



65 Glenn Street | 169 Ocean Blvd.
Lawrence, MA 01843 | Unit 101, PO Box 249
Hampton, NH 03842
T:978.794.1792 T:603.601.8154
TheEngineeringCorp.com

MEMORANDUM

TO: Susan Bottan, SFO
Town of Wayland School Department
41 Cochituate Road
Wayland, MA 01778
FROM: Eric K. Gerade, PE, LEED AP
RE: School Bus Parking Site Evaluation

DATE: December 19, 2016

PROJECT NO.: T0558.17

TEC, Inc. (TEC) was retained by the Town of Wayland School Department to review and evaluate Town owned properties where approximately twenty one (21) school buses, twenty-three (23) automobiles and one work trailer can be sited for the relocation of the existing bus park facility, currently located at 480 Boston Post Road (Route 20).

INITIAL SITE DUE DILIGENCE

TEC utilized the Town of Wayland's Geographic Information System (GIS) database and Survey Department to identify 315 Town owned properties. The School Department identified the following five parameters to narrow the list of potential properties.

1. Parcels to be greater than one acre in size;
2. Favorable topography;
3. Minimal land clearing required;
4. Access to electricity; and,
5. Provide a cost effective solution to construct a parking facility.

Additionally, properties designated as Conservation Land were eliminated from the list of potential sites for the parking facility.

TEC further reduced to the list to parcels greater than one acre and then analyzed the remaining properties utilizing the GIS data layers for favorable topography, proximity to electricity, potential resource areas (i.e., wetlands, rivers, aquifer protection, floodplain, etc.), and ortho-imagery obtained from MassGIS to review existing land cover.

The School Department also provided the following letters summarizing similar site selection efforts for the bus parking evaluation:

- Mr. Bill Steinberg, Wayland Resident, dated October 28, 2016;
- Mr. Mike Lowery, Surface Water Quality Committee, dated November 28, 2016;
- Wayland Real Asset Planning (WRAP) Committee, dated December 1, 2016; and,
- Mr. Tom Abdella, Wayland Resident, dated December 5, 2016.

TEC ranked the parcels as "Advantageous Parcels", "Potential Parcels" and "Non-Advantageous Parcels", to focus on the properties that will provide the best opportunity to meet the needs of the School Department. The rankings incorporated the Town's Staff

comments, WRAP's comments, and GIS analysis. Refer to the attached Table 1 for a summary of the parcel rankings. Table 1 is color coded; green for "Advantageous Parcels", yellow for "Potential Parcels" and red for "Non-Advantageous Parcels". Refer to Figure 1 for an overview map of the Town of Wayland highlighting the Town owned parcels identified in Table 1. TEC identified the top four advantageous parcels as:

- 0 River Road (Parcel ID: 17-018) (Landfill Area)
- 357 Commonwealth Road (Parcel ID: 52-158) (Open parcel)
- 86 Claypit Hill Road (Parcel ID: 19-072A) (Claypit Hill Elementary School)
- 0 Pemberton Road (Parcel ID: 51C-036E) (Near Lakeview Cemetery and Town Beach)

PRELIMINARY SITE ASSESSMENT

TEC conducted a site visit on December 12, 2016 to review the existing conditions at the four sites identified above. Conceptual layouts were prepared to show the proposed bus parking concepts at each site. The conceptual layouts include proposed bus parking stalls with dimensions of twelve (12') foot by forty (40') foot, automobile parking stalls at nine (9') foot by eighteen and a half (18½') foot and a standard size trailer. A summary of each concept is identified below.

0 River Road (Parcel ID: 17-018) – Town Landfill

This 13-acre parcel is part of the landfill properties on the westerly side of Wayland. The area identified for a potential bus parking facility is at the existing yard waste compost area. The proposed conceptual plan provides an opportunity for a linear parking field with separated parking for employee automobiles. Based on initial discussions with Town Staff, this area may be slated for a future wetlands mitigation project; however, there appear to be other adequate areas to relocate the wetland replication in this general area. The limits of construction are near jurisdictional wetland resources and may require review and approval from the Town of Wayland Conservation Commission, which will be determined based on final grading and stormwater management. Land and tree clearing will be minimal as this area is actively used as a yard waste area. Electricity is available via overhead wires in close proximity. Refer to Figure 2 for the proposed Conceptual Plan for this property.

