



Traffic Solutions
William J. Bray, P.E.
235 Bancroft Street
Portland, ME 04102
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October 30, 2014

Thomas A. Errico, P.E.
Senior Associate
Traffic Engineering Director
T.Y. Lin International
12 Northbrook Drive
Falmouth, ME 04105

RE: 89 Anderson Street East Bayside Lofts Project – Response to Comments Received September 17 and October 2, 2014

Dear Tom:

This letter formally addresses comments (requiring a response) presented in the noted documents identified above from your office, which I understand is based upon a preliminary review of the traffic materials previously submitted for the proposed East Bayside Lofts Project. Each comment is noted in italic print followed by an appropriate response in “bold” print.

September 17, 2014 E-Mail Document

1. The study collected traffic volumes at the Washington Avenue/Fox Street/Walnut Street intersection during the summer time period and not when area schools were in session. It is requested that the traffic counts be updated to include school activity.

A 12-hour manual traffic count was conducted at the noted intersection on Tuesday, October 28, 2014 with all vehicular, pedestrian and bicycle traffic approaching the intersection recorded in 15-minute intervals. From a summary of the data, a peak hour of traffic was determined for both the morning and afternoon peak time periods. The following table compares the peak hour data collected earlier on Thursday, August 14 with the most recent data collected on October 28.

**Traffic Volume Data Comparison
Washington Avenue/Fox Street/Walnut Street
(August 14 and October 28, 2014)**

<u>Turning Movement</u>	<u>August 14, 2014</u>		<u>October 14, 2014</u>		<u>Difference</u>	
	<u>AM Peak</u>	<u>PM Peak</u>	<u>AM Peak</u>	<u>PM Peak</u>	<u>AM Peak</u>	<u>PM Peak</u>
Washington Ave. EB Left to Walnut St.	11	26	15	24	4	2
Washington Ave. EB Thru movement	530	313	605	253	75	60
Washington Ave. EB Right to Fox St.	46	43	38	35	8	8
Washington Ave. WB Left to Fox St.	60	76	69	76	9	0
Washington Ave. WB Thru movement	191	579	209	451	18	128
Washington Ave. WB Right to Walnut St.	13	26	8	15	5	11
Walnut St. Left to Washington Ave. EB	12	7	11	9	1	2
Walnut St. Left to Fox St.	61	46	66	30	5	16
Walnut St. Right to Washington Ave. WB	27	24	41	10	14	14
Fox St. Left to Washington Ave. WB	36	43	30	26	6	17
Fox St. Left to Walnut St.	9	59	29	51	20	8
Fox St. Right to Washington Ave. EB	52	58	35	36	17	22
TOTAL Volumes					108	284

Notes: Red highlighted numbers reflect the volume increase of August data compared to October data.

As presented in the table, the traffic data collected during the month of August is slightly lower than the data collected in the month of October during the morning peak hour and the August data is considerably greater in the PM peak hour.

2. An estimated traffic signal warrant evaluation was conducted at the Washington Avenue/Fox Street/Walnut Street intersection and could not conclusively determine whether a traffic signal should be installed. The applicant should conduct a full comprehensive traffic signal warrant study and render a decision on traffic signalization.

A detailed traffic signal warrant assessment has been completed and is attached as a separate document to the body of this letter. The traffic signal warrant assessment concluded that prevailing travel conditions at the noted intersection do not meet the warrants for signalization.

3. The traffic study should be revised to account for all development land uses. It is my understanding that a restaurant is being proposed and, therefore, should be included in the analysis.

