

## Subtask 2.2. Station Development

### Requirement

*The contractor shall review the coalition developed preliminary site evaluation and station development reports and provide a list of remaining steps towards completion. The contractor shall review rail station and system access, egress and parking needs. The contractor will identify assurances needed for Wally's interests in management and control of station sites.*

*The contractor shall identify all necessary design elements for station development including site-specific environmental issues, e.g., wetlands, possible contamination and underground utilities and other relevant matters. The contractor shall identify access to utilities, electricity and communications for station locations. The contractor shall provide examples and recommend construction-contracting processes.*

*The contractor shall describe processes to manage the interaction between project needs and community wants in light of the limited resources for such improvements.*

*The contractor shall review stations beyond the immediate platform design and development including but not limited to parking needs, access and circulation, interface areas for connecting transit service as well as "kiss and ride" areas. The contractor shall determine if station site access and circulation needs are appropriate for the service.*

*The contractor shall provide a recommended station maintenance operations plan. The contractor shall provide examples of plans for wayfinding signs to/from the stations.*

*Deliverable: Technical memorandum that provides an assessment of Station Development as described in detail above, that identifies additional work areas to complete planning phases, and that identifies critical path to initiation of service.*

### Discussion

#### Materials Reviewed

RLBA reviewed the following site evaluation and station development reports:

- Station area inventory and analysis
- Planned route and stations
- Conceptual station platform design
- Pertinent portions of the Draft Business Plan

The latter states (Section 3.2, Commuter Rail Program Summary) that the four initial stations will include Howell (downtown), Chilson/Brighton, Whitmore Lake and Barton Road, that Hamburg station will be constructed after start of service because of funding

issues, and that ADA access will be via railcar-borne devices or mini-high blocks strategically located. In Section 5.1, Current Budget Status, the Draft Business Plan forecasts station costs of \$2,286,000. However, the figures provided in fact add up to \$2,769,000:

Track upgrade	\$364,000
Track Sidings/Main	200,000
Howell Design	805,000
Chilson/Brighton Station	320,000
Hamburg Station	205,000
Whitmore Lake Station	550,000
Ann Arbor Station	<u>325,000</u>
Total	\$2,769,000

RLBA also considered comments, on the subject of stations, made in the May 1 and 2 meetings, and interviewed members of the Station Committee. Comments touched on environmental issues and availability of parking at stations. Concerns were expressed regarding having an adequate number of parking spaces.

#### Visits to Station Sites

RLBA visited station sites on May 2, assisted by Terri Blackmore. Comments on those sites follows:

##### Howell

There is an old depot building at the north end of N. Walnut Street. There is not much space for parking in evidence. Subsequent phone conversation with Nathan Voght provided assurance that 150 parking spaces are available today within a short walking distance, and another phone conversation with Norb Boes provided the statement that development plans for the site will include adequate station parking. Given the downtown location of this station, all urban services (utilities, electricity) are presumably available.

##### Chilson/Brighton/Genoa

The prospective station is to be located adjacent to Chilson Hills Church property, and it is understood that a lease will be negotiated so that the commuter rail service may utilize church parking spaces. A platform would be located on west side of the main line tracks. Electricity is available. The station has immediate access to roadways as it is close to the intersection of Brighton Road and Chilson Road. Wetlands exist to the east of the railroad siding, which is on the east side of the main track. A very small wetland on the west side of the track may require some degree of mitigation.

##### Hamburg (future station)

Two sites were visited: one adjacent to Merrill Road and immediately north of Hamburg Township Hall, and the other, adjacent to Hamburg Road. The former location is beset with wetlands. Parking would have to be at some distance – at least a few minutes’ walk -- from the station. The Hamburg Road site appeared to have no wetlands. Both locations are served by nearby power lines. It is possible that an archeological dig may be required, depending upon exact site selected.

#### Whitmore Lake

One site was visited, adjacent to Eight Mile Road. No wetlands or wetlands vegetation in evidence at this site. Power is available. A location for a platform and for parking appear to be available, depending upon planned use of former industrial area.

