Children & Family Justice Center

King County Superior Court

Pre-Design Report

June 2010

King County

Department of Executive Services
Facilities Management Division

500 4th Avenue, Room 800
Seattle, WA 98104

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1.0 Executive Summary

Overview of Planning Efforts

King County's Youth Service Center (YSC) is located at 12th Avenue and East Alder Street in Seattle. Courtrooms, administrative offices and youth detention facilities are housed in three conjoined buildings on the campus: the Alder tower (1972), the Alder wing (1951), partially renovated in 1972), and the Spruce youth detention facility (1991). The major building systems in Alder tower and wing have reached the end of their useful life and need to be replaced. It is estimated that replacement of these systems alone would cost approximately $20 million.

In response to the deteriorating condition of the existing Youth Service Center Alder tower and wing and the desire to improve service delivery to children and families in the King County justice system, the Executive, working with Superior Court, completed a Targeted Operational Master Plan (OMP) for their juvenile and family court operations. The OMP was transmitted to the council in late spring of 2006. The recommendations from the OMP involved non-capital and capital measures that would achieve the long term goal of Superior Court to co-locate juvenile and family law matters for the north and south ends of the county.

Following the completion of the Superior Court OMP, work on a targeted facilities master plan (FMP) began in 2007 and was completed in May 2009.

The King County Council reviewed the FMP, and in December of 2009 accepted this FMP and approved the long term goal of co-locating all north end juvenile and family cases with children (Scenario 5.5 of the FMP) at the existing Youth Service Center site. In light of the county's current financial situation and uncertainties in the caseload forecast, the council also requested a joint report from the Facilities Management Division (FMD) and Superior Court that addressed three questions: 1) whether it was possible to phase the construction or reduce the size and still achieve the objectives of Scenario 5.5, 2) whether the facility could be reduced based on reexamination of case filings and proceeding trends, and 3) how the operating costs for a replacement facility fit within the overall funding constraints. The joint report was accepted by the King County Council on May 10, 2010 by Motion 13218.

The joint report recommended that planning for the facility and the site should accommodate the future growth needs for co-locating north end juvenile and family law cases through 2032 at the existing YSC site. However, the report also stated that construction of the facility could be phased and that the size of the facility for Phase 1 should be based on Scenario 5 minus 10,000 square feet. This would include space for 9 courtrooms with full time equivalent (FTE) growth to 2022 or 10 courtrooms without FTE growth; each requires the same amount of space.

Purpose of the Pre-Design Report

Prior to requesting funding for Phase 1, the FMD undertook the development of a pre-design report to more thoroughly understand the scope, cost, and schedule of this initial phase of development and how future growth needs could be met.

A scope of work was identified by developing site concepts, analyzing the civil, mechanical, electrical, parking, land use permits, hazardous materials, and construction phasing. Based on this scope, a cost estimate and project schedules were developed, specific to the conditions identified in the development of the scope of work. It should be noted that the site concepts

developed in the pre-design report are hypothetical, used for estimating costs and schedules. **The final site configuration may be different than shown in this report.**

A formal implementation plan for the completion of this project was not developed for this report. The FMD determined that it was premature to develop a specific plan based on a project delivery method that did not have the concurrence of the King County Council. However, the report identifies the initial steps to be taken if the council agrees with the FMD's recommendations.

Project Program Requirements

In addition to the facility requirements identified in the joint report that the King County Council accepted by Motion 13218, Superior Court requested the following adjustments to Phase 2 (site master plan building program):

- Prosecuting Attorney-Family Support Division (11,158 s.f.) (Phase 2)
- Prosecuting Attorney-Domestic Violence Protection Order Advocates (1,850 s.f.) (Phase 2)

In addition, the FMD identify areas in the basement of the Alder Tower that require further investigation to determine if they were included in the FMP building program for Phase 1 of this project. These areas are identified below:

- Juvenile Detention-Visitation, central control, housing unit
  (this space resides under the existing Alder tower that will be demolished. At this time, FMD cannot confirm the final space needs, but will in the next design phase of the project. The preliminary project budget includes a placeholder of 6,200 s.f. as a contingency to mitigate cost risk)

The following chart is a summary of the project program requirements based on the above:

Description	Phase 1 (2015)	Phase 2 (2032)	Total
Building SF	156,140	87,470	243,610
Superior Court Program Updates	0	13,008	13,008
Total Building SF	156,140	100,478	256,618
Parking	440 stalls	197 stalls	637 stalls

Site Concept Review

As part of the development of the site concepts for both Phase 1 (2015) and Phase 2 (2032) needs of Superior Court and the support agencies, the FMD completed a preliminary environmental analysis to comply with the SEPA requirements, determined the land use requirements, investigated the utility infrastructure, reviewed three site concepts, and conducted a community program to solicit comments on the proposed project

SEPA

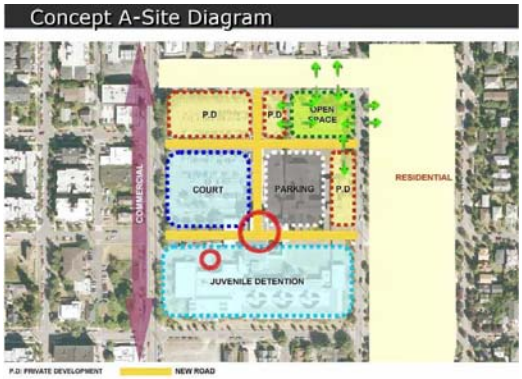
As part of the pre-design effort, an environmental checklist was developed to serve as preliminary review of the demolition of the existing Alder tower and wing and the construction associated project program. The analysis was based on the site concept alternatives. These alternative concepts represent approximate configuration of the proposed development and were considered adequate for analysis and disclosure of the environmental impacts. Based on this analysis, a threshold determination of a Mitigated Determination of Non-Significance is recommended.

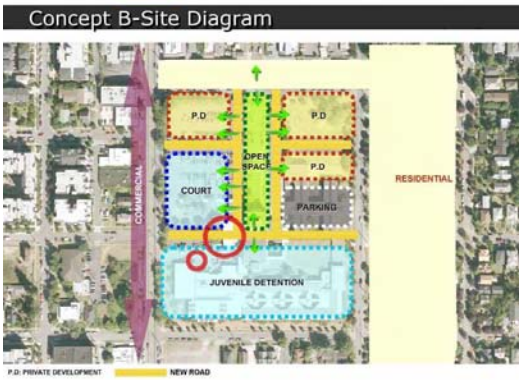
Land Use Requirements

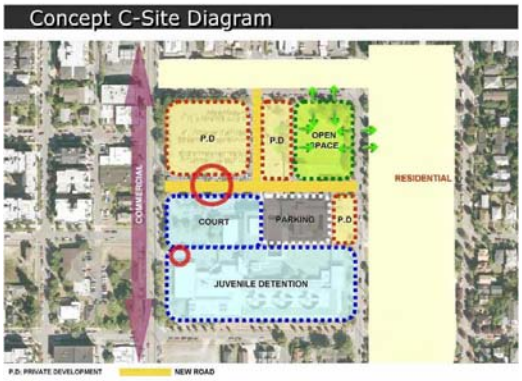
The consultant team conducted a review of the land use permit requirements for the project. Given the split zoning on the project site and the nature of the proposed development, the consultant team identified two alternative courses of action on the approval process:

- Council Conditional Use (City of Seattle Council)
- Contract Rezone

Both processes require the approval of the City of Seattle Council and are estimated to take approximately 12 months. Based on concerns of possible challenges and interpretations of facility-type uses, the consultant team has recommended that a contract rezone option be pursued.







Site Concepts

The concepts were developed using proven strategies that will provide a positive user experience and help reintegrate the site into its urban neighborhood. The following primary strategies were used to inform the development of these concepts:

- Re-introduction of the city street grid in order to create visual, pedestrian and appropriate vehicular connections across the site
- Building scale, pedestrian access, and private development opportunities that support the development of 12th Avenue as a comfortable pedestrian environment
- Zoning of site pedestrian and vehicular access for ease of circulation and to provide appropriate site circulation control and security
- Open area locations that encourage appropriate uses and enhance the entire neighborhood.

Based on these strategies, the three concept diagrams, shown in this section, were used to develop conceptual site alternatives that were used to garner community comments and assist

the project team in the project analysis. The final site configuration may be different than shown in these concept diagrams

Community Outreach

During the course of developing the pre-design report, the project team hosted three community meetings on March 9th, April 10th and May 11th. . The neighbors have consistently communicated their priorities for campus development as follows:

- Aesthetic improvement of the entire property
- Retail space along 12th Avenue as part of a mixed use development
- Possible housing along the east side of the property
- Enhanced open area
- Improved access to and through the campus
- Specific concerns were identified in the community meetings on the site concept alternatives and are listed below:
    1. Schedule for further community involvement
    2. Security
    3. Building Mass and Height
    4. Parking and Parking configuration
    5. Shared uses with residents and institutions for the parking and other campus amenities
    6. Open area: location, size and uses
    7. Traffic Flow and ingress and egress locations
    8. Concepts that considers 24 hour campus access

Project Analysis

Preliminary Project Budget

Using the consultants, KMD Architects and Roen Associates, preliminary construction cost estimate dated May 19, 2010 and project "soft cost" estimated by FMD staff, the overall project costs are summarized in the two charts shown below. (The lowest cost range used a 3% estimating contingency, the best is a 10% contingency, and the highest used a 20% contingency).

2010 Dollars (millions)			
	Lowest	Best	Highest
Total Project Cost	113.9	120.6	130.2

Escalated to Mid Point of Construction (June 2014) (millions)			
	Lowest	Best	Highest
Total Project Cost	129.0	136.6	147.5

For planning purposes at this stage of the project, based on the level of information obtained during this pre-design, and with conversation with other construction professionals, FMD recommends using the "Best Estimate to Mid Point of Construction" as the preliminary project budget.

Opportunities to Reduce Cost for Phase 1

The project costs reflected throughout this report are based on the facility program developed in the FMP, as updated in Motion 13106. All cost estimates include structured parking, the Alder School, and the potential areas for removal identified in the chart below. The table below represents potential options that could reduce the overall cost of the project shown above

Description	2010 Cost (millions)	2014 Cost (millions)
Remove/reduce Alder School or cost share with Seattle Public Schools	(5.7)	(6.5)
Potential areas for removal	(1.3)	(1.5)
Pursue 15% parking stall reduction through a transportation management plan	(2.6)	(3.0)
Open area sharing with Seattle Parks & Recreation Department	(1.1)	(1.3)
Surface Parking in lieu of parking garage for Phase 1[1]	(14.2)	(16.1)
Total possible Cost Savings	(29.90)	(34.10)

These opportunities to reduce the overall project cost for Phase 1 would require the following policy decisions if the project moves forward in the next design phase:

- Continue the partnership with Seattle Public School District on the Alder School but pursue opportunities to share the cost of the new facility.
- Accept the reductions of the potential areas for removal.
- Recommend that a transportation management plan be developed for the Children and Family Justice Center to reduce the overall parking.
- Recommend that FMD develop a partnership with Seattle Parks & Recreation for the development of the open area portion of this project to help offset the capital cost and possible maintenance of the open area.
- Allow FMD and DAJD to explore the feasibility of utilizing the existing housing capacity in the main detention building to avoid reconstructing "Z-Hall" and a potential opportunity to reduce overall project cost by $2.1-2.3 million.

In addition to the above opportunities, if, through discussions/negotiations with labor unions, there is a possibility that existing practices can be modified to allow the county to charge employees for parking; this could be used as offsetting revenue for the project. Preliminary estimates indicate the combined total of public and employee parking revenue would generate a capitalized amount of approximately $5 million.

Project Phase 1 Property Tax Rates

The property tax rates shown below assume the cost of Phase 1 is based on the escalated cost to the mid-point of construction (2014) for the low, best, and highest cost estimates shown above.

[1] The neighborhood has indicated that surface parking is unacceptable during the public meetings. This opportunity to reduce cost would delays construction of parking garage to a future phase.

This cost could be lower if policy decisions noted above are accepted and cost savings are realized. Annual payments, levy rates and costs to typical homeowners are listed below.

Annual Payments by Duration ($ millions)			
	Lowest	Best	Highest
Standard Lid Lift (9-Year)	$15.6	$16.4	$17.8
20-yr Excess Levy	$8.9	$9.4	$10.2
30-yr Excess Levy	$7.1	$7.6	$8.2

Note: All payment options assume two issues. Payment amounts are total of both issues starting in 2014 and assume 3.75%, 4% and 4.25% for the borrowing rates for the 9, 20 and 30-yr options respectively.

Required Levy Rate in 2011			
	Lowest	Best	Highest
Standard Lid Lift (9-Year)	$0.046-$0.050	$0.049-$0.053	$0.053-0.057
20-yr Excess Levy	$0.021-$0.025	$0.023-$0.027	$0.025-$0.029
30-yr Excess Levy	$0.015-$0.019	$0.016-$0.020	$0.017-$0.021

Note: Ranges are provided to reflect uncertainty in assessed valuation, interest rates and financing costs.

Annual Cost to $400,000 Home in 2011			
	Lowest	Best	Highest
Standard Lid Lift (9-Year)	$18.40-$20.00	$19.60-$21.20	$21.20-$22.80
20-yr Excess Levy	$8.40-$10.00	$9.20-$10.80	$10.00-$11.60
30-yr Excess Levy	$6.00-$7.60	$6.40-$8.00	$6.80-$8.40

Note: Ranges are provided to reflect uncertainty in assessed valuation, interest rates and financing costs.

Preliminary Project Delivery Method Recommendation

Based on a review of the various delivery methods, the FMD's preliminary recommendation for the overall project delivery method is to use a lease-leaseback method with bridging documents that define the project's overall spatial needs and performance requirements for the building. This delivery method is recommended for the following reasons:

- Construction risk is transferred to the developer.
- Procurement of developer not tied to project cost, which is negotiated after all necessary parties are on-board.
- Financing structure encourages construction cost savings.
- Completion can be expedited, because construction can commence before design is complete.
- Necessary resources for project development are provided by private partners, reducing the need for the public agency to allocate resources to the project, but retaining review function.
- A single point of accountability for final design and construction.
- Faster delivery.

- The owner gains a better understanding of the design before awarding the final design/build contract.
- Guaranteed Maximum Price at the conclusion of the pre-development phase eliminates owner risk for cost overruns.

Construction Sequencing

Two basic approaches were considered for the construction of Project Phase 1:

- Alternative 1: a construction sequence that maintains county operations on site during construction, and
- Alternative 2: a construction sequence that temporarily locates most of the county operations off of the site during construction.

Maintaining court operations on-site has a longer construction duration and therefore creates greater construction costs and lengthens the overall project schedule by approximately 9 months. The relocation of court operations off-site reduces the overall construction cost and schedule, but will require additional operational costs to relocate the existing court functions to another location during construction.

The FMD identified similar costs that were common for both approaches. Costs associated solely for each approach were also identified and were used in a life cycle cost analysis of these two approaches. The analysis assumed that the Green River Flood project will continue to pay for the lease of the Park Place building until 2012 when construction would start on the Children and Family Justice Center. The results of the analysis indicate an overall cost to the project of approximately $48,000 if court operations are moved off-site during construction.

Based on this initial review, it appears that the overall cost difference for between approaches is negligible. Therefore, it is recommended that a more detailed analysis occurs in the next design phase to confirm the results of this initial analysis.

Recommendations

Based on the analysis and review of the project contained within this pre-design report, if the project moves forward to the next design phase, the King County Executive recommends the following:

1. The King County Council should accept the Best Estimate escalated to the mid-point of construction for Phase 1, as recommended by FMD, as the preliminary project budget.
2. King County, in the next design phase, should pursue a contract rezone for compliance with the City of Seattle's land use regulations.
3. The overall program for Phase 1 of the Children and Family Justice Center should be based on 156,140 square foot building.
    a. To reduce the overall parking demand, the FMD may include a transportation management plan in the next design phase that could reduce the overall need by 15%.
    b. To reduce the initial capital outlay, Phase 1 may provide surface parking in lieu of a parking garage. Phase 2 of the project would include structured parking.
4. The King County Executive strongly encourages pursuing the opportunities to reduce cost. To that end, King County should further evaluate the following potential opportunities for cost saving in the next design phase for Phase 1:

   a. Pursuing a partnership with the Seattle Public School District
   b. Pursuing a partnership with the Seattle Parks and Recreation Department
   c. Allowing FMD and DAJD to explore the feasibility of utilizing the existing housing capacity in the main detention building to avoid reconstructing "Z-Hall".
   d. Reducing the overall space program of Phase 1 by accepting the potential areas for removal.
   e. Requesting the development team to identify the revenue stream that could offset the capital cost of providing parking on-site.
5. King County should continue the community outreach efforts in the next design phase.
6. The King County council should accept the lease-leaseback with bridging documents as the project delivery method.

Next Steps

With the recommendations noted above, the FMD has outlined the following necessary steps to be completed if the project moves forward to the next design phase:

1. FMD develops an appropriate level of bridging documents.
2. FMD analyzes the capital and operating cost, and spatial requirements for relocating court operations off-site during construction and for maintaining court operations on-site during construction.
3. FMD issue a Request for Proposal to select a developer.
4. FMD enter into a Pre-Development Agreement with the developer
   a. County issues spatial needs and performance requirements to the developer (bridging documents)
5. Through the pre-development agreement, the developer and county agree on the following:
   a. Terms of the lease
   b. Guaranteed cost of the project
   c. Design
   d. Financing mechanism
6. Developer designs and constructs the facility and upon completion the county begins lease payments.
   a. Terms of the lease would include the option to buy out the lease at a certain point in time that is compatible with the financing method (e.g., within the applicable redemption period of any potential debt instrument).

2.0 Facility Master Plan Summary

A. The Alder Site

King County's Youth Service Center (YSC) is located at 12th Avenue and East Alder Street in Seattle. Courtrooms, administrative offices and youth detention facilities are housed in three conjoined buildings on the campus: the Alder tower (1972), the Alder wing (1951, renovated in 1972), and the Spruce youth detention facility (1991). The remaining space is occupied by surface level parking and undeveloped land that includes a significant art piece.

The Alder tower houses:

- Superior Court courtrooms
- Judicial chambers
- Clerk's Office
- Juvenile Probation offices
- Prosecuting Attorney offices
- Attorney General offices
- Public Defense facilities
- Juvenile Detention Administration
- Various support and meeting spaces

The Alder wing houses:

- Alder Academy (alternative school for at-risk middle/high school students run by Seattle School District)
- Probation Records Unit and records storage area
- Some probation units & programs
- Alder gymnasium
- Superior Court Computer Services
- Miscellaneous equipment storage

The Spruce youth detention facility, located south of the Alder tower, was constructed between 1989 and 1991 and has a capacity to house 160 overnight juvenile detainees. The detention facility houses youth in short term custody, detention facility support services, detention recreation and gym, the detention health clinic, and the detention school.

The Alder tower and wing have immediate needs to either replace or repair the major buildings systems. The electrical, plumbing, and heating, ventilation and air conditioning (HVAC) systems serving these buildings are past the end of their useful life. Replacement of these systems alone would cost roughly $20 million.

B. The Facility Master Plan

In combination with the pressing need to replace the failing YSC facility, Superior Court recognized there was also a need to integrate the juvenile and family law justice systems to better serve court clients. In 2005, the Executive, in partnership with Superior Court, requested County Council approval for the development of a targeted operational master plan (OMP) focused on improving the delivery of justice services to children and families in King County. The Superior Court Targeted OMP was completed in 2006.

The OMP included eleven recommendations representing new directions for serving children and families. While some of these recommendations involved non-capital alternatives, many of the recommended system changes required facility improvements and/or construction of additional space. In addition, the OMP recognized that there are substantial deficits in the Youth Services Center facility. The need to replace this facility is a consistent theme throughout the OMP as well as the need to provide a facility that allows for the physical integration of juvenile and family law cases. The final OMP recommendation called specifically for completion of a targeted juvenile and family law facilities master plan which is required, pursuant to King County Code, prior to funding a major capital project.

The FMP identified King County's juvenile and family law space requirements and examined facility alternatives balancing many factors. These factors included the operational directions outlined in the OMP, the expected workload growth for affected agencies, the estimated capital costs, the county's current and long term operational financial constraints, the impact on other facilities, and integration with other criminal justice planning efforts. In conjunction with Superior Court and the Office of Management and Budget (OMB), the Facilities Management Division (FMD) prepared the FMP. Stakeholders from other affected groups, both internal and external to the county, were involved in developing the FMP through steering committee and project workgroup meetings.

Work on the FMP began in 2007, leading to the initial development of countywide options with a time horizon of 2032. The options involved either building a centralized facility or two decentralized facilities containing all children and family court matters. Since the preliminary capital costs for these options began at $340 million and reached just over $500 million, a new set of scenarios was developed.

The seven new scenarios focused on the Alder site (capitalizing on use of the existing juvenile detention facility), phased development, trimming space requirements, and other cost cutting measures. All of the scenarios below planned for the handling of countywide juvenile offender matters at Alder and the continued handling of south county Becca, dependency, and family law matters at the Maleng Regional Justice Center (MRJC). Becca cases are truancy, at risk youth and children in need services cases; dependency cases are cases brought by the State to determine the fitness of a juvenile's parents or guardian to maintain custody; and family law matter cases address family-related issues such as dissolutions, paternity, modifications, and other case types. The facility scenarios ranged from simple replacement of the seven courtrooms in the existing Alder facility to the transfer of all family law functions from downtown Seattle into a new 19-courtroom facility on the Alder site for the first phase with associated spaces for enhanced services.

Facility Scenarios – FMP	Alder Courtrooms 2022	2032
Scenario 1. Code-compliant replacement of the existing facility, no growth.	7	0
Scenario 2. Code-compliant replacement of the existing facility, plus accommodation for growth and staff currently housed in leased space.	9	1
Scenario 3. Replacement of the existing facility consistent with 2005 Arai Jackson report.	7	1
Scenario 4. No Dependency at Alder: continuation of current operations at Alder with the exception of dependency cases which are relocated to KCCH.	7	1
Scenario 5. All Dependency at Alder: continuation of current operations, plus the retention of all dependency cases, eliminating the practice of brokering cases to KCCH.	10	1
Scenario 5.5. All Juvenile and Family Law cases with children at Alder.	15	2
Scenario 6. All Juvenile and Family Law cases with and without children at Alder.	19	2

All of the above scenarios would allow for private development on-site.

The seven scenarios represent various ways of organizing and housing juvenile offender, dependency, Becca, and family law court matters and related operations at the Alder site and the KCCH.

Scenario	Countywide Juvenile Offender	North End		
		Becca	Dependency	Family Law
1	Alder	Alder	Alder/w some KCCH	KCCH
2	Alder	Alder	Alder/w some KCCH	KCCH
3	Alder	Alder	Alder/w some KCCH	KCCH
4	Alder	Alder	KCCH	KCCH
5	Alder	Alder	Alder	KCCH
5.5	Alder	Alder	Alder	Alder/ KCCH
6	Alder	Alder	Alder	Alder

The Superior Court Targeted Juvenile and Family Law Facilities Master Plan was transmitted to the King County Council on May 14, 2009.

C. Council Motion 13106

On December 14, 2009, the King County Council approved the Superior Court Targeted Juvenile and Family Law Facilities Master Plan and affirmed the goal of co-locating all juvenile offender, north county dependency and Becca cases, and north county family law matters involving children in a single facility as envisioned under Scenario 5.5.

In light of the county's current financial situation and uncertainties in caseload forecasts, the council requested the following information:

- Whether it is possible to phase construction of the project and/or reduce the size of the replacement facility, and number of courtrooms, while maintaining the objectives of scenario 5.5.
- Whether the facility size for Scenario 5.5 can be reduced if the future needs were based on the case filing and proceeding trends of family law, juvenile offender, Becca Bill and juvenile dependency cases in King County.
- How the operating costs of such a replacement facility fit within the overall funding constraints facing the county's general fund for 2011 and thereafter.

The council requested by motion that the Superior Court and FMD produce a joint report that addressed these questions. A team consisting of the Office of Management and Budget (OMB), FMD, Superior Court, the Department of Adult and Juvenile Detention (DAJD), and the Department of Judicial Administration (DJA) was formed to answer the questions posed by council.

The requested report was completed and transmitted to the King County Council on April 16th, 2010; it was accepted by the King County Council on May 10th, 2010 by Motion 13218. The policy direction provided in Motion 13218 has been incorporated into this pre-design report.

Following is a brief summary of the key elements contained in the joint report to King County Council in response to King County Motion 13106 and incorporated into this pre-design report.

Is it possible to phase the construction and/or reduce the size of the facility while maintaining the objectives of scenario 5.5?

The joint report concluded, and Motion 13218 affirmed that phased development of the Children and Family Justice Center is consistent with the co-location objectives of Scenario 5.5 and helps meet the goals of the Superior Court with the understanding that provisions will be made for the following:

- Phase 1 shall be based on Scenario 5 minus 10,000 sf. This would include space for 9 courtrooms with full time equivalent (FTE) growth to 2022 or 10 courtrooms without FTE growth, each requires the same amount of space.
- Appropriate legal encumbrance on the property to provide capacity for subsequent phases.
- Obligation of the proceeds from the sale of the portion of the Alder site designated for private development by ordinance to be directly applied toward the capital costs of the

planned project completion, consistent with Scenario 5.5.
- Design work for Phase 1 will provide for subsequent phases that will accommodate scenario 5.5.

Superior Court and Executive branch staff determined that construction of the Children and Family Justice Center can be achieved in two phases. Phase 1 will be designed to accommodate countywide juvenile offender cases and north county Becca and dependency matters through 2022 and will include space for 9 courtrooms with full time equivalent (FTE) growth or 10 courtrooms without FTE growth, each requires the same amount of space. This phase provides sufficient space for Superior Court to unify all north county dependency cases in the new facility, ending the practice of brokering dependency cases to the King County Courthouse. Every effort will be made to maximize the use of any vacant space in the new facility.

In future construction phase(s), 5-7 courtrooms would be added to allow for the unification of north county juvenile and family law matters. Two more courtrooms (for a total of 17) would be required to accommodate the additional case filings growth forecast in the FMP through 2032. Phasing construction responds to uncertainty highlighted in the joint report in the projected case filings, and the related judicial and staff growth forecasts.

Description	Phase 1 (2015)	Phase 2 (2032)	Total
	Scenario 5 10 courtrooms 6 offender 1 Becca 3 dependency (minus 10,000 sf)	5-7 courtrooms: Family Law	15-17 Courtrooms
Building SF	156,140	87,470	243,610
Superior Court Program Updates	0	13,008	13,008
Total Building SF	156,140	100,478	256,618
Parking	440 stalls	197 stalls	637 stalls

It must be noted that it is too early in the pre-design process to make firm and final commitments regarding the future design for courtrooms and related spaces to be constructed in future phases. Site planning and permitting will reserve sufficient space for future facility phases through 2032.

In addition to the phasing sequence the joint team effort also identified the following additional spaces as potential areas for reduction or removal:

Potential Areas for Reduction	Assigned Sq Ft
Alder School (Phase 1)	11,660
Family Law CASA (future)	1,140
Law Library (future)	5,440
Total	18,240

Potential areas for removal	Assigned Sq Ft
Large conference room (Phase 1)	669
Archival Storage (future)	743
Court Holding area (duplication) (Phase 1)	930
Court Holding area (duplication) (future)	930
Computer Training Room (Phase 1)	501
Wellness/Exercise room (Phase 1)	560
Total	4,333

Can the facility size be reduced if the future needs were based on the case filing and proceeding trends of family law, juvenile offender, Becca Bill, and juvenile dependency cases in King County?

A joint workgroup of Department of Judicial Administration (DJA), Superior Court, and OMB staff was formed to review the caseload forecast. Dr. Shiquan Liao, statistician for DJA, undertook a review of the juvenile and family law filing projections provided by the National Center for State Courts (NCSC) in 2007. Three years have elapsed since the publication of the NCSC's report. This passage of time provided the county with the opportunity to review the accuracy of the NCSC's projections via a comparison of actual and projected filings for the years 2007, 2008 and 2009.

The filing data review indicated that actual filings for juvenile and family law matters in north King County were 5 percent lower (on average) than those projected by the NCSC from 2006 through 2009. A 5 percent reduction in the projected number of filings impacts only slightly the courtroom space required to meet the objectives of Scenario 5.5 on opening day in 2015.

OMB staff provided an alternative analysis of Superior Court's juvenile and family law filings. OMB utilized a forecasting model based upon both regression analysis and age cohort population growth rates. OMB's analysis makes two key assumptions that vary from the assumptions of the NCSC study: 1) rather than using the overall population growth rate to predict future filings, OMB used the under 60 population growth rate as a predictor for family law cases and the under 18 population growth rate for juvenile cases; and 2) where the NCSC predicts a reversal of the 18 year downward trend, OMB assumes that the decline will continue at the average rate of the last five years and the filings trend will not begin to grow until 2015. Recognizing that filings are unlikely to fall indefinitely, the OMB 2015-2032 forecast assumes that filings will grow at the projected growth rate of the under 60 population for Family Law and at the projected growth rate of the under 18 population for Becca, Dependency, and Offender case types. The OMB forecast projects case filings will not return to current levels until 2027.

The two very different methodologies for predicting case growth lead to significantly different projections of filings growth.

How the operating costs of such a replacement facility fit within the overall funding constraints facing the county's general fund for 2011 and thereafter?

OMB recently modeled a twenty-year General Fund[2] (GF) which assumes that expenditures and services levels are not changed in the future, and shows the persistence of annual deficits due to the ongoing imbalance between the growth rate of revenues and the growth rate of expenditures. Expenditure growth, if left unchecked, will vastly exceed revenue growth. Based on historic experience, expenditures are projected to grow 5.8 percent annually for the next twenty years, while revenues are projected to grow at an average annual rate of 3.5 percent. This structural imbalance creates the ongoing need for reductions in the base General Fund budget for the duration of the twenty-year forecast.

A key task for King County in addressing the structural deficit is to address the disparity between revenue and expenditure growth. A central component of that process will involve reducing the rate of expenditure growth. This will require not only slowing the growth of salary and benefit costs associated with existing FTEs, but also restraining any increase in the number of FTEs throughout the General Fund. In an environment of ongoing deficits, any additional cost in one area must be offset by a reduction in another. That is, any FTE added to the General Fund will require the offsetting reduction of another.

Supporting the operational costs associated with the new facility will involve a combination of savings through operational efficiencies, new revenues associated with private development, court revenues which accrue to the county general fund, and broader efforts to improve the county's revenue picture. It will also entail county prioritization of justice and treatment services for children and families.

Additional revenue sources may become available in coming years. For example, Superior Court has suggested that revenue enhancements for King County include such actions as implementing the split on filing fees ($550,000 annually) and inflation based Revised Code of Washington (RCW) fee increases ($660,000 annual new revenue). Another option would be to include in the voter approved bond funds the new revenues required to sustain operating cost increases.

While hard to quantify, a modern building will achieve efficiencies. These include building operations which have more energy efficient HVAC, electrical and plumbing systems. Additional Superior Court operational savings will result from combining the juvenile and family law calendars and merging administration staff between two different departments for juveniles and for unified family court. The Superior Court operational efficiencies will not be realized until Phase 2 is completed, however, the expected energy savings will occur when Phase 1 is completed.

[2] The general fund supports the day-to-day operation of essential King County services that have no other dedicated funding sources, e.g. Sheriff, Prosecuting Attorney, Superior Court, Department of Adult and Juvenile Detention, etc…

Revenues associated with private development include charging for such things as parking; rental for agreements using expanded space or for rental by attorneys. Without knowing the specifics or market conditions at the time of opening, these are hard to quantify.

3.0 Project Program

A. Building Space List

As outlined in the response to Motion 13106, FMD will master plan the site to insure that full achievement of the goals of Scenario 5.5 can be realized. The site master plan shown in this report utilized the building program for Scenario 5.5 for the year 2032 as the basis for the site concepts shown in chapter 4 of this report. In other words, the site master plan covers the first phase of site development, as well as future phases. However, two additional elements were added to this program that were not included in Scenario 5.5, but were identified in the joint report. These elements were identified while reviewing the original program with the facility users. The two additions, not slated for the first development phase, are noted below:

Prosecuting Attorney's Family Support Division and Domestic Violence Protection Order Advocate

The operational details of Scenario 5.5 were not fully developed at the time the FMP was adopted by council. The original FMP states that "all non-dependency Washington State actions brought by the King County Prosecuting Attorney's Office remain at the KCCH." Since that time, Superior Court has worked with its criminal justice partners to develop a functional operational model that meets the policy objectives of Scenario 5.5. The model includes within the definition of Scenario 5.5 child support and paternity matters, and domestic violence protection orders for clients with children in the new facility[3].

Superior Court and its criminal justice partners are in agreement that these matters should be included in the new facility because they are integral to the comprehensive handling of family law proceedings involving children. All dissolutions with children require the establishment of child support. Placing all out-of-custody child support matters at the new facility avoids making parties to a dissolution travel to two locations to finalize their court action. Domestic violence protection orders are often required within the context of a dissolution of marriage. Handling protection orders at Alder provides clients with children with a single court location capable of resolving both their dissolution and their need for a protection order. Finally, paternity cases often involve the modification of parenting plans for unmarried parents.

Superior Court notes that many court clients are involved in both juvenile and family law proceedings. The co-location of juvenile and all family law matters involving children will provide these clients with one central location to have their court issues addressed, and allow easier access to information they may require for a variety of court proceedings.

These matters are identified by Superior Court in the joint report. Programming of these matters is included in the site master plan to allow policymakers, if necessary, the ability to accomplish this at the appropriate time.

It is important to note that the inclusion of these workgroups for the Site Master Plan Building Program, under a model of co-location, requires revision of the facility program outlined for

[3] It is important to note that only out-of-custody child support, domestic violence protection orders and paternity cases will be handled at the Children and Family Justice Center. All in-custody matters on these calendars will remain at the King County Courthouse.

scenario 5.5, and shown in Table 2, and council approval of the scope and cost changes. These programming changes increase the cost approximately $6.5-7.5 million (in 2010 dollars)

Adult and Juvenile Detention

During the review of the original space program for Scenario 5.5 with juvenile detention staff during this pre-design phase, it was discovered that certain portions of the existing operations in the basement of the Alder tower remain unclear in the original program. These areas are noted below:

Central Control
Visitation Lobby
In-custody visitation
Security electronics equipment room
Juvenile housing unit (status offenders)
Outdoor recreation
In-custody circulation/sallyports

During the next design phase, it will be necessary to explore these areas and determine how they will work with the new facility and what if any additional building area may be required. Using the existing area of these functions, an approximate size under review is 6,200 square feet. The cost range for this additional area is approximately $3.5-4.0 million and are included in the preliminary project budget as a risk management, budget item in case it is determined that these areas were not included in the FMP building program.

With these modifications, Table 1 below outlines the building program that was utilized to master plan the site for the full build out of Scenario 5.5 by 2032.

However, as discussed in Chapter 2, the response to the King County Council Motion 13106 states that the initial project Phase 1 would reflect the building program of Scenario 5, minus the space requirements for new FTE's estimated at 10,000 square feet. The space list for project Phase 1 is identified in Table 2, and will be utilized to determine the initial project scope, schedule and budget in the later chapters.

Table 1 Site Master Plan Building Program
Scenario 5.5 Building Program through 2032

Space Component	Gross Area
Entry & Public Facilities	
Entry and Public/Staff Support	13,040
Public Child Care	1,970
Entry Security Screening	3,360
Family Law Functions	
Family Court Operations	7,500
Family Law Courtrooms	34,170
Dependency CASA	2,950
Family Law information Center (FLIC)	2,910
Juvenile Court/Juvenile Court Services	
Juvenile Court Services Administration	3,270
Juvenile Offender Courtrooms	30,360
Juvenile Dependency Courtrooms	16,240
Becca & Treatment Courtrooms	6,810
Family Law CASA	1,140
Juvenile Probation Services Unit	15,070
Juvenile Treatment Services	4,710
Juvenile Court Services/Juvenile Services Division	3,060
Adult and Juvenile Detention-Juvenile Division	7,390
Alder School	11,660
Other Agency Space	
Department of Judicial Administration (Clerk)	11,180
Law Library	5,440
Prosecuting Attorney's Office (Juvenile Offender Unit)	9,360
Public Defender Workspace	2,590
Health, Mental Health, & Social Services	2,890
Children's Administration & Attorney General	2,060
Security	
Security Operations	1,490
In-custody holding-Central	5,890
Support Functions	
Staff Support	19,010
Satellite Administration/Records/Archive	2,030
Information Technology	2,830
Interpreter Services	1,800
Facilities & Building Support	11,430
Subtotal Original Building Program (38)	243,610
Program Updates	
Prosecuting Attorney-Family Support Division	11,158
Prosecuting Attorney – Domestic Violence Protection Order Advocates	1,850
Juvenile Detention (Central Control, Housing Unit) (6200 sf included in prelim . budget to be assessed in the next design phase)	TBD
Subtotal Building Program Updates	13,008
Grand Total	256,618

Table 2 Phase 1 Building Program (Scenario 5 through 2022)

Space Component	Gross Area
Entry & Public Facilities	
Entry and Public/Staff Support	7,440
Public Child Care	1,430
Entry Security Screening	2,530
Family Law Functions	
Family Court Operations	460
Family Law Courtrooms	0
Dependency CASA	2,840
Family Law information Center (FLIC)	0
Juvenile Court/Juvenile Court Services	
Juvenile Court Services Administration	3,270
Juvenile Offender Courtrooms	28,490
Juvenile Dependency Courtrooms	16,240
Becca & Treatment Courtrooms	6,810
Family Law CASA	0
Juvenile Probation Services Unit	14,600
Juvenile Treatment Services	4,710
Juvenile Court Services/Juvenile Services Division	3,060
Adult and Juvenile Detention-Juvenile Division	7,390
Alder School	11,660
Other Agency Space	
Department of Judicial Administration (Clerk)	7,030
Law Library	0
Prosecuting Attorney's Office (Juvenile Offender Unit)	9,090
Public Defender Workspace	2,590
Health, Mental Health, & Social Services	2,890
Children's Administration & Attorney General	2,060
Security	
Security Operations	1,340
In-custody holding-Central	5,400
Support Functions	
Staff Support	13,440
Satellite Administration/Records/Archive	770
Information Technology	1,970
Interpreter Services	1,360
Facilities & Building Support	7,270
Subtotal Original Building Program (38)	**166,140**
Program Updates	
Prosecuting Attorney-Family Support Division	0
Prosecuting Attorney – Domestic Violence Protection Order Advocates	0
Program reduction Motion 13106	-10,000
Juvenile Detention (Central Control, Housing Unit) (6200 sf included in prelim . budget to be assessed in the next design phase)	TBD
Subtotal Building Program Updates	-10,000
Grand Total	**156,140**

B. Parking

Preliminary Parking Demand Assessment

The peak parking demand for the site under the proposed redevelopment was determined based on a calibrated parking demand rate determined specifically for this site and the daily fluctuation in building occupants for the site. Parking demand throughout each workday was assumed to fluctuate in direct relationship with net building occupancy (occupancy data as provided by Gilmore Research Group **see Appendix A**).

Calibration was performed to estimate the number of vehicles parked at the site per building occupant. Existing counts of occupied parking stalls on-site were conducted on Thursday, March 25, 2010 for the purposes of determining a calibration factor associated with the net building occupancy data collected by Gilmore on Thursday February 25, 2010. Based on the Gilmore survey, the on-site parking counts were increased to account for 7 percent of the vehicles parking off-site prior to calibration.

The results of the existing parking counts at the site are summarized, **see Appendix A**. Building occupancy fluctuations (and therefore parking fluctuations) throughout a typical weekday are affected by 3 main factors: first shift (day shift) employment, AM court participants/spectators, and PM court participants/spectators. Each factor was assumed to be the primary influence on parking demand during a specific part of the day. For example, the number of AM court participants/spectators is likely the primary influence on parking demand between 8:45 AM and noon. For each factor, King County provided current estimates and future estimates for the project phase 1 (Scenario 5) and for the final project phase (Scenario 5.5, 2032) of the site. The participant/spectator and employee headcount data is summarized, **see Appendix A**.

The parking demand estimates for Phase 1 and for the final development phase, account for the anticipated future growth identified in Table 1, Site Master Plan Building Program, by factoring the inbound and outbound traffic at the door of the facility by the relative increases for each factor. Then, the resulting net occupancy is converted to parking demand using the derived calibration factor.

Table 3, shown on the next page, summarizes the preliminary Phase 1 and future final phase estimated peak parking demand for each day of the week, and identifies the weekday maximum. Detailed parking demand worksheets for Phase 1 and the future final phase are included **in Appendix A**.

Table 3 Children and Family Justice Center Preliminary Peak Parking Demand			
Day of Week	**Estimated Existing Peak Demand[1]**	**Estimated Peak Demand Phase I**	**Estimated Peak Demand Final Phase**
Monday	291	347	503
Tuesday	336	407	589
Wednesday	337	398	573
Thursday	312	379	566
Friday	327	401	605
Weekday Maximum	**337**	**407**	**605**
Preliminary Recommended Parking Supply			
Minimum		407	637
Recommended @ 5%[2]		428	672
Recommended @ 10%[3]		452	

Notes:

1. Existing peak demand includes on-site parking demand plus estimated demand off site
2. Assumes 5% practical capacity
3. Assumes 10% practical capacity

As shown in **Table 3**, the weekday maximum peak parking demands in the future with Phase 1 is expected to occur Tuesday mornings with approximately 407 parking stalls occupied. The weekday maximum peak parking demand for the final phase is expected to occur Friday mornings with approximately 605 parking stalls occupied.

To account for "practical capacity" (also known as "effective parking supply"), we recommend providing a parking supply that exceeds the peak parking demand. Practical capacity is the level of parking occupancy at which users perceive parking is full. If you approach 100% occupancy, users will have difficulty finding the last few spaces creating inefficiency in circulation and driver frustration. Providing excess parking to account for "practical capacity" is recommended. In addition it also provides for vacancies created by setting aside some spaces for reserved stalls (such as ADA stalls, service stalls, etc.). The Institute of Transportation Engineers (ITE) and the Urban Land Institute (ULI) recommend adding between 5 and 15 percent additional parking spaces above peak demand to account for practical capacity. For this project, it is recommended 10 percent additional spaces, but no less than 5 percent additional spaces be added to the estimated parking demand.

- ***Accounting for practical capacity, the preliminary number of spaces required for the project phase 1 would be 440, which is within the midrange of the recommended parking supply.***

- ***The preliminary number of spaces required for the site master plan would be 672 (recommended) or 637 (minimum).***

Traffic Analysis for City of Seattle Master Use Permit (MUP) Application

Based on our consultant's experience in Seattle, the following provides an outline of the traffic analysis that the county would expect the City of Seattle to require associated with the Master Use Permit (MUP) application.

- Document and confirm trip generation estimates with the City.
- Assign the net new weekday PM peak hour project trips onto the street system.
- Assess level of service (LOS) at study intersections and project driveways with and without the proposed project. Study intersections would need to be confirmed by the City of Seattle staff.
- Assess the impacts of the proposed project on existing pedestrian and transit facilities.
- Document the parking demand created by the completed project and compare to the proposed on-site parking supply.
- Assess transportation concurrency.
- Determine mitigation (if needed).

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4.0 Site Master Plan

A. Site Master Plan Process

The primary work of the pre-design effort has been developing a master site plan for the Alder campus that includes conceptual alternative development options. The current site of approximately 10 acres encompasses a relatively new detention facility; 2 older court facilities; a large surface parking lot; and undeveloped open areas. Based on earlier planning work, the county is aware of the high development opportunity that exists on the site for public as well as private purposes.

As stated in the Targeted Facilities Master Plan, the Superior Court's goal is construction of a new Children and Family Justice Center that allows for consolidation of juvenile and family court services. The community has communicated their priority as an improved, mixed-use campus, with accessible open areas. The King County Executive and King County Council's requirement for financially viable development options, along with the aforementioned goals, served as the basis of this site master planning process. To that end, the consultant, KMD was charged with developing an updated Site Master Plan for the Youth Service Center campus located at 1211 East Alder Street, Seattle. The work occurred over a 24 week period. The major milestones and deliverables follow:

Organization

The consultant provided alternative development concepts for the overall site and performed environmental and other analysis of these alternatives. The consultant's work has been coordinated with efforts performed by county staff and other consultants or contractors, with King County's FMD as the project and contract manager. The FMD established work groups and coordinating committees to ensure ongoing communication and expeditious decision-making throughout the process.

State Environmental Policy Act Compliance (SEPA)

The development of the site master plan included a SEPA checklist and environmental reports, public outreach coordination, cost estimates and life cycle cost and risk management analysis, schedules, building and zoning codes. The consultant provided studies, documentation, and process management as necessary for compliance with SEPA for each of the three concept configurations for development. The county was provided with a completed SEPA Environmental Checklist.

Community Outreach

The FMD and the consultant developed community outreach tools to increase public awareness and generate support for the project goals. The work included developing a project specific website, maintained by King County; meeting with key community stakeholders to gather public input; and insuring compliance with SEPA. This outreach will continue to provide for dialogue with the community and to comply with SEPA.

During the course of developing the pre-design report, the project team hosted three community meetings on March 9th, April 10th and May 11th. The current pre-design process is an extension of earlier Facilities Management Division (FMD) investigations and work with the community to determine the capacity of the campus for new facilities. The 10-acre Youth Services Center (YSC) campus resides in the Squire Park neighborhood adjacent to residential areas. Over the years, the Squire Park community has been actively involved in planning efforts. The neighbors have consistently communicated their priorities for the campus and these priorities will continue to inform the design process as it moves forward.

- Aesthetic improvement of the entire property
- Retail space along 12th Avenue as part of a mixed use development
- Possible housing along the east side of the property
- Enhanced open area
- Improved access to the campus
- Support for additional public transportation options along 12th Avenue

More recently the 12th Avenue Initiative Committee was formed to facilitate cohesive private, public and open area development along the 12th Avenue corridor and improved transportation access. Both the Squire Park Neighborhood Council and the 12th Avenue Initiative Committee will provide feedback to the county during the SEPA process and provide input during the next design phase. The team included the firm of Norton-Arnold & Company to develop a public outreach program and facilitate and document the results. Their report is included in Appendix A.

In summary, meetings were well attended with questions and issues focused on the following:

- Schedule for further community involvement
- Security
- Building mass and height
- Parking and parking configuration
- Shared uses with residents and institutions for the parking and other campus amenities
- Open area: location, size and uses
- Traffic flow and ingress and egress locations
- Design concepts that considers 24 hour campus access

Each meeting was staffed by team members from FMD, the consultant team, and Superior Court. The Squire Park meeting was attended by Judge Trickey, Judge Hilyer and Councilmember Larry Gossett, Judge Trickey also provided a summary of the Court's vision at the 12th Avenue Initiative Committee meeting.

Superior Court Anticipated Facility Benefits:

- A safe and secure environment
- A building that meets public health standards
- Adequate waiting areas and private attorney/client meeting spaces
- Room for childcare facilities
- Court services and staff available onsite
- Intake/enrollment for offsite/community services
- Appropriately-sized courtrooms
- Synchronized results in cases involving children and families
- Better case and client information sharing
- Enhanced judicial decision-making based on deeper understanding of family context
- Improved access/linkage to services that support children and families in crisis

The meetings provided a venue to share information and begin a new dialogue around mutually beneficial goals.

In addition to community meetings, the project has implemented a web page www.kingcounty.gov/ChildrenAndFamilyJusticeCenter , and an email address. Additional outreach efforts included a telephone phone bank, and postcard drop to 550 households, informing neighbors of the new project and upcoming community meetings.

B. Land Use Permit Requirements

Background

Existing Zoning – As depicted by Figure 1 on the following page, the east and south portions of the site are zoned L3 and the northwest portion of the site is zoned NC3P-65.

- L3 is a low-density residential zone that provides moderate scale multifamily housing opportunities in multifamily neighborhoods.

- NC3 is a neighborhood commercial zone with an aim of supporting or encouraging pedestrian-oriented shopping that serves the neighborhood and a larger community clientele. The NC3 zone incorporates offices, business support services and residences that are compatible with the retail character. The "P" suffix is applied when retail and pedestrian-oriented shopping are to be preserved or encouraged and non-auto modes of transportation are favored.

Allowed Uses and Development Standards – The proposed project consists of six major elements: courts, office space, structured parking, a school, open area, and co-development. No modifications to the existing Spruce youth detention facility are planned as part of this proposed project.[4]

L3 Zone – Allowed Uses

- *Courtrooms* - Few public facility-type uses are specifically identified in Seattle's Land Use and Zoning Code. In the L3 zone, for example, uses in public facilities are permitted outright if they are most similar to private sector uses that are permitted outright in the same zone. Similarly, such uses are permitted as a conditional use if they are most similar to a private sector use that is permitted as a conditional use in that zone. Certain public facility uses, such as police stations, fire stations, etc. require city council approval. Other public facility type uses (e.g., jail facilities) are typically prohibited.

  Since there are no specific regulations for courtrooms, it is not clear whether they could be permitted with city council approval. Such approval would hinge on an argument that they are similar to one of the other public sector-type uses that are specifically identified in the code.

- *Office* - Like the courtrooms, this is a use that is neither permitted outright in the L3 zone nor as an administrative conditional use. It would, however, be an accessory to the courtrooms and would, therefore, require city council approval.

- *Parking* - A new accessory parking garage may be provided in the L3-zoned portion of the site - only if the parking is accessory to a use that is permitted in the L3 zone. Again, this would be part of the argument noted above.

[4] A detention facility is a prohibited use in the NC3P-65 and the L3 zonings. At such time as modifications are necessary to that facility, permit research would be necessary in order to determine what approvals were granted and when by the City of Seattle that authorized the existing detention facility in the L3 zone.

- *School* - Schools are a permitted use in the L3 zone.

- *Open Area*- There is no limitation with regard to the provision of open area on-site. Open area would be a requirement of residential development associated with the co-development.

Figure 1 – Zoning

Source: *Google*, 2010.

BLUMEN CONSULTING GROUP, INC	King County Youth Services Center Replacement	Figure 1 Zoning

L3 Zone – Development Standards

- Public facilities that are permitted in the L3 zone are subject to the same development standards as similar private sector development. These include: height limit (30 ft.), lot coverage (50%), structure width and depth, building setbacks (front, rear and side-yard), building modulation, screening/landscaping. If there are no such standards, the development standards that apply are those that apply to institutions in the L3 zone.

- The city council may waive or modify development standards.

NC3P Zone – Allowed Uses

- *Courtrooms* – As with the L3 zone, courtrooms are not specifically identified in Seattle's Land Use and Zoning Code as a public facility that is permitted outright in the NC3P zone. The same requirements as outlined for the L3 zone would apply.

- *Office* – This is a use that is permitted outright in the NC3P zone.

- *Parking* -- An accessory parking garage would be permitted in the NC3P zone.

- *School* -- Schools are a permitted use in the NC3 zone.

- *Open area* -- There is no limitation with regard to the provision of open area on-site. As noted previously, open area would be a requirement of residential development associated with the co-development.

NC3P Zone – Development Standards

- Public facilities that are permitted in the NC3P zone are subject to the same development standards as similar private sector development. Key requirements include: height limit (65 ft.), Floor Area Ratio (4.75),[5] building setbacks, and screening/landscaping.

- The city council may waive or modify development standards.

Approval Process

Key Entitlement Process – Use and Development Standards

Given the split zoning on-site and the nature of the proposed development program, two alternative courses of action are possible regarding the approval process.

- Council Conditional Use; or a
- Contract Rezone.

The following outlines both options and is followed by a recommended course of action.

[5] Floor Area Ratio (FAR) is defined as "a ratio expressing the relationship between the amount of gross floor area or chargeable floor area permitted in one or more structures and the area of the lot on which the structure is, or structures are, located … (Seattle Municipal Code 23.84A.012).

Council Conditional Use (CCU) – This process would involve the following:

- The courts element of the proposed project would be a public facility. As noted courts are not specifically identified in either the L3 or the NC3P-65 zones as a use that is permitted outright, that is permitted as an administrative or council conditional use, or is prohibited.

- In the L3 zone, if the use is not like anything specifically permitted outright or as an administrative conditional use, it may be approved by the city council -- but only if it is like one of the possible "public"-type uses that are specifically identified in the code, namely: "police precinct stations, fire stations, public boat moorages, utility service uses, and other similar uses" (SMC 23.45.106B). If it is a use that is not similar to one of these, the use isn't allowed. Therefore, a convincing case would need to be made to the city council to indicate that the court complex would be comparable in some aspect to one or more of these other public facility-type uses identified. That may be difficult. In addition, such justification could be challenged on the basis that the proposed project is not sufficiently similar to the use that was identified.

- Unlike the L3 zone, in the NC3 zone, if the use is not like anything specifically allowed -- either outright or as an administrative conditional use -- it may be allowed by the city council even if it is not comparable to a police station, fire station, public boat moorage or utility service use.

- Another possibility would be to locate the court complex (and associated parking) entirely on the NC3P-zoned portion of the site, which could also be done with a CCU. This would still necessitate completing the CCU process. More importantly, however, this would not provide optimal adjacency relative to the existing on-site detention facility and it would involve locating the courts complex in a portion of the site that is intended for co-development.

- In the multifamily zone, uses in public facilities that do not meet the development standards may be permitted by the city council based on the following criteria.[6]

    - "The project provides unique services which are not provided to the community by the private sector, such as police and fire stations;

    - The proposed location is required to meet specific public service delivery needs;

    - The waiver or modification to the development standards is necessary to meet specific public service delivery needs;

    - The relationship of the project to the surrounding area has been considered in the design, siting, landscaping and screening of the facility."

- The CCU permit process is a Type IV quasi-judicial process. The Department of Planning and Development (DPD)reviews the application materials for the CCU. The DPD provides a recommendation to the City's Hearing Examiner. The Hearing Examiner holds a public

[6] SMC 23.45.106C

hearing on the application, compiles a recommendation, and submits the recommendation to the city council. A city council committee reviews the application and the Hearing Examiner's recommendation and makes a recommendation to the full city council. The city council approves, approves with modifications or denies the CCU application.

- Timing for completion of the CCU process -- approximately 12 months.

Contract Rezone – This process would involve the following:

- The "contract" part of this option is called a Property Use and Development Agreement (PUDA). Essentially, this would be a contract between the city and the county to allow development, as proposed, to occur -- with conditions.

- The contract rezone process could involve a broad range of changes applicable only to this site. Possibilities may include: a change of zoning to NC3 for the westerly portion of the site;[7] authorization of specific land uses within portions of the site, modifications to allowed height limits, provisions for open area, and pedestrian-oriented amenities, etc.

- Conditions associated with the contract rezone could address any number of issues and community concerns. Some possible examples include the following:

    - Limitations could be placed on where specifically on-site added height would be allowed. Also, it may be desirable to provide step-down provisions (relative to the height limit) proximate to residential development in blocks north and east of the site.
    - Provisions could be added with regard to pedestrian amenities, street trees, etc.

    - A provision to authorize phased development of the site to occur over an extended period of time, regardless of limitations associated with the City's Master Use Permit process.

- The City's rezone criteria applicable to a specific zoning designation would have to be met.
- Like the CCU process, the contract rezone is a Type IV quasi-judicial process in that it involves: DPD reviewing the application materials for the contract rezone; DPD providing a recommendation to the City's Hearing Examiner; the Hearing Examiner holding a public hearing on the application, compiling a recommendation and submitting the recommendation to city council; a city council committee reviews the application and the Hearing Examiner's recommendation and makes a recommendation to the full city council; city council approves, approves with modifications or denies the PUDA.

- Timing for completion of the contract rezone process -- approximately 12 months.

[7] In addition to the northwest portion of the project site, properties north, south and west of 12th Avenue are already zoned NC3. It may not be unreasonable, therefore, to extend the NC3 zoning along the 12th Avenue frontage of the site.

Recommended Action

The decision of which option to pursue will establish the overall entitlement direction for King County's public portion of the project. Regardless of the option, the process will encompass approximately a one year effort.

While the CCU option could result in most if not all use and development standard revisions requested by the county, the issue remains whether a sufficiently convincing case could be presented to the city council to indicate that the facility would be comparable to one or more of the other public facility-type uses identified by City code. Another key consideration is whether such justification could withstand a challenge.

It is recommended, therefore, that the contract rezone option be pursued during the next design phase.. Conceivably, this option could be designed to achieve all the use and development regulation changes that the county needs for the project.

Other Major Entitlement Considerations

- Master Use Permit (City of Seattle)

  As noted below in the Comprehensive List of Permits/Approvals Needed, Seattle's principal discretionary permit is the Master Use Permit (MUP). The MUP is an umbrella-type permit in that it combines all discretionary actions into one permit process. Components most often included are: compliance with zoning (in terms of land use and development standards), SEPA[8] and Design Review. At the conclusion of the MUP process, the Seattle Department of Planning and Development (DPD) issues the administrative decision – the MUP Analysis & Decision. A 14-day appeal period follows DPD's issuance of the MUP decision. The MUP process would occur concurrent with the city council's review of the applicable Type IV option (CCU or contract rezone). The MUP decision, however, cannot be rendered prior to the city council's Type IV decision.

  It is anticipated that the proposed county facilities would be included as one MUP that is sponsored by the county and the co-development aspect of the project would be separate, subsequent MUP(s), which would be the responsibility of the developer. As noted, a 14-day appeal period would follow issuance of any MUP decision.

  The MUP must be approved and the appeal period completed before DPD can issue a Building Permit for the project.

[8] When another public agency acts as Lead Agency for SEPA compliance, DPD exercises their substantive SEPA authority to review the project under Seattle's SEPA Ordinance (SMC 25.05.660). This means that they perform a detailed review and analysis of the Lead Agency's SEPA analysis and may require additional mitigation beyond that required in the Lead Agency's SEPA decision. DPD's review is limited to those issues identified by the Lead Agency. In addition, DPD's SEPA review is a component of their MUP decision (or Recommendation in the case of Council Decisions) and conditions are appealable by any interested party.

- Short Subdivision

Since King County intends to sell a portion of the site for subsequent co-development, a legal subdivision (short plat) of the project site may be required. The platting action may be necessary, depending on where the lot line is proposed. Since there are existing underlying platted lot lines, it may be possible to sell portions of the property without short platting. If a short subdivision is needed, it would be evaluated and considered as a component of the City's MUP process.

- Right-of-Way Vacations

As noted below in the Comprehensive List of Permits/Approvals Needed, it may be necessary to vacate four segments of streets and alleys[9] that are located along the east boundary of the site. If these areas are intended for use in conjunction with the Courthouse Replacement project (or co-development), one or more would need to be vacated. These are portions of rights-of-way that were vacated in 1969 (City Ord. No. 98410). Based on the City's zoning map (#111), it appears that these rights-of-way exist and extend onto the project site from 14th Ave. a distance of about 12 ft.; collectively they encompass an area of approximately 1,500 sq.ft.

Vacations are processed by the Seattle Department of Transportation (SDOT). The Seattle Design Commission, along with approximately 40 other agencies and City departments would review and provide comments concerning the proposed vacations. The Design Commission's review involves at least one public meeting. The final decision regarding vacations rests with the city council. The vacation process typically takes 9 to 12 months. Review of City engineering records regarding the rights-of-way in question would be necessary to confirm the need for the vacations. The zoning map alone is not conclusive.

- Design Review

As a public facility, review by the City's Capitol Hill Design Review Board would not be required. Design review, however, would be required for the subsequent co-development. Also, since this is a public project sponsored by King County, rather than the City, review by the City's Design Commission would not be required – other than review relative to the possible, partial vacations noted above.

Comprehensive List of Permits/Approvals Needed

King County Council
- Approval of the pre-design report
- Decision to place funding of the proposed project to a public vote

King County Department of Executive Services
- Decision regarding the entitlement option

City of Seattle – City Council

[9] two segments and two alley segments

- Approval of either a Council Conditional Use Permit or a Property Use and Development Agreement for the proposed project
- Possible vacation of four partial rights-of-way located along the east boundary of the site

City of Seattle – Department of Planning and Development
- Master Use Permit (which includes: zoning review, possibly a short subdivision and SEPA review)
- Demolition Permit
- Grading Permit
- Building Permits
- Mechanical Permits
- Electrical Permits
- Certificates of Occupancy

City of Seattle – Department of Transportation
- Street Improvements (i.e., sidewalk improvements, curbcuts, etc.)
- Street Use Permits (temporary – construction-related)
- Public Right-of-Way Vacation process

Seattle Public Utilities
- Water/Wastewater
- Recycling

Seattle City Light
- Electrical Power

Puget Sound Clean Air Agency
- Asbestos / Demolition Notification

C. Infrastructure/Utilities Requirements

Site utilities include sanitary/storm combined sewer, water, and as well as power, communications, and natural gas.

1. Sanitary/Storm Sewer

a. Purveyor: Seattle Public Utilities
b. Existing Mains. The property is served by City owned combined sanitary storm sewers as noted below:
   - An 18" combined sewer running south down 12th Avenue.
   - A 21" combined sewer running south down 14th Ave.
   - A 15" concrete combined sewer that runs through the site along vacated 13th Avenue that carries combined sewage from streets and parcels to the north of the site. The line becomes a 16" ductile iron pipe that runs diagonally under the existing Alder wing building (approximately 16' deep) before tying into the main in 14th Ave. There is a utility easement along the sewer alignment.
   - An existing private storm drain system drains collects and conveys on-site stormwater to the southeast corner of the site where is connects to the combined sewer in 14th Avenue. There is an existing 72-inch, 300-foot long detention pipe between the Detention building and E Spruce Street sidewalk. There is a 15" pipe on the east side of the Detention building and an 18-inch pipe on the west side of the Detention building that collects runoff from the site. There is a network of smaller storm drain pipes that conveys runoff to these larger pipes.

c. Storm Drainage:

1. *Water Quality:* The project drains to a combined sanitary and storm sewer that runs through sanitary treatment, therefore water quality treatment is <u>not</u> required.
2. Detention:
   - The project is required to comply with the peak flow control standard for the 2-year storm and for the 25-year storm.
   - Currently there is an existing detention pipe located south of the detention building. It has a capacity of 8,500 cubic feet.
   - Based on the estimated amount of impervious surface shown in the site concept alternatives, an additional detention volume of approximately 11,200 cubic feet is required for anticipated development of the 9 acre site.
   - The current drainage code requires the project to install Green Stormwater Infrastructure to the maximum extent feasible.
   - Site flooding problems will be alleviated by providing new stormwater infrastructure:
   - Flow paths that are designed to direct runoff away from the buildings.
   - Oversized drainage pipes where appropriate providing excess conveyance capacity and storage
   - Redundant catch basins
   - Improved street right-of-way drainage keeping off-site surface runoff from entering the

site.

d. Sewer Development:

- The existing combined sewer that runs through the site must be relocated to accommodate the anticipated construction of parking garage, Phase 2, as the lower levels of a garage are anticipated to conflict with the sewer pipe.
-

2. Water

a. *Purveyor*: Seattle Public Utilities

b. *Existing Services*: 6" fire & 6" domestic off E Remington Ct, 2" irrigation off 12th Ave

c. *Existing Water Mains*: 8" cast iron along E Remington Ct, 20" cast iron along 12th Ave

d. Development Criteria

- SPU limits one domestic and one fire protection service to each parcel. The water availability certificate indicates the maximum service size available are 6" domestic and 8" fire protection based on connection to E Remington CT. There is adequate water supply for the anticipated site developments.
- We anticipate the future private developments will occupy subdivided portions of the existing site, so new water services will be provided when those developments are constructed.
- Generally there is good hydrant coverage in the right-of-way and we do not anticipate on-site hydrants will be required.

3. Utilities

1. *Purveyor*: Seattle City Light, Comcast, Puget Sound Energy, and potentially others.
2. *Existing Power and communications*: Overhead lines adjacent to site along 12th Avenue and minor communications adjacent to site along 14th Avenue.
3. *Natural Gas.* There are 6" gas lines on the 12th Avenue and 14th Avenue right-of-ways.
4. *Power and communications conditions and development criteria*

- Project is south of "Seattle Mandatory Underground Ordinance Area", but project is required to be 10' clear of power lines, including permanent structures, temporary conditions, and future maintenance activities.

4. Street Improvements

Based on discussions with SDOT representatives and past experience the following criteria should be considered when planning the site development.

Minimum Requirements

- The major overhead utility system along 12th Avenue represents the most significant

constraint in relation to site development. The conductors are roughly 50 feet above the existing sidewalk grade. Seattle City Light requires a 10-foot setback between the closest conductor and the maintenance/construction envelope outside the building face.

- The City Arborist will require that street trees be retained as much as possible, especially mature ones. This limits the grading work that can be conducted in the sidewalk or planting strip.
- Sidewalks that do not meet ADA requirements must be replaced. The minimum requirement is to repair cracks, broken, and heaved sidewalks. We estimate that a minimum of 75% of the sidewalks will need to be replaced around the right-of-way adjacent to the new development. We also anticipate that no sidewalk repair work will occur on the south, east, and west frontages adjacent to the existing Detention building.
- Reconstructing, relocating, and installing new driveways will trigger the need to do some pavement overlay work in the street.
- Based on the anticipated minimum street improvement requirements, the drainage improvements will be limited to implementing Green Stormwater Infrastructure to the maximum extent feasible in the right-of-way.

D. Existing Site Artwork

Existing YSC Public Art Works
Currently the Youth Services Center and the Alder campus are home to 2 major public art pieces: A mural located on the exterior wall of the main entry; "Making Choices" and a sculpture; "Spirit of Our Youth" located on the northeast corner of the campus. The mural is a relatively new piece. Installed in 2003, it is a vibrant painting, approximately 21 feet in width and 13 feet high. The sculpture sits in an area that is accessible for use and viewing by the neighborhood residents. Residents value this area as well as the art work that has served as a key feature of that space. At 23 feet high, the "Whale Fin" as it is affectionately called, is considered one of the largest bronze sculptures in the region. The land surrounding the artwork is also a part of the piece, groomed to represent ripples of water flowing from the fin. The piece as originally envisioned would span 1-3 acres.

Construction Phasing and Art Relocation
Given the size and significance of both art works, consultation with the artists will be needed to assess appropriate removal and/or relocation. Both pieces were developed under contract with 4Culture which is the public art representative body for King County. 4Culture has guidelines for moving art pieces and relocating them either temporarily or permanently. Those guidelines generally include consultation with the artist and approval by the arts commission.

Process and Next Steps
In the near-term, representatives from the project team will facilitate work with the architects, 4Culture and the artists on a plan for managing the art works during the various stages of project development. The 4Culture manager will be included as a representative to the Project's Design Review Committee which includes all of the building users and major campus stakeholders. During the next design phases, the 4Culture will be consulted to determine the future of each existing art piece as well as begin to develop concepts around integrated art for the new campus. This work will include neighborhood input through a series of community charrettes.

Future Art Opportunities
Approval of funding for the new Children and Family Justice Center will generate a 1% art allowance for the project. This will provide an opportunity to develop art that supports the new facility. In addition, open areas are a feature of each design concept for the Alder campus. County staff and local residents have requested space for active purposes as well as relief space. Further definition of these concepts will come during the next design phases and offer special opportunities for art.

"Spirit of Our Youth" 1999
Artist: Marvin Oliver
Cast bronze with patina, integral color concrete and landforms

Sculpture dimensions: 23' x 9.5' x 2'

The concept and design of "Spirit of our Youth" originates in Seattle and represents the rich Salish heritage of Washington as well as the diverse ethnic background of this community. The sculpture is a dedication to our youth. The thunderbird reflects the heavens and is a symbol of hope and prosperity. The salmon represent the power of the individual and the fragility of life. The placement of the "dorsal fin" and waves raises reference to the shoreline, water, and "edges" of time and space, creating and inviting, imaginary space. The sculpture presents the metaphor of the submerged and partially visible spirit which integrates the full courtyard.

This mural, one of artist Nhon Truong's first public commissions, reflects the true core of the Youth Service Center – providing hope and support to the young people and their families involved in the justice system. Through his research for this painting, Truong heard people speaking of the themes of family, community, cultural diversity, future and dreams. The artwork is painted in a youthful style but incorporates content that is reflective of the older community, hoping to bridge the gaps between audiences of all ages and cultural backgrounds.

"Making Choices" 2003
Artist: Nhon K. Truong
Vitreous enamel on aluminum
Mural dimensions: 13' x 21'

E. Site Concepts

Goals and Strategies

The existing Youth Service Center (YSC) site is a significant county land asset. The county's plan to replace the existing Alder Tower and Alder Wing with a new Facility provides an important opportunity to maximize the value of the site for the county and benefit the surrounding community. The site concepts proposed for the development of the YSC site address the following goals in order to provide the optimum value for the use of this important County land asset.

- Optimizing the site plan for Superior Court functions in terms of adjacencies, massing, site access, and civic image.
- Optimizing the opportunity parcels for private development on the site in terms of development potential and improving the site integration with existing neighborhoods.
- Optimizing the development of an open area on the site to support the Superior Court functions while providing amenities for the adjacent neighborhoods and the community.

The site concept have been developed using proven strategies that will provide a positive user experience and help reintegrate the site into its urban neighborhood. These concepts are intended to provide an integrated civic environment that communicates the expectation of civic behavior through the use of visual design cues. The following primary strategies have informed the development of these alternative site concepts:

- Re-introduction of the city street grid in order to create visual, pedestrian and appropriate vehicular connections across the site.
- Building scale, pedestrian access, and private development opportunities that support the development of 12th Avenue as a comfortable pedestrian environment.
- Zoning of site pedestrian and vehicular access for ease of circulation and to provide appropriate site circulation control and security.
- Open area locations that encourage appropriate uses and enhance the entire neighborhood.

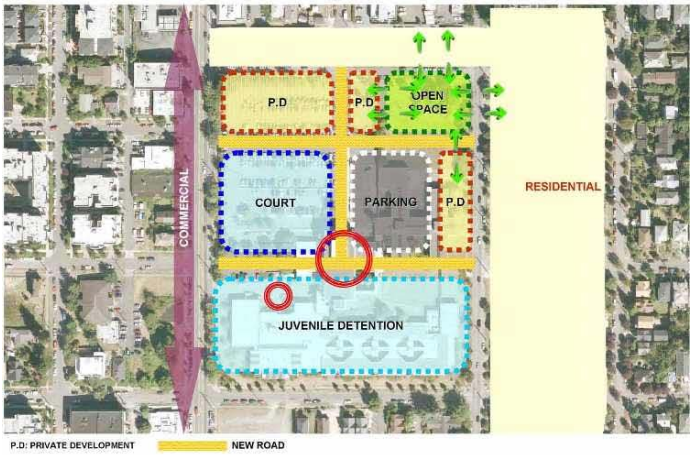
Site Concepts Diagrams

Three distinct site concepts have been developed for the site. These concepts show the range of opportunities and constraints for development within the context of the County's goals for the site and the strategies outlined above, to gather public input, and gain an understanding of the communities concerns. These concepts do not represent the final design layouts.

All three site concepts show the same general location for the new courts facility in response to adjacency requirements for the Detention facility, construction phasing considerations associated with maintaining operations in the Alder Tower, and building height requirements that are best achieved by locating the building along 12th Avenue. Each site concept alternative takes a different approach to the arrangement of the roadways on site, the location of the open area, and the allocation of private development space.

The three site concept are represented conceptually in the following diagram.

Concept A-Site Diagram



Concept B-Site Diagram

Concept C-Site Diagram

Site Concept A

Conceptual Layout

Urban Design Enhancements: In Concept A, the site concept enhances the urban fabric of the 12th Avenue Center Village and Squire Park community by breaking down the scale of the site and reintroducing visual, pedestrian and vehicular access paths across the site. The vehicular and pedestrian circulation has a clear relationship with the established street grid. Building heights are adjusted to accommodate site topography, regional views, and the scale of the surrounding neighborhood community. Outdoor spaces between buildings and at street level are sized and scaled to establish an appropriate civic scale and street environment.

Multiple points of access and entry into the inner areas of the site are introduced at the perimeter of the project site along 12th, 13th, and 14th Avenues. These site access or entry points provide transition from the surrounding community, and define a sequence of pedestrian and vehicular experience leading to the primary entrance to the Children and Family Law Justice Center. These site entry points function as gateways with their physical characteristics providing a needed sense of arrival. The site entry at 12th and Alder is identified as a major point of site access and is designed to be the most civic in function and character. The site entry is sized and scaled to provide clear sightlines into the site, generous pedestrian spaces, and small gathering areas. The size and scale of urban elements at the 14th Avenue entry are less formal and smaller in scale to respond to the character of the adjacent residential neighborhoods.

Vehicular Access, Circulation, and Parking: Extensions of the city street grid into the project site are intended to provide improved access to courthouse and related facilities as well as reducing the scale of the existing "super-block" and more effectively integrating courthouse complex into the existing community fabric. East Alder and E. Terrace Street extensions provide west-east pedestrian connections across the site and vehicular connections where appropriate. An extension of 13th Avenue terminates at E. Alder. The proposed street extensions provide vehicular and pedestrian access to a major circulation node at 13th and Alder that incorporates the courthouse drop-off zone and main public entrance plaza. A smaller scaled Alder Street extension for fire and other emergency vehicles connects to 14th Avenue. A service access is planned from 12th Avenue to the re-configured service yard that supports both the courthouse and detention facilities.

Parking for visitors and staff is provided in a parking structure located roughly in the center of the site, adjacent to the Courthouse. Separate parking zones are planned for staff and visitors including separate entrances. A separate, secure parking area for judicial officers and senior staff will be located within the parking structure with a secure tunnel connection to the facility.

Site Pedestrian Access and Circulation: The site concept is envisioned to be pedestrian-oriented to accommodate movement on foot from the surrounding neighborhood, from public transit stops, and the proposed parking structure. Proposed street extensions will comply with the City of Seattle streetscape design standards. A primary pedestrian link is planned along Alder from 12th Street to the courthouse building's main entrance plaza, an important civic space for the overall complex. Pedestrian spaces along Alder would take advantage of solar access with south facing spaces. Pedestrian traffic to and from the courthouse is removed from the private development areas and is localized around the courthouse main entrance.

Courthouse: The new courthouse facility occupies the central west-side of the project site flanked by 12th and 13th Avenues and Terrace and Alder Streets. The proposed facility's main entrance and drop-off are situated at the intersection of 13th and Alder for visitors and staff arriving on foot or by vehicle. The courthouse is oriented on a primary east-west axis with the main façade and entrance on the south thereby maximizing solar access to interior areas of the building and providing distant views to Mt. Rainier.

For this site concept the proposed courthouse is a multi-story structure with a basement level. Building functions, massing, and exterior wall treatment would reinforce the 12th Avenue pedestrian-oriented corridor. Visitor drop-off zones are principally on the street side opposite the Courthouse's main entrance requiring visitors to cross the street to reach the entrance plaza. Southbound arrivals on 13th would be dropped-off on the Courthouse side of the street. Appropriate office program functions are located in a separate building located on the south side of the new Alder extension. This new building serves to create a strong urban edge along the new Alder extension and provides screening for the site service areas. A sky bridge is proposed at the second story to provide a connection between the courthouse and the new office building.

Youth Detention: The existing youth detention facility occupies the southern portion of the project site. Minor alterations to the existing facility are proposed for the north side of the structure along East Alder extension to allow for appropriate connections to the new facility and replacement of program elements currently located in the basement of Alder Tower. The

primary connection for secure movement of juveniles in custody to the new Courthouse is provided with a tunnel connection below the new Alder extension.

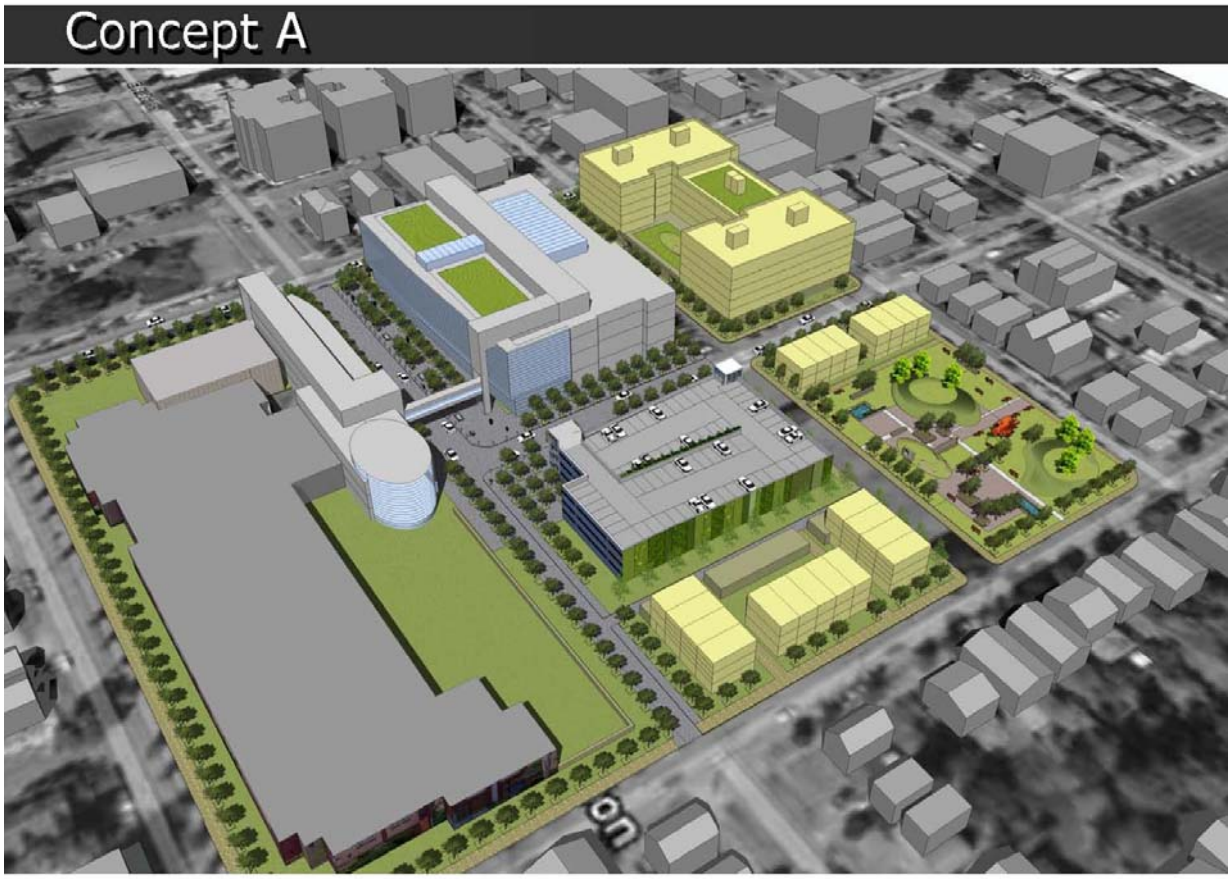
Private Development: Private development is concentrated along both Remington Court and 14th Avenue. Private development acts as a physical buffer and scale transition from the surrounding neighborhood to courthouse facilities. The program for the private development is not yet determined.

Open Area: The major open area occupies the Northeast quadrant of the project site in proximity to the single family housing neighborhoods. This open area component will likely be used for passive recreation and will incorporate landscape elements and amenities along with outdoor public art. The open area will require further analysis to address functional and identity issues. Private development located adjacent to the primary open area will have enhanced value because of the amenity.

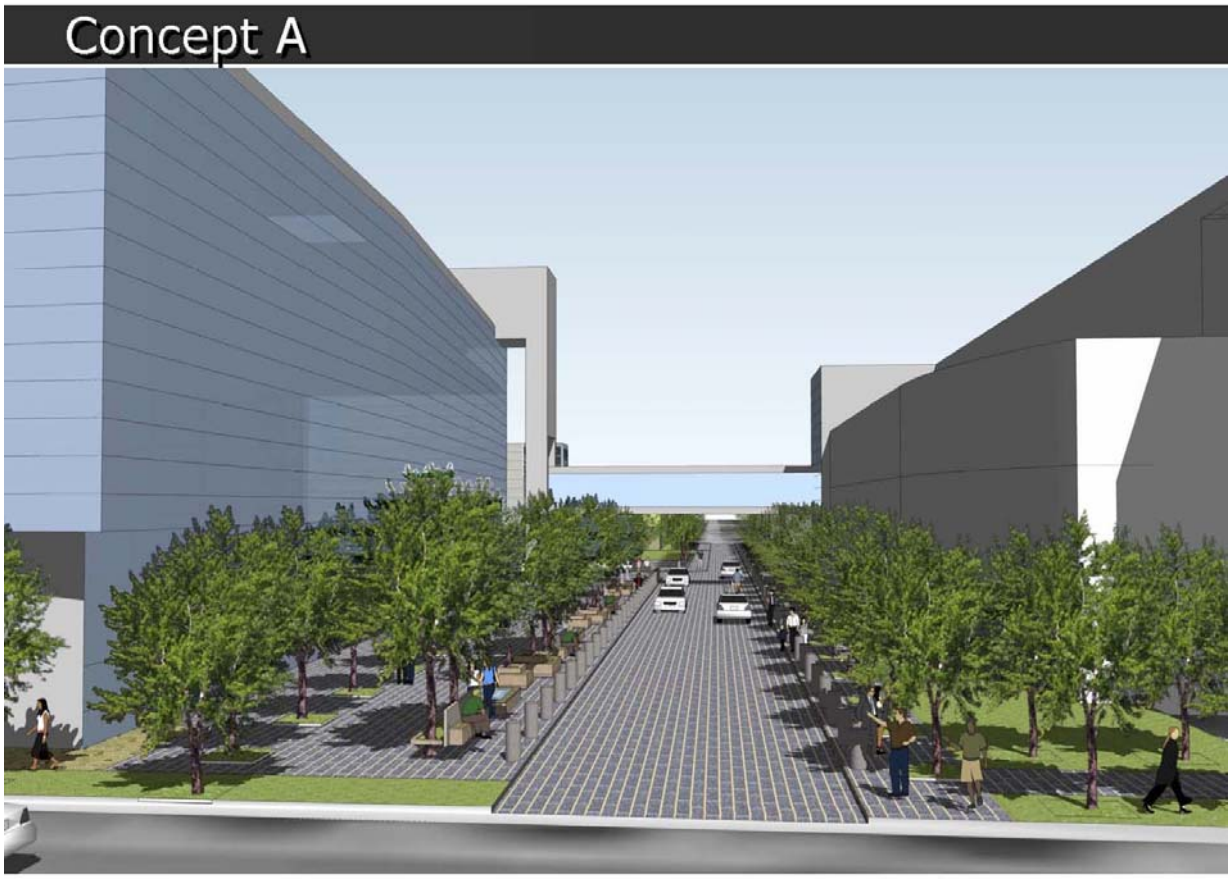
Site Security and Safety: The site concept addressed concerns for public safety and security. In this site concept alternative, the Superior Court function site circulation and the mixed-use site circulation are separated from each other. This allows for a sense of privacy for the Superior Court visitors as well as a sense of security for the private development functions. Security requirements will be implemented in an integrated manner that will provide a normal, civic environment. Safety and security will be further enhanced through natural surveillance, cameras, access control, assistance alarm stations, appropriate lighting, and an understanding of public, semi-public, and private spaces. Along Alder, new courthouse and office construction establishes a streetscape as a "protected environment" that is perceived as safe for facility staff and users and is visible from the public way along 12th Avenue.

Project Phase 1 (156,140 sf, 440 parking stalls): The program identified for Phase 1 is accommodated on the site by building a significant portion of the Court Building, the Alder School and any detention program replacement area adjacent to the Detention Facility, and reserving space for the parking garage anticipated in future phases. The site area for future growth of the court functions will be reserved as open area until the needed in the future. The area for the parking garage would be reserved to accommodate the anticipated future parking stalls. The office building across Alder and adjacent to the loading dock would not be constructed as part of Phase 1. It should be noted that the exact configuration of the Phase 1 Court Building will be determined during the next design phase. The "L" configuration shown in this plan is one of the options for reserving space for future construction to complete the Court Building. Other configuration options may be considered as the program is developed in the next design phase.

View from SW Corner of Site



View from SE Corner of Site



View from 12th Avenue at Alder

View of Project Phase 1 from SW Corner

Site Concept B

Conceptual Layout

Urban Design Enhancements: Similar to Concept A.

Vehicular Access, Circulation, and Parking: Similar to Concept A with the exception that 13th Avenue is envisioned as a one-way traffic couplet framing a public open area. The one-way couplet connects with a major vehicular circulation node or traffic "round-about" at Alder that serves as a drop-off zone at the center of the site. The roundabout is a major traffic terminus and focal point for vehicles arriving and departing the courthouse area. Parking is located on the central, eastern edge of the site adjacent to the residential community. Parking access is located on the 13th Avenue one-way northbound street.

Site Pedestrian Access and Circulation: Similar to Concept A.

Courthouse: Similar to Concept A.

Youth Detention: Similar to Concept A.

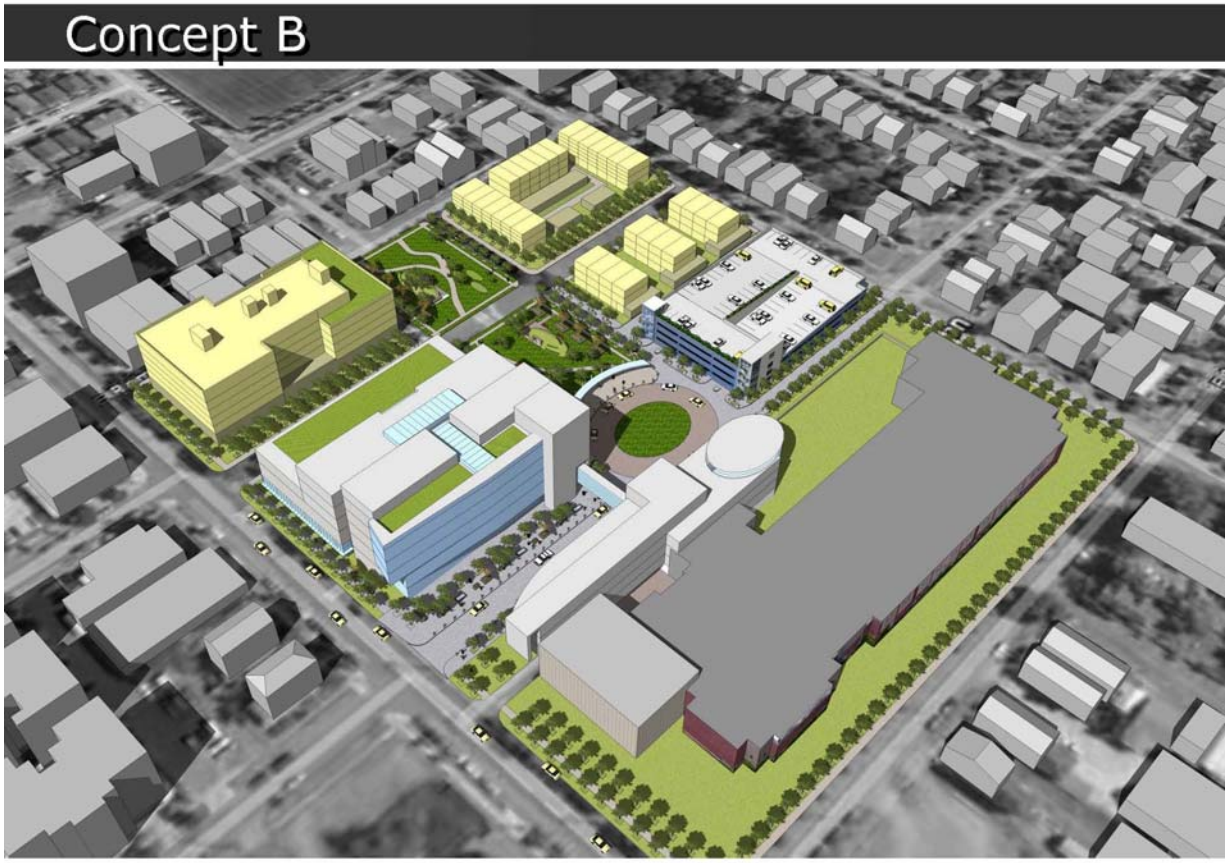
Private Development: Similar to Concept A with the exception that all private development is concentrated to the north and northeast along E. Remington Court and E. Terrace.

