

# P R O P O S E D SIKH GURDWARA TEMPLE

BEING PART OF THE NORTHEAST OF SECTION 34, T. 3N., R. 11E.  
271 W. AUBURN ROAD, CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

## ENGINEER



ENGINEERING SERVICES, INC.  
32300 SCHOOLCRAFT ROAD, SUITE D1  
LIVONIA, MICHIGAN 48150  
PHONE: (734) 525-7330  
FAX: (734) 525-7255

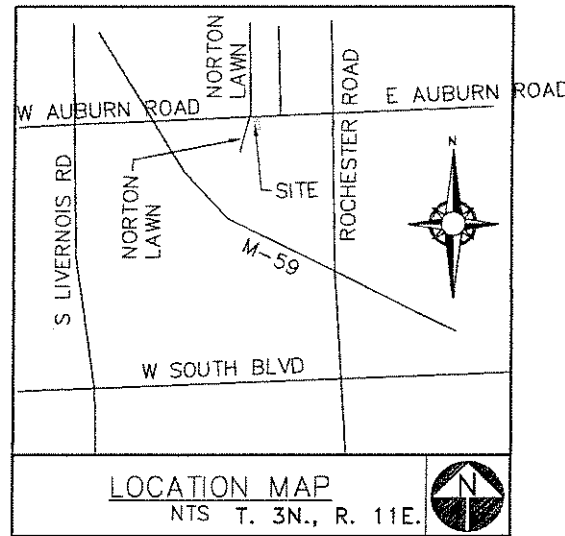
## OWNER

RAGHBIR SINGH  
363 CROSSCREEK BLVD.  
ROCHESTER HILLS, MICHIGAN 48306  
PHONE: (248) 894-6140

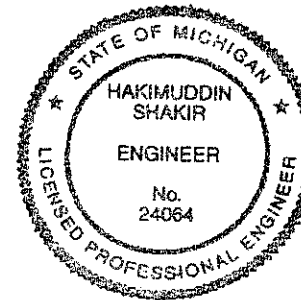
LEGEND	
⊙	= PROP. GV & W; OR T S V & W
⊘	= EX. GV & W; OR T S V & W
⊙	= PROP. FIRE HYDRANT
⊘	= EX. FIRE HYDRANT
⊙	= PROP. SANITARY MH
⊘	= EX. SANITARY MH
⊙	= CLEANOUT
⊙	= PROP. MANHOLE
⊘	= EX. MANHOLE
⊙	= PROP. REAR YARD CB
⊘	= EX. REAR YARD CB
⊙	= PROP. CATCH BASIN
⊘	= EX. CATCH BASIN
⊙	= PROP. INLET
⊘	= EX. INLET
⊙	= END SECTION

## PRIMARY BENCH MARK (USGS DATUM)

**B.M.#1**  
NO. 34-35 RAILROAD SPIKE IN N.E. SIDE OF POWER POLE, S.W. CORNER OF NORTON LAWN AND AUBURN ROAD,  
ELEVATION : 770.94 (U.S.G.S.)  
**B.M.#2**  
ARROW ON HYDRANT EAST SIDE OF NORTON LAWN(SOUTH) 400'± SOUTH OF AUBURN ROAD  
ELEVATION : 761.74 (U.S.G.S.)  
**B.M.#3**  
ARROW ON HYDRANT NORTH SIDE OF AUBURN ROAD AND 85' ± EAST OF NORTON LAWN (NORTH)  
ELEVATION : 775.32 (U.S.G.S.)



CONSTRUCTION TYPE: III-B  
USE GROUP: A-3



*H. Shakir*

SITE DATA	
ZONING :	R-3
GROSS SITE AREA :	4.51 AC.
NET SITE AREA :	4.24 AC.
FRONT SETBACK: 30 FEET(REQUIRED)/ 88 FEET (PROVIDED)	
SIDE SETBACK: 10' EACH SIDE (REQUIRED)	
101.70 FT. TO EAST PR. LINE & 249.1 FT. TO WEST PR. LINE	
REAR SETBACK: 35 FEET(REQUIRED)/ 97.7 FEET (PROVIDED)	
MAXIMUM BUILDING HEIGHT: 35 FEET/32.3' PROPOSED	
PROPOSED BUILDING FOOTPRINT AREA : 9130 SQ. FT.	
FIRST FLOOR AREA	
TOTAL AREA= 21544 SQ. FT.	

PARKING REQUIREMENTS  
NUMBER OF PEOPLE:  
300  
PARKING REQUIRED:  
300/3 = 100 SPACES  
PARKING PROVIDED:  
101 SPACES  
INCLUDING 5 H.C. SPACES.  
4 REGULAR & ONE VAN ACCESSIBLE

LIST OF DRAWINGS	
C-0	COVER SHEET
C-1	TOPOGRAPHICAL PLAN
C-2	SITE PLAN
C-3	GRADING PLAN
C-4	DRAINAGE AREA
C-5	UTILITY PLAN
C-6	APPROACH DETAIL
L-01	LIGHTING PLAN
LP-01	LANDSCAPING PLAN
LP-02	LANDSCAPE NOTES AND DETAILS
IR-01	IRRIGATION PLAN
IR-02	IRRIGATION SYSTEM DETAILS
A-01	PROPOSED FLOOR PLAN
A-02	PROPOSED ELEVATIONS & SECTIONS

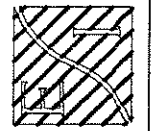
## LEGAL DESCRIPTION:

LOTS 40 THRU 42, BOTH INCLUSIVE, "AVONCROFTS SUBDIVISION", AS RECORDED IN LIBER 19 OF PLATS, PAGE 15, OAKLAND COUNTY RECORDS, BEING PART OF THE NORTHEAST 1/4 OF SECTION 34, T. 3N., R. 11E, AVON TOWNSHIP, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS:

BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 42, BEING DISTANT S. 89°56'30" E. 828.48' ALONG THE NORTH LINE OF SAID SECTION 34 AND S. 00°01'21" E. 33.00'; THENCE S. 89°57'28" E. 430.27' ALONG THE SOUTHERLY LINE OF AUBURN ROAD, (120' WIDE), TO THE NORTHEAST CORNER OF SAID LOT 40; THENCE S. 00°17'30" W. 544.10' TO THE SOUTHWEST CORNER OF SAID LOT 40; THENCE N. 89°28'18" W. 164.50'; THENCE N. 34°34'02" W. 66.03'; THENCE N. 67°40'44" W. 151.85'; THENCE N. 71°56'17" W. 215.58' TO A POINT ON THE EAST LINE OF NORTON LAWN ROAD (50' WIDE) AND THE SOUTHWEST CORNER OF SAID LOT 42; THENCE ALONG SAID EAST LINE 118.67' ALONG A CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 488.00', A DELTA ANGLE OF 13°55'57", AND A LONG CHORD BEARING N. 18°45'58" E. 118.37'; THENCE ALONG SAID EAST LINE 205.15' ALONG A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 474.95', A DELTA ANGLE OF 24°44'55", AND A CHORD BEARING OF N. 13°04'30" E. 203.56' TO A POINT ON THE SOUTH LINE OF SAID AUBURN ROAD AND THE POINT OF BEGINNING. SAID PARCEL CONTAINS 4.51 ACRES, MORE OR LESS, AND IS SUBJECT TO ANY EASEMENTS, RESTRICTIONS AND RIGHTS OF WAY OF RECORD. THE WESTERLY 5 FT. OF THE PROPERTY TO BE DEDICATED BY THE OWNER AND TO BE ADDED TO NORTON LAWN ROAD R.O.W. (EX. 50 WD.).

CONSULTING ENGINEERS  
32300 SCHOOLCRAFT ROAD  
LIVONIA, MICHIGAN 48150  
PHONE: (734) 525-7330  
FAX: (734) 525-7255

ENGINEERING SERVICES, INC.  
CIVIL, ARCHITECTURE  
ENVIRONMENTAL, GEOTECH, SURVEYING.



TITLE: SIKH GURDWARA  
271 W. AUBURN ROAD  
ROCHESTER HILLS, MICHIGAN

SCALE: AS SHOWN  
DRAWN BY: SG  
APPROVED BY: HS

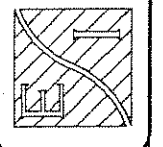
DATE: 12-18-05  
DRAWING NO.: C-0

## COVER SHEET

REV.	DATE	DESCRIPTION	BY	APP'D

RECEIVED  
SEP - 5 2006

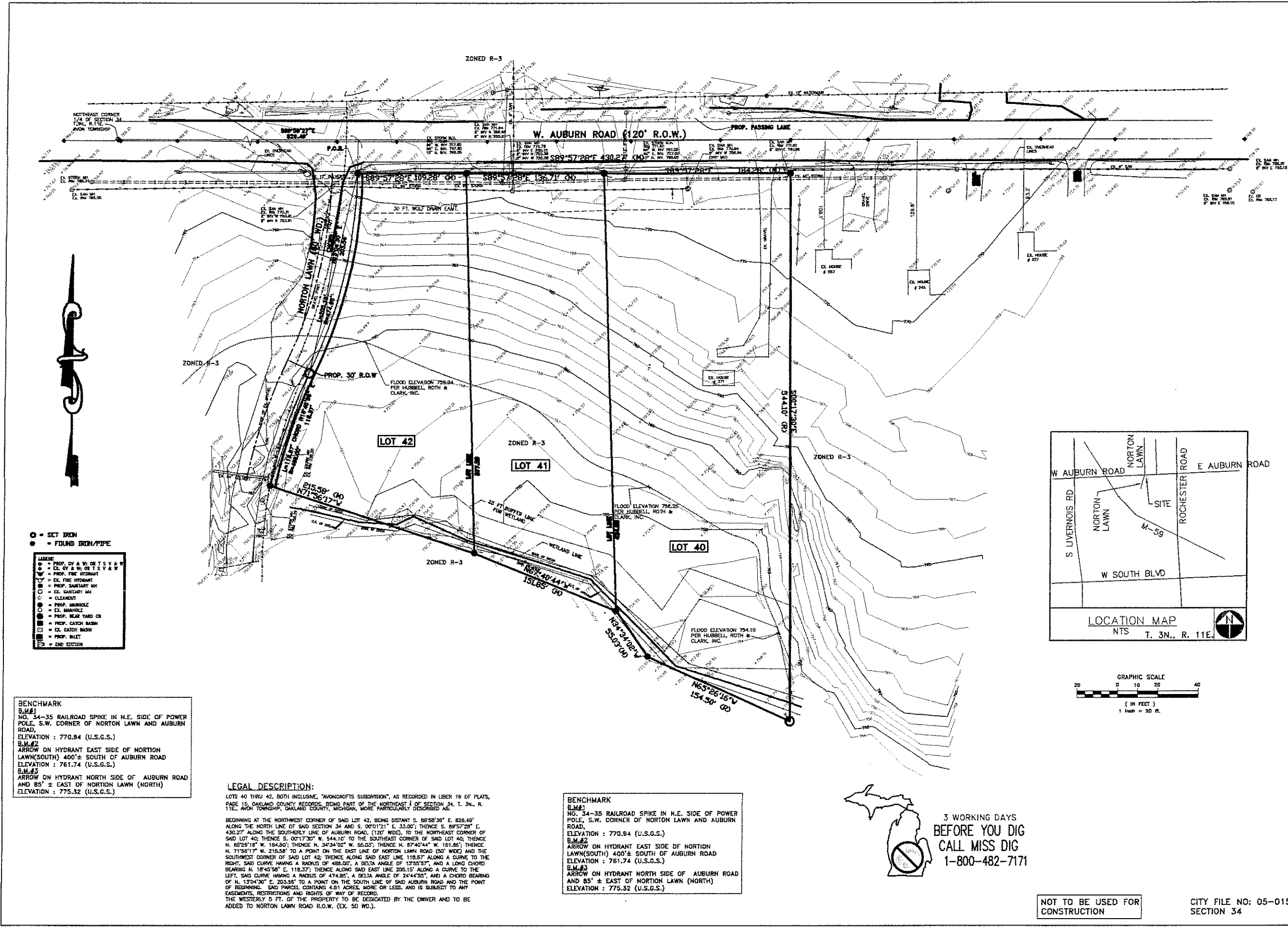
CONSULTING ENGINEERS  
 CIVIL ARCHITECTURE  
 ENVIRONMENTAL, GEOTECH, SURVEYING.



**ENGINEERING SERVICES, INC.**  
 271 W. AUBURN ROAD  
 ROCHESTER HILLS, MICHIGAN 48065  
 PHONE: (248) 855-7330  
 FAX: (248) 855-7336

**TOPOGRAPHICAL PLAN**

NO.	DATE	REVISIONS	BY	APP'D.
1	12/15/05	AS PER CITY COMMENTS ON 11/22/05		
2	12/15/05	AS PER COMMENTS FROM CITY OF ROCHESTER HILLS ON 12/08/05		

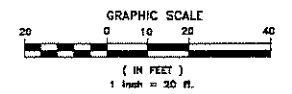
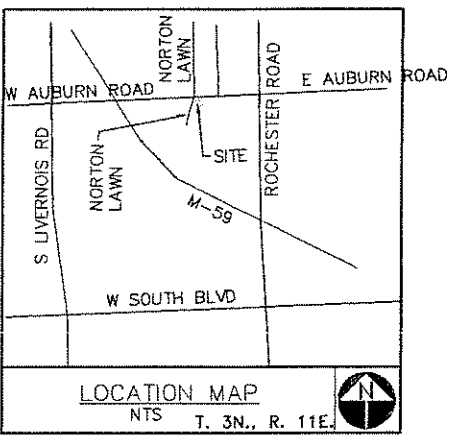


- LEGEND**
- = SET IRON
  - = FOUND IRON/PIPE
  - ▬ = PROP. CV & W. OR T.S.V.E.W.
  - ▬ = EX. CV & W. OR T.S.V.E.W.
  - ▬ = PROP. FIRE HYDRANT
  - ▬ = EX. FIRE HYDRANT
  - ▬ = PROP. SANITARY MH
  - ▬ = EX. SANITARY MH
  - = CLEANOUT
  - = PROP. MANHOLE
  - = EX. MANHOLE
  - = PROP. NEAR YARD CB
  - = EX. NEAR YARD CB
  - = PROP. CATCH BASIN
  - = EX. CATCH BASIN
  - = PROP. INLET
  - ▬ = END SECTION

**BENCHMARK**  
 B.M.#1  
 NO. 34-35 RAILROAD SPIKE IN N.E. SIDE OF POWER POLE, S.W. CORNER OF NORTON LAWN AND AUBURN ROAD.  
 ELEVATION : 770.84 (U.S.G.S.)  
 B.M.#2  
 ARROW ON HYDRANT EAST SIDE OF NORTON LAWN(SOUTH) 400'± SOUTH OF AUBURN ROAD  
 ELEVATION : 761.74 (U.S.G.S.)  
 B.M.#3  
 ARROW ON HYDRANT NORTH SIDE OF AUBURN ROAD AND 85'± EAST OF NORTON LAWN (NORTH)  
 ELEVATION : 775.32 (U.S.G.S.)

**LEGAL DESCRIPTION:**  
 LOTS 40 THRU 42, BOTH INCLUSIVE, "WAGNOR'S SUBDIVISION", AS RECORDED IN LIBER 19 OF PLATS, PAGE 15, OAKLAND COUNTY RECORDS, BEING PART OF THE NORTHEAST 1/4 OF SECTION 34, T. 3N., R. 11E., AVON TOWNSHIP, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS:  
 BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 42, BEING DISTANT S. 89°50'36" E. 826.49' ALONG THE NORTH LINE OF SAID SECTION 34 AND S. 0°01'21" E. 33.00'; THENCE S. 89°57'28" E. 430.27' ALONG THE SOUTHERLY LINE OF AUBURN ROAD, (120' WIDE), TO THE NORTHEAST CORNER OF SAID LOT 40; THENCE S. 0°17'30" W. 544.10' TO THE SOUTHEAST CORNER OF SAID LOT 42; THENCE N. 65°28'18" W. 154.50'; THENCE N. 34°34'02" W. 55.03'; THENCE N. 87°40'44" W. 151.85'; THENCE N. 71°58'17" W. 215.58' TO A POINT ON THE EAST LINE OF NORTON LAWN ROAD (50' WIDE) AND THE SOUTHWEST CORNER OF SAID LOT 42; THENCE ALONG SAID EAST LINE 118.87' ALONG A CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 488.05', A DELTA ANGLE OF 13°53'57", AND A CHORD BEARING N. 18°45'58" E. 118.37'; THENCE ALONG SAID EAST LINE 205.15' ALONG A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 474.95', A DELTA ANGLE OF 24°44'32", AND A CHORD BEARING N. 13°04'30" E. 203.36' TO A POINT ON THE SOUTH LINE OF SAID AUBURN ROAD AND THE POINT OF BEGINNING. SAID PARCEL CONTAINS 4.51 ACRES, MORE OR LESS, AND IS SUBJECT TO ANY EASEMENTS, RESTRICTIONS AND RIGHTS OF WAY OF RECORD. THE WESTERLY 5 FT. OF THE PROPERTY TO BE DEDICATED BY THE OWNER AND TO BE ADDED TO NORTON LAWN ROAD R.O.W. (EX. 50 WD.).

