

HIGHWAY MAINTENANCE FACILITY LOCATION STUDY

WASHINGTON COUNTY WISCONSIN

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NUMBER 132

HIGHWAY MAINTENANCE FACILITY LOCATION STUDY WASHINGTON COUNTY, WISCONSIN

Prepared by the

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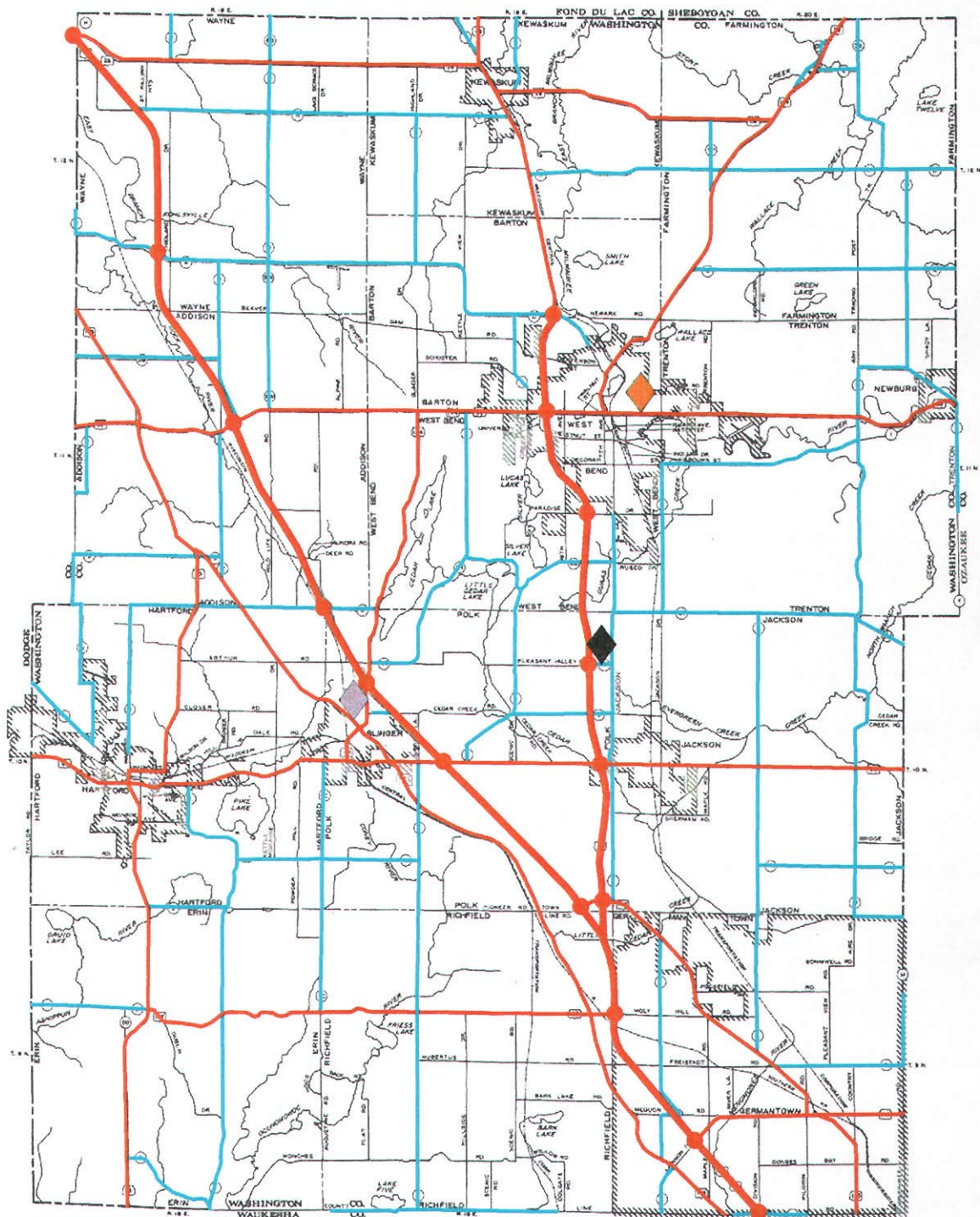
HIGHWAY MAINTENANCE FACILITY LOCATION STUDY

INTRODUCTION

At the request of the Washington County Highway Commissioner, the Regional Planning Commission has prepared an evaluation of the locations of the two existing Washington County highway maintenance facilities, and of an alternative proposed single centralized highway maintenance facility location. The two existing maintenance facilities are located in the City of West Bend on STH 33 at Schmidt Road and in the Village of Slinger on STH 175 just north of Maple Avenue. A proposed alternative centralized maintenance facility would be located in the northeast quadrant of the USH 45 interchange with CTH PV adjacent to the Washington County Fair Park grounds. These two alternative maintenance facility configurations--two existing sites and an alternative single centralized site--were evaluated with respect to their efficiency in serving the existing and planned county trunk highway systems, particularly with respect to snow and ice control. Also, a subalternative of the Fair Park centralized maintenance facility alternative was considered which would include satellite salt storage facilities.

The location of the two existing highway maintenance facilities are shown on Map 1, along with the proposed consolidated Fair Park site. The existing county and state trunk highway system for which the county has maintenance responsibilities is also shown on Map 1. The existing snow and ice control routes served by, and the attendant service areas of, the two existing maintenance facilities are shown on Map 2. In 1998 there were 28 snow and ice control routes in Washington County, including a total of 417.2 route-miles, and 894.9 lane-miles, of pavement of county and

LOCATIONS OF THE HIGHWAY MAINTENANCE FACILITIES



LEGEND

EXISTING FREEWAY

STATE TRUNK HIGHWAY

INTERCHANGE

EXISTING STANDARD ARTERIAL

STATE TRUNK HIGHWAY SYSTEM

COUNTY TRUNK HIGHWAY SYSTEM



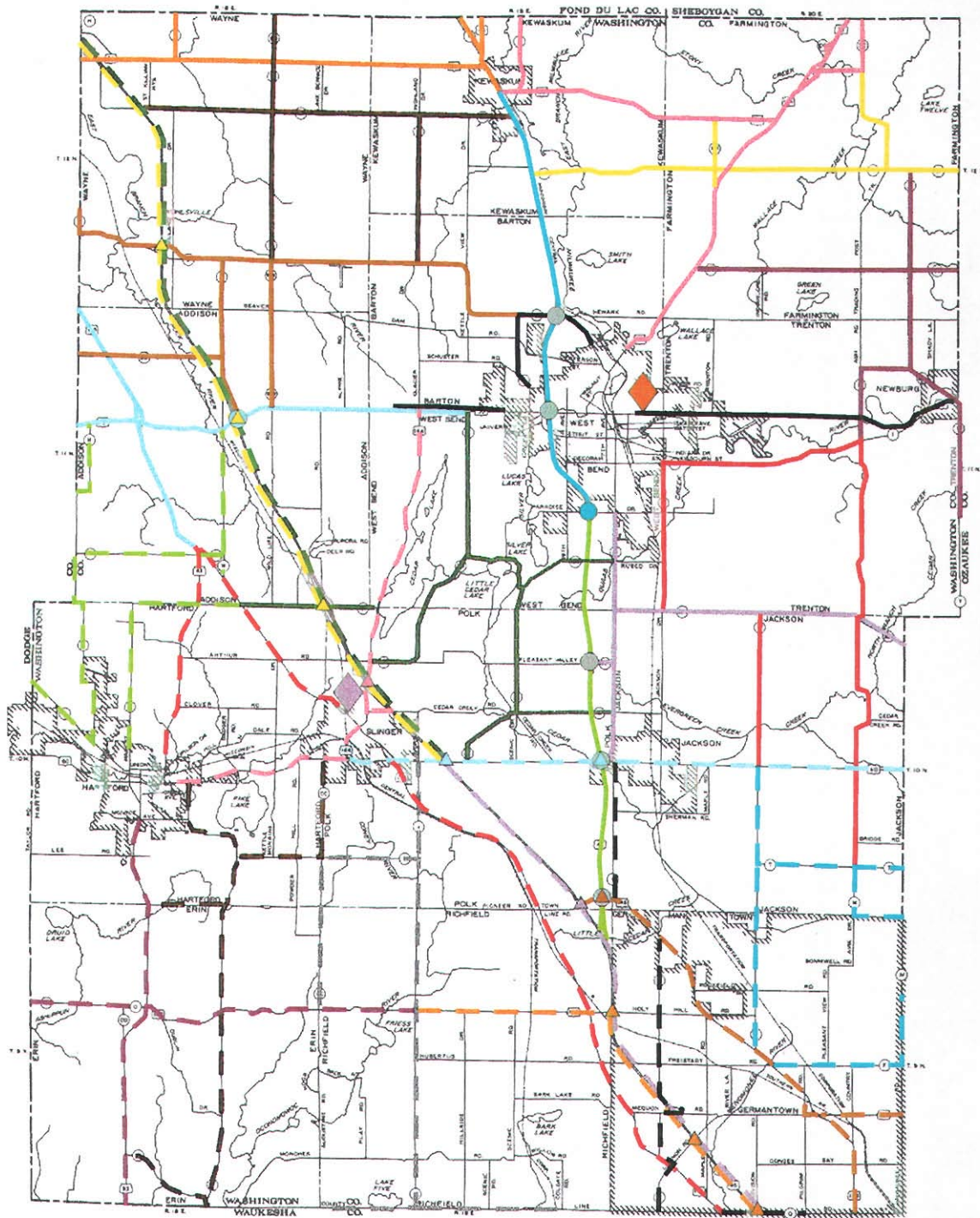
CITY OF WEST BEND HIGHWAY MAINTENANCE FACILITY

