

RAILWAY ST REALIGNMENT AND CARPARKING NORTH COTTESLOE PRIMARY SCHOOL

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TOWN OF COTTESLOE



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trading as Porter Consulting Engineers ABN 78 636 396 385

JOB No. 16-6-79



LEGEND

- EXISTING KERB
- - - - - EXISTING KERB TO BE REMOVED
- PROPOSED KERB AND PATH
- PROPOSED RETAINING WALL
- Gx EXISTING HP GAS LINE
- Gx EXISTING MP GAS LINE
- Sx EXISTING SEWER PIPE
- Tx EXISTING TELSTRA CABLE
- Wx EXISTING WATER MAIN
- Dx EXISTING DRAINAGE LINE
- DHx EXISTING OVERHEAD POWER LINES
- CDM EXISTING COMMUNICATIONS
- Px EXISTING LOW VOLTAGE UNDERGROUND
- HVx EXISTING HIGH VOLTAGE UNDERGROUND
- D PROPOSED DRAINAGE
- [Blue Hatched Box] AREA OF CONCRETE PATHS/CROSSOVERS
- [Green Dotted Box] AREA OF GRASS INFILL
- [Orange Hatched Box] AREA OF BRICK PAVING
- [Star Symbol] EXISTING NORFOLK PINES
- [Circle Symbol] EXISTING TREES



PROJECT: **RAILWAY ST REALIGNMENT
NORTH COTTESLOE P.S.**

NO.	DATE	REVISION
C	9-9-2016	DETAILED DESIGN SERVICES TO BE PICKED UP. DRAINAGE YET TO BE DESIGNED.
B	28-7-2016	RAILWAY ST DEVIATION TIGHTENED. PED ISLAND ADDED. PATH 2m. HATCHING SHOWN
A	15-7-2016	PRELIMINARY PLOT FOR APPROVAL

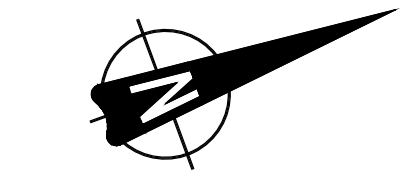
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CLIENT: **TOWN OF COTTESLOE**

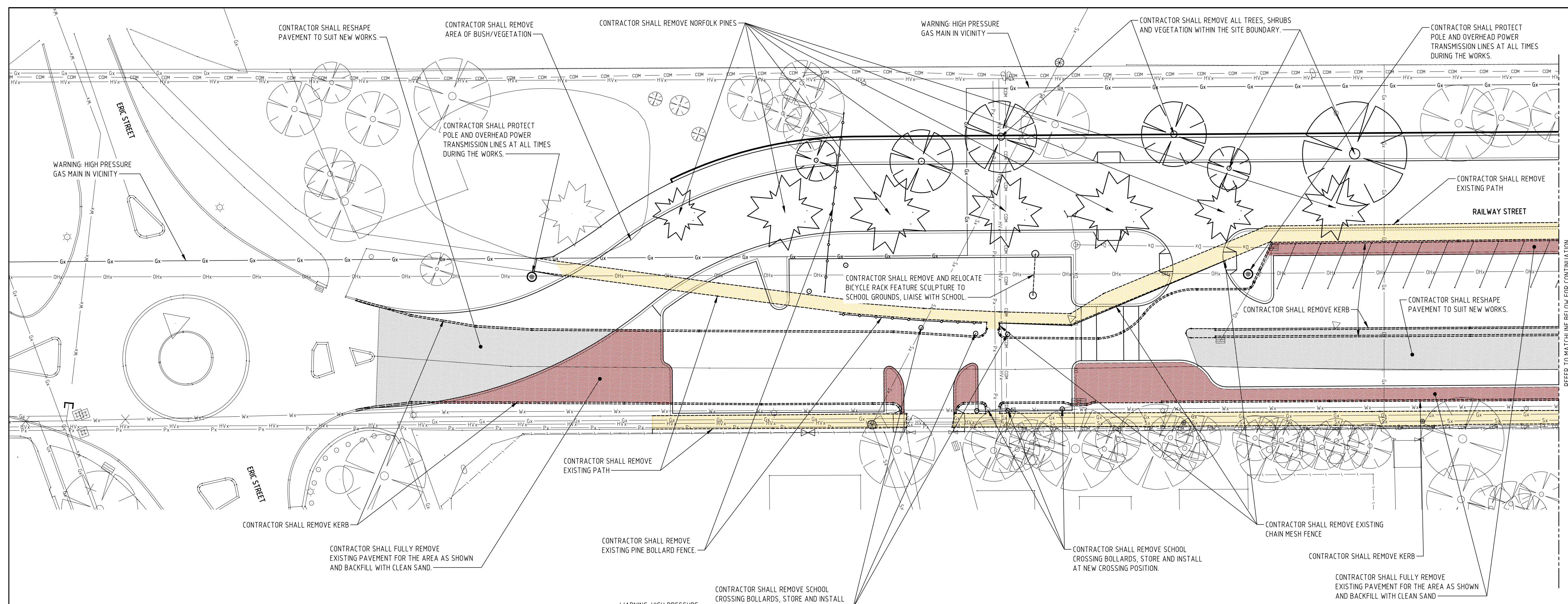
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 STATUS: **FOR APPROVAL**

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LEGEND

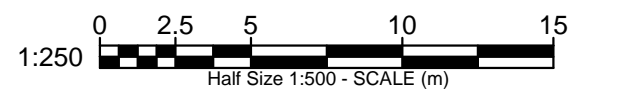
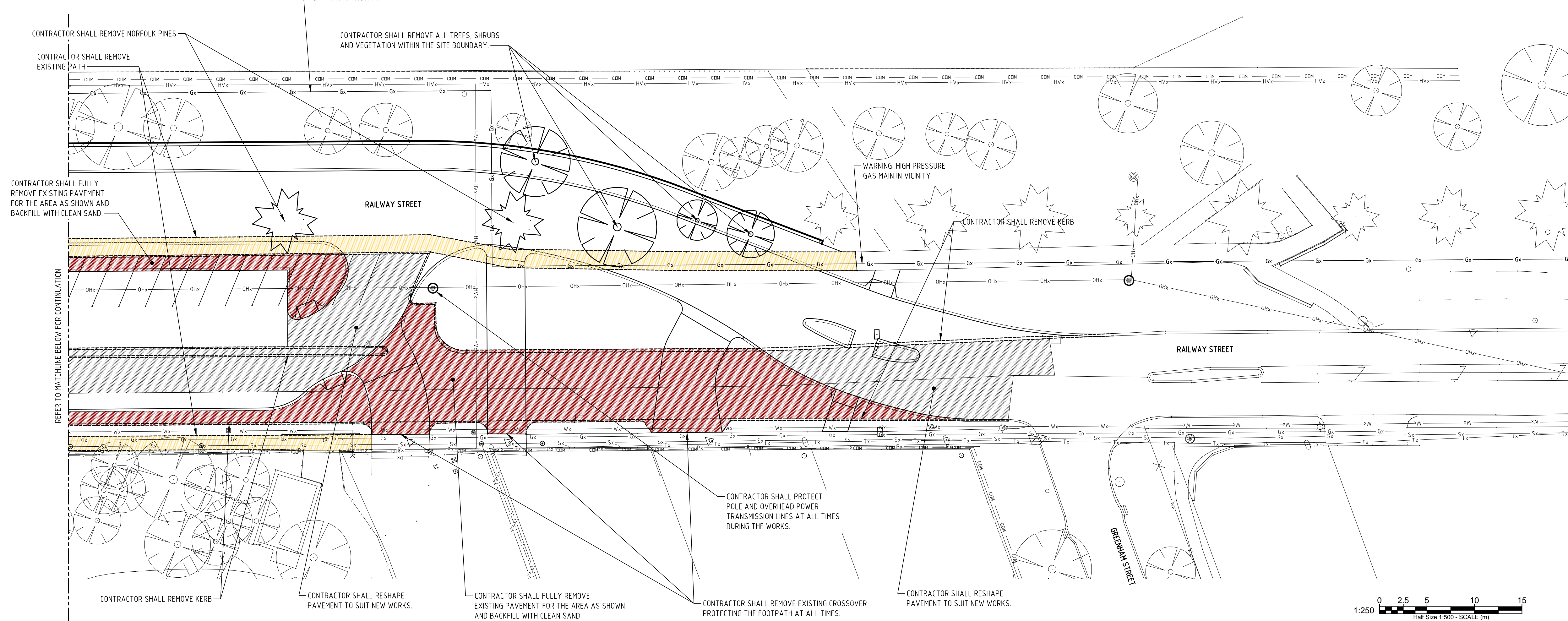
- EXISTING KERB
- EXISTING KERB AND PATH TO BE REMOVED
- PROPOSED KERB AND PATH
- PROPOSED RETAINING WALL
- EXISTING HP GAS LINE
- EXISTING MP GAS LINE
- EXISTING SEWER PIPE
- EXISTING TELSTRA CABLE
- EXISTING WATER MAIN
- EXISTING DRAINAGE LINE
- EXISTING OVERHEAD POWER LINES
- EXISTING COMMUNICATIONS
- EXISTING LOW VOLTAGE UNDERGROUND
- EXISTING HIGH VOLTAGE UNDERGROUND
- AREA OF EXISTING ROAD TO BE RESHAPED
- AREA OF EXISTING ROAD TO BE REMOVED
- AREA OF EXISTING PATH TO BE REMOVED
- EXISTING NORFOLK PINES TO BE REMOVED
- EXISTING TREES TO BE REMOVED



NOTE
HIGH PRESSURE GAS MAIN IN VICINITY. CONTRACTOR SHALL ALLOW FOR ALL WORKS ASSOCIATED IN PROTECTING THE HIGH PRESSURE MAIN INCLUDING ALL SUPERVISION ALLOWANCES. CONTRACTOR SHALL LIAISE DIRECT WITH WESTNET ENERGY PRIOR TO COMMENCING ANY WORKS.

SITWORKS NOTES

1. VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 1994 PCG94
2. EXISTING SURVEY/CONTOURS FROM SITE SURVEY BY TOWN OF COTTESLOE
3. SERVICES, SUCH AS SEWER, WATER, GAS, TELEPHONE, ELECTRICITY, AND DRAINAGE MAY BE ENCOUNTERED DURING CONSTRUCTION OF THE WORKS. SERVICES INFORMATION SHOWN ON DRAWINGS IS INDICATIVE ONLY AND MAY NOT BE COMPLETE. BEFORE EXCAVATION COMMENCES THE LOCATION OF ALL SUCH SERVICES SHALL BE OBTAINED FROM THE RELEVANT AUTHORITIES BY THE CONTRACTOR.
4. THE CONTRACTOR SHALL CO-ORDINATE THE LOCATION OF ALL EXISTING AND PROPOSED SERVICES PRIOR TO COMMENCEMENT OF WORK. ANY CONFLICTS ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
5. THE CONTRACTOR SHALL PROVIDE A SAFE WORKING ENVIRONMENT FOR THE DURATION OF THE WORKS. CONTRACTOR SHALL HAVE IN PLACE A PROJECT SAFETY AND RISK MANAGEMENT SYSTEM WHICH COMPLIES WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT AND WORK SAFE WA REQUIREMENTS
6. THE CONTRACTOR SHALL LIMIT ACCESS TO THE WORKS TO THE SITWORKS BOUNDARY. EXISTING VEGETATION OUTSIDE OF BOUNDARY TO BE PROTECTED.
7. THE CONTRACTOR SHALL PREPARE AND IMPLEMENT A DUST MANAGEMENT PLAN IN ACCORDANCE WITH THE DEPARTMENT OF ENVIRONMENT AND CONSERVATIONS GUIDELINES. THE CONTRACTOR SHALL PAY ALL FEES AND OBTAIN ALL APPROVALS FROM THE LOCAL AUTHORITY FOR THIS DUST MANAGEMENT PLAN PRIOR TO ANY WORKS STARTING ON SITE.
8. CONTRACTOR TO INSTALL TEMPORARY SITE FENCING WITH DUST CONTROL FABRIC AND MAINTAIN FOR DURATION OF WORKS.
9. DUST SUPPRESSION METHODS SHALL BE APPLIED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATION.
10. ALL TREES TO REMAIN UNDISTURBED SPECIFICALLY NOTED ON THE PLANS OR ADVISED BY THE ENGINEER
11. THE CONTRACTOR SHALL REMOVE FROM SITE ALL RUBBISH WITHIN SITWORKS BOUNDARY TO AN APPROVED DISPOSAL SITE.



PROJECT: **RAILWAY ST REALIGNMENT
NORTH COTTESLOE P.S.**

NO.	DATE	REVISION	BY
C	6-9-2016	DETAILED DESIGN, ISSUED FOR APPROVAL. SERVICES TO BE PICKED UP, DRAINAGE NOT DESIGNED	MJV
B	28-7-2016	DESIGN VEHICLE GARBAGE TRUCK ROAD REALIGNED TO AVOID TRANSMISSION POLES	MJV
A	15-7-2016	PRELIMINARY PLOT FOR APPROVAL	MJV

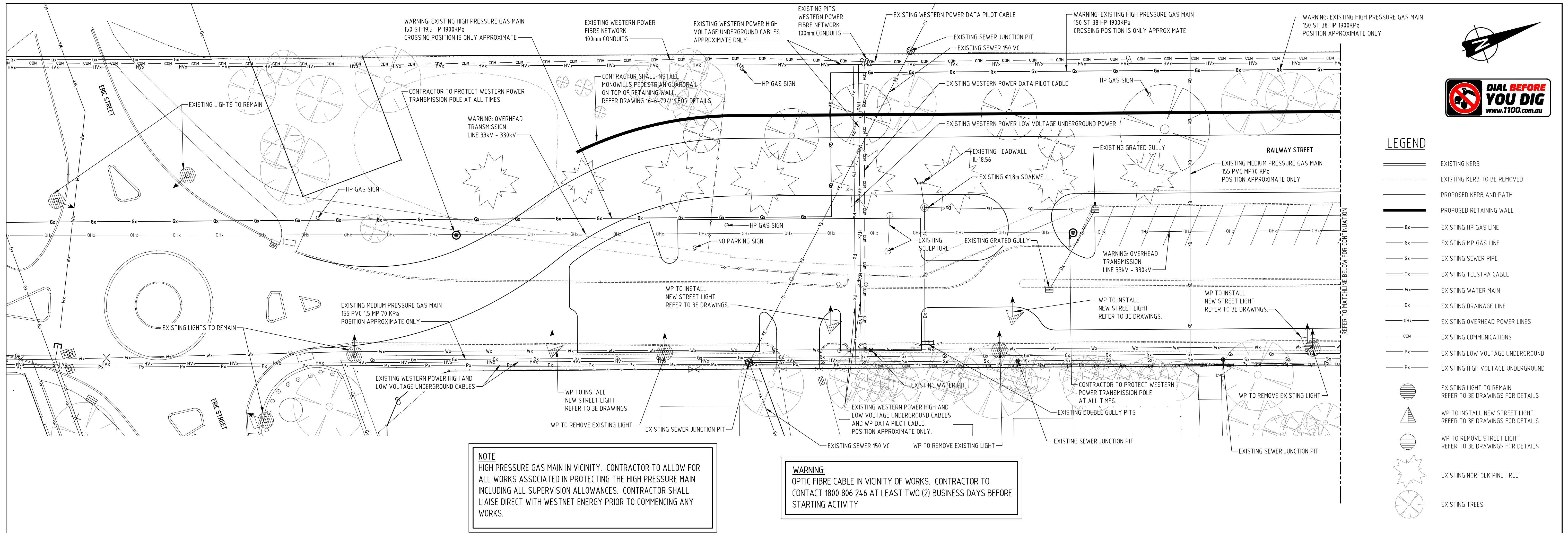
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CLIENT: **TOWN OF COTTESLOE**

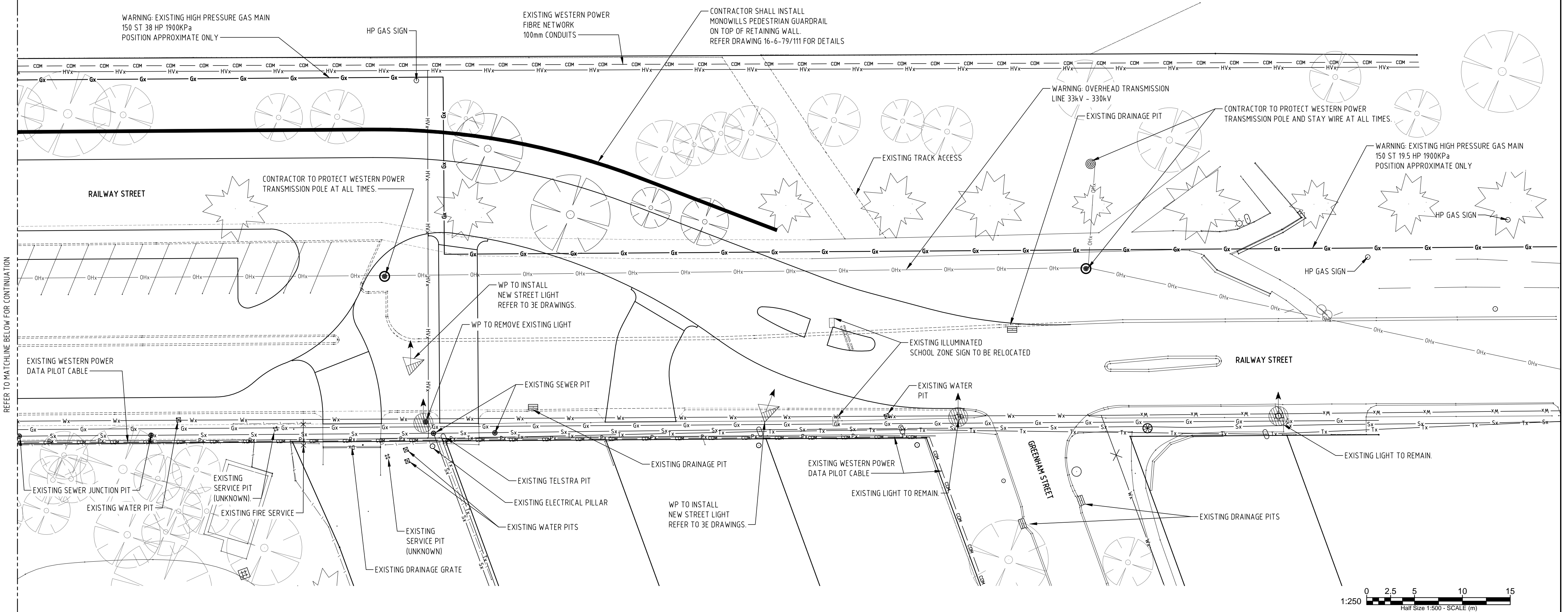
DRAWING: **SITWORKS PLAN**
STATUS: **FOR APPROVAL**

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DATE: SEPT 2016	16-6-79/101	C	A1
DESIGN: ELW	FILE NAME: S:\ACTIVE PROJECTS\16-06-079\ACAD\16079-101.dwg		
DRAWN: MJV	APPD:		
CHECK:			



NOTE
 HIGH PRESSURE GAS MAIN IN VICINITY. CONTRACTOR TO ALLOW FOR ALL WORKS ASSOCIATED IN PROTECTING THE HIGH PRESSURE MAIN INCLUDING ALL SUPERVISION ALLOWANCES. CONTRACTOR SHALL LIAISE DIRECT WITH WESTNET ENERGY PRIOR TO COMMENCING ANY WORKS.

WARNING
 OPTIC FIBRE CABLE IN VICINITY OF WORKS. CONTRACTOR TO CONTACT 1800 806 246 AT LEAST TWO (2) BUSINESS DAYS BEFORE STARTING ACTIVITY



PROJECT: **RAILWAY ST REALIGNMENT
 NORTH COTTESLOE P.S.**

C	9-9-2016	ADDITIONAL SURVEY ADDED. SERVICES NOTED AS APPROX ONLY, NEED TO BE PICKED UP.	MJV
B	28-7-2016	RAILWAY ST REALIGNMENT TIGHTENED. GARBAGE TRUCK DESIGN VEHICLE. POLES AVOIDED.	MJV
A	15-7-2016	PRELIMINARY PLOT FOR APPROVAL	MJV
NO.	DATE	REVISION	BY

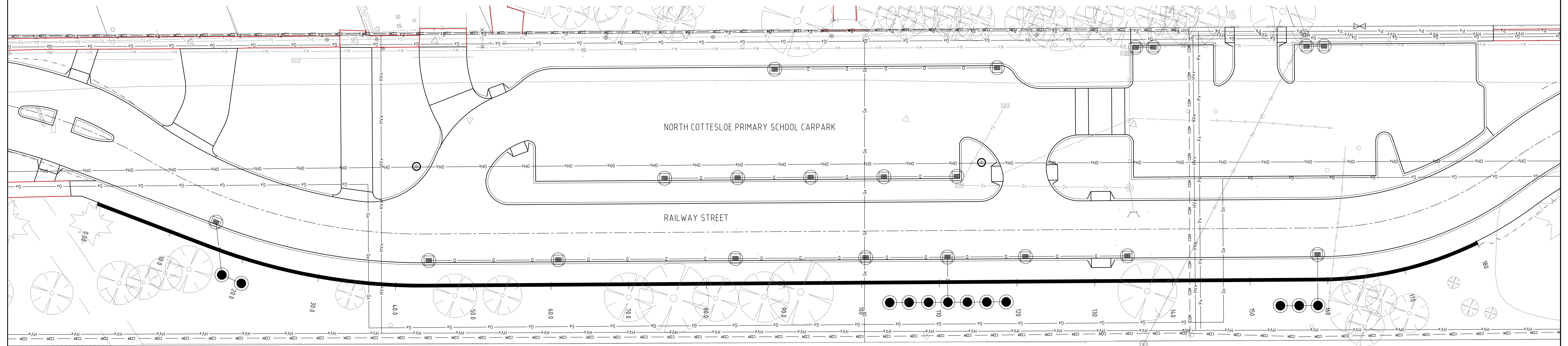
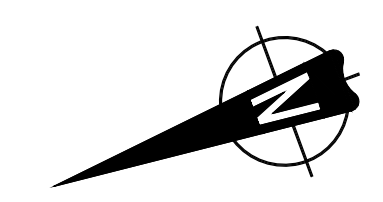
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CLIENT: **TOWN OF COTTESLOE**

DRAWING: **EXISTING SERVICES PLAN**
 STATUS: **FOR APPROVAL**

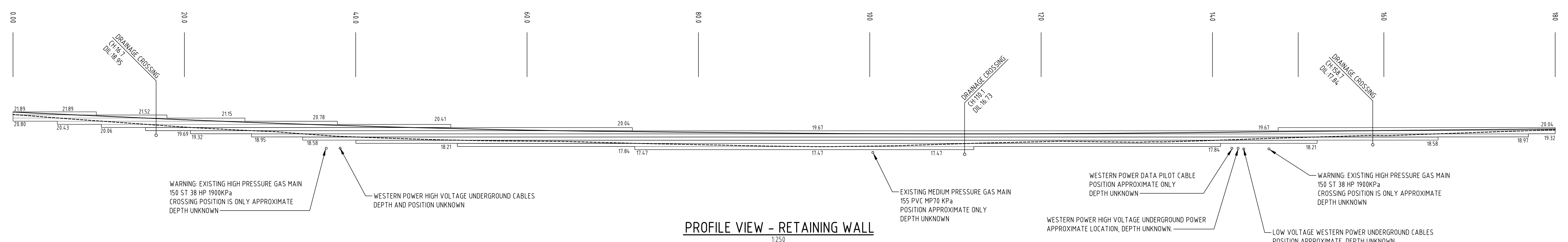
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CHECK: APPD	APPD		



PLAN VIEW - RETAINING WALL
1:250

LEGEND

- EXISTING KERB
- PROPOSED KERB AND PATH
- PROPOSED RETAINING WALL
- Gx — EXISTING HP GAS LINE
- Gx — EXISTING MP GAS LINE
- Sx — EXISTING SEWER PIPE
- Tx — EXISTING TELSTRA CABLE
- Wx — EXISTING WATER MAIN
- Dx — EXISTING DRAINAGE LINE
- OHx — EXISTING OVERHEAD POWER LINES
- CCM — EXISTING COMMUNICATIONS
- Px — EXISTING LOW VOLTAGE UNDERGROUND
- HVx — EXISTING HIGH VOLTAGE UNDERGROUND
- D — PROPOSED DRAINAGE



PROFILE VIEW - RETAINING WALL
1:250

WARNING: EXISTING HIGH PRESSURE GAS MAIN 150 ST 38 HP 1900KPa CROSSING POSITION IS ONLY APPROXIMATE DEPTH UNKNOWN

WESTERN POWER HIGH VOLTAGE UNDERGROUND CABLES DEPTH AND POSITION UNKNOWN

EXISTING MEDIUM PRESSURE GAS MAIN 155 PVC MP70 KPa POSITION APPROXIMATE ONLY DEPTH UNKNOWN

WESTERN POWER DATA PILOT CABLE POSITION APPROXIMATE ONLY DEPTH UNKNOWN

WARNING: EXISTING HIGH PRESSURE GAS MAIN 150 ST 38 HP 1900KPa CROSSING POSITION IS ONLY APPROXIMATE DEPTH UNKNOWN

WESTERN POWER HIGH VOLTAGE UNDERGROUND POWER APPROXIMATE LOCATION, DEPTH UNKNOWN

LOW VOLTAGE WESTERN POWER UNDERGROUND CABLES POSITION APPROXIMATE, DEPTH UNKNOWN



PROJECT: **RAILWAY ST REALIGNMENT
NORTH COTTESLOE P.S.**

DATE	8-9-2016	REVISION	PRELIMINARY PLOT FOR APPROVAL. SERVICES TO BE PICKED UP, DRAINAGE TO BE DESIGNED.
BY	MJV	BY	

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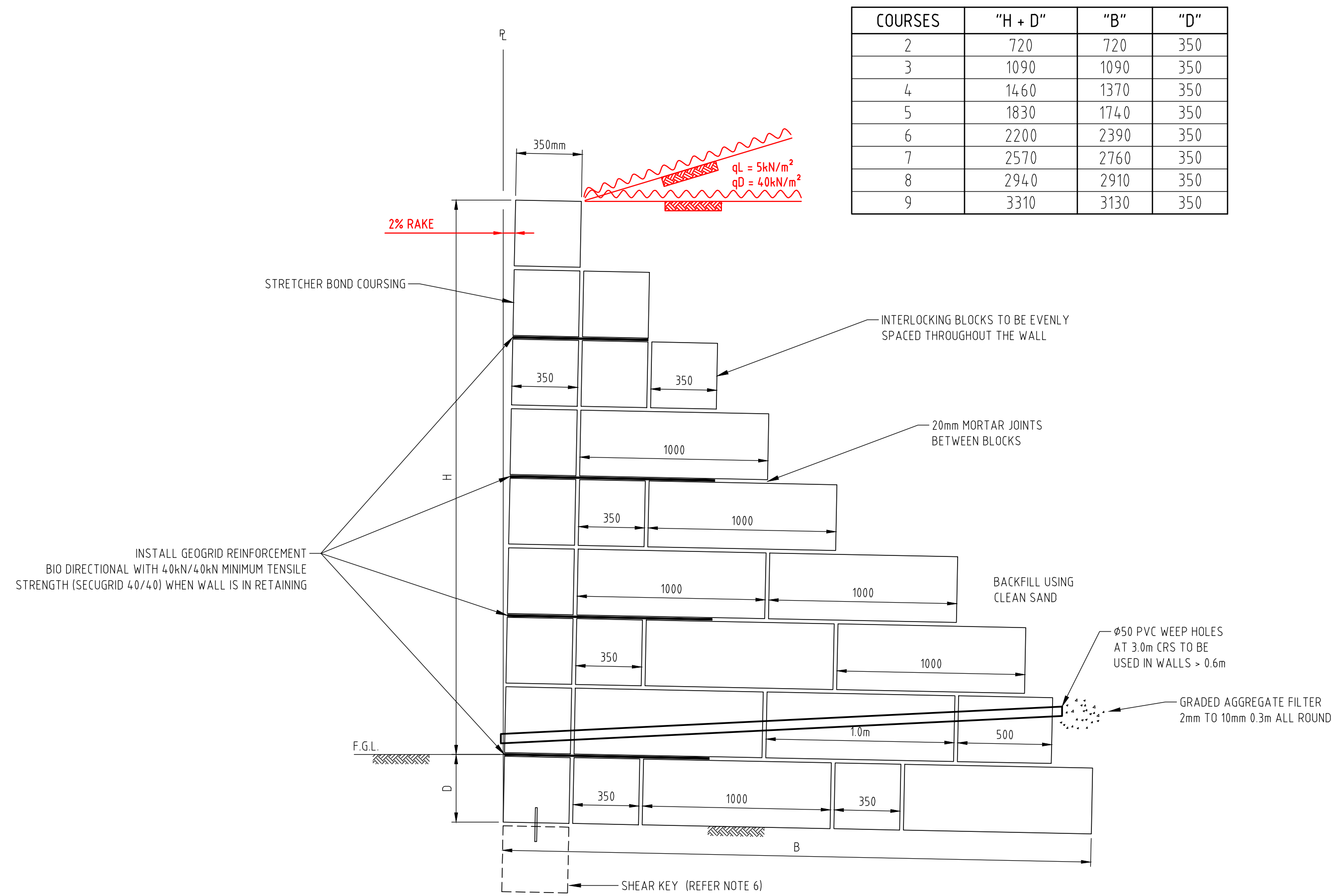
CLIENT: **TOWN OF COTTESLOE**

DRAWING: **RETAINING WALL**

STATUS: **FOR APPROVAL**

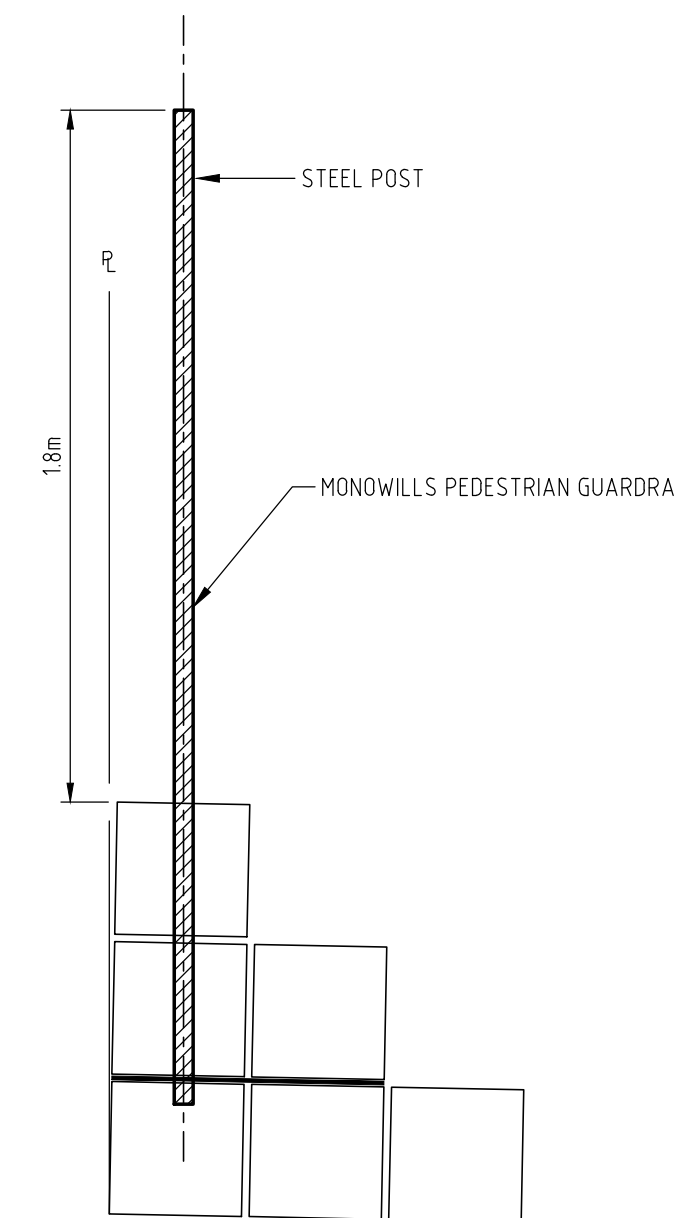
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CHECK	APPD						

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3	1090	1090	350
4	1460	1370	350
5	1830	1740	350
6	2200	2390	350
7	2570	2760	350
8	2940	2910	350
9	3310	3130	350



SIDE WALL ADJACENT TO BUILDING
TYPE 2

RECONSTITUTED LIMESTONE MASS GRAVITY RETAINING WALL
SCALE 1:20



FENCE DETAIL
SCALE 1:20

RETAINING WALL NOTES

- THE CONTRACTOR SHALL OBTAIN RETAINING WALL BUILDING LICENSE PRIOR TO COMMENCEMENT OF RETAINING WALL WORKS. THE CONTRACTOR SHALL PAY FOR ALL FEES ASSOCIATED WITH OBTAINING THE BUILDING LICENSE.
- THIS DETAIL IS SUITABLE FOR SANDY SOIL ONLY. ALL OTHER CONDITIONS MUST BE REFERRED TO THE ENGINEER.
- DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION.
- MINIMUM DENSITY OF LIMESTONE TO BE 1700kg/m³. DO NOT USE RUBBLE IN WALL CONSTRUCTION. TYPICAL LIMESTONE BLOCKS SIZES INCLUDE THE FOLLOWING OR CUT TO SUIT:
LIMESTONE BLOCKS
- 350x350x350
- 350x350x500
- 350x350x1000
- UNLESS OTHERWISE SPECIFIED IN THE GEOTECHNICAL REPORT, THE CONTRACTOR SHALL COMPACT GROUND IN FRONT OF AND UNDER THE WALL TO ACHIEVE 8 BLOWS PER 300mm WHEN TESTED WITH A STANDARD PENETROMETER.
- THE CONTRACTOR SHALL CONSTRUCT SHEAR KEY IN UNIFORMLY GRADED SOILS. (BASSEDEAN SOIL).**
- THE CONTRACTOR SHALL ENSURE THE TOE COURSING OF THE RETAINING WALLS ALIGN WITH THE PROPERTY BOUNDARIES UNLESS OTHERWISE DIMENSIONED. CONTRACTOR SHALL ENSURE ALL PARTS OF THE RETAINING WALLS ARE LOCATED WITHIN THE LOT UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL VERIFY THE FOOTING COURSE SETOUT PRIOR TO INSTALLATION OF FURTHER BLOCKS TO ENSURE THE RETAINING WALL IS INSTALLED AS PER DESIGN.
- THE CONTRACTOR SHALL PROVIDE CONTROL JOINTS AT 20m CRS. MAX.
- ALL VERTICAL AND HORIZONTAL JOINTS TO BE FORMED IN 1 CEMENT : 1 LIME : 6 SAND
- NO BACK FILLING UNTIL 7 DAYS AFTER WALL COMPLETION.
- THE CONTRACTOR SHALL PROP ALL RETAINING WALLS AT 1800 CRS DURING BACK FILLING AND COMPACTION.
- THE CONTRACTOR SHALL CONSTRUCT BACKFILL IN 300mm LAYERS AND COMPACT TO ACHIEVE 8 BLOWS PER 300mm WHEN TESTED WITH A STANDARD PENETROMETER.
- ANTI-GRAFFITI COATING TO BE APPLIED TO ALL EXPOSED FACES AS DETAILED IN THE SPECIFICATION.
- CONTRACTOR TO ENGAGE A STRUCTURAL ENGINEER TO CERTIFY THAT ALL RETAINING WALLS ARE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN DRAWINGS AND SPECIFICATIONS.

RETAINING WALL DESIGN LIMITS

THE RETAINING WALLS HAVE BEEN DESIGNED FOR CONSTRUCTION ON COMPACTED WELL GRADED COHESIONLESS SAND TO SUPPORT THE FULL WEIGHT OF SAND BACK FILL WITH A UNIFORMLY DISTRIBUTED SURCHARGE OF 5kN/m² LIVE LOAD AND 40kN/m² DEAD LOAD.

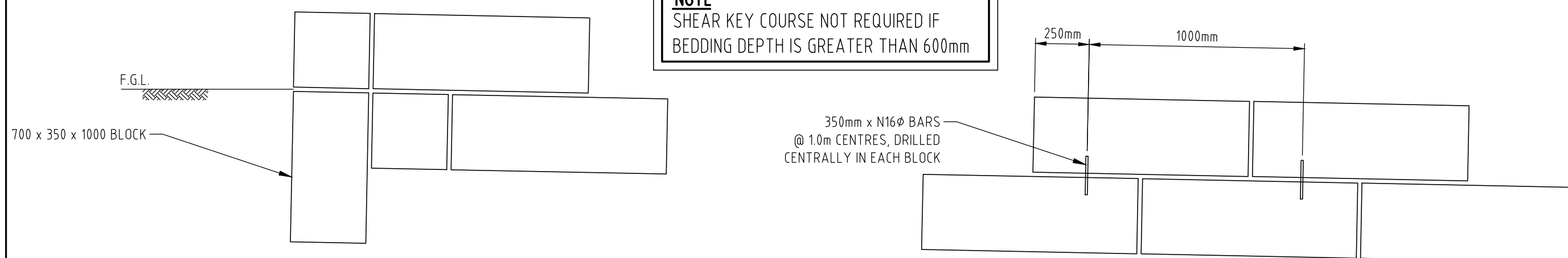
THE HEIGHT OF THE RETAINING WALL SHALL NOT BE INCREASED WITHOUT CERTIFICATION BY A PRACTICING STRUCTURAL ENGINEER.

EXCAVATION ADJACENT TO THE TOE OF A RETAINING WALL AND/OR FILLING ON TOP OF A RETAINING WALL IS NOT PERMITTED UNLESS THESE ACTIVITIES HAVE BEEN CERTIFIED BY A PRACTICING STRUCTURAL ENGINEER.

M COOK MIE AUST CP ENG NER

NOTE
SHEAR KEY COURSE NOT SHOWN ON RETAINING WALL LONGITUDINAL SECTIONS

NOTE
SHEAR KEY COURSE NOT REQUIRED IF BEDDING DEPTH IS GREATER THAN 600mm



ALTERNATIVE SHEAR KEY ARRANGEMENT
SCALE 1:20

SHEAR KEY DETAIL
SCALE 1:20

NOTE
DIMENSIONS ON RETAINING WALL SECTIONS ARE MEASURED ABOUT THE FACE OF WALL.

NOTE
CONTRACTOR SHALL INSTALL TEMPORARY STAR PICKET FENCE WITH 3-STRAND WIRE AND DANGER TAPE ON ALL RETAINING WALLS GREATER THAN 0.6m HIGH

NOTE
DIMENSIONS SHOWN ON RETAINING WALL SECTIONS ARE APPROXIMATE ONLY. CONTRACTOR SHALL POSITION WALL AND CONSTRUCT COURSE CHANGES TO TIE IN WITH CADASTRAL BOUNDARIES. MINIMUM 'D' DIMENSION TO BE MAINTAINED AT ALL LOCATIONS.

PROJECT: **RAILWAY ST REALIGNMENT
NORTH COTTESLOE P.S.**

NO.	DATE	REVISION	BY
A	9-9-2016	PRELIMINARY PLOT FOR APPROVAL	MJV

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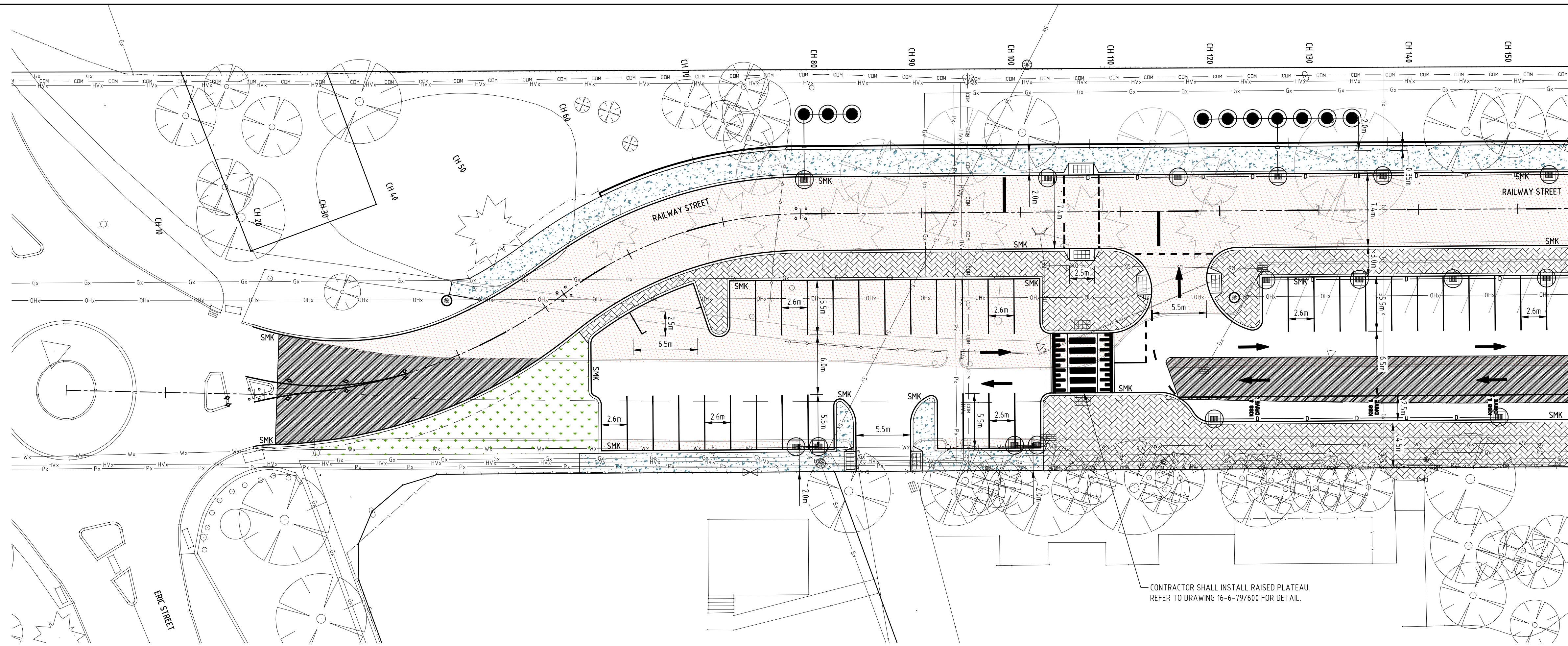
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CLIENT: **TOWN OF COTTESLOE**

DRAWING: **RETAINING WALL
STANDARD DETAILS**
STATUS: **FOR APPROVAL**

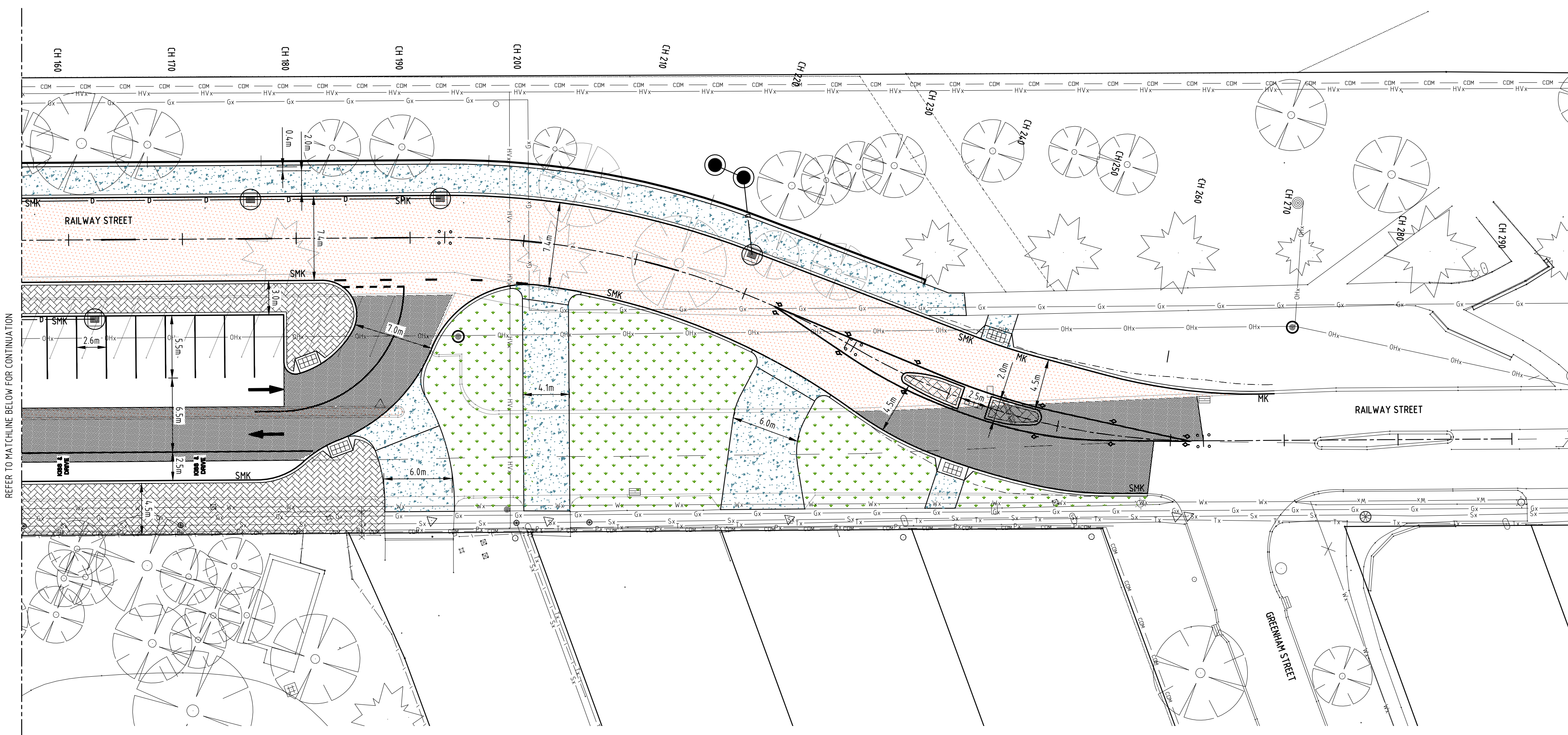
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DESIGN	ELW			
DRAWN	MJV	FILE NAME: S:\ACTIVE PROJECTS\16-06-079\ACAD\16679-111.dwg		
CHECK	APPD			

WAPC:



REFER TO MATCHLINE BELOW FOR CONTINUATION

- ### ROAD NOTES
- VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM.
HORIZONTAL DATUM: PERTH COASTAL GRID 1994 (PCG94)
 - SERVICES, SUCH AS SEWER, WATER, GAS, TELEPHONE, ELECTRICITY, AND DRAINAGE MAY BE ENCOUNTERED DURING CONSTRUCTION OF THE WORKS. SERVICES INFORMATION SHOWN ON DRAWINGS IS INDICATIVE ONLY AND MAY NOT BE COMPLETE. BEFORE EXCAVATION COMMENCES THE LOCATION OF ALL SUCH SERVICES SHALL BE OBTAINED FROM THE RELEVANT AUTHORITIES.
 - THE CONTRACTOR SHALL CO-ORDINATE THE LOCATION OF ALL EXISTING AND PROPOSED SERVICES PRIOR TO COMMENCEMENT OF WORK. ANY CONFLICTS ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
 - ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATION, BUT WHERE NO DETAIL PROVIDED, TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
 - CONTRACTOR SHALL PROVIDE ALL SIGNING, LIGHTING AND FLAGMEN NECESSARY TO ENSURE SAFETY OF THE PUBLIC AND OF THE WORKS.
 - LOCATE ALL LEVELS FROM EXISTING SURVEY MARKS. ALL SURVEY MARKS ARE TO BE PROTECTED.
 - EXISTING VERGES SHALL NOT BE DISTURBED BEYOND THE EXTENT OF WORK.
 - ALL FILL SHALL BE CLEAN NON PLASTIC MATERIAL FREE FROM VEGETATION AND OTHER DELETERIOUS MATERIAL AND CERTIFIED AS SUITABLE FOR RESIDENTIAL LANDUSE.
 - ALL FILL SHALL BE PLACED IN UNIFORM LAYERS NOT EXCEEDING 300mm THICKNESS AND COMPACTED TO A DENSITY NOT LESS THAN 95% MAXIMUM DRY DENSITY.
 - CONTRACTOR SHALL TIE IN OF NEW SURFACE TO FINISH FLUSH WITH EXISTING SURFACE.
 - BRICK PAVING SHALL BE CLAY HIGH PERFORMANCE 80mm PAVERS LAID IN HERRINGBONE 45° WITH HEADER COURSE UNLESS OTHERWISE SHOWN. COLOUR TO BE SPECIFIED BY THE ENGINEER.
 - ALL EDGE KERBING SHALL BE SEMI MOUNTABLE UNLESS OTHERWISE NOTED.
 - SIGN POSTS AND PLATES TO BE SUPPLIED AND INSTALLED TO LOCAL AUTHORITY REQUIREMENTS.
 - THE CONTRACTOR SHALL 'SPOT OUT' THE LINE MARKING. THE CONTRACTOR SHALL ADVISE MAIN ROADS WHEN THE SITE IS READY FOR LINEMARKING AND SIGNAGE INSTALLATION. LINE MARKING AND SIGNING TO BE UNDERTAKEN BY MAIN ROADS.
 - THE CONTRACTOR SHALL PREPARE AS-CONSTRUCTED ROADS AND PATH DRAWINGS (INCLUDING SURVEY) TO THE SATISFACTION OF THE LOCAL AUTHORITY. AS CONSTRUCTED PLANS TO BE ISSUED TO THE ENGINEER FOR SIGNING AND PRESENTATION TO THE LOCAL AUTHORITY.
 - THE CONTRACTOR SHALL PREPARE AND PROVIDE ROAD AND PATH AS CONSTRUCTED DOCUMENTS IN 'R' SPEC FORMAT AS PER LOCAL AUTHORITY REQUIREMENTS.
 - IT IS DEEMED THAT THE AS CONSTRUCTED DOCUMENTS FORM PART OF THE WORKS. PRACTICAL COMPLETION CAN NOT BE AWARDED IF ACCEPTABLE AS CONSTRUCTED DOCUMENTS HAVE NOT BEEN PROVIDED TO THE ENGINEER.
 - DRAINAGE PIPES ON LONGITUDINAL SECTION SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.



REFER TO MATCHLINE BELOW FOR CONTINUATION

LEGEND

- EXISTING KERB
- EXISTING KERB TO BE REMOVED
- PROPOSED KERB AND PATH
- PROPOSED RETAINING WALL
- EXISTING HP GAS LINE
- EXISTING MP GAS LINE
- EXISTING SEWER PIPE
- EXISTING TELSTRA CABLE
- EXISTING WATER MAIN
- EXISTING DRAINAGE LINE
- EXISTING OVERHEAD POWER LINES
- EXISTING COMMUNICATIONS
- EXISTING LOW VOLTAGE UNDERGROUND
- EXISTING HIGH VOLTAGE UNDERGROUND
- PROPOSED DRAINAGE
- SEMI MOUNTABLE KERB
- MOUNTABLE KERB
- AREA OF NEW PAVEMENT
- AREA OF NEW PAVEMENT TO BE RESHAPED
- AREA OF CONCRETE PATHS/CROSSOVERS
- AREA OF GRASS INFILL
- AREA OF BRICK PAVING INFILL
- EXISTING NORFOLK PINES
- EXISTING TREES

- ### PATH NOTES
- ALL FOOTPATHS AND PEDESTRIAN RAMPS SHALL BE CONSTRUCTED TO LOCAL AUTHORITY STANDARD. ALL MATERIAL USED SHALL BE IN ACCORDANCE WITH LOCAL AUTHORITY STANDARD SPECIFICATION.
 - THE CONTRACTOR SHALL PROTECT ALL EXISTING WORKS, AND SUPPLY AND MAINTAIN ALL SAFETY DEVICES TO PROTECT VEHICLES, PEDESTRIANS AND THE WORKS.
 - UNLESS OTHERWISE SHOWN, ALL JOINTS SHALL BE SPACED IN ACCORDANCE WITH THE LOCAL AUTHORITY REQUIREMENTS; IF NOT AVAILABLE, THEY SHALL BE AS PER THE IPWEA REQUIREMENTS. JOINTS TO TIE IN WITH KERB JOINTS.
 - PRIOR TO PLACING CONCRETE THE BASE SHALL BE FREE FROM DELTERIOUS MATERIAL, UNIFORMLY COMPACTED TO 95% MAXIMUM DRY DENSITY AND LIGHTLY DAMPENED.
 - ALL CONCRETE WORK SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 32 MPa AT 28 DAYS.
 - THE FINAL SURFACE SHALL BE BROOM FINISHED AND ALL EDGES AND JOINTS TOOL FINISHED.
 - CONTRACTOR SHALL PROTECT THE FINISHED WORK FOR 24 HOURS AFTER THE CONCRETE HAS BEEN LAID, ANY DAMAGE SHALL BE MADE GOOD AT THE CONTRACTORS EXPENSE.



PROJECT: RAILWAY ST REALIGNMENT NORTH COTTESLOE P.S.

6-9-2016	DETAILED DESIGN SERVICES TO BE PICKED UP, DRAINAGE YET TO BE DESIGNED	MJV
28-7-2016	ROAD REALIGNED TO AVOID TRANSMISSION POLES, GARBAGE TRUCK DESIGN VEHICLE	MJV
15-7-2016	PRELIMINARY PLOT FOR APPROVAL	MJV
NO.	DATE	REVISION

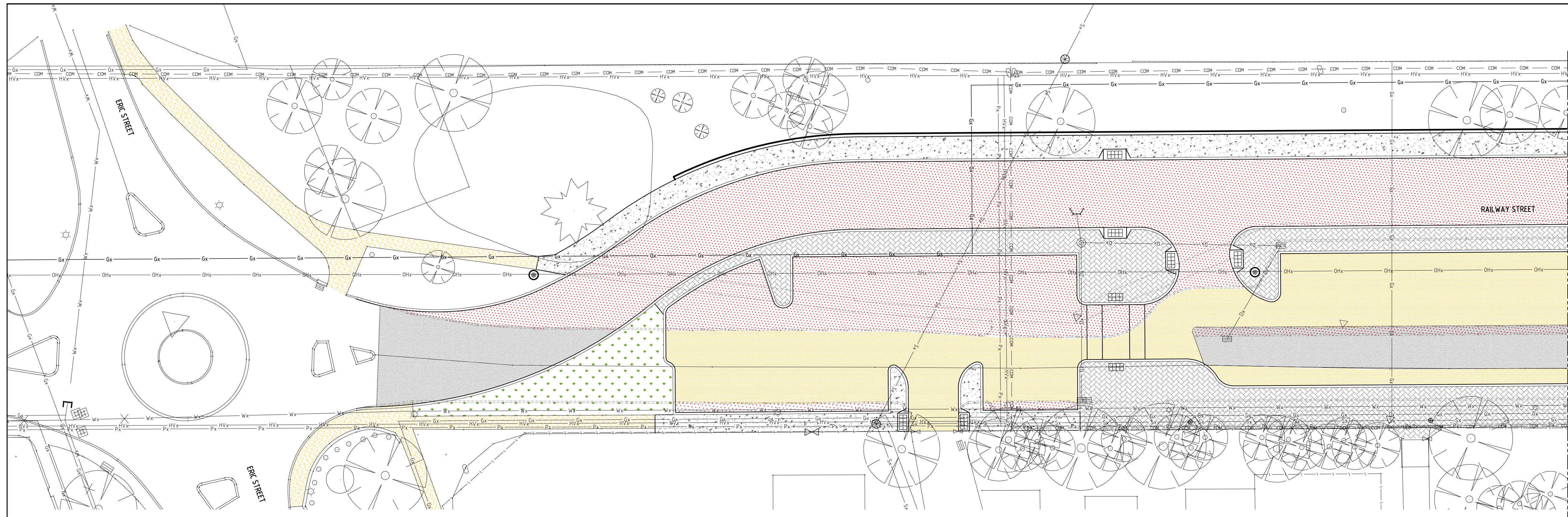
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 170360 Pty Ltd ACN 070 071 148 an Invision for the Consulting Engineering Unit Trust trading as Porter Consulting Engineers ABN 78 438 396 385

CLIENT: **TOWN OF COTTESLOE**

DRAWING:	ROAD LAYOUT PLAN
STATUS:	FOR APPROVAL

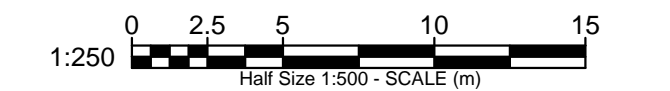
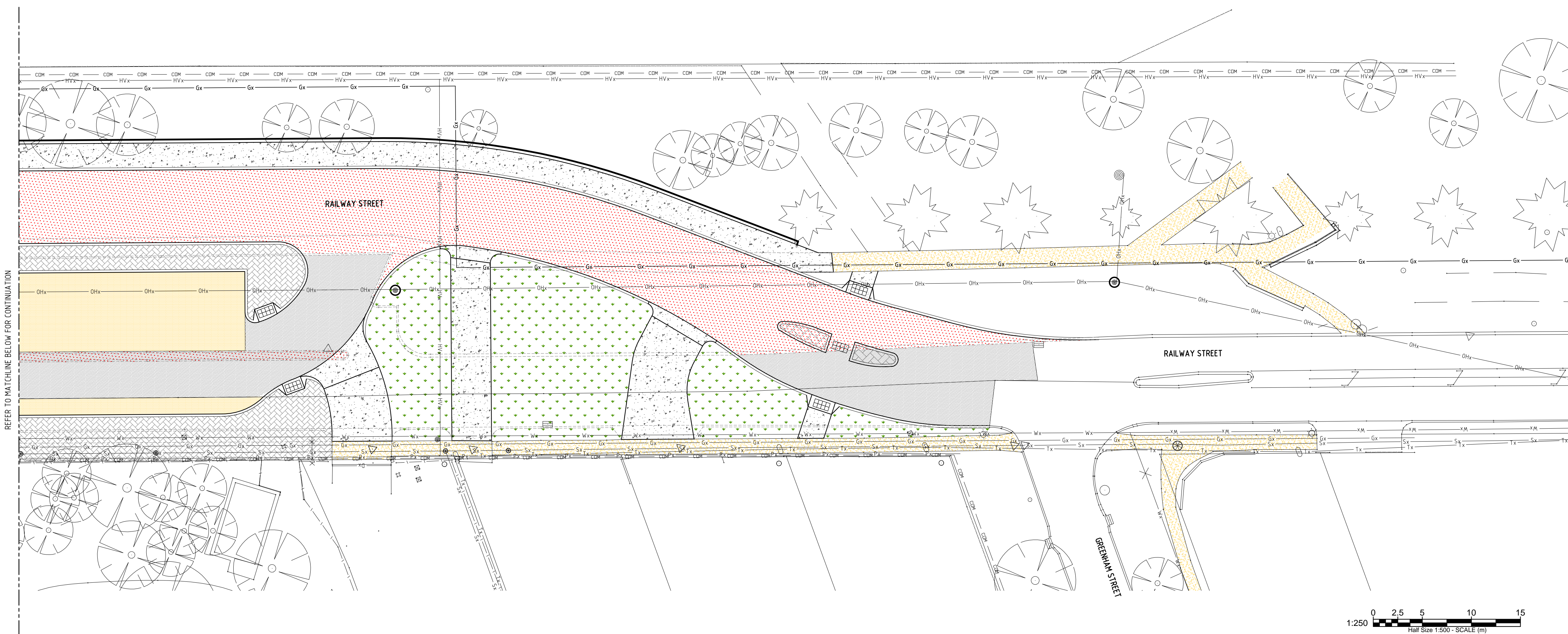
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DATE:	SEPT 2016	DESIGN:	ELW	FILE NAME:	S:\ACTIVE PROJECTS\16-06-079\ACAD\16679-400.dwg
DRAWN:	MJV	CHECK:	APPD		



LEGEND

	EXISTING KERB
	EXISTING KERB TO BE REMOVED
	PROPOSED KERB AND PATH
	PROPOSED RETAINING WALL
	EXISTING HP GAS LINE
	EXISTING MP GAS LINE
	EXISTING SEWER PIPE
	EXISTING TELSTRA CABLE
	EXISTING WATER MAIN
	EXISTING DRAINAGE LINE
	EXISTING OVERHEAD POWER LINES
	EXISTING COMMUNICATIONS
	EXISTING LOW VOLTAGE UNDERGROUND
	EXISTING HIGH VOLTAGE UNDERGROUND
	AREA OF EXISTING ROAD TO BE RESHAPED
	AREA OF NEW PAVEMENT
	AREA OF CONCRETE PATH
	AREA OF BRICK PAVING
	AREA OF EXISTING PAVEMENT TO BE RESURFACED
	AREA OF EXISTING PATH TO REMAIN
	AREA OF VERGE TO BE GRASSED

NOTE
 HIGH PRESSURE GAS MAIN IN VICINITY. CONTRACTOR SHALL ALLOW FOR ALL WORKS ASSOCIATED IN PROTECTING THE HIGH PRESSURE MAIN INCLUDING ALL SUPERVISION ALLOWANCES. CONTRACTOR SHALL LIAISE DIRECT WITH WESTNET ENERGY PRIOR TO COMMENCING ANY WORKS.



PROJECT: **RAILWAY ST REALIGNMENT
 NORTH COTTESLOE P.S.**

DATE	9-9-2016	REVISION	PRELIMINARY PLOT FOR APPROVAL	BY	MJV
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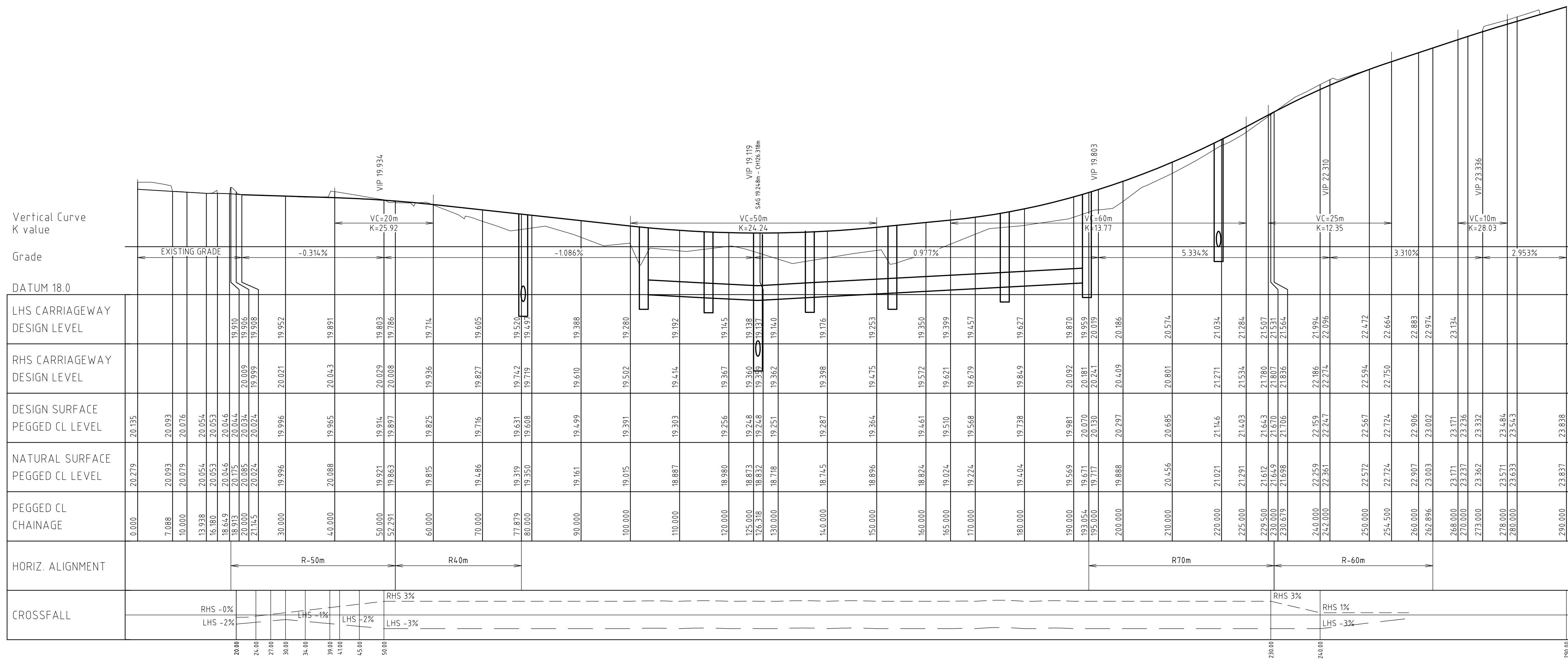
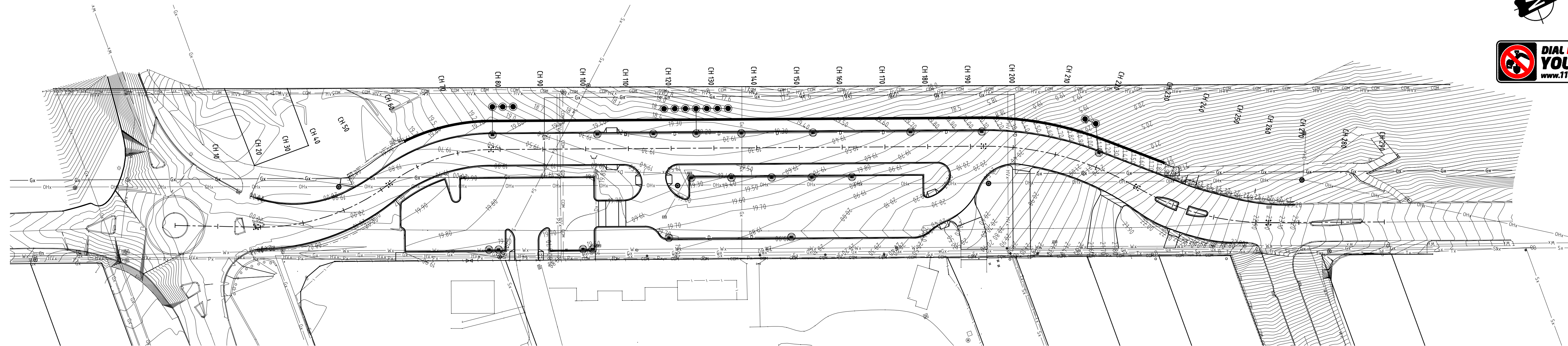
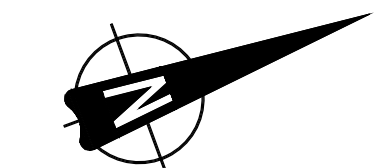
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CLIENT: **TOWN OF COTTESLOE**

DRAWING: **PAVEMENT PLAN**
 STATUS: **FOR APPROVAL**

SCALE	1:250	DRAWING No.	16-6-79/401	REV No.	A	ORIGINAL DRAWING SIZE	A1
DATE	SEPT 2016	DESIGN	ELW	FILE NAME	S:\ACTIVE PROJECTS\16-06-079\ACAD\16679-401.dwg		
DRAWN	MJV	CHECK	APPD				



RAILWAY STREET REALIGNMENT LONGITUDINAL SECTION

SCALE: HORIZONTAL - 1:500
VERTICAL - 1:50



PROJECT: RAILWAY ST REALIGNMENT
NORTH COTTESLOE P.S.

B	9-9-2016	DETAILED DESIGN SERVICES TO BE PICKED UP. DRAINAGE TO BE DESIGNED.
A	15-7-2016	PRELIMINARY PLOT FOR APPROVAL
No.	DATE	REVISION

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MJV
MJV
BY

Porter
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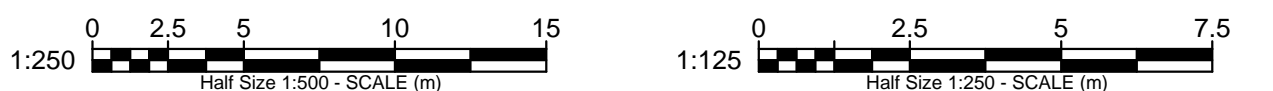
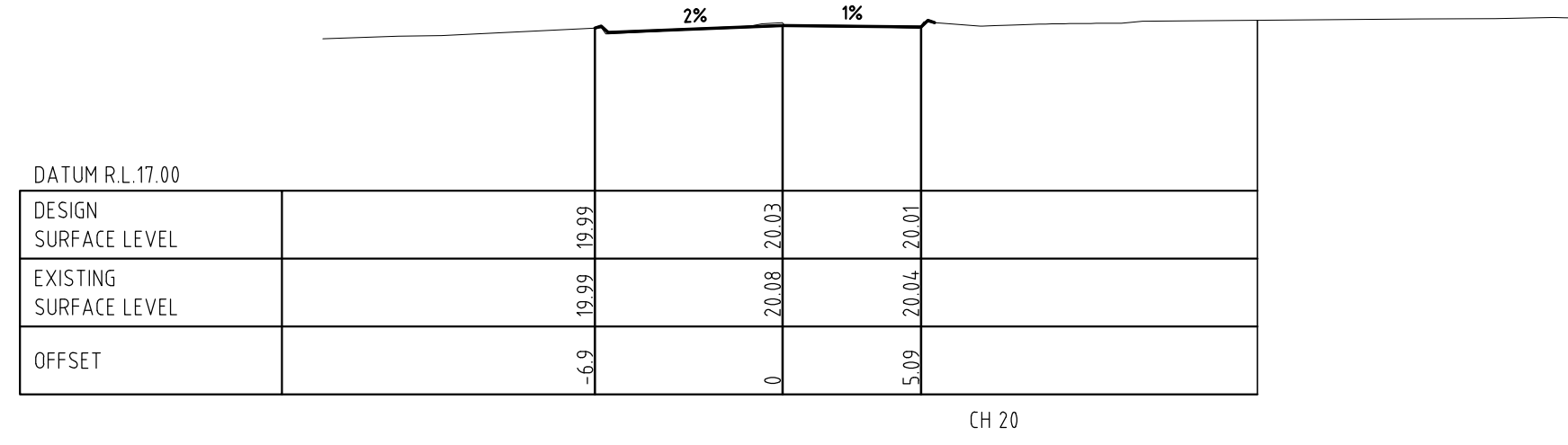
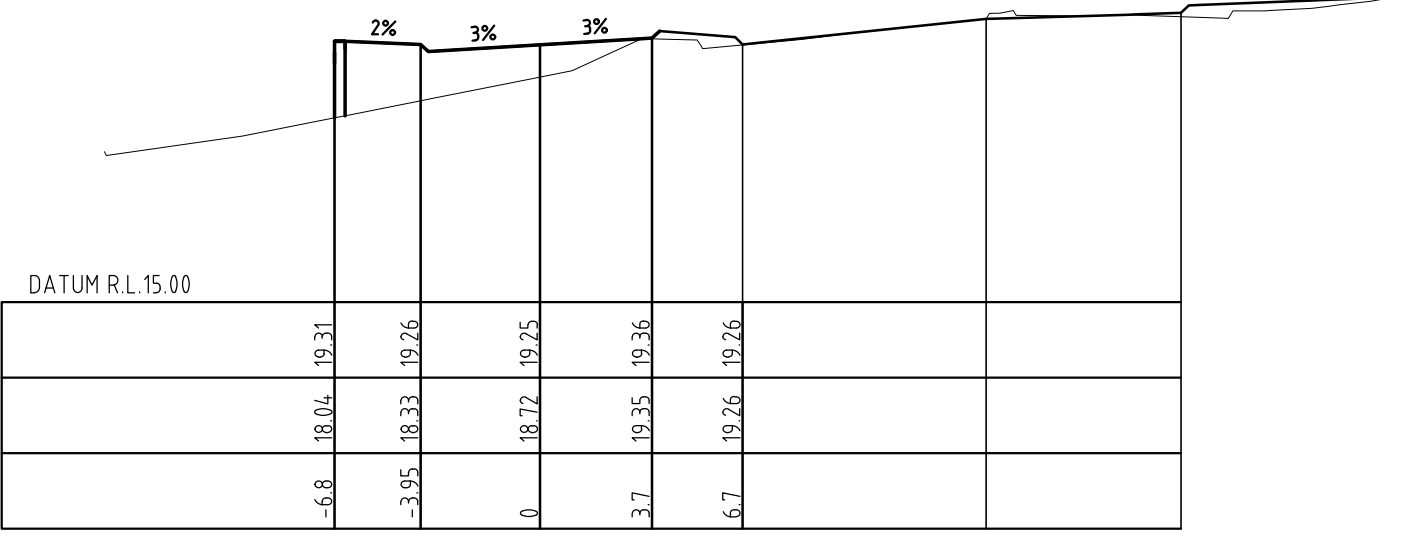
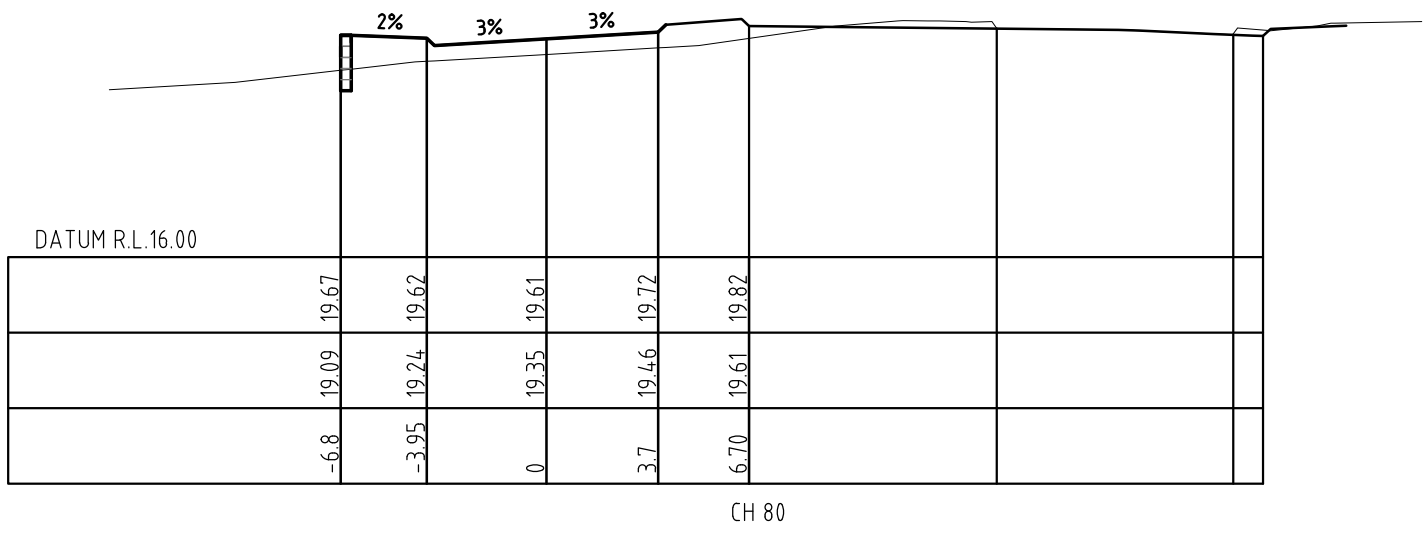
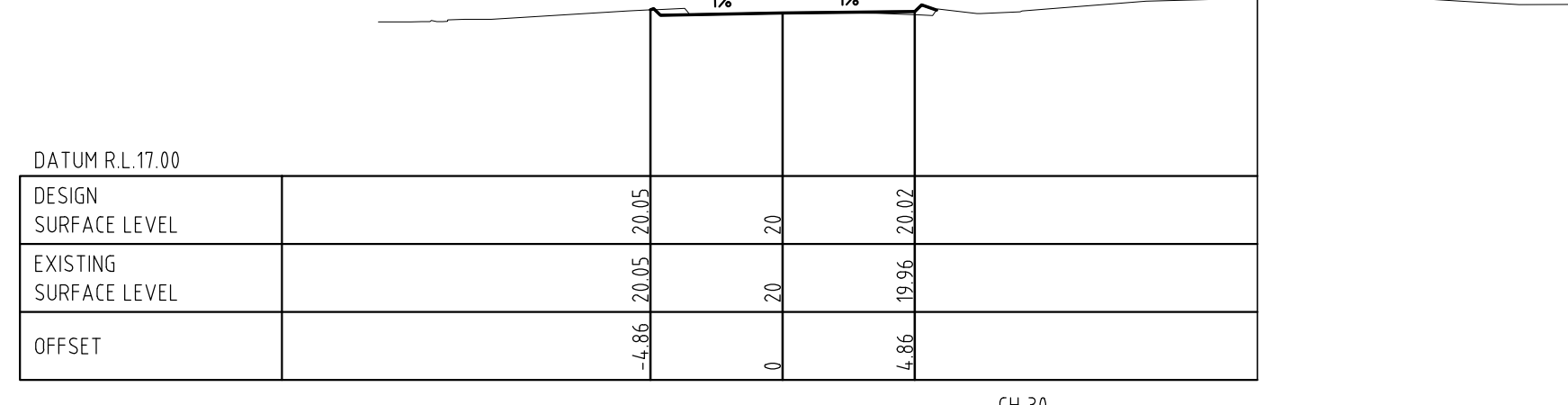
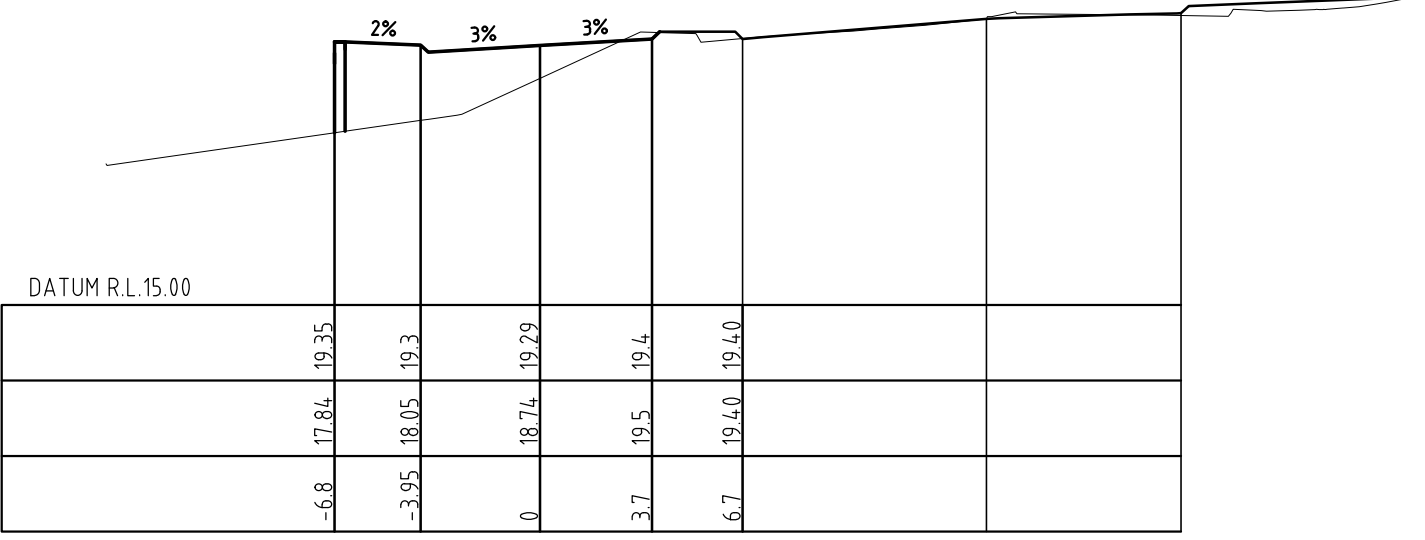
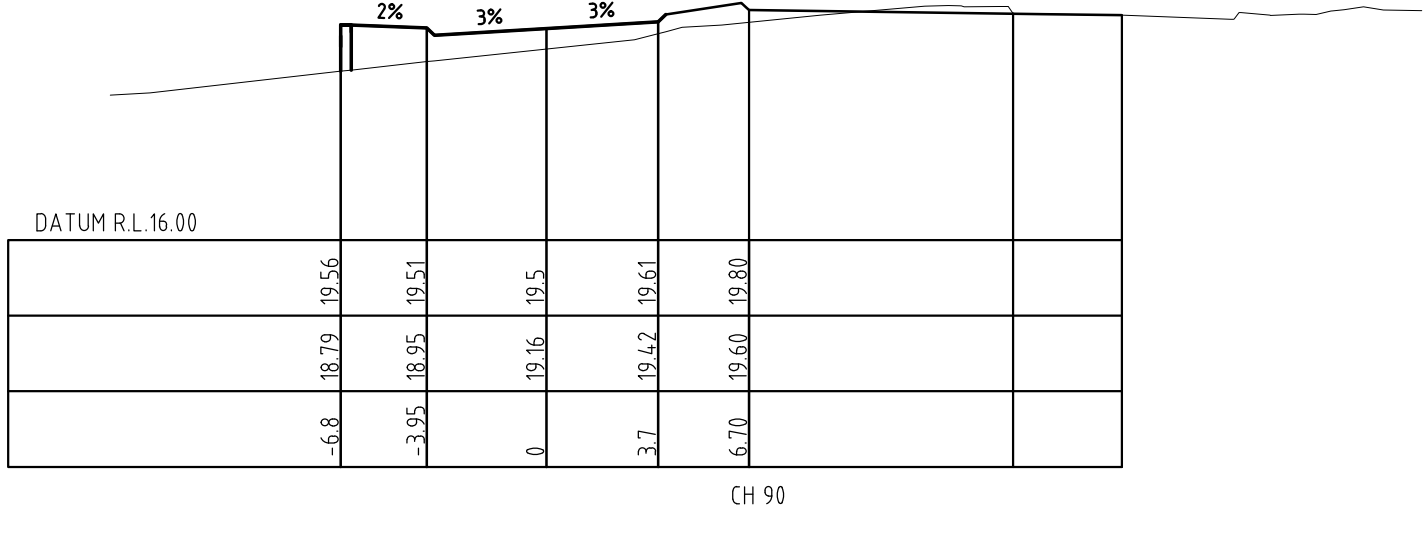
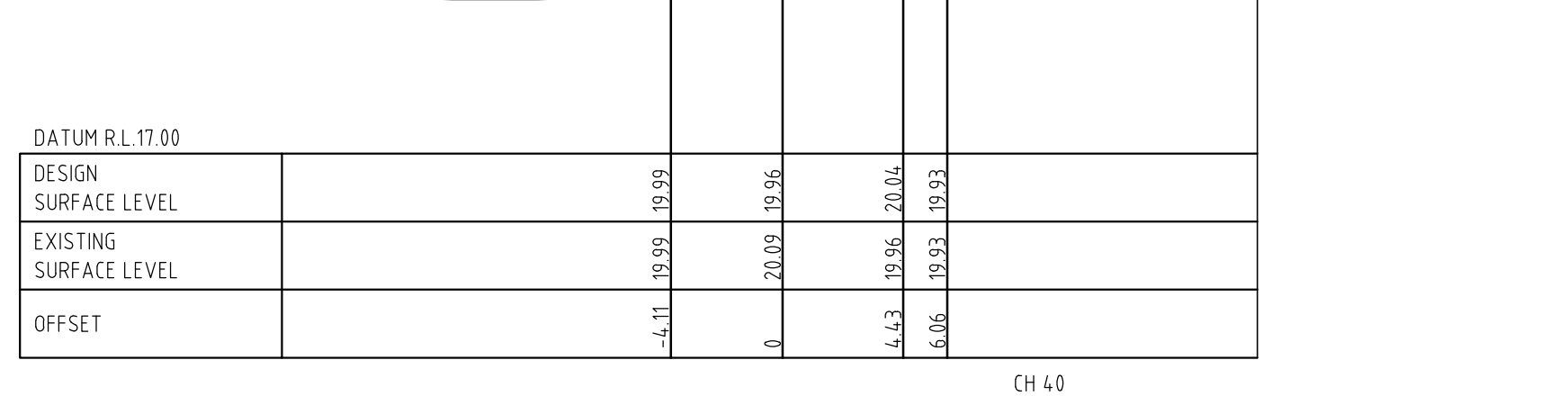
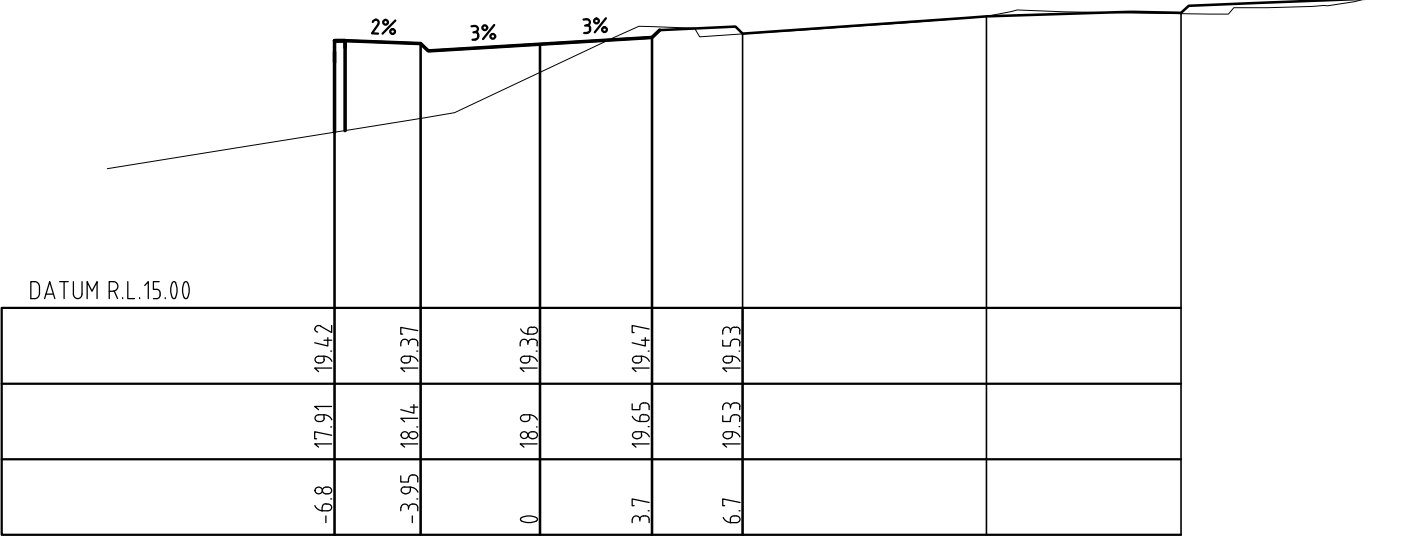
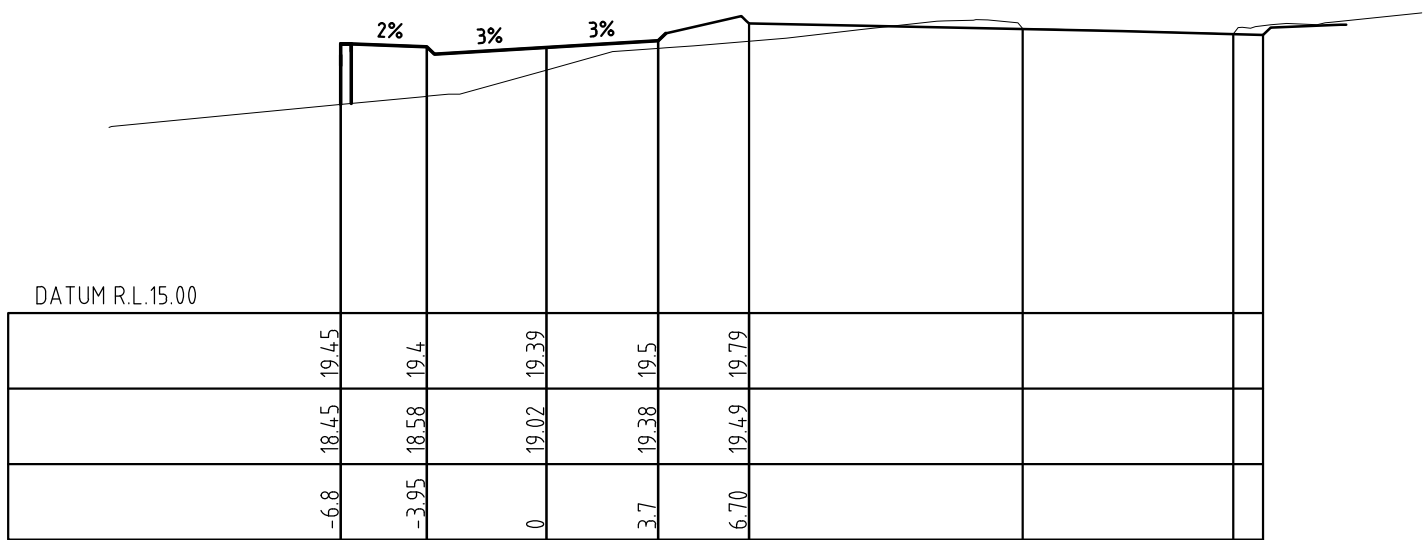
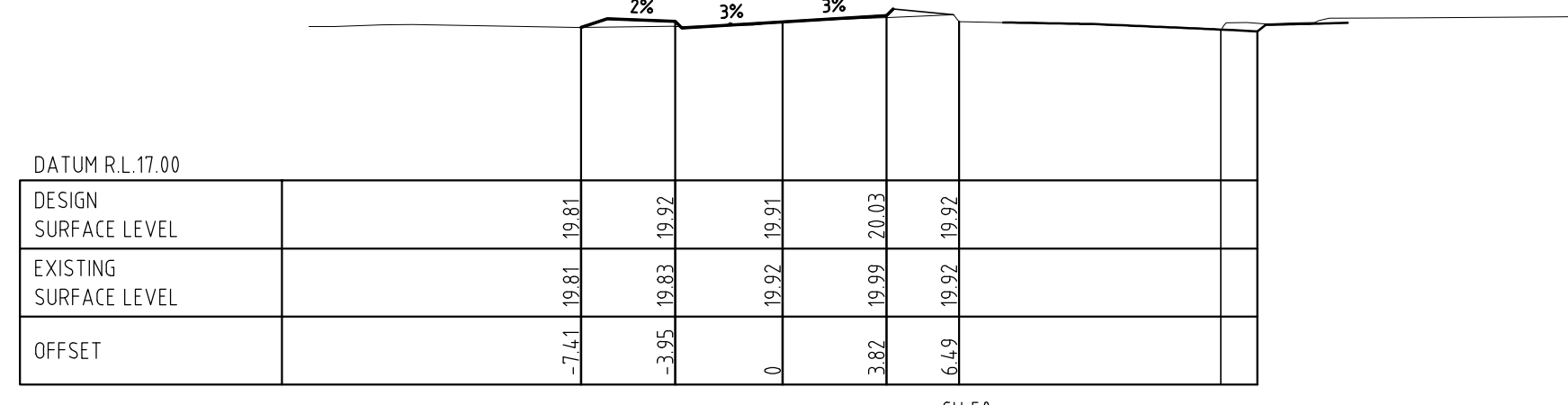
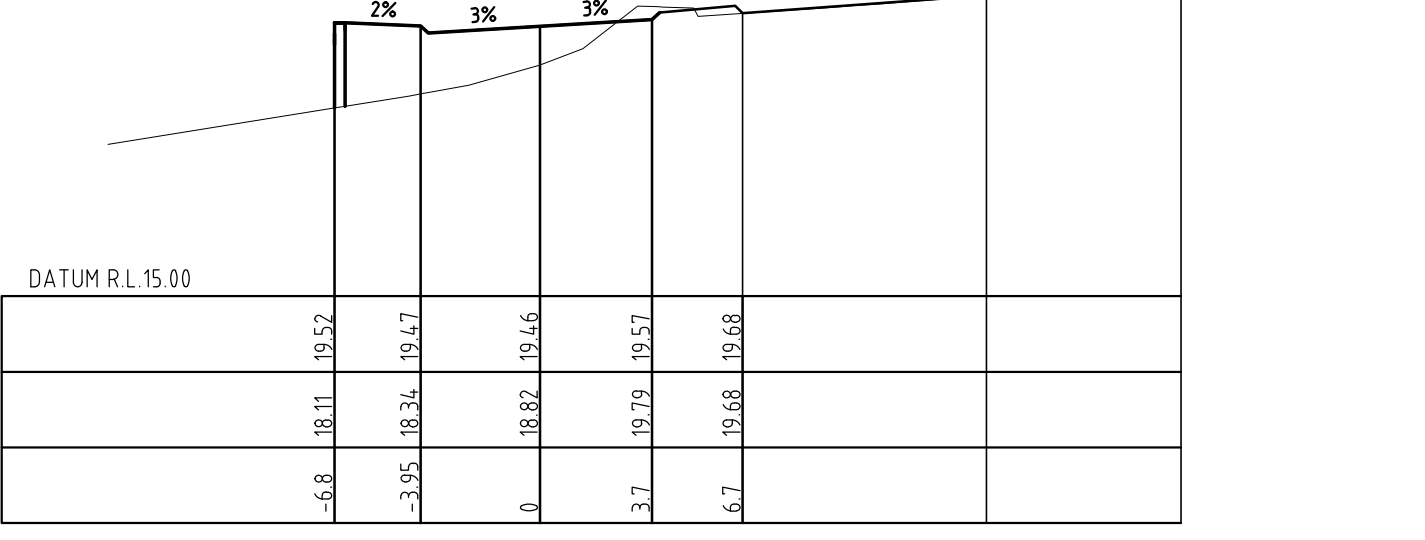
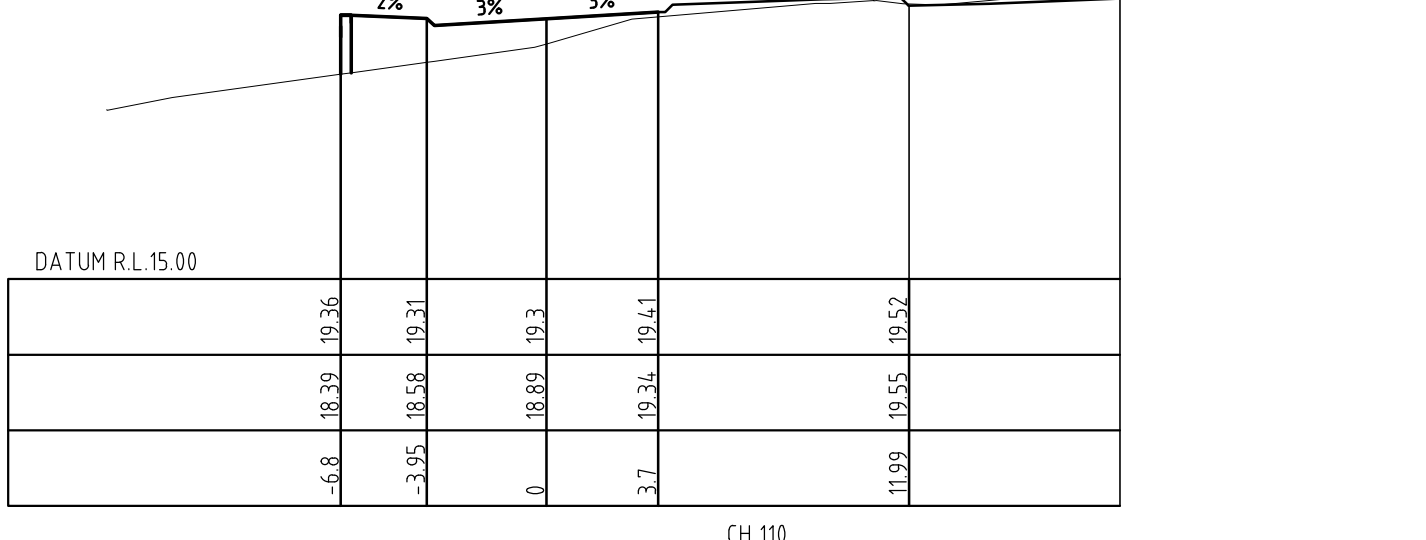
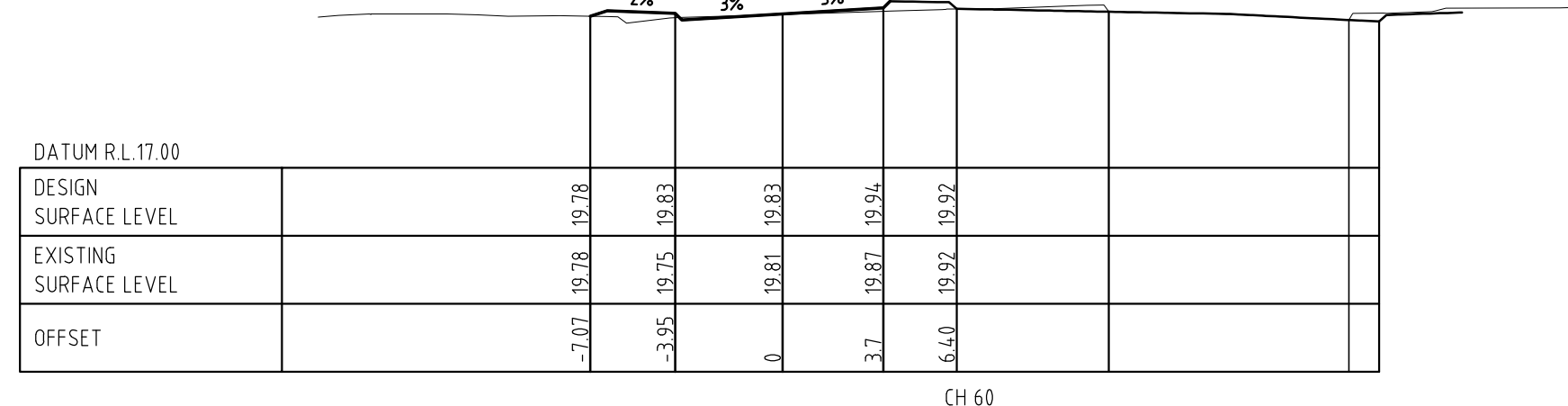
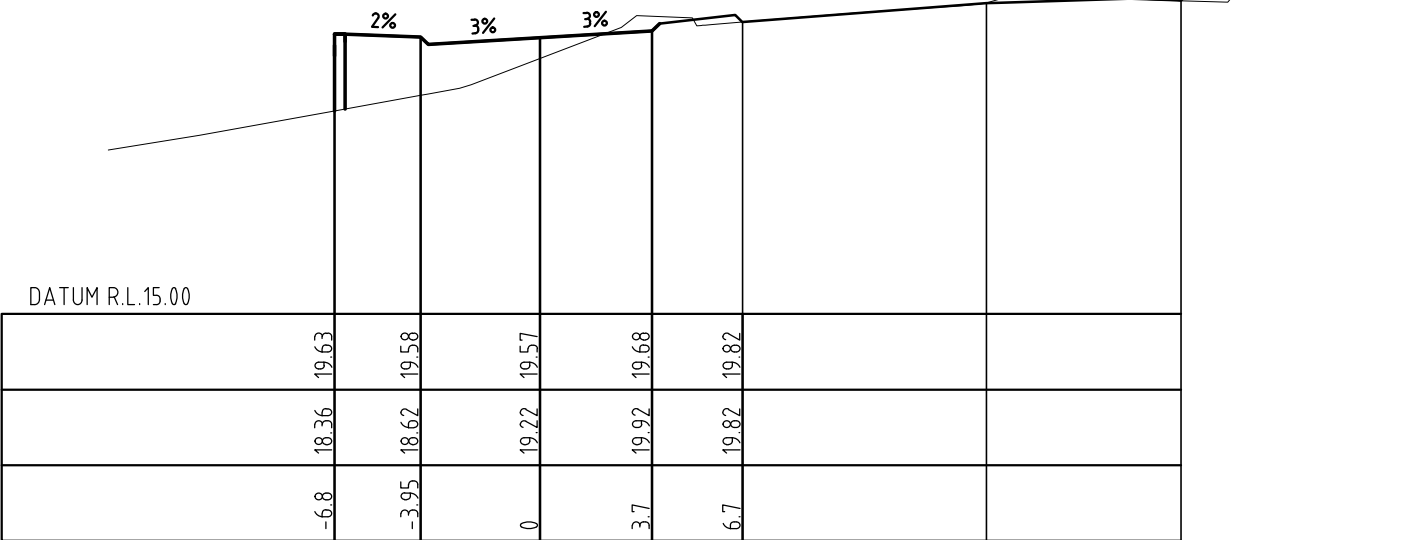
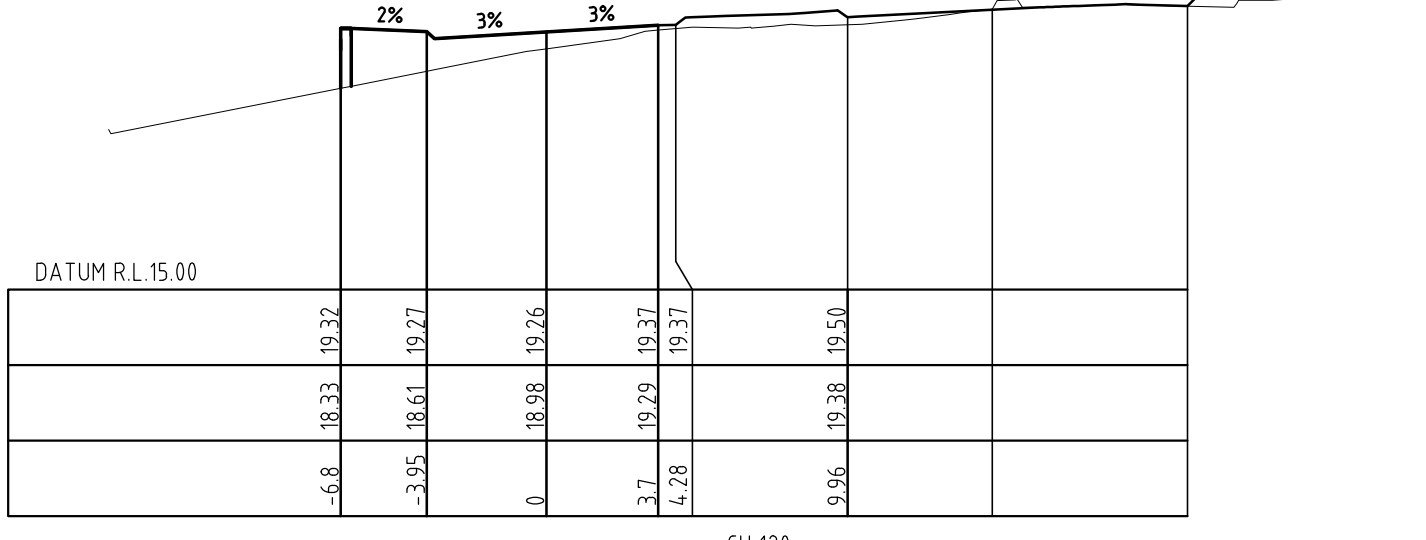
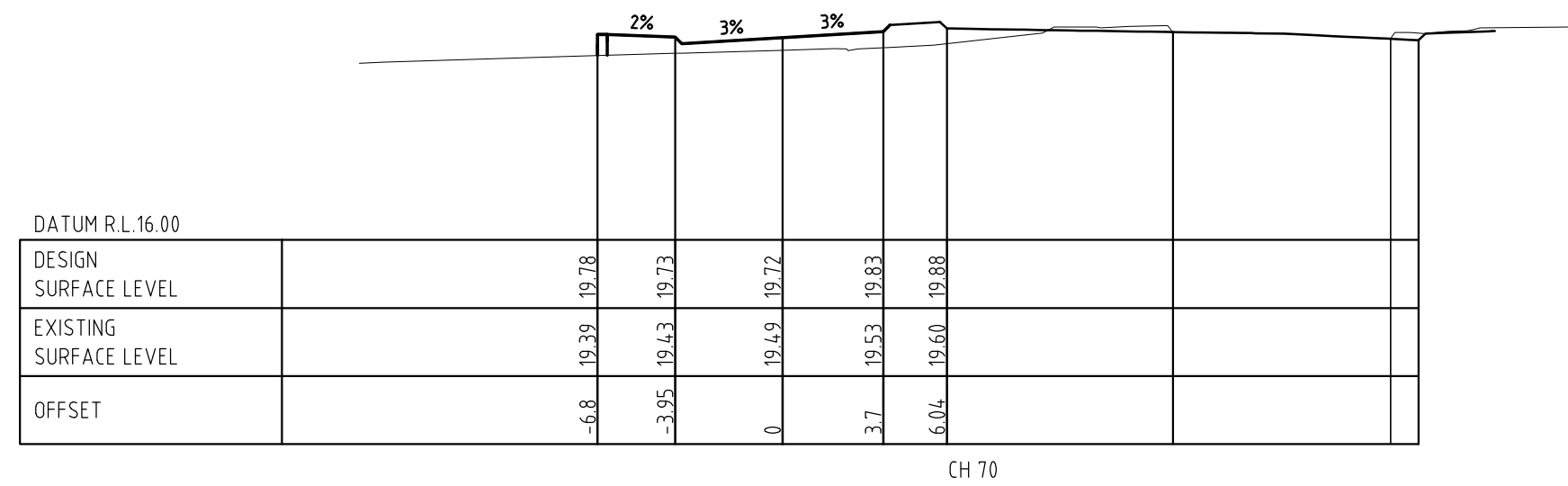
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CLIENT: TOWN OF COTTESLOE

DRAWING: RAILWAY ST REALIGNMENT

STATUS: FOR APPROVAL

SCALE: AS SHOWN	DRAWING No.	REV No.	ORIGINAL DRAWING SIZE
DATE: SEPT 2016	16-6-79/410	B	A1
DESIGN: ELW	FILE NAME: S:\ACTIVE PROJECTS\16-06-079\ACAD\16679-410.dwg		
DRAWN: MJV	APPD		
CHECK:			



**RAILWAY ST REALIGNMENT
NORTH COTTESLOE P.S.**

PROJECT:	9-9-2016	ROAD CROSS SECTIONS REVISED: SERVICES TO BE PICKED UP, DRAINAGE TO BE DESIGNED	MJV
DATE:	15-7-2016	PRELIMINARY PLOT FOR APPROVAL	MJV
REVISION:			

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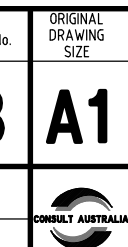
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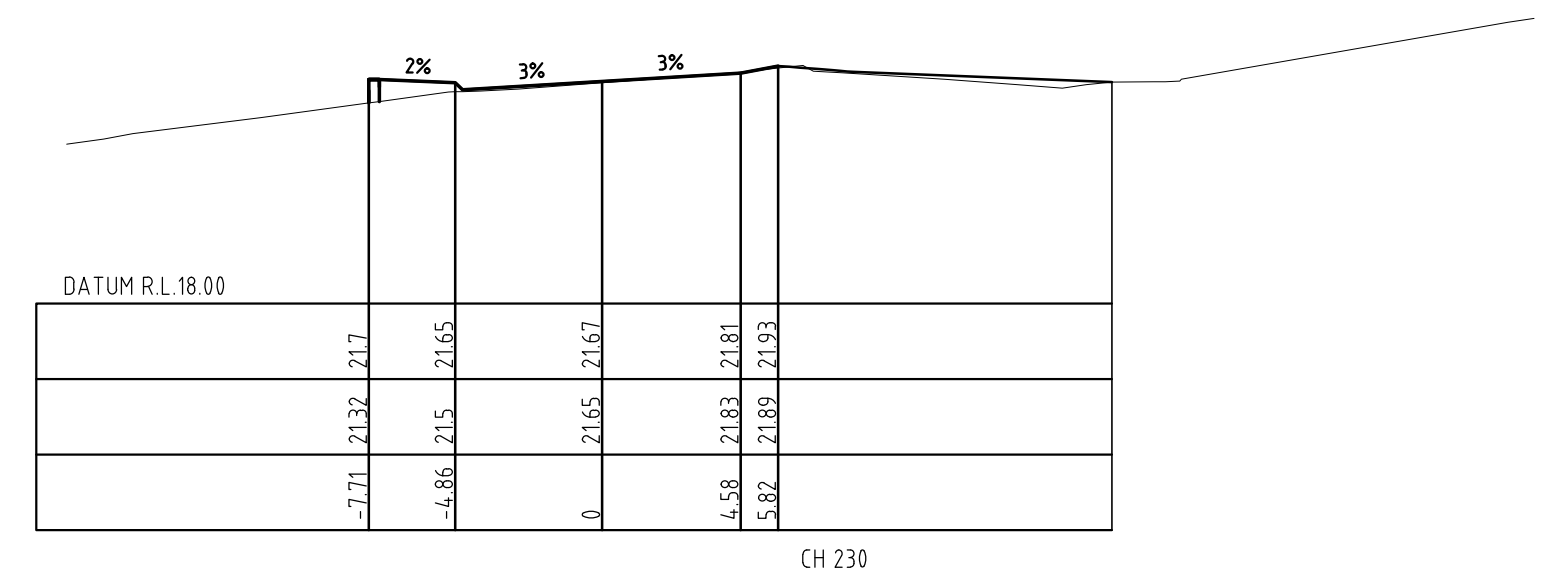
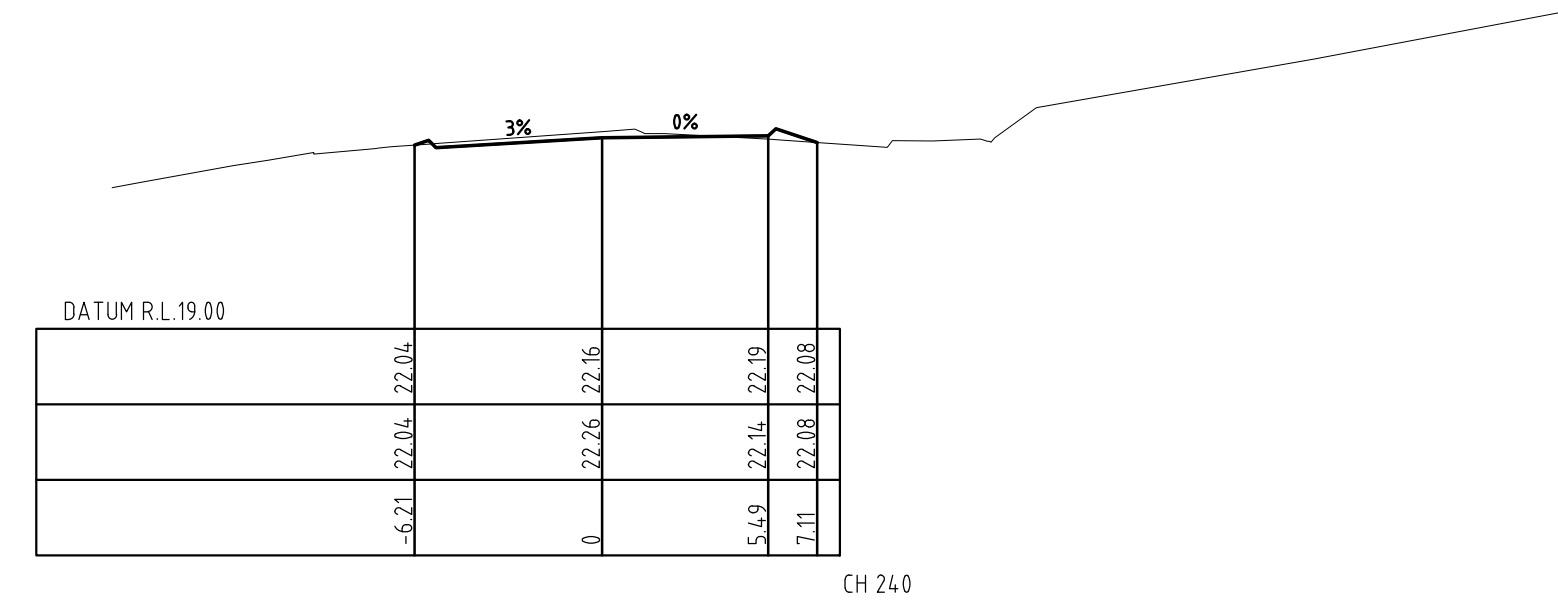
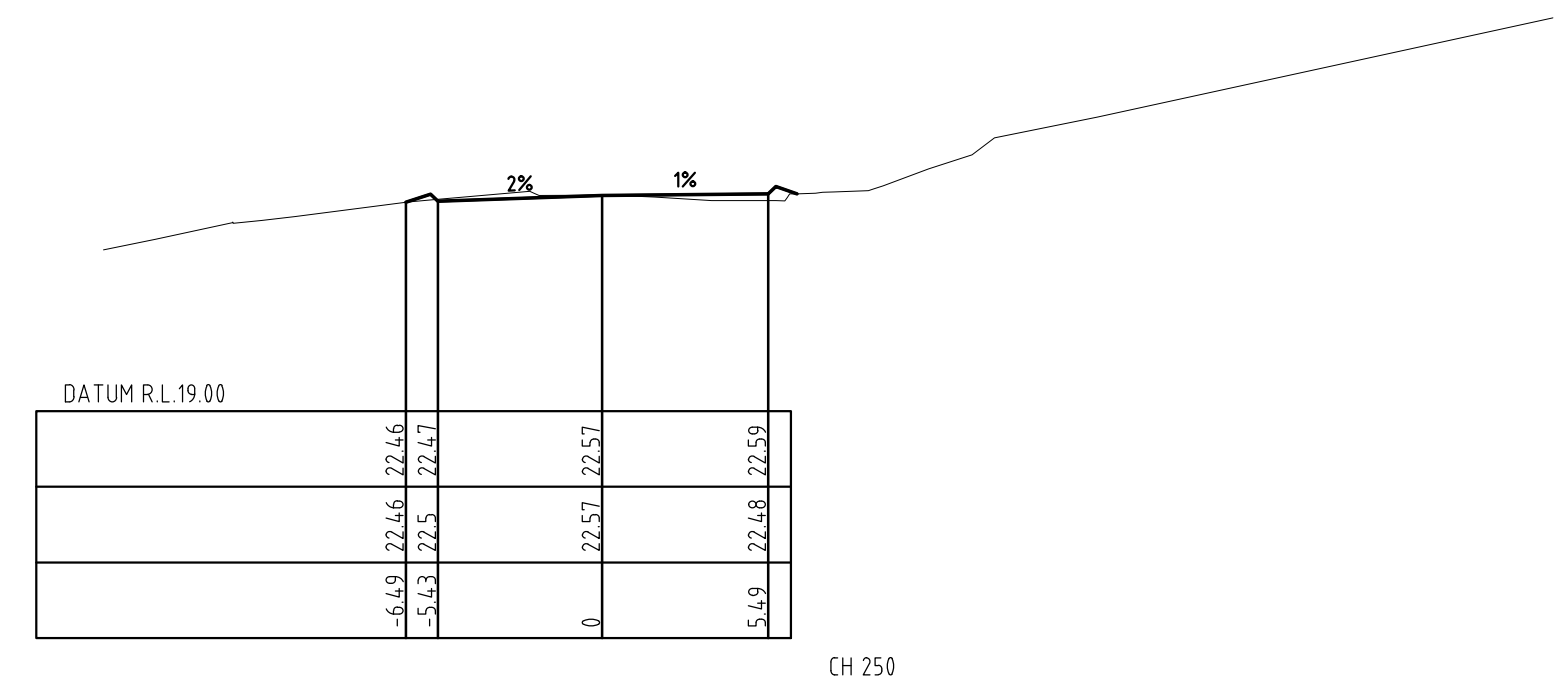
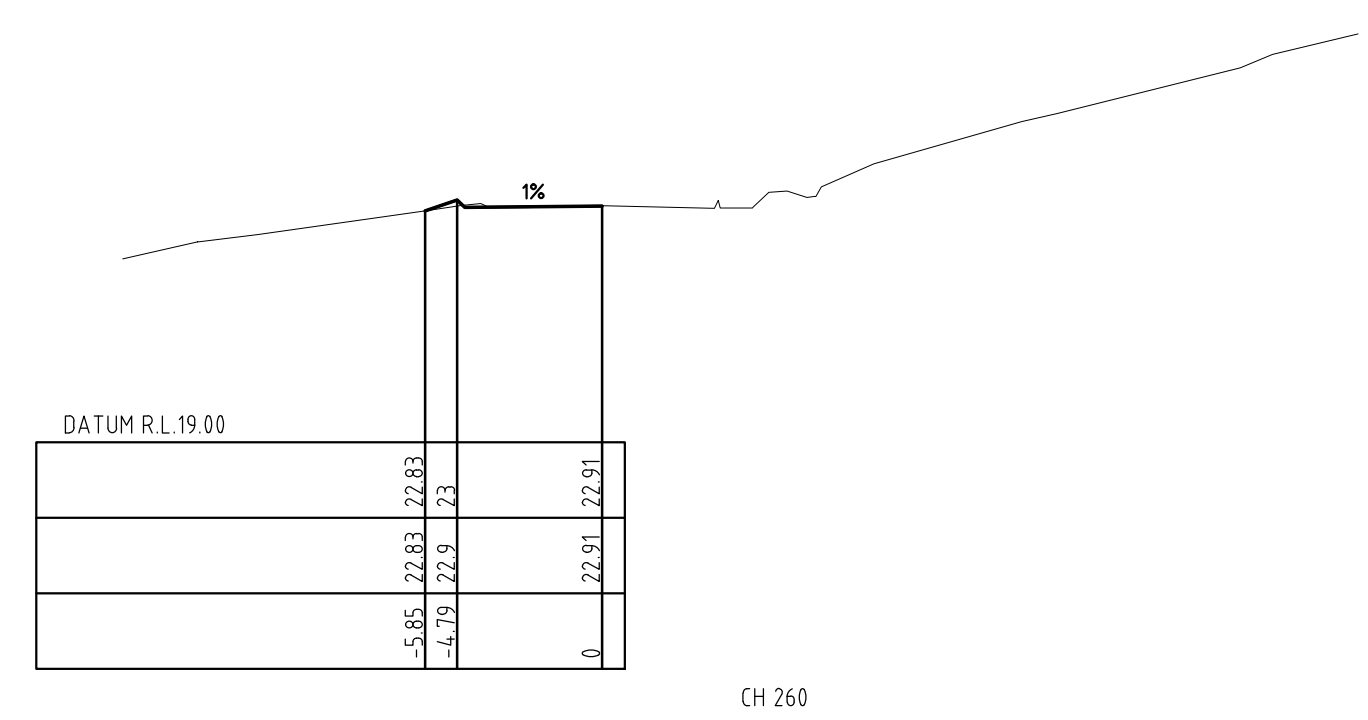
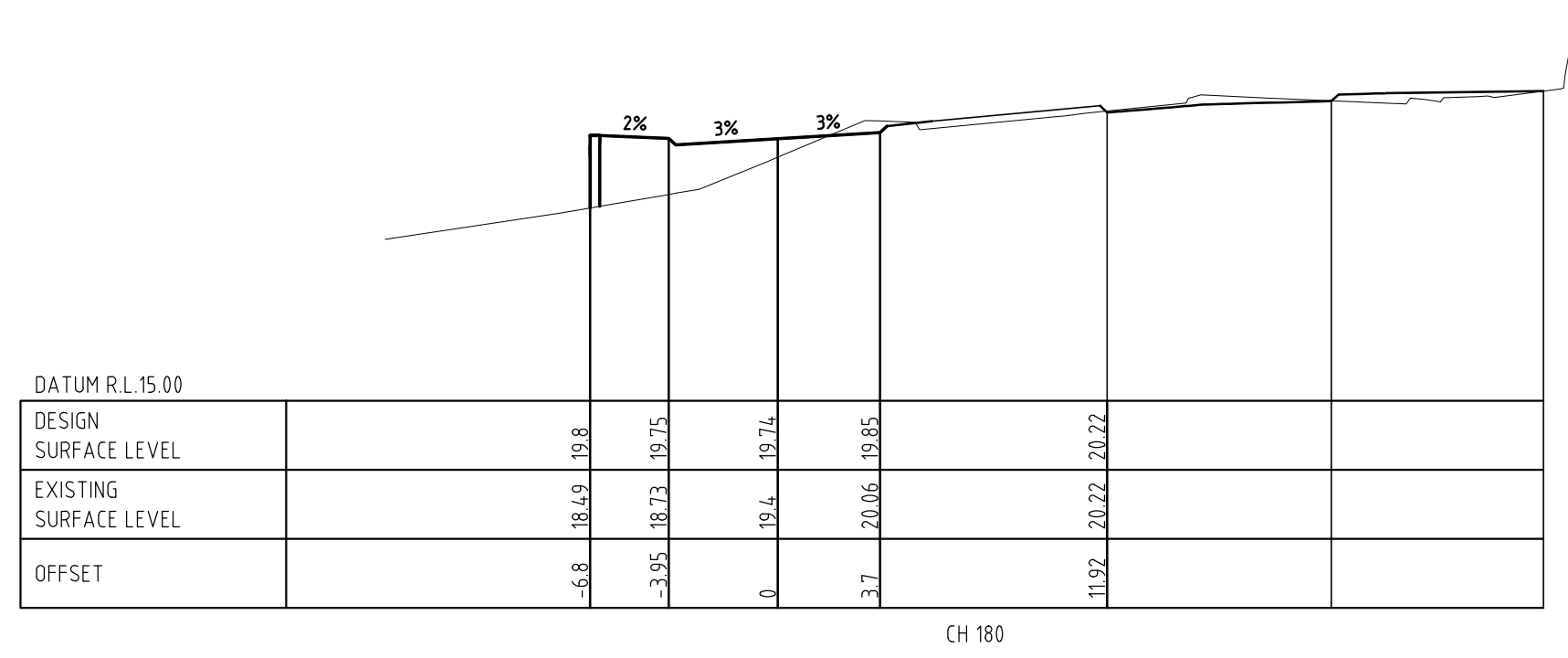
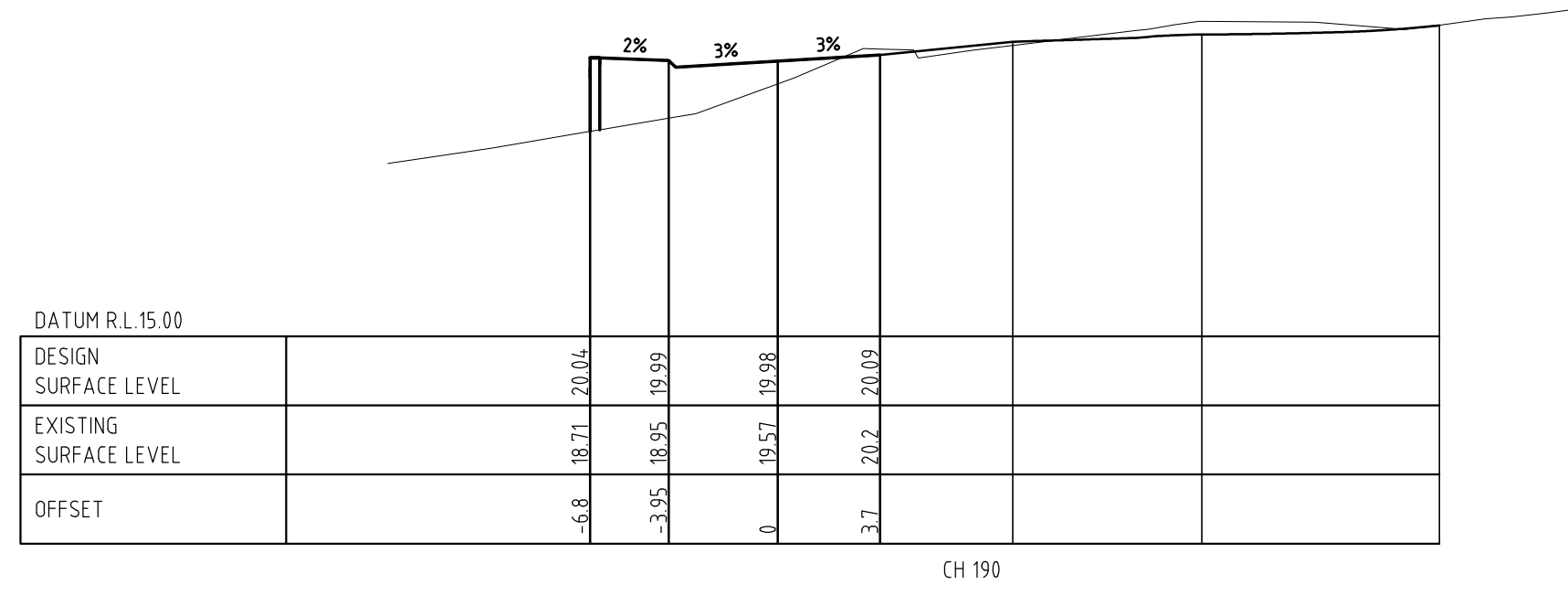
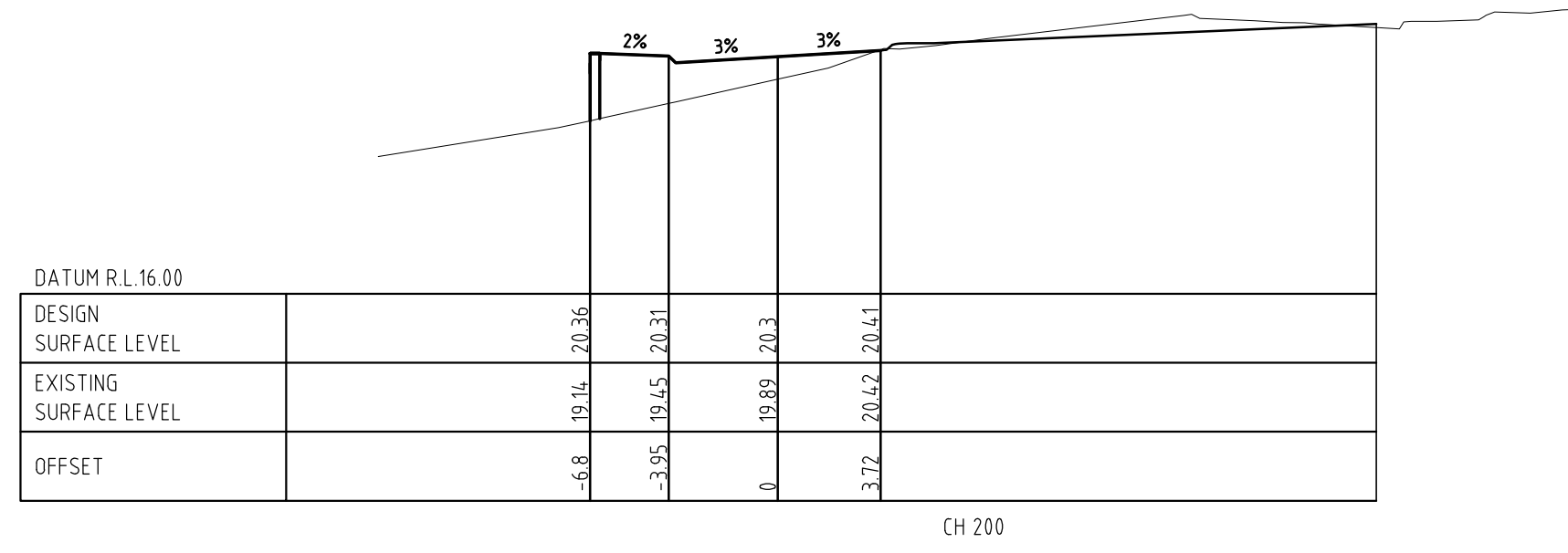
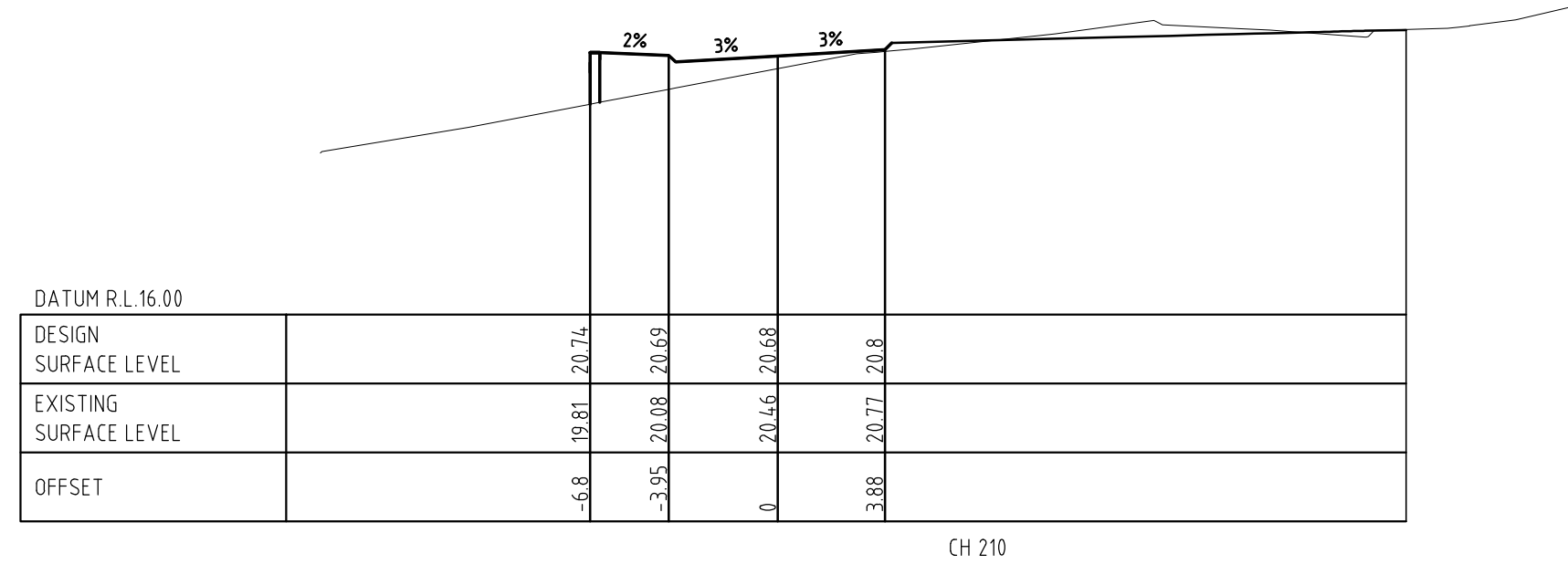
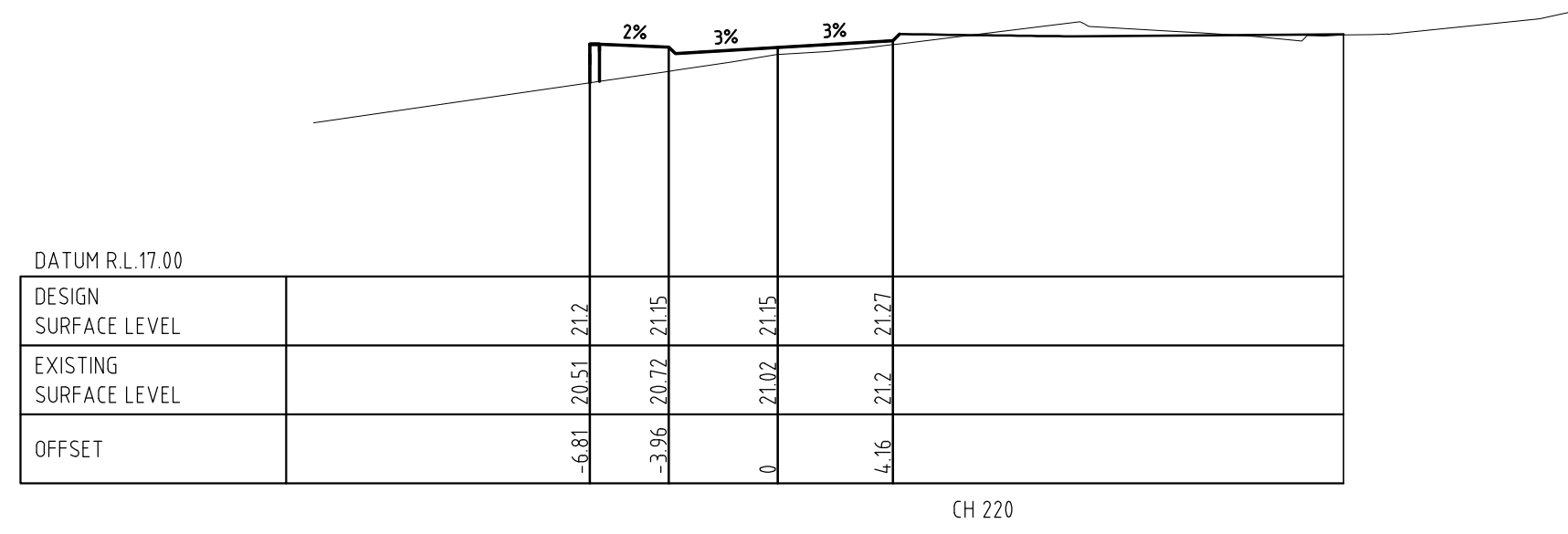
TOWN OF COTTESLOE

**RAILWAY STREET
CROSS SECTIONS CH:20-170**

SCALE:	1:250	DRAWING No:		REV No:	
DATE:	SEPT 216		16-6-79/411	B A1	
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DRAWN:	MJV	FILE NAME:	S:\ACTIVE PROJECTS\16-06-079\ACAD\16679-411-412.dwg		
CHECK:		APPD:			

STATUS: **FOR APPROVAL**





PROJECT: **RAILWAY ST REALIGNMENT
NORTH COTTESLOE P.S.**

B	9-9-2016	DETAILED DESIGN: CROSS SECTIONS REVISED. SERVICES TO BE PICKED UP.	MJV
A	15-7-2016	PRELIMINARY PLOT FOR APPROVAL	MJV
No.	DATE	REVISION	BY

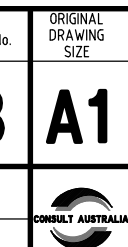
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CLIENT: **TOWN OF COTTESLOE**

DRAWING: **RAILWAY STREET
CROSS SECTIONS CH:180-260**

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DATE	SEPT 2016	DESIGN	ELW	FILE NAME	S:\ACTIVE PROJECTS\16-06-079\ACAD\16679-412.dwg
DRAWN	MJV	CHECK	APPD	STATUS	FOR APPROVAL





LEGEND

- EXISTING KERB
- PROPOSED KERB AND PATH
- PROPOSED RETAINING WALL
- AREA OF CONCRETE PATHS/CROSSOVERS
- AREA OF GRASS INFILL
- AREA OF BRICK PAVING INFILL

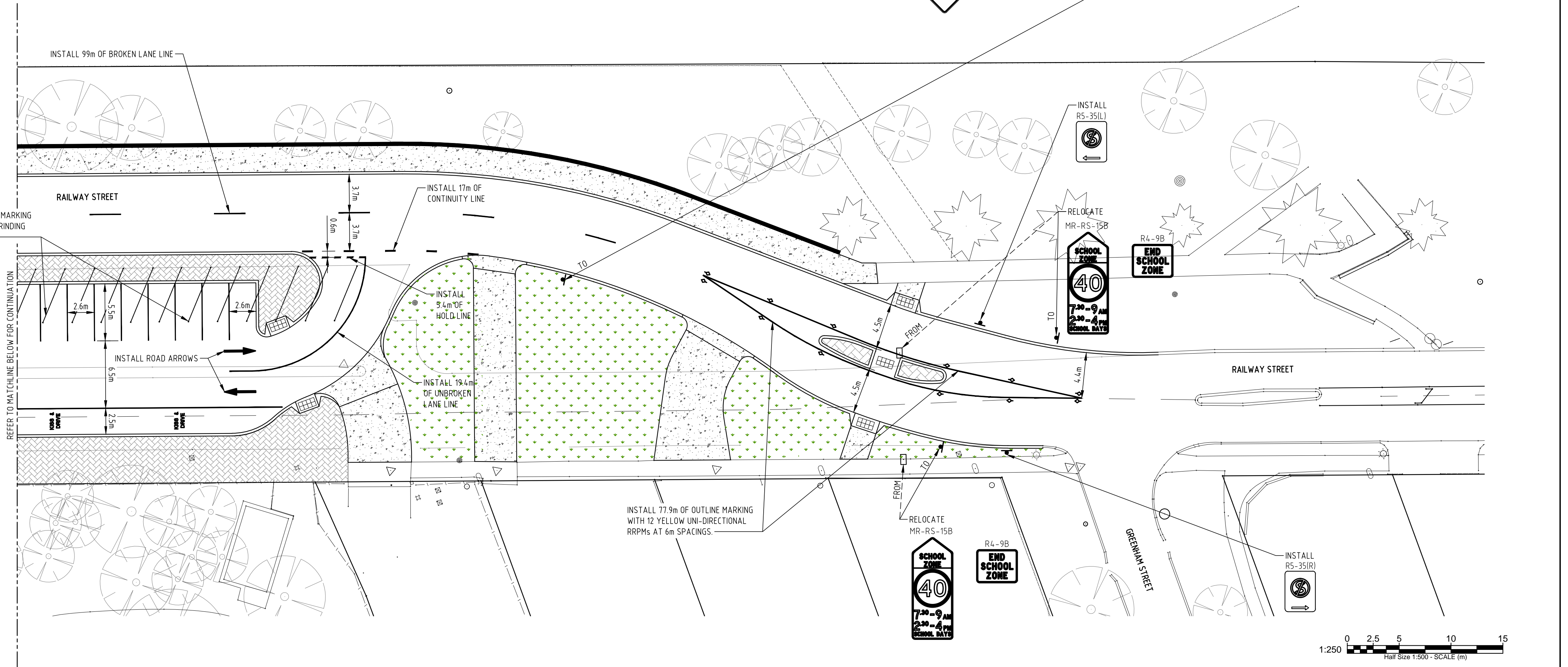
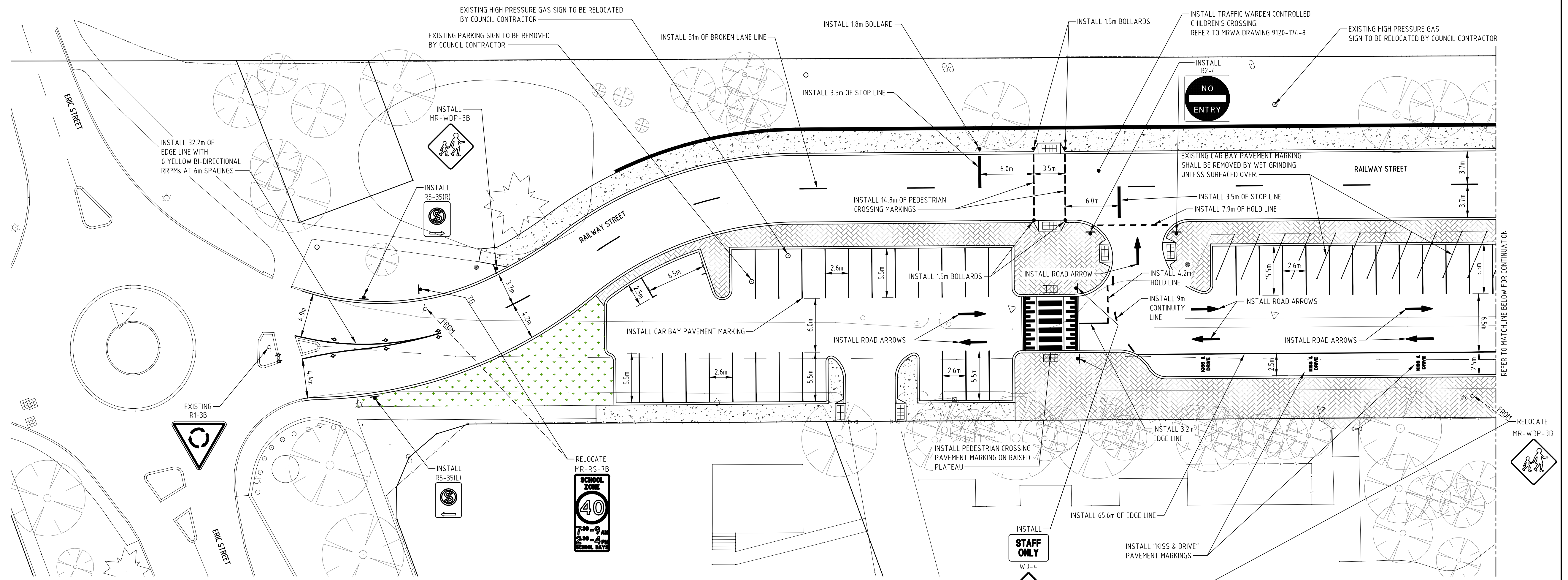
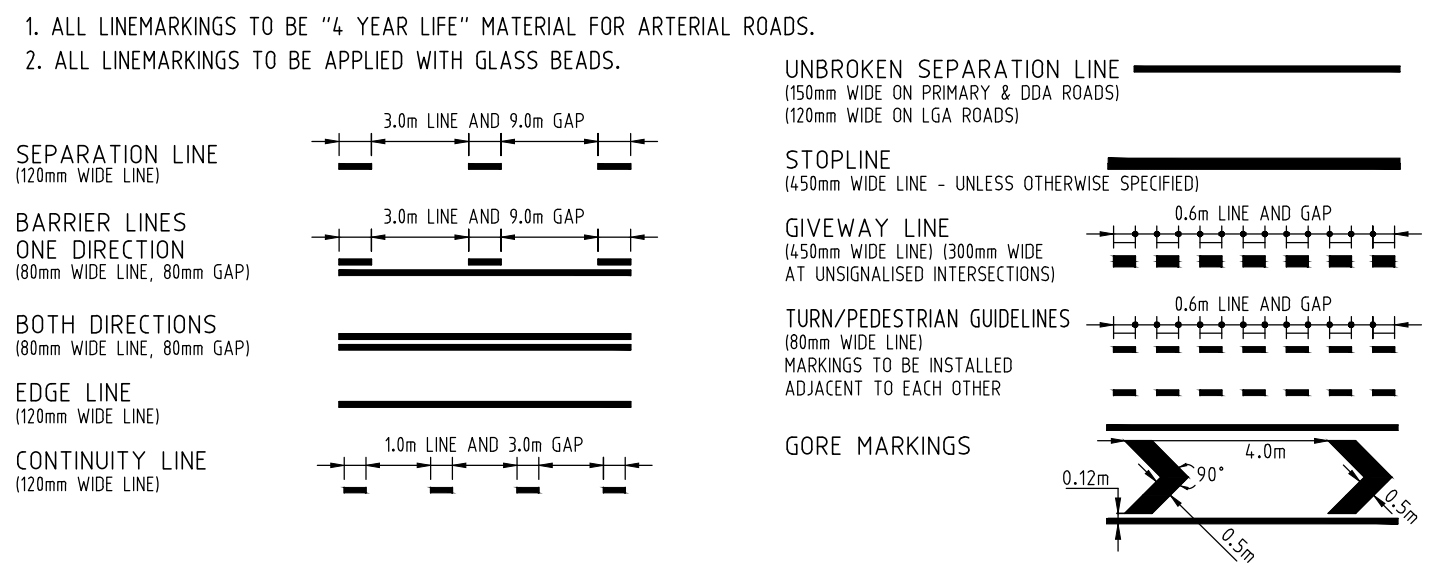
SIGNS & PAVEMENT MARKING NOTES:

1. SIGNS & LINES SHALL BE INSTALLED IN ACCORDANCE WITH CURRENT MAIN ROADS WA STANDARD DRAWINGS AND SPECIFICATIONS. SEE MAIN ROADS WA WEBSITE FOR FURTHER DETAILS.
2. COUNCIL'S CONTRACTOR SHALL SPOT PROPOSED PAVEMENT MARKING POSITIONS AS PER MRWA GUIDELINES AND ADVISE MAIN ROADS WA WHEN READY FOR INSTALLATION.
3. ALL LINWORK SHALL BE WHITE UNLESS NOTED OTHERWISE.
4. THE CONTRACTOR SHALL MAINTAIN THE SITE IN A SAFE CONDITION FOR ALL USERS BY THE USE OF TEMPORARY SIGNAGE, PAVEMENT MARKINGS AND LIGHTING IF REQUIRED UNTIL PAVEMENT SIGNS AND PAVEMENT MARKINGS ARE INSTALLED.
5. COUNCIL'S CONTRACTOR SHALL ARRANGE FOR THE REMOVAL OF ALL EXISTING REDUNDANT SIGNS AND PAVEMENT MARKINGS. REDUNDANT SIGNS ARE TO BE TAKEN TO THE LOCAL AUTHORITY FOR COLLECTION BY MAIN ROADS WA.
6. SIGNS NOTED AS TEMPORARY SHALL BE REMOVED BY THE CONTRACTOR AFTER 6 MONTHS FROM INSTALLATION.

NOTE:
COUNCIL'S CONTRACTOR SHALL INSTALL SIGNING & PAVEMENT MARKINGS IN CAR PARKS AND OTHER SPECIFIED LOCATIONS IN ACCORDANCE WITH AUSTRALIAN STANDARDS AND LOCAL AUTHORITY REQUIREMENTS

NOTE:
REFER TO STANDARD DETAILS DRAWING 166-6-79/600 FOR CARPARK MARKING DETAILS

ROAD MARKING CONSTRUCTION DETAILS



PROJECT: **RAILWAY ST REALIGNMENT
NORTH COTTESLOE P.S.**

DATE: 9-9-2016
REVISION: PRELIMINARY PLOT FOR APPROVAL

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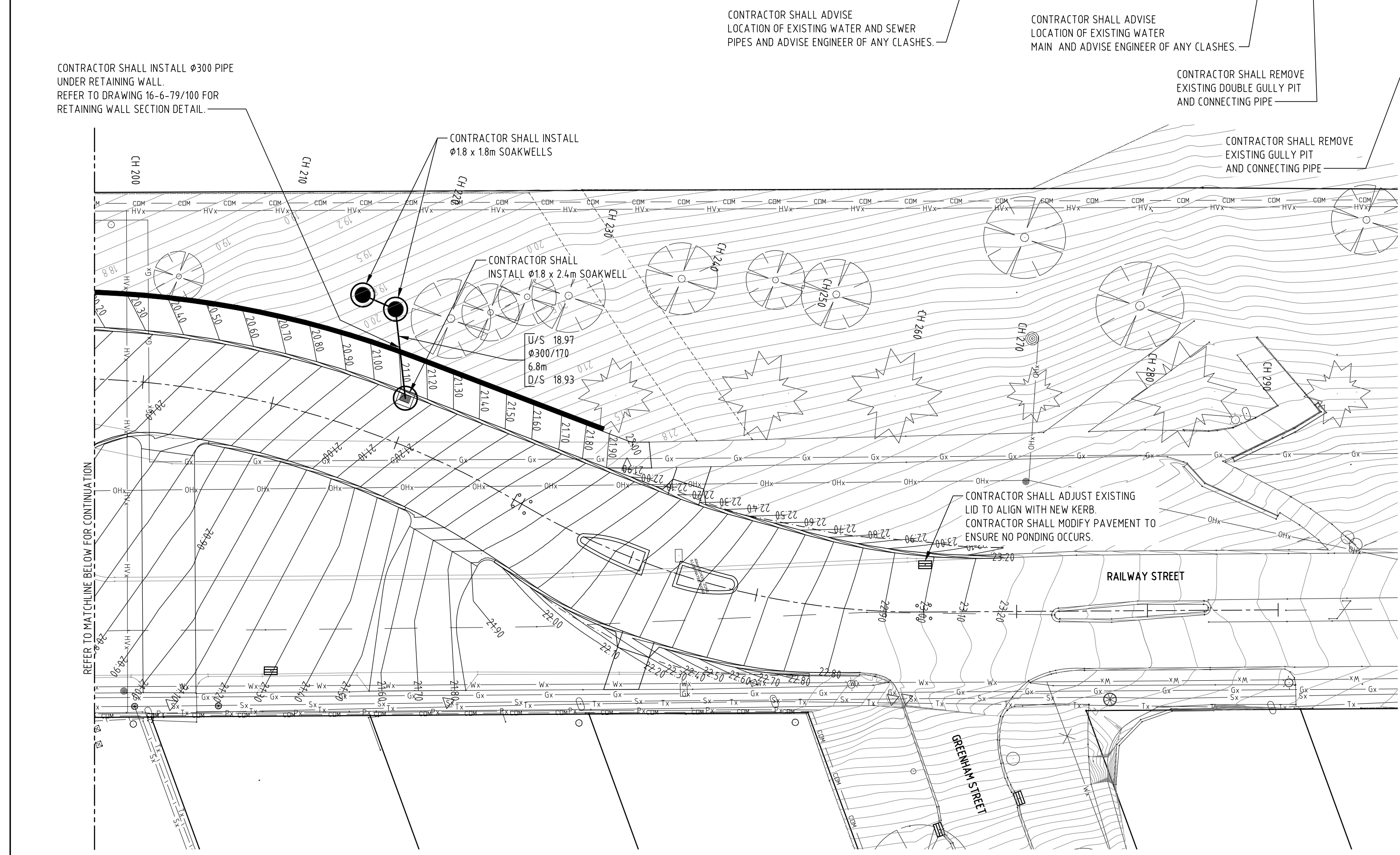
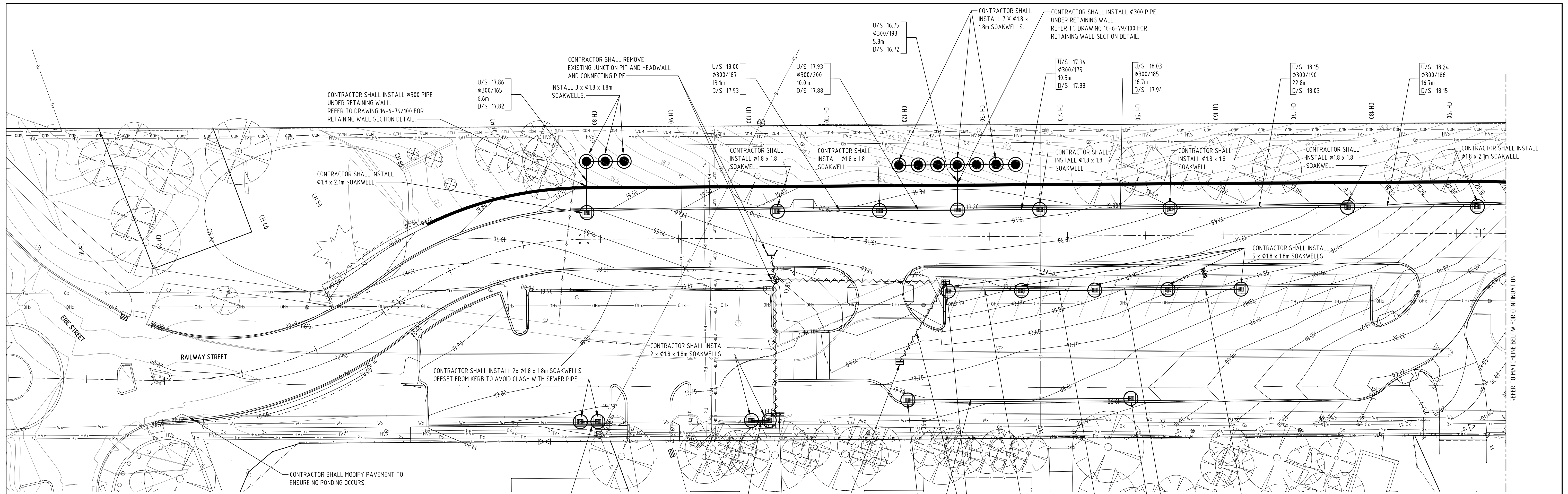
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CLIENT: **TOWN OF COTTESLOE**

DRAWING: **SIGNS AND PAVEMENT MARKING LAYOUT**

STATUS: **FOR APPROVAL**

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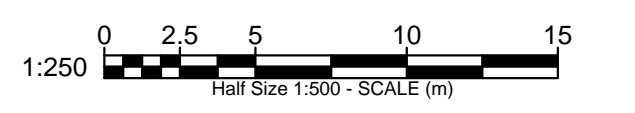


DRAINAGE NOTES

1. THE CONTRACTOR SHALL CO-ORDINATE THE LOCATION OF ALL EXISTING AND PROPOSED SERVICES PRIOR TO COMMENCEMENT OF WORK. ANY CONFLICTS ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
2. SERVICES, SUCH AS SEWER, WATER, GAS, TELEPHONE, ELECTRICITY, AND DRAINAGE MAY BE ENCOUNTERED DURING CONSTRUCTION OF THE WORKS. SERVICES INFORMATION SHOWN ON DRAWINGS IS INDICATIVE ONLY AND MAY NOT BE COMPLETE. BEFORE EXCAVATION COMMENCES THE LOCATION OF ALL SUCH SERVICES SHALL BE OBTAINED FROM THE RELEVANT AUTHