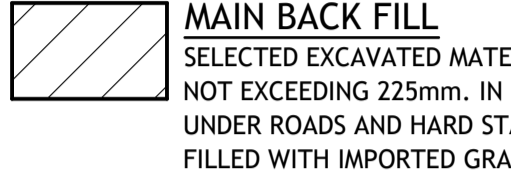


Bc = EXTERNAL DIAMETER OF PIPE

**UNIFORM SOILS**  
A = Bc OR 100mm WHICHEVER IS GREATER

**ROCK & SOILS CONTAINING HARD SPOTS**  
A = Bc OR 200mm WHICHEVER IS GREATER

NEEDLE PUNCHED GEOTEXTILE WRAPPED AROUND GRANULAR PIPE BEDDING TO PREVENT MIGRATION OF FINES FROM SURROUNDING SOILS. GEOTEXTILE NOT REQUIRED IN COHESIVE (CLAY) MEASURES



**PIPE BEDDING DETAILS**  
CLASS 5  
SCALE 1:20

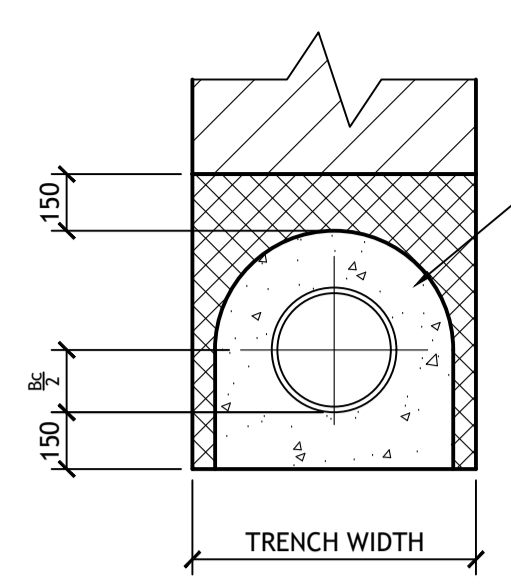
PIPE BEDDING MATERIAL SHALL CONSIST OF FREE-DRAINING, HARD, CLEAN, CHEMICALLY STABLE GRAVEL, CRUSHED STONE OR CRUSHED SLAG, GRADED IN ACCORDANCE WITH THE FOLLOWING TABLE. THE MATERIAL SHALL HAVE A COMPACTION FRACTION VALUE NOT EXCEEDING 0.2.

B.S. 410 TEST SIEVE	PERCENTAGE BY MASS PASSING			
	TYPE A40	TYPE A20	TYPE A14	TYPE A10
63mm	100	-	-	-
37.5mm	85-100	100	-	-
20mm	0-25	85-100	100	-
14mm	-	-	85-100	100
10mm	0-5	0-25	0-50	85-100
5mm	-	0-5	0-10	0-25
2.36mm	-	-	-	0-5

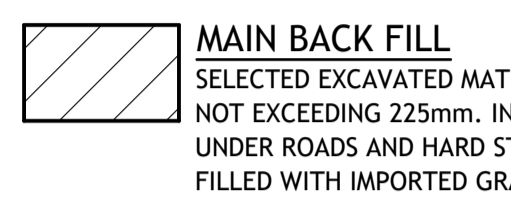
THE BEDDING MATERIAL TYPE SHALL BE CHOSEN ACCORDING TO PIPE SIZE IN ACCORDANCE WITH THE FOLLOWING TABLE.

