

## GENERAL PROJECT NOTES:

1. BENCHMARK: DESC. - EXISTING FIRE HYDRANT WEST OF ROUNDABOUT
2. ALL UNITS OF MEASURE ARE IN ENGLISH.
3. THE CONTRACTOR(S) SHALL NOTIFY ALL EXISTING UTILITY COMPANIES PRIOR TO THE START OF CONSTRUCTION.
4. ALL WORK SHALL CONFORM TO THE CURRENT STANDARD SPECIFICATIONS OF ALL STATE AND LOCAL APPLICABLE AUTHORITIES.
5. CONTRACTOR(S) TO NOTIFY THE CITY OF ROCHESTER HILLS 48 HOURS PRIOR TO THE START OF ANY PHASE OF CONSTRUCTION.
6. THE CONTRACTOR(S) SHALL OBTAIN ANY/ALL NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES, PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR(S) IS RESPONSIBLE FOR MAINTAINING ALL PREVIOUSLY INSTALLED S.E.S.C. MEASURES INCLUDING RESTORATION OF ALL DAMAGED AREAS OUTSIDE OF THE CONSTRUCTION LIMITS. AND INSTALLING AND MAINTAINING ALL NEW S.E.S.C. MEASURES.
8. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR REPLACEMENT OR REPAIR OF ANY EXISTING UTILITIES OR OTHER SITE FEATURES THAT ARE DAMAGED DURING CONSTRUCTION TO THE SATISFACTION AND APPROVAL OF THE APPROPRIATE UTILITY COMPANY. OTHER EXISTING SITE ELEMENTS THAT ARE DAMAGED MUST BE REPAIRED OR REPLACED TO THE SATISFACTION AND APPROVAL OF THE TOWNSHIP.
9. NOTIFY MISS DIO AT 811 OR 1460-462-7171, 72 HOURS PRIOR TO START OF CONSTRUCTION.
10. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS OR UTILITY COMPANIES AS REQUIRED TO ACCOMPLISH THEIR CONSTRUCTION OPERATIONS.
11. AS AN AID TO THE CONTRACTOR(S), VARIOUS UTILITIES ARE SHOWN ON THE PLAN. ALL INFORMATION CONCERNING ALL UTILITIES SHOWN ON THE PLAN ARE TAKEN FROM AVAILABLE RECORDS, THE OWNER OR ARCHITECT DOES NOT GUARANTEE THEIR LOCATION AND/OR ELEVATION. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH THE EXACT LOCATIONS AND/OR ELEVATIONS OF ALL EXISTING UTILITIES AND REFLECT THAT IN THEIR BID.
12. IT IS UNDERSTOOD THAT THE CONTRACTOR(S) SHALL PERFORM ALL WORK UNDER THIS CONTRACT IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS, POLICIES, RULES AND STANDARDS OF THE MICHIGAN OCCUPATIONAL SAFETY AND HEALTH ACT (MOSHA) BEING ACT 154 OF THE PUBLIC ACTS OF 1974 AND AS AMENDED.
13. ANY QUANTITIES GIVEN WITHIN THESE PLANS AND SPECIFICATIONS ARE APPROXIMATIONS ONLY AND SHOULD NOT BE USED TO DETERMINE COSTS. ALL QUANTITIES SHOULD BE VERIFIED BY THE CONTRACTOR(S) FOR BIDDING PURPOSES. THIS IS A LUMP SUM BID. UNIT PRICES WILL BE TAKEN FOR SPECIFIC ITEMS THAT MAY BE NECESSARY TO ADD OR DELETE DURING PROJECT CONSTRUCTION.
14. CONTRACTOR IS RESPONSIBLE FOR ALL STAKING AND LAYOUT FOR THIS PROJECT. THIS INCLUDES GRADES AND ESTABLISHMENT OF A BENCHMARK.
15. CONTRACTOR TO PROVIDE ALL TRAFFIC CONTROL DURING CONSTRUCTION. ALL TRAFFIC CONTROL SHALL CONFORM TO CURRENT MINUTCD STANDARDS.
16. ANY ITEMS INDICATED TO BE REMOVED ARE TO BE LEGALLY DISPOSED OF OFF-SITE UNLESS OTHERWISE NOTED.
17. ALL PERSONNEL ARE REQUIRED TO WEAR HARD HATS WITHIN WORK ZONES AND COMPLY WITH ALL MOSHSA STANDARDS.
18. CONTRACTOR SHALL PERFORM DAILY CLEAN UP OF MATERIALS AND DEBRIS GENERATED BY THEIR WORK WITHIN THE PROJECT LIMITS AND IN PUBLIC AREAS IN WHICH THEY CREATE DEBRIS AND/OR TRACKING OF SOIL MATERIALS.
19. CONTRACTOR IS RESPONSIBLE FOR SECURITY OF THEIR OWN TOOLS, EQUIPMENT, MATERIALS, ETC. TO GUARD AGAINST FIRE, THEFT, VANDALISM, AND/OR WEATHER DAMAGE.
20. PREVAILING WAGES ARE NOT REQUIRED FOR THIS PROJECT.
21. THE OWNER WILL PROVIDE CONSTRUCTION MATERIAL TESTING. CONTRACTOR SHALL COORDINATE TESTING WITH OWNER'S TESTING AGENCY.

## LOCAL UTILITY CONTACTS

WATER & SANITARY SEWER: ROCHESTER HILLS DPS  
ALLAN E. SCHNECK P.E. DIRECTOR  
PH: 248-556-4655  
1000 ROCHESTER HILLS DR.  
ROCHESTER HILLS, MI 48309

## ADDITIONAL POINTS OF CONTACT:

THE CITY OF ROCHESTER HILLS  
PH: (248) 841-2572  
CONTACT PERSON: ED ANZEK, AICP, DIRECTOR  
PLANNING AND ECONOMIC DEVELOPMENT

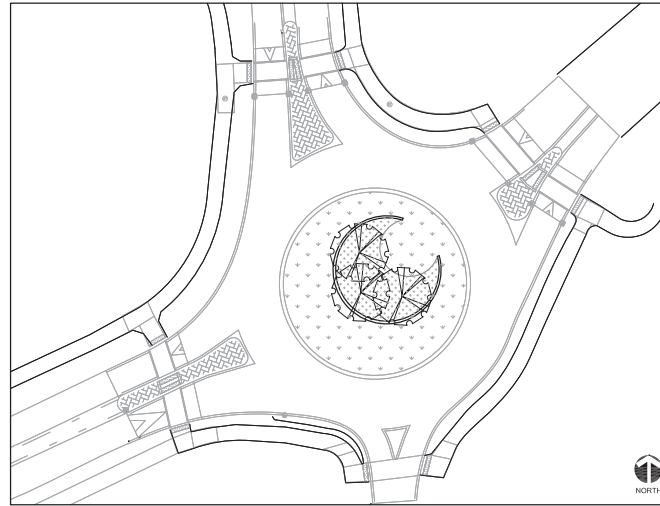
LANDSCAPE ARCHITECTS & PLANNERS, INC.  
(517) 485-5500  
CONTACT PERSON: ROBERT FORD, LA  
MATT HULL, LANDSCAPE DESIGNER

## TRAFFIC CONTROL AND STAGING:

1. ALL CONSTRUCTION ACTIVITIES & WORK TO BE STRICTLY CONFINED TO THE EXISTING INNER PAVED TRAFFIC APRON AND ALL CONSTRUCTION OPERATIONS STAGED AND MAINTAINED AS NOT TO OVERFLOW INTO INNER CIRCULAR LANE FOR THE ROUNDABOUT AT ANY TIME.
2. ALL STAGING SHALL INSIDE OF TRAFFIC CIRCLE. DURING DAYLIGHT HOURS FROM 0900AM-330PM IT IS POSSIBLE TO ONLY TEMPORARY CLOSE ONE OF TWO APPROACH LANES FOR NE WITH TRAFFIC CONTROLLED DEVICES AND FLAGGER CONTROL TO ACCESS INTO THE TRAFFIC ISLAND. OCCSO PATROL WILL ALSO MOSTLY LIKELY BE NECESSARY.
4. ALL PERMIT FEES (RIGHT OF WAY) SHALL BE INCIDENTAL TO THE CONTRACT AND BE INCLUDED IN THE PAY ITEM TRAFFIC CONTROL LSUM.

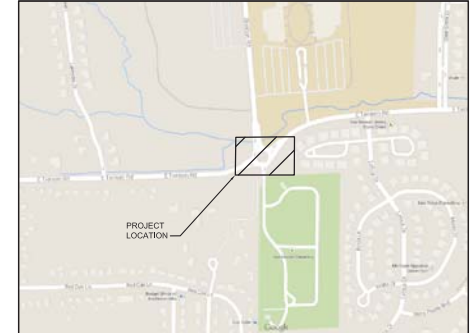
# TIENKEN SHELDON ROUNDABOUT

ROCHESTER HILLS, MI



SITE MAP  
NOT TO SCALE

THE CITY OF ROCHESTER HILLS  
PLANNING AND ECONOMIC DEVELOPMENT  
1000 ROCHESTER HILLS DRIVE  
ROCHESTER HILLS, MI 48309  
PH: (248) 841-2572



VICINITY LOCATION MAP

NOT TO SCALE

## PROJECT SHEET INDEX:

- C0 COVER
- C1 EXISTING CONDITIONS
- C2 DEMOLITION
- C3 SITE LAYOUT
- C4 GRADING
- C5 GRADING ENLARGEMENT
- C6 LANDSCAPE PLAN
- C7 IRRIGATION PLAN

## SURVEY COMPLETED BY:

BASE MAP DATA PROVIDED BY THE CITY OF ROCHESTER HILLS.  
BASE MAP CONSISTS OF AS-BUILT DRAWINGS AND HISTORIC TOPOGRAPHIC DATA. NO NEW SURVEY WAS UNDERTAKEN FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE BIDDER TO VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.



Know what's below.  
Call before you dig.



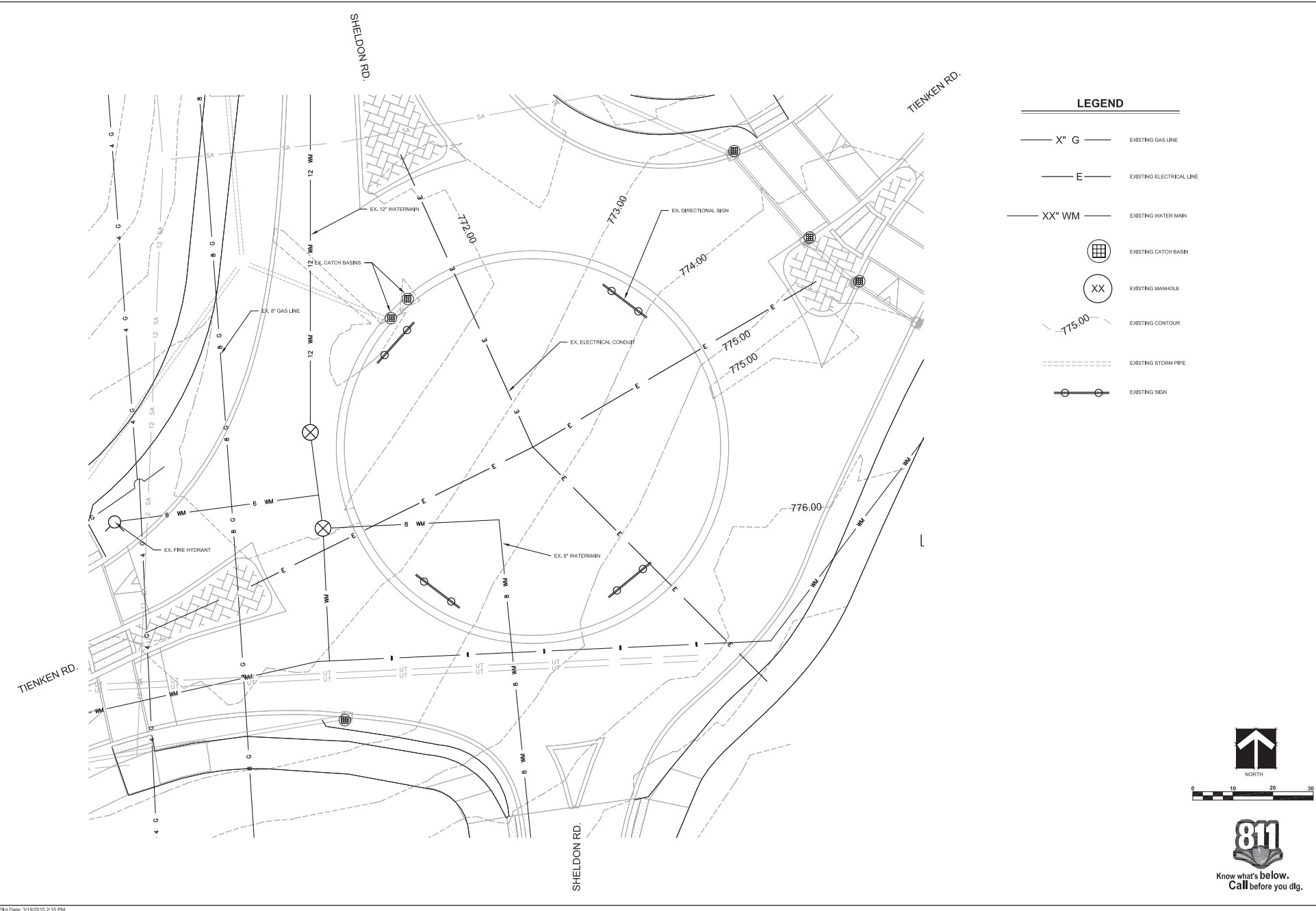
**Landscape Architects & Planners, Inc.**

OAKLAND CENTER - 809 CENTER STREET - SUITE 1 - LANSING, MI 48906  
PH: (517) 485-5500 - FAX: (517) 485-5576 - EMAIL: INFO@LAPINC.NET

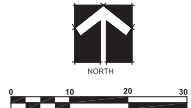
DATE: 07/24/2014  
DESIGNED BY: JMW  
CHECKED BY: REF  
DRAWN BY: NROY  
PROJECT NO.: 12037-0301

SHEET  
C0

\LA\SERV\COMPANY\PROJECTS\PROJECTS\2012\2007\0001\PH\TIENKEN RD CONSTRUCTION\DRAWINGS\CD SET\SHEET SETS\2012\2007\0001\PH\TIENKEN RD CONSTRUCTION\EXISTING CONDI\EXISTING CONDITIONS.DWG



LEGEND	
— X" G —	EXISTING GAS LINE
— E —	EXISTING ELECTRICAL LINE
— XX" WM —	EXISTING WATER MAIN
	EXISTING CATCH BASIN
	EXISTING MANHOLE
— 775.00 —	EXISTING CONTOUR
---	EXISTING STORM PIPE
	EXISTING SIGN



Know what's below.  
Call before you dig.

**Landscape Architects & Planners, Inc.**  
 OAKLAND CENTER  
 609 CENTER STREET  
 SUITE ONE  
 LANSING, MI 48206  
 P: (313) 485-5500  
 F: (313) 485-5576  
 info@lapinc.com

REVISIONS	DATE	COMMENTS

**ED ANZEK, AICP, DIRECTOR**  
 PLANNING AND ECONOMIC DEVELOPMENT  
 1000 ROCHESTER HILLS DRIVE  
 ROCHESTER HILLS, MI 48069  
 P: (248) 841-2572 F: ---

**TIENKEN SHELDON ROUNDABOUT**  
 THE CITY OF ROCHESTER HILLS  
 PHASE ONE  
 EXISTING CONDITIONS

DATE: 02/24/2014	DESIGNED BY: JADY
DRAWN BY: JADY	CHECKED BY: JADY
SCALE: N/A	SHEET: N/A

**SHEET**  
C1

ALL RIGHTS RESERVED  
 © 2014 Landscape Architects & Planners, Inc.