Attached is a copy of the latest development proposal, dated October 17, 2014, which identifies a total of 2,780 square feet of commercial space proposed for the first floor of the development. At this time specific usage of this space remains undetermined. The eighth edition of the Institute of Transportation Engineers (ITE) "TRIP GENERATION" manual was used to determine the volume of site traffic generated by the commercial space. The ITE publication provides numerous land-use categories and the average volume of trips that are generated by each category. The following trip rates were used to calculate the trip generation of the proposed project:

Land Use #814 – Specialty Retail Center
PM Peak Hour = 2.71 trips/1000 square feet

Accordingly, the proposed 2,780 square feet of commercial space can be expected to generate a total of 8 additional site generated trips in the PM peak hour. The previous traffic impact study completed for the proposed 53-apartment units estimated that a total of 27 trips would be generated in the morning peak

hour and a total of 33 trips in the afternoon peak hour. The revised total volume of peak hour trips generated by the proposed 89 Anderson Street project is 27 trips in the morning peak hour and a total of 41 trips in the evening peak hour. As previously discussed with your office, the proposed East Bayside Lofts Project displaces the existing 3G's automobile repair center. Peak hour vehicle trips generated by the existing site should be appropriately deducted from the estimate of "new" site generated trips to forecast the "net" increase in site generated traffic. Attached is a copy of a letter, dated September 17, 2014, which was forwarded to your office that provides documentation on the volume of trips generated by the existing 3G's auto repair facility. The estimate of trips was determined based upon field counts conducted onsite on September 11, 2014. In summary, the existing 3G's auto repair facility generates a total of 12 trips in the morning peak hour and a total of 24 trips in the PM peak hour. Subtraction of these existing trips from the forecasted volume of trips generated by the proposed project results in a total volume of "new" trips generated by the proposed project of 15 trips in the AM peak hour and a total of 17 PM peak hour trips. Both "new" site generated peak hour values are lower than the volume of site generated trips utilized in the traffic impact study completed for the proposed project in August 2104. Therefore, the intersection levels of service summary, presented in the August traffic impact study, are conservative estimates of the project's impact on intersection operations.

October 2, 2014 E-Mail Document

4. *Contact Ethan Owens from the City's Recreational Department and get a schedule of field events.*

Please find attached copies of the City's fall schedule of events held at the East Bayside Athletic Facility. The majority of events scheduled for weekdays are between the hours of 5:00 and 8:00 PM. A traffic count was conducted at the Anderson Street/Fox Street intersection on Friday, October 24, 2014 between the hours of 12-Noon and 6:00 PM (Copy of traffic data is attached for reference) to measure the traffic impacts of the recreational uses at the East Bayside Field Complex. Two events were scheduled for the field complex that evening; unfortunately weather conditions required cancelation of both events. The scheduled count was completed anyway to measure the impact of the adjacent Mosque has on traffic operations at the intersection. The traffic data was summarized and it was determined that the peak hour at the intersection occurred between the hours of 3:45 and 4:45 PM when a total of 652 vehicles entered the intersection. The most recent traffic data was then compared with the traffic count data conducted on Tuesday, August 12, 2014, which was used in the conduct of the traffic impact study for the project to determine the validity of the earlier data. A total of 665 vehicles were recorded at the intersection in August, which represents a slightly higher volume than the October data. Although it would have been desirable to obtain traffic data for the intersection during scheduled field events at the East Bayside Field Complex; a high level of confidence remains in the validity of the conclusions of the traffic impact study even with omission of traffic data generated by the sports field complex. The noted intersection was projected to operate at the absolutely best level of service (Level of Service A) under post-development conditions and, based upon that determination, it is highly reasonable to assume that more than acceptable traffic operations would remain at the intersection even with the addition of significantly heavier peak hour volumes of traffic generated by the Sports fields.

5. *Contact the Mosque and see what their schedule is.*

A gentleman at the Mosque advised that the busiest time period at the religious facility occurs on a Friday between the hours of 12-Noon and 6:00 PM. A traffic survey was conducted at the Anderson Street/Fox Street intersection between the noted hours (Copy of the data summary is attached). From a summary of the data a peak hour was determined for the six hour manual traffic count. The highest volume of vehicles entering the intersection occurred between 3:45 and 4:45 PM when a total of 652 vehicles entered the intersection. The total volume of traffic recoded during this time period is slightly lower than the values measured during the month of August, when a total of 665 vehicles was recorded.


