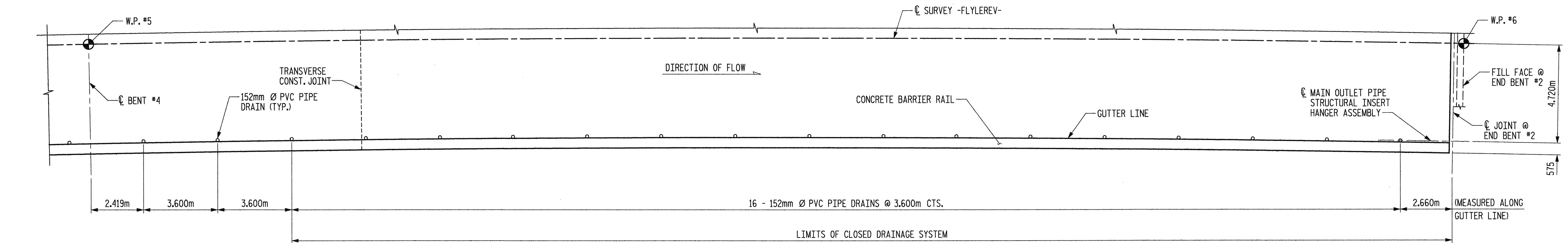
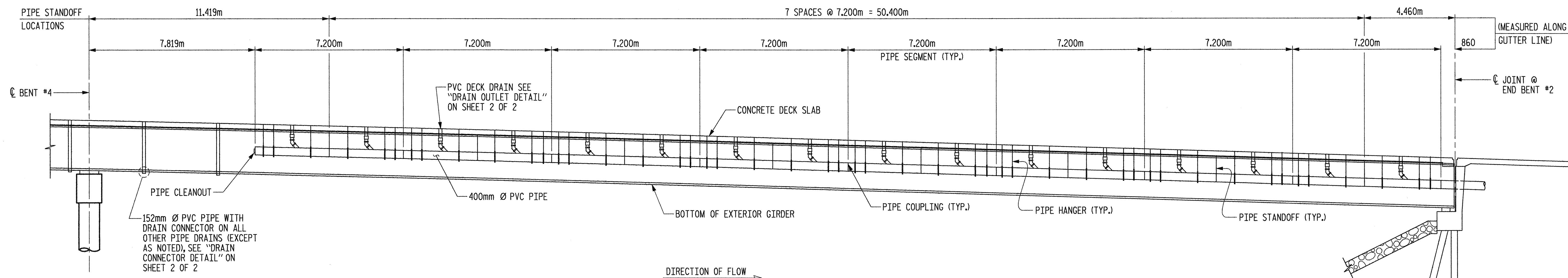


SPAN "E"



PIPE LAYOUT PLAN

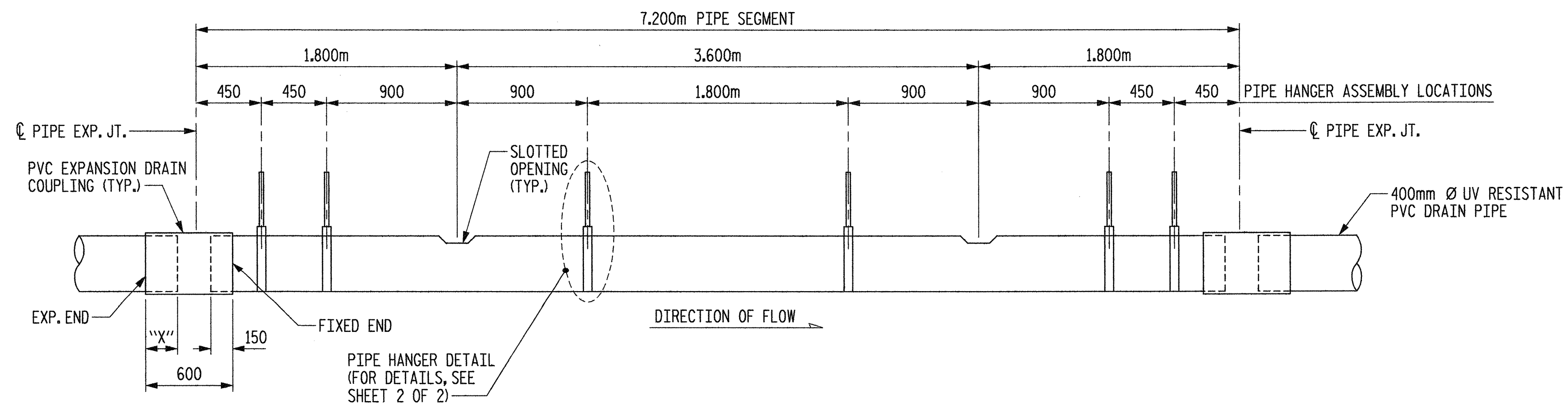


ELEVATION

NOTE: CONCRETE BARRIER RAIL NOT SHOWN FOR CLARITY.