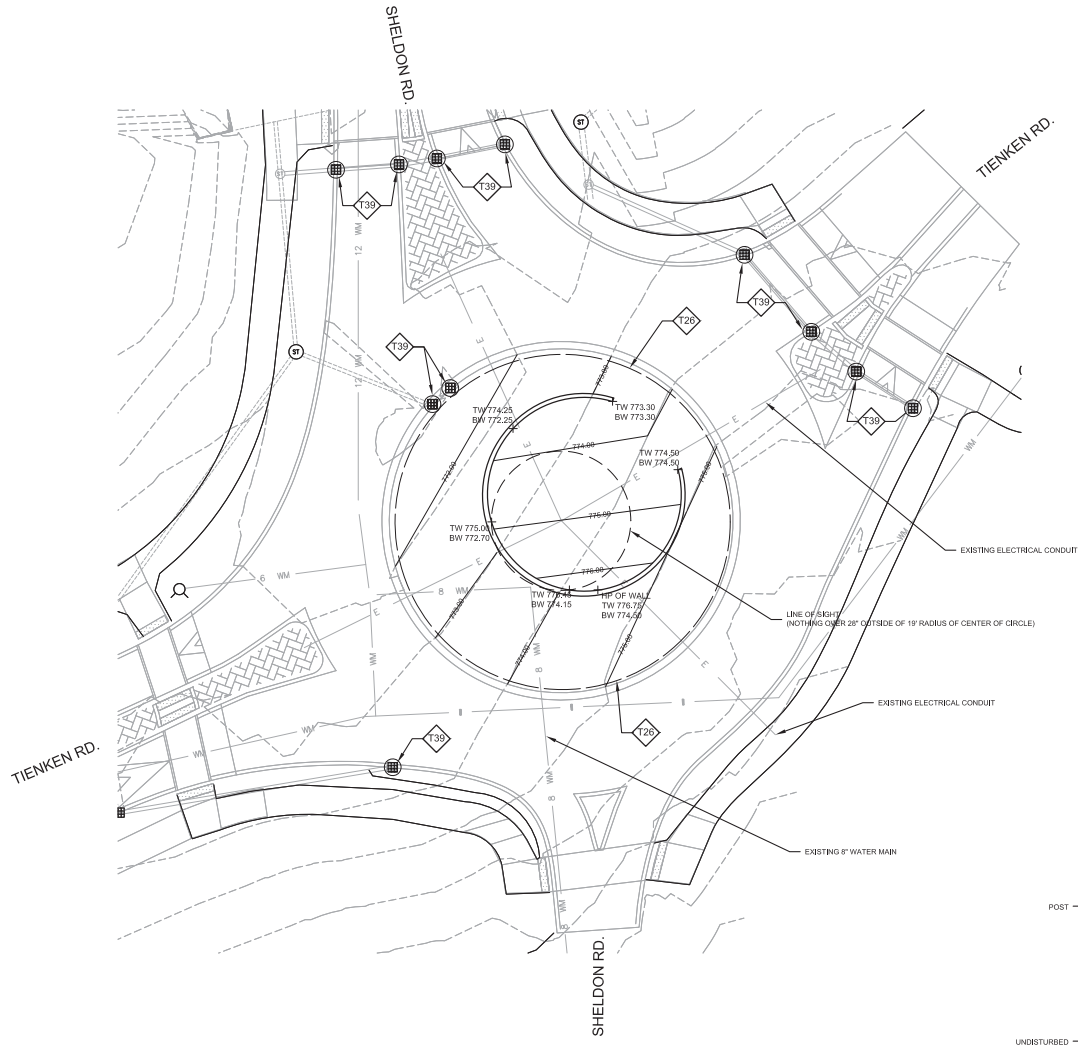






\\NASB\SERVER\COMPANY\PROJECTS\PROJECTS\2012\12\03\001\PH\TIENKEN RD CONSTRUCTION\DRAWINGS\SCD SET\26 SHEET SET(S) 2012\12\03\001\PH\TIENKEN RD CONSTRUCTION\DRAWINGS\SCD SET\26 SHEET SET(S) 2012\12\03\001\PH\TIENKEN RD CONSTRUCTION\DRAWINGS\SCD SET\26 SHEET SET(S) 2012\12\03\001\PH\TIENKEN RD CONSTRUCTION\DRAWINGS\SCD SET\26 SHEET SET(S)

Plot Date: 3/19/2015 2:16 PM



**S.E.S.C. PLAN LEGEND:**

- CONTOUR
- SPOT ELEVATION
- CATCH BASIN
- S.E.S.C. SYMBOL
- EXISTING CONTOUR
- SILT FENCE

- HP = HIGH POINT
- RM = RIM ELEVATION
- ME = MATCH EXISTING ELEVATION
- T = TOP OF CURB
- GP = GUTTER PAN
- TW = TOP OF WALL
- BW = BOTTOM OF WALL
- BC = TOP OF CURB
- RCP = RIGID CONCRETE PIPE
- TDC = TO BE DETERMINED
- CB = CATCH BASIN
- WM = WATER MAIN

**ADDITIONAL GRADING/S.E.S.C. NOTES**

- MICHIGAN UNIFIED SOIL EROSION CONTROL SYMBOLS ARE USED HEREIN AS APPROVED BY MUCOT 2001.
- THE LIMITS OF EARTH CHANGE IS INSIDETHE RAISED CURB OF THE ROUNDABOUT ISLAND
- EROSION CONTROL MEASURES SCHEDULE.
- THIS SITE IS NOT 500' FROM A STREAM, LAKE OR OPEN DRAINAGE CHANNEL
- THE PREDOMINANT SOIL TYPES IS CLAY SANDY LOAM
- ALL DISTURBED AREAS WILL RECEIVE PERMANENT EROSION CONTROL TREATMENT WITHIN 5 DAYS OF FINAL GRADING
- ALL AREAS TO BE LANDSCAPED AND MULCHED AS INDICATED ON THE LANDSCAPE PLAN.
- APPROXIMATE EARTHWORK CALCULATIONS 25 CYD OF FILL AND NO CYD OF CUT

**S.E.S.C. MAINTENANCE PLAN**

- ROUTINE MAINTENANCE SHOULD BE COMPLETED BY THE CONTRACTOR DURING CONSTRUCTION. ROUTINE MAINTENANCE INCLUDES IMPLEMENTING NECESSARY REPAIR OR CORRECTIONS TO EXISTING TEMPORARY OR PERMANENT S.E.S.C. MEASURES.
- REPAIRS TO TEMPORARY S.E.S.C. MEASURES SHALL BE CONDUCTED IMMEDIATELY.
- PERMANENT MEASURES IN NEED OF REPAIR SHALL BE CORRECTED WITHIN 15 DAYS OF DETECTION OF PROBLEM.
- INSTALL VEGETATION IMMEDIATELY FOLLOWING FINAL GRADING ON DISTURBED AREAS.
- ALL SOIL EROSION SHALL BE CHECKED AFTER EVERY RAIN EVENT. CONTRACTOR TO CLEAN, REPAIR, OR INSTALL EROSION CONTROL MEASURES TO CORRECT ANY PROBLEM AREAS.
- TYPICAL ROUTINE MAINTENANCE TASKS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
  - CHECK SILT FENCE, STABILIZE AND RE-STAKE.
  - SLOPE PROTECTION AND WASHOUT REPAIR
  - LANDSCAPE WITHIN 5 DAYS OF FINAL GRADING.
- ALL RESTORED AREAS SHALL BE MAINTAINED DURING THE GROWING SEASON BY CONTRACTOR UNTIL FINAL ACCEPTANCE. THEN THE OWNER SHALL TAKE OVER MAINTENANCE.
- ALL STOCKPILED AND EXCAVATED MATERIAL SHALL BE SURROUNDED BY SILT FENCE IF LEFT OVERNIGHT OUTSIDE OF A PROTECTED AREA.
- STORM WATER FROM SUBJECT SITE WILL NOT ADVERSELY IMPACT ADJACENT PROPERTIES.
- NO WETLANDS EXIST ON SITE.

**SEQUENCE OF CONSTRUCTION**

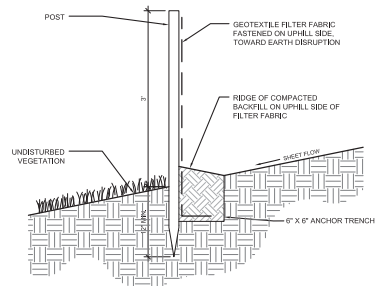
- INSTALL EROSION CONTROL MEASURES, SILT FENCE
- STRIP TOPSOIL
- ROUGH GRADE SITE
- INSTALL RETAINING WALL AND IRRIGATION
- FINE GRADE SITE
- LANDSCAPE AND MULCH TO STABILIZE ENTIRE SITE
- REMOVE TEMPORARY EROSION CONTROL MEASURES

**GRADING/S.E.S.C. NOTES**

- BY THE END OF EACH WORKDAY, SWEEP OR SCRAPE UP SOIL TRACKED ONTO THE ROAD. BY THE END OF THE NEXT WORKDAY AFTER A STORM, CLEAN UP THE SOIL WASHED OFF-SITE.
- ON A DAILY BASIS, INSPECT, REPAIR, AND/OR REPLACE SILT FENCE AND OTHER REQUIRED SOIL EROSION CONTROLS.
- STOCK PILE SOILS MUST BE AT LEAST 15 FEET FROM CURB AND SENSITIVE FEATURES, SUCH AS LAKES, STREAMS, COUNTY DRAINS, OR WETLANDS, UNLESS AUTHORIZED BY ENFORCEMENT OFFICER ON APPROVED PLAN.
- TEMPORARY CONTROL MEASURES MUST REMAIN IN PLACE AND BE MAINTAINED UNTIL PERMANENT SITE STABILIZATION IS COMPLETED AND THE SITE IS FORMALLY CLOSED. THE SITE IS CLOSED WHEN PERMANENT EROSION CONTROL MEASURES (LANDSCAPING AND MULCH) ARE INSTALLED. PERMANENT STABILIZATION MUST BE COMPLETED WITHIN 5 DAYS AFTER FINAL GRADE.
- CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EARTH DISTURBANCE ON SITE REMAINS WITHIN LIMITS AS INDICATED ON APPROVED SITE PLAN. THE ENGINEER MUST BE NOTIFIED OF ANY MODIFICATIONS TO THE LIMIT OF EARTH DISTURBANCE.
- AFTER A SITE IS STABILIZED, PERMANENT EROSION CONTROL MEASURES ARE TO BE MAINTAINED BY THE OWNER.
- ENFORCEMENT STAFF MAY REVIEW AND MODIFY THE APPROVED SITE EROSION PLAN AS NEEDED THROUGHOUT THE CONSTRUCTION PERIOD.

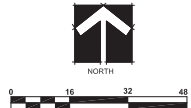
**SEEDING NOTES:**

- SEED ALL NON-NATIVE DISTURBED AREAS UNLESS OTHERWISE NOTED WITH EARTH CARPET QUICK TO GROW LAWN SEED MIXTURE
  - 25% PERENNIAL RYEGRASS
  - 25% KENTUCKY BLUEGRASS
  - 25% ANNUAL RYEGRASS
  - 25% CREEPING RED FESCUE
- APPLY AT THE RATE OF 5-6 POUNDS PER 1,000SF



**SILT FENCE INSTALLATION DETAIL**  
SECTION - NOT TO SCALE

KEY	DETAILS	CHARACTERISTICS
26	 GEOTEXTILE SILT FENCE	USE GEOTEXTILE AND POSTS OR RILES AT 6' - 0" MAXIMUM SPACING. EDGES OF SLOPE AREA. USUALLY PERMANENT. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.
39	 FILTER	CAN UTILIZE MATERIAL FOUND ON SITE. EASY TO CONSTRUCT, FILTERS SEDIMENT FROM RUNOFF FILTER ALL CATCH BASINS WITHIN 200'



LANDSCAPE CENTER  
609 CENTER STREET  
SUITE ONE  
LANSING, MI 48206  
P: (313) 485-5000  
F: (313) 485-5076  
info@lapi.net

REVISIONS	DATE	COMMENTS

**ED ANZEK, AICP, DIRECTOR**  
PLANNING AND ECONOMIC DEVELOPMENT  
1000 ROCHESTER HILLS DRIVE  
ROCHESTER HILLS, MI 48069  
P: (248) 841-2572 F: ---

TIENKEN SHELTON ROUNDABOUT  
THE CITY OF ROCHESTER HILLS  
PHASE ONE  
GRADING

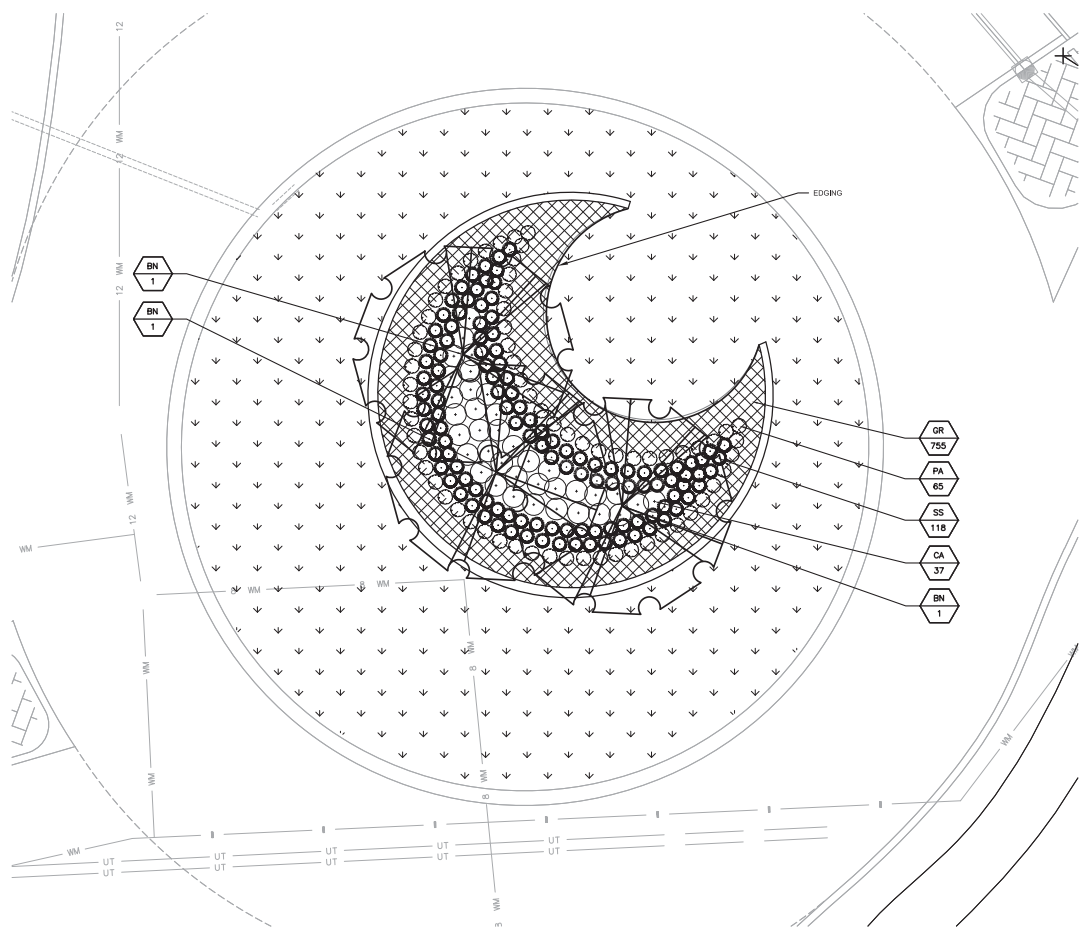
DATE: 02/24/2014  
DESIGNED BY: JADP  
DRAWN BY: JADP  
CHECKED BY: JADP  
SCALE: N/A  
SHEET: N/A

SHEET C4

ALL RIGHTS RESERVED



\\NAS-SERV\COMPANY\PROJECTS\PROJECTS\2012\03\01\TIENKEN RD CONSTRUCTION\DRAWINGS\SCD SET\SH01(1)R1.TIF\TIENKEN RD CONSTRUCTION\LANDSCAPE PLAN\CD LANDSCAPE PLAN.DWG



LANDSCAPE PLANTING SCHEDULE						
QUANT.	ABBREV.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	COMMENTS
755	GR	GERANIUM 'ROZANNE'	ROZANNE GERANIUM	NO. 1 CONT.	12"	DISEASE, INSECT AND SALT TOLERANT
65	MS	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	MINIATURE FOUNTAIN GRASS	NO. 1 CONT.	AS SHOWN	REDDISH-PINK PLUMES
118	SS	SCHIZACHYRIUM SCOPARUM 'LITTLE BLUE STEM'	LITTLE BLUE STEM	NO. 2 CONT.	AS SHOWN	RED FALL COLOR
37	CA	CALAMAGROSTIS SCUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	NO. 2 CONT.	AS SHOWN	SUN OR SHADE
3	BN	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	2 1/2" CAL. MULT-STEM	AS SHOWN	MULTI-STEM, EXPLODATING BARK

**LANDSCAPE PLAN LEGEND**



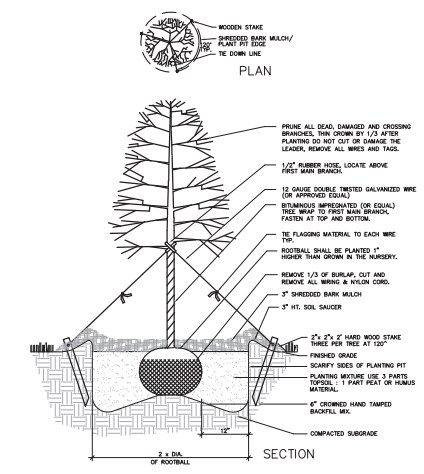
**SEEDING NOTES:**

- SEED ALL NON NATIVE DISTURBED AREAS UNLESS OTHERWISE NOTED WITH:
  - EARTH CARPET QUICK TO GROW LAWN SEED MIXTURE
  - 25% PERENNIAL RYEGRASS
  - 25% KENTUCKY BLUEGRASS
  - 25% ANNUAL RYEGRASS
  - 25% CREEPING RED FESCUE

