ARBORIST REPORT & TREE PROTECTION PLAN

PERTAINING TO:	740 HOLLY AVE WINNIPEG, MB.
PREPARED FOR:	LANDMARK PLANNING & DESIGN INC. WINNIPEG, MB.
PREPARED BY:	FLEAWOOD TREE WORKS 83 LARCHDALE CR. WINNIPEG, MB.
ISA CERTIFIED ARBORIST®:	COREY DOUCETTE
ISA CERTIFICATION ID #:	PR-5491A
ASSESSMENT DATE:	13-NOV-22
REPORT DATE:	15-NOV-22

Landmark Planning & Design Inc.

fleawood

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INTRODUCTION

FLEAWOOD TREE WORKS (ISA CERTIFIED ARBORIST®), WAS HIRED BY CHOI HO, OF LANDMARK PLANNING & DESIGN INC. TO COMPLETE AN ARBORIST TREE PRESERVATION REPORT AND PROTECTION PLAN FOR THE WORK SITE AT 740 HOLLY AVENUE. A TREE INVENTORY REPORT WAS COMPLETED TO INFORM THE CLIENT OF THE EXISTING SPECIES, SIZE AND CONDITION OF THE TREES ON THE SITE. THE REPORT ALSO PROVIDES PRELIMINARY TREE PRESERVATION RECOMMENDATIONS.

METHOD

1. FLEAWOOD TREE WORKS CONDUCTED A SITE INSPECTION AND TREE ASSESSMENT ON NOVEMBER 13, 2022.
2. TRUNK DIAMETER WAS MEASURED USING A CALIBRATED DIAMETER TAPE. THE MEASUREMENT WAS TAKEN AT 1.4 METERS ABOVE GROUND LEVEL, GENERALLY REFERRED TO AS THE DIAMETER AT BREAST HEIGHT (DBH).
3. TREES WERE ASSESSED BY VISUAL INSPECTION FROM THE GROUND. TREES WERE EVALUATED IN CONSIDERATION OF OVERALL HEALTH AND STRUCTURAL INTEGRITY AND ASSIGNED A CONDITION RATING RANGING FROM GOOD TO FAIR TO POOR.
4. A TREE PROTECTION PLAN WAS CREATED BY ADDING TREE LOCATIONS TO A SITE MAP BASED ON A SURVEY AND ARCHITECTURAL DRAWING (PROVIDED BY CLIENT) WITH TREE PROTECTION/REMOVAL COMMENTS. REFER TO APPENDIX I.

TREE PROTECTION AND REMOVAL PLAN

The construction related activities may affect the following trees (Refer to Appendix I)*:

TREE NO.	OWNERSHIP	ACTION/NOTES
1-12, 14, 33, 41-57	• CLIENT OWNED TREES (PRIVATE)	REMOVAL REQUIRED. TREES FALL WITHIN PROPOSED BUILDING FOOTPRINT / HARDSCAPING.
15-16, 34-35, 37-38	• CLIENT OWNED TREES (PRIVATE)	REMOVAL RECOMMENDED. TREES ARE IN POOR / DEAD CONDITION.
13, 17-32, 36 39-40	• CLIENT OWNED TREES (PRIVATE)	TREES TO BE PROTECTED. TREES ARE IN GOOD / FAIR CONDITION AND FALL OUTSIDE OF PROPOSED WORK ZONE.
N/A	• CITY OWNED TREES (PUBLIC)	NO CITY-OWNED TREES WITHIN PROPOSED WORK ZONE.

TREE PROTECTION - GENERAL

1. PROTECTIVE BARRIERS SHOULD BE INSTALLED AROUND ALL TREES TO BE RETAINED PRIOR TO ANY CONSTRUCTION COMMENCING ON SITE AS SHOWN ON THE TREE PROTECTION PLAN.