VILLAGE OF SLINGER HIGHWAY MAINTENANCE FACILITY

PROPOSED FAIR PARK HIGHWAY MAINTENANCE FACILITY



EXISTING SNOW AND ICE CONTROL ROUTES IN WASHINGTON COUNTY
BY HIGHWAY MAINTENANCE FACILITY: 1998



LEGEND

ROUTES SERVED FROM THE
CITY OF WEST BEND HIGHWAY
MAINTENANCE FACILITY

- SECTION 1
- SECTION 1 ½
- SECTION 2
- SECTION 2 ½
- SECTION 12
- SECTION 12 ½
- SECTION 13
- SECTION 13 ½
- SECTION 14
- SECTION 14 ½
- SECTION 16
- SECTION 20
- SECTION 20 ½

ROUTES SERVED FROM THE
VILLAGE OF SLINGER HIGHWAY
MAINTENANCE FACILITY

- SECTION 3
- SECTION 4
- SECTION 5
- SECTION 5 ½
- SECTION 6
- SECTION 7
- SECTION 8
- SECTION 9
- SECTION 9 ½
- SECTION 10
- SECTION 10 ½
- SECTION 11
- SECTION 15
- SECTION 15 ½

INTERCHANGES SERVED FROM
THE CITY OF WEST BEND HIGHWAY
MAINTENANCE FACILITY

- SECTION RAMPS
- SECTION 20
- SECTION 20 ½

INTERCHANGES SERVED FROM
THE VILLAGE OF SLINGER HIGHWAY
MAINTENANCE FACILITY

- SECTION 3
- SECTION 7
- SECTION 9 ½

- CITY OF WEST BEND HIGHWAY
MAINTENANCE FACILITY
- VILLAGE OF SLINGER HIGHWAY
MAINTENANCE FACILITY



state trunk highways.¹ Of the 28 snow and ice control routes, 14 routes totaling 222.1 route-miles, and 471.1 lane-miles, were served by the County maintenance facility located in the Village of Slinger; and 14 routes totaling 195.1 route-miles, and 423.8 lane-miles, were served by the County maintenance facility located in the City of West Bend. Shown on Map 3 is the planned future year 2020 County and State trunk highway system for which the County is proposed to have maintenance responsibilities. This planned future highway system is defined in the adopted Washington County jurisdictional highway system plan and adopted year 2020 regional transportation system plan.

EVALUATION OF OPTIMAL LOCATION OF COUNTY HIGHWAY MAINTENANCE FACILITIES

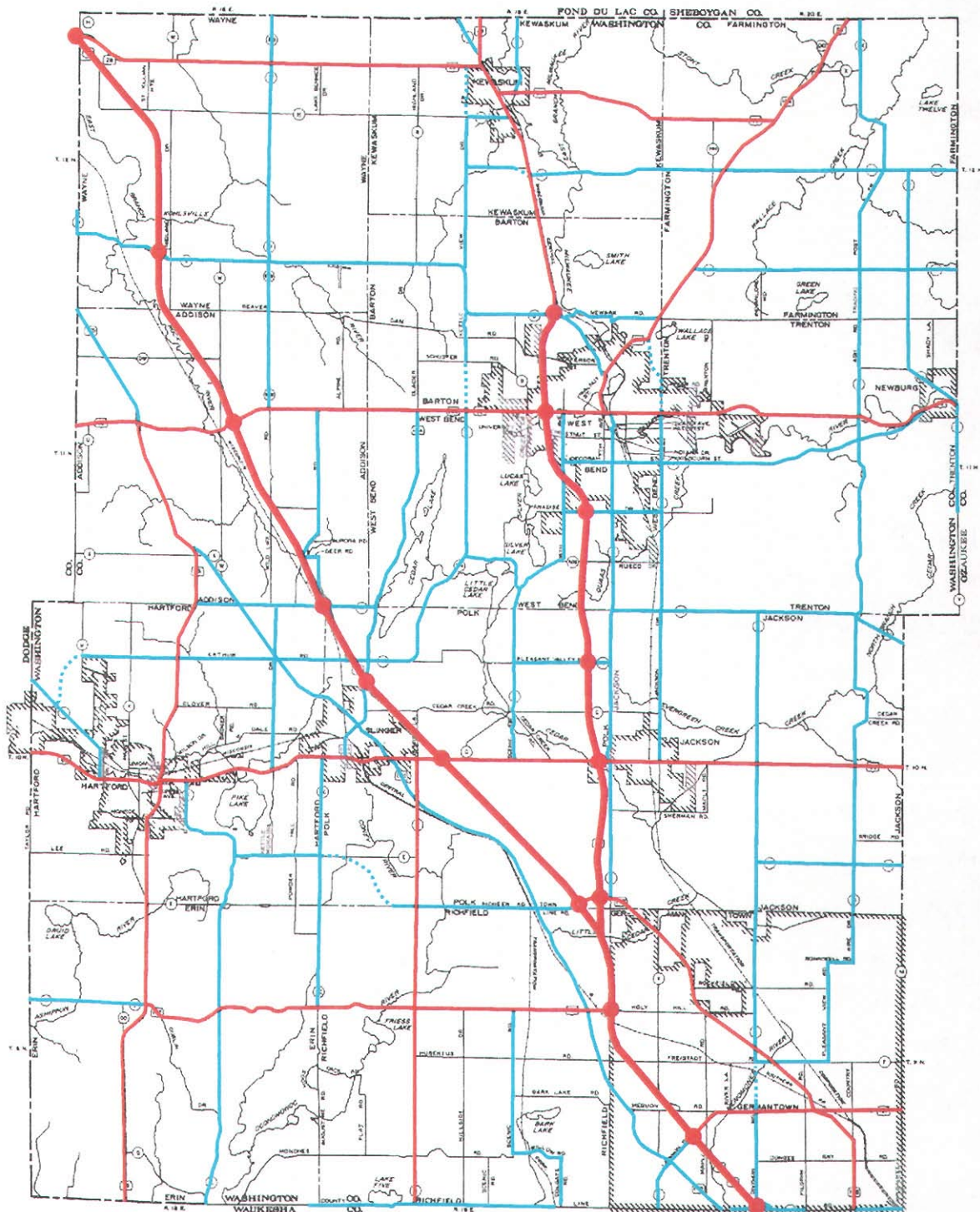
The first step in the evaluation of alternative highway maintenance facility locations was to determine; 1) the optimal location for a single centralized facility; and 2) whether the two existing facilities are located in optimal locations to serve their respective service areas. The optimal location for a highway maintenance facility would be the location with the minimum travel distance to serve the total route and lane-miles of county and state trunk highway.

