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"I suggest to you that the North West Arm is the greatest asset Halifax has from a recreational and scenic point of view. Anything that detracts from its beauty is detrimental to the City. The further South the bridge is located the more the Arm is confined in appearance. Further, a bridge at Robie Street would not conform to the natural shore line. I suggest if a bridge is necessary (a point on which I think there is great doubt) at all, it would be more in keeping with the configuration of the Arm if it were built at a narrower place that might lend itself to such a structure.

"Now, as Mr. Kanigsberg has outlined, my understanding of the report is the same as his. The financial forecast of the Whitman-Benn Report is that the projected revenue from the bridge is based to a large extent on an extensive housing development between Spryfield and Herring Cove to the South and South-west of William's Lake which Mr. Kanigsberg quite properly called, 'the bad lands'. I wonder what investigation, if any, has been made of this area by the authors of the report. I believe if an investigation had been made, their report would not be as it is. This land never has been built on and I doubt if it ever will be. You have heard its residential potential described by a competent engineer, Mr. Vaughan; and you have the report before you of Mr. Whynacht, an experienced real estate man, which I think you will find depressing if you are looking forward to a big residential development in that area. You will, of course, realize the additional burden that will be put on the guarantors of the bridge securities, and those guarantors are the over-burdened taxpayers of Halifax and the County of Halifax; and they will assume that burden if that source of revenue from this proposed development in the William's Lake area does not materialize. Obviously, the center of population which the bridge underwriters can look to as a source of revenue is the present Spryfield area. To service this area and derive financial benefit from it, the bridge must of necessity be further north than Robie Street.

"Two people from Spryfield drive towards destinations in the far South end of Halifax, I suggest most of these people are going to destinations in the City North of South Street -- indeed North of Coburg Road. Few from Spryfield (and this was also pointed out by Mr. Kanigsberg) are going to drive

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South to a bridge at Robie Street, pay a toll for the crossing and then drive North to their destination in the center or North of Halifax. A bridge at Robie Street would not give them the same service as one further North; and, consequently it would not derive as much revenue from this center of population and the only other -- the projected source of revenue is between Spryfield and Herring Cove in the William's Lake area which according to all the information before us, especially Mr. Vaughan's and Mr. Whynacht's report may very well turn out to be nil.

"Now, I have referred several times to a location further North than Robie Street. By this, I don't necessarily mean Oakland Road by any means. I think it would be a tragic shame to ruin that beautiful street the same as it would be a tragic shame to ruin the south end of Robie Street. The best solution and this was also suggested by Mr. Kanigsberg and I believe it was incorporated in one of the previous surveys at the time the Rotary was being planned -- the Rotary was only a temporary measure. When it was overcrowded -- then the provision, as I understand it, was to build the 'Y' shaped crossing over the Rotary from Chebucto Road to the Herring Cove Road and St. Margaret's Bay Road; and that, I believe, is the best solution. It is one that would not disfigure the Arm and would solve the traffic problem as far as the foreseeable future is concerned. This, of course, was not in the terms of reference and was not considered by Whitman-Benn. True, such a crossing would earn no revenue, but it might in the end cost the taxpayers of the City and the County less than the Robie Street or Oakland Road projects and give them at the same time much better service.

"I respectfully suggest that it is premature to even consider an Arm bridge until the traffic pattern that is developed by the Bicentennial Drive has manifested itself. Let me remind you that about 50 years ago the residential potential of the South end of Halifax was irreparably damaged by the misconceived visions of politicians and engineers. We hope this tragic blunder will not buy such a costly and disfiguring venture as the Robie Street crossing. Thank you!"

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Mr. Jeffrey Marshall addressed Council as follows:

"With some slight study of sociology, I have been an advocate of a bridge across the Arm for a good many years and I have expressed myself since. However, I have made some study; not such a detailed engineering study as others have, because I wasn't in a position to do so. I have made some study of the terrain, of the movement of traffic and the various aspects of such a bridge. I have expressed the opinion eight or ten years ago and I still hold to it that the proper place for such a bridge is neither Oakland Road nor Robie Street, but South Street. The objection has been raised about the South Street location that the cars would be difficult. I am not of that opinion. Somebody spoke of the grave mistake which was made when the railway cutting was put through Halifax; I fully agree. We could retrieve part of that area by building our plaza across the railroad tracks and make use of some of that space. The suggestion that a bridge would disfigure the Arm, I would also contradict. If a proper type of bridge is chosen, and it is well carried out, it is a most beautiful structure and can definitely be an ornament and not a detraction from the beauty of the Arm. One large source of traffic, I think, was not included in the Whitman, Benn traffic count, and that is the Saturday, Sunday and holiday traffic to the Dingle throughout all the fine week-ends in the summer. It is so heavy, as you no doubt know, the City has found it necessary to place traffic police on duty there. Since the ferry service from the foot of Oakland Road has deteriorated until it is practically useless, people who are not blessed or cursed with automobiles who wish to go to the Dingle, have no easy means of access to it and a bridge at the South Street location should give foot passengers such an access.

"If a bridge went across South Street, Beaufort Avenue from South Street, south, for some little distance, could readily be widened on the western side with the agreement of the railroad, of course, thus tending to spread the bridge traffic over a wider area and a larger number of the City streets, rather than confining them to one particular street. I agree that there is a psychological barrier to the use of the bridge at Robie Street. I think very little of the

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traffic that is at present operating, would go south to a bridge at Robie Street and a good deal of it, I do not think, would go south even to Oakland Road to the point where it would reach on the other side."

Mr. Spencer Ball addressed the Council as follows:

"First, let me make abundantly clear two points: 1. that I am not opposed to a bridge, if I am convinced that a bridge is necessary, and 2. that I have tried to maintain strict impartiality in my thinking on this matter.

"I have read with interest the report on the feasibility of a bridge over the North West Arm, by Whitman-Benn, and have no criticism on the treatment of the subject after the basic assumptions had been stated.

"The report distinctly states that the conclusions drawn are valid only for these basic assumptions, and it is with the most important assumption that I must disagree, namely, the question of estimated population of Spryfield.

"The figure of 50,000, to be reached in 1991, is arrived at by extrapolation, or extension into the future, of a curve which is based on only three population counts, in 1941, 1951 and 1956,--a period of 15 years; this curve is extended into the future 35 years, or about two and a quarter times the period of record. The fact that the last five years of record showed a decided drop in the rate of increase appears to have had little influence on the projection of the curve, and the end result is almost certain to be unduly optimistic. While extrapolation of a curve is quite normal procedure, there are features about this curve which lead me to doubt its validity.

