

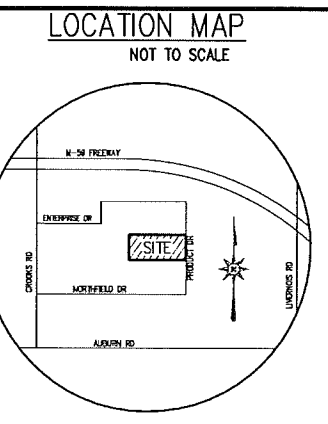
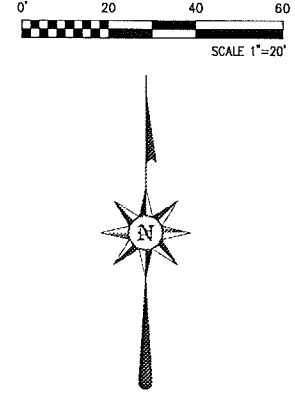
**STORMWATER DETENTION VOLUME**

DETENTION VOLUME (10 YR)		VOLUME IN FORM BASIN (ELE 811.44)		812.30 FT 3930 SF		3930 SF	
A <sub>1</sub> = 0.76 Acres	2272 SF * 0.20-18524 SF * 0.50	811.44 FT 2876 SF	811.00 FT 1697 SF	812.00 FT 3467 SF	812.00 FT 3467 SF	3930 SF + 3467 SF	7397 SF
C <sub>1</sub> = 0.69	2272 SF - 18524 SF	2876 SF + 1697 SF	1697 SF	3467 SF	3467 SF	7397 SF - 3467 SF	3930 SF
Q <sub>10</sub> = 0.50 * 0.76	0.38 CFS	810.00 FT 16 SF	1697 SF + 13 SF	1810.00 FT 2013 SF	1810.00 FT 2013 SF	3467 SF + 2013 SF	5480 SF
Q <sub>10</sub> = 0.38 (0.76 * 0.69)	0.27 CFS	809.98 FT 13 SF	1697 SF + 13 SF	1810.00 FT 2013 SF	1810.00 FT 2013 SF	3467 SF + 2013 SF	5480 SF
T <sub>10</sub> = 25 * sqrt(0.69 / 0.27)	77 MIN	809.98 FT 13 SF	135 SF + 13 SF	1429 CF	1429 CF	2740 CF	2740 CF
V <sub>10</sub> = 10500 * 70 * 40 * 70 * 0.72	5713 CF / IMPERVIOUS ACRE	809.98 FT 13 SF	135 SF + 13 SF	1429 CF	1429 CF	2740 CF	2740 CF
V = 5713 * 0.76 * 0.69	2987 CF	809.98 FT 13 SF	135 SF + 13 SF	1429 CF	1429 CF	2740 CF	2740 CF

DETENTION VOLUME (25 YR)		TOTAL VOLUME PROVIDED	
A <sub>1</sub> = 0.55 Acres	2272 SF * 0.20-18524 SF * 0.50	V <sub>1</sub> = 1869 CF + 5720 CF	7589 CF
C <sub>1</sub> = 0.64	2272 SF - 18524 SF	V <sub>2</sub> = 5572 CF	5572 CF
Q <sub>10</sub> = 0.50 * 0.55	0.27 CFS		
Q <sub>10</sub> = 0.27 (0.55 * 0.64)	0.18 CFS		
T <sub>10</sub> = 25 * sqrt(0.64 / 0.18)	77 MIN		
V <sub>10</sub> = 12000 * 77 * 40 * 70 * 0.78	7347 CF / IMPERVIOUS ACRE		
V = 7347 * 0.55 * 0.64	2565 CF		
TOTAL VOLUME REQUIRED	5572 CF		

FIRST FLUSH VOLUME		DETENTION TIME FOR 1" DIAMETER HOLE	
A = 0.76 AC	0.00545 * 0.62 * (2.932 * 2.93)	h = 3.3 FT	3.3 FT
C = 0.64	0.00493 CFS	Aff = 0.00545 SF	0.00545 SF
Q = 32.2 FT/S		Q <sub>avg</sub> act = 0.00545 * 0.62 * (2.932 * 2.93)	0.00493 CFS
V <sub>ff</sub> = 1815 * 0.76 * 0.64	883 CF	TH = 883	883
		Q <sub>avg</sub> = 0.00493 * 3600	49.8 HRS > 24 HRS

SANITARY BASIS OF ANALYSIS	
OFFICE	0.4 PER 1000 SF
INDUSTRIAL	0.5 PER 1000 SF
EX BLDG OFFICE	3600 SF
INDUSTRIAL	5000 SF
PR BLDG INDUSTRIAL	10200 SF
REU OFFICE	1.6 UNITS
INDUSTRIAL	8.0 UNITS
TOTAL	9.6 UNITS
EQUIVALENT POP	3.5 PERSON/UNIT
POPULATION (P)	9.6 UNITS * 3.5 PERSON/UNIT
POPULATION IN 1000s (P/1000)	0.034
STANDARD USAGE	0.4 CFS/1000 PEOPLE
AVERAGE FLOW	0.035 * 0.40 CFS
PEAK FLOW	18 * SQRT(P/1000) * Q <sub>avg</sub>
CAPACITY OF 6" PIPE AT 1.00%	0.56 CFS



**MEI**  
Mickalich Engineering, Inc.  
Civil Engineering | Land Surveying | Planning  
8405 Andersonville Rd (248) 220-3299  
Suite F Clarkston, MI 48345  
albert@mickalich.com  
Engineer's Seal

Project Title  
**2750 PRODUCT DR ROCHESTER HILLS, MI**

Sheet Title  
**SITE PLAN**

Client  
**KEMP BUILDING & DEVELOPMENT COMPANY**  
275 W. GIRARD  
MADISON HEIGHTS, MI

Date Issued for By  
06/22/14 TOWNSHIP REVIEW

10/09/14 TOWNSHIP REVIEW

3 FULL WORKING DAYS BEFORE YOU DIG CALL



Know what's below Call before you dig.

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Scale: 1" = 20'

Drawn: DMH

Checked: RJP

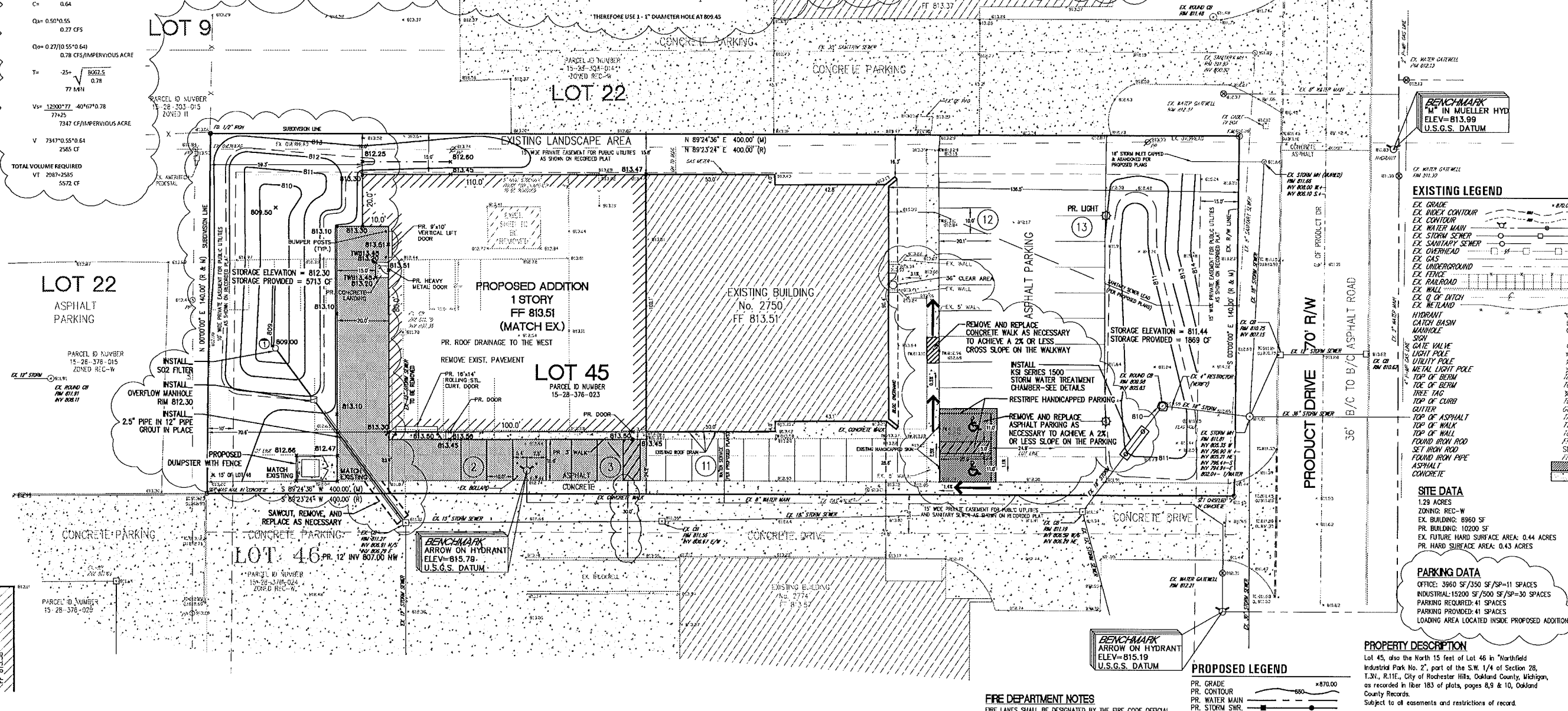
Approved: APM

Date: 06/03/14

Job no. 13-006

Sheet no.

1 OF 2



ENVIRONMENTAL IMPACT STATEMENT PER SECTION 138-2.204. NO WOODLANDS OR WETLANDS IN AREA. NO ENVIRONMENTAL IMPACT.

**UTILITY REFERENCE INFORMATION**

Consumers Energy:	1/4 Section Map 03-61-28-3, (no date shown)
Sanitary Sewer:	Township Utility Map
Watermain:	Township Utility Map
Electric:	Have not received as of 06-03-14
Telephone:	Have not received as of 06-03-14
CATV:	Have not received as of 06-03-14

**FIRE DEPARTMENT NOTES**  
FIRE LINES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL, AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH FIRE LANE SIGNS, SPACED NOT MORE THAN 100 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.  
CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH FC 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 WORTER SHALL BE WITHIN THE CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES.