Open Area: The primary open area is located in the north central portion of the site in a linear configuration that is bisected by E. Terrace Street creating two distinct open area blocks while remaining a unified whole. Each block could allow for multiple uses with resulting distinctive appearances given their locations and adjacent site uses. The location of the southern open area block provides convenient use by courthouse staff and visitors, while the northern open area block is convenient for use by adjacent residential and commercial neighbors. The southern block effectively extends to the green space of the traffic roundabout and, given its proximity to the courthouse, provides foreground views from occupants of the eastside courthouse spaces.

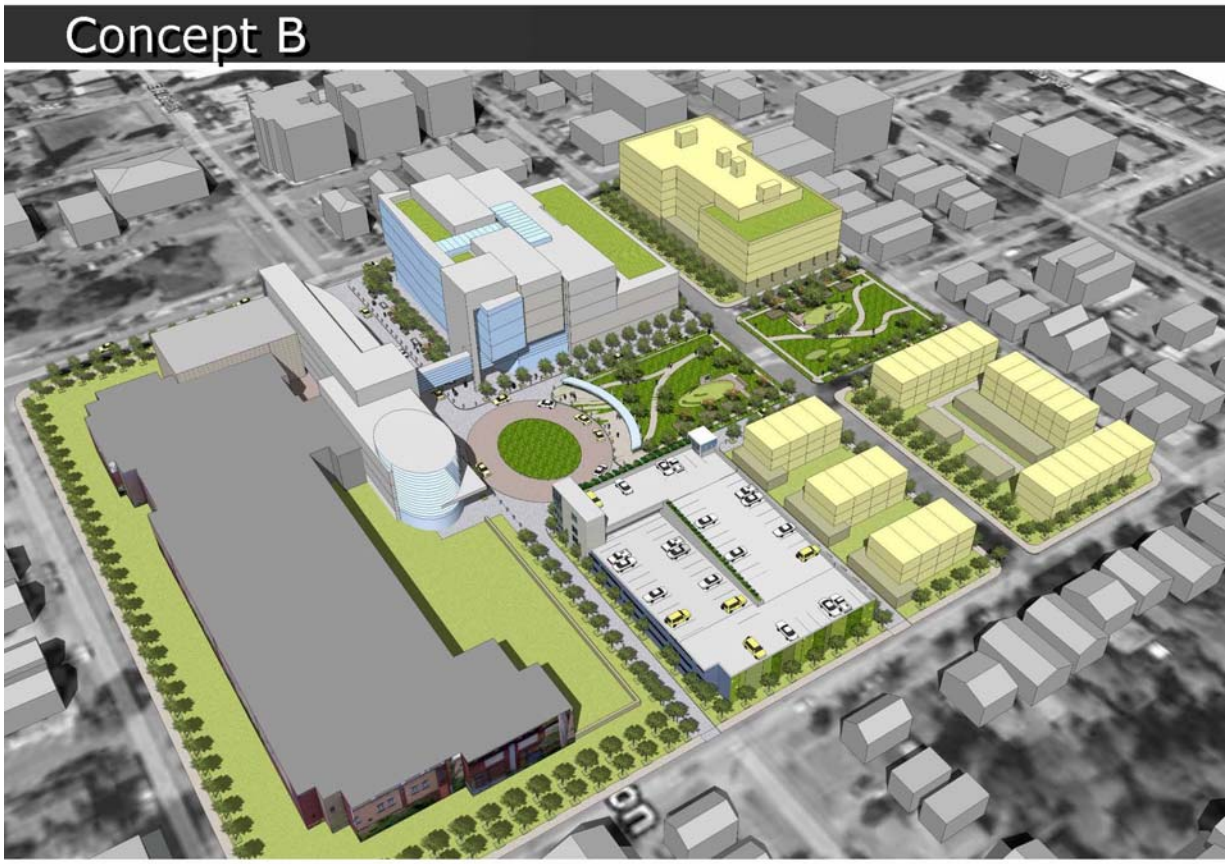
Site Security and Safety: Similar to Concept A with the exception that the "center" location for the open area allows for more direct visibility of activities occurring within the open area from the courthouse but less visibility from the adjacent neighborhood residents.

P.D: PRIVATE DEVELOPMENT

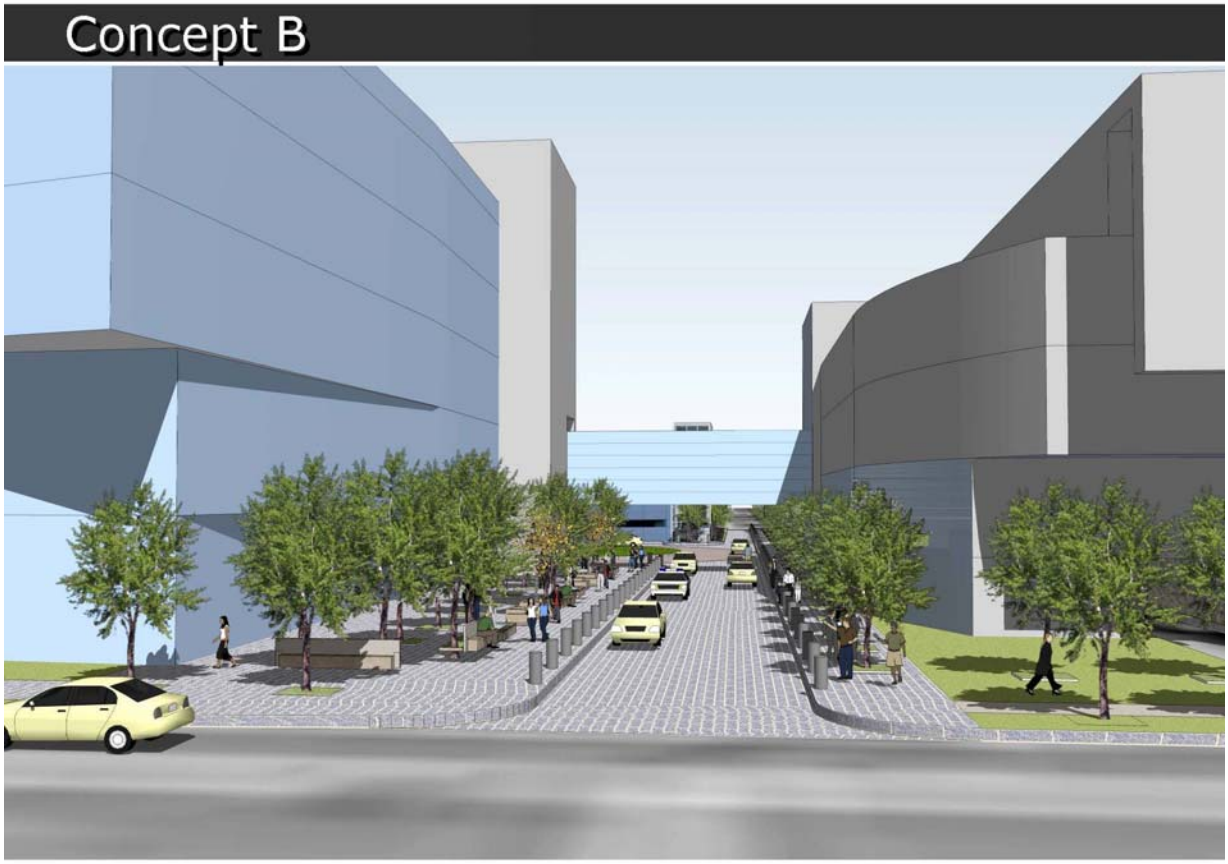
Project Phase 1 (156,140 sf, 440 parking stalls): The program identified for Phase 1 is accommodated on the site by building a significant portion of the Court Building, the Alder School and any detention program replacement area adjacent to the Detention Facility, and a parking for the Phase 1 program. The site area for future growth of the court functions will be reserved as open area until needed in the future. The area for parking would be reserved to accommodate the future parking stalls. The office building across Alder and adjacent to the loading dock would not be constructed as part of Phase 1. It should be noted that the exact configuration of the Phase 1 Court Building will be determined during the next design phase. The "bar" configuration shown in this plan is one of the options for reserving space for future construction to complete the Court Building. Other configuration options may be considered as the program is developed in the next design phase.



View of Site from SW Corner



View of Site from SE Corner

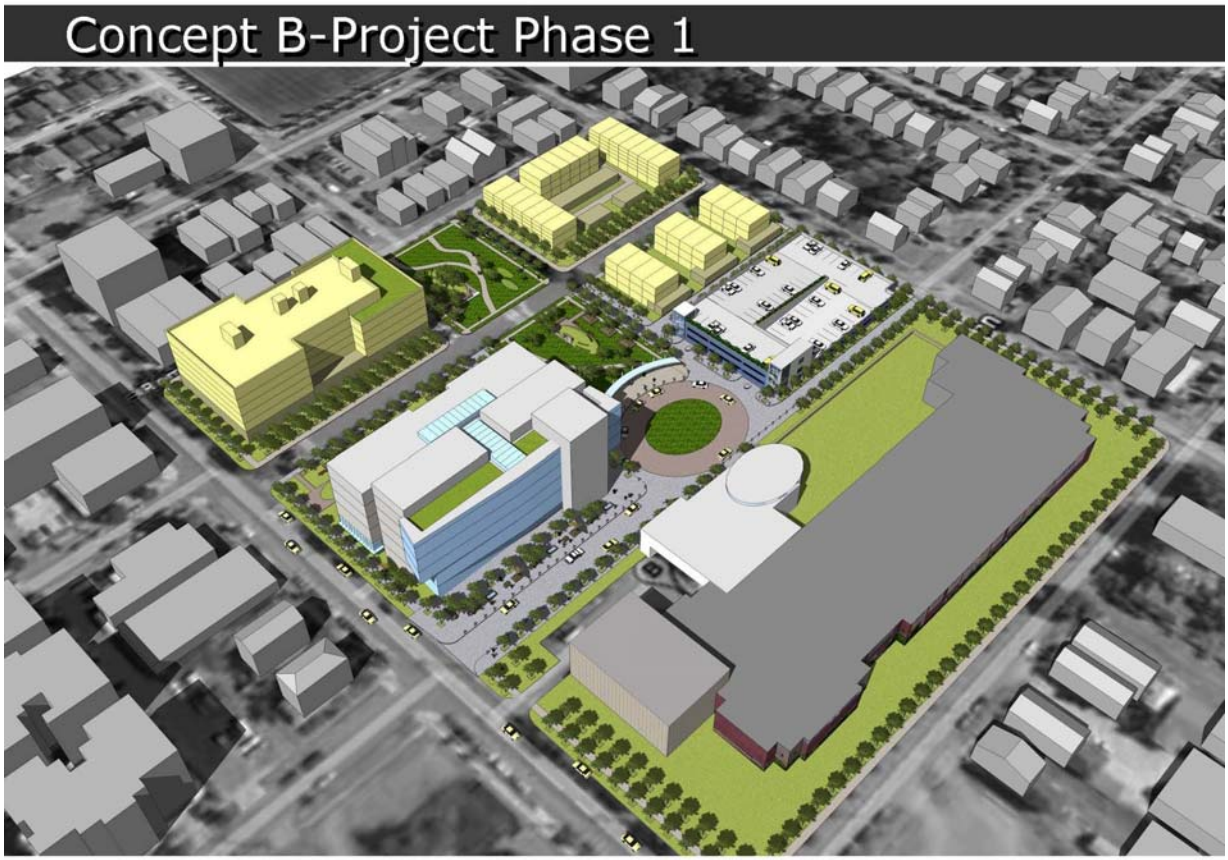


View from 12th Avenue at Alder

Concept B

View of Public Open area

View of Drop-Off at Court Building Entrance



View of Project Phase 1 from SW Corner

Site Concept C

Conceptual Layout

Urban Design Enhancements: Similar to Concept A with the exception that the larger scale massing of the courthouse-detention complex and the absence of an E. Alder street extension is less successful in breaking down the scale of the site and reintegrating the site into the neighborhood fabric.

Vehicular Access, Circulation, and Parking: Similar to Concept A with the exception that E. Terrace is the primary vehicular access into the site for both the Superior Court functions and the private development opportunities. E. Terrace extends to 13th Avenue as a one-way traffic couplet. Another east-West Street is introduced between the courthouse and private development, but anticipates a high volume of two-way traffic in its length. A vehicle drop-off zone located in front of the Courthouse at its north-side. Access to the parking structure is from the new east-West Street. A fire vehicle road wraps the parking structure on the south and west.

Site Pedestrian Access and Circulation: Similar to Concept A.

Courthouse: Similar to Concept A with the major exception that the courthouse is reversed in orientation with the main façade and courts on the north side of the structure with other service functions located on the south and east sides. The primary building façade, public entrance

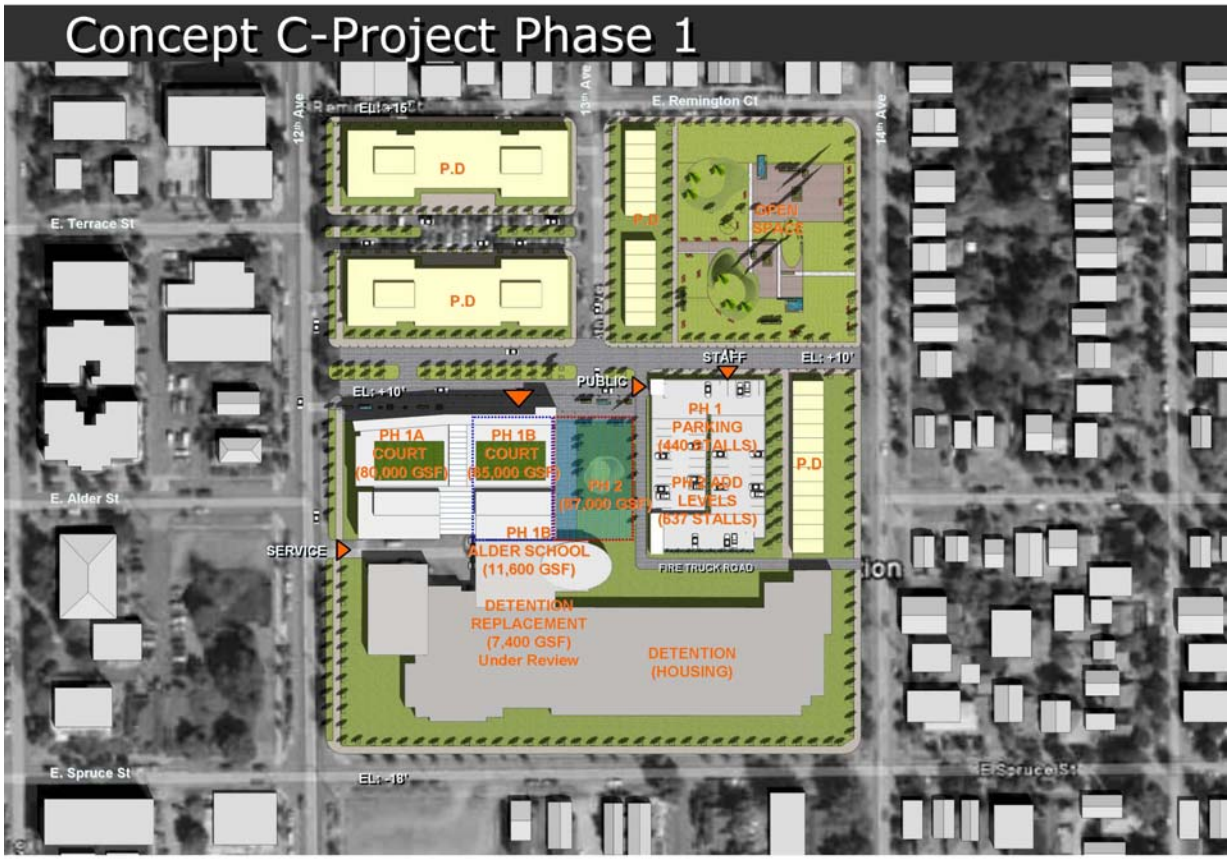
plaza, and visitor drop-off zone are located on the north side of the building which is somewhat less welcoming as it is in shade most of the year.

Youth Detention: Similar to Concept A.

Private Development: Similar to Concept A with the exception that private development faces the main façade and entry plaza of the courthouse and is exposed to the volume of vehicular and pedestrian traffic to and from that facility.

Public Open area: Similar to Concept A.

Site Security and Safety: Similar to Concept A with the exception that the new east-west street precludes the creation of a protected environment for the Superior Court access that is achieved in Concepts A and B.

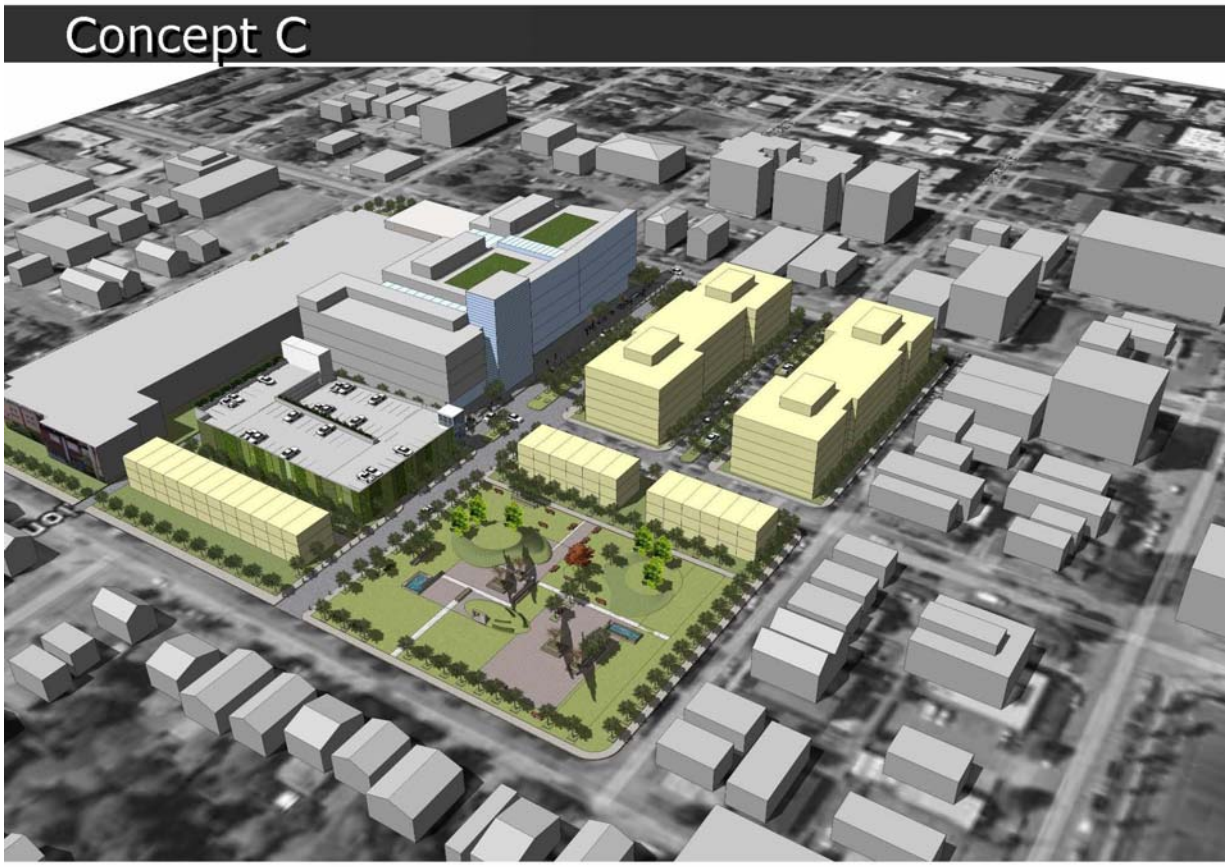


Project Phase 1 (156,140 sf, 440 parking stalls) : The program identified for Phase 1 is accommodated on the site by building a significant portion of the Court Building, the Alder School and any detention program replacement area adjacent to the Detention Facility, and parking for the Phase 1 program. The site area for future growth of the court functions will be reserved as open area until needed in the future. The area for parking would be reserved to accommodate the future parking stalls. The office building extension to the Court Building would not be constructed as part of Phase 1. It should be noted that the exact configuration of the Phase 1 Court Building will be determined during the next design phase. The configuration shown in this plan is one of the options for reserving space for future construction to complete the Court Building. Other configuration options may be considered as the program is developed in the next design phase.

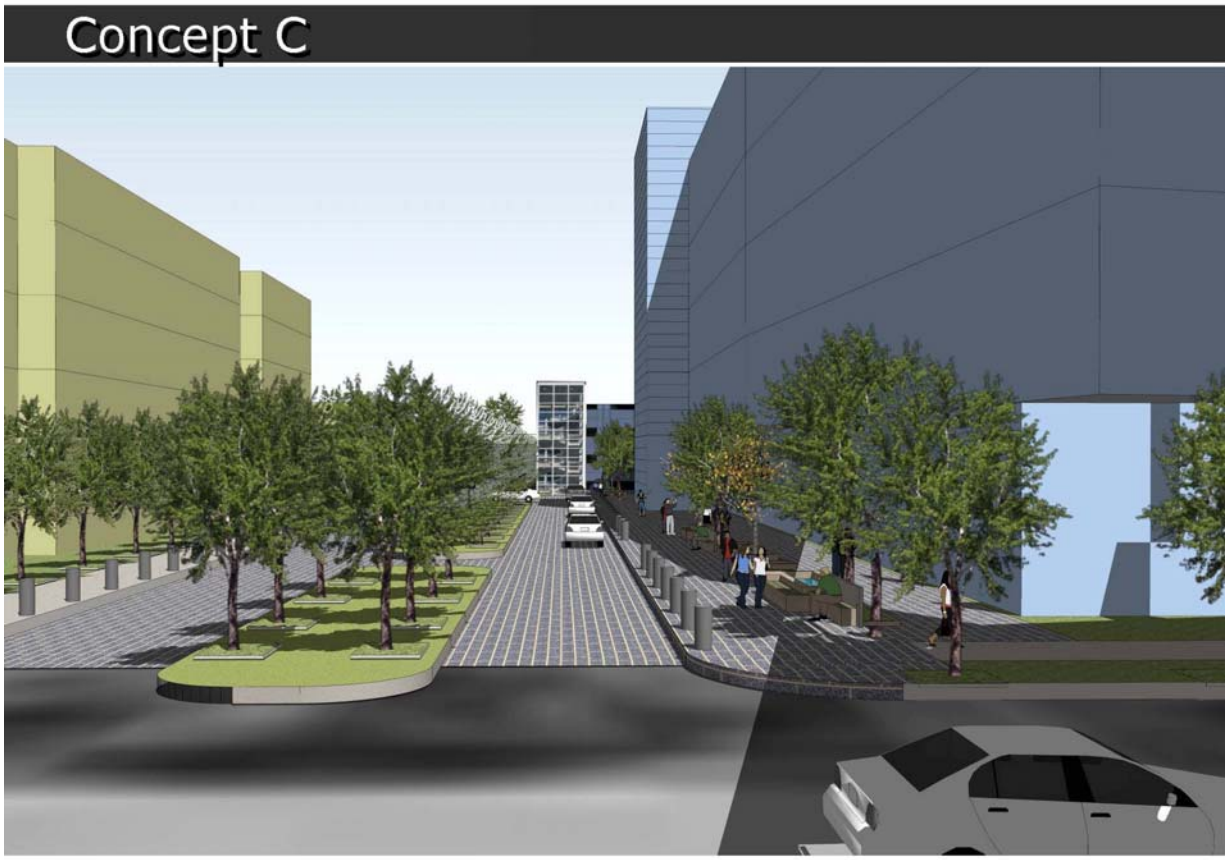
The Concept C site configuration creates a more difficult site construction sequence during Phase 1 construction period. Both Concept A and B allow for the Court Building to be constructed in one construction phase while the Alder Tower remains operational.

View from SW Corner of Site

View from SE Corner of Site



View from NE Corner of Site



View from 12th Avenue at Terrace

View of Project Phase 1 from SW Corner

F. Private Development Opportunities

The project site is located in the 12th Avenue corridor between the relatively dense First Hill neighborhood to the west, which is home to several large institutions and the quiet residential neighborhood of Squire Park to the east. North of the site is the very energetic Pike/Pine Neighborhood. To the south is the emerging "Little Saigon" area of the International District. These adjacent communities are substantially different from each other in scale, use and activity.

Over the next few years as these communities continue to develop, the potential for private development on this site will improve. Members of the private development community were consulted as these site concept alternatives were being developed to confirm viability of the site opportunities shown in the concept alternatives. There was consensus that, along with the potential for commercial development along the 12th Avenue frontage, there are a number of different types of private development that might be considered in the future depending on the market timing and the continued development of the neighborhoods:

Residential
Commercial Office
Student Housing
Institutional (health care, university)
Private Agencies (providing services to court clients)
Other County or Governmental Agencies

Following are some of the neighborhood characteristics that would suggest the type of private development that would likely be successful at this site:

1. 12th Avenue, for most of its recent life has been a street of small businesses, offices and light manufacturing. It is now a neighborhood in flux, with substantial growth in educational institutions (Seattle University, Bailey Gatzert Elementary School, and the Seattle Academy of Arts and Science). There has also been a dramatic growth of mixed-use residential buildings to the north of the Youth Service Center property.

2. Two recent developments reflect the potential that will guide the future of the 12th Avenue Corridor:
    a. The City of Seattle has established the "12th Avenue Urban Center" to provide specific code relief and incentives to redevelopment.
    b. The 12th Avenue Initiative is an effort by local non-profit groups and businesses to create an identity for and seek improvements to the 12th Avenue Corridor.

3. It is the area immediately surrounding the project site that has experienced the least change and minimal redevelopment in recent years. This may very well change as the new facility is developed, the surrounding streetscape and pedestrian environment is improved and the site becomes more integrated into the whole of its neighborhood. In particular, the new facility must recognize the stable residential neighborhood to the east. However, given the very diverse urban context surrounding the site, it is very likely that the redevelopment of the surrounding neighborhood to the north, west and south (including Yesler Terrace) will be spurred by and take its context from what the County develops on its property.

5.0 Project Analysis

A. Project Budget

Summary

Using the consultants, KMD Architects and Roen Associates, preliminary construction cost estimate dated May 19, 2010 and project "soft cost" estimated by FMD staff, the overall project costs are summarized in the two charts shown below. (The lowest cost range used a 3% estimating contingency, the best is a 10% contingency, and the highest used a 20% contingency).

2010 Dollars (millions)			
	Lowest	Best	Highest
Total Project Cost	113.9	120.6	130.2

Escalated to Mid Point of Construction (June 2014) (millions)			
	Lowest	Best	Highest
Total Project Cost	129.0	136.6	147.5

For planning purposes at this stage of the project, based on the level of information obtained during this pre-design, and with conversation with other construction professionals, FMD recommends using the Best Estimate to Mid Point of Construction as the preliminary project budget.

Opportunities to Reduce Cost for Phase 1

The project costs reflected throughout this report are based on the facility program developed in the FMP, as updated in Motion 13106. All cost estimates include structured parking, the Alder School, and the potential areas for removal identified in the chart below. The table below represents potential options that could reduce the overall cost of the project shown above:

Description	2010 Cost (millions)	2014 Cost (millions)	Comments
Remove/reduce Alder School or cost share with Seattle Public Schools	(5.7)	(6.5)	Need to work with Seattle School District to implement
Potential areas for removal	(1.3)	(1.5)	Storage areas, conf rm, etc.
Pursue 15% parking stall reduction through a transportation management plan	(2.6)	(3.0)	
Open area sharing with Seattle Parks & Recreation Department	(1.1)	(1.3)	Need to work with Seattle Parks and Recreation & possible other agencies
Surface Parking in lieu of parking garage for Phase 1[10]	(14.2)	(16.1)	
Total possible Cost Savings	(29.90)	(34.10)	

[10] Neighborhood has indicated that surface parking is unacceptable during the public meetings. This would delay construction of garage to a future phase.

These opportunities to reduce the overall project cost for Phase 1 would require the following policy decisions if the project moves forward to the next design phase:

- Continue the partnership with Seattle Public School District on the Alder School but pursue opportunities to share the cost of the new facility.
- Accept the reductions of the potential areas for removal .
- Recommend that a transportation management plan be developed for the Children and Family Justice Center to reduce the overall parking during the next design phase.
- Recommend that FMD develop a partnership with Seattle Parks & Recreation for the development of the open area portion of this project to help offset the capital cost and possible maintenance of the open area.
- Allow FMD and DAJD to explore the feasibility of utilizing the existing housing capacity in the main detention building to avoid reconstructing "Z-Hall" and a potential opportunity to reduce overall project cost by $2.1-2.3 million.

In addition to the above opportunities, if, through discussions/negotiations with labor unions, there is a possibility that existing practices can be modified to allow the county to charge employees for parking; this could be used as offsetting revenue for the project. Preliminary estimates indicate the combined total of public and employee parking revenue would generate a capitalized amount of approximately $5 million.

With the implementation of the county's new high risk project ordinance, the baseline project budget will be established at the completion of the schematic design phase (30% design) or the pre-development agreement phase (lease-leaseback project delivery method).

Preliminary Project Budget Assumptions

Base year of cost is 2010

Base budget is based on General Contractor/Construction Manager (GC/CM) approach utilizing a development manager. Other project delivery methods are assumed to cost the same or less based on FMD's prior history with these methods.

Schedule is based on the schedule shown in Chapter 5.0(D) and assumes the court remains on site during construction:

- Project schedule described in Chapter 5.0 (E) and has a total duration of 50 months
- Mid-point of construction is estimated at June 2014

Escalation rate for future years:

Construction cost	3.2%
Non-construction	3.2%

Sales Tax rate is 9.5%

Superior Court maintains the court functions on site during construction

- The alternative scenario vacates the Alder tower and wing to leased offices. Based on the delivery method, this alternative for construction phasing may be less expensive assuming a 24 month construction period can be achieved.

Architect and Engineering (A/E) fees are based on the Washington State, General Administration fee schedule and guidelines

Building size: 156,140 gross square feet

Parking: 440 stalls, 148,000 gross square feet

Construction Cost

Consultant Cost Estimates

The following cost for the courthouse, a parking garage, tunnels, and site improvements were provided by Roen Associates on 5/19/2010. (the full detail and quantity takeoffs are shown in Appendix A).

Highest:

GC/CM specified General Conditions:	5.00%
Prime contractor OH+P, Bond:	3.50%
Est. Contingency –P/D level:	*20.0%*
GC/CM bond:	4.00%

Best:

GC/CM specified General Conditions:	5.00%
Prime contractor OH+P, Bond:	3.50%
Est. Contingency –P/D level:	*10.0%*
GC/CM bond:	4.00%

Lowest:

GC/CM specified General Conditions:	5.00%
Prime contractor OH+P, Bond:	3.50%
Est. Contingency –P/D level:	*3.0%*
GC/CM bond:	4.00%

Courthouse

Description	Estimate Cost w/ markups			
	Low	Best	High	% of Total
Substructure	1,297,528	1,385,501	1,511,566	2.3%
Superstructure	7,833,711	8,364,841	9,125,945	13.9%
Exterior Closure	6,061,601	6,472,581	7,061,511	10.8%
Roofing and Skylights	1,065,566	1,137,812	1,241,340	1.9%
Interior Construction	5,676,816	6,061,707	6,613,252	10.1%
Interior Finishes	2,916,445	3,114,181	3,397,536	5.2%
Conveying Systems	407,476	435,103	474,692	0.7%
Plumbing	1,454,246	1,552,845	1,694,136	2.6%

HVAC	6,820,152	7,282,562	7,945,191	12.1%
Fire Protection Systems	590,788	630,844	688,243	1.1%
Electric (Power, lighting, comm.)	9,503,818	10,148,182	11,071,549	16.9%
Equipment	1,690,804	1,805,442	1,969,716	3.0%
Furnishings	90,891	97,053	105,884	0.2%
LEED and Phasing	1,404,428	1,499,649	1,636,100	2.5%
Subtotal Building	46,814,270	49,988,303	54,536,661	83.3%
Site Preparation & Bldg Demolition	3,067,020	3,274,966	3,572,950	5.5%
Site Improvements	3,765,433	4,020,731	4,386,571	6.7%
Site Civil/Mech Utilities	959,611	1,024,674	1,117,907	1.7%
Site Electrical	1,571,693	1,678,254	1,830,956	2.8%
Subtotal Sitework	9,363,757	9,998,625	10,908,384	16.7%
Grand Total Courthouse	**56,178,027**	**59,986,928**	**65,445,045**	**100.0%**

Special Conditions

Description	Estimate Cost w/markups			
	Low	Best	High	% of Total
Existing Detention Bldg electrical/technology re-feed	3,492,651	3,729,455	4,068,792	58.0%
Missing detention program	2,527,988	2,699,387	2,945,000	42.0%
Grand Total Special Conditions	**6,020,639**	**6,428,842**	**7,013,792**	**100.0%**

Parking Garage (under consideration for project Phase 1 vs. Phase 2)

Description	Estimate Cost w/markups			
	Low	Best	High	% of Total
Substructure	1,434,390	1,531,642	1,671,004	11.3%
Superstructure	3,868,107	4,130,367	4,506,183	30.4%
Exterior Closure	2,005,900	2,141,901	2,336,789	15.8%
Roofing and Skylights	810,295	865,234	943,960	6.4%
Interior Construction	430,761	459,966	501,818	3.4%
Interior Finishes	258,457	275,980	301,091	2.0%
Conveying Systems	203,738	217,551	237,346	1.6%
Plumbing	387,684	413,970	451,636	3.0%
HVAC	537,868	574,336	626,594	4.2%
Fire Protection Systems	344,608	367,973	401,454	2.7%
Electric (Power, lighting, comm.)	1,164,217	1,243,152	1,356,264	9.2%
Low Voltage Systems	133,885	142,962	155,970	1.1%
Equipment	43,076	45,997	50,182	0.3%
Furnishings	0	0	0	0.0%

Special Construction	17,463	18,647	20,344	0.1%
Subtotal Garage	11,640,449	12,429,678	13,560,635	91.5%
Site Preparation	1,081,989	1,155,349	1,260,472	8.5%
Grand Total Parking Garage	**12,722,438**	**13,585,027**	**14,821,107**	**100.0%**

Tunnels

Description	Estimate Cost w/markups			
	Low	Best	High	% of Total
Substructure	294,708	314,689	343,322	16.6%
Superstructure	109,249	116,657	127,271	6.1%
Exterior Closure	0	0	0	0.0%
Roofing and Skylights	21,376	22,825	24,902	1.2%
Interior Construction	34,927	37,296	40,689	2.0%
Interior Finishes	18,722	19,991	21,810	1.1%
Conveying Systems	0	0	0	0.0%
Plumbing	10,687	11,412	12,450	0.6%
HVAC	45,125	48,185	52,569	2.5%
Fire Protection Systems	10,687	11,412	12,450	0.6%
Electric (Power, lighting, comm.)	1,047,796	1,118,837	1,220,638	59.0%
Low Voltage Systems	116,421	124,315	135,626	6.6%
Equipment	0	0	0	0.0%
Furnishings	0	0	0	0.0%
Special Construction	0	0	0	0.0%
Subtotal Tunnels	1,709,698	1,825,617	1,991,727	96.2%
Site Preparation	66,776	71,303	77,791	3.8%
Grand Total Tunnels	**1,776,474**	**1,896,920**	**2,069,518**	**100.0%**

Project Soft Cost

Description	Low	Best	High	% of Total
A/E	5,393,481	5,586,411	5,857,459	14.3%
Tax	7,286,259	7,780,272	8,488,186	20.8%
Testing & commission	498,534	532,334	580,771	1.4%
Program Management	4,373,868	4,451,870	4,563,646	11.2%
1% Art	1,127,522	1,193,968	1,289,123	3.2%
Contingency	10,250,204	10,854,252	11,719,304	28.7%
Permits	383,487	409,488	446,747	1.1%
Move/TI's	716,860	716,860	716,860	1.8%
Utilities	1,097,000	1,097,000	1,097,000	2.7%

Telecommunications/Data	1,911,660	1,911,660	1,911,660	4.7%
FFE	3,391,099	3,391,099	3,391,099	8.3%
Pre-Const Services	240,000	240,000	240,000	0.6%
Const Security	282,240	282,240	282,240	0.7%
Printing	230,092	245,693	268,048	0.7%
Grand Total Project Soft cost	**37,182,307**	**38,693,147**	**40,852,144**	**100.0%**

Total Project Cost Summary

Description	Low	Best	High	% of Total
Courthouse	56,178,027	59,986,928	65,445,045	50.3%
Special Conditions	6,020,639	6,428,842	7,013,792	5.4%
Parking Garage	12,722,438	13,585,027	14,821,107	11.4%
Tunnels	1,776,474	1,896,920	2,069,518	1.6%
Project Soft cost	37,182,307	38,693,147	40,852,144	31.4%
Grand Total Project Cost	**113,879,885**	**120,590,864**	**130,201,606**	**100.0%**

Current estimate vs. FMP estimate

Current Best Estimate vs. Scenario 2				
	FMP (2009)	SF/Stalls	**Current(2010)**	SF/Stalls
Courthouse	54,057,600	154,120	49,988,303	156,140
Sitework	7,014,000		9,998,625	
Parking Garage	11,102,400	329	13,585,027	440
Special Conditions			6,428,842	
Tunnels	875,000	1	1,896,920	3
Subtotal	73,049,000		81,897,717	
FFE	3,300,000		Incl in softcost	
Project Softcost	29,429,360		38,693,147	
Subtotal	32,729,360		38,693,147	
Escalated to 2010 (3.2%)	3,384,908		0	
Total	**109,163,268**		**120,590,864**	

The main differences between the two estimates are noted below:

- Overall cost of the courthouse has dropped by approximately $4.0 million dollars due to the recent market conditions.

- Sitework on the project increased by $2.9 million. The main reason for the increase is that more information was available to the current project team than was available to the consultants working on the facilities master plan. This included more in depth knowledge on the storm water detention system, utilities, roads, and other infrastructure requirements.

- Parking garage (optional for project Phase 1) cost increased by $2.5 million due to more detailed survey of the parking demand that increased the size of the garage from 329 stalls to 440. The FMD in the next design phase will work to reduce the overall parking demand, by developing a transportation management plan.

- The project team, through the analysis done in this report, discovered two items that were not known during the development of the facilities master plan. These two items increased the overall cost by $6.4 million and are listed below:

    - Existing detention facility electrical and data backfeed
    - Re-build juvenile detention programs

- Additional tunnels were identified that may be needed that increased the cost by $1.0 million. As indicated above, further analysis will be required to determine if the juvenile detention programs in the existing Alder Tower will need to be re-built. Also, the FMD will work to see if there a other options for reducing the cost of the electrical service backfeed.

- Project softcost and FFE increased by $5.9 million. This increase was mostly due to cost of the following items that were unknown during the development of the facilities master plan:

    - Cost of the date/network/telecommunications $1.9 million
    - Cost of development mgr and GC/CM pre-const services $1.4 million
    - Increase of cost of utility connections and network fiber $1.1 million
    - Increase of sales tax from 9.0% to 9.5% $0.4 million

B. Project Revenue Alternatives

The section provides an overview of the various revenue options available for Phase 1 of the Children and Family Justice Center project. The county has a range of options available including debt supported financing and voter-approved revenue increases.

Revenue Options

Levy Lid Lifts

Levy Lid lifts expand the regular authority of a jurisdiction and are subject to many restrictions, including growth, duration, aggregate amounts and voter approval. The proposition must contain the specific limited purpose for use of the revenues. The authorizing statue also requires that the new revenues not replace or supplant existing funds for the same purpose. Two general categories of lid lifts are available to the county, a standard lid lift or a multi-year lid lift. Both options require voter approval with passage by a simple majority and no minimum voter turnout requirements. The increase in the county's regular levy authority can either be temporary or permanent. A standard lift uses a limit factor of 1%. If one of the stated uses of a standard lift is repayment of bonds, then the levy cannot exceed 9 years.

Excess Levies

Excess levies are authorized by the state constitution and do not impact regular levy limitations. There are two types of levies. The one most pertinent to this project is the multi-year level levy dedicated to repayment of general obligation bonds issued for capital purposes. An excess levy can be submitted to the voters at any election but requires a 60% majority approval. Voter participation must equal or exceed a number equal to 40% of the voters in the previous general election. The county may not submit excess levy propositions to the voters more than twice in a calendar year.

General Obligation Bonds

Limited Tax General Obligation Bonds (LTGO)
An LTGO bond does not require voter approval. These bonds are approved by the county and secured by the full faith, credit and taxing power of the county. As such LTGO bonds are often referred to as councilmanic bonds. The total amount of councilmanic debt outstanding at any given time is limited by the state constitution to a percentage of assessed value in the county. By policy, the county also limits the percentage of general fund revenue that will be used to pay debt service on councilmanic debt to 5%.

Unlimited Tax General Obligation Bond – this bond is similar to the LTGO bond except that the borrowing authority is voter approved rather than King County Council approved.

Interim Borrowing

Interim borrowing options can be used in advance of bond issuance. Capital project financing may use interim financing to coordinate the beginning of the debt repayment schedule. It may

also be used to postpone debt payments to remain within debt repayment limits during the interim borrowing period and in cases where there is some uncertainty as to the final project costs to be financed with long term debt. Interim borrowing can be in the form of a bond anticipation note (BAN) or interfund borrowing among county agencies. A BAN is issued by the county and redeemed from the proceeds of the long-term bond proceeds issued at completion of the project. A BAN is regularly used as an interim funding option for periods of more than one year.

Sales Tax Increase

The county has the ability to raise the sales taxes charged on goods and services within King County on a temporary or permanent basis. In recent years, sales tax increases have been targeted toward specific uses and enacted with approval of the voters.

Lease Supported Interim Construction Financing

63-20 Financing – This construction financing option references the federal authorizing tax policy that allows a county building program to be financed by a 501c3 eligible non-profit organization. The 63-20 project is anchored by a lease agreement whereby the county provides lease payments to the non-profit organization for a period that coincides with the bond repayment schedule. The county ownership of the facility is fully restored at the end of the lease payment period. One of the main benefits of the 63-20 financing option is the reduction of construction costs escalation risk. The county has used this model successfully on the Chinook Building, King Street Center, the Pat Steel Building and the Ninth and Jefferson Building at Harborview[11].

Certificate of Participation (COP)
This construction financing instrument is similar in concept to the 63-20 financing option except that a COP is issued by the county and the county makes payments to the lessor of the facility who reimburses the certificate holder. The lessor typically assigns the lease and lease payment to a trustee who then distributes the lease payments to the certificate holders. The Issaquah District Court was financed using a COP because the intended property was neither owned by the county nor available for sale to the county. The ownership of the facility is transferred to the county at the end of the repayment period when the certificates are retired[12].

Debt Limits

Under the provisions of Article VIII of the State Constitution, counties have a debt limit equal to one and one half percent of county-wide assessed value. This limit applies to bonds approved by the King County Council for general county purposes and metropolitan functions. King County is below the limit specified in the RCW; however, the non-voter approved general purpose debt approved by the King County Council is subject to a more restrictive policy limit.

[11] Note that either 63-20 or COPS require King County payments under lease agreements. Revenue sources to pay these leases would need to accompany either of these two options. For example, a 63-20 or COPS financed project could be coupled with a levy lid lift or a sales tax increase to provide revenues to fund the long-term lease options.
[12] See footnote above.

According to county policy the debt payments associated with general purpose bonds authorized by the county council where debt service is paid by the general fund cannot exceed 5% of adjusted general fund revenue. According to revenue forecasts adopted with the 2010 budget, approximately $40 million of debt capacity may be available. The Children and Family Justice Center is competing with other major projects for use of this debt capacity, as well as other countywide technology and facility improvements.

The financial policy decision regarding the most appropriate financing vehicle will consider the feasibility of each approach as an achievable and effective companion to the project delivery method.

Brief Overview of Washington Property Tax Structure

Local jurisdictions in Washington State have the authority to levy property taxes. The amount of taxes to be levied each year is determined by the local authority and restricted by a variety of state-imposed constitutional and statutory limitations.

Generally, the annual growth of regular property taxes authorized for collection cannot exceed one percent plus a component due to the value of new construction. The one percent limit is called the limit factor. There are methods to exceed this growth limitation, but each requires voter approval. Voters can approve temporary or permanent increases to the authorized levy. An increase can be dedicated to certain purposes, but it does not necessarily need to be restricted for certain purposes in all cases.

In addition to annual growth restrictions, the legislature has also established restrictions on the total millage rate that can be assessed. Counties are generally limited to $1.80 per $1,000 of assessed value (AV). For 2010, the regular millage rate assessed by King County is $1.10. Aggregate rate limits covering multiple jurisdictions are also established and discussed below.

	Standard Lid Lift	Multi-year Lid Lift	Excess Levy
Max Limit Factor	1%	Any	NA
Max duration without bond repayment	Permanent	6 years	1 year (to avoid impairment of contract)
Max duration with bond repayment	9 years	6 years	Term of related bonds
Impacts jurisdiction's regular levy limits	Yes	Yes	No
Upon expiration, increases county's regular levy authority	Must be specified in ballot	Must be specified in ballot	No
Voter approval requirements	Simple majority, no turnout requirements	Simple majority, no turnout requirements	60%; minimum of 40% turnout in most recent previous general election
Election timing	Any	Primary or general	Any; not more than 2 elections with excess levy propositions per year
Revenue use limitations	None – need not be specified, but can be	Limited use must be stated on ballot	Repayment of bonds only

Limits on Property Tax Levies

King County cannot levy more than $1.80 per $1,000 AV of regular property taxes. In 2009, King County's regular property tax millage was $0.95. King County's millage in 2010 is $1.10, leaving $.70 in capacity. This capacity can only be accessed with voter approval.

In addition to the county's $1.80 limit on regular property taxes, the state legislature has also limited the cumulative millage rate for all local districts to $5.90. This limitation excludes the state levy, excess levies, and a few other specific levies and jurisdictions (EMS, Ferry District, and Port). Within King County, there are over 500 taxing districts, i.e. state, counties, cities, fire districts, representing different combinations of local jurisdiction.

In the event that the $5.90 rate limit is reached in a levy district, levy pro-rationing occurs. This is a process established by the legislature in which levies of local jurisdictions are reduced until the $5.90 cap is restored. King County is considered a senior taxing district and would not be impacted by pro-rationing. Special districts, however, could be impacted. As prescribed by state law, parks and recreation districts would be the first jurisdictions impacted, followed by the ferry district. See RCW 84.52.010(2).

In 2010, the maximum cumulative rate subject to the $5.90 cap in King County was $5.78 in levy code 6675, leaving $0.12 of overall capacity. As primary revenue sources remain constricted, local taxing districts may look to raise their regular authorized property tax levies to offset the impact of growing costs thus reducing the remaining capacity.

Excess levies fall outside of the rate limitations discussed here and would not impact the ability of other jurisdictions or King County to use existing levy capacity for other purposes.

Project Phase 1 Property Tax Rates

The property tax rates shown below assume the cost of Phase 1 is based on the escalated cost to the mid-point of construction (2014) for the low, best, and highest cost estimates shown in section 5.0 (A). This cost could be lower if policy decisions noted above are accepted and cost savings are realized. Annual payments, levy rates and costs to typical homeowners are listed below.

Annual Payments by Duration ($ millions)			
	Lowest	Best	Highest
Standard Lid Lift (9-Year)	$15.6	$16.4	$17.8
20-yr Excess Levy	$8.9	$9.4	$10.2
30-yr Excess Levy	$7.1	$7.6	$8.2

Note: All payment options assume two issues. Payment amounts are total of both issues starting in 2014 and assume 3.75%, 4% and 4.25% for the borrowing rates for the 9, 20 and 30-yr options respectively.

Required Levy Rate in 2011			
	Lowest	Best	Highest
Standard Lid Lift (9-year)	$0.046-$0.050	$0.049-$0.053	$0.053-0.057
20-yr Excess Levy	$0.021-$0.025	$0.023-$0.027	$0.025-$0.029
30-yr Excess Levy	$0.015-$0.019	$0.016-$0.020	$0.017-$0.021

Note: Ranges are provided to reflect uncertainty in assessed valuation, interest rates and financing costs.

Annual Cost to $400,000 Home in 2011			
	Lowest	Best	Highest
Standard Lid Lift (9-Year)	$18.40-$20.00	$19.60-$21.20	$21.20-$22.80
20-yr Excess Levy	$8.40-$10.00	$9.20-$10.80	$10.00-$11.60
30-yr Excess Levy	$6.00-$7.60	$6.40-$8.00	$6.80-$8.40

Note: Ranges are provided to reflect uncertainty in assessed valuation, interest rates and financing costs.

C. Project Delivery Alternatives

Summary of RCW Provisions

The rules governing the construction of capital projects by or for the benefit of public agencies in the State of Washington are established by statute. Prior to 1991, public agencies in this state were required to use the traditional Design-Bid-Build public works contracting method. Beginning in 1991, the legislature authorized additional alternative project delivery methods, including General Contractor/Construction Manager (GC/CM) and Design-Build methods, which were expanded to include all public agencies in 2007. The rules for use of these alternative methods are codified in RCW 39.10. In addition, King County utilizes the Municipal Leasing Act (RCW 35.42) in conjunction with tax-exempt financing to construct capital projects, using a Lease-Leaseback contracting method, where the project is to be built on property King County intends to acquire or already owns.

Chapter 39.10 RCW specifies a process that must be followed in order for agencies to use the GC/CM and Design-Build methods. In general, Chapter 39.10 RCW requires that a public body must be approved by the Project Review Committee of the state Capital Projects Advisory Review Board for permission to use the Design-Build or GC/CM methods.

Chapter 39.10 also specifies the types of projects that are eligible for approval for use of the Design-Build and GC/CM methods. For Design-Build, the types of projects listed include projects that cost over $10 million and where the design and construction activities, technologies and schedule are highly specialized, or the project design is repetitive in nature, or for parking garages, pre-engineered or prefabricated buildings, regardless of cost. GC/CM may be used when implementation of the project involves complex scheduling, phasing or coordination; when construction involves an occupied facility which must continue to operate during construction; when the involvement of the general contractor/construction manager during the design phase is critical to the success of the project; when the project involves a complex or technical work environment; or when the project requires specialized work on a building of historical significance.

Limitations associated by financing

There are certain legal constraints that affect the choices available to the county both as to delivery methods and financing that arise if the funds to pay for the project are provided from the proceeds of either an excess levy or a levy lid-lift.

The excess levy statute, RCW 84.52.056, cannot be used to fund payments in a lease-lease back transaction on the tax exempt lease-revenue bonds issued by a nonprofit entity in a 63-20 financing arrangement or Certificates of Participation issued by a bank. That is because under the excess levy statute, and the authority for that statute in Washington Constitution Article VII, Section 2(b), an excess levy may only be used for the purpose of paying principal and interest on a taxing district's general obligation bonds. Neither 63-20 bonds nor Certificates of Participation constitute general obligation bonds and, therefore, the excess levy statute is not available. The only possible way to use a lease-to-own or lease-lease back, as authorized by the Municipal Leasing Act, RCW 35.42, where the funding for the project is an excess levy, is to

require the developer to privately finance the project and upon completion bond proceeds are used to purchase the building.

The Levy Lid Lift statute, RCW 84.55.050, contains a restriction that applies where the purposes of the levy include making redemption payments on bonds with the proceeds of the levy. In that case, the levy is limited to nine (9) years. This restriction probably applies to any of the delivery methods discussed in this submittal, because it is unclear that any could be used without issuing bonds.

The Municipal Leasing Act contains two particular requirements that complicate use of a developer delivery method where the funding for the project derives from a Levy Lid Lift.

First, the cost of construction cannot be an obligation of the county. The county's obligation arises only upon completion of the construction project when the county enters into either a lease-to-own or lease-back. This means that funding for the project must be provided by someone else, which could include private financing, 63-20 bonds or Certificates of Participation.

Second, the Municipal Leasing Act requires that in a lease-leaseback, which applies where the county already owns the underlying property, the county's rental rate cannot exceed prevailing rates for comparable buildings. Lease-leaseback transactions use lease terms of approximately 25 years, which has been sufficient to establish a rental rate that meets this market-based requirement. Reducing the lease to 9 years (the levy term) obviously has a significant effect on the rate necessary to pay debt service and retire the bonds within 9 years. It is doubtful that such an arrangement would meet the market-based requirement in RCW 35.42.

There are approaches that could be used to address this last issue, in the context of a developer delivery method, but they may increase the complexity and cost of the transaction.

One approach would be to structure the transaction like a normal lease-leaseback, with a normal lease term, using tax exempt or private financing, to levy at a rate that would produce excess funds, which could be then be invested and used to pay the rental costs of the lease in the years following expiration of the levy. This option increases financial risk to the county, because its viability depends on the yield of the investments. Lower than anticipated yield means insufficient funds for the out years.

A second approach looks basically the same, except it adds an option to purchase on completion of construction. If used, this approach reduces the county's financial risk. It also may be possible to use some form of tax exempt financing, in addition to private financing, if the option period is not deemed to be too brief to support the issuance of tax exempt debt, consistent with the requirements of the Municipal Leasing Act. This approach can increase interest cost likely offset by a reduction in construction cost and risk.

A third approach moves the purchase option to the expiration of the levy or a similar period, again using investment proceeds to produce sufficient excess funds to pay off the debt remaining when the option is exercised. This approach allows use of tax exempt or private financing. It also increases financial risk to the county, as in the first approach, but for a shorter period of time. This approach can increase interest cost likely offset by a reduction in construction cost and risk.

Project Delivery Methods

Design-Bid-Build

In a design-bid-build project, the public agency follows a sequential process that involves procuring an architect/engineering (A/E) firm to design the project through a competitive request for proposal/qualifications process and once the design specifications are completed by the A/E firm, soliciting competitive bids for the construction of the project, selecting the construction contractor based on the responsive bid with the lowest price.

Advantages:

- Familiar delivery method
- Relatively easy process to manage
- Governed by detailed legislative/local authority
- The separate design phase offers the public agency significant input into the project design,
- There is a fully defined project scope for the design and construction,
- Responsibilities are relatively clear, and
- The competitive bidding process is transparent.

Disadvantages:

- The sequence can be time-consuming, because each step must be completed before the project can move to the next step,
- Contractor selection is primarily based on price, though legislation was enacted in 2007 that established minimum contractor qualifications criteria,
- Project price is not established until completion of bidding,
- Bids may be artificially low, which results in change orders and delay claims,
- Bids may be artificially high because the contractor increases contingencies to minimize its risk as the contractor was not involved in the project's design,
- The two-step process may create an adversarial relationship among the designer, contractor and public agency,
- Virtually all construction risk is borne by the public agency,
- There is little flexibility for change, and
- Since the contractor was not involved in the design, frequent disputes arise between the designers and the contractor, which generally result in increased costs to the public agency, as well as delay.

General Contractor/ Construction Manager (GC/CM)

The GC/CM method attempts to address some of the main disadvantages of Design-Bid-Build by involving the contractor in the design phase and providing an increased measure of flexibility in the procurement of the contractor and the process for establishment of the project's price. Under the GC/CM method, the public agency contracts with an A/E firm for design, as is the case

under the traditional method. During the design process, the owner also retains the services of a GC/CM through a pre-construction services contract. The GC/CM also acts as the general contractor for the project, and the early procurement during the design phase allows for the GC/CM to provide value engineering, scheduling and constructability reviews, and cost estimating services as the project is being designed. The GC/CM is selected based on best value, including qualifications, experience, approach, and fees, but not based on a bid for constructing the project. After the design has sufficiently progressed, the owner negotiates a Maximum Allowable Construction Cost (MACC) and Total Contract Cost (TCC) with the GC/CM. Subcontracts are competitively bid.

State statutes define when public bodies may utilize the GC/CM delivery method for public works projects. According to RCW 39.10.340 projects where one or more of the following criteria are met are suitable for GC/CM:

1. Implementation of the project involves complex scheduling, phasing, or coordination,
2. The project involves construction at an occupied facility which must continue to operate during construction,
3. The involvement of the general contractor/construction manager during the design stage is critical to the success of the project,
4. The project encompasses a complex or technical work environment, or
5. The project requires specialized work on a building that has historic significance.

Advantages:

- Selection of GC/CM is based on qualifications, as well as cost,
- There is a single point of responsibility for construction,
- Early involvement of contractor in design should reduce disputes and aid in efficiency of construction, and
- Completion may be accelerated as there is the possibility of a reduced overall schedule.

Disadvantages:

- The process can be complicated
- The relationships during design are not as clear and have the potential to produce an adversarial dynamic
- There is generally a premium to be paid for the additional pre-construction services of the GC/CM
- The project price is not established until late in the process, and
- The reliability of the project price is difficult to evaluate, in part because the subcontracts must be competitively bid, although 2007 legislation partly addresses this issue by allowing the parties to bid major bid packages before reaching agreement on the MACC. RCW 39.10.370(2).

Design-Build

Under the Design-Build method, the public agency selects a single firm (usually a team led by either a contractor or design firm) both to design and construct the project. In advance of the procurement process, the public agency defines a project scope and determines the project budget. The public agency then negotiates a fixed-price contract. The firm designs the project, based on project requirements identified by the owner.

State statutes define when public bodies may utilize the Design-Build delivery method for public works projects. According to RCW 39.10.300 projects where one or more of the following criteria are met are suitable for Design-Build:

1. For public works projects in which the total project cost is over ten million dollars and where:
2. The design and construction activities, technologies, or schedule to be used are highly specialized and a design-build approach is critical in developing the construction methodology or implementing the proposed technology, or
3. The project design is repetitive in nature and is an incidental part of the installation or construction, or
4. Regular interaction with and feedback from facilities users and operators during design is not critical to an effective facility design.
5. Subject to the process in RCW 39.10.270 or 39.10.280, public bodies may use the design-build procedure for parking garages, regardless of cost.
6. The design-build procedure also may be used for the construction or erection of pre-engineered metal buildings or prefabricated modular buildings, regardless of cost and is not subject to approval by the committee.
7. Except for utility projects, the design-build procedure may not be used to procure operations and maintenance services for a period longer than three years.

Advantages:

- Project requirements are established by the public agency,
- There is early certainty about cost and schedule,
- Integration of design and construction reduces construction risk,
- Design and construction to a specified budget has the potential to reduce overall costs, and
- Completion may be accelerated, because construction can commence before design is complete.

Disadvantages:

- Agency has little control over design,
- Development of project specifications in advance of procurement requires a significant expenditure of time and money by the public agency, before it knows if it actually can build the project for the available budget,

- The required expenditure of time and resources by the proposers may limit competition and potentially increase overall project cost, and
- Statutory requirements and restrictions may limit the availability of this method for projects that are neither repetitive, like parking garages nor highly specialized with a limited number of contractors experienced in the particular type of project, like wastewater treatment facilities.

Lease-Based Delivery Methods

Pure lease:
The most straightforward structure would be a traditional lease, in which the county agrees to pay a lease payment amount (fixed or adjustable) in return for which the developer delivers the building while continuing to own it. There is no expectation of ultimate county ownership of the building.

Lease/leaseback:
In a lease-leaseback transaction, pursuant to the Municipal Leasing Act, R.C.W. Chapter 35.42, a public agency may lease a site it owns to a private developer to build a building to the public agency's specifications, which the developer will lease back to the public agency upon completion of the construction. Chapter 35.42 requires the public agency to select the developer through a competitive process, upon terms most favorable to the public agency. Such a project is not a "public work" as defined in RCW 39.04.010(4), but prevailing wages must be paid during construction of the building, no rental payments may be made by the public tenant until construction is complete, and no part of the cost of construction of the building shall ever become an obligation of the lessee. The rent payments by the public agency must "not exceed prevailing rates for comparable space."

Lease to own:
In a "lease-to-own" transaction, a developer may contract with a public agency to deliver a project, built to the public agency's specifications, at a fixed cost on property owned or controlled by the developer. The public agency may negotiate the terms of such an acquisition without a traditional public bidding process. The Municipal Leasing Act requires the public agency to select a developer through a competitive process, "pursuant to a call for bids upon terms most favorable to the county, as opposed to the traditional public bidding process that awards a contract to the lowest responsible bidder. This gives the public agency some flexibility in the RFP process and in negotiating terms of the lease. As in a lease-leaseback transaction, prevailing wages must be paid during construction of the building. No rental payments may be made by the public tenant until construction is complete, and no part of the cost of construction of the building shall ever become an obligation of the lessee.

In practice, King County combines one or the other of the lease-based delivery methods with tax-exempt financing, using Certificates of Participation or, more frequently, through the issuance of private, tax-exempt debt by a non-profit corporation, which acts as the lessor and owner and executes a development agreement with the developer for a fixed price. At the end of the lease, title to the building or the building and the land, as appropriate, is conveyed, without restriction, to the county.

Advantages:

- Procurement of developer and non-profit simplified and not tied to project cost, which is negotiated after all necessary parties are on-board,
- Construction is not subject to public works restrictions, except prevailing wages,
- Structure encourages construction cost savings,
- Construction risk is transferred to the developer,
- Completion can be expedited, because construction can commence before design is complete, and
- Necessary resources for project development are provided by private partners, reducing the need for the public agency to allocate resources to the project, but retaining review function.

Disadvantages:

- Depending on the financing method to some extent, costs associated with the tax-exempt financing in leased-based delivery methods are higher, because of bond issuance costs, fees and somewhat higher interest rates, than where the county directly issues debt to pay for the project,
- Like design-build, the county has little control over design and construction, and
- The process lacks the transparency associated with traditional public works delivery methods.

Bridging:

Bridging combines the traditional design process with design/build or leased based delivery. The Owner selects an architect who develops design and performance specifications to a level that establishes the program and performance requirements of the owner. The level of information provided depends upon the complexity of the project and which elements of the building are critical to the owner. The bridging document will be an integral part of the negotiations with either a design build team or a developer under the lease-leaseback methods. The owner then selects a design/build team or developer to complete design and construction of the project. This process is best suited to larger, new or renovation projects that are schedule sensitive and difficult to define at the front end.

Advantages:

- A single point of accountability for final design and construction
- Potential for faster delivery
- The design build team or developer gains a better understanding of the county's requirements
- The owner gains a better understanding of the design concept before awarding the final design/build contract
- Guaranteed Maximum Price eliminates owner risk for cost overruns

Disadvantages

- Include no check and balance between designer and builder
- Design/build team only meets minimum criteria standards for quality
- Potential for conflict between architect and design/build team
- Not suitable for small projects or those subject to change during development

Project Delivery Method Selection Process

The staff evaluation is not a mechanical process, but an application of professional judgment to the particular circumstances. This process yields a unique evaluation grid for each project.

The expected tenants for the Alder facility represent a rather broad range of criminal justice functions that range from Superior Court judicial officers and, court staff activities, Public Defender activities, Prosecuting Attorney activities, and other family support services providing a broad range of services to youth and their families. The courthouse will need to meet security standards for not only access to and exiting from the facility, but also interior risk management of the various players in juvenile court and court support activities. The building needs to be designed for a high volume of public and detention managed visitors and will have a substantial amount of specialty tenant improvements to support the various occupants and to provide appropriate security.

To select the best project delivery method for a particular project, FMD staff first evaluate the importance of delivery method attributes to the needs of the particular project. We rated twenty-nine separate attributes with regard to the degree of importance of each to success on the Alder project. These attributes fall into seven general categories:

Design Control:
- quality
- design flexibility
- ability to manage competing interests
- owner involvement in design, and
- neighborhood input.

Risk:
- single point accountability
- legal constraints
- project size and complexity, and
- specialty/special needs.

Cost Management:
- project cost
- savings incentives
- mitigates inflation risk
- allows to capture deflation opportunities
- early involvement of contractor, and
- early involvement of subcontractors.

Post-Construction Opportunities/Support:
- ensuring functionality
- building operating considerations
- post construction support, and
- LEEDS certifications.

Owner Experience:

past successes
ease of implementation, and owner expertise.

Construction Management:
construction risk-overruns
occupied building renovations
construction accountability, and
historic buildings.

Schedule Management:
schedule fast track delivery, and
schedule control.

Having assessed and graded the attributes needed for success in the Alder project, staff then scored eight different project delivery alternatives on each of the twenty-nine attributes. This evaluation yielded a score for each delivery method on each of the attributes; these, when compiled, yielded an overall assessment of the desirability of that delivery method for the Alder project. The full evaluation methodology and scoring are shown in Appendix A.

The following chart compares eight possible project delivery alternatives for the Alder project.

	Overall Rank	8	5	7	6	3	1	4	1
Importance	Attribute Categories	D/B/B	GC/CM	D-B	D-B w/Bridging	L/L 63-20	L/L 63-20 w/Bridging	L/L COP	L/L COP w/Bridging
		Score	Score						
7	Schedule Management	4	8.5	10.25	8.75	12	11.75	12	11.75
6	Construction Management	5	11.5	14.25	14.25	15	15	15	15
3	Cost Management	9	29	32.5	31.25	34.75	33.25	34.75	33.25
1	Design Control	40.5	49.5	38.5	43.75	39	44.25	39	44.25
5	Owner Experience	17.5	14.5	9.5	9.5	21	17	19.5	17
2	Risk	22	32	34	35.5	42	41.5	42	41.5
3	Post Construction Operations/Support	24	27	23	25	29	31	29	31
	Score	122	172	162	168	192.75	193.75	191.25	193.75
	Legend								
	Design/Bid/Build	D/B/B							
	General Contractor/Construction Manager at risk	GC/CM							
	Design/Build	D-B							
	Lease/Leaseback	L/L							
	63-20 Financing	L/L 63-20							
	Certificate of Participation financing	L/L COP							

Evaluation summary:

This evaluation indicates that four of the potential project delivery methods, Lease/Leaseback methods are better suited to the particular needs of this project than are the other options. The Lease/Leaseback delivery method with bridging rated slightly higher on this aggregate scale. However, the final selection of the financing mechanism for the lease-leaseback delivery method will need to be coordinated with legal requirements of the overall project financing discussed in section 5.0 (B).

Preliminary Project Delivery Method Recommendation

Based on the above review of the various delivery methods and the evaluation summary above, FMD's recommendation for the overall project delivery method is to use a lease-leaseback method with bridging documents that define the project's overall spatial needs and performance requirements for the building. With this recommendation, FMD anticipates the following steps will be needed for this process if the project moves forward:

1. Issue a Request for Proposal to select a developer
2. Enter into a Pre-Development Agreement with the developer
    a. County issues spatial needs and performance requirements to the developer (bridging documents)
3. Through the pre-development agreement, the developer and county agree on the following:
    a. Terms of the lease
    b. Guaranteed cost of the project
    c. Design
    d. Financing mechanism
4. Developer constructs the facility and upon completion the county begins lease payments. Terms of the lease would include the option to buy out the lease at a certain point in time that is compatible with the financing method (e.g., within the applicable redemption period of any potential debt instrument).

D. Project Schedule

Approach

To be conservative (i.e. to provide the longest project schedule), the project schedule included in this report was developed assuming a GC/CM delivery method and assuming construction phasing that would allow continued operation of Superior Court functions on the site during construction[13]. The schedule also assumes construction of the optional project components listed in Section 5.0 (A). Final decisions on whether these components will be included in the final project proposal will be contingent on additional research and discussions regarding these project cost reduction options.

Design/Permitting

Master Use Permit (MUP): The schedule shows a one year duration for the MUP process which is the duration needed for the required contract rezone. The schedule assumes that the design process will proceed in anticipation of successful completion of the MUP process. While this introduces some design risk, overlapping the design process with the MUP process reduces the overall project schedule and thereby reduces project costs and construction escalation costs.

Schematic Design: The schedule shows two phase for the Schematic Design duration. First, a preliminary schematic design is established for the master plan full site build-out of the program. This level of information is required on the full site build-out in order to achieve the contract rezone and to work though the MUP process. This will also establish the site boundaries to set aside for future phases of the Superior Court program and for private development opportunities. The second portion of the schematic design will focus specifically on the Project Phase 1 development of the court building, parking, Alder School, and detention replacement programs.

Design Development/Construction Documents: Because of the scheduled early construction package for the parking, there are two different durations shown during the Design Development and Construction Document: a shorter duration for the parking and a longer duration for the court and detention functions. It is anticipated that the project team will be using Building Information Modeling (BIM) for this project. Durations for Design Development and Construction Documents are shown that reflect the BIM delivery approach.

Permitting: In order to achieve the construction approach indicated in the schedule, it is anticipated that there will be three separate building permit submittals: one for demolition of Lower Alder, one for the parking garage (if included in project phase 1), and one for the court/detention building functions (which will include the demolition permit for Alder tower).

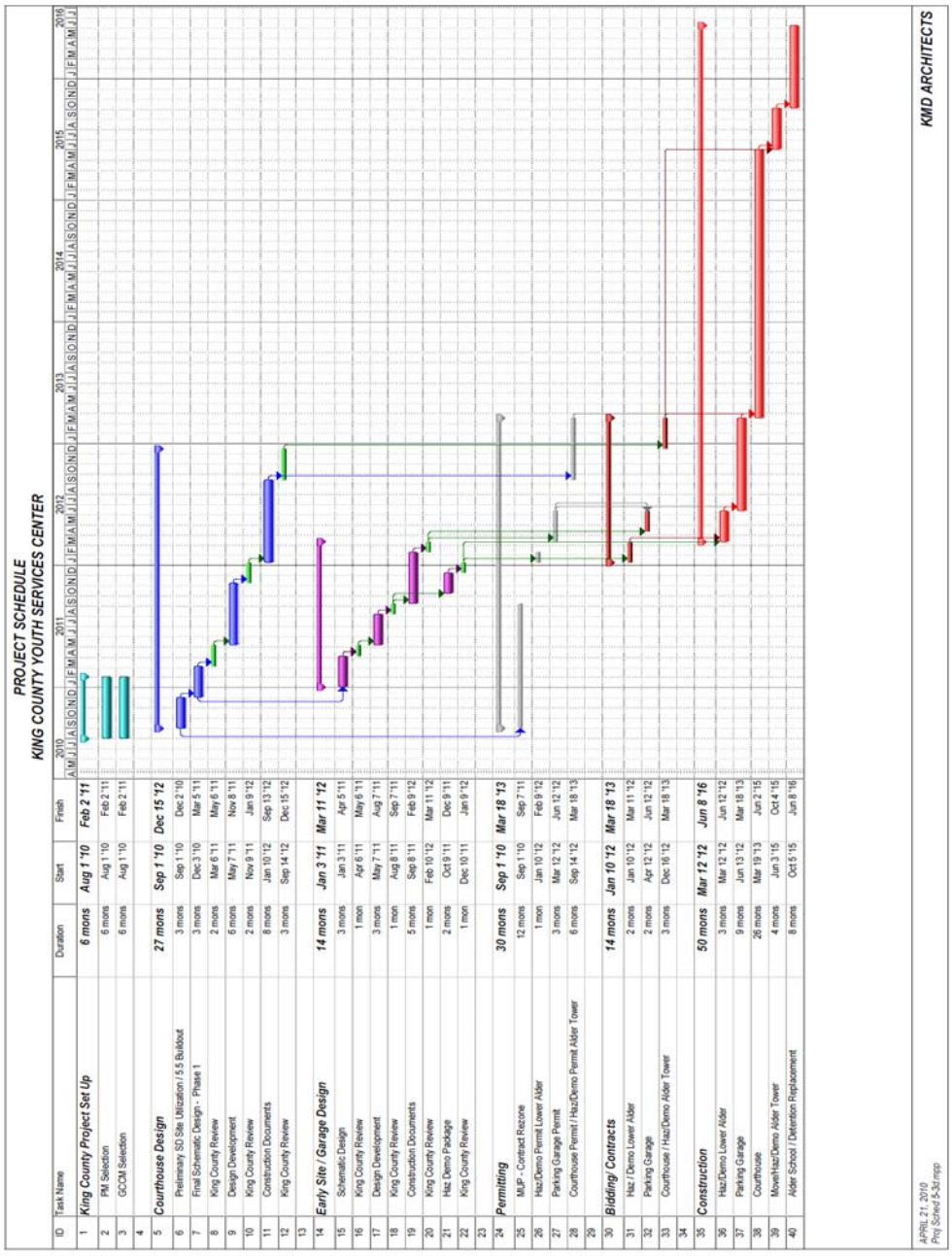
Construction

The schedule shows a fifty month construction period, overlapping demolition of Lower Alder and the early construction of the parking garage (if included in Project Phase 1) with the final

[13] These are not recommended, but are included to provide policy makers with the "worst known case" project schedule.

stages of design documentation for the court/detention building functions. The parking garage , if included in project phase 1, would have a nine month duration. The court building construction period follows completion of the parking garage and is anticipated to be a twenty-six month duration. Move-in to the new building and demolition of Alder tower follows construction of the court building and is anticipated to be a four month duration. Finally, the Alder School and detention program replacement construction follows the demolition of Alder tower and is anticipated to be an eight month duration.

Permit Requirements and Timelines



E. Construction Sequencing

Purpose:

This chapter provides a general discussion of the potential sequence of construction for Project Phase 1 with the goal of capturing cost and operational impacts to the existing occupants.

Summary:

Two basic approaches were considered for the construction of Project Phase 1:

- Alternative 1: a construction sequence that maintains county operations on site during construction, and
- Alternative 2: a construction sequence that temporarily locates most of the county operations off of the site during construction.

Maintaining court operations on site has longer construction duration and therefore creates greater construction costs and lengthens the overall project schedule by approximately 9 months. The relocation of court operations off site reduces the overall construction cost and schedule, but requires additional operational cost to relocate the existing courts to another location during construction.

The FMD identified similar costs that were common for both approaches. Costs associated solely for each approach were also identified and were used in a life cycle cost analysis of these two approaches. The results of this analysis are summarized in the chart below[14]:

Costs	Alt 1 On-site court operations	Alt 2 Off-site court operations
Initial Cost ($2010)		
Additional construction cost due to longer construction schedule	3,100,000	
Tenant Improvements		548,000
Cost of financing longer construction period	3,273,000	0
Other cost(vans, move, phones. equip, fees, staff)		466,225
Operating Cost (Present Worth) 2.5 yrs		
Lease		2,239,527
Juv Offender transfers		2,552,727
JDO overtime		224,706
Security at Lease bldg		390,422
Total Cost (Present Worth)	6,373,000	6,421,607
Difference (above or below Alternative 1)		48,507

[14] The full details on this analysis are shown in Volume 3, Technical Appendix. This initial analysis assumed an inflation rate of 3.2%, a real discount rate of 5.0%, 2.5 year construction period for the single phase approach, and an additional 9 months of financing for the multi-phase approach.

Based on this initial review, it appears that the cost difference between the two approaches is negligible. The schedule difference is significant, allowing the building to open at least 9 months sooner if court operations are moved offsite. Additionally, there would be significant operational hurdles associated with operating juvenile courts in a construction zone. Therefore, it is recommended that a more detailed analysis occur in the next design phase to confirm the results of this initial analysis.

Methodology:

Identification of potential construction phasing for Project Phase 1 was accomplished by several meetings attended by the prime Consultant KMD, together with the major sub consultant disciplines: mechanical, electrical, civil, and structural. Also participating were King County Facilities Management Division representatives.

The discussions were facilitated by graphically showing the proposed courthouse alternates and the existing buildings on transparent overlays, making relationships between new structures and existing structures and parking apparent.

Additionally potential area(s) for the contractor's staging of material and equipment during construction ("lay down space"), as well as site access were made obvious by viewing the components through the overlays.

Knowledge of the existing Superior Court and Department of Adult and Juvenile Detention operations within the existing buildings allowed constraints on construction to be identified.

Components of the construction phasing include: existing buildings and operations that must remain functional during construction, parking for existing King County employees and the public, construction 'laydown space' for the contractor to stage equipment and material, areas of construction, site access for both contractor and King County operations.

Alternatives Discussed:

For all 3 of the site alternatives two basic approaches can be applied to the construction:

- Portions of the site are turned over to the contractor for construction purposes while other parts of the site are retained for the Owner's use/operations. As the contractor completes a portion of construction, the completed element is given over to the owner for their use, and another portion of the site is given to the contractor for the next construction phase.
-
- The site is vacated by the Owner (with the exception of the detention facility) and turned over to the contractor for construction. The Owner reoccupies the site when all the components are completed. In site alternates A and B the components would be the new parking, the new courts building and the annex building.

There could be nuances to the above alternates that may become apparent as the project progresses beyond the pre design stage. Also, the selected project delivery method may reveal variations that would be beneficial to the county.

Alternative 1: Maintain court operations on-site during construction

This alternative assumes the county will maintain most operations on site during the construction period. The exceptions to this are the functions in Lower Alder which include the school (Alder Academy staffed by the Seattle School District), DAJD Alternatives to Secured Detention, Superior Court's Low Level Supervision, Sexual Offender Unit, and Records.

Lower Alder currently occupies the area where the proposed new parking will be located. Making the new parking garage, if constructed in Project Phase 1, the first structure to be built provides parking for court and detention facility users with what appears to be the maximum separation from contractor operations for the subsequent phases. This separation provides safety for the public and allows the most latitude for the contractor's operations. For the sake of providing conservative scheduling scenarios, optional program components, such as the parking garage and Alder school are included.

The potential sequence is:

One:

- Relocate Lower Alder occupants to leased or other facilities offsite
- Remove hazmat materials and demolish lower alder
- Construct new parking garage, if included in Project Phase 1
- Relocate site utilities as necessary (including the combined sewer line)

Two:

- Relocate employee and public parking to new garage, if constructed in Project Phase 1
- Construct new courts building
- Provide interim locations for displaced/interrupted services

Three:

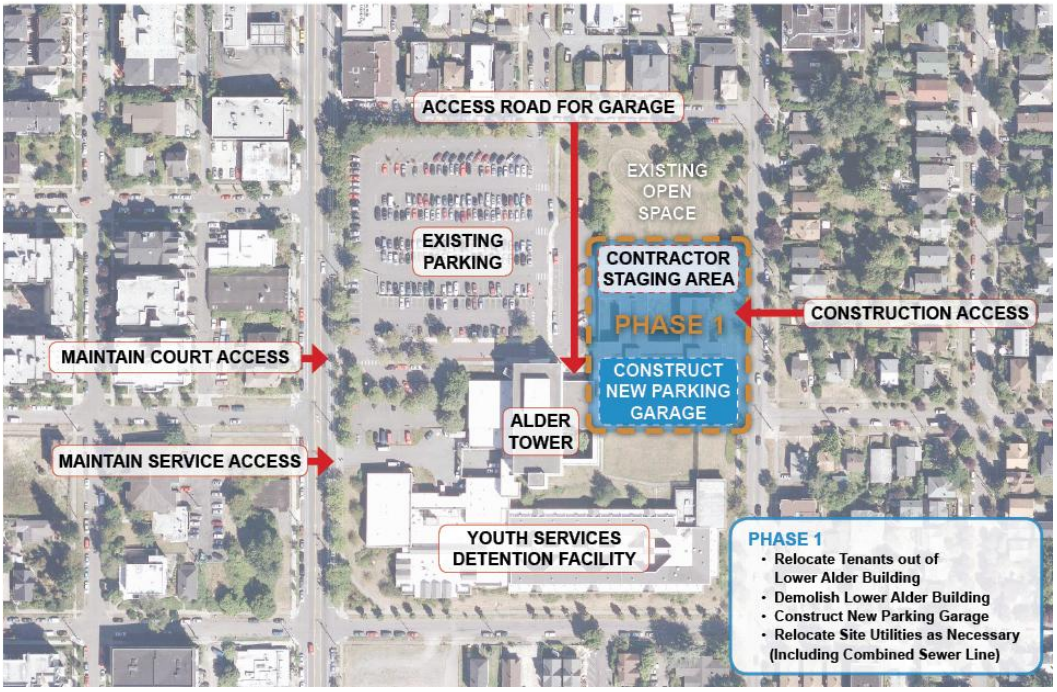
- Occupy new courts building
- Construct protection measures for DAJD operations
- Construct tunnel connections, as necessary
- Relocate detention functions out of Alder tower to temporary locations (central control and in-custody visitation)
- Demolish Alder tower

Four:

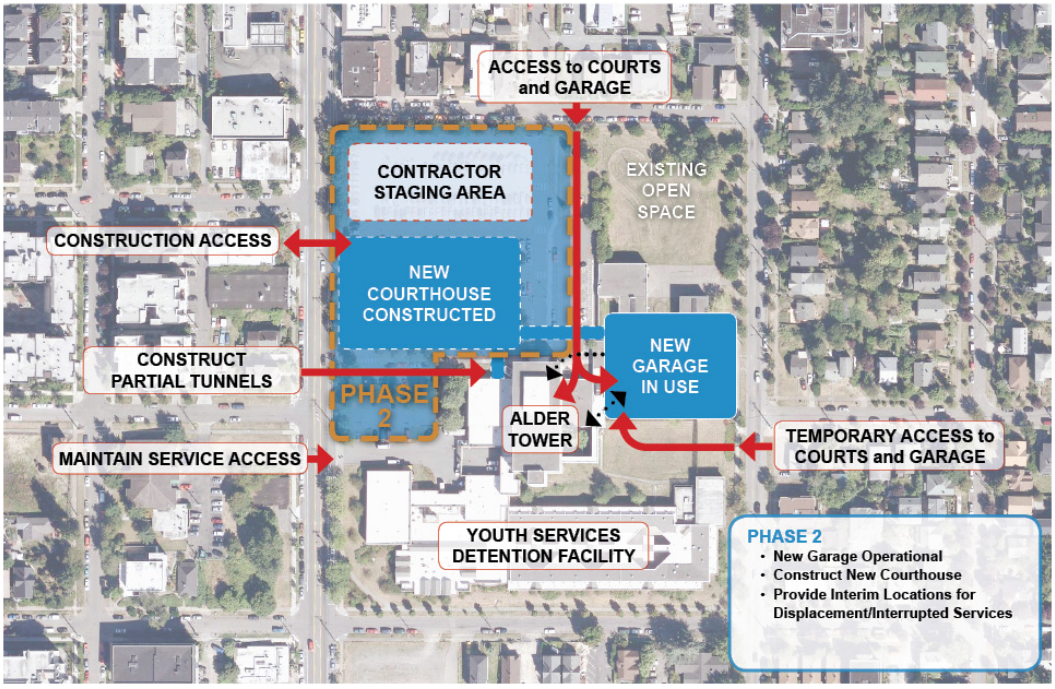
- Construct detention functions and entry road
- Provide interim service/police access during construction

The graphics on the following pages show the above sequence for site concept B and would be similar for site concepts A and C.

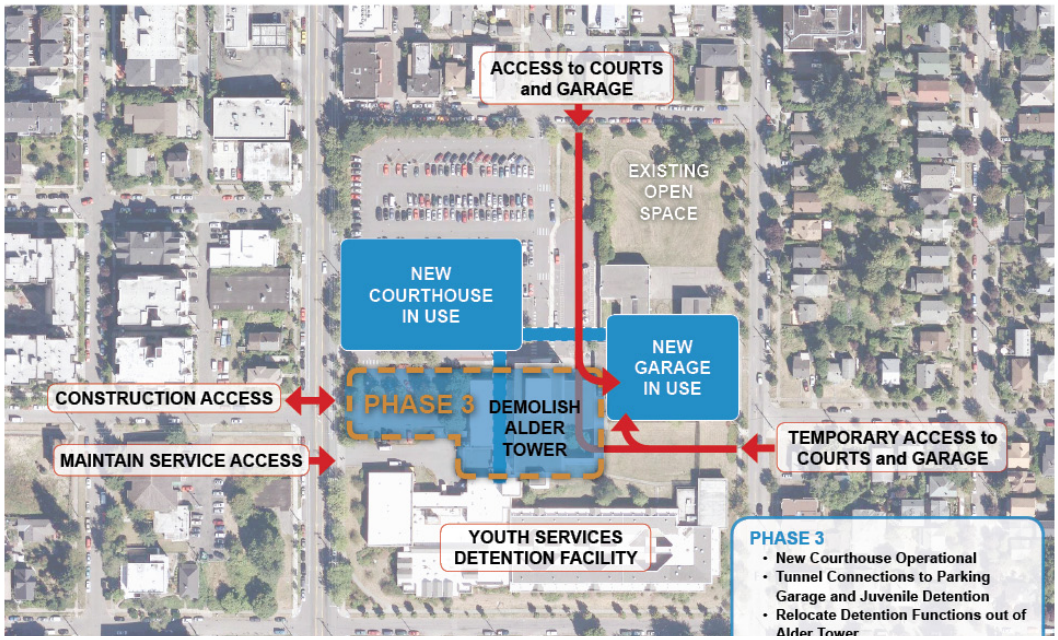
Project Construction Phasing | Phase 1



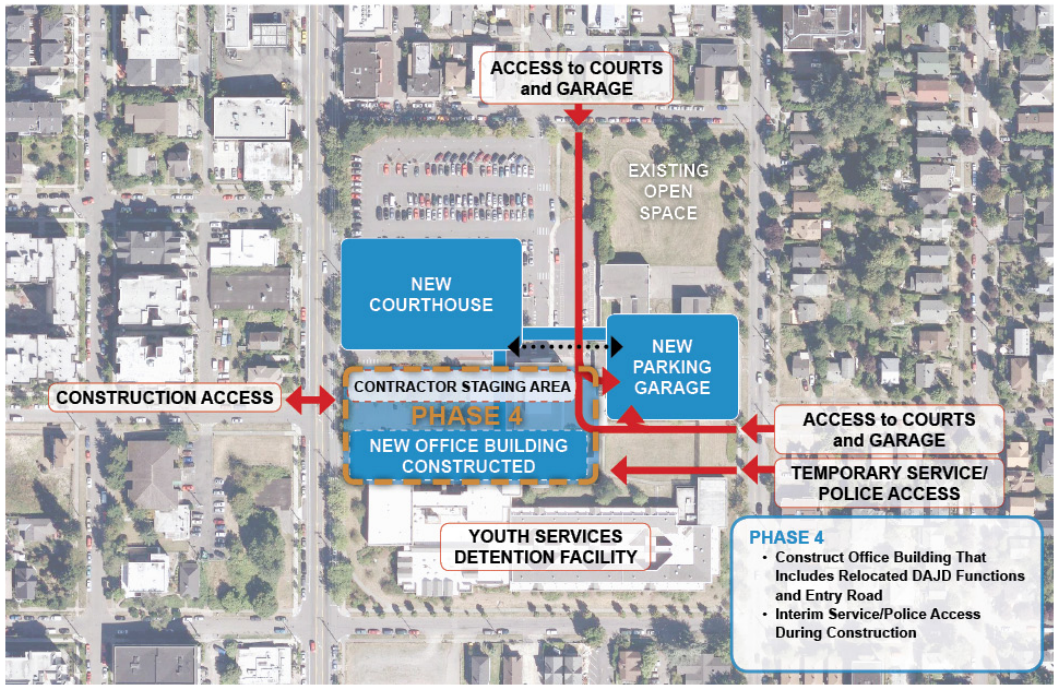
Project Construction Phasing | Phase 2



Project Construction Phasing | Phase 3



Project Construction Phasing | Phase 4



The advantages of maintaining court operations on-site are:

- Minimal move/lease/tenant improvement costs associated with relocating staff and operations off of the site.
- The transportation of in custody juveniles remains similar to current practice, as opposed to transporting juveniles to a offsite at an added cost.
-

Disadvantages of maintaining court operations on-site are:

- Longer construction duration: Constraints on the Contractor's operations will force a sequence that will lengthen the overall construction time and costs. The increase in costs will also include constructing protective measures or sequences to protect the employees and public from construction operations
- Potential construction noise impacts to court operations
- Construction traffic impacts to court users
- Safety concerns related to the public and county employees that will be use the courts facilities during construction. As noted above, the financing costs associated with the multiple phased construction is estimated to be $3.2 million more than the single phase option
-

Alternative 2: Relocate court operations off-site during construction

This alternative assumes the existing court operations and ancillary staff and other departments will be moved offsite for the duration of construction. The Detention facility would remain on site and operational.

