

LEGEND:

- EX GROUND ELEVATION 686.09
- PROPOSED FINISHED DESIGN ELEVATION 686.77
- EX TIE IN ELEVATION 686.10
- EX. CATCH BASIN . . . . . CB OR
- PROPOSED CATCH BASIN . . . . . ●
- EX FIRE HYDRANT . . . . . ✦
- PROPOSED FIRE HYDRANT . . . . . ✦
- EX MANHOLE . . . . . ⊙
- PROPOSED MANHOLE . . . . . ○
  - SMH = STORM MANHOLE MH = SANITARY MANHOLE
  - CBMH = CATCHBASIN MANHOLE ⊙
- REQUIRED NUMBER OF STEPS IN SIDEWALK . . .
- PROPERTY LINE . . . . . ▬ ▬ ▬
- HEAVY DUTY PAVED AREA . . . . . ▩
- LIGHT DUTY PAVED AREA . . . . . ▨
- STORMWATER PONDING AREA . . . . . ▭
- 1:100 STORM WATER OVERFLOW POINT . . ➡
- NUMBER OF STEPS REQUIRED . . . . . (3)

TOP OF RETAINING WALL ELEVATION = TOW
BOTTOM OF RETINAING WALL ELEVATIN = BOW

NOTES:

1. DIMENSIONS ARE IN METRES AND DECIMALS THEREOF.
2. CONTOUR INTERVAL = 0.20m
3. SURVEY PERFORMED BETWEEN JULY 14 AND AUGUST 12, 2011 BY PALS GEOMATIC CORP.
4. ELEVATIONS ARE GEODETIC AND ARE REFERRED TO ASCM 467704 ELEV. = 686.014m
5. REFER TO ARCHITECTURAL SITE PLAN FOR SITE LAYOUT DETAILS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION & PROTECTION OF EXISTING UTILITIES
7. REFER TO GEO-TECHNICAL REPORT FOR GRADING & PAVEMENT REQUIREMENTS.
8. MEASURES SHOULD BE TAKEN TO PROTECT THE EXISTING FENCE DURING CONSTRUCTION OF ANY RETAINING WALL ADJACENT TO THE FENCE. ANY DAMAGE TO THE EXISTING FENCE TO REPAIRED AT CONTRACTORS EXPENSE.
9. TYPICAL STEP RISER = 0.20
   STEP RUN = 0.30
   NUMBER OF STEPS REQUIRED AT SPECIFIED LOCATION INDICATED AS (3)

STORMWATER MANAGEMENT CALCULATIONS:

TOTAL SITE AREA = 1.43 ha
LANDSCAPING = 0.376 ha
HARD SURFACE = 1.05 ha

$C_{AVE} = \frac{(0.1 * 0.376) + (0.9 * 1.05)}{1.43} = 0.69$

SWM STORAGE(1:25) FOR [C_{AVE} = 0.69] = 1.43 ha @ 119.2cu.m./ha = 170.5 cu.m.
(122cu.m./ha as per City of Edmonton standard)

SWM STORAGE PROVIDED:
WITHIN: SURFACE PONDING = 113 cu.m.
PIPE = 29 cu.m.
MANHOLES/CB = 39 cu.m.

TOTAL PONDING = 181 cu.m.

ORIFICE SIZE CALCULATION:
MAX. ALLOWABLE OUTFLOW = 35 L/s/ha * 1.43 ha = 50 L/s (0.05 cms)

Q=Ca√(2gh) where; Q=0.05 cms
C=0.61
g= 9.81 m/s/s
h= 684.85m – 682.21m = 2.64 m

a = Q/(C√(2gh)) = 0.011 sq.m. (120mmØ)

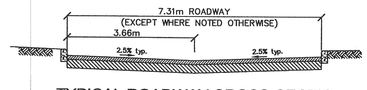
INSTALL 120mm Ø ORIFICE ON OUTLET ON SMH 12-01

PAVEMENT STRUCTURES:

LIGHT DUTY ASPHALT
- 75mm ASPHALT
- 200mm – 20mm CRUSHED GRAVEL
- 150mm SUB-GRADE PREPARATION (STABLIZED AS NECESSARY)

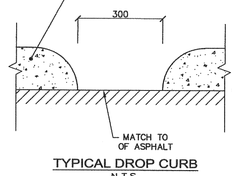
HEAVY DUTY ASPHALT
- 100mm ASPHALT
- 280mm – 20mm CRUSHED GRAVEL
- 150mm SUB-GRADE PREPARATION (STABLIZED AS NECESSARY)

STRAIGHT FACE CURB
N.T.S.



TYPICAL ROADWAY CROSS-SECTION
N.T.S.

TYPICAL SIDEWALK DRAINAGE CROSSING
N.T.S.



TYPICAL DROP CURB
N.T.S.

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Rev.	yy-mm-dd	Revision /Drawing Issue	Drawn by
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2	12-12-20	RE-ISSUED FOR APPROVAL	AHB
1	12-09-28	ISSUED FOR APPROVAL	AHB

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MARK V. MEDOWSKY
ENGINEER

CITY OF ST. ALBERT
ENGINEERING SERVICES
EXAMINED
Per Greg Persson
Date Feb 19, 2013
Signature

PROJECT

NOBLE GREENS TOWNHOUSES

LOT 102, BLOCK 12, PLAN 072 6741
ST. ALBERT, ALBERTA

DRAWING TITLE

GRADING & STORM WATER MANAGEMENT PLAN

Project number	Date	15 DEC 2011
C11-028	Scale	1:300
Drawn by AHB	Checked by	MVM
	REVISION	3

C-100

DRAWING NAME: C11-028 GRADING AND SERVICING V3.dwg
LAYOUT: GRADING

DATE PLOTTED: Feb 12, 2013 – 10:47 am