NOTES:

- PIPE HANGER ASSEMBLY SHALL BE GALVANIZED.
- THE UNIT CONTRACT PRICE BID FOR THE LUMP SUM OF THE "STRUCTURAL DRAINAGE SYSTEM" SHALL INCLUDE FURNISHING AND INSTALLING OF ALL DRAINAGE PIPES, PIPE HANGERS, EXPANSION JOINTS AND ALL OTHER ACCESSORIES.
- FOR PIPE STANDOFF DETAIL, SEE SHEET 2 OF 2.
- FOR STRUCTURE DRAINAGE SYSTEM, SEE SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL SUBMIT A PLAN FOR THE DRAINAGE SYSTEM, INCLUDING, BUT NOT LIMITED TO, ATTACHMENTS TO THE BRIDGE, PIPE ALIGNMENT AND PIPE LENGTHS, AND ALL NECESSARY FITTINGS, ELBOWS, WYES, ADAPTERS, GUIDES AND JOINTS.
- LOCATION OF HANGERS AND PIPE JOINTS SHALL BE ADJUSTED BY THE CONTRACTOR AS NECESSARY TO CLEAR CONNECTOR PLATES, BEARING STIFFENERS AND FIELD SPLICES. HANGER SPACING FOR PVC PIPE SHALL NOT EXCEED 1.800m MAX. CENTERS.
- PVC DECK DRAINS SHALL BE PAINTED WITH TWO COATS OF BROWN PRIMER MEETING REQUIREMENTS OF ARTICLE 1080-12 OF THE STANDARD SPECIFICATIONS. EACH COAT SHALL BE 0.050mm THICK. DECK DRAINS SHALL BE ROUGHENED PRIOR TO PAINTING. NO SEPARATE PAYMENT SHALL BE MADE FOR PAINTING PVC DECK DRAINS AS THIS IS CONSIDERED INCIDENTAL TO THE PAY ITEM FOR REINFORCED CONCRETE DECK SLAB.
- THE DRAINAGE SYSTEM SHALL DRAIN TOWARD END BENT #2. THE 400mm Ø PVC PIPE SHALL PASS THROUGH END BENT #2 AND SHALL BE CONNECTED TO THE ROADWAY DRAINAGE SYSTEM.
- DRAIN PIPE SYSTEM SHALL BE PVC SCH-40 MATERIAL MEETING SPECIFICATIONS OF ASTM D-1784 AND DIMENSIONS MEETING SPECIFICATIONS OF ASTM D-1785.
- CONTRACTOR SHALL PROVIDE EXPANSION COUPLERS IN DRAIN PIPE AS NECESSARY. EXPANSION COUPLERS SHALL BE LEAK PROOF CERTIFIED. COUPLERS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- PIPING SHALL BE LAID WITH BELL ENDS FACING IN THE UPSTREAM DIRECTION.
- THE CONTRACTOR SHALL COORDINATE CONNECTION OF BRIDGE DRAINAGE SYSTEM TO ROADWAY SYSTEM. ALL COSTS ASSOCIATED WITH COORDINATION AND CONNECTED SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR "STRUCTURE DRAINAGE SYSTEM".



EXPANSION COUPLING DETAIL

PVC EXPANSION DRAIN COUPLINGS SHALL CONTAIN A METHOD OF RESTRAINT TO PREVENT PULLOUT

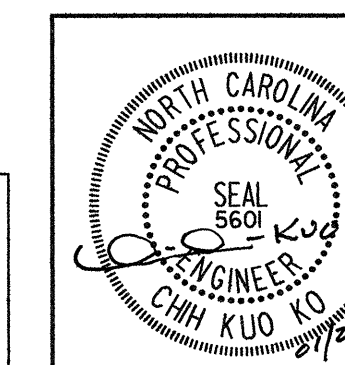
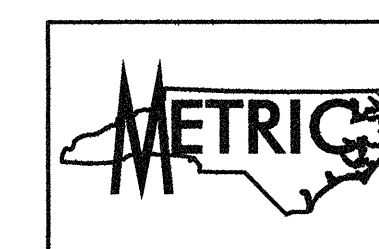
INSTALLATION TEMPERATURE	"X"
LESS THAN 0°C	220
0°C TO 21°C	260
GREATER THAN 21°C	300

PROJECT NO. R-2552AA  
 WAKE-JOHNSTON COUNTY  
 STATION: 28+31.359 -I1Y1-

SHEET 1 OF 2

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

SUPERSTRUCTURE  
 STRUCTURE DRAINAGE SYSTEM DETAILS



Plans prepared by:  
**KO & ASSOCIATES, P.C.**  
 Consulting Engineers  
 1011 SCHUB DR. SUITE #202  
 RALEIGH, N.C. 27606  
 For Division of Highways

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.  
 5-97  
 TOTAL SHEETS  
 4/29

DWG. NO. 14

PLOT: 01/27/2005 8:24:22 PM KO & ASSOCIATES, P.C.  
 FILE NAME: F:\2552AA\JUL04.DWG

DRAWN BY: B.E. LANNING DATE: JAN. 2005  
 CHECKED BY: J.C. KO / A.K. ORR DATE: JAN. 2005