"All other curves shown for population increase in the Metropolitan Area are based on 96 years of record, except for the City of Halifax and the Dartmouth Lakes area, which have 56 years of record. Even with long records and well established trends, it is difficult to draw an estimated population figure that will be reasonably accurate, but with a record of fifteen years and only three counts in that time, and a projection into the future of thirty-five years, I fear that I cannot accept any such results.

"If we take the proportionate increase for the Spryfield area between 1956 and 1991, and apply it to the other areas we find that the Dartmouth lakes would have a count of about 87,000, and the Metropolitan Area a count of 685,000.

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"Since even the curves of the Whitman-Benn report show a figure for the Metropolitan Area in 1991 of about 370,000, it is clear that Spryfield is favoured to increase at a much heavier rate than any other area, but no reason is given. At present there is no apparent reason to support such a conclusion, and I must classify this estimate of 50,000 as an educated guess.

"While there are some portions of the Spryfield area which possess adequate soil cover for sewer, water and road services, there is a considerable area between the Herring Cove Road and the North West Arm which is of a forbidding nature, with heavy rock boulders and outcrops, where the cost of services would be prohibitive. The difficulty of sewage disposal in this area has been prominent in the press for several years.

"The condition which has brought this entire question of a bridge into focus is the congestion which occurs at times of heavy traffic in the approaches to the rotary and the Fairview overpass, and any solution must surely take account of both of these sites, which is not the case in the suggested bridge.

"What, then, is the solution to the problem of congestion at the rotary and the Fairview overpass? I do not think it is possible to answer that conclusively, but I do think our future action is quite clear. We have for many years tried to force ever increasing volumes of traffic through two or three roads which have not been equal to the task laid upon them. Surely, the logical first move should be to provide more roads to lead westward from the City to arterial roads which could receive this traffic and convey it southward, westward or northward. This will have to be done sometime and the first step is to have a plan to work by, so that we do not rush into piecemeal projects which may be impossible to integrate at a later date, or, if possible, only at considerably higher cost.

"Before any decision on this matter can be soundly reached, the entire western portion of the Metropolitan Area, including Halifax, should be studied to produce a Master Plan for the development of traffic routing. This should be a component of any Master Plan, even if produced primarily for subdivision purposes.

"The study of Spryfield is one component of the work for such a plan,

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but to decide on this part alone to build a bridge at a cost of from six to ten million dollars, would be to add one more to the piecemeal projects which will have to be integrated at some future time.

"At the present time, the building of a bridge at any point between Quinpool Road and the Point Pleasant area, would have a serious effect, in my opinion, on the residential real estate values on the Halifax side, even if the bridge were sited in undeveloped land on the western shore. Indeed, I cannot escape the conclusion that for both the Robie Street and the Oakland Road sites this residential value would suffer a disastrous drop.

"The optimistic estimates for growth of traffic and revenue, drawn from a parallel course with the MacDonald Bridge combined with the extremely doubtful estimate of 50,000 population for Spryfield, could be woefully wrong; and, if so, as I sincerely believe, could saddle the community with an addition to what has been recently referred to as an intolerable and crushing load of taxation. We must not lose sight of the fact that the traffic estimates for the MacDonald Bridge were in error, fortunately too low; but to assume that the traffic using the North West Arm Bridge would follow the same pattern would be tempting fate too much.

"May I repeat that Master Plan of traffic routes is absolutely necessary for proper co-ordination, and nothing should be done until such a plan is produced. To proceed with a bridge before it is conclusively shown to be a necessary link in such a plan is, in my opinion, the sheerest folly.

"The problem of traffic routing has reached a point where its solution should be sought without delay but in the overall sense, not by premature projects which could lead to heavy financial loss and future frustration and confusion.

"One feature of the terrain west of the City which is affecting development is the watershed area. If a phenomenal growth of population were to occur in the not too distant future, could the City justify economically the holding of this area as watershed? If it were decided to open the watershed for subdivision the entire picture of traffic routing could be changed.

"In closing let me again say that I am not opposed to a bridge, if that

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is found to be a necessary part of an overall scheme, but only when it is based on a complete study of a Master Plan for traffic routes for the City and the western suburbs."

Mr. Donald G. Grant, #17 Robie Street, addressed Council as follows:

"A large scale housing development on the western side of the North West Arm has considerable appeal to any person concerned with the scarcity of building sites within the City of Halifax, and when considering the easiest means of gaining access to that area, bridging the North West Arm offers one of the most natural solutions to the highway problem. The Whitman, Benn Report emphasizes two locations where this bridge might be put, and any emphasis placed upon the Robie Street site is influenced largely by the fact that this street is already wide and runs the length of the City.

"I venture to say that both these factors are rather obvious and were there not other serious considerations involved there might be little room for debate. What then are some of the serious factors which must be carefully weighed before any irreparable decision is reached -

(1) "The present population on the western side of the North West Arm does not provide the traffic necessary to justify a bridge at the present time and a bridge can only be justified if the area is built up in line with the Whitman, Benn population expectancy. The financial success of the bridge is dependent upon what the report calls 'new generation and development traffic in the early years of the bridge generation'. Development traffic is defined by the report as 'a component of future traffic due to the improvement of real estate in the areas served by the new facility'. It is obvious then that the financial success of the bridge is dependent upon a large future residential development, which to date has been curtailed as compared with other metropolitan areas. I suggest that the reasons for this curtailment are natural causes which are clearly apparent to anyone who has knowledge of the terrain. A sobering question is why has not this area been built up more rapidly than say the Cole Harbour, Woodside, Westphal areas? The reason, I suggest, is that residential housing has been expanding on the eastern side of the Harbour because the land is good, excavations can be readily made without excessive cost, sewage and water are

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easily installed, landscaping and a garden can be put in at normal cost. These facilities are not available over a great deal of the western side of the North West Arm and never will be because the land is too rocky and does not lend itself to housing development. If it did the houses would be there now and we couldn't find subdivisions on a large scale taking place as far north as twenty-five miles from the City limits.

"I speak with some knowledge of this situation, for I have occasion to examine many mortgage applications for housing constructed in the metropolitan area. Builders and home owners are more interested in good land where a basement can be excavated with a bulldozer in a matter of hours, where lots are of a size to permit decent landscaping and gardening, than they are in any other single factor. What I should like to emphasize is, that if the land on the western side of the North West Arm were suitable for large scale housing development, that development would have already taken place and a bridge will not provide the incentive, as the Whitman, Benn report seems to think it will, and that really seems to be the keystone of the report, that the terrain was not examined, appears to be born out by the report which says in part--Page 41.

