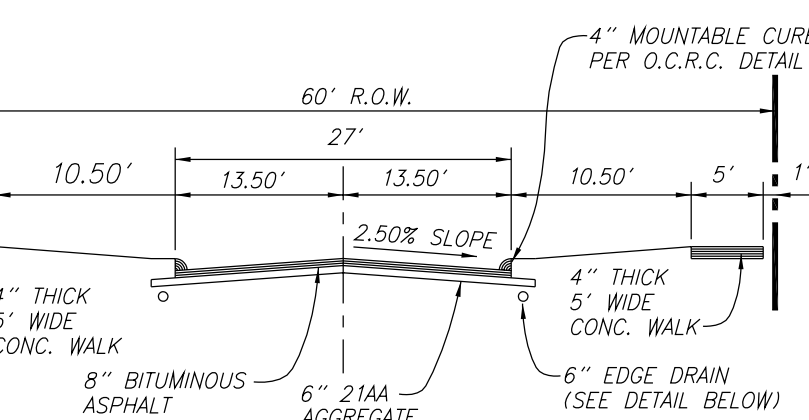
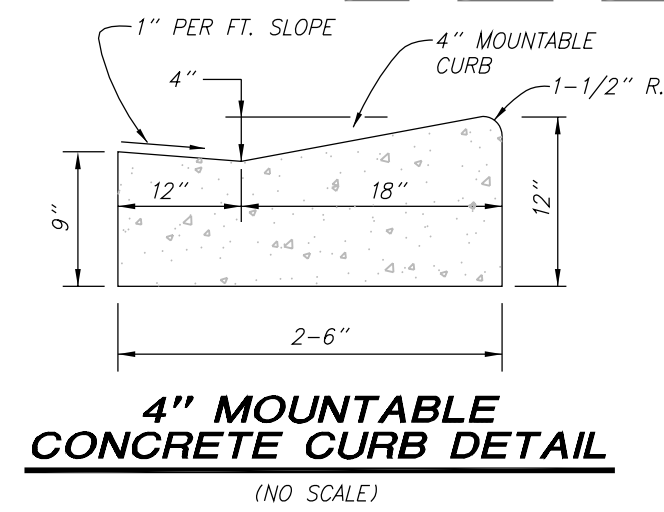
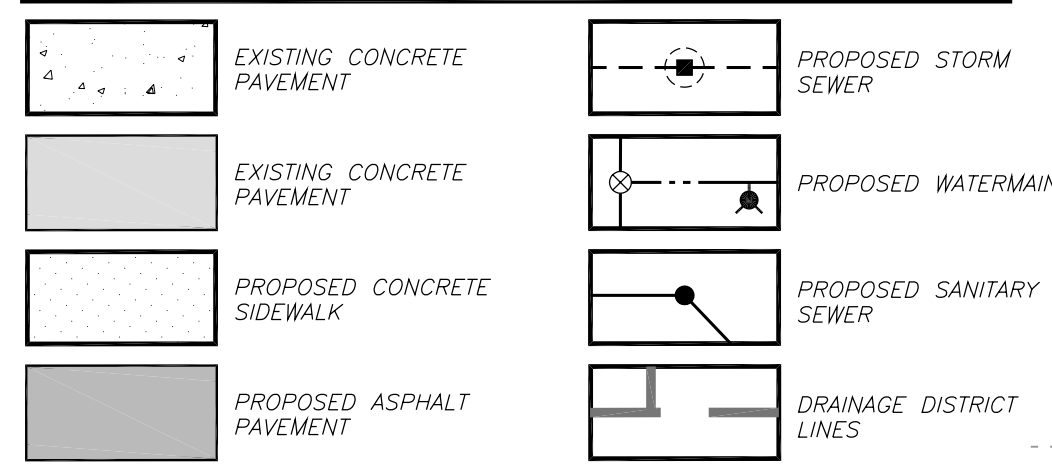
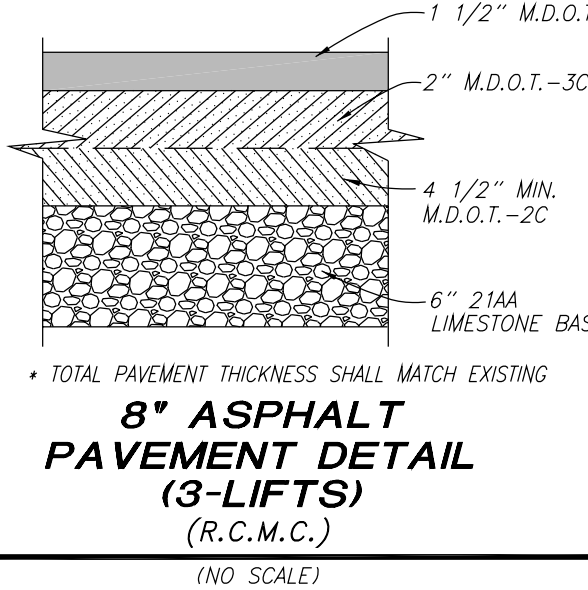


