CULVER'S PRELIMINARY SITE PLAN APPROVAL

ROCHESTER HILLS, OAKLAND CO., MICHIGAN

APPLICANT

ROSETTA BUILDING COMPANY 4564 OAKHURST RIDGE DRIVE CLARKSTON, MI 48348

CONTACT: MR. ANDREW ZIELKE PHONE: (248) 891.6080

s.	TANDARD LEGEND	
DESCRIPTION	PROPOSED	EXISTING
BUILDING	L	Liddenidad
STORM SEWER	→ -12 ° 	
SANITARY SEWER		
WATER		
GAS LINE		
ELECTRIC LINE		
TELEPHONE LINE		
MANHOLE	•	0
CATCH BASIN	9 2	0 0
ENDSECTION		D)
FIRE HYDRANT	¥	ø
GATE VALVE & WELL	8	9
UTILITY POLE	சு	(D)
UTILITY RISER		ß
aleh	-	
LIGHT POLE	+-0	٥
CURB & GUTTER		
FENCE	xxx	·
SILT FENCE		
TREE - DECIDUOUS	AS NOTED ON PLANS	
TREE LINE	~~~	~~~
SPOT ELEVATION	+136.68	r Tables
CONTOUR LINE	<u>165</u>	<u> </u>
SECTION CORNER		•
FOUND PROPERTY IRON		Ü
SET PROPERTY IRON		e e
gas meter		0
ELECTRICAL METER		5
TELEPHONE RISER		TFED
MAILBOX		53
SOIL BORING LOCATION		•

AUBURN ROAD AUBURN ROAD PROJECT AREA

LOCATION MAP

DRAWING INDEX

C1.0	COVER SHEET
C2.0	SURVEY PLAN
C2.1	REMOVAL PLAN
C3.0	SITE LAYOUT AND PAVING PLAN
C4.0	GRADING PLAN
£5Q~	WTILITY PLAN
C5.1	UTILITY PLAN STORM MANAGEMENT PLAN }

ATWELL-HICKS REFERENCE DRAWINGS
CP-43 OVERALL DRAINAGE AREA PLAN
CP-45 STORM SEWER CALCULATIONS

CIVIL ENGINEER

BUD DESIGN & ENGINEERING SERVICES, INC. 10755 S. SAGINAW ST., SUITE B GRAND BLANC, MI 48439

CONTACT: ANDREW ANDRE, P.E. PHONE: (810) 695-0793
FAX: (810) 695-0569

UTILITY CONTACTS

UTILITY NOTE

THE UTILITY LOCATIONS AS HEREON SHOWN ARE BASED ON FIELD OBSERVATIONS AND A CAREFUL REVIEW OF MUNICIPAL AND UTILITY RECORDS. HOWEVER, IT IS NOT POSSIBLE TO DETERMINE THE PRECISE SIZE, LOCATION, DETTH, PRESSURE, OR ANY OTHER CHARACTERISTICS OF UNDERGROUND UTILITY.

ZONING INFORMATION

FB-3 ZONING REGULATIONS FRONT ARTERIAL SETBACK (AUBURN) 15' MIN./25' MAX FRONT 'ARD MINOR SETBACK (MEJER ACCESS DRIVE) 5' MIN./20' MAX SIDE 'ARD INTERIOR SETBACK (WEST) NONE

ELECTRIC

DREW ANDRE, P.E.
CHIGAN PE 47380
D DESIGN & ENGINEERING SERVICES INC.

CASS MORE RENERGY
GAS INFORMATION MGMT
1030 FEATHERSTORE RD.
PONTIAC, M. 48342

WATER / SEWER
UNTY OF ROCHESTER HILLS
(DPS)/NEIGNEERING
1000 ROCHESTER HILLS OR, AND ADD ADD ADD ADD
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BENCHMARKS

B.M. \$1 - GV & WELL RIM NORTHEAST CORNER OF MENER DRIVE.

ELEV. 748.85



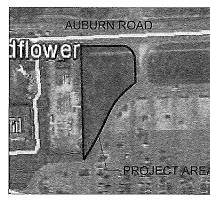
CULVER'S AUBURN ROAD ROCHESTER HILLS, MI



로부 분~요조를	
ISSUED FOR	DATE
SITE PLAN	06/21/16
SITE PLAN	07/18/18
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	1
	<u> </u>
	1
	1
DATE: 06/06/16	
DRAWN: ACA	
CHECKED: JT	
SCALE: NA	
JOB NO : BD-16-214	
SHEET TITLE: COVER SHEE	ΞT

C1.0





LOCATION MAP

NO SCALE

EXISTING UTILITY POWER POLE EXISTING TELEPHONE RISER

UTILITY	CONTACTS	l		EGEND
TELEPHONE	GAS	H		_LGLND
AT&T 54 N. MILL ST.	CONSUMERS ENERGY GAS INFORMATION MIGHT	li	•	MONUMENT / SECTION CORNER
P.O. BOX 32	1030 FEATHERSTONE RD.	ı	•	FOUND PROPERTY IRON
PONTIAC, MI 48642	PONTIAC, MI 48342	ll	0	SET PROPERTY IRON
		1	0	EXISTING CATCHBASIN
		1	Ø	EXISTING MANHOLE/CATCHBASIN
ELECTRIC	WATER/SEWER	1	0	EXISTING MANHOLE
DTE	CITY OF ROCHESTER HILLS	1	- V	EXISTING HYDRANT
1 GS GROUP	(DPS)\ENGINEERING	i I	M	EXISTING VALVE
ONE ENERGY PLAZZ	1000 ROCHESTER HILLS DR.	i	SAN	EXISTING SANITARY SEWER
ROOM 518 SB	ROCHESTER HILLS, MI. 48309	ı		EXISTING STORM SEWER
DETROIT MI, 48226	(248) 656-4685	ı		EXISTING WATERMAIN
		ı	××	EXISTING FENCE LINE
	ZONING	Н		EXISTING UNDERGROUND ELECTRIC LINE
	CITY OF ROCHESTER HILLS	H	G4S	EXISTING UNDERGROUND GAS LINE
	PLANNING DEPARTMENT	ll		EXISTING UNDERGROUND TELEPHONE LINE
	1000 ROCHESTER HILLS DR. ROCHESTER HILLS, MI. 48309	ı		EXISTING CENTERLINE
	(248) 656-4660		-////-	EXISTING OVERHEAD ELECTRICAL WIRES
	(2.12) 555 1555	Ιì	D	EXISTING MAILBOX / NEWSPAPER BOX
		'		EXISTING SIGN
		,	Ð	EXISTING DECIDUOUS TREES
Uni	ITY NOTE	ı	*	EXISTING CONIFEROUS TREES
		l	Ø	EXISTING UTILITY POWER POLE

UTILITY NOTE

UTILITY CONTACTS

UTILITY NOTE

THE UTILITY LOCATIONS AS HEREON SHOWN ARE BASED ON FIELD OBSERVATIONS AND A CAREFUL REWIEW OF MUNICIPAL AND UTILITY RECORDS. HOWEVER, IT IS NOT POSSIBLE TO DETERMINE HER PRECESS EST. LOCATION, DEPTH, PRESSURE TO THE PRECESS OF THE PRECESS OF THE PRECESS OF THE ACCURACY OF COMPLETENESS OF THE BURIED UTILITY INFORMATION HEREON SHOWN. THE EXCHANGE SHALL CALL MISS DIO (1-800-482-717) A MINIMUM OF THREE WORKING DAYS PRIOR TO ANY EXCAVATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO WEIFY THESE UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND MARE EVERY EFFORT TO PROTECT AND/OR RELOCATE THEM AS RECORDING THE CONTRACTOR AND THE CONTRACTOR SHALL CALL FOR THE SECONDARY.

ZONING INFORMATION

ZONED- 8-3 SHOPPING CENTER BUSINESS DISTRICT FB-3 FLEX BUSINESS OVERLAY.

B-3 ZONING REGULATIONS FRONT: - 75' (AUBURN) REAR: - 75' (EAST/WEST) SIDE: - 75'/25' (SOUTH)

SIDE: 7-9/20 (2001),
FE-3 ZONING REGULATIONS
FRONT ARTERIAL SETBACK (AUBURN) 15' MIN./25' MAX
FRONT YARD MINOR SETBACK (MEJER ACCESS DRIVE)
5' MIN./20' MAX
SIDE YARD MITERIOR SETBACK (WEST) NONE

FURNISHED LEGAL DESCRIPTION

A PART OF THE NORTHWEST IZ OF SECTION 35, T-3N, R-11E, CITY OF ROCHESTER HILLS, OAXLAND COUNTY, MICHIGAN, BEHIG MORE PARTICULARLY DESCRIBED AS COMMENCION AT THE NORTHWEST CORNER OF SAID SECTION 35, THENCE NO 874736*

1 THENCE CONTINUED ON 374730 SE 12.03 PS SECTION 35 AND FOLLOWING AUBURN ROAD TO THE POINT OF BEGINNING, DITTORY OF THE SECTION OF THE SECTION SAID SECTION 35 AND FOLLOWING AUBURN ROAD TO THE POINT OF BEGINNING, ON 30 SUCCESS AND SECTION SAID SAID SECTION SAID SECTI (GROSS) OR 1.08 ACRES (NET) EXCLUDING THE NORTHERLY 60 FEET FOR THE AUBURN ROAD RIGHT OF WAY

	BENCHMARKS										
М.	#1 - GV & WELL RI DRIVE.	M NORTHEAST CORNER OF MEIJER									
		ELEV. 748.85 NAVD 88 DATUM									

Cumming



THOMAS M. SMITH P.S. PROFESSIONAL LAND SURVEYOR

7559 OLDE STURBRIDGE TRAIL CLARKSTON, MICHIGAN 48348 PHONE: 248.625.3276 EMAIL: tsmith7559@yohoo.com



SCALE: 1" = 30'



Bud Design & ngineering Services, Inc.

