administrator

District Enrollment	7,933	5,950	8,565
Contact Representative Phone Number:	732-613-6723	908-486-2800	908-685-2777

Scope of Services

Option 1: Demographic Study

A Demographic Study would be prepared consisting of the following information:

a) Community Overview

As part of our general overview on the Borough of Glassboro ("Glassboro"), we would collect historical population counts (1940-2010) from the United States Census Bureau and future population projections from the Delaware Valley Regional Planning Commission. Selected demographic characteristics, such as racial breakdown, income levels, educational attainment, and number of owner- and renter- occupied units, would be compared at two time points: 2000 and 2010, using data from the Census and the American Community Survey (ACS).

b) Live Birth Data

Birth data would be collected for Glassboro and would be obtained from the New Jersey Department of Health. Accurate birth data is needed to project the number of kindergarten students five years later. Kindergarten enrollments would be calculated as follows. Birth data, lagged five years behind its respective kindergarten class, would be used to calculate the survival ratio for each birth-to-kindergarten cohort. Average birth-to-kindergarten survival ratios are computed using three, four, five, or six-year trends.

Birth data from 2004-2015 will be used to project the number of kindergarten students through 2020. To project the number of kindergarten students for 2021 and 2022, birth rates would need to be estimated. Future births will be estimated by averaging the number of births in the last five or six years and using this value for the remaining years of the projection period.

c) Historical Enrollment Trends

A review of the district's historical enrollment trends for the past ten years would be conducted using data from the Fall Report and NJ SMART databases. This would be conducted not only for the entire district, but also for the elementary (PK-6), middle (7-8), and high school (9-12) levels.

d) Self-Contained Special Education

Since there are no survival rates for self-contained special education students as compared to regular education students, a different methodology is employed. Special education enrollments are projected by calculating the average proportion (based on a certain number of years of historical data) of self contained special education students with respect to the historical regular education subtotals and multiplying this proportion by the future regular education subtotals. This method has been found to be highly accurate, provided that a district has not changed its policy on educating

special education students. For instance, if a district, has decided in the last year that it would like to mainstream more of its special education population, using an average special education proportion from the last three years would overly inflate the number of special education students.

e) Enrollment Projections

PK-12 enrollments would be projected annually for a five-year period beginning with the 2018-19 school year and ending in 2022-23 using the Cohort-Survival Ratio (CSR) method. In this method, a survival ratio is computed for each grade progression, which essentially compares the number of students in a particular grade to the number of students in the previous grade during the previous year. Simply stated, a survival ratio of 1.00 indicates stable enrollment, less than 1.00 indicates declining enrollment, while greater than 1.00 indicates increasing enrollment. If, for example, a school district had 100 fourth graders and the next year only had 95 fifth graders, the survival ratio would be 0.95. Due to the fluctuation in survival ratios from year to year, it is necessary to calculate an average survival ratio. This value is then used to calculate future grade enrollments five years into the future. Depending upon growth patterns in the district, average or weighted-average survival ratios would be based on a four-year, five-year, or six-year trend. The average survival ratios selected would be at the discretion of our firm. To provide a range of potential enrollments, two sets of projections will be completed.

The projections will also be displayed in tables for the five-year period as follows:

1. District-wide PK-12 by individual grades
2. Configuration Level (PK-6, 7-8, and 9-12)

We would also project the additional number of pre-kindergarten students to be phased in over the next five years as a result of the School Funding Reform Act of 2008 (SFRA) whereby all school districts in New Jersey are to provide expanded Abbott-quality pre-school programs for at-risk 3- and 4-year olds. While the program has not yet rolled out due to budgetary constraints, we will assume that the program will be eventually established to determine the full impact on the district.

f) Housing Growth

The Glassboro construction and/or planning departments would be contacted to receive information on new home construction to determine the impact, if any, on the school district. The number of potential children would be estimated using the Rutgers University Center for Policy Research ("CUPR") student yield multipliers.

g) Homes Sales

The number of Glassboro home sales will be collected from 2001-2016 to show historical trends.

