



Developing Rail Transit the Hard Way

The Long and Tortured History of Milwaukee's Streetcar

Text by Robert J. Bauman
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▲ The first indication of how serious Milwaukee was about building a streetcar system was the rehabilitation of the 1966-built St. Paul Street Bridge over the Milwaukee River. The re-decking project in 2013-2014 added built-in slots for the streetcar tracks, even though this bridge project was completed over a year before the vote to approve streetcar construction was held. Relatively little modification was needed to the bridge structure to support the weight of a streetcar. We are looking east across the river on March 19, 2017.

Friday, November 2, 2018, dawned a sunny and brisk autumn day. It was not an ordinary day for public transit and rail advocates in Milwaukee since it marked the return of streetcar service after a 60-year absence. On this day Milwaukee leaders and citizens celebrated the opening of the 2.1 mile mainline of Milwaukee's 2.5 mile downtown street car system (known as The Hop). While this was a joyous occasion it contained elements of regret for some given the years of controversy and the squandered opportunities for a much larger regional light rail system similar to what cities such as Charlotte, Denver, St. Louis, Portland, Dallas and the Twin Cities have developed over the last 30 years.

As chronicled in this publication, Milwaukee was once served by an extensive street railway and interurban network (TMER&L and CNS&M) that was among the best in the country. However, since the early 1980's, the city had been struggling with declining bus ridership, increasing freeway congestion, accelerating suburban sprawl, deteriorating urban neighborhoods, and the growing problem of connecting low-income central city residents, who frequently did not own cars, with jobs in the suburbs.

East-West Corridor Transportation Study

To address these concerns, a major transportation study, known as the East-West Corridor Transportation Study, was initiated in the early 1990's to consider public transit and freeway improvements in the Milwaukee metropolitan area.

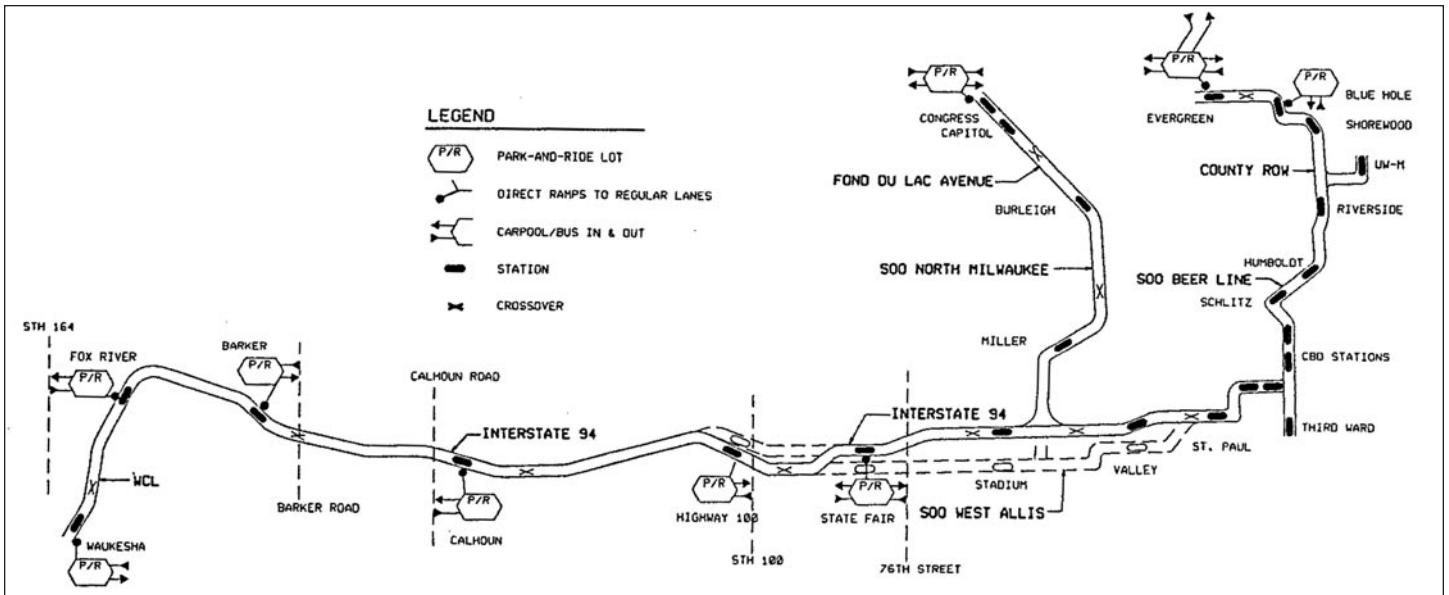
This corridor was a large geographic area covering downtown Milwaukee, Milwaukee's east side and near south side and west side neighborhoods extending into the western suburbs of Milwaukee County as well as significant portions of Waukesha County to Milwaukee's west (127 sq. miles). The corridor was 21 miles long and about 5 miles wide. The corridor contained about 552,000 people (about 1/3 of the metro area population), 407,000 jobs and 218,369 households according to 1990 census data. About 52,000 households did not have access to an automobile. In low-income central city neighborhoods within the corridor, 30% to 47% of households did not have access to an automobile.

The corridor contained four major universities (Marquette University, the University of Wisconsin-Milwaukee, the Milwaukee School of Engineering and the Milwaukee Area Technical College) and a major health

care hub known as the Milwaukee Regional Medical Center consisting of about six health care institutions and the Medical College of Wisconsin (about 8 miles west of downtown Milwaukee).

