

# LITTLE WINKLER ESTATES

PART OF THE NORTHEAST 1/4 OF SECTION 1, T.3N., R.1E., ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN.

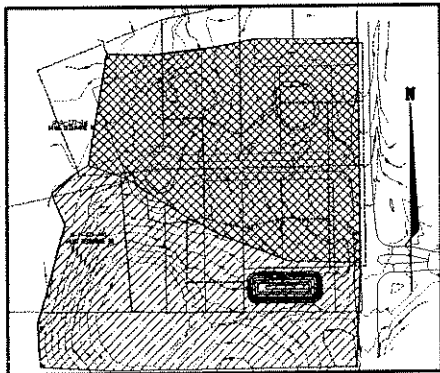
## ZONING REQUIREMENTS

ZONE	R-1
MINIMUM CORNER UNIT WIDTH	120 FT
MINIMUM UNIT WIDTH	90 FT
MINIMUM UNIT AREA	18,000 SQ FT
MINIMUM SIDE YARD	10 FT
MINIMUM TOTAL SIDE YARD	20 FT
MINIMUM REAR YARD	35 FT
MINIMUM FRONT YARD	40 FT

(UNIT AVERAGE CONCEPT USED)

**NET DENSITY**  
 10 UNITS/7.320 ACRES = 1.366 UNITS/ACRE  
 < 1.70 UNITS/ACRES (ORDINANCE 20.01A.D)

UNIT	UNIT WIDTH (FT.)	AREA (SQ. FT.)
1	120.00	24,000
2	90.00	20,154
3	90.00	22,422
4	99.16	19,229
5	125.62	23,167
6	99.16	22,944
7	99.10	25,258
8	90.00	26,895
9	90.00	18,900
10	120.00	24,000
<b>UNIT AVERAGE</b>	<b>22.481</b>	

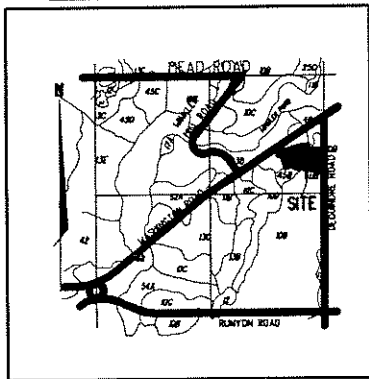


**SLOPE GRADIENT**

SCALE 1" = 200'

LEGEND: SLOPES BASED ON ONSITE TOPOGRAPHY

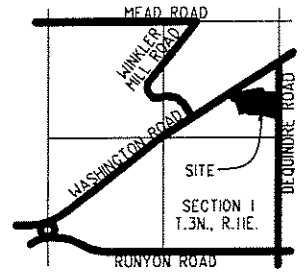
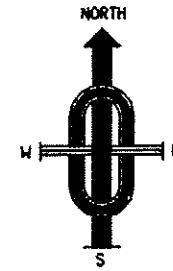
- EXISTING SLOPES 2% - 4%
- EXISTING SLOPES GREATER THAN 4%



- Soil Survey Legend**
- 80 - Marlette sandy loam, 1 to 5 percent slope
  - 81 - Marlette sandy loam, 5 to 12 percent slope
  - 82 - Marlette loam, 12 to 18 percent slope
  - 83 - Capon sandy loam, 0 to 4 percent slope
  - 84 - Bronston and Cold loams
  - 85 - Delton-Snyder loamy sand, 0 to 6 percent slope
  - 86 - Delton-Snyder loamy sand, 6 to 12 percent slope
  - 87 - Delton-Snyder loamy sand, 12 to 40 percent slope
  - 88 - Oakville loam, 5 to 18 percent slope
  - 89 - Spinks loamy sand, 5 to 12 percent slope
  - 90 - Fair sandy loam, 1 to 6 percent slope
  - 91 - Sison fine sandy loam, 5 to 12 percent slope
  - 92 - Pit
  - 93 - Airport loamy fine sand, 2 to 6 percent slope
  - 94 - Airport loamy fine sand, 6 to 12 percent slope
  - 95 - Airport loamy fine sand, 12 to 25 percent slope
  - 96 - Dakota loamy fine sand, 0 to 3 percent slope
  - 97 - Saffridge loamy sand, 0 to 3 percent slope
  - 98 - Redford sandy loam, 0 to 3 percent slope

## BENCHMARK DESCRIPTIONS

- PK AND WASHER NORTH FACE OF UTILITY POLE LOCATED APPROXIMATELY AT THE MIDDLE OF NORTH PROPERTY LINE @ HOUSE #713  
ELEV. 811.64
- UTILITY POLE LOCATED AT NORTHWEST CORNER OF PROPERTY @ HOUSE #745.  
ELEV. 816.73
- ARROW TOP HYDRANT LOCATED THE END OF GRAND PARK DRIVE  
ELEV. 810.16
- MAG EAST FACE ON 19 IN OAK, LOCATED ±600 FT. FROM CENTERLINE OF AUBURN ROAD ON WEST PROPERTY LINE  
ELEV. 810.96
- ARROW TOP HYDRANT LOCATED APPROXIMATELY ±75 FT. FROM SOUTHEAST CORNER OF PROPERTY, EAST SIDE OF GRAND PARK BLVD.  
ELEV. 798.34



**LOCATION MAP**  
SCALE 1" = 2000'

**10 TOTAL UNITS**

## NOTES:

- THIS SITE CONDOMINIUM IS ZONED R-1 SINGLE FAMILY RESIDENTIAL DISTRICT.
- LAYOUT AND DIMENSIONS ARE TENTATIVE AND SUBJECT TO MODIFICATION UPON CALCULATION OF THE CONDOPLAT.
- A 10 FT. (MINIMUM) EASEMENT IS AT THE FRONT OF EACH UNIT FOR PUBLIC UTILITIES UNLESS OTHERWISE NOTED.
- ALL UNITS WILL BE SERVED WITH PUBLIC SANITARY SEWER AND WATER MAIN.
- ALL SANITARY SEWERS, SERVICES AND RELATED ITEMS MUST BE DESIGNATED IN ACCORDANCE WITH THE CITY OF ROCHESTER HILLS ENGINEERING DESIGN STANDARDS.
- ALL STORM SEWER AND RELATED ITEMS MUST BE DESIGNATED IN ACCORDANCE WITH THE CITY OF ROCHESTER HILLS ENGINEERING DESIGN STANDARDS.
- THE DEVELOPER SHALL COMPLY WITH APPLICABLE CODES AND ORDINANCES OF THE CITY OF ROCHESTER HILLS, OAKLAND COUNTY AND THE STATE OF MICHIGAN.
- INDICATES PROPOSED DRAINAGE PATTERN.
- EXISTING GRADES VARY OVER THE EXISTING SITE. PROPOSED STREET GRADING WILL CONFORM TO THE REQUIREMENTS OF THE CITY OF ROCHESTER HILLS.
- ELECTRICAL AND GAS LINES WILL BE IN THE STREET RIGHT-OF-WAY OR FRONT YARD EASEMENTS.
- ALL INTERIOR WATER MAIN TO BE 12" DIAMETER (MINIMUM).
- ALL WATER MAIN AND APPURTENANCES MUST BE DESIGNATED IN ACCORDANCE WITH CITY OF ROCHESTER HILLS ENGINEERING DESIGN STANDARDS.
- SOIL TYPES FOR THIS SITE ARE MARLETTE SANDY LOAM, CAPAC SANDY LOAM, ARKPORT LOAMY FINE SAND AND DIXBORO LOAMY FINE SAND ACCORDING TO INFORMATION MADE AVAILABLE BY THE UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, (WELL-SUITED FOR BUILDING DEVELOPMENT)
- TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY BY MCS ASSOCIATES, INC.
- WORK BEFORE AND DURING CONSTRUCTION SHALL COMPLY WITH NFPA-241
- SIDEWALKS ARE REQUIRED THROUGHOUT THE SITE CONDOMINIUM AND WILL BE INDICATED ON THE ENGINEERING PLANS.
- EASEMENTS FOR ALL UTILITIES WILL BE PROVIDED AS REQUIRED.
- ALL SITE CONDOMINIUM SIGNS REQUIRE PERMITS.
- FIRE LANES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL, AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH FIRE LANE SIGNS SPACED NOT MORE THAN 100 FT. APART, AND IN CONFORMANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH UNIFORM FIRE CODE ARTICLE 87.
- OPEN BURNING IS NOT PERMITTED INCLUDING THE BURNING OF TRASH, DEBRIS OR LAND CLEARING MATERIALS.
- ALL PROPOSED GRADES WILL MATCH EXISTING ELEVATIONS AT THE PROPERTY LINE.
- SINGLE PHASE CONSTRUCTION.
- ALL WORK IN THE DEQUINDRE ROAD RIGHT-OF-WAY REQUIRE PERMIT FROM OARC.
- STREET LIGHTING AND SIGNS, IF DESIRED, WILL BE DESIGNATED TO CITY OF ROCHESTER HILLS STANDARDS.
- CONSTRUCTION TYPE V.
- IT IS NOT KNOWN WHAT THE MAXIMUM HOME SIZE WILL BE DUE TO THE FACT THAT THE HOME BUILDERS HAVE NOT BEEN CHOSEN AT THIS TIME. HOWEVER WE EXPECT THAT MAXIMUM HOME SIZE TO BE 6000 SF.

## LEGAL DESCRIPTION

Part of the NE 1/4 of Section 1, T.3N., R.1E., Rochester Hills, Oakland County, Michigan, being more particularly described as follows:  
 Beginning at the East 1/4 corner of Section 1; thence N89°44'48"W 529.15 feet; thence N04°12'20"W 299.69 feet; thence N72°59'40"E 15.53 feet; thence N2°22'51"W 222.81 feet; thence N68°41'30"E 202.71 feet; thence N78°11'30"E 191.22 feet; thence S00°35'30"E 65.00 feet; thence N89°24'30"E 235.00 feet to the East line of Section 1, Rochester Hills, being the Oakland County line, and the Centerline of Dequindre Road (R.O.W. varies); thence S00°35'30"E 563.50 feet along said line to the Point of Beginning. Containing 318,845 square feet --- 7.320 acres (Gross). Containing 285,065 square feet --- 6.544 acres (Net), more or less.

Subject to the rights of the public and any governmental unit in any part thereof taken, used or devoted for street, road or highway purposes

**PROPRIETOR:**  
 LITTLE WINKLER LLC  
 38880 GARFIELD  
 CLINTON TOWNSHIP  
 MICHIGAN 48038  
 TELEPHONE (586) 909-8949

**AUTHORIZED REPRESENTATIVES:**  
 DAMIAN KASSAB

**PREPARED BY:**  
 JOHN C. WRIGHT, P.E.  
 PROFESSIONAL ENGINEER No. 51423  
 44444 MOUND ROAD  
 SUITE 100  
 STEELING HEIGHTS, MICHIGAN 48314  
 TELEPHONE (586) 726-6310

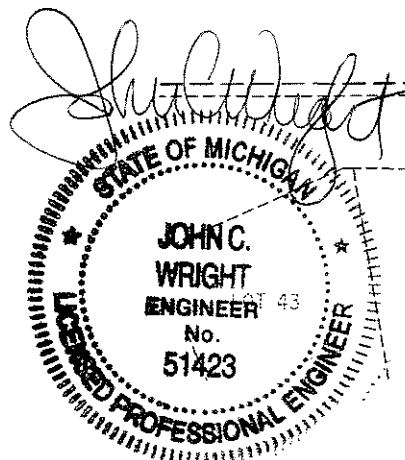
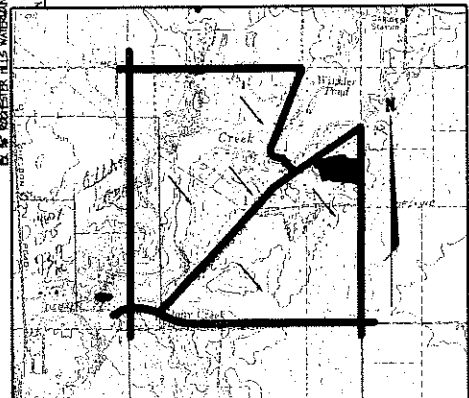
**SHEET INDEX:**

SHEET 1	PRELIMINARY SITE PLAN
SHEET 2	UTILITY/GRADING PLAN
SHEET 3	DEQUINDRE ROAD PLAN
SHEET 4	TREE PRESERVATION PLAN
SHEET 5	TREE LISTING
SHEET 6	EXISTING CONDITIONS
SHEET 7	DEQUINDRE ROAD TOPD
SHEET 11-15	LANDSCAPE PLANS

**NOTE:**  
 NOT TO BE USED AS CONSTRUCTION DRAWINGS

REV: 08-29-06 PER CITY (AP)  
 REV: 09-21-06 PER CITY (AP)  
 REV: 09-18-06 PER CITY (AP)  
 REV: 03-22-06 PER CITY (AP)  
 REV: 02-04-06 PER CITY (JLZ)

**WATERSHED MAP (USGS)**  
SCALE 1" = 2000'

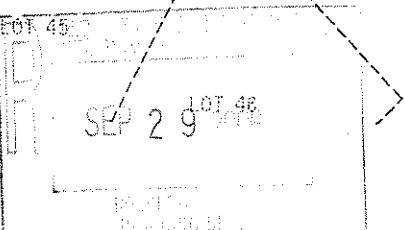


"PHEASANT CREEK VILLAGE SUB. NO. 2"  
 (L. 253, P. 27-34)

