Wake Transit Plan

Site Selection Criteria

TASK 4.4 – SITE SELECTION CRITERIA

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SITE SELECTION METHODOLOGY

The methodology or process utilized by the Study Team in a Site Selection effort for a paratransit or fixed route bus operations and maintenance facility includes the following steps as described and illustrated in the Exhibit A Site Selection Methodology:

Step One: Develop Space Needs Program

The Study Team has developed Space Needs Programs for each Transit Partner that documented the needs of a modern paratransit or fixed route bus operations and maintenance facility. A general summary of each Space Needs Program is provided in Task 4.3.

Step Two: Develop Site Search Parameters

The Study Team will work with CAMPO and the Transit Partners' staff to develop and refine the Site Search Parameters for each specific facility and agency requirements. These parameters are typically Site Size, Land Use/Zoning, and Proximity to Roadway Network.

Step Three: Develop Preliminary "All Sites" List

Using the Site Search Parameters the Study Team will generate a Preliminary "All Sites" list. This list will include all properties, both listed and not listed that meet the search parameters for each facility in Wake County.

Step Four: Site Selection Criteria Workshop

The Study Team will facilitate a workshop with CAMPO and the Transit Partners' staff to educate them on the various aspects and importance of the site selection task. In the workshop, the site selection process is discussed in detail allowing all elements and facets of the process to be evaluated by each Transit Partner. During the workshop, the Study Team and Transit Partner will agree upon the **Initial Screening Criteria** and the **Final Site Evaluation Criteria.** Additionally, a numerical weight or importance factor for each criterion will be discussion and agreed upon. This weight will be used during the site evaluation and rating process. By including CAMPO and the Transit Partners' staff as a participant in both the assignment of the criterion weight and during the site evaluation process, the final numerical ranking will reflect the true importance of each evaluation criterion to each Transit Partner and to the citizens utilizing their transit services.

Step Five: Initial Site Screening

The next step in the site selection process is the initial screening of the sites on the Preliminary "All Sites" List. This screening effort will utilize the **Initial Site Screen Criteria** developed during the Site Selection Criteria Workshop.

The Initial Site Screening Criteria will be applied to each of the sites, with the exception of the sites that were eliminated prior to the initial screen by either the Transit Partner or another public agency due to undisclosed issues or the absolute unavailability of the site. The result of this Initial Site Screening evaluation is a Finalist Sites List.

Step Six: Finalist Site Evaluation

To effectively evaluate the properties on the Finalist Sites List the team will require more detailed data for each of the sites. The Study Team will collect this detailed site data and document it on Site Data Sheets. Transit Partners' internal Real Estate group will be integral to the data collection and vetting of each site. An example of a Site Data Sheet is provided in Exhibit E. The Study Team, CAMPO and the Transit Partners' staff will use these data sheets during the tours of each site to record observations and thoughts. The purpose of the site tours is to gain insight and a perspective on access, traffic, surrounding business, and proximity to any residential neighborhoods for each site.

The evaluation process will include rating the site based on the application of the individual criterion and multiply that rating by the weight of that criterion yielding a numeric score. The insight gained during the tours will allow site evaluators the necessary background to apply a rating on each of the evaluation criterion for each site.

The sites with the highest numerical evaluation scores will be ranked based on the calculated numerical value. From this ranking the Study Team will suggest the top three sites for each Transit Partner for further action.

This evaluation process will help objectively identify the most appropriate sites and produce the three Finalist Sites that will be used by the Study Team for Site Master Planning and Conceptual Design.