To conduct this assessment, Washington County was divided into 108 sub-areas, each four square miles in area. The number of lane-miles and route-miles of county trunk highways and state trunk

¹Also within the County, 13.7 route-miles, and 33.0 lane-miles, of county and state trunk highways are not plowed by the County but rather are plowed by municipalities and other counties. There are 1.5 route-miles, and 3.0 lane-miles, of STH 60 located west of the City of Hartford currently plowed by Dodge County; 0.5 route-miles, and 1.0 lane-miles, of CTH H plowed by Fond Du Lac County; 2.8 route-miles, and 5.6 lane-miles, of STH 167 plowed by the Village of Germantown; 1.5 route-miles, and 3.0 lane-miles, of STH 60 and 1.7 route-miles, and 3.4 lane-miles, of STH 83 plowed by the City of Hartford; 1.4 route-miles, and 2.8 lane-miles, of STH 175 plowed by the Village of Slinger; and 1.5 route-miles, and 3.0 lane-miles, of STH 144 and 2.8 route-miles, and 11.2 lane-miles, of STH 33 plowed by the City of West Bend.

The route-miles of a roadway are a measurement of its length; i.e., a roadway 8.0 miles long has 8.0 route-miles. For the purposes of this analysis, only through traffic lanes were used to compute lane-miles. Therefore, a two-traffic lane roadway, 8.0 route-miles in length, has 16.0 lane-miles.

PLANNED FUTURE YEAR 2020 COUNTY AND STATE TRUNK HIGHWAY
SYSTEM FOR WASHINGTON COUNTY



LEGEND

FREEWAY

- STATE TRUNK HIGHWAY
- INTERCHANGE

STANDARD ARTERIAL

- STATE TRUNK HIGHWAY SYSTEM
- COUNTY TRUNK HIGHWAY SYSTEM
- PLANNED ROUTE TO BE CONSTRUCTED

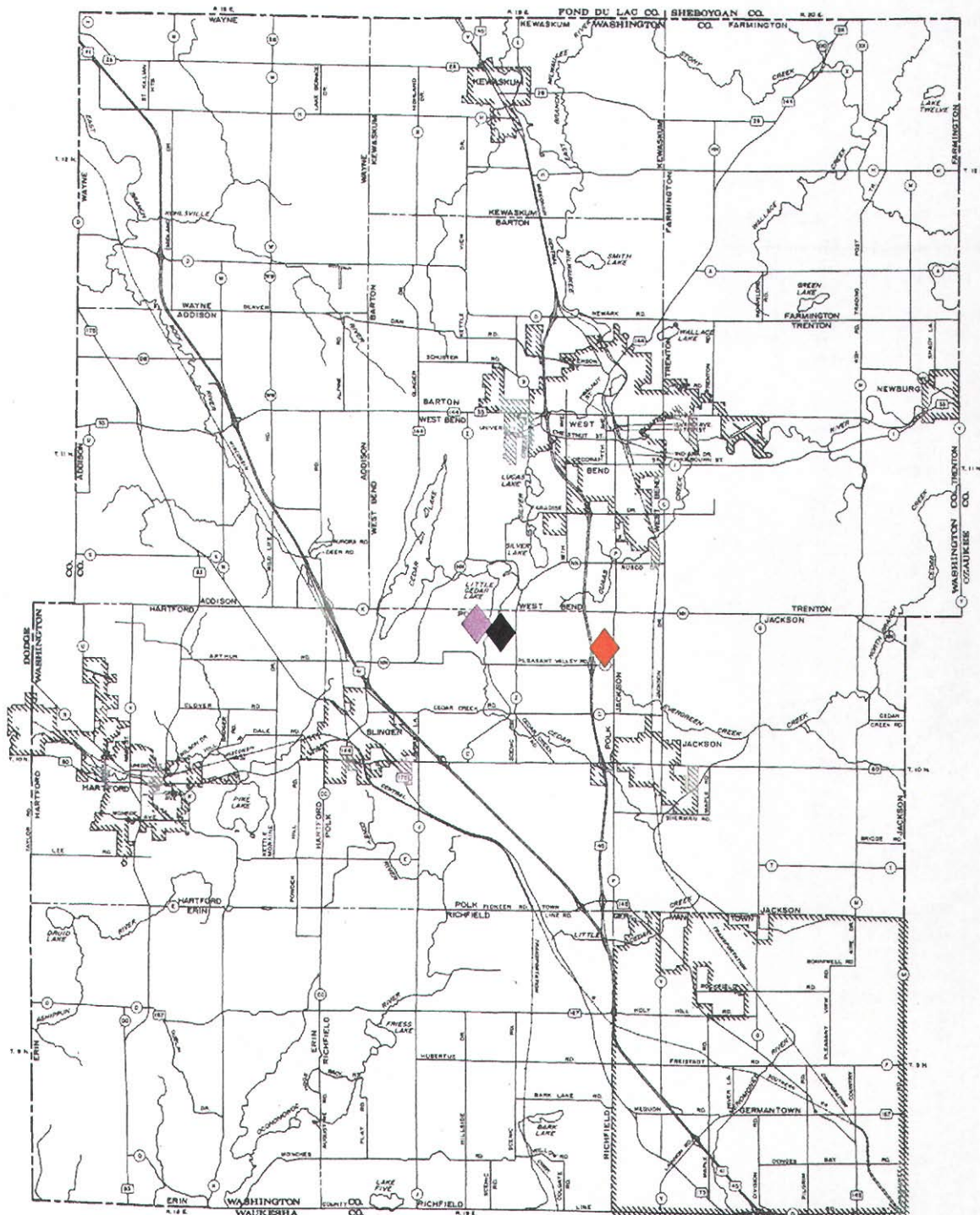


highways to be maintained within each sub-area was determined. When County or State trunk highways were coincident with the boundary between adjacent sub-areas, the lane- and route-miles were divided equally between the two sub-areas. The travel distance between each of the sub-areas was also estimated. For each of the 108 sub-areas, travel distance to serve the total route and lane-miles of County and State trunk highways was calculated.

The optimal location for a single, centralized highway maintenance facility to serve the existing County and State trunk highway system was determined to be approximately 0.25 mile west of the southern tip of Little Cedar Lake, as shown on Map 4. The optimal location with respect to the year 2020 planned County and State trunk highway system was determined to be approximately 0.25 mile east of the southern tip of Little Cedar Lake, or about 0.50 mile east of the optimal location with respect to the existing County and State trunk highway systems. These optimal locations are very close to the proposed Fair Park site, that is, about 2.0 miles west of the proposed Fair Park site. Thus, the Fair Park site may be concluded to be a desirable, and nearly ideal, site for the construction of a single centralized countywide highway maintenance facility. The Fair Park site has a number of practical advantages over the precise optimal locations identified. The Fair Park site would have immediate access to both CTH P and CTH PV, as well as direct access to the USH 45 Freeway via an interchange at CTH PV. Another advantage of this site is that the land is under County ownership.

An evaluation was also conducted to assess whether the two existing highway maintenance facilities were optimally located with respect to the County and State trunk highways within their service areas. As shown on Map 5, the optimal location for a maintenance facility serving the County and State trunk highways located within the existing West Bend highway maintenance facility service area was determined to be approximately 0.5 mile north and 1.5 miles west of the existing West Bend highway maintenance facility. With regard to the planned County and State trunk highway systems, the optimal highway maintenance facility location would be at approximately the same location, about 0.5 mile north and 1.0 mile west of the existing West Bend highway maintenance facility. Thus, the West Bend highway maintenance facility is in a desirable,

THE PROPOSED FAIR PARK SITE AND THE OPTIMAL LOCATION FOR
A SINGLE CENTRALIZED HIGHWAY MAINTENANCE FACILITY SERVING
THE EXISTING AND PLANNED COUNTY AND STATE TRUNK HIGHWAY SYSTEM