Since the mid 1990's this corridor has witnessed strong, but uneven growth. Downtown employment has remained relatively flat but the downtown residential population has grown significantly--nearly tripling to 22,000. The Milwaukee Regional Medical Center and adjacent research park has seen dramatic growth in investment and employment (22,000 employees and 1.2 million patient visits). However, central city neighborhoods in the corridor have experienced population loss and disinvestment.

Initially this effort had bi-partisan support from then Wisconsin Governor, Tommy Thompson (R), then Milwaukee Mayor, John Norquist (D), and then Milwaukee County Executive, Tom Ament (D). Senior advisors to the governor had travelled to San Diego to inspect its light rail system and were so impressed that they declared that Milwaukee needed such a system. The state even pledged to provide half of the local share (non-federal share) of capital costs of the public transit



▲ The East-West Corridor Transportation Study essentially recreated The Milwaukee Electric Railway & Light Company's 1920-era Rapid Transit Line. I-94 between the Marquette (downtown Milwaukee) and Zoo (Wauwatosa) interchanges occupies or is adjacent to this right-of-way. TM's interurban trains served Waukesha, Oconomowoc and Watertown. This proposed light rail system would connect downtown Milwaukee with Waukesha and the north and northwest sides of Milwaukee. TM's Port Washington-Sheboygan line served Milwaukee's north side (Figure 1).

project recommended by the study (about 10% of total capital costs).

Milwaukee also had considerable federal funds to work with including \$289 million in Interstate Cost Estimate ("ICE") funds which had been redirected by Governor Thompson from interstate highway projects to transit improvements in Milwaukee County and \$200 million in New Start funds authorized by the recently passed federal transportation bill known as the Intermodal Surface Transportation Efficiency Act of 1991 ("ISTEA"). In today's dollars that was a funding level of well over one billion dollars.

By the mid 1990's the early spirit of bipartisanship began to erode largely fueled by conservative talk radio. Battle lines formed between Republicans (against) and Democrats (in favor of light rail) and suburban residents (against) and urban residents (in favor of light rail). Others demanded that any public transit improvement must "pay for itself" (i.e. no operating subsidies). Frequently, the very function and purpose of public transit was called into question. Light rail took on almost religious dimensions with some viewing public transit in general and light rail in particular as an existential threat. The word "boondoggle" became a frequent refrain among light rail opponents.

Nevertheless, the study process soldiered on. Light rail alternatives were defined and

refined including one alternative that proposed a 32-mile largely grade separated "rapid" light rail system (Figure 1) which resembled parts of the short lived Speedrail system (chronicled in this publication) that operated over the "Rapid Transit" portion of the remaining TMER&L interurban system in the early 1950's. Under this alternative, light rail trains would have

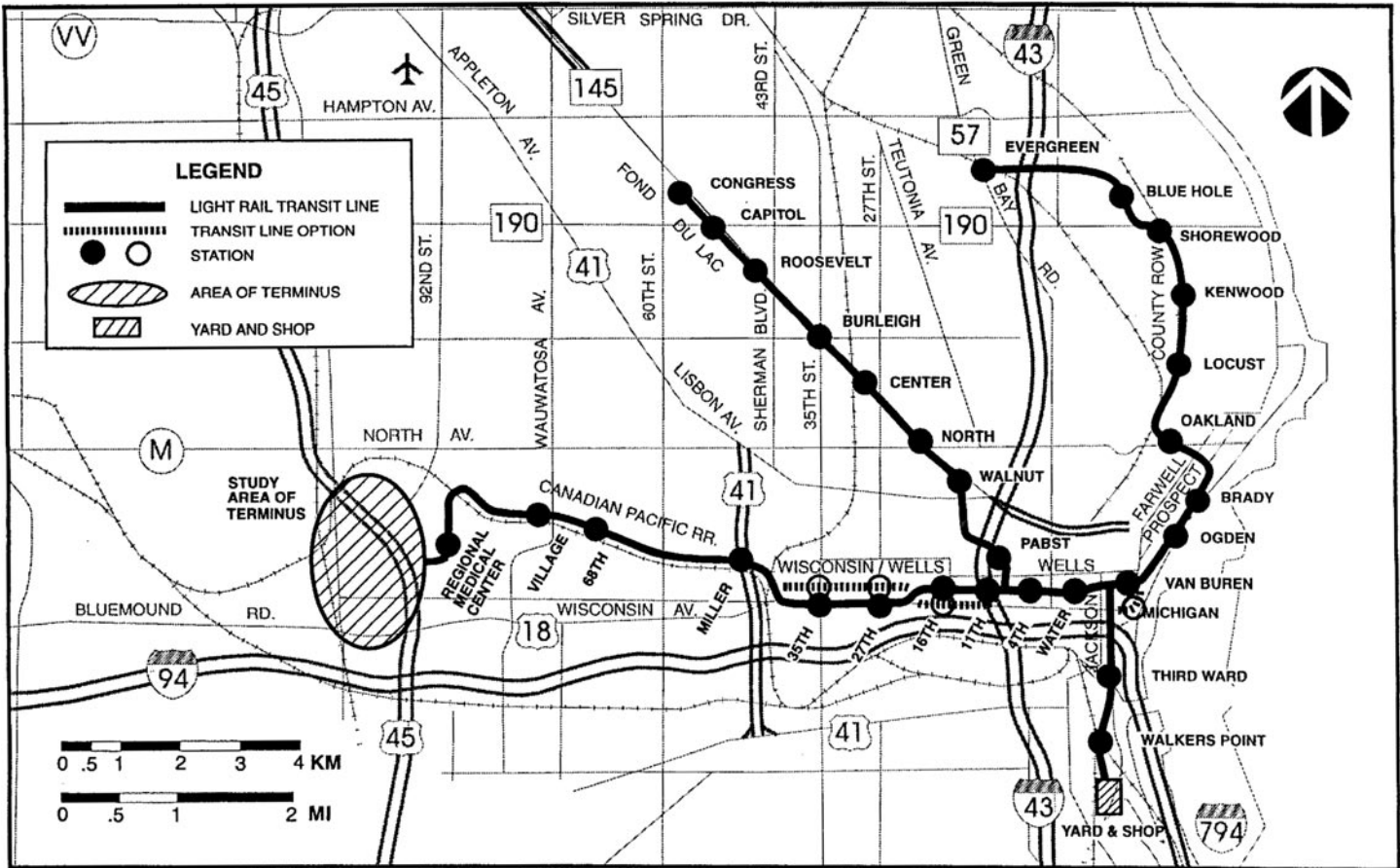
covered the 19 miles between downtown Milwaukee and downtown Waukesha in 32 minutes. In 1950, Speedrail provided service between those same destinations in 39 minutes. The East-West Corridor Transportation Study was considering some very robust light rail transit options.