2. TREE PROTECTION BARRIERS ARE TO BE LOCATED AT THE OUTER LIMIT OF THE MINIMUM TREE PROTECTION ZONE (TPZ) AND IS CORRELATED TO TRUNK DIAMETER (SEE TABLE BELOW).

SIZE CLASS	TRUNK DIAMETER (DBH)	~ PROTECTION DISTANCES REQUIRED
1	< 10 CM	4 FT
2	11 - 29 CM	6 FT
3	30 - 41 CM	8 FT
4	41 - 50 CM	10 FT
5	51 - 60 CM	12 FT
6	61 - 70 CM	14 FT
7	71 - 80 CM	16 FT
8	81 - 90 CM	18 FT
9	91 - 100 CM +	20 FT

3. THE TREE PROTECTION BARRIERS ENCLOSE THE TREE PROTECTION ZONE (TPZ), WITHIN WHICH NO CONSTRUCTION-RELATED ACTIVITY SHOULD BE PERMITTED. WITHIN THE TPZ THERE IS TO BE:
   - NO CONSTRUCTION
   - NO ALTERING OF GRADE DUE TO CUT AND FILL, SURFACE SCRAPING, EXCAVATING, OR SOIL DISTURBANCE
   - NO STORAGE OF CONSTRUCTION MATERIALS, SOIL, WASTE, OR DEBRIS
   - NO DISPOSAL OF ANY SOLID OR LIQUID
   - NO PARKING, OPERATION, OR PASSAGE OF VEHICLES OR EQUIPMENT

4. UNLESS OTHERWISE STIPULATED ON THE TREES PROTECTION PLAN, THE BARRIERS ARE TO BE 4 FEET HIGH, AND CONSTRUCTED OF HIGH ORANGE PLASTIC WEB SNOW FENCING ON A WOOD FRAME OR A COMPARABLY ADEQUATE FENCING SOLUTION. SUPPORTS AND BRACES FOR THE BARRIERS MUST BE INSTALLED OUTSIDE THE TPZ. THE BARRIER LOCATIONS CAN BE ADJUSTED TO ALIGN WITH CURBS AND EDGES AT CLEAR PATH OF TRAVEL ZONES.

5. TREE STRAPPING MATERIAL WILL BE INSTALLED ON INDIVIDUAL TREES WHERE WORK WILL BE COMPLETED WITHIN THE TPZ.

TREE-BY-TREE INVENTORY

1. TREE-BY-TREE INVENTORY (PLEASE REFER TO SITE MAP IN APPENDIX I. ALL MEASUREMENTS NOTED ARE RADIUSES FROM CENTER OF TREE.
2. THIS INVENTORY WAS COMPLETED ON AN UNMAINTAINED PROPERTY - 'VOLUNTEER' TREES < 6 CM DBH ARE NOT INCLUDED IN THIS INVENTORY.

