

**May 24, 2005**  
**GARFIELD HIGH SCHOOL**  
**COST SAVINGS IDEAS**

ON-SITE DEVELOPMENT	DIRECT COST ESTIMATED SAVINGS	ACCEPTED BY SSD	Rejected
1. Relocate chiller closer to building (adjacent to classrooms), (relocate parking as necessary) (chiller to have acoustical lid) (potential of adjacent classroom to have insulated glass)	(\$20,000.00)	0.00	-- -- --
2. Simplify chiller enclosure, change from CMU to metal	(\$5,000.00)	--	\$ (5,000.00)
3. Change cast-in-place concrete retaining wall (80%) along west edge of track to segmental retaining wall.	(\$16,000.00)	\$ (10,019.00)	--
4. Delete covered walk between historic buildings and PE/PAC (add small canopy at PE/PAC entry)	(\$135,000.00)	\$ (109,200.00)	
5. Simplify covered walk design. (Not included in total)	(\$55,000.00)		\$ (55,000.00)
6. Revise/simplify site lighting.	(\$50,000.00)	\$ (50,000.00)	
7. Delete reader board.	(\$20,000.00)	\$ (23,000.00)	
8. Reduce asphalt section from 2-1/2" to 2" thick at light-duty pavement.	(\$7,500.00)	\$ (8,514.00)	
9. Change west edge of bus loop from concrete curb to thickened asphalt edge (310 LF).	(\$6,000.00)	\$ (11,284.00)	
10. Change 200 LF± of poured vertical concrete curb to	(\$5,000.00)	\$ (6,280.00)	
11. Change underground storm drainage wet pipe to compost	(\$30,000.00)		\$ (30,000.00)
12. Relocate fire service from Alder Street to 25th Avenue.	\$0.00	\$ -	
13. Reduce landscaping.	(\$30,000.00)	\$ (30,000.00)	
14. Change synthetic grass field to all-weather natural grass	(\$250,000.00)		\$ (250,000.00)
15. Slope southeast corner of site up to street level to reduce height/eliminate retaining wall. (eliminate synthetic turf at corner?)	(\$34,000.00)	\$ (8,639.00)	
16. Purchase field event equipment out of FFE budget.	(\$20,000.00)	\$ (19,085.00)	
17. Delete guardrail at north side of gym to chainlink 200 LF.	(\$20,000.00)	\$ (32,275.00)	
18. Delete brick pavers at flag pavilion; change to concrete.	(\$12,000.00)	\$ (18,134.00)	
19. Simplify flag pavilion, delete radiused concrete joints; delete radiused steps. (need opportunity to have donor names in concrete?)	(\$10,000.00)	\$ (29,223.00)	
20. Delete colored concrete paving, change to plain concrete.	(\$15,000.00)		\$ (15,000.00)
21. Change concrete ballustrade at entry stairs to steel railing.	(\$60,000.00)	\$ (74,292.00)	
22. Simplify/reduce south east (upper) plaza.	(\$30,000.00)	\$ (39,588.00)	
23. Delete concrete steps/seats at baseball field.	(\$8,000.00)		\$ (8,000.00)
24. Delete concrete cube benches at flag pavilion (19 each).	(\$10,000.00)	\$ (9,500.00)	
25. Delete benches at Peace Garden.	(\$3,000.00)		\$ (3,000.00)
26. Delete (2) @13.96 ramp at south side of historic building. Add (1) ramp @5,000	(\$15,000.00)	\$ (21,392.00)	
27. Delete concrete walk between exit stairs, north of gym.	(\$12,000.00)		\$ (12,000.00)
SAVINGS MARK-UP	(\$500,500.00)		
<b>TOTAL SITE DEVELOPMENT COST SAVINGS</b>		\$ (500,425.00)	\$ (378,000.00)

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<b>P.E./PAC BUILDING</b>	<b>DIRECT COST ESTIMATED SAVINGS</b>	<b>ACCEPTED</b>	<b>Rejected</b>
1. Delete exterior solar screen over auditorium lobby curtain	(\$106,000.00)	\$ (74,431.00)	