The potential sequence is as follows:

1. Programming and build out of tenant improvements, as required
2. Relocate all functions out of lower Alder and tower to leased or existing county facilities
3. Construct protection measures to separate and protect DAJD operations from the construction area
4. Demolish lower Alder and tower
5. Construction of new parking garage (if included in Project Phase 1), new courts building, and new detention connection
6. Relocate courts and associated departments to new facility.

Advantages of relocating court operations off-site are:

- This scenario gives the contractor the most flexibility in scheduling the construction work.
- Demolition of the entire Alder tower and wing could occur simultaneously, followed by a single construction phase. This would decrease the overall project schedule by approximately 9 months.
- Eliminates construction noise impacts to court operations,
- Eliminates construction traffic impacts to court users,
- Eliminates safety issues related to an occupied site during construction

Disadvantages of relocating court operations off-site are:

- Additional move, tenant improvement and lease costs associated with relocating the courts and affiliated departments.
- Increased operational costs for transporting in-custody juveniles between the courts and the detention facility.

- Disruptions to services created by the move to temporary facilities.
- Inefficiencies to court and related departments interactions due to the temporary relocation of functions and services currently at YSC into multiple separate buildings. The programming, tenant improvement, and relocation of this amount of square footage is a project in itself, and would include the following major tasks:
  - Procurement of leased (or other county controlled) space
  - Design and build out of tenant improvements for court operations
  - Relocate courts and staff to other facilities, (vacate lower Alder and tower).
  - Relocation of DAJD operations within the demolition construction zone to an onsite area outside of the construction zone.
  - Demolition of lower Alder and tower
  - Construction of new parking garage (if included in Project Phase1), new courts building, and new annex building
  - Relocate courts and associated departments to new facility.

Relocation off-site Lease/Tenant Improvement Scenarios

Lease / Tenant Improvement Costs Scenario 1

This scenario is comprised of a series of moves to take advantage of the recently completed 10 courtrooms built at the Park Place building in anticipation of flooding in the Kent Valley.

The Park Place facility was improved to accommodate family law courtrooms, juvenile dependencies, and offices from the MRJC, however it may also be able to accommodate the Unified Family Courts located in the King County Courthouse. This assumes the flooding of the Kent Valley will become a non issue in 2012. According to the current terms of the lease for Park Place, criminal proceedings are prohibited in that facility.

Moving the four Unified Family Court (UFC) courtrooms from the KCCH to Park Place creates sufficient room to move four offender courts from YSC to the KCCH. The two dependency courts and one Becca court at YSC would be relocated to Park Place with the UFC from the KCCH. The table below outlines these moves:

Lease / Tenant Improvement Scenario 1		
Function	**From**	**To**
4 Unified Family Cts.	KCCH	Park Place
2 Dependency Ctrms & 1 Becca Ctrm	YSC	Park Place
Depts. and staff related to Dependency & Becca Ctrms	YSC	Park Place
4 Offender	YSC	KCCH
Depts. and staff associated w/Offender Ctrms.	YSC	Admin Building and Park Place

The advantages of this approach are:

- The courtroom tenant improvement cost in leased space have already been paid for.
- The lease costs are at a favorable rate.
- The King County Courthouse is already a secured building capable of accommodating in-custody procedures and other high profile cases.

The disadvantages are:

- The county is currently paying rental costs on vacant space, and would have to continue to do so until construction begins in approximately 2 years. This cost could be mitigated by the interim use of the site by other King County functions.
- Juvenile in-custody holding would have to be accommodated by operational and built solutions to maintain the "sight and sound" separation of in-custody juveniles and adults. This operational change may lengthen the time it takes to transfer both adult and juvenile in-custody individuals from the holding areas to the courtrooms.
- Moving of UFC will create a temporary disruption to their operations.
- Division of juvenile offender staff – A significant number of staff associated with the juvenile offender courts will be located at Park Place due to lack of sufficient space in KCCH. This is likely to inconvenience court clients who need to make contact with the staff regarding their case. In addition, requiring staff to travel from Park Place to KCCH to support the business of the juvenile offender courts may create delays in the handling of offender cases.
- Increased volume at KCCH – Introducing the juvenile offender courts while removing the unified family law courts will increase the number of people entering KCCH each day. This may result in extended wait times to enter the courthouse. The number of entry security staff may need to be increased. Security staff may also need to be increased to monitor the waiting room space associated with the juvenile offender courts.
- Division of family law – Moving the unified family court judges from KCCH to Park Place will require the duplication of a limited amount of space including perching space for Family Court Services staff, and 1-2 offices for senior management.

<u>Lease/Tenant Improvement Costs Scenario 2</u>

This scenario relocates the dependency courts from YSC together with the four UFC courts from the KCCH to Park Place. The four YSC offender courts and one Becca court would then move into the KCCH. The cost difference between this and scenario 1 is relatively small, however the discussion is included to show a possible option for consideration.

An advantage of this scenario is the probable ability to obtain additional space within Park Place to accommodate a number of staff currently located at YSC. This would maintain the staff's proximity to the dependency courtrooms thereby maintaining operational efficiencies.

The table below outlines these moves:

Lease / Tenant Improvement Scenario 2		
Function	**From**	**To**
4 UFC Ctrms & 1 Family Law Ctrm	KCCH	Park Place
2 Dependency Ctrms	YSC	Park Place
Depts. and staff related to Dependency cts.	YSC	Park Place

4 Offender Ctrms & 1 Becca Ctrm	YSC	KC Courthouse
Depts. and staff associated w/Offender & Becca Ctrms	YSC	Admin Build'g and Park Place

The advantages of this approach are:

- The courtroom tenant improvement cost in leased space has already been paid for.
- The lease costs are at a favorable rate.
- Additional space is available within Park Place for departments that benefit from co-location with dependency and Becca courts.
- The existing King County Courthouse is already a secured building capable of accommodating in-custody procedures and other high profile cases.

The disadvantages are:

- The county is currently paying rental costs on vacant space at Park Place in response to a potential Green River flood, and would have to continue to do so until construction begins in approximately 2 years. These costs are assumed to paid by the Green River flood project until construction begins.
- Juvenile in-custody holding would have to be accommodated by operational and built solutions to maintain the "sight and sound" separation of in-custody juveniles and adults. This operational change may lengthen the time it takes to transfer both adult and juvenile in-custody individuals from the holding areas to the courtrooms.
- The moving of UFC will create a temporary disruption to their operations.
- Division of juvenile offender staff – A significant number of staff associated with the juvenile offender courts will be located at Park Place due to lack of sufficient space in KCCH. This is likely to inconvenience court clients who need to make contact with the staff regarding their case. In addition, requiring staff to travel from Park Place to KCCH to support the business of the juvenile offender courts may create delays in the handling of offender cases.
- Increased volume at KCCH – Introducing the juvenile offender courts while removing the unified family law courts will increase the number of people entering KCCH each day. This may result in extended wait times to enter the courthouse. The number of entry security staff may need to be increased. Security staff may also need to be increased to monitor the waiting room space associated with the juvenile offender courts.
- Division of family law – Moving the unified family court judges from KCCH to Park Place will require the duplication of a limited amount of space including perching space for Family Court Services staff, and 1-2 offices for senior management.

<u>Lease/Tenant Improvement Costs Scenario 3</u>

This scenario assumes that Park Place is not available, and therefore all of the YSC courts and staff are relocated to a leased facility.

Relocation of a facility of this type and size is a project unto itself, and would require 12 to 18 months. The broad scope steps as previously noted would be:
Procurement of leased space
Design and build out of tenant improvements for court operations
Relocate courts and staff to other facilities, (vacate lower Alder and tower).

The advantages of this approach are:

- No disruption to the tenants in the KCCH
- Possibly one location for all of YSC staff and departments

The disadvantages of this approach are:

- High cost of specialized tenant improvements for court spaces, holding cells etc.
- Length of time to design and construct the tenant improvements (12-18 months)
- Possibility that leased space cannot be found near the existing facility, increasing estimated transport cost and exacerbating the operational impacts

Because of the high cost of this scenario and the necessary time and effort to plan for the tenant improvements in another leased building, FMD did not consider this a viable alternative.

F. Existing Hazardous Materials

To assess for the potential for hazardous materials that could be encountered during redevelopment, two studies were commissioned. These included a *Phase 1 Environmental Site Assessment,* prepared by Herrera Environmental Consultants, and a *Building Hazardous Material Survey,* prepared by Med-Tox Northwest. The complete text for both of these reports can be found in the Technical Appendix of this pre-design report.

Phase 1 Environmental Site Assessment

The Phase 1 Environmental Site Assessment (ESA) included a review of the present and historical land uses of the property and surrounding area to assess the potential for subsurface contamination in soil and groundwater. Regulatory agency files and environmental databases were also reviewed as part of the Phase 1 ESA. Typical subsurface contaminants in urban developed areas include petroleum products from leaking underground fuel storage tanks, and chemicals such as solvents and heavy metals associated with dry cleaning, vehicle repair, and other commercial and industrial processes.

In summary, results of the Phase 1 ESA indicate a low probability for significant contamination on the property. If present, the most likely sources of contamination would have been from:

- Petroleum leakage from historic heating oil tanks associated with residences and apartment that occupied the site prior to development by the county in the early 1950s.
- Petroleum leakage from a previously removed underground storage tank that provided fuel for an onsite emergency generator between 1969 and 1989.
- Petroleum leaks or spills from an oil burner company that operated briefly in the southwest corner of the site in the early 1940s.

While the likelihood of impact from these historic activities is considered low, project delays could occur if unanticipated contamination were discovered during construction. As a precaution, consideration should be given to testing soil in areas where excavation may occur prior to construction. This testing could be combined with any geotechnical testing that may be needed in the next design phase.

Building Hazardous Material Survey

Numerous building materials now considered hazardous were used in the Alder tower and Alder wing of the YSC facility. Most common among these are asbestos (commonly found in insulation, mastics, and older vinyl floor tiles), PCBs (commonly found in older light ballasts and other electrical equipment, and more recently in older paints and caulks), and lead-based paint. Some but not all of these materials have been tested and removed or otherwise abated as part of past building renovation and repair projects.

In order to identify remaining hazardous materials, a Hazardous Building Materials Survey was performed to identify remaining hazardous materials that will need to be managed during redevelopment activities. The survey included extensive testing of accessible building materials.

Some areas of the buildings were inaccessible and will require destructive sampling methods after the buildings have been vacated and prior to demolition.

Results of the Building Hazardous Material Survey (summarized in Appendix XX) were generally consistent with previous testing and findings. The results are briefly summarized as follows:

Asbestos-containing Materials
Asbestos was detected in various grout, caulking, sealant, gasket, adhesive, vinyl floor tile, sheet flooring, mastic, insulating cement, fire proofing, and roof coating materials. Results of asbestos-containing materials are summarized in Table 1 of the Hazardous Building Materials Survey report. Table 2 of the report is a summary of materials suspected of but determined not to contain asbestos (see Technical Appendix for complete report).

Lead-based Paint
Lead-based paint was detected in 13 of 28 samples collected from walls, ceilings, floor, doors, and other surfaces throughout the Alder tower and Alder wing. Results of lead paint samples are summarized in Table 3 of the Hazardous Building Materials Survey report (see Technical Appendix). As a precaution, all painted surfaces should be presumed to contain at least trace levels of lead unless paint surfaces are removed, which is typically cost-prohibitive.

PCB Light Ballasts
Older fluorescent light fixture ballasts, particularly those manufactured before 1979, may contain high concentrations of polychlorinated biphenyls (PCBs). Ballasts manufactured after 1978 may contain a PCB replacement called di-(2-ethylhexyl) phthalate, which is a probable human carcinogen. As there are an estimated 1,762 ballasts in the Alder tower and Alder wing buildings, and since many of the ballasts have been replaced since these buildings were constructed, no attempt was made during the survey to inspect each fixture. As part of building demolition activities, all ballasts will be removed, inspected and packaged for transport as appropriate to a certified recycling or disposal facility.

PCB in Caulk and Paint
Similar to light ballasts, PCBs were used in certain paint, caulk, and sealants up until the late 1970s. For the Alder wing and tower survey, a total of 18 representative caulk, paint, and sealant samples were tested. PCB sample results are summarized in Table 5 of the Hazardous Building Materials Survey report (see Technical Appendix). Of the 18 samples tested, PCBs were detected in nine samples. In eight if the nine samples in which PCBs were detected, the levels ranged from 1.3 milligrams per kilogram (mg/Kg) to 39 mg/kg. One sample, collected from the exterior window caulking of the Alder tower, contained PCBs at a level of 150,000 mg/kg. At the time of this report, additional testing is being planned to determine if PCBs have migrated from the Alder tower window caulk into surrounding materials.

Conclusions

Many of the building materials of the Alder tower and Alder wing buildings contain hazardous substances including asbestos, lead, and PCBs. Preliminary abatement costs are estimated at $400,000, not including sales tax and are included in the preliminary project budget. All abatement work must be performed in accordance with appropriate worker safety and waste handling and disposal regulations. A copy of the full Hazardous Building Materials Survey

report should be kept onsite and available during demolition work, and the report should be provided to prospective contractors during the bidding process.

G. Risk Assessment

A Preliminary Risk Assessment was initiated by FMD with the core project team. Members from superior court, capital planning, FMD director's office and the consulting team contributed multi-disciplinary experience and judgment to assess potential risk in the upcoming phases of this project. The process for this effort was adopted from the WSDOT guidelines for factoring risk into project estimates. Briefly the process consists of the following steps.

Process

Identification Stakeholders experienced with this type of project brainstormed as many potential problems, concerns or threats as possible.
Rating For each risk identified, the team rated the impact to project cost, the probability of the risk occurring and the urgency of a response with a simple low medium and high rating. The thresholds for the ratings appear in the risk register legend.
Prioritization The rated risks were then sorted by cost, probability and urgency. This resulted in five qualitative categories of risk. The project team developed preliminary mitigation plan for those risk that received three "high" or two "high" and one "med" rating
Mitigation plans The highest two categories of risk are considered 'priority risks'. The project team has proposed mitigating actions following the table below, to reduce the possibility or impact of each 'priority risk'.
Risk Tracking When the project is approved to proceed, FMD will establish Risk Mitigation Plans and regular systematic status reviews to ensure a high degree of risk management.

Limitations

The pre design budget and schedule limited this risk assessment to qualitative results. Future project phases will include additional input from project participants on an on-going basis.

The brainstorming sessions named a number of very broad risks inherent of typical major projects. Examples included economic or statutory change, results of a public process, disasters natural or man-made, and major shifts in public sentiment or political priorities. These risk types originate from sources beyond the county's influence and would require extraordinary resources from many entities to mitigate. Recognizing the finite limitations of the county's influence, the project team can only monitor for the emergence of these types of broad external risks. The next phases of the project will include appropriate contingencies and will respond with adjustments to the scope schedule or budget should these risks arise.

Risk Assessment Results

The results of the preliminary risk assessment are complied into the Risk Register below.

Childern and Family Justice Center Project

Design Risk Register

Last Updated

PP-Planning & Programming
PD-Pre-Design
CO-Community Outreach
CRA-Council Review Adoption
APP-Appropriation
SD GC/CM- Schematic Design with GC/CM Process
SD D/B- Schematic Design with Developer

Cost	Additional cost < $500K=High; $500-200K= Med; Under $200K=Low
Probability	Greater than 70%= High, 30-70%= Med, 30% or less= Low
Urgency	Expected within: 4mo = High; 4 to 12 mo = Med; After 12 mo =Low

Schedule Phase	Risk Identification	Consequence	Qualitative Risk (Initial Outcome)			Risk Mitigation / Strategy
			Cost Impact	Probability (%)	Urgency	
PP 2	Not enough SEPA information collected in the pre-design phase.	delay in next project phase	high	high	high	Complete SEPA review on 2032 building program to insure worst case is included in the checklist. Overlap consultant scope tasks. Arrange early meetings with Seattle planning department. Defer emergent issues to SD phase .
PD2	Procurement A/E negotiation exceeds planned schedule	addl costs of acceleration	high	high	low	Provide contract T&C at initiation of A/E negotiations
PD5	Delay in A/E Contract negotiation	schedule delay	high	high	low	Limit initial contract to tasks having certainty. Add uncertain tasks as new info defines scope.
SD D/B	Limited number of proven courthouse developers	low quality	high	high	med	Provide definition of County courthouse requirements through bridging document to deduce developer risk. Advertise nationally to broaden the pool of applicants
SD D/B	No-growth program for Phase I building.	Future facility restrictions	high	high	Med	Invest in design elements that provide flexibility of space use.
SD GCCM	Impact of public design process	cost & schedule delay	high	high	med	Budget for high probablity amenities: street development, transportation plan, traffic mitigations, park improvements…..to the greatest extent possible
SD D/B	Permit process identifies need for a traffic mitigation plan	cost	high	high	med	Obtain early survey of parking needs. Developed early TMP with Superior Court, include cost in proj contingency
SD D/B	City re-zone process slowed by unique developer/Owner relationship	schedule	high	high	med	Develop approved re-zone process with Seattle prior to development agreement
CO1	Limited community support	delayed acceptance	high	low	high	Engage public through a variety of venues to insure adequate input. A/E scoped to provide outreach program. In-house out reach jan, febr.
CO3	Expectations of community groups/members exceed planned scope and budget	delayed acceptance	high	low	high	Assemble community expectations, include in design program materials.
PD8	Site Plan doesn't have developer's perspective	lower sale price	high	low	low	A/E scoped to provide analysis of proposed development parcel with developers
SD GCCM	LEED decision process		high	low	low	
SD D/B	Too much detail to bridging document	limits creativity	high	low	low	
SD D/B	Unknown process for Developer implementation of Public project re-zone	extend schedule	high	low	low	Add schedule contingency
SD D/B	Parking estimates. Too high or low	SEPA and schedule impact	high	low	low	Obtain early survey of parking needs. Developed early TMP with Superior Court, include cost in proj contingency
PP 10	Unknown environmental impacts	Mitigation	high	low	med	Pre PD review with City. Provide Contingency factor for EIS mitigations in PD
CO2	Unidentified stakeholders	decision delay, addl costs	high	low	med	Engage public through a variety of venues to insure adequate input.
SD D/B	Unable to maintain quality with design/build team.	quality	high	med	low	Develop adequate bridging documents to insure the county has addressed the priority quality and performance issues
PD6	Project budget underfunded	reduce scope & effort	high	med	low	
PD9	Community Program limits land available for County	addl cost	high	med	low	Educate community as to County program and site needs.
SD D/B	Stakeholder expectations exceed authority and responsibility (participation & control)		high	med	low	Educate stakeholders to the process and controlling priorities
SD D/B	Geotechnical unkown sub-surface conditions		high	med	low	Risk weight structural estimate
SD D/B	Timely definition of operational interface between Detention and Court systems. Consensus documentation required for design.	Additional design time	high	med	low	Additional design programming and operational consensus (KCSO/DAJD) as part of establishing the bridging documents
PD10	1% Arts Program limits land available for County	addl cost	high	med	med	Early negotiations with 4culture. Propose improved installation.
SD GCCM	Prioritization of site design elements. Finalize for re-zone. Scope of improvements. Open space, developmt parcel, mitigations		high	med	med	
SD GCCM	Contract re-zone unknown scope of required site improvements		high	med	med	
SD GCCM	Programmatic change by Tenant		high	med	med	
SD D/B	Reduced control of design and response to programatic change		low	high	med	
SD D/B	Limited detail in bridging document or development agreement	Program reduction or rezone delay	low	med	med	
SD GCCM	Temp construction phasing unkown impacts		med	high	low	
SD D/B	Undefined customer arrival handling		med	high	low	
SD D/B	Undefined information handling	inefficient case handling	med	high	low	
SD D/B	Unknown operations delivery impacts design	re-design	med	high	med	Info desk? Adult in-custody Probation reception Screening separation
PD3	reduction of County Staff assiigned to project	quality loss	med	low	low	
SD GCCM	Operational impact due to temporary facilities and procedures		med	low	low	Design temporary facilities to minimize risk
SD GCCM	Operational impact to construction process		med	low	low	
SD GCCM	Public Appeal of DNS. Unknown appeal process		med	low	low	
PP 11	Zoning and/or permitting issues	land value	med	low	med	
App 3	Scope change directed, Exec, Council, Sp Ct		med	low	med	
CO4	Consistent and adequate public communications	delayed acceptance	med	med	high	Assign Communications team member. Utilize multi-media. Present to all community group meetings
SD GCCM	Temporary facilities budgets prove insufficient		med	med	low	
SD GCCM	Public Appeal of Design Review		med	med	low	
SD D/B	Undefined buildng systems quality		med	med	low	Mandate performance and quality in technical definition
SD D/B	Reduced Control of final product		med	med	low	
SD D/B	Construction Market recovery increases cost		med	med	low	
SD GCCM	Multiple design process' Phase I only vs. Ph I + full build		med	med	med	

Preliminary Mitigation Plan

The following lists was developed as a preliminary mitigation plan, outlining actions that would mitigate or reduce the likelihood or consequence of the impact, for the high priority risk meeting the criteria noted in the process section above:

Not enough SEPA information collected in the pre-design phase

The SEPA process has been defined with the City. Refer to Chapter 6 SEPA. In this phase the county learned they will be the lead agency administering the SEPA approval. More frequent expedited meeting schedule resulted in the completed checklist included in this report for the 2032 building program. A mitigated determination of non-significance (DNS) was issued. Environmental issues that may emerge from the completion of the DNS will be deferred to the next design phase for resolution.

Limited pool of proven courthouse developers

Provide definition of county courthouse requirements through bridging documents to reduce developer risk.

No-growth program for Phase I building

The next design phase will include elements that provide flexibility of space use. Proviso response includes additional space for office or courtroom.

Impact of public process

Budget for high probability amenities, including street development, transportation plan, traffic mitigations, park improvements, etc to the greatest extent possible.

Traffic mitigation plan may be required

Obtain early survey of parking needs. Developed early traffic management plan with Superior Court to reduce the total demand and alleviate neighborhood concerns.

Contract re-zone process slowed by unique Developer/Owner relationship

Include in the request for proposal for the developer, the need for a contract re-zone for this project and the requirement to work closely with the county, and neighborhood, in seeking the City of Seattle's approval.

Community support for project

Engage public through a variety of venues to insure adequate input. Include in A/E contract provision to provide community outreach program.

H. Sustainable Design Strategies (LEED)

The King County Council passed Ordinance 16147 on June 24, 2008 requiring the use of green building and sustainable development practices for all capital projects as long as certain financial requirements are met. The desired goal for these capital projects shall be registered through the United States Green Building Council and should plan for and achieve a LEED Gold certification or the highest rating possible with no incremental cost impact to the current expense (general) fund over the life of the asset.

Potential LEED Gold Strategy

The project team has taken a holistic approach to this project and looked beyond LEED towards sustainability to develop a strategy that helps restore ecological systems, promotes health and wellbeing, inspires community and does it in a cost effective, maintenance friendly manner. By seeking interdependency between building and site systems, identifying opportunities and employing rigor to performance requirements, the project team has identified strategies that allow this project to achieve a LEED Gold certification within the existing program requirements at no incremental cost increase. The sustainability strategies described below are those the project team has identified as appropriate responses to the current program.

Sustainable Sites and Water Efficiency

The project team has noted several opportunities to optimize sustainability strategies including energy systems, stormwater management systems, water reuse systems, habitat and urban agricultural opportunities.

The site is located in a glacial till zone with a natural drainage pattern below grade from North to South and is presumed to have very well draining soil which lends itself to many stormwater management opportunities. Stormwater can be managed in several ways on the master plan and project site. General site stormwater can be managed through the use of pervious paving, flow through planters and swales. Site stormwater systems at grade can be responded to in a way that fits within the urban context.

Stormwater can also be collected from the buildings into cisterns. Cistern systems identified can include cell systems below county owned streets, below ground cisterns at new buildings and above ground cisterns for the existing detention facility. Stormwater can be collected and used for toilet flushing and cooling tower makeup water at new buildings, irrigation for specific vegetated areas and laundry use for the existing detention facility. To minimize system sizing requirements, the project team proposes that the main storage facility be separate from the treated water which can be stored in a smaller tank and sized specifically for daily use requirements.

Greywater has also been identified as a resource that can be utilized to help reduce the main cistern tank size by providing a constant water source during the dry summer months. Greywater can be used for toilet flushing, cooling tower makeup water and for subsurface and drip irrigation. Alternatively greywater can be captured and treated onsite and allowed to infiltrate into the ground to recharge the aquifer through the use of constructed wetland

systems. Constructed wetlands can be designed to fit an urban environment and become a site amenity.

The domestic water fixture package can include dual flush toilets, pint flush urinals, 0.5gpm lavatory faucets and 1gpm showers. These measures alone can help reduce domestic potable water use by roughly 40%.

Irrigation water use can be reduced through the use of native and adaptive plantings, drip and low flow spray heads as well as a rain sensors. Additionally, once established, many native plants on the site will require little additional supplemental water.

These combined strategies can reduce overall potable water usage on site significantly helping to future proof the building potential increases in potable water and wastewater conveyance costs.

Biophilia is the connections that human beings subconsciously seek with the rest of life. Connecting with nature and the rest of life can take place in a number of ways including providing site landscape that attract wildlife and bring plantings and natural materials into buildings. The effect nature has on occupant health and wellbeing is very positive ranging from reduction in occupant absences to increased worker productivity.

The project team has identified ways to bring nature into the site and building in several ways. At the ground plane plant materials can be diverse in type and size to allow for habitat regeneration. The buildings can also be utilized as planting surfaces. Greenwalls can also be utilized to soften large expanses of wall and in some locations to help mitigate seasonal heat gain within the buildings. A greenwall in the lobby area is also possible to help improve indoor air quality and bring nature into the building. Greenwalls, greenroofs and site landscaping can all be considered for food production. Maintenance of these systems can be tempered through cooperative partnerships with the detention facility and local schools such as the Seattle Academy who use horticulture for learning and therapy.

King County has in place a low impact landscape maintenance program. As the project progresses, the team can work with King County to improve their program ensuring activities have minimal impact to the local ecosystem.

King County has in place an alternative transportation management plan which includes incentives to encourage employees to ride their bikes, take public transportation and carpool to work. To enhance this program, the project can include solar powered charging stations for fleet vehicles as well as employees and visitors as an incentive for purchasing plug in hybrid and electric vehicles.

Energy and Indoor Air Quality

Reduce Load Demands through Architecture

The building can be oriented to optimize north and south glazing and minimize east and west glazing. This strategy provides greater opportunity to control solar heat gain and daylighting.

Glazing ratios can be provided to optimize daylighting and energy efficiency. The floorplate can be designed so that employees can either be working within the 40' of an exterior window or within close proximity to an interior light well so that daylight is always accessible. Private offices can be limited to the east and west exterior walls and interior partitions can be primarily glazing. Daylighting and views to the outdoors not only positively impacts employee productivity but also reduces overall energy usage. Lighter and brighter surfaces can help reflect light into the space. The daylight strategy for the building can coincide with the programmatic elements within the building. Glare control can include exterior shading devices as well as interior automatic blinds.

Thermal insulation can be optimized at the building slab, walls and roof. The thermal mass that concrete and brick provides can create an opportunity to use night flushing to help keep the building cool during the summer.

Additional items that may be considered if proven that the payback period for initial investment is less than five years:

- A double skinned façade at the south face of the building, and possibly other faces, can help allow for the integration of operable windows into the building. The double façade can be developed in one of two ways. One option is to allow for a 2' space between the interior and exterior windows for maintenance or the space can be increased to become an occupiable winter garden. Both strategies can allow for added control of heating and cooling at the south façade. The interior windows can be operable.

- Operable windows can be integrated into the north, east and west facades and be automated to ensure that windows can be closed and locked during unoccupied hours from a central control.

Reduce Internal Energy Loads

Daylight controls can be provided using wireless photocell controls and sensors can be placed according to daylight zones along exterior walls and lighting on these zones can be on dimming ballasts to provide a seamless transition between daylight and artificial light. Occupancy sensors can also be provided along with task lighting to ensure all occupants have adequate lighting control at their workspace. The lighting power densities in office areas can be as low as .35w/sf with direct, indirect task lighting.

Heating and cooling systems can be provided that reduce internal energy loads and improve occupant comfort and ongoing flexibility in technology systems as well as space requirements. Raised access floors can be implemented at the office and courthouse to allow for lower fan power requirements, deliver warm and cool air directly to the occupied zone, and allow for flexibility and to provide occupants for controllability of their thermal comfort. The lobby area can have radiant floor heating which can allow the system to deliver heat at a lower temperature than with a forced air system. An alternative to a raised access floor distribution system is a displacement ventilation system which allows for lower volume air flows but does not provide the same flexibility as a raised access floor system. Chilled beam systems use water to remove heat from a room and move chilled water closer to occupied space than a standard air handler. Chilled beams can help to minimize energy required by fans, reduce noise and provide enhanced

occupant comfort. For the courthouse, chilled beams can be incorporated at the perimeter either as active or passive systems.

The larger master plan site allows for geothermal heat sink opportunities horizontally and even below county owned streets. A water to water heat pump type system can be employed as a part of a hybrid system. The geothermal system would provide capacity for the majority of the year temperature conditions but the peak conditions can be supplemented with a separate system. This can allow for a faster pay back by decreasing the cost of the geothermal system. A soil conductivity test can help establish the payback period for geothermal.

The larger master plan site also allows the project to explore heat recovery systems such as sanitary sewer heat recovery systems, kitchen heat recovery system and heat transfer between buildings with different uses on the site. Likewise, a central cogen plant might be appropriate in a private/public partnership between the housing developer and King County. These opportunities can be further explored the next design phase.

Renewable Energy

King County requires that 50% of the energy used in a project be provided by on or off-site renewable power by 2012. The new buildings can be pre-wired to accommodate both photovoltaic panels on the roof and in shading devices. Additionally, fuel cell technology is advancing and so the team can provide space for a fuel cell and connections to install this system in the future when the technology becomes less expensive.

Controls

The lighting system can be controlled with a DALI system and can include daylighting and occupancy sensors. The DALI system can help ensure that the lighting system is operated optimally.

Reduce Environmental Impact of Materials

The team can re-use and recover as many materials on site as deemed reusable and can meet the 95% diversion rate of construction waste from landfill. A methodical and detailed tracking system can be put in place prior to the start of demolition. The construction and subcontractor teams can go through a 4 hour training to cover all LEED construction related credits that can include education on the recycling system that can be on site. Additionally, weekly inspections can be performed to ensure proper waste and recycling disposal protocols are being followed.

A minimum of 50% of all new wood materials purchased can be FSC certified including roof decking and interior finish carpentry. New building materials can be selected for their manufacturing/harvest location, recycled content as well as proven long term durability.

Material criteria can be incorporated into the contract documents and a subcontractor and vendor training program can be required to be completed before project commencement.

6.0 SEPA

Process

A SEPA Environmental Checklist has been prepared for this project. That document, which includes a geotechnical report, a greenhouse gas emission analysis, and a transportation assessment are contained in ***Appendix A*** of this Pre-Design Report. The SEPA Environmental Checklist addresses three massing concepts that have been identified by the King County Department of Executive Services, Facilities Management Division. As noted previously in this Pre-Design Report, these concepts differ with regard to the scale of development components that comprise the project and the location of proposed land uses on-site.

The SEPA document is conceptual in that it addresses multiple concepts – rather than a single development proposal. In light of the conceptual nature of the proposal at this stage of refinement, the SEPA document presents a worst-case analysis. With the selection of a preferred alternative and project-specific mitigation, it is anticipated that environmental impacts would be lessened. As necessary, additional project-specific information may be provided in conjunction with design refinements and selection of a preferred alternative. This clarifying information could be provided as an addendum to the Environmental Checklist.

Because there are other public agencies with jurisdiction[15] regarding this project, the County's SEPA Threshold Determination (see **Threshold Determination Summary** below) and the SEPA Environmental Checklist must be circulated to such agencies, the WA Department of Ecology, affected tribes, local agencies or political subdivisions whose public services would be changed as a result of implementation of the proposal and the public for a 14-day review and comment period (WAC 197-11-340[2][b]). At the conclusion of the comment period, the King County will evaluate comments received and may: *1)* retain the original Threshold Determination, *2)* revise the Threshold Determination or *3)* withdraw the original Threshold Determination.

For development projects in the City of Seattle in which an agency other than the City is the SEPA Lead Agency, but issuance of a land use and/or building permit would be required from the City, Seattle's Department of Planning and Development (DPD) requires that before a land use or building permit application can be accepted by DPD, the entire SEPA process must be concluded. That includes any administrative appeal period associated with the SEPA Threshold Determination -- with no appeal filed. As noted previously, King County would serve as the SEPA Lead Agency for this project and compliance with this requirement – completion of the SEPA appeal period – would be necessary. It is expected that this requirement could be met by King County publishing Notice of Action (RCW 43.21C.080).

The Subsequent Environmental Analysis section, (below) further describes the subsequent steps in the SEPA process for this project.

[15] Agency with jurisdiction refers to permitting authority relative to the project.

Land Use Issues

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The Environmental Checklist evaluates probable environmental impacts of the proposed design concept options based on existing and proposed land uses proximate to the project site.

From a regulatory standpoint, key elements of the design concept options are uses that are not permitted in the zoning districts that comprise the site. As such, City Council authorization would be necessary to address the intended land uses and development standards that would be necessary. Refer to Section 4.0 of this Pre-Design Report.

Environmental Analysis Summary

The following presents a comparative analysis of development considerations relative to the three design concept options:

	COURT and DETENTION AREA	PARKING AREA	OPEN AREA[16]	CO-DEVELOP-MENT	ROAD (MISC.)	TOTAL (GSF)
A	228,000 (52%)	35,000 (8%)	40,000 (9%)	88,000 (20%)	49,000 (11%)	440,000
B	224,000 (51%)	38,000 (8%)	30,000 (7%)	91,000 (21%)	57,000 (13%)	440,000
C	192,000 (44%)	31,000 (7%)	53,000 (12%)	109,000 (25%)	55,000 (12%)	440,000

Community Considerations Regarding Environmental Issues

The proposed project and the massing options have been discussed with 10 key stakeholders in the area, as well as with over 20 community organizations. Environmental and land use considerations that these groups have raised include: aesthetic improvement of the property, provision of retail space along 12th Ave. as part of a mixed-use development, possible housing along the east-side of the site, enhanced open area, improved access through and around the site, and provision of additional public transportation options and/or routes. These issues have been evaluated as part of the Environmental Checklist.

Threshold Determination Summary

Because of the amount of County-sponsored development that would occur in conjunction with this project, the development would be subject to SEPA compliance. The proposed project would not be categorically exempt. Compliance with the substantive and procedural provisions of SEPA is a major component of the entitlement process for all major development projects. The SEPA process must be completed before land use or building permits can be issued for the project.

[16] The existing open area is approximately 48,000 sf.

Chapter 20.44 of the King County Code establishes the County's SEPA procedures. With regard to SEPA lead agency responsibilities and the County's designated responsible official, the code notes that the "county department exercising initial jurisdiction over a private proposal or sponsoring a county project shall be responsible for performing the duties of the lead agency. The director of such department shall serve as the responsible official."[17] Therefore, the director of the Department of Executive Services would be the responsible official for SEPA compliance associated with this project.

The sequence of events that would need to occur with regard to SEPA compliance is outlined below. The County's responsible official will review the Environmental Checklist and issue a Threshold Determination. There are several possible options associated with the SEPA Determination:

- Issue a **Determination of Non-Significance** – This implies that no EIS is required.
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- Issue a **Mitigation Determination of Non-Significance** – This means that with the mitigation that is proposed, no EIS is required.
-
- Issue a **Determination of Significance** – This determination means that an EIS is required for the proposed project.

Subsequent Environmental Analysis

The Environmental Checklist that is contained in ***Appendix A*** of this Pre-Design Report provides a comprehensive analysis of a range of design concept options for the proposed project. In order to provide further clarity for all permitting agencies, additional project-specific information may be provided in conjunction with design refinements and selection of a preferred alternative. Such clarifying information could be provided as an addendum to the Environmental Checklist.

[17] K.C.C 20.44.020 A.

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7.0 Operations, Maintenance, and Security Costs

A. The proposed facility is larger than the existing facility.

Many of the costs of operating and maintaining a large facility of any kind are a function of the number of square feet being serviced. In this case, the number of square feet to be serviced will substantially increase:

Existing facility:	105,883 sq ft
Proposed facility:	156,140
Increase	50,257
Increase %	47 %

Thus without consideration of specific operating and maintenance economies, annual O&M costs in the same building would be assumed to increase by 47%.

Similarly, required charges for the Major Maintenance Reserve Fund would also normally be a function of square feet to be maintained, as well as specific building systems.

B. The existing facility is uneconomical to operate and maintain.

The current O&M cost for the existing facility, in 2011 dollars, is 17.90 per sq. ft. This compares very unfavorably with other county buildings: Maleng Regional Justice Center (MRJC) at $15.35, the King County Courthouse at $14.66 and the Administration Building at $14.44 (all 2011 dollars).

Comparing the proposed facility with the existing buildings, particularly in terms of size and function, staff determined that the best model was the King County Courthouse, if it could be updated for modern construction. This figure was adjusted by substituting the MRJC security element figure of $1.65 for the KCCH figure of $2.88, yielding a baseline O&M (exclusive of MMRF and security charges) of $13.36/SF.

One substantial savings opportunity exists in the heating source costs. The present facility uses Seattle Steam. The proposed facility would use high-efficiency gas or electric heat, with a reduction in both the annual operating costs and total capital plus operating costs on a net present value basis.

The existing facility requires very high contributions to the MMRF because of its age and the specific need to replace obsolete systems. Several of the existing building systems are in need of replacement. Were the existing facility to be retained in service, the county would need to promptly invest approximately $20 million in replacing the electrical, plumbing, and heating, ventilation and air conditioning (HVAC) systems, all of which are past the end of their useful life.

The MMRF estimate is based on the MRJC courts building systems model, assuming new construction. A $2.63 per sq. ft. cost (in 2011 $'s) represents the amount in current dollars that would need to be collected each year to ensure that sufficient funds are available over the 60

year building life to maintain the building systems in good condition. The current MMRF rate for the existing facility is $8.67 per sq. ft. (in 2011 $'s).

The reduced MMRF rate for the proposed facility translates into sharply lower annual MMRF costs, even with the larger size of the new facility. The present facility requires $917,747 per year to fund its MMRF liability. The proposed facility would require only $410,809 per year. (both in 2011 dollars)

C. Whether or not a new facility is built, the security arrangements, equipment and staffing are inadequate, and annual security costs would need to increase.

Internal courts-specific security is a major cost specific to court facilities, and is calculated in addition to county-wide O&M and MMRF costs. The analysis of the proposed facility includes an estimate of sharply higher new security costs.

For purposes of this estimate, it is assumed that annual security costs will triple, from the current $206.522 to a proposed $619,566. (Both figures are approximate, in 2011 dollars.) This is exclusive of the needed capital cost of new security equipment.

Until access, internal traffic patterns and court layouts are determined, there will be uncertainty as to the new security budget. FMD believes that with careful planning in the next design phase, it will be possible to somewhat reduce the estimate above.

In summary, the O&M and MMRF costs for the proposed facility would be lower than for the smaller present facility, and much lower on a per sq. ft. basis. When the assumed increase in security costs is included, the total cost of the new facility is slightly higher, but much lower on a per sq. ft. basis.

O & M and Security Cost
Current Facility vs. Proposed Facility

(all figures in 2011 dollars)

		O&M	MMRF	O&M + MMRF	Security	Total	NPV of Total	NPV of total per SF
	Sq. Feet	/Sq. Ft.	/Sq. Ft.	/Year	/Year	/Year	(60 yr)	
Current facility	105,593	17.90	8.67	2,812,775	206.522	3,019,297	41,153,842	389
Proposed	156,140	13.36	2.63	2,496,329	619,566	3,335,516	42,292,215	271

The 105,883 sq. ft. of the current facility requires $2,812,775/year in O&M and MMRF. The 156,140 sq. ft. of the proposed facility will require $2,496,329/yr. in these costs. (Both in 2011 dollars)

Thus a 47% increase in the size of the facility results in slightly more than a 11% reduction in the O&M and MMRF.

Combining the assumed 200% increase in security costs with this reduction in per sq. ft. O&M and MMRF costs enables us to estimate the capitalized value of the operation of the proposed facility in comparison with the current facility.

The NPV (2011 dollars) of estimated O&M, MMRF and Security costs for the present facility over 60 years is $41.2 million; the NPV of the same costs for the proposed facility is $42.3 million. This yields a NPV of $389/SF for operating the present facility, and $271/SF for the proposed facility.

Appendix A

Children and Family Justice Center
Pre-Design Report

Child and Family Justice Center		Phase One Space List		
Space/Component	Unit/ Area Std.	No. of Units	Net Area	Comments
Number of Courtrooms:		**10**		
ENTRY AND PUBLIC FACILITIES				
Entry and Public/Staff Support				
General Lobby	1200	0.6	720	(+ waiting at ctrms.)
Information Desk	200	0.6	120	3 stations
Information Kiosks	16	3	48	Self service
Food Service - Coffee Cart	150	0	0	
Food Service - Cafe w/Seating	1000	0.6	600	15 SF per seat
Private Attorney Convenience Room	400	0.6	240	Lounge, carrels, pay copier, coffee.
Staff Toilets (male & female)	120	10	1,200	2 ea. per floor at restr. corridor
Public Toilets (male & female)	180	6	1,080	1 ea. per floor
Net Area Subtotal			4,008	
Departmental Area (add 30%)			5,210	
Gross Area (÷.70)			7,440	
Public Child Care				
Child Care Office	100	1	100	Supervised visitation is at Family
Child Care Check-in Lobby	120	0.6	72	Ct. Operations. In Sc. 5.5, meeting
Child Care Kitchenette	80	0.6	48	needs for all hearing types would
Child Care Storage	80	0.6	48	add ±280 net square feet.
Child Care - Play Area	800	0.5	400	
Child Care Toilets	50	2	100	
Net Area Subtotal			768	Access to outdoor area desirable
Departmental Area (add 30%)			1,000	
Gross Area (÷.70)			1,430	
Entry Security Screening				
Pre-Checkpoint Queue Area	500	0.8	400	40 at 12.5 sf each
Fire Access Control Panel (FACP)	100	1	100	Fire panel; just inside entry
Magnetometer	30	2	60	
Parcel Scanner (Xray)	75	2	150	
Exit Lane	80	1	80	
Post-Checkpoint Area	350	0.8	280	
Security Post at Screening	45	1	45	
Interview Room	100	1	100	
Judicial Officers' Entrance w/Screening	150	1	150	from secure parking to private circ.
Net Area Subtotal			1,365	
Departmental Area (add 30%)			1,770	
Gross Area (÷.70)			2,530	

Child and Family Justice Center		Phase One Space List		
Space/Component	Unit/ Area Std.	No. of Units	Net Area	Comments
Family Court Operations				
Administration				near FL Comm. Courtrms.; grnd. fl.
Director	180	0	0	conf. rm. adjacent
Manager of Administrative Services	120	0	0	
Lead/Floater	48	0	0	
Court & Program Support				For FL Commissioners
Public Counter	120	0	0	2 positions - staffed by ct. coord.
Admin Supervisor	48	0	0	
Court Coordinators (UFC & Depend.)	48	0	0	public and courtroom access
Customer Spec II (with counter)	80	0	0	recpt. for interviews w/soc. wkr.
Unified Family Court				
Manager (supervisor)	64	0	0	needs separation from clients
Case Managers	48	0	0	needs separation from clients
Civil Case Specialists	48	0	0	
Case Screeners	100	0	0	added for Sc.5.5; not needed for Sc.6
Family Court Services				
Manager	120	0	0	superv. 6 staff & sees some clients
Assistant Manager	100	0	0	superv. 6 staff & sees some clients
Mediators (Social Workers)	140	0	0	meet 2-5 clients in office
Paralegal	64	0	0	needs separation from clients
Program Coordinators	64	0	0	4 lateral files; much time on phone
Family Court Operations - Shared Space				
Reception/Waiting (for 6-8)	120	0	0	with one staff
Observation Room - Client Side	180	1	180	could attach to conference room
Observation Room - Staff Side	64	1	64	shared with Juv. Family Treatment
Copy/Fax/Supplies	200	0	0	
Mail Area	60	0	0	
File Storage	200	0	0	high density filing
Coffee Counter/Break Area	20	0	0	
Net Area Subtotal			244	
Departmental Area (add 30%)			320	
Gross Area (÷.70)			460	
Family Law Courtrooms (and related spaces)				
Courtrooms				
UFC Judge Courtrooms (trials)	900	0	0	
Commissioners Courtrooms (general)	1200	0	0	high volume; ground floor
Commissioners Courtrooms (support)	1800	0	0	high volume; ground floor
Sound Lock/Vestibule	80	0	0	1 per courtroom
Courtroom Electronic Equipment	50	0	0	1 per courtroom
Courtroom Exhibit Storage	25	0	0	1 per courtroom
Courtroom Holding/Interview - Standard	500	0	0	1 per 2 crtms - 4 cells/2 interv. rm.
Courtroom Holding/Interview - add at FS	300	0	0	added holding - group cell for 8-10
Courtroom Public Waiting (20)	300	0	0	
Judges/Commissioners Chambers	400	0	0	with restroom
Judges Support (Clerk/Bailiff)	160	0	0	workspace for 2
Commissioners FL Coordinators	160	0	0	2 counter stations, file sorting, 4 file cabs + shelving; access to restricted circulation
Pro Tem/Visiting Judges/Commiss. Chambers	400	0	0	2 provided (1 FL, 1 Juv) -increases utilization of courtrooms
Pro Tem/Visiting Support (Bailiff/Recept.)	150	0	0	
Attorney/Client Meeting Room Larger	140	0	0	1 per courtroom
Attorney/Client Meeting Room Smaller	100	0	0	1 per courtroom
Net Area Subtotal			0	
Departmental Area (add 25%)			0	
Gross Area (÷.70)			0	

Child and Family Justice Center		Phase One Space List		
Space/Component	Unit/ Area Std.	No. of Units	Net Area	Comments
Dependency CASA (Court Appointed Special Advocate)				
Waiting Area	15	8	120	
Public counter w/work station	80	2	160	
Interview Room	120	1	120	for volunteers
Program Manager	120	1	120	
Asst. Program Managers (Social Wkr.)	64	7	448	supervise volunteers
Attorney (incl. GAL - guardian ad litem)	80	3	240	don't usually see clients
Paralegal	64	2	128	Exist FTE 2010
Admin supervisor	64	1	64	Exist FTE 2010
File Storage	100	1	100	
Copy/Storage	64	1	64	
Volunteer Work Area	160	1	160	Lounge seating for 8
Net Area Subtotal			1,724	
Departmental Area (add 30%)			2,240	
Gross Area (÷.70)			3,200	
FLIC - Family Law Information Center (*Pro Se*)				
Queuing Area	15	0	0	locate near main entry
Public counter w/ work sta. (Intake Spec.)	80	0	0	
Forms Storage (Staff)	60	0	0	racks on wall behind counter
Public Work Area	400	0	0	tables and information display
Computer Terminals/Carrels	36	0	0	
Supervisor	140	0	0	see client groups in office
Volunteer Attorney Office	140	0	0	see client groups in office
Facilitator's Offices	140	0	0	see client groups in office
Forms/Pamphlet Display	60	0	0	
Photocopy/Fax/Printer	100	0	0	
Net Area Subtotal			0	
Departmental Area (add 30%)			0	
Gross Area (÷.70)			0	

Child and Family Justice Center		Phase One Space List		
Space/Component	Unit/ Area Std.	No. of Units	Net Area	Comments
Juvenile Court Services/Administration				
Administration				
Juvenile Court Services Director	180	1	180	
Probation Div. Manager	120	1	120	
Juvenile Services Div. Manager	120	1	120	
Juvenile Treatment Svc. Div Mgr.	120	1	120	
Project/Program Manager III	64	1	64	
Project/Program Manager II	64	1	64	
Confidential Secretary	80	1	80	w/waiting; pers. files; printer/fax
Reform Initiatives, Analysts, Evaluators				
JJOMP Coordinator (OMB)	120	1	120	
PPM III	64	1	64	
PPM II	64	2	128	
Administration - Shared Space				
Reception/Waiting	80	1	80	
Copy/Fax/Supplies	100	1	100	
Files (active only)	250	1	250	High-density
Mail Area	60	1	60	
Coffee Counter/Break Area	20	1	20	
Net Area Subtotal			1,570	
Departmental Area (add 30%)			2,040	
Gross Area (÷.70)			2,910	
Juvenile Offender Courts				
Standard Juv Offender Courtroom	900	4	3,600	
Juvenile First Appearance Courtroom	1200	2	2,400	For 1st appearance/arraignments
Sound Lock/Vestibule	80	6	480	1 per courtroom
Courtroom Electronic Equipment	50	6	300	1 per courtroom
Courtroom Exhibit Storage	25	6	150	1 per courtroom
Court Program Specialist	120	6	720	access public and courtroom
Courtroom Holding/Interview	500	3	1,500	1 per 2 crtms - 4 cells/2 interv. rm.
Courtroom Public Waiting (20)	300	6	1,800	
Judges/Commisioners Chambers	400	6	2,400	with restroom
Judges/Comm. Support (Bailiff/Clerk/Recept.)	160	6	960	space for 2
Presiding Judge Facilities	200	1	200	
Pro Tem/Visiting Judges/Commiss. Chambers	400	0	0	2 provided (1 FL, 1 Juv) -increases utilization of
Pro Tem/Visiting Support (Bailiff/Recept.)	150	0	0	
Attorney/Client Meeting Room Larger	140	6	840	1 per courtroom
Attorney/Client Meeting Room Smaller	100	6	600	1 per courtroom
Net Area Subtotal			15,950	
Departmental Area (add 25%)			19,940	
Gross Area (÷.70)			28,490	
Juvenile Dependency Courts				
Courtrooms	1200	3	3,600	
Sound Lock/Vestibule	80	3	240	1 per courtroom
Courtroom Electronic Equipment	50	3	150	1 per courtroom
Courtroom Exhibit Storage	25	3	75	1 per courtroom
Court Program Specialist	120	3	360	access public and courtroom
Courtroom Holding/Interview	500	2	1,000	1 per 2 crtms - 4 cells/2 interv. rm.
Courtroom Public Waiting (20)	300	3	900	
Judges/Commisioners Chambers	400	3	1,200	with restroom
Dependency Coordinators	150	3	450	next to Commissioner + public
Dependency CASA Room	200	2	400	2 carrels + lounge seating for 8
Attorney/Client Meeting Room Larger	140	3	420	
Attorney/Client Meeting Room Smaller	100	3	300	1 per courtroom
Net Area Subtotal			9,095	
Departmental Area (add 25%)			11,370	
Gross Area (÷.70)			16,240	
Becca and Treatment Courts				
Courtroom (Commissioner)	1800	1	1,800	
Sound Lock/Vestibule	80	1	80	1 per courtroom
Courtroom Electronic Equipment	50	1	50	1 per courtroom
Courtroom Exhibit Storage	25	1	25	1 per courtroom
Court Program Specialist	120	1	120	access public and courtroom
Courtroom Holding/Interview	500	1	500	1 per 2 crtms - 4 cells/2 interv. rm.
Courtroom Public Waiting (30)	450	1	450	
Judges/Commisioners Chambers	400	1	400	with restroom
Judges/Comm. Support (Bailiff/Recept.)	150	1	150	staff are not provided - space is
Attorney/Client Meeting Room Larger	140	1	140	1 per courtroom
Attorney/Client Meeting Room Smaller	100	1	100	1 per courtroom
Net Area Subtotal			3,815	
Departmental Area (add 25%)			4,770	
Gross Area (÷.70)			6,810	

Child and Family Justice Center		Phase One Space List		
Space/Component	Unit/ Area Std.	No. of Units	Net Area	Comments
Juvenile Probation Services Units				
Intake Unit				Screening at Det.; Superv. in field
Reception/Waiting	15	30	450	high volume; come from court
JPC	64	10	640	use interview rooms
JPC Supervisor	100	1	100	
Adm. Specialist	48	3	144	
Diagnostic/Sex Offender Unit				
Reception/Waiting (10)	15	6	90	
Adm. Specialist	48	1	48	receptionist
JPC	64	9	576	use interview rooms
JPC Supervisor	100	1	100	
Treatment Evaluator	100	1	100	
City Unit				could be in field (or South)
JPC	64	8	512	use interview rooms
JPC Supervisor	100	1	100	
Adm. Specialist	48	1	48	
Community Progr/Restitution Monitor				
Youth Program Specialist	64	5	320	use interview rooms
JPC Supervisor	100	1	100	
Restitution Monitor	64	1	64	
Adm. Specialist	48	1	48	
Records Unit				
Adm. Specialist	48	2	96	
Supervisor	80	1	80	
Courier Workstation	48	1	48	Runner if have two locations
Archiving Workspace	80	1	80	
File Storage - Diagnostics	130	0.3	39	Locked room; staging, wk, area, files
File Storage - Main	370	0.3	111	High density storage
Copy/Fax/Supplies	120	1	120	
Probation Units - Shared Space				
Reception/Waiting	150	1	150	For units that don't have their own
Interview Room - Verify Number	120	16	1,920	1 per 3 JPCs
JPC "Hot" Workstations for Field Staff	36	7	252	phone & computer/laptop
Copy/Fax/Supplies	150	1	150	
Mail Area	40	1	40	
Coffee Counter/Break Area	200	1	200	
Net Area Subtotal			6,726	
Departmental Area (add 30%)			8,740	
Gross Area (÷.70)			12,490	

Child and Family Justice Center		Phase One Space List		
Space/Component	Unit/ Area Std.	No. of Units	Net Area	Comments
Juvenile Treatment Services				
Drug Court/Treatment Court/CDDA				Advocacy teams are in the field
JPC	64	4	256	
Drug/Treatment Court Manager	100	1	100	
CDDA Case Manager	64	1	64	
Adm. Specialist	48	2	96	adjacent to public waiting
Community Outreach Liaison	64	1	64	
Treatment Liaison	64	0	0	
Family Treatment Court				
Supervisor/Program Manager	100	1	100	
Court Program Specialist	64	1	64	
Treatment Liaison (contracted)	64	2	128	
Parent to Parent coordinator	64	1	64	Existing FTE 2010
Adm. Specialist	48	1	48	adjacent to public waiting
File Storage	60	1	60	
CJAA Programs & Low Level Supervision				Community Juvenile
JPC	64	2	128	Accountability Act
JPC Supervisor	100	1	100	
Adm. Specialist	64	2	128	
CSO	64	3	192	
FFT Program Staff	64	0	0	
Intern Desks	36	5	180	
Treatment Units - Shared Space				
Reception/Waiting	250	1	250	Books and information display
UA Sample Room	80	1	80	Toilet, sink, cabinet, counter; also used by
Interview Room	120	2	240	1 per 3 JPCs
Copy/Fax/Supplies	80	1	80	
Mail Area	40	1	40	
Coffee Counter/Break Area	80	1	80	
Net Area Subtotal			2,542	
Departmental Area (add 30%)			3,300	
Gross Area (÷.70)			4,710	
Juvenile Court Services/Juvenile Services Division				
Partnership for Youth Justice				Near Probation
Area Program Manager	100	1	100	Existing FTE 2010
Financial Screener	100	1	100	Existing FTE 2010
Adm. Specialist	48	2	96	Existing FTE 2010
At-Risk Youth (Becca) Program				Near BECCA courtroom if can
ARY Program Manager	64	1	64	Existing FTE 2010
ARY Case Manager	64	4	256	
Truancy Program Assistant	48	1	48	Existing FTE 2010
Truancy Facilitator	48	1	48	
Education/Medicaid Services Advocate				Near Juv. Prob. Services
Educ./Medicaid Services Advocate	64	1	64	
Adm. Specialist	48	0	0	adjacent to public waiting
Court Operations				Ct.Prgr. Specs. at courtrooms
Court Operations Manager	120	1	120	Existing FTE 2010
Case Setting Coordinator	150	1	150	meets w/ 6-7 half day
Information Specialist	64	2	128	receptionist at counter
Juvenile Services - Shared Space				
Reception/Waiting	120	0.8	96	
Copy/Fax/Supplies	80	1	80	
Mail Area	40	1	40	
Coffee Counter	20	1	20	
Net Area Subtotal			1,410	
Departmental Area (add 30%)			1,830	
Gross Area (÷.70)			2,610	

Child and Family Justice Center		Phase One Space List		
Space/Component	Unit/ Area Std.	No. of Units	Net Area	Comments
Adult & Juvenile Detention - Juvenile Division				
Alternatives to Secure Detention				Detention space est. at end of list
DAJD Juvenile Division Director	180	1	180	
Assistant Director	100	1	100	
Confidential Secretary	64	1	64	
Probation Division Manager	100	0	0	Not part of ASD
Juvenile Services Div. Manager	100	0	0	Not part of ASD
Juvenile Treatment Svc Div. Mgr	100	0	0	Not part of ASD
Training Coordinator	64	1	64	Added position
Volunteer Coordinator	64	1	64	Added position
Analyst PPM 3	48	1	48	
CSO (Comm. Supervision) Office - 4	64	3	192	Divided positions in 2 categories
CSO (Comm. Supervision) - 7	64	6	384	Divided positions in 2 categories
CSO File Storage	36	1	36	Added space
Placement Specialist	120	4	480	meet families in office -all day long
Expediter	64	1	64	
Clerical Support	48	2	96	
ASD File Storage	64	1	64	Added space
Electronic Monitor Storage	80	1	80	
ASD Spaces To Be Replaced from Tower Base				
Conference/Training (50)	1000	1	1,000	
Storage	150	1	150	
Single Toilet with Shower (m & F)	80	2	160	
ASD Shared Spaces				
Reception/Waiting	120	1	120	
Copy/Fax/Supplies	80	1	80	
Mail Area	40	1	40	
Interview Room (for 6)	120	1	120	
Coffee Counter	20	1	20	
Net Area Subtotal			3,606	
Departmental Area (add 30%)			4,690	
Gross Area (÷.70)			6,700	
Alder School (ASD)				School District could close/move
Classrooms (for 12 + teacher)	600	3	1,800	Could be outside court building
Special Ed. Classroom	300	1	300	Could be outside court building
Multipurpose/Indoor Recreation	2500	1	2,500	lunch and games
Multipurpose Storage	200	2	400	1 mats; 1 tables & chairs **[added]**
Multipurpose Storage - Training Equipment	100	1	100	A/V equipment - locked **[added]**
Youth Toilets	130	2	260	
Time Out Room	100	1	100	
Reception/Waiting	80	1	80	
School Office	200	1	200	
Staff Toilets	45	2	90	
Supply Storage/Teacher Workroom	250	1	250	copier
Equipment Storage	200	1	200	
Net Area Subtotal			6,280	
Departmental Area (add 30%)			8,160	
Gross Area (÷.70)			11,660	

Child and Family Justice Center		Phase One Space List		
Space/Component	Unit/ Area Std.	No. of Units	Net Area	Comments
Department of Judicial Administration (Clerk)				
Management				
Manager Office	120	1	120	
Cashiering				
Counter Waiting Area (5 people/window)	50	2	100	
Public Counter w/Clerk Workstation	80	1	80	
Supervisor Workstation	80	0	0	
Forms Storage	120	0.3	36	mostly generated on printer
Cash Handling Area (secure; w/vault)	180	1	180	2 stations; glazed
Copier	80	1	80	
Case Processing				
Counter Waiting Area (5 people/window)	50	1	50	S4 & S5 like S2
Public Counter w/o Clerk Workstation	80	1	80	Case processing clerks
Workstations w/o Public Counter	48	3	144	Case processing clerks
Public Counter w/Clerk Workstation	80	0	0	Judgments/Auditing
Work Area	150	0.5	75	
EDP Staff - Imaging Workstation	64	2	128	
Imaging Work Area	80	1	80	staging of documents; shredder
Document Destruction Staging	300	0.5	150	boxes; contractor pick up
Records Services				
Counter Waiting Area (5 people/window)	50	2	100	1 is a cashier station
Public Counter w/Clerk Workstation	80	2	160	
Workstations w/o Public Counter	48	1	48	
Public terminals	48	3	144	
Public copier	36	1	36	
Restricted Viewing Room	120	1	120	for files (mostly electr.)
Will-Call/Pick-up	120	1	120	
Forms Storage	120	0.5	60	mostly generated on printer
Copier	80	1	80	
Court Services				
Counter Waiting Area (5 people/window)	50	1	50	
Public Counter w/Clerk Workstation	80	1	80	Reception/information
Courtroom Clerk Workspace	48	5	240	outside courtroom; shared 1 for 2
Exhibits Clerk	80	0	0	
Exhibit Storage	300	0.6	180	
Secure Storage/Safe	100	0.6	60	
Restricted Viewing Room	100	1	100	locked; for exhibits; pass through
Domestic Violence Program				
Counter Waiting Area (10 people/window)	100	0	0	Next to Cashiering w/divider
Public Counter w/Clerk Workstation	80	0	0	
Step-Up Program				
Staff Office	120	2	240	See clients; near DJA entry
DJA Shared Spaces				
Copy/Supplies	100	1	100	distributed
Mail Area	60	0.6	36	
Case Files	660	0.25	165	Includes duplication & microfiche
Technology Staff	80	0	0	
Technology Workbench & Storage	200	0.5	100	
Coffee Counter	20	1	20	
Net Area Subtotal			3,542	
Departmental Area (add 30%)			4,600	
Gross Area (÷.70)			6,570	

Child and Family Justice Center		Phase One Space List		
Space/Component	Unit/ Area Std.	No. of Units	Net Area	Comments
Law Library				**Only in Scenario 6**
Reception/Waiting	200	0	0	Queue for 3 plus 3-4 lounge chairs
Circulation Desk (including public approach)	336	0	0	Includes reference shelving
Public Work Area - tables	48	0	0	
Public Work Area - carrels	36	0	0	
Small Group Study Room	128	0	0	
Large Group Study Room	240	0	0	
Public Access Computers	24	0	0	
Public Access Photocopier	48	0	0	
Book Stacks	1200	0	0	15000 vols@5/lf; 7 hi = 430 lf units
Staff Work Area	96	0	0	
Staff Office	120	0	0	
Storage Room	144	0	0	
Coffee Counter	20	0	0	
Net Area Subtotal			0	
Departmental Area (add 30%)			0	
Gross Area (÷.70)			0	
Prosecuting Attorney's Office				
Juvenile Offender Unit				
Reception/Waiting	15	12	180	Witnesses, police officers, etc.
Interview Room	120	2	240	
File Storage	350	1	350	purge files - need space to stage
DPA Unit Chair	150	1	150	
Supervising DPA	120	5	600	
DPA	100	13	1,300	small enclosed office
Staff Supervisor	80	1	80	
Paralegal	80	4	320	
Legal Assistant	48	15	720	
Intern	48	3	144	
Supervisor - Victim Advocate Unit	80	1	80	
Victim Advocate	80	2	160	
Clerical Support Staff	48	3	144	
Victim Waiting Area (for 2-4)	64	1	64	
Copy/Fax/Supplies	120	1	120	
Coffee Counter w/seating for 6	90	1	90	Eliminate if with FS
Family Support Unit				co-locate with Juvenile - share
Chief Deputy	120	0	0	enclosed office
Fiscal Operations Coordinator	100	0	0	FSU budget director - conf. records
Supervisor	100	0	0	small enclosed office
Adminstrative Assistant	64	0	0	
Computer Guy	80	0	0	
Computer Equipment Storage	64	0	0	with computer gear
Reception/Waiting	15	0	0	
Receptionist w/ Counter	64	0	0	
Interview Room	100	0	0	
Settlement Conference Room (for 4-6)	150	0	0	
Genetic Testing Room	100	0	0	
Genetic Testing Coordinator	64	0	0	
Clerical Support Staff	48	0	0	
File Storage (Centralized)	500	0	0	high density storage for all KC
DPA	100	0	0	
Paralegal	80	0	0	
Legal Assistant	48	0	0	
Intern	48	0	0	
Intake Officer	80	0	0	
Copy/Fax/Supplies	100	0	0	
Computer/Server Room	80	0	0	Separate cooling, UPS
Law Library/References	100	0	0	shared by both units
FS Workroom (perch space for 4)	64	0	0	
Coffee Counter/Break Room (for 12)	180	0	0	shared with Juvenile
Net Area Subtotal			4,742	
Departmental Area (add 30%)			6,160	
Gross Area (÷.70)			8,800	

Child and Family Justice Center		Phase One Space List		
Space/Component	Unit/ Area Std.	No. of Units	Net Area	Comments
Public Defender Workspace				Locate near juvenile courtrooms
Public Waiting	15	5	75	OPD
Interviewer Office	120	1	120	OPD
Coordinator Office	100	1	100	OPD
Copier/Printer/Supplies (OPD)	60	1	60	OPD
Contract Attys. Office (w/2 desks)	120	2	240	1/contract firm + 1 extra
Interview Room (all shared)	120	2	240	1 non-contact
Copier/Printer/Supplies (shared)	60	1	60	For contracted firms - shared
Coffee Counter	20	1	20	sink, coffee, refrigerator, microwave
Net Area Subtotal			915	
Departmental Area (add 30%)			1,190	
Gross Area (÷.70)			1,700	
Health, Mental Health & Social Services				Integrate w/Juv. Treatment
Staff				MIDD Mental Illness & Drug
Chemical Dependency Professionals	64	2	128	Dependency
MH Liaisons	64	3	192	
Psychologist	120	1	120	
Psychiatric Office	120	1	120	shared by part time staff
Admin./Clerical	48	1	48	
Schedulers	64	1	64	
Support Spaces				
Reception & Waiting - General	150	0.6	90	
Quiet Waiting for MH Patients	120	0.7	84	
Interview Room	100	1	100	
Interview Room - Families	140	1	140	
Copy & Supplies	100	0.6	60	
Coffee Counter	20	1	20	sink, coffee, refrigerator, microwave
Net Area Subtotal			1,166	
Departmental Area (add 30%)			1,520	
Gross Area (÷.70)			2,170	
Childrens Administration & Attorney General				**Co-locate AG & CA**
Waiting/Public Counter w/Staff Behind	180	1	180	"Fishbowl" - near entry/waiting
AG Workroom & Carrels	250	1	250	Enclosed room
CA Social Workers/Child Advocates	64	3	192	permanent on-site staff
CA Social Worker Supervisor	100	1	100	
CA Workroom (carrels + tables)	200	1	200	temp. space for staff while on site
CA Office Assistants	48	1	48	
Coffee Counter	20	1	20	sink, coffee, refrigerator, microwave
CA Mail Slots	40	1	40	
Copy Room with Work Counter	80	1	80	
Net Area Subtotal			1,110	
Departmental Area (add 30%)			1,440	
Gross Area (÷.70)			2,060	
Family Law CASA (Court Appointed Special Advocate)				
Waiting Area	15	0	0	
Public counter w/ work stations	80	0	0	
Interview Rooms	100	0	0	for volunteers
FL CASA Admin. Supervisor	64	0	0	
FL CASA Admin. Specialist	48	0	0	sees clients in office [make larger?]
Copy/Storage	64	0	0	
Volunteer Waiting Area (6-8)	120	0	0	
Net Area Subtotal			0	
Departmental Area (add 30%)			0	
Gross Area (÷.70)			0	

Child and Family Justice Center		Phase One Space List		
Space/Component	Unit/ Area Std.	No. of Units	Net Area	Comments
SECURITY				
Security Operations				
SO Sergeant's Office (2-3 desks)	100	1	100	
FMD Sergeant's Office (1 desks)	80	1	80	
Line Staff "Hot" Workstations	36	2	72	Computer and phone
Badging Station	64	1	64	Camera and badge machine
Evidence & Equipment Storage	64	1	64	locked closet
Temporary Holding Cell (detained/remanded)	80	1	80	combi unit, privacy screen
Security Staff Locker/Change (M)	120	0.6	72	15 full size lockers
Security Staff Locker/Change (F)	80	0.6	48	5 full size lockers
Staff Toilet/Shower (M)	120	0.6	72	
Staff Toilet/Shower (F)	80	0.6	48	
Coffee Counter	20	1	20	
Net Area Subtotal			720	
Departmental Area (add 30%)			940	
Gross Area (÷.70)			1,340	
In-Custody Holding - Central				
Juvenile Holding Area				Tunnel from Detention not listed
Pedestrian Security Vestibule	100	1	100	
Search & Staging Area	150	1	150	
Staff Work/Waiting Area	120	1	120	
Single Holding Cell	60	20	1,200	with toilet and privacy screen
Control Station	120	1	120	took out group holding
Safety Equipment Storage	50	1	50	
Attorney Interview Booth	80	2	160	
Attorney Waiting/Reception	120	1	120	
Staff Toilet/Shower	80	2	160	
Adult Holding Area				
Pedestrian Security Vestibule	80	1	80	sight/sound separation from Juvenile
Search & Staging Area	120	0	0	
Processing Area	80	0	0	for remands
Single Holding Cell (1)	60	2	120	with toilet and privacy screen
Group Holding Cell - Male (4)	100	0	0	with toilet and privacy screen
Group Holding Cell - Female (4)	100	0	0	with toilet and privacy screen
Control Station	120	0	0	
Safety Equipment Storage	50	1	50	
Kitchenette	50	1	50	
Attorney Interview Booth	80	1	80	
Attorney Waiting/Reception	80	1	80	
Staff Break Area	150	0.4	60	For 6-8 at one time; sink, ctr., etc.
Staff Toilet/Shower	80	0	0	
Net Area Subtotal			2,700	w/vehicular sallyport - exterior
Departmental Area (add 40%)			3,780	
Gross Area (÷.70)			5,400	

Child and Family Justice Center		Phase One Space List		
Space/Component	Unit/ Area Std.	No. of Units	Net Area	Comments
SUPPORT FUNCTIONS				
Staff Support				
Conference/Training Center	2000	0.6	1,200	public access; divisible in 3 or 4
Conference/Training Storage	120	1	120	furniture and equipment
Conference/Training Kitchenette	120	0.75	90	ctr., stor., sink, refr., micro.
Conference/Training Toilets	80	2	160	ctr., stor., sink, refr., micro.
Computer Training Room	450		0	for 15; tech. enabled
Larger Shared Conference (15-18)	360	1	360	
Medium Shared Conference (8-12)	240	4	960	
Smaller Shared Conference (4-6)	120	6	720	
Staff Break Room (1 per floor)	400	2	800	Vend., coffee, sink, etc.
Judge's Conference/Break Room	1250	0.5	625	sized for all - 1 per building; ctr./sink
Quiet/Lactation Room	120	1	120	Lounge chair; cot
Wellness/Exercise Room	500	0.6	300	Mats; treadmill, stationary bike, etc.
Staff Lockers & Showers (M&F)	200	2	400	With toilets; 30 lockers min.
Net Area Subtotal			5,855	
Departmental Area (add 30%)			7,610	
Gross Area (÷.70)			10,870	
Satellite Administration/Records/Archive				
Reception & Waiting	60	0	0	
HR/Payroll	120	0	0	
Clerical Support	64	1	64	
Mail Room	250	0.5	125	
Archival File Storage	400	0	0	Near loading dock
Copy/Fax	100	1	100	
Net Area Subtotal			289	
Departmental Area (add 30%)			380	
Gross Area (÷.70)			540	
Information Technology/MIS				Added County IT reqts.?
LAN Administrator	80	2	160	in 1 room
Help Desk Staff	64	0	0	
Server Room	200	0.6	120	locked; raised floor; AC; UPS
Computer Equipment Staging & Storage	200	0.6	120	w/bench, power, network
MDF - Main Distribution Frame	300	1	300	OIRM space; includes telecom
MPOE (Main Point of Entry)	100	1	100	
Other Floor LAN Rooms	100	2	200	IDF - intermediate distrib. frame
Net Area Subtotal			1,000	
Departmental Area (add 30%)			1,300	
Gross Area (÷.70)			1,860	
Interpreter Services				
Office Manager/Lead (in shared office)	80	0	0	requires very convenient access to
Staff Workstation	48	0	0	attorney-client interview room
Public Counter/Waiting	80	1	80	
Desk/Carrel	36	1	36	Shared use
Computers	36	1	36	Shared use
File Storage	36	1	36	
Tables & Chairs	150	0.5	75	Shared use
Lounge Seating	150	0.5	75	Shared use
Lockers	40	1	40	
Coffee Counter	20	1	20	
Net Area Subtotal			398	
Departmental Area (add 30%)			520	
Gross Area (÷.70)			740	

Child and Family Justice Center		Phase One Space List		
Space/Component	Unit/ Area Std.	No. of Units	Net Area	Comments
Facilities & Building Support				
Facilities Manager	80	1	80	
Office Assistant	48	1	48	[not in staff projections]
Clean Shop Area	400	0.5	200	locks, HVAC, security, etc.
Dirty Shop Area	600	0.5	300	carp., plumb., weld, etc.
Maintenance Storage	500	0.5	250	
Service Entry/Loading Dock	200	1	200	
Receiving Area	150	1	150	
Supply Clerk	80	0	0	next to loading dock
Mail Screening/Xray	200	1	200	
General Storage	2000	0.5	1,000	
Trash/Compactor	500	0.6	300	
Recycling Sorter/Containers	250	0.6	150	
Maint./Custodial Staff Break Area	200	0.8	160	
Maint./Custodial Staff Toilet/Lockers	150	0.6	90	
Custodial Supplies and Storage	200	1	200	Central
Custodial Closets	60	2	120	1/floor; w/floor sink
Net Area Subtotal			3,448	
Departmental Area (add 30%)			4,480	
Gross Area (÷.70)			6,400	
TOTAL AREA				
Grand Total, Net Area			84,988	
Grand Total, Departmental Area			109,300	% factor varies by area
Building Gross Area (at 70% efficient)			**156,140**	
Courts - Gross Area Per Courtroom			15,614	

SPACE LIST SUMMARY		Dept. Area	Gross Area	
ENTRY AND PUBLIC FACILITIES				
Entry and Public/Staff Support		5,210	7,440	
Public Child Care		1,000	1,430	
Entry Security Screening		1,770	2,530	
FAMILY LAW FUNCTIONS				
Family Court Operations		320	460	
Family Law Courtrooms (and related spaces)		-	0	
Dependency CASA (Court Appointed Special Advocate)		2,240	3,200	
FLIC - Family Law Information Center (Pro Se)		-	0	
JUVENILE COURT				
Juvenile Court Services/Administration		2,040	2,910	
Juvenile Offender Courts		19,940	28,490	
Juvenile Dependency Courts		11,370	16,240	
Becca and Treatment Courts		4,770	6,810	
Family Law CASA (Court Appointed Special Advocate)		-	0	
Juvenile Probation Services Units		8,740	12,490	
Juvenile Treatment Services		3,300	4,710	
Juvenile Court Services/Juvenile Services Division		1,830	2,610	
Adult & Juvenile Detention - Juvenile Division		4,690	6,700	
Alder School (ASD)		8,160	11,660	
OTHER AGENCY SPACE				
Department of Judicial Administration (Clerk)		4,600	6,570	
Law Library		-	0	
Prosecuting Attorney's Office		6,160	8,800	
Public Defender Workspace		1,190	1,700	
Health, Mental Health & Social Services		1,520	2,170	
Childrens Administration & Attorney General		1,440	2,060	
SECURITY				
Security Operations		940	1,340	
In-Custody Holding - Central		3,780	5,400	
SUPPORT FUNCTIONS				
Staff Support		7,610	10,870	
Satellite Administration/Records/Archive		380	540	
Information Technology/MIS		1,300	1,860	
Interpreter Services		520	740	
Facilities & Building Support		4,480	6,400	
TOTALS		**109,300**	**156,130**	

Construction Cost Recap

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ROEN ASSOCIATES

Architect: KMD
Project Name: **KC Youth Services Center Courthouse S5.0**
Project Location: Seattle, Washington

Scenario	Date	Area	Building Cost and SF cost	Site Cost and SF cost	Total ECC today's $
King County Youth Services Center, scenario 5, Option B, today's dollars					
Courts and Office Buildings - 2022	5/14/2010	156,140	$54,536,659	$10,908,386	$65,445,045
			$372.31	$69.86	$419.14
Tunnel A		1,440	$489,365	$27,711	$517,076
			$339.84	$19.24	$359.08
Tunnel B including Technology		1,200	$1,012,996	$22,369	$1,035,365
			$844.16	$18.64	$862.80
Tunnel C, (Allow)		1,440	$489,365	$27,711	$517,076
			$339.84	$19.24	$359.08
Subtotal 2022		160,220	$56,528,385	$10,986,177	$67,514,562
Existing Detention Facility refeed and Technology Backfeed via Tunnel A: $3 m Electrical plus GC mark up		Lump	$4,068,792		$4,068,792
Subtotal, Construction Cost, Courts, Tunnels, Refeed, etc.					$71,583,354
Escalation to midpoint of construction for Courts, Tunnels, etc. 11/2014,, 16.76%, 3.5% per year					$11,997,370
Subtotal, Escalated Construction Cost, Courts, Tunnels, Refeed, etc.					$83,580,724
Parking Garage, 440 Stalls		148,000	$13,560,634	$1,260,472	$14,821,105
Escalation to midpoint of construction for Parking Garage, 10/2012, 8.4%, 3.5% per year					$1,246,455
Subtotal, Escalated Construction Cost, Parking Garage					$16,067,560
Grand Total Escalated Construction Cost, Courts, Tunnels, and Parking Garage					***$99,648,284***
Potential Scope Increase - To Be Determined Next Phase					
Tear down and rebuild existing for phasing (Detention Replacement Building)		7,400	$3,515,000 $475.00		$3,515,000
Escalation to midpoint of construction for Detention Replace Building, 10/2012, 16.76%, 3.5%/yr					$589,114
Subtotal, Escalated Construction Cost, Detention Replacement Building					$4,104,114

NOTE: This estimate is based on the drawings and program associated with Site Alternative B, Project Phase 1. It assumes construction phasing that will allow the Alder Tower to remain occupied until the new Court Building is completed. Site Alternative A is similar enough in scope to Site Alternative B that the same construction costs can be assumed. For Site Alternative C, additional phasing costs would need to be added to the Grand Total Escalated Construction Cost due to increased phasing complexity.

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			Architect:		KMD	General Contractor Markups		
Project Name:	KC Youth Services Center Courthouse S5.0		Duration:		50 mos.	GCCM Specified Gen Conditions:		5.00%
Project Location:	Seattle, WA		GSF at 2022		156,140	Prime Contractor OH+P, Bond		3.50%
Bid Date:	TBD, estimate is in today's dollars	Est Date:	Structured Gross SF		156,140	Est. Contingency - P-D level		20.00%
	ESTIMATE SUMMARY	4/26/2010	Site Square Footage		373900	GC/CM fee, GC/CM bond		4.00%

No.	Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markups	Cost per GSF	% of Total
A10	Substructure	156,140	BLDSF	$7.14	$1,114,507	$1,511,566	$9.68	2.3%
B10	Superstructure	156,140	BLDSF	$43.09	$6,728,738	$9,125,945	$58.45	13.9%
B20	Exterior Closure	156,140	BLDSF	$33.35	$5,206,590	$7,061,511	$45.23	10.8%
B30	Roofing and Skylights	156,140	BLDSF	$5.86	$915,264	$1,241,340	$7.95	1.9%
C10	Interior Construction	156,140	BLDSF	$31.23	$4,876,080	$6,613,252	$42.35	10.1%
C30	Interior Finishes	156,140	BLDSF	$16.04	$2,505,070	$3,397,536	$21.76	5.2%
D10	Conveying Systems	156,140	BLDSF	$2.24	$350,000	$474,692	$3.04	0.7%
D20	Plumbing	156,140	BLDSF	$8.00	$1,249,120	$1,694,136	$10.85	2.6%
D30	HVAC	156,140	BLDSF	$37.52	$5,858,145	$7,945,191	$50.89	12.1%
D40	Fire Protection Systems	156,140	BLDSF	$3.25	$507,455	$688,243	$4.41	1.1%
D50	Electric Power and Lighting and Comm	156,140	BLDSF	$52.28	$8,163,270	$11,071,549	$70.91	16.9%
E10	Equipment	156,140	BLDSF	$9.30	$1,452,310	$1,969,716	$12.62	3.0%
E20	Furnishings	156,140	BLDSF	$0.50	$78,070	$105,884	$0.68	0.2%
F10	LEED, Phasing	156,140	BLDSF	$7.73	$1,206,328	$1,636,100	$10.48	2.5%
F20	Selective Building Demolition	156,140	BLDSF	$0.00	$0	$0	$0.00	0.0%
	Subtotal Building Only				$40,210,946	$54,536,659	$349.28	83.3%
G10	Site Preparation and Building Demolition	373900	SITESF	$7.05	$2,634,406	$3,572,950	$22.88	5.5%
G20	Site Improvements	373900	SITESF	$8.65	$3,234,305	$4,386,571	$28.09	6.7%
G30	Site Civil/Mechanical Utilities	373900	SITESF	$2.20	$824,255	$1,117,907	$7.16	1.7%
G40	Site Electrical	373900	SITESF	$3.61	$1,350,000	$1,830,956	$11.73	2.8%
	Subtotal Sitework				$8,042,966	$10,908,386	$69.86	16.67%
	Grand Total Estimated Cost				***$48,253,913***	***$65,445,045***	$419.14	100.0%

Note the estimate does not include "soft costs" such as design fees, permits, abatement, construction change order contingencies, and loose fixtures or furnishings.