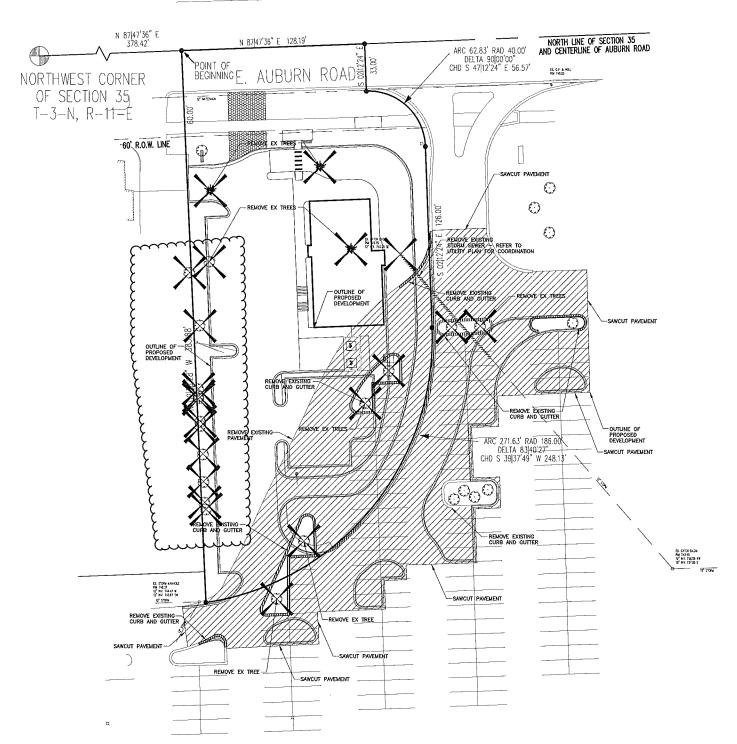
10775 S. Saginaw St. Suite B Grand Elanc, MI 43437 (PH) 810.695.0793 (FAX) 810.695.0569 Web: www.buddes/gn.com

 \equiv CULVER'S AUBURN ROAD ROCHESTER HILLS, N

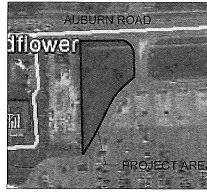


ISSUED FOR	DATE
ITE PLAN	06/21/16
ITE PLAN	07/18/16
DATE: 06/06/16	
DRAWN: ACA	
CHECKED: JT	
SCALE: 1'*30'	
JOB NO : BD-16-214	
SHEET TITLE:	
SURVEY PLAI	N

C2.0







LOCATION MAP

NO SCALE

REMOVAL NOTES

- CONTRACTOR TO PROVIDE NECESSARY SIGNAGE, BARRICADES AND OTHER DEVICES FOR PROTECTION OF THE PUBLIC AND CONSTRUCTION WORKERS PRIOR TO PERFORMING ANY WORK. TRAFFIC CONTROL TO CONFORM TO MANULT.C.D.
- ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE TO BE IN PLACE PRIOR TO STARTING REMOVALS.
- 3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE ALL PERMITS AND POST ALL BONDS PRIOR TO CONSTRUCTION, OR ENSURE THAT ALL REQUIRED PERMITS AND BONDS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION.
- 4. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UBLITIES. THE CONTRACTOR SHALL VERIFY ALL UBLITY LOCATIONS FRIGHT FOR CONSTRUCTION BY CALLING MISS-DIG AT 1-800-482-7171 AT LEAST 3 WORKING DAYS PRIOR TO EXCAVATION.
- THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF ALL EXISTING UNLINES DURING CONSTRUCTION. ALL UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITH LIKE MATERIAL. THE EXACT LOCATION OF EMISTING UTILITIES SHALL BE LOCATED BY HAND DIGGING.
- ALL DEMOLITION MATERIAL SHALL BE DISPOSED OF OFF-SITE, DISPOSE OF ALL DEBRIS LEGALLY OFF-SITE.
- THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE TO STREE SIDEWALKS OTHER STRUCTURES AND ADJACENT AREAS CAUSED DEMOLITION OR HAULING OPERATIONS.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY ACTIONS TO ENSURE WORKER SAFETY AND COMPLIANCE WITH MI-OSHA GUIDELINES.
- CONTRACTOR SHALL FULLY REMOVE ALL BUILDING STRUCTURES, SLABS AND FOUNDATIONS AS INDICATED.
- SAWCUTTING OF CONCRETE SHALL BE AT THE LOCATION INDICATED OR AT THE NEAREST JOINT.

REMOVAL LEGEND

ITEM OR OBJECT TO BE REMOVED

X ++++



Bud Design & Engineering Services, Inc Architecture | Engineering | Interior Design

> 10775 S. Saginaw St. Suite B Grand Blanc, Mt 48439 (PH) 810:495:0793 (FAX) 810:495:0549

Web: www.buddes/gn.com

CULVER'S AUBURN ROAD ROCHESTER HILLS, MI

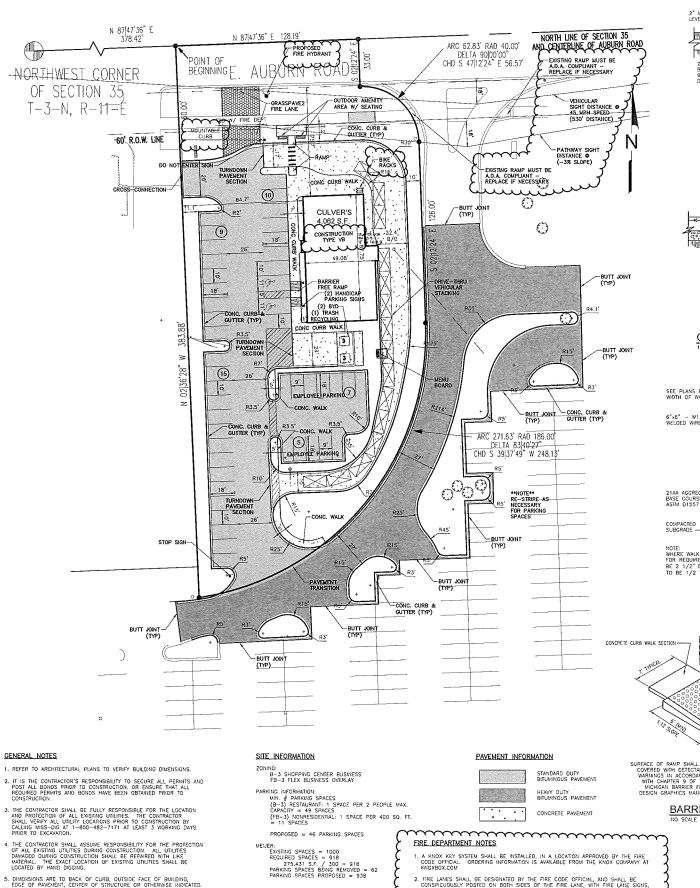


E 0-EB	
ISSUED FOR	DATE
SITE PLAN	08/21/15
SITE PLAN	07/18/16
	-
DATE: 06/06/16	
DRAWN: ACA	
CHECKED: JT	
SCALE: 1'=30'	
JOB NO: BD-16-214	
SHEET TITLE :	
REMOVAL PL	AN

C2.1

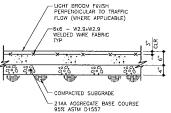
Know what's below.
Call before you dig.

0' 30' 60'
SCALE: 1" = 30'



6. PARKING STRIPING SHALL BE PER THE CITY OF ROCHESTER HILLS STANDARDS. 7. ALL PAVING MATERIALS AND OPERATIONS SHALL BE IN CONFORMANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MODT) STANDARD SPECIFICATIONS FOR CONSTRUCTION.

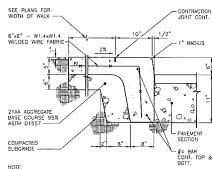
BITUMINOUS PAVEMENT



NOTE: A GEOTECHNICAL REPORT WITH PAVEMENT DESIGN RECOMMENDATIONS WAS NOT AVAILABLE, THEREFORE THE PAVEMENT SECTION REPRESENTS THE MINIMUM STANDARD RECOMMENDED.

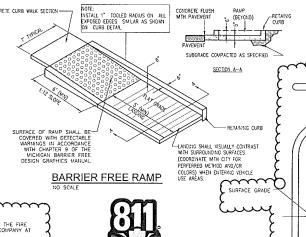
CONCRETE SHALL BE 3500 PSI

CONCRETE PAVEMENT

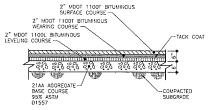


NOTE: WHERE WALK DOES NOT ABUIT ASPHALT PAVEMENT, EXTEND THICKNESS FOR REQUIRED WIDTH AND OWN CURB PORTION. CONTRACTION JOINTS TO BE 2.1/2" DEEP, SPACED AT 5" RITERVALS (TOOLED). EXPANSION JOINTS TO BE 1/2 " PREMOLDED FILLER. SPACED A MAXIMUM OF 30' APART.

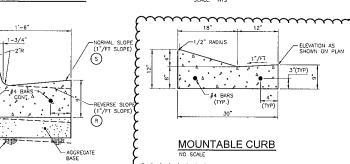
CONCRETE CURB WALK



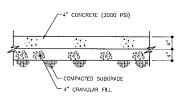
 FIRE LAMES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL, AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LAME, WITH FIRE LAME SIGNS, SPACED NOT MORE THAN 100 FEET APAIT. FIRE LAME SIGNS SHALL READ "NO STOPPHIG, STANDING, PARKING, FIRE LAME", AND SHALL COMPORN TO THE MICHIGAN MAINLAL OF UNIFORM TRAFFIC CONTINGL DEVISION. 3. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IFC 2006 CHAPTER 14.



HEAVY DUTY BITUMINOUS PAVEMENT



CONC. CURB & GUTTER



NOTE: CONTRACTION JOINT SHALL BE 1/4"×2 3/4" DEEP, SPACED AT 5"-0" INTERVALS. EXPANSION JOINTS SHALL BE 1/2" PREMOLDED FILLER, SPACED AT A MAXIMUM 30' APART. EXPANSION JOINTS TO BE PLACED BETWEEN NEW AND EXISTING CONCRETE.

o2 3/8"

NOTES: AFEX BIKE RACK BY SITE SCAPES, PRODUCT NO. AP2-02-EM PLACE RACK MINIMUM OF 24" FROM WALL

RIGHT SIDE VIEW

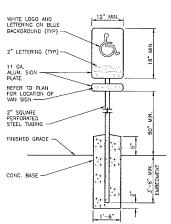
BIKE RACK

MATERIAL LIST:

1. TUBING = 0 2 1 x.154" WALL STEEL TUBING

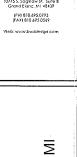
CONCRETE WALK

TOP VIEW



GRASSPAVE2 FIRE LANE

TYPICAL HANDICAP SIGN



be

Bud Design &

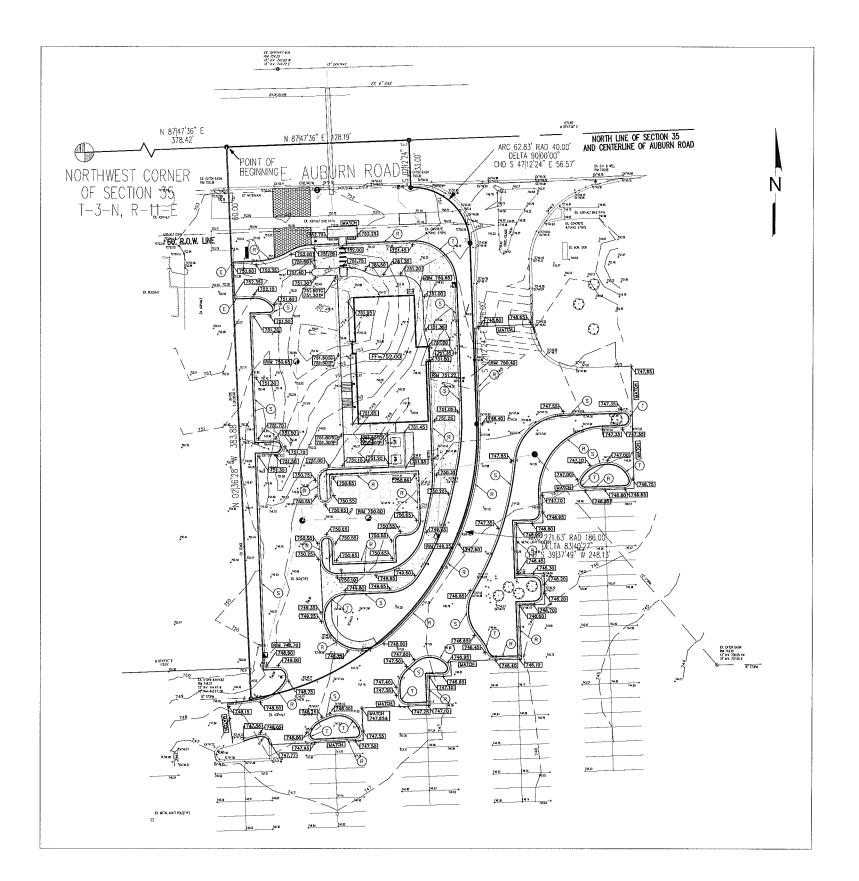
AUBURN ROAD ROCHESTER HILLS, CULVER



PET CONTROL OF STATE	α,
ISSUED FOR	DATE
SITE PLAN	06/21/15
SITE PLAN	07/18/18
ļ	
DATE: 06/06/16	:
DRAWN: ACA	
CHECKED: JT	
SCALE: 1'+30'	
JOB NO: BD-16-214	
SHEET TITLE:	
SITE LAYOUT PAVING PLAN	
SHEET	
C3.	.0

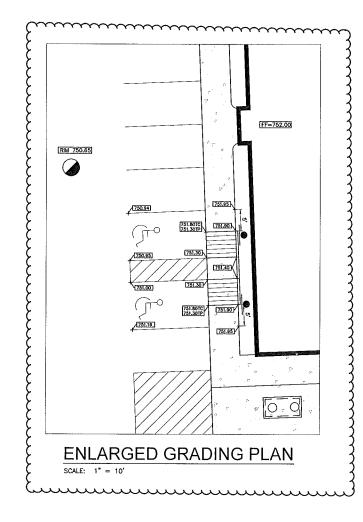
Know what's below. Call before you dig.





