THE OLD DOMINION SURVEYOR

MOUNT VERNON CHAPTER APPRENTICESHIP GRADUATION HELD JUNE 22

Commencement exercises were held at the Suburban House in Springfield on June 22, 1967 for the first graduating class of Apprenticeship Surveying Personnel.

This class consisted of twelve men, the majority of which attended the full four years.

We were honored to have Mr. Robert F. Beard, Director of Apprenticeship Division of the Virginia Department of Labor and Industry, as our speaker of the evening. Mr. Beard delivered a very interesting and informative talk dealing with education today and the apprentice.

The night of June 22, 1967 is one in which honor and distinction fell upon V.A.S. and the Mount Vernon Chapter, for that night saw the graduation of one of the very few classes of this type existing throughout the country.

This program has been the answer to one of the most pressing problems facing the Surveyor today, that being the availability of trained men.

We all realize full well that this is not the complete answer, however, we are of the opinion that the Surveyor today should have education and training available to him on a three level basis. These levels being the apprentice training, the technical college level, and the full four year degree program in the universities.

We of the Mount Vernon Chapter and of V.A.S. would like to express our sincere and heartfelt thanks to Mr. Beard, Mr. Richard L. Hampton, Mr. Robert P. Branden, Mr. James H. Harndon and his fellow instructors from the Surveying School at Fort Belvoir, and to all others who have contributed and worked so diligently to make this program the success that it is.

T. RAY HASSELL APPOINTED TO FIVE YEAR TERM BY GOVERNOR

T. Ray Hassell III of Chesapeake, Virginia, was appointed to a full term of five years on the Board for the Examination and Certification of Architects, Professional Engineers and Land Surveyors by Governor Mills E. Godwin, Jr., on July 1st.

Mr. Hassell was originally selected by the Governor in April to fill the unexpired term of Frank D. Tarrell, Jr. who had served for the past 10 years.
President's Message

It is with a great deal of sadness in which I write this message, for just a few days past the Virginia Association of Surveyors lost one of its most devoted and dedicated members. The passing of Edward L. Carroll of Fredericksburg will be a loss to all who knew him. While Ed's spirit has passed on, he will be remembered for all of his contributions to our profession.

I would like to express the congratulations of V.A.S. and myself to Mr. T. Ray Hassell, III of Portsmouth who was just appointed by Governor Godwin to a full five year term as a member of the Surveyor Section of the Board for the Examination and Certification of Architects, Professional Engineers and Land Surveyors. I feel sure that Ray will serve our profession with pride and dignity.

It is indeed a pleasure for me to announce to the entire membership of V.A.S. that the ballot for a dues increase to twenty-five dollars annually, effective January 1, 1968, received an overwhelming majority. This increase was essential in order for your association to continue its advancement.

Also I am happy to report that the Board for the Examination and Certification of Architects, Professional Engineers and Land Surveyors acted favorably upon our request for increased experience requirements for applicants desiring to become Certified Land Surveyors. Briefly those changes were that in no case shall the experience in Land Surveying be less than four years instead of the original two. Also a definition of experience was added which reads as follows: "Experience above mentioned shall be acquired in positions of responsibility which require initiative, skill and independent judgment, and shall exclude experience as chainman, rodman, instrument man, transitman (unless acting as Chief of Party), ordinary draftsmen and others doing routine work."

In addition to these, the training and experience of a nature and character satisfactory to the Board in 3(b) type work shall be required. We of V.A.S. are very happy to see this action by the Board, for we feel this is a needed step in the continued effort for the upgrading of our profession.

Edward L. Carroll former Assistant Professor in the School of Civil Engineering at Catholic University and partner in the firm of Carroll-Kim Associates died July 6th at Mary Washington Hospital in Fredericksburg, Virginia.

Born in Berkeley Springs, West Virginia, Edward graduated from Catholic University in 1942.

Serving as a Naval lieutenant in the South Pacific during World War II, he returned to Catholic University where he taught engineering from 1946 to 1952.

For several years he was associated with Wright Engineers in Fairfax, Virginia, and in 1958, formed a partnership with Robert R. Kim, with offices in Springfield and Fredericksburg, Virginia.

Well known in the surveying and engineering profession Ed Carroll was also the original instructor for the State of Virginia's 4th year apprenticeship training program which only this month awarded certificates to members of the first class.

For many years a member of V.A.S. Ed Carroll served on several committees and was most active in helping to form the apprenticeship curriculum.