TREE NO.	COMMON NAME	CONDITION	DBH (CM)	SRZ (FT)	CRZ (FT)	TPZ	MPA (FT)	NOTES / RECOMMENDED ACTION
1	MANITOBA MAPLE	POOR	57,32	-	-	-	-	REMOVAL RECOMMENDED. MULTI-STEM (2). BASAL DECAY. SPLIT.
2	MANITOBA MAPLE	GOOD	69	-	-	-	-	
3	CHOKECHERRY	GOOD	14,7,10	-	-	-	-	MULTI-STEM (3). NO BLACK KNOT PRESENT.
4	WILLOW	FAIR	23	-	-	-	-	BARK SLOUGHING OFF NEAR BASE OF TREE. FULL CANOPY.
5	WILLOW	GOOD	20,13	-	-	-	-	MULTI-STEM (2).
6	AMERICAN ELM	GOOD	10	-	-	-	-	
7	MANITOBA MAPLE	FAIR	23,33	-	-	-	-	MULTI-STEM (2). 1 LARGE DEAD LIMB (25% OF TREE).
8	SPRUCE	GOOD	38	-	-	-	-	
9	APPLE	GOOD	11,12,18,10	-	-	-	-	MULTI-STEM (4). CROSSING-RUBBING LIMBS.
10	AMERICAN ELM	GOOD	16,11,10,6	-	-	-	-	
11	SIBERIAN ELM	GOOD	16,13,9	-	-	-	-	MULTI-STEM (3). TIPS ENCROACHING ON HYDRO WIRES.
12	MANITOBA MAPLE	GOOD	27	-	-	-	-	
13	SPRUCE	GOOD	50	9	25	A	12	
14	SPRUCE	GOOD	49	-	-	-	-	
15	MANITOBA MAPLE	FAIR	-	-	-	-	-	MULTI-STEM (5). SPROUTED STUMP.
16	PAPER BIRCH	POOR	17,34,21,27	-	-	-	-	REMOVAL RECOMMENDED. MULTI-STEM (4). NEAR HYDRO WIRES.
17	MANITOBA MAPLE	GOOD	11	2	5	A	8	NEAR HYDRO WIRES.
18	SPRUCE	FAIR	56	10	28	A	14	SPARSE CANOPY.
19	MANITOBA MAPLE	FAIR	21	4	10	A	8	MULTI-STEM (2). TOPPED FOR HYDRO WIRE CLEARANCE.
20	MANITOBA MAPLE	GOOD	13	2	6	B	8	MULTI-STEM (2).
21	MANITOBA MAPLE	GOOD	13	2	6	B	8	
22	MANITOBA MAPLE	GOOD	20	4	10	B	8	
23	MANITOBA MAPLE	GOOD	18	3	9	B	8	BROKEN BRANCHES HANGING.
24	SPRUCE	FAIR	47	8	23	B	12	SPARSE CANOPY
26	AMERICAN ELM	GOOD	67	12	33	B	16	PROMINENT TREE. MINOR WOOD PECKER DAMAGE AT OLD WOUND.
27	MANITOBA MAPLE	GOOD	10	2	5	B	6	
28	MANITOBA MAPLE	GOOD	8	1	4	B	6	
29	MANITOBA MAPLE	GOOD	9	2	4	B	6	
30	MANITOBA MAPLE	GOOD	8	1	4	B	6	
31	MANITOBA MAPLE	GOOD	20	4	10	B	8	
32	MANITOBA MAPLE	GOOD	35	6	17	C	10	

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GLOSSARY OF TERMS

DBH: TRUNK DIAMETER AT BREAST HEIGHT

DIAMETER AT BREAST HEIGHT, OR DBH, IS A STANDARD METHOD OF EXPRESSING THE DIAMETER (1.3M ABOVE GRADE) OF THE TRUNK OF A STANDING TREE.

SRZ: STRUCTURAL ROOT ZONE (ROOT PLATE)

THE WOODY ROOTS, VISIBLE FROM THE TRUNK, ALSO KNOWN AS THE ROOT PLATE. THESE ROOTS ANCHOR THE TREE AND CREATE STABILITY. DAMAGE TO THESE ROOTS LEAD TO CATASTROPHIC FAILURE OF THE TREE.

CRZ: CRITICAL ROOT ZONE

ZONE IN WHICH THE FIBROUS ROOTS, JUST BELOW THE SURFACE, SPREAD TO. OFTEN TIMES CAN EXTEND TWO TO THREE TIMES PAST THE EXTENT OF THE CANOPY.

RPZ: ROOT PROTECTION ZONE

THE ECOLOGICAL ROOT PRINT AREA IN AN UNCONSTRAINED LANDSCAPED SETTING. LIMITED DISTANCE TO ENCHROACHMENT UNDER IDEAL CIRCUMSTANCES.