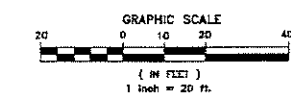
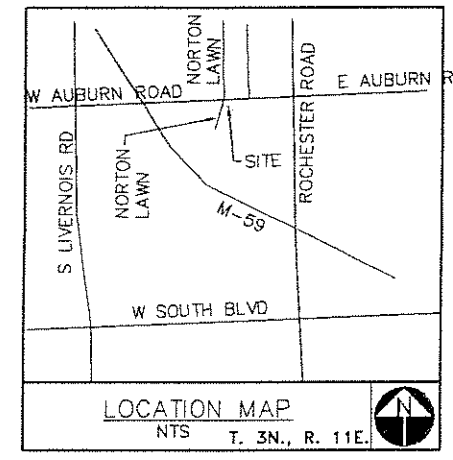
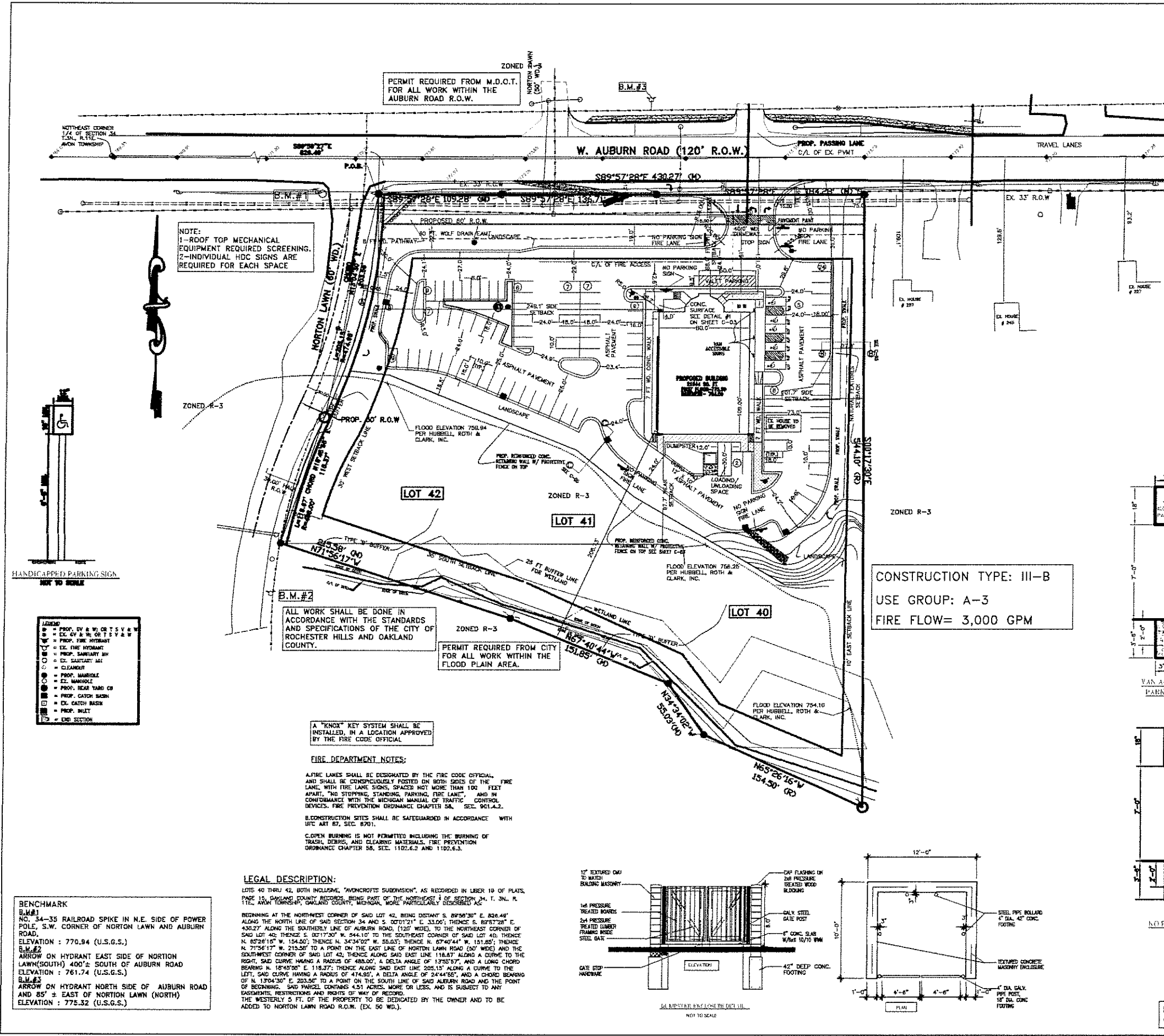
**BENCHMARK**  
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 ELEVATION : 761.74 (U.S.G.S.)  
 B.M.#3  
 ARROW ON HYDRANT NORTH SIDE OF AUBURN ROAD AND 85'± EAST OF NORTON LAWN (NORTH)  
 ELEVATION : 775.32 (U.S.G.S.)



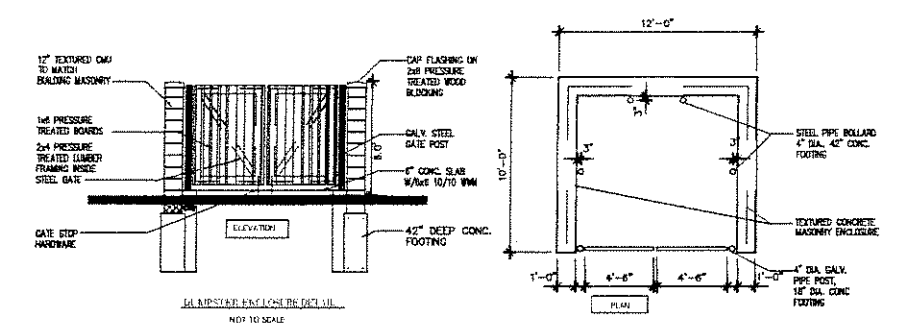
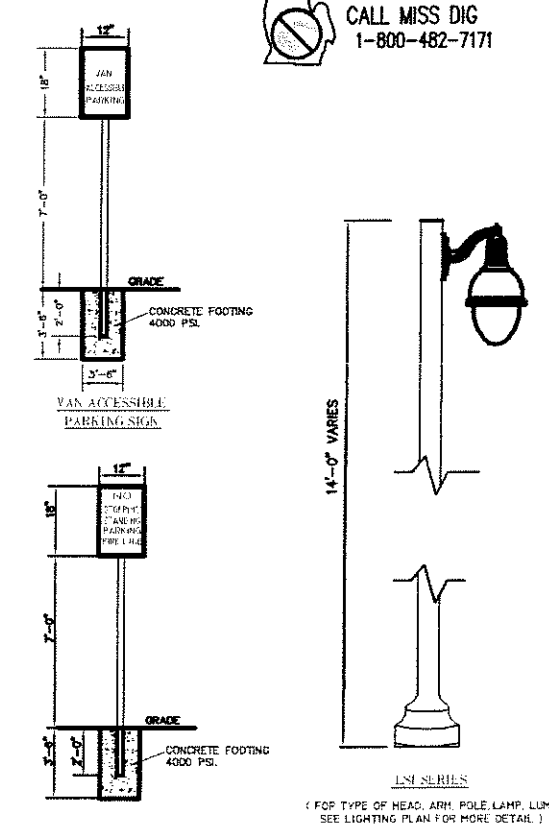
3 WORKING DAYS  
 BEFORE YOU DIG  
 CALL MISS DIG  
 1-800-482-7171

NOT TO BE USED FOR  
 CONSTRUCTION

CITY FILE NO: 05-015,  
 SECTION 34



3 WORKING DAYS BEFORE YOU DIG  
 CALL MISS DIG  
 1-800-482-7171



CONSULTING ENGINEERS  
 3330 SCHOOLCRAFT ROAD  
 LYONIA, MICHIGAN 48150  
 PH (734) 885-7300  
 FAX (734) 885-7308

**ENGINEERING SERVICES, INC.**  
 CIVIL, ARCHITECTURE  
 ENVIRONMENTAL, GEOTECH, SURVEYING.

**TITLE** SIKH GURDWARA  
 271 W. AUBURN ROAD  
 ROCHESTER HILLS, MICHIGAN

**PROJ. NO.** SCALE 1"=40'  
**DRAWN BY** SG  
**APPROVED BY** HS  
**DATE** 11-16-05 **DRAWING NO.** C-02

**SITE PLAN**

REV.	DATE	DESCRIPTION	APP'D.
1	11/25/05	AS PER CITY COMMENTS ON 11/12/05	
2	12/01/05	AS PER CITY COMMENTS FROM CITY OF ROCHESTER HILLS ON 12/01/05	

**NOT TO BE USED FOR CONSTRUCTION**

CITY FILE NO: 05-015, SECTION 34

CITY FILE NO: 05-015,  
SECTION 34



3 WORKING DAYS  
BEFORE YOU DIG  
CALL MISS DIG  
1-800-482-7171

NOT TO BE USED FOR  
CONSTRUCTION

TRENDS AND LANDINGS TO BE  
SLOPED (2% MAX.) TO PREVENT  
THE ACCUMULATION OF WATER.

CONSULTING ENGINEERS  
32300 SCHOENKRAFT ROAD  
LYNDRA, MICHIGAN 48150  
P # (734) 532-7330  
FAX # (734) 532-7330

ENGINEERING  
SERVICES,  
INC.

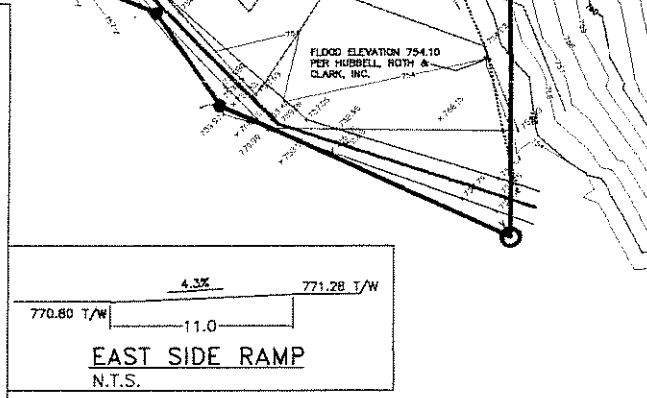
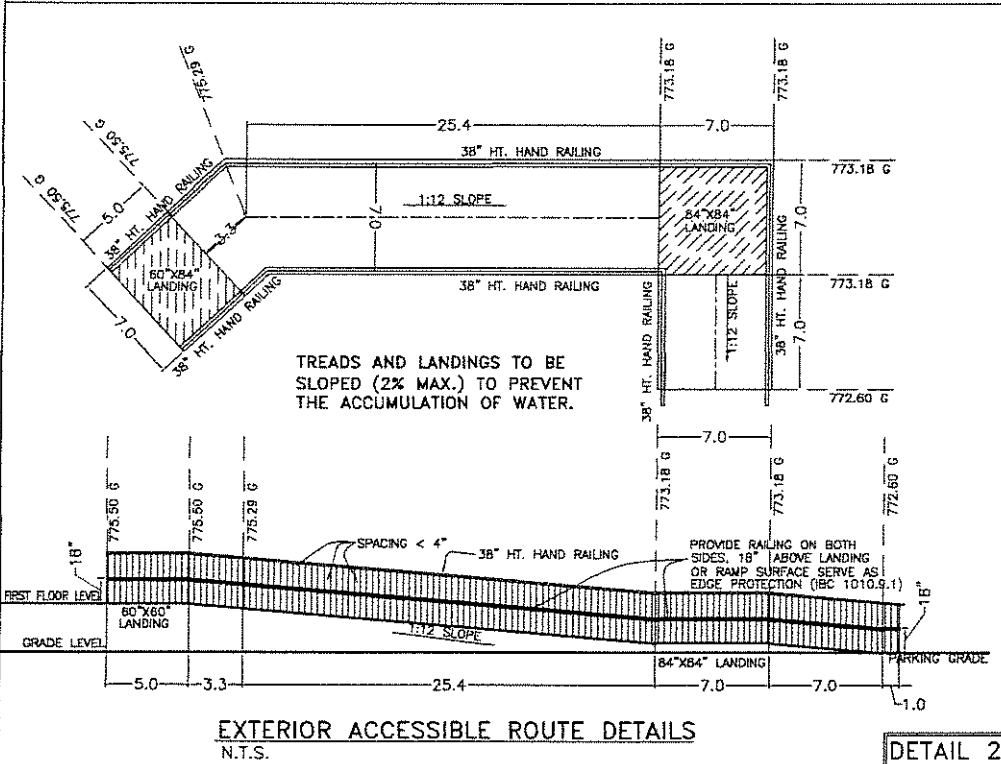
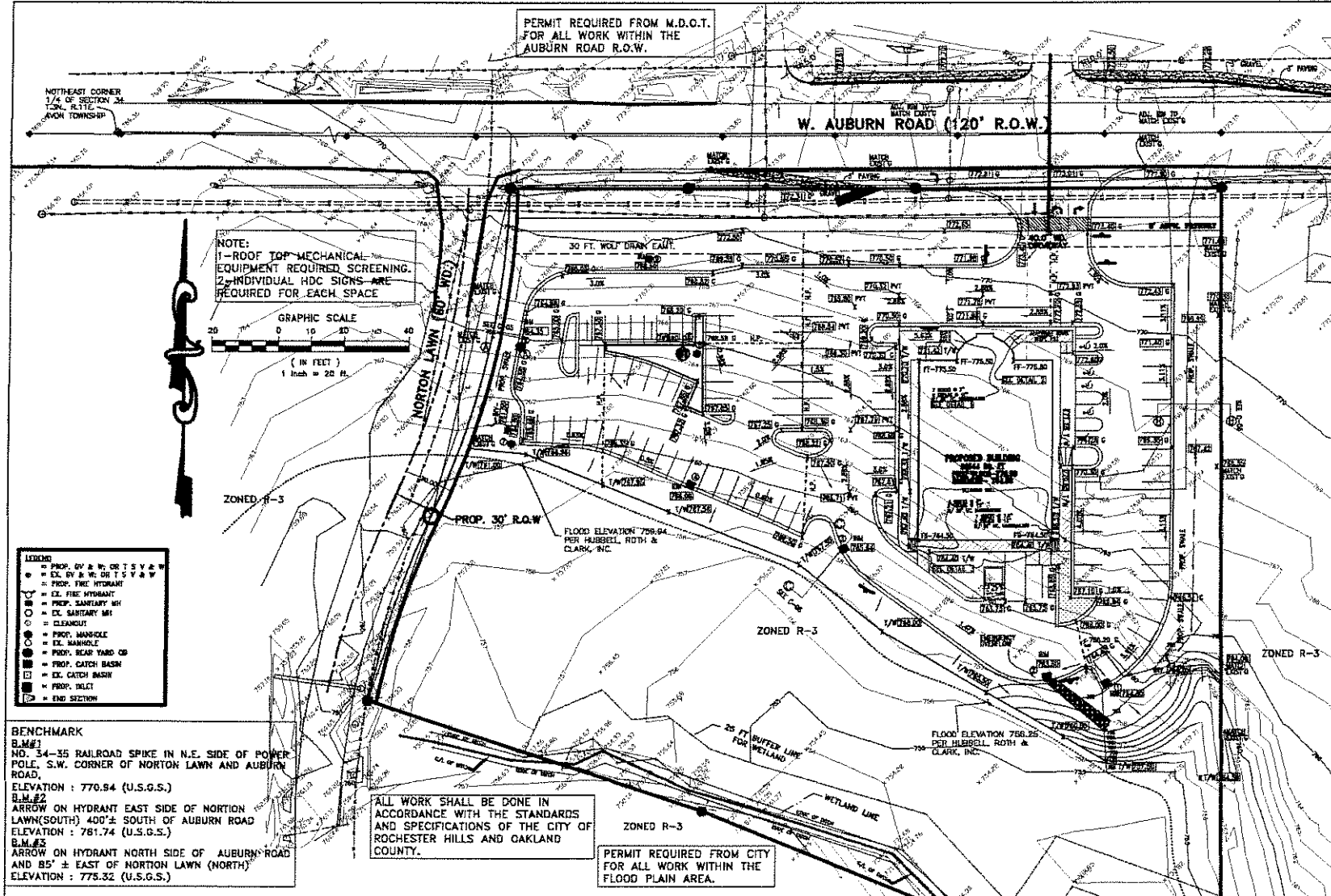
CIVIL, ARCHITECTURE,  
ENVIRONMENTAL, SURVEYING.

