APPENDIX 4
Traffic and Parking Study Reports

1. Traffic Operation Report and Parking Analysis, Jacobs Edwards and Kelcey, November 2006, revised March 2008

2. Supplemental Parking Memo, Jacobs Engineering, September, 2008

Appendix 4.1 Traffic Operation Report and Parking Analysis, Jacobs Edwards and Kelcey, November 2006, revised March 2008

TRAFFIC OPERATION REPORT AND PARKING ANALYSIS

PROVINCETOWN MUNICIPAL AIRPORT
PROVINCETOWN, MASSACHUSETTS

PREPARED FOR:

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November 2006

Revised March 2008

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1.0 INTRODUCTION

This report evaluates traffic operations and parking demand to support the environmental analysis and permitting for the Provincetown Municipal Airport's Capital Improvements Plan. The November 2006 Report has been revised to respond to comments received on the Draft EIR/EA. The traffic analysis has been prepared in conformance with MEPA guidelines for Traffic Impact Assessment and the Cape Cod Commission's guidance documents. The report examines traffic impacts, parking, transportation demand management (TDM), bicycle facilities, and pedestrian accommodations. The operational efficiency of the existing parking facility, traffic operations at the intersection of Route 6 at Conwell Street and Race Point Road, and the intersection of Race Point Road with Airport Drive has been examined. Parking demand for existing and future conditions has also been evaluated.

Data collection revealed heavy use on the local roadways during the summer tourist season. However, traffic analysis at the intersection of Route 6 and Conwell Street showed that the existing signal could accommodate future increases in demand at the Airport. Additionally, the traffic analysis for the intersection of Airport Drive and Race Point Road also indicates that the intersection (unsignalized) can accommodate future increases. Concerning parking, the average weekday demand for parking at the Airport is met by the existing parking area, but the parking area is operating close to full capacity. The Airport's passenger parking area, however, does not meet existing peak demand periods. The need for additional parking spaces to meet existing peak demand periods, as well as future increases in passenger enplanements, is discussed further in the parking analysis section.

2.0 TRAFFIC OPERATIONS STUDY

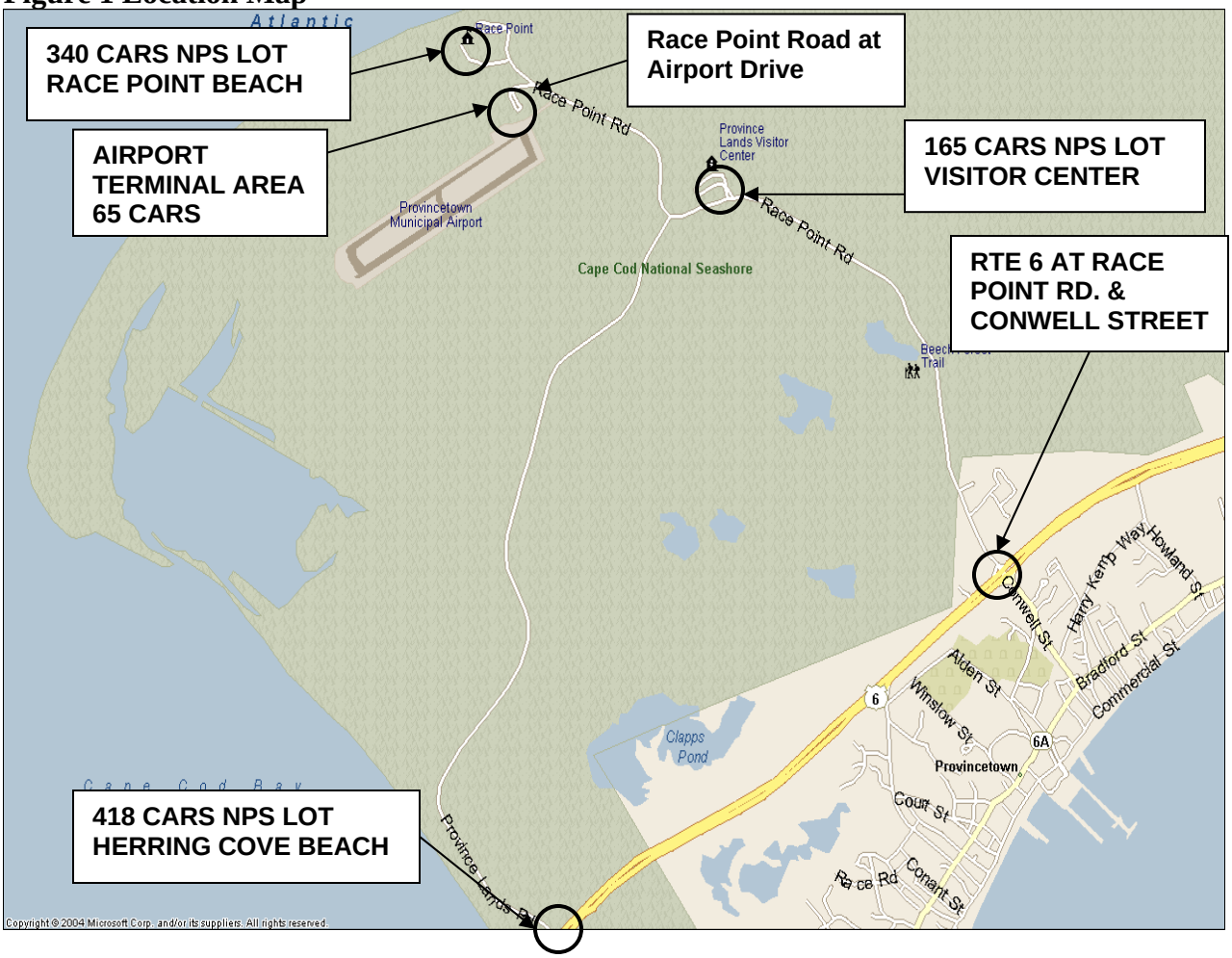
2.1 Background & Study Area

Provincetown Municipal Airport, located in Provincetown, MA, is a Primary Service Airport as defined by the Federal Aviation Administration (FAA). It serves scheduled commercial flights, private sightseeing tours, and general aviation. During the peak summer months of June, July, and August, there are six flights per day to Boston-Logan (BOS) in nine-passenger Cessna 402 commuter planes operated by Cape Air. During the peak seasons, each scheduled "flight" can actually require as many as six extra sections (aircraft) to accommodate passenger demand. In addition there are also sightseeing tours originating at the Airport, as well private general aviation activity. During the peak season in 2004, nearly 2,700 passengers arrived and departed through the Provincetown Municipal Airport monthly. The Airport is located within the Cape Cod National Seashore, part of the National Park Service (NPS), which also has a peak season with a significant increase in the number of summer visitors. The main access for both the Airport and the visitor center is Race Point Road. Figure 1 shows the location of the Airport, roads, the NPS Province Lands Visitor Center, NPS parking lots, and intersections within the study area.

Traffic on Race Point Road, leaving northbound from the intersection with Route 6 and Conwell Street, enters the National Seashore, passes an intersection with Province Lands Road, and arrives at the Airport driveway approximately two miles from the intersection with Route 6. Race Point Road continues on to Race Point Beach, where special off-road vehicles may

continue on the beach or along specific restricted Park Service roads. The NPS operates a large, five-bay parking facility at Race Point Beach that is capable of parking approximately 340 automobiles. The NPS also operates a 165 car parking lot at the Province Lands Visitor Center and a 418 car parking lot at Herring Cove Beach, at the west end of Province Lands Road. Although vehicles may arrive at the Airport via Province Lands Road, traffic counts conducted by the Cape Cod Commission (CCC) revealed traffic is very light on this road, and the vast majority of the traffic utilizes Race Point Road for Airport access. An analysis of the intersection of Province Lands Road and Route 6 was not scoped by MEPA and would not be warranted based on the CCC traffic counts.

Figure 1 Location Map



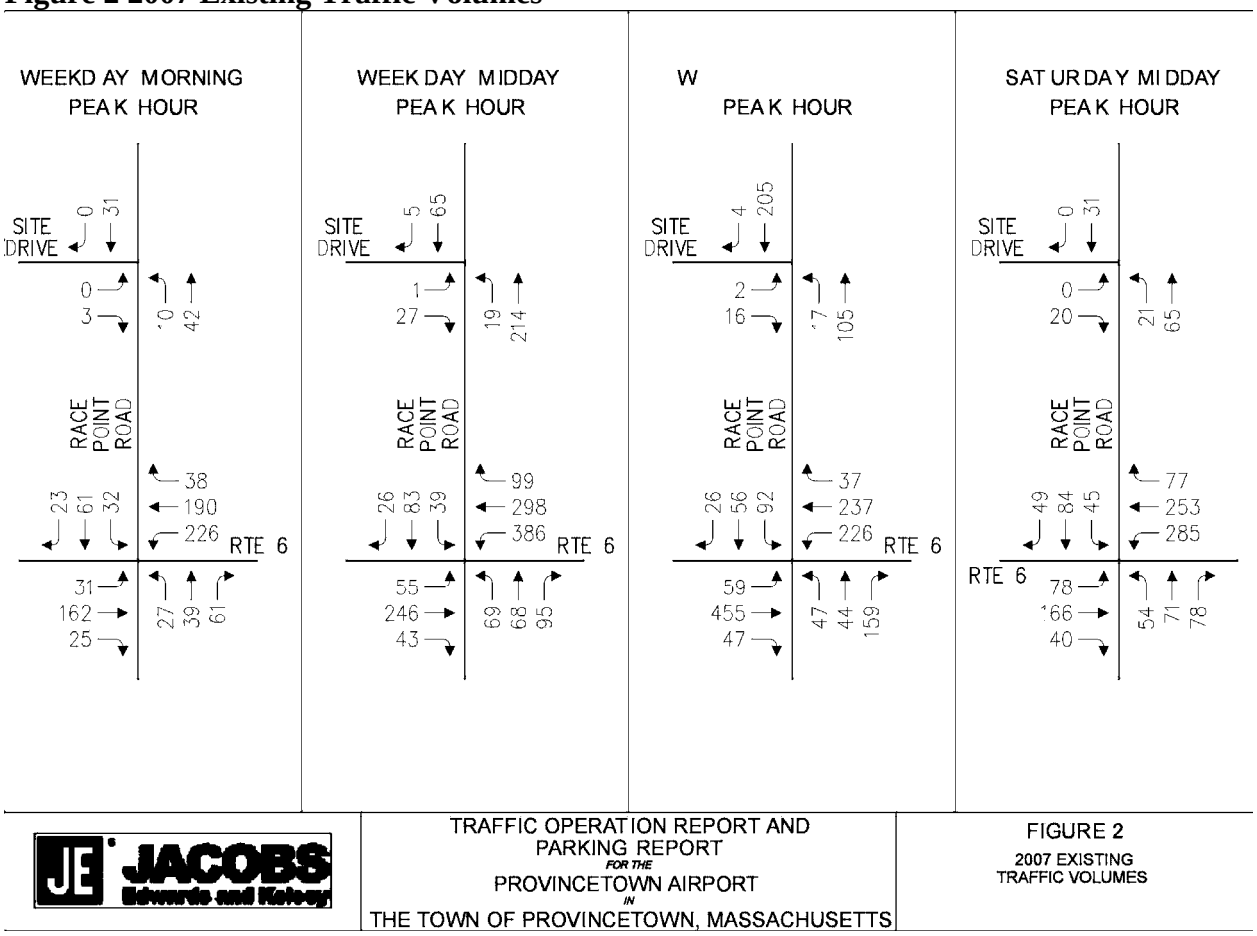
Within the study area, Race Point Road, Province Lands Road, and Conwell Street are all two lane local roads. The intersection of Race Point Road and Province Lands Road is under stop control. Route 6 is a major arterial with two travel lanes and a speed limit of 55 mph. There are exclusive left turn lanes at the intersection with Conwell Street and Race Point Road.

2.2 Data Collection

Automatic Traffic Recorders (ATR) and Turning Movement Counts (TMC) were used to collect current traffic data in August 2006, and August/September 2007, which is within the peak period. The ATRs were placed along Airport Drive, west of Race Point Road, Race Point Road, south of Airport Drive, and on Race Point Road, north of Route 6 (near the National Park boundary). These ATRs collected average daily traffic volumes over an extended period of time and provide an hourly volume breakdown.

The TMCs were performed during the weekday morning, midday, evening and Saturday midday peak periods. The TMCs were conducted at the study area intersections of Route 6 at Race Point Road, and Race Point Road at Airport Drive. The existing traffic volumes are depicted on Figure 2, with the traffic count information provided in the *Technical Appendix* of this report.

Figure 2 2007 Existing Traffic Volumes



In addition, a parking occupancy and turnover study of the Airport parking area was conducted. The results of the parking study are discussed in Section 3.0.

2.3 Level of Service Criteria

Level of Service (LOS) is a term used to describe the quality of the traffic flow on a roadway facility at a particular point in time. It is an aggregate measure of travel delay, travel speed, congestion, driver discomfort, convenience, and safety based on a comparison of roadway facility capacity to travel demand. Operating levels of service are reported on a scale of A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS A represents free-flow conditions with little or no traffic delays, while LOS F represents a forced-flow condition with long delays and traffic demands exceeding roadway capacity.

Roadway operating levels of service are calculated following procedures defined in the *2000 Highway Capacity Manual (HCM)*, published by the Transportation Research Board. For signalized intersections, the operating level of service is based on travel delay. Delay can be measured in the field, but is generally calculated as a function of the traffic volume; quality of traffic progression; the green ratio; the cycle length; the v/c (volume/capacity) ratio; and the capacity of each intersection approach, as appropriate. Delay criteria for unsignalized intersections are calculated for the side street or minor street approach and for left turns from the major street. The specific criteria applied per the HCM for signalized and unsignalized intersections are summarized in Table 1.

Table 1 Intersection Level of Service Criteria

Level of Service	Average Stopped Delay per Vehicle (seconds)	
	Signalized Intersection	Unsignalized Intersection
A	0 - 10	0 - 10
B	>10 - 20	>10 - 15
C	>20 - 35	>15 - 25
D	>35 - 55	>25 - 35
E	>55 – 80	>35 - 50
F	>80	>50

Source: *Highway Capacity Manual*, Special Report 209, Transportation Research Board; Washington, DC; 2000.

2.4 Capacity Analysis

Existing Conditions

Existing peak hour traffic operations in the traffic study area were assessed from both a quantitative and qualitative perspective. The qualitative analysis is based on field observations made during peak traffic periods, while the quantitative analysis is based on calculated intersection operating levels of service as described in greater detail below.

Utilizing the TMC collected for this project, the Study Team conducted a level-of-service (LOS) analysis of the signalized intersection of Route 6 at Conwell Street and Race Point Road and the unsignalized intersection of Race Point Road and Airport Drive. The analysis was done by using the widely accepted software program Synchro v.6.0, which is based upon the concepts and

procedures described in the HCM. The summary of the analysis is shown in Figure 2 and Tables 2 and 3. In addition to delay, the 95th percentile queue length is shown, which represents the maximum queue length, and the volume to capacity ratio (v/c) is reported, which measures the saturation of a particular approach. Values typically fall between 0 and 1.0, with values over 1.0 implying that the approach or intersection exceeds capacity.

Table 2 Signalized Intersection Level of Service Summary

Intersection/Peak Period/Movement	2007 Existing Conditions				2024 Design Year Conditions				2024 Design Year Conditions			
	V/C[a]	Delay[b]	LOS[c]	Queue[d] 50th/95th	V/C	Delay	LOS	Queue 50th/95th	V/C	Delay	LOS	Queue 50th/95th
Route 6 at Conwell Street and Race Point Road												
Weekday Morning Peak Hour:												
Route 6 EB L	0.04	2.9	A	3/12	0.05	3.1	A	4/15	0.05	3.1	A	4/15
Route 6 EB T	0.07	2.9	A	9/20	0.09	3.2	A	12/27	0.09	3.2	A	12/27
Route 6 EB R	0.02	2.8	A	0/7	0.02	3.0	A	0/8	0.02	3.0	A	0/8
Route 6 WB L	0.28	4.3	A	30/69	0.36	5.2	A	39/97	0.36	5.2	A	39/97
Route 6 WB T	0.08	3.0	A	11/23	0.10	3.3	A	14/30	0.10	3.3	A	14/30
Route 6 WB R	0.03	2.9	A	0/8	0.03	3.1	A	0/10	0.03	3.1	A	0/10
Conwell Street NB LT	0.27	27.2	C	22/52	0.32	25.4	C	28/61	0.32	25.2	C	28/61
Conwell Street NB R	0.04	25.7	C	0/26	0.05	23.6	C	0/28	0.05	23.4	C	0/28
Race Point Road SB LT	0.37	28.0	C	32/69	0.48	26.8	C	44/87	0.48	26.6	C	44/87
Race Point Road SB R	0.02	25.5	C	0/16	0.02	23.4	C	0/19	0.02	23.3	C	0/19
Overall	**0.30**	**9.6**	**A**	**--**	**0.38**	**9.8**	**A**	**--**	**0.38**	**9.7**	**A**	**--**
Weekday Midday Peak Hour:												
Route 6 EB L	0.08	3.5	A	7/23	0.12	4.7	A	10/30	0.12	4.7	A	10/30
Route 6 EB T	0.11	3.5	A	16/36	0.14	4.7	A	22/46	0.14	4.8	A	22/46
Route 6 EB R	0.03	3.3	A	0/11	0.03	4.4	A	0/12	0.03	4.4	A	0/12
Route 6 WB L	0.54	8.0	A	73/193	0.75	16.0	B	114/349	0.75	16.1	B	114/349
Route 6 WB T	0.13	3.7	A	20/43	0.17	5.0	A	27/55	0.17	5.0	A	27/55
Route 6 WB R	0.07	3.5	A	0/16	0.08	4.7	A	0/19	0.08	4.7	A	0/19
Conwell Street NB LT	0.58	31.2	C	49/97	0.55	23.5	C	62/116	0.56	23.8	C	63/118
Conwell Street NB R	0.07	25.2	C	0/32	0.08	19.1	B	0/34	0.08	19.1	B	0/34
Race Point Road SB LT	0.44	28.1	C	43/85	0.44	21.7	C	55/104	0.45	21.8	C	57/107
Race Point Road SB R	0.02	24.9	C	0/17	0.02	18.8	B	0/19	0.02	18.8	B	0/19
Overall	**0.55**	**10.9**	**B**	**--**	**0.70**	**11.9**	**B**	**--**	**0.70**	**12.0**	**B**	**--**
Weekday Evening Peak Hour:												
Route 6 EB L	0.08	3.6	A	8/26	0.12	5.0	A	11/32	0.13	5.1	A	12/33
Route 6 EB T	0.20	3.9	A	34/69	0.27	5.5	A	48/85	0.27	5.6	A	48/85
Route 6 EB R	0.03	3.4	A	0/12	0.04	4.7	A	0/13	0.04	4.7	A	0/13
Route 6 WB L	0.41	6.7	A	39/111	0.60	12.6	B	61/170	0.60	12.7	B	61/170
Route 6 WB T	0.11	3.7	A	16/37	0.14	5.1	A	23/45	0.14	5.2	A	23/45
Route 6 WB R	0.03	3.5	A	0/10	0.04	4.7	A	0/13	0.04	4.8	A	0/13
Conwell Street NB LT	0.36	24.1	C	32/67	0.36	20.9	C	42/84	0.36	20.9	C	42/85
Conwell Street NB R	0.11	22.2	C	0/40	0.13	19.2	B	0/43	0.13	19.1	B	0/43
Race Point Road SB LT	0.58	27.5	C	54/104	0.58	24.1	C	70/130	0.59	24.1	C	71/132
Race Point Road SB R	0.02	21.7	C	0/17	0.02	18.5	B	0/19	0.02	18.5	B	0/19
Overall	**0.45**	**10.1**	**B**	**--**	**0.59**	**11.0**	**B**	**--**	**0.60**	**11.0**	**B**	**--**
Saturday Midday Peak Hour:												
Route 6 EB L	0.11	3.4	A	9/29	0.16	4.7	A	13/39	0.16	4.7	A	13/40
Route 6 EB T	0.07	3.3	A	10/24	0.10	4.4	A	14/32	0.10	4.5	A	14/32
Route 6 EB R	0.03	3.2	A	0/10	0.03	4.2	A	0/12	0.03	4.3	A	0/12
Route 6 WB L	0.37	5.4	A	43/107	0.50	8.5	A	61/156	0.50	8.6	A	62/156
Route 6 WB T	0.11	3.5	A	15/34	0.15	4.7	A	22/46	0.15	4.7	A	22/47
Route 6 WB R	0.05	3.3	A	0/13	0.07	4.4	A	0/17	0.07	4.5	A	0/17
Conwell Street NB LT	0.54	29.8	C	45/89	0.51	22.6	C	57/108	0.51	22.6	C	57/108
Conwell Street NB R	0.05	25.3	C	0/29	0.06	19.2	B	0/31	0.06	19.1	B	0/31
Race Point Road SB LT	0.50	28.9	C	46/91	0.50	22.4	C	61/113	0.51	22.4	C	62/115
Race Point Road SB R	0.03	25.2	C	0/23	0.04	19.0	B	0/25	0.04	19.0	B	0/26
Overall	0.40	11.1	B	--	0.50	10.5	B	--	0.50	10.6	B	--

[a]*Volume to Capacity Ratio*
[b]*Average Delay Time in Seconds*
[c]*Level-of-Service*
[d]*Queue Length in Feet.*
NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; NEB Northeastbound; SEB = Southeastbound; SWB = Southwestbound; NWB = Northwestbound.
L = Left Turn; T = Through; R = Right Turn; LT = Shared Left-turn/Thorough; TR Shared Through/Right-turn; LR = Shared Left/Right-turn; LTR = Shared Left/Through/Right-turn.

Table 3 Unsignalized Intersection Level of Service Summary

Intersection/Peak Period/Movement	2007 Existing Conditions				2024 Design Year Conditions				2024 Design Year Conditions			
	V/C[a]	Delay[b]	LOS[c]	Queue[d]	V/C	Delay	LOS	Queue	V/C	Delay	LOS	Queue
Race Point Road at the Provincetown Airport Driveway												
Weekday Morning Peak Hour:												
Provincetown Airport Driveway EB LR	0.00	8.5	A	0	0.00	8.5	A	0	0.00	8.5	A	0
Race Point Road NB LT	0.01	1.5	A	1	0.01	1.3	A	1	0.01	1.5	A	1
Race Point Road SB TR	0.02	0.0	A	1	0.02	0.0	A	0	0.02	0.0	A	0
Weekday Midday Peak Hour:												
Provincetown Airport Driveway EB LR	0.03	8.8	A	2	0.03	8.9	A	2	0.04	8.9	A	3
Race Point Road NB LT	0.01	0.7	A	1	0.01	0.6	A	1	0.02	0.8	A	1
Race Point Road SB TR	0.04	0.0	A	0	0.05	0.0	A	0	0.05	0.0	A	0
Weekday Evening Peak Hour:												
Provincetown Airport Driveway EB LR	0.02	9.7	A	2	0.03	10.0	A	2	0.03	10.0	A	2
Race Point Road NB LT	0.01	1.2	A	1	0.01	1.0	A	1	0.02	1.2	A	1
Race Point Road SB TR	0.13	0.0	A	0	0.16	0.0	A	0	0.16	0.0	A	0
Saturday Midday Peak Hour:												
Provincetown Airport Driveway EB LR	0.02	8.5	A	2	0.02	8.6	A	2	0.02	8.6	A	2
Race Point Road NB LT	0.01	1.9	A	1	0.01	1.7	A	1	0.02	1.8	A	1
Race Point Road SB TR	0.02	0.0	A	0	0.02	0.0	A	0	0.02	0.0	A	0

[a]*Volume to Capacity Ratio*
[b]*Average Delay Time in Seconds*
[c]*Level-of-Service*
[d]*Queue Length in Feet.*
NB = Northbound; SB = Southbound; EB = Eastbound.
LT = Shared Left-turn/Thorough; TR Shared Through/Right-turn; LR = Shared Left/Right-turn.

As shown in Table 2, the overall LOS during all time periods is acceptable, with the only concern being the 469-foot queue from Route 6 West onto Conwell Street. This turn, however, is into Provincetown center, away from the Airport and the study area. Turning movements relevant to the Airport route, such as Race Point Road southbound, have acceptable delays.

Future Conditions

In order to assess the potential traffic impacts of the proposed project, existing traffic volumes were projected to a future design year. A seventeen-year traffic projection was utilized on the study area roadways for consistency with the Providence Airport 2005 Master Plan. It should be noted that this horizon exceeds the MEPA guidelines for the preparation of traffic impact studies, which typically prescribes a five-year horizon. Under the No-Build alternative, traffic increases along the study area roadways are associated with normal traffic growth patterns as well as other currently planned development projects.

The 2024 Build scenario consists of anticipated traffic associated with the project superimposed upon the 2024 No-Build scenario traffic volumes. The impacts of the proposed development may be determined by making comparisons to the 2024 No-Build alternative, which assumes that the project is not built. The development and analysis of these future traffic flows for both the No-Build and Build conditions are described in the following text.

Traffic Growth from Other Developments
Traffic growth on area roadways is a function of the expected land development in the immediate area, as well as the surrounding region. Several methods are used to estimate this growth. To develop the seventeen-year forecast, two components of traffic growth were considered: traffic generated by both background growth and planned projects.

First, an annual-average traffic-growth percentage was determined. After a review of CCC historical traffic volume data at several locations within the Town of Provincetown, it was determined that traffic volumes have actually decreased by approximately 0.6 percent per year over the past 10 years. However, to present a conservative (worst case) analysis and to match standard regional/local engineering practices, an increase of 1.0 percent per year compounded annual growth rate was used to account for general background traffic growth.

Second, any planned or approved specific developments were included that would generate a significant volume of traffic on study area roads within the next 17 years. Based on discussions with officials from the Town of Provincetown in February-March 2008, there are several projects planned that will add traffic to the study area in the near future:

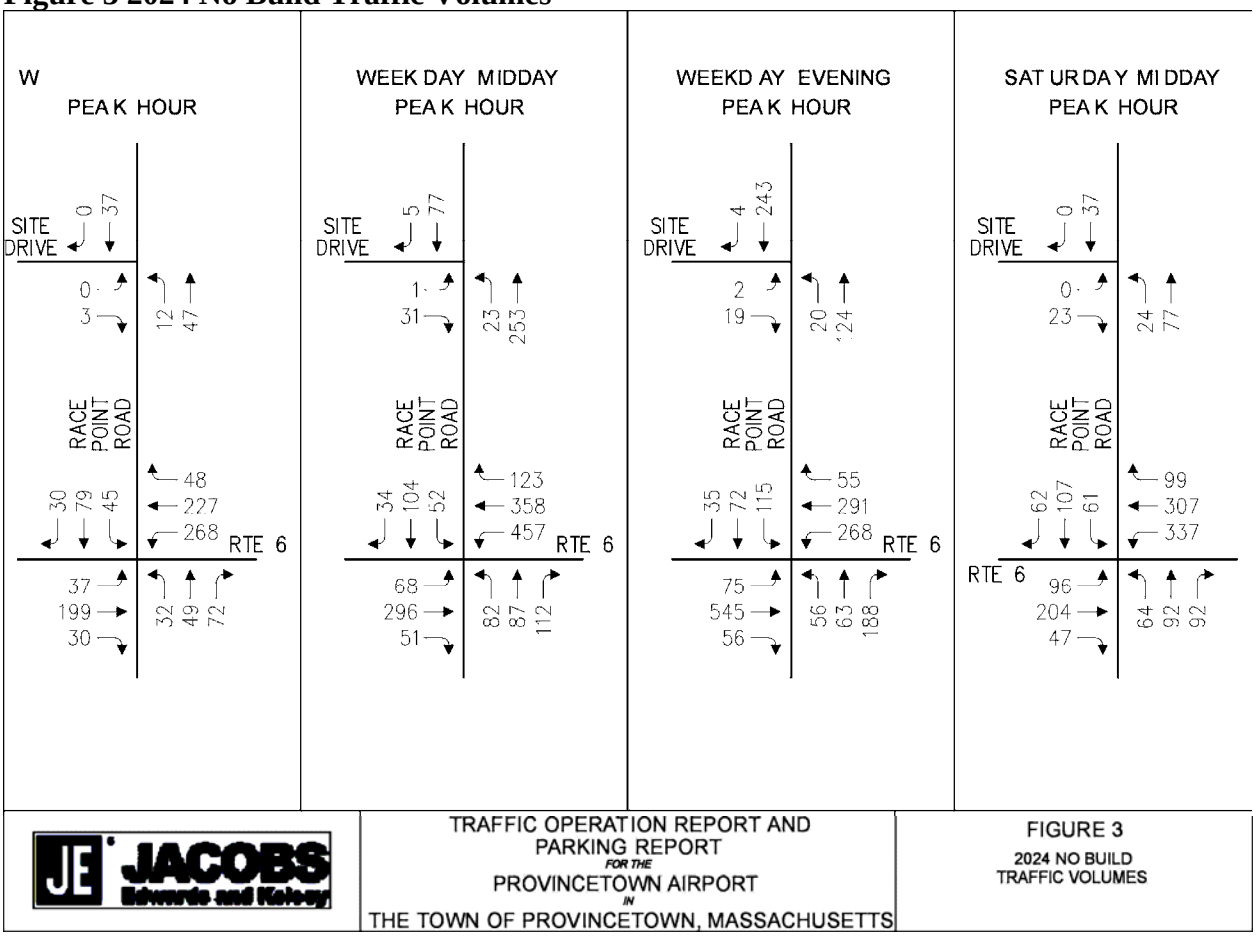
- Proposed 19-35 Race Point Road Residential Development, Provincetown, MA. This proposed project consists of the construction of 35 residential apartment units located off Race Point Road just north of the intersection of Route 6, and to the south of the Provincetown Airport. Traffic volumes associated with this development were estimated based on trip generation calculations provided by the ITE and distributed based on existing roadway travel patterns. The network sheets are included in the *Technical Appendix*.

- Proposed Shankpainter Road Residential Development, Provincetown, MA. At this time, it is anticipated that a future development will be constructed on Shankpainter Road, located off Route 6 east of the study area. This project is at its preliminary stages and may undergo several alterations before a final construction plan is determined. In order to provide a conservative estimation of traffic conditions, it was assumed that this development would be constructed as a 40-unit apartment complex. This estimate was based on discussions with the Town of Provincetown and applied to the roadway based on trip generation calculations provided by the ITE and distributed based on existing roadway travel patterns. These trips are included in the *Technical Appendix*.

Additionally, based on a review of the MassHighway Transportation Improvement Plan, no roadway improvement projects (outside of routine maintenance) are anticipated within the study area.

The 2024 No-Build traffic volume networks were developed by applying a background growth rate and by adding traffic associated with proposed developments to be completed by others. The 2024 No-Build peak-hour traffic flow networks are represented on Figure 3.

Figure 3 2024 No Build Traffic Volumes



Project Generated Traffic Growth

Anticipated traffic volumes to be generated by the proposed development were determined and assigned to the 2024 No Build roadway networks in order to develop the 2024 Build traffic scenarios. Procedures used to generate and assign trips to the roadway networks are described below and discussed in more detail in a memo included in the *Technical Appendix*.

Project Trip Generation

Anticipated 2024 traffic volumes were based on Passenger Enplanement projections published in the Provincetown Airport 2005 Master Plan. The forecasted enplanement totals were applied to a trip rate which was empirically calculated based on the existing amount of vehicular traffic entering and exiting the site. This methodology was suggested by CCC and is similar to one used to generate vehicular trips associated with the Terminal project at the Barnstable Airport. The projected number of trips was then subtracted from the existing traffic, in order to arrive at the increased amount of trips estimated to be generated by the Provincetown Airport in the future.

Presently, 141 passengers use the Provincetown Airport on a peak period average day (as stated in the 2005 Master Plan). Reviewing traffic counts conducted at the site driveway, 13 vehicles

access the site (10 enter, 3 exit) during the weekday morning peak period, 52 vehicles access the airport during the weekday midday peak period (24 enter, 28 exit), 39 access the airport during the weekday evening peak period (21 enter, 18 exit) and 41 access the airport during the Saturday midday peak period (21 enter, 20 exit). Projecting these volumes based on the anticipated future passenger count results in motor vehicle trip increases ranging from 2 to 8 vehicles during the peak periods. The analysis results are summarized in Table 4.

Table 4 Trip Generation Using Empirical Method

	(A) Existing Number of Daily Passengers[1]	(B) Existing Airport Generated Trips[2]	(C=A/B) Trip Generation Rate	(D) Projected Number of Daily Passengers[1]	(E=DxC) Projected Airport Generated Trips	**(F=E-B) Trip Increase**	**(G=F/B) Percentage of Trip Generation Increase**
Weekday Morning Peak Hour	141	13	0.09	162	15	**2**	***15.4%***
Entering		*10*			*12*	***2***	***20.0%***
Exiting		*3*			*3*	***0***	***0.0%***
Weekday Midday Peak Hour	141	52	0.37	162	60	**8**	***15.4%***
Entering		*24*			*28*	***4***	***16.7%***
Exiting		*28*			*32*	***4***	***14.3%***
Weekday Evening Peak Hour	141	39	0.28	162	45	**6**	***15.4%***
Entering		*21*			*24*	***3***	***14.3%***
Exiting		*18*			*21*	***3***	***16.7%***
Saturday Midday Peak Hour	141	41	0.29	162	47	**6**	***14.6%***
Entering		*21*			*24*	***3***	***14.3%***
Exiting		*20*			*23*	***3***	***15.0%***

[1] *Based on the 2024 Demand Forecasts Section of the 2005 Airport Master Plan, Peak Period Average Day.*
[2] *As observed in August 2007.*

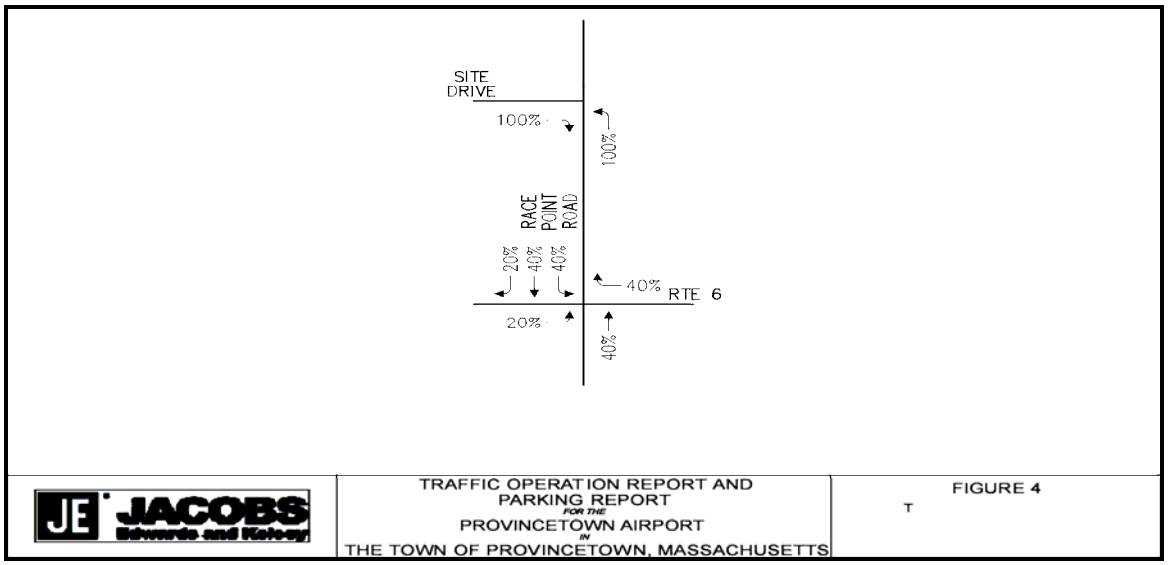
Project Trip Distribution

The directional distribution of proposed new site traffic on the area roadways is based on the existing traffic flow pattern observed within the study area and is shown in Table 5. This distribution is also depicted on Figure 4.

Table 5 Trip Distribution Summary

Road	**Direction (To/From)**	**Percent Site Traffic Distribution**
Route 6	East	40%
Route 6	West	20%
Conwell Street	South	40%
	Total	**100%**

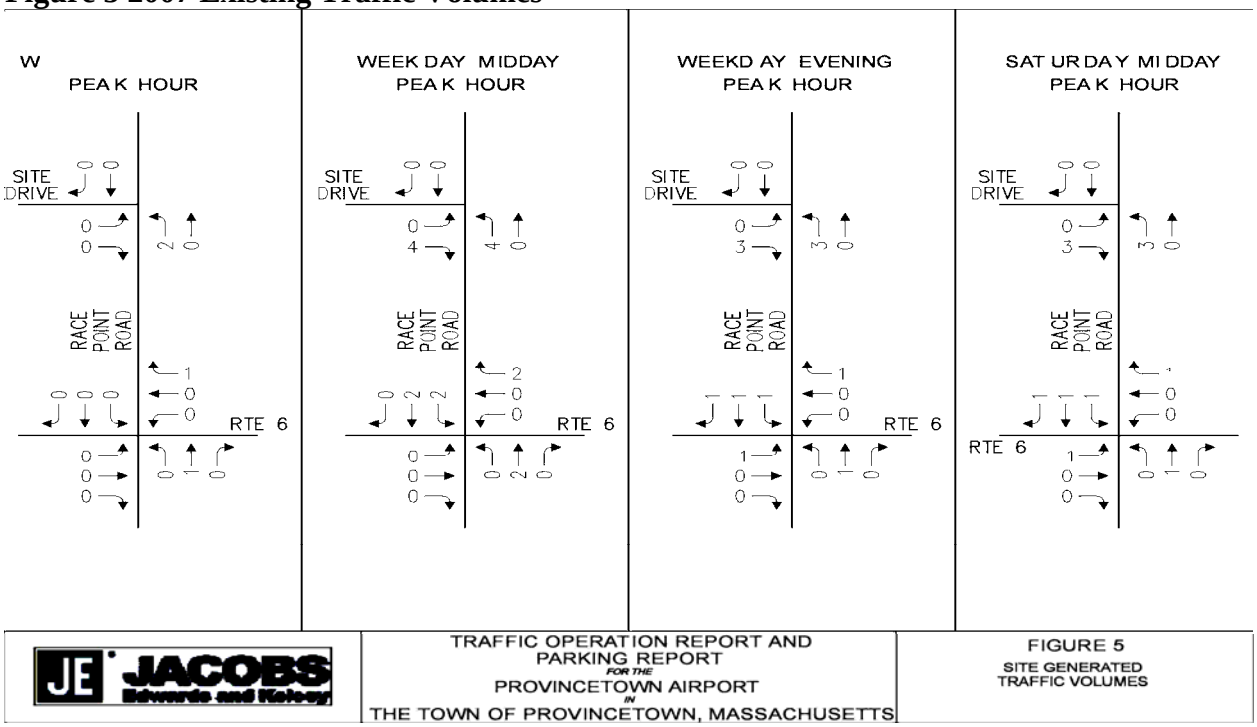
Figure 4 2007 Race Point Road Turning Distribution



The results indicate approximately 40 percent of the new site traffic is expected to and from the east on Route 6, 20 percent is expected to and from the west on Route 6 and 40 percent is expected to and from the south on Conwell Street.

The site generated volumes are shown in Figure 5 for the weekday morning, midday, and evening and Saturday midday peak hours.

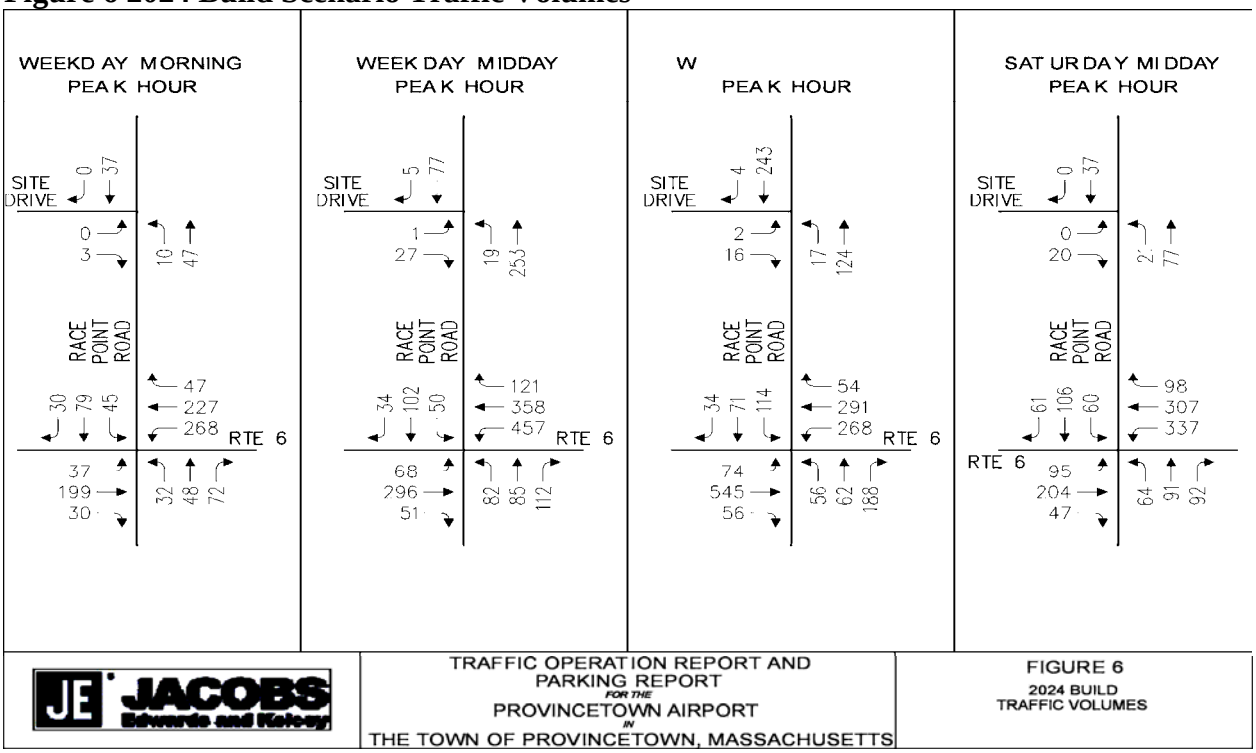
Figure 5 2007 Existing Traffic Volumes



Future Traffic Volumes

Anticipated site-generated traffic volumes were combined with the 2024 No Build peak hour traffic volumes. The resulting traffic flows represent the 2024 Build weekday morning, midday, evening, and Saturday midday peak periods, as illustrated on Figure 6.

Figure 6 2024 Build Scenario Traffic Volumes



Summary of LOS Analysis Results

Level of Service analyses were conducted utilizing Synchro software methodology to determine the Existing, No Build and Build peak hour operating levels of service at the study area intersections. The results for signalized intersection are shown in Table 2, with the unsignalized intersections shown on Table 3.

Signalized Intersection of Route 6 at Conwell Street and Race Point Road

Under all conditions (2007 Existing, 2024 No Build and 2024 Build), this intersection currently operates at LOS A during the weekday morning peak hour and at LOS B during the weekday midday, evening and Saturday midday peak hours.

Unsignalized Intersection at Race Point Road and Airport Drive

Under all conditions, the critical movements (all movements from the Provincetown Airport driveway) at this unsignalized intersection operate at LOS A during the weekday morning, midday, and evening and Saturday midday peak hours.

2.5 Motor Vehicle Crash Data

Crash data was obtained from the MassHighway Crash Database for accidents occurring within the study area over the most recent three-year period, 2004-2006. Crash data for a given location is provided in terms of severity (property damage only, injury or fatality), collision type, and number of accidents. A summary of this crash data is shown in Table 6. A total of 6 crashes occurred within the study area roadways, all at the intersection of Route 6 at Race Point Road and Conwell Street. Approximately 50 percent of the accidents were either angle type or rear end crashes, indicating turning conflicts with through movements or failures to yield. No fatalities occurred within the study area during this period.

Crash data for a given location is normally identified as either a spot location (intersection, bridge or major driveway), or road section (mid-block) of varying length. The accident rate basis for calculations presented in Table 6 is based on spot locations. The formula for calculating the crash rate for an intersection or spot location is typically expressed in million entering vehicles (MEV).

High-accident locations can be identified where frequency of occurrence exceeds the average rates for similar locations or conditions. The calculated rates for each intersection were compared with MassHighway's 2005 Average Accident Rates for District 5, which includes the South Shore and the Cape. The average MEV for District 5 is 0.84 for signalized intersections and 0.59 for unsignalized intersections. The calculated crash rate for the intersection of Route 6 at Race Point Road and Conwell Street is 0.33, lower than average for signalized intersections. The crash rate calculations are provided in the *Technical Appendix*.

Table 6 Accident Data Summary

	Number of Accidents		Crash Rate[b]	Severity			Type			
Location	**Total**	**Avg/Year**		**PD[a]**	**PI[b]**	**F[c]**	**CM[d]**	**RE[e]**	**HO[f]**	**Other**
Route 6 at Race Point Road and Conwell Street	6	2.00	0.33	1	5	0	1	2	2	1
Race Point Road at the Provincetown Airport Driveway	0	0.00	0.00	0	0	0	0	0	0	0
Total	**6**	**-**	**-**	**1**	**5**	**0**	**1**	**2**	**2**	**1**

[a]Property Damage Only; [b]Personal Injury; [c]Fatality; [d]Cross Movement (or angle); [e]Rear End; [f]Head On.

[b]Crash Rate Per Million Entering Vehicles (MEV)

3.0 PARKING CAPACITY ANALYSIS

3.1 Data Collection

The parking study was conducted on Thursday, August 24, 2006, immediately after the TMCs and was taken during three time periods, from 9:10 AM to 9:40 AM, 1:40 PM to 2:10 PM, and 6:20 PM to 6:50 PM. At three 10-minute intervals within each time period, the field engineer wrote down the license plates of all of the vehicles in the parking lot. The three intervals helped create a better understanding of the parking turnover and occupancy during the set time periods.

3.2 Parking Data Review

The existing PVC parking lot has a total of 62 spaces, including 3 spaces designated for handicapped plate vehicles and 5 for the Enterprise Rental Car Company. Employee parking is in a separate area and is not included in this analysis. The parking occupancy data was analyzed and sub-divided into three categories, regular passenger parking, rental car spaces, and handicapped spaces. Table 7 reviews the occupancy of the existing spaces taken during a single weekday in August 2006. The percentage has not been averaged or adjusted. Additional qualitative observations were made during a week in the summer of 2007. Occupancy was higher than that observed in 2006.

Table 7 Parking Lot Weekday Occupancy

	AM Period	Midday Period	PM Period
Passenger Parking	63.2 %	83.9 %	66.1 %
Rental Cars	100.0 %	100.0 %	100.0 %
Handicapped	0.0 %	22.2 %	0.0 %
Overall	63.1 %	82.3 %	74.7 %

As shown in Table 7, during the midday the parking lot is fairly well occupied. The rental car spaces were always occupied because the car rental company transfers cars as needed from the employee lot. The field engineer observed that there were additional rental cars parked in conventional two hour spaces. It is important to note, applying duration data to the occupancy numbers, that 16 spaces were occupied by vehicles during the entire day. Excluding the 5 rental car spaces, these long-term occupants account for 27% (16 out of 59) of the overall parking occupancy. In terms of turnover, there was very little turnover observed during any of the observation periods. During all intervals, there were no changes at any of the parking spaces in at least 85% of the available spaces.

3.3 Parking Generation

Recognized guidelines for parking and trip generation are published by the Institute of Transportation Engineers (ITE) for many different land uses based upon studies taken across the United States. The land use code 021 (Commercial Airport) is normally used for estimating the number of spaces required at a similar Airport. However, Table 8 summarizes the number of spaces necessary at the Airport during the peak hour, based upon the number of passenger enplanements, obtained from the 2005 Airport Master Plan. The projections utilizing enplaning passengers, shown in Table 8, is a more accurate projection to use compared to flights, because of the variation of the definition of a flight and specific operating condition at the Airport. Since Cape Air aircraft are much smaller than the typical commercial flight, a flight at the airport can actually involve several planes as explained in Section 2.1.

Current peak period parking space needs range from 62 to 126 spaces using passengers over weekday or weekend data. It is projected that for the highest demand period of 2024 on a Saturday during the peak season, 145 spaces are predicted to be necessary compared to the 62 existing spaces. Thus, there is a need for up to 83 additional spaces to meet future needs.

Table 8 Parking Generation Summary							
Generator Type	**Peak Period**	**2004 Existing Conditions**			**2024 Projected Conditions**		
		Passengers[1]	**Average Parking Rate[2]**	**Parking Spaces Required**	**Passengers[1]**	**Average Parking Rate**	**Parking Spaces Required**
Enplaning Passengers	Weekday	141 enplaning passengers	0.44	62	162 enplaning passengers	0.44	72
	Saturday		0.89	126		0.89	145
	Sunday		0.84	119		0.84	137

[1] *Information from the Provincetown Municipal Airport 2005 Master Plan*
[2] *Values from ITE parking Generation handbook, 2nd Edition, 1987.*

4.0 TRANSPORTATION DEMAND MANAGEMENT REVIEW (TDM)

Currently, there are three measures in place that will continue to reduce parking demand, referred to collectively as Transportation Demand Management (TDM). These measures are rental car availability, taxi cabs, and a shuttle bus service to Provincetown managed by the Cape Cod Regional Transit Authority (CCRTA). Enterprise Rent-A-Car currently operates out of the Airport and has 5 dedicated spaces in the parking lot. There was turnover in these spaces as the rental agency rented out the vehicles and accepted the return of old ones.

The primary taxi cab companies in Provincetown typically have one taxi that is coordinated with the arrival of the scheduled Cape Air commercial service.

The Provincetown shuttle bus previously had a scheduled stop at the Airport to pick up passengers for transit to Provincetown center, approximately 2.5 miles to the south of the Airport. The shuttle bus modified the schedule to a call when needed system, where the bus will stop at the Airport when called en-route. The shuttle bus does not seem to be synchronized with Cape Air commercial flights.

Another underutilized TDM application is parking enforcement. The Airport Commission has reported in the past that tourists traveling to Race Point Beach would utilize the Airport parking lot (no fee) as opposed to paying the National Seashore fee at the beach. Especially on the weekends, this problem has contributed to the parking shortage at the Airport.

5.0 BICYCLE AND PEDESTRIAN ACCOMMODATIONS REVIEW

Bicycles are typically not a mode of transportation used to go to the Airport. However the Provincetown Airport is immediately adjacent to the Province Lands Bicycle Path, a dedicated off-road paved path that leads most of the way to Provincetown center. One could hypothesize that a customer or employee could use their bicycle if they were taking a private sightseeing tour or utilizing general aviation (i.e. private plane).

Race Point Road does not have any sidewalks throughout its entire length and pedestrians are prohibited from using the bicycle path as a walkway. Within the Airport terminal drop-off zone, there is adequate pedestrian access.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Traffic

The Study Team observed parking and traffic operations within the study area of the Provincetown Municipal Airport in August of 2006. The traffic signal of Route 6 at Conwell Street at Race Point Road adequately handled traffic from the Airport on Race Point Road with acceptable delays and queues, and it is likely that it will continue to do so in the future condition.

Parking

Although parking demand observed on a single weekday during the peak summer period was met by the existing parking lot, the current number of spaces does not meet the needs for the existing peak weekend periods or the 2024 future projections for both weekday and weekends. There is a need for at least 83 additional spaces during the planning period.

Transportation Demand Measures (TDM)

The Airport should continue to enhance TDM measures through coordination with CCRTA, Enterprise Rent-A-Car, the National Park Service, and the Provincetown Police Department for parking enforcement. The Airport should work with Enterprise to determine the number of rental car spaces necessary during the summer peak season. Coordination between three entities (Cape Air, Cape Cod Regional Transit Authority, and the Airport Commission) might enhance ridership on the shuttle bus. Enforcement of the parking rules, with fines and towing, might address the issue of non-airport use of the lot. Similarly, long term parking without the long term permit should not be allowed. Bicycle racks are provided at the Airport. All of these measures will help to alleviate increased parking demand.

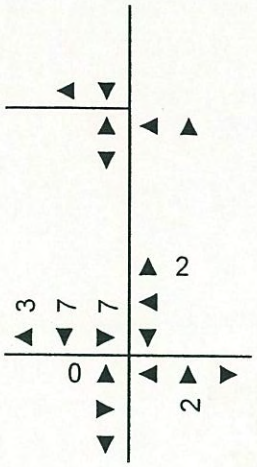
TECHNICAL APPENDIX

The Appendix contains the following:

1. Turning Movement Counts 2006
2. Turning Movement Counts 2007
3. Network Sheets
4. Crash Data Calculations
5. March 26, 2008 Memo

Appendix 1 - Turning Movement Counts 2006

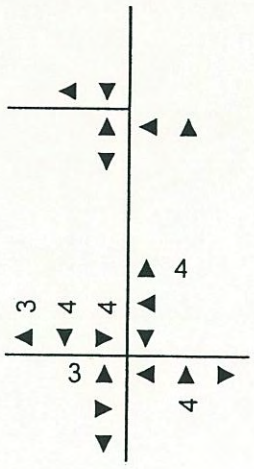
19-35 Race Point Road Residential Development Weekday Morning Peak Hour Traffic Volumes



Dwelling Units	**35**
Trip Equation	**T = 0.49(X) + 3.73**
Trip Split	**20% Entering**
	80% Exiting

Trips	
In	**4**
Out	**17**
Total	**21**

19-35 Race Point Road Residential Development Weekday Midday Peak Hour Traffic Volumes

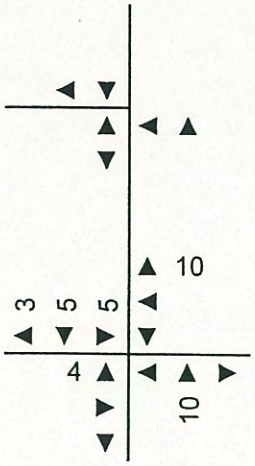


Dwelling Units	**35**
Trip Equation*	**T = 6.01(X) + 150.35**
Trip Split*	**50% Entering**
	50% Exiting

Trips	
In	**11**
Out	**11**
Total	**22**

**Average Daily Trip Rate used and scaled to midday levels*
Note: Midday 'K' factor approximately 6% (737/12,641)
Count volume west of Conwell Street (from TMCs) = 737
CCC Count Station AADT Volume (21017) = 12,641

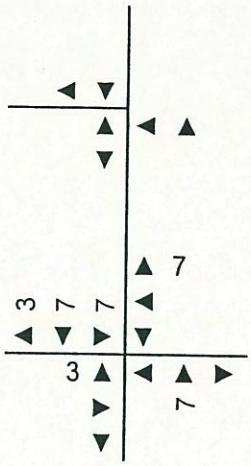
19-35 Race Point Road Residential Development Weekday Evening Peak Hour Traffic Volumes



Dwelling Units	**35**
Trip Equation	**T = 0.55(X) + 17.65**
Trip Split	**65% Entering**
	35% Exiting

Trips	
In	**24**
Out	**13**
Total	**37**

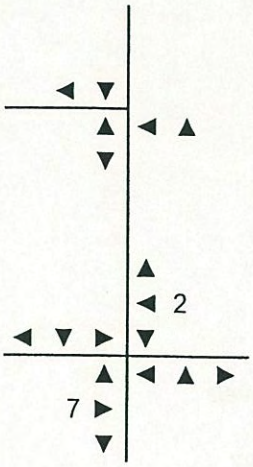
19-35 Race Point Road Residential Development Weekday Evening Peak Hour Traffic Volumes



Dwelling Units	**35**
Trip Equation	**T = 0.41(X) + 19.23**
Trip Split	**50% Entering**
	50% Exiting

Trips	
In	**17**
Out	**17**
Total	**34**

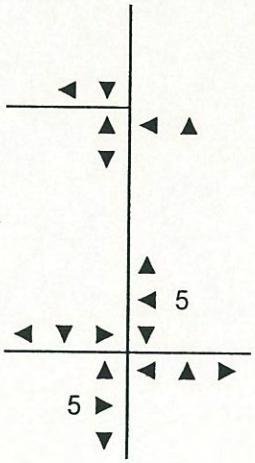
Shanks Painter Road Residential Development Weekday Morning Peak Hour Traffic Volumes



Dwelling Units	**40**
Trip Equation	**T = 0.49(X) + 3.73**
Trip Split	**20% Entering**
	80% Exiting

Trips	
In	**5**
Out	**18**
Total	**23**

Shanks Painter Road Residential Development Weekday Midday Peak Hour Traffic Volumes

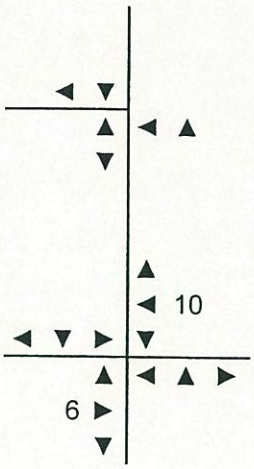


Dwelling Units	**40**
Trip Equation*	**T = 6.01(X) + 150.35**
Trip Split*	**50% Entering**
	50% Exiting

Trips	
In	**12**
Out	**12**
Total	**24**

**Average Daily Trip Rate used and scaled to midday levels*
Note: Midday 'K' factor approximately 6% (737/12,641)
Count volume west of Conwell Street (from TMCs) = 737
CCC Count Station AADT Volume (21017) = 12,641

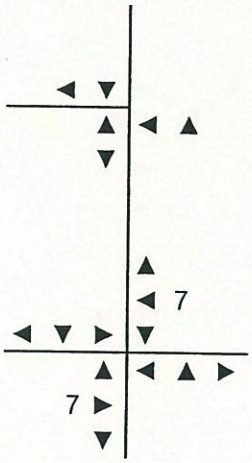
Shanks Painter Road Residential Development Weekday Evening Peak Hour Traffic Volumes



Dwelling Units	**40**
Trip Equation	**T = 0.55(X) + 17.65**
Trip Split	**65% Entering**
	35% Exiting

Trips	
In	**26**
Out	**14**
Total	**40**

Shanks Painter Road Residential Development Weekday Evening Peak Hour Traffic Volumes



Dwelling Units	40
Trip Equation	T = 0.41(X) + 19.23
Trip Split	50% Entering
	50% Exiting

Trips	
In	18
Out	18
Total	36

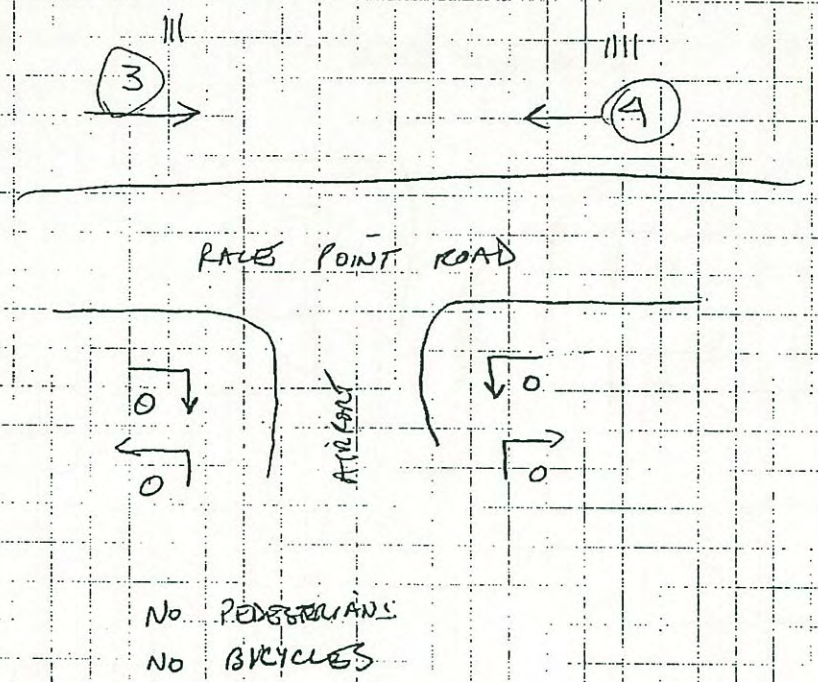
Appendix 2 - Turning Movement Counts 2007

EDWARDS AND KELCEY
CONSULTING ENGINEERS

PROJECT: TURNING COUNTS
SUBJECT: RACE POINT ROAD + AIRPORT DRIVE
COMPUTED BY: MG
CHECKED BY: [illegible]
FILE NO.:
SHEET NO. ____ OF ____
DATE: FRIDAY 8/24/07

7:00 AM – 7:15 AM

7 AUTOS
0 PED
0 AIRPORT

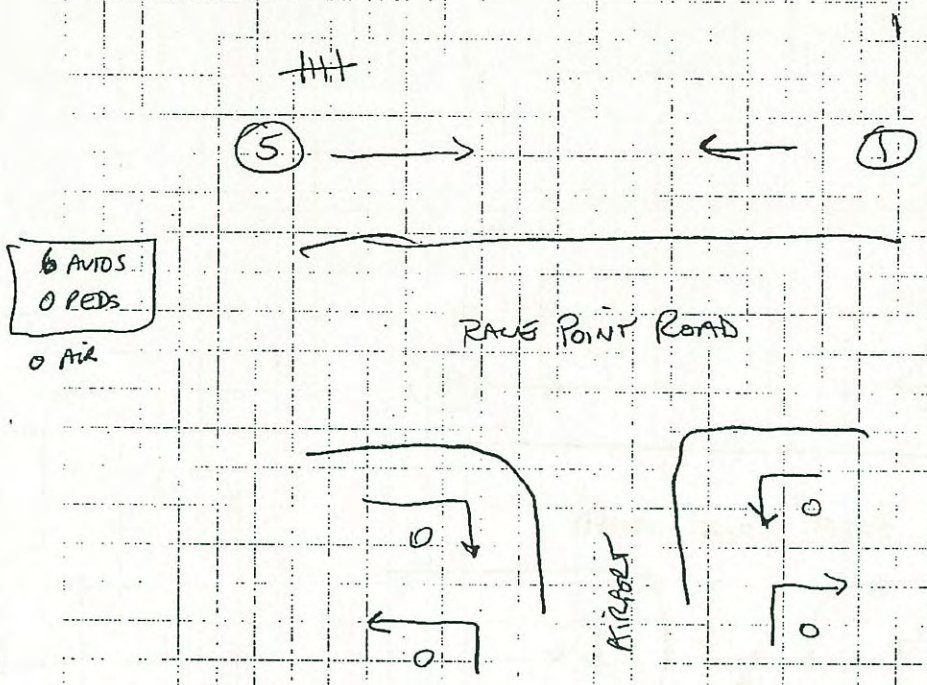


NO PEDESTRIANS
NO BICYCLES

EDWARDS AND KELCEY
CONSULTING ENGINEERS

PROJECT ..... FILE NO. .....
SUBJECT ..... SHEET NO. .....OF .....
COMPUTED BY ..... CHECKED BY ..... DATE .....

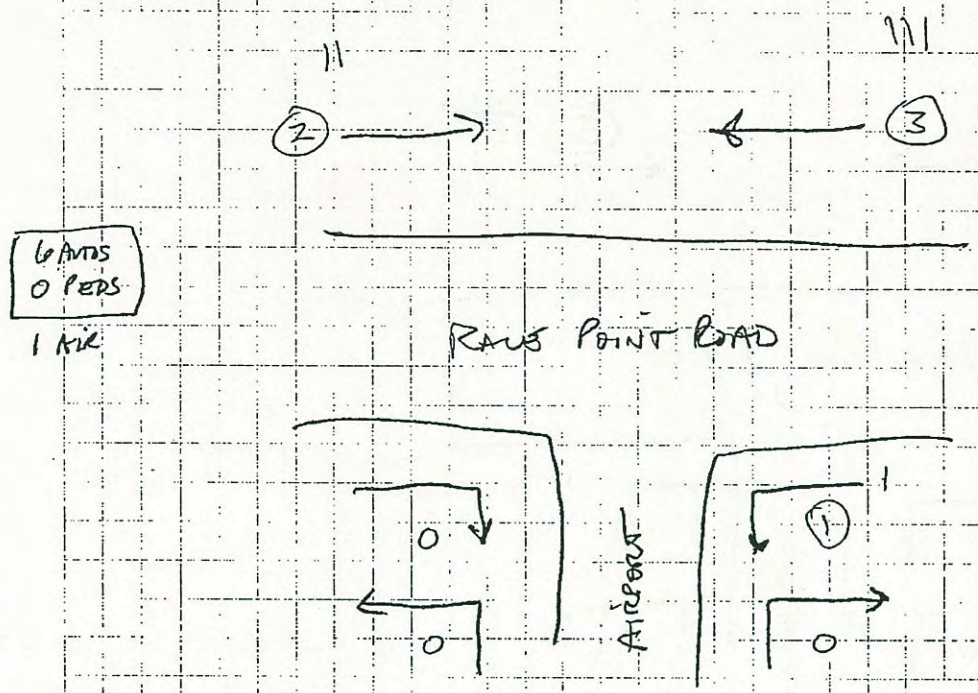
7:15 AM – 7:30 AM



EDWARDS AND KELCEY
CONSULTING ENGINEERS

PROJECT ..... FILE NO. .....
SUBJECT ..... SHEET NO. .....OF .....
COMPUTED BY ..... CHECKED BY ..... DATE .....

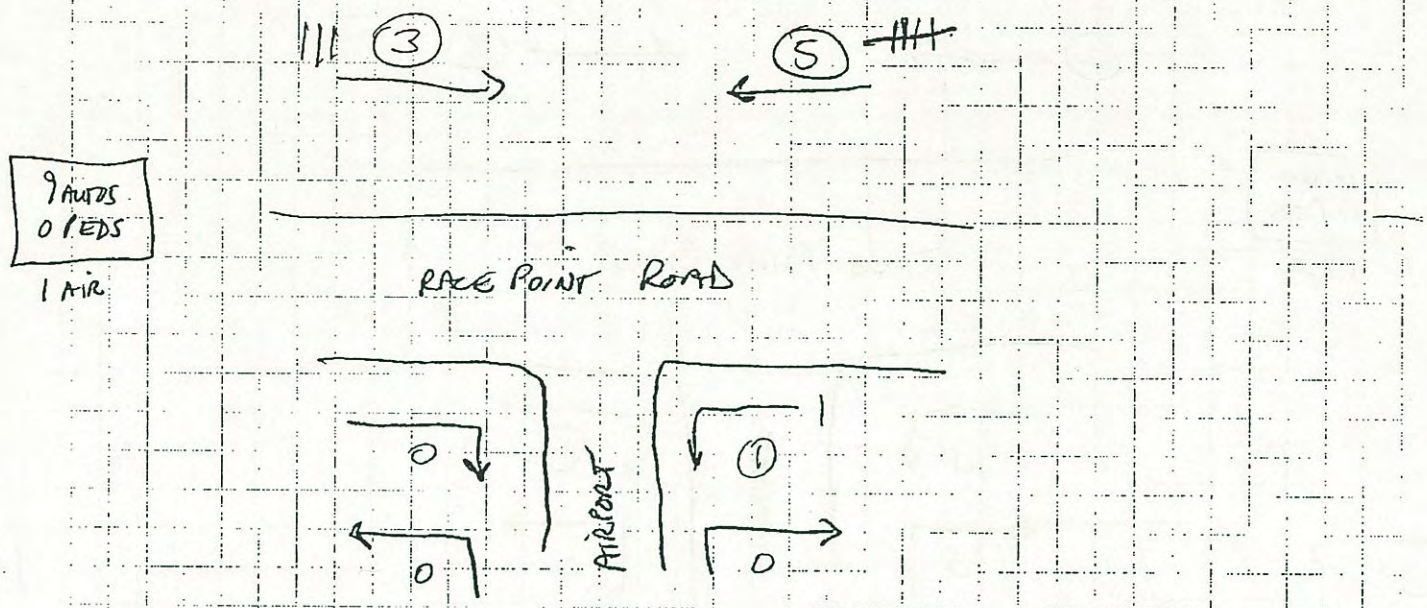
7:30 AM - 7:45 AM



EDWARDS AND KELCEY
CONSULTING ENGINEERS

PROJECT ..... FILE NO. .....
SUBJECT ..... SHEET NO. .....OF .....
COMPUTED BY ..... CHECKED BY ..... DATE .....

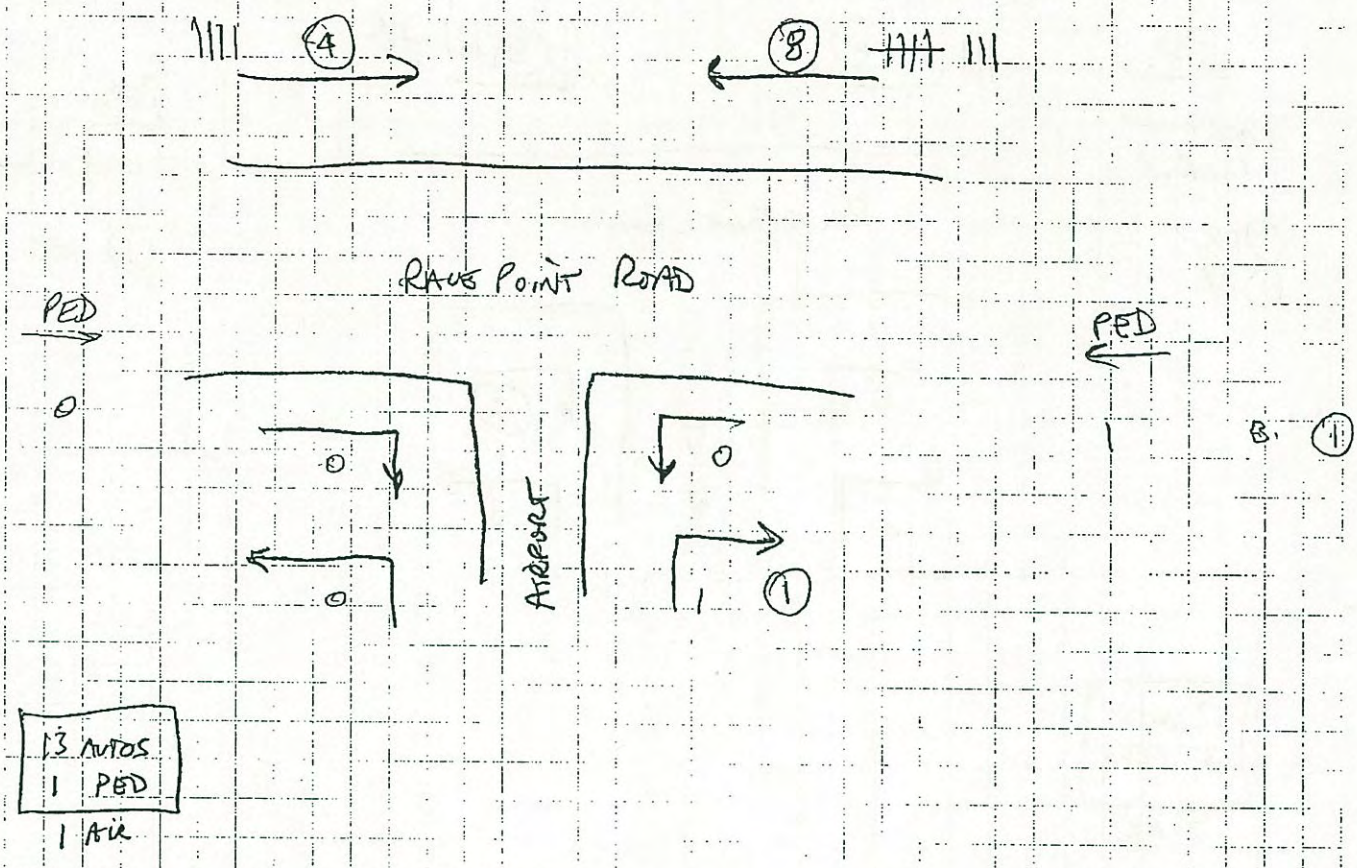
7:45 AM — 8:00 AM



EDWARDS AND KELCEY
CONSULTING ENGINEERS

PROJECT ..... FILE NO. .....
SUBJECT ..... SHEET NO. ..... OF .....
COMPUTED BY ..... CHECKED BY ..... DATE .....

8:00 AM – 8:15 AM

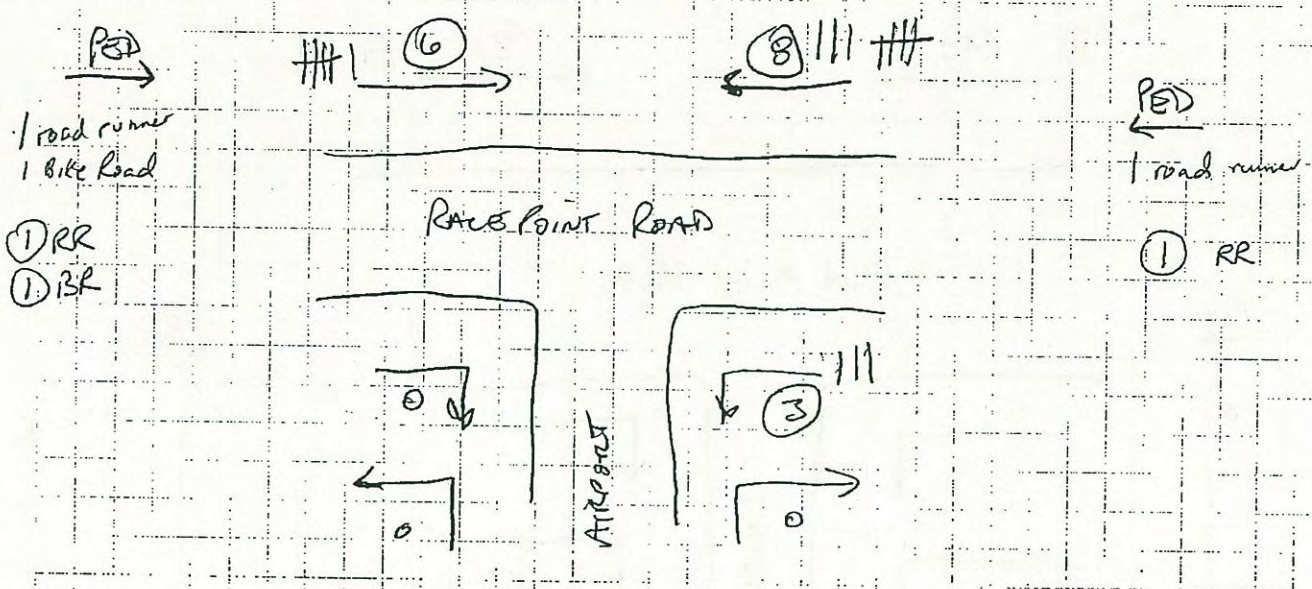


13 AUTOS
1 PED
1 AIR

EDWARDS AND KELCEY
CONSULTING ENGINEERS

PROJECT ..... FILE NO. .....
SUBJECT ..... SHEET NO. ..... OF .....
COMPUTED BY ..... CHECKED BY ..... DATE .....

8:15 AM — 8:30 AM



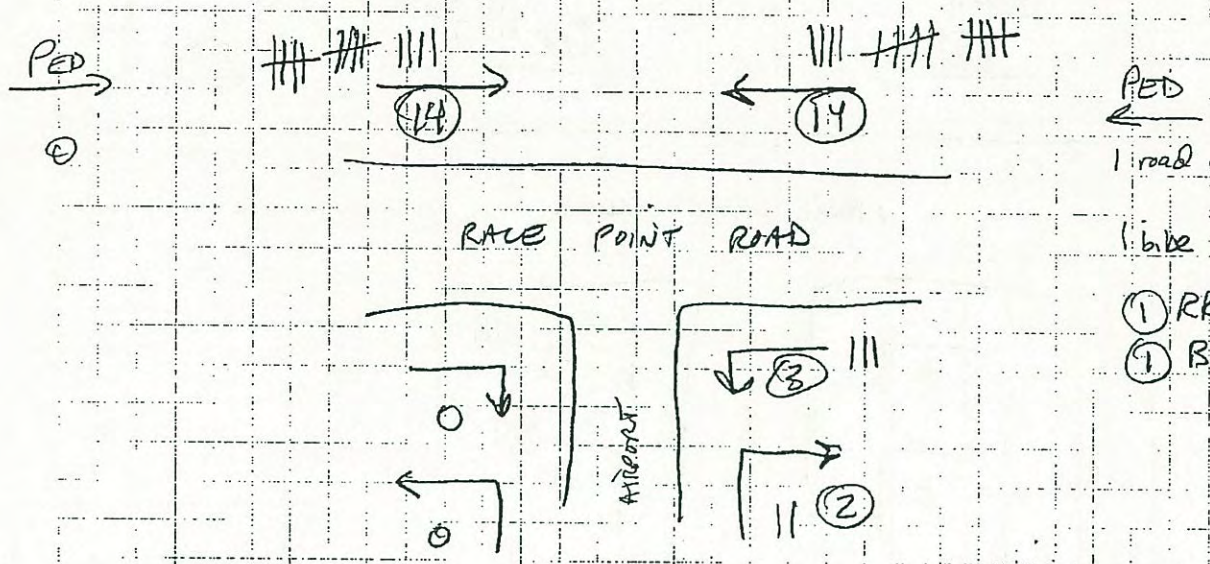
17 AUTOS
3 PEDS

3 Ave

EDWARDS AND KELCEY
CONSULTING ENGINEERS

PROJECT ..... FILE NO. .....
SUBJECT ..... SHEET NO. .....OF .....
COMPUTED BY ..... CHECKED BY ..... DATE .....

8:30 AM — 8:45 AM



1 road walk
1 bike Path
1 RR
1 B

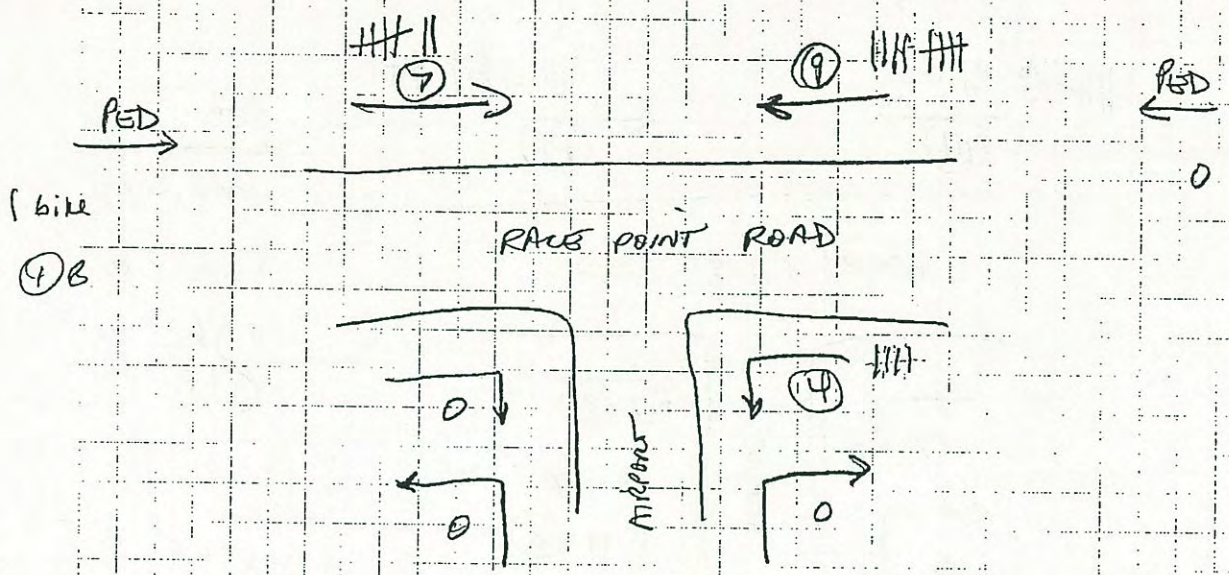
33 AUTOS
2 PEDS

5 AIR

EDWARDS AND KELCEY
CONSULTING ENGINEERS

PROJECT ..... FILE NO. .....
SUBJECT ..... SHEET NO. .....OF .....
COMPUTED BY ..... CHECKED BY ..... DATE .....

8:145 AM – 9:100 AM



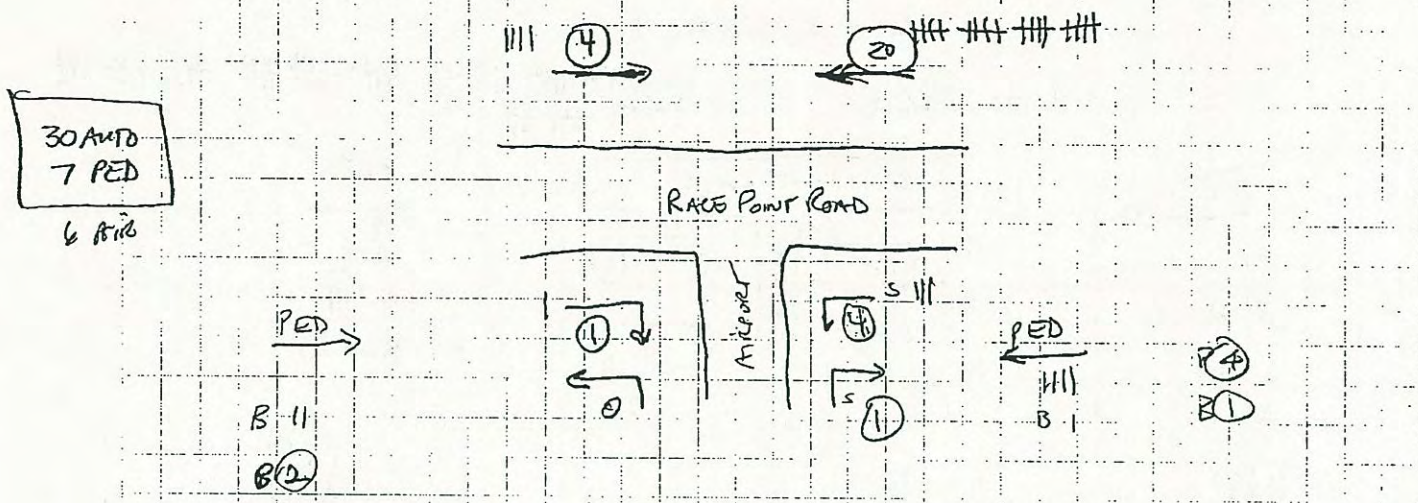
1 bike
4 B

20 AUTOS
1 PED
4 BIK

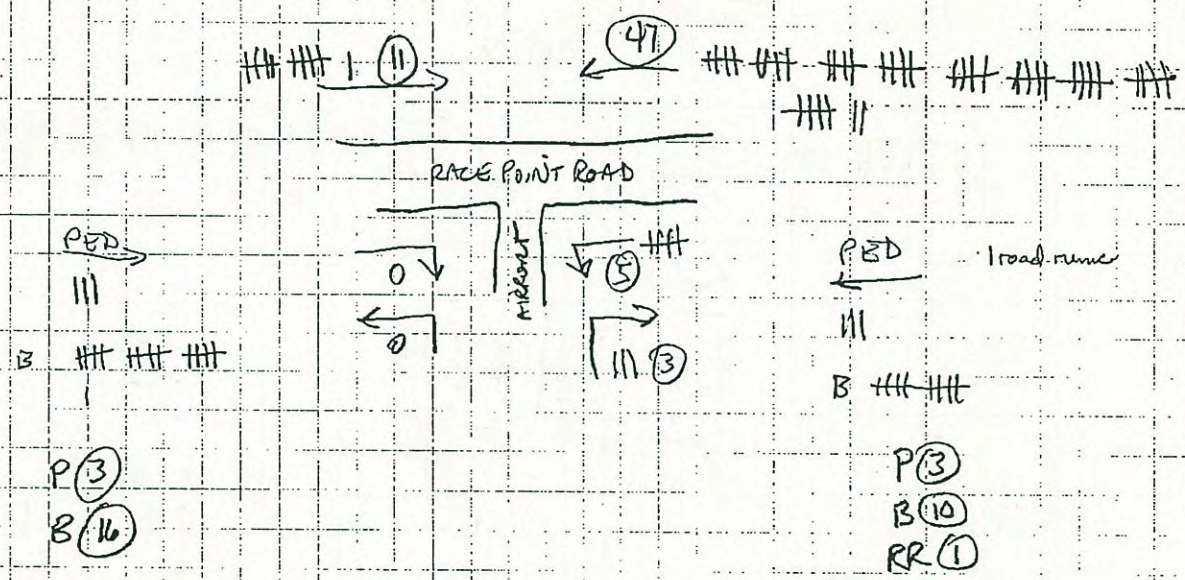
EDWARDS AND KELCEY
CONSULTING ENGINEERS

PROJECT ..... FILE NO. .....
SUBJECT ..... SHEET NO. .....OF .....
COMPUTED BY ..... CHECKED BY ..... DATE .....

11:08 – 11:15 AM



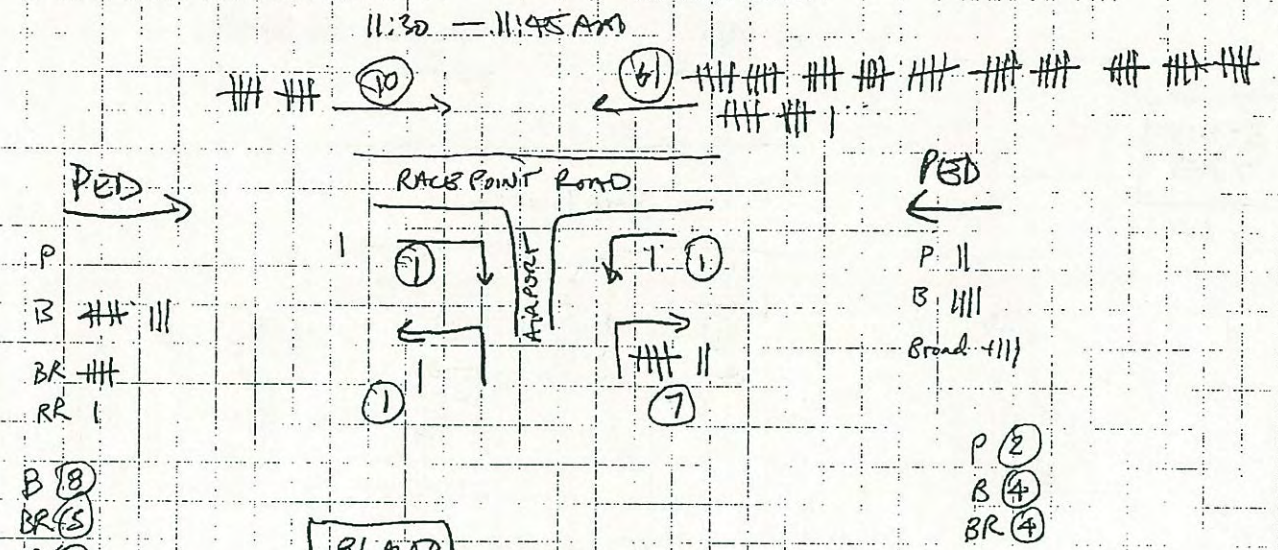
11:15 – 11:30 AM



EDWARDS AND KELCEY
CONSULTING ENGINEERS

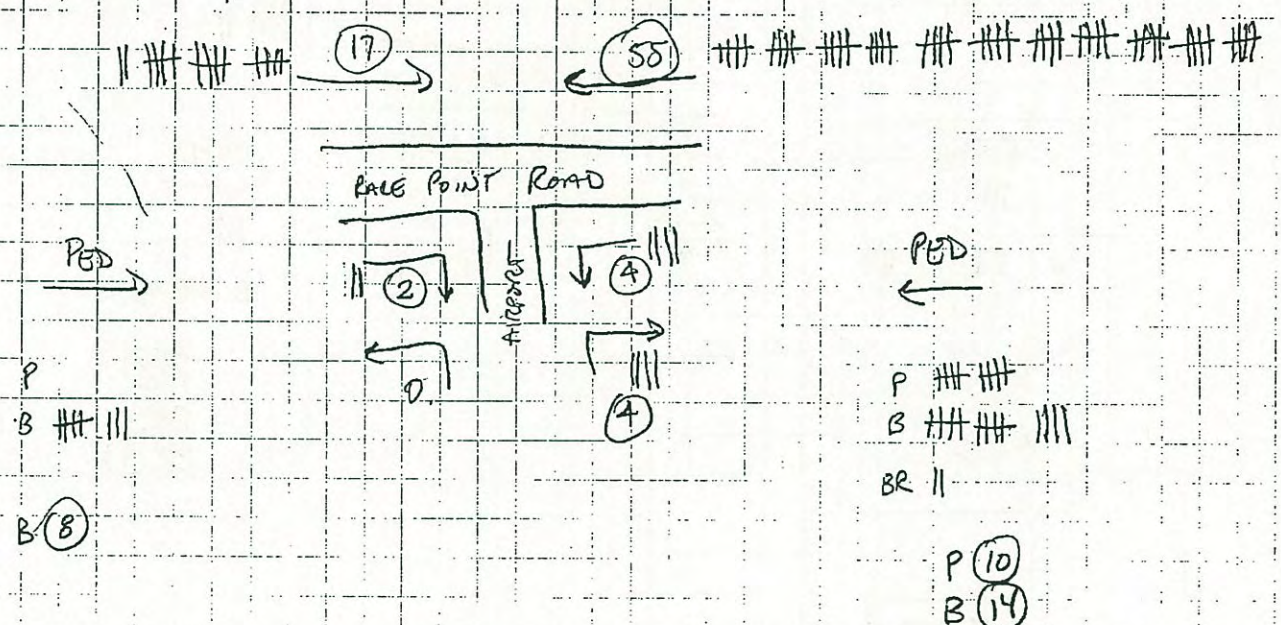
PROJECT ..... FILE NO. .....
SUBJECT ..... SHEET NO. ..... OF .....
COMPUTED BY ..... CHECKED BY ..... DATE .....

11:30 — 11:45 AM



81 AUTO
24 PED
10 AIR

11:45 — 12:00 PM

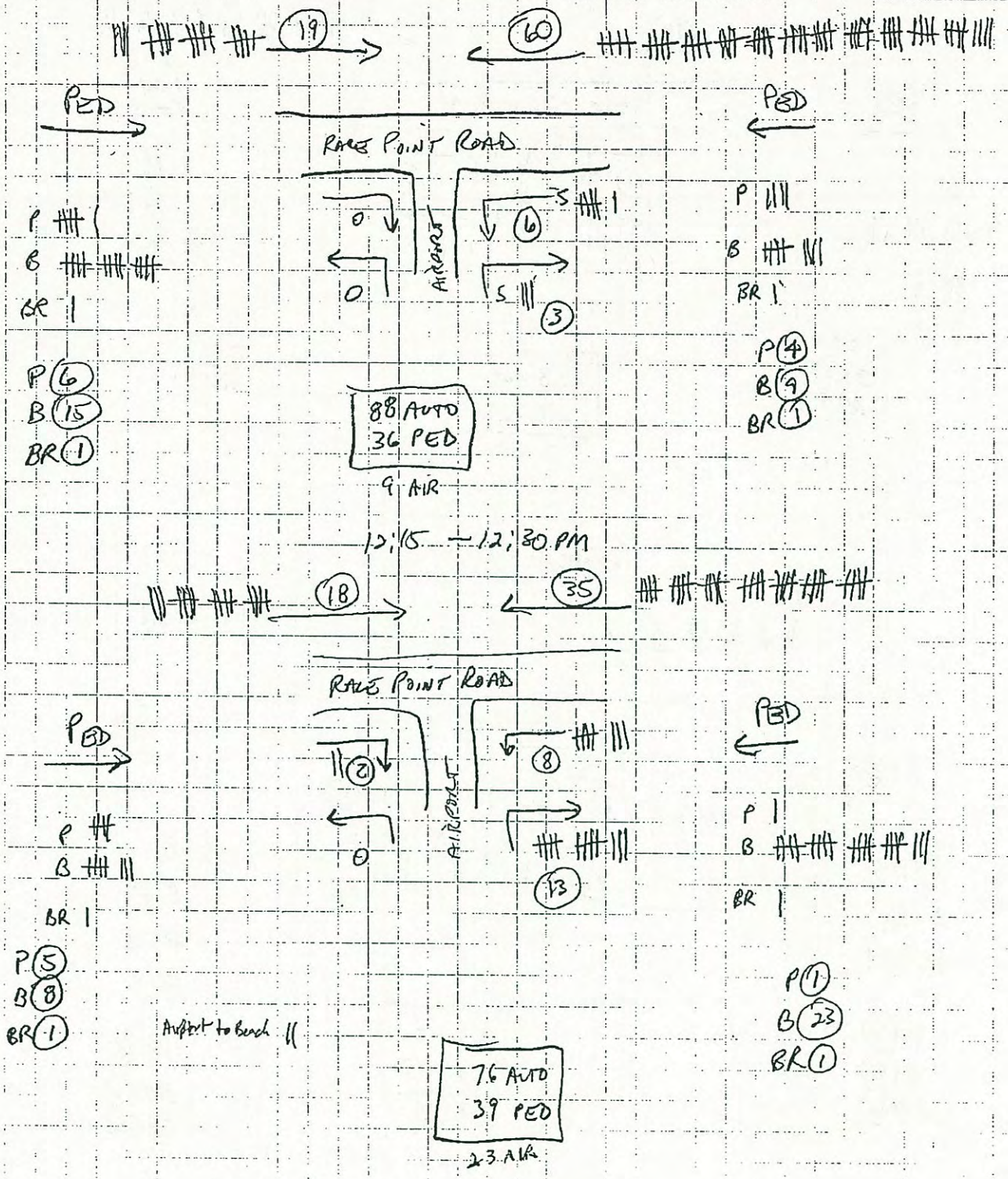


82 AUTO
34 PED
10 AIR

EDWARDS AND KELCEY
CONSULTING ENGINEERS

PROJECT ..... FILE NO. .....
SUBJECT ..... SHEET NO. ..... OF .....
COMPUTED BY ..... CHECKED BY ..... DATE .....