#### Plymouth Road at Barton Drive

It is understood that the platform location is planned east of Barton Drive and between the railroad and Plymouth Road. A member of the Station Committee said that the plan is for passengers to walk westward along the platform towards Barton Drive. At the south end of the platform, north of Milepost 47.5, a walkway would be constructed to link the platform to the sidewalk along Plymouth Road. Passengers would board buses alongside Plymouth Road. It was stated that, because of wetlands, platform length would be limited to two cars. Passengers in the third, fourth or fifth car would be obliged to walk through the cars to reach the second car, and deboard. RLBA considers this an inappropriate method of deboarding and recommends 500 foot platforms (assuming five-passenger-car trains) at all stations.

#### Washington Street (potential future station, downtown Ann Arbor)

Track level is approximately 12 feet above ground level, requiring construction of an elevated station platform. One local official stated that transit connections would be required, as this station is some distance (seven or eight blocks) from downtown destinations. Also, it is an uphill climb to those destinations, so winter snow and ice would be a problem. In any event, RLBA suggests consideration of connecting bus service to nearby or more distant downtown destinations if such service appears to be needed.

#### W. William Street (potential future station, downtown Ann Arbor)

The City of Ann Arbor owns a property at this location. The property is at the same grade as the railroad in this location, and is a “key hole” that provides direct access to Ashley Street. The Downtown Development Authority idea is that this location could be a transit oriented development with at-grade access on the west near the railroad, and at-grade access on Ashley Street. A major Ann Arbor bus transfer station is located at 4<sup>th</sup> Avenue and William Street.

#### Hoover Avenue (potential future station, near University of Michigan stadiums)

The University of Michigan indicates that a station here would not be a big destination except for special events at the stadiums. Otherwise, the number of people employed on the south campus location is relatively small. An Ann Arbor transportation official states that there are large concentrations of employers south of Hoover Avenue, along S. State Street. That official suggests that private shuttles or subscription bus service could be made available from a Hoover Avenue station location, and be able to serve additional employment zones.

### Additional Discussion with Regard to Downtown Ann Arbor Station Sites

Subsequent to RLBA visits to potential downtown Ann Arbor station sites, there was considerable discussion with various officials regarding these sites.<sup>1</sup> Following is a discussion of the results.

Downtown station sites will need to address certain key City concerns as identified by City and Coalition officials: (1) proximity to the core downtown, the center-point of which is the intersection of Huron and Main Streets, (2) blocking city streets that have significant traffic during the rush hours, and (3) mitigating the impact of the eastward uphill walk (toward Ashley Street) that passengers would encounter when walking toward downtown and the University of Michigan's central campus. Potential locations were discussed at some length with local officials.

Available railroad right of way segment lengths between cross streets at the three sites range between 200 and 450 feet, which gives rise to the issue of whether all cars of a train will have access to a station's platform. Regardless of whether or not this prospective new commuter rail service is required to meet U.S. Department of Transportation policy with regard to ADA (Americans with Disabilities Act) requirements, which policy is that the disabled must be able to board and deboard all cars in the train, RLBA strongly recommends that all platform lengths on the prospective commuter rail service be designed and constructed so as to allow boarding and deboarding from every car on the train. Otherwise, passengers would be required to board a specific car, depending upon their destination stations, or move through the train to reach the appropriate car. This practice is not recommended.

RLBA further recommends platform length design consider growth in ridership.

1. The proposed West Washington Street site would allow distance of 380 feet of the west side of the AARR right of way between West Washington and West Liberty Streets. In order to board and deboard all cars, a platform of approximately 500 feet could be constructed at track level (approximately twelve feet above ground level) and extend beyond either West Washington or West Liberty.

This proposed station site is about 300 yards from the intersection of Huron and Main Streets, and since it is an uphill climb to those destinations, winter snow and ice could

---

<sup>1</sup> Discussion included Eli Cooper, Terri Blackmore and Susan Pollay.

be a problem. It is understood that the proposed station site is a parcel of city-owned land currently subject to a development RFP process. Some of the resulting development proposals include rail transit options. The property is in a flood zone which imposes limits on the type of development that can occur there. A concern was expressed that station construction should not result in the blocking of West Liberty Street, described as a major east-west arterial. An elevated platform crossing W. Washington Street need not interfere with West Liberty Street traffic.