LEGEND

SINGLE CENTRAL MAINTENANCE FACILITY LOCATION



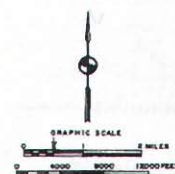
PROPOSED FAIR PARK SITE



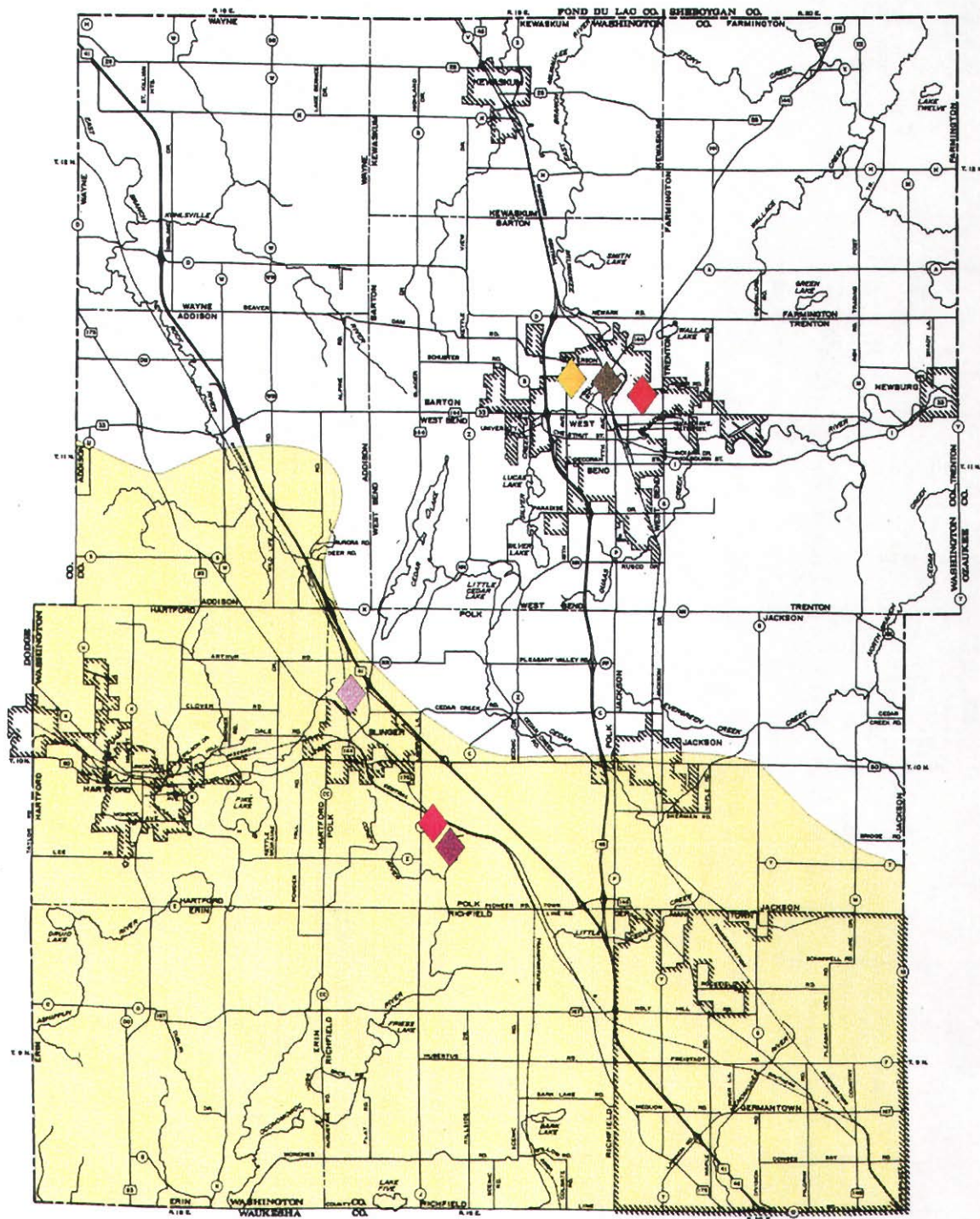
OPTIMAL LOCATION -- EXISTING COUNTY
AND STATE TRUNK HIGHWAY SYSTEM



OPTIMAL LOCATION -- PLANNED COUNTY
AND STATE TRUNK HIGHWAY SYSTEM



THE LOCATION OF EXISTING HIGHWAY MAINTENANCE FACILITIES AND THE OPTIMAL LOCATIONS FOR THE MAINTENANCE FACILITIES WITHIN THEIR RESPECTIVE SERVICE AREAS TO SERVE THE EXISTING AND PLANNED COUNTY AND STATE TRUNK HIGHWAY SYSTEMS



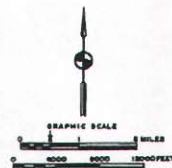
LEGEND

EXISTING WEST BEND HIGHWAY MAINTENANCE FACILITY

- ◆ EXISTING LOCATION
- ◆ OPTIMAL LOCATION - EXISTING COUNTY AND STATE TRUNK HIGHWAY SYSTEM
- ◆ OPTIMAL LOCATION - PLANNED COUNTY AND STATE TRUNK HIGHWAY SYSTEM

EXISTING SLINGER HIGHWAY MAINTENANCE FACILITY

- ◆ EXISTING LOCATION
- ◆ OPTIMAL LOCATION - EXISTING COUNTY AND STATE TRUNK HIGHWAY SYSTEM
- ◆ OPTIMAL LOCATION - PLANNED COUNTY AND STATE TRUNK HIGHWAY SYSTEM
- GENERALIZED SERVICE AREA



and nearly ideal, location with respect to the existing and planned county and state trunk highway systems within its service area.

As also shown on Map 5, the optimal location for a maintenance facility serving the existing county and state trunk highways located within the existing Slinger highway maintenance facility service area was determined to be approximately 2.0 miles south, and 1.5 miles east of the Slinger highway maintenance facility. With regard to the planned county and state trunk highway systems, the optimal location was determined to be approximately 2.5 miles south and 2.0 miles east of the existing Slinger maintenance facility. Although the existing highway maintenance facility in the Village of Slinger is not in the most desirable location with respect to travel time and distance to the county and state trunk highways it serves, it is in reasonable proximity to the most desirable location and has excellent access to the arterial street and highway system including USH 41, STH 60, STH 144, and STH 175.

In summary, the single proposed highway maintenance facility Fair Park site may be considered to be located in a desirable, and nearly ideal, location to serve both the existing and planned county and state trunk highway systems. The existing City of West Bend facility may be considered to be in a desirable, and nearly ideal location to serve the county and state trunk highway systems within its service area. The existing Village of Slinger facility may also be considered to be located in proximity to the ideal, most desirable location to serve the existing and planned county and state trunk highway systems within its service area.

The next step in the evaluation of the desirability of the single proposed new highway maintenance facility as an alternative to the two existing highway maintenance facilities was to estimate the deadhead travel times between the existing Washington County snow and ice control routes and the existing and proposed highway maintenance facilities.

The deadhead travel time is the unproductive travel time required to travel between the highway maintenance facility and the snow and ice control routes.