12:00 – 12:15 PM

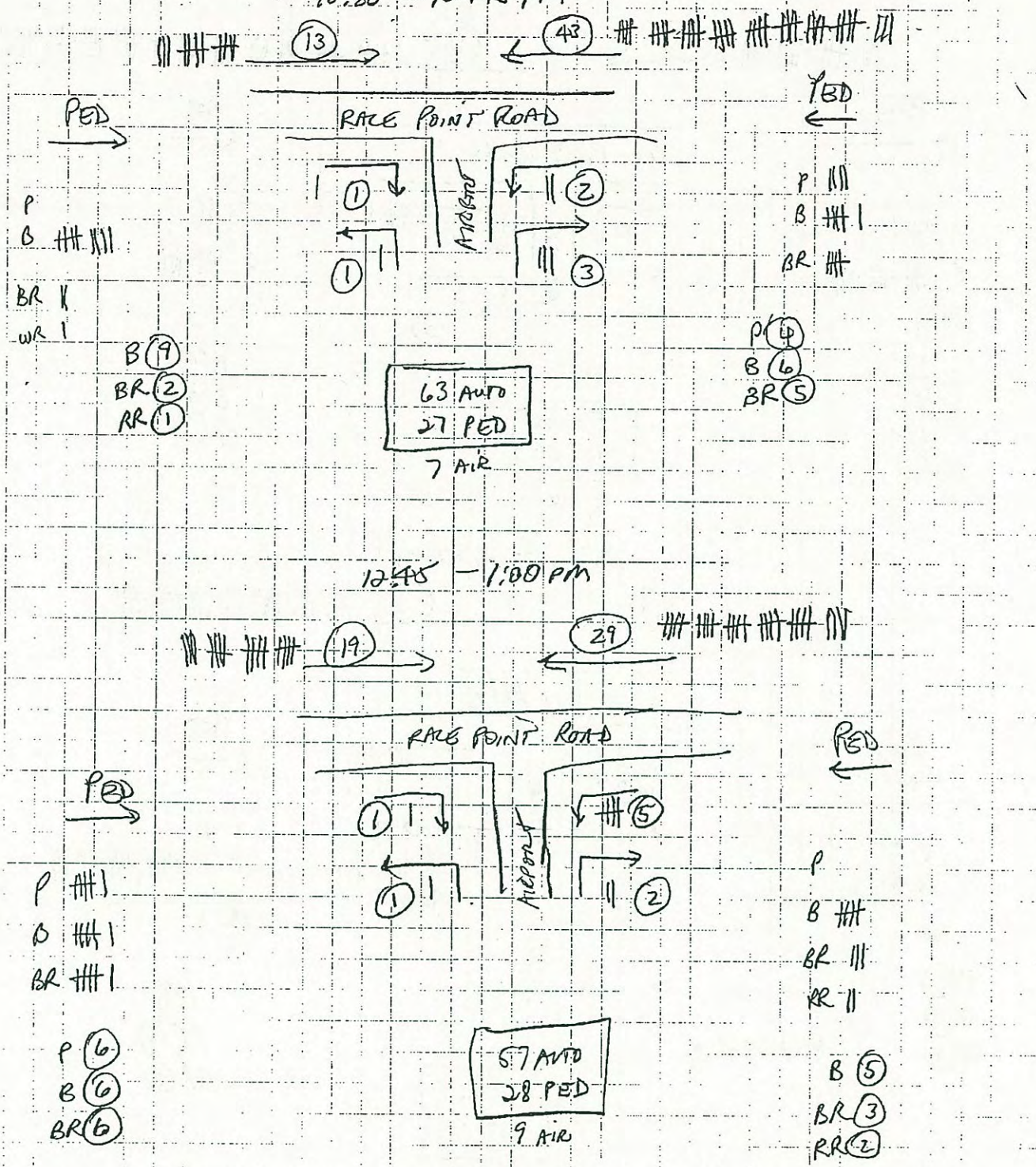


11

EDWARDS AND KELCEY
CONSULTING ENGINEERS

PROJECT ..... FILE NO. .....
SUBJECT ..... SHEET NO. ..... OF .....
COMPUTED BY ..... CHECKED BY ..... DATE .....

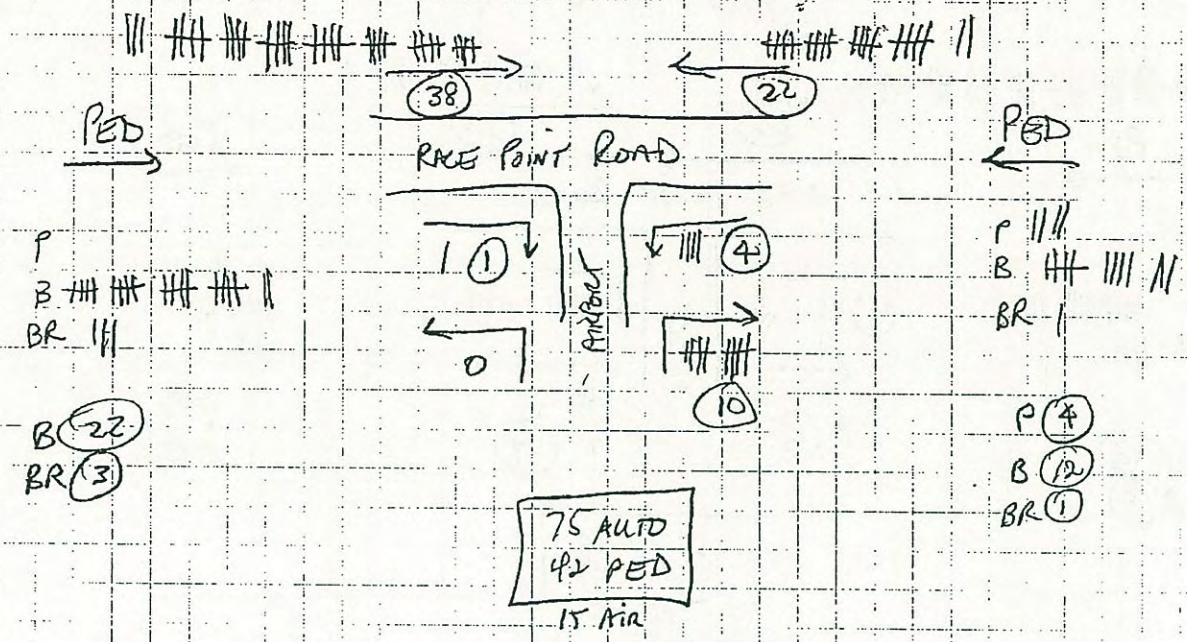
12:30 – 12:45 PM



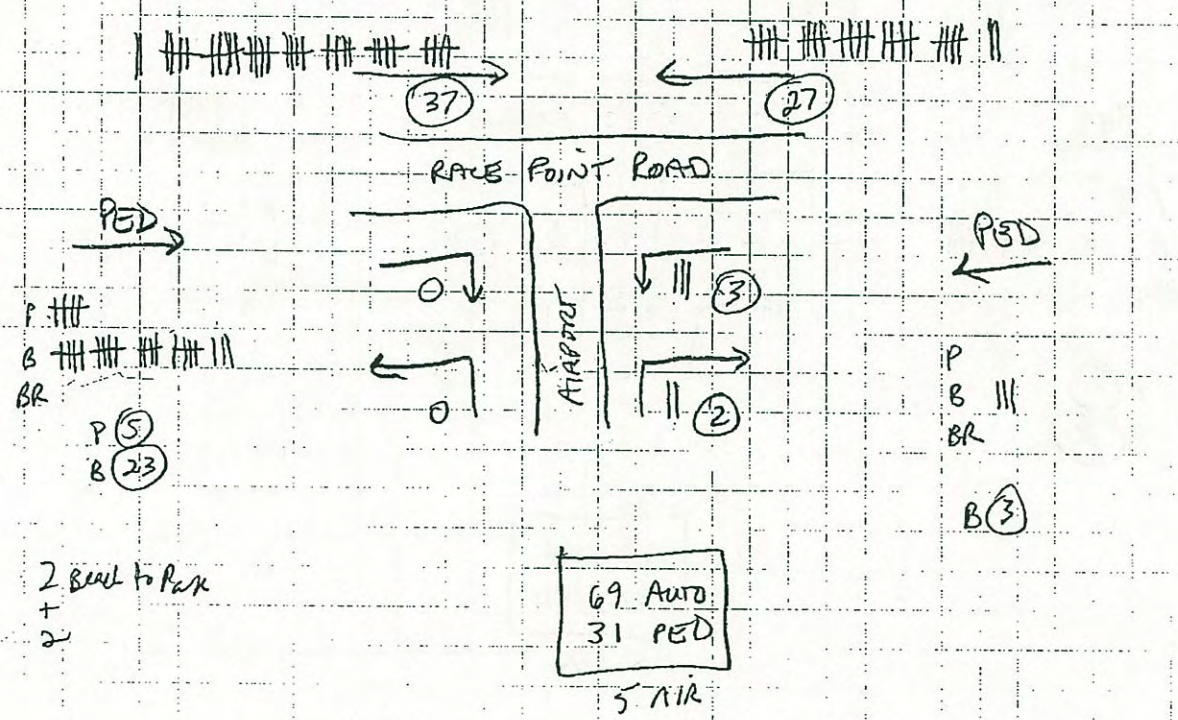
EDWARDS AND KELCEY
CONSULTING ENGINEERS

PROJECT ..... FILE NO. .....
SUBJECT ..... SHEET NO. ..... OF .....
COMPUTED BY ..... CHECKED BY ..... DATE .....

4:00 – 4:15 PM



4:15 – 4:30 PM



EDWARDS AND KELCEY
CONSULTING ENGINEERS

PROJECT ..... FILE NO. .....
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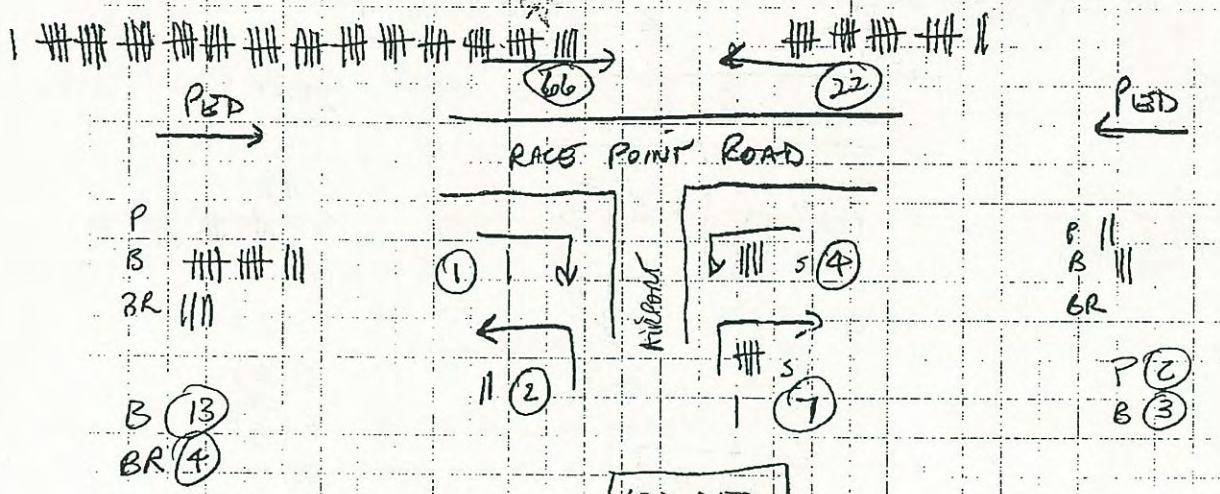
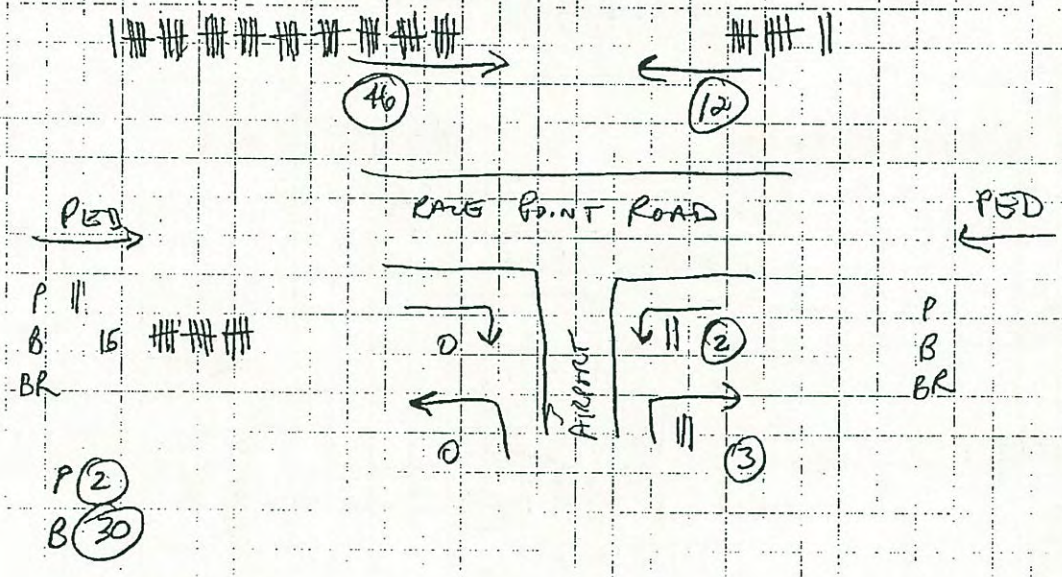


102 AUTO
32 PED
14 AIR

4:45 – 5:00 PM



63 AUTO
32 PED
5 AIR

EDWARDS AND KELCEY
CONSULTING ENGINEERS

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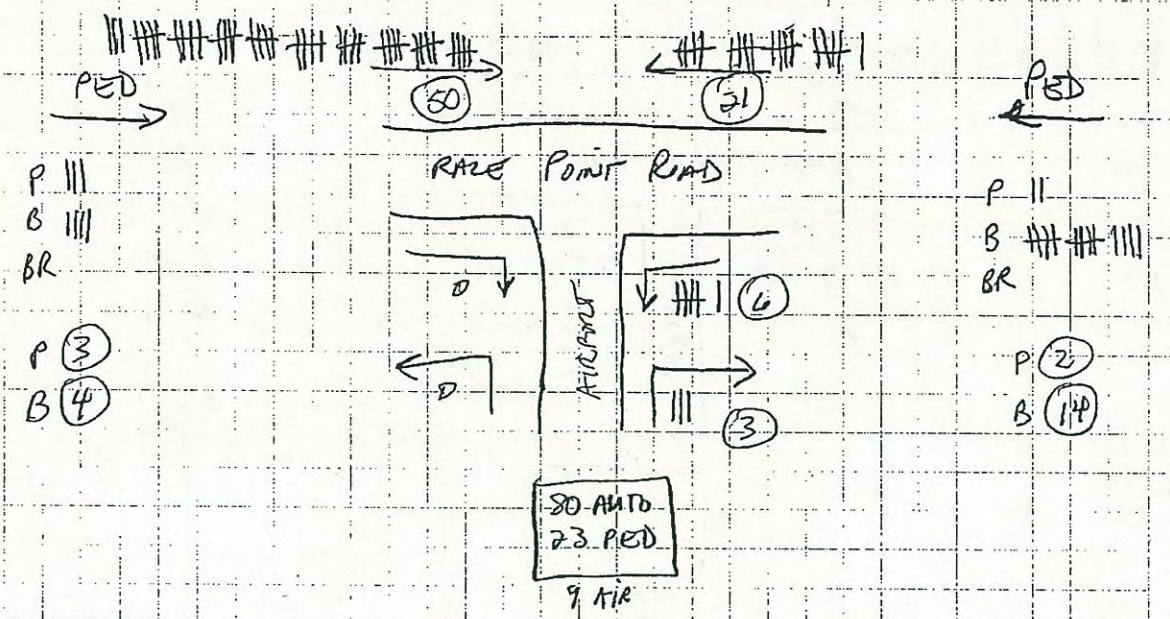

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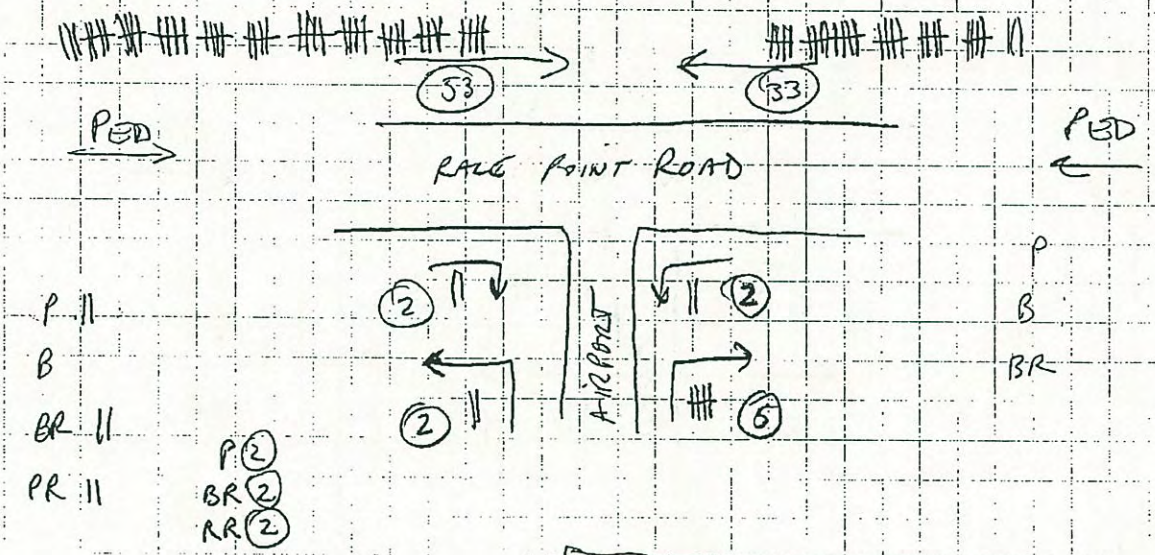

14
Bend to Airport

EDWARDS AND KELCEY
CONSULTING ENGINEERS

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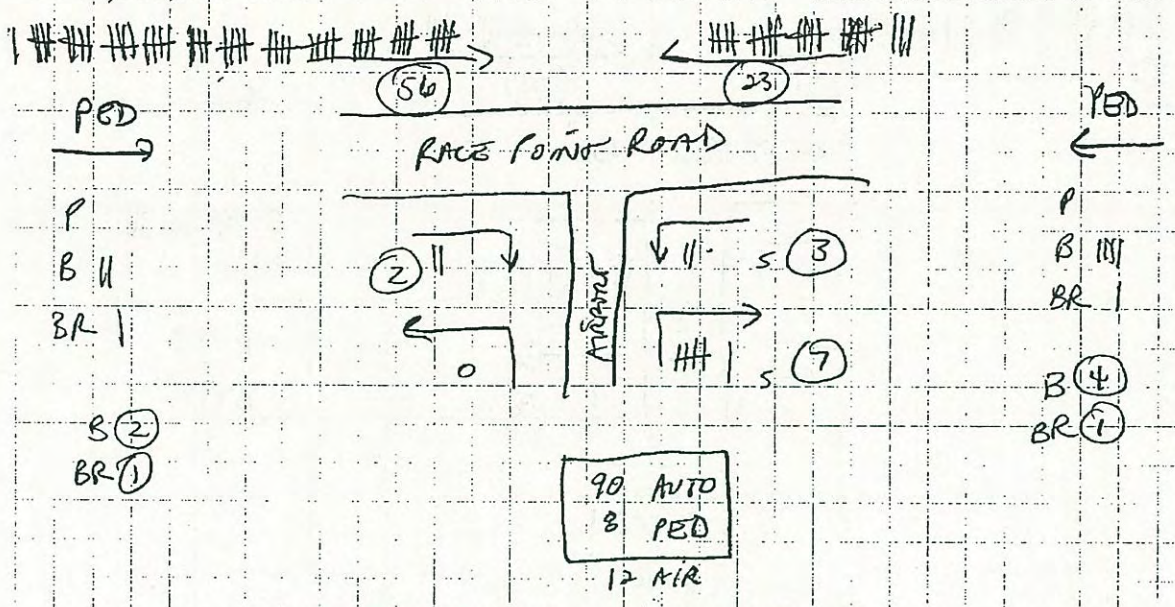

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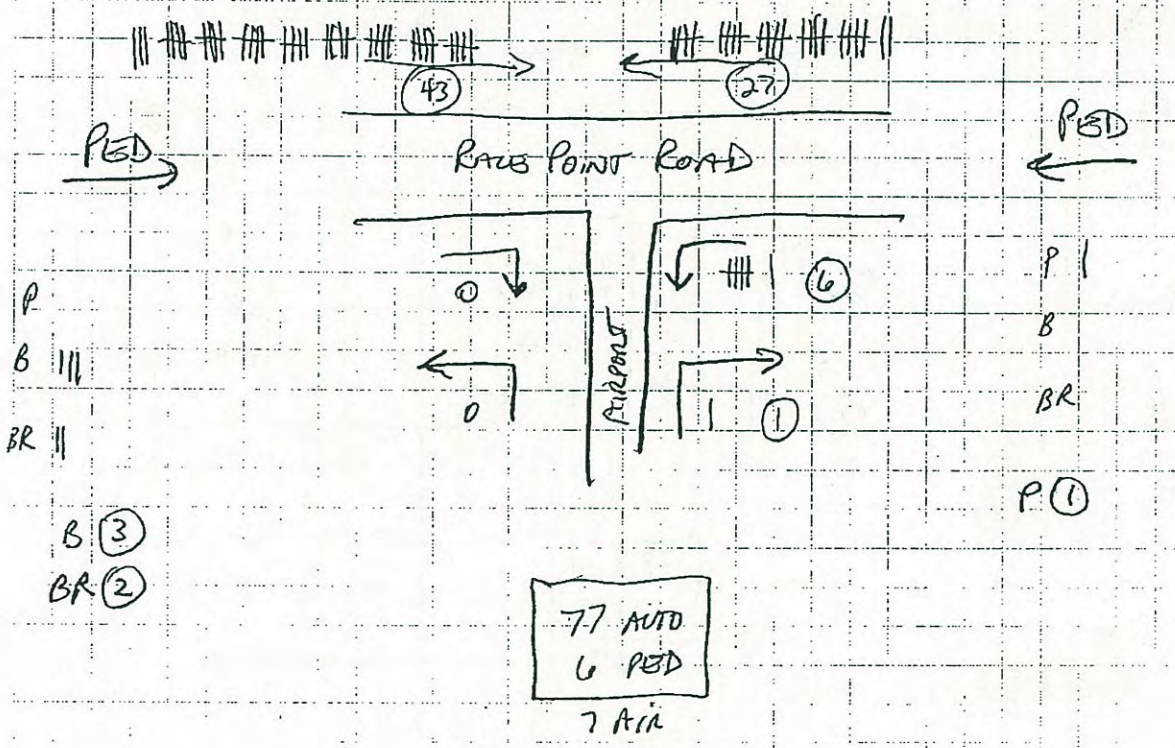


Appendix 3 - Network Sheets

Edwards and Kelcey

343 Congress Street
Boston MA, 02210

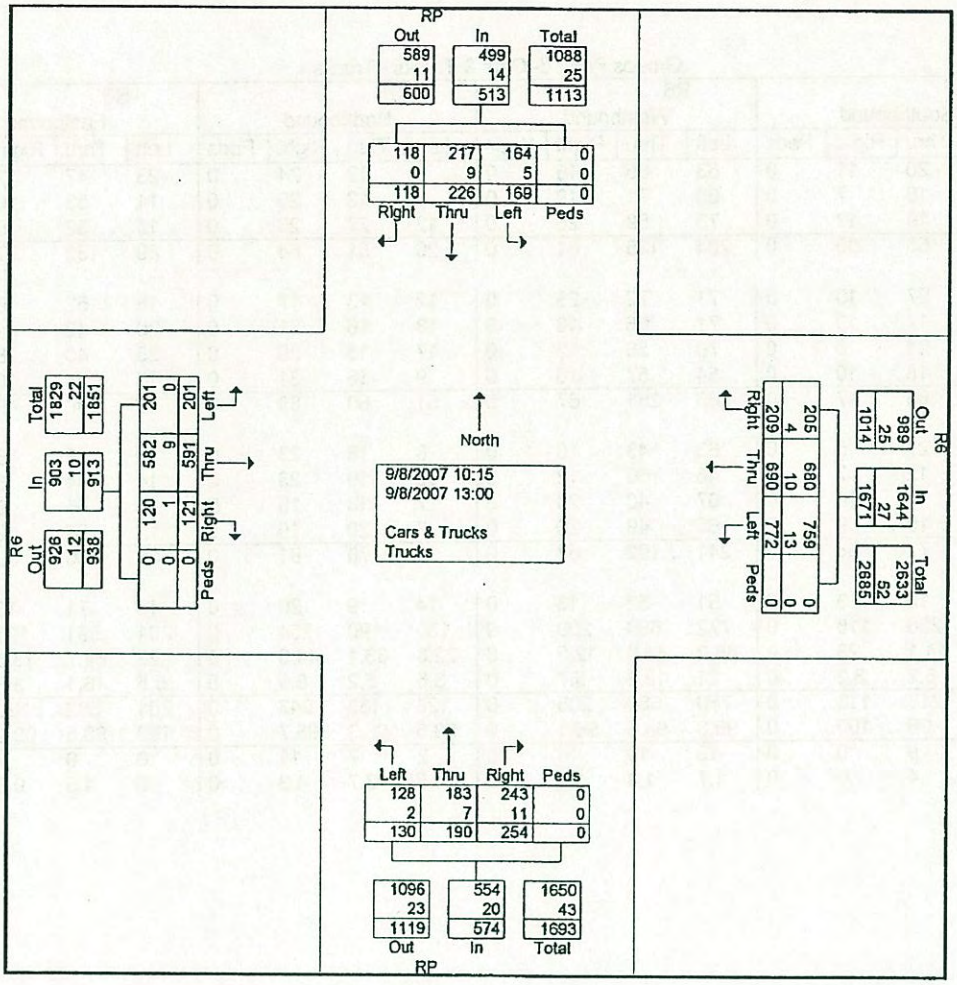
File Name : rte6_conwell_sat
Site Code : 00000000
Start Date : 9/8/2007
Page No : 1