2. Reduce height of curtain wall; change top 3-1/2' of glazing to metal siding at Auditorium lobby (simplify parapet).	(\$20,000.00)	\$ (36,084.00)	
3. Simplify curtain wall extrusion - delete "fin" detail.	(\$10,000.00)		\$ -
4. South auditorium exit stair. → Delete curtain wall. → Change to single wythe masonry walls with glazing	(\$13,000.00)	\$ (9,271.00)	
5. Change curtain wall to metal siding on framing above southeast	(\$3,500.00)	\$ (2,014.00)	
6. Change from curtain wall to storefront over main gym entry.	(\$6,000.00)	\$ (18,547.00)	
7. Eliminate exterior canopies at north gym exits.	(\$10,000.00)	\$ (9,796.00)	
8. Change "Alucobond" to "Swiss Pearl" cement board at Auditorium	(\$5,000.00)	NA	
9. Gym exterior exit stairs: → Reduce width from 9'-4" to 6'-8". → Delete CMU structure, use steel columns with chain link → (make stair treads open grating)	(\$25,000.00)	\$ (56,202.00)	
10. Elevator Tower. → Delete glazing at top of tower, change to metal siding. → Delete sand blasting of concrete finish	(\$15,000.00)	\$ (11,022.00)	
11. Change Kyak storage to "carport" design: → Chainlink in lieu of walls. → Delete garage door.	(\$15,000.00)	\$ (17,116.00)	
12. Delete elevator stop at mechanical penthouse.	(\$8,000.00)		\$ (8,000.00)
13. Reduce quantity of H.C. door operators from (3) to (2). None at TLC; 1 at Auditorium; 1 at Gym Main Entry; 1 at PE/PAC	(\$3,500.00)		\$ (3,500.00)
14. Delete security gates and screen adjacent to main stair (lower level).	(\$6,000.00)	\$ (9,950.00)	
15. Change storefront security wall at east stair to perforated metal on steel frame.	(\$4,000.00)	missing	--
16. Change CMU wall above proscenium opening to metal frame wall. Combined with item # 19	(\$15,000.00)		missing
17. Reduce quantity of wood paneling at auditorium. Reduce 8,517 sf to 6,000 sf.	(\$100,000.00)	\$ (160,000.00)	
18. Reduce cost per sq.ft. of wood paneling (\$40.00/sf to \$30.00/sf). With 17 above	(\$60,000.00)		
19. Change concrete columns and beams at proscenium opening to	(\$5,000.00)	YES 4	
20. Reduce quantity of stage lighting fixtures.	(\$10,000.00)	\$ (10,000.00)	
21. Simplify rigging, lighting and curtains in drama room.	(\$10,000.00)	\$ (5,000.00)	
22. Delete access from mid-house catwalk to control room.	(\$16,000.00)	\$ (15,420.00)	
23. Delete catwalk adjacent to proscenium opening.	(\$10,000.00)		\$ (10,000.00)
24. Delete (4) general purpose line sets (stage rigging).	(\$12,000.00)	\$ (12,000.00)	--
25. Purchase overhead acoustical shells through FFE.	(\$60,000.00)	\$ (103,000.00)	
26. Delete (2) pairs of aluminum doors at auditorium lobby.	(\$4,000.00)	\$ (6,000.00)	--
27. Reduce quantity of acoustical doors at auditorium from (17) to	(\$2,500.00)	\$ (8,265.00)	--
28. Change metal ceiling to SAC in lower concourse.	(\$24,000.00)	\$ (16,150.00)	--

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29. Change stained and polished concrete floors to non-colored polished concrete floors at concourse and	(\$30,000.00)	\$ (5,496.00)	--
30. Reduce basketball backstops from (20) to (14).	(\$33,000.00)	\$ (32,136.00)	--
31. Use wood bleachers in lieu of formed plastic.	(\$30,000.00)		\$ -
32. Change auxiliary gym floor from wood to Tara-flex.	(\$23,000.00)	--	\$ (23,861.00)