GRADING NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF ROCHESTER
 HILLS STANDARDS AND SPECIFICATIONS.
- 2. SPOT ELEVATIONS INDICATE TOP OF PAVEMENT UNLESS OTHERWISE INDICATED: $TC = TOP \ \ \text{OF CURB} \\ TP = TOP \ \ \text{OF PAVEMENT}$
- 3. CURB AND GUTTER LEGEND
- S = STANDARD CURB AND GUTTER
- R = REVERSE SLOPE CURB AND GUTTER T= 5' TRANSITION FROM STANDARD TO REVERSE
- 4 REFER TO LANDSCAPE PLAN FOR LANDSCAPE TREATMENT AND PLACEMENT.







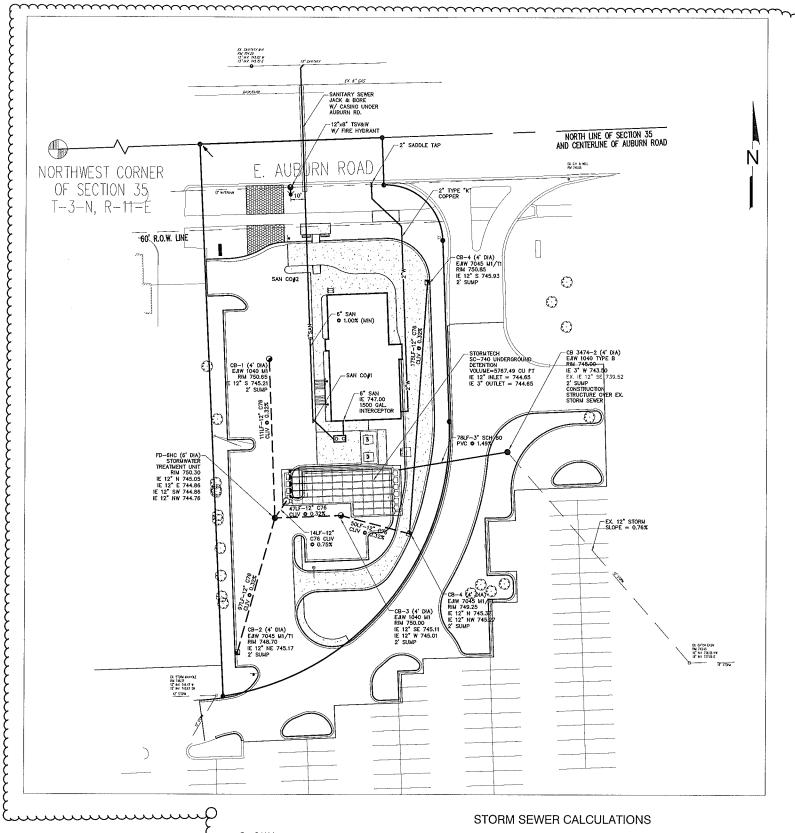
10775 S. Saginaw St. Suite B Grand Planc, MI 48437