CITY OF ROCHESTER

**NOTE:**  
 SINGLE FAMILY DETACHED CONDOMINIUM.  
 SINGLE PHASE CONSTRUCTION.

**NOTE:**  
 Open burning is **not** permitted including the burning of trash, debris, or land clearing materials. 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 Chapter 568, Sec. 102.6.2 & 102.6.2.3



**ASSOCIATES, INC.**  
 Civil Engineering and Surveying

44444 Mound Road, Suite 100  
 Sterling Heights, Michigan 48314  
 Telephone (586) 726-6310  
 Fax (586) 726-0042

**FORMERLY MCS ASSOCIATES, INC.**

**LITTLE WINKLER ESTATES SITE CONDOMINIUM**  
 PART OF NORTHWEST 1/4 OF SECTION 1, T.3N., R.1E., OAKLAND COUNTY, MICHIGAN

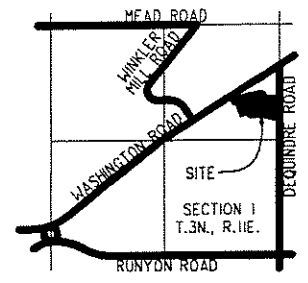
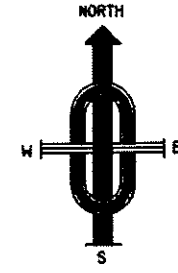
DATE 10-11-05	SCALE 1"=50'
DRAWN BY AP	SHEET 1 OF 7
CHECKED BY JCW	DRAWING PS-05-801

**PRELIMINARY SITE PLAN**

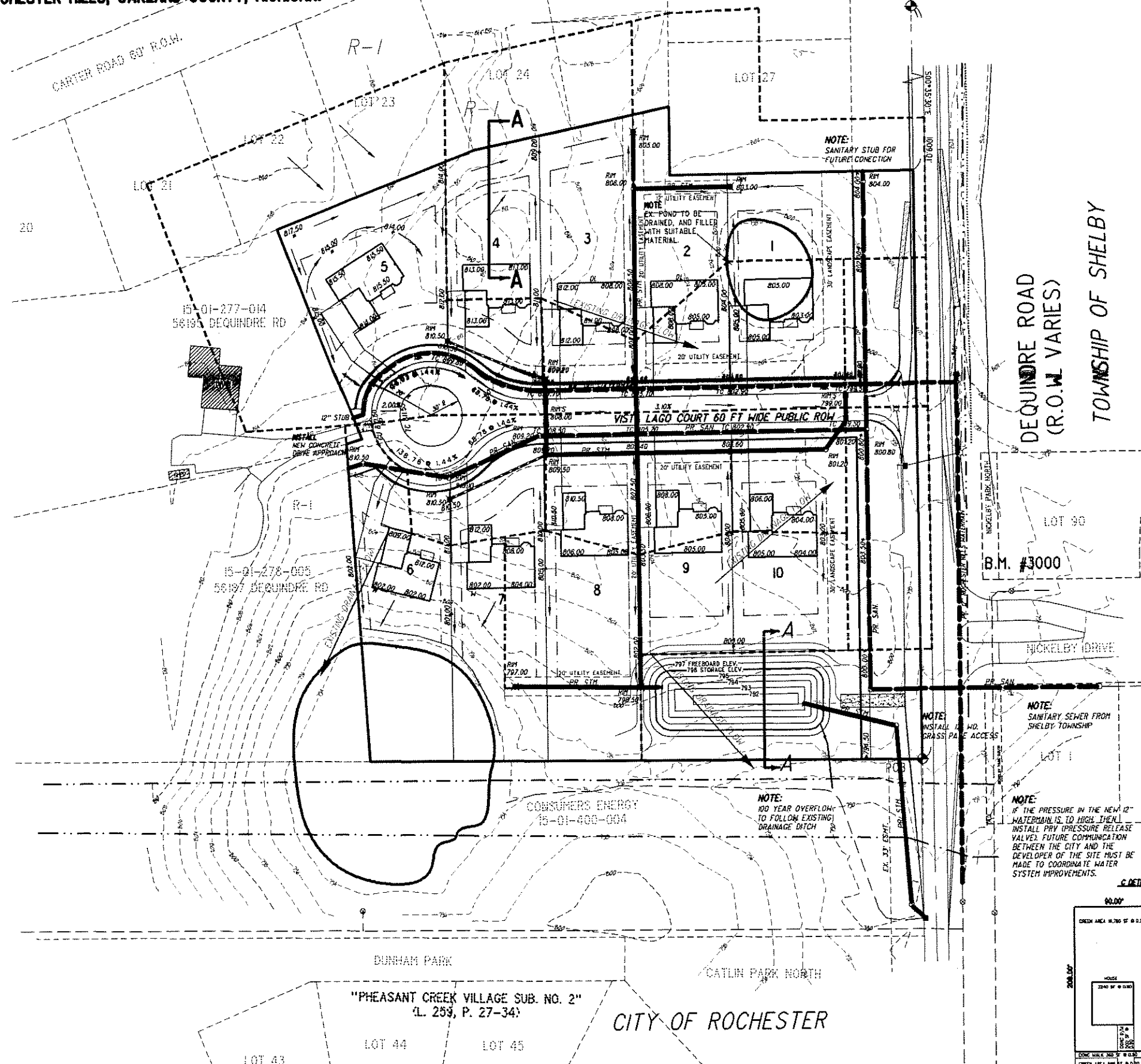
CITY FILE #05-042

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LOCATION MAP  
SCALE 1" = 2000'



**ACTUAL POND SIZE**

VOLUME =  $H/3(A1+Ab+(A1+Ab)^{0.5})$   
 A1 = AREA AT TOP SURFACE  
 Ab = AREA AT BOTTOM SURFACE  
 H = HEIGHT

**STORAGE PROVIDED**

ELEVATION	AREA	VOLUME
792.00	906	1576
793.00	2591	3486
794.00	4665	5486
795.00	6379	7220
796.00	8920	7720

**DETENTION CALCULATIONS**

REQUIRED STORAGE PER O.C.D.C. STANDARDS: (10 YEAR STORM)

TOTAL AREA: 7.32 Ac.  
 DEVELOPED AREA: 6.29 Ac. C = 0.37

EQUIVALENT AREA:  $(6.29 \text{ Ac.}) \times (0.37) = 2.32 \text{ Ac.}$

$Q_0$  restricted =  $(6.29 \text{ Ac.}) \times (0.20 \text{ CFS/Ac.}) = 1.258 \text{ CFS}$   
 $Q_0$  unrestricted =  $C \times A = 0.24 \times (3.89) \times (0.54) = 0.54 \text{ CFS}$

$Q_0 = Q_0$  restricted -  $Q_0$  unrestricted =  $1.258 - 0.54 = 0.718 \text{ CFS}$

$Q_0 = (0.718 \text{ CFS}) / (3.1817 \text{ Ac.}) = 0.188$   
 $T = -25 + [6.5625 / (0.188)^2]^{0.5} = 161.83 \text{ MIN}$   
 $V_0 = 10.400 \times (161.83 \text{ MIN}) = 1683.83 \text{ MIN}$   
 $V_1 = 1.878 \times 10.400 \times 161.83 \text{ MIN} = 3136.83 \text{ CF}$

Storage Elev 792.00 to 796.00 = 16,370 cf

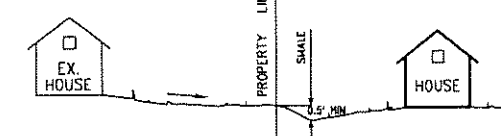
**OUTLET CALCULATIONS:**

$Q_0 = 0.718 \text{ CFS}$

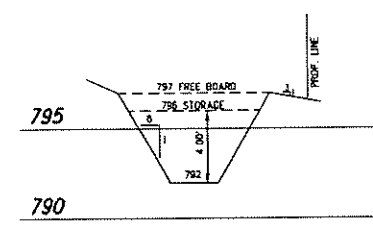
ASSUME A 3" ORIFICE  
 A = 0.050 SF  
 C = 0.62  
 H = 4.00 FT  
 $Q = (0.050 \text{ SF}) \times (0.62) \times [2(32.2)(4.00 \text{ FT})]^{0.5} = 0.50 \text{ CFS}$

ALL PROPOSED GRADES WILL MATCH EX. ELEV. AT PROPERTY LINE WHERE GRADING ESMTS. ARE NOT OBTAINED.

PROTECTIVE SWALE TO BE BUILT TO CARRY DRAINAGE LATERALLY IN THE DIRECTION OF DRAINAGE, TO THE CATCH BASINS.



DETAIL REAR YARD SWALE SECTION A-A



NOTE: NOT TO BE USED AS CONSTRUCTION DRAWINGS.

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 REV: 02-04-06 PER CITY (JLZ)

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 PART OF NORTHEAST 1/4 OF SECTION 1, T.3N., R.1E., ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

DATE 10-11-05 SCALE 1"=50'  
 DRAWN BY AP SHEET 2 OF 7  
 CHECKED BY JCW DRAWING PS-05-801

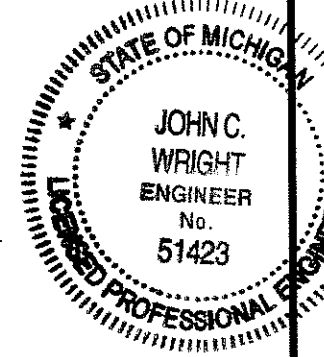
**C DETERMINATION**

00.00'	4765.0-20 = 2932
00.00'	3240.0-0 = 2616
00.00'	500.0-90 = 430
380.0-90 = 324	
508.0-20 = 18	
972.0-90 = 875	
20,420	7,630
WEIGHTED C FACTOR = 7433/20,420	
C = 0.37	

**LEGEND**

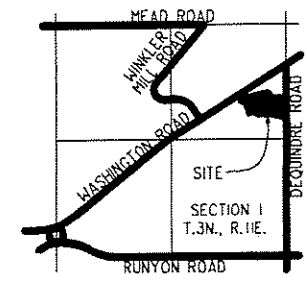
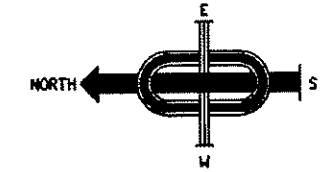
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- MANHOLE w/ R.Y.C.B. COVER
- STANDARD MANHOLE
- 3' DIA. R.Y.C.B.
- 2' DIA. R.Y.C.B.
- MANHOLE w/ PAVT. C.B. COVER - 2' SUMP
- STD. PAVT. CATCH BASIN - 2' SUMP
- STD. PAVT. INLET - 2' SUMP
- GATE VALVE IN WELL
- EXISTING HYDRANT
- PROPOSED HYDRANT

CITY FILE #05-042

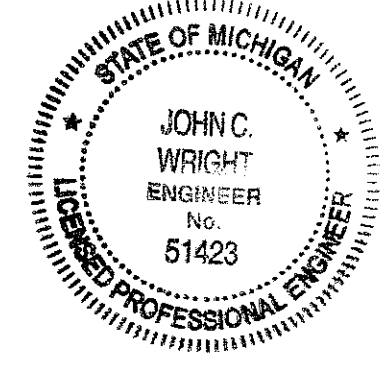
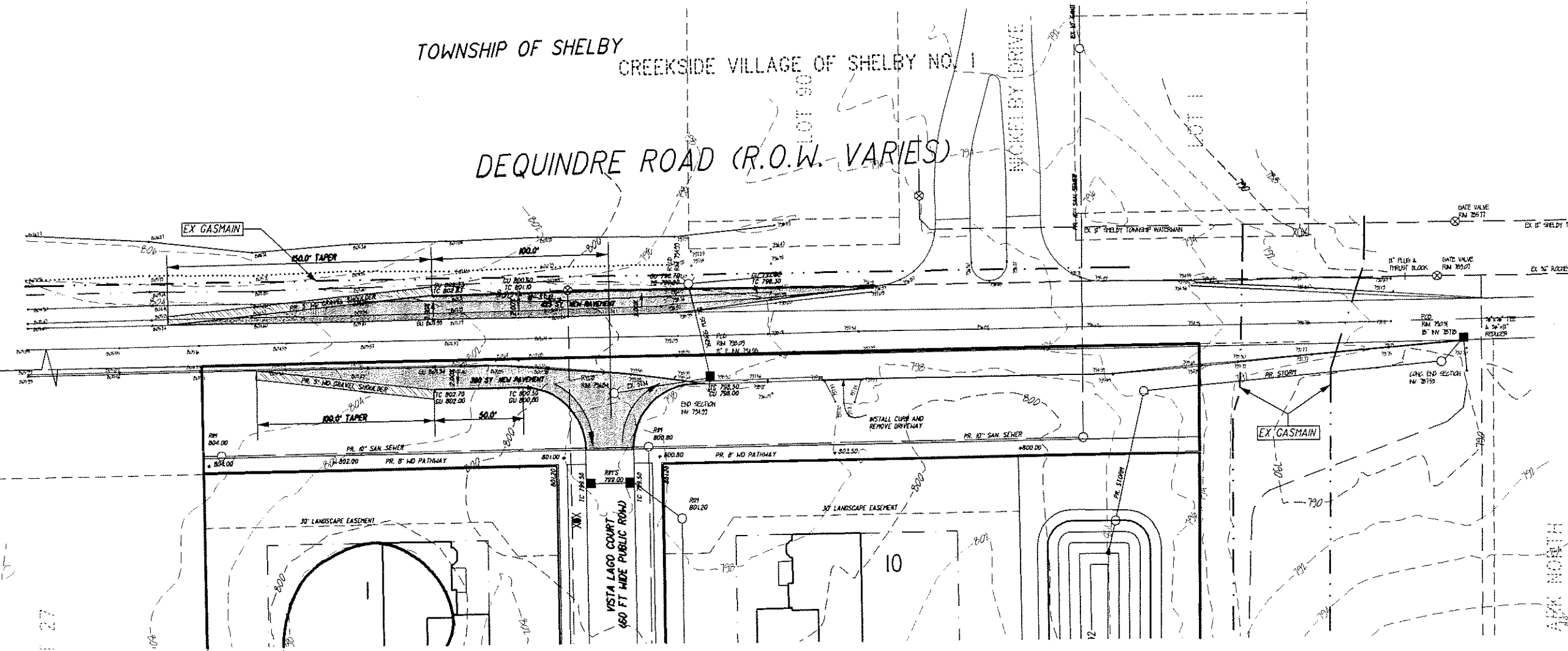


# LITTLE WINKLER ESTATES"

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R.1E., ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN.

