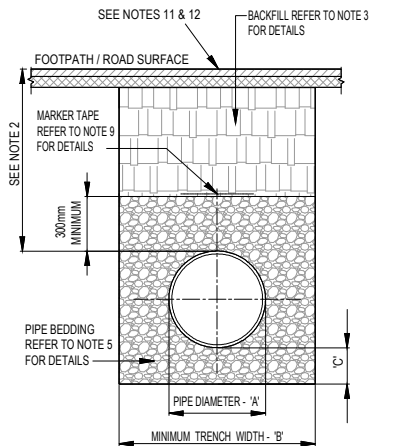
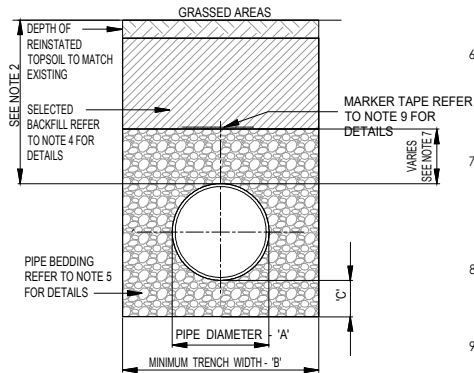


TRENCH BACK FILL AND BEDDING NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE.
- THE MINIMUM DEPTH OF COVER FROM THE FINISHED SURFACE TO THE CROWN OF GRAVITY PIPES WITHOUT PROTECTION SHOULD BE AS FOLLOWS:
 - GARDENS AND PATHWAYS WITHOUT ANY POSSIBILITY OF VEHICULAR ACCESS - DEPTH NOT LESS THAN 0.5 M. [THIS WOULD NORMALLY RELATE TO DRAINS IN PRIVATE PROPERTY, SHALLOW PIPES OF THIS NATURE ARE UNDESIRABLE AND SHOULD BE INSTALLED IN ACCORDANCE WITH THE CURRENT BUILDING REGULATIONS].
 - DRIVEWAYS, PARKING AREAS AND YARDS WITH HEIGHT RESTRICTIONS TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.75m.
 - DRIVEWAYS, FOOTWAYS, PARKING AREAS AND NARROW STREETS WITHOUT FOOTWAYS (E.G. MEWS DEVELOPMENTS) WITH LIMITED ACCESS FOR VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.9 M.
 - DEPTHS OF SEWERS IN GATED ESTATES SHALL BE SIMILAR TO THAT OUTLINED ABOVE.
 - AGRICULTURAL LAND AND PUBLIC OPEN SPACE - DEPTH NOT LESS THAN 0.9M.
 - OTHER HIGHWAYS AND PARKING AREAS WITH UNRESTRICTED ACCESS TO VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 1.2m.
- CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS IS TO BE USED AS BACKFILL MATERIAL WHERE THE SEWER MAIN IS LOCATED IN ROADS, FOOTPATHS OR WHEN THE NEAREST PART OF THE TRENCH IS WITHIN 1m OF THE PAVED EDGE OF THE ROADWAY. CLAUSE 804 / 808 IS TO BE COMPACTED AS PER CLAUSE 802 OF THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS. CLAUSE 808 IS TO BE USED WITHIN 500mm OF CEMENT BOUND MATERIALS, CONCRETE PAVEMENTS, CONCRETE STRUCTURES OR CONCRETE PRODUCTS. OTHERWISE CLAUSE 804 MAY BE USED. ALTERNATIVE BACKFILL MATERIAL TO THAT DESCRIBED ABOVE (CLAUSE 804 OR CLAUSE 808) OF THE PIPE TRENCH WILL ONLY BE ALLOWED BY IRISH WATER WHERE THE ROADS AUTHORITY IN WHOSE FUNCTIONAL AREA THE DEVELOPMENT IS LOCATED, PROVIDES WRITTEN APPROVAL TO THE DEVELOPER TO THE USE SUCH ALTERNATIVE MATERIAL. EVIDENCE OF THIS WRITTEN APPROVAL TO BE PROVIDED TO IRISH WATER IN ADVANCE OF THE COMMENCEMENT OF WORKS.
- SELECTED EXCAVATED MATERIAL COMPLYING WITH THE REQUIREMENTS OF "ACCEPTABLE MATERIAL" AS OUTLINED ON CLAUSE 601 OF THE TI SPECIFICATION FOR ROADWORKS, TABLE 6/1, CLASS 8, CLASS 2, MAY BE USED IN GREEN-FIELD AREAS ABOVE GRANULAR PIPE SURROUND MATERIAL SUBJECT TO REVIEW BY IRISH WATER.