(FH) 810-695-0793 (FAX) 810-695-0569

AUBURN ROAD ROCHESTER HILLS, MI **CULVER'S**

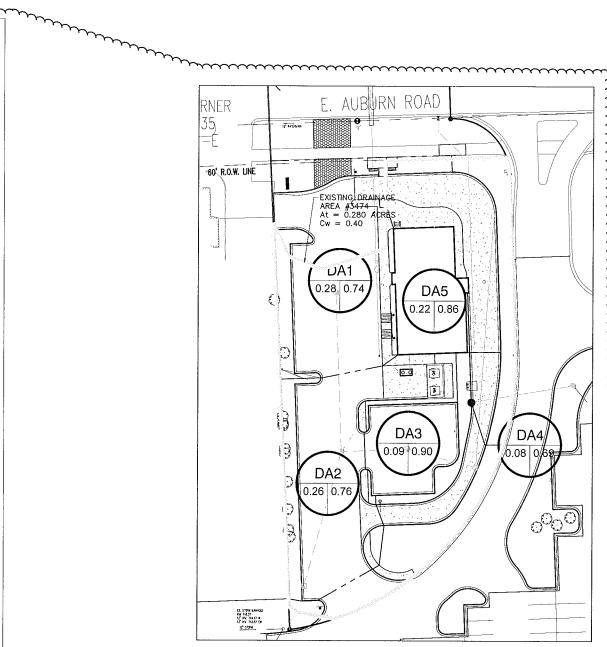


HALL TOOL HAW CONDING, AND	B 0.8
ISSUED FOR	DATE
SITE PLAN	08/21/10
SITE PLAN	07/18/19
	
~~~~	
DATE: 06/06/16	
DRAWN: ACA	
CHECKED: JT	
SCALE: 1'+30'	
JOB NO: BD-16-214	
SHEET TITLE :	
GRADING PL	AN
SHEET	
C4	.0



Qp = A x 1.486/n x R^{2/3} x S^{1/2} 1 = 175/(25 + t₋) for 10 year storm event

																					8.0	3.L.	INVER:	ELEV.	PIPE	COVER
AREA	FROM	TO	AREA	COEFF.		AREA	COEFF.		TIME	INT.	n	FLOW	PIPE	PIPE	PIPE	PIPE	VEL.	TME	RIM	RM	HIGH	LOW	HIGH	LOW	HIGH	LOW
NO.	MH/CB	MH/CB	A	С	AxC	TOTAL	Wt	At x Cw	tc	- 1		Q _R	CAP.	LENGTH	DIA.	SLOPE	FULL	FLOW	ELEV	ELEV	END	END	END	END	END	END
						At	Cw					Q=CIA	Qp						HIGH	LOW	HGL	HGL	NV	MA		1
			acres			acres			min	njπ		ots	ats	t	n	t. ₂	tisec	man	1	1			1		1	
DA1	1	FD-6HC	0.28	0.74	0.21	0.28	0.74	0.21	15.00	4.38	0.013	0.92	2.02	111	12	0.32%	2.57	0.72	750.65	750.30	746.33	745.88	745.21	744.86	4.29	4.29
DA2	2	FD-6HC	0.28	0.76	0.20	0.26	0.76	0.20	15.00	4.38	0.013	0.87	2.02	97	12	0.32%	2.57	0.63	748.70	750.30	746.28	745.88	745.17	744.86	2.38	4.29
DA5	5	4	0.22	0.86	0.19	0.22	0.86	0.19	15.00	4.38	0.013	0.84	2.02	175	12	0.32%	2.57	1.14	750.85	749.25	747.20	746.48	745.93	745.37	3.77	2.73
DA4	4	3	0.08	0.69	0.06	0.30	0.82	0.25	18.14	4.25	0.013	1.06	2.02	50	12	0.3255	2.57	0.32	749.25	750.00	746.38	746.17	745.27	745.11	2.83	3.74
DA3	3	FD-6HC	0.09	0.90	0.08	0.39	0.83	0.33	16.46	4.22	0.013	1.37	2.02	47	12	0.32%	2.57	0.31	750.00	750.30	746.07	745.88	745.01	744.£ô	3.84	4.29
	FD-6HC	DET	0.00	0.00	0.00	0.93	0.78	0.73	16.77	4.19	0.013	3.07	3.09	14	12	0.75%	3.93	0.06	750.30	749.25	745.78	745.65	744,76	744.65	4.39	3.45



DRAINAGE AREAS سسسس DRAINAGE AREAS

DRAINAGE AREA KEY

Know what's below, Call before you dig.

| Area | Pentous | Impentous | C Pentous | C Pavement | Area Total (acres) | C Pentous | Total (S.F.) | Area (S.F.) | C Pentous | C Pavement | Area Total (acres) | C Pentous | C Pavement | Area Total (acres) | C Pentous | C Pavement | Area Total (acres) | C Pentous | C Pavement | Area Total (acres) | C Pentous | C Pavement | Area Total (acres) | C Pentous | C Pavement | Area Total (acres) | C Pentous | C Pavement | Area Total (acres) | C Pentous | C Pavement | Area Total (acres) | C Pentous | C Pavement | Area Total (acres) | C Pentous | C Pavement | Area Total (acres) | C Pentous | C Pavement | Area Total (acres) | C Pentous | C Pavement | Area Total (acres) | C Pentous | C Pent Area DA1 DA2 DA3 DA4 DA5

A_T = 0.934 ACRES 0.780 ACRES 0.15 ACRES A_{PERV} = Cw =

PROPOSED CONDITIONS

RUNOFF DRECTED TO REGIONAL BASM (Atwell-Hicks "As Built" plans from City File 05-037)

Meijer Site Drainage Area 3474

A_T = 0.280 ACRES

## SANITARY BASIS OF DESIGN

CULVER'S RESTAURAN		סוסחם	OI DESIGN	
USAGE	AREA	u	NIT FACTOR	R.E.U.
Cuick Service Franchise	1	building	5.6 units per building	5.60 5.60
POPULATION EQUIVALENT	= 3.5	Persons per	R.E.U.	
POPULATION =	19.6	Persons		
AVERAGE FLOW RATE =	90	Gallons per	cacita per dav	
AVERACE FLOW -	4.704.00	onn .		

AVERAGE FLOW = PEAK FACTOR = PEAK FLOW =

Sanitary Sewer 7.055.00 GPD = 0.011 CFS 6'@1.00%(cfs) = 0.52

be Bud Design & Engineering Services, Architectus | Engineering | Interior D (FH) 810.495.0793 (FAX) 810.695.0569

> ⋈ AUBURN ROAD ROCHESTER HILLS, CULVER'S





NATIONALISM NATION	<b>8</b> 0 8
ISSUED FOR	DATE
SITE PLAN SITE PLAN	08/21/16
OHE PERM	01710710
	<b></b>
DATE: 06/06/16	
DRAWN: ACA	
CHECKED: JT	
SCALE: 1'*30'	
JOB NO : BD-16-214	
SHEET TITLE :	
UTILITY PLAN	4
SHEET	
C5	0.

StormTech. Chamber Model -SC-740

Number of chambers Voids in the stone (prosity) -Base of Stone Elevation -Amount of Stone Above Chambers -Amount of Stone Below Chambers -Area of system -

Administration of MINES 58 40 744.65 12 9 ☐ Include Perimeter Stone in Calculations 2452 sf Min. Area - 1961 sf min. area

		Cumulative			10-110-120 distribution (100)	Automorphism Company
Height of			Incremental	incremental	Cumulative	
System	Chamber	Total Chamber	Stone	Ch & St	Chamber	Elevation
(inches)	(cubic feet)	(cubic feet)	(cubic feet)	(cubic feet)	(cubic feet)	(feet)
51	0.00	0.00	81.73	81.73	5767,49	748.90
50	0.00	0.00	81.73	81.73	5685,76	748.82
49	0.00	0.00	81.73	81.73	5604.02	748,73
48	0.00	0.00	81.73	81.73	5522.29	748.65
47	0.00	0.00	81.73	81.73	5440.56	748.57
46	0.00	0.00	81.73	81.73	5358.82	748.48
45	0.00	0.00	81.73	81.73	5277.09	748.40
44	0.00	0.00	81.73	81.73	5195.36	748.32
43	0.00	0.00	81.73	81.73	5113.62	748.23
42	0.00	0.00	81.73	81.73	5031,89	748.15
41	0.00	0.00	81.73	81.73	4950.16	748.07
40	0.00	0.00	81.73	81.73	4868.42	747,98
39	0.05	3.19	80.46	83.65	4786.69	747,90
38	0.16	9.45	77.95	87.40	4703.04	747.82
37	0.28	16.35	75.19	91.54	4615.64	747.73
36	0.60	35.03	67.72	102.75	4524.09	747.65
35	08.0	46.50	63,13	109.63	4421.34	747.57
34	0.95	55.14	59.68	114.82	4311.71	747.48
33	1.07	62.32	56.80	119.13	4196.89	747.40
32	1,18	68.47	54.35	122.81	4077.77	747.32
31	1.27	73.41	52.37	125.78	3954.95	747.23
30	1.36	78.59	50.30	128.89	3829.17	747.15
29	1.45	84.34	48.00	132.34	3700.29	747.07
28	1.52	88.43	46.36	134.79	3587.95	746.98
27	1,58	91.77	45.02	136.80	3433.16	746.90
26	1.64	95.25	43.63	138.88	3296,36	746.82
25	1.70	98.57	42.30	140.88	3157.47	746.73
24	1.75	101.67	41.07	142.74	3016.60	746.65
23	1,80	104.56	39,91	144.47	2873.86	746,57
22	1.85	107.59	38.70	146.29	2729.39	746.48
21	1.89	109.80	37.81	147.61	2583.10	746.40
20	1.93	112.17	36,66	149.04	2435.49	748.32
19	1.97	114.55	35.91	150,46	2286,45	746.23
18	2.01	116,58	35.10	151.68	2135,99	746.15
17	2.04	118.61	34.29	152.90	1984.31	748.07
16	2.07	120.35	33.59	153.94	1831.41	745.98
15	2.10	122.08	32.90	154.98	1677,47	745.90
14	2,13	123.64	32.28	155.92	1522.49	745.82
13	2.15	124.92	31.76	156.69	1366.57	745.73
12	2.18	126.27	31.23	157.50	1209.88	745,65
11	2.20	127.50	30.73	158.24	1052.38	745.57
10	2.21	128.02	30.52	158.55	894.15	745,48
9	0.00	0.00	81.73	81.73	735.60	745.40
8	0.00	0.00	81.73	81.73	653.87	745.32
7	0.00	0.00	81.73	81.73	572.13	745.32
6	0.00	0.00	81.73	81.73	490.40	745.23
5	0.00	0.00	81.73	81.73	490,40	745.07
4	0.00	0.00	81.73	81,73		
3	0.00	0.00	81.73	81,73	326.93 245.20	744.98
2	0.00	0.00				744.90
4	0.00	0.00	81,73	81.73	163,47	744.82

## PROPOSED DEVELOPED CONDITIONS

DRAINAGE AREA  $A_T = 0.934$  $C_{27} = 0.78$ 

REQUIRED DETENTION VOLUME (25-YEAR EVENT) Q_a = 0.2 cfs / acre Q_a = 0.19 CFS/AC-IMP

 $Q_0 = (Q_a)/(A_T^*C_W)$   $Q_0 = 0.255$ 

 $T_{25} = -25 + (8062.5/Q_2)^{1/2}$ T₂₄ = 152.84 min

 $V_{525} = [(12900^{\circ}T_{25})(T_{25}+25)] - 40(Q_1)(T_{25})$ V₅₂₅ = 9,528 FT

 $V_{T25} = (V_{525})(A_T)(C_{VI})$  $V_{T25} = 6,983$  FT³

EXISTING DRAINAGE

RUNOFF DIRECTED TO REGIONAL BASIN (Atwell-Hicks "As Built" plans from City File 05-037) Atveil-Hicks As Born prans born only the coop DRAINAGE AREA Area noted as "3474" on Atvell-Hicks plans

A_T = 0.280 ACRES

C_W = 0.40 Runoff Coefficient from Johnson Drain plans

REQUIRED DETENTION VOLUME (25-YEAR EVENT)

 $Q_a = 0.2 \text{ cfs} / \text{acre}$  $Q_a = 0.06$ 

 $Q_0 = (Q_a)/(A_7{}^aC_{ii})$  $Q_0 = 0.500$ CFS

 $T_{25} = -25 + (8062.5/Q_2)^{1/2}$ T₂₅ = 101.98 min

 $V_{S25} = [(18500^{\circ}T_{25})/(T_{25}+25)] - 40(Q_{5})/(T_{25})$ V₅₂₅ = 11,212 FT

 $V_{125} \simeq (V_{525})(A_1)(C_{11})$ V₁₂₅ = 1,256 FT³

## REQUIRED DETENTION

Required detention is the difference between the existing conditions and the proposed conditions

Proposed Conditions = 6.983 ET³ 5,728 FT³

## REQUIRED DISCHARGE

0.255 cfs

ELEV_{GET} 744.65 (Underground Detention) ELEV_{DISCHARGE} = 743.50 (New MH Connection) have = (ELEVDET - ELEVDISCHARGE)

h_{AVE} = 1.15 FT

A = Q / (0.62*(2*a*h.v.=)*0.5 A = 0.05 FT² D = 3.0

3.0 INCH DIA. SCH 80 PVC @ 1.50%