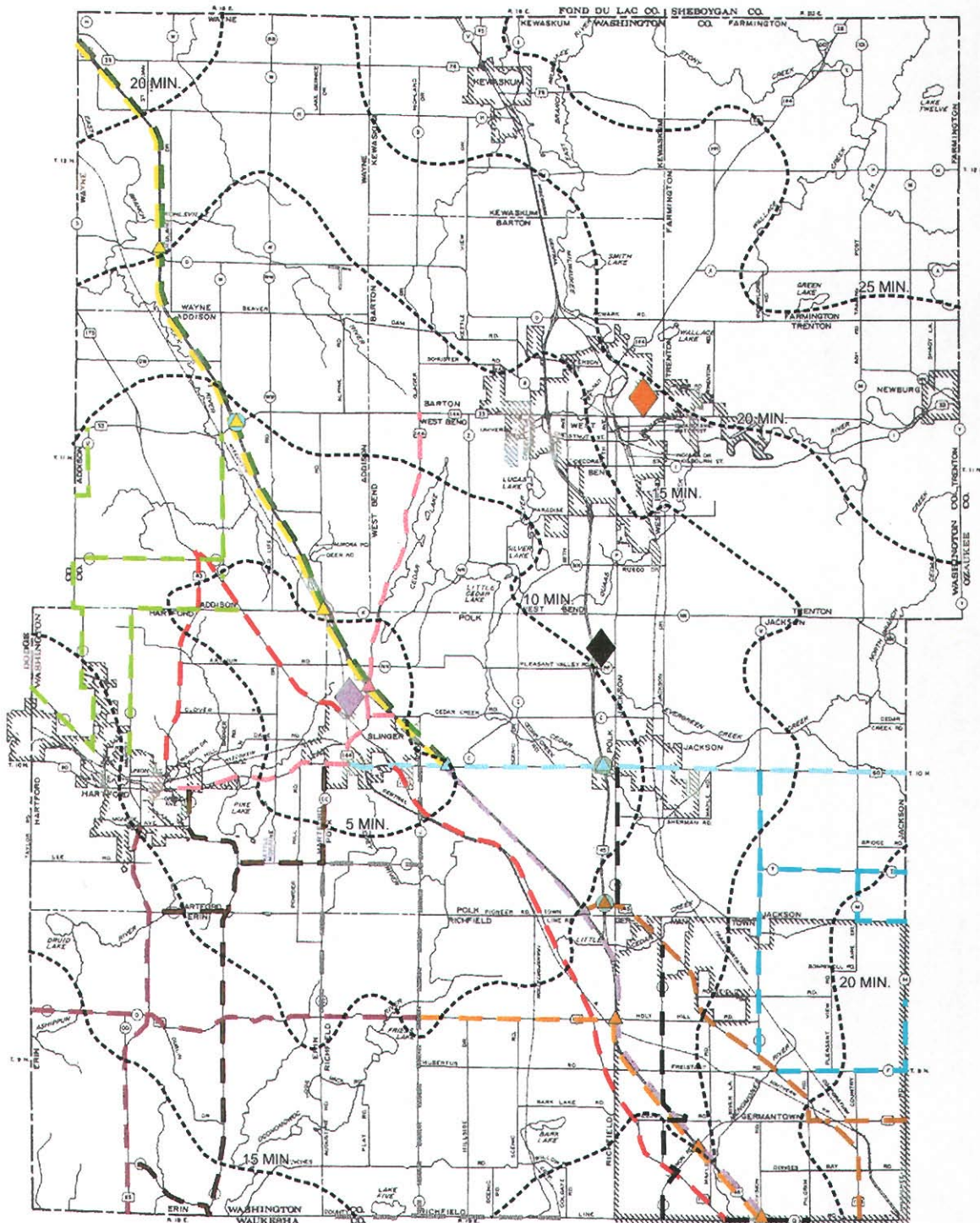
The estimated five-minute isochronal travel times from the existing Slinger highway maintenance facility to the 14 snow and ice control routes within its present service area are shown on Map 6. Of those 14 routes, 12 routes representing 194 route-miles, and 417.4 lane-miles, of the total 222.1 route-miles, and 471.1 lane-miles served by this facility, are located within an estimated deadhead travel time of 10 minutes or less. The remaining two routes have deadhead travel times between 10 and 15 minutes.

The estimated five-minute isochronal travel times from the existing West Bend highway maintenance facility to the 14 snow plowing routes within its present service area are shown on Map 7. Of those 14 routes, 13 routes, representing 179.3 route-miles, and 392.2 lane-miles of the total 195.1 route-miles and 423.8 lane-miles served by this facility, have a deadhead travel time of 10 minutes or less. The remaining route has a deadhead traveltime of between 10 and 15 minutes.

The estimated five minute isochronal travel times from the proposed centralized highway maintenance facility at the Fair Park site to the 28 existing snow and ice control routes within Washington County are shown on Map 8. Of the 28 total existing routes, 22 routes, representing 322.2 route-miles, and 704.8 lane-miles, would be within an estimated deadhead travel time of 10 minutes or less. The remaining six routes would be served by deadhead traveltimes of between 10 and 15 minutes. Thus, deadhead traveltimes would be expected to increase under an alternative single Fair Park maintenance facility, although only modestly. Compared to the existing two maintenance facilities, three routes totaling 51.9 route-miles, and 104.8 lane-miles, would entail a deadhead travel time of between 10 and 15 minutes, rather than a deadhead travel time of under 10 minutes. The three routes represent about 11 percent of the total 28 routes; 51.9 route-miles, or 12 percent, of the total 417.2 route-miles; and 104.8 lane-miles, or 12 percent, of the total 894.9 lane-miles of county and state trunk highway system snow and ice control routes.

The effects on deadhead traveltime as a result of the alternative consolidation of the two existing highway maintenance facilities to a single facility are shown on Map 9 in five minute increments. There are areas of the County, which may be expected to experience a deadhead travel time decrease, and other areas, which may be expected to experience an increase. Of the 28 snow and

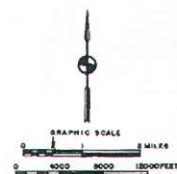
EXISTING SNOW AND ICE CONTROL ROUTES IN WASHINGTON COUNTY
SERVED BY THE VILLAGE OF SLINGER HIGHWAY MAINTENANCE FACILITY: 1998



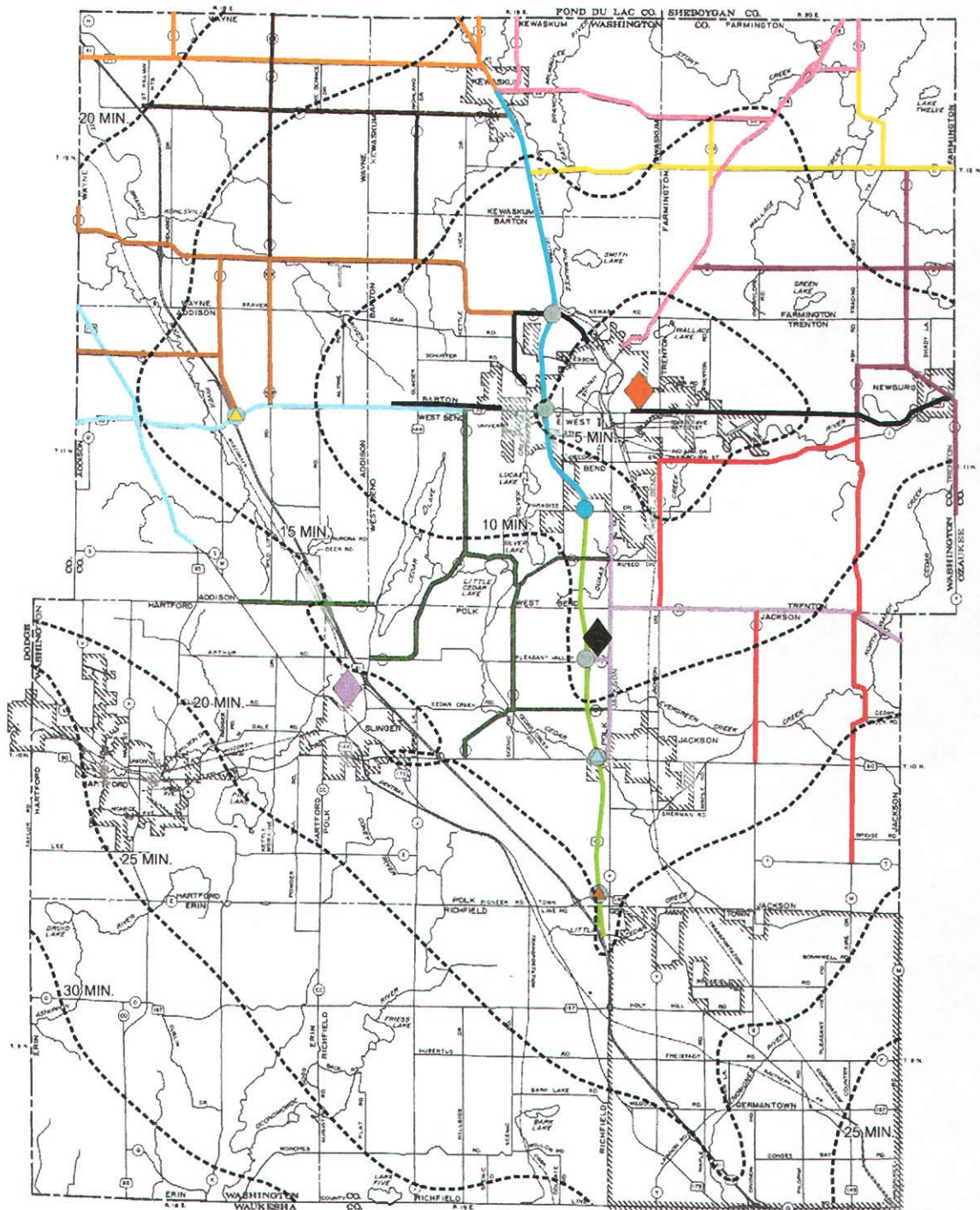
LEGEND

- ROUTES SERVED FROM THE VILLAGE OF SLINGER HIGHWAY MAINTENANCE FACILITY
- ▲ INTERCHANGES SERVED FROM THE VILLAGE OF SLINGER HIGHWAY MAINTENANCE FACILITY
- INTERCHANGES ALSO SERVED FROM WEST BEND MAINTENANCE FACILITY

