

2037 Off-Site With-Project AM & PM Peak Hour Traffic Volumes

FIGURE

16

Future With-Project Traffic Operations

An operational analysis was conducted at the study intersections to evaluate the future (2022) weekday AM and PM peak hour conditions with the project. The results of the with-project analysis were compared to the without-project conditions to identify the potential project impacts. Table 17 summarizes the future with and without-project LOS for the forecast 2022 weekday AM and PM peak hour. Table 18 summarizes the LOS results for 2037 without and with-project conditions. The Master Plan's intersection proportionate share based on the City of Kirkland method is also shown in the tables. Detailed LOS worksheets are included in Appendix D. The shaded intersections are those operating below the current LOS standard.

Table 17. Future 2022 Weekday Peak Hour LOS Summary

Intersection	Jurisdiction	LOS Standard	2022 Without-Project			2022 With-Project			Proportionate Share ⁵
			LOS ¹	Delay ²	WM ³	LOS ¹	Delay ²	WM ³	
<u>Weekday AM Peak Hour</u>									
1. 6th Street S / Central Way	Kirkland	D	C	30	-	C	30	-	2.1%
2. 6th Street S / Kirkland Way	Kirkland	D	A	10	-	A	10	-	2.2%
3. 6th Street S / 9th Avenue S	Kirkland	D	A	7	-	A	7	-	1.0%
4. State Street S / NE 68th Street	Kirkland	D	B	17	-	B	17	-	0.6%
5. 108th Avenue / NE 68th Street	Kirkland	D	F	108	-	F	121	-	7.7%
6. I-405 Ramps / NE 70th Place	WSDOT	E	F	168	-	F	>180	-	5.5%
7. 116th Avenue NE / NE 70th PI	Kirkland	D	F	114	-	F	117	-	7.2%
8. 116th Avenue NE / I-405 Ramps ⁴	WSDOT	E	B	20	-	B	20	-	4.1%
9. 132nd Avenue NE / NE 70th PI	Kirkland	D	D	41	-	D	42	-	0.9%
10. 108th Avenue NE / NE 60th St	Kirkland	D	F	142	WB	F	>180	WB	4.5%
11. 108th Avenue NE / NE 53rd St	Kirkland	D	F	>180	WBL	F	>180	WBL	12.8%
12. 108th Avenue NE / NE 48th St	Kirkland	D	E	37	WB	E	40	WB	1.9%
13. 108th Avenue NE / NE 45th St	Kirkland	D	D	28	WB	E	38	WB	1.9%
<u>Weekday PM Peak Hour</u>									
1. 6th Street S / Central Way	Kirkland	D	D	48	-	D	49	-	2.1%
2. 6th Street S / Kirkland Way	Kirkland	D	B	11	-	B	11	-	2.2%
3. 6th Street S / 9th Avenue S	Kirkland	D	A	7	-	A	7	-	1.0%
4. State Street S / NE 68th Street	Kirkland	D	D	52	-	D	52	-	0.6%
5. 108th Avenue / NE 68th Street	Kirkland	D	E	76	-	F	105	-	7.7%
6. I-405 Ramps / NE 70th Place	WSDOT	E	E	73	-	F	113	-	5.5%
7. 116th Avenue NE / NE 70th PI	Kirkland	D	C	35	-	D	36	-	7.2%
8. 116th Avenue NE / I-405 Ramps ⁴	WSDOT	E	F	81	-	F	83	-	4.1%
9. 132nd Avenue NE / NE 70th PI	Kirkland	D	E	79	-	E	80	-	0.9%
10. 108th Avenue NE / NE 60th St	Kirkland	D	F	82	WB	F	154	WB	4.5%
11. 108th Avenue NE / NE 53rd St	Kirkland	D	F	128	WBL	F	>180	WBL	12.8%
12. 108th Avenue NE / NE 48th St	Kirkland	D	D	27	WB	D	31	WB	1.9%
13. 108th Avenue NE / NE 45th St	Kirkland	D	D	27	WB	D	30	WB	1.9%

Notes: Shaded intersections operate below City of Kirkland LOS D or WSDOT Mitigated LOS E standards.

1. LOS as defined by the HCM (TRB, 2010)

2. Average delay per vehicle in seconds.

3. Worst movement (WM) reported for stop-controlled intersections where WB = westbound approach and WBL = westbound left-turn movement.

4. Analyzed in HCM 2000 due to intersection configuration and signal phasing.

5. City of Kirkland proportionate share calculation methodology. Proportional share is calculated based on the current enrollment projections and potential phasing of the Master Plan. The Master Plan will be phased over a 20-year period.

Table 18. Future 2037 Weekday Peak Hour LOS Summary

Intersection	Jurisdiction	LOS Standard	2037 Without-Project			2037 With-Project			Proportionate Share ⁵
			LOS ¹	Delay ²	WM ³	LOS ¹	Delay ²	WM ³	
<u>Weekday AM Peak Hour</u>									
1. 6th Street S / Central Way	Kirkland	D	D	54	-	E	55	-	3.8%
2. 6th Street S / Kirkland Way	Kirkland	D	B	12	-	B	13	-	4.0%
3. 6th Street S / 9th Avenue S	Kirkland	D	B	10	-	B	11	-	1.7%
4. State Street S / NE 68th Street	Kirkland	D	B	17	-	B	17	-	1.2%
5. 108th Avenue / NE 68th Street	Kirkland	D	F	151	-	F	177	-	13.8%
6. I-405 Ramps / NE 70th Place	WSDOT	E	F	>180	-	F	>180	-	9.9%
7. 116th Avenue NE / NE 70th PI	Kirkland	D	F	>180	-	F	>180	-	13.0%
8. 116th Avenue NE / I-405 Ramps ⁴	WSDOT	E	C	25	-	C	26	-	7.3%
9. 132nd Avenue NE / NE 70th PI	Kirkland	D	F	88	-	F	90	-	1.6%
10. 108th Avenue NE / NE 60th St	Kirkland	D	F	>180	WB	F	>180	WB	8.0%
11. 108th Avenue NE / NE 53rd St	Kirkland	D	F	>180	WBL	F	>180	WBL	22.9%
12. 108th Avenue NE / NE 48th St	Kirkland	D	F	76	WB	F	88	WB	3.4%
13. 108th Avenue NE / NE 45th St	Kirkland	D	E	43	WB	E	47	WB	3.4%
<u>Weekday PM Peak Hour</u>									
1. 6th Street S / Central Way	Kirkland	D	F ⁴	88	-	F	88	-	3.8%
2. 6th Street S / Kirkland Way	Kirkland	D	B	14	-	B	15	-	4.0%
3. 6th Street S / 9th Avenue S	Kirkland	D	B	11	-	B	13	-	1.7%
4. State Street S / NE 68th Street	Kirkland	D	F	96	-	F	97	-	1.2%
5. 108th Avenue / NE 68th Street	Kirkland	D	F	103	-	F	146	-	13.8%
6. I-405 Ramps / NE 70th Place	WSDOT	E	F	142	-	F	>180	-	9.9%
7. 116th Avenue NE / NE 70th PI	Kirkland	D	E	66	-	E	75	-	13.0%
8. 116th Avenue NE / I-405 Ramps ⁴	WSDOT	E	F	141	-	F	147	-	7.3%
9. 132nd Avenue NE / NE 70th PI	Kirkland	D	F	145	-	F	149	-	1.6%
10. 108th Avenue NE / NE 60th St	Kirkland	D	F	>180	WB	F	>180	WB	8.0%
11. 108th Avenue NE / NE 53rd St	Kirkland	D	F	>180	WBL	F	>180	WBL	22.9%
12. 108th Avenue NE / NE 48th St	Kirkland	D	E	41	WB	E	49	WB	3.4%
13. 108th Avenue NE / NE 45th St	Kirkland	D	E	39	WB	E	47	WB	3.4%

Notes: Shaded intersections operate below City of Kirkland LOS D or WSDOT Mitigated LOS E standards.

1. LOS as defined by the HCM (TRB, 2010)

2. Average delay per vehicle in seconds.

3. Worst movement (WM) reported for stop-controlled intersections where WB = westbound approach and WBL = westbound left-turn movement.

4. Analyzed in HCM 2000 due to intersection configuration and signal phasing.

5. City of Kirkland proportionate share calculation methodology. Proportional share is calculated based on the current enrollment projections and potential phasing of the Master Plan. The Master Plan will be phased over a 20-year period.

As discussed previously, the City adopted standard is LOS D and WSDOT's is LOS E mitigated with the study area. As shown in Table 17 and Table 18, several of the study intersections already operate at LOS E or F and this is anticipated to continue for both 2022 and 2037 weekday AM and PM peak hour conditions with the project. In addition, intersection operations would degrade to LOS E or F at the following locations:

- NE 70th Street/I-405 Ramps – degrades from LOS E to LOS F with the project in 2022 during the weekday PM peak hour
- 108th Avenue NE/NE 68th Street – degrades from LOS E to LOS F with the project in 2022 during the weekday PM peak hour
- 6th Street S/Central Way – degrades from LOS D to LOS E with the project in 2037 during the weekday AM peak hour

- 116th Avenue NE/I-405 Ramps – degrades from LOS D to LOS E with the project in 2037 during the weekday PM peak hour
- 108th Avenue NE/NE 45th Street – degrades from LOS D to LOS E with the project in 2022 during the weekday AM peak hour

Based on the City's *Traffic Impact Analysis Guidelines* (August 2014), the City defines a SEPA impact requiring mitigation at signalized and unsignalized locations where the project's proportional share of daily intersection traffic related to the capacity of the intersection represents the following:¹⁴

- More than 15 percent at intersections operating at LOS E
- More than 5 percent at intersections operating at LOS F

Table 17 and Table 18 summarize the proportionate share at each off-site study intersection. Appendix A contains the proportionate share calculation worksheets for each intersection under 2022 and 2037 conditions.

Based on the adopted LOS standards, forecast traffic operations, and the proportionate share calculations, mitigation would be required to address project impacts at four City of Kirkland study intersections under either 2022 or 2037 conditions:

- 116th Avenue NE / NE 70th Place
- 108th Avenue NE / NE 68th Street
- 108th Avenue NE / NE 60th Street
- 108th Avenue NE / NE 53rd Street

Mitigation measures to address intersection impacts of the Master Plan are summarized in Mitigation and Recommendations section of this study.

For WSDOT locations, based on the *Development Services Manual*, April 2016 when a development affects a highway intersection where LOS is already below the applicable threshold, then the pre-development LOS is the condition that is preserved. WSDOT also notes that mitigation must be reasonably related and proportional to the development's impacts. As described in the future without-project section, LOS F conditions at the NE 70th Street/116th Avenue NE/I-405 ramps were previously identified in the City's 2015 *Transportation Master Plan*. No specific improvements have been identified at this location but the City recognizes the need to coordinate with WSDOT on improvements at this interchange.

In addition to intersection LOS, the City's 2015 Comprehensive Plan also reviewed traffic operations for key corridors during the weekday PM peak hour including 108th Avenue NE-6th Street. The EIS Alternatives were studied for a 2035 horizon year and a review of traffic volumes shows that the 2037 forecasts were generally higher than the EIS Alternative 1. The 2037 108th Avenue NE-6th Street corridor operations would be LOS E consistent with the 2015 Comprehensive Plan.

¹⁴ See Table 1 of the City of Kirkland *Traffic Impact Analysis Guidelines*, Revised August 2014.

Site Access & Neighborhood Context

The following sections summarize future site access traffic volumes, driveway operations, and traffic conditions in the neighborhood surrounding the campus.

Driveway Traffic Volumes

Forecast 2022 and 2037 site access driveway traffic volumes were forecast consistent with the previously described methodologies. The assignment of future project trips to the campus driveways assumed a distribution based on the existing driveway travel patterns and the location of future Master Plan uses. The tennis center trips were assigned exclusively to the 110th Way NE driveway and trips generated by public use of the sports fields were assigned exclusively to the 111th Lane NE driveway. Master Plan-related vehicle trips were then added to the future 2022 and 2037 without-project traffic volumes to form the basis of the with-project analysis. Figure 17 shows the 2022 forecast with-project weekday AM and PM peak hour traffic volumes at the campus driveways and 2037 traffic volumes are shown on Figure 18.

Driveway Traffic Operations

Traffic operations under forecast future with-project traffic volumes were evaluated consistent with the methodology previously described for existing and future without-project conditions. Table 19 summarizes the 2022 forecast without-project AM and PM peak hour intersection operations for the campus driveways and Table 20 summarizes 2037 forecast operations.

Table 19. Future 2022 With-Project Weekday Peak Hour Site Access LOS Summary

Intersection	AM Peak Hour			PM Peak Hour		
	LOS ¹	Delay ²	WM ³	LOS ¹	Delay ²	WM ³
A. 108th Avenue NE / Davis Driveway	B	12	WB	C	24	WB
B. 108th Avenue NE / 55th Lane NE (Main Driveway)	C	17	WB	D	34	WB
C. 110th Way / NE 53rd Street	B	12	NB	B	14	NB
D. 111th Avenue NE / NE 53rd Street	B	10	SB	B	11	SB
E. 111th Lane NE / NE 53rd Street	B	10	NB	C	17	NB
F. Barton Driveway / NE 53rd Street	A	9	SB	A	9	SB
G. 114th Avenue NE / NE 53rd Street	A	10	NB	A	10	NB
11. 108th Avenue NE / NE 53rd Street	F	>180	WBL	F	>180	WBL

Note: Shaded intersections operate below City of Kirkland LOS standards. The City's LOS standard does not apply to unsignalized site access driveways

1. LOS as defined by the HCM (TRB, 2010)

2. Average delay per vehicle in seconds.

3. Worst movement (WM) reported for stop-controlled intersections where WBL = westbound left-turn movement and EB = eastbound approach.

Table 20. Future 2037 With-Project Weekday Peak Hour Site Access LOS Summary

Intersection	AM Peak Hour			PM Peak Hour		
	LOS ¹	Delay ²	WM ³	LOS ¹	Delay ²	WM ³
A. 108th Avenue NE / Davis Driveway	C	22	WB	D	35	WB
B. 108th Avenue NE / 55th Lane NE (Main Driveway)	C	24	WB	F	91	WB
C. 110th Way / NE 53rd Street	B	13	NB	C	15	NB
D. 111th Avenue NE / NE 53rd Street	B	10	SB	B	12	SB
E. 111th Lane NE / NE 53rd Street	B	13	NB	C	18	NB
F. Barton Driveway / NE 53rd Street	A	9	SB	A	9	SB
G. 114th Avenue NE / NE 53rd Street	A	10	NB	A	10	NB
11. 108th Avenue NE / NE 53rd Street	F	>180	WBL	F	>180	WBL

Note: Shaded intersections operate below City of Kirkland LOS standards. The City's LOS standard does not apply to unsignalized site access driveways.

1. LOS as defined by the HCM (TRB, 2010)

2. Average delay per vehicle in seconds.

3. Worst movement (WM) reported for stop-controlled intersections where WBL = westbound left-turn movement and EB = eastbound approach.

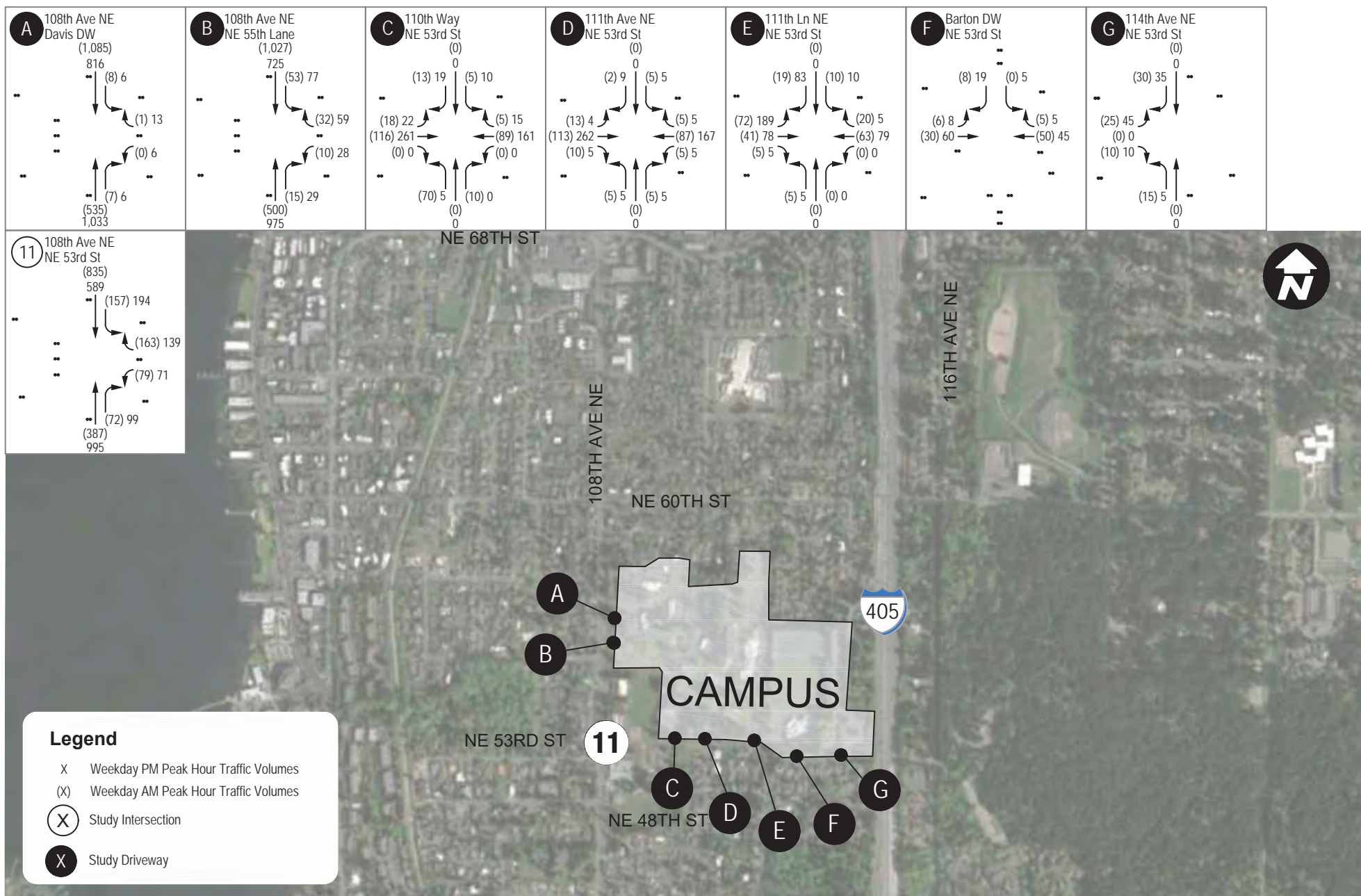
As shown in Table 19, all site access driveways are forecasted to operate at LOS D or better in both peak hours under 2022 with the forecast on-campus student enrollment growth. With additional background traffic growth and the Master Plan and enrollment growth by 2037, as shown in Table 20, the 108th Avenue NE/55th Lane NE intersection is forecasted to operate at LOS F during the weekday PM peak hour. In addition, as discussed previously, the 108th Avenue NE/NE 53rd Street intersection, which provides access to the campus driveways along NE 53rd Street, would operate at LOS F. Improvements to address potential operations issues and impacts are described in the Mitigation and Recommendations section of this study.

Driveway Configuration and Spacing

As discussed previously, the Master Plan does not propose any new driveways; however, it does propose to realign the 111th Avenue NE driveway to accommodate the proposed tennis center. The City of Kirkland's *Policy R-4: Driveway Policy*, April 2016 outlines the standards for driveway configuration and spacing. The proposed driveway improvements were reviewed against this policy.

The proposed realignment would create an offset intersection by moving 111th Avenue NE to the east or right of the existing driveway south of NE 53rd Street. Based on City Policy R-4, the City prefers new driveways be aligned with existing opposing driveways or be offset to the left of the existing opposing driveway in order to minimize left turn conflicts on the streets. The current proposed realignment of the 111th Avenue NE driveway would result in new left-turn conflicts with the existing opposing southern leg of 111th Avenue NE. In order to minimize these conflicts, consistent with the City's Policy R-4, it is recommended that left-turns be restricted to and from the Northwest University 111th Avenue NE access.

The proposed driveway realignment would meet the City of Kirkland driveway spacing requirements. The City requires a driveway spacing of 50-feet along collectors, such as NE 53rd Street, for non-residential use.

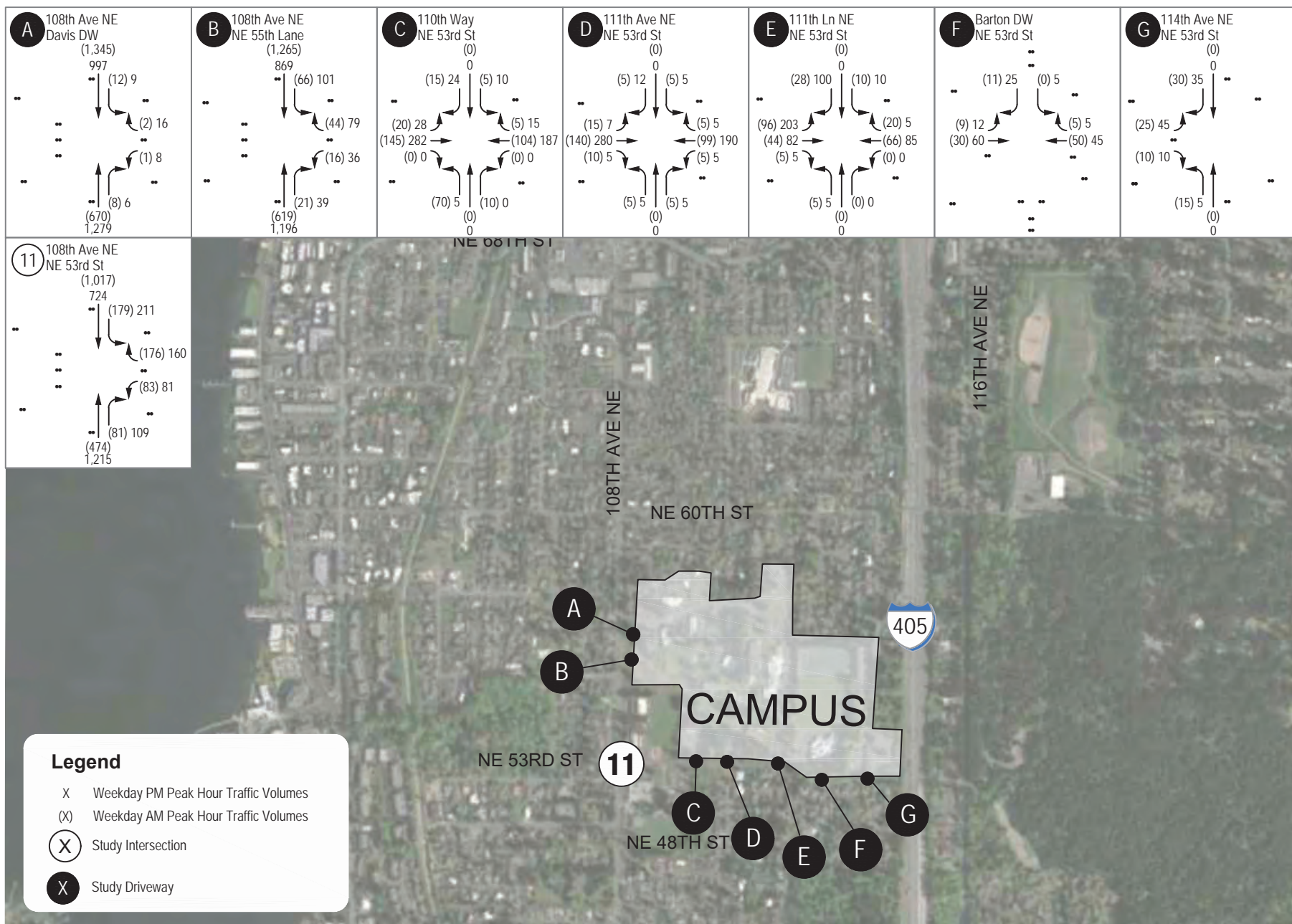


2022 With-Project Site Access AM & PM Peak Hour Traffic Volumes

Northwest University Master Plan

FIGURE

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2037 With-Project Site Access AM & PM Peak Hour Traffic Volumes

Northwest University Master Plan

FIGURE

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Neighborhood Traffic Conditions

The Master Plan and growth in student enrollment would result in additional traffic to and from the campus. Resulting project neighborhood impacts would include:

- **Contribution to Speeding Traffic along NE 53rd Street.** As noted in existing conditions, there are speeding issues along NE 53rd Street and with the additional traffic due to the Master Plan the number of vehicles travelling above the posted speed limit would likely increase.
- **Increase Conflicts at 108th Avenue NE/NE 53rd Street Intersection.** As traffic volumes increase, the number of conflicts between various modes would increase. This would include an increase in conflicts with the school-related activity already occurring at this intersection.
- **Increase in Neighborhood Cut-Through Traffic.** The review of existing neighborhood cut-through traffic to and from the campus showed very few vehicles related to Northwest University travelled within the neighborhood. With increases in traffic volumes and congestion in the study area, there could be some increase in neighborhood cut-through traffic including for vehicles associated with the campus.

Mitigations to address these neighborhood impacts are discussed in the Mitigation and Recommendations section.

Parking

This section summarizes the anticipated Master Plan parking supply and demand.

Supply

The master plan would construct 300 additional parking spaces and eliminate 122 parking spaces. The net increase in campus parking would be 178 parking spaces. Under the initial redevelopment anticipated by 2022, a net increase of approximately 120 additional parking stalls are anticipated after accounting for demolished and reconstructed parking spaces/garages. At 2037 buildout the further addition of 56 parking stalls is anticipated for a total increased parking supply of approximately 178 parking stalls. Figure 3, shown previously, illustrates the location of the proposed parking supply.

Peak Demand

Similar to trip generation, changes in parking demand with the Master Plan would be associated with increases in enrollment, the tennis center, public use of the sports fields as well as events on campus related to the banquet facilities. Parking demand for Northwest University is anticipated to be highest midday on a weekday when classes are in session.