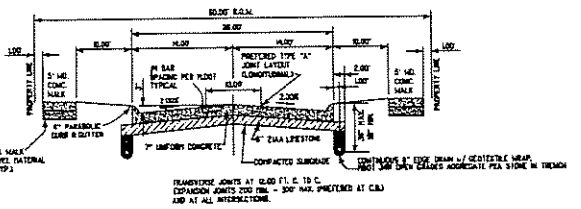


**LOCATION MAP**  
SCALE 1" = 2000'



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TYPICAL SECTION THROUGH  
28 FT. PAVEMENT  
(NOT TO SCALE)

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SITE CONDOMINIUM**  
PART OF NORTHWEST 1/4 OF  
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ROCHESTER HILLS,  
OAKLAND COUNTY, MICHIGAN

DATE 10-11-05 SCALE 1"=30'  
DRAWN BY AP SHEET 3 OF 7  
CHECKED BY JCW DRAWING PS-05-801

CITY FILE #05-042

DEQUINDRE ROAD PLAN

# LITTLE WINKLER ESTATES"

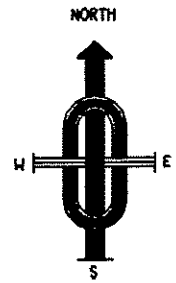
PART OF THE NORTHEAST 1/4 OF SECTION 1  
T.3N.,R.1E., ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN.

## TOTAL TREES SURVEYED

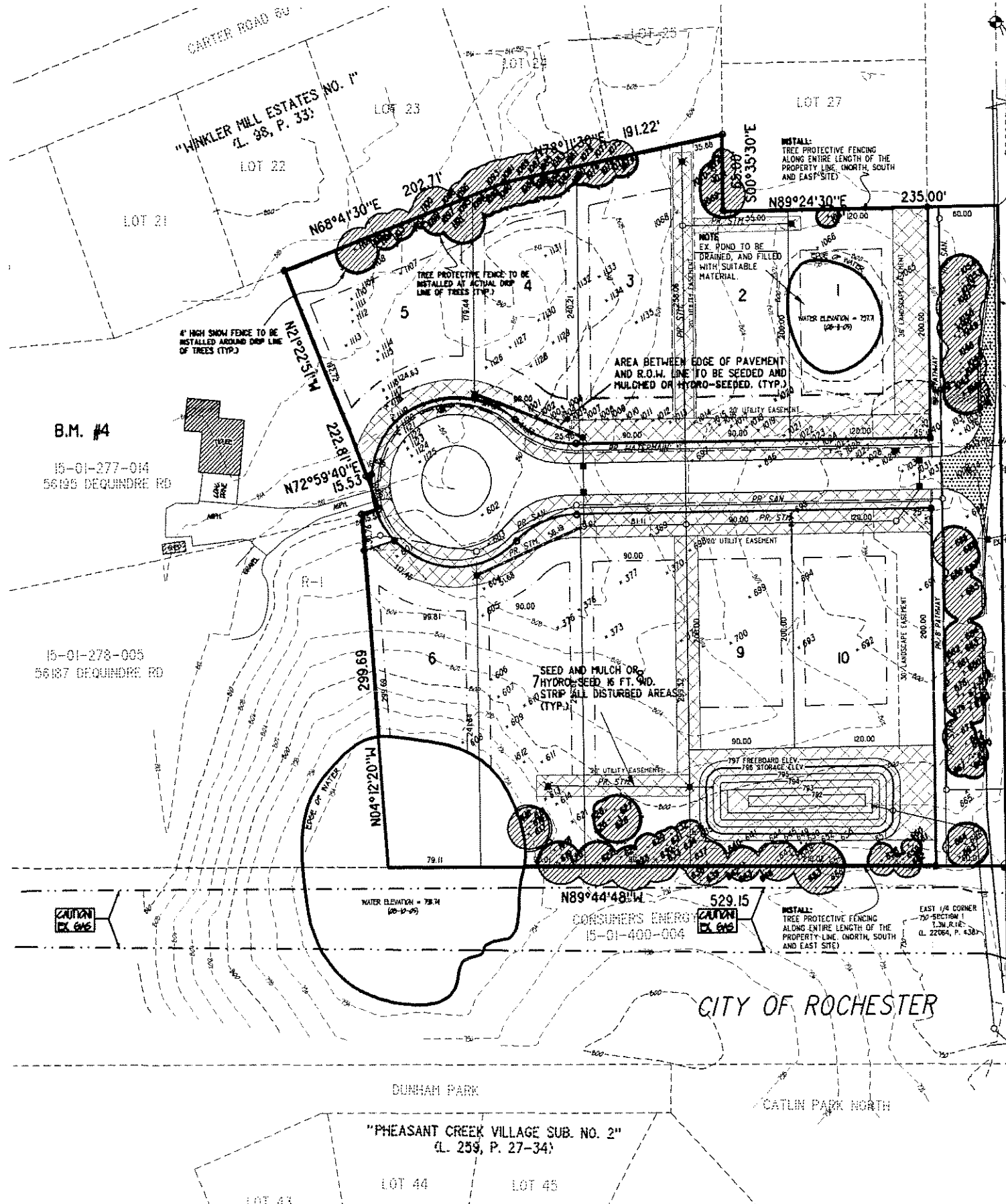
TREES TO BE SURVEYED  
MINUS ASH TREES  
MINUS ROW TREES  
TOTAL REGULATED TREES ONSITE  
MINUS TREE TO BE REMOVED (ONSITE)  
PROPOSED TREES TO BE SAVED (BOLD)

233  
-3  
-69  
18  
=107  
74

74 REGULATED TREES PRESERVED ONSITE EQUALS 40%  
107 TREE REPLACEMENT CREDITS REQUIRED



LOCATION MAP  
NOT TO SCALE

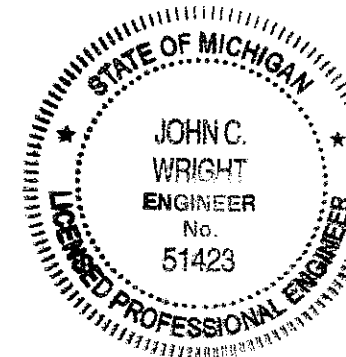


## NOTES:

- INDIVIDUAL TREES TO REMAIN WILL BE IDENTIFIED BY YELLOW FLAGGING AROUND THE BASE OF THE TREE AND WILL BE PROTECTED BY SNOW FENCE AT THE DRIP LINE.
- GROUPS OF TREES SHALL BE PROTECTED BY SNOW FENCING PLACED AROUND THE ENTIRE GROUP OF TREES IN LIEU OF INDIVIDUAL TREES.
- THE INDIVIDUAL BUILDER SHALL BE RESPONSIBLE FOR PROTECTING TREES TO BE SAVED ON THE LOT DURING HOME CONSTRUCTION.
- PROPOSED TOP OF CURB ELEVATIONS WILL BE DESIGNED TO MATCH EXISTING GROUND AS CLOSE AS POSSIBLE. PROPOSED FINISH GRADE OF HOUSES WILL BE APPROXIMATELY 2 TO 3 FEET ABOVE EXISTING GROUND.
- TREE PROTECTIVE FENCING IS REQUIRED TO BE PLACED AT THE DRIP LINE OF TREES LOCATED ON ADJACENT PROPERTIES BEFORE ANY ACTIVITY OCCURS ON THE SITE.
- TREE PROTECTION FENCING WILL NEED TO BE INSTALLED, INSPECTED AND APPROVED BY THE CITY OF ROCHESTER HILLS LANDSCAPE ARCHITECT.
- MONIES WILL BE DEPOSITED WITH THE CITY TO PERMIT THE INSTALLATION OF ONE STREET TREE PER UNIT.

## 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 1-248-858-6860 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 1-248-858-6860 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 1-248-858-6860 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 1-248-858-6860 to schedule this inspection.
- The Tree Conservation Ordinance prohibits any construction or development activities within the drip line of and regulated trees not approved for removal, including but not limited to land clearing, grubbing, trenching, grading or filling, no person shall place any debris, 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 devices or wires/cables/wires/ropes to an existing tree designated to be preserved.
- All utility service requests must include notification to the installer that protected trees must be protected defined here in.
- All trenching shall occur outside the TPF.
- Stakes shall be routed to avoid the area within the drip line of the any tree designated for preservation. Stakes shall be constructed so as not to direct any additional flow into the drip line of 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 an in for one 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 defined here in.
- The TPF shall consist of a 4 foot high orange snow fencing to be installed around the drip line of all trees 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.



NOTE:  
EVERY EFFORT MUST BE MADE TO PUT ALL REPLACEMENT TREES ON THE SITE. IF ALL REPLACEMENT TREES CANNOT BE PLACED ONSITE PAYMENT INTO CITY TREE FUND WILL BE NECESSARY.

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 roadway. Evergreen and ornamental trees must be planted at least 10' from the edge of the public roadway. 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 with a public roadway 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 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 possibly replace, any such trees.

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NOTE:  
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REV: 09-29-06 PER CITY (AP)  
REV: 08-21-06 PER CITY (AP)  
REV: 03-12-06 PER CITY (AP)  
REV: 03-22-06 PER CITY (AP)  
REV: 02-04-06 PER CITY (JLZ)

**J ASSOCIATES, INC.**  
Civil Engineering and Surveying

44444 Mound Road, Suite 100  
Sterling Heights, Michigan 48314  
Telephone (586) 725-6310  
Fax (586) 725-0042

**MCS ASSOCIATES, INC.**  
LITTLE WINKLER ESTATES  
SITE CONDOMINIUM  
PART OF NORTHEAST 1/4 OF  
SECTION 1, T.3N., R.1E.,  
ROCHESTER HILLS,  
OAKLAND COUNTY, MICHIGAN

DATE 10-11-05 SCALE 1" = 50'  
DRAWN BY AP SHEET 4 OF 7  
CHECKED BY JCW DRAWING PS-05-801

TREE PRESERVATION PLAN

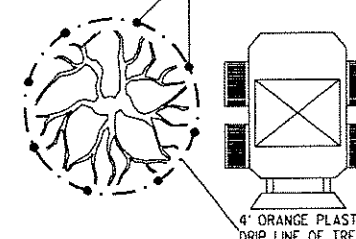
4" HIGH SNOW FENCE TO BE INSTALLED AROUND DRIP LINE OF TREES TO BE SAVED PRIOR TO ANY LAND CLEARING OR CONSTRUCTION

NO CUTTING, FILLING OR TRESPASSING SHALL OCCUR INSIDE FENCED AREAS WITHOUT APPROVAL

DRIP LINE

4" ORANGE PLASTIC OR WOOD FENCE AT DRIP LINE OF TREE

6" METAL T-BAR POSTS EVERY 8' O.C. INSTALL POSTS 2" IN TO GROUND



TREE PROTECTION DETAIL CITY FILE #05-042

NOTE:  
BOLD TREES TO BE SAVED.

NOTE:  
SEED/MULCH ALL DISTURBED AREAS

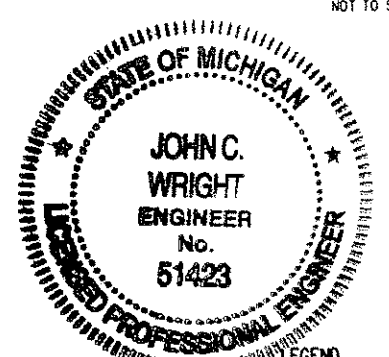
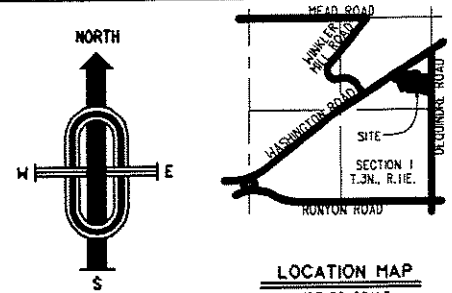
SEEDING INFORMATION:  
PLANTURE AREA 6,725 sq  
RATE 2.25 \$/sq  
COST \$15,134

CITY OF ROCHESTER



# "LITTLE WINKLER ESTATES"

PART OF THE NW 1/4 OF SECTION 1,  
T. 3N., R. 11E., ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN.