**PROPOSED LEGEND**

PR. GRADE	870.00
PR. CONTOUR	860
PR. WATER MAIN	
PR. STORM SWR.	
PR. SANITARY SWR.	
PR. COMPACTED SAND BACKFILL	
PR. HYDRANT	
PR. GATE VALVE	
PR. CATCH BASIN	
PR. MANHOLE	
PR. R.Y.C.B.	
PR. REVERSE CURB	
PR. SILT FENCE	
PR. CONCRETE	
PR. SILT SACK/INLET FILTER	
V.I.F.	10,000.00
GU.	60,000.00
TW.	100,000.00
BW.	200,000.00
ES.	300,000.00
EM.	400,000.00
HANDICAPPED PATH	

**EXISTING LEGEND**

EX. GRADE	870.00
EX. CONTOUR	860
EX. WATER MAIN	
EX. STORM SEWER	
EX. SANITARY SEWER	
EX. OVERHEAD	
EX. GAS	
EX. UNDERGROUND	
EX. FENCE	
EX. RAILROAD	
EX. WALL	
EX. Q. OF DITCH	
EX. WETLAND	
HYDRANT	
CATCH BASIN	
MANHOLE	
GATE VALVE	
LIGHT POLE	
UTILITY POLE	
METAL LIGHT POLE	
TOP OF BERM	
TOP OF CURB	
CUTTER	
TOP OF ASPHALT	
TOP OF WALK	
TOP OF ROAD	
FOUND IRON PIPE	
FOUND IRON PIPE	
ASPHALT	
CONCRETE	

**SITE DATA**

1.29 ACRES
ZONING: REC-W
EX. BUILDING: 8960 SF
PR. BUILDING: 10200 SF
EX. FUTURE HARD SURFACE AREA: 0.44 ACRES
PR. HARD SURFACE AREA: 0.43 ACRES

**PARKING DATA**

OFFICE: 3660 SF / 350 SF/SP=11 SPACES
INDUSTRIAL: 15200 SF / 500 SF/SP=30 SPACES
PARKING REQUIRED: 41 SPACES
PARKING PROVIDED: 41 SPACES
LOADING AREA LOCATED INSIDE PROPOSED ADDITION

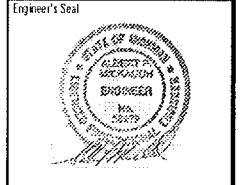
**PROPERTY DESCRIPTION**  
Lot 45, also the North 15 feet of Lot 46 in "Northfield Industrial Park No. 2", part of the S.W. 1/4 of Section 28, T.3N., R.11E., City of Rochester Hills, Oakland County, Michigan, as recorded in Liber 183 of plats, pages 8,9 & 10, Oakland County Records.  
Subject to all easements and restrictions of record.  
No title work was supplied by client. Therefore, not all easements of record could be shown.

**NOTES:**  
At the time of the survey, significant amount of snow covered the site and adjacent sites. Therefore, some existing features might not be shown due to the snow coverage.

**UTILITY STATEMENT**  
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CITY FILE #85-572-4  
© 2014

NOT TO BE USED AS CONSTRUCTION DRAWINGS



Project Title  
**2750 PRODUCT DR  
 ROCHESTER HILLS, MI**

Sheet Title  
**DETAIL SHEET**

Client  
**KEMP BUILDING  
 & DEVELOPMENT COMPANY  
 275 W. GIRARD  
 MADISON HEIGHTS, MI**

Date	Issued for	By

**3 FULL WORKING DAYS  
 BEFORE YOU DIG CALL**

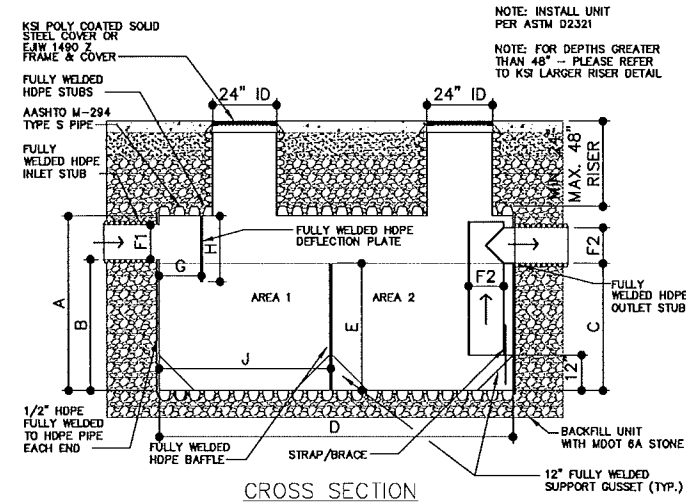


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Scale:	1" = 20'
Drawn:	DWH
Checked:	RP
Approved:	AM
Date:	3/23/14
Job no.	13-006
Sheet no.	2 OF 2

## STORM WATER TREATMENT CHAMBER KSI SERIES 1500 HDPE CHAMBER

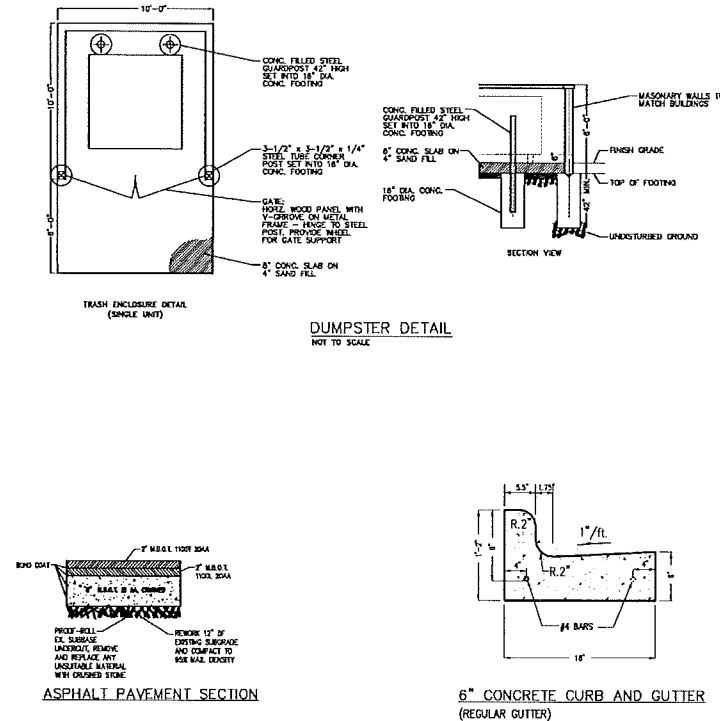


STORM WATER TREATMENT CHAMBER DIMENSIONS AND CAPACITIES

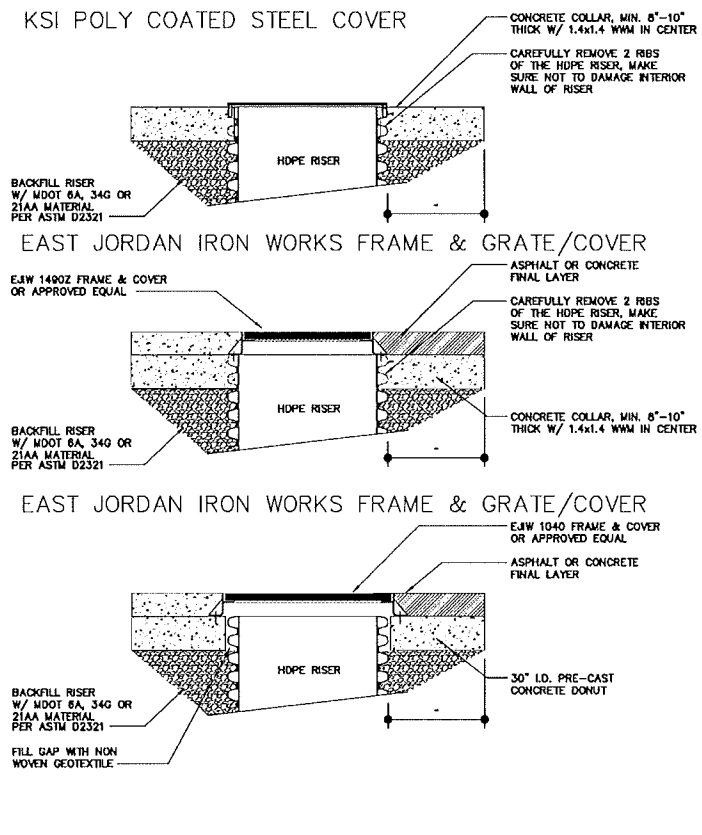
MODEL NO.	A	B	C	D	E	F1	F2	G	H	J	AREA 1	AREA 2
1500-48-18	48"	27"	26"	27 1/2"	26"	18"	18"	12"	24"	13 3/4"	79.1 CF	167 CF