TPZ: TREE PROTECTION ZONE

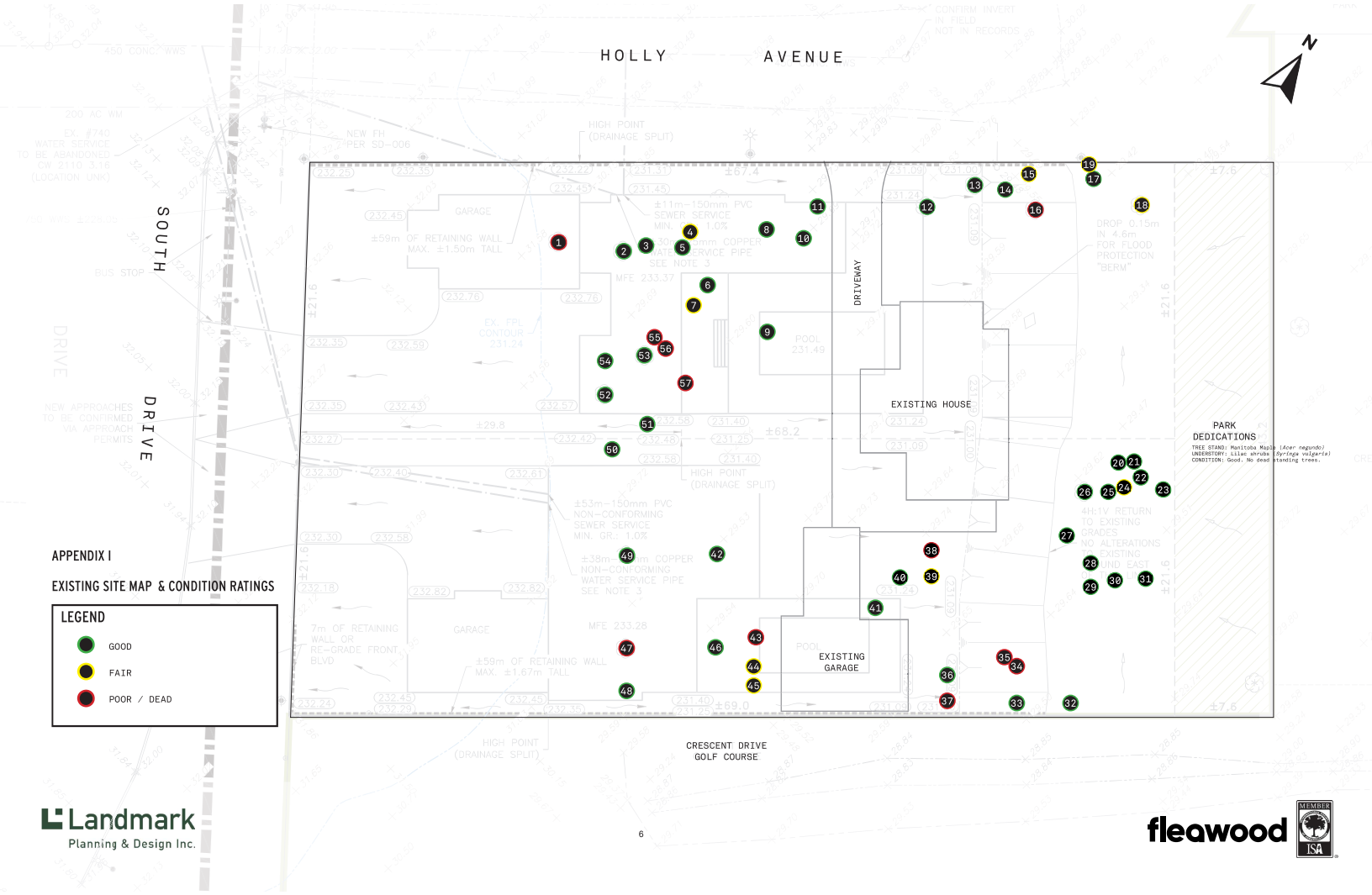
THE ZONE IN WHICH NO CONSTRUCTION RELATED ACTIVITY SHOULD TAKE PLACE - THESE ZONES CAN INCLUDE INDIVIDUAL TREES, OR MULTIPLE TREES.