NOMINAL PIPE SIZE mm	BEDDING MATERIAL
LESS THAN 300	A10
300 - 525	A14

TRENCH WIDTHS	
PIPE Ø	WIDTH
100	550
150	600
225	700
300	750
375	1050

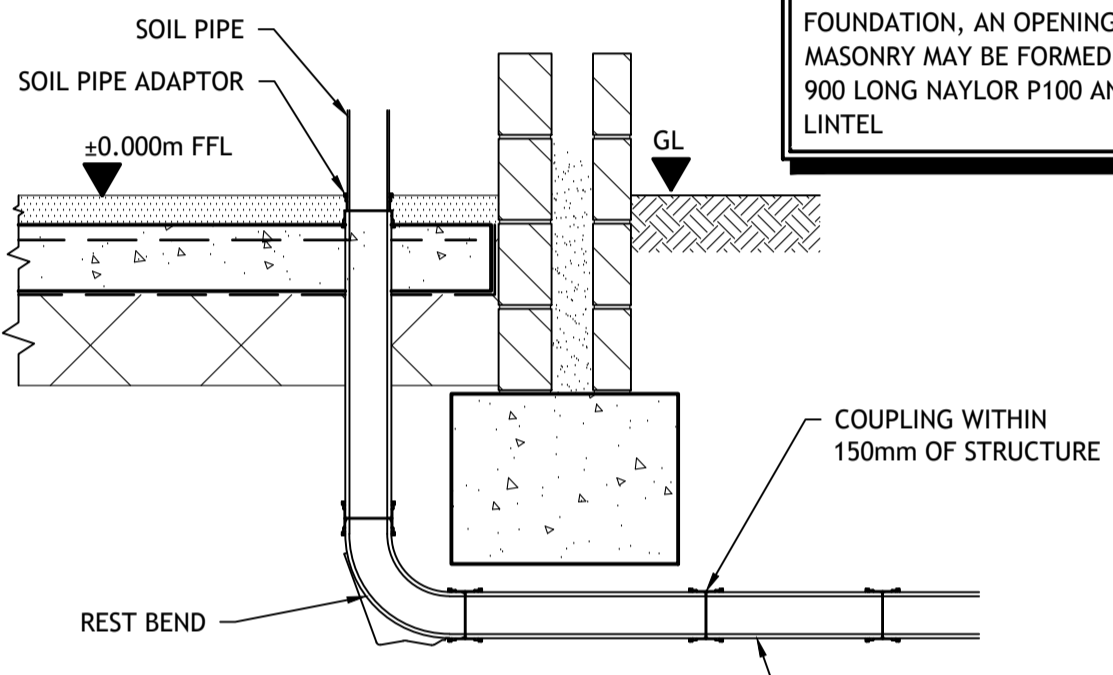


MINIMUM 150mm CONCRETE SURROUND AS SHOWN OR TO FULL TRENCH WIDTH. JOINTS REQUIRED IN SURROUND AT 5m MAXIMUM CENTRES USING 25mm COMPRESSIBLE FILLER BOARD ACROSS SECTION AT JOINT POSITIONS

