

WOODLAND PARK

A PART OF THE NORTHEAST 1/4, OF SECTION 28, TOWN 3 NORTH, RANGE 11 EAST,
CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

PRELIMINARY SITE PLAN

LEGAL DESCRIPTION
PARCELS 1, 2, 3, 4, 5, AND 6B COMBINED (23.629 ACRES) AS SURVEYED
 (PARCEL IDENTIFICATION: 70-15-28-226-022, 70-15-28-226-021, 70-15-28-226-007,
 70-15-28-226-008, 70-15-28-204-004, AND PART OF 70-15-28-226-001)

A PARCEL OF LAND LOCATED IN THE NORTHEAST 1/4 OF SECTION 28, TOWN 3 NORTH, RANGE 11 EAST, CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS; COMMENCING AT NORTHEAST CORNER OF SAID SECTION 28; THENCE SOUTH 705.50 FEET ALONG THE EAST LINE OF SECTION 28 TO THE POINT OF BEGINNING; THENCE EXTENDING SOUTH 530.65 FEET ALONG THE EAST LINE OF SECTION 28; THENCE N.86°50'01"W 331.20 FEET; THENCE SOUTH 1.60 FEET; THENCE ALONG THE NORTHERLY AND EASTERLY LINE OF "WHISPERING WILLOWS NO. 1 AS RECORDED IN LIBER 173 ON PAGES 1-4, OAKLAND COUNTY RECORDS THE FOLLOWING COURSES AND DISTANCES; N87°10'47"W 838.39 FEET, N00°38'51"W 172.73 FEET, S38°51'51"W 314.56 FEET AND N01°17'26"W 987.16 FEET TO THE NORTH LINE OF SECTION 28; THENCE N89°12'02" E 325.63 FEET ALONG THE NORTH LINE OF SECTION 28; THENCE S00°38'51"E 400.00 FEET; THENCE S86°46'06"E 271.56 FEET; THENCE SOUTH 225.34 FEET; THENCE S87°10'47"E 966.61 FEET TO THE POINT OF BEGINNING. CONTAINING 23.629 ACRES OF LAND.

SUBJECT TO AN EASEMENT FOR PEDESTRIAN/BICYCLE PATHWAY AS RECORDED IN LIBER 10759, PAGES 7, AND 101, AND LIBER 10758 PAGE 780, AND LIBER 10823, PAGE 175.

ALSO SUBJECT TO AN EASEMENT FOR A SANITARY SEWER CROSS THE EAST 53 FEET AS RECORDED IN LIBER 7159, PAGE 578 AND 579 AND LIBER 7343, PAGE 565.

ALSO SUBJECT TO A RIGHT OF WAY ACQUISITION RECORDED IN LIBER 0383, PAGE 97.

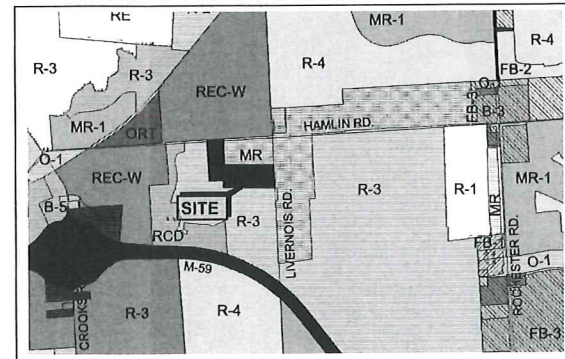
ALSO SUBJECT TO THE RIGHT OF THE PUBLIC IN LIVERNOIS ROAD AND HAMLIN ROAD

ALSO SUBJECT TO ANY EASEMENTS AND/OR RIGHTS OF WAY RECORDED OR OTHERWISE.

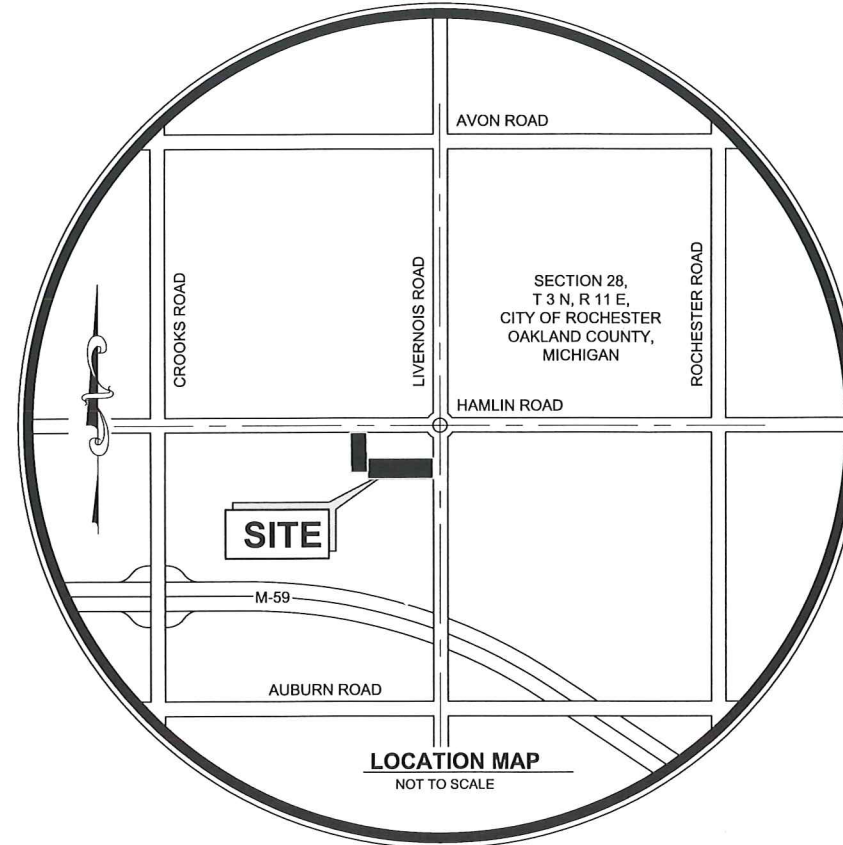
SOIL MAP



ZONING MAP



NOTE:
NO FLOOD ZONES PRESENT ON SITE PER CITY OF ROCHESTER HILLS FLOOD MAP.



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THE CONTRACTOR SHALL CHECK AND VERIFY ALL PERTINENT DIMENSIONS AND REPORT ANY DISCREPANCIES TO FAZAL KHAN & ASSOCIATES INC. BEFORE PROCEEDING WITH THE WORK.

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF ALL GOVERNING AGENCIES.

ALL WATERMANS, SANITARY SEWERS (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN 3 FT. OF PAVEMENT TO BE SAND BACK FILLED AND COMPACTED TO 95% OPTIMUM DENSITY. ALL UTILITY CROSSINGS TO BE SAND BACK FILLED. SAND BACK FILLING TO BE INCIDENTAL TO CONTRACT.

PERMITS

SANITARY PERMIT # _____ ISSUED _____

WATER MAIN PERMIT # W _____ ISSUED _____

SOIL EROSION PERMIT # _____ ISSUED _____

DEQ WETLAND PERMIT # _____ ISSUED _____

NPDES PERMIT # MR _____ ISSUED _____

FIRE MARSHALL APPROVAL _____

RCOC PERMIT # _____ ISSUED _____

CITY OF ROCHESTER HILLS ROW USE # _____ ISSUED _____

SHEET INDEX

1	COVER SHEET
2	BOUNDARY AND TOPOGRAPHY
3	TREE SURVEY / TREE PRESERVATION PLAN
4	TREE SURVEY / TREE PRESERVATION PLAN
5	TREE LIST
6	TREE LIST
7	OVERALL SITE PLAN
7A	SITE DRAINAGE PLAN
8	SITE PLAN AT HAMLIN ROAD
9	SITE PLAN AT LIVERNOIS ROAD
10	LANDSCAPE PLAN
10A	SIGHT DISTANCE PLAN
11	LANDSCAPE DETAILS
12	WETLAND IMPACT

SITE DATA

ZONED	R3 — MIXED RESIDENTIAL OPTION (MR)
TOTAL SITE AREA	23.629 ACRES
HAMLIN ROAD RIGHT-OF-WAY	0.448 ACRES
LIVERNOIS ROAD RIGHT-OF-WAY	0.730 ACRES
NET SITE ACREAGE	22.451 ACRES

DENSITY CALC.

PROPOSED UNITS	48 UNITS
PERMITTED DENSITY: 3.45 UNITS/ACRE	72 UNITS

UNIT SIZES PROVIDED

AVERAGE AREA	11,805.52 S.F.
MAX. AREA	19,761 S.F. (UNIT 35)
MIN. AREA	9,688 S.F. (UNIT 3)
MIN. DEPTH	120.00 FEET
MIN. WIDTH	80.00 FEET

NOTE: NO MINIMUM LOT AREA OR WIDTH REQUIREMENT FOR DETACHED DWELLINGS IN (MR)

PERIMETER SETBACKS

FRONT:	30.0'
SIDE:	15.0'
REAR:	60.0'

UNIT SETBACKS

	REQUIRED	PROVIDED
FRONT	20.0'	25.0' FRONT 20.0' (SIDE ENTRY)
SIDE MIN.	5.0'	5.0'
TOTAL SIDE	15.0'	30.0'
REAR	35.0'	35.0'

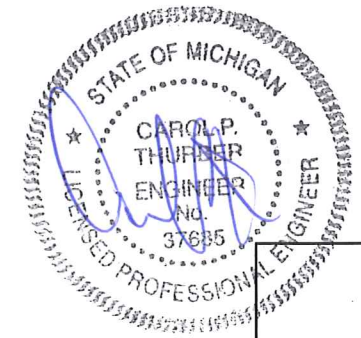
OPEN SPACE PROVIDED

PASSIVE OPEN SPACE	2.456 acres
	0.483 acres
	0.364 acres
	0.156 acres
	0.089 acres
TOTAL PASSIVE =	3.548 acres
ACTIVE OPEN SPACE	0.640 acres
	0.369 acres
	0.210 acres
	0.096 acres
TOTAL ACTIVE =	1.315 acres
TOTAL ACTIVE AND PASSIVE	4.863 acres (21.66%)

OWNER / DEVELOPER

PULTE LAND COMPANY, LLC
 100 BLOOMFIELD HILLS PARKWAY, SUITE 150
 BLOOMFIELD HILLS, MI 48304
 ATTN: JOE SKORE
 (248) 330-3069

SURVEYOR / ENGINEER

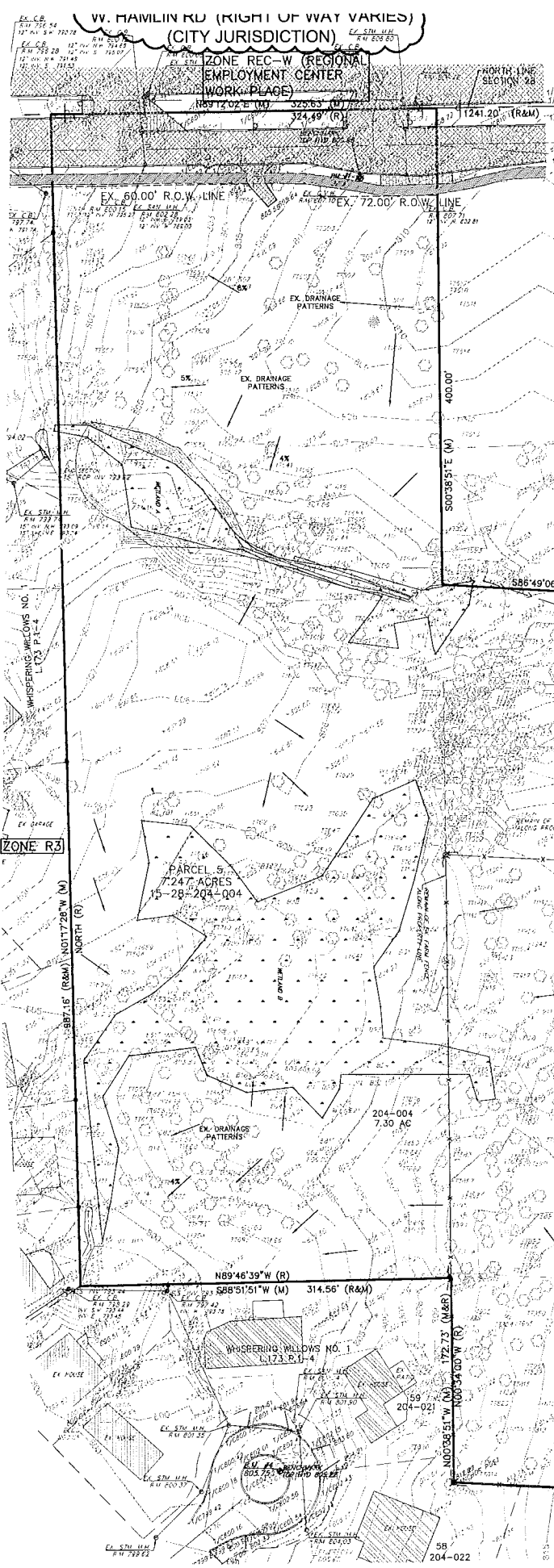


FAZAL KHAN AND ASSOCIATES, INC.
 43279 SCHOENHERR ROAD
 STERLING HEIGHTS, MI 48313
 (586) 739-8007

PLANS SUBMITTED TO:	DATE SUBMITTED:	COMMENTS RECEIVED:	RE-SUBMITTED:	COMMENTS RECEIVED:	RE-SUBMITTED:	DATE APPROVED:	ADDRESS AND PHONE #:
CITY OF ROCHESTER HILLS	08-21-2015	09-22-2015	10-16-2015	10-29-2015	11-11-2015		1000 ROCHESTER HILLS DRIVE, ROCHESTER HILLS, MI 48309-3303 PHONE: (248) 658-4000 FAX: (248) 658-4104

CITY FILE # 15-014

NOT TO BE USED AS CONSTRUCTION DRAWINGS

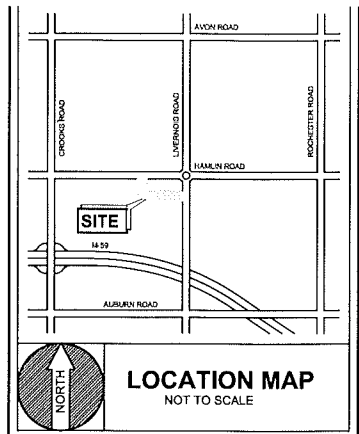


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LEGEND

● IRON FOUND	○ IRON SET
⊙ MONUMENT FOUND	⊕ SEC. CORNER
⊙ MONUMENT SET	— PROPERTY LIMITS
— SECTION LINE	— ROAD CENTERLINE
— GATE VALVE AND WELL	— WATER MAIN
— SANITARY MANHOLE	— SANITARY SEWER
— STORM MANHOLE	— STORM SEWER
— SWALE	— METAL FENCE LINE
— WOOD FENCE LINE	— OVERHEAD WIRES
— UNDERGROUND UTILITY CONTOUR	
— TREE / BRUSH LINE	
— SIGN	— MAILBOX
— TRENCH	— TRENCH
— TRANSFORMER	— UTILITY PEDESTAL
— WELL	— WATER METER
— TAPPING SLEEVE, VALVE AND WELL	— HYDRANT
— UTILITY POLE	— WATER LEAD SHUT OFF



- BENCHMARK LIST**
- BENCHMARK #1 (SHOWN)
MAG NAIL IN NORTH FACE OF UTILITY
ELEV = 863.16 (NAVD 88)
 - BENCHMARK #2 (SHOWN)
MAG NAIL IN WEST FACE OF UTILITY POLE
ELEV = 838.60 (NAVD 88)
 - BENCHMARK #3
TOP OF HYDRANT
ELEV = 831.81 (NAVD 88)
(SOUTH OF LOT #2 MAPLE LEAF DR.)
 - BENCHMARK #4 (SHOWN)
TOP OF HYDRANT
ELEV = 805.75 (NAVD 88)

NOTE:
 UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY LOCATIONS.

