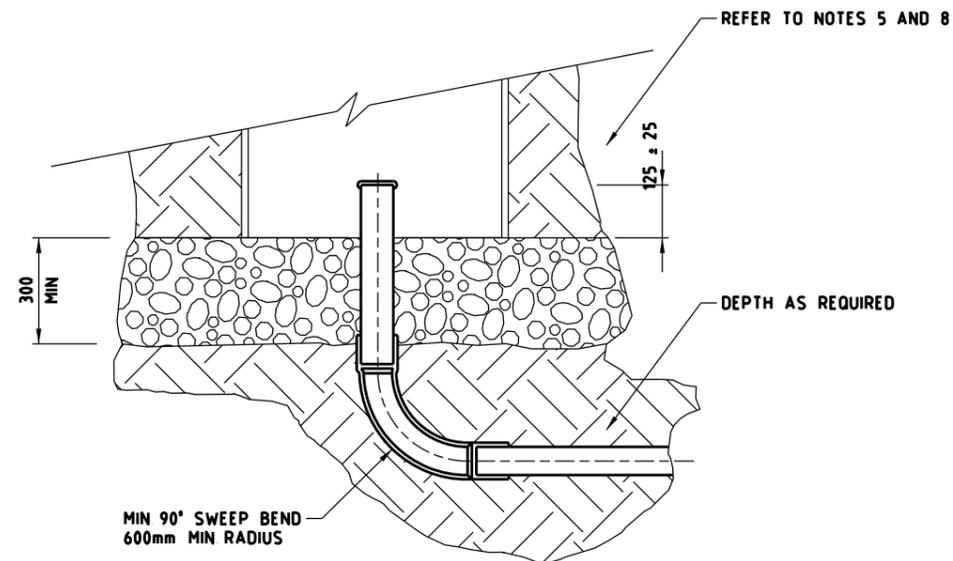


TYPICAL SIDE ENTRY

SECTION B



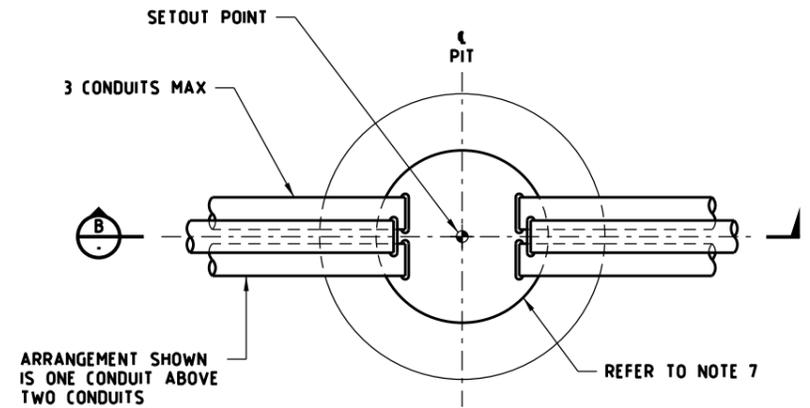
TYPICAL BASE ENTRY

NOTES

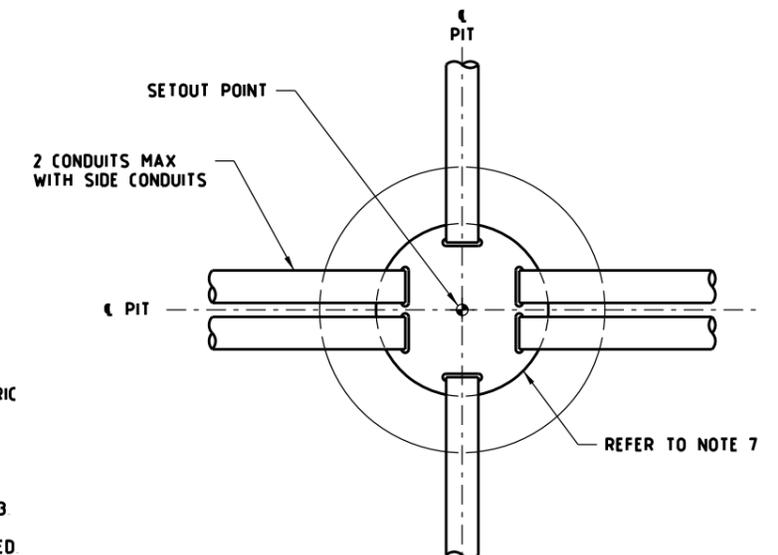
- 1 DIMENSIONS SHOWN ARE IN MILLIMETERS, U N O
- 2 AVOID DISTORTION DURING COMPACTION SUCH THAT THE MINIMUM DIAMETRIC DIMENSION EXCEEDS 580mm
- 3 ENDS OF CONDUITS TO BE TRIMMED NEATLY AND FREE FROM SHARP EDGES OR BURRS WITH CONDUIT BUSHES
- 4 THIS DRAWING TO BE USED IN CONJUNCTION WITH STANDARD SECTION 733
- 5 BASE ENTRY TO BE USED ONLY WHERE DEEP CONDUIT RUNS ARE REQUIRED
- 6 MAXIMUM OF 6 X 100mm CONDUITS PER PIT WHERE ROAD CROSSING CONDUITS ARE REQUIRED, MAXIMUM OF 2 CONDUITS TO ENTER BASE
- 7 REFER TO STANDARD DRAWINGS TC-2216 - CABLE PIT FORMER AND TC-2217 CABLE PIT ACCESS COVER, FRAME AND PRECAST CONCRETE SURROUND
- 8 BASE ENTRY CONDUITS MUST BE APPROPRIATELY SEALED WITH DUCT TAPE AT ALL TIMES UNTIL REQUIRED FOR CABLING
- 9 CABLE PIT SHOWN IS A 600mm PIT WITH A 610mm COVER
- 10 ALL CONDUITS ENTRY AND EXIT POINTS INTO PIT WALLS TO BE SEALED WITH CEMENT MORTAR TO PROVIDE WATERTIGHT SEAL
- 11 APPROPRIATE LABELLING PLATES SHALL BE PERMANENTLY FIXED TO THE CONCRETE SURROUND INDICATING THE TYPE AND DIRECTION OF EACH CONDUIT ROUTE
- 12 REINFORCEMENT RINGS 750 DIA AND 900 DIA WIRE WITH EIGHT LIGATURE

MATERIALS REQUIRED PER PIT

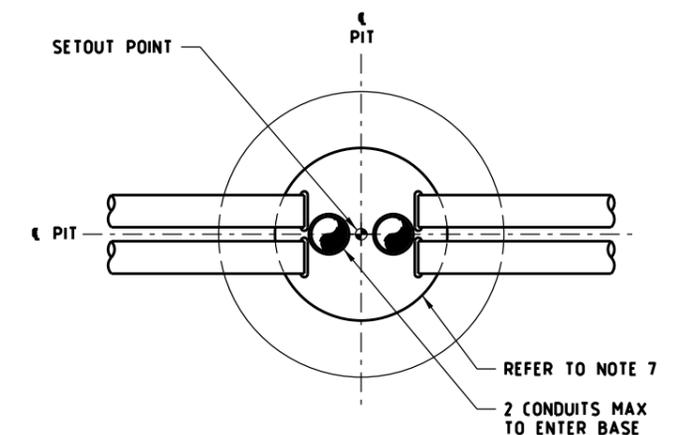
- CABLE PIT FORMER
- ACCESS COVER AND FRAME, WITH COVER SUITABLY INSCRIBED AS PER SPECIFICATION
- HEAVY DUTY ORANGE OR WHITE CONDUIT AS REQUIRED
- REINFORCEMENT RINGS, 750 dia AND 900 dia WIRE WITH EIGHT LIGATURE
- CONDUIT JOINTING CEMENT, CRUSHED ROCK, CONCRETE, MORTAR ETC AS REQUIRED



TYPICAL SIDE ENTRY CONFIGURATION 1



TYPICAL SIDE ENTRY CONFIGURATION 2



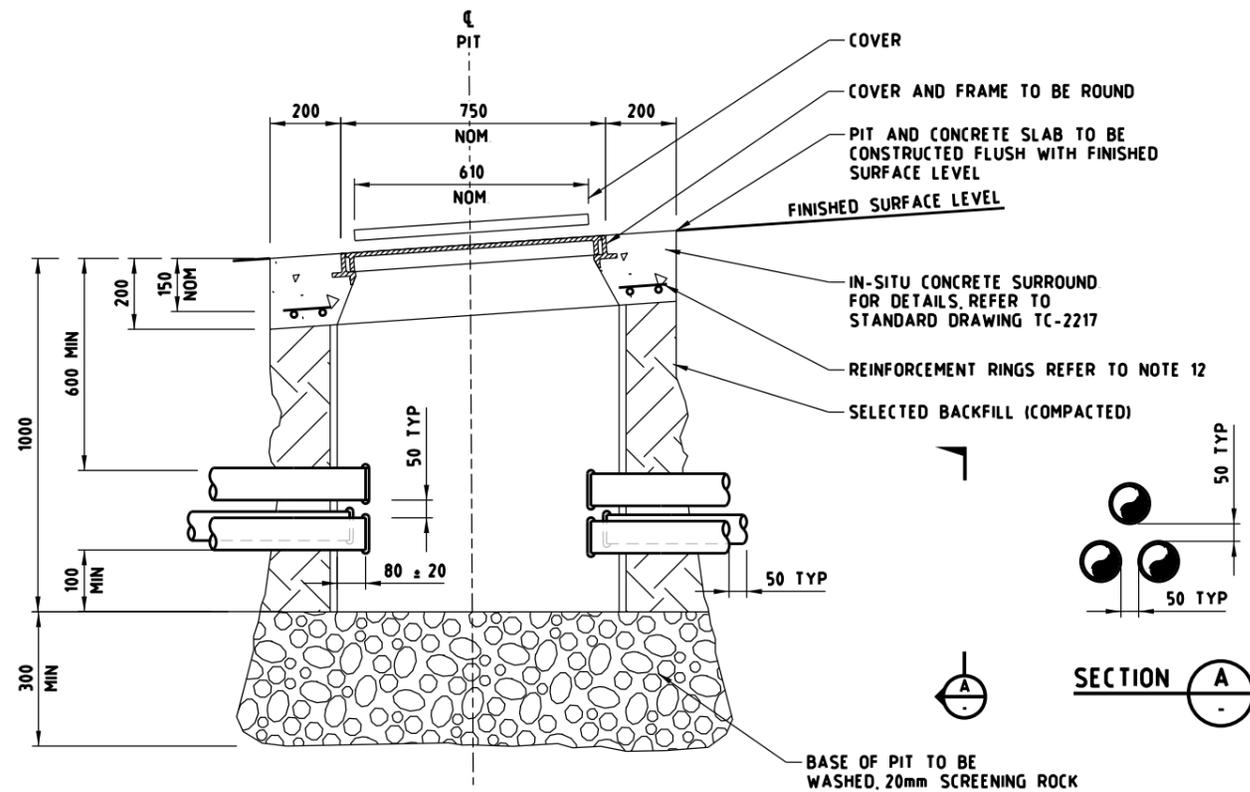
TYPICAL ROAD CROSSING CONFIGURATION

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ISSUE	APP'D	DATE	AMENDMENT

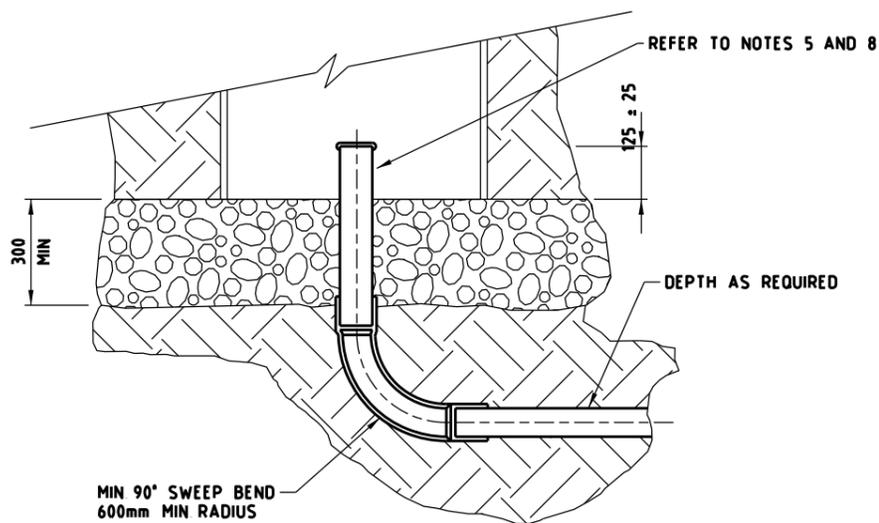
GENERAL NOTES	
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DESIGNED	M80 UPGRADE	07/2015	
APPROVED	W HARVEY - MANAGER ITS INFRASTRUCTURE & SYSTEM 08/2015		
CAT.			SCALE OF METRES N T S
PROJ.			HOR
FILE			VER

STANDARD DRAWING MANAGED MOTORWAY				
PIT AND CONDUIT ARRANGEMENTS 600mm ROUND ELECTRICAL CABLE PIT				
FILE NO	CONTRACT NO	SHEET NO	DRAWING NO	ISSUE
			TC-2200	A