Pedestrian travel through the intersection was somewhat heavy between 12:00 and 1:30 PM, when more than 90 pedestrians walked through the intersection.

6. Contact the North End School and see if they have any unusual days in the coming weeks.

The school administrative office advised that the school has early discharge times on Wednesdays, while Tuesdays and Thursdays generally represent typical conditions.

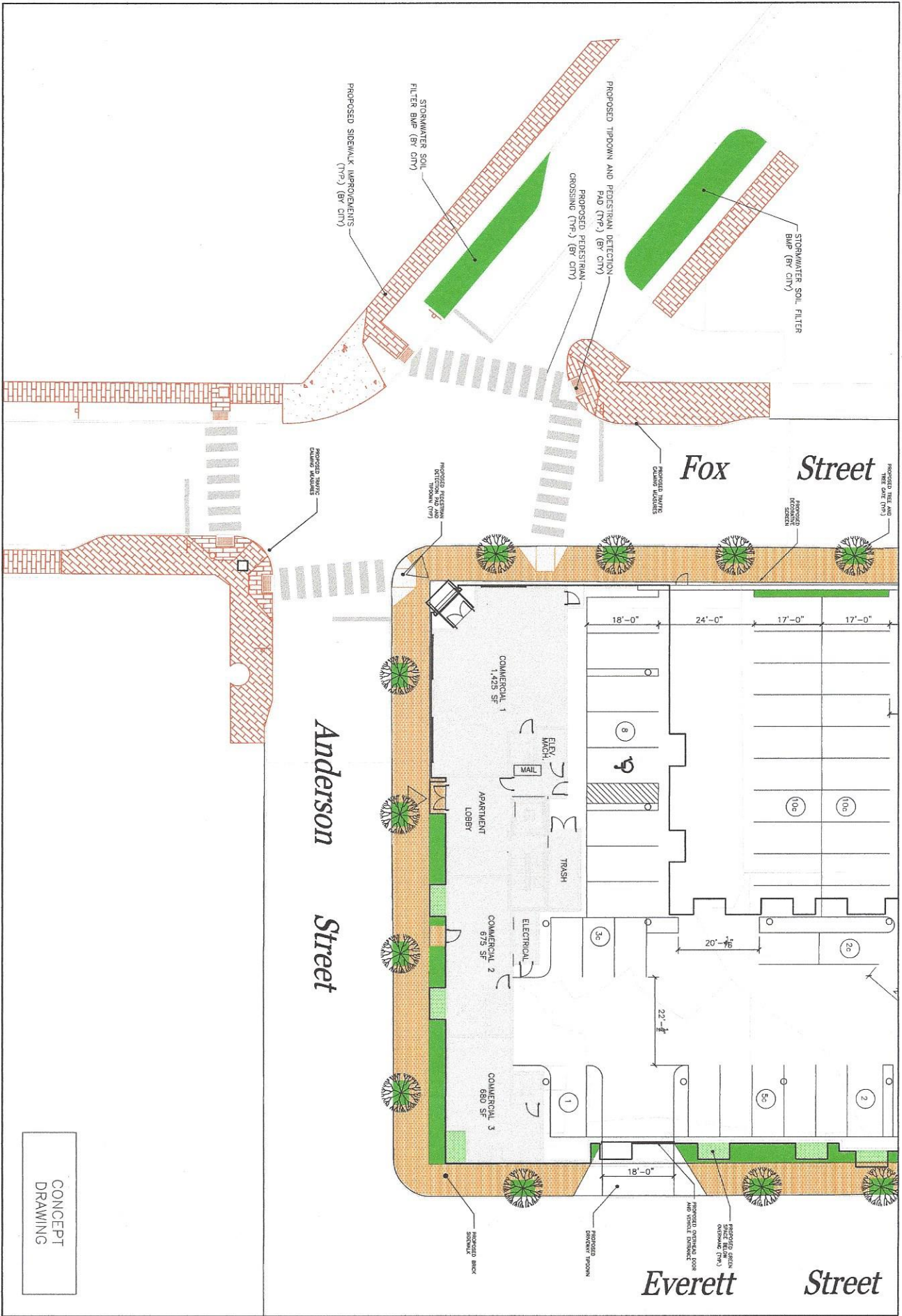
Tom, your assistance and guidance in sorting through the myriad of traffic issues and determining the additional traffic data and analyses requirements is much appreciated. Please contact me with questions or clarification of the information enclosed.

