

PROCEEDINGS  
OF THE  
COMMON COUNCIL.

---

REGULAR SESSION.

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CHAMBER OF THE COMMON COUNCIL OF THE  
CITY OF INDIANAPOLIS,  
MONDAY, AUGUST 23D, 1869, 7½ O'CLOCK, P. M. }

The Common Council met in regular session.

Present—Hon. John S. Newman in the chair, and the following members :

Councilmen Brown, Cottrell, Gimber, Harrison, Heckman, Kahn, Kennington, Locke, Marsee, Newman, Pyle, Thalman, Thoms, Weaver, Whitsit, Wiles and Woodburn—17.

Absent—Councilmen Shepherd—1.

The proceedings of the regular session held August 16, 1869, were read and approved.

CALL OF THE ROLL.

Mr. Brown offered the following motion :

That the Street Commissioner be directed to raise the culverts on the west side of Illinois street and the north side of Georgia street at its intersection with Illinois street, to such height as will enable the water to flow under the same freely.

Which was adopted.

Mr. Cottrell presented the following communication :

INDIANAPOLIS, Aug. 16, 1869

*To the Mayor and Common Council of the City of Indianapolis :*

GENTLEMEN:—We are informed that you wish to purchase a central location for a City Hall, Council Chamber, and City Offices. We have one of the most desirable lots in our city, and will offer it cheap. The lot is on the north-west corner of Market and Delaware streets, one of the most desirable front lots, 195 feet on Delaware street, running back 67½ feet on Market street, and a 30 foot alley on the north end. We offer the lot at one hundred and fifty-five dollars per foot front on Delaware street. Col. Parker paid \$180 per foot on the square below for business; our property is worth more than his; you can get a good rent for the basement, and a large paying rent for rooms on the first story, say 10 rooms, which will be a good investment for you.

ANDREW & JOHN WALLACE.

Which was referred to the Committee on Public Buildings.

Mr. Cottrell offered the following motions :

That the Street Commissioner be directed to have the gutter that crosses Sinker street, at its intersection with the first alley east of Alabama street, properly bowldered.

That the Street Commissioner be instructed to have the gutter cleaned on the east side of New Jersey street, between Washington street and the Bellefontaine R. R. track.

That the Street Commissioner be directed to have a plank crossing made at the crossings of East and New Jersey streets.

Which were adopted.

Also, the following resolution :

*Resolved*, That the Street Commissioner be instructed to notify the Indiana Central Railroad Company to plank all their crossings on New Jersey street to its full width, and on failure to do the same, after sixty days' notice, the Street Commissioner shall cause the same to be done and the expense thereof shall be collected from the aforesaid Railroad Company.

The question being on the adoption of the resolution,

Those who voted in the affirmative were Councilmen Brown, Cottrell, Gimber, Harrison, Heckman, Kahn, Kennington, Pyle, Thalman, Thoms, Weaver, Wiles and Woodburn—13.

No Councilman voting in the negative.

So the resolution was adopted.

Mr. Kennington presented the following petition :

INDIANAPOLIS, Aug. 23, 1869.

*To the Mayor and Common Council of the City of Indianapolis :*

GENTLEMEN:—James Wood, Esq., deceased, late Civil Engineer, set stakes for me on the crossing of McCarty and Tennessee streets, and authorized me

to grade and gravel said crossing, that the city would pay me for it under my certain contract with the city for grading and graveling Tennessee street and sidewalks. I would respectfully ask pay for the same. I have been paid for graveling, but not for the grade

Also, I would respectfully ask pay for grading and graveling on both sides of Pogue Run, as appears from an estimate allowed me for grading and graveling Illinois street and sidewalks. I have filed affidavits, but Mr. Seidenticker, one of the owners of said property for which grading and graveling was done was, at that time, a member of the City Council, and by some means or the other prevented me from getting the precepts issued. I would respectfully ask that the city either issue precepts or pay me for said work. I understand that the City Street Commissioner with his force is finishing my job on South Tennessee street without any authority from me, and I desire to know whether the city have taken the job from my hands or not.

Very respectfully,

THOMAS WREN.

Which was referred to the City Civil Engineer, with instructions to report an estimate of all the work done by Mr. Wren.

Mr. Kahn presented the following petition:

INDIANAPOLIS, Aug. 23, 1869.

*To the Mayor and Common Council of the City of Indianapolis:*

GENTLEMEN:—We, the undersigned, owners of real estate in out-lot No. 170 in the City of Indianapolis, Indiana, respectfully petition your honorable body to enact an ordinance to provide for the grading and graveling of Muskingum alley from Pratt to First streets.

Respectfully,

James Frank,  
A. S. Mount,  
A. G. Porter.

Which was received.

Also, special ordinance No. 95—1869, entitled:

AN ORDINANCE to provide for grading and graveling Muskingum alley from Pratt to First streets.

Which was read the first time.

Also, special ordinance No. 96—1869, entitled:

AN ORDINANCE to provide for grading and paving with brick the sidewalk on the east side of Alabama street, between Market and Washington Sts.

Which was read the first time.

Mr. Locke presented the following petition:

INDIANAPOLIS, Aug. 23, 1869.

*To the Mayor and Common Council of the City of Indianapolis:*

The undersigned petitioner, property holder on Indiana Avenue, respectfully pray that the sidewalk from Mississippi to West streets, on the south side of said Avenue, be laid with a brick pavement of ten feet in width.

JOHN LINTNER.

Which was received.

Also, special ordinance No. 97—1869, entitled :

AN ORDINANCE to provide for grading and paving with hard brick the south sidewalk on Indiana Avenue, between West and Mississippi streets.

Which was read the first time.

Mr. Pyle offered the following motion :

That the Street Commissioner be instructed to remove the garbage from the East Market Square and grade and gravel the walk on the north side and curb with oak lumber.

Which was adopted.

Mr. Thalman presented the following petition :

INDIANAPOLIS, Aug. 19, 1869.

*To the Mayor and Common Council of the City of Indianapolis:*

GENTLEMEN:—The undersigned, owner of the real estate fronting on alley next to the Canal race, between Washington street and National Road, respectfully petition your honorable body to pass an ordinance providing for the grading and graveling the above named alley with good River or Creek gravel. And your petitioner will ever pray, &c.

ADAM GOLD.

Which was received.

Also, special ordinance No. 98—1869, entitled :

AN ORDINANCE to provide for grading and graveling the alley running north and south from the National Road to Washington street.

Which was read the first time.

Mr. Wiles offered the following motion :

That the City Sexton be instructed to have the dead trees removed from the City Cemetery; also, to have such other trimming of trees done as is necessary for the protection of the grounds.

Which was adopted.

Mr. Whitsit presented the following petition :

INDIANAPOLIS, Aug. 23, 1869.

*To the Mayor and Common Council of the City of Indianapolis:*

We, the undersigned petitioners, pray your honorable body that you will fill, or cause to be filled, certain ponds in and near Buchanan and McCarty streets, as they are very foul and stagnant water and not considered healthy, and are a great nuisance to the people living in the vicinity, and for this your petitioners will ever pray, &c.

Wm. Martindale,  
Henry Rodewald,  
Thomas Dalton,

P. O. Barrett,  
Henry Goldsborough,  
And 21 others.

Which was received.

Also, the following resolution :

*Resolved*, That the owners of the following described real estate, to-wit: Lot Number 173, in Daugherty's subdivision of out-lot Number 99, in the City of Indianapolis, be, and they are hereby, required to fill and drain the same, as, in the opinion of this Council, there is a hole or excavation thereon, in which water has or may become so stagnant and noxious as to be a nuisance and injurious to the health and comfort of said city and of the inhabitants thereof, and that the Street Commissioner be, and he is hereby, required to notify the owners thereof, as provided by an ordinance passed April 23d, 1866, entitled "An ordinance providing for the drainage and filling up of ponds, excavations and holes, and prescribing penalties for the failure to fill up or drain the same," and that in case of the failure of the owners thereof to fill or drain the same, the Street Commissioner proceed to drain or fill said excavation, as provided in said ordinance; provided the cost thereof shall not exceed ten per cent. of the value of the aforesaid real estate as assessed upon the tax duplicate for city purposes.

The question being on the adoption of the resolution,

Those who voted in the affirmative were Councilmen Brown, Cottrell, Gimber, Harrison, Heckman, Kahn, Kennington, Marsee, Newman, Pyle, Thalman, Thoms, Weaver, Whitsit, Wiles and Woodburn  
—16.

Councilman Locke voting in the negative.

So the resolution was adopted.

Also, the following resolution :

*Resolved*, That the owners of the following described real estate, to-wit: Lot Nos. 45 and 46, in Greer & Walters' subdivision of out-lot No. 100, in the City of Indianapolis, be, and they are hereby, required to fill and drain the same, as, in the opinion of this Council, there is a hole or excavation thereon, in which water has or may become so stagnant and noxious as to be a nuisance and injurious to the health and comfort of said city and of the inhabitants thereof, and that the Street Commissioner be, and he is hereby, required to notify the owners thereof, as provided by an ordinance passed April 23d, 1866, entitled "An ordinance providing for the drainage and filling up of ponds, excavations and holes, and prescribing penalties for the failure to fill up or drain the same," and that in case of the failure of the owners thereof to fill or drain the same, the Street Commissioner proceed to drain or fill said excavation, as provided in said ordinance, and provided that the cost thereof shall not exceed ten per cent. of the value of the aforesaid real estate as assessed upon the tax duplicate for city purposes.

The question then being on the adoption of the resolution,

Those who voted in the affirmative were Councilmen Brown, Cottrell, Gimber, Harrison, Heckman, Kahn, Kennington, Marsee, Newman, Pyle, Thalman, Thoms, Weaver, Whitsit, Wiles and Woodburn  
—16.

Councilman Locke voting in the negative.

So the resolution was adopted.

Also, the following resolution :

*Resolved,* That the owners of the following described real estate, to-wit: Lots Nos. 10, 11, 12 and 13, in Bradshaw and Holmes' subdivision of out-lot numbered 100, in the City of Indianapolis, be, and they are hereby, required to fill and drain the same, as, in the opinion of this Council there is a hole or excavation thereon, in which water has or may become so stagnant and noxious as to be a nuisance and injurious to the health and comfort of said city and of the inhabitants thereof, and that the Street Commissioner be, and he is hereby, required to notify the owners thereof, as provided by an ordinance passed April 23d, 1866, entitled "An ordinance providing for the drainage and filling up of ponds, excavations and holes, and prescribing penalties for the failure to fill up or drain the same," and that in case of the failure of the owners thereof to fill or drain the same, the Street Commissioner proceed to drain or fill said excavations, as provided in said ordinance, provided the cost thereof shall not exceed ten per cent. of the value of the aforesaid real estate as assessed upon the tax duplicate for city purposes.

The question being on the adoption of the resolution,

Those who voted in the affirmative were Councilmen Brown, Cottrell, Gimber, Harrison, Heckman, Kahn, Kennington, Marsee, Newman, Pyle, Thalman, Thoms, Weaver, Whitsit, Wiles and Woodburn—16.

Councilman Locke voting in the negative.

So the resolution was adopted.

Dr. Woodburn offered the following motion :

That the City Clerk advertise for proposals for building a stone culvert two feet high and three feet wide, to be covered with flag stone four inches in thickness, at the crossing of Market and Tennessee streets, south side.

Which was adopted.

Also, special ordinance No. 99—1869, entitled :

AN ORDINANCE to provide for grading and graveling Severn alley and sidewalks, between St. Clair and Pratt street, except such portions as have already been graded and graveled.

Which was read the first time.

Also, general ordinance No. 49—1869, entitled :

AN ORDINANCE to protect the paved streets and alleys of the City of Indianapolis.

Which was read the first time.

Mr. Gimber moved to reject the ordinance.

Dr. Woodburn called for the ayes and noes.

Those who voted in the affirmative were Councilmen Brown, Gimber, Kahn, Kennington, Locke, Marsee, Pyle, Thoms and Wiles—9.

Those who voted in the negative were Councilmen Cottrell, Heckman, Harrison, Newman, Thalman, Whitsit and Woodburn—8.

So the motion to reject was adopted.

Mr. Wiles moved to reconsider the vote just taken.

The question being on reconsidering,

Those who voted in the affirmative were Councilmen Cottrell, Harrison, Heckman, Locke, Newman, Pyle, Thalman, Weaver, Wiles and Woodburn—10.

Those who voted in the negative were Councilmen Brown, Gimber, Kahn, Kennington, Marsee, Thoms and Whitsit—7.

So the vote was reconsidered.

The question then recurring on the motion to reject the ordinance,

Those who voted in the affirmative were Councilmen Brown, Gimber, Kahn, Kennington, Marsee, Pyle, Thoms and Whitsit—8.

Those who voted in the negative were Councilmen Cottrell, Harrison, Heckman, Locke, Newman, Thalman, Weaver, Wiles and Woodburn—9.

So the motion to reject the ordinance was lost, and the ordinance passed to its second reading.

Mr. Marsee offered the following motion :

That the Street Commissioner be directed to cut down the shade trees on the corner of the alley in front of Mr. John W. Brough's property.

Which was adopted.

Mr. Kahn offered the following motion :

That further time be granted for the opening of Vermont street, provided the property owners give the Council a sufficient guaranty that at the expiration of two months the street shall be opened. ✓

Which was adopted.

Mr. Newman presented the following communication and resolution :

INDIANAPOLIS, Aug. 23, 1869.

*To the Mayor and Common Council of the City of Indianapolis :*

At a meeting of the citizens invited to accompany the Committee of the Common Council to Peoria, Illinois, to examine the Holly System of Water Works in operation there, held on the evening of Saturday, August 21, 1869,

the following resolutions were unanimously adopted, a copy of which Mr. Stoughton A. Fletcher, Jr., was authorized to present to the next meeting of the City Council.

*Resolved*, That though favorably impressed with the operation of the Holly System of Water Works, on the investigations already made at Peoria, we recommend that the Council appoint a Committee of three citizens of known probity, mechanical and scientific skill, free, or as far as possible free, from prepossession in favor of any particular system of works, to examine said system as the same is in operation at the places where the Holly System has been longest in use, and that they be authorized to examine the merits of other systems and report to the Council the result of their examination within one month from the date of their appointment.

*Resolved further*, That it is the sense of this meeting that some system of water supply should be introduced into the City of Indianapolis without any more delay than is absolutely required to determine upon the most efficient plan.

H. G. CAREY, Chairman.

E. W. HALFORD, Secretary.

Which was received.

By consent, Mr. Brown presented the following upon the same subject :

INDIANAPOLIS, Aug. 23, 1869.

*To the Mayor and Common Council of the City of Indianapolis :*

The undersigned members of the Special Committee, beg leave to report that, in company with a number of Councilmen and other citizens, they visited Peoria, Illinois, on the 17th and 18th instant, and returned by the way of Springfield, Illinois. At the first named city they examined the Holly System of Water Works, on the 18th. The works are about 2½ miles from the center of the city, in substantial brick buildings. The machinery consists of two engines of 300 horse power, one rotary engine of 200 horse power and four rotary pumps. Your Committee witnessed the running of but two pumps, the other two being held in reserve for fire purposes. The water is obtained from the Peoria Lake, a large body of good water, forming a natural reservoir, and this water is intended to be filtered through gravel into a series of vats from whence it is pumped directly into the mains and cross pipes of the city. The pumps did good service in throwing streams from a hydrant near the works, and also, from nine different hydrants at the same time in the city. The works have but just been finished and have not yet been accepted by the city, and your Committee are of opinion that, until further tested, the same system ought not to be applied to this city.

At Springfield there are good Water Works operated by indifferent and cheap machinery, the water being pumped from the Sangamon River four miles to a reservoir and stand pipe near the city limits, and distributed from that point throughout the city. The source of supply is inferior to that of Peoria, and, as a consequence, the water is not so pure for domestic purposes.

Your Committee are of opinion that no time should be lost by the Council in surveying for a source of supply for good water for all purposes, and recommend that such a survey be made looking to Fall Creek or White River as the source for supply, and that estimates be obtained from competent men of the cost of constructing an aqueduct from such source, if any there be, believing that before resorting to pumps and engines, this old, reliable method of supplying water should be, at least, inquired into, and if feasible and not too expensive adopted.

Respectfully submitted,

AUSTIN H. BROWN, C. HECKMAN, JOHN L. MARSEE,	}	Committee.
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By consent, Mr. Whitsit offered the following resolution :

*Resolved*, That the Common Council respectfully request Gen. T. A. Morris and James W. Brown to assist the Civil Engineer in making a survey from this city up Fall Creek, to such distance as they may deem expedient, the object of such survey being to fully test the practicability of supplying the city with water by means of a reservoir and pipes therefrom; said survey to give the approximate distance and cost of the main pipe or pipes, the size and cost of a reservoir or dam across said creek, and generally all facts necessary to a full and complete understanding of a plan or plans to supply the city with water, by gravitation, from said source.

On motion, the whole subject of Water Works was laid over for one week.

By consent, Mr. Marsee, from the Committee on Sewerage, made the following report :

INDIANAPOLIS, Aug. 23, 1869.

*To the Mayor and Common Council of the City of Indianapolis:*

GENTLEMEN:—Your Committee on Sewerage would respectfully report, that in pursuance of the instructions received from the Council they invited the Civil Engineers of Cincinnati, Newport and Chicago, to visit our city to aid us in devising a general system of sewerage. On the 27th of July, R. C. Phillips, Engineer, and Jacob Wirth, ex-Engineer, of Cincinnati, arrived here, and in company with our own Civil Engineer, the Mayor, your Committee, and other members of the Council, visited all parts of the city, examining it with special reference to underground and surface drainage. These gentlemen have a high reputation for ability in their profession, and the results of their examination and the plan they have proposed is satisfactory, with but one slight exception, to your Committee. We have recently received their report, together with a profile map of the proposed Washington street sewer, and a map containing a complete system of sewerage within the present city limits. This report, and the accompanying maps, are herewith submitted.

The general system comprises five main or trunk sewers, (marked in red lines on the map,) with the accompanying laterals or pipes, (marked in blue); the dimensions of the mains at various points and directions, both of the mains and laterals, are fully indicated on the map. The profile shows the size, grade and depth below the surface of the Washington street sewer. The mains forming the system, as shown on the maps, are as follows:

1st. The longest and most important main runs west from Pogue Run culvert, on Washington street, to the River. It is 8 feet in diameter at the culvert, and its bottom is 18 feet below the surface of the street; it is 8 feet in internal diameter at the beginning and for a distance of 3 squares west; it then increases to 8½ feet for 3 squares, then to 9 feet for 3 squares, then to 9½ feet for 4 squares, and then 10 feet until it reaches the River. Two grades have been indicated on the profile by the Engineers; one in red lines, beginning at the culvert, gives the bottom of the sewer a uniform descent of 2 inches to the 100 feet to West street, and 7½ inches to the 100 feet from West street to the River. The other grade (in blue lines) begins at the culvert, has a uniform descent to the River at 3¾ inches to the 100 feet. The first grade will save about 12,000 yards of excavation, but the Engineers unhesitatingly recommend the adoption of the 3¾ inch grade, and your Committee concur therein. The increased and steady velocity gained by the current, and the increased space drained will more than compensate for the increased cost. Twenty-six lateral sewers or pipes are indicated on the map as entering the main line from the north and south; these may be of such size and materials, and can be built at such times as may be necessary. Those on the

leading cross streets being built first, as the addition east of the city will be incorporated under the city government before many years, the Washington street sewer may then be extended eastward as far as desirable on the National Road, and the territory north and south of it may then be drained into it. It is desirable to put a catch basin at Pogue Run to drain a part of that stream through the sewer to the River.

2d. The second great main in the system is intended to carry off the waters of Virginia River; for this two routes are indicated, either of which may be followed. The first, or Virginia Avenue sewer, begins at the junction of the Avenue and McCarty street, with a diameter of 5 feet, which increases to 6 feet at South street, and runs thence to Washington street, joining the main sewer there. If this route be taken the size of the Washington street main must be increased one foot in diameter from thence to the River. This route would have 16 lateral drains.

The other line for Virginia River may be termed the South street sewer, and begins on the donation line in Fletcher Avenue, running north-west on the Avenue to South street, west to Illinois, south to Merrill street, west to Kentucky Avenue, and south-west to the River. It is 5 feet in diameter at the beginning, increasing at various points to 8 feet on Kentucky Avenue. It is joined on the Avenue by a branch main running south-west from Georgia street. This route will receive about 45 lateral drains, and with the Ray street sewer will drain nearly one-half of the city, making it at the present, perhaps, the most important of the sewers.

3d. The third great main begins at the crossing of Alabama street and Massachusetts Avenue, running west on Vermont street to Fall Creek. It is 3 feet in diameter at the street, increasing 6 inches in diameter for each 4 squares to Patterson street. It is 5 feet in diameter at the Creek. It has 34 lateral drains entering from the north and south. The main can hereafter be extended eastward as it may be needed.

4th. The fourth main begins at the crossing of Tennessee and North sts., running west to Indiana Avenue, and thence north-west on the Lafayette Road to Fall Creek. It has 16 laterals on the intersecting streets, and the main can hereafter be extended east on North street, and north-east on Fort Wayne Avenue, if necessary. The Engineers have omitted to place the size of this main on the map, but we think it should be  $3\frac{1}{2}$  feet in diameter at the beginning, and 5 feet at the Creek.

5th. The fifth main is the Ray street sewer, now in course of construction, intended to drain the Lake McCarty region, and extending from Lake McCarty to the Creek. Eight lateral drains are indicated on the map as connected with this main.

The above mentioned mains and laterals constitute the general system as laid out by the Engineers for the present limits of the city, but the mains can be extended and the laterals increased in number to correspond with any future growth by annexation of the present suburbs.

The Committee would recommend the adoption of the system, as above mapped out, to be followed in the future construction of our sewers. One of the two routes for the water of Virginia River, however, must be chosen, and though the Engineers recommend the Virginia Ave. route as the shortest and cheapest, the Committee, after full consideration, are of opinion that the strongest reasons exist for the adoption of the South street route. In the first place, the Washington street main has water enough to carry without Virginia River. If the large district east of the city be annexed, the Washington street sewer will ultimately be extended far to the east, and with its many additional laterals would be flooded to its full capacity. 2d. By following the South street route the whole region between Maryland and Ray sts., and Kentucky and Virginia Avenues, will be thoroughly drained; but if the Virginia Avenue line be chosen, this whole section is left unprovided for. 3d. Although the South street route is longer, it seems to us that the great advantage secured by it, and the sewerage it gives a large district will largely counterbalance its increased cost. We therefore strongly urge the adoption of the South street route in the general plan, but with the following change

in its line as laid down on the map. We think that instead of bending south on Illinois street to Merrill street, and thence west to the Avenue, that it should continue west from Illinois street to Kentucky Avenue, and thence to the River, and that Merrill street be drained by a lateral drain to the Avenue. By this line we entirely avoid two sharp turns in the sewer, get the same fall in a much shorter distance, and of course an increased velocity in the current. The line we recommend therefore begins on the donation line on Fletcher's Avenue, running north-west to South street, west on South street to Kentucky Avenue, and south-west on Kentucky Avenue to the River—Virginia Avenue and Merrill street to be provided for by lateral drains. We think the system thus mapped out a very efficient one, and that if adopted and completed it will afford perfect drainage. Each main sewer is in a measure independent of the others, yet all interlock in the general plan. Each main may be separately constructed, and the whole system thus gradually completed without seriously impairing our resources.

It will be unnecessary, and indeed impossible, for us to undertake the construction of all the mains at once, or even one or two of the mains with all of their laterals. We would urge the construction of the mains first, with only such laterals as can hardly be dispensed with—as, for instance, Washington street main, with laterals on Illinois, Pennsylvania, Alabama and East streets—by so doing we get, at least, partial advantages in the sewerage of large districts without so large an expenditure, and other laterals can be added as they are needed.

The next question to be considered is somewhat difficult, on account of the local wants and great necessities to be provided for. This question is, what main and lateral sewers must first be built. We have given it our earnest consideration. We wish it were possible for us to begin on the Vermont, the Wash'gton and the South St. sewers all together, but fear that we must restrict operations to two of the mains at the most. We have, therefore, asked ourselves which main, or two mains, are most imperatively demanded, or drain the largest extent of territory. In answer to these we find the Washington street sewer to be the largest, most central, and ultimately the longest and most important in the system. It also traverses the best built part of the city, and taps Illinois street where the insufficient drainage has long been complained of. Extending the inquiry, we find the South street sewer imperatively needed at present, and the city tacitly under agreement to provide at once a remedy against further damage to property in the 7th and 8th Wards. It, also, traverses a thickly settled section, is at present the longest main, and will drain the largest surface in the system: its importance must be conceded, and its construction can scarcely be delayed. The Washington and South street sewers being regarded as the most important, we have concluded to recommend that they be first constructed—the Washington street main to begin, for the present, at the culvert on Noble street and end at the River, on the grade of  $3\frac{3}{8}$  inches to the 100 feet, as shown in the map and profile, and that laterals be constructed on the north side only, on Illinois, Pennsylvania, Alabama, and East streets, allowing surface drainage on the south to the Run. We recommend, also, that the South street sewer be at once built, beginning on the donation line on Fletcher Avenue, then to South street, then to Kentucky Avenue, then to the River; that it descend at a uniform grade, and to be of the size specified on the map. That the laterals be constructed on the south side, at present running laterals on Merrill, East and Virginia Avenue. The water on other streets, on the line of both mains, can be conducted to them by surface drains for some time to come, but as soon as possible we would recommend the construction of the other mains and laterals. It may be asked why sewers so long, and such depth, are recommended, and why Washington street is chosen for the main line, instead of Pogue Run. In the first place, a properly constructed sewer should last and do its work for ages, and should, therefore, be large enough for the extension of the city in the far future. It should be at such a depth that all cellars and night-soil pits can be thoroughly drained to the bottom, and no offensive smell reach the surface, even in the warmest weather. This depth

below the surface, when the sewer is full, will give weight and velocity to the current, even when the grade or descent is small.

Washington street is chosen because it is the shortest line to the River. The sewer can also be easily flushed from the Run, and the route is also on public property. Pogue Run, on the contrary, is almost altogether on private property, is very crooked, and is more than twice the distance to the River. All the lines we recommend are on public streets.

The cost of making the survey, map and profiles, was as follows:

For services of Engineers, - - - - -	\$200 00
For carriage hire, - - - - -	13 00
Hotel bill, - - - - -	7 00
Total, - - - - -	\$220 00

We respectfully offer for adoption the following resolution:

*Resolved*, That the report, profile, and general sewerage map, prepared for the city by Messrs. Phillips and Wirth, Civil Engineers, be accepted, and that the general map be backed and properly mounted and placed in the office of the City Civil Engineer for reference and future use.