## STORM WATER TREATMENT CHAMBER INSTALLATION AND MAINTENANCE GUIDELINES

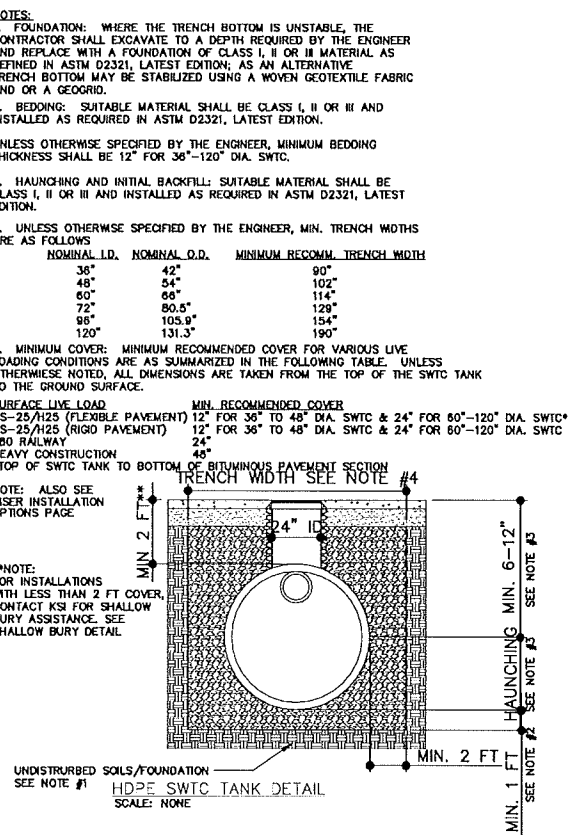
- ### INSTALLATION GUIDELINES
- EXCAVATE AREA FOR KSI SWTC AND PREPARE TRENCH BOTTOM PER ASTM D2321, SECTIONS 6 & 7.
  - THE KSI SWTC SHALL BE INSTALLED ON A BED OF NO LESS THAN 12" CLASS I, II OR III BEDDING MATERIALS COMPACTED TO 95% PROCTOR DENSITY. MOOT 6A IS RECOMMENDED.
  - INSTALL KSI SWTC UNIT, HIGH FLOW BYPASS LINE (IF APPLICABLE), DIVERSION STRUCTURE AND EXITING STRUCTURE AT ELEVATIONS INDICATED ON SITE PLAN. COUPLE INLET AND OUTLET STUBS WITH APPROPRIATE PIPE COUPLINGS, FERNCOs OR HDPE SPLIT COUPLERS TO CONVEYANCE PIPE.
  - BACKFILL UNIT WITH CLASS I, II OR III MATERIALS PER ASTM D 2321. CLASS I MATERIAL IS RECOMMENDED. BACKFILL SHALL BE COMPACTED TO 95% PROCTOR DENSITY. MOOT 6A IS RECOMMENDED.
  - THE HDPE ACCESS RISERS SHALL BE FIELD CUT TO FINISH GRADE BY THE CONTRACTOR. SEE RISER INSTALLATION OPTIONS PAGE.
  - KSI RECOMMENDS FILLING THE UNIT WITH WATER UPON COMPLETION OF INSTALLATION UP TO THE BAFFLE HEIGHT.
- ### MAINTENANCE GUIDELINES
- ALL STORM WATER TREATMENT CHAMBERS WILL REQUIRE PERIODIC MAINTENANCE DEPENDING ON SPECIFIC SITE CONDITIONS.
  - KSI RECOMMENDS CLEANING THE SWTC QUARTERLY AND AFTER HEAVY RAIN STORMS. SEDIMENT IS EASIER TO REMOVE WHEN IT IS REMOVED ON A REGULAR BASIS.
  - DISPOSAL OF MATERIAL FROM THE KSI SWTC ARE SIMILAR TO THAT OF ANY OTHER BEST MANAGEMENT PRACTICES (BMP). LOCAL GUIDELINES SHOULD BE CONSULTED PRIOR TO DISPOSAL OF THE SWTC CONTENTS. PETROLEUM WASTE PRODUCTS SHOULD BE REMOVED BY A LICENSED WASTE MANAGEMENT COMPANY.
  - IF A HYDROCARBON REMOVAL SYSTEM WAS INSTALLED - REPLACE IT WHEN IT TURNS BLACK. UNIT CAN BE DISPOSED OF VIA NORMAL REFUSE REMOVAL. SPENT UNIT DOES NOT LEACH CAPTURED CONTAMINATES.
- WHITE = NEW  
 GREY = WORKING  
 BLACK = SPENT - NEEDS REPLACEMENT - CONTACT KSI FOR REPLACEMENT PARTS  
 5. AFTER CLEANING THE UNIT - KSI RECOMMENDS REFILLING THE UNIT WITH WATER

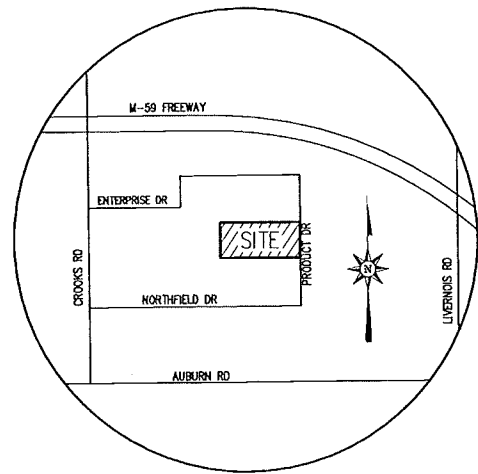


## KSI RISER INSTALLATION OPTIONS

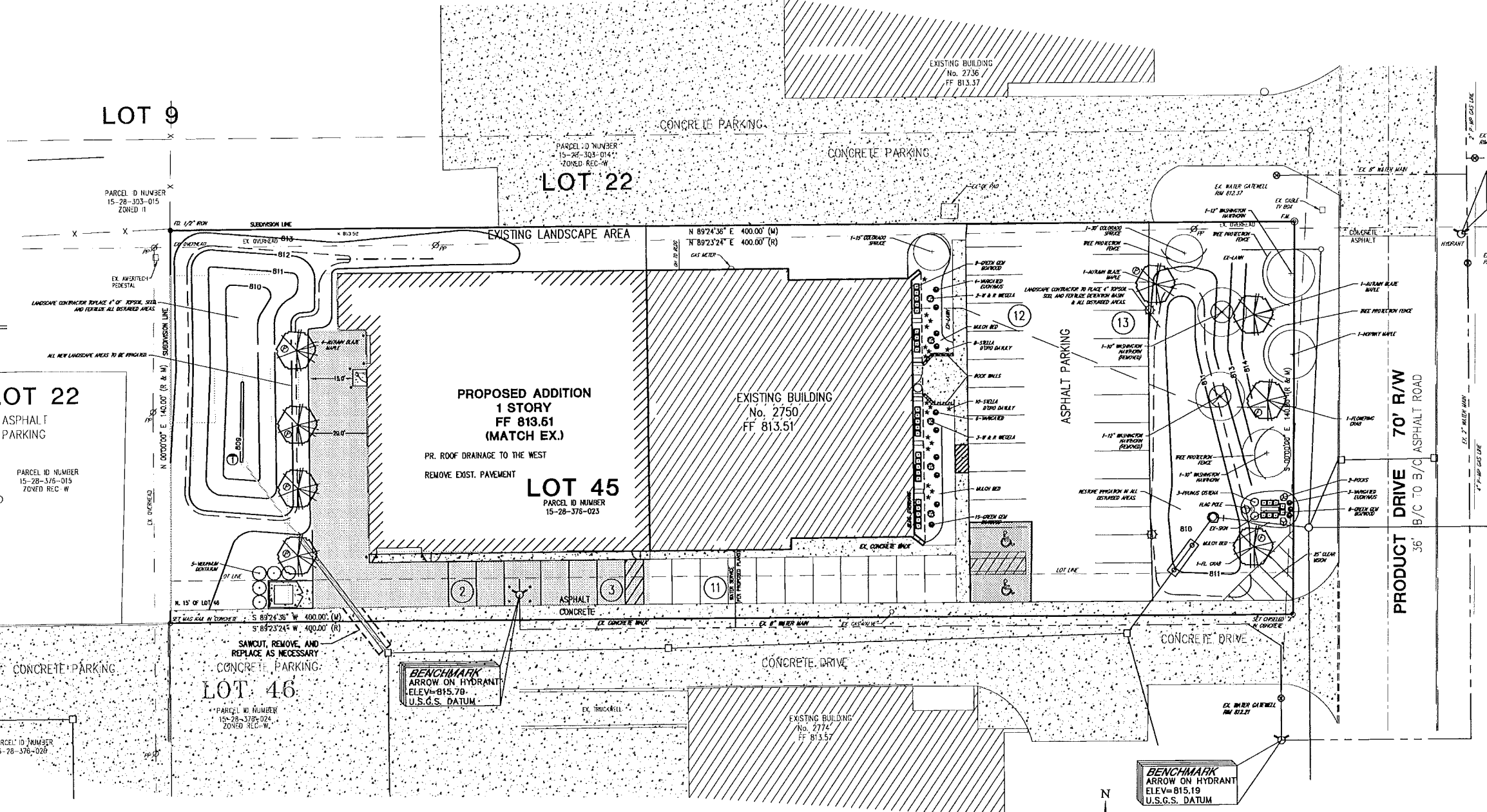


## STORM WATER TREATMENT CHAMBER

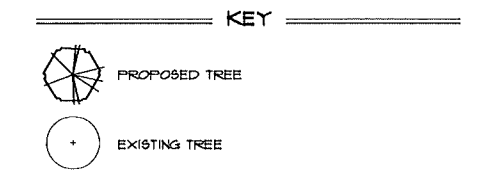




LOCATION MAP



- NOTES**
- LANDSCAPE CONTRACTOR TO PLACE 4" OF TOPSOIL, SEED/SOD, AND FERTILIZE ALL DISTURBED AREAS AS NOTED ON DRAWING.
  - SEED AREAS TO BE MDOT-CLASS A SEED MIX OR AIR-APPROVED EQUAL.
  - LANDSCAPE CONTRACTOR TO PLACE MULCH BLANKET OVER ALL SEEDED AREAS.
  - IRRIGATION TO BE INSTALLED IN ALL NEW LANDSCAPE AREAS & ADJUSTED AS REQUIRED IN EXISTING LANDSCAPE AREAS IMPACTED BY NEW CONSTRUCTION.