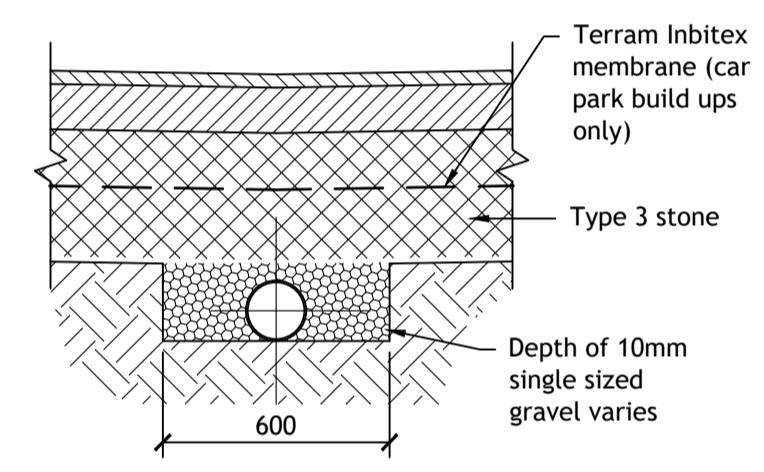


**CONCRETE SURROUND DETAIL**  
WHERE COVER LESS THAN 1.2m  
UNLESS AGREED OTHERWISE WITH BUILDING CONTROL  
SCALE 1:20

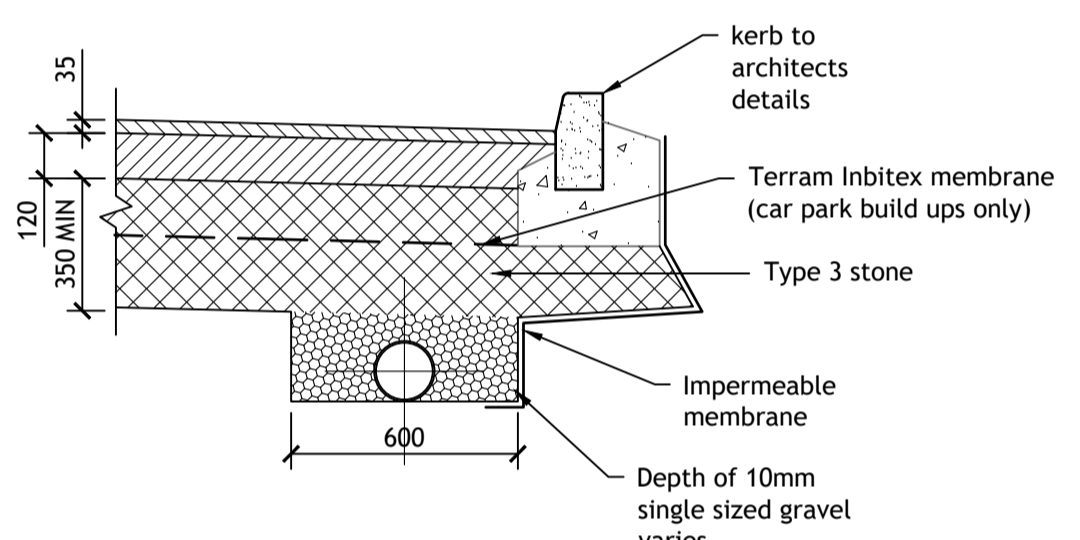
**NOTE**  
WHERE PIPES PASSE ABOVE A FOUNDATION, AN OPENING IN THE MASONRY MAY BE FORMED WITH A 900 LONG NAYLOR P100 AND P140 LINTEL



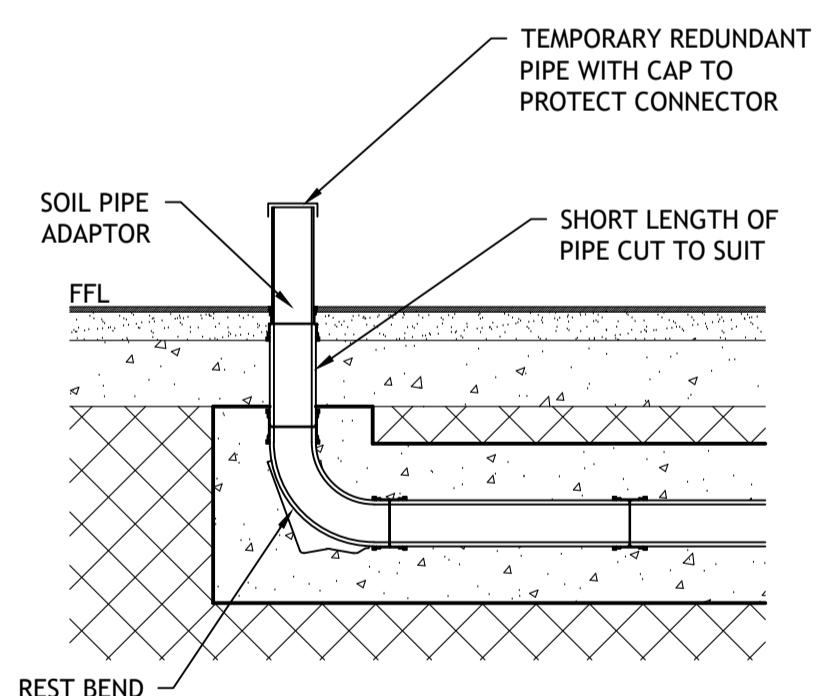
**SOIL & VENT PIPE DETAIL**  
(CLOSE TO WALL)  
ALL DRAINAGE BENEATH THE SLAB IS TO BE ENCASED IN A MINIMUM OF 150mm CONCRETE  
SCALE 1:20