(2) "As to the use that such a bridge will be put, is it reasonable to suppose that traffic will go miles out its way and pay a toll to cross a bridge, the greatest benefit of which results in the journey being an uninterrupted one? The report outlines in some detail the method by which the traffic count in favour of the bridge was taken, but I ask the question 'how much weight is to be attached to answers given to a hypothetical question on a situation which may or may not exist at some uncertain future date, and asked under circumstances hardly conducive to a considered reply?' Unless the flow of traffic which would be diverted to a bridge from its natural course is sufficient to maintain and pay for that bridge then to keep the bridge in service the authorities may well be faced with removing the toll charge. A bridge will have the effect of reducing assessments in the areas affected in the residential south end of the City of Halifax, with a corresponding loss of tax revenue. If on top of this the City is called upon to finance from general revenue, losses incurred in the operation of the bridge and to pay its share of capital costs (all of

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which is a distinct possibility) then the strain on taxpayers of this City will prove excessive. Have they not the right to expect before anything is done towards bridging the North West Arm that the possibility of improving the traffic facilities at the head of the Arm, which is where this traffic naturally flows, is more fully examined?

"In conclusion, may I strongly urge the members of this Council to satisfy themselves that this bridge will be a financial success before they commit the revenue and resources of this City to such an expenditure. We have reason to expect that traffic facilities will be vastly improved by the extension of the Bicentennial Highway and the City's greatest contribution, I suggest, may well lie in the building of a causeway or a system of overhead roads, or both, at the head of the Arm."

His Worship the Mayor: "There seems to be an understanding on the part of those who have spoken so far, that the bridge construction across the Arm has been based upon the premise only, that traffic is generated only in the Spryfield area. This is not the case because we have been given to understand by the Department of Highways; in fact, the Minister, himself, speaking at the 1980 Conference, suggested that the Bicentennial Highway would proceed beyond the present School Avenue entrance to the south and he so indicates in a letter to me on June 29th, 1959, and upon which time we engaged the services of A. D. Margison to consider the Bicentennial approach to the City in the vicinity of Bayers Road. He quotes: 'In making this study, A. D. Margison and Associates are to keep in mind the possibility of a bridge over the North West Arm in the reasonable future'. You will also notice in the Whitman, Benn Report, they show three dotted lines suggesting means of connecting up the Bicentennial Highway now under construction from the Hammonds Plains Road to School Avenue; and on file in the Department of Highways at the present time, are plans showing an extension southward to provide an additional entrance to the City of Halifax, not only for the Spryfield, Herring Cove residents, but also for Provincial-wide traffic. I think you are forgetting this; you are ignoring it completely in your discussions here this evening."

Mr. C. G. Pratt, #11 Oakland Road, addressed the Council as follows:

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"One point leading from the comments you just made, Your Worship, is the flow of traffic as a result of the Bicentennial Highway. It would seem to me that the crossing of the Bicentennial Highway with the newly-paved Hammonds Plains Road from French Village, and a possible tie-road between the St. Margaret's Bay Road and the Bicentennial Highway, at about the C. J. C. H. transmitter, across to the back of the Chain Lake, which is less than a mile between the existing St. Margaret's Bay Road and the new Bicentennial Highway, would take care of a good deal of the flow of traffic to the southwest shore, and remove a good deal of the load which is at present at the Armdale Rotary.

"If this is proven to be true, then the Armdale Rotary would be better able to handle the demands of traffic to the Purcell's Cove and Herring Cove Roads; and, might, in fact, be able to be modified to cope with any future expansion of development in that area. This would take advantage of the Bicentennial Highway to reduce the need for a bridge across the Arm."

Mr. G. B. Robertson, Barrister, #83 Oxford Street, addressed the Council as follows:

"I think most of us who are here this evening must admit that we are very much at interest in this matter but we are all, I believe, or nearly all, residents of the area south of South Street. All of the ones who have spoken before, except Commander Pratt, were directly interested or concerned more with the Robie Street entrance possibilities than myself. I, with a number of others here, are very concerned about the possibility of a bridge site at Oakland Road and this affects Oakland Road, Beaufort Avenue, Rockcliffe Street, and Ridgewood Drive, particularly. Insofar as the matter of the advisability of a bridge is concerned, I hesitate to take any real stand on the matter which requires experts far beyond my capacity to analyze, study, and determine whether a bridge should be built in the southern area of the Arm, or not. I have a feeling that at some stage a bridge will be built and I rather thought the Council had already come to the conclusion that a bridge would be built."

Alderman Lloyd: "We haven't reached any such conclusion."

Mr. Robertson: "Well, perhaps I am wrong but I attended a meeting when this was discussed and I rather thought you had come to the conclusion that

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you were going to build a bridge. Most of the objections have been directed to the possible inadequacy of traffic. I have some personal doubts myself about it, not for the same reasons that have been expressed here at all this evening. Most of it has been expressed on the basis that the population of Spryfield will never enlarge to the levels which would make a bridge economic. But, if you study the Halifax-Dartmouth Bridge, you will find that a great percentage of the traffic is not the residential generated traffic at all. It is commercial traffic and the higher charges on the Halifax-Dartmouth Bridge, which undoubtedly contribute to some of its financial success, relate to the large number of oil trucks, delivery trucks, and the like, which pass back and forth between the two large areas of Halifax and Dartmouth.

"When you look at the Spryfield, Herring Cove, Sambro areas, you will find there is no industrial complex at all in the area, which would be directly concerned with such bridge traffic into the southern area of Halifax. I do agree that if the Bicentennial Highway should come into the southern area, a certain type of large vehicles would undoubtedly seek to use it, such as ones coming into the railway yards area, the Docks area, down from Pier 20, south. I suggest that the commercial aspect of this would be far, far less than anything you could hope for, by comparison with the Halifax-Dartmouth area. I do think this is a very important thing which has not been brought into the discussions at all tonight.