Campus Parking

As described previously, the current campus contains 1,166 parking spaces and the existing peak parking demand is 638 vehicles occurring between 10 and 11 a.m. The Kirkland campus currently enrolls approximately 1,230 students, which would equate to 0.52 vehicles/student during the peak weekday parking period. Parking demand associated with faculty, staff, and visitors is reflected in the existing demand and thus included in the rate.

As discussed previously, the University is projected to increase campus enrollment by 370 students by 2022 and 770 students by 2037. Table 21 summarizes the campus projected weekday peak parking demand for 2022 and 2037 conditions.

Table 21. Peak On-Campus Parking Summary

Year	On-Campus Enrollment	Peak Parking Demand Rate	Peak Parking Demand	Campus Parking Supply
2015 / 2016	1,230 students	0.52 veh / student	638 vehicles	1,166 stalls
2022	1,600 students	0.52 veh / student	832 vehicles	1,288 stalls
2037	2,000 students	0.52 veh / student	1,040 vehicles	1,344 stalls

As shown in Table 21, parking demand is estimated to increase by 194 vehicles by 2022 and an additional 208 vehicles by 2037. In addition, it is anticipated that campus parking supply would increase by 142 stalls by 2022 and 178 stalls by 2037. In addition to students, faculty and staff, the campus parking would also accommodate parking demands associated with the tennis center and public field use. The following describes these additional parking demands and how the parking demand for all the proposed uses would be accommodated on-campus.

Tennis Center Parking

Estimated weekday tennis center peak parking demand was calculated based on ITE *Parking Generation*, 4th Edition. The racquet/tennis club (LU 491) average parking demand rate was used to estimate the tennis center parking demand. A weekday peak parking demand of 21 vehicles is anticipated at approximately 7 p.m. It is anticipated that at 10 a.m. when the University parking peaks, the tennis center parking demand would be 11 vehicles.

There are limited viewing areas and there is no seating to view matches at the tennis center. It is anticipated that there would be little to no tournaments at the tennis center. There are lounges similar to other athletic facilities. These lounges accommodate parents waiting for players and provide a transition area as players arrive and depart the facility; this is accounted for in the parking demand for typical weekday conditions. If there are tournaments in the future the parking demand is anticipated to be limited to mostly players and coaches since there would be very limited viewing areas in the proposed tennis center; assuming 2 players and 2 coaches per court, there could be up to 48 people at the tennis center plus there may be a handful of spectators and other facilities management. The tennis center would have approximately 79 spaces associated with it and other parking could be shared on-campus. Parking for the tennis center and the rare occurrence of a tournament would be accommodated on-campus and event management strategies including signage, monitoring, and directing visitors outlined in the mitigations section would be utilized.

Public Field Use

The public sports field is anticipated to start operations after 4 p.m. and not expected to produce parking demand between the 10 to 11 a.m. Based on similar assumptions as applied to trip generation (where under 8 youth soccer would have the highest level of weekday activity), peak parking demand for the public use of the sports fields assumes 128 children and 32 coaches with practice starting at 5:00 p.m. It assumes all the coaches and 90 percent of the children would arrive between 4-5 p.m. and 25 percent of the parents would leave after dropping off the children. All the coaches are assumed to drive alone and parents are assumed only to have only one child in a vehicle. The resulting peak parking demand is 160 vehicles and would occur at approximately 7 p.m.

Similar to the tennis center, the frequency of tournaments for the sports fields is anticipated to be low. Parking for tournaments would be accommodate on-campus and event management strategies including signage, monitoring, and directing visitors outlined in the mitigations section would be utilized.

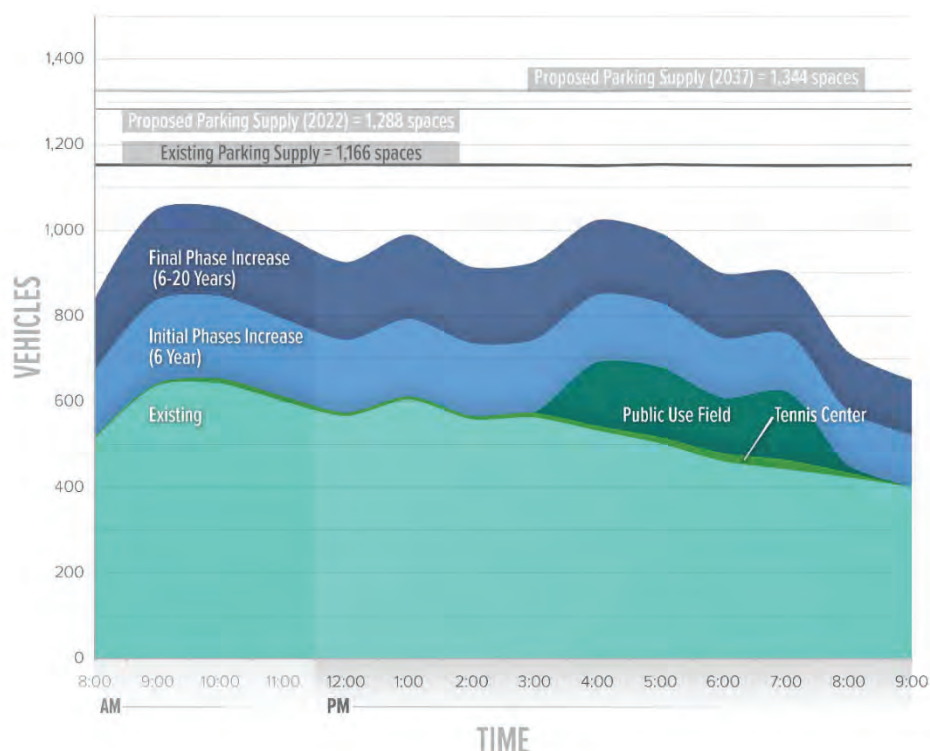
Shared Parking Demand

Parking demand associated with general University operations would peak at a different time of the day compared to the tennis center and public use of the field. The hourly parking demand for the campus was reviewed to determine the adequacy of the campus parking supply. Appendix F provides a summary of the projected hourly parking demand for the site. Hourly parking distributions for the Master Plan uses are based on:

- **Campus-Related Population Demand** – Hourly parking data collected in March 2016 and ITE *Parking Generation*, 4th Edition data for the University/College (LU 550)
- **Tennis Center** – ITE *Parking Generation*, 4th Edition data for the Racquet/Tennis Club (LU 491)
- **Public Use of Sports Fields** – Assuming all the coaches and 90 percent of the children would arrive between 4-5 p.m., 25 percent of the parents would leave after dropping off the children, practice is only 1-hour and only one soccer practice session would occur during the weekday evening.

The project Master Plan weekday hourly parking demand is illustrated on Figure 19. As shown on the figure, the peak parking demand for the campus occurs at approximately 10 a.m. consistent with existing conditions and would be 1,051 vehicles. The existing parking supply could accommodate the anticipated future peak parking demand with the Master Plan for both 2022 (6-year) and 2037 (6-20 year) conditions. With build-out of the Master Plan, parking utilization for the campus would be approximately 90 percent if no new parking was constructed or 78 percent with an additional 178 parking spaces. As shown in the existing conditions section, there are some parking lots on campus that are highly utilized and others that have very low utilization. This shows that there is sufficient parking on campus; however, it may not be in the most convenient location. If parking is not located within a reasonable proximity of the site use, then campus-related traffic may be more likely to park on-street. The provision of parking with the Master Plan would help distribute the location of parking spaces within the campus as well as provide more conveniently located parking for the proposed uses.

Figure 19. Weekday Hourly Master Plan Parking Demand



Event Parking Demand

Tournaments are anticipated to be very limited; the tennis center has no seating and very limited viewing areas and the public fields and gymnasium are not anticipated to have frequent tournaments. As described previously, assuming 2 players and 2 coaches per court, there could be up to 48 people at the tennis center plus there may be a handful of spectators and other facilities management. The tennis center would have approximately 79 spaces associated with it and other parking could be shared on-campus. Parking for the tennis center and the rare occurrence of a tournament would be accommodated on-campus and event management strategies including signage, monitoring, and directing visitors outlined in the mitigations section would be utilized.

The Master Plan includes a banquet facility and gymnasium with up to 900 seats that could have event demands. These events are anticipated to occur during off-peak periods on either weekends or evenings when the overall campus parking demand is low. The following describes potential event parking demand associated with these facilities.

Banquet Facility

The proposed banquet facility within the Welcome Center would accommodate up to 450 guests and be constructed by 2037. It is anticipated that the banquet facilities would be available for evening use. Based hourly parking demand presented on Figure 19 and with the proposed parking supply of 1,344 campus spaces, there would be approximately 355 parking spaces available on-campus at 5 p.m. and parking availability would continue to increase throughout the evening. The proposed parking supply would accommodate the anticipated banquet facility parking needs.

Gymnasium

The increased seating in the gymnasium will provide the ability for the University to hold occasional student assemblies on-campus; there is no existing facility on-campus that has the capacity to accommodate campus-wide student assemblies. The expansion of the gymnasium is not anticipated to increase tournament or playoff activity for the campus. It is anticipated that large attendance levels where up to 900 seats are utilized would occur at most 15 times per year to accommodate events such as baccalaureate services and convocations.

The largest attendance draw for events at the gymnasium is men's basketball games. With additional seats, there could be some increase in attendance at the men's basketball games, but it is not anticipated that the attendance levels would be 900-persons. The increase in attendance at men's basketball games would occur outside the weekday commuter periods and would mainly be a result of increased University student population. The college basketball playoffs are typically one game on-campus at a time with only the two teams playing the game. As described previously, parking demand for men's basketball is typically 0.38 and 0.43 vehicles per seat. Assuming the proposed 900 seats are filled, the parking demand would be 342 to 387 vehicles. It is anticipated that the gymnasium would be constructed by 2022 and the parking supply would be 1,288 stalls on-campus. Basketball games with higher attendance levels typically occur on Friday and Saturday evenings starting at 6 or 8 p.m. As shown in Figure 19, overall campus parking demand would be lower during these periods and approximately 400 to 600 spaces would be available to accommodate the additional parking demand.

Parking would be managed for the banquet facility and gymnasium through event management. Scheduling strategies would be used to manage use of the tennis center, gym, fields and banquet facility such that high activities are not scheduled on the same day. It is anticipated that large attendance levels where up to 900 seats are utilized would occur at

most 15 times per year to accommodate events such as baccalaureate services and convocations.

Traffic Safety

Traffic generated by the proposed master plan would likely result in a proportionate increase in the probability of collisions. As noted previously, the 116th Avenue NE / NE 70th Street intersection was the only intersection where the observed crash rate was greater than the critical crash rate. However, recently collisions have been decreasing at this location. The City regularly monitors major intersections for safety issues and if a pattern of collisions is identified potential safety improvements are reviewed.

Non-Motorized Facilities

The non-motorized facilities in the area as well as the linkages to the existing transit stops are adequate to support the current and future increases in activity. As part of the Master Plan, improvements would be made to pedestrian connectivity to help better utilize parking and reduce driving between portions of the campus. The existing pedestrian path between the lower campus and the FIRS and Student Apartments would be improved and a new staircase would be constructed that provides a more direct connection to the lower campus instead of the existing circuitous route. A new staircase would also be constructed between the fields and the lower parking lot to the west.

As discussed previously, the City's *Transportation Master Plan* recommends NE 53rd Street as a future greenway to accommodate bicycle activity and facilitate connectivity of the City's bicycle network. The proposed Master Plan would not preclude development of this greenway.

Transit Services

It is anticipated that existing transit services would be able to accommodate increases in ridership as a result of the Master Plan and increases in enrollment. As previously described, the nearest transit is located along 108th Avenue NE.

Transportation Concurrency

A transportation concurrency test was completed for this project by the City of Kirkland on May 25, 2016. The proposed project passed the concurrency test based on the forecasted person trip generation shown in the May 25, 2016 memorandum to Tony Leavitt, Senior Planner from Thang Nguyen, Transportation Engineer subjected *NW University Master Plan Traffic Concurrency Test Notice, Tran16-00967*. Appendix G contains the transportation concurrency test notice. The concurrency test notice shall expire and a new concurrency test application is required unless:

- A complete SEPA checklist, traffic impact analysis and all required documentation are submitted to the City within 90 calendar days of the concurrency test notice.
- A Certificate of Concurrency is issued or an extension is requested and granted by the Public Works Department within one year of issuance of the concurrency test notice. (A Certificate of Concurrency is issued at the same time a development permit or building permit is issued if the applicant holds a valid concurrency test notice.)
- A Certificate of Concurrency shall expire six years from the date of issuance of the concurrency test notice unless all building permits are issued for buildings approved under the concurrency test notice.

Mitigation and Recommendations

With each building permit, a traffic review would be conducted including an assessment of potential neighborhood impacts and mitigation measures. Potential mitigation measures are described below. The basic framework of the mitigation plan includes recommendations with respect to:

- Intersection Improvements
- Traffic Calming
- Parking / Internal Campus Connectivity
- Event Management

In addition, the University would be responsible for payment of City of Kirkland transportation impact fees to mitigate general transportation related impacts of the Master Plan.

Intersection Improvements

Based on the traffic operations impacts at the study intersections, potential mitigation measures were identified at the following locations:

- 116th Avenue NE / NE 70th Place
- 108th Avenue NE / NE 68th Street
- 108th Avenue NE / NE 60th Street
- 108th Avenue NE / NE 53rd Street

116th Avenue NE/NE 70th Place

Traffic operations at the 116th Avenue NE/NE 70th Place intersection are forecast to operate at LOS F with the anticipated increase in on-campus student enrollment under either 2022 or 2037 conditions. These operations are also consistent with the 2015 Comprehensive Plan DEIS findings, which identifies a southbound right-turn pocket at this intersection. The right-turn would not improve intersection operations to pre-project conditions and the feasibility of this improvement would need to be further explored. This intersection is generally built out and payment of transportation impact fees supporting transportation improvements throughout the City would mitigate project-related impacts at this location.

Mitigation would be triggered at the 116th Avenue NE/NE 70th Place intersection when the Master Plan's intersection proportional share is greater than 5 percent, which is anticipated to occur with a net increase of approximately 840 new daily trips.

108th Avenue NE/NE 68th Street

Under both 2022 and 2037 conditions, the 108th Avenue NE/NE 68th Street intersection operates at LOS F either without or with the addition of project traffic and is consistent with the Comprehensive Plan findings. As with other City intersections, this intersection is generally built out with no public right-of-way available to construct additional lanes at the intersection. The City's 2015-2020 *Capital Improvement Program* includes the 6th Street Corridor Study and Houghton/Everest Neighborhood Plan, which is underway. This study will develop a corridor and neighborhood plan including transportation solutions to accommodate growth in the study area. These solutions may include policies (e.g., parking policies), projects (e.g., intersection improvements) and programs (e.g., bike share). Given constraints along the corridor, the plan will generally focus on transit, bicycle, and pedestrian facilities and consider safety, geometrics, and other transportation conditions.

Project-related impacts at the 108th Avenue NE/NE 68th Street intersection could be mitigated by Northwest University contributing towards improvements identified in the 6th Street Corridor Study. The City has not developed final solutions for improving the 108th Avenue NE/NE 68th Street intersection; however, improvements that are currently being reviewed include transit signal priority, transit lanes and queue jump lanes, 6th Street corridor signal coordination, bicycle lanes and improved trail access, access management through consolidating and closing driveways, and pedestrian safety improvements with wider sidewalks and removal of crosswalks in conflict areas.

Mitigation would be triggered at the 108th Avenue NE/NE 68th Street intersection when the Master Plan's intersection proportional share is greater than 5 percent, which is anticipated to occur with a net increase of approximately 700 new daily trips.

108th Avenue NE/NE 60th Street

A review of the 4-hour and 8-hour volume warrants from the *Manual on Uniform Traffic Control Devices* (MUTCD), 2009 indicates a traffic signal would not be warranted at this intersection. The 108th Avenue NE/NE 60th Street intersection is being studied in the 6th Street Corridor Study. Project-related impacts at the 108th Avenue NE/NE 60th Street intersection could be mitigated by Northwest University contributing towards identified improvements at this intersection. The City has not developed final solutions for improving the 108th Avenue NE/NE 60th Street intersection; however, improvements that are currently being reviewed include enhanced pedestrian and bicycle access for the 60th Street Neighborhood Greenway and new east-west connection across I-405 and connection to Lakeview Drive and the Houghton Park-and-Ride facility.

Mitigation would be triggered at the 108th Avenue NE/NE 60th Street intersection when the Master Plan's intersection proportional share is greater than 5 percent, which is anticipated to occur with a net increase of approximately 2,400 new daily trips.

108th Avenue NE/NE 53rd Street

Project-related impacts at the NE 108th Avenue//NE 53rd Street intersection could be mitigated by installing a traffic signal. A review of the 4-hour and 8-hour volume warrants from the *Manual on Uniform Traffic Control Devices* (MUTCD), 2009 indicates a traffic signal would be warranted in 2022.

An analysis of mitigated conditions was conducted assuming an actuated uncoordinated signal with no roadway channelization changes at the 108th Avenue NE/NE 53rd Street. In addition, the intersection improvement could also result in campus traffic from the NE 55th Street (Main) driveway shifting to the NE 53rd Street signalized intersection especially during weekday peak periods when making westbound left-turn movements may be difficult from an unsignalized location. Given the difficulty of making a westbound left-turn during the weekday peak periods and as a worse case assessment of potential vehicle queues and increases in traffic volumes at the 108th Avenue NE/NE 53rd Street intersection, this evaluation assumes all westbound left-turns at the NE 55th Street driveway shift from the 108th Avenue NE/NE 53rd Street intersection. Table 22 summarizes the resulting LOS with the proposed mitigation and the traffic shift.

Table 22. Future With-Project With and Without Mitigation Weekday Peak Hour LOS Summary

Intersection	2022						2037					
	Without Mitigation			With Mitigation			Without Mitigation			With Mitigation		
	LOS ¹	Delay ²	WM ³	LOS ¹	Delay ²	WM ³	LOS ¹	Delay ²	WM ³	LOS ¹	Delay ²	WM ³
<u>Weekday AM Peak Hour</u>												
11. 108th Ave NE / NE 53rd St	F	>180	WBL	A	9	-	F	>180	WBL	B	11	-
B. 108th Ave NE / 55th Ln NE (Main Driveway) ⁴	C	17	WB	B	13	WB	C	24	WB	B	15	WB
<u>Weekday PM Peak Hour</u>												
11. 108th Ave NE / NE 53rd St	F	>180	WBL	C	26	-	F	>180	WBL	D	54.8	-
B. 108th Ave NE / 55th Ln NE (Main Driveway) ⁴	D	34	WB	C	24	WB	F	91	WB	E	42	WB

Notes: Shaded intersections operate below City of Kirkland LOS D or WSDOT Mitigated LOS E standards.

1. LOS as defined by the HCM (TRB, 2010)
2. Average delay per vehicle in seconds
3. Worst movement (WM) reported for stop-controlled intersections where WB = westbound approach and WBL = westbound left-turn movement
4. The evaluation assumes 100 percent of the westbound left-turns at this location shift to the 108th Avenue NE/NE 53rd Street intersection. It is likely that vehicles that choose to continue to utilize this driveway would experience LOS E or F operations during the weekday PM peak hour conditions in 2037. For all other periods, the traffic operations would be LOS D or better during the weekday peak hours.

When analyzed as an actuated non-coordinated signal with no roadway channelization changes, this intersection would operate at LOS C or better under 2022 conditions and LOS D or better during 2037 conditions, improving operations to meet City of Kirkland LOS standards. The 95th percentile vehicle queues along the NE 53rd Street approach of the intersection would be approximately 200-feet or less during the weekday peak hours under both 2022 and 2037 conditions with the proposed Master Plan. These queues would be fully accommodated within the existing 200-foot westbound turn lane storage. The 95th percentile queue represents the vehicle queue that would only be exceed 5 percent of the time. This analysis conservatively assumes all campus traffic at the NE 55th Street driveway shifts to the new signalized intersection and a lesser shift would result in queues and delays at the 108th Avenue NE/NE 53rd Street intersection decreasing. It is unlikely that all traffic from the main access point would shift to the new signal; providing a signal at the 108th Avenue NE/NE 53rd Street intersection could result in additional gaps in traffic along 108th Avenue NE to facilitate access to and from the NE 55th Street access. Vehicles shifting to the new signalized intersection would improve operations of the main driveway.

As part of the signalization of the 108th Avenue NE/NE 53rd Street intersection the existing mid-block crosswalk immediately south of this intersection would be removed and the crosswalk would be relocated to the NE 53rd Street intersection. Provision of a signal at this location would likely deter some neighborhood cut-through activity since traffic to and from NE 53rd Street would have less delay. In addition, the signalized crossing would reduce conflicts and facilitate pedestrian activity to and from the schools and transit stops near the 108th Avenue NE/NE 53rd Street intersection.

Mitigation of this intersection would be required when signal warrants are met. It is anticipated that a signal would be warranted with a net new increase of approximately 250 daily trips or 20 weekday PM peak hour trips. This trip generation would likely occur with the first phase of development and construction of the traffic signal would be required prior to occupancy of the first building.

Traffic Calming

A review of 85th-percentile speeds along NE 53rd Street show there is a speeding issue on this corridor and some additional impact could occur with the Master Plan. Potential adverse impacts to the NE 53rd Street corridor could be mitigated through Northwest University support of the City's neighborhood traffic calming program. The University could contribute a proportional share to traffic calming improvements along NE 53rd Street as well as within the neighborhood. The traffic calming program would be facilitated by the City and the neighborhood would make decisions related to specific improvements and locations. Consideration would need to be given to the recommended greenway along NE 53rd Street that is part of the City's *Transportation Master Plan*. Depending on the traffic calming measures that are implemented such as speed humps, speed cushions, curb extension, speed radar, or other measures,¹⁵ vehicle speeds are likely to be reduced. Providing traffic calming would require following the City's Neighborhood Traffic Control Program (NTCP) process, which has a defined two-phase approach including outreach, data collection, and evaluation of measures.

Parking / Internal Campus Connectivity

As previously described, the existing parking would be adequate to serve the anticipated Master Plan parking demand; however, it may not be in a convenient location. If parking is not located within reasonable proximity of destinations, then campus-related users may be more likely to park on-street. Parking impacts could be minimized by implementing management strategies as well as providing improved internal pedestrian connectivity. The parking mitigations could include:

- Providing additional internal pedestrian connections from parking lots to buildings and campus facilities. This would include providing a pedestrian connection on the east and west side of the sports fields to serve the adjacent parking facilities and the campus apartments.
- Assigning campus population to specific parking lots to reduce potential parking in the neighborhood or moving vehicles between classes.
- Increasing parking permit costs to deter student driving and potentially increase use of non-motorized and transit modes. This could be coupled with providing a subsidy for transit passes as part of the tuition cost to reduce the potential for students to park within the neighborhood. In addition, the City has a Neighborhood Traffic Control Program that can be utilized by the neighbors if parking issues occur and are not being addressed through the NU management strategies. Through this program the City would monitor and investigate the parking issues and work with the community to implement time limits, parking restrictions, or other strategies to reduce the neighborhood parking impacts.

Event Management

With the forecast increases in student enrollment and existing and potential on-campus special events and activities such as receptions or sporting events, on-site parking and special event management processes could be implemented to reduce isolated on-campus parking congestion, excess vehicle circulation by drivers unfamiliar with the campus and the potential for parking within the neighborhood. Examples of potential measures include:

¹⁵ City of Kirkland Traffic Calming Devices
www.kirklandwa.gov/depart/Public_Works/Transportation_and_Traffic/Traffic_Calming_Devices.htm

- Management event schedules to minimize concurrent high activity events at multiple venues on-campus
- Assignment of specific event/visitor parking lots
- On-campus wayfinding signage directing drivers to specific parking areas (this is already done by the University during events)
- Active enforcement of any permanent and/or temporary parking restrictions
- Posting of no parking signage along NE 53rd Street during events and visually monitoring neighborhood parking
- Provide a field manager to coordinate public use of the fields and events including parking associated with these activities
- Provision parking monitors or a flagger to direct visitors to parking lots

Transportation Impact Fees

The proponent would be required to pay the City of Kirkland transportation impact fees to mitigate general transportation-related project impacts throughout the City. Table 23 shows the preliminary fee estimate for the proposed project based on the currently adopted impact fee rate (effective 1/1/2016). These fees are provided as estimates only and would be finalized by the City upon review.

Table 23. Preliminary Estimate of Transportation Impact Fee

Land Use	Student Increase	Rate ¹	Fee
2022 Conditions University / College (6-Year)	+370 Students	\$553 / student	\$204,610
2037 Conditions University / College (6-20 Year)	<u>+400 Students</u>	\$553 / student	<u>\$221,200</u>
Total	+770 Students		\$425,810

Source: Transpo Group, 2016

1. Based on City of Kirkland Transportation Impact Fee Schedule (Chapter 27.04 KMC) as of January 1, 2016.

Construction

A Construction Management Plan (CMP) would be developed prior to beginning construction for each phase of development. The CMP would describe procedures for construction activity including such items as truck routes, hours of operation, and site parking. The following measures would be included in the construction management plan to mitigate potential impacts of construction activity:

- Construction activities would be scheduled so that the most intensive activities in terms of construction traffic are spread out over time and avoid the peak periods of traffic congestion.
- Safe pedestrian, bicycle and vehicular circulation would be provided adjacent to the construction site through the use of temporary walkways, signs, and manual traffic control (flaggers), as appropriate.
- Construction material delivery vehicles would be prohibited from leaving or entering the site during the weekday AM and PM peak hours.
- Truck routes would be identified.



CITY OF KIRKLAND

Department of Public Works

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MEMORANDUM

To: Tony Leavitt, Senior Planner

From: Thang Nguyen, Transportation Engineer
Joel Pfundt, Transportation Manager

Date: December 18, 2018

Subject: NW University Master Plan Development TIA Review

This memo summarizes my review of the traffic impact analysis (TIA) memorandum dated June 14, 2017 *Final Traffic Impact Analysis- Northwest University Master Plan* submitted by the Transpo Group for the proposed Northwest University Master Plan update. My findings and recommendations are summarized below, followed by my review comments in response to the traffic impacts documented in the traffic impact analysis memorandum.