He is survived by his wife Patricia, two daughters Mary Susan and Julie Katherine and two sons Martin Edward and Jonathan Daniel of 529 Butler Road in Fredericksburg.
ADOPT STANDARDS FOR JOB CLASSIFICATION

Michigan Society of Registered Land Surveyors

The Committee which was charged with the task of submitting to the Board of Directors of the Michigan Society of Registered Land Surveyors recommended occupational qualifications for land survey party personnel, filed its Report with the Surveyors' Board at its recent meeting.

After many hours of review and discussion, the Board of Directors of the Michigan Society of Registered Land Surveyors adopted the classifications for field personnel, as printed herein.

ADOPTED STANDARDS

Rodman—Chairman—

Required Education—minimum 12th grade or equivalent.
Physical Requirements—Good health with no impairing physical disability.
Age—18 years minimum.

Rodman—Chairman Grade I

Duties: Carrying equipment and materials.
Assist in and make measurements with rules, rods, and tapes.
Place site rods and targets on line with survey points.
Drive stakes.
Dig for buried monuments and markers.
Clear brush and trees.
Care for and clean tools and equipment.
Valid State license to drive automobile or light truck.
Provide miscellaneous assistance as required in the course of survey.

Rodman—Chairman Grade II

Requirements: Six months experience as Rodman—Chairman Grade I.

Duties: Expertly perform all duties of all lower classifications.
Make proper use of common survey tools and equipment.
Must be capable of performing routine duties on orders of his supervisor, correctly and efficiently.
Securing ordinary accuracy without requiring detailed instructions, or close supervision.
Make routine measurements and report same to party chief or superior.
Must be able to set up transit and give line.
Must be able to set up level.
Must be able to use dip needle.

Rodman—Chairman Grade III

Requirements: Six months experience as Rodman-Chairman Grade II.

Duties: Expertly perform all duties of all lower classifications.
Must understand survey procedure well enough to carry out duties of efficiency.
Assist instrument man without continuing orders as the work progresses.
Must readily be able to properly select topographic ground points and level reference points for topographic and construction surveys.
Must be able to comprehend surveying notes, keep simple topographic and level notes, on occasion, to perform, without field supervision and with assistance of other rodmen, small simple field surveying acts or portions of larger surveys not requiring the use of instruments under direction when performing simple operations, such as giving line and setting up level points.

Instrument Man

Required education: High School graduate, or equivalent.
Requirements: 6 months experience as Rodman-Chairman 3 or 6 months as Rodman-Chairman 2, and one year Technical College with geometry and trigonometry.
Physical Condition: Good health with no impairing physical disabilities.

Instrument Man Grade 4

Duties: Expertly perform all duties of all lower classifications.
Use standard transit and level with accuracy and reasonable speed.
Check necessary field adjustments of transit and level.
Take charge of and perform minor surveys and do ordinary level work and direct operations of field party in absence of party chief.
Keep notes and make simple field calculations, and compute grade cut sheets.
Properly use normal incidental equipment; such as, surveyor's compass, electronic pipe locator, etc.

Instrument Man Grade 5

Requirements: 6 months experience as Instrument Man 4.
Duties: Expertly perform all duties of all lower classifications.
Perform necessary field checks of accuracy of transit and level and make field adjustments if required.
Capable of working accurately and expertly with all makes and varieties of surveying instruments and related equipment.
Keep good survey notes for all types of surveys, including levels and stadia surveys.

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JOB CLASSIFICATION . . .

Continued from Page 3

Take complete charge of and direct complex survey work in absence of party chief.

Make and check surveying calculations, including traverse closures.

Instrument Man Grade 6

Requirements: 6 months experience as Instrument Man 5.

Duties: Expertly perform all duties of all lower classifications.

Rapidly produce results to the full capabilities of all kinds and types of surveying and instruments.

Perform first order precision work with suitable equipment.

Survey Party Chief

Requirements: 6 months experience as Instrument Man 6 and 2 years Technical College with trigonometry, or equivalent or college graduate with 6 months experience as Instrument Man 4.

Physical Condition: Good health with no impairing physical disabilities.

Survey Party Chief Grade 7

Duties: Expertly perform all duties of all lower classifications.

Working from survey notes, maps, deeds, plats, property lines, subdivision monuments, etc., directs and/or participates in work of instrument man and Rodman engaged in making field surveys.

Reviews performance of survey party; verifies accuracy of measurements of survey party; keeps accurate records, notes and sketches of work performed.