- FIVE MINUTE TRAVEL TIME ISOCHRONAL LINES
- ◆ CITY OF WEST BEND HIGHWAY MAINTENANCE FACILITY
- ◆ VILLAGE OF SLINGER HIGHWAY MAINTENANCE FACILITY
- ◆ LOCATION OF PROPOSED HIGHWAY MAINTENANCE FACILITY



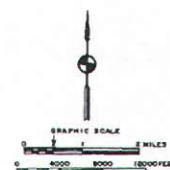
EXISTING SNOW AND ICE CONTROL ROUTES IN WASHINGTON COUNTY SERVED
BY THE CITY OF WEST BEND HIGHWAY MAINTENANCE FACILITY: 1998



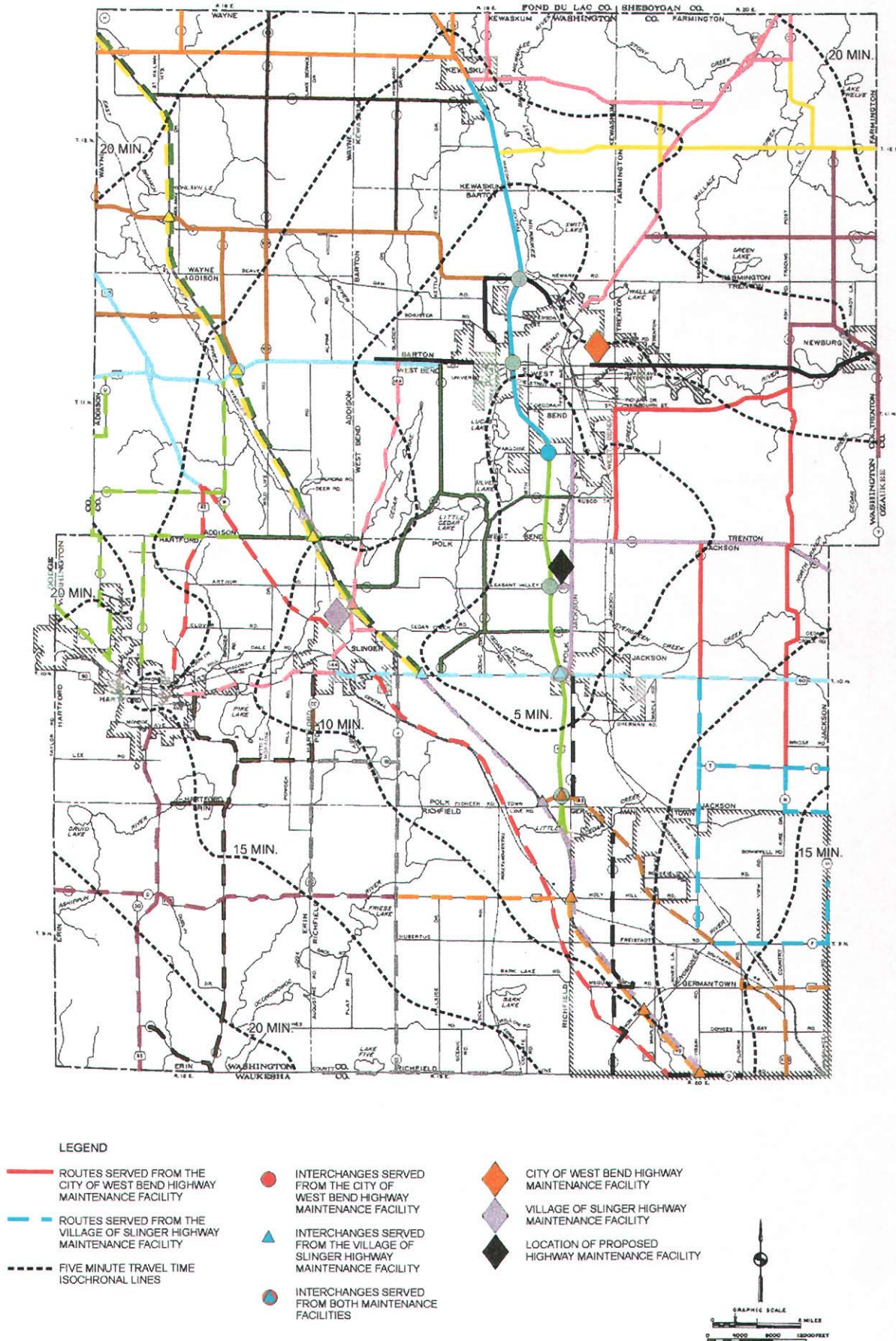
LEGEND

- ROUTES SERVED FROM THE CITY OF WEST BEND HIGHWAY MAINTENANCE FACILITY
- INTERCHANGES SERVED FROM THE CITY OF WEST BEND HIGHWAY MAINTENANCE FACILITY
- INTERCHANGES ALSO SERVED FROM SLINGER MAINTENANCE FACILITY

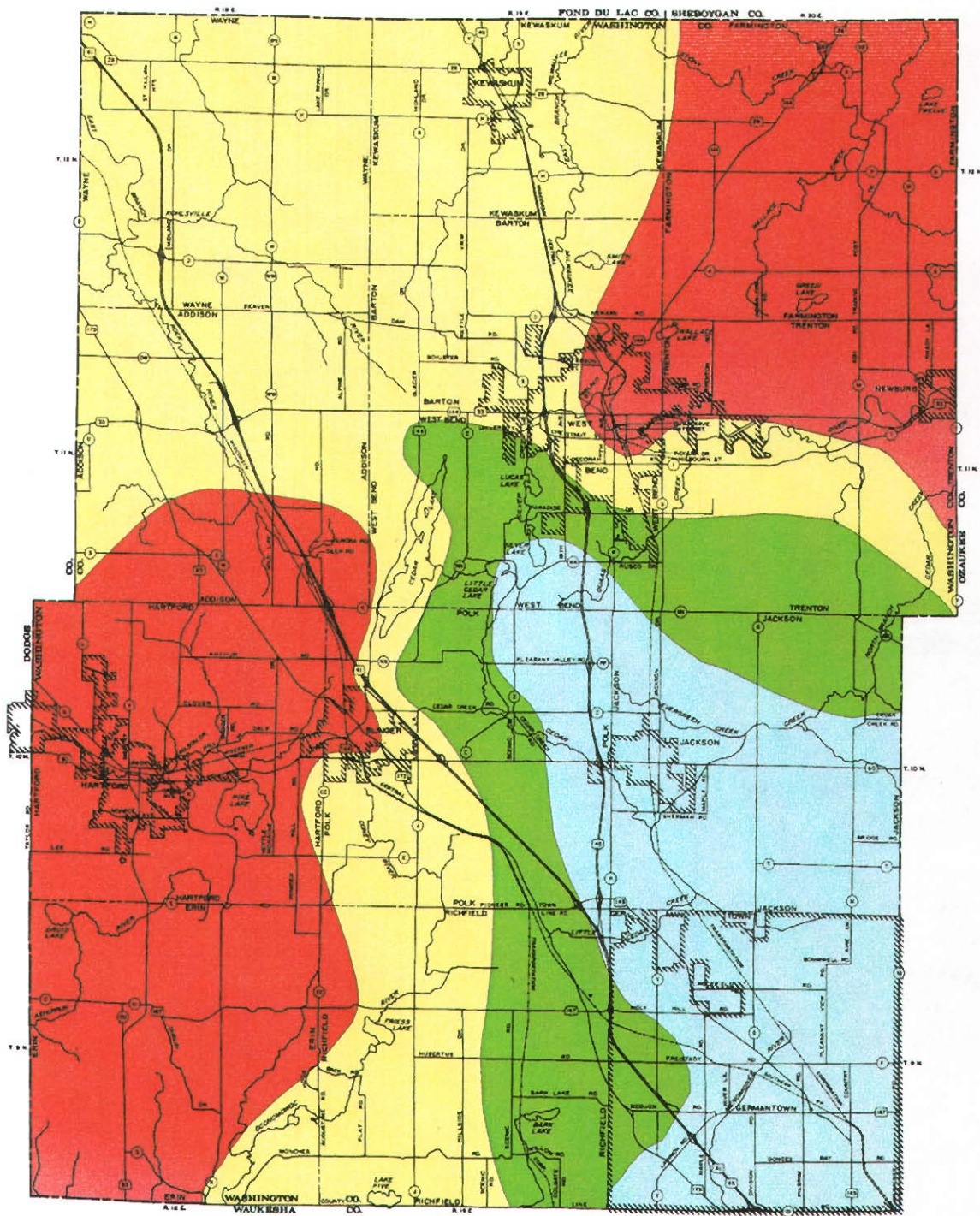
- FIVE MINUTE TRAVEL TIME ISOCHRONAL LINES
- ◆ CITY OF WEST BEND HIGHWAY MAINTENANCE FACILITY
- ◆ VILLAGE OF SLINGER HIGHWAY MAINTENANCE FACILITY
- ◆ LOCATION OF PROPOSED HIGHWAY MAINTENANCE FACILITY