### CONTROL POINTS: $\Delta$

NUMBER	NORTHING	EASTING	ELEVATION
2	9956.9823	10054.4375	791.91
3	10367.9857	9696.4289	805.13
4	10501.3467	9708.3611	806.02
5	10141.5179	9626.1882	802.02
6	10298.4784	9376.4394	812.02
7	10268.7364	9891.6424	797.77
8	9929.5390	9643.9927	797.05
9	10589.9597	9829.6859	804.66
10	10641.1714	9693.4401	806.68
11	10587.6770	9829.7964	813.87
12	10294.1324	10028.7666	798.27
612	10088.8124	10083.2349	794.89

### BENCHMARKS:

NUMBER	NORTHING	EASTING	ELEVATION
4	-----	-----	820.68
3000	10194.9603	10045.0135	797.02
3308	10346.3889	9570.15584	811.72

**PRIMARY BENCHMARK:**  
MAG NAIL ON THE NORTHWEST FACE OF A UTILITY POLE

#### BENCHMARK DESCRIPTIONS:

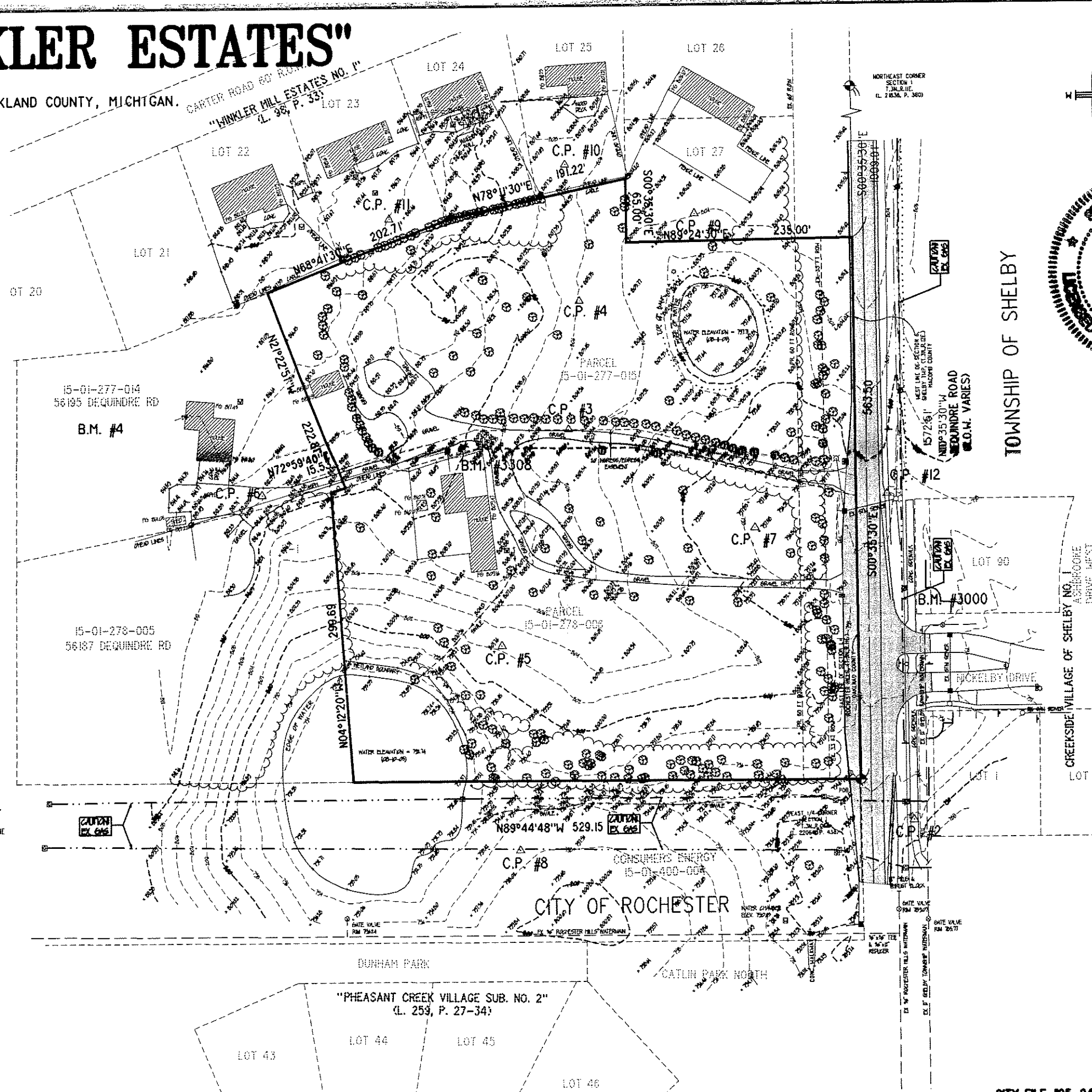
3000 MAG. NAIL IN WEST FACE OF UTILITY POLE LOCATED  $\pm 35'$  EAST OF THE CENTERLINE OF DEQUINDRE AND  $\pm 195'$  NORTH OF THE EAST 1/4 CORNER OF SECTION 1, T.3N., R.11E. (L.C.R.C. L. 1631, P.728).

3308 MAG. NAIL IN NORTH FACE OF UTILITY POLE LOCATED  $\pm 120'$  EAST OF THE WEST PROPERTY LINE AND  $240'$  SOUTH OF THE NORTH PROPERTY LINE.

#### LEGAL DESCRIPTION

Part of the NE 1/4 of Section 1, T.3N., R.11E., Rochester Hills, Oakland County, Michigan, being more particularly described as follows:  
Beginning at the East 1/4 corner of Section 1; thence N89°44'48"W 529.15 feet; thence N04°12'20"W 299.69 feet; thence N72°59'40"E 15.53 feet; thence N2°22'51"W 222.81 feet; thence N68°47'30"E 202.71 feet; thence N78°11'30"E 191.22 feet; thence S00°35'30"E 85.00 feet; thence N89°24'30"E 235.00 feet to the East line of Section 1, Rochester Hills, being the Oakland County line, and the Centerline of Dequindre Road (R.O.W. varies); thence S00°35'30"E 563.50 feet along said line to the Point of Beginning.  
Containing 318,845 square feet  $\approx$  7.320 acres (Gross).  
Containing 285,063 square feet  $\approx$  6.544 acres (Net), more or less.

Subject to the rights of the public and any governmental unit in any part thereof taken, used or deemed for street, road or highway purposes.



- #### LEGEND
- $\Delta$  CONTROL POINT
  - $\otimes$  FIRE HYDRANT
  - $\odot$  GATE VALVE
  - $\circ$  MANHOLE - STM OR SAN AS INDICATED
  - $\blacksquare$  PAVEMENT CATCH BASIN
  - $\square$  REAR YARD CATCH BASIN
  - $\square$  BAR MARKER
  - $\square$  PED
  - $\odot$  UTILITY POLE
  - $\odot$  GUY POLE
  - $\odot$  LIGHT POLE
  - $\square$  SIGN
  - $\square$  MAIL BOX
  - TOP OF BANK
  - CL OF DITCH
  - EX. STORM SEWER
  - EX. SANITARY SEWER
  - EX. WATERMAIN
  - FENCE
  - GAS MAIN
  - O'HEAD LINES
  - EDGE OF TREE LINE
  - SWALE

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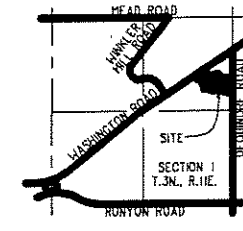
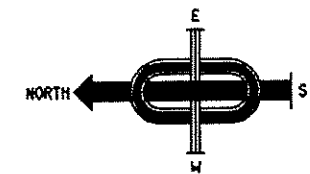
**FORMERLY MCS ASSOCIATES, INC.**

**LITTLE WINKLER ESTATES**  
SITE CONDOMINIUM  
PART OF NORTHWEST 1/4 OF SECTION 1, T.3N., R.11E., ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

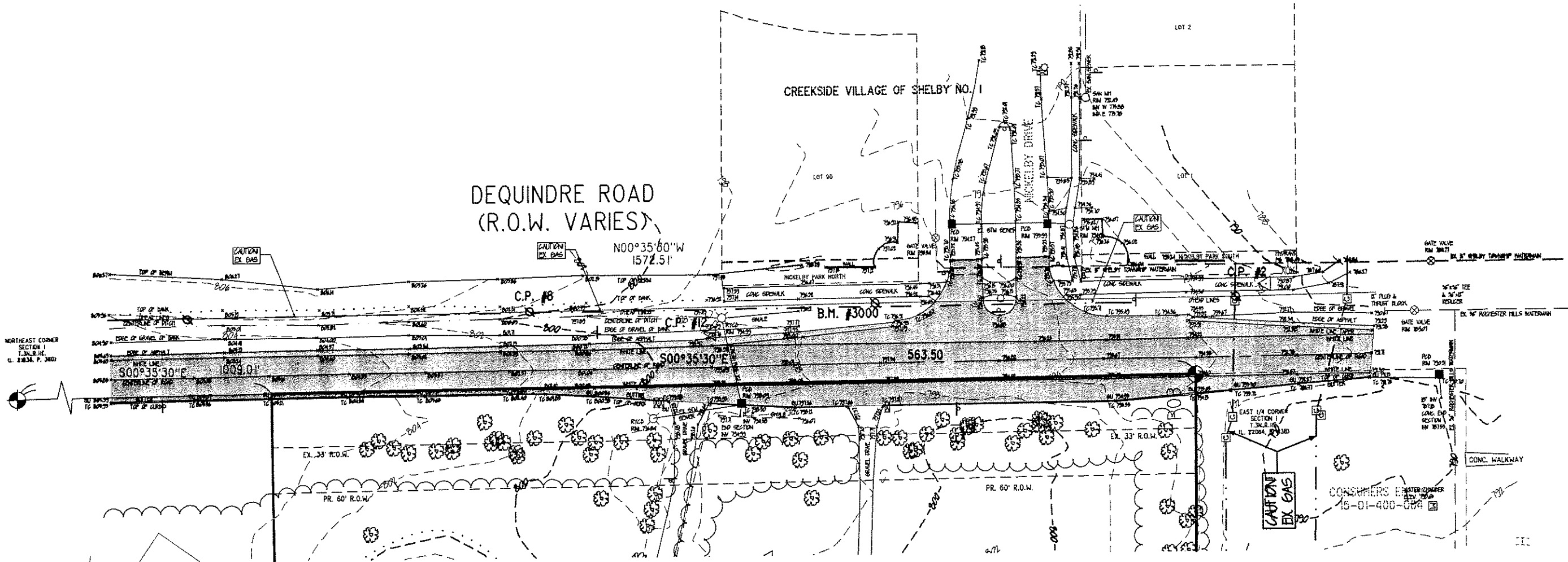
DATE 10-11-05 SCALE 1"=50'  
DRAWN BY AP SHEET 6 OF 7  
CHECKED BY JCW DRAWING PS-05-801

**EXISTING CONDITIONS**

CITY FILE #05-042



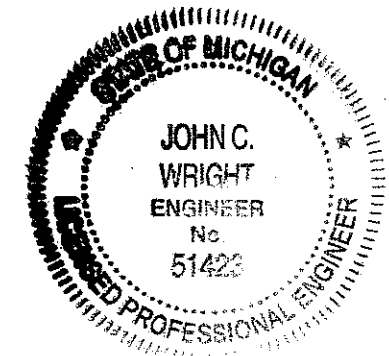
LOCATION MAP  
NOT TO SCALE



NORTHEAST CORNER  
SECTION 1  
T.3N. R.1E.  
U. 2183A P. 360



NOTE:  
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*Civil Engineering and Surveying*

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Fax (586) 725-0042

**FORMERLY MGS ASSOCIATES, INC.**

LITTLE WINKLER ESTATES  
SITE CONDOMINIUM  
PART OF NORTHWEST 1/4 OF  
SECTION 1, T.3N. R.1E.  
ROCHESTER HILLS  
OAKLAND COUNTY, MICHIGAN

DATE 10-11-05	SCALE 1"=50'
DRAWN BY AP	SHEET 7 OF 7
CHECKED BY JCW	DRAWING PS-05-801

CITY FILE #05-042

DEQUINDRE ROAD TOPO

developer:  
**LITTLE WINKLER L.L.C.**  
 39880 Garfield  
 Clinton Township, Michigan 48038

landscape plan for:  
**"Little Winkler Estates" - a planned residential community**  
 City of Rochester Hills, Michigan

**note:**  
 unless noted otherwise, numerical values on landscape quantities specified on plan take precedence over graphic representation.

scale: 0' 20' 40' 80' 120'  
 1" = 40'-0"

("Little Winkler Estates") sht. L - 1 of 5  
 REV DATE 4-25-2008 REV JOB NO. L5-08-D14-02A DATE 6-11-2008  
 REV JOB NO. L5-08-D14-02B DATE 6-16-2008

**IMPORTANT: ALL TREES ON ADJACENT PROPERTIES MUST BE PROTECTED, HENCE THE TREE PROTECTIVE FENCING MAY BE PLACED ALONG THE ACTUAL PROPERTY LINE IF THE BRANCHES OF THE TREES ON THE ADJACENT PROPERTIES DO NOT OVERHANG ONTO THE SITE BEING DEVELOPED. IF THE BRANCHES OVERHANG ONTO THE AREA OF THE SITE BEING DEVELOPED THE TREE PROTECTIVE FENCING MUST BE PLACED AT THE ACTUAL DRIP LINES OF THESE TREES. IT SHOULD ALSO BE NOTED THAT THE SILT FENCING MUST BE PLACED ON THE DEVELOPMENT SIDE OF THE TREE PROTECTIVE FENCING. THE SILT FENCING MAY NOT BE PLACED BETWEEN THE TREES BEING PRESERVED AND THE TREE PROTECTIVE FENCING. IF ANY REGULATED TREES ARE DAMAGED ON THE ADJACENT PROPERTIES THE DAMAGED TREE WILL BE EITHER REPLACED ON THE PROPERTY OF DAMAGE ON AN INCH FOR INCH BASIS OR A FINE IN A SUM OF \$122.00 PER CALIPER INCH WILL BE ISSUED AGAINST THE DEVELOPMENT. THIS FINE WILL BE DUE PRIOR TO THE BUILDING PERMITS BEING ISSUED. IF YOU HAVE ANY QUESTIONS OR NEED ADDITIONAL INFORMATION CALL THE CITY'S LANDSCAPE ARCHITECT AT 248-656-4660.**