Prepares report on field conditions.

Secures information from state, city and governmental agencies and other surveyors.

Survey Party Chief Grade 8

Duties: Expertly perform all duties of all lower classifications.

Make solar and celestial observations.

Expeditiously use optical instruments, including geodimeter, tellurometer, etc.

Reduce notes and make necessary calculations for celestial observations and establish cardinal directions.

Survey Party Chief Grade 9

Duties: Expertly perform all duties of all lower classifications.

BOOK NOTES

Occasionally there are requests for information on books for surveying and mapping which might be available. The following are some of the best known which are of recent date and should be available from the publishers.


Boundary Control and Legal Principles, Curtis M. Brown; A textbook on the principles of boundary control and the legal elements that determine the exact location of property. John Wiley & Sons, 1957.

Evidence and Procedures for Boundary Location, Curtis M. Brown and Prof. Winfield H. Eldridge; Property location, evidence, historical background, platting, court procedures, etc. John Wiley & Sons, 1962.


Real Estate Law, Robert Kratovil; Land descriptions, titles and interests in land, deeds and recording, zoning, and adverse possession. Prentice-Hall, 1952.

Surveying—An Introduction to Engineering Measurements, Legault, McMaster and Marlette; Subdivisions, cadastral surveys and legal descriptions. Prentice-Hall, 1956.


Robert F. Beard—Director of Apprenticeship Division of the Virginia Department of Labor and Industry addresses first four year graduating class of surveying personnel and Mount Vernon Chapter members.

Walter C. Sampsell, Jr. is presented his diploma by President Cook. With a 4 year average of 93, Sampsell has also been employed by the firm of Carlisle and Cook for the past 14 years. Last year he received his surveyors license and was also given VAS membership by his employers.

Members of Virginia Department of Labor and Industry and VAS officials at head table during apprenticeship program.
The earliest maps of North America were compiled in the 16th Century from coastal observations of ships' navigators and primitive route sketches of adventurers. By the time of the English settlements at Jamestown (1607) and Plymouth (1620) dozens of small-scale (about 1:2,500,000) charts with flamboyant cartouches carrying names like Mercator, Verrazano and Tatton were available for the enterprising employer, promoter or dreamer.

Perhaps the earliest trained surveyor to make fairly accurate local maps was the famous English mathematician, Thomas Harriot (1560-1621). Sir Walter Raleigh sent him to accompany Sir Richard Grenville to the New World, where he made surveys of Virginia about 1585. The versatile Captain John Smith (1575-1631) published his widely-used maps of the Chesapeake Bay region in 1612 and coastal New England in 1616 at scales of about 1:100,000. It is interesting to note that among the books carried by the redoubtable Elder William Brewster (1567-1644) aboard the "Mayflower" was one on surveying. It may well have been Aaron Rathbone's, "The Surveyor, Four Books" published in London in 1616, a popular work at the time; or it could have even been one of the earliest books ever printed in England on surveying "Boke of Measuring" by Richard de Benese circa 1570.

A pioneer in the history of American surveying was Nathaniel Foote (c. 1600-1644), who went down the Connecticut River from Springfield, Mass., to settle the new town (sic) of Wethersfield, Conn., in 1634. Two years later he laid out the Common, home lots, pasture lands, etc., and established the boundary line with nearby Hartford. Wethersfield is of particular interest to civil engineers as the birthplace and boyhood home of Benjamin Wright (1770-1842.)

Other surveyors contemporary with Foote include Andries Hudde (1608-1663), who mapped New Amsterdam; Augustin Herrman (c. 1605-1686), who worked in the Maryland-Virginia area; and the team of Solomon Saffrey and Nathaniel Woodward that staked out the controversial boundary between Rhode Island and Massachusetts in 1642. About 70 years later it was agreed "That the stake set up by Nathaniel Woodward and Solomon Saffrey, skilful, approver artists . . . (would be) the commencement of the line between Massachusetts and Rhode Island . . . ."

During the latter half of the 17th Century, men like Thomas Holm (1624-1695) and John Bonner (c. 1643-1736) were making detailed city maps of the burgeoning cities of Philadelphia and Boston, Eusebius Kino (c. 1645-1711) was at this same time making extensive surveys of Mexican territories (including what is now the Southwestern United States), but the principal work was being done in establishing legally recognizable boundaries in the Atlantic colonies. With their crude, open-vaned compasses, and clumsy chains, surprisingly accurate surveys were made in New Jersey by Surveyor General (of "West Jersey Province") Daniel Leeds (1652-1720), and in Pennsylvania by Edward Penington (1667-1701), its Quaker Surveyor-General and colleague of Thomas Holm. Both Leeds and Penington were active pamphleteers and wrote such tracts as "News of a Trumpet Sounding in the Wilderness" and "The Discoverer Discovered."