Deliverables

Statistical Forecasting LLC will provide an electronic copy of the report in PDF format. We would be able to submit the report within 60-90 days upon receipt of all data. Our reports contain an array of tables and charts, which enable them to be read and understood by a wide range of audiences.

If desired, a PowerPoint presentation can be provided to the Board of Education summarizing the findings of the study.

Option 1 Cost of Service: **$5,500** ___ check if desired
$6,250 (with presentation) ___ check if desired

The following represents additional options that the district may consider.

Option 2: Detailed Housing Analysis

In this option, we would compute student yields explicitly based on Glassboro housing data, which would be most useful if the community has a large number of new housing units planned. This would provide more specific yields for any proposed housing construction as compared to the yields available from CUPR, which are regionally based and are older data based on the 2000 Census. Homes owned 10 or fewer years will only be considered, as homes with low lengths of ownership typically have the most children according to our research. This would only be computed for 1- to 4- family homes and would not include rentals or apartments. We would join the district's 2017-18 student database with the property database of Glassboro. Student yields by housing type (detached single-family, townhouse, etc.) will then be computed where the number of school children will be tabulated and divided by the total number of homes to determine the student yield per home.

Apartment student yields will also be computed based on the number of units in a complex and the number of current students residing in the development.

The number of school children projected from any new housing developments would be computed by using the student yields extracted from this analysis, which provides a more valid way of estimating future school children since we would be using actual yields as derived from existing housing data.

Option 2 Cost of Service: **$4,200** ___ check if desired

Option 3: GIS Mapping

We will geocode (electronically pin-map) student addresses from the 2012-13 and 2017-18 school years. Data specifications for the student address database are provided in the Appendix. Using Geographic Information Systems computer mapping software, we would generate maps showing the following outputs over the two different time periods:

- Locations of where students live.
- Student population by census block or tract to show the locations where the fewest and greatest number of students resides.
- Student density by census block or tract. Since census blocks/tracts vary in size, these maps show the fewest and greatest number of students per square mile by census block/tract.

- Number of students per housing unit (student yield) by census block/tract.

Option 3 Cost of Service: **$1,550** ___ check if desired

Option 4: Race and Poverty Analysis

The racial distribution of students will be compared at two time points, 2012-13 and 2017-18, to determine if there has been a shift in racial composition in the district. Enrollments by race will be analyzed not only for the total population, but by school as well.

As a proxy for measuring poverty in the school district, counts of students receiving free or reduced lunch will be compiled by school for 2012-13 through 2017-18. This will aid in determining whether there are any trends, either increasing or decreasing, in the percentage of students in poverty.

Option 4 Cost of Service: **$1,900** ___ check if desired

Option 5: Housing Turnover Analysis

Rising enrollment in a school district is often not due to new housing growth, but is instead caused by the selling of homes of older residents to families with children. To analyze the existing housing turnover rate, parcel-level data of approximately 4,000 housing units from Glassboro will be combined with student address data, the latter to be provided by the district. The housing units that will be analyzed are 1- to 4-family homes. From the parcel-level data, we will be able to identify homes that have sold recently (in the last 25-30 years). This will help to determine a) the housing turnover rates by length of ownership and b) the current distribution of homes by length of ownership. The student address data will be used to compute the student yields (average number of students per housing unit) by length of ownership.

In short, the housing turnover model uses length of home ownership as a proxy for the age of the homeowners since this variable is unknown and cannot be accurately determined through other data collection methods such as surveys. Research has shown that student yields are smallest in long-held homes and greatest in homes that were recently sold. While it has been shown that enrollment tends to increase when long-held homes are sold, it is not clear that the ***overall*** enrollment will increase in the district since some houses that currently contain children will have declining yields as children graduate or leave the district to attend private or parochial schools. Therefore, it is not correct to assume that having a high percentage of long-held homes will lead to an enrollment increase in the district.

As deliverables, we would project a distribution of 1- to 4-family homes based on length of ownership and historical turnover rates for five years into the future. Residences such as apartments are excluded since the length of time a tenant occupies a residence cannot be determined. Using the student yields computed separately for length of ownership, the total number of students would be projected for a period of five years into the future. Unfortunately, due to data constraints, it is not possible to compute enrollment at the grade configuration level. It should be noted that this is a completely independent analysis that can show housing turnover rate scenarios whereby enrollment in the district is likely to increase.

