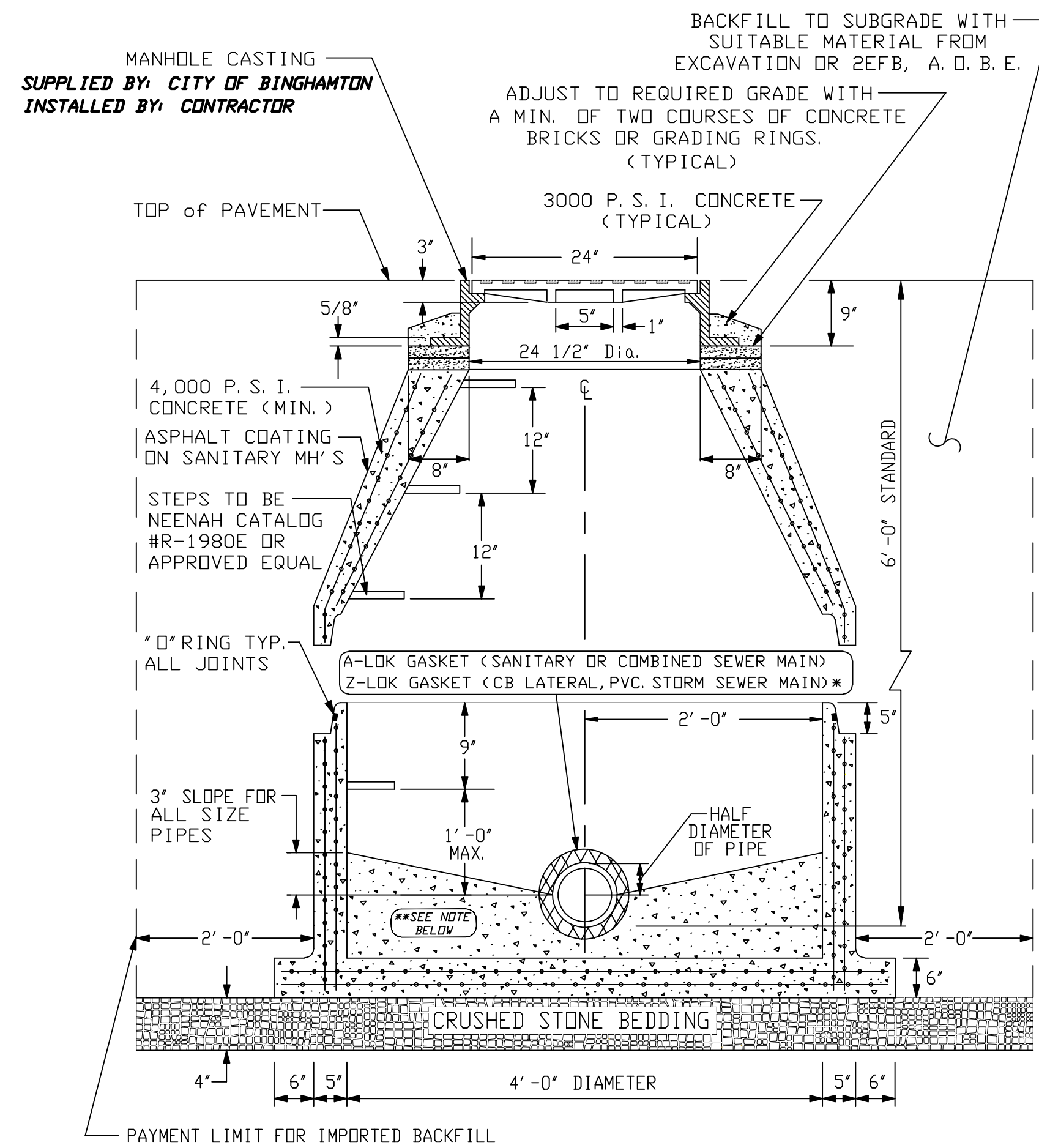


**STANDARD MANHOLE FRAME & GRATE**  
**TO BE SUPPLIED BY THE CITY OF BINGHAMTON**

NEENAH CASTING R-1713 (OR APPROVED EQUAL)  
 A. S. T. M. A 48-83, CLASS 35  
 Not To Scale

- STORM LID: SOLID PLATEN, TYPE C, REG. SEAT, GI CLASS 35,  
 1 OPEN PICK HOLE, LETTERED "STORM SEWER"
- SANITARY LID: SOLID PLATEN, TYPE B, T-SEAL, 2 F PK, AC,  
 GI CLASS 35, LETTERED "SANITARY SEWER"