TYPICAL SIDE ENTRY
SECTION B



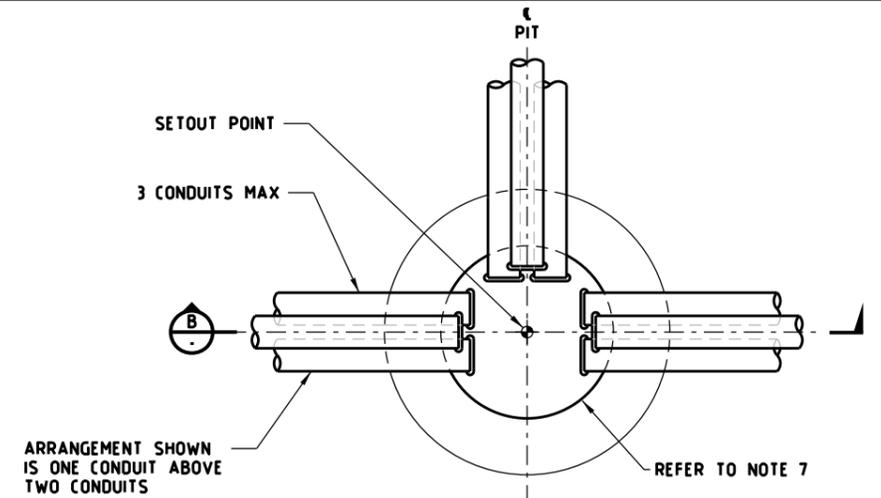
TYPICAL BASE ENTRY

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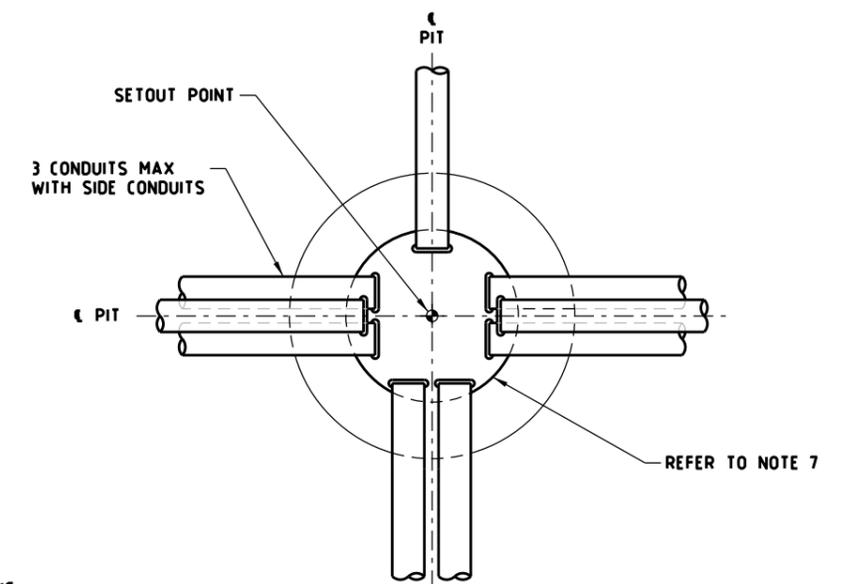
- 1 DIMENSIONS SHOWN ARE IN MILLIMETERS, UNO
- 2 AVOID DISTORTION DURING COMPACTION SUCH THAT THE MINIMUM DIAMETRIC DIMENSION EXCEEDS 725mm
- 3 ENDS OF CONDUITS TO BE TRIMMED NEATLY AND FREE FROM SHARP EDGES OR BURRS AND SHALL BE FITTED WITH CONDUIT BUSHES
- 4 THIS DRAWING TO BE USED IN CONJUNCTION WITH STANDARD SECTION 733
- 5 BASE ENTRY TO BE USED ONLY WHERE DEEP CONDUIT RUNS ARE REQUIRED
- 6 MAXIMUM OF 9 X 100mm AND 1 X 50mm CONDUITS PER PIT WHERE ROAD CROSSING CONDUITS ARE REQUIRED, MAXIMUM OF 3 TO ENTER BASE (50mm CONDUITS ARE REQUIRED FOR STREET LIGHTING CONNECTION FROM TRUNK TO POLE)
- 7 REFER TO STANDARD DRAWINGS TC-2216 - CABLE PIT FORMER AND TC-2217 CABLE PIT ACCESS COVER, FRAME AND PRECAST CONCRETE SURROUND
- 8 BASE ENTRY CONDUITS MUST BE APPROPRIATELY SEALED WITH DUCT TAPE AT ALL TIMES UNTIL REQUIRED FOR CABLING
- 9 ALL CONDUITS ENTRY AND EXIT POINTS INTO PIT WALLS TO BE SEALED WITH CEMENT MORTAR TO PROVIDE WATERTIGHT SEAL
- 10 CABLE PIT SHOWN IS A 750mm PIT WITH A 610mm COVER
- 11 APPROPRIATE LABELLING PLATES SHALL BE PERMANENTLY FIXED TO THE CONCRETE SURROUND INDICATING THE TYPE AND DIRECTION OF EACH CONDUIT ROUTE
- 12 REINFORCEMENT RINGS 750 DIA AND 900 DIA WIRE WITH EIGHT LIGATURE

MATERIALS REQUIRED PER PIT

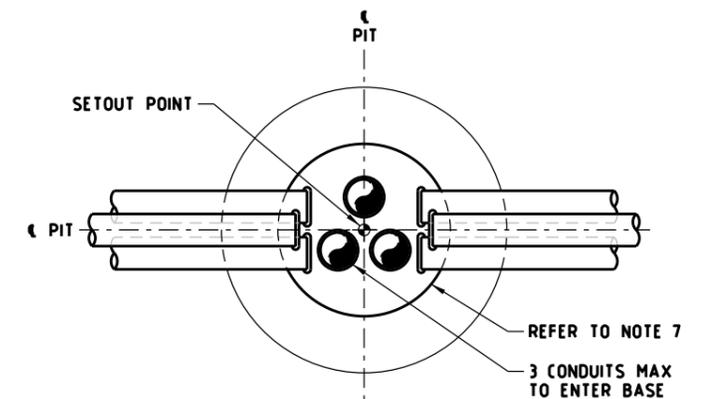
- CABLE PIT FORMER
- ACCESS COVER AND FRAME, WITH COVER SUITABLY INSCRIBED AS PER SPECIFICATION
- HEAVY DUTY ORANGE CONDUIT AS REQUIRED
- REINFORCEMENT RINGS AS REQUIRED
- CONDUIT JOINTING CEMENT, CRUSHED ROCK, CONCRETE, MORTAR ETC AS REQUIRED



TYPICAL SIDE ENTRY CONFIGURATION 1



TYPICAL SIDE ENTRY CONFIGURATION 2



TYPICAL ROAD CROSSING CONFIGURATION

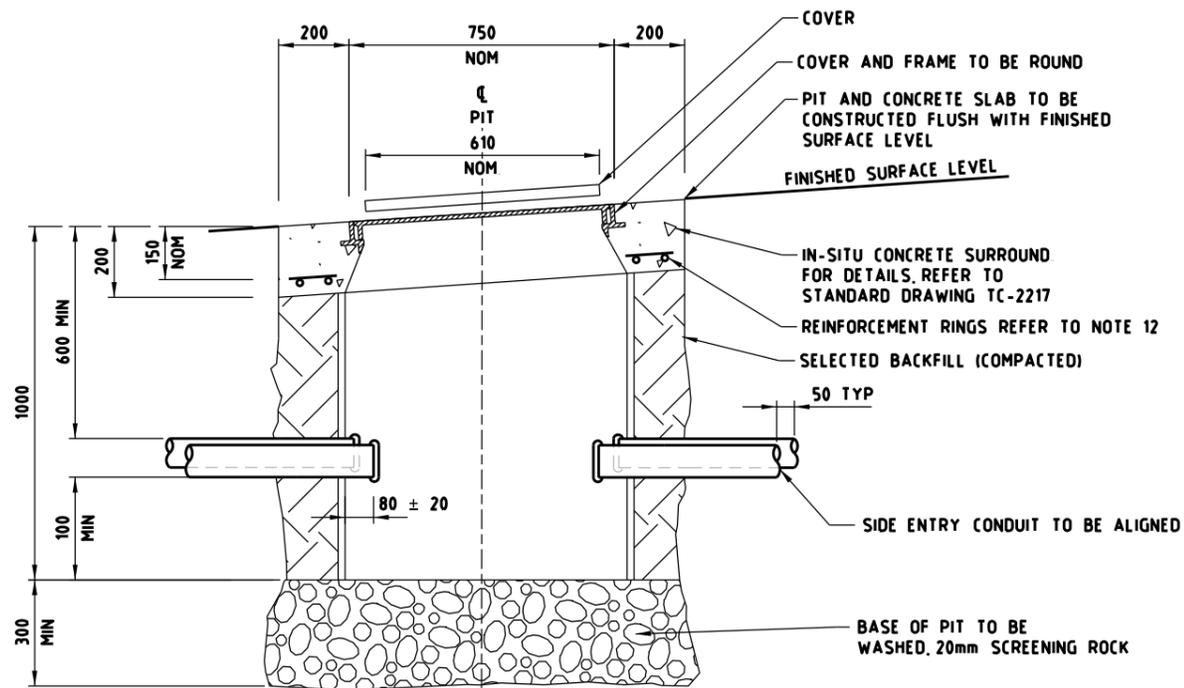
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ISSUE	APP'D	DATE	AMENDMENT

GENERAL NOTES	
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DESIGNED	M80 UPGRADE	07/2015
APPROVED	W HARVEY - MANAGER ITS INFRASTRUCTURE & SYSTEM 08/2015	
CAT. PROJ. FILE	SCALE OF METRES N T S	

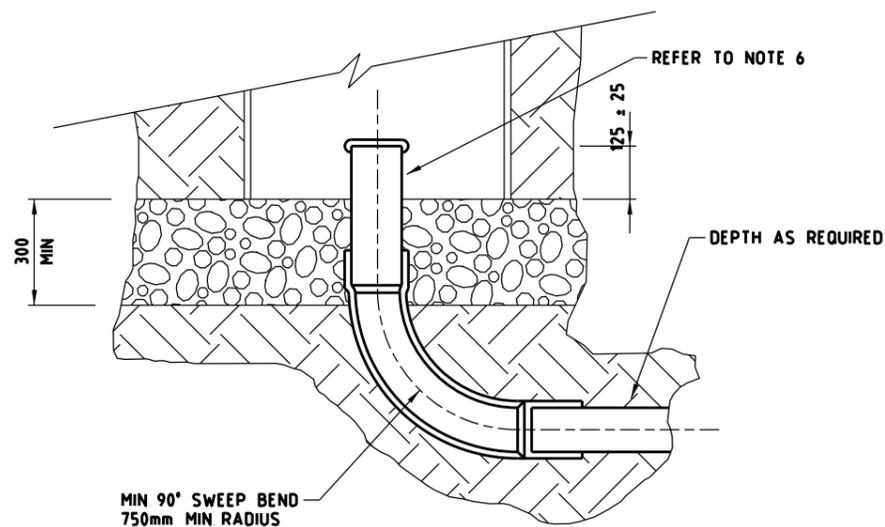


STANDARD DRAWING MANAGED MOTORWAY				
PIT AND CONDUIT ARRANGEMENTS 750mm ROUND ELECTRICAL CABLE PIT				
FILE NO	CONTRACT NO	SHEET NO	DRAWING NO	ISSUE
			TC-2201	A

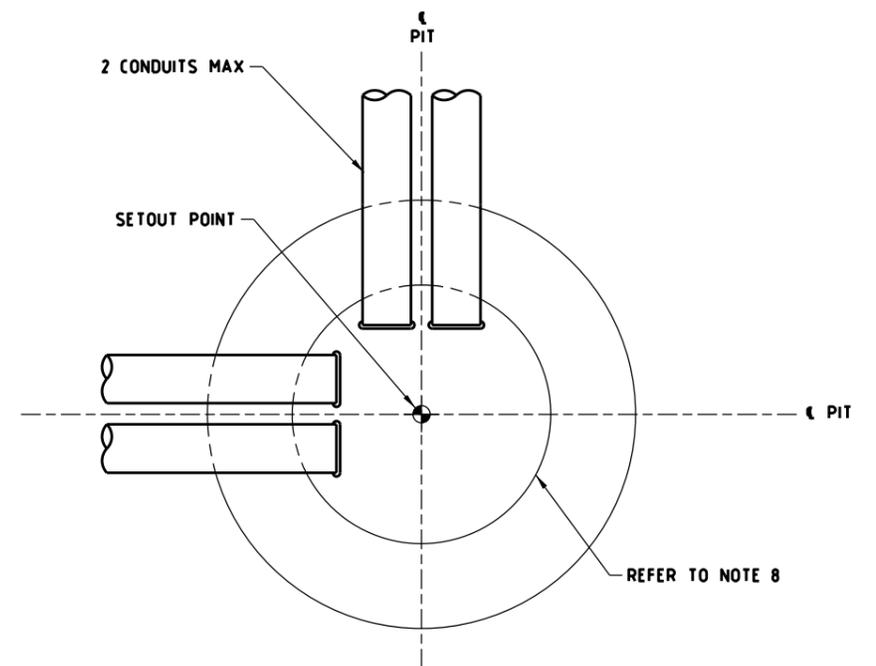


TYPICAL SIDE ENTRY CONFIGURATION

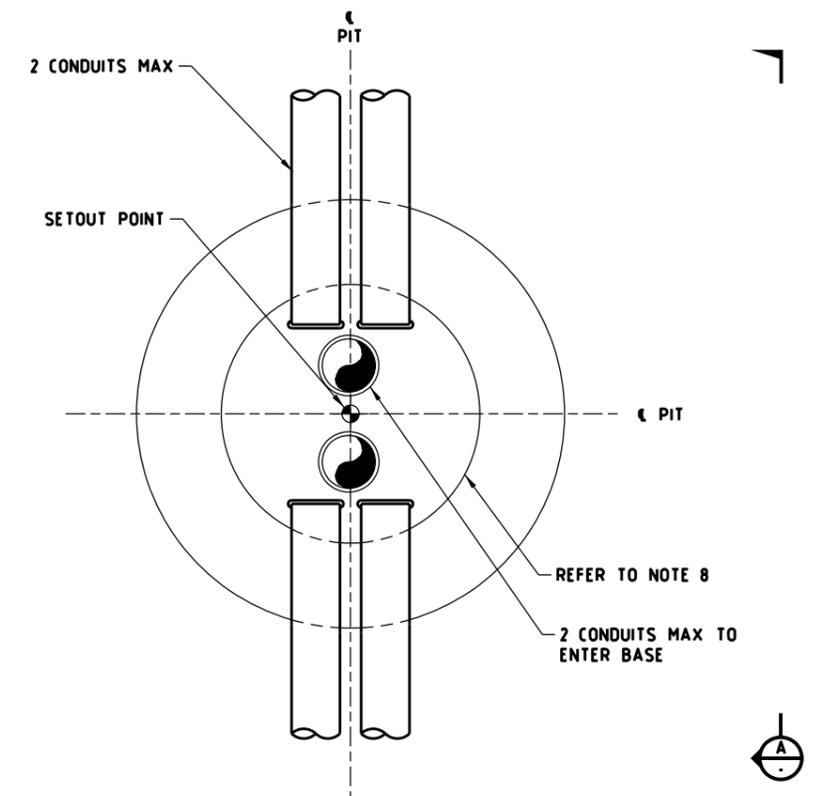
SECTION A



TYPICAL BASE ENTRY



TYPICAL SIDE ENTRY CONFIGURATION



TYPICAL SIDE AND BASE ENTRY CONFIGURATION

NOTES

- 1 DIMENSIONS SHOWN ARE IN MILLIMETERS, UNO
- 2 CABLE PIT SHOWN IS A 750mm PIT WITH A 610mm COVER
- 3 AVOID DISTORTION DURING COMPACTION SUCH THAT THE MINIMUM DIAMETRIC DIMENSION EXCEEDS 725mm
- 4 ENDS OF CONDUITS TO BE TRIMMED NEATLY AND FREE FROM SHARP EDGES OR BURRS AND SHALL BE FITTED WITH CONDUIT BUSHES
- 5 THIS DRAWING TO BE USED IN CONJUNCTION WITH STANDARD SECTION 733
- 6 BASE ENTRY TO BE USED ONLY WHERE DEEP CONDUIT RUNS ARE REQUIRED
- 7 MAXIMUM OF 6 X 100mm CONDUITS PER PIT WHERE ROAD CROSSING CONDUITS ARE REQUIRED, MAXIMUM OF 2 CONDUITS TO ENTER BASE
- 8 REFER TO STANDARD DRAWINGS TC-2216 - CABLE PIT FORMER AND TC-2217 CABLE PIT ACCESS COVER, FRAME AND PRECAST CONCRETE SURROUND
- 9 BASE ENTRY CONDUITS MUST BE APPROPRIATELY SEALED WITH DUCT TAPE AT ALL TIMES UNTIL REQUIRED FOR CABLING
- 10 ALL CONDUITS ENTRY AND EXIT POINTS INTO PIT WALLS TO BE SEALED WITH CEMENT MORTAR TO PROVIDE WATERTIGHT SEAL
- 11 APPROPRIATE LABELLING PLATES SHALL BE PERMANENTLY FIXED TO THE CONCRETE SURROUND INDICATING THE TYPE AND DIRECTION OF EACH CONDUIT ROUTE
- 12 REINFORCEMENT RINGS 750 DIA AND 900 DIA WIRE WITH EIGHT LIGATURE

MATERIALS REQUIRED PER PIT

- CABLE PIT FORMER
- ACCESS COVER AND FRAME, WITH COVER SUITABLY INSCRIBED AS PER SPECIFICATION
- HEAVY DUTY WHITE CONDUIT AS REQUIRED
- REINFORCEMENT RINGS AS REQUIRED
- CONDUIT JOINTING CEMENT, CRUSHED ROCK, CONCRETE, MORTAR ETC AS REQUIRED

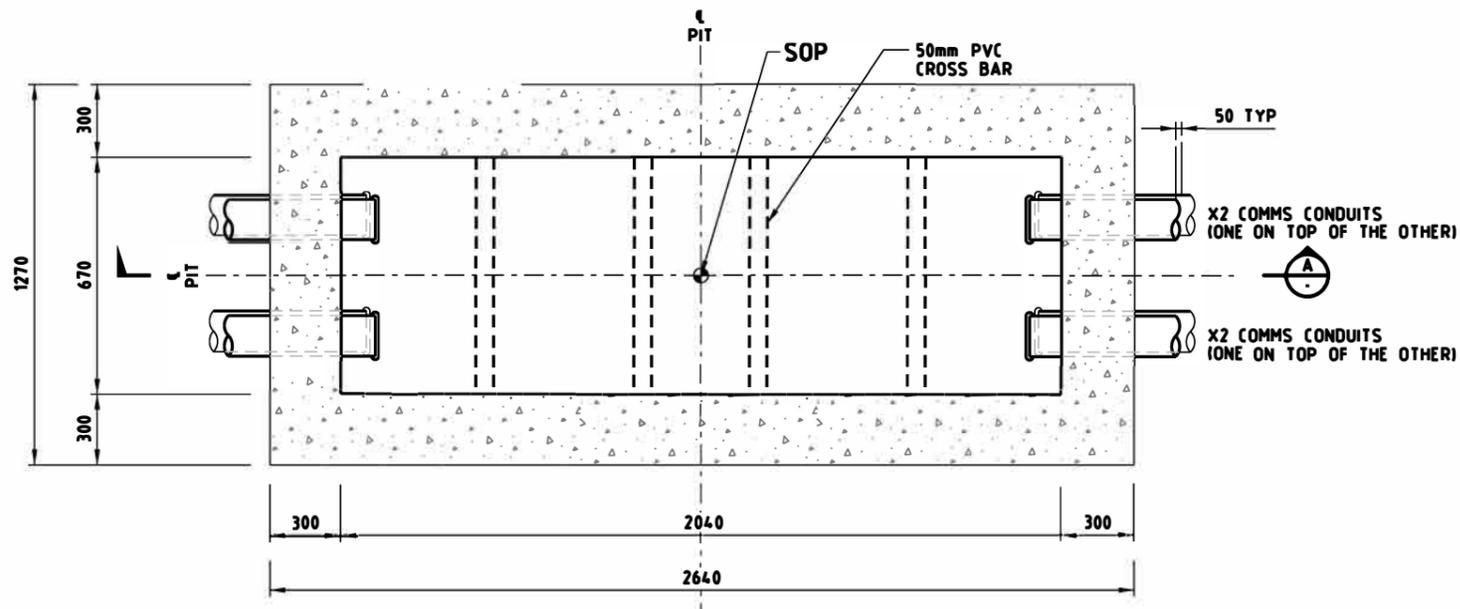
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A	WH	12/2018	REVISION OF DETAIL
ISSUE	APP'D	DATE	AMENDMENT

GENERAL NOTES	
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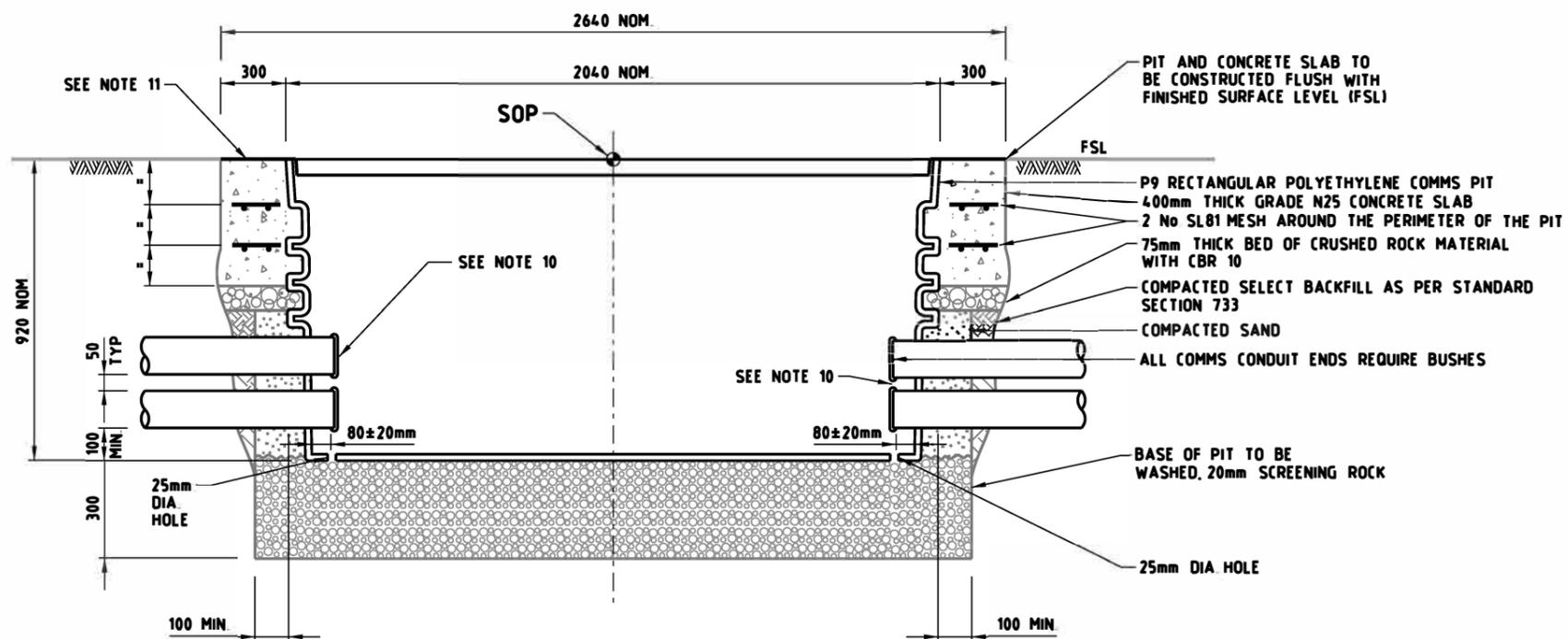
DESIGNED	M80 UPGRADE	07/2015
APPROVED	W HARVEY - MANAGER	
ITS INFRASTRUCTURE & SYSTEM 08/2015		
CAT.	SCALE OF METRES	
PROJ.	NTS	
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STANDARD DRAWING				
MANAGED MOTORWAY				
PIT AND CONDUIT ARRANGEMENTS				
750mm ROUND COMMUNICATIONS JUNCTION PIT				
FILE NO	CONTRACT NO	SHEET NO	DRAWING NO	ISSUE
			TC-2202	A

P9 COMMUNICATION PIT



PLAN 1



SECTION A

NOTES

1. DIMENSIONS SHOWN ARE IN MILLIMETERS, UNO
2. ALL CONDUIT ENTRY AND EXIT POINTS INTO PIT WALLS TO BE SEALED WITH CEMENT MORTAR TO PROVIDE A WATERTIGHT SEAL.
3. ALL PIT LIDS TO BE INSCRIBED IN ACCORDANCE WITH VICROADS STANDARD DRAWING TC 1220. INSCRIPTION TO BE "VICROADS COMMS".
4. ENDS OF CONDUITS TO BE TRIMMED NEATLY FREE FROM SHARP EDGES OR BURRS AND SHALL BE FITTED WITH CONDUIT BUSHES.
5. ALL VICROADS COMMUNICATION PIT LIDS TO BE LOCKABLE.
6. CONDUITS MUST NOT ENTER FROM THE BOTTOM OR LONGITUDINAL SIDE OF THE PIT.
7. CHANGE IN DIRECTION CONDUITS MUST USE A JUNCTION PIT REFER TO STANDARD DRAWING TC-2202.
8. AVOID DISTORTION SUCH THAT THE DIMENSIONS OF THE PIT REMAIN UNCHANGED.
9. ALL CONDUIT PROTRUSIONS INTO PIT SIDE WALL MUST BE MADE USING A HOLE SAW.
10. GAP BETWEEN CONDUITS TO BE LARGE ENOUGH TO FIT CONDUIT BUSHES.
11. CONCRETE SURROUND SHALL HAVE THE TYPE AND DIRECTION OF EACH CONDUIT ROUTE INSCRIBED IN IT DURING THE CASTING PROCESS.
12. THIS DRAWING IS TO BE USED IN CONJUNCTION WITH STANDARD SECTION 733. ALL CONCRETE WORKS AS PER STANDARD SECTION 703.
13. ALL P9 PITS TO BE TELSTRA APPROVED.

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B	C.C.	10/2022	REPLACED P8 PIT WITH P9
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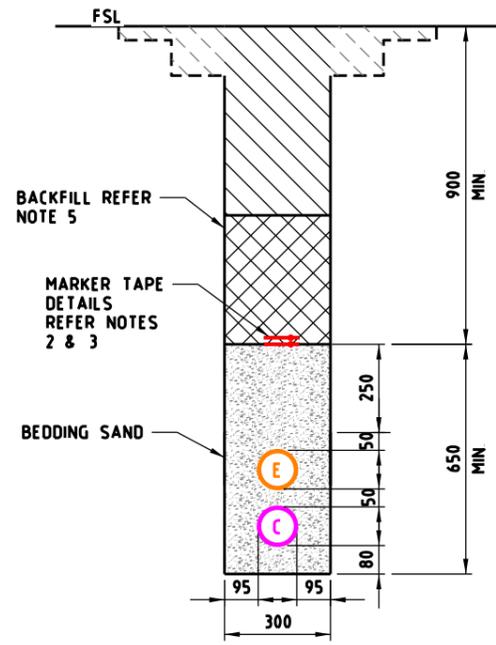
GENERAL NOTES
1 REFER TO STANDARD SECTION 733

DESIGNED	M80 UPGRADE	07/2015
APPROVED	W HARVEY - MANAGER	
	ITS INFRASTRUCTURE & SYSTEM 08/2015	
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PROJ:		N.T.S.
FILE:		

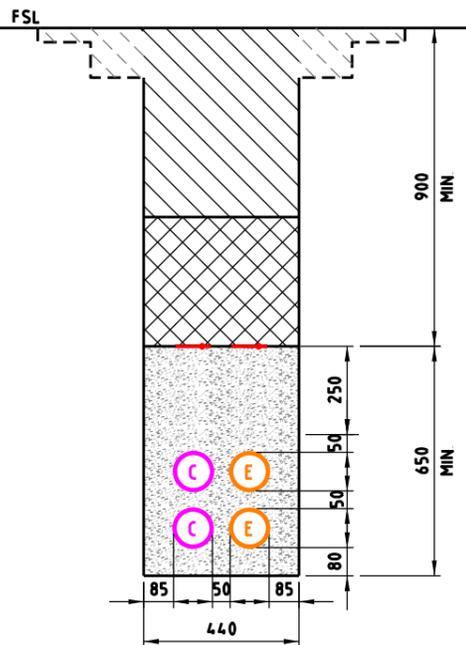


STANDARD DRAWING MANAGED MOTORWAY				
PIT AND CONDUIT ARRANGEMENTS P9 COMMUNICATION PIT				
FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
			TC-2203	B

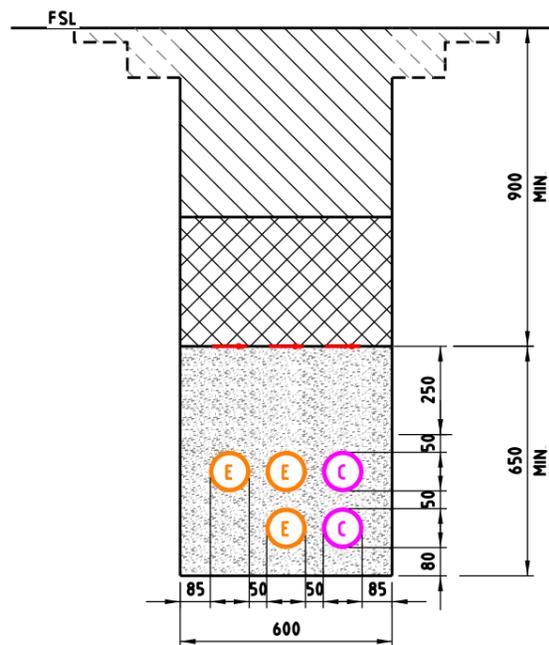
**1 OR 2 CONDUITS
BENEATH NEW PAVEMENT TRENCH**



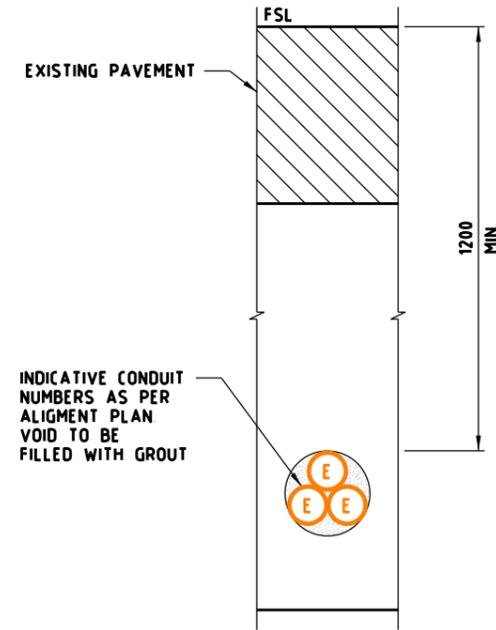
**4 CONDUITS
BENEATH NEW PAVEMENT TRENCH**



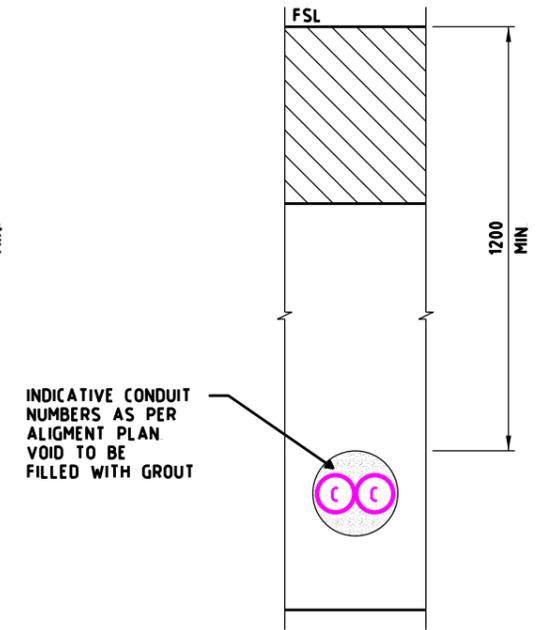
**5 CONDUITS
BENEATH PAVEMENT TRENCH**



**3 ELECTRICAL CONDUITS
BENEATH EXISTING PAVEMENT (BORED)**



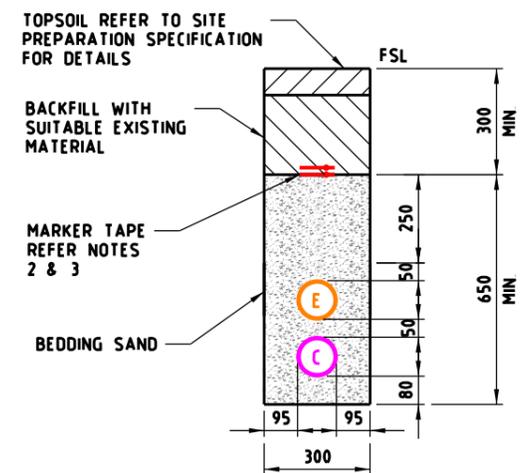
**2 COMMS CONDUITS
BENEATH EXISTING PAVEMENT (BORED)**



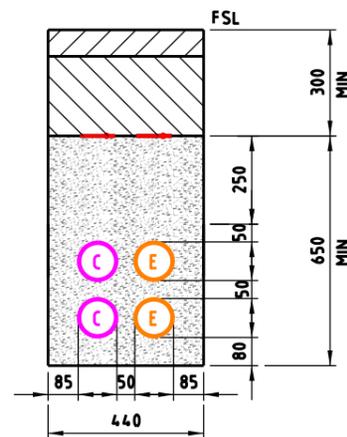
NOTES:

- DIMENSIONS SHOWN ARE IN MILLIMETERS, UNO
- APPROPRIATE MARKER TAPE WITH TRACE WIRE RELEVANT TO THE TYPE OF SERVICE AND COMPLYING WITH CURRENT STANDARDS TO BE PROVIDED 300mm ABOVE EACH COLUMN OF SIMILAR CONDUIT TYPES
- WHERE BOTH ELECTRICAL AND COMMUNICATION CONDUITS ARE PROVIDED IN A TRENCH OR SAME COLUMN, TWO MARKER TAPES SHALL BE PROVIDED, ONE FOR ELECTRICAL AND THE OTHER FOR COMMUNICATION CONDUITS WHERE ELECTRICAL TAPE IS ON TOP
- ALL CONDUITS SHALL BE HEAVY DUTY UPVC AND IN ACCORDANCE WITH AS2053 COMMUNICATION CONDUIT SHALL COMPLY WITH AS/ACIF S008 COMMUNICATIONS CONDUITS SHALL BE WHITE ELECTRICAL CONDUITS SHALL BE ORANGE UNLESS NOTED OTHERWISE MINIMUM INTERNAL DIAMETER IS 100mm ALL CONDUITS SHALL BE PROVIDED WITH A DRAW STRING SECURED AT THE ENDS
- NOMINATED BACKFILL FOR TRENCHING IN EXISTING PAVEMENT AND UNDER NEW PAVEMENT TO BE STABILISED SAND
- WHERE COVER NOMINATED ON ALIGNMENT PLANS IS LESS THAN 600mm TO ELECTRICAL CONDUITS, WRITTEN CONSENT FROM ENERGY SAFE VICTORIA MUST BE SOUGHT AND OBTAINED PRIOR TO CONDUIT INSTALLATION
- THIS DRAWING TO BE USED IN CONJUNCTION WITH STANDARD SECTION 733

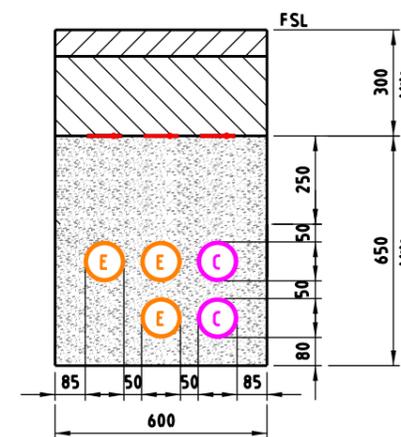
1 OR 2 CONDUITS - OFF PAVEMENT TRENCH



4 CONDUITS - OFF PAVEMENT TRENCH



5 CONDUITS - OFF PAVEMENT TRENCH



KEY:

- ELECTRICAL CONDUIT
- COMMUNICATION CONDUIT

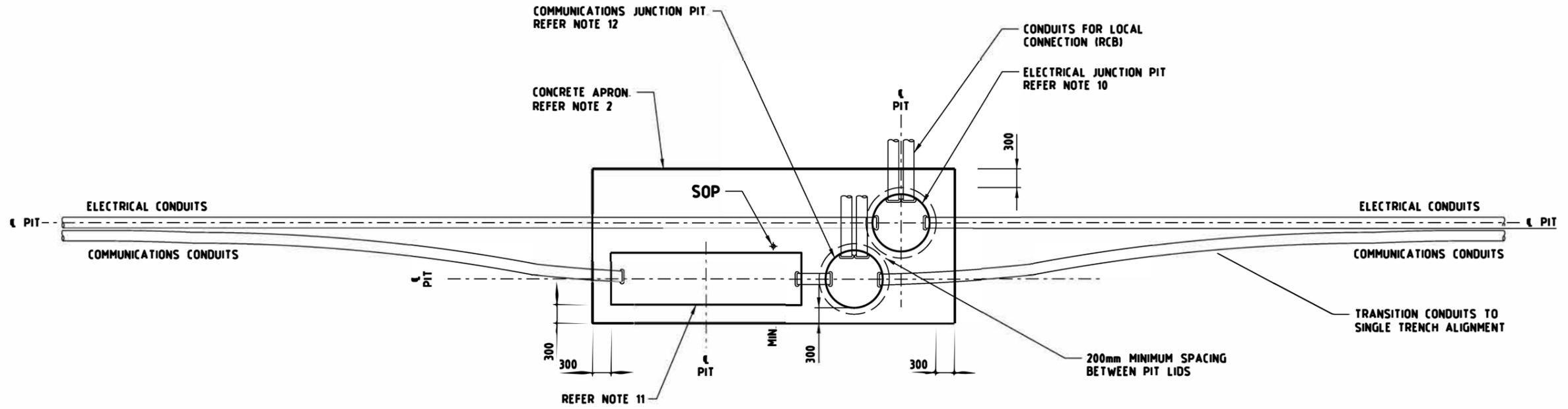
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ISSUE	APP'D	DATE	AMENDMENT

GENERAL NOTES	
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DESIGNED	M80 UPGRADE	07/2015
APPROVED	W HARVEY - MANAGER	
	ITS INFRASTRUCTURE & SYSTEM 08/2015	
CAT. FILE		
	HOR	SCALE OF METRES N T S
	VER	



STANDARD DRAWING				
MANAGED MOTORWAY				
PIT AND CONDUIT ARRANGEMENTS				
ELECTRICAL & COMMUNICATION TRENCHES				
TYPICAL ARRANGEMENT				
FILE NO	CONTRACT NO	SHEET NO	DRAWING NO	ISSUE
			TC-2204	A

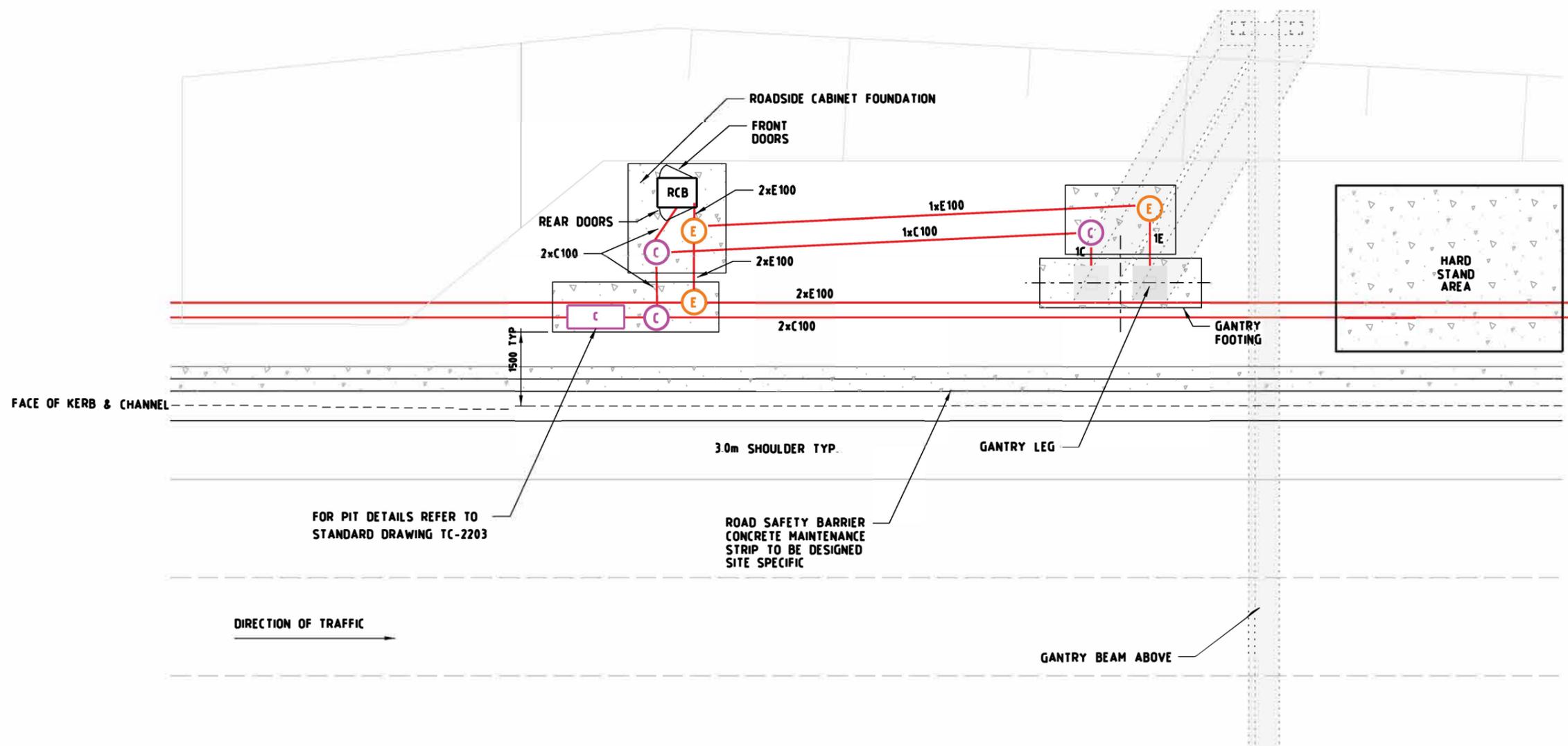


P9 COMMUNICATION PIT, COMMUNICATION AND ELECTRICAL JUNCTION PITS
PLAN

NOTES

- | | |
|--|--|
| <p>1. REFER TO ALIGNMENT PLANS FOR NUMBER, SIZE AND ORIENTATION OF CONDUITS</p> <p>2. CONCRETE APRON 200mm THICK GRADE N25 WITH SL82 MESH CENTRALLY PLACED, 75mm THICK BED OF CRUSHED ROCK MATERIAL WITH CBR 10 20mm FALL AWAY FROM PIT</p> <p>3. LIGHT DUTY PIT LIDS USED IN FREEWAY VERGES PROTECTED FROM TRAFFIC</p> <p>4. ALL CONDUIT ENTRY AND EXIT POINTS INTO PIT WALLS TO BE SEALED WITH CEMENT MORTAR TO PROVIDE A WATERTIGHT SEAL</p> <p>5. ALL VICROADS PIT LIDS TO BE INSCRIBED IN ACCORDANCE WITH VICROADS STANDARD DRAWING TC 1220 INSCRIPTION TO BE "VICROADS ELEC" FOR ELECTRICAL PITS AND "VICROADS COMMS" FOR COMMUNICATION PITS</p> <p>6. AVOID DISTORTION DURING COMPACTION SUCH THAT THE MINIMUM DIAMETRIC DIMENSION EXCEEDS 720mm FOR 750Ø PIT</p> <p>7. ENDS OF CONDUITS TO BE TRIMMED NEATLY, FREE FROM SHARP EDGES OR BURRS, AND SHALL BE FITTED WITH CONDUIT BUSHES</p> <p>8. 300mm THICK BASE OF WASHED 20mm SCREENING TO BE PROVIDED UNDER THE ENTIRE AREA COVERED BY CONCRETE APRON</p> <p>9. ALL VICROADS COMMUNICATION PITLIDS TO BE LOCKABLE</p> | <p>10. 750mm ROUND ELECTRICAL PIT AS APPROPRIATE FOR DETAILS, REFER TO STANDARD DRAWING TC-2201</p> <p>11. P9 COMMUNICATION PIT FOR DETAILS, REFER TO STANDARD DRAWING TC-2203 - P9 ITS COMMUNICATIONS PIT</p> <p>12. 750mm ROUND COMMUNICATIONS JUNCTION PIT IS REQUIRED ONLY FOR ITS DEVICES/ CONDUITS REFER TO STANDARD DRAWING TC-2202</p> <p>13. FOR TRENCHING METHOD, REFER TO STANDARD DRAWING TC-2204 - ELECTRICAL AND COMMUNICATION TRENCHES</p> <p>14. DIMENSIONS SHOWN ARE IN MILLIMETERS, UNO</p> <p>15. THIS DRAWING IS TO BE USED IN CONJUNCTION WITH STANDARD SECTION 733</p> <p>16. CONCRETE SURROUNDS AND PIT LIDS SHALL BE GRADED IN THE SAME DIRECTION WITH A MINIMUM GRADE OF 2% SHALL NOT POND WATER AND MATCH EXISTING SURFACE LEVELS FOR SAFETY OF MAINTENANCE STAFF AND PUBLIC</p> <p>17. THIS DRAWING IS APPLICABLE WHERE 2 OR MORE PITS ARE GROUPED TOGETHER WHERE POSSIBLE PITS SHALL BE GROUPED TOGETHER AND CONTAINED WITHIN A SINGLE CONCRETE APRON/SURROUND</p> <p>18. CONCRETE APRON EDGES TO BE CHAMFERED</p> |
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A				FILE:				VER				SHEET NO.							
ISSUE	APP'D	DATE	AMENDMENT	GENERAL NOTES								DRAWING NO. TC-2206							
												ISSUE B							



- KEY**
-  ELECTRICAL PIT 750mm
 -  COMMUNICATION PIT 750mm JUNCTION
 -  COMMUNICATION PIT (P9)
 -  ROADSIDE CABINET
 - COMMUNICATIONS CONDUITS
 - ELECTRICAL CONDUITS
 -  CONCRETE APRON
- E100 - ELECTRICAL (ORANGE) HEAVY DUTY CONDUIT 100 DIA
 C100 - COMMUNICATIONS (WHITE) HEAVY DUTY CONDUIT 100 DIA

NOTES

1. SAFE NON-SLIP PEDESTRIAN ACCESS SURFACE TO BE PROVIDED BETWEEN VEHICLE HARD-STAND AND RCB.
2. HARD STAND AREA SHALL BE MINIMUM OF 6m IN LENGTH AND 4m WIDE, MADE OF REINFORCED CONCRETE.
3. FOR PIT DETAILS, REFER TO STANDARD DRAWINGS TC-2201 TO TC-2203
4. FOR ROADSIDE CABINET FOUNDATION DETAILS REFER TO STANDARD DRAWING TC-2230
5. WHERE REQUIRED ADDITIONAL ELECTRICAL CONDUITS FOR OTHER ELECTRICAL SYSTEMS SHALL BE PROVIDED IN PARALLEL TO THOSE SHOWN IN THIS DRAWING.
6. HARD STAND AREA SHALL BE DESIGNED SITE SPECIFIC TO PROVIDE VEHICLE ACCESS AND PROTECTION FROM LIVE TRAFFIC.
7. THIS DRAWING IS INDICATIVE ONLY, EACH LOCATION SHALL BE DESIGNED SITE SPECIFIC TO THE SATISFACTION OF VICROADS.
8. FOR FRS GANTRY DESIGN, ENSURE THE ELECTRICAL PIT IS LOCATED ADJACENT TO THE FIRST LEG FROM APPROACH SIDE TO ALLOW ELECTRICAL CABLES TO BE INSTALLED FOR TRAFFIC SIGNAL LANTERNS.