"I doubt if the Spryfield area will extend itself as much as the Dartmouth area has, for the reasons given by people such as Mr. Grant. There's also limitations because we cannot provide too much land on that side because we would be encroaching on the Watershed. My particular concern, and for which I have been asked to speak, is the inappropriate suggestion of Oakland Road as the crossing. As far as the opposite side of the Arm is concerned, the most densely populated portion of the Arm, near the City, is really the Jollimore Village complex. If the bridge was taken across, just south of the Dingle Tower, it would run into quite a large number of houses stretching almost continuously from the Dingle area, westward, as far as you wish to go--right across to the Spryfield area, so that you would rip out a lot of housing in the

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area of Jollimore. You would do tremendous damage to the Dingle and I think, perhaps, that is one of Halifax's most prized possessions. There would be great objection to the ruination of the Dingle by a bridge right on top or adjacent to the tower itself. So far as the Halifax side is concerned, within the last two or three years, this Council on an application, which I submitted at the time for residents of Oakland Road, and some adjoining streets, upgraded the zoning of Oakland Road and some of the adjacent areas to R-1 from R-2; and, in a way, committed this area to first-class residential use for a continued period of time. There has been a fairly substantial and costly development of housing in and around Beaufort Avenue, Ridgewood Drive, and so on. If you bring a bridge into this area, you will 'crack' seriously the assessed values or the real values of all the residential properties in the Oakland Road complex around the Beaufort Avenue crossing.

"I suggest this would be a ~~tragedy~~. Oakland Road, itself, is far too narrow for any major traffic flow. It must be widened, and I believe that you have asked for a report from the Commissioner of Works as to the cost of widening it. Once you have widened it, you are putting the front doorsteps onto the sidewalk, if not onto the street; and, I think, you have doomed Oakland Road. Many of the houses near the western end of Oakland Road must be removed if a proper bridge mouth would be provided. The people who I am speaking for, are deeply concerned that the proposed bridge at Oakland Road will destroy properties in quite a wide area and quite a substantial approach through that district to the bridge. They are greatly concerned and feel it would be most inappropriate.

"They do feel that if a bridge has to bring traffic into the general south end area, Robie Street presents the only existing street which is wide enough to carry a large flow of traffic, and which could be widened by the removal of some of the central boulevards. In this sense, it does provide a backbone of the north-south traffic but it does not necessarily provide a perfect answer for a bridge for a flowing of traffic, if you're thinking of the people who might use the bridge to work in the City. However, I'm not really directing my attention too much to that."

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Mr. O. F. McKenzie, #10 Oakland Road, addressed the Council as follows:

"I have come here without the benefit of having seen any of the reports which have been reported here tonight. Some, I may frankly confess, I have never even heard of. I have no brief prepared; I didn't even know about this meeting until a few hours ago when I was about to leave for Cape Breton. I was asked to come and oppose this suggestion of the Oakland Road bridge. Like Mr. Harry MacKeen, I'm prejudiced. My wife and I live on Oakland Road at one end of the Road towards Robie Street, and my son lives at the other end in a house that he is quite proud of. He has built it himself. As I understand it, if this suggested bridge goes through, we would be wiped out; that is, the house would have to be removed. Naturally, they don't want to lose their home. Neither do my wife and I, at the other end of Oakland Road, want to see property values decimated by the proposed bridge. I'm not going to attempt to give any reasons on the feasibility or otherwise of the bridge because I've made no study whatever. I don't think that this Council should lightly undertake to do something that is going to decimate the property values on Oakland Road for the benefit of the people who may at sometime wish to establish themselves across the Arm or in other areas. I am not going to make any argument at all about whether a bridge should or should not be built.

"I find myself somewhat in agreement with some of the arguments advanced here tonight concerning the grave doubts about the traffic that might ensue. That is for the Council to decide. I have lived in Halifax a great many years and before I came to live here, I have listened to a lot of boasting from native Haligonians about the beauty of the North West Arm. If it is the desire of City Council, the County authorities, and other bodies to destroy the value of the Arm, then I don't care where you put the bridge if it is going to be built. I would respectfully suggest that unless the City of Halifax is prepared to take over the properties on Oakland Road, at the rather fanciful, shall I say, valuations put on them by the City Assessor, that they should be prepared to reimburse everybody now living on Oakland Road, at least to the value that they are now assessed. I am quite satisfied that the values on Oakland Road, if you put a bridge there, would fall probably by at least 50%."

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His Worship the Mayor requested Mr. P. A. Benn, representing Whitman, Benn and Associates, to address the Council.

Alderman Lloyd: "I take it, Your Worship, that Mr. Benn will confine himself to questions of fact on the matter."

His Worship the Mayor: "He is going to answer Mr. J. P. Vaughan's statement."

Alderman Lloyd: "Being an advisor and an engineer, I am quite sure he realizes his position is purely on the question of fact."

Alderman Lane: "Before Mr. Benn begins, might I ask to have clarified the North West Arm Bridge Committee? By whom was it appointed and who are the personnel?"

His Worship the Mayor: "Mr. Vaughan, could we have that information?"

Mr. J. P. Vaughan: "There are a number of members of that Committee here. The designation is a self-styled one, I might say. I am not sure whether I know all of them. Perhaps some of the members would be able to outline just who are members. I know there are a number of citizens of Halifax, and the County of Halifax on the western side of the Arm."

Alderman Lane: "That is what I wanted to establish, whether or not it was a Committee appointed by a Legislative body, of which I knew nothing, or if it is a Citizens' Committee."

His Worship the Mayor: "It is a Citizens' Committee."

Mr. P. A. Benn: "I will confine myself entirely to fact and the verification of this Report which we have submitted. Maybe it would be adequate to introduce ourselves as experts. Certain allegations have been made by Mr. Kanigsberg, which may induce persons here present to think that we are not experts. Our qualifications have been submitted to the Province, to the City, and to the County. We say that Doctor Whitman is a Doctor of Engineering; he is a graduate of Technical College here; he has been 45 years in the consulting, engineering business and a well-known authority, not only in the Province of Nova Scotia, but throughout Canada. Myself, I have a degree of Master of Engineering; I have a certificate in Traffic Engineering; I have been in practice for 22 years; widely known in Canada and this Province in connection with

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highways and with bridge construction.

"In addition to that, we had a Traffic Associate associated with us on this project. This Traffic Associate is Mr. Wilbur Smith and he is the former Director of Traffic Planning of the University of Yale. He is a nationally and internationally, well-known authority on traffic problems. He has been the teacher of most of the Traffic Engineers in this country and in the U. S. A. He is considered in the U. S. A. as 'The' Traffic Engineer. I believe that with these qualifications, we may qualify ourselves as experts.

"We have no particular axes to grind; we have no property in the neighbourhood of Robie Street, on the other side of the North West Arm; we have no connections with real estate people; and we have confined our study and have conducted our study to the best of our knowledge and according to the best practice in this case.

"May I remind Mr. Kanigsberg that he is retained as a lawyer, that he receives a fee to represent certain interests, and this may be all the difference between the lawyer and the Consulting Engineer. I am being put here in a rather difficult position to answer Mr. Vaughan's report. He has overstepped practically every rule in procedure and engineering analysis which I have been taught. There are certain ethical codes in discussing engineering problems. This study which we have presented is the proof of seven months' investigation. It is a considered opinion and with all due respect to Mr. Vaughan, I suggest that figures which have been presented by us, are probably based on more investigation and more facts than those presented by him.

"If and when, according to our Code, there is a discrepancy in opinion of engineering facts, this opinion, according to our Code, has to be voiced. Since Mr. Vaughan has chosen another procedure, I cannot be too kind with him. Mr. Vaughan questions in particular certain assumed population increases indicated as possible in the Spryfield, Herring Cove area. We have cited on Page 4 of our Report that the possible annual population increase in this area is in the neighbourhood of 7%. Mr. Vaughan referred to a previous report by Professor Stephenson, who, by the way, is not a Traffic Engineer, and has not been retained to make any particular studies of that area.

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Now, the figures which he (Mr. Vaughan) quoted in his report, are figures forecast by the Canadian Engineering Consultants who made their forecast, which was immediately after the Census of 1951. Since then we had a Census in 1956, and in Table #1, page #9, of our report, substantiated by a figure immediately following this Table, we have given this information and breakdown, in figures, of the various population increases starting from 1871 to 1956. The forecast quoted by the Canadian Engineering Consultants has been a 3% increase of the actual growth of this Metropolitan Halifax area only. We have quoted and given in our report, in the same Table, the actual figure of 1956 and as can be seen from this report the increase has actually been 4% and not 3%. Therefore, it is the double of what Mr. Vaughan suggests that should have been used. As engineers we have been called to avail ourselves of facts, investigate facts. I regret that Mr. Vaughan hasn't found it necessary to analyze our figures."

Alderman Lloyd: "I find it very hard to follow these figures. Would you just go over those again on page #9?"

Mr. Benn: "On page #9, we have broken down the population statistics for the years 1871 to 1956. They are broken down as follows; Nova Scotia as a total; Halifax County and the Halifax Metropolitan area Subdivision 'D', which comprises the figures of Halifax, Dartmouth, unincorporated suburban areas, including Spryfield and Herring Cove."

Alderman Lloyd: "You mention there was an increase of 4%, from when to when?"

Mr. Benn: "From 1941 to 1951 there has been an increase of 3% in the Halifax Metropolitan area."

Alderman Lloyd: "From 1951 to 1956?"

Mr. Benn: "In 1951 to 1956, for the Metropolitan Halifax area, there has been an increase of 4%."

Alderman Lloyd: "How did you arrive at the 4%?"

Mr. Benn: "You multiply the figure of 1941 by 1.04."

Alderman Lloyd: "I think you said 1951 over 1956."

Mr. Benn: "From 1951 until 1956, the Metropolitan area has increased from 133,000 in 1951 to 164,000 in 1956, the equivalent of an annual increase of

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4%. If you doubt my figures, I would be glad to substantiate them."

Alderman Lloyd: "Unfortunately, I am in the middle of you and the lawyer. I have to perform as an auditor but I am only trying to find a justification for your figures. This is a very important question whatever the ethical aspects may be. The criticisms, Mr. Benn, have been based on your calculations. I just want to be sure as to whether you and Mr. Vaughan are talking about the same thing."

Mr. Benn: "That is what I am trying to find out, myself. I don't know what he is talking about."

Alderman Lloyd: "I want to get what you are talking about, at the moment. Can I take the 164,000, subtract from it 133,000, and I get 31,000; there's a 31,000 increase in a 5-year period. That is an average increase of 6,000 per year; 6,000 per year over the base figure of 133,931 is what?"

Mr. Benn: "It is over 4%."

Alderman Lloyd: "It's over 4% in that 5-year period. Is that your point?"

Mr. Benn: "Yes, that is right."

Alderman Lloyd: "Thank you."

Mr. Benn: "The tabulation is a little bit different, we don't take an average, we multiply by 1.4 and multiply it again five times by 1.4. Actually, the way you figure, it would be about 4½% to 5%, but if you apply the same reasoning to the figure of 133,098, because in the figures of 1956 and 1951 there is a difference of, roughly, 35,000 over a 10-year period, you have a population increase of 3.5%. As you see, the growth rate between 1951 and 1956 is, approximately, 30% bigger than the growth rate between 1941 and 1951. Is that correct?"

Alderman Lloyd: "This percentage, certainly, justifies your argument."

Mr. Benn: "I don't want to get involved in any argument with any member of the Council. I am trying to refute certain presentations made by another engineer, which are not based on any facts."

Alderman Lloyd: "We are not arguing with you, we will have that opportunity at a later date. Right now, I am dealing with facts."

Alderman Wyman arrived 9:50 P. M.

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Mr. Benn: "I have prepared a report in answering Mr. Vaughan."

COMMENTS ON A BRIEF PREPARED BY J. P. VAUGHAN, ON BEHALF OF
NORTH WEST ARM BRIDGE COMMITTEE - MAY 26, 1960 -
WHITMAN BENN & ASSOCIATES, CONSULTING ENGINEERS, HALIFAX, N.S.

1. FEASIBILITY STUDY

The Feasibility Study for a proposed North West Arm Bridge prepared and submitted by Whitman, Benn & Associates, under the terms of authorization indicated on Page 1 on their report, is the result of very detailed investigations, studies and estimates. Based on considerable past experience the latest authentic data and information have been scientifically and comprehensively compiled, analyzed and used to provide all necessary materials for a technically sound and unbiased study.

2. BRIEF ON BEHALF OF NORTH WEST ARM BRIDGE COMMITTEE.

In a brief prepared by J. Philip Vaughan, Consulting Engineer on behalf of unnamed Halifax citizens designated as the North West Arm Bridge Committee, a rather unsuccessful attempt is being made to question some of the population estimates and traffic growth figures developed in the Whitman-Benn Study.

Indeed, in his brief, Mr. J. Philip Vaughan apparently disregards authentic and detailed statistics compiled in Table 1 and Fig. 2 on Page 9 of the Feasibility Study and indulges in completely arbitrary statements and speculative contentions.

3. CLARIFICATIONS

On Page 2 of Mr. J. Philip Vaughan's Brief, he questions in particular the assumed 7% annual population increase indicated as possible for the Spryfield-Herring Cove Area during the first ten years of bridge operation and refers to the Stephenson Report on Redevelopment of Halifax, Page 16, which in turn quotes the Canadian British Engineering Consultants using a probable growth rate of 3% for the metropolitan population of Halifax, and other quarters favouring the use of a 2% growth rate only.