Option 5 Cost of Service: **$5,750** ___ check if desired

Notes:

- The quoted prices above do not include on-site meetings, which if requested, cost $750 and include all travel-related costs. Skype and telephone conferences are free.

- Any requests for services to be performed outside the scope of this proposal will need to be negotiated with Statistical Forecasting LLC as a change order and to be verified in writing.

- This proposal has been prepared by Dr. Richard S. Grip, Executive Director of the firm. The proposal shall be valid for ninety (90) days from the day of submission.

- While Statistical Forecasting LLC strives to provide accurate enrollment projections, future events occurring in the Borough of Glassboro that are beyond the control of Statistical Forecasting LLC may affect the accuracy of the demographic study. The enrollment projections produced by Statistical Forecasting LLC use the most recent data available at the time of the study. By agreeing to the terms set forth in this document, the Glassboro Public Schools will not hold Statistical Forecasting LLC liable for any change in enrollments for the stated projection period.

Agreed by Glassboro Public Schools

_____
Name

_____
Title

_____
Date

_____
Signature

Agreed by Statistical Forecasting LLC

Richard S. Grip Ed.D.
Name

Executive Director
Title

September 22, 2017
Date


Signature

APPENDIX

Student Address Data Specifications for Geocoding

Required Data: Each record (row) of the student enrollment database should contain data for one **ACTIVE** student. Each of the numbered items below should be a separate field (column) in the database. In the home address field (#4), the information should always be in the indicated order.

1. student's last name, first name (separate fields)
2. school attending
3. grade level (K or 0, 1, 2, 3, etc.) for all students, including special education students
4. student's home address (number, street name, street type, apartment # or letter, city, zip) This information needs to be separated into the following fields.
    a) Number and street name
    b) Apartment number, if applicable **(MUST BE IN SEPARATE FIELD)**
    c) City
    d) State
    e) Zip Code

Please include a *street address* (not a Post Office Box) for each student. It is very important to include the street type (Road, Street, Court, etc.). The only abbreviations that should be used are for street types. These abbreviations should be standardized as follows:

Avenue = Ave	Court = Ct	Place = Pl	Way = Wy
Boulevard = Blvd	Drive = Dr	Road = Rd	
Circle = Cir	Lane = Ln	Street = St	

Client List

Allamuchy School District (NJ)
Arlington Public Schools (VA)
Atlantic City School District (NJ)
Bedford Central School District (NY)
Bismarck Public School District (ND)
Blairstown Township School District (NJ)
Boonton Township Public Schools (NJ)
Brick Township School District (NJ)
Bridgewater-Raritan Regional School District (NJ)
Buena Regional School District (NJ)
Carteret School District (NJ)
Cedar Grove School District (NJ)
Clinton Township School District (NJ)
Colts Neck Township Schools (NJ)
Commercial Township School District (NJ)
Cranbury Township Cresskill Public Schools (NJ)
Deptford Township School District (NJ)
Dobbs Ferry Union Free School District (NJ)
East Brunswick Public Schools
East Orange School District (NJ)
Englewood Cliffs School District (NJ)
Evesham Public Schools (NJ)
Fairfield Township School District - Cumberland County (NJ)
Flemington-Raritan Regional School District (NJ)
Florence Township School District (NJ)
Fort Lee School District (NJ)
Frelinghuysen Township School District (NJ)
Galloway Township School District (NJ)
Glassboro School District (NJ)
Hackensack Public Schools (NJ)
Hackettstown School District (NJ)
Haddonfield Public Schools (NJ)
Hamilton Township School District - Mercer County (NJ)
High Point Regional High School District (NJ)
Hopewell Valley Regional School District (NJ)
Katonah-Lewisboro Union Free School District (NY)
Knowlton Township School District (NJ)
Lawrence Township School District- Mercer County (NJ)
Linden Public Schools (NJ)
Little Egg Harbor Township School District (NJ)
Long Beach Island Consolidated School District (NJ)
Long Hill Township School District (NJ)
Matawan-Aberdeen Regional School District (NJ)
Medford Township School District (NJ)
Mendham Borough Public Schools (NJ)
Millburn School District (NJ)
Millville School District (NJ)