Exhibit A: Site Selection Methodology

Step One Space Needs Program

- Interview Stakeholders to determine Functional Imparatives and Tour Existing Facilities to gauge current maintenance capabilities
- Develop Prototypical Space Needs Program using Space Standards and Planning Ratios

Step Two Develop Site Search Parameters

- Develop and review the general Site Search Parameters

Step Three Develop Preliminary "All Sites" List

- Develop and review the Preliminary "All Sites" List using the Search Parameters developed in Step Two

Step Four Site Selection Criteria Workshop

- Establish Initial and Final Selection Criteria
- Develop Weights (Importance Factor) for each criteria
- Agree upon scoring and consistancy of measuring effectiveness for each criterion

Step Five Initial Site Screening

- Using "All Sites" List and Initial Screening Criteria - Screen and Evaluate to develop Fnalist Sites List

Step Six Finalist Site Evaluation

- Using Finalist Site List and Final Site Evaluation Criteria - Screen and Evaluate to determine mathmatically the "Top Three Sites"

INITIAL SEARCH PARAMETERS

The Study Team will develop the search parameters to help focus the site selection search effort and provide a manageable number of potential sites. These parameters are based on facility and operational givens that will be determined by the Transit Partners and Study Team. These Search Parameters are as follows:

1. **Facility Space Needs Program (Site Size)**

   The programming effort documented in the Space Needs Program identifies a projected facility and site size for the each Facility.

2. **Land Use/ Zoning**

   A compatible land use, such as industrial or light industrial activity, is essential to support a future Facility.

3. **Proximity to Major Thoroughfares and Highways**

   Proximity to major roads, thoroughfares and highways is essential as a larger portion of the bus trips originating from the site may utilize these roads to access larger population centers in Wake County

INITIAL SCREENING CRITERIA

Exhibit B is an example of the Initial Screening Criteria that will be confirmed and utilized by the Study Team, CAMPO and the Transit Partners' staff. These criteria allow a quick and effective method of evaluating each of the sites on the Preliminary Sites List and determine if that site was a viable option.

Exhibit B: Initial Screening Criteria

Initial Screening Criteria	
Site Size	A site size of (XX+) acres of usable land area as based upon the space needs program.
Site Access	The site should be located within proximity to a major highway and/or arterial and with easy access to and from the site.
Zoning and Land Use	The site should be zoned for industrial use or readily re-zoned. The adjacent land uses should be compatible with intended use by each Transit Partner.
Utilities	The site should be served by adequate utilities including water, sanitary sewer, storm sewer, power, natural gas, and telephone services.
Deadhead Impact	Will the location of this site increase the Deadhead costs for each Transit Partner?

FINALIST SITE EVALUATION CRITERIA

Exhibit C is an example of the final evaluation criteria will be confirmed and utilized by the Study Team, CAMPO and the Transit Partners in the Site Selection process for a potential site for a new facility. This criterion will be used to determine the top three sites using the weight and rate system presented in Exhibit D. For the top three sites, a Site Data Sheet will be developed as a deeper evaluation of the sites selected. An example Site Data Sheet is shown in Exhibit E.

Exhibit C: Finalist Site Evaluation Criteria:

Site Size	A site size of xx acres of usable land area as based upon the Needs Assessment and the Space Needs Program.
Site Configuration	A rectangular site configuration with a length to width ratio of 3:1 would offer the maxim efficiency for facility use.
Geo-tech/Seismic/Topography	The site should be reasonably flat and free of significant geologic and seismic obstacles to avoid costly mitigation and to maximize flexibility of facility use.
Drainage/Floodplain	The site should be located with access to adequate drainage for storm water runoff. The site should not be located within the floodplain.
Zoning and Land Use	The site should be zoned for industrial use or readily re-zoned. The adjacent land uses should be compatible with UM's intended use of bus operations and maintenance.
Site Utilities	The site should be served by adequate utilities including water, sanitary sewer, storm sewer, power, natural gas, and telephone services.
Site Access	The site should be located within proximity to a major highway and/or arterial for ease of access. The site should be accessible by an adequate local street system.
Traffic	The site should be in a location that has adequate traffic capacity in the foreseeable future and/or can be readily improved.
Hazardous Materials	The site should not be known, or have a high potential, to contain hazardous or toxic materials which will be costly and time consuming to remove prior to development.
Environmental/Neighborhood	The site should not include potential wetlands, threatened or endangered species, historic or archaeological resources, and parkland. Adjacent land uses should not be sensitive to noise, light, and visual appearance of the proposed uses by each Facility.
Availability of Land	The site should be readily available to be acquired either from a public or private ownership, but preferably from one owner rather than multiple property owners.