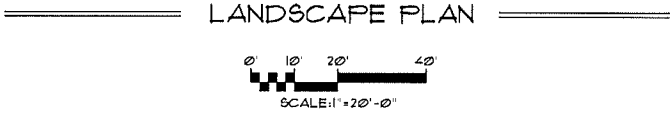


**EXISTING PLANT MATERIAL LIST**

QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
1	NM	ACER PLATANOIDES	NORWAY MAPLE	(2)X(1), (2)X2"	EXISTING	REMOVE 2 TREES (10'X12')
4	UH	CRATAEGUS PHAENOPYRUM	WASHINGTON HAWTHORN	30', 15'	EXISTING	
2	CS	PICEA PUNGENS	COLORADO SPRUCE		EXISTING	
32	GB	BUXUS 'GREEN GEM'	GREEN GEM BOXWOODS		EXISTING	RELOCATE
3	CP	FRAXINUS CISTENA	CISTENA PLUM		EXISTING	RELOCATE
13	VE	EUONYMUS	VARIGATED EUONYMUS		EXISTING	RELOCATE
5	WRW	WEIGELA F. 'WINE & ROSES'	WINE & ROSES WEIGELA		EXISTING	
18	DL	HEMEROCALLIS 'STELLA D'ORO'	STELLA D'ORO DAYLILY		EXISTING	

**NEW PLANT MATERIAL LIST**

QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS	REPLACEMENT CREDIT	COST
2	FC	MALUS 'SNOWDRIFT'	SNOWDRIFT CRAB	2 1/2"	B 4 B			1700.00
2	AM	ACER R. X. F. 'ARMSTRONG'	ARMSTRONG MAPLE	2 1/2"	B 4 B			1700.00
5	ABM	ACER F. 'AUTUMN BLAZE'	AUTUMN BLAZE MAPLE	2 1/2"	B 4 B	REPLACEMENT	2 TREES	11,150.00
1	ABM	ACER F. 'AUTUMN BLAZE'	AUTUMN BLAZE MAPLE	3"	B 4 B		2 TREES	1450.00
5	VB	VIBURNUM DENTATUM	ARROWOOD VIBURNUM	5 GAL	CONT			1325.00
<b>TOTAL:</b>								<b>13,925.00</b>
325 CY MULCH								12125
287 SY SEED								12,075.00
472 SY SOD								12,360.00
IRRIGATION RESTORATION								11,000.00
NEW IRRIGATION								12,500.00
<b>TOTAL:</b>								<b>18,096.25</b>
<b>TOTAL:</b>								<b>42,021.25</b>



**PARKING LOT TREE REQUIREMENTS**

TOTAL PARKING AREA: 14,367 SF

5% OF TOTAL PARKING AREA TO BE LANDSCAPE AREA:  
14,367 SF x 5% = 718 SF

1 TREE/150 SF OF PARKING LOT LANDSCAPE AREA:  
718 SF / 150 SF = 5 TREES

**CONCEPTUAL PLAN NOT FOR CONSTRUCTION**



*Patrick S. Conroy*

**LANDSCAPE PLAN**

DATE	REVISION
6-30-14	CITY REVIEW
9-5-14	CITY REVIEW
9-10-14	ESTIMATE
10-6-14	CITY REVIEW

**PROJECT:** RGM SITE  
**CLIENT:** KEMP CONSTRUCTION  
 275 W. GIRARD AVE  
 MADISON HEIGHTS, MI 48071  
 P: 248-583-9030

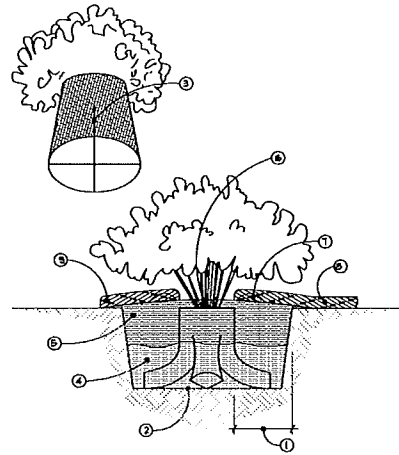
**DESIGNED BY:** BKB  
**DRAWING DATE:** 6-4-14

**PROJECT NO.:** 14.117  
**SHEET NO.:** L-1

**CONTACT:** PATRICK S. CONROY AND ASSOCIATES, INC. P.O. Box 542, Lake Orion, Michigan 48361-0542  
 P: 248.814.8082 F: 248.690.7164 W: www.conroyla.com

**CONROY AND ASSOCIATES, INC.**  
 Landscape Architecture & Construction • Construction Management  
 Site Planning • Civil Architecture

#85-5724



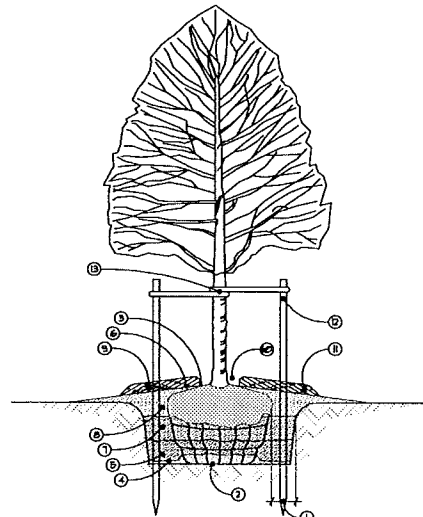
- INSTALLATION NOTES:**
- DIG PLANT POCKET 1" WIDER THAN EDGE OF ROOTBALL.
  - THOROUGHLY COMPACT BOTTOM OF PLANT POCKET.
  - REMOVE PLANT FROM CONTAINER AND EXAMINE ROOTMASS. IF ROOTMASS IS LOOSE, INTEGRATE PLANT ROOTS & POTTING MEDIA WITH PLANTING MIX. IF A ROOTBOUND CONDITION EXISTS, DISRUPT THE ROOTMASS BY CUTTING THROUGH BOTTOM HALF OF ROOTMASS. ROTATE ROOTMASS 90° AND CUT AGAIN, FORMING FOUR (4) LOBES. SPREAD THE FOUR LOBES DISRUPTING ROOTMASS AND INTEGRATE PLANT ROOTS & POTTING MEDIA WITH PLANTING MIX. PLACE PLANT IN POCKET SLIGHTLY ABOVE GRADE.
  - BACKFILL PLANT POCKET 1/2 WITH PLANTING MIX CONSISTING OF 50% TOPSOIL & 50% NATIVE SOIL, ASSURING SHRUB IS STRAIGHT.
  - BACK FILL REMAINING 1/2 OF PLANT POCKET WITH PLANTING MIX & COMPACT THOROUGHLY, ASSURING SHRUB IS STILL STRAIGHT.
  - SPREAD 1" OF PLANTING MIX OVER TOP OF CONTAINER ROOTBALL, SLOPE GRADE AWAY FROM SHRUB.
  - IF PLANTED IN NON-IRRIGATED AREAS, FORM A SAUCER WITH SOIL AT OUTSIDE EDGE OF ROOTBALL.
  - SHREDDED BARK MULCH 3" DEPTH, MULCH TO BE NATURAL IN COLOR. LEAVE 1-2" RING EXPOSED AT BASE OF PLANT.
  - IF NOT PLANTED WITHIN A LANDSCAPE BED, MULCH RINGS TO BE CONSISTENT IN SIZE WITH PLANT TYPE/SIZE THROUGHOUT PROJECT AND SHOULD NOT EXTEND BEYOND PLANT POCKET.

**CONTAINER SHRUB PLANTING DETAIL**

POT: 6" DIA. x 6" HIG.

NOT TO SCALE

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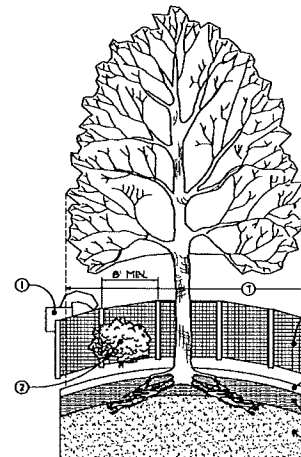
- INSTALLATION NOTES:**
- DIG PLANT POCKET 1" WIDER THAN EDGE OF ROOTBALL.
  - THOROUGHLY COMPACT BOTTOM OF PLANT POCKET.
  - REMOVE ALL TWIG FROM TOP OF ROOTBALL. EXAMINE TRUNK COLLAR & REMOVE EXCESS SOIL FROM TOP OF ROOTBALL DOWN TO THE UPPER LEVEL OF THE ROOT SYSTEM. SET ROOTBALL WITH TOP 1/3 OF BALL ABOVE FINISH GRADE.
  - PLACE BACKFILL UNDER & ALONGSIDE BASE OF BALL TO STRAIGHTEN TREE. THOROUGHLY COMPACT TO FILL ALL VOIDS.
  - BACKFILL PLANT POCKET 1/3 WITH PLANTING MIX CONSISTING OF 50% TOPSOIL & 50% NATIVE SOIL & COMPACT THOROUGHLY, ASSURING TREE IS STILL STRAIGHT.
  - BEFORE CONTINUING WITH BACKFILL, REMOVE TOP BRACE LOOPS, OR BEND DOWN UNTIL THEY TOUCH SIDE OF BALL. REMOVE EXCESS BURLAP.
  - BACKFILL PLANT POCKET SECOND 1/3 WITH PLANTING MIX & COMPACT THOROUGHLY, ASSURING TREE IS STILL STRAIGHT.
  - BACKFILL PLANT POCKET LAST 1/3 WITH PLANTING MIX & COMPACT THOROUGHLY, ASSURING TREE IS STILL STRAIGHT. SLOPE GRADE AWAY FROM TREE.
  - IF PLANTED IN NON-IRRIGATED AREAS, FORM A SAUCER WITH SOIL AT OUTSIDE EDGE OF ROOTBALL.
  - SHREDDED BARK MULCH 3" DEPTH, MULCH TO BE NATURAL IN COLOR. LEAVE 2-3" RING EXPOSED AT BASE OF TRUNK.
  - MULCH RINGS TO BE CONSISTENT WITH PLANT TYPE/SIZE THROUGHOUT PROJECT & SHOULD NOT EXTEND BEYOND PLANT POCKET.
  - MINIMUM 2"x4"x6" HARDWOOD STAKES TO EXTEND INTO UNDISTURBED SOIL UNDER PLANT POCKET. STAKE LOCATIONS PER TREE TO BE CONSISTENT THROUGHOUT PROJECT.
  - IF WIDE BELT LIKE NYLON, PLASTIC, OR OTHER ACCEPTABLE MATERIAL, NO BRACE OR WIRE TO BE USED TO GUY TREES. TWO (2) GUYS PER TREE.