MPA: MINIMUM PROTECTION AREA

THE OUTER LIMIT OF THE TREE PROTECTION ZONE WHERE TREE PROTECTION BARRIERS ARE TO BE PLACED.

CONTINUED

TREE NO.	COMMON NAME	CONDITION	DBH (CM)	SRZ (FT)	CRZ (FT)	TPZ	MPA (FT)	NOTES / RECOMMENDED ACTION
33	MANITOBA MAPLE	GOOD	41	-	-	-	-	
34	MANITOBA MAPLE	POOR	54,29	-	-	-	-	MULTI-STEM (2). SINGLE STEM FAILED INTO ADJACENT TREE.
35	AMERICAN ELM	DEAD	27	-	-	-	-	REMOVAL RECOMMENDED.
36	SPRUCE	GOOD	58	10	29	C	14	CO-DOMINANT STEMS.
37	SIBERIAN ELM	POOR	25	-	-	-	-	REMOVAL RECOMMENDED. STORM DAMAGED TREE. BROKEN TIPS.
38	SIBERIAN ELM	DEAD	13,15,12	-	-	-	-	REMOVAL RECOMMENDED. MULTI-STEM (3).
39	GREEN ASH	FAIR	12	2	6	C	8	FAILED STEM OF TREE #34 HUNG UP IN TREE.
40	MANITOBA MAPLE	GOOD	13	2	6	C	8	MULTI-STEM (2)
41	MANITOBA MAPLE	GOOD	15,13,12,9,7,7	-	-	-	-	MULTI-STEM (6)
42	SPRUCE	GOOD	45	-	-	-	-	
43	MANITOBA MAPLE	POOR	12,13	-	-	-	-	REMOVAL RECOMMENDED. MULTI-STEM (2). LEANING ON SHED.
44	AMERICAN ELM	FAIR	8	-	-	-	-	TIP DIEBACK.
45	MANITOBA MAPLE	FAIR	8,7,9	-	-	-	-	MULTI-STEM (3).
46	MANITOBA MAPLE	GOOD	25,23,20,17,19,12	-	-	-	-	MULTI-STEM (6).
47	MANITOBA MAPLE	POOR	73	-	-	-	-	REMOVAL RECOMMENDED.
48	GREEN ASH	GOOD	36	-	-	-	-	
49	MANITOBA MAPLE	GOOD	37,34	-	-	-	-	MULTI-STEM (2).
50	MANITOBA MAPLE	GOOD	21	-	-	-	-	
51	SPRUCE	GOOD	49	-	-	-	-	
52	GREEN ASH	GOOD	14	-	-	-	-	
53	SPRUCE	GOOD	45	-	-	-	-	
54	GREEN ASH	GOOD	13	-	-	-	-	
55	MANITOBA MAPLE	DEAD	16	-	-	-	-	
56	MANITOBA MAPLE	GOOD	17	-	-	-	-	HEAVY LEAN / PHOTOTROPIC (REACHING FOR LIGHT)
57	GREEN ASH	GOOD	7	-	-	-	-	