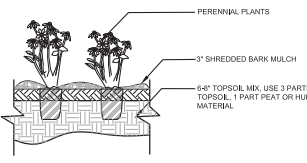
APPLY AT THE RATE OF 64 POUNDS PER 1000SF

**LANDSCAPE NOTES:**

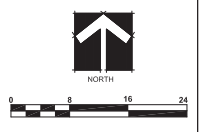
- INSTALL 3" DEEP SHREDDED BARK MULCH TO ALL PLANTING AREAS/BEDS (NO POLY-FILM).
- INSTALL 3" X 12 GA. EDGING TO SEPARATE LAWN FROM PLANTING BED.
- CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES, AS WELL AS THE LOCATION OF EXISTING TREES AND VEGETATION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COST INCURRED DUE TO DAMAGE/REMOVAL OF SAID ELEMENTS.
- ANY DISCREPANCIES BETWEEN PLANS, NOTES, DETAILS AND EXISTING CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE OWNER'S AUTHORIZED REPRESENTATIVE FOR REVIEW AND DECISION. CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
- CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING MATERIALS/IMPROVEMENTS DAMAGED DURING CONSTRUCTION.
- SITE BOUNDARY, TOPOGRAPHY, UTILITIES AND OTHER BASE INFORMATION PROVIDED BY OTHERS.
- CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON PLANT SCHEDULES AND THOSE INDICATED ON PLANS. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF QUANTITIES DRAWN.
- CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO PLANT MATERIAL LOCATIONS IN FIELD, AS NECESSARY. THE LOCATION OF ALL PLANT MATERIAL SHALL BE SUBJECT TO APPROVAL BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
- ALL PLANT MATERIAL SHALL BE OF THE SIZES CALLED FOR IN THE PLANT SCHEDULES. ANY PLANT MATERIAL NOT MEETING THE SIZES AND/OR QUALITY AS CALLED FOR SHALL BE REMOVED FROM SITE. ALL TREES SHALL BE INSPECTED AND APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE. NO SUBSTITUTIONS OF PLANT MATERIAL SHALL BE MADE WITHOUT APPROVAL FROM THE OWNER'S AUTHORIZED REPRESENTATIVE.
- ALL PROPOSED TREES 2" CAL. AND OVER SHALL BE GUYED/STAKED SECURE. SEE DECIDUOUS TREE PLANTING/STAKING DETAIL, WHERE APPLICABLE.
- ALL PLANTING BEDS TO BE TREATED WITH PRE-EMERGENT HERBICIDE. CONTRACTOR SHALL INSURE THAT PROPOSED PLANT MATERIAL IS RESISTANT TO THE HERBICIDE PROPERTIES AND THAT HERBICIDE APPLICATION FOLLOWS THE MANUFACTURER'S SPECIFICATIONS AND IS APPLIED IN ACCORDANCE WITH SOUND HORTICULTURAL PRACTICES.
- CONTRACTOR SHALL DETERMINE APPROPRIATE PLANTING BACKFILL MIXES (BASED ON SOILS/SUBSURFACE CONDITIONS) AND REVIEW ALTERNATIVES WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- FOR A PERIOD OF ONE (1) YEAR AFTER ACCEPTANCE, AT NO ADDITIONAL COST TO THE OWNER, THE CONTRACTOR SHALL REPLACE ANY PLANT MATERIALS THAT ARE DEAD OR THAT ARE, IN THE OPINION OF THE ARCHITECT, IN AN UNHEALTHY OR UNSIGHTLY CONDITION, OR THAT HAVE LOST THEIR NATURAL SHAPE DUE TO DEAD BRANCHES, EXCESSIVE PRUNING, OR INADEQUATE OR IMPROPER MAINTENANCE.



**1 TREE PLANTING DETAIL**  
SCALE: NOT TO SCALE



**2 PERENNIAL PLANTING DETAIL**  
SCALE: NOT TO SCALE



**Landscape Architects & Planners, Inc.**  
 OAKLAND CENTER  
 609 CENTER STREET  
 SUITE ONE  
 LANSING, MI 48206  
 P: (313) 485-5000  
 F: (313) 485-5076  
 info@lapi.com

REVISIONS	DATE	COMMENTS

**ED ANZEK, AICP, DIRECTOR**  
 PLANNING AND ECONOMIC DEVELOPMENT  
 1000 ROCHESTER HILLS DRIVE  
 ROCHESTER HILLS, MI 48069  
 P: (248) 841-2572 F: ---

TIENKEN SHELTON ROUNDABOUT  
 THE CITY OF ROCHESTER HILLS  
 PHASE ONE  
 LANDSCAPE PLAN

DATE: 02/20/14	DESIGNED BY: JADP
DRAWN BY: JADP	CHECKED BY: JADP
PROJECT NO.: 1037-0301	SHEET NO.: 1
SHEET TITLE: N/A	DATE: 02/20/14

**SHEET C6**

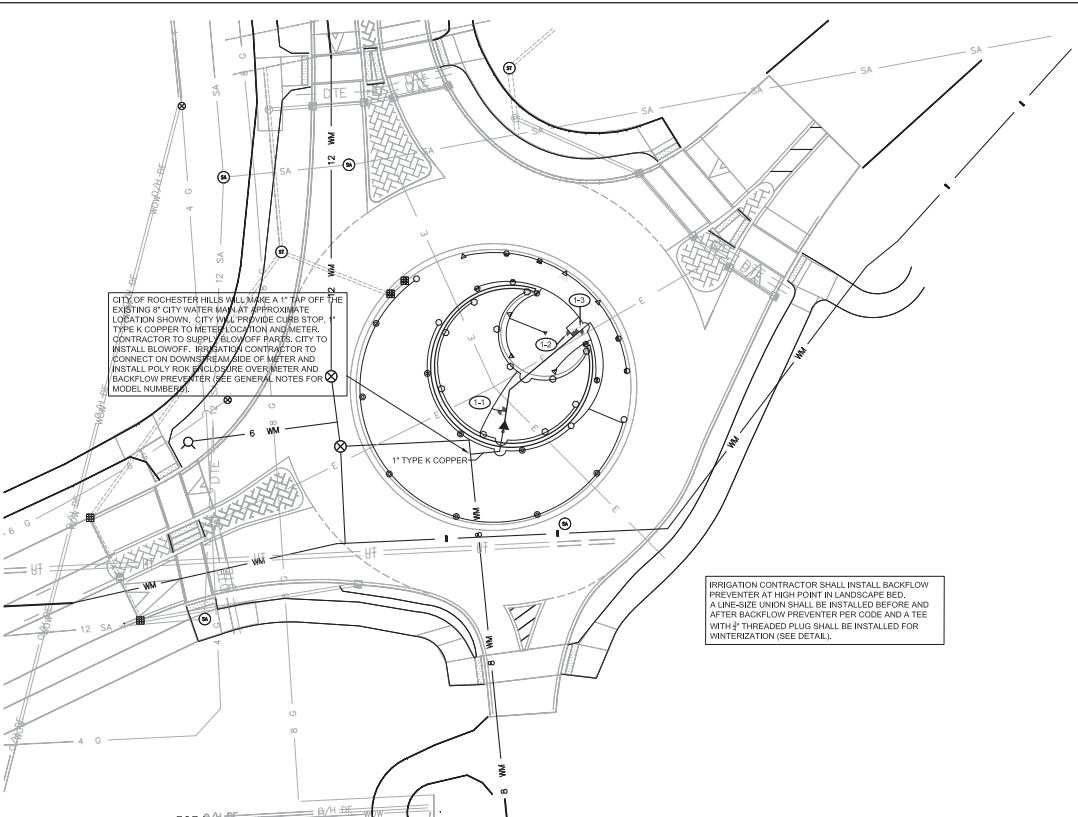
REVISIONS	DATE	COMMENTS

**ED ANZEK, AICP, DIRECTOR**  
 PLANNING AND ECONOMIC DEVELOPMENT  
 1000 ROCHESTER HILLS DRIVE  
 ROCHESTER HILLS, MI 48069  
 P: (248) 841-2572 F: ---

**TENKEN SHELTON ROUNDABOUT**  
 THE CITY OF ROCHESTER HILLS  
 PHASE ONE  
 IRRIGATION PLAN

DATE: 02/24/2014	DESIGNED BY: JADY
DRAWN BY: JADY	CHECKED BY: JADY
DATE: 02/24/2014	DATE: 02/24/2014
SCALE: 1/8" = 1'-0"	SCALE: 1/8" = 1'-0"
DATE: 02/24/2014	DATE: 02/24/2014
SCALE: 1/8" = 1'-0"	SCALE: 1/8" = 1'-0"

**SHEET C7**



CITY OF ROCHESTER HILLS WILL MAKE A 1" TAP OFF THE EXISTING 8" CITY WATER MAIN AT APPROXIMATE LOCATION SHOWN. CITY WILL PROVIDE CURB STOP, 1" TYPE K COPPER TO METER LOCATION AND METER. CONTRACTOR TO SUPPLY BLOW OFF PARTS. CITY TO INSTALL BLOWOFF. IRRIGATION CONTRACTOR TO CONNECT ON DOWNSTREAM SIDE OF METER AND INSTALL POLY ROK BACKFLOW ENCLOSURE OVER METER AND BACKFLOW PREVENTER (SEE GENERAL NOTES FOR MODEL NUMBER).

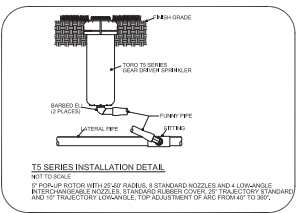
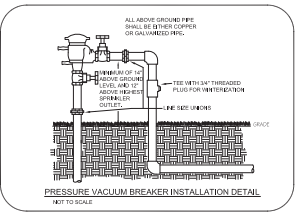
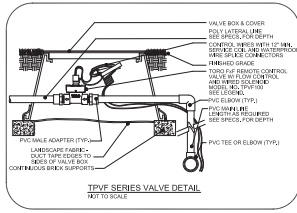
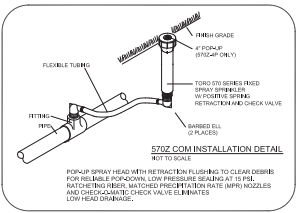
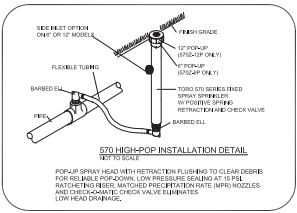
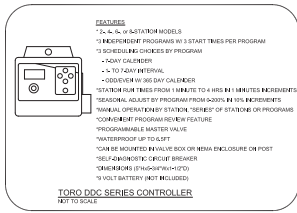
IRRIGATION CONTRACTOR SHALL INSTALL BACKFLOW PREVENTER AT HIGH POINT IN LANDSCAPE BED. A LINE-SIZE UNION SHALL BE INSTALLED BEFORE AND AFTER BACKFLOW PREVENTER PER CODE AND A TEE WITH 1/2" THREADED PLUG SHALL BE INSTALLED FOR WINTERIZATION (SEE DETAIL).

- LEGEND**
- TSPCK #1.0 L.A. NOZZLE TORO GEAR DRIVEN ROTARY POP-UP
  - 5702-4P-COM 10-PRECISION SERIES TORO FIXED SPRAY POP-UP (4")
  - 5702-4P-COM 12-PRECISION SERIES TORO FIXED SPRAY POP-UP (4")
  - ▼▼▼ 5702-4P-COM 15-PRECISION SERIES TORO FIXED SPRAY POP-UP (4")
  - 5702-4P-COM PRN-TA NOZZLE TORO FIXED SPRAY POP-UP (4")
  - 5702-12P-COM PRN-TA NOZZLE TORO FIXED SPRAY POP-UP (12")
  - ⚡ TPVF100 TORO 1" ELECTRIC VALVE W/ DCLS-P LATCHING SOLENOID
  - NOT SHOWN DDCWP-4-9V 4 STATION TORO DC POWERED WATERPROOF CONTROLLER W/ TRS WIRED RAIN SENSOR
- PVC 200# PIPE (1" PRESSURIZED MAINLINE)  
 — 100# POLYETHYLENE PIPE (PE-3408 NSF APPROVED) (ALL PIPE DOWNSTREAM OF VALVE IS 1")
- NOT SHOWN #14 UL APPROVED 24V RED CONTROL WIRE WITH A #14 UL APPROVED WHITE COMMON WIRE
- POINT OF CONNECTION (P.O.C.)
  - ▶ 765-1 FEBCO 1" PRESSURE VACUUM BREAKER

- GENERAL NOTES:**
- COORDINATE THIS WORK WITH ALL OTHER TRADES.
  - ALL PLUMBING AND ELECTRICAL SHALL BE INSTALLED ACCORDING TO STATE AND LOCAL CODES.
  - ANY SLEEVES REQUIRED SHALL BE 4" SCH 40 PVC (UNLESS OTHERWISE SPECIFIED). SLEEVE INSTALLATION SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR.
  - ALL PIPE NOT SIZED DOWNSTREAM OF VALVE IS 1".
  - IRRIGATION CONTRACTOR'S POINT OF CONNECTION SHALL BE A 1" COPPER LINE ON DOWNSTREAM SIDE OF CITY WATER METER. (SEE NOTE ON PLAN.)
  - IRRIGATION CONTRACTOR TO PROVIDE AND INSTALL POLY ROK BACKFLOW ENCLOSURE MODEL VOPLRZ WITH GPR2 ENCLOSURE PAD.
  - CONTROLLER SHALL BE MOUNTED INSIDE A JUMBO VALVE BOX ALONG WITH ZONE VALVES "1/2" & "1/3".
  - IRRIGATION CONTRACTOR SHALL ADJUST THE FLOW CONTROL FEATURE ON ALL ELECTRIC VALVES PER THE MANUFACTURER'S RECOMMENDATIONS TO MAXIMIZE THE VALVES PERFORMANCE AND LONGEVITY.
  - IF SITE PRESSURE IS NOT ADEQUATE, A BOOSTER PUMP AND RELATED EQUIPMENT MAY BE REQUIRED AT ADDITIONAL COST TO OWNER.
  - PIPE ROUTING IS DIAGRAMMATIC. ALL EQUIPMENT AND PIPE ARE TO BE FIELD ADJUSTED TO TAKE INTO CONSIDERATION ANY OBSTRUCTIONS AND ALL LANDSCAPE.

WATER REQUIREMENTS: 14 GPM @ 50 PSI (AT P.O.C.)

