

SITE SUMMARY
SITE ZONING: B3-SHOPPING CENTER DISTRICT
EXISTING SITE AREA: 5.098 ACRES (INCLUDING 60' ROCHESTER ROAD R.O.W.)
APPROXIMATE AREA OF PROJECT (SITE) AREA OF IMPACT: 4.67 ACRES
APPROXIMATE AREA OF EARTH DISRUPTION: 3.60 ACRES

PARKING CALCULATIONS
PARKING REQUIREMENTS
BASED ON PROJECTED USE INFORMATION PROVIDED BY THE OWNER, THE SITE PLAN SHOWN PROVIDES THE FOLLOWING PARKING SPACES:
• 32 CUSTOMER PARKING SPACES (MIN. 10'x18' DIMENSIONS)
• 80 EMPLOYEE PARKING SPACES (MIN. 9'x18' DIMENSIONS)
• 213 VEHICLE DISPLAY PARKING SPACES (MIN. 9'x18' DIMENSIONS)
• 68 VEHICLE DISPLAY PARKING SPACES - COMPACT CARS (MIN. 9'x18' DIMENSIONS)

FIRE DEPARTMENT NOTES
1. A KNOX KEY SYSTEM SHALL BE INSTALLED IN A LOCATION APPROVED BY THE FIRE CODE OFFICIAL. ORDERING INFORMATION IS AVAILABLE FROM THE KNOX COMPANY AT KNOXBOOK.COM.
2. FIRE LANES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH THE FIRE LANE SIGNS SPACED NOT MORE THAN 100 FEET APART. FIRE LANE SIGNS SHALL READ: "NO STOPPING, STANDING, PARKING, FIRE LANE", AND SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
3. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IFC 2006 CHAPTER 14. 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.

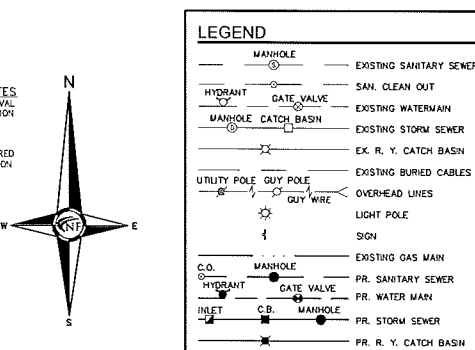
SIGN NOTE
ALL MONUMENT SIGNS AND OTHER SIGNS PROPOSED ON THIS PLAN MUST MEET SECTION 138-6.304 AND CHAPTER 134 OF THE CITY CODE OF ORDINANCES AND BE APPROVED UNDER A SEPARATE PERMIT ISSUED BY THE BUILDING DEPARTMENT.

PARKING COUNT LEGEND

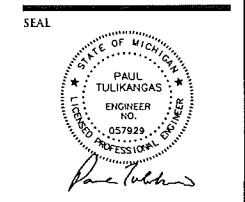
(1)	PROPOSED CUSTOMER PARKING
(2)	PROPOSED EMPLOYEE PARKING
(3)	PROPOSED DISPLAY PARKING
(4)	PROPOSED DISPLAY PARKING (COMPACT CARS)

LEGEND

(Symbol)	MANHOLE	EXISTING SANITARY SEWER
(Symbol)	HYDRANT	SAN. CLEAN OUT
(Symbol)	MANHOLE CATCH BASIN	EXISTING WATERMAIN
(Symbol)	UTILITY POLE	EXISTING STORM SEWER
(Symbol)	QUI WIRE	EX. R. Y. CATCH BASIN
(Symbol)	QUI WIRE	EXISTING BURIED CABLES
(Symbol)	QUI WIRE	OVERHEAD LINES
(Symbol)	QUI WIRE	LIGHT POLE
(Symbol)	QUI WIRE	SIGN
(Symbol)	C.O. MANHOLE	EXISTING GAS MAIN
(Symbol)	HYDRANT	PR. SANITARY SEWER
(Symbol)	INLET	PR. WATER MAIN
(Symbol)	C.B. MANHOLE	PR. STORM SEWER
(Symbol)	(Symbol)	PR. R. Y. CATCH BASIN
(Symbol)	(Symbol)	PROPOSED LIGHT POLE



CITY OF ROCHESTER HILLS
PROJECT #99-027.2



PROJECT
Fox Automotive
755 S. Rochester Road
Rochester Hills, MI

CLIENT
Fox Automotive
Rochester Hills, MI
Contact:
John Fox
johnfox@autobyfox.com
(248) 651-7000 (T)
(248) 651-8089 (F)

PROJECT LOCATION
Part of the SW 1/4
of Section 14
T. 3N, R. 11E
Rochester Hills,
Oakland County,
Michigan