Very truly yours,



WILLIAM
JAMES
BRAY
NO. 407
PROFESSIONAL ENGINEER

William J. Bray, P.E.



CONCEPT
DRAWING

DRAWING NO. C-11	SCALE 1"=10' DATE 03-17-2014 DRAWN BY MJD CHECKED BY MJD	ACORN ENGINEERING, INC. 158 DANFORTH STREET, PORTLAND, MAINE 04102 (207) 775-2255	DRAWING NAME SITE LAYOUT PLAN	PROJECT NAME EAST BAYSIDE LOFTS CLIENT: REDFERN MUNJOY, LLC. P.O. BOX 8816 PORTLAND, ME 04104
			ISSUED FOR CONCEPT REVISION REV. NO. DATE	



Traffic Solutions

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September 17, 2014

Jonathan Culley
Redfern Properties, LLC
P.O. Box 8816
Portland, Maine 04104

RE: Portland Anderson Street Apartment Project – Trip Generation 3G’s Garage

Dear Jonathan:


In an effort to accurately measure the existing volume of peak hour traffic generated by the 3G’s auto repair garage, in-field traffic counts were conducted on Thursday, September 11 (Field data summary sheets from that effort are attached for documentation of the results). Manual traffic counts were conducted between the hours of 7:30 to 9:00 AM and again between 3:30 to 5:30 PM. From a summary of the data during each peak travel period, the total volume of trips entering or exiting the garage was determined. A total of 12 vehicle trips was recorded entering/exiting the garage during the morning peak hour (7:30 to 8:30 AM) and a total of 24 trips was measured in the evening peak hour of 3:30 to 4:30 PM.

Your proposed 53-unit apartment project, which will raze the existing 3G’s garage, is projected to generate a total of 27 trips in the AM peak hour and 33 trips during the PM peak hour. Accordingly, the “net” increase in vehicle trips generated by the proposed 53-unit apartment project is 15 trips during the AM peak hour and 9 trips in the PM peak hour.

The Traffic Impact Study conducted for the proposed project by Traffic Solutions was prepared based upon the full vehicle trip generation of the 53-unit apartment project with no deduction applied for vehicle trips generated by the existing 3G’s auto repair garage. The results presented in the noted report represent an extremely conservative assessment of the projects traffic impact.

I spoke to Tom Errico, P.E.; the City’s Peer Traffic Consultant, yesterday and promised him a copy of this letter to further assist him in his review of the traffic impacts of the proposed project.