ZONE NUMBER	VALVE SIZE	GPM	ZONE TYPE
1-1	1"	11	LANDSCAPE SPRAYS W/ PRNS
1-2	1"	14	TURF SPRAYS
1-3	1"	14	TURF ROTORS & SPRAYS W/ PRNS



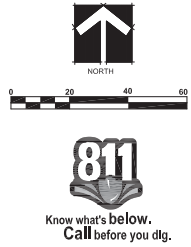
**TORO**  
**Spartan Distributors**

487 W. 24th St.  
 Sparta, MI 49345  
 Ph: 616.887.7301  
 Fax: 616.887.6268

1050 Oakdale Road  
 Auburn Hills, MI 48026  
 Ph: 248.373.8600  
 Fax: 248.373.8699

800.622.2216

Design By: L. CHORKALUK, C.I.D.  
 Plan #: TSC030  
 Date: 02/11/14  
 Revisions:

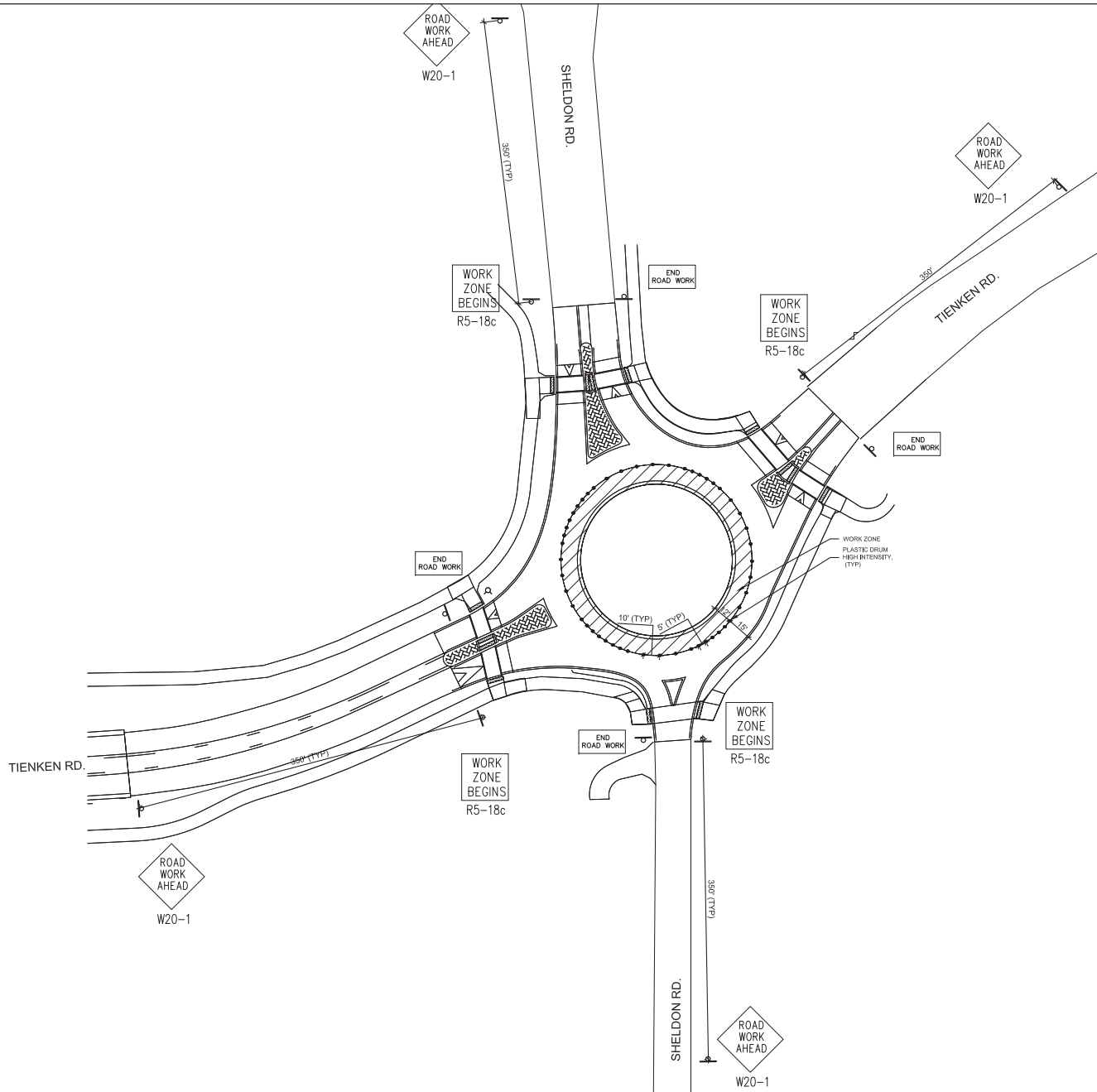


**811**  
 Know what's below.  
 Call before you dig.

THIS DESIGN IS BASED ON INFORMATION PROVIDED BY THE ARCHITECT AND/OR OWNER WHO ASSUMES FULL RESPONSIBILITY FOR ITS CORRECTNESS.

\LA\SERVCOMPANY\PROJECTS\PROJECTS\2012\2007\0001\RI\TIENKEN RD CONSTRUCTION\DRAWINGS\CD SET\SHEET SETS\2012\2007\0001\RI\TIENKEN RD CONSTRUCTION\TRAFFIC CONTROL\TRAFFIC CONTROL PLAN.DWG

Plot Date: 3/19/2015 2:17 PM



**LEGEND**



**MAINTAINING TRAFFIC NOTES**

1. ALL SIGNS SHALL BE INSTALLED ACCORDING TO THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC DEVICES 2013 EDITION, THE LETTERING AND SPACING ON ALL SIGNS SHALL CONFORM TO THE FHWA STANDARD ALPHABETS FOR HIGHWAY SIGNS. USE PRISMATIC REFLECTIVE SHEETING FOR ALL TEMPORARY SIGNS
2. SIGNS SHALL NOT BE INSTALLED BEHIND ANY OBSTRUCTIONS (POLES, TREES AND BRUSH)
3. CONFLICTING WARNING, REGULATORY, CONSTRUCTION AND GUIDE SIGNS WITHIN THE CONSTRUCTION INFLUENCE SHALL BE COVERED OR RELOCATED.
4. DISTANCES SHOWN BETWEEN SIGNS ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.
5. PLASTIC DRUM, HIGH INTENSITY, SHALL BE SPACED AS SPECIFIED ON THE MAINTAINING TRAFFIC PLANS OR AS DIRECTED BY THE ENGINEER.



Know what's below.  
Call before you dig.



**Landscape Architects & Planners, Inc.**

OSHLAND CENTER  
609 CENTER STREET  
SUITE ONE  
LANSING, MI 48206  
P: (313) 485-5500  
F: (313) 485-5576  
info@lapi.com

REVISIONS	DATE	COMMENTS

**ED ANZEK, AICP, DIRECTOR**  
 PLANNING AND ECONOMIC DEVELOPMENT  
 1000 ROCHESTER HILLS DRIVE  
 ROCHESTER HILLS, MI 48069  
 P: (248) 841-2572 F: ---

TIENKEN SHELDON ROUNDABOUT  
 THE CITY OF ROCHESTER HILLS  
 PHASE ONE  
 MAINTAINING TRAFFIC PLAN

DATE: 02/24/2014
DESIGNED BY: JES
DRAWN BY: JES
PROJECT NO.: 2012-001
SHEET NO.: 1
SCALE: N/A
DATE: N/A

SHEET C8

ALL RIGHTS RESERVED



**GENERAL PROJECT NOTES:**

- BENCHMARK DESC. - EXISTING FIRE HYDRANT NORTHWEST OF ROUNDABOUT
- ALL UNITS OF MEASURE ARE IN ENGLISH.
- THE CONTRACTOR(S) SHALL NOTIFY ALL EXISTING UTILITY COMPANIES PRIOR TO THE START OF CONSTRUCTION.
- ALL WORK SHALL CONFORM TO THE CURRENT STANDARD SPECIFICATIONS OF ALL STATE AND LOCAL APPLICABLE AUTHORITIES.
- CONTRACTOR(S) TO NOTIFY THE CITY OF ROCHESTER HILLS 48 HOURS PRIOR TO THE START OF ANY PHASE OF CONSTRUCTION.
- THE CONTRACTOR(S) SHALL OBTAIN ANY/ALL NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES, PRIOR TO CONSTRUCTION.
- THE CONTRACTOR(S) IS RESPONSIBLE FOR MAINTAINING ALL PREVIOUSLY INSTALLED S.E.S.C. MEASURES INCLUDING RESTORATION OF ALL DAMAGED AREAS OUTSIDE OF THE CONSTRUCTION LIMITS, AND INSTALLING AND MAINTAINING ALL NEW S.E.S.C. MEASURES.
- CONTRACTOR(S) SHALL BE RESPONSIBLE FOR REPLACEMENT OR REPAIR OF ANY EXISTING UTILITIES OR OTHER SITE FEATURES THAT ARE DAMAGED DURING CONSTRUCTION TO THE SATISFACTION AND APPROVAL OF THE APPROPRIATE UTILITY COMPANY. OTHER EXISTING SITE ELEMENTS THAT ARE DAMAGED MUST BE REPAIRED OR REPLACED TO THE SATISFACTION AND APPROVAL OF THE TOWNSHIP.
- NOTIFY MISS DIG AT 811 OR 1-800-462-7171, 72 HOURS PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR(S) SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS OR UTILITY COMPANIES AS REQUIRED TO ACCOMPLISH THEIR CONSTRUCTION OPERATIONS.
- AS AN AID TO THE CONTRACTOR(S), VARIOUS UTILITIES ARE SHOWN ON THE PLAN. ALL INFORMATION CONCERNING ALL UTILITIES SHOWN ON THE PLAN ARE TAKEN FROM AVAILABLE RECORDS. THE OWNER OR ARCHITECT DOES NOT GUARANTEE THEIR LOCATION AND/OR ELEVATION. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH THE EXACT LOCATIONS AND/OR ELEVATIONS OF ALL EXISTING UTILITIES AND REFLECT THAT IN THEIR BID.
- IT IS UNDERSTOOD THAT THE CONTRACTOR(S) SHALL PERFORM ALL WORK UNDER THIS CONTRACT IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS, POLICIES, RULES AND STANDARDS OF THE MICHIGAN OCCUPATIONAL SAFETY AND HEALTH ACT (MOSHA) BEING ACT 554 OF THE PUBLIC ACTS OF 1974 AND AS AMENDED.
- ANY QUANTITIES GIVEN WITHIN THESE PLANS AND SPECIFICATIONS ARE APPROXIMATIONS ONLY AND SHOULD NOT BE USED TO DETERMINE COSTS. ALL QUANTITIES SHOULD BE VERIFIED BY THE CONTRACTOR(S) FOR BIDDING PURPOSES. THIS IS A LUMP SUM BID. UNIT PRICES WILL BE TAKEN FOR SPECIFIC ITEMS THAT MAY BE NECESSARY TO ADD OR DELETE DURING PROJECT CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR ALL STAKING AND LAYOUT FOR THIS PROJECT. THIS INCLUDES GRADES AND ESTABLISHMENT OF A BENCHMARK.
- CONTRACTOR TO PROVIDE ALL TRAFFIC CONTROL DURING CONSTRUCTION. ALL TRAFFIC CONTROL SHALL CONFORM TO CURRENT MMUTCD STANDARDS.
- ANY ITEMS INDICATED TO BE REMOVED ARE TO BE LEGALLY DISPOSED OF OFF-SITE UNLESS OTHERWISE NOTED.
- ALL PERSONNEL ARE REQUIRED TO WEAR HARD HATS WITHIN WORK ZONES AND COMPLY WITH ALL MOSHA STANDARDS.
- CONTRACTOR SHALL PERFORM DAILY CLEAN UP OF MATERIALS AND DEBRIS GENERATED BY THEIR WORK WITHIN THE PROJECT LIMITS AND IN PUBLIC AREAS IN WHICH THEY CREATE DEBRIS AND/OR TRACKING OF SOIL MATERIALS.
- CONTRACTOR IS RESPONSIBLE FOR SECURITY OF THEIR OWN TOOLS, EQUIPMENT, MATERIALS, ETC. TO GUARD AGAINST FIRE, THEFT, VANDALISM, AND/OR WEATHER DAMAGE.
- PREVALING WAGES ARE NOT REQUIRED FOR THIS PROJECT.
- THE OWNER WILL PROVIDE CONSTRUCTION MATERIAL TESTING. CONTRACTOR SHALL COORDINATE TESTING WITH OWNER'S TESTING AGENCY.

**LOCAL UTILITY CONTACTS**

**WATER & SANITARY SEWER: ROCHESTER HILLS DPS**  
 ALAN E. SCHROCK, P.E. DIRECTOR  
 PH: 248.256.4685  
 1000 ROCHESTER HILLS DR.  
 ROCHESTER HILLS, MI 48309

**ADDITIONAL POINTS OF CONTACT:**

THE CITY OF ROCHESTER HILLS  
 PH: (248) 841-2572  
 CONTACT PERSON: ED ANZEK, AICP, DIRECTOR  
 PLANNING AND ECONOMIC DEVELOPMENT

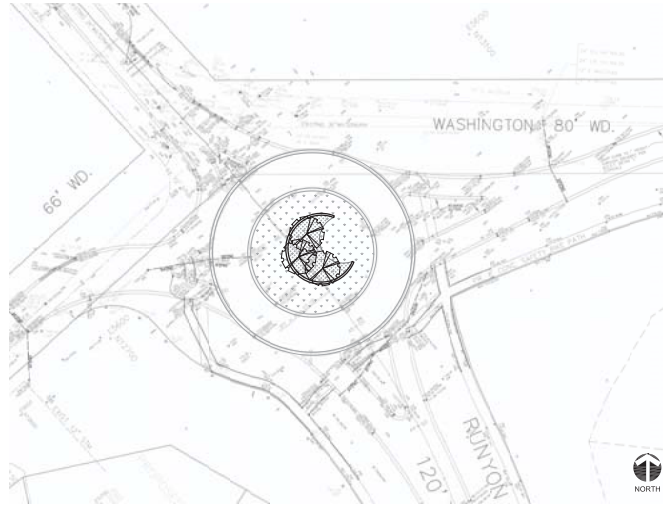
LANDSCAPE ARCHITECTS & PLANNERS, INC.  
 (517) 485-5500  
 CONTACT PERSON: ROBERT FORD, LA  
 MATT HULL, LANDSCAPE DESIGNER

**TRAFFIC CONTROL AND STAGING:**

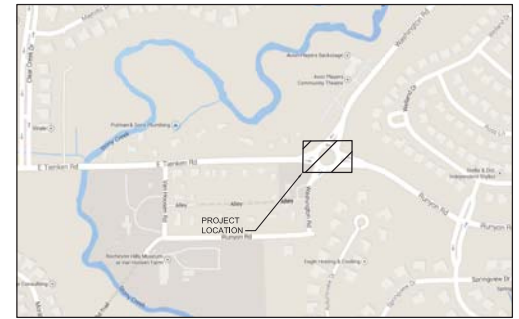
- ALL CONSTRUCTION ACTIVITIES & WORK TO BE STRICTLY CONFINED TO THE EXISTING INNER PAVED TRAFFIC APRON AND ALL CONSTRUCTION OPERATIONS STAGED AND MAINTAINED AS NOT TO OVERFLOW INTO INNER CIRCULAR LANE FOR THE ROUNDABOUT AT ANY TIME.
- ALL STAGING TO BE INSIDE OF TRAFFIC CIRCLE.
- DURING DAYLIGHT HOURS FROM 9:00AM - 3:00PM IT IS POSSIBLE TO ONLY TEMPORARILY CLOSE ONE OF TWO APPROACH LANES FOR NB WITH TRAFFIC CONTROLLED DEVICES AND FLAGGER CONTROL. TO ACCESS INTO THE TRAFFIC ISLAND, OCSO PATROL WILL ALSO MOSTLY LIKELY BE NECESSARY.
- ALL PERMIT FEES (RIGHT OF WAY) SHALL BE INCIDENTAL TO THE CONTRACT AND BE INCLUDED IN THE PAY ITEM TRAFFIC CONTROL LSUM.

# WASHINGTON RUNYON ROUNDABOUT

ROCHESTER HILLS, MI



**THE CITY OF ROCHESTER HILLS**  
**PLANNING AND ECONOMIC DEVELOPMENT**  
 1000 ROCHESTER HILLS DRIVE  
 ROCHESTER HILLS, MI 48309  
 PH: (248) 841-2572



**VICINITY LOCATION MAP**

NOT TO SCALE

**PROJECT SHEET INDEX:**

- C0 COVER
- C1 EXISTING CONDITIONS
- C2 DEMOLITION
- C3 SITE LAYOUT
- C4 GRADING
- C5 GRADING ENLARGEMENT
- C6 LANDSCAPE PLAN
- C7 IRRIGATION PLAN

**SURVEY COMPLETED BY:**

BASE MAP DATA PROVIDED BY:  
 ZEIMET WOZNIAK & ASSOCIATES  
 55800 GRAND RIVER, SUITE 100  
 NEW HUDSON, MICHIGAN 48165-0318  
 PHONE 248.437.5099  
 FAX 248.437.5222  
[WWW.ZEIMETWOZNAK.COM](http://WWW.ZEIMETWOZNAK.COM)

CIVIL ENGINEERS AND LAND SURVEYORS  
 INNOVATION AND EXCELLENCE FOR OVER 35 YEARS

BASE MAP CONSISTS OF AS-BUILT DRAWINGS AND HISTORIC TOPOGRAPHIC DATA. NO NEW SURVEY WAS UNDERTAKEN FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE BIDDER TO VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.