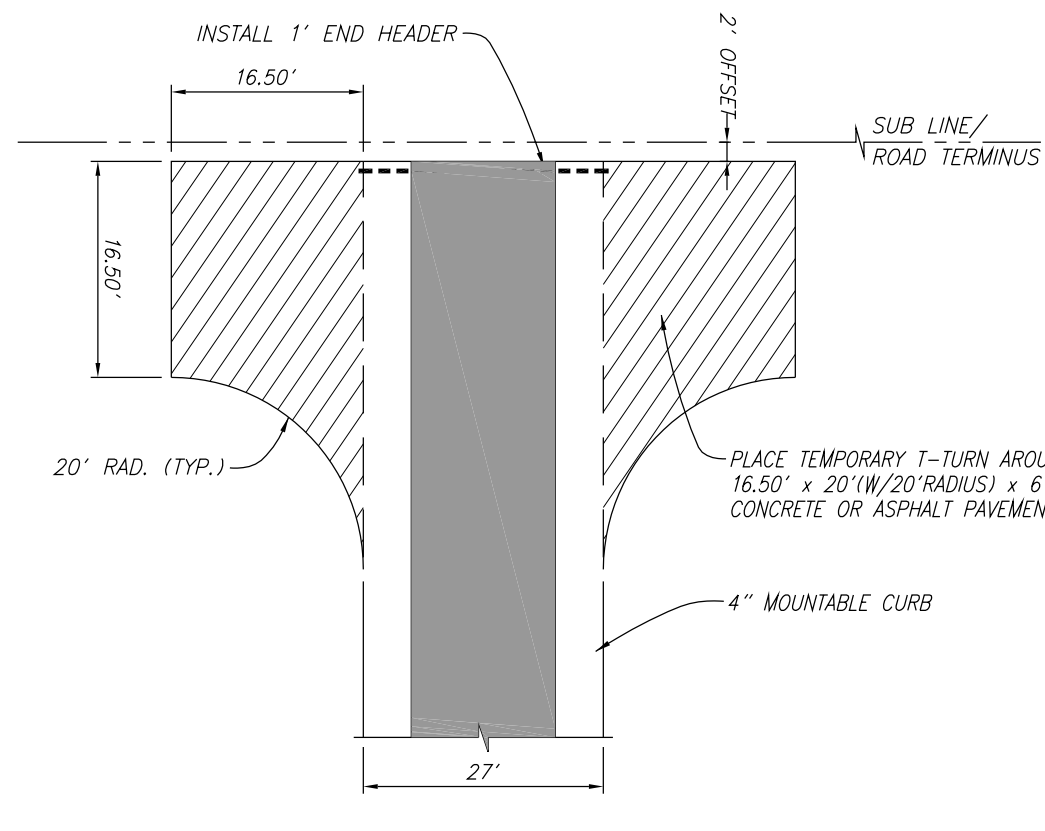
**LEGEND**



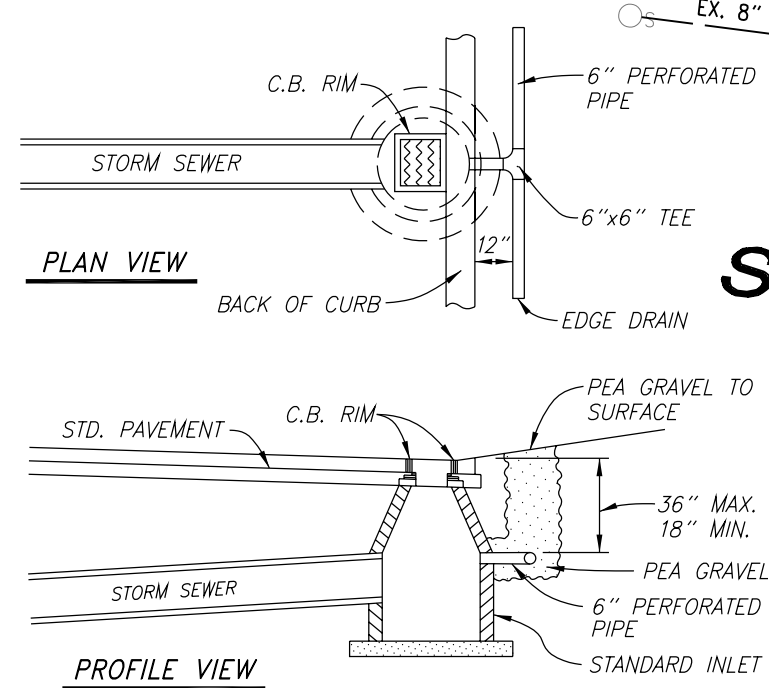
**TYPICAL ROAD SECTION**  
(NO SCALE)



**8\"/>**



**T-TURN AROUND**  
(PER CITY OF ROCHESTER HILLS STANDARD)  
(NO SCALE)



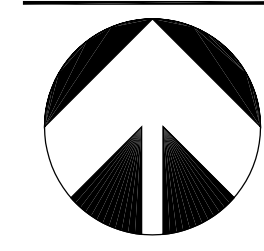
**EDGE DRAIN DETAIL**  
(NO SCALE)

**PROPOSED "HICKORY RIDGE" SITE CONDOMINIUMS (BY OTHERS)**

**PROPERTY DESCRIPTION**

Lots 10 and 11 "Supervisor's Plat No. 6 part of the S.W. 1/4 of Section 34, T.3N., R.11E., Avon Township (now known as the City of Rochester Hills), Oakland County, Michigan as recorded in Liber 5, Page 56 of the Oakland Records, excepting the South 5.00 feet for road purposes.