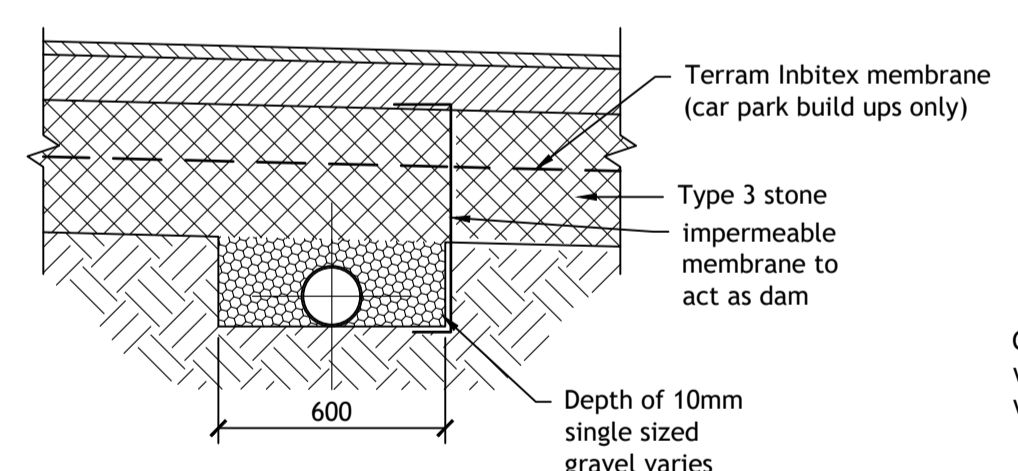
**DETAIL OF FRENCH DRAIN**  
WHERE PIPE IS CENTRAL TO FORMATION FALLS  
SCALE 1:20



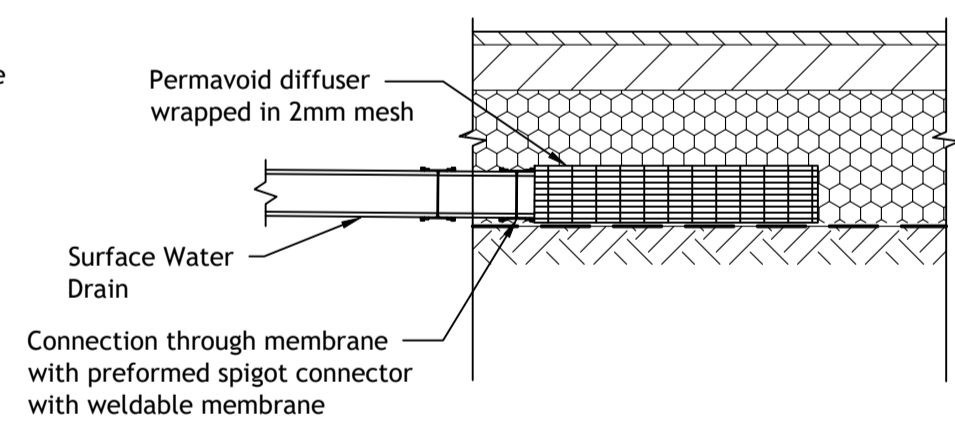
**DETAIL OF FRENCH DRAIN**  
ADJACENT KERB  
SCALE 1:20