APPENDIX I

EXISTING SITE MAP & CONDITION RATINGS

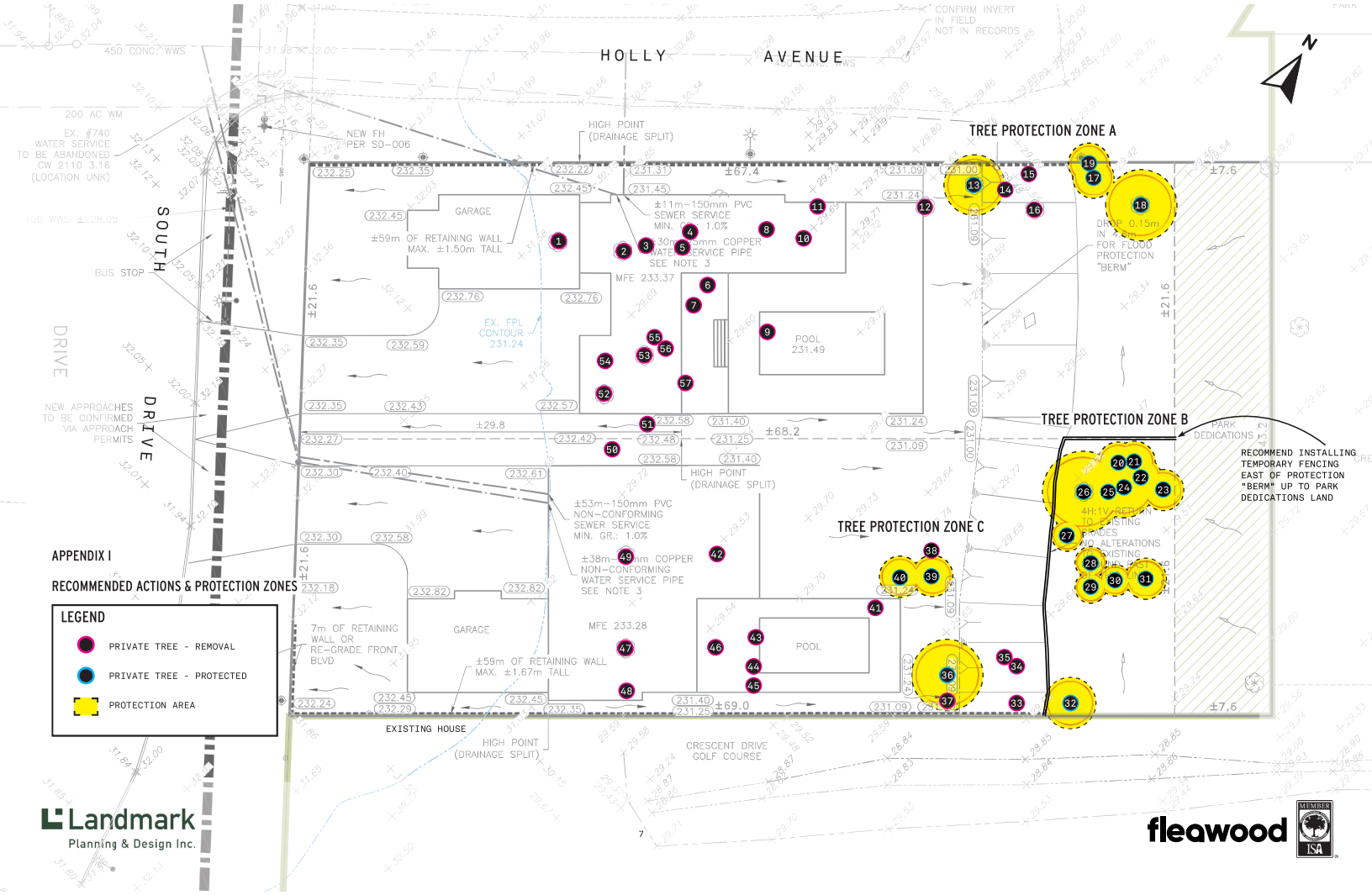
LEGEND

- GOOD
- FAIR
- POOR / DEAD

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HOLLY AVENUE
SOUTH DRIVE
TREE PROTECTION ZONE A
TREE PROTECTION ZONE B
TREE PROTECTION ZONE C
RECOMMEND INSTALLING TEMPORARY FENCING EAST OF PROTECTION "BERM" UP TO PARK DEDICATIONS LAND
PARK DEDICATIONS
APPENDIX I
RECOMMENDED ACTIONS & PROTECTION ZONES
LEGEND
PRIVATE TREE - REMOVAL
PRIVATE TREE - PROTECTED
PROTECTION AREA
GARAGE
POOL
EXISTING HOUSE
HIGH POINT (DRAINAGE SPLIT)
CRESCENT DRIVE GOLF COURSE
BUS STOP
NEW APPROACHES TO BE CONFIRMED VIA APPROACH PERMITS
NEW FH PER SD-006
EX. FPL CONTOUR 231.24
MFE 233.37
MFE 233.28
±59m OF RETAINING WALL MAX. ±1.50m TALL
±59m OF RETAINING WALL MAX. ±1.67m TALL
7m OF RETAINING WALL OR RE-GRADE FRONT BLVD
±11m–150mm PVC SEWER SERVICE MIN. 1.0%
±53m–150mm PVC NON-CONFORMING SEWER SERVICE MIN. GR.: 1.0%
±38m–19mm COPPER NON-CONFORMING WATER SERVICE PIPE SEE NOTE 3
DROP 0.15m IN 4.5m FOR FLOOD PROTECTION "BERM"
4H:1V RETURN TO EXISTING GRADES NO ALTERATIONS TO EXISTING
CONFIRM INVERT IN FIELD NOT IN RECORDS
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SPECIFIC TREE PROTECTION RECOMMENDATIONS

ZONE A (TREES 13, 17-19)