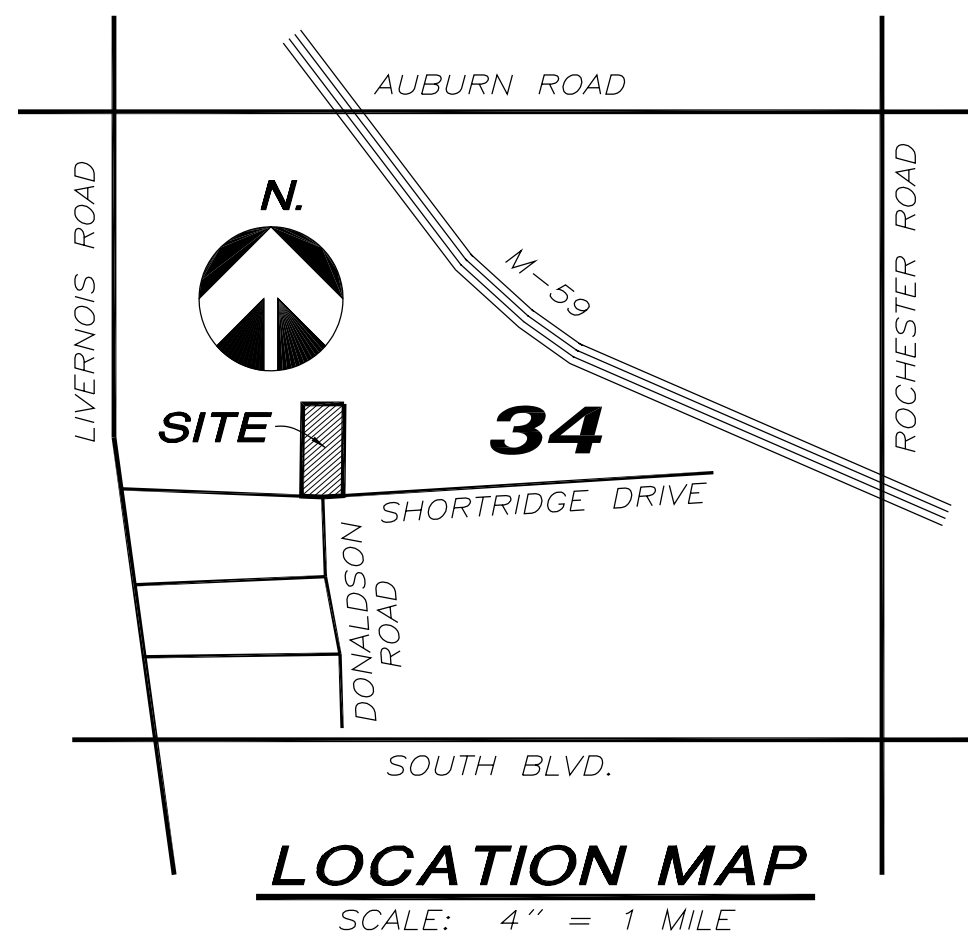
**NORTH**



**SCALE: 1"=40'**

**BENCHMARKS**

- RR SPIKE IN N. FACE UTILITY POLE BETWEEN HOUSE #886 & 605 SHORTRIDGE. ELEVATION = 773.31
- PK IN N. FACE UTILITY POLE BETWEEN HOUSE #711 & 733 SHORTRIDGE. ELEVATION = 785.05



**SITE CRITERIA**

- PARCEL IDENTIFICATION #: (LOT 11) 15-34-301-005 and (LOT 12) 15-34-326-012
  - EXISTING ZONING: R4
  - ADJACENT ZONINGS: R4
  - GROSS AREA OF SITE: 173,292.6 S.F. (3.98 AC.)
  - NET AREA OF SITE: 173,292.6 S.F. (3.98 AC.)
  - PROPOSED USE: SINGLE FAMILY SITE CONDOMINIUM w/ PUBLIC ROAD
- UNIT SUMMARY (UNIT AVERAGING 10% REDUCTION):**
- MINIMUM UNIT SIZE: 8,640 S.F.
  - DENSITY PERMITTED: 173,292.6 S.F./8,640 S.F. = 20 UNITS
  - DENSITY PROVIDED: 12 UNITS
  - MINIMUM UNIT FRONTAGE: 72' (MEASURED AT FRONT SETBACK LINE)
  - MINIMUM UNIT CORNER FRONTAGE: 92' (MEASURED AT FRONT SETBACK LINE)
- BUILDING SETBACKS:** FRONT = 25', REAR = 35', SIDE = 10'

UNIT AVERAGING	UNIT FRONTAGE	UNIT AREA (SQ. FT.)
1	84.04'	8,875.5
2	72.93'	8,238.7
3	77.56'	8,649.8
4	115.60'	9,966.6
5	72.76'	7,603.6
6	77.08'	10,917.9
7	75.76'	9,209.6
8	76.41'	8,676.1
9	72.00'	8,700.7
10	78.93'	9,032.9
11	73.04'	9,069.1
12	92.02'	13,616.5
TOTAL	983.13	118,047
AVERAGE	= 81.93'	9,837.25

**UTILITY SUMMARY**

- WATER MAIN: MUNICIPAL
- SANITARY SEWER: MUNICIPAL
- STORM SEWER: ENCLOSED PIPE WITH OUTLET TO EXISTING DRAIN

**NOTE**

THIS SCHEME AND LAYOUT WAS CHOSEN SO IT COULD ALIGN WITH DONALDSON TO THE NORTH & SOUTH.