EAST LINE OF SECTION 28
 SOUTH 705.50'

S. LIVERNOIS RD. (60' = 1/2 WIDTH)
 (RCCJ JURISDICTION)

23.629 ACRES

POINT OF BEGINNING
 6
 101-009
 ZONE MR (MIXED RESIDENTIAL)

7
 226-013
 226-012

N 87°10'47\"/>

EAST 1/4 CORNER OF SEC. 28,
 T4N, R12E, ROCHESTER HILLS,
 OAKLAND COUNTY, MICHIGAN
 (MAG NAIL W/ REMON. TAG)

CITY FILE # 15-014

3/15/15 - 482'0\"/>

NOT TO BE USED AS CONSTRUCTION DRAWINGS

WOODLAND PARK

A PART OF THE NORTH 1/4, OF SECTION 28, TOWN 3 NORTH, RANGE 11 EAST,
CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

TREE SUMMARY
 TOTAL # OF TREES SURVEYED ON-SITE (350 TREES + 201 TREES) = 551 TREES
 TOTAL # OF UNDESIRABLE TREES/ TREES IN BLDG. ENVELOPE = 290 TREES
 TOTAL # OF REGULATED TREES = 261 TREES
 TOTAL # OF REGULATED TREES TO BE REMOVED = 142 TREES
 TOTAL # OF REGULATED TREES REQUIRED TO REMAIN = 97 TREES
 TOTAL # OF REGULATED TREES TO REMAIN = 119 TREES
 % OF REGULATED TREES TO REMAIN = 45% OF REG. TREES TO REMAIN

- ALL UNDESIRABLE TREES (ASH, BOX ELDER, POPLAR, ELM, SILVER MAPLE, TREE OF HEAVEN, CATALPA, RUSSIAN OLIVE, MULBERRY, BUCKTHORN, WILLOW, SIBERIAN ELM) ARE TO BE REMOVED, EXCEPT IN NATURAL AREA.

PRESERVE A MINIMUM 37% OF THE TOTAL NUMBER OF REGULATED TREES. HOWEVER TREES CONTAINED WITHIN THE DESIGNATED BUILDING ENVELOPE SHALL NOT COUNT TOWARDS THE PRESERVATION PERCENTAGE. TREES WITHIN THE BUILDING ENVELOPE ARE NOT REQUIRED TO BE RELOCATED OR REPLACED.

- ALL UNHEALTHY/DEAD TREES NOT LOCATED IN WETLAND AREAS TO BE REMOVED.

- HEALTHY TREES PRESERVED SHALL APPLY TO LANDSCAPE REQUIREMENTS:

REPLACEMENT TREES REQUIRED: 142 TREES

REPLACEMENT TREES PROVIDED: 57 STREET TREES

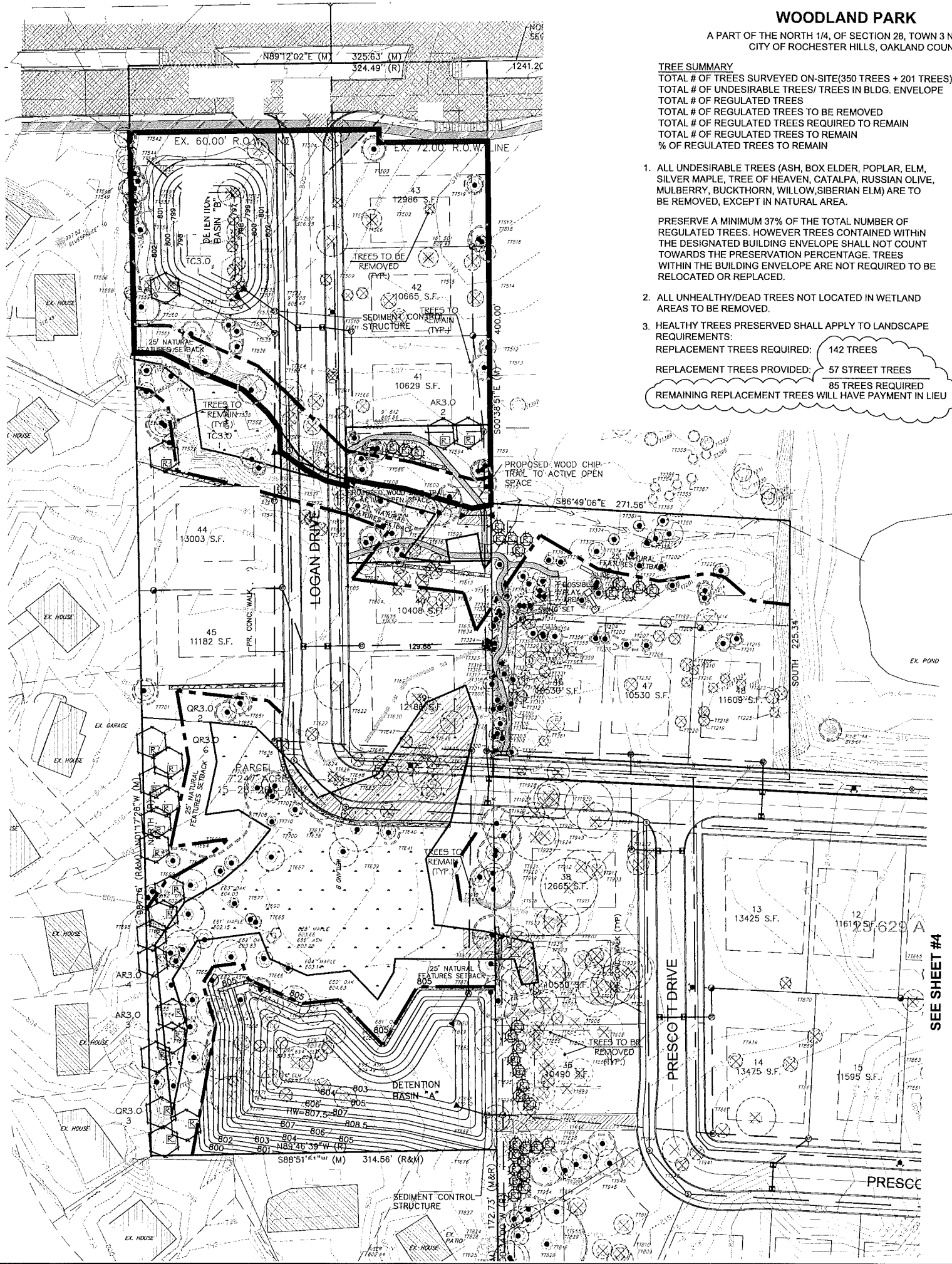
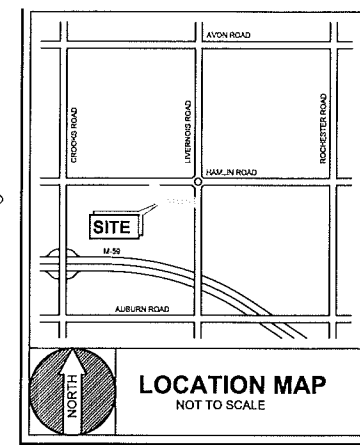
REMAINING REPLACEMENT TREES WILL HAVE PAYMENT IN LIEU

TREE PLAN LEGEND

- EXISTING TREES TO BE SAVED
- HEALTHY TREES PRESERVED TO MEET REPLACEMENT TREES REQUIRED
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING

Common Name	Botanical Name
American Elm	Ulmus americana
Apple	Malus domestica
Apple Species	Malus spp.
Arbutus	Thuja occidentalis
Austrian Pine	Pinus nigra
Balsam Fir	Abies balsamea
Basswood	Tilia americana
Bitternut Hickory	Carya cordiformis
Black Ash	Fraxinus nigra
Black Cherry	Prunus serotina
Black Locust	Robinia pseudoacacia
Black Oak	Quercus velutina
Black Walnut	Juglans nigra
Black Willow	Salix nigra
Blue Spruce	Picea pungens
Bowlflower	Acer negundo
Bur Oak	Quercus macrocarpa
Butternut	Juglans cinerea
Chinquapin Oak	Quercus muhlenbergii
Colorado Blue Spruce	Picea pungens
Common Suckthorn	Rhus copallina
Cottonwood	Populus deltoides
English Walnut	Juglans regia
Hawthorn	Crataegus sp.
Hop Hornbeam	Ostrya virginiana
Japanese Maple	Acer palmatum
Mountain Ash	Sorbus americana
Norway Maple	Acer platanoides
Norway Spruce	Picea abies
Ornamental Cherry	Prunus sp.
Pear	Pyrus cornifolia
Pignut Hickory	Carya alabra
Pine Oak	Quercus palustris
Quaking Aspen	Populus tremuloides
Red Ash	Fraxinus pennsylvanica
Red Maple	Acer rubrum
Red Oak	Quercus rubra
Russian-Olive	Elaeagnus angustifolia
Scots Pine	Pinus sylvestris
Shagbark Hickory	Carya ovata
Shellbark Hickory	Carya laciniosa
Siberian Elm	Ulmus pumila
Silver Maple	Acer saccharinum
Slimy Elm	Ulmus rubra
Sugar Maple	Acer saccharum
Swamp White Oak	Quercus bicolor
Sweet Cherry	Prunus avium
White Ash	Fraxinus americana
White Mulberry	Morus alba
White Oak	Quercus alba
White Pine	Pinus strobus
Yellow Birch	Betula alleghaniensis

NOTE:
ALL TREES INCLUDING ASH TREES TO BE PRESERVED IN WETLAND/NATURAL AREA.



