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Public Service and the Profession

The December issue of LOUISIANA ARCHITECT is devoted in its entirety to reproduction of a "Study of the Proposed Riverfront and Elysian Fields Expressway and An Alternate Proposal." The study on the much discussed New Orleans controversy is being published here for two reasons: 1. To demonstrate that there are possibilities other than the one presently advanced; 2. To illustrate to the public that the architectural profession stands ready to be of selfless service, which after all, is the basis for the existence of any profession. ED

(Due to a lack of space, the bibliography was omitted. Anyone interested in this information may write LAA Headquarters for a loan copy of the full report.)

COVER: Riverview of the Vieux Carre, 1836. Portion of a watercolor by G. W. Sully, collection of Tulane University.

In This Issue

THE EXPRESSWAY STUDY

By James R. Lamantia, F.A.A.R., A.I.A. Associate Professor of Architecture

William K. Turner

Assistant Professor of Architecture

STUDY OF THE PROPOSED RIVERFRONT AND ELYSIAN FIELDS EXPRESSWAY AND AN ALTERNATE PROPOSAL

CONDUCTED BY THE SCHOOL OF ARCHITECTURE, TULANE UNIVERSITY, NEW ORLEANS

SPONSORED BY THE NEW ORLEANS CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS AND THE W D S U FOUNDATION

PUBLISHED UNDER THE SPONSORSHIP OF URBAN AMERICA, INC.

FOREWORD

"A House is a small city - A City is a big house".

With this simple but profound equation, the eminent architect Aldo van Eyck balances the seemingly irreconcilable polarities of collective and individual.

Once we understand that "house is city and city is house" the mystique which has grown up around city planning and urban design suddenly disappears to a point where we can see clearly again that man is the constant in the equation. We see that the path from any point in the city to any other is a path to somebody's front door past many other front doors. Indifference becomes impossible.

We are concerned with our city's front doors - anachronisms in a city making rockets to send man to the moon. We are most particularly concerned here with that noble front door to our city - the River - and any plan that would separate the Vieux Carre, * our city's living room, from its creator, the great river.

A new spirit is abroad - a spirit which can formulate America's next great goal - that of making this nation the most beautiful on earth. As the most predatory of living creatures, man in his growing emancipation from toil and the pressing concerns for food, shelter and clothing, must now turn from brutalizing environment to the task of enhancing. We must begin to give back what we have taken.

In urban and urbanizing America, the greatest dilemma is the automobile - the detachable part of the house. It has proved to be insatiable. Expressways have proved to be obsolete when built, or even before.

As recently as September, 1965, John W. Dyckman, chairman of the Center for Planning and Development Research, University of California, and consultant to federal and municipal planning offices, writing in Scientific American, concludes that "Additional accommodation creates additional traffic. The opening of a freeway designed to meet existing demand may eventually increase that demand until congestion on the freeway increases the travel time to what it was before the freeway existed."

This is a nationwide experience and certainly not unknown in New Orleans.

Dyckman continues, "The case for supplementary transportation systems, such as mass transit, arises from the conviction that measures to accommodate the demands of the automobile are approaching the limit of their effectiveness The very scale of the effort to transform our cities to accommodate the automobile has, in view of the problems created by such investment, raised serious doubts in the minds of public officials and transportation experts about the efficacy of making further investments of this kind '

If the proposed Riverfront Elysian Fields Expressway is built through the Vieux Carre, what is the next step? What happens after 1980? Decatur Street?

Feasibility is a word of much currency in New Orleans. Feasibility judgments are only as good as the value judgments which generated them in the first place.

If it is assumed that there is no destruction of environmental values in building an elevated expressway through the Vieux Carre, and if it is further assumed that Elysian Fields Avenue with its double decking, its noise and perpetual shadow, can be written off as a street of enormous regenerative potential for future downtown housing, then feasibility is a moot point.

Techni-economic-political feasibility does not always coincide with socioenvironmental feasibility. It would relieve the parking problem (for a moment) if we turned Jackson Square into a parking lot. It is economically feasible. Why don't we do it? Economics is only one band of the whole spectrum of feasibility. If "feasibility" is equated to "cheapest" without due regard for humanistic values, we mock history and the whole process of man's progress through building what is right instead of what is cheapest. The monastery on the mountain was not built because a study disclosed that this would be economically feasible. Elementary family economics gives daily proof that first costs are rarely the governing criterion for judging the worth of a product. Long range cost is the real cost, especially for an important civic undertaking. Its effect for good or bad is not measured by one generation.

Returning to the mood of our first thoughts above, "A city, if it is really a city, has a very compound rhythm based on many kinds of movement, human, mechanical and natural. The first is paradoxically suppressed, the second tyrannically emphasized, the third inadequately expressed."

These, then are some of the considerations which have motivated our efforts here - concern with our big house, the city.

John W. Lawrence, FAIA Dean, School of Architecture **Tulane** University

^{*} The Louisiana State Constitution and a City of New Orleans Ordi-nance designates for preservation under the control of The Vieux Carre Commission that area bounded by the river side of Rampart Street to the Mississippi River and from the downtown side of Iberville Street to the uptown side of Esplanade Avenue. The enabling Constitutional amendment and the derivative City Ordinance have been upheld by the Louisiana Supreme Court.

Cities have been founded for many reasons — as strategic military posts, as focal points for trade, or merely to satisfy the grandiose whim of a ruler. A city transcends its original purpose and survives to greatness when it performs one major function — that of allowing and protecting the rights of association among individuals. The freedom of urban life, with all its amenities, enhances the citizen's opportunity to specialize in a desired activity. He profits from this freedom and in turn contributes to the development and enrichment of the city.

New Orleans has survived to greatness by overcoming natural barriers the swamps and cypress forests that originally surrounded it—and by stretching itself to the limits imposed by the Mississippi River and Lake Pontchartrain. But the geography of the city, its ecology and growth patterns have wrought internal barriers that now challenge its future.

As early as 1923, the City Planning and Zoning Commission of New Orleans was appointed to impose order on the development of the city and to correlate plans for improvements and growth.

Through the years, many plans have been proposed to alleviate the conditions restrictive to the growth of the city. The tendency in the most recent ones has been to focus on transportation needs often to the detriment and neglect of other areas, some of consummate importance.

There is no doubt that the era describing the development of the automobile has generated major transportation problems. New Orleans is not alone in the attention given to relieve them; other cities find their plans being shaped by the same demands of transportation. The fact that this emphasis is producing a situation of severe imbalance (in relation to the overall planning objective) is becoming gradually apparent as growing objections to transportation solutions are witnessed in many areas of the United States.

THE SPONSORS OF THIS REPORT BELIEVE THAT THE TRANS-PORTATION PROBLEMS OF NEW ORLEANS MUST BE STUDIED IN THE LIGHT OF THE BROADEST URBAN PLANNING TERMS RATHER THAN FROM THE VIEWPOINT OF TRANSPORTATION ALONE; THE OBJECTIVE, AFTER ALL, IS NOT TO MAKE THE CITY SAFE FOR THE AUTOMOBILE. Other dimensions must be recognized—the organization of natural attributes and public space; existing buildings and sites for new ones; the unique character and historic interest of the city; its cultural life and the psychology of its people; aesthetics, and scope for growth. IN SHORT, THE CITY PLAN MUST RECOGNIZE THE ENTIRE URBAN ORGANISM AND PLOT ITS FUNCTIONS, ATTEMPTING TO SERVE THE BROADEST SPEC-TRUM OF PUBLIC INTEREST AND NEEDS.