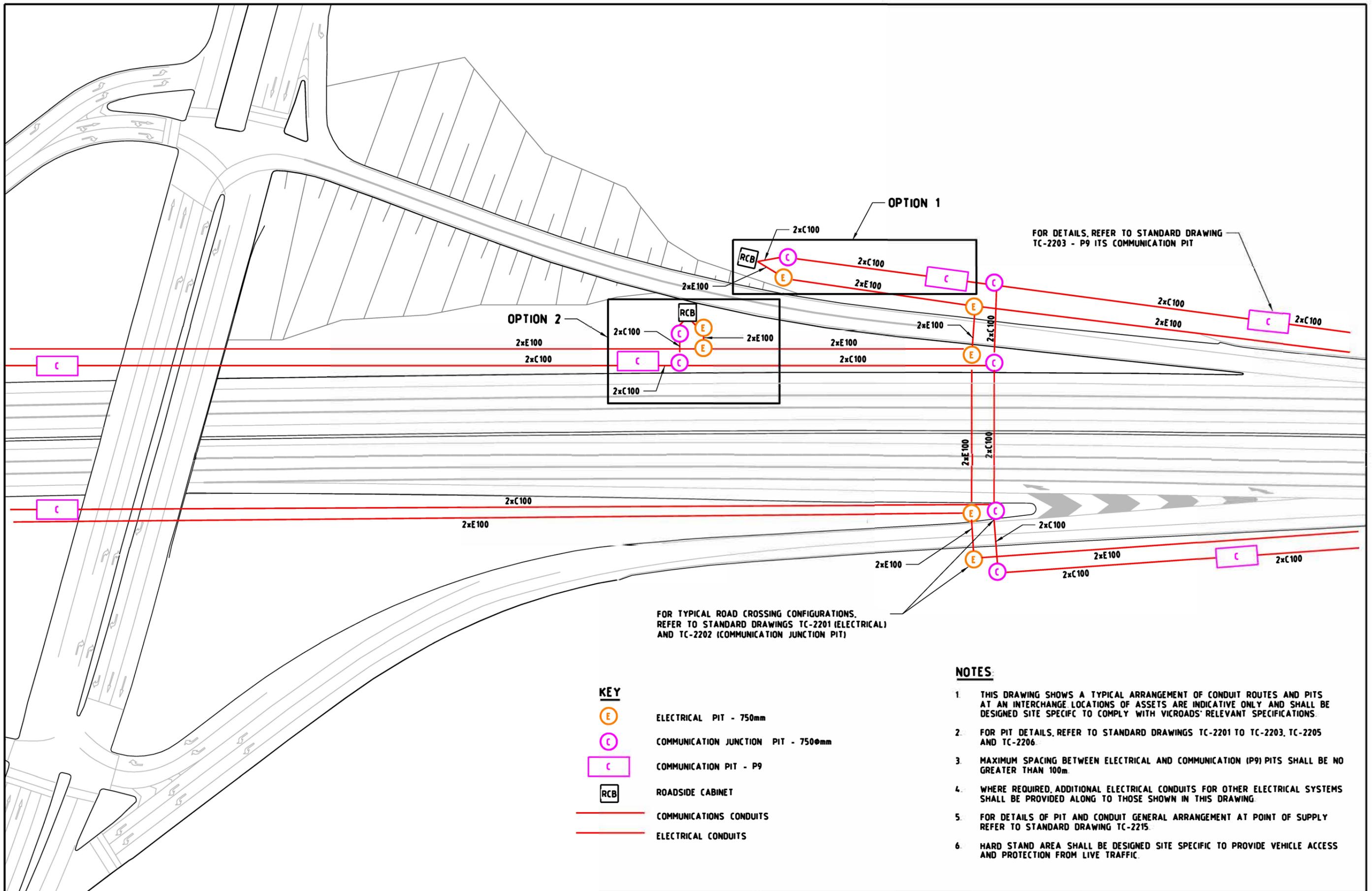
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B	C.C.	10/2022	REPLACED P8 PIT WITH P9
A	W.H.	12/2018	REVISION OF DETAIL
ISSUE	APP'D	DATE	AMENDMENT

GENERAL NOTES	

DESIGNED	M80 UPGRADE	07/2015
APPROVED	W HARVEY - MANAGER	
	ITS INFRASTRUCTURE & SYSTEM 08/2015	
CAT:	SCALE OF METRES	
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STANDARD DRAWING MANAGED MOTORWAY				
PIT AND CONDUIT ARRANGEMENTS GENERAL ARRANGEMENT AT GANTRIES				
FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
			TC-2207	B



FOR DETAILS, REFER TO STANDARD DRAWING TC-2203 - P9 ITS COMMUNICATION PIT

FOR TYPICAL ROAD CROSSING CONFIGURATIONS, REFER TO STANDARD DRAWINGS TC-2201 (ELECTRICAL) AND TC-2202 (COMMUNICATION JUNCTION PIT)

- KEY**
- E ELECTRICAL PIT - 750mm
 - C COMMUNICATION JUNCTION PIT - 750mm
 - C COMMUNICATION PIT - P9
 - RCB ROADSIDE CABINET
 - COMMUNICATIONS CONDUITS
 - ELECTRICAL CONDUITS

NOTES

1. THIS DRAWING SHOWS A TYPICAL ARRANGEMENT OF CONDUIT ROUTES AND PITS AT AN INTERCHANGE LOCATIONS OF ASSETS ARE INDICATIVE ONLY AND SHALL BE DESIGNED SITE SPECIFIC TO COMPLY WITH VICROADS' RELEVANT SPECIFICATIONS.
2. FOR PIT DETAILS, REFER TO STANDARD DRAWINGS TC-2201 TO TC-2203, TC-2205 AND TC-2206.
3. MAXIMUM SPACING BETWEEN ELECTRICAL AND COMMUNICATION (P9) PITS SHALL BE NO GREATER THAN 100m.
4. WHERE REQUIRED, ADDITIONAL ELECTRICAL CONDUITS FOR OTHER ELECTRICAL SYSTEMS SHALL BE PROVIDED ALONG TO THOSE SHOWN IN THIS DRAWING.
5. FOR DETAILS OF PIT AND CONDUIT GENERAL ARRANGEMENT AT POINT OF SUPPLY REFER TO STANDARD DRAWING TC-2215.
6. HARD STAND AREA SHALL BE DESIGNED SITE SPECIFIC TO PROVIDE VEHICLE ACCESS AND PROTECTION FROM LIVE TRAFFIC.

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B	C.C.	10/2022	REPLACED P8 PIT WITH P9
A	W.H.	12/2018	REVISION OF DETAIL
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GENERAL NOTES

DESIGNED M80 UPGRADE 07/2015

APPROVED W HARVEY - MANAGER ITS INFRASTRUCTURE & SYSTEM 08/2015

CAT: PROJ: FILE:

SCALE OF METRES N T S

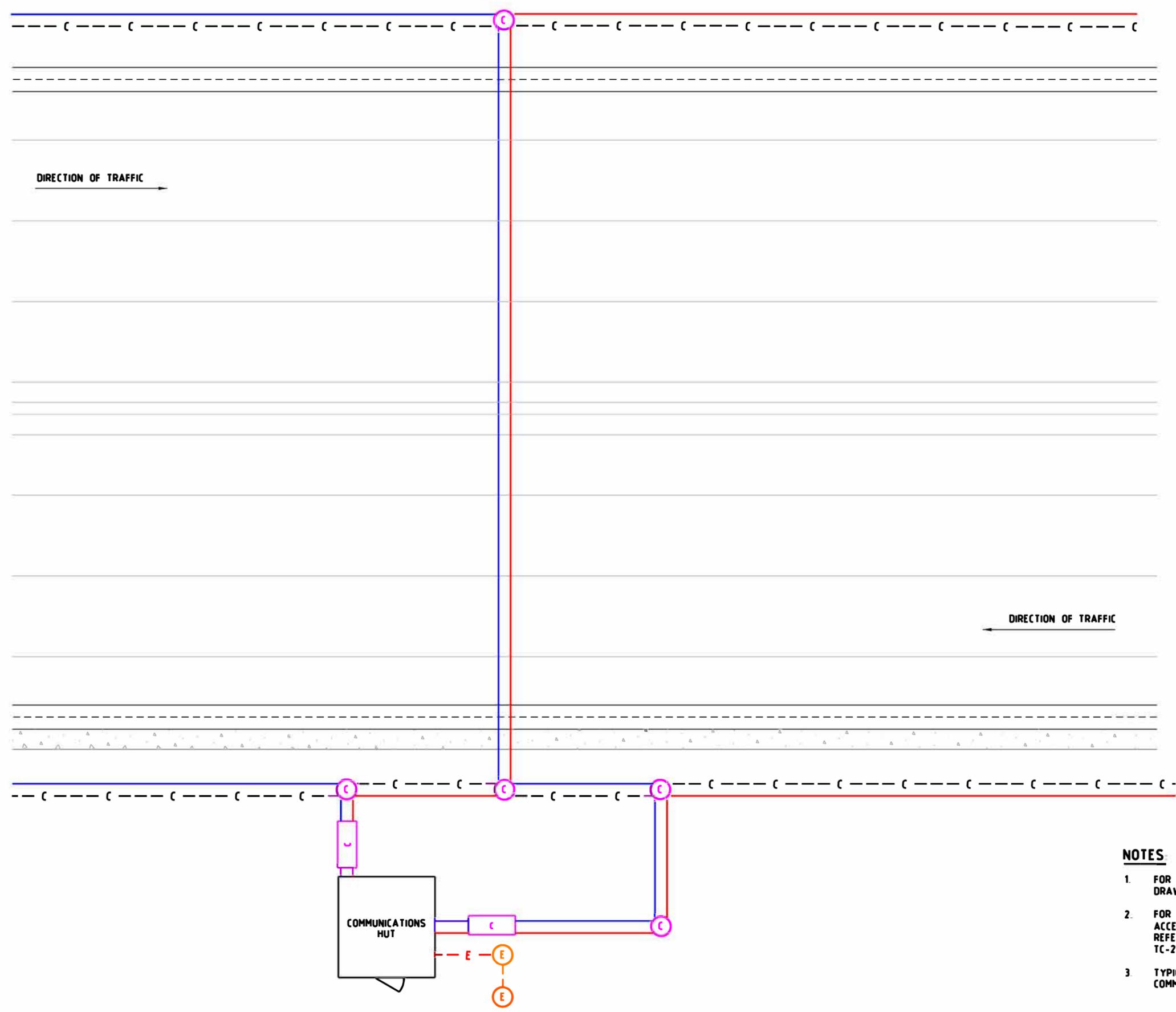
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STANDARD DRAWING
MANAGED MOTORWAY

PIT AND CONDUIT ARRANGEMENTS
GENERAL ARRANGEMENT AT AN INTERCHANGE

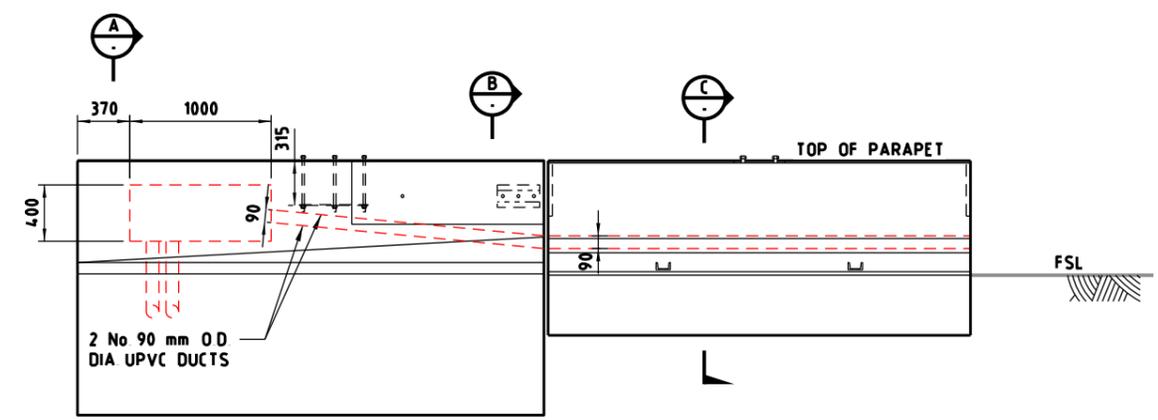
FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
			TC-2208	B

- KEY**
-  ELECTRICAL PIT 750mm
 -  COMMUNICATION JUNCTION PIT 750mm
 -  COMMUNICATION PIT (P9)
 -  FIBRE OPTIC - ROUTE A IN CONDUIT
 -  FIBRE OPTIC - ROUTE B IN CONDUIT
 -  COMMUNICATIONS CONDUIT NOT USED
 -  ELECTRICAL CONDUIT

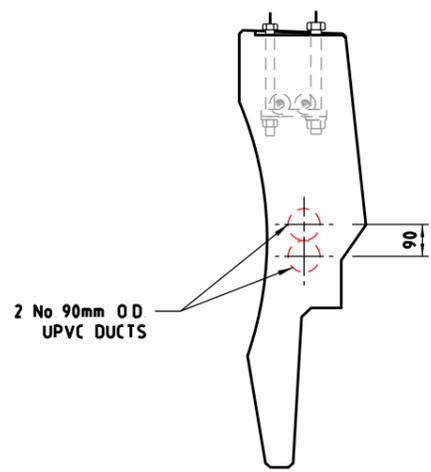


- NOTES**
1. FOR PIT AND CONDUIT DETAILS, REFER TO STANDARD DRAWINGS TC-2201 TO TC-2206.
 2. FOR COMMUNICATIONS HUT FLOOR PLAN, SPECIFICATIONS, ACCESS ARRANGEMENTS AND COMPOUND LAYOUT PLAN, REFER TO STANDARD DRAWINGS TC-2300, TC-2301 AND TC-2302.
 3. TYPICAL FIBRE OPTIC ROUTE A AND B TO PROVIDE COMMUNICATIONS NETWORK PHYSICAL DIVERSITY.

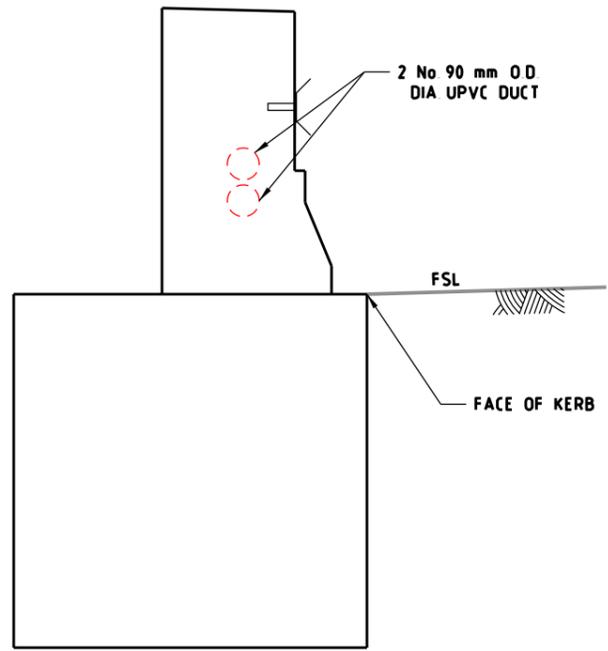
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A	W.H.	12/2018	REVISION OF DETAIL																																		
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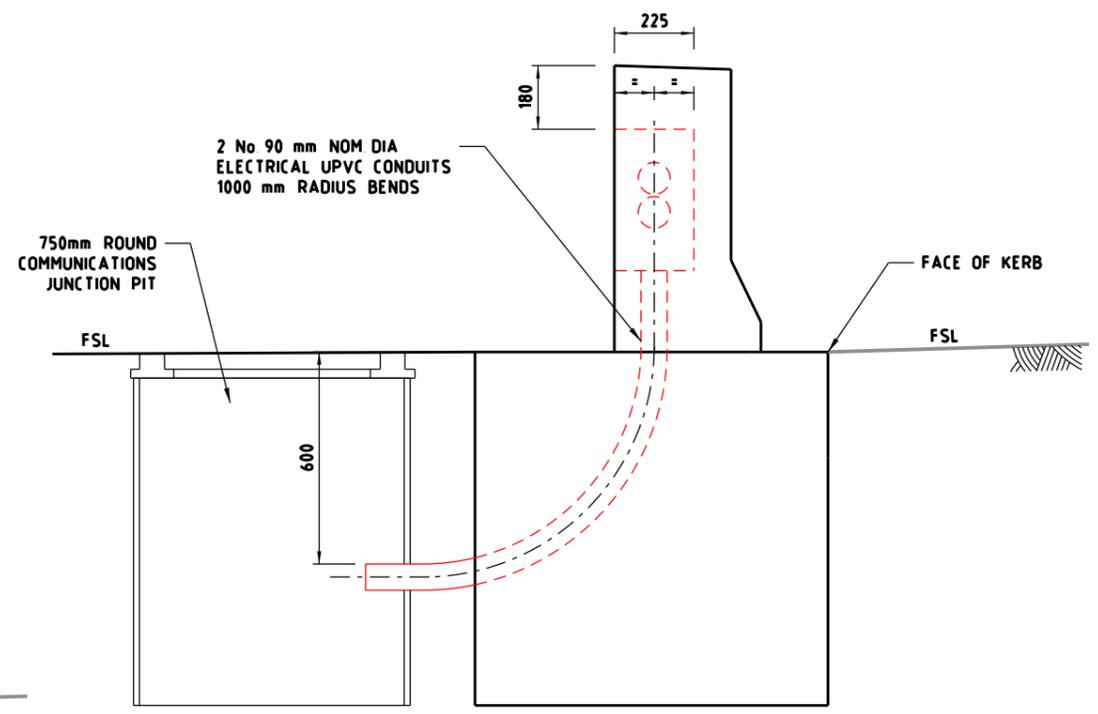
ELEVATION