But the politics became so entrenched that light rail in Milwaukee's suburban



▲ Preliminary construction began in Spring 2016, starting with moving underground utilities where they were in the way. As is common in urban construction there were numerous things that had been buried or covered over. As seen here on April 23, 2017, the new streetcar construction ran into old TM rails. This rail on Plankinton Avenue had lain dormant since the end of the original streetcar service on Route 16 in June 1953.

LIGHT RAIL "A"



JANUARY 1995

MILWAUKEE EAST-WEST CORRIDOR STUDY

▲ The lack of support from beyond Milwaukee County resulted in a proposed Draft Environmental Impact Study being done for a 22-mile light rail system entirely within Milwaukee County (Figure 2).

counties became a non-starter so the Draft Environmental Impact Statement (“DEIS”) recommended a 22-mile light rail system entirely within Milwaukee County at an estimated capital cost of \$610 million (Figure 2).

This plan also generated political opposition, so in May, 1997 the Wisconsin Department of Transportation issued a Locally Preferred Alternative that recommended, along with various freeway and bus service improvements, the construction of a 15.1-mile light rail “starter system” (Figure 3). This \$444 million dollar system (1994 dollars) proposed an east-west mainline connecting downtown

► The Locally Preferred Alternative is a 15.1-mile system proposed by the Wisconsin Department of Transportation in 1997 (Figure 3).

LIGHT RAIL ELEMENT IN LPA

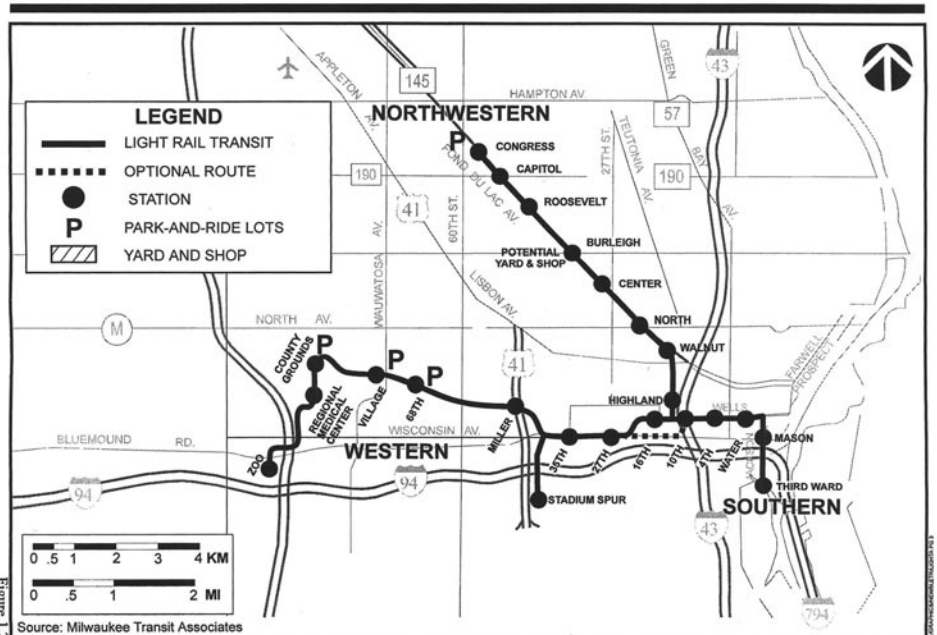


Figure 12

Source: Milwaukee Transit Associates

Milwaukee with the Milwaukee Regional Medical Center and Zoo located at the western outskirts of Milwaukee County, a branch line that would connect downtown with a major commercial district on the city's Northwest Side, a branch line that would serve the Third Ward and Walkers Point where the shops and yard would be located and a short spur connecting the mainline to Miller Park, home of the Milwaukee Brewers.

The 8.8 mile east-west mainline alignment contemplated about 4 miles of operation in dedicated medians on city streets with the balance using exclusive rights-of-way along the CP Chicago-Twin Cities mainline (former Milwaukee Road mainline) and over undeveloped county owned land. The branch lines would mostly use dedicated medians in city streets. 23 stations were planned and 23 vehicles were required.

While many transit advocates argued that this light rail "starter" system was not big enough since it did not serve suburban counties where much of the region's growth was occurring. From a political standpoint, the starter system was the only configuration that had any chance of generating enough support to enable the project to move into the preliminary engineering phase.

However, preliminary engineering never happened. In September, 1997 Governor Tommy Thompson decided to terminate any further study of the proposed light rail "starter" system and bus service improvements. However, the governor did not stop further study of major freeway improvements recommended by that same Locally Preferred Alternative.