TITLE **SIKH GUJWARA**  
271 W. AUBURN ROAD  
ROCHESTER HILLS, MICHIGAN

PROJ. NO. \_\_\_\_\_  
SCALE 1"=40'  
DRAWN BY HS  
DATE 11-18-05  
DRAWING NO. **C-03**

**GRADING PLAN**

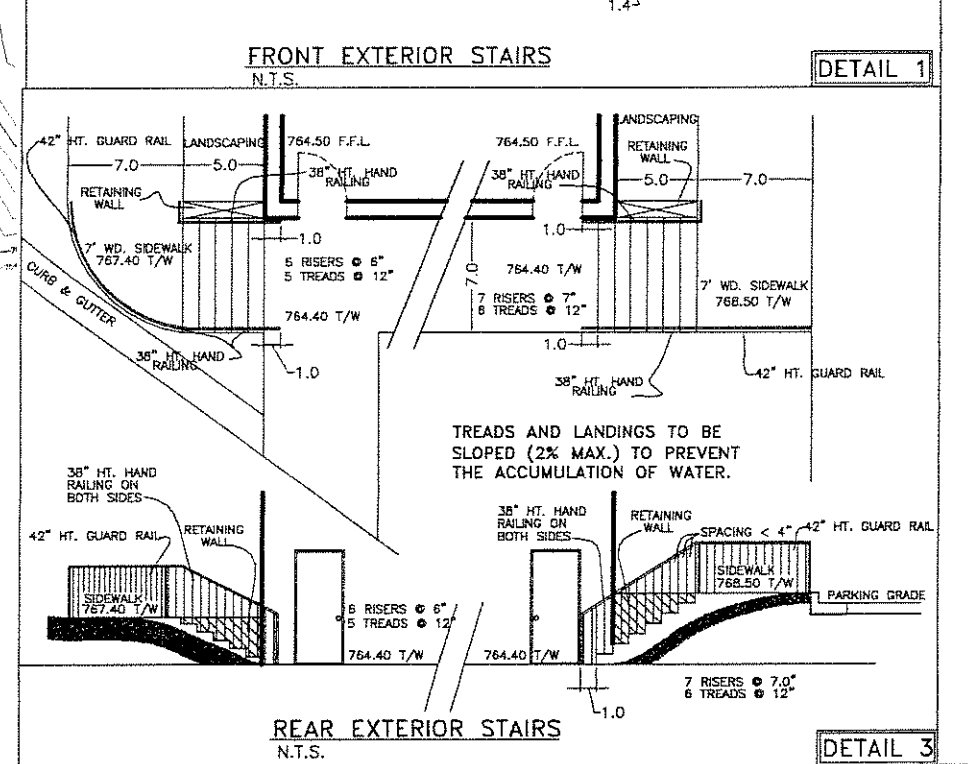
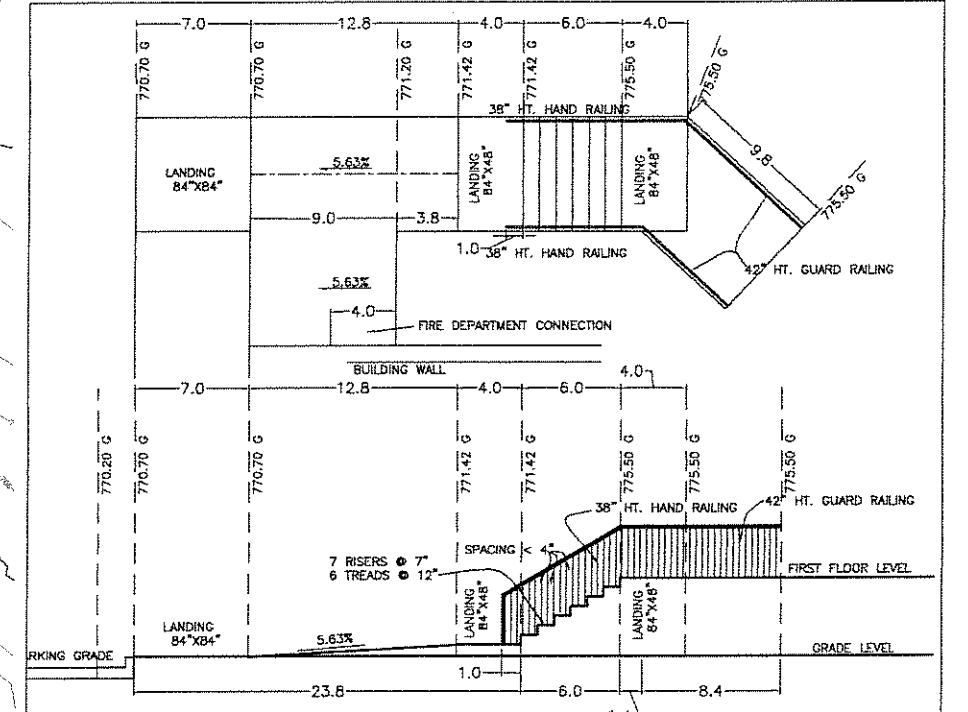
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1	11/18/05	AS PER CITY COMMENTS ON 11/12/05		

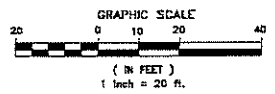
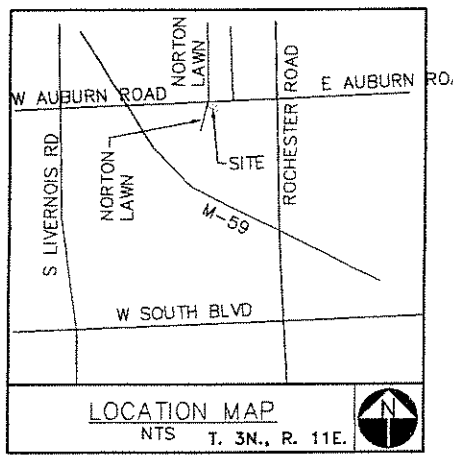
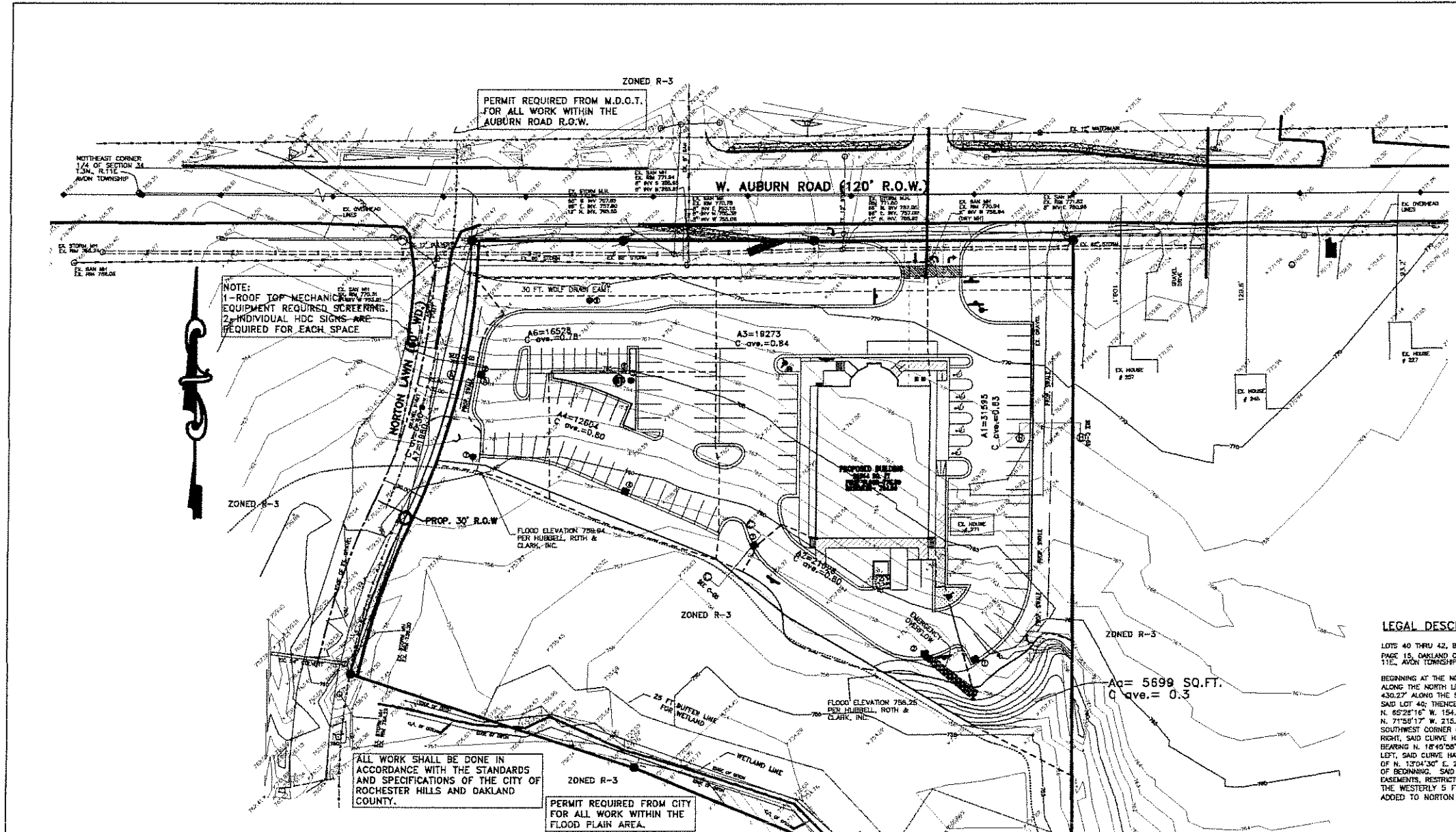


**LEGAL DESCRIPTION:**

LOTS 40 THRU 42, BOTH INCLUDING, "AVONCROFTS SUBDIVISION", AS RECORDED IN LIBER 18 OF PLATS, PAGE 15, OAKLAND COUNTY RECORDS, BEING PART OF THE NORTHEAST 1/4 OF SECTION 34, T. 3N., R. 11E., AVON TOWNSHIP, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS:

BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 42, BEING DISTANT S. 89°58'39" E. 828.40' ALONG THE NORTH LINE OF SAID SECTION 34 AND S. 00°01'21" E. 33.00' THENCE S. 89°57'28" E. 430.27' ALONG THE SOUTHERLY LINE OF AUBURN ROAD, (120' WIDE), TO THE NORTHEAST CORNER OF SAID LOT 40; THENCE S. 00°17'30" W. 544.10' TO THE SOUTHEAST CORNER OF SAID LOT 40; THENCE N. 85°28'18" W. 154.50'; THENCE N. 34°34'02" W. 55.03'; THENCE N. 87°40'44" W. 151.85'; THENCE N. 71°58'17" W. 215.20' TO A POINT ON THE EAST LINE OF NORTON LAWN ROAD (50' WIDE) AND THE SOUTHWEST CORNER OF SAID LOT 42; THENCE ALONG SAID EAST LINE 118.57' ALONG A CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 488.00', A DELTA ANGLE OF 133°55'57", AND A LONG CHORD BEARING N. 18°45'38" E. 118.57'; THENCE ALONG SAID EAST LINE 205.15' ALONG A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 474.85', A DELTA ANGLE OF 24°44'55", AND A CHORD BEARING OF N. 13°04'30" E. 223.86' TO A POINT ON THE SOUTH LINE OF SAID AUBURN ROAD AND THE POINT OF BEGINNING. SAID PARCEL CONTAINS 4.51 ACRES, MORE OR LESS, AND IS SUBJECT TO ANY EASEMENTS, RESTRICTIONS AND RIGHTS OF WAY OF RECORD. THE WESTERLY 6 FT. OF THE PROPERTY TO BE DEDICATED BY THE OWNER AND TO BE ADDED TO NORTON LAWN ROAD R.O.W. (50' WD.).





3 WORKING DAYS  
BEFORE YOU DIG  
CALL MISS DIG  
1-800-482-7171

**LEGAL DESCRIPTION:**  
 LOTS 40 THRU 42, BOTH INCLUSIVE, "WINDROCKTS SUBDIVISION", AS RECORDED IN LIBER 10 OF PLATS, PAGE 15, OAKLAND COUNTY RECORDS, BEING PART OF THE NORTHEAST 1/4 OF SECTION 34, T. 34 N., R. 11 E., AVON TOWNSHIP, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS:  
 BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 42, BEING DISTANT S. 89°58'30" E. 826.44' ALONG THE NORTH LINE OF SAID SECTION 34 AND S. 0°01'21" E. 33.00'; THENCE S. 85°57'28" E. 430.27' ALONG THE SOUTHERLY LINE OF AUBURN ROAD, (120' WIDE), TO THE NORTHEAST CORNER OF SAID LOT 42; THENCE S. 0°01'21" E. 544.10' TO THE SOUTHWEST CORNER OF SAID LOT 42; THENCE N. 82°28'16" W. 154.80'; THENCE N. 34°34'02" W. 65.03'; THENCE N. 87°40'44" W. 151.85'; THENCE N. 71°58'17" W. 215.58' TO A POINT ON THE EAST LINE OF NORTON LAWN ROAD (50' WIDE) AND THE SOUTHWEST CORNER OF SAID LOT 42; THENCE ALONG SAID EAST LINE 118.87' ALONG A CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 485.00', A DELTA ANGLE OF 13°55'57", AND A LONG CHORD BEARING N. 18°40'28" E. 118.37'; THENCE ALONG SAID EAST LINE 205.15' ALONG A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 474.95', A DELTA ANGLE OF 24°44'55", AND A CHORD BEARING N. 13°04'30" E. 203.58' TO A POINT ON THE SOUTH LINE OF SAID AUBURN ROAD AND THE POINT OF BEGINNING. SAID PARCEL CONTAINS 4.51 ACRES, MORE OR LESS, AND IS SUBJECT TO ANY EASEMENTS, RESTRICTIONS AND RIGHTS OF WAY OF RECORD. THE WESTERLY 5 FT. OF THE PROPERTY TO BE DEDICATED BY THE OWNER AND TO BE ADDED TO NORTON LAWN ROAD R.O.W. (50 WD.).

**BENCHMARK**  
 B.M.#1  
 NO. 34-35 RAILROAD SPIKE IN N.E. SIDE OF POWER POLE, S.W. CORNER OF NORTON LAWN AND AUBURN ROAD, ELEVATION : 770.94 (U.S.G.S.)  
 B.M.#2  
 ARROW ON HYDRANT EAST SIDE OF NORTON LAWN(SOUTH) 400'± SOUTH OF AUBURN ROAD, ELEVATION : 761.74 (U.S.G.S.)  
 B.M.#3  
 ARROW ON HYDRANT NORTH SIDE OF AUBURN ROAD AND 85'± EAST OF NORTON LAWN (NORTH), ELEVATION : 775.32 (U.S.G.S.)

AREA #	AREA ac.	C			Cave
		0.96	0.3	1	
A1	0.725	0.963	0.342	0	0.63
A2	0.483	0.375	0.108	0	0.80
A3	0.442	0.368	0.074	0	0.84
A4	0.289	0.224	0.065	0	0.80
A5	0	0	0	0	MH.
A6	0.379	0.277	0.102	0	0.78
A7	0.045	0	0.045	0	0.30
<b>TOTAL AREA</b>	<b>2.36</b>	<b>1.607</b>	<b>0.766</b>	<b>0</b>	
<b>TOTAL AREA (acres)</b>	<b>2.36</b>				
<b>Cave =</b>	<b>0.742</b>				

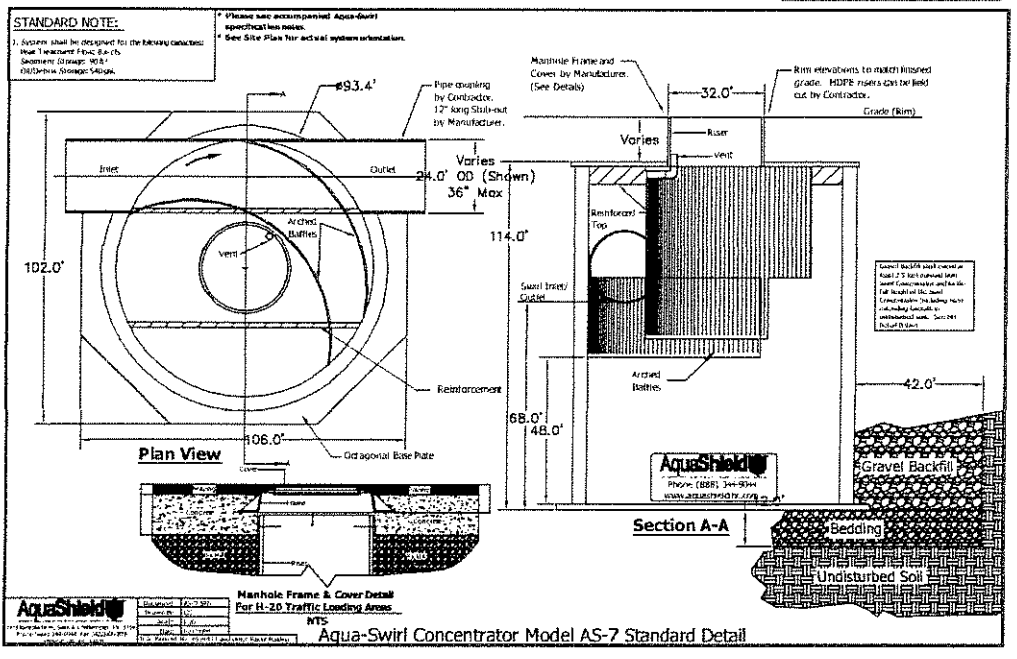
NOT TO BE USED FOR CONSTRUCTION

CITY FILE NO: 05-015, SECTION 34

NOTE:  
 1-ROOF TOP MECHANICAL EQUIPMENT REQUIRES SCREENING.  
 2-INDIVIDUAL HDC SIGNS ARE REQUIRED FOR EACH SPACE

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF ROCHESTER HILLS AND OAKLAND COUNTY.