Groups Printed- Cars & Trucks - Trucks

	RP Southbound				R6 Westbound				RP Northbound				R6 Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
10:15	15	20	11	0	63	65	16	0	9	12	24	0	23	47	12	0	317
10:30	8	16	7	0	68	71	19	0	5	12	20	0	11	53	10	0	300
10:45	9	19	12	0	73	59	26	0	12	27	20	0	15	32	5	0	309
Total	32	55	30	0	204	195	61	0	26	51	64	0	49	132	27	0	926
11:00	9	27	10	0	71	72	23	0	12	13	17	0	18	52	6	0	330
11:15	10	17	19	0	71	66	16	0	13	16	21	0	20	42	11	0	322
11:30	17	21	8	0	70	56	12	0	17	15	20	0	25	40	18	0	319
11:45	17	18	10	0	54	57	16	0	9	16	31	0	16	54	10	0	308
Total	53	83	47	0	266	251	67	0	51	60	89	0	79	188	45	0	1279
12:00	11	27	8	0	63	43	16	0	8	18	23	0	16	46	6	0	285
12:15	16	12	7	0	46	60	12	0	16	19	23	0	14	44	6	0	275
12:30	16	14	14	0	67	40	20	0	7	13	16	0	13	55	9	0	284
12:45	16	19	9	0	65	49	20	0	8	20	19	0	12	55	12	0	304
Total	59	72	38	0	241	192	68	0	39	70	81	0	55	200	33	0	1148
13:00	25	16	3	0	61	52	13	0	14	9	20	0	18	71	16	0	318
Grand Total	169	226	118	0	772	690	209	0	130	190	254	0	201	591	121	0	3671
Apprch %	32.9	44.1	23	0	46.2	41.3	12.5	0	22.6	33.1	44.3	0	22	64.7	13.3	0	
Total %	4.6	6.2	3.2	0	21	18.8	5.7	0	3.5	5.2	6.9	0	5.5	16.1	3.3	0	
Cars & Trucks	164	217	118	0	759	680	205	0	128	183	243	0	201	582	120	0	3600
% Cars & Trucks	97	96	100	0	98.3	98.6	98.1	0	98.5	96.3	95.7	0	100	98.5	99.2	0	98.1
Trucks	5	9	0	0	13	10	4	0	2	7	11	0	0	9	1	0	71
% Trucks	3	4	0	0	1.7	1.4	1.9	0	1.5	3.7	4.3	0	0	1.5	0.8	0	1.9

Edwards and Kelcey
343 Congress Street
Boston MA, 02210

File Name : rte6_conwell_sat
Site Code : 00000000
Start Date : 9/8/2007
Page No : 2

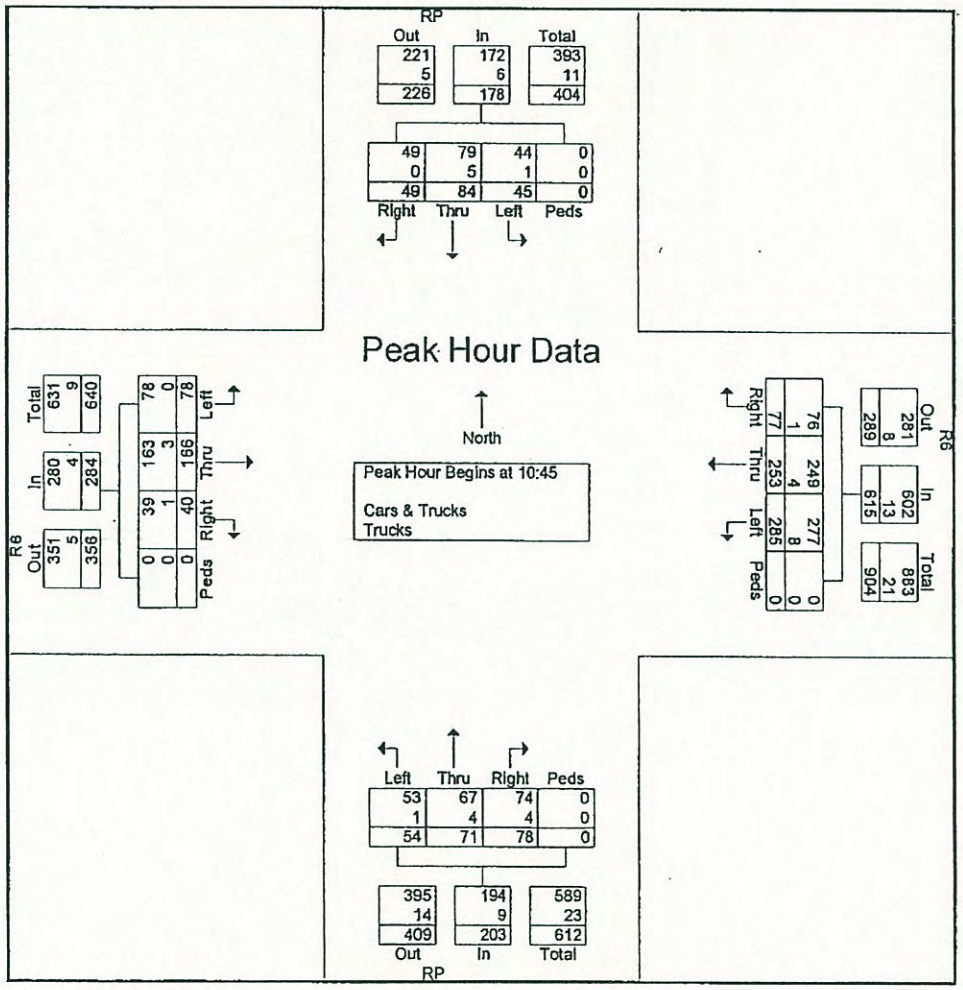


Edwards and Kelcey

343 Congress Street
Boston MA, 02210

File Name : rte6_conwell_sat
Site Code : 00000000
Start Date : 9/8/2007
Page No : 3

	RP Southbound					R6 Westbound					RP Northbound					R6 Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 10:15 to 13:00 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 10:45																					
10:45	9	19	12	0	40	73	59	26	0	158	12	27	20	0	59	15	32	5	0	52	309
11:00	9	27	10	0	46	71	72	23	0	166	12	13	17	0	42	18	52	6	0	76	330
11:15	10	17	19	0	46	71	66	16	0	153	13	16	21	0	50	20	42	11	0	73	322
11:30	17	21	8	0	46	70	56	12	0	138	17	15	20	0	52	25	40	18	0	83	319
Total Volume	45	84	49	0	178	285	253	77	0	615	54	71	78	0	203	78	166	40	0	284	1280
% App. Total	25.3	47.2	27.5	0		46.3	41.1	12.5	0		26.6	35	38.4	0		27.5	58.5	14.1	0		
PHF	.662	.778	.645	.000	.967	.976	.878	.740	.000	.926	.794	.657	.929	.000	.860	.780	.798	.556	.000	.855	.970
Cars & Trucks	44	79	49	0	172	277	249	76	0	602	53	67	74	0	194	78	163	39	0	280	1248
% Cars & Trucks	97.8	94.0	100	0	96.6	97.2	98.4	98.7	0	97.9	98.1	94.4	94.9	0	95.6	100	98.2	97.5	0	98.6	97.5
Trucks	1	5	0	0	6	8	4	1	0	13	1	4	4	0	9	0	3	1	0	4	32
% Trucks	2.2	6.0	0	0	3.4	2.8	1.6	1.3	0	2.1	1.9	5.6	5.1	0	4.4	0	1.8	2.5	0	1.4	2.5



Appendix 4 - Crash Data Calculations

MassHighway

CRASH RATE WORKSHEET

CITY/TOWN : Provincetown COUNT DATE : 2007

DISTRICT : 5 UNSIGNALIZED : [ ] SIGNALIZED : [X]

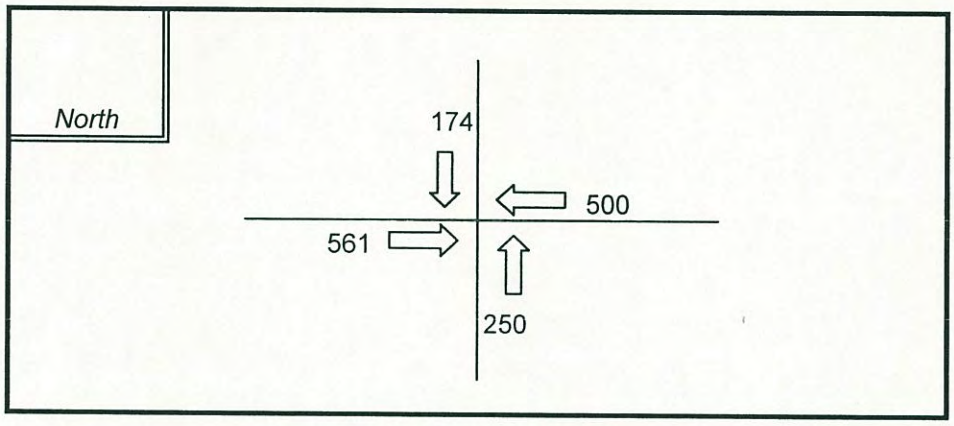
~ INTERSECTION DATA ~

MAJOR STREET : Route 6

MINOR STREET(S) : Race Point Road

Conwell Street

INTERSECTION DIAGRAM (Label Approaches)



Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/**PM**) :	250	174	561	500		1,485

" K " FACTOR : **0.090** APPROACH ADT : **16,500** **ADT** = TOTAL VOL/"K" FACT.

TOTAL # OF CRASHES : 6 # OF YEARS : 3 AVERAGE # OF CRASHES (**A**) : **2.00**

CRASH RATE CALCULATION : **0.33**

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(ADT * 365)}$$

Comments :

Appendix 5 - March 26, 2008 Memo

Technical Memorandum

Date: March 26, 2008

To: Project File

Attn: Michael Garrity

From: Andrew J. Arseneault

Subject: Trip Generation Methodology
Project Study Area
Provincetown Municipal Airport (CIP)

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1. BACKGROUND

A traffic study (*Traffic Operation Report and Parking Analysis*, November 2006) was prepared to support preparation of the Draft Environmental Impact Report (DEIR) for the Provincetown Airport Capital Improvement Project (CIP). The study was prepared in response to the Certificate on the Environmental Notification Form (ENF), comment letters, and the MEPA traffic guidelines. The MEPA Certificates for the ENF and the DEIR (EOEEA No. 13789) scoped the inclusion of two intersections: Route 6 at Conwell Street and Race Point Road, and Race Point Road at Airport Drive. Comments were received on the DEIR from MEPA, the CCC and other agencies. Some of the comments questioned the trip generation methodology used to generate the anticipated motor vehicles accessing the site and subsequently the impact of the generated trips on the study area. This memorandum seeks to offer a recommendation on both of these outstanding issues. Additionally, the traffic operations and parking analysis study will be revised for the Final EIR in response to the MEPA Certificate and other comments on the DEIR.

The CIP project will also be reviewed by the Cape Cod Commission (CCC) as a Development of Regional Impact (DRI). As part of the review process, a pre-application meeting for the project was held with several CCC staff on August 19, 2007. Several issues related to the traffic impacts for the CIP were discussed at that meeting, in addition to other environmental issues. After that meeting a follow-up meeting specific to traffic was held with Robert Munford and B. Clay Schofield, CCC staff traffic specialists, on August 27, 2007 to further discuss the two issues of trip generation and study area. It is recommended that this memo be forwarded to the CCC staff for their review and comment prior to submission of the FEIR and DRI application.

The traffic study prepared for the DEIR included trip generation based on the standard methodology published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Handbook*, 7th Edition. In addition to investigating the ITE methodology, the CCC transportation staff suggested using an alternative trip generation methodology, similar to the one used for the Barnstable Municipal Airport DRI. These two methods are compared in this memo and a recommendation is made.

2. TRIP GENERATION

ITE Trip Generation

The standard method of generating projected traffic volumes for transportation projects is from the Institute of Traffic Engineers (ITE) Trip Generation Handbook 7th Edition. The ITE Trip Generation Handbook is based on several field investigations of various land uses (i.e. Commercial Airport, General Aviation Airport, waterport/marine terminal, truck terminal, park-and-ride lot with bus service, light rail transit station with parking). It provides a statistical breakdown of the motor vehicle trips generated by a project based on various independent factors (i.e. employees, commercial flights, motor vehicle trips versus based aircraft, motor vehicle trips versus scheduled flights). The land use deemed most appropriate for the CIP project at the Airport is Land Use Code (LUC) 22, General Aviation Airport. Although the project meets many of the criteria for a commercial airport designation it functions more appropriately as a GA airport in terms of traffic. The trip generation calculation worksheets, as well as the applicable Demand Forecasts Tables of the Provincetown Municipal Airport 2005 Master Plan, are included in the Appendix for this memorandum.

The standard ITE method estimates a relatively small increase in motor vehicle trips, as shown in Table 1a and 1b. Both the independent variables of trips versus based aircraft, and trips versus scheduled flights have been analyzed and are shown on Tables 1a and 1b respectively. Trip generation calculations were performed for all periods available from the ITE method. Saturday periods are not included with the ITE method.

Table 1a Trip Generation Versus Based Aircraft Using ITE Method

	(A) Trip Generation Rate[1]	(B) Existing Based Aircraft[2]	(C=BxA) Calculated Existing Airport Generated Trips[3]	(D) Projected Based Aircraft[2]	(E=DxA) Projected Airport Generated Trips[3]	**(F=E–C) Trip Increase**	**(G=F/C) Percentage of Trip Generation Increase**
Weekday Morning Peak Hour	0.24	6	1	7	2	**1**	***100%***
Entering	*(83%)*		*1*		*2*	***1***	***100%***
Exiting	*(17%)*		*0*		*0*	***0***	***0%***
Weekday Evening Peak Hour	0.37	6	2	7	3	**1**	***50%***
Entering	*(45%)*		*1*		*1*	***0***	***0%***
Exiting	*(55%)*		*1*		*2*	***1***	***100%***

[1]Based on ITE LUC 22, General Aviation Airport, vs. Based Aircraft.
[2]Based on the Demand Forecasts Section of the Provincetown Municipal Airport 2005 Master Plan.
[3]Based on ITE Average Trip Generation Rate.

Table 1b Trip Generation Versus Scheduled Flights Using ITE Method							
	(A) Trip Generation Rate[1]	(B) Existing Scheduled Flights[2]	(C=BxA) Calculated Existing Airport Generated Trips[3]	(D) Projected Scheduled Flights[2]	(E=DxA) Projected Airport Generated Trips[3]	**(F=E-C) Trip Increase**	**(G=F/C) Percentage of Trip Generation Increase**
Weekday Morning Peak Hour	0.24	40	10	44	11	**1**	***10.0%***
Entering	*(83%)[4]*		*8*		*9*	***1***	***12.5%***
Exiting	*(17%)[4]*		*2*		*2*	***0***	***0.0%***
Weekday Evening Peak Hour	0.30	40	12	44	13	**1**	***8.3%***
Entering	*(45%)[4]*		*6*		*6*	***0***	***0.0%***
Exiting	*(55%)[4]*		*6*		*7*	***1***	***16.7%***
Saturday Midday Peak Hour	0.20	40	8	44	9	**1**	***12.5%***
Entering	*(50%)[4]*		*4*		*5*	***1***	***25.0%***
Exiting	*(50%)[4]*		*4*		*4*	***0***	***0.0%***

[1]Based on ITE LUC 22, General Aviation Airport, vs. Average Flights per Day.
[2]Based on the Demand Forecasts Section of the 2005 Airport Master Plan.
[3]Based on ITE Average Trip Generation Rate.
[4]No value provided, split assumed based on other Independent Variables for LUC 22.

Empirical Trip Generation

An alternative methodology was suggested by the CCC at the August 27, 2007 meeting which determines a trip generation rate based on the existing number of passengers (as reported by Cape Air and included in the 2005 Master Plan). This trip rate would then be applied to the 2024 forecasted number of passengers (as stated in the 2005 Master Plan). This method of determining trip generation is based on the method that the CCC accepted in the Barnstable Municipal Airport DRI.

Presently, 141 passengers use the Provincetown Airport on an average peak weekday. Traffic counts were taken at the site driveway and indicate that 13 vehicles access the site (10 enter, 3 exit) during the weekday morning peak period, 52 vehicles access the airport during the weekday midday peak period (24 enter, 28 exit), 39 access the airport during the weekday evening peak period (21 enter, 18 exit) and 41 access the airport during the Saturday midday peak period (21 enter, 20 exit). Projecting these volumes based on the anticipated future passenger count results in motor vehicle trip increases ranging from 2 to 8 vehicles during the peak periods. The analysis results are summarized in Table 2.

Table 2 Trip Generation Using Empirical Method							
	(A) Existing Number of Daily Passengers[1]	(B) Existing Airport Generated Trips[2]	(C=A/B) Trip Generation Rate	(D) Projected Number of Daily Passengers[1]	(E=DxC) Projected Airport Generated Trips	**(F=E-B) Trip Increase**	**(G=F/B) Percentage of Trip Generation Increase**
Weekday Morning Peak Hour	141	13	0.09	162	15	**2**	***15.4%***
Entering		*10*			*12*	***2***	***20.0%***
Exiting		*3*			*3*	***0***	***0.0%***
Weekday Midday Peak Hour	141	52	0.37	162	60	**8**	***15.4%***
Entering		*24*			*28*	***4***	***16.7%***
Exiting		*28*			*32*	***4***	***14.3%***
Weekday Evening Peak Hour	141	39	0.28	162	45	**6**	***15.4%***
Entering		*21*			*24*	***3***	***14.3%***
Exiting		*18*			*21*	***3***	***16.7%***
Saturday Midday Peak Hour	141	41	0.29	162	47	**6**	***14.6%***
Entering		*21*			*24*	***3***	***14.3%***
Exiting		*20*			*23*	***3***	***15.0%***

[1]Based on the Demand Forecasts Section of the 2005 Airport Master Plan.
[2]As observed in August 2007.

Trip Generation Summary and Recommendations

Of the two different methods of determining the projects impact on trip generation, the Empirical Trip Generation procedure results in more conservative (i.e. higher) traffic volume increases during the peak periods compared to the ITE method. Both methods estimate trip increases within the same order of magnitude and have increases during the same periods. Additionally, the percentage of increased trips, when compared to existing trips (using the scheduled flights independent variable), is comparable under both methods.

Based on the trip generation methodologies discussed above and standard engineering practices, it is recommended that the conservative Empirical Trip Generation method (as calculated in Table 2) be used to develop the anticipated trip increases for the Provincetown Municipal Airport.

3. STUDY AREA

Based on CCC guidelines, the study area associated with a development should include every intersection which has an increase greater than 1% in vehicular traffic. However, it is unclear

whether this parameter would be applicable for this project since it is projected that there will be relatively minor traffic volume increase. A study of the surrounding roadways was investigated. When investigating the existing traffic flow patterns within the area, it was determined that approximately 40% of site related traffic will travel to and from the east on Route 6, 40% to/from the south on Conwell Street and 20% to/from the east on Route 6.

Applying these percentages to the most conservative trip generation estimate, it was shown that approximately 1 to 4 vehicles would be added to Route 6 east of the Conwell Street/Race Point Road intersection during the peak periods (1 during the weekday morning, 4 during the weekday midday and 2 during the weekday evening). The nearest intersection to the east is the intersection of Route 6 at Howland Street, a tee-intersection located approximately 0.5 miles away. Based on traffic volumes collected by the CCC, the traffic volume increases at this intersection are expected to be less than 1%. The vehicle increases south of the study area also ranged from 1 to 4 vehicles (1 during the weekday morning, 4 during the weekday midday and 2 during the weekday evening). The closest intersection south of the study area is Conwell Street at Hensche Lane, another tee-intersection approximately 550 feet to the south. Again, based on the latest CCC Traffic Counting Report, these increases were anticipated to be less than 1%. Two additional vehicles were projected to exit the study area east during the weekday evening peak period, with no vehicles projected during the weekday morning and midday periods. The closest intersection east of the study area is Sandy Hill Lane, a tee-intersection 625 feet east of Conwell Street/Race Point Road. This intersection is also projected to result in a less than 1% increase to traffic volumes.

Study Area Recommendation

Based on the relatively small traffic increases projected at the intersections, it is recommended that the current study area is retained. This study area was scoped by the MEPA Certificate on the ENF.

ATTACHMENTS

1. Trip Generation Work Sheets, August 2007
2. Demand Forecast Tables, 2005 Master Plan

1. Trip Generation Work Sheets, August 2007

General Aviation Airport

Current Peak Day Based Aircraft	6
Anticipated Peak Day Based Aircraft	7

Weekday Morning Peak Hour

Current Peak Day Based Aircraft

$T = 0.24 * X$
$T = 0.24 * 40$
$T = 1$
$T \approx 1$

Anticipated Peak Day Based Aircraft

$T = 0.24 * X$
$T = 0.24 * 44$
$T = 1.68$
$T \approx 2$

Projected New

$\Delta = 2-1$
$\Delta = 1$

Weekday Evening Peak Hour

Current Peak Day Based Aircraft

$T = 0.37 * X$
$T = 0.37 * 40$
$T = 2$
$T \approx 2$

Anticipated Peak Day Based Aircraft

$T = 0.37 * X$
$T = 0.37 * 44$
$T = 3$
$T \approx 3$

Projected New

$\Delta = 3-2$
$\Delta = 1$

General Aviation Airport

Current Peak Day Scheduled Flights	40
Anticipated Peak Day Scheduled Flights	44

Average Weekday Daily

Current Peak Day Scheduled Flights

$T = 1.97 * X$
$T = 1.97 * 40$
$T = 78.80$
$T \approx 79$

Anticipated Peak Day Scheduled Flights

$T = 1.97 * X$
$T = 1.97 * 44$
$T = 86.68$
$T \approx 87$

Projected New

$\Delta = 87-79$
$\Delta = 8$

Weekday Morning Peak Hour

Current Peak Day Scheduled Flights

$T = 0.24 * X$
$T = 0.24 * 40$
$T = 9.60$
$T \approx 10$

Anticipated Peak Day Scheduled Flights

$T = 0.24 * X$
$T = 0.24 * 44$
$T = 10.56$
$T \approx 11$

Projected New

$\Delta = 11-10$
$\Delta = 1$

Weekday Evening Peak Hour

Current Peak Day Scheduled Flights

$T = 0.30 * X$
$T = 0.30 * 40$
$T = 12.00$
$T \approx 12$

Anticipated Peak Day Scheduled Flights

$T = 0.30 * X$
$T = 0.30 * 44$
$T = 13.20$
$T \approx 13$

Projected New

$\Delta = 13-12$
$\Delta = 1$

Appendix 2. Forecast Demand Tables

Table 4-4 Forecast Scheduled Aircraft Operations (2004-2024)

Year	Annual Operations	Peak Month	Peak Day	Peak Hour
2004	4,140	1,035	40	10
2009	4,245	1,062	41	11
2014	4,352	1,088	42	11
2024	4,574	1,144	44	12

Source: Final-2005 Master Plan, Provincetown Municipal Airport

Table 4-5 Forecast of PVC Scheduled Passenger Enplanements

Year	Enplaned Passengers	Peak Month	Average Day	Peak Hour
2004	10,792	2,698	141	46
2009	11,175	2,794	146	47
2014	11,572	2,893	151	49
2024	12,408	3,102	162	52

Source: Final-2005 Master Plan, Provincetown Municipal Airport

Appendix 4.2 Supplemental Parking Memo, Jacobs Engineering, September, 2008

343 Congress Street
Boston, MA 02210 U.S.A.
1.617.242.9222 Fax 1.617.242.9824

Memorandum

Date **September 2008**

To File E2X32200_Traffic

From Michael Garrity

Subject **Supplemental Parking Memo,** July 2008
Provincetown Municipal Airport

Background

A supplemental parking study was conducted at the Airport to provide an additional data point. This study supplements the November 2006 study conducted at the Airport. The previous study was conducted during August 2006 to reflect the peak summer season. The supplemental study reflects data collected during a peak weekend in 2008.