STAFF FINDINGS

The proposed project will create significant SEPA traffic impacts that warrant off-site transportation mitigation. The off-site SEPA mitigation measures and Public Works conditions below are required to mitigate the project transportation impacts.

STAFF RECOMMENDATIONS

Off-site SEPA Mitigation

Staff recommends the following SEPA traffic mitigation to mitigate the transportation impacts created by the proposed master plan.

1. The University shall contribute \$15,000 to the City of Kirkland Neighborhood Traffic Control Program to be used to mitigate neighborhood traffic impacts in the Houghton Neighborhood in the vicinity of Northwest University. The University shall make this contribution prior to the first building permit issued for projects included in the subject Master Plan or with public use of the athletic fields.
2. The University shall improve the intersection of 108th Avenue NE/NE 53rd Street to include a new traffic signal and associated intersection improvements (curb ramp, crosswalk, etc.) to the City of Kirkland's standards. The construction of the traffic signal will necessitate the removal of the existing lighted crosswalk (Rectangular Rapid Flashing Beacon) and associated infrastructure located south of the intersection, which will also be done by the University as part of the intersection improvement. The construction of the traffic signal and crosswalk removal will be triggered by the construction of any new building within the Master Plan that is greater than 5,000 square feet gross floor area. The traffic signal and associated intersection improvements shall be constructed and operational prior to the issuance of the building occupancy permit of the

Memorandum to Tony Leavitt
December 18, 2018
Page 2 of 18

first building greater than 5,000 square feet gross floor area or with public use of the athletic fields.

3. In lieu of constructing half-street improvements along the 108th Avenue NE frontage to include a dedicated bus lane as described in the Phase II Transit Queue Jump improvement of the 108th corridor project (PT 0006), the City will require a width of up to 12-feet of right-of-way (ROW) dedication (approximately 880-feet) along the 108th Avenue NE University properties (including the property at 5710 108th Avenue NE and parcel 9353900355amd 935390050). The dedication will occur when the City begins the right-of-way acquisition portion of the 108th Avenue NE corridor improvement project. The value of the land shall be its fair market value based on an independent appraisal to be prepared when needed by an appraiser agreed upon by both parties, which agreement will not be unreasonably withheld. If the 108th corridor improvement project (PT 0006) becomes a city capacity project to be partly funded by transportation impact fees, then the agreed value of the right-of-way dedication shall be credited against the University Master Plan's transportation impact fee.

The City will assume responsibility for maintaining the current infrastructure located within the dedicated areas at the time the property is dedicated. The City will be responsible for relocating and replacing existing utilities structures within the dedicated ROW during construction of the 108th Avenue NE corridor improvement projects including, but not limited to, the existing masonry monuments and signs at the two (2) entry driveways, masonry piers and iron fencing along the property frontage, existing rock retaining wall, associated landscaping along the property frontage, associated lighting and fixtures and any underground utilities that are affected by these relocations. Any replacement of structures and landscaping will be in-kind.

4. The University shall sell a width of up to 12-feet of frontage at 6710 108th Avenue NE for the construction of the Phase I Transit Queue Jump improvement of the 108th corridor project (PT 0005). The City shall pay fair market value for the frontage based on an independent appraisal to be prepared when needed by an appraiser agreed upon by both parties, which agreement will not be unreasonably withheld. The University will sell the property during the right-of-way acquisition portion of the 108th Avenue NE corridor improvement projects. If the City purchases the land dedication prior to the City's planned improvement project, the City will assume responsibility for maintaining the infrastructure and landscaping located within the dedicated areas. This includes landscaping, monument signs, lighting and fixtures and utilities. During construction of the 108th Avenue NE corridor improvement project, the City will also be responsible for relocating and replacing structures or landscaping within the dedicated ROW or outside of the dedication that are impacted by construction. These structures include, but may not be limited to, private sidewalk at face of building, monument signs, associated lighting and fixtures, frontage landscaping, relocation or replacement of existing utility boxes (two (2) power and one (1) cable) such that they do not obstruct the front of the 6710 Building, and any underground utilities that are affected by the ROW dedication and improvements.

5. The University shall contribute a proportional share to the intersection improvement of Phase I Transit Queue Jump improvement of the 108th corridor project (PT 0005) not-to-exceed \$266,306 or 14 percent of the total project cost (whichever is lower). The proportional share contribution shall be made with the construction of the first building within the Master Plan (with

Memorandum to Tony Leavitt
December 18, 2018
Page 3 of 18

the exception of the Chapel and Field House) or with public use of the athletic fields to mitigate the SEPA transportation impact. The payment shall be due at final building permit issuance. If the improvement project is partly funded by transportation impact fees, then the proportional share contribution shall be credited against the University Master Plan transportation impact fee.

6. The University shall contribute a proportional share to the intersection improvement of Phase II Transit Queue Jump improvement of the 108th corridor project (PT 0006) not-to-exceed \$175,606 or 8 percent of the total project cost (whichever is lower). The proportional share contribution shall be made with the construction of the first building within the Master Plan (with the exception of the Chapel and Field House) or with public use of the athletic fields to mitigate the SEPA transportation impact of the Master Plan. The payment shall be due at final building permit issuance or with public use of the athletic fields, as applicable. If the improvement project is partly funded by transportation impact fee, then the proportional share contribution shall be credited against the University Master Plan transportation impact fee.

7. The University shall contribute a proportional share to the intersection improvement of the NE 68th Street Intersection Improvements/Access Management (TR 0117 004) not-to-exceed \$241,214 or 14 percent of the total project cost (whichever is lower). The proportional share contribution shall be made with the construction of more than 100,000 square feet of the Master Plan (with the exception of the Chapel and Field House) or more than 50,000 square feet of the Master Plan (with the exception of the Chapel and Field House) when combined with public use of the athletic fields to mitigate the SEPA transportation impact. The payment shall be due at final building permit issuance or with public use of the athletic fields, as applicable. If the improvement project is partly funded by transportation impact fees, then the proportional share contribution shall be credited against the University Master Plan transportation impact fee.

8. The University shall submit a parking management plan for staff review and approval prior to final building permit for the first building greater than 5,000 square feet or with public use of the athletic fields.

9. The University will create a parking management plan and monitor events that are anticipated to result in 90 percent of the campus parking supply being occupied. The University shall prominently post community contact information on the University website for the University staff person responsible for monitoring events and managing parking. Examples of parking event strategies included in the parking management plan to minimize impacts to the surrounding neighborhoods during times when parking inventories may be constrained or when there is significant impacts to the surrounding neighborhood are:

- Manage event schedules to minimize concurrent high activity events on-campus.
- Designate specific event parking lots.
- Provide way-finding signage to direct visitors to specific parking facilities and pick-up/drop-off area.
- Active enforcement of parking restrictions.
- Post no parking sign along NE 53rd Street during events and visually monitor neighborhood parking.

Memorandum to Tony Leavitt
December 18, 2018
Page 4 of 18

- Designate a representative from Northwest University to coordinate public use of facilities including parking management associated with the activities.
- Provide parking monitors and flagger to direct visitors to on-campus parking lots.
- Provide police traffic control on 108th Avenue NE when traffic flow on 108th Avenue NE is impacted.

The University shall submit the parking management plan to the City's transportation engineer or the Neighborhood Traffic Control Program coordinator for review and approval.

The University shall submit an annual report to the City regarding the operation of the parking management plan. The annual report shall include the number of events for the year and the attendance and parking demand for major events. Every two years, the City and the University shall meet to review the parking management plan and determine whether additional or different measures are necessary to mitigate parking impacts in adjoining neighborhood.

Public Works Conditions

The following condition of approval is required for the proposed development to mitigate citywide traffic impacts and meet Public Works standards:

1. Pay Transportation Impact Fee to mitigate system-wide transportation impacts.
2. As part of each building permit, submit a construction management plan for any new building within the Master Plan that is greater than 5,000 square feet gross floor area to the City's development engineers for review and approval for each building. All construction parking shall be located on-campus.

Project Description

The project site is located at 5520 108th Avenue NE. Currently, there are 1,230 students that attend classes at the campus. The University estimates the day-time student enrollment at the campus will increase by approximately 370 students by 2022 and 770 students by 2037. It is estimated that there will be a total of 1,600 students in 2022 and 2,000 students in 2037. The staff population is anticipated to grow in proportion to the total student enrollment. Table 1 summarizes the student and staff population.

The University is proposing an 8-phase development of the campus as summarized in Table 2. Approximately 250 to 350 new parking spaces are proposed to be located in a parking garage under the tennis center, gymnasium and Welcome Center. The University is not proposing any additional driveways. The full build-out of the proposed master plan will build approximately 340,915 net new gross floor area within eight buildings. The residence building will have approximately 172 dormitory rooms with approximately 300 beds. A new tennis center will have six courts and the sport field will accommodate 16 youth soccer teams.

Table 1. Student and Staff Population Summary

Memorandum to Tony Leavitt
December 18, 2018
Page 5 of 18

	Total Enrollment	Day Time Students	Evening Students	On-campus Student Residents	Full-time Staff/Faculty
Existing	1,230	910	320	680	237
2022	1,600	1,250	350	680	308
2037	2,000	1,500	500	1,056	385

Memorandum to Tony Leavitt
December 18, 2018
Page 6 of 18

Table 2. Development Program Summary

Northwest University Master Plan Summary of Existing and Proposed Development

Building Name	Building (GSF) ¹			Residential Beds			Parking (stalls)			Estimated Timing ³
	Existing	Addition ²	Total	Ex.	Add.	Total	Ex.	Add.	Total	
Davis	16,800		16,800				45		45	
Gray/Beatty	44,400		44,400	210		210				
Cafeteria (Dining Hall)	11,500		11,500				188		188	
Crowder, Guy, Perks	68,400		68,400	314		314				
Greely Center	2,930		2,930				74		74	
Family Res. Duplexes	28,077		28,077	14 ⁶		14	28		28	
FIRS Apartments	87,869		87,869	78 ⁶		78	135		135	
Student Apartments	24,960		24,960	140		140	55		55	
Library	28,200		28,200				66		66	
Ness Academic Center	33,400	-33,400	0				59		59	2031 to 2037
Pecota Center	7,400	-7,400	0				32	-32	0	2019 to 2022
Millard Hall	15,000		15,000				26		26	
Pavilion	23,460	-23,460	0				90	-90	0	2021 to 2024
Chapel	14,334	+3,000	17,334				88		88	2019 to 2020
Green House	927		927				0		0	
Maintenance / Shop Buildings	10,639		10,639				15		15	
Barton Admin.	34,704		34,704				138		138	
Argue HSC	45,436		45,436				127		127	
Ness Replacement		+70,910	70,910						0	2031 to 2037
Welcome Center		+43,320	43,320					+70	70	2021 to 2024
Pavilion/ Gymnasium		+37,950	37,950					+95	95	2019 to 2022
Residence Hall ⁴		+85,060	85,060		+300	300			0	2021 to 2024
Tennis Center		+63,660	63,660					+79	79	2017 to 2020
Fitness Center		+21,390	21,390					+56	56	2029 to 2032
Field House		+3,500	3,500						0	2022 to 2024
Total⁵	498,436	+264,530	762,966	756	+300	1,056	1,166	+178	1,344	

Notes: gsf = gross square-feet; Ex. = existing Add. = addition

1. Gross floor areas shown only include useable building area not parking facilities.

2. Additional gsf associated with the proposed Master Plan.

3. The completion of individual projects within the Master Plan would ultimately depend on funding. The approximate timing of the phase was used to estimate trip generation and assignment associated with the 2022 and 2037 horizon years for analysis.

4. New residence hall would include approximately 172 dorm rooms with about 300 beds.

5. The total square-footage is for proposed buildings and excludes proposed parking structures.

6. The Family Resident Duplexes and FIRS Apartments currently house faculty and staff.

Trip Generation

Currently, the University is generating approximately 5,191 daily trips, 283 AM peak hour trips, 394 PM peak hour trips, and 482 PM peak person trips. Based on the trip generation calculations, the project is forecasted to generate 2,130 net new daily trips, 107 net new AM peak hour trips and 332 net new PM peak hour trips in 2022; 3,820 net new daily trips, 199 net new AM peak hour trips and 460 net new PM peak hour trips in 2037. Overall, the University will generate

Memorandum to Tony Leavitt
December 18, 2018
Page 7 of 18

9,012 daily trips, 482 AM peak hour trips, 854 PM peak hour trips, and 1,141 PM peak hour person trips in 2037.

Table 3 summarizes the trip generation for the proposed project. A more detailed explanation of the trip generation is provided in appendix E of the Northwest University Master Plan Final Transportation Impact Analysis report prepared by Transpo Group dated June 2017.

Table 3. Trip Generation Summary (Net New Trips)

Land Use	Size	Trip Rate ^{1,2}	2022			2037			2037 ⁴
			Total	In	Out	Total	In	Out	Total Person Trip
<u>Weekday Daily</u>									
Northwest University Campus	+370 students (2022) +770 students (2037)	4.22 per student	1,560	780	780	3,250	1,625	1,625	n/a
Tennis Center ³	6 courts	38.70 per court	250	125	125	250	125	125	n/a
Public Sports Field Use	-	=	<u>320</u>	<u>160</u>	<u>160</u>	<u>320</u>	<u>160</u>	<u>160</u>	<u>n/a</u>
Total Net New			2,130	1,065	1,065	3,820	1,910	1,910	
Existing			5,192	2,596	2,596	5,192	2,596	2,596	
Total Gross Trips			7,322	3,661	3,661	9,012	4,479	4,470	
<u>Weekday AM Peak Hour</u>									
Northwest University Campus	+370 students (2022) +770 students (2037)	0.23 per student	85	51	34	177	106	71	n/a
Tennis Center	6 courts	3.58 per court	22	11	11	22	11	11	n/a
Public Sports Field Use	-	=	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>n/a</u>
Total Net New			107	62	45	199	117	82	n/a
Existing			283	170	113	283	170	113	n/a
Total Gross Trips			390	232	158	482	287	195	n/a
<u>Weekday PM Peak Hour</u>									
Northwest University Campus	+370 students (2022) +770 students (2037)	0.32 per student	118	59	59	246	123	123	301
Tennis Center	6 courts	3.58 per court	22	12	10	22	12	10	38
Public Sports Field Use	-	=	<u>192</u>	<u>160</u>	<u>32</u>	<u>192</u>	<u>160</u>	<u>32</u>	<u>320</u>
Total Net New			332	231	101	460	295	165	659
Existing			394	197	197	394	197	197	482
Total Gross Trips			726	428	298	854	492	362	1,141

1. Site specific trip rates calculated based on field observations for the campus daily and peak hour conditions and Eastside Tennis Center peak hour conditions. Daily trip rate for tennis center based on Institute of Transportation Engineers *Trip Generation*, 9th Edition tennis/racket club land use (#491).
2. Trip generation for the sports fields is based on use of the fields for youth soccer.
3. Trip generation rounded up.
4. Person trip is only relevant to PM peak hour for concurrency testing.

TRAFFIC CONCURRENCY

The proposed development project passed traffic concurrency. The concurrency test notice is valid until July 23, 2019 at which time the applicant must obtain a development permit and

Memorandum to Tony Leavitt
December 18, 2018
Page 8 of 18

certificate of concurrency or apply and receive an extension prior to the expiration of the concurrency test notice.

TRAFFIC IMPACT ANALYSIS

The scope of analysis was approved by the City Transportation Engineer and the traffic report was completed in accordance with the City of Kirkland Traffic Impact Analysis Guidelines (TIAG).

The citywide trip distribution was determined by using the Bellevue-Kirkland-Redmond (BKR) traffic model.

The City's TIAG requires a level of service (LOS) analysis using the Highway Capacity Manual Operational Method for intersections that have a proportionate share equal or greater than 1% as calculated using the method in the TIAG. Based on the proportionate share calculation for the full build-out of the proposed project, thirteen off-site intersections will have 1% or more proportionate share impact and are required to be analyzed for LOS. Those intersections are listed in Table 4.

Table 4. Significantly Impacted Off-site Intersections

Intersection	Jurisdiction	LOS Standard	Proportional Share Impact	LOS That Warrants Mitigation	2037 Levels of Service	Mitigation Required?
1. 6th Street S / Central Way	Kirkland	D	3.8%	Not Warranted	LOS-F	No
2. 6th Street S / Kirkland Way	Kirkland	D	4.0%	Not Warranted	LOS-B	No
3. 6th Street S / 9th Avenue S	Kirkland	D	1.7%	Not Warranted	LOS-B	No
4. State Street S / NE 68th Street	Kirkland	D	1.2%	Not Warranted	LOS-F	No
5. 108th Avenue / NE 68th Street	Kirkland	D	13.8%	LOS-F	LOS-F	Yes
6. I-405 Ramps / NE 70th Place	WSDOT	E	9.9%	LOS-F	LOS-F	Yes
7. 116th Avenue NE / NE 70th Pl	WSDOT	E	13.0%	LOS-F	LOS-F	Yes
8. 116th Avenue NE / I-405 Ramps	WSDOT	E	7.3%	LOS-F	LOS-F	Yes
9. 132nd Avenue NE / NE 70th Pl	Kirkland	D	1.6%	Not Warranted	LOS-F	No
10. 108th Avenue NE / NE 60th St	Kirkland	D	8.0%	LOS-F	LOS-F	Yes
11. 108th Avenue NE / NE 53rd St	Kirkland	D	22.9%	LOS-E	LOS-F	Yes
12. 108th Avenue NE / NE 48th St	Kirkland	D	3.4%	Not Warranted	LOS-F	No
13. 108th Avenue NE / NE 45th St	Kirkland	D	3.4%	Not Warranted	LOS-E	No

Traffic Mitigation Threshold

The City requires developers to mitigate traffic impacts when one of the following two warranted conditions is met:

1. An intersection level of service is at E and the project has a proportional share of 15% impact or more at the intersection.
2. An intersection level of service is at F and the project has a proportional share of 5% impact or more at the intersection.

Off-site Traffic Impacts

Memorandum to Tony Leavitt
December 18, 2018
Page 9 of 18

Six of the intersections analyzed (highlighted) are forecasted to be impacted by the project by 5% or more. Based on the fact that these intersection are forecasted to have an intersection LOS of F, the impacts from the master plan trigger the requirement for transportation mitigations. Intersections #6, #7, and #8 are within the jurisdiction of the Washington State Department of Transportation (WSDOT). WSDOT have reviewed the traffic study and are satisfied with Transpo's responses to their comments. WSDOT is not requiring transportation mitigation for those intersections.

Based on the mitigation requirements of the previous master plan, the University was required to signalize the intersection of 108th Avenue NE/NE 53rd Street (Intersection #11) when the intersection meets signal warrants. The intersection was determined to meet signal warrants with Phase I of this master plan. In addition, the intersection is operating at LOS-F with more than 5% of the proportional share impact with Phase I of the master plan. Therefore, a traffic signal will be required by the construction of any building greater than 5,000 square feet gross floor area. With the installation of a traffic signal, the intersection will operate at a LOS-D or better during the AM and PM peak hours. Therefore, no additional mitigation is required for the intersection.

The intersections of 108th Avenue NE/NE 60th Street (Intersection #10) and 108th Avenue NE/NE 68th Street (Intersection #5) are calculated to operate at LOS-F and warrant mitigation. The transportation impact analysis report did not identify specific transportation mitigations for the intersections of 108th Avenue NE/NE 60th Street and 108th Avenue NE/NE 68th Street. The City has completed a corridor study and has identified improvements to the 108th Avenue NE corridor to improve traffic flow, safety and person moving capacity. The proposed 108th Avenue NE corridor improvements include installing transit priority signals at the intersection of 108th Avenue NE/NE 68th Street and 108th Avenue NE/NE 60th Street, a new traffic signal at the intersection of 108th Avenue NE/NE 60th Street, widening of 108th Avenue NE to provide for a transit queue bypass lane, and installing bicycle facility improvements along 108th Avenue NE. Subsequent to the TIA report, the applicant worked with the City to identify the appropriate mitigations to offset the project's impacts.

The applicant has agreed to the following mitigating measures to offset the SEPA transportation impacts:

1. The University shall contribute \$15,000 to the City of Kirkland Neighborhood Safety Program. The University shall make this contribution prior to the first building permit issued for projects included in the subject Master Plan or with public use of the athletic fields.
2. The University shall construct a new traffic signal and associated intersection improvements at the intersection of 108th Avenue NE/NE 53rd Street. The construction of the traffic signal will necessitate the removal of the existing crosswalk and associated infrastructure located south of the intersection, which will also be done by the University. The construction of the traffic signal and crosswalk removal will be triggered by the construction of any new building within the Master Plan that is greater than 5,000 square feet gross floor area or with public use of the athletic fields. The traffic signal shall be constructed and operational prior to the issuance of

Memorandum to Tony Leavitt
December 18, 2018
Page 10 of 18

the building occupancy permit of the first building greater than 5,000 square feet gross floor area or with public use of the athletic fields.

3. In lieu of constructing half-street improvements along the 108th Avenue NE frontage to include a dedicated bus lane as described in the Phase II Transit Queue Jump improvement of the 108th corridor project (PT 0006), the University will dedicate a width of up to 12-feet of right-of-way (ROW) dedication (approximately 880-feet) along the 108th Avenue NE University properties (including the property at 5710 108th Avenue NE).

4. The University shall sell a width of up to 12-feet of frontage at 6710 108th Avenue NE for the construction of the Phase I Transit Queue Jump improvement of the 108th corridor project (PT 0005).

5. Table 5 provides a summary list of the proportional share SEPA off site mitigations for the proposed master plan. The University shall contribute a proportional share to the intersection improvement of Phase I Transit Queue Jump improvement of the 108th corridor project (PT 0005) not-to-exceed \$266,306 or 14 percent of the total project cost (whichever is lower). The proportional share contribution shall be made with the construction of the first building within the Master Plan (with the exception of the Chapel and Field House) or with public use of the athletic fields to mitigate the SEPA transportation impact of the Master Plan.

6. The University shall contribute a proportional share to the intersection improvement of Phase II Transit Queue Jump improvement of the 108th corridor project (PT 0006) not-to-exceed \$175,606 or 8 percent of the total project cost (whichever is lower). The proportional share contribution shall be made with the construction of the first building within the Master Plan (with the exception of the Chapel and Field House) to mitigate the SEPA transportation impact of the Master Plan. The proportional share shall be paid with the permit of any new building greater than 5,000 square feet or with public use of the athletic fields.

7. The University shall contribute a proportional share to the intersection improvement of the NE 68th Street Intersection Improvements/Access Management (TR 0117 004) not-to-exceed \$241,214 or 14 percent of the total project cost (whichever is lower). The proportional share contribution shall be made with the construction of more than 100,000 square feet of the Master Plan (with the exception of the Chapel and Field House) or more than 50,000 square feet of the Master Plan (with the exception of the Chanpel and Field House) combined with public use of the athletic fields to mitigate the SEPA transportation impact.

Memorandum to Tony Leavitt
December 18, 2018
Page 11 of 18

Table 5. Proportional Share Mitigation for 108th Avenue NE

CIP Project Number	CIP Project Title	Proportional Share based on Proportional Share Impact Calculation ¹	NW University Proportional Share ²	Intersection/signal Improvements/Construction ²	Total Corridor Widening Project Cost
PT 0005	68th/108th Avenue NE transit Queue Jump Phase I	14.0%	\$ 266,306	\$ 1,902,189	\$ 4,875,000
PT 0006	60th/108th Avenue NE transit Queue Jump Phase II	8.0%	\$ 175,606	\$ 2,195,077	\$ 5,640,000
TR 0117 004	68th/108th Avenue NE transit Queue Jump Phase I (SB right-turn lane)	14.0%	\$ 241,214	\$ 1,722,959	\$ 4,375,000
	Total		\$ 683,127	\$ 4,097,266	\$ 14,890,000

1. Proportional Share Impact calculation in the NW University Master Plan Transportation Impact Analysis report.

WSDOT Intersections

I-405 Ramps / NE 70th Place

The intersection of I-405 Ramps / NE 70th Place is forecasted to degrade from LOS-E to LOS-F in 2037 with completion of the master plan. WSDOT staff has raised concerns about how the queuing at the intersection would impact traffic flow on I-405. Subsequently, a queue analysis was completed by the consultant and the result indicates that the queue would not extend beyond the 700-foot transition area of the off-ramp and would not impact the traffic flow on I-405. WSDOT has review the subsequent queue analysis and is satisfied with the analysis and will not require transportation mitigation.

116th Avenue NE / NE 70th PI

The intersection of 116th Avenue NE / NE 70th PI is forecasted to operate at LOS-F during both AM and PM peak hours in 2037 with and without the master plan. When warranted, WSDOT requires mitigation to bring the intersection level of service back to the condition without the project impact. Since the level of service does not change, WSDOT is satisfied with the analysis and will not require transportation mitigation.

116th Avenue NE / I-405 Ramps

The intersection of 116th Avenue NE / I-405 Ramps is forecasted to operate at LOS-F during the PM peak hour in 2037 with and without the master plan. When warranted, WSDOT requires mitigation to bring the intersection level of service back to the condition without the project impact. Since the level of service does not change, WSDOT is satisfied with the analysis and will not require transportation mitigation.

Site Access Operation

With the exception of the intersection of 108th Avenue NE/55th Lane NE (Main Driveway) all other project driveways into the site are forecasted to operate at LOS-D or better. Based on the City's mitigation guideline, transportation mitigation is not warranted for those intersections operating at LOS-D or better.

The intersection of 108th Avenue NE/55th Lane NE is forecasted to operate at LOS-F in 2037 with the full build out of the Master Plan. Staff anticipates the new signal at the intersection of 108th Avenue NE/NE 53rd Street would redistribute traffic volumes, resulting in some traffic shifting from 55th Lane NE to NE 53rd Street. The 95th percentile queue length for westbound traffic at

Memorandum to Tony Leavitt
December 18, 2018
Page 12 of 18

55th Lane NE ranges from two to four vehicles in the PM peak hour; this queue length is typical during the PM peak hour. The forecasted traffic volume would not meet signal warrant. Therefore, no specific mitigation is required.