Since 1997, these freeway improvements have been largely completed or are in final planning. WisDOT and the Federal Highway Administration ("FHWA") have spent over \$2.3 billion rebuilding and expanding two major freeway interchanges within the East-West Corridor, and are planning to spend another \$1.2 billion to rebuild and expand 3.5 miles of mainline freeway on Milwaukee's west side roughly parallel to what would have been the mainline alignment of the proposed light rail "starter" system. As of 2021, Wisconsin and FHWA have spent or have committed to spend approximately \$4 billion on freeway improvements in the East West Corridor.



▲ On May 18, 2017, construction was underway on St. Paul Street. We are looking east from Second Street toward Plankinton Avenue.



▲ Further west on St. Paul Avenue construction progressed enough that it was starting to resemble a streetcar Line. Gracie, then 2-½ years old, was visiting Grandpa who took her along on May 22, 2017. Standing on one of the pedestrian bridges to walk over the construction, Gracie pointed to the westbound track and said "train." In September 2018 Gracie and Grandpa attended the press conference at the car barn when Milwaukee Mayor Tom Barrett was announcing opening day. Every time the mayor said "Hop," Gracie would hop. Noticing this, Mayor Barrett called Gracie up to the podium to hop every time he said "Hop." She appeared in all the television newscasts that evening.

Transit advocates were outraged by the governor's action so they filed two administrative complaints with the United States Department of Transportation charging that the governor and the Wisconsin Department of Transportation had violated various federal civil rights and transportation planning laws. Specifically, these complaints alleged that the governor's decision to continue to

study freeway improvements while shelving mass transit improvements recommended in the same Locally Preferred Alternative had an adverse impact on low income, minority, and disabled residents of the City of Milwaukee and violated the spirit and letter of the comprehensive intermodal planning process mandated by the Intermodal Surface Transportation Efficiency Act. These complaints asked



▲ Pouring and finishing concrete on the curve at Kilbourn Avenue and Milwaukee Street.

U.S. DOT to cut off federal funding for the highway components of the Locally Preferred Alternative unless the governor and WisDOT agreed to continue the study of the mass transit improvements including the light rail starter system.

Milwaukee's business community and political establishment were not happy either. They had largely come to the conclusion that some type of rail transit system was needed in Milwaukee to maintain the competitiveness of the region and were worried that inaction would risk the loss of millions of federal transportation dollars that had been set aside for public transit improvements in Milwaukee. This risk was real since in the mid 1990's Congress reduced the ICE funding from \$289 million to \$241 million and redirected the \$200 million in New Start funds to other projects largely because Milwaukee could not reach consensus on the use of the funds.

Despite these sentiments and legal actions, the governor held firm. A large scale regional light rail system was dead although a significant amount of federal funds still remained on the table for transit improvements.

[As a side note: Governor Thompson claimed to be a rail supporter. He served as chairman of the Amtrak board of directors during the Clinton Administration (he had his name affixed to an AEM-7 NEC locomotive until 2006), actively sought the position of US DOT secretary in the Bush Administration, supported the Midwest

Rail initiative and in the late 1990's he advocated for the extension of Chicago-Milwaukee Amtrak service to Madison, Wisconsin. He directed WisDOT to undertake a study of this service which became "shovel ready" upon approval of all environmental studies. As a result, this project was allocated \$810 million in federal funds from the 2009 Obama Stimulus Bill (American Recovery and Reinvestment Act). These funds would have covered 100% of the project cost. No state or local funding was required. However, upon Scott Walker's election as governor in November, 2010, Thompson changed his mind and opposed his own plan to fall in line with Republican orthodoxy and Scott Walker's opposition to the project.]

Downtown Transit Connector Study.

In order to break the stalemate, negotiations commenced over the disposition of the remaining federal funds. Ultimately, an agreement was reached in 1999 among the state, city and county to allocate the remaining federal funds to a mix of Milwaukee area highway projects and transit projects. \$91.5 Million in federal ICE funds were set aside for a public transit improvement in downtown Milwaukee. A new study commenced in 2000 (the Downtown Transit Connector Study) to identify this project. After nearly a decade of planning and debate, the federal funds available for rail transit in Milwaukee had dwindled from \$489 million to \$91.5 million.