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Foundations							
	Gravity column footings - Courts	217	cy	$435.00	$94,395	$128,025	$0.82	
	Lateral footings - Courts	231	cy	$450.00	$103,950	$140,984	$0.90	
	Basement wall footings - Courts	29	cy	$435.00	$12,615	$17,109	$0.11	
	Slabs on grade 5" Courts	30,445	sf	$5.50	$167,448	$227,103	$1.45	
	Slab subdrain per narrative	30,445	sf	$4.00	$121,780	$165,166	$1.06	
	Elevator pit Courts	2	ea	$25,000.00	$50,000	$67,813	$0.43	
	Basement wallls 14" Courts	9,588	sf	$30.00	$287,640	$390,116	$2.50	
	Waterproof below grade walls Courts	9,588	sf	$4.50	$43,146	$58,517	$0.37	
	Gravity column footings - Office	87	cy	$435.00	$37,845	$51,328	$0.33	
	Lateral footings - Office	144	cy	$450.00	$64,800	$87,886	$0.56	
	Slabs on grade 8" Loading dock aisles	5,128	sf	$7.50	$38,460	$52,162	$0.33	
	Slabs on grade 5" below Office	2,307	sf	$5.50	$12,689	$17,209	$0.11	
	Slab subdrain per narrative	7,435	sf	$4.00	$29,740	$40,335	$0.26	
	Elevator pit Office	2	ea	$25,000.00	$50,000	$67,813	$0.43	
					$0	$0	$0.00	
	Subtotal Foundations	156,140	bldsf	$7.14	$1,114,507	$1,511,566	$9.68	2.3%
	Superstructure							
	Gravity framing - Courts	673	tons	$4,000.00	$2,690,953	$3,649,643	$23.37	
	Lateral framing - Courts	372	tons	$4,000.00	$1,488,000	$2,018,121	$12.93	
	Floor slab on metal deck - Courts	124,984	sf	$6.50	$812,396	$1,101,823	$7.06	
	Roof deck incl penthouse - Courts	30,445	sf	$3.25	$98,946	$134,197	$0.86	
	Gravity framing - Office	131	tons	$4,000.00	$524,000	$710,682	$4.55	
	Lateral framing - Office	72	tons	$4,000.00	$288,000	$390,604	$2.50	
	Floor slab on metal deck - Office	23,074	sf	$6.50	$149,981	$203,414	$1.30	
	Roof deck - Office	7,691	sf	$3.25	$24,996	$33,901	$0.22	

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Lid over holding areas	8,512	sf	$25.00	$212,800	$288,613	$1.85	
	Building circulation stairs - both Courts and Office	12	flights	$18,000.00	$207,665	$281,649	$1.80	
	Hoisting for structural trades	77	day	$3,000.00	$231,000	$313,297	$2.01	
	Subtotal Superstructure	156,140	bldsf	$43.09	$6,728,738	$9,125,945	$58.45	13.9%
	Exterior Closure							
	Walls							
	Exterior opaque walls - Courts	29,239	wallsf	$45.00	$1,315,755	$1,784,511	$11.43	
	Exterior penthouse metal siding - Courts	4,984	wallsf	$15.00	$74,760	$101,394	$0.65	
	Exterior opaque walls - office	15,118	wallsf	$45.00	$680,310	$922,680	$5.91	
	Doors							
	Courts allowance	19	opgs	$2,500.00	$47,500	$64,423	$0.41	
	Office allowance	13	opgs	$2,500.00	$32,500	$44,079	$0.28	
	Windows							
	Exterior glazing Courts	19,493	wallsf	$85.00	$1,656,905	$2,247,201	$14.39	
	Exterior glazing Office	10,079	wallsf	$75.00	$755,925	$1,025,234	$6.57	
	Soffitts, & Overhangs, Signage							
	Louvers	1	allow	$6,500.00	$6,500	$8,816	$0.06	
	Sunshades, daylighting features	29,572	glaz sf	$15.00	$443,580	$601,612	$3.85	
	Soffit finish underside Office 1st floor	7,691	sf	$20.00	$153,820	$208,621	$1.34	
	Signage	156,140	gsf	$0.25	$39,035	$52,942	$0.34	
	Subtotal Exterior Enclosure	156,140	bldsf	$33.35	$5,206,590	$7,061,511	$45.23	10.8%

	DETAILED ESTIMATE		Unit of	Unit	Total Estimated	Estimated Cost	Cost per	% of
No.	Description	Quantity	Measure	Cost	Cost	w/GC Markup	GSF	Total
	Roofing							
	Roofing and insulation Courts	30,445	rfsf	$15.00	$456,675	$619,372	$3.97	
	Skylights allow. Assume custom.	3,653	rfsf	$75.00	$274,005	$371,623	$2.38	
	Roofing and insulation Office	7,691	rfsf	$15.00	$115,365	$156,465	$1.00	
	Skylights allow. Assume custom.	923	rfsf	$75.00	$69,219	$93,879	$0.60	
	Subtotal Roofing	156,140	bldsf	$5.86	$915,264	$1,241,340	$7.95	1.9%
	Interior Construction							
	Entry and Public Facilities							
1	Entry and Public/Staff support	7,440	gsf	$30.00	$223,200	$302,718	$1.94	
2	Public Child Care	1,430	gsf	$25.00	$35,750	$48,486	$0.31	
3	Entry Security Screening	2,530	gsf	$35.00	$88,550	$120,097	$0.77	
	Family Law Functions							
4	Family Court Operations	460	gsf	$30.00	$13,800	$18,716	$0.12	
5	Family Law Courtrooms	0	gsf	$40.00	$0	$0	$0.00	
6	Dependancy CASA	2,840	gsf	$30.00	$85,200	$115,554	$0.74	
7	FLIC Family Law Info Center	0	gsf	$30.00	$0	$0	$0.00	
	Juvenile Court / JC Services							
8	Juvenile Court Services / Admin	3,270	gsf	$25.00	$81,750	$110,875	$0.71	
9	Juvenile Offender Courts	28,490	gsf	$40.00	$1,139,600	$1,545,598	$9.90	
10	Juvenile Dependancy Courts	16,240	gsf	$35.00	$568,400	$770,900	$4.94	
11	Becca and Treatment Courts	6,810	gsf	$35.00	$238,350	$323,266	$2.07	
12	Family Law CASA	0	gsf	$30.00	$0	$0	$0.00	
13	Juvenile Probation Services Units	14,600	gsf	$28.00	$408,800	$554,441	$3.55	
14	Juvenile Treatment Services	4,710	gsf	$30.00	$141,300	$191,640	$1.23	
15	Juvenile Court Services Juvenile Services Division	3,060	gsf	$25.00	$76,500	$103,754	$0.66	
16	Adult & Juvenile Detention - Juvenile Division	7,390	gsf	$35.00	$258,650	$350,798	$2.25	
17	Alder School	11,660	gsf	$28.00	$326,480	$442,793	$2.84	

	DETAILED ESTIMATE		Unit of	Unit	Total Estimated	Estimated Cost	Cost per	% of
No.	Description	Quantity	Measure	Cost	Cost	w/GC Markup	GSF	Total
	Other Agency Space							
18	Department of Judicial Admin (Clerk)	7,030	gsf	$30.00	$210,900	$286,036	$1.83	
19	Law Library	0	gsf	$35.00	$0	$0	$0.00	
20	Prosecuting Attorney's Office	9,090	gsf	$25.00	$227,250	$308,211	$1.97	
21	Public Defender Workspace	2,590	gsf	$25.00	$64,750	$87,818	$0.56	
22	Health, Mental Health and Social Services	2,890	gsf	$25.00	$72,250	$97,990	$0.63	
23	Children's Admin and Attorney General	2,060	gsf	$25.00	$51,500	$69,848	$0.45	
	Security							
24	Security Operations	1,340	gsf	$30.00	$40,200	$54,522	$0.35	
25	In Custody Holding - Central	5,400	gsf	$35.00	$189,000	$256,334	$1.64	
	Support Functions							
26	Staff support	13,440	gsf	$25.00	$336,000	$455,705	$2.92	
27	Satellite Admin / Records / Archive	770	gsf	$25.00	$19,250	$26,108	$0.17	
28	Information Technology / MIS	1,970	gsf	$25.00	$49,250	$66,796	$0.43	
29	Interpreter Services	1,360	gsf	$25.00	$34,000	$46,113	$0.30	
30	Facilities and Building Support	7,270	gsf	$20.00	$145,400	$197,201	$1.26	
31	Reduce Office Areas by 10,000 gsf	-10,000	gsf	$25.00	($250,000)	($339,066)	($2.17)	
	Subtotal Interior Construction	156,140	bldsf	$31.23	$4,876,080	$6,613,252	$42.35	10.1%
	Interior Finishes							
	Entry and Public Facilities							
1	Entry and Public/Staff support	7440	gsf	$12.00	$89,280	$121,087	$0.78	
2	Public Child Care	1430	gsf	$8.00	$11,440	$15,516	$0.10	
3	Entry Security Screening	2530	gsf	$12.00	$30,360	$41,176	$0.26	
	Family Law Functions							
4	Family Court Operations	460	gsf	$10.00	$4,600	$6,239	$0.04	
5	Family Law Courtrooms	0	gsf	$30.00	$0	$0	$0.00	
6	Dependancy CASA	2840	gsf	$12.00	$34,080	$46,221	$0.30	
7	FLIC Family Law Info Center	0	gsf	$12.00	$0	$0	$0.00	

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Juvenile Court / JC Services							
8	Juvenile Court Services / Admin	3270	gsf	$10.00	$32,700	$44,350	$0.28	
9	Juvenile Offender Courts	28490	gsf	$30.00	$854,700	$1,159,199	$7.42	
10	Juvenile Dependancy Courts	16240	gsf	$30.00	$487,200	$660,772	$4.23	
11	Becca and Treatment Courts	6810	gsf	$25.00	$170,250	$230,904	$1.48	
12	Family Law CASA	0	gsf	$12.00	$0	$0	$0.00	
13	Juvenile Probation Services Units	14600	gsf	$10.00	$146,000	$198,015	$1.27	
14	Juvenile Treatment Services	4710	gsf	$10.00	$47,100	$63,880	$0.41	
15	Juvenile Court Services Juvenile Services Division	3060	gsf	$10.00	$30,600	$41,502	$0.27	
16	Adult & Juvenile Detention - Juvenile Division	7390	gsf	$4.00	$29,560	$40,091	$0.26	
17	Alder School	11,660	gsf	$10.00	$116,600	$158,140	$1.01	
	Other Agency Space							
18	Department of Judicial Admin (Clerk)	7030	gsf	$15.00	$105,450	$143,018	$0.92	
19	Law Library	0	gsf	$25.00	$0	$0	$0.00	
20	Prosecuting Attorney's Office	9090	gsf	$10.00	$90,900	$123,284	$0.79	
21	Public Defender Workspace	2590	gsf	$10.00	$25,900	$35,127	$0.22	
22	Health, Mental Health and Social Services	2890	gsf	$10.00	$28,900	$39,196	$0.25	
23	Children's Admin and Attorney General	2060	gsf	$15.00	$30,900	$41,909	$0.27	
	Security							
24	Security Operations	1340	gsf	$10.00	$13,400	$18,174	$0.12	
25	In Custody Holding - Central	5400	gsf	$4.00	$21,600	$29,295	$0.19	
	Support Functions							
26	Staff support	13440	gsf	$10.00	$134,400	$182,282	$1.17	
27	Satellite Admin / Records / Archive	770	gsf	$8.00	$6,160	$8,355	$0.05	
28	Information Technology / MIS	1970	gsf	$8.00	$15,760	$21,375	$0.14	
29	Interpreter Services	1360	gsf	$8.00	$10,880	$14,756	$0.09	
30	Facilities and Building Support	7270	gsf	$5.00	$36,350	$49,300	$0.32	
31	Reduce Office Areas by 10,000 gsf	-10,000	gsf	$10.00	($100,000)	($135,626)	($0.87)	
	Subtotal Interior Finishes	166,140	bldsf	$15.08	$2,505,070	$3,397,536	$21.76	5.2%

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Conveying Systems							
1	Courts - assume 2 each	8	stops	$25,000.00	$200,000	$271,253	$1.74	
2	Office - assume 2 each	6	stops	$25,000.00	$150,000	$203,440	$1.30	
	Subtotal Conveying Systems	156,140	bldsf	$2.24	$350,000	$474,692	$3.04	0.7%
	Plumbing							
	Domestic plumbing system	156,140	gsf	$8.00	$1,249,120	$1,694,136	$10.85	
	Subtotal Plumbing	156,140	sf	$8.00	$1,249,120	$1,694,136	$10.85	2.6%
	HVAC							
	Boilers, Pumps Upsize, Domesitc HW, for Existing Detention	1	ls	$120,000.00	$120,000	$162,752	$1.04	
	Chilled Water System w/ AHU's	156,140	gsf	$18.00	$2,810,520	$3,811,807	$24.41	
	Heating Water System	156,140	gsf	$10.25	$1,600,435	$2,170,612	$13.90	
	Ductwork	156,140	gsf	$8.50	$1,327,190	$1,800,020	$11.53	
	Subtotal HVAC	156,140	bldsf	$37.52	$5,858,145	$7,945,191	$50.89	12.1%
	Firesprinklering							
	Wet pipe system	156,140	gsf	$3.25	$507,455	$688,243	$4.41	
	Subtotal Fire Sprinkler	156,140	bldsf	$3.25	$507,455	$688,243	$4.41	1.1%

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Electrical - See Sparling							
1	Building electrical	156,140	sf	$35.00	$5,464,900	$7,411,847	$47.47	
	Special Data and Security - see Frank Hopkins estimate							
1	Special Data and Security, Low Voltage , cmpl	1	ls	$2,698,369	$2,698,370	$3,659,701	$23.44	
	Subtotal Electrical	156,140	bldsf	$52.28	$8,163,270	$11,071,549	$70.91	16.9%
	Equipment							
	Entry and Public Facilities							
1	Entry and Public/Staff support	7440	gsf	$5.00	$37,200	$50,453	$0.32	
2	Public Child Care	1430	gsf	$5.00	$7,150	$9,697	$0.06	
3	Entry Security Screening	2530	gsf	$30.00	$75,900	$102,940	$0.66	
	Family Law Functions							
4	Family Court Operations	460	gsf	$5.00	$2,300	$3,119	$0.02	
5	Family Law Courtrooms	0	gsf	$15.00	$0	$0	$0.00	
6	Dependancy CASA	2840	gsf	$10.00	$28,400	$38,518	$0.25	
7	FLIC Family Law Info Center	0	gsf	$5.00	$0	$0	$0.00	
	Juvenile Court / JC Services							
8	Juvenile Dependancy Courts	3270	gsf	$15.00	$49,050	$66,525	$0.43	
9	Becca and Treatment Courts	28490	gsf	$15.00	$427,350	$579,599	$3.71	
10	Family Law CASA	16240	gsf	$10.00	$162,400	$220,257	$1.41	
11	Juvenile Probation Services Units	6810	gsf	$5.00	$34,050	$46,181	$0.30	
12	Juvenile Treatment Services	0	gsf	$5.00	$0	$0	$0.00	
13	Juvenile Court Services Juvenile Services Division	14600	gsf	$5.00	$73,000	$99,007	$0.63	
14	Adult & Juvenile Detention - Juvenile Division	4710	gsf	$25.00	$117,750	$159,700	$1.02	
15	Alder School	3060	gsf	$5.00	$15,300	$20,751	$0.13	
16	Other Agency Space	7390	gsf	$5.00	$36,950	$50,114	$0.32	
17	Department of Judicial Admin (Clerk)	11660	gsf	$5.00	$58,300	$79,070	$0.51	

	DETAILED ESTIMATE		Unit of	Unit	Total Estimated	Estimated Cost	Cost per	% of
No.	Description	Quantity	Measure	Cost	Cost	w/GC Markup	GSF	Total
	Other Agency Space							
18	Department of Judicial Admin (Clerk)	7030	gsf	$5.00	$35,150	$47,673	$0.31	
19	Law Library	0	gsf	$15.00	$0	$0	$0.00	
20	Prosecuting Attorney's Office	9090	gsf	$5.00	$45,450	$61,642	$0.39	
21	Public Defender Workspace	2590	gsf	$5.00	$12,950	$17,564	$0.11	
22	Health, Mental Health and Social Services	2890	gsf	$5.00	$14,450	$19,598	$0.13	
23	Children's Admin and Attorney General	2060	gsf	$5.00	$10,300	$13,970	$0.09	
	Security							
24	Security Operations	1340	gsf	$5.00	$6,700	$9,087	$0.06	
25	In Custody Holding - Central	5400	gsf	$25.00	$135,000	$183,096	$1.17	
	Support Functions							
26	Staff support	13440	gsf	$5.00	$67,200	$91,141	$0.58	
27	Satellite Admin / Records / Archive	770	gsf	$15.00	$11,550	$15,665	$0.1	
28	Information Technology / MIS	1970	gsf	$5.00	$9,850	$13,359	$0.09	
29	Interpreter Services	1360	gsf	$5.00	$6,800	$9,223	$0.06	
30	Facilities and Building Support	7270	gsf	$3.00	$21,810	$29,580	$0.19	
31	Reduce Office Areas by 10,000 gsf	-10,000	gsf	$5.00	($50,000)	($67,813)	($0.43)	
	Subtotal Equipment	156,140	bldsf	$9.30	$1,452,310	$1,969,716	$12.62	3.0%
	Furnishings							
1	Window coverings, mats, etc	156,140	gsf	$0.50	$78,070	$105,884	$0.68	
	Subtotal Furnishings	156,140	bldsf	$0.50	$78,070	$105,884	$0.68	0.2%
	Special Construction - LEED							
1	LEEDS Premium	0.0%	percent	$40,210,946	$0	$0	$0.00	
2	Phasing impact	3.0%	percent	$40,210,946	$1,206,328	$1,636,100	$10.48	
	Subtotal Special Construction - LEED	156,140	bldsf	$7.73	$1,206,328	$1,636,100	$10.48	2.5%

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Selective Building Demolition							
1	With phasing allowance	0	gsf	$0.00	$0	$0	$0.00	
	Subtotal Selective Demo	156,140	bldsf	$0.00	$0	$0	$0.00	0.0%
	Site Preparation and Building Demolition							
	Demo of Alder Tower and Alder Wing per R.W. Rhine budget	95000	sf	$6.84	$650,000	$881,572	$5.65	
	Demo of H Building, (Allow)	incl. above				$0	$0.00	
	Haz mat per 2008 budget	95000	sf	$3.68	$350,000	$474,692	$3.04	
	Asphalt Concrete Pavement Removal	14,652	SY	$10.00	$146,520	$198,720	$1.27	
	Concrete Curb Removal	3,467	LF	$5.00	$17,335	$23,511	$0.15	
	Concrete Sidewalk Removal	1,445	SY	$18.00	$26,010	$35,276	$0.23	
	Storm Drain Pipe Removal	1,500	LF	$12.00	$18,000	$24,413	$0.16	
	Storm Drain Manhole Removal	2	EA	$500.00	$1,000	$1,356	$0.01	
	Storm Drain Catch Basin Removal	13	EA	$600.00	$7,800	$10,579	$0.07	
	Sanitary Sewer Manhole Removal	1	EA	$1,200.00	$1,200	$1,628	$0.01	
	Sanitary Sewer Pipe Removal	300	LF	$12.00	$3,600	$4,883	$0.03	
	Remove Tree	30	EA	$200.00	$6,000	$8,138	$0.05	
	Remove Ex Driveway	4	EA	$2,000.00	$8,000	$10,850	$0.07	
	Remove Ex Granite Curb	60	LF	$12.00	$720	$977	$0.01	
	Shoring at courts building	17,736	sf	$45.00	$798,100	$1,082,435	$6.93	
	Temp shoring or underpinning at Alder tower	1	allow	$50,000.00	$50,000	$67,813	$0.43	
	Stripping and haul	2,500	bcy	$15.00	$37,500	$50,860	$0.33	
	Excavate below buildings and stockpile	23,981	bcy	$8.00	$191,848	$260,197	$1.67	
	Site fill at Alder Street Driveway, assume native	10,277	bcy	$5.00	$51,385	$69,692	$0.45	
	Site fill at 13th Ave driveway, assume native	2,000	tcy	$5.00	$10,000	$13,563	$0.09	
	Backfill native at existing Alder basement (2nd move in)	500	tcy	$5.00	$2,500	$3,391	$0.02	
	Haul away remaining spoils	13,204	tcy	$5.00	$66,020	$89,541	$0.57	

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Allowance for imported backfill	1,000	tcy	$35.00	$35,000	$47,469	$0.30	
	Rough grade below new landscape area	0	sf	$1.50	$0	$0	$0.00	
	Fine grade	373,900	sitesf	$0.12	$44,868	$60,853	$0.39	
	Retaining wall allowance	2,000	wallsf	$20.00	$40,000	$54,251	$0.35	
	Construction Stormwater Pollution Prevention Measures	1	ls	$30,000	$30,000	$40,688	$0.26	
	Construction Stormwater Pollution Prevention Maintenance	36	mos	$1,000	$36,000	$48,826	$0.31	
	Construction Fencing - assume with GC's	1	ls	$0	$0	$0	$0.00	
	Tree protection	1	allow	$5,000.00	$5,000	$6,781	$0.04	
	Subtotal Site Preparation and Building Demolition	373,900	sitesf	$7.05	$2,634,406	$3,572,950	$22.88	5.5%
	Site Improvements							
	Roadway							
	Grind & Overlay / Patch - 12th Ave - 1/2 of Roadway	18,250	sqft	$2.50	$45,625	$61,880	$0.40	
	Roadway Patching Allowance - E Remington Ct	596	lnft	$15.00	$8,940	$12,125	$0.08	
	New Roadway - SS Relocation - 14th Ave	7,500	sqft	$15.00	$112,500	$152,580	$0.98	
	Roadway Patching Allowance - 14th Ave	410	lnft	$15.00	$6,150	$8,341	$0.05	
	Roadway Patching Allowance - E Spruce St	596	lnft	$15.00	$8,940	$12,125	$0.08	
	New Roadway @ Utility Crossings - E Remington Ct	3	each	$5,000.00	$15,000	$20,344	$0.13	
	New Roadway @ Curb / Gutter	1,980	sqft	$15.00	$29,700	$40,281	$0.26	
	New Curb @ 12th Ave Improvements	660	lnft	$30.00	$19,800	$26,854	$0.17	
	Repair Curbs & Walks at Demo'd Drives	4	ea	$10,000.00	$40,000	$54,251	$0.35	
	Drive Approaches & Aprons	4	ea	$25,000.00	$100,000	$135,626	$0.87	
	New On-Site Roadway - E Terrace St Extension	17,750	sqft	$15.00	$266,250	$361,105	$2.31	
	New On-Site Roadway - N-S Access from E Remington (2 Each)	4,800	sqft	$15.00	$72,000	$97,651	$0.63	
	Curbs @ Above On-Site Roadways	1,988	lnft	$18.00	$35,784	$48,533	$0.31	

	DETAILED ESTIMATE		Unit of	Unit	Total Estimated	Estimated Cost	Cost per	% of
No.	Description	Quantity	Measure	Cost	Cost	w/GC Markup	GSF	Total
	Site Vehicular Circulation / Streets			$0.00	$0	$0	$0.00	
	Main Entry & Round-about	16,750	sqft	$12.00	$201,000	$272,609	$1.75	
	Special Paving Premium @ Round-about	7,200	sqft	$5.00	$36,000	$48,826	$0.31	
	N-S Drives	4,950	sqft	$12.00	$59,400	$80,562	$0.52	
	E-W Fire Truck Road	2,640	sqft	$12.00	$31,680	$42,966	$0.28	
	E-W Drive	3,300	sqft	$12.00	$39,600	$53,708	$0.34	
	Service Drive / LD	750	sqft	$12.00	$9,000	$12,206	$0.08	
	Curbs @ Above On-Site Streets	2,142	lnft	$18.00	$38,556	$52,292	$0.33	
	Roadway Apputenances - Traffiffic Signage / Striping, Etc. (Off & On Site)	1	lsum	$7,500.00	$7,500	$10,172	$0.07	
	BLANK			$0.00	$0	$0	$0.00	
	Parking Lot			$0.00	$0	$0	$0.00	
	BLANK			$0.00	$0	$0	$0.00	
	Pedestrian Paving			$0.00	$0	$0	$0.00	
	12ft w COS Sidewalk along 12th Ave	8,040	sqft	$5.00	$40,200	$54,522	$0.35	
	Street Frontage / Perimeter Improvements - COS Sidewalks; Curbs; Etc.	476	lnft	$100.00	$47,550	$64,490	$0.41	
	ADA Ramps @ Intersection (Both sides of Street)	2	each	$10,000.00	$20,000	$27,125	$0.17	
	On-Site Walks - Entry Plaza / Main Circulation	24,500	sqft	$8.00	$196,000	$265,828	$1.70	
	On-Site Walks - Sidewalks	5,500	sqft	$8.00	$44,000	$59,676	$0.38	
	On-Site Walks - "Open Space" Sidewalks / Paths	7,100	sqft	$8.00	$56,800	$77,036	$0.49	
	Site Development			$0.00	$0	$0	$0.00	
	Canopy @ Round-about Drop-off	110	lnft	$1,600.00	$176,000	$238,702	$1.53	
	12ft H Arch Fence Housing "Yard"	250	lnft	$150.00	$37,500	$50,860	$0.33	
	Flagpoles	3	ea	$5,000.00	$15,000	$20,344	$0.13	
	Misc Hardscape Allowance	1	lsum	$150,000.00	$150,000	$203,440	$1.30	
	Site Furnishings Allowance	1	lsum	$350,000.00	$350,000	$474,692	$3.04	
	Site Signage / Monument Sign / Wayfinding	1	lsum	$15,000.00	$15,000	$20,344	$0.13	
	BLANK			$0.00	$0	$0	$0.00	

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Landscaping			$0.00	$0	$0	$0.00	
	Landscape - "Open Space"	33,250	sqft	$6.00	$199,500	$270,575	$1.73	
	Landscape - "Public Development" Sites	76,500	sqft	$2.00	$153,000	$207,508	$1.33	
	Landscape - On Site	56,500	sqft	$4.50	$254,250	$344,830	$2.21	
	Landscape - Street Frontage	2,372	lnft	$15.00	$35,580	$48,256	$0.31	
	Landscape - Street Trees - 12th Ave	30	each	$1,500.00	$45,000	$61,032	$0.39	
6	Landscape - Street Trees - Infill @ E Spruce & 14th Ave	27	each	$1,500.00	$40,500	$54,929	$0.35	
7	Landscape - Site Trees w/Planters	60	each	$2,000.00	$120,000	$162,752	$1.04	
	Landscape - Site Trees in LS / Planting Strip	110	each	$500.00	$55,000	$74,595	$0.48	
	Subtotal Site Improvements	373900	sitesf	$8.65	$3,234,305	$4,386,571	$28.09	6.7%
	Site Civil/Mechanical Utilities							
	Storm Drainage							
	Storm Drain Manhole Type 200	7	EA	$3,500.00	$24,500	$33,228	$0.21	
	Storm Drain Catchbasin	19	EA	$1,800.00	$34,200	$46,384	$0.30	
	8" PVC or HDPE Storm Drain Pipe	200	LF	$35.00	$7,000	$9,494	$0.06	
	10" PVC or HDPE Storm Drain Pipe	200	LF	$40.00	$8,000	$10,850	$0.07	
	12" PVC or HDPE Storm Drain Pipe	653	LF	$45.00	$29,385	$39,854	$0.26	
	15" PVC or HDPE Storm Drain Pipe	500	LF	$50.00	$25,000	$33,907	$0.22	
	18" PVC or HDPE Storm Drain Pipe	170	LF	$60.00	$10,200	$13,834	$0.09	
	6' CMP Detention Pipe	400	L	$290.00	$116,000	$157,327	$1.01	
	Type 204 Detention Manhole	3	EA	$14,000.00	$42,000	$56,963	$0.36	
	4" Schedule 40 PVC Perforated footing drain	3450	LF	$28.00	$96,600	$131,015	$0.84	
	Footing Drain Pump Station	2	EA	$15,000	$30,000	$40,688	$0.26	
	Miradrain Wall Drainage	2,000	SY	$18	$36,000	$48,826	$0.31	
	Restore subdrainage at exist dentention housing	1	ls	$20,000	$20,000	$27,125	$0.17	
	Tie ins to existing storm system	2	ea	$2,500	$5,000	$6,781	$0.04	

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Sanitary Sewer							
	Sewer Manhole Type 200	4	EA	$3,800.00	$15,200	$20,615	$0.13	
	Sewer Manhole Type 204	2	EA	$4,800.00	$9,600	$13,020	$0.08	
	6" PVC Sewer Pipe	312	LF	$55.00	$17,160	$23,273	$0.15	
	8" PVC Sewer Pipe	390	LF	$60.00	$23,400	$31,737	$0.20	
	18" PVC Sewer Pipe	320	LF	$120.00	$38,400	$52,081	$0.33	
	21" PVC Sewer Pipe (in street)	280	LF	$190.00	$53,200	$72,153	$0.46	
	Water							
	6" DI Water Pipe	534	LF	$60.00	$32,040	$43,455	$0.28	
	8" DI Water Pipe	626	LF	$70.00	$43,820	$59,431	$0.38	
	6" Domestic Water Meter	1	EA	$8,000.00	$8,000	$10,850	$0.07	
	8" Fire Protection Detector Check	1	EA	$12,000.00	$12,000	$16,275	$0.10	
	Fire Hydrant	4	EA	$3,800.00	$15,200	$20,615	$0.13	
	PIV	6	EA	$1,200.00	$7,200	$9,765	$0.06	
	FDC	6	EA	$2,400.00	$14,400	$19,530	$0.13	
	Steam							
	Re-feed 2 ea 6" HP steam lines from 12th Ave	1	ls	$30,000.00	$30,000	$40,688	$0.26	
	Gas							
	Site gas distribution	830	lf	$25.00	$20,750	$28,142	$0.18	
	Subtotal Site Civil/Mechanical Utilities	373,900	sitesf	$2.20	$824,255	$1,117,907	$7.16	1.7%

	DETAILED ESTIMATE		Unit of	Unit	Total Estimated	Estimated Cost	Cost per	% of
No.	Description	Quantity	Measure	Cost	Cost	w/GC Markup	GSF	Total
	Site Electrical - see Sparling							
	Generators - see below	0	ls	below	$0	$0	$0.00	
	Gear to parallel the generators -below	0	ls	below	$0	$0	$0.00	
	Site Lighting	1	ls	$250,000	$250,000	$339,066	$2.17	
	Seattle City Light Feeds- Half By Owner	1	ls	$500,000	$500,000	$678,132	$4.34	
	Technology Service Feeds	1	ls	$100,000	$100,000	$135,626	$0.87	
	Technology (public notification, wireless)	1	ls	$500,000	$500,000	$678,132	$4.34	
	444-LA Communication Vault per kpff	6	EA	above	$0	$0	$0.00	
	844-LA Power Vault per kpff	4	EA	above	$0	$0	$0.00	
	816 Power Vault per kpff	2	EA	above	$0	$0	$0.00	
	4" Com conduit per kpff	1,660	LF	above	$0	$0	$0.00	
	6" Power Conduit per kpff	1,660	LF	above	$0	$0	$0.00	
	Subtotal Site Electrical	373900	sitesf	$3.61	$1,350,000	$1,830,956	$11.73	2.8%

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Project Name: **KC Youth Services Center Courthouse S5.0**
Project Location: Seattle, WA
Bid Date: TBD, estimate is in today's dollars
ESTIMATE SUMMARY

Est Date: 4/12/2010

Architect:	KMD
Duration:	See phasing plan
GSF at 2032	148,000
Structured Gross SF	148,000
Site Square Footage	23668

General Contractor Markups	
GCCM Specified Gen Conditions:	5.00%
Prime Contractor OH+P, Bond	3.50%
Est. Contingency - P-D level	20.00%
GC/CM fee, GC/CM bond	4.00%

No.	Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markups	Cost per GSF	% of Total
A10	Substructure	148,000	BLDSF	$8.32	$1,232,064	$1,671,004	$11.29	11.3%
B10	Superstructure	148,000	BLDSF	$22.45	$3,322,497	$4,506,183	$30.45	30.4%
B20	Exterior Closure	148,000	BLDSF	$11.64	$1,722,960	$2,336,789	$15.79	15.8%
B30	Roofing	148,000	BLDSF	$4.70	$696,000	$943,960	$6.38	6.4%
C10	Interior Construction	148,000	BLDSF	$2.50	$370,000	$501,818	$3.39	3.4%
C30	Interior Finishes	148,000	BLDSF	$1.50	$222,000	$301,091	$2.03	2.0%
D10	Conveying Systems	148,000	BLDSF	$1.18	$175,000	$237,346	$1.60	1.6%
D20	Plumbing	148,000	BLDSF	$2.25	$333,000	$451,636	$3.05	3.0%
D30	HVAC	148,000	BLDSF	$3.12	$462,000	$626,594	$4.23	4.2%
D40	Fire Protection	148,000	BLDSF	$2.00	$296,000	$401,454	$2.71	2.7%
D50	Electrical	148,000	BLDSF	$6.76	$1,000,000	$1,356,264	$9.16	9.2%
D55	Low Voltage Systems	148,000	BLDSF	$0.78	$115,000	$155,970	$1.05	1.1%
E10	Equipment	148,000	BLDSF	$0.25	$37,000	$50,182	$0.34	0.3%
E20	Furnishings	148,000	BLDSF	$0.00	$0	$0	$0.00	0.0%
F10	Special Construction	148,000	BLDSF	$0.10	$15,000	$20,344	$0.14	0.1%
	Subtotal Building Only				$9,998,521	$13,560,634	$91.63	91.5%
G10	Site Preparation	23,668	SITESF		$929,370	$1,260,472	$8.52	8.5%
G20	Site Improvements	23,668	SITESF		$0	$0	$0.00	0.0%
G30	Site Civil/Mechanical Utilities	23,668	SITESF		$0	$0	$0.00	0.0%
G40	Site Electrical	23,668	SITESF		$0	$0	$0.00	0.0%
	Subtotal Sitework				$929,370	$1,260,472	$8.52	8.50%
	Grand Total Estimated Cost				***$10,927,891***	***$14,821,105***	$100.14	100.0%
	Cost per stall (440)					***$33,684***		

Note the estimate does not include "soft costs" such as design fees, permits, abatement, construction change order contingencies, and loose fixtures or furnishings.

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
1	**Substructure**							
	Gravity column footings	365	cy	$435.00	$158,688	$215,223		
	Moment frame footings	256	cy	$450.00	$115,200	$156,242		
	Basement wall footings	44	cy	$435.00	$19,256	$26,116		
	Slabs & Ramps On Grade 5"	48,000	sf	$5.50	$264,000	$358,054		
	Slab subdrain per narrative	48,000	sf	$4.00	$192,000	$260,403		
	Elevator pit	1	ea	$25,000.00	$25,000	$33,907		
	Basement wallls 10"	17,280	sf	$22.00	$380,160	$515,597		
	Waterproof below grade walls	17,280	sf	$4.50	$77,760	$105,463		
	Subtotal Foundations	148,000	bldsf		$1,232,064	$1,671,004	$11.29	11.3%
2	**Superstructure**							
	Elevevated PT slab 7"	96,000	sf	$17.43	$1,673,651	$2,269,913		
	Gravity beams PT	754	cy	$850.00	$641,198	$869,633		
	Gravity girders mild	100	cy	$750.00	$74,673	$101,276		
	Moment frame beams mild	318	cy	$750.00	$238,145	$322,988		
	Gravity columns	129	cy	$1,000.00	$129,164	$175,180		
	Moment frame columns	263	cy	$1,500.00	$394,667	$535,272		
	Roof Structure Over Stairs / Elevator	2,000	sf	$15.50	$31,000	$42,044		
	Steel Stairs, Switchback, Complete	14	flts	$10,000.00	$140,000	$189,877		
	Subtotal Superstructure	148,000	bldsf		$3,322,497	$4,506,183	$30.45	30.4%
3	**Exterior Closure**							
	Overhead Entrance Coiling doors	2	ea	$35,000.00	$70,000	$94,938		
	Control arms and readers	2	ea	$10,000.00	$20,000	$27,125		
	Precast and brick at above grade 50% of area	20,160	sf	$80.00	$1,612,800	$2,187,383		
	Sealants	20,160	sf	$1.00	$20,160	$27,342		
	Subtotal Exterior Enclosure	148,000	bldsf		$1,722,960	$2,336,789	$15.79	15.8%

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
4	**Roofing**							
	Roofing Over Stairs / Elevator	2,000	sf	$12.00	$24,000	$32,550		
	Waterproof membrane at top level	24,000	sf	$8.00	$192,000	$260,403		
	Membrane, Drainage, Wear Surface at Plaza	24,000	sf	$20.00	$480,000	$651,007		
	Subtotal Roofing	148,000	bldsf		$696,000	$943,960	$6.38	6.4%
5	**Interior Construction**							
	Interior partitions at stairs elevator MEP	148,000	gsf	$0.75	$111,000	$150,545		
	Cable rails, guardrails	148,000	gsf	$1.25	$185,000	$250,909		
	Miscellaneous Specialties and signage	148,000	sf	$0.50	$74,000	$100,364		
	Subtotal Interior Construction	148,000	bldsf	$2.50	$370,000	$501,818	$3.39	3.4%
6	**Interior Finishes**							
	Floor sealer and wall painting	148,000	sf	$1.50	$222,000	$301,091		
	Subtotal Interior Finishes	148,000	bldsf		$222,000	$301,091	$2.03	2.0%
7	**Conveying Systems**							
	Elevator, 7-Stop, Hydraulic	7	stop	$25,000.00	$175,000	$237,346		
	Subtotal Conveying Systems	148,000	bldsf		$175,000	$237,346	$1.60	1.6%
8	**Plumbing (Glumac)**							
	Plumbing	148,000	sf	$2.25	$333,000	$451,636		
	Subtotal Plumbing	148,000	bldsf		$333,000	$451,636	$3.05	3.0%

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
9	**HVAC**							
	HVAC, ventilate P1 to P3	84,000	sf	$5.50	$462,000	$626,594		
	Subtotal HVAC	148,000	bldsf		$462,000	$626,594	$4.23	4.2%
10	**Fire Protection**							
	Fire Protection	148,000	sf	$2.00	$296,000	$401,454		
	Subtotal Fire Protection	148,000	bldsf		$296,000	$401,454	$2.71	2.7%
11	**Electrical (Sparling)**							
	Electrical Service and Distribution	148,000	sf	$3.38	$500,000	$678,132		
	Lighting and Branch Wiring	148,000	sf	$3.38	$500,000	$678,132		
	Subtotal Electrical	148,000	bldsf		$1,000,000	$1,356,264	$9.16	9.2%
12	**Low Voltage Systems (Sparling)**							
	Teledata	1	ls	$100,000.00	$100,000	$135,626		
	Security per Frank Hopkins	1	ls	$15,000.00	$15,000	$20,344		
	Subtotal Low Voltage Systems	148,000	bldsf		$115,000	$155,970	$1.05	1.1%
13	**Equipment**							
	Miscellaneous Equipment	148,000	bldsf	$0.25	$37,000	$50,182		
	Subtotal Equipment	148,000	bldsf		$37,000	$50,182	$0.34	0.3%
14	**Furnishings**							
	(no work anticipated)				$0	$0		
	Subtotal Furnishings	148,000	bldsf		$0	$0	$0.00	0.0%

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
15	**Special Construction**							
	Exit kiosk structure - pre fab	1	ea allow	$15,000.00	$15,000	$20,344		
	Subtotal Special Construction	148,000	bldsf		$15,000	$20,344	$0.14	0.1%
16	**Site Prep & Demolition**							
	Shoring for below grade walls	11376	wlsf	$45.00	$511,920	$694,299		
	Granular backfill at below grade walls	1,250	cy	$35.00	$43,750	$59,337		
	Excavate for garage structure and haul	28,200	cy	$13.00	$366,600	$497,206		
	Fine Grading	23,668	sf	$0.30	$7,100	$9,630		
	Subtotal Site Preparation	148,000	bldsf		$929,370	$1,260,472	$8.52	8.5%
17	**Site Improvements - see site estimate**							
	Subtotal Site Improvements	148,000	bldsf		$0	$0	$0.00	0.0%
18	**Site Civil/Mechanical Utilities - see site estimate**							
	Subtotal Site Civil/Mechanical Utilities	148,000	bldsf		$0	$0	$0.00	0.0%
19	**Site Electrical - see site estimate**							
	Subtotal Site Electrical	148,000	bldsf		$0	$0	$0.00	0.0%

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Project Name: **KC Youth Services Center Courthouse S5.0**
Project Location: Seattle, WA
Bid Date: TBD, estimate is in today's dollars
Est Date: 4/12/2010

Architect: KMD
Duration: See phasing plan
GSF at 2032: 1,440
Structured Gross SF: 1,440
Site Square Footage: 1440

General Contractor Markups	
GCCM Specified Gen Conditions:	5.00%
Prime Contractor OH+P, Bond	3.50%
Est. Contingency - P-D level	20.00%
GC/CM fee, GC/CM bond	4.00%

ESTIMATE SUMMARY

No.	Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markups	Cost per GSF	% of Total
A10	Substructure	1,440	BLDSF	$59.40	$85,538	$116,012	$80.56	22.4%
B10	Superstructure	1,440	BLDSF	$23.00	$33,120	$44,919	$31.19	8.7%
B20	Exterior Closure	1,440	BLDSF	$0.00	$0	$0	$0.00	0.0%
B30	Roofing	1,440	BLDSF	$4.50	$6,480	$8,789	$6.10	1.7%
C10	Interior Construction	1,440	BLDSF	$6.94	$10,000	$13,563	$9.42	2.6%
C30	Interior Finishes	1,440	BLDSF	$3.83	$5,520	$7,487	$5.20	1.4%
D10	Conveying Systems	1,440	BLDSF	$0.00	$0	$0	$0.00	0.0%
D20	Plumbing	1,440	BLDSF	$2.25	$3,240	$4,394	$3.05	0.8%
D30	HVAC	1,440	BLDSF	$9.50	$13,680	$18,554	$12.88	3.6%
D40	Fire Protection	1,440	BLDSF	$2.25	$3,240	$4,394	$3.05	0.8%
D50	Electrical	1,440	BLDSF	$138.89	$200,000	$271,253	$188.37	52.5%
D55	Low Voltage Systems	1,440	BLDSF	$0.00	$0	$0	$0.00	0.0%
E10	Equipment	1,440	BLDSF	$0.00	$0	$0	$0.00	0.0%
E20	Furnishings	1,440	BLDSF	$0.00	$0	$0	$0.00	0.0%
F10	Special Construction	1,440	BLDSF	$0.00	$0	$0	$0.00	0.0%
	Subtotal Building Only				$360,818	$489,365	$339.84	94.6%
G10	Site Preparation	1,440	SITESF		$20,432	$27,711	$19.24	5.4%
G20	Site Improvements	1,440	SITESF		$0	$0	$0.00	0.0%
G30	Site Civil/Mechanical Utilities	1,440	SITESF		$0	$0	$0.00	0.0%
G40	Site Electrical	1,440	SITESF		$0	$0	$0.00	0.0%
	Subtotal Sitework				$20,432	$27,711	$19.24	5.36%
	Grand Total Estimated Cost				***$381,250***	***$517,076***	$359.08	100.0%

Note the estimate does not include "soft costs" such as design fees, permits, abatement, construction change order contingencies, and loose fixtures or furnishings.

	DETAILED ESTIMATE		Unit of	Unit	Total Estimated	Estimated Cost	Cost per	% of
No.	Description	Quantity	Measure	Cost	Cost	w/GC Markup	GSF	Total
1	**Substructure**							
	Tunnel wall footings	7	cy	$485.00	$3,578	$4,853		
	Slab On Grade 5"	1,440	sf	$7.00	$10,080	$13,671		
	Slab subdrain per narrative	1,440	sf	$5.00	$7,200	$9,765		
	Tunnel wallls 8"	2,640	sf	$20.00	$52,800	$71,611		
	Waterproof below grade walls	2,640	sf	$4.50	$11,880	$16,112		
	Subtotal Foundations	1,440	bldsf		$85,538	$116,012	$80.56	22.4%
2	**Superstructure**							
	Tunnel lid 10" CIP conc	1,440	sf	$23.00	$33,120	$44,919		
	Subtotal Superstructure	1,440	bldsf		$33,120	$44,919	$31.19	8.7%
3	**Exterior Closure**							
	Subtotal Exterior Enclosure	1,440	bldsf		$0	$0	$0.00	0.0%
4	**Roofing**							
	Waterproof tunnel lid	1,440	sf	$4.50	$6,480	$8,789		
	Subtotal Roofing	1,440	bldsf		$6,480	$8,789	$6.10	1.7%
5	**Interior Construction**							
	Allowance to connect to each end	2	allow	$5,000.00	$10,000	$13,563		
	Subtotal Interior Construction	1,440	bldsf	$6.94	$10,000	$13,563	$9.42	2.6%

	DETAILED ESTIMATE		Unit of	Unit	Total Estimated	Estimated Cost	Cost per	% of
No.	Description	Quantity	Measure	Cost	Cost	w/GC Markup	GSF	Total
6	**Interior Finishes**							
	Floor sealer and wall and lid painting	5,520	sf	$1.00	$5,520	$7,487		
	Subtotal Interior Finishes	1,440	bldsf		$5,520	$7,487	$5.20	1.4%
7	**Conveying Systems**							
	Subtotal Conveying Systems	1,440	bldsf		$0	$0	$0.00	0.0%
8	**Plumbing (Glumac)**							
	Plumbing	1,440	sf	$2.25	$3,240	$4,394		
	Subtotal Plumbing	1,440	bldsf		$3,240	$4,394	$3.05	0.8%
9	**HVAC (Glumac)**							
	HVAC	1,440	sf	$9.50	$13,680	$18,554		
	Hydronics between detention and courts building	1,440	sf		$0	$0		
	Subtotal HVAC	1,440	bldsf		$13,680	$18,554	$12.88	3.6%
10	**Fire Protection (Glumac)**							
	Fire Protection	1,440	sf	$2.25	$3,240	$4,394		
	Subtotal Fire Protection	1,440	bldsf		$3,240	$4,394	$3.05	0.8%
	Glumac total	1,440	gsf	$14.00	$20,160			
11	**Electrical (Sparling)**							
	Electrical Service and Distribution	1,440	sf	$138.89	$200,000	$271,253		
	Subtotal Electrical	1,440	bldsf		$200,000	$271,253	$188.37	52.5%

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
12	**Low Voltage Systems (Sparling)**							
	Technology (back-feed from new facility to detention facility) - see recap sheet	1,440	sf	$0.00	$0	$0		
	Subtotal Low Voltage Systems	1,440	bldsf		$0	$0	$0.00	0.0%
13	**Equipment**							
	Miscellaneous Equipment	1,440	bldsf	$0.00	$0	$0		
	Subtotal Equipment	1,440	bldsf		$0	$0	$0.00	0.0%
14	**Furnishings**							
	(no work anticipated)				$0	$0		
	Subtotal Furnishings	1,440	bldsf		$0	$0	$0.00	0.0%
15	**Special Construction**							
	(no work anticipated)				$0	$0		
	Subtotal Special Construction	1,440	bldsf		$0	$0	$0.00	0.0%
16	**Site Prep & Demolition**							
	Shoring - assume lay back	0	wlsf	$0.00	$0	$0		
	Excavate for tunnel and haul	1,244	cy	$13.00	$16,178	$21,941		
	Backfill walls with native	764	cy	$5.00	$3,822	$5,184		
	Fine Grading	1,440	sf	$0.30	$432	$586		
	Subtotal Site Preparation	1,440	bldsf		$20,432	$27,711	$19.24	5.4%

	DETAILED ESTIMATE		Unit of	Unit	Total Estimated	Estimated Cost	Cost per	% of
No.	Description	Quantity	Measure	Cost	Cost	w/GC Markup	GSF	Total
17	**Site Improvements - see site estimate**							
	Subtotal Site Improvements	1,440	bldsf		$0	$0	$0.00	0.0%
18	**Site Civil/Mechanical Utilities - see site estimate**							
	Subtotal Site Civil/Mechanical Utilities	1,440	bldsf		$0	$0	$0.00	0.0%
19	**Site Electrical - see site estimate**							
	Subtotal Site Electrical	1,440	bldsf		$0	$0	$0.00	0.0%

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Project Name: **KC Youth Services Center Courthouse S5.0**
Project Location: Seattle, WA
Bid Date: TBD, estimate is in today's dollars
Est Date: 4/12/2010

ESTIMATE SUMMARY

Architect:	KMD
Duration:	See phasing plan
GSF at 2032	1,200
Structured Gross SF	1,200
Site Square Footage	1200

General Contractor Markups	
GCCM Specified Gen Conditions:	5.00%
Prime Contractor OH+P, Bond	3.50%
Est. Contingency - P-D level	20.00%
GC/CM fee, GC/CM bond	4.00%

No.	Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markups	Cost per GSF	% of Total
A10	Substructure	1,200	BLDSF	$68.38	$82,062	$111,298	$92.75	10.7%
B10	Superstructure	1,200	BLDSF	$23.00	$27,600	$37,433	$31.19	3.6%
B20	Exterior Closure	1,200	BLDSF	$0.00	$0	$0	$0.00	0.0%
B30	Roofing	1,200	BLDSF	$4.50	$5,400	$7,324	$6.10	0.7%
C10	Interior Construction	1,200	BLDSF	$8.33	$10,000	$13,563	$11.30	1.3%
C30	Interior Finishes	1,200	BLDSF	$4.20	$5,040	$6,836	$5.70	0.7%
D10	Conveying Systems	1,200	BLDSF	$0.00	$0	$0	$0.00	0.0%
D20	Plumbing	1,200	BLDSF	$2.25	$2,700	$3,662	$3.05	0.4%
D30	HVAC	1,200	BLDSF	$9.50	$11,400	$15,461	$12.88	1.5%
D40	Fire Protection	1,200	BLDSF	$2.25	$2,700	$3,662	$3.05	0.4%
D50	Electrical	1,200	BLDSF	$416.67	$500,000	$678,132	$565.11	65.5%
D55	Low Voltage Systems	1,200	BLDSF	$83.33	$100,000	$135,626	$113.02	13.1%
E10	Equipment	1,200	BLDSF	$0.00	$0	$0	$0.00	0.0%
E20	Furnishings	1,200	BLDSF	$0.00	$0	$0	$0.00	0.0%
F10	Special Construction	1,200	BLDSF	$0.00	$0	$0	$0.00	0.0%
	Subtotal Building Only				$746,902	$1,012,996	$844.16	97.8%
G10	Site Preparation	1,200	SITESF		$16,493	$22,369	$18.64	2.2%
G20	Site Improvements	1,200	SITESF		$0	$0	$0.00	0.0%
G30	Site Civil/Mechanical Utilities	1,200	SITESF		$0	$0	$0.00	0.0%
G40	Site Electrical	1,200	SITESF		$0	$0	$0.00	0.0%
	Subtotal Sitework				$16,493	$22,369	$18.64	2.16%
	Grand Total Estimated Cost				***$763,395***	***$1,035,365***	$862.80	100.0%

Note the estimate does not include "soft costs" such as design fees, permits, abatement, construction change order contingencies, and loose fixtures or furnishings.

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
1	**Substructure**							
	Tunnel wall footings	6	cy	$485.00	$2,982	$4,044		
	Slab On Grade 5"	1,200	sf	$7.00	$8,400	$11,393		
	Slab subdrain per narrative	1,200	sf	$5.00	$6,000	$8,138		
	Tunnel wallls 8"	2,640	sf	$20.00	$52,800	$71,611		
	Waterproof below grade walls	2,640	sf	$4.50	$11,880	$16,112		
	Subtotal Foundations	1,200	bldsf		$82,062	$111,298	$92.75	10.7%
2	**Superstructure**							
	Tunnel lid 10" CIP conc	1,200	sf	$23.00	$27,600	$37,433		
	Subtotal Superstructure	1,200	bldsf		$27,600	$37,433	$31.19	3.6%
3	**Exterior Closure**							
	Subtotal Exterior Enclosure	1,200	bldsf		$0	$0	$0.00	0.0%
4	**Roofing**							
	Waterproof tunnel lid	1,200	sf	$4.50	$5,400	$7,324		
	Subtotal Roofing	1,200	bldsf		$5,400	$7,324	$6.10	0.7%
5	**Interior Construction**							
	Allowance to connect to each end	2	allow	$5,000.00	$10,000	$13,563		
	Subtotal Interior Construction	1,200	bldsf	$8.33	$10,000	$13,563	$11.30	1.3%
6	**Interior Finishes**							
	Floor sealer and wall and lid painting	5,040	sf	$1.00	$5,040	$6,836		
	Subtotal Interior Finishes	1,200	bldsf		$5,040	$6,836	$5.70	0.7%

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
7	**Conveying Systems**							
	Subtotal Conveying Systems	1,200	bldsf		$0	$0	$0.00	0.0%
8	**Plumbing (Glumac)**							
	Plumbing	1,200	sf	$2.25	$2,700	$3,662		
	Subtotal Plumbing	1,200	bldsf		$2,700	$3,662	$3.05	0.4%
9	**HVAC (Glumac)**							
	HVAC	1,200	sf	$9.50	$11,400	$15,461		
	Subtotal HVAC	1,200	bldsf		$11,400	$15,461	$12.88	1.5%
10	**Fire Protection (Glumac)**							
	Fire Protection	1,200	sf	$2.25	$2,700	$3,662		
	Subtotal Fire Protection	1,200	bldsf		$2,700	$3,662	$3.05	0.4%
	Glumac total	1,200	gsf	$14.00	$16,800			
11	**Electrical (Sparling)**							
	Electrical (feed garage from Courthouse electrical system)	1,200	sf	$416.67	$500,000	$678,132		
	Subtotal Electrical	1,200	bldsf		$500,000	$678,132	$565.11	65.5%
12	**Low Voltage Systems (Sparling)**							
	Technology (security w/i tunnel plus head-end connections)	1,200	sf	$83.33	$100,000	$135,626		
	Subtotal Low Voltage Systems	1,200	bldsf		$100,000	$135,626	$113.02	13.1%

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
13	**Equipment**							
	Miscellaneous Equipment	1,200	bldsf	$0.00	$0	$0		
	Subtotal Equipment	1,200	bldsf		$0	$0	$0.00	0.0%
14	**Furnishings**							
	(no work anticipated)				$0	$0		
	Subtotal Furnishings	1,200	bldsf		$0	$0	$0.00	0.0%
15	**Special Construction**							
	(no work anticipated)				$0	$0		
	Subtotal Special Construction	1,200	bldsf		$0	$0	$0.00	0.0%
16	**Site Prep & Demolition**							
	Shoring - assume lay back	0	wlsf	$0.00	$0	$0		
	Excavate for tunnel and haul	1,037	cy	$13.00	$13,481	$18,284		
	Backfill walls with native	530	cy	$5.00	$2,652	$3,597		
	Fine Grading	1,200	sf	$0.30	$360	$488		
	Subtotal Site Preparation	1,200	bldsf		$16,493	$22,369	$18.64	2.2%
17	**Site Improvements - see site estimate**							
	Subtotal Site Improvements	1,200	bldsf		$0	$0	$0.00	0.0%

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
18	**Site Civil/Mechanical Utilities - see site estimate**							
	Subtotal Site Civil/Mechanical Utilities	1,200	bldsf		$0	$0	$0.00	0.0%
19	**Site Electrical - see site estimate**							
	Subtotal Site Electrical	1,200	bldsf		$0	$0	$0.00	0.0%

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Architect: KMD
Project Name: **KC Youth Services Center Courthouse S5.0**
Duration: 50 mos.
Project Location: Seattle, WA
GSF at 2032 1
Bid Date: TBD, estimate is in today's dollars
Est Date: Structured Gross SF 1
ESTIMATE SUMMARY
4/13/2010
Site Square Footage 1

General Contractor Markups	
GCCM Specified Gen Conditions:	5.00%
Prime Contractor OH+P, Bond	3.50%
Est. Contingency - P-D level	20.00%
GC/CM fee, GC/CM bond	4.00%

No.	Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markups	Cost per GSF	% of Total
A10	Substructure	1	BLDSF	$0.00	$0.00	$0.00	$0.00	0.0%
B10	Superstructure	1	BLDSF	$0.00	$0.00	$0.00	$0.00	0.0%
B20	Exterior Closure	1	BLDSF	$0.00	$0.00	$0.00	$0.00	0.0%
B30	Roofing and Skylights	1	BLDSF	$0.00	$0.00	$0.00	$0.00	0.0%
C10	Interior Construction	1	BLDSF	$25.00	$25.00	$33.91	$33.91	35.7%
C30	Interior Finishes	1	BLDSF	$10.00	$10.00	$13.56	$13.56	14.3%
D10	Conveying Systems	1	BLDSF	$0.00	$0.00	$0.00	$0.00	0.0%
D20	Plumbing	1	BLDSF	$3.00	$3.00	$4.07	$4.07	4.3%
D30	HVAC	1	BLDSF	$6.00	$6.00	$8.14	$8.14	8.6%
D40	Fire Protection Systems	1	BLDSF	$1.00	$1.00	$1.36	$1.36	1.4%
D50	Electric Power and Lighting and Comm	1	BLDSF	$14.00	$14.00	$18.99	$18.99	20.0%
E10	Equipment	1	BLDSF	$5.00	$5.00	$6.78	$6.78	7.1%
E20	Furnishings	1	BLDSF	$1.00	$1.00	$1.36	$1.36	1.4%
F10	LEED, Phasing	1	BLDSF	$0.00	$0.00	$0.00	$0.00	0.0%
F20	Selective Building Demolition	1	BLDSF	$5.00	$5.00	$6.78	$6.78	7.1%
	Subtotal Building Only				$70.00	$94.94	$94.94	100.0%
G10	Site Preparation and Building Demolition	1	SITESF	$0.00	$0	$0	$0.00	0.0%
G20	Site Improvements	1	SITESF	$0.00	$0	$0	$0.00	0.0%
G30	Site Civil/Mechanical Utilities	1	SITESF	$0.00	$0	$0	$0.00	0.0%
G40	Site Electrical	1	SITESF	$0.00	$0	$0	$0.00	0.0%
	Subtotal Sitework				$0	$0	$0.00	0.00%
	Grand Total Estimated Cost				***$70.00***	***$94.94***	$94.94	100.0%

Note the estimate does not include "soft costs" such as design fees, permits, abatement, construction change order contingencies, and loose fixtures or furnishings.

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Foundations							
					$0	$0	$0.00	
	Subtotal Foundations	1	bldsf	$0.00	$0	$0	$0.00	0.0%
	Superstructure							
	Subtotal Superstructure	1	bldsf	$0.00	$0	$0	$0.00	0.0%
	Exterior Closure							
	Subtotal Exterior Enclosure	1	bldsf	$0.00	$0	$0	$0.00	0.0%
	Roofing							
	Subtotal Roofing	1	bldsf	$0.00	$0	$0	$0.00	0.0%
	Interior Construction							
	Typical Office Interiors budget	1	gsf	$25.00	$25	$34	$33.91	
	Subtotal Interior Construction	1	bldsf	$25.00	$25	$34	$33.91	35.7%
	Interior Finishes							
	Typical Office finishes budget	1	gsf	$10.00	$10	$14	$13.56	
	Subtotal Interior Finishes	1	bldsf	$10.00	$10	$14	$13.56	14.3%

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Conveying Systems							
	Subtotal Conveying Systems	1	bldsf	$0.00	$0	$0	$0.00	0.0%
	Plumbing							
	Domestic plumbing system TI portion	1	gsf	$3.00	$3	$4	$4.07	
	Subtotal Plumbing	1	sf	$3.00	$3	$4	$4.07	4.3%
	HVAC							
	Chilled Water System w/ AHU's - with shell / core	1	gsf	$0.00	$0	$0	$0.00	
	Heating Water System - with shell / core	1	gsf	$0.00	$0	$0	$0.00	
	Ductwork - distribution	1	gsf	$6.00	$6	$8	$8.14	
	Subtotal HVAC	1	bldsf	$6.00	$6	$8	$8.14	8.6%
	Firesprinklering							
	Wet pipe system - set heads and finish	1	gsf	$1.00	$1	$1	$1.36	
	Subtotal Fire Sprinkler	1	bldsf	$1.00	$1	$1	$1.36	1.4%
	MPS total	1	gsf	$10.00	$10			
	Electrical - See Sparling							
1	Electrical finish - lighting, switching, outlets	1	sf	$8.00	$8	$11	$10.85	
2	Technology finish work	1	sf	$3.00	$3	$4	$4.07	
	Special Data and Security - see Frank Hopkins estimate							
1	Data/security/Court Smart, less parking estimate	1	gsf	$3.00	$3	$4	$4.07	
2	Electrical r.i. for security system - with shell core	1	ls	$0.00	$0	$0	$0.00	
3	Electrical UPS - with shell core	1	ea	$0.00	$0	$0	$0.00	
	Subtotal Electrical	1	bldsf	$14.00	$14	$19	$18.99	20.0%

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Equipment							
	Typical Office finishes budget	1	gsf	$5.00	$5	$7	$6.78	
	Subtotal Equipment	1	bldsf	$5.00	$5	$7	$6.78	7.1%
	Furnishings							
1	Misc	1	gsf	$1.00	$1	$1	$1.36	
	Subtotal Furnishings	1	bldsf	$1.00	$1	$1	$1.36	1.4%
	Special Construction - LEED and Phasing							
1	LEED Gold premium - assume NA for temp work	3.0%	percent	$0	$0	$0	$0.00	
2	Phasing impact - NA	5.0%	percent	$0	$0	$0	$0.00	
	Subtotal Special Construction - LEED	1	bldsf	$0.00	$0	$0	$0.00	0.0%
	Selective Building Demolition							
1	Scope unclear, allowance	1	gsf	$5.00	$5	$7	$0.00	
	Subtotal Selective Demo	1	bldsf	$5.00	$5	$7	$6.78	7.1%
	Site Preparation and Building Demolition							
	Subtotal Site Preparation and Building Demolition	1	sitesf	$0.00	$0	$0	$0.00	0.0%
	Site Improvements							
	Subtotal Site Improvements	1	sitesf	$0.00	$0	$0	$0.00	0.0%

	DETAILED ESTIMATE		Unit of	Unit	Total Estimated	Estimated Cost	Cost per	% of
No.	Description	Quantity	Measure	Cost	Cost	w/GC Markup	GSF	Total
	Site Civil/Mechanical Utilities							
	Subtotal Site Civil/Mechanical Utilities	1	sitesf	$0.00	$0	$0	$0.00	0.0%
	Site Electrical - see Sparling							
	Subtotal Site Electrical	1	sitesf	$0.00	$0	$0	$0.00	0.0%

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Architect: KMD
Project Name: **KC Youth Services Center Courthouse S5.0** Duration: 50 mos.
Project Location: Seattle, WA GSF at 2032 1
Bid Date: TBD, estimate is in today's dollars Est Date: Structured Gross SF 1
ESTIMATE SUMMARY 4/13/2010 Site Square Footage 1

General Contractor Markups

GCCM Specified Gen Conditions:	5.00%
Prime Contractor OH+P, Bond	3.50%
Est. Contingency - P-D level	20.00%
GC/CM fee, GC/CM bond	4.00%

No.	Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markups	Cost per GSF	% of Total
A10	Substructure	1	BLDSF	$0.00	$0.00	$0.00	$0.00	0.0%
B10	Superstructure	1	BLDSF	$0.00	$0.00	$0.00	$0.00	0.0%
B20	Exterior Closure	1	BLDSF	$0.00	$0.00	$0.00	$0.00	0.0%
B30	Roofing and Skylights	1	BLDSF	$0.00	$0.00	$0.00	$0.00	0.0%
C10	Interior Construction	1	BLDSF	$40.00	$40.00	$54.25	$54.25	33.1%
C30	Interior Finishes	1	BLDSF	$30.00	$30.00	$40.69	$40.69	24.8%
D10	Conveying Systems	1	BLDSF	$0.00	$0.00	$0.00	$0.00	0.0%
D20	Plumbing	1	BLDSF	$3.00	$3.00	$4.07	$4.07	2.5%
D30	HVAC	1	BLDSF	$6.00	$6.00	$8.14	$8.14	5.0%
D40	Fire Protection Systems	1	BLDSF	$1.00	$1.00	$1.36	$1.36	0.8%
D50	Electric Power and Lighting and Comm	1	BLDSF	$20.00	$20.00	$27.13	$27.13	16.5%
E10	Equipment	1	BLDSF	$15.00	$15.00	$20.34	$20.34	12.4%
E20	Furnishings	1	BLDSF	$1.00	$1.00	$1.36	$1.36	0.8%
F10	LEED, Phasing	1	BLDSF	$0.00	$0.00	$0.00	$0.00	0.0%
F20	Selective Building Demolition	1	BLDSF	$5.00	$5.00	$6.78	$6.78	4.1%
	Subtotal Building Only				$121.00	$164.11	$164.11	100.0%
G10	Site Preparation and Building Demolition	1	SITESF	$0.00	$0	$0	$0.00	0.0%
G20	Site Improvements	1	SITESF	$0.00	$0	$0	$0.00	0.0%
G30	Site Civil/Mechanical Utilities	1	SITESF	$0.00	$0	$0	$0.00	0.0%
G40	Site Electrical	1	SITESF	$0.00	$0	$0	$0.00	0.0%
	Subtotal Sitework				$0	$0	$0.00	0.00%
	Grand Total Estimated Cost				***$121.00***	***$164.11***	$164.11	100.0%

Note the estimate does not include "soft costs" such as design fees, permits, abatement, construction change order contingencies, and loose fixtures or furnishings.

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Foundations							
					$0	$0	$0.00	
	Subtotal Foundations	1	bldsf	$0.00	$0	$0	$0.00	0.0%
	Superstructure							
	Subtotal Superstructure	1	bldsf	$0.00	$0	$0	$0.00	0.0%
	Exterior Closure							
	Subtotal Exterior Enclosure	1	bldsf	$0.00	$0	$0	$0.00	0.0%
	Roofing							
	Subtotal Roofing	1	bldsf	$0.00	$0	$0	$0.00	0.0%
	Interior Construction							
	Typical Court Interiors budget	1	gsf	$40.00	$40	$54	$54.25	
	Subtotal Interior Construction	1	bldsf	$40.00	$40	$54	$54.25	33.1%
	Interior Finishes							
	Typical Courts finishes budget	1	gsf	$30.00	$30	$41	$40.69	
	Subtotal Interior Finishes	1	bldsf	$30.00	$30	$41	$40.69	24.8%

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Conveying Systems							
	Subtotal Conveying Systems	1	bldsf	$0.00	$0	$0	$0.00	0.0%
	Plumbing							
	Domestic plumbing system TI portion	1	gsf	$3.00	$3	$4	$4.07	
	Subtotal Plumbing	1	sf	$3.00	$3	$4	$4.07	2.5%
	HVAC							
	Chilled Water System w/ AHU's - with shell / core	1	gsf	$0.00	$0	$0	$0.00	
	Heating Water System - with shell / core	1	gsf	$0.00	$0	$0	$0.00	
	Ductwork - distribution	1	gsf	$6.00	$6	$8	$8.14	
	Subtotal HVAC	1	bldsf	$6.00	$6	$8	$8.14	5.0%
	Firesprinklering							
	Wet pipe system - set heads and finish	1	gsf	$1.00	$1	$1	$1.36	
	Subtotal Fire Sprinkler	1	bldsf	$1.00	$1	$1	$1.36	0.8%
	MPS total	1	gsf	$10.00	$10			
	Electrical - See Sparling							
1	Electrical finish - lighting, switching, outlets	1	sf	$12.00	$12	$16	$16.28	
2	Technology finish work	1	sf	$4.00	$4	$5	$5.43	
	Special Data and Security - see Frank Hopkins estimate							
1	Data/security/Court Smart, less parking estimate	1	gsf	$4.00	$4	$5	$5.43	
2	Electrical r.i. for security system - with shell core	1	ls	$0.00	$0	$0	$0.00	
3	Electrical UPS - with shell core	1	ea	$0.00	$0	$0	$0.00	
	Subtotal Electrical	1	bldsf	$20.00	$20	$27	$27.13	16.5%

No.	DETAILED ESTIMATE Description	Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	Estimated Cost w/GC Markup	Cost per GSF	% of Total
	Equipment							
	Typical Courts finishes budget	1	gsf	$15.00	$15	$20	$20.34	
	Subtotal Equipment	1	bldsf	$15.00	$15	$20	$20.34	12.4%
	Furnishings							
1	Misc	1	gsf	$1.00	$1	$1	$1.36	
	Subtotal Furnishings	1	bldsf	$1.00	$1	$1	$1.36	0.8%
	Special Construction - LEED and Phasing							
1	LEED Gold premium - assume NA for temp work	3.0%	percent	$0	$0	$0	$0.00	
2	Phasing impact - NA	5.0%	percent	$0	$0	$0	$0.00	
	Subtotal Special Construction - LEED	1	bldsf	$0.00	$0	$0	$0.00	0.0%
	Selective Building Demolition							
1	Scope unclear, allowance	1	gsf	$5.00	$5	$7	$0.00	
	Subtotal Selective Demo	1	bldsf	$5.00	$5	$7	$6.78	4.1%
	Site Preparation and Building Demolition							
	Subtotal Site Preparation and Building Demolition	1	sitesf	$0.00	$0	$0	$0.00	0.0%
	Site Improvements							
	Subtotal Site Improvements	1	sitesf	$0.00	$0	$0	$0.00	0.0%

	DETAILED ESTIMATE		Unit of	Unit	Total Estimated	Estimated Cost	Cost per	% of
No.	Description	Quantity	Measure	Cost	Cost	w/GC Markup	GSF	Total
	Site Civil/Mechanical Utilities							
	Subtotal Site Civil/Mechanical Utilities	1	sitesf	$0.00	$0	$0	$0.00	0.0%
	Site Electrical - see Sparling							
	Subtotal Site Electrical	1	sitesf	$0.00	$0	$0	$0.00	0.0%

DESIGN / ESTIMATE REVIEW NOTES

Project: ***King County Youth Services Center Courthouse Replacement S5.0***

Date: **4/29/10**

Sort codes: 1=standard qualifications; 2=specific qualifications; 3=assumptions; 4=exclusions; 5=inclusions; 6=value engineering; 7=constructability / buildability; 8=added from prior estimate; 9=questions 10=notes to myself

Sort code	#	System	Date	Item
1	1			An estimating contingency of 20% is included at pre-design phase.
1	2			Building signage is included with the envelope cost.
1	3			Costs are in today's dollars. Escalation should be applied until the construction midpoint. We recommend an annual rate of 3.5 % this year and next year, and subsequent years.
1	4			Estimate based on documents prepared by KMD and sub team March/April 2010.
1	5			General building plan check and permit cost is excluded. Loose fixtures, equipment, and furniture are also excluded. These will be a soft costs.
1	6			Handling & disposal of hazardous materials (asbestos, PCBs, lead, contaminated soil etc.) is part of the demolition category, included with hard costs.
1	7			Payment and performance bond premiums for the GC are a soft cost. Sub bonds are not included in either construction cost or soft cost.
1	8			Phasing impacts were included as a percentage of construction at this level. See 'Special' category in the buildings estimate.
1	9			Spare
1	10			The contract will be delivered via the GC/CM process for the baseline scenario.
1	11			The Contractor will either be union shop or required to pay prevailing wages.
1	12			Washington State sales tax is excluded. This is a soft cost.
2	13		30-Mar	The costs were conservatively based upon a normal building climate, as the bid dates are a couple of years into the future. The dip in prices during the recession is unsustainable in our minds, thus a return to a more normal bidding climate is anticipated.
3	14	C10		Office space cost at PD and prosecutor is assumed the same as other office space.
3	15	C30		Court finishes are assumed as carpet, wood paneling,acoustical wall panels, and suspended ceilings with drywall beams.
3	16	C30		Holding area finishes are assumed to be simple. Concrete sealed, paint walls, painted lid. Cost of the hard lid is with interior construction.
3	17	G20		The entire site is developed - either landscape or paving. No 'existing to remain' area.
3	18	Garage	11-Apr	A cladding system of brick and precast was included for 50% of the area above grade of the structure. Remaining 50% is open air for natural ventilation.
3	19		9-Apr	Building configuration based upon Option B.
3	20			Construction duration of 50 months assumed. Our GC's are a percent of cost so the estimate is not linked to schedule at this point.
3	21		29-Mar	I assume there will be more cut than fill on site, due to excavation of the basements, tunnel and bottom levels of the garage structure. The remaining spoils are hauled away after backfill is complete.
3	22		29-Mar	I assumed the recessional outwash material would be usable as backfill at the driveways, tunnel and around the new basements.

DESIGN / ESTIMATE REVIEW NOTES

Project: ***King County Youth Services Center Courthouse Replacement S5.0***

Date: **4/29/10**

Sort codes: 1=standard qualifications; 2=specific qualifications; 3=assumptions; 4=exclusions; 5=inclusions; 6=value engineering; 7=constructability / buildability; 8=added from prior estimate; 9=questions 10=notes to myself

Sort code	#	System	Date	Item
3	23		9-Apr	Parking garage scope is based upon Garage Building narrative from KPFF. This was revised in late April per sketches e-mailed from KPFF.
3	24			We estimated to the year 2022 program area and scenario S5.0.
4	25	G20	29-Mar	Offsite signalization is not included. Frontage improvements at sections of the site affected by new work are included. Sidewalk, parkway, not the curb.
4	26			Pavers are outside the baseline estimate. Baseline is based upon an asphalt paving section. Pavers to be add alternate.
5	27	G10		Construction fencing not itemized. Assume it is with GC's percentage.
5	28			We noted one utility pole to relocate at the new entry apron of 12th and Alder. Would need the survey to check the other proposed aprons for conflicts.
9	29		10-Apr	We figured shoring along the western edge of the Courts building at 12th Ave and at the west part of Alder tower during the new construction. We assumed shoring on all four sides of the building footprint.
9	30			Scope at private developer work is rough grade, seed, and stub utilities for future.
9	31	General		Regarding comparables and methodology used in the estimate, our approach is a step further than that used in the Farberstein-Meng report. We used site plans and footprints developed by the architects to define rough quantities, such as floor plates, roof area, etc., and descriptions of structural systems provided by the engineers to develop a base cost for building shell and core. We identified exterior materials as precast, brick, and glazing to develop a system cost reflecting that level of exterior finish. Our interior construction costs, or build out costs, are itemized and priced by the spaces identified in the building program. These cost items appear in the detail of the estimate under "Interior Construction, Finishes, and Equipment" categories. The unit costs used in those categories were taken from more developed plans and other comparable projects in our database, such as the Skagit County Jail and Courts Building, and the Clark County Courthouse.

Appendix Item Three

Project Delivery Methods Evaluation

Children and Family Justice Center

King County Superior Court

Relative Risks/Strengths of Construction Delivery Structure

Importance		Weight	D/B/B Rank	D/B/B Score	GCCM/GMP Rank	GCCM/GMP Score	Design/Build		Design/Build Bridge		Lease/Leaseback 63-20		Lease/Leaseback 63-20 Bridge		Lease/Leaseback Certificates of Participation		Lease/Leaseback Certificates of Participation/Bridge	
	Rank		**8**		**5**		**7**		**6**		**3**		**1**		**4**		**1**	
7	**Schedule Management**			4		8.5		10.25		8.75		12		11.75		12		11.75
1	Schedule Fast Track Delivery	1	1	1	2.5	2.5	2.75	2.75	2.75	2.75	3	3	2.75	2.75	3	3	2.75	2.75
2	Schedule Control	3	1	3	2	6	2.5	7.5	2	6	3	9	3	9	3	9	3	9
6	**Construction Management**			5		11.5		14.25		14.25		15		15		15		15
6	Construction Risk - Overruns	3	1	3	2	6	2.75	8.25	2.75	8.25	3	9	3	9	3	9	3	9
25	Occupied Building Renovations	0																
19	Contruction Accountability	2	1	2	2.75	5.5	3	6	3	6	3	6	3	6	3	6	3	6
26	Historic Buildings	0																
3	**Cost Management**			9		29		32.5		31.25		34.75		33.25		34.75		33.25
3	Project Cost	3	1	3	2.5	7.5	2.5	7.5	2.5	7.5	2.75	8.25	2.5	7.5	2.75	8.25	2.5	7.5
7	Savings Incentives	0	1	0	2	0	2	0	2	0	2.5	0	2.5	0	2.5	0	2.5	0
27	Mitigates Inflation Risk	2	1	2	2	4	2	4	3	6	3	6	3	6	3	6	3	6
28	Allows to Capture Deflation Opportunities	2	2	4	2.5	5	3	6	2	4	3	6	3	6	3	6	3	6
16	Early Involvement of Contractor	3	0	0	2.5	7.5	3	9	2.75	8.25	3	9	2.75	8.25	3	9	2.75	8.25
17	Early Invovlement of Subcontractors	2	0	0	2.5	5	3	6	2.75	5.5	2.75	5.5	2.75	5.5	2.75	5.5	2.75	5.5
1	**Design Control**			40.5		49.5		38.5		43.75		39		44.25		39		44.25
4	Quality	4	2	8	2.75	11	2.5	10	2.5	10	2.5	10	2.5	10	2.5	10	2.5	10
15	Design Flexibility	3	3	9	3	9	3	9	2.75	8.25	3	9	2.75	8.25	3	9	2.75	8.25
12	Ability to Manage Competing Interests	4	1.5	6	3	12	2	8	2.5	10	2.5	10	2.75	11	2.5	10	2.75	11
10	Owner Involvement in Design	4	3	12	3	12	1.5	6	2.5	10	1.5	6	2.5	10	1.5	6	2.5	10
18	Neighborhood Input	2	2.75	5.5	2.75	5.5	2.75	5.5	2.75	5.5	2	4	2.5	5	2	4	2.5	5
5	**Owner Experience**			17.5		14.5		9.5		9.5		21		17		19.5		17
5	Past Successes	2	2	4	2	4	1	2	1	2	3	6	2.5	5	3	6	2.5	5
20	Ease of Implementation	3	2	6	2	6	1	3	1	3	2	6	2	6	2	6	2	6
21	Owner Expertise	3	2.5	7.5	1.5	4.5	1.5	4.5	1.5	4.5	3	9	2	6	2.5	7.5	2	6
2	**Risk**			22		32		34		35.5		42		41.5		42		41.5
9	Single Point Accountability	2	1	2	2	4	3	6	2.75	5.5	3	6	2.75	5.5	3	6	2.75	5.5
24	Legal Constraints	4	3	12	2	8	2	8	2	8	3	12	3	12	3	12	3	12
8	Project size and Complexity	4	0	0	2.5	10	2.5	10	3	12	3	12	3	12	3	12	3	12
29	Aligned with financing structure	0	3	0	3	0	3	0	3	0	2.5	0	2.5	0	2.5	0	2.5	0
11	Specialty/Special Needs	4	2	8	2.5	10	2.5	10	2.5	10	3	12	3	12	3	12	3	12
3	**Post Construction Operations/Support**			24		27		23		25		29		31		29		31
13	Ensure functionality	4	2	8	2.5	10	1.5	6	2	8	2	8	2.5	10	2	8	2.5	10
14	Building Operating Considerations	3	2	6	2	6	2	6	2	6	2.5	7.5	2.5	7.5	2.5	7.5	2.5	7.5
22	Post Construction Support	3	2	6	2	6	2	6	2	6	2.5	7.5	2.5	7.5	2.5	7.5	2.5	7.5
23	LEEDS Certifications	2	2	4	2.5	5	2.5	5	2.5	5	3	6	3	6	3	6	3	6
	Score			**122**		**172**		**162**		**168**		**192.75**		**193.75**		**191.25**		**193.75**

Project Delivery Attributes

The fullowing attributes will be evaluated as an element to the methodology employed to find the best suited construction delivery method.

Attribute #	Attribute Sound Bite	Description of Optimum Condition
1	Schedule Fast Track Delivery	Ensure critical schedule requirements can be met/early start of construction.
2	Schedule Control	Project structure encourages adherence to baseline schedule: minimizes slippage and mitigates the effects of delay
3	Project Cost	Project structure encourages adherence to budget:early buy-in on cost and minimizes the cost of changes
4	Quality	Flexibility to influence quality of building components and building features
5	Past Successes	Historical owner success in applying delivery structure
6	Construction Risk	Ensure delivery on-time and within budget/Incentives for Project Delivery
7	Savings Incentives	Built in savings Incentives for cost control
8	Project size and Complexity	Can effectively deliver large complex construction project
9	Single Point Accountability	Single point of accountability for design and construction, and performance of building
10	Owner Involvement in Design	Owner has ample opportunity to provide input on design and design specifications
11	Specialty/Special Needs	Can effectively mobilize a team of experts to address all specialty/special needs
12	Ability to Manage Competing Interests	Ability to digest input from disparit user groups and solve competing needs in cost effective manner
13	Ensure functionality	Ability to translate user needs into highly functional facility
14	Building Operating Considerations	Ensure building is constructed with a design that facilitates cost effective operations considering who will operate building
15	Design Flexibility	Flexibility to make changes in the to scope/program as issues arise (especially for unique structures) within the project budget
16	Early Involvement of Contractor	Early involvement of contractor in the design process
17	Early Invovlement of Subcontractors	Early involvement of subcontractors in the design process
18	Neighborhood Input	Ability to effectively apply resources to neighborhood outreach
19	Contruction Accountability	Industry standard accountability and reporting during construction
20	Ease of Implementation	Little red tape and private sector driven construction methods
21	Owner Expertise	The Owner has proper mix of expertise to successfully deliver construction within delivery structure
22	Post Construction Support	Owner has strong support during warrantee period from project participants
23	LEEDS Certifications	Ensure that appropriate LEEDS certifications are achieved through design and assessment
24	Legal Constraints	The delivery structure can stand any legal tests with minimal risk of lawsuits and claims as well as financing compliance requirements
25	Occupied Building Renovations	Effectively staging and coordinating major renovation work in an occupied building
26	Historic Buildings	Skills to deal with major rennovation or additions to an historic building
27	Mitigates Inflation Risk	Structure shifts inflation risk to contractor
28	Allows to Capture Deflation Opportunities	Structure allows County to capture deflation opportunities
29	Aligned with financing structure	Construction delivery structure is aligned with financing structure/no legal constraints

The Council just passed legislation calling for a risk assessment of all emerging major projects. The risk factors identified in this legislation are:

funding source options and availability;
regulatory requirements;
interdependencies with other county projects and programs or other agencies;
schedule constraints;
implementing agency resources and expertise to manage the project, including experience completing projects of similar scope and complexity;
project delivery method;
property acquisition issues;
public impact;
any new technology;
any issue making the project more complex for the agency, such as number of contracts and trades involved;
any changes in scope and variance of project delivery performance, by phase, from baseline, if available; and
any other issues that could have a significant impact on the ability of the project to meet baseline scope, schedule or budget.

One of those factors, project delivery method, relates directly to the attributes identified here. The project delivery method should mitigate many of the risks the Council is interested in considering. Those risks that are included in the attributes above are identified in yellow.

Project Delivery Attributes Ranking

Current Project Factors

On December 14, 2009 the Council affirmed the goal of co-locating all juvenile offender, Northend juvenile dependency and family court matters involving children in a single facility. The County Council approved a scenario that would replace the Youth Services Center with a facility large enough to co-locate all juvenile offender cases countywide, Northend Becca cases; all Northend juvenile dependency cases and Northend family law cases involving children. To add to the complexity, the Council desires a full exploration of phasing and LS&J consolidation options which broadens the potential scope alternatives for this project. The approved option would result in a facility of 15 to 17 courtrooms with capital costs ranging from $158 to $171 million.

The expected tenants for this building represent a rather broad range of criminal justice functions that vary from Superior Court judges, court activities, public defender activities, Prosecuting Attorney activities, and other family support services providing a broad range of services to youth and their families. The Courthouse will need to meet security standards for not only access to and exiting from the facility, but also interior risk management of the various players in youth court and court support activities. The building needs to be designed for a high volume of public and detention managed visitors and will have a substantial amount of specialty tenant improvements to support the various occupants and to provide appropriate security.

With this in mind, please rate the following attributes with regard to degree of importance to success on this project.
Rankings are as follows:

0	N/A	Does not apply N/A
1	A	Applicable but no particular special importance
2	I	Important to successful delivery of construction, commissioning, and operations
3	VI	Very important to successful delivery of construction, commissioning, and operations
4	E	Essential

Please X the appropriate column for each attribute

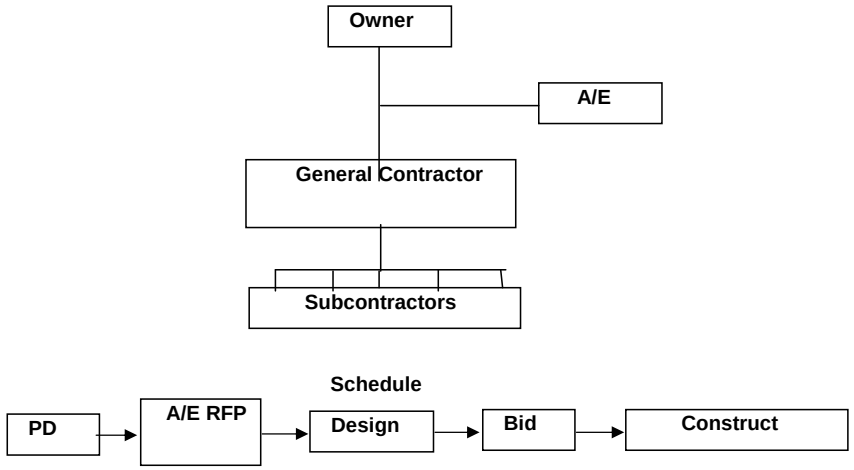
	Rankings 0 N/A	1 A	2 I	3 VI	4 E	Attribute #	Attribute Sound Bite	Description of Optimum Condition
1		X				1	Schedule Fast Track Delivery	Ensure critical schedule requirements can be met/early start of construction.
3				X		2	Schedule Control	Project structure encourages adherence to baseline schedule: minimizes slippage and mitigates the effects of delay
3				X		3	Project Cost	Project structure encourages adherence to budget:early buy-in on cost and minimizes the cost of changes
4					X	4	Quality	Flexibility to influence quality of building components and building features
2			X			5	Past Successes	Historical owner success in applying delivery structure
3				X		6	Construction Risk	Ensure delivery on-time and within budget/Incentives for Project Delivery
						7	Savings Incentives	Built in savings Incentives for cost control
4					x	8	Project size and Complexity	Can effectively deliver large complex construction project
2			X			9	Single Point Accountability	Single point of accountability for design and construction, and performance of building
4					X	10	Owner Involvement in Design	Owner has ample opportunity to provide input on design and design specifications
4					X	11	Specialty/Special Needs	Can effectively mobilize a team of experts to address all specialty/special needs
4					X	12	Ability to Manage Competing Interests	Ability to digest inut from disparit user groups and solve competing needs in cost effective manner
4					X	13	Ensure functionality	Ability to translate user needs into highly functional facility
3				X		14	Building Operating Considerations	Ensure building is constructed with a cost effective design that considers who will operate building
3				X		15	Design Flexibility	Flexibility to make changes in the to scope/program as issues arise (especially for unique structures)
3				X		16	Early Involvement of Contractor	Early involvement of contractor in the design process
2			X			17	Early Invovlement of Subcontractors	Early involvement of subcontractors in the design process
2			X			18	Neighborhood Input	Ability to effectively apply resources to neighborhood outreach

2			X			19	Contruction Accountability	Industry standard accountability and reporting during construction
3				X		20	Ease of Implementation	Little red tape and private sector driven construction methods
3				X		21	Owner Expertise	The Owner has proper mix of expertise to successfully deliver construction within delivery structure
3				X		22	Post Construction Support	Owner has strong support during warrantee period from project participants
2			x			23	LEEDS Certifications	Ensure that appropriate LEEDS certifications are achieved through design and assessment
4					X	24	Legal Constraints	The delivery structure can stand any legal tests with minimal risk of lawsuits and claims as well as financing compliance requirements
0	X					25	Occupied Building Renovations	Effectively staging and coordinating major renovation work in an occupied building
0	X					26	Historic Buildings	Skills to deal with major rennovation or additions to an historic building
2			X			27	Mitigates Inflation Risk	Structure shifts inflation risk to contractor
2			X			28	Allows to Capture Deflation Opportunities	Structure allows County to capture deflation opportunities
						29	Aligned with financing structure	Construction delivery structure is aligned with financing structure/no legal constraints

Competitive Bid (Design/Bid/Build)

This method is the one with which most public sector owners are familiar. It is a linear process where one task follows completion of another with no overlap possible. Plans and specifications are completed by the architect and then bids are issued. Contractors bid the project exactly as it is designed with the lowest responsible, responsive bidder awarded the work. The design consultant team is selected separately and reports directly to the owner.

Structure and Schedule



PD=Project Definition/Scope

Competitive Bid (Design/Bid/Build)

Advantages

Familiar Delivery Method
Traditional Process to Manage
Public agencies trained in Delivery Method
Governed by Detailed Legislative/Local Authority
Design phase allows the Agency significant input to design
Fully Defined Project Scope for the Construction bid
Both Design Team and Contractor Accountable to Owner
Competitive bidding process is transparent

Disadvantages

The sequence can be time-consuming, because each step must be completed before the project can move to the next step,
Contractor selection based on price; minimum contractor qualifications can be required for bidders.
Price Not Established Until competion of bidding - May Require Redesign or Re-Bid
Bids may be artificially low, which results in change orders and delay claims,
Bids may be artificially high because the contractor increases contingencies to minimize its risk.
This two-step process may create an adversarial relationship among the designer, contractor and public agency,
Virtually all construction risk is borne by the Owner
There is little flexibility for change with bearing additional cost.
Since the contractor was not involved in the design, disputes can arise between the designers and the contractor.
Disputes generally result in increased costs and delay to the Owner

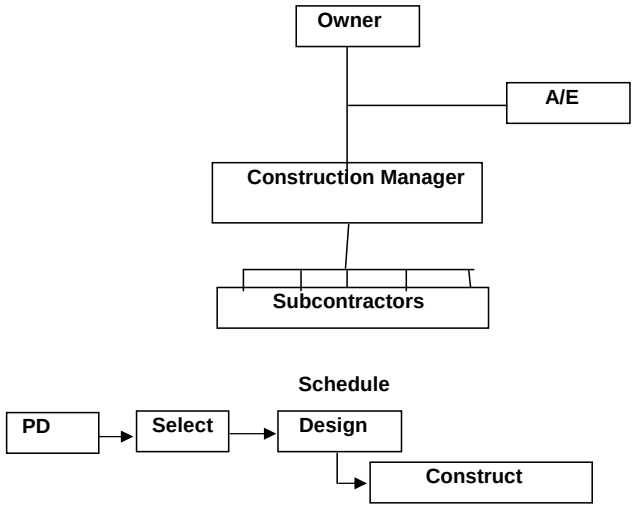
Relevant Statute: RCW 39.04.010.
Financing options: 1. LTGO Bonds 2. Voter-approved GO Bonds 3. Revenue Bonds 4. Cash
State Tax Issues: no property taxes
Prevailing \ Wage: All Contractors must pay prevailing wages. RCW 39.12.020.

GC/CM at Risk (General Contractor/Construction Management)

CM at-Risk Allows the Owner to Interview and Select a Fee-Based Firm to Manage Construction Before Design Is Complete. This delivery method is often referred to as GCCM. The construction manager and architect work together to develop and estimate the design. A guaranteed maximum price (GMP) is provided by the CM, who then receives proposals from and awards contracts to subcontractors. The final construction price is the sum of the CM's fee and the subcontractor's bids. The Owner will not pay more than the GMP, and retains any savings. Recent changes to the State Law altered the term for guaranteed maximum price to "Total Construction Cost". According to the PAO, the definition of what constitutes "Total Construction Cost" is the same as the previous definition of guaranteed maximum price. The change is not significant.

GC/CM may be used as an approved alternative delivery method when implementation of a project involves complex scheduling, phasing or coordination, when construction involves an occupied facility which must continue to operate during construction, when the involvement of the general contractor/construction manager during the design phase is critical to success of the project, when the project involves a complex technical work environment, or when the project requjires specialized work on a building of historical significance.

Structure and Schedule



PD=Project Definition/Scope

GC/CM at Risk (General Contractor/Construction Management)

Advantages

Selection of GC/CM is based on qualifications, as well as cost,
There is a single point of responsibility for construction,
Early involvement of contractor in design should reduce disputes and aid in efficiency of construction, and
Completion may be accelerated as there is the possibility of a reduced overall schedule.
Familiar alternative delivery approach
Flexibility in Contractor Selection, based upon qualifications, experience and team
Contractor provides design phase assistance in budget and planning
Continuous budget control possible
Owner selects architect and CM separately and allows for collaboration between Owner, architect, and contractor
Pre-qualification of subcontractors allows Owner and contractor quality screening
Faster schedule than tradition bid: fast tract construct possible
Ability to obtain GMP ealier in design process: earlier than tradition bid but later than Design Build (D/B)
Provides more ability to handle change in design and scope
Reduced changes and claims once construction commences
Both Design Team and Contractor Accountable to Owner
Best suited for large new or renovation projects that are schedule sensitive, difficult to define or subject to potential changes;
also for projects requiring a high level of construction management due to multiple phases, technical complexity or multi-disciplinary coordination
Construction risk held by contractor once GMP established

Disadvantages

The process is more complex than D/B/B
The relationships during design are not as clear and have the potential to produce an adversarial dynamic
There are additional cost for the pre-construction services of the GC/CM
The construction price is not established until late in the design process
The GMP price is difficult to evaluate, in part because the subcontracts must be competitively bid,
However, 2007 legislation partly addresses this issue by allowing the parties to bid major bid packages before reaching agreement on the MACC. RCW 39.10.37
Costs more than traditional bid due to reduced competition in pricing of contractor overhead fee and subj-contract costs
Costs often increase due to "details" not in GMP
CM may expand budget to create future savings
Negotiated CM fee is not competitively bid
Relies on Construction Manager to deliver on promise of design and construction quality
Not suited for small projects because of high level of administrative support necessary
Must submit project justification and await approval by the State of Washington

Relevant Statute: RCW 39.10.061.
Financing: 1. LTGO Bonds 2. GO Bonds 3. Revenue Bonds
State Tax Issues: No property taxes
Prevailing Wage: all Contractors must pay prevailing wages. RCW 39.12.020

Design/Build

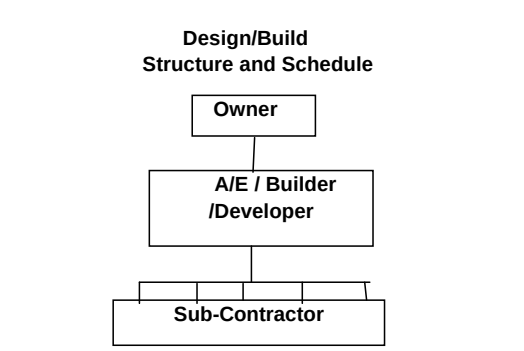
The contractor and architect are one entity hired by the Owner to deliver a complete project. A guaranteed maximum price (GMP) is provided by the D/B early in the project based upon design criteria prepared by the Owner and a moderately developed design by the contractor/architect then develop drawings that fulfill the criteria and complete the design, while staying below the furnished GMP. The contractor then receives proposals from and awards subcontracts to subcontractors.