Neighborhood Cut-through Traffic

Based on the TIA report, there were less than 10 peak hour trips cutting through the neighborhood. It is anticipated that the amount of cut-through traffic would be proportionally equal to the traffic growth resulting from the expansion of the campus. It is forecasted that there would be less than 20 peak hour trips cutting through the neighborhood. This amount of cut-through traffic is not significant to warrant mitigation. The applicant proposes to contribute \$15,000 to the City's Neighborhood Traffic Control Program (NTCP). If the City determines that cut-through traffic is significant in the future, various traffic calming measures could be implemented to mitigate the cut-through. The City's NTCP would evaluate the needs for traffic calming.

NE 53rd Street Traffic Impact

Based on the TIA report, the 85th-percentile speed on NE 53rd Street is higher than the posted speed. The report indicates that there is a speeding issue on NE 53rd Street. As mentioned above, the applicant is proposing to contribute \$15,000 to the City's Neighborhood Traffic Control Program (NTCP), this contribution will mitigate the traffic calming on NE 53rd Street to reduce speed on this street. The appropriate traffic calming will be determined through the City NTCP process.

Parking and Neighborhood Parking Impact

Student/Staff/Faculty Parking Demand

Parking data were collected during school to determine peak parking rates and hourly parking trends. Based on the data, the peak parking demand occurs between 10 and 11 a.m. at a rate of 0.52 parking stalls per student (this parking rate includes the staff/faculty population). Based on the parking rate of 0.52 parking stalls per student, it is forecasted that 832 parking stalls will be required in 2022 (1,600 students x 0.52 parking stalls per student); and 1,040 parking stalls will be required in 2037 (2,000 students x 0.52 parking stalls per student). Currently, there are 1,166 parking stalls on campus and the applicant proposes to provide 1,288 parking stalls in 2022 and 1,344 parking stalls in 2037. There will be 304 more parking stalls in 2037 than the parking demand during the regular school hours without special sporting and community events.

Tennis Center Parking Demand

Based on the traffic impact analysis report, the tennis center will have 6 courts and no seating area for spectators. The tennis center will have a lounge area to accommodate parents waiting for players and will serve as a transition area for players and coaches. Seventy nine (79) parking spaces will be within the parking garage under the tennis center. The tennis center parking demand was based on data collected at the Eastside Tennis Center. There are twelve courts at the Eastside Tennis Center and its peak parking demand is 21 parking stalls during regular use (non-tournament). The hourly parking trend for the tennis center was based on the hourly parking trend of an athletic club use documented in the Institute of Transportation Engineers (ITE) Parking Generation, 4th Edition. Based on ITE data, the peak demand is at 7 p.m.

Memorandum to Tony Leavitt
December 18, 2018
Page 13 of 18

According to the school, there are no plans to hold major tournament events at the school. However, there may be local tournament from local tennis organizations. Nevertheless, the parking demand would be low because there is no spectator viewing area. Therefore, the parking demand would only be generated by the coaches, players and parents of the players. Given that there is no spectator viewing area, either the parent would drive the players or the players would drive themselves. A worst case (atypical) scenario is a double tournament with 12 teams playing at the same time during the weekday and everyone driving alone to the tennis center. Each court would have four players and two coaches. With everyone driving alone, the parking demand would be approximately 36 spaces (6 players and coaches x 6 courts). For double tournaments, it is likely that players would carpool; therefore, the parking demand would be the same. In addition, if two leagues were to be scheduled to play one after the other and there is an overlap, the peak demand would occur during the transition time when one league is transitioned to leave while the other arrives. During this short transition period, the parking demand would double to 72 parking stalls which would be accommodated in the tennis parking garage. In addition, at 7 P.M., there is a surplus of over 400 parking spaces and can accommodate any overflow of parking from the tennis center. Since there are no classes during the weekend, the 1,344 parking spaces is more than adequate to accommodate the tennis center.

Athletic Fields Parking Demand

The public use of the sport fields by organized sport clubs such as kids or adult soccer may increase the parking demand. Soccer is most likely to have the largest parking demand as compared to other team sports. The highest parking demand would be generated from kids soccer because their play field is smaller than the adult field, therefore; more fields and teams can be accommodated by the school athletic fields (4 adult teams vs. 16 kids teams). The use of the field by outside organizations is expected to occur after 4 p.m. which is outside of the school peak parking demand (10 to 11 a.m.). The team sizes, the field sizes and the number of fields that can be accommodated at the school athletic field are summarized in Table 6. Based on Table 6, the peak parking demand is 160 parking stalls assuming that the players and coaches all arrives separately (25% of the parents would stay to watch the practice). Based on the future forecast of student enrollment and the parking demand hourly profile, it is estimated that there would be more than 300 parking spaces available for the athletic field use.

Tournaments would most likely occur during the weekend. During tournament, the number of teams would double; therefore, the parking demand would also double resulting in a parking demand of 320 spaces. Since there are no classes during the weekend, most of the 1,344 parking spaces will be available to accommodate the parking demand for the soccer tournament.

Table 6. Worst-case Weekday Peak Parking Demand during Practice

Grade	# Players per Team	Field Size (Yards)	Number of Fields	Number of Teams	Number of Players	Number of Coaches	Parking Demand
K	6	20 x 30	16	16	96	32	128
1 st	8	20 x 30	16	16	128	32	160
2 nd	10	40 x 60	8	8	80	16	96
3 rd	12	40 x 60	8	8	96	16	112

Memorandum to Tony Leavitt
December 18, 2018
Page 14 of 18

4 th	14	50 x 75	4	4	56	8	64
5 th	14	50 x 75	4	4	56	8	64
6 th to 12 th	18	75 x 112	2	2	36	4	40

Cumulative Parking Demand

The school, tennis center and athletic fields have peak parking demands at different times of the day. Based on the hourly parking demand trends for those uses, the combined average peak parking demand for all three uses is approximately 1,020 stalls occurring at 4 p.m. However, if we assume the worse-case scenario (combining the individual peak demands of those uses and assuming they occur at the same time), the cumulative peak parking demand would be approximately 1,296 stalls which is less than the proposed parking supply of 1,344 stalls. Table 7 summarizes the worse-case scenario for 2022 and 2037.

Table 7. Worst-case Peak Parking Demand Summary

	Student/Staff/Faculty (Stalls)	Tennis Center (Stalls)	Athletic Fields (Stalls)	Total Demand	Parking Supply (Stalls)	Net Differences (Stalls)
2022	832	+96	+160	1,097	1,288	+191
2037	1,040	+96	+160	1,296	1,344	+48

Special Events Parking

Banquet Facility

The proposed banquet facility is planned to be constructed by 2037. The facility will accommodate approximately 450 guests and would be available during the evening (after 5 p.m.). The school parking demand after 5 p.m. is 881 stalls or less; resulting in 485 vacant parking stalls. Assuming the worst case that all guests drive alone, the capacity after 5 p.m. is sufficient to accommodate the banquet facility.

Gymnasium

The largest attendance for the gymnasium that occurs as part of the University's regular activity is men's basketball games and the highest attendance generally occur during Friday and Saturday evenings at 6 P.M. or 8 P.M. At this time, it is estimated that there are 400 to 600 vacant spaces on campus (after accounting for the parking demand from the tennis center and the athletic fields). The parking rate for men's basketball is 0.43 parking spaces per seat. Assuming full attendance (900 seats), the parking demand is 387 spaces. Therefore, it is anticipated that there will be adequate parking to accommodate the basketball parking demand.

Another use for the gymnasium that may have full occupancy is baccalaureate services or student assembly. During student assembly, the students are already on campus, therefore it is not anticipated that there would be significantly more parking demand than the school regular peak. Baccalaureate services often occur outside when class and school sporting events are not in session. The only other activity that may occur concurrently is the athletic field use by the public

Memorandum to Tony Leavitt
December 18, 2018
Page 15 of 18

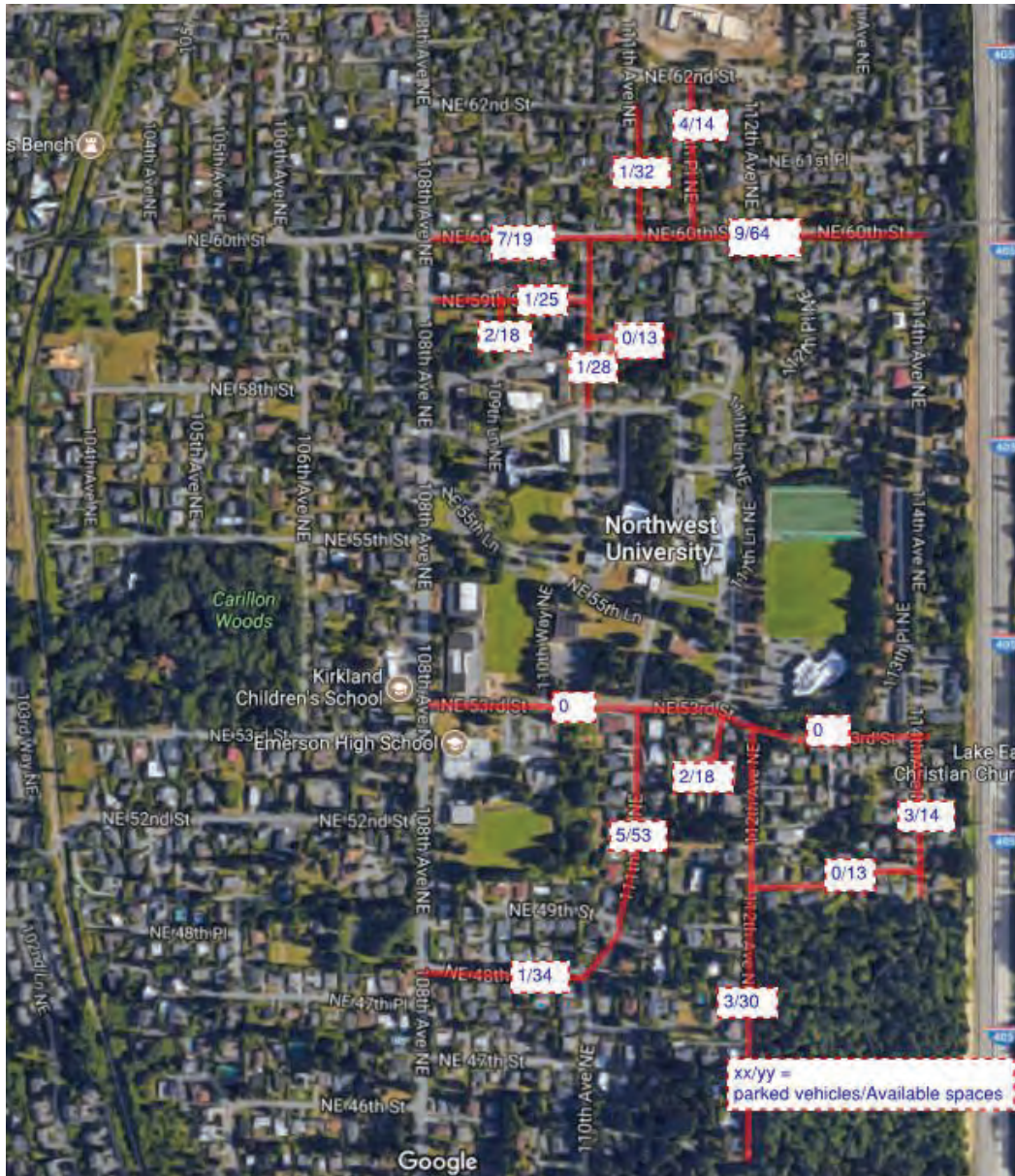
(with a parking demand of 160 spaces). It is anticipated that 1,100 on-site parking spaces would be vacant ($1,344 - 160$). Given that seating is limited to 900 it is not anticipated that the parking demand would be much more than 900 spaces (this assumes everyone drives alone).

On-street Parking Demand

An on-street parking utilization study was done to determine the impact of the students parking on the neighborhood streets that connect to the University campus. Based on the traffic study, there are 375 legal on-street parking spaces on those streets that have direct path to the campus. The peak on-street parking utilization when school was in session was 39 parking spaces and the peak on-street parking utilization when school was not in session was 62 spaces. Figure 1 shows the parking utilization when school was in session and Figure 2 shows the parking utilization when school was not in session. The data indicate that the impact to on-street parking by the school is not significant. The future parking supply is more than the demand, therefore it is not anticipated that the school parking would spill over onto the neighboring streets more than it is currently.

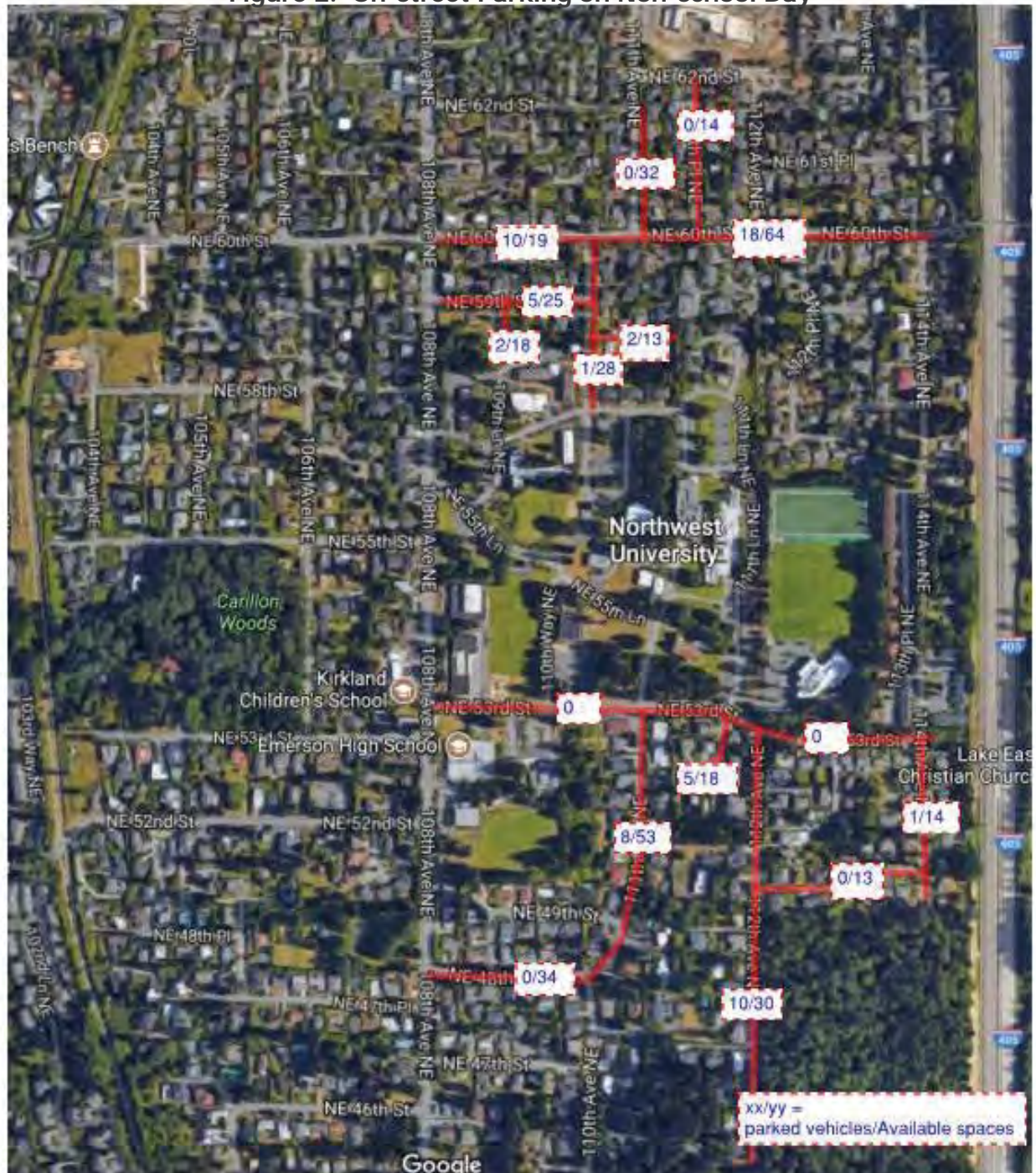
Figure 1. On-street Parking On School Day

Memorandum to Tony Leavitt
December 18, 2018
Page 16 of 18



Memorandum to Tony Leavitt
December 18, 2018
Page 17 of 18

Figure 2. On-street Parking on Non-school Day



Memorandum to Tony Leavitt
December 18, 2018
Page 18 of 18

Traffic Safety

Based on the TIA report, the 116th Avenue NE/NE 70th Street intersection was the only intersection where the observed crash rate was greater than the critical crash rate. However, recent collisions have been decreasing at this location. The City will continue to monitor the intersection and will work with WSDOT to improve the intersection safety.

Event Management

The University will monitor all events and create a parking management plan for on-campus events. The University will implement the following strategies to minimize impacts to the surrounding neighborhoods:

- Management event schedules to minimize concurrent high activity events on-campus.
- Designate specific parking lots for visitors for specific events.
- Provide way-finding signage to direct visitors to specific
- Active enforcement of parking restrictions.
- Post no parking sign along NE 53rd Street during events and visually monitor neighborhood parking.
- Provide a field manager to coordinate public use of the fields and events including parking management associated with the activities.
- Provide parking monitors and flagger to direct visitors to on-campus parking lots.

The University shall submit the parking management plan to the City's transportation engineer or the Neighborhood Traffic Control Program coordinator for review and approval.

Construction Impacts

Construction management plans for construction of any new building within the Master Plan that is greater than 5,000 square feet gross floor area shall be submitted to the City's development engineers for review and approval. All construction parking shall be located on-campus.

cc: Stefanie Herzstein, PE, PTOE, Transpo Group
John Burkhalter, Development Engineer Manager
Joel Pfundt, Transportation Engineer Manager



Mr. Tony Leavitt
Senior Planner
City of Kirkland
Department of Public Works
123 Fifth Avenue
Kirkland, WA 98033

Dear Mr. Leavitt,

We are in receipt of the December 18, 2018 memorandum from Thang Nguyen, Transportation Engineer and Joel Pfundt, Transportation Manager regarding the Northwest University Master Plan Development TIA Review. We are writing to let you know we agree with the staff recommendations and traffic impact analysis that is contained in the memorandum.

Should you have any questions please feel free to direct them to me. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "John Jordan", followed by a horizontal line.

John Jordan
Chief Financial Officer
Northwest University

KZC Section 45.60: Private College and Related Facilities

1. The Master Plan, approved by Resolution R-4203, includes a site plan, which is on file with the City. That site plan is, by reference, incorporated as a part of this code as it pertains to the location, configuration and nature of improvements in the PLA 1 zone.
2. In addition to the site plan referenced above, the adopted Master Plan includes the following special regulations:
 - a. Future development permits shall be reviewed by the Planning Director to ensure consistency with the Master Plan.
 - b. The applicant shall indicate all site improvements and landscaping for the areas to be affected by construction which are proposed to accompany the construction of each facility. The Planning Director shall have the authority to require implementation of these related elements of the Master Plan at such time new facilities, structures or additions are being constructed.
 - c. At the time of application for development of the married student housing information relating to the degree of cutting and filling necessitated shall be provided. Plans for stabilization of nearby slopes shall be included in this information. This information shall indicate to what extent the drainage conditions on the eastern portion of the campus will be disturbed, and what measures will be taken to insure that surrounding properties will not be adversely affected by alternate drainage patterns.
 - d. A 30-foot-wide landscape buffer planted as follows:
 - 1) Two rows of trees planted eight feet on center along the entire length of the buffer. No more than 50 percent of the required trees may be deciduous. At the time of planting, deciduous trees must be at least two inches in diameter as measured using the standards of the American Association of Nurserymen; and coniferous trees must be at least five feet in height.
 - 2) Shrubs, 18 inches high, planted to attain coverage of at least 60 percent of the buffer area within two years.
 - 3) The buffer shall be provided around the campus perimeter, except along 108th Ave. NE, 114th Ave. NE, I-405, and between on-campus duplex housing and adjacent single-family sites or I-405. The buffer shall incorporate all existing significant trees and vegetation. Where fencing is proposed, it shall be wood, unless alternative fencing is requested in writing by the adjacent neighbor and agreed to by the applicant.
 - e. A 15-foot-wide landscape buffer planted pursuant to the requirements of subsections (d)(1) and (2) of this section shall be provided between on-campus duplex housing and adjacent single-family sites. The buffer shall incorporate all existing significant trees and vegetation.
 - f. New construction of buildings and parking areas shall preserve existing significant trees to the maximum extent possible.
 - g. Storm drainage plans shall accompany any applications for development permits. Said plans shall comply with the requirements of KMC Title 15.

- h. Development permits for additional parking areas shall include a lighting plan for review and approval by the Planning Director. The lighting shall be directed such that it does not negatively impact adjacent residential areas.
- i. All main interior streets shall maintain a driving width of 24 feet plus curb and gutter improvements on both sides of the streets, for a total of 28 feet. Widths of, and improvements to secondary streets and service roads, shall be subject to the review and approval of the Planning Director. It will be necessary for secondary streets and service roads to provide adequate clearance for emergency vehicle access.
- j. The location, material and design of any walkway within the campus shall be at the discretion of the College and its representatives, but will be reviewed by the Planning Director; provided, that the pedestrian/bicycle path in 114th Ave. NE shall be asphalt or concrete, eight feet wide.
- k. The "NO PARKING" signs along 110th Avenue NE, east of the men's dormitory, shall remain indefinitely, to discourage future parking along this street.
- l. Within 30 feet of all outer edges of the campus (except along 108th Ave. NE, 114th Ave. NE, and I-405), no institutional uses or new parking areas are permitted, including any future redevelopment of the maintenance buildings.
- m. The housing unit, south of Gairloch, and west of 114th Ave. NE, shall be separated from abutting properties to the north and east by a dense vegetative buffer of not less than 30 feet.
- n. Parking lots shall include landscaping islands as required by Chapter 105 KZC.
- o. Where adjacent to existing single-family residences, existing campus roadways and parking areas shall be landscaped as much as possible in the space available to provide a visual screen of the roadways and parking areas from the nearby residences. The amount and type of landscaping shall be subject to the review and approval of the Planning Director. An effort shall be made to reduce the amount of asphalt surfacing wherever possible.
- p. Construction of the proposed clock tower shall be subject to the issuance of a Process IIB Permit, to be reviewed by the Houghton Community Council, the Kirkland Hearing Examiner and the Kirkland City Council.
- q. The two westernmost campus access drives (adjacent to the Seventh Day Adventist Church and opposite 111th Ave. NE) shall be closed to general vehicle use. The driveway serving The Firs married student housing shall be relocated to lie within the 114th Ave. NE right-of-way.
- r. The District Office shall have only one access point from 108th Avenue NE.
- s. New buildings or building expansions must conform with design guidelines as adopted as part of the Master Plan.
- t. The City is authorized to implement measures, identified in the approved Master Plan, to protect the surrounding neighborhood from parking impacts.
- u. For other regulations applicable to this use, see the Master Plan approved under Resolution R-4203.

v. Structure height shall not exceed 30 feet above average building elevation if located within 100 feet of the campus perimeter, or 40 feet above average building elevation if located greater than 100 feet from the campus perimeter.

3. Deviations from the approved Master Plan may be administratively approved by the Planning Director:

a. Unless:

1) There is a change in the use and the Zoning Code establishes different or more rigorous standards for the new use than for the existing use.

2) The Planning Director determines that there will be substantial changes in the impacts on the neighborhood or the City as a result of the change; and

b. The proposed modification or deviation satisfies all of the following:

1) No vehicular ingress or egress from surrounding streets may be changed.

2) No roadways, parking lots or structures within 100 feet of the site perimeter may be shifted toward the perimeters. Any other shifting or improvements shall be consistent with the design concept of the College.

3) No buffers shown in the approved site plan may be reduced, unless specifically authorized by some other special regulation.

4) Reconfigurations of the footprint of the structures shown in the approved plan may be permitted; provided, that such changes are not apparent off-site and do not increase building height.

5) Minor new structures not shown on the approved site plan may be permitted; provided, that they are at least 200 feet from the site perimeter, are not apparent from off-site and do not require the significant shifting of roadways, parking areas or other improvements.

c. The Planning Director shall notify the Houghton Community Council in writing, at least 40 days before issuance of a decision on a request for a modification of the Master Plan.

d. A Process IIB zoning permit review process is required:

1) For any change to the Master Plan that does not meet the above criteria;

2) For leasing of any campus facilities to long-term tenants;

3) For any increase in student population above 1,200; or

4) For a change in all or any part of the Seahawks facility to a use other than a professional football team office and practice facility. (Ord. 4476 § 2, 2015)

LEGEND

- ① DAVIS ADMINISTRATION BLDG. ADDITION
- ② GRAY-BEATTY RESIDENCE HALL ADDITION
- ③ CATERER'S ADDITION
- ④ CROWDERGUT PARKS RESIDENCE HALL ADDITION
- ⑤ ENROLLMENT CENTER
- ⑥ TWO-FAMILY HOME
- ⑦ MARRIED STUDENT HOUSING NORTH
- ⑧ MARRIED STUDENT HOUSING SOUTH ADDITION
- ⑨ D.V. WREST LIBRARY ADDITION
- ⑩ WEBB HALL ADDITION
- ⑩A PROPOSED ACADEMIC BUILDING
- ⑪ STUDENT UNION BUILDING (FECOTU) ADDITION
- ⑫ TELLARD HALL ADDITION
- ⑬ PAVILION ADDITION
- ⑭ BUTTERFIELD CHAPEL ADDITION
- ⑮ NEW PRAYER GAZEBO
- ⑯ MAINTENANCE BUILDINGS
- ⑰ SEAHAWK FACILITY
- ⑱ EMERGENCY WATER TANK

- PERIMETER LANDSCAPE BUFFER
 ----- 100' SETBACK
 ----- 300' SETBACK
 --- NW COLLEGE PROPERTY OUTSIDE PL-1 ZONE
 - - - - - CAMPUS PL-1 ZONE BOUNDARY

BUILDING AREAS

THE FOLLOWING REITERATES HOW THE ACADEMIC BUILDING AREA IS FORMED USING EXISTING APPROVED AREAS FROM THE PREVIOUSLY APPROVED MASTER PLAN.