Monroe Township School District- Middlesex County (NJ)
Montgomery Township School District (NJ)
Montville Township Public Schools (NJ)
Moonachie School District (NJ)
Moorestown Township School District (NJ)
Morris Hills Regional School District (NJ)
Mount Laurel Township Public Schools (NJ)
Mount Olive Township School District (NJ)
Newton School District (MA)
New York City Public Schools (NY)
North Caldwell Public Schools (NJ)
North Hanover Township School District (NJ)
North Warren Regional School District (NJ)
Northern Burlington County Regional School District (NJ)
Ocean Township School District- Monmouth County (NJ)
Oradell Public Schools (NJ)
Palmyra Public Schools (NJ)
Pascack Valley Regional High School District (NJ)
Pemberton Township School District (NJ)
Penns Grove-Carneys Point Regional School District (NJ)
Pittsgrove Township School District (NJ)
Pleasantville School District (NJ)
Princeton Regional Schools (NJ)
River Edge School District (NJ)
River Dell Regional School District (NJ)
Robbinsville Public School District (NJ)
Roosevelt School District (NJ)
Rutherford School District (NJ), for Lincoln Equities Group, LLC
School District of the Chathams (NJ)
Scotch Plains-Fanwood School District (NJ)
Somers Central School District (NY)
Somerville Public Schools (NJ)
South Brunswick Township School District (NJ)
Stafford Township School District (NJ)
Swedesboro-Woolwich School District (NJ)
Union Beach School District (NJ)
Upper Freehold Regional School District (NJ)
Vernon Township School District (NJ)
Vineland School District (NJ)
Warren Township Schools (NJ)
Washington Township School District (Morris County NJ)
West Windsor-Plainsboro Regional School District (NJ)
Westwood Regional School District (NJ)
Wildwood School District (NJ)
Woodbridge Township School District (NJ)
Woodcliff Lake Public Schools (NJ)
Woodstown-Pilesgrove Regional School District (NJ)
Yonkers Public Schools (NY)

RICHARD S. GRIP, Ed.D.

Work Address:
Statistical Forecasting LLC
170 Owls Head Hill Lane South
Dorset, VT 05251
802-768-8563

ACADEMIC AND PROFESSIONAL CAREER HISTORY

Executive Director: Statistical Forecasting LLC, Dorset, Vermont, March 1998 – present.

- Performed demographic studies projecting enrollment using the Modified Regression Technique and Cohort Survival Ratio method for public school districts.
- Testified at a deposition and trial as an expert witness in school demography regarding the termination of the sending-receiving relationship of Newfield Borough with the Buena Regional School District.
- Testified at a trial as an expert witness in school demography regarding the termination of the sending-receiving relationship of the Merchantville School District with the Pennsauken Public Schools.
- Testified at a trial as an expert witness in school demography regarding a proposed change in the funding formula for River Dell Regional School District.
- Completed feasibility studies for school districts considering regionalization, de-regionalization, or alternative send-receive relationships. The studies look at demographic, educational, and financial implications of the new structure as compared to the status quo.
- Performed external evaluations of educational programs in both secondary and post-secondary settings using both qualitative and quantitative techniques. Constructed surveys and conducted interviews to measure program effects.

Representative Projects

Somers Point (NJ) – Feasibility Study (2017) – Analyzed demographic effects of the reconfiguration of the Somers Point School District.

Bedford Central School District (NY) – Demographic Study (2016) – Performed ten-year enrollment projections at the individual school level. Student addresses were geocoded to show the five-year changes in the relative concentrations of where students live and the sections of each community that have the most children per housing unit. Computed student yields by development and housing type (coops, townhouse/condos, and apartments). Projected enrollments for three separate subgroups: English Language Learners, special education students, and economically disadvantaged students.