**NOTE**

CONSTRUCTION SITE SHALL BE SAFEGUARDED IN ACCORDANCE WITH UFC ARTICLE 87, SEC. 8701

**NOTE**

OPEN BURNING IS NOT PERMITTED INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING MATERIAL. OPEN BURNING FOR WARMING OF SAND AND/OR WATER FOR THE PREPARATION OF MORTAR SHALL BE WITHIN THE CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES. FIRE PREVENTION ORDINANCE CH. 58, SEC. 1102.6.2 & 1102.6.2.3

**NOTE**

ALL FUTURE DRIVEWAYS WILL BE ACCESSED VIA DONALDSON ROAD.

**NOTE**

PRIOR TO THE ISSUANCE OF A LAND IMPROVEMENT PERMIT FUNDS WILL BE DEPOSITED WITH THE CITY TO PERMIT THE INSTALLATION OF ONE STREET PER UNIT.

**NOTE**

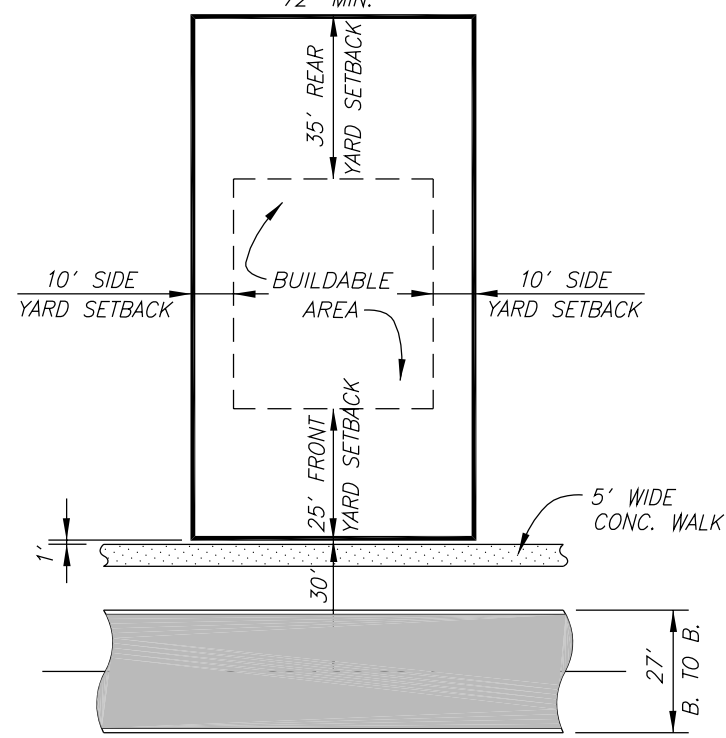
A POST CONSTRUCTION BMP WILL BE PROVIDED PRIOR TO THE INLET TO THE POND.

**NOTE**

ALL UTILITIES AND GRADING SHOWN ARE FOR PLANNING PURPOSES ONLY. EXACT UTILITY LOCATIONS AND GRADING TO BE DETERMINED DURING ENGINEERING.

**NOTE**

NO STREET LIGHTING OR SIGN ARE PROPOSED FOR THIS SITE.



**TYPICAL SETBACKS**  
(NO SCALE)

**POND SIZING CALCULATION**  
(OAKLAND COUNTY DRAIN COMMISSION METHOD)

A) TRIBUTARY AREA: 3.98 ACRES AT PROPOSED C = 0.35  
 B) ALLOWABLE OUTFLOW = 0.2 CFS / ACRE = 0.796 CFS AT AGRICULTURAL RATE  
 C) 10 YEAR DETENTION REQUIRED  

$$Q_0 = \frac{(Ac.)(PROPOSED "C")}{(Ac.)(ALLOWED "C")} = \frac{0.20}{0.35} = 0.57$$

$$T = \frac{6,562.5}{Q_0} = 25 = 82.3 \text{ MINUTES}$$

$$V_s = T + 25 = 400T$$

$$V_s = 8,054 - 1,876 = 6,178 \text{ CU. FT. / ACRE/IMPERVIOUS}$$

$$V_{REQUIRED} = (A) \times (V_s) \times (C_{PROPOSED})$$

$$V_{REQUIRED} = (3.98 \text{ AC.})(6,178)(0.35) = 8,606 \text{ CU. FT.}$$

D) VOLUME PROVIDED:  $A_{POND} = 5,477 \text{ SQ. FT.}$   
 $A_{POND} = 918 \text{ SQ. FT.}$

$H = 3.0 \text{ FT.}$   
 $V = \frac{1}{3} (A_1 + A_2 + \sqrt{A_1 A_2}) \times (H) = 8,637 \text{ C.F.}$   
 $V = 8,637 \text{ CU. FT.} > 8,606 \text{ CU. FT.} \therefore \text{O.K.}$

FREEBOARD = 788.00  
 HIGH WATER LEVEL = 787.00  
 OVERFLOW TO SHORTRIDGE DRIVE EXISTING DITCH  
 OUTLET: RESTRICTED TO SHORTRIDGE DRIVE DRAIN