Table 1 and Figure 2 of the Feasibility Study compiles Population Statistics 1871-1956 for the Province of Nova Scotia, Halifax County and various parts of the Halifax Metropolitan Area. These statistics include figures for 1956 which were not available to the Canadian British Engineering Consultants and Dr. Stephenson at the time of their report.

Today, however, they are available and provide a good indication as to the actual growth rate as compared with the forecast one. Indeed, as indicated on Fig. 2 of the Feasibility Study, the Halifax Metropolitan Area population based on 3% possible growth rate forecast by Canadian Engineering Consultants has been exceeded in 1956 and consequently the actual growth rate is higher than 3% and not smaller, as suggested by J. Philip Vaughan in his brief.

Based on the population statistics, compiled in Table 1 and Fig. 2 of the Whitman-Benn Report, we have here below given the actual growth rate for the various areas mentioned which are as follows:

	<u>Nova Scotia</u>	<u>Halifax County</u>	<u>Halifax Met. Area</u>	<u>City of Halifax</u>	<u>Dartmouth</u>	<u>Spryfield-Herring Cove</u>	<u>Unincorporated</u>
1941 - 51	1%	3%	3%	2%	4%	8%	7%
1951 - 56	1.6%	4%	4%	1.6%	7%	7.5%	8%

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It appears from the above figures that, as mentioned before, the growth rate of Halifax Metropolitan Area far from decreasing to 2%, increased from 3% to 4%, primarily because of the very high growth rate of the Dartmouth and unincorporated suburban area. It is also of interest to note that the total population of the unincorporated suburban area for the period considered was roughly $2\frac{1}{2}$ times larger than the population of Dartmouth and that in fact, the growth rate of this area was also larger than that of Dartmouth. This growth rate was even higher for the Spryfield-Herring Cove Area in spite of the "impossible nature as to suitability for housing development, street grades, sewer and water installations and other services" alleged by J. Philip Vaughan on Page 4 of his Brief, and which, apparently, should have encouraged future builders to look elsewhere.

There are sufficient indications to believe that the growth rate for the unincorporated suburban area and particularly the Spryfield-Herring Cove Area for the period 1956-1961 is substantially equal if not higher than those recorded above, until 1956.

Since, in the future, the "rugged" nature in the Spryfield-Herring Cove Area is bound to remain unchanged, the only reason for a rapid decrease of population growth would be lack of adequate and convenient access to the rest of Halifax, to be anticipated if a Bridge over the North West Arm is not being built in the very near future. On the other hand, provided convenient access to the rest of the Halifax area is not only maintained, but improved, it is quite evident that the rapid rate of population increase in this area will not only continue well in the future, but may even accelerate over and above the growth rate figures indicated before.

In view of the foregoing, it would be fully justifiable to use 8% or even 9% for the assumed population increase during the first ten years of bridge operation. Instead, the authors of the Feasibility Report decided to be rather conservative in their forecasts and to base their traffic estimates on 7% assumed annual increase, which is even slightly lower than the actual recorded one for the period 1941-1956.

Consequently, estimated toll revenues and analysis of bridge earnings must be developed on the basis of the figures used in the Feasibility Study and not those arbitrarily advanced by Mr. J. Philip Vaughan in his Brief.

4. SUMMARY

To arrive at a different and much lower growth rate figure of 2%, used by J. Philip Vaughan in his Brief, several basic errors have been committed.

To begin with, statistical data available to the public and more particularly included in the Feasibility Study have been disregarded in suggesting an arbitrary growth rate figure without even attempting to verify or justify it.

In addition, the obvious distinction between the smaller growth rate of the total Halifax Metropolitan Area including Halifax County and the higher growth rate of the Suburban Area and particularly the Spryfield-Herring Cove Area, which we are concerned with, has been omitted, although all pertinent information was contained in the Feasibility Study.

Having adopted a fictitious growth rate, estimated toll revenues and analyses of bridge earnings have been developed, which obviously are meaningless in view of the arbitrary assumptions on which these calculations were made.

Finally, it is completely impossible to determine a bridge location for maximum traffic benefit by the pattern of desire lines as suggested by J. P. Vaughan on Page 5 of his Brief. Such bridge location is determined on the basis of rather complex analysis of all the variables involved. As a matter of fact, the optimum bridge location for maximum traffic benefit appears to be somewhat South of Oakland Road and not North of it, as indicated in the Brief.

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5. CONCLUSIONS

Since our qualifications and those of our associates were known by you prior to our selection and authorization to proceed with the Feasibility Study, it is, we believe, unnecessary to insist again on the wealth of experience being used in carrying out this Study. A great number of similar assignments have in the past been successfully completed by us or our associates, and we are confident that the findings and recommendations made in our Feasibility Study for a proposed North West Arm Bridge are fully justified, and, as described, will permit revenue bond financing. Indeed, any unnecessary delay in the construction of such a bridge may constitute an impediment to the future growth of the Spryfield-Herring Cove Area and deprive the City of Halifax of numerous advantages more specifically mentioned in the report.

Respectfully submitted,

WHITMAN, BENN & ASSOCIATES
P. A. Benn, P. Eng.

His Worship the Mayor: "The source of your figures for the Herring Cove-Spryfield area, is what?"

Mr. Benn: "The source is the Census figures, which were made available to us and from which we have made the breakdown given, here, in this Table."

His Worship the Mayor: "In the Herring Cove-Spryfield Area is the Census listed separately?"

Mr. Benn: "We have defined a certain area there, which is normally known as the Spryfield-Herring Cove Area, and we used these figures."

His Worship the Mayor: "Those figures you got from the Census."