**DECIDUOUS TREE PLANTING DETAIL**

TREE: 3" CAL. & UNDER

NOT TO SCALE

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**TREE PROTECTION NOTES:**

- APPROVED TREE PROTECTION SHALL BE ERRECTED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. IT SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED. THE FORESTRY DIVISION SHALL BE NOTIFIED AFTER THE PROTECTION IS IN PLACE PRIOR TO CONSTRUCTION ACTIVITIES, INCLUDING DELIVERY OF MATERIALS.
  - NO PERSON SHALL CONDUCT ACTIVITIES INSIDE THE DRIP LINES OF ANY TREE DESIGNATED TO REMAIN, INCLUDING, BUT NOT LIMITED TO, PLACING SOLVENTS, BUILDING MATERIALS, CONSTRUCTION EQUIPMENT, OR SOIL DEPOSITS WITHIN THE DRIP LINES OF SAID TREE.
  - GRADE CHANGES MAY NOT OCCUR WITHIN THE DRIP LINES OF ANY PROTECTED TREE.
  - DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE OF ANY KIND TO ANY REMAINING TREE.
  - ALL UTILITY SERVICE REQUESTED MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE THE PROTECTIVE FENCING.
  - ALL UTILITY SERVICE REQUESTED MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE THE PROTECTIVE FENCING.
  - IF THE PROTECTION CAN NOT BE MAINTAINED FOR A TREE THROUGHOUT THE CONSTRUCTION PERIOD, REPLACEMENT OF THAT TREE MAY BE REQUIRED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
  - REGULATED TREES LOCATED ON ADJACENT PROPERTIES THAT MAY BE AFFECTED BY ACTIVITIES MUST BE PROTECTED.
- CONSTRUCTION DEBRIS.
  - UNDER STORY PLANTS.
  - 4' HIGH PLASTIC FRESH PROTECTIVE FENCE.
  - ORGANIC LAYER.
  - TOPSOIL.
  - MINERAL SOIL.
  - DRIP LINE.

**TREE PROTECTION FENCE DETAIL**

NOT TO SCALE

**GENERAL NOTES**

- ALL LANDSCAPE INSTALLATION SHALL CONFORM TO THE LANDSCAPE REQUIREMENTS AS OUTLINED IN THE ORDINANCES FOR ROCHESTER HILLS, MICHIGAN.
- ALL PLANT MATERIAL TO BE INSTALLED PER PLANTING DETAILS & SPECIFICATIONS.
- ALL LAWN AREA (AS INDICATED) ARE TO BE SEEDDED WITH A MINIMUM 3" OF TOPSOIL.
- ALL LAWN AND LANDSCAPE AREAS (AS INDICATED) WILL BE IRRIGATED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM.
- ALL EDGINGS (AS INDICATED) TO BE AS SPECIFIED ON DRAWINGS & DETAILS, INSTALL PER MANUFACTURERS SPECIFICATIONS.
- SIZE AND QUALITY OF LANDSCAPE MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARDS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- LANDSCAPE CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT IN WRITING OF ANY PROPOSED CHANGE IN PLANT MATERIAL AND OR LOCATION. LANDSCAPE ARCHITECT TO APPROVAL ALL SUBSTITUTIONS AND OR CHANGES IN WRITING, PRIOR TO INSTALLATION.
- THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL THE DOES NOT MEET THE OWNER, LANDSCAPE ARCHITECT, OR INDUSTRY STANDARDS.
- LANDSCAPE ARCHITECT TO APPROVE ALL PLANT LOCATIONS PRIOR TO INSTALLATION. ALL CONSTRUCTION AND PLANT MATERIAL LOCATIONS MAY BE ADJUSTED ON SITE IF NECESSARY.
- PLANT TREES AND SHRUBS GENERALLY NO CLOSER THEN THE FOLLOWING DISTANCES FROM SAFETY PATHS, SIDEWALKS, CURBS, PARKING STALLS & FIRE DEPARTMENT CONNECTIONS (HYDRANTS):  
DECIDUOUS TREES - 5 FT.  
ORNAMENTAL & CONIFEROUS TREES - 10 FT.  
SHRUBBERY LESS THAN 12' HT. x 12" DIA. (AT MATURITY) - 3 FT.
- NO DECIDUOUS OR CONIFEROUS TREES ARE TO BE INSTALLED OVER ANY PROPOSED OR EXISTING UNDERGROUND UTILITY LINES AS SHOWN ON THE OVERALL SITE LANDSCAPE PLAN. REFER TO CIVIL ENGINEERING PLANS FOR EXACT LOCATIONS AND DETAILS.
- THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE THE WORK IS ACCEPTED IN WRITING BY CONROY & ASSOCIATES, INC. THE CONTRACTOR SHALL REPLACE, WITHOUT COST TO THE OWNER, ALL DEAD PLANTS, AND ALL PLANTS NOT IN VIGOROUS THRIVING CONDITIONS, AS DETERMINED BY CONROY & ASSOCIATES, INC., DURING AND AT THE END OF THE GUARANTEE PERIOD. REPLACEMENT MATERIAL SHALL CONFORM TO THE ORIGINAL SPECIFICATION.

**PLANTING TREES & SHRUBS**

- DIG PLANT POCKET MINIMUM 24" WIDER THAN BALL.
- DIG PLANT POCKET FOR SHRUBS A MINIMUM OF 6" WIDER THAN BALL OR CONTAINER.
- LOOSEN SOIL ON SIDES OF POCKET TO BREAK GLAZING CAUSED BY DIGGING. THOROUGHLY COMPACT SUBGRADE.
- CONTRACTOR TO VERIFY PERCOLATION OF PLANTING BED OR POCKET PRIOR TO INSTALLATION.
- COMPLETELY REMOVE ALL CONTAINERS AT THE TIME OF PLANTING.
- ALL UNSUITABLE SOIL TO BE REMOVED FROM SITE.
- ALL HEIGHTS SHOWN ON DETAILS ARE BEFORE PRUNING.
- ALL DEPTHS SHOWN ON DETAILS ARE BEFORE SETTLING.
- SET 1/3 OF BALL IN POCKET, EXPOSING 1/3 OF BALL AT GRADE MINIMUM.
- BACKFILL PREPARED SOIL TO 1/3 THE DEPTH & COMPACT THOROUGHLY, BACKFILL SECOND 1/3 & COMPACT THOROUGHLY, FINISH BACKFILL & COMPACT THOROUGHLY.
- LOOSEN & REMOVE ALL LACING FROM BALL.
- BACKFILL WITH PREPARED SOIL.
- COVER PLANT POCKET AREA & ALL PLANTING BEDS WITH A MINIMUM 3" DEPTH SHREDDED BARK MULCH. LEAVE 3" RING EXPOSED AT BASE OF ALL INDIVIDUAL TREES. MULCH TO BE NATURAL IN COLOR.
- ALL ANNUAL & PERENNIAL BEDS ARE TO BE ENCAVATED TO A DEPTH OF 6" & REPLACED WITH A PLANTING MIX CONSISTING OF 50% SANDY SOIL & 50% LEAF COMPOST.
- ALL PLANTS ARE TO BE PLANTED PRIOR TO STAKING. STAKING IS NOT TO BE USED TO STRAIGHTEN LEANING MATERIAL.
- ALL STAKES & GUYING MATERIAL TO BE REMOVED BY LANDSCAPE CONTRACTOR ONE (1) YEAR AFTER INSTALLATION.

**LANDSCAPE PLAN**

DATE	REVISION
6-30-14	CITY REVIEW
9-5-14	CITY REVIEW
9-10-14	ESTIMATE
10-6-14	CITY REVIEW

**PROJECT**  
RGM SITE  
ROCHESTER HILLS, MICHIGAN

**CLIENT**  
KEMP CONSTRUCTION  
275 W. GIRARD AVE  
MADISON HEIGHTS, MI 48071  
P: 248.583.9030

**DRAWN BY**  
BKB

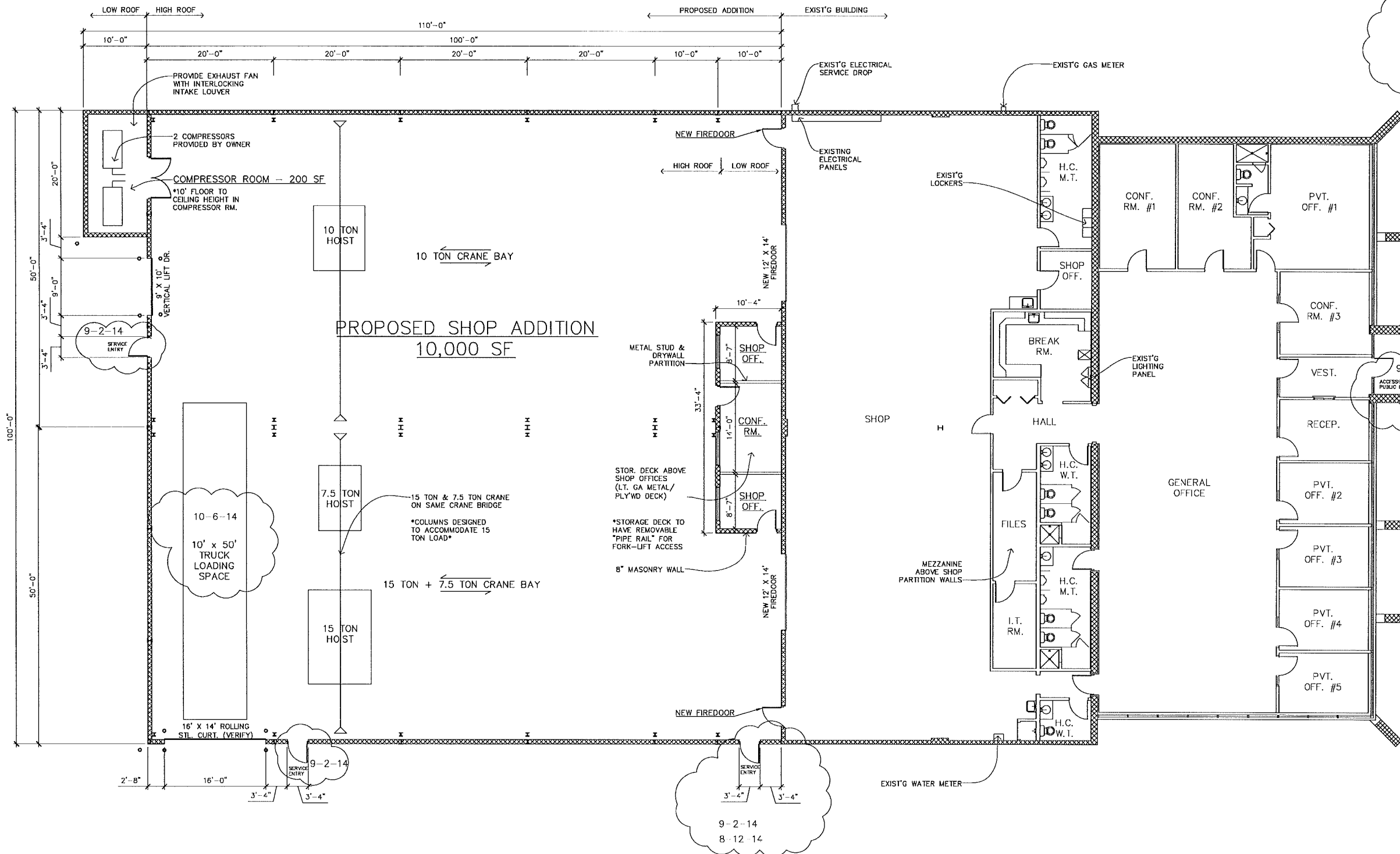
**DRAWING DATE**  
6-4-14

**PROJECT NO.**  
14.117

**SHEET NO.**  
L-2

P. O. Box 542  
Lake Orion, Michigan 48361-0542  
P: 248.814.8082  
F: 248.690.7164  
W: www.conroyla.com

**PATRICK S. Conroy AND ASSOCIATES, INC.**  
Landscape Architecture & Construction • Construction Management  
Site Planning • Golf Course Architecture