Acquisition Cost	The site should be available for a known property value, either by outright purchase or equity swap.
Development Cost of Land	The site with existing infrastructure of streets, utilities, and similar development costs would be preferable over a site with no infrastructure in place.
Operational Efficiency and Flexibility	The site should allow for each Facility to operate the bus system to support the community at a reasonable expense.
Deadhead Costs (Optional)	The cost of mileage incurred by buses not in revenue service - also known as "Deadhead".
Adjacent Available Property	Property with options available for future expansion of the site and facilities.

Exhibit D: Evaluation Criteria with Rating Factor and Weight Example

Evaluation Criteria	Rating Factor	Weight
1. Site Size	Acres +/- Target	4
2. Site Configuration	Rectangular 3:1 Ratio	4
3. Geotech/Seismic/Topography	Cost to Mitigate	3
4. Drainage/Floodplain	Cost to Mitigate	2
5. Zoning and Land Use	Appropriate Zone	4
6. Site Utilities	Capacity/Availability	1
7. Site Access	Proximity to Arterial	4
8. Traffic	Level of Service	1
9. Hazardous Materials	Cost to Mitigate	2
10. Environmental/Neighborhood	Ability/Cost to Mitigate	3
11. Availability of Land	Ease of Acquisition	1
12. Acquisition Cost	Cost per Square Foot	2
13. Development Costs of Land	Ability/Cost to Mitigate	3
14. Operational Efficiency/Flexibility	Low - High	5
15. Deadhead Costs (Optional)	Deadhead Milage Costs	5
16. Adjacent Available Property	Options Availble	1

Exhibit E: Site Data Sheet Example

Site#_____

Site Data Sheet

Property Name: _____
Location: Some Road between Highway and River

	Aerial Photo
1. Site Size:	23.50e, Existing Site includes properties across the street
2. Site Configuration:	Generally rectangular.
3. Geo-tech/Seismic/Topography:	Poor. Former landfill site. Issues with subsidence and poor soil conditions well documented in several reports.
4. Drainage/Flood Plain:	No issues reported, however site is adjacent to a river but located at Levee Road level.
5. Zoning and Land Use:	Industrial
6. Site Utilities:	Available.
7. Site Access:	Private Vehicles access the site from Some Road. Primary access is from _____ Road. Secondary bus entry/exit from _____ Road. Deliveries are made from _____ Road.
8. Traffic:	Potential impact on _____ Road due to increased bus and personal vehicle traffic on _____ Road with the expansion of the facilities.
9. Hazardous Materials:	Potential for Hazardous Materials in areas around fuel storage tanks, and in areas where geotechnical conditions present subsidence as a result of the former landfill.
10. Environmental/Neighborhood:	No adverse neighborhood issues.
11. Availability of Land:	Available. Currently listed.
12. Acquisition Cost:	$0.00
13. Development Costs of Land:	Moderate depending on location of new structures due to poor geotechnical conditions
14. Operational Efficiency/Flexibility:	Loss of operational efficiency as system grows and service is needed in growth areas in the south and southeast portions of the service region.
15. Deadhead Costs:	Remain Constant until growth in south and southeast portions of the service region.
16. Adjacent Available Property:	Limited parcels.

FINALIST SITE RATING FACTOR DEFINITIONS

Each criterion used in the final site evaluation process requires a qualitative factor to fairly compare the various criteria on an equal basis. This factor is called the Rating Factor. Each Rating Factor has a value translated into a numeric rating system of one to four with one being the least important/poor and four being most important/excellent. The following table presents an example of the Rating Factor values of each the criterion.

