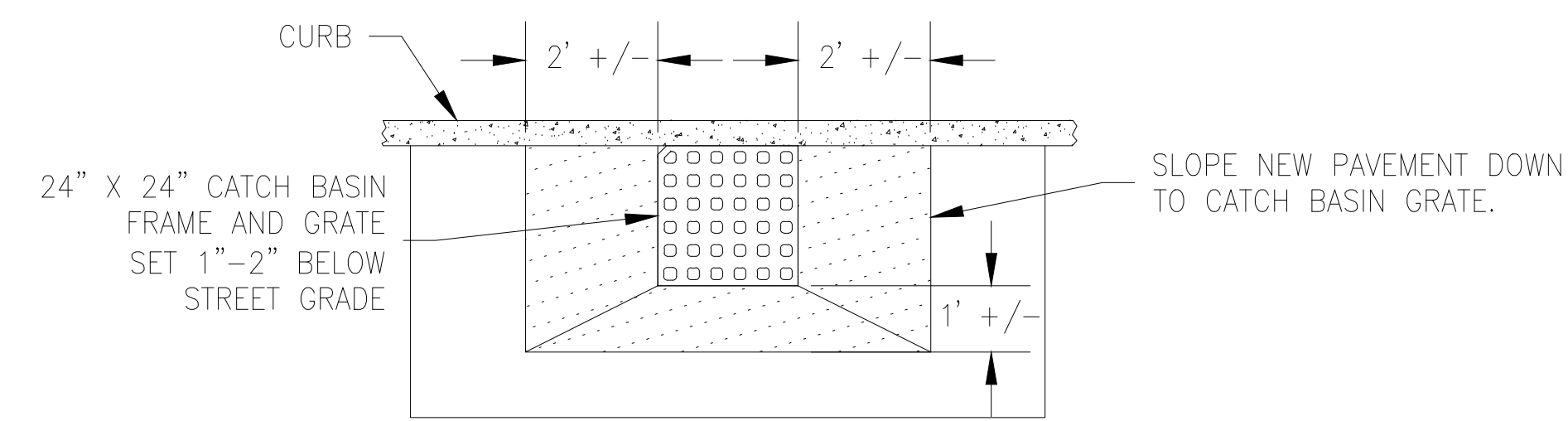
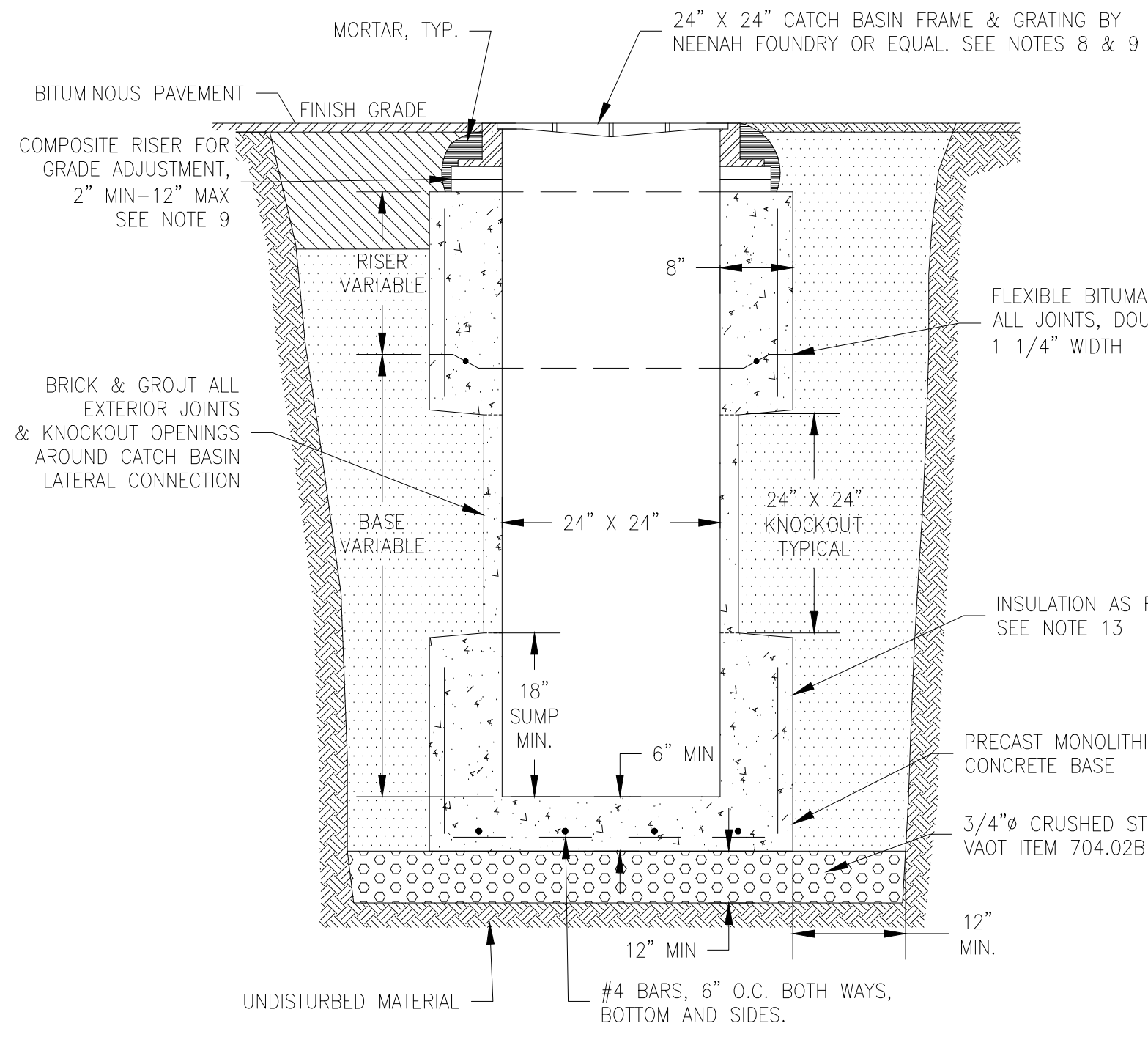


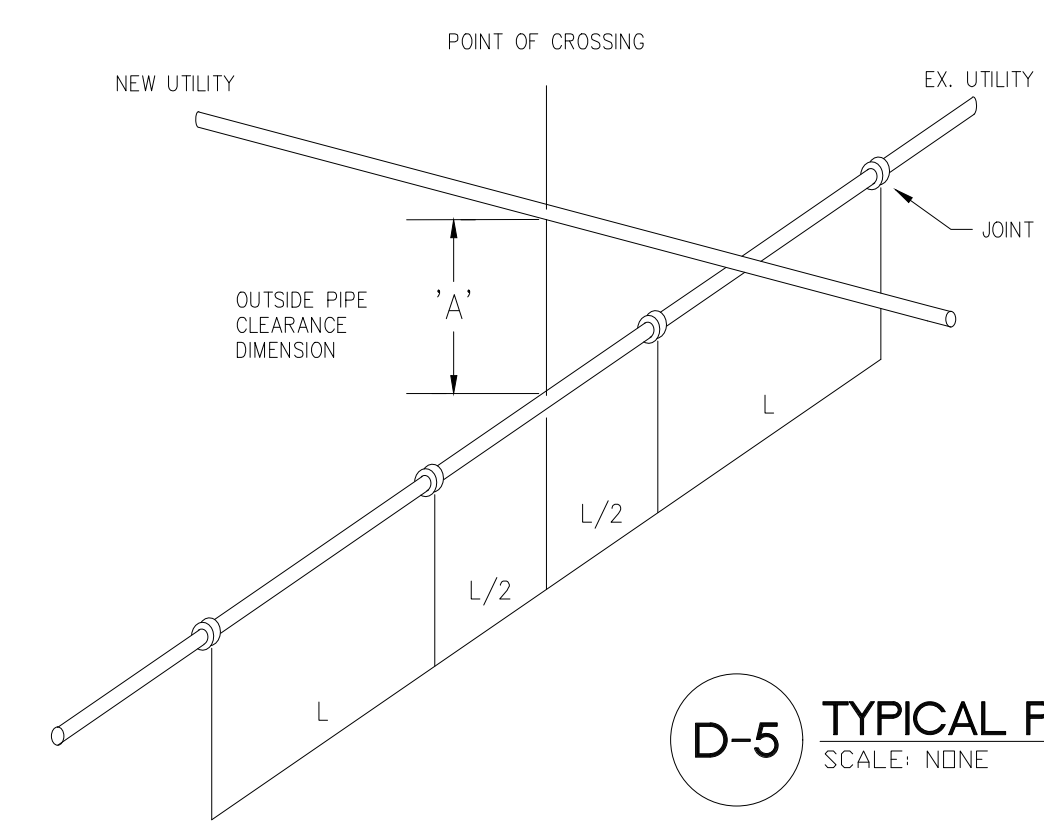
D-1 TYPICAL CATCH BASIN DETAIL
SCALE: NONE



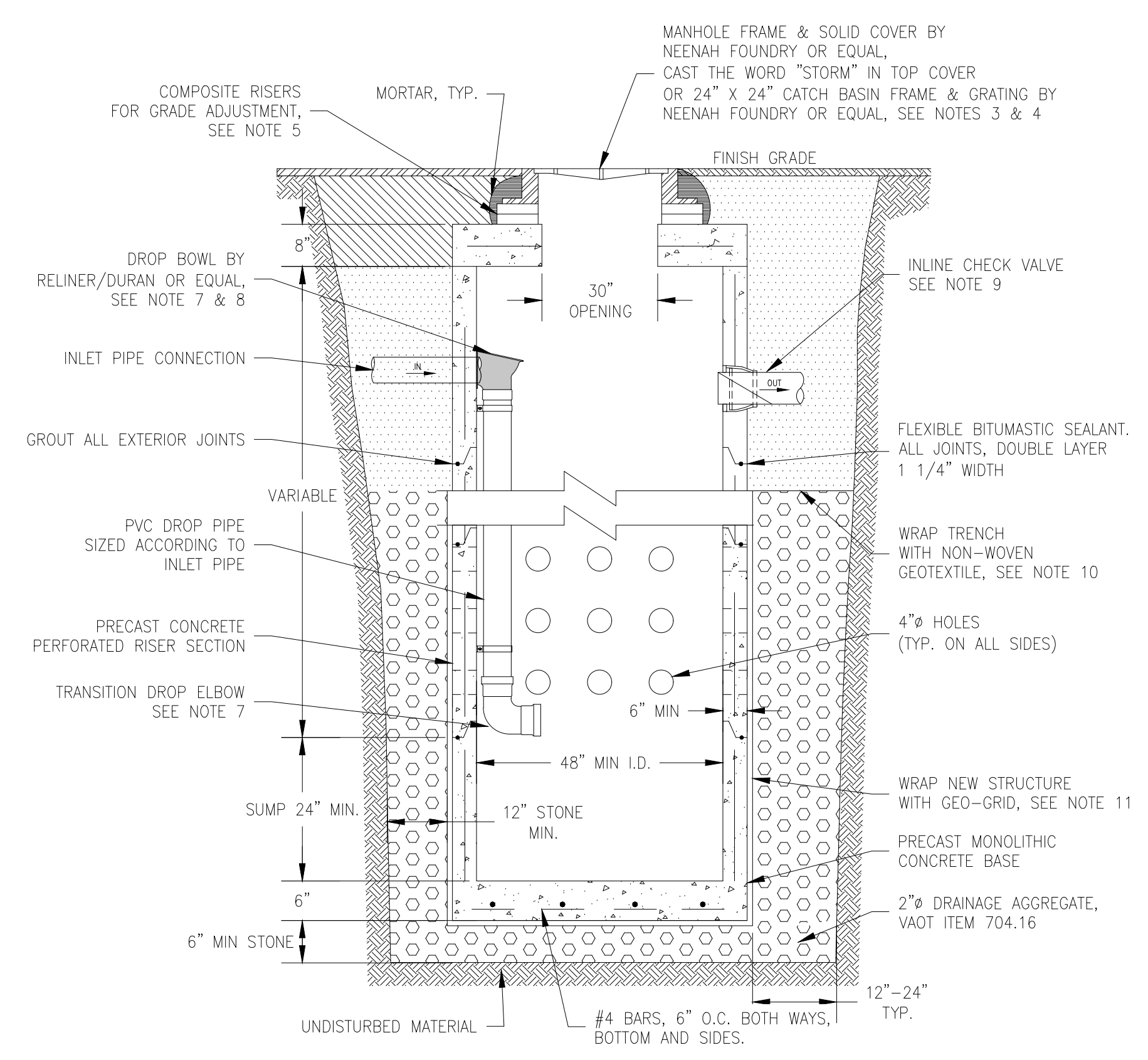
D-4 TYPICAL CB GRATE PAVEMENT TAPER DETAIL
SCALE: NONE



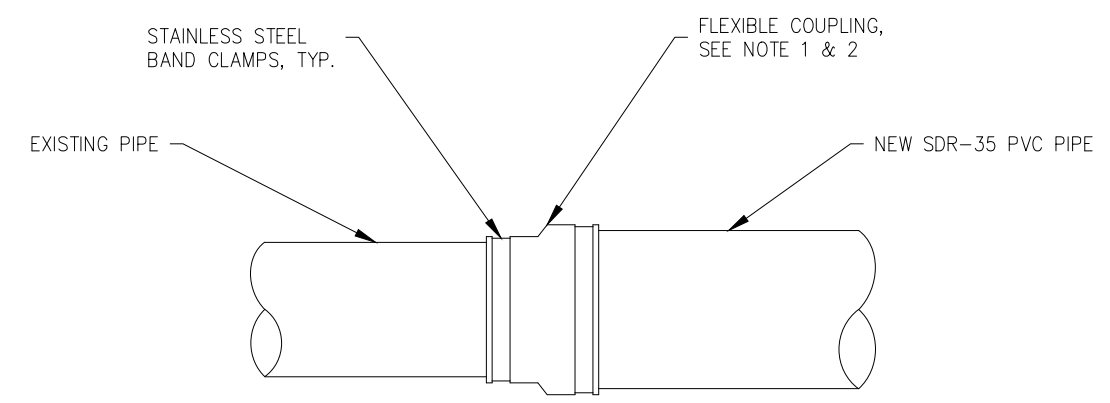
D-2 TYPICAL KNOCKOUT STRUCTURE DETAIL
SCALE: NONE



D-5 TYPICAL PIPE/UTILITY CROSSING DETAIL