357 Commonwealth Road (Parcel ID: 52-158)

This 4.5-acre parcel is abutting the Wayland Woods office building and across Commonwealth Road from the Mobil Gas Station. The property contains wetlands and riverfront jurisdictional areas to the south and easterly property limits, with an area towards the northwesterly corner that can be utilized for the proposed parking facility. The shape and topography of the parcel provides an opportunity for angled bus parking stalls and a separated automobile parking area. This conceptual plan will require land/tree clearing and minor grading activities to construct the parking facility. Electricity is available along the frontage on Commonwealth Road. Due to the various resource areas present and associated buffer zones, the project will require review and approval from the Town of Wayland Conservation Commission. Refer to Figure 3 for the proposed Conceptual Plan for this property.

86 Claypit Hill Road (Parcel ID: 19-072A) – Claypit Hill Elementary School

This 1.25-acre parcel is part of the Claypit Hill Elementary School complex, directly south of the existing parking lot for the school and playing fields. The existing parking field can be extended in a southerly direction to be utilized for the bus parking facility. Due to the configuration of the existing parking field, a total of sixteen new parking spaces are provided. The existing parking field appears to have excess capacity and could provide the additional employee parking requested. The area available is generally square in shape and currently wooded with relatively flat topography. Electricity can be provided by the existing electrical utility currently servicing the school. The Claypit Hill Elementary School complex is located within a residential area. The parking lot expansion will reduce the natural buffer to an existing residence. Refer to Figure 4 for the proposed Conceptual Plan for this property.

0 Pemberton Road (Parcel ID: 51C-036E) Lakeview Cemetery/Town Beach

This 2-acre parcel is adjacent to Lakeview Cemetery and the Town Beach. The proposed concept provides angled parking stalls for the buses and a separated parking field for automobiles. There are utility poles and overhead wires through the Town Beach parcel for access to electrical service. Land and tree clearing will be minimal as this area is cleared and currently used as a compost, stump, and material stockpile area. Construction of the parking facility will likely require moderate earth moving activities due to the topography of the land. It appears that the project limits will be outside of Conservation Commission jurisdictional areas. Coordination with the Town of Wayland DPW will be required for utilizing this parcel for a bus facility as it may impact Cemetery operations. Refer to Figure 5 for the proposed Conceptual Plan for this property.

TEC looks forward to discussing these conceptual layouts further with the Town of Wayland School Department, incorporating comments received from other Town Staff and stakeholders, and providing a construction cost estimate for the preferred location.

List of Tables:

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- Figure 1 – Town Owned Parcel Rankings Map
- Figure 2 – Concept 1 - 0 River Road (Parcel ID: 17-018) – Town Landfill
- Figure 3 – Concept 2 - 357 Commonwealth Road (Parcel ID: 52-158)
- Figure 4 – Concept 3 - 86 Claypit Hill Road (Parcel ID: 19-072A) – Claypit Hill Elementary School
- Figure 5 – Concept 4 - 0 Pemberton Road (Parcel ID: 51C-036E) Lakeview Cemetery/Town Beach