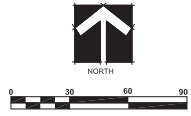
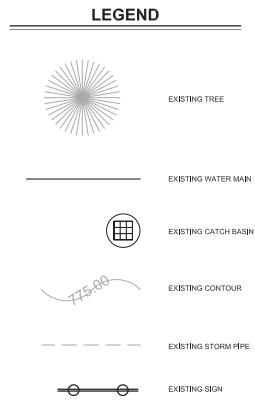
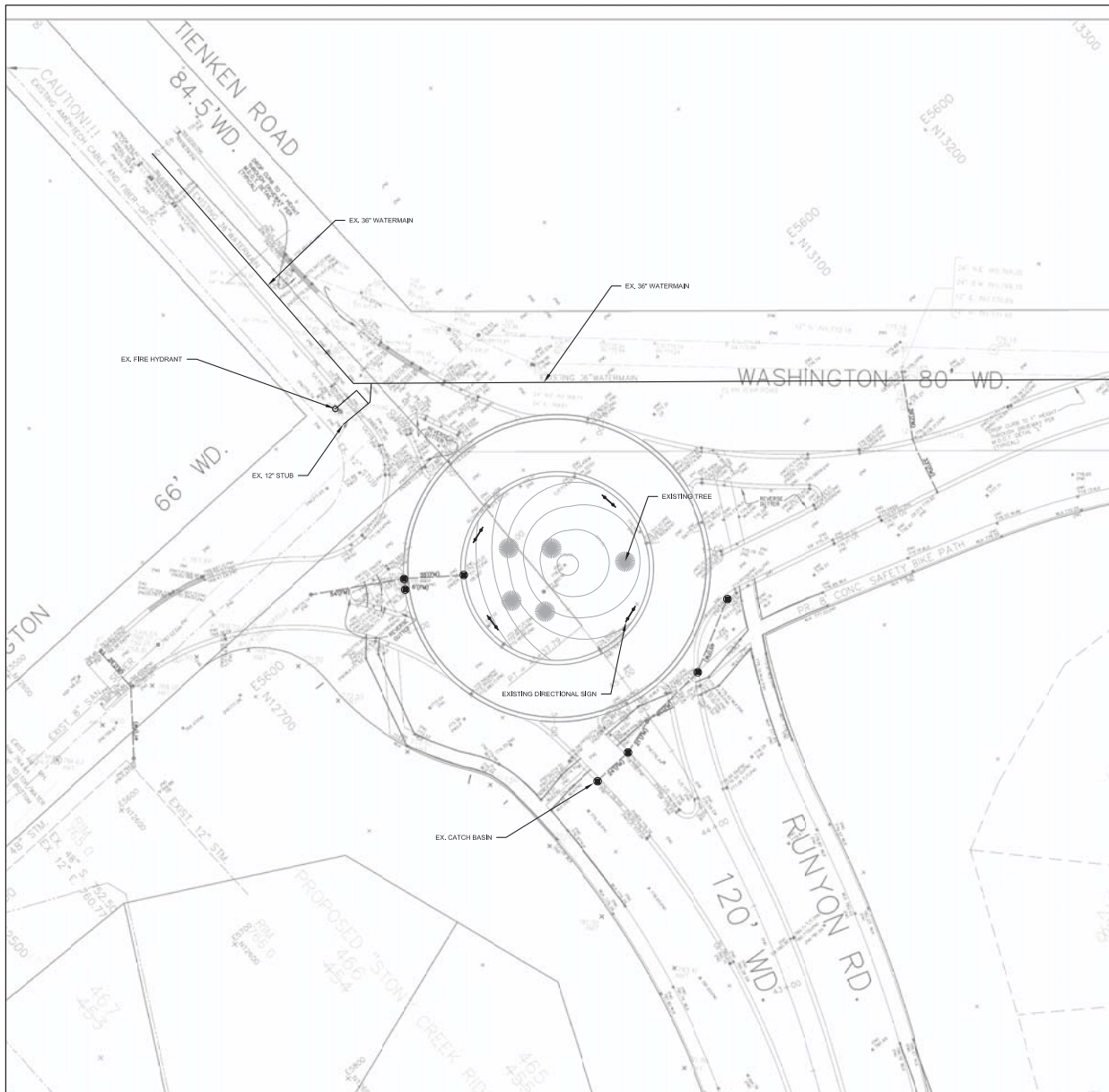
**Landscape Architects & Planners, Inc.**  
 OAKLAND CENTER - 809 CENTER STREET - SUITE 1 - LANSING, MI 48906  
 PH: (517) 485-5500 - FAX: (517) 485-5576 - EMAIL: INFO@LAPINC.NET

DATE: 07/24/2014  
 DESIGNED BY: JMW  
 CHECKED BY: REE  
 DRAWN BY: NRW  
 PROJECT NO.: 12037-0301

SHEET  
**C0**



U:\A\SERV\COMPANY\PROJECTS\PROJECTS\2012\2017\0001\RI\TIENKEN RD CONSTRUCTION\DRAWINGS\CD SET\SHEET SETS\2017\0001\RI\TIENKEN RD CONSTRUCTION\EXISTING CONDI\EXISTING CONDI.DWG



Know what's below.  
Call before you dig.



**Landscape Architects & Planners, Inc.**

OAKLAND CENTER  
609 CENTER STREET  
SUITE ONE  
LANSING, MI 48206  
P: (317) 485-5500  
F: (317) 485-5576  
info@labrvo.net

REVISIONS	DATE	COMMENTS

**ED ANZEK, AICP, DIRECTOR**  
PLANNING AND ECONOMIC DEVELOPMENT  
1000 ROCHESTER HILLS DRIVE  
ROCHESTER HILLS, MI 48069  
P: (248) 841-2572 F: ---

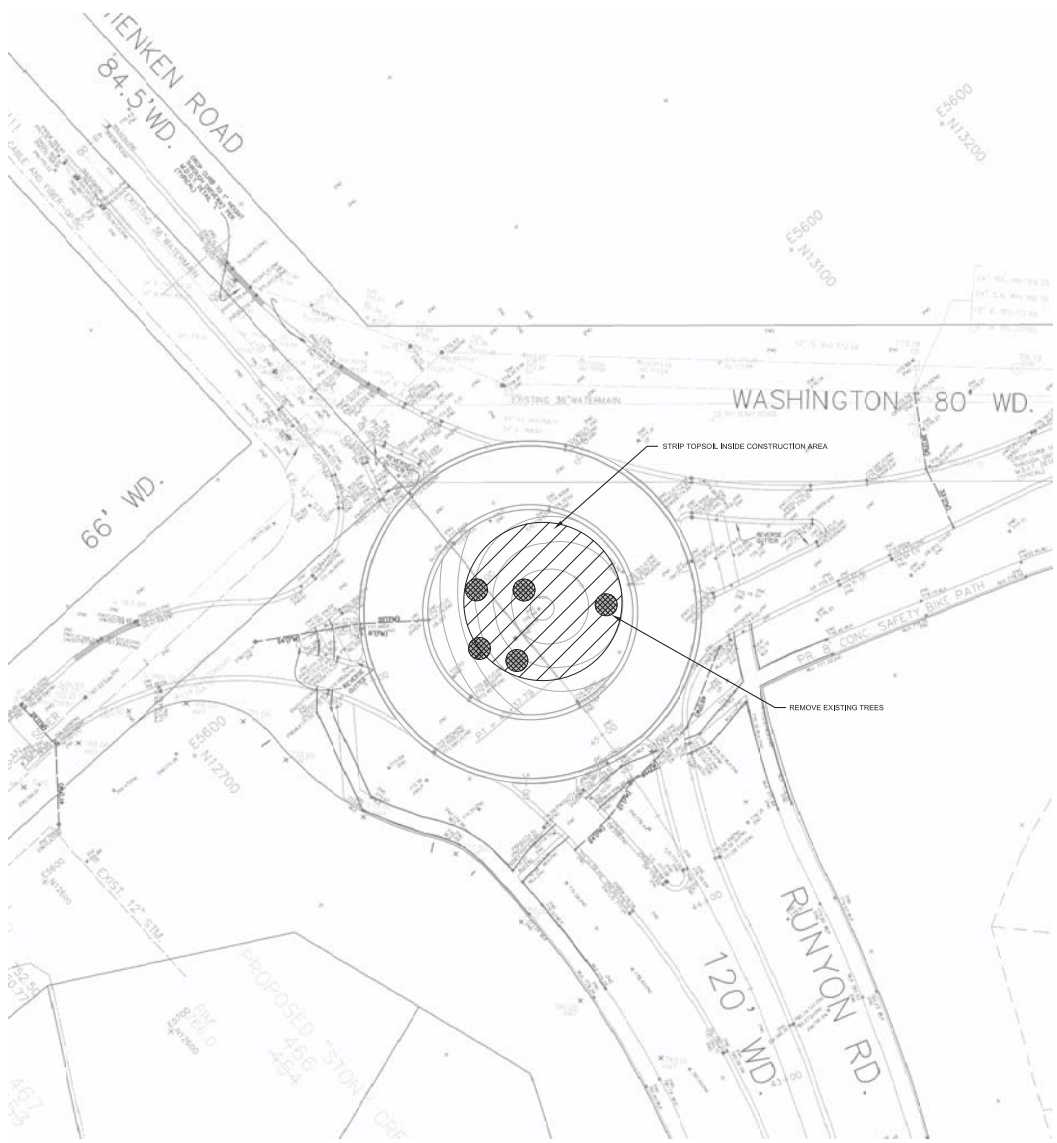
WASHINGTON RUNYON ROUNDABOUT  
THE CITY OF ROCHESTER HILLS  
PHASE ONE  
EXISTING CONDITIONS

DATE: 02/28/2014
DESIGNED BY: JADY
DRAWN BY: JADY
RECHECKED: JADY, 02/27/2014
SCALE: N/A
DATE: N/A

SHEET  
C1

ALL RIGHTS RESERVED

U:\A\SERV\COMPANY\PROJECTS\PROJECTS\_2012\2017\0017\_RN\_TIER1\RD\_CONSTRUCTION\DRAWINGS\CD\_SETSHEET\SETS\_2017\0017\_RN\_TIER1\RD\_CONSTRUCTION\DEMOLITION\DC2 DEMOLITION.DWG

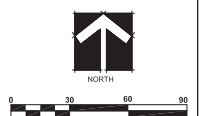


**DEMOLITION & SITE PREPARATION NOTES:**

1. ALL TOPSOIL AND ORGANIC SOILS ENCOUNTERED SHALL BE STRIPPED AND REUSED ONSITE BEHIND RETAINING WALL.
2. ALL EXPOSED GRANULAR SUBGRADE TO A DEPTH OF 12 INCHES SCHEDULED FOR PATHWAYS OR STRUCTURES MUST BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY. ANY UNSUITABLE AREAS MUST BE EXCAVATED AND FILLED WITH ENGINEERED FILL AND BE APPROVED BY THE LANDSCAPE ARCHITECT. ALL SUBGRADE STABILIZATION PRACTICES MUST BE APPROVED BY THE LANDSCAPE ARCHITECT BEFORE PROCEEDING.
3. CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING IF NECESSARY TO STABILIZE THE SUBGRADE FOR SCHEDULED CONSTRUCTION.
4. ALL REMOVAL QUANTITIES AND AREAS NOTED ON THESE PLANS ARE APPROXIMATE AND SHOULD BE VERIFIED IN FIELD PRIOR TO BIDDING.
5. ALL MATERIALS CALLED OUT TO BE REMOVED SHALL BE HAULLED OFF-SITE BY CONTRACTOR AND LEGALLY DISPOSED OF PROPERLY UNLESS OTHERWISE NOTED.
6. ALL UTILITIES TO REMAIN UNLESS OTHERWISE NOTED.
7. PROTECT TREES SCHEDULED TO REMAIN AS NECESSARY.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR ANY DAMAGE TO THE UTILITIES IN THIS AREA DURING CONSTRUCTION.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE ALL EQUIPMENT.
10. ALL EXISTING SIGNS SHALL REMAIN.

**DEMOLITION LEGEND**

- REMOVE ITEMS
- TOPSOIL STRIPPED AREA
- STAGING AREA
- BARRICADE SIGN



Know what's below.  
Call before you dig.

**Landscape Architects & Planners, Inc.**  
 OAKLAND CENTER  
 609 CENTER STREET  
 SUITE ONE  
 LANSING, MI 48206  
 P: (317) 485-5500  
 F: (317) 485-5576  
 info@lapi.net

REVISIONS	DATE	COMMENTS

**ED ANZEK, AICP, DIRECTOR**  
 PLANNING AND ECONOMIC DEVELOPMENT  
 1000 ROCHESTER HILLS DRIVE  
 ROCHESTER HILLS, MI 48069  
 P: (248) 841-2572 F: ---

WASHINGTON RUNYON ROUNDABOUT  
 THE CITY OF ROCHESTER HILLS  
 PHASE ONE  
 DEMOLITION

DATE: 02/24/2014
DESIGNED BY: JADP
DRAWN BY: JADP
PROJECT NO: 12027-001
SHEET NO: 02
SCALE: N/A
DATE: N/A

SHEET  
C2

















**GENERAL PROJECT NOTES:**

1. ORIGINAL BASE SURVEY PROVIDED BY: SURVEY COMPANY on 00/00/0000  
PH: (999) 999-9999
2. BENCHMARK: DESC. - EDIT BENCHMARK DESCRIPTION
3. ALL UNITS OF MEASURE ARE IN ENGLISH.
4. THE CONTRACTOR(S) SHALL NOTIFY ALL EXISTING UTILITY COMPANIES PRIOR TO THE START OF CONSTRUCTION.
5. ALL WORK SHALL CONFORM TO THE CURRENT STANDARD SPECIFICATIONS OF ALL STATE AND LOCAL APPLICABLE AUTHORITIES.
6. CONTRACTOR(S) TO NOTIFY CITY OF ROCHESTER HILLS 48 HOURS PRIOR TO THE START OF ANY PHASE OF CONSTRUCTION.
7. THE CONTRACTOR(S) SHALL OBTAIN ANY/ALL NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES, PRIOR TO CONSTRUCTION.
8. THE CONTRACTOR(S) IS RESPONSIBLE FOR MAINTAINING ALL PREVIOUSLY INSTALLED S.E.S.C. MEASURES INCLUDING RESTORATION OF ALL DAMAGED AREAS OUTSIDE OF THE CONSTRUCTION LIMITS. AND INSTALLING AND MAINTAINING ALL NEW S.E.S.C. MEASURES.
9. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR REPLACEMENT OR REPAIR OF ANY EXISTING UTILITIES OR OTHER SITE FEATURES THAT ARE DAMAGED DURING CONSTRUCTION TO THE SATISFACTION AND APPROVAL OF THE APPROPRIATE UTILITY COMPANY. OTHER EXISTING SITE ELEMENTS THAT ARE DAMAGED MUST BE REPAIRED OR REPLACED TO THE SATISFACTION AND APPROVAL OF THE TOWNSHIP.
10. NOTIFY MISS DIG AT 811 OR 1-800-482-7171, 72 HOURS PRIOR TO START OF CONSTRUCTION.
11. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS OR UTILITY COMPANIES AS REQUIRED TO ACCOMPLISH THEIR CONSTRUCTION OPERATIONS.
12. AS AN AID TO THE CONTRACTOR(S), VARIOUS UTILITIES ARE SHOWN ON THE PLAN. ALL INFORMATION CONCERNING ALL UTILITIES SHOWN ON THE PLAN ARE TAKEN FROM AVAILABLE RECORDS. THE OWNER OR ARCHITECT DOES NOT GUARANTEE THEIR LOCATION AND/OR ELEVATION. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH THE EXACT LOCATIONS AND/OR ELEVATIONS OF ALL EXISTING UTILITIES AND REFLECT THAT IN THEIR BID.
13. IT IS UNDERSTOOD THAT THE CONTRACTOR(S) SHALL PERFORM ALL WORK UNDER THIS CONTRACT IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS, POLICIES, RULES AND STANDARDS OF THE MICHIGAN OCCUPATIONAL SAFETY AND HEALTH ACT (MIOSHA) BEING ACT 154 OF THE PUBLIC ACTS OF 1974 AND AS AMENDED.
14. ANY QUANTITIES GIVEN WITHIN THESE PLANS AND SPECIFICATIONS ARE APPROXIMATIONS ONLY AND SHOULD NOT BE USED TO DETERMINE COSTS. ALL QUANTITIES SHOULD BE VERIFIED BY THE CONTRACTOR(S) FOR BIDDING PURPOSES. THIS IS A LUMP SUM BID. UNIT PRICES WILL BE TAKEN FOR SPECIFIC ITEMS THAT MAY BE NECESSARY TO ADD OR DELETE DURING PROJECT CONSTRUCTION.
15. CONTRACTOR IS RESPONSIBLE FOR ALL STAKING AND LAYOUT FOR THIS PROJECT. THIS INCLUDES GRADES AND ESTABLISHMENT OF A BENCHMARK.
16. CONTRACTOR TO PROVIDE ALL TRAFFIC CONTROL DURING CONSTRUCTION. ALL TRAFFIC CONTROL SHALL CONFORM TO CURRENT MMDOTD STANDARDS.
17. ANY ITEMS INDICATED TO BE REMOVED ARE TO BE LEGALLY DISPOSED OF OFF-SITE UNLESS OTHERWISE NOTED.
18. ALL PERSONNEL ARE REQUIRED TO WEAR HARD HATS WITHIN WORK ZONES AND COMPLY WITH ALL MIOSHA STANDARDS.
19. CONTRACTOR SHALL PERFORM DAILY CLEAN UP OF MATERIALS AND DEBRIS GENERATED BY THEIR WORK WITHIN THE PROJECT LIMITS AND IN PUBLIC AREAS IN WHICH THEY CREATE DEBRIS AND/OR TRACKING OF SOIL MATERIALS.
20. CONTRACTOR IS RESPONSIBLE FOR SECURITY OF THEIR OWN TOOLS, EQUIPMENT, MATERIALS, ETC. TO GUARD AGAINST FIRE, THEFT, VANDALISM, AND/OR WEATHER DAMAGE.
21. CONTRACTOR TO COORDINATE CONSTRUCTION SCHEDULE AND DISRUPTIONS OF NORMAL ACTIVITIES WITH OWNER.
22. THE OWNER WILL PROVIDE CONSTRUCTION MATERIAL TESTING. CONTRACTOR SHALL COORDINATE TESTING WITH OWNER'S TESTING AGENCY.