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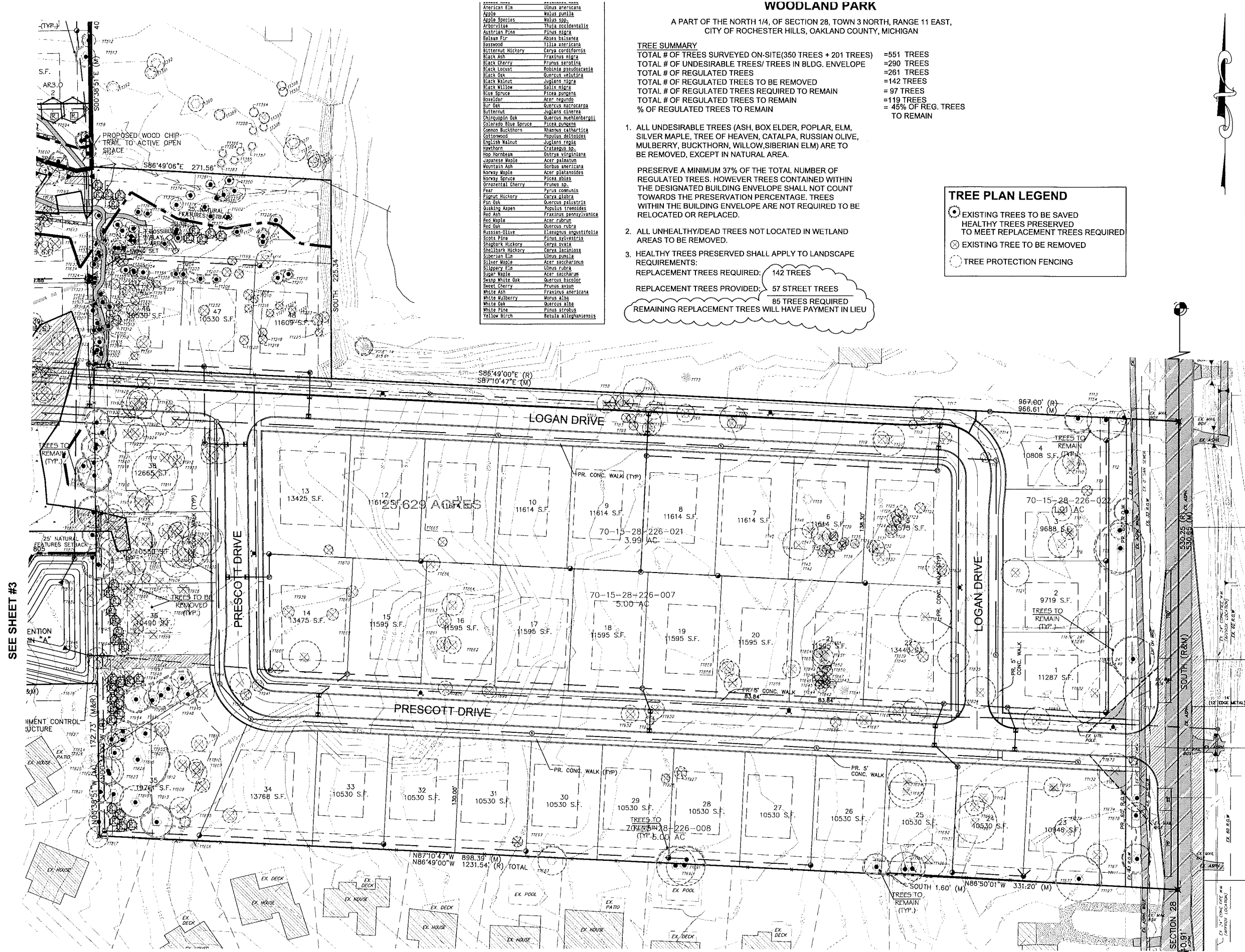
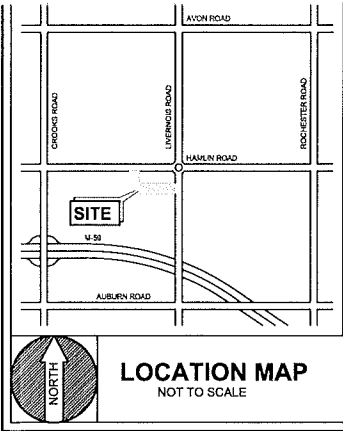
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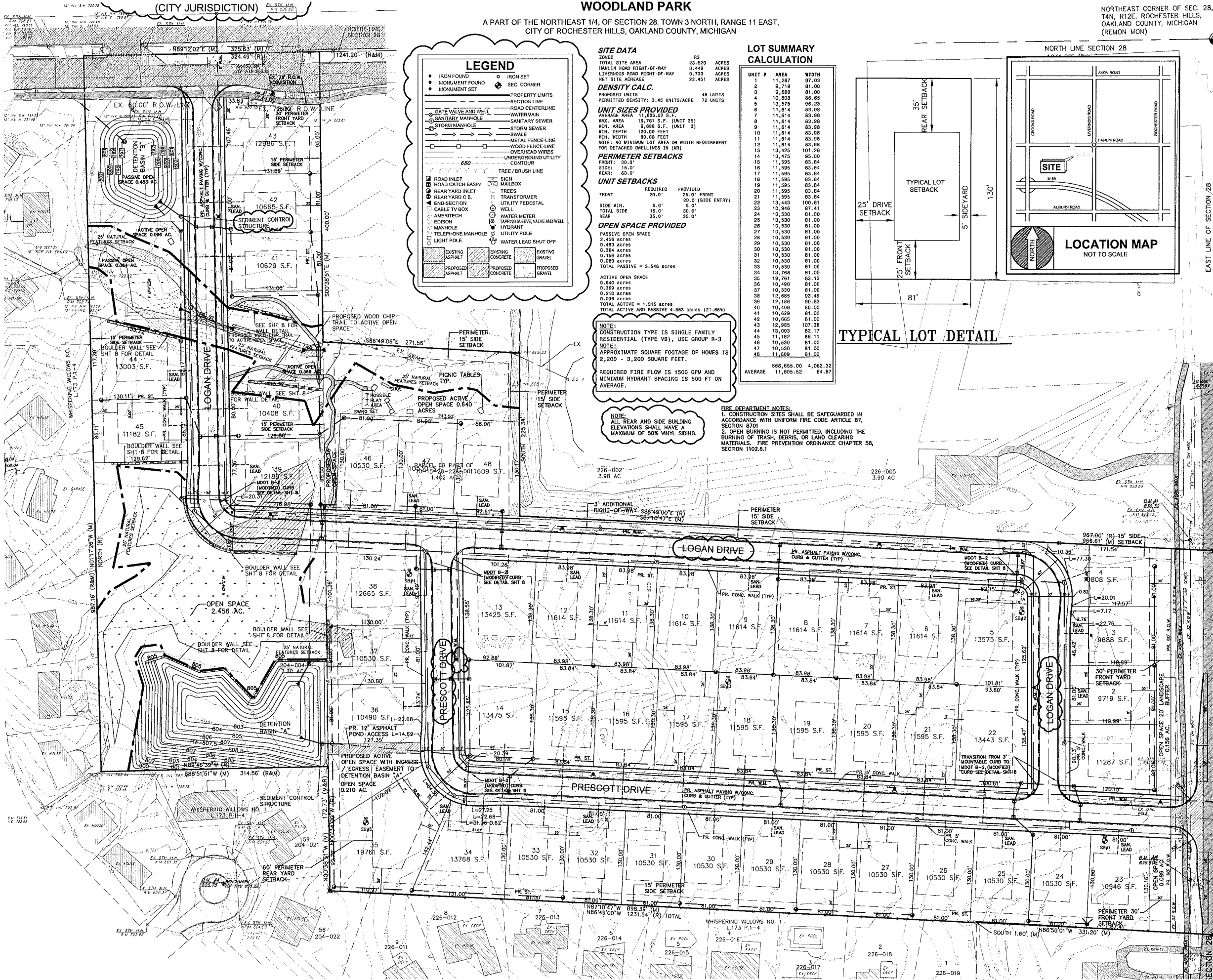
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OAKLAND COUNTY, MICHIGAN
(MAG NAIL W/ REMON. TAG)

CITY FILE # 15-014

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3/20/10 10:02:10 AM (P) 15-014-001, 148025.dwg, 04-13-10, 1/10/2010, 2:47:03 PM



LEGEND

- IRON FOUND
- MONUMENT FOUND
- MONUMENT SET
- PROPERTY LIMITS
- SECTION LINE
- ROAD CENTERLINE
- WATERMAIN
- SANITARY SEWER
- STORM SEWER
- SWALE
- METAL FENCE LINE
- WOOD FENCE LINE
- OVERHEAD WIRES
- UNDERGROUND UTILITY CONTOUR
- TREE / BRUSH LINE
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- HYDRANT
- TAPPING SLEEVE, VALVE AND WELL
- UTILITY POLE
- WATER LEAD SHUT-OFF
- EXISTING ASPHALT
- EXISTING CONCRETE
- EXISTING GRAVEL
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- PROPOSED GRAVEL

SITE DATA

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 MAX. AREA 19,761 S.F. (UNIT 95)
 MIN. AREA 9,688 S.F. (UNIT 3)
 MIN. DEPTH 120.00 FEET
 MIN. WIDTH 60.00 FEET
 NOTES: NO MINIMUM LOT AREA OR WIDTH REQUIREMENT FOR DETACHED DWELLINGS IN (M)

PERIMETER SETBACKS

FRONT: 30.0'
 SIDE: 15.0'
 REAR: 60.0'

UNIT SETBACKS

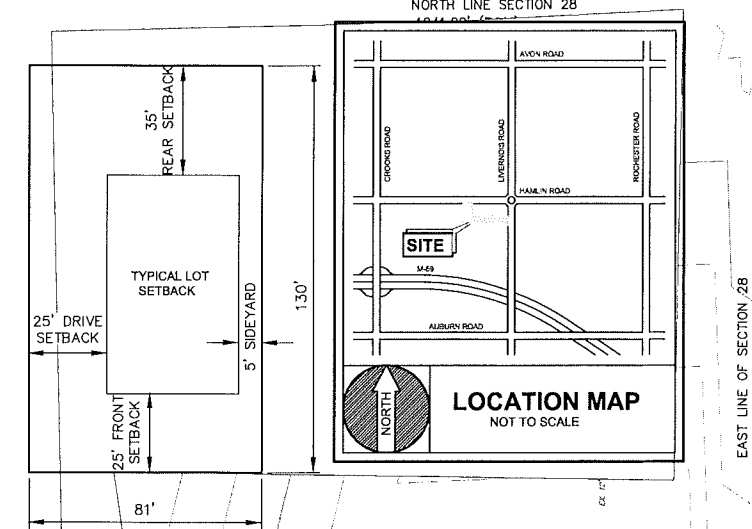
REQUIRED	PROVIDED
FRONT 20.0'	25.0' (SIDE ENTRY)
TOTAL SIDE 6.0'	6.0'
TOTAL REAR 35.0'	30.0'

OPEN SPACE PROVIDED

PASSIVE OPEN SPACE 2,456 ACRES
 ACTIVE OPEN SPACE 0.840 ACRES
 TOTAL ACTIVE AND PASSIVE 4.683 ACRES (21.66%)

LOT SUMMARY CALCULATION

UNIT #	AREA	WIDTH
1	11,287	97.03
2	9,719	81.00
3	9,688	81.00
4	10,808	86.65
5	13,575	96.23
6	11,614	83.98
7	11,614	83.98
8	11,614	83.98
9	11,614	83.98
10	11,614	83.98
11	11,614	83.98
12	11,614	83.98
13	13,425	101.26
14	13,475	95.00
15	11,595	83.84
16	11,595	83.84
17	11,595	83.84
18	11,595	83.84
19	11,595	83.84
20	11,595	83.84
21	11,595	83.84
22	13,443	100.61
23	10,846	91.41
24	10,530	81.00
25	10,530	81.00
26	10,530	81.00
27	10,530	81.00
28	10,530	81.00
29	10,530	81.00
30	10,530	81.00
31	10,530	81.00
32	10,530	81.00
33	10,530	81.00
34	13,768	81.00
35	19,761	83.12
36	10,468	81.00
37	10,530	81.00
38	12,665	93.49
39	12,168	90.83
40	10,408	80.00
41	10,629	81.00
42	10,665	81.00
43	12,985	107.98
44	13,003	82.17
45	11,182	86.11
46	10,530	81.00
47	10,530	81.00
48	11,609	81.00
AVERAGE	566,665.00	4,062.32
	11,805.52	84.87



- ### BENCHMARK LIST
- BENCHMARK #1 (SHOWN)
MAG NAIL IN NORTH FACE OF UTILITY POLE
ELEV = 863.18 (NAVD 88)
 - BENCHMARK #2 (SHOWN)
MAG NAIL IN WEST FACE OF UTILITY POLE
ELEV = 835.62 (NAVD 88)
 - BENCHMARK #3
TOP OF HYDRANT
ELEV = 831.81 (NAVD 88)
(SOUTH OF LOT #2 MAPLE LEAF DR.)
 - BENCHMARK #4 (SHOWN)
TOP OF HYDRANT
ELEV = 805.75 (NAVD 88)

NOTE: CONSTRUCTION TYPE IS SINGLE FAMILY RESIDENTIAL (TYPE VB), USE GROUP R-3
 NOTE: APPROXIMATE SQUARE FOOTAGE OF HOMES IS 2,200 - 3,200 SQUARE FEET.
 REQUIRED FIRE FLOW IS 1500 GPM AND MINIMUM HYDRANT SPACING IS 500 FT ON AVERAGE.

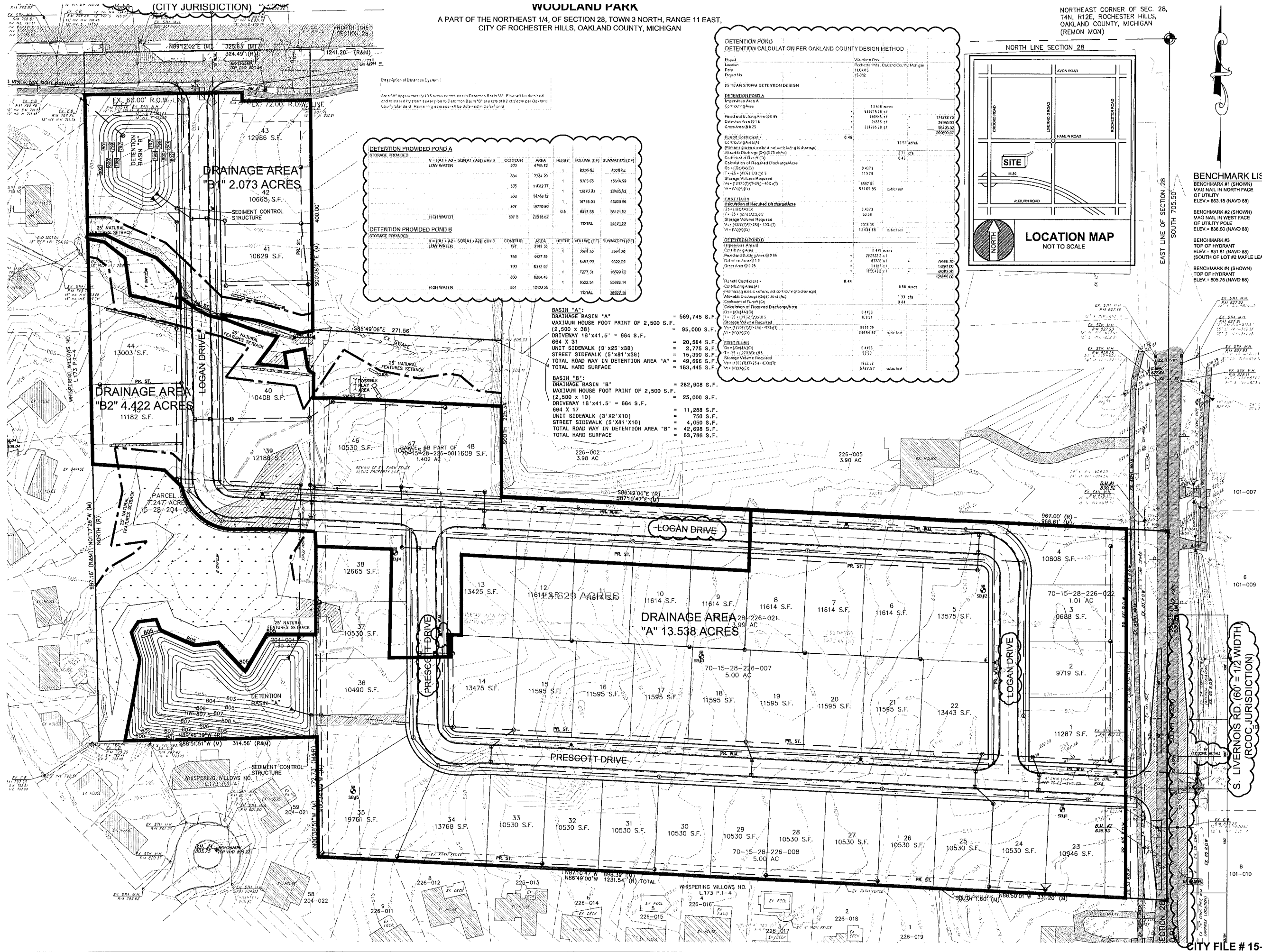
FIRE DEPARTMENT NOTES:
 1. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH UNIFORM FIRE CODE ARTICLE 87, SECTION 8701
 2. OPEN BURNING IS NOT PERMITTED, INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING MATERIALS. FIRE PREVENTION ORDINANCE CHAPTER 58, SECTION 1102.6.1

NOTE: ALL REAR AND SIDE BUILDING ELEVATIONS SHALL HAVE A MAXIMUM OF 50K VINYL SIDING.