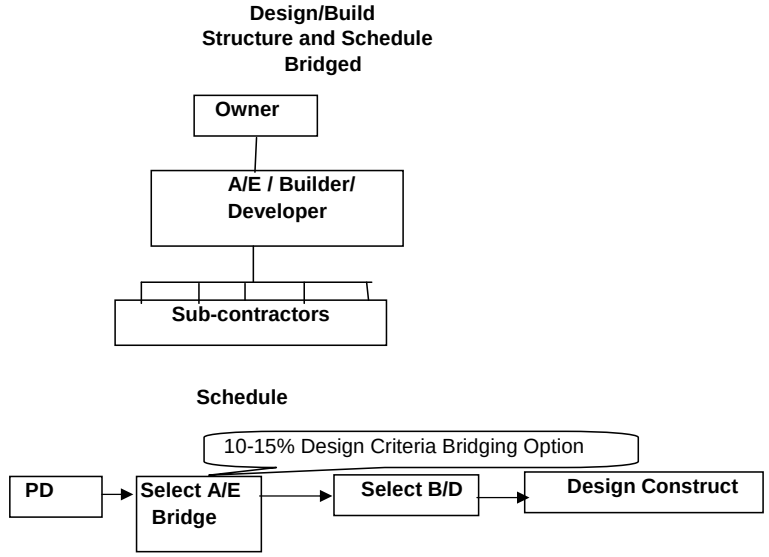
The design-builder many times is a general contractor but can also be a contractor or engineer. The design-builder may also be a developer/project manager with each type of design-builder have a unique set of skills to bring to the table. The design-builder may employ various strategies for delivering construction. This usually involves using in-house staff capabilities and a combination of contracts to deliver various portions of a project. These contracts may involve architects, engineers, or even a general contractor subject to the terms of a development agreement. The design-builder may also share in construction risk any way deemed appropriate considering the fact that the design-builder has committed to a Guaranteed Maximum Price.

This type of delivery method is authorized by State Law as an alternative delivery method if the project costs more than $10 million and where the design and construction activities, technologies and schedule are highly specialized, or the project design is is repetitive in nature, or for parking garagers or prefabricated buildings regardless of cost.

Normally the financing of a capital project does not impact the structure related to construction delivery. However, there are three exceptions when one is considering various design/build approaches. These are: 1) financing using Certificates of Participation; 2) financing using a 63-20 approach; 3) financing related to tenant improvements installed in conjunction with a lease with a purchase to option. The first two, Certificates of Participation and 63-20 financings are not governed by laws allowing alternative construction delivery methods. Rather, these types of design/build structures are governed by the Municipal Leasing Act. The last approach, financing related to tenant improvements is not governed by either the alternative construction delivery methods or the Municipal Leasing Act. All three are presented as separate and unique delivery methods here.

There is an emerging structure designed to mitigate one of the primary shortcomings of the Design/Build structure, a lack of owner participation in design. This modified structure is called "bridging" and it combines the traditional design process with design/build delivery. The Owner selects an architect who develops the design to 10 to 15 % document stage in order to provide definition of the final product.
The owner than selects a builder/developer whose team would complete the development of a Guaranteed Maximum Price and final design.





PD=Project Definition/Scope

Design/Build

Advantages

Project requirements are established by the public agency
Guaranteed price possible earlier in the process
Construction risk is with A/E / Builder unless there is a tenant improvement allowance as part of the GMP
Design and construction to a specified budget has the potential to reduce overall costs, and
Enables fast track delivery - construction begins before design is complete ***Bridging detracts from this advantage.***
Selection of contractor based upon qualitications, experience and team
Single point of accountability for design and construction. ***Bridging detracts from this advantage.***
Contractor provides design phase assistance in budget and planning. ***Bridging detracts from this advantage.***
Price tends to match quality (also a disadvantage)
Early GMP facilitates alternative financing methods
No change orders written for D/B errors and ommissions - covered for allowance in GMP. Owner still responsible for other types of changes.
Best suited for new construction projects that are highly time sensitive, projects with smaller user groups or reduced need for user reviews and mid-course design changes. ***Bridging best suited for larger, new or renovation projects that are schedule sensitive and difficult to define.***

Disadvantages

Owner has no input on selection of proposed design team and limited control over design ***Bridging mitigates this disadvantage.***
Development of project specifications requires a significant expendature of resources by the public agency in order to determine if the budget is adequate.
The required expenditure of time and resources by the proposers may limit competition and potentially increase overall project costs.
Statutory requirements and restrictions limit the availability of this method to projects that are, repetitive like parking garages, or highly specialized like wastewater treatment facilities, or feedback from facility users is not critical to an effective design.
Difficult to control quality because design/build team must only meet minimum criteria standards
No check and balance between architect and builder. Owner left to fend for itself versus the contractor, creating potential for conflict between Owner and D/B team. ***Bridging mitigates this disadvantage.***
Difficult for Owner to determine whether the best price has been achieved for the work. ***Bridging partially mitigatges this disadvantage.***
Initial costs likely higher than traditional bid due to increased contractor risk, reduced competition in pricing of contractor overhead, fee and sub-contract costs. ***Bridging adds to A/E costs as well.***
Changes difficult to make once construction begins, due to phased construction and cost driven, inflexible budget.
Owner must have a clear idea of scope and concept before selection. **Bridging mitigates this disadvantage.**
Over-emphasis on price may compromise quality.
Reduced time for user reviews and decisionmaking.
Design is completed after GMP is given
Price tends to match quality. Low price = low quality
Statutory requirements may restrict the use of this delivery method as an alternative delivery method.
Must develop justification and get State approval to mover forward as alternative construction delivery
Bridging approach does not integrate well into recent legislation creating a preliminary design phase which brings design to 30%

Relevant Statute: RCW 39.10.051.
Financing: 1. LTGO Bonds 2. GO Bonds 3. Revenue Bonds
State Tax Issues: No property taxes
Prevailing Wage: all Contractors must pay prevailing wages. RCW 39.12.020

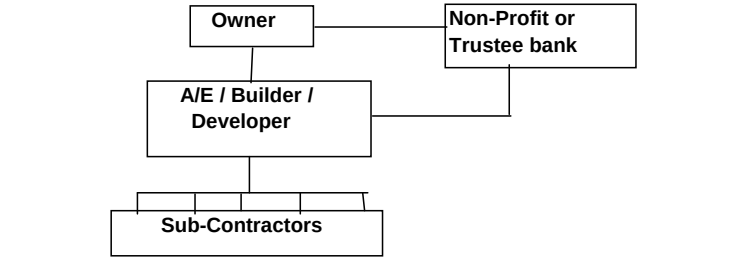
Lease based Design/Build (Structure Previously Employed by FMD)

The lease/lease back transaction is made pursuant to the Municipal Leasing Act, RCW 35.42. The developer and nonprofit intermediary must be selected through a competitive process. This type of project is not a "public work" as defined by RCW 39.04.010(4) but prevailing wages must be paid during construction of the building. The rent rates for thebuilding must not exceed "prevailing rental rates" for comparable space for lease/leaseback arrangements.

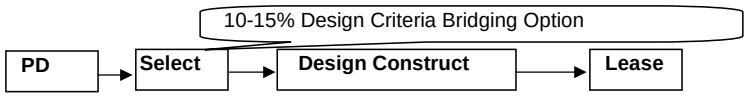
In a lease-to-own transaction the public agency may negotiate the terms without a traditional public bidding process. The Municipal Leasing Act allows for a call for bids upon terms most favorable to the county. Prevailing wages must be paid on construction.

Bridging can also be employed in this structure with the same impact to design/build advantages and disadvantages outlined at the "Design/Build" presentation.

Design/Build
Structure and Schedule
63-20 Financing



Schedule



PD=Project Definition/Scope
Lease=Lease/Lease Back or Lease both to own

Lease based Design/Build (Structure Previously Employed by FMD)

Advantages

Single point of accountability for design and construction
Project requirements are established by the public agency
No public agency obligation until construction is substantially complete and there is a temporary occupancy permit in place.
Simplified selection of contractor based upon qualitications, experience and team
Reduced owner project management costs partially offset by costs of nonprofit intermediaty.
Easy to mobilize multiple disciplines based on specialty needs of facility
Contractor provides design phase assistance in budget and planning. ***Bridging detracts from this advantage.***
Enables fast track delivery - construction begins before design is complete
Guaranteed price possible earlier in the process
Construction is not subject to public works restrictions except prevailing wages
Price tends to match quality (also a disadvantage)
Early GMP facilitates alternative financing methods
Early GMP locks price and protects owner from inflation risk
Construction risk with Developer except tennant improvements when subject to an allowance
No change orders written for Developer errors and ommissions - covered for allowance in GMP. Owner still responsible for other types of changes.
Best suited for new construction projects that are highly time sensitive, projects with smaller user groups or reduced need for user reviews and
Third party (Nonprofit) review of project claims and release of funds based on verification of percent of completion or delivery
Third party (Nonprofit) assistance on Commissioning and ongoing certification that major maintenance program is in place.
Third party assistance on operating the completed building if so desired by the public agency

Disadvantages

Price tends to match quality (also an advantage)
Costs of financing higher
No check and balance between architect and builder. Owner left to fend for itself versus the contractor, creating potential for conflict between Owner and D/B team. ***Bridging mitigates this disadvantage.***
Difficult for Owner to determine whether the best price has been achieved for the work. ***Bridging partially mitigatges this disadvantage.***
Initial costs likely higher than traditional bid due to increased contractor risk, reduced competition in pricing of contractor overhead, fee and sub-contract costs. ***Bridging adds to A/E costs as well.***
Changes difficult to make once construction begins, due to phased construction and cost driven, inflexible budget.
Owner must have a clear idea of scope and concept before selection. **Bridging mitigates this disadvantage.**
Owner has no input on selection of proposed design team except during solicitation and selection of developer.
Over-emphasis on price may compromise quality.
Reduced time for user reviews and decisionmaking.
Difficult to structure with multiple funding sources
Difficult to control quality because design/build team must only meet minimum criteria standards
Less transparency of process
Difficult to partially fund project with County resources - increases legal and financial risk

Relevant Statute: RCW 35.42.
Financing: tax exempt bonds issued by non-profit corporation created specifically for the project.
Other categories same as DB COPS

King County
Always at your service

Department of Executive Services
Facilities Management Division
King County
500 4th Avenue, Suite 800
Seattle, WA 98116
http://www.kingcounty.gov/operations/FacilitiesManagement.aspx/

Mitigated Determination of Non-Significance (MDNS)

***Name of Proposal*: King County Youth Services Center Courthouse Replacement**

Description of Proposal: The proposed ***King County Youth Services Center Courthouse Replacement*** project includes phased development of a new courthouse and related facilities of approximately 256,600-square-feet and structured parking for approximately 637 vehicles. The existing courthouse (referred to as Alder Tower) and an ancillary structure (Alder Wing) would be demolished as part of the phased redevelopment for which this determination is issued.

Conceptual massing options are presently being considered for the proposed project. Features common to each include the following.

- The proposed project would involve phased development. Phase 1 would involve construction of 9-10 courtrooms, 156,000 square foot facility. Phase 1 is anticipated to occur sometime in the next 5 years. Phase 2 is anticipated to occur some time before 2032

- It is proposed that Alder Tower and Alder Wing would be replaced by a new facility. Phase 1 and 2 combined would total approximately 256,600 square feet and include 15-17 courts (juvenile court and family court), together with ancillary offices. As presently exists, holding cells and a secure waiting area would be located proximate to the courts.

- Alder Academy (the existing school that is located within Alder Wing) may be incorporated into the new complex.

- The existing Youth Detention Facility would be retained.

- The existing surface parking would ultimately be replaced by structured parking (approx. 637 spaces) that would likely be partially below-grade. This facility would provide secure parking for judges, employee parking and parking for visitors.

- An area on-site would be provided for mixed-use, co-development (housing) with street-level retail uses. This aspect of site redevelopment would be completed separately and would likely entail sale of this portion of the site to a developer.

- Open space would be provided on-site that may include: lawn, landscaping, a picnic area and the whale fin sculpture for use by families of youth that are in detention, employees of the facility, and the community.

Three conceptual massing alternatives have been developed for this proposed project. They essentially contain the same development elements, but differ with regard to: the location of major uses on-site, the footprint of such uses, the location and amount of on-site co-

development, the location and amount of open space, and internal vehicular access and circulation.

This would be a phased development involving demolition of several existing structures on-site and construction of replacement facilities. It is anticipated that demolition would begin in spring 2012 and the first phase would become operational by 2015. Preliminary indications are that a subsequent phase would be operational by 2032, if required by caseload filing forecast. The analysis contained in the SEPA Environmental Checklist for this project addresses full build-out.

Location of Proposal: The project site is located at the King County Youth Services Center in the City of Seattle's Central Area neighborhood, within the 12th Avenue Urban Center Village, on approximately a 9-acre site. The site is bounded by 12th Avenue on the west, E. Remington Court on the north, 14th Avenue on the east, and E. Spruce Street on the south.

Proponent and Lead Agency: King County Department of Executive Services, Facilities Management Division.

The Lead Agency for this proposal has determined that the project could have a probable minor to moderate adverse impact on the environment if no mitigation measures are taken. The Lead Agency had determined that if the listed mitigation measures are taken, no probable significant adverse impacts on the environment are anticipated. The recommended mitigation measures are described in Table 1 below. The Lead Agency also determined that an environmental impact statement (EIS) is not required under RCW 43.21C.030 (2)(c). This decision was made after review of the completed Environmental Checklist and supporting information on-file with the Lead Agency. This information is available to the public on request.

Table 1: Mitigation Measures Required and Procedure for Mitigations Enforcement

Source of Impact	*Impacted Area*	*Mitigation Plan Required*	*Procedure to be Followed*
Erosion	On-site and in the area surrounding the site	- Comprehensive Drainage Control Plan - Geotechnical Design Study - Implementation of construction best management practices consistent with the geotechnical data	-City of Seattle Master Use Permit to be obtained. -City of Seattle Building Permit to be obtained. -City of Seattle Grading Permit to be obtained.
Emissions from Construction Vehicles	On-site and area surrounding the site	Contractors and subcontractors would utilize well-maintained construction equipment to reduce on-site and localized air quality emissions. Idling of construction-related trucks for prolonged periods of time would be avoided.	-City of Seattle Master Use Permit to be obtained. -City of Seattle Building Permit to be obtained. -City of Seattle Grading Permit to be obtained.
Demolition – Air Quality Emissions	On-site and area surrounding the site	Debris and exposed areas would be sprinkled, as necessary, to control dust; quarry spall areas would be provided on-site prior to vehicles exiting the site; and truck loads and routes would be monitored to minimize dust-related impacts.	-City of Seattle Master Use Permit to be obtained. -City of Seattle Building Permit to be obtained. -City of Seattle Grading Permit to be obtained.

Source of Impact	Impacted Area	Mitigation Plan Required	Procedure to be Followed
Demolition	On-site and area surrounding the site	Hazardous substances, such as asbestos, lead-based paint, PCBs and mercury may be present in the buildings, which would be removed (Alder Tower and Alder Wing). Prior to demolition, asbestos, lead-based paint and other similar hazardous materials that may be encountered during demolition would be removed by a qualified abatement contractor in accordance with State and Federal guidelines.	-PSCAA Asbestos/Demolition Notification
Construction	On-site and in the area surrounding the site	Trucking movements to and from the site would be scheduled and coordinated to minimize congestion during peak travel times associated with adjacent roadways.	-Truck routing plan would be executed with the City of Seattle
Greenhouse Gas Emissions/Energy Use	On-site and in the area surrounding the site	The proposed development would employ measures to reduce energy consumption including: energy-saving lighting, high efficiency heating and air conditioning units, high efficiency water heaters, and variable frequency drives on fans in the parking garage. All mechanical systems would be designed to comply with applicable City of Seattle and Washington State Energy Code requirements. The proposed project would be built to achieve a LEED Gold certification.	-Compliance with City of Seattle and Washington State Energy Code requirements. -LEED Gold Certification to be obtained.
Surface Water Runoff	On-site and in the area surrounding the site	The proposed project would comply with applicable requirements relating to surface water runoff control and water quality including the City's Drainage Control Ordinance. The proposed project would also require City approval of a Comprehensive Drainage Control Plan (including Construction Best Management Practices, Erosion and Sediment Control approvals) as part of the building permit process. Temporary and permanent storm water control systems for the development would be designed and constructed in accordance with the City of Seattle's Storm Water Code. This code sets minimum requirements for flow control and storm water treatment facilities, as well as minimum requirements for all discharges, which are designed to reduce the introduction of pollutants into storm water runoff as close to the source as possible.	-City of Seattle Master Use Permit to be obtained -City of Seattle Building Permit to be obtained

Source of Impact	Impacted Area	Mitigation Plan Required	Procedure to be Followed
Removal of On-site Trees and/or Vegetation	On-site	All tree removal would comply with the City of Seattle's tree protection regulations, which are contained in the Seattle Municipal Code, Chapter 25.05 and 25.11, and within Director's Rule 16-2008. The Director's Rule clarifies the definition of Exceptional Trees and clarifies SEPA policies relative to a determination of value for outstanding trees.	-City of Seattle Master Use Permit to be obtained -City of Seattle Building Permit to be obtained
Construction Noise as a result of on-site demolition and construction activities	Area surrounding the site	The project would comply with provisions of the City of Seattle's Noise Code; specifically: construction hours would be limited to weekdays (non-holiday) from 7 AM to 7 PM and Saturdays and Sundays and legal holidays from 9 AM to 7 PM. If extended construction hours became necessary, King County would need to seek approval from the City of Seattle Department of Planning and Development in advance.	-City of Seattle Master Use Permit to be obtained -City of Seattle Building Permit to be obtained
Operational Noise from increased traffic due and noise from building heating, ventilation and air conditioning (HVAC) units	Area surrounding the site	The project would comply with provisions of the City of Seattle's Noise Code. Operational noise impacts of the completed project could be reduced by shielding HVAC units.	-City of Seattle Master Use Permit to be obtained -City of Seattle Building Permit to be obtained
Trip Generation - Full-buildout of the project would generate approximately 1,112 net new weekday daily trips (over existing). Peak trip volumes would occur from 4 to 5 PM.	Area surrounding the site	Measures to reduce or control transportation impacts would be determined once a specific design alternative has been selected and a traffic analysis completed that is specific to the project design. It is likely that a Transportation Management Plan would be required, consistent with the requirements of the City of Seattle Department of Planning and Development Director's Rule 19-2008.	-City of Seattle Master Use Permit to be obtained -City of Seattle Building Permit to be obtained

This Mitigated Determination of Non-Significance is issued under WAC 197-11-350 Sections (1) and (7); the Lead Agency will not act on this proposal for fourteen (14) days from the date below.

Responsible Official Kathy Brown

Position/Title: Division Director of the Facilities Management Division of the King County Department of Executive Services

Address: 500 Fourth Avenue, Suite 800
Seattle, WA 98104

DATE: 5/24/10 SIGNATURE: Kathy D Brown

Contact Person: Jim Burt, Major Projects Manager
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Email: jim.burt@kingcounty.gov

This material is available in alternate formats upon request to Jim Burt.

ENVIRONMENTAL CHECKLIST

for the

King County

Youth Services Center
Courthouse Replacement

prepared for

King County
Department of Executive Services
Facilities Management Division
500 4th Avenue, Suite 800
Seattle, WA 98116

May 2010

Blumen Consulting Group, Inc.
Transportation Engineering Northwest, Inc.
KMD Architects, Inc.
Shannon & Wilson, Inc.
Herrera Environmental Consultants, Inc.

--PREFACE--

The purpose of this Environmental Checklist is to identify and evaluate environmental impacts that could result from the proposed **King County Youth Services Center Courthouse Replacement** project alternatives and to identify measures to mitigate those impacts. The roughly 9-acre project site is located in Seattle's Central Area Neighborhood and is bounded by E. Remington Court on the north, 12th Avenue on the west, E. Spruce Street on the South and 14th Avenue on the east. The proposed project evaluated in this environmental checklist includes phased development of a new courthouse and related facilities of approximately 256,600-square-feet and structured parking for approximately 637 vehicles. The existing courthouse (referred to as Alder Tower) and an ancillary structure (Alder Wing) would be demolished as part of the phased redevelopment. The existing youth detention facility will remain.

The State Environmental Policy Act, or SEPA,[1] requires that all governmental agencies consider the environmental impacts of a proposal before the proposal is decided upon. This Environmental Checklist has been prepared in compliance with the State Environmental Policy Act; the SEPA Rules, effective April 4, 1984, as amended (Chapter 197-11, Washington Administrative Code); and the King County's Environmental Procedures Code (20.44), which implements SEPA.

This document is intended to provide requisite SEPA analysis for demolition and construction associated with the various King County Youth Service Center site options under consideration. Environmental impacts associated with redevelopment of the project site under each of these options are disclosed in this document. Analysis contained in this Environmental Checklist is based on conceptual plans for the facility, which identify three concept development alternatives that are under consideration by King County. These development options represent the eventual size, approximate site location and configuration of proposed development and are considered adequate for analysis and disclosure of environmental impacts. Information is sufficient to allow for an appropriate assessment of probable environmental impacts under each of the plan variations under review.

This Environmental Checklist is organized into three major sections. *Section A* of the Checklist (starting on page 1) provides background information concerning the proposed **King County Youth Services Center Courthouse Replacement** project (e.g., purpose, proponent/contact person, project description, project location, etc.). *Section B* (beginning on page 23) contains the analysis of environmental impacts that could result from the proposed project alternatives, based on review of major environmental parameters. This section also identifies possible mitigation measures. *Section C* (page 48) contains the signature of the proponent, confirming the completeness of this Environmental Checklist.

1 Chapter 43.21C. RCW

ENVIRONMENTAL (SEPA) CHECKLIST

PURPOSE

The State Environmental Policy Act, SEPA, Chapter 43.21 RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. The purpose of this checklist is to provide information to help identify impacts from the proposal (and to reduce or avoid impacts, if possible) and to help the King County Department of Executive Services, Facilities Management Division to make a SEPA threshold determination.

A. BACKGROUND

1. Name of Proposed Project:

King County Youth Services Center Courthouse Replacement

2. Name of Applicant:

King County Department of Executive Services, Facility Management Division

3. Address and Phone Number of Applicant and Contact Person:

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4. Date Checklist Prepared

May 26, 2010

5. Agency Requesting Checklist

King County Department of Executive Services

6. Proposed Timing or Schedule (including phasing, if applicable):

The proposal evaluated in this environmental checklist would be a phased development involving demolition of several existing structures on-site and construction of replacement facilities. It is anticipated that demolition would begin in spring 2012 and that the first phase would become operational by 2015. Preliminary indications are that a subsequent phase would be operational by 2032, if required by caseload filing

forecast. The analysis contained in this SEPA environmental checklist addresses full build-out to 2032.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

Yes. This would be a phased development so there are plans for future activity connected with this project. Under each of the options considered in this checklist, portions of the site are reserved for potential commercial development. Detailed analysis regarding the impact of such potential future development is not included in this checklist and would be considered in a separate future phase of environmental review if and when actual proposals are being considered.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal:

Site-specific environmental reports related to the proposed project have been prepared and information has been incorporated into this environmental analysis. The reports include:

- **Transportation** .....Transportation Engineering Northwest (TENW) and Gilmore Research Group
- **Phase I Geotechnical Site Assessment**.....Shannon & Wilson
- **Environmental Site Assessment** .....Herrera Environmental Consultants

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain:

There are no known pending applications that would directly affect this project site. There are, however, other nearby development projects that could indirectly affect the proposed development. Those projects are described in **Section B8** of this environmental document.

10. List any government approvals or permits that will be needed for your proposal, if known:

Local Agencies

King County Council

- Selection of a preferred development option
- Decision to place funding of the proposed project to a public vote

City of Seattle – City Council

- Approval of either a Council Conditional Use Permit or a Property Use and Development Agreement for the proposed project
- Possible vacation of four partial rights-of-way located along the east boundary of the site

City of Seattle – Department of Planning and Development

- Master Use Permit
- Demolition Permit
- Grading Permit
- Building Permit
- Mechanical Permits
- Electrical Permits
- Certificates of Occupancy

City of Seattle – Department of Transportation

- Street Improvements (i.e. sidewalk improvements, curbcuts, etc.)
- Street Use Permits (temporary – construction-related)

Seattle Public Utilities

- Water/Wastewater
- Recycling

Seattle City Light

- Electrical Power

Puget Sound Clean Air Agency

- Asbestos / Demolition Notification

11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

Existing Site Conditions

The King County Youth Services Center is located in Seattle's Central Area neighborhood, within the 12th Avenue Urban Center Village, on approximately a 9-acre site (**Figures 1** and **2**). As depicted in **Figure 3**, presently there are three structures on-site, including:

- **Alder Tower** – This 6-story (above-grade), 73,800-square-foot building is centrally-located on the site, immediately north of and connected to the Youth Detention Facility. Alder Tower serves as the "entrance" to all facilities on-site. It contains a secure entry, waiting area, seven district superior courts (courtrooms and associated administrative offices), offices for the Prosecuting Attorney, Attorney General, public defense, juvenile detention administration and support and meetings space. This building was built in 1972 and some renovation work was done in 1998.

- **Youth Detention Facility** – This building occupies the south quarter of the site extending from 12th Ave. to 14th Ave. The Youth Detention Facility is a 1-2-story (above-grade), 103,000 square-foot building that houses youth in short-term custody and youth detention facility support services; it can accommodate up to 160 juvenile detainees. The Youth Detention Facility also contains one of the two schools that are located on-site and operated by the Seattle School District; the other school is located in Alder Wing. This structure was constructed in 1952 and substantially rebuilt in 1992.

- **Alder Wing** – This 1-story (above-grade), 38,000-square-foot building is located in the central-east portion of the site, northeast of Alder Tower. The H-shaped complex (plan view) contains one of the two schools that are located on-site ("Alder Academy"), which is operated by the Seattle School District. This school is for problem youths that are not incarcerated and are on a day-reporting program; it includes several classrooms and a gymnasium. Alder Wing also contains staff offices and record storage. This building was built in 1951 and substantially renovated in 1972.

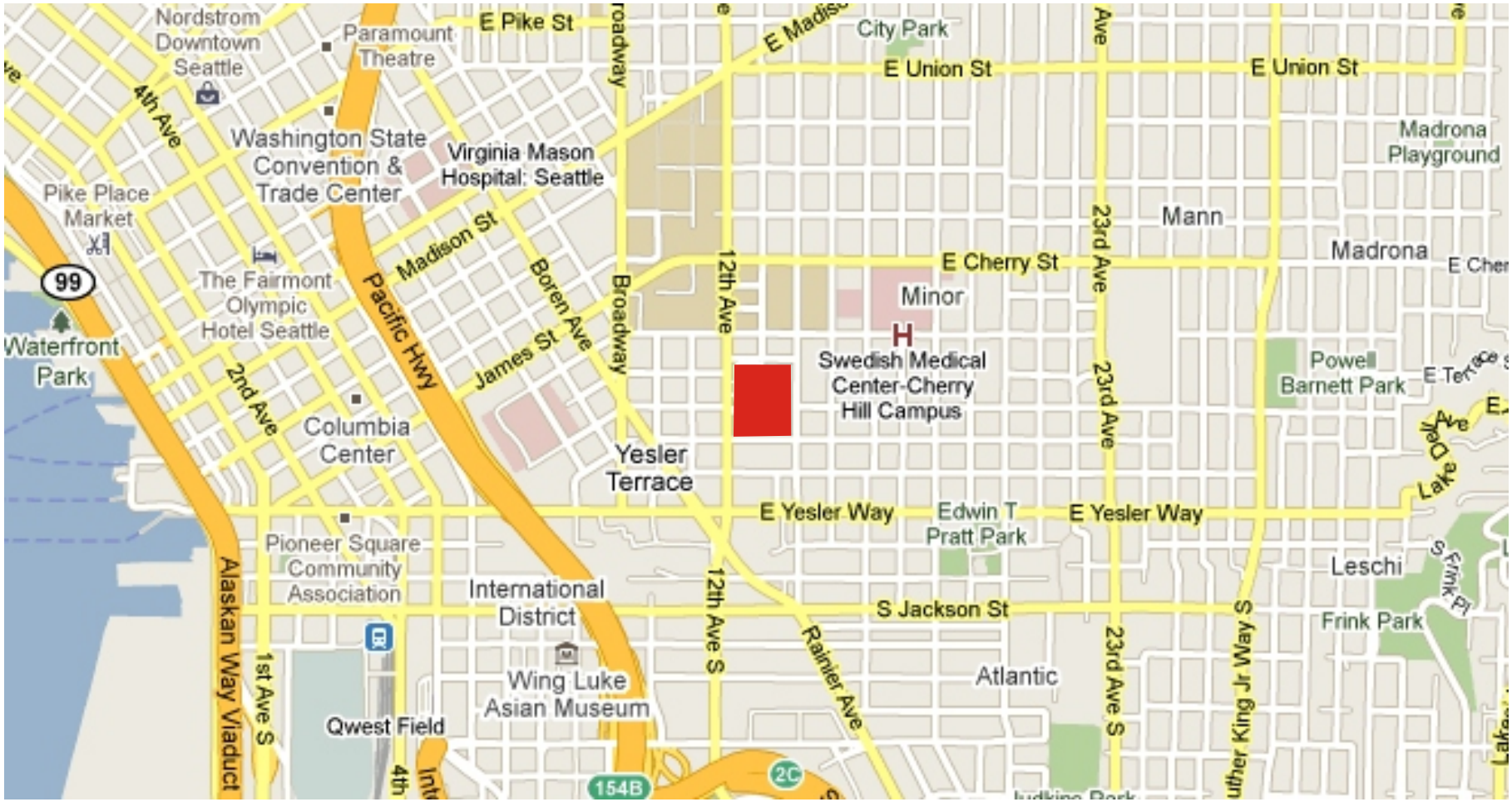
Source: *City of Seattle,* 2003.

BLUMEN CONSULTING GROUP, INC

King County
Youth Services Center Replacement

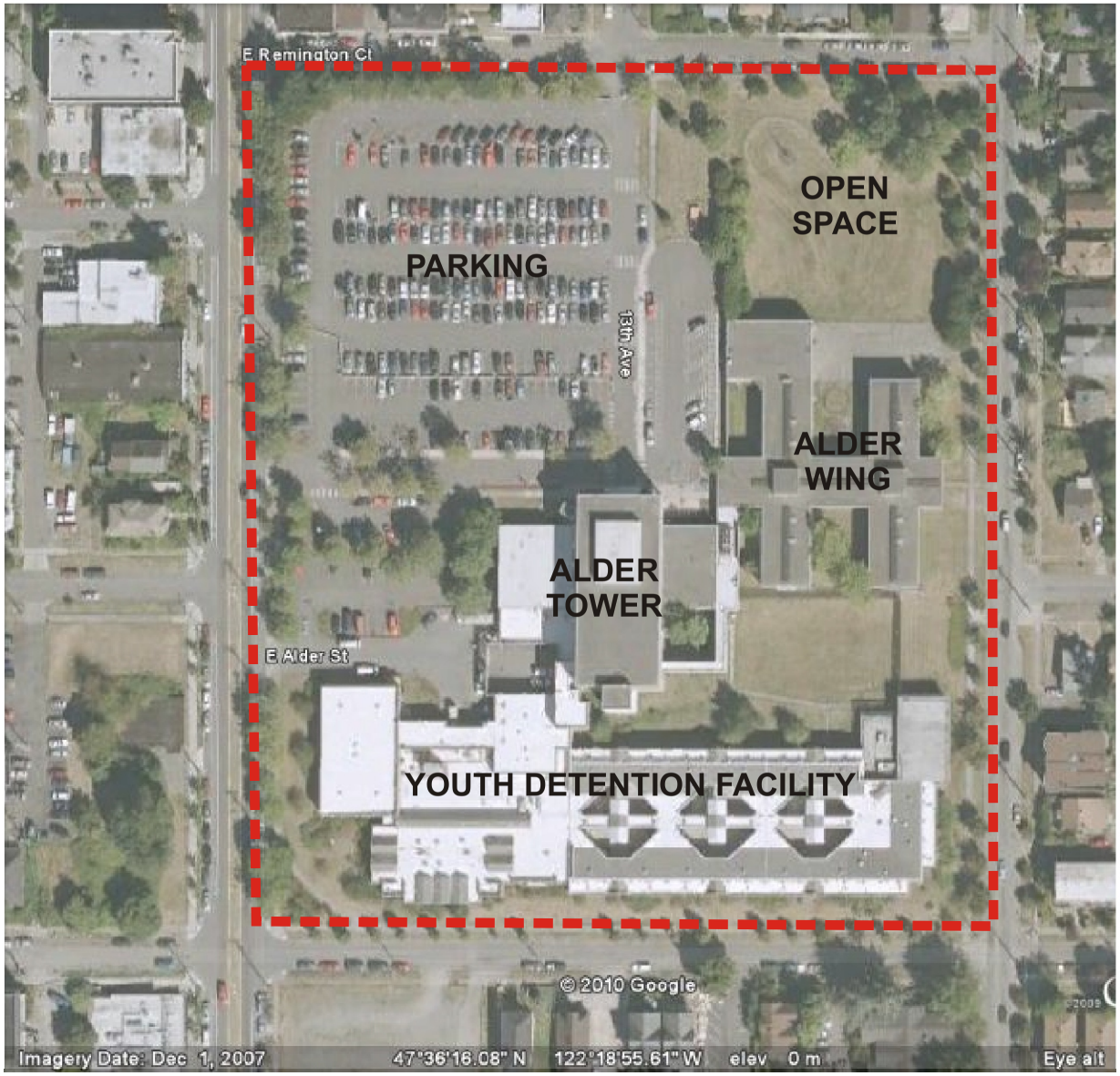
Figure 1

City of Seattle



Source: *Google,* 2010.

BLUMEN CONSULTING GROUP, INC	**King County Youth Services Center Replacement**	**Figure 2** **Vicinity Map**



Source: *Google,* 2010.

BLUMEN CONSULTING GROUP, INC	**King County Youth Services Center Replacement**	**Figure 3** **Existing Conditions - Aerial**

- **Parking and Sally Port[2] / Service Access**

  - ***Parking*** -- Surface parking is located in three areas on-site: immediately west of Alder Tower (restricted/gated access for judges and County vehicles), another separate area immediately west of Alder Tower (visitors), and in the northwest portion of the site for visitors and employees (restricted/gated access). There are a total of approximately 317 parking spaces on-site. Access to each of these parking areas is from 12th Ave. with three access locations; gated ingress/egress for employees is also provided in conjunction with E. Remington Ct. In addition, the site is served by two secondary driveways from 14th Ave.

  - ***Sally Port / Service Access*** – The sally port and service access are contained within a single point of access from 12th Ave. and located in the southwest portion of the site. These, however, are two separate elements of the existing facility with the loading dock located west of a secure entry into the sally port.

- **"Spirit of Our Youth" Open Area –** A County-owned and maintained open area (approximately one acre) is located in the northeast portion of the site. This includes a picnic area with tables, lawn and sculpted landforms, and sculpture titled "Spirit of Our Youth." While the area is largely for families of youth that are in detention and employees of the facility, it is also available for use by the community.

Proposed Action

Several conceptual massing options are presently being considered for the proposed project. While each is described below, features common to each include the following.

- The proposed project would involve phased development.

- It is proposed that Alder Tower and Alder Wing would ultimately be replaced by a new facility. The new courthouse and related facilities would contain approximately 256,600 square feet and include 15-17 courts (juvenile court and family court),[3] together with ancillary offices. Full build-out of the courts would most likely occur by 2032. As presently exists, holding cells[4] and a secure waiting area would be located proximate to the courts.

- Alder Academy (the existing school that is located within Alder Wing) may be incorporated into the new complex.

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2 A sally port is a secure entryway that consists of a series of doors or gates (Merriam-Webster OnLine).

3 The juvenile courts handle youths under 18 yrs. of age and family court can involve adults. No adults, however, are incarcerated at this facility.

4 Juvenile offenders are typically held in such cells less 30 min. while awaiting court appearance.

- The existing Youth Detention Facility would be retained.

- The existing surface parking would ultimately be replaced by structured parking (approx. 637 spaces) that would likely be partially below-grade. This facility would provide secure parking for judges, employee parking and parking for visitors.

- Provide an area on-site for mixed-use, co-development with street-level retail uses. This aspect of site redevelopment would be completed separately and would likely entail sale of this portion of the site to a developer.

- Provide an open area that includes: lawn, landscaping, a picnic area and the "Spirit of Our Youth" sculpture for use by families of youth that are in detention, employees of the facility, and the community.

Three conceptual massing alternatives have been developed for this proposed project. They differ with regard to the location of major uses on-site, the footprint of such uses, the location and amount of on-site co-development, the location and amount of open space; and internal vehicular access and circulation. Each preliminary concept is briefly described below.

Concept Alternative A **(Figures 4, 5, and 6)**

Massing

Concept Alternative A could entail development of a new court building consisting of a 4-5 level structure located in the west-central area of the site. The court would connect via a skybridge or underground tunnel to a new 3-story office building to the south. The office building would be attached to a portion of the north side of the existing Youth Detention Facility. For security purposes, a single entrance would be provided for the entire King County Youth Services Center building complex, which would be located at the southeast corner of the new court building.

Structured Parking

Below-grade, structured parking could be provided in the central-east portion of the site for 637 vehicles. Two separate vehicle ingress and egress points would be provided for staff and the public. The staff ingress/egress would be from E. Alder Street on the southeast side of the structure, and the public ingress/egress would be from 13th Avenue on the southwest side of the structure. An underground tunnel could connect the staff parking area to the court building.

Co-development

Space for co-development (mixed use, residential with street-level retail) could be provided in three locations on-site. Final massing would be determined at the time of actual development.

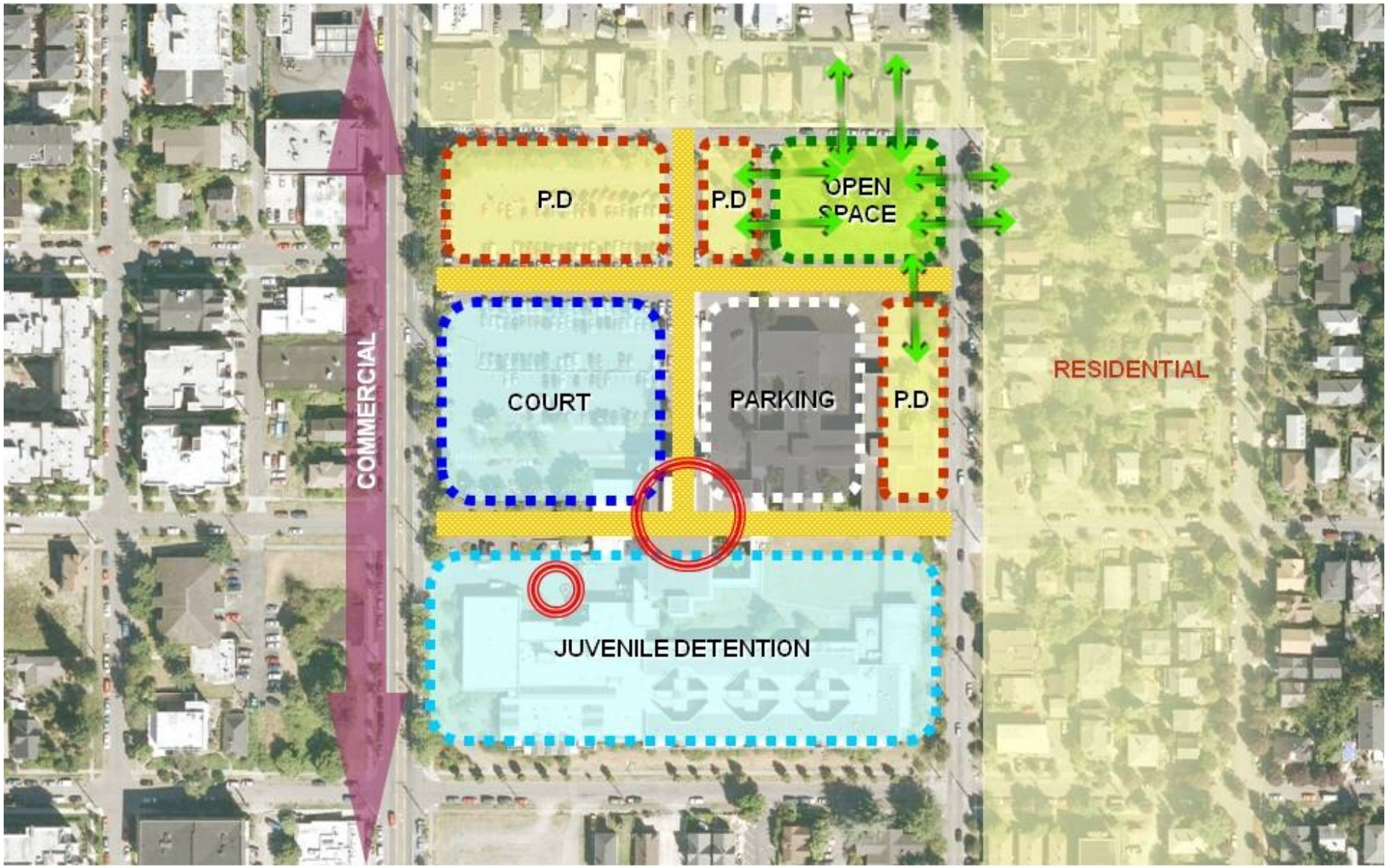
Open Area

An estimated 40,000-square foot of open area could be provided on-site. The main open area, similar to existing conditions, would be located in the northeast portion of the site, bounded by E Remington Ct. and 14th Avenue and could be bordered by co-development on the west.

Vehicular Access and On-site Circulation

New internal roadways could be provided to align with 13th Avenue to the north and E Alder Street to the east and west. An additional east/west roadway, just south of E Terrace Street, could be located north of the new court building and parking garage.

Vehicular access to the site would be possible from two entrances on 12th Avenue, one entrance on the north from 13th Avenue, and two entrances from 14th Avenue on the east. A secure sally port and a service vehicle entrance would be provided from 12th Avenue, adjacent to the west side of the new office building.



Source: *KMD Architects,* 2010.

BLUMEN CONSULTING GROUP, INC	**King County Youth Services Center Replacement**	**Figure 4** **Concept Alternative A - Site Diagram**

Source: *KMD Architects,* 2010.

BLUMEN CONSULTING GROUP, INC	**King County Youth Services Center Replacement**	**Figure 5** **Concept Alternative A - Development Scheme**

Source: *KMD Architects,* 2010.

BLUMEN CONSULTING GROUP, INC	**King County Youth Services Center Replacement**	**Figure 6** **Concept Alternative A - Development Massing**

Concept Alternative B **(Figures 7, 8, and 9)**

Massing

Concept Alternative B could entail development of a new court building consisting of a 4-5 level structure located in the west-central area of the site. The court building could connect via a skybridge and underground tunnel to a new 3-story office building to the south. The office building could be attached to a portion of the north side of the existing Youth Detention Facility. For security purposes, a single entrance could be provided for the entire King County Youth Services Center building complex, located at the southeast corner of the new court building.

Structured Parking

Below-grade, structured parking could be provided in the central-east portion of the site for 637 vehicles. Two separate vehicle ingress and egress points could be provided for staff and the public. The staff ingress/egress would be from E Alder Street on the southeast side of the structure and the public ingress/egress would be from the southwest side of the structure. An underground tunnel could connect the staff parking area to the court building.

Co-development

Space for co-development (mixed use, residential with street-level retail) could be provided in three locations on-site. Final massing would be determined at the time of actual development.

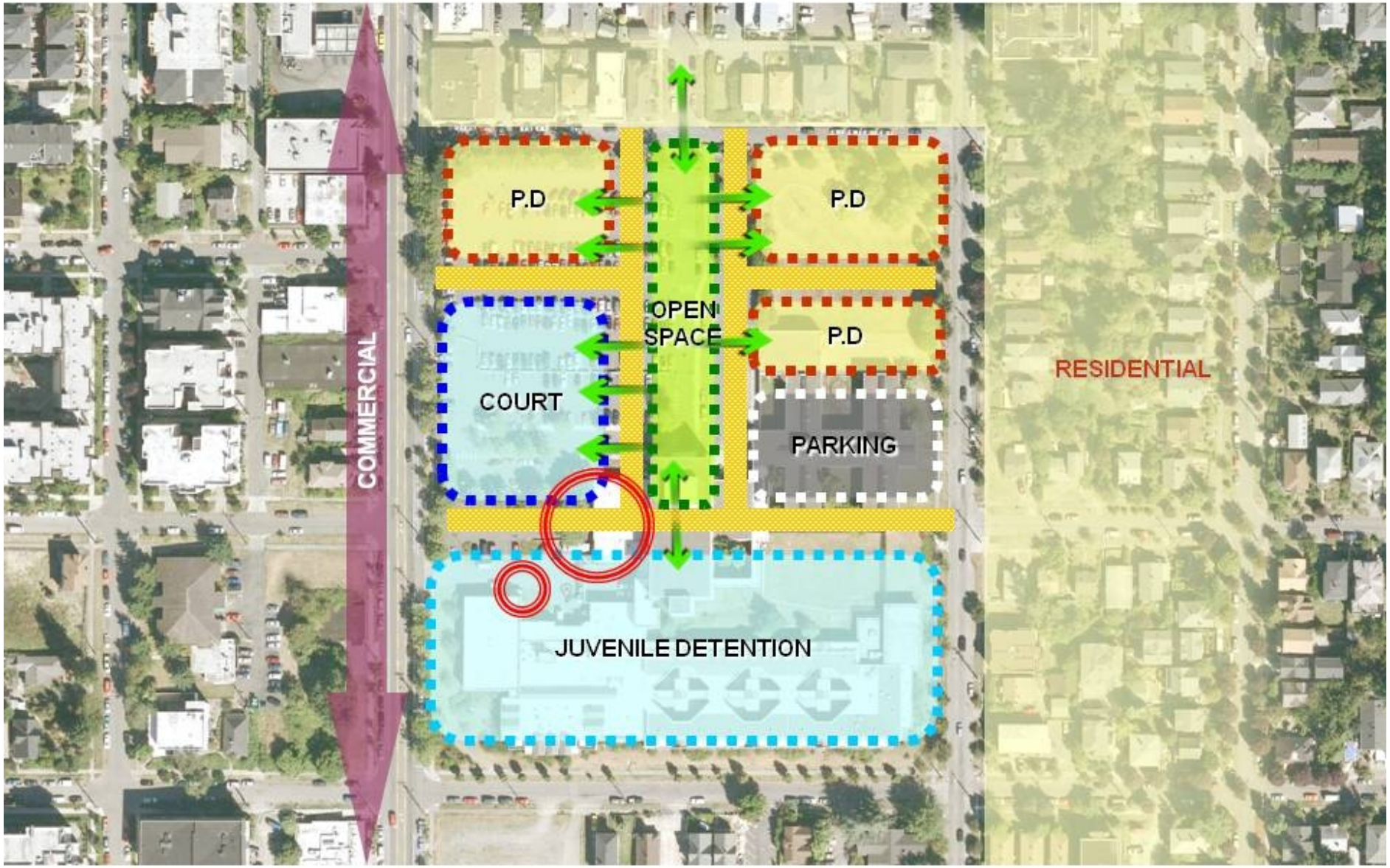
Open Area

An estimated 40,000-square-feet of open area could be provided on-site. The main open area could be located in central and north-central portions of the site and would be bisected by an east-west running street. This area could be framed by internal access roads to the east and west and a roundabout to the south.

Vehicular Access and On-site Circulation

A new internal roadway could be provided within the site to align with Alder Street to the east and west. An additional east-west running road could be provided to the north, just south of E. Terrace Street, and to the north of the court building and parking garage. Two, one-way, north-south roadways could be provided on the east and west sides of the open space and connect to a roundabout to the south.

Vehicular access to the site would be possible from two entrances on 12th Avenue, two entrances on the north from E. Remington Ct. and two entrances from 14th Avenue on the east. A secure sally port and a service vehicle entrance would be provided from 12th Avenue, adjacent to the west side of the new office building.



Source: *KMD Architects,* 2010.

BLUMEN CONSULTING GROUP, INC	**King County Youth Services Center Replacement**	**Figure 7** **Concept Alternative B - Site Diagram**

Source: *KMD Architects,* 2010.

BLUMEN CONSULTING GROUP, INC	**King County Youth Services Center Replacement**	**Figure 8** **Concept Alternative B - Development Scheme**

Source: *KMD Architects,* 2010.

BLUMEN CONSULTING GROUP, INC	**King County Youth Services Center Replacement**	**Figure 9** **Concept Alternative B - Development Massing**

Concept Alternative C **(Figures 10, 11, and 12)**

Massing

Concept Alternative C could entail development of a single new building containing both the court and office functions and could be located in the west-central portion of the site. The new building could be a 4-5 level rectangular structure with a 3-level wing connected to the south building face. This wing could connect the new building to a portion of the north side of the existing Youth Detention Facility. For security purposes, a single entrance would be provided for the entire King County Youth Services Center building complex; this would be located on the north side of the new court/office building.

Structured Parking

Below-grade, structured parking could be provided in the central-east portion of the site for 637 vehicles. Two separate vehicle ingress and egress points would be provided for staff and the public. The staff ingress/egress would be from the north side of the structure, and the public ingress/egress would be from the west side of the structure. An underground tunnel would connect the staff parking area to the new court/office building.

Co-development

Space for co-development (mixed use, residential with street-level retail) could be provided in three locations on-site. Final massing would be determined at the time of actual development.

Open Area

An estimated 50,000-square-feet of open space could be provided on-site. The main open area could be located in the northeast corner, similar to existing conditions. This open space could be bordered by co-development on the west side.

Vehicular Access and On-site Circulation

New roadways could be provided on the northerly portion of the site creating four similarly sized blocks for development. A new east-west roadway could be provided within the site, separating the open space and primary co-development space to the north from the King County Youth Services Center facilities to the south. A north-south roadway could align with 13th Avenue. Also, a roadway could be provided to align with E Terrace Street on the west, connecting to 13th Avenue in the center of the site.

Vehicular access to the site could be possible from two entrances on the west from 12th Avenue, one entrance on the north from 13th Avenue and one entrance from 14th Avenue on the east. A sally port and secure service vehicle entrance would be provided from 12th Avenue, at the southwest corner of the new court/office building.

Source: *KMD Architects,* 2010.

BLUMEN CONSULTING GROUP, INC	**King County Youth Services Center Replacement**	**Figure 10** **Concept Alternative C - Site Diagram**

Source: *KMD Architects,* 2010.

BLUMEN CONSULTING GROUP, INC	**King County Youth Services Center Replacement**	**Figure 11** **Concept Alternative C - Development Scheme**

Source: *KMD Architects,* 2010.

BLUMEN CONSULTING GROUP, INC	**King County Youth Services Center Replacement**	**Figure 12** **Concept Alternative C - Development Massing**

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any. If a proposal would occur over a range of area, provide the range or boundaries of the site(s).

The project site is located at the King County Youth Services Center in Seattle's Central Area neighborhood, within the 12th Avenue Urban Center Village, on approximately a 9-acre site (see **Figures 1** and **2**). The site is bounded by 12th Avenue on the west, E. Remington Court on the north, 14th Avenue on the east, and E. Spruce Street on the south.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one):
***Flat*, rolling, hilly, steep slopes, mountainous,**
other:_____

Based on the geotechnical report in Attachment A to this checklist (Shannon & Wilson, 2010), the site slopes downward to the southeast with approximately a 45-foot grade separation between the northwest corner of the site and the southeast corner. The site contains intermediate terraces.

b. What is the steepest slope on the site (approximate percent slope)?

The overall site gradient is approximately 4.3 percent. The steepest slope on the site is approximately 6 percent.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

The site generally consists of fill, recessional outwash, glacial till and advanced outwash soil.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

The Puget Sound region is a seismically active region, thus the site could experience seismic activity, which may cause surface rupture, liquefaction and subsidence, and landslides. Based on site conditions, the risk of these hazards is considered low.

A small area of the site, located in the southeast quadrant, is mapped by the City of Seattle as a steep slope. However, this part of the site is now covered by the existing Youth Detention Facility building and the depiction is apparently an uncorrected mapping error.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

It is anticipated that approximately 51,000 cubic yards of earthwork may be necessary in order to prepare the site for construction activities. This earthwork would consist of an estimated 39,000 cubic yards of cut and 12,000 cubic yards of fill.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Erosion is possible in conjunction with any construction activity. Site work will expose soils, but planned mitigation (including Construction Best Management Practices) is expected to mitigate potential impacts. Once the proposed project is operational, no erosion is anticipated.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

- ***Concept Alternative A*** *– Approximately 91 percent of the site would be covered with impervious surfaces.*
- ***Concept Alternative B*** *– Approximately 93 percent of the site would be covered with impervious surfaces.*
- ***Concept Alternative C*** *– Approximately 88 percent of the site would be covered with impervious surfaces.*

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Comprehensive Drainage Control Plan approvals (including Construction Best Management Practices, Erosion and Sediment Control approvals) would be submitted as components of the City of Seattle Master Use Permit and the Building Permit. A Geotechnical Design Study would be prepared for the site including additional recommendations to ensure soil stability during construction.

2. Air

a. What type of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

The Proposed Action could result in localized increases in air emissions (primarily carbon monoxide) due to construction activities and possible increased vehicular traffic/congestion associated with the proposed development. As noted in Section A 11 of this Environmental Checklist, while the Proposed Action would result in a net increase of approximately 320 parking spaces on-site, the footprint associated with such parking would be reduced.

In order to evaluate the climate change impacts of the proposed project, a Greenhouse Gas Emissions Worksheet was used to estimate the emissions footprint for the lifecycle of the development alternatives on a gross-level basis. The Worksheet estimate is based

on building square footage, and since the three alternatives assume the same total building square footage, the estimate is the same for all the alternatives. In total, the estimated lifespan emissions estimate for the alternatives is approximately 336,465 $MTCO_2e$[5]. *The Greenhouse Gas Emissions Worksheet used to estimate the project emissions are available in Attachment B to this Checklist.*

The emissions estimate is based on the combined emissions from the following sources:

- *Embodied Emissions - extraction, processing, transportation, construction and disposal of materials and landscape disturbance;*
- *Energy-related Emissions - energy demands created by the development after it is completed; and,*
- *Transportation-related Emissions - transportation demands created by the development after it is completed.*

The scale of global climate change is so large that a project's impacts can only be evaluated on a cumulative scale, and it is not anticipated that a single development project, even one of the scale proposed, would have an individually discernable impact on global climate change.

The proposed project would be designed to conform to the applicable regulations and standards of agencies regulating air quality in Seattle. These include the Environmental Protection Agency, Washington State Department of Ecology, and the Puget Sound Clean Air Agency.

The project would not be expected to result in violations of ambient air quality during construction or operation.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

5 $MTCO_2e$ is defined as Metric Tonne Carbon Dioxide Equivalent; equates to 2204.62 pounds of CO2. This is a standard measure of amount of CO2 emissions reduced or sequestered. Carbon is not the same as Carbon Dioxide. Sequestering 3.67 tons of CO2 is equivalent to sequestering one ton of carbons.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

- *The proposed project would be built to achieve a LEED Gold certification in accordance with King County Ordinance 16147.*
- *The proposed project would comply with provisions of the Puget Sound Clean Air Agency and Seattle Department of Development.*
- *During demolition, debris and exposed areas would be sprinkled as necessary to control dust; quarry spall areas would be provided on-site prior to vehicles exiting the site; and truck loads and routes would be monitored to minimize dust-related impacts.*
- *Using well-maintained equipment would reduce emissions from construction equipment and construction-related trucks and prolonged periods of vehicle idling would be avoided.*
- *Trucking equipment and demolition debris to and from the site would be scheduled and coordinated to minimize congestion during peak travel times associated with adjacent roadways.*

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No surface water bodies are near the site.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No. The Proposed Action is outside the boundary of any designated shoreline.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

No fill or dredge material would be placed in or removed from any surface water body as a result of this proposed project.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No. The Proposed Action would not require any surface water withdrawals or diversions.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No. The site is not within a 100-year floodplain and is not identified as a flood prone area on the Seattle critical areas map.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No. There would be no discharge of waste materials to surface waters.

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

It is not anticipated that dewatering would be necessary during construction of proposed buildings at this location or that there would be discharge of water to groundwater.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Waste material would not be discharged into the ground from septic tanks or other sources. Each building would be connected to the City's sewer system and would discharge directly to that sewer system.

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Existing and new impervious surfaces constructed on the site are and would continue to be the source of runoff from the proposed project. Currently, stormwater flows overland across the site to one or more catch basins on-site or proximate to the site. Stormwater management systems for the proposed project have not yet been designed. However, it is anticipated that stormwater runoff from the site for the proposed project would be routed through a detention system in accordance with City of Seattle design standards, prior to discharge to the City's existing sewer system adjacent to the site.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No. The proposed storm water collection system and associated mitigation measures would prevent waste materials from entering the ground water or surface waters.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

The Proposed Action would comply with applicable requirements relating to surface water runoff control and water quality including the City's Drainage Control Ordinance. The proposed project would also require City approval of a Comprehensive Drainage Control Plan (including Construction Best Management Practices, Erosion and Sediment Control approvals) as part of the building permit process. Temporary and permanent storm water control systems for the development would be designed and constructed in accordance with the City of Seattle's Storm Water Code. This code sets minimum requirements for flow control and storm water treatment facilities, as well as minimum requirements for all discharges, which are designed to reduce the introduction of pollutants into storm water runoff as close to the source as possible.

4. Plants

a. Check or circle types of vegetation found on the site:

X deciduous tree: alder, maple, aspen, other
X evergreen tree: fir, cedar, pine, other
X ornamental shrubs
X grass
__ pasture
__ crop or grain
__ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
__ water plants: water lily, eelgrass, milfoil, other
__ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

It is likely that the proposed project would require removal of some on-site trees and vegetation.

All tree removal would comply with the City of Seattle's tree protection regulations, which are contained in the Seattle Municipal Code, Chapter 25.05 and 25.11, and within Director's Rule 16-2008. The Director's Rule clarifies the definition of Exceptional Trees and clarifies SEPA policies relative to a determination of value for outstanding trees.

c. List threatened or endangered species known to be on or near the site.

There are no known threatened or endangered species located on or proximate to the project site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

To compensate for the loss of existing trees during construction, new trees would be planted on the project site and new landscaping would be provided. The number and size of new trees would meet or exceed applicable City of Seattle requirements.

5. Animals

a. Circle (underlined) any birds and animals that have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, songbirds, other: seagulls, pigeons, mammals: deer, bear, elk, beaver, other: None.

fish: bass, salmon, trout, herring, shellfish, other: None.

b. List any threatened or endangered species known to be on or near the site.

There are no known threatened or endangered species located on or proximate to the project site.

c. Is the site part of a migration route? If so, explain.

The site is not mapped as a City of Seattle migration route.

d. Proposed measures to preserve or enhance wildlife, if any:

No specific measures are proposed to enhance wildlife and/or habitat other than the planned landscaping, which could potentially contribute to an enhanced urban wildlife habitat in this portion of the Central Area Neighborhood.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Electricity and natural gas are the primary sources of energy that would serve the proposed development. During operation, these energy sources would be used for project heating, cooling and for hot water.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

Development Alternatives A, B and C would not be anticipated to result in any significant impacts relative to solar access for properties in the vicinity of the site.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

The proposed development would employ measures to reduce energy consumption including: energy-saving lighting, high efficiency heating and air conditioning units, high efficiency water heaters, and variable frequency drives on fans in the parking garage. All mechanical systems would be designed to comply with applicable City of Seattle and Washington State Energy Code requirements.

The proposed development would be built to achieve a LEED Gold rating in accordance King County Ordinance 16147.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

A Phase I Environmental Site Assessment has been prepared for the King County Youth Service Center (YSC) property.

Findings indicate that the project site currently manages diesel fuel in an underground storage tank to support use of an emergency generator at the southwest corner of the building complex. No releases of chemicals to the environment have been reported or are known to have occurred on the project property.

No properties immediately surrounding the project site have reported any releases of chemicals to the environment; most of this area has been residential, with occasional businesses interspersed between houses and apartments. Historically, numerous vehicle repair shops have occupied properties along the west side of 12th Avenue. Currently, an Arco gas station is situated up-gradient to the northwest of the site at the intersection of E. Jefferson and 12th Avenue, and an auto repair facility exists at 317 12th Avenue. Both of these properties handle chemicals, but no release to the environment has been reported.

Additionally, a Hazardous Materials Building Survey has been completed that identified the presence of asbestos, lead-based paint, polychlorinated biphenyls (PCBs), and mercury that may be found in switches and other electrical equipment. All of these materials are likely to exist in the buildings on-site.

Based on this information, there does not appear to be a concern that a release of hazardous substances has occurred on or near the site.

Hazardous substances, such as asbestos, lead-based paint, PCBs and mercury are present in the buildings, which would be removed, including Alder Tower and Alder Wing, as part of the Proposed Action.

1) Describe special emergency services that might be required.

No special emergency services are anticipated as a result of this Proposed Action. As is typical of urban development, the proposed development would require fire, medical, and other emergency services from the City of Seattle, as noted later in this Environmental Checklist.

2) Proposed measures to reduce or control environmental health hazards, if any:

Following completion of the Phase I Site Assessment, if hazardous materials are found to exist on-site, a hazardous materials (hazmat) remediation plan would be prepared and any remediation work would be professionally monitored throughout demolition and excavation. The excavation contractor would be monitored by an environmental consultant and when any contaminated soils are identified, the soils would be sorted and stockpiled prior to disposal.

Prior to demolition, any asbestos, lead-based paint and other similar hazardous materials that may be encountered during demolition would be removed by a qualified abatement contractor in accordance with State and Federal guidelines.

b. Noise

1) What types of noise exist in the area that may affect your project (for example: traffic, equipment operation, other)?

The existing acoustic environment on and around the site is typical of an urban setting, and consists primarily of vehicular traffic on surrounding streets, aircraft overflights, noise in conjunction with on-site traffic and parking, and service vehicle back-up alarms. At times of the day, aircraft noise can be the major contributor to ambient levels.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from site.

Construction-related noise would occur as a result of on-site demolition and construction activities associated with the Proposed Action. Construction noise would be short-term and would be the most noticeable noise generated by the proposed project. This would include demolition and construction activities on-site, and noise associated with construction-related traffic. Construction noise is subject to specific limits in the Seattle noise ordinance.

Once the proposed redevelopment was complete, several elements of the operational project could potentially result in noise impacts at nearby receivers. These elements could include noise from increased traffic due to additional project-related development, and noise from building heating, ventilation and air conditioning (HVAC) units.

3) Proposed measures to reduce or control noise impacts, if any:

As noted previously, the project would comply with provisions of the City's Noise Code; specifically: construction hours would be limited to weekdays (non-holiday) from 7 AM to 7 PM and Saturdays and Sundays and legal holidays from 9 AM to 7 PM. If extended construction hours became necessary, the applicant would need to seek approval from DPD in advance. However, the need for extended construction hours would not be anticipated.

In addition to compliance with the Noise Code, relatively simple and inexpensive practices could be implemented to ensure that construction noise levels stay within applicable sound level limits. These could include using properly sized and maintained mufflers, engine intake silencers, engine enclosures, and turning off idle equipment. Construction contracts could specify that mufflers be in good working order and that engine enclosures be used on equipment when the engine is the dominant source of noise. Stationary equipment could be placed as far away from sensitive receiving locations as possible, and where this is infeasible, portable noise barriers could be placed around the equipment.

Measures to reduce operational noise impacts of the completed project could include shielding HVAC units.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

*As depicted by **Figure 1**, the project site is located in the 12th Avenue Urban Center Village. Information regarding site uses are noted in Section A 11 of this Environmental Checklist. Basically, the site houses the King County Youth Services Center facilities which include the Juvenile Detention Center, Juvenile Court, Juvenile Court Services, and the juvenile divisions of the Prosecuting Attorney's Office and the Department of Judicial Administration.*[6]

Existing uses adjacent to the site

The project site is primarily surrounded by single and multi-family housing, with some commercial development to the west along 12th Avenue.
Specifically, existing land uses bordering the site include:

- ***To the north -** Apartments, condominiums and single family residences. A mini-mart is located to the northwest;*
- ***To the east -** single family residences;*
- ***To the south -** Single and multi-family residences, surface parking, and a church. A storage building is located to the southwest; and,*
- ***To the west -** Storage buildings, vacant land, several offices, a service garage, and a single family residence.*

The largest future projects under development in the site vicinity include the following:

- *Yesler Terrace Redevelopment – Seattle Housing Authority is preparing an EIS for a phased redevelopment of the Yesler Terrace community to a mixed-use residential community on a 28-acre site located to the west and southwest of the King County Youth Services Center site. This project is anticipated to consist of 3,000 to 5,000 dwelling units, 800,000 to 1.2 million sq.ft. of office space and 40,000 to 88,000 sq.ft. of retail space.*

- *Seattle University Major Institution Master Plan (MIMP) – Seattle University is currently in the process of updating their Major Institution Master Plan for the Seattle campus, which is located roughly two blocks north of the King County Youth*

[6] King County, Department of Adult & Juvenile Detention, http://www.kingcounty.gov/courts/detention/juvenile_detention.aspx

Services Center site. Full build-out associated with the MIMP would involve the addition of up to 2,145,000 sq.ft. of on-campus development and a net increase of approximately 550 parking spaces.

- *Swedish Medical Center/Cherry Hill Campus MIMP – Swedish Hospital is commencing preliminary planning with regard to updating their Major Institution Master Plan for the Cherry Hill campus, which is located roughly three blocks northeast of the King County Youth Services Center site. No details of the scope of that development are yet available.*

- *12th Avenue and Cherry Street – a mixed-use building with retail and residential housing is under construction on the campus of Seattle University, approximately 2-blocks to the north of the site.*

b. Has the site been used for agriculture? If so, describe.

No. Not in over 100 years.

c. Describe any structures on the site.

There are three buildings on the project site:

- *Alder Tower – 6-story (above-grade), 73,800-square-foot building which is centrally located on the site, immediately north of and connected to the Youth Detention Facility.*

- *Alder Wing – 1-story (above-grade), H-shaped, 38,000-square-foot building is located in the central east portion of the site, northeast of Alder Tower.*

- *Youth Detention Facility – 2-story (above-grade), 103,000 square- foot building occupies the south quarter of the site extending from 12th Avenue to 14th Avenue.*

d. Will any structures be demolished? If so, what?

Both Alder Tower and Alder Wing would be demolished as part of the proposed project.

e. What is the current zoning classification of the site?

As mentioned previously, the site currently contains two zoning designations: the northwest quarter is zoned NCP3-65, Neighborhood Commercial 3 with a maximum 65' Height Limit, and a P1 (pedestrian)

Overlay; the remainder of the site is zoned L-3, Lowrise – 3, which is a residential zoning classification. As such, the King County Youth Services Center is currently a non-conforming use in terms of either zoning designation and is permitted under a City of Seattle Council Conditional Use authorization.

f. What is the current comprehensive plan designation of the site?

The current Comprehensive Plan Designation for the project site is Urban Center Village.

Information in this section addresses the relationship of the Proposed Action and development alternatives to adopted land use plans, applicable policies and development regulations. Specific documents that are referenced include:

- *City of Seattle Comprehensive Plan;*
- *Central Area Neighborhood Plan (Including the 12th Ave. Urban Center Village); and*
- *12th Avenue Development Plan.*

City of Seattle Comprehensive Plan

The City of Seattle's Comprehensive Plan – Toward a Sustainable Seattle, was originally adopted in 1994, amended each year, and substantially updated in 2005. The City's updated Comprehensive Plan consists of eleven major elements – urban village, land use, transportation, housing, capital facilities, utilities, economic development, neighborhood, human development, cultural resources and environment. Each element contains goals and policies that are intended to "guide the development of the City in the context of regional growth management" for the next 20 years. The King County Youth Services Center project site is part of the First Hill/Capitol Hill Urban Center, which emphasizes medium density mixed-use residential land uses.

Central Area Neighborhood Plan/12th Avenue Urban Center Village

The King County Youth Services Center site is located within the borders of the Central Area Neighborhood Planning Area that was adopted and incorporated as part of the City's Comprehensive Plan. Goals and policies from the Central Area Neighborhood Plan emphasize:

- *enhancing the sense of community/pride among residents, business owners, employees and visitors through excellent physical and social environments on main thoroughfares;*

- *encouraging use of travel modes, such as transit, bicycles, walking and shared vehicles by students and employees, and discouraging commuting by single occupancy vehicles;*
- *minimizing impacts of commuters on Central Area neighborhoods and neighborhood cut through traffic to and from the regional highway network;*
- *working with institutions/businesses to develop creative solutions for minimizing auto usage by employees and students; and*
- *encouraging shared parking at business nodes in order to meet parking requirements while maximizing space for other uses with a goal to reduce the need for surface parking lots especially along key pedestrian streets.*
- *creating a thriving mixed-use residential and commercial area with a "main street" including services and retail that is attractive and useful to neighborhood residents and students, and public spaces that foster a sense of community, near the intersection of several diverse neighborhoods and major economic and institutional centers;*
- *encouraging increased housing density where appropriate, such as on 12th Ave. and on Yesler Way, and in mid-rise zoned areas;*
- *facilitating the redevelopment of City-owned land, emphasizing mixed use where that type of development will contribute to the desired community character; and*
- *seeking services and retail uses that build on the neighborhood's proximity to Seattle University.*

12th Avenue Development Plan

The 12th Avenue Development Plan area is generally bounded by E. Spring Street, E. Jefferson Street, 12th Avenue and 15th Avenue. The King County Youth Services Center site is located directly to the south of this plan area. The 12th Avenue Development Plan was adopted in 1992. Goals and policies from the 12th Avenue Development Plan emphasize:

- *creating a mixed-use neighborhood that serves the needs of, and reinforces the integrity of, the community;*
- *ensuring that uses allowed within this area are consistent with and supportive of a residentially oriented mixed-use environment;*
- *ensuring that development of commercial property within the study area is supportive of residentially oriented mixed-use development;*
- *that streets and public rights-of-way throughout the study area should be improved to create a more pedestrian-oriented environment;*
- *providing a link between the existing residential neighborhood and the adjacent institutional campuses;*

- *providing more compatibility of scale between the recommended development and the future development of local institutions;*
- *that the east-west streets of Columbia, Cherry and Jefferson, should be enhanced to better support pedestrian movement;*
- *that all planning for institutional growth in the area should ensure that there are no spill-over traffic impacts upon the adjacent residential community; and*
- *ensuring that the adjacent institutional and/or commercial development does not create negative impacts on the surrounding residential community.*

g. If applicable, what is the current shoreline master program designation of the site?

The site is not located within a shoreline area.

h. Has any part of the site been classified as an "environmentally critical" area? If so, specify.

The City of Seattle has mapped a small portion of the site, located in the southeast quadrant, as a steep slope area. However, this part of the site is now covered by the existing Youth Detention Facility building and the depiction is apparently an uncorrected mapping error.

i. Approximately how many people would reside or work in the completed project?

It is anticipated that following completion of the Phase I development program, approximately 553 individuals could work in the new King County Youth Services Center facilities. Following completion of the Phase II development approximately 615 individuals could work in the facility.

j. Approximately how many people would the completed project displace?

No residential uses exist on the project site; therefore, the Proposed Action would not displace any people.

Development of Concept Alternative C would entail construction of the new court and office building on land that is presently occupied by the Alder Tower. Employees and services contained in this building would be temporarily re-located to an off-site location until construction of the new building is completed.

k. Proposed measures to avoid or reduce displacement impacts, if any:

No mitigation measures are necessary.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

As noted, the proposed project is a non-conforming use and authorization is granted through a Council Conditional Use Permit; therefore project approval will require either a Council Conditional Use approval from the City of Seattle or a Property Use and Development Agreement with the City of Seattle. In either case, the approval will assure that the project is compatible with existing and projected land uses and plans.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Part of the site would be made available for mixed-use, co-development that could involve housing with street level retail uses. As mentioned previously, this aspect of the site redevelopment would be completed as a separate action and would be subject to its own SEPA review process.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

No housing units would be eliminated by the Proposed Action.

c. Proposed measures to reduce or control housing impacts, if any:

Since no housing units would be eliminated, no measures are proposed to reduce or control housing impacts.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Concept Alternative A

- *Courthouse: 4-5 levels (up to 65 feet)*
- *Office: 3-levels (up to 45 feet)*
- *Co-Development: 5-levels (up to 80 feet) in the northwest corner, 3-levels (up to 45 feet) in remaining areas.*

Concept Alternative B

- *Courthouse: 4-5 levels (up to 65 feet)*
- *Office: 3-levels (up to 45 feet)*
- *Co-Development: 5-levels (up to 80 feet) in the northwest corner, 3-levels (up to 45 feet) in remaining areas.*

Concept Alternative C

- *Courthouse and Office: 4-5 levels (up to 65 feet)*
- *Co-Development: 5-levels (up to 80 feet) in the northwest corner, 3-levels (up to 45 feet) in remaining areas.*

Under all of the development alternatives, the parking garage would be a partially below-grade structure with a maximum above-grade height of approximately 35-feet.

The principal exterior building materials which may be used for the proposed project would be determined as part of a later design effort. It could be anticipated, however, that materials would be selected with the goal of respecting the existing aesthetic character of the immediate neighborhood.

b. What views in the immediate vicinity would be altered or obstructed?

Under all of the development options, existing views of the site would be replaced by increased development and density. Co-development and open space would primarily face the edges of the site, while the main bulk of the County's replacement facilities (court, office and parking garage) would be located in the interior of the site, with just the east façade of the court and office buildings facing a portion of the western edge of the site.

Specifically views in the immediate vicinity would be altered as follows:

Concept Alternative A

The new internal street configuration would divide the northerly portion of the site into four similarly sized blocks of development. Views of the existing surface parking lot on the northwest quadrant of the site would be replaced by that of a mixed-used co-development in the northwest portion of the site and the new 4-5-level court building immediately south of the co-development. The existing open space in the northeast quadrant would largely be retained, although space for co-development would be provided bordering the west side of this area.

Views of the existing Alder Wing building would be replaced by co-development that borders the east boundary of the site and a 637-car parking garage west of the co-development. Views of the Alder Tower would be replaced by a new internal street system, with an east/west road aligning with E Alder Street and a north/south road aligning with 13th Avenue. Views of the existing Youth Detention Facility would primarily remain the same, with the exception of the west half of the north façade, which would be rehabilitated with a 3-level office addition.

Concept Alternative B

Views of the existing surface parking lot on the northwest quadrant of the site would be replaced by that of mixed-used co-development in the northwest portion of the site and a new 4-5-level court building to the immediately south of the co-development. Linear north-south open space would be located east of these buildings and would be framed by north/south oriented roads on each side.

Views of the existing open space in the northeast corner of the site could be replaced by that of co-development.

Views of the existing Alder Wing building in the east-central area of the site would be replaced by co-development (immediately south of the co-development proposed for the northeast portion of the site) and a 637-car parking garage immediately south of the co-development, bordering 14th Avenue.

Views of the Alder Tower would largely be replaced by a new road aligned with E Alder Street to the east and west, and a roundabout in the central portion of the site.

Concept Alternative C

Views of the existing surface parking lot on the northwest quadrant of the site would be replaced by mixed-use co-development in two least-west-oriented buildings with the new 4-5-level court and office building to the south.

The existing open space in the northeast quadrant would largely be retained, although space for co-development would be provided bordering the west side of this area.

Views of the existing Alder Wing building in the east-central portion of the site would be replaced by co-development bordering 14th Avenue and a 637-car parking garage immediately west of the co-development in this portion of the site.

Views of the Alder Tower would largely be replaced by the new court and office complex, which would be located immediately east of E Alder Street.

c. Proposed measures to reduce or control aesthetic impacts, if any:

While design details have not been determined at this stage in the planning process, it is anticipated that new development would be designed to be compatible with the surrounding neighborhood. As such, it is likely that buildings would be modulated to break up massing and scale and to promote a pedestrian-oriented environment.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

New temporary sources of light and glare would be introduced to the site during construction activities. The lighting sources would be associated with building construction, trucks and other equipment. Lighting associated with construction activities would be limited by City of Seattle regulations, which limit activities during night-time hours; this would lessen the amount of construction lighting necessary. Light and glare sources would be temporary in nature, are a life and safety requirement of the construction process, and would not be assumed to be significant.

Following the site redevelopment, light and glare from both stationary sources and mobile sources, particularly at night would continue to occur. Stationary sources of light could include interior lighting, building and parking entrance and street lighting, pedestrian-level façade lighting, and pedestrian-oriented lighting within open space

areas. Mobile sources would primarily include light from vehicle headlights entering and exiting the site and accessing the on-site parking garage. Lighting from the site would appear as a continuation of the urban and residential lighting pattern in the area, and no significant light-related impacts would be anticipated.

New sources of glare could include reflection from building facades and windows and reflections from vehicle traffic. The amount of glare generated by the development options would not be anticipated to be significant.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Light and glare from the finished project would not be anticipated to be a safety hazard, as the project is not located in proximity to a major highway or transportation corridor.

The project would not interfere with any designated City of Seattle viewpoints, view corridors or scenic routes.

c. What existing off-site sources of light or glare may affect your proposal?

There are no off-site sources of light or glare that would affect the proposal.

d. Proposed measures to reduce or control light and glare impacts, if any:

Exterior building lighting and pedestrian lighting could be selected and located to ensure that light is directed downward and away from adjacent off-site properties to minimize the light spillage-related impacts to nearby uses.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

As noted in Section A 11 of this Environmental Checklist, there is an open space located in the northeast corner of the project site, which contains a sculpture, sculpted land forms and a picnic area. The perimeter of the open space area is landscaped.

The Squire Park P-Patch Community Gardens are located approximately one block to the south of the project site, on 14th

Avenue and E Fir Street. Seattle University's Logan Field is located approximately one block to the northwest and Championship Field is located approximately one block to the north. Both athletic fields are located within the boundary of the Seattle University campus.

b. Would the proposed project displace any existing recreational uses? If so, describe.

The proposed project would not displace any off-site recreational uses.

*Under development of Concept Alternatives A and C, the existing on-site open area that is proposed for the northeast corner of the site would largely be maintained, with the west side devoted to co-development (see **Figures 4, 5, 6, 10, 11, and 12**). Under Concept Alternative B, the existing open area would be replaced by co-development and a new open area would be located in the central portion of the site (see **Figures 7, 8, and 9**). While the total amount of on-site open area would decrease slightly under Concept Alternatives A and B, it would increase under Concept Alternative C.*

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

No recreation impacts are anticipated and no mitigation is necessary.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

There are no places, objects or buildings on or directly next to the project site that are listed or proposed for national, state, or local preservation registers. The closest designated City of Seattle Landmark is Washington Hall, which is located at 153-14th Avenue, approximately one block south of the site.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

As mentioned above, there are no designated landmarks or evidence of sites of historic, archaeological or cultural significance on or next to the site.

c. Proposed measures to reduce or control impacts, if any:

No impacts to historic or archaeological resources would be anticipated to result from the Proposed Action.

14. Transportation

a. Identify public streets and highways serving the site, and describe the proposed access to the existing street system. Show on site plans, if any.

Based on the transportation analysis contained in Attachment C to this checklist (TENW, 2010), the site is served by 12th Avenue, which is classified by the City of Seattle as a Minor Arterial, and 14th Avenue, which is classified as a Collector Arterial. According to the Seattle Comprehensive Plan, Minor Arterials are roadways that distribute traffic from principal arterials to collector arterials and access streets; Collector Arterials are roadways that collect and distribute traffic from principal and minor arterials to local access streets or provide direct access to destinations.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

The site is well served by public transit with the following Metro bus routes providing services within several blocks of the site:

- *Route 3 – 12th Avenue and E. Jefferson Street*
- *Route 4 – 12th Avenue and E. Jefferson Street*
- *Route 9 – Yesler and 12th Avenue*
- *Route 27 – Yesler and 12th Avenue*
- *Route 43 – Broadway and E. Terrace Street.*
- *Route 49 – Broadway and E. Terrace Street*
- *Route 60 – Broadway and Spruce Street*
- *Route 64 – 12th Avenue and E. Jefferson Street*
- *Route 84 – 14th Avenue and E. Jefferson Street*
- *Route 211 – 12th Avenue and E. Jefferson Street*
- *Route 941 – 12th Avenue and E. Jefferson Street*

In addition, the project site is located within four or five blocks of the future First Hill Street Car route.

c. How many parking spaces would the completed project have? How many would the project eliminate?

The completed project would have 637 parking spaces; these would replace the 317 existing parking spaces. There would be a net increase in parking on the site with the *Proposed Action*.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

The proposed project would result in modification of existing curb cuts in conjunction with removal of existing driveways and the addition of new driveways. Also, as noted in Section A of this Environmental Checklist, vacations of several partial rights-of-way may be necessary along the east boundary of the site. Each of the development alternatives propose new on-site roadways.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The project will not occur in the immediate vicinity of water or air transportation. The project will be in close proximity to the future First Hill Streetcar.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

It is estimated that the proposed Phase I development would generate 250 net new weekday daily trips (net new = total trips with Phase I minus existing trips) and the Phase II development would generate approximately 862 net new weekday daily trips (net new = total trips with Phase II minus total trips with Phase I).

Therefore full-buildout generates 1,112 net new weekday daily trips (over existing). Peak trip volumes would occur from 4:00 to 5:00 PM. See the Transportation Analysis contained in Attachment C to this Environmental Checklist for details.

g. Proposed measures to reduce or control transportation impacts, if any.

Measures to reduce or control transportation impacts would be determined once a specific design alternative has been selected, and the traffic analysis completed. It is likely, however, that a Transportation Management Plan would be required, consistent with the requirements of the City of Seattle Department of Planning and Development Director's Rule 19-2008.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

The project is not anticipated to result in an increased need for public services in that it is largely a replacement of existing facilities that are located elsewhere within the community.

b. Proposed measures to reduce or control direct impacts on public services, if any.

No measures are proposed to reduce or control direct impacts on public services.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

All utilities are currently available.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in immediate vicinity that might be needed.

Utilities and providers (in parentheses) proposed for the project include the following:

- *Water (Seattle Public Utilities)*
- *Sewer (Seattle Public Utilities)*
- *Gas (Puget Sound Energy)*
- *Telecommunications (Comcast)*
- *Electrical (Seattle City Light)*

C. SIGNATURES

The above answers are true and complete to the best of my knowledge. I understand the lead agency is relying on them to make its decision.

Signature:

Holly D Brown

Date submitted:

5/26/10

References

for the

King County

Youth Services Center
Courthouse Replacement

REFERENCES

King County, Department of Adult & Juvenile Detention, http://www.kingcounty.gov/courts/detention/juvenile_detention.aspx. Accessed 11 March 2010.

King County. *King County Youth Services Center: Site Master Plan Report*. December 2005.

King County Assessor data.

Attachment A

Phase I Geotechnical Site Assessment

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for the

King County

Youth Services Center
Courthouse Replacement

Phase I Geotechnical Site Assessment
King County Youth Service Center
Courthouse Replacement Project
1211 East Alder Street Site
Seattle, Washington

April 29, 2010

Submitted To:
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21-1-21296-001

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KING COUNTY YOUTH SERVICE CENTER COURTHOUSE REPLACEMENT PROJECT
1211 EAST ALDER STREET SITE
SEATTLE, WASHINGTON

1.0 INTRODUCTION

This report presents the results of a Phase I Geotechnical Site Assessment for the proposed King County Youth Service Center Courthouse Replacement Project (the Project) located at 1211 East Alder Street, in Seattle, Washington. This site assessment includes data review and a field reconnaissance of the site. This report is based on the Scope of Work, Phase I Geotechnical Site Assessment, dated February 3, 2010. Authorization to proceed was received on March 31, 2010.

We have collected sufficient data to determine the feasibility of constructing a courthouse replacement on this site. This assessment describes the site geology and identifies environmentally critical areas and seismic hazards. Preliminary geotechnical recommendations are given for foundation alternatives and applicable bearing pressures, shoring systems, and dewatering requirements.

2.0 PROJECT DESCRIPTION

The proposed courthouse replacement will consist of new courtrooms, office and program space, and structured parking. Five building configuration alternatives are being developed. All alternatives will have four to five levels above grade with one level planned below grade. The parking structure will have two to three levels above grade with one to one and one-half levels below grade. A tunnel connection between the existing detention building and the new court building is also planned. Some alternatives have an annex that will be three stories above grade.

3.0 SITE DESCRIPTION

Reconnaissance of the Project located at 1211 East Alder Street in Seattle, Washington, occurred on March 16, 2010, to observe the site conditions. Past site development has consisted of grading (cuts and fills) to form terraces for the buildings and parking areas. The buildings appear to be constructed with a slab-on-grade floors and shallow conventional spread footings with a minimum embedment depth.

The site is about 370,300 square feet (8.5 acres) in plan dimension and is currently developed with the Youth Service Center. The site is bordered to the north by Remington Court, to the east by 14th Street, to the south by Spruce Street, and to the west by 12th Street, as shown in the Vicinity Map, Figure 1.

The existing Youth Service Center was built in 1972 and currently houses juvenile detention, juvenile courts, administration, and supporting social service facilities. The centrally located tower holds the existing courthouse and other offices. For reference, the tower and detention center locations are shown in Figure 2.

The site slopes down to the southeast with elevations ranging from 260 feet at the northwest corner to 215 at the southeast for a total topographic relief of about 45 feet with intermediate terraces 4 to 12 feet high. A steep slope lies north of the existing detention center and south of the tower at the southern end of the site, as shown in Figure 2. A two-story building is adjacent to the tower's northeast corner with parking occupying the northwest quarter of the site.

The site is vegetated along the west boundary with deciduous trees, along the north boundary with a mixture of mature evergreen and deciduous trees, and along the east and south boundaries with a sparse mixture of evergreen and deciduous trees. Within the youth service campus area, landscaping consists of several wide, open lawn areas. The largest open lawn area in the northeast section of the site is called Remington Court Park and contains the King County Arts Commission, Spirit of Our Youth, 26-foot monumental cast bronze, glass, and rock sculpture with adjoining artistic earthwork. A smaller lawn area is located in the eastern portion in front of the detention center where the steep slope the detention center.

A very large parking lot is located in the northwest portion of the project site. It is bounded by 12th Avenue to the west, East Remington to the north, 13th Avenue to the east, and East Alder Court to the south. There is also additional parking next to this lot on the east side of 13th Avenue. A smaller parking area for up to six vehicles is located in the western portion of the site with an entrance on East Alder Street.