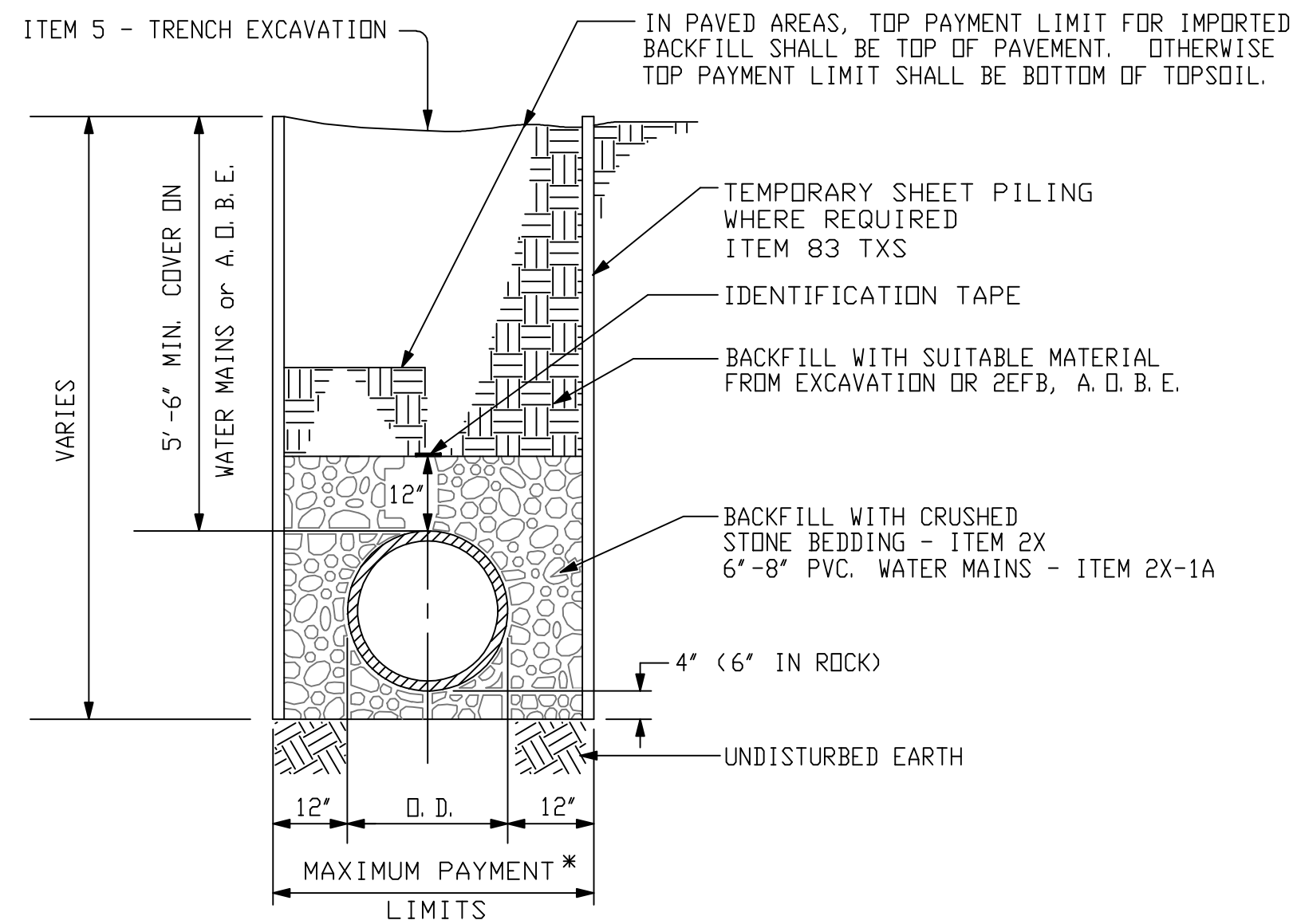
**STANDARD MANHOLE - ITEM 202**  
 CONCENTRIC MANHOLE  
 Not To Scale

\* NOTE: Z-LOK GASKETS MAY BE OMITTED IF CONNECTIONS ARE MODIFIED (SEE SPECIFICATIONS).