NOT TO BE USED AS CONSTRUCTION DRAWINGS

WOODLAND PARK
 A PART OF THE NORTHEAST 1/4, OF SECTION 28, TOWN 3 NORTH, RANGE 11 EAST,
 CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

NORTHEAST CORNER OF SEC. 28,
 T4N, R12E, ROCHESTER HILLS,
 OAKLAND COUNTY, MICHIGAN
 (REMON MON)



DETENTION PROVIDED POND A

STORAGE PROVIDED	V = [(A1 + A2 + SQRT(A1 * A2)) * H] / 3	DEPTH	AREA	HEIGHT	VOLUME (CF)	SLURRYWATER (CF)
LOW WATER			478.72	1	478.72	478.72
			778.20	1	778.20	778.20
			1100.77	1	1100.77	1100.77
			1476.12	1	1476.12	1476.12
			1870.80	1	1870.80	1870.80
HIGH WATER		0.5	20918.62	0.5	9917.58	5814.52
TOTAL 15521.52						

DETENTION PROVIDED POND B

STORAGE PROVIDED	V = [(A1 + A2 + SQRT(A1 * A2)) * H] / 3	DEPTH	AREA	HEIGHT	VOLUME (CF)	SLURRYWATER (CF)
LOW WATER			318.33	1	318.33	318.33
			497.85	1	497.85	497.85
			632.87	1	632.87	632.87
			826.49	1	826.49	826.49
HIGH WATER		0.5	10422.25	0.5	4509.23	2822.15
TOTAL 10329.87						

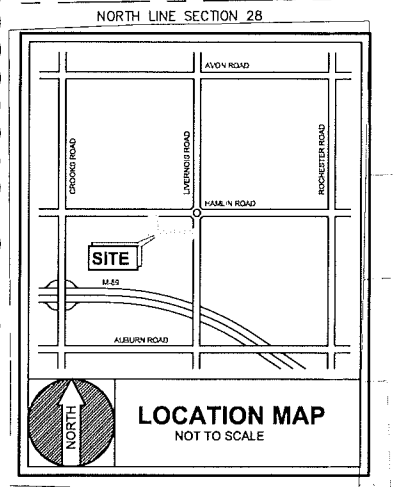
DETENTION POND DESIGN

DETENTION POND A

Impervious Area A	13518	Acres
Conforming Area	533715.28	S.F.
Detention Area @ 15	18345	S.F.
Detention Area @ 25	29558	S.F.
Grass Area @ 25	381765.28	S.F.
174278.75		
240630.00		
90128.30		
292920.00		

DETENTION POND B

Impervious Area B	610	Acres
Conforming Area	25222.2	S.F.
Detention Area @ 15	9374	S.F.
Detention Area @ 25	14931	S.F.
Grass Area @ 25	185142.1	S.F.
79946.70		
14071.00		
40281.30		
125219.00		



- BENCHMARK LIST**
- BENCHMARK #1 (SHOWN)
MAG NAIL IN NORTH FACE
OF UTILITY POLE
ELEV = 663.18 (NAVD 88)
 - BENCHMARK #2 (SHOWN)
MAG NAIL IN WEST FACE
OF UTILITY POLE
ELEV = 663.60 (NAVD 88)
 - BENCHMARK #3
TOP OF HYDRANT
ELEV = 851.81 (NAVD 88)
(SOUTH OF LOT #2 MAPLE LEAF DR.)
 - BENCHMARK #4 (SHOWN)
TOP OF HYDRANT
ELEV = 605.75 (NAVD 88)

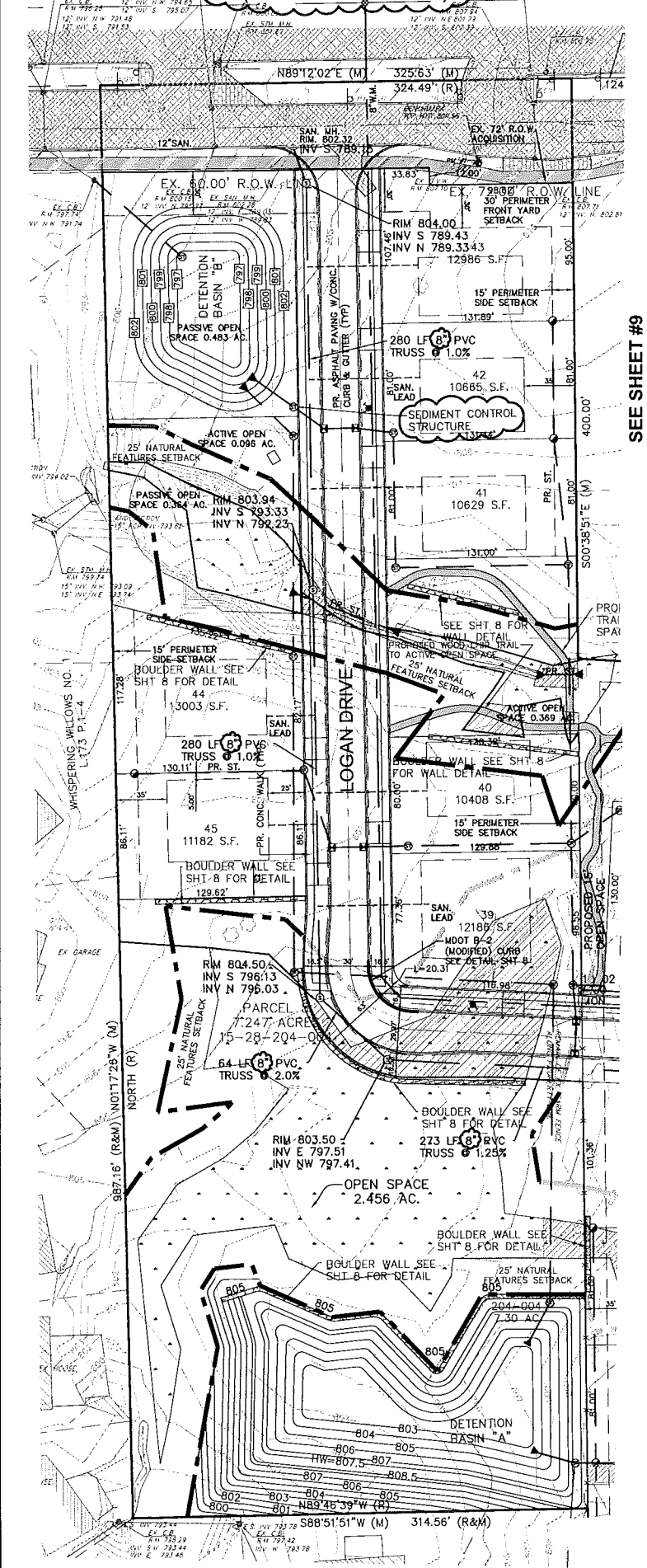
- BASIN "A":**
 DRAINAGE BASIN "A" = 589,745 S.F.
 MAXIMUM HOUSE FOOT PRINT OF 2,500 S.F. = 95,000 S.F.
 DRIVEWAY 18' X 41.5' = 664 S.F.
 664 X 31 = 20,584 S.F.
 UNIT SIDEWALK (3' X 25' X 30) = 2,775 S.F.
 STREET SIDEWALK (5' X 81' X 10) = 15,390 S.F.
 Storage Volume Required = 49,698 S.F.
 TOTAL ROAD WAY IN DETENTION AREA "A" = 183,445 S.F.
 TOTAL HARD SURFACE = 183,445 S.F.
- BASIN "B":**
 DRAINAGE BASIN "B" = 282,908 S.F.
 MAXIMUM HOUSE FOOT PRINT OF 2,500 S.F. = 25,000 S.F.
 DRIVEWAY 18' X 41.5' = 664 S.F.
 664 X 17 = 11,288 S.F.
 UNIT SIDEWALK (3' X 2' X 10) = 750 S.F.
 STREET SIDEWALK (5' X 81' X 10) = 4,050 S.F.
 TOTAL ROAD WAY IN DETENTION AREA "B" = 42,698 S.F.
 TOTAL HARD SURFACE = 83,786 S.F.

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NOT TO BE USED AS CONSTRUCTION DRAWINGS

**W. HAMLIN RD (RIGHT OF WAY VARIES)
(CITY JURISDICTION)**

WOODLAND PARK
A PART OF THE NORTHEAST 1/4, OF SECTION 28, TOWN 3 NORTH, RANGE 11 EAST,
CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN



SEE SHEET #9

SEE SHEET #9

- NOTES:**
1. PROPOSED GRADES WILL MATCH EXISTING ELEVATIONS AT PROPERTY LINES.
 2. 2 PARKING SPACES ARE PROVIDED IN EACH GARAGE, ALONG WITH 2 SPACES IN EACH DRIVEWAY. 4 SPACES x 48 UNITS = 192 TOTAL PARKING SPACES PROVIDED.
 3. NO TRANSFORMERS CAN BE SHOWN AT THIS TIME.
 4. ALL SIGNS MUST MEET THE REQUIREMENTS OF SECTION 138-12306 AND CHAPTER 134 OF THE CITY CODE OF ORDINANCES AND APPROVED UNDER SEPARATE PERMIT AS ISSUED BY THE BUILDING DEPARTMENT.
 5. STREET TREES WILL BE PROVIDED IN ACCORDANCE WITH CITY OF ROCHESTER HILLS REGULATIONS.
 6. UNDESIGNATED WIDTH OF UTILITY EASEMENTS WILL NOT DECREASE THE BUILDING ENVELOPE OF ANY UNIT BELOW THAT INDICATED.
 7. ALL PROPOSED EASEMENT AGREEMENTS SHALL BE REVIEWED AND APPROVED BY THE CITY PRIOR TO FINAL SITE PLAN CONSIDERATION.
 8. THE CONSTRUCTION DRAWINGS WILL ESTABLISH A CONSTRUCTION SEQUENCE THAT WILL PROVIDE FOR THE EXCAVATION OF THE DETENTION BASIN.
 9. THE INTENDED USE OF THE PROPOSED DEVELOPMENT IS FOR SINGLE-FAMILY RESIDENCES.
 10. OPEN SPACE AREAS ARE TO REMAIN UNDEVELOPED AND MAY BE USED FOR PASSIVE AND ACTIVE RECREATION.
 11. THE PROPERTY HAS BEEN STAKED AT EACH CORNER WITH A CLEARLY VISIBLE MARKER.
 12. LIVERNOIS AND HAMLIN ROAD IMPROVEMENTS TO BE INDICATED IN GREATER DETAIL ON CONSTRUCTION DRAWINGS.
 13. CONSTRUCTION TYPE IS SINGLE FAMILY RESIDENTIAL (TYPE VB) USE GROUP R-3.
 14. APPROXIMATE SQUARE FOOTAGE OF HOMES IS 2,200-3,200 SQ.FT.
 15. A PERMIT WILL BE REQUIRED FROM THE ROAD COMMISSION FOR OAKLAND COUNTY FOR WORK WITHIN THE LIVERNOIS ROAD RIGHT OF WAY.
 16. SOIL TYPE: (SEE SOILS MAPS FOR DRAINAGE CHARACTERISTICS) 108 CAPAC SANDY LOAM, BROOKSTON AND COLWOOD LOAMS WHICH IS SUITABLE FOR SINGLE FAMILY RESIDENTIAL DEVELOPMENT.
 17. THIS LAYOUT WAS CHOSEN OVER OTHERS BASED ON A DESIRE TO PRESERVE THE MAX NO. OF REGULATED TREES LOCATED IN OPEN SPACE AND TO PROMOTE TRAFFIC SAFETY WITHIN THE SITE AND OFF SITE.
 18. RELIEF FROM THE SIDEWALK REQUIREMENT ON NORTH SIDE OF CONRAD DRIVE ACROSS FORM UNITS 5 THRU 12 AND SOUTH SIDE OF CONRAD DRIVE ADJACENT TO WETLAND WILL BE SOUGHT FROM CITY COUNCIL.
 19. NO SITE LIGHTING IS PROPOSED.
 20. BEST MANAGEMENT PRACTICES (BMP) WILL BE IMPLEMENTED DURING THE CONSTRUCTION PHASE OF THIS PROJECT.
 21. ALL DISTURBED WETLAND AREAS TO BE RESTORED TO THERE ORIGINAL GRADE WITH ORIGINAL SOILS OR EQUIVALENT SOILS AND SEEDED WITH A CITY APPROVED WETLAND SEED MIX.
 22. ALL SIGNS MUST MEET THE REQUIREMENTS OF SECTION 138-12,306 AND CHAPTER 134 OF THE CITY CODE OF ORDINANCES AND BE APPROVED UNDER SEPARATE PERMITS ISSUED BY THE BUILDING DEPARTMENT.

SANITARY SEWER BASIS OF DESIGN:

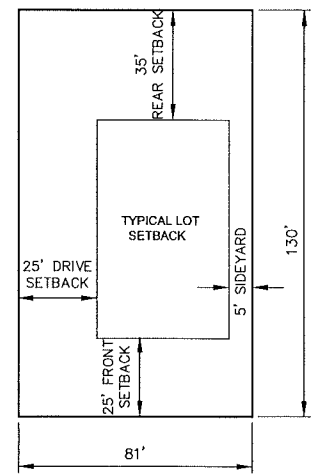
No of Lots = 48
 Population = 48 Lots x 3.5 People = 168

Average Flow = $\frac{168 \text{ People} \times 100 \text{ GPCPD}}{86400 \text{ Secr Day} \times 7.48 \text{ Gal / C.F.}} = 0.026 \text{ cfs}$

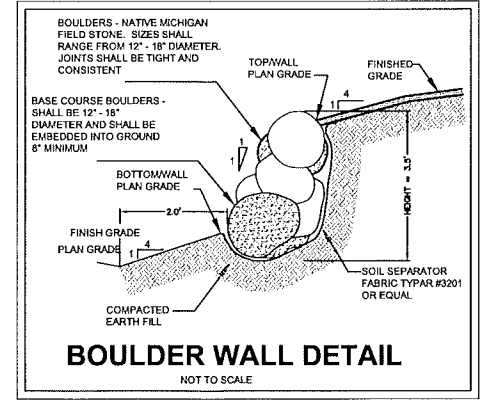
Peaking Factor = $\frac{18 + (\text{SQR})}{4 + (\text{SQR})} = \frac{18 + 0.168}{4 + 0.168} = 4.175$

Peak Flow = $16800 \text{ GPD} \times 4.175 = 70135 \text{ GPD} = 0.109 \text{ cfs}$

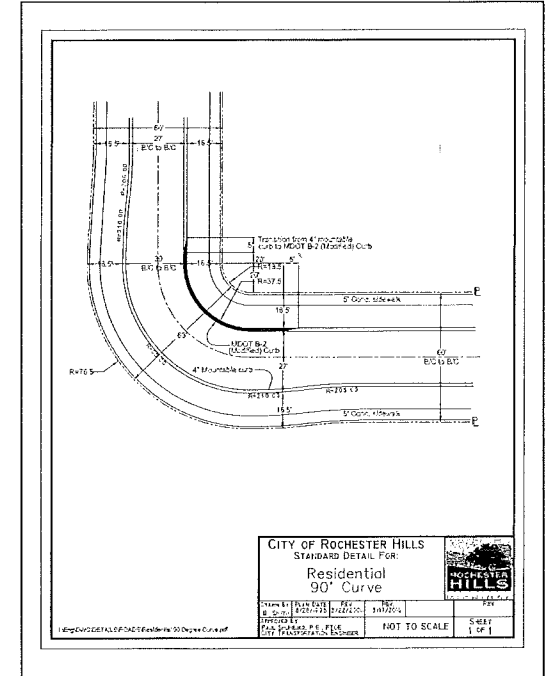
CAPACITY OF RECEIVING SEWER: 12" @ 0.22% = 1.07 CFS