**9-30-14  
CODE COMPLIANCE CHART**

1. THIS PROJECT WAS DESIGNED TO AND SHALL COMPLY WITH  
 MICHIGAN BUILDING CODE 2012  
 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS (ADOPTED 2014)  
 (BASED ON THE INTERNATIONAL EXISTING BUILDINGS CODE 2012)  
 MICHIGAN PLUMBING CODE 2012 (PART 7)  
 MICHIGAN MECHANICAL CODE 2012  
 MICHIGAN ELECTRICAL CODE 2011 (PART 8) - NATIONAL ELECT. CODE 2011  
 UNIFORM ENERGY CODE 2009  
 INTERNATIONAL FUEL GAS CODE 2012  
 INTERNATIONAL FIRE CODE 2009

USE GROUP - B, S-1, F-1 MIXED USE, NON-SEPARATED  
 CONSTRUCTION TYPE - IIB  
 NUMBER OF STORIES - ONE

EXISTING BUILDING AREAS  
 OFFICE 4,048 S.F.  
 SHOP AND WAREHOUSE 5,000 S.F.  
 TOTAL 9,048 S.F.

PROPOSED ADDITION 10,200 S.F.  
 PROPOSED BUILDING AFTER ADDTN 19,248 S.F.

NOT FIRE SPRINKLERED  
 BUILDING TO BE DIVIDED INTO TWO FIRE AREAS EACH LESS THAN 12,000 S.F.  
 FIRE SEPARATION BETWEEN THE TWO FIRE AREAS IS TO BE A THREE HOUR FIRE  
 BARRIER AND RATED DOORS. 9-30-14

Maximum Building Area Calculation  
 Tabular Area Allowed (F-1) 15,500  
 Non-Sprinklered

North	204 <	20.0 feet	
West	100 >	30.0 feet	3,000.0
South	10 >	30.0 feet	300.0
	150 =	23.9 feet	3,585.0
	44 =	28.6 feet	1,258.4
East	100 >	30.0 feet	3,000.0

Total Perimeter (P) 608 11,143.4  
 Perimeter > 20 feet (F) 404 / 404.0  
 Weighted average (W) 27.6

[ F / P - 0.25 ] W / 30 = Increase allowed  
 [ 404 / 608 - 0.25 ] 27.5 / 30 = 0.38

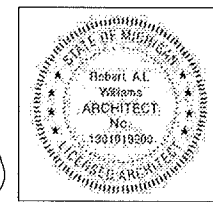
15,500 + (15,500 \* 0.38) = 21,407 Sq. Ft.  
 Calculated Building Area 19,248 Sq. Ft.  
 Calculated does not exceed Allowable

2. NUMBER OF OCCUPANTS PER EGRESS REQUIREMENTS -  
 19,248 SF / 100 = 193 OCC.
3. NUMBER OF OCCUPANTS USED TO DETERMINE PLUMBING FIXTURES - 193
4. REQUIRED AND PROVIDE FIXTURE QUANTITIES

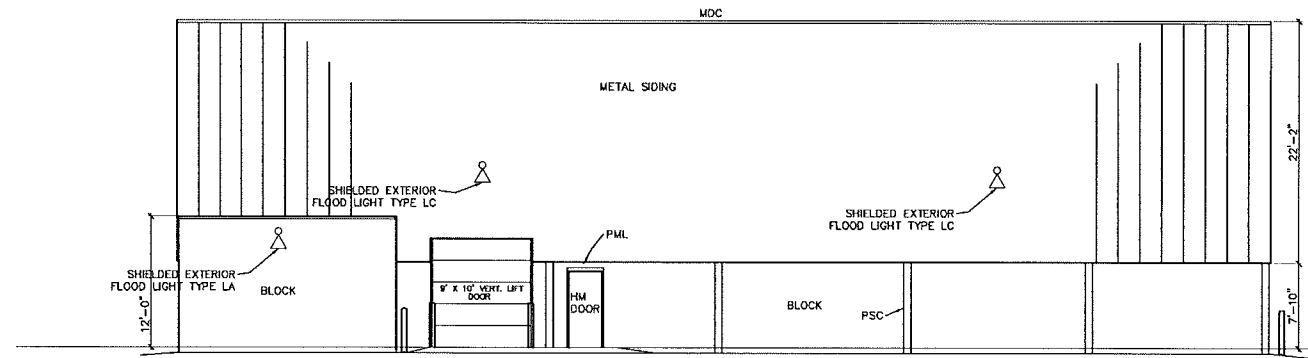
	REQUIRED	PROVIDED
MEN (97)		
WATER CLOSETS	3	4 + 4 URINALS
LAVATORIES	3	3
WOMEN (97)		
WATER CLOSETS	3	3
LAVATORIES	3	3
TOTAL BUILDING SERVICE SINK	1	1
DRINKING FOUNTAIN	1	1

NOT TO BE USED AS CONSTRUCTION DRAWINGS

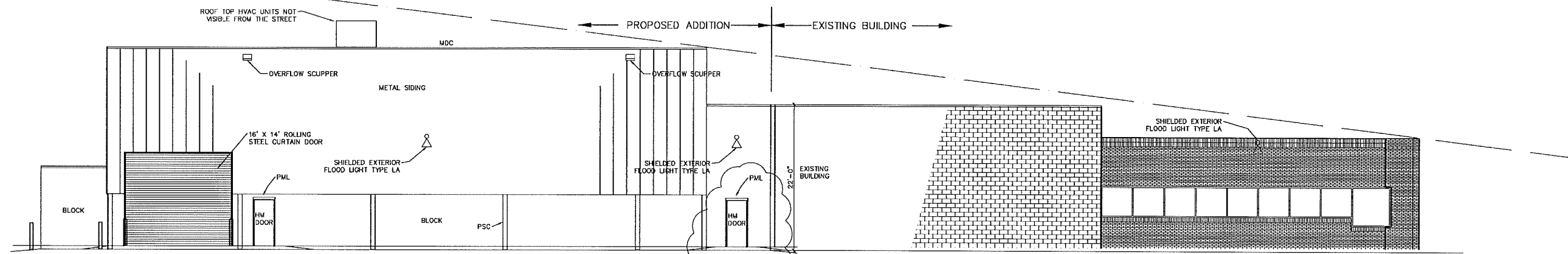
8-12-14 City File Number #85-572.4



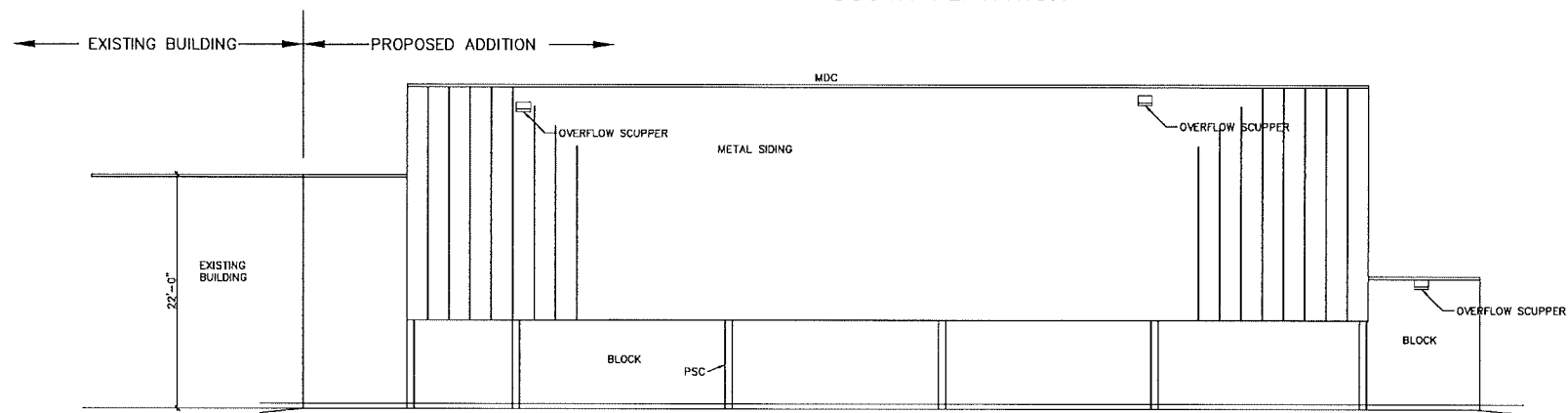
ADDITION FOR RGM TOOLING 2750 PRODUCT DR., ROCHESTER HILLS, MI	
CONTRACTOR - KEMP BUILDING AND DEVELOPMENT	
FLOOR PLAN	
ISSUED FOR SPR 6-2-14	SCALE: 1/8" = 1'-0"
REVISED FOR SPR 8-12-14	PROJECT NO. 1136E
REVISED FOR SPR 10-8-14	
ROBERT A. L. WILLIAMS, ARCHITECT 1920 ROBINA AVE., BERKLEY, MI 48072 248-388-0465 EMAIL@ROBERTALWILLIAMS.COM	SHEET 1 OF 2