Matawan-Aberdeen Regional School District (NJ) – Demographic Study (2016) – Performed five-year enrollment projections at the individual school level. Births by census block group were used to project kindergarten students at the school level. Student yields were computed by housing type

(single-family, townhouse, apartment) in each community and used to adjust baseline enrollment projections.

Edgewater Park (NJ) – Feasibility Study (2016) – Analyzed demographic effects of the withdrawal of Edgewater Park students for grades 9-12 from the Burlington City School District upon termination of its existing sending-receiving relationship, as well as the demographic effects upon the creation of a new sending-receiving relationship with the Delran Board of Education.

North Haledon (NJ) – Feasibility Study (2016) – Analyzed demographic effects of the withdrawal of North Haledon students from Manchester Regional School District where students would instead attend Manchester Regional School District through a sending-receiving relationship.

Oaklyn Public Schools – Feasibility Study (2016) – Analyzed demographic and racial effects of expanding the Oaklyn Public Schools' existing relationship with the Collingswood Public Schools from a grade 10-12 sending-receiving relationship to a grade 6-12 sending-receiving relationship.

Arlington Public Schools (VA) – Demographic Consultant (2015-17) – Reviewed and evaluated the projection methodologies used by the Arlington Public Schools. Recommendations for improvements to the forecasting process were made. Student yields were computed both for 2010 and 2015 by housing type and affordability. A model was developed to project district-wide enrollments for the long-term, six to ten years into the future.

Seaside Park (NJ) – Feasibility Study (2015) – Analyzed the demographic and racial effects of Seaside Park students upon creating a second sending-receiving relationship with the Lavallette School District in addition to its existing sending-receiving relationship with the Toms River Regional School District.

East Newark (NJ) – Feasibility Study (2014) – Analyzed demographic and racial effects of the withdrawal of East Newark students from the Harrison Public Schools upon termination of its existing sending-receiving relationship, as well as the demographic and racial effects upon the creation of a new sending-receiving relationship with the Kearny Board of Education.

Cape May (NJ) – Feasibility Study (2013) – Analyzed demographic and racial effects of the withdrawal of Cape May students from Lower Cape May Regional for grades 7-12 and the establishing of a sending-receiving relationship with either Lower Cape May Regional or Middle Township for grades 7-12.

West Windsor-Plainsboro Regional School District (NJ) - Demographic Study (2013, 2017) – Performed ten-year enrollment projections for large school district (9,800+ students) at the individual school level. Births by census tract and block group were used to project enrollment at the school level. Student addresses were geocoded to show the five-year changes in the relative concentrations of where students live and the sections of each township that have the most children per housing unit. Computed student yields by development and housing type (single-family, townhouse, apartment) in both communities. Analyzed change in racial and poverty distributions in the district and at school level over six historical years.

Merchantville Borough (NJ) - Feasibility Study (2012) – Conducted a study considering the demographic and racial effects of the withdrawal of Merchantville students from the Pennsauken Public Schools upon termination of the existing sending-receiving relationship, as well as the demographic and racial effects upon the creation of a new sending-receiving relationship with the Haddon Heights Board of Education.

Woodbridge School District (NJ) - Demographic Study (2012) – Performed five-year enrollment projections for large school district (13,000+ students) at the individual school level. Births by census tract and block group were used to project enrollment at the school level. Student addresses were geocoded to show the five-year changes in the relative concentrations of where students live and the sections of the township that have the most children per housing unit.

South Hunterdon Regional School District (NJ) Feasibility Study (2012) – Conducted a study considering the dissolution of the South Hunterdon Regional School District (grades 7-12) and analyzed six different scenarios for the education of students in Lambertville Borough, Stockton Borough, and West Amwell Township. Analyzed demographic and racial impacts in each of the scenarios.

Yonkers Public Schools (NY) - Demographic Study (2011, 2013, 2016) – Performed ten-year enrollment projections by the four major races in the school district. Other analyses performed include projecting future birth counts by race, studying the impact of immigration on enrollment, and the effects of charter, private, and parochial schools on enrollment. The impact of new housing developments on the school district was also considered.