Our study will consider the unique growth patterns of New Orleans and how planning through the years has sought to aid them. We will examine the current Riverfront and Elysian Fields Expressway proposal both in the light of the traffic engineering theory which lies behind it and the effect that it must inevitably produce on other aspects of urban life, beyond transportation. Finally, we offer an alternate transportation proposal for the Central Area, which is based on a different theory—one that we believe satisfies more comfortably and clearly the composite needs of this vital area and incorporates the complex considerations made necessary by the unique character of New Orleans in its present and future needs. SECTION I

THE BACKGROUND OF PLANNING IN NEW ORLEANS

Cities rarely grow gracefully. Their sites, usually chosen for geographic advantages have limitations that tend to constrict growth during later stages of development.

The planning problems facing New Orleans today are of unusual complexity. The growth of the city is limited by restrictive geographic conditions. The characteristic interplay of land and water has always acted both for and against the formation of the city. To understand the difficulty of applying conventional planning solutions to these problems, we must understand why the conditions of New Orleans resist them.

The site for New Orleans was chosen because the land was higher than the surrounding area and easily accessible via the river and the lake. Ironically, the very basis for the city's existence has become a limiting factor in its expansion.

For nearly a hundred years, the chief business and social activities of New Orleans were confined to the original eighteenth century gridiron, planned by professional engineers. The city centered on a riverfront plaza which has acquired historic and aesthetic values of national importance. No proposal that affects Jackson Square can ignore this significance.

After The Louisiana Purchase in 1803, the city spread west on high land along the river into an area of old land grants. (Plate 2). The wedge shaped plantation grants, dictated by river frontage, explains the radiating pattern of the new streets that were built along their boundaries. They tended to converge at a point which, from traffic considerations, should logically be the center of the city, but it was quite otherwise in New Orleans, as Harland Bartholomew observed. "The chief focal point of the city is not where one would expect it to be from an examination of the street plan but near the river, in a section of the city poorly designed for such intensive use." (2 p. 22)*





PLATE 2: ILLUSTRATION FROM 1927 MAJOR STREET REPORT SHOWING THE LAND GRANT BOUNDARIES SUPERIMPOSED ON A STREET PATTERN OF THE DE-VELOPED CITY.



PLATE 3: PLATE SHOWING THE PLAN, OFFERED IN 1906, BY THE PARKWAY COMMIS-SION OF PROPOSED MAJOR BLVDS., PARKS, AND SQUARES FOR THE CITY.

Subsequent expansion sought the higher ridge lines. These were followed primarily upriver to the west and to a lesser degree downriver (east) and to the north (Esplanade Ridge). It became increasingly apparent that the biggest obstacle to growth was geographic. The sporadic pattern of marsh and high ground had somehow to be relieved by draining and reclaiming the land. It was not until 1895 that the need for comprehensive drainage was finally acted upon; and a drainage commission created by the city.

The Sewerage and Water Board was formed shortly afterward, following the yellow fever epidemic of 1899. The work that engineers performed under these boards broadly contributed to the development of a system of major streets in the city. Formidable in scope, it may be considered as "city planning of a most valuable kind." (2 p. 20) The system of drainage anticipated future growth, and even today New Orleans continues to benefit from it.

The turn of the century found New Orleans and the nation prosperous. This financial climate supported a renewed interest in the aspects of American cities. The twentieth century needed a new urban image and Washington led the way. The national capital revivied its original plan with such landscaped avenues as St. Charles, Louisiana, Napoleon, and Carrollton. A plan "of existing and proposed Boulevards and Parks" was Commission the city moved toward establishing its boulevard character with landscaped avenues as St. Charles, Louisiana, Napoleon, and Carrollton. A plan "of existing and proposed Boulevards and Parks" was presented to the city as a comprehensive Park System in 1906. (Plate 3). To launch it Allison Owen, one of the city's most promising architects and Secretary of the Parkway Commission, wrote in glowing terms of the developments of similar plans in other cities and concluded, "Now is the psychological moment-tomorrow it will be impossible." (1 p. 3) The prediction was accurate for "tomorrow" brought a decade that ended in the First World War.

The population explosion that followed the War placed new demands on the physical aspects of the city, greater in scale than those that had gone before. New Orleans was headed toward those degrees of complexity that beset all American cities, "growing difficulty in management of its large corporate area (in 1927, fourth largest in the country), in providing means for people to get around, in giving them suitable places in which they may live and work." (2 p. 8) In 1923, the City Planning and Zoning Commission was set up "so that... New Orleans might make greater progress and better meet the competition of other cities if these problems of growth and development were served and solved through the medium of a broad, comprehensive city plan." (2 p. 8)

The initial study to be produced under the Commission's auspices appeared in 1927, and was entitled *Major Street Report*. This significant document by Harland Bartholomew, in collaboration with Miller, Tilton, and Downes, recognized the first obligation of the commission to be that of "securing a complete and dependable city plan." (2 p. 9) It held out the promise that "the present study of major traffic streets would be supplemented by surveys and reports on transit facilities, port and industrial problems, zoning, civic art, and other related subjects." (2 p. 9) The thirty-eight years which have passed since the *Major Street Report* have seen more than a dozen studies exploring the same area.

There remains one other significant happening that must be mentioned when considering the background of planning in New Orleans—the formation of the Vieux Carre Commission in 1936, with the purpose of maintaining and preserving the unique historic and architectural character of the Quarter. The legislation devised for the creation of this Commission has stood as a model of its kind for other preservation acts throughout the country.





PLATE 4: A PLAN FOR KARLSRUHE, GERMANY SHOWING THE RIGID APPLICATION OF THE RADIAL AND CIRCUMFERENTIAL THEORY. THE GEOMETRIC DIAGRAM ABOVE PRE-SENTS THIS ABSTRACTLY.

SECTION II

THE RIVERFRONT & ELYSIAN FIELDS EXPRESSWAY PROPOSAL

A THEORY OF TRAFFIC ENGINEERING

Before discussing the proposal contained in the preliminary report of the Riverfront and Elysian Fields Avenue Expressway, it would be well to describe in general terms the theory of traffic engineering which lies behind it—that of RADIALS AND CIRCUMFERENTIALS. The abstract geometry employed by this theory to symbolize traffic movement is a combination of concentric circles and lines which radiate outward from the city's center. (Plate 4).

The radial lines (A) represent the main arteries along which traffic flows to or from the center. The circles are belts whose functions differ in relation to their distance from or proximity to the center. Thus, the outermost circle (B) is what we might describe in traffic terms as an URBAN AREA BYPASS ROUTE, and the innermost one (E) is a SERVICE AND DISTRIBUTOR ROUTE for the central area. This theory has proved valuable in cities whose growth occurred in a pattern that generated concentrically from a point. (Plate 4). The condition is typical for city sites whose geography allows easy expansion. New Orleans, as we have pointed out, is atypical in this sense, because of geographic limits (the river and the lake) and the unique historic conditions.



PLATE 5: DIAGRAM OF THE PROPOSED RIVERFRONT-ELYSIAN FIELDS EXPRESSWAY SHOW-ING THE ELEVATED CIRCUMFERENTIAL BELT AND THE INNER BELT OF SURFACE STREETS.

THE THEORY APPLIED

The Riverfront and Elysian Fields Expressway, under the proposed theory, would combine with the existing Pontchartrain Expressway and Federal Interstate Expressway along North Claiborne Avenue to form a CIRCUMFERENTIAL or major elevated belt around the Central Area of New Orleans. Like the North Claiborne section, this new expressway proposal is being submitted for Federal approval by the Louisiana Department of Highways and the City of New Orleans to the Bureau of Public Roads. The Expressways are intended to fall under the Federal-Aid Highway Act of 1956 as an urban part of the Federal interstate system. It is beyond the scope of this report to discuss the background, financing, or timing of this application.