BLDG. 9	20,790	SF
BLDG. 10	24,000	SF
BLDG. 12	13,930	SF
BLDG. 13	2,970	SF
TOTAL	60,950	SF

TOTAL AREA OF ACADEMIC BLDG 10A IS 60,950 SF.

PARKING FOR THE ACADEMIC BUILDING

PARKING PREVIOUSLY APPROVED IN MASTER PLAN = 154 STALLS

PARKING PROPOSED FOR ACADEMIC BUILDING = 154 STALLS

LOT SIZE: 59 ACRES, MORE OR LESS

TYPE OF CONSTRUCTION: TYPE II FR.

⑩ EXISTING PARKING STALLS TO BE REMOVED

⑩ EXISTING NUMBER OF PARKING STALLS

⑩ PROPOSED NUMBER OF PARKING STALLS

TOTAL PARKING ON-SITE:

SEAHAWKS FACILITY: 133 STALLS

NUC CAMPUS: 1045 STALLS

TOTAL PARKING PROVIDED: 1178 STALLS

TOTAL PARKING ALLOWED: 1178 STALLS



The Dennis Barry & Associates Group
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Sheet
A4
of 11

PROPOSED MASTER SITE PLAN

1"=100'-0"



00054

Kirkland Seventh-day Adventist School

5320 108th Avenue NE, Kirkland, WA 98033
425-822-7554 ksdaschool.org 425-828-0856

August 16, 2017

John Jordan, CFO
Northwest University
5520 108th Ave NE
Kirkland, WA 98033

Reference: Northwest University Master Plan – Buffer Reduction

Dear Mr. Jordan,

This letter serves to formalize our review and agreement with the proposed buffer reduction included in the Northwest University Master Plan, currently under review at the City of Kirkland. We understand that city staff has requested a letter from Kirkland Seventh Day Adventist School (KSDAS) and we are writing in response to this request. We further understand that the buffer as described in the expired NU master plan is 30', meaning that when the expired master plan was in force, no buildings or structures were allowed to be built within this 30' buffer. The proposed buffer reduction in the proposed twenty-year master plan of 10' will update this requirement so that buildings and/or structures approved in the master plan may be constructed no closer than 10' from the KSDAS property.

As expressed when we met to discuss the master plan updates, we are concerned about maintaining a safe and secure campus for our students now and into the future. We would ask that Northwest University fully cooperate and pay 100% of the expenses related to maintaining or replacing the current fence between our campuses as a condition of our approval of the reduced buffer.

Blessings,



Ron Jacaban
Principal
Kirkland SDA School

We are here to honor Christ, to become like Him, to serve Him.

KZC Section 46.60 Special Regulation Changes

1. The Master Plan, approved by Resolution R-4203, includes a site plan, which is on file with the City. That site plan is, by reference, incorporated as a part of this code as it pertains to the location, configuration and nature of improvements in the PLA 1 zone.

Staff Note: Resolution reference will need to be updated as part of new Master Plan

2. In addition to the site plan referenced above, the adopted Master Plan includes the following special regulations:

a. Future development permits shall be reviewed by the Planning Director to ensure consistency with the Master Plan.

Staff Note: No changes proposed

b. The applicant shall indicate all site improvements and landscaping for the areas to be affected by construction which are proposed to accompany the construction of each facility. The Planning Director shall have the authority to require implementation of these related elements of the Master Plan at such time new facilities, structures or additions are being constructed.

Staff Note: No changes proposed

c. At the time of application for development of the married student housing information relating to the degree of cutting and filling necessitated shall be provided. Plans for stabilization of nearby slopes shall be included in this information. This information shall indicate to what extent the drainage conditions on the eastern portion of the campus will be disturbed, and what measures will be taken to insure that surrounding properties will not be adversely affected by alternate drainage patterns.

Staff Note: Delete as the project was already constructed.

d. A 30-foot-wide landscape buffer planted as follows:

- 1) Two rows of trees planted eight feet on center along the entire length of the buffer. No more than 50 percent of the required trees may be deciduous. At the time of planting, deciduous trees must be at least two inches in diameter as measured using the standards of the American Association of Nurserymen; and coniferous trees must be at least five feet in height.
- 2) Shrubs, 18 inches high, planted to attain coverage of at least 60 percent of the buffer area within two years.
- 3) The buffer shall be provided around the campus perimeter, except along 108th Ave. NE, 114th Ave. NE, I-405, and between on-campus duplex housing and adjacent single-family sites or I-405. The buffer shall incorporate all existing significant trees and vegetation. Where fencing is proposed, it shall be wood, unless alternative fencing is requested in writing by the adjacent neighbor and agreed to by the applicant.

Staff Note: Edit section to reflect reduced 10 foot buffer near PSAA.

e. A 15-foot-wide landscape buffer planted pursuant to the requirements of subsections (d)(1) and (2) of this section shall be provided between on-campus duplex housing and adjacent single-family sites. The buffer shall incorporate all existing significant trees and vegetation.

Staff Note: No changes proposed

f. New construction of buildings and parking areas shall preserve existing significant trees to the maximum extent possible.

Staff Note: No changes proposed

g. Storm drainage plans shall accompany any applications for development permits. Said plans shall comply with the requirements of KMC Title 15.

Staff Note: No changes proposed

h. Development permits for additional parking areas shall include a lighting plan for review and approval by the Planning Director. The lighting shall be directed such that it does not negatively impact adjacent residential areas.

Staff Note: No changes proposed

i. All main interior streets shall maintain a driving width of 24 feet plus curb and gutter improvements on both sides of the streets, for a total of 28 feet. Widths of, and improvements to secondary streets and service roads, shall be subject to the review and approval of the Planning Director. It will be necessary for secondary streets and service roads to provide adequate clearance for emergency vehicle access.

Staff Note: No changes proposed

j. The location, material and design of any walkway within the campus shall be at the discretion of the College and its representatives, but will be reviewed by the Planning Director; provided, that the pedestrian/bicycle path in 114th Ave. NE shall be asphalt or concrete, eight feet wide.

Staff Note: No changes proposed

k. The “NO PARKING” signs along 110th Avenue NE, east of the men’s dormitory, shall remain indefinitely, to discourage future parking along this street.

Staff Note: No changes proposed

l. Within 30 feet of all outer edges of the campus (except along 108th Ave. NE, 114th Ave. NE, and I-405), no institutional uses or new parking areas are permitted, including any future redevelopment of the maintenance buildings.

Staff Note: Edits needed to allow 10 foot setback for the Tennis Center and Gym near the PSAA property..

m. The housing unit, south of Gairloch, and west of 114th Ave. NE, shall be separated from abutting properties to the north and east by a dense vegetative buffer of not less than 30 feet.

Staff Note: No changes proposed

n. Parking lots shall include landscaping islands as required by Chapter 105 KZC.

Staff Note: No changes proposed

o. Where adjacent to existing single-family residences, existing campus roadways and parking areas shall be landscaped as much as possible in the space available to provide a visual screen of the roadways and parking areas from the nearby residences. The amount and type of landscaping shall be subject to the review and approval of the Planning Director. An effort shall be made to reduce the amount of asphalt surfacing wherever possible.

Staff Note: No changes proposed

p. Construction of the proposed clock tower shall be subject to the issuance of a Process IIB Permit, to be reviewed by the Houghton Community Council, the Kirkland Hearing Examiner and the Kirkland City Council.

Staff Note: Delete as the applicant is no longer proposing this project.

q. The two westernmost campus access drives (adjacent to the Seventh Day Adventist Church and opposite 111th Ave. NE) shall be closed to general vehicle use. The driveway serving The Firs married student housing shall be relocated to lie within the 114th Ave. NE right-of-way.

Staff Note: Delete as the project was already constructed.

r. The District Office shall have only one access point from 108th Avenue NE.

Staff Note: No changes proposed

s. New buildings or building expansions must conform with design guidelines as adopted as part of the Master Plan.

Staff Note: No changes proposed

t. The City is authorized to implement measures, identified in the approved Master Plan, to protect the surrounding neighborhood from parking impacts.

Staff Note: No changes proposed

u. For other regulations applicable to this use, see the Master Plan approved under Resolution R-4203.

Staff Note: Change Resolution Reference

v. Structure height shall not exceed 30 feet above average building elevation if located within 100 feet of the campus perimeter, or 40 feet above average building elevation if located greater than 100 feet from the campus perimeter.

Staff Note: Change to reflect 60 feet above average building elevation for Residence Hall and 40 feet above average building elevation for Tennis Center and Gymnasium Pavilion.

3. Deviations from the approved Master Plan may be administratively approved by the Planning Director:

a. Unless:

1) There is a change in the use and the Zoning Code establishes different or more rigorous standards for the new use than for the existing use.

2) The Planning Director determines that there will be substantial changes in the impacts on the neighborhood or the City as a result of the change; and

b. The proposed modification or deviation satisfies all of the following:

1) No vehicular ingress or egress from surrounding streets may be changed.

2) No roadways, parking lots or structures within 100 feet of the site perimeter may be shifted toward the perimeters. Any other shifting or improvements shall be consistent with the design concept of the College.

3) No buffers shown in the approved site plan may be reduced, unless specifically authorized by some other special regulation.

4) Reconfigurations of the footprint of the structures shown in the approved plan may be permitted; provided, that such changes are not apparent off-site and do not increase building height.

5) Minor new structures not shown on the approved site plan may be permitted; provided, that they are at least 200 feet from the site perimeter, are not apparent from off-site and do not require the significant shifting of roadways, parking areas or other improvements.

c. The Planning Director shall notify the Houghton Community Council in writing, at least 40 days before issuance of a decision on a request for a modification of the Master Plan.

Staff Note: No changes proposed

d. A Process IIB zoning permit review process is required:

1) For any change to the Master Plan that does not meet the above criteria;

2) For leasing of any campus facilities to long-term tenants;

3) For any increase in student population above 1,200; or

4) For a change in all or any part of the Seahawks facility to a use other than a professional football team office and practice facility. (Ord. 4476 § 2, 2015)

Staff Note: No changes to 1 and 2. Edit to 3 for new student population maximum. Delete 4 as this project was completed.

Revisions Submitted to

This proposal of revisions to the design guidelines is an attempt to streamline and coordinate two documents that appear in separate locations in the 1999 Master Plan Approval Documents of Northwest College. The City of Kirkland staff report (Exhibit, A Attachment 6) offers *general design guideline* for development on the campus in addition to appendix "H" (proposed by the College) which offers *general guidelines for architectural design*, site lighting and site furniture.

PCO
August 14,
2002

These guidelines seek to reinforce our commitment to design excellence and the creation of a unified and responsive project. Through overall architectural, design, and landscape detailing, the intention is that all aspects of the college development will blend with the natural beauty of the existing site and establish a high standard of architectural design that will unify and gradually upgrade the existing campus structures.

It is hoped that planning by the city, the community, and the college can be simplified and streamlined by combining these two documents. It is intended that the proposed consolidation would replace "Attachment 6" and Appendix "H".

Proposed additions to the existing documents are in ***bold italics***.

Proposed deletions to the existing documents are ~~lined out~~.

Comments of explanation are (*in parenthesis and italics*.)

////////////////////////////////////
"ATTACHMENT 6" (Page 82 of Master Plan Approval Documents 1999)

GENERAL DESIGN GUIDELINES (Additions to applicant's proposal (see Appendix H)) (former "Exhibit A" - "attachment 6")

- a. Planning Official shall review and approve the design of each new building or addition. Structures shall be evaluated based on the following general design guidelines: relationship to human scale, horizontal and vertical modulation to ~~reduce~~ ***minimize*** the bulk of buildings, ~~roof style should be compatible with residential uses on the perimeter of the campus, and treatment of blank walls with vegetation, graphics, or texture.~~
- b. ~~Establish a Maximum Building Height—Maximum Building Height in center of campus should not exceed 40 feet~~ ***above average building elevation*** in height. ~~Within 100 feet of the perimeter, should not exceed 30 feet above A.B.E., consistent with our multi-family standards of height and bulk. Structures may be taller in the interior campus than the perimeter. (see KZC 60.12.010.2.v.)~~
- c. Elevated walkway design must be submitted to Planning Director for design approval.
- d. Residential structures shall be designed with peaked roofs.
- e. Each building permit for a Duplex or multifamily structure shall include a landscape plan and installation prior to occupancy.
- f. ~~Scale of buildings shall be compatible with surrounding reside~~
(*This is addressed in detail the General Guidelines for Archite*)

- g. ~~College is encouraged to replace any new fencing with wood instead of chain link along all property lines that abut single family properties. (See Conditions of Approval document #10.)~~
- h. Avoid large glass windows or facades that may cause glare on surrounding residential properties. ~~or not be in character with the surrounding neighborhood.~~
- i. All new rooftop appurtenances shall be below the roofline or screened. Building permits shall include plans for screening. *(see KZC 115.60.2B and 115.120.)*
- j. The **above ground** water tank shall be screened with mature landscaping to be approved as part of the building permit.

APPENDIX "H"—ARCHITECTURAL DESIGN GUIDELINES

ARCHITECTURAL DESIGN GUIDELINES:

These guidelines are a supplement to the "Northwest College Master Plan 1995". They will serve to insure a high standard of development for the project. These guidelines seek to reinforce our commitment to design excellence and the creation of a unified and responsive project. Through overall architectural design and landscape detailing, the intention is that all aspects of the college development will blend with the natural beauty of the existing site and establish a high standard of architectural design that will unify and gradually upgrade the existing campus structures.

GENERAL GUIDELINES FOR ARCHITECTURE *ARCHITECTURAL DESIGN* (former "Appendix H")

- A. Building shapes will respond to the site function and environmental factors so as to be in harmony with the surrounding natural environment and preexisting structures.
- B. ~~Building shape and orientation will take advantage of micro-climate factors including sunlight, prevailing winds, views and energy conservation. (deleted – unclear.)~~
- C. Scale of building will be carefully related to the overall visual environment ~~and to adjacent on-site pedestrian areas.~~ *on and around the campus.*
 - 1. The scale and visual mass of buildings *which are significantly visible from adjacent residential properties, or within 100' of the campus perimeter* will be controlled through the following design measures:
 - a. Modeling the planes of the exterior walls to provide for a modulation of the forms. *Model the planes of the exterior walls and varying the height of the building components to provide for a distinct modulation of forms.*
 - b. ~~Varying the height of the building components so that the structures appear to be divided into distinct massing elements.~~
 - c. To "humanize" the different parts of the building façade by use of color, arrangement of façade elements and detailing to minimize the impact of large structures and provide a relation between the building façade and adjacent pedestrian areas

- d. Use of landscape and architectural detailing at ground levels to enhance the human scale of the structures.
- 2. *The scale and mass of buildings which are not significantly visible from adjacent residential properties, or are significantly screened, or are more than 100' from the campus perimeter may be allowed to be of institutional design and character.*
- D. Arcades will be used along pedestrian-oriented building facades to provide weather protection, and to enhance the "collegiate" image of the proposed structures. ~~The use of these arcades will be one of the major design elements unifying the various structures on campus.~~
- E. Materials and finishes for buildings will be selected for appropriateness, ease of maintenance and durability.
- F. Dominant building materials may be concrete, stone, wood or brick with acceptable accent materials being metal, glass, wood or other materials complimentary to the dominant building material. The predominate use of facing brick as a dominant building material will *may* serve to unify the various structures on campus.
- G. Dominant building colors will relate to the inherent color of the primary building finish materials. In general, exterior colors and materials for new structures will be directly related to adjacent existing material and colors.
- H. Accent colors may be used to highlight architectural details such as door and window frames, doors, and special miscellaneous metal items.
- I. Roof surfaces and textures will be selected to minimize reflectivity and glare as viewed from other buildings or locations.
- J. Rooftop mechanical equipment, vents and ducts will be screened, covered or installed in a manner which minimizes visual impact or obstruction of views from adjacent structures or locations. (*see KZC 115.60. and 115.120*)
- K. Loading and servicing areas for buildings will be designed as an integral part of the building's architecture. The intention is that these would be located away from pedestrian areas and adjacent to building's vehicular access roadways.

GENERAL SITE ELEMENT GUIDELINES:

Lighting:

- A. Site lighting will be a coordinated system compatible with the dominant architectural theme of the development.
- B. Lights will be located to provide for safety in vehicular and pedestrian areas and will meet applicable standards for illumination.
- C. Accent lighting will be used to highlight entrances, special gathering places or focal elements.
- D. Light fixtures will be concealed source wherever possible to prevent glare and spillover from impacting adjacent roadways, buildings or residential properties.

E. Lighting design will conform to accepted Washington State energy conservation standards and guidelines.

Signage:

A. Site signage will be a comprehensive system that is compatible with the aesthetics for the development, durable, vandal resistant, and easily maintained.

B. A consistent building identification system is to be developed for the whole site and will meet the requirement of emergency response services.

C. Traffic signage will meet all applicable city and state standards.

D. Locations, mounting height, readability, and viewing angles of signs will be designed for efficiency of viewing and so as not to block important sight lines.

Site Furniture:

A. The site furniture used at Northwest College will be durable, vandal resistant, easily maintained and compatible with the dominant theme of the development.

B. Adequate and comfortable seating will be provided in all publicly accessed areas.

C. Site appurtenances such as trash receptacles, drinking fountains, etc. will be located for easy access and use. These will be chosen for compatibility with the overall design intentions of the project.

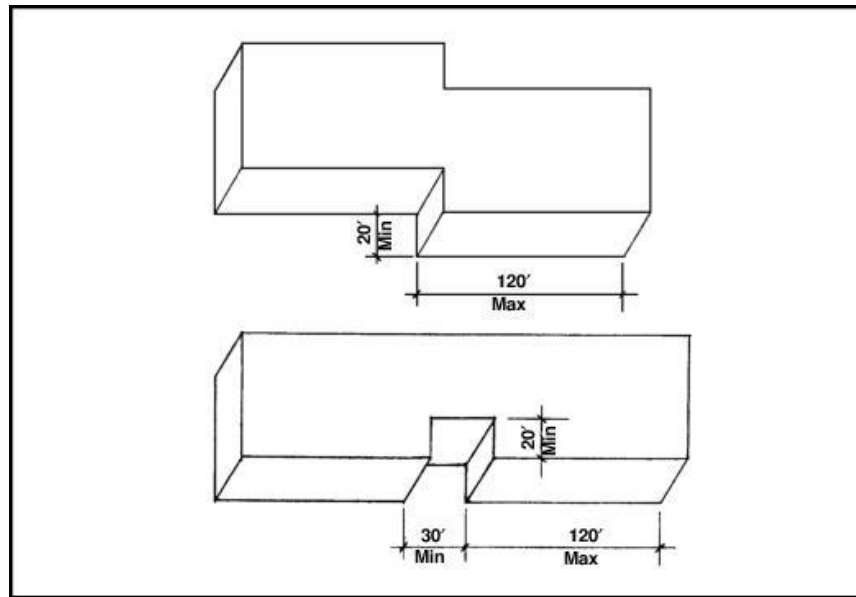
- 4) A combination of methods described above.
- b. All Zones – There must be architectural screening or other treatment of openings above the ground level for the facades of parking garages along the Market Street Corridor, pedestrian-oriented streets, through-block pathways and major pedestrian sidewalks.
- c. RHBD and TLBD Zones – Structures containing parking on the ground floor:
 - 1) Parking structures on designated pedestrian-oriented streets shall provide space for ground-floor commercial uses along street frontages at a minimum of 75 percent of the frontage width. The entire facade facing a pedestrian-oriented street must feature a pedestrian-oriented facade.
 - 2) Parking structures adjacent to non-pedestrian-oriented streets may be located adjacent to a sidewalk where they provide space for ground-floor commercial uses along street frontages at a minimum of 75 percent of the frontage width and include a pedestrian-oriented facade along the applicable frontage.
 - 3) Parking structures adjacent to non-pedestrian-oriented streets and not featuring a pedestrian-oriented facade shall be set back at least 10 feet from the sidewalk and feature substantial landscaping between the sidewalk and the structure. This includes a combination of evergreen and deciduous trees (one (1) per 20 lineal feet), shrubs (one (1) per 20 square feet), and ground cover (sufficient to cover 90 percent of the area within three (3) years). Other treatments will be considered in the Design Review process.
 - 4) Parking garage entries shall be designed and sited to complement, not subordinate, the pedestrian entry. If possible, locate the parking entry away from the primary street, to either the side or rear of the building.
 - 5) The design of structured parking at finished grade under a building shall minimize the apparent width of garage entries.
 - 6) Parking within the building shall be enclosed or screened through any combination of walls, decorative grilles, or trellis work with landscaping.
 - 7) Parking garages shall be designed to be complementary with adjacent buildings. Use similar forms, materials, and/or details to enhance garages.
 - 8) Parking structure service and storage functions shall be located away from the street edge and generally not be visible from the street or sidewalks.

(Ord. 4671 § 2, 2018; Ord. 4637 § 3, 2018; Ord. 4636 § 3, 2018; Ord. 4495 § 2, 2015; Ord. 4390 § 1, 2012; Ord. 4107 § 1, 2007; Ord. 4097 § 1, 2007; Ord. 4037 § 1, 2006; Ord. 4030 § 1, 2006; Ord. 3972 § 1, 2004; Ord. 3833 § 1, 2002)

92.30 Architectural and Human Scale

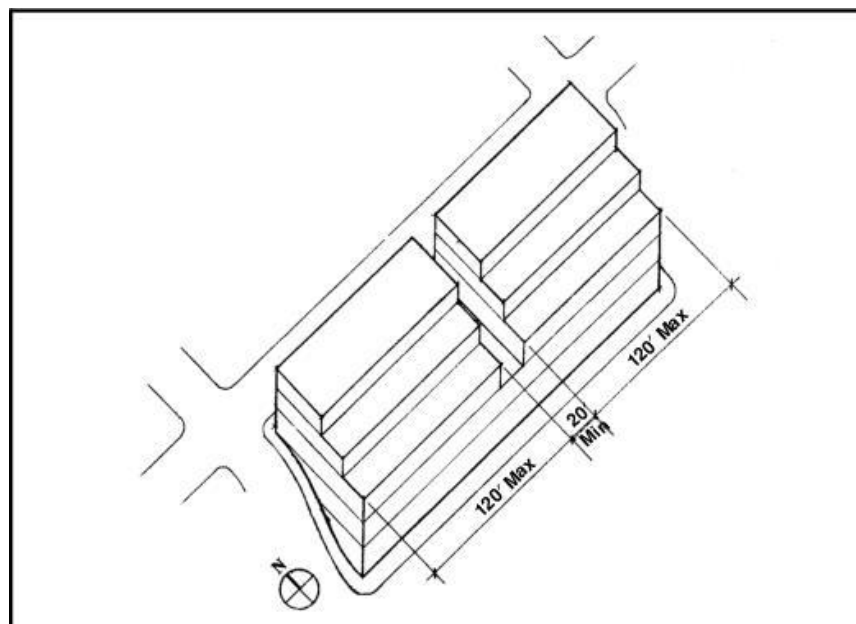
1. Techniques To Moderate Bulk and Mass in the CBD

- a. General – This section establishes required techniques to be used in the design and construction of building facades in specific areas of the CBD. The applicant shall comply with the techniques listed below in order to reduce the perceived bulk and mass of large structures by dividing the building mass into smaller-scale components. As an alternative, the City may approve other techniques, elements, or methods if consistent with the following criteria:
 - 1) The alternative is generally consistent with the downtown plan provisions of the Comprehensive Plan and the design guidelines.
 - 2) The alternative clearly provides superior moderation of the architectural bulk and mass than would result from strict application of the required techniques.
- b. Vertical Definition – The applicant shall comply with the following requirements to moderate the horizontal scale of buildings:
 - 1) All CBD Zones – The maximum length of any facade facing a street is 70 feet without vertical definition. Vertical definition may be in the form of changes in color and materials, modulations of sufficient width and depth to define the vertical element, or some combination of these techniques. This vertical element should carry through all floors of the building.
 - 2) CBD 4, CBD 6, CBD 8 – Along First Street, Second Street South, First Avenue South, and Fifth Street, the maximum length of a facade is 120 feet. Any facade that exceeds 120 feet along the right-of-way shall comply with the following requirements (see Figure 92.30.A):
 - a) Shall be divided by a 30-foot-wide modulation of the exterior wall so the maximum length of the facade is 120 feet without this modulation.
 - b) The modulation shall be 20 feet in depth and shall start at finished grade and extend through all floors.
 - c) Decks and roof overhangs may encroach up to three (3) feet (per side) into the modulation.

Vertical Definition: CBD 4, 6, and 8**FIGURE 92.30.A**

3) CBD 6, CBD 8: Along the axes of all buildings which are predominantly east-west and/or most closely parallel to Central Way, Third Avenue, Fourth Avenue, or Sixth Avenue, the maximum length of a building is 120 feet. The following exceptions apply (see Figure 92.30.B):

- a) Portions of buildings which are below the elevation of Third Avenue, Fourth Avenue, or Sixth Avenue, as measured at the midpoint of the frontage of the subject property on the applicable right-of-way, may exceed the 120-foot limitation.
- b) Portions of the building above Third Avenue, Fourth Avenue, or Sixth Avenue shall be divided into two (2) or more distinct building masses with a maximum length of 120 feet separated by at least 20 feet in width.
- c) Decks, bay windows, roof overhangs, and chimneys may encroach up to three (3) feet (per side) into the separation.

Vertical Definition: CBD 6 and 8**FIGURE 92.30.B**

2. Horizontal Definition in All Zones – The applicant shall comply with the following requirements to moderate the vertical scale of buildings. All buildings shall include design techniques which clearly define the building's top, middle, and bottom (see Figure 92.30.C). The following techniques are suggested methods of achieving vertical articulation:

- a. Top: Sloped roofs, strong eave lines, cornice treatments, horizontal trellises, or sunshades, etc.
- b. Middle: Windows, balconies, material changes, railings, and similar treatments that unify the building design.
- c. Bottom: Pedestrian-oriented storefronts, pedestrian-scale building details, awnings, arcades, "earth" materials such as concrete stone, stucco, etc.

Where appropriate, the applicant should coordinate the horizontal elements (i.e., cornices, window lines, arcades, etc.) in a pattern and height to reflect similar elements on neighboring buildings.