At the turn of the 18th Century, Joshua Fry (c. 1700-1757) was among the last of the Pre-Revolutionary surveyors of note. Born in England, he apparently left Oxford after two years of study to emigrate to Virginia about 1720. By the 1740's Fry was a leading citizen of Albermarle County. With Peter Jefferson (father of Thomas) as his deputy, he surveyed part of the Carolina Border and later published the famous "Maps of the Inhabited Parts of Virginia" (1751). A few years before this, as professor of mathematics at Williams and Mary, he had approved young George Washington's registration as the Culpeper County surveyor. Three years after, Colonel Fry was leading the Virginia Militia against the French when he was overcome by fever near (now) Cumberland, Md., where he died May 31, 1754. His successor, Lt. Col. George Washington, was to gain much fame from his leadership of this expedition.

Mention might also be made of James Genn, Washington's mentor in surveying, and William May who, undaunted by the Great Dismal Swamp, surveyed the famous Byrd Line of 1728 along Virginia's southern boundary. Although an inaccurate assumption as to magnetic variations of about 6 sec caused a significant error in the completed line, one must admire the perseverance required in running a survey 242 miles through total wilderness. It was, by the way, Fry and Jefferson who extended this line 90 miles in 1749. Perhaps the most famous names in American surveying are Charles Mason and Jeremiah Dixon, the two English mathematicians who were engaged to verify the controversial boundary between William Penn's holdings and those of Lord Baltimore. From 1763 to 1767 they so carefully surveyed the border, that 130 years later an elaborate resurvey showed a difference of only 2.3 seconds of arc.

The Mason-Dixon survey is a convenient point to end the Colonial period of American survey history.

Editor's Note: The following article appeared in Civil Engineering, April, 1967.
ANNOUNCEMENT

Membership Applications received by July 25th will insure your names appearing in the 1967-1968 V.A.S. Directory. This Directory is distributed to all Certified Surveyors and various agencies throughout the State.

CENTRAL CHAPTER . . .

The Richmond Chapter held a meeting on May 26th at the Disottoque Lounge attended by 16 surveyors. Various phases of business was discussed, resulting in some matters to be attended to locally and other matters to be sent on to State committees.

It was decided to have the annual summer picnic again at Forrist Seargent's river home on the Mattaponi River on July 22nd. It was also brought out that our chapter will play host to the annual golf match and the Fall V.A.S. Board Meeting.

Ben Newlon was re-instated for membership and Melvin Floyd has joined our chapter. We also have an application from Edward Fisher for membership. This brings our total membership to 22 paid-up members to the Richmond Chapter. We also voted to acquire the lapel pins and tie tacs for local distribution.

MONTICELLO CHAPTER . . .

The second meeting of 1967 of the Monticello Chapter, V.A.S., was held at 6:30 P.M. May 19th at the General Wayne Hotel in Waynesboro, Virginia.

The members present were Harvey Bailey, Jim Bell, Tom Blue, Bill Clark, W. A. Crawford, Bob Funk, Frank Gregg, Jerry Harris and Tom Shumate. Also Morris Foster and Ray Snow of Charlottesville joined the chapter at this meeting. Guests present were Mr. Carter Allen, Mr. Ned Higgs, Mr. Ray Nicely and Mr. Ed Smith.

During the business portion of the meeting, Jim Bell reported to us on the action taken at the last V.A.S. state board meeting held in Richmond in April and also appointed Harvey Bailey to the state association Illegal Practices Committee.

Mr. Roudabush represented the Chapter in "Career Night" at the Lane High School on April 19. This very interesting talk about surveying as a profession and its potential for the future was well received by the students with a result that several high school graduates have expressed an interest in our profession. Plans are in the making to again have a repeat performance for next year's graduating class as well as several other area high schools.

At the conclusion of the business meeting, Mr. Carter Allen, Commonwealth Attorney for the City of Waynesboro, gave a very informative talk on the legal aspects of surveying and some of the requirements for title insurance surveys in our area.

SOUTHERN CHAPTER . . .