The Preliminary Engineering Report prepared for the Louisiana Department of Highways (18) contains the specifics of the proposal. DESIGNED AS HIGH SPEED, LIMITED ACCESS EXPRESSWAYS, THERIVERFRONT-ELYSIAN FIELDS PROPOSAL ACCOMMODATES SIX LANES OF TRAFFIC ON A ROADBED 87 FEET IN WIDTH. THE PRELIMINARY DESIGN SHOWS THE ROADBED TO BE 36 FEET ABOVE DECATUR STREET AT JACKSON SQUARE AND 20 FEET ABOVE ELYSIAN FIELDS AVENUE. IT FURTHER SHOWS THAT THE LANDSCAPED MEDIAN ON ELYSIAN FIELDS WILL BE ENTIRELY COVERED BY THE STRUCTURE AND THAT IT WILL PROJECT APPROX-IMATELY 18 FEET OVER THE STREET ON EITHER SIDE. The minimum design speed employed is 50 m.p.h., and the distance between access and egress interchanges may not be below 900 feet.

The Central Area of New Orleans, according to this proposal, would be surrounded by an elevated roadbed six lanes wide (Plate 5). The purpose of this belt in theoretical terms is to serve as an INNER-CIRCUMFERENTIAL. This means that the belt may either divert volumes of traffic about the Central Area or distribute and collect them at points formed by its intersections with major surface streets by means of the INTERCHANGE.

An INTERCHANGE is considered complete when it accommodates a free flow of traffic between the arteries involved. The preliminary report shows sixteen INTERCHANGE points along the belt, only one of which may be considered complete—the proposed intersection of the Riverfront and Pontchartrain Expressways.

Eleven INTERCHANGE points occur on Pontchartrain—Claiborne, and five occur along the Riverfront—Elysian Fields Expressways. The variance in this distribution indicates higher traffic demands on the former over the latter, yet the proposed facilities are the same. It be comes obvious that the frequency of INTERCHANGE points along the Pontchartrain—Claiborne section will serve to diminish effective speeds. Traffic that is to bypass the Central Area would then be attracted to the less frequently interrupted Riverfront—Elysian Fields route.

INNER BELT

The distribution pattern for traffic formed along surface streets within the central area is first described in the 1957 *Prospectus for Revitalizing the Central Business District*, prepared by the City Planning Commission of New Orleans. More recently the Central Area Committee of the Chamber of Commerce has echoed this same pattern in a publication entitled *Guidelines for Growth*. (24 p. 22). In theory, it proposes still another CIRCUMFERENTIAL, now composed of surface streets, which will interact with the expressway belt. The illustration (Plate 5) shows that it is composed of the following streets: Poydras-Loyola, Basin, Rampart-Esplanade Avenue, North Peters, Decatur and Tchoupitoulas. From this ring, the area within would be penetrated by traffic of various densities.

The report of the Louisiana Department of Highways, New Orleans Metropolitan Area Transportation Study, Outlook for the Future, makes the following predictions for 1980:

	1960	1980	Approx. Increase
Poydras	5,000	26,000	500%
Basin	10,000	29,000	300%
Esplanade	15,000	20,000	25%
Decatur-North Peters-Tchoupitoulas	22,000	29,000	30%

AS TO TRAFFIC WITHIN THE FRENCH QUARTER, THE PREDICTION FURTHER STATES THAT DAUPHINE, ROYAL AND CHARTRES STREETS WILL RETAIN THEIR PRESENT TRAFFIC VOLUMES. THIS MEANS THAT THE RIVERFRONT EXPRESS-WAY IS NOT SEEN AS AFFORDING RELIEF TO PRESENT TRAFFIC VOLUMES WITHIN THE QUARTER BUT RATHER AS A PALLIATIVE TO PREVENT THEIR INCREASE. (17 p. 28)

The same study recommends a complete INTERCHANGE between St. Claude Avenue and the Elysian Fields Expressway. (17 p. 43) The preliminary report, ignoring this recommendation, does not provide the INTERCHANGE. Resultantly, St. Claude with an assignment of 40,000 vehicles per day does not become part of the system of RADIALS and is given no access to the proposed Elysian Fields Expressway. To worsen the situation, the PREDICTIONS ON FRENCH QUARTER STREETS ARE BASED ON A FULL INTERCHANGE AT ST. CLAUDE.

JACKSON SQUARE

For many people the entire expressway proposal hinges on its effect on Jackson Square. This is understandable when we consider the importance of the Square as a physical symbol of the Vieux Carre, and the fact that it is presently the only point along the Quarter from which one can begin to form some visual association between a major river, known to be there, and the historic complex of buildings that once enjoyed an unobstructed view toward it. Historically this combination was a most impressive one, prompting Benjamin Latrobe to write in 1819:

> "The public square, which is open to the river, has an admirable general effect, and is infinitely superior to anything in our Atlantic cities as a water view of the city" (25 p. 23)

As to when that 'water view' was closed, we cannot be completely certain, but recent removal of the wharves along this difficult portion of the levee have roused an interest to reclaim it.

IBERVILLE-BIENVILLE

The INNER BELT encloses the densely developed Central Business District and the Vieux Carre. The density of Canal Street department stores forms a heavy service and distributor desire along the boundary between the two areas. The *Guidelines For Growth*, published by the Chamber of Commerce, suggest that Canal should be relieved of this excessive traffic, by employing a 'coupling' of Iberville and Bienville streets as a service corridor. THIS WOULD MEAN THE EXTENSION OF SERVICE TRAFFIC FARTHER INTO THE QUARTER, WITH SERIOUS RESULTS FOR BOTH STREETS AND THE QUARTER.

ESPLANADE AVENUE

The Guidelines again suggest the inclusion of Esplanade in the INNER BELT pattern. The resultant increase of traffic is patently at odds with the nature of the avenue and all efforts now being made to preserve it. AS PART OF THIS SURFACE-DISTRIBUTOR SYSTEM, ESPLANADE WOULD RETURN TO A SITUATION THAT ONCE SERIOUSLY THREAT. ENED THE HISTORIC HOUSES ALONG ITS BORDER — THAT OF BECOMING A SEMI-TRUCK ROUTE. The 1957 Prospectus warns against possible blight on Esplanade should it become part of the belt. Elysian Fields, a wider boulevard than Esplanade, could not accommodate this distributor function because the encumberances of the elevated expressway would prohibit it from doing so. THE FULL USE OF ELYSIAN FIELDS AS A SURFACE DISTRIBUTOR STREET DEMANDS THAT THE EXPRESSWAY BE MOVED FARTHER EASTWARD TO ANOTHER CORRIDOR.



PLATE 6: DIAGRAM OF THE PRESS STREET AND POLAND AVENUE CORRIDORS AND ELYSIAN FIELDS INCORPORATED INTO THE INNER BELT.

PRESS STREET AND POLAND-ALVAR AVENUES

Two alternate routes have been suggested in place of Elysian Fields; one along Press Street and one along Poland-Alvar Avenues. Objections to these CORRIDORS have ranged from their longer lengths and the difficulties of negotiation with the railroads—over whose trackage air rights would have to be secured—to the excessive cost of property acquisition for rights-of-way. A report commissioned by the Mayor of New Orleans to evaluate testimony on alternate routes given at the public hearing on March 24 states that Press Street "is questionable as serving the same function as the planned east leg of the outer-belt." (20 p. 5) and that Poland-Alvar "would not effectively serve as the eastern leg of the outer-belt." (20 p. 7) It fails, however, to explain these conclusions.

In the case of Press Street, there can be no doubt that the same function would be served. (Plate 6) Time, and not distance, is the salient factor of high-speed traffic design. Here the increase in distance is negligible in terms of the time necessary to traverse it, although it may not be so in economic terms.