SHEET
Overall Site Plan

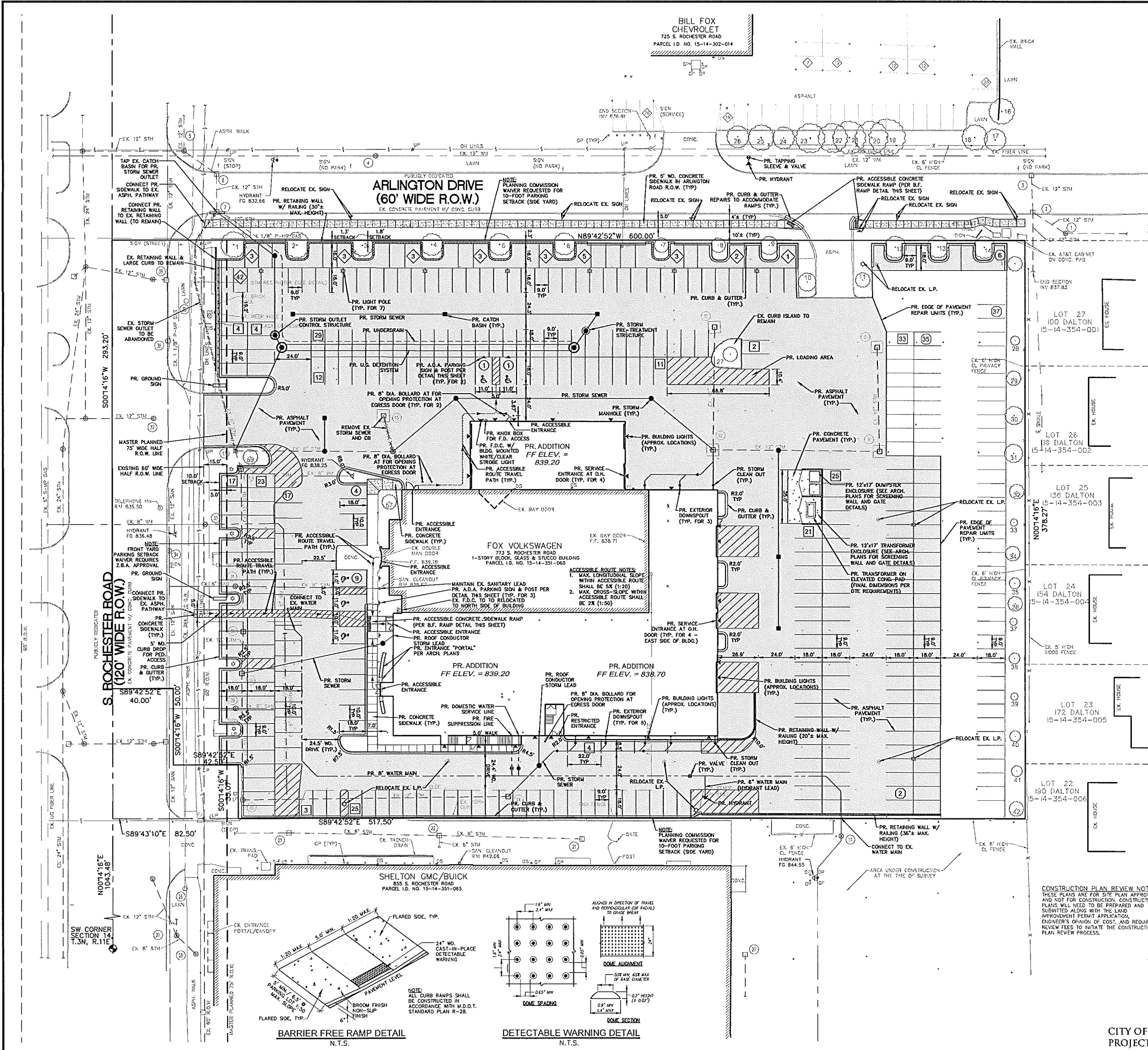


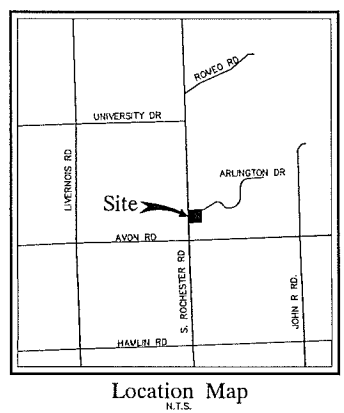
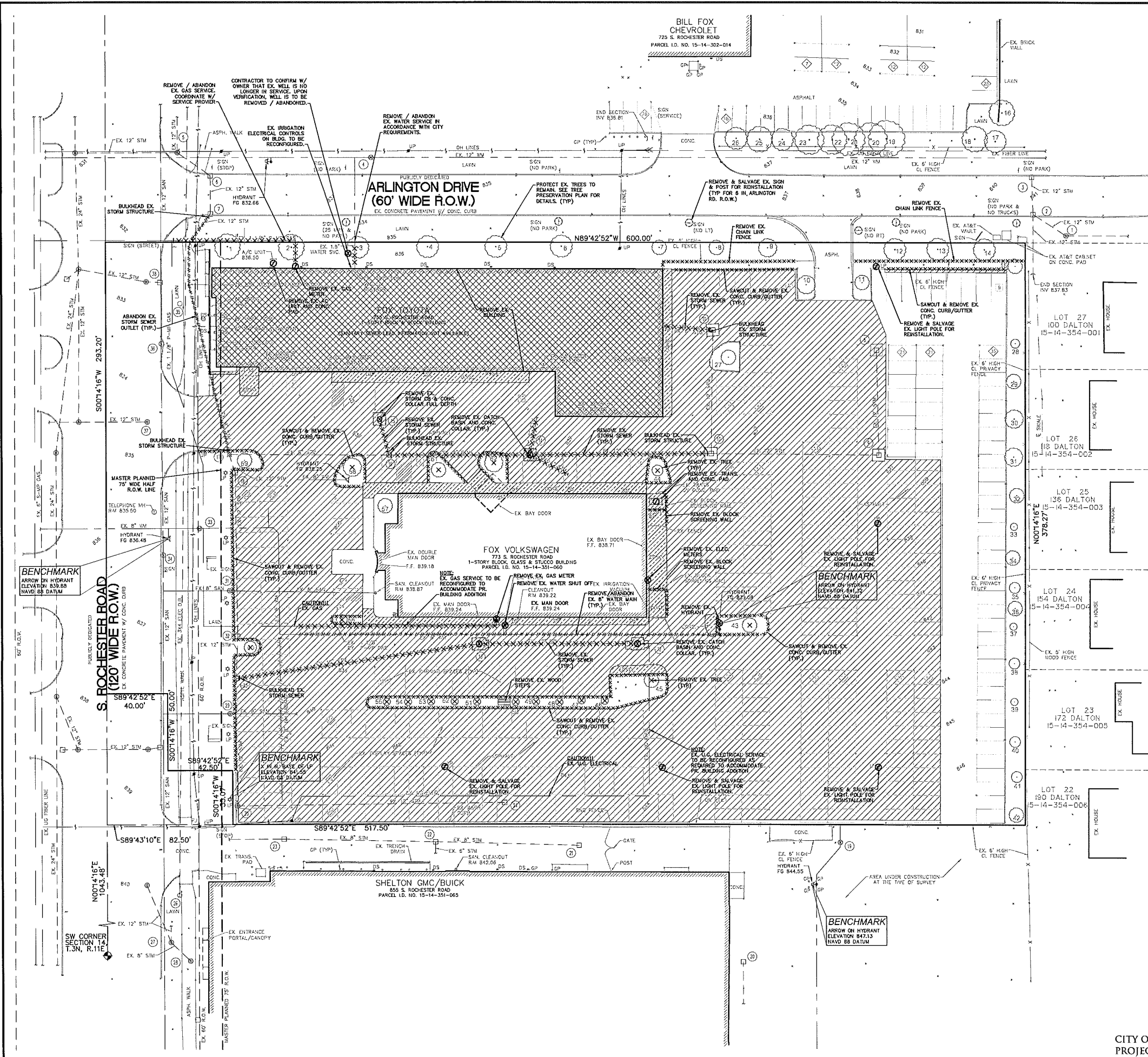
REVISIONS

10-23-15	SITE PLAN SUBMITTAL
11-25-15	REVISED PER CLIENT
01-11-16	REVISED PER CITY REVIEW
02-18-16	REVISED PER CITY REVIEW #2

DRAWN BY:
P. Tulikang
DESIGNED BY:
P. Tulikang
APPROVED BY:
B. Buchholz

DATE:
10-20-15
SCALE: 1" = 30'
NFE JOB NO. SHEET NO.
I678 SP1





DEMOLITION NOTES

DEMOLITION OF SITE IMPROVEMENTS SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE PUBLIC AGENCY HAVING JURISDICTION OVER SAID DEMOLITION.

FOR ANY DEMOLITION WITHIN PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR, AND SECURE, ALL NECESSARY PERMITS AND LICENSES SHALL ARRANGE FOR ALL SITE INSPECTIONS.

SITE DEMOLITION INCLUDES THE COMPLETE REMOVAL OF SITE IMPROVEMENTS AND OFF-SITE DISPOSAL DEBRIS SHALL BE TRANSPORTED TO AN APPROPRIATE DISPOSAL FACILITY THAT IS LICENSED FOR THAT TYPE OF DEBRIS.

THE CONTRACTOR SHALL COORDINATE TRUCK ROUTES WITH THE MUNICIPALITY PRIOR TO COMMENCEMENT OF SITE DEMOLITION. ALL TRUCKS SHALL BE TARPED OR PROPERLY SECURED TO CONTAIN DEMOLITION DEBRIS PRIOR TO LEAVING SITE.

EXISTING ON-SITE UNDERGROUND UTILITIES AND BUILDING SERVICES HAVE BEEN INDICATED BASED UPON THE BEST AVAILABLE UTILITY RECORDS AND/OR ON-SITE INSPECTION. NO GUARANTEE IS MADE BY THE DESIGN ENGINEER, AS TO THE COMPLETENESS OR ACCURACY OF UTILITY DATA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF UTILITY INFORMATION (THE DESIGN ENGINEER MAKES NO GUARANTEE NOR ASSUMES ANY LIABILITY AS TO THE COMPLETENESS AND/OR ACCURACY OF UTILITY DATA).

PRIOR TO THE REMOVAL OR ABANDONMENT OF ANY EXISTING UNDERGROUND UTILITY OR BUILDING SERVICE LINES CALLED FOR IN THE PLANS OR DISCOVERED DURING EXCAVATION, THE CONTRACTOR MUST DETERMINE IF THE UTILITY LINE OR BUILDING SERVICE IS STILL IN USE. IF THE UTILITY LINE OR BUILDING SERVICE IS STILL IN USE/ACTIVE THE CONTRACTOR MUST TAKE ALL THE NECESSARY STEPS TO GUARANTEE THAT THE UTILITY LINE OR BUILDING SERVICE IS RECONNECTED WITHOUT AN INTERRUPTION IN SERVICE. THE RECONNECTION OF THE UTILITY LINE OR BUILDING SERVICE MUST BE IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF THE APPROPRIATE GOVERNMENTAL AGENCY OR PRIVATE UTILITY COMPANY.

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO SITE DEMOLITION.

* THE CONTRACTOR SHALL NOTIFY MISS DIG (1-800-482-7171) A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF THE SITE DEMOLITION.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH THE DETROIT EDISON COMPANY. REMOVAL OF CABLE SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF DETROIT EDISON.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH CONSUMERS ENERGY/MICHCON. REMOVAL OF CONSUMERS ENERGY/MICHCON GAS SERVICES SHALL BE IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF CONSUMERS ENERGY/MICHCON.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH AMERTECH. REMOVAL OF AMERTECH COMMUNICATION SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF AMERTECH.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH THE APPROPRIATE CABLE COMPANY. REMOVAL OF CABLE SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF THE CABLE COMPANY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF PRIVATE UTILITY COMPANIES AND COORDINATE UTILITY SERVICE SHUT OFF/DISCONNECT, PRIOR TO DEMOLITION OF EXISTING STRUCTURES OR PROPERTIES.

ALL UTILITY METERS SHALL BE REMOVED BY THE APPROPRIATE UTILITY COMPANY.

ANY ON-SITE STORM SEWER FACILITIES LOCATED DURING DEMOLITION SHALL BE REMOVED AND BULK HEADED AT THE PROPERTY LINE IF INDICATED FOR REMOVAL ON THE PLANS.

PRIOR TO BUILDING DEMOLITION, ALL HAZARDOUS MATERIAL SHALL BE REMOVED BY OTHERS. THE DEMOLITION CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER SHOULD ANY SUSPICIOUS MATERIAL BE FOUND.

WATER SERVICES AND/OR STOP-BOX SHALL BE PRESERVED AND BULK HEADED AT THE PROPERTY LINE OR AS DIRECTED BY THE OWNER'S REPRESENTATION.

WHERE EXISTING BUILDINGS PLANNED FOR DEMOLITION FALL WITHIN PROPOSED BUILDING FOOT PRINTS, BISSHITT FLOOR SLABS, FOUNDATION WALLS AND FOOTINGS SHALL BE COMPLETELY REMOVED AND BACK FILLED WITH MDOT CLASS 4 GRANULAR MATERIAL AND BE MACHINE COMPACTED TO A MINIMUM OF 98% OF MATERIALS MAXIMUM DENSITY.