PERMIT REQUIRED FROM CITY FOR ALL WORK WITHIN THE FLOOD PLAIN AREA.



CONSULTING ENGINEERS  
 2350 SCHOENFELD ROAD  
 LYONIA, MICHIGAN 48150  
 PHONE: (248) 838-7300  
 FAX: (248) 838-7300

ENGINEERING SERVICES, INC.  
 CIVIL, ARCHITECTURE  
 ENVIRONMENTAL, GEOTECH, SURVEYING.

**SIKH GURDWARA**  
 271 W. AUBURN ROAD  
 ROCHESTER HILLS, MICHIGAN

SCALE: 1"=40'  
 DRAWN BY: SC  
 CHECKED BY: HS  
 APPROVED BY: HS

DATE: 11-18-05  
 DRAWING NO: C-04

**DRAINAGE AREA PLAN**

REVISIONS

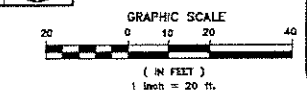
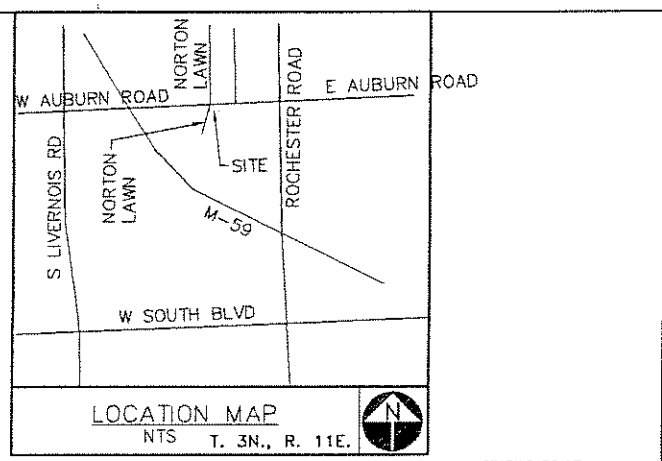
NO.	DATE	DESCRIPTION
1	11/18/05	AS PER CITY COMMENTS ON 11/22/05
2	11/18/05	AS PER COMMENTS FROM CITY OF ROCHESTER HILLS ON 12 JAN 2006



3 WORKING DAYS  
BEFORE YOU DIG  
CALL MISS DIG  
1-800-487-3373

CITY FILE NO: 05-015,  
SECTION 34

NOT TO BE USED FOR  
CONSTRUCTION



CONSULTING ENGINEERS  
3230 BONDURANT ROAD  
LIVONIA, MICHIGAN 48150  
PH: (734) 655-1200  
FAX: (734) 655-1206

ENGINEERING  
SERVICES,  
INC.

CIVIL, ARCHITECTURE  
ENVIRONMENTAL, GEOTECH, SURVEYING.

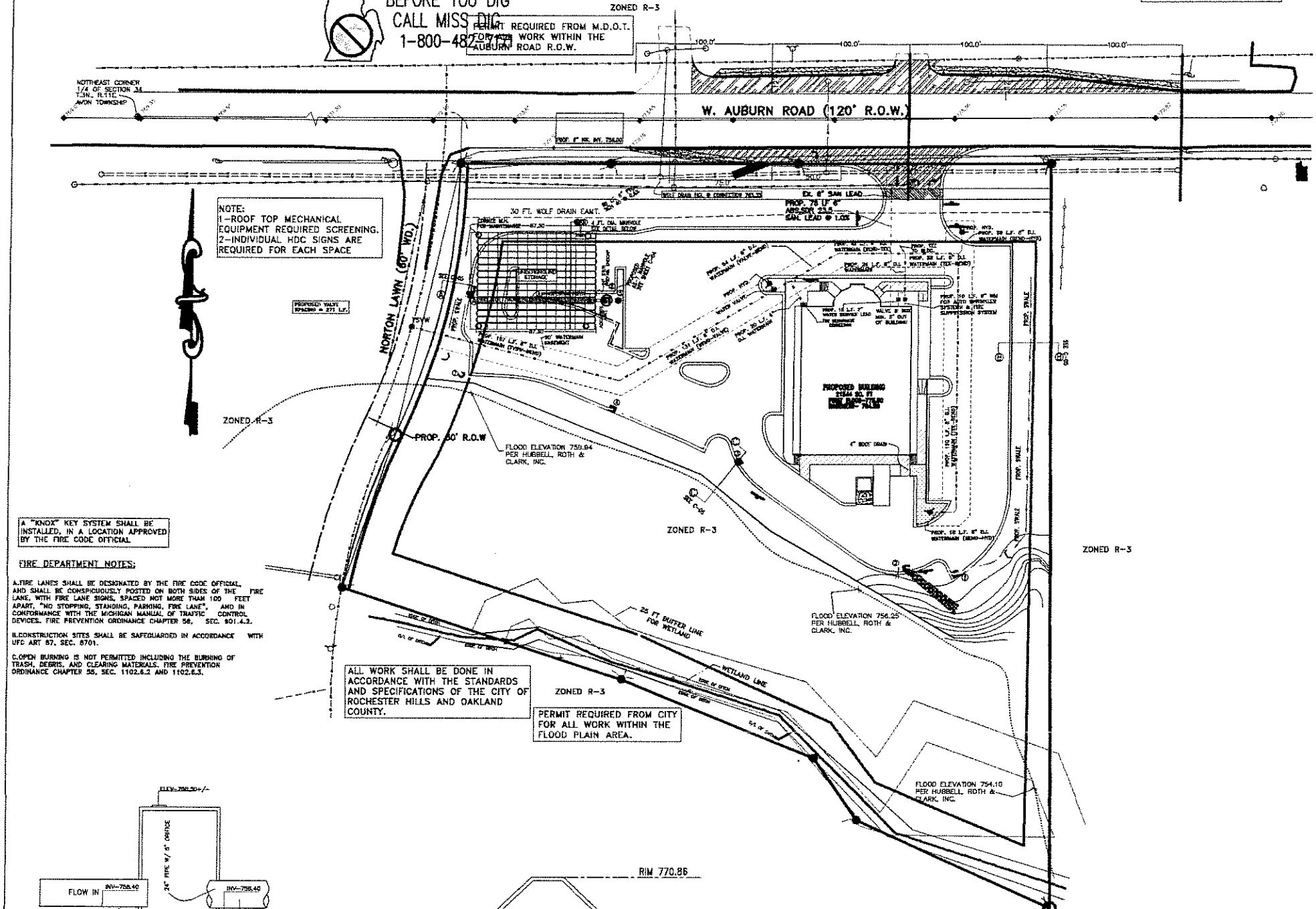
TITLE  
**SIKH GURDWARA**  
271 W. AUBURN ROAD  
ROCHESTER HILLS, MICHIGAN

SCALE NTS  
DRAWN BY SG  
NTS APPROVED BY HS

PROJ. NO.  
DATE 11-19-05  
DRAWING NO. **C-06**

**UTILITY PLAN**

REV.	DATE	DESCRIPTION	APP'D.
1	11/12/05	AS PER CITY COMMENTS ON 11/12/05	
2	11/15/05	AS PER COMMENTS FROM CITY OF ROCHESTER HILLS ON 11/15/05	



NOTE:  
1-ROOF TOP MECHANICAL  
EQUIPMENT REQUIRED SCREENING.  
2-INDIVIDUAL HDC SIGNS ARE  
REQUIRED FOR EACH SPACE

A "KNOX" KEY SYSTEM SHALL BE  
INSTALLED, IN A LOCATION APPROVED  
BY THE FIRE CODE OFFICIAL

**FIRE DEPARTMENT NOTES:**

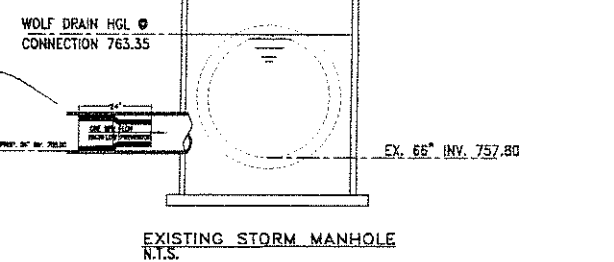
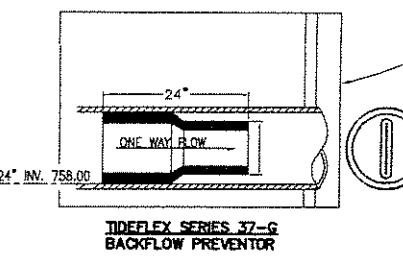
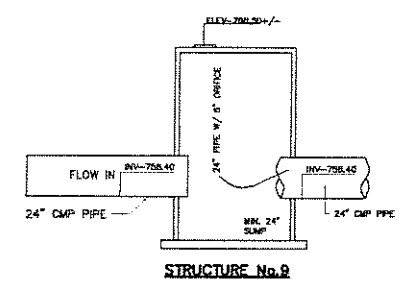
ALL FIRE LANES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL,  
AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE  
LANE, WITH FIRE LANE SIGNS, SPACED NOT MORE THAN 100 FEET  
APART, "NO STOPPING, STANDING, PARKING, FIRE LANE", AND IN  
CONFORMANCE WITH THE MICHIGAN MANUAL OF TRAFFIC  
CONTROL DEVICES, FIRE PREVENTION ORDINANCE CHAPTER 56,  
SEC. 501.4.2.

RECONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH  
UFC ART 57, SEC. 8701.

COPEN BURNING IS NOT PERMITTED INCLUDING THE BURNING OF  
TRASH, DEBRIS, AND CLEARING MATERIALS. FIRE PREVENTION  
ORDINANCE CHAPTER 56, SEC. 1102.6.2 AND 1102.6.3.

ALL WORK SHALL BE DONE IN  
ACCORDANCE WITH THE STANDARDS  
AND SPECIFICATIONS OF THE CITY OF  
ROCHESTER HILLS AND OAKLAND  
COUNTY.

PERMIT REQUIRED FROM CITY  
FOR ALL WORK WITHIN THE  
FLOOD PLAIN AREA.



**STORAGE VOLUME CALCULATION**

TOTAL AREA	2.38
A(C=0.95) ACRE	1.61
A(C=1.00) ACRE	0.09
A(C=0.30) ACRE	0.76
C ave	= 0.742
Q <sub>a</sub> = 0.20 x A	= 0.47 cfs
<b>100 YEAR FLOOD DESIGN:</b>	
Q <sub>o</sub> = Q <sub>a</sub> x C	= 0.27 cfs/ac-imp
T = 25 + (6962.5 / Q <sub>o</sub> ) <sup>0.5</sup>	= 131.04 min.
V <sub>s</sub> = [(10560 x T) / (T + 25)] x (40 x C <sub>o</sub> x T)	= 7404.86 cfs-ac-imp
V = V <sub>s</sub> x A x C	= 12984 cf
<b>BANKFULL FLOOD VOLUME: (THE 1.5-YR./24 HR. STORM EVENT)</b>	
V <sub>bf</sub> = 5160 x A x C	= 8046 cf
<b>FIRST FLUSH VOLUME: (THE RUNOFF FROM THE 0.5\"/&gt; </b>	

**STORMTECH PIPING**

STORMTECH SC740 51\"/>

**STORMTECH PIPING**

ROW LENGTH	ft.	65.4	12 UNITS PER ROW
NUMBER OF ROWS	No.	15	
WIDTH REQUIRED	FT.	72.75	
NO. OF CHAMBERS	No.	180.00	
EXACT NO. OF CHAMBERS	No.	175	
TOTAL LENGTH	FT.	1261	
INSTALLED STORAGE	CU. FT.	13407	
TOTAL VOLUME PROVIDED BY UNDERGROUND STORAGE =		13407.1	CU. FT.
TOTAL VOLUME PROVIDED		13407	CU. FT.
TOTAL VOLUME REQUIRED		12984	CU. FT.

**ORIFICE CALCULATION**

K =	1.486	Q =	0.473
N =	0.012	PVC	A = 0.19635
DENCH =	6.0	R =	0.125
THEN S =		0.60%	
USE 6\"/>			

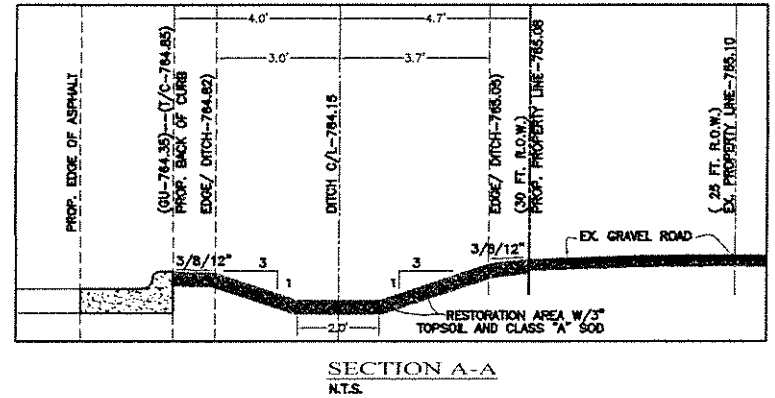
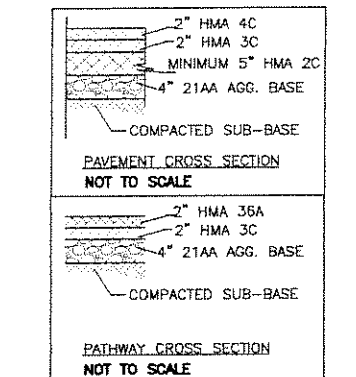
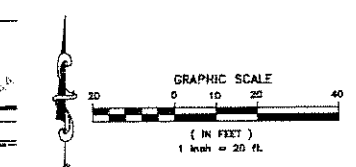
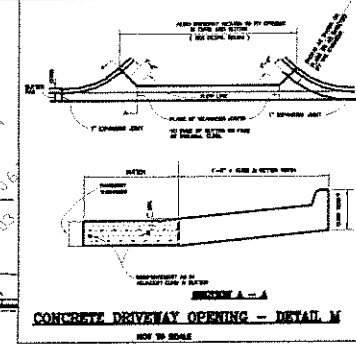
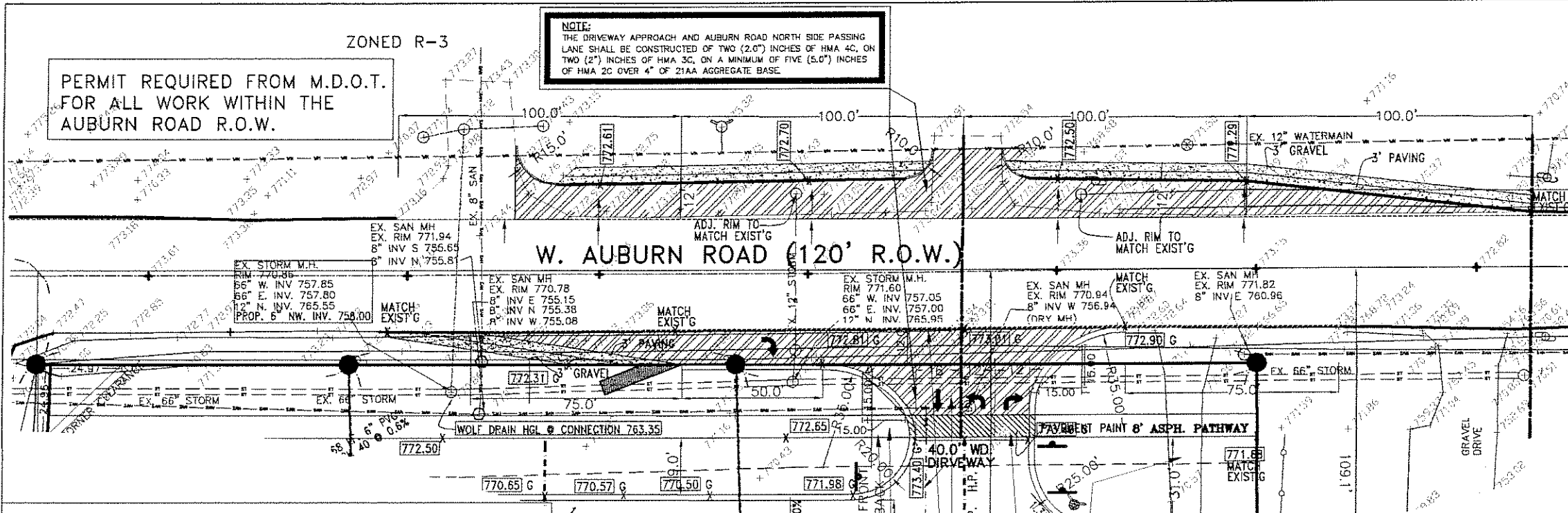
**STORM CALCULATION:**