**ALLOWABLE OUTFLOW**  
 TRIBUTARY AVERAGE: A = 3.98 acre  
 ALLOWABLE OUTFLOW = 0.20 cfs/acre  
 $O_A = (0.20 \text{ cfs/acre}) \times (3.98 \text{ acre}) = 0.796 \text{ cfs}$

**OUTLET RESTRICTION SIZE**  
 $Q_A = 0.62 \times a \times 2 \times g \times h = 0.796 \text{ cfs}$   
 $h = 787.00 - 784.00 = 3.00'$   
 $a = \frac{0.796 \text{ cfs}}{0.62 \times 2 \times 32.2 \times 3.00} = 0.0924 \text{ s.f.}$   
 $0.62 \times 2 \times 32.2 \times 3.00$   
 Dia. pipe = 0.343 ft. = 4.11 in.  
 USE 4" P.V.C. SCHD. 40 AS MINIMUM DIAMETER PER ENGINEERING ORDINANCE

**WEIR CALCULATION FOR EMERGENCY SPILLWAY**  
 WEIR EQUATION:  $Q = 2/3 \times B \times \sqrt{2 \times G} \times H^{3/2}$   
 USING  $Q = 5.5 \text{ CFS}$  &  $G = 32.2 \text{ FT/SEC}^2$   
 ASSUME WEIR WIDTH "B" = 10' & HEIGHT "H" = 0.25'  
 $Q = 2/3 \times 10' \times \sqrt{2 \times 32.2} \times 0.25^{3/2} = 6.7 \text{ CFS} > 5.5 \text{ CFS} \therefore \text{O.K.}$   
 (USE WIDTH=10' & HEIGHT=0.25')

**LANDSCAPE NOTE**

- PRIOR APPROVAL IS REQUIRED TO PLANT ANY TREE OR SHRUB ON THE PUBLIC RIGHT-OF-WAY. ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF THE PUBLIC ROAD. SHADE TREES AND SHRUBS MUST BE PLANTED AT LEAST 5' FROM THE EDGE OF THE PUBLIC WALKWAY. EVERGREEN AND ORNAMENTAL TREES MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF THE PUBLIC WALKWAY. NO TREES OR SHRUBS MAY BE PLANTED WITHIN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY STREET RIGHT-OF-WAY LINES AT A DISTANCE ALONG EACH LINE OF 25' FROM THEIR POINT OF INTERSECTION. NO TREES OR SHRUBS MAY BE PLANTED IN THE TRIANGULAR AREA FORMED AT THE INTERSECTION 10' OF ANY DRIVEWAY WITH A PUBLIC WALKWAY AT A DISTANCE ALONG EACH LINE OF 15' FROM THEIR POINT OF INTERSECTION. ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM ANY FIRE HYDRANT. SHADE TREES AND EVERGREEN TREES MUST BE AT LEAST 15' AWAY FROM THE NEAREST OVERHEAD WIRE. TREES MUST BE PLANTED A MINIMUM OF 5' FROM AN UNDERGROUND UTILITY, UNLESS THE CITY'S LANDSCAPE ARCHITECT REQUIRES A GREATER DISTANCE.
- PRIOR TO THE RELEASE OF THE PERFORMANCE BOND, THE CITY OF ROCHESTER HILLS FORESTRY DIVISION NEEDS TO INSPECT ALL TREES, EXISTING OR PLANTED, TO IDENTIFY ANY THAT POSE A HAZARD TO THE SAFE USE OF THE PUBLIC RIGHT-OF-WAY. FORESTRY MAY REQUIRE THE DEVELOPER TO REMOVE, AND POSSIBLE REPLACE, ANY SUCH TREES.

**PRELIMINARY SITE CONDOMINIUM PLAN**  
PART OF THE S.W. 1/4 OF SECTION 34, T.3N., R.11E., CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN.

DATE: 05/02/23  
 Job No.: 050233  
 Date: 8-26-05  
 Scale: 1"=40'  
 Drawn: S.R.T./CY  
 Check: R.A.W.  
 Sheet: 3 OF 3  
 10-07-05 REVISED PER CITY OF ROCHESTER HILLS  
 09-26-05 REVISED PER CITY OF ROCHESTER HILLS

**"THE COMMONS SOUTH"**  
FOR: FRANK FLEURY  
1171 HICKORY HILL  
ROCHESTER HILLS, MI. 48309  
(248) 650-3378

PHONE: 586 731-8030  
 FAX: 586 731-2605

**URBAN LAND CONSULTANTS**

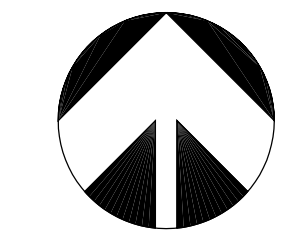
CIVIL ENGINEERS PLANNERS LAND SURVEYORS  
 SHELBY TWP., MI 48316-4516  
 8800 23 MILE ROAD

**SOIL**

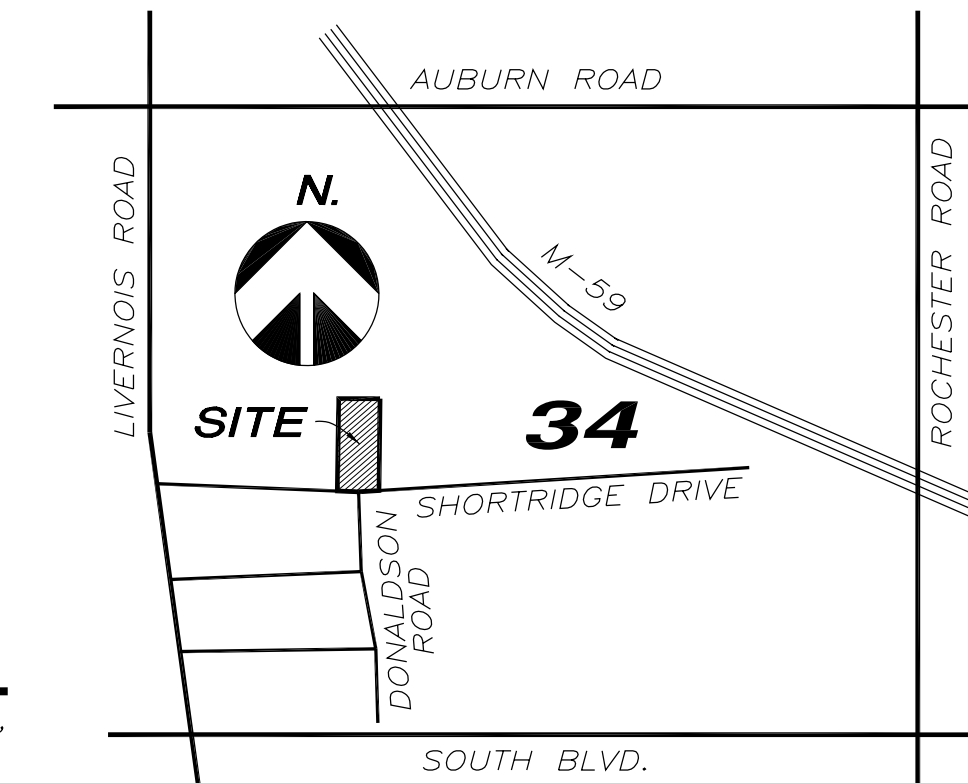
- 11B** CAPAC SANDY LOAM (0 TO 4% SLOPES)  
0"-8" VERY DARK GRAYISH-BROWN SANDY LOAM, 8"-20" BROWN CLAY LOAM, 20"-32" GRAYISH-BROWN SANDY LOAM, 32"-60" PALE BROWN LOAM. MODERATELY SLOW PERMEABILITY, SLOW RUNOFF.
- 54A** MATHERTON SANDY LOAM (0% TO 3% SLOPES)  
0"-13" VERY DARK GRAYISH-BROWN SANDY LOAM, LOAM, 13"-34" GRAYISH-BROWN MOTTLED, FRABLE SANDY LOAM CLAY, GRAVELLY CLAY LOAM  
34"-60" LIGHT BROWNISH GRAY GRAVELLY SAND  
THE MATHERTON SOMEWHAT POORLY DRAINED, MODERATELY RAPID PERMEABILITY.

**PROPOSED "HICKORY RIDGE" SITE CONDOMINIUMS (BY OTHERS)**

**NORTH**



**SCALE: 1"=40'**



**LOCATION MAP**  
SCALE: 4" = 1 MILE

**TREE PROTECTION NOTES**

- The tree protection fencing (TPF) shall be erected per the plans approved by the City of Rochester Hills Planning Department. The TPF must be in place and be inspected by the City of Rochester Hills' Landscape Architect prior to the start of any earthwork or construction operations. It is the developer's responsibility to contact the City Planning Department at 1-248-656-4660 to schedule a TPF inspection. The TPF shall remain in place throughout the entire construction process or until the City authorizes the removal or issues a final Certificate of Occupancy, whichever occurs first.
- Upon completion of grading and the installation of the infrastructure a second inspection of the TPF and the trees designated for preservation is required by the City of Rochester Hills' Landscape Architect prior to the start of any additional construction. It is the developer's responsibility to contact the City Planning Department at 1-248-656-4660 to schedule this TPF inspection.
- Upon completion of all construction and prior to the removal of the TPF the City of Rochester Hills' Landscape Architect must inspect all trees designated to be preserved. The landscape Performance Bond will not be released until this inspection is complete and all related issues are resolved. It is the developer's responsibility to contact the City Planning Department at 1-248-656-4660 to schedule this inspection.
- A final inspection by the City of Rochester Hills' Landscape Architect is required at the end of the warranty and maintenance period. The landscape Maintenance Bond will not be released until this inspection is complete and all related issues are resolved. It is the developer's responsibility to contact the City Planning Department at 1-248-656-4660 to schedule this inspection.
- The Tree Conservation Ordinance prohibits any construction or development activities within the drip line of any tree designated for preservation, including but not limited to land clearing, grubbing, trenching, grading or filling, no person shall place any solvents, building material, construction equipment, soil deposits, or harmful materials within the drip line limit of trees designated for preservation.
- Proposed grades are to match the existing elevations outside the limits of the TPF. No grading either cut or fill is permitted within the drip line of any tree designated for preservation.
- During the construction process no person shall attach any device or wire/cable/cord/rope to an existing tree designated to be preserved.
- All utility service requests must include notification to the installer that protected trees must be avoided. All trenching shall occur outside the TPF.
- Swales shall be routed to avoid the area within the drip line of any tree designated for preservation. Swales shall be constructed so as not to direct any additional flow into the drip line a tree designated for preservation.
- If tree protection cannot be maintained for a tree throughout entire period required. The replacement of that tree will be required on and inch for inch basis prior to the issuance of the Certificate of Occupancy.
- Regulated trees located off-site on adjacent properties that may be affected by construction operations must be protected as defined here in.
- The TPF shall consist of 4 foot high orange snow fencing to be installed around the drip line of all tree designated to be saved. This fencing shall be supported by 6 foot metal T-bar posts 5 feet on center and driven a minimum of 24" into ground. The TPF fencing shall remain upright and securely in place for the required time as specified above.

**PROPERTY DESCRIPTION**

Lots 10 and 11 "Supervisor's Plat No. 6 part of the S.W. 1/4 of Section 34, T.3N., R.11E., Avon Township (now known as the City of Rochester Hills), Oakland County, Michigan as recorded in Liber 5, Page 56 of the Oakland Records, excepting the South 5.00 feet for road purposes.

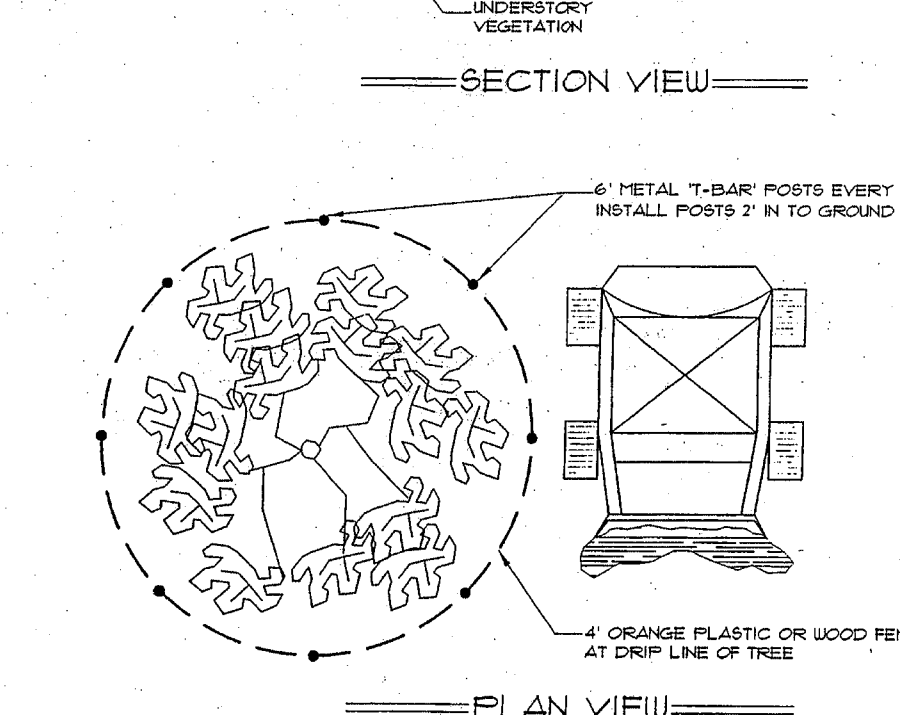
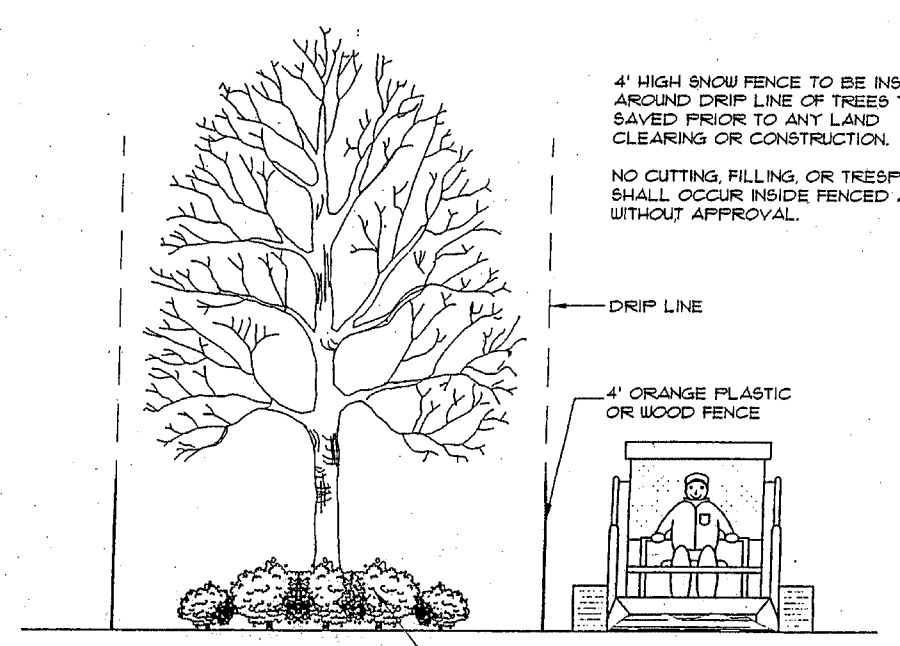
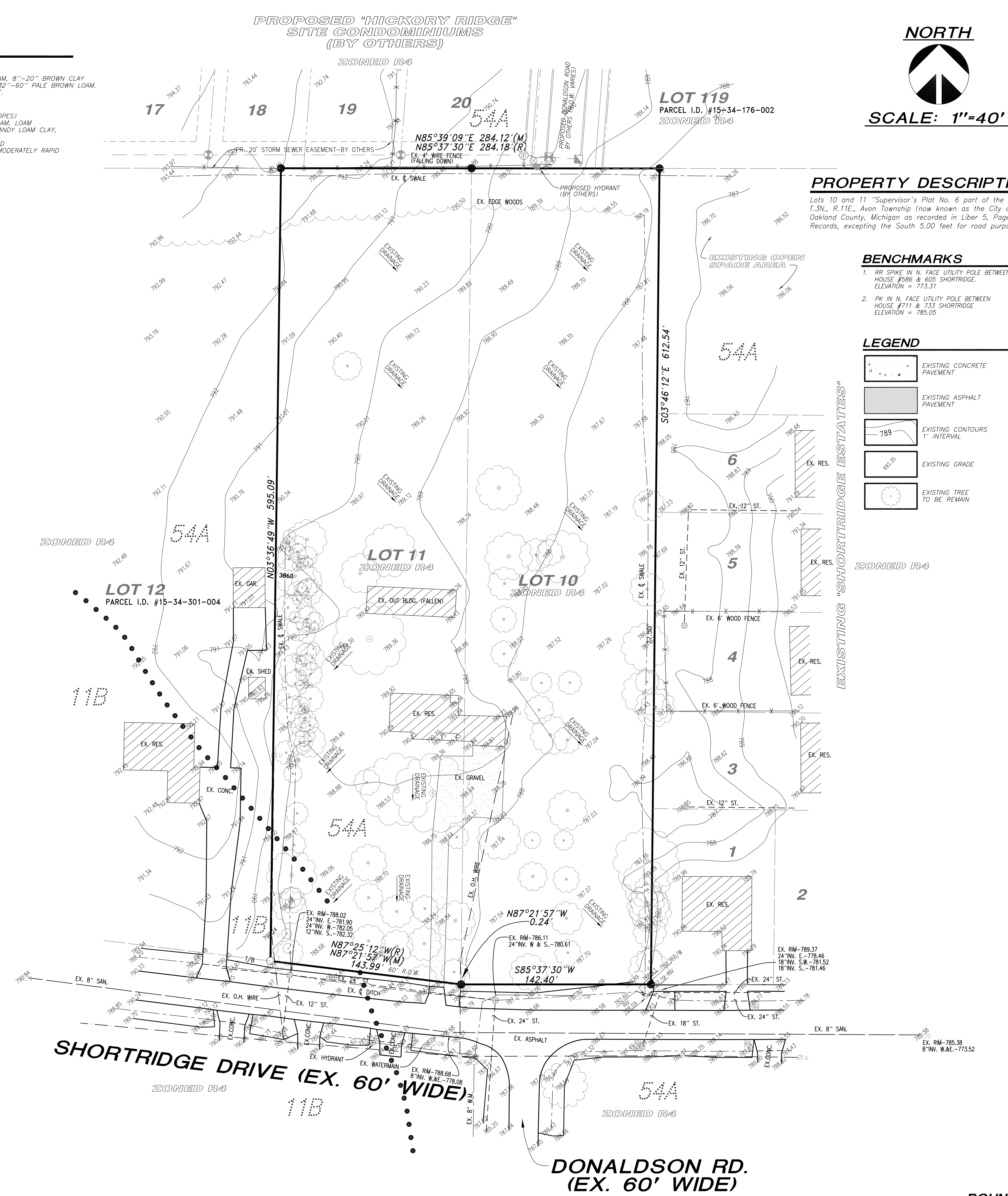
**BENCHMARKS**