4.0 GEOLOGY

The U.S. Geological Survey Geologic Map of Seattle – A Progress Report (Troost and others, 2005) shows the site is underlain with glacially derived sediment deposited during the Pleistocene (Vashon Stade) Fraser glacial advance and retreat that ended about 12,000 years ago. Surficial glacial deposits at or near the Project consist of glacial till (Qvt) and recessional

outwash (Qvro). The site lies within a north-south trending Qvro swath bordered on the east and west by Qvt deposits and is shown in Figure 2.

5.0 SUBSURFACE EXPLORATIONS

We reviewed available geotechnical reports for sites within about 300 feet of the project site. Subsurface soil conditions were explored at eight zones with a total of 25 borings and test pit excavations. The explorations are listed by subsurface exploration Zones 1 through 8, as shown in Figure 2. A summary table of historical subsurface explorations is presented in Appendix A. The summary table lists location, elevation, soil types, and geologic unit depths. Test pit and boring information is averaged for each zone.

Generally, these explorations found soils likely to be present at the project site will consist of fill, recessional outwash (Qvro), glacial till (Qvt), and advanced outwash (Qvat) soil. The U.S. Geological Survey Geologic Map of Seattle – A Progress Report (Troost and others, 2005) shows the site is underlain with glacially derived sediment deposited during the Pleistocene (Vashon Stade) Fraser glacial advance and retreat that ended about 12,000 years ago. The site lies within a north-south trending Qvro swath bordered on the east and west by Qvt deposits and is shown in Figure 2.

5.1 Anticipated Geologic Units

The following descriptions are of soil types encountered in the available geotechnical borings and test pits:

Holocene (Non-glacial) Units

Fill (Hf) is one of the most prevalent Holocene deposits. This is usually disturbed or placed material due to the construction of buildings and roads. These deposits are not glacially overridden.

Quaternary Recessional Vashon Glacial Units

Recessional Vashon glacial deposits accumulated during retreat or wasting of the most recent glacial ice and are not glacially overridden. The base of the recessional deposits coincides with the top of glacially overridden soils. Recessional units expected in the project area include outwash (Qvro).

Quaternary Glacially Overridden Vashon Glacial Units

Glacially overridden Vashon deposits consist of soil deposited by glacial processes during the Vashon glaciation. These soils have been glacially consolidated and are generally very dense or very stiff to hard. Glacially overridden Vashon glacial soil expected in the project area is till (Qvt) and advance outwash (Qva).

5.2 Summary of Previous Subsurface Explorations

Borings and test pits previously performed by local companies exist on the perimeter of the proposed site, located 60 to 325 feet away to the north and west of the site, as shown in Figure 2.

Generally, these explorations encountered 2 feet to 7 feet of fill material (Hf) underlain by till (Qvt), which extended to the bottom of the exploration, as found in Zones 1, 3 to 5, and 7. Recessional outwash (Qvro) was encountered at depths of 5 to 13 feet and extended to bottom of exploration in Zone 6 investigations. Recessional outwash (Qvro) was also encountered up to a depth of 4 feet below ground surface (bgs) in Zone 8 and was underlain by Qvt and Qva. Advanced outwash (Qva) was encountered below Qvt at depths of 5 to 6 feet bgs in Zones 2 and 8.

Please refer to the summary table in Appendix A for further details of the subsurface explorations including exploration logs.

5.3 Groundwater

The site sits in a channel and has been known to undergo flooding during the winter months. The northwest corner of the site at East Remington Court and 12th Avenue is at an elevation of about 260 feet. The southeast corner of the site, at East Spruce Street and 14th Avenue, is at an elevation of about 215 feet. Water would likely drain from the surrounding till areas toward the site and flow to the southeast. Topographical information is given in Figure 2.

Groundwater was not encountered at the boring drilled to 25.6 feet deep located at 11th Avenue and East Alder Street in Zone 1 or the boring drilled to 19.5 feet deep in Zone 2 at 12th Avenue and East Alder Street. Subsurface explorations in Zones 3 and 4 that are west of 12th Avenue encountered average groundwater levels ranging from seepage to 5 feet bgs. Subsurface explorations in Zones 5, 7, and 8 north of the site encountered average groundwater levels ranging from seepage to between 5 and 11.5 feet bgs. Explorations in Zone 6, also north of the site, encountered groundwater at 4.0 feet bgs. Perched groundwater conditions could be

encountered due to the dense underlying till. The summary table in Appendix A presents groundwater information.

6.0 CONCEPTUAL GEOTECHNICAL ENGINEERING CONCLUSIONS AND RECOMMENDATIONS

6.1 General

The proposed project site is about 370,300 square feet (8.5 acres). Five different building configurations are being considered. The buildings, park, and parking areas will fit the site using multi-story building and parking configurations. The site is sloped with topographic relief of 45 feet, and intermediate terraces 4 to 12 feet high and the new building configurations could be stepped into the slope and conform to the existing terracing. From a geotechnical standpoint, the proposed project plan is deemed feasible.

The following sections provide conceptual geotechnical engineering recommendations for: foundation alternates, groundwater control and potential impacts during and after construction, excavation and shoring systems, seismic hazard evaluation, and environmentally critical areas.

These conclusions and recommendations are based on soil conditions inferred from nearby soil borings and test pits. Since no site specific subsurface soil information is available, a geotechnical study of the site, including soil borings and/or test pit excavations, is needed to properly characterize the subsurface soils, the location of the groundwater table, and to determine actual design recommendations.

6.2 Foundation Recommendations

Presently, the south and west portions of the site are occupied by youth center buildings, paved sidewalks, and asphalt parking areas. The existing foundation subgrade soil could not be observed. Based on the Geologic Map, the site could be underlain with loose to dense, silty sand and gravel and gravelly, silty sand (Qvro) and very dense, gravelly, silty sand (Qvt). Boring and test pit logs along the western boundaries of the site confirm the presence of these materials. These boring and test pit explorations also encountered loose fill in the upper 2 to 7 feet. Ranges of design bearing resistances for the anticipated soil units are from 8 to 12 kips per square foot (ksf) for Qvt and 2 to 6 ksf for Qvro, as shown in Table 1. A preliminary design bearing pressure of 6 ksf can be used for cost estimating purposes.

To construct shallow foundations, excavations may be needed to remove unsuitable fill and soft silt or loose sand and expose suitable bearing soil. Placement of compacted, structural fill to

reach the desired foundation subgrade would follow excavation. Foundations built onto compacted structural fill placed on Qvro or Qvt could be designed for a preliminary bearing pressure of 4 ksf.

A deep foundation alternative at this site is not anticipated, however, should a thickness of soft peat and organic silt be encountered that is thicker than could be easily removed, augercast piles would be appropriate. Piles that penetrate into dense Qvro and Qvt could be used instead of extensive excavation, structural filling or use of lower bearing pressures.

The table below presents preliminary design parameters for footing bearing pressures.

TABLE 1
PRELIMINARY DESIGN BEARING RESISTANCES

Soil Unit	Design Bearing Resistance * [kips per square foot]
Glacial till (Qvt)	8 to 12
Recessional Outwash (Qvro)	2 to 6

Note:
* A preliminary bearing pressure of 6 kips per square foot should be used for predesign purposes.

6.3 Groundwater Control

Groundwater seepage on site was not observed at the time of our reconnaissance. If the site is covered with a thickness of Qvro, a moderate amount of water could be stored within it and perched water above Qvt may exist.

Collection of water perched within the surface soil could be accomplished using temporarily excavated sumps and portable pumps. Excavations could encounter wet soil conditions and/or the groundwater level. Control of groundwater could be accomplished using sumps and pumps or a designed dewatering system depending on the actual depth and volume of water encountered. A conventional stormwater drainage system would be suitable to meet surface water drainage requirements.

6.4 Infiltration

Based on review of various databases, geologic maps, five test pit explorations ranging from 8 to 13 feet, one boring to a depth of 19.5 feet, and our engineering experience near the site (but not

6.4 Infiltration

Based on review of various databases, geologic maps, five test pit explorations ranging from 8 to 13 feet, one boring to a depth of 19.5 feet, and our engineering experience near the site (but not within the site), we are under the assumption that the subsurface in the project area is mainly composed of glacial till (Qvt) with areas of recessional outwash (Qvro). Table 2 presents our preliminary estimates for groundwater infiltration.

TABLE 2
PRELIMINARY DESIGN INFILTRATION RATES

Soil Unit	Design Infiltration Rates [inch/hr]
Glacial till (Qvt)	< 0.002
Recessional Outwash (Qvro)	0.142 to 1.42

6.5 Excavation and Shoring Systems

Depending upon the final location, available space at the site may allow construction of an at-grade building, such as the annex building, and parking areas without significant excavation. Temporary excavation in loose granular and soft cohesive soil could be made at 2 Horizontal to 1 Vertical (2H:1V). Flatter slopes may be necessary if wet or seepage conditions are encountered. Temporary excavations made into dense to very dense glacial till could be made at 1H:1V to depths of 25 feet and 1.5H:1V in recessional outwash. Should shored excavations be required, vertical soil nail walls or soldier pile walls with tiebacks would be applicable at this site. Groundwater would require evaluation.

6.6 Seismic Hazards

Seismic hazards can include fault-related ground rupture, liquefaction, settlement, and landsliding. The inferred soil types (Qvro and Qvt) indicate the site is underlain with glacially overconsolidated soil. Therefore, the East Alder site would be classified in accordance with the 2009 International Building Code as a site Class C. Due to the relatively dense nature of glacially overridden soils anticipated at the site, gentle topography, and estimated depth to groundwater, liquefaction, settlement, and landsliding at the site are low and therefore not considered a design issue for this project. The closest, potentially active fault is the Seattle Fault, which is located approximately 1 mile to the south. No evidence of surface rupture has been detected at the site. The low risk of these hazards should be verified.

6.7 Environmentally Critical Areas (ECAs)

The only known ECA on the site, as categorized by the City of Seattle Department of Planning and Development, is a 40 percent steep slope located north of the existing detention center building and south of the tower at the southern end of the site. This slope was probably shaped during grading for the construction of the detention center and slope construction was engineered, including soil selection and compaction, thus removing the need to provide mitigation for the ECA.

7.0 SITE CHALLENGES

This site presents the following geotechnical challenges.

7.1 Site

This site can accommodate all of the proposed alternatives. The site has been graded into four to five terraces that are 4 to 12 feet high. Initial construction of terraces included cuts and fills to create the level building areas. Removal of the buildings will expose the terraces. An irregularly shaped benched surface will likely be exposed during preliminary site demolition. Design and construction of the buildings may need to conform to these contours to avoid a large cut or fills. Excavation and removal of existing pavement may be required.

7.2 Soil Conditions

Soil types (Qvro and Qvt) inferred from nearby test pits would be suitable for shallow spread foundation bearing. Excavations made into these soils would temporarily stand at relatively steep slopes. Fill soil used during previous courthouse construction could be encountered during excavation at the terraces. Topsoils and loose fills may be encountered and require removal in areas that have not been developed on the site. Dewatering of perched groundwater will likely be required.

On-site fill material could potentially contain contaminated materials that would require additional permits for soil and water disposal.

7.3 Cost

The East Alder site is large and each of the proposed alternatives with surrounding parks will likely fit easily. Building construction methods for low-rise structures, site and pavement

subgrade preparations, and surficial site drainage at this site could use cost-effective, conventional methods such as spread footings and slab-on-grade floors.

8.0 FEASIBILITY

Construction of the proposed Youth Service Center Courthouse on this site is feasible. The site infrastructure (sewer, water, power, drainage) is in place to service the buildings on the south half of the site. Additional infrastructure would be needed depending on the location of the buildings. Site preparation, prior to building construction, would consist of removing the existing buildings and asphalt parking pavement. More accurate evaluation of the feasibility can be made after the building option is selected and foundation location and elevations are determined. Additional subsurface explorations will be needed to characterize the site soils at new building locations. Final recommendations for building foundations, excavations, shoring, and drainage can be developed following the subsurface explorations and soil laboratory testing. Some additional challenges could be encountered depending on the actual subsurface soil and groundwater conditions.

9.0 ADDITIONAL INFORMATION

We could not find logs of soil borings that were completed for the existing King County Youth Service Center site development and existing building construction. After selection of the proposed alternative, a program of at least four borings drilled at each new building location, with a series of 8 to 10 test pits should be completed to characterize the site subsurface soil and groundwater conditions. Borings would provide samples for laboratory testing that would aid with the seismic hazard determination and mitigation. Borings would have water level observation/sampling wells installed to screen for potential contamination. The wells would also provide information regarding the amount of water that could be expected during excavation.

10.0 LIMITATIONS

This report was prepared for the exclusive use of KMD Justice for specific application to the geotechnical elements of this site. The report should be used for information of factual data only, and not as a warranty of subsurface conditions, such as those interpreted from the exploration logs and discussions of subsurface conditions included in this report.

The analyses, conclusions, and recommendations contained in this report are based on site conditions as they presently exist. Within the limitations of the scope, schedule, and budget, the analyses, conclusions, and recommendations presented in this report were prepared in

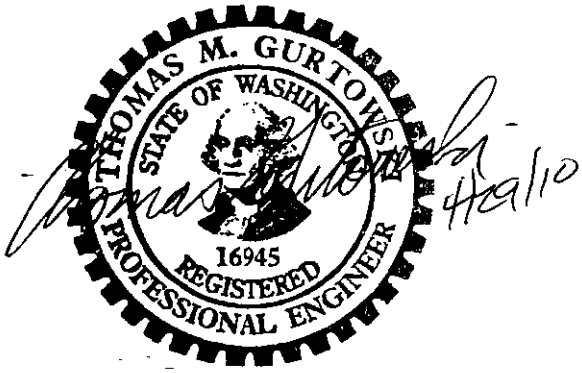
accordance with generally accepted professional geotechnical engineering principles and practice in this area at the time this report was prepared. We make no other warranty, either express or implied.

The scope of our services for this report did not include soil borings, test pit excavations, or any evaluation regarding the presence or absence of wetlands. No assessments or evaluations regarding the presence or absence of hazardous or toxic substances in the soil or groundwater on or below this site were in our scope of work.

Shannon & Wilson, Inc. has prepared Appendix B, "Important Information About Your Geotechnical/Environmental Report," to assist you and others in understanding the use and limitations of our reports.

SHANNON & WILSON, INC.

Hilja K. Welsh
Geotechnical Engineer



Thomas M. Gurtowski, P.E.
Vice President

KTB: BAG:HKW:TMG/hkw

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0 400 800

Approximate Scale in Feet

NOTE

Map adapted from aerial imagery provided by Google Earth Pro, reproduced by permission granted by Google Earth ™ Mapping Service.

1211 East Alder Street
King County Youth Service Center
Courthouse Replacement Project
Seattle, Washington

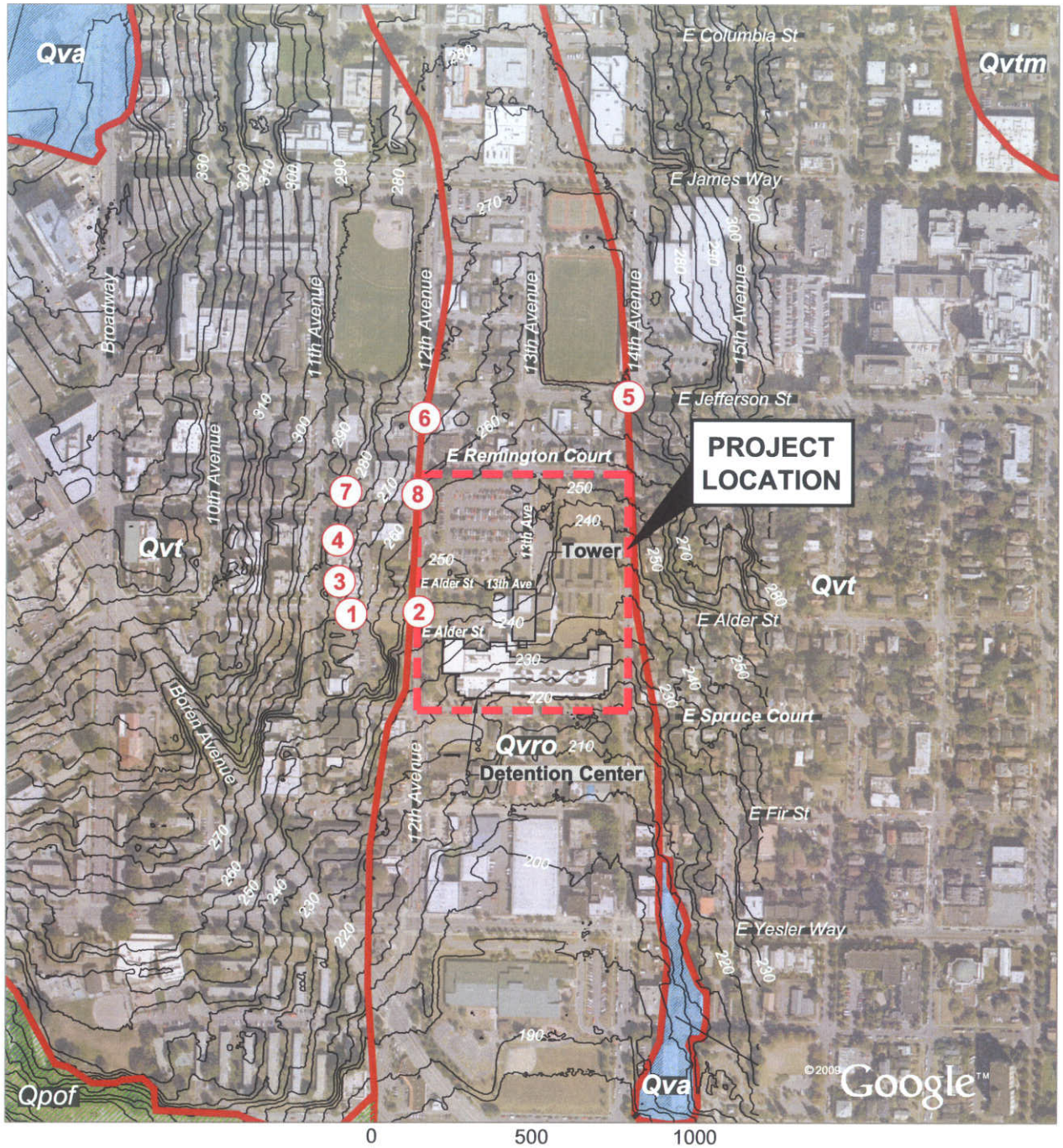
VICINITY MAP

April 2010 21-1-21296-001

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 1

Filename: J:\21\21296-001\21-1-21296-001 fig 1.dwg Date: 04-23-2010 Login: sac



LEGEND

(1) Approximate Location from Referenced Geotechnical Reports

Qvro Approximate Geologic Contact

NOTE

Map adapted from aerial imagery provided by Google Earth Pro, reproduced by permission granted by Google Earth ™ Mapping Service. Geology adapted from USGS Geologic Map of Seattle - a progress report (2005) Troost and others. Contours derived from data provided by PSLC using ESRI 3D Analyst.

1211 East Alder Street
King County Youth Service Center
Courthouse Replacement Project
Seattle, Washington

SITE AND EXPLORATION PLAN

April 2010 21-1-21296-001

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 2

Filename: J:\21\21296-001\21-1-21296-001 Fig 2.dwg Date: 04-23-2010 Login: sac

APPENDIX A

PREVIOUS SUBSURFACE EXPLORATIONS

APPENDIX A

PREVIOUS SUBSURFACE EXPLORATIONS

TABLE OF CONTENTS

TABLE

FIGURES

FIGURES (cont.)

Zone

APPENDIX A

PREVIOUS SUBSURFACE EXPLORATIONS

A.1 INTRODUCTION

A review of existing subsurface explorations was conducted as part of the site assessment for the King County Youth Services Courthouse Replacement project. The approximate boring locations are shown in the Site and Exploration Plan (Figure 2).

A.2 PREVIOUS BORINGS

Existing boring logs are included in Appendix A and a summary table of these previous subsurface explorations is presented in Table A-1 below.

Logs of existing subsurface explorations are collected from GeoMapNW at the University of Washington.

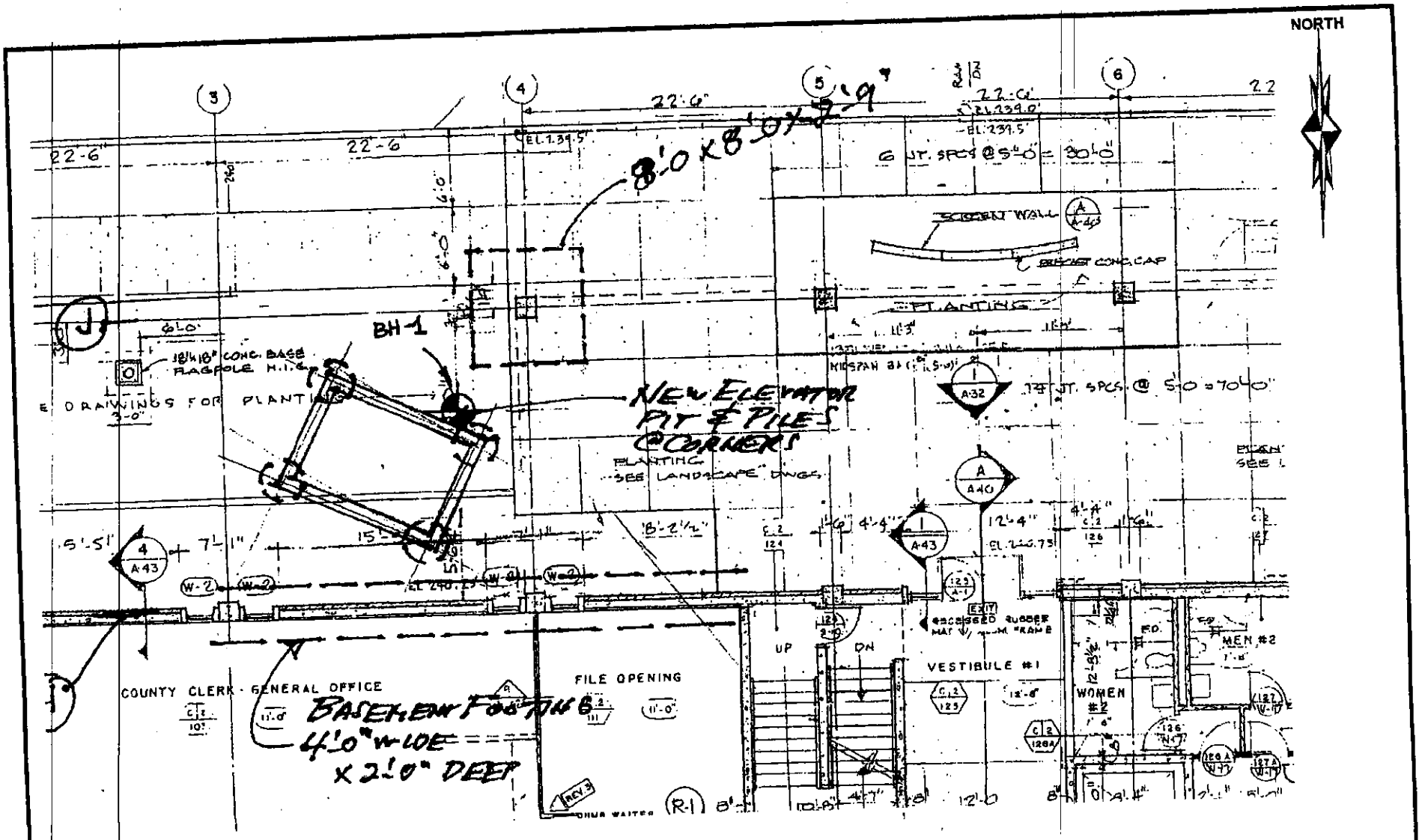
TABLE A-1
SUMMARY OF HISTORICAL SUBSURFACE EXPLORATIONS

Zone as shown in Figure 2	Address	Elevation (feet)	Depth Drilled/ Excavated (feet)	Date	Number of Explorations	Fill Depth (feet)	Recessional Outwash Depth (feet)	Till Depth (feet)	Advance Outwash Depth (feet)	Groundwater (feet bgs)
1	1121 East Alder Street	247	25.6	8/2001	1	0-13	-	13-25.6	-	-
2	Alder Street/ 12th Avenue	245	19.5	6/2002	1	0-2	-	2-5	5-19.5	-
3	300 11th Avenue	263	10	3/1989	3	0-2.5	-	2.5-10	-	Seepage-5
4	312 11th Avenue	265	10	4/1996	4	0-2.5	-	2.5-10	-	Seepage-5
5	1401 East Jefferson	274	12	9/1982	4	0-2	-	2-12	-	Seepage-11.5
6	464 12th Avenue	263	13	1/1980	2	0-5	5-13		-	4
7	410 11th Avenue	Unknown	8	5/1981	5	0-2	-	2-8	-	Seepage-8
8	411 12th Avenue	273	12	2/1991	5	0-7	0-4	4-6.6	6.6-12	Seepage-5 to 10

Notes:
Locations may include several test pits or borings, in which the above table lists average values.
Source: GeoMapNW - Online Geodatabase
bgs = below ground surface

ZONE 1

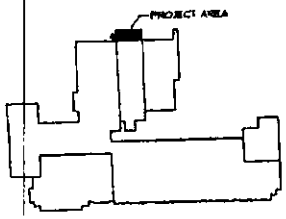
PAN GEO



LEGEND:

BH-1 ⊕ Boring designation and approximate location

0 5 10
Approximate Scale: 1" = 10'



PanGEO INCORPORATED

King County Youth Center
1121 East Alder Street
Seattle, Washington

Site and Exploration Plan

Project No.	Figure No.
01-057	1

RELATIVE DENSITY / CONSISTENCY

SAND / GRAVEL			SILT / CLAY		
Density	SPT N-values	Approx. Relative Density (%)	Consistency	SPT N-values	Approx. Undrained Shear Strength (psf)
Very Loose	<4	<15	Very Soft	<2	<250
Loose	4 to 10	15 - 35	Soft	2 to 4	250 - 500
Med. Dense	10 to 30	35 - 65	Med. Stiff	4 to 8	500 - 1000
Dense	30 to 50	65 - 85	Stiff	8 to 15	1000 - 2000
Very Dense	>50	85 - 100	Very Stiff	15 to 30	2000 - 4000
			Hard	>30	>4000

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		GROUP DESCRIPTIONS	
Gravel 50% or more of the coarse fraction retained on the #4 sieve. Use dual symbols (eg. GP-GM) for 5% to 12% fines.	GRAVEL (<5% fines)	GW	Well-graded GRAVEL
		GP	Poorly-graded GRAVEL
	GRAVEL (>12% fines)	GM	Silty GRAVEL
		GC	Clayey GRAVEL
Sand 50% or more of the coarse fraction passing the #4 sieve. Use dual symbols (eg. SP-SM) for 5% to 12% fines.	SAND (<5% fines)	SW	Well-graded SAND
		SP	Poorly-graded SAND
	SAND (>12% fines)	SM	Silty SAND
		SC	Clayey SAND
Silt and Clay 50%or more passing #200 sieve	Liquid Limit < 50	ML	SILT
		CL	Lean SILT
		OL	Organic SILT or CLAY
	Liquid Limit > 50	MH	Elastic SILT
		CH	Fat CLAY
		OH	Organic SILT or CLAY
Highly Organic Soils		PT	PEAT

Notes:

1. Soil exploration logs contain material descriptions based on visual observation and field tests using a system modified from the Uniform Soil Classification System (USCS). Where necessary laboratory tests have been conducted (as noted in the "Other Tests" column), unit descriptions may include a classification. Please refer to the discussions in the report text for a more complete description of the subsurface conditions.

2. The graphic symbols given above are not inclusive of all symbols that may appear on the borehole logs. Other symbols may be used where field observations indicated mixed soil constituents or dual constituent materials.

DESCRIPTIONS OF SOIL STRUCTURES

Layered: Units of material distinguished by color and/or composition from material units above and below

Laminated: Layers of soil typically 0.05 to 1mm thick, max. 1 cm

Lens: Layer of soil that pinches out laterally

Interlayered: Alternating layers of differing soil material

Pocket: Erratic, discontinuous deposit of limited extent

Homogeneous: Soil with uniform color and composition throughout

Fissured: Breaks along defined planes

Slickensided: Fracture planes that are polished or glossy

Blocky: Angular soil lumps that resist breakdown

Disrupted: Soil that is broken and mixed

Scattered: Less than one per foot

Numerous: More than one per foot

COMPONENT DEFINITIONS

COMPONENT	SIZE / SIEVE RANGE	COMPONENT	SIZE / SIEVE RANGE
Boulder:	> 12 inches	Sand	
Cobbles:	3 to 12 inches	Coarse Sand:	#4 to #10 sieve (4.5 to 2.0 mm)
Gravel		Medium Sand:	#10 to #40 sieve (2.0 to 0.42 mm)
Coarse Gravel:	3 to 3/4 inches	Fine Sand:	#40 to #200 sieve (0.42 to 0.074 mm)
Fine Gravel:	3/4 inches to #4 sieve	Silt	0.074 to 0.002 mm
		Clay	<0.002 mm

TEST SYMBOLS

for In Situ and Laboratory Tests listed in "Other Tests" column.

CBR	California Bearing Ratio
Comp	Compaction Tests
Con	Consolidation
DD	Dry Density
DS	Direct Shear
%F	Fines Content
GS	Grain Size
Perm	Permeability
PP	Pocket Penetrometer
R	R-value
SG	Specific Gravity
TV	Torvane
TXC	Triaxial Compression
UCC	Unconfined Compression

SYMBOLS

Sample/In Situ test types and intervals


2-inch OD Split Spoon, SPT (140-lb. hammer, 30" drop)


3.25-inch OD Split Spoon (300-lb hammer, 30" drop)


Non-standard penetration test (see boring log for details)


Thin wall (Shelby) tube


Grab


Rock core


Vane Shear

MONITORING WELL


Cement / Concrete Seal

Bentonite grout / seal

Silica sand backfill

Groundwater Level at time of drilling (ATD)

Static Groundwater Level

Slotted tip

Slough

Bottom of Boring

MOISTURE CONTENT

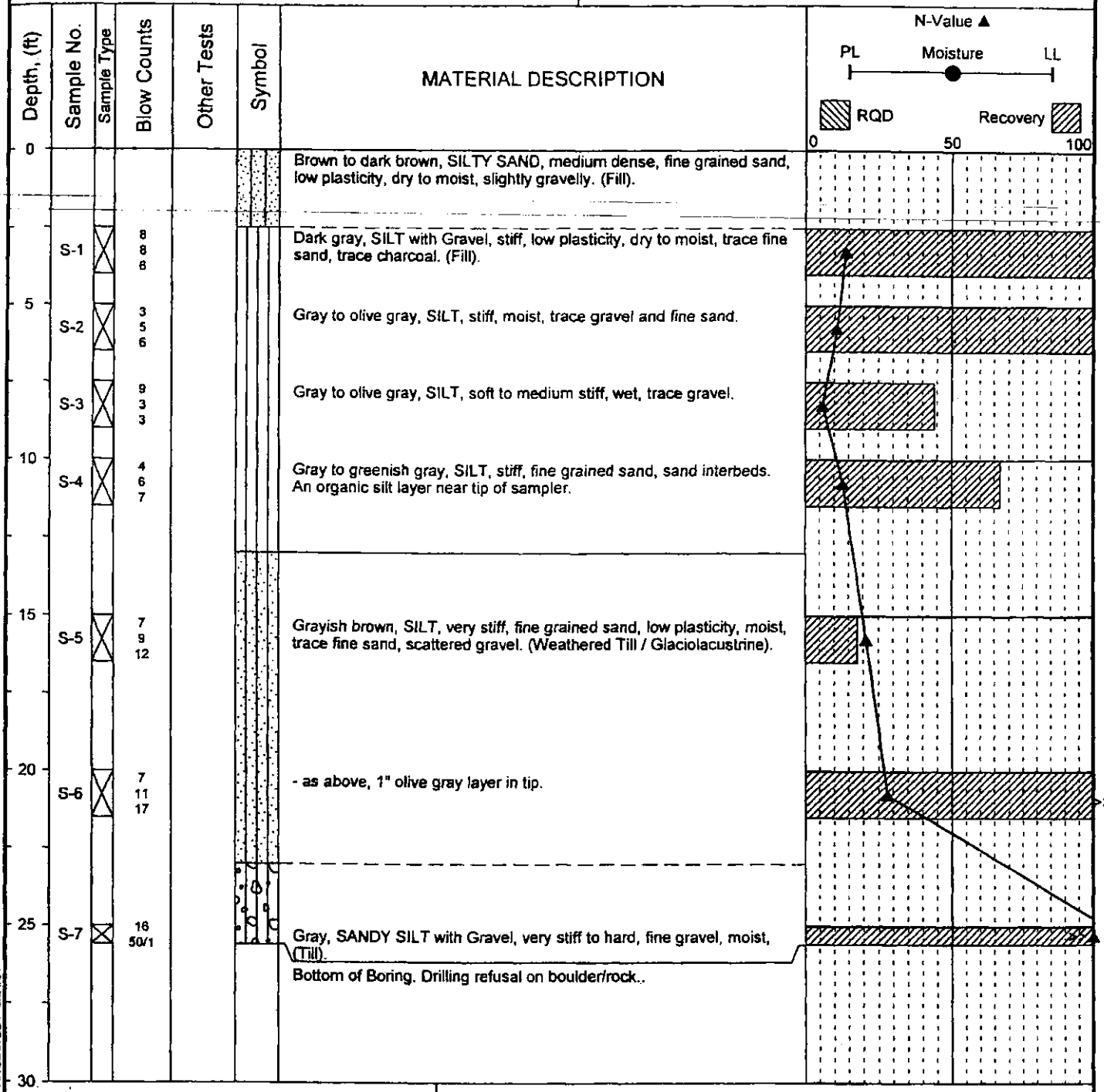
Dry	Dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water

PanGEO INCORPORATED
Phone: 206.262.0370

Terms and Symbols for Boring Logs

Figure 2

Project:	King County Youth Center	Surface Elevation:	240 feet, approx.
Job Number:	01-057	Top of Casing Elev.:	N/A
Location:	1121 East Alder Street, Seattle, WA	Drilling Method:	Hollow Stem Auger - Mobil B-24
Coordinates:	not surveyed	Sampling Method:	SPT - cathead & rope



Completion Depth:	25.6ft
Date Borehole Started:	8/18/01
Date Borehole Completed:	8/18/01
Logged By:	SLT
Drilling Company:	Boretec Drilling

Remarks: No groundwater encountered.

PanGEO INCORPORATED
Phone: 206.262.0370

LOG OF BOREHOLE BH-1

Figure 3

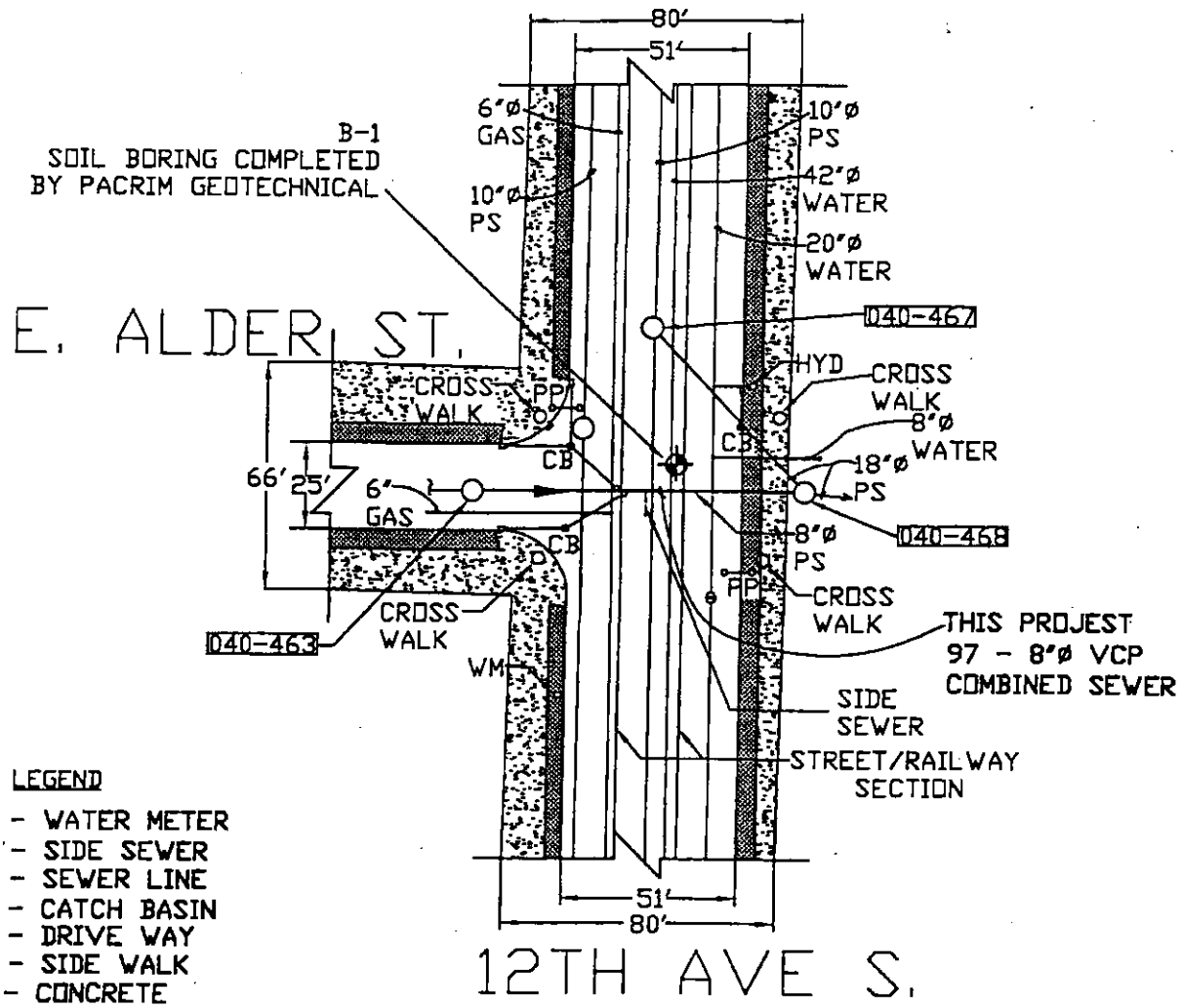
The stratification lines represent approximate boundaries. The transition may be gradual.

LOG OF BOREHOLE 01-057.GPJ PANGEO.GDT 8/24/01

ZONE 2

PACRIM GEOTECHNICAL, INC.

022017008O2.DWG



LEGEND

- WM - WATER METER
- --- - SIDE SEWER
- PSS - SEWER LINE
- CB - CATCH BASIN
- DW - DRIVE WAY
- CW - SIDE WALK
- CONCRETE
- GRASS
- UTILITIES LINES
- PP - POWER POLE
- EARTH
- FLOW DIRECTION
- SOIL BORINGS COMPLETED BY PACRIM GEOTECHNICAL

N

NTS

NOTE:
UTILITY LOCATIONS ARE APPROXIMATE, ARE NOT COMPLETE AND NEED TO BE VERIFIED.

CH2MHILL

RCT ENGINEERING INC.

PACRIM GEOTECHNICAL INC.
GEOTECHNICAL ENGINEERING AND APPLIED EARTH SCIENCES

Seattle Public Utilities
2003 Full Line Sewer Replacement
East Alder Street and 12th Avenue East

Site and Exploration Plan

Project No.: 022017 #008 C302412 Figure 2

RELATIVE DENSITY OR CONSISTENCY VERSUS SPT N-VALUE

COHESIONLESS SOILS			COHESIVE SOILS		
Density	N (blows/ft)	Approximate Relative Density (%)	Consistency	N (blows/ft)	Approximate Undrained Shear Strength (psf)
Very Loose	0 to 4	0 - 15	Very Soft	0 to 2	<250
Loose	4 to 10	15 - 35	Soft	2 to 4	250 - 500
Medium Dense	10 to 30	35 - 65	Medium Stiff	4 to 8	500 - 1000
Dense	30 to 50	65 - 85	Stiff	8 to 15	1000 - 2000
Very Dense	over 50	85 - 100	Very Stiff	15 to 30	2000 - 4000
			Hard	over 30	>4000

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP DESCRIPTIONS	
Coarse Grained Soils: More than 50% Retained on No. 200 Sieve Size	Gravel and Gravelly Soils: More than 50% of Coarse Fraction Retained on No. 4 Sieve	Clean Gravel (little or no fines)	GW	Well-graded GRAVEL
			GP	Poorly-graded GRAVEL
		Gravel with Fines (appreciable amount of fines)	GM	Silty GRAVEL
			GC	Clayey GRAVEL
	Sand and Sandy Soils: 50% or More of Coarse Fraction Passing No. 4 Sieve	Clean Sand (little or no fines)	SW	Well-graded SAND
			SP	Poorly-graded SAND
		Sand with Fines (appreciable amount of fines)	SM	Silty SAND
			SC	Clayey SAND
Fine Grained Soils: 50% or More Passing No. 200 Sieve Size	Silt and Clay	Liquid Limit Less than 50%	ML	SILT
			CL	Lean CLAY
			OL	Organic SILTor CLAY
	Silt and Clay	Liquid Limit 50% or More	MH	Elastic SILT
			CH	Fat CLAY
			OH	Organic SILTor CLAY
Highly Organic Soils			PT	PEAT

DESCRIPTORS FOR SOIL STRATA AND STRUCTURE

General Thickness or Spacing		Structure		General Attitude	
Parting:	less than 1/16 in.	Pocket:	Erratic, discontinuous deposit of limited extent	Near horizontal:	0 to 10 deg.
Seam:	1/16 to 1/2 in.	Lens:	Lenticular deposit	Low angle:	10 to 45 deg.
Layer:	1/2 to 12 in.	Varved:	Alternating seams of silt and clay	High angle:	45 to 80 deg.
Stratum:	greater than 12 in.	Laminated:	Alternating seams	Near vertical:	80 to 90 deg.
Scattered:	less than 1 per ft.	Interbedded:	Alternating layers		
Numerous:	more than 1 per ft.				

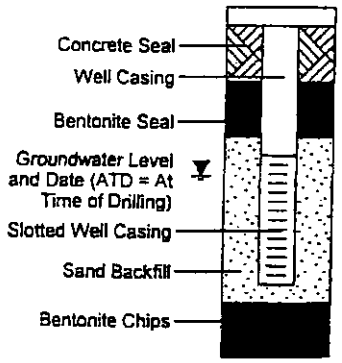
LABORATORY TEST SYMBOLS

AL	Atterberg Limits
FC	Fines Content
GSD	Grain Size Distribution
MC	Moisture Content
MD	Moisture Content/Dry Density
Comp	Compaction Test (Proctor)
SG	Specific Gravity
CBR	California Bearing Ratio
RM	Resilient Modulus
Perm	Permeability
TXP	Triaxial Permeability
Cons	Consolidation
VS	Vane Shear
DS	Direct Shear
UC	Unconfined Compression
TXS	Triaxial Compression
HYD	Hydrometer
UU	Unconsolidated, Undrained
CU	Consolidated, Undrained
CD	Consolidated, Drained

SAMPLE TYPE SYMBOLS

- Std. Penetration Test (2.0" OD)
- Ring Sampler (3.25" OD)
- California Sampler (3.0" OD)
- Undisturbed Tube Sample
- Grab Sample
- Core Run
- Non-standard Penetration Test (with split spoon sampler)

GROUNDWATER WELL COMPLETIONS



Notes:

1. Sample descriptions in this report are based on visual field and laboratory observations, which include density/consistency, moisture condition, grain size, and plasticity estimates, and should not be construed to imply field nor laboratory testing unless presented herein. Visual-manual classification methods of ASTM D 2488 were used as an identification guide. Where laboratory data are available, soil classifications are in general accordance with ASTM D 2487.

2. Solid lines between soil unit descriptions indicate change in interpreted geologic unit. Dashed lines indicate stratigraphic change within the unit.

Seattle Public Utilities
2003 Full Line Sewer Replacement
East Alder Street and 12th Avenue East
Seattle, Washington

PACRIM GEOTECHNICAL INC.
GEOTECHNICAL ENGINEERING AND APPLIED EARTH SCIENCES

KEY TO EXPLORATION LOGS

Project No. 022-017 Project #008 C302412 FIGURE A-2

SPU EXPLORATION LEGEND SPU008.GPJ PACRIM.GDT 10/14/02

GeoMapNW

The Pacific Northwest Center for Geologic Mapping Studies

Point ID	58332
Document ID	10395
Point Name	B-1
Point Type	Boring
Northing	223987
Easting	1274482
Location Confidence	Less than 20 feet
Point Depth	19.5
Point Elevation	0.0
Elevation from DEM	245.0
Elevation Source	Not applicable
Datum name	Not applicable
Author name	PacRim Geotechnical, Inc.
Point Date	2002-06-06 00:00:00
Boring Method	Hollow stem auger
Contractor	GeoTech Explorations
Number of Wells	0

Document ID	10395 (PDF)
Document Type	Report
Source Name	Seattle Public Utilities - Materials Lab
Author Name	PacRim Geotechnical, Inc.
Document Name	2003 Full Line Sewer Replacement
Document Date	2002-11-30 00:00:00
Project Type	Utility
Project Address	E Alder ST & 12th AVE E
Local ID 1	11-01-2002
Local ID 2	0

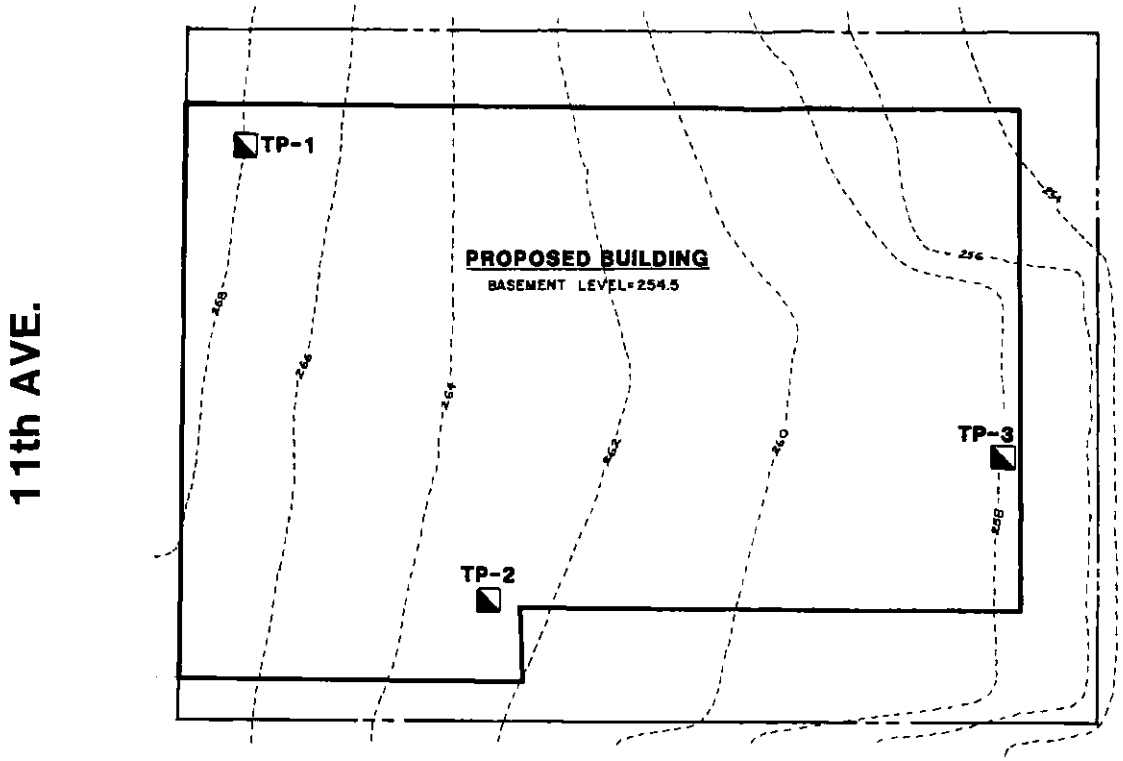
Layer No.	Top Depth	Bottom Depth	Layer Description	USCS on Log
1	0.0	0.4	Asphalt 5 inches thick	Not applicable
2	0.4	0.8	Brick 4 inches thick	Unknown
3	0.8	2.0	Concrete 15 inches thick	Not applicable
4	2.0	5.0	GLACIAL TILL, CL-ML Sandy silty CLAY: 55-60% silty clay; 25-30% sand, fine to coarse, 10-15% gravel, fine; trace organics, brown, moist, hard.	CL-ML
5	5.0	10.0	SM Silty SAND with gravel: 65-70% sand, fine to coarse; 15-20% silt, 15-20% gravel, fine; brown, moist, very dense.	SM

6	10.0	19.5	SM Silty SAND: 70-75% sand, fine to coarse; 15-20% silt, 0-5% gravel; gray, moist, very dense.	SM

Comment No.	Depth	Comment Description
1	19.0	Grades 60-65% sand, 30-35% silt, 0-5% gravel
2	19.5	Groundwater not encountered during drilling

ZONE 3

GEOTECH CONSULTANTS, INC.



GEOTECH CONSULTANTS

TEST PIT LOCATION PLAN
11TH AVENUE & EAST ALDER STREET
SEATTLE, WASHINGTON

Job No.:	Date:	Scale:	Plate:
89102	MAY, 1989	1" = 16'	2

TEST PIT 1

Depth (ft.) | Moisture Content (%) | USCS | Description | Elevation: 268±

Depth (ft.)	USCS	Description
0	OL	Topsoil
	ML	Tan-brown sandy SILT, moist, soft
5	SM	Gray silty gravelly SAND with occastional cobbles, medium grained, moist, medium dense to dense (Glacial Till)
		becomes more silty, very dense
10		Test Pit terminated at 8 feet below existing grade. No groundwater seepage encountered during excavation.
15		

TEST PIT 2

Depth (ft.) | Moisture Content (%) | USCS | Description | Elevation: 263±

Depth (ft.)	USCS	Description
0	OL	Topsoil
	ML	Brown sandy SILT, very moist, soft to firm
5	SM	Tan very silty gravelly SAND, wet, medium dense to dense
	SM	Gray slightly gravelly silty SAND, fine to medium grained, dense (Glacial Till)
10		Test Pit terminated at 10 feet below existing grade. Minor groundwater seepage encountered at 5 feet during excavation.
15		

GEOTECH CONSULTANTS

TEST PIT LOGS

BARBER APARTMENT BUILDING

SEATTLE, WASHINGTON

Job No.:	Date:	Logged By:	Plate:
89102	3/31/89	JGR	3

TEST PIT 3

Depth (ft.) | Moisture Content (%) | USCS | Description | Elevation: 258±

Depth (ft.)	USCS	Description
0	OL	Topsoil
	SM	Tan silty SAND, fine to medium grained, moist, loose (FILL)
	ML	Tan to brown sandy SILT, moist, firm
5	SM	Gray silty gravelly SAND, moist to wet, medium dense to dense (Till)
10		
15		

Test Pit terminated at 10 feet below existing grade.
No groundwater seepage encountered during excavation.

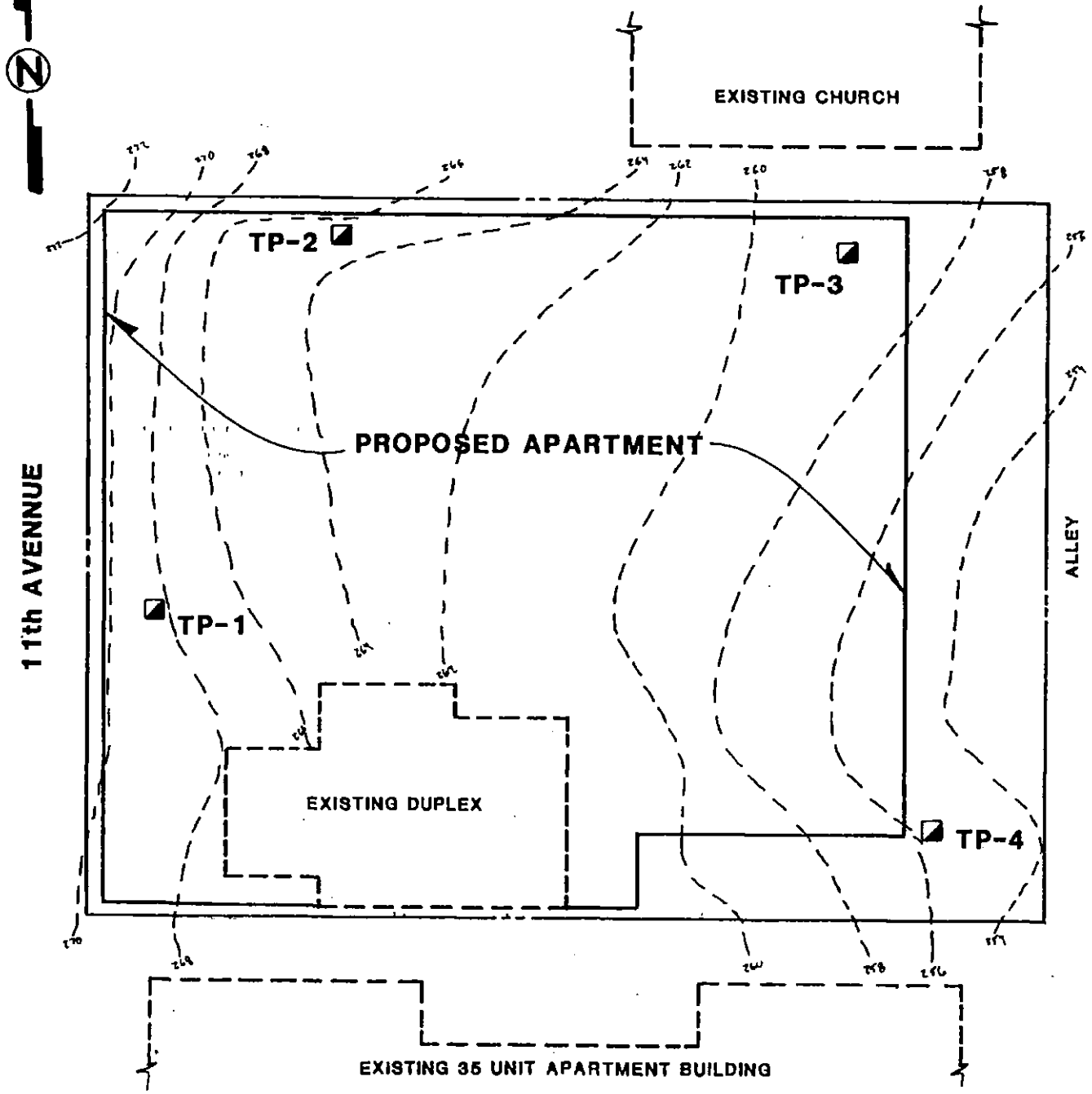
GEOTECH CONSULTANTS

TEST PIT LOGS
BARBER APARTMENT BUILDING
SEATTLE, WASHINGTON

Job No.:	Date:	Logged By:	Plate:
89102	3/31/89	JGR	4

ZONE 4

GEOTECH CONSULTANTS, INC.



LEGEND:

APPROXIMATE TEST PIT LOCATIONS

GEOTECH CONSULTANTS

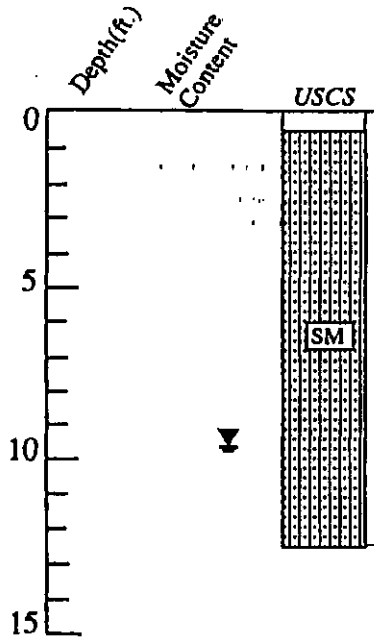
SITE EXPLORATION PLAN

312 - 11th AVENUE

SEATTLE, WA

Job No.:	Date:		Plate:
96145	MAY 1996		2

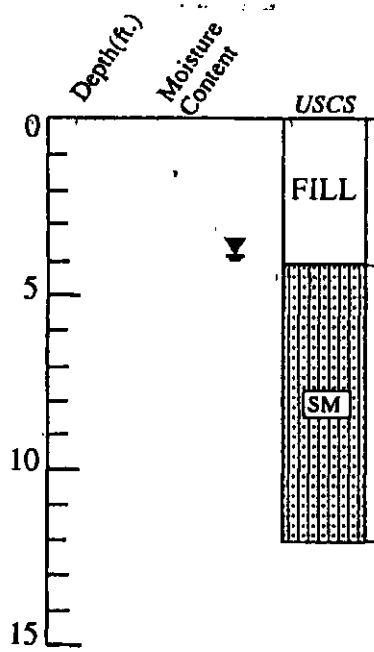
TEST PIT 1



USCS	Description
	Topsoil over: Reddish brown, gravelly, silty SAND, some intermittent boulders, many organics, very moist, loose (Weathered Glacial Till)
	-becomes medium-dense, few organics
SM	-becomes gray, no organics, dense (sandy Glacial Till)
	-some very wet lenses encountered

Test pit terminated at 12.5 feet below grade on 4-30-96.
Minor groundwater seepage was encountered at 10 feet during excavation.
No caving.

TEST PIT 2



USCS	Description
FILL	Gray/black fill soil with extensive large debris, including concrete, loose
	-old concrete floor ?
	Tan/mottled, gravelly, silty SAND, very wet, medium-dense (Weathered Glacial Till)
SM	-becomes gray, dense (sandy Glacial Till)

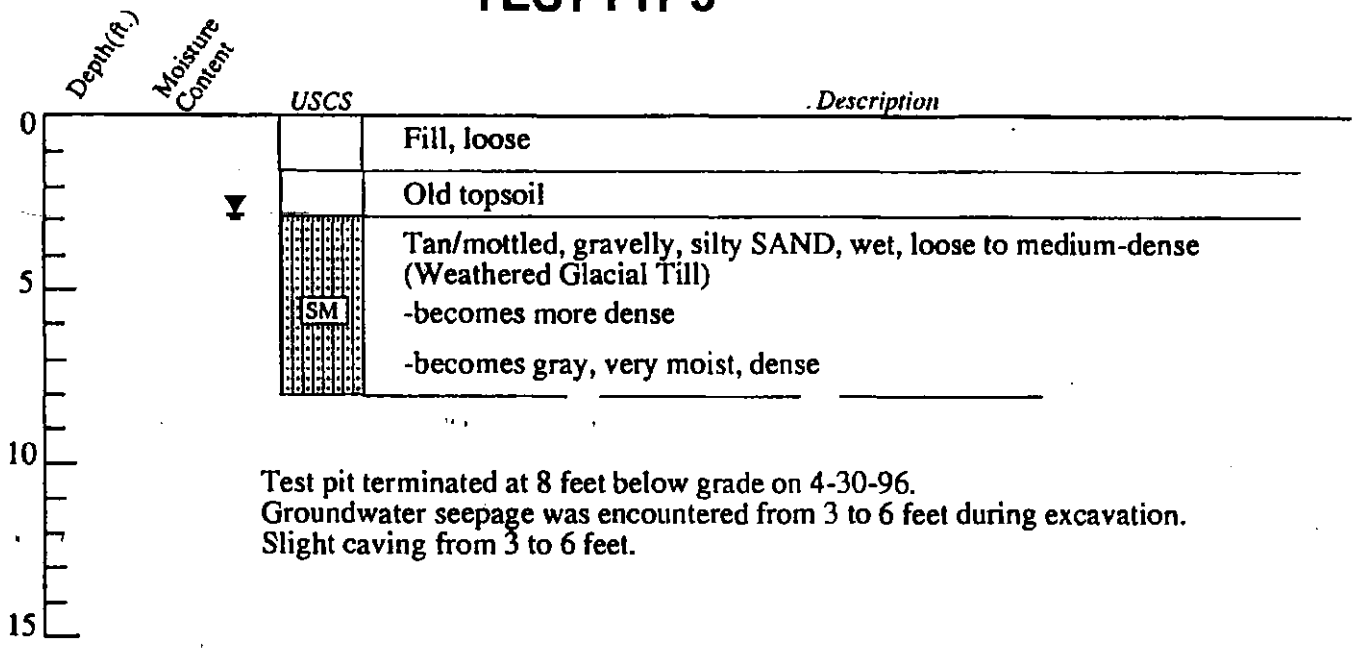
Test pit terminated at 12 feet below grade on 4-30-96.
Groundwater seepage was encountered at 4 feet during excavation.
Slight caving below 4 feet.

GEOTECH
CONSULTANTS, INC.

TEST PIT LOGS
312 - 11th AVENUE
SEATTLE, WA

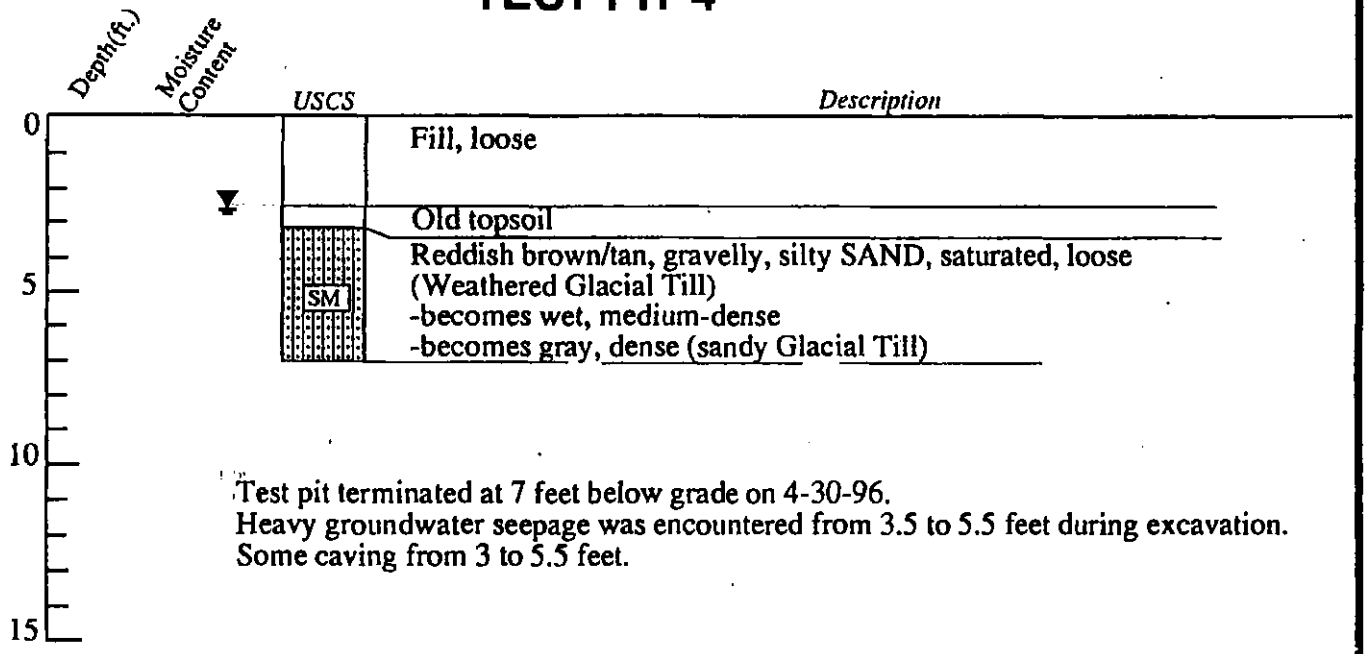
Job No:	Date:	Logged by:	Plate:
96145	MAY 1996	DRW	3

TEST PIT 3



Test pit terminated at 8 feet below grade on 4-30-96.
Groundwater seepage was encountered from 3 to 6 feet during excavation.
Slight caving from 3 to 6 feet.

TEST PIT 4



Test pit terminated at 7 feet below grade on 4-30-96.
Heavy groundwater seepage was encountered from 3.5 to 5.5 feet during excavation.
Some caving from 3 to 5.5 feet.

GEOTECH
CONSULTANTS, INC.

TEST PIT LOGS
312 - 11th AVENUE
SEATTLE, WA

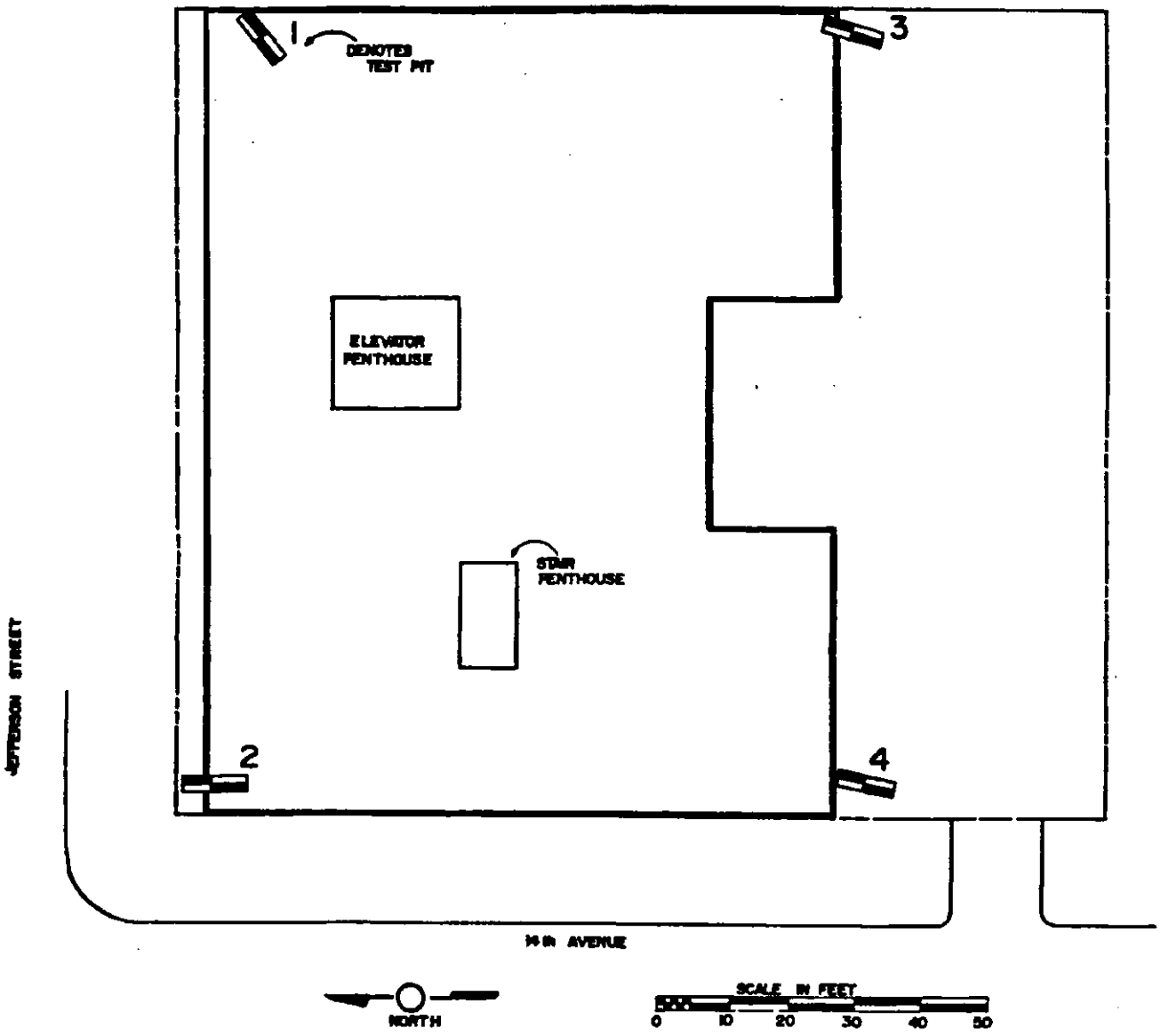
Job No: 96145	Date: MAY 1996	Logged by: DRW	Plate: 4

ZONE 5

EARTH SCIENCES

RECEIVED
JUN 17 1985
Dept. of Construction & Land Use

THE JEFFERSON BUILDING—SEATTLE, WASHINGTON



TEST PIT LOGS

1. 0' - Variable gravelly fill
0.6' - Brown silty fine sand with gravel (very dense glacial till)
13.3' - Completed, no groundwater encountered

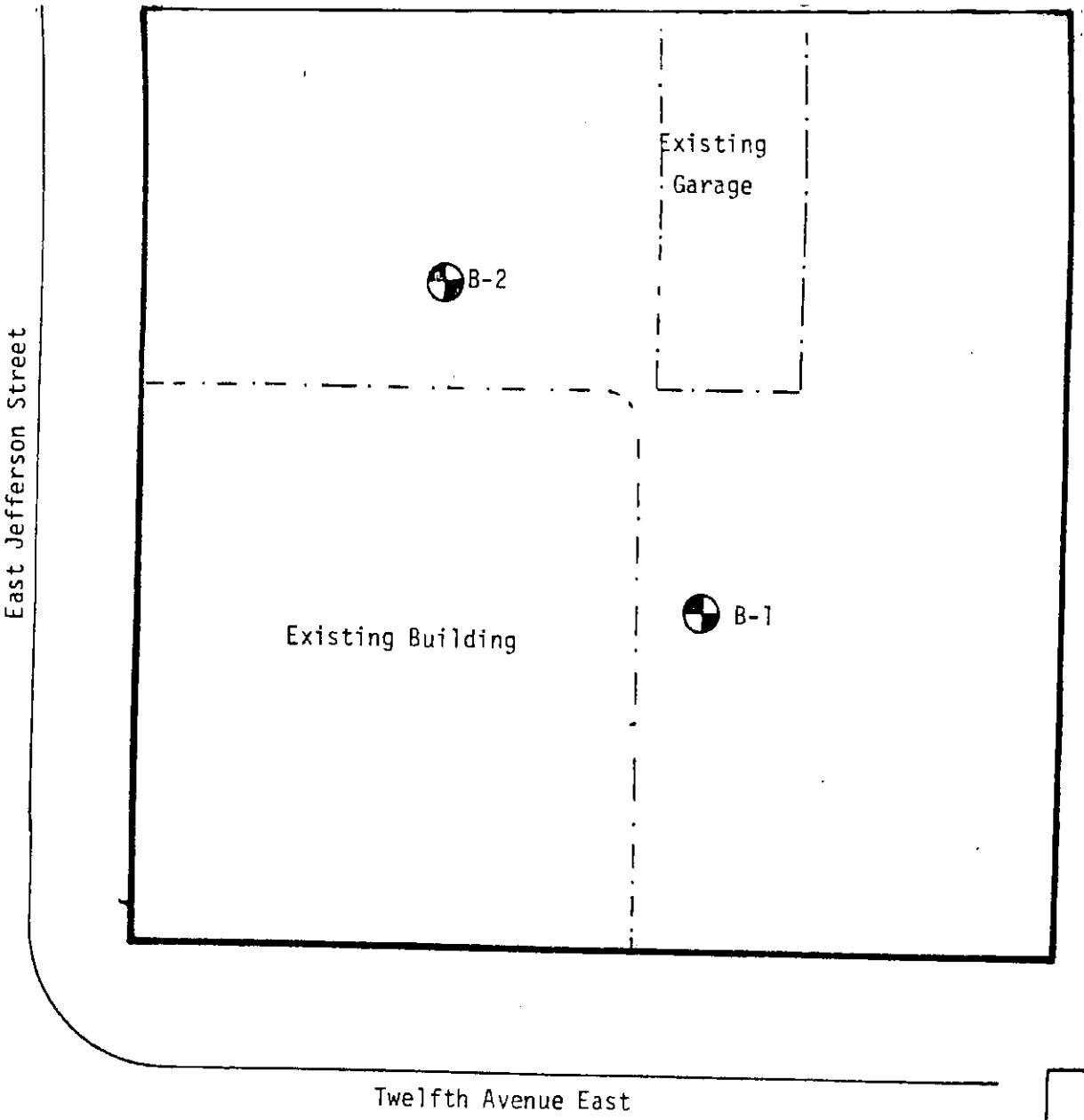
2. 0' - Variable silty sand and gravel fill
2.8' - Brown silty fine sand with gravel (weathered glacial till)
4.8' - Brown to gray silty fine sand with gravel (very dense glacial till)
11.5' - Slight groundwater flow
12.0' - Completed

3. 0' - Variable silty sand and gravel fill
2.0' - Dark brown topsoil
2.3' - Brown silty fine sand with gravel (very dense glacial till)
11.8' - Completed, no groundwater encountered

4. 0' - Variable silty sand and gravel fill with occasional brick and asphalt chunks
2.9' - Brown silty fine sand with gravel (glacial till, grades to hardpan at 4.5' depth)
7.5' - Completed, no groundwater encountered

ZONE 6

RZA



Microfilm

NORTH

B-2 Indicates Number and Locatic of Borings

RITTENHOUSE - ZEMAN & ASSOC., INC.
FOUNDATION AND SOILS ENGINEERING, GEOLOGY

13837 N.E. 8th Street
Bellevue, Washington 98005
746-8020

8050 S.W. Cirrus Drive
Beaverton, Oregon 97005
644-9141

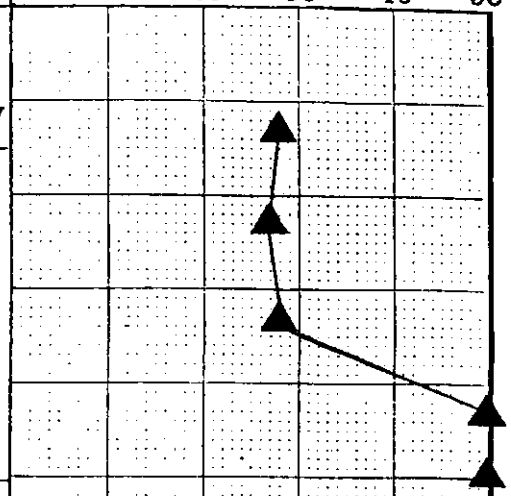
WRIGHT BUILDING

W.O. 3236 DATE 1-80
BY CCL SCALE 1/16" = 1'

DEPTH, FEET	SOIL DESCRIPTION	SAMPLES	GROUNDWATER
	Surface Elevation:		
	Medium dense, wet, brown, silty fine sand and gravel (Fill).		
5	Medium dense, saturated, brown, very silty medium sand and gravel. (Natural Ground)		
10	Very dense, saturated, brown, very silty medium sand with gravel.		
	Bottom of boring at 12.5 feet.		
15			
20			
25			
30			
35			
40			

PENETRATION RESISTANCE
▲ Blows per foot
(140 lb. hammer, 30" drop)

10 20 30 40 50



15 January 1980

● % Water Content

LEGEND

I 2.0" O.D. split spoon sampler
II 3.0" O.D. undisturbed sampler
P Sampler pushed
• Sample not recovered
Piezometer tip
Water level
Atterberg limits: Liquid limit, Natural water content, Plastic Limit

Wright Building
LOG OF BORING NO. B-1
W-3236
RITTENHOUSE-ZEMAN & ASSOC.
SOILS ENGINEERING AND GEOLOGY

Microfilm

Surface Elevation:

DEPTH, FEET	SOIL DESCRIPTION	SAMPLES	GROUNDWATER
0	Medium dense, wet, brown, silty fine sand w/gravel. (Fill)		
5	Medium dense to dense, saturated brown, silty sand and gravel. (Natural Ground)		
10			
15	Bottom of boring at 14.0 feet.		
20			
25			
30			
35			
40			

PENETRATION RESISTANCE
▲ Blows per foot
(140 lb. hammer, 30" drop)

10 20 30 40 50

Blow Count Overstated

15 January 1980

● % Water Content

LEGEND

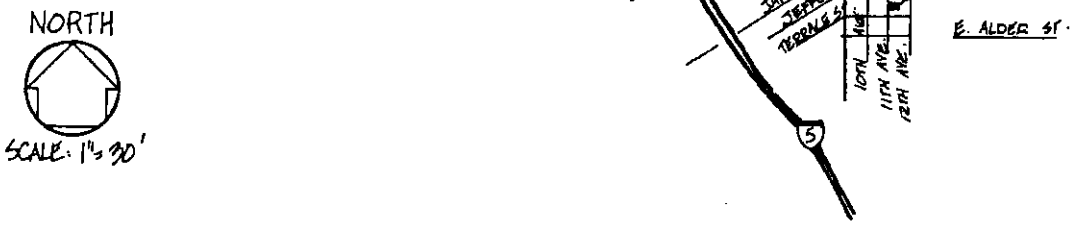
I 2.0" O.D. split spoon sampler
II 3.0" O.D. undisturbed sampler
P Sampler pushed
• Sample not recovered
Piezometer tip
▽ Water level
Atterberg limits: ⊢●⊣ Liquid limit
Natural water content
Plastic Limit

Wright Building
LOG OF BORING NO. B-2
W-3236

RITTENHOUSE-ZEMAN & ASSOC.
SOILS ENGINEERING AND GEOLOGY

ZONE 7

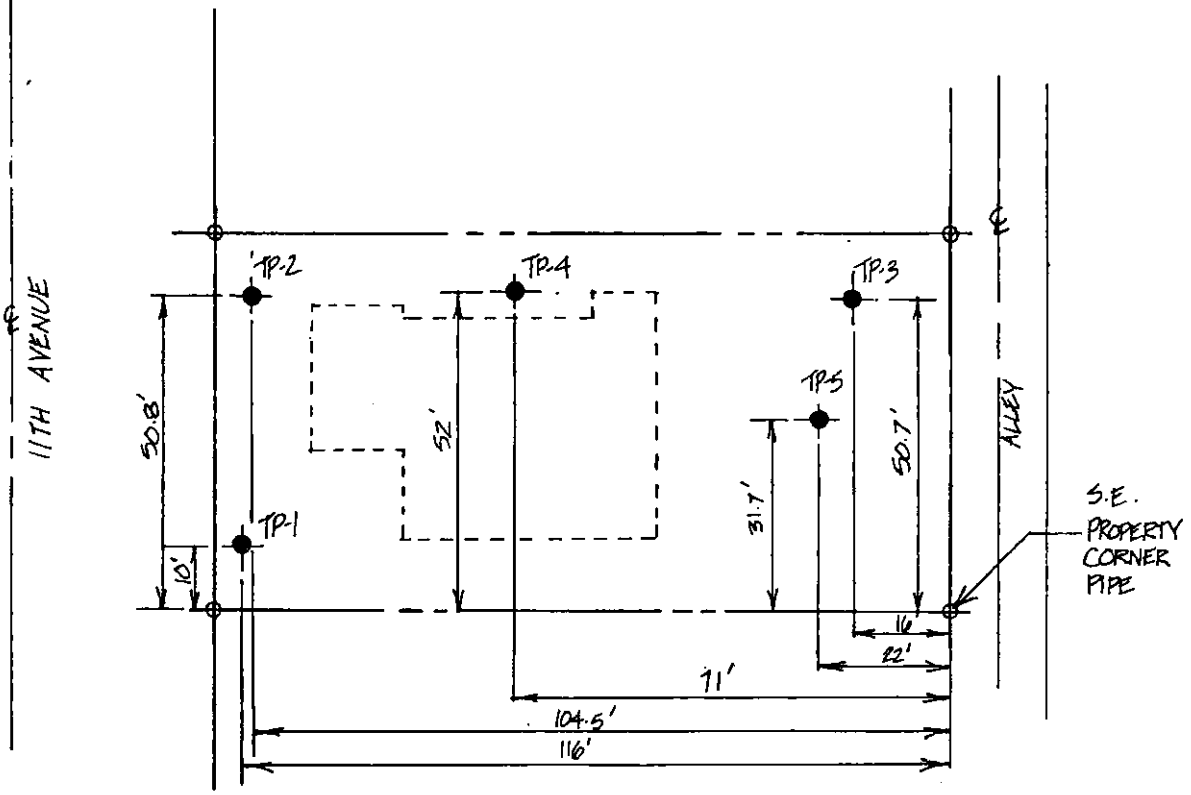
PACIFIC TESTING LABORATORIES



VICINITY MAP

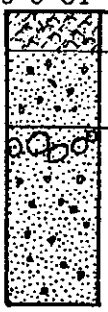
NORTH

SCALE: 1" = 30'



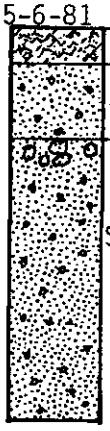
PACIFIC TESTING LABORATORIES 3220 17th AVE. W. SEATTLE, WA. 98119 206-282-0668	TEST PIT LOCATION MAP for Tim Ryan Construction 410 11th Avenue Seattle, Washington	PROJECT NO. 8105-4010 DATE 5-12-81 DRAWN JEM ENGR./GEOL. CJ APPROVED

TP-1 Location: See Test Pit Location Map
5-6-81 Elevation: 108.8'



(0.0')EL.108.8'
Topsoil with organics
(1.0')EL.107.8'
SP Light brown, moist, medium grained SAND & gravel
(3.0')EL.105.8'
SP Cobbles to 12"
Blue-gray, moist, medium grained SAND & gravel
BOH=(8.0')EL.100.8'

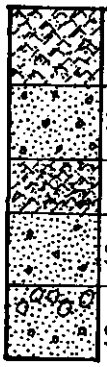
TP-2 Location: See Test Pit Location Map
5-6-81 Elevation: 109.8'



(0.0')EL.109.8'
Topsoil with organics
(1.0')EL.108.8'
SP Light brown, moist, medium grained SAND & gravel
(3.0')EL.106.8'
Cobbles to 8"
SP Blue-gray, moist, medium grained SAND & gravel
Seepage at (8.0')EL.101.8'
BOH=(10.7')EL.99.1'

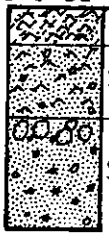
PACIFIC TESTING LABORATORIES 3220 17th AVE. W. SEATTLE, WA. 98119 206-282-0666	TEST PIT LOG for Tim Ryan Construction 410 11th Avenue Seattle, Washington	PROJECT NO. 8105-4010 DATE 5-12-81 DRAWN JEM ENGR./GEOL. CJ APPROVED

TP-3 Location: See Test Pit Location Map
5-6-81 Elevation: 105.3'



(0.0')EL.105.3'
Topsoil with organics
(2.0')EL.103.3'
SP Light brown, moist, medium grained SAND & gravel
(4.0')EL.101.3'
Dark brown, sandy soil with organics (buried topsoil)
(5.5')EL.99.8'
SP Light brown, moist, medium grained SAND & gravel
(7.5')EL.97.8'
Cobbles to 8"
SP Blue-gray, moist, medium grained, SAND & gravel
BOH=(9.5')EL.95.8'

TP-4 Location: See Test Pit Location Map
5-6-81 Elevation: 108.0'



(0.0')EL.108.0'
Topsoil with organics
(1.0')EL.107.0'
SP Light brown, moist, fine grained SAND & gravel with organics
(3.0')EL.105.0'
Cobbles to 8"
SP Blue-gray, moist, fine grained SAND & gravel
BOH=(6.0')EL.102.0'

PACIFIC TESTING LABORATORIES 3220 17th AVE. W. SEATTLE, WA. 98119 206-282-0666	TEST PIT LOG for Tim Ryan Construction 410 11th Avenue Seattle, Washington	PROJECT NO. 8105-4010 DATE 5-12-81 DRAWN JEM ENGR./GEOL. CJ APPROVED

TP-5 Location: See Test Pit Location Map
5-6-81 Elevation: 104.8'

Topsoil with organics — (0.0')EL.104.8'

(1.0')EL.103.8'

SP Light brown, moist, medium grained SAND & gravel

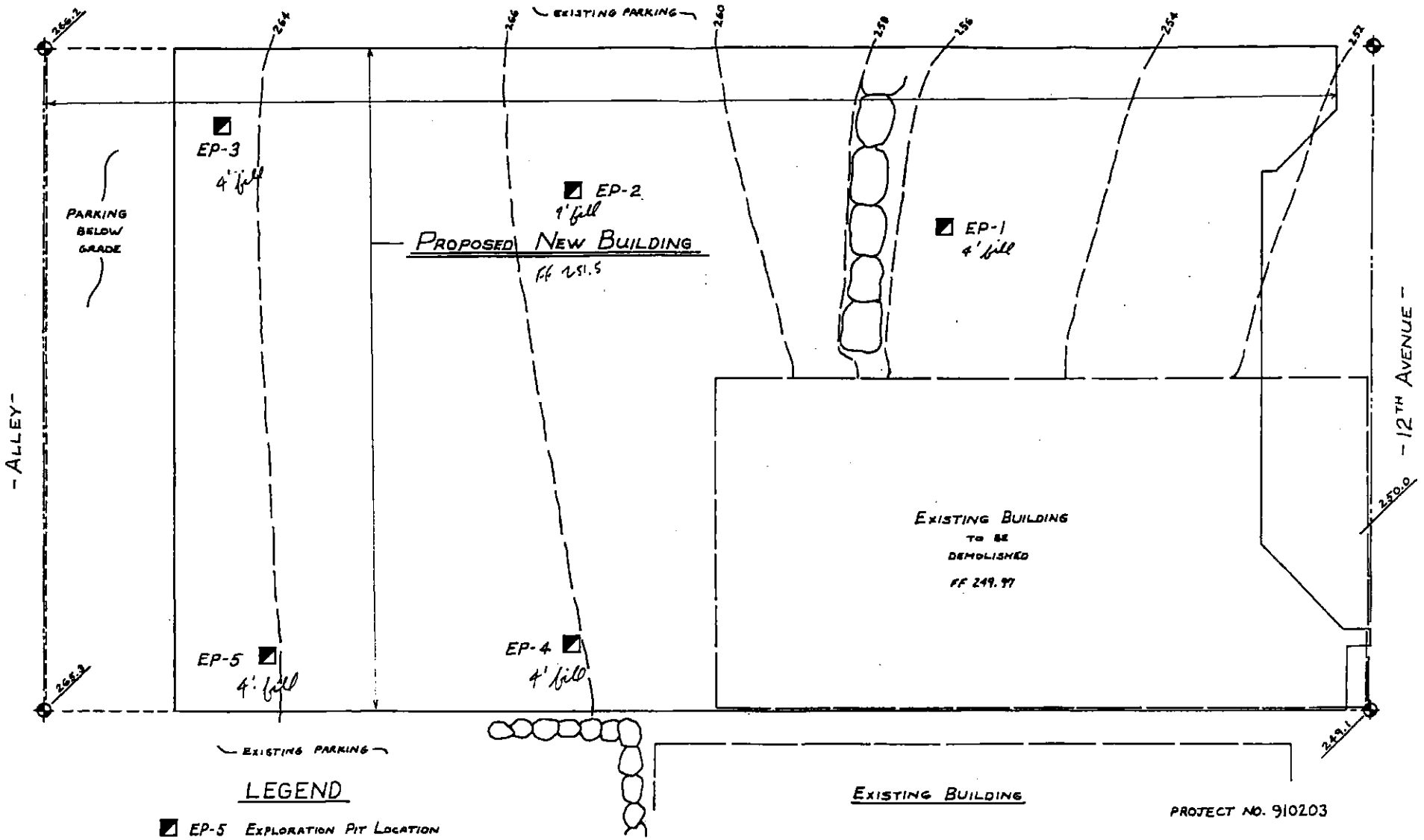
(3.0')EL.101.8'

SP Blue-gray, moist, medium grained SAND & gravel — BOH=(3.5')EL.101.3'

PACIFIC TESTING LABORATORIES 3220 17th AVE. W. SEATTLE, WA. 98119 206-282-0666	TEST PIT LOG for Tim Ryan Construction 410 11th Avenue Seattle, Washington	PROJECT NO. 8105-4010 DATE 5-12-81 DRAWN JEM ENGR./GEOL. CJ APPROVED

ZONE 8

GEOSOURCE



GeoSource

SITE AND EXPLORATION PLAN Figure 1

EXPLORATION PIT LOGS

Commercial Building
411 - 12th Avenue
Seattle, Washington
Project No. 910203

EXPLORATION PIT NO. 1

Depth (ft)	Soil Description
0.0–4.0	Medium dense, moist, black, brown and tan, silty, gravelly, fine to coarse sand, with wood, metal and concrete debris (fill).
4.0–8.0	Very dense, damp, tan, silty, gravelly, fine to coarse sand (till).
	No seepage.
	No caving.