**LOCAL UTILITY CONTACTS**

WATER & SANITARY SEWER: ROCHESTER HILLS DPS  
ALLEN E. SCHREIBER, P.E., DIRECTOR  
PH: 248.656.4695  
1000 ROCHESTER HILLS DR.  
ROCHESTER HILLS, MI 48309

**ADDITIONAL POINTS OF CONTACT:**

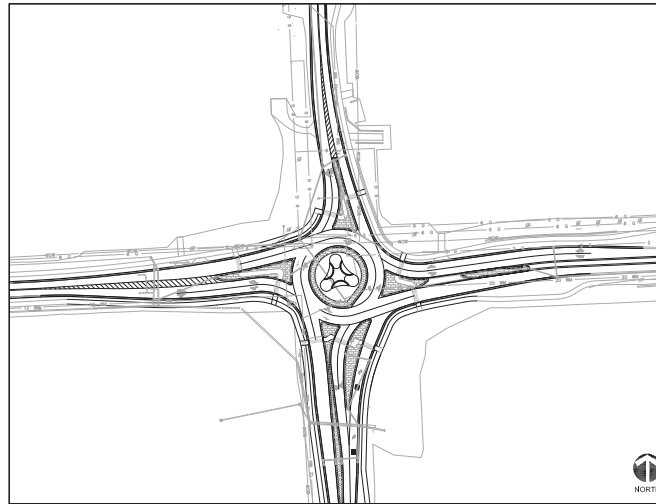
CITY OF ROCHESTER HILLS  
PH: (248) 841-2572  
CONTACT PERSON: ED ANZO  
DIRECTOR

LANDSCAPE ARCHITECTS & PLANNERS, INC.  
(517) 485-5500  
CONTACT PERSON: ROBERT FORD LA  
ROBERT STASUK DESIGNER

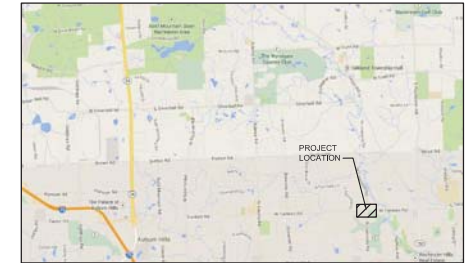
**TRAFFIC CONTROL AND STAGING:**

1. ALL CONSTRUCTION ACTIVITIES & WORK TO BE STRICTLY CONFINED TO THE EXISTING INNER PAVED TRAFFIC APRON AND ALL CONSTRUCTION OPERATIONS STAGED AND MAINTAINED AS NOT TO OVERFLOW INTO INNER CIRCULAR LANE FOR THE ROUNDABOUT AT ANY TIME.
2. ALL STAGING SHALL INSIDE OF TRAFFIC CIRCLE.
3. DURING DAYLIGHT HOURS FROM 9:00AM - 5:00PM IT IS POSSIBLE TO ONLY TEMPORARILY CLOSE ONE OF TWO APPROACH LANES FOR NB WITH TRAFFIC CONTROLLED DEVICES AND FLAGGER CONTROL TO ACCESS INTO THE TRAFFIC ISLAND. OCSO PATROL WILL ALSO MOSTLY LIKELY BE NECESSARY.
4. ALL PERMIT FEES (RIGHT OF WAY) SHALL BE INCIDENTAL TO THE CONTRACT AND BE INCLUDED IN THE PAY ITEM TRAFFIC CONTROL LSUM.

# TIENKEN - LIVERNOIS ROUNDABOUT



**SITE MAP**  
NOT TO SCALE



**VICINITY LOCATION MAP**

NOT TO SCALE

**PROJECT SHEET INDEX:**

- C0 COVER SHEET
- C1 EXISTING CONDITIONS
- C2 SITE LAYOUT PLAN
- C3 LANDSCAPE PLAN
- C4 IRRIGATION PLAN
- C5 GRADING AND SESC PLAN
- C6 CONSTRUCTION DETAILS
- C7 MAINTAINING TRAFFIC PLAN



Know what's below.  
Call before you dig.

**SURVEY COMPLETED BY:**

BASE MAP DATA PROVIDED BY THE CITY OF ROCHESTER HILLS. BASE MAP CONSISTS OF AS-BUILT DRAWINGS AND HISTORIC TOPOGRAPHIC DATA. NO NEW SURVEY WAS UNDERTAKEN FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE BIDDER TO VERIFY EXISTING CONDITIONS PRIOR TO BIDDING.



**Landscape Architects & Planners, Inc.**

OAKLAND CENTER - 809 CENTER STREET - SUITE 1 - LANSING, MI 48906  
PH: (517) 485-5500 - FAX: (517) 485-5576 - EMAIL: INFO@LAPINC.NET

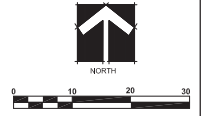
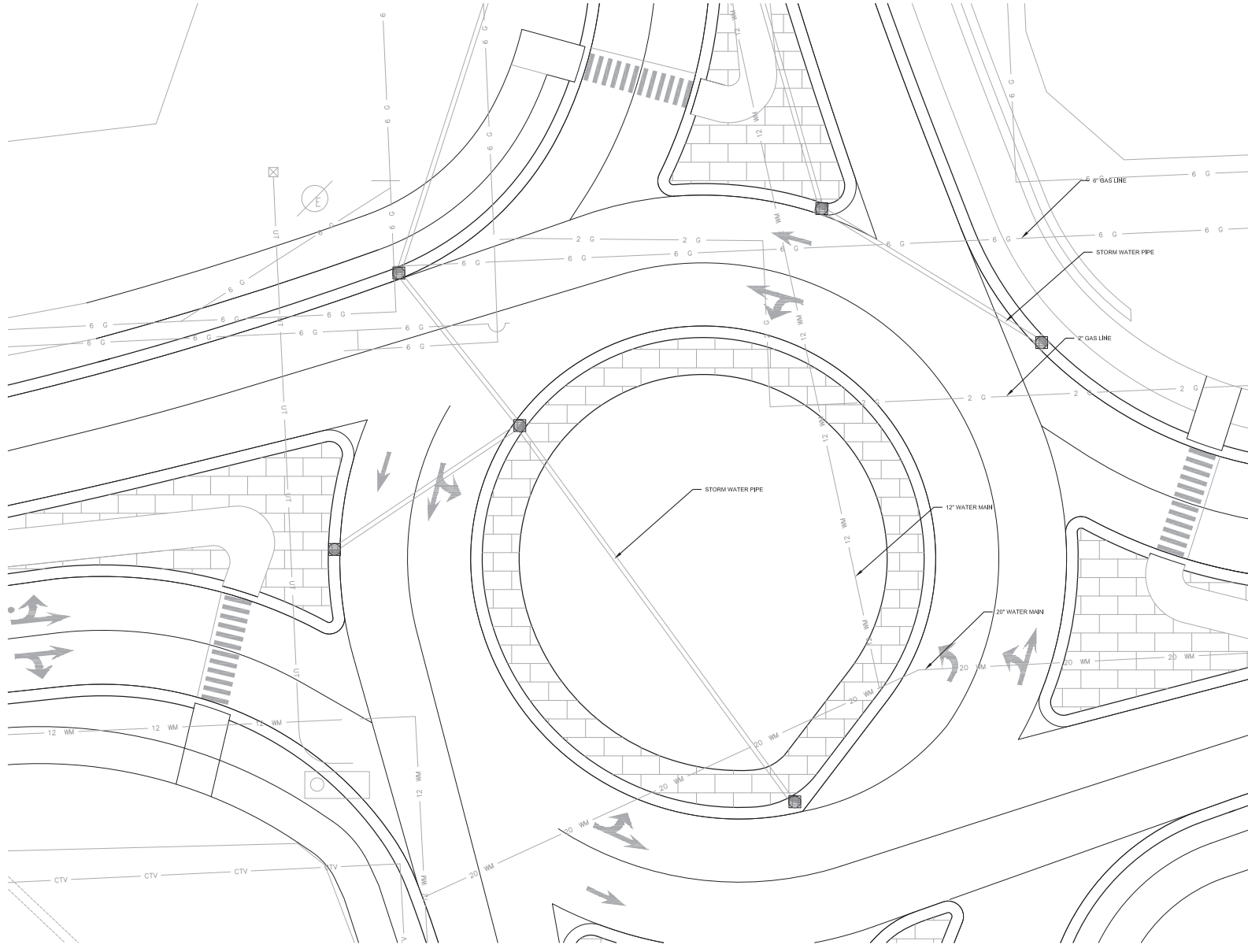
**CITY OF ROCHESTER HILLS**  
PLANNING AND ECONOMIC DEVELOPMENT  
1000 ROCHESTER HILLS DRIVE  
ROCHESTER HILLS, MI 48309  
PH: (248) 841-2572



DATE:	3/16/2010
DESIGNED BY:	RJS
CHECKED BY:	REF
DRAWN BY:	RJS
PROJECT NO.:	12037.04

**SHEET**  
**CO**

PROJECTS: 20120324.RW.TIENKHA.LIVERNIS.RAB11.CONSTRUCTION.DOCUMENTS.CONSTRUCTION.DRAWINGS.SHEETS.ERECTING.CONDITIONS.C1.ERECTING.CONDITIONS.DWG



Know what's below.  
Call before you dig.



**Landscape Architects & Planners, Inc.**

DAKLAND CENTER  
800 CENTER STREET  
SLATE CREEK  
LANARK, MD 21096  
P: (301) 485-0000  
F: (301) 485-0379  
info@lapl.com

REVISIONS	DATE	COMMENTS

**CITY OF ROCHESTER HILLS**  
**PLANNING AND ECONOMIC DEVELOPMENT**  
 16000 W. 23RD AVENUE, SUITE 100  
 ROCHESTER HILLS, MI 48069  
 PHONE: 248.842.8222

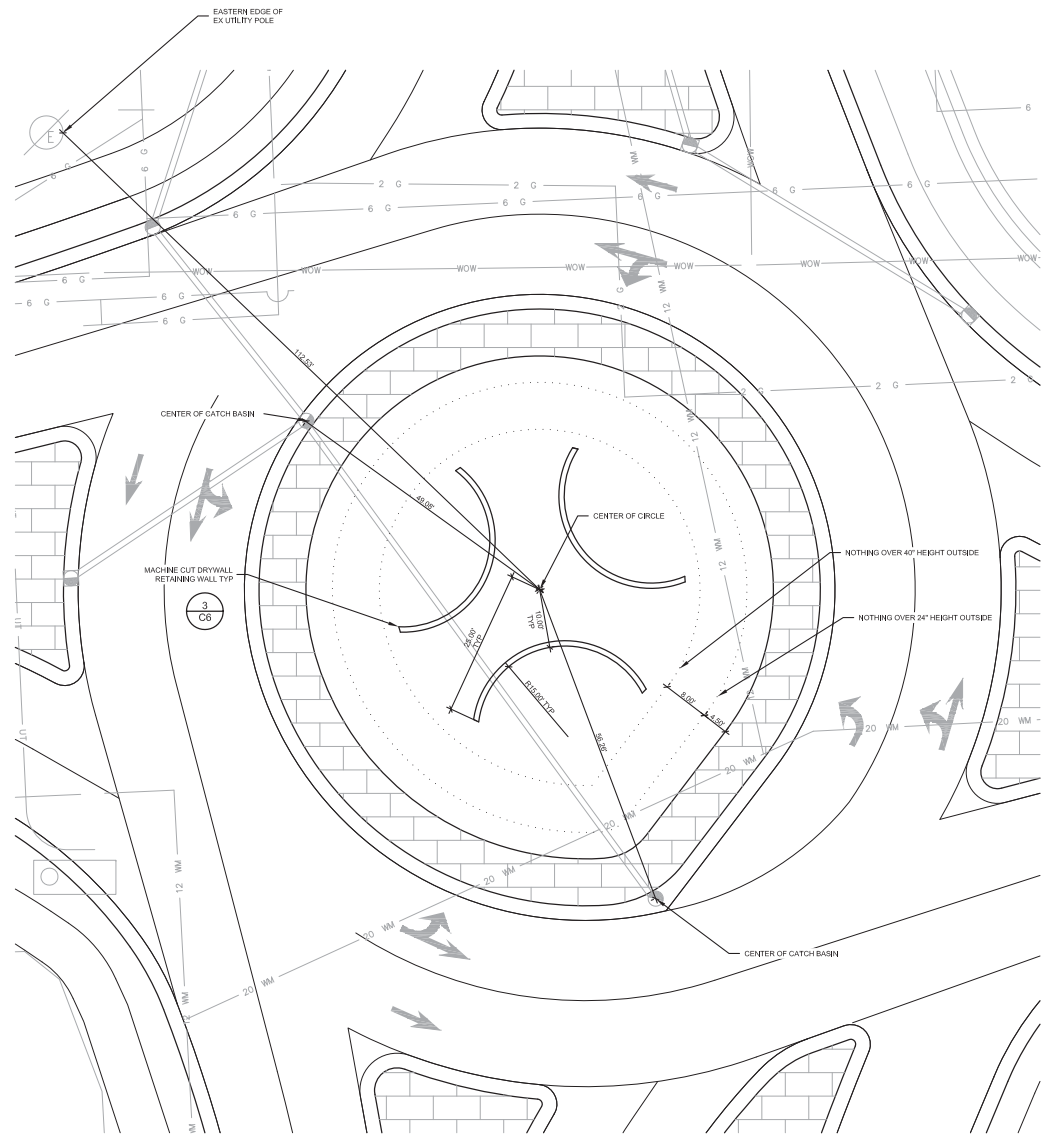
TIENKEN - LIVERNIS ROUNDABOUT  
**EXISTING CONDITIONS**  
 TIENKEN - LIVERNIS ROUNDABOUT

DATE: 3/19/2015  
 BY: [unintelligible]  
 CHECKED BY: [unintelligible]  
 DRAWING NO.: 20120324.RW  
 SCALE: AS SHOWN  
 PROJECT NO.: 20120324

SHEET  
C1

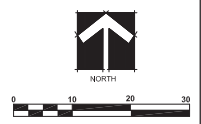
© Copyright 2015, Landscape Architects & Planners, Inc.  
ALL RIGHTS RESERVED

P:\PROJECTS\PROJECTS\_2012\120724.RW.TENKHA.LIVERNOIS.RAB11.CONSTRUCTION.DOCUMENTS.CONSTRUCTION.DRAWINGS\SHEETS\SITE LAYOUTS\_811.LAYOUT.DWG



**SITE PLAN NOTES:**

1. ALL MEASUREMENTS ARE SHOWN IN ENGLISH DIMENSIONS.
2. CONTRACTOR TO PROVIDE ALL TRAFFIC CONTROL REQUIRED TO COMPLETE THIS PROJECT. TRAFFIC CONTROL SHALL MEET CURRENT MMUTCD AND OAKLAND COUNTY ROAD COMMISSION STANDARDS.
3. CONTRACTOR IS RESPONSIBLE FOR ALL STAKING AND LAYOUT FOR THIS PROJECT. THIS INCLUDES ESTABLISHMENT OF A BENCHMARK AS REQUIRED FOR CONSTRUCTION.
4. RADII GIVEN ARE FOR INNER ROAD.
5. INTENT OF LAYOUT IS TO CENTER DESIGN WITHIN CIRCLE. FIELD ADJUSTMENTS MAY BE MADE TO LOCATE TRUE CENTER OF CIRCLE.
7. ANY DISCREPANCIES BETWEEN PLANS, NOTES, WRITTEN SPECIFICATIONS, DETAILS AND EXISTING CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE OWNER'S AUTHORIZED REPRESENTATIVE FOR REVIEW AND DECISION. CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
8. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING STRUCTURES, MATERIALS/IMPROVEMENTS, UTILITIES DAMAGED DURING CONSTRUCTION.



