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## PROPOSED ROCHESTER MN SOUTHERN RAIL CORRIDOR POTENTIAL TO SUPPORT PASSENGER RAIL SERVICE

The engineering completed to date and described in a report prepared by Gannett Fleming did not assume the implementation of passenger rail service to the Rochester area or to points beyond the Rochester area. The last passenger train service via Rochester was operated by DM&E predecessor Chicago & North Western via the existing (“in town”) rail line. The service was eliminated in July 1963. In the event that a modest portion of the projected future Powder River Basin (PRB) unit coal train traffic materializes and operates via the existing “in town” route and a Southern Corridor is not constructed, it will be very difficult to reliably operate a passenger train service without upgrading most of the route to include a second main track. This would impose significant increase in costs. This is in part because the coal trains will not operate on a clock-face schedule with a timekeeping precision that would be consistent with the operation of passenger trains, and in part because the average operating speed of even conventional passenger trains is incompatible with heavy unit train operation on a single track with passing sidings. Construction of a second main track through Rochester along the existing “in town” route is not impossible but would impose significantly increased costs, as it would impact numerous grade crossings, existing active industrial sidings (including the power plant) and a major river crossing.

If it were deemed desirable or essential to serve downtown Rochester directly with a future passenger rail service and not via an outlying destination point such as the airport, re-use of a portion of an abandoned former Chicago Great Western railroad alignment might be considered. This would approach the city from the south-southeast where it could potentially junction with the proposed Southern Corridor alignment near Simpson – site of a former CGW wye junction and still largely undeveloped. Within the city this former CGW right-of-way still exists and is actively used by the DM&E (now CPR) to reach on-line freight customers. The feasibility and cost of acquiring and restoring this former right-of-way was not examined and is beyond the scope of the Gannett Fleming report.

The proposed Southern Corridor alignment by contrast could be constructed to anticipate –and at a minimum not preclude – future passenger train services provided a dedicated track (or tracks) would be constructed to support the operation of passenger trains. (Additional infrastructure would of course also be needed along the existing former DM&E rail line east and west of the City.) Such a scenario would certainly require added attention to reducing the number of at-grade crossings with public roadways along the Southern Corridor to a minimum. This would be done by grade-separating everywhere possible and potentially closing certain roads that have very low traffic counts and are not deemed essential routes for first responders. In addition, the track (or tracks) built to support the passenger trains should be grade-separated from

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those intended for freight trains to avoid conflicts at any point where they must cross each other. It is not clear such a point would exist in the Southern Corridor. This is especially important because of the daily volume of very heavy unit coal trains that could be operating under a maximum PRB coal development scenario.

The over-arching objective of the functional requirements of the potential Southern Corridor around Rochester is to provide a superior “air line”<sup>1</sup> railroad route that:

- Avoids downtown Rochester
- Is practical to construct, operate and maintain for the anticipated traffic
- Yields operating benefits to the railroad that make it sufficiently attractive to merit serious consideration.

It is recommended that key functional elements include the following – all of which have been reflected in the preliminary alignment design that has been engineered by Gannett Fleming:

- Civil design to support operating speed of up to 60 mph
- No significant speed restrictions
- Maximum grade not to exceed 1% (one percent)
- Positive Train Control system for bi-directional traffic control and broken rail detection
- Significantly greater capacity than the existing alignment through Rochester;
- Ability to meet and pass trains at multiple locations along the Bypass, with short delays that are acceptable to Canadian Pacific and consistent with good freight railroad operating practices

In addition, an effort was made to maximize utilization of multiple segments of abandoned former Chicago Great Western R.R. grades where practicable and without violating functional requirements listed above. None of the design parameters listed above preclude the possible operation of passenger train services via the Southern Corridor alignment. However, the proposed single main track with multiple passing siding facilities along the Southern Corridor that would only be sufficient to support a less than full volume of PRB unit coal trains would not be adequate to also support the introduction of passenger trains. Additional infrastructure would be required if the full amount of coal traffic were to occur. It is not simply a matter of mathematical capacity but of operational reliability: The passenger train schedule would be highly intolerant of delays caused by likely conflicts with long, heavy freight trains that will not be operating on a precise clock-face schedule.

A logical approach would be to accommodate and “not preclude” accommodation for passenger train services during the design and permitting process. Passenger trains

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<sup>1</sup> The term “air line” as applied to railroads means a point-to-point route constructed to optimize the operation of through or “overhead” traffic without attempting to serve or tap local traffic sources.

are assigned much greater locomotive horsepower per trailing ton than typical freight trains and can climb steeper grades with much less performance degradation. Therefore, “flyover” structures to separate the passenger and freight trains and to separate passenger tracks from public roadways are likely to be feasible in most instances where they may be required or strongly recommended. A recent structure in Florida used daily by Amtrak trains and regional “commuter” trains that bypassed a moveable railroad bridge over a navigable waterway features grades as steep as 3.0%.

A sophisticated train control system such as Positive Train Control (PTC) coupled with conventional Automatic Train Control (ATC) would be required for this alignment. This is a future requirement of Federal Law presently being developed by the Federal Railroad Administration. This would allow higher operating speeds on the alignment. Such higher operating speeds are of no value to a freight railroad conducting unit coal train operations because fuel consumption would be intolerably high even if the freight trains are capable of attaining and maintaining the higher maximum speed. For this and other reasons the maximum operating speed differential between freight and passenger trains on the Southern Corridor would certainly require partially separated tracks for the passenger service -- although the two could be adjacent and some facilities such as certain crossovers might be shared in order to increase operating flexibility for both types of services. For example, in the event of scheduled or unscheduled track maintenance or repairs, a passenger train could use such shared facilities to divert from its normal route. (The reverse might or might not be practical depending on vertical profile and other considerations.)

In summary, the operation of passenger trains via the proposed Southern Corridor was not considered by the engineering done to date. However, it could be feasible if the necessary additional track and facilities such as grade-separation structures are anticipated in subsequent design phases or at least not precluded. It will be very much in the interest of both the freight operator and the passenger operator to have substantially separate but compatible facilities, especially given the nature of unit coal train operation. However there is no reason why such separate but compatible facilities could not be designed and constructed to occupy the same corridor(s). Responsibility for ongoing maintenance would need to be partitioned and agreed prior to construction.