DEMOLITION LEGEND

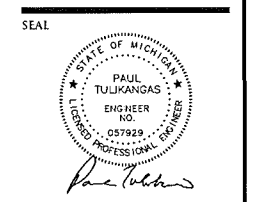
	INDICATES AREAS OF ASPHALT PAVEMENT TO BE REMOVED
	INDICATES AREAS OF CONCRETE PAVEMENT OR SIDEWALK TO BE REMOVED
	INDICATES EX. BUILDING TO BE REMOVED
	INDICATES CURB / WALL / FENCE REMOVAL
	INDICATES UTILITY REMOVAL
	INDICATES UTILITY ABANDONMENT / REMOVAL
	INDICATES UTILITY STRUCTURE REMOVAL
	INDICATES MISC. REMOVAL
	INDICATES TREE REMOVAL

LEGEND

	MANHOLE	EXISTING SANITARY SEWER
	HYDRANT	SAN. CLEAN OUT
	DATE VALVE	EXISTING WATERMAIN
	MANHOLE CATCH BASIN	EXISTING STORM SEWER
		EX. R. Y. CATCH BASIN
	UTILITY POLE	EXISTING BURIED CABLES
	GUY POLE	OVERHEAD LINES
	GUY WIRE	LIGHT POLE
		SIGN
	C.O. MANHOLE	EXISTING GAS MAIN
	HYDRANT	PR. SANITARY SEWER
	INLET	PR. WATER MAIN
	C.B. MANHOLE	PR. STORM SEWER
		PR. R. Y. CATCH BASIN
		PROPOSED LIGHT POLE

NF ENGINEERS
 CIVIL ENGINEERS
 LAND SURVEYORS
 LAND PLANNERS

NOWAK & FRAUS ENGINEERS
 46777 WOODWARD AVE.
 PONTIAC, MI 48342-5032
 TEL. (248) 332-7931
 FAX. (248) 332-8257



PROJECT
 Fox Automotive
 755 S. Rochester Road
 Rochester Hills, MI

CLIENT
 Fox Automotive
 Rochester Hills, MI
 Contact:
 John Fox
 johnfox@autobryfox.com
 (248) 651-7000 (T)
 (248) 651-8089 (F)

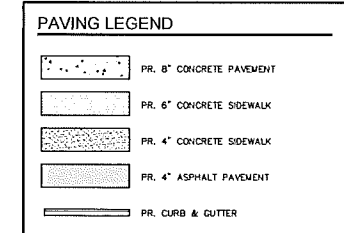
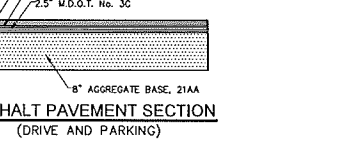
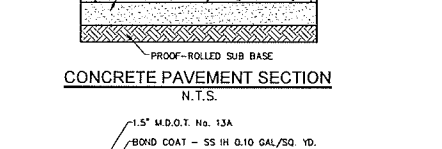
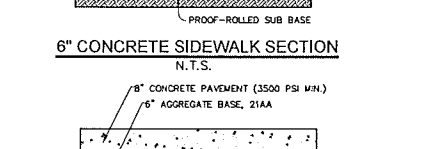
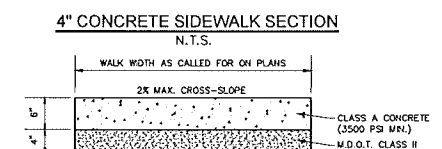
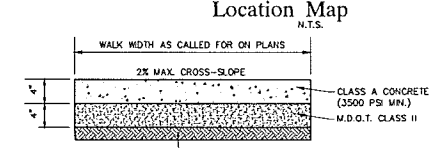
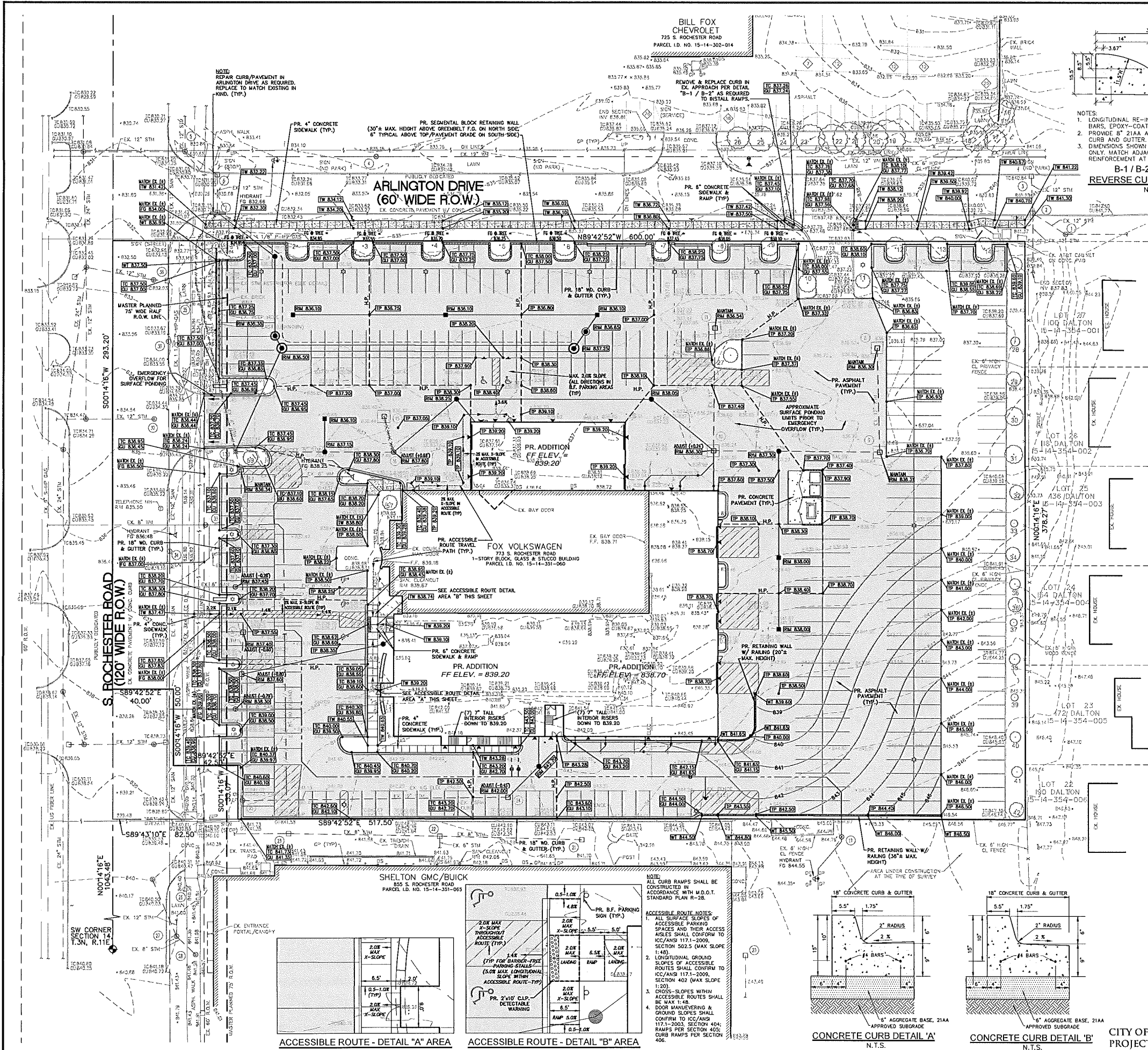
PROJECT LOCATION
 Part of the SW 1/4
 of Section 14
 T. 3N, R. 11E
 Rochester Hills,
 Oakland County,
 Michigan

SHEET
 Demolition Plan



REVISIONS
 10-23-15 SITE PLAN SUBMITTAL
 01-11-16 REVISED PER CITY REVIEW
 02-18-16 REVISED PER CITY REVIEW #2

DRAWN BY:
 P. Tulikang
 DESIGNED BY:
 P. Tulikang
 APPROVED BY:
 B. Buchholz
 DATE:
 10-20-15
 SCALE: 1" = 30'
 CITY OF ROCHESTER HILLS
 PROJECT #99-0272



REVISIONS

10-23-15	SITE PLAN SUBMITTAL
12-10-15	SCHEMATIC DETENTION
01-11-16	REVISED PER CITY REVIEW
02-18-16	REVISED PER CITY REVIEW #2

DRAWN BY:
P. Tulikangas

DESIGNED BY:
P. Tulikangas

APPROVED BY:
B. Buchholz

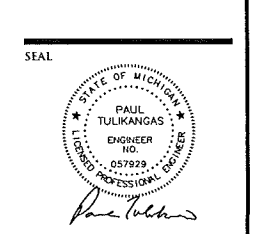
DATE:
10-20-15

SCALE: 1" = 30'

NFE JOB NO. 1678 SHEET NO. SP3

NF ENGINEERS
CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
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FAX. (248) 332-8257



PROJECT
Fox Automotive
755 S. Rochester Road
Rochester Hills, MI

CLIENT
Fox Automotive
Rochester Hills, MI
Contact:
John Fox
johnfox@autobfox.com
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(248) 651-8089 (F)

PROJECT LOCATION
Part of the SW 1/4
of Section 14
T. 3N, R. 11E
Rochester County,
Michigan

SHEET
Paving & Grading Plan



CITY OF ROCHESTER HILLS
PROJECT #99-027.2

ACCESSIBLE ROUTE - DETAIL "A" AREA
ACCESSIBLE ROUTE - DETAIL "B" AREA

CONCRETE CURB DETAIL "A"
CONCRETE CURB DETAIL "B"

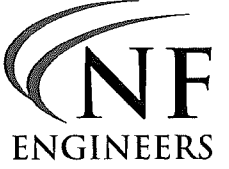
BILL FOX CHEVROLET
 725 S. ROCHESTER ROAD
 PARCEL I.D. NO. 15-14-302-014

WATER MAIN STRUCTURE SCHEDULE

- 61 PR. WATER SERVICE 4" SHUT-OFF VALVE IN BOX
- 62 PR. FIRE SUPPRESSION 6" SHUT-OFF VALVE IN BOX
- 63 PR. 8" GATE VALVE IN BOX
- 64 PR. 12" TAPPING SLEEVE & VALVE IN WELL
- 65 PR. HYDRANT ASSEMBLY
- 66 PR. HYDRANT ASSEMBLY