Mr. Benn then recited his figures shown in the Table, and continued: "I repeat, these are figures which are taken from Census data. We included them in our report, and anybody who wanted to analyze the report had these figures available, and there is no particular engineering knowledge required to analyze them. It appears from the rough figures that the growth rate of the Halifax Metropolitan area, apart from increasing 2%, as Mr. Vaughan would like to have it, increased from 3% to 4%, and this increase is due, primarily, because of the very high growth rate of the Dartmouth and unincorporated suburban areas. It is, also, of interest to note that the total population of the unincorporated suburban area for the period considered was, roughly, two and one-half times larger than the population of Dartmouth. Consequently, the rate of growth of Dartmouth could not influence considerably the rate of growth of the suburban area. The growth rate was even higher for the Spryfield-

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Herring Cove area, in spite of, and I quote Mr. Vaughan's report, 'the almost impossible nature as to the suitability for housing development, street grades, sewer and water installations and other services', alleged by Mr. Philip Vaughan on Page 4 of his Brief, and which, apparently, should have encouraged all those who built houses in this area to go somewhere else. However, they went to the Spryfield-Herring Cove area. There are sufficient indications to believe that the growth rate for the unincorporated suburban area and, particularly, the Spryfield-Herring Cove area for the period 1956 to 1961, is substantially equal, if not higher, than those recorded to 1956. Since, in the future, the rugged nature in the Spryfield-Herring Cove area is bound to remain unchanged, the only reason even for a rapid decrease of population growth, such as, for instance, the 2% would be the lack of adequate and convenient access to the rest of Halifax and to be anticipated if a bridge over the North West Arm is not being built in the very near future. On the other hand, provided convenient access to the rest of the Halifax area, even if it is not only maintained but improved, it is quite evident that the rapid rate of population increase in this area will not only continue well in the future, but may even accelerate over and above the growth-rate figures indicated before.

"In view of the foregoing, and these are facts and figures taken from the Census, it would be fully justifiable for us to use 8% or even 9% for the huge annual population increase during the first 10 years of the bridge operations. Instead, we have decided to be rather conservative in our forecast and to base our traffic estimate on 7%, as to annual increase; and this figure is even slightly lower than the actual recorded one for the period 1941 to 1956, which is 8% and 7½%."

Alderman Lloyd: "At that particular point, there has been some question raised about this by another speaker tonight. Now, on the 7% - what tactics do you use to increase this from the experience of, say, the last 5 years? The annual increase, you said, was 5%."

Mr. Benn: "The annual increase, I said, was 7%."

Alderman Lloyd: "And the future increase you expected to be from when?"

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Mr. Benn: "No, I think there, again, I may have to clarify it. I am analyzing the Spryfield-Herring Cove area, only."

Alderman Lloyd: "Would the Spryfield-Herring Cove area be in this Table #1 as part of the unincorporated area?"

Mr. Benn: "It is part of the unincorporated. Now, I have figures for the Spryfield-Herring Cove area."

Alderman Lloyd: "Because that unincorporated area increased an average of 1,446 in the last 5-year period."

His Worship the Mayor: "The unincorporated area, Alderman, is that area outside the City of Halifax. That is all the County area."

Alderman Lloyd: "That is the entire County area?"

His Worship the Mayor: "That is right."

Mr. Benn: "No, it is the entire County area visioned in Subdivision 'D', only."

His Worship the Mayor: "Subdivision 'D' is what section?"

Mr. Benn: "Subdivision 'D' is only part of Halifax County."

His Worship the Mayor: "Not the eastern portion?"

Mr. Benn: "No. You see in Table #1, we give the total for the Halifax Metropolitan area 133,000, and the Halifax County 162,000."

Alderman Lloyd: "And this Subdivision 'D' is a Census area, is it?"

Mr. Benn: "Subdivision 'D' is the so-called Metropolitan area."

Alderman Lloyd: "These figures were drawn from a tabulation in respect to this area boundary line."

Mr. Benn: "Yes, taken from Subdivision 'D'."

Alderman Lloyd: "Now you are talking about an area within that area."

Mr. Benn: "That is correct. On Table #1 these figures have not been given, unfortunately. If I had expected this examination, if I may so, we would have given you the figure. However, the difference of this figure is given on Figure #2, in a graph form, and this graph is reasonably accurate, at least within the tolerances we do calculate, Alderman; and this graph, 1941, we start at the bottom something between 3,000 and 4,000; let us say it is 3.6, 3,600; in 1951 the graph shows something between 8,000 and 9,000, and I arrive at 8,400;

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in 1956 the graph shows between 10,000 and 20,000, and I arrive at 11,500."

His Worship the Mayor: "Could I ask you a further question, Mr. Benn? You say, here, in this sentence, 'to base the traffic estimates on 7%'. Is there another factor included in that, other than a mere population increase?"

Mr. Benn: "The only factor included there is the population increase based in part on Census data."

His Worship the Mayor: "Do you add anything? Mr. Vaughan has made a calculation of an increase in Motor Vehicle registration. Do you include that in your 7%?"

Mr. Benn: "No, we don't."

Alderman Lloyd: "The City Manager explains to me that Subdivision 'D' is on the City side of the Harbour, and only when you speak about the unincorporated area. Is that correct, Mr. Manager?"

City Manager: "Yes."

Mr. Benn: "We included Dartmouth and the other area, which is generally confined in the Halifax Metropolitan area."

Alderman Lloyd: "Does Subdivision 'D' include any unincorporated portions, at least the County portions, of the Dartmouth side of the Harbour?"

Mr. Benn: "No. It includes only the Dartmouth Lakes area."

Alderman Lloyd: "That doesn't include the Town of Dartmouth necessarily the Metropolitan area?"

Mr. Benn: "Right."

Alderman Lloyd: "But Subdivision 'D' includes only the areas lying outside boundary line of the City of Halifax, on the Halifax side of the Harbour. Is that correct?"

His Worship the Mayor: "No. It includes all the Metropolitan area of Halifax outside the incorporated district of Halifax City and Town of Dartmouth. Is that correct?"

Mr. Benn: "Yes. Now, may I repeat again, based on these figures, there has been an 8% increase in the Spryfield-Herring Cove area from 1941 to 1951, and a 7½% annual increase during 1951 to 1956."

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Alderman Lloyd: "Was there a sudden rise from 1951, 1952, 1953 and then did it level off?"

Mr. Benn: "No. The Figure #2, which gives the diagram, shows you a practically steady rise between 1941, 1951, and a slightly slower rise between 1951 and 1956. The inclination of this line indicates the rate of growth. Any angles to this line will show you whether there has been a sudden increase, or a sudden decrease."

Alderman Lloyd: "Your line is projected on annual figures?"

Mr. Benn: "The line between 1941 and 1956 is based on actual figures, on Census figures."

Alderman Lloyd: "So you plotted your positions with your line right across the space."

Mr. Benn: "Right."

Alderman Lloyd: "And you don't find any substantial increase in one year, and a lesser one in another?"

Mr. Benn: "I don't think we have attempted to go every year. We took the Census of 1941 and the Census of 1951, we based ourselves on facts. We don't have any other Census between 1941 and 1951."