Table 1 - Parcel Rankings

RATING	PARCEL ID	ADDRESS	DIVISION	AREA	COMMENTS
A	51C-036E	0 Pemberton Rd	DPW - PARK	2.02	Lakeview Cemetery Adequate size Currently disturbed and active Town work area Access electricity Moderate topography
A	52-158	357 Commonwealth Rd	DPW - PARK	4.50	Old Cochituate Gravel Bank Adequate size Frontage and access from Commonwealth Road Easy access to electricity/utility poles Wetlands to the east/south
A	17-018	0 River Rd	DPW - HIGHWAY	13.04	Landfill Area Adequate size Access from existing access drive to transfer station Easy access to electricity/utility poles Wetlands and floodplan to the east Potential Town wetland mitigation project in this area to be coordinated
A	19-072A	86 Claypit Hill Rd	SCHOOLS	1.31	Claypit Hill Elementary School Can connect to existing parking field. Currently wooded Generally flat topography Utilize existing electrical service to school .
A	19-072	86 Claypit Hill Rd	SCHOOLS	25.32	Claypit Hill Elementary School See comments above for adjacent parcel Partially in aquifer protection
A	01-047	91 Oxbow Rd	DPW - PARK / CONS	10.71	Currently cleared area Generally flat topography Linear in shape Potential park redevelopment Existing utility poles on Oxbow Road, Aquifer Protection District
P	47D-058C	193 Main St	SCHOOLS	2.00	Wayland Middle School Adequate access from Main Street Existng utility poles on Main Street Aquifer protection district
P	47D-058A	201 Main St	SCHOOLS	28.83	Wayland Middle School Unfavorable topography (20' cut) Partially within Aquifer Protection District
P	47D-058B	201 Main St	SCHOOLS	7.95	Wayland Middle School Unfavorable topography Wetland impacts
P	37-034	264 Old Connecticut Path	SCHOOLS	67.86	Wayland Highschool Partial Conservation area Aquifer Protection District
P	37-032	0 Anthony Rd	DPW - HIGHWAY	22.20	Partial Conservation area Partial Priority Habitat Limited access Utilize the existing stream crossing Adjacent to the High School
P	48-058	49 Locker St	SCHOOLS	17.60	Loker Elementary School Adequate size Requires land clearing Existing wetlands and streams Unfavorable topography
P	18-056	0 Orchard Ln	SCHOOLS	13.72	Proposed School site Existing utility poles on Orchard Lane Aquifer protection district Requires land clearing Located within a residential area
P	43A-039	63 Pequot Rd	SCHOOLS	12.96	Happy Hollow Elementary School Unfavorable topography Existing wetlands
P	43A-007	0 Maiden Ln	SCHOOLS	1.90	Happy Hollow Elementary School Adequate access from Maiden Lane Unfavorable topography Existing utility poles adjacent to site
P	22-001	0 Boston Post Rd	MUNICIPAL	10.58	Conservation Land

Table 1 - Parcel Rankings

RATING	PARCEL ID	ADDRESS	DIVISION	AREA	COMMENTS
P	51C-047A	25 Parkland Dr	RECREATION	10.51	Town Beach Partial Priority Habitat Partial Conservation Land Adjacent to the Lakeview Cemetary Adequate access from Parkland Drive
P	07-019	0 Sherman Bridge Rd	SCHOOLS	10.08	Apline Field Adequate access from Alpine Road Existing utility poles Aquifer Protection District Adjacent to residential area
P	07-019	0 Sherman Bridge Rd	SCHOOLS	1.92	Adequate access from Alpine Road Existing utility poles Land clearing required Earthwork/Grading required
P	22-004	0 River Rd	DPW - HIGHWAY	15.00	Existing Landfill Wetlands Priority Habitat Area
P	21-010A	68 River Rd	DPW - HIGHWAY	9.50	Portions of Draper Road - Not Abandoned Conservation Land Landfill
P	21-012	68 River Rd	DPW - HIGHWAY	8.57	DPW Building & Salt Shed Conservation land
P	22-002	0 Boston Post Rd	DPW - HIGHWAY	5.90	Partial Conservation Area Partial Priority Habitat Adequate access from Boston Post Road Land clearing required
P	47A-027E	0 Curtis Rd	RECREATION	2.71	Housing Authority Art #21 1977 ATM Aquifer protection district Adequate access to site Adjacent to various Town owned parcels Requires land clearing Located in a Residential area
P	47D-027	0 Curtis Rd	RECREATION	1.12	Housing Authority Art #21 1977 ATM Aquifer protection district Adequate access to site Adjacent to various Town owned parcels
N	51A-065	12 Bent Ave	HOUSING	2.61	Bent Park Housing Existing parking No available area
N	22-006	0 Boston Post Rd	DPW - HIGHWAY	4.50	Conservation land Priority Habitat
N	22-003	0 Boston Post Rd	DPW - HIGHWAY	7.63	Portion of Mun. Service Dist. Existing wetlands Priority Habitat
N	24-008D	214 Boston Post Rd	MUNICIPAL	1.30	Wetlands
N	24-008C	214 Boston Post Rd	DPW - PARK	2.62	Wetlands
N	24-008B	214 Boston Post Rd	DPW - PARK	1.23	Wetlands
N	22-007	484 Boston Post Rd	DPW - HIGHWAY	1.00	Conservation land Partial Priority Habitat
N	04-065A	0 Campbell Rd	DPW - WATER	11.80	Trout Brook Conservation
N	03-040A	0 Campbell Rd	DPW - WATER	6.10	Trout Brook Conservation/Campbell Well
N	03-041A	0 Campbell Rd	DPW - WATER	1.00	Trout Brook Conservation
N	03-041	0 Campbell Rd	DPW - WATER	1.38	Conservation land
N	04-066B	0 Campbell Rd	DPW - WATER	3.20	Trout Brook Conservation
N	19-037	0 Claypit Hill Rd	DPW - PARK	12.00	Lower Mill Brook Conservation
N	29-003	0 Cochituate Rd	DPW - PARK	1.70	South Cemetary
N	23-048	1 Cochituate Rd	MUNICIPAL	1.15	Wayland Depot Unfavorable shaped parcel Existing parking fields
N	23-106	38 Cochituate Rd	MUNICIPAL	2.81	Wayland Public Safety Building Existing wetlands and streams
N	23-001	41 Cochituate Rd	RECREATION	26.13	Art King Field Conservation Land Existing wetlands Priority Habitat