2. Near the intersection of West William and 1<sup>st</sup> Streets, the railroad right of way is at ground level, creating closely-spaced grade crossings and odd-shaped lots. There appear to be two possible sites. Between the point where the railroad crosses South First Street at grade, and where the railroad crosses West William Street at grade, a city-leased parcel abuts the east edge of the right of way. The Downtown Development Authority is exploring development of this parcel in ways that would include means to minimize the steep uphill walk toward Ashley St. to the east. One official suggests a 200-foot platform at this location. Again, RLBA strongly recommends against short platforms. RLBA believes that the city should not stint on platform lengths, which could cause patrons to miss a stop, or could cause slow boarding and deboarding. RLBA believes that Ann Arbor should consider closing a street if necessary.

Another possible West William Street site is further to the south, on the segment of railroad right of way between West William Street and South Ashley Street. It is understood that about 450 feet are available here for a platform. This may accommodate five-car trains. The site is about one-third of a mile from the intersection of Huron and Main Streets. This site has the same uphill walk issue. A former railroad passenger station, now used as a daycare center, lies between the east edge of the right of way and South Ashley Street. A major Ann Arbor Transit bus transfer station is located at 4<sup>th</sup> Avenue and William Street.

3. A potential future station near Hoover Street would serve the University of Michigan stadiums. The University of Michigan indicates that a station here would not be a big destination except for events at the stadiums. Otherwise, the number of people employed on the south campus location is relatively small. On the other hand, more than 100,000 people attend the football games, and others travel to the south campus for hockey, basketball and baseball games. Special event trains should be considered.

The railroad right of way between Hoover Street and Stadium Street (to the southeast) is approximately 1,900 feet long and is about 135 feet wide on the southernmost 1,386 feet. A University office building complex is proximate to the northwest edge of the right of way.

#### Identification of Issues Requiring Additional Attention

Review of the information and data provided, discussions with various interested officials, and visits to station sites, indicate that additional attention is required with regard to the following:

- Sufficiency of planned parking
- U.S. Department of Transportation ADA policy and station platform requirements
- Environmental issues

Following is a discussion of each.

### Sufficiency of Planned Parking

Section 3.2 (page 12) of the Draft Business Plan states that “over 850 free spaces will be provided at the stations outside of downtown.” Table 6.1, projected costs and funding, shows 150 current spaces at Howell and 140 at Brighton/Chilson/Genoa, and potential spaces totaling 300 at Howell, 175 at Brighton/Chilson/Genoa, and 375 at Whitmore Lake. The potential numbers add up to 850.

“Potential riders” is estimated in the same table at 1,688 in year one, and 2,202 in year ten. Approximately 2/3 of the ridership numbers represent University of Michigan passengers. This is the number of riders arriving at stations in the morning; total daily ridership, or trips, would be double this number.

The same table, Table 6.1, assumes 1.75 passengers per car arriving at the station. This 1.75 figure seems unduly high. The Ann Arbor Downtown Parking Study (prepared for the Ann Arbor Downtown Development Authority in 2007) shows a range of 1.14 to 1.45 in a discussion of commuters per private vehicle, with 1.14 being the Michigan statewide average and 1.45 being the downtown district factor. Washtenaw County is shown as 1.22, and all Ann Arbor, 1.31. Absent any justification of the 1.75 figure, RLBA concludes that a much lower factor should be utilized in connection with outlying stations of the proposed commuter rail service. Use of a lower factor will of course increase the parking spaces requirement.