TYPICAL LOT DETAIL

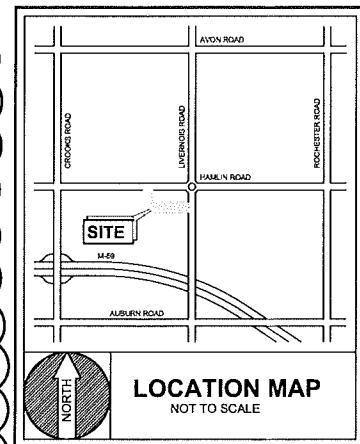


BOULDER WALL DETAIL



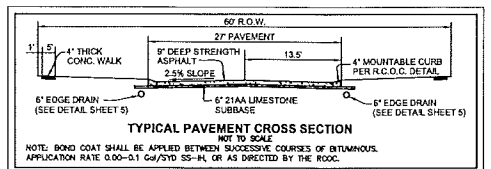
LEGEND

- IRON FOUND
- MONUMENT FOUND
- MONUMENT SET
- PROPERTY LIMITS
- SECTION LINE
- ROAD CENTERLINE
- WATERMAIN
- SANITARY SEWER
- STORM SEWER
- SWALE
- METAL FENCE-LINE
- WOOD FENCE-LINE
- OVERHEAD WIRES
- UNDERGROUND UTILITY CONTOUR
- TREE / BRUSH LINE
- SIGN
- MAIL BOX
- TREES
- TRANSFORMER
- UTILITY PEDESTAL
- WELL
- WATER METER
- TAPPING SLEEVE, VALVE AND WELL
- HYDRANT
- UTILITY POLE
- WATER LEAD SHUT OFF

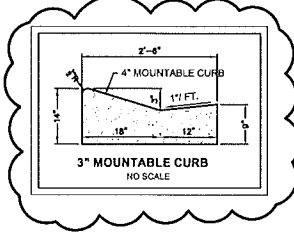
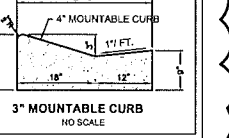
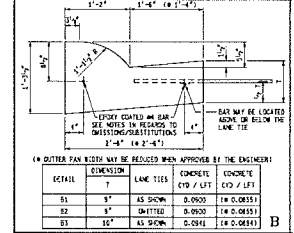


LOCATION MAP
NOT TO SCALE

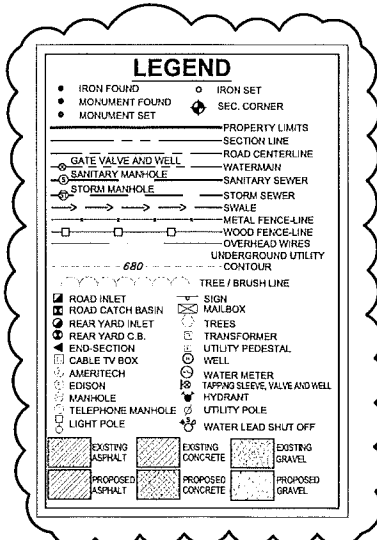
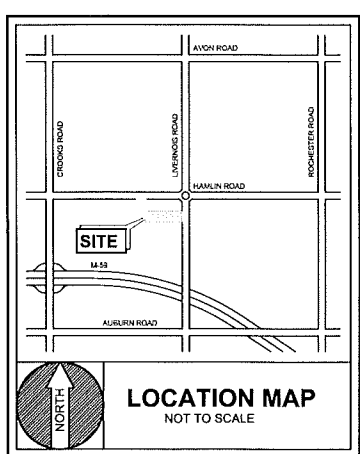
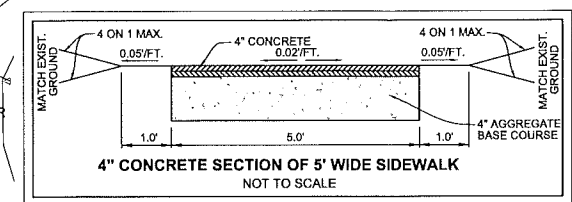
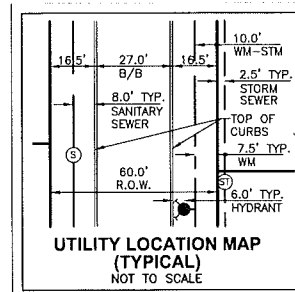
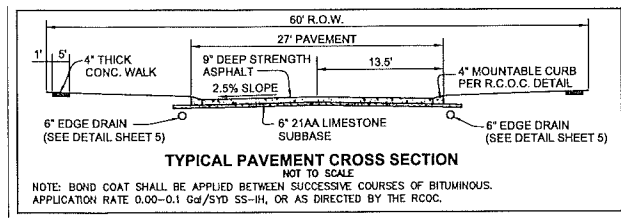
- BENCHMARK LIST**
- BENCHMARK #1 (SHOWN) MAG NAIL IN NORTH FACE OF UTILITY ELEV.= 836.18 (NAVD 88)
 - BENCHMARK #2 (SHOWN) MAG NAIL IN WEST FACE OF UTILITY POLE ELEV.= 836.60 (NAVD 88)
 - BENCHMARK #3 (SHOWN) TOP OF HYDRANT ELEV.= 831.81 (NAVD 88) (SOUTH OF LOT #2 MAPLE LEAF DR.)
 - BENCHMARK #4 (SHOWN) TOP OF HYDRANT ELEV.= 805.75 (NAVD 88)



TYPICAL PAVEMENT CROSS SECTION

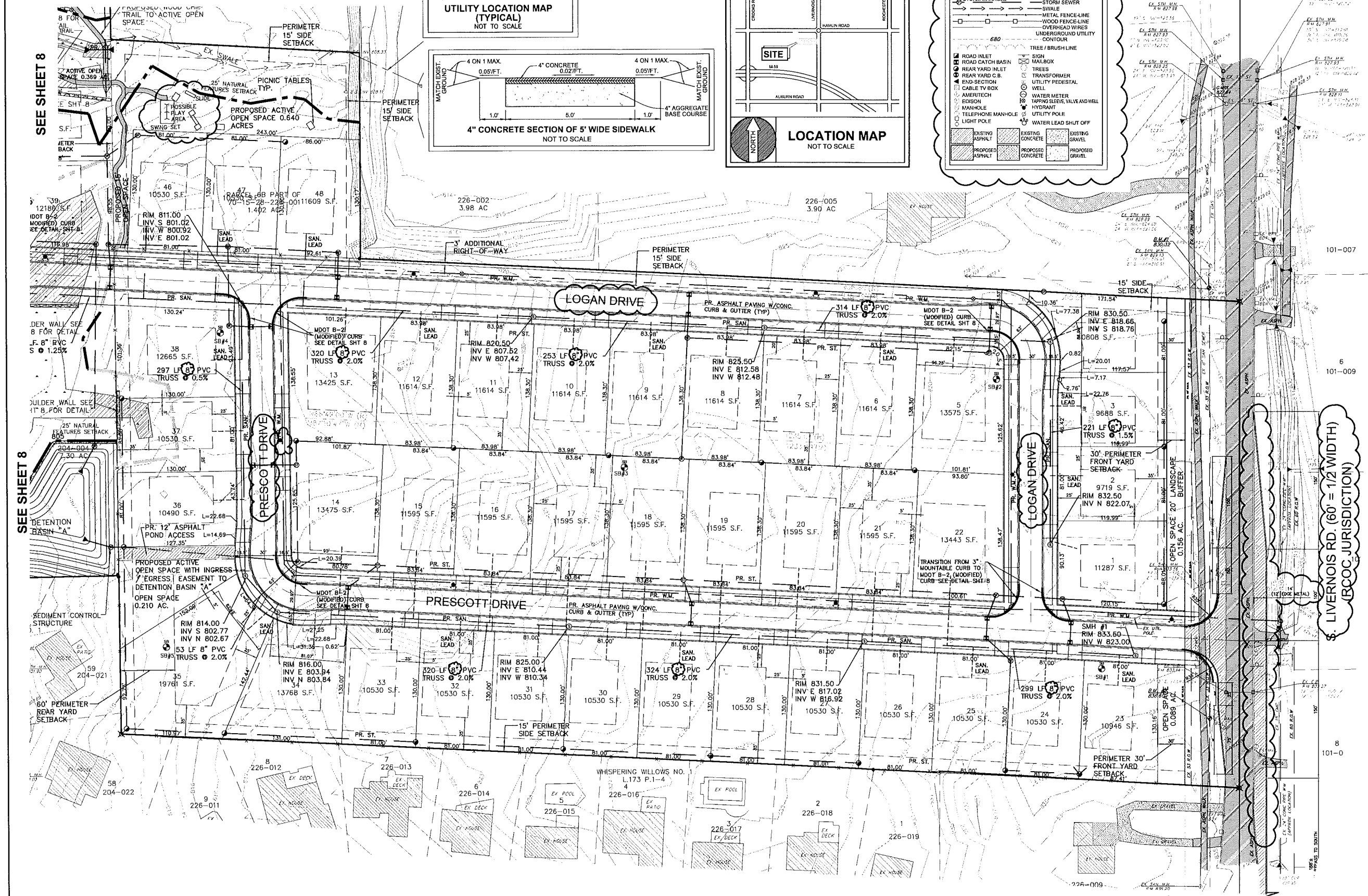


WOODLAND PARK
A PART OF THE NORTHEAST 1/4, OF SECTION 28, TOWN 3 NORTH, RANGE 11 EAST,
CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN



BENCHMARK LIST

BENCHMARK #1 (SHOWN)	MAG NAIL IN NORTH FACE OF UTILITY	ELEV. = 663.18 (NAVD 88)
BENCHMARK #2 (SHOWN)	MAG NAIL IN WEST FACE OF UTILITY POLE	ELEV. = 636.60 (NAVD 88)
BENCHMARK #3 (SHOWN)	TOP OF HYDRANT	ELEV. = 831.81 (NAVD 88)
	(SOUTH OF LOT #2 MAPLE LEAF DR.)	
BENCHMARK #4 (SHOWN)	TOP OF HYDRANT	ELEV. = 805.75 (NAVD 88)



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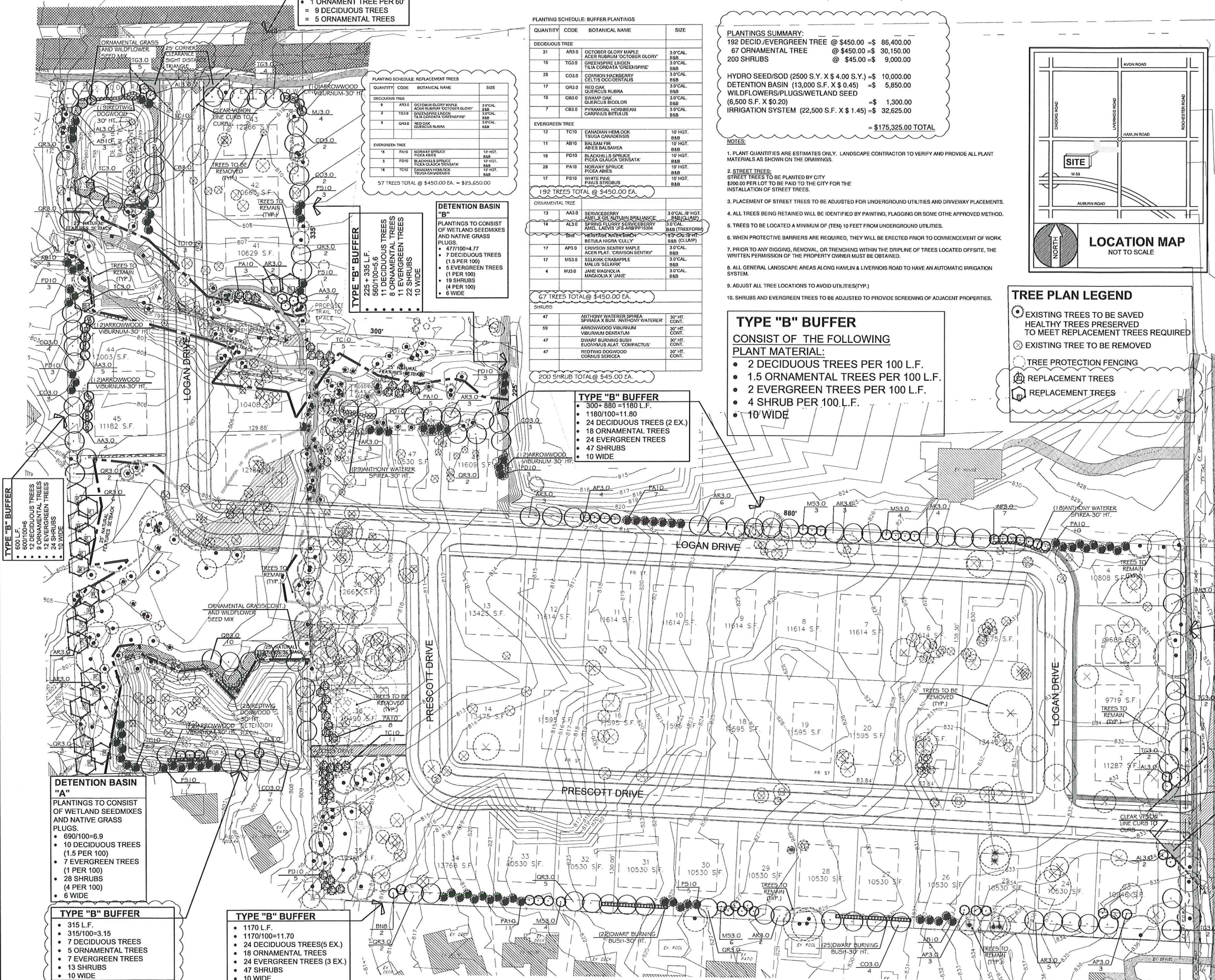
NOT TO BE USED AS CONSTRUCTION DRAWINGS

W. HAMLIN RD (RIGHT OF WAY VARIES)
(CITY JURISDICTION)

RIGHT OF WAY
325 L.F.
• 1 DECIDUOUS TREE PER 35'
• 1 ORNAMENTAL TREE PER 60'
= 9 DECIDUOUS TREES
= 5 ORNAMENTAL TREES

WOODLAND PARK

A PART OF THE NORTH 1/4, OF SECTION 28, TOWN 3 NORTH, RANGE 11 EAST,
CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN



PLANTING SCHEDULE: REPLACEMENT TREES

QUANTITY	CODE	BOTANICAL NAME	SIZE
9	AR3.0	OCTOBER GLORY MAPLE ACER RUBRUM 'OCTOBER GLORY'	3" CAL BBB
2	TG3.0	GREENSPICE LINDEN TILIA CORDATA 'GREENSPICE'	3" CAL BBB
9	GR3.0	RED OAK QUERCUS RUBRA	3" CAL BBB

57 TREES TOTAL @ \$450.00 EA. = \$25,650.00

PLANTING SCHEDULE: BUFFER PLANTINGS

QUANTITY	CODE	BOTANICAL NAME	SIZE
31	AR3.0	OCTOBER GLORY MAPLE ACER RUBRUM 'OCTOBER GLORY'	3" CAL BBB
15	TG3.0	GREENSPICE LINDEN TILIA CORDATA 'GREENSPICE'	3" CAL BBB
25	CO3.0	COMMON HACKBERRY CELTIS OCCIDENTALIS	3" CAL BBB
17	GR3.0	QUERCUS RUBRA	3" CAL BBB
10	OB3.0	SWAMP OAK QUERCUS BICOLOR	3" CAL BBB
7	CB3.0	PYRAMIDAL HORNBEAM CARPINUS BETULUS	3" CAL BBB

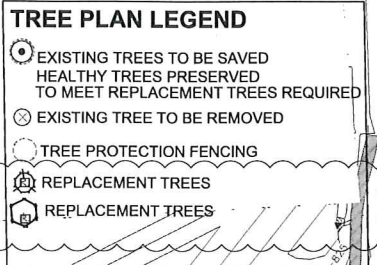
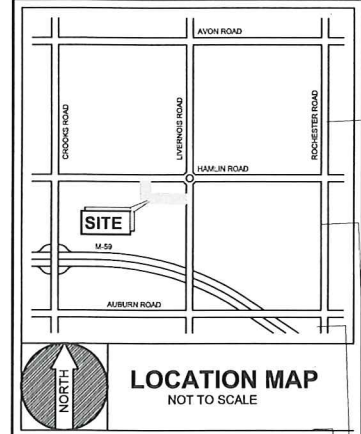
192 TREES TOTAL @ \$450.00 EA.

PLANTINGS SUMMARY:
192 DECID/EVERGREEN TREE @ \$450.00 = \$ 86,400.00
67 ORNAMENTAL TREE @ \$450.00 = \$ 30,150.00
200 SHRUBS @ \$45.00 = \$ 9,000.00

HYDRO SEED/SOD (2500 S.F. X \$ 4.00 S.F.) = \$ 10,000.00
DETENTION BASIN (13,000 S.F. X \$ 0.45) = \$ 5,850.00
WILDFLOWERS/PLUGS/WETLAND SEED (6,500 S.F. X \$ 0.20) = \$ 1,300.00
IRRIGATION SYSTEM (22,500 S.F. X \$ 1.45) = \$ 32,625.00

= \$175,325.00 TOTAL

- NOTES:**
1. PLANT QUANTITIES ARE ESTIMATES ONLY. LANDSCAPE CONTRACTOR TO VERIFY AND PROVIDE ALL PLANT MATERIALS AS SHOWN ON THE DRAWINGS.
 2. STREET TREES: STREET TREES TO BE PLANTED BY CITY \$200.00 PER LOT TO BE PAID TO THE CITY FOR THE INSTALLATION OF STREET TREES.
 3. PLACEMENT OF STREET TREES TO BE ADJUSTED FOR UNDERGROUND UTILITIES AND DRIVEWAY PLACEMENTS.
 4. ALL TREES BEING RETAINED WILL BE IDENTIFIED BY PAINTING, FLAGGING OR SOME OTHER APPROVED METHOD.
 5. TREES TO BE LOCATED A MINIMUM OF (TEN) 10 FEET FROM UNDERGROUND UTILITIES.
 6. WHEN PROTECTIVE BARRIERS ARE REQUIRED, THEY WILL BE ERRECTED PRIOR TO COMMENCEMENT OF WORK.
 7. PRIOR TO ANY DIGGING, REMOVAL, OR TREMORING WITHIN THE DRIPLINE OF TREES LOCATED OFFSITE, THE WRITTEN PERMISSION OF THE PROPERTY OWNER MUST BE OBTAINED.
 8. ALL GENERAL LANDSCAPE AREAS ALONG HAMLIN & LIVERNOIS ROAD TO HAVE AN AUTOMATIC IRRIGATION SYSTEM.
 9. ADJUST ALL TREE LOCATIONS TO AVOID UTILITIES (TYP.)
 10. SHRUBS AND EVERGREEN TREES TO BE ADJUSTED TO PROVIDE SCREENING OF ADJACENT PROPERTIES.



TYPE "B" BUFFER
CONSIST OF THE FOLLOWING
PLANT MATERIAL:

- 2 DECIDUOUS TREES PER 100 L.F.
- 1.5 ORNAMENTAL TREES PER 100 L.F.
- 2 EVERGREEN TREES PER 100 L.F.
- 4 SHRUB PER 100 L.F.
- 10' WIDE

TYPE "B" BUFFER

- 300+ 880 = 1180 L.F.
- 1180/100 = 11.80
- 24 DECIDUOUS TREES (2 EX.)
- 18 ORNAMENTAL TREES
- 24 EVERGREEN TREES
- 47 SHRUBS
- 10 WIDE

DETENTION BASIN "A"
PLANTINGS TO CONSIST OF WETLAND SEEDMIXES AND NATIVE GRASS PLUGS.

- 690/100=6.9
- 10 DECIDUOUS TREES (1.5 PER 100)
- 7 EVERGREEN TREES (1 PER 100)
- 28 SHRUBS (4 PER 100)
- 6 WIDE

TYPE "B" BUFFER

- 315 L.F.
- 315/100=3.15
- 7 DECIDUOUS TREES
- 5 ORNAMENTAL TREES
- 7 EVERGREEN TREES
- 13 SHRUBS
- 10 WIDE

TYPE "B" BUFFER

- 1170 L.F.
- 1170/100=11.70
- 24 DECIDUOUS TREES (5 EX.)
- 18 ORNAMENTAL TREES
- 24 EVERGREEN TREES (3 EX.)
- 47 SHRUBS
- 10 WIDE

- LANDSCAPE NOTES:**
1. ALL SIGNS MUST MEET THE REQUIREMENTS OF SECTION 13B-12.306 AND CHAPTER 134 OF THE CITY CODE OF ORDINANCES AND APPROVED UNDER SEPARATE PERMITS ISSUED BY THE BUILDING DEPARTMENT.
 2. PRIOR TO RELEASE OF PERFORMANCE BOND, THE CITY OF ROCHESTER HILLS MUST INSPECT ALL LANDSCAPE PLANTINGS.
 3. MAINTENANCE (13B-12-109): THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE OF SITE LANDSCAPING AS FOLLOWS:
 - A.) LANDSCAPING SHALL BE KEPT IN A NEAT, ORDERLY AND HEALTHY GROWING CONDITION. FREE FROM DEBRIS AND REFUSE.
 - B.) PRUNING SHALL BE MINIMAL AT THE TIME OF INSTALLATION, ONLY TO REMOVE DEAD OR DISEASED BRANCHES. SUBSEQUENT PRUNING SHALL ASSURE PROPER MATURATION OF PLANTS TO ACHIEVE THEIR APPROVED PURPOSE.
 - C.) ALL DEAD, DAMAGED OR DISEASED PLANT MATERIAL SHALL BE REMOVED IMMEDIATELY AND REPLACED WITHIN SIX MONTHS AFTER IT DIES OR IN THE NEXT PLANTING SEASON, WHICHEVER OCCURS FIRST. FOR PURPOSES OF THE SECTION THE PLANTING SEASON FOR DECIDUOUS PLANT SHALL BE BETWEEN MARCH 1 AND JUNE 1 AND FROM OCTOBER 1 UNTIL THE PREPARED SOIL BECOMES FROZEN. THE PLANTING SEASON FOR EVERGREEN PLANTS SHALL BE BETWEEN MARCH 1 AND JUNE 1. PLANT MATERIAL INSTALLED TO REPLACE DEAD OR DISEASED MATERIAL SHALL BE AS CLOSE AS PRACTICAL TO THE SIZE OF THE MATERIAL IT IS INTENDED TO REPLACE. THE CITY MAY NOTIFY PROPERTY OWNERS OF THE NEED TO REPLACE DEAD, DAMAGED OR DISEASED MATERIAL.
 - E.) APPROVED LANDSCAPE PLAN SHALL BE CONSIDERED A PERMANENT RECORD & PART OF SITE PLAN APPROVAL. ANY REVISIONS TO OR REMOVAL OF PLANT MATERIAL, OR NON-COMPLIANCE WITH THE MAINTENANCE REQUIREMENTS OF THIS SECTION WILL PLACE THE PLAN IN NON-COMPLIANCE WITH THE APPROVED LANDSCAPE PLAN AND BE A VIOLATION OF THIS ORDINANCE.
 - F.) IF PROTECTED TREES ARE DAMAGED, A FINE SHALL BE ISSUED ON AN INCH-BY-INCH BASIS AT A MONETARY RATE AS DEFINED BY THE FORESTRY DEPARTMENT.

4. THE CITY SHALL PLANT STREET TREES IN R.O.W. AFTER CONSTRUCTION OF THE PROJECT IS COMPLETE. THE APPLICANT SHALL PAY \$200 PER LOT TO ACCOUNT FOR STREET TREES.

(48 STREET TREES X \$200 = \$9,600)
FOR STREET TREES TO BE INSTALLED AFTER CONSTRUCTION IS COMPLETE.

5. REPLACEMENT TREES REQUIRED: 142 TREES
REPLACEMENT TREES PROVIDED: 57 REPLACEMENT TREES (85) TREE FUND
PAYMENT IN LIEU DUE TO INFRASTRUCTURE CONFLICTS: 85 TREES X \$200 = \$17,000

RIGHT OF WAY
530 L.F.
• 1 DECIDUOUS TREE PER 35'
• 1 ORNAMENTAL TREE PER 60'
= 15 DECIDUOUS TREES (7 EX.)
= 4 ORNAMENTAL TREES

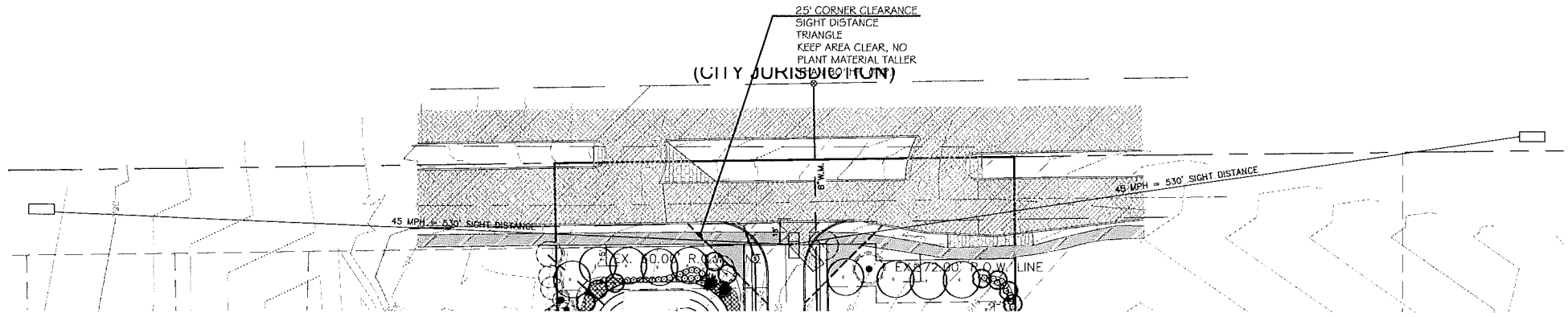
25' CORNER CLEARANCE SIGHT DISTANCE TRIANGLE
KEEP AREA CLEAR, NO PLANT MATERIAL TALLER THAN 30" (TYP.)

Ozell T. Gothard
Landscape Architect
No. 1302

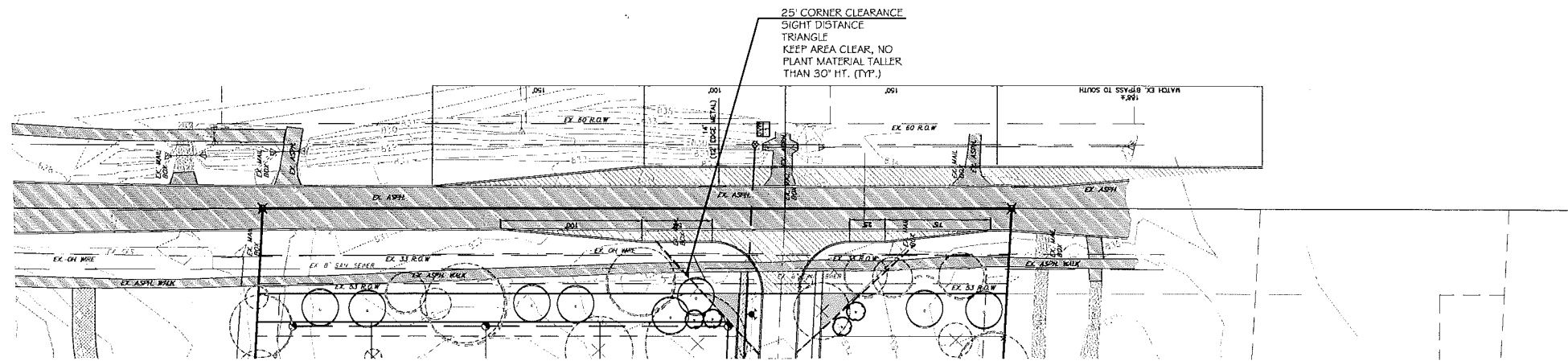
CITY FILE # 15-014

NOT TO BE USED AS CONSTRUCTION DRAWINGS

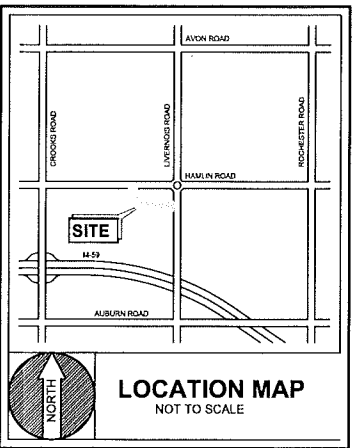
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W. HAMLIN ROAD



LIVERNOIS ROAD



LANDSCAPE GENERAL NOTES

GENERAL:

1. THE WORK SHALL CONSIST OF PROVIDING ALL NECESSARY MATERIALS, LABOR, EQUIPMENT, TOOLS, AND SUPERVISION REQUIRED FOR THE COMPLETION AS SHOWN ON THE DRAWINGS.