\*\* NOTE: A POURED CONCRETE INVERT REQUIRED ONLY ON SANITARY SEWER MANHOLES. CHANGES IN PIPE DIRECTION (GREATER THAN OR LESS THAN 180°) SHALL HAVE A POURED CONCRETE SWEEP INVERT.

NOTES:

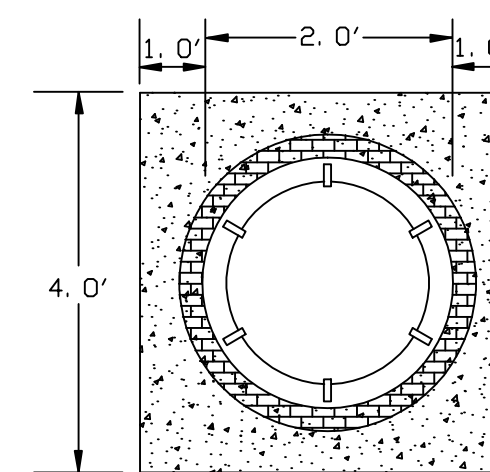
1. PRECAST REINFORCED CONCRETE UNITS SHALL CONFORM TO THE REQUIREMENTS OF A. S. T. M. DESIGNATIONS C-478-78a PRECAST CONCRETE MANHOLE RISERS AND TOPS.
2. ALL PRECAST UNITS SHALL BE SET ON A MINIMUM OF 4" CRUSHED STONE BEDDING.



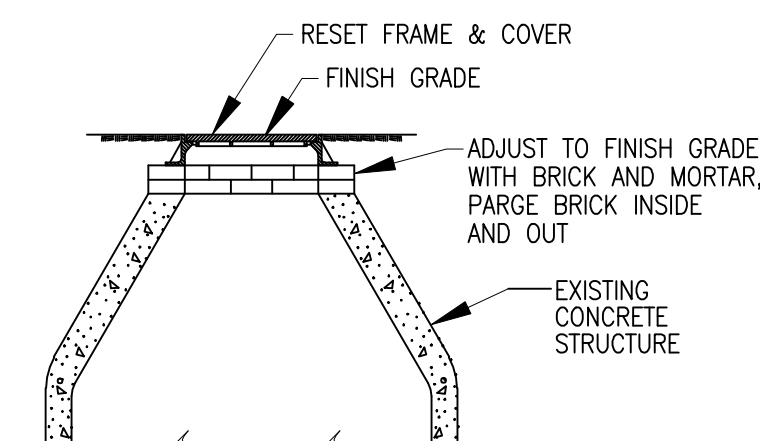
**DETAIL**  
 EXCAVATION AND BACKFILL  
 FOR PIPES UNDER 24" DIA.  
 AND ALL WATER MAINS  
 Not To Scale

\* MAXIMUM PAYMENT LIMIT:  
 WHERE USE OF DRAG SHIELD IS REQUIRED TO MEET SAFETY STANDARDS DUE TO DEPTH OF PIPE OR SOIL CONDITIONS, THEN MAXIMUM LIMIT IS TO BE THE OUTSIDE WIDTH OF SHIELD. QUANTITIES TO BE COMPUTED ON THAT WIDTH AS MEASURED BY THE ENGINEER. CONTRACTOR SHALL UTILIZE SMALLEST WIDTH SHIELD THAT IS FEASIBLE.  
**NO PAYMENT FOR DRAG SHIELD USED BY CONTRACTORS.**