- PIPE BEDDING SHALL COMPLY WITH WIS 4-08-02 AND IGN 4-08-01. THE PIPE BEDDING GRANULAR MATERIAL SHALL BE 14mm TO 5mm (d/D 2/14) GRADED AGGREGATE OR 10mm (d/D 4/10) SINGLE SIZED AGGREGATE TO IS EN 13242. CONCRETE BED, HAUNCH, & SURROUND, WHERE REQUIRED, SHALL BE TO STD-WW-08.
- IN SOFT GROUND CONDITIONS (CBR < 5) THE MATERIAL SHOULD BE EXCAVATED AND DISPOSED OF IN ACCORDANCE WITH THE WASTE MANAGEMENT ACT AND CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS SHALL REPLACE THE EXCAVATED MATERIAL, WRAPPED IN GEO-TEXTILE WRAPPING. ALTERNATIVELY, SPECIAL PIPE SUPPORT ARRANGEMENTS, INCLUDING PILING ETC., MAY BE REQUIRED WHERE THE DEPTH OF SOFT MATERIAL IS EXCESSIVE. SUCH ARRANGEMENTS SHALL BE SUBJECT TO ASSESSMENT BY IRISH WATER BEFORE ADVANCING WITH THE WORK.
- IN GREEN FIELD AREAS, TYPE B BACKFILL (SELECTED EXCAVATED MATERIAL COMPLYING WITH THE REQUIREMENTS OF "ACCEPTABLE MATERIAL" AS OUTLINED ON CLAUSE 601 OF THE TI SPECIFICATION FOR ROADWORKS, TABLE 6/1, CLASS 8, CLASS 2,) WILL BE ALLOWED ABOVE THE SIDE HAUNCH GRANULAR MATERIAL IN THE CASE OF RIGID PIPES. A GRANULAR SURROUND OF A MINIMUM, DEPTH OF 150mm ABOVE THE CROWN OF THE PIPE IS REQUIRED FOR FLEXIBLE PIPES AND TYPE B MATERIAL MAY BE USED AS BACKFILL ABOVE THIS. ALL RISING MAINS IN GREENFIELD AREAS SHALL HAVE A MINIMUM COVER OF 300mm OF GRANULAR MATERIAL ABOVE THE EXTERNAL CROWN OF THE PIPE. PIPES SHALL NOT BE SUPPORTED ON STONES, ROCKS OR ANY HARD OBJECTS AT ANY POINT ALONG THE TRENCH. ROCK SHALL BE EXCAVATED TO A DEPTH OF 150mm BELOW THE ACTUAL DEPTH OF THE TRENCH WITH THE VOID FILLED WITH CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS. THE GRANULAR MATERIAL SHALL BE LAID ABOVE THIS VOID BACKFILL MATERIAL.
- NON DEGRADABLE MARKER TAPE SHOULD BE INSTALLED AT THE TOP OF PIPE BEDDING LAYER FOR SEWERS AND RISING MAINS. IT SHOULD RUN CONTINUOUSLY AROUND MANHOLES. IN THE CASE OF NON METAL PIPE MATERIAL, THE MARKER TAPE SHOULD INCORPORATE A TRACE WIRE WHICH IS LINKED TO FITTINGS AND TERMINATED AT THE WASTE WATER PUMPING STATION (IF PROVIDED) AND THE DISCHARGE MANHOLE.
- TRENCH WIDTHS FOR PIPE SIZES <80mm MAY BE <50mm, SUBJECT TO CONSIDERATION BEING GIVEN TO THE TRENCH DEPTH, HEALTH & SAFETY & CONSTRUCTION ACCESS REQUIREMENTS
- NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
- EXISTING ROAD REINSTATEMENT TO COMPLY WITH CURRENT VERSION OF "GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS" BY THE DEPT. OF TRANSPORT, TOURISM & SPORT, OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.

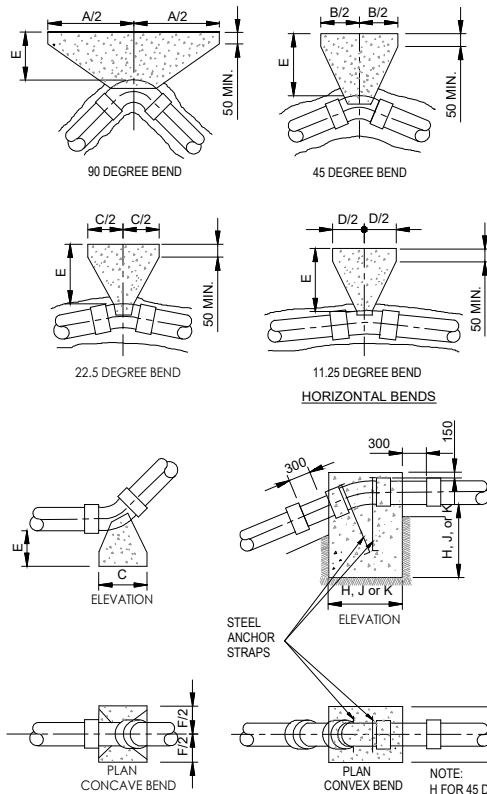
**CROSS SECTION IN ROADWAYS****CROSS SECTION IN GRASSED AREAS**