Very truly yours,

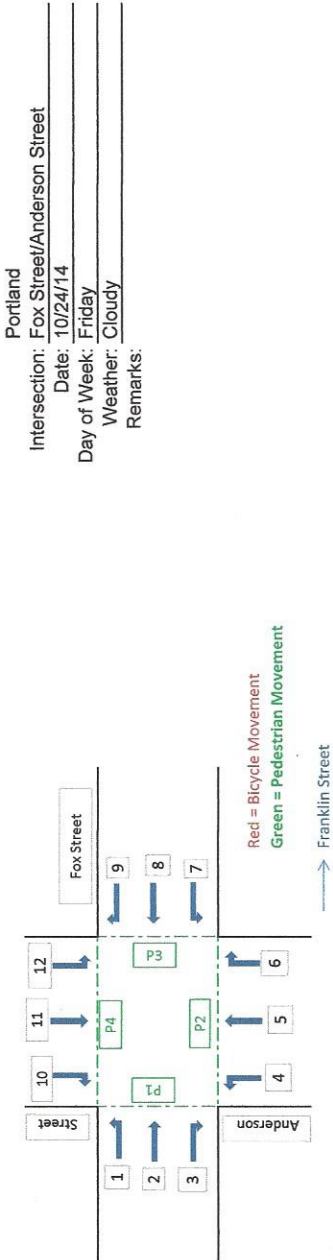

William J. Bray, P.E.
Cc: Thomas Errico, P.E.





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**INTERSECTION PLAN
 WITH NUMBERED MOVEMENTS:**



Portland
 Intersection: Fox Street/Anderson Street

Date: 10/24/14

Day of Week: Friday

Weather: Cloudy

Remarks:

Count Summary Movement

Start	End	1	2	3	4	5	6	7	8	9	10	11	12	Total	P1	P2	P3	P4	C2	C4	C5	C6	C7	C8	C9	C11	C12
12:00	12:15	2	31	4	8	16	12	35	12	10	10	10	10	150	0	1	2	1	0	0	0	0	0	0	0	0	0
Truck Count		0	0	0	0	1	1	0	2	0	0	0	0	4													
12:15	12:30	0	28	3	6	11	17	30	16	2	5	5	13	147	5	0	2	1	0	0	0	1	0	0	0	0	0
Truck Count		0	2	0	1	1	0	0	1	0	0	0	1	6													
12:30	12:45	0	28	3	4	10	16	12	27	7	4	3	15	129	6	1	3	1	0	0	0	0	1	0	0	0	0
Truck Count		0	1	0	0	0	0	0	2	0	0	1	1	5													
12:45	1:00	1	28	7	8	10	18	7	27	16	2	8	11	143	4	1	8	0	0	0	0	0	0	0	0	0	0
Truck Count		0	2	0	0	1	1	0	2	1	0	0	0	7													
1:00	1:15	0	30	5	3	8	19	11	29	4	0	6	10	125	4	2	3	1	0	0	1	0	0	0	0	0	0
Truck Count		0	1	0	0	0	0	0	0	2	0	0	0	3													
1:15	1:30	0	39	3	14	20	48	7	32	9	3	3	21	199	23	1	19	3	2	1	1	0	0	0	0	0	0
Truck Count		0	0	0	0	0	0	0	0	0	0	0	0	0													
1:30	1:45	0	37	3	4	13	32	10	23	12	1	1	13	149	1	1	0	1	0	0	0	0	0	0	0	0	0
Truck Count		0	1	0	0	0	4	1	0	0	0	0	0	6													
1:45	2:00	1	31	4	4	12	41	10	27	13	1	4	8	156	2	1	4	3	0	0	0	0	0	0	0	0	0
Truck Count		0	0	0	0	0	2	1	0	0	0	0	0	3													
2:00	2:15	0	33	5	4	5	12	5	16	12	1	4	17	114	0	0	0	0	0	0	0	0	0	0	0	0	1
Truck Count		0	0	0	0	0	1	0	0	0	0	0	0	1													
2:15	2:30	0	34	3	4	6	2	10	25	8	1	6	13	112	1	2	2	4	0	0	0	1	1	0	0	0	0
Truck Count		0	0	0	0	0	2	0	0	0	0	0	0	2													
2:30	2:45	0	22	1	5	7	9	6	33	11	2	3	17	116	7	1	0	1	0	0	0	0	0	0	0	0	1
Truck Count		0	0	0	0	0	0	0	0	0	0	0	0	0													
2:45	3:00	2	26	3	6	7	17	7	33	20	1	5	12	139	0	1	1	1	0	0	0	0	0	1	2	0	2
Truck Count		0	0	1	0	0	3	0	0	0	0	0	0	4													