- RR SPIKE IN N. FACE UTILITY POLE BETWEEN HOUSE #686 & 605 SHORTRIDGE. ELEVATION = 773.31
- PK IN N. FACE UTILITY POLE BETWEEN HOUSE #711 & 733 SHORTRIDGE. ELEVATION = 785.05

**LEGEND**

- EXISTING CONCRETE PAVEMENT
- EXISTING ASPHALT PAVEMENT
- EXISTING CONTOURS 1' INTERVAL
- EXISTING GRADE
- EXISTING TREE TO BE REMAIN

EXISTING "SHORTRIDGE ESTATES"



**TREE PROTECTION DETAIL**  
CITY OF ROCHESTER HILLS  
NOT TO SCALE



**Contractor Note:**  
The locations of existing underground utilities are shown in an approximate way only. The contractor shall determine the exact location of all existing utilities before commencing work. He agrees to be fully responsible for any and all damages which might be occasioned by his failure to exactly locate and preserve any and all underground utilities.

**BOUNDARY AND TOPOGRAPHIC SURVEY**  
PART OF THE S.W. 1/4 OF SECTION 34, T.3N., R.11E., CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN.

DATE	10-27-05	REVISED PER CITY OF ROCHESTER HILLS
DATE	09-06-05	REVISED PER CITY OF ROCHESTER HILLS
DATE	05-02-03	REVISED PER CITY OF ROCHESTER HILLS
DATE	08-26-05	REVISED PER CITY OF ROCHESTER HILLS

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FAX 586 731-2605