THESE TREES ARE PRIVATE, CLIENT OWNED TREES, IN GOOD TO FAIR CONDITION AND SHOULD BE PROTECTED. DETERMINE THE MINIMUM AMOUNT OF ROOM NEEDED FOR CONSTRUCTION PURPOSES, AND PROVIDE A BARRIER OUTSIDE OF THESE CONSTRUCTION ZONES TO MAXIMIZE THE TPZ. MINIMISING THE ALTERATION OF EXISTING GRADE WILL PROTECT AGAINST DAMAGE TO THE ROOT SYSTEM.

ZONE B (TREES 20-31):

THESE TREES ARE PRIVATE, CLIENT OWNED TREES; IN GOOD CONDITION AND SHOULD BE PROTECTED. DETERMINE THE MINIMUM AMOUNT OF ROOM NEEDED FOR CONSTRUCTION PURPOSES, AND PROVIDE A BARRIER OUTSIDE OF THESE CONSTRUCTION ZONES TO MAXIMIZE THE TPZ. INSTALLING TEMPORARY CONSTRUCTION FENCING EAST OF PROPOSED BERM AROUND THE MINIMUM PROTECTION AREA FOR ALL TREES UP TO AND INCLUDING THE PARK DEDICATIONS LAND IS RECOMMENDED.

ZONE C (TREES 36, 39-40):

THESE TREES ARE PRIVATE, CLIENT OWNED TREES; IN GOOD CONDITION AND SHOULD BE PROTECTED. DETERMINE THE MINIMUM AMOUNT OF ROOM NEEDED FOR CONSTRUCTION PURPOSES, AND PROVIDE A BARRIER OUTSIDE OF THESE CONSTRUCTION ZONES TO MAXIMIZE THE TPZ.

IF CONSTRUCTION WITHIN THE IDEAL TPZ DOES OCCUR THERE ARE FURTHER MEASURES THAT SHOULD BE TAKEN TO PREVENT SOIL COMPACTION AND TRUNK DAMAGE,SUCH AS THE USE OF MULCH OR GEO-MATS TO REDUCE SOIL COMPACTION. CONSULT WITH YOUR ARBORIST.

AS DESCRIBED ABOVE, FENCING / PROTECTION LOCATIONS HAVE BEEN PRESCRIBED FOR THREE ZONES. PRIOR TO ANY WORK ON THE SITE, TREE PROTECTION FENCING SHOULD BE INSTALLED PER THE LOCATIONS SHOWN ON THE SITE MAP IN APPENDIX I.

