

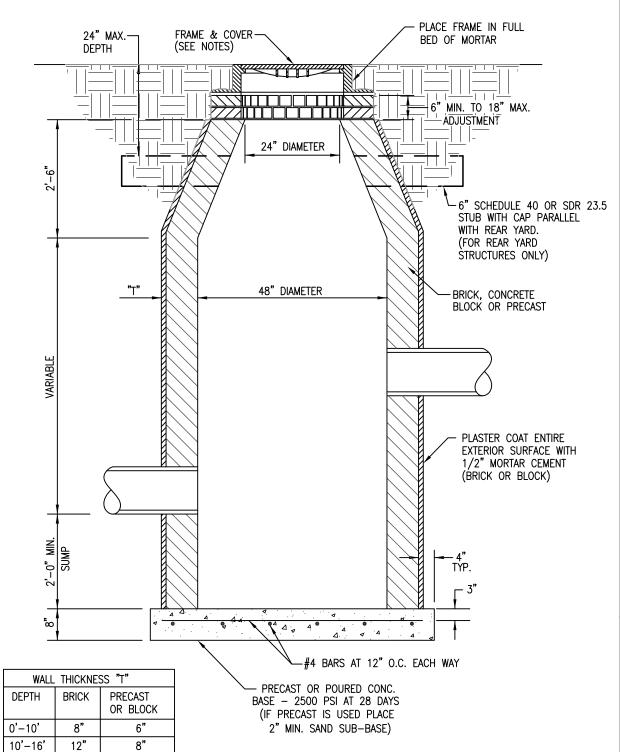
## STANDARD WYE DETAIL IN CONCRETE PIPE FOR SUMP PUMP CONNECTION

NOT TO SCALE

- SPECIAL CATCH BASIN NOTES: 1. DIAMETER OF "YARD" CATCH BASIN MAY BE REDUCED TO 36" PROVIDED THERE IS ONLY ONE (1) PIPE IN THE STRUCTURE AND
- 2. CATCH BASIN MUST DISCHARGE INTO MANHOLES AND NOT INTO OTHER CATCH BASINS, EXCEPT: A. WHERE CATCH BASIN IS A "YARD" TYPE WITH NOT MORE THAN

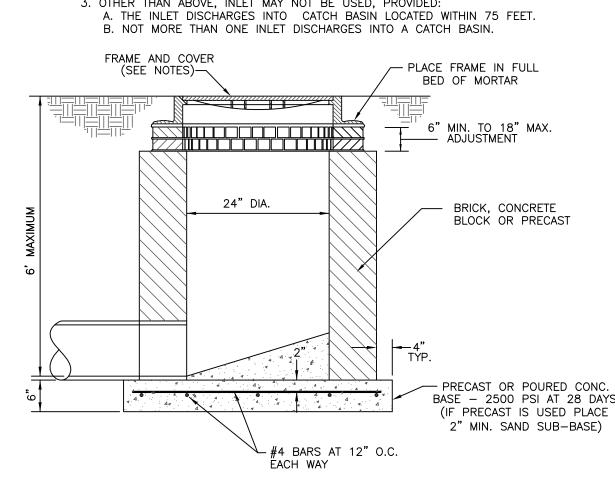
THE DISTANCE TO THE OUTLET MANHOLE IS LESS THAN 150 FEET

- THREE (3) CATCH BASINS DISCHARGING INTO IT. B. WHERE CATCH BASIN IS A "PAVEMENT TYPE" DISCHARGING INTO ANOTHER CATCH BASIN LOCATED WITHIN 75 FEET. 3. STEPS SHALL BE PLACED IN ALL 48" DIAMETER STRUCTURES MORE
- 4. ALL BACKFILL AROUND THE STRUCTURE SHALL BE 1/4" TO 3/4" ANGULAR STONE UP TO THE SPRINGLINE OF THE HIGHEST PIPE. THE REMAINING BACKFILL (TO GRADE) SHALL BE SAND COMPACTED IN 12" LIFTS.



## STORM SEWER CATCH BASIN

SPECIAL INLET NOTES: . INLET SHALL NOT BE USED FOR YARD DRAINAGE. 2. INLET SHALL NOT BE USED IN COUNTY ROAD RIGHT-OF-WAY 3. OTHER THAN ABOVE, INLET MAY NOT BE USED, PROVIDED: A. THE INLET DISCHARGES INTO CATCH BASIN LOCATED WITHIN 75 FEET. B. NOT MORE THAN ONE INLET DISCHARGES INTO A CATCH BASIN.



STORM SEWER INLET

## GENERAL STORM SEWER NOTES

- 1. THE CONTRACTOR SHALL NOTIFY RICHMOND TOWNSHIP (586-727-8998), MACOMB COUNTY ROAD COMMISSION (586-463-8671). AND THE MACOMB COUNTY OFFICE OF PUBLIC WORKS (586-469-5325) THREE WORKING DAYS PRIOR TO CONSTRUCTION.
- 2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING, AT A TIME AND PLACE AS ARRANGED BY THE OWNER OR THE MUNICIPAL ENGINEER, AT WHICH VARIOUS UTILITY COMPANIES AND GOVERNMENTAL AGENCY REPRESENTATIVES WILL BE PRESENT.
- 3. PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST HAVE IN HIS POSSESSION A COPY OF A VALID PERMIT TO CONSTRUCT A CONNECTION TO, OR AN EXTENSION OF, THE STORM WATER DRAINAGE SYSTEM.
- 4. THE CONTRACTOR SHALL SECURE PERMITS FROM THE OFFICE OF THE PUBLIC WORKS COMMISSIONER FOR TAPS AND CROSSINGS OF COUNTY DRAINS AND SHALL PAY THE COSTS OF SAID PERMITS AND THE COST OF ANY INSPECTION CHARGES BY THAT AGENCY FOR WORK DONE UNDER THE PERMITS.
- 5. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL TELEPHONE MISS DIG (800-482-7171) FOR THE LOCATION OF UNDERGROUND FACILITIES. AND SHALL ALSO NOTIFY REPRESENTATIVES OF ANY OTHER FACILITIES, LOCATED IN THE VICINITY OF THE WORK, WHICH MAY NOT BE HANDLED BY MISS DIG.
- 6. ALL STORM WATER DRAINAGE SYSTEM CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY, COUNTY ROAD COMMISSION AND/OR THE OFFICE OF THE PUBLIC WORKS COMMISSIONER, AS REQUIRED.

DRILL PERIMETER BAR AT

SET BOLT AND NUTS. ——

2" x 1/4" BAR RING BENT IN FIELD TO FIT PERIMETER

GEOTEXTILE FABRIC -

PIPE BEDDING-

GALVENIZED.

NOTE: BAR SCREEN SHALL BE

**CONCRETE BEDDING** 

OF END SECTION ———

4 LOCATIONS AND SECURE

TO END SECTION WITH RAM

-STAKED IN PLACE SOD

PLAN VIEW

-4' SOD STAKED

IN PLACE

(2) #4 RE-BARS-

PROFILE VIEW

MAX. SPACING

RIP-RAP

RIP-RAP

IN FULL BED

ROUND BARS AT

6" ON CENTER

OF MORTAR

- 3000 P.S.I.

CONCRETE

ROCK FRAGMENT

CRUSHED STONE

END SECTION AND BAR SCREEN DETAIL

NOT TO SCALE

ROCK FRAGMENT

- 7. ALL REINFORCED CONCRETE SEWER PIPE SHALL CONFORM TO ASTM SPECIFICATION C76 WITH CLASS DESIGNATION ON PLANS.
- 8. UNLESS OTHERWISE INDICATED ON THE PLANS, ALL STORM SEWER BEDDING SHALL BE STANDARD BEDDING.
- 9. UNLESS OTHERWISE NOTED ON THE PLANS, STRUCTURE FRAME AND COVERS SHALL BE AS FOLLOWS:
  - MANHOLE (IN ROAD R.O.W.) E.J.I.W. 1060 OR NEENAH R-1784 WITH PERFORATED COVER (MDOT COVER A).
  - MANHOLE (OTHER THAN IN ROAD R.O.W.) E.J.I.W. 1040 OR NEENAH R-1642 WITH PERFORATED
  - CATCH BASIN OR INLET (PAVEMENT TYPE) E.J.I.W. 5105 OR NEENAH R-3036 WITH SINUSOIDAL GRATE (MDOT COVER D4).
- CATCH BASIN (YARD TYPE) OR SIDE INLET E.J.I.W. 1040 OR NEENAH R-1642 WITH OVAL GRATE

HAVING A RISE ABOVE THE FRAME OF 3 1/4".

- 10. ALL STORM SEWER JOINTS SHALL BE TONGUE & GROOVE WITH BITUMINOUS COMPOUND JOINT FILLER MATERIAL.
- 11. AS PART OF THE FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE FOR TELEVISION INSPECTION OF THE STORM SEWER LINES IN ACCORDANCE WITH THE CURRENT DETAILED SPECIFICATIONS OF THE MUNICIPALITY.
- 12. ALL WYES AND BUILDING SERVICE CONNECTIONS SHALL BE 3" POLY VINYL CHLORIDE (PVC) SEWER PIPE D3033 OR D3034-3.

-LIMITS OF SOD

-3000 P.S.I.

FRAME AND COVER

(SEE NOTES)

**VARIES** 

END VIEW

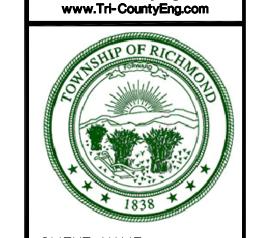
PROFILE VIEW

STANDARD BEDDING

-RIP-RAP ROCK

BAR RING

FRAGMENT



TRI-COUNTY

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CLIENT NAME: RICHMOND TOWNSHIP MACOMB COUNTY



Know what's below.

Call before you dig. PRIOR TO CONSTRUCTION, ALL EXISTING UTILITIES LOCATION AND DEPTH WITHIN THE PROJECT AREA SHALL BE FIELD VERIFIED. CALL MISS DIG SYSTEM 3 WORKING DAYS PRIOR TO CONSTRUCTIO TILITY INFORMATION SHOWN ON THIS DRAWING ARE APPROXIMATE AND MAY E ACCORDING TO AVAILABLE RECORD OR SCLOSED INFORMATION BY VARIOUS

ILITY COMPANIES, PUBLIC AGENCIES, R OTHER SOURCES AND THUS MAY OT NECESSARILY REFLECT ACTUAL FIELD LOCATIONS AND NO GUARANTEE GIVEN TO COMPLETENESS OR ACCURAC COPYRIGHT (C) 2021. ALL RIGHTS INFORMATION CONTAINED HEREIN ARE NOT TO BE USED OR REPRODUCED

TRI-COUNTY ENGINEERING CONSULTAN

PROJECT NAME:

RICHMOND TOWNSHIF STORM SEWER

PROJECT LOCATION:

STANDARD DETAILS

SEC , TO5N, R14E RICHMOND TOWNSHIP MACOMB COUNTY

Drawn By: TCEC Checked By: TWP Approved By: TWP

REVISIONS:



SCALE VERIFICATION: BAR IS ONE-INCH ADJUST SCALES ACCORDINGLY IF N

SCALE: NONE

DRAWING NO: RichmondStdSTM

Sheet

STORM SEWER SIDE INLET **PLAN VIEW** NOT TO SCALE BACKFILL AS REQUIRED BY SPECIFICATIONS OR — JURISDICTION 4/3 INSIDE DIAMETER 4/3 INSIDE DIA. OF PIPE (MDOT CLASS II SAND IF +15" MAX FOR 18" DIA. OF PIPE +15 WITHIN 1:1 OF PAVEMENT PIPE & LARGER INFLUENCE) SLOPE ACCORDING TO -MIOSHA OR PROVIDE TRENCH BRACING OR UNDISTURBED JACKS AS REQUIRED EARTH --UNDISTURBED MDOT CL II SAND EARTH BACKFILL OR 21 AA 1/4 OUTSIDE -GRADED LIMESTONE DIAMETER CIP TO 95% MAX DENSITY · 3/4" ANGULAR OR CRUSHED UNDISTURBED STONE BEDDING IN POOR EARTH SOIL CONDITIONS AS CONCRETE UNDISTURBED -(3000 PSI AT 28 DAYS)