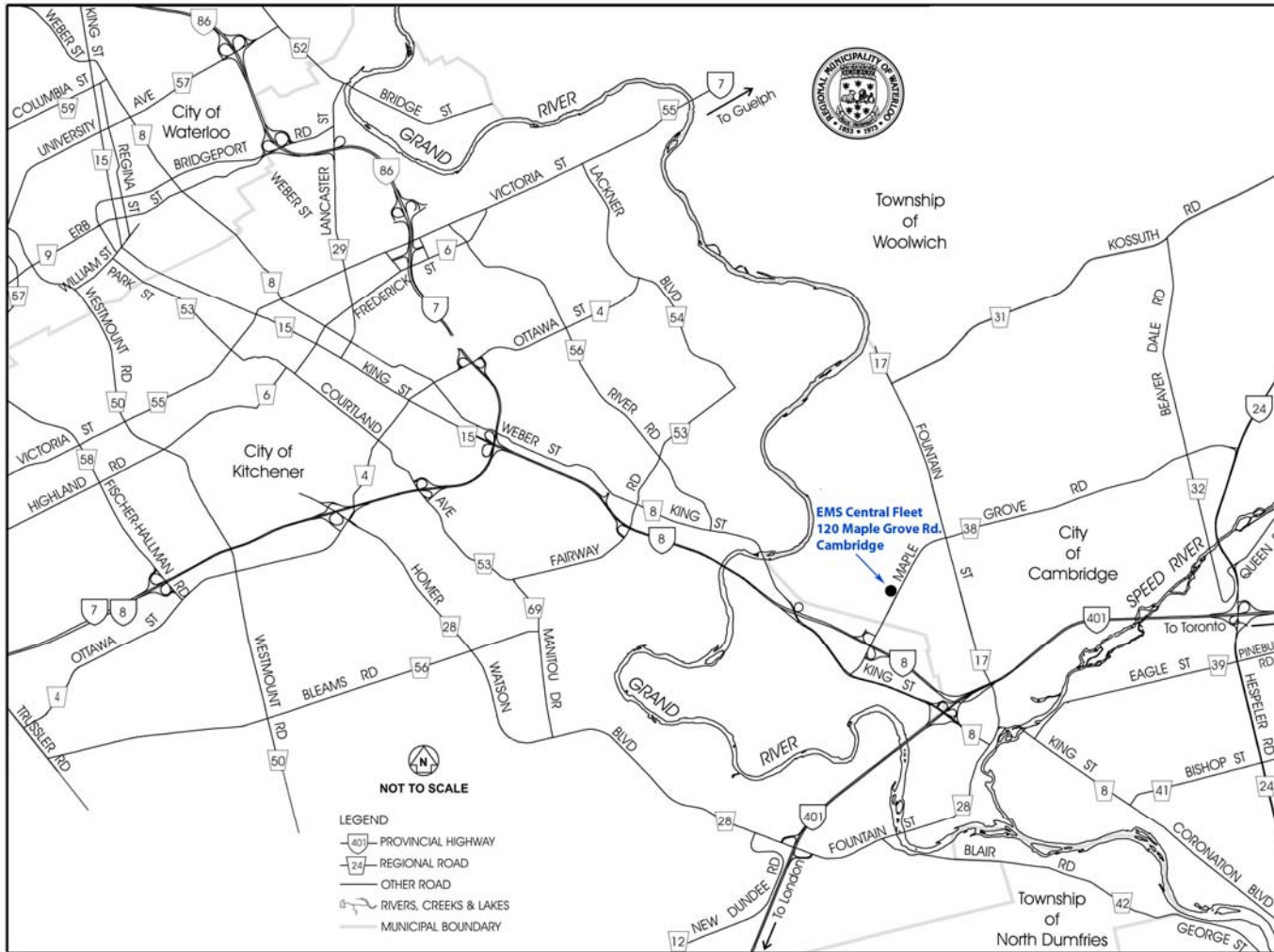




Emergency Medical Services Fleet Centre McCallum Sather Architects

Sebastian Bartnicki Matthew Peddie Ann Ravens Maneu Tataryn



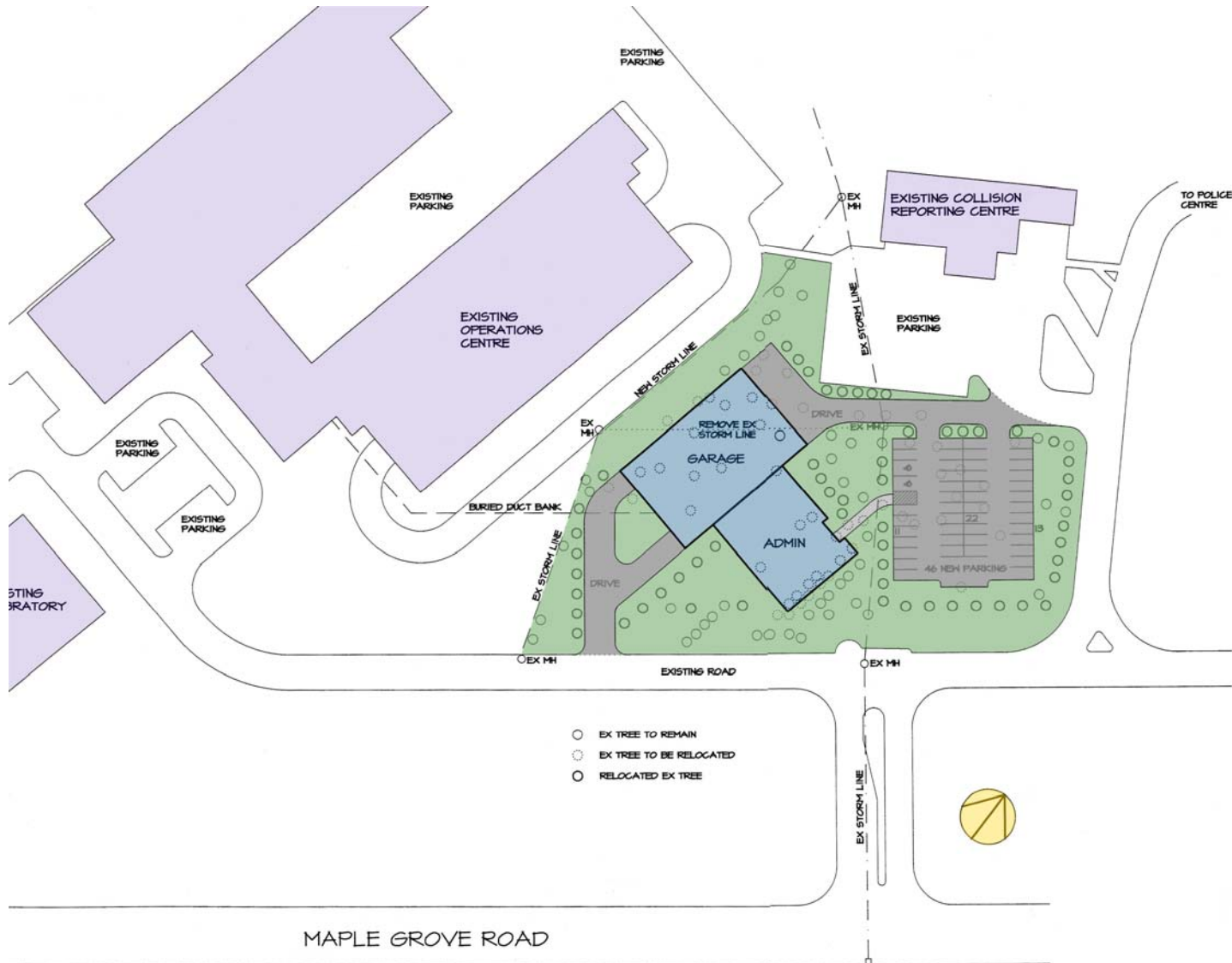


Map adapted from the EMS website <<[http://www.region.waterloo.on.ca/web/region.nsf/8f9c046037662cd985256af000711418/51BAC43FE5287A7485256AF00730CB5/\\$file/Police_Ops.pdf?open](http://www.region.waterloo.on.ca/web/region.nsf/8f9c046037662cd985256af000711418/51BAC43FE5287A7485256AF00730CB5/$file/Police_Ops.pdf?open)>>