SCALE: NONE



D-3 TYPICAL DRYWELL W/ DROP INLET DETAIL
SCALE: NONE



D-6 TYPICAL FLEXIBLE COUPLING CONNECTION DETAIL
SCALE: NONE

- CATCH BASIN SPECIFICATIONS & NOTES:**
- CATCH BASINS SHALL HAVE PRECAST CONCRETE MONOLITHIC BASES AND PRECAST RISER SECTIONS OTHERWISE SPECIFIED OR APPROVED BY THE WATER RESOURCES DEPARTMENT. CATCH BASIN STRUCTURE SHALL BE CAPABLE OF MEETING OR EXCEEDING AASHTO H-20 LOADING.
 - STEEL REINFORCEMENT SHALL CONFORM TO ASTM SPECIFICATION OF 0.12 sq.in./LF, USING #4 REINFORCING BARS.
 - PRECAST CONCRETE BASES SHALL BE SET ON A LEVEL FOUNDATION OF CRUSHED STONE AT LEAST 12-INCHES THICK.
 - PRECAST BASES SHALL BE MANUFACTURED WITH THE WALL OPENINGS OF THE MINIMUM SIZE TO RECEIVE ALL CONNECTING PIPES.
 - CONNECTION OF PIPES TO STRUCTURE SHALL BE LOCK-JOINT FLEXIBLE MANHOLE SLEEVES, KOR-N-SEAL JOINT SLEEVES OR EQUAL.
 - JOINTS SHALL BE SEALED WITH A BUTYL RUBBER-BASED SEALANT CONFORMING TO ASTM C478.
 - FRAME AND GRATES SHALL BE CAST IRON MINIMUM CLASS 30 CONFORMING TO ASTM A48. CASTINGS SHALL BE CAPABLE OF MEETING OR EXCEEDING AASHTO H-20 LOADING. CASTINGS SHALL BE MANUFACTURED BY NEENAH FOUNDRY CO., E.L. LEBARON FOUNDRY CO., OR EQUAL.