**Know what's below.  
Call before you dig.**

**Landscape Architects & Planners, Inc.**  
 OAKLAND CENTER  
 800 CENTER STREET  
 SUITE ONE  
 LANSING, MI 48206  
 P: (313) 485-0500  
 F: (313) 485-0519  
 INFO@lapkc.net

REVISIONS	DATE	COMMENTS

**CITY OF ROCHESTER HILLS**  
 PLANNING AND ECONOMIC DEVELOPMENT  
 1000 ROCHESTER HILLS DRIVE  
 ROCHESTER HILLS, MI 48069  
 PHONE: 248.322.2100

TENKEN - LIVERNOIS ROUNDABOUT  
**SITE LAYOUT PLAN**  
 TENKEN - LIVERNOIS ROUNDABOUT

DATE: 3/19/2015	BY: [Signature]
CHECKED: [Signature]	DATE: 3/19/2015
DRAWING: [Signature]	SCALE: 1"=20'
PROJECT: 120724	PROJECT: 120724
USER: [Signature]	USER: [Signature]

**SHEET C2**

© Copyright 2015, Landscape Architects & Planners, Inc. ALL RIGHTS RESERVED









**Landscape Architects & Planners, Inc.**

1000 BOSTON CENTER  
 BOX CENTER STREET  
 SUITE ONE  
 LANSING, MI 48206  
 P: (313) 485-0500  
 F: (313) 485-0519  
 INFO@LAPK.COM

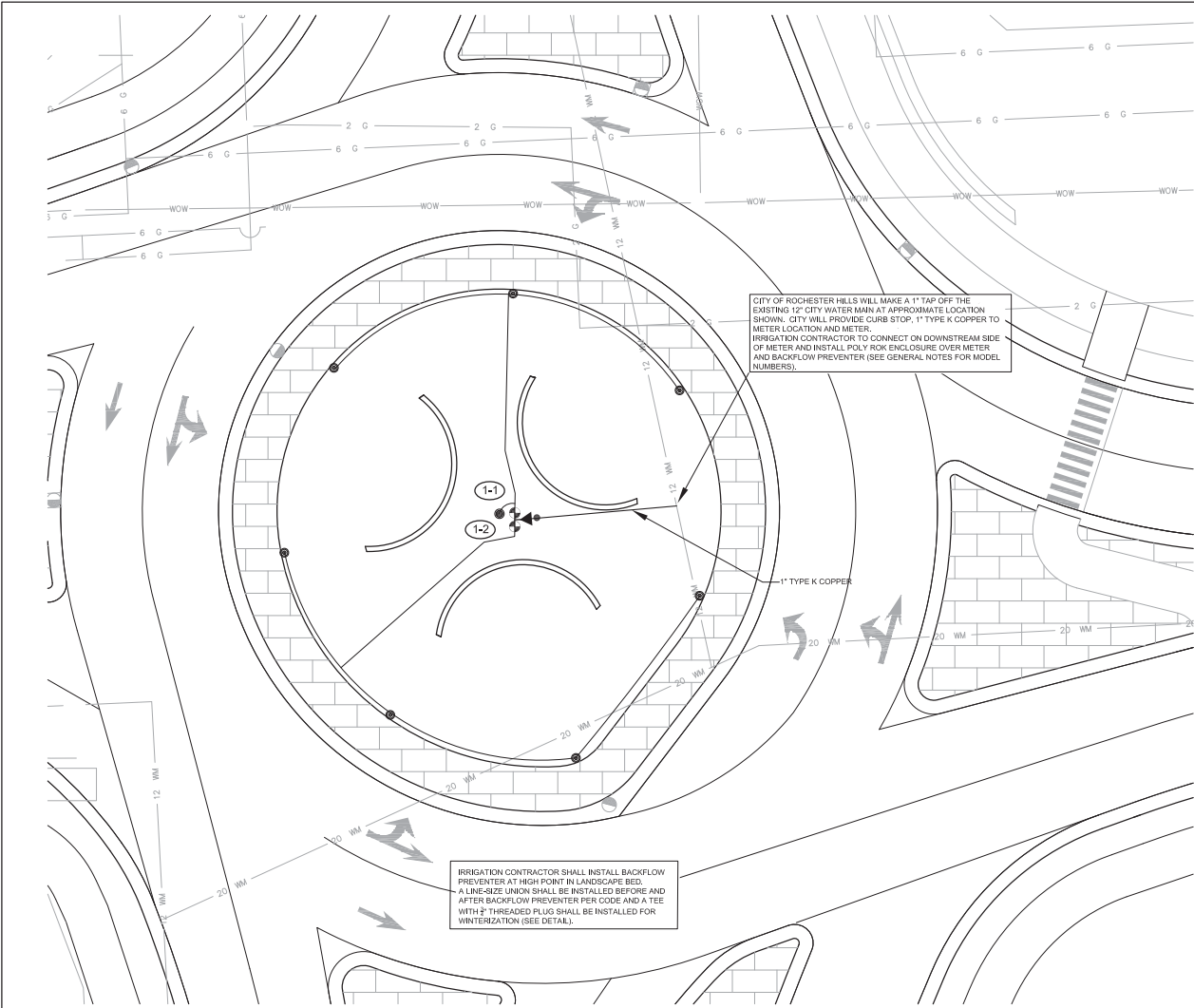
REVISIONS	DATE	COMMENTS

**CITY OF ROCHESTER HILLS**  
 PLANNING AND ECONOMIC DEVELOPMENT  
 1000 BOSTON CENTER STREET, SUITE ONE  
 LANSING, MI 48206  
 P: (313) 485-0500  
 F: (313) 485-0519  
 INFO@LAPK.COM

**TENKEN - LIVERNOIS ROUNDABOUT**  
 IRRIGATION PLAN  
 TENKEN - LIVERNOIS ROUNDABOUT

DATE: 3/19/2015  
 DRAWN BY: J. CHOKALUK  
 CHECKED BY: J. CHOKALUK  
 SCALE: AS SHOWN  
 SHEET: C4

ALL RIGHTS RESERVED



CITY OF ROCHESTER HILLS WILL MAKE A 1" TAP OFF THE EXISTING 12" CITY WATER MAIN AT APPROXIMATE LOCATION SHOWN. CITY WILL PROVIDE CURB STOP, 1" TYPE K COPPER TO METER LOCATION AND METER. IRRIGATION CONTRACTOR TO CONNECT ON DOWNSTREAM SIDE OF METER AND INSTALL POLY ROK ENCLOSURE OVER METER AND BACKFLOW PREVENTER (SEE GENERAL NOTES FOR MODEL NUMBERS).

IRRIGATION CONTRACTOR SHALL INSTALL BACKFLOW PREVENTER AT HIGH POINT IN LANDSCAPE BED. A LINE-SIZE UNION SHALL BE INSTALLED BEFORE AND AFTER BACKFLOW PREVENTER PER CODE AND A TEE WITH 2" THREADED PLUG SHALL BE INSTALLED FOR WINTERIZATION (SEE DETAIL).

- LEGEND**
- T5HP #6.0 NOZZLE TORO GEAR DRIVEN HIGH-POP ROTARY SPRINKLER
  - T5HP #3.0 NOZZLE TORO GEAR DRIVEN HIGH-POP ROTARY SPRINKLER
  - TPVF100 TORO 1" ELECTRIC VALVE
  - W DCSL LATCHING SOLENOID
  - NOT SHOWN DDCWP-24V 2 STATION TORO DC POWERED WATERPROOF CONTROLLER W/ TRS WIRED RAIN SENSOR
  - PVC 200# PIPE (1" PRESSURIZED MAINLINE)
  - 100# POLYETHYLENE PIPE (PE-3408 NSF APPROVED) (ALL PIPE DOWNSTREAM OF VALVE IS 1")
  - NOT SHOWN #14 UL APPROVED 24V RED CONTROL WIRE WITH A #14 UL APPROVED WHITE COMMON WIRE
  - POINT OF CONNECTION (P.O.C.)
  - 765-1 FEBCO 1" PRESSURE VACUUM BREAKER

**GENERAL NOTES:**

1. COORDINATE THIS WORK WITH ALL OTHER TRADES.
2. ALL PLUMBING AND ELECTRICAL SHALL BE INSTALLED ACCORDING TO STATE AND LOCAL CODES.
3. ANY SLEEVES REQUIRED SHALL BE 4" SCH 40 PVC (UNLESS OTHERWISE SPECIFIED). SLEEVE INSTALLATION SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR.
4. ALL PIPE NOT SIZED DOWNSTREAM OF VALVE IS 1".
5. IRRIGATION CONTRACTOR'S POINT OF CONNECTION SHALL BE A 1" COPPER LINE ON DOWNSTREAM SIDE OF CITY WATER METER. (SEE NOTE ON PLAN.)
6. IRRIGATION CONTRACTOR TO PROVIDE AND INSTALL POLY ROK BACKFLOW ENCLOSURE MODEL V01R2L WITH GPORE ENCLOSURE PAD.
7. CONTROLLER SHALL BE MOUNTED INSIDE A JUMBO VALVE BOX ALONG WITH ZONE VALVES "1-1" & "1-2".
8. IRRIGATION CONTRACTOR SHALL ADJUST THE FLOW CONTROL FEATURE ON ALL ELECTRIC VALVES PER THE MANUFACTURER'S RECOMMENDATIONS TO MAXIMIZE THE VALVES PERFORMANCE AND LONGEVITY.
9. IF SITE PRESSURE IS NOT ADEQUATE, A BOOSTER PUMP AND RELATED EQUIPMENT MAY BE REQUIRED AT ADDITIONAL COST TO OWNER.
10. PIPE ROUTING IS DIAGNOSTIC. ALL EQUIPMENT AND PIPE ARE TO BE FIELD ADJUSTED TO TAKE INTO CONSIDERATION ANY OBSTRUCTIONS AND ALL LANDSCAPE.

WATER REQUIREMENTS: 13 GPM @ 45 PSI (AT P.O.C.)

ZONE NUMBER	VALVE SIZE	GPM	ZONE TYPE
1-1	1"	13	LANDSCAPE ROTORS
1-2	1"	11	LANDSCAPE ROTORS



**FEATURES**

- \* 12" x 6" x 6" - 250# FORM MODEL
- \* IRRIGATION PROGRAMS #1-3 START TIMES PER PROGRAM
- \* SCHEDULED CHANGES BY PROGRAM
- \* 4-ON/OFF CYCLES
- \* 1-10 MINUTE INTERVAL
- \* OCCURS ON 2ND DAY CALENDER
- \* TO RUN FROM 12:00 PM TO 1:00 PM TO 4:00 PM (WINTER INCREMENTS SEASONAL ADJUST BY PROGRAM FROM 3000MM TO INCREMENTS)
- \* MANUAL OVERRIDE FROM "ON/OFF" TO "OFF" BY 15 MINUTES OR PROGRAMS
- \* CONTROLLER PROGRAM RECALL FEATURE
- \* PROGRAMMABLE MASTER VALVE
- \* WATERPROOF UP TOULET
- \* CAN BE MOUNTED IN VALVE BOX OR MEDIA ENCLOSURE (OPTION)
- \* 12V BATTERY (NOT INCLUDED)
- \* 12V BATTERY (NOT INCLUDED)

**TORO DDC SERIES CONTROLLER**  
 NOT TO SCALE

**TPVF SERIES VALVE DETAIL**  
 NOT TO SCALE

**PRESSURE VACUUM BREAKER INSTALLATION DETAIL**  
 NOT TO SCALE

**T5HP SERIES INSTALLATION DETAIL**  
 NOT TO SCALE

**TORO**

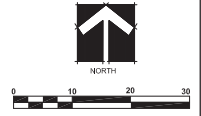
**Spartan Distributors**

487 W. Driven St.  
 Sparta, MI 48345  
 Ph: 616.887.7301  
 Fax: 616.887.6288

1050 Opdyke Road  
 Auburn Hills, MI 48320  
 Ph: 248.373.8800  
 Fax: 248.373.8899

800.822.2216

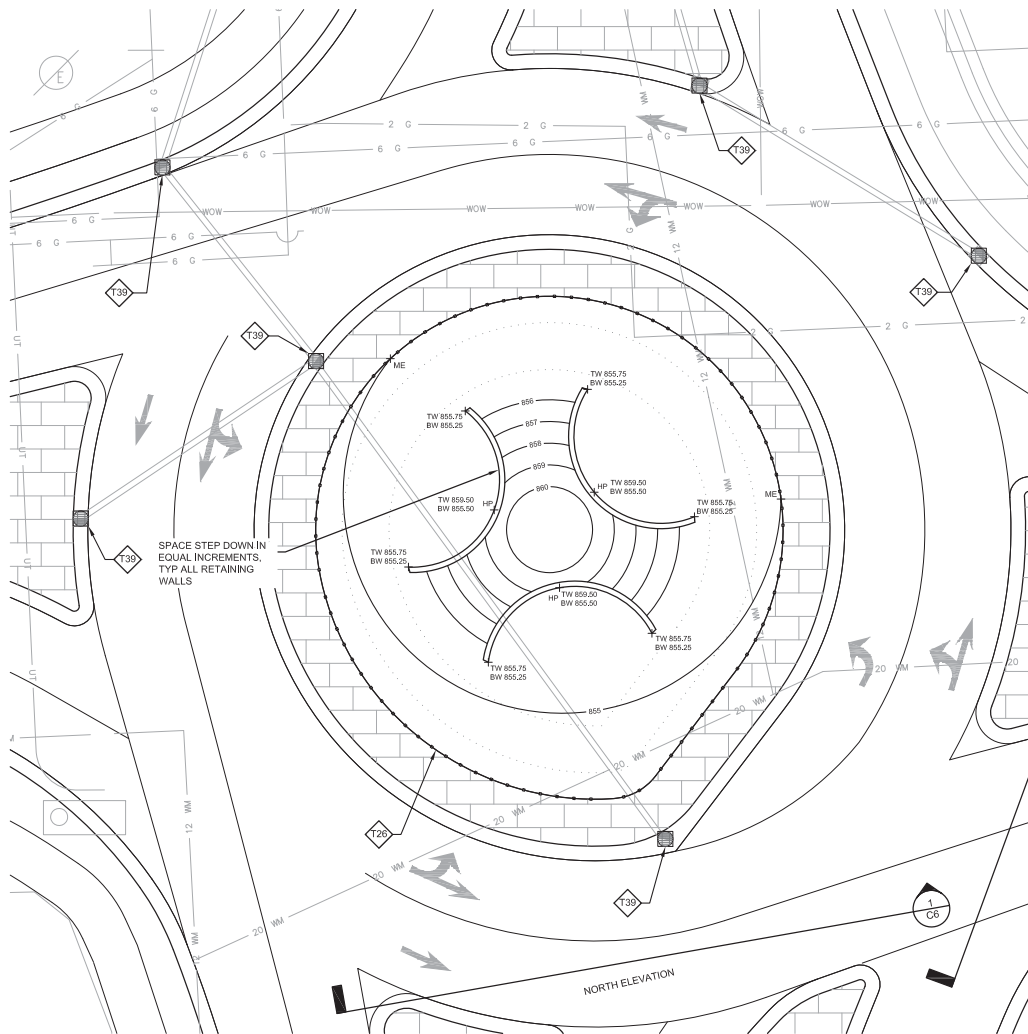
Design By: J. CHOKALUK, C.I.D.  
 Plan #: TCA185  
 Date: 03/19/15  
 Revision:



Know what's below.  
 Call before you dig.

PROJECTS/PROJECTS/2015/1037/44.RVT/TENKEN-LIVERNOIS ROUNDABOUT/CONSTRUCTION DRAWINGS/SHEETS/IRRIGATION PLANS/IRRIGATION PLAN\_C4.DWG

P:\PROJECTS\PROJECTS\_2012\1037.dwg RW TENKIN - LIVERNOIS ROUNDABOUT CONSTRUCTION DOCUMENTS DRAWINGS SHEETS GRADING - GRADING NOTES



SPACE STEP DOWN IN EQUAL INCREMENTS. TYP ALL RETAINING WALLS

**GRADING/S.E.S.C. NOTES**

- BY THE END OF EACH WORKDAY, SWEEP OR SCRAPE UP SOIL TRACKED ONTO THE ROAD. BY THE END OF THE NEXT WORKDAY AFTER A STORM, CLEAN UP THE SOIL, WASHED OFF-SITE.
- ON A DAILY BASIS, INSPECT, REPAIR, AND/OR REPLACE SILT FENCE AND OTHER REQUIRED SOIL EROSION CONTROLS.
- STOCK PILE SOILS MUST BE AT LEAST 15 FEET FROM CURB AND SENSITIVE FEATURES, SUCH AS LAKES, STREAMS, COUNTY DRAINS, OR WETLANDS, UNLESS AUTHORIZED BY ENFORCEMENT OFFICES ON APPROVED PLAN.
- TEMPORARY CONTROL MEASURES MUST REMAIN IN PLACE AND BE MAINTAINED UNTIL PERMANENT SITE STABILIZATION IS COMPLETED AND THE SITE IS FORMALLY CLOSED. THE SITE IS CLOSED WHEN PERMANENT EROSION CONTROL MEASURES (LANDSCAPING AND MULCH) ARE INSTALLED. PERMANENT STABILIZATION MUST BE COMPLETED WITHIN 5 DAYS AFTER FINAL GRADE.
- CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EARTH DISTURBANCE ON SITE REMAINS WITHIN LIMITS AS INDICATED ON APPROVED SITE PLAN. THE ENGINEER MUST BE NOTIFIED OF ANY MODIFICATIONS TO THE LIMIT OF EARTH DISTURBANCE.
- AFTER A SITE IS STABILIZED, PERMANENT EROSION CONTROL MEASURES ARE TO BE MAINTAINED BY THE OWNER.
- ENFORCEMENT STAFF MAY REVIEW AND MODIFY THE APPROVED SITE EROSION PLAN AS NEEDED THROUGHOUT THE CONSTRUCTION PERIOD.
- CATCH BASIN FILTER BAGS SHALL BE INSTALLED ON EVERY CATCH BASIN INLET WITHIN 500' OF THE SITE.