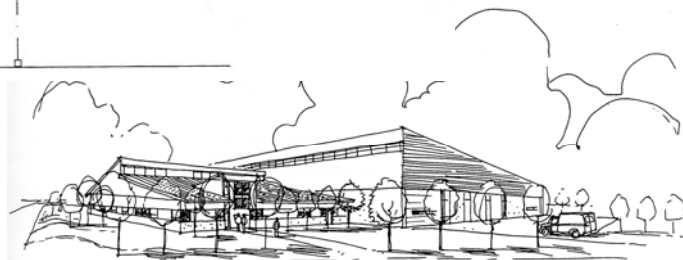
site information



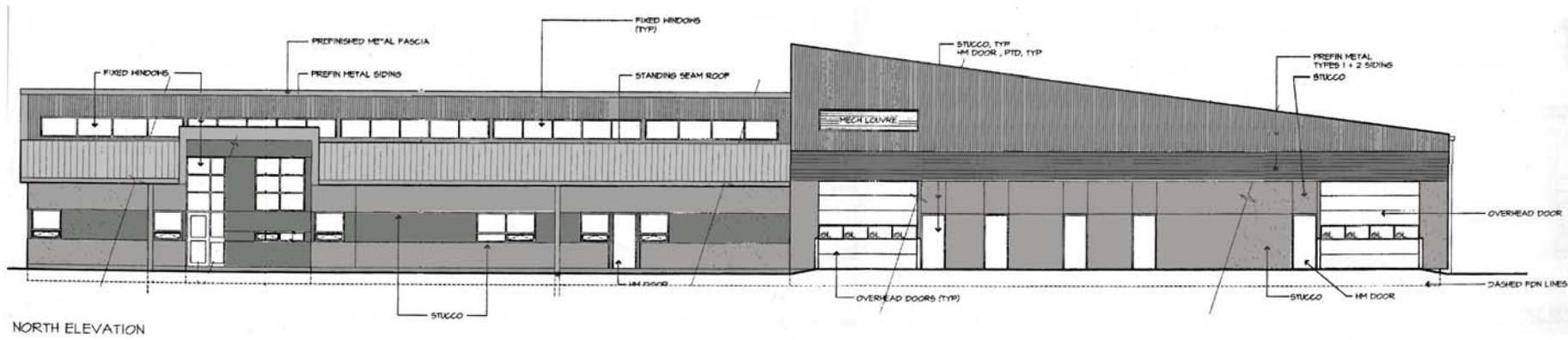
Emergency Medical Services Fleet Centre



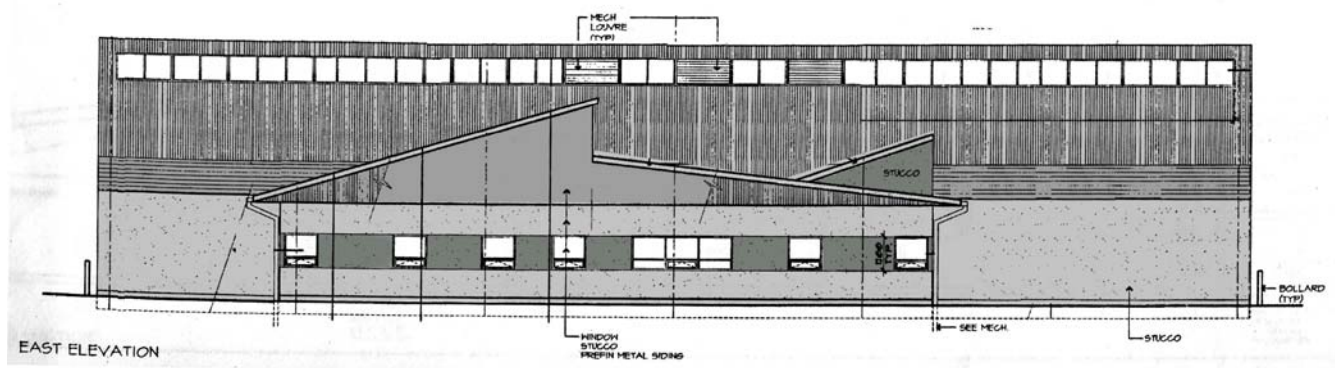
site information



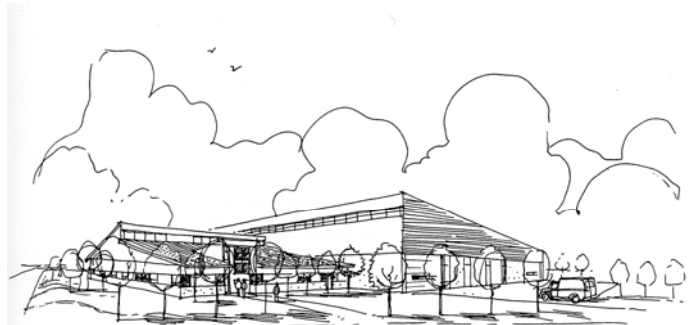
Emergency Medical Services Fleet Centre



NORTH ELEVATION

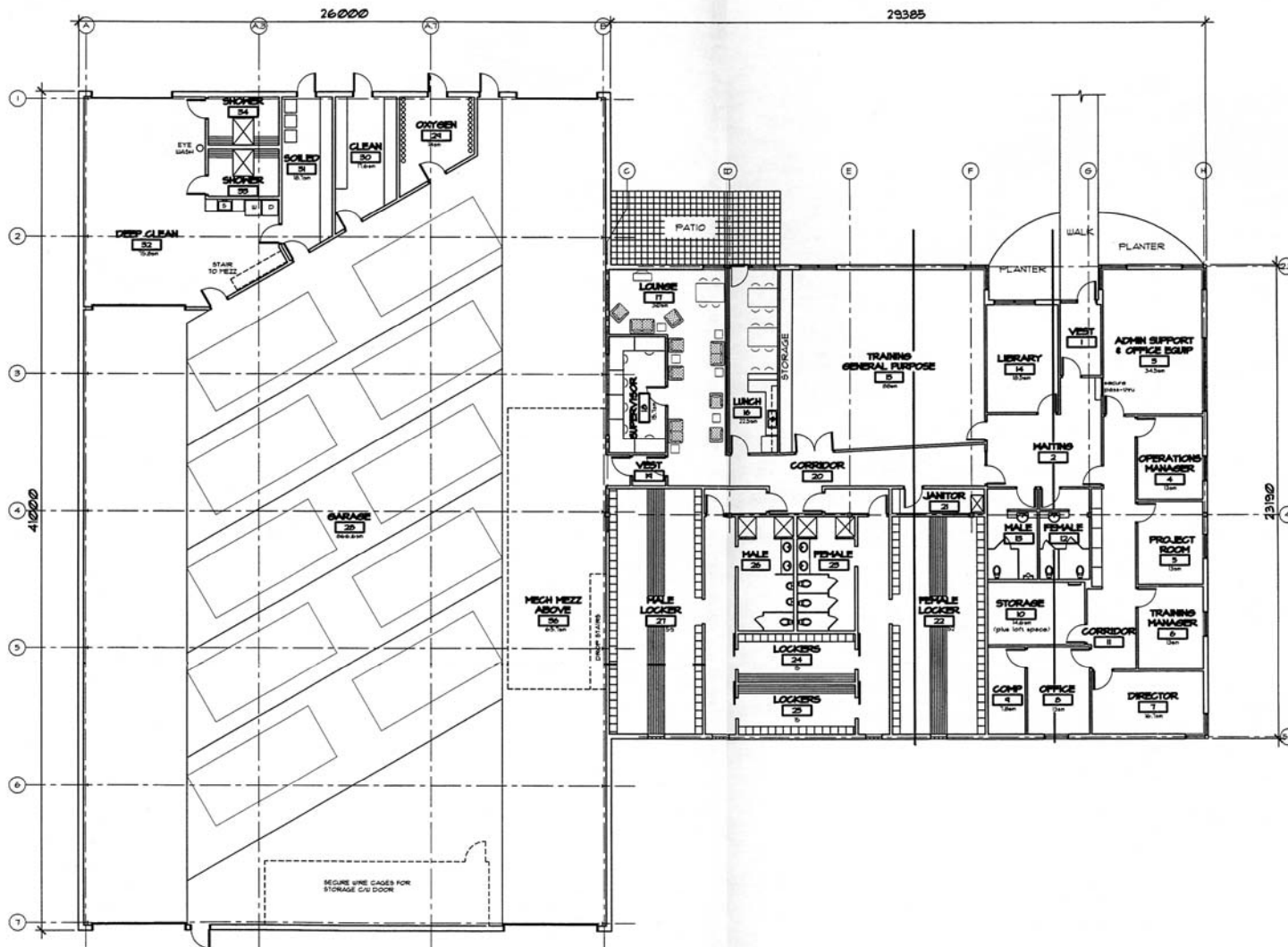


EAST ELEVATION

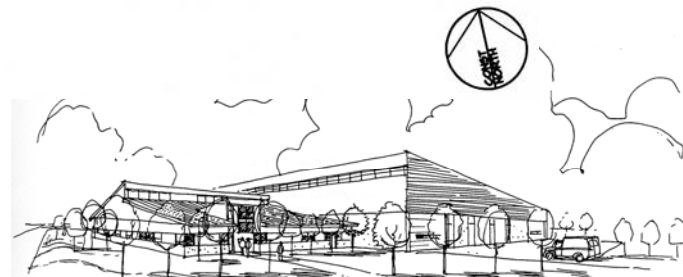


Emergency Medical Services Fleet Centre

elevations



plan