## Hydro & International &

## First Defense®

Cost-effective stormwater treatment with adaptability to meet demanding site requirements

## Product Profile

The First Delense⁵ is an enhanced vortex separator that combines an effective and economical stormwater treatment chamber with an inlegar peak flow bypass. It efficiently removes sediment total suspended solids (TSS), tesh and hydrocarbons from etormwater runoff without washing oul previously captured pollutants. The First Delense⁶ is available in several model configurations to accommodate a wide range of pipe sizes, peak flows and depti constraints (Table 1, next page).

## Components 1. Inlet Grate (optional)

- 2. Inlet Chute
- Inlet Pipe (optional)
   Floatables Draw Off Slot

5. Precast Vortex Chamber

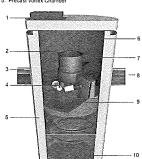


Fig.1 The First Defense* has internal components designed to efficiently capture pollutants and prevent washout at peak flows.

. Stormwater treatment at the point of entry into the drainage line

Sites constrained by space, topography or dramage profiles with limited slope and depth of cover

tied into an existing storm drain line

• Pretreatment for filters, infiltration and storage

Applications

Advantages

How it Works

- . Internal Bypass
- - 7. Outlet Chute 8. Outlet Pipe
- (not pictured)
- 9. Oil and Floatables Storage 10. Sediment Storage Sump

The First Defense* has internal components designed to remove and retain gross debris, total suspended solids (TSS) and hydrocarbons (Fig.1).

Inlet options include surface grate or multiple inlet pipes
Integral high capacity bypass conveys large peak flows without
the need for "offine" arrangements using separate junction
manholes
Proven to prevent poflutant washout at up to 500% of its
fractional Rev.

treatment flow

Long flow path through the device ensures a long residence time within the treatment chamber, enhancing pollutant settling

Delivered to site pre-assembled and ready for installation

Contaminated stormwater runoff enters the inlet chute from a surface grate and/or inlet pipe. The inlet chute introduces flow into the chamber tangentially to create a low energy vortex flow regime (magenta arrow) that directs sediment into the sump while oils, floating trash and debris rise to the surface.

Treated stormwater exits through a submerged outlet chute located opposite to the direction of the rotating flow (blue arrow). Enhanced vortex separation is provided by forcing the rotating flow within the vessel to follow the longest path possible rather than directly from inlet to outlet.

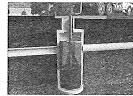
Higher flows bypass the treatment chamber to prevent turbulence and regards involve uppass on oreament chamber to prevent furbiblence and washout of captured poblatins. An integral bypass conveys infrequent peak flows directly to the outlet chute, eliminating the need for, and expense of, external bypass control structures. A floatables draw off soft functions to convey floatables into the treatment chamber prior to bypass.

Stormwater Solutions Turning Water Around...4

## First Defense®

The First Defense's needs minimal maintenance, but like all structural best management practices maintenance is necessary for the long-term protection of

More information can be found in the First Defense' Operation and Maintenance Manual, available at http://www.hydro-int.com/us/products/first-defense.



## First Defense Sizing & Design

Design Options for Inlet and Internal Bypass Arrangements

For maximum flexibility the First Defenses inlet and internal bypass arrangements are available in two configurations (Fig.3a & 3b).



Fig.3b First Defense*-HC with higher capacity internal bypass and larger maximum pipe diameter,

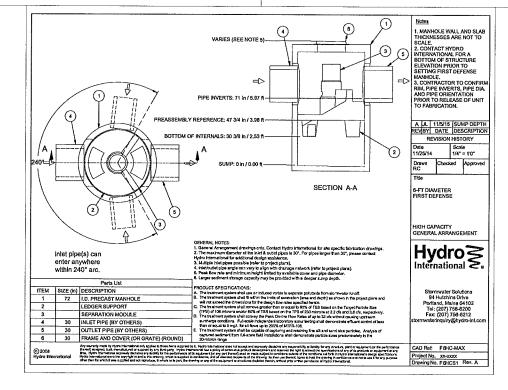
Table 1. Fin	rst Defense* I	Models and	Design Crit	ieria.					
First Defense* Model Number	Diameter	Flow Rat	olcal es for TSS Iment 230µm	Online	Maximum Pipe Diameter ¹	Oil Storage Capacity	Typical Sediment Storage Capacity*	Minimum Distance from Outlet Invert to Top of Rim!	Standard Distance from Outlet Invert to Sump Floor
	(0/m)	(ds / Us)	(ds/Us)	(cfs / L/s)	(in / mm)	(gal/L)	(yd/m²)	(h/m)	(fistori)
FD-4	4/12	0.7/20	1.2/34	6 / 170	18 / 450	180 / 681	1.3 / 1.0	3.1 / 1.1	5.47 / 1.7
FD-4HC	471.2	0.7720	1.2734	18 / 510	24 / 600	191 / 723		2.3 - 3.9 / 0.7 - 1.2	
FD-6	6/1.8	2.2 / 63	63 3.8 / 108	18/510	24 / 600	420 / 1,590	33/25	4.0 / 1.2	6.52 / 2.0
FD-6HC	07 1.0	2.2703	3.67 106	32/908	30 / 750	496 / 1,878	3.372.5	3.0 - 5.1 / 0.9 - 1.6	

¹Contact Hydro International when larger pipe sizes are required.

²Contact Hydro International when custom sediment storage capacity is required. ³The minimum distance for the 4HC and 6HC models depends on pipe diameter.

Hydro International, 94 Hytichins Drive, Portland, ME 04102 Tel: (207) 758-6200 Fax: (207) 756-6212 Email: stormwateringuiry@hydro-int.com Web: www.hydro-int.com

Stormwater Solutions Turning Water Around...5





Web: www.buddesign.com

⋝

## AUBURN ROAD ROCHESTER HILLS, **CULVER'S**

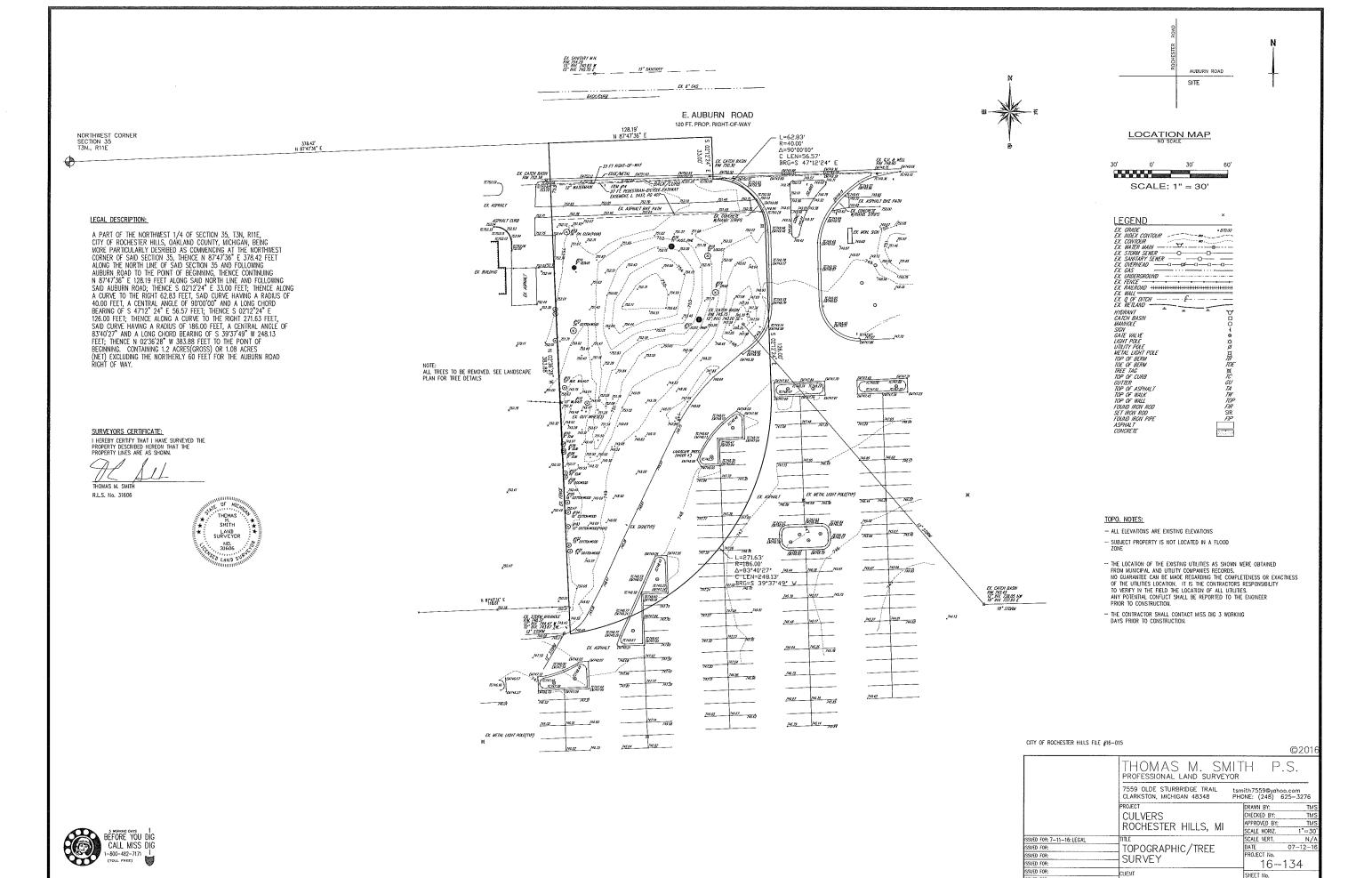




	H ROW H ROW DOOR HUDDE C H AND H AND HANCE WATER	
	ISSUED FOR	DATE
	SITE PLAN	07/18/18
	DATE: 06/06/16	
	DRAWN: ACA	
ļ	CHECKED: JT	
	SCALE: 1'-30'	
J	JOB NO - BD-16-214	

Know what's below. Call before you dig.

STORM MANAGEMENT PLAN C5.1 SCALE: 1" = 30' ROCHESTER HILLS FILE #16-0



SUED FOR:

ZIELKE

1 of 1

## LANDSCAPE PLANTING NOTES:

- Installation of all plant material shall be in accordance with the latest edition of the American Association of Nurserymen Standards for Nursery Stock and with the specifications set forth by the City of Rochester Hills, Michigan,
- 2. The plant materials shall conform to the type stated 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
- 4. Plants designated "B&B" shall be balled and burlapped with firm balls of
- 5. Dig shrub pits one foot (1") larger than the shrub rootball, tree pits three (3) times the width of the tree rootball and backfill with one (1) part topsoil and one (1) part soil from excavated pit. Plant trees and shrubs at the same grade level at which they were planted at the nursery. If wet, clay soils are vident, plant trees and shrubs slightly higher.
- 6. The Contractor is responsible for planting the materials at the correct grades and spacing. The plants shall be oriented to give the best appearance 7. When the plant has been properly set, the pit shall be backfilled with the
- topsoil mixture, gradually filling, patting, and settling with water 8. Trees in lawn areas to have a four foot (4') circle of mulch, four inches (4') deep, and three inches (3") away from the trunk. Shrub beds are to be mulched with shredded bark mulch to a minimum depth of three inches (3"). Perennial beds are to be mulched with shredded bark mulch to a minimul depth of three inches (3"). Only natural color, finely shredded hardwood bark mulch will be accented
- 9. Remove all twine, wire, and burlap from the top one third (1/3) of tree and shrub root balls and from tree trunks. Remove all non-biodegradable material such as plastic or nylon completely from branches and stems. All tree wrap, stakes, and guys are to be removed after one (1) winter season
- 10. 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.
- 11. Organic, friable topsoil shall be evenly distributed and fine graded over all areas to receive lawns at uniform depth of four inches (4") after settlement 12. All lawn areas shall be seeded with the Grade A Kentucky Blue Grass blend as specified over the topsoil.
- 13. All plantings shall be completed no later than November 30 in the fall seasor The date of intended installation for landscape plant materials is approximately Spring, 2017. Plantings shall thereafter be reasonably maintained, including permanence and health of plant materials to provide a