SITE EXAMINATION:

1. CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS, AND ELEVATIONS IN THE FIELD BEFORE STARTING WORK, AND NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS IF ENCOUNTERED.

SAFETY:

1. NEITHER THE OWNER NOR THE LANDSCAPE ARCHITECT WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.

2. PRIOR TO THE RELEASE OF THE PERFORMANCE BOND, THE CITY OF ROCHESTER HILLS LANDSCAPE ARCHITECT MUST INSPECT ALL LANDSCAPE PLANTINGS INCLUDING BUT NOT LIMITED TO EXISTING TREES, REPLACEMENT TREES, AND BUFFER PLANTINGS, AND THE FORESTRY DIVISION MUST INSPECT ALL RIGHT-OF-WAYS TO IDENTIFY ANY PLANTINGS NEW OR EXISTING THAT POSE A HAZARD TO THE SAFE USE OF THE RIGHT-OF-WAY FORESTRY MAY REQUIRE THE DEVELOPER TO REMOVE AND POSSIBLY REPLACE ANY SUCH TREES.

3. NO TREE OR SHRUB MAY BE PLANTED WITHIN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY STREET RIGHT-OF-WAY AT A DISTANCE OF 25 FEET FROM THEIR POINT OF INTERSECTION. NO TREE OR SHRUB MAY BE PLANTED IN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY DRIVEWAY WITH A PUBLIC SIDEWALK AT A DISTANCE ALONG EACH LINE OF 15' FROM THEIR POINT OF INTERSECTION.

UTILITIES:

1. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO LOCATE AND PROTECT ANY UNDERGROUND OR CONCEALED CONDUIT, PLUMBING OR OTHER UTILITIES WHERE NEW WORK IS BEING PERFORMED. IN NO CASE SHALL LANDSCAPE MATERIAL BE PLANTED IN A WAY WHICH WILL INTERFERE WITH OR CAUSE DAMAGE TO OVERHEAD OR UNDERGROUND UTILITIES.

2. ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF A PUBLIC ROADWAY.
-SHADE TREES AND SHRUBS MUST BE PLANTED AT LEAST 5' FROM THE EDGE OF A PUBLIC WALKWAY.
-EVERGREEN AND ORNAMENTAL TREES MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF A PUBLIC WALKWAY OR ROADWAY.
-ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM ANY FIRE HYDRANT.
-SHADE AND EVERGREEN TREES MUST BE PLANTED AT LEAST 15' FROM THE NEAREST OVERHEAD WIRE AND AT LEAST 10' FROM THE NEAREST UNDERGROUND UTILITY.

REQUIREMENTS:

1. ALL WORK SHALL CONFORM TO ALL FEDERAL STATE AND LOCAL REQUIREMENTS FOR INSTALLATION AND MAINTENANCE.

CLEARZONE:

1. THE CLEARZONE SHALL BE MAINTAINED AT ALL INTERSECTIONS THAT INGRESS AND EGRESS TO THE SITE. IT IS THE OWNERS RESPONSIBILITY TO MAINTAIN THE PLANT MATERIAL AT A HEIGHT OF NOT OVER THIRTY (30) INCHES ABOVE PAVEMENT AND PROVIDE UNOBSTRUCTED SIGHT DISTANCE FOR DRIVERS IN VEHICLES APPROACHING THE INTERSECTION.

2. VERTICAL CLEARANCE OF AT LEAST EIGHTY (80) INCHES MUST BE PROVIDED ABOVE WALKS AT ALL TIMES. IT IS THE OWNERS RESPONSIBILITY TO MAINTAIN TREES AND OTHER OVERHANGING OBJECTS TO PROVIDE ADEQUATE HEADROOM TO COMPLY WITH A.D.A. GUIDELINES.

3. PRIOR APPROVAL IS REQUIRED TO PLANT ANY TREE OR SHRUB IN THE PUBLIC RIGHT-OF-WAY.

CONFLICTS:

1. SHOULD A CONFLICT ARISE BETWEEN SPECIFICATIONS, CODES, STANDARDS, ORDINANCES AND PLANS, THE MOST STRINGENT REQUIREMENTS SHALL APPLY.

2. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS BE THE SAME AS FOR SIMILAR WORK SHOWN ON THE DRAWING AND MEET WITH MANUFACTURERS SPECIFICATIONS.

SUBSTITUTIONS:

1. NO SUBSTITUTIONS OR CHANGES OF LOCATION OR PLANT TYPES SHALL BE MADE WITHOUT THE APPROVAL OF THE DEVELOPER AND THE CITY OF ROCHESTER HILLS LANDSCAPE ARCHITECT.

2. THE DEVELOPER AND/OR THE CITY OF ROCHESTER HILLS LANDSCAPE ARCHITECT SHALL HAVE THE RIGHT, AT ANY STAGE OF THE INSTALLATION, TO REJECT ANY WORK OR MATERIAL THAT DOES NOT MEET THE REQUIREMENTS OF THE PLANS OR SPECIFICATIONS.

3. ANY CHANGES OR DEVIATIONS FROM THESE PLANS MUST BE APPROVED IN WRITING BY THE OWNER AND THE CITY OF ROCHESTER HILLS. THEY SHALL POSSESS THE SAME CHARACTERISTICS AS INDICATED ON THE PLANS AND SPECIFICATIONS.

MEASUREMENTS:

1. BEFORE COMMENCING WORK OR ORDERING ANY MATERIALS, THE CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND SHALL BE RESPONSIBLE FOR THEM BEING CORRECT. ANY DISCREPANCIES SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DIFFERENCES BETWEEN ACTUAL DIMENSIONS AND MEASUREMENTS INDICATED.

2. WRITTEN DIMENSIONS SHALL PREVAIL IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THE DRAWING.

TOPSOIL:

1. TOPSOIL SHALL BE FRIABLE, FERTILE TOPSOIL OF CLAY LOAM CHARACTER CONTAINING AT LEAST 5% BUT NOT MORE THAN 20% BY WEIGHT OF ORGANIC MATTER WITH A PH RANGE FROM 6.0 TO 7.0. SOIL SHALL BE FREE FROM CLAY LUMPS, COARSE SAND, PLANT ROOTS, STICKS AND OTHER FOREIGN MATERIALS.

MULCH:

1. PLANTING BEDS TO BE MULCHED AND DRESSED WITH A MINIMUM OF SIX (6) INCHES OF SHREDED HARDWARK (NO ARTIFICIAL COLORS). ALL MULCH SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT AND PLANNING CONSULTANT WITHIN TWENTY-FOUR (24) HOURS OF PLANTING.

QUANTITIES:

1. CONTRACTOR SHALL SUPPLY THE QUANTITIES NECESSARY TO COMPLETE THE WORK AS SHOWN ON THE DRAWINGS. QUANTITIES LISTED ON THE PLANT LIST ARE APPROXIMATE ONLY.

QUALITY AND SIZE:

1. REQUIRED PLANT MATERIALS SHALL CONFORM TO TYPE STATED ON THE PLANT LIST. SIZES SHALL BE THE MINIMUM STATED ON THE PLANT LIST OR LARGER. ALL INSTALLATION AND MEASUREMENTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE 'A.A.N. STANDARDS FOR NURSERY STOCK' AND WITH THE GENERAL PLANTING SPECIFICATIONS AS SET FORTH BY THE LOCAL MUNICIPAL AGENCIES LANDSCAPE ORDINANCE.

2. REQUIRED LANDSCAPE PLANT MATERIAL SHALL SATISFY A.M.N. STANDARDS, BE STATE DEPARTMENT OF AGRICULTURE INSPECTED AND NO. 1 GRADE WITH STRAIGHT, UNSCARRED TRUNK AND WELL-DEVELOPED UNIFORM CROWN (PARK GRADE TREES WILL NOT BE ACCEPTED).

3. THE PLANT MATERIAL SHALL BE NURSERY GROWN AND INSPECTED BY THE OWNERS REPRESENTATIVE BEFORE PLANTING. THE OWNERS REPRESENTATIVE AND THE CITY OF ROCHESTER HILLS LANDSCAPE ARCHITECT RESERVE THE RIGHT TO REJECT ANY PLANT MATERIAL AT ANY TIME.

4. PLANTS DESIGNATED 'B&B' SHALL BE BALLED AND BURLAPPED, WITH FIRM BALLS OF EARTH.

5. ALL INSTALLED PLANT MATERIALS WILL BE CERTIFIED BY THE STATE OF MICHIGAN DEPARTMENT OF AGRICULTURE TO BE DISEASE-FREE AND PEST-FREE AND NOT OF A SPECIES KNOWN TO CARRY OR BE HOST TO DESTRUCTIVE PATHOGENS OR PESTS.

6. ALL TREES SHALL HAVE A CENTRAL LEADER AND A RADIAL BRANCHING STRUCTURE. PARK GRADE TREES ARE NOT ACCEPTABLE, ALL SHALL BE BALLED AND BURLAPPED (B&B).

PLANTING:

1. THE CONTRACTOR IS RESPONSIBLE FOR PLANTING THE MATERIALS AT THE CORRECT GRADES AND SPACING. THE PLANTS SHALL BE ORIENTED AS TO GIVE THE BEST APPEARANCE. DO NOT PLANT CLOSER THAN FOUR (4) FEET FROM PROPERTY LINES.

2. DIG SHRUB PITS ONE (1) FOOT LARGER THAN SHRUB ROOT BALLS. THE PLANTING PITS OF ALL TREES ARE TO BE TWICE THE SIZE OF THE ROOT BALL. WHEN THE PLANTING HAS BEEN PROPERLY SET, THE PIT SHALL BE BACKFILLED WITH ONE (1) PART TOPSOIL AND ONE (1) PART SOIL FROM EXCAVATED PLANTING HOLE, GRADUALLY FILLING, PATTING AND SETTLING WITH WATER.

3. REMOVE ALL TWINE, WIRE AND BURLAP FROM THE TOP ONE THIRD OF THE ROOT BALL. REFER TO DETAILS.

4. ALL LANDSCAPE AREAS SHALL BE EXCAVATED OF ALL BUILDING MATERIALS, DEBRIS AND POOR SOILS TO A DEPTH OF EIGHTEEN (18) INCHES AND BACKFILLED WITH A GOOD MEDIUM TEXTURED PLANTING SOIL (LOAM OR LIGHT YELLOW CLAY). ALL LANDSCAPE AREAS TO HAVE SIX (6) INCHES OF TOPSOIL, AND AREA TO BE CROWNED A MINIMUM OF SIX (6) INCHES HIGHER OR AS SPECIFIED ON PLANS AND DETAILS THAN ADJACENT CURBS OR WALKS AFTER SETTLING.

5. ALL LARGE TREES AND EVERGREENS TO BE STAKED, GUYED AND WRAPPED. TREES TO BE MULCHED WITH A FOUR (4) FOOT WIDE BY MINIMUM OF SIX (6) INCH DEEP SHREDED BARK RING.

6. ALL PLANT MATERIAL TO RECEIVE TERRA-SORB SUPERABSORBENT POLYMER, FOLLOW MANUFACTURERS SPECIFICATIONS.

PRUNING:

1. ALL PLANT MATERIAL SHALL BE PRUNED AND INJURIES REPAIRED. THE AMOUNT OF PRUNING SHALL BE LIMITED TO THE REMOVAL OF DEAD OR INJURED TWIGS. CUTS SHOULD BE FLUSH, LEAVING NO STUBS.

NEW LAWN AREAS:

1. ALL NEW LAWN AREAS TO BE SOO OVER 6" TOPSOIL.

TREE PROTECTION:

1. REPLACEMENT TREES MAY NOT BE PLANTED WITHIN THE DRIP LINE OF EXISTING TREES.

2. EXISTING TREES TO REMAIN SHALL BE PROTECTED.

3. FOR EXISTING TREE PROTECTION, A FOUR (4) FOOT HIGH WOODEN SNOW FENCE OR OTHER RIGID MATERIAL IS TO BE ERRECTED AROUND THE TREE DRIP LINES PRIOR TO LAND CLEARING AND SITE CONSTRUCTION. IT SHALL BE MAINTAINED THROUGHOUT THE SITE DEVELOPMENT PERIOD. NO CUTTING, FILLING OR TRESPASSING SHALL OCCUR INSIDE THE TREE PROTECTION FENCING.

GUARANTEE:

1. THE CONTRACTOR AGREES TO GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF TWO (2) YEARS. AT THAT TIME THE CITY OF ROCHESTER HILLS LANDSCAPE ARCHITECT RESERVES THE RIGHT FOR A FINAL INSPECTION. PLANT MATERIAL WITH 25% DIE BACK, AS DETERMINED BY THE OWNERS REPRESENTATIVE SHALL BE REPLACED. THIS GUARANTEE INCLUDES THE FURNISHING OF NEW PLANTS, LABOR AND MATERIALS. THESE NEW PLANTS SHALL ALSO BE GUARANTEED FOR THE PERIOD OF TWO (2) YEARS.

2. ALL DEAD PLANT MATERIALS SHALL BE REMOVED AND REPLACED AS REQUIRED IN ORDER TO MAINTAIN AN ATTRACTIVE LANDSCAPE AT ALL TIMES.

MAINTENANCE:

1. ALL LANDSCAPED AREAS TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE LOCAL MUNICIPAL AGENCIES STANDARDS AND REQUIREMENTS, IN A HEALTHY GROWING CONDITION, NEAT AND ORDERLY IN APPEARANCE AND FREE OF REFUSE AND DEBRIS.

ADDITIONAL NOTES:

1. LAWN TREES TO BE MULCHED WITH A FOUR (4) FOOT WIDE BY MINIMUM OF SIX (6) INCH DEEP SHREDED BARK RING OR APPROVED ALTERNATIVE DESIGN FOR TRUNK PROTECTION.

2. BACKFILL BEHIND ALL CURBS AND ALONG SIDEWALKS, AND COMPACT TO TOP OF CURB OR WALK TO SUPPORT VEHICLE AND PEDESTRIAN WEIGHT WITHOUT SETTLING.

3. PROVIDE POSITIVE DRAINAGE FOR ALL LANDSCAPE AREAS.

4. THE OWNER OR DEVELOPER MUST NOTIFY THE CITY OF THE INSTALLATION SCHEDULE AND PROVIDE AN OPPORTUNITY FOR INSPECTION ON SITE BEFORE PLANTS ARE PURCHASED.