WEST ELEVATION



SOUTH ELEVATION



NORTH ELEVATION

ELEVATION NOTES

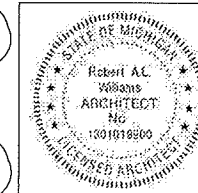
1. \* MDC \*  
-METAL DRIP CAP
2. \* BLOCK \*  
-LIGHTWEIGHT AGGREGATE BLOCK  
-PAINT PER PAINTING SCHEDULE
3. \* OH DR \*  
-OVERHEAD DOOR  
-PAINT PER PAINTING SCHEDULE
4. \* HMD \*  
-HOLLOW METAL DOOR AND FRAME  
-PAINT PER PAINTING SCHEDULE
5. \* PML \*  
-PRECAST MASONRY LINTEL
6. \* OVERFLOW SCUPPER \*  
-16" WIDE X 8" HIGH OPENING  
-SET AT 2" ABOVE LOW POINT OF ROOF
7. \* METAL SIDING \*  
-PRECOLORED FACTORY FINISHED COATED ALUMINUM  
-INSULATED "R-14"  
-42" WIDE PANELS
8. \* PSC \*  
-PAINTED STEEL COLUMNS

COLORS TO MATCH EXISTING BUILDING  
SIDING TO BE PRE-FINISHED BROWN TO APPROXIMATE TONE OF EXISTING BRICK  
BLOCK TO BE PAINTED TAN TO MATCH EXISTING BLOCK  
DOORS TO BE PAINTED DARK BROWN TO MATCH EXISTING DOORS AND WINDOWS

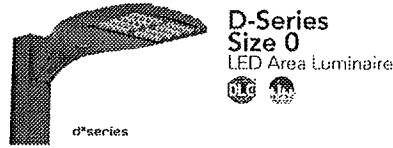
10-8-14 Exterior Lighting revised

NOT TO BE USED AS CONSTRUCTION DRAWINGS

8-12-14 City File Number #85-572.4



ADDITION FOR RGM TOOLING 2750 PRODUCT DR., ROCHESTER HILLS, MI	
CONTRACTOR - KEMP BUILDING AND DEVELOPMENT	
ELEVATIONS	
ISSUED FOR SPR 6-2-14 REVISED FOR SPR 8-12-14 REVISED FOR SPR 10-8-14	PROJECT NO. 1136E
ROBERT A. L. WILLIAMS, ARCHITECT 1920 ROBINA AVE., BERKLEY, MI 48072 248-388-0465 EMAIL@ROBERTALWILLIAMS.COM	SHEET 2 OF 2

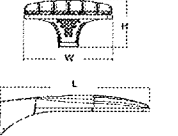


## D-Series Size 0 LED Area Luminaire



### Specifications

EPA: 0.6 ft<sup>2</sup>  
Length: 12"  
Width: 1.7"  
Height: 7"  
Weight: 1.8 lbs  
Max: 120V



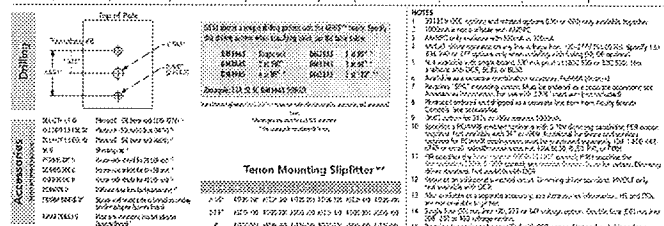
### Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment.

The D-Series details the benefits of the latest in LED technology into a high performance, high efficiency, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 65% and expected service life of over 100,000 hours.

EXAMPLE: DSK0 LED 40C 1000 40K T3M MVOLT SPA DDBXD

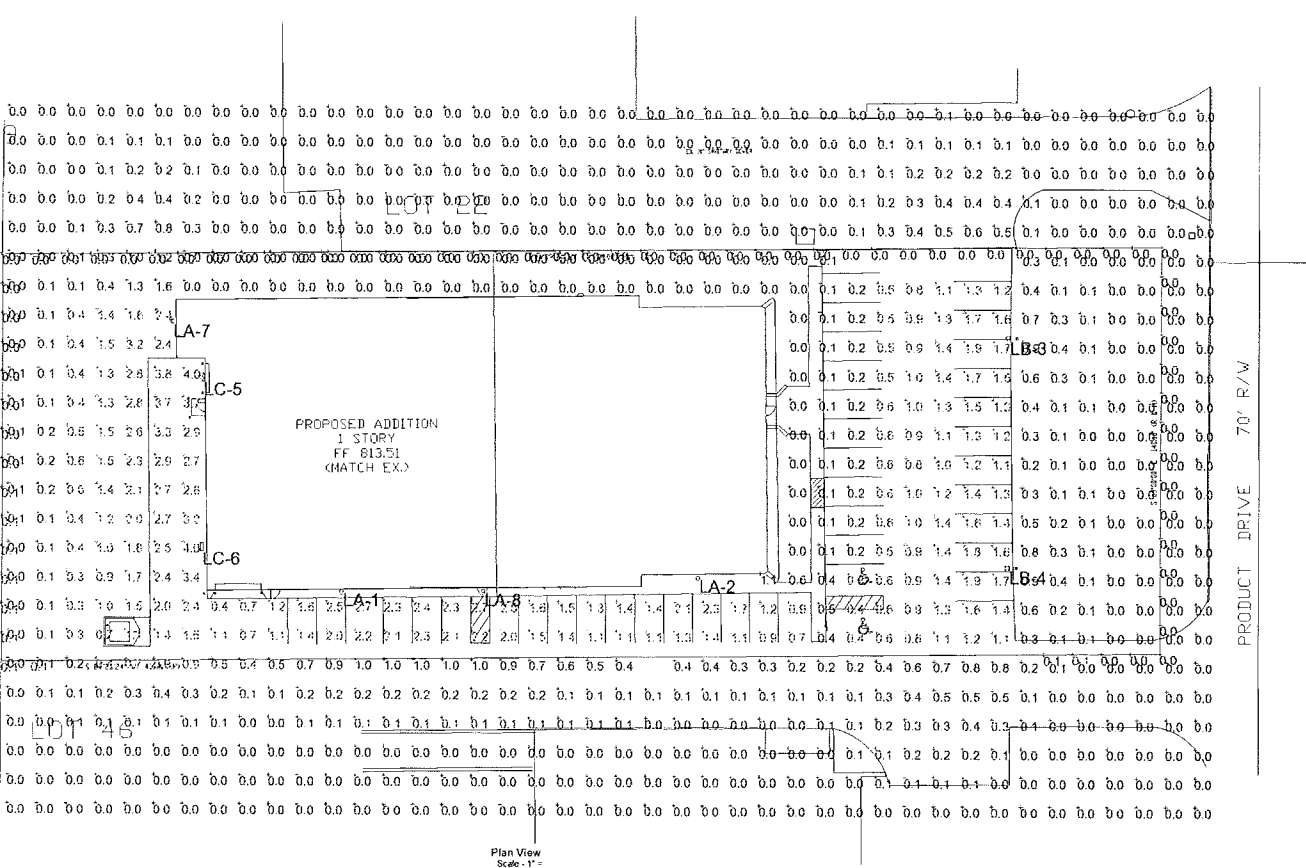
Item No.	Quantity	Description	Manufacturer	Notes
10001	1	DSK0 LED 40C 1000 40K T3M MVOLT SPA DDBXD	Lithonia Lighting	
10002	1	DSK0 LED 40C 1000 40K T3M MVOLT SPA DDBXD	Lithonia Lighting	
10003	1	DSK0 LED 40C 1000 40K T3M MVOLT SPA DDBXD	Lithonia Lighting	
10004	1	DSK0 LED 40C 1000 40K T3M MVOLT SPA DDBXD	Lithonia Lighting	
10005	1	DSK0 LED 40C 1000 40K T3M MVOLT SPA DDBXD	Lithonia Lighting	



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LOT

LOT 22



Plan View Scale = 1" = 30'

Symbol	Label	Quantity	Manufacturer	Description	Catalog Number	Lamp	Number of Lamps	Power Name	Lumens Per Lamp	Light Loss Factor	Wattage
LA	LA	4	Lithonia Lighting	DSK0 LED WITH 2 LIGHT ENGINES, 20 LED'S, 700mA DRIVER, 4000K LED, TYPE 2 MEDIUM OPTIC	DSK0 LED 20C 700 40K T2M MVOLT	LED	1	DSK0_LED_20C_700_40K_T2M_MVOLT_0LT.kcs	4369 601	0.9	47
LC	LC	2	Lithonia Lighting	DSK0 LED WITH (2) 20 LED LIGHT ENGINES, TYPE 14M OPTIC, 4000K, @ 100mA WITH HOUSE SIDE SHIELD	DSK0 LED 40C 700 40K T4M MVOLT HS	LED	1	DSK0_LED_40C_700_40K_T4M_MVOLT_1HS.kcs	6405 521	0.9	91
LC	LC	2	Lithonia Lighting	DSK0 LED WITH 3 LIGHT ENGINES, 30 LED'S, 1000mA DRIVER, 4000K LED, TYPE 4 MEDIUM OPTIC	DSK0 LED 30C 1000 40K T4M MVOLT	LED	1	DSK0_LED_30C_1000_40K_T4M_MVOLT_0LT.kcs	8610 702	0.9	109

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
OVERALL TGT VALUES	+	0.4 f	4.0 f	0.0 f	N/A	N/A
PARKING LOT	+	1.4 f	4.0 f	0.2 f	20.0 f	7.0 f
PROPERTY LINE @ 5' ON A VERTICAL PLANE	+	0.6 f	0.1 f	0.0 f	N/A	N/A

No	Label	X	Y	MH	Orientation	TI
1	LA	2798.58	28.09	15.00	180.00	0.00
2	LA	2921.48	33.46	15.00	180.00	0.00
3	LB	3031.47	110.15	20.00	270.00	0.00
4	LB	3031.47	37.12	20.00	270.00	0.00
5	LC	2750.04	101.57	15.00	270.00	0.00
6	LC	2750.04	43.21	15.00	270.00	0.00
7	LA	2739.54	120.74	15.00	270.00	0.00
8	LA	2847.30	28.37	15.00	180.00	0.00

### Lumen Output

Lumen output is based on the luminaire's beam spread and is calculated based on the luminaire's beam spread and is calculated based on the luminaire's beam spread.