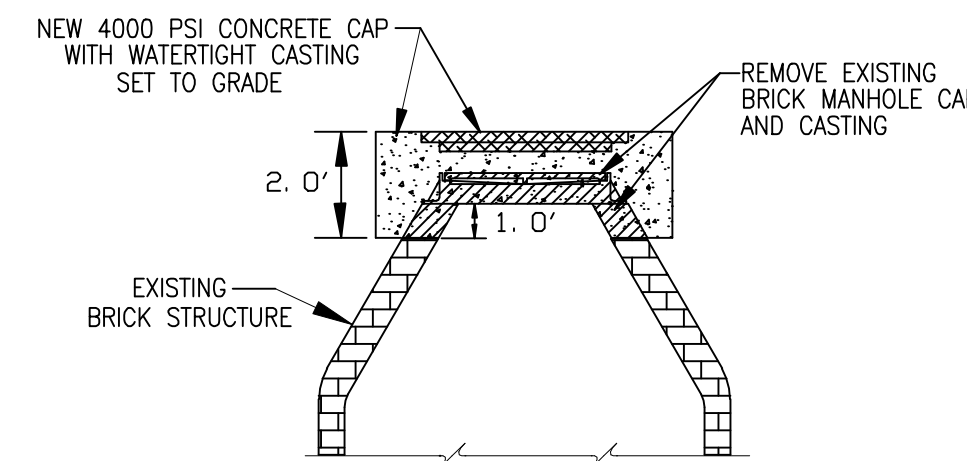
NOTE: INSTALL #4 DOWELS TO A DEPTH OF 9" MIN. AT 12" O/C AND EPOXY GROUT IN PLACE. INSTALL A DOUBLE MAT OF #4 BARS AT 12" O/C, 2" MIN. FROM TOP AND BOTTOM OF CAP. TIE HORIZONTAL BARS TO DOWELS, BOTTOM BARS TO INSIDE, TOP BARS TO OUTSIDE AT THE CASTING OPENING.



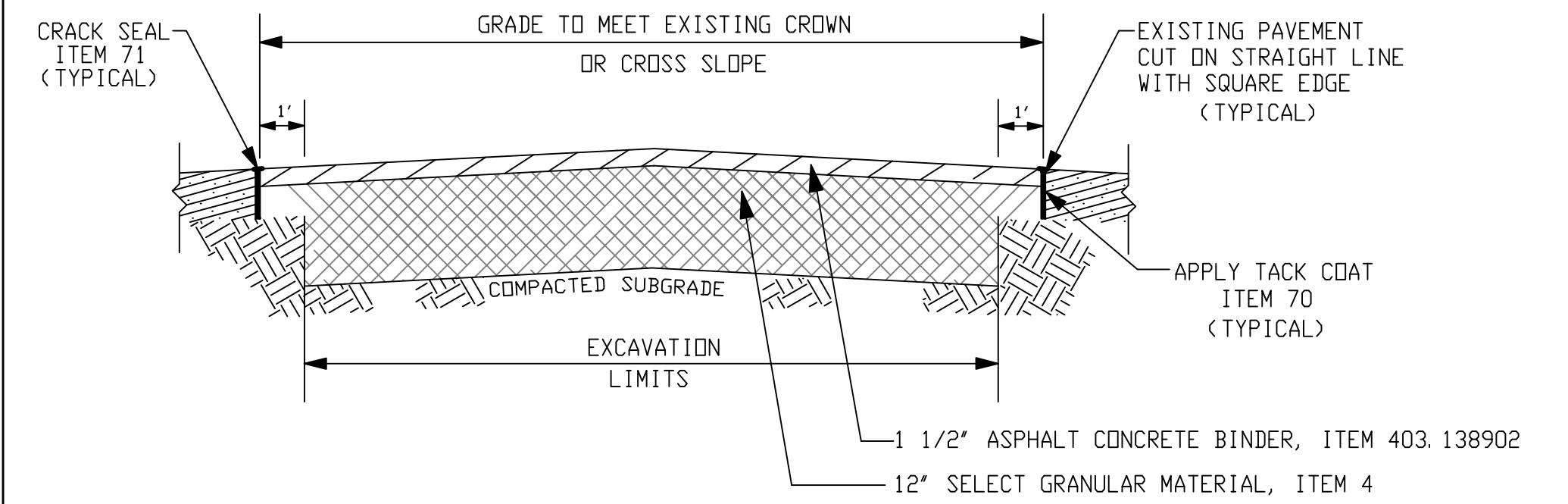
PLAN



**DETAIL FOR REGRADING**  
 EXISTING MANHOLE STRUCTURE  
 TO MEET EXISTING GRADE  
 (ITEMS 510 & 512)  
 Not To Scale

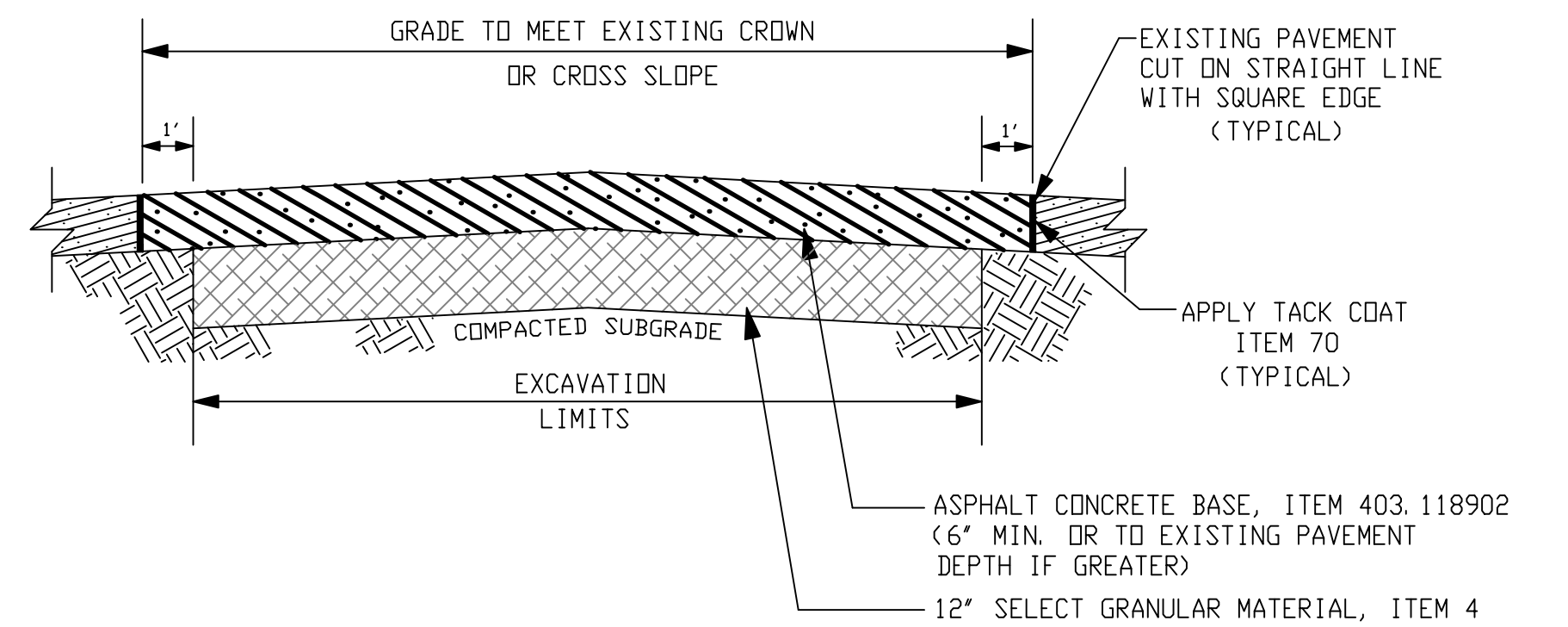


**DETAIL FOR NEW MANHOLE CAP**  
 & WATERTIGHT CASTING  
 (ITEM 18)  
 Not To Scale



NOTE:  
 DETAIL SHOWN IS TYPICAL SECTION FOR TRENCH EXCAVATION AND RELATED WORK. FOR ACTUAL PAVEMENT REPLACEMENT DETAILS FOR STREETS IN THIS CONTRACT, REFER TO TYPICAL STREET SECTION & APPLICABLE NOTES.

**DETAIL**  
 PAVEMENT RESTORATION FOR TRENCH EXCAVATIONS  
 IN STREETS RECEIVING 6" MILL  
 Not To Scale



NOTE:  
 DETAIL SHOWN IS TYPICAL SECTION FOR TRENCH EXCAVATION AND RELATED WORK ON STREETS TO BE MILLED & PAVED (BY OTHERS).

**DETAIL**  
 PAVEMENT RESTORATION FOR TRENCH EXCAVATIONS  
 RECEIVING 2" MILL  
 Not To Scale

DATE	REVISION
<b>MANHOLE, EXCAVATION &amp; RESTORATION</b>	
<b>STANDARD DETAILS</b>	
DESIGNED: C.O.B.	 <b>City of Binghamton</b> Matthew T. Ryan, Mayor DEPARTMENT OF ENGINEERING
DRAWN: W.A.R.	
CHECKED: D.J.F.	
DATE: MARCH 2004	
SCALE: NOTED	
SHEET: 1 OF 1	DRAWING NO. 201X-XX