5. THE FINAL APPROVED LANDSCAPE PLAN MUST BE AVAILABLE FOR ON SITE INSPECTION AT ALL TIMES.

6. PREVENT DAMAGE TO ANY UTILITIES OR THE INTERRUPTION OF UTILITY SERVICES, AND PREVENT DAMAGE OR LITTERING ONTO ADJACENT PROPERTY OR PUBLIC STREETS, SIDEWALKS OR OTHER PUBLIC THROUGHFARES WITH DIRT, SEDIMENT, WATER, PLANT MATERIAL OR OTHER MISCELLANEOUS DEBRIS WHICH CONSTITUTES A PUBLIC NUISANCE OR HAZARD. ALL SUCH DEBRIS SHALL BE PROMPTLY REMOVED.

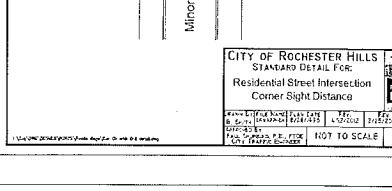
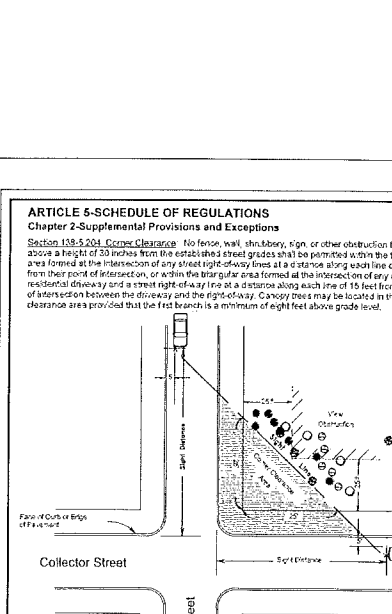
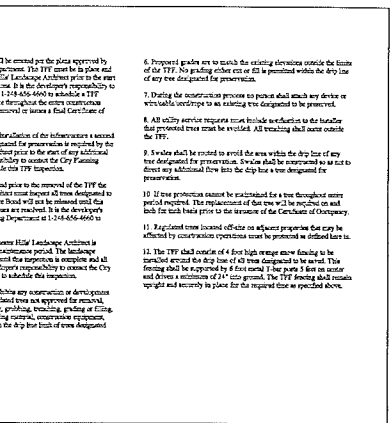
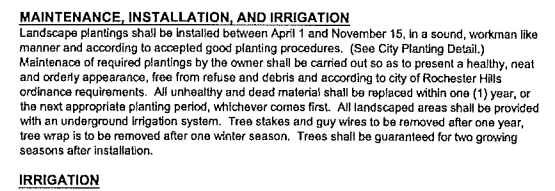
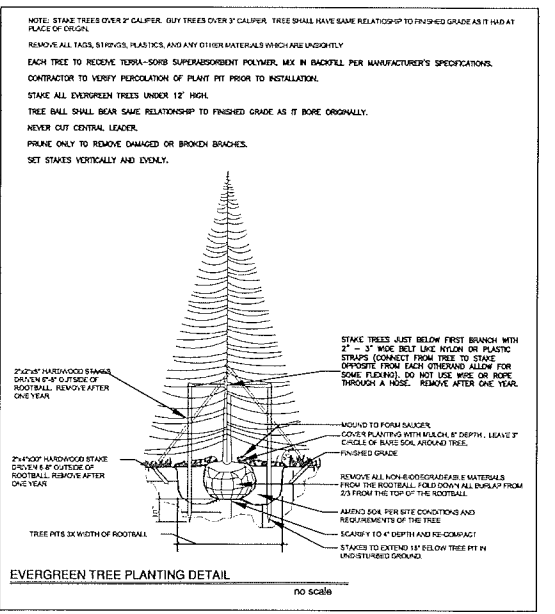
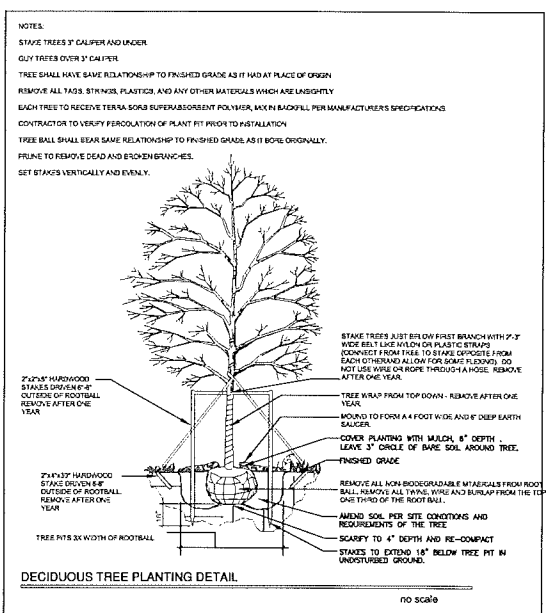
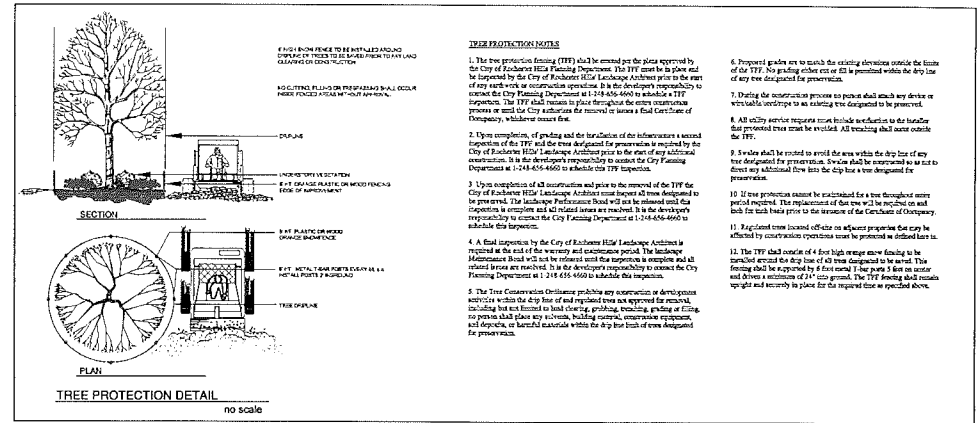
7. PARK GRADE TREES ARE NOT ACCEPTABLE.

8. SPECIES OF PROPOSED PLANT MATERIALS MAY BE ALTERED UPON NOTIFICATION AND APPROVAL BY THE CITY.

9. PLANT MATERIALS, EXCEPT CREEPING VINE TYPE PLANTINGS, SHALL NOT BE LOCATED WITHIN FOUR (4) FEET OF THE PROPERTY LINE.

10. TREE WRAP FOR DECIDUOUS AND ORNAMENTAL TREES TO BE REMOVED AFTER ONE YEAR.

11. PROTECTIVE FENCE WRAP TO BE STAKED WITH 'T-POSTS'.



City of Rochester Hills Standard Detail for Sight Distance Roadways

MAJOR ROAD APPROACHING INTERSECTION	MINOR ROAD APPROACHING INTERSECTION	MINOR ROAD APPROACHING INTERSECTION	MINOR ROAD APPROACHING INTERSECTION
25'	30'	35'	40'
30'	35'	40'	45'
35'	40'	45'	50'
40'	45'	50'	55'
45'	50'	55'	60'
50'	55'	60'	65'
55'	60'	65'	70'

City of Rochester Hills Standard Detail for Sight Distance Pathways

PATHWAY APPROACHING INTERSECTION	PATHWAY APPROACHING INTERSECTION	PATHWAY APPROACHING INTERSECTION
0'	0'	0'
-1'	-1'	-1'
-2'	-2'	-2'
-3'	-3'	-3'
-4'	-4'	-4'
-5'	-5'	-5'
-6'	-6'	-6'
-7'	-7'	-7'
-8'	-8'	-8'

City of Rochester Hills Standard Detail for Sight Distance Pathways

PATHWAY APPROACHING INTERSECTION	PATHWAY APPROACHING INTERSECTION	PATHWAY APPROACHING INTERSECTION
0'	0'	0'
-1'	-1'	-1'
-2'	-2'	-2'
-3'	-3'	-3'
-4'	-4'	-4'
-5'	-5'	-5'
-6'	-6'	-6'
-7'	-7'	-7'
-8'	-8'	-8'

"NOT TO BE USED AS CONSTRUCTION DRAWINGS"

WOODLAND PARK

A PART OF THE NORTHEAST 1/4, OF SECTION 28, TOWN 3 NORTH, RANGE 11 EAST,
CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

WETLAND IMPACT	
WETLAND	AREA OF IMPACT
AREA "1"	1,679.41 S.F.
AREA "2"	9,457.61 S.F.
AREA "3"	1,794.47 S.F.
TOTAL	12,931.49 S.F. (0.30 ACRE) (23%)

NOTES:

BEST MANAGEMENT PRACTICES (BMP) WILL BE IMPLEMENTED DURING THE CONSTRUCTION PHASE OF THE PROPOSED PROJECT.

TEMPORARY IMPACT AREAS ARE TO BE RESTORED TO ORIGINAL GRADE WITH ORIGINAL SOILS OR EQUIVALENT SOILS AND SEEDED WITH A CITY APPROVED WETLAND SEED MIX.

MDEQ PART 303 AND PART 301 PERMIT WILL BE OBTAINED AND SUBMITTED TO THE CITY FOR REVIEW.

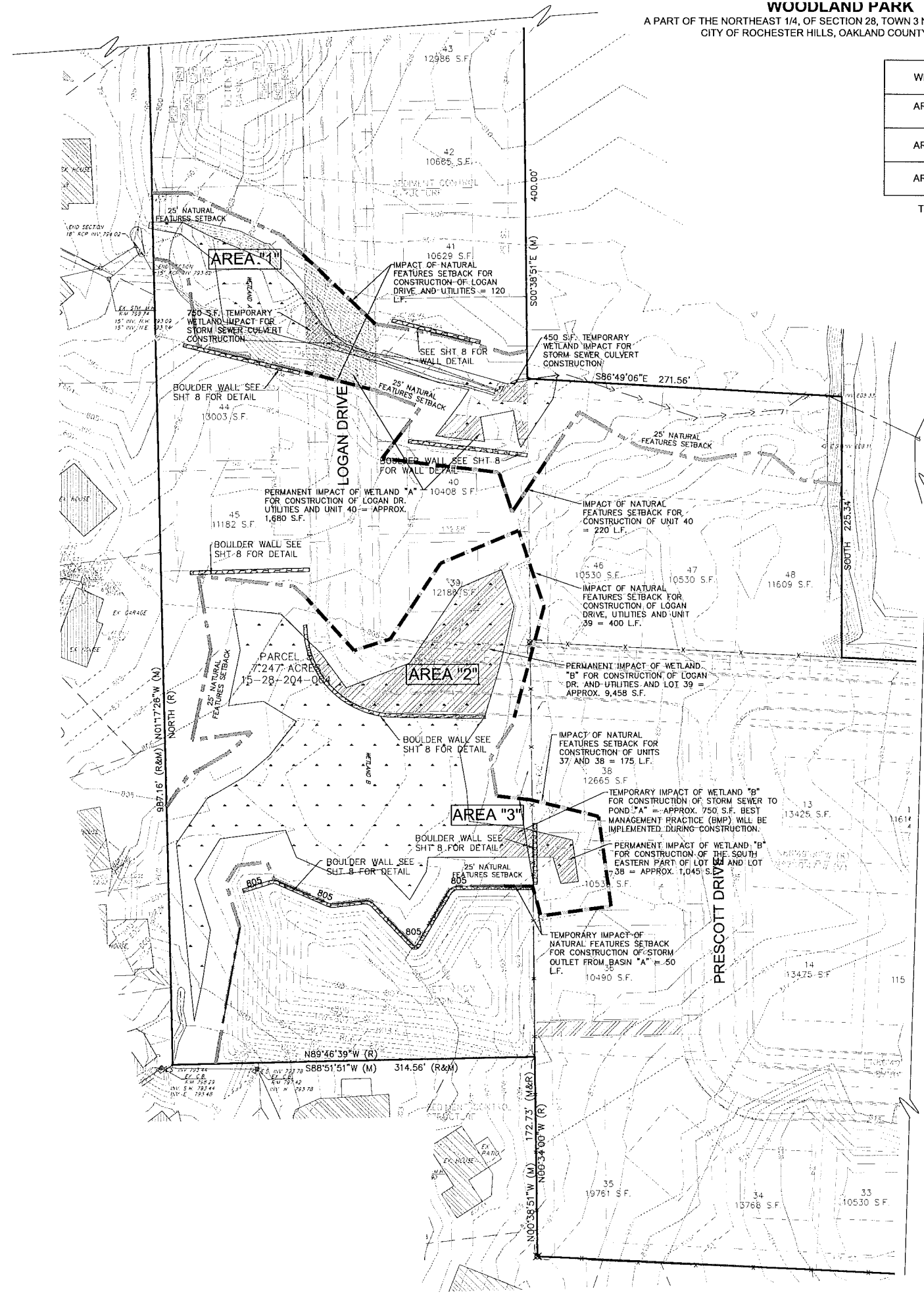
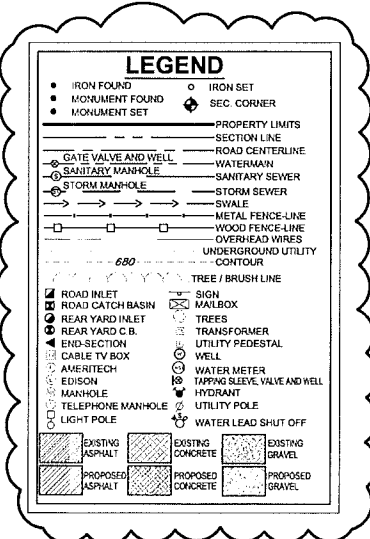
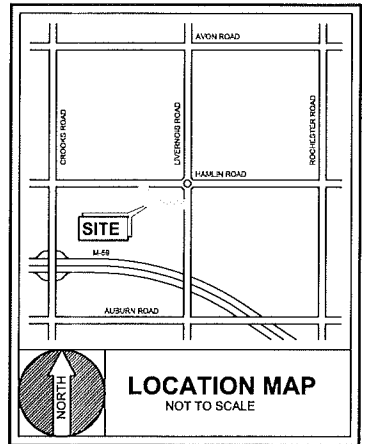
NOTES:

1. WETLAND SURVEYED AND MEASURED ON-SITE (ASTI REPORT 6/4/2015)
1.28 ACRES

2. TOTAL WETLAND IMPACT
0.30 AC. / 1.28 AC. = 0.23 OR 23%

3. MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY (MDEQ) PRE-APPLICATION MEETING.

FILE NUMBER=14-63-0272-P



NOT TO BE USED AS CONSTRUCTION DRAWINGS