Respectfully submitted,

JOHN L. MARSEE,	} Committee.
ERIE LOCKE,	
C. E. WHITSIT,	

Also, the following:

BUFFALO, N. Y., Aug. 18, 1869.

*To Henry Willis:*

DEAR SIR:—I have visited Syracuse and made, to the best of my ability, a thorough investigation of the cement sewer-pipe, made and used under the same patent you propose to work under.

In the first place I ascertained from the city officers and business men, bankers, &c., the character of the Bassett Brothers, who have manufactured the pipe in Syracuse during the past five years, and from whom the city purchases all it uses. They stand No. 1 in reputation as honest and square business men, and among the very best as to ability and success in the work they do. I then ascertained that the City of Syracuse made the experiment of this pipe about five years ago, that it has been successful far beyond expectation, and that it is now an official requirement in the letting of sewerage contracts, and I do not hesitate to say its position in Syracuse has been purely and entirely built upon the honest merit of the cement pipe itself, and not the good management of its makers.

The City Engineer could not be found during the day I spent there, but I found that many miles of the pipe are used and are being added to daily. I saw the 24 inch size, egg shape, being laid through one of the principal streets when I was there, and other streets contracted for are only waiting the manufacture of the pipe, it being impossible to supply the demand. It hardens with age, it is cheaper in manufacture than any other sewer pipe, it rarely needs repair if laid with ordinary care, and can be repaired if necessary with but little trouble and skill; and in this city, where it has been used and thoroughly tested for now over five years, it answers the best of all tests, the satisfaction of the people who use it and pay taxes for the privilege.

After a visit to the Bassett Bros. place of manufacture, in the suburbs, I took the pains to call alone upon the proprietors of hotels, banks, and business houses generally for opinions as to the merits of the pipe. Not once did I hear any but the warmest and, sometimes, enthusiastic praises of its success from all and each. I saw at street corners some sections of 18 inch pipe for sink holes, which had been exposed to the frosts and changes of five winters, and were simply toughened and improved without an injury by crack or warp.

I took the liberty of making an inquiry into your own standing, and the Bassetts pronounce in earnest terms in your favor as a good business man, strictly reliable and understanding the making of the pipe as well as any man in the United States. The offer is made that if capital is not furnished in Indianapolis, it will be furnished in Syracuse for you.

The only conditions named are good cement and good gravel. Our gravel in Indianapolis is much better than that used in Syracuse; but of the cement I know nothing. That from Roudout, N. Y., and called, I think, the "Rosendale brand," is used here by the Bassetts, but they know nothing of any western cement, though the Louisville was suggested as having a good reputation East.

I consider the matter one of interest to the city, and though not officially desired or ordered to report upon any such subject, shall take the liberty of giving the "Sewerage Committee" the results of my investigation in a better form, and more in detail, for its information and such use as may be deemed advisable, as soon as the chance occurs. If you, or any of our citizens interested in your success, would like information upon any point not touched by me in this short letter, I would be happy to hear from you or them, and answer promptly.

Respectfully,

Your obedient servant,

DANIEL MACAULEY.

Also, the following :

*John L. Marsee, Chairman Committee on Sewerage and Drainage, Indianapolis :*

SIR:—In obedience to your request we have made a brief and somewhat hasty examination of the more important portions of your city, with a view to giving you our opinion upon the general subject of the sewerage and drainage of the same, and respectfully report:

That after examining the ground with a very good, and, we think, accurate map of the whole territory before us, and availing ourselves of the valuable information furnished us by yourself and the other gentlemen who accompanied us, we have prepared a tracing of the map referred to, and shown upon it in *Red* lines the main sewers which in our judgment are required for the effectual drainage of the district under consideration. We have also suggested in *Blue* lines some of the laterals that would be required. You will find marked upon the plan the sizes of the several portions of the mains which will afford the amount of water way required, except in cases hereafter explained.

We do not hesitate to say that a grand trunk or main sewer in Washington street from Pogue Run to White River is the true foundation, or basis, for a general system of drainage for your whole city. This should be 18 feet below the surface at Pogue Run, and have a uniform grade to low water in the River, and this grade will be about 0.30 in 100 feet throughout. It should have the several sizes marked on the plat down to Virginia Avenue in any event; and if the waters from the east line of the city which flow along Fletcher and Virginia Avenues should be carried, as we think they should be, along Virginia Ave. to Washington St. sewer, then the Washington St sewer should be enlarged from that point to the River one foot in diameter at all points. If, however, the drainage of this eastern district be taken along South, Illinois, and Merrill streets, as shown on the plat, then the sizes marked will be sufficient in both cases.

You will observe we have shown on the profile two grades, one in red, the other in blue lines. The one in red will require an excavation of say 104,348 cubic yards, while the one in blue will require 116,700 yards, or a difference in cost at 50 cents per yard, of \$6,176.

We recommend the straight grade for two important reasons: 1st. It will discharge a much greater amount of water per minute; and, 2d. It will, owing to its greater depth, enable you to drain into it a very large territory, with sufficient fall to insure the clearing of the laterals by their own action;

whereas the other would be to a considerable extent deficient in both these points, while the entire saving of expense would only be some \$6,000, as above stated, a very small sum in a work of such magnitude.

You will observe upon the profile that the upper line of figures in the series indicates the depth of the interior of the sewer (bottom) below the surfaces at the several points noted for the grade in blue; while the lower line in the series indicates the same thing for the red grade—the other figures are explained by the notes.

It is contemplated to take into this sewer most or all the water of Pogue Run by means of a well hole, or catch basin of proper form, which should have adjustable overfalls so as to allow any desired amount of water to pass off in times of flood, and to allow of flushing the sewer in times of drouth.

Assuming that rain falls sometimes occur which require a discharge (after deducting for absorption, evaporation, &c.), say  $1\frac{1}{2}$  inches per hour, the amount thrown upon the sewer from a surface of 284 acres would be, say 426 cubic feet per second. An  $8\frac{1}{2}$  feet sewer, with a slope of 0.30 in 100, would have a velocity of the flowing section of 7.46 feet per second, its area = 56.70 square feet, giving a discharge of 423 cubic feet per second.

We observe, however, that the surface of water in Pogue Run in flood time will be about 10 feet above the center of this sewer at its upper end, and this will give a much greater velocity than that named above, and since we enlarge the sewer rapidly as it takes up the additional water from the laterals, the velocity and consequent discharge will be sufficient.

We advise the drainage of the eastern portion of the city through Virginia and Fletcher Avenues into this sewer, because it will be much the shortest and cheapest route, and when these mains are once constructed a proper system of laterals may be put down at any time, by means of which a very large portion of your city could be effectually drained. The other line shown would be very long, and while it would effectually drain the eastern and south-western portions of the city, it would be at great cost, and by a circuitous route.

We remark that you may think the depth recommended too great; we reply, that the extremely flat surface and great area of your city, in connection with the fact that the water must all be discharged at one side of the city, renders this great depth if not absolutely necessary, at least very desirable. It is to be noted, too, that the additional cost will not be much, indeed not worth naming when considered in connection with its great advantages.

The soil and subsoil of your city is of excellent quality for sewerage works, and the surplus excavation will be found of great value in filling up the lots and lands which are generally much too low for the streets as improved, the common error of establishing grades on level or flat districts much too high for the adjacent lands having been generally fallen into in your city, thus rendering it difficult or impossible to drain the lots into the streets.

The plan suggested above contemplates taking all or most of the water from Pogue Run through the sewer even in flood time; and the capacity to free about 2,000 feet in width on each side of Washington street, together with the drainage of the territory near by and adjacent to Virginia and Fletcher Avenues, of the waters from these districts in flood time.

The water from a large portion of these districts could be gathered and delivered to these main lines by surface drainage, provided the streets in the newer and more remote parts of the city be properly graded.

Allow us to remark that this statement or report does not pretend to absolute accuracy, since it is based upon a mere reconnoissance, made in part of a single day; but at the same time we feel assured you can rely upon the general facts stated, and besides, the estimates are mainly accurate, based upon prices governing in this city.

We have not given any estimate of the cost of the Virginia and Fletcher Avenue sewers, but remark that from what we have said you can approximate their cost. If it is desired we will furnish you an estimate of these.

Regretting that a press of other duties has prevented us from furnishing

you this at an earlier day, and besides has even now compelled us to present it in a less complete form than we could desire, and hoping you may find it satisfactory,

We remain,

Very respectfully yours,

R. C. PHILLIPS,  
JACOB WIRTH,  
Civil Engineers.

On motion, the whole subject was laid over for one week.

Mr. Locke offered the following motion :

That the Street Commissioner be instructed to widen the culvert on New York street at the crossing of Bright street.

Which was adopted.

On motion, bids for public works were referred to the Committee on Contracts without reading.

On motion the Council adjourned.

~~DANIEL MACAULEY~~, Mayor.

ATTEST:

*Ans Russell*  
~~D. M. DANSELMAN~~, City Clerk.

*Russell Pro Tem*