FR M M.H.	TO M.H.	AREA (ACRES)	C	(C <sup>2</sup> ) ACRES	TOTAL (C <sup>2</sup> A) ACRES	T TIME MIN	I INCH PER HOUR	Q=CIA cfs	DIA OF PIPE INC	SLOPE %	LEN GTH OF PIPE	CAPACI TY OF SEWER C.F.S	VE. FULL FLOW FT/S	TIME OF FLOW MIN	CAPA CITY OF SEWER	RIM ELEV. UPPER ELBV	INVERT ELEV. UPPER ELBV	RIM - H.G.L. UPPER ELBV	RIM-PIPE CROWN UPPER ELBV	LOWER ELBV	LOWER ELBV	LOWER ELBV	
6	7	0.38	0.78	0.30	0.30	15.00	4.47	1.32	12	0.33	49	2.04	2.60	0.31	2.04	764.35	764.50	760.17	760.01	3.28	3.59	3.18	3.49
7	4	0.05	0.3	0.01	0.31	15.31	4.44	1.37	15	0.24	8.5	3.14	2.56	0.06	3.14	764.50	766.05	760.01	759.99	3.37	4.94	3.24	4.82
1	2	0.73	0.63	0.46	0.46	15	4.47	2.04	12	0.68	37	2.94	3.74	0.16	2.94	764.50	763.50	759.60	759.35	4.00	3.25	3.9	3.15
2	3	0.48	0.6	0.36	0.84	15.16	4.45	3.78	16	0.28	145	5.53	3.13	0.77	5.53	763.50	765.84	759.35	758.95	2.80	5.34	2.65	5.19
3	4	0.44	0.48	0.21	1.06	15.94	4.37	4.61	18	0.21	100	4.83	2.73	0.61	4.83	765.64	766.06	758.95	758.74	5.34	5.97	5.19	5.82
4	5	0.42	0.76	0.32	1.38	16.55	4.30	5.92	24	0.26	79	11.97	3.81	0.35	11.97	766.06	768.20	758.74	758.52	5.52	7.88	5.32	7.66
5	8	0.00	0	0.00	1.69	16.89	4.26	7.18	24	0.24	8.5	11.00	3.50	0.04	11.00	768.20	768.20	758.52	758.50	7.88	7.90	7.68	7.70

ZONED R-3

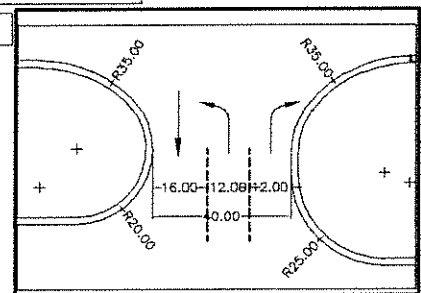
PERMIT REQUIRED FROM M.D.O.T.  
FOR ALL WORK WITHIN THE  
AUBURN ROAD R.O.W.

NOTE:  
THE DRIVEWAY APPROACH AND AUBURN ROAD NORTH SIDE PASSING  
LANE SHALL BE CONSTRUCTED OF TWO (2") INCHES OF HMA 4C, ON  
TWO (2") INCHES OF HMA 3C, ON A MINIMUM OF FIVE (5.0") INCHES  
OF HMA 2C OVER 4" OF 21AA AGGREGATE BASE.

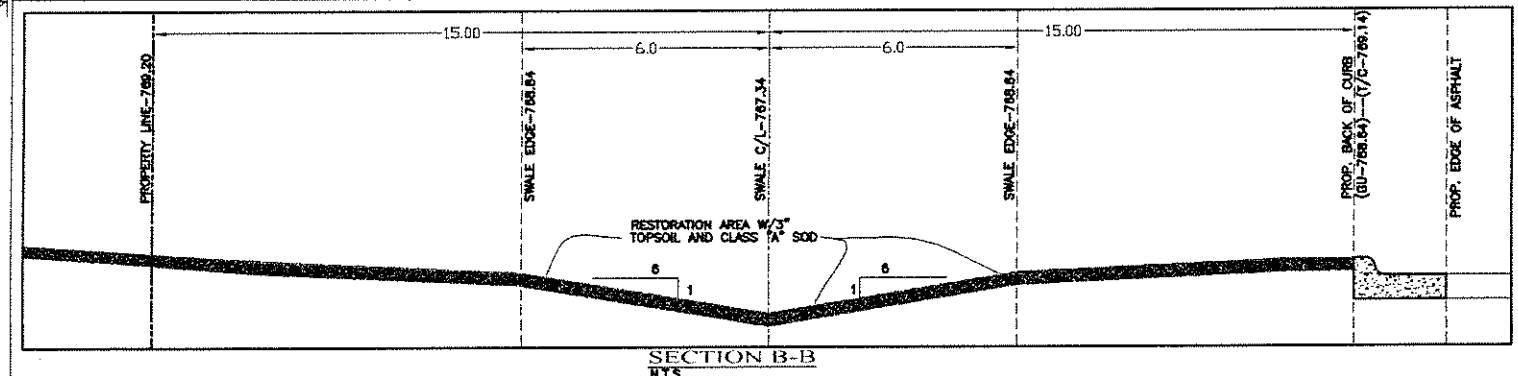
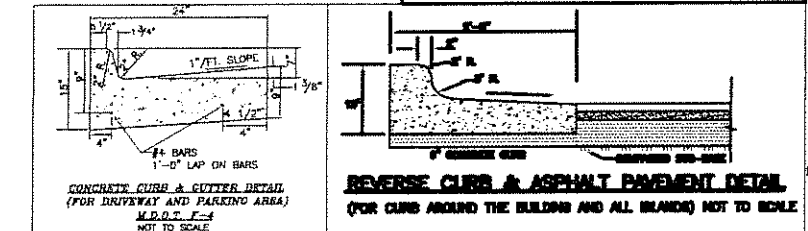
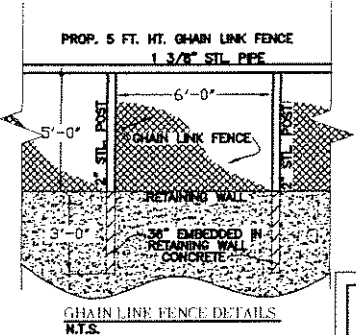
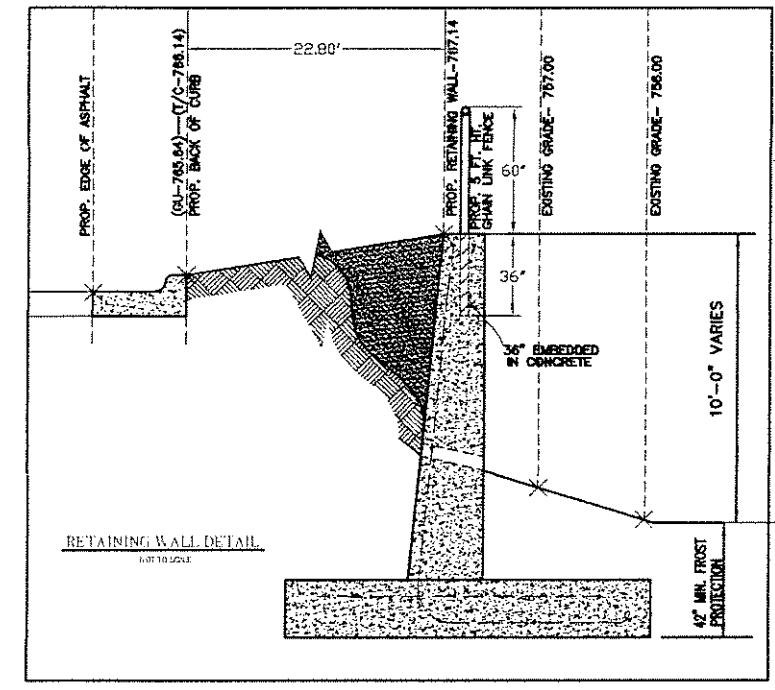


770.32 PVT  
PLACE 1/2\"/>

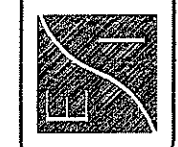
REMOVE THE EXISTING GRAVEL ROAD / SHOULDER  
DR AS DIRECTED BY COUNTY ENGINEER.  
PLACE 8\"/>



- PAVEMENT NOTES :
- All work in the right-of-way of Auburn Road under the jurisdiction of the MDOT is subject to their review, approval, standards and specifications.
  - The proposed soils shall be 2\"/>
  - Proposed on-site curb shall be F4 concrete curb and gutter (see details).
  - Taper proposed curbs to 0' height at the intersection of all existing and/or proposed soils.
  - It shall be the contractor's responsibility to verify and/or obtain any information necessary regarding the presence of underground utilities on the project.
  - Standard utility trench bedding and back fill Trench B shall conform to Oakland County Trench-B for utilities located at least five(5) feet outside the edge of existing or proposed pavement or sidewalk. Trenches may be used.
  - Contractor shall notify to City of Rochester Hills department of public works 48 hours prior to the start of construction.
  - Testing and inspection of all materials and construction is required at the expense of the contractor.
  - Match the construction joints of the proposed pavement with existing pavement or as directed by the county engineer.
  - Provide min. 18\"/>
  - Place 1\"/>
  - The slope of the drive approaches should not exceed 6.0%



CONSULTING ENGINEERS  
3230 SCHOENKRAFT ROAD  
LIVONIA, MICHIGAN 48150  
PH: (313) 624-7326  
FAX: (313) 624-7328

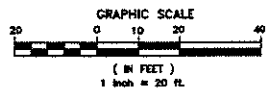
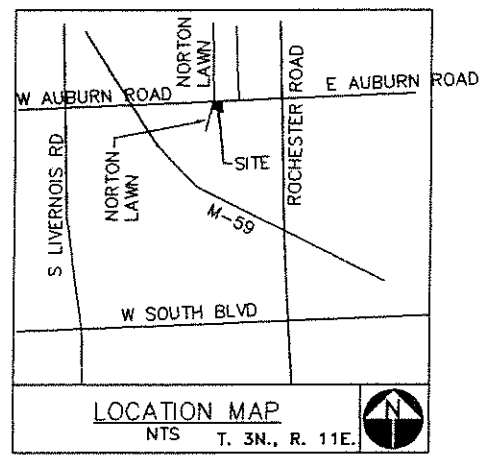
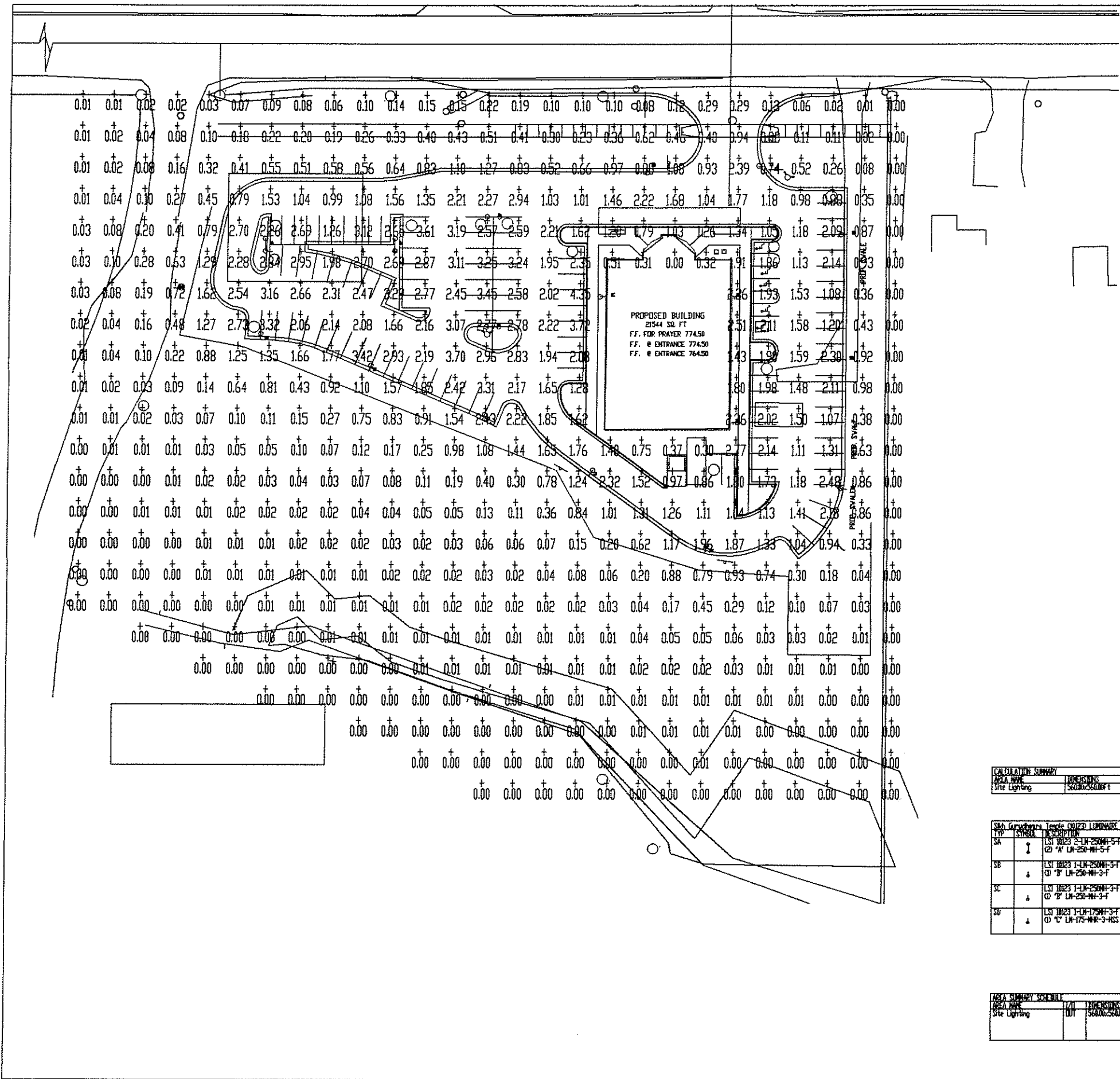


ENGINEERING SERVICES, INC.  
CIVIL, ARCHITECTURE  
ENVIRONMENTAL, GEOTECH, SURVEYING.

TITLE  
**APPROACH  
DETAIL**

REV.	DATE	DESCRIPTION	BY	APP'D.
1	11/15/2018	AS PER CITY COMMENTS ON 11/12/2018		
2	11/15/2018	AS PER COMMENTS FROM CITY OF ROCHESTER HILLS ON 11/15/2018		

PROJECT NO. 18-001  
SCALE 1\"/>



AREA NAME	DIMENSIONS	GRID / TYPE	LUPTS	SPR	GROUP	AVE	MAX	MIN	MAX/MIN(AVE/MIN)
Site Lighting	5600x5600ft	6x6 / F-F	556	2000	(4)	0.68	4.35	0.00	N/A / N/A

SYMBOL	DESCRIPTION	LAMP	LUMENS	MOUNTING/HANG/CAST	LF	QTY
SA	LSI 1823 2-LF-250W-3-F (2) 4" LF-250-W-3-F	(2) H250U	22000	SPRINKLER 30' Concise	0.72	4
SB	LSI 1823 1-LF-250W-3-F (1) 8" LF-250-W-3-F	(1) H250U	22000	SPRINKLER 30' Concise	0.72	6
SC	LSI 1823 1-LF-250W-3-F (1) 8" LF-250-W-3-F	(1) H250U	22000	Wall mounted 20' above grade	0.72	3
SD	LSI 1823 1-LF-175W-3-F (1) 4" LF-175-W-3-RSS	(1) H175/W/RT28	13000	SPRINKLER 30' Concise	0.72	4

AREA NAME	TYPE	DIMENSIONS	LUMENS / (AREA)	WATTS / SQ FT	FOY
Site Lighting	F-F	5600x5600ft	0.83		1

CONSULTING ENGINEERS  
3300 SCHOOLCRAFT ROAD  
LIVONIA, MICHIGAN 48150  
Ph: (734) 831-2300  
Fax: (734) 831-7326

ENGINEERING SERVICES, INC.