PEAK HOUR COUNT		15	25	35	45	55	65
1	139	15	25	35	45	55	65
TIME:	1:00	TO:	1:05	1:10	1:15	1:20	1:25
5	14	19	24	29	34	39	44
641							

September 2014

East Bayside Athletic Facility

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	
	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	11:00 AM-3:00 PM W rugby AF Field Rental Portland Womens Rugby Club / Brittney Braasch 11:00 AM-3:00 PM	
7	8	9	10	11	12	13
10:45 AM-1:15 PM Plymouth HSL Adult FB AF Game Field Prep The Plymouth House / John Buro 10:45 AM-1:15 PM 2:00 PM-6:00 PM Soccer League AF Game Field Prep Portland Latino League Soccer / carlos salamonca 2:00 PM-6:00 PM	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	5:00 PM-8:00 PM Practice AF Field Rental Men's Rugby AF Game Field Prep Portland Rugby Club - Men's / Matthew Winch 12:00 PM-4:00 PM	
14	15	16	17	18	19	20
10:45 AM-1:15 PM Plymouth HSL Adult FB AF Game Field Prep The Plymouth House / John Buro 10:45 AM-1:15 PM	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	11:00 AM-3:00 PM W rugby AF Field Rental Portland Womens Rugby Club / Brittney Braasch 11:00 AM-3:00 PM
21	22	23	24	25	26	27
10:45 AM-1:15 PM Plymouth HSL Adult FB AF Game Field Prep The Plymouth House / John Buro	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth	5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth	11:00 AM-3:00 PM W rugby AF Field Rental Portland Womens Rugby Club / Brittney Braasch

For Facility: East Bayside Athletic Facility | For Room: Fox Multipurpose Field | From Date: 9/1/2014 |
Thru Date: 11/1/2014

Recreation & Facilities Management



September 2014

East Bayside Athletic Facility

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
21 10:45 AM-1:15 PM	22 5:00 PM-8:00 PM	23 5:00 PM-8:00 PM	24 5:00 PM-8:00 PM	25 5:00 PM-8:00 PM	26 5:00 PM-8:00 PM	27 11:00 AM-3:00 PM
28 10:45 AM-1:15 PM Plymouth HSL Adult FB AF Game Field Prep The Plymouth House / John Buro 10:45 AM-1:15 PM	29 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	30 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM				



October 2014

East Bayside Athletic Facility

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	2 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	3 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	4 12:00 PM-4:00 PM Men's Rugby AF Game Field Prep Portland Rugby Club - Men's / Matthew Winch 12:00 PM-4:00 PM
5 10:45 AM-1:15 PM Plymouth HSL Adult FB AF Game Field Prep	6 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	7 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	8 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	9 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	10 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	11 12:00 PM-4:00 PM Men's Rugby AF Game Field Prep Portland Rugby Club - Men's / Matthew Winch 12:00 PM-4:00 PM
12 10:45 AM-1:15 PM Plymouth HSL Adult FB AF Game Field Prep	13 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	14 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	15 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	16 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	17 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	18 12:00 PM-4:00 PM Men's Rugby AF Game Field Prep Portland Rugby Club - Men's / Matthew Winch 12:00 PM-4:00 PM
19 10:45 AM-1:15 PM Plymouth HSL Adult FB AF Game Field Prep	20 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	21 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	22 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	23 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	24 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	25 12:00 PM-4:00 PM Men's Rugby AF Game Field Prep Portland Rugby Club - Men's / Matthew Winch 12:00 PM-4:00 PM
26 10:45 AM-1:15 PM Plymouth HSL Adult FB AF Game Field Prep	27 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	28 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	29 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	30 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	31 5:00 PM-8:00 PM Practice AF Field Rental PYFL / Football League Portland Youth 5:00 PM-8:00 PM	



October 2014

East Bayside Athletic Facility

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	31	
The Plymouth House / John Buro 10:45 AM-1:15 PM						



November 2014

East Bayside Athletic Facility

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1