Horizontal Definition: Articulation of Buildings' Top, Middle and Bottom

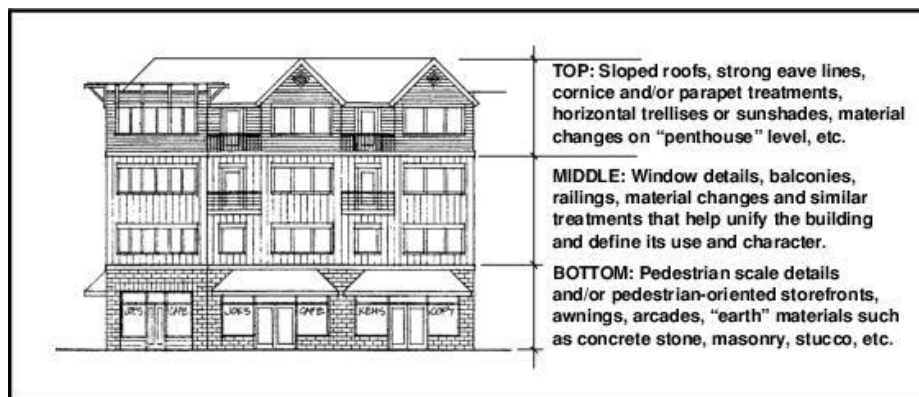


FIGURE 92.30.C

3. Techniques To Moderate Bulk and Mass in the RHBD and TLBD Zones

a. Along all streets, through-block pathways, and public open spaces, the maximum length of a facade is 120 feet. Any facade that exceeds 120 feet along the right-of-way shall comply with the following requirements (see Figure 92.30.A):

- 1) Shall be divided by a 30-foot-wide modulation of the exterior wall so the maximum length of the facade is 120 feet without this modulation.
- 2) The modulation shall be 20 feet in depth and shall start at finished grade and extend through all floors.
- 3) Decks and roof overhangs may encroach up to three (3) feet (per side) into the modulation.

4. Techniques To Achieve Architectural Scale in All Zones – The applicant shall use at least two (2) of the following elements and features in the design and construction of all buildings that are three (3) or more stories or have a building footprint of more than 10,000 square feet. As an alternative, the applicant may propose slight variations from the required dimensions noted in the following techniques, or other methods to comply with the requirements of this subsection. The City may approve the proposal if it is consistent with the design guidelines and the Comprehensive Plan.

- a. All stories above the second story must be set back at least 10 feet from the ground floor facade along at least two (2) facades of the building.
- b. Horizontal Building Modulation – On all building facades visible from a street or public park, provide horizontal modulation consistent with all of the following standards:
 - 1) The maximum allowable horizontal dimension of the facade between modulations is 70 feet;
 - 2) The minimum depth of each modulation, except balconies, is 10 feet; and
 - 3) The minimum width of each modulation, except balconies, is 15 feet.
- c. On all building facades visible from a street or public park, provide balconies which are consistent with the following standards:
 - 1) Balconies must be placed on at least every other floor above the ground floor;
 - 2) The maximum distance between balconies, measured horizontally, is 100 feet; and
 - 3) The minimum amount of floor area for each balcony is 100 square feet.
- d. Change in Roofline – Provide vertical modulation of the roof line of all facades of the building adjoining a street or public park. For buildings with flat, gabled, hipped or similar roofs, the maximum length of any continuous roof line, with a slope of less than three (3) feet

vertical to 12 feet horizontal, is 50 feet without being modulated. If modulation is necessary, at least one (1) of the following methods must be used (see Figure 92.30.D):

- 1) The height of the visible roof line must change at least eight (8) feet if the adjacent roof segments are less than 50 feet in length.
- 2) The height of the visible roof line must change at least 12 feet if the adjacent roof segments are greater than 50 feet in length.

Flat Roof Modulation Options

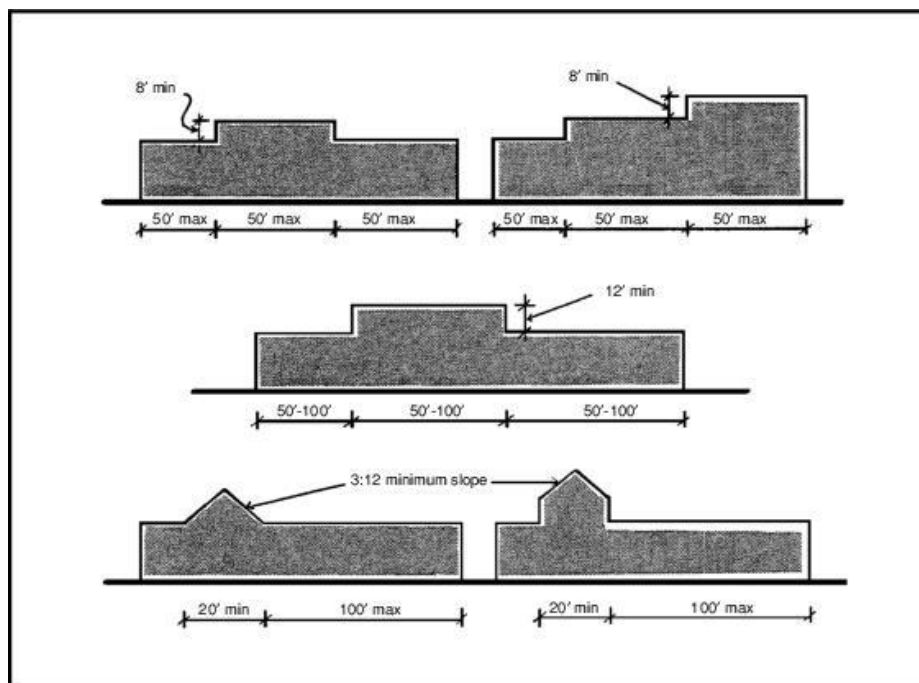


FIGURE 92.30.D

- 3) The length of a sloped or gabled roof line segment must be at least 20 feet. The minimum slope of the roof segment is three (3) feet vertical to 12 feet horizontal.

e. Buildings with other roof forms, such as arched, gabled, vaulted, domered or sawtooth, must have a significant change in slope or significant change in roof line at least every 100 feet.

5. Techniques To Achieve Architectural Scale in the RHBD and the TLBD Zones

a. The following standards supplement the required techniques described in subsection (4) of this section. Where there are similar techniques, the standards in this section shall apply. All buildings in the RHBD and TLBD zones shall include at least three (3) of the following modulation techniques at the articulation intervals described in subsection (5)(b) of this section along all facades containing the primary building entries (alley facades are exempt):

- 1) Repeating distinctive window patterns at intervals less than the articulation interval;
- 2) Horizontal Building Modulation – Minimum depth of modulation is two (2) feet and minimum width for each modulation is four (4) feet if tied to a change in color or building material and roof line modulation as defined below. Otherwise, minimum depth of modulation is 10 feet (except balconies) and minimum width for each modulation is 15 feet;
- 3) Providing a separate covered entry or separate weather protection feature for each articulation interval;
- 4) Change of Roofline – To qualify for this measure, the maximum length of any continuous roofline shall not be less than the articulation interval and comply with the treatments below (see Figure 92.30.E):
 - a) For segments less than 50 feet in horizontal width, the height of visible roofline must change at least four (4) feet if tied to horizontal building modulation and at least eight (8) feet in other cases.
 - b) For segments more than 50 feet in horizontal width, the height of visible roofline must change at least six (6) feet if tied to horizontal building modulation and at least 12 feet in other cases.
 - c) The length of sloped or gabled roof line segments must be at least 20 feet. The minimum slope of the roof segment is three (3) feet vertical to 12 feet horizontal;

- 5) Change in building material or siding style coordinated with horizontal building modulation and/or change in building color where appropriate;
 - 6) Providing lighting fixtures, trellis, tree, or other landscape feature within each interval;
 - 7) Alternative methods that achieve the desired architectural scale as approved by the City.
- b. Articulation Intervals – Modulation and/or articulation shall be provided at the following intervals:
- 1) No more than 30 feet for buildings containing residential uses on all floors above the ground floor;
 - 2) No more than 70 feet for nonresidential buildings (within RHBD, this applies to the Regional Center);
 - 3) RHBD – No more than 50 feet for nonresidential buildings in the Neighborhood Center;
 - 4) RHBD – No more than 30 feet for nonresidential buildings in the East End.

Building Articulation and Modulation Techniques

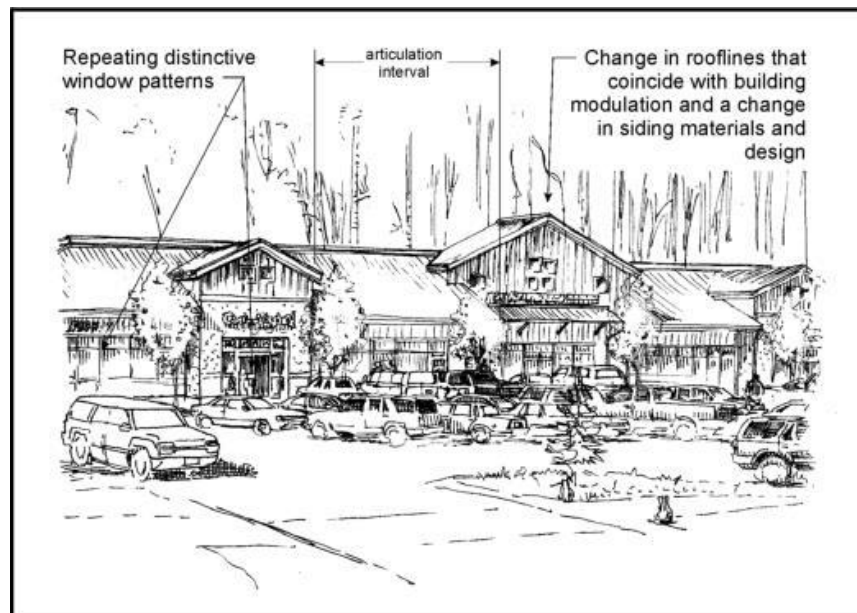


FIGURE 92.30.E

- c. Techniques To Achieve Architectural Scale for Office Buildings in the RHBD and in the TLBD Outside of Business District Core
- 1) Office Building Design Standards for the TLBD and the RHBD's Regional Center – These standards are intended to supplement other building design standards that apply to the Totem Lake Business District and to the Regional Center. Where there is a conflict between standards, these standards shall apply as they are specific to office buildings.
 - a) Buildings must use design techniques to break up long continuous building walls, reduce the architectural scale of the building, and add visual interest. Specifically, any building facade longer than 120 feet in width must employ design techniques to limit the length of individual facades. To meet this requirement, buildings must utilize a combination of horizontal building modulation with a change in building materials or finishes, a clear change in building articulation and/or a change in fenestration technique (see Figure 92.30.F).

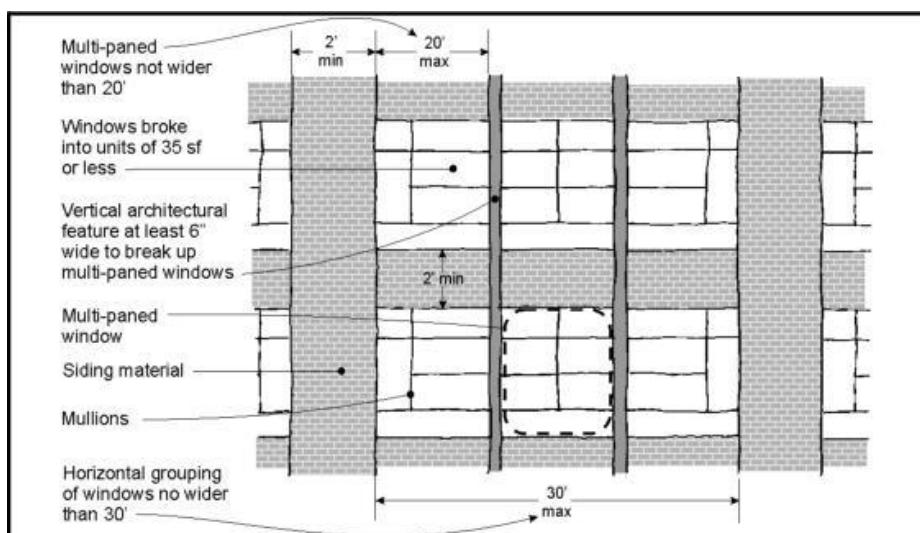
This building uses an angled window wall over the primary building entry to break up the width of the facade:

**FIGURE 92.30.F**

b) Buildings must employ design techniques to divide windows into units that give the building an identifiable scale (see Figure 92.30.G). Specifically:

- 1) Windows must be broken into units of 35 square feet or less with each window unit separated by a visible mullion or other element.
- 2) Multi-paned windows separated by mullions shall not exceed 20 feet in width and shall not exceed the height of individual floors.
- 3) Horizontal groupings of windows shall not exceed 30 feet in width. At least one (1) vertical architectural feature at least six (6) inches wide shall be used within the grouping to break up individual multi-paned windows. Architectural features at least two (2) feet in width shall separate such horizontal groupings of windows.
- 4) Siding material at least two (2) feet in height shall separate windows on each floor.
- 5) Building facades shall employ techniques to recess or project windows at least two (2) inches from the facade (see Figure 92.30.H).

Standards to divide windows into units that will give buildings an identifiable sense of scale.

**FIGURE 92.30.G**

Some or all of these standards may be relaxed through the Design Review process where other methods can be effectively used to divide windows into units and give the building an identifiable scale.

- c) Continuous window walls are prohibited, except where used as an accent facade element to break up long continuous building walls and/or emphasize a building entry. Such window walls should be modulated horizontally, by at least two (2) feet, and should not exceed 20 feet in width.
- d) Mirrored glass and other highly reflective materials are prohibited (see Figure 92.30.I)

Recessed windows, mullions and trim



FIGURE 92.30.H

Continuous window walls are prohibited unless used as an accent, such as in this building:



FIGURE 92.30.I

6. Achieving Human Scale in All Zones

a. General

- 1) CBD – Except as provided in subsection (6)(a)(3) of this section, the applicant shall use at least two (2) of the elements or techniques listed in subsection (6)(b) of this section in the design and construction of each facade of a building facing a street or public park.
- 2) BN, JBD, NRHBD, RHBD, MSC, BDC, YBD and TLBD – Except as provided in subsection (6)(a)(3) of this section, the applicant shall use at least one (1) of the elements or techniques listed in subsection (6)(b) of this section in the design and construction of each facade of a 1-story building facing a street or through-block pathway, and at least two (2) of the elements or techniques for a 2-story building facing a street or through-block pathway (see Plate 34 in Chapter 180 KZC).
- 3) All Zones – The applicant shall use at least three (3) of the elements or techniques listed in subsection (6)(b) of this section in the design and construction of any facade of a building facing a street, through-block pathway or public park, if:
 - a) The facade has a height of three (3) or more stories; or
 - b) The facade is more than 100 feet long.

b. Techniques To Achieve Human Scale in All Zones – The techniques to be used in the design and construction of building facades under subsection (6)(a) of this section are listed below. As an alternative, the applicant may propose other techniques, elements or methods which provide human scale to the building and are consistent with the applicable design guidelines and the Comprehensive Plan.

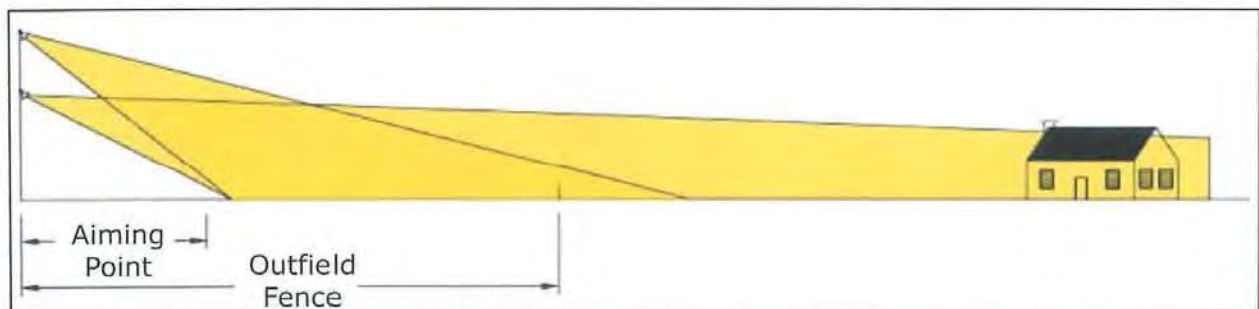
- 1) On each story above the ground floor, provide balconies or decks, at least six (6) feet wide and six (6) feet deep.
- 2) On each story above the ground floor, provide bay windows that extend out at least one (1) foot, measured horizontally, from each facade of the building.
- 3) Provide at least 150 square feet of pedestrian-oriented space in front of each facade (see KZC 92.15(2)(c)(2)).
- 4) Provide at least one-half (1/2) of the window area above the ground floor of each facade consistent with all of the following criteria (see Figure 92.30.J):
 - a) The windows must have glazed areas with dimensions less than five (5) feet by seven (7) feet.
 - b) The windows must be surrounded by trim, molding and/or sill at least two (2) inches wide.

Big Finn Hill Field Conversion

**PHOTOMETRICS
and LIGHTING DETAIL**

Light-Structure
GREEN.

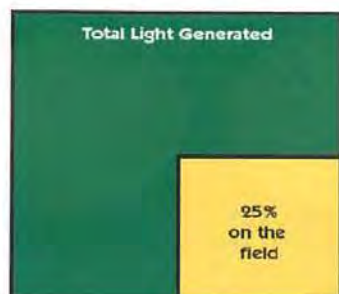
Taller poles ensure proper aiming angles, decrease glare for players, and decrease off-site spill light.





1976

SportsCluster



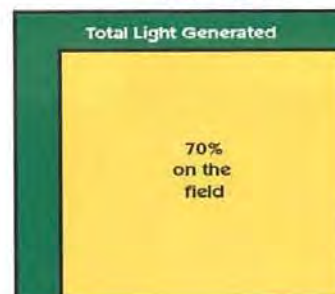
1989

SportsCluster-2



2005

Light-Structure GREEN

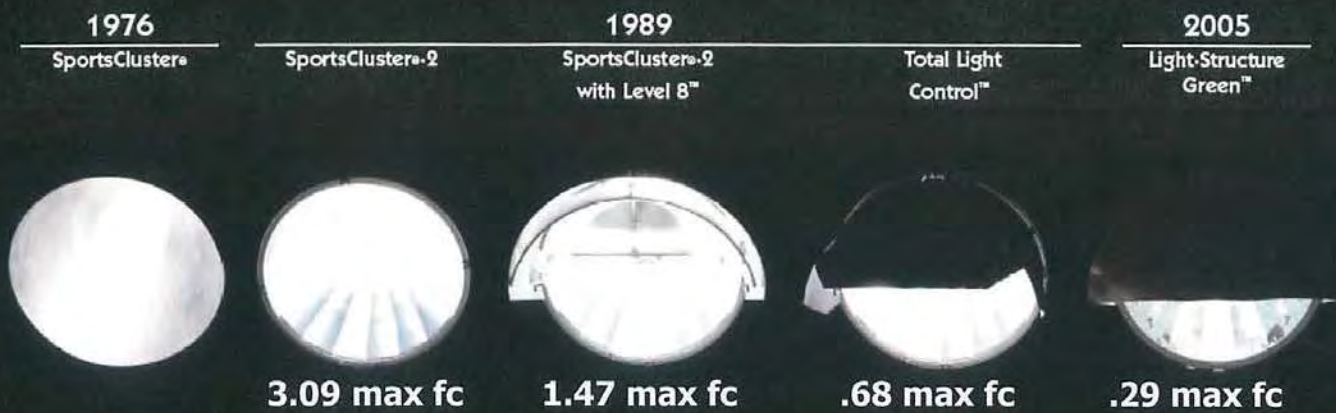


Musco's technology has developed over 29 years to utilize on the field 70% of the available light energy.





Evolution of Light Control



Maximum vertical footcandles at 150'

53%

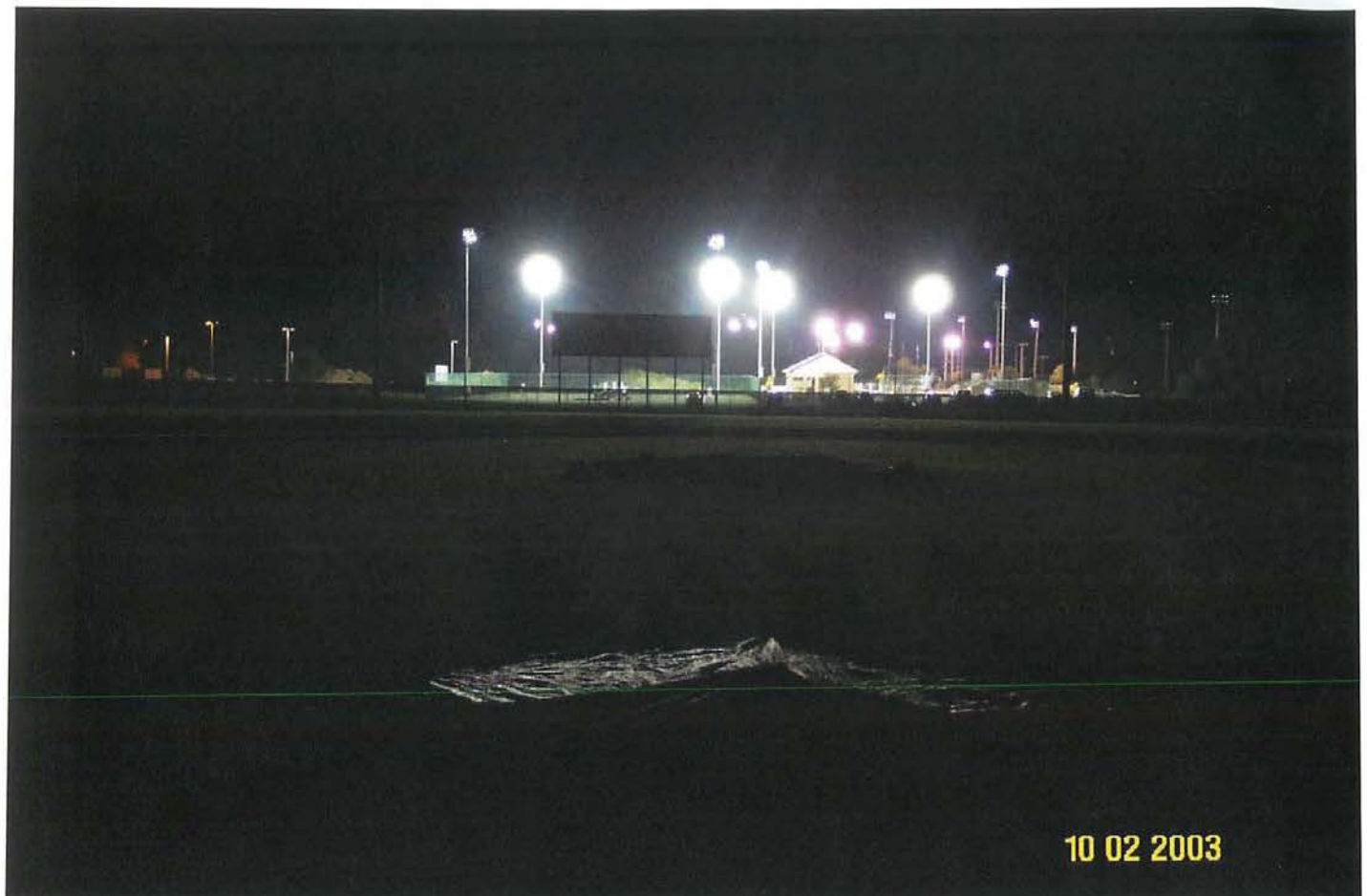
53%

57%

Total Reduction from SC2 to LSG – 90%

MUSCO

Light-Structure
GREEN.



MUSCO

Light-Structure
GREEN.

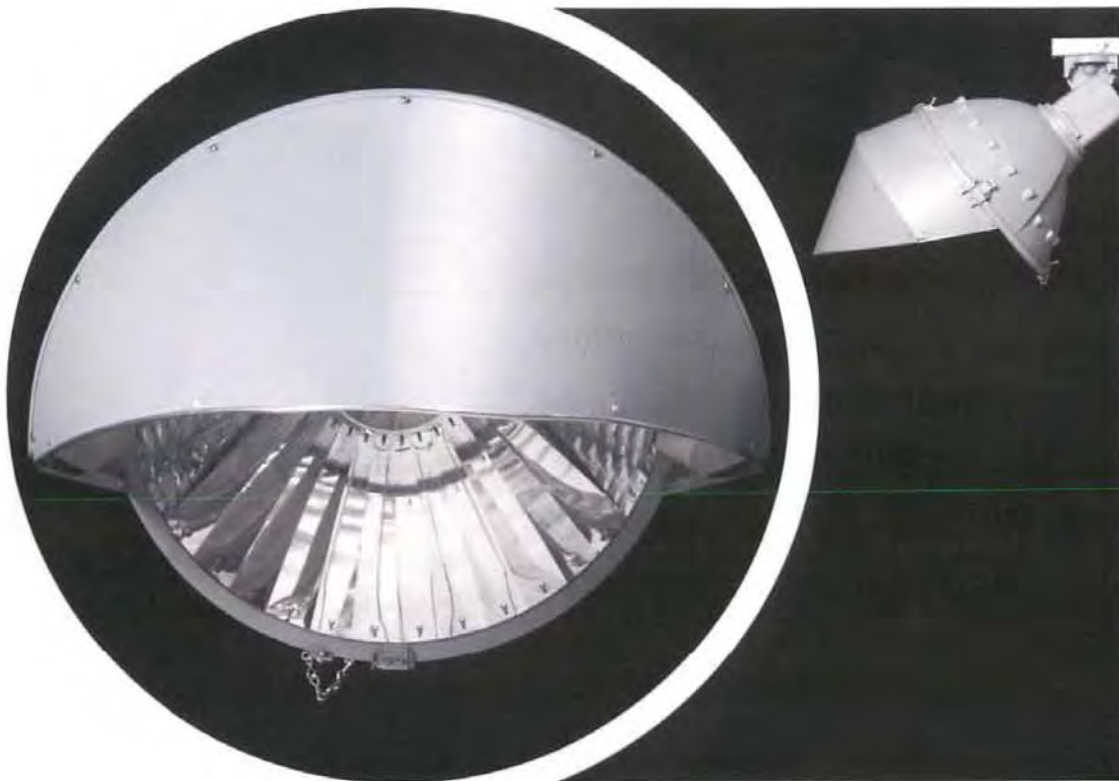


12 29 2003



How does Light Structure Green reduce spill & glare?