The Southern Chapter's second meeting of the year was held at Roberts Restaurant in Clarksville on June 10, 1967, with one member absent. As usual, this meeting included the ladies and in addition, our V.A.S. State President, George Cook, Jr. and his wife attended. Several State Committee appointments were made as follows: Ethics—F. Richard Quible, Chase City; Fees & Salaries—Erskine W. Proffitt, Lynchburg; Highway Liaison—Alfred Carter, Halifax.

The brochure prepared by the Public Relations Committee of the State has been distributed to some of the high schools in the Chapter area. This was well received by the guidance counselors contacted.

The chapter voted to purchase 15 lapel pins (with tie tac option). The six applicants for membership to the V.A.S. were named and there was no opposition expressed.

The Hall of Fame requirements were discussed and one member is busy compiling some data for a candidate. Tom Charlton was appointed Public Relations Officer with instructions to make news of the V.A.S. and the Southern Chapter available to the news media.

Alfred Carter has been busy on the Chapter level with his Highway Liaison committee duties. Most of the resident engineers have responded with varying requirements for subdivision streets. All data will be forwarded to Jack Hill, V.A.S. State Highway Liaison Committee Chairman.

President George Cook made his official visit to the Chapter. It was a pleasure to have him and his wife with us.

The next meeting was scheduled for August 19th, with Alfred Carter in charge of arrangements.

CENTRAL CHAPTER TO HOST DIRECTORS AT FALL MEETING

The Central Chapter of V.A.S. has offered for the second year, to be host at the annual fall meeting of the State Board of Directors, to be held in conjunction with their Ladies Night banquet. This well attended affair will start off with a golfers luncheon at the Hermitage Country Club on October 6th, and will be followed by the annual surveyors golf match. J. K. Timmons of Richmond was the low gross winner in 1966 and plans to again defend his title.

Following the golf match members will attend a cocktail hour and banquet at the new Howard Johnson Motel on Dover Road. The program Friday night will be outstanding as the week-end is also highlighted by the Tobacco Festival in Richmond. Saturday will be devoted to the business sessions and the Board agenda.

All members of V.A.S. are invited with a special invitation being extended to their wives. A special program has been arranged on Saturday for the V.A.S. wives which include a shopping tour and theatre party.
29 Candidates Pass State Exams

Mr. Cecil J. Cross, Alexandria, Virginia, Chairman of the Land Surveying Section of the Virginia State Board for the Examination and Certification of Architects, Professional Engineers and Land Surveyors, announces that the following persons were certified as Land Surveyors as a result of having passed an examination given in Richmond, Virginia on May 1, and 2, 1967:

Alvin M. Blumert
John G. Cargill, Jr.
Jack A. Clark
Milton T. Estes
Collin E. Farmer
Edward D. Fisher
William M. Foster
Ennis O. Johnson
Cecil W. King
William W. Ludlow, Jr.
William Pallavicini, Jr.
Charles E. Ross
Larry N. Scartz
James A. Smith
Peter G. Vandenberg
Wilbur M. Whitson
Arthur D. Whittaker

An examination was also administered by the Land Surveying Section for those Certified Land Surveyors wishing to be qualified to engage in subdivisional work. The following candidates were successful in passing this examination:

Calvin R. Allen
John P. DiGiulian
Joseph C. Draper
H. Bruce Edens
Frank H. Hammond, III
David C. Holland
Charles J. Huntley
Joseph Monaco
Wayne E. Niskanen
Charles E. Ofenstein
Charles B. Shreve
Elmer P. Thompson

Other members of the Land Surveying Section of the Virginia State Board for the Examination and Certification of Architects, Professional Engineers and Land Surveyors are Mr. J. Walter Jones, Jr., of South Boston, Virginia and Mr. T. Ray Hassell, III of Portsmouth, Virginia.

CAPTAIN WM. J. MORAN PROMOTED

Captain William J. Moran our host for the tour of the USS RANDOLPH in January has been selected by the U. S. Navy for promotion to the rank of Rear Admiral.

MARYLAND SURVEYORS CONVENTION
September 14, 15 and 16, 1967
CAROUSEL MOTEL
Ocean City, Maryland

VIRGINIA ASSOCIATION OF SURVEYORS 20TH ANNUAL MEETING
January 18-21, 1968
WILLIAMSBURG LODGE
Williamsburg, Virginia

The Old Dominion Surveyor
P.O. Box 278
Falls Church, Virginia 22046