- screen to abutting properties and including the absence of weeds and refuse 14. Backfill directly behind all curbs and along sidewalks and compact to the top of curbs or walk to support vehicle and pedestrian weight without settling
- Required landscape material shall satisfy the criteria of the American. Association of Nurserymen Standards for Nursery Stock and be: a.) Northern nursery grown; b.) State Department of Agriculture inspected; c.) No. 1 grade material with a straight, unscarred trunk, and well-developed uniform crown (park grade trees will not be accepted); d.) Staked wrapped watered, and mulched according to the details provided; and e.) Guaranteed for one (1) year.
- 2. Topsoil shall be friable, fertile soil of 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 between 6.0 and 7.0. The topsoil shall be free from clay lumps, coarse sand, plant roots, sticks, and other foreign

Interior landscaping areas equivalent to five percent (5%) of the vehicular use area

One (1) decidious shade tree shall be required for each 150 sq. ft. of required interior landscape area - 1,382 divided by 150 equals 9.2 trees or 10 trees

PERIMETER LANDSCAPING ALONG AUBURN ROAD (159 lineal feet)

One (1) deciduous shade tree for each twenty-five lineal feet (25 I.f.) = 6.72 trees or 7 trees
 One (1) ornamental tree for each thirty-five lineal feet (35 I.f.) = 4.88 trees or 5 trees
 Fifteen (15) shrubs for each one-hundred lineal feet (100 I.f.) = 23.85 shrubs or 24 shrubs

Three (3) ornamental trees for each one-hundred lineal feet (100 l.f.) = 10.5 trees or 11 trees

* One (1) deciduous shade tree for each thirty-five lineal feet (35 l.f.) = 4.54 trees or 5 trees
* One (1) ornamental tree for each sixty lineal feet (60 l.f.) = 2.65 trees or 3 trees

LANDSCAPE CALCULATIONS:

PARKING LOT LANDSCAPING (27,626 square feet)

* 27,626 sq. ft, times 0.05 equals 1,382 sq. ft, required

PERIMETER LANDSCAPING ALONG MEIJER ROAD (350 lineal feet)

* Eight (8) shrubs for each one-hundred lineal feet (100 l.f.) = 28 shrubs RIGHT-OF-WAY LANDSCAPING (159 lineal feet)

## 3. The seed mixture shall consist of the following types and proportions: Kentucky Blue Grass blend "Baron/Sheri/Adelphi" @ sixty percent (60%), Chewing Fescue @ twenty-five percent (25%), Creeping Red Fescue @ ten percent (10%), and Perennial Rye Grass @ five percent (5%). Weed content shall not exceed one

- percent (1%). The mix shall be applied at a rate of 200 pounds per acre. 4. Sod shall be two (2) year old "Baron/Sheri/Adelphi" Kentucky Blue Grass blend
- grown in a sod nursery on loam soil.

  Proposed perennials shall be full, well-rooted plants.

## GENERAL

- 1. Do not plant deciduous or evergreen trees directly over utility lines or under overhead wires. Maintain a six foot (6') distance from the centerline of utilities and twenty feet (20') from the centerline of overhead wires for planting holes. Call MISS DIG forty-eight (48) hours prior to landscape construction for field location of utility lines.
- 2. The Contractor agrees to guarantee all plant material for a period of one (1) year At that time, the Owner's representative reserves the right for a final inspection. Plant material with twenty-five percent (25%) die back, as determined by the Owner's representative shall be replaced. This guarantee includes the furnishing of new plants, labor, and materials. These new plants shall also be guaranteed for a period of one (1) year.
- 3. The work shall consist of providing all necessary materials, labor, equipment,
- tools, and supervision required for the completion as indicated on the drawings.

  4. All landscape areas shall be irrigated by an automatic underground irrigation system. Lawns and shrub/landscape areas shall be watered by separate zones to minimize overwatering.
- 5. All written dimensions override scale dimensions on the plans 6. All substitutions or deviations from the landscape plan must be approved by the City of Rochester Hills prior to installation
- 7. All bidders must inspect the site and report any discrepancies to the Owner's representative.
- All specifications are subject to change due to existing conditions.
- The Owner's representative reserves the right to approve all plant material. MAINTENANCE
- 1. The Owner of the landscaping shall perpetually maintain such landscaping in good condition so as to present a healthy, neat, and orderly appearance, free from refuse and debris.
- 2. All unhealthy, damaged, diseased, and/or dead material shall be removed immediately and replaced within six (6) months after it dies or in the next growing season. The planting season for deciduous plants shall be between March 1 and June 1 and from October 1 until the prepared soil becomes frozen. The planting season for evergreen plants shall be between March 1 and June 1. Plant mate installed to replace dead or diseased material shall be as close as practical to the size of the material it is intended to replace. The Cit may notify property owners of the need to replace dead, damaged, or diseased material.
- The Owner shall conduct a seasonal landscape maintenance program including regular lawn cutting (at least once per week during the growing season), watering, and snow removal during winter. Pruning shall be minimal at the time of installation, only to remove dead or diseased branches. Subsequent pruning will assure proper maturation of plants to achieve their approved purpose.
- The Contractor is responsible for watering and maintenance of all seed areas until a minimum of ninety percent (90%) coverage, as determined by the Owner's
- 5. Any debris such as lawn clippings, fallen leaves, fallen limbs, and litter shall be removed from the site on a weekly basis at the appropriate season.
- 6. All planting beds shall be maintained by removing weeds, fertilizing, and eplenishing mulch as needed.
- 7. The approved landscape plan will be considered a permanent record and integral
- part of the Site Plan Approval. Unless otherwise approved in accordance with the aforementioned procedures, any revisions to or removal of plant materials, or non-compliance with the maintenance requirements in Section 138-12.109 of the City Ordinance will place the parcel in non-conformity with the approved landscape plan and be a violation of the ordinance.

PERENNIALS:

PARKING LOT ISLAND DETAIL

TO INSTALLATION

OR BROKEN BRANCHES

SHREDDED BARK TO

FOUR INCH (4") DEPTH



COMMON NAME

Greenspire European Linden 3" cal. B&B

Greensnire European Linden, 3" cal. B&B.

Fastigiate Maldenhair Tree

Gro-Low Fragrant Sumac

Keteleer Upright Juniper

Pink Spires Crabapple

Goldflame Burnald Spirea

Alice Oakleaf Hydrangesa

Gro-Low Fragrant Sumac

\$350

\$125

\$200

\$50

\$90

\$1.50

\$200

\$10,150.00

\$125.00

\$3,000,00

\$4,200,00

\$2,950.00

\$1,350.00

\$2,660,00

\$2,394,00

\$5,000.00

\$550.00

\$1,600.00

\$2,000.00

Old Gold Juniper

Chadwick Yew

29

15

15

Emerald Arborvita

Procumbens Juniper

Tamarax Juniper

7 Pyrus calleryana 'Cleveland Select' Cleveland Select Callery Pear 3" cal. B&B

1 Pyrus calleryana 'Cleveland Select' Cleveland Select Callery Pear 3" cal. B&B

Servicebern

Hemerocallis sp. 'Happy Returns' Happy Returns Daylily

SIZE

1 gal. pot, 24" o.c.

24" spr., 3 gal. pot

30" spr., 5 gal, pot

24" ht., 3 gal, pot

24" ht., 3 gal. pot

24" ht., 3 gal. pot

24" spr., 3 gal. poi

24" ht., 3 gal. pot

24" ht., 3 gal. pot

24" ht., 3 gal, po

1 gal. pot, 24* o.c.

6' ht. B&B

2 cal B&B

3" cal. B&B

4' ht. 8&B

Dimensions - 72" x 24" x 37 Mounting - In ground

BENCH SPECIFICATION not to scale