33. Delete auxiliary gym bleachers (Alt. Bid).	(\$30,000.00)	\$ (24,000.00)	--
34. Use exposed structure as ceilings in locker rooms in lieu of framed GWB ceiling (5,000 sf).	(\$20,000.00)	\$ (24,422.00)	--
35. Delete (2) coiling doors; (1) at each athletic locker area (Rooms 1515 and 1528).	(\$20,000.00)	\$ (10,760.00)	--
36. Delete shower partitions in boy's locker room.	(\$5,000.00)	\$ (4,200.00)	--
37. Change underground ductwork in auditorium lobby to overhead ductwork.	(\$5,000.00)	\$ (5,000.00)	--
38. Delete main mechanical penthouse. → Use roof top units (weather-rated). → Use gas fired equipment. → Delete water piping. → Downsize boiler and pumping system.	(\$200,000.00)		\$ (234,220.00)
39. Delete mechanical penthouse over Kayak storage.	(\$30,000.00)	\$ (54,171.00)	
40. Change metal ductwork to fabric ductwork in gym.	(\$12,500.00)	more research	
41. Reduce size of emergency generator. → (Support MDF, fire pump, emergency lighting).	(\$15,000.00)	\$ (15,000.00)	
42. Single wyth CMU @ radius wall	?	\$ (41,465.00)	
<b>SUBTOTAL DIRECT COST ESTIMATED P.E./PAC BUILDING SAVINGS</b>	<b>(\$940,000.00)</b>	<b>\$ (1,031,138.00)</b>	<b>\$ (45,361.00)</b>
<b>MARK-UP</b>			
<b>TOTAL PE/PAC BUILDING COST SAVINGS</b>			

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TEEN LIFE BUILDING	DIRECT COST ESTIMATED SAVINGS	ACCEPTED	Rejected
Delete folding wall. Downgrade to accordian wall.	(\$6,000.00)	\$ (10,400.00)	
Relocate existing gym curtain in lieu of providing new.	(\$2,000.00)	--	\$ (2,000.00)
Delete sun shade over office window.	(\$1,500.00)	\$ (1,500.00)	
Delete internal row of columns and associated footings in Lobby.	(\$15,000.00)	\$ (6,919.00)	
<i>SUBTOTAL DIRECT COST ESTIMATED TEEN LIFE BUILDING SAVINGS</i>	(\$16,500.00)		
MARK-UP			
<b>TOTAL TEEN LIFE BUILDING COST SAVINGS</b>			
<b>TOTAL SAVINGS</b>	(\$1,457,000.00)	\$ (18,819.00)	\$ (2,000.00)

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MAIN BUILDING	DIRECT COST ESTIMATED SAVINGS	ACCEPTED BY SSD	FURTHER RESEARCH REQUIRED BY
1. Eliminate air conditioning (except MDF Room and Elev. Machine Room)	(\$1,200,000)	-	\$ (1,200,000)
2. Encourage "School" mechanical contractors to bid Garfield	(\$ ? )	\$ -	
3. Reduce quantity of acid waste piping. → Provide at (4) labs, west side of atrium only.	(\$50,000)	MISSING	
4. Delete acid neutralization tank. (ALREADY ADJUSTED)	(\$17,000)	\$ -	
5. Control System: Review assumed number of control points in estimate, reduce as appropriate.	(\$30,000)	\$ (30,000)	
6. Substitute round duct for rectangular ducts.	(\$200,000)	\$ -	
7. Change HVAC system from 4-pipe fan coil to VAV system. (Not included in total)	* (\$100,000)		-
8. Change HVAC system from 4-pipe fan coil to gas/electrical roof top units. (Not included in total)	* (\$1,000,000)		-
9. Reduce quantity of smoke/fire dampers in estimate.	(\$35,000)	\$ (35,000)	
10. Simplify/specify less costly TVSS system.	(\$30,000)	\$ (30,000)	
11. Electrical Floor Boxes: → Approximately 40% of floor boxes are in existing slab-on-grade, therefore reduce/eliminate premium for support of those floor boxes. 6" core with no structure	(\$50,000)	\$ (98,000)	
12. Simplify security system → Reduce number of cameras and security points. (Reduce estimate from \$130,000 to \$100,000)	(\$30,000)	\$ (30,000)	