- TREE PROTECTIVE FENCING TO BE PROVIDED AROUND THE ENTIRE LENGTH OF THE NORTH, SOUTH & EAST PROPERTY LINE.
- 5' WIDE CONC. PUBLIC WALK, TYP.
- LAWN AREAS TO RECEIVE IRRIGATION & SOD ON FINISH GRADES. PROVIDE POSITIVE DRAINAGE. SEE ENGINEERING PLANS FOR GRADES.
- MAINTAIN SPARTAN JUNIPER AS A 'KNIT' 6' HIGH TRIMMED HEDGE.
- HATCHING DENOTES EXISTING TREES AND VEGETATION TO BE RETAINED. SEE TREE SURVEY FOR DETAILS.
- ALL TREES OR SHRUBS TO BE PLANTED NO CLOSER 5' MIN. DISTANCE FROM PUBLIC PATHWAY TYP.
- MAINTAIN TAXUS YENS AS A 'KNIT' 30" HIGH TRIMMED HEDGE.
- ENTRY MONUMENT-FINAL LOCATION, SIZE, MATERIAL, METHOD OF CONSTRUCTION & DETAILS PER CITY/TWP. REQUIREMENTS & APPROVALS. SEE SHT. L-3 AND 4 FOR DETAILS.
- LANDSCAPE EASEMENT LINE TYP.
- 25' VEHICULAR CLEARVIEW LINE
- NEW AND DISTURBED LAWN AREAS TO RECEIVE IRRIGATION & SOD ON FINISH GRADES. PROVIDE POSITIVE DRAINAGE. SEE ENGINEERING PLANS FOR GRADES.
- 4" ALUMINUM/STEEL EDGING OR EQUAL BETWEEN LANDSCAPE LANDSCAPE BEDS AND LAWN AREAS.
- MAINTAIN TAXUS YENS AS A 'KNIT' 30" HIGH TRIMMED HEDGE.
- ALL EVERGREENTREES OR ORNAMENTAL TREES TO BE PLANTED NO CLOSER 10' MIN. DISTANCE FROM PUBLIC PATHWAY TYP.
- ALL TREES OR SHRUBS TO BE PLANTED NO CLOSER 5' MIN. DISTANCE FROM PUBLIC PATHWAY TYP.
- MAINTAIN JUNIPER SPREADERS AS A 'KNIT' MASSING.
- TREE PROTECTIVE FENCING TO BE PROVIDED AROUND THE ENTIRE LENGTH OF THE NORTH, SOUTH & EAST PROPERTY LINE.

**CAUTION:**  
 THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS PLAN ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.

1 WORKING COPY  
 BEFORE YOU DIG  
 CALL MISS DIG  
 1-800-487-2121



**CALVIN HAAS & ASSOCIATES**  
 Registered Landscape Architect  
 39880 Garfield  
 Clinton Township, Michigan 48038  
 Tel: (248) 857-8118  
 Fax: (248) 857-8118

ORIGINAL



**tree replacement requirements:**

TOTAL NO. OF REGULATED TREES ON SITE	233
NO. OF EXISTING ASH TREES	-3
NO. OF EXISTING TREES IN R.O.M.	-44
TOTAL NO. OF REGULATED TREE	181
NO. OF REGULATED TREES TO BE REMOVED	107
NO. OF REGULATED TREES TO BE SAVED	74 (40%)
TOTAL NO. OF TREES REPLACEMENT CREDIT REQUIRED	107
TOTAL NO. OF TREE REPLACEMENT CREDITS PROVIDED	143
4 2" CALIPER SHADE TREE @ 1.0-CREDITS	2
4 3" CALIPER SHADE TREE @ 2-CREDITS	88
15 8' HIGH EVERGREEN TREES @ 1-CREDIT	15
15 12' HIGH EVERGREEN TREES @ 2-CREDITS	30
4 18' HIGH EVERGREEN TREES @ 2-CREDITS	8

**City of Rochester Hills landscape notes:**

- GENERAL NOTES:**
- PLANT MATERIALS TO BE INSTALLED ACCORDING TO THE CITY OF ROCHESTER HILLS AND THE AMERICAN ASSOCIATION OF NURSERMEN'S STANDARDS (LATEST EDITION).
  - ALL BUFFER, SCREEN AND PARKING ISLAND VEGETATION & TREES THAT ARE REQUIRED TO MEET CITY OF ROCHESTER HILLS ORDINANCE, SHALL BE GUARANTEED BY THE DEVELOPER FOR TWO FULL GROWING SEASONS.
  - PLANT MATERIALS TO BE OF PREMIUM QUALITY, NO. 1 GRADE, IN HEALTHY CONDITION, FREE OF PESTS, FREE OF DISEASES AND NORTHERN GROWN.
  - MULCH IS TO BE NATURAL COLORED, SHREDDED HARDWOOD BARK OF 3" DEPTH IN THE PLANTING BED.
  - CALL MISS DIG AT 1-800-482-1171 PRIOR TO ANY CONSTRUCTION.
  - DATE OF INTENDED LANDSCAPE INSTALLATION TO BE FALL 2007.
  - PRIOR APPROVAL IS REQUIRED TO PLANT ANY TREE OR SHRUB ON THE PUBLIC R.O.M. ALL TREES & SHRUBS MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF THE PUBLIC ROAD. SHADE TREES & SHRUBS MUST BE PLANTED AT LEAST 5' FROM THE EDGE OF PUBLIC WALKWAY. EVERGREEN & 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 STREET INTERSECTIONS OF ANY STREET R.O.M. LINES AT A DISTANCE ALONG EACH LINE OF 25' FROM THEIR POINT OF INTERSECTION. NO TREES OR SHRUBS MAY BE PLANTED WITHIN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY DRIVEWAY WITH A PUBLIC WALKWAY AT A DISTANCE ALONG EACH LINE OF 15' FROM THEIR POINT OF INTERSECTION. ALL TREES & SHRUBS MUST BE PLANTED AT LEAST 10' FROM ANY FIRE HYDRANT. SHADE AND EVERGREEN TREES MUST BE AT LEAST 15' AWAY FROM THE NEAREST OVERHEAD WIRE.

**DECIDUOUS & EVERGREEN TREE:**

- TREE SHALL BEAR 2" HIGHER TO FINISH GRADE AS IT BORE ORIGINALLY OR SLIGHTLY HIGHER THAN FINISH GRADE UP TO 6" ABOVE GRADE, IF DIRECTED BY LANDSCAPE ARCHITECT FOR HEAVY CLAY SOIL AREAS.
- DO NOT PRUNE TERMINAL LEADER. PRUNE ONLY DEAD OR BROKEN BRANCHES.
- REMOVE ALL TAGS, STRINGS, PLASTICS AND OTHER MATERIALS THAT ARE UNSIGHTLY AND COULD CAUSE GIRDLING.

**SHRUB:**

- SHRUB SHALL BEAR 1" HIGHER TO FINISH GRADE AS IT BORE ORIGINALLY OR SLIGHTLY HIGHER THAN FINISH GRADE UP TO 4" ABOVE GRADE, IF DIRECTED BY LANDSCAPE ARCHITECT FOR HEAVY CLAY SOIL AREAS.
- DO NOT PRUNE TERMINAL LEADER. PRUNE ONLY DEAD OR BROKEN BRANCHES.
- REMOVE ALL TAGS, STRINGS, PLASTICS AND OTHER MATERIALS THAT ARE UNSIGHTLY AND COULD CAUSE GIRDLING.

**PERENNIAL:**

- PERENNIALS TO BE PLANTED UP TO SAUCER AROUND TREE OR SHRUB IN THE AREA.

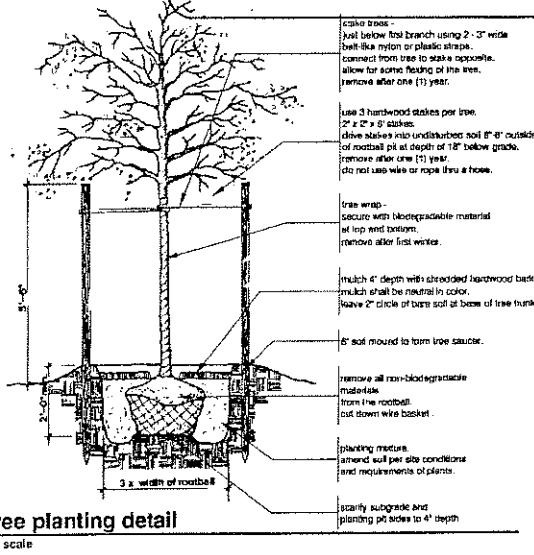
**TREE PROTECTION:**

- EITHER PLASTIC OR WOOD ORANGE SHOWN FENCING SHALL BE INSTALLED AT OR BEYOND THE DRIFLINE UNLESS MORE SUBSTANTIAL FENCING IS REQUIRED.
- STAKES SHALL BE METAL T-POLES SPACED NO FURTHER THAN 5' ON CENTER.
- FENCING SHALL NOT BE INSTALLED CLOSER TO THE TREE THAN THE DRIFLINE OF THOSE TREES TO BE SAVED. SPECIAL CIRCUMSTANCES SHALL BE REVIEWED BY THE CITY.
- FENCING SHALL BE ERECTED PRIOR TO CONSTRUCTION. THE CITY SHALL BE NOTIFIED ONCE THE FENCING IS INSTALLED FOR INSPECTION.
- UNDER NO CIRCUMSTANCES SHALL THE PROTECTIVE FENCING BE REMOVED WITHOUT PROPER APPROVAL FROM THE CITY.
- NO PERSON SHALL CONDUCT ANY ACTIVITY WITHIN THE AREAS PROPOSED TO REMAIN. THIS SHALL INCLUDE, BUT NOT LIMITED TO:
  - NO SOLVENTS OR CHEMICALS WITHIN THE PROTECTED AREAS.
  - NO BUILDING MATERIALS OR CONSTRUCTION EQUIPMENT WITHIN THE PROTECTED AREAS.
  - NO GRADE CHANGES, INCLUDING FILL, WITHIN THE PROTECTED AREAS.
  - NO REMOVAL OF VEGETATION FROM THE GROUND UP WITHOUT PERMISSION FROM THE PROPER REVIEWING AUTHORITY, INCLUDING THE WOODLANDS REVIEW BOARD.
  - ANY REQUIRED SWALES NEEDS TO BE DIRECTED AROUND THE PROTECTED AREAS. IN INSTANCES WHERE SWALES ARE APPROVED THRU A PROTECTED AREA, THE SWALES NEED TO BE HAND DUG. MACHINERY OF ANY KIND IS PROHIBITED.
- REGULATED WOODLANDS OR REGULATED TREES ADJACENT TO THE PROPERTY ARE ALSO REQUIRED TO BE PROTECTED WHETHER OR NOT THEY ARE SHOWN ON THE PLAN.

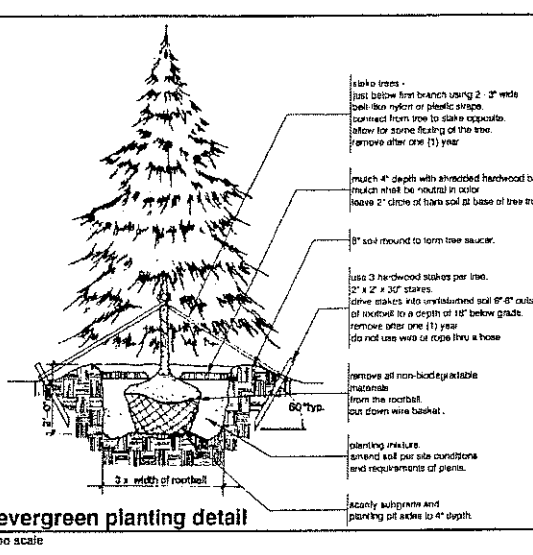
plant material list				cost estimate		
key	quant.	botanical name	common name	size	unit cost	total cost
LARGE CANOPY TREES AND SMALL FLOWERING TREES						
ZS	8	ZELKOVA S. VILLAGE GREEN	VILLAGE GREEN ZELKOVA	4" BB	\$1425.00	\$11400.00
LS	14	LIGULANBAR STRACZYCIWA	BREAST GUM	3" BB	\$325.00	\$4550.00
QB	4	QUERCUS BICOLOR	SHARP WHITE OAK	3" BB	\$825.00	\$3300.00
BS	4	BALUS SNOWDRIFT	SNOWDRIFT CRAB	5" BB	\$250.00	\$1000.00
MY	16	MAIUS VELVETOLI	VELVET MILLER CRAB	3" BB	\$225.00	\$3600.00
CC	2	CRATAEGUS CRIBRIGALLI NERMIS CRUSADER	CRUZAR HAWTHORN	2" - 2 1/2" BB	\$225.00	\$450.00
BF	8	BALUS FLORIBUNDA	JAPANESE FLOWERING CRAB	3" BB	\$250.00	\$2000.00
SHRUBS						
ET	10	FORSYTHIA INTERMEDIA	BORDER FORSYTHIA	5" - 3 1/2" BB	\$30.00	\$300.00
BB	12	EUONYMUS ACATUS COMPACTA	DWARF WINGED BURNING BUSH	2" - 2 1/2" BB	\$35.00	\$420.00
VM	18	VIBURNUM P.T. HARRISII	MARIAGE DOUBLEDICE VIBURNUM	3" - 3 1/2" BB	\$50.00	\$900.00
VHK	4	VIBURNUM X.B. MOHAWK	MOHAWK VIBURNUM	5" - 5 1/2" BB	\$25.00	\$100.00
VO	12	VIBURNUM OPULIS COMPACTUM	EUROPEAN CHAMBERY VIBURNUM	3" - 3 1/2" BB	\$45.00	\$540.00
LARGE & SMALL EVERGREEN TREES AND EVERGREEN SHRUBS						
TD	101	TAXUS X.H. WENSFORSIS	JAPANESE DENSE YEN	24" - 30" BB	\$50.00	\$5050.00
JT	18	JUNIPERUS S. YAPANSAPOLIA	YAPANS JUNIPER	24" - 30" BB	\$40.00	\$720.00
JH	34	JUNIPERUS HUGHES	HUGHES JUNIPER	24" - 30" BB	\$40.00	\$1360.00
JS	83	JUNIPERUS SPARTAN	SPARTAN JUNIPER	6" BB	\$10.00	\$830.00
FM	4	PSEUDOTSUGA HENZENI	DOUGLAS FIR	8" BB	\$800.00	\$3200.00
PM	2	PSEUDOTSUGA HENZENI	DOUGLAS FIR	12" BB	\$975.00	\$1950.00
PS	11	PICEA SLAUKA	WHITE SPRUCE	8" BB	\$300.00	\$3300.00
PL	13	PICEA SLAUKA	WHITE SPRUCE	12" BB	\$375.00	\$4875.00
PG	4	PICEA SLAUKA	WHITE SPRUCE	16" BB	\$475.00	\$1900.00
PK	8	PIRACANTHA ANDRTHPOLIA 'SHOZAN'	GNOZAM PIRACANTHA	8" BB	\$112.50	\$900.00
MISC						
		SOIL			\$2375.00	\$11875.00
		IRRIGATION			\$50.00	\$50.00
		TREE STAKING AND MULCH			\$25.00	\$125.00
		SEEDING				\$1575.00
				GRAND TOTAL:	\$75664.00	