EXPLORATION PIT NO. 2

Depth (ft)	Soil Description
0.0–1.0	Loose, moist, black and brown, topsoil.
1.0–4.5	Medium dense, moist, light brown, gray and black, gravelly, silty, fine to coarse sand (fill).
4.5–7.0	Medium dense to dense, moist, tan, silty, gravelly, fine to coarse sand with cobbles (fill in old basement).
7.0–12.0	Very dense, damp, tan, silty, gravelly, fine to coarse sand with cobbles (till).
	No seepage.
	No caving.

EXPLORATION PIT NO. 3

Depth (ft)	Soil Description
0.0–2.0	Loose to medium dense, moist, tan, black and gray, silty fine to coarse sand with some gravel (fill).
2.0–3.8	Loose to medium dense, moist, brown topsoil.
3.8–6.0	Dense, moist, tan, gravelly, silty, fine to coarse sand (weathered till).
6.0–18.0	Very dense, damp, tan, silty, gravelly, fine to coarse sand (till).
	Slow seepage at 5 to 10 feet.
	No caving.

EXPLORATION PIT NO. 4

Depth (ft)	Soil Description
0.0-3.0	Medium dense, moist, black and brown, silty fine to coarse sand with wood, concrete and metal debris (fill).
3.0-4.6	Medium dense, moist, tan, gravelly, silty, fine to coarse sand (weathered till).
4.6-9.0	Very dense, damp, silty, gravelly, fine to coarse sand (till).
	No seepage.
	No caving.

EXPLORATION PIT NO. 5

Depth (ft)	Soil Description
0.0-1.0	Medium dense, moist, black, topsoil.
1.0-3.6	Medium dense, moist, brown, gravelly, silty, fine to coarse sand.
3.6-5.3	Medium dense to dense, moist, tan, silty, gravelly, fine to coarse sand with cobbles (weathered till).
5.3-8.0	Dense, damp, tan, silty, gravelly, fine to coarse sand with cobbles (till).
8.0-13.0	Very dense, damp, tan, silty, gravelly, fine to coarse sand with cobbles (till).
	No seepage.
	No caving.

APPENDIX B

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL/ENVIRONMENTAL REPORT

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

Attachment to and part of Report 21-1-21296-001

Date: April 29, 2010
To: Mr. Chris Griffes
Kaplan McLaughlin Diaz

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL/ENVIRONMENTAL REPORT

CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring witb the consultant.

THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include: the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used: (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors which were considered in the development of the report have changed.

SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events, and should be consulted to determine if additional tests are necessary.

MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by tbe consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the
ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland

Attachment B

Greenhouse Gas Emissions Worksheets

for the

King County

Youth Services Center
Courthouse Replacement

Alternative A, B and C

Section I: Buildings

Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Emissions Per Unit or Per Thousand Square Feet (MTCO2e) Embodied	Energy	Transportation	**Lifespan Emissions (MTCO2e)**
Single-Family Home	0		98	672	792	**0**
Multi-Family Unit in Large Building	0		33	357	766	**0**
Multi-Family Unit in Small Building	0		54	681	766	**0**
Mobile Home	0		41	475	709	**0**
Education		0.0	39	646	361	**0**
Food Sales		0.0	39	1,541	282	**0**
Food Service		0.0	39	1,994	561	**0**
Health Care Inpatient		0.0	39	1,938	582	**0**
Health Care Outpatient		0.0	39	737	571	**0**
Lodging		0.0	39	777	117	**0**
Retail (Other Than Mall)		0.0	39	577	247	**0**
Office		0.0	39	723	588	**0**
Public Assembly		0.0	39	733	150	**0**
Public Order and Safety		256.6	39	899	374	**336465**
Religious Worship		0.0	39	339	129	**0**
Service		0.0	39	599	266	**0**
Warehouse and Storage		0.0	39	352	181	**0**
Other		0.0	39	1,278	257	**0**
Vacant		0.0	39	162	47	**0**

Section II: Pavement

Pavement		0.00				**0**

Total Project Emissions: **336465**

City of Seattle Department of Planning and Development
SEPA GHG Emissions Worksheet
Version 1.7 12/26/07

Introduction

The Washington State Environmental Policy Act (SEPA) requires environmental review of development proposals that may have a significant adverse impact on the environment. If a proposed development is subject to SEPA, the project proponent is required to complete the SEPA Checklist. The Checklist includes questions relating to the development's air emissions. The emissions that have traditionally been considered cover smoke, dust, and industrial and automobile emissions. With our understanding of the climate change impacts of GHG emissions, the City of Seattle requires the applicant to also estimate these emissions.

Emissions created by Development

GHG emissions associated with development come from multiple sources:

- The extraction, processing, transportation, construction and disposal of materials and landscape disturbance (Embodied Emissions)
- Energy demands created by the development after it is completed (Energy Emissions)
- Transportation demands created by the development after it is completed (Transportation Emissions)

GHG Emissions Worksheet

This GHG Emissions Worksheet has been developed to assist applicants in answering the SEPA Checklist question relating to GHG emissions. The worksheet was originally developed by King County, but the City of Seattle and King County are working together on future updates to maintain consistency of methodologies across jurisdictions.

The SEPA GHG Emissions worksheet estimates all GHG emissions that will be created over the life span of a project. This includes emissions associated with obtaining construction materials, fuel used during construction, energy consumed during a buildings operation, and transportation by building occupants.

Using the Worksheet

1. Descriptions of the different residential and commercial building types can be found on the second tabbed worksheet ("Definition of Building Types"). If a development proposal consists of multiple projects, e.g. both single family and multi-family residential structures or a commercial development that consists of more than on type of commercial activity, the appropriate information should be estimated for each type of building or activity.

2. For paving, estimate the total amount of paving (in thousands of square feet) of the project.

3. The Worksheet will calculate the amount of GHG emissions associated with the project and display the amount in the "Total Emissions" column on the worksheet. The applicant should use this information when completing the SEPA checklist.

4. The last three worksheets in the Excel file provide the background information that is used to calculate the total GHG emissions.

5. The methodology of creating the estimates is transparent; if there is reason to believe that a better estimate can be obtained by changing specific values, this can and should be done. Changes to the values should be documented with an explanation of why and the sources relied upon.

6. Print out the “Total Emissions” worksheet and attach it to the SEPA checklist. If the applicant has made changes to the calculations or the values, the documentation supporting those changes should also be attached to the SEPA checklist.

Definition of Building Types

Type (Residential) or Principal Activity (Commercial)	Description
Single-Family Home	Unless otherwise specified, this includes both attached and detached buildings
Multi-Family Unit in Large Building	Apartments in buildings with more than 5 units
Multi-Family Unit in Small Building	Apartments in building with 2-4 units
Mobile Home	
Education	Buildings used for academic or technical classroom instruction, such as elementary, middle, or high schools, and classroom buildings on college or university campuses. Buildings on education campuses for which the main use is not classroom are included in the category relating to their use. For example, administration buildings are part of "Office," dormitories are "Lodging," and libraries are "Public Assembly."
Food Sales	Buildings used for retail or wholesale of food.
Food Service	Buildings used for preparation and sale of food and beverages for consumption.
Health Care Inpatient	Buildings used as diagnostic and treatment facilities for inpatient care.
Health Care Outpatient	Buildings used as diagnostic and treatment facilities for outpatient care. Doctor's or dentist's office are included here if they use any type of diagnostic medical equipment (if they do not, they are categorized as an office building).
Lodging	Buildings used to offer multiple accommodations for short-term or long-term residents, including skilled nursing and other residential care buildings.
Retail (Other Than Mall)	Buildings used for the sale and display of goods other than food.
Office	Buildings used for general office space, professional office, or administrative offices. Doctor's or dentist's office are included here if they do not use any type of diagnostic medical equipment (if they do, they are categorized as an outpatient health care building).
Public Assembly	Buildings in which people gather for social or recreational activities, whether in private or non-private meeting halls.
Public Order and Safety	Buildings used for the preservation of law and order or public safety.
Religious Worship	Buildings in which people gather for religious activities, (such as chapels, churches, mosques, synagogues, and temples).
Service	Buildings in which some type of service is provided, other than food service or retail sales of goods
Warehouse and Storage	Buildings used to store goods, manufactured products, merchandise, raw materials, or personal belongings (such as self-storage).
Other	Buildings that are industrial or agricultural with some retail space; buildings having several different commercial activities that, together, comprise 50 percent or more of the floorspace, but whose largest single activity is agricultural, industrial/ manufacturing, or residential; and all other miscellaneous buildings that do not fit into any other category.
Vacant	Buildings in which more floorspace was vacant than was used for any single commercial activity at the time of interview. Therefore, a vacant building may have some occupied floorspace.

Sources: .....

Residential 2001 Residential Energy Consumption Survey
Square footage measurements and comparisons
http://www.eia.doe.gov/emeu/recs/sqft-measure.html

Commercial Commercial Buildings Energy Consumption Survey (CBECS),
Description of CBECS Building Types
http://www.eia.doe.gov/emeu/cbecs/pba99/bldgtypes.html

Embodied Emissions Worksheet

Section I: Buildings

Type (Residential) or Principal Activity (Commercial)	# thousand sq feet/ unit or building	Life span related embodied GHG missions (MTCO2e/ unit)	Life span related embodied GHG missions (MTCO2e/ thousand square feet) - See calculations in table below
Single-Family Home	2.53	98	39
Multi-Family Unit in Large Building	0.85	33	39
Multi-Family Unit in Small Building	1.39	54	39
Mobile Home	1.06	41	39
Education	25.6	991	39
Food Sales	5.6	217	39
Food Service	5.6	217	39
Health Care Inpatient	241.4	9,346	39
Health Care Outpatient	10.4	403	39
Lodging	35.8	1,386	39
Retail (Other Than Mall)	9.7	376	39
Office	14.8	573	39
Public Assembly	14.2	550	39
Public Order and Safety	15.5	600	39
Religious Worship	10.1	391	39
Service	6.5	252	39
Warehouse and Storage	16.9	654	39
Other	21.9	848	39
Vacant	14.1	546	39

Section II: Pavement

All Types of Pavement			50

	Columns and Beams	Intermediate Floors	Exterior Walls	Windows	Interior Walls	Roofs		
Average GWP (lbs CO2e/sq ft): Vancouver, Low Rise Building	5.3	7.8	19.1	51.2	5.7	21.3		
Average Materials in a 2,272-square foot single family home	0.0	2269.0	3206.0	285.0	6050.0	3103.0	Total Embodied Emissions (MTCO2e)	Total Embodied Emissions (MTCO2e/ thousand sq feet)
MTCO2e	0.0	8.0	27.8	6.6	15.6	30.0	88.0	38.7

Sources

All data in black text — King County, DNRP. Contact: Matt Kuharic, matt.kuharic@kingcounty.gov

Residential floorspace per unit
2001 Residential Energy Consumption Survey (National Average, 2001)
Square footage measurements and comparisons
http://www.eia.doe.gov/emeu/recs/sqft-measure.html

Floorspace per building
EIA, 2003 Commercial Buildings Energy Consumption Survey (National Average, 2003)
Table C3. Consumption and Gross Energy Intensity for Sum of Major Fuels for Non-Mall Buildings, 2003
http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set9/2003excel/c3.xls

Average GWP (lbs CO2e/sq ft): Vancouver, Low Rise Building
Athena EcoCalculator
Athena Assembly Evaluation Tool v2.3- Vancouver Low Rise Building
Assembly Average GWP (kg) per square meter
http://www.athenasmi.ca/tools/ecoCalculator/index.html
Lbs per kg 2.20
Square feet per square meter 10.76

Average Materials in a 2,272-square foot single family home
Buildings Energy Data Book: 7.3 Typical/Average Household
Materials Used in the Construction of a 2,272-Square-Foot Single-Family Home, 2000
http://buildingsdatabook.eren.doe.gov/?id=view_book_table&TableID=2036&t=xls
See also: NAHB, 2004 Housing Facts, Figures and Trends, Feb. 2004, p. 7.

Average window size
Energy Information Administration/Housing Characteristics 1993
Appendix B, Quality of the Data. Pg. 5.
ftp://ftp.eia.doe.gov/pub/consumption/residential/rx93hcf.pdf

Pavement Emissions Factors
MTCO2e/thousand square feet of asphalt
or concrete pavement 50 (see below)

Embodied GHG Emissions……Worksheet Background Information

Buildings
Embodied GHG emissions are emissions that are created through the extraction, processing, transportation, construction and disposal of building materials as well as emissions created through landscape disturbance (by both soil disturbance and changes in above ground biomass).

Estimating embodied GHG emissions is new field of analysis; the estimates are rapidly improving and becoming more inclusive of all elements of construction and development.

The estimate included in this worksheet is calculated using average values for the main construction materials that are used to create a typical family home. In 2004, the National Association of Home Builders calculated the average materials that are used in a typical 2,272 square foot single-family household. The quantity of materials used is then multiplied by the average GHG emissions associated with the life-cycle GHG emissions for each material.

This estimate is a rough and conservative estimate; the actual embodied emissions for a project are likely to be higher. For example, at this stage, due to a lack of comprehensive data, the estimate does not include important factors such as landscape disturbance or the emissions associated with the interior components of a building (such as furniture).

King County realizes that the calculations for embodied emissions in this worksheet are rough. For example, the emissions associated with building 1,000 square feet of a residential building will not be the same as 1,000 square feet of a commercial building. However, discussions with the construction community indicate that while there are significant differences between the different types of structures, this method of estimation is reasonable; it will be improved as more data become available.

Additionally, if more specific information about the project is known, King County recommends two online embodied emissions calculators that can be used to obtain a more tailored estimate for embodied emissions: www.buildcarbonneutral.org and www.athenasmi.ca/tools/ecoCalculator/.

Pavement
Four recent life cycle assessments of the environmental impacts of roads form the basis for the per unit embodied emissions of pavement. Each study is constructed in slightly different ways; however, the aggregate results of the reports represent a reasonable estimate of the GHG emissions that are created from the manufacture of paving materials, construction related emissions, and maintenance of the pavement over its expected life cycle. For specifics, see the worksheet.

Special Section: Estimating the Embodied Emissions for Pavement

Four recent life cycle assessments of the environmental impacts of roads form the basis for the per unit embodied emissions of pavement. Each study is constructed in slightly different ways; however, the aggregate results of the reports represent a reasonable estimate of the GHG emissions that are created from the manufacture of paving materials, construction related emissions, and maintenance of the pavement over its expected life cycle.

The results of the studies are presented in different units and measures; considerable effort was undertaken to be able to compare the results of the studies in a reasonable way. For more details about the below methodology, contact matt.kuharic@kingcounty.gov.

The four studies, Meil (2001), Park (2003), Stripple (2001) and Treolar (2001) produced total GHG emissions of 4-34 MTCO2e per thousand square feet of finished paving (for similar asphalt and concrete based pavements). This estimate does not including downstream maintenance and repair of the highway. The average (for all concrete and asphalt pavements in the studies, assuming each study gets one data point) is ~17 MTCO2e/thousand square feet.

Three of the studies attempted to thoroughly account for the emissions associated with long term maintenance (40 years) of the roads. Stripple (2001), Park et al. (2003) and Treolar (2001) report 17, 81, and 68 MTCO2e/thousand square feet, respectively, after accounting for maintenance of the roads.

Based on the above discussion, King County makes the conservative estimate that 50 MTCO2e/thousand square feet of pavement (over the development's life cycle) will be used as the embodied emission factor for pavement until better estimates can be obtained. This is roughly equivalent to 3,500 MTCO2e per lane mile of road (assuming the lane is 13 feet wide).

It is important to note that these studies estimate the embodied emissions for roads. Paving that does not need to stand up to the rigors of heavy use (such as parking lots or driveways) would likely use less materials and hence have lower embodied emissions.

Sources:

Meil, J. A Life Cycle Perspective on Concrete and Asphalt Roadways: Embodied Primary Energy and Global Warming Potential. 2006. Available: http://www.cement.ca/cement.nsf/eee9ec7bbd630126852566c40052107b/6ec79dc8ae03a782852572b90061b914/$FILE/ATTK0WE3/athena%20report%20Feb.%202%202007.pdf

Park, K, Hwang, Y., Seo, S., M.ASCE, and Seo, H. , "Quantitative Assessment of Environmental Impacts on Life Cycle of Highways," Journal of Construction Engineering and Management , Vol 129, January/February 2003, pp 25-31, (DOI: 10.1061/(ASCE)0733-9364(2003)129:1(25)).

Stripple, H. Life Cycle Assessment of Road. A Pilot Study for Inventory Analysis. Second Revised Edition. IVL Swedish Environmental Research Institute Ltd. 2001. Available: http://www.ivl.se/rapporter/pdf/B1210E.pdf

Treloar, G., Love, P.E.D., and Crawford, R.H. Hybrid Life-Cycle Inventory for Road Construction and Use. Journal of Construction Engineering and Management. P. 43-49. January/February 2004.

Energy Emissions Worksheet

Type (Residential) or Principal Activity (Commercial)	Energy consumption per building per year (million Btu)	Carbon Coefficient for Buildings	MTCO2e per building per year	Floorspace per Building (thousand square feet)	MTCE per thousand square feet per year	MTCO2e per thousand square feet per year	Average Building Life Span	Lifespan Energy Related MTCO2e emissions per unit	Lifespan Energy Related MTCO2e emissions per thousand square feet
Single-Family Home	107.3	0.108	11.61	2.53	4.6	16.8	57.9	672	266
Multi-Family Unit in Large Building	41.0	0.108	4.44	0.85	5.2	19.2	80.5	357	422
Multi-Family Unit in Small Building	78.1	0.108	8.45	1.39	6.1	22.2	80.5	681	489
Mobile Home	75.9	0.108	8.21	1.06	7.7	28.4	57.9	475	448
Education	2,125.0	0.124	264.2	25.6	10.3	37.8	62.5	16,526	646
Food Sales	1,110.0	0.124	138.0	5.6	24.6	90.4	62.5	8,632	1,541
Food Service	1,436.0	0.124	178.5	5.6	31.9	116.9	62.5	11,168	1,994
Health Care Inpatient	60,152.0	0.124	7,479.1	241.4	31.0	113.6	62.5	467,794	1,938
Health Care Outpatient	985.0	0.124	122.5	10.4	11.8	43.2	62.5	7,660	737
Lodging	3,578.0	0.124	444.9	35.8	12.4	45.6	62.5	27,826	777
Retail (Other Than Mall)	720.0	0.124	89.5	9.7	9.2	33.8	62.5	5,599	577
Office	1,376.0	0.124	171.1	14.8	11.6	42.4	62.5	10,701	723
Public Assembly	1,338.0	0.124	166.4	14.2	11.7	43.0	62.5	10,405	733
Public Order and Safety	1,791.0	0.124	222.7	15.5	14.4	52.7	62.5	13,928	899
Religious Worship	440.0	0.124	54.7	10.1	5.4	19.9	62.5	3,422	339
Service	501.0	0.124	62.3	6.5	9.6	35.1	62.5	3,896	599
Warehouse and Storage	764.0	0.124	95.0	16.9	5.6	20.6	62.5	5,942	352
Other	3,600.0	0.124	447.6	21.9	20.4	74.9	62.5	27,997	1,278
Vacant	294.0	0.124	36.6	14.1	2.6	9.5	62.5	2,286	162

Sources

All data in black text — King County, DNRP. Contact: Matt Kuharic, matt.kuharic@kingcounty.gov

Energy consumption for residential buildings
2007 Buildings Energy Data Book: 6.1 Quad Definitions and Comparisons (National Average, 2001)
Table 6.1.4: Average Annual Carbon Dioxide Emissions for Various Functions
http://buildingsdatabook.eren.doe.gov/
Data also at: http://www.eia.doe.gov/emeu/recs/recs2001_ce/ce1-4c_housingunits2001.html

Energy consumption for commercial buildings
and
Floorspace per building
EIA, 2003 Commercial Buildings Energy Consumption Survey (National Average, 2003)
Table C3. Consumption and Gross Energy Intensity for Sum of Major Fuels for Non-Mall Buildings, 2003
http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set9/2003excel/c3.xls

Note: Data in plum color is found in both of the above sources (buildings energy data book and commercial buildings energy consumption survey).

Carbon Coefficient for Buildings
Buildings Energy Data Book (National average, 2005)
Table 3.1.7. 2005 Carbon Dioxide Emission Coefficients for Buildings (MMTCE per Quadrillion Btu)
http://buildingsdatabook.eere.energy.gov/?id=view_book_table&TableID=2057
Note: Carbon coefficient in the Energy Data book is in MTCE per Quadrillion Btu.
To convert to MTCO2e per million Btu, this factor was divided by 1000 and multiplied by 44/12.

Residential floorspace per unit
2001 Residential Energy Consumption Survey (National Average, 2001)
Square footage measurements and comparisons
http://www.eia.doe.gov/emeu/recs/sqft-measure.html

average lief span of buildings,
estimated by replacement time method

	Single Family Homes	Multi-Family Units in Large and Small Buildings	All Residential Buildings	
New Housing Construction, 2001	1,273,000	329,000	1,602,000	
Existing Housing Stock, 2001	73,700,000	26,500,000	100,200,000	
Replacement time:	57.9	80.5	62.5	(national average, 2001)

Note: Single family homes calculation is used for mobile homes as a best estimate life span.
Note: At this time, KC staff could find no reliable data for the average life span of commercial buildings.
Therefore, the average life span of residential buildings is being used until a better approximation can be ascertained.

Sources:

New Housing Construction, 2001
Quarterly Starts and Completions by Purpose and Design - US and Regions (Excel)
http://www.census.gov/const/quarterly_starts_completions_cust.xls
See also: http://www.census.gov/const/www/newresconstindex.html

Existing Housing Stock, 2001
Residential Energy Consumption Survey (RECS) 2001
Tables HC1:Housing Unit Characteristics, Million U.S. Households 2001
Table HC1-4a. Housing Unit Characteristics by Type of Housing Unit, Million U.S. Households, 2001
Million U.S. Households, 2001
http://www.eia.doe.gov/emeu/recs/recs2001/hc_pdf/housunits/hc1-4a_housingunits2001.pdf

Transportation Emissions Worksheet

Type (Residential) or Principal Activity (Commercial)	# people/ unit or building	# thousand sq feet/ unit or building	# people or employees/ thousand square feet	vehicle related GHG emissions (metric tonnes CO2e per person per year)	MTCO2e/ year/ unit	MTCO2e/ year/ thousand square feet	Average Building Life Span	Life span transportation related GHG emissions (MTCO2e/ per unit)	Life span transportation related GHG emissions (MTCO2e/ thousand sq feet)
Single-Family Home	2.8	2.53	1.1	4.9	13.7	5.4	57.9	792	313
Multi-Family Unit in Large Building	1.9	0.85	2.3	4.9	9.5	11.2	80.5	766	904
Multi-Family Unit in Small Building	1.9	1.39	1.4	4.9	9.5	6.8	80.5	766	550
Mobile Home	2.5	1.06	2.3	4.9	12.2	11.5	57.9	709	668
Education	30.0	25.6	1.2	4.9	147.8	5.8	62.5	9247	361
Food Sales	5.1	5.6	0.9	4.9	25.2	4.5	62.5	1579	282
Food Service	10.2	5.6	1.8	4.9	50.2	9.0	62.5	3141	561
Health Care Inpatient	455.5	241.4	1.9	4.9	2246.4	9.3	62.5	140506	582
Health Care Outpatient	19.3	10.4	1.9	4.9	95.0	9.1	62.5	5941	571
Lodging	13.6	35.8	0.4	4.9	67.1	1.9	62.5	4194	117
Retail (Other Than Mall)	7.8	9.7	0.8	4.9	38.3	3.9	62.5	2394	247
Office	28.2	14.8	1.9	4.9	139.0	9.4	62.5	8696	588
Public Assembly	6.9	14.2	0.5	4.9	34.2	2.4	62.5	2137	150
Public Order and Safety	18.8	15.5	1.2	4.9	92.7	6.0	62.5	5796	374
Religious Worship	4.2	10.1	0.4	4.9	20.8	2.1	62.5	1298	129
Service	5.6	6.5	0.9	4.9	27.6	4.3	62.5	1729	266
Warehouse and Storage	9.9	16.9	0.6	4.9	49.0	2.9	62.5	3067	181
Other	18.3	21.9	0.8	4.9	90.0	4.1	62.5	5630	257
Vacant	2.1	14.1	0.2	4.9	10.5	0.7	62.5	657	47

Sources

All data in black text — King County, DNRP. Contact: Matt Kuharic, matt.kuharic@kingcounty.gov

people/ unit

Estimating Household Size for Use in Population Estimates (WA state, 2000 average)
Washington State Office of Financial Management
Kimpel, T. and Lowe, T. Research Brief No. 47. August 2007
http://www.ofm.wa.gov/researchbriefs/brief047.pdf
Note: This analysis combines Multi Unit Structures in both large and small units into one category;
the average is used in this case although there is likely a difference

Residential floorspace per unit

2001 Residential Energy Consumption Survey (National Average, 2001)
Square footage measurements and comparisons
http://www.eia.doe.gov/emeu/recs/sqft-measure.html

employees/thousand square feet

Commercial Buildings Energy Consumption Survey commercial energy uses and costs (National Median, 2003)
Table B2 Totals and Medians of Floorspace, Number of Workers, and Hours of Operation for Non-Mall Buildings, 2003
http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set1/2003excel/b2.xls

Note: Data for # employees/thousand square feet is presented by CBECS as square feet/employee.
In this analysis employees/thousand square feet is calculated by taking the inverse of the CBECS number and multiplying by 1000.

vehicle related GHG emissions

Estimate calculated as follows (Washington state, 2006)_

56,531,930,000	2006 Annual WA State Vehicle Miles Traveled	
		Data was daily VMT. Annual VMT was 365*daily VMT.
		http://www.wsdot.wa.gov/mapsdata/tdo/annualmileage.htm
6,395,798	2006 WA state population	
		http://quickfacts.census.gov/qfd/states/53000.html
8839	vehicle miles per person per year	
0.0506	gallon gasoline/mile	
		This is the weighted national average fuel efficiency for all cars and 2 axle, 4 wheel light trucks in 2005. This includes pickup trucks, vans and SUVs. The 0.051 gallons/mile used here is the inverse of the more commonly known term “miles/per gallon” (which is 19.75 for these cars and light trucks).
		Transportation Energy Data Book. 26th Edition. 2006. Chapter 4: Light Vehicles and Characteristics. Calculations based on weighted average MPG efficiency of cars and light trucks.
		http://cta.ornl.gov/data/tedb26/Edition26_Chapter04.pdf
		Note: This report states that in 2005, 92.3% of all highway VMT were driven by the above described vehicles.
		http://cta.ornl.gov/data/tedb26/Spreadsheets/Table3_04.xls
24.3	lbs CO2e/gallon gasoline	
		The CO2 emissions estimates for gasoline and diesel include the extraction, transport, and refinement of petroleum as well as their combustion.
		Life-Cycle CO2 Emissions for Various New Vehicles. RENew Northfield.
		Available: http://renewnorthfield.org/wpcontent/uploads/2006/04/CO2%20emissions.pdf
		Note: This is a conservative estimate of emissions by fuel consumption because diesel fuel,
2205		with a emissions factor of 26.55 lbs CO2e/gallon was not estimated.
4.93	lbs/metric tonne	
	vehicle related GHG emissions (metric tonnes CO2e per person per year)	

average lief span of buildings, estimated by replacement time method — See Energy Emissions Worksheet for Calculations

Commercial floorspace per unit — EIA, 2003 Commercial Buildings Energy Consumption Survey (National Average, 2003)
Table C3. Consumption and Gross Energy Intensity for Sum of Major Fuels for Non-Mall Buildings, 2003
http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set9/2003excel/c3.xls

Attachment C

Transportation Assessment

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for the

King County

Youth Services Center
Courthouse Replacement

Transportation Engineering NorthWest **Memorandum**

DATE: May 13, 2010

TO: Terry McCann
Blumen Consulting Group, Inc.

FROM: Chris Forster, P.E.
Transportation Engineering Northwest

RE: King County Youth Services Center Courthouse Replacement
Revised Preliminary Transportation Assessment
TENW Project No. 4396

This memorandum provides a preliminary transportation assessment for the proposed King County Youth Services Center (KCYSC) Courthouse Replacement project. This memo is a revision to our previous memo dated April 9, 2010 to address changes in the project phasing as determined by King County. The following items are included in our assessment:

- Project Description
- Trip Generation
- Preliminary Parking Demand Assessment
- Outline of next steps in the City of Seattle's Master Use Permit (MUP) application process

Project Description

The KCYSC is located on roughly 9-acres in Seattle's Central Area Neighborhood and is bounded by E. Remington Court on the north, 12th Avenue on the west, E. Spruce Street on the South, and 14th Avenue on the east. The site consists of three main buildings:

1. Alder Tower – Contains 7 existing courtrooms for juvenile law and associated administrative offices.
2. Alder Wing – Contains staff offices, records storage, and the Alder Academy (a school for troubled youth), which includes several classrooms and a gymnasium.
3. Youth Detention Facility – Houses youth in short-term custody and youth detention support services, and a school for detained youths.

Currently, vehicular access to the site is provided by three driveways on 12th Avenue and one driveway on E. Remington Court.

As we understand, the proposed project includes the phased development of a new courthouse of approximately 256,600 sq.ft. and structured parking. The existing

courthouse (referred to as Alder Tower) and an ancillary structure (Alder Wing) would be demolished (approximately 95,000 sq.ft.) as part of the phased development, and the youth detention facility (103,000 sq. ft.) would remain unchanged. For Phase I (estimated year 2015), the new courthouse building would accommodate the existing uses currently housed in Alder Tower and Alder Wing, 3 additional juvenile law courtrooms, and administrative space to accommodate expanded juvenile court activities. Therefore, the total number of courtrooms with Phase I assumed for this analysis is 10 courtrooms. For Phase II (estimated year 2032), 7 additional courtrooms (6 existing family law courts that are currently housed offsite plus 1 additional family law court) would be added to the building (for a total of up to 17 courtrooms assumed in this analysis).

A portion of the existing site is also planned for on-site mixed use "co-development". This aspect of the project would be completed separately from the courthouse replacement and would likely entail sale of this portion of the site to a developer. This transportation assessment does not address the trip generation and parking associated with this aspect of the redevelopment.

Preliminary plans show vehicular access to the future development would be provided by new driveways on 12th Avenue, E. Remington Court, and 14th Avenue. Exact driveway locations would be determined during the future entitlement/permitting process.

Trip Generation

The weekday PM peak hour trip generation associated with the proposed KCYSC Courthouse Replacement project was estimated based on a derived trip generation rate per employee. Daily trips were estimated using a K-factor (ratio of PM to daily trips).

The PM peak hour trip generation rate was determined based on weekday PM peak hour traffic counts conducted at the four existing site driveways on Thursday, March 25, 2010 (see **Attachment A**). These traffic volumes were then factored up to account for 7 percent of the vehicular traffic parking offsite based on survey data conducted by The Gilmore Research Group (see **Attachment B**). Accounting for offsite parking, this results in an existing PM peak hour trip generation estimate of 135 trips. Based on an existing first shift (day-shift) employment count of 308 employees, TENW derived a trip rate of 0.44 weekday PM peak hour trips per employee associated with the existing KCYSC site.

A review of the survey data by Gilmore Research Group also indicated that weekday daily and PM peak hour trip generation on a Thursday was likely higher than the weekday average trip generation based on counts of people entering and exiting the building over a 5-day study period. As a conservative measure, TENW did not adjust the PM peak hour trip generation rate measured on a Thursday downward to account for weekday fluctuations.

The PM peak hour trip generation estimate for Phase I assumed a total day-shift employee count of 353 employees (308 existing plus 45 additional for Phase I). The estimate for Phase II assumed a total day-shift employee count of 510 employees (353 with Phase I plus 157 additional for Phase II).

The daily trip generation estimate for the site was determined using a K factor (ratio of PM peak hour trips to daily trips). The K factor was derived based on the number of people entering and exiting the existing facility throughout an entire day as documented in the parking assessment found later in this report. Based on this data, a K factor of 0.08 was calculated (number of people entering/exiting between 4-5 PM divided by the total for the entire day).

The following **Table 1** summarizes the net new weekday PM peak hour and daily project trips estimated for Phase I and Phase II of the proposed project.

Table 1
KCYSC Courthouse Replacement
PM Peak Hour and Daily Trip Generation Summary

			PM Trips Generated			Daily Trips [3]
Land Use	**Employees[1]**	**Trip Rate [2]**	**In**	**Out**	**Total**	**Total**
Existing Site[4]	308	0.44	27	108	135	1,688
Total With Phase I	353	0.44	31	124	155	1,938
	Net New Trips for Phase I =		**4**	**16**	**20**	**250**
Total With Phase II	510	0.44	45	179	224	2,800
	Net New Trips for Phase II =		**14**	**55**	**69**	**862**

Notes:
1. Number of employees provided by King County. Includes 1st shift (day shift) employment only.
2. Trip Rate = PM peak hour vehicle trips per employee derived from existing counts and employment.
3. Daily trips estimated based on K factor (ratio of PM peak hour to daily trips) = 0.08.
4. Existing site trips based on 3/25/10 driveway counts factored to account for 7 percent of vehicles parking off-site.

As shown in **Table 1**, Phase I of the project is estimated to generate 20 net new weekday PM peak hour trips and 250 net new weekday daily trips (calculated by taking total trips with Phase I and subtracting the existing site trips). Phase II of the project is estimated to generate 69 net new weekday PM peak hour trips and 862 net new weekday daily trips (calculated by taking total trips with Phase II and subtracting the total trips with Phase I). The total gross trip generation from the site with Phase I (including existing traffic) is estimated at 155 weekday PM peak hour trips and 1,938 weekday daily trips. The total gross trip generation from the site with Phase II (including existing and Phase I traffic) is estimated at 224 weekday PM peak hour trips and 2,800 weekday daily trips.

Preliminary Parking Demand Assessment

The peak parking demand for the site with the proposed redevelopment was determined based on a calibrated parking demand rate determined specifically for this site and the daily fluctuation in building occupants for the site. Parking demand throughout each workday was assumed to fluctuate in direct relationship with net building occupancy (occupancy data as provided by Gilmore Research Group in **Attachment B**).

Calibration was performed to estimate the number of vehicles parked at the site per building occupant. Existing counts of occupied parking stalls on-site were conducted on Thursday, March 25, 2010 for the purposes of determining a calibration factor associated with the net building occupancy data collected by Gilmore on Thursday February 25, 2010. Based on the Gilmore survey, the on-site parking counts were increased to account for 7 percent of the vehicles parking off-site prior to calibration. The results of the existing parking counts at the site are summarized in **Attachment C**.

Building occupancy fluctuations (and therefore parking fluctuations) throughout a typical weekday are affected by 3 main factors: first shift (day shift) employment, AM court participants/spectators, and PM court participants/spectators. Each factor was assumed to be the primary influence on parking demand during a specific part of the day. For example, the number of AM court participants/spectators is likely the primary influence on parking demand between 8:45 AM and noon. For each factor, King County provided current estimates and future estimates with Phase I and Phase II of the proposed project. The participant/spectator and employee headcount data is summarized in **Attachment D**.

The parking demand estimates for Phases I and II account for the forecasted increases in employment and court activities by factoring the inbound and outbound traffic at the door of the facility by the relative increases for each factor. Then, the resulting net occupancy is converted to parking demand using the derived calibration factor.

Table 2 summarizes the preliminary existing and future Phase I and Phase II estimated peak parking demand for each day of the week, and identifies the weekday maximum. Detailed parking demand worksheets for Phase I are included in **Attachment E**. Detailed parking demand worksheets for Phase II are included in **Attachment F**.

Table 2
King County Youth Services Center
Preliminary Peak Parking Demand Summary

Day of Week	Estimated Existing Peak Demand[1]	Estimated Future Peak Demand with Phase I	Estimated Future Peak Demand with Phase II
Monday	291	347	503
Tuesday	336	407	589
Wednesday	337	398	573
Thursday	312	379	566
Friday	327	401	605
Weekday Maximum	**337**	**407**	**605**
Preliminary Recommended Parking Supply with Redevelopment			
Minimum [2]		**428**	**637**
Recommended [3]		**452**	**672**

Notes:
1. Existing peak demand includes on-site parking demand plus estimated demand off-site (e.g. street parking).
2. Assumes 5% Practical Capacity.
3. Assumes 10% Practical Capacity.

As shown in **Table 2**, the weekday maximum peak parking demand in the future with Phase I is expected to occur Tuesday mornings with approximately 407 parking stalls occupied. The weekday maximum peak parking demand in the future with Phase II is expected to occur Friday mornings with approximately 605 parking stalls occupied.

To account for "practical capacity" (also known as "effective parking supply"), we recommend providing a parking supply that exceeds the peak parking demand. Practical capacity is the level of parking occupancy at which users perceive parking is full. If you approach 100% occupancy, users will have difficulty finding the last few spaces creating inefficiency in circulation and driver frustration. Providing excess parking to account for this is recommended. In addition it also provides for vacancies created by setting aside some spaces for reserved stalls (such as ADA stalls, service stalls, etc.). The Institute of Transportation Engineers (ITE) and the Urban Land Institute (ULI) recommend adding between 5 and 15 percent additional parking spaces above peak demand to account for practical capacity. For this project, TENW would recommend 10 percent additional spaces, but no less than 5 percent additional spaces.

Based on our parking analysis, we understand that King County is currently proposing to construct 440 parking stalls with Phase I (assumes 7.5% practical capacity), and 637 parking stalls with Phase II (assumes 5% practical capacity).

Traffic Analysis for City of Seattle Master Use Permit (MUP) Application

It is our understanding that once a specific design alternative has been selected by the King County Council, the KCYSC Courthouse Replacement would proceed through the City of Seattle standard development permit process. Based on our experience in Seattle, the following provides an outline of the traffic analysis we would expect the City to require associated with the Master Use Permit (MUP) application.

- Document and confirm trip generation estimates with the City.
- Assign the net new weekday PM peak hour project trips onto the street system.
- Assess level of service (LOS) at study intersections and project driveways with and without the proposed project. Study intersections would need to be confirmed by the City of Seattle staff.
- Assess the impacts of the proposed project on existing pedestrian and transit facilities.
- Document the parking demand created by the completed project and compare to the proposed on-site parking supply.
- Assess transportation concurrency.
- Determine mitigation (if needed).

If you have any questions regarding the information presented in this memorandum, please call me at 206-498-5897 or email at forster@tenw.com.

cc: Jeff Haynie, P.E., Principal, TENW

ATTACHMENT A

Existing PM Peak Period Traffic Counts
at Site Driveway

King County Youth Services Center
Existing Trip Generation (PM Peak)
TENW Project No. 4396

King County Youth Services Center
Existing PM Peak Hour Trip Generation Summary

Thursday, March 25, 2010

	12th Ave (South Driveway)				12th Ave (Middle Driveway)				12th Ave (North Driveway)				Remington Court Driveway							Hourly Total			
	Entering		Exiting		Entering		Exiting		Entering		Exiting		Entering			Exiting							
Time Period	NB Right	SB Left	WB Left	WB Right	NB Right	SB Left	WB Left	WB Right	NB Right	SB Left	WB Left	WB Right	EB Right	WB Left	SB Thru	NB Left	NB Thru	NB Right	**TOTAL**	Entering	Exiting	Total	
4:00-4:15 PM	0	0	2	0	0	2	0	2	0	0	4	9	0	0	0	0	3	0	**22**	20	100	120	4:00 - 5:00
4:15-4:30 PM	0	1	0	1	3	4	7	8	1	0	2	4	0	0	0	0	1	1	**33**	**25**	**101**	**126**	**4:15 - 5:15 PM Peak**
4:30-4:45 PM	0	0	0	0	4	0	4	3	0	0	13	8	0	0	1	0	2	1	**36**	19	86	105	4:30 - 5:30
4:45-5:00 PM	0	0	0	1	3	1	9	2	0	0	2	2	0	0	0	0	5	4	**29**	16	63	79	4:45 - 5:45
5:00-5:15 PM	0	0	0	4	2	5	3	4	0	0	1	4	0	0	0	0	4	1	**28**	12	48	60	5:00 - 6:00
5:15-5:30 PM	1	0	0	0	0	1	1	4	0	0	1	0	1	0	0	0	2	1	**12**				
5:30-5:45 PM	0	0	0	1	2	0	4	1	0	0	0	1	0	0	0	0	0	1	**10**				
5:45-6:00 PM	0	0	0	0	0	0	5	2	0	0	0	2	0	0	0	0	0	1	**10**				
Peak Hr Volume	**0**	**1**	**0**	**6**	**12**	**10**	**23**	**17**	**1**	**0**	**18**	**18**	**0**	**0**	**1**	**0**	**12**	**7**	**126**	**4:15 - 5:15 PM**			

Factored to account for vehicles parking off-site			**7%**
Hourly Total			
Entering	Exiting	Total	
27	**108**	**135**	**4:15 - 5:15 PM Peak**

ATTACHMENT B

Gilmore Research Group Survey

THE GILMORE RESEARCH GROUP
SIXTY YEARS OF STRAIGHT ANSWERS

King County Juvenile Courthouse Transportation Survey

Prepared for:

Facilities Management Division
Capital Planning & Development Section

Seattle, WA

March 3, 2010

2801 4th Ave, Suite 800 ■ Seattle, WA 98121
Voice: (206) 726-5555 ■ Fax: (206) 219-1944 ■ Email: info@gilmore-research.com

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METHODOLOGY

King County contracted with Gilmore Research to conduct a count of people entering and exiting the King County Juvenile Courthouse and to collect information about their mode of transportation, including if they parked on or off site if they drove.

Intercepts were conducted from 7:30AM to 5:00PM on February 23-26, 2010 and March 1, 2010.

One staff person was stationed by the stairwell inside the main entrance to count the people who enter the Building. A second staff person stood inside the exit to count each person who exited the building. They tallied the counts in 15 minute increments.

The third staff person was stationed at the entrance to the waiting area to interview people as they exited screening and asked them to complete our brief survey. They did not approach anyone who appeared to be under 10 years of age. If they agreed, the interviewer handed them a survey and pencil and collected the completed surveys. After the first day of intercepting it was determined that it was more effective to have the interviewer personally interview the respondent when possible. Also starting on the second day of interviewing the outgoing counter started interviewing people as well in order to catch more respondents. The outgoing counter only interviewed when the outgoing count was low enough to enable the interceptor to do both.

Sample Disposition

The following table shows the number of completed surveys, the number of surveys handed out, the number of people who refused and those who did not complete the survey due to a language barrier, were under 10 years of age, had already completed the survey the same day or for some other reason such as mental health barrier and hearing impairment.

SAMPLE DISPOSITION						
	Tuesday 2/23/10	**Wednesday 2/24/10**	**Thursday 2/25/10**	**Friday 2/26/10**	**Monday 3/1/10**	**Total**
Number surveys distributed	422	645	620	620	571	2,878
Refusals	214	67	37	22	30	370
Unable to complete-Language Barrier	16	5	0	1	0	22
Unable to complete-Under 10 years of age	10	10	1	4	5	30
Unable to complete-- other reason	5	1	0	0	0	6
Already completed survey today	36	374	384	273	296	1,363
Completed Surveys	382	637	618	593	571	2,801
Number of people approached	703	1,102	1,042	920	902	4,669

Entry, Exit and Net Occupancy Tallies															
Time Block	Tuesday February 23, 2010			Wednesday February 24, 2010			Thursday February 25, 2010			Friday February 26, 2010			Monday March 1, 2010		
	Entries	Exits	Net Occu - pancy	Entries	Exits	Net Occu- pancy	Entries	Exits	Net Occu- pancy	Entries	Exits	Net Occu- pancy	Entries	Exits	Net Occu- pancy
7:30-7:45	17	3	14	17	5	12	24	1	23	12	5	7	18	4	14
7:45-8:00	33	6	41	20	1	31	26	3	46	23	2	28	25	2	37
8:00-8:15	52	5	88	64	2	93	51	3	94	65	2	91	58	7	88
8:15-8:30	69	7	150	86	8	171	71	13	152	81	3	169	79	10	157
8:30-8:45	80	6	224	87	4	254	78	5	225	64	4	229	66	3	220
8:45-9:00	61	6	279	49	7	296	54	3	276	42	11	260	38	6	252
9:00-9:15	47	11	315	38	9	325	38	18	296	39	13	286	32	9	275
9:15-9:30	38	22	331	31	29	327	27	17	306	43	26	303	26	25	276
9:30-9:45	14	20	325	23	25	325	20	33	293	47	34	316	25	17	284
9:45-10:00	23	23	325	28	39	314	22	16	299	18	12	322	27	34	277
10:00-10:15	17	35	307	24	29	309	21	27	293	20	24	318	15	33	259
10:15-10:30	15	30	292	24	30	303	22	28	287	13	39	292	15	27	247
10:30-10:45	19	29	282	21	34	290	9	25	271	12	28	276	22	20	249

Entry, Exit and Net Occupancy Tallies															
Time Block	Tuesday February 23, 2010			Wednesday February 24, 2010			Thursday February 25, 2010			Friday February 26, 2010			Monday March 1, 2010		
	Entries	Exits	Net Occu - pancy	Entries	Exits	Net Occu- pancy	Entries	Exits	Net Occu- pancy	Entries	Exits	Net Occu- pancy	Entries	Exits	Net Occu- pancy
10:45 -11:00	18	43	257	19	15	294	23	28	266	26	34	268	15	17	247
11:00 – 11:15	25	21	261	20	32	282	17	22	261	16	44	240	13	24	236
11:15 – 11:30	21	25	257	16	34	264	13	31	243	9	34	215	17	20	233
11:30 – 11:45	11	35	233	15	32	247	13	33	223	11	27	199	10	31	212
11:45 – 12:00	12	39	206	22	26	243	9	38	194	20	33	186	11	36	187
12:00 – 12:15	20	51	175	16	76	183	26	59	161	22	49	159	7	43	151
12:15 – 12:30	13	43	145	23	43	163	31	30	162	25	34	150	19	23	147
12:30 – 12:45	13	7	151	39	16	186	44	25	181	26	23	153	30	17	160
12:45 – 1:00	25	15	161	54	18	222	39	12	208	27	10	170	47	25	182
1:00 – 1:15	57	21	197	72	19	275	59	24	243	39	26	183	59	33	208
1:15 – 1:30	37	13	221	52	17	310	56	22	277	40	14	209	46	11	243
1:30 – 1:45	40	8	253	19	15	314	30	12	295	24	24	209	23	11	255
1:45 – 2:00	19	9	263	19	23	310	20	25	290	22	12	219	12	24	243

Entry, Exit and Net Occupancy Tallies

Time Block	Tuesday February 23, 2010			Wednesday February 24, 2010			Thursday February 25, 2010			Friday February 26, 2010			Monday March 1, 2010		
	Entries	Exits	Net Occu - pancy	Entries	Exits	Net Occu- pancy	Entries	Exits	Net Occu- pancy	Entries	Exits	Net Occu- pancy	Entries	Exits	Net Occu- pancy
2:00 – 2:15	12	19	256	22	25	307	19	20	289	17	30	206	12	18	237
2:15 – 2:30	17	18	255	30	47	290	17	31	275	12	22	196	13	40	210
2:30 – 2:45	21	40	236	28	53	265	18	36	257	12	36	172	18	24	204
2:45 – 3:00	31	42	225	48	35	278	41	21	277	29	15	186	37	20	221
3:00 – 3:15	22	45	202	13	64	227	11	39	249	9	34	161	28	56	193
3:15 – 3:30	11	30	183	28	22	233	32	19	262	12	30	143	10	11	192
3:30 – 3:45	10	35	158	15	35	213	13	44	231	8	14	137	7	25	174
3:45 – 4:00	5	12	151	16	30	199	16	38	209	6	17	126	11	33	152
4:00 – 4:15	7	33	125	12	57	154	17	48	178	5	21	110	9	23	138
4:15 – 4:30	9	15	119	3	35	122	5	32	151	13	24	99	6	29	115
4:30 – 4:45	9	45	83	21	28	115	13	36	128	6	25	80	7	31	91
4:45 – 5:00	1	0	84	12	39	88	2	24	106	5	31	54	4	18	77
TOTALS:	951	867		1146	1058		1047	941		920	866		917	840	

SURVEY RESPONSES:

The table below shows the survey responses by day.

How did you get here today? Did you...

	Tuesday 2/23/10	Wednesday 2/24/10	Thursday 2/25/10	Friday 2/26/10	Monday 3/1/10	Total
Ride the bus	48	85	94	79	70	376
Carpool	52 (# of occupants blank-2)	128(# of occupants blank-4)	79 (# of occupants blank-2)	84 (# of occupants blank-2)	75 (# of occupants blank-1)	418 (# of occupants blank-11
2 people in carpool	36	75	44	53	33	241
3 people in carpool	10	28	20	18	26	102
4 people in carpool	3	20	13	10	10	56
5 people in carpool	1	1	0	1	5	8
Drive onsite parking lot	188(#who did not specify site-10)	299 (# who did not specify site-2)	353(# who did not specify site-1)	333# who did not specify site-2)	338 (# who did not specify site-2)	1511(# who did not specify site-17)
Drive Offsite street parking	38	64	24	35	25	186
Bicycle	1	3	1	1	1	7
Got a ride	21	15	19	26	10	91
Taxi	0	5	4	5	4	18
Walked	14	25	29	24	41	133
Multi-Mode (Public Transit)	7	8	10	3	2	30
Some other way – including responses such as train, ferry, and sounder	3	3	4	1	3	14

Drivers who were part of a carpool were recorded as drivers only and were asked to indicate where they parked. Carpool passengers were counted as carpools only and asked to record number of carpoolers in their car.

SURVEY FORM

King County

TRANSPORTATION SURVEY

How did you get here today?
Did you...

- ☐ Ride the bus
- ☐ Carpool
  If you carpooled, how many people in your car? _____
- ☐ Bicycle
- ☐ Drive
  If you drove, where did you park? ☐ Onsite parking lot ☐ Offsite street parking
- ☐ Got a ride
- ☐ Taxi
- ☐ Some other way

ATTACHMENT C

Existing Counts of Occupied Parking Stalls

King County Youth Service Center
Parking Utilization Study

Date: Thursday, March 25, 2010

AM PEAK PERIOD PARKING DEMAND

Parking Area	Type of Stall	*Parking Supply*	Number of Parked Vehicles Onsite										**Maximum**	**Maximum % Utilization**
			8:45 AM	9:00 AM	9:15 AM	9:30 AM	9:45 AM	10:00 AM	10:15 AM	10:30 AM	10:45 AM	11:00 AM		
South Staff (Gated)	Staff Reserved	*19*	14	14	13	13	11	11	11	9	8	8	14	74%
Main Staff (Gated)	Staff Reserved	*15*	9	9	9	11	12	12	11	10	10	11	12	80%
	Staff Carpool	*26*	26	26	26	26	26	26	26	26	26	25	26	100%
	Staff General	*156*	121	129	132	135	135	135	137	138	139	138	139	89%
	Subtotal Staff (Gated) Parking	***216***	**170**	**178**	**180**	**185**	**184**	**184**	**185**	**183**	**183**	**182**	**185**	**86%**
Loading Dock[1]	Loading/Service Vehicles	*12*	4	4	7	6	7	6	7	6	7	7	7	58%
	Total Staff/Service + Loading Dock Parking	***228***	**174**	**182**	**187**	**191**	**191**	**190**	**192**	**189**	**190**	**189**	**192**	**84%**
General Public	Visitor	*72*	75	75	74	72	73	75	72	74	70	65	75	104%
	Police/Service/Transport	*3*	2	4	3	3	2	2	2	1	2	2	4	133%
	Disabled	*13*	11	9	11	12	12	12	11	12	12	11	12	92%
	Motorcycle	*1*	2	2	2	2	2	2	2	1	1	1	2	n/a
	Total Public Parking	***89***	**90**	**90**	**90**	**89**	**89**	**91**	**87**	**88**	**85**	**79**	**91**	**102%**
Total On-Site Parking Demand		***317***	**264**	**272**	**277**	**280**	**280**	**281**	**279**	**277**	**275**	**268**	**281**	**89%**

PM PEAK PERIOD PARKING DEMAND

Parking Area	Type of Stall	*Parking Supply*	Number of Parked Vehicles Onsite										**Maximum**	**Maximum % Utilization**
			1:00 PM	1:15 PM	1:30 PM	1:45 PM	2:00 PM	2:15 PM	2:30 PM	2:45 PM	3:00 PM	3:15 PM		
South Staff (Gated)	Staff Reserved	*19*	7	7	7	10	10	11	10	11	11	11	11	58%
Main Staff (Gated)	Staff Reserved	*15*	11	10	10	10	12	12	12	10	9	9	12	80%
	Staff Carpool	*26*	24	24	26	26	26	26	25	25	25	22	26	100%
	Staff General	*156*	126	127	126	130	133	135	131	138	130	123	138	88%
	Subtotal Staff (Gated) Parking	***216***	**168**	**168**	**169**	**176**	**181**	**184**	**178**	**184**	**175**	**165**	**184**	**85%**
Loading Dock[1]	Loading/Service Vehicles	*12*	8	8	8	9	8	8	8	8	7	7	9	75%
	Total Staff/Service + Loading Dock Parking	***228***	**176**	**176**	**177**	**185**	**189**	**192**	**186**	**192**	**182**	**172**	**192**	**84%**
General Public	Visitor	*72*	54	69	72	71	70	68	64	69	63	65	72	100%
	Police/Service/Transport	*3*	2	2	2	2	2	2	2	3	2	2	3	100%
	Disabled	*13*	13	13	13	12	12	12	12	13	13	12	13	100%
	Motorcycle	*1*	1	1	1	1	1	1	1	0	0	0	1	n/a
	Total Public Parking	***89***	**70**	**85**	**88**	**86**	**85**	**83**	**79**	**85**	**78**	**79**	**88**	**99%**
Total On-Site Parking Demand		***317***	**246**	**261**	**265**	**271**	**274**	**275**	**265**	**277**	**260**	**251**	**277**	**87%**

Note: [1]Parking supply at the loading dock is not striped clearly - estimated at 12 vehicles (9 service/truck delivery stalls + 3 stalls behind security gate)

ATTACHMENT D

Summary of Participant/Spectator Forecasts and Employee Headcount for Phases I and II

EXISTING COURTS SUMMARY	Monday		Tuesday		Wednesday		Thursday		Friday		FTE Staff
PARTICIPANTS/SPECTATORS		Total		Total		Total		Total		Total	1st Shift
Juvenile - 7 courts	AM										308
AM Total		304		336		302		174		381	
AM Offender -4 cts		176		198		137		104		176	
AM Truancy -1 ct		63		73		100		5		0	
AM Dependency - 2 ct		65		65		65		65		205	
All Day Dependency - 2 cts		18		18		18		18			
AM Total with All Day		322		354		320		192		381	
	PM										
PM Total		397		266		367		371		362	
PM Offender -4 cts		112		88		145		88		112	
PM Truancy -1 ct		63		106		0		65		0	
PM Dependency - 2 ct		72		72		72		68		100	
Case Setting (no chg)		150		0		150		150		150	
All Day Dependency - 2 cts		18		18		18		18			
PM Total with All Day		415		284		385		389		362	
Family - 6 courts	AM										139
AM Total		147		147		105		105		331	
All Day Total		52		52		52		52			
AM Total with All Day		199		199		157		157		331	
	PM										
All Day Total		52		52		52		52			
PM Total		152		42		164		164		195	
PM Total with All Day		204		94		216		216		195	

ADDITIONAL FOR PHASE I - 10 Courts	AM										Additional FTE Staff
+2 Offender Court		88		99		69		52		88	30
+1 Dependency Court		42		42		42		42		103	15
Total Additional with Phase I		130		141		111		94		191	45
	PM										
+2 Offender Court		56		44		73		44		56	
+1 Dependency Court		45		45		45		43		50	
Total Additional with Phase I		101		89		118		87		106	

EXISTING COURTS SUMMARY	Monday		Tuesday		Wednesday		Thursday		Friday		FTE Staff
PARTICIPANTS/SPECTATORS		Total		Total		Total		Total		Total	1st Shift
Juvenile - 7 courts	AM										308
AM Total		304		336		302		174		381	
AM Offender -4 cts		176		198		137		104		176	
AM Truancy -1 ct		63		73		100		5		0	
AM Dependency - 2 ct		65		65		65		65		205	
All Day Dependency - 2 cts		18		18		18		18			
AM Total with All Day		322		354		320		192		381	
	PM										
PM Total		397		266		367		371		362	
PM Offender -4 cts		112		88		145		88		112	
PM Truancy -1 ct		63		106		0		65		0	
PM Dependency - 2 ct		72		72		72		68		100	
Case Setting (no chg)		150		0		150		150		150	
All Day Dependency - 2 cts		18		18		18		18			
PM Total with All Day		415		284		385		389		362	
Family - 6 courts	AM										139
AM Total		147		147		105		105		331	
All Day Total		52		52		52		52			
AM Total with All Day		199		199		157		157		331	
	PM										
All Day Total		52		52		52		52			
PM Total		152		42		164		164		195	
PM Total with All Day		204		94		216		216		195	

ADDITIONAL FOR PHASE II - 17 Courts		AM								Additional FTE Staff
6 Family Ct AM Total with All Day		199		199		157		157		331	139
+2 Offender Court		88		99		69		52		88	30
+1 Dependency Court		42		42		42		42		103	15
+1 Family Court		33		33		26		26		55	18
Total Additional with Phase II		362		373		294		277		577	202
		PM									
6 Family Ct PM Total with All Day		204		94		216		216		195	
+2 Offender Court		56		44		73		44		56	
+1 Dependency Court		45		45		45		43		50	
+1 Family Court		34		16		36		36		33	
Total Additional with Phase II		339		199		370		339		334	

ATTACHMENT E

Phase I Parking Demand Forecasts

KCYSC Peak Parking Demand Summary

Phase I (10 Juv. Courts: 7 Existing + 2 Offender + 1 Dependency + 0 Family

Day of Week	Estimated Existing Peak Demand	Estimated Future Peak Demand with Phase I
Monday	291	347
Tuesday	336	407
Wednesday	337	398
Thursday	312	379
Friday	327	401
Weekday Average	**321**	**386**
Weekday Maximum	**337**	**407**

Recommended Parking Supply with Phase I		
Est. Maximum Future Parking Demand =	**407**	
Supply Assuming 5% Practical Capacity =	**428**	**Recommended Minimum**
Supply Assuming 10% Practical Capacity =	**452**	**Recommended Preferred**

Monday Parking Demand Estimates

Project Statistics for: Monday

EXISTING KCYSC	
AM Participants	322
PM Participants	415
1st Shift Employees	308
Totals	1045

+

PHASE I
130
101
45
276

=

FUTURE WITH PHASE I		% increase
AM Participants	452	40%
PM Participants	516	24%
1st Shift Employees	353	15%
Totals	1321	26%

Primary Influence	EXISTING Entry, Exit and Net Occupancy Tallies					Calibration Factor (parked vehicles per occupant) 0.777	Ratio of Entries/Exits to Primary Influence:	
	Overnight Occupancy 15	Monday 1-Mar-10						
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand		Entries	Exits
1st Shift Employees	before 7:30 AM (est)	90	15	90	70		29.3%	4.9%
1st Shift Employees	7:30-7:45	18	4	104	81		5.8%	1.3%
1st Shift Employees	7:45-8:00	25	2	127	99		8.1%	0.6%
1st Shift Employees	8:00-8:15	58	7	178	138		18.8%	2.3%
1st Shift Employees	8:15-8:30	79	10	247	192		25.6%	3.2%
1st Shift Employees	8:30-8:45	66	3	310	241		21.4%	1.0%
AM Participants	8:45-9:00	38	6	342	266		11.8%	1.9%
AM Participants	9:00-9:15	32	9	365	284		9.9%	2.8%
AM Participants	9:15-9:30	26	25	366	284		8.1%	7.8%
AM Participants	9:30-9:45	25	17	374	291		7.8%	5.3%
AM Participants	9:45-10:00	27	34	367	285		8.4%	10.6%
AM Participants	10:00-10:15	15	33	349	271		4.7%	10.2%
AM Participants	10:15-10:30	15	27	337	262		4.7%	8.4%
AM Participants	10:30-10:45	22	20	339	263		6.8%	6.2%
AM Participants	10:45 -11:00	15	17	337	262		4.7%	5.3%
AM Participants	11:00 – 11:15	13	24	326	253		4.0%	7.5%
AM Participants	11:15 – 11:30	17	20	323	251		5.3%	6.2%
AM Participants	11:30 – 11:45	10	31	302	235		3.1%	9.6%
AM Participants	11:45 – 12:00	11	36	277	215		3.4%	11.2%
Mix	12:00 – 12:15	7	43	241	187		0.7%	4.1%
Mix	12:15 – 12:30	19	23	237	184		1.8%	2.2%
Mix	12:30 – 12:45	30	17	250	194		2.9%	1.6%
Mix	12:45 – 1:00	47	25	272	211		4.5%	2.4%
PM Participants	1:00 – 1:15	59	33	298	232		14.2%	8.0%
PM Participants	1:15 – 1:30	46	11	333	259		11.1%	2.7%
PM Participants	1:30 – 1:45	23	11	345	268		5.5%	2.7%
PM Participants	1:45 – 2:00	12	24	333	259		2.9%	5.8%
PM Participants	2:00 – 2:15	12	18	327	254		2.9%	4.3%
PM Participants	2:15 – 2:30	13	40	300	233		3.1%	9.6%
PM Participants	2:30 – 2:45	18	24	294	229		4.3%	5.8%
PM Participants	2:45 – 3:00	37	20	311	242		8.9%	4.8%
PM Participants	3:00 – 3:15	28	56	283	220		6.7%	13.5%
PM Participants	3:15 – 3:30	10	11	282	219		2.4%	2.7%
PM Participants	3:30 – 3:45	7	25	264	205		1.7%	6.0%
1st Shift Employees	3:45 – 4:00	11	33	242	188		3.6%	10.7%
1st Shift Employees	4:00 – 4:15	9	23	228	177		2.9%	7.5%
1st Shift Employees	4:15 – 4:30	6	29	205	159		1.9%	9.4%
1st Shift Employees	4:30 – 4:45	7	31	181	141		2.3%	10.1%
1st Shift Employees	4:45 – 5:00	4	18	167	130		1.3%	5.8%
1st Shift Employees	After 5:00 PM (est)	15	167	15	12		4.9%	54.3%
	TOTALS:	1022	1022	MAX:	291			

Existing Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	336	41	employees
8:45-noon	266	299	AM participants
noon-1	103	108	mix
1-3:45 pm	265	273	PM participants
after 3:45	52	301	employees
All Day	1022	1022	Total

Primary Influence	FUTURE Entry, Exit and Net Occupancy Tallies					Calibration Factor (parked vehicles per occupant) 0.777
	Overnight Occupancy 15	Monday Future				
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand	
1st Shift Employees	before 7:30 AM (est)	103	15	103	80	
1st Shift Employees	7:30-7:45	21	5	119	92	
1st Shift Employees	7:45-8:00	29	2	146	113	
1st Shift Employees	8:00-8:15	66	8	204	159	
1st Shift Employees	8:15-8:30	91	11	284	221	
1st Shift Employees	8:30-8:45	76	3	357	277	
AM Participants	8:45-9:00	53	8	402	312	
AM Participants	9:00-9:15	45	13	434	337	
AM Participants	9:15-9:30	36	35	435	338	
AM Participants	9:30-9:45	35	24	446	347	
AM Participants	9:45-10:00	38	48	436	339	
AM Participants	10:00-10:15	21	46	411	319	
AM Participants	10:15-10:30	21	38	394	306	
AM Participants	10:30-10:45	31	28	397	308	
AM Participants	10:45 -11:00	21	24	394	306	
AM Participants	11:00 – 11:15	18	34	378	294	
AM Participants	11:15 – 11:30	24	28	374	291	
AM Participants	11:30 – 11:45	14	44	344	267	
AM Participants	11:45 – 12:00	15	51	308	239	
Mix	12:00 – 12:15	9	54	263	204	
Mix	12:15 – 12:30	24	29	258	200	
Mix	12:30 – 12:45	38	21	275	214	
Mix	12:45 – 1:00	59	32	302	235	
PM Participants	1:00 – 1:15	73	41	334	260	
PM Participants	1:15 – 1:30	57	14	377	293	
PM Participants	1:30 – 1:45	29	14	392	305	
PM Participants	1:45 – 2:00	15	30	377	293	
PM Participants	2:00 – 2:15	15	22	370	287	
PM Participants	2:15 – 2:30	16	50	336	261	
PM Participants	2:30 – 2:45	22	30	328	255	
PM Participants	2:45 – 3:00	46	25	349	271	
PM Participants	3:00 – 3:15	35	70	314	244	
PM Participants	3:15 – 3:30	12	14	312	242	
PM Participants	3:30 – 3:45	9	31	290	225	
1st Shift Employees	3:45 – 4:00	13	38	265	206	
1st Shift Employees	4:00 – 4:15	10	26	249	193	
1st Shift Employees	4:15 – 4:30	7	33	223	173	
1st Shift Employees	4:30 – 4:45	8	36	195	152	
1st Shift Employees	4:45 – 5:00	5	21	179	139	
1st Shift Employees	After 5:00 PM (est)	15	179	15	12	
	TOTALS:	1275	1275	MAX:	347	

Future Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	386	44	employees
8:45-noon	372	421	AM participants
noon-1	130	136	mix
1-3:45 pm	329	341	PM participants
after 3:45	58	333	employees
All Day	1275	1275	Total

Tuesday Parking Demand Estimates

Project Statistics for: Tuesday

EXISTING KCYSC		+	PHASE I	=	FUTURE WITH PHASE I		% increase
AM Participants	354		141		AM Participants	495	40%
PM Participants	284		89		PM Participants	373	31%
1st Shift Employees	308		45		1st Shift Employees	353	15%
Totals	946		275		Totals	1221	29%

Primary Influence	EXISTING Entry, Exit and Net Occupancy Tallies				Calibration Factor (parked vehicles per occupant) 0.777	Ratio of Entries/Exits to Primary Influence:	
	Overnight Occupancy 15	Tuesday 23-Feb-10					
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand	Entries	Exits
1st Shift Employees	before 7:30 AM (est)	102	15	102	79	33.0%	4.9%
	7:30-7:45	17	3	116	90	5.5%	1.0%
	7:45-8:00	33	6	143	111	10.7%	1.9%
	8:00-8:15	52	5	190	147	16.9%	1.6%
	8:15-8:30	69	7	252	196	22.4%	2.3%
	8:30-8:45	80	6	326	253	26.0%	1.9%
AM Participants	8:45-9:00	61	6	381	296	17.2%	1.7%
	9:00-9:15	47	11	417	324	13.3%	3.1%
	9:15-9:30	38	22	433	336	10.7%	6.2%
	9:30-9:45	14	20	427	332	4.0%	5.6%
	9:45-10:00	23	23	427	332	6.5%	6.5%
	10:00-10:15	17	35	409	318	4.8%	9.9%
	10:15-10:30	15	30	394	306	4.2%	8.5%
	10:30-10:45	19	29	384	298	5.4%	8.2%
	10:45 -11:00	18	43	359	279	5.1%	12.1%
	11:00 – 11:15	25	21	363	282	7.1%	5.9%
	11:15 – 11:30	21	25	359	279	5.9%	7.1%
	11:30 – 11:45	11	35	335	260	3.1%	9.9%
	11:45 – 12:00	12	39	308	239	3.4%	11.0%
Mix	12:00 – 12:15	20	51	277	215	2.1%	5.4%
	12:15 – 12:30	13	43	247	192	1.4%	4.5%
	12:30 – 12:45	13	7	253	196	1.4%	0.7%
	12:45 – 1:00	25	15	263	204	2.6%	1.6%
PM Participants	1:00 – 1:15	57	21	299	232	20.1%	7.4%
	1:15 – 1:30	37	13	323	251	13.0%	4.6%
	1:30 – 1:45	40	8	355	276	14.1%	2.8%
	1:45 – 2:00	19	9	365	283	6.7%	3.2%
	2:00 – 2:15	12	19	358	278	4.2%	6.7%
	2:15 – 2:30	17	18	357	277	6.0%	6.3%
	2:30 – 2:45	21	40	338	262	7.4%	14.1%
	2:45 – 3:00	31	42	327	254	10.9%	14.8%
	3:00 – 3:15	22	45	304	236	7.7%	15.8%
	3:15 – 3:30	11	30	285	221	3.9%	10.6%
	3:30 – 3:45	10	35	260	202	3.5%	12.3%
1st Shift Employees	3:45 – 4:00	5	12	253	196	1.6%	3.9%
	4:00 – 4:15	7	33	227	176	2.3%	10.7%
	4:15 – 4:30	9	15	221	171	2.9%	4.9%
	4:30 – 4:45	9	45	185	143	2.9%	14.6%
	4:45 – 5:00	1	0	186	144	0.3%	0.0%
	After 5:00 PM (est)	15	186	15	12	4.9%	60.3%
	TOTALS:	1068	1068	MAX:	336		

Primary Influence	FUTURE Entry, Exit and Net Occupancy Tallies				Calibration Factor (parked vehicles per occupant) 0.777
	Overnight Occupancy 15	Tuesday Future			
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand
1st Shift Employees	before 7:30 AM (est)	117	15	117	91
	7:30-7:45	19	3	133	103
	7:45-8:00	38	7	164	127
	8:00-8:15	60	6	218	169
	8:15-8:30	79	8	289	225
	8:30-8:45	92	7	374	291
AM Participants	8:45-9:00	85	8	451	350
	9:00-9:15	66	15	502	390
	9:15-9:30	53	31	524	407
	9:30-9:45	20	28	516	401
	9:45-10:00	32	32	516	401
	10:00-10:15	24	49	491	382
	10:15-10:30	21	42	470	365
	10:30-10:45	27	41	456	354
	10:45 -11:00	25	60	421	327
	11:00 – 11:15	35	29	427	332
	11:15 – 11:30	29	35	421	327
	11:30 – 11:45	15	49	387	301
	11:45 – 12:00	17	55	349	271
Mix	12:00 – 12:15	26	66	309	240
	12:15 – 12:30	17	56	270	210
	12:30 – 12:45	17	9	278	216
	12:45 – 1:00	32	19	291	226
PM Participants	1:00 – 1:15	75	28	338	263
	1:15 – 1:30	49	17	370	287
	1:30 – 1:45	53	11	412	320
	1:45 – 2:00	25	12	425	330
	2:00 – 2:15	16	25	416	323
	2:15 – 2:30	22	24	414	322
	2:30 – 2:45	28	53	389	302
	2:45 – 3:00	41	55	375	291
	3:00 – 3:15	29	59	345	268
	3:15 – 3:30	14	39	320	249
	3:30 – 3:45	13	46	287	223
1st Shift Employees	3:45 – 4:00	6	14	279	217
	4:00 – 4:15	8	38	249	193
	4:15 – 4:30	10	17	242	188
	4:30 – 4:45	10	52	200	155
	4:45 – 5:00	1	0	201	156
	After 5:00 PM (est)	15	201	15	12
	TOTALS:	1361	1361	MAX:	407

Existing Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	353	42	employees
8:45-noon	321	339	AM participants
noon-1	71	116	mix
1-3:45 pm	277	280	PM participants
after 3:45	46	291	employees
All Day	1068	1068	Total

Future Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	405	46	employees
8:45-noon	449	474	AM participants
noon-1	92	150	mix
1-3:45 pm	365	369	PM participants
after 3:45	50	322	employees
All Day	1361	1361	Total

Wednesday Parking Demand Estimates

Project Statistics for: Wednesday

EXISTING KCYSC		+	PHASE I	=	FUTURE WITH PHASE I		% increase
AM Participants	320		111		AM Participants	431	35%
PM Participants	385		118		PM Participants	503	31%
1st Shift Employees	308		45		1st Shift Employees	353	15%
Totals	1013		274		Totals	1287	27%

Primary Influence	EXISTING Entry, Exit and Net Occupancy Tallies					Calibration Factor (parked vehicles per occupant) 0.777	Ratio of Entries/Exits to Primary Influence:	
	Overnight Occupancy 15	Wednesday 24-Feb-10						
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand		Entries	Exits
1st Shift Employees	before 7:30 AM (est)	107	15	107	83		34.7%	4.9%
	7:30-7:45	17	5	119	92		5.5%	1.6%
	7:45-8:00	20	1	138	107		6.5%	0.3%
	8:00-8:15	64	2	200	155		20.8%	0.6%
	8:15-8:30	86	8	278	216		27.9%	2.6%
	8:30-8:45	87	4	361	280		28.2%	1.3%
AM Participants	8:45-9:00	49	7	403	313		15.3%	2.2%
	9:00-9:15	38	9	432	336		11.9%	2.8%
	9:15-9:30	31	29	434	337		9.7%	9.1%
	9:30-9:45	23	25	432	336		7.2%	7.8%
	9:45-10:00	28	39	421	327		8.8%	12.2%
	10:00-10:15	24	29	416	323		7.5%	9.1%
	10:15-10:30	24	30	410	318		7.5%	9.4%
	10:30-10:45	21	34	397	308		6.6%	10.6%
	10:45 -11:00	19	15	401	311		5.9%	4.7%
	11:00 – 11:15	20	32	389	302		6.3%	10.0%
	11:15 – 11:30	16	34	371	288		5.0%	10.6%
	11:30 – 11:45	15	32	354	275		4.7%	10.0%
	11:45 – 12:00	22	26	350	272		6.9%	8.1%
Mix	12:00 – 12:15	16	76	290	225		1.6%	7.5%
	12:15 – 12:30	23	43	270	210		2.3%	4.2%
	12:30 – 12:45	39	16	293	228		3.8%	1.6%
	12:45 – 1:00	54	18	329	255		5.3%	1.8%
PM Participants	1:00 – 1:15	72	19	382	297		18.7%	4.9%
	1:15 – 1:30	52	17	417	324		13.5%	4.4%
	1:30 – 1:45	19	15	421	327		4.9%	3.9%
	1:45 – 2:00	19	23	417	324		4.9%	6.0%
	2:00 – 2:15	22	25	414	322		5.7%	6.5%
	2:15 – 2:30	30	47	397	308		7.8%	12.2%
	2:30 – 2:45	28	53	372	289		7.3%	13.8%
	2:45 – 3:00	48	35	385	299		12.5%	9.1%
	3:00 – 3:15	13	64	334	259		3.4%	16.6%
	3:15 – 3:30	28	22	340	264		7.3%	5.7%
	3:30 – 3:45	15	35	320	249		3.9%	9.1%
1st Shift Employees	3:45 – 4:00	16	30	306	238		5.2%	9.7%
	4:00 – 4:15	12	57	261	203		3.9%	18.5%
	4:15 – 4:30	3	35	229	178		1.0%	11.4%
	4:30 – 4:45	21	28	222	172		6.8%	9.1%
	4:45 – 5:00	12	39	195	151		3.9%	12.7%
	After 5:00 PM (est)	15	195	15	12		4.9%	63.3%
	TOTALS:	1268	1268	MAX:	337			

Existing Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	381	35	employees
8:45-noon	330	341	AM participants
noon-1	132	153	mix
1-3:45 pm	346	355	PM participants
after 3:45	79	384	employees
All Day	1268	1268	Total

Primary Influence	FUTURE Entry, Exit and Net Occupancy Tallies					Calibration Factor (parked vehicles per occupant) 0.777
	Overnight Occupancy 15	Wednesday Future				
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand	
1st Shift Employees	before 7:30 AM (est)	122	15	122	95	
	7:30-7:45	19	6	135	105	
	7:45-8:00	23	1	157	122	
	8:00-8:15	73	2	228	177	
	8:15-8:30	99	9	318	247	
	8:30-8:45	100	5	413	321	
AM Participants	8:45-9:00	66	9	470	365	
	9:00-9:15	51	12	509	395	
	9:15-9:30	42	39	512	398	
	9:30-9:45	31	34	509	395	
	9:45-10:00	38	53	494	384	
	10:00-10:15	32	39	487	378	
	10:15-10:30	32	40	479	372	
	10:30-10:45	28	46	461	358	
	10:45 -11:00	26	20	467	363	
	11:00 – 11:15	27	43	451	350	
	11:15 – 11:30	22	46	427	332	
	11:30 – 11:45	20	43	404	314	
	11:45 – 12:00	30	35	399	310	
Mix	12:00 – 12:15	20	97	322	250	
	12:15 – 12:30	29	55	296	230	
	12:30 – 12:45	50	20	326	253	
	12:45 – 1:00	69	23	372	289	
PM Participants	1:00 – 1:15	94	25	441	343	
	1:15 – 1:30	68	22	487	378	
	1:30 – 1:45	25	20	492	382	
	1:45 – 2:00	25	30	487	378	
	2:00 – 2:15	29	33	483	375	
	2:15 – 2:30	39	61	461	358	
	2:30 – 2:45	37	69	429	333	
	2:45 – 3:00	63	46	446	347	
	3:00 – 3:15	17	84	379	294	
	3:15 – 3:30	37	29	387	301	
	3:30 – 3:45	20	46	361	280	
1st Shift Employees	3:45 – 4:00	18	34	345	268	
	4:00 – 4:15	14	65	294	228	
	4:15 – 4:30	3	40	257	200	
	4:30 – 4:45	24	32	249	193	
	4:45 – 5:00	14	45	218	169	
	After 5:00 PM (est)	15	218	15	12	
	TOTALS:	1591	1591	MAX:	398	

Future Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	436	38	employees
8:45-noon	445	459	AM participants
noon-1	168	195	mix
1-3:45 pm	454	465	PM participants
after 3:45	88	434	employees
All Day	1591	1591	Total

Thursday Parking Demand Estimates

Project Statistics for: Thursday

EXISTING KCYSC	
AM Participants	192
PM Participants	389
1st Shift Employees	308
Totals	889

+

PHASE I
94
87
45
226

=

FUTURE WITH PHASE I		% increase
AM Participants	286	49%
PM Participants	476	22%
1st Shift Employees	353	15%
Totals	1115	25%

Primary Influence	EXISTING Entry, Exit and Net Occupancy Tallies				Calibration Factor (parked vehicles per occupant) 0.777	Ratio of Entries/Exits to Primary Influence:	
	Overnight Occupancy 15	Thursday 25-Feb-10					
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand	Entries	Exits
1st Shift Employees	before 7:30 AM (est)	95	15	95	74	30.9%	4.9%
1st Shift Employees	7:30-7:45	24	1	118	92	7.8%	0.3%
1st Shift Employees	7:45-8:00	26	3	141	110	8.4%	1.0%
1st Shift Employees	8:00-8:15	51	3	189	147	16.6%	1.0%
1st Shift Employees	8:15-8:30	71	13	247	192	23.1%	4.2%
1st Shift Employees	8:30-8:45	78	5	320	249	25.3%	1.6%
AM Participants	8:45-9:00	54	3	371	288	28.1%	1.6%
AM Participants	9:00-9:15	38	18	391	304	19.8%	9.4%
AM Participants	9:15-9:30	27	17	401	312	14.1%	8.9%
AM Participants	9:30-9:45	20	33	388	302	10.4%	17.2%
AM Participants	9:45-10:00	22	16	394	306	11.5%	8.3%
AM Participants	10:00-10:15	21	27	388	302	10.9%	14.1%
AM Participants	10:15-10:30	22	28	382	297	11.5%	14.6%
AM Participants	10:30-10:45	9	25	366	285	4.7%	13.0%
AM Participants	10:45 -11:00	23	28	361	281	12.0%	14.6%
AM Participants	11:00 – 11:15	17	22	356	277	8.9%	11.5%
AM Participants	11:15 – 11:30	13	31	338	263	6.8%	16.1%
AM Participants	11:30 – 11:45	13	33	318	247	6.8%	17.2%
AM Participants	11:45 – 12:00	9	38	289	225	4.7%	19.8%
Mix	12:00 – 12:15	26	59	256	199	2.9%	6.6%
Mix	12:15 – 12:30	31	30	257	200	3.5%	3.4%
Mix	12:30 – 12:45	44	25	276	215	4.9%	2.8%
Mix	12:45 – 1:00	39	12	303	236	4.4%	1.3%
PM Participants	1:00 – 1:15	59	24	338	263	15.2%	6.2%
PM Participants	1:15 – 1:30	56	22	372	289	14.4%	5.7%
PM Participants	1:30 – 1:45	30	12	390	303	7.7%	3.1%
PM Participants	1:45 – 2:00	20	25	385	299	5.1%	6.4%
PM Participants	2:00 – 2:15	19	20	384	299	4.9%	5.1%
PM Participants	2:15 – 2:30	17	31	370	288	4.4%	8.0%
PM Participants	2:30 – 2:45	18	36	352	274	4.6%	9.3%
PM Participants	2:45 – 3:00	41	21	372	289	10.5%	5.4%
PM Participants	3:00 – 3:15	11	39	344	267	2.8%	10.0%
PM Participants	3:15 – 3:30	32	19	357	278	8.2%	4.9%
PM Participants	3:30 – 3:45	13	44	326	253	3.3%	11.3%
1st Shift Employees	3:45 – 4:00	16	38	304	236	5.2%	12.3%
1st Shift Employees	4:00 – 4:15	17	48	273	212	5.5%	15.6%
1st Shift Employees	4:15 – 4:30	5	32	246	191	1.6%	10.4%
1st Shift Employees	4:30 – 4:45	13	36	223	173	4.2%	11.7%
1st Shift Employees	4:45 – 5:00	2	24	201	156	0.6%	7.8%
1st Shift Employees	After 5:00 PM (est)	15	201	15	12	4.9%	65.3%
	TOTALS:	1157	1157	MAX:	312		

Primary Influence	FUTURE Entry, Exit and Net Occupancy Tallies				Calibration Factor (parked vehicles per occupant) 0.777
	Overnight Occupancy 15	Thursday Future			
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand
1st Shift Employees	before 7:30 AM (est)	109	15	109	85
1st Shift Employees	7:30-7:45	28	1	136	106
1st Shift Employees	7:45-8:00	30	3	163	127
1st Shift Employees	8:00-8:15	58	3	218	169
1st Shift Employees	8:15-8:30	81	15	284	221
1st Shift Employees	8:30-8:45	89	6	367	285
AM Participants	8:45-9:00	80	4	443	344
AM Participants	9:00-9:15	57	27	473	368
AM Participants	9:15-9:30	40	25	488	379
AM Participants	9:30-9:45	30	49	469	364
AM Participants	9:45-10:00	33	24	478	371
AM Participants	10:00-10:15	31	40	469	364
AM Participants	10:15-10:30	33	42	460	357
AM Participants	10:30-10:45	13	37	436	339
AM Participants	10:45 -11:00	34	42	428	333
AM Participants	11:00 – 11:15	25	33	420	326
AM Participants	11:15 – 11:30	19	46	393	305
AM Participants	11:30 – 11:45	19	49	363	282
AM Participants	11:45 – 12:00	13	57	319	248
Mix	12:00 – 12:15	33	74	278	216
Mix	12:15 – 12:30	39	38	279	217
Mix	12:30 – 12:45	55	31	303	235
Mix	12:45 – 1:00	49	15	337	262
PM Participants	1:00 – 1:15	72	29	380	295
PM Participants	1:15 – 1:30	69	27	422	328
PM Participants	1:30 – 1:45	37	15	444	345
PM Participants	1:45 – 2:00	24	31	437	340
PM Participants	2:00 – 2:15	23	24	436	339
PM Participants	2:15 – 2:30	21	38	419	326
PM Participants	2:30 – 2:45	22	44	397	308
PM Participants	2:45 – 3:00	50	26	421	327
PM Participants	3:00 – 3:15	13	48	386	300
PM Participants	3:15 – 3:30	39	23	402	312
PM Participants	3:30 – 3:45	16	54	364	283
1st Shift Employees	3:45 – 4:00	18	44	338	263
1st Shift Employees	4:00 – 4:15	19	55	302	235
1st Shift Employees	4:15 – 4:30	6	37	271	211
1st Shift Employees	4:30 – 4:45	15	41	245	190
1st Shift Employees	4:45 – 5:00	2	28	219	170
1st Shift Employees	After 5:00 PM (est)	15	219	15	12
	TOTALS:	1459	1459	MAX:	379

Existing Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	345	40	employees
8:45-noon	288	319	AM participants
noon-1	140	126	mix
1-3:45 pm	316	293	PM participants
after 3:45	68	379	employees
All Day	1157	1157	Total

Future Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	395	43	employees
8:45-noon	427	475	AM participants
noon-1	176	158	mix
1-3:45 pm	386	359	PM participants
after 3:45	75	424	employees
All Day	1459	1459	Total

Friday Parking Demand Estimates

Project Statistics for: Friday

EXISTING KCYSC		+	PHASE I	=	FUTURE WITH PHASE I	% increase
AM Participants	381		191		572	50%
PM Participants	362		106		468	29%
1st Shift Employees	308		45		353	15%
Totals	1051		342		1393	33%

Primary Influence	EXISTING Entry, Exit and Net Occupancy Tallies				Calibration Factor (parked vehicles per occupant) 0.777	Ratio of Entries/Exits to Primary Influence:	
	Overnight Occupancy 15	Friday 26-Feb-10					
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand	Entries	Exits
1st Shift Employees	before 7:30 AM (est)	99	15	99	77	32.2%	4.9%
	7:30-7:45	12	5	106	82	3.9%	1.6%
	7:45-8:00	23	2	127	99	7.5%	0.6%
	8:00-8:15	65	2	190	148	21.1%	0.6%
	8:15-8:30	81	3	268	208	26.3%	1.0%
	8:30-8:45	64	4	328	255	20.8%	1.3%
AM Participants	8:45-9:00	42	11	359	279	11.0%	2.9%
	9:00-9:15	39	13	385	299	10.2%	3.4%
	9:15-9:30	43	26	402	312	11.3%	6.8%
	9:30-9:45	47	34	415	323	12.3%	8.9%
	9:45-10:00	18	12	421	327	4.7%	3.1%
	10:00-10:15	20	24	417	324	5.2%	6.3%
	10:15-10:30	13	39	391	304	3.4%	10.2%
	10:30-10:45	12	28	375	291	3.1%	7.3%
	10:45 -11:00	26	34	367	285	6.8%	8.9%
	11:00 – 11:15	16	44	339	263	4.2%	11.5%
	11:15 – 11:30	9	34	314	244	2.4%	8.9%
	11:30 – 11:45	11	27	298	232	2.9%	7.1%
	11:45 – 12:00	20	33	285	222	5.2%	8.7%
Mix	12:00 – 12:15	22	49	258	201	2.1%	4.7%
	12:15 – 12:30	25	34	249	194	2.4%	3.2%
	12:30 – 12:45	26	23	252	196	2.5%	2.2%
	12:45 – 1:00	27	10	269	209	2.6%	1.0%
PM Participants	1:00 – 1:15	39	26	282	219	10.8%	7.2%
	1:15 – 1:30	40	14	308	239	11.0%	3.9%
	1:30 – 1:45	24	24	308	239	6.6%	6.6%
	1:45 – 2:00	22	12	318	247	6.1%	3.3%
	2:00 – 2:15	17	30	305	237	4.7%	8.3%
	2:15 – 2:30	12	22	295	229	3.3%	6.1%
	2:30 – 2:45	12	36	271	211	3.3%	9.9%
	2:45 – 3:00	29	15	285	222	8.0%	4.1%
	3:00 – 3:15	9	34	260	202	2.5%	9.4%
	3:15 – 3:30	12	30	242	188	3.3%	8.3%
	3:30 – 3:45	8	14	236	183	2.2%	3.9%
1st Shift Employees	3:45 – 4:00	6	17	225	175	1.9%	5.5%
	4:00 – 4:15	5	21	209	162	1.6%	6.8%
	4:15 – 4:30	13	24	198	154	4.2%	7.8%
	4:30 – 4:45	6	25	179	139	1.9%	8.1%
	4:45 – 5:00	5	31	153	119	1.6%	10.1%
	After 5:00 PM (est)	15	153	15	12	4.9%	49.7%
	TOTALS:	1034	1034	MAX:	327		