The principal advantage of the Press Street CORRIDOR, however, must be stated in terms of urban considerations. Elysian Fields has most recently been retrieved as a part of its surrounding neighborhood—a cohesive unit on both sides and extending eastward to St. Roch, Almonaster and Franklin Avenues. Indeed, it is precisely along the rail trackage of Press Street that this neighborhood may be said to end. An elevated expressway of the magnitude proposed on Elysian Fields would bisect this pattern; whereas, Press Street would serve to mark its boundary. For these reasons, PRESS STREET SHOULD HAVE BEEN SUBSTITUTED FOR ELYSIAN FIELDS as the eastern leg of the proposal. Moreover, the additional length of the Press Street CORRIDOR has traffic advantages as well. More needed interchanges could be provided (particularly at Florida Avenue and North Claiborne Avenue-North Robertson) and relief given to the North Claiborne Expressway bectues of the environment of these volumes of traffic. This would more nearly equalize the work of the expressway belt.

We have already discussed the fact that the geography of New Orleans resists the superimposition of the RADIAL-CIRCUMFERENTIAL theory. The selection of Press Street as the eastern leg of the outer-belt stretches the concept to its limit; the selection of Poland-Alvar would distort it beyond recognition. This could be the reason for the statement in the Mayor's report. The down-river length of expressway connection between Elysian Fields and Poland Avenue becomes an excessive and artificial length to construct in order to complete this belt concept. For this reason it is agreed that the CORRIDOR should be rejected as an alternate within the CIRCUMFERENTIAL theory. It does have many advantages, however, removed from this context, particularly as a service route paralleling the Industrial Canal.

PARKING

In conjunction with the application of the outer-belt theory the Louisiana Department of Highways prepared a study of the central business district, outlining existing street and off-street parking facilities along with future needs (13). Four sites proposed in 1960 were all WITHIN the existing high density business and commercial area. Parking facilities should be located ALONG the inner distributor route, and not WITHIN the area that the Loop describes. Otherwise, the Loop concept is weakened as volumes of traffic are brought deep into the center to be parked.

In the five intervening years since the date of the report, no significant moves have been made to follow its recommendations as to suggested parking sites, but sites near these have been spottily developed. Meanwhile, a rash of open lots, the sites of demolished buildings, are frantically used to satisfy the central area demand for parking. These represent the unorganized attempts of private enterprise to handle a problem which the report suggests might best be the concern of a constituted municipal authority. The *Guidelines for Growth* of the Chamber of Commerce is moved to observe on this point that:

> "A meeting of the minds' should be reached in regard to public and private responsibility for the needed central area parking". (24 p. 25)

The major failure of the Central Business District Parking Study, however, is its handling o the Vieux Carre. In the SUMMARY OF FINDINGS there is at least one conclusion to deligh anyone having recent experience with the parking problem in the French Quarter:

> Sufficient parking capacity is available in the French Quarter after 6:00 P.M. to meet the demands for many years". (13)

Even though, at the time of the report, the International Trade Mart Center was not the reality seen today, this fact does not erase the problem of having to accommodate the traffic and park ing that it poses. The Trade Mart and International Exhibition Center plans include garage space for 1,850 cars. This would seem to be precious little parking for the facilities that it con tains. The fact that the center occurs near a major juncture of both expressway and inner bell systems has reduced most forecasts to silence.

THE PROPOSAL AND THE FUTURE

We have tried to place the Riverfront and Elysian Fields Expressway Proposal into the contex of an organized plan for transportation in the Central Area. The same approach cannot be fo lowed toward placing it in relation to a transportation plan for the larger corporate limits of Nei Orleans or for the metropolitan area of the city—for, in fact, no plan of this scope has yet bee endorsed. True, there are projects which could form the components; the extension of Florid Avenue, the Paris Road bridge and "Dixie Freeway", an Airline Expressway, etc.—but THEN HAVE NOT BEEN ORGANIZED AS ELEMENTS OF A BROAD TRANSPORTATION PLAN. This situation strikes at the very premise of planning—for it allows the fragment to appear, fully developed, before the whole plan is stated.

We have reviewed the radial and circumferential theory and its intended application in th instance of the Riverfront-Elysian Fields Expressway, in an effort to determine the effect o that application on the heart of the city and the Frame of the surrounding area. The results, in all instances, are not the most satisfactory ones. The difficulties may be summarized by the following six points:

- The Riverfront-Elysian Fields Expressway will function as a BY-PASS of the Central Area rather than an elevated INNER-CIRCUMFERENTIAL for the distribution of traffic as intended.
- 2. Projected INNER-BELT distribution of traffic volumes will not relieve the streets of the French Quarter.
- The effect of the expressway has not duly considered the importance of Jackson Square.
- The INNER-BELT by using Esplanade as an eastern leg violates an historic and physically limited avenue.
- The use of Elysian Fields Avenue for an elevated expressway will bisect an existing neighborhood.
- The serious problem of parking as a contingency of this expressway proposal is inadequately studied.

THESE PROBLEMS LEAD TO THE SEARCH FOR SOLUTIONS.

The remaining section of this report suggests how they might be overcome by pursuing a different approach; one which we believe to be taken from a vantage wider in scope than that or transportation alone.



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The buildings of New Orleans' new International Trade Center are designed to serve the buyers and sellers of merchandise from every corner of the world. Here, through the imaginative use of concrete, is expressed the very spirit and pace of modern-day trade. In he Convention-Exhibition building, the New Orleans architects used a concrete barrel shell roof to create striking beauty, as well as an interior clear span of 253 feet, sufficient to seat 17,600 people. Textured exterior concrete walls provide tasteful contrast. The adjacent 33-story Trade Mart tower also utilizes concrete throughout. The highly compressible qualities of New Orleans' soils were mastered by prestressed concrete piles, providing firm foundations for the light but strong reinforced concrete frame and floors designed by advanced new structural criteria. Gleaming exterior curtain wall panels of precast concrete assure visual interest. An eight-story concrete barking tower is nearby.

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EW ORLEANS INTERNATIONAL EXHIBITION FACILITY: ARCHITECTS: CURTIS & DAVIS, EDWARD & SULVERSTEIN & ASSOCIATES, AND MATHES, BERGMAN & ASSOCIATES, ALL OF NEW ORLEANS. STRUCTURAL ENGINEERS: WORTHINGTON, SKILLING, HELLE & JACKSON, SEATLE, AGH., AND A. W. THOMPSON & ASSOCIATES, NEW ORLEANS. CONTRACTOR: C. H. LEAVELL CONSTRUCTION CO., EL PAGO, TEXAS. INTERNATIONAL TRADE MART: ARCHITECT: EDWARD & DUBELL STONE, NEW YORK, ASSOCIATE ARCHITECT: ROBERT LEE HALL AND ASSOCIATES, MEMPHIS, TENN. STRUCTURAL ENGINEERS: ELLER AND REAVES, MEMPHIS, TENN. CONTRACTOR: BLOOMFILD BUILDING INCUSTIES, MEMPHIS, TENN. STRUCTURAL ENGINEERS: B. M. DORNBLATT & ASSOCIATES, INC., NEW ORLEANS International Trade Center dominates New Orleans skyline with spectacular architecture



Covering six city blocks, the all-concrete, 40-milliondollar New Orleans Trade Center, pictured in the illustration above, is located where the mighty Mississippi River meets Canal Street—the main thoroughfare of New Orleans. One of the widest streets in America, it terminates at the five-acre Plaza (1). Dominating the entire complex is the 33-story, 407-ft. high, reinforced concrete Trade Mart tower (2), providing 520,000 square feet of office and commercial space. The Mart tower is flanked by two other concrete structures, the International Exhibition Facility (3), a long-span, prestressed concrete barrel shell structure supported on tapered diamond-shaped columns, and an eight-story Parking Facility. (4). Passing under the entire Trade Center complex is a six-lane section (5) of Interstate highway 310.