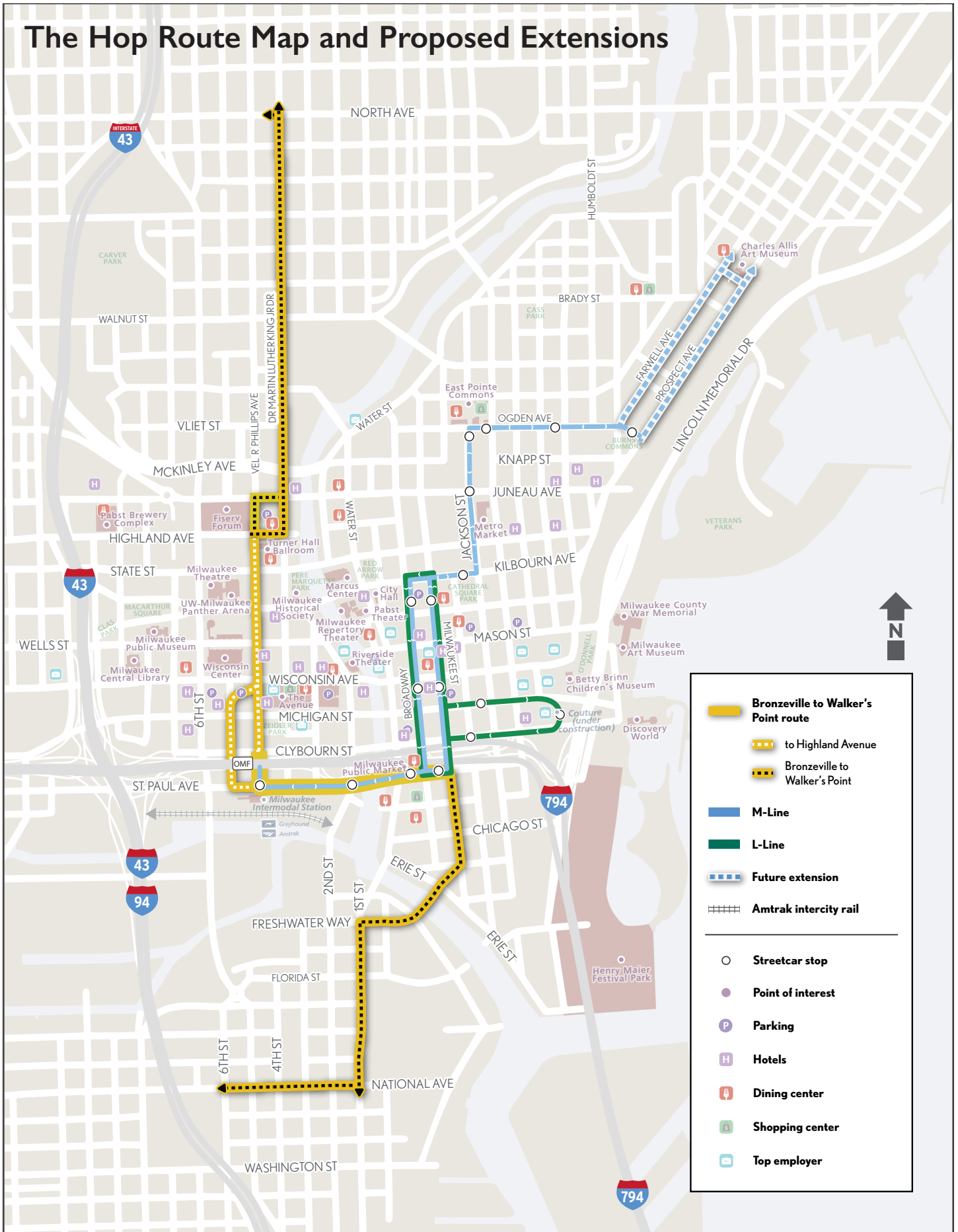
The Hop Route Map and Proposed Extensions

▶ As of March 2022, the M Line is operational from St Paul Avenue and Vel R. Phillips Avenue (formerly 4th Street) to Ogden and Farwell. The L line trackage in Michigan and Clybourn Streets had been constructed but is not in service. This is approximately 75 percent of the line. Construction of the mixed-use real estate development known as the Couture is finally under way. The current estimate of completion is December 31, 2023. Resumption of streetcar construction will follow. Construction north from Ogden on Farwell and Prospect Avenues is "shovel ready," but not funded.

The routes in gold are the proposed extensions to serve transit dependent communities. The segment rendered in light gold to Highland Avenue has received approval for compliance with the environmental and federal government funding provisions. In other words, this segment is "shovel ready." But there is no funding commitment. The portion of this segment between St Paul and Wisconsin is on both 5th Street and Vel R. Phillips to mitigate utility relocation cost on Vel R. Phillips. It also provides a short turn loop at Wisconsin Avenue. There are also plans for a Vel R. Phillips Plaza at Wisconsin Avenue through which the streetcar would operate. The dark gold routes are simply proposed extensions. Environmental and qualifying for funding studies need to be undertaken. Bronzeville is the area just north of downtown Milwaukee along Dr. Martin Luther King Jr. Drive (formerly 3rd Street). Walker's Point is the neighborhood immediately south of downtown Milwaukee and south of the Milwaukee River including 6th Street and National Avenue. Juneau and Kilbourn, east and west of the Milwaukee River, respectively, and Walker's Point to the south of the river were the original settlements of Milwaukee. The arrows at each end of the proposed extensions indicate the desire to continue further.

As in other cities, Milwaukee is building streetcar lines on streets where streetcar service previously operated. Milwaukee Northern operated streetcar service on 4th Street and interurban service on 3rd Street. TM continued interurban service on 3rd Street until March 1948. The North Shore Line operated streetcar and interurban service on 5th and 6th Street to Clybourn and streetcar service beyond there on 5th, Wells and 2nd Streets. TM operated streetcars throughout the city (Figure 4).—Map courtesy of the City of Milwaukee