Emergency Medical Services Fleet Centre



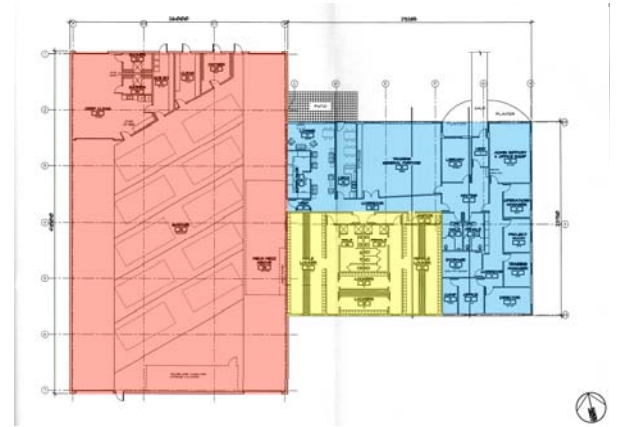
garage



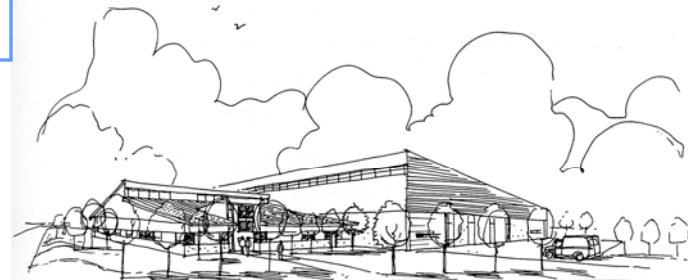
locker rooms



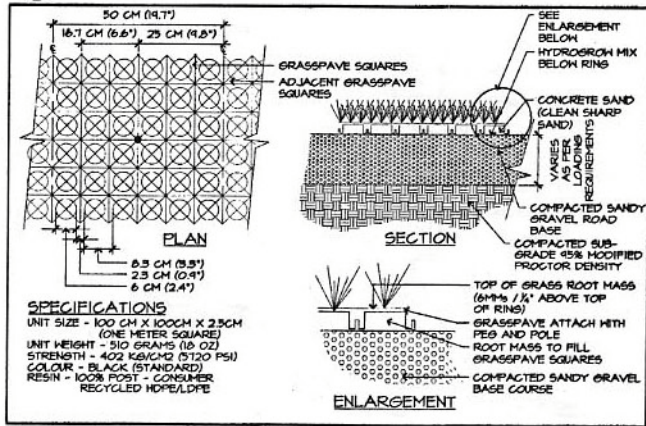
office



distribution of functions



Emergency Medical Services Fleet Centre



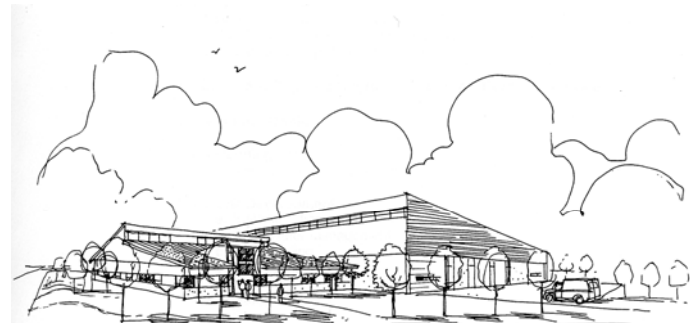
Credit 5.1: Site disturbance limited - permeable firelane



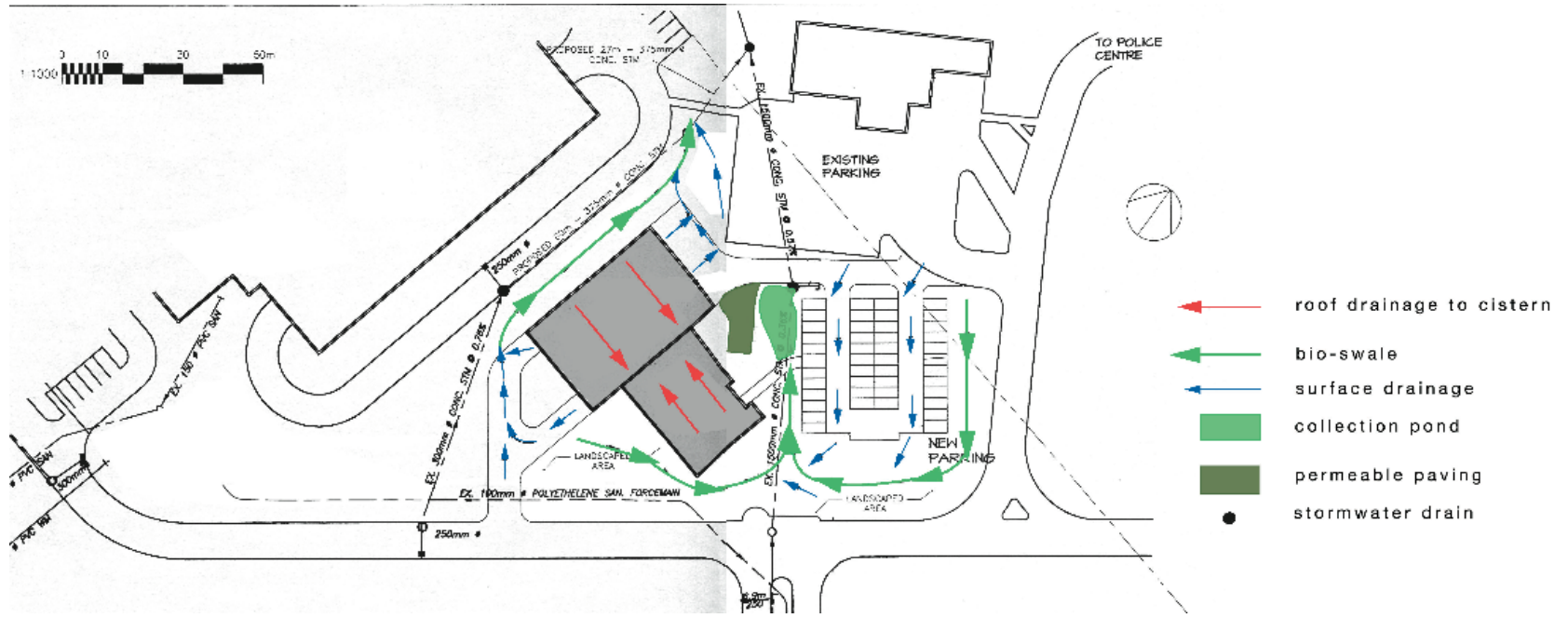
Credit 5.1: Site disturbance limited



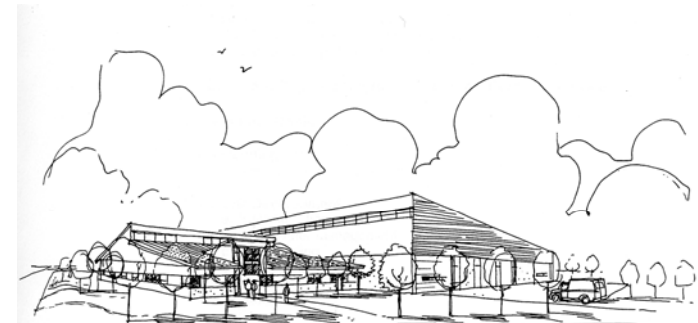