Parking Observations Data Collection

The parking study was conducted on two separate weekdays, Friday, July 4th, 2008, and Monday, July 7th, 2008. Observations were taken during three separate time periods, from 8:00 AM to 9:30 AM, 1:00 PM to 2:30 PM, and 6:00 PM to 7:30 PM. Parking observations were recorded during three half-hour intervals within each time period. Data collection included license plate recordings and occupancy rate.

Parking Observations Data Review

The existing Airport public parking lot has a total of 62 spaces, including 3 spaces designated for handicapped plate vehicles and 5 for the Enterprise Rental Car Company. Employee parking is in a separate area and is not included in this analysis. The parking occupancy data was analyzed and sub-divided into three categories: regular passenger parking, rental car spaces, and handicapped spaces. The following table shows the average parking space occupancy rate for the existing parking lot, taken during two weekdays in July 2008.

Parking Lot Weekday Occupancy Rate Table

	AM Period	Midday Period	PM Period
Passenger Parking	104.6 %	105.7 %	102.4 %
Rental Cars	100.0 %	100.0 %	100.0 %
Handicapped	100.0 %	100.0 %	100.0 %
Overall	105.1 %	106.3 %	103.7 %

As shown in the table above, the parking lot was fully occupied during each time period observed. The average usage was 100 percent or above. Occupancy above 100 percent reflects parking along Airport Road, outside of the parking area. From three to nine autos were parking in non-

spaces or along the road during these periods. Automobiles were lined along the Airport Road waiting for flights to arrive. The rental car spaces were always occupied because the car rental company transfers cars as needed from the employee lot.

This occupancy rate is higher than the August 2006 parking demand study, when approximately 85 percent of the parking lot was occupied during the study periods.

Field Interviews

During this study, an interview with the rental agency staff was conducted. The rental agency staff noted that they shift automobiles from the employee lot to the 5 spaces in the parking lot dedicated as rental spaces in response to demand.

An interview with a cab driver was also conducted. The cab companies encourage ride sharing during peak periods, with a standard six dollar rate per person to go into town. This decreases the number of cabs at the Airport

Cape Air provides service during peak periods by adding sections (additional planes) to each scheduled flight period as necessary. In other words, as the demand increases above the number of seats in the aircraft, Cape Air increases the number of aircraft to meet this demand. Therefore, each scheduled flight period could provide service to between nine and 54 passengers (one to six airplanes).

APPENDIX 5

NPS Agreements and other Documents

The following items are included in this Appendix:

1. **NPS Special Use Permit NES CACO 2170-02047, May 3, 2002**
2. **Runway Extension Agreement (Attachment 1)**
3. **FAA ROD, November 16, 2000**
4. **NPS ROD, November 28, 2001**
5. **NPS letter to FAA, February 21, 2001**

Appendix 5.1 NPS Special Use Permit NES CACO 2170-02047, May 3, 2002

Form 10-114
Rev. DEC. 99

UNITED STATES DEPARTMENT OF THE INTERIOR
National Park Service

Special Use Permit

Name of Use Airport Operations

Date Permit Reviewed 20 02 5/1
Reviewed 20 ____
Reviewed 20 ____
Expires 20 22 6/1

Long Term X

Short Term ____

Permit # NES CACO 2170 02047
Region Park Type No.

Cape Cod National Seashore
Name of Area

Town of Provincetown
Provincetown Airport Commission of Town Hall 260 Commercial St. Provincetown, MA 02657 508-487-0241
Name or Permittee Address Phone

is hereby authorized during the period from (Time 8:00AM day 01 Month 06 20 02), through (Time 11:59PM day 31 Month 12 20 22), to use the following described land or facilities in the above named area: The Commission will use the Portion of Tract # 01-8633 for the purpose(s) of Airport and Airport Guidance Equipment Operations. NPS authorizes the Commission to conduct airport operations within Area A and airport guidance equipment operations in Area B as depicted on the map entitled 2002 Agreement Area by Edwards and Kelsey dated March 2001 which is attached hereto and incorporated herein by reference.

For the purpose(s) of: see attached

Authorizing legislation or other authority (RE - DO-53): 16 USC 7 a-e

NEPA Compliance: CATEGORICALLY EXCLUDED ___ EA/FONSI ___ EIS X OTHER APPROVED PLANS ___

PERFORMANCE BOND: Required ____ Not Required X Amount $_____

LIABILITY INSURANCE: Required ____ Not Required ____ Amount $ see condtions

ISSUANCE of this permit is subject to the conditions on the reverse hereof and appended pages and when appropriate to the payment to the U.S. Dept. of the Interior, National Park Service of the sum of $ waived

The undersigned hereby accepts this permit subject to the terms, covenants, obligations, and reservations, expressed or implied herein.

PERMITTEE Richard Silva 5/3/02
Signature RICHARD SILVA CHAIRMAN AIRPORT COMMISSION Date

Authorizing Official Matthew Ahles Superintendent 5/3/02
Signature Date

Additional Authorizing Official Tom Manogh 5/3/02
(If Required) Signature KEITH BERGMAN Title TOWN MANAGER Date

CONDITIONS OF THIS PERMIT

1 The permittee shall exercise this privilege subject to the supervision of the Superintendent, and shall comply with all applicable laws and regulations of the area.

2 Damages - The permittee shall pay the United States for any damage resulting from this use which would not reasonably be inherent in the use which the permittee is authorized to make of the land described in this permit.

3 Benefit - Neither Members of, nor Delegates to Congress, or Resident Commissioners shall be admitted to any share or part of this permit or derive, either directly or indirectly, any pecuniary benefits to arise therefrom: Provided, however, that nothing herein contained shall be construed to extend to any incorporated company, if the permit be for the benefit of such corporation.

4 Assignment - This permit may not be transferred or assigned without the consent of the Superintendent, in writing.

5 Revocation - This permit may be terminated upon breach of any of the conditions herein or at the discretion of the Superintendent.

6 The permittee is prohibited from giving false information; to do so will be considered a breach of conditions and be grounds for revocation [Re: 36 CFR 2.32(a)(4)].

7 Permittee will comply with applicable public health and sanitation standards and codes.

8 At all times during the Term and at its sole cost and expense, Commission shall obtain and keep in force General Liability Insurance in the amount of one million dollars [($1,000,000.00)] and an Umbrella policy in the amount of ~~five~~ three million dollars [($5,000,000.00)]

9 In addition to the insurance requirements set forth elsewhere in this permit, Commission shall provide the NPS with evidence of the following insurance if, during the construction of Commission improvements or alterations, the Commission or Commission's agents transport Hazardous Materials off-site from the Premises for disposal: Pollution Legal Liability Insurance maintained by the off-site disposal operator for losses arising from the insured facility's accepting Hazardous Materials.

10 The Commission shall not do anything, or permit anything to be done, in or about the Premises or the Seashore that would: (i) invalidate or be in conflict with the provisions of any insurance policies covering the Premises or any property located therein, or (ii) result in a refusal by insurance companies of good standing to insure the Premises or other property in amounts required under this permit.

11 All liability policies shall specify that the insurance company shall have no right of subrogation against the United States of America and/or shall provide that the United States of America is named an additional insured.

12 This permit does not authorize an extension of the runway.

Special Use Permit NES CACO 6000-0032C, authorizing Provincetown's use of federal lands for airport operations and NES CACO 6000-032D authorizing Provincetown's use of federal lands for airport operations and guidance equipment is combined and renumbered to Special Use Permit NES-CACO-2170-02047 and is also amended to extend the expiration date to December 31, 2022. All other conditions of the Permit Number NES CACO 6000-0032C (and previous permit NAR CACO 6000-0006 and CX1730-9-0007) and CACO 6000-0032D (and previous permit NAR CACO 6000-0014 and CX 1730-9-0008) remain in effect.

The extension is contingent upon the Town of Provincetown receiving in fiscal year 2002 funds from the Federal Aviation Administration's Airport Improvement Program. If Provincetown does not obtain these federal funds in fiscal year 2002, this permit shall not be extended and will expire on December 31, 2019.

Please note: These extensions are granted as an interim measure pending completion and signature of an Agreement, currently in draft, between the Town and the National Park Service, which will replace this permit. The Agreement is proposed for a term of 30 years once it is finalized. This permit extension will expire automatically upon completion of the Agreement and is granted upon condition of diligent and timely work by the Town/Airport Commission to reach accord with NPS regarding the contents of the Agreement.

Special Use Permit NES CACO 2170-02047 combines:
NES CACO 6000-032C (1998) and NES CACO 6000-032D (1998)

Special Use Permit: NES CACO 2170-02047 was formerly numbered:
NES CACO 6000-032C (1999)
NES CACO 6000-032G (1998)
NES CACO 6000-032E (1997):
NES CACO 6000-032C (1996);
NAR CACO 6000-0032 (1995);
NAR CACO 6000-0006 (1993);
CX1730-9-0007 (1990)

Special Use Permit: NES CACO 2170-02047 was formerly numbered:
NES CACO 6000-032D(1999)
NES CACO 6000-032H (1998)
NES CACO 6000-032F (1997):
NES CACO 6000-032D (1996);
NAR CACO 6000-032B (1995);

ACORD CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY) 05/06/

PRODUCER

BENSON YOUNG & DOWNS INS AGNCY
32 HOWLAND STREET
PO BOX 559
PROVINCETOWN MA 02657

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY A: LEGION INSURANCE COMPANY

COMPANY B: COREGIS

COMPANY C:

COMPANY D:

INSURED

TOWN OF PROVINCETOWN
PROVINCETOWN AIRPORT COMM.
260 COMMERCIAL ST
PROVINCETOWN MA 02657

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
	GENERAL LIABILITY	GL11565412	10/01/01	10/01/02	GENERAL AGGREGATE	$3,000,000
X	COMMERCIAL GENERAL LIABILITY				PRODUCTS - COMP/OP AGG	$1,000,000
	CLAIMS MADE [X] OCCUR				PERSONAL & ADV INJURY	$1,000,000
	OWNER'S & CONTRACTOR'S PROT				EACH OCCURRENCE	$1,000,000
					FIRE DAMAGE (Any one fire)	$ 100,000
					MED EXP (Any one person)	$ 10,000
	AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT	$
	ANY AUTO					
	ALL OWNED AUTOS				BODILY INJURY (Per person)	$
	SCHEDULED AUTOS					
	HIRED AUTOS				BODILY INJURY (Per accident)	$
	NON-OWNED AUTOS					
					PROPERTY DAMAGE	$
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
	ANY AUTO				OTHER THAN AUTO ONLY:	
					EACH ACCIDENT	$
					AGGREGATE	$
	EXCESS LIABILITY	503200557	10/01/01	10/01/02	EACH OCCURRENCE	$3,000,000
X	UMBRELLA FORM				AGGREGATE	$3,000,000
	OTHER THAN UMBRELLA FORM					$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY				WC STATUTORY LIMITS / OTHER	
	THE PROPRIETOR PARTNERS/EXECUTIVE OFFICERS ARE: INCL / EXCL				E.L. EACH ACCIDENT	$
					E.L. DISEASE-POLICY LIMIT	$
					E.L. DISEASE-EA EMPLOYEE	$
	OTHER					

COPY

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

PROVINCETOWN AIRPORT - RACE POINT ROAD, PROVINCETOWN MA 02657;
CERTIFICATE HOLDER IS INCLUDED AS AN ADDITIONAL INSURED;

CERTIFICATE HOLDER

UNITED STATES OF AMERICA
NATIONAL PARK SERVICE
CAPE COD NATIONAL SEASHORE
WELLFLEET MA 02667

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 10 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

Carl R. Goveia CG A

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Appendix 5.2 Runway Extension Agreement (Attachment 1)

Attachment 1

RUNWAY EXTENSION AGREEMENT

The National Park Service (NPS) and the Federal Aviation Administration (FAA) recognize that the need for a future runway extension at the Provincetown Municipal Airport is dependent on future conditions that either might not occur or might be precluded by factors presently unforeseen. This affects the ability to conclude a Section 4(f) determination that there is "no prudent or feasible alternative" to the proposed runway extension, as specified by the DOT Act of 1966, as well as NPS policies and authorities which must be addressed prior to issuing a special use permit.

For the reasons specified in the Final Environmental Impact Statement (FEIS) including growth in passenger levels and the need to efficiently and economically serve that growth by replacing existing aircraft with faster, larger aircraft, the Federal Aviation Administration (FAA) believes that the need for a 700-foot-long runway extension is reasonably foreseeable within the next 3-5 years. The NPS agrees that the FAA may identify this need in the future, and if it does, the documentation of the need and the alternatives discussed in this EIS will require reevaluating, and updating if necessary, before they will support the NPS permit actions. The steps to accomplish this are outlined below.

Because of changing aircraft needs to serve Provincetown the extension is reasonably foreseeable and because the FAA is assessing the extension's environmental impact in this EIS, the FAA intends to approve a 700-foot runway extension on the official Airport Layout Plan, for planning purposes only and not as a commitment for federal funding, to be included in the FEIS. Both the NPS and FAA agree that the discussion in this EIS of the alternative configurations for the physical location of such a runway extension is adequate, and that the

evaluation of certain conditions and equipment alternatives available to the carrier cannot be completed presently for a decision which is not being made now.

When the FAA becomes aware of airline proposals that would require a runway extension, it will notify the NPS. The FAA will initiate a subsequent reevaluation of several of the factors that affect the Federal decision making process for selecting the runway extension alternatives and the adequacy of the current Record of Decision (ROD), in the form of an Environmental Assessment (EA).

These would include purpose and need of the project, and alternatives that could affect the need for a runway extension. This reevaluation would include alternatives related to runway length requirements for the actual aircraft proposed by the carrier, alternative aircraft (requiring less runway length), and then-existing airport standards or navigational aid technology that could affect runway length requirements. Assuming that FAA's review concludes that the market conditions and the subsequent EA's discussion of alternatives available at that future time show no prudent or feasible alternative, and the initial environmental impact analysis remains current and accurate, a new ROD including a FONSI and a Section 4(f) determination would be issued to document the runway extension decision. The FAA will coordinate its review and ROD with the NPS. The goal is to produce a document that will satisfy FAA and NPS needs.

If the review process concludes that substantial changes have occurred since the original EIS publication affecting the alternatives analysis, or additional alternatives exist, the FAA will develop a Supplemental Environmental Impact Statement (SEIS). It is intended that the SEIS would be a less demanding and lengthy document than the original, concentrating specifically and only on the runway extension and any of the identified alternatives. For example, it may involve only one alternative in addition to the runway extension, a "no action" alternative. As another example, if the review found three new potential alternatives that could affect runway extension design, the SEIS would analyze

those along with the original runway extension. The reevaluation in the SEIS will also include a re-assessment of purpose and need, incorporating a review of passenger forecasts to determine their continued utility. The reevaluation will include alternative proposals such as high-speed ferry service or major highway improvements. The FAA will coordinate any of these actions with the NPS.

If the FAA concludes through a Section 4(f) Statement that there is no feasible and prudent alternative to a runway extension, it will then issue a new Record of Decision for that project consulting with the NPS prior to issuing both.

Appendix 5.3 FAA ROD, November 16, 2000

DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

RECORD OF DECISION
AIRPORT LAYOUT PLAN APPROVAL
FEDERAL FUNDING OF AIRPORT DEVELOPMENT

PROVINCETOWN MUNICIPAL AIRPORT
PROVINCETOWN, MASSACHUSETTS

FAA NEW ENGLAND REGION

November 16, 2000

RECORD OF DECISION
AIRPORT LAYOUT PLAN APPROVAL
APPROVAL OF FEDERAL FUNDING OF AIRPORT DEVELOPMENT

PROVINCETOWN MUNICIPAL AIRPORT
PROVINCETOWN, MASSACHUSETTS

I. PURPOSE

This Record of Decision (ROD) documents environmental, aviation safety and airport efficiency in the Federal Aviation Administration's (FAA) decision to approve an Airport Layout Plan and to fund Runway Safety Area (RSA), apron construction and replacement of an approach light system. This has been coordinated with the National Park Service, a cooperating agency for the Environmental Impact Statement. These decisions constitute Federal actions requiring compliance with the National Environmental Policy Act, implementing regulations and directives of the Council on Environmental Quality and the FAA.

This ROD follows issuance of a Final Environmental Impact Statement and Department of Transportation Act Section 4(f) Statement (FEIS) and addresses extension of RSAs at both ends of the runway and aircraft parking apron expansion. An existing Approach Light System (ALS) will be replaced as part of the runway shift needed to accommodate the RSAs. A runway extension was also analyzed in the EIS. This ROD does not approve the funding of the runway extension. Any runway extension will be further evaluated in accordance with an agreement between the National Park Service and the FAA (attachment 1). The improvements are depicted on Figures 53, 19A and 12 of the FEIS (attached). Figure 3 (attached) shows the access road depicted in Figure 12 but as modified in a permit process after the FEIS was completed.

The Federal Aviation Act charges the FAA with providing for a safe and efficient national airspace system. FAA accomplishes this in part by funding airport development that contributes to this system. The construction of RSAs would enhance aviation safety, as does the replacement of the ALS. The expansion of aircraft parking apron responds to the current and forecasted demand, particularly during the peak season.

II. Background

The Federal Aviation Act of 1958, as amended and recodified (49 U.S.C. § 40101 et. seq.) charges the FAA with providing for a safe and efficient national airspace system. FAA accomplishes this in part by funding airport development that enhances aviation safety. RSAs and ALS are examples of airport development that help to accomplish this mission.

Provincetown Municipal Airport (PVC) is located at the extreme northeastern tip of Cape Cod. It provides scheduled commercial service that links municipalities of the Outer Cape (Provincetown, Truro, Wellfleet and Eastham) to the rest of the national airspace system. The airport is located within the Cape Cod National Seashore, a management unit of the National Park Service. The Cape Cod National Seashore was authorized in 1961 and formally established in 1966. The airport was constructed in 1947. The deed of conveyance from the Commonwealth of Massachusetts for the land to become the Cape Cod National Seashore recognizes the continued existence of the airport and it allows for airport improvements and expansion. The deed states in condition # 2, "Such additional area as shall be agreed upon between the Secretary of the Interior or his designee and the Town of Provincetown, acting through its airport commission shall be made available by lease or otherwise to said town for public airport and access purposes".

PVC has a single runway, 7-25 that was last overlaid in 1971. The runway lacks standard RSAs. These areas enhance the safety of airplanes that undershoot, overrun or veer off the runway and they provide greater accessibility for firefighting and rescue equipment during such incidents.

PVC also has a shortage of aircraft parking apron space to accommodate existing and projected demand. General Aviation aircraft currently are manually pushed into parking positions since there is not enough room for them to safely taxi into a space under their own power. Aircraft are also parking during peak periods on grass areas not designed to be an apron.

PVC is one of seven Massachusetts Primary Service airports contained in FAA's *National Plan of Integrated Airport Systems (1998-2002)*. This designation recognizes the significant role that PVC plays in providing access to the national air transportation system. The airport is also a destination for a substantial number of tourists each year and provides a vital link between the Town of Provincetown and the City of Boston. Scheduled air service began at PVC in 1949 and continues to this day.

In June of 1992 the airport completed a comprehensive Airport Master Plan that recommended certain improvements including construction of RSAs, runway overlay, apron expansion, security fencing, terminal area renovation, equipment acquisition and construction of a garage to house the equipment as well as several other short term projects/purchases. The Master plan also forecasted the need for a 1,000-foot runway extension. Approximately 17 acres of wetland and 20 acres of upland were estimated to be affected by the improvements shown in the Master Plan.

Total project impacts were reduced dramatically from those in the Master Plan through the EIS process, alternatives analysis and agency and public input. One impact not included in the original Master Plan impacts relates to the airport's Approach Light System. During the EIS process, the ALS, owned by the Massachusetts Aeronautics Commission, became dilapidated and in need of replacement. The FAA will replace the Approach Light System. This was added after the DEIS was issued. Total cumulative

wetland impacts for all the projects in the EIS now total 2.3 acres. For the projects FAA intends to approve and fund at this time, the RSAs (no wetland impact), aircraft apron (0.06 ac.) and replacement ALS (0.44ac.), wetland impacts, including temporary impacts, total 0.5 ac. The wetland impacts for the runway extension described in the EIS are 1.8 ac.

In 1993, after review of the Master Plan, it was determined that a combined Environmental Impact Statement (EIS for the Federal process)/Environmental Impact Report (EIR for the Commonwealth's process) should be prepared to assess environmental impact. Scoping meetings were held on May 11, 1993 and August 23, 1993. The Notice of Intent to Prepare the EIS was published in the Federal Register on September 24th, 1993 and the opportunity for an additional scoping meeting was offered in that notice. The National Park Service was a Cooperating Agency for the EIS.

A Technical Advisory Committee, including representatives from state and federal agencies, local communities and the Airport Commission was formed to provide a forum to provide input from local, state and federal agencies. This committee met four times during the preparation of the EIS. A public agency coordination group was also formed to discuss regulatory and permitting issues for the airport improvements. This group met several times during the preparation of the EIS.

The availability of the DEIS and solicitation of comments was published in the Federal Register on April 17, 1998. Comments were also solicited in the Commonwealth of Massachusetts Environmental Monitor at various stages of the environmental process. Three public information meetings/workshops were also held for the EIS/EIR. Two public hearings were held. One by the FAA to solicit comments on the Draft EIS was held on May 18, 1998. The Cape Cod Commission, a regional agency established by the Commonwealth of Massachusetts, held another on April 14, 2000 as part of their permit process. Numerous other meetings were held both on site and offsite with various regulatory agencies and the National Park Service.

III. Aviation Safety Issues

In 1997, a White House commission on aviation safety charged FAA with the initiation of a major aviation safety program called Safer Skies. This program looks comprehensively at aviation safety and has a component that addresses airport approaches and landings. Aviation safety specialists have been conducting a detailed analysis of approach and landing accidents, with particular emphasis on interventions that might be implemented to break the chain of events that typically leads to such accidents.

There have been several incidents and accidents at PVC over the years related to the Runway Safety Areas. At least three aircraft have run off the end of the runway in the last 15 years. One of these aircraft sustained substantial damage and the other two sustained minor damages. Fortunately, there have been no injuries or fatalities to date associated with insufficient RSAs. Construction of the RSA is needed to help prevent future

incidents and accidents and to allow fire, safety and rescue equipment access should an aircraft leave the runway.

The Approach Light System is an important safety feature at PVC. The airport's proximity to the water produces a black hole effect for approaching aircraft. At least one aircraft accident has occurred when a pilot became disoriented close to the runway and crashed. This occurred in 1975 when the original Omnidirectional Approach Light System was in place. A Medium Intensity Approach Light System was installed in 1978. That system is in disrepair both due to age, a hostile environment and difficulty in maintaining the system due to poor access. A replacement system that can be properly maintained is needed.