The Hop Route Map and Proposed Extensions

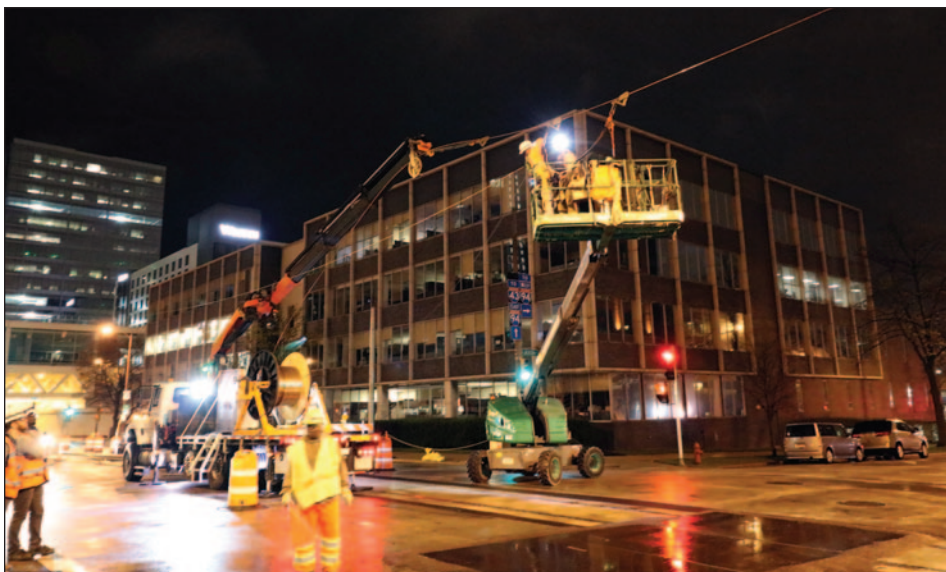




◀ Car 01 arrived from Brookville Equipment Corporation on March 26, 2018. The car was unloaded onto a track in St. Paul Street in front of Milwaukee's Main Post Office near 3rd Street. After being winched off the Silk Road delivery truck, car 01 ran a few feet under its own battery power. This was the first time that a streetcar operated on the streets of Milwaukee since March 2, 1958. After the delivery truck drove away the car operated under its own power into the Operation and Maintenance Facility. This facility is located under the I-794 elevated highway in the city block surrounded by St. Paul Street, Clybourn, Vel R. Phillips Avenue and 5th Streets. Milwaukee's Amtrak station is one block to the south.



▲ On May 7, 2018, welding crews are working on some of the last pieces of the track structure to be completed. 80-foot lengths of rail are being welded together on Cathedral Curve at Kilbourn Avenue and Jackson Street.



The new study considered several rail routes and vehicle types including European style trams. However, in 2002 a new transit technology gained traction; namely, the guided street tram ("GST") or guided bus or "Trams on Tires." The guided street tram was a proprietary system built by Bombardier. It consisted of a three section articulated electric bus operating on rubber tires with a guidance arm equipped with a double flanged steel wheel mounted on the front of the vehicle which rode on a single rail embedded in the pavement. It was powered by overhead wire.

At the time, the guided street tram was operating in two cities in France so city leaders flew to Nancy, France on a private jet to inspect the operation. They never actually witnessed the guided bus in operation since it was temporarily shut down due to technical problems. Nevertheless, upon their return they declared the guided street tram was the solution for Milwaukee. They proclaimed that the GST had all the features of light rail for less capital cost. Today the GST does not operate in any city. They were replaced (or are being replaced) with conventional trams in those two French cities. Bombardier no longer manufactures this vehicle type.

Needless to say, transit advocates were skeptical and some transportation experts were apoplectic. Many declared that the

◀ Construction workers tension the last piece of overhead to be installed on May 10, 2018, on Michigan Street. This segment of The Hop will carry the streetcar through Couture Tower. This line is not in service as the building, after significant delays, is finally under construction.



◀ With just over a month before opening day, car 03 is running north on Jackson Street at Juneau Avenue. It is October 1, 2018. The cars are being run on the proposed schedule as a test of their performance capabilities and for operator training.



▲ Crowds gather around cars 05 and 03 before the opening ceremonies at Cathedral Square, Kilbourn Avenue and Jackson Street, on November 2, 2018.

▶ Standing next to Mayor Tom Barrett and holding up a ribbon festooned with hops is our author, Alderman Robert Bauman. With tongue in cheek, Bob noted that there was a temporary suspension of streetcar service in Milwaukee. (It only lasted for 60 years and eight months.) After the Mayor cut a ceremonial ribbon, many people enjoyed an inaugural ride. During its first month of operation, The Hop carried an average of 2,191 passenger trips daily.





◀ On April 9, 2019, car 01 makes what is—for now—a rare move, turning left at Broadway to run east on St. Paul Avenue. This will be the future route of the L-Line but is only used by special moves for the time being. The reason for the turn here was that the St. Paul Bridge stuck open, so this car, being east of the river, just short-turned and continued to run until city crews fixed the bridge.



▲ Car 03 is northbound on Milwaukee Street crossing Wells Street on June 11, 2019. Route 10, Wells Street was the last TM streetcar line to operate in Milwaukee. North of Cathedral Square the cars operate on Jackson Street and Ogden Avenue on the pre-1953 route of TM's Route 10, Wells Street.

GST was actually a very expensive form of bus service rather than a poor man's light rail among many other criticisms of this technology. Critics were worried that Milwaukee would become the laughing stock of the transit industry if it adopted the guided bus. Nevertheless, support grew especially among Milwaukee's business leaders and eventually the Downtown Transit Connector Study proposed a Locally Preferred Alternative consisting of a 13-mile, \$300 million guided bus system.

In early 2006, Milwaukee's Common Council actually voted to support this Locally Preferred Alternative, however, Milwaukee's mayor, Tom Barrett, vetoed the legislation and the council upheld that veto in May 2006. Milwaukee had to go back to the drawing board once again.

Modern Streetcar Technology Comes Into View.

The study's focus eventually shifted to modern streetcars similar to the successful street car system in Portland, Oregon.

In February, 2007 Mayor Barrett released his Comprehensive Transportation Plan. The plan had two major components: a three-mile downtown streetcar circulator; and bus rapid transit service on two routes in Milwaukee that would connect major employment centers. The total cost of the Mayor's plan was \$107.65 million (\$91.5 million in federal funds plus local share) with the street car capital cost estimated to be \$52.5 million.