Table 1 - Parcel Rankings

RATING	PARCEL ID	ADDRESS	DIVISION	AREA	COMMENTS
N	23-001	41 Cochituate Rd	MUNICIPAL / SCHOOLS	5.00	Town Building and Childrens Way Partial Conservation land Partial Priority habitat.
N	33-001H	137 Cochituate Rd	DPW - HIGHWAY	1.10	Johnson LN Easement Conservation land
N	33-001E	137 Cochituate Rd	RECREATION	10.10	Greenways Conservation
N	49-064B	412 Commonwealth Rd	RECREATION	8.37	Loker Conservation & Recreation
N	15-021	0 Concord Rd	DPW - HIGHWAY	1.29	Existing wetlands
N	23-094	5 Concord Rd	MUNICIPAL	1.04	Wayland Public Library Existing wetlands Existing building and parking
N	18-082	83 Concord Rd	MUNICIPAL	4.80	Lower Mill Brook Conservation
N	14-040C	42 Glezen Ln	DPW - WATER	4.50	Existing wetlands No access to the parcel
N	51D-038A	106 Main St	HOUSING	3.25	Cochituate Village Apartments
N	51B-036	145 Main St	MUNICIPAL	1.54	Cochituate Fire Station/Wayland Art Center
N	47D-005	195 Main St	DPW - HIGHWAY	4.63	Additional Meeting on 03/1944 #8 Aquifer protection district Existing building and parking
N	34-027	0 Old Connecticut Path	DPW - WATER	4.40	Access through adjacent Town owned parcel Steep/unfavorable topography
N	34-026	139 Old Connecticut Path	DPW - WATER	7.60	Reeves Hill Water Tower Steep/unfavorable topography
N	33-001C	202 Old Connecticut Path	MUNICIPAL	26.40	Greenways Conservation
N	37-033	266 Old Connecticut Path	DPW - WATER	2.50	Happy Hollow Wells Conservation land
N	18-018	0 Old Sudbury Rd	DPW - WATER	12.90	Water Treatment Facility Partial Conservation land Limited access
N	18-032	65 Old Sudbury Rd	DPW - PARK	3.97	North Cemetary
N	18-032A	65 Old Sudbury Rd	DPW - PARK	8.26	North Cemetary
N	36C-051B	0 Overlook Rd	DPW - PARK	3.61	Riverview Park Existing playing fields
N	23-002	0 Pelham Island Rd	DPW - PARK	2.72	Conservation land
N	55-001B	0 Pemberton Rd	DPW - PARK	1.67	Lakeview Cemetary
N	55-001C	0 Pemberton Rd	DPW - PARK	1.88	Lakeview Cemetary
N	55-001	0 Pemberton Rd	DPW - PARK	9.69	Lakeview Cemetary
N	55-001A	0 Pemberton Rd	DPW - PARK	1.00	Lakeview Cemetary
N	24-126	0 Plain Rd	DPW - PARK	9.51	Mill Pond Partially in Aquifer Protection District
N	04-038A	0 Red Barn Rd	DPW - WATER	9.50	Trout Brook Conservation
N	07-020	0 Sherman Bridge Rd	SCHOOLS	1.76	Conservation land
N	10-071	11 Spruce Tree Ln	DPW - WATER	1.18	Conservation land
N	10-061	94 Spruce Tree Ln	DPW - WATER	8.70	Chamberlain Well Partial Conservation land Priority Habitat area Aquifer Protection District
N	51A-001A	0 West Plain St	DPW - PARK	4.60	Cochituate Field Existing playing fields
N	04-065	0 York Rd	DPW - WATER	2.69	Trout Brook Conservation
N	04-066	9 York Rd	MUNICIPAL	1.47	Conservation land