New York City School Construction Authority - Demographic Study (2006-2017) – Performed enrollment projections for the New York City Public Schools as part of the Five-Year Capital Plan. Projections are being computed by the four major races for each of the 32 community school districts and aggregated by borough and citywide. Another analyses performed include projecting future birth counts by race, developing a special education model to project self-contained special education students, and studying the impact of immigration on enrollment. Finally, a comprehensive study of the impact of new housing development in New York City on enrollment at the community school district level was undertaken.

Hackensack Public Schools (NJ) - Demographic Study (2010) – Conducted a study projecting enrollment five years into the future. Analyzed local population trends, demographic characteristics of the community using Census and ACS data, student mobility rates, and the impact of new housing starts on enrollment. Completed a capacity analysis of building capacities compared to projected enrollment. Performed a separate analysis of housing turnover in the community by using home sale data for the past 30 years to project the number of homes by length of ownership based on the current length of ownership and historical turnover rates. Using the student yields computed separately by length of ownership, the total number of students was projected five years into the future.

North Hanover Township School District (NJ) - Demographic Study (2010) – Conducted a study projecting enrollment five years into the future. Analyzed local population trends, demographic characteristics of the community using Census and ACS data, and student mobility rates. Completed a capacity analysis of building capacities compared to projected enrollment. Performed an in-depth analysis of the demolition and renovation of housing units at McGuire Air Force Base and its impact on enrollment.

Black Horse Pike Regional School District (NJ) Feasibility Study (2009) – Conducted a study considering the dissolution of the Black Horse Pike Regional School District (grades 9-12) whereby a full PK-12 regional district would be created between Bellmawr Borough, Gloucester Township, and Runnemede Borough. Analyzed demographic and racial impacts in each of the scenarios.

Robbinsville Township School District (NJ) - Demographic Study (2009, 2016) – Conducted a study projecting enrollment five years into the future. Analyzed local population trends, demographic characteristics of the community using Census and ACS data, student mobility rates, and the impact of new housing starts on enrollment. Completed a capacity analysis of building capacities compared

to projected enrollment. Performed a separate analysis of housing turnover in the community by using home sale data for the past 30 years to project the number of homes by length of ownership based on the current length of ownership and historical turnover rates. Using the student yields computed separately by length of ownership, the total number of students was projected five years into the future.

Montvale Borough (NJ) and Woodcliff Lake Borough (NJ) - Feasibility Study (2008) – Conducted a study considering the dissolution of the Pascack Valley Regional High School District whereby a full K-12 regional district would be created between Montvale and Woodcliff Lake Boroughs.

Carlstadt Borough (NJ) - Feasibility Study (2008) – Conducted a study considering the dissolution of the Carlstadt-East Rutherford Regional High School District whereby a full K-12 regional district would be created between East Rutherford and Carlstadt Boroughs or whereby a K-12 district would be created in East Rutherford Borough and high school students from Carlstadt Borough would attend East Rutherford on a sending-receiving basis.

Watchung Borough (NJ) - Feasibility Study (2008) – Conducted a study considering the withdrawal of Watchung Borough from the Watchung Hills Regional High School District whereby Watchung would send its students to the existing regional district on a sending-receiving basis. The study also considered the dissolution of the Watchung Hills Regional High School District whereby a full K-12 regional district would be created or whereby a K-12 district would be created in Warren Township and high school students from Watchung Borough would attend Warren Township on a sending-receiving basis.

Park Ridge Borough (NJ) - Feasibility Study (2007) – Conducted a study considering many different organizational structures to the existing PK-12 school district including forming an all-purpose regional school district with adjoining communities and joining an existing limited-purpose regional high school district.

Merchantville Board of Education (NJ) – Racial Impact Study (2007) – Conducted a study to determine the racial impact of Merchantville terminating its sending-receiving relationship with Pennsauken Township.