SECTION C



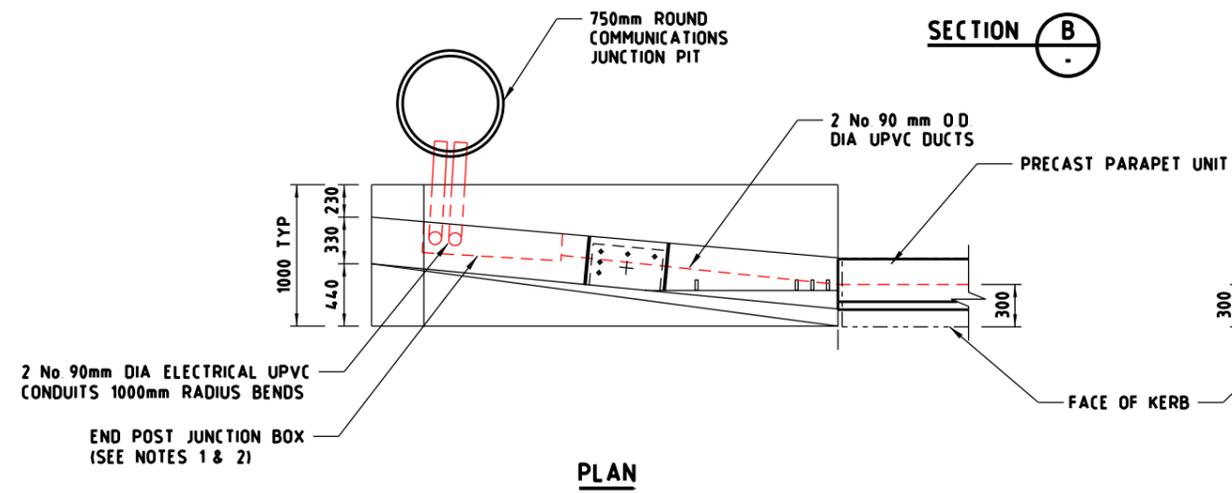
SECTION B



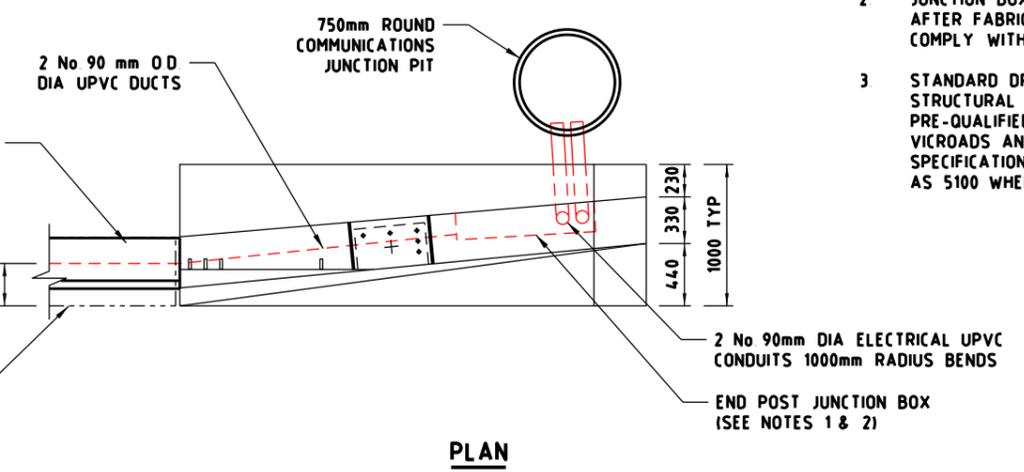
SECTION A

NOTES:

- 1 JUNCTION BOX SHALL BE GRADE 250 AND COMPLY WITH AS 3678
- 2 JUNCTION BOX SHALL BE HOT DIP GALVANISED AFTER FABRICATION WITH GALVANISING TO COMPLY WITH AS/NZS4680
- 3 STANDARD DRAWINGS SHOWN ARE INDICATIVE ONLY. STRUCTURAL DETAILS SHALL BE DESIGNED BY A PRE-QUALIFIED CONSULTANT TO THE SATISFACTION OF VICROADS AND SHALL COMPLY WITH VICROADS' SPECIFICATION BRIDGE TECHNICAL NOTES (BTN'S) AND AS 5100 WHERE APPLICABLE.



PLAN



PLAN

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A	W H	12/2018	REVISION OF DETAIL
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GENERAL NOTES

DESIGNED M80 UPGRADE 07/2015

APPROVED W HARVEY - MANAGER ITS INFRASTRUCTURE & SYSTEM 08/2015

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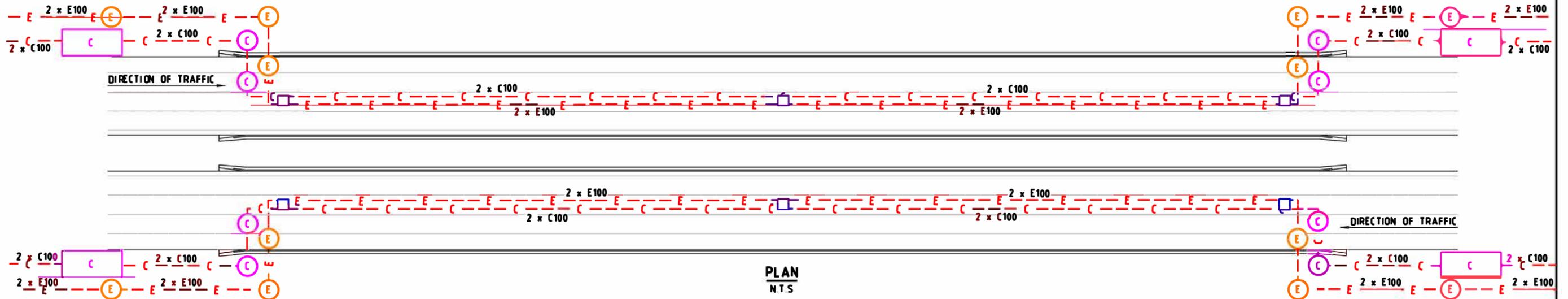
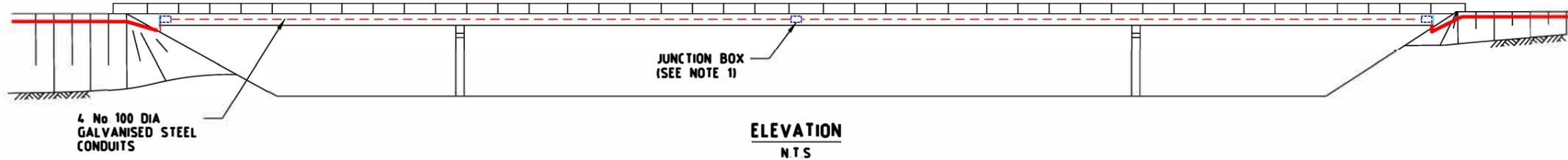
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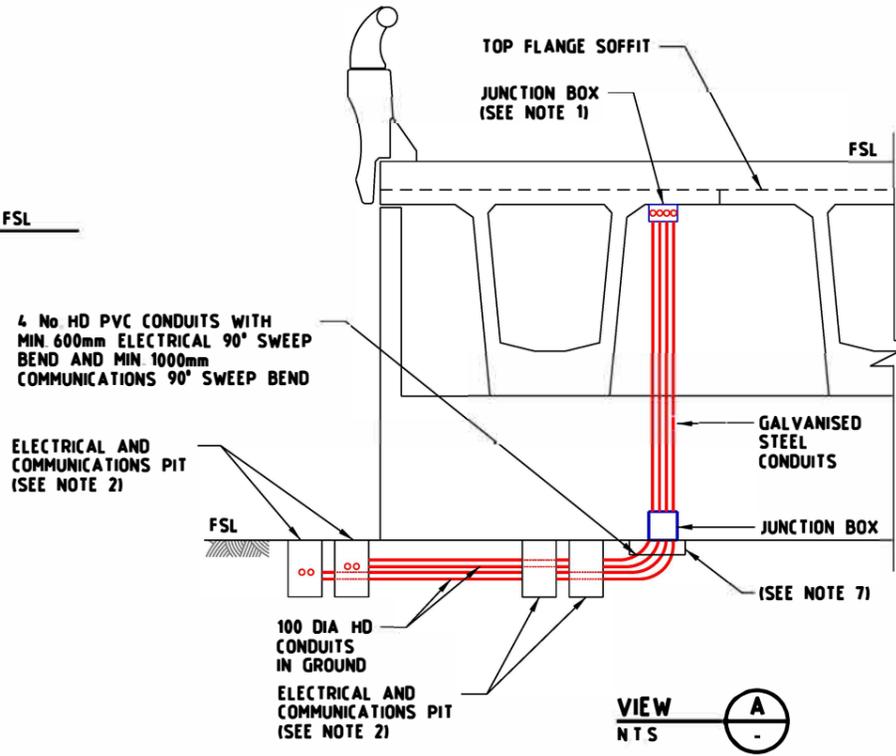
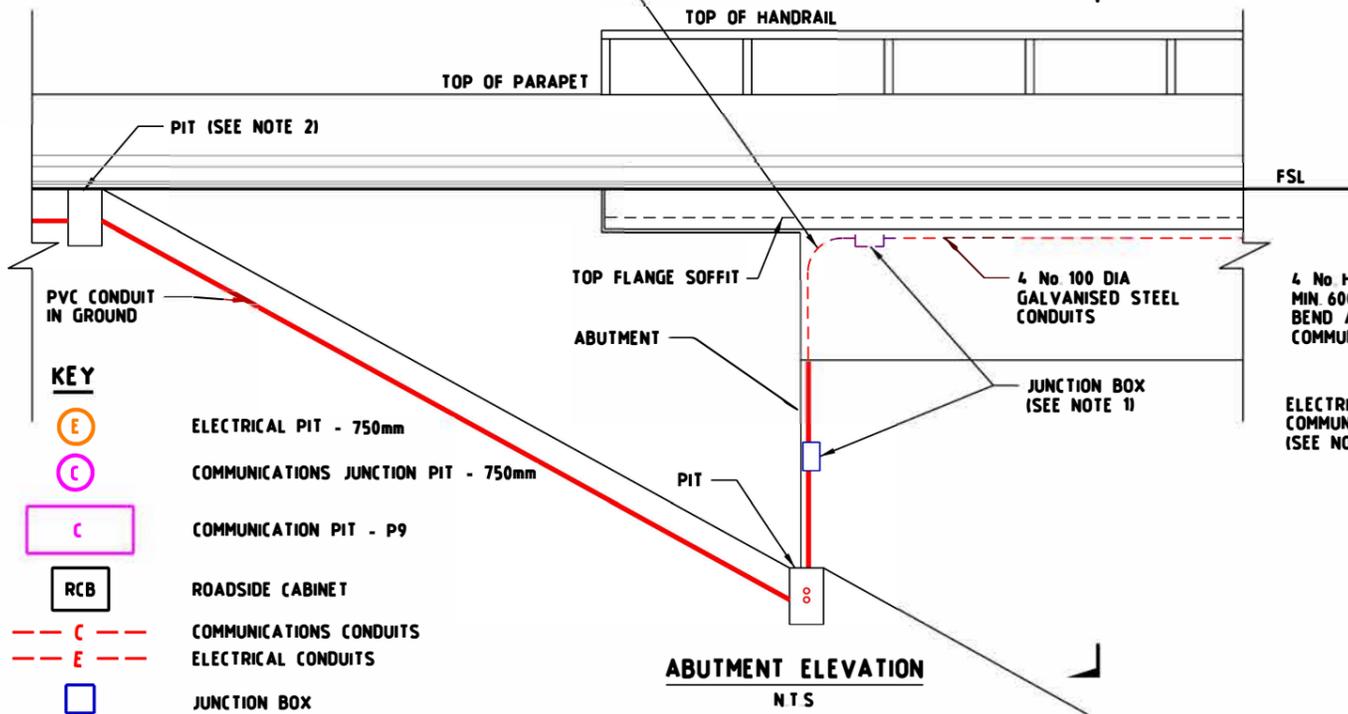
STANDARD DRAWING
MANAGED MOTORWAY
PIT AND CONDUIT ARRANGEMENTS
TRANSITION TO BRIDGE BARRIER
TYPICAL ARRANGEMENT

FILE NO	CONTRACT NO	SHEET NO	DRAWING NO	ISSUE
			TC-2210	A

APPROACH SLAB 100m MAXIMUM 100m MAXIMUM APPROACH SLAB



4 No GALVANISED STEEL CONDUITS WITH MIN 600mm ELECTRICAL 90° SWEEP BEND AND MIN 1000mm COMMUNICATIONS 90° SWEEP BEND



NOTES

- FOR JUNCTION BOX DETAILS, REFER TO STANDARD DRAWING TC-2212
- PITS SHALL BE 750mm ROUND COMMUNICATIONS AS REQUIRED FOR DETAILS, REFER TO STANDARD DRAWINGS TC-2201 AND TC-2202
- WHERE REQUIRED, ADDITIONAL ELECTRICAL CONDUITS FOR OTHER ELECTRICAL SYSTEMS SHALL BE PROVIDED IN PARALLEL TO THOSE SHOWN IN THIS DRAWING
- ENSURE CONDUIT RUN BETWEEN 'T' BEAMS ARE CONCEALED
- ANY CHANGES IN DIRECTION OF CONDUIT, REQUIRES A PIT OR JUNCTION CABINET
- CONDUIT TO BE DESIGNED AND INSTALLED TO ALLOW FOR ANY BRIDGE MOVEMENT
- MINIMUM 300mm DEEP CONCRETE PAD TO STABILISE CONDUITS ENTERING THE JUNCTION BOX 200mm AWAY FROM ANY OBJECT

KEY

- ELECTRICAL PIT - 750mm
- COMMUNICATIONS JUNCTION PIT - 750mm
- COMMUNICATION PIT - P9
- ROADSIDE CABINET
- COMMUNICATIONS CONDUITS
- ELECTRICAL CONDUITS
- JUNCTION BOX