1. Site Size	Rating Factor
Site is short of target acreage by 2 acres or more	1
Site is short of target acreage by less than 2 acres	2
Site is exactly on the target acreage	3
Site is larger than the target acreage	4
2. Site Configuration	**Rating Factor**
Parcel has varied shape with more than 4 sides	1
Parcel has varied shape with 4 sides but not rectangular	2
Parcel has 4 sides and is rectangular but with less or more than a 3:1 length to width ratio.	3
Parcel has 4 sides and is rectangular with a 3:1 length to width ratio.	4
3. Geo-tech/Seismic/Topography	**Rating Factor**
Significant negative topographic features and/or geologic obstructions identified or known to be present. Cost to mitigate anticipated being high.	1
Moderate negative topographic features and/or geologic obstructions identified or known to be present. Cost to mitigate anticipated being moderate.	2
Some negative topographic features and/or minor geologic obstructions identified or known to be present. Cost to mitigate anticipated being modest or average for area. Topography may contribute to a desirable natural drainage pattern.	3
No negative topography and/or minor geologic obstructions identified or known to be present. No additional cost to mitigate anticipated. Topography may be considered favorable for site grading or to enhancement of natural drainage patterns.	4
4. Drainage/Floodplain	**Rating Factor**
Significant drainage and floodplain mitigation anticipated. Cost to mitigate anticipated being high.	1
Moderate drainage and floodplain mitigation anticipated. Cost to mitigate anticipated being moderate.	2
Slight drainage and floodplain mitigation anticipated. Cost to mitigate anticipated being modest or average for area.	3
No drainage and floodplain mitigation required. No additional cost to mitigate anticipated.	4
5. Zoning/Land Use	**Rating Factor**
Parcel is zoned for functions other than light or heavy industrial or manufacturing and is not appropriate for intended use. Surrounding land use is not compatible for anticipated O&M facility functions. Rezoning is generally considered not viable and would meet with major opposition.	1
Parcel is zoned for light or heavy industrial or manufacturing and is appropriate for intended use. However, surrounding land use is not compatible for anticipated O&M facility functions.	2
Parcel is zoned for functions other than light or heavy industrial or manufacturing and is not appropriate for intended use. Surrounding land use is compatible for anticipated O&M facility functions. Rezoning is a viable option with little or no opposition.	3

Parcel is zoned for light or heavy industrial or manufacturing and is appropriate for intended use. Surrounding land use is compatible for anticipated O&M facility functions.	4
6. Site Utilities	**Rating Factor**
No site utilities have been established. Service capacity and availability of utilities is not known. Significant cost to establish appropriate service and capacity anticipated.	1
No site utilities have been established. Utilities are available but service capacity may not be adequate. Moderate cost to establish and upgrade capacity of services anticipated.	2
Site utilities have been established. Utilities are generally available but service capacity may not be adequate. Low cost to upgrade capacity of services anticipated.	3
Site utilities have been established. Service capacity is adequate. No cost to upgrade services anticipated.	4
7. Site Access	**Rating Factor**
No site access has been established. Site is not within 1 mile of a major arterial. Significant cost to establish access and ongoing deadhead costs are anticipated.	1
No site access has been established. Site is within 1 mile of a major arterial. Moderate cost to establish access and ongoing deadhead costs are anticipated.	2
Site access has been established. Site is within close proximity to major arterial(s). Low operational cost for ongoing deadhead costs anticipated.	3
Site access has been established. Site is adjacent to major arterial(s). No additional operational cost for site access is anticipated.	4
8. Traffic	**Rating Factor**
Surrounding roads and streets infrastructure cannot support additional traffic without significant and major upgrades to support level of service. Cost to improve level of service anticipated to be high.	1
Surrounding roads and streets infrastructure cannot support additional traffic generated by the O&M Facility without a moderate level of upgrades to support level of service. Cost to improve level of service anticipated being moderate.	2
Surrounding roads and streets can support additional traffic generated by the O&M Facility. Some minor and basic upgrades to support level of service may be required for long term growth. Cost to improve level of service anticipated being modest.	3
Surrounding roads and streets infrastructure can support additional traffic generated by the O&M Facility. No infrastructure upgrade needed. No cost anticipated.	4
9. Hazardous Materials	**Rating Factor**
Significant hazardous material removal and mitigation anticipated. Cost to mitigate anticipated being high.	1
Moderate hazardous material removal and mitigation anticipated. Cost to mitigate anticipated being moderate.	2
Some minor hazardous material removal and mitigation anticipated. Cost to mitigate anticipated being modest or average for area.	3
No hazardous material removal and mitigation required. No additional cost to mitigate anticipated.	4
10. Environmental and Neighborhood Issues	**Rating Factor**
Significant Environmental issues and/or Neighborhood Issues and concerns are associated with the property and possible acquisition requiring a significant degree of mitigation and programmatic compromises necessary. Cost to mitigate anticipated being high.	1

Moderate Environmental issues and/or Neighborhood Issues and concerns are associated with the property and possible acquisition requiring a moderate degree of mitigation. Programmatic compromises may or may not be necessary. Cost to mitigate anticipated being moderate.	2
Minor Environmental issues and/or Neighborhood Issues and concerns are associated with the property and possible acquisition requiring some minor degree of mitigation. No programmatic compromises will be necessary. Cost to mitigate anticipated being modest.	3
No Environmental issues and/or Neighborhood Issues and concerns are associated with the property and possible acquisition. No mitigation required. No programmatic compromises will be necessary. No cost to mitigate.	4
11. Availability of Land	**Rating Factor**
Significant acquisition issues will be encountered such as unwilling seller, high cost of property due to other development or prevailing market. Property cost anticipated being high and acquisition obstacles anticipated being high.	1
Moderate acquisition issues will be encountered. Property cost anticipated being higher than the average and acquisition obstacles anticipated being moderate. Property may or may not be for sale and seller may not be willing to sell to a public entity.	2
Minor acquisition issues will be encountered. Property cost anticipated being average and acquisition obstacles anticipated being modest. Property is for sale by a willing seller to most public entities.	3
No acquisition issues will be encountered. Property cost anticipated being low to average and no acquisition obstacles are anticipated. Property is for sale by a willing seller to [AGENCY] and other public entities.	4
12. Acquisition Cost	**Rating Factor**
Significant costs per square foot associated with the purchase of the site relative to the surrounding neighborhood.	1
Cost per square foot to acquire the site is higher than the cost of land in the surrounding neighborhood.	2
Cost per square foot to acquire the site is equal to the cost of land in the surrounding neighborhood.	3
Cost per square foot to acquire the site is lower than the cost of land in the surrounding neighborhood.	4
13. Development Cost of Land	**Rating Factor**
Significant cost associated with developing and providing site improvements not related to utilities. Cost to mitigate anticipated being high.	1
Moderate cost associated with developing and providing site improvements not related to utilities. Cost to mitigate anticipated being moderate.	2
Some minor cost associated with developing and providing site improvements not related to utilities. Cost to mitigate anticipated being modest or average for area.	3
No cost associated with developing and providing site improvements not related to utilities. No additional cost to mitigate anticipated.	4
14. Operational Efficiency/Flexibility	**Rating Factor**
The site location does not allow for an efficient or flexible operation based upon routes and deadhead analysis.	1
The site location allows for some efficiencies and flexibility for operation based upon routes and deadhead analysis.	2

The site location is an efficient or flexible operation based upon routes and deadhead analysis.	3
The site location provides very efficient or flexible operation based upon routes and deadhead analysis.	4
15. Deadhead Costs (Optional)	**Rating Factor**
The site location creates significantly more "Deadhead" costs than other potential properties.	1
The site location creates no more "Deadhead" costs than other potential properties.	2
The site location creates less "Deadhead" costs than other potential properties.	3
The site location creates significantly less "Deadhead" costs than other potential properties.	4
16. Adjacent Available Property	**Rating Factor**
The site location does not have available property adjacent	1
The site location has adjacent property that is not for sale at this time	2
The site location has adjacent property that may be for sale.	3
The site location has adjacent available property.	4