Draft Business Plan estimated ridership by station also is shown in Table 6.1:

<u>Station</u>	<u>Potential Riders</u>
Howell	525
Hamburg	
Brighton/Chilson/Genoa	306
Special Riders (Daily Rate)	200
Whitmore Lake	<u>656</u>
Total	1,687

It appears that Special Riders (Daily Rate) refers to those riders who do not use a monthly or weekly pass, but rather pay by the trip. The Draft Business Plan apparently does not distribute these riders by station. It is evident that station parking has been sized for first year ridership (exclusive of the Special Daily Rate Riders) and based upon a factor of 1.75 passengers per car parked at stations. On the other side of this discussion, RLBA recognizes that “kiss and ride” passengers, and bicyclists, will require

no parking spaces. RLBA has not seen evidence, however, that the “kiss and ride” and bicyclist percentage will be appreciable. Thus, all these things considered, it appears that the number of parking spaces needed has been underestimated, as a result of: too optimistic a passengers-per-car factor, using first year ridership only (there should be space available for growth in parking requirements with growth in ridership), and the apparent fact that Special Daily Rate Riders have not been considered. In addition, it must be recognized that even the most sophisticated ridership estimation will result in numbers which may turn out to be substantially differently in the actual implementation of new commuter rail service.

In Subtask 2.4, Ridership Estimates, RLBA suggests what it considers a more reasonable allocation of arriving (in the morning) riders per station, per day:

Howell	350
Chilson/Brighton/Genoa	390
Whitmore Lake	<u>560</u>
Total	1,300

RLBA recommends a passengers per car factor of 1.2 and an added contingency of 20 percent to acknowledge that even the best ridership estimates are “educated guesses”. RLBA does this to prevent a recurrence of the very common problem throughout the U.S. public transit industry, parking-constrained-ridership.

RLBA was briefly concerned that there might be another potential issue, associated with ridership estimates, that is, that student riders would use commuter rail service only during months when school is in session, rather than twelve months a year. It is understood that student activity at U.M. is concentrated in eight months of the year. David Miller of U.M. states that students were not considered in U.M. ridership surveys, as it is not expected that many students would use the service, because not many students commute to school.

Utilizing the new RLBA-estimated numbers of riders daily arriving at each outlying station, and then applying a passengers-per-car factor of 1.2, and the 20 percent contingency (to reflect inherent inexactness in ridership forecasting, as well as to accommodate expected ridership growth), results in parking requirements as follows.

<u>Station</u>	<u>Potential Riders</u>	<u>Parking Space Requirements</u>
Howell	350	350
Hamburg (future station)		
Brighton/Chilson/Genoa	390	390
Whitmore Lake	<u>560</u>	<u>560</u>
Total	1,300	1,300

The figures are the same in the two columns because the division by the 1.2 factor to reflect the number of riders per automobile, and then multiplication by 1.2 to add a 20 percent contingency, have the mathematical effect of cancelling each other out.

Thus Wally is left with an overall parking requirement of 1,300 spaces, as opposed to 850, assuming ridership has been reasonably forecasted. 1,300 spaces is about 50 percent more than the Draft Business Plan estimate. The Draft Business Plan indicates that some parking is already available and (presumably) will require no additional cost, at two locations: 150 spaces at Howell, and 140 spaces at Brighton/Chilson/Genoa. The latter spaces are assumed to be those in the church parking lot. If this is the case, there will be a cost, perhaps a lease cost, and that cost is to be negotiated. The 150 spaces at Howell are not apparent based upon on-site inspection of the proposed station location, where N. Walnut Street approaches the Great Lakes Central Railroad; however subsequent phone conversation provided assurance that 150 spaces are indeed available within a short walking distance from the proposed station.

Following is a summary of the parking space situation.

Station	Potential Riders	Parking Space Reqmnts	Available Parking	Deficit
Howell	350	350	150	200
Hamburg (future station)				
Brighton/Chilson/Genoa	390	390	140	250
Whitmore Lake	560	560	0	560
Total	1,300	1,300	290	1,010

A developer states that Whitmore Lake station parking will be provided as part of a development, and the parking lot will be leased. Thus there will be an unstated annual lease charge. Likewise there will be an annual rent for 140 spaces at the Chilson Hills Church. Another developer indicates he will provide parking at the Howell station; presumably someone will be paying for use of those spaces. That leaves a 250 spaces deficit at the Brighton/Chilson/Genoa station, the construction cost of which is roughly estimated at \$875,000 (250 x \$3500), not including real estate cost.