PIPE DIAMETER 'A' (mm)	TRENCH WIDTH 'B' (mm)
≤ 80 RISING MAIN	SEE NOTE 10.
100	500
150-200	600
>200-350	750
>350-450	900

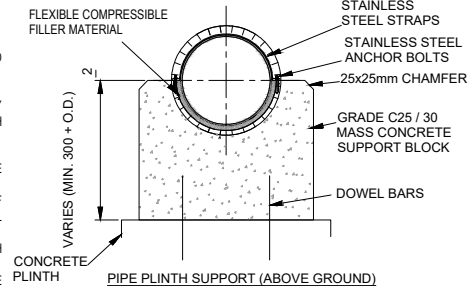
PIPE DIAMETER 'A' (mm)	DEPTH OF BEDDING 'C' (mm)
≤ 100	100
150 - 450	200

IRISH WATER DETAIL STD-WW-07**TRENCH BACK FILL AND BEDDING IN ROADWAYS & GRASSED AREAS**

SCALE: NTS

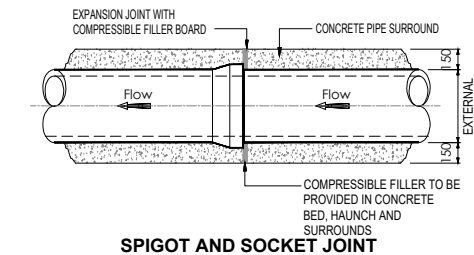
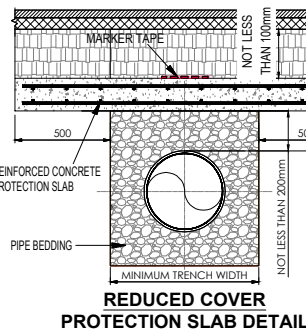
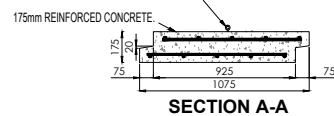
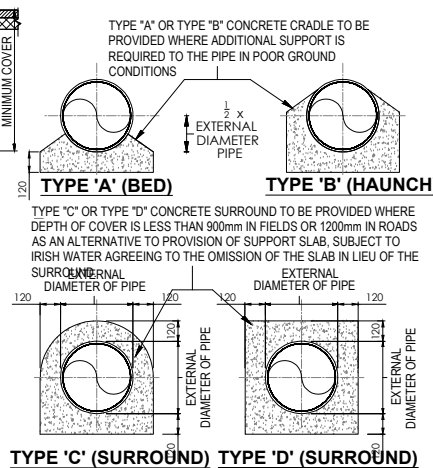
**THRUST BLOCK AND RISING MAIN****NOTES**

- ALL DIMENSIONS IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE
- CONCRETE THRUST BLOCKS (ANCHORAGE) SHALL BE POSITIONED SYMMETRICALLY WITH RESPECT TO THE CONNECTING PIPE & BENDS.
- TRENCH DIMENSIONS: REFER TO DRAWING No. STD-WW-07.
- THRUST BLOCKS SHALL BEAR ON UNDISTURBED SOIL. IF FOR ANY REASON THEY CANNOT THEN THE DEVELOPER SHALL NOTIFY IRISH WATER IMMEDIATELY WITH A PROPOSED SOLUTION.
- THRUST BLOCK REINFORCEMENT REQUIRES SPECIFIC DESIGN.
- FOR TEST PRESSURES GREATER THAN 18 BAR, THRUST BLOCK DESIGN IS TO BE SUBMITTED TO IRISH WATER FOR REVIEW.
- THRUST BLOCKS ARE DESIGNED FOR FOR AN AVERAGE BEARING PRESSURE OF 100 kN/m (TYPICAL FOR SOFT CLAY) FOR OTHER CONDITIONS, ACTUAL DIMENSIONS MAY BE ALTERED ON INSTRUCTIONS FROM IRISH WATER.
- CONCRETE IN THRUST BLOCKS SHALL BE GRADE C20/25 IN ACCORDANCE WITH IS EN 206.
- COMPRESSIBLE FILLER FOR CONCRETE PROTECTION TO BE IN ACCORDANCE WITH BS EN 622-1 AND BS EN 622-4. BITUMINOUS MATERIAL SHALL NOT BE PUT IN CONTACT WITH PLASTIC PIPES. THE THICKNESS OF COMPRESSIBLE FILLER FOR MAINS < 450mm IN DIAMETER IS TO BE 18mm
- CONCRETE THRUST BLOCKS FOR POLYETHYLENE PIPE TO COMPLY WITH THE MANUFACTURER'S REQUIREMENTS.
- POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE BEING CAST INTO CONCRETE.