13. Reduce quantity of data drops. (Reduce quantity from 1,800 drops to 1,500 drops)	(\$88,000)	\$ (60,000)	
14. Use MC cabling in lieu of conduit. (Use conduit to classrooms, then MC cable distribution within room)	(\$50,000)	\$ (111,100)	
15. Change enclosed lightwells to open: (Not included in total) → Delete all skylights _____ (\$273,000) → Add roofing, roof drains, over-flows _____ + \$75,000 → Add exterior wall finish (metal siding) at new walls (north and south walls of each lightwell) _____ + \$49,000 → Add batt wall insulation to both new and existing walls _____ + \$11,000	* (\$138,000)	\$ (169,000)	
16. Reduce quantity of skylights in lightwells Delete all skylights (4,196 sf) _____ (\$273,000) Add roof structure _____ + \$60,000 Add roofing _____ + \$38,000 Add 700 sf skylights (\$50/sf for skylights) _____ + \$35,000	(\$140,000) (\$114,000)		\$ (114,000)
17. Delete furring of new and existing concrete shear walls in corridors (except at first floor lobby and north cross-corridor): → Furring and GWB (7,000 sf) _____ (\$26,000) → Wainscot (4 ft. H) _____ (\$10,000) → VWC (3 ft. H) _____ (\$5,000) → Wood trim _____ (\$5,000) → Wainscot finish and pt. above VWC _____ (\$5,000) → Sandblast Concrete _____ + \$15,000 → Anti-Graffiti Coating _____ + \$11,000	(\$25,000)	\$ (61,045)	
18. Paint GWB in lieu of VWC above wainscoting in corridors (except VWC in Item 17) (except at first floor lobby and cross-corridor)	(\$13,000)		\$ (13,000)
19. Use VCT in lieu of linoleum in corridors → Savings (22,700 sf x \$4.50/sf)	(\$102,000)	\$ (15,890)	
20. Use polished and sealed concrete in Student Commons and Atrium. Change to polished concrete in student commons → Savings (14,000 sf x \$2.75/sf) remove stain	(\$39,000)	\$ (13,869)	
21. Change terazzo stairs in Student Commons to polished and sealed concrete.	(\$15,000)	modified	

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22. Change terazzo stairs in Student Commons to concrete stairs	(\$25,000)	\$ (21,152)	
23. Reduce quantity of student lockers from 862 to 400. (Not included in total.)	* (\$37,000)		\$ (37,000)
24. Delete all student lockers; Owner purchase out of FFE budget	(\$69,000)	--	\$ (69,000.00)
25. Reduce quantity of relites from Student Learning Commons to Student Commons and Atrium by 50%. (Reduction of 244 sf of relite).	(\$10,000)	\$ (9,760)	
26. Reduce GWB reveals by 50% in Atrium walls. (Reduction of 1,200 lf of reveals).	(\$14,000)	DELETE	
27. Delete door closers on classroom doors (121 doors x \$150/ea.).	(\$18,000)	--	\$ (18,000)
28. Delete SAC ceilings in Art Room 3102, 3108, 3109, 3110, 3111: → Delete 4,300 sf of SAC _____ (\$9,700) → Add glue-on ACT (75% of 4,300 sf) _____ \$9,700 → Paint additional wall height, ceiling structure, and ductwork etc. _____ \$3,000 → Delete hanging GWB walls _____ (\$5,000)	NO COST CHANGE	\$ -	
29. Delete SAC ceilings in Science Labs. (See Item 28)	NO COST CHANGE	-	
30. Simplify classroom ceilings exposed concrete ceilings Option 2 savings → Delete (1) hanging GWB wall → Delete GWB ceiling at perimeter	(\$68,000)	\$ (58,764)	
31. Delete handicap lift and new stair at SE entry	(\$17,000)	\$ (16,892)	--