Please note that the foregoing estimate regarding the required number of parking spaces is for the start of commuter rail service only. The Coalition must recognize that virtually all new start commuter rail services grow in ridership with time; it is important that the Coalition make plans to expand parking as necessary.

Given likelihood of snow and ice in winter, it is recommended that all parking be paved.

#### U.S. Department of Transportation Commuter Rail Platform Guidelines

The U.S. Department of Transportation states that “the norm for new commuter and intercity rail stations is a platform running the full length of the passenger boarding area

of the station that permits level boarding to all accessible cars of trains stopping at the station. Level boarding for all cars of a train is significant because, if passengers with disabilities are unable to enter all cars from the platform, the passengers will have access only to segregated service. This would be inconsistent with the nondiscrimination mandate of the ADA.”<sup>2</sup> The Department’s regulations define level boarding “as involving a horizontal gap of no more than three inches and a vertical gap of no more than 5/8 inches”. The Department recognizes that meeting or maintaining the three inch and 5/8 inch gap requirements “is likely to be infeasible in most commuter and intercity rail stations” and therefore allows use of “short bridge plates”. If that approach is not feasible, then “another solution permitting access to all cars” should be employed, for example, car-borne or station-based lifts serving each accessible car. Full-length level boarding is the U.S. Department of Transportation (DOT) policy.

This above-summarized U.S. DOT policy appears to rule out plans by Great Lakes Central Railroad and Federated Railways to modify one car per train to be in compliance with ADA requirements. It appears that all passenger coaches would have to comply with ADA requirements.

This also appears to rule out plans for shorter platforms. All platforms will have to be long enough to serve the full extent of the passenger coaches which are part of the train. If five coaches are envisioned on some trains, this would mean a platform approximately 450-500 feet in length.

In order to insure understanding, RLBA phoned Federal Railroad Administration and spoke to Mr. Dick Cogswell, who confirmed that level boarding is required in the instance of new passenger rail service, absent a very strong reason for infeasibility. Cogswell stated that the standard in Michigan, Ohio, Indiana and Illinois is the 15 inch high (above top of rail) platform, which permits level boarding for the Amtrak Superliner cars and the so-called California Car. (On the other hand, 48 inch platforms are the norm in northeastern United States.)

The type of passenger railcar intended to be utilized in the Ann Arbor-Howell commuter rail service was acquired from Chicago Metra. The bilevel Budd railcar features a seating capacity of between 134 and 148 (Draft Business Plan says “about 160”; a specifications sheet provided by Mike Bagwell shows between 145 and 148), and with a 16 inch (above top of rail) boarding height. However, the railcar entrance has three steps upward (within the railcar) to reach a 40 inch above top of rail floor level (the lower floor level of the bilevel car).

Mr. Cogswell advises that the commuter rail sponsors get in touch with their Regional Federal Transit Administration office in writing as soon as possible so that this issue may be resolved.

---

<sup>2</sup> This paragraph summarizes the U.S. Department of Transportation guidance and is taken from [www.fra.dot.gov/downloads/Research/commuterplatform.pdf](http://www.fra.dot.gov/downloads/Research/commuterplatform.pdf). ADA is the 1990 Americans with Disabilities Act.

Regardless of ADA requirements, RLBA strongly recommends platform length corresponding with the expected train lengths, in order to avoid customer confusion. 500-foot platforms at each station would cost roughly \$350,000 per station (\$700 per lineal foot x 500 feet), or \$1,400,000 for four stations. (RLBA recommends that platform length design consider potential ridership growth.) Any required land acquisition, shelters, telephones, ticket vending machines and lighting would be an additional cost. Also to be added would be engineering design and construction management costs, approximately 18 percent of construction cost.

### Site-Specific Environmental Issues

The Phase Three Report, "Detailed Analysis of the Selected Route", of the *Lansing to Detroit Passenger Rail Study* (July 2000) includes discussion of the environmental screening performed on the selected corridor, which includes the Ann Arbor-Howell segment. The environmental screening was conducted in accordance with the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) guidelines and other state/federal environmental regulations.<sup>3</sup> The report states that no major issue was discovered which would preclude moving forward with the project. Indeed, the report notes environmental benefits in terms of reduction in vehicle miles of travel and related benefits such as air quality improvements and enhanced mobility opportunities.