 - CATCH BASIN FRAME AND GRATES THAT ARE TO BE INSTALLED ON STREETS WITH NO SLOPES SHALL BE NEENAH FOUNDRY R-3405 TYPE "A" OR EQUAL. CATCH BASIN FRAME AND GRATES THAT ARE TO BE INSTALLED ON STREETS WITH SLOPES, OR AS REQUESTED BY THE WATER RESOURCES DEPARTMENT, SHALL BE NEENAH FOUNDRY R-3210 TYPE "L" OR EQUAL.
 - GRADE ADJUSTMENTS SHALL BE MADE USING COMPOSITE RISER SECTIONS, "PRO-RING" BY CRETEX OR EQUAL. RISERS SHALL BE SIZED AND SHAPED TO TO THE CLEAR OPENING IN THE STRUCTURE. A MINIMUM OF 2-INCH AND A MAXIMUM OF 12-INCH ADJUSTMENT SHALL BE PROVIDED.
 - FRAMES AND GRATES SHALL BE SET IN ACCORDANCE WITH THE COMPOSITE RISER SECTIONS INSTALLATION PROCEDURE.
 - FRAMES AND GRATES SHALL BE SET 1-INCH BELOW GRADE TO ALLOW FOR PROPER DRAINAGE. THE PAVEMENT SHALL GRADUALLY SLOPE DOWN TO GRADE. SEE DETAIL HEREIN.
 - CATCH BASIN RUNGS ARE NOT TO BE INSTALLED UNLESS SHOWN ON CONTRACT DRAWINGS OR AS REQUESTED BY THE WATER RESOURCES DEPARTMENT.
 - ALL LIFTING HOLES AND OTHER DEFECTS SHALL BE PLUGGED WITH A PORTLAND CEMENT AND SAND MIXTURE PRIOR TO BACKFILLING.
 - CATCH BASINS LOCATED WITHIN THE COLLECTION SYSTEM SHALL BE A MIN 36" DIAMETER. CATCH BASINS THAT CONNECT TO OTHER SYSTEMS, SUCH AS PERFORATED PIPES, INFILTRATION SYSTEMS, ETC SHALL BE A MIN 48" DIAMETER. 24" SQUARE STRUCTURES SHALL BE APPROVED BY WATER RESOURCES DEPARTMENT PRIOR TO INSTALLATION. SEE STANDARD DETAIL THIS SHEET.
 - SHALLOWER SUMPS SHALL BE APPROVED BY THE WATER RESOURCES DEPARTMENT PRIOR TO INSTALLATION.
 - IF EXTERNAL DIAMETER OF CATCH BASIN STRUCTURE IS WITHIN 5- FEET OF WATER MAIN, INSULATION OF CATCH BASIN STRUCTURE IS REQUIRED. INSULATION SHALL BE "STYROFOAM" BRAND SM EXTRUDED POLYSTYRENE FOAM INSULATION MANUFACTURED BY DOW CHEMICAL, OR APPROVED EQUAL. PRIOR TO INSTALLING A CATCH BASIN WITHIN 5- FEET OF DRINKING WATER INFRASTRUCTURE, THE WATER RESOURCES ENGINEERING TEAM SHALL BE CONSULTED TO REVIEW HOW THE CATCH BASIN MAY BE RELOCATED OR MODIFIED TO AVOID CONFLICT.
 - ODOR CONTROL HOODS SHALL BE INSTALLED ON ALL OUTLET PIPES WHERE CATCH BASIN STRUCTURE IS CONNECTING TO THE COMBINED SEWER SYSTEM. ODOR CONTROL HOODS SHALL BE PPF CB HOODS BY EJ PRESCOTT, THE ELIMINATOR BY KLEANSTREAM, OR APPROVED EQUAL.

- KNOCKOUT STRUCTURE NOTES:**
- CATCH BASINS SHALL HAVE PRECAST CONCRETE MONOLITHIC BASES AND PRECAST RISER SECTIONS OTHERWISE SPECIFIED OR APPROVED BY THE WATER RESOURCES DEPARTMENT. CATCH BASIN STRUCTURE SHALL BE CAPABLE OF MEETING OR EXCEEDING AASHTO H-20 LOADING.
 - STEEL REINFORCEMENT SHALL CONFORM TO ASTM SPECIFICATION OF 0.12 sq.in./LF, USING #4 REINFORCING BARS.
 - PRECAST CONCRETE BASES SHALL BE SET ON A LEVEL FOUNDATION OF CRUSHED STONE AT LEAST 12-INCHES THICK.
 - JOINTS SHALL BE SEALED WITH A BUTYL RUBBER-BASED SEALANT CONFORMING TO ASTM C478.
 - FRAME AND GRATES SHALL BE CAST IRON MINIMUM CLASS 30 CONFORMING TO ASTM A48. CASTINGS SHALL BE CAPABLE OF MEETING OR EXCEEDING AASHTO H-20 LOADING. CASTINGS SHALL BE MANUFACTURED BY NEENAH FOUNDRY CO., E.L. LEBARON FOUNDRY CO., OR EQUAL. CATCH BASIN FRAME AND GRATES THAT ARE TO BE INSTALLED ON STREETS WITH NO SLOPES SHALL BE NEENAH FOUNDRY R-3405 TYPE "A" OR EQUAL.
 - CATCH BASIN FRAME AND GRATES THAT ARE TO BE INSTALLED ON STREETS WITH SLOPES, OR AS REQUESTED BY THE WATER RESOURCES DEPARTMENT, SHALL BE NEENAH FOUNDRY R-3210 TYPE "L" OR EQUAL.
 - GRADE ADJUSTMENTS SHALL BE MADE USING COMPOSITE RISER SECTIONS, "PRO-RING" BY CRETEX OR EQUAL. RISERS SHALL BE SIZED AND SHAPED TO TO THE CLEAR OPENING IN THE STRUCTURE. A MINIMUM OF 2-INCH AND A MAXIMUM OF 12-INCH ADJUSTMENT SHALL BE PROVIDED.
 - FRAMES AND GRATES SHALL BE SET IN ACCORDANCE WITH THE COMPOSITE RISER SECTIONS INSTALLATION PROCEDURE.
 - CATCH BASIN RUNGS ARE NOT TO BE INSTALLED UNLESS SHOWN ON CONTRACT DRAWINGS OR AS REQUESTED BY THE WATER RESOURCES DEPARTMENT.
 - ALL LIFTING HOLES, VOIDS BETWEEN PIPE AND KNOCKOUT OPENINGS AND OTHER DEFECTS SHALL BE PLUGGED WITH A PORTLAND CEMENT AND SAND MIXTURE PRIOR TO BACKFILLING.
 - SHALLOWER SUMPS SHALL BE APPROVED BY THE WATER RESOURCES DEPARTMENT PRIOR TO INSTALLATION.
 - IF EXTERNAL DIAMETER OF CATCH BASIN STRUCTURE IS WITHIN 5- FEET OF WATER MAIN, INSULATION OF CATCH BASIN STRUCTURE IS REQUIRED. INSULATION SHALL BE "STYROFOAM" BRAND SM EXTRUDED POLYSTYRENE FOAM INSULATION MANUFACTURED BY DOW CHEMICAL, OR APPROVED EQUAL. PRIOR TO INSTALLING A CATCH BASIN WITHIN 5- FEET OF DRINKING WATER INFRASTRUCTURE, THE WATER RESOURCES ENGINEERING TEAM SHALL BE CONSULTED TO REVIEW HOW THE CATCH BASIN MAY BE RELOCATED OR MODIFIED TO AVOID CONFLICT.

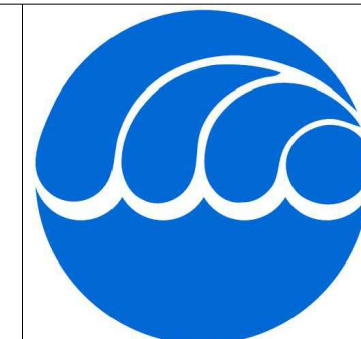
- DRYWELL NOTES:**
- CONCRETE=4,000 psi; STEEL REBAR=40,000 psi
 - STRUCTURES SHALL BE DESIGNED TO WITHSTAND H2O LOADING.
 - PROVIDE 24" X 24" CATCH BASIN FRAME AND COVER FOR DRYWELL WITHOUT DIRECT CONNECTIONS TO A CATCH BASIN STRUCTURE. FRAME AND GRATES SHALL BE CAST IRON MINIMUM CLASS 30 CONFORMING TO ASTM A48. CASTINGS SHALL BE CAPABLE OF MEETING OR EXCEEDING AASHTO H-20 LOADING. CASTINGS SHALL BE MANUFACTURED BY NEENAH FOUNDRY CO., E.L. LEBARON FOUNDRY CO., OR EQUAL.
 - CATCH BASIN FRAME AND GRATES THAT ARE TO BE INSTALLED ON STREETS WITH NO SLOPES SHALL BE NEENAH FOUNDRY R-3405 TYPE "A" OR EQUAL. CATCH BASIN FRAME AND GRATES THAT ARE TO BE INSTALLED ON STREETS WITH SLOPES, OR AS REQUESTED BY THE WATER RESOURCES DEPARTMENT, SHALL BE NEENAH FOUNDRY R-3210 TYPE "L" OR EQUAL.
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 - FRAMES AND GRATES SHALL BE SET IN ACCORDANCE WITH THE COMPOSITE RISER SECTIONS INSTALLATION PROCEDURE.
 - TRANSITION DROP ELBOW SHALL BE INSTALLED SO THAT THE CROWN OF THE DISCHARGE ELBOW IS A MIN 2 INCHES BUT NOT MORE THAN 6 INCHES BELOW THE INVERT OF THE LAST PERFORATED ROW.
 - DROP BOWL SHALL BE PROVIDED WHERE DRYWELL INLET PIPE IS CONNECTED TO AN EXTERNAL CATCH BASIN STRUCTURE DIRECTLY UPSTREAM OF DRYWELL. DROP BOWL SHOULD BE INSTALLED WITH ENOUGH CLEARANCE FROM UNDERSIDE OF STRUCTURE TO ENSURE MAINTENANCE ACCESS.
 - CHECK VALVE REQUIRED IN INSTALLATIONS WHERE DRYWELL IS CONNECTED TO SEWER INFRASTRUCTURE. CHECK VALVE IS TO BE CHECKMATE ULTRAFLEX BY TIDEFLEX, SERIES 700 PROFLEX BY PROCO PRODUCTS OR EQUAL.
 - NON-WOVEN GEOTEXTILE SHALL BE AASHTO CLASS 2 NON-WOVEN GEOTEXTILE, ADS 601T, MIRAFI 160N, OR APPROVED EQUAL.
 - GEOTEXTILE SHALL BE ADS BX154GG, MIRAFI BXG120, TENSAR BIAXIAL BX1500, OR APPROVED EQUAL.

THE STANDARDS ARE TO BE USED BY ENGINEERING PROFESSIONALS FOR PROJECTS WITHIN THE CITY. THE STANDARD DETAILS MAY NEED TO BE MODIFIED WITH CITY APPROVAL TO MEET PROJECT SPECIFIC APPLICATIONS. THE STANDARDS DO NOT COVER ALL ASPECTS OF WATER RESOURCES INFRASTRUCTURE AND IT IS THE RESPONSIBILITY OF THE DESIGNER TO ENSURE CONSTRUCTION DETAILS ARE COMPLETE FOR SPECIFIC APPLICATIONS. THE CITY IS NOT RESPONSIBLE FOR THE USE OF THESE STANDARDS FOR APPLICATIONS THAT ARE NOT APPROPRIATE. THE STANDARD DETAILS WILL BE PERIODICALLY UPDATED. IT IS THE RESPONSIBILITY OF THE DESIGNER TO CONFIRM THE STANDARDS THEY ARE USING ARE THE MOST RECENT VERSIONS.

1	REV A - INITIAL RELEASE	OCT 2023
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PUBLIC WORKS
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TYPICAL STORMWATER
INFRASTRUCTURE DETAILS

DESIGNED AEW	RFS NO.
DRAWN AEW	SCALE NTS
CHECKED	DRAWING NO.
DATE OCTOBER 2023	SHEET 1 OF 1