Undulating concrete shell roof of Exhibition Facility provides economical, column-free space

Long, cylindrical barrel shells roof an area roughly 420x452 ft. in the Exhibition Facility. Associated architects for the building noted: "The need was for a maximum column-free space to accommodate exhibit shows and large meetings. After months of study, it was determined that a thin shell concrete roof would accomplish a fluid architectural form which would compare favorably in cost to a conventional type frame." In addition to providing a fire-safe, low-maintenance structure spanning large areas, a concrete shell roof eliminates the necessity for a hung ceiling to hide unsightly structural elements.

Interesting architectural treatment was achieved by using diamond-shaped, cast-in-place columns to support the shell. The columns are skewed 45 degrees to the shell and taper from 5 ft. 6 in. at the floor line to 3 ft. 6 in. at the top. Models were used to study the relationship between shell and column to find the desired esthetic effect. Such freedom in form is obtainable only with concrete. World's longest barrel shell span achieved by prestressing



TYPICAL SHELL ROOF OF EXHIBIT FACILITY

Each barrel of the Exhibit Facility roof is 60 ft. wide and rises 18 feet. The thickness varies from $4\frac{1}{2}$ in. at the crown to $5\frac{1}{2}$ in. at the valleys where the shell flares into "V" shaped beams 5 ft. 6 in. deep. Through shell action and prestressing, a 253-ft. clear span was possible over the main hall, believed to be the world's longest for a barrel. A side span has a 139-ft. columnfree area. In addition there is a 30-ft. cantilever all around the building.

The entire roof is prestressed in two directions. Draped steel strands used in each barrel over the main hall carry a force of 1,820 tons; similar strands in each valley beam carry 840 tons. The shell is posttensioned transversely at the column lines. Design of the shell roof was based on concrete with a strength of 4,000 lb. per sq. in. at 28 days after casting.

Shell structure and six-lane highway underpass supported on concrete-filled tension piles

A 900-ft.-long, six-lane segment of Interstate 310, passing beneath the front section of the Exhibition Facility is incorporated into the foundation system of the structure, (see section). Since the surface of the Mississippi River, nearby, will periodically be above the roadway elevation, the structure must be held down by tension piles. Sixty-foot-long, concrete-filled shell piles perform this task. They were designed for an uplift force of 24 tons per pile.



A 6-in. concrete dry bottom protects a continuous reinforced slab 3 ft. thick, the top surface of which serves as the pavement. Columns with continuous caps support the roof down the centerline.

The typical underpass roof consists of standard precast, prestressed concrete highway girders spaced at 7 ft. 6 in. and topped with a $7\frac{1}{2}$ -in. monolithic slab. This roof structure is designed for H20-S16 highway loading, since the surface is part of plaza and service drives. Where highway passes beneath the Exhibit Facility, the precast girders are replaced by cast-inplace girders on 15-ft. centers.

616 prestressed concrete piles support 33-story Trade Mart tower

The Trade Mart tower is a reinforced concrete frame structure clad in white concrete panels. Prestressed concrete piles were chosen for the foundation after comparison with several other types showed concrete carried the greatest load per pile dollar. More than 64,000 lineal feet of octagonal piling were used.

Lightweight aggregate concrete was used throughout in the frame and curtain wall, resulting in over 12,000 tons savings in dead load. This reduction in dead load means substantial savings in the cost of the foundation and reinforcing steel in the frame.

The frame design was based on the 1963 ACI Code using ultimate strength design criteria. A concrete strength of 3,000 psi was used in the pan-joist floor system, with 4,000 psi concrete used for columns and walls above the 3rd floor, and 5,000 psi below this point. Column sizes were held to a minimum through use of ultimate strength design and new large-size reinforcing bars. Exterior columns were 24 in. square, interior columns a maximum of 30 in. square.



Concrete framing and wall panels offer dramatic cost savings

Total cost of the completed tower, including interior finishing, was a little over 15 dollars per square foot, according to Harry Bloomfield, President of Bloomfield Building Industries, contractor on the Trade Mart tower. Mr. Bloomfield noted, "We do not believe we could have accomplished the Trade Mart in steel for at least 5 dollars per square foot more, and we feel we have a much better building with concrete."

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Curtain walls of white cement concrete achieve dramatic architectural effect and economy

Precast concrete wall panels have considerable economic advantage over many other types of curtain walls. In construction of the Trade Mart tower, wall units were cast on each floor adjacent to their final positions on the frame.

(1) Forms were composed of steel end bulkheads and plywood sides. Insulation, 1 in. thick, was first placed directly on the floor slab. It served as the bottom of the form and prevented panel concrete from bonding to the floor. But, its primary function is to insulate the panel from the building frame, thus overcoming most problems with air conditioning and heating. White, lightweight aggregate concrete for all panels was ready mixed. Typical cubic yard quantities are:

White portland cement	. 611 lb.
Fine aggregate (sand)	1360 lb.
Coarse aggregate (lightweight expanded clay)	. 725 lb.
Water	. 357 lb.
Air-entraining agent	. 3.25 oz.

(2) This cross-section of a typical wall panel shows critical dimensions and reveals its channel-shaped simplicity. The panels in most cases were 11 ft. 6 in. long with 1 ft. 8 in. protruding ribs. When hung on the building frame, the panels had a 4 ft. 6 in. space between them to receive metal window units.

(3) The panels shown here, undergoing final inspection, were cured five days, or until a strength of 5,000 psi was reached, whichever occurred first. The unit in the foreground is a corner panel (648 required), other units shown are interior panels (1,404 required). Ribs are rubbed white concrete with contrasting areas between surfaced with a glistening white quartz aggregate set in a white cement matrix. Quartz is spread by hand and tamped into surface before concrete sets. Excess aggregate is blown off with air jets.

(4) Erection of the panels was simple and expedient. With one end attached to a hoist line, the panels were lifted off the floor with a hydraulic hand truck and rolled to the floor edge where the hoist took over.

(5) Once clear of the floor edge, panels were rotated 180 degrees and lowered into place. Steel dowels cast into the panels assured good alignment with the unit below. The hoist was on a monorail, mounted on a frame projecting high on the building. From the one position, many floors of panels could be set.

(6) Fastening details are simple. Panels are attached to steel angles bolted to the concrete spandrel beams, two at top of each panel, and two near the bottom. Inserts to receive bolts are incorporated into the panels during casting.

(7) Slotted holes in the steel fastening angles allow for minor adjustments in panel alignment. Hook eyes screwed into inserts cast into the top of the panel provide convenient pick-up points for the hoist line.

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E 7: THE LIMITS OF THE CENTRAL AREA

TION III

ALTERNATE PROPOSAL FOR TRANSPORTATION IN THE CENTER OF NEW ORLEANS

ALTERNATE PROPOSAL HOLDS THAT THE PERSPEC-E OF PLANNING MUST BE EXPANDED BEYOND TRANS-TATION PROBLEMS.

THE CENTRAL AREA RE-DEFINED

The CENTRAL AREA must be described in its entirety if an effective plan is to be formulated. THE AREA LIMITS ARE FORMED BY THE MISSISSIPPI RIVER, THE VIEUX CARRE, AND THE EX-ISTING PONTCHARTRAIN EXPRESSWAY CONNECTING WITH THE PROPOSED CLAIBORNE AVENUE EXPRESSWAY (Plate 7).