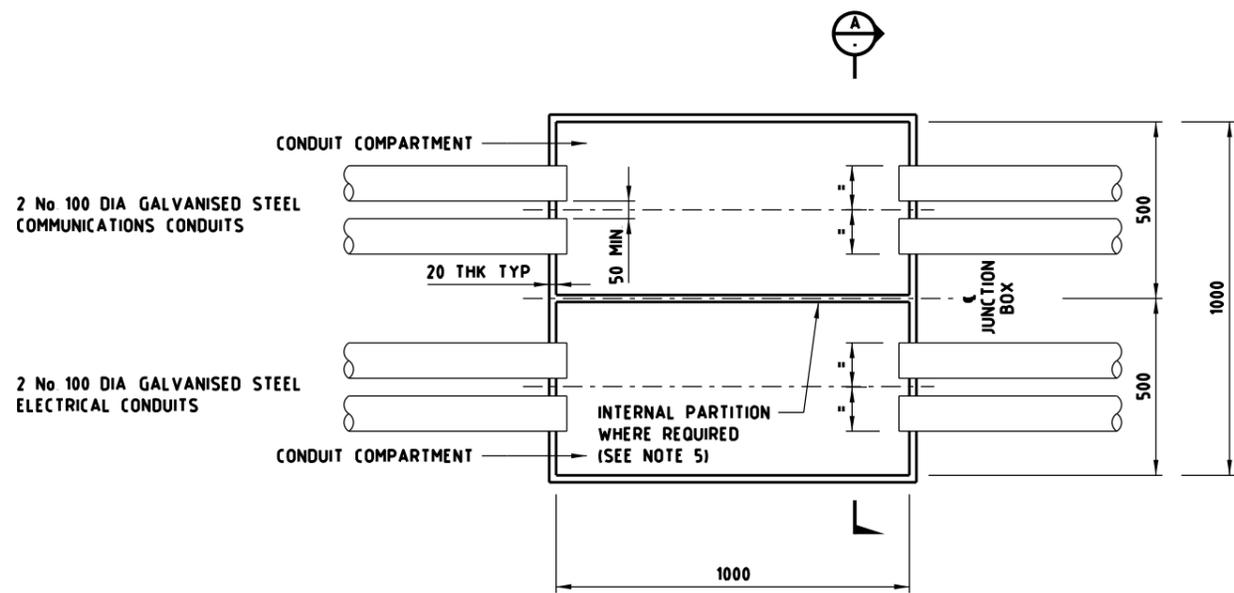
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B	C.C.	10/2022	REPLACED P8 PIT WITH P9
A	W.H.	12/2018	REVISION OF DETAIL

GENERAL NOTES	

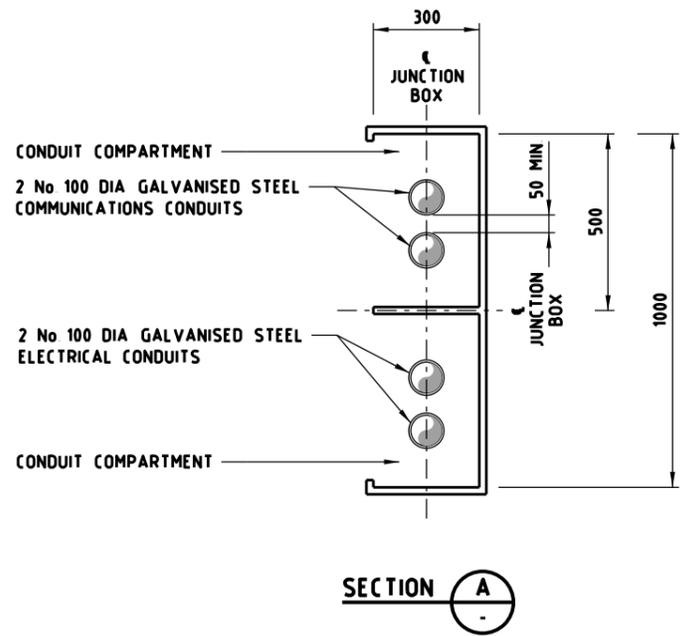
DESIGNED	M80 UPGRADE	07/2015
APPROVED	W HARVEY - MANAGER	
ITS INFRASTRUCTURE & SYSTEM 08/2015		
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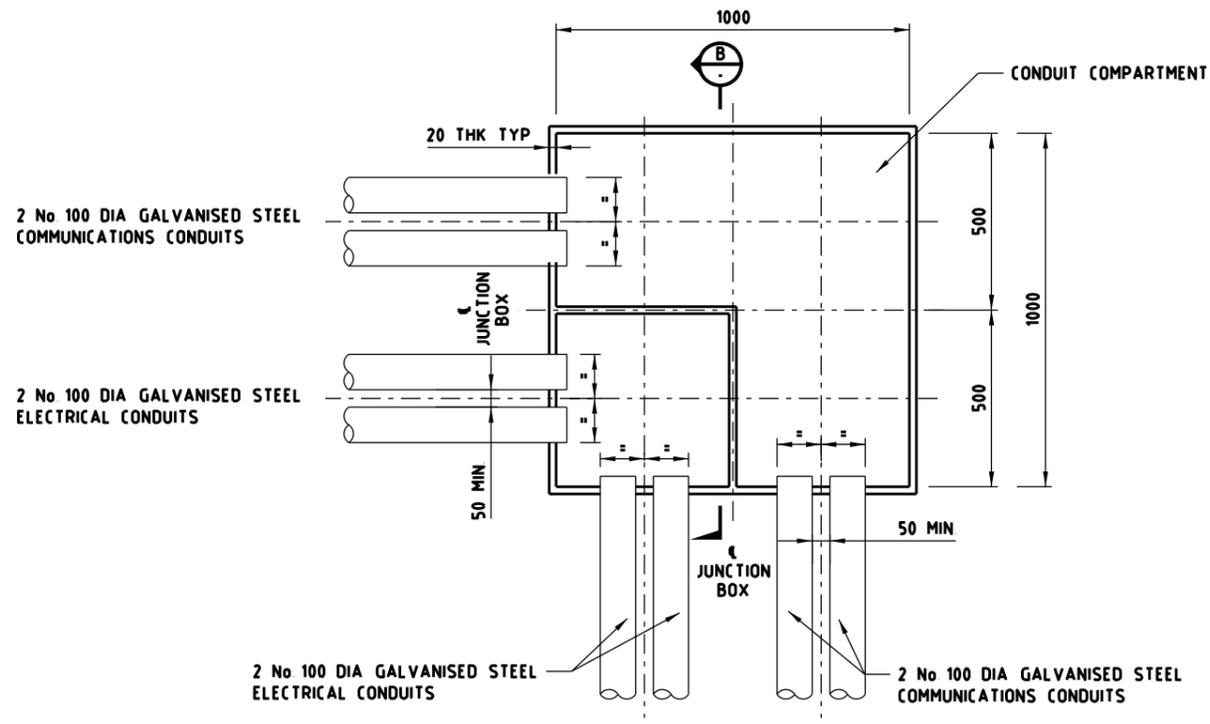
STANDARD DRAWING					
MANAGED MOTORWAY					
PIT AND CONDUIT ARRANGEMENTS					
TYPICAL ARRANGEMENT					
AT EXISTING STRUCTURES					
FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE	
			TC-2211	B	



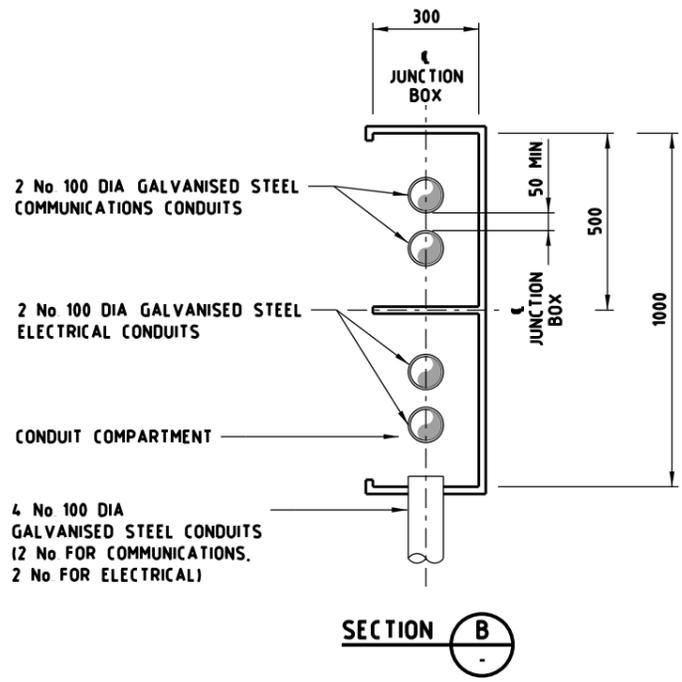
**TYPE 1 STRUCTURE MOUNTED JUNCTION BOX
ELEVATION**



SECTION A



**TYPE 2 STRUCTURE MOUNTED JUNCTION BOX
ELEVATION**



SECTION B

NOTES

- 1 DIMENSIONS SHOWN ARE IN MILLIMETERS, UNO
- 2 ANY VARIATION IN SIZE TO BE APPROVED BY VICROADS
- 3 WEATHERPROOF COUPLING TO BE PROVIDED BETWEEN CONDUIT AND JUNCTION BOX.
- 4 ENDS OF CONDUITS TO BE TRIMMED NEATLY AND FREE FROM SHARP EDGES
- 5 JUNCTION BOX SHALL BE 2mm MARINE GRADE ALUMINIUM POWDER COATED OR 15mm STAINLESS STEEL (GRADE 316)
- 6 INTERNAL PARTITION TO BE PROVIDED FOR ALL TYPE OF COMMUNICATIONS CABLES
- 7 DOORS TO BE INDIVIDUALLY LOCKABLE AND SECURED IN THE CLOSED POSITION BY WAY OF A MULTIPOINT SECURING SYSTEM ACTIVATED VIA A SINGLE KEYED LOCK
- 8 THE LOCK TO BE A STANDARD VICROADS BI-LOCK TYPE WITH INTERCHANGEABLE CYLINDER THE KEYING TO BE SET TO MATCH A STANDARD VICROADS CABINET KEY CODE, WHICH SHALL BE PROVIDED TO THE CONTRACTOR UPON THE AWARD OF THE CONTRACT.

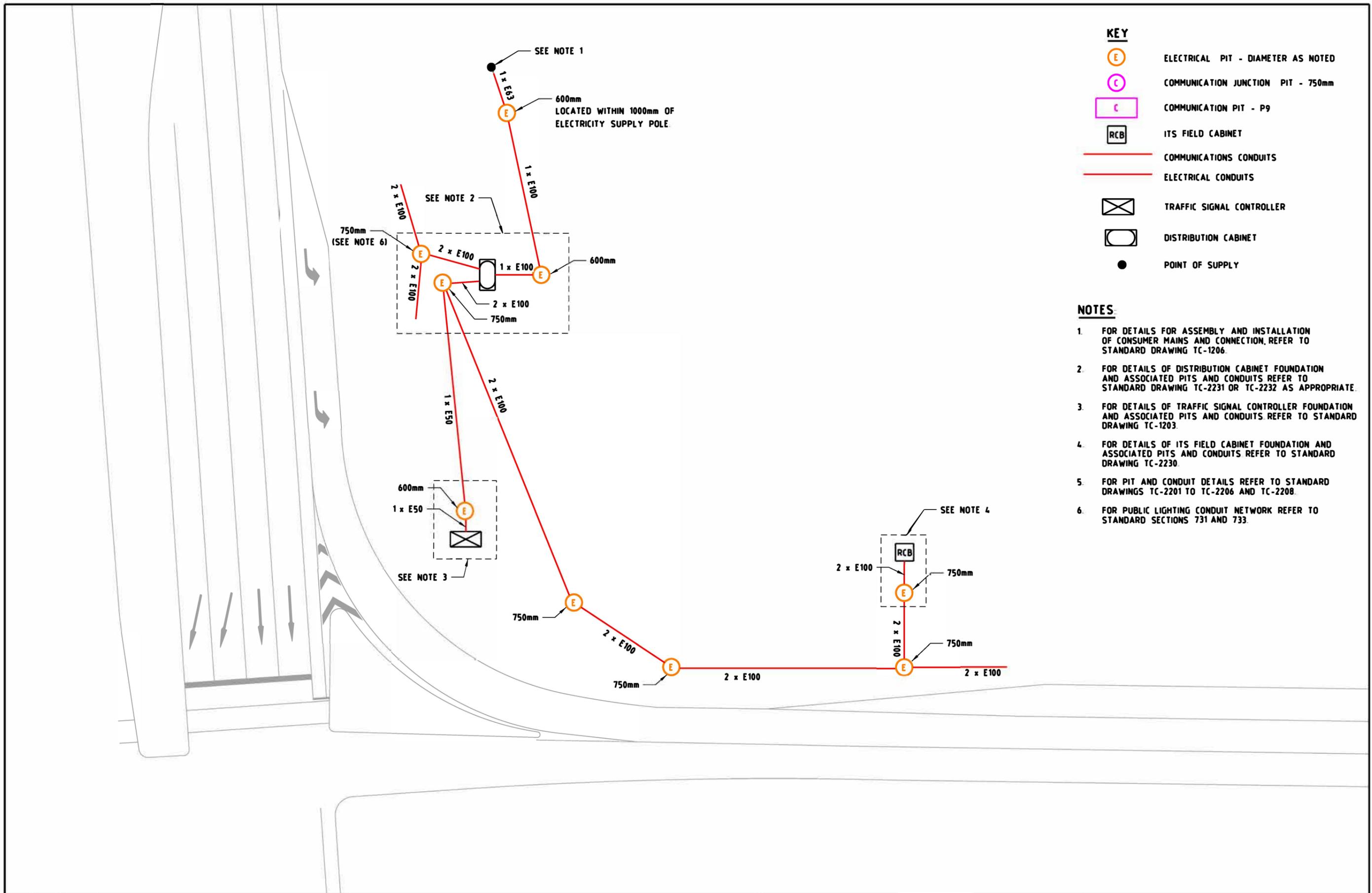
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ISSUE	APP'D	DATE	AMENDMENT

GENERAL NOTES

DESIGNED	M80 UPGRADE	07/2015
APPROVED	W HARVEY - MANAGER	ITS INFRASTRUCTURE & SYSTEM 08/2015
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STANDARD DRAWING MANAGED MOTORWAY				
PIT AND CONDUIT ARRANGEMENTS TYPICAL STRUCTURE MOUNTED JUNCTION BOX				
FILE NO	CONTRACT NO	SHEET NO	DRAWING NO	ISSUE
			TC-2212	A



- KEY**
- E ELECTRICAL PIT - DIAMETER AS NOTED
 - C COMMUNICATION JUNCTION PIT - 750mm
 - C COMMUNICATION PIT - P9
 - RCB ITS FIELD CABINET
 - COMMUNICATIONS CONDUITS
 - ELECTRICAL CONDUITS
 - TRAFFIC SIGNAL CONTROLLER
 - DISTRIBUTION CABINET
 - POINT OF SUPPLY

- NOTES:**
1. FOR DETAILS FOR ASSEMBLY AND INSTALLATION OF CONSUMER MAINS AND CONNECTION, REFER TO STANDARD DRAWING TC-1206.
 2. FOR DETAILS OF DISTRIBUTION CABINET FOUNDATION AND ASSOCIATED PITS AND CONDUITS REFER TO STANDARD DRAWING TC-2231 OR TC-2232 AS APPROPRIATE.
 3. FOR DETAILS OF TRAFFIC SIGNAL CONTROLLER FOUNDATION AND ASSOCIATED PITS AND CONDUITS REFER TO STANDARD DRAWING TC-1203.
 4. FOR DETAILS OF ITS FIELD CABINET FOUNDATION AND ASSOCIATED PITS AND CONDUITS REFER TO STANDARD DRAWING TC-2230.
 5. FOR PIT AND CONDUIT DETAILS REFER TO STANDARD DRAWINGS TC-2201 TO TC-2206 AND TC-2208.
 6. FOR PUBLIC LIGHTING CONDUIT NETWORK REFER TO STANDARD SECTIONS 731 AND 733.