CIVIL, ARCHITECTURE ENVIRONMENTAL, GEOTECH, SURVEYING.

TITLE: SIKH GURDWARA  
271 W. AUBURN ROAD  
ROCHESTER HILLS, MICHIGAN

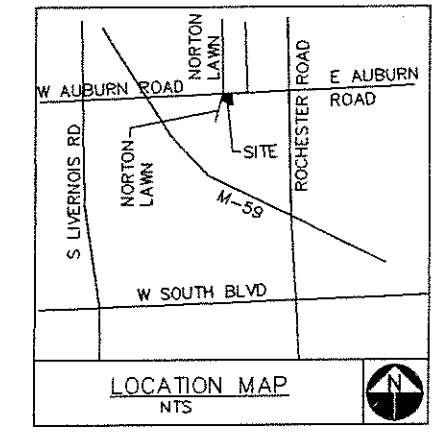
SCALE: 1"=40'  
DRAWN BY: SG  
APPROVED BY: HS

PROJ. NO. DATE: 11-18-05 DRAWING NO. L-01

## LIGHTING PLAN

SYN	DATE	REVISIONS	BY	APP'D
1	11/19/05	AS PER CITY COMMENTS ON 11/12/05		
		AS PER COMMENTS FROM CITY OF ROCHESTER HILLS ON 11.24.05		





**PLANT LIST**

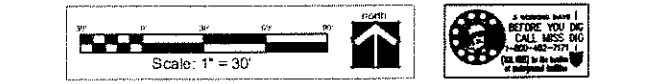
KEY QTY.	BOTANICAL NAME	COMMON NAME	SIZE
<b>ISLAND TREES</b>			
AC	2 <i>Amelanchier canadensis</i>	Serviceberry	2" cal. B&B
COI	4 <i>Celtis occidentalis</i>	Northern Hackberry	2" cal. B&B
GBI	3 <i>Ginkgo biloba</i> 'Fastigiata'	Fastigate Maidenhair Tree	2" cal. B&B
TCI	1 <i>Tilia cordata</i> 'Glenleven'	Glenleven European Linden	2" cal. B&B
HHR	189 <i>Hemerocallis</i> sp. 'Happy Returns'	Happy Returns Daylily	1 gal. pot, 18" o.c.
<b>BUFFER TREES &amp; GENERAL SITE PLANTING</b>			
Auburn Road			
ASB	15 <i>Acer saccharum</i> 'Legacy'	Legacy Sugar Maple	3-1/2" cal. B&B
CK	6 <i>Cornus kousa</i>	Kousa Dogwood	2" cal. B&B
COB	18 <i>Celtis occidentalis</i>	Northern Hackberry	3-1/2" cal. B&B
PS	3 <i>Pinus strobus</i>	White Pine	14" ht. B&B
SJS	27 <i>Spiraea japonica</i> 'Shirobana'	Shiobori Spirea	24" ht., 3 gal. pot
Norton Lawn Road			
COB	1 <i>Celtis occidentalis</i>	Northern Hackberry	3-1/2" cal. B&B
PA	10 <i>Picea abies</i>	Norway Spruce	10" ht. B&B
TCB	9 <i>Tilia cordata</i> 'Greenspire'	Greenspire Linden	3-1/2" cal. B&B
East Property Line			
PG	32 <i>Picea glauca</i>	White Spruce	12" ht. B&B
South Property Line			
CK	3 <i>Cornus kousa</i>	Kousa Dogwood	2" cal. B&B
CO	1 <i>Celtis occidentalis</i>	Northern Hackberry	3-1/2" cal. B&B
IV	30 <i>Ilex verticillata</i> 'Sparkleberry'	Sparkleberry Michigan Holly	30" ht., 5 gal. pot
LT	14 <i>Liriodendron tulipifera</i>	Tuliptree	3-1/2" cal. B&B
PG	39 <i>Picea glauca</i>	White Spruce	12" ht. B&B
General Site Plantings			
DG	18 <i>Deutzia gracilis</i>	Slender Deutzia	24" ht. B&B
JT	7 <i>Juniperus tamariscifolia</i>	Tamarac Juniper	24" spr., 3 gal. pot
TMH	8 <i>Taxus x media</i> 'Hicksii'	Hicks Yew	36" ht. B&B

**COST ESTIMATE**

TOTAL MATERIALS SPECIFIED:

1. Island trees and perennials			
* Deciduous Trees (2" cal.):	8	\$275	\$2,200.00
* Ornamental Trees:	2	\$250	\$500.00
* Perennials:	189	\$15	\$2,835.00
2. Buffer trees, shrubs, and perennials			
* Deciduous Trees (3 1/2" cal.):	54	\$450	\$24,300.00
* Ornamental Trees (2" cal.):	9	\$250	\$2,250.00
* Evergreen Trees (14" ht.):	3	\$650	\$1,950.00
* Evergreen Trees (12" ht.):	71	\$550	\$39,050.00
* Evergreen Trees (10" ht.):	10	\$500	\$5,000.00
* Deciduous Shrubs:	75	\$50	\$3,750.00
* Upright Evergreen Shrubs:	8	\$110	\$880.00
* Evergreen Shrubs:	7	\$50	\$350.00
* Sodded Lawn:	920 sq. yds.	\$2.50	\$2,300.00
* Shredded Bark:	72 cu. yds.	\$30	\$2,160.00
<b>TOTAL</b>			<b>\$87,525.00</b>

date: August 3, 2005  
 revised:  
 12-19-05 Revise for site plan changes & City review ltr. dated September 1, 2005.  
 3-7-06 Revise for site plan changes & City review ltr. dated January 9, 2006.  
 4-25-06 Revise for City review ltr. dated April 17, 2006.  
 5-22-06 Revise for site plan changes.  
 6-26-06 Revise for latest eng. site plan & City review ltr. dated June 1, 2006.  
 8-22-06 Revise for latest eng. site plan & City review ltr. dated July 25, 2006.



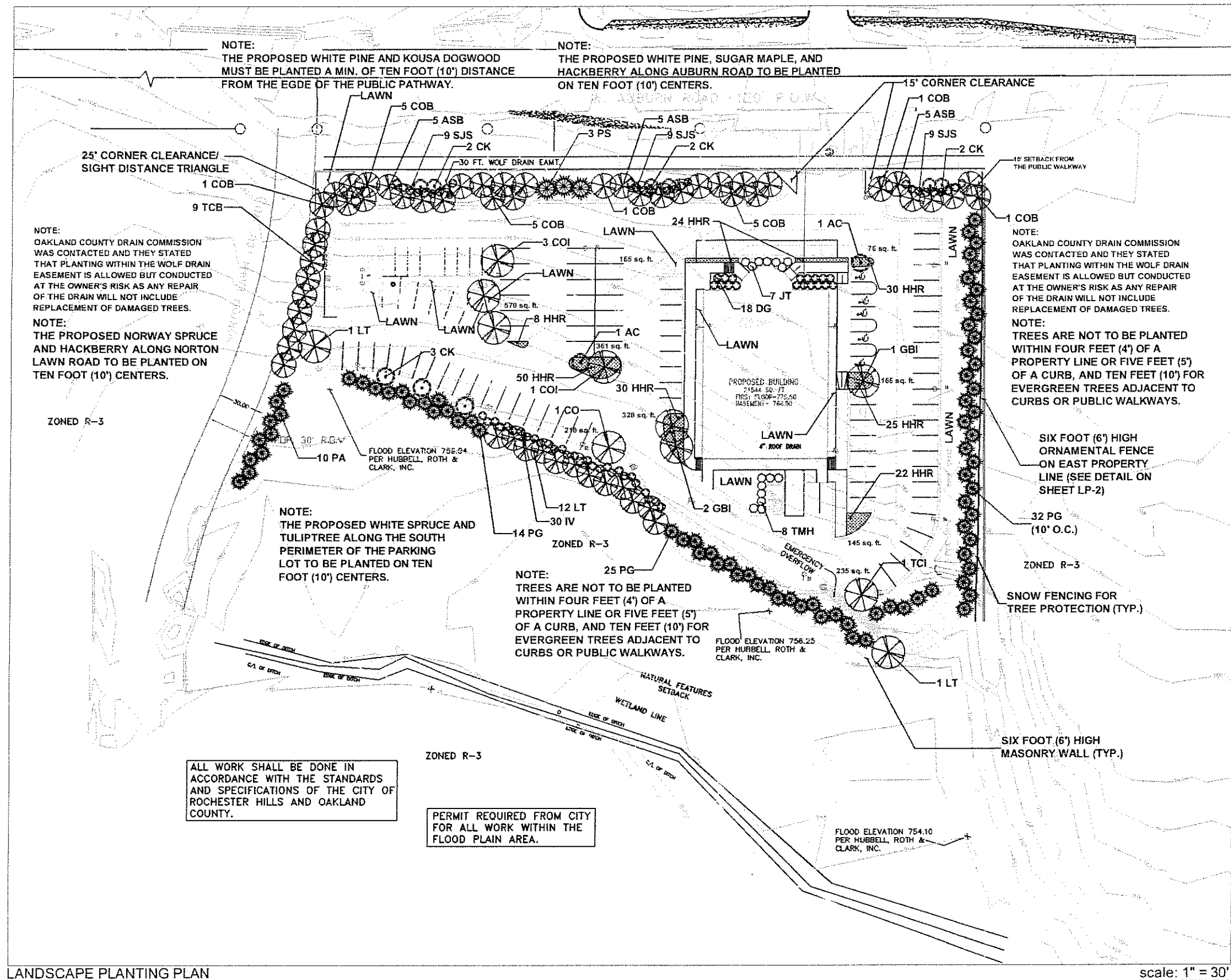
**LANDSCAPE PLAN FOR:**  
 ENGINEERING SERVICES, INC.  
 32300 Schoolcraft Road  
 Livonia, Michigan 48150  
 (734) 525-7330

**PROJECT LOCATION:**  
 SIKH GURDWARA  
 271 W. Auburn Road  
 Rochester Hills, Michigan

**LANDSCAPE PLAN BY:**  
 Nagy & Associates  
 17517 Ellen Drive  
 Livonia, Michigan 48152  
 (734) 462-2239

*John F. Nagy*

**LP - 1: LANDSCAPE PLANTING PLAN**  
 \* Base data provided by ENGINEERING SERVICES, INC.  
 CITY OF ROCHESTER HILLS FILE NO. 05-015



**LANDSCAPE PLANTING PLAN** scale: 1" = 30'

**PARKING LOT ISLAND REQUIREMENTS:**

- \* One hundred and fifty (150) sq. ft. of parking lot island area required for every ten (10) parking spaces
- \* One hundred and three (103) parking spaces require 1,650 square feet of parking lot island planters with five (5) parking lot island trees
- \* 103/10 = 10.3 = 11 x 150 sq. ft. = 1,650 sq. ft./300 = 5.5 trees = 6 trees
- \* Total number of parking lot island planters equals seven (7)
- \* Total parking lot island area provided: 2,256 sq. ft.
- \* Total island trees provided: 8 trees

**NOTE:**  
 \* See Sheet LP- 2 for landscape notes, planting details, tree protection fencing detail, and landscape construction details.

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF ROCHESTER HILLS AND OAKLAND COUNTY.

PERMIT REQUIRED FROM CITY FOR ALL WORK WITHIN THE FLOOD PLAIN AREA.

**NOTES:**

**LANDSCAPE REQUIREMENTS**

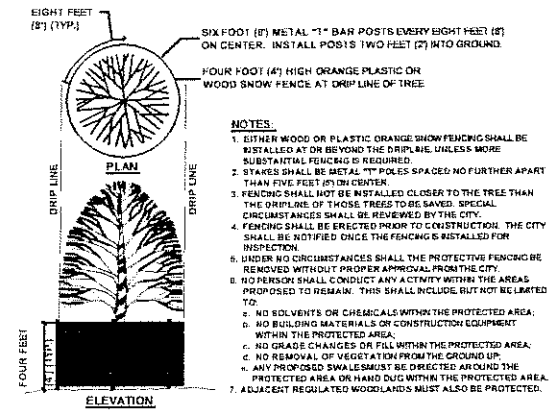
- The work shall consist of providing all necessary materials, labor, equipment, tools, and supervision required for the completion of the landscaping as shown on the plan.
- The plant materials shall conform to the type listed on the plant list. Sizes shall be the minimum stated on the plant list or larger. All measurements shall be in accordance with the latest edition of the *American Association of Nurserymen Standards for Nursery Stock*.
- The plant material shall be nursery grown and inspected by the Owner's representative before planting. The Owner's representative reserves the right to reject any plant material at any time.
- Plants designated "B&B" shall be balled and burlapped with firm balls of earth.
- The Contractor is responsible for planting the materials at the correct grades and spacing. The plants shall be oriented to give the best appearance.
- When the plan has been properly set, the pit shall be backfilled with a topsoil mixture, gradually filling, watering, and sealing with water. After planting, mulch as indicated in the planting detail with shredded bark of a natural color. All planting beds shall be mulched with a minimum of four inches (4") of shredded bark.
- All plant materials shall be pruned and injuries repaired. The amount of pruning shall be limited to the removal of dead or injured limbs and to compensate for the loss of roots from transplanting. Cuts should be flush, leaving no stubs. Cuts over three quarters of an inch (3/4") shall be painted with tree paint. Shrubs along the site perimeter shall be allowed to grow together in a natural form.
- The Contractor agrees to guarantee all plant material for a period of two (2) years from the date of acceptance by the City of Rochester Hills Landscape Architect. At the end of the warranty period, the City of Rochester Hills Landscape Architect reserves the right of final inspection and approval. This guarantee includes the furnishing of new plants, labor, and materials. All replacement plantings shall be guaranteed for a period of one (1) year.
- Topsoil shall be friable, fertile soil of a clay loam character containing at least five percent (5%) but not more than twenty percent (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.
- The seed mixture shall consist of the following types and proportions: Kentucky Blue Grass blend "Baron/Star/Adelphi" @ sixty percent (60%), Chewbacca @ twenty-five percent (25%), Creeping Red Fescue @ ten percent (10%), and Perennial Ryegrass @ five percent (5%). Weed control shall not exceed one percent (1%). The mix shall be applied at a rate of 200 pounds per acre.
- Sod shall be two (2) year old "Baron/Star/Adelphi" Kentucky Blue Grass blend grown in a sod nursery on loam soil.
- Elevate the rootballs of Yew shrubs in clay soils for improved drainage.
- Edging shall consist of Perma-Loc black aluminum edging.
- An automatic, underground irrigation system shall be provided for all landscape areas.
- If fences and/or signs are proposed, separate permits are required for each.
- All landscape work must be completed prior to issuance of a certificate of occupancy from April 15 through December 1.

**CITY OF ROCHESTER HILLS LANDSCAPE NOTES**

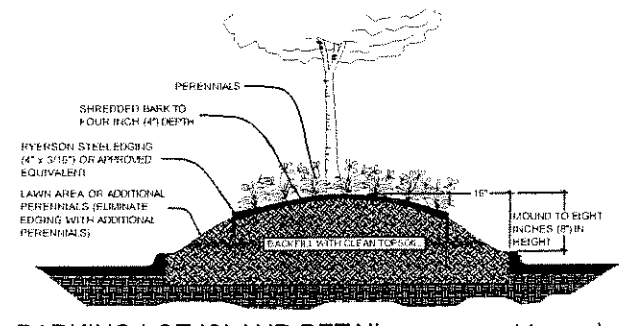
- Prior to the release of the Performance Bond, the City of Rochester Hills Landscape Architect and Forestry Division must inspect all landscape plantings including but not limited to existing trees, replacement trees, buffer plantings, and parking lot islands. The right-of-way will be inspected by the Forestry Division to identify any planting, 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.
- All trees and shrubs must be planted at least ten feet (10') from the edge of a public roadway. Shade trees and shrubs must be planted at least five feet (5') from the edge of a public walkway. Evergreen and ornamental trees must be planted at least ten feet (10') from the edge of a public walkway. All trees and shrubs must be planted at least ten feet (10') from any fire hydrant. Shade and evergreen trees must be planted at least fifteen feet (15') from the nearest overhead wire and at least ten feet (10') from the nearest underground utility. Trees are not to be planted within four feet (4') of a property line or within five feet (5') of a curb (ten feet (10') for evergreen trees adjacent to curbs or public walkways).
- 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 twenty-five feet (25') 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 fifteen feet (15') from their point of intersection.
- Prior approval is required to plant any tree or shrub in the public right-of-way.
- 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.
- 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.
- Replacement trees may not be planted within the drip line of existing trees.
- All landscape areas are measured from the back of curb.