**ADDITIONAL GRADING/S.E.S.C. NOTES**

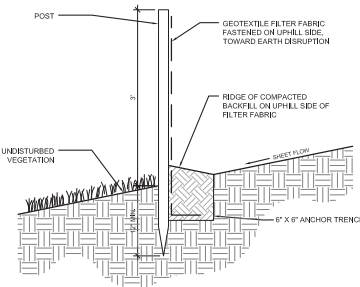
- MICHIGAN UNIFIED SOIL EROSION CONTROL SYMBOLS ARE USED HEREIN AS APPROVED BY MDOT 2011.
    - LIMITS OF EARTH CHANGE IS INSIDE THE RAISED CURB OF THE ROUNDABOUT ISLAND.
    - EROSION CONTROL MEASURES SCHEDULE.
    - THIS SITE IS NOT 500' FROM A STREAM, LAKE OR OPEN DRAINAGE CHANNEL.
    - THE PREDOMINANT SOIL TYPES IS CLAYEY SANDY LOAM.
    - ALL DISTURBED AREAS WILL RECEIVE PERMANENT EROSION CONTROL TREATMENT WITHIN 5 DAYS OF FINAL GRADING.
    - ALL AREAS TO BE LANDSCAPED AND MULCHED AS INDICATED ON THE LANDSCAPE PLAN.
    - APPROXIMATE EARTHWORK CALCULATIONS 25 CYD OF FILL AND NO CYD OF CUT.
- S.E.S.C. MAINTENANCE PLAN**
- ROUTINE MAINTENANCE SHOULD BE COMPLETED BY THE CONTRACTOR DURING CONSTRUCTION. ROUTINE MAINTENANCE INCLUDES IMPLEMENTING NECESSARY REPAIR OR CORRECTIONS TO EXISTING TEMPORARY OR PERMANENT S.E.S.C. MEASURES.
  - REPAIRS TO TEMPORARY S.E.S.C. MEASURES SHALL BE CONDUCTED IMMEDIATELY. PERMANENT MEASURES IN NEED OF REPAIR SHALL BE CORRECTED WITHIN (5) DAYS OF DETECTION OF PROBLEM.
  - INSTALL VEGETATION IMMEDIATELY FOLLOWING FINAL GRADING ON DISTURBED AREAS.
  - ALL SOIL EROSION SHALL BE CHECKED AFTER EVERY RAIN EVENT; CONTRACTOR TO CLEAN, REPAIR, OR INSTALL EROSION CONTROL MEASURES TO CORRECT ANY PROBLEM AREAS.
  - ROUTINE MAINTENANCE TASKS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
    - CHECK SILT FENCE, STABILIZE AND RE-STAKE.
    - SLOPE PROTECTION AND WASH-OUT REPAIR.
    - LANDSCAPE WITHIN 5 DAYS OF FINAL GRADING.
  - ALL RESTORED AREAS SHALL BE MAINTAINED DURING THE GROWING SEASON BY CONTRACTOR UNTIL FINAL ACCEPTANCE. THEN THE OWNER SHALL TAKE OVER MAINTENANCE.
  - ALL STOCKPILED AND EXCAVATED MATERIAL SHALL BE SURROUNDED BY SILT FENCE IF LEFT OVERNIGHT OUTSIDE OF A PROTECTED AREA.
  - STORM WATER FROM SUBJECT SITE WILL NOT ADVERSELY IMPACT ADJACENT PROPERTIES.
  - NO WETLANDS EXIST ON SITE.

**SEQUENCE OF CONSTRUCTION**

- INSTALL EROSION CONTROL MEASURES, SILT FENCE
- STRIP TOPSOIL
- ROUGH GRADE SITE
- INSTALL RETAINING WALL AND IRRIGATION
- FINE GRADE SITE
- LANDSCAPE AND MULCH TO STABILIZE ENTIRE SITE
- REMOVE TEMPORARY EROSION CONTROL MEASURES



NORTH WEST ELEVATION



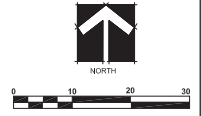
**SILT FENCE INSTALLATION DETAIL**

SECTION - NOT TO SCALE

**S.E.S.C. PLAN LEGEND:**

- CONTOUR
- SPOT ELEVATION
- CATCH BASIN
- S.E.S.C. SYMBOL
- SILT FENCE
- HP = HIGH POINT
- RM = RIM ELEVATION
- ME = MATCH EXISTING ELEVATION
- TC = TOP OF CURB
- GP = GUTTER PANEL
- TW = TOP OF WALL
- BW = BOTTOM OF WALL
- TC = TOP OF CURB
- RCP = RIGID CONCRETE PIPE
- TBD = TO BE DETERMINED
- CB = CATCH BASIN
- MH = MANHOLE

26	<p>GEOTEXTILE SILT FENCE</p>	USE GEOTEXTILE AND POSTS OR POLES AT 4' - 0" MAXIMUM SPACING. EDGES OF SLOPE AREA, USUALLY PERMANENT. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.
39	<p>CATCH BASIN FILTER BAG</p>	
		MANUFACTURED FILTER BAG INSERTED UNDER CASTING. COLLECTS SEDIMENT AT CATCH BASIN INLET.



Know what's below.  
Call before you dig.

**Landscape Architects & Planners, Inc.**  
 640 LAND CENTER  
 800 CENTER STREET  
 SUITE ONE  
 LANSING, MI 48206  
 P: (313) 485-0200  
 F: (313) 485-0479  
 info@lapl.com

REVISIONS	DATE	COMMENTS

**CITY OF ROCHESTER HILLS**  
 PLANNING AND ECONOMIC DEVELOPMENT

PLANNING AND ECONOMIC DEVELOPMENT  
 1000 ROCHESTER HILLS DRIVE  
 ROCHESTER HILLS, MI 48069  
 P: 248-842-2222

TENKIN - LIVERNOIS ROUNDABOUT  
**GRADING AND S.E.S.C. PLAN**  
 TENKIN - LIVERNOIS ROUNDABOUT

DATE: 10/30/2015	BY: [Signature]
CHECKED: [Signature]	DATE: 10/30/2015
DRAWING NO.: 845	SCALE: 1" = 40'
SHEET NO.: 1	TOTAL SHEETS: 1



**Landscape Architects & Planners, Inc.**

DANLAND CENTER  
800 CENTER STREET  
SLATE CREEK  
LANING, NH 03066  
P: (603) 485-0500  
F: (603) 485-0579  
info@lapl.com

REVISIONS	DATE	COMMENTS

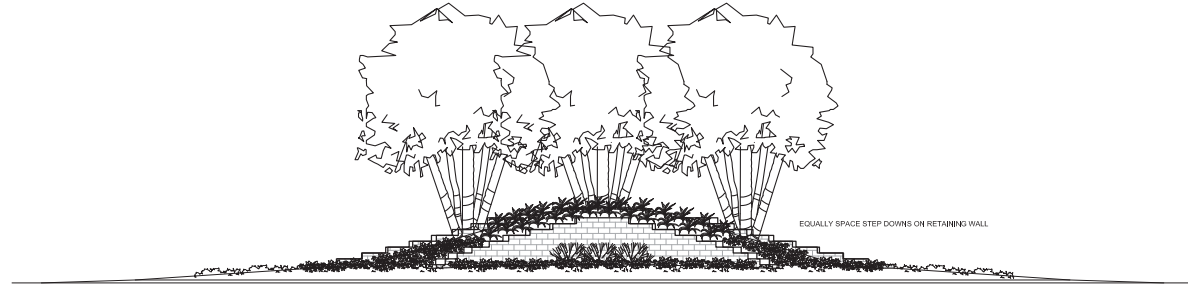
**CITY OF ROCHESTER HILLS**  
PLANNING AND ECONOMIC DEVELOPMENT  
PLANNING AND ECONOMIC DEVELOPMENT  
1000 ROCHESTER HILLS DRIVE  
ROCHESTER HILLS, MI 48069  
PC248 84322

TENKEN - LIVERNOIS ROUNDABOUT  
**CONSTRUCTION DETAILS**  
TENKEN - LIVERNOIS ROUNDABOUT

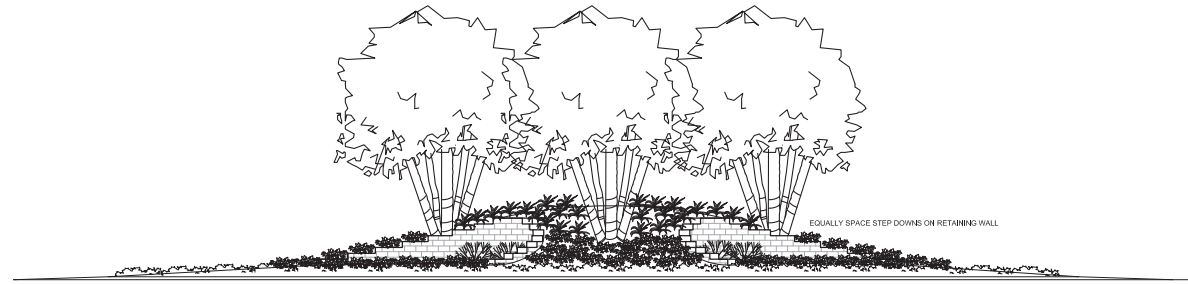
DATE: 3/10/2015
BY: [Signature]
CHECKED BY: [Signature]
DRAWING NO: 20150704
PROJECT NO: 150000000
SCALE: 1/8" = 1'-0"
DATE: 3/10/2015
BY: [Signature]

**SHEET C6**

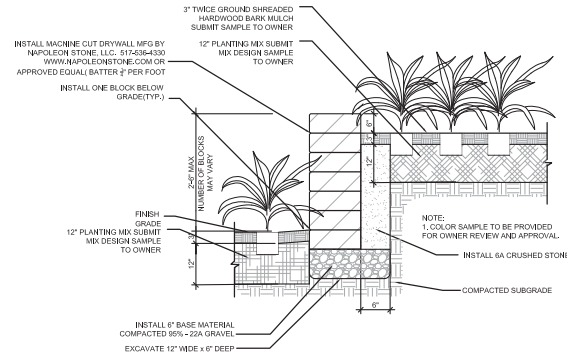
© Copyright 2015, Landscape Architects & Planners, Inc.  
ALL RIGHTS RESERVED



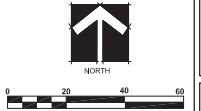
**1 NORTH ELEVATION**  
SCALE: NOT TO SCALE



**2 NORTH-WEST ELEVATION**  
SCALE: NOT TO SCALE



**3 MACHINE CUT DRYWALL RETAINING WALL DETAIL**  
SCALE: 1:1



Know what's below.  
Call before you dig.



**Landscape Architects & Planners, Inc.**

1000 ROCHESTER CENTER STREET  
SUITE ONE  
LANSING, MI 48206  
P: (313) 485-0000  
F: (313) 485-0079  
info@lapc.com

REVISIONS	DATE	COMMENTS

**CITY OF ROCHESTER HILLS**  
PLANNING AND ECONOMIC DEVELOPMENT

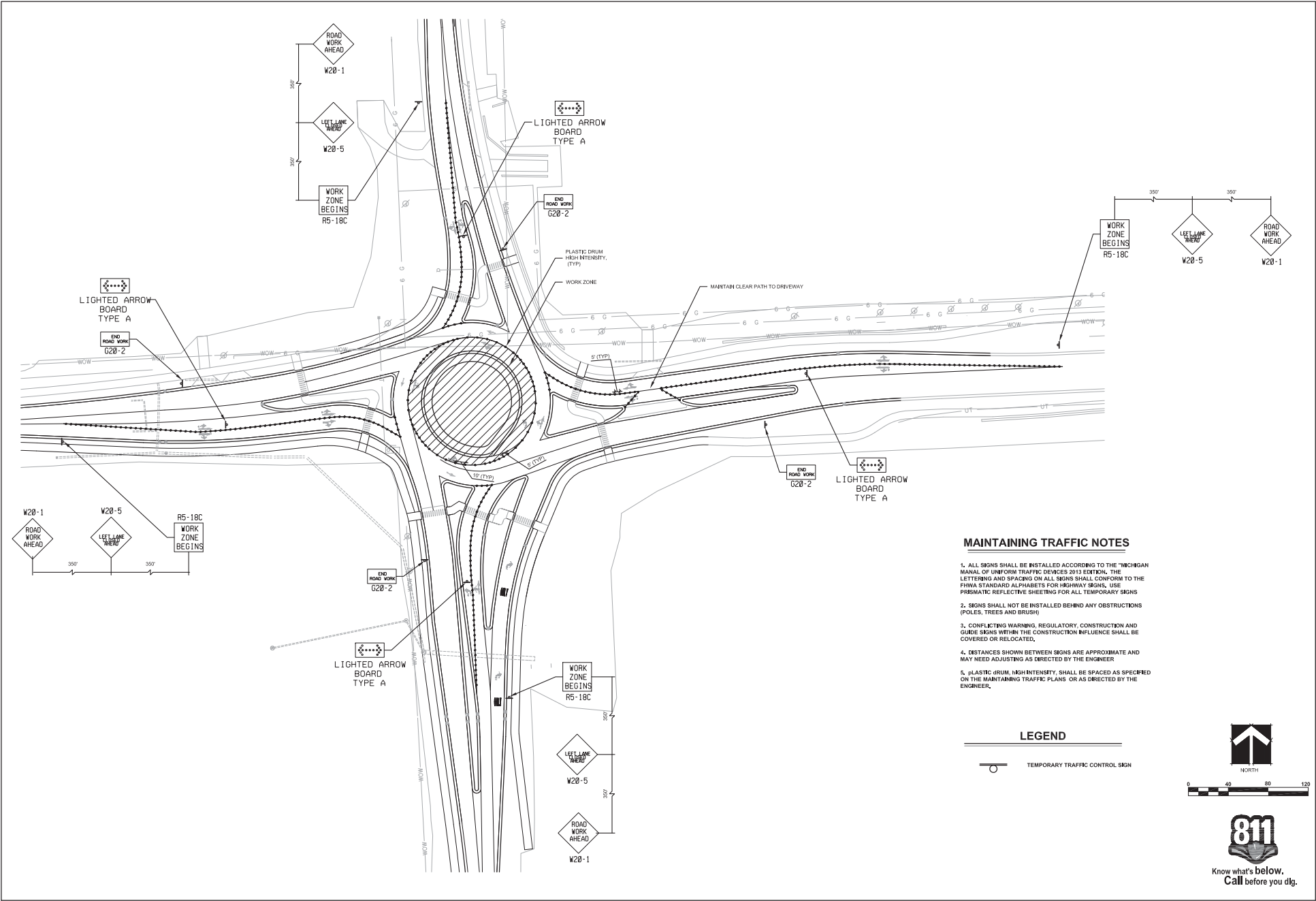
PLANNING AND ECONOMIC DEVELOPMENT  
1000 ROCHESTER CENTER STREET, SUITE ONE  
ROCHESTER HILLS, MI 48069  
P: 248-842-2222

TENKEN - LIVERNOIS ROUNDABOUT  
**MAINTAINING TRAFFIC PLAN**  
TENKEN - LIVERNOIS ROUNDABOUT

DATE: 3/19/2015	BY: [Signature]
DRAWN BY: [Signature]	CHECKED BY: [Signature]
DATE: 3/19/2015	BY: [Signature]
DRAWN BY: [Signature]	CHECKED BY: [Signature]
DATE: 3/19/2015	BY: [Signature]
DRAWN BY: [Signature]	CHECKED BY: [Signature]

**SHEET C7**

© Copyright 2015, Landscape Architects & Planners, Inc. ALL RIGHTS RESERVED.



**MAINTAINING TRAFFIC NOTES**

1. ALL SIGNS SHALL BE INSTALLED ACCORDING TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC DEVICES 2013 EDITION. THE LETTERING AND SPACING ON ALL SIGNS SHALL CONFORM TO THE FHWA STANDARD ALPHABETS FOR HIGHWAY SIGNS. USE PRISMATIC REFLECTIVE SHEETING FOR ALL TEMPORARY SIGNS.
2. SIGNS SHALL NOT BE INSTALLED BEHIND ANY OBSTRUCTIONS (POLES, TREES AND BRUSH).
3. CONFLICTING WARNING, REGULATORY, CONSTRUCTION AND GUIDE SIGNS WITHIN THE CONSTRUCTION INFLUENCE SHALL BE COVERED OR RELOCATED.
4. DISTANCES SHOWN BETWEEN SIGNS ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.
5. PLASTIC DRUM HIGH INTENSITY SHALL BE SPACED AS SPECIFIED ON THE MAINTAINING TRAFFIC PLANS OR AS DIRECTED BY THE ENGINEER.

**LEGEND**

○ TEMPORARY TRAFFIC CONTROL SIGN



Know what's below.  
Call before you dig.

PROJECTS: 20120324.RM.TENKEN-LIVERNOIS ROUNDABOUT CONSTRUCTION DOCUMENTS DRAWING SHEETS TRAFFIC CONTROL PLAN.DWG

Plot Date: 3/19/2015 1:59 PM