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B	C.C.	10/2022	REPLACED P8 WITH PIT P9
A	W.H.	12/2018	REVISION OF DETAIL
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GENERAL NOTES

DESIGNED M80 UPGRADE 07/2015

APPROVED W HARVEY - MANAGER
ITS INFRASTRUCTURE & SYSTEM 08/2015

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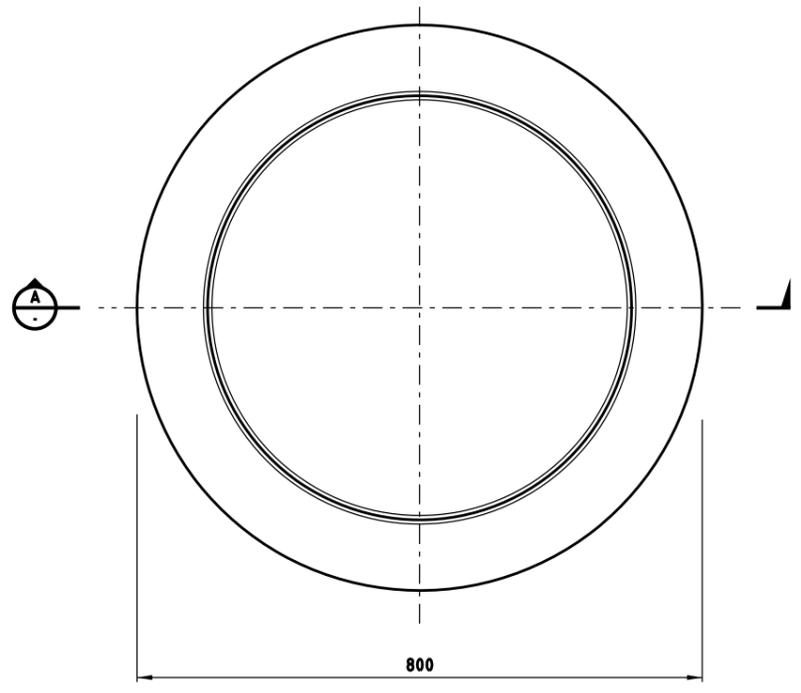
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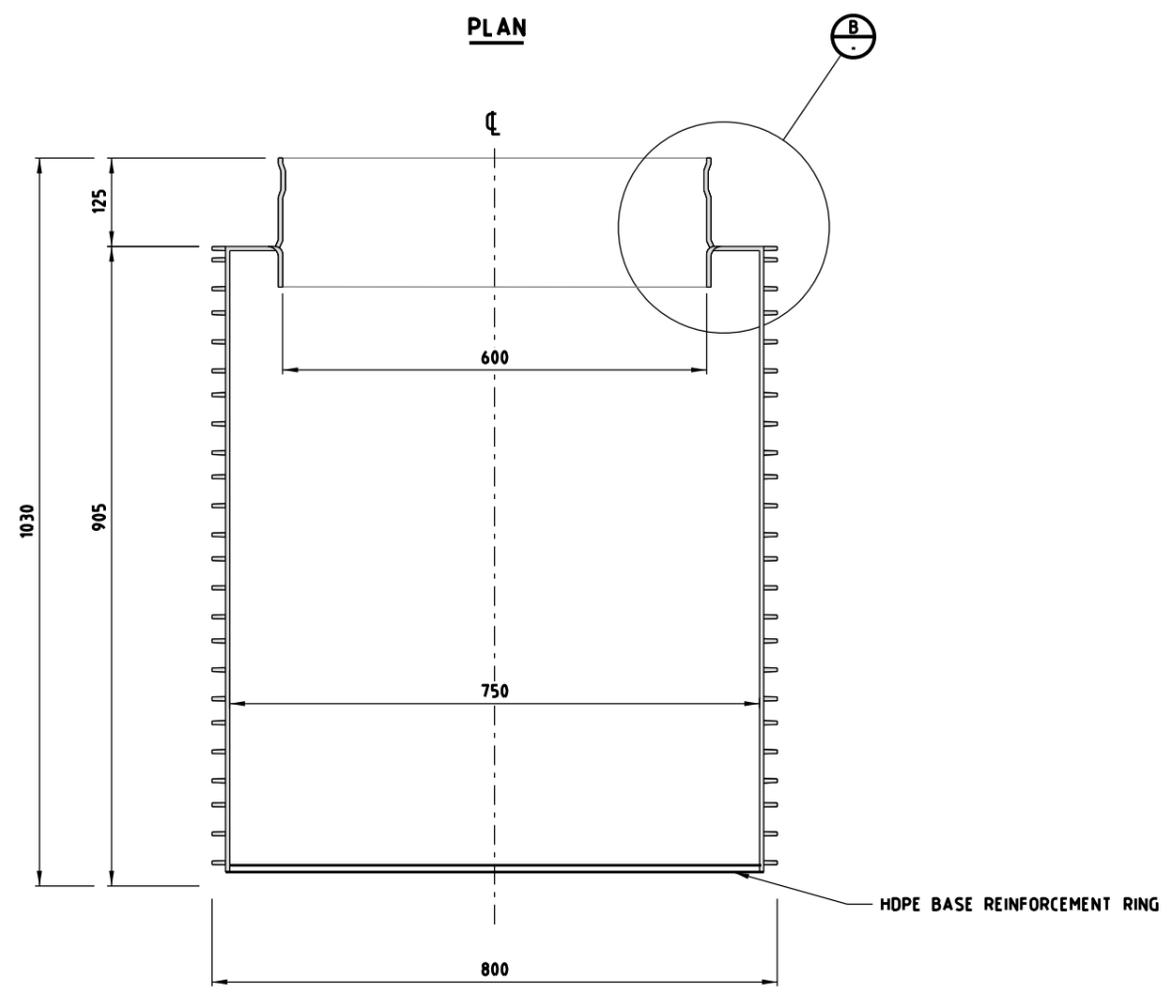
STANDARD DRAWING
MANAGED MOTORWAY

PIT AND CONDUIT ARRANGEMENTS
GENERAL ARRANGEMENT AT POINT OF SUPPLY

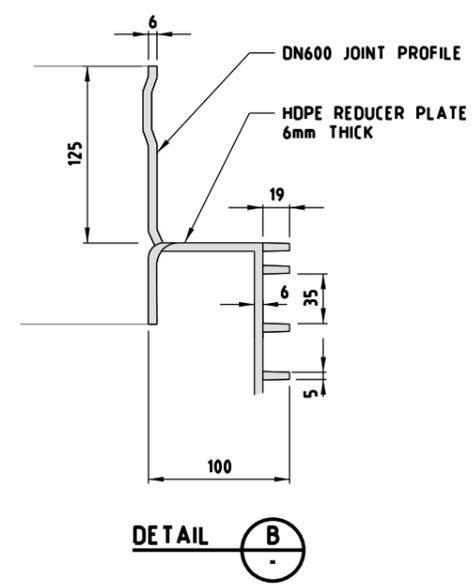
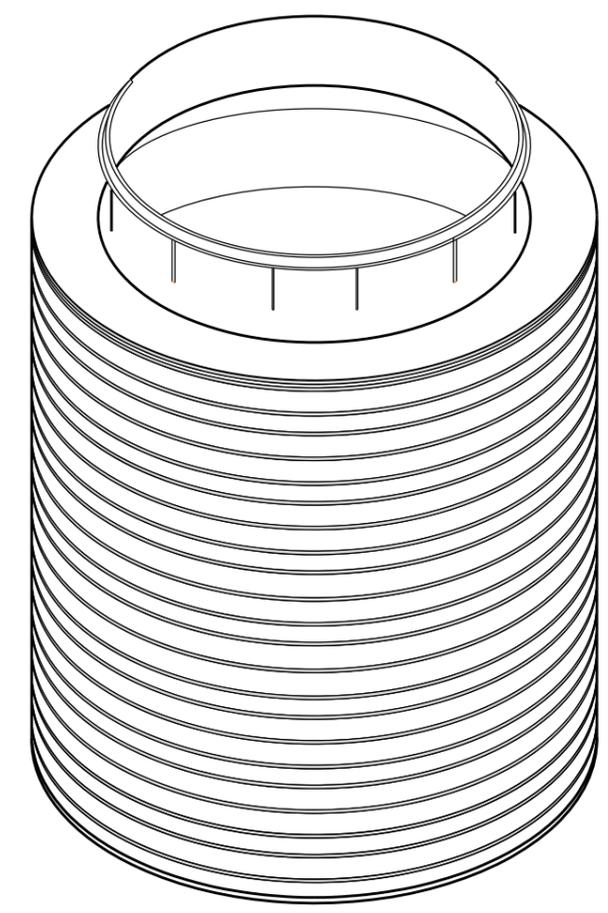
FILE NO.	CONTRACT NO.	SHEET NO.	DRAWING NO.	ISSUE
			TC-2215	B



PLAN



SECTION A



DETAIL B

NOTES:

- 1 DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED
- 2 MATERIAL HDPE OR AS SPECIFIED
- 3 ALL JOINTS FULLY SEAM WELDED TO COMPLY WITH RELEVANT STANDARD
- 4 FOR DETAILS OF CABLE PIT ACCESS COVER, FRAME AND PRECAST CONCRETE SURROUND REFER TO STANDARD DRAWING TC-2217.
- 5 PIT FORMER SHOWN IS INDICATIVE ONLY PIT FORMERS SHALL BE TYPE APPROVED BY VICROADS

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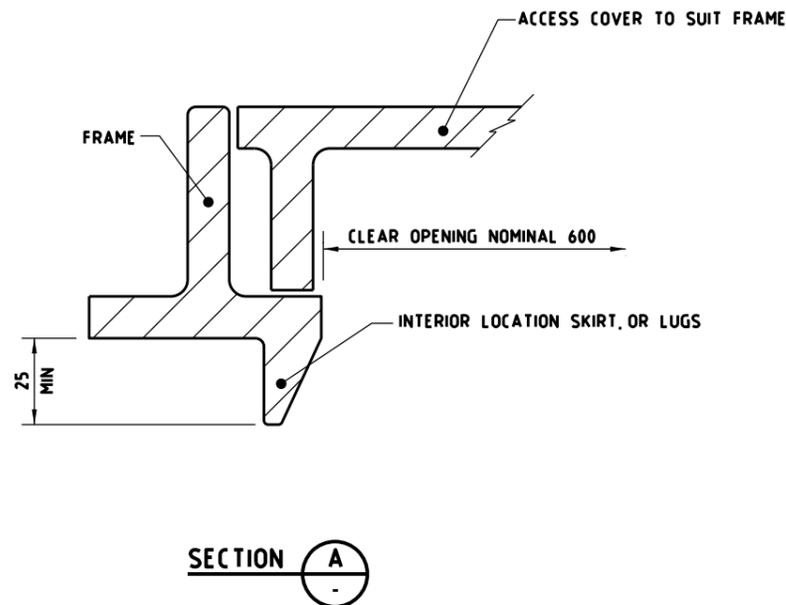
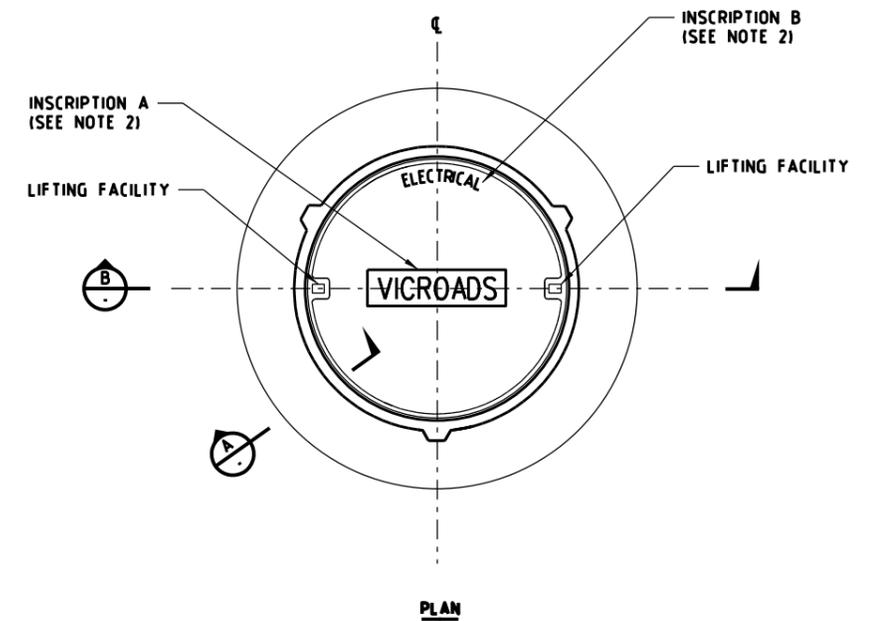
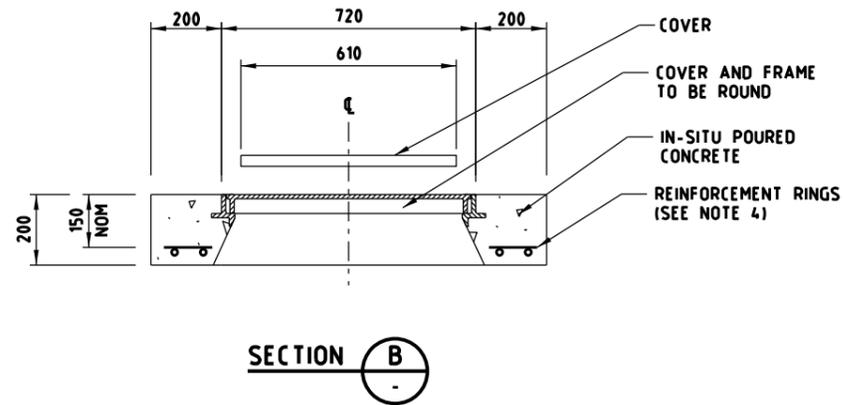
GENERAL NOTES

DESIGNED M80 UPGRADE 07/2015
 APPROVED W HARVEY - MANAGER ITS INFRASTRUCTURE & SYSTEM 08/2015
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STANDARD DRAWING
 MANAGED MOTORWAY
PIT INSTALLATION ARRANGEMENTS
 CABLE PIT FORMER 750mm DIA
 TO SUIT 600mm DIA LID

FILE NO	CONTRACT NO	SHEET NO	DRAWING NO	ISSUE
			TC-2216	A



NOTES

- 1 PIT ACCESS COVER AND FRAME TO COMPLY WITH AS 3996 - CLASS B UNSEALED (STANDARD) ANT TO BE TYPE APPROVED WITH SOLID TOP OR RECESSED WITH CONCRETE OR OTHER FILL
- 2 INSCRIPTIONS ON THE COVER ARE TO BE CAST, IMPRESSED OR AFFIXED BY AN APPROVED METHOD AND BE OF HIGH DURABILITY AND LEGIBILITY UNLESS OTHERWISE SPECIFIED. THE TEXT SHALL BE IN UPPER CASE LETTERING MINIMUM 20 HIGH THE REQUIRED INSCRIPTION MUST BE SPECIFIED WHEN ORDERING
 INSCRIPTION "A" OPTIONS:
 "A1" = "VICROADS"
 "A2" = "OTHER INSCRIPTION AS SPECIFIED"
 INSCRIPTION "B" OPTIONS:
 "B1" = "ELECTRICAL" or "ELEC"
 "B2" = "COMMUNICATIONS" or "COMMS"
 "B3" = "TRAFFIC SIGNALS" or "TRAFF SIG"
 "B4" = "OTHER INSCRIPTION AS SPECIFIED"
- 3 PIT LID TOP SURFACE SHALL MEET SKID RESISTANCE REQUIREMENTS FOR CLASS X AS DETAILED IN TABLE 2 OF AS/NZS 4586 FOR SLIP RESISTANCE CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS
- 4 REINFORCEMENT RINGS 750 DIA AND 900 DIA WIRE WITH EIGHT LIGATURE

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GENERAL NOTES

DESIGNED M80 UPGRADE 07/2015

APPROVED W HARVEY - MANAGER ITS INFRASTRUCTURE & SYSTEM 08/2015

CAT. PROJ. FILE

SCALE OF METRES N T S

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STANDARD DRAWING MANAGED MOTORWAY				
PIT INSTALLATION ARRANGEMENTS CABLE PIT ACCESS COVER, FRAME AND CONCRETE SURROUND - 750mm DIA				
FILE NO	CONTRACT NO	SHEET NO	DRAWING NO	ISSUE
			TC-2217	A