**NOTES FOR EXISTING TREES:**

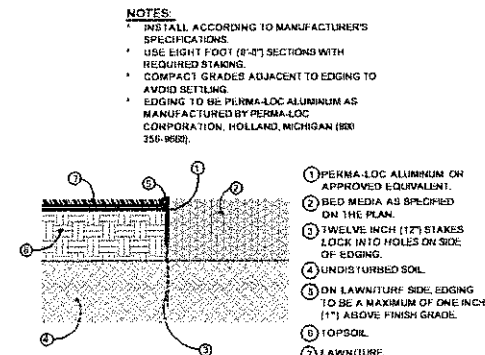
- The tree protection fencing (tpf) shall be erected per the plans approved by the City of Rochester Hills Planning Department. The TPF must be in place and be inspected by the City of Rochester Hills Landscape Architect prior to the start of any earthwork or construction operations. It is the Developer's responsibility to contact the City Planning Department at 1-248-655-4660 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 comes 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 1-248-655-4660 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 1-248-655-4660 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 1-248-655-4660 to schedule this inspection.
- The Tree Conservation Ordinance prohibits any construction or development activities within the drip line of any regulated tree not approved for removal, 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 of tree 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, or rope to an existing tree 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 of any tree designated for preservation.
- If tree protection cannot be maintained for a tree throughout the entire period required, the replacement of that tree will be required on an inch for inch basis prior to the issuance of a Certificate of Occupancy.
- Regulated trees located off-site on adjacent properties that may be affected by construction operations must be protected as defined herein.
- The TPF shall consist of four foot (4') high orange snow fencing to be installed around the drip line of all trees designated to be saved. This fencing shall be supported by six foot (6') metal T-bar posts five feet (5') on center and driven a minimum of twenty-four inches (24") into the ground. The TPF fencing shall remain upright and securely in place for the required time as specified above.
- Existing trees within fifteen feet (15') of buildings and roads are to be pruned by a professional tree contractor.



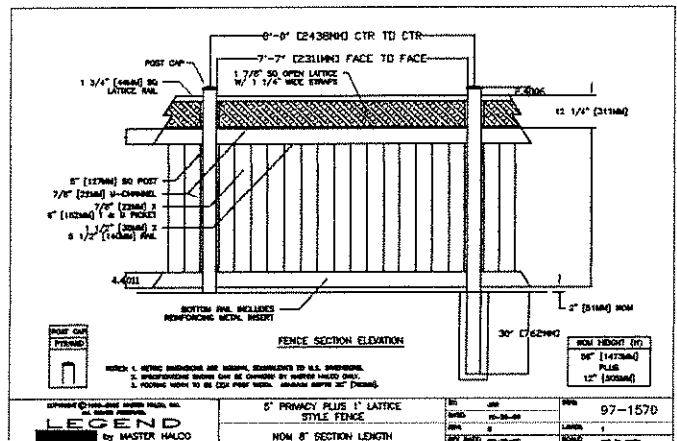
**TREE PROTECTION FENCING DETAIL n.t.s.**



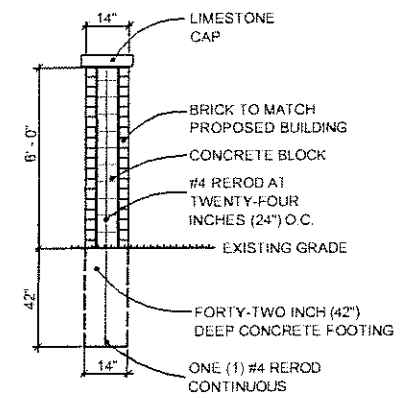
**PARKING LOT ISLAND DETAIL not to scale**



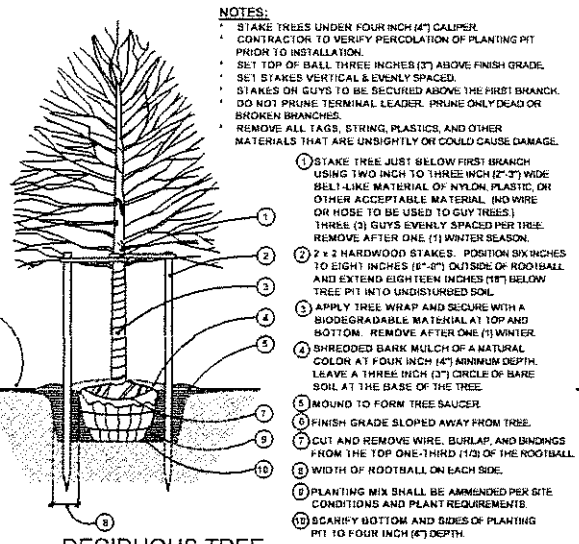
**LANDSCAPE EDGING DETAIL n.t.s.**



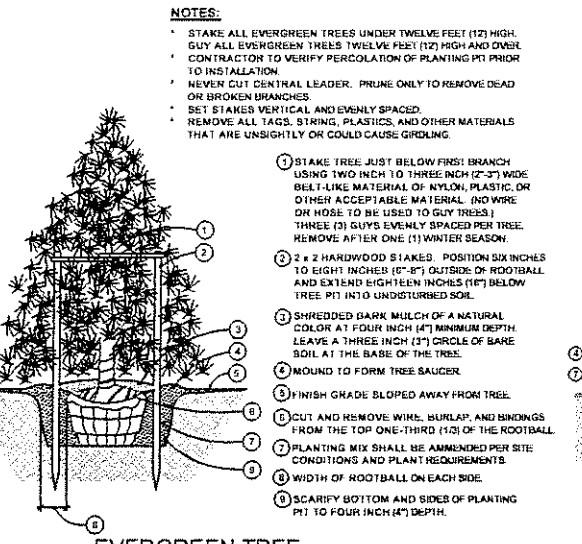
**VINYL ORNAMENTAL FENCE DETAIL not to scale**



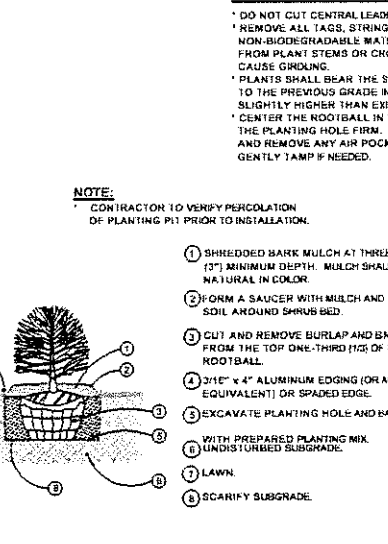
**MASONRY WALL DETAIL n.t.s.**



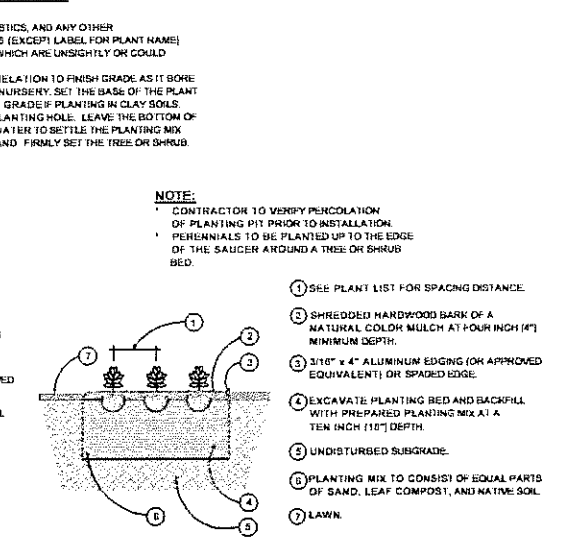
**DECIDUOUS TREE PLANTING DETAILS**



**EVERGREEN TREE PLANTING DETAILS**



**SHRUB PLANTING DETAILS**



**ANNUAL / PERENNIAL / GROUNDCOVER PLANTING DETAILS**

**NOTE:**  
\* See Sheet LP- 1 for planting plan, plant list, cost estimate, parking lot island calculation, and location map.



date: August 3, 2005  
revised:  
12-19-05 Revise for site plan changes & City review ltr. dated September 1, 2005  
3-7-06 Revise for site plan changes & City review ltr. dated January 9, 2006  
4-25-06 Revise for City review ltr. dated April 17, 2006  
6-26-06 Revise for City review ltr. dated June 1, 2006

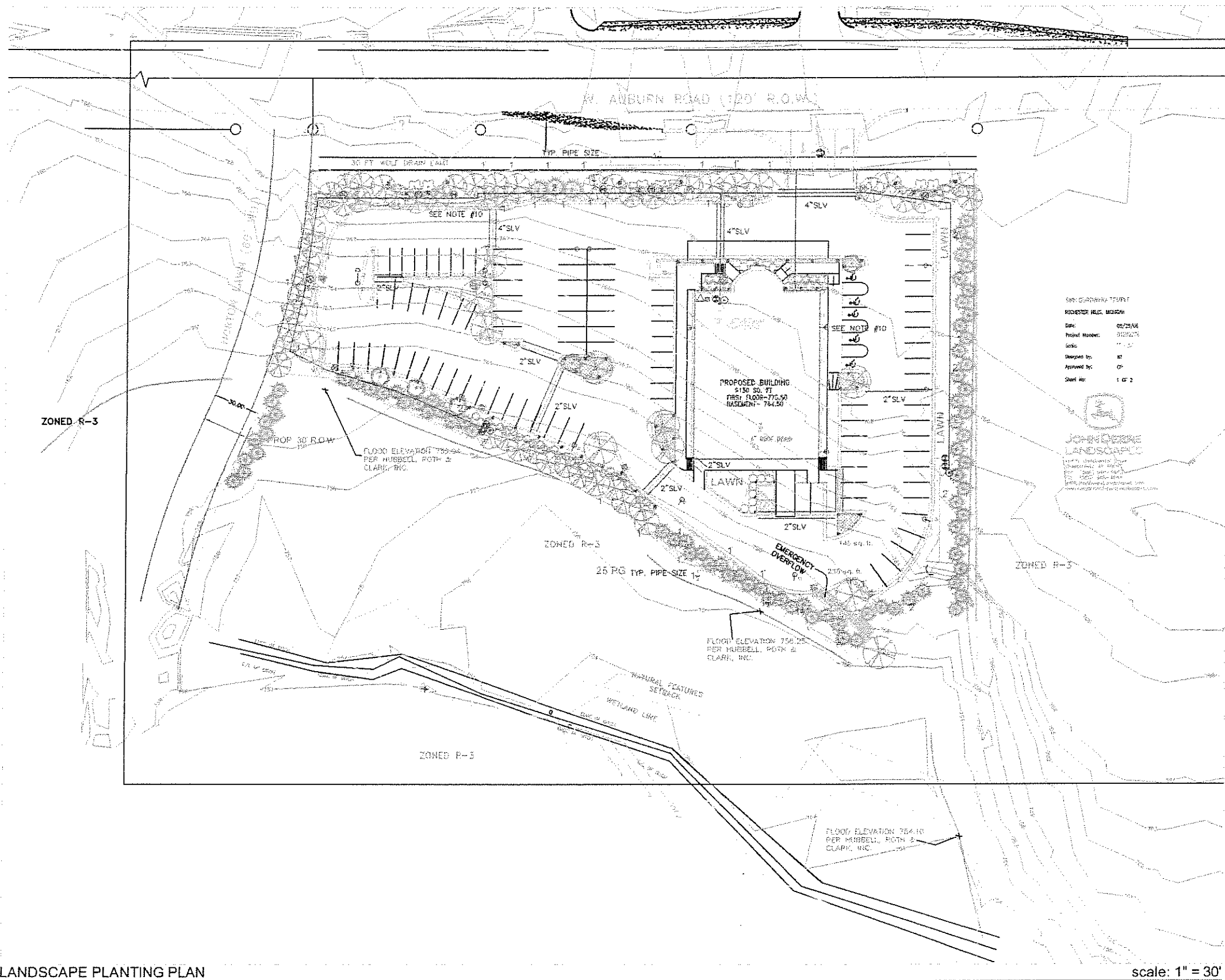
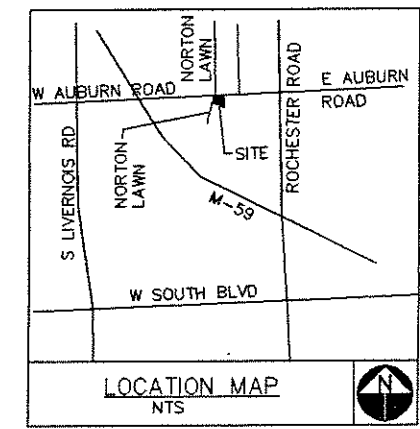
**LANDSCAPE PLAN FOR: ENGINEERING SERVICES, INC.**  
32300 Schoolcraft Road  
Livonia, Michigan 48150  
(734) 525-7330

**PROJECT LOCATION: SIKH GURDWARA**  
271 W. Auburn Road  
Rochester Hills, Michigan

**LANDSCAPE PLAN BY:**  
Nagy & Associates  
17517 Ellen Drive  
Livonia, Michigan 48152  
(734) 462-2239



**LP - 2: LANDSCAPE NOTES & DETAILS**  
\* Base data provided by ENGINEERING SERVICES, INC.



Sikh GURDWARA TOWNSHIP  
ROCHESTER HILLS, MICHIGAN

Date: 08/29/06  
Project Number: 0123275  
Scale: 1" = 30'  
Designed by: JT  
Approved by: CP  
Sheet No: 1 of 2

**NOTE:**  
\* See Sheet IR- 2 for irrigation notes and details.  
\* See Sheet LP-1 and LP- 2 for overall planting and landscape notes and details.

date: August 29, 2006  
revised:



**IRRIGATION PLAN FOR:**  
**ENGINEERING SERVICES, INC.**  
32300 Schoolcraft Road  
Livonia, Michigan 48150  
(734) 525-7330

**PROJECT LOCATION:**  
**SIKH GURDWARA**  
271 W. Auburn Road  
Rochester Hills, Michigan

**IRRIGATION PLAN BY:**  
John Deere Landscapes  
46421 Continental Drive  
Chesterfield Township, Michigan 48047  
(586) 948-4643

**IR - 1: IRRIGATION PLAN**  
\* Base data provided by ENGINEERING SERVICES, INC.  
CITY OF ROCHESTER HILLS FILE NO. 05-015

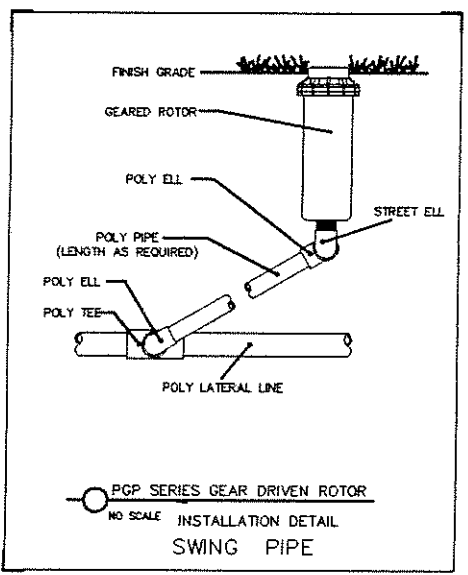
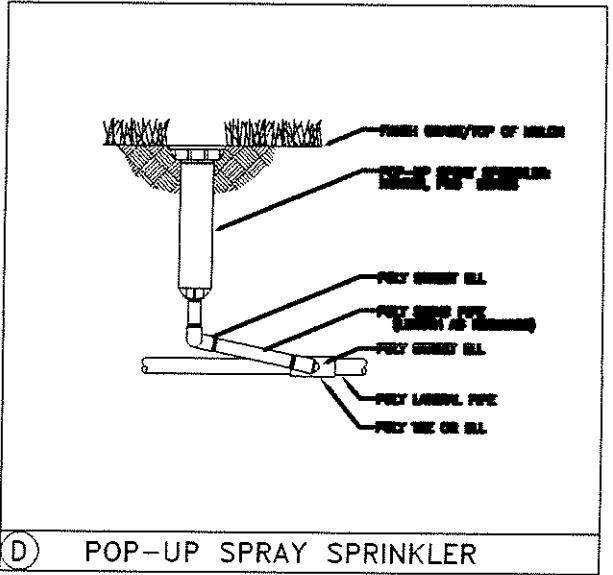
LANDSCAPE PLANTING PLAN

scale: 1" = 30'

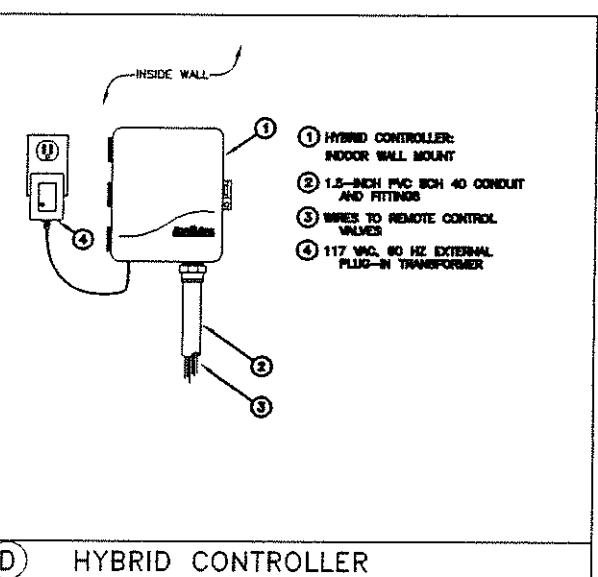
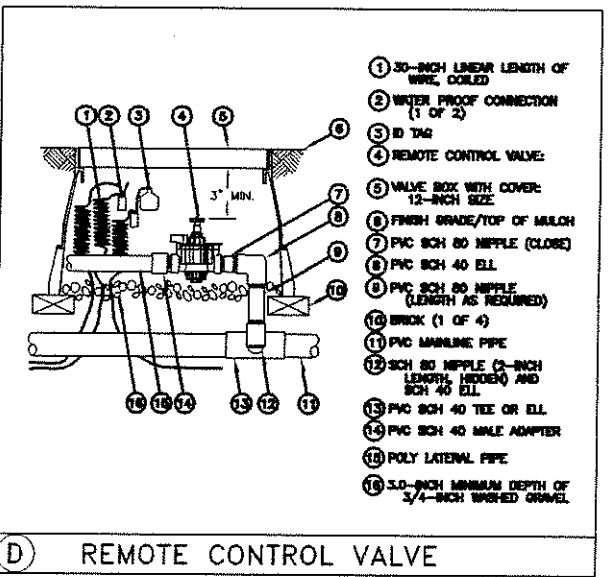
IRRIGATION PLAN

SCALE: 1" = NTS

DESIGNED BY: D.K.  
CHECKED BY: C.P.  
APPROVED BY: C.P.