The land area described is but two miles square, yet it is the scene of the daily activities of a high proportion of the city's population, many of whom not only travel to the center to work—but reside in it as well. (Twenty thousand people are said to live in the Vieux Carre).

STABILITY OF THE CENTRAL AREA

The Prospectus of 1957 reports a prosperous retail climate for the CENTRAL AREA. This points to continued patronage and sets New Orleans apart from comparable cities which are experiencing a shift of their commercial activity to suburban subcenters. The maintenance of a strong center, and the reinforcement of its commercial and cultural attractions, is generally seen to be healthy for the city as a whole. The center can, in fact, offer a broader spectrum of these elements than any of its satellites.

ACCESS AND DENSITY

Accessibility of the CENTRAL AREA is necessary for continued health. With traffic in this area already an acute problem, the direction towards overdevelopment and increased density should be discouraged. THE AREA CAN CONTINUE TO PERFORM AN IMPORTANT ROLE, IF IT IS NOT PUSHED TO A POINT WHICH WILL CRUSH IT WITH THE WEIGHT OF UNREASONABLE, AND EVEN INHUMAN DEMANDS.

HIGH DENSITIES BREED HIGH DENSITY PROBLEMS-STREET TRAFFIC NOT THE LEAST OF THESE. The Summary of the 1960 planning data collected for the NEW ORLEANS METROPOLITAN AREA TRANSPORTATION STUDY states:

> "....forecasts revealed that the area within a five mile radius of the intersection of Canal and Rampart Streets is now approaching a saturation point of development, beyond which any additional growth must be vertical." (17 p. 18)

HORIZONTAL VS. VERTICAL DEVELOPMENT

If building densities are to reach beyond the present point of "saturation" by vertical growth, surely there is little reason to encourage the process. A HORIZONTAL DEVELOPMENT SPREADING EXPANSION OVER A LARGER PROPORTION OF THE CENTRAL AREA IS A MORE JUDICIOUS PURSUIT.

Because of the poor soil conditions, New Orleans has always been restricted to low building heights. Until the late nineteenth century, design and technology had still not produced the heights in building that were to find expression in the twentieth century skyscraper. New Orleans has, to be sure, its open air museum of skyscrapers, but the numbers of these has been limited by the excessive costs of the foundations that are needed to sustain them; although, it must be observed that they are still coming. In general, the average building in the CENTRAL AREA does not seek these proportions.

THE FRAME

Taller building mainly occurs within a CORE AREA bounded by Canal, Poydras, and Loyola Avenue. Much attention has been paid to this CORE, but it would be myopic to plan for this to the exclusion of the surrounding area. THIS FRAME EXTENDS ABOUT THE CORE TO THE LIMITS OF THE RIVER, THE PONTCHARTRAIN AND CLAIBORNE EXPRESS. WAYS AND THE VIEUX CARRE. THE AREA CONTAINED IS MORE THAN FIVE TIMES THE SIZE OF THE EXISTING CORE AND INVITES THE ATTENTION OF THE PLANNER FOR DEVELOPMENT. It becomes necessary to examine the needs and potentials within the FRAME index to roder to discover how they may best be brought into a complementary relationship with the CORE and thus produce a plan for the entire.

TO THE WEST, THE SUB-STANDARD AREAS OF ST. CHARLES AND CAMP STREETS BETWEEN POYDRAS AND HOWARD AVENUE (Plate 7, 1) SHOULD GIVE PAUSE TO ANYONE INTERESTED IN THE IMAGE OF THE CENTRAL AREA. These blocks have begun to form a gray fringe about the well manicured CORE. Below them lies the early nineteenth century commercial center stretching to the river (Plate 7, 2) and above them to Loyola Avenue, the area which enjoyed great expectations earlier in this century and now has reason to renew them — the development along Loyola from the Civic Center to the Union Terminal has breathed new life into this section (Plate 7, 3).

The areas immediately north, between the line of Loyola, Basin and Rampart Streets and Claiborne Avenue, are also part of the FRAME. Offering a separate formation of conditions, they contain such diverse elements as express warehousing, railroad trackage (Plate 7, 4), the medical facilities on both sides of Tulane Avenue (Plate 7, 5), the Bienville housing project (Plate 7, 6), the Municipal Auditorium (Plate 7, 7), and the historic residential overflow of the Vieux Carre, (Plate 7, 8).

Lastly, there is the River to the south. Symbolically the lifeline of the city, it should be seen as something more than a commercial generator. THE RIVERFRONT FROM THE GREATER NEW ORLEANS BRIDGE TO THE FOOT OF ELYSIAN FIELDS COULD BE THE SHOW-PLACE OF THE CITY. The gradual release from the wharf and rail facilities that now harness this frontage would be effected by further development of the Mississippi River Gulf Outlet. Port facilities may then occur away from the unpredictable and erosive currents of the river that have continually hampered their operations. The type of development so boldly realized by the International Trade Mart would then be extended to include sites for housing, recreation and park land. Only then will New Orleans rank with other great port cities like San Francisco and Chicago, which have realized plans that relate them to their water source.

BARTHOLOMEW VS. MOSES: THE RIVERFRONT

The 1947 report of Robert Moses was the first to propose an elevated expressway along this important river frontage of the CENTRAL AREA (4). The report was concerned primarily with traffic and produced a workmanlike traffic solution.

Harland Bartholomew, having had a longer association with the plan of New Orleans, was not in full agreement. HE ARGUED (IN THE 1951 MASTER PLAN) AGAINST AN ELEVAT-ED ROUTE ALONG THE RIVER BOUNDARY OF THE VIEUX CARRE, AND SAW THE SUGGESTION AS A LAST RESORT—ONLY AFTER ALL EFFORTS FOR A SURFACE ROUTE HAD FAILED:

"It is not recommended that these two expressways (Pontchartrain and Elysian Fields) be connected by an elevated structure on the river side of the Vieux Carre and the central business district. Only a small volume of traffic desires to travel completely through the city, and the majority of the traffic using the expressway is destined for the central business district. This traffic would enter and leave the expressways on the lake, rather than the river side of the shopping center. (6 Chapter 4. p. 33).

The fact that this view was taken concurrently with or very soon after the Moses Report, and that this was only fifteen years ago, should be noted -THE ELEVATED RIVERFRONT EXPRESSWAY HAD BEEN CHALLENGED AT THE TIME OF ITS FIRST PROPOSAL, AND BY THE OFFICIAL PLANNING AGENCY OF NEW ORLEANS.

PLANNING OBJECTIVES

In the sense of urban planning, the foregoing discussion may be summarized by the following points:

- 1. MAINTENANCE OF THE ROLE OF THE CENTRAL CORE.
- 2. DEVELOPMENT OF THE "FRAME."
- 3. DEVELOPMENT OF THE RIVER FRONTAGE ALONG THE CENTER AS AN URBAN ASSET.

A transportation solution if it pursues all three of these must proceed from the recognition that the third is the most difficult to accomplish. The continued health of the central area and the redevelopment of the frame (Points 1 and 2) are urban objectives to be approached from many points of vantage. To pursue our immediate objective of solving transportation in the center, we now proceed to the traffic problems within the area. The 1961 Metropolitan Area Transportation Study, conducted by the Louisiana Department of Highways, has analyzed the factors involved, and some of the conclusions reached must be noted.



PLATE 8: TRAFFIC DENSITIES COMING INTO THE CENTRAL AREA. THE NUMBERS INDICATE VOLUMES IN THOUSANDS OF VEHICLES PER DAY.