Once again political obstacles arose. Milwaukee County had to agree to spend the federal funds on a streetcar system and the

then county executive, Scott Walker, had no intention of agreeing to any form of rail transit. Milwaukee again faced stalemate.

Yes, this is the same Scott Walker who upon being elected Wisconsin Governor in November, 2010 cancelled the \$810 million federally funded project to extend Amtrak intercity rail service from Milwaukee to Madison and cancelled a proposed commuter rail line (utilizing the former C&NW mainline) that would have connected downtown Milwaukee, downtown Racine and downtown Kenosha (connecting with Metra's UP North Line service).

The log jam was broken in March 2009 following the Obama election. Mayor Barrett (a former member of Congress) approached his old colleague, Rep. David Obey, who chaired the House Appropriations Committee. Congress amended the law regarding the ICE funds by allocating \$54.9 million to the city of Milwaukee and \$36.6 million to Milwaukee County—a 60/40 split. The good news: Milwaukee now had complete control over its share of the \$91.5 million ICE funds. The bad news: those funds were a tiny fraction of the federal funds that were available when the study process began in the early 1990's. In addition, the state was no longer on board to cover half of the local share. The city would have to cover the entire non-federal share of capital costs.

Nevertheless, for the first time, Milwaukee seemed to have a clear track ahead to develop its streetcar.

In July, 2011 the Common Council approved a 3.6-mile locally preferred alternative and also approved a financing plan to build an initial \$64.6 million 2.1-mile streetcar segment in order to remain within the constraints of the available funding (federal funding (\$54.9 million) plus local share (\$9.7 million)). The local share was to be provided by revenue generated by several existing tax incremental financing districts.



◀ The highest number of daily passenger trips to date was recorded on July 13, 2019, during Milwaukee's Bastille Days celebration. Cars 04 and 05 pass at Cathedral Square where the event was held. Due to Covid there were no Bastille Days celebrations in 2020 and 2021.

► Online comments always seem to suggest that there is nothing that could be done with a streetcar that breaks down, as if it would have to stay there until it grows mold. That isn't the case, of course. While the Liberty series streetcars used by The Hop are not equipped to run in trains, one car can pull another. Couplers are hidden out of sight under the front panels. Such tows are rare. The only known breakdown happened when a car suddenly lost power at Public Market on August 27, 2019. Car 01 was sent out from the maintenance facility to tow Car 04 back to the facility for repairs.

But once again political obstacles arose. This time it involved utility relocation costs.

Historically public utilities were permitted to locate their facilities in public rights-of-way free of charge; however, if a city had a project that required the utility to move those facilities, the utility would have to absorb that cost. This arrangement was enshrined in Wisconsin law and city ordinance and the arrangement had worked this way for decades without controversy. But not this time.

A citizen, who also happened to be the executive director of a Republican think tank, filed a complaint with the Wisconsin Public Service Commission alleging that it was unfair for utility rate payers to absorb utility relocation costs associated with the streetcar. Stalemate once again.

Ironically, the local electric utility, WE Energies Corporation, enthusiastically supported this complaint despite the fact that they would supply the electric power for the streetcar and despite the fact that they were the successor company to TMER&L Co. Their corporate offices (still located in the historic Public Service Building that served as TM's main interurban terminal) were adorned with beautiful



original photographs of interurban trains and streetcars.

Eventually a hearing was held before the Public Service Commission but the Republican dominated commission declined to make a decision since it appeared that current law supported the city's position on utility relocation. They punted the ball to the Wisconsin State Legislature which promptly amended the law to require the city to assume the cost of utility relocation in connection with the streetcar project. They did not amend the law as applied to highway related projects. In other words, rail transit was singled out for special treatment in the hope that this added cost would kill the project. This law change did kill Kenosha's plan to expand its streetcar.

They also amended a provision of state law that designated rail transit as a form of public transit eligible for state funding. In the eyes of the Wisconsin State

Legislature, rail transit was no longer public transit.

So the project was back on track, however, the city would have to cover significant additional costs for utility relocation, which at one time was estimated at over \$40 million but had been whittled down to about \$15 million, and increased construction costs driven by inflation. New funding sources were identified and eventually a new financing plan was developed for the 2.1-mile main line now identified as the M Line. A short branch line connecting the main line to Milwaukee's lakefront was added to the project in 2014 with the assistance of a federal TIGER grant of \$14 million. This is now designated as the L Line (Figure 4).

The total project cost had now ballooned to \$128 million for a 2.5-mile double track streetcar route, five Brookville-built streetcars and the shops and yard



◀ With the city's skyline behind it, a streetcar is westbound on St Paul Avenue approaching 2nd Street on October 1, 2021. The name Hop comes from hops as well as hopping on and off the streetcars. Hops are the seed cones from hops plants that give bitterness to beer as well as flavor and aroma. Hops give stability to beer. They have antibacterial effects over other ingredients and balance the sweetness of malt. As we know from advertisements and the number of breweries in Milwaukee, beer is the product that made the city famous.

moved back to October, 2023 due to unforeseen construction problems.

Initial operations of the streetcar were met with public enthusiasm and ridership exceeded forecasts until March, 2020. The pandemic severely reduced ridership similar to the experience of every other public transit system in the country. Ridership is slowly returning as the city reopens and downtown workers return to their offices.

It is worth noting that the streetcar charges no fare. Operating costs are covered by a combination of federal Congestion Mitigation Air Quality grants ("CMAQ"), city parking revenue and a substantial grant from the Milwaukee based Potawatomi Hotel and Casino which is the presenting sponsor of The Hop. Speaking of operating costs, it is also worth noting that the Wisconsin State Legislature has declared the streetcar ineligible for state funded public transportation operating assistance that is received by every other public transit agency in the state of Wisconsin. Yes, the obstacles just kept coming and coming.