FINALIST SITES

Using the 16 rating factors described, the Study Team, CAMPO and the Transit Partners' staff will determine the Finalist Sites. The sites will then be ranked using a Finalist Site Scoring Worksheet to identify the "Top Three Sites". These sites will be used in future Site Master Planning efforts to test fit program elements and determine the best possible site for the Transit Partners' Operations and Maintenance Facility to acquire Finalist Sites.

Finalist Site Scoring Worksheet

The Finalist Site Scoring Spreadsheet is used to determine the "Top Three Sites." For each of the Evaluation Criteria, a score is produced by multiplying the rating by the weight. The average of the 16 Evaluation Criteria Scores produces the ranking for each site. Exhibit F presents an example of a Finalist Site Scoring Worksheet.

Exhibit F: Finalist Site Scoring Worksheet Example

Site Scoring Worksheet																								
	Site #1				Site #2				Site #3				Site #4				Site #5				Site #6			
	Site Name				Site Name				Site Name				Site Name				Site Name				Site Name			
Evaluation Criteria	Rating	X	WEIGHT	Score	Rating	X	WEIGHT	Score	Rating	X	WEIGHT	Score	Rating	X	WEIGHT	Score	Rating	X	WEIGHT	Score	Rating	X	WEIGHT	Score
1. Site Size	1	X	4	4	4	X	4	16	4	X	4	16	4	X	4	16	4	X	4	16	4	X	4	16
2. Site Configuration	3	X	4	12	3	X	4	12	4	X	4	16	4	X	4	16	4	X	4	16	4	X	4	16
3. Geotech/Seismic/Topography	0	X	3	0	4	X	3	12	3	X	3	9	3	X	3	9	3	X	3	9	3	X	3	9
4. Drainage/Floodplain	1	X	2	2	3	X	2	6	3	X	2	6	3	X	2	6	3	X	2	6	3	X	2	6
5. Zoning and Land Use	4	X	4	16	3	X	4	12	4	X	4	16	4	X	4	16	4	X	4	16	2	X	4	8
6. Site Utilities	2	X	1	2	4	X	1	4	2	X	1	2	3	X	1	3	3	X	1	3	3	X	1	3
7. Site Access	3	X	4	12	4	X	4	16	2	X	4	8	2	X	4	8	2	X	4	8	2	X	4	8
8. Traffic	3	X	1	3	4	X	1	4	3	X	1	3	3	X	1	3	3	X	1	3	2	X	1	2
9. Hazardous Materials	1	X	2	2	4	X	2	8	3	X	2	6	2	X	2	4	3	X	2	6	3	X	2	6
10. Environmental/Neighborhood	4	X	3	12	3	X	3	9	2	X	3	6	2	X	3	6	3	X	3	9	2	X	3	6
11. Availability of Land	4	X	1	4	4	X	1	4	3	X	1	3	3	X	1	3	3	X	1	3	2	X	1	2
12. Acquisition Cost	4	X	2	8	3	X	2	6	3	X	2	6	2	X	2	4	3	X	2	6	3	X	2	6
13. Development Costs of Land	1	X	3	3	3	X	3	9	2	X	3	6	1	X	3	3	2	X	3	6	2	X	3	6
14. Operational Efficiency/Flexibility	3	X	5	15	2	X	5	10	3	X	5	15	3	X	5	15	4	X	5	20	2	X	5	10
15. Deadhead Costs (Optional)	1	X	5	5	2	X	5	10	4	X	5	20	4	X	5	20	4	X	5	20	3	X	5	15
16. Adjacent Available Property	1	X	1	1	4	X	1	4	3	X	1	3	3	X	1	3	3	X	1	3	3	X	1	3
Total Score				101				142				141				135				150				122
Rank				6				2				3				4				1				5