## * Planting Soil Mix 28 cu. yds. \$40 \$1,120.00 * Shredded Hardwood Bark 45 cu. yds. \$30 \$1,350,00 WAUSAU MADE: Bench - MF2011 Color - Textured gray with gray legs

## EXISTING TREE TOTALS of trees on survey Trees to be removed with replacement required: Trees to be removed with replacement not required (Includes poor and very poor along west property line) Total replacement trees required equals eight (8) trees

date: June 15, 2016

07-14-2016 Revise acc. to City review

Itr, dated July 8, 2016.

Existing

indens

--2 TC

TO BE RETAINED

Existing 3" to 5"

TO BE REMOVED

Lindens

SEEDED

-12 JT

-7 GBF

-6 SBG

-8 PCS

∠6 MSF

~15 JK

Ex. Aus. Pine, Crab,

-SEEDED LAWN

& Honevlocust TO

BE REMOVED

0

0

£

Fx. 3" Linden

(Very Poor) TO-

BE REMOVED

Existing 5"

*⊢Maples* TO BÉ

RETAINED

Ex. 5" Maple

-2 TC

-(Very Poor) TO

BE REMOVED

-SEEDED LAWN

LAWN

-26 RAG 📳

DW. DAYLILY

-12 TMC

-14 SJS

Culver's

1 HQ

**F** 

 $\bigvee$ 

Cooper C

1 TOE-

219 RAG ¬

813 JC —

(7

SEEDED

I AWN.

6 SBG

## scale: 1" = 30'

SHREDDED BARK

MULCH (TYP.)

CITY OF ROCHESTER HILLS FILE NUMBER: 16-015

LANDSCAPE PLAN FOR: S & Z Restaurants, L.L.C. 4564 Oakhurst Ridge Road Clarkston, Michigan 48434 Mr. Andrew Zielke (248) 891-6080

PROJECT LOCATION: Culver's Restaurant Auburn Road Rochester Hills, Michigan

scale: 1" = 30'

LANDSCAPE PLAN BY: Nagy Devlin Land Design / 31736 West Chicago Ave. Livonia, Michigan 48150 (734) 634-9208



LP - 1: LANDSCAPE PLANTING PLAN

GENERAL NOTES FOR ALL PLANTINGS:

DO NOT CUT CENTRAL LEADER. PRUNE ONLY TO REMOVE DEAD OR BROKEN BRANCHES.

REMOVE ALL TAGS, STRINGS, PLASTICS, AND ANY OTHER NON-BIODEGRADEABLE MATERIALS (EXCEPT LABEL FOR PLANT NAME) FROM PLANT STEMS OR CROWN WHICH ARE UNSIGHTLY OR COULD CAUSE GIROLING.

OR COULD CAUSE GIRDLING. PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS IT BORE TO THE PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINE PLANT SLIGHTLY HIGHER THAN IOUS GRADE IN THE NURSERY. SET THE BASE OF THE PLANT SLIG

EXISTING GRADE IF PLANTING IN CLAY SOILS.
CENTER THE ROOTBALL IN THE PLANTING HOLE, LEAVE THE BOTTOM OF THE HOLE FIRM. USE WATER TO SETTLE THE PLANTING MIX AND REMOVE ANY AIR POCKETS AND FIRMLY SET THE TREE OR SHRUB, GENTLY TAMP IF NEEDED.

. MOUND TO TWELVE

NCH (12") HEIGHT

not to scale

PLANT LIST

PCS

RAG

PCS

SJS

TMC

KEY QTY. BOTANICAL NAME

3 Tilia cordata 'Greenspire'

11 Tilia cordata 'Greenspire'

5 Amelanchier canadensis

22 Juniperus procumbens

12 Juniperus tamariscifolia

10 Malus sp. 'Pink Spires'

GENERAL SITE LANDSCAPING

26 Rhus aromatica 'Gro-Low'

Gingko biloba 'Fastigiata'

15 Juniperus chinensis 'Keteleeri'

1 Hydrangea quercifolia 'Alice'

13 Juniperus chinensis 'Old Gold'

19 Rhus aromatica 'Gro-Low'

12 Taxus x media 'Chadwickii'

14 Spiraea japonica 'Shirobana'

Thuja occidentalis 'Emerald'

COST ESTIMATE

Deciduous Trees

* Ornamental Trees

* Deciduous Shrubs

' Evergreen Shrubs

* Perennials

* Benches

* Upright Evergreen Shrubs

* Tree Fund - R.O.W. Trees

Underground Irrigation

Seeded Lawn (square yards) 1,596

Tree Fund - Replacement Trees 8

* Evergreen Trees

TOTAL MATERIALS SPECIFIED:

Landscape Contractor to determine the quantity in the field

Spiraea x bumalda 'Goldflame'

MEIJER PARKING LOT TREE REPLACEMENT

PERIMETER LANDSCAPING ALONG AUBURN ROAD

SBM 12 Spiraea x bumalda 'Magic Carpet' Magic Carpet Spirea

Lavandula angustifolia 'Munstead' Munstead Lavender

PERIMETER LANDSCAPING ALONG MEIJER ACCESS ROAD

PARKING LOT LANDSCAPING

(2) 2 x 2 HARDWOOD STAKES. POSITION SIX INCHES TO EIGHT INCHES (6"-8") OUTSIDE OF ROOTBALL AND EXTEND EIGHTEEN INCHES (18") BELOW TREE PIT INTO UNDISTURBED SOIL. SHREDDED BARK MULCH OF A NATURAL

SOIL AT THE BASE OF THE TREE. YOUND TO FORM TREE SAUCER. (5) FINISH GRADE SLOPED AWAY FROM TREE.

(8) WIDTH OF ROOTBALL ON EACH SIDE

(1) STAKE TREE AS INDICATED USING TWO INCH TO THREE INCH (2"-3") WIDE BELT-LIKE MATERIAL OF FABRIC. (NO WIRE OR HOSE TO BE USED TO GUY TREES.) THREE (3) GUYS EVENLY SPACED PER TREE. REMOVE AFTER COLOR AT FOUR INCH (4") MINIMUM DEPTH. LEAVE A THREE INCH (3") CIRCLE OF BARE

THE PLANTING MIXTURE SHALL CONSIST OF 20% TOPSOIL, 60% SAND, AND 20% COMPOST, 1 SHREDDED BARK MULCH AT THREE INCH (3") MINIMUM DEPTH. MULCH SHALL BE NATURAL IN COLOR, -2 (3) (4) 3/16" x 4" ALUMINUM EDGING

CONTRACTOR TO VERIFY PERCOLATION

OF PLANTING PIT PRIOR TO INSTALLATIO

-① (2) FORM A SAUCER WITH MULCH AND SOIL AROUND SHRUB BED. (3) (3) CUT AND REMOVE BURLAP AND ₩ ₩ (OR APPROVED EQUIVALENT) OR SPADED EDGE. 5 EXCAVATE PLANTING BED AND BACK-FILL WITH PREPARED PLANTING MIX. (A) LINDISTLIBBED SUBGRADE

(8) SCARIFY SUBGRADE.

6 PLANTING MIX TO CONSIST OF EQUAL PARTS OF SAND, LEAF COMPOST, AND NATIVE SOIL. PERENNIAL / GROUNDCOVER

CONTRACTOR TO VERIFY PERCOLATION
OF PLANTING PIT PRIOR TO INSTALLATION

TOPSOIL, 60% SAND, AND 20% COMPOST

PERENNIALS TO BE PLANTED UP TO THE EDGE OF

THE SAUCER AROUND A TREE OR SHRIJE BED.

THE PLANTING MIXTUE SHALL CONSIST OF 20%

SHRUB

9 SCARIFY BOTTOM AND SIDES OF PLANTING PIT TO FOUR INCH (4") DEPTH. EVERGREEN TREE

STAKE ALL EVERGREEN TREES UNDER TWELVE FEET (12') HIGH.
GUY ALL EVERGREEN TREES TWELVE FEET (12') HIGH AND OVER
CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOF

NEVER CUT CENTRAL LEADER. PRUNE ONLY TO REMOVE DEAD

ONE (1) WINTER SEASON

N 87|47'36" E 378.42'

Ex. 36" Ch. Elm

(Very Poor) TO

BE REMOVED

Ex. 13" Black Walnuts

TO BE REMOVED

In general, existing

are in substandard

condition.

Cottonwoods and Flms

along west property line

Ex. Cottonwoods & Elms

TO BE REMOVED

Ex. Understory of

Buckthorn, Sumac.

Grape, Woodbine, &

Gray Dogwood,

Box Elder TO

SEEDED

LAWN

DW. DAYLILY/(TYP.)

LANDSCAPE PLANTING PLAN

1 SEE PLANT LIST FOR SPACING DISTANCE.

(2) SHREDDED HARDWOOD BARK OF A NATURAL COLOR MULCH AT TWO INCH (2") MINIMUM DEPTH.

3) 3/16" x 4" ALUMINUM EDGING (OR APPROVED EQUIVALENT) OR SPADED EDGE.

(4) EXCAVATE PLANTING BED AND BACKFILL WITH PREPARED PLANTING MIX AT A TEN INCH (10") DEPTH.

(5) (5) UNDISTURBED SUBGRADE.

1 TC

BE REMOVED

ROSS ACCES

N 87|47'36" E 128.19'

-SEEDED LAWN

-12 SBM∕-

22 JP

SEEDED

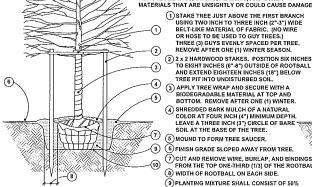
LAWN

۾ جن

AUBURN

not to scale

* Base data provided by Client.



**DECIDUOUS TREE** 

PLANTING DETAILS

TREE PIT INTO UNDISTURBED SOIL. APPLY TREE WRAP AND SECURE WITH A BIODEGRADABLE MATERIAL AT TOP AND BOTTOM. REMOVE AFTER ONE (1) WINTER. (4) SHREDDED BARK MULCH OF A NATURAL COLOR AT FOUR INCH (4*) MINIMUM DEPTI LEAVE A THREE INCH (3*) CIRCLE OF BARE SOIL AT THE BASE OF THE TREE. 5 MOUND TO FORM TREE SAUCER. (6) FINISH GRADE SLOPED AWAY FROM TREE. (8) WIDTH OF ROOTBALL ON EACH SIDE. 9 PLANTING MIXTURE SHALL CONSIST OF 50% TOSOIL AND 50% SAND.

USING TWO INCH TO THREE INCH (2"-3") WIDE BELT-LIKE MATERIAL OF FABRIC. (NO WIRE OR HOSE TO BE USED TO GUY TREES.) THREE (3) GUYS EVENLY SPACED PER TREE. REMOVE AFTER ONE (1) WINTER SEASON. (2) 2 x 2 HARDWOOD STAKES. POSITION SIX INCHES TO EIGHT INCHES (6"-8") OUTSIDE OF ROOTBALL AND EXTEND EIGHTEEN INCHES (18") BELOW CUT AND REMOVE WIRE, BURLAP, AND BINDINGS FROM THE TOP ONE-THIRD (1/3) OF THE ROOTBALL -(8)

NOTES:

STAKE TREES UNDER FOUR INCH (4") CALIPER.
CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION.
SET TOP OF BALL THREE INCHES (3") ABOVE FINISH GRADE.
SET STAKES VERTICAL & EVENLY SPACED.
STAKES OR GUYS TO BE SECURED ABOVE THE FIRST BRANCH.
DO NOT PRUNE TERMINAL LEADER. PRUNE ONLY DEAD OR

SCARIFY BOTTOM AND SIDES OF PLANTING PIT TO FOUR INCH (4") DEPTH.

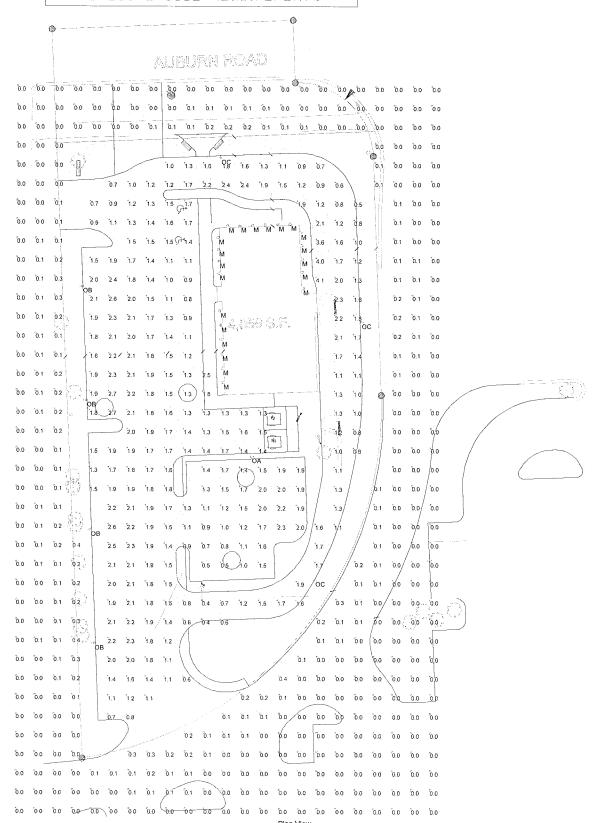
REMOVE ALL TAGS, STRING, PLASTICS, AND OTHER

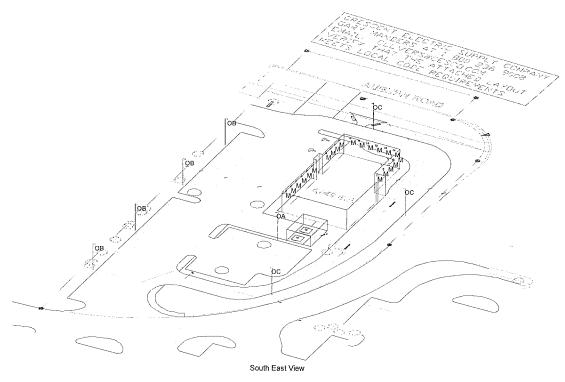
OR BROKEN BRANCHES.
SET STAKES VERTICAL AND EVENLY SPACED,