Prerequisite 1 : Erosion and sedimentation control



Emergency Medical Services Fleet Centre



Credit 6.1/6.2: Stormwater management system

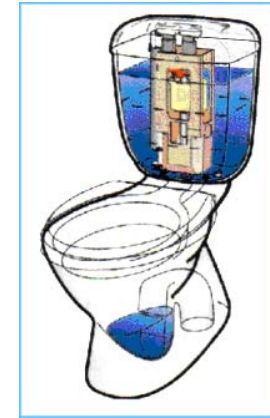


5 0 0

Water Efficiency

Y ? N

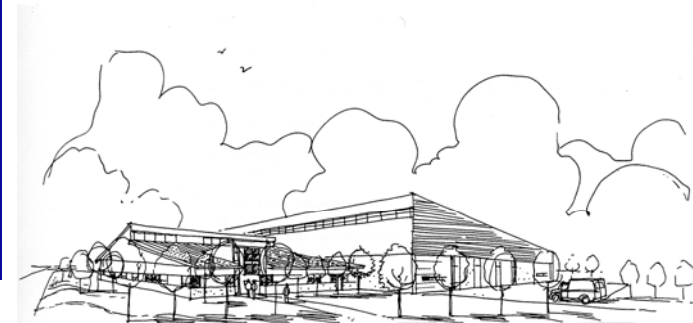
Credit: 2/3.1
waterless urinals +
dual flush toilets



Credit 1.1: Rain
water collection
system

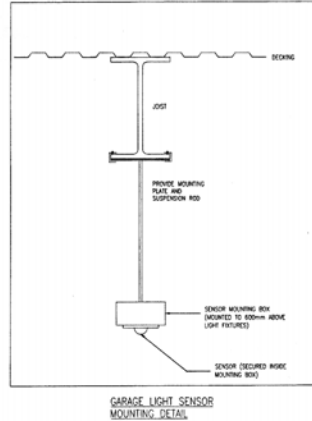


Waterless urinals,
dual flush toilets,
and reused cistern
wastewater reduce
total water by 41%.