▲ A pair of cars wrapped in advertising pass each other on November 18, 2021, at Jackson Street and Juneau Avenue. All cars carried a reference to the Potawatomi Hotel and Casino as Potawatomi underwrote the cost of operations for a period of ten years thus providing for no fares being collected to ride the streetcars. Additional funding comes from downtown parking revenue.

facility. The city would now have to cover nearly half of the capital costs. The common council had to again vote to approve the new plan amid threats of recall elections and campaigns to oust streetcar supporters at the next election. Nevertheless, the common council approved the project in February 2015, four years after the first approval in 2011.

The track ahead was finally clear. Final design was completed. Construction contracts were let. Work commenced in 2016 and was completed in the summer of 2018 nearly 27 years after the planning process commenced. Regarding the politics, no streetcar supporter was defeated for reelection at the next council election.

So the ribbon cutting on that beautiful autumn day in 2018 was a bitter sweet

experience for those who were familiar with the history. Yes, the city had persevered against immense political opposition to build a streetcar; however, what was built was a fraction of the urban rail system envisioned when the planning process began in the early 1990's. In fact, the full 2.5-mile system was not even complete.

The lake front branch line had only been partially built as of November, 2018. The design included a lake front terminal on the ground floor of a new high rise residential tower. This real estate project encountered significant problems obtaining financing. Financing was not secured until early 2021. Construction is now underway with the completion of the lake front branch initially scheduled for summer, 2022. However, that date has been

Expansion Plans

Notwithstanding the pandemic and the incomplete lake front branch, expansion planning is underway. Expansion efforts include extending the streetcar from the Milwaukee Intermodal Station (Amtrak and intercity bus operators) to the Convention Center and Fiserv Forum (home of the 2021 NBA World Champion Milwaukee Bucks). This half mile extension is shovel ready but federal and local funding sources must still be identified. Beyond this short extension, project development is contemplated for significant expansion both north of downtown to the Bronzeville neighborhood and south of downtown to the Walker's Point neighborhood. These expansion plans would grow the streetcar system to a total of six route miles (Figure 4).

At six miles, Milwaukee would be approaching the scale of the rail transit system envisioned in the early 1990's. However, many challenges remain mostly in the form of state laws that have intentionally created road blocks to rail transit development and the state legislature's refusal to allow local governments to form regional transit authorities with dedicated funding sources for capital and operating costs like virtually every other major transit system in the country. On the plus side, President Biden's bipartisan Infrastructure bill a/k/a Infrastructure Investment and Jobs Act may offer new opportunities for federal funds to support streetcar expansion.

The local political landscape has also changed. On December 16, 2021, the U.S. Senate confirmed President Biden's nomination of Milwaukee's mayor, Tom Barrett, as the Ambassador to Luxembourg. Barrett resigned on December 22 after serving 18 years, and Milwaukee's Common Council president, Alderman Cavalier Johnson, became the acting mayor. A special election was held in April, 2022 to elect a mayor to complete Barrett's term which expires in April, 2024. Acting Mayor Cavalier Johnson, a streetcar supporter, won that election.

Milwaukee has faced even more daunting challenges over the last 30 years, yet The Hop is up and running today. Therefore, this author is cautiously optimistic that, with strong and visionary leadership, The Hop will be expanded to bring the benefits of rail transit to more Milwaukee neighborhoods and we won't have to wait another 30 years.

About the author: *The author has been involved in almost every aspect of this history. During the 1990s, he served on the East-West Corridor Transportation Study Technical Advisory Committee and was chair of the Southeast Wisconsin New Transportation Alliance that advocated for improved and expanded public transportation. In 1997 he was one of the attorneys who filed an administrative complaint against Governor Thompson and WisDOT. In the early 2000's he was a member of the Downtown Transit Connector Study Advisory Committee. In 2004 he was elected to the Milwaukee Common Council representing the downtown aldermanic district where The Hop currently operates. As an alderman for the last 18 years, he has been a leading advocate for the*



▲ Among the objections that streetcar opponents raised was that streetcars could not operate in snow. Perhaps this was an urban legend coming from the monstrous 1947 snowstorm that completely shut down the Milwaukee area. Defying the skeptics, car 04 is running east on Ogden Street just past Astor during the snowstorm of February 4, 2022. The absence of vehicles on Ogden is noteworthy. During The Hop's first winter season, 2018-2019, a series of nasty snowstorms shut down the freeways multiple times. The Hop did not shut down.



▲ The Hop has stimulated residential real estate development along its route including the 25-story Ascent Tower on Kilbourn Avenue a few blocks from Lake Michigan. The structural members of the building above the fourth floor are made of "mass timber" also known as "cross-laminated timber." The product is lumber and epoxy pressed together in structural shapes. Interior building design elements include exposed timber ceilings and columns. At 284 feet in height, the developer claims that this is the tallest mass timber structure in the world. Car 04 is passing the building on its eastward trip along Jackson Street on February 17, 2022.

development of rail transit in Milwaukee and was lead sponsor of the legislation approving the construction of The Hop.

The author is a native of Chicago's Edgewater neighborhood (Red Line, Thorndale stop), a graduate of Marquette University (B.A., 1974) and Northwestern

University Pritzker School of Law (J.D., 1977). He has lived in Milwaukee since 1977. In the 1980's, the author was an owner and CEO of Milwaukee Rail Car Corp. whose projects included the restoration and return to mainline service of the former Milwaukee Road sky top parlor car "Cedar Rapids."