1. Internal optics allow for project specific photometric distribution
2. Improved optics shields the players & neighbors from excess glare





How does Light Structure Green reduce energy cost?

40% Energy Savings

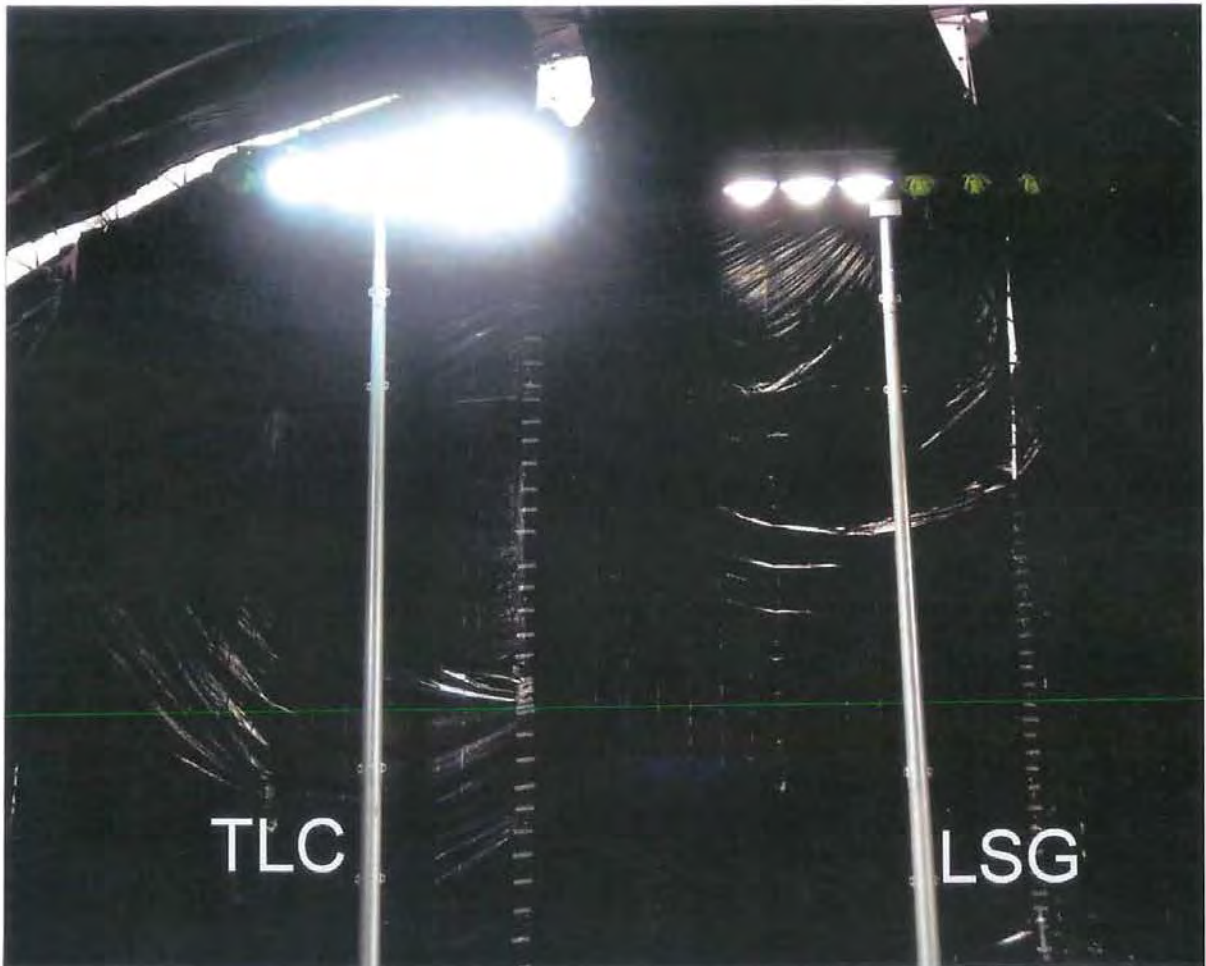


- Improved fixture efficiency
- New aerodynamic visor with beam control
- Geared Tilt adjustment
- 2000 Photometric patterns
- Improved gasketing
- Smart Lamp Technology



MUSCO

Light-Structure
GREEN.





GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Blanket	
Big Finn Hill Park Soccer Lacrosse Kirkland, WA	
Blanket	
Grid Spacing = 10.0' x 30.0'	
Values given at 3.0' above grade	
Luminaire Type	Green Generation
Rated Lamp Life	5,000 hours
Avg Lumens/Lamp	134,000
CONSTANT ILLUMINATION	
HORIZONTAL FOOTCANDLES	
No. of Target Points	644
Average	5.4
Maximum	40
Minimum	0
Avg/Mn	609.36
Max/Mn	6254.41
UG (Adjacent Pts)	13.14
CV	1.98
Average Lamp Tilt Factor	1.000
Number of Luminaires	28
Avg KW over 5,000	43.79
Max KW	47.6

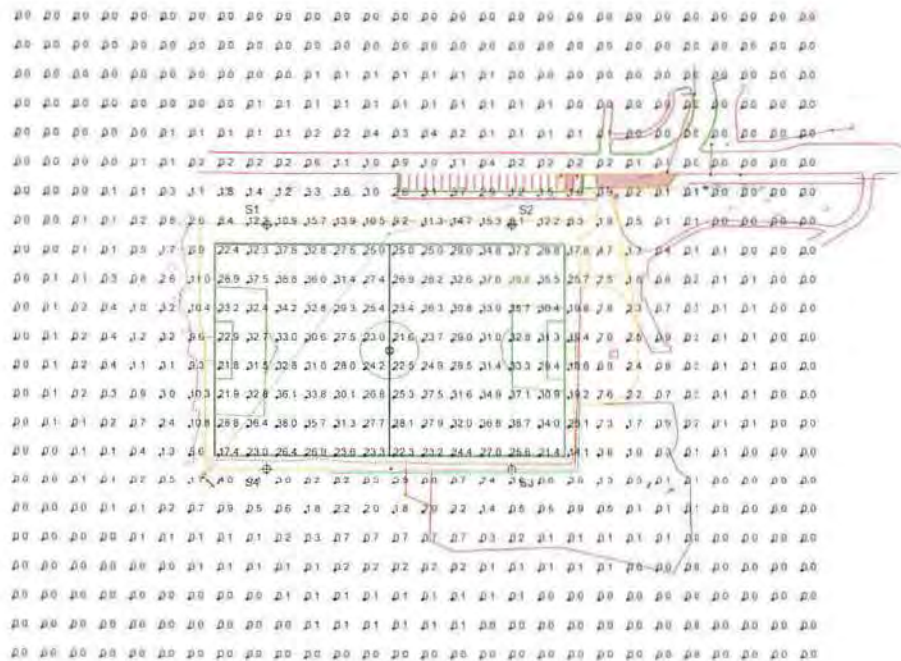
Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be $\pm 10\%$ in accordance with IESNA RP-9-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Appendix Draw Sheet and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume $\pm 1.3\%$ nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

Rounded to nearest
10th



SCALE IN FEET 1" = 100'



By: Eric Sverby

File #: 151556R23p

Date: 18-Nov-11

Note: Location(s) shown are relative to 0.0 reference point(s).

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Print Date (18-Nov-2011) & Time (12:11)



ILLUMINATION SUMMARY

Spill @ NE 138th ST

Big Finn Hill Park Soccer Lacrosse
Kirkland, WA

Spill @ NE 138th ST

Grid Spacing = 30.0'

Values given at 3.0' above grade

Luminaire Type: Green Generation
Rated Lamp Life: 5,000 hours
Avg Lumens/Lamp: 124,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

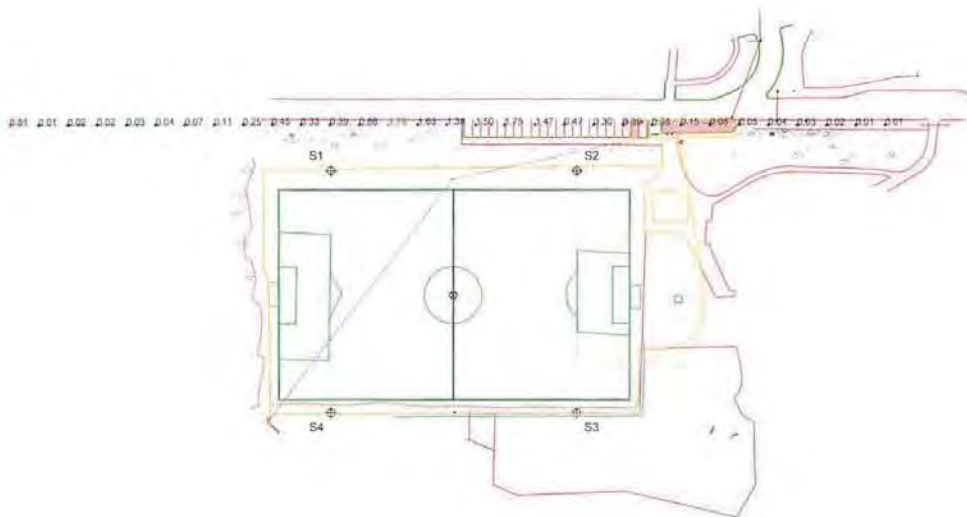
Entire Grid	
No. of Target Points	31
Average	0.452
Maximum	1.78
Minimum	0.01
Average Lamp Tilt Factor:	1.000
Number of Luminaires	28
Avg KW over 5,000:	43.79
Max KW:	47.6

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be $\pm 10\%$ in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Ampereage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume $\pm 1-2\%$ nominal voltage at one side of the ballast and structures located within 3 feet (1m) of design locations.



SCALE IN FEET 1" = 100'



By: Eric Sventy

File #: 15155R3p

Date: 10-Nov-11

Pipe (cabinets) 4-dimensions are relative to 0.0 reference point(s)

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Print Date (10-Nov-2011) & Time (13:11)



ILLUMINATION SUMMARY

Spill @ Juanita Drive

Big Finn Hill Park Soccer Lacrosse
Kirkland, WA

Spill @ Juanita Drive

Grid Spacing = 30.0'

Values given at 3.0' above grade

Luminaire Type: Green Generation
Rated Lamp Life: 5,000 hours
Avg Lumens/Lamp: 154,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

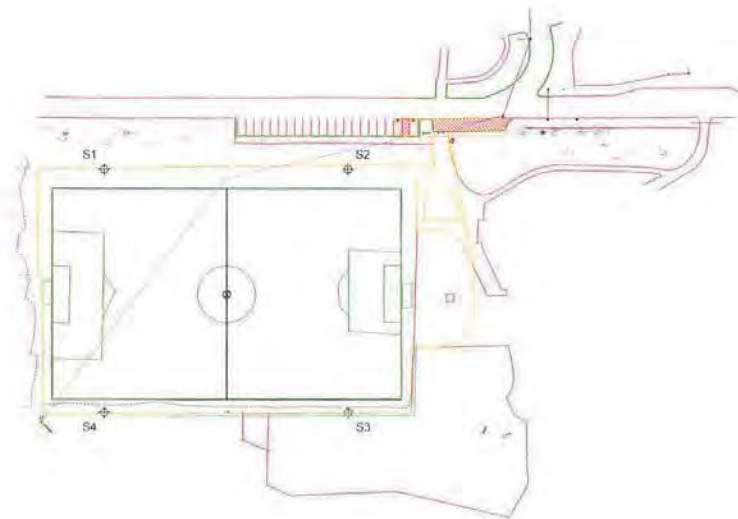
Entire Grid	
No. of Target Points	25
Average	0.008
Maximum	0.01
Minimum	0.00
Average Lamp Tilt Factor	1.000
Number of Luminaires	28
Avg KW over 5,000	43.79
Max KW	47.6

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be $\pm 10\%$ in accordance with IESNA RP-0-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume $\pm 1-3\%$ nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.



By Eric Sweeney

Fig # 1515SR34p

Date: 10-Nov-11

Pole location(s) + dimensions are relative to 0.0 reference point(s).
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Print Date (16-Nov-2011) & Time (13:11)

SCALE IN FEET 1 100





City of Kirkland
123 Fifth Avenue
Kirkland, WA 98033

Please print or type information

Document Title (or transaction contained therein):

- 1 Transportation Management Plan
- 2
- 3
- 4

Grantor(s) (Last name first, then first name and initials Check Box #5 if there are more than four grantors Do not list more than the first four)

- 1 Northwest College
- 2
- 3
- 4
- 5 ☐ Additional names can be found on page(s) of document

Grantee(s) (Last name first, then first name and initials Check Box #5 if there are more than four grantees Do not list more than the first four)

- 1 City of Kirkland
- 2
- 3
- 4
- 5 ☐ Additional names can be found on page(s) of document

Legal description (abbreviated i.e., Lot, block, plat or section, township, range, and quarter/quarter section:

That portion of the NE quarter of Section 17, Township 25 North, Range 5 East, W.M., in King County Washington, beginning at the Northwest Corner of Lot 19, Block 2, Harry White and Company's Fifth Addition to Kirkland

☒ The complete or remaining legal description is on page 3-5 of document

Assessor's Property Tax Parcel or Account Number at time of recording:

172505-9006, 172505-9007, 172505-9268, 741500-0030, 172505-9218, 172505-9144, 935390-0550
172505-9203, 935390-0385, 935390-0406, 172505-9171

Reference Number(s) of Documents assigned or released

☐ Additional references on page of document

City Contact:
Janice Soloff

Phone:
828-1274

City I.D. #

7649

☒ CAO

The auditor/Recorder will rely on the information provided on the form. The staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.

F:\APPS\MSOFF97\TEMPLATES\COK\OCD-CVR\12-21-99

**TRANSPORTATION MANAGEMENT PLAN
FOR THE NORTHWEST COLLEGE CAMPUS MASTER PLAN
FILE NO. III-IV-95-30**

This Transportation Management Plan (TMP) has been developed to provide for the transit and ride sharing needs for the Students and Employees of Northwest College Campus. The purpose of the TMP is to reduce the number of single-occupant vehicle trips generated by Northwest College Students and Employees and to assist in mitigating the traffic impacts of the Master Plan on the streets in the project vicinity.

The city of Kirkland is authorized to require a TMP under policy T-5.5 of the Comprehensive Plan, State Environmental Policy Act (SEPA) and Section 5 of the Non-Motorized Transportation Plan.

PROJECT DESCRIPTION: Northwest College Master Plan, 5520 108th Avenue NE, Kirkland WA 98083-0579. Total existing Master Plan gross square footage of land is 2,379,018 square feet. Total changes under the new Master Plan is 00 square feet. A comparison of existing and proposed impervious surface changes within the plan can be reviewed in the Transportation Impact Analysis, Section II, Pages 1 & 2. The subject property serves as a residential higher education institution.

The following elements of this plan shall be implemented by Northwest College the owner of the project Northwest College shall coordinate with and utilize the services of METRO staff in implementing the TMP

There are 47 full time employees and 41 contracted 9-10 month faculty in the traditional school year (August - May) There are 43 part time adjunct and applied music faculty that teach selected subjects or music lessons in a semester, as necessary Northwest College presently serves approximately 800 students of which 650 reside on campus and 150 reside off campus

ELEMENTS OF THE TMP. The TMP shall consist of the following elements

- A permanent Transportation Coordinator (TC) is assigned to coordinate and promote transit, ride sharing and non motorized transportation options The name of the TC shall be forwarded to a representative as directed by the City
- The TC shall provide members of staff annually with Alternate Transportation Awareness Packets by coordinating with the leadership of the Faculty Council, and Staff Council
- The TC shall work with the Dean Of Students to provide Alternate Transportation Packets at the New/Transfer Student Orientation each semester Further, the Dean of Students Office shall provide training to Residential Staff so that information and encouragement to use alternate transportation styles and non-motorized transportation options will occur
- 6 am to 9 am Preferential parking stalls shall be provided in 12 locations as close as possible to a building's most commonly used entrance Parking in these stalls shall be regulated by parking stickers issued through the Dean Of Students office and the Human Resources office The TC working with the Supervisor of the Security department shall be responsible for enforcement of the preferential parking sites METRO will provide assistance to this program
- Display boards/Commuter Information Centers shall be established in highly visible accessible areas of Student lounges, faculty lounges and staff lounges These areas shall be maintained by the Dean of Students office in cooperation with the TC The CIC shall include bus schedules and ride share information as provided by METRO
- Northwest College encourages staff and students to 'Walk and Talk not Drive and Honk' If the goals of the TMP are not being met, Northwest College shall provide a minimum of 50% of the cost of a monthly two-zone transit pass If further encouragement is necessary to modify the creep towards keeping the TMP goals in tack, Northwest College will provide a comparable monetary subsidy for other non-SOV modes, including car-poolers, bicycle users, and walkers

- Northwest College shall provide and maintain bicycle racks to accommodate a total of 35 bicycles. These racks shall be located throughout the Northwest College Campus site in a safe and convenient location. Dorm locations shall be lockable, covered, and permanently mounted to the ground. Other sites related to the Classrooms shall be lockable, and permanently mounted to the ground.
- A guaranteed ride home shall be available for students and employees who rideshare, bike, walk, or use transit should a personal emergency arise.
- Flex time, Compressed Work Week, and Staggered Work Hours will be used on a continuing basis to manage the impact of traffic and campus use.
- 5 full size vans shall be maintained to facilitate movement of 5-15 persons to a common venue.
- Provide a bus shelter pad on 108th Avenue NE that meets the requirements of METRO. This pad shall be located just West of the Northwest College Administration Building at a time that METRO and the college deems it necessary.
- Upon approval of Northwest College Master Plan by the Kirkland City Council, Northwest College shall conduct an initial employee survey to establish a basis for measuring the performance of the TMP management and to determine the existing amount of transit, ridesharing, and/or Non-SOV employee activities.

Northwest College shall be responsible for printing, distributing, and collecting the survey questionnaires. All questionnaires that are used shall be reviewed by the City of Kirkland prior to distribution. A data analysis consultant, selected by the City of Kirkland, shall perform the data entry, tabulation, and preparation of a report of the survey data. Northwest College shall pay for costs of work performed by the data analysis consultant, chosen by the city, through the third-party contract with the City of Kirkland.

Every two years after the initial survey, the TMP will be evaluated by the City of Kirkland for effectiveness in meeting of the POLICY T-5.2. Northwest College shall survey the students and employees on campus. The same process that was used shall be used. If the goals of the TMP are not met, Northwest College shall modify the TMP as mutually agreed upon with the City of Kirkland.

The goal of this TMP shall be to reduce the number of single-occupant vehicle (SOV) trips to the site as follows: based on provisions of the Washington State Commute Trip Reduction Law 15% (from the base year value) two years after the site's initial survey, 20% reduction from the base after two additional years, 25% after two additional years, and 35% within six additional years. The base year value can be determined from the initial site survey, or the current East King County CTR Zone base of 85% SOV may be used.

The TMP shall be recorded with King County as part of the covenants, conditions, and restrictions of the project to assure its implementation. The TMP shall run for the life of the institution.

- The real property subject to the Transportation Management Agreement is situated in Kirkland, King County, Washington, and legally described as follows: (See Attached Page for Legal's)

DATED at Kirkland, this 29th day of April 1997
 Corporation—Northwest College of the Assemblies of God
 by President [Signature]
 by Secretary [Signature]

172505-9006

EXHIBIT A

PARCEL A-1

COMMENCING AT THE NORTHEAST CORNER OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 17, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON,

THENCE SOUTH ALONG THE CENTER OF THE COUNTY ROAD SOUTH 0°34'12" EAST 158.04 FEET,
 THENCE SOUTH 89°03'57" WEST 30 FEET TO THE WEST MARGIN OF SAID COUNTY ROAD,
 THENCE CONTINUING SOUTH 89°03'57" WEST 594.12 FEET, MORE OR LESS, TO A COUNTY ROAD RIGHT OF WAY,
 THENCE SOUTH 0°35'17" EAST ALONG THE EAST LINE OF SAID RIGHT OF WAY, 130 FEET,
 THENCE NORTH 89°03'57" EAST 297.04 FEET AND THE TRUE POINT OF BEGINNING,
 THENCE SOUTH 0°34'46" EAST, 130 FEET,
 THENCE NORTHERLY 89°03'57" EAST 297.01 FEET TO THE WESTERLY MARGIN OF SAID COUNTY ROAD,
 THENCE NORTH 0°34'12" WEST ALONG THE SAID WESTERLY MARGIN 130 FEET, MORE OR LESS, TO A POINT WHICH LIES NORTH 89°03'57" EAST OF THE POINT OF BEGINNING,
 THENCE SOUTH 89°03'57" WEST 297.01 FEET, MORE OR LESS, TO THE POINT OF BEGINNING

PARCEL A-2

THE SOUTH 260 FEET OF THE EAST HALF OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 17, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON,

EXCEPT THE EAST 30 FEET FOR THE COUNTY ROAD

PARCEL A-3

THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 17, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON,
 EXCEPT THOSE PORTIONS CONVEYED FOR ROAD PURPOSES BY DEEDS RECORDED UNDER RECORDING NUMBERS 2707803 AND 7303050376
 EXCEPTING FROM SAID PARCELS A-1, A-2, AND A-3 THOSE PORTIONS THEREOF LYING WITH THE FOLLOWING DESCRIBED TRACT

THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 17, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS

COMMENCING AT THE NORTHWEST CORNER OF LOT 19, BLOCK 2, HARRY WHITE AND COMPANY'S 5TH ADDITION TO KIRKLAND, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 7 OF PLATS, PAGE 5 IN KING COUNTY, WASHINGTON:

THENCE SOUTH 89°15'26" EAST 250.01 FEET,
 THENCE NORTH 01°15'09" EAST 25.30 FEET,
 THENCE SOUTH 89°13'38" EAST 350.05 FEET,
 THENCE SOUTH 01°19'15" WEST 187.58 FEET,
 THENCE SOUTH 89°04'35" EAST 220.28 FEET,
 THENCE NORTH 01°18'54" EAST 100.00 FEET,
 THENCE SOUTH 89°04'35" EAST 131.01 FEET,
 THENCE NORTH 01°18'42" EAST 238.72 FEET,
 THENCE SOUTH 89°03'52" EAST 327.04 FEET,
 THENCE SOUTH 01°18'11" WEST 338.65 FEET,
 THENCE NORTH 89°04'35" WEST 30.00 FEET,
 THENCE SOUTH 01°18'11" WEST 287.54 FEET,
 THENCE SOUTH 89°02'39" EAST 50.03 FEET TO THE TRUE POINT OF BEGINNING,
 THENCE CONTINUING SOUTH 89°02'39" EAST 440.00 FEET,
 THENCE SOUTH 01°25'30" WEST 357.22 FEET,
 THENCE SOUTH 42°28'45" EAST 48.48 FEET,
 THENCE SOUTH 02°31'15" WEST 262.90 FEET,
 THENCE SOUTH 32°17'08" WEST 33.09 FEET,
 THENCE SOUTH 75°17'38" WEST 28.44 FEET,
 THENCE SOUTH 88°32'33" WEST 44.36 FEET,
 THENCE SOUTH 01°25'30" WEST 343.50 FEET TO THE NORTHERLY MARGIN OF NORTHEAST 53RD STREET,
 THENCE NORTH 88°55'59" WEST ALONG SAID MARGIN 242.17 FEET TO A POINT OF CURVATURE,
 THENCE ALONG A CURVE TO THE RIGHT THE CENTER OF WHICH BEARS NORTH 01°04'01" EAST 256.48 FEET, HAVING A DELTA OF 34°45'05", AN ARC LENGTH OF 155.56 FEET,
 THENCE NORTH 54°11'44" WEST 31.79 FEET TO A POINT OF CURVATURE,
 THENCE ALONG A CURVE TO THE LEFT OF CENTER WHICH BEARS SOUTH 35°48'33" WEST 316.48 FEET, HAVING A DELTA OF 16°57'14", AN ARC LENGTH OF 93.65 FEET,
 THENCE NORTH 35°44'16" EAST 83.06 FEET,
 THENCE SOUTH 88°34'30" EAST 72.00 FEET,
 THENCE NORTH 01°25'30" EAST 862.79 FEET, TO THE TRUE POINT OF BEGINNING

172505-9007

THE SOUTH 409.26 FEET OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 17, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON,
 EXCEPT THAT PORTION CONVEYED TO KING COUNTY FOR ROADS UNDER RECORDING NUMBERS 424352 AND 2716850
 AND EXCEPT THAT PORTION CONVEYED FOR STATE HIGHWAY 2-A,
 AND EXCEPT ANY PORTION THEREOF LYING EASTERLY OF STATE HIGHWAY 2-A

172505-9268

PARCEL A

BEGINNING AT THE NORTHWEST CORNER OF LOT 19, BLOCK 2, HARRY WHITE AND COMPANY'S FIFTH ADDITION TO KIRKLAND, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 7 OF PLATS, PAGE 5, IN KING COUNTY WASHINGTON,
 THENCE NORTH 89°26'25" EAST 160 FEET,
 THENCE SOUTH 290.53 FEET,
 THENCE NORTH 76°18'44" WEST 164.67 FEET TO THE EAST LINE OF 108TH AVENUE NORTHEAST,
 THENCE NORTH 250 FEET TO THE POINT OF BEGINNING.