Emergency Medical Services Fleet Centre

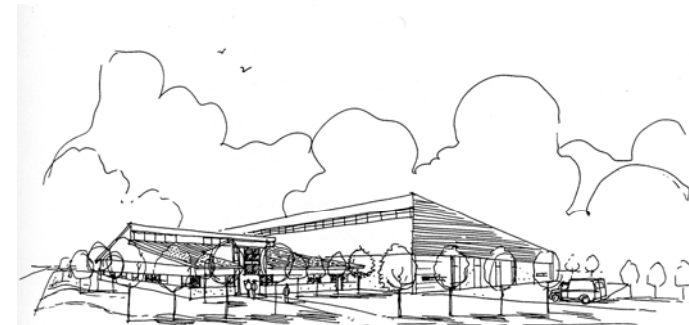
Y ? N



Credit 1.1: Optimize energy performance
 - T5 fluorescent fixture with occupancy sensors used throughout

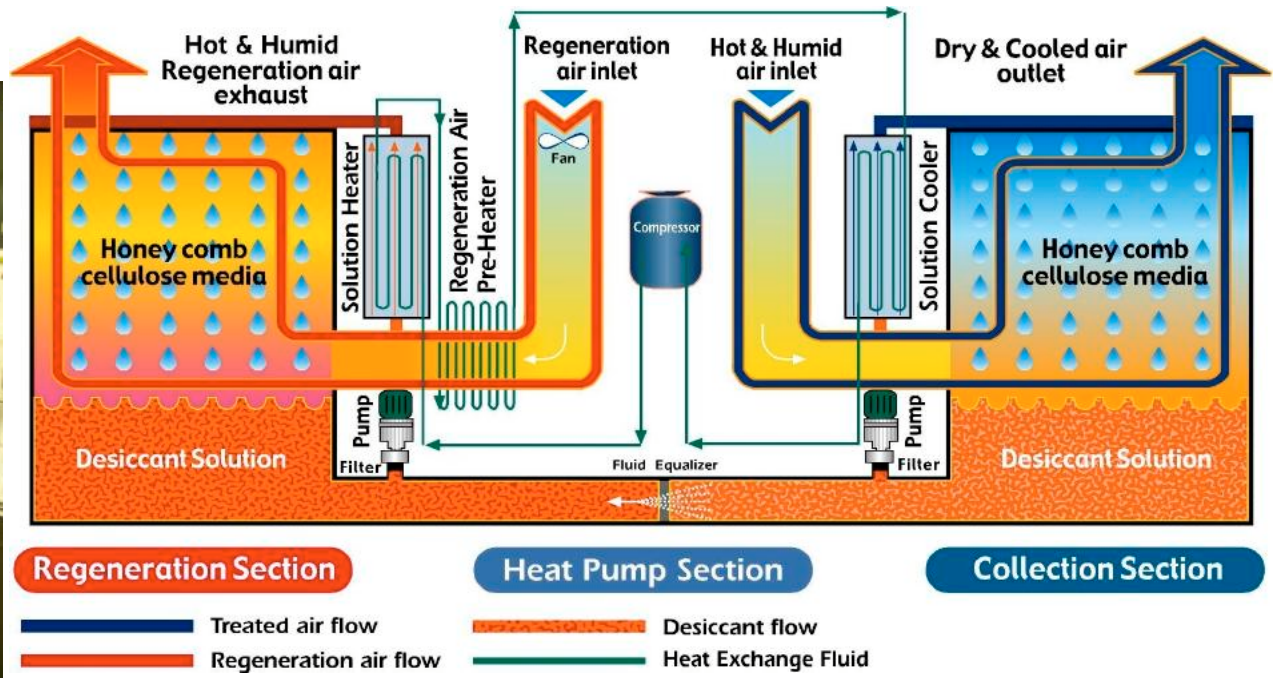
Energy cost savings of 52% before photovoltaic installation, 58% with photovoltaics installed.

Credit 2.1/2.2:
 Renewable energy -
 5 kw PV system to be installed will save
 14% of electrical demand