PUBLIC TREES

ANY CONSTRUCTION RELATED ACTIVITY OCCURING NEAR THE PUBLIC BOULEVARD TREE MUST ADHERE TO ALL TREE PROTECTION RECOMMENDATIONS AS OUTLINED IN THE TREE PLANTING DETAILS & SPECIFICATIONS DOCUMENT - SECTION 5.0 - TREE PROTECTION DURING CONSTRUCTION:
HTTPS://WINNIPEG.CA/PUBLICWORKS/PARKSOPENSPACE/URBANFORESTRY/PDF/PRINCIPLES_AND_GUIDELINES.PDF

ANY WORK REQUIRED ON A CITY OWNED TREE REQUIRES THE FOLLOWING FORM TO BE COMPLETED AND SUBMITTED TO THE CITY OF WINNIPEG URBAN FORESTRY BRANCH:

AGREEMENT FOR CONTRACTORS TO PERFORM ARBORICULTURAL SERVICES ON TREES UNDER CONTROL OF THE URBAN FORESTRY BRANCH
HTTPS://WINNIPEG.CA/PUBLICWORKS/PARKSOPENSPACE/URBANFORESTRY/PDF/AGREEMENT_FOR_CONTRACTORS_AUGUST_2016.PDF

WATERING OF TREES

IT IS EXTREMELY IMPORTANT TO REGULARLY MONITOR THE SOIL MOISTURE LEVELS WITHIN THE ROOT ZONES OF THE TREES DURING THE MONTHS FROM APRIL TO NOVEMBER, AND TO ENSURE ADEQUATE SUPPLEMENTAL WATERING IS DONE PROMPTLY AS NECESSARY. THE OBJECTIVE OF THE WATERING IS TO PROVIDE THE TREES WITH DEEP, THOROUGH WATERING WHEN RAINFALL IS INSUFFICIENT TO KEEP THE SOIL MOIST 2” BELOW THE SURFACE. IT IS STRONGLY RECOMMENDED THAT AN INDIVIDUAL WHO WILL BE ON-SITE FOR THE DURATION OF THE PROJECT BE ASSIGNED THIS RESPONSIBILITY AND BE GIVEN CLEAR INSTRUCTION ON HOW TO CHECK MOISTURE LEVELS, HOW AND WHERE TO APPLY THE WATER AND HOW MUCH.

FERTILIZATION

DEEP ROOT FERTILIZATION CAN BE COMPLETED TO ENCOURAGE GROWTH AND INCREASE VIGOR. FERTILIZERS SHOULD BE APPLIED IN EARLY SPRING JUST BEFORE GROWTH OCCURS. LATE SUMMER FERTILIZING IS NOT RECOMMENDED, AS IT WILL ENCOURAGE SUCCULENT GROWTH, WHICH WILL BE MORE PRONE TO WINTER INJURY.

SITE SUPERVISION BY THE ARBORIST

IT IS RECOMMENDED THAT THE CLIENT RETAIN A CONSTRUCTION-PHASE PROJECT ARBORIST TO MAKE ROUTINE SITE INSPECTIONS TO MONITOR TREE PROTECTION AND TREE CONSIDERATIONS AND PROVIDE FOLLOW-UP RECOMMENDATIONS FOR TREE CARE OR PROTECTION RELATED WORK.

CONCLUDING REMARKS

THE TREE PRESERVATION PRESCRIPTIONS RECOMMENDED IN THIS REPORT FOR THOSE TREES TO BE PROTECTED ON THE SITE HAVE BEEN PREPARED FOLLOWING THE CITY OF WINNIPEG'S MINIMUM TREE PROTECTION ZONE GUIDELINES. IT IS ANTICIPATED THAT FOR THOSE TREES WITHIN WHICH THESE MINIMUM TREE PROTECTION ZONES ARE FULLY OBSERVED, THESE TREES WILL NOT BE MARKEDLY AFFECTED BY THE PROPOSED DEVELOPMENT.

CONTACT

FOR ANY QUESTIONS CONCERNING CITY-OWNED TREES, PLEASE CONTACT THE URBAN FORESTRY BRANCH WITH THE CITY OF WINNIPEG.

FOR ANY QUESTIONS REGARDING THIS REPORT, PLEASE CONTACT:

COREY DOUCETTE

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