



- GRADING NOTES:**
- CONTRACTOR TO BE ADVISED THAT EXISTING GRADES ARE GIVEN AS INFORMATION ONLY AND SHOULD BE VERIFIED ON SITE. REPORT ANY DISCREPANCIES TO CONTRACT ADMINISTRATOR PRIOR TO ANY CONSTRUCTION.
 - ALL GRADING TO BE STAKED AND APPROVED BY CONTRACT ADMINISTRATOR PRIOR TO CONSTRUCTION.
 - ALL ELEVATION ARE IN METERS.
 - ALL PROPOSED ELEVATIONS TO BE FINISHED ELEVATIONS.
 - REFER TO LAYOUT PLAN L1, FOR LAYOUT OF ALL PATHWAYS, SWALES, ETC.
 - EXISTING GRADE TO BE MAINTAINED AT ALL PROPERTY LINES, LIMIT OF WORK LINE AND CITY SIDEWALKS.
 - SIDEWALK SLOPES:
-MAXIMUM 5%
-MINIMUM 2%
-MAXIMUM CROSS SLOPE 2%
EXCEPT AS NOTED
 - SODDED AREA SLOPES
-MAXIMUM 25%
-MINIMUM 2%
 - PAVED AREA SLOPES:
-MAXIMUM 5%
-MINIMUM 1%
ANY DEVIATION FROM THE ABOVE SLOPES TO BE APPROVED BY CONTRACT ADMINISTRATOR PRIOR TO CONSTRUCTION.
 - ENSURE POSITIVE DRAINAGE IN ALL AREAS TO CATCH BASINS AND CURB INLETS AS NOTED.
 - CATCH BASINS, CURB INLETS, MANHOLES, FIRE HYDRANTS AND WATER VALVES TO BE ABANDONED OR ADJUSTED ARE TO BE TO CITY OF WINNIPEG SPECIFICATIONS.
 - CONTRACTOR TO OBTAIN LOCATION OF ALL UTILITIES PRIOR TO ANY CONSTRUCTION. REPORT ANY DISCREPANCIES. CONTRACTOR TO BE ADVISED THAT LOCATIONS OF EXISTING SERVICES ARE GIVEN AS INFORMATION ONLY.
 - IF POWER EQUIPMENT IS TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:
A) NOTIFY THE GAS COMPANY AND HYDRO COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
B) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY AND HYDRO COMPANY INSTALLATIONS.
 - FILL DITCH WITH COMPACTED CLEAN EARTH FILL SUITABLE FOR PLANT GROWTH. REMOVE PLANT MATERIAL AND ORGANIC MATERIAL PRIOR TO FILLING.

- GENERAL NOTES:**
- CONTRACTOR TO VERIFY LOCATION AND TYPE OF ALL EXISTING BURIED UTILITIES.
 - ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF WINNIPEG STANDARD CONSTRUCTION SPECIFICATION.
 - LDS SEWER PIPES TO BE PVC OR CONCRETE.
 - ALL TRENCH, MANHOLE AND CATCH BASIN BACKFILL FOR WATER, SEWER AND PVC CONDUIT INSTALLATIONS SHALL BE CLASS 2 BEDDING AND BACKFILL IN PAVED AREAS AND CLASS 4 BACKFILL IN LANDSCAPED AREAS.
 - THE CONTRACTOR SHALL CLEAN AND VIDEO INSPECT ALL STORM AND SANITARY SEWERS PRIOR TO FINAL INSPECTION. THE CONTRACTOR SHALL SUBMIT (2) TWO COPIES OF THE WRITTEN REPORT AND VIDEO TO THE SITE SERVING CONSULTANT.
 - ALL CATCH BASINS TO HAVE SUBDRAINS IN ACCORDANCE WITH THE DETAIL.
 - THIS DRAWING IS NOT TO BE USED FOR SURVEY LAYOUT.

- STORM WATER DISCHARGE CRITERIA**
- ALLOWABLE DISCHARGE DETERMINED BY THE RATIONAL METHOD, $Q=CiA$
POST-DEVELOPMENT RUNOFF AND DISCHARGE RATES DETERMINED BY HYDROGRAPH METHOD USING EPA SWMM 5.0
 - RAINFALL INTENSITY i (mm/hr) = 5 YEAR WINNIPEG DESIGN STORM, $i = 1199 / (t+8)^{0.28}$
 - RAINFALL INTENSITY i (mm/hr) = 25 YEAR WINNIPEG DESIGN STORM, $i = 1842 / (t+9)^{0.42}$
 - TIME OF CONCENTRATION = 15 MINUTES, AREA 1.30 ha
 C^1 ALLOWABLE = 0.30, Q^1 ALLOWABLE = 5 YEAR, = 0.097 m³/s
 - POST DEVELOPMENT
SITE TOTAL:
IMPERVIOUS AREA = 0.307 ha
PERVIOUS AREA = 0.928 ha
NON-CONTRIBUTING AREA = 0.065 ha
PERCENT IMPERVIOUS = 24.9%, $C^1 = 0.39$
 Q^1 (5 YEAR) = 0.128 m³/s
 Q^1 (25 YEAR) = 0.181 m³/s
 - SITE DISCHARGE
 Q^1 (5 YEAR) - POST DEVELOPMENT = 0.063 m³/s
 Q^1 (25 YEAR) - POST DEVELOPMENT = 0.082 m³/s
 - REQUIRED ON SITE STORAGE = 152 m³
AVAILABLE ON SITE STORAGE = 260 m³
 - PONDING LEVELS REGULATED BY THE SIZING OF INTERNAL PIPING AND THE INSTALLATION OF A RESTRICTOR IN CATCH PIT#1. SEE RESTRICTOR DETAIL.
 - SITE DISCHARGE CONTROLLED BY 250 mm DISCHARGE PIPE.

LOCATION	RESTRICTOR/PIPE DIAMETER (mm)	DISCHARGE (m ³ /s)		PONDING DEPTH (m)		STORED VOLUME (m ³)	
		5 yr	25 yr	5 yr	25 yr	5 yr	25 yr
Restrictor	105	0.024	0.025	0.178	0.332	23.7	119.2
EX CB	250	0.063	0.082	--	0.308	0.2	33.0

LEGEND

- PROPERTY LINE
- PROPOSED LDS
- CENTRE LINE OF DITCH
- EXISTING CATCH BASIN
- PROPOSED CATCH PIT
- PROPOSED GRADE
- EXTRAPOLATED GRADE
- SLOPE
- EXISTING GRADE
- CP CATCH PIT
- CB CATCH BASIN
- INV INVERT
- HP HIGH POINT
- TC/BC TOP OF CURB/BOTTOM OF CURB

ISSUED FOR TENDER MAR 12 2016 AH
 99% CITY REVIEW APR 23 2015 AH
 Revisions Date By
 01-12-14 1:200
 Designed By SR Drawn By MRD Checked By AH
 Seals

McGOWAN RUSSELL
 Client
 CITY OF WINNIPEG

Project Title
PARK CITY WEST COMMUNITY CENTRE

Sheet Title
GRADING & SERVICING PLAN

Project No. 14-032 Drawing No. L2.1