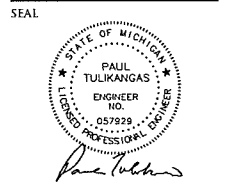
STORM SEWER STRUCTURE SCHEDULE

- 6 MANTAN EX. 50 CB RM 830.52 12" W INV. 826.72 12" S INV. 826.82
- 7 BURKHEAD & TAP EX. 50 CB RM 830.82 12" W INV. 827.02 12" W-SW INV. 827.52 (BURKHEAD) PR. 12" S INV. 827.52 (TAP) PR. 6" SE INV. 828.00 (TAP-UNDERDRAIN)
- 8 MANTAN EX. 50 CB RM 836.30 12" S INV. 834.30 12" W INV. 834.30 12" W INV. 834.01 12" W INV. 833.91
- 9 MANTAN EX. 50 CB RM 836.31 12" W INV. 834.01 12" W INV. 833.91
- 10 ADJUST BURKHEAD & TAP EX. 50 CB RM 836.60 12" E INV. 833.56 (MANTAN) 12" N INV. 833.56 (MANTAN) 12" W INV. 833.56 (REMOVE & BURKHEAD) PR. 6" S INV. 833.56 (TAP)
- 11 BURKHEAD EX. 50 CB RM 836.54 12" S INV. 833.74 (MANTAN) 6" W INV. 833.74 (REMOVE & BURKHEAD)
- 15 REMOVE EX. 50 CB RM 836.12 NO PIPES VISIBLE (FULL OF WATER)
- 16 ADJUST BURKHEAD & TAP EX. STORM MH RM 837.12 PR. RM 837.00 6" E INV. 832.22 (REMOVE & BURKHEAD) 8" W INV. 832.22 (MANTAN) -11 INV. 832.42 (REMOVE & BURKHEAD) PR. 12" NE INV. 832.80 (TAP)
- 17 EX. RYCS RM 836.78 8" E INV. 831.28 12" SE INV. 830.98 12" NW INV. 830.98 PR. 12" NE INV. 831.08 (TAP)
- 18 MANTAN EX. 50 CB RM 836.34 12" NW INV. 831.08 12" S INV. 831.08
- 24 ADJUST & TAP EX. 50 CB RM 842.45 PR. RM 842.00 NO PIPES VISIBLE 1/4" WATER 825.45 B/STRUCTURE 834.25 PR. 12" NE INV. 836.60 (FIELD VERIFY)
- 25 MANTAN EX. STORM MH RM 840.78 12" E INV. 834.43 12" W INV. 834.23
- 28 ADJUST EX. SAN MH RM 839.09 PR. RM 839.30 8" E INV. 830.69 8" W INV. 830.59
- 30 ADJUST & TAP EX. 50 CB RM 836.40 PR. RM 837.60 12" S INV. 833.30 12" N INV. 833.25 12" E INV. 833.90 (REMOVE) PR. 6" E INV. 833.90 (TAP)
- 31 ADJUST EX. SAN MH RM 837.73 PR. RM 837.45 8" E INV. 828.75 8" W INV. 828.53
- 32 ADJUST EX. 50 CB RM 839.00 PR. RM 837.40 12" S INV. 832.83 12" N INV. 832.83
- 33 MANTAN EX. 50 CB RM 836.57 12" W INV. 829.67 12" S INV. 829.72 12" N INV. 829.72 1/8" DROP 831.28
- 34 MANTAN EX. SAN MH RM 836.58 12" N INV. 826.78 12" S INV. 826.78 1/8" DROP 831.28
- 35 MANTAN EX. FUEL MH RM 834.88 12" N INV. 824.87 12" S INV. 824.87
- 36 MANTAN EX. SAN MH RM 833.37 12" N INV. 824.87 12" S INV. 824.87
- 37 MANTAN EX. STORM MH RM 834.56 12" W INV. 831.51 BOTTOM 824.56
- 38 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 39 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
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- 56 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 57 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
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- 71 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 72 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 73 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 74 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 75 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 76 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 77 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 78 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 79 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 80 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 81 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 82 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
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- 85 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 86 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 87 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 88 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 89 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 90 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 91 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 92 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 93 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 94 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 95 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 96 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 97 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 98 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 99 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78
- 100 PR. 4" DIA. PRE-CAST STORM CATCH BASIN W/ 2' SUMP EJM COVER 5105-MI RM 836.10 PR. 12" INV W 831.78



**CIVIL ENGINEERS
 LAND SURVEYORS
 LAND PLANNERS**

NOWAK & FRAUS ENGINEERS
 4677 WOODWARD AVE.
 PONTIAC, MI 48342-5032
 TEL. (248) 332-7931
 FAX. (248) 332-8257



PROJECT
 Fox Automotive
 755 S. Rochester Road
 Rochester Hills, MI

CLIENT
 Fox Automotive
 Rochester Hills, MI
 Contact:
 John Fox
 johnfox@autoboyfox.com
 (248) 651-7000 (T)
 (248) 651-8089 (F)

PROJECT LOCATION
 Part of the SW 1/4
 of Section 14
 T. 3N, R. 11E
 Rochester Hills,
 Oakland County,
 Michigan

SHEET
 Utility Plan



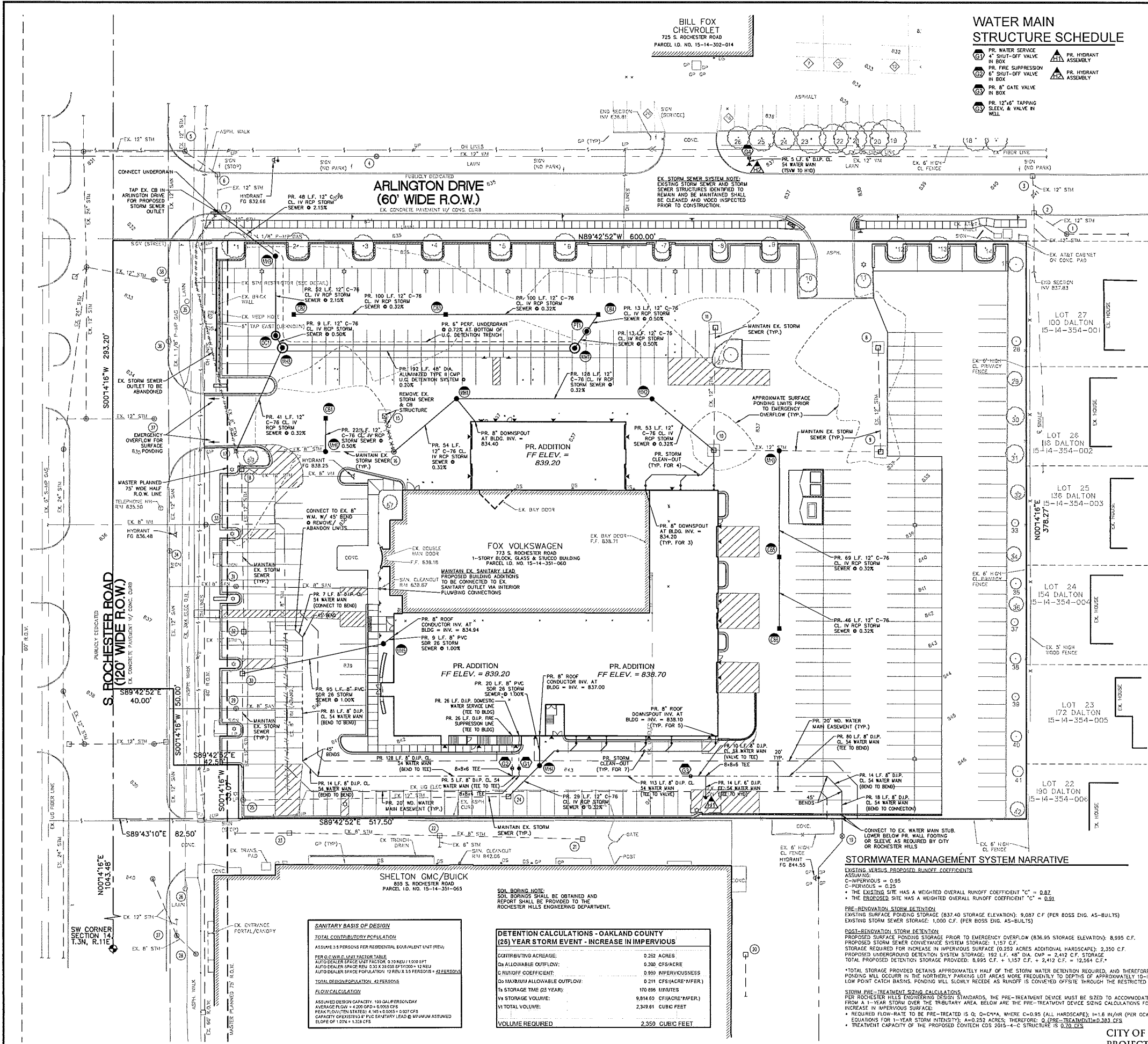
Know what's below
 Call before you dig.

REVISIONS
 10-23-15 SITE PLAN SUBMITTAL
 01-11-16 REVISED PER CITY REVIEW
 02-18-16 REVISED PER CITY REVIEW #2

DRAWN BY:
 P. Tulikang
DESIGNED BY:
 P. Tulikang
APPROVED BY:
 B. Buchholz
DATE:
 10-20-15

SCALE: 1" = 30'
 30 15 0 15 30 45

NFE JOB NO. SHEET NO.
 I678 SP4



STORMWATER MANAGEMENT SYSTEM NARRATIVE

EXISTING VERSUS PROPOSED RUNOFF COEFFICIENTS
 ASSUMING:
 C-IMPERVIOUS = 0.95
 C-PERVIOUS = 0.25
 * THE EXISTING SITE HAS A WEIGHTED OVERALL RUNOFF COEFFICIENT "C" = 0.82
 * THE PROPOSED SITE HAS A WEIGHTED OVERALL RUNOFF COEFFICIENT "C" = 0.61

PRE-RENOVATION STORM DETENTION
 EXISTING SURFACE PONDING STORAGE (837.40 STORAGE ELEVATION): 9,087 C.F. (PER BOSS ENG. AS-BUILT'S)
 EXISTING STORM SEWER STORAGE: 1,000 C.F. (PER BOSS ENG. AS-BUILT'S)

POST-RENOVATION STORM DETENTION
 PROPOSED SURFACE PONDING STORAGE PRIOR TO EMERGENCY OVERFLOW (836.95 STORAGE ELEVATION): 8,995 C.F.
 PROPOSED STORM SEWER CONVEYANCE SYSTEM STORAGE: 1,157 C.F.
 STORAGE REQUIRED FOR INCREASE IN IMPERVIOUS SURFACE (0.252 ACRES ADDITIONAL HARDSCAPE): 2,350 C.F.
 PROPOSED UNDERGROUND DETENTION SYSTEM STORAGE: 192 L.F. 48" DIA. CUP = 2,412 C.F. STORAGE
 TOTAL PROPOSED DETENTION STORAGE PROVIDED: 8,995 C.F. + 1,157 C.F. + 2,412 C.F. = 12,564 C.F.

* TOTAL STORAGE PROVIDED DETAINS APPROXIMATELY HALF OF THE STORM WATER DETENTION REQUIRED, AND THEREFORE, SURFACE PONDING WILL OCCUR IN THE NORTHERLY PARKING LOT AREAS MORE FREQUENTLY TO DEPTHS OF APPROXIMATELY 10-INCHES AT LOW POINT CATCH BASINS. PONDING WILL SLOWLY REcede AS RUNOFF IS CONVEYED OFFSITE THROUGH THE RESTRICTED OUTLET.

STORM PRE-TREATMENT SIZING CALCULATIONS
 PER ROCHESTER HILLS ENGINEERING DESIGN STANDARDS, THE PRE-TREATMENT DEVICE MUST BE SIZED TO ACCOMMODATE RUN-OFF FROM A 1-YEAR STORM OVER THE TRIBUTARY AREA. BELOW ARE THE PRE-TREATMENT DEVICE SIZING CALCULATIONS FOR THE INCREASE IN IMPERVIOUS SURFACE:
 * REQUIRED FLOW-RATE TO BE PRE-TREATED IS Q_p = C_p * I_a, WHERE C_p = 0.95 (ALL HARDSCAPE), I_a = 1.6 IN/HR (PER COWC EQUATIONS FOR 1-YEAR STORM INTENSITY), A = 0.252 ACRES; THEREFORE: Q (PRE-TREATMENT) = 0.383 CFS
 * TREATMENT CAPACITY OF THE PROPOSED CONTECH CDS 2015-4-C STRUCTURE IS 0.70 CFS

SANITARY BASIS OF DESIGN

TOTAL CONTRIBUTORY POPULATION
 ASSUME 3 PERSONS PER RESIDENTIAL EQUIVALENT UNIT (REU)
 PER COWC UNIT FACTOR TABLE
 AUTO DEALER SPACE UNIT FACTOR 0.19 REU/1000 SFT
 AUTO DEALER SPACE REV. 530 X 330 SPT/1000 + 12 REU
 AUTO DEALER SPACE POPULATION 12 REU X 3 PERSONS = 36 PERSONS

TOTAL DESIGN POPULATION: 42 PERSONS

FLOW CALCULATION

ASSUMED DESIGN CAPACITY: 100 GALLONS/DAY
 AVERAGE FLOW = 4.00 CFS @ 0.005 CFS
 PEAK FLOW (TULI STATE) = 4.00 + 0.005 = 0.07 CFS
 CAPACITY CREDITS 1/4" PVC SANITARY LEAD @ 80% W/ ASSUMED SLOPE OF 1.0% = 1.328 CFS

**DETENTION CALCULATIONS - OAKLAND COUNTY
 (25) YEAR STORM EVENT - INCREASE IN IMPERVIOUS**

CONTRIBUTING ACREAGE: 0.252 ACRES
 C_p ALLOWABLE OUTFLOW: 0.200 CFS/ACRE
 C_p RUNOFF COEFFICIENT: 0.95 IMPERVIOUSNESS
 C_p MAXIMUM ALLOWABLE OUTFLOW: 0.211 CFS/ACRE/MPER
 T₁ STORAGE TIME (25 YEAR): 10.896 MINUTES
 W₁ STORAGE VOLUME: 8.8440 CFS/ACRE/MPER
 W₂ TOTAL VOLUME: 2.34961 CUBIC FEET
 VOLUME REQUIRED: 2,350 CUBIC FEET

LEGEND

- MANHOLE - EXISTING SANITARY SEWER
- HYDRANT - SAN. CLEAN OUT
- MANHOLE CATCH BASIN - EXISTING WATERMAIN
- UTILITY POLE - EXISTING STORM SEWER
- GUY POLE - EX. R. Y. CATCH BASIN
- GUY WIRE - EXISTING BURIED CABLES
- OVERHEAD LINES - OVERHEAD LINES
- VERTICAL 24" CUP - EXISTING GAS MAIN
- PR. MANHOLE - PR. SANITARY SEWER
- PR. HYDRANT - PR. WATER MAIN
- PR. INLET - PR. STORM SEWER
- PR. C.B. MANHOLE - PR. R. Y. CATCH BASIN
- PROPOSED LIGHT POLE

SEAL



PROJECT
Fox Automotive
755 S. Rochester Road
Rochester Hills, MI

CLIENT
Fox Automotive
Rochester Hills, MI
Contact:
John Fox
johnfox@autobyfox.com
(248) 651-7000 (T)
(248) 651-8089 (F)

PROJECT LOCATION
Part of the SW 1/4
of Section 14
T. 3N, R. 11E
Rochester Hills,
Oakland County,
Michigan

SHEET
Tree Preservation Plan



Know what's below
Call before you dig.

REVISIONS

01/11/16 REVISED PER CITY REVIEW
02/18/16 REVISED PER CITY REVIEW #2

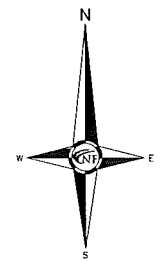
DRAWN BY:
G. Ostrowski
DESIGNED BY:
G. Ostrowski
APPROVED BY:
G. Ostrowski

DATE:
10/23/15

SCALE: 1" = 30'

NFE JOB NO.
1678

SHEET NO.
L1



NOTE:
SEE SHEET L2, LANDSCAPE PLAN FOR
PROPOSED TREE REPLACEMENT LOCATIONS

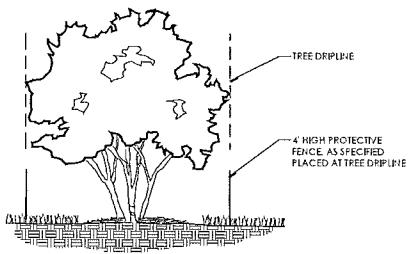
NOTE:
NO DIGGING, GRADING (CUT OR FILL),
TRENCHING OR ANY OTHER CONSTRUCTION
OPERATION IS PERMITTED WITHIN THE
DRILLPIE OF ANY TREE DESIGNATED FOR
PRESERVATION.

TREE PRESERVATION SUMMARY

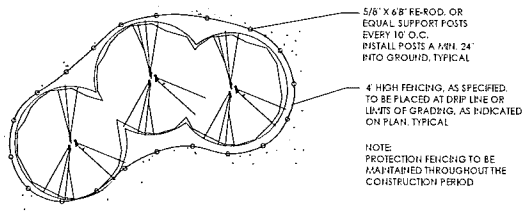
TREES >6" DBH SHALL BE REPLACED AT 1:1

2" CAL. DECIDUOUS =	1 CREDIT
2.5" CAL. DECIDUOUS =	1.5 CREDIT
3" CAL. DECIDUOUS =	2 CREDITS
8" HT. EVERGREEN =	1 CREDIT
10" HT. EVERGREEN =	2 CREDITS

TOTAL TREES SURVEYED:	61
TOTAL DEAD TREES ON-SITE:	0
TOTAL ASH TREES ON-SITE:	0
TOTAL OFF-SITE TREES:	11
TOTAL UNREGULATED TREES:	16
TOTAL NET REGULATED TREES:	34
TOTAL REGULATED TREES TO BE SAVED:	28
TOTAL TREES TO BE REMOVED:	7
TOTAL REPLACEMENT CREDITS REQUIRED:	7
TOTAL REPLACEMENT CREDITS PROVIDED:	0
*MONIES WILL BE PAID INTO THE CITY TREE FUND FOR 7 REPLACEMENTS	
7 CREDITS AT \$200.00 PER CREDIT = \$1,400.00	



TREE PROTECTION DETAIL-SECTION



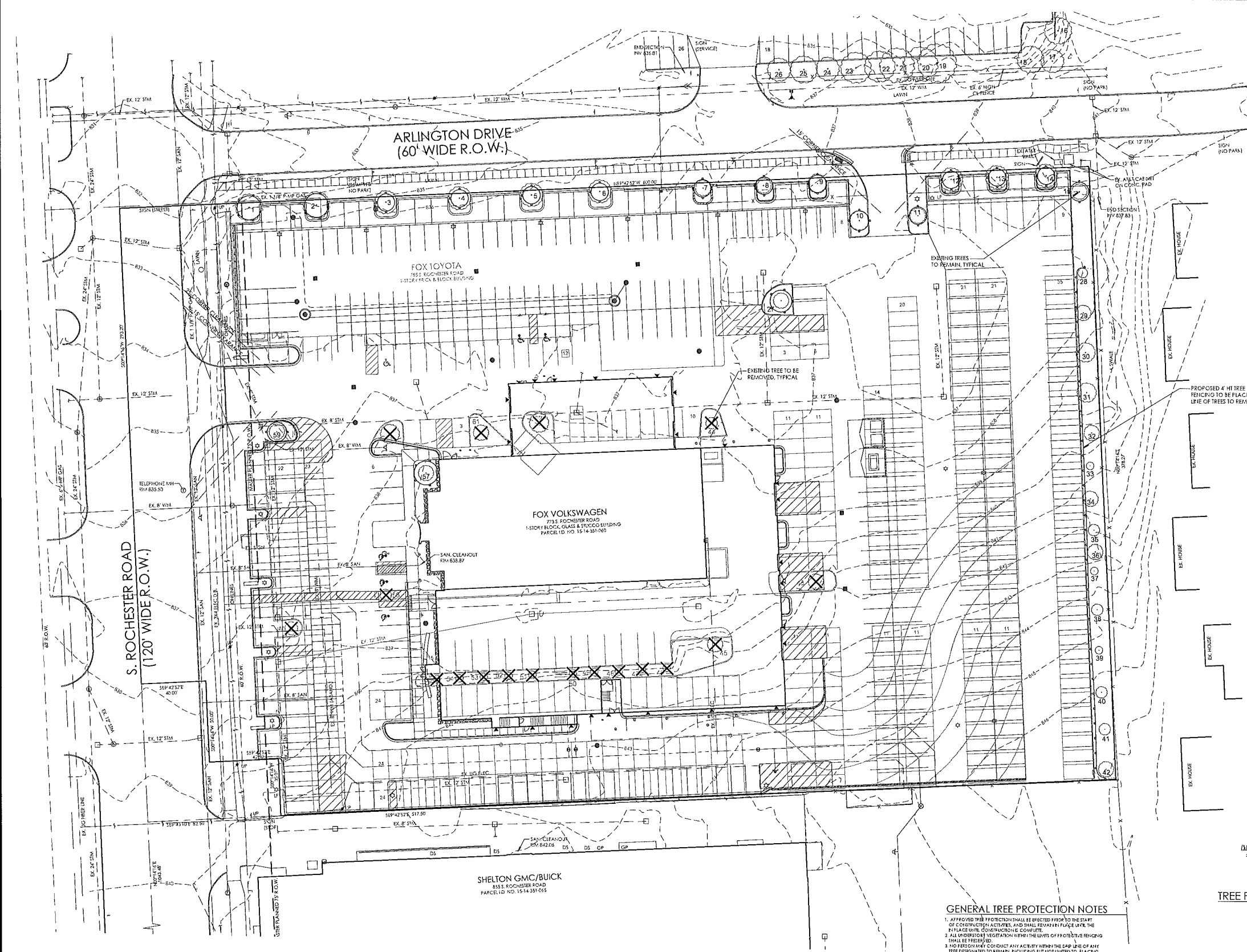
TREE PROTECTION DETAIL-PLAN

GENERAL TREE PROTECTION NOTES

1. APPROVED TREE PROTECTION SHALL BE ERRECTED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION. ALL TREE PROTECTION SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
2. ALL UNDESIRABLE VEGETATION WITHIN THE DRIP LINES OF PROTECTED TREES SHALL BE REMOVED.
3. NO PERSONS SHALL CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN, INCLUDING BUT NOT LIMITED TO, PLACING ERECTION, BUILDING MATERIALS, CONSTRUCTION EQUIPMENT, OR SOIL DEPOSITS WITHIN THE DRIP LINE.
4. WHERE GROUPINGS OF TREES ARE TO REMAIN, TREE PROTECTION SHALL BE PLACED AT THE LEVELS OF GRADE LINES.
5. DURING CONSTRUCTION NO PERSON SHALL ATTACH ANY DEVICE OR WIPE TO AND FROM PROTECTED TREES.
6. ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE DISTRICT MANAGER PRIOR TO ANY WORK. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING.
7. SHORES SHALL BE PROTECTED TO AVOID THE AREA WITHIN THE DRIP LINES OF PROTECTED TREES.
8. TREES LOCATED ON ADJACENT PROPERTIES THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED.
9. ROOT ZONES OF PROTECTED TREES SHOULD BE SURROUNDED WITH HEAVY STATED FENCING.
10. THE FRAMEWORK OF BILE AND PILING EQUIPMENT SHALL BE PROTECTED UNDER THE DRIP LINE OF PROTECTED TREES.
11. THE TRIPPING OF TOPSOIL FROM AROUND PROTECTED TREES SHALL BE PROHIBITED.
12. ALL TREES TO BE REMOVED SHALL BE CUT AWAY FROM TREES TO REMAIN.
13. THE GRASSING OF UNDESIRABLE VEGETATION WITHIN CONSTRUCTION AREAS SHOULD BE CLEARLY BY CUTTING VEGETATION AT THE GROUND WITH A CHAIN SAW OR EQUIVALENT WITH A HYDRO-AXE.
14. THE CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT FOR OFF-RAMPAGE CLEARANCE. FOR THE DAMAGE OR REMOVAL OF ANY TREE DESIGNATED TO REMAIN, TREES TO BE REMOVED SHALL BE FIELD VERIFIED, EVALUATED AND FLAGGED FOR REMOVAL BY THE LANDSCAPE ARCHITECT OR FORESTER, ONLY AS DESIGNATED BY THE OWNER OR OWNER'S REPRESENTATIVE.

LEGEND:

- TREES TO BE REMOVED
- TREES TO REMAIN
- TREE PROTECTION FENCING



SEAL



PROJECT
Fox Automotive
755 S. Rochester Road
Rochester Hills, MI

CLIENT
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Rochester Hills, MI
Contact:
John Fox
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(248) 651-7000 (T)
(248) 651-8089 (F)

PROJECT LOCATION
Part of the SW 1/4
of Section 14
T. 3N, R. 11E
Rochester Hills,
Oakland County,
Michigan

SHEET
Irrigation Diagram



Know what's below
Call before you dig.

REVISIONS
12/21/15 REVISION FOR CITY REVIEW
02/11/16 REVISION FOR CITY REVIEW
02/18/16 REVISION FOR CITY REVIEW #2

DRAWN BY:
G. Ostrowski
DESIGNED BY:
G. Ostrowski
APPROVED BY:
G. Ostrowski

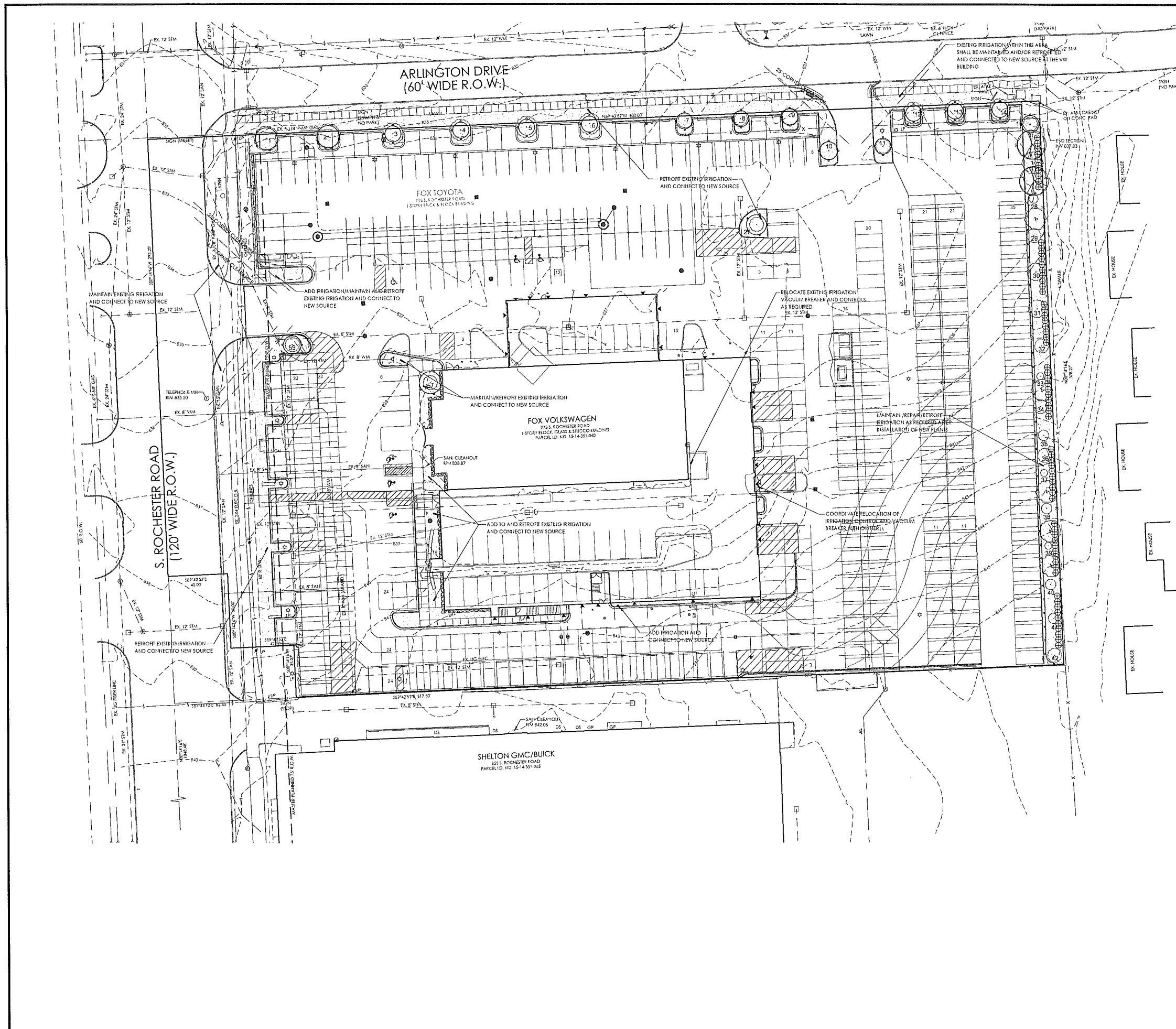
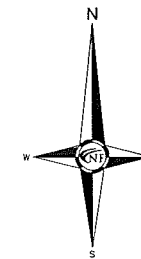
DATE:
10/23/15

SCALE: 1" = 30'



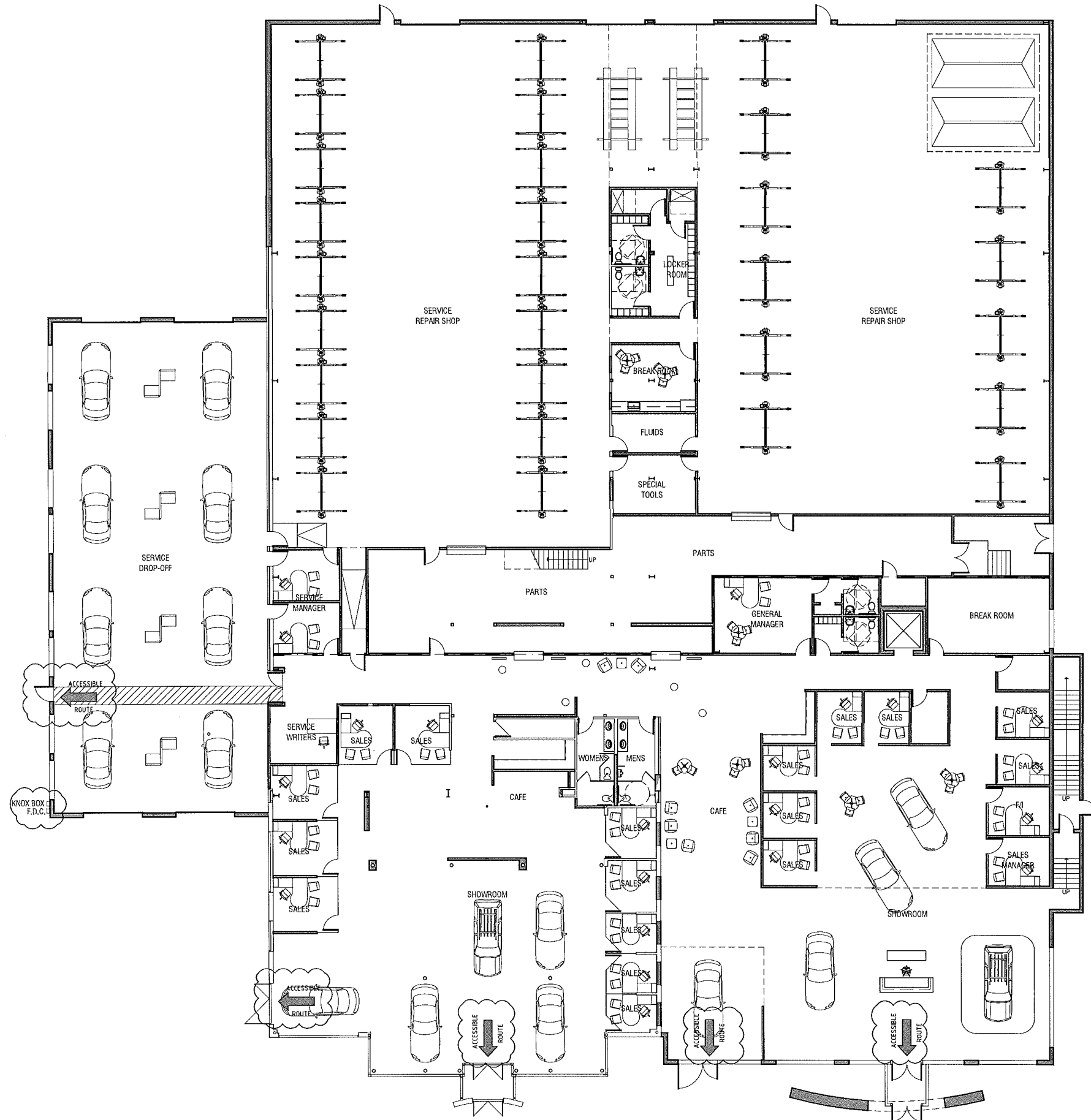
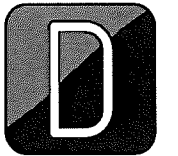
NFE JOB NO. SHEET NO.
1678 L3

CITY FILE NO. 99-027.2



DESIGNHAUS

301 WALNUT BOULEVARD
 ROCHESTER, MI 48307
 T: 248.601.4422
 F: 248.453.5854
 WWW.DESIGNHAUS.COM



No.	Revision/Issue	Date
---	---	---
---	---	---
---	SPA Rev. #2	02.18.2016
---	SPA Rev. #1	01.15.2015
---	Site Plan Approval	03.23.2015

Fox Automotive
 733 S. Rochester Rd.
 Rochester Hills, MI 48307
 United States of America
 City of Rochester Hills
 Project #99-027.2

Ground Floor Plan

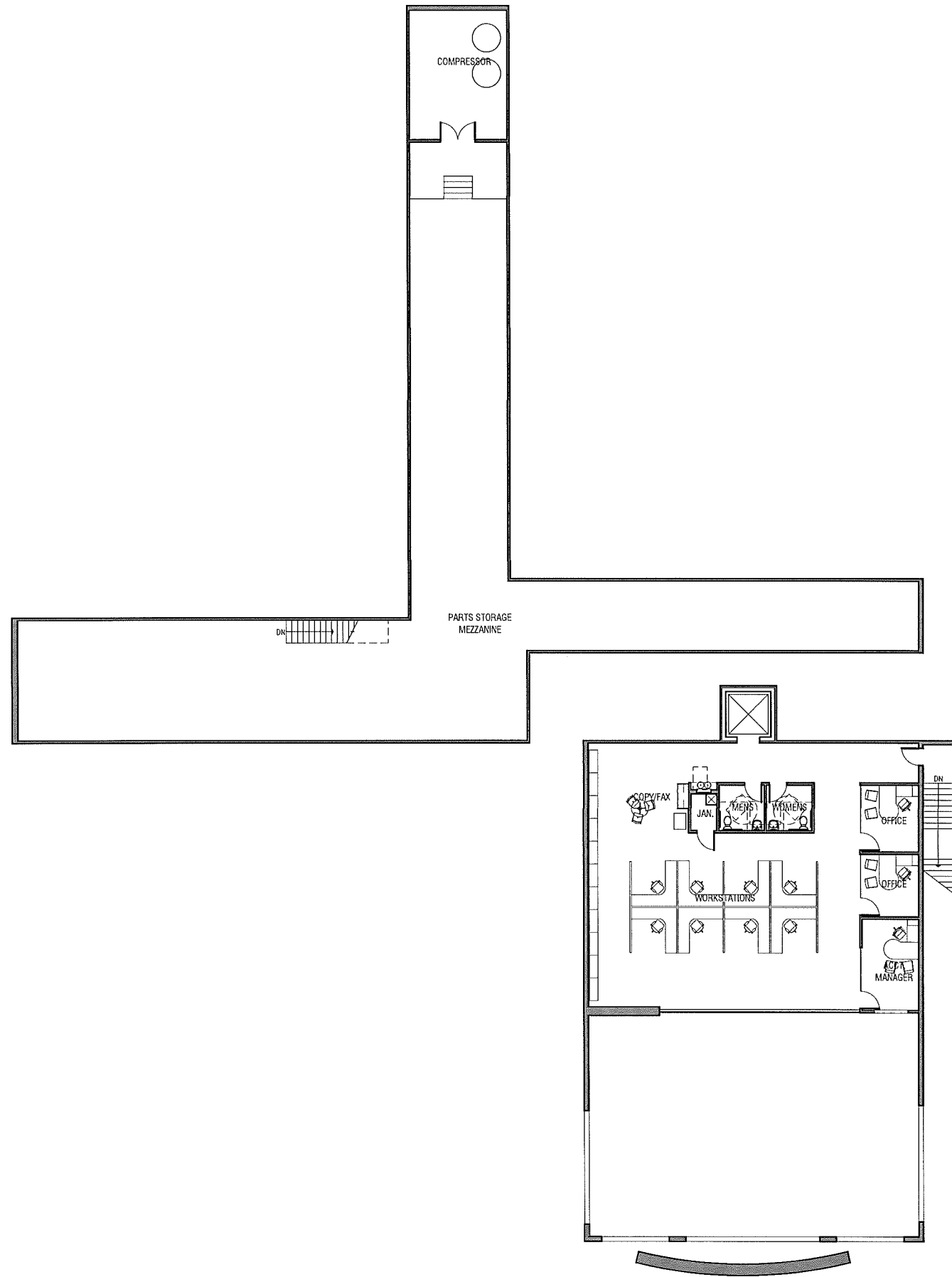
A100 014253

1 Ground Floor Plan NORTH
 SCALE: 3/32" = 1'

A100 Floor Plan.dwg

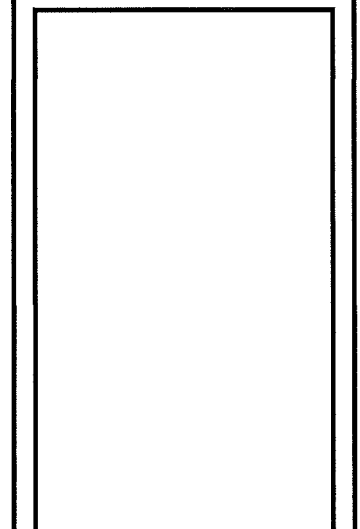
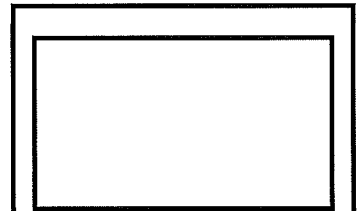
2/22/2016