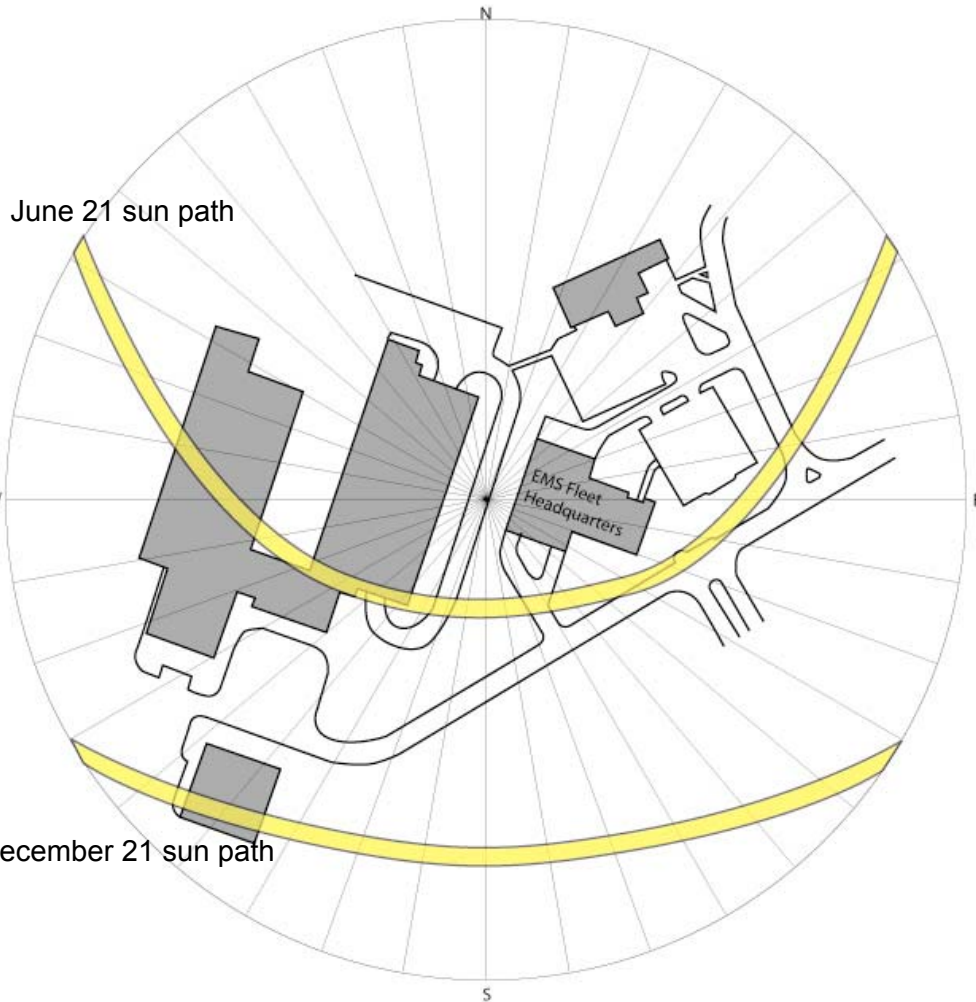


Emergency Medical Services Fleet Centre

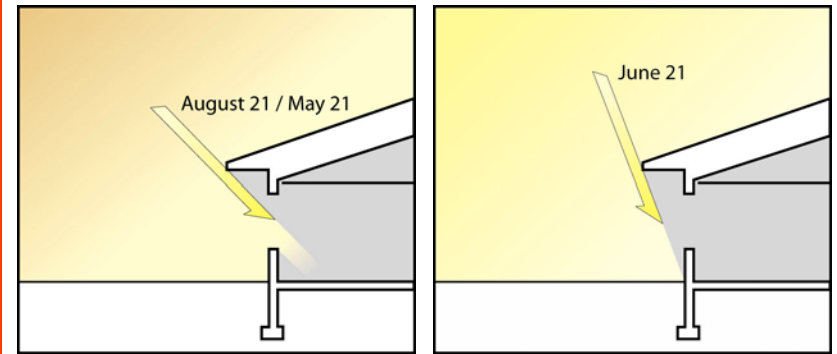
Credit 1.1: Drykor: Our dry air is cool!



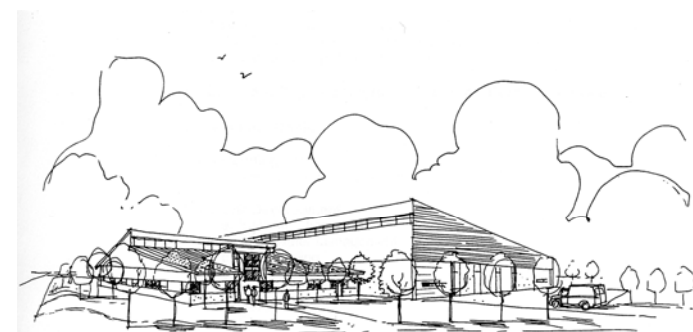
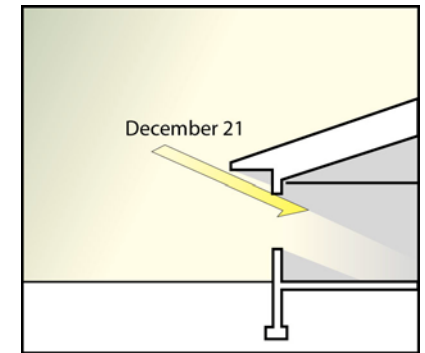
Emergency Medical Services Fleet Centre



Site Plan with Solar Path Diagram



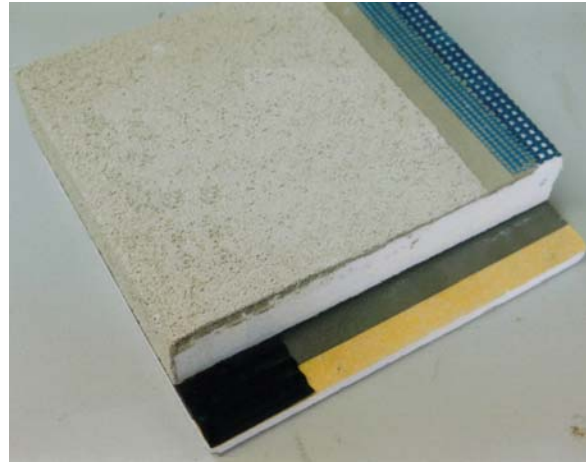
Credit 1.1: Optimize energy Performance - overhang designed to block summer sun



Emergency Medical Services Fleet Centre

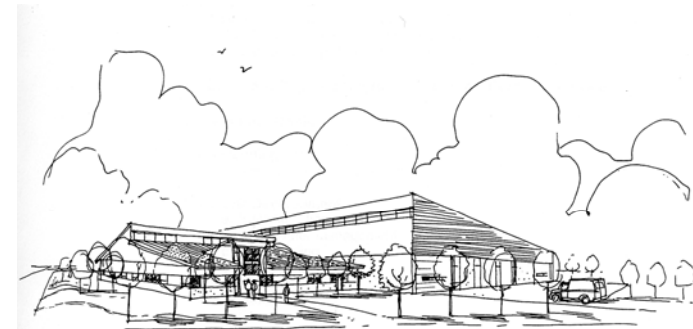


Credit 1.1: Optimize energy Performance - Thermally broken windows with fiberglass frames



Credit 1.1: Optimize energy Performance - EIFS system combined with batt insulation to reduce thermal bridging

Improved windows estimated to perform 5.4% better than the Model National Energy Code for Buildings (MNECB). Improved insulation estimated to perform 1.3% better MNECB.