REMOVE ALL TAGS, STRING, PLASTICS, AND OTHER MATERIALS
THAT ARE UNSIGHTLY OR COULD CAUSE GIRDLING.

6 CUT AND REMOVE WIRE, BURLAP, AND BINDINGS FROM THE TOP ONE-THIRD (1/3) OF THE ROOTBALL.

7 PLANTING MIXTURE SHALL CONSIST OF 50% TOSOIL AND 50% SAND.

GRESCHNI ELECTRIC SUPPLY COMPANY GARY MANDERS AT 1 300 206 9008 EMAIL: CULVERC@CESCO.COM VERIFY THAT THE ATTACHED LAYOUT MEETS LOCAL CODE REQUIREMENTS





Symbol	Label	Quantity	Manufactur er	Catalog Number	Lamp	Wattage
	ОА	1		DSX1 LED 30C 1000 40K T5M MVOLT NA8C	LED	105
<u> </u>	ОВ	4		DSX1 LED 30C 1000 40K T4M MVOLT HS NA8C	LED	105
<b>D</b>	OC	3		DSX1 LED 30C 1000 40K T3M MVOLT HS NA8C	LED	105
	M	21	RAB LIGHTING, INC.	GNLED13N W/FLOOD REF/FROSTED LENS	ONE WHITE MULTI-CHIP LIGHT EMITTING DIODE (LED) WITH LEDS ARRANGED IN AN ARRAY OF THREE LINEAR ROWS, VERTICAL BASE- UP-POSITION.	15.4
	Light Poles	8	LITHONIA	SSS184C 2 FT. CONCRETE BASE		_ 1.

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
AREA OUTSIDE OF PARKING LOT		0.0 fc	0.4 fc	0.0 fc	N/A	N/A
PARKING LOT		1.6 fc	4.1 fc	0.4 fc	10.3:1	4.0:1

Designer

Date

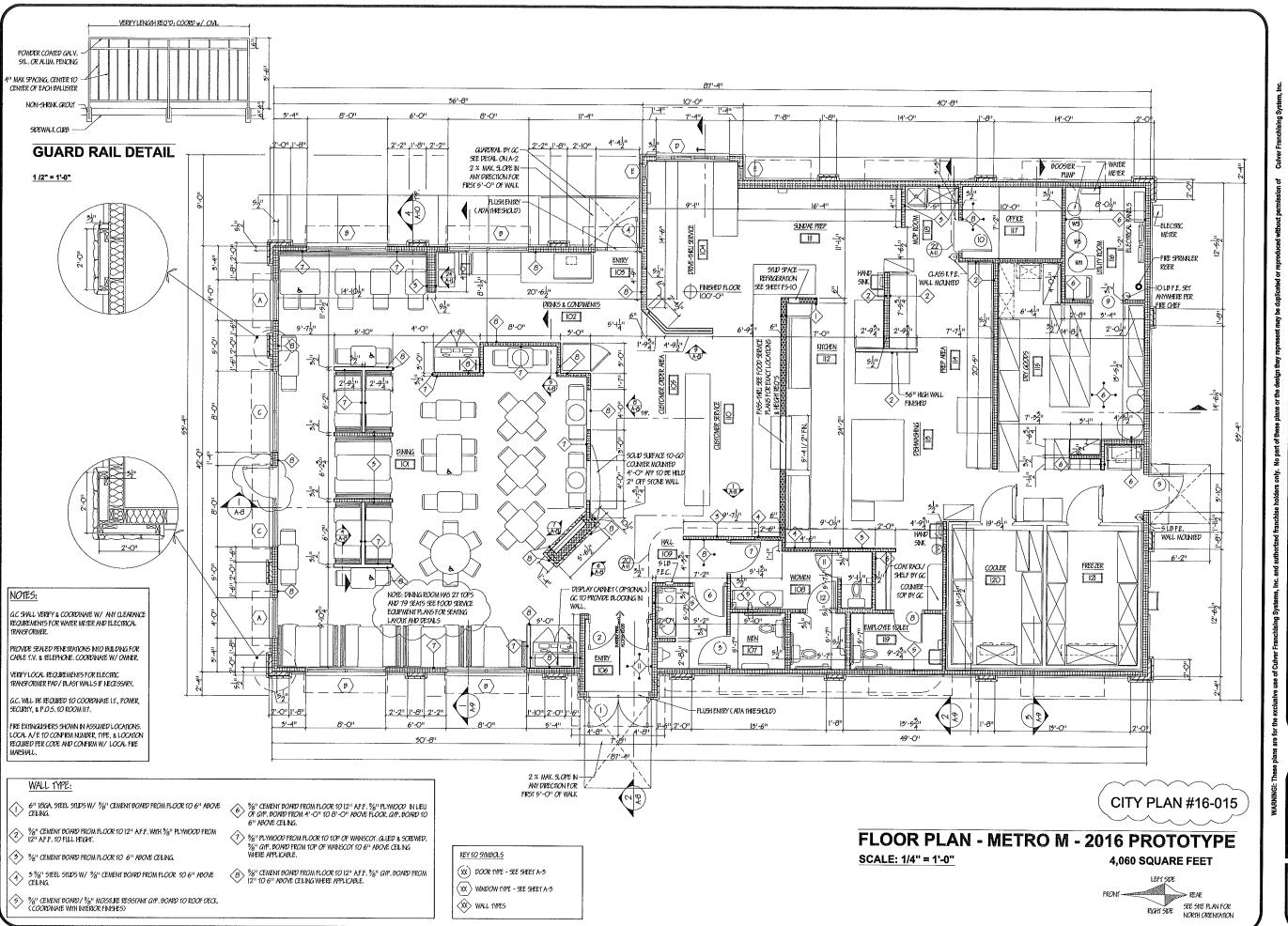
JUNE 16, 2016

Scale

Not to Scale

Drawing No.

1 of 1



Date Revision By

Culver Franchising System, Inc. 1240 Water Street Prairie du Sac, WI 53578 608-643-7980



CULVER FRANCHISING SYSTEM, IN METRO M - 2016 PROTOTYPE PLANS

Sheet Contents:
FLOOR
PLAN

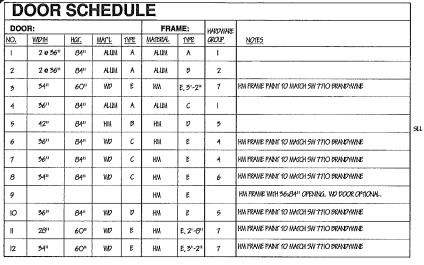
Metro M - 2016

S. Datka

Jan. 1, 2016

Sheet

A=2



## **HARDWARE GROUPS:**

HARDWARE OROUP 1: (Doors 1 & 4) This hardware group to be provided as part of the alumnum entrance package and shall be manufacturer's best quality system.

Roton continuous hinges with heavy duty hardware Tauthar exit device (Van Duprin Series 98 or approved equal) Manufacture's standard flush bolts LCN 4000 series with heavy duty hardwar Threshold: Aluminum - Meets ADA requirements Sween: Mfar's standard sween

Weatherstropping: Mfgr's premim package

HARDWARE OROUP 2: (Poor 2)

This hardware group to be provided as part of the aluminum entrance package and shall be manufacturer's best quality system.

as hinges with heavy duby hardware

Closers: LCN 4000 Series with heavy duty hardware Threshold: None

HARDWARE OROLF 3: (Dar 5)

Hinges: 1-1/2 pair butts 5055 55 413 450 11313 NRP

(ar Stanley or Hager equal) Schlage D series "Rhodes" in 626 finish Lock Protector: Gum-Johnson U5520 - Coard. w/ lock Closens: LCN 4000 H Cush w/ Integral stop

Weatherstripping: Full - Penko ar equal Kick Plate: 12" high x door width @ both sides of door. 626 finish - Rockwood or equal.

**DOOR TYPES** 

111 L 1 156" x 84" dear anodized aluminum

match laminate 2 alternate: marlite pre

North, class is 5/8" tempered

42" x 84" insulated lim door w/

4 x 25" -tempered glass like (ADA

compliant) w/ 5/8" travaling dass

36" x 84" x 1-3/4" flush panel solid 36" x 84" reulated hm door w/ single

core wid door w/ maple veneer, finish to pane 1/4" tempered like

finish to match adjacent exterior field ado

HARDWARE OROLP 4: (Doors 6 & 7) Hinges: 1-1/2 pair butto -5055 450 x NRP (or Stanley or Hazer equal) Brookline 50 x 626 hes 436 or hes 407 - 1/2 x 626 LCN 4000 series with heavy duty hardware Kick Plate: 8" high x door width @ both sides

HARDWARE OROUP 5: (Poors 9 & 10) 14/2 par butts - 5055 450 1BB (or Stanley or Hager equal) Schlage AL series "Salum" in 626 Ninish hes 436 or hes 407 - 1/2 x 626 Kick Plate: 8" high is door width @ kitchen side 626 Anish - Brookline or equal

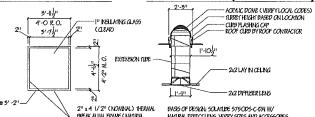
HARDWARE OROUP 6: (Door 8) (OPTIONAL Employee Bathroom) 14/2 pair butts - Soss 450 188 ( or Starley or Hazer equal) Schlage AL Series "Salum" in 626 Philish hes 436 or hes 407 - 1/2 x 626 LCN 4000 Series with heavy duty hardware

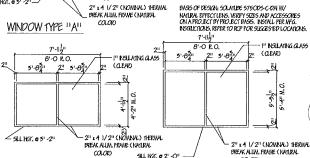
B¹¹ high x door width € kitchen side

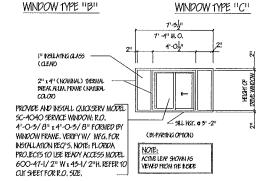
626 finish - Brooking or equal

HARDWARE OROUP 7: (Doors 3, 11 & 12) 1-1/2 par butts - Soss 450 188 (or Stanley or Hagar equal) Schlage AL series "Saturn" in 626 finish Bath/Bedroom Privacy Lock hes 436 or hes 407 - 1/2 x 626

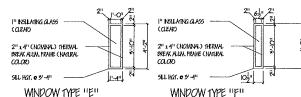
## **WINDOW TYPES: SKYLIGHT: (OPTIONAL)**



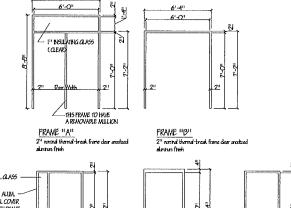


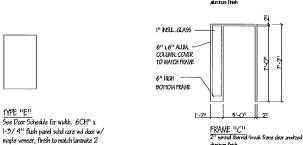


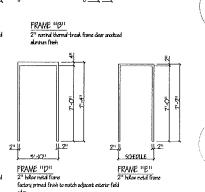
## WINDOW TYPE "D"



## **FRAME TYPES**







EXTERIOR MATERIALS OPTIONS: SEE EXTERIOR FINISH SELECTION DOCUMENT FOR SELECTIONS NATIONAL DISCUSS.

TOP OF PRAMET TO BE CLAD WITH UNA CLAD STEEL REGAL BLUE OR UNA-CLAD STEEL NEDUM BROATZE FOR ALL OPTIONS.

DO NOT DRISTACK CLLUTED STONE

PLASTERS & CORNICES

MAIN FELD MATERIAL:

_A_A

—coordnate returns W/ Structural Encaneer ensurang lateral Stablity

BRUSHED ALLIMANIA CANORY TO MATCH STORE PROME -

LED ACCENT LIGHTING - OPTIONAL

6'-7" Hx 6'-0" W(000)

FRONT ELEVATION

RIGHT SIDE ELEVATION

-LED ACCENT LIGHTNG

OPTIONAL (OFO)

SIL & ACCESSORES, BOILDER CREEK CHSEL PACE,

EFS.NED SAND FINSH, COLOR TO MATCH SHERWIN WILLIAMS SATI 525 TREE BRANCH

FIDER CENENT BOARD : JAMES HARDE HARDERLANK

LAP SIDNG, COLOR: KHAKI BROWN, 7.25" CEDAR MILL

Owen,

BOLLDER CREEK, PRAKE BLIFF, LANER NEWSERRY SLL & ACCESSORES, BOLLDER CREEK CHISEL FACE,

PLASTERS & CORNICES EFS NED SALD FRISH, COLOR TO MATCH GERMN
WILLIAMS SWIFGOD TRIHIT
MAN FELD MATERA;

FIBER CENENT BOARD : JANES HARDE, HARDERLANK LAP SIDNIG, COLOR: NAKI BROVAN 7.25" CEDAR MILL

EFS WED SAND FINAL COLOR TO WAICH SHERWIN

BOLLDER CREEK, PRAKE BLIFF, MOJAVE & NAVAJO

ENVIRONWENTAL STONEWORKS, FLISCAN LEDGE -SLL & ACCESSORES, EMPRONHENTAL STONEWORKS,

PLASIERS & CORNICES EFS. WED SAND FINSH, COLOR TO MATCH SHERVIN WLUAMS 947525 TIEE BRANCH

W/ LOCAL FIRE DEPARTMENT

LED ACCENT LIGHTING - OPTIONAL

6'-T' H16'-O' W (OFO)

EFF( SE (ARLE)

MAIN FIELD MATERIAL: FIRE CENENT BOARD . LANES HARDE HARDERI ANK LAP SIONG COLOR: NHAO BROWN 1.25" CEDAR WILL

EFS NED SAID FINSI, COLOR TO MATCH SERVIN WLUMIS SHTOSS TONY THE LEFS HED SHID FINEL COLOR TO HATCH SERVEN

-LED ACCENTILIZATING - CRITCHIA.

ENMRONWENTAL STONEWORKS, TUSCAN LEDGE -SIL & ACCESSORES, ENVIRONMENTAL STONEWORKS, FOND CILLAR.

 EPS: NED SAND FINSH, COLOR TO MATCH SHERVAN WILLIAMS SWITSON THO HUY MARI FIELD MATERIAL

FIBER CENENT BOARD : JANES HARDE, HARDERLANK LAP SONNG, COLOR: NHAT BROWN, 7:25", CEDAR HU

EFS. HED SAND FINSH, COLOR TO HATCH STERVIN

6'-0" Culver Franchising System, Inc. rairie du Sac. WI 53578





SIGNAGE NOTE:
ALL SIGNS MUST MEET CHAPTER 134
OF THE CITY CODE OF ORDINANCES
AND BE APPROVED UNDER A SEPARATE
PERMIT ISSUED BY THE BUILDING
DEPARTMENT.

~ CANNAS ANAUNG

6'-7" H x 8'-0" W (0F0) FRER CEMENT 90NG

- CANNAS AWANNAS -VENEERED SYONE 6'-7" Hx8'-O" W(070) BUILDING FRONTAGE TO BUILD-TO AREA: 31.5%

SCALE: 1/8" = 1'-0" SCUPPER C -LED ACCENT LIGHTING - OPTONIA LED ACCENT LIGHTING - OPTIONAL VENEERED STONE H29E 1999 6'-7"H18'-0"W (0FO) 6'-7"Hx6'-O"W (OFO) 10 MATCH STOREFROAT -FIBER CENTRIC GIORNI CO 6'-T" H & B'-O" W (OFO)

LEFT SIDE ELEVATION PRIMARY MATERIALS: 678
ACCENT MATERIALS: 83%
TRANSPARENCY 19% STANDARD PROTOTYPE AWNINGS (OFOI) autuen FIRE CHEN SONG OREFS (SEE TASLE)

REAR ELEVATION

ALLEADA DALL APPRES FOR POOR -

SCALE: 1/8" = 1'-0"

- CANVAS AMNINCO @ 6'-7" Hx8'-0" Wx2'-0" D 5 - CANVAS AWAINGS @ 6'-7" Hx 6'-0" Wx 2'-0" D - CANVAS AMMINGS @ 5'-6" H x 6'-0" W x 2'-0"D

BUILDING FRONTAGE TO BUILD-TO AREA: 39%

CANVAS AMNING COLOR SPECIFICATIONS:

STRIPED CANVAS AWAIRUG SINERELLA OYSTER STYLE 4642

SUNBRELLA, ROYAL BLIE, SIYLE 4617 SINDREALLA, SKY BLUE, SIYLE 4624

SOLID CANVAS AWNING: SINDRELLA ROYAL BLUE SOLE 4617

CITY PLAN #16-015

FRANCHISING S
OM - 2015
OTYPE PLA RON DE LA COMPANSION DE CULVER 20

SYSTEM,

**EXT. ELEV'S DOOR & WIND** SCHEDULE Metro M - 2018

Jul.15, 2016

