DRAINAGE SERVICES DISCLAIMER

DRAINAGE SERVICES' REVIEW AND APPROVAL OF THE LOT GRADING PLAN RELATES EXCLUSIVELY TO THE SURFACE DRAINAGE DESIGN, AND DOES NOT ADDRESS REQUIREMENTS FOR BUILDING FOUNDATIONS OR ANY OTHER USE OF THE LANDS, AND DOES NOT IMPLY THE SUITABILITY OF THE GROUND OR FILLS FOR ANY FOUNDATION REQUIREMENTS OR OTHER USE. IT IS THE OWNER OR THE BUILDER'S RESPONSIBILITY TO EMPLOY THE SERVICES OF A QUALIFIED GEOTECHNICAL CONSULTANT TO DETERMINE GROUND AND SUBSURFACE CONDITIONS THAT MAY AFFECT FOUNDATION DESIGN OR OTHER USE REQUIREMENTS.

LEGEND:

- EXISTING GROUND SPOT ELEVATION
- EXISTING FINISHED ELEVATION
- DESIGN FINISHED ELEVATION
- DESIGN GRADE
- CATCHMENT AREA BOUNDARY
- SITE GRADING FLOW LINE
- MAJOR OVERFLOW

STORMWATER MANAGEMENT INFORMATION

DESIGN REQUIREMENTS
STORE 1:100 YR RETURN PERIOD STORM RUNOFF.
MAXIMUM ALLOWABLE DISCHARGE TO BE 0.035m^3/s/ha

SITE AREA
TOTAL SITE AREA = 1.11 Ha

CATCHMENT AREA No. 1

STORAGE REQUIRED
FROM CITY OF EDMONTON STORAGE TABLES,
STORAGE REQUIRED PER Ha. = 282m^3
CATCHMENT AREA = 0.07 Ha.
STORAGE REQUIRED = 20m^3

STORAGE PROVIDED = 0m^3

CATCHMENT AREA No. 2

STORAGE REQUIRED
FROM CITY OF EDMONTON STORAGE TABLES,
STORAGE REQUIRED PER Ha. = 282m^3
CATCHMENT AREA = 0.30 Ha.
STORAGE REQUIRED = 85m^3

STORAGE PROVIDED
POND AREA = 1150m^2
POND DEPTH = 0.36m
VOLUME = $1150 \times \frac{0.36}{3} = 138m^3$

CATCHMENT AREA No. 3

STORAGE REQUIRED
FROM CITY OF EDMONTON STORAGE TABLES,
STORAGE REQUIRED PER Ha. = 282m^3
CATCHMENT AREA = 0.17 Ha.
STORAGE REQUIRED = 48m^3

STORAGE PROVIDED
POND AREA = 540m^2
POND DEPTH = 0.30m
VOLUME = $540 \times \frac{0.30}{3} = 54m^3$

CATCHMENT AREA No. 4

STORAGE REQUIRED
FROM CITY OF EDMONTON STORAGE TABLES,
STORAGE REQUIRED PER Ha. = 282m^3
CATCHMENT AREA = 0.10 Ha.
STORAGE REQUIRED = 28m^3

STORAGE PROVIDED = 0m^3

CATCHMENT AREA No. 5

STORAGE REQUIRED
FROM CITY OF EDMONTON STORAGE TABLES,
STORAGE REQUIRED PER Ha. = 282m^3
CATCHMENT AREA = 0.14 Ha.
STORAGE REQUIRED = 39m^3

STORAGE PROVIDED
POND AREA = 408.0m^2
POND DEPTH = 0.23m
VOLUME = $408.0 \times \frac{0.23}{3} = 31m^3$

CATCHMENT AREA No. 6 (TO BLDG MECHANICAL)

STORAGE REQUIRED
FROM CITY OF EDMONTON STORAGE TABLES,
C=0.15
STORAGE REQUIRED PER Ha. = 11m^3
CATCHMENT AREA = 0.06 Ha.
STORAGE REQUIRED = 1m^3

STORAGE PROVIDED = 0m^3

CATCHMENT AREA 7 (CRU A)

STORAGE REQUIRED
FROM CITY OF EDMONTON STORAGE TABLES,
STORAGE REQUIRED PER Ha. = 282m^3
CATCHMENT AREA = 0.13 Ha.
STORAGE REQUIRED = 37m^3

STORAGE PROVIDED
FROM MECHANICAL DRAWINGS = 37m^3

BUILDING MECHANICAL HAS PROVIDED STORAGE ON THE ROOF. STORMWATER IS DISCHARGED TO STMH2 USING FLOW CONTROL DRAINS.