Scale: 1"=2,500'

LEGEND	
ADVANTAGEOUS PARCELS	<div></div>
POTENTIAL PARCELS	<div></div>
NON-ADVANTAGEOUS PARCELS	<div></div>
AQUIFER PROTECTION DISTRICT	<div></div>

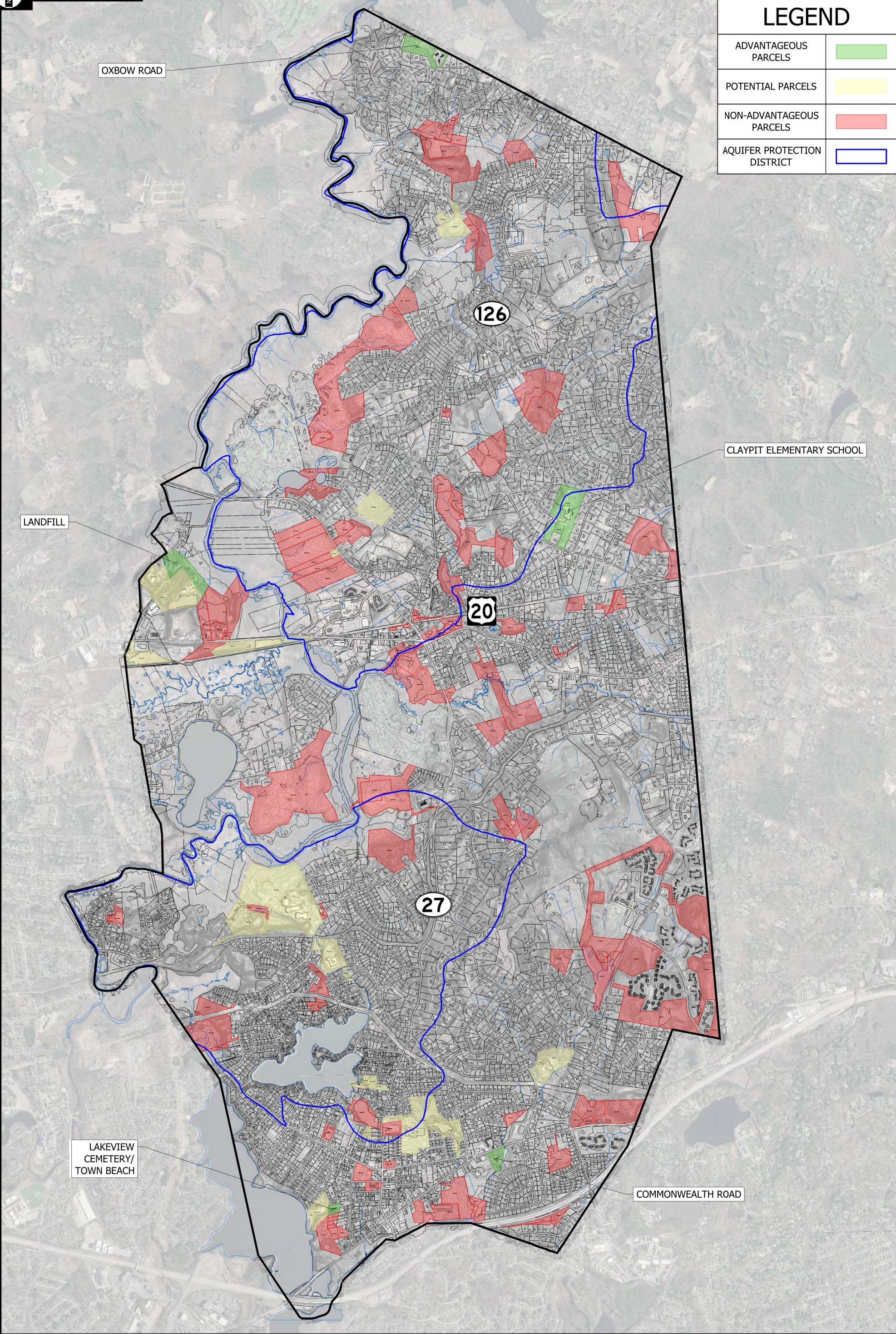


Figure 1



TEC, Inc.

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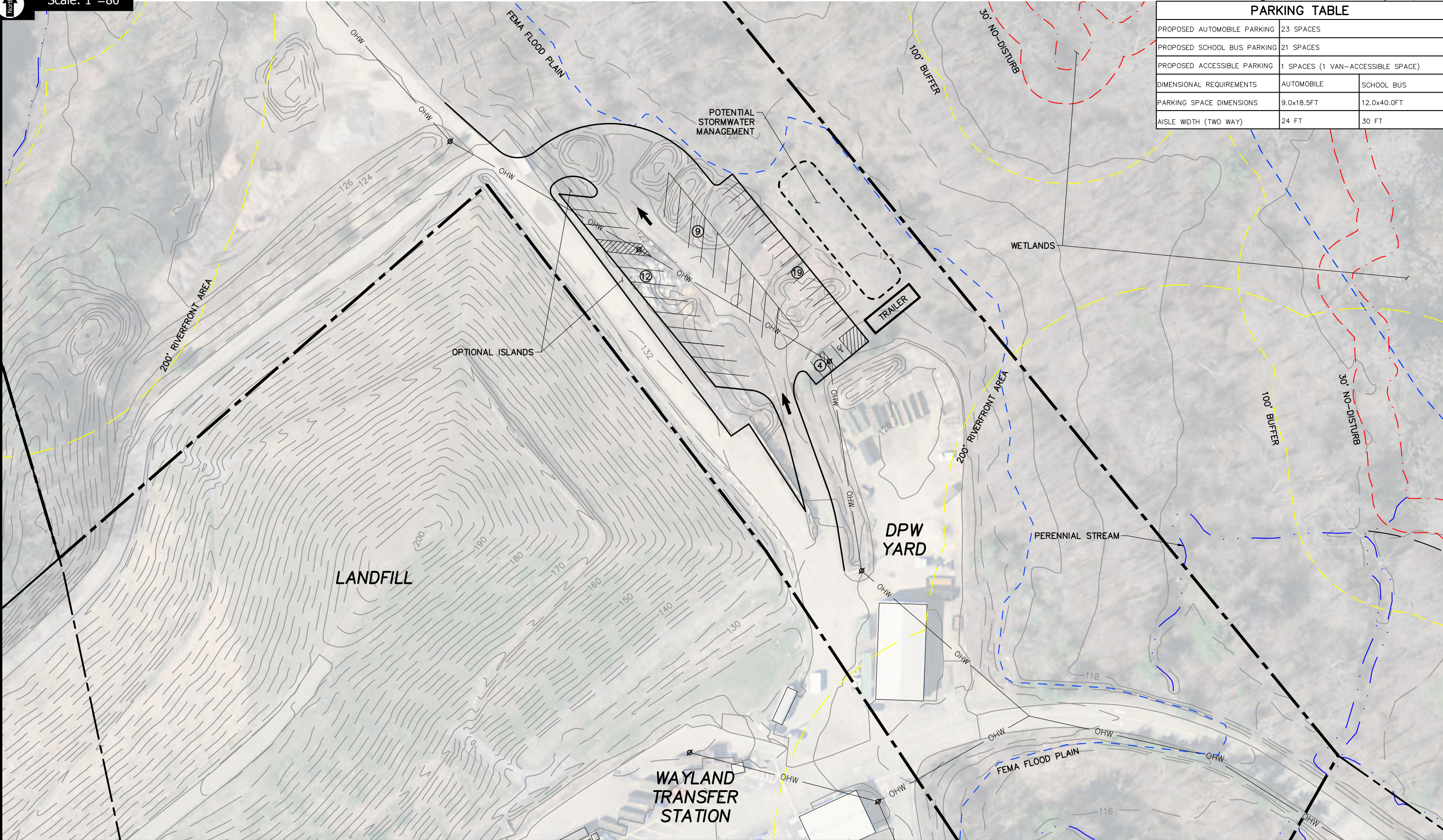