ENTRY AND DISTRIBUTION OF TRAFFIC

In describing the inter-district desire lines of traffic on the major streets that bring traffic to the central area, the report states in summary:

> "Volumes in excess of 3,000 vehicles are generally found to be concentrated in the Central Business District (CBD) and the areas immediately adjacent thereto.

> "This can be explained by the fact that the CBD and its adjacent districts are the major traffic generators in the area. Furthermore, a majority of the traffic to and from the CBD is between districts quite close to the CBD. Since the CBD is located in the southermost portion of the east bank of the Mississippi River, the large volumes are from the points north of the CBD." (14 p.41)

This conclusion confirms the 1951 opinion of Bartholomew in the Master Plan by indicating THE PATTERN OF HEAVY ENTRY FROM THE NORTH. The solution must then lie in distributing traffic from the concentrated points of entry (North-West and the East).

BY-PASS CIRCUMFERENTIAL

The problem of creating a by-pass circumferential about the central area must be considered as being separate from the entry and distribution pattern within it. The Riverfront Elysian-Fields Expressway proposal eclipses these two functions whereas they need to be distinctly articulated – witness the extremely close relationship of the central area and the river. This point has been emphasized but cannot be overstated – THE CORRIDOR BETWEEN THE CEN-TRAL AREA AND THE RIVER IS NOT APPROPRIATE FOR A BY-PASS FUNCTION; IT IGNORES WEST BANK TRAFFIC AND TENDS TO STRANGLE TRANSPORTA-TION BY BEING TOO SMALL. A larger circumferential, including the west bank, must be suggested. A bridge crossing to act in combination with the Greater New Orleans Bridge will effect a wider urban belt and offer service distribution along the Industrial Canal as well as absorb the potential by-pass traffic of Paris Road. The choice might best be made in the vicinity of Poland Avenue, upriver from the presently projected Paris Road Bridge. Only then will a central area by-pass circumferential be effectively designed.

Returning to the problem of the concentrated entry and distribution of traffic in the CEN-TRAL AREA, we should next observe the most important entry points in an effort to concentrate our pattern and simplify the solution (Plate 8).

> 1. FROM THE WEST, THE MAJOR APPROACHES ARE: TCHOUPITOULAS, ST. CHARLES, CLAIBORNE, AND EARHART.

- 2. FROM THE NORTH: THE PONTCHARTRAIN EXPRESSWAY, TULANE, CANAL, ORLEANS, AND ESPLANADE.
- 3. FROM THE EAST: ELYSIAN FIELDS, THE CLAIBORNE EXPRESSWAY, FLORIDA AVENUE, NORTH CLAIBORNE-NORTH ROBERTSON, AND ST. CLAUDE AVENUE.
- 4. FROM THE SOUTH: THE GREATER NEW ORLEANS BRIDGE.

The diagram shows these points graphically and lists current volumes as they appear in the 1961 Metropolitan Area Transportation Study.

THE SPUR

Many of these arteries can flow freely into the center, but some of the primary ones cannot. South Claiborne Avenue from the west, The Pontchartrain Expressway from the north, and St. Claude Avenue from the east all become seriously hampered in their final approaches to the center. Additionally, the volumes from the two expressways must be deployed without overcrowding surface streets. TO ACCOMMODATE THESE TWO SITUATIONS, THIS PROPOSAL SUGGESTS HAN-DLING THESE TRAFFIC VOLUMES BY LIMITED ACCESS SPURS. THE SPURS WILL PROVIDE POINTS OF ENTRY INTO THE CEN-TRAL AREA AND CONNECT WITH A NETWORK OF SERVICE-DISTRIBUTOR STREETS. (Plate 9).

The Proposed Spurs are:

- 1. POYDRAS SPUR FROM THE PONTCHARTRAIN EXPRESS-WAY (BROAD STREET INTERCHANGE) TO LOYOLA.
- 2. ST. CLAUDE SPUR FROM THE EAST THROUGH BASIN-RAMPART TO CANAL STREET.



PLATE 9: AN ALTERNATE PROPOSAL FOR TRAFFIC IN THE CENTER OF NEW ORLEANS. CHECKED HATCHED AREAS INDICATE PARKING FACILITIES The proposal for the ST. CLAUDE SPUR is to provide an elevated expressway along St. Claude Avenue from the Industrial Canal to Orleans Avenue. The design of this expressway has to accommodate the present and projected volumes of traffic and will probably require six traffic lanes. In 1962 it shared with South Claiborne the position of having the highest volume of traffic directed toward the center (36,000 cars, the Pontchartrain Expressway carried only 32,000). Therefore, there can be no doubt about the need to provide a major approach along this corridor, NOW AND FOR THE FUTURE.

ST. CLAUDE AVENUE IS THE ONLY MAJOR ARTERY WHICH DOES NOT INTERSECT EITHER CLAIBORNE OR PONTCHARTRAIN EXPRESSWAYS (we have already discussed the lack of an INTERCHANGE in the Elysian Fields proposal). The St. Claude SPUR will relieve the congestion of I-10 as it approaches the center after the north Claiborne Interchange by providing an alternate route for traffic volumes from the east. The design of the SPUR in its final approach to the intersection of Canal and Basin poses the question of an elevated *versus* a surface structure. The approaches near the Municipal Auditorium are complicated by the intersection with Orleans Avenue. The two traffic flows must be allowed ease of separation, and of course, access and egress to the Auditorium must be provided. It will be noted that the CORRIDOR, for right-of-way, uses parts of the city-owned cultural center site and half of the squares between St. Claude and Rampart on the Lake side. Property acquisitions on the east side of the intersection of Esplanade and Rampart are also necessary for the transition to St. Claude. Plate 9 indicates the SPUR semidepressed at Beauregard Square.

In conjunction with the St. Claude SPUR, Poland-Alvar Avenue should be developed as an Expressway paralleling the Industrial Canal. A connection to the West bank at the Poland-Alvar point of the river (rather than downstream at Paris Road) will satisfy major inter-city traffic desires (to the east, west and the southwest) and act, in times of natural or nuclear disaster, as an evacuation route via a limited access system.

THE POYDRAS SPUR

The proposal for the POYDRAS SPUR is to provide an elevated roadbed/minimum of four traffic lanes) from the Pontchartrain Expressway at Broad Street, to a point before Loyola Avenue (LaSalle Street). There is an advantage in an elevated roadbed on Poydras that would relieve the 1-10 intersection at Claiborne Avenue. The SPUR would incorporate new INTERCHANGES for traffic collected from the Pontchartrain and Claiborne Expressways (1-10). THIS SPUR WOULD DIRECT TRAFFIC TO AN APPROXIMATE MIDPOINT OF THE CENTRAL AREA ON THE NORTH AND RELIEVE THE PONTCHARTRAIN EXPRESSWAY BELOW BROAD STREET. South Claiborne Avenue would then be able to flow more freely into 1-10. It would be difficult to estimate the diversion of traffic under this proposal—there can be no doubt, however, that this approach to the central area would be an active route.

THE SURFACE NETWORK

The surface-distributor pattern which must complement these two major SPURS is seen in the diagram (Plate 9). The major differences from the INNER BELT (Section II) planned to act with the Riverfront-Elysian Fields proposal are:

1) THE USE OF ELYSIAN FIELDS

The case for Esplanade Avenue has already been made. Elysian Fields, as a silane surface street, can easily continue to function as the distributor for the sur rounding neighborhood. The character of its broad landscaped median will remain undisturbed.

2) THE USE OF RAMPART TO THE NORTH OF THE VIEUX CARRE

Rampart will perform the work of surface-distributor and will feed the Quarte from the north. In order to do this, connections with the SPUR will be limited to points near Esplanade and near Canal.