Emergency Medical Services Fleet Centre



Credit 2.1/2.1: Comprehensive waste management

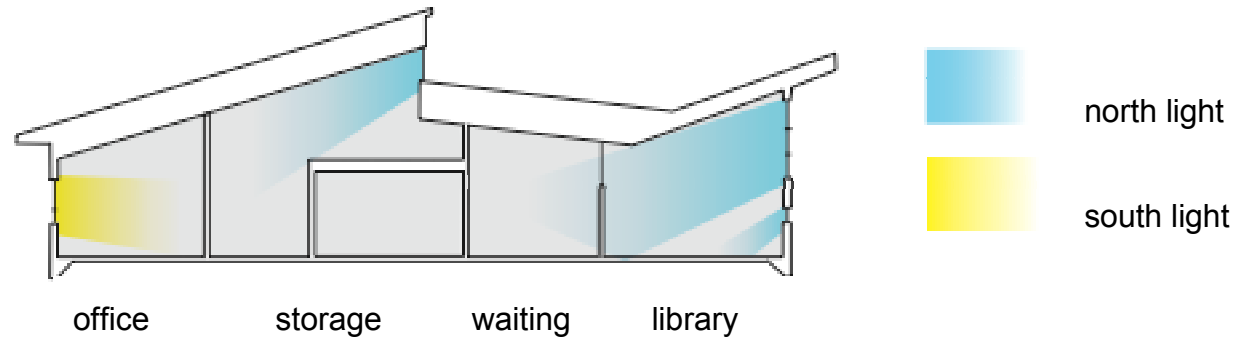
Prerequisite 1:
Storage and
collection of
recyclables



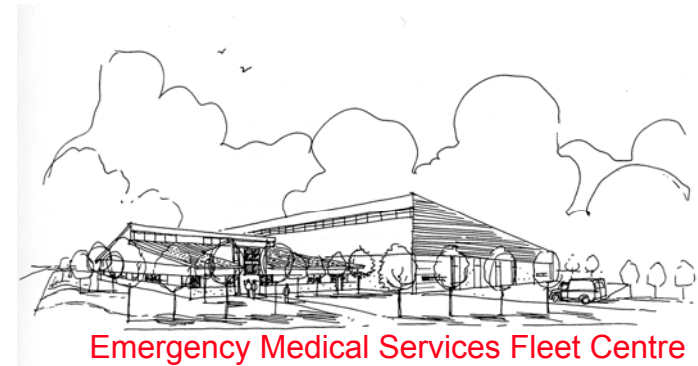
Credit 4.1: Recycled
steel, fly-ash in
concrete, drywall



Emergency Medical Services Fleet Centre



Credit 8.1: Daylight for 75% of spaces

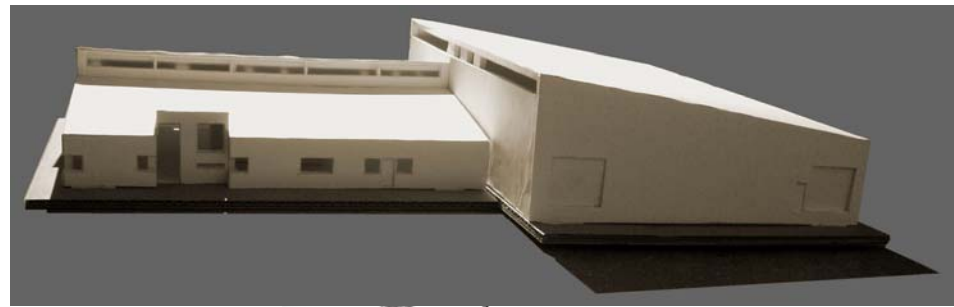
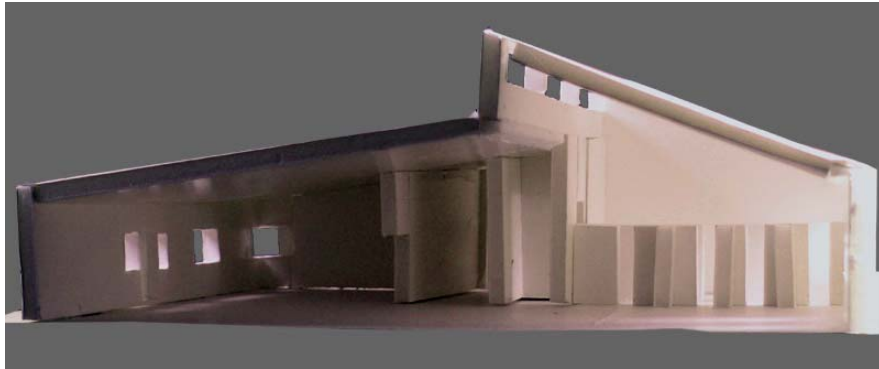




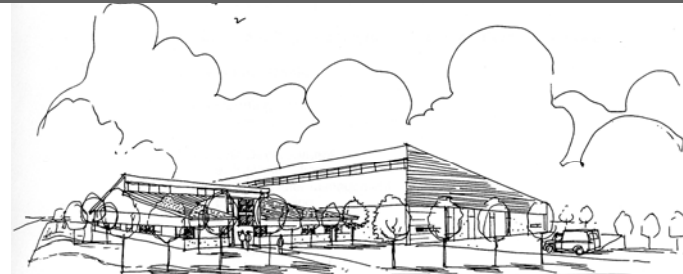
Credit 8.1: Daylight for 75% of spaces



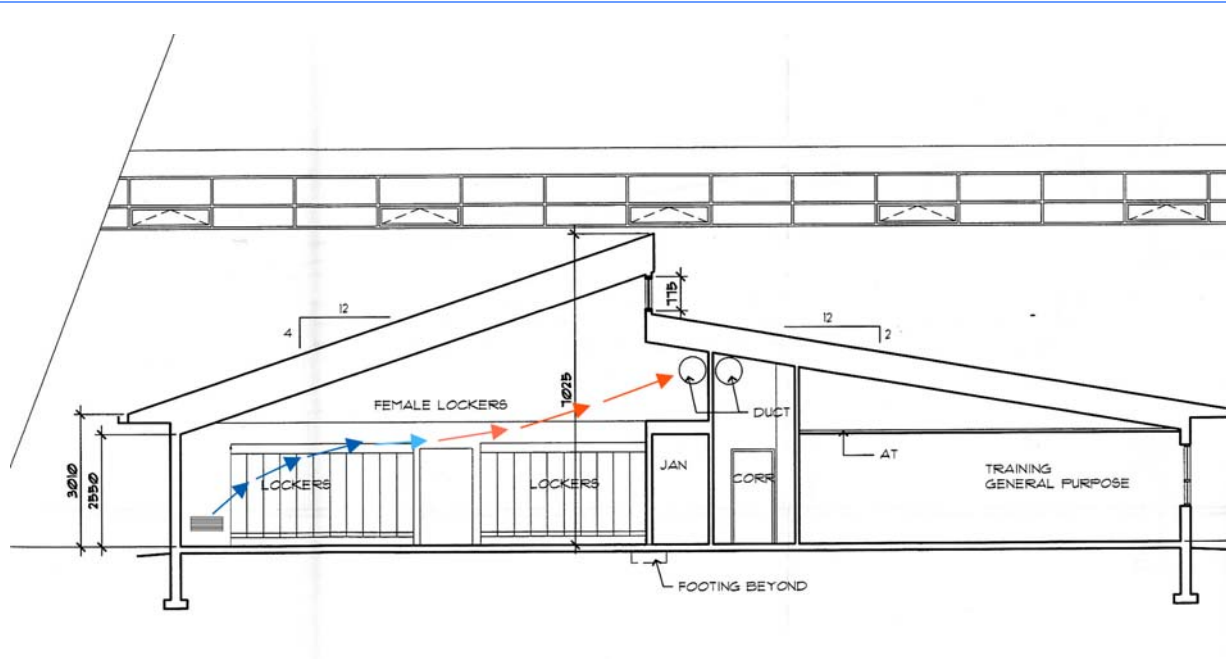
Emergency Medical Services Fleet Centre



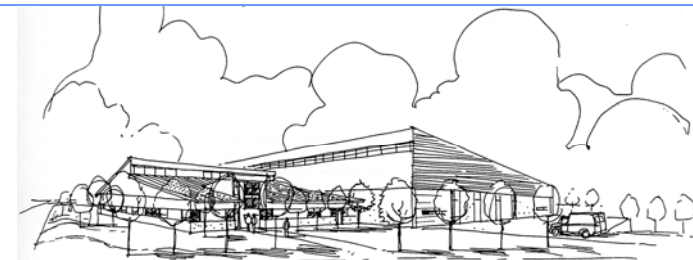
Foam core model demonstrating day lighting strategies



Emergency Medical Services Fleet Centre



Credit 2: Increase Ventilation Effectiveness - Displacement ventilation used throughout



Emergency Medical Services Fleet Centre



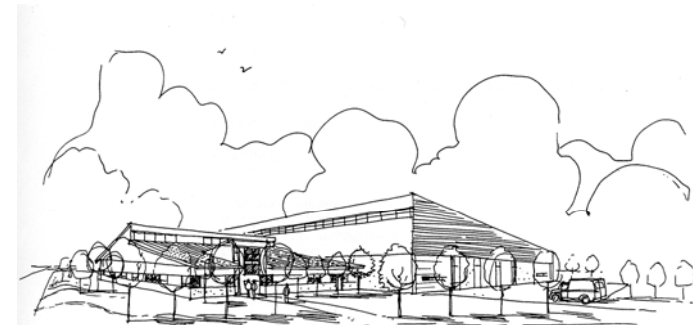
Credit 4.4: Low-emitting materials - urea-formaldehyde-free glue specified



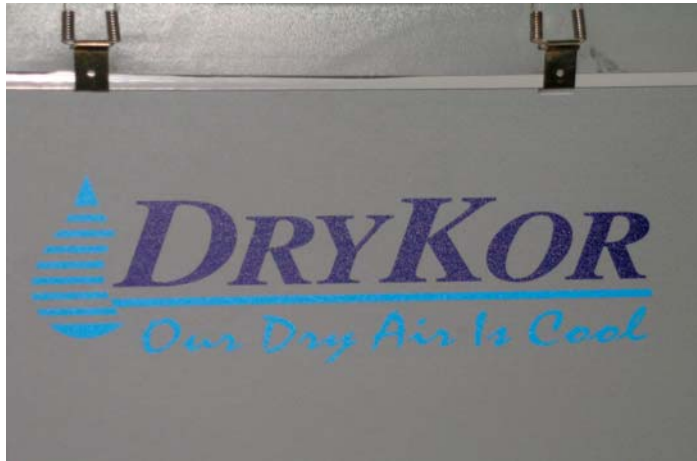
Credit 4.3: Low-emitting carpet - natural sisal wall covering



Credit 2: Increase Ventilation Effectiveness - directional air vents aid displacement ventilation

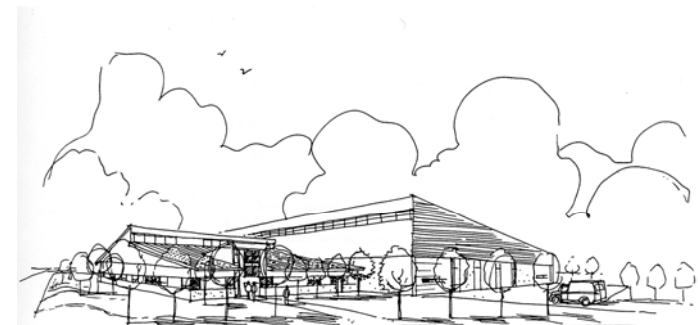


Emergency Medical Services Fleet Centre



Credit 1.1: Use of Drykor dehumidification for better humidity control

Credit 1.3: New type of PV system - Spherical Solar Technology



Emergency Medical Services Fleet Centre

Credits

Construction Photos courtesy of Terri Meyer Boake

Emergency Medical Services - Central Fleet Preliminary Schematic Design Report by McCallum Sather Architects Inc, Enermodal Engineering Limited, Stantec Consulting, BTY Group

Architectural Drawings prepared by McCallum Sather Architects Inc

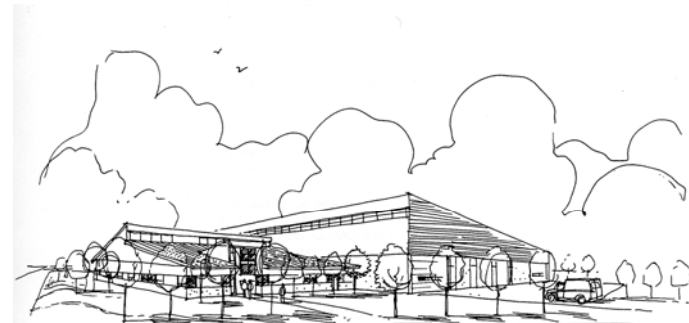
LEED Scorecard prepared by McCallum Sather Architects Inc

Interview and site tour with project Manager Kary Feldman, Friday November 12, 2004

University of Waterloo Course # Arch 684 Advanced studies in Canadian Sustainable design: "Emergency Medical Services Fleet Centre" research report prepared by Wang Renping spring 2004. Report available at http://www.fes.uwaterloo.ca/architecture/faculty_projects/terri/sustain_casestudies/EMS_renping_wang.pdf

Information and graphic on Drykor Dessicant System from <http://www.drykor.com/HTMLs/article.aspx?C2004=880&BSP=861>

Dual Flush toilet graphic courtesy of C&L Supply Co.
www.candlsupply.com/products/caroma/



Emergency Medical Services Fleet Centre