PROPOSED SNOW AND ICE CONTROL ROUTES IN WASHINGTON COUNTY
SERVED BY THE FAIR PARK HIGHWAY MAINTENANCE FACILITY: 1998



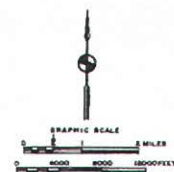
ESTIMATED CHANGE IN DEADHEAD TIMES ATTENDANT TO COMBINING THE TWO
EXISTING HIGHWAY MAINTENANCE FACILITIES IN SLINGER AND WEST BEND
INTO A SINGLE HIGHWAY MAINTENANCE FACILITY AT FAIR PARK



LEGEND

ESTIMATED CHANGE IN DEADHEAD TIME UNDER
SINGLE HIGHWAY MAINTENANCE FACILITY

- INCREASE OF 5 TO 10 MINUTES
- INCREASE OF LESS THAN 5 MINUTES
- DECREASE OF LESS THAN 5 MINUTES
- DECREASE OF 5 TO 10 MINUTES



ice control routes within Washington County, nine routes having 148.8 route-miles, and 301.7 lane-miles, are expected to experience a deadhead travel time increase of less than five minutes. An additional six routes having 95.8 route-miles, and 194.1 lane-miles, are expected to experience a deadhead travel time increase ranging from five to ten minutes. Conversely, five routes having 76.6 route-miles, and 192.8 lane-miles, are expected to experience a deadhead travel time decrease of less than five minutes. An additional eight routes having 96.0 route-miles, or 206.30 lane-miles, are expected to experience a deadhead travel time decrease ranging from five to ten minutes.

The number of route-miles--95.8--expected to experience an increase of five to ten minutes in deadhead travel times is virtually identical to the number of route-miles--96.0--expected to experience a decrease of five to ten minutes in deadhead travel times. The net change in deadhead travel times attendant to the consolidation of the highway maintenance facilities at the Fair Park site, then, is that about 72 route-miles--148.8 compared to 76.6--are expected to require up to five minutes of additional deadhead travel time. In total, only three more snow and ice control routes are expected to experience an increase deadhead travel time than are expected to experience a decrease. Therefore, it may be concluded that consolidation from the two existing highway maintenance facilities to a single highway maintenance facility would be expected to result in a very modest net increase in deadhead travel times to the existing snow and ice control routes. Moreover, the Fair Park site is in a desirable, if not ideal, location to serve as that single maintenance facility.

Satellite Salt Storage Facilities

As a subalternative of the single highway maintenance facility location analysis, the provision of satellite salt storage facilities was considered. The satellite facilities in this study were assumed to be used as vehicular refueling and salt replenishment sites only; that is, all vehicles were assumed to be garaged at the proposed highway maintenance facility at the Fair Park site. It was also assumed that salt storage capabilities would be retained at the proposed Fair Park site.

Based upon information provided by the County staff, a truckload of salt lasts approximately 1.5 to 2.0 hours, the equivalent of the average time for the first pass to be made during an average

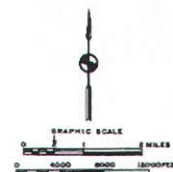
snowfall event. On average, two passes are required on a typical snow and ice control route, the first pass to clear the road, and the second pass to clear the shoulders and intersections. County staff also indicated that the snow and ice control vehicles have sufficient fuel capacity to make the two to three passes required in a typical snowfall event without refueling. County staff also indicated that, on average, 30 snowfall events occur annually.

Two alternatives were evaluated to determine if the provision of satellite salt storage and refueling sites would improve the efficiency of a single highway maintenance facility. The first alternative would provide two satellite facilities and the second alternative would provide four satellite facilities. The basis of this evaluation was a comparison between the estimated capital costs of constructing these satellite facilities with the reduction in deadhead travel time and its estimated cost.

In order to evaluate the provision of two satellite facilities, the County was divided into three subareas, as shown on Map 10. The satellite facilities were located in the center of the northern and southern thirds of the County, based on location of county and state trunk highways. A total of 14 snow and ice control routes are expected to be served by the satellite facilities. The capital cost of providing two satellite salt storage facilities was estimated to be approximately \$760,000 in 1998 dollars. Each facility was assumed to have a 5,000 ton capacity salt dome, refueling facilities, and ten acres of land. The capital cost does not include the cost of salt loading equipment. The annualized capital cost of these facilities in constant dollars--without interest charges--over a 20 year period would be \$38,000.

The provision of satellite facilities in this configuration would not be expected to have any travel time impact on routes in the center third of the County, as vehicles servicing the snow and ice control routes in this third would continue to use the Fair Park site. If satellite facilities are provided in the northern and southern thirds, the travel times savings per route are expected to average less than eight minutes, or about 15 minutes per round trip, but may range up to about 15 minutes in each direction or a total of 30 minutes per round trip. During a typical snowfall event, the salt load would need to be replenished once, but the fuel load would not require reloading

APPROXIMATE AREAS UTILIZED IN THE ANALYSIS OF TWO SATELLITE SALT STORAGE FACILITIES WITH THE SINGLE CENTRALIZED HIGHWAY MAINTENANCE FACILITY