**IRISH WATER DETAIL STD-WW-14 THRUST BLOCKS FOR RISING MAINS**

SCALE: NTS

DIMENSIONS					CONCRETE m³/m RUN OF SEWER				DISPOSAL m³/m RUN OF SEWER			
PIPE (Dia)mm	Do	b	t	w	WIDTH OF TRENCH	BED ALL TYPES	HAUNCH & SURROUND		TYPE A	TYPE B	TYPE C	TYPE D
100	150	100	100	350	600	0.016	0.160	0.058	0.185	0.069	0.111	0.230
150	210	100	100	410	700	0.410	0.220	NOT USED	0.076	0.225	0.098	0.260
225	300	120	150	600	750	0.720	0.380	0.156	0.289	0.175	0.293	0.360
300	400	120	150	700	850	0.840	0.560	0.198	0.364	0.251	0.393	0.490
375	480	150	150	780	950	0.117	NOT USED	0.120	0.260	0.427	0.420	0.540
450	560	150	150	860	1000	0.129	NOT USED	0.160	0.300	0.493	0.540	0.660
525	650	150	150	950	1100	0.143	NOT USED	0.180	0.340	0.571	0.660	0.810
600	735	150	150	1035	1200	0.155	NOT USED	0.190	0.380	0.647	0.770	0.950
675	870	200	200	1150	1350	0.230	NOT USED	0.300	0.550	0.774	1.000	1.200
750	910	200	200	1310	1450	0.262	NOT USED	0.340	0.660	0.814	1.250	1.530
900	1080	200	200	1480	1650	0.296	NOT USED	0.380	0.740	0.988	1.590	1.960
1050	1260	250	250	1760	1900	0.440	NOT USED	0.580	1.080	1.187	2.270	2.770
1200	1425	250	250	1925	2100	0.481	NOT USED	0.640	1.230	1.381	2.720	3.310

**SPIGOT AND SOCKET JOINT****REDUCED COVER PROTECTION SLAB DETAIL****SECTION A-A****TYPE 'C' (SURROUND) TYPE 'D' (SURROUND)**

- FOR ANY SLABBING WORKS TO BE CARRIED OUT WITHIN THE VICINITY OF THE PIPELINE, A METHOD STATEMENT IS TO BE SUBMITTED FOR REVIEW BY IRISH WATER.
- MARKER TAPE TO BE PLACED ABOVE THE SLAB AND ALONG THE DIRECTION OF THE PIPELINE
- CONCRETE TO BE GRADE C30/35
- MINIMUM COVER TO STEEL REINFORCEMENT = 40mm
- SLABS TO BE DESIGNED FOR USE UNDER A HB25 LOAD IN ACCORDANCE WITH BS5400-2. DESIGN TO BE SUBMITTED TO IRISH WATER FOR ASSESSMENT PRIOR TO INSTALLATION.
- THE SOIL ON WHICH THE SLAB RESTS MUST HAVE A CBR OF 4% OR GREATER WHERE THE CBR IS LESS THAN 4% THE MATERIAL SHALL BE REMOVED AND REPLACED WITH IMPORTED GRANULAR MATERIAL AS APPROVED BY IRISH WATER.
- IF DIRECTION OF PIPELINE AND DIRECTION OF TRAFFIC FLOW ARE PARALLEL, THE DIRECTION OF LAY OF THE SLAB IS TO BE AGAINST THE DIRECTION OF TRAFFIC FLOW.
- IF PIPELINE PROTECTION SLAB IS TO BE USED SOLELY FOR IMPACT PROTECTION & OVERALL DEPTH OF COVER IS GREATER THAN 1.2m, THE DISTANCE BETWEEN UNDERSIDE OF SLAB & TOP OF PIPE MAY BE INCREASED AFTER CONSULTATION WITH IRISH WATER
- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE
- CONCRETE BED AND HAUNCHES MAY BE REQUIRED TO PROVIDE ADDITIONAL SUPPORT IN POOR GROUND CONDITIONS. PROPOSALS TO BE PROVIDED TO IRISH WATER WITH GEOTECHNICAL REPORT SUPPORTING THEIR USE.
- CONCRETE SURROUNDS SHALL HAVE A MINIMUM THICKNESS OF 150mm WITH AN ABSOLUTE MINIMUM DEPTH OF COVER ABOVE THE EXTERNAL CROWN OF THE PIPE OF 750mm.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206 AND TO BE GRADE C16/20 TO IS EN206
- THE HAUNCHES AND SURROUNDS TO BE FORMED USING FORM WORK TO PROVIDE A ROUGH CAST FINISH.
- EXPANSION JOINTS IN THE CONCRETE SHALL BE PROVIDED AT ALL PIPE JOINTS TO ALLOW FOR PIPE FLEXIBILITY, COMPRESSIBLE FILLER BOARD TO BE IN ACCORDANCE WITH BS EN 622-1 AND BS EN 622-4, AND TO BE 18mm THICK.
- POLYETHYLENE AND uPVC PIPES SHALL BE WRAPPED IN PLASTICSHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE BEING CAST INTO CONCRETE.
- BITUMINOUS MATERIAL SHALL NOT BE PUT IN CONTACT WITH PE OR PVC PIPES.