Alderman Lloyd: "Therefore, you have projected your line between, you have drawn a graph - a space length, from a point in 1951 to a point in 1956, and it does not portray any variations in that percentage, from 1951 to 1956. Is that right, Mr. Benn?"

Mr. Benn: "Right. Consequently, evaluating the growth, which has taken place in the last few years in the Halifax Metropolitan area, it was our considered opinion that these 8% or $7\frac{1}{2}\%$ increases have continued up to 1961. However, we haven't made use of these big figures. We have reduced this figure and went down to 7%, which we consider to be a conservative evaluation. At this point I would like to clarify another point which has been brought up by other speakers. Everybody seems to think that what we forecast, here, is the certitude of having a population of 50,000 by 1991. Again, Mr. Vaughan should have been able to follow this, in this report. On page #11, of our report, we say a population numbering 50,000, or more, is entirely feasible in the Spryfield-

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Herring Cove area within the foreseeable future. We didn't say it would be, nor did we say that we needed a population of this magnitude to justify the traffic earnings potential. As a matter of fact, on page #4, we refer to a 7% annual increase for only ten years, after the construction of the bridge which, if we transfer this figure, would project a population of only 30,000 to 32,000 sometime in 1975 or 1980. Under no circumstances have we tried, or intended to make any actual forecast of what such operation could hold. We only indicated that, based on the general development in this area, in the Province of Nova Scotia, and, in particular, the Metropolitan area and, more particularly, in the unincorporated suburban area, including Spryfield-Herring Cove, and, based on past experience in the Spryfield-Herring Cove area, it is absolutely, conservatively possible to have there an annual population increase of 7% over the next ten or twelve years."

Alderman Lloyd: "Based upon past Census figures, you did not give any weight to the factor of the condition of the terrain of the land, or did you?"

Mr. Benn: "No. I would like to comment on this. This condition ipso facto, by experience has been proven not to exist because in spite of the very rugged condition there, and although the real estate problem in this Province, or in this area, has not been so acute as it is possibly today; and in spite of the fact that the traffic conditions at the Armdale Rotary haven't been as bad as they are now, nevertheless, had there been construction going on and development going on, and there has been a population increase of 7% or 8%. This argument, I believe, is just a fallacy."

Alderman Lloyd: "No, don't argue with me on that, Mr. Benn."

His Worship the Mayor: "Let Mr. Benn make his point."

Alderman Lloyd: "I still have questions, Your Worship. We have plans in this Council which deal with restriction of land uses in that area, in the Master Plan development of the City. So, it is no fallacy."

His Worship the Mayor: "How often do we exercise them?"

Mr. Benn: "The terms of our study did not ask us to make a land development study, Alderman. They asked us to determine the feasibility of a

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bridge and the traffic potential of a bridge -- that is all. We didn't go into very many details as far as the nature of the terrain is concerned, or as far as desirability of development, and so on. We just based ourselves on pure facts, facts which are given by Census. Admittedly, there is a certain area which is rugged. Nevertheless, construction has been going on. Admittedly, the traffic problem in this City is getting worse, nevertheless, you continue to build there and the population growth is bigger than the one ordered by us in the near future. So, based on these facts, we can only assume that, provided access is given to this area, a similar, or maybe a slightly higher, population growth will be taking place there over the next ten or twelve years. Obviously, if you will have a Rotary which will not be able to congest any traffic, and you will not allow this area to develop, this 7% figures doesn't mean anything, but the assumption is that it is in the interest of this overall population to develop this area and to have, as we call, a dormitory there because, apparently, you have to go much farther away in order to get this dormitory. So, based on these facts, it is absolutely, conservatively reasonable to expect this growth. Now, again, it is feasible that you can have 50,000 there by 1991, as it is feasible that you may have only 40,000 or 50,000. For the purpose of our study, this 50,000 figure which is quoted here, is purposeless. As long as there will be a population of 30,000 to 32,000 by 1980, or 1978, this is enough to justify, earningswise, a bridge over the North West Arm.

"I would like to condense in a summary, here, various errors which have been made by Mr. Vaughan. I will assume that these errors have been unintentional, possibly by lack of experience. To begin with, statistical data available to the public and, more particularly, included in the feasibility study, has been disregarded in suggesting an arbitrary growth rate figure without even attempting to verify or justify it. In addition, the distinction between the smaller growth rate of the total Halifax Metropolitan area, including Halifax City, and the higher growth rate of the suburban area and, particularly, the Spryfield-Herring Cove area, which we are concerned with, has been omitted, although all pertinent information was contained in the feasibility study. Having adopted a fictitious growth rate of 2%, estimated sure revenues and analyses of bridge

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earnings have been developed by Mr. Vaughan which, obviously, are meaningless in view of the arbitrary assumption on which these calculations were made. Finally, it is completely impossible to determine a bridge location for maximum traffic benefit by the pattern of desire line, as is suggested by Mr. Vaughan, on page #5 of his Brief. That bridge location is determined on the basis of rather a complex analysis of all the variables involved. As a matter of fact, the optional bridge location for maximum traffic benefit appears to be somewhat south of Oakland Road, and not north of it, as indicated in the Brief.

"I would like to take this opportunity to comment on other statements which have been made, here; (1) Mr. Kanigsberg referred to improvements of part of the Rotary concerned. I would like to refer Mr. Kanigsberg to page #11 of our report, which specifically states that the relief of traffic congestion for vehicles entering the Armdale Rotary via the Herring Cove Road, a condition which is already serious and which will progressively worsen as the volume of traffic increases. The condition is a basic one related to the capacity of the streets which serve the Armdale Rotary, and enter into downtown Halifax. Otherwise saying, it is quite possible to improve the Rotary. As a matter of fact, there is a Master Plan which shows an improvement by bridging the Rotary, but this improvement will have very little benefit on the traffic congestion because the streets from the Rotary to the City are congested; and unless the streets are widened, at a very big expense for the City, you cannot, basically, improve the Rotary.

I believe I answered the question about the 2% increase of your expert, Mr. Kanigsberg. I will be glad to give more detailed information about that. As far as the so-called qualification of 'bad land' and 'good land' is concerned, we tried to base ourselves again on facts. I must say, at this point, I am not a real estate developer, and I don't know, of course, what is going to happen there from year to year, but I can just refer to certain developments which take place throughout Canada. We have the British properties in Vancouver, which are quite similar, I would say much worse, than the land conditions west of the North West Arm Bridge. It is not only rugged and rocky, it is hilly which is very expensive; and in spite of the fact the construction of the Lion's Gate Bridge has caused a tremendous development of the British properties, and