However, although the Lansing to Detroit study's environmental screening is encouraging, the prospective station locations in the *Lansing to Detroit Passenger Rail Study*, with regard to Howell and Ann Arbor stations, are different from the Howell and Ann Arbor station locations in the current study. (The Lansing to Detroit study plans no stations between Howell and Ann Arbor.) And it is at the stations where construction of new parking, station access roads, and kiss and ride lanes, would require appropriate NEPA actions if federal funding is to be used in this project.

Thus it is clear that additional environmental work must be done to follow the NEPA process, assuming federal funding is to be used.

An estimate cannot be made of the cost of environmental mitigation without first performing an environmental survey.

It is understood that an environmental paper has been sent by the Wally Coalition to Michigan Department of Transportation. This paper cites the environmental benefits of the proposed commuter rail service, and these benefits are considerable. The paper also mentions the wetlands at one of the prospective Hamburg stations. Based upon assumptions behind that environmental paper, e.g., short platforms which avoided wetlands, RLBA's strong recommendation that platforms be long enough for boarding and deboarding of all passenger railcars, and based upon other issues raised in this

---

<sup>3</sup> Phase Three Report, "Detailed Analysis of the Selected Route", of the *Lansing to Detroit Passenger Rail Study* (July 2000), page 6.

RLBA study (e.g., insufficient parking, specific location of each station), RLBA suggests that another environmental paper may be required.

#### Station Planning: Access and Egress, Design Elements for Development

RLBA saw no plans for highway access to and egress from the stations, and no plans for bus lanes, or kiss and ride. These should be prepared and approved by the local traffic control authority and public works authority in each jurisdiction in which a station is to be located. It is important that the local traffic control and public works officials be aware of this planning so that they may insure that access and circulation needs are appropriately provided in the station planning. By the same token, it is recommended that those responsible for providing connecting transit service, such as bus service at the stations, be involved in the station planning process.

RLBA reviewed the generic station platform concept drawing, which is not deemed sufficient for the planning stage of this project. As indicated above, the ADA and train boarding issue must be addressed. The generic platform concept drawing must be adapted to each site and placed at a specific location at each site, so that planned new construction features will be seen in relation to the existing topography including drainage features and wetlands, if any, and in relation to pedestrian pathways between parking places and station platforms. Furthermore, it is recommended that walking distances, between parking and station platforms (and between bus and kiss and ride drop off points) be kept as short as possible. All these site-specific issues must be nailed down conceptually so that an environmental assessment may be performed with regard to each station where there is to be new construction, in particular, new construction outside of the existing railroad right of way.

By the same token, access to utilities, electricity and communications must be planned with specific reference to each station site. It appears that electrical power is available at or close to each station site, but specific coordination should be effected with power, utility and communications providers to insure there will be no surprises in the design phase.

#### Management and Control of Station Sites

Various commuter rail operations around the nation utilize different means of managing their station sites. Some perform this function centrally; others provide central guidance and specifications, and ask the local communities to develop, construct, operate and maintain the stations. The latter method perhaps has the advantage of the sense of "local ownership" and responsibility (and funding) for any given station.

Station maintenance and operations should be included in the overall station planning process, whether the stations are to be managed centrally, or by local communities. In either case standards for station maintenance should be drafted, and these will serve as a basis for planning the annual maintenance expenses.

## Examples and Recommended Construction-Contracting Processes

There are two basic construction contracting processes, and variations on those two. Traditional U.S. practice has been to employ a formal design process (utilizing an architect/engineer firm), prepare plans and specifications (using the same firm), advertise for bids from construction contractors, accept the lowest responsive bid, and construct the facility. In this process, it is normal to engage the architect/engineer firm to perform construction management services, that is, supervise the execution of the construction contract to insure that the plans and specifications are followed. In recent decades, the alternative “design-build” process has gained stature. Instead of a two-step process, first design and then construct, design-build is a one-step process in which the client advertises a design-build “package” (detailed description of what is wanted), which is bid upon by a firm (or likely a combination of firms, or joint venture) which performs both the design and construction. It is important in this process that the client know exactly what is wanted, and provide the necessary degree of specificity in the documents which comprise the design-build package. Either process could be utilized to design and build the stations and parking facilities of the Ann Arbor-Howell commuter rail service.