Del: User



DESIGNHAUS

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No.	Revision/Issue	Date
---	---	---
	SPA Rev. #2	02.18.2016
	SPA Rev. #1	01.15.2016
	Site Plan Approval	10.23.2015

Fox Automotive
 733 S. Rochester Rd.
 Rochester Hills, MI 48307
 United States of America
 City of Rochester Hills
 Project #99-027.2

Mezzanine Plan

A101

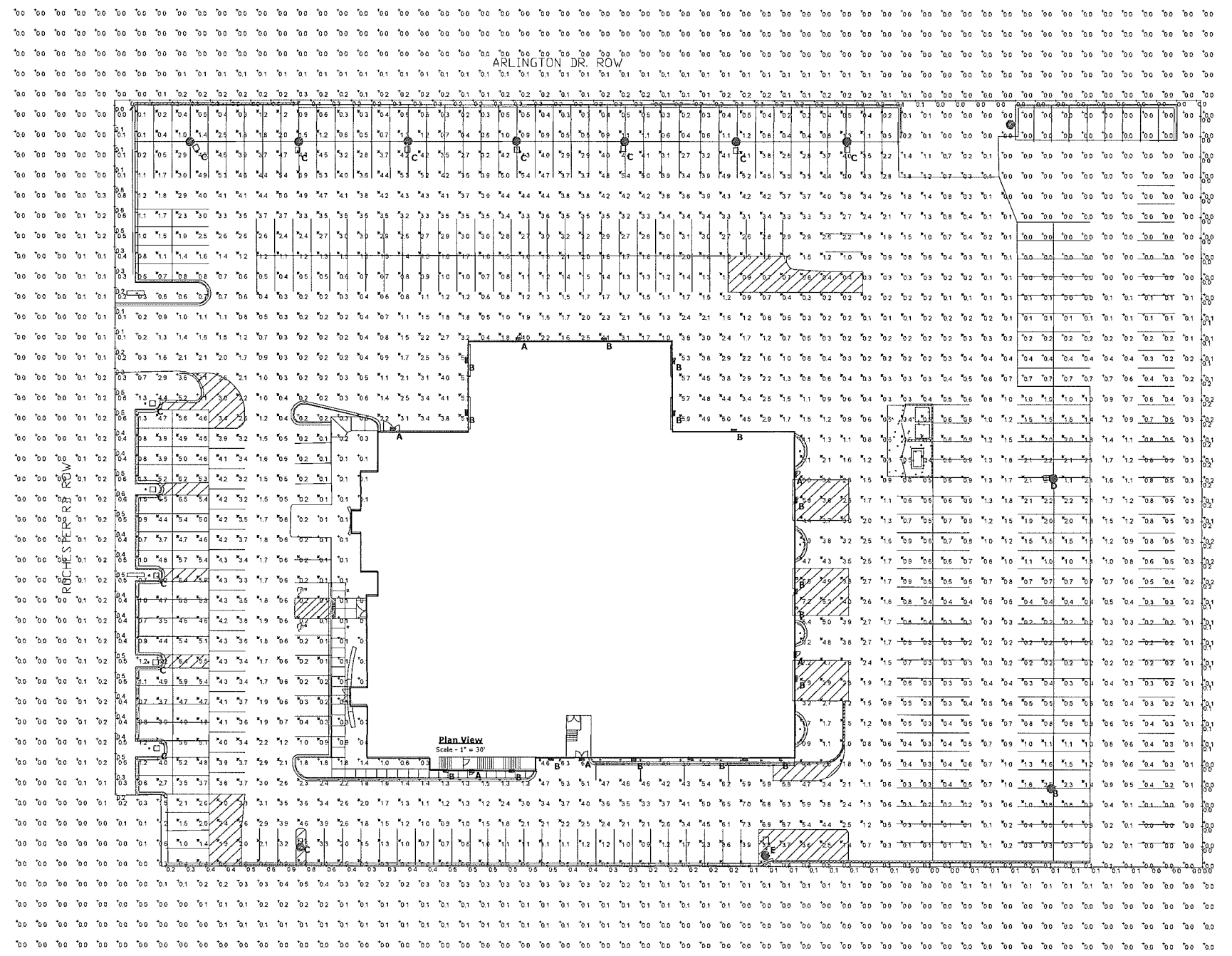
014253

Symbol	Label	Quantity	Manufacturer	Description	Catalog Number	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
A	A	6	Lithonia Lighting	DIE-CAST GENERAL PURPOSE WALLMOUNT WITH POLYCARBONATE REFRACTOR	TWP 70H	ONE 70-WATT CLEAR ED-17 METAL HALIDE, HORIZONTAL POSITION.	1	TWP_70H.fles	5200	0.75	55
B	B	17	Lithonia Lighting	DSX1 LED WITH (1) 30 LED LIGHT ENGINES, LEFT ROTATED TYPE T4H OPTIC, 4000K, ϕ 700mm	DSX1 LED 30C 700 40K	LED	1	DSX1_LED_30C_700_40K_T4H_HV.fles	7358	0.9	68.09
C	C	13	Lithonia Lighting	DSX1 LED WITH (2) 30 LED LIGHT ENGINES, RIGHT ROTATED TYPE T4H OPTIC, 4000K, ϕ 1000mm WITH HOUSE SIDE SHIELD	DSX1 LED 60C 1000 40K	LED	1	DSX1_LED_60C_1000_40K_T4H_HV.fles	13242	0.9	208.96
D	D	1	Lithonia Lighting	DSX1 LED WITH (2) 30 LED LIGHT ENGINES, LEFT ROTATED TYPE T5W OPTIC, 4000K, ϕ 1000mm	DSX1 LED 60C 1000 40K	LED	1	DSX1_LED_60C_1000_40K_T5W_HV.fles	20095	0.9	209.28
E	E	1	Lithonia Lighting	DSX1 LED WITH 60 LEDs ϕ 700mm, 3000K, BACKLIGHT CONTROL OPTIC	DSX1 LED 60C 700 30K	LED	1	DSX1_LED_60C_700_30K_BLC.fles	11727.2	0.9	131

Label	X	Y	MH	Orientation	Tilt
C	-96.97	192.40	20.00	180.00	0.00
C	-42.67	192.68	20.00	180.00	0.00
C	11.63	192.68	20.00	180.00	0.00
C	64.80	193.24	20.00	180.00	0.00
C	120.78	192.40	20.00	180.00	0.00
C	175.92	192.96	20.00	180.00	0.00
B	54.98	94.73	16.00	0.00	0.00
B	69.16	84.76	16.00	90.00	0.00
B	89.24	58.75	16.00	90.00	0.00
B	119.89	50.03	16.00	0.00	0.00
B	150.05	16.46	16.00	90.00	0.00
B	150.30	-22.26	16.00	90.00	0.00
B	150.47	-71.85	16.00	90.00	0.00
B	142.73	-111.19	12.75	180.00	0.00
B	111.13	-111.28	12.75	180.00	0.00
B	70.49	-111.47	12.75	180.00	0.00
B	28.09	-111.65	12.75	180.00	0.00
B	9.94	-117.17	19.00	180.00	0.00
B	-23.51	-116.78	19.00	180.00	0.00
B	-13.17	84.54	14.66	270.00	0.00
B	-13.11	58.63	14.66	270.00	0.00
A	12.46	94.84	10.00	0.00	0.00
A	150.02	29.19	10.00	90.00	0.00
A	150.32	-60.05	10.00	90.00	0.00
A	44.28	-111.48	10.00	180.00	0.00
A	-10.51	-116.95	10.00	180.00	0.00
A	-49.61	50.29	10.00	0.00	0.00
A	-172.66	21.03	20.00	90.00	0.00
A	-171.06	-21.55	20.00	90.00	0.00
C	-171.46	-44.34	20.00	90.00	0.00
C	-170.86	-106.73	20.00	90.00	0.00
C	-96.03	-156.18	20.00	0.00	0.00
D	278.48	27.44	20.00	270.00	0.00
C	-172.66	63.44	20.00	90.00	0.00
B	150.30	-36.94	16.00	90.00	0.00
B	276.82	-125.40	20.00	353.42	0.00
E	135.59	-155.73	20.00	5.00	0.00
C	-148.83	192.99	20.00	153.43	0.00

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
OVERALL LG VALUES	+	1.1 ft	7.3 ft	0.0 ft	N/A	N/A
PARKING LOT	X	2.0 ft	7.3 ft	0.0 ft	N/A	N/A
PROPERTY LINE	+	0.2 ft	0.9 ft	0.0 ft	N/A	N/A

Note
 1. SEE MH COLUMN OF LUMINAIRE LOCATIONS FOR MOUNTING HEIGHTS.
 2. SEE LUMINAIRE SCHEDULE FOR LIGHT LOSS FACTORS.
 3. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT GRADE.
 THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.
 GBA DOES NOT ACT AS THE CIVIL OR STRUCTURAL ENGINEER AND DOES NOT DETERMINE BASE REQUIREMENTS.
 POLES SPECIFICATIONS ARE NOT INCLUDED WITH EXTERIOR LIGHTING PHOTOMETRIC ANALYSIS.
 THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.



FOX TOYOTA
 SITE LIGHTING VALUES AT GRADE
 PREPARED FOR: MIKE PIZZOLA
 GASSER BUSH ASSOCIATES

City of Rochester Hills
 Job # 99-027.2

Designer
 LM/KJS
 Date
 2/12/2016
 Scale
 Not to Scale
 Drawing No.
 #15-46079-V3
 1 of 1