32. Reduce LCL unit cost for roofing: → LCI: \$8.85/sf x 71,000 sf _____ \$628,350 → Robinson: \$7.25/sf x 71,000 sf _____ \$514,750	(\$100,000)	--	
33. Reduce size of Commons skylight by 500 sf	(\$27,000)	\$ (24,800)	--
34. Simplify Information Commons Computer Lab → Reduce quantity of wall glazing by 50%; replace with wall framing. _____ (\$8,000) → Lexan Panels on steel structure in lieu of curved Kal-Wal _____ (\$15,000)	(\$23,000)	\$ (15,992)	
35. Delete enclosed atrium, revert to open courtyard. LCL =(111621)	(\$300,000)	\$ (111,621)	
36. Eliminate science capability from Rooms 3308 and 3309 → Delete folding wall _____ (\$10,000) → Delete (8) sinks _____ (\$20,000) → Delete emergency shower _____ (\$2,500) → Add frame wall _____ + \$2,500	(\$30,000)		\$ (30,000)
37. Reduce selective demo costs LCL S.D. Est. (without Gym demo) \$2,470,000 LCL's VE Savings at Schematic Design Phase (\$500,000) \$1,970,000 LCL D.D. Est. (without Gym demo) \$2,649,000	(\$600,000)	MISSING	
38. Reduce quantity of VWC in Library → Reduce height by 10', align top of VWC with bottom of existing windows (reduce quantity by 2,900 sf)	(\$7,000)	\$ (7,105)	
39. Simplify choir room design → Delete operable wall. Replace with acoustical frame wall. _____ (\$24,000) → Delete eyebrow over folding wall } _____ (\$30,000) → Simplify roof } → Change CMU wall to metal studs with plywood and GWB. _____ (\$15,000)	(\$59,000)	\$ (176,000)	
40. Reduce unit cost of (3) music practice rooms; reduce from \$20,000 each to \$15,000. (No "virtual sound" feature)	(\$15,000)	\$ (15,000)	--
41. Reuse (3) existing Wenger practice rooms. (Not included in total)	* (\$30,000)	--	\$ (30,000)
42. Reduce quantity of whiteboards. Delete center 4' x 5' whiteboard in each general purpose classroom.	(\$11,000)	\$ (14,472)	
43. Change wood sectional door to aluminum sectional door at art room.	(\$3,000)	\$ (3,000)	
44. Reduce unit cost of floor leveling system.	(\$65,000)	already adjusted	

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	(\$11.76/sf to \$8.00/sf) Heery to verify.			
45.	Review/reduce steel erection cost. (Per reconciliation discussion).	(\$300,000)	\$ -	
46.	Delete acoustical reflector over proscenium arch in Student Commons.	(\$12,000)	\$ (12,000)	
47.	Change mechanical penthouse metal siding from vertical to horizontal. (Not included in total).	* (\$5,000)	already adjusted	
48.	Change mechanical penthouse metal siding to cement board lap siding.	(\$24,000)		-
49.	Reduce quantity of acoustical doors from (20) to (15)	(\$12,000)	\$ (13,775)	
50.	Change triple pane to double pane windows at band room.	(\$6,000)	MISSING	
51.	On interior side of all exterior walls, retain existing plaster as final finish. Delete furring, stud framing, insulation and GWB. Patch and paint existing plaster.	(\$150,000)		\$ (150,000)
52.	Delete perimeter heating system	(\$200,000)		\$ (200,000)
53.	Delete most duct lining	?	MISSING	
54.	Substitute stretched vinyl sheet of ACT and GWB for ceilings at Commons & Libray, W. Seattle Library, Seattle Justic Building	?	MORE RESEARCH	
	<b>SUBTOTAL DIRECT COST ESTIMATED MAIN BUILDING</b>	<b>(\$2,024,000)</b>		
	MARK-UP			
	<b>TOTAL MAIN BUILDING COST SAVINGS</b>		<b>\$ (1,154,237)</b>	<b>\$ (1,861,000)</b>