**general landscape notes:**

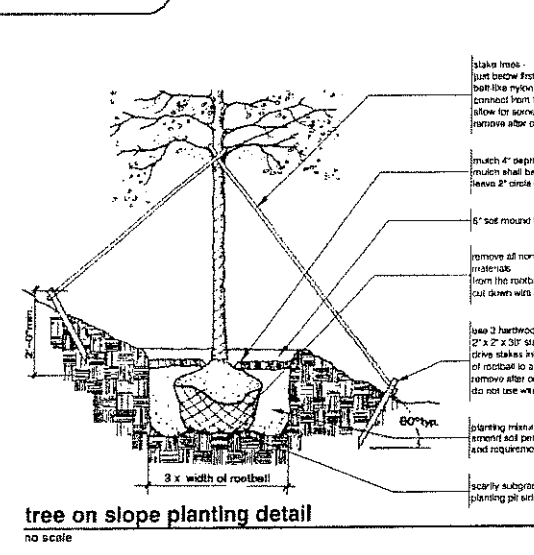
- ALL CONSTRUCTION AND PLANT MATERIAL LOCATION TO BE ADJUSTED ON SITE IF NECESSARY.
- ANY SUBSTITUTIONS OF PLANT MATERIAL OR ALTERATION IN PLANT SIZES OR SPECIFICATION TO BE APPROVED BY THE LANDSCAPE ARCHITECT AND CITY OF ROCHESTER HILLS LANDSCAPE ARCHITECT.
- ALL 3" TREES AND 8" EVERGREENS TO BE STAKED, GUYED AND WRAPPED AS DETAIL SHOWN ON PLAN.
- PLANT BEDS TO BE MULCHED AND DRESSED WITH 4" OF SHREDDED HARD BARK.
- EVERGREEN GROUPINGS TO VARY IN HEIGHT AS SPECIFIED IN PLANT MATERIAL LIST.
- DIS SHRUB PITS 1' LARGER THAN SHRUB ROOT BALLS AND TREE PITS 3x LARGER THAN ROOT BALL. BACK FILL WITH ONE PART TOP SOIL AND ONE PART SOIL FROM EXCAVATED PLANTING HOLE.
- REMOVE ALL TWIG & WIRE FROM TREE AND SHRUB EARTH BALLS, AND FROM TREE TRUNKS.
- LAWN TREES TO BE MULCHED WITH 4" WIDE MINIMUM OF 4" DEEP SHREDDED BARK RINGS OR APPROVED ALTERNATE DESIGN FOR TRUNK PROTECTION. MAINTAIN MULCH 2" AWAY FROM BASE OF TRUNK.
- PROVIDE SOIL FOR ALL NEW LAWN AREAS UNLESS NOTED OTHERWISE.
- INSTALLATION OF PLANT MATERIAL SHALL BE IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF NURSERMEN LANDSCAPE STANDARDS (LATEST EDITION).
- PLANT MATERIAL, ESPECIALLY EVERGREENS, TO BE PLANTED HIGHER THAN NORMAL (TREE BALL 2" AND SHRUB BALL 1" ABOVE GRADE) WHEN HEAVY SOIL CONDITIONS (CLAY, ETC.) PREVAIL.
- AT THE TIME OF SITE PREPARATION, LANDSCAPE ARCHITECT IS TO REVIEW ALL EXISTING VEGETATION, AND TAG MATERIALS TO BE SAVED OR RELOCATED.
- ALL PLANTING AREAS TO BE PREPARED WITH APPROPRIATE SOIL MIXTURES AND FERTILIZER BEFORE PLANT INSTALLATION.
- PLANT TREES AND SHRUBS NO CLOSER THAN THE FOLLOWING DISTANCES FROM:
  - WITHIN PUBLIC R.O.M.
    - ALL TREES AND SHRUBS \_\_\_\_\_ PRIOR CITY APPROVAL
  - PUBLIC ROAD
    - ALL TREES AND SHRUBS \_\_\_\_\_ 10 FT.
  - PUBLIC WALKWAY
    - SHADE TREES AND SHRUBS \_\_\_\_\_ 5 FT.
    - ORNAMENTAL AND EVERGREEN TREES \_\_\_\_\_ 10 FT.
  - 25' STREET R.O.M. CLEARVIEW TRIANGLE
    - ALL TREES AND SHRUBS \_\_\_\_\_ NOT PERMITTED WITHIN
  - 15' DRIVEWAY CLEARVIEW TRIANGLE
    - ALL TREES AND SHRUBS \_\_\_\_\_ NOT PERMITTED WITHIN
  - FIRE HYDRANT
    - ALL TREES AND SHRUBS \_\_\_\_\_ 10'
    - OVERHEAD WIRE
      - SHADE AND EVERGREEN TREES \_\_\_\_\_ 15'
- NO TREES OR EVERGREENS TO BE INSTALLED OVER ANY PROPOSED OR EXISTING UTILITY LINES AS SHOWN ON THE OVERALL LANDSCAPE PLAN. SEE ENGINEERING PLANS FOR EXACT LOCATION AND DETAILS.
- LAWN AND LANDSCAPE AREAS TO BE FULLY IRRIGATED WITH AUTOMATIC UNDERGROUND SYSTEMS (GREENBELT AND DEFENTION)
- FOR EXISTING TREE PROTECTION, 4'-0" HIGH SNOW FENCE TO BE ERECTED AROUND TREE DRIP LINES PRIOR TO LAND CLEARING AND SITE CONSTRUCTION, AND MAINTAINED THROUGHOUT SITE DEVELOPMENT PERIOD. NO CUTTING, FILLING OR TRESPASSING SHALL OCCUR INSIDE FENCED AREAS WITHOUT PRIOR CITY APPROVALS.
- ALL LANDSCAPING IS TO BE WARRANTED FOR A PERIOD OF 2 YEARS (NOT TWO GROWING SEASONS). THE WARRANTY PERIOD STARTS UPON APPROVAL OF THE LANDSCAPING BY THE CITY OF ROCHESTER HILLS LANDSCAPE ARCHITECT.



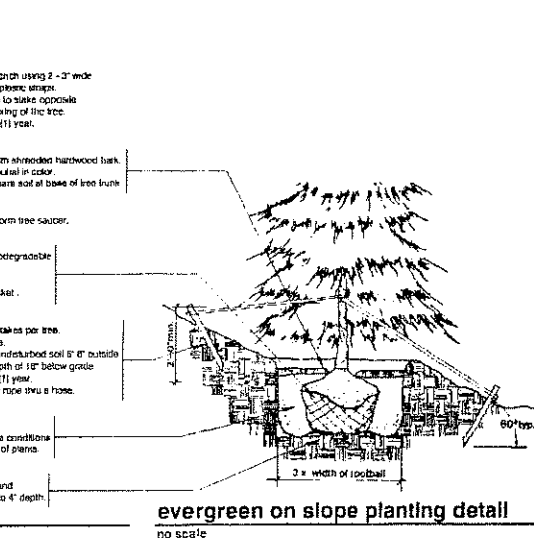
**tree planting detail**  
no scale



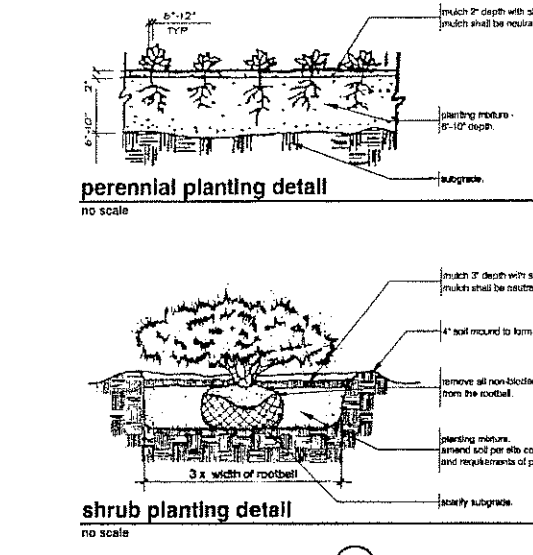
**evergreen planting detail**  
no scale