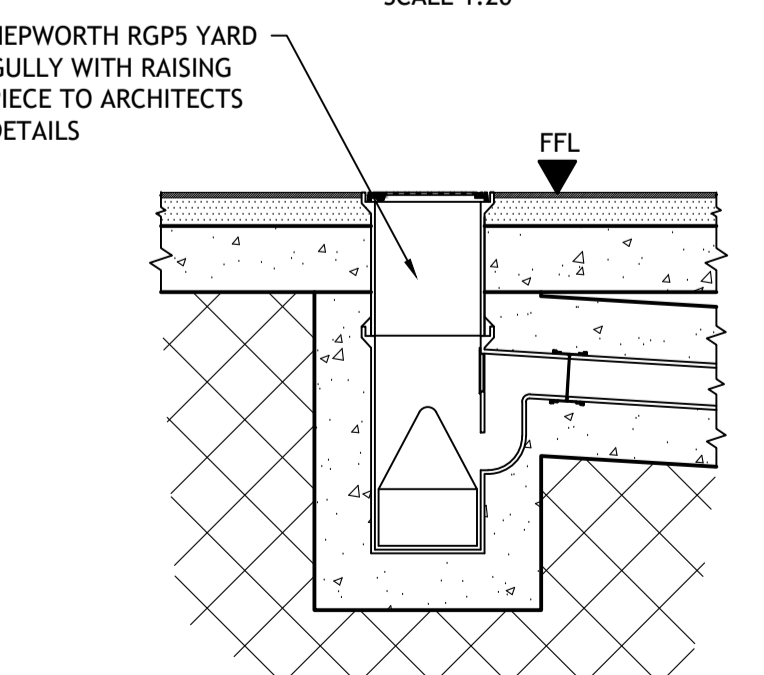
**SVP/STUB STACK DETAIL**  
SCALE 1:20



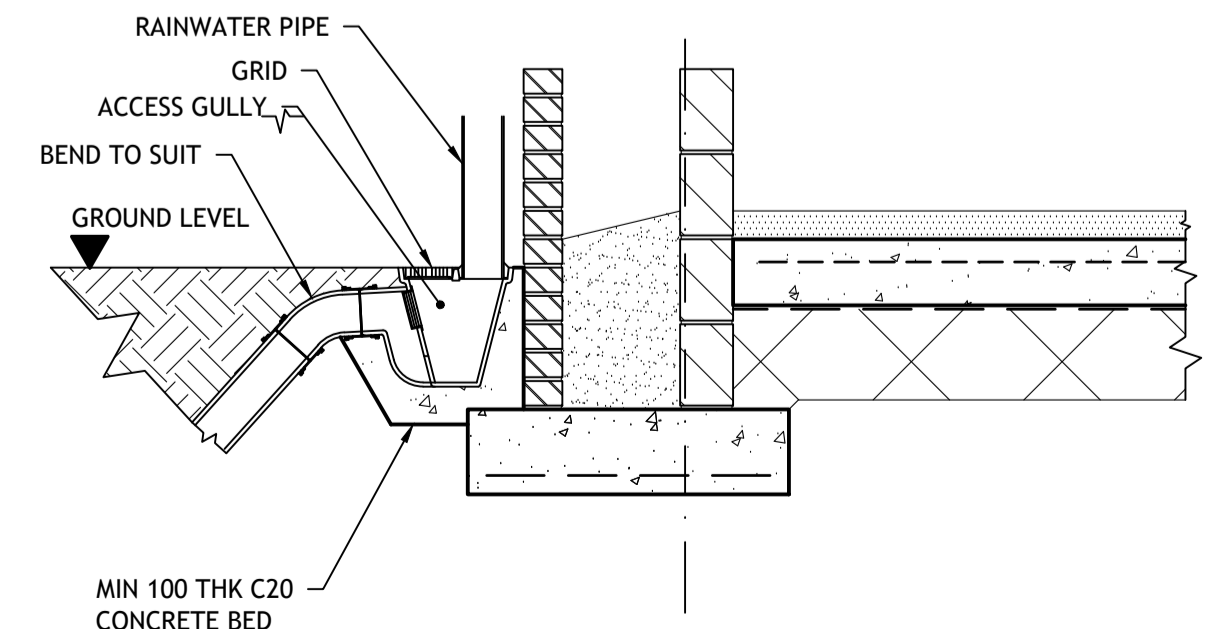
**DETAIL OF FRENCH DRAIN**  
WHERE PIPE IS PART WAY DOWN FORMATION SLOPE  
SCALE 1:20