IV. Alternatives Considered

In regard to the Runway Safety areas, shortening the runway to use some of its length as safety area instead of runway, realigning the runway, and limiting construction on only the East Side of the airport were alternatives screened out early in the process as either being too environmentally damaging or not practicable.

Other alternatives considered included:

- RSA1, 500' wide by 1,000' long (R/W 7 end) and 500' wide by 800' long (R/W 25 end)
- RSA2, 300' wide by 600' long, all new construction to the east, relocate Race Point Road
- RSA3A, 300' by 600', beyond both ends of the existing runway
- RSA3B, 400' by 800', beyond both ends of the existing runway
- RSA3C, use of gravel or foam beds, safety nets and ramps
- RSA3D, 300' by 600', use of declared distances
- RSA4, 150' by 300' with 200' runway shift to the east
- No Action

In order to accommodate all aircraft that use PVC, a runway safety area 500 feet wide, extending 1,000 feet from the end of each runway would be required. This was the RSA recommended in the Master Plan. The EIS analysis showed that the most demanding aircraft that would require such a RSA comprise less than 1% of the operations at PVC. Based on the fleet that currently operates at PVC on a regular basis and the fleet that was forecasted to operate in the future, FAA safety standards require RSAs of 150 feet in width extending 300 beyond each runway end (Advisory Circular 150/5300-13). Use of gravel or foam beds, safety nets and ramps either do not actually constitute RSAs, are not FAA approved and/or are not designed to accommodate the type of aircraft operating at PVC. Alternative RSA4, 150' by 300', meets the minimum requirements for RSAs at PVC and was selected as the preferred alternative. RSA4 requires no wetland fill and is the least environmentally damaging of the build alternatives.

Four alternatives were considered for the aircraft-parking apron.

- A1, a paved extension of the existing apron (850' by 65')
- A2, constructing new aprons south of the runway (765' by 122' paved and 650' by 122' turf)
- A3 (850' by 15' paving over turf, 510' by 70' turf north of the taxiway and 650' by 45' turf)
- A4 was the No-Action alternative

Alternative A3 was selected as the preferred alternative. It has the least amount of wetland fill (0.06 ac.) of the practicable alternatives. Alternative A2 does not require wetland fill but is not practicable as it would require continual crossing of the runway by General Aviation pilots and passengers to access the terminal area. This is a public safety concern.

Five alternatives were considered for constructing and providing access to the Approach Light System.

- Alternative 1, construction of a 10' wide travel lane, approximately 1,200 feet long, with a raised catwalk for the last 150' of the light system
- Alternative 1a. construction of a 5' wide access way for its entire length
- Alternative 2, access from a roughly parallel road constructed by the NPS by constructing a series of roads perpendicular to the light lane
- Alternative 3, use of a temporary wooden pallet road for construction only of the light system
- Alternative 4, No-Action.

Alternative 1 was selected as the preferred alternative. This alternative was modified somewhat by the Cape Cod Commission Decision after the FEIS was published to include additional walkway to the last two light stations instead of just the last station. This alternative has a minimal amount of wetland impact (0.44 ac. total, permanent wetland fill is 0.27 ac.) fill is confined to a wetland area already used for the existing light lane unlike Alternative 2 and provides adequate access for constructing and maintaining the replacement lights unlike Alternatives 1a, 3 and 4.

Eleven alternatives were considered for the Runway Extension.

- Construction on the west side of the airport only
- Realigning the runway (2-20, 16-34 and 9-27 configurations screened out)
- RE1, 700' extension to the west, 300' extension to the east
- RE2, 700' extension to the east, relocate Race Point Road
- RE3A through E, 700',650', 500', 500' and 700' to the east and 500', 650' , 800', 500' and 300' to the west respectively with variations on the Declared Distance concept
- RE4, 350' extension to the west and 150' extension to the east
- No-Action

RE4 was selected as the preferred alternative. It would require the least amount of wetland impact of all the build alternatives other than RE2 and less Section 4(f) impacts than RE2. RE2 requires the relocation of Race Point Road and would result in a significant impact to Section 4(f) lands.

The environmentally preferable alternatives would be the "No Action" alternatives. However, these would result in an airport with substandard safety areas, continued crowding of aircraft on the apron as well as aircraft parking on areas not designed as apron and the continued degradation of the approach light system until it became inoperative. The loss of the approach light system would make it more difficult for pilots to locate the runway and would result in difficulty for pilots to land under adverse conditions. This would degrade the safety, utility and efficiency of the airport. The runway extension was analyzed in the EIS process to fully disclose potential cumulative impacts and to avoid segmentation of any of the projects. As stated earlier, the funding of the runway extension is not approved at this time and will be subject to the agreement detailed in Attachment 1. The lack of a future runway extension could limit the utility and efficiency of the airport and would require the use of multiple aircraft to provide the same service that could be provided by the use of larger aircraft. RE4 could have environmental benefit, i.e. less cumulative noise impact, since there would be fewer operations by larger, potentially quieter, aircraft that could carry the same number of passengers as multiple operations of the 9 seat Cessna 402s that currently provide the scheduled air service.

V. Environmental Issues

The EIS examined 20 Areas of potential environmental impact, aircraft noise, land use, social impacts, induced socioeconomic impacts, air quality, water quality, DOT 4(f) impacts, historic/archaeological/cultural resources, biotic communities, endangered and threatened species, wetlands, floodplains, Coastal Zone Management/barriers, scenic/visual quality, energy supply, solid waste impacts, light emissions, wild and scenic rivers, farmlands, construction impacts and environmental justice.

Conclusions related to various potentially adverse environmental impact areas are as follows:

- **Wetlands**

The build alternative RSA4 would require a total of 0.5 acres of wetland fill for the ALS (0.44 ac.) and the aircraft parking apron (0.06ac.). Since publication of the EIS, the Cape Cod Commission (CCC) has required that a longer portion of the access to the lights be a walkway instead of a fill road. This results in the reduction in the area of permanent wetland fill by 0.17 ac. The CCC decision also requires a series of culverts to be placed under the road to minimize harm to wetlands. Temporary impacts during construction for the ALS remain at 0.44 ac. All of the wetland fill is confined to the managed (mowed) wetland in which the existing light system is located. These projects were the subject of a rigorous alternatives analysis. In accordance with Executive Order 11990, there are no

practicable alternatives to this work in wetland areas and the preferred alternatives/proposed actions include all practicable measures to minimize harm to wetlands.

The runway extension alternative RE4 would require 1.8 ac. of wetland to be filled. The funding of the runway extension is not approved, as it is not necessary at this time. The determination of compliance with Executive Order 11990 for the runway extension will occur in the future after reevaluation of the runway extension as specified in Attachment 1.

- **Floodplains**

All of the build alternatives are located in floodplain. In fact the entire airport is below the 100-year flood elevation. However since the floodplain is in such close proximity to the ocean and lack of any structures "downstream" except those constructed to control hydrology, floodplain impacts are negligible. The encroachment into the floodplain is not considered significant. In accordance with Executive Order 11988, there are no practicable alternatives for the aprons, RSA and ALS work to occur in the floodplain and the actions conform to applicable state and local floodplain protection standards.

The determination of compliance with Executive Order 11988 for the runway extension will occur in the future after reevaluation of the extension as specified in Attachment 1.

- **Department of Transportation 4(f) Impacts (recodified at Section 303(b))**

The Department of Transportation 4(f) impacts for the preferred RSA alternative involve the use of approximately 0.69 acres of existing parkland between the existing airport boundary and Race Point Road. The 0.69 acres of National Park land must be used since the runway 7 localizer must be relocated when the runway is shifted to construct the RSA. It should be noted that the runway was shifted to minimize wetland impacts at the runway 7-approach end. There are no prudent and feasible alternatives to relocating the localizer. The NPS concurs with this determination. The project includes all possible planning to minimize harm to the land resulting from the use. Any vegetation removal that affects scenic quality from the bike trail near the relocated localizer will be mitigated by construction of a small vegetated berm to replace the screening effect of the vegetation.

The aircraft parking apron has no 4(f) impacts.

The runway extension would not require the use of any 4(f) lands not currently permitted for airport use but would require a change in the special use permit issued by the NPS to allow use of an area specified for the operation of navigational aids (the ALS) to be used for navigational aids and RSA. At this time we can not conclude that there are no prudent and feasible alternatives to the runway extension since it is dependent on future conditions. Section 4(f) compliance will be determined in the future in accordance with Attachment 1.

VI. Mitigation

The FAA is committed to assure compensation for unavoidable wetland impacts. The EIS describes the Hatches Harbor restoration project to be used as mitigation for wetland impacts. The National Park Service, the restoration proponent, agreed to use the Hatches Harbor restoration as mitigation for all of the projects described in the EIS with the provision that the environmental documents are satisfactorily completed for the projects. The FAA has issued a grant to the airport to fund approximately 20% of the restoration project. The project, initiated in 1999, is anticipated to restore up to 90 acres of former saltmarsh that is now freshwater marsh as well as create approximately 7 acres of wetland from the creation of wetland hydrology in areas of low lying upland.

FAA is also committed to approving a change to the Airport Layout Plan showing that the airport will exchange 2 acres of land permitted for airport use, more remote from runway operations to compensate for the 0.69 acres of park land needed to relocate the localizer and its associated critical area. The 2 acres of compensatory land is located on the SSE side of the airport in the area of the old crosswind runway. The 0.69 ac. of parkland is located in between the airport permit area and Race Point Road. The 2 acres of compensatory land provide dune habitat that is more valuable than the land being used between the end of the runway and Race Point Road. The Cape Cod National Seashore has stated they intend to take favorable action on permitting the use of this land. It should be noted that the net area used for airport purposes is decreased slightly by the land exchange.. Additionally, the ALS will be moved closer in to the area that is already developed, i.e. the runway, terminal area and Race Point Road and it is shifted so it does not intrude as far as it does now into the Hatches Harbor Restoration area.

A berm to visually screen the airport from a bicycle path as well as provide some ground noise attenuation has been included along Race Point Road and further discussion and design will be coordinated with the National Park Service.

VII. Comments on Final Environmental Impact Statement

The availability of the FEIS was published in the Federal Register on April 7, 2000 with a due date of May 1, 2000. The FAA received two comment letters after the publication of the FEIS. They came from the Department of the Interior and the Environmental Protection Agency.

The Department of the Interior (DOI) letter, dated May 5, 2000, stated that the Executive Summary was ambiguous in regard to cumulative wetland impacts. As we responded in a letter to the DOI dated May, 15, 2000, we do not believe that the Executive Summary was ambiguous, highlighted the wetland impacts shown in the Executive Summary and

also provided the DOI with the summary page from the Cumulative Impacts section of the EIS where the cumulative impacts are clearly shown.

The DOI also believed that RSA4 encroached into an area permitted for navigational equipment only. In fact, RSA4 ends approximately 200 feet outside of the permit boundary in question. If the runway extension were to take place in the future, the RSA extending from the new end of the runway would extend into area specified for navigation aids. Coordination with the National Park Service on that issue will occur as described in Attachment 1. We intend to approve the RSA with the replacement ALS at this time.

The DOI also stated that the FAA needed to determine compliance with Executive Orders 11988 and 11990 as well as Section 4(f) of the Department of Transportation Act. These determinations are made in this Record of Decision in Section V.

The Environmental Protection Agency (EPA) in a letter Dated May 9, 2000 stated that they have no objections to the recommended actions in the EIS.

VIII. Decision

I have considered the environmental impact and enhancement of aviation safety of the proposed projects. Subject to the mitigation measures specified above, I am directing unconditional approval of the Provincetown Municipal Airport Layout Plan, as modified to depict the projects, including Runway Safety Areas, Approach Light System, Aircraft Parking Apron and Runway Extension, as specified in the Final EIS and modified in this Record of Decision. In addition, funding of the RSAs, ALS and Aircraft Parking Aprons is approved at this time. The funding of the Runway Extension is not approved. Its approval will require a reevaluation process that was the result of an agreement between the FAA and the NPS. This reevaluation process was described in the FEIS and is also included here as Attachment 1. The EPA supports this process and requested that they be notified concurrently with the NPS about any reevaluation proceedings. The FAA will do this as requested.

Under the authority delegated to me, I find that the federal actions stated here are reasonably supported. These actions are taken pursuant to 49 U.S.C. § 40101 *et seq.*, and constitute orders of the Administrator that are subject to review by the appropriate Court of Appeals of the United States in accordance with the provisions of 49 U.S.C. § 46110.

11/21/00

Vincent A. Scarano
Manager, Airports Division
New England Region

Date

Attachment 1

RUNWAY EXTENSION AGREEMENT

The National Park Service (NPS) and the Federal Aviation Administration (FAA) recognize that the need for a future runway extension at the Provincetown Municipal Airport is dependent on future conditions that either might not occur or might be precluded by factors presently unforeseen. This affects the ability to conclude a Section 4(f) determination that there is "no prudent or feasible alternative" to the proposed runway extension, as specified by the DOT Act of 1966, as well as NPS policies and authorities which must be addressed prior to issuing a special use permit.

For the reasons specified in the Final Environmental Impact Statement (FEIS) including growth in passenger levels and the need to efficiently and economically serve that growth by replacing existing aircraft with faster, larger aircraft, the Federal Aviation Administration (FAA) believes that the need for a 700-foot-long runway extension is reasonably foreseeable within the next 3-5 years. The NPS agrees that the FAA may identify this need in the future, and if it does, the documentation of the need and the alternatives discussed in this EIS will require reevaluating, and updating if necessary, before they will support the NPS permit actions. The steps to accomplish this are outlined below.

Because of changing aircraft needs to serve Provincetown the extension is reasonably foreseeable and because the FAA is assessing the extension's environmental impact in this EIS, the FAA intends to approve a 700-foot runway extension on the official Airport Layout Plan, for planning purposes only and not as a commitment for federal funding, to be included in the FEIS. Both the NPS and FAA agree that the discussion in this EIS of the alternative configurations for the physical location of such a runway extension is adequate, and that the

evaluation of certain conditions and equipment alternatives available to the carrier cannot be completed presently for a decision which is not being made now.

When the FAA becomes aware of airline proposals that would require a runway extension, it will notify the NPS. The FAA will initiate a subsequent reevaluation of several of the factors that affect the Federal decision making process for selecting the runway extension alternatives and the adequacy of the current Record of Decision (ROD), in the form of an Environmental Assessment (EA).

These would include purpose and need of the project, and alternatives that could affect the need for a runway extension. This reevaluation would include alternatives related to runway length requirements for the actual aircraft proposed by the carrier, alternative aircraft (requiring less runway length), and then-existing airport standards or navigational aid technology that could affect runway length requirements. Assuming that FAA's review concludes that the market conditions and the subsequent EA's discussion of alternatives available at that future time show no prudent or feasible alternative, and the initial environmental impact analysis remains current and accurate, a new ROD including a FONSI and a Section 4(f) determination would be issued to document the runway extension decision. The FAA will coordinate its review and ROD with the NPS. The goal is to produce a document that will satisfy FAA and NPS needs.

If the review process concludes that substantial changes have occurred since the original EIS publication affecting the alternatives analysis, or additional alternatives exist, the FAA will develop a Supplemental Environmental Impact Statement (SEIS). It is intended that the SEIS would be a less demanding and lengthy document than the original, concentrating specifically and only on the runway extension and any of the identified alternatives. For example, it may involve only one alternative in addition to the runway extension, a "no action" alternative. As another example, if the review found three new potential alternatives that could affect runway extension design, the SEIS would analyze

those along with the original runway extension. The reevaluation in the SEIS will also include a re-assessment of purpose and need, incorporating a review of passenger forecasts to determine their continued utility. The reevaluation will include alternative proposals such as high-speed ferry service or major highway improvements. The FAA will coordinate any of these actions with the NPS.

If the FAA concludes through a Section 4(f) Statement that there is no feasible and prudent alternative to a runway extension, it will then issue a new Record of Decision for that project consulting with the NPS prior to issuing both.

Appendix 5.4 NPS ROD, November 28, 2001

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Record of Decision/Statement of Findings: Issuance of Permits, Which Would Allow for Safety Improvements at the Provincetown Municipal Airport, Provincetown, MA

[Federal Register: January 31, 2002 (Volume 67, Number 21)]
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DEPARTMENT OF THE INTERIOR
National Park Service

Record of Decision/Statement of Findings: Issuance of Permits, Which Would Allow for Safety Improvements at the Provincetown Municipal Airport, Provincetown, MA

ACTION: Notice of approval of Record of Decision.

SUMMARY: Pursuant to subsection 102(2) of the National Environmental Policy Act of 1969, and the regulations promulgated by the Council on Environmental Quality (40 CFR 1505.2), the National Park Service, U.S. Department of the Interior has prepared a Record of Decision and Statement of Findings for Executive Orders 11988 (``Floodplain Management'') and 11990 (``Protection of Wetlands'').

DATES: The Record of Decision was recommended by the Superintendent of Cape Cod National Seashore, and approved by the Director of the Northeast Region on November 28, 2001. The Statement of Findings was also recommended by the Superintendent of Cape Cod National Seashore, certified for technical adequacy and servicewide consistency by both the Chief of the Water Resources Division and the Northeast Region Compliance Officer and approved by the Director of the Northeast Region on November 28, 2001.

ADDRESSES: Inquires regarding the Record of Decision or the Statement of Findings should be submitted to the Superintendent, Cape Cod National Seashore, 99 Marconi Site Road, Wellfleet, Massachusetts 02667. Telephone (508) 349-3785 or e-mail to CACO_Superintendent@NPS.Gov.

SUPPLEMENTARY INFORMATION: The summary of the Record of Decision/ Statement of Findings follows:

The Department of the Interior, National Park Service (NPS) has prepared this Record of Decision (ROD)/Statement of Findings (SOF) concerning the issuance of special use permits, which would allow for safety improvements at the Provincetown Municipal Airport, Provincetown, Massachusetts. This ROD/SOF responds to and references the Final Environmental Impact Statement (FEIS), of April 7, 2000, for the Provincetown Municipal Airport, Provincetown, Massachusetts, and Department of Transportation Section 4(F) Statement as prepared by the Federal Aviation Administration (FAA). This ROD provides a statement of the decision made; a summary description of the alternatives analyzed by FAA in their

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FEIS; the decision rationale; identification of the environmentally preferable alternative; a description of mitigation measures; and a discussion of impairment.

The U.S. Department of the Interior owns the land under the airport. Two twenty-year Special Use Permits have been issued and/or updated to the Town of Provincetown, as of 6/01/98 and 6/19/98, to operate a municipal airport within a prescribed permit area boundary indicated in the NPS permit(s) for aviation operations. One covers the runway area and operational facilities and the other relates to navigational lighting and instrumentation facilities. Section 4(f) of the Department of Transportation Act of 1966 (recodified at 49 U.S.C. 303) requires ``that the Secretary shall not approve any program or project which requires the use of any public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance as determined by the officials having jurisdiction thereof unless there is no feasible and prudent alternative to the use of such land and such program or project includes all possible planning to minimize harm resulting from the use.'' The pending issuance of permits covered by this ROD for safety improvements necessitated an impact analysis of 4(f) land, as parkland beyond that currently permitted for the various airport purposes was requested by FAA. A Statement of Findings on wetland protection was also prepared to address wetland and floodplain impacts.

The FEIS for the Provincetown Municipal Airport was prepared by the FAA to cover their actions related to implementing the airport Master Plan. The NPS cooperated in the development of the FEIS by providing technical input and review/commentary on impact analysis. The Airport Master Plan is basic to FAA's procedures to develop an Airport Layout Plan that guides physical airport development and improvement such as alterations to runway safety areas, the apron area, and replacement of an approach light system.

A runway extension was evaluated in the FEIS on the basis of current development interests and currently feasible alternative considerations; however, funding for the project is not being approved at this time and further evaluation of this action will be pursued according to conditions outlined in a General Agreement prepared by the FAA and NPS, the essential text of which is presented in the FEIS. The inclusion of the runway extension in the FEIS and the Airport Layout Plan was for planning consideration only. Basically, the agreement between NPS and FAA states that when the FAA detects a need to further consider runway extension, the FAA will fully document the need and initiate re-evaluation of the several factors that affect the Federal decision making process for identifying and selecting the runway

extension alternatives and the adequacy of the FAA ROD, by way of an Environmental Assessment (EA). Section 4(f) and Executive Order 11990 compliance for runway extension will be duly accomplished at that time. NPS decision-making on the runway extension is also deferred to that time.

Decision (Selected Action)

The National Park Service will adjust the parkland area permitted for airport use based only on the proposed actions related to the Runway Safety Area, parking aprons, and lighting system as described for safety improvements in the FEIS for the Provincetown Municipal Airport issued in April 2000 and the FAA's ROD, signed November 21, 2000. This will involve exchange and re-designation of the airport land use footprint, by returning two acres of previously permitted land, back to parkland use, and permitting 0.96 acres (incorrectly described in the FAA FEIS and FAA ROD as 0.69 acres) of parklands needed to serve navigational localizer relocation and its associated critical area use. The two acres of previously permitted parklands are being relinquished by FAA to revert to parkland uses, in compensation for the new acreage provided for the localizer. These two acres are located in a surficially undisturbed dune area which possess greater ecological value than the portion of land being exchanged, located between the eastern end of the runway and Race Point Road.

Dated: November 28, 2001.
Marie Rust,
Northeast Regional Director, National Park Service.
[FR Doc. 02-2286 Filed 1-30-02; 8:45 am]
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Appendix 5.5 NPS letter to FAA, February 21, 2001

United States Department of the Interior

NATIONAL PARK SERVICE
Northeast Region
United States Custom House
200 Chestnut Street
Philadelphia, PA 19106

IN REPLY REFER TO:

February 21, 2001

Robert Bartanowicz
Regional Administrator
Federal Aviation Administration
12 New England Executive Park
Burlington, MA 01802

Dear Mr. Bartanowicz:

We have reviewed the Record of Decision (ROD) for the Airport Layout Plan Approval for the Provincetown Municipal Airport, Provincetown, Massachusetts, dated November 16, 2000, and received on January 22, 2001. We appreciate the opportunity to provide comments on this document.

Some editing from the last draft (dated July 14, 2000) has inadvertently resulted in a substantive change in the decision by eliminating a clear reference to conditions that constrain the runway extension. These conditions are clearly outlined in Appendix 1 and are referred to throughout the ROD; however, Section VIII of the Decision states that the runway extension is "unconditionally approved" which would be in conflict with the intent of the rest of the ROD's language and the agreement provided in Appendix 1. Cape Cod National Seashore provided oral comment on that draft in order to expedite its finalization. In that discussion, the sentence originally read "...unconditional approval of the Provincetown Municipal Airport Layout Plan, as modified to depict the projects as specified in the Final EIS." The Seashore requested a change that stated "...unconditional approval of the Provincetown Municipal Airport Layout Plan, as *modified by this ROD* to depict the *RSA and ALS* projects as specified in the Final EIS." So although, we believe the intent was not to supercede the agreement presented in Appendix 1, we wish to clarify our position that the evaluation of future factors which may influence the decision with regard to a runway extension is still necessary as outlined in Appendix 1.

We note that the agreement attached (Attachment 1) to the ROD does not include a signature page. In review of our files, we found clear reference to the fact that the agreement recorded in Attachment 1 was approved by both the National Park Service (Service) and the Federal Aviation Administration (Administration). Although this agreement is not formally signed, we consider it binding and relevant to both the Service and the Administration, and that it will guide our future discussions with regard to any further airport improvements, namely the potential runway extension.

Lastly, there is reference in the ROD (Section VI) to the 2 acres of land, which will no longer be permitted for airport uses, in exchange for the permitting of 0.69 acres of land needed for the localizer improvements. We would like to have the 2 acres and the 0.69 acres clearly identified on a map or figure so we may adjust the permit boundaries and so that the administrative record clearly reflects this change in use.

Thank you for your consideration of these points and if we can provide further clarification please contact Nancy Finley at (508) 349-3785, extension 216.

Sincerely,

Marie Rust
Northeast Regional Director

cc: Superintendent, CACO