



NOWAK & FRAUS ENGINEER
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
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SEAL



PROJECT
Village at Bloomfield

CLIENT
REDICO
One Towne Square,
Suite 1600
Southfield, MI 48076

Contact: --
Phone: (248) 784-6486

PROJECT LOCATION
Part of the W. 1/2 of Section 5,
T. 2N., R. 10E., and part of the
NE 1/4 of Section 6, T. 2N., R.
10E., Bloomfield Township, The
City of Pontiac and Bloomfield
Township (conditionally
transferred to The City of
Pontiac) Oakland County,
Michigan

SHEET
Storm Sewer Plan



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

DATE	ISSUED / REVISED
05-12-17	Bids / Permits

DRAWN BY:

A. Wiseman

DESIGNED BY:

A Wiseman

APPROVED BY:

P Williams

DATE: _____

AUGUST 2015

SCALE:

1" =

A horizontal number line with tick marks at 40, 20, and 0. The segment between 40 and 20 is white, and the segment between 20 and 0 is shaded black.

0 10 20 30 40 50 60 70 80 90 100

NFL JOB NO.
111521

A116-21

SHEET NO.

C-23

STORM SEWER NOTES

ALL WORKSMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD AND SPECIFICATIONS OF THE MUNICIPALITY. THE MUNICIPALITY STANDARD NOTES, DETAILS AND SPECIFICATIONS SHALL BE INCORPORATED AS PART OF THEIR PLANS.

ALL STORM SEWER TRENCHES UNDER OR WITHIN THREE (3) FEET OF EXISTING OR PROPOSED PAVEMENT SHALL BE BACKFILLED WITH MDOT CLASS II MATERIAL (SAND) AND BE MACHINE COMPACTED TO A MINIMUM OF 95% OF THE MATERIAL'S MAXIMUM DENSITY. PAVEMENT SHALL INCLUDE PARKING LOTS, DRIVE APPROACHES, CURB & GUTTER AND ADJACENT WALLS.

ALL STORM SEWER PIPE SHALL BE INSTALLED ON CLASS "B" BEDDING OR BETTER UNLESS OTHERWISE INDICATED ON THE PLANS.

STORM SEWER SHALL BE OF THE TYPE, SIZE & CLASS DESIGNATION INDICATED ON THE PLAN AND SHALL BE INSTALLED AT THE PROPOSED LINE AND GRADE INDICATED.

ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM SPECIFICATION C-76, CL IV.

ALL MANHOLE, CATCH BASIN, INLET, REAR YARD DRAIN FRAMES AND COVERS SHALL BE AS INDICATED ON THE PLANS IN ACCORDANCE WITH MUNICIPALITY STANDARDS.

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

EXACT GRADES AND INVERTS OF PROPOSED STORM SEWER ARE TO BE CHECKED WITH THE FIELD ENGINEER PRIOR AND DURING INSTALLATION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER OF ANY PLAN INCONSISTENCY AN/OR UTILITY CONFLICTS.

ALL STORM SEWER PIPE JOINTS SHALL BE "PREMIUM JOINT" MODIFIED GROOVED TONGUE, (M.G.T.) WITH SYNTHETIC RUBBER GASKETS CONFORMING TO ASTM SPECIFICATION C-443 & C-361 UNLESS OTHERWISE INDICATED ON THE PLANS. ALTERNATE JOINT CONNECTION MAY BE STANDARD GROOVED TONGUE WITH COLD MASTIC (DEWITT #10 JOINT COMPOUND OR EQUAL).

FACTORY MANUFACTURED PRECAST TEE SECTIONS SHALL BE USED FOR ROOF DRAINS AND/OR SUMP PUMP LEADS AND LATERALS WHERE INDICATED ON THE PLANS. BLIND TOP CONNECTIONS INTO STORM SEWER WILL NOT BE PERMITTED BY BREAKING PIPE WALL.

THE UNDERGROUND SITE CONTRACTOR SHALL INSTALL ALL STORM SEWER BUILDING LEADS TO WITHIN FIVE (5) FEET OF PROPOSED BUILDING.

GRADED RIP RAP SHALL BE INSTALLED AT THE ENDS OF ALL CULVERTS AND END SECTIONS. GRADED RIP RAP SHALL BE INSTALLED AT OUTLET POINTS IN DETENTION AND SEDIMENTATION FACILITY. THE MINIMUM WIDTH OF THE RIP RAP SHALL BE TWICE THE OUTSIDE DIAMETER OF THE PIPE. THE RIP RAP SHALL EXTEND FROM THE BOTTOM OF THE SLOPE TO THE PIPE INVERT.

THE CONTRACTOR SHALL PAY FOR AND SECURE ALL NECESSARY PERMITS AND LIKEWISE
ARRANGE FOR ALL SITE INSPECTION.

STORM WATER MANAGEMENT NOTE

FOR THE PROPOSED REDEVELOPMENT OF THIS SITE, THE EXISTING APPROVED DETENTION AND SEDIMENTATION CONTROL SYSTEMS WILL NOT BE AFFECTED. ALL DRAINAGE DISTRICT AREAS WILL BE MAINTAINED AND RUNOFF COEFFICIENTS WILL BE AT OR BELOW PREVIOUSLY APPROVED LEVELS. NO CHANGES ARE PROPOSED TO THE SEDIMENTATION CONTROL STRUCTURES OR OUTLET PIPES.

NOTE:
PROVIDE 6" PERFORATED UNDERDRAIN
AROUND STRUCTURE AT 2FT. BELOW RIM

UNDERDRAIN DETAIL
N.T.S.

STORM WATER MANAGEMENT NOTE