Rialtas na hÉireann
Government of Ireland



Ana chomhchistiú ag
an Aontas Eorpach
Co-funded by the
European Union



Tionól Réigiúnach an
Oirthir agus Láir Tíre
Eastern and Midland
Regional Assembly



government supporting communities



Comhairle Contae Thiobraid Árann
Tipperary County Council

The Masterplan development of a 10 acre site and Part 8 Planning for an industrial core building at Lisheen Co. Tipperary, is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund.

STANDARD INSTRUCTIONS

- THE MAIN CONTRACTOR, SUB-CONTRACTOR OR SUPPLIER SHALL:
VERIFY ALL DIMENSIONS ON SITE AND IMMEDIATELY REPORT TO THE ARCHITECT ANY DISCREPANCIES ON THE DRAWINGS.
WORK TO FIGURED DIMENSIONS ONLY (EXCEPT WHERE FULL SIZE DETAILS ARE PROVIDED).
NOT VARY ANY WORK SHOWN ON THE DRAWINGS WITHOUT OBTAINING PRIOR APPROVAL FROM THE DESIGNER.
BE RESPONSIBLE FOR REQUESTING FROM THE DESIGNER ANY ADDITIONAL INFORMATION REQUIRED.
SUPPLY TO THE DESIGNER ALL SHOP DRAWINGS, ILLUSTRATIONS, SPECIFICATIONS, ETC. OF ALL SPECIALIST WORK TO BE INCORPORATED IN THE MAIN CONTRACT WORKS.

- IMMEDIATELY INFORM THE DESIGNER IF ANY WORK SHOWN ON THIS DRAWING IS NOT IN ACCORDANCE WITH THE RELEVANT CODES OF PRACTICE RECOGNISED GOOD PRACTICE THROUGHOUT THE INDUSTRY AND DOES NOT COMPLY WITH THE RELEVANT LOCAL AUTHORITY BYE-LAWS OR BUILDING REGULATIONS.
IMMEDIATELY ADVISE THE DESIGNER / QUANTITY SURVEYOR OF THE EFFECT UPON PROGRAMME AND COST OF ANY ALTERATIONS TO THE PROPOSED WORKS SHOWN ON THIS DRAWING.
- THIS DRAWING SUPERSEDES ALL PREVIOUS ISSUES OF THE SAME DRAWING NUMBER WITH EARLIER REVISIONS.
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- ALL DIMENSIONS TO BE CHECKED ON SITE.
THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT SPECIFICATIONS AND DRAWINGS.
IN THE EVENT OF ANY DISCREPANCIES BETWEEN DRAWINGS THE CONTRACTOR IS TO INFORM THE DESIGNER IMMEDIATELY.
DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
ALL WORK TO COMPLY WITH CURRENT BUILDING REGS & B.S.

REVISION REGISTER

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
-	-/-/-	-	-	-	-
-	-/-/-	-	-	-	-
-	-/-/-	-	-	-	-
P1	07/11/2025	TENDER ISSUE	MT	CQ	MJP



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Clonmel, Co. Tipperary

SCALE: AS NOTED

STATUS: TENDER

CLIENT: TIPPERARY COUNTY COUNCIL

PROJECT: IBF LISHEEN Co. TIPPERARY

DRAWING TITLE: PROPOSED WASTEWATER DETAILS SHEET 2 OF 2

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