**TYPICAL PERMAVOID DIFFUSER DETAIL**  
TO POROUS CAR PARK AREA  
SCALE 1:20



**FLOOR GULLY DETAIL**  
GULLY GRATING DETAIL TO BE TAKEN FROM HARRIS PARTNERSHIP DRAWINGS  
SCALE 1:20



**RAINWATER PIPE AND BACK INLET GULLY**  
SCALE 1:20

- CDM GENERAL KEY**
- 1. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION
  - 2. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECTURAL AND STRUCTURAL DRAWINGS INFORMATION
  - 3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  - 4. ALL LEVELS ARE IN METRES RELATIVE TO ORDNANCE DATUM.
  - 5. ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION
- DRAINAGE**
- THIS DRAWING USES THE ARCHITECTURAL DRAWING AS A BACKGROUND. THE CONTRACTOR SHOULD USE ARCHITECTURAL DRAWINGS FOR SETTING OUT OF ALL POP-UPS AND ABOVE GROUND DRAINAGE POSITIONS.
  - REFERENCE SHOULD BE MADE TO ALL OTHER DRAINAGE DRAWINGS PROVIDED BY SWF CONSULTING WHICH GIVES CONSTRUCTION DETAILS.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE DRAINAGE SPECIFICATION PREPARED FOR THIS PROJECT.
  - THE DESIGN OF THE PIPES HAS BEEN BASED ON THE FOLLOWING:
    - 1000 FOWL WATER PIPE: WAVIN OSMADRAIN
    - 1500 OR LARGER FOUL WATER PIPE: WAVIN ULTRARIB
    - 1500 OR LARGER SURFACE WATER PIPE: WAVIN TWINWALL.
 ALTERNATIVE PRODUCTS MAY BE USED WITH PRIOR APPROVAL FROM SWF CONSULTING.
  - THE EXACT LOCATION OF THE OUTFALL PIPE/MANHOLE IS TO BE CHECKED AND FIRMED TO SWF CONSULTING PRIOR TO COMMENCEMENT OF ANY DRAINAGE WORKS.
  - REFERENCE SHOULD BE MADE TO ANY CCTV SURVEY, SEWER RECORDS WHICH INDICATE THE EXISTING DRAINAGE SYSTEMS.
  - ON COMPLETION OF THE CONTRACT, THE PIPES AND OIL SEPARATOR SHALL BE JET CLEANED TO REMOVE ANY SILT OR CONSTRUCTION DEBRIS AND A CCTV SURVEY SHOULD BE UNDERTAKEN.
  - ONCE THE AS-BUILT SURVEY HAS BEEN COMPLETED A COPY OF THE SURVEY LOGS SHOULD BE ISSUED TO SWF CONSULTING TOGETHER WITH THE VIDEO FOOTAGE FOR THEIR COMMENT WITH DUPLICATE COPIES BEING ISSUED TO THE CDM CO-ORDINATOR FOR INCLUSION IN THE HEALTH & SAFETY FILES.
  - COVER LEVELS ARE INDICATIVE AND MAY NEED TO BE ADJUSTED TO SUIT THE ACTUAL FINISHED LEVELS OF THE EXTERNAL AREAS.
  - GRADIENTS INDICATED ON PIPES ARE MINIMUM GRADIENTS REQUIRED. HOWEVER, MANHOLE INVERT LEVELS ARE TO TAKE PRECEDENCE OVER THESE GRADIENTS.
  - POSITIONS OF MANHOLES, GULLYS AND DRAINAGE ARE TO BE SET OUT BY THE CONTRACTOR TO AVOID WHITE LINING DELINEATING CAR PARKING AREAS, KERB LINES ETC.

**NOTE**  
THE ARCHITECTURAL BACKGROUNDS ARE A VISUAL REPRESENTATION OF THE PROPOSED BUILDING LAYOUT, BUT ARE NOT NECESSARILY DIMENSIONALLY ACCURATE AND THUS MAY NOT RELATE TO THE LOCATION OF THE STRUCTURAL MEMBERS

**ABBREVIATIONS**

CL - COVER LEVEL	FG - FLOOR GULLY
IL - INVERT LEVEL	RE - RODDING EYE
RG - ROAD GULLY	SVP - SOIL & VENT PIPE
YG - YARD GULLY	SS - STUB STACK

Rev	Date	Description	By	Chkd
C02	21.07.23	A2: PPIC details moved to drawing 1502.	DR	PSS
C01	11.07.23	A2: Issued for Construction	DR	PSS
P01	19.05.23	S1: Issued for Coordination	DR	PSS

Project  
**LEA GATE PRIMARY SCHOOL**  
GREAVES TOWN LANE, LEA  
PRESTON

Client  
**LANCASHIRE COUNTY COUNCIL**

Drawing Title  
**DRAINAGE**  
DRAINAGE DETAILS

Project - Originator - Func. - Spat. - Form - Disc. - Number  
**9378-SWF-XX-XX-D-C-1501**

Scale 1: 20	@ A1	Date MAY 2023	By DR	Chkd PSS
Suitability Status	Revision	Classification		
S1: APPROVED FOR CONSTRUCTION	C02	PM_40_40		

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