The elimination of Decatur as a through east-west distributor and the substantial reduction of assigned traffic is the result of locating the main distributor rout north of the Quarter and letting traffic filter down in a north-south action. The separated east and west sections of Decatur would serve the developed river from facilities.

3) THE USE OF CANAL STREET

The continued use of Canal rather than the Iberville-Bienville, is suggested as a distributor route. The effort should be to rehabilitate Iberville rather than pushing the present character of a "backdoor" on to Bienville. Canal Street, undoubtedly a special problem, has the dimensions to accommodate a solution for the varied types of transportation that it generates.

4) THE INTRODUCTION OF ST. JOSEPH STREET AND HOWARD AVE-NUE AS A WESTERN SECTION OF THE BELT AND THE FRONT-DELTA STREET CORRIDOR, TO THE SOUTH.

The importance of extending the surface network to the west and south is the key to the development of this area of the FRAME. The accompanying proposal of a planned URBAN COMPLEX of commercial and residential use, is meant to complement the regenerative influence of the Trade Mart. It is but one dimension of the area enclosed beyond Poydras. The areas of blight along Camp and St. Charles and Lafayette Square lie within it and contrast with the improvements along Loyola. It is not the intention of this report to replan the area; that problem deserves much wider consideration than could be provided here.

PARKING

The programmed parking of the volumes of traffic that are brought by SPURS must be facilitated by garages of sufficient capacities to satisfy varying demands. This would require MAJOR PARKING facilities (Plate 9). Site locations in the case of the POYDRAS SPUR should occur near Poydras and Loyola and for the ST. CLAUDE SPUR between Rampart and Basin, or to the north of Basin along its line from the Auditorium to Canal. These locations could absorb parking related to the SPURS. Adequate public transit "shuttles" following the path of the inner distributor streets would then provide further motorized circulation and encourage the use of the peripheral facilities.

Other major surface streets with high volumes of traffic should have parking facilities related to them. Facilities of a localized character would be anticipated along the river development.

The price of parking at these MAJOR peripheral facilities would, either through subsidy of other means, have to be kept well below existing and competitive facilities within the CEN-TRAL AREA. It is appropriate to echo the suggestion made previously that a MUNICIPAL PARKING AUTHORITY, rather than private enterprise, might best handle these requirements and develop the necessary planning for their organization.

AN URBAN COMPLEX

Between the Trade Mart at the foot of Canal and Poydras, and below Camp there are some of the finest groupings of 19th century commercial buildings in the United States. Block after block presents modulated structures of near uniform height (three to five stories). This sensible urbar landscape can absorb an equally sensible density of use. Demolition occurring in properties about the Trade Mart seriously challenge this equilibrium by destroying the homogeneity of the area Restrictions to prevent this, as well as to regulate the height and character of new construction similar to those employed in the French Quarter, are desperately needed.

Immediately west of Poydras lies a site which invites development. Stretching to Howard Avenue it contains many buildings of the type discussed; and it should be the intent of any proposal that new building would complement the scale of the neighboring nineteenth century center and incor porate some of these older structures. Whereas this is not meant to exclude taller structures it does indicate that they should be judiciously introduced.

A complex is proposed to form about an open urban space or mall, stretching from Magazine Street to the River. Commercial uses would flank this and residential uses — apartments and town houses — would occur near the river. The mall may either be elevated or at grade. As an elevated expanse, it would allow the free flow of east-west streets and accommodate parking and services. Specific design study would be needed for the projection of this idea. The expertise of the economist, the architect, the statistician, the planner, and professional engineer, as well as others who may shed light on the project are neyded to produce a scheme for revitalization of this scope, which may indeed be seen as an expanded image for the city.



PLATE 10: A PROPOSAL FOR TRAFFIC IN THE VIEUX CARRE SHOWING ENTRY AND DISTRI-BUTION FROM THE NORTH VIA RAMPART STREET.

A TRAFFIC SOLUTION FOR THE FRENCH QUARTER

The largest achievement of the ST. CLAUDE SPUR will be the relief that it provides for traffic in the French Quarter. With it the Quarter can launch a program of prohibition of through traffic.

Approached and serviced from the north, with primary emphasis on north-south traffic, Jackson Square can be extended to the river. Not a half measure, the suggestion is to block the eastwest streets on either side of Orleans Street. The diagram (Plate 10) shows the result of these restrictions: traffic may still manage to achieve an east-west direction, but under the handicap of having the north-south streets with the right-ofway. Chartres, Royal and Bourbon Streets would be closed by bollards or other removable devices which would allow the passage of necessary or emergency traffic. A bold concept for circulation within the historic district is necessary.

CONCLUSION

By substituting the theory of TRAFFIC SPURS for that of CIRCUM-FERENTIAL BELTS to bring traffic to and from the central area, we have tried to show that New Orleans can achieve a solution for transportation problems without using the riverfront corridor as a major traffic artery. The fact that major traffic densities approach the central area from the North make the SPURS sensible and practical to pursue; because they occur at the northerly points of entry and avoid the difficult southern boundary between the city and the river. The lack of significant by-pass desires, related to the central area, further augment this choice.

That transportation cannot be detached from the broader perspectives of comprehensive planning, to the degree that it ignores these, we have been at pains to point out. Thus the FRAME area and the RIVER must be brought into the scope of the central area if it is to fulfill it's full potential, and remain the REAL focal point of the growing metropolitan area. There should be no doubt that the spirit of this report and of the sponsorship behind it, is an affirmation of faith in the ability of the downtown area of New Orleans to do precisely that.

The contiguous aspect of the Vieux Carre makes it obvious that it too, must be considered along with the central area. One of the major benefits of the SPUR solution is the effective relief that it suggests for traffic that now threatens the character of this historic district; that possibility cannot be lightly dismissed, for it has long been sought and is desperately needed if the area is to survive as a legacy for the future.

The use of the SPUR in traffic engineering is a concept of standard application. Surprisingly the Riverfront-Elysian Fields Expressway proposal IS TO BE FINANCED AS A SPUR. Under the requirements of the Federal Highway system, all proposed mileage must connect to that system so as to be integral with it. The Pontchartrain Expressway, exist ing and having been State financed, would disqualify a CIRCUMFE

RENTIAL proposal, since a section of the Pontchartrain Expressway is designed to be part of the ring. Therefore, the masquerade as a SPUR from I-10 to and along the river must be assumed, yet the intended design function still remains; that of a CIRCUMFERENTIAL BELT interacting with Pontchartrain as one of the segments. Those segments of the proposed Poydras or St. Claude SPURS that were directly connected to the Federal system could then be assumed to proportionately use the same mileage now allocated to the Riverfront-Elysian Fields proposal.

The Alternate Proposal, outlined in this report, utilizes all existing expressways and those presently under contract, with minor interchange modifications, and should allow the transfer of this mileage without excessive delay.

The matter of time has been much discussed, particularly in relation to the Riverfront proposal. Warnings have been sounded that any delays which would prevent this proposal from meeting the 1972 completion deadline, now effective for Interstate Highway projects, must at all cost be avoided. This can only be countenanced by the observation that the Riverfront proposal must be weighed primarily in terms of its own merits: if these are found to be wanting, it should be held in the best interests of the city to correct them and seek to achieve those results that will serve the widest possible public interest.

The evaluation is not a simple one. The reasoned, comprehensive approach of serious planning, considering ALL actual conditions, must be applied. ANY PROPOSAL MUST BE PREPARED TO HAVE APPLIED TO IT THE FULL MEASURE OF URBAN PLANNING. Surely New Orleans will not allow the exegencies of the automobile to halt her development as a center of commercial vitality and civilized living: HER FUTURE RESTS IN THE PLANS ADOPTED BY HER CITIZENS TODAY.





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