PARCEL B

LOTS 20, 21, 22, AND 23, BLOCK 2, HARRY WHITE AND COMPANY'S FIFTH ADDITION TO KIRKLAND, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 7 OF PLATS, PAGE 5, IN KING COUNTY, WASHINGTON

PARCEL C

LOTS 1 THROUGH 5, INCLUSIVE, AND LOTS 24 THROUGH 28 INCLUSIVE, BLOCK 2, HARRY WHITE AND COMPANY'S FIFTH ADDITION TO KIRKLAND, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 7 OF PLATS, PAGE 5, IN KING COUNTY, WASHINGTON

741500-0030, 172505-9218, 172505-9144

LOT 3, ROSCOMMON PLAT, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 82 OF PLATS, PAGE 8, IN KING COUNTY, WASHINGTON, AND THE NORTH 82 FEET OF THE SOUTH 182 FEET OF THE WEST 145 FEET AND THE WEST 196 FEET OF THE SOUTH 100 FEET OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER, SECTION 17, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON; MORE PARTICULARLY DESCRIBED AS FOLLOWS

BEGINNING AT THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 17, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M.,
 THENCE NORTH 01°18'55" EAST ALONG THE WEST LINE OF SAID NORTHEAST QUARTER 182.00 FEET,
 THENCE SOUTH 89°02'59" EAST 144.98 FEET,
 THENCE SOUTH 01°19'28" WEST 82.00 FEET,
 THENCE SOUTH 89°02'59" EAST 182.06 FEET TO THE NORTHEAST CORNER OF ABOVE MENTIONED LOT 3,
 THENCE SOUTH 01°19'28" WEST 100.00 FEET TO THE SOUTHEAST CORNER OF SAID LOT 3,
 THENCE NORTH 89°02'59" WEST 327.00 FEET TO THE TRUE POINT OF BEGINNING

SITUATE IN THE CITY OF KIRKLAND, KING COUNTY, WASHINGTON

(ALSO KNOWN AS PARCEL A, CITY OF KIRKLAND ALTERATION OF LOT LINE NUMBER LL-00-84.)

935390-0550

LOTS 6, 7, AND 8, BLOCK 4, HARRY WHITE AND COMPANY'S FIFTH ADDITION TO KIRKLAND, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 7 OF PLATS, PAGE 5, IN KING COUNTY, WASHINGTON,

TOGETHER WITH THAT PORTION OF VACATED 109TH PLACE NORTHEAST AS WOULD ATTACH BY OPERATION OF LAW

172505-9203

THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 17, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS

BEGINNING AT THE NORTHWEST CORNER OF LOT 19, BLOCK 2, HARRY WHITE AND COMPANY'S FIFTH ADDITION TO KIRKLAND, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 7 OF PLATS, PAGE 5, IN KING COUNTY WASHINGTON,
 THENCE NORTH 89°26'25" EAST 250.002 FEET,
 THENCE NORTH 25.33 FEET,
 THENCE NORTH 89°26'33" EAST 350.002 FEET,
 THENCE SOUTH 760.585 FEET,
 THENCE NORTH 80°27' WEST 50.433 FEET,
 THENCE SOUTH 09°33' WEST 95.000 FEET,
 THENCE SOUTH 19°03'36.8" WEST, 62.650 FEET,
 THENCE NORTH 89°40'34" WEST 134.961 FEET,
 THENCE NORTH 89°47' WEST 420.00 FEET,
 THENCE NORTH 872.04 FEET TO THE POINT OF BEGINNING,
 EXCEPT BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 19, BLOCK 2,
 THENCE NORTH 89°26'25" EAST 160.00 FEET,
 THENCE SOUTH 290.53 FEET,
 THENCE NORTH 76°18'44" WEST 164.67 FEET,
 THENCE NORTH 250.00 FEET TO THE POINT OF BEGINNING

935390-0385

POINT THE EAST 75 FEET LOT 2 EXCEPT THE EAST 75 FEET LOT 3 EXCEPT THE NORTH 15 FEET OF THE EAST 75 FEET LOT 4 EAST 84 FEET OF LOTS 5 AND 6 LOTS 7 AND 8 LOTS 21 AND 22 ALL IN BLOCK 3 HARRY WHITE AND COMPANY'S FIFTH ADDITION TO KIRKLAND ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 7 OF PLATS PAGE 5 IN KING COUNTY WASHINGTON

TOGETHER WITH THE WEST 20 FEET OF VACATED 109TH PLACE NORTHEAST ADJOINING

935390-0406

LOTS 23 24 25 AND THE SOUTH 8 FEET OF LOT 26 AND THE WEST 16 FEET OF LOTS 5 AND 6 ALL IN BLOCK 3 HARRY WHITE AND COMPANY'S FIFTH ADDITION TO KIRKLAND ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 7 OF PLATS PAGE 5 IN KING COUNTY WASHINGTON

172505-9171

THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 17 TOWNSHIP 25 NORTH RANGE 5 EAST WM IN KING COUNTY WASHINGTON DESCRIBED AS FOLLOWS

COMMENCING AT THE NORTHWEST CORNER OF LOT 19 BLOCK 2 HARRY WHITE AND COMPANY'S FIFTH ADDITION TO KIRKLAND ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 7 OF PLATS PAGE 5 IN KING COUNTY WASHINGTON

THENCE NORTH 89 26 25 EAST 250.002 FEET
 THENCE NORTH 25 33 FEET
 THENCE NORTH 89 26 33 EAST 350.002 FEET
 THENCE SOUTH 187 634 FEET TO THE TRUE POINT OF BEGINNING
 THENCE NORTH 89 38 55 EAST 351.310 FEET
 THENCE NORTH 0 01 40 EAST 338.72 FEET
 THENCE NORTH 89 37 18 EAST 327.152 FEET
 THENCE SOUTH 0 02 11 WEST 338.882 FEET
 THENCE SOUTH 89 38 55 WEST 30.00 FEET
 THENCE SOUTH 0 02 11 WEST 1250.584 FEET TO A POINT ON THE NORTHERLY MARGIN OF NORTHEAST 53RD STREET AS ESTABLISHED BY KING COUNTY AND AT A POINT ON A CURVE FROM WHICH POINT CENTER OF SAID CURVE BEARS SOUTH 31 41 30 WEST
 THENCE NORTHWESTERLY ALONG THE NORTHERLY MARGIN OF SAID NORTHEAST 53RD STREET ON A CURVE TO THE LEFT OF A UNIFORM RADIUS OF 316.48 FEET AN ARC DISTANCE OF 173.856 FEET
 THENCE NORTH 89 47 00 WEST ALONG SAID NORTHERLY MARGIN OF NORTHEAST 53RD STREET 662.533 FEET
 THENCE NORTH 480.00 FEET
 THENCE SOUTH 89 40 34 EAST 134.961 FEET
 THENCE NORTH 19 03 36 WEST 62.65 FEET
 THENCE NORTH 9 33 00 EAST 55.00 FEET
 THENCE SOUTH 80 27 00 EAST 50.433 FEET
 THENCE NORTH 572.951 FEET TO THE TRUE POINT OF BEGINNING

TOGETHER WITH THAT PORTION OF 112TH AVENUE NORTHEAST LYING WITHIN THE NORTHEAST QUARTER OF SECTION 17 TOWNSHIP 25 NORTH RANGE 5 EAST WM IN KING COUNTY WASHINGTON AS VACATED BY THE CITY OF KIRKLAND ORDINANCE NUMBER 2512 DESCRIBED AS FOLLOWS

BEGINNING AT THE INTERSECTION OF THE NORTH MARGIN OF NORTHEAST 53RD STREET AS ESTABLISHED ON JANUARY 25 1932 AS KING COUNTY ROAD NUMBER 1515 AND THE WEST MARGIN OF 112TH AVENUE NORTHEAST AS ESTABLISHED BY THE PLAT OF WOODS ADDITION TO KIRKLAND ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 6 OF PLATS PAGE 24 IN KING COUNTY WASHINGTON SAID POINT BEING THE TRUE POINT OF BEGINNING

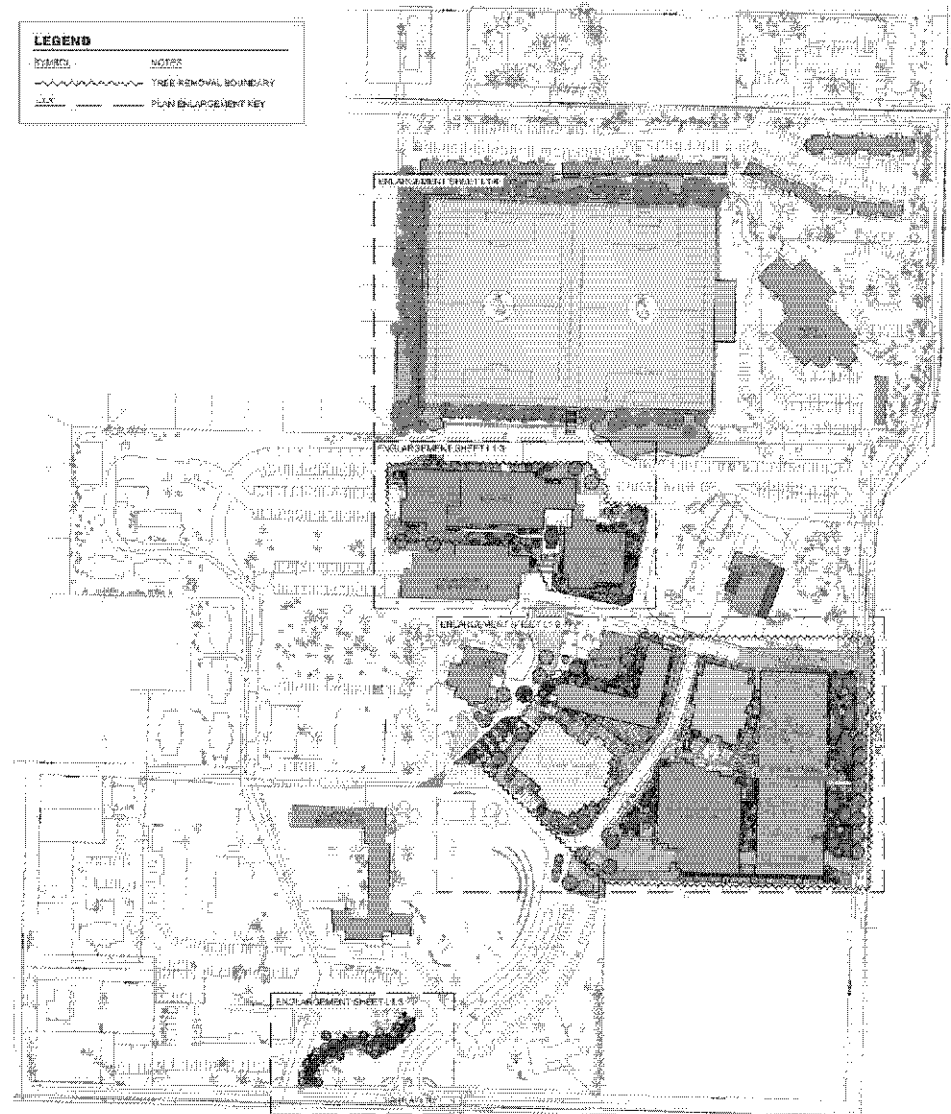
THENCE NORTH 01 18 11 EAST ALONG THE WESTERLY MARGIN OF 112TH AVENUE NORTHEAST 1250.81 FEET MORE OR LESS TO THE NORTHERLY MARGIN OF NORTHEAST 58TH STREET ESTABLISHED BY BELTLINE ADDITION TO KIRKLAND ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 6 OF PLATS PAGE 73 IN KING COUNTY WASHINGTON
 THENCE SOUTH 89 04 35 EAST 30.00 FEET TO THE CENTERLINE OF SAID 112TH AVENUE NORTHEAST
 THENCE SOUTH 01 18 11 WEST ALONG SAID CENTERLINE 288.04 FEET MORE OR LESS
 THENCE SOUTH 89 02 58 EAST 30.00 FEET TO THE EASTERLY MARGIN OF SAID 112TH AVENUE NORTHEAST
 THENCE ALONG SAID EASTERLY MARGIN SOUTH 01 18 11 WEST 390.00 FEET
 THENCE NORTH 88 59 19 WEST 30.00 FEET MORE OR LESS TO THE CENTERLINE OF 112TH AVENUE NORTHEAST
 THENCE ALONG SAID CENTERLINE SOUTH 01 18 11 WEST 601.89 FEET TO THE NORTHERLY MARGIN OF SAID NORTHEAST 53RD STREET
 THENCE WESTERLY A LONG SAID NORTHERLY MARGIN 30.00 FEET MORE OR LESS TO THE POINT OF BEGINNING

EXCEPT THAT FURTHER SAID PREMISES LYING SOUTHERLY AND EASTERLY OF THE FOLLOWING DESCRIBED LINE

COMMENCING AT A POINT 30 FEET EAST OF THE SOUTHWEST CORNER OF LOT 11 CARLOCH ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 99 OF PLATS PAGES 95 AND 96 IN KING COUNTY WASHINGTON
 THENCE SOUTH 01 25 30 WEST 862.79 FEET TO THE TRUE POINT OF BEGINNING OF THE HEREIN DESCRIBED LINE
 THENCE NORTH 88 34 30 WEST 72.00 FEET
 THENCE SOUTH 35 44 16 WEST 83.06 FEET MORE OR LESS TO THE NORTHERLY MARGIN OF NORTHEAST 53RD STREET AND THE TERMINUS OF SAID LINE


EXCEPT THE EAST 10 FEET OF THAT PORTION OF VACATED 112TH AVENUE NORTHEAST LYING SOUTH OF THE SOUTH LINE OF LOT 11 CARLOCH ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 99 OF PLATS PAGES 95 AND 96 IN KING COUNTY WASHINGTON AND NORTH OF THE SOUTH LINE OF THE NORTH HALF OF THE NORTHEAST QUARTER OF SECTION 17 TOWNSHIP 25 NORTH RANGE 5 EAST WM IN KING COUNTY WASHINGTON

LEGEND	
	EXISTING
	PROPOSED
	THREE REMOVAL BOUNDARY
	PLAN ENLARGEMENT KEY





Northwest University
Master Plan Update



SCJ STUDIO
LANDSCAPE ARCHITECTURE
1000 UNIVERSITY AVENUE
SUITE 100
EVANSTON, IL 60201
(708) 845-1000

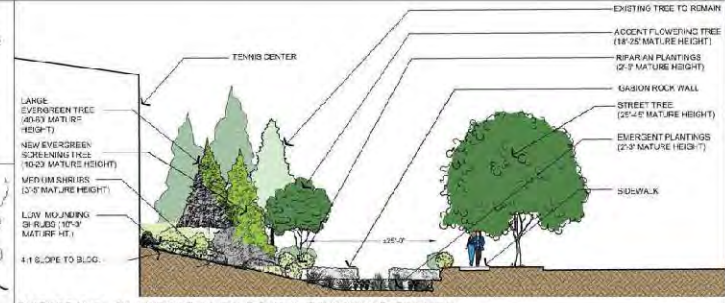
NO.	DATE	REVISION
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2	07/20/2016	SCJ STUDIO
3	07/20/2016	SCJ STUDIO
4	07/20/2016	SCJ STUDIO
5	07/20/2016	SCJ STUDIO
6	07/20/2016	SCJ STUDIO
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97	07/20/2016	SCJ STUDIO
98	07/20/2016	SCJ STUDIO
99	07/20/2016	SCJ STUDIO
100	07/20/2016	SCJ STUDIO

OVERALL LANDSCAPE PLAN

L1.1

LEGEND

SYMBOL	NOTES	ACRES
	SPECIALIZED CONCRETE PAVING COLOR, SCORED OR PAVERS	0.61
	STORM WATER RUNOFF FEATURE	0.02
	RAIN GARDEN	
	SCHOOL MASCOT IN PAVING	

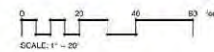


SECTION 2 - PLANTING AREA SOUTH OF TENNIS CENTER



LANDSCAPE IMPROVEMENT AREAS

	LARGE EVERGREEN		LOW SHRUBS
	EVERGREEN ACCENT TREES		LOW NATIVE PLANT MIX
	LARGE CANOPY TREE		LAWN AREA
	FLOWERING ACCENT TREES		EMERGENT PLANTS
	MEDIUM SHRUBS		RIPIARIAN MIX
	LARGE EVERGREEN SCREENING SHRUBS		MEADOW MIX
	EXISTING TREE TO REMAIN		FLOWERING GROUND PERENNIALS





DAYLIGHTED STREAM LANDSCAPE

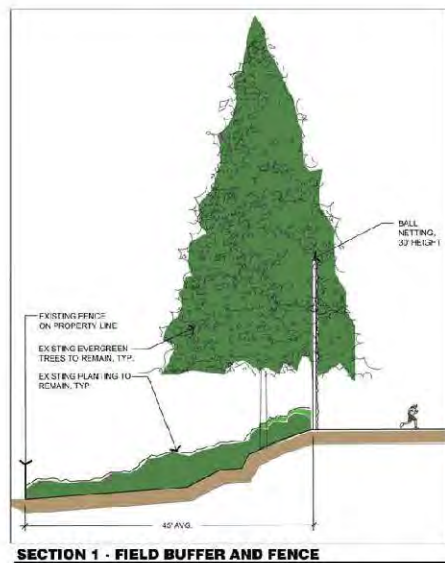
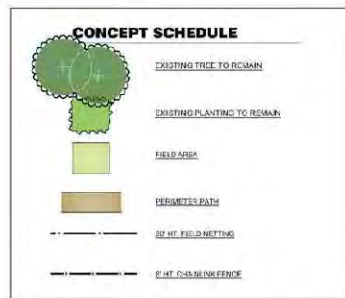


NESS HALL LANDSCAPE

LANDSCAPE IMPROVEMENT AREAS			
	LARGE EVERGREEN		LOW SHRUBS
	EVERGREEN ACCENT TREES		LOW NATIVE PLANT MIX
	LARGE CANOPY TREE		LAWN AREA
	FLOWERING ACCENT TREES		EMERGENT PLANTS
	MEDIUM SHRUBS		RIPARIAN MIX
	LARGE EVERGREEN SCREENING SHRUBS		MEADOW MIX
			FLOWERING GC/ PERENNIALS

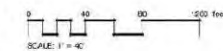


SCALE: 1" = 20'





LEGEND	
SYMBOL	NOTES
---	TREE REMOVAL BOUNDARY
X	EXISTING TREE TO BE REMOVED



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Northwest University
Master Plan Update



NO.	DATE	REVISION
1	2/10/17	Final responses

DATE:	02/10/2017
JOB NUMBER:	2280
FILE:	Y

TREE REMOVAL PLAN

L1.5

Northwest University Campus Masterplan
Tree Inventory (Removals only) Feb-17

Proposed Building or Paved Area	Species	Size DBH IN	Tree Credits	Tree Survey #	Non-Viable
Ness Phase One	Vine Maple	3.7	1	632	
	Rug Leaf Maple	4.16	16	633	
	AP/WO	3.3	1	634	
	Beech	2.6	1	635	
Total			19		4

Ness Phase Two	Sweetgum	12.5	2	637	
	Sweetgum	15.3	5	638	
	Sweetgum	13.2	2	639	
	Sweetgum	13.7	1	640	
	Sweetgum	12.8	2	641	
	Sweetgum	13.7	1	642	
	Sweetgum	13.7	1	643	
	Flowering Cherry	32	1	644	
	Colorado Blue Spruce	9.8	1	645	
	Australian Black Pine	14.8	2	646	
	Western Red Cedar	28.1	7	647	
	Sweetgum	19.5	5	648	
	Sweetgum	11.5	1	649	
	Sweetgum	11.6	1	650	
	Sweetgum	11.8	1	651	
	Flowering Cherry	9.8	1	652	
Total			90		16

Ness Phase Three	Thunderbolt Plum	32	1	653	
	Northern Catalpa	28.6	10	654	
	Purple Bark Birch	15.4	8	655	
Total			13		3

Welcome Center	Bigleaf Maple	53.3	21	656	
	Flowering Cherry	3.2	1	657	
	Douglas Fir	30.8	15	658	
	Rug/No	29.2	10	659	
	Western Red Cedar	18.7	5	660	
	Rug/No	17.6	4	661	
	Douglas Fir	17.1	4	662	
	Western Red Cedar	19.3	7	663	
	Douglas Fir	18.7	5	664	
	Western Red Cedar	15.2	5	665	
	Douglas Fir	14.9	5	666	
	Rug/No	13.3	2	667	
	Douglas Fir	16.2	5	668	
	Douglas Fir	14.4	3	669	
	Douglas Fir	13.7	4	670	
	Rug/No	13.9	3	671	
	Rug/No	13.6	3	672	
Total			95		17

New Dormitory	Western Red Cedar	15.4	3	673	
	Blue Alaska Cedar	35.8	14	674	
	Douglas Fir	17.9	8	675	
	Douglas Fir Multi Trunk	44.6	18	676	
	Douglas Fir	29.6	15	677	
	Douglas Fir	23.9	11	678	
	Douglas Fir	20	8	679	
	Decid. Cedar	39.7	12	680	
	Korean Cherry	21.9	8	681	
	Bigleaf Maple	41.5	16	682	
	Maple Multi Stem	42.7	17	683	
Total			136		13

Northwest University Campus Masterplan
Tree Inventory (Removals only) Feb-17

Proposed Building or Paved Area	Species	Size DBH IN	Tree Credits	Tree Survey #	Non-Viable
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Tennis & Fitness Centers	Rug/No	27	8	684	
	Douglas Fir	23.4	7	685	
	Rug/No	34	7	686	
	Rug/No	12	2	687	
	Douglas Fir	27.9	7	688	
	Douglas Fir	30.1	11	689	
	Douglas Fir	59.6	21	690	
	Douglas Fir	15.9	5	691	
	Douglas Fir	23.5	7	692	
	Douglas Fir	17	4	693	
	Douglas Fir	15.4	3	694	
	Pacific Dogwood	12.3	1	695	
	Western Red Cedar	7.9	1	696	
	Douglas Fir	12.2	4	697	
	Douglas Fir	11.4	1	698	
	Western Red Cedar	8.7	1	699	
	Douglas Fir	7	1	700	
	Douglas Fir	12.1	4	701	
	Douglas Fir	12.8	5	702	
	Douglas Fir	11.8	1	703	
	Douglas Fir	11.1	1	704	
	Douglas Fir	7.6	1	705	
	Douglas Fir	13.8	2	706	
	Douglas Fir	3.1	1	707	
	Bigleaf Maple	21.4	8	708	
	Western Red Cedar	38.1	15	709	
	Douglas Fir	42.2	17	710	
	Western Red Cedar	14	3	711	
	Douglas Fir	7.2	1	712	
	Douglas Fir	5.3	1	713	
	Douglas Fir	11.6	1	714	
	Douglas Fir	8.4	1	715	
	Western Red Cedar	24.6	8	716	
	Western Red Cedar	21.4	8	717	
	Western Red Cedar	8	1	718	
	Western Red Cedar	20.3	11	719	
	Western Red Cedar	22.9	7	720	
	Western Red Cedar	22.9	7	721	
	Western Red Cedar	38.2	12	722	
	Western Red Cedar	35.8	14	723	
	Western Red Cedar	31	12	724	
	Western Red Cedar	22.4	7	725	
	Douglas Fir Multi Trunk	12.9	9	726	
	Pacific Dogwood	22.9	7	727	
	Douglas Fir	39.9	13	728	
	Douglas Fir	31	7	729	
	Douglas Fir	25.6	8	730	
	Douglas Fir	29.1	7	731	
	Douglas Fir	26.2	10	732	
	Western Red Cedar	12.4	1	733	
	Western Red Cedar	31.1	11	734	
	Douglas Fir	12.1	2	735	
	Douglas Fir	2.7	1	736	
	Bigleaf Maple	20.3	10	737	
	Bigleaf Maple	28.4	10	738	
	Bigleaf Maple	27.1	8	739	
	Douglas Fir Multi Trunk	22.5	10	740	
	Douglas Fir	29.4	9	741	
	Douglas Fir	18.6	5	742	
	Western Red Cedar	15.2	1	743	
	Pacific Dogwood	15.8	6	744	
	Western Red Cedar	8.1	1	745	
	Douglas Fir	10	1	746	
	Pacific Dogwood	13.1	6	747	
	Douglas Fir	35.3	13	748	
	Douglas Fir	22.4	9	749	
	Douglas Fir	42.4	16	750	
	Pacific Dogwood	15.4	9	751	
	Pacific Dogwood	11	6	752	
	Rug/No	11.5	1	753	
	Douglas Fir	25.9	8	754	
Total			416		81

Northwest University Campus Masterplan
Tree Inventory (Removals only) Feb-17

Proposed Building or Paved Area	Species	Size DBH IN	Tree Credits	Tree Survey #	Non-Viable
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Tennis Beyond 37 Setback	Western Red Cedar	34.3	13	755	
	Douglas Fir	18.8	1	756	
	Douglas Fir	11.4	1	757	
	Douglas Fir	12	2	758	
	Douglas Fir	7.8	1	759	
	Douglas Fir	13.3	2	760	
	Douglas Fir	12.1	2	761	
	Douglas Fir	20.2	5	762	
	Douglas Fir	9.7	1	763	
	Pacific Dogwood	10.3	1	764	
Trees Within 30' Setback	White Fir	10.9	1	765	
	Douglas Fir	15.1	3	766	
	Western Red Cedar	9.3	1	767	
	Western Red Cedar	1.3	2	768	
	Douglas Fir	29.7	12	769	
Total			67		17

Pavilion/Gymnasium Replacement	Bigleaf Maple	71.4	31	770	
	Douglas Fir	41.8	15	771	
	Douglas Fir	35.7	13	772	
	Douglas Fir	28.6	11	773	
	Douglas Fir	47.6	19	774	
	Western Red Cedar	15.2	5	775	
	Western Red Cedar	1.3	2	776	
	Western Red Cedar	15	5	777	
	Western Red Cedar	15.6	3	778	
	Western Red Cedar	13.7	2	779	
Pavilion/Marketplace	Pacific Dogwood	14.1	3	780	
	Pacific Dogwood	23.3	8	781	
	Rug/No	16.5	1	782	
Total			134		15

Grand Total	Tree Credits to be removed:	416	Non-Viable trees to be removed:	11	Total viable trees to be removed:	251

NOTE:
• SEE SHEET L1.5 FOR AREAS OF TREE REMOVAL.
• SEE ARBORIST REPORT FOR FURTHER INFORMATION ON INDIVIDUAL TREE LOCATION & CONDITION.