Beam Spread	Beam Diameter	Beam Area	Beam Volume	Beam Length	Beam Area at End	Beam Volume at End
15°	1.0	0.79	0.79	1.0	0.79	0.79
20°	1.3	1.07	1.07	1.3	1.07	1.07
25°	1.6	1.41	1.41	1.6	1.41	1.41
30°	1.9	1.81	1.81	1.9	1.81	1.81
35°	2.2	2.26	2.26	2.2	2.26	2.26
40°	2.5	2.75	2.75	2.5	2.75	2.75
45°	2.9	3.29	3.29	2.9	3.29	3.29
50°	3.3	3.88	3.88	3.3	3.88	3.88
55°	3.7	4.52	4.52	3.7	4.52	4.52
60°	4.1	5.21	5.21	4.1	5.21	5.21
65°	4.5	5.96	5.96	4.5	5.96	5.96
70°	4.9	6.76	6.76	4.9	6.76	6.76
75°	5.3	7.62	7.62	5.3	7.62	7.62
80°	5.7	8.54	8.54	5.7	8.54	8.54
85°	6.1	9.51	9.51	6.1	9.51	9.51
90°	6.5	10.54	10.54	6.5	10.54	10.54

Note: Lumen output is based on the luminaire's beam spread and is calculated based on the luminaire's beam spread.

### Lumen Ambient Temperature (LAT) Multipliers

Lumen output is adjusted for ambient temperature. The multiplier is based on the ambient temperature and is calculated based on the ambient temperature.

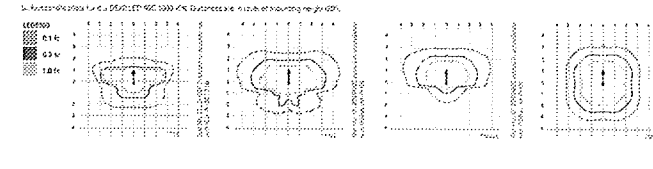
LAT	Multiplier
100°F	1.00
110°F	0.98
120°F	0.96
130°F	0.94
140°F	0.92
150°F	0.90
160°F	0.88
170°F	0.86
180°F	0.84
190°F	0.82
200°F	0.80

### Projected LED Lumen Maintenance

Projected LED lumen maintenance is the percentage of light output that remains after a certain number of hours of operation. It is calculated based on the luminaire's beam spread and is calculated based on the luminaire's beam spread.

Hours	Lumen Maintenance (%)
0	100
1000	95
2000	90
3000	85
4000	80
5000	75
6000	70
7000	65
8000	60
9000	55
10000	50

### Beam Spread Photometric Diagrams



### FEATURES & SPECIFICATIONS

**BEST PRACTICE USE:** The best practice use of the D-Series luminaire is to install it in a location where it will provide the most uniform illumination. It is ideal for replacing up to 400W metal halide with typical energy savings of 65% and expected service life of over 100,000 hours.

**OPERATION:** The luminaire is designed to operate in a wide range of ambient temperatures. It is ideal for use in outdoor applications. The luminaire is designed to operate in a wide range of ambient temperatures. It is ideal for use in outdoor applications.

**WARRANTY:** The luminaire is covered by a limited warranty. The warranty is based on the luminaire's beam spread and is calculated based on the luminaire's beam spread.

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RGIM TOOL  
SITE LIGHTING & SPECIFICATIONS  
GASSER BUSH ASSOCIATES

Designer  
RSKJS  
Date  
10/2014  
Scale  
AS SHOWN  
Drawing No.  
#14-26934-V2  
1 of 2  
CITY FILE #85-572.4



# D-Series Size 1 LED Wall Luminaire

Country	USA
Accessories	
Type	

d-series

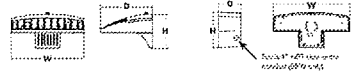
### Specifications Luminaire

Width	13.21" (335mm)
Depth	10" (254mm)
Height	6.58" (167mm)

Back Box (BBW, ELCW)	13.21" (335mm) BBW Weight: 4.7 lbs (2.1kg)
	5 lbs (2.3kg) ELCW Weight: 10 lbs (4.5kg)

### Introduction

The D-Series Wall Luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance. With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 800W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.



EXAMPLE: DSKW1 LED 20C 1000 40K T3M MVOLT DDBTXD

SKU	LED	Wattage	Temp	Beam	Optic	Control	Mount	Finish	Notes
DSKW1	20C	1000	40K	T3M	MVOLT	DDBTXD	Black	Standard	
DSKW1	20C	1000	40K	T3M	MVOLT	DDBTXD	White	Standard	
DSKW1	20C	1000	40K	T3M	MVOLT	DDBTXD	Black	With Accessories	
DSKW1	20C	1000	40K	T3M	MVOLT	DDBTXD	White	With Accessories	

#### Accessories

DSKW1	DSKW1-ACC	DSKW1-ACC
DSKW1	DSKW1-ACC	DSKW1-ACC
DSKW1	DSKW1-ACC	DSKW1-ACC
DSKW1	DSKW1-ACC	DSKW1-ACC

Direct from the factory, we have a variety of accessories available for your luminaire. For more information, please contact your local distributor or visit our website at [www.lithonia.com](http://www.lithonia.com).



# D-Series Size 2 LED Wall Luminaire

Country	USA
Accessories	
Type	

d-series

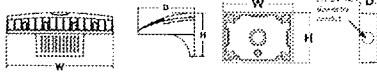
### Specifications Luminaire

Width	18.12" (460mm)
Depth	10" (254mm)
Height	7.53" (191mm)

Back Box (BBW, ELCW)	18.12" (460mm) BBW Weight: 7.5 lbs (3.4kg)
	10 lbs (4.5kg) ELCW Weight: 15 lbs (6.8kg)

### Introduction

The D-Series Wall Luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance. With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 800W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.



EXAMPLE: DSKW2 LED 30C 700 40K T3M MVOLT DDBTXD

SKU	LED	Wattage	Temp	Beam	Optic	Control	Mount	Finish	Notes
DSKW2	30C	700	40K	T3M	MVOLT	DDBTXD	Black	Standard	
DSKW2	30C	700	40K	T3M	MVOLT	DDBTXD	White	Standard	
DSKW2	30C	700	40K	T3M	MVOLT	DDBTXD	Black	With Accessories	
DSKW2	30C	700	40K	T3M	MVOLT	DDBTXD	White	With Accessories	

#### Accessories

DSKW2	DSKW2-ACC	DSKW2-ACC
DSKW2	DSKW2-ACC	DSKW2-ACC
DSKW2	DSKW2-ACC	DSKW2-ACC
DSKW2	DSKW2-ACC	DSKW2-ACC

Direct from the factory, we have a variety of accessories available for your luminaire. For more information, please contact your local distributor or visit our website at [www.lithonia.com](http://www.lithonia.com).

## Performance Data

### Lumen Output

Lumen output is based on the luminaire's rated wattage and color temperature. Actual lumen output may vary due to ambient temperature and other factors. For more information, please contact your local distributor.

SKU	LED	Wattage	Temp	Beam	Optic	Control	Mount	Finish	Lumen Output (lm)
DSKW1	20C	1000	40K	T3M	MVOLT	DDBTXD	Black	Standard	10000
DSKW1	20C	1000	40K	T3M	MVOLT	DDBTXD	White	Standard	10000
DSKW1	20C	1000	40K	T3M	MVOLT	DDBTXD	Black	With Accessories	10000
DSKW1	20C	1000	40K	T3M	MVOLT	DDBTXD	White	With Accessories	10000

Direct from the factory, we have a variety of accessories available for your luminaire. For more information, please contact your local distributor or visit our website at [www.lithonia.com](http://www.lithonia.com).

## Performance Data

### Lumen Ambient Temperature (LAT) Multipliers

Lumen output is based on the luminaire's rated wattage and color temperature. Actual lumen output may vary due to ambient temperature and other factors. For more information, please contact your local distributor.

Temp (°F)	Temp (°C)	Multiplier
50	10	1.00
60	15.5	0.95
70	21	0.90
80	26.5	0.85
90	32	0.80
100	37.5	0.75
110	43	0.70
120	48.5	0.65
130	54	0.60
140	60	0.55
150	65.5	0.50

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## Performance Data

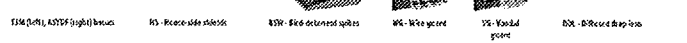
### Projected LED Lumen Maintenance

Lumen output is based on the luminaire's rated wattage and color temperature. Actual lumen output may vary due to ambient temperature and other factors. For more information, please contact your local distributor.

Time (hrs)	Temp (°F)	Temp (°C)	Maintenance (%)
0	50	10	100
1000	50	10	95
2000	50	10	90
3000	50	10	85
4000	50	10	80
5000	50	10	75
6000	50	10	70
7000	50	10	65
8000	50	10	60
9000	50	10	55
10000	50	10	50

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## Options and Accessories



## FEATURES & SPECIFICATIONS

**STANDARD USE**  
The luminaire is designed for use in a variety of applications. It is suitable for use in both indoor and outdoor environments. For more information, please contact your local distributor.

**CONSTRUCTION**  
The luminaire is constructed from high-quality materials. It is designed to be durable and long-lasting. For more information, please contact your local distributor.

**INSTALLATION**  
The luminaire is easy to install. It can be mounted on a wall or ceiling. For more information, please contact your local distributor.

**OPERATION**  
The luminaire is designed to operate in a variety of environments. It is suitable for use in both indoor and outdoor environments. For more information, please contact your local distributor.

**MAINTENANCE**  
The luminaire is designed to be easy to maintain. It has a long service life and requires minimal maintenance. For more information, please contact your local distributor.

**WARRANTY**  
The luminaire is covered by a warranty. For more information, please contact your local distributor.

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8000	50	10	60
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10000	50	10	50

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## Options and Accessories



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RGM TOOL  
SITE LIGHTING SPECIFICATIONS  
GASSER BUSH ASSOCIATES