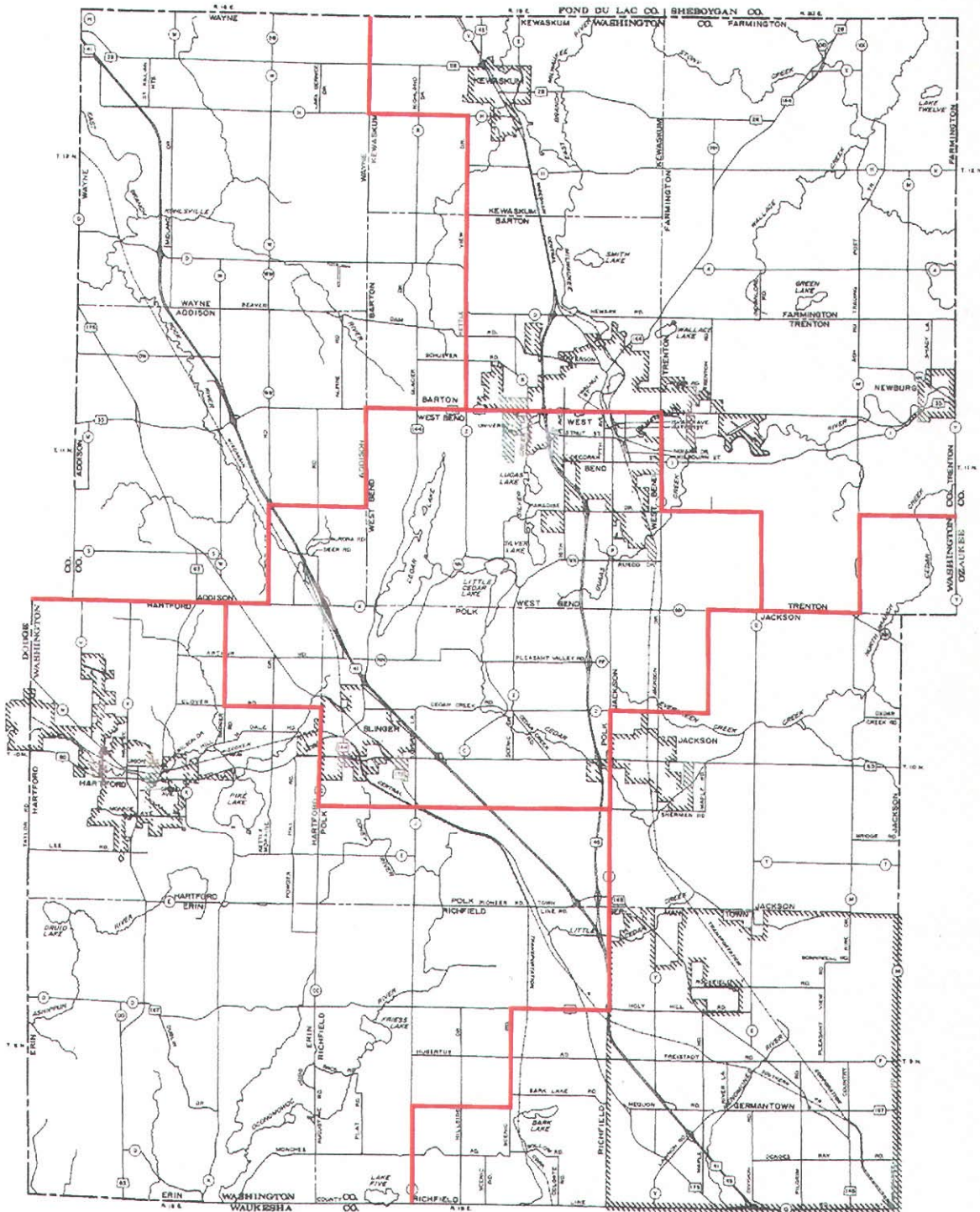


thereby generating a single round trip between either the satellite facility or the highway maintenance facility per snowfall event. It is estimated that the provision of two satellite salt storage and refueling facilities would result in a total travel time savings of about 3.5 hours per snowfall event, or approximately 15 minutes per snow and ice control route. This would represent an annual savings of about 105 hours. Based upon data provided by the Washington County staff, the hourly cost to operate a snowplow truck including equipment labor and charges is \$62.62. Thus, the total annual savings would approximate \$6,575, or about 17 percent of the annualized cost of \$38,000.

In order to evaluate the provision of four satellite salt storage and refueling facilities, the County was divided into five equal areas with respect to lane-miles, as shown on Map 11. The proposed Fair Park highway maintenance facility was in the centermost area of the county and the satellite facilities were located near the centroids of the four areas located at the northeast, northwest, southeast, and southwest quadrants of the County. Based upon this division, a total of 23 snow and ice control routes are expected to be served by the satellite facilities. The capital cost of providing four satellite salt storage facilities was estimated to be approximately \$1.1 million in 1998 dollars. These facilities would be the same as the satellite salt storage facilities in the first alternative, except that a 3,000 ton capacity salt dome was substituted in place of the 5,000 ton capacity salt dome. The capital cost does not include the cost of salt loading equipment. The total capital cost for the four salt storage facilities annualized in constant dollars--without interest charges--over a 20 year period would be \$55,000.

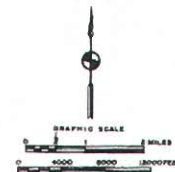
The provision of satellite facilities in this configuration would not be expected to have any travel time impact on routes in the center of the County, as vehicles servicing the five snow and ice control routes in this area would continue to use the Fair Park site. In the four remaining areas, the travel time savings per route are expected to average about seven minutes, or about 15 minutes per round trip, but may range up to about 15 minutes in each direction or a maximum total of 30 minutes per round trip. During a typical snowfall event, the salt load would need to be replenished once, but the fuel load would not require reloading thereby generating a single round trip between either the satellite facility or the highway maintenance facility per snowfall event. It is estimated

APPROXIMATE AREAS UTILIZED IN THE ANALYSIS OF FOUR SATELLITE SALT STORAGE
FACILITIES WITH SINGLE CENTRALIZED HIGHWAY MAINTENANCE FACILITY



LEGEND

— AREA BOUNDARIES



that the provision of four satellite salt storage and refueling facilities would result in a total travel time savings of less than 5.9 hours per snowfall event. This would represent an annual savings of about 180 hours. Based upon data provided by the Washington County staff, the hourly cost to operate a snowplow truck including labor and equipment charges is \$62.62. Thus, the total annual savings would approximate \$11,275, or about 20 percent of the annualized capital cost of \$55,000.

Although other satellite salt storage alternatives may be postulated, these analyses indicate that the capital cost to construct these facilities likely exceeds the monetary savings realized from any deadhead travel time savings, which result from their construction. Reducing the capital cost by providing fewer satellite salt storage facilities has the net effect of reducing the savings in deadhead costs. Increasing the number of satellite salt storage facilities has the net effect of increasing the deadhead travel times savings, but also increases the capital costs. Any addition or reduction in the number of satellites would not appear capable of generating a sufficient reduction in the deadhead travel time costs to overcome the attendant capital expenditures. In addition, this analysis has not included consideration of the potential capital costs of salt loading equipment nor any operational cost attendant to the provision of these satellite salt storage facilities.

SUMMARY

A highway maintenance facility location study was conducted at the request of Washington County officials. The study was to consider two basic alternatives: 1) retention of the two existing highway maintenance facilities; or 2) consolidating the two facilities at a new location on the County's Fair Park grounds. A subalternative of the Fair Park single consolidated site alternative, which would include the provision of satellite salt storage facilities, was also considered. The key findings of the highway maintenance facility location study are summarized below:

- The Fair Park site is located at approximately the optimal location for a single highway maintenance facility, based upon the travel times and distances to the existing and planned county and state trunk highway systems for which the County has maintenance responsibility;

- With respect to the County's two existing highway maintenance facilities and service areas, the City of West Bend facility is located at approximately the optimal location with respect to the existing and planned county and state trunk highway systems within its current service area. The existing Village of Slinger highway maintenance facility is located in proximity to the optimal location with respect to the existing and planned county and state trunk highway systems within its service area.
- Consolidating the two existing highway maintenance facilities into a single centralized facility would result in a deadhead travel time increase of less than five minutes on nine routes having about 149 route-miles and 302 lane-miles; and a deadhead travel time increase of between five and ten minutes on six additional routes having about 96 route-miles and 194 lane-miles. Thus, deadhead travel time is expected to increase on 245 route-miles and 496 lane-miles, or about 59 percent and 55 percent of the total 417 route-miles and 895 lane-miles served, respectively. Conversely, five routes having about 77 route-miles and 193 lane-miles would experience a deadhead traveltime decrease of less than five minutes; and eight additional routes having 96 route-miles and 206 lane-miles would experience a decrease of five to ten minutes. Thus, deadhead traveltime is expected to decrease on 172 route-miles and 399 lane-miles, or about 41 percent and 45 percent of the total route- and lane-miles, respectively. Thus, the net effect on deadhead traveltime of a single centralized maintenance facility is an increase in deadhead traveltime of under five minutes on about 72 route-miles of snow and ice control routes, or about 17 percent of total route-miles within Washington County.
- The capital cost to construct satellite salt storage facilities would appear to exceed the monetary savings which may be realized from any deadhead travel time reduction which may result from their construction. However, there is the potential for those capital costs to be reduced if these salt storage facilities could be developed as joint county-municipal facilities.