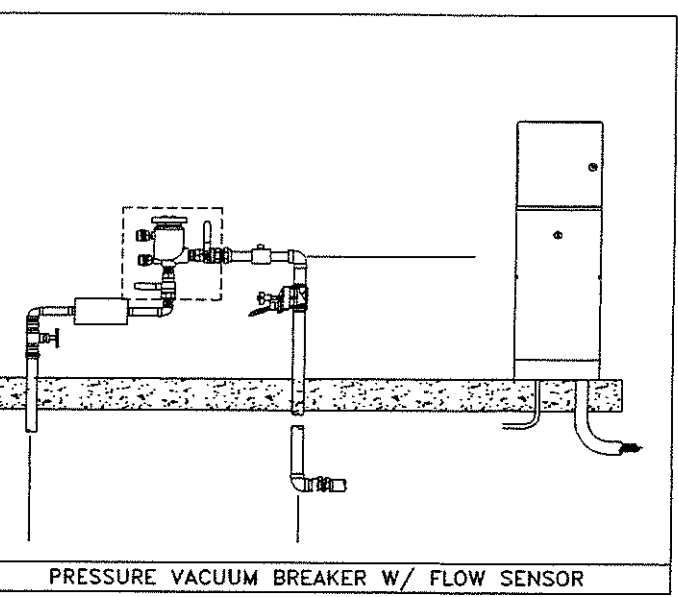
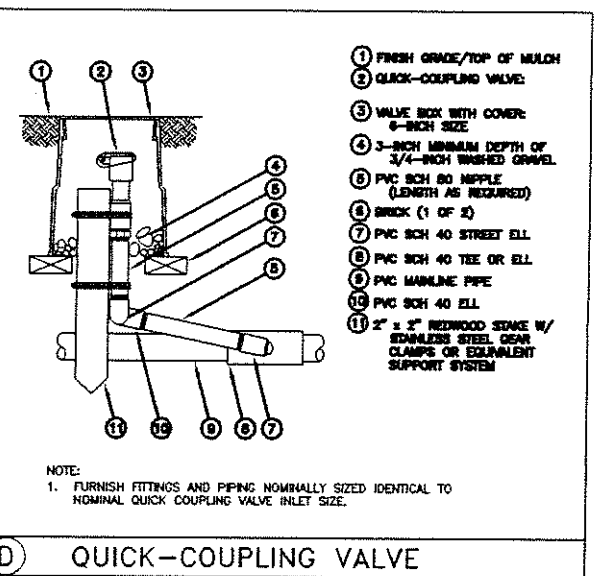
- IRRIGATION LEGEND
- HUNTER, PGP GEAR DRIVEN ROTOR, W/ #7 NOZZLE
  - ⊖ HUNTER, PGJ GEAR DRIVEN ROTOR, W/ #2 NOZZLE
  - ⊙ HUNTER, PRO SERIES, 4" POP UP SPRAY, W/ 15A NOZZLE
  - ⊙ HUNTER, PRO SERIES, 4" POP UP SPRAY, W/ 10A NOZZLE
  - ⊙ HUNTER, PRO SERIES, 4" POP UP SPRAY, W/ 15SST NOZZLE
  - HUNTER, PRO SERIES, 12" POP UP SPRAY, W/ 15A NOZZLE
  - HUNTER, PRO SERIES, 12" POP UP SPRAY, W/ 10A NOZZLE
  - HUNTER, PRO SERIES, 12" POP UP SPRAY, W/ 15SST NOZZLE
  - ⊕ HUNTER, QCV100, QUICK COUPLING VALVE 1"
  - ⊗ HUNTER, PGV SERIES, ELECTRIC VALVE, 1.5"
  - ⊗ HUNTER, PGV SERIES, ELECTRIC VALVE, 1"
  - ⊠ HUNTER, ICC 1600PL, ICC SERIES, AUTOMATIC CONTROLLER
  - △ HUNTER, 502P, MINICLIK, AUTOMATIC RAIN SENSOR
  - TAP LOCATION, 1.5"
  - ▼ FEBCO, 765150P, PRESSURE VACUUM BREAKER, 1.5"
  - PVC MAINLINE, CLASS 200, BE, 18" BURY, SIZE 2"
  - POLY LATERAL, 100 PSI, NSF, 12" BURY, SIZE AS SHOWN
  - PVC SLEEVING, CLASS 200, BE, 18" BURY, SIZE AS SHOWN



LATERAL PIPE SIZE POLY LATERAL

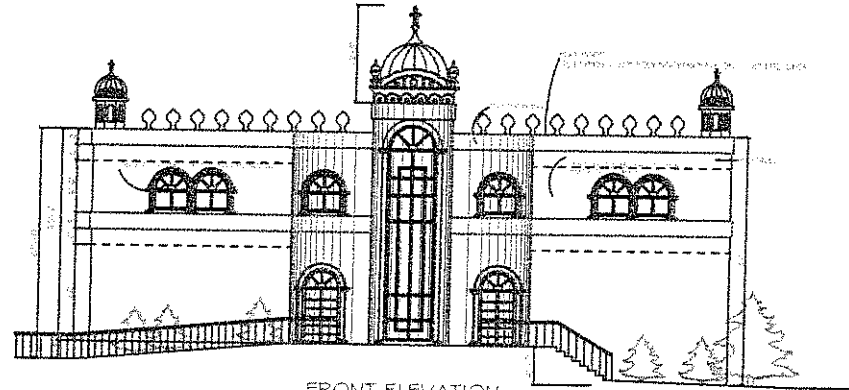
1"	1 - 12GPM
1.5"	13 - 30 GPM
2"	31 - 50 GPM

- IRRIGATION SPECIFICATIONS
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 40 GPM @ 55 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.

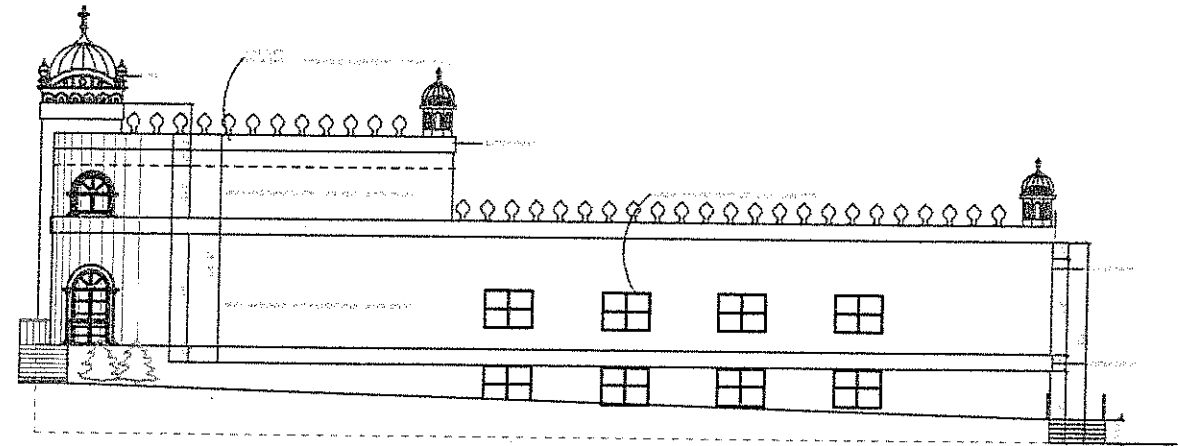




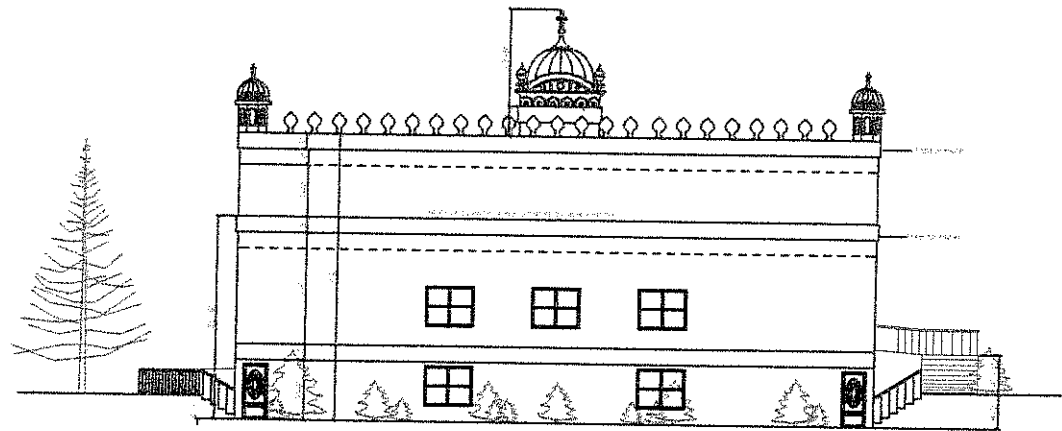
# PROPOSED ELEVATIONS AND SECTIONS FOR GURDWARA AT ROCHESTER HILLS



FRONT ELEVATION

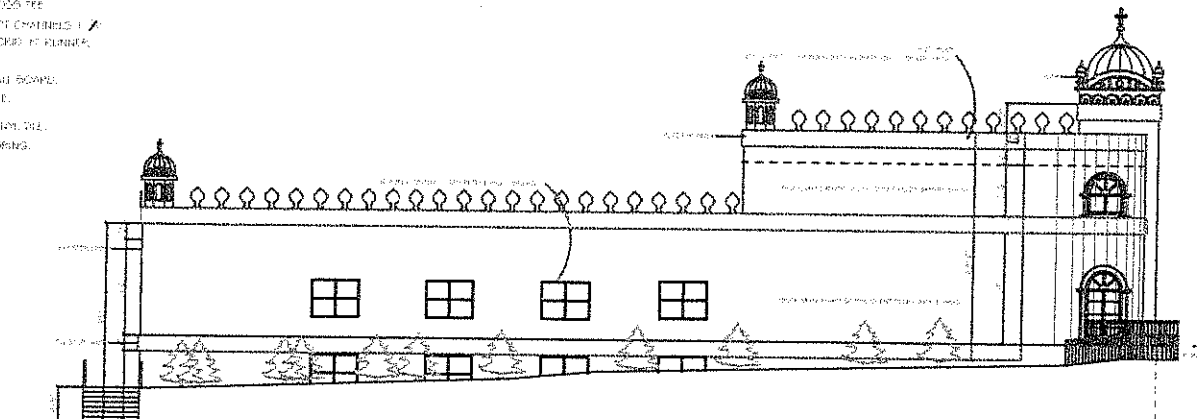


SIDE ELEVATION

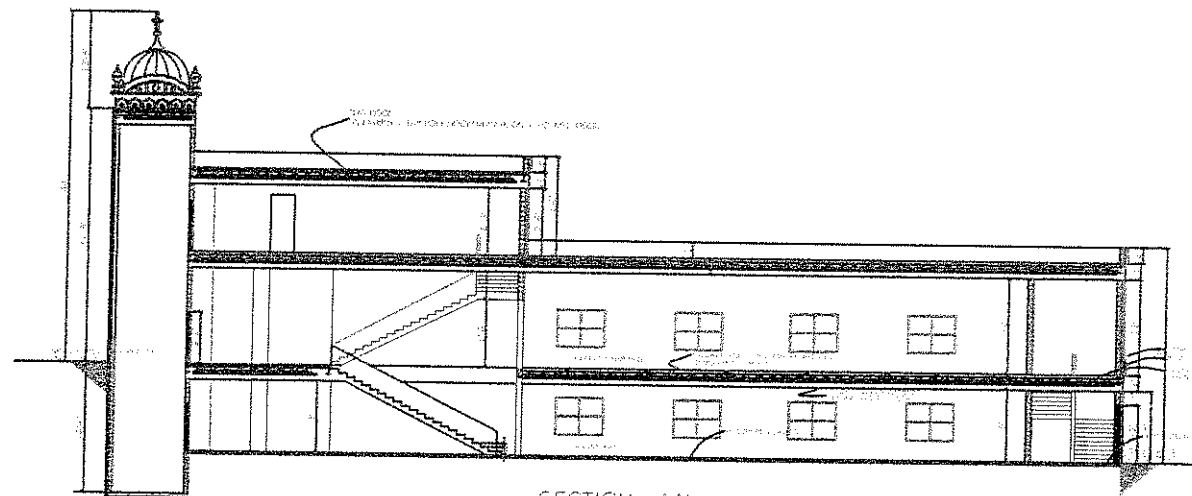


BACK ELEVATION

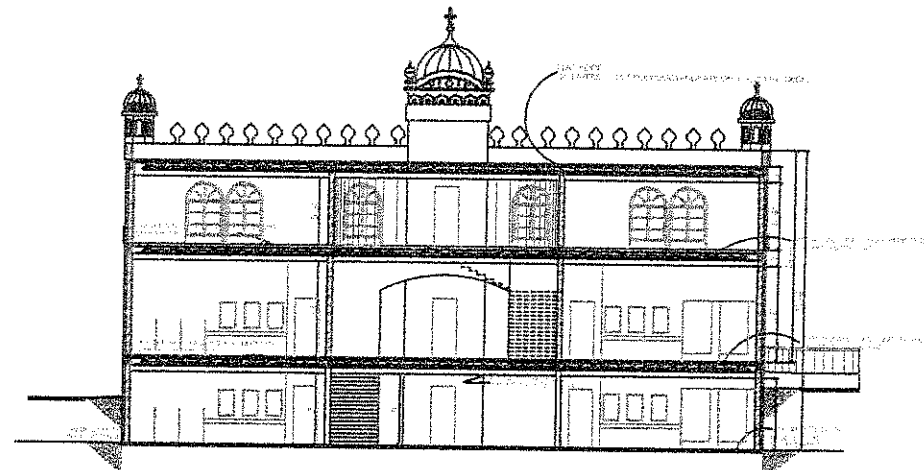
- FINISHES:
- (1) CHINA AGGREGATE DISPERSED IN PLASTER
  - (2) CHINA GYPSUM
  - (3) CHINA GYPSUM
  - (4) PLASTER
  - (5) MARBLE FINISH
  - (6) ENAMEL CROSS TIE
  - (7) WHITE PORTLAND CEMENT
  - (8) CONCRETE CURB AT PLANK
  - (9) WOOD
  - (10) STONE WALL BOARD
  - (11) CHINA TILE
  - (12) REINFORCED CONCRETE
  - (13) WOOD FLOORING
  - (14) CARPET



SIDE ELEVATION



SECTION - AA'

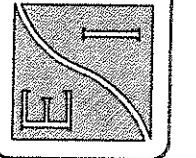


SECTION - BB'

CONSULTING ENGINEERS  
3330 SCHROEDER ROAD  
LYONNA, MICHIGAN 48150  
PH: (313) 828-7330  
FAX: (313) 828-7289

ENGINEERING SERVICES, INC.

CIVIL, ARCHITECTURE  
ENVIRONMENTAL, GEOTECH, SURVEYING.



PROPOSED ELEVATIONS AND SECTION

PROJ. NO. \_\_\_\_\_ SCALE: 1/4" = 1'-0" DATE: \_\_\_\_\_

DRAWING NO.: A-2

SIKH GURDWARA  
271 W. AUBURN ROAD  
ROCHESTER HILLS MI

NO.	DATE	DESCRIPTION	BY	APP'D