Scale: 1"=80'

School Bus Parking Site Evaluation - Wayland, MA

PARKING TABLE

PROPOSED AUTOMOBILE PARKING	23 SPACES	
PROPOSED SCHOOL BUS PARKING	21 SPACES	
PROPOSED ACCESSIBLE PARKING	1 SPACES (1 VAN-ACCESSIBLE SPACE)	
DIMENSIONAL REQUIREMENTS	AUTOMOBILE	SCHOOL BUS
PARKING SPACE DIMENSIONS	9.0x18.5FT	12.0x40.0FT
AISLE WIDTH (TWO WAY)	24 FT	30 FT



TEC, Inc.

NOTE:
THIS CONCEPTUAL LAYOUT PROVIDES A GENERAL CONCEPT
INCORPORATING THE REQUESTED PARAMETERS FOR THE BUS PARKING
FACILITY. VARIOUS CONFIGURATIONS OF BUS ROUTING AND PARKING CAN
BE INCORPORATED. FINAL CONFIGURATIONS CAN BE COORDINATED WITH
THE TOWN AND FACILITIES MANAGER DURING FINAL DESIGN.

Figure 2

Concept 1 - Parcel ID: 17-018
0 River Road, Wayland, MA
December 19, 2016

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Scale: 1"=80'

School Bus Parking Site Evaluation - Wayland, MA

PARKING TABLE

PROPOSED AUTOMOBILE PARKING	23 SPACES	
PROPOSED SCHOOL BUS PARKING	21 SPACES	
PROPOSED ACCESSIBLE PARKING	1 SPACES (1 VAN-ACCESSIBLE SPACE)	
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Figure 3

Concept 2 - Parcel ID: 52-158
357 Commonwealth Road, Wayland, MA
December 19, 2016

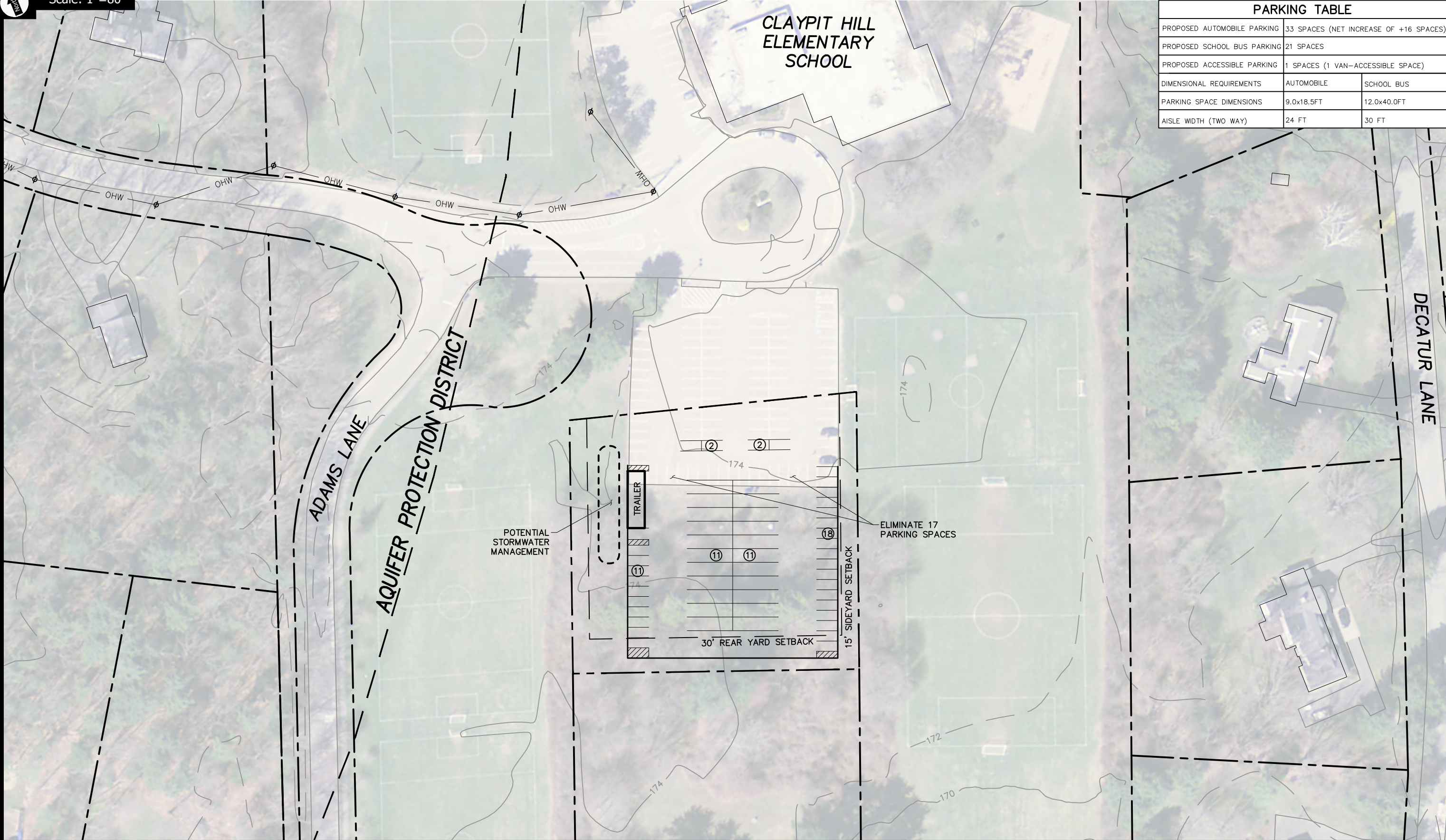
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Scale: 1"=80'

School Bus Parking Site Evaluation - Wayland, MA

PARKING TABLE		
PROPOSED AUTOMOBILE PARKING	33 SPACES (NET INCREASE OF +16 SPACES)	
PROPOSED SCHOOL BUS PARKING	21 SPACES	
PROPOSED ACCESSIBLE PARKING	1 SPACES (1 VAN-ACCESSIBLE SPACE)	
DIMENSIONAL REQUIREMENTS	AUTOMOBILE	SCHOOL BUS
PARKING SPACE DIMENSIONS	9.0x18.5FT	12.0x40.0FT
AISE WIDTH (TWO WAY)	24 FT	30 FT



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Figure 4

Concept 3 - Parcel ID: 19-072A
86 Claypit Hill Road, Wayland, MA
December 19, 2016

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Scale: 1"=80'

School Bus Parking Site Evaluation - Wayland, MA

PARKING TABLE		
PROPOSED AUTOMOBILE PARKING	23 SPACES	
PROPOSED SCHOOL BUS PARKING	21 SPACES	
PROPOSED ACCESSIBLE PARKING	1 SPACES (1 VAN-ACCESSIBLE SPACE)	
DIMENSIONAL REQUIREMENTS	AUTOMOBILE	SCHOOL BUS
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AISE WIDTH (TWO WAY)	24 FT	30 FT



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Figure 5

Concept 4 - Parcel ID: 51C-036E
0 Pemberton Road, Wayland, MA
December 19, 2016