Primary Influence	FUTURE Entry, Exit and Net Occupancy Tallies				Calibration Factor (parked vehicles per occupant) 0.777
	Overnight Occupancy 15	Friday Future			
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand
1st Shift Employees	before 7:30 AM (est)	114	15	114	89
	7:30-7:45	14	6	122	95
	7:45-8:00	26	2	146	113
	8:00-8:15	74	2	218	169
	8:15-8:30	93	3	308	239
	8:30-8:45	73	5	376	292
AM Participants	8:45-9:00	63	17	422	328
	9:00-9:15	59	20	461	358
	9:15-9:30	65	39	487	378
	9:30-9:45	71	51	507	394
	9:45-10:00	27	18	516	401
	10:00-10:15	30	36	510	396
	10:15-10:30	20	59	471	366
	10:30-10:45	18	42	447	347
	10:45 -11:00	39	51	435	338
	11:00 – 11:15	24	66	393	305
	11:15 – 11:30	14	51	356	277
	11:30 – 11:45	17	41	332	258
	11:45 – 12:00	30	50	312	242
Mix	12:00 – 12:15	29	65	276	214
	12:15 – 12:30	33	45	264	205
	12:30 – 12:45	34	30	268	208
	12:45 – 1:00	36	13	291	226
PM Participants	1:00 – 1:15	50	34	307	239
	1:15 – 1:30	52	18	341	265
	1:30 – 1:45	31	31	341	265
	1:45 – 2:00	28	16	353	274
	2:00 – 2:15	22	39	336	261
	2:15 – 2:30	16	28	324	252
	2:30 – 2:45	16	47	293	228
	2:45 – 3:00	37	19	311	242
	3:00 – 3:15	12	44	279	217
	3:15 – 3:30	16	39	256	199
	3:30 – 3:45	10	18	248	193
1st Shift Employees	3:45 – 4:00	7	19	236	183
	4:00 – 4:15	6	24	218	169
	4:15 – 4:30	15	28	205	159
	4:30 – 4:45	7	29	183	142
	4:45 – 5:00	6	36	153	119
	After 5:00 PM (est)	15	153	15	12
	TOTALS:	1349	1349	MAX:	401

Existing Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	344	31	employees
8:45-noon	316	359	AM participants
noon-1	100	116	mix
1-3:45 pm	224	257	PM participants
after 3:45	50	271	employees
All Day	1034	1034	Total

Future Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	394	33	employees
8:45-noon	477	541	AM participants
noon-1	132	153	mix
1-3:45 pm	290	333	PM participants
after 3:45	56	289	employees
All Day	1349	1349	Total

ATTACHMENT F

Phase II Parking Demand Forecasts

KCYSC Peak Parking Demand Summary

Phase II: 17 Total Courts: 10 Juv. Courts (7 Existing + 2 Offender + 1 Dependency) + 7 Family (6 relocated + 1 new)

Day of Week	Estimated Existing Peak Demand	Estimated Future Peak Demand with Phase II
Monday	291	503
Tuesday	336	589
Wednesday	337	573
Thursday	312	566
Friday	327	605
Weekday Average	**321**	**567**
Weekday Maximum	**337**	**605**

Recommended Parking Supply with Phase II		
Est. Maximum Future Parking Demand =	**605**	
Supply Assuming 5% Practical Capacity =	**637**	**Recommended Minimum**
Supply Assuming 10% Practical Capacity =	**672**	**Recommended Preferred**

Monday Parking Demand Estimates

Project Statistics for: Monday

EXISTING KCYSC		+	PHASE II	=	FUTURE WITH PHASE II		% increase
AM Participants	322		362		AM Participants	684	112%
PM Participants	415		339		PM Participants	754	82%
1st Shift Employees	308		202		1st Shift Employees	510	66%
Totals	1045		903		Totals	1948	86%

Primary Influence	EXISTING Entry, Exit and Net Occupancy Tallies					Calibration Factor (parked vehicles per occupant) 0.777	Ratio of Entries/Exits to Primary Influence:	
	Overnight Occupancy 15	Monday 1-Mar-10						
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand		Entries	Exits
1st Shift Employees	before 7:30 AM (est)	90	15	90	70		29.3%	4.9%
	7:30-7:45	18	4	104	81		5.8%	1.3%
	7:45-8:00	25	2	127	99		8.1%	0.6%
	8:00-8:15	58	7	178	138		18.8%	2.3%
	8:15-8:30	79	10	247	192		25.6%	3.2%
	8:30-8:45	66	3	310	241		21.4%	1.0%
AM Participants	8:45-9:00	38	6	342	266		11.8%	1.9%
	9:00-9:15	32	9	365	284		9.9%	2.8%
	9:15-9:30	26	25	366	284		8.1%	7.8%
	9:30-9:45	25	17	374	291		7.8%	5.3%
	9:45-10:00	27	34	367	285		8.4%	10.6%
	10:00-10:15	15	33	349	271		4.7%	10.2%
	10:15-10:30	15	27	337	262		4.7%	8.4%
	10:30-10:45	22	20	339	263		6.8%	6.2%
	10:45 -11:00	15	17	337	262		4.7%	5.3%
	11:00 – 11:15	13	24	326	253		4.0%	7.5%
	11:15 – 11:30	17	20	323	251		5.3%	6.2%
	11:30 – 11:45	10	31	302	235		3.1%	9.6%
	11:45 – 12:00	11	36	277	215		3.4%	11.2%
Mix	12:00 – 12:15	7	43	241	187		0.7%	4.1%
	12:15 – 12:30	19	23	237	184		1.8%	2.2%
	12:30 – 12:45	30	17	250	194		2.9%	1.6%
	12:45 – 1:00	47	25	272	211		4.5%	2.4%
PM Participants	1:00 – 1:15	59	33	298	232		14.2%	8.0%
	1:15 – 1:30	46	11	333	259		11.1%	2.7%
	1:30 – 1:45	23	11	345	268		5.5%	2.7%
	1:45 – 2:00	12	24	333	259		2.9%	5.8%
	2:00 – 2:15	12	18	327	254		2.9%	4.3%
	2:15 – 2:30	13	40	300	233		3.1%	9.6%
	2:30 – 2:45	18	24	294	229		4.3%	5.8%
	2:45 – 3:00	37	20	311	242		8.9%	4.8%
	3:00 – 3:15	28	56	283	220		6.7%	13.5%
	3:15 – 3:30	10	11	282	219		2.4%	2.7%
	3:30 – 3:45	7	25	264	205		1.7%	6.0%
1st Shift Employees	3:45 – 4:00	11	33	242	188		3.6%	10.7%
	4:00 – 4:15	9	23	228	177		2.9%	7.5%
	4:15 – 4:30	6	29	205	159		1.9%	9.4%
	4:30 – 4:45	7	31	181	141		2.3%	10.1%
	4:45 – 5:00	4	18	167	130		1.3%	5.8%
	After 5:00 PM (est)	15	167	15	12		4.9%	54.3%
	TOTALS:	1022	1022	MAX:	291			

Primary Influence	FUTURE Entry, Exit and Net Occupancy Tallies					Calibration Factor (parked vehicles per occupant) 0.777
	Overnight Occupancy 15	Monday Future				
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand	
1st Shift Employees	before 7:30 AM (est)	149	15	149	116	
	7:30-7:45	30	7	172	134	
	7:45-8:00	41	3	210	163	
	8:00-8:15	96	12	294	228	
	8:15-8:30	131	17	408	317	
	8:30-8:45	109	5	512	398	
AM Participants	8:45-9:00	81	13	580	451	
	9:00-9:15	68	19	629	489	
	9:15-9:30	55	53	631	490	
	9:30-9:45	53	36	648	503	
	9:45-10:00	57	72	633	492	
	10:00-10:15	32	70	595	462	
	10:15-10:30	32	57	570	443	
	10:30-10:45	47	42	575	447	
	10:45 -11:00	32	36	571	444	
	11:00 – 11:15	28	51	548	426	
	11:15 – 11:30	36	42	542	421	
	11:30 – 11:45	21	66	497	386	
	11:45 – 12:00	23	76	444	345	
Mix	12:00 – 12:15	13	80	377	293	
	12:15 – 12:30	35	43	369	287	
	12:30 – 12:45	56	32	393	305	
	12:45 – 1:00	88	47	434	337	
PM Participants	1:00 – 1:15	107	60	481	374	
	1:15 – 1:30	84	20	545	423	
	1:30 – 1:45	42	20	567	441	
	1:45 – 2:00	22	44	545	423	
	2:00 – 2:15	22	33	534	415	
	2:15 – 2:30	24	73	485	377	
	2:30 – 2:45	33	44	474	368	
	2:45 – 3:00	67	36	505	392	
	3:00 – 3:15	51	102	454	353	
	3:15 – 3:30	18	20	452	351	
	3:30 – 3:45	13	45	420	326	
1st Shift Employees	3:45 – 4:00	18	55	383	298	
	4:00 – 4:15	15	38	360	280	
	4:15 – 4:30	10	48	322	250	
	4:30 – 4:45	12	51	283	220	
	4:45 – 5:00	7	30	260	202	
	After 5:00 PM (est)	15	260	15	12	
	TOTALS:	1873	1873	MAX:	503	

Existing Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	336	41	employees
8:45-noon	266	299	AM participants
noon-1	103	108	mix
1-3:45 pm	265	273	PM participants
after 3:45	52	301	employees
All Day	1022	1022	Total

Future Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	556	59	employees
8:45-noon	565	633	AM participants
noon-1	192	202	mix
1-3:45 pm	483	497	PM participants
after 3:45	77	482	employees
All Day	1873	1873	Total

Tuesday Parking Demand Estimates

Project Statistics for: Tuesday

EXISTING KCYSC		+	PHASE II	=	FUTURE WITH PHASE II		% increase
AM Participants	354		373		AM Participants	727	105%
PM Participants	284		199		PM Participants	483	70%
1st Shift Employees	308		202		1st Shift Employees	510	66%
Totals	946		774		Totals	1720	82%

Primary Influence	EXISTING Entry, Exit and Net Occupancy Tallies				Calibration Factor (parked vehicles per occupant) 0.777	Ratio of Entries/Exits to Primary Influence:	
	Overnight Occupancy 15	Tuesday 23-Feb-10					
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand	Entries	Exits
1st Shift Employees	before 7:30 AM (est)	102	15	102	79	33.0%	4.9%
	7:30-7:45	17	3	116	90	5.5%	1.0%
	7:45-8:00	33	6	143	111	10.7%	1.9%
	8:00-8:15	52	5	190	147	16.9%	1.6%
	8:15-8:30	69	7	252	196	22.4%	2.3%
	8:30-8:45	80	6	326	253	26.0%	1.9%
AM Participants	8:45-9:00	61	6	381	296	17.2%	1.7%
	9:00-9:15	47	11	417	324	13.3%	3.1%
	9:15-9:30	38	22	433	336	10.7%	6.2%
	9:30-9:45	14	20	427	332	4.0%	5.6%
	9:45-10:00	23	23	427	332	6.5%	6.5%
	10:00-10:15	17	35	409	318	4.8%	9.9%
	10:15-10:30	15	30	394	306	4.2%	8.5%
	10:30-10:45	19	29	384	298	5.4%	8.2%
	10:45 -11:00	18	43	359	279	5.1%	12.1%
	11:00 – 11:15	25	21	363	282	7.1%	5.9%
	11:15 – 11:30	21	25	359	279	5.9%	7.1%
	11:30 – 11:45	11	35	335	260	3.1%	9.9%
	11:45 – 12:00	12	39	308	239	3.4%	11.0%
Mix	12:00 – 12:15	20	51	277	215	2.1%	5.4%
	12:15 – 12:30	13	43	247	192	1.4%	4.5%
	12:30 – 12:45	13	7	253	196	1.4%	0.7%
	12:45 – 1:00	25	15	263	204	2.6%	1.6%
PM Participants	1:00 – 1:15	57	21	299	232	20.1%	7.4%
	1:15 – 1:30	37	13	323	251	13.0%	4.6%
	1:30 – 1:45	40	8	355	276	14.1%	2.8%
	1:45 – 2:00	19	9	365	283	6.7%	3.2%
	2:00 – 2:15	12	19	358	278	4.2%	6.7%
	2:15 – 2:30	17	18	357	277	6.0%	6.3%
	2:30 – 2:45	21	40	338	262	7.4%	14.1%
	2:45 – 3:00	31	42	327	254	10.9%	14.8%
	3:00 – 3:15	22	45	304	236	7.7%	15.8%
	3:15 – 3:30	11	30	285	221	3.9%	10.6%
	3:30 – 3:45	10	35	260	202	3.5%	12.3%
1st Shift Employees	3:45 – 4:00	5	12	253	196	1.6%	3.9%
	4:00 – 4:15	7	33	227	176	2.3%	10.7%
	4:15 – 4:30	9	15	221	171	2.9%	4.9%
	4:30 – 4:45	9	45	185	143	2.9%	14.6%
	4:45 – 5:00	1	0	186	144	0.3%	0.0%
	After 5:00 PM (est)	15	186	15	12	4.9%	60.3%
	TOTALS:	1068	1068	MAX:	336		

Primary Influence	FUTURE Entry, Exit and Net Occupancy Tallies				Calibration Factor (parked vehicles per occupant) 0.777
	Overnight Occupancy 15	Tuesday Future			
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand
1st Shift Employees	before 7:30 AM (est)	168	15	168	131
	7:30-7:45	28	5	191	148
	7:45-8:00	55	10	236	183
	8:00-8:15	86	8	314	244
	8:15-8:30	114	12	416	323
	8:30-8:45	132	10	538	418
AM Participants	8:45-9:00	125	12	651	506
	9:00-9:15	97	23	725	563
	9:15-9:30	78	45	758	589
	9:30-9:45	29	41	746	580
	9:45-10:00	47	47	746	580
	10:00-10:15	35	72	709	551
	10:15-10:30	31	62	678	527
	10:30-10:45	39	60	657	510
	10:45 -11:00	37	88	606	471
	11:00 – 11:15	51	43	614	477
	11:15 – 11:30	43	51	606	471
	11:30 – 11:45	23	72	557	433
	11:45 – 12:00	25	80	502	390
Mix	12:00 – 12:15	36	93	445	346
	12:15 – 12:30	24	78	391	304
	12:30 – 12:45	24	13	402	312
	12:45 – 1:00	45	27	420	326
PM Participants	1:00 – 1:15	97	36	481	374
	1:15 – 1:30	63	22	522	406
	1:30 – 1:45	68	14	576	448
	1:45 – 2:00	32	15	593	461
	2:00 – 2:15	20	32	581	451
	2:15 – 2:30	29	31	579	450
	2:30 – 2:45	36	68	547	425
	2:45 – 3:00	53	71	529	411
	3:00 – 3:15	37	77	489	380
	3:15 – 3:30	19	51	457	355
	3:30 – 3:45	17	60	414	322
1st Shift Employees	3:45 – 4:00	8	20	402	312
	4:00 – 4:15	12	55	359	279
	4:15 – 4:30	15	25	349	271
	4:30 – 4:45	15	75	289	225
	4:45 – 5:00	2	0	291	226
	After 5:00 PM (est)	15	291	15	12
	TOTALS:	1910	1910	MAX:	589

Existing Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	353	42	employees
8:45-noon	321	339	AM participants
noon-1	71	116	mix
1-3:45 pm	277	280	PM participants
after 3:45	46	291	employees
All Day	1068	1068	Total

Future Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	583	60	employees
8:45-noon	660	696	AM participants
noon-1	129	211	mix
1-3:45 pm	471	477	PM participants
after 3:45	67	466	employees
All Day	1910	1910	Total

Wednesday Parking Demand Estimates

Project Statistics for: Wednesday

EXISTING KCYSC		+	PHASE II	=	FUTURE WITH PHASE II		% increase
AM Participants	320		294		AM Participants	614	92%
PM Participants	385		370		PM Participants	755	96%
1st Shift Employees	308		202		1st Shift Employees	510	66%
Totals	1013		866		Totals	1879	85%

Primary Influence	EXISTING Entry, Exit and Net Occupancy Tallies				Calibration Factor (parked vehicles per occupant) 0.777	Ratio of Entries/Exits to Primary Influence:	
	Overnight Occupancy 15	Wednesday 24-Feb-10					
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand	Entries	Exits
1st Shift Employees	before 7:30 AM (est)	107	15	107	83	34.7%	4.9%
	7:30-7:45	17	5	119	92	5.5%	1.6%
	7:45-8:00	20	1	138	107	6.5%	0.3%
	8:00-8:15	64	2	200	155	20.8%	0.6%
	8:15-8:30	86	8	278	216	27.9%	2.6%
	8:30-8:45	87	4	361	280	28.2%	1.3%
AM Participants	8:45-9:00	49	7	403	313	15.3%	2.2%
	9:00-9:15	38	9	432	336	11.9%	2.8%
	9:15-9:30	31	29	434	337	9.7%	9.1%
	9:30-9:45	23	25	432	336	7.2%	7.8%
	9:45-10:00	28	39	421	327	8.8%	12.2%
	10:00-10:15	24	29	416	323	7.5%	9.1%
	10:15-10:30	24	30	410	318	7.5%	9.4%
	10:30-10:45	21	34	397	308	6.6%	10.6%
	10:45 -11:00	19	15	401	311	5.9%	4.7%
	11:00 – 11:15	20	32	389	302	6.3%	10.0%
	11:15 – 11:30	16	34	371	288	5.0%	10.6%
	11:30 – 11:45	15	32	354	275	4.7%	10.0%
	11:45 – 12:00	22	26	350	272	6.9%	8.1%
Mix	12:00 – 12:15	16	76	290	225	1.6%	7.5%
	12:15 – 12:30	23	43	270	210	2.3%	4.2%
	12:30 – 12:45	39	16	293	228	3.8%	1.6%
	12:45 – 1:00	54	18	329	255	5.3%	1.8%
PM Participants	1:00 – 1:15	72	19	382	297	18.7%	4.9%
	1:15 – 1:30	52	17	417	324	13.5%	4.4%
	1:30 – 1:45	19	15	421	327	4.9%	3.9%
	1:45 – 2:00	19	23	417	324	4.9%	6.0%
	2:00 – 2:15	22	25	414	322	5.7%	6.5%
	2:15 – 2:30	30	47	397	308	7.8%	12.2%
	2:30 – 2:45	28	53	372	289	7.3%	13.8%
	2:45 – 3:00	48	35	385	299	12.5%	9.1%
	3:00 – 3:15	13	64	334	259	3.4%	16.6%
	3:15 – 3:30	28	22	340	264	7.3%	5.7%
	3:30 – 3:45	15	35	320	249	3.9%	9.1%
1st Shift Employees	3:45 – 4:00	16	30	306	238	5.2%	9.7%
	4:00 – 4:15	12	57	261	203	3.9%	18.5%
	4:15 – 4:30	3	35	229	178	1.0%	11.4%
	4:30 – 4:45	21	28	222	172	6.8%	9.1%
	4:45 – 5:00	12	39	195	151	3.9%	12.7%
	After 5:00 PM (est)	15	195	15	12	4.9%	63.3%
	TOTALS:	1268	1268	MAX:	337		

Existing Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	381	35	employees
8:45-noon	330	341	AM participants
noon-1	132	153	mix
1-3:45 pm	346	355	PM participants
after 3:45	79	384	employees
All Day	1268	1268	Total

Primary Influence	FUTURE Entry, Exit and Net Occupancy Tallies				Calibration Factor (parked vehicles per occupant) 0.777
	Overnight Occupancy 15	Wednesday Future			
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand
1st Shift Employees	before 7:30 AM (est)	177	15	177	138
	7:30-7:45	28	8	197	153
	7:45-8:00	33	2	228	177
	8:00-8:15	106	3	331	257
	8:15-8:30	142	13	460	357
	8:30-8:45	144	7	597	464
AM Participants	8:45-9:00	94	13	678	527
	9:00-9:15	73	17	734	570
	9:15-9:30	59	56	737	573
	9:30-9:45	44	48	733	570
	9:45-10:00	54	75	712	553
	10:00-10:15	46	56	702	545
	10:15-10:30	46	58	690	536
	10:30-10:45	40	65	665	517
	10:45 -11:00	36	29	672	522
	11:00 – 11:15	38	61	649	504
	11:15 – 11:30	31	65	615	478
	11:30 – 11:45	29	61	583	453
	11:45 – 12:00	42	50	575	447
Mix	12:00 – 12:15	30	141	464	361
	12:15 – 12:30	43	80	427	332
	12:30 – 12:45	72	30	469	364
	12:45 – 1:00	100	33	536	416
PM Participants	1:00 – 1:15	141	37	640	497
	1:15 – 1:30	102	33	709	551
	1:30 – 1:45	37	29	717	557
	1:45 – 2:00	37	45	709	551
	2:00 – 2:15	43	49	703	546
	2:15 – 2:30	59	92	670	521
	2:30 – 2:45	55	104	621	483
	2:45 – 3:00	94	69	646	502
	3:00 – 3:15	25	126	545	423
	3:15 – 3:30	55	43	557	433
	3:30 – 3:45	29	69	517	402
1st Shift Employees	3:45 – 4:00	26	50	493	383
	4:00 – 4:15	20	94	419	326
	4:15 – 4:30	5	58	366	284
	4:30 – 4:45	35	46	355	276
	4:45 – 5:00	20	65	310	241
	After 5:00 PM (est)	15	310	15	12
	TOTALS:	2305	2305	MAX:	573

Future Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	630	48	employees
8:45-noon	632	654	AM participants
noon-1	245	284	mix
1-3:45 pm	677	696	PM participants
after 3:45	121	623	employees
All Day	2305	2305	Total

Thursday Parking Demand Estimates

Project Statistics for: Thursday

EXISTING KCYSC		+	PHASE II	=	FUTURE WITH PHASE II		% increase
AM Participants	192		277		AM Participants	469	144%
PM Participants	389		339		PM Participants	728	87%
1st Shift Employees	308		202		1st Shift Employees	510	66%
Totals	889		818		Totals	1707	92%

Primary Influence	EXISTING Entry, Exit and Net Occupancy Tallies				Calibration Factor (parked vehicles per occupant) 0.777	Ratio of Entries/Exits to Primary Influence:	
	Overnight Occupancy 15	Thursday 25-Feb-10					
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand	Entries	Exits
1st Shift Employees	before 7:30 AM (est)	95	15	95	74	30.9%	4.9%
	7:30-7:45	24	1	118	92	7.8%	0.3%
	7:45-8:00	26	3	141	110	8.4%	1.0%
	8:00-8:15	51	3	189	147	16.6%	1.0%
	8:15-8:30	71	13	247	192	23.1%	4.2%
	8:30-8:45	78	5	320	249	25.3%	1.6%
AM Participants	8:45-9:00	54	3	371	288	28.1%	1.6%
	9:00-9:15	38	18	391	304	19.8%	9.4%
	9:15-9:30	27	17	401	312	14.1%	8.9%
	9:30-9:45	20	33	388	302	10.4%	17.2%
	9:45-10:00	22	16	394	306	11.5%	8.3%
	10:00-10:15	21	27	388	302	10.9%	14.1%
	10:15-10:30	22	28	382	297	11.5%	14.6%
	10:30-10:45	9	25	366	285	4.7%	13.0%
	10:45 -11:00	23	28	361	281	12.0%	14.6%
	11:00 – 11:15	17	22	356	277	8.9%	11.5%
	11:15 – 11:30	13	31	338	263	6.8%	16.1%
	11:30 – 11:45	13	33	318	247	6.8%	17.2%
	11:45 – 12:00	9	38	289	225	4.7%	19.8%
Mix	12:00 – 12:15	26	59	256	199	2.9%	6.6%
	12:15 – 12:30	31	30	257	200	3.5%	3.4%
	12:30 – 12:45	44	25	276	215	4.9%	2.8%
	12:45 – 1:00	39	12	303	236	4.4%	1.3%
PM Participants	1:00 – 1:15	59	24	338	263	15.2%	6.2%
	1:15 – 1:30	56	22	372	289	14.4%	5.7%
	1:30 – 1:45	30	12	390	303	7.7%	3.1%
	1:45 – 2:00	20	25	385	299	5.1%	6.4%
	2:00 – 2:15	19	20	384	299	4.9%	5.1%
	2:15 – 2:30	17	31	370	288	4.4%	8.0%
	2:30 – 2:45	18	36	352	274	4.6%	9.3%
	2:45 – 3:00	41	21	372	289	10.5%	5.4%
	3:00 – 3:15	11	39	344	267	2.8%	10.0%
	3:15 – 3:30	32	19	357	278	8.2%	4.9%
	3:30 – 3:45	13	44	326	253	3.3%	11.3%
1st Shift Employees	3:45 – 4:00	16	38	304	236	5.2%	12.3%
	4:00 – 4:15	17	48	273	212	5.5%	15.6%
	4:15 – 4:30	5	32	246	191	1.6%	10.4%
	4:30 – 4:45	13	36	223	173	4.2%	11.7%
	4:45 – 5:00	2	24	201	156	0.6%	7.8%
	After 5:00 PM (est)	15	201	15	12	4.9%	65.3%
	TOTALS:	1157	1157	MAX:	312		

Primary Influence	FUTURE Entry, Exit and Net Occupancy Tallies				Calibration Factor (parked vehicles per occupant) 0.777
	Overnight Occupancy 15	Thursday Future			
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand
1st Shift Employees	before 7:30 AM (est)	158	15	158	123
	7:30-7:45	40	2	196	152
	7:45-8:00	43	5	234	182
	8:00-8:15	84	5	313	243
	8:15-8:30	118	22	409	318
	8:30-8:45	129	8	530	412
AM Participants	8:45-9:00	132	7	655	509
	9:00-9:15	93	44	704	547
	9:15-9:30	66	42	728	566
	9:30-9:45	49	81	696	541
	9:45-10:00	54	39	711	552
	10:00-10:15	51	66	696	541
	10:15-10:30	54	68	682	530
	10:30-10:45	22	61	643	500
	10:45 -11:00	56	68	631	490
	11:00 – 11:15	42	54	619	481
	11:15 – 11:30	32	76	575	447
	11:30 – 11:45	32	81	526	409
	11:45 – 12:00	22	93	455	354
Mix	12:00 – 12:15	50	113	392	305
	12:15 – 12:30	60	58	394	306
	12:30 – 12:45	84	48	430	334
	12:45 – 1:00	75	23	482	375
PM Participants	1:00 – 1:15	110	45	547	425
	1:15 – 1:30	105	41	611	475
	1:30 – 1:45	56	22	645	501
	1:45 – 2:00	37	47	635	493
	2:00 – 2:15	36	37	634	493
	2:15 – 2:30	32	58	608	472
	2:30 – 2:45	34	67	575	447
	2:45 – 3:00	77	39	613	476
	3:00 – 3:15	21	73	561	436
	3:15 – 3:30	60	36	585	455
	3:30 – 3:45	24	82	527	409
1st Shift Employees	3:45 – 4:00	26	63	490	381
	4:00 – 4:15	28	79	439	341
	4:15 – 4:30	8	53	394	306
	4:30 – 4:45	22	60	356	277
	4:45 – 5:00	3	40	319	248
	After 5:00 PM (est)	15	319	15	12
	TOTALS:	2240	2240	MAX:	566

Existing Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	345	40	employees
8:45-noon	288	319	AM participants
noon-1	140	126	mix
1-3:45 pm	316	293	PM participants
after 3:45	68	379	employees
All Day	1157	1157	Total

Future Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	572	57	employees
8:45-noon	705	780	AM participants
noon-1	269	242	mix
1-3:45 pm	592	547	PM participants
after 3:45	102	614	employees
All Day	2240	2240	Total

Friday Parking Demand Estimates

Project Statistics for: Friday

EXISTING KCYSC		+	PHASE II	=	FUTURE WITH PHASE II	% increase
AM Participants	381		577		958	151%
PM Participants	362		334		696	92%
1st Shift Employees	308		202		510	66%
Totals	1051		1113		2164	106%

Primary Influence	EXISTING Entry, Exit and Net Occupancy Tallies				Calibration Factor (parked vehicles per occupant) 0.777	Ratio of Entries/Exits to Primary Influence:	
	Overnight Occupancy 15	Friday 26-Feb-10					
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand	Entries	Exits
1st Shift Employees	before 7:30 AM (est)	99	15	99	77	32.2%	4.9%
	7:30-7:45	12	5	106	82	3.9%	1.6%
	7:45-8:00	23	2	127	99	7.5%	0.6%
	8:00-8:15	65	2	190	148	21.1%	0.6%
	8:15-8:30	81	3	268	208	26.3%	1.0%
	8:30-8:45	64	4	328	255	20.8%	1.3%
AM Participants	8:45-9:00	42	11	359	279	11.0%	2.9%
	9:00-9:15	39	13	385	299	10.2%	3.4%
	9:15-9:30	43	26	402	312	11.3%	6.8%
	9:30-9:45	47	34	415	323	12.3%	8.9%
	9:45-10:00	18	12	421	327	4.7%	3.1%
	10:00-10:15	20	24	417	324	5.2%	6.3%
	10:15-10:30	13	39	391	304	3.4%	10.2%
	10:30-10:45	12	28	375	291	3.1%	7.3%
	10:45 -11:00	26	34	367	285	6.8%	8.9%
	11:00 – 11:15	16	44	339	263	4.2%	11.5%
	11:15 – 11:30	9	34	314	244	2.4%	8.9%
	11:30 – 11:45	11	27	298	232	2.9%	7.1%
	11:45 – 12:00	20	33	285	222	5.2%	8.7%
Mix	12:00 – 12:15	22	49	258	201	2.1%	4.7%
	12:15 – 12:30	25	34	249	194	2.4%	3.2%
	12:30 – 12:45	26	23	252	196	2.5%	2.2%
	12:45 – 1:00	27	10	269	209	2.6%	1.0%
PM Participants	1:00 – 1:15	39	26	282	219	10.8%	7.2%
	1:15 – 1:30	40	14	308	239	11.0%	3.9%
	1:30 – 1:45	24	24	308	239	6.6%	6.6%
	1:45 – 2:00	22	12	318	247	6.1%	3.3%
	2:00 – 2:15	17	30	305	237	4.7%	8.3%
	2:15 – 2:30	12	22	295	229	3.3%	6.1%
	2:30 – 2:45	12	36	271	211	3.3%	9.9%
	2:45 – 3:00	29	15	285	222	8.0%	4.1%
	3:00 – 3:15	9	34	260	202	2.5%	9.4%
	3:15 – 3:30	12	30	242	188	3.3%	8.3%
	3:30 – 3:45	8	14	236	183	2.2%	3.9%
1st Shift Employees	3:45 – 4:00	6	17	225	175	1.9%	5.5%
	4:00 – 4:15	5	21	209	162	1.6%	6.8%
	4:15 – 4:30	13	24	198	154	4.2%	7.8%
	4:30 – 4:45	6	25	179	139	1.9%	8.1%
	4:45 – 5:00	5	31	153	119	1.6%	10.1%
	After 5:00 PM (est)	15	153	15	12	4.9%	49.7%
	TOTALS:	1034	1034	MAX:	327		

Primary Influence	FUTURE Entry, Exit and Net Occupancy Tallies				Calibration Factor (parked vehicles per occupant) 0.777
	Overnight Occupancy 15	Friday Future			
	Time Period	Entries	Exits	Net Occupancy	Estimated Parking Demand
1st Shift Employees	before 7:30 AM (est)	164	15	164	127
	7:30-7:45	20	8	176	137
	7:45-8:00	38	3	211	164
	8:00-8:15	108	3	316	246
	8:15-8:30	134	5	445	346
	8:30-8:45	106	7	544	423
AM Participants	8:45-9:00	106	28	622	483
	9:00-9:15	98	33	687	534
	9:15-9:30	108	65	730	567
	9:30-9:45	118	85	763	593
	9:45-10:00	45	30	778	605
	10:00-10:15	50	60	768	597
	10:15-10:30	33	98	703	546
	10:30-10:45	30	70	663	515
	10:45 -11:00	65	85	643	500
	11:00 – 11:15	40	111	572	444
	11:15 – 11:30	23	85	510	396
	11:30 – 11:45	28	68	470	365
	11:45 – 12:00	50	83	437	340
Mix	12:00 – 12:15	45	101	381	296
	12:15 – 12:30	51	70	362	281
	12:30 – 12:45	54	47	369	287
	12:45 – 1:00	56	21	404	314
PM Participants	1:00 – 1:15	75	50	429	333
	1:15 – 1:30	77	27	479	372
	1:30 – 1:45	46	46	479	372
	1:45 – 2:00	42	23	498	387
	2:00 – 2:15	33	58	473	368
	2:15 – 2:30	23	42	454	353
	2:30 – 2:45	23	69	408	317
	2:45 – 3:00	56	29	435	338
	3:00 – 3:15	17	65	387	301
	3:15 – 3:30	23	58	352	274
	3:30 – 3:45	15	27	340	264
1st Shift Employees	3:45 – 4:00	10	28	322	250
	4:00 – 4:15	8	35	295	229
	4:15 – 4:30	22	40	277	215
	4:30 – 4:45	10	41	246	191
	4:45 – 5:00	8	51	203	158
	After 5:00 PM (est)	15	203	15	12
	TOTALS:	2073	2073	MAX:	605

Existing Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	344	31	employees
8:45-noon	316	359	AM participants
noon-1	100	116	mix
1-3:45 pm	224	257	PM participants
after 3:45	50	271	employees
All Day	1034	1034	Total

Future Summary of People In/Out by Primary Influence:			
Time Block	Entries	Exits	Primary Influence:
until 8:45	570	41	employees
8:45-noon	794	901	AM participants
noon-1	206	239	mix
1-3:45 pm	430	494	PM participants
after 3:45	73	398	employees
All Day	2073	2073	Total

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Youth Service Center
Seattle, Washington

Tax Parcels
2908700085
7949300095

Prepared for

King County Real Estate Services Section
King County Administration Building
500 Fourth Avenue, Room 500
Seattle, WA 98104

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April 23, 2010

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Figures

Work for this project, including preparation of this report, was performed in accordance with the American Society of Testing and Materials (ASTM) Standard E 1527-05, the Environmental Protection Agency (EPA) All Appropriate Inquiry (AAI) standards and requirements for conducting Phase I environmental site assessments, and with generally accepted professional standards that are currently practiced within this geographical area. This report is intended for the exclusive use of King County. This report is not meant to represent a legal opinion. No other warranty, express or implied, is made. Any use of this report made by third parties, or any reliance on or decisions made based on it, is the responsibility of that third party. Herrera accepts no responsibility for damages incurred by any third party resulting from decisions made based on this report. This report is based only upon available information and records.

Introduction

Involved Parties

Herrera Environmental Consultants, Inc. (Herrera) (see Appendix A for assessor resume) has completed a Phase I Environmental Site Assessment (ESA) for the Youth Service Center (YSC) property, located at 1211 East Alder Street in Seattle, Washington 98122 (Figure 1). The work was conducted under On-Call Environmental Hazard Services Procurement Contract No. B21945B, between King County and Herrera. The assessment was performed prior to renovation of the property to determine the potential for presence of hazardous substances prior to construction. King County is the property owner.

Purpose

The purpose of the Phase I ESA was to evaluate the likelihood for presence of recognized environmental conditions at the Site. The term *recognized environmental conditions* (RECs) means the presence or likely presence of regulated hazardous or dangerous wastes and/or substances, including petroleum products, under conditions that indicate an existing release, a past release, or a material threat of a release into the structures of the property or into the ground, ground water, or surface water of the property. Hazardous or dangerous wastes and/or substances and release reporting requirements are defined by the Washington State Model Toxics Control Act (MTCA) regulations (Ecology 2007) and the Washington Dangerous Waste regulations (Ecology 2004).

Scope of Work

This Phase I ESA was performed on behalf of King County Facilities Management Division in general accordance with American Society of Testing Materials (ASTM) Standard E 1527-05 (ASTM International 2005) and the U.S. Environmental Protection Agency (U.S. EPA) All Appropriate Inquiry (AAI) standard (40 CFR Part 312). The Phase I ESA scope of work included the following subtasks:

- Review of readily available information regarding current uses of the properties and their surroundings
- Review of readily available information from various sources with respect to the historical uses of the properties, including aerial photographs, Sanborn fire insurance maps, historical maps, and other resources

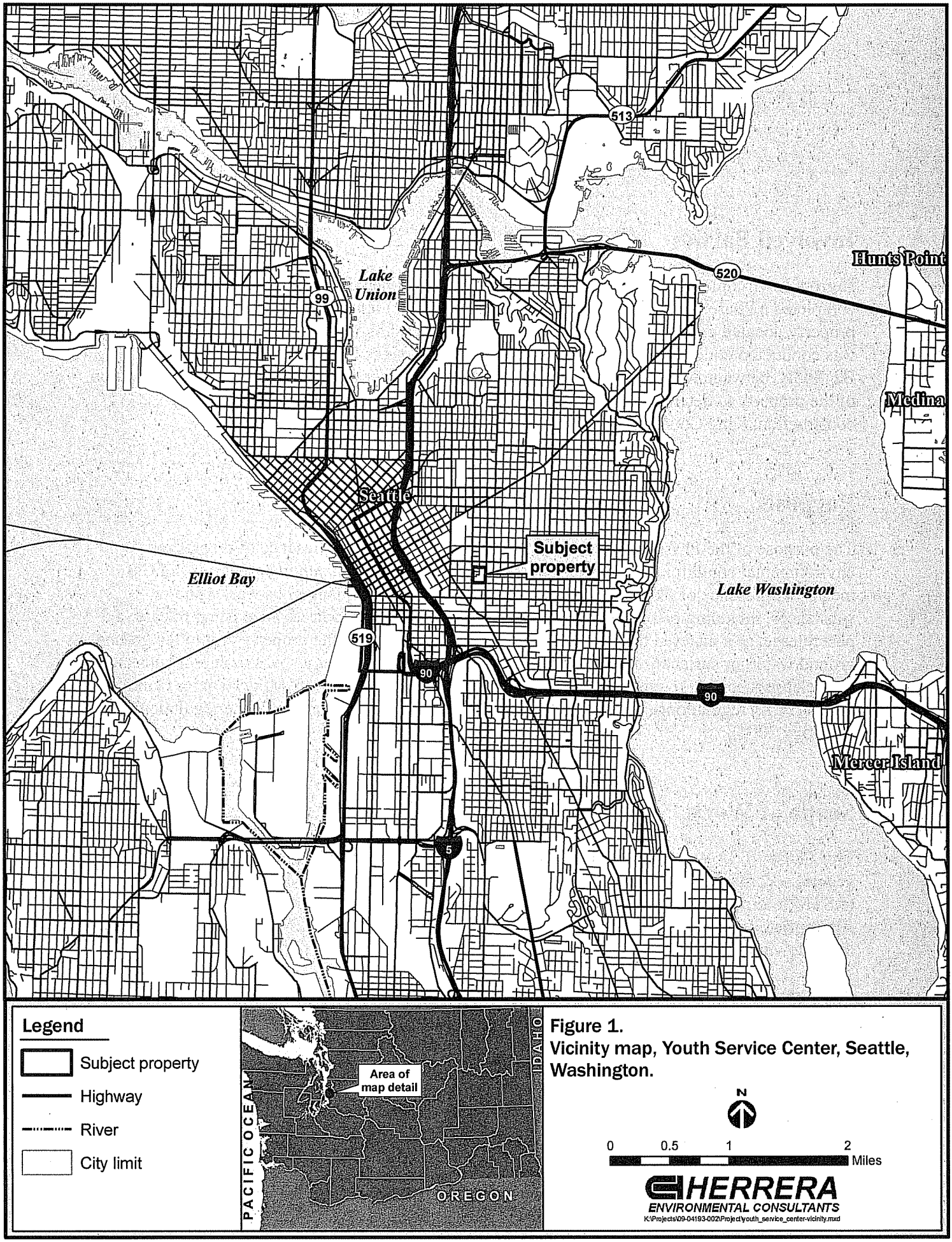


Figure 1.
Vicinity map, Youth Service Center, Seattle, Washington.

- Review of federal, state, and local environmental database records identifying properties with known or suspected environmental conditions
- Conduct a visual reconnaissance of the property and cursory reconnaissance of the immediate site vicinity to observe existing conditions, and to help identify potential or actual environmental impacts posed by hazardous materials
- Conduct an interview with the subject property owner and/or manager, as well as neighboring property owners, if available.
- Evaluate whether conditions exist that might result in onsite migration from offsite sources
- Evaluate whether conditions exist that might result in offsite migration of onsite contaminants by air emissions, ground water, or other media.

The scope of this project did not include an audit of environmental regulatory compliance issues or permits, wetland delineation, or collection and testing of environmental samples, including those for radon gas, lead-based paint, polychlorinated biphenyls (PCBs), asbestos, soil, and/or groundwater. A separate hazardous building materials survey was conducted concurrently with this assessment and is reported on separately.

Site Description and Physical Setting

Site Description and Physical Setting

The site consists of two parcels covering at total of 8.59 acres, located in the south central portion of Section 41, Township 25 North, Range 4 East of the Willamette Meridian, in King County. The two parcels are identified by Tax ID numbers 2908700085 and 7949300095. A site vicinity plan, including the subject property, is presented in Figure 2.

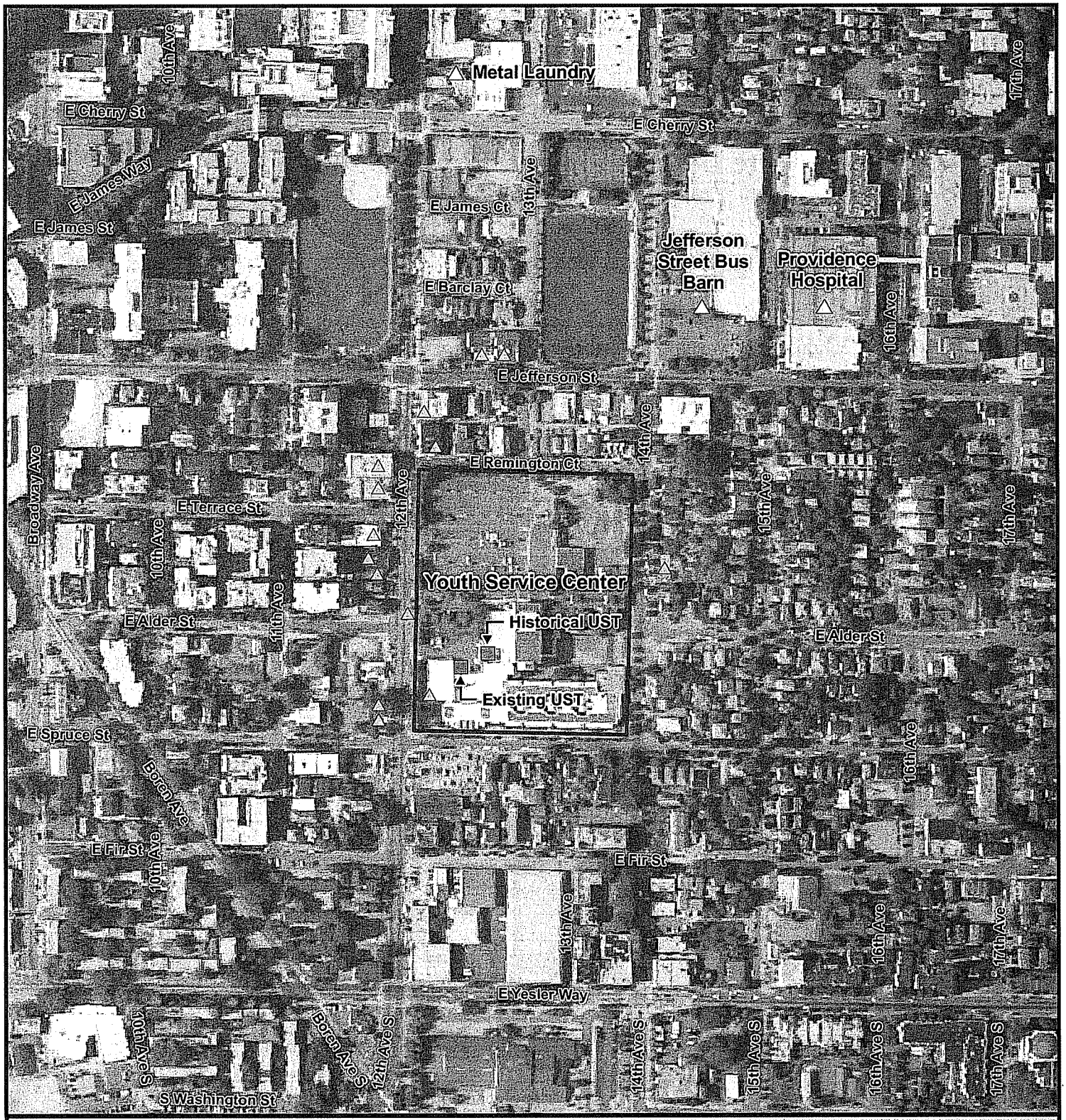
The subject property is situated at latitude 47.59909 North and longitude -122.33136 West on land that slopes down to the south from approximately 260 to 220 feet above mean sea level (EDR 2010). The site is currently used as a juvenile detention center by King County. Approximately 65 percent of the site is covered by impervious surfaces that include building roofs and paved parking areas. Buildings cover approximately 35 percent of the property; the remainder is composed of parking lots, paved walkways, and lawn/landscaped areas. Catch basins in the paved areas drain surface water to the City stormwater system. The site is bordered by residential and commercial/industrial properties on all sides.

Asset Description

King County property records indicate the following:

Building Number	Building Area (ft^2)	Building Construction Date	Building Type	Current Use	Heating System
1	90,792	1951	2 story reinforced concrete	Cafeteria, hospital, gymnasium	Package unit
2	64,500	1971	6 story reinforced concrete	Office and court	Package unit
3	40,144	1971	2 story reinforced concrete	Youth center dormitory	Package unit
4	30,750	1974	2 story reinforced concrete	Youth center dormitory	Package unit
5	4,459	1970	1 story reinforced concrete	Gymnasium	Package unit
6	4,108	1968	2 story reinforced concrete	Indoor swimming pool room	Package unit
7	95,719	1990	2 story masonry	Office, jail, gymnasium	Package unit

Source: King County 2010.



Legend

- Subject property
- △ Reported release site (see Table 2)
- △ Historical site of concern (see Table 3)
- ▩ Underground storage tank (onsite)

Figure 2.
Site map, Youth Service Center, Seattle, Washington.

N

0 175 350 700 Feet

HERRERA
ENVIRONMENTAL CONSULTANTS

Aerial photograph: USDA, 2009

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Regional and Site Geology and Hydrogeology

Geology

The subject property is located within the southern portion of the Puget Sound Lowland physiographic region. The Puget Sound Lowland has undergone physiographic and depositional changes due to at least five glacial episodes. The last glaciation that occurred in the region was the Vashon Stade of the Fraser Glaciation, which ended approximately 13,500 years ago. The advance of the Vashon Glacier deepened and widened the north/south trending valleys situated between the Olympic Mountains and the Cascade Range in western Washington State. In the Seattle area, the Vashon Stade is represented by four stratigraphic units (from oldest to youngest): Lawton Clay, Esperance Sand, Vashon Till, and Vashon recessional deposits that make up the Vashon Drift (Galster and Laprade 1991).

As the Vashon glacial lobe advanced south and blocked the northern portion of the Puget Sound basin, a lake was formed and fine-grained sediments were deposited. This glaciolacustrial deposit, known as the Lawton Clay, is reported to be present in the Seattle area as high as 150 feet above mean sea level. A fine- to medium-grained sand unit was deposited above the Lawton Clay by meltwater streams issuing from the advancing ice sheet as it neared the Seattle area. This sand unit is called the Esperance Sand Member. The Lawton Clay and Esperance Sand are sometimes intermixed and interbedded, and the contact between the two soil types may be gradational. Both of these deposits were overridden by an estimated 3,000 feet of ice, which consolidated them into hard or dense layers. A mantle of the Vashon till was deposited on top of the Esperance Sand and Lawton Clay.

The subject property likely rests on Vashon glacial till and outwash sediments. Glacial till typically consists of a heterogeneous mix of gravelly sand, with scattered cobbles and boulders in a clay/silt matrix. It is very dense and is locally referred to as hardpan. Excavation can be difficult due to its compact nature (Sound Transit 1999).

Regional and Site Hydrology (Surface Water, Wetlands, Stormwater Runoff

The subject property sits at the center of a north-south trending trough, with the potential to accept surface flow from a wide arc, extending from the northwest, swinging through the north to the northeast. Surface water leaves the site to the south. Surface flow typically is intercepted by the City stormwater collection system, so that only site runoff comes onto the property; however, historical intense rainfall events have resulted in significant site flooding. There are no wetlands or surface water bodies mapped in the vicinity of the subject property.

Hydrogeology (Groundwater)

Groundwater in the Seattle area generally occurs above the Esperance Sand/Lawton Clay contact and emerges along hillsides as springs. Limited groundwater may be found in the Vashon till as

perched layers. Groundwater is primarily recharged by direct infiltration and seepage from surface waters, precipitation, and surface runoff. The likely direction of regional groundwater flow beneath the subject property is toward the northwest and Puget Sound. Based on surface topography, shallow groundwater likely flows to the south.

No monitoring wells or soil boring logs were readily available for the subject property and immediate vicinity to evaluate ground water conditions. Because of the location of the subject property in a minor valley and variable upslope and downslope conditions, sites to the northwest, north, and northeast of the subject property that may be crossgradient have been considered potentially upgradient.

Environmental Database Review

Regulatory Agency Databases

A review of regulatory agency records was conducted for the property and surrounding area to identify known or suspected sources of contamination that could adversely impact the subject properties (EDR 2010). Records were obtained using Environmental Data Resources, Inc. (EDR), a commercial database service that searches U.S. EPA and Washington State Department of Ecology (Ecology) records. The commercial database search report was reviewed for accuracy of site locations and was modified appropriately. Table 1 provides a summary of the databases reviewed; the complete commercial database search report is included in Appendix B with figures identifying locations of the reportable sites. The search radii are based on a starting point situated at the center of the property. Each site located in the search was assigned the individual identifier (ID code) shown in Table 2.

Table 1. Regulatory database source lists.

Agency	List Acronym/ID [a]	Description	Search Radius	Number of Sites Located
U.S. EPA	NPL	National Priority List	1 Mile	1
U.S. EPA	CORRACTS	RCRA Corrective Actions	1 Mile	0
Ecology	CSCSL/CSCSL-NFA	Confirmed and Suspected Contaminated Sites List/No Further Action	1 Mile	49
U.S. EPA	Delisted NPL	Delisted National Priority List	1/2 Mile	0
U.S. EPA	CERCLIS/NFRAP	Sites Currently Under Review	1/2 Mile	2
Ecology	HSL/SHWS	CSCSL sites scored by Ecology	1/2 Mile	10
U.S. EPA	TSDF	Permitted RCRA Treatment, Storage, and Disposal Facilities	1/2 Mile	0
Ecology	LUST	Leaking Underground Storage Tank Sites	1/2 Mile	16
Ecology	ICR/VCP	Independent Cleanup Report/Voluntary Cleanup Program	1/2 Mile	49
Ecology	SWLF	Permitted Solid Waste Landfills, Incinerators, or Transfer Stations	1/2 Mile	0
Ecology	Brownfields	Local Brownfields	1/2 Mile	5
Ecology	UST	Regulated Underground Storage Tanks	1/8 Mile	1
U.S. EPA	ERNS	Emergency Response Notification System	0 Mile	0
U.S. EPA	RCRA-LQG	RCRA Registered Large Quantity Generators of Hazardous Waste	0 Mile	0
U.S. EPA	RCRA-SQG	RCRA Registered Small Quantity Generators of Hazardous Waste	0 Mile	0
Ecology	SPILLS	Reported Spills	0 Mile	0

RCRA = Resource Conservation and Recovery Act.

[a] See Appendix B for definitions of database acronyms.

Table 2. Summary of sites with known or suspected environmental conditions based on regulatory record searches, Youth Service Center property.

Site Name	Site Address	REC [a] Y/N	Justification	Distance [b]	ID Code	Type	Condition	Contaminant	Media
KING CNTY YOUTH SERVICES	1211 E ALDER ST	Y	Existing UST	Onsite	A1, A2, A3	FINDS, UST	Generator fuel storage, no reported release	Diesel fuel	NA
CAPITOL HILL ARCO	427 12TH AVE	N	No reported release	Approx 500 feet northwest	D13	FINDS, UST	Petroleum fuel storage in three USTs	Petroleum products	NA
TD AUTO BODY & REPAIR	1209 E FIR ST	N	Downgradient from site	Approx 500 feet south	E19	FINDS, CSCSL	Petroleum release reported, awaiting remedial action	Petroleum product	Soil
B & B AUTO REPAIR SEATTLE	151 12TH AVE	N	Downgradient from site	Approx 500 feet south	E20	UST	Petroleum fuel storage in two USTs	Petroleum products	NA
151 12TH AVE	151 12TH AVE	N	Downgradient from site	Approx 500 feet south	E21	LUST, SPILLS	Spill reported	Petroleum products	Unknown
JEFFERSON STREET BUS BARN	1398 E. JEFFERSON ST.	N	Distance from site	Approx 500 feet northeast	G25, G26	FINDS, CSCSL, ICR	Tank release	Petroleum product	Soil
FORMER NU WAY CLEANERS III	117 12TH AVENUE	N	Downgradient from site	Approx 500 feet south	H29	BROWNFIELDS	Historical dry cleaner releases	Petroleum products, solvents	Soil, groundwater
PROVIDENCE HOSPITAL	1506 JEFFERSON ST.	N	Distance from site	Approx 750 feet northeast	30	ICR	Tank release	Petroleum product	Soil
BLUE WHALE/SEATTLE UNIVERSITY	610 13TH AVE.	N	Distance from site	Approx 900 feet north	N56	UST, LUST, ICR	Tank release, reported cleaned up	Petroleum products	Soil
METAL LAUNDRY INCORPORATED	614 12TH	N	Distance from site	Approx 1,000 feet north	65	CSCSL, HSL	4 USTs removed in 1996	Solvents	Soil, groundwater

Notes:
[a] RECs are "recognized environmental conditions" listed in the Conclusions section of this report and are the outcome of the entire Phase I ESA discernment process.
[b] Distance of the listed site relative to the subject property, as determined by area reconnaissance.
FINDS Facility Index System/Facility Registry System
CSCSL Confirmed and Suspected Contaminated Sites List
ICR Independent Cleanup Report
LUST leaking underground storage tank
UST underground storage tank

No contaminant release has been reported for the subject property; the property is listed only on the state underground storage tank (UST) database.

A review of the EDR database search report, including sites listed in the orphan site summary, identified two sites with documented releases and one site (Capitol Hill ARCO) that manages hazardous materials in significant quantities located within a 1/8-mile radius and upgradient of the Site. These are discussed below.

Known or Suspected Contaminant Releases

The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database contains data on potentially hazardous waste sites that have been reported to the EPA by states, municipalities, private companies, and private persons pursuant to Section 103 of CERCLA. CERCLIS sites designated as "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites include those where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the National Priority List (NPL), or the contamination was not serious enough to require Federal Superfund action or NPL consideration. One site was identified within one mile of the subject property. The Lower Duwamish Superfund site is actually located more than 1 mile downgradient from the subject property and poses no potential to impact the YSC.

The Confirmed and Suspected Contaminated Sites List (CSCSL) compiled by Ecology records contaminant release sites that may or may not already be listed on the CERCLIS list. CSCSL sites designated as "No Further Action" are not deleted from the database when cleanup activities are completed; instead, a NFA code is entered based upon the type of NFA determination issued for the site. Three sites were identified within 0.5 mile and upgradient of the subject property. The Metal Laundry site is located approximately 1,000 feet north and the Jefferson Street Bus Barn and Providence Hospital sites are located approximately 500 feet and 750 feet northeast, respectively. The Metal Laundry site is discussed further below; the other two sites experienced petroleum releases to soil and were reportedly cleaned up in the 1990s.

The Leaking Underground Storage Tank (LUST) list compiled by Ecology includes reported active and inactive leaking underground storage tanks. A review of the LUST list revealed one site located within 0.5 mile and upgradient of the subject property. The Blue Whale/Seattle University site experienced a petroleum release to soil that was reportedly cleaned up in the 1990s.

The Washington State Voluntary Cleanup Program (VCP), and its predecessor Independent Cleanup Reports (ICR), lists compiled by Ecology include remedial action reports received either from the owner or operator of a hazardous materials release site. These actions have been conducted without Ecology oversight or approval and are not under an order or decree. A review of the list revealed three sites within 0.5 mile and upgradient of the subject property. The

Jefferson Street Bus Barn, Providence Hospital, and Blue Whale/Seattle University sites have reportedly been cleaned up, and are unlikely to impact the subject property.

Other Relevant Sites Considered

The Underground Storage Tank (UST) register compiled by Ecology includes registered active and inactive underground storage tanks. A registered underground storage tank is defined in Underground Storage Regulations Chapter 173-360 of the Washington Administrative Code (WAC). Heating oil tanks are not regulated or registered. A review of the UST list revealed one site within 0.25 mile and upgradient of the subject property. Capitol Hill ARCO manages three USTs and has not reported any releases to the environment.

Site File Review Summary

Summarized below is the Ecology regulatory site file and EDR report information reviewed on the major property of concern identified in the regulatory database. It is not considered a REC.

Metal Laundry, 614 12th Avenue

This site is located approximately 1,000 feet north of the subject property. It has operated as dry cleaner and metal plating facilities in the past. Solvents have been released to soil and groundwater, resulting in a plume that has reached the southern property boundary. Monitoring wells installed onsite indicate the presence of floating product near the center of the property, with the leading edge of the plume extending beneath East Cherry Street (RETEC Group 2007). Due to distance from the YSC, this site is not considered a REC.

Historical Records Review

The report sections below describe historical land uses and explain the reasons for including or omitting the associated suspect environmental conditions from further consideration as concerns for the subject property.

Maps, Directories, and Other Sources

The history of land use at and surrounding the Site was evaluated to identify past uses with potential adverse effects on environmental conditions, primarily through the use of potentially hazardous materials. Historical information was obtained by reviewing readily available public agency and library documents.

The following site history is based on a compilation of information obtained from these sources:

- Property and building characteristics information obtained from the King County parcel viewer website (King County 2010)
- Sanborn Library maps obtained from EDR, Inc. (2010) for years 1893, 1905, 1949, 1950, and 1969 (Appendix C)
- Aerial photographs obtained from EDR, Inc. (2010) for years 1956, 1965, 1968, 1977, 1980, 1985, 1990, and 2006 (Appendix D)
- Seattle city directories obtained for 1937, 1940, 1943-45, 1948-1949, 1951, 1953, and 1960
- King County tax assessor records (WSA 2010).

Site History

Prior to development as the YSC, the subject property was developed as single family and apartment housing. The 1940 City Directory identified Lasalle Oil Burner Co on the subject property (not in the 1937 or the 1943 directories). The 1949 Sanborn fire insurance map indicates the property bounded by East Spruce Street, 12th Avenue, East Alder, and 14th Avenue primarily with houses and apartments, with one auto repair shop on the southwest corner of the YSC property. The 1950 Sanborn fire insurance map indicates this entire area without buildings. King County building records indicate that the first YSC building was erected in 1951, with additions made in 1968, 1970, 1971, 1974, and 1990. Tax Assessor information identified the YSC as having an oil burner in the 1951 record. The 1956 aerial photograph indicates the Spruce Wing as built out. Both the 1965 aerial photograph and Sanborn fire insurance map indicate the YSC

configuration as unchanged. The 1977 aerial photograph indicates development of the site to include the tower, the Alder Wing to the northeast, and the large parking lot to the northwest. Since then, modifications to the buildings have occurred, primarily within the approximate 1977 footprint. Development of the property north of East Alder Street required the demolition primarily of houses and apartments, according to the 1969 Sanborn fire insurance map.

Adjacent Site History

The YSC has historically been surrounded by single family houses, apartments, and small commercial businesses. Numerous auto repair and clothing cleaner facilities have been located adjacent to the YSC property over the years (Table 3). These businesses have no records of chemical releases and do not appear on regulatory databases; however, they have been identified by EDR from historical information sources. The distances provided in Table 3 were measured from the address cited to the YSC building footprint, as a measure of potential to impact the remodel based on groundwater as a transport mechanism. All sites are considered RECs because they are nearby and upgradient of the YSC; however, their potential to impact the property is considered to be small.

Existing Related Reports

Following review of available electrical, mechanical, and site civil drawings for the YSC, King County provided historical building electrical drawings from 1969, 1989, and 1990 (Appendix E). The 1969 drawing indicates the presence of a 1,000 gallon diesel oil UST that appears to be located beneath the southwest corner of the existing tower, with fuel lines extending northwest to a day tank and generator in the building. The 1990 as-built drawing indicates an "existing fuel tank" at the same general location with fuel lines extending northwest into the building; the tank and lines are labeled "to be removed". The 1990 drawing also indicates a buried fuel tank outside the northwest corner of the Spruce Wing, with fuel lines extending south into the building supporting a day tank. The 1989 Site Plan indicates an engine generator inside the building at this location. Mechanical and site civil drawings did not indicate the presence of features associated with hazardous substances.

Interview with Local Government Officials and Others

According to the Seattle Fire Marshal, there are no records of tank removal at the YSC on file (Seattle 2010).

Table 3. Summary of sites with suspected environmental conditions based on historical activities, Youth Service Center property.

Site Name	Site Address	REC [a] Y/N	Justification	Distance [b]	ID Code	Type	Contaminant	Media
HILL S AUTO REPAIR	314 12TH AVE	Y	Distance to site	Approx 150 feet west	B4	Historical Auto Stations	Petroleum products	NA
TETS AUTO REPAIR	31712TH AVE	Y	Distance to site	Approx 150 feet west	B5	Historical Auto Stations	Petroleum products	NA
KONO GARAGE	321 12TH AVE	Y	Distance from site	Approx 150 feet west	B6	Historical Auto Stations	Petroleum products	NA
BOB S AUTO REPAIR	305 12TH AVE	Y	Distance from site	Approx 150 feet west	B7	Historical Auto Stations	Petroleum products	NA
FULLER SERV U DRY CLEANERS	320 14TH AVE	Y	Distance from site	Approx 150 feet west	8	Historical Cleaners	Solvents	NA
NW PERKINS MOTORS	217 12TH AVE	Y	Distance from site	Approx 50 feet west	C9	Historical Auto Stations	Petroleum products	NA
JOHNSON PAUL R	212 12TH AVE	Y	Distance from site	Approx 50 feet west	C10	Historical Auto Stations	Petroleum products	NA
KONO Y TKIO	407 12TH AVE	Y	Distance from site	Approx 350 feet northwest	D11	Historical Auto Stations	Petroleum products	NA
FRANS BROS	417 12TH AVE	Y	Distance from site	Approx 350 feet northwest	D12	Historical Auto Stations	Petroleum products	NA
LAW S CLEANERS AND HATTERS	452 12TH AVE	Y	Distance from site	Approx 450 feet northwest	D15	Historical Cleaners	Solvents	NA
ROBERTSON S CLEANERS	460 12TH AVE	Y	Distance from site	Approx 450 feet northwest	16	Historical Cleaners	Solvents	NA
LEE WING HAND LAUNDRY	1222 E JEFFERSON ST	Y	Distance from site	Approx 450 feet northwest	F22	Historical Cleaners	Solvents	NA
DONG GOM	1220 E JEFFERSON ST	Y	Distance from site	Approx 450 feet northwest	F22	Historical Cleaners	Solvents	NA
Auto Repair	320 12th AVE	Y	Distance from site	Onsite	Sanborn	Historical Auto Repair	Petroleum products	NA

Notes:
[a] RECs are "recognized environmental conditions" listed in the Conclusions section of this report and are the outcome of the entire Phase I ESA discernment process.
[b] Distance of the listed site relative to the subject property buildings, as determined by area reconnaissance.

Results of Site Reconnaissance

On March 30, 2010, a Herrera representative conducted visual reconnaissance of the subject property, and an interview was conducted with the facility maintenance supervisor, Peggy Wickard (Appendix F). The purpose of the site visit was to identify visible indications of hazardous or potentially hazardous substances historically used or currently used, generated, stored, or disposed of on the subject property and on nearby properties. Site reconnaissance notes are provided in Appendix G. A general visual reconnaissance of adjacent properties was also conducted during the site visit, restricted to what could be observed from public areas.

Site Setting and Observations

The subject property includes the seven structures described in the Asset Description section earlier in this report. All of the buildings were built on poured concrete foundations and are heated by steam delivered via underground piping from the Seattle Steam Company.

Only the basement area beneath the 6-story courtroom/office tower building and a tunnel associated with the Alder wing was observed during the site visit. Approximately 100 gallons of paint, paint thinner, and drywall mud compound in 1-gallon and 5-gallon containers was observed stored in the tunnel associated with the Alder wing; no stained concrete or indications of spills was observed where the paint was stored. A small quantity of approximately 15 paint containers were also observed on a cart near the kitchen loading dock; according to the maintenance supervisor the paint is awaiting pickup by a contracted disposal company. The maintenance supervisor stated that there are several janitor closets with floor drains located throughout the facility buildings; stains observed at these locations in the past are believed to be associated with typical mop water and rust (the facility currently uses Emerald Green biodegradable cleaners).

One of the two boiler rooms located at the facility was observed. Numerous pipes wrapped in insulation, heat exchangers, and an air compressor was observed in the room. Some water/condensate ponded on the floor was observed, but no stains were present. An asbestos survey underway at the facility will include testing samples of the pipe insulation in the boiler rooms (reported separately).

Vicinity Reconnaissance

Areas surrounding the subject property gently slope to the south-southeast. The subject property is surrounded on all sides by residential and a few commercial properties. An ARCO gas station was observed upgradient to the northwest of the subject property at the intersection of East Jefferson Street and 12th Avenue. An auto repair facility, H&I Automotive, was also observed at 317 12th Avenue.

Miscellaneous Environmental Concerns

Polychlorinated Biphenyls

Since the early 1920s, electrical transformers, fluorescent light ballasts, and other electrical equipment have used mineral oil mixed with varying quantities of PCBs as dielectric fluid. The U.S. EPA currently regulates PCBs through the Toxic Substances Control Act of 1976 that dictates the use, labeling, storage, record-keeping, and disposal of PCBs (40 Code of Federal Regulations [CFR] 761). Transformers and equipment manufactured after July 1979 are required to be PCB-free and labeled accordingly.

Five electrical transformers mounted on top of three utility poles were identified adjacent to the west side of the subject property along 12th Avenue. Based on the transformer serial numbers, all were manufactured in 1985 and contain less than 50 parts per million PCBs (Dinehart 2010). Information for transformers observed adjacent to the east, and cross-gradient or down-gradient of the subject property along 14th Avenue was not obtained.

Asbestos-Containing Materials

Hazardous building material survey reports are being prepared under separate cover, based on surveys conducted concurrently with this assessment.

Lead-Based Paint

Lead was a common additive in most interior and exterior oil-based paints prior to the 1950s. In the early 1950s, other ingredients became more popular, but some lead pigments, corrosion inhibitors, and drying agents were still used. A voluntary standard was adopted in 1966 to limit the lead content in interior paint; however, buildings constructed in the 1960s and 1970s are not necessarily free of lead-based paint. Up to 1977, exterior paints continued to contain significant amounts of lead. After 1977, lead content in paint was limited to no more than 0.06 percent.

Hazardous building material survey reports are being prepared under separate cover, based on surveys conducted concurrently with this assessment.

Findings

Herrera has performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM Practice E 1527 and U.S. EPA AAI standards of the property at 1211 East Alder Street. No exceptions to, or deletions from, this practice were required during the assessment. This assessment has revealed evidence of recognized environmental conditions in connection with the subject property.

The subject property consists of two parcels covering 8.59 acres. One parcel is used primarily as a parking lot and the other primarily supports the YSC buildings. One emergency generator diesel fuel UST exists on the property. It is a double wall steel tank registered with Ecology, complies with current regulations, and features an electronic leak detection system; no evidence of a leak has been identified. A diesel fuel UST was historically used to support emergency generator use in the basement on the west side of the tower. City Directory information indicates that between 1937 and 1943, the Lasalle Oil Burner Company was located near the southwest corner of the YSC property and the 1949 Sanborn fire insurance map indicates that an auto repair shop was located a little further north on the property. After significant site development, it is unlikely that residual contamination associated with either of these businesses still exists. Tax assessor information for 1951 indicates the use of an oil burner onsite; other information indicates that building heat has always been supplied by the Seattle Steam Company.

A hazardous building materials survey currently being conducted throughout the property buildings will identify existing asbestos, lead-based paint, PCBs, and mercury, if they exist.

An environmental regulatory database search revealed one site nearby and upgradient of the YSC with a release of chemicals to groundwater. Solvent releases from the Metal Laundry site has resulted in minor offsite migration that is not expected to impact the YSC. Two other sites located nearby and upgradient of the YSC have released petroleum products to soil and were reportedly cleaned up in the 1990s. The Capitol Hill ARCO gas station identified at 427 12th Avenue manages petroleum products in USTs, but has not reported a release. No other sites of concern were identified on regulatory databases.

Thirteen sites of concern were identified as historical auto stations or historical cleaners (Table 3 and Figure 2). These sites operated in the past, prior to release reporting requirements. It is possible that any of these historical sites have released chemicals to the environment; it is unknown whether they have impacted the YSC. These sites are considered RECs; however, the chance of impacts to the subject property is minor. It is also possible that homes located on the YSC property prior to development may have used heating oil stored in USTs.

Based on the results of this Phase I ESA, there is a low likelihood of contamination present on the site; however, it would be prudent to collect soil samples from areas prior to excavation that coincide with activities related to historical hazardous substance use (e.g. historical UST, Lasalle Oil Burner Company, and auto repair facility).

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR §312.10. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. The Assessor's resume is provided in Appendix A.

Peter Jowise

Principal Waste and Energy Services

Data Gaps

There were no significant data gaps affecting the ability of the environmental professional to identify conditions indicative of releases or threatened releases.

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Children and Family Justice Center

Courthouse Replacement Pre-Design Phase

The Design Consultants presented four concepts for the YSC site master plan to the Superior Court Children and Family Justice Center Construction Committee on 3/26/10. They invite your feedback on design concepts in the following format. In order to respond to your comments prior to Community presentation we request your replies by close of business 4/2/10.

A) Please prioritize the following site design objectives, with #1 as the most important issue.

SITE DESIGN OBJECTIVES

1. SITE PHASING LOGIC
   – Continued Court & Detention Operation
2. HIERARCHY OF SECURITY ZONING
   – Distinct zones for Public, County, Staff, Participants, Detention
3. SEPARATION OF CIRCULATION PATHS
   – Public, Judicial officers/Staff, Police, Services
4. SITE ACCESS, CIRCULATION AND PARKING/DEDICATED PEDESTRIAN CIRCULATION
   – Understandable flow and orientation, efficient and simple
5. FUTURE EXPANSION CAPACITY
6. DEDICATED OPEN SPACE
   – Neighborhood, Visitors, Staff
7. INCORPORATE VARIATION OF SITE ZONES
   – Create Separation and Open Space
8. OPTIMIZE CO-DEVELOPMENT
   – Retail, Housing, Office, Arts, Etc.
9. INTEGRATION OF PUBLIC ART
10. ZONING RESTRICTIONS
    – Neighborhood Commercial, L3 Residential

COMMUNITY OBJECTIVES October 2009

1. Improve interface between institution and community

- Traffic calming measures on 14th ave.
- Maintain scale and character of residential development on 14th ave.
- Maintain Open Space & Whale Fin sculpture
- Mixed-use pedestrian development NW corner
- Below grade parking

B) In your judgment, note the design option(s) that best fulfill each of the design objectives.

SITE DESIGN OBJECTIVES

Option

2 OPTIMIZE CO-DEVELOPMENT
– Retail, Housing, Office, Arts, Etc.

2 INCORPORATE VARIATION OF SITE ZONES
– Create Separation and Open Space

2 HIERARCHY OF SECURITY ZONING
– Distinct zones for Public, County, Staff, Participants, Detention

2 SITE ACCESS, CIRCULATION AND PARKING
– Understandable flow and orientation, efficient and simple

2 SEPARATION OF CIRCULATION PATHS
– Public, Judicial officers/Staff, Police, Services

2 DEDICATED PEDESTRIAN CIRCULATION

2 DEDICATED OPEN SPACE
– Neighborhood, Visitors, Staff

2 INTEGRATION OF PUBLIC ART

2 SITE PHASING LOGIC
– Continued Court & Detention Operation

NA ZONING RESTRICTIONS
– Neighborhood Commercial, L3 Residential
The court does not have sufficient information to comment on the zoning restrictions.

2 FUTURE EXPANSION CAPACITY

COMMUNITY OBJECTIVES October 2009

Option

2 Improve interface between institution and community
- Traffic calming measures on 14th ave.
- Maintain scale and character of residential development on 14th ave.
- Maintain Open Space & Whale Fin sculpture
- Mixed-use pedestrian development NW corner
- Below grade parking

C) Comments:

The CFJCCC ranked the facility options as follows:

1. Option 2 (Concept B)
2. Option 1(Concept A)
3. Option 3 (Concept A)
4. Option 4 (Concept C)

The CFJCCC decided that <u>Option 2 (Concept B)</u> best satisfies the site design criteria for the following reasons:

- Relocating the open space to the center of the site integrates the park into the campus and creates a more secure environment. Visibility across the site is enhanced.

- The inclusion of a turnabout in Option 2 also enhances security by slowing traffic. This design provides a convenient means for court clients to be dropped off and picked up within clear sight of the main entry and without impeding the flow of traffic through the neighborhood and to the private development.

- The provision of separate access streets for court clients and the general public reduces the potential for traffic congestion at the front of the courthouse.

- Relocating the open space to the center of the site optimizes co-development through the provision of a park that may be used by court clients, housing tenants and retail customers. This increases the utility of the open space and the quality of the site as a whole.

- Option 2 provides a covered walkway connection for court clients between the parking garage and the courthouse entry. This is functional, and provides good line of sight for court security.

- Option 2 is the most aesthetically appealing of the four alternatives and improves the interface between the court and the community, a key community objective. It creates a town square atmosphere.

- Option 2 allows for the continuation of court operations onsite during construction.

Children and Family Justice Center

Courthouse Replacement Pre-Design Phase

Comments on Options 1, 3 & 4

- Leaving the park in its current location on the northeast corner of the site separates the open space from the remainder of the campus (Concepts A and C). Visibility of the park from the courthouse is poor, and this may limit the safety/utility of the open space.

- Option 4 (Concept C) requires all court operations to move offsite for 3-4 years. This will create operating difficulties for the court in terms of the timely transfer of in-custody youth. The costs associated with performing large numbers of in-custody transfers must be taken into account.

- Option 4 (Concept C) locates the main entry on the north side of the courthouse, on the single thru-street on the site. This creates a number of security concerns including:

    - increasing court clients' vulnerability to drive-by shootings;
    - increasing traffic congestion outside the courthouse as a result of shared-use by court clients and the general public;
    - requiring court clients to traverse a path from the parking garage to the main entry that is out of the line-of-sight of court security.

- (Concept C) Locating the entry on the north side of the facility, may compromise the value of the northwest quadrant of the site for developers in terms of retailers not wishing to be located directly across from the courthouse entry.

- The parking garage is very close to the courthouse under Option 4(Concept C). This could present a security threat in terms of providing access for a shooter and/or a bomb threat.

King County

King County Facilities Management Division (FMD)
Children and Family Justice Center
Pre-Design Report
12th Avenue Initiative Meeting

Meeting Summary
Prepared by Norton-Arnold & Company
May 11, 2010

Overview

The King County Youth Services Center (YSC) co-locates juvenile detention facilities, juvenile courts, and other related functions on approximately 10-acres on the southwestern edge of Seattle's Central District. The youth services courthouse is aged and desperately in need of replacement. As a result, King County has committed to raising the awareness of residents, property owners, and stakeholders about the forthcoming redevelopment, and recently provided them with an opportunity to comment during the technical pre-design phase.

King County Superior Court's priority is to build a new Children and Family Justice Center that can consolidate children and family law issues in one place. In March 2010, King County Facilities Management (FMD) hired the architectural firm of Kaplan McLaughlin Diaz (KMD) to conduct a site planning and pre-design effort. This effort builds upon earlier work done by Arai Jackson that included a campus capacity analysis for building a new courthouse, a proposal for development of a mixed-use office/retail structure and housing; and the enhancement of open space.

The priorities of the community and Superior Court will inform the process as King County moves forward with building plans. The community has identified its priorities for the Alder campus as:

- Aesthetic improvement of the entire property
- Retail space along 12th Avenue as part of a mixed use development
- Possible housing along the east side of the property
- Enhancement of open space
- Improved access through and around the campus
- Additional public transportation options and/or routes.

To date, the consulting team has given participated in three community meetings providing project updates to the public; one at the12th Avenue Initiative meeting on March 3, 2010, and one at the Squire Park Community Council on Saturday, April 10,

2010. On May 11, 2010, the consulting team hosted a community meeting dedicated to the project to collect public comments on the schemes currently under consideration by King County Council.

The following representatives attended some or all community meetings

Larry Gossett, *King County Councilmember*

Judge Michael Trickey, *King County Superior Court*
Judge Hilyer, King *County Superior Court*
Linda Ridge, *King County Superior Court*
Michelle Garvey, *King County Superior Court*
Paul Sherfey, *King County Superior Court*

Kathy Brown, *King County FMD*
Jim Burt, *King County FMD*
Leslie Harper-Miles, *King County FMD*
Gay Boyce, *King County FMD*

Carla Weinheimer, *KMD*
Chris Hellstern, *KMD*
Shanon Kearney, *Norton-Arnold & Company*
Stacy Smedley, *KMD*
Steve Johnson, *Johnson Architecture and Planning*

Meeting Format

This first community meeting took place at Seattle University's Alumni and Admissions Building on Tuesday, May 11 from 7 – 9p.m. King County's Facilities Management Division advertised the community meeting through a mailer to stakeholders and property owners within 500 feet of the property in April, flyering the neighborhood the week of the meeting, posting a project brief and event listing in the *Squire Park Newsletter*, and launching the project website and email address.

The meeting agenda included a welcome greeting, project overview, and presentation by the King County FMD, Superior Court, and the KMD team: Jim Burt, Judge Michael Trickey, Carla Weinheimer, Shanon Kearney, and Steve Johnson of Johnson Architecture and Planning. The presentation covered the following topics:

- Team member introductions
- Superior Court goals and vision
- Proposed project schedule
- Explanation of the Pre-Design phase
- A project overview including information such as physical context and known challenges
- Review of known community issues

- Review of preliminary redevelopment strategies

After the project presentation, King County FMD and Superior Court staff and the consulting team opened up the meeting for a Question & Answer session. Among some of the general questions posed were:

- Will the entrance be like the Federal Court with high steps and barricades?
- What are the height restrictions on the property?
- Does the County envision surface parking or underground parking?
- Are green spaces the same size in each plan?
- Does the County plan to sell any land?

After approximately twenty minutes, the room divided in half to provide community members with an opportunity to speak one on one with the County and consulting team representatives about their questions and concerns.

Summary of Community Comments

After the Q & A session, Shanon Kearney of Norton-Arnold & Company asked attendees if there were any priorities that needed to be taken into consideration for further developing the schemes for the Alder campus. Below are the general comments expressed by the community for the redevelopment of the Children and Family Justice Center.

General Priorities Noted by the Community:

- Be mindful of building scale and character.
    - A 14th Avenue neighbor expressed concern about increased density on the site at full build out because it could impact the current, much-appreciated open space area.
    - Make building a high LEED standard. Concern about toxin clean-up on site and proper removal of waste.
    - Create dense development. Make five over one to private development side.

- Provide public amenities.
    - Consider adding a domed lobby space like the one at courts building in Kent. The space can be used by the public for weddings and events during off hours and make a strong civic statement.

- Explore the possibilities of public green space.
    - One meeting attendee was very interested in the design possibilities of the open space in Alternative B. He suggested well developing the green space like the South Park blocks in Portland. He thought flanking the green space with the private development on both sides would help keep the space safer.

- Two neighbors directly north of the existing green space expressed concern about the open space design in Alternative B because police driving by on 14th Avenue would not be able to see in as easily. There are currently drug deals that occur along their block.
- One couple expressed concern that the central section of open space in Alternative B would be unsafe at night because there is no activity around it during that time.
- Provide play areas in community green space.
- Walk the campus at 2:00 am, as well as during "off hours," to get a perspective on design concepts that work 24 hours; 7 days per week.
- Many neighbors preferred the current location of the open space to the open space design in Scheme B.
- Create a more active park that would accommodate kids, dogs, walking, etc. Look at Powell Barnett Park located on Martin Luther King and Cherry as an example. A Starbucks grant funded the park renovation and it is now a vibrant place in the neighborhood.
- Landscaping is important. Better to plant tall trees rather than short bushes that people can hide and do drugs in.
- Maintenance of the park is very important.
- Schemes A and C are better designed for walkability and attracting different age groups.
- Perhaps public art would be better placed to the side rather the center. Also, consider uplighting art or adding park lighting.
- More access to park at 14th Avenue and E. Remington Court.
- Create a community open space and a court open space rather than separating spaces with private development.
- Combine forces with Seattle Parks and Recreation to maximize green space.

- Create a design that promotes security and operates well around the clock.
  - Make sure the design works for the community before, during, and after business hours.
  - Use design to deter bad behavior.
  - Keep light and activity on the campus during non-business hours for security reasons. Consider adding a neighborhood meeting room or small conference center that could be used by court, neighbors, and institutions.

- Need for parking and traffic studies.
  - Do not make parking accessible from 14th Avenue.
  - Study traffic impacts on 12th Avenue resulting from the site development.
  - Find a way to soften traffic impacts if the parking garage connects with 14th Avenue.

- Open parking garage to the community after 5p.m. to allow the neighborhood and Swedish and Harborview hospital workers to benefit from onsite parking.
- Consider establishing partnerships with the hospitals to provide shuttles for night staff.
- Carefully site and design the parking structure to be less ugly.
- Maximize the use of the garage beyond the courts.
- Concern about views to site especially towards a parking lot. Consider a green roof.
- Put parking in the center of site to eliminate "dead space" on abutting streets.

Next Steps

At the end of the meeting, Carla Weinheimer informed participants that the next community meeting would be contingent upon receiving County Council approval to have the project added to the November ballot. She reminded the community that the earliest possible start to the Schematic Design Phase, where the public could have the most input, would be fall or winter of 2010-11.

The project's communications team will continue to keep stakeholders and neighbors aware of any project updates through the website http://www.kingcounty.gov/ChildrenandFamilyJusticeCenter as well as through community newsletters and mailers as appropriate.

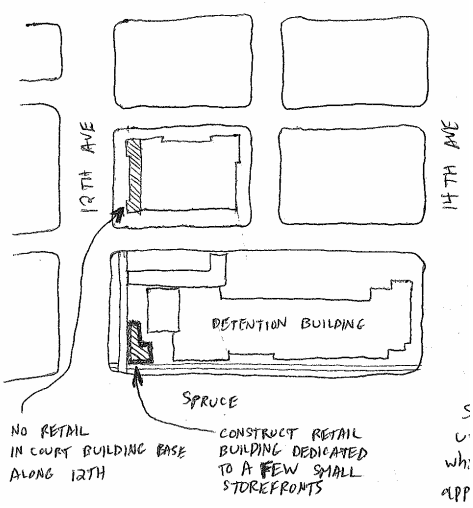
APPENDIX

Specific Community Comments

After the May 11th meeting, seven comment forms were received from meeting attendees. Their comments are listed below.

Comment #1

Generally I prefer Option B – the reconnection of Alder and the central green space are good directions to go in when starting schematic design. My worry, though, is that the block of 12th Avenue between Alder and Spruce streets is still going to be a tough space for pedestrians. It seems like there is still enough room to insert a small low-rise retail building at the SW corner of the detention building's block. This would shorten the pedestrian "dead space" along 12th Avenue by just enough to stitch together the portion of the 12th Avenue north of the site and south of the site, as well as making it easier to justify not inserting any retail space on the ground floor under the court building, which I think is the correct approach for this civic building.



Mark Stoner
The Pony Pub LLC
Peter Stoner Architects LLC
1221 E. Madison Street
Seattle, WA 98122
mark@stonerarch.com
206-979-0079

Comment #2

- Park must stay where it is
- Please consider how the space is used at night after workers have left
- Parking garage should stay in middle of complex as to not degrade the neighborhood or create dead space
- KC tried to remove park years ago and community wants it to stay
- Option A is best solution
- Want more retail along 12th
- Need more public transit on 12th so less cars need to be parked

Derek Harn
1318 E Remington Court
Dimsa43x@yahoo.com

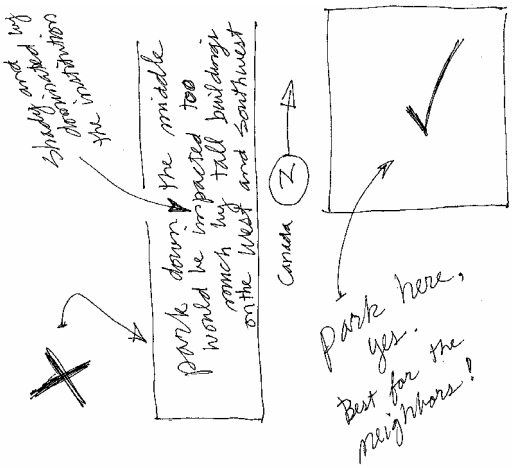
Comment #3

- Please no low-income housing in the "private-development" areas

Arthur S. Mason
450 14th Avenue
Seattle, WA 98122
asmaslow@yahoo.com

Comment #4

- Park down the middle would be impacted too much by tall buildings on the west and southwest
- Shady and dominated by the institutions (down the middle)
- Park here, yes. Best for the neighbors! (across the street)



Bill Shipple
914 13th Avenue
Seattle, WA 98122

Comment #5

- If Plan B is used, concern over closing off are to center & providing center open space as dangerous area at night for local drug traffickers.
- Correction might be to use Plan B but leave park space.
    - Architects might consider creating an "indoor park" with retail space with trees outlining the glass contained 1st floor and office/retail on upper floors. Possibly there could be the childcare or play facility.

Beth Maslow
450 14th Avenue
Seattle, WA 98122
bethmaslow@yahoo.com

Comment #6
Priorities

- Maintain park space in <u>current</u> location (14th Avenue & E. Remington Court)
- Keep parking structure off of any current open street. Consider accommodating additional parking and public access
- Increase retail space & local involvement in area.
- Consider light issues, this is a valley & light comes in <u>low</u>. Option B creates very dark situations and housing. Also consider sight lines of Mt. Rainier.

Overall

- Option A seems most community friendly. I am <u>strongly opposed</u> to Option B.

Thank you,
Lara Behnert

1318 E. Remington Court

Comment #7

- Generally, I do not see any plan that addresses the expressed preference of 12th Avenue community to expand open space next to Whale Fin – e.g. a band west along E. Remington Court.
- To maintain a pedestrian friendly environment along 12th Avenue between Alder Street and Spruce Street (and not stop the flow south for many feet) consider: 1) making the green space attractive and continuous with whatever is made attractive and usable by pedestrians in northerly sections (present parking lot); and 2) not building out toward 12th Avenue unless (and except if) that new addition to the Juvenile Detention facility is open to the public/community (and yet secure, of course).
- If you cannot find any way to phase the building additions construction during court operations, what use is offering this non-option? (I have been told tonight by a court officer that the main value is seeing what the cost differential would be. So to do it any acceptable way is costly – yes – so what!)

Long time active with 12th Avenue & Squire Park Community Council
John Oliver Perry
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