## Limited Resources and Community Needs

The RFP asks that the consultant describe processes to manage the interaction between project needs and community wants in light of limited resources for improvements. This is an area in which the consultant can recommend what is needed to attract riders and make the service successful. Ultimately the community must decide what it can afford. As already stated above, a successful transit service should not be parking-constrained. On the other hand, stations need not be luxurious, and there are commuter rail operations in which station platforms are constructed simply, in some cases without weather protection or other amenities. Outside of meeting necessary U.S. DOT ADA requirements, and station platform geometry requirements required by the railroad (e.g., horizontal and vertical distances between platform and track centerline and top of rail), the degree to which stations may be simply constructed is largely a local decision. Degree of protection from weather, lighting, etc., may be a local decision, based upon local preferences and requirements.

## Maintenance Plan

A part of this Station Development subtask is to “provide a recommended station maintenance operations plan.”

Operations of commuter rail stations is relatively straightforward and simple. Commuters arrive in the morning by automobile, bus or other conveyance, or walk to the station. Those with cars park them. Commuters wait on the platform, and board the train when it arrives. Those without weekly or monthly passes either purchase tickets from a ticket vending machine on the platform, or purchase tickets from the conductor after boarding, depending upon the system in use. On the return trip, commuters de-

board at destination stations and depart by bus, auto, bicycle or on foot. Stations are not staffed. If desired, the WALLY Coalition may install a communications system to make loudspeaker announcements at stations (alternative: electronic message board), and/or to allow phone-in queries.

Maintenance of the station requires a plan, for example, for removal of ice and snow, and trash. Following is a recommended starting plan for operating and maintaining stations. This plan should be reviewed and revised, and details and specifics should be added, following station design.

### Recommended Plan

#### 1. General

Purpose. The purpose of this plan for operating and maintaining stations is to insure safe, effective and convenient use of commuter rail stations.

Updating and Revision. This plan should be appropriately expanded and revised in accordance with station design, and subsequent design changes, if any. This plan should be coordinated with and reflect the requirements of all pertinent local codes.

Features. This plan includes the following features safety and security, structural integrity, ADA provisions, electrical system, pavement and walkways, and preservation.

#### 2. Inspections

Inspections are intended to assure compliance with design, and with the operations and maintenance plan. Following construction of each station (including parking, and access lanes for buses and “kiss and ride”), an inspection should be made to assure compliance with all design requirements.

During service life, periodic inspections should be made to insure proper functioning and preservation of all design features. Special attention should be given to safety and security, structural integrity and ADA (Americans with Disabilities Act) features. Periodic inspections should be scheduled so as to assure compliance with local codes. Special attention should be given to potential hazards, such as slippery walking surfaces, or incipient structural failure.

#### 3. Snow and Ice Removal

Snow and ice removal must be performed so that stations, including parking and station access lanes, paths, stairs and ramps, are cleared of ice and snow prior to arrival of the first morning commuter. Snow and ice removal must be performed over the course of the day, where conditions require it.

#### 4. Periodic Maintenance

Structural Integrity. Inspections (item 2 above) and/or local codes will provide the basis for periodic or ad hoc maintenance remedial actions.

Electrical System and Lighting. Likewise inspections and/or code requirements dictate electrical system maintenance. Lighting fixtures should be replaced when outages occur.

Drainage Facilities. Periodic inspection will determine the need to clean out culverts or otherwise improve drainage features.

Landscaping and grass. Depending upon the particular design at any given station, routine and periodic maintenance of landscaping and grounds is required – watering, fertilization, grass cutting and shrub pruning, leaf removal in the fall – in order to preserve the grounds surrounding the station platform, walkways, access roads and parking.