**tree on slope planting detail**  
no scale



**evergreen on slope planting detail**  
no scale

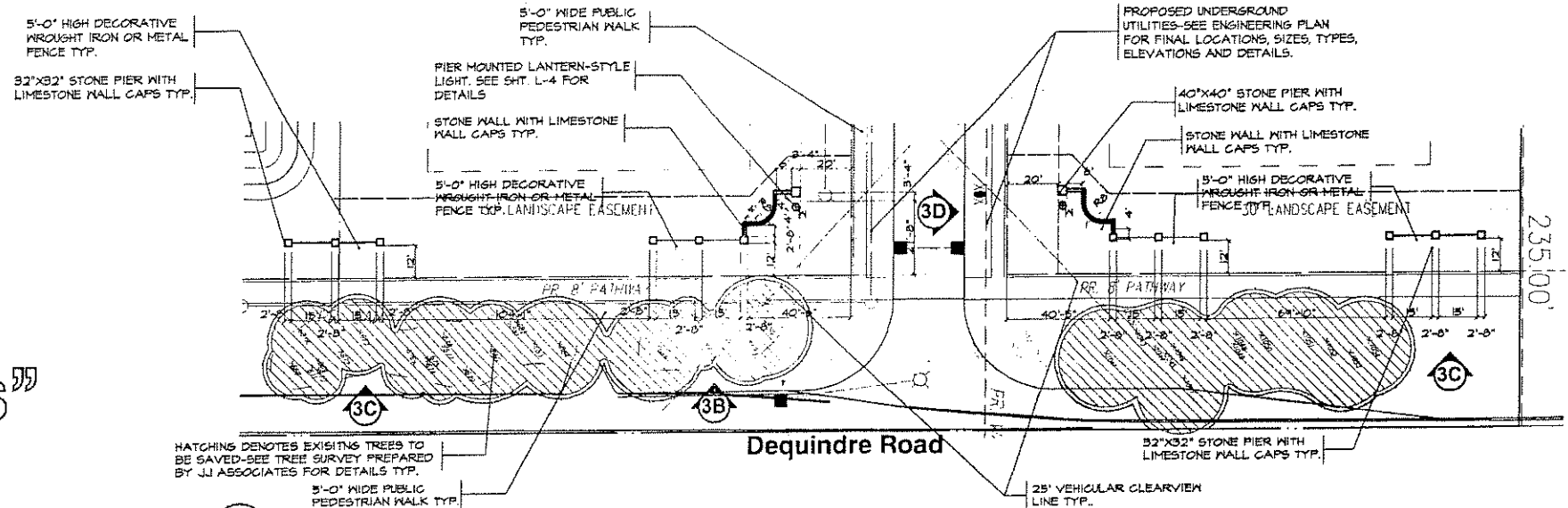


**shrub planting detail**  
no scale

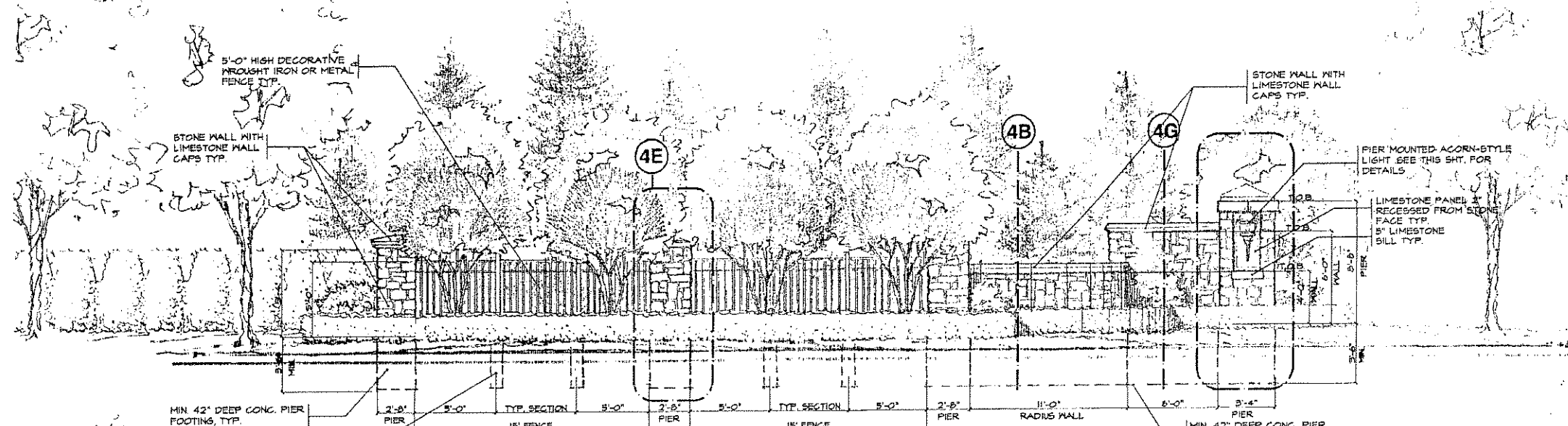
developer:  
**LITTLE WINKLER L.L.C.**

38880 Garfield  
Clinton Township, Michigan 48038  
Ph. (586)

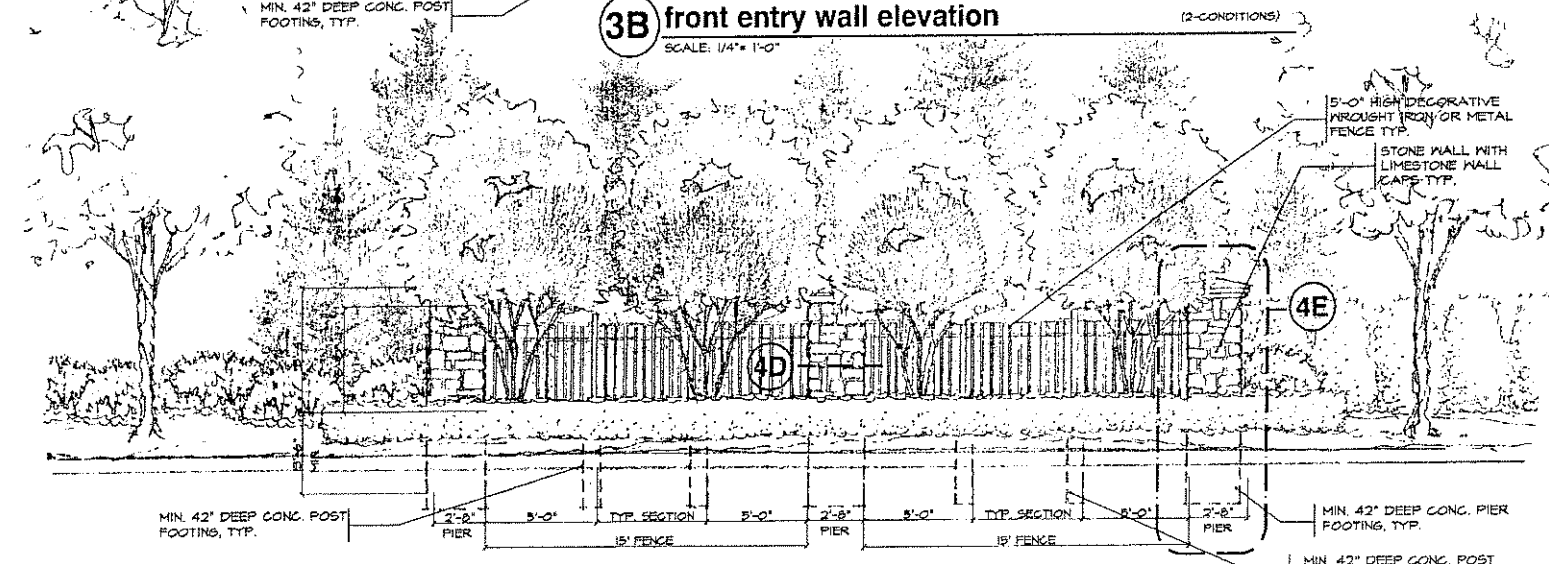
entry monument plan for:  
**"Little Winkler Estates"**  
City of Rochester Hills, Michigan



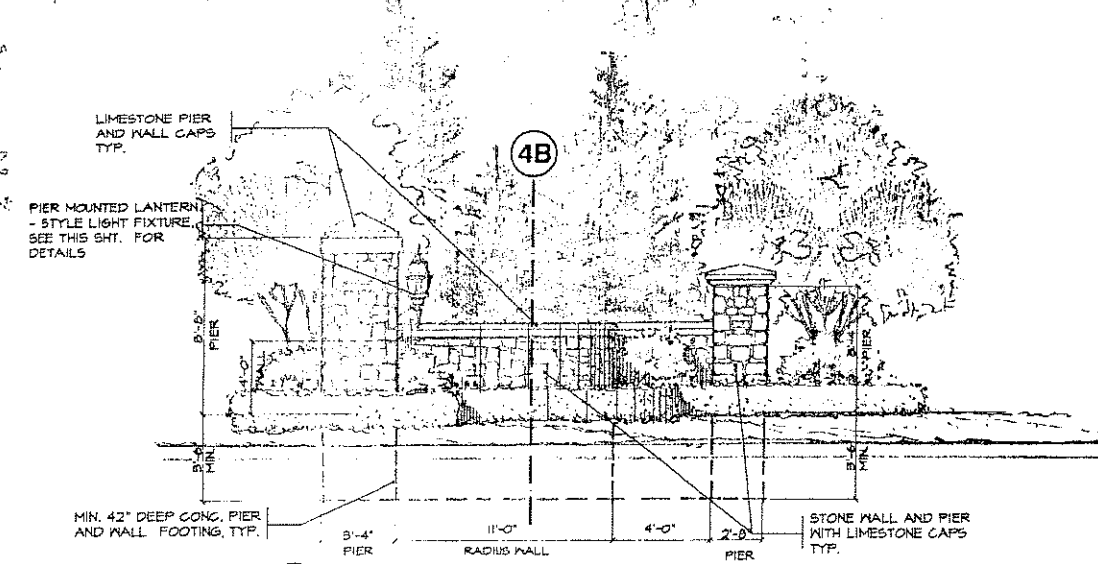
**3A** entry monument site plan  
SCALE: 1" = 30'-0"



**3B** front entry wall elevation  
SCALE: 1/4" = 1'-0"  
(2-CONDITIONS)



**3C** end pier/fence elevation  
SCALE: 1/4" = 1'-0"  
(2-CONDITIONS)



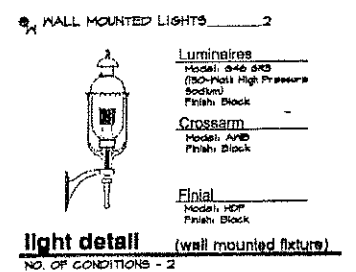
**3D** side entry wall elevation  
SCALE: 1/4" = 1'-0"  
(2-CONDITIONS)

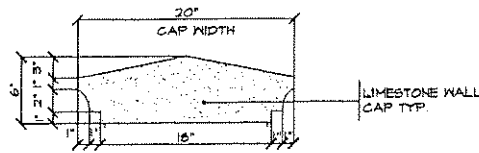
**entry wall notes:**

1. LOCATE AND STAKE ALL EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION. COORDINATE ANY ADJUSTMENTS OF WALLS WITH LANDSCAPE ARCHITECT.
2. ALL ENTRY WALL LIGHTINGS SHALL BE CONTROLLED WITH A "PHOTO-EYE" SWITCH. ALL LIGHTINGS SHALL BE SHIELDED FROM PUBLIC R.O.N.'S AND ADJACENT PROPERTIES.
3. SEE LANDSCAPE PLAN FOR PROPOSED PLANTINGS ADJACENT TO PROPOSED ENTRY SIGNAGE AND WALLS.
4. VERIFY SOIL BEARING CAPACITY PRIOR TO ENTRY SIGNAGE WALL, PIER AND WING WALL CONSTRUCTION. IF SOIL BEARING CAPACITY FALLS BELOW STANDARD REQUIREMENTS, CONSULT STRUCTURAL ENGINEER FOR RECOMMENDATION OF FINAL WALL/PIER FOOTING DESIGN.
5. ALL INFORMATION CONTAINED HEREIN IS SUBJECT TO APPROVAL AND PERMITS TO BE OBTAINED PRIOR TO CONSTRUCTION.

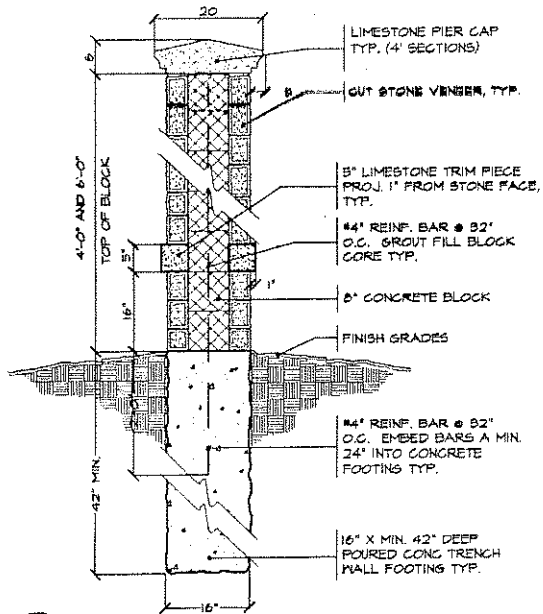
**lighting notes:**

1. DECORATIVE POLE AND WALL MOUNTED LIGHTS MANUFACTURED BY ANTIQUE STREET LAMPS, INC. OR EQUAL. P.O. BOX 150274, AUSTIN, TX 78715-0274 PH. (512) 245-9905
2. INSTALLATION PER MANUFACTURER SPECIFICATION & REQUIREMENTS AND PER CITY OF ROCHESTER HILLS STANDARDS.
3. SEE SITE AMENITIES REFERENCE PLAN ON THIS SHEET FOR PROPOSED LIGHT LOCATIONS. TOTAL NO. OF CONDITIONS:

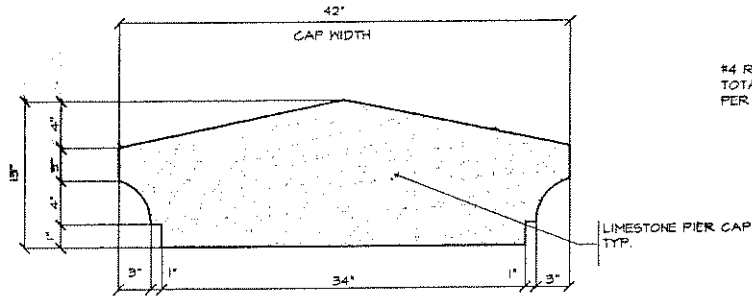




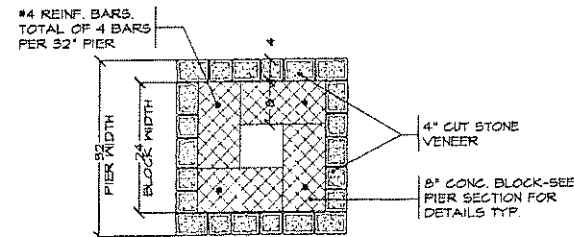
**4A wall cap section detail**  
SCALE: 1 1/2" = 1'-0" (4 SECTIONS)



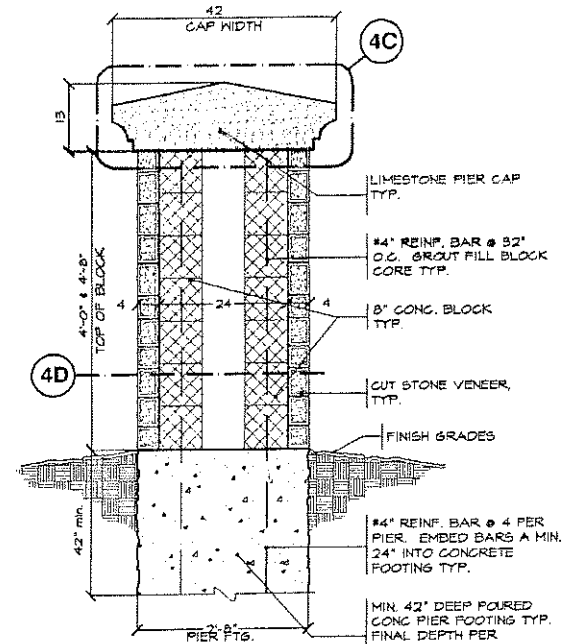
**4B wall section detail**  
SCALE: 3/4" = 1'-0"



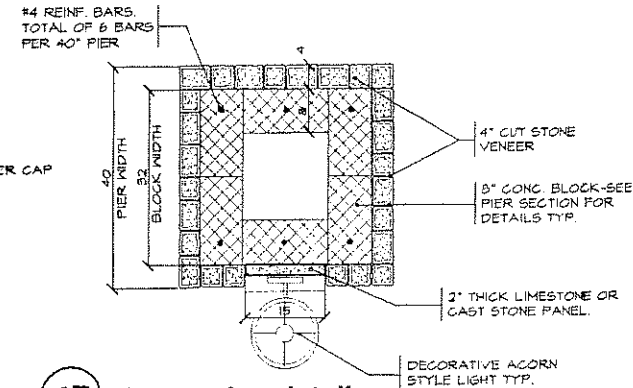
**4C pier cap detail**  
SCALE: 1 1/2" = 1'-0" (4 SECTIONS)