Vineland Board of Education (NJ) - Demographic Study (2006, 2013) – The average student yield per home was computed by analyzing recent developments constructed in Vineland City. This value was then used to project the number of children from comparable future developments. A representative sample of 26 new streets located in 15 different developments was analyzed. District transportation records were accessed from 2002-2006 to obtain the number of children per household on these streets and their grade levels for each of these years. The number of children per housing unit was computed and used to project the expected number of children from approximately 1,600 new single-family homes in Vineland City. Baseline enrollment projections were then modified.

Oradell Borough (NJ) - Feasibility Study (2006) – Conducted a study of dissolving the River Dell Regional School District, a limited-purpose grade 7-12 regional district, with the resulting formation of two independent K-12 districts in Oradell Borough and River Edge Borough. The study explored having Oradell enter into a send-receive relationship with River Edge for its grade 7 and 8 students while River Edge enter into a send-receive relationship with Oradell for its grade 9-12 students.

Liberty Township (NJ) - Feasibility Study (2006, 2008) – Conducted two studies, one which would dissolve the Great Meadows Regional School District, a grade PK-8 regional district, and create two independent PK-8 districts in Liberty Township and Independence Township. The second study analyzed dissolving the Great Meadows Regional School District, creating a PK-8 district in

Independence Township and a PK-5 district in Liberty Township where Liberty Township students in grades 6-8 would be sent to Independence Township on a sending-receiving basis.

Newfield Board of Education (NJ) - Feasibility Study (2006) – Conducted a study of terminating the existing send-receive relationship between the Newfield Board of Education and the Buena Regional School Board of Education and initiating a new sending-receiving relationship between the Newfield Board of Education and the Delsea Regional Board of Education and the Franklin Township Board of Education. Testified at a deposition and trial as an expert witness in school demography regarding the termination of the sending-receiving relationship of Newfield Borough with the Buena Regional School District.

Elmer Borough Board of Education (NJ) - Feasibility Study (2004) – Conducted a study of making the Elmer Borough School District a non-operating district by creating a new sending-receiving relationship between the Elmer Board of Education and the Pittsgrove Board of Education. Analyzed the demographic impacts on each school district for the proposed organizational change.

Elk Township, Franklin Township, and Delsea Regional High School District (NJ) – Feasibility Study (2003-2004) – Conducted a feasibility study exploring the expansion of the Delsea Regional High School District from a limited purpose (grades 7-12) regional concept to an all-purpose (grades PK-12) regional alignment. Other options explored were the dissolution of the Delsea Regional High School District and formation of two independent PK-12 school districts in Franklin Township and Elk Township.

The College of New Jersey - External Evaluator and Psychometrician (2003-2006) – Served as an external evaluator and psychometrician measuring the effects of the Teachers as Leaders and Learners program, which was designed to provide professional development opportunities, mentoring, and graduate coursework in mathematics and science for elementary and middle school teachers of an urban school district in New Jersey. Entry and exit surveys were constructed to measure changes in attitudes and beliefs of teachers after program participation. Terra Nova, NJASK4, and GEPA test score data of students whose teachers participated in the program were analyzed to measure gains. A summative year-end report, which consisted of survey and test score results, was written to demonstrate how the program's goals and objectives were being met.

New Jersey Department of Education - External Evaluator and Psychometrician (2003-2006) – Served as an external evaluator and psychometrician for the Alternate Route Strand of the Teacher Quality Enhancement Grant for the New Jersey Department of Education. Responsibilities included writing quarterly and year-end reports documenting completion of program initiatives by the New Jersey Department of Education Provisional Teacher Program (Alternate Route). Provisional teachers rated the program's formal instruction component through a written survey. Data collected was subsequently analyzed to aid the New Jersey Department of Education in understanding the strengths and weaknesses of the program.

Adjunct Professor: Marlboro College, Marlboro, Vermont, January 2006 - May 2006.

- Taught *Statistics*, an undergraduate-level course offered by the Department of Mathematics.

Adjunct Professor: Graduate School of Education, Rutgers University, New Brunswick, New Jersey, June 1999 – December 2000.

- Taught *Assessment and Measurement for Teachers*, a graduate-level course offered by the Department of Educational Psychology.

- Taught *Psychometric Theory I*, a graduate-level course offered by the Department of Educational Psychology.

Physics and Statistics Instructor (with tenure): Bridgewater-Raritan High School, Bridgewater, New Jersey, September 1993 – June 2001.

- Chair of Technology Committee for Middle States Evaluation – Directed faculty in the creation of a report on uses of technology in the school. Presented the summative report to the faculty and administration for final approval.

Adjunct Statistics Instructor: Raritan Valley Community College, Somerville, New Jersey, January 1996 - May 1999.

Physics Instructor (tenure-track): Montville High School, Montville, New Jersey, September 1992 - June 1993.

Adjunct Mathematics Instructor: County College of Morris, Randolph, New Jersey, June 1992 - December 1992.

Physics and Astronomy Instructor: Delbarton School, Morristown, New Jersey, January 1992 - June 1992.

EDUCATION

Rutgers University, New Brunswick, NJ
Doctor of Education in Educational Statistics and Measurement, May 1998
Dissertation: Prediction of Student Enrollments using the Modified Regression Technique
Doctoral Committee Chair: John W. Young

Rutgers University, New Brunswick, NJ
Master of Education in Science Education, January 1992

Rutgers University, New Brunswick, NJ
Bachelor of Science in Civil Engineering, May 1989

PRESENTATIONS

Lead Presenter. Association of American Geographers, Chicago, IL, April 2015: Computing Student Yields: A Case Study in Comparing Methodology.

Panel Presenter. New Jersey Association of School Administrators, Branchburg NJ, June 2009: Forum on New Jersey School District Consolidation.

Lead Presenter. Population Association of America, New Orleans, LA, April 2008: Does Projecting School District Enrollments by Race Produce More Accurate Results?

Lead Presenter. Population Association of America, New York City, NY, March 2007: Highlights of a Demographic Study Prepared for an Abbott District.

Lead Presenter. American Association of School Administrators Rural and Small School Leaders, Baltimore, MD, July 2002: Performing Enrollment Projections in Vermont: A Case Study.

Lead Presenter. New Jersey Association of School Administrators, Atlantic City, NJ, May 2002: The Demographic Study: One size does not fit all.

Lead Presenter. New Jersey Association of School Administrators, Atlantic City, NJ, May 2001: Projecting Enrollments in Rapidly Growing School Districts.

Lead Presenter. New Jersey School Boards Convention, Atlantic City, NJ, October 2000: Enrollment projections: Making them accurate

Lead Presenter. New Jersey Association of School Administrators, Atlantic City, NJ, May 2000: Enrollment projections: A new direction.

Lead Presenter. New Jersey Association of School Administrators, Atlantic City, NJ, May 1999: Enrollment projections: A solution for high growth and low growth school districts.

Lead Presenter. American Educational Research Association, Montreal, Canada, April 1999: Predicting public school enrollments using the Modified Regression Technique.

Co-Presenter. Research Corporation Conference, Tucson, Arizona, January, 1996: Presented the experimental results of ^{152}Gd g-factors at the 2^+ and 4^+ states using a particle accelerator at Yale University.

PAPERS

Grip, R. S. (2010). Reading trends, not tea leaves. School Leader, 40(4), 32-38.

Grip, R.S. (2009). Does projecting enrollments by race produce more accurate results in New Jersey school districts? Population Research and Policy Review, 28(6), 747-771.

Grip, R. S. (2005). Enrollment trends in New Jersey. School Leader, 34(5), 20-27.

Grip, R. S. (2004). Projecting enrollment in rural schools: A study of three Vermont school districts. Journal of Research in Rural Education [On-line] 19(3). Available: http://www.umaine.edu/jrre/19-3.htm

Grip, R. S. (2002). Using demographic studies to project school enrollments. School Business Affairs, 68(7), 15-17.

Grip, R. S. & Young, J.W. (1999). The modified regression technique: A new method for public school enrollment projections. Planning and Changing, 30(3 & 4), 232-248.

AWARDS

Outstanding Dissertation Award (1999): Presented by the Rutgers University Alumni Association to the best dissertation from the Graduate School of Education

PROFESSIONAL AFFILIATIONS

American Educational Research Association
Population Association of America