Station Platforms and Walkways. In addition to maintenance of structural integrity and the electrical lighting system, station platforms and the facilities on these platforms (communications, ticket-vending-machines, windscreens and shelters) require periodic inspection and maintenance to assure safety, security and preservation. Periodic painting may be required. Platforms, stairs and walkways should be designed to be non-slip, and non-slip surfaces should be preserved, and renovated as required. Trash must be removed periodically.

Parking and Access Roads. Maintenance of parking and access roads may include repair of potholes, re-painting of parking spaces and pedestrian crossings on automobile/bus access lanes, and periodic re-surfacing. Wayfinding signs may require re-painting or replacement.

#### Plans for Wayfinding Signs to/from the Stations

Obviously, it is important that prospective commuter rail patrons know how to get to their stations. This subject should figure importantly in the marketing and advertising of the service, and may include the preparation, publication, distribution and posting of maps. Local community traffic control authorities and public works official must be involved in the process of planning signage to direct motorists to stations. This is necessarily a local and site-specific function.

Wayfinding systems have been designed for a number of communities, including, in Michigan<sup>4</sup>:

Battle Creek  
Chelsea

---

<sup>4</sup> Much of this information on wayfinding was provided by Susan Pollay, Ann Arbor Downtown Development Authority.

Frankenmuth  
Grand Rapids  
Holland  
Howell  
Kalamazoo  
Lansing  
Petoskey  
Royal Oak

Ann Arbor has a wayfinding program design in progress. The idea of a wayfinding system is to help visitors – drivers and pedestrians – find their way to the downtown and around the downtown, to key points of interest and to parking. Wayfinding signs are intended to be eye-catching and distinctive. Examples of wayfinding signs may be seen on the Ann Arbor Downtown Development Authority website, [www.a2dda.org](http://www.a2dda.org) (click on current projects, downtown wayfinding).

Wayfinding signs should be placed on roads near stations, near bus stops that connect to stations, and at other locations chosen by local authorities for their value in encouraging people to use commuter rail and in showing people how to reach the stations.

#### List of Remaining Steps

Work on this subtask, as described above, indicates that the following areas require additional investigation or other effort to complete the planning phase of this project.

- U.S. DOT ADA requirements
- Parking requirements at each station
- Station planning with regard to access and egress, transit interface, kiss and ride
- NEPA process

It is not known how long it will require to determine the extent to which the Coalition must observe U.S. DOT ADA requirements. Perhaps one-half year, or longer, to obtain a decision. On top of that at least several months may be required to make the appropriate planning adjustments.

Parking requirements at each station are recommended above; it is now appropriate for the Coalition to determine how to meet them, whether by acquisition of land, or lease, or some other arrangement.

Approximately one year is the estimated time required for the initial NEPA process to determine whether an environmental impact statement must be prepared, or whether lesser action will suffice.

Station planning with regard to access/egress, local transit service, etc., could be accomplished in a few months.

Considering the foregoing, the critical path to initiation of service appears to lie through the NEPA process, but the NEPA process cannot be initiated until the other three issues have been resolved. It is recommended that the Coalition immediately apply to the Regional Federal Transit Administration Office for an exception to the full-platform-boarding U.S. DOT ADA policy, based upon fact that the passenger railcars have already been acquired. At the same time, Coalition actions with regard to parking requirements, and other station planning issues, may commence.

## **Conclusions**

Station planning issues require additional effort prior to initiation of design.

The U.S. Department of Transportation (DOT) policy with regard to boarding of disabled persons must be resolved as soon as possible.

Whether or not the Wally Coalition obtains a waiver of U.S. DOT policy, RLBA strongly recommends full-train-length boarding and deboarding. For five-passenger-car trains, this means platforms must be at least 450 feet in length.

Adequacy of parking and other station planning issues also require resolution. RLBA strongly recommends that parking be available, close to the station platform (short walking distance), for all who desire to drive their automobiles to the stations in order to use the commuter rail service. Where a developer has said he will provide parking space and lease it, lease costs need to be added to annual operating costs.

When additional planning activities have been completed, the NEPA process must be followed to determine the extent of environmental analysis required, if federal funding is to be used in the project. Even if federal funds are not to be used, station design should not be initiated until decisions are made with regard to exact station locations, and with regard to the various issues discussed in this paper.