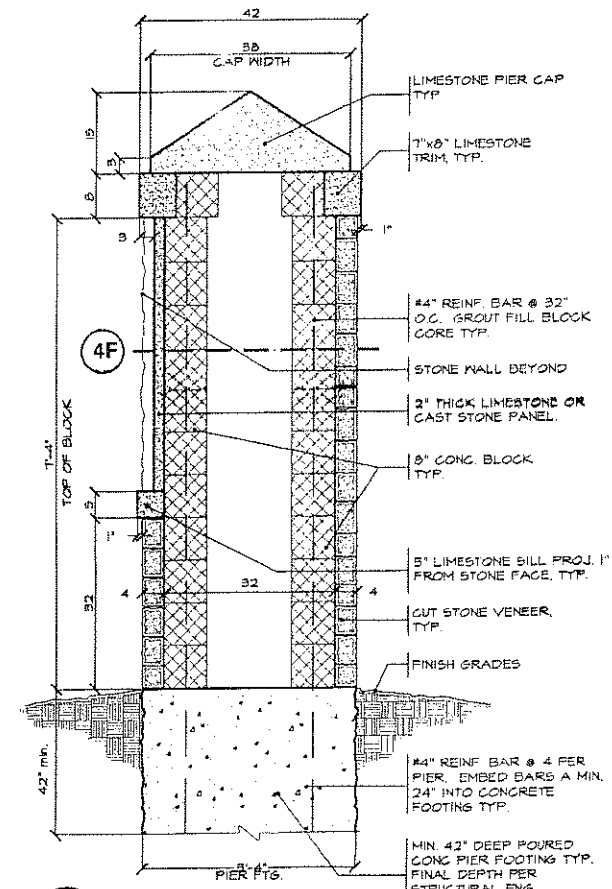
**4D pier section detail**  
SCALE: 3/4" = 1'-0"



**4E pier section detail**  
SCALE: 3/4" = 1'-0"

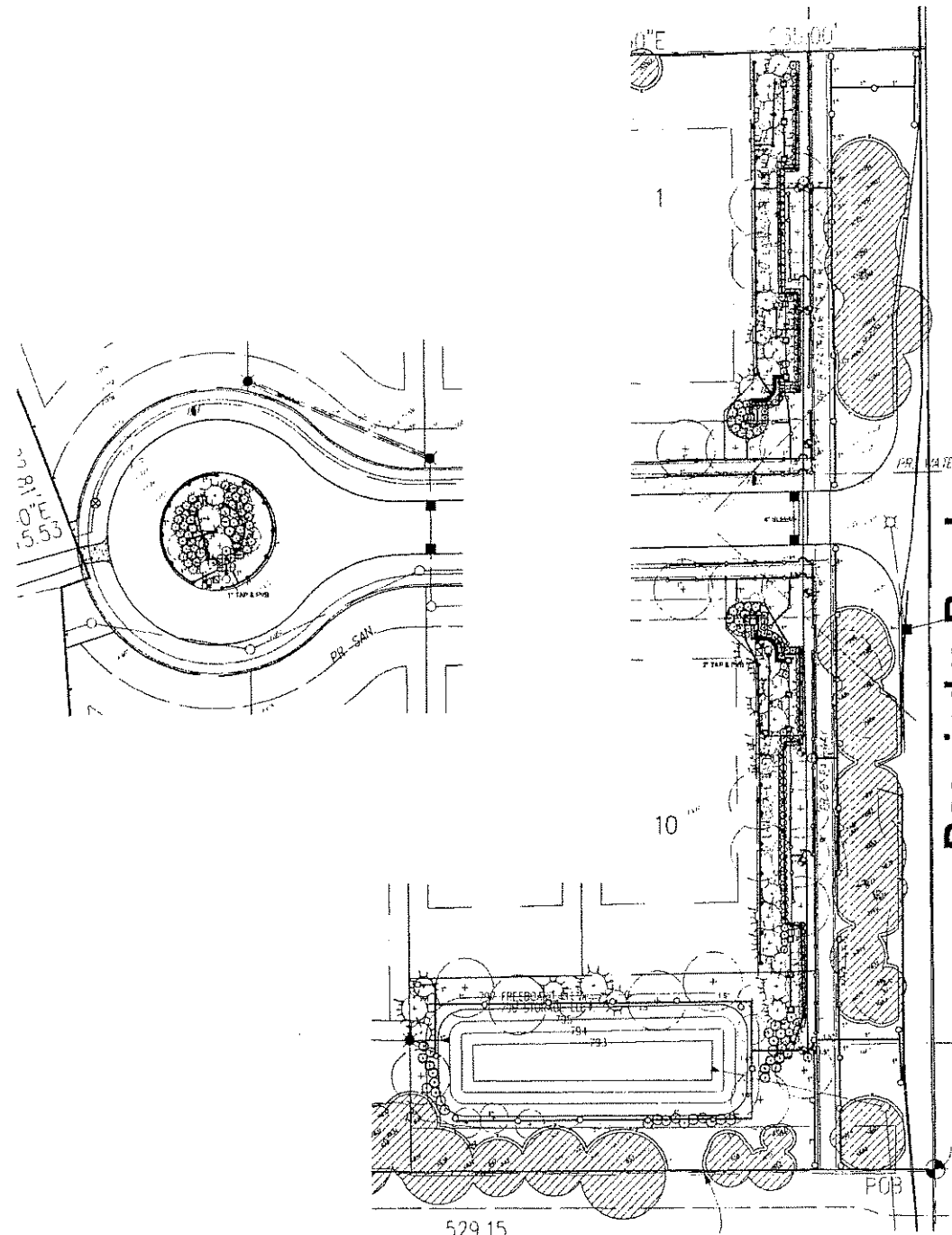


**4F pier section detail**  
SCALE: 3/4" = 1'-0"

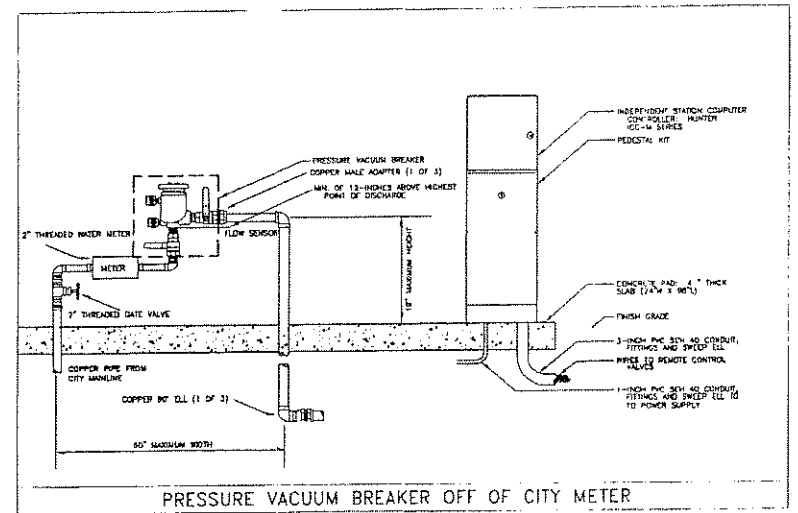
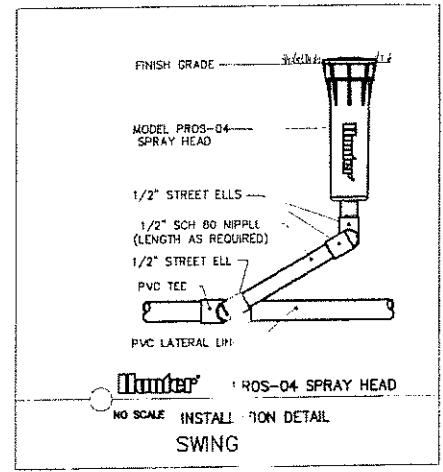
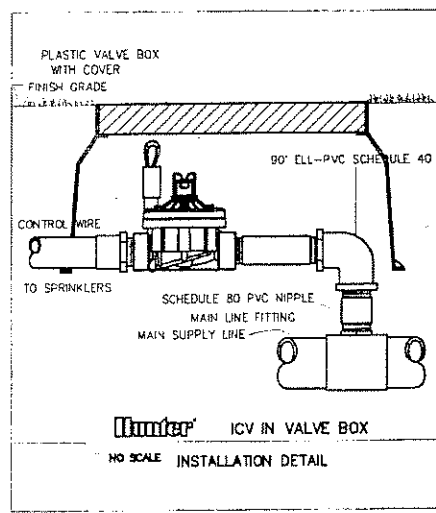
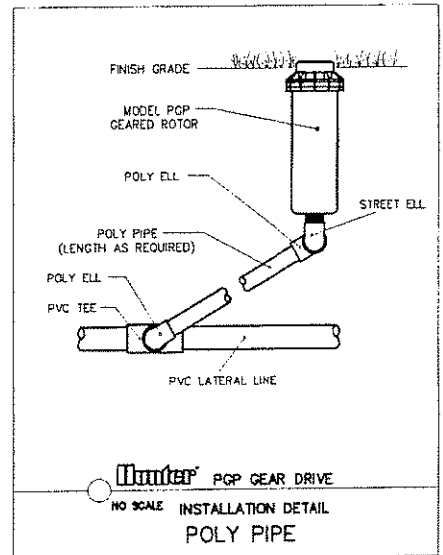


**4G pier section detail**  
SCALE: 3/4" = 1'-0"

**note:**  
unless noted otherwise, numerical value on landscape quantities specified on plan take precedence over graphic representation.



Dequindre Road



**irrigation legend**

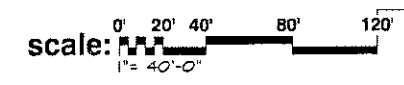
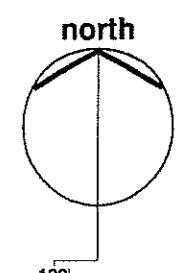
- HUNTER, POP SERIES, GEAR DRIVEN ROTOR, W/ #7 NOZZLE
- HUNTER, PRO SERIES, 4" POP UP W/ MPR NOZZLE
- HUNTER, PRO SERIES, 12" POP UP W/ MPR NOZZLE
- ⊙ HUNTER, QCV, QUICK COUPLING VALVE, 1"
- ⊗ HUNTER, PGV SERIES, ELECTRIC VALVE, 1"
- ⊕ HUNTER, PGV SERIES, ELECTRIC VALVE, 1.5"
- ⊞ HUNTER, ICC-M SERIES, AUTOMATIC CONTROLLER W/ PEDESTAL
- ⊟ HUNTER, MINICLICK, AUTOMATIC RAIN SHUT OFF
- TAP LOCATION, SIZE AS SHOWN
- ▼ FEBCO, 765 SERIES, PRESSURE VACUUM BREAKER, SIZE AS SHOWN
- PVC MAINLINE, CLASS 200, BE, 18" BURY, SIZE 2"
- POLY LATERAL, 100 PSI, NSF, 12" BURY, SIZE AS SHOWN
- PVC SLEEVING, CLASS 200, BE, SIZE AS SHOWN

**Irrigation specification**

1. ALL WORK IS TO BE IN COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL CODES AND ORDINANCES.
2. ALL UNDERGROUND ELECTRICAL CONNECTIONS ARE TO BE MADE WITH 3-M WIRE CONNECTORS, DBY.
3. ALL AUTO CONTROL VALVES ARE TO BE INSTALLED IN CARSON VALVE BOXES OF APPROPRIATE SIZE.
4. ALL CONTROL WIRING DOWNSTREAM OF THE CONTROLLER IS TO BE 14 AWG, UL APPROVED FOR DIRECT BURY.
5. ALL ROTORS AND SPRAY POP-UPS SHALL BE INSTALLED ON SWING PIPE.
6. ALL QCV SHALL BE INSTALLED ON 3-ELBOW PVC SWING JOINTS.
7. SYSTEM DESIGN BASED UPON 22&40 GPM @ 60 PSI.
8. ANY CHANGES IN AVAILABILITY OF SUPPLY SHOULD BE NOTED AND MODIFICATIONS TO THE DESIGN SHOULD BE MADE.
9. CONTRACTOR TO VERIFY WATER PRESSURE AND AVAILABILITY PRIOR TO INSTALLATION.
10. ANY IRRIGATION PIPING SHOWN OUTSIDE OF CURBS FOR CLARITY ONLY.
11. 120V. TO CONTROLLER AND COPPER STUB, BY OTHER THAN IRRIGATION CONTRACTOR.

**lateral pipe size chart for poly**

1"	1 - 12 GPM
1.5"	13 - 30 GPM
2"	31 - 50 GPM



irrigation plan for:  
**"Little Winkler Estates"** - a planned residential community  
 City of Rochester Hills, Michigan



**CAUTION**  
 THE INFORMATION CONTAINED HEREIN IS FOR YOUR INFORMATION ONLY. IT IS NOT TO BE USED AS A BASIS FOR ANY OTHER ACTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION.

("Little Winkler Estates") sht. L - 5 of 5  
 REV. DATE: 4-25-2006

**JOHN DEERE LANDSCAPES**  
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 Chesterfield, MO 63047  
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 FX: (588) 948-4654  
 www.johndeerlandscape.com  
 oplwonsk@johndeerlandscape.com

**CALVIN HALL & ASSOCIATE**  
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 Registered Landscape Architect  
 1000 Greenfield Rd., Suite 100  
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 cjh@calvinhall.com

ORIGINAL