CATCHMENT AREA 8 (BOSTON PIZZA)

STORAGE REQUIRED
FROM CITY OF EDMONTON STORAGE TABLES,
STORAGE REQUIRED PER Ha. = 282m^3
CATCHMENT AREA = 0.07 Ha.
STORAGE REQUIRED = 20m^3

STORAGE PROVIDED
FROM MECHANICAL DRAWINGS = 20m^3

BUILDING MECHANICAL HAS PROVIDED STORAGE ON THE ROOF. STORMWATER IS DISCHARGED TO STMH1 USING FLOW CONTROL DRAINS.

CATCHMENT AREA 9 (CRU B)

STORAGE REQUIRED
FROM CITY OF EDMONTON STORAGE TABLES,
STORAGE REQUIRED PER Ha. = 282m^3
CATCHMENT AREA = 0.03 Ha.
STORAGE REQUIRED = 8m^3

STORAGE PROVIDED
FROM MECHANICAL DRAWINGS = 8m^3

BUILDING MECHANICAL HAS PROVIDED STORAGE ON THE ROOF. STORMWATER IS DISCHARGED TO STMH4 USING FLOW CONTROL DRAINS.

ORIFICE CALCULATION: (CB5)

ALLOWABLE DISCHARGE = 0.035 x 0.14
ALLOWABLE FLOW = 0.005m^3/s
HEAD AT ORIFICE = 2.31m

ORIFICE AREA = $\frac{Q\ allowable}{0.61\sqrt{2} \times g \times h} = \frac{0.005}{0.61\sqrt{2} \times 9.81 \times 2.31}$

ORIFICE AREA REQ'D = 0.0012m^2

ORIFICE DIAMETER = $\sqrt{\frac{4 \times 0.0012}{\pi}}$

= 0.039

USE 50mm DIA. CIRCULAR ORIFICE ON 250mm STM. AT CB5

ORIFICE CALCULATION: (CB3)

ALLOWABLE DISCHARGE = 0.035 x 0.17
ALLOWABLE FLOW = 0.006m^3/s
HEAD AT ORIFICE = 2.26m

ORIFICE AREA = $\frac{Q\ allowable}{0.61\sqrt{2} \times g \times h} = \frac{0.006}{0.61\sqrt{2} \times 9.81 \times 2.26}$

ORIFICE AREA REQ'D = 0.0015m^2

ORIFICE DIAMETER = $\sqrt{\frac{4 \times 0.0015}{\pi}}$

= 0.043

USE 50mm DIA. CIRCULAR ORIFICE ON 250mm STM. AT CB3

ORIFICE CALCULATION: (CB2)

ALLOWABLE DISCHARGE = 0.035 x 0.30
ALLOWABLE FLOW = 0.011m^3/s
HEAD AT ORIFICE = 2.22m

ORIFICE AREA = $\frac{Q\ allowable}{0.61\sqrt{2} \times g \times h} = \frac{0.011}{0.61\sqrt{2} \times 9.81 \times 2.22}$

ORIFICE AREA REQ'D = 0.0026m^2

ORIFICE DIAMETER = $\sqrt{\frac{4 \times 0.0026}{\pi}}$

= 0.058

USE 58mm DIA. CIRCULAR ORIFICE ON 250mm STM. AT CB2

ORIFICE CALCULATION: (STMH1)

ALLOWABLE DISCHARGE = 0.035 x 1.07
ALLOWABLE FLOW = 0.037m^3/s
HEAD AT ORIFICE = 2.58m

ORIFICE AREA = $\frac{Q\ allowable}{0.61\sqrt{2} \times g \times h} = \frac{0.037}{0.61\sqrt{2} \times 9.81 \times 2.58}$

ORIFICE AREA REQ'D = 0.0086m^2

ORIFICE DIAMETER = $\sqrt{\frac{4 \times 0.0086}{\pi}}$

= 0.105

USE 105mm DIA. CIRCULAR ORIFICE ON 250mm STM. AT STMH1

TOTAL ON-SITE STORAGE REQUIREMENTS

TOTAL ON-SITE STORAGE REQUIRED = 278m^3
TOTAL ON-SITE STORAGE PROVIDED = 280m^3

GENERAL NOTES:

1. FOR EXISTING SURFACE FEATURES, SEE EXISTING SITE CONDITIONS PLAN BY ARCHITECT.
2. ALL EXCAVATION & BACKFILL METHODS TO COMPLY WITH REQUIREMENTS OF THE GEOTECHNICAL REPORT.
3. ALL CONSTRUCTION IN THE ROAD ALLOWANCES TO COMPLY WITH CITY OF EDMONTON DESIGN & CONSTRUCTION STANDARDS, LATEST EDITION.
4. ALL CONSTRUCTION TO COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE MUNICIPAL, PROVINCIAL AND FEDERAL CODES AND REGULATIONS, INCLUDING OCCUPATIONAL HEALTH AND SAFETY.
5. FOR DETAILS OF SITE CURBS, PARKING LOT LAYOUT, PAVEMENT MARKINGS, PAVEMENT STRUCTURES AND LANDSCAPE DETAILS, SEE ARCHITECT'S DRAWINGS.
6. CONSTRUCTION SURVEY LAYOUT TO BE PROVIDED AND PAID FOR BY THE CONTRACTOR.
7. ALL DISTURBED FEATURES AND SURFACES TO BE RESTORED TO CONDITION EQUAL TO CONDITION PRIOR TO CONSTRUCTION.
8. TRAFFIC CONTROL AND PUBLIC SAFETY MEASURES TO COMPLY WITH ALL APPLICABLE MUNICIPAL AND PROVINCIAL REQUIREMENTS. COORDINATE WITH CITY OF EDMONTON FOR TRAFFIC CONTROL AND PUBLIC SAFETY MEASURES.
9. ALL ELEVATIONS ARE IN METRES & ARE REFERENCED TO A.S.C.M. 275321 ELEVATION 679.985m.
10. EXISTING SITE ELEVATIONS WERE OBTAINED FROM A SITE SURVEY BY THE FOCUS CORPORATION LTD. DATED OCTOBER, 2004.
11. ALL COSTS ASSOCIATED WITH DETOUR / INFORMATION SIGNING & BARRICADING WILL BE BORNE BY THE CONTRACTOR.
12. DESIGN ELEVATIONS ARE TOP OF ASPHALT OR TOP OF CONCRETE UNLESS NOTED OTHERWISE.
13. CONTRACTOR IS RESPONSIBLE FOR GENERAL SITE CLEANUP.
14. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO LANDSCAPED AREAS & MUST MAKE ALL NECESSARY RESTORATIONS AND REPAIRS.
15. CONTRACTOR TO VERIFY ALL DIMENSIONS & GRADES PRIOR TO CONSTRUCTION & REPORT ANY DISCREPANCIES TO THE ENGINEER.
16. CONTRACTOR TO TAKE NECESSARY PRECAUTIONS TO PROTECT ALL SITE FEATURES EXISTING AT TIME OF CONSTRUCTION UNLESS SPECIFIED FOR DEMOLITION ON THE DRAWINGS. THIS INCLUDES ALL SURVEY BARS, STAKES & MONUMENTS. MAKE GOOD ANY DAMAGE.
17. EXISTING ASPHALT MUST BE SAW CUT AND/OR MILLED AT THE TIE-IN POINTS.

PROFESSIONAL SEAL

PROFESSIONAL PERMIT TO PRACTICE STAMP

APPROVED LOT GRADING PLAN STAMP WITH SIGNATURE OF DRAINAGE SERVICES MANAGER

LEGAL DESCRIPTION
LOT 1, BLOCK 3, PLAN 002 2276

Mark:	Date:	Description:
Revision:		

APPROVED LOT GRADING PLAN
COMMERCIAL AND MULTI-FAMILY
SAMPLE DRAWING

CONSULTANT / DEVELOPER INFORMATION

Project Title:

CLAREVIEW CRUs
Alldritt Development Limited

139th Avenue & 142nd Street
EDMONTON, ALBERTA

Sheet Title:

SITE GRADING PLAN

Scale: 1:500	Date: 2005-03-07
Drawn: K.T.C.	Sheet no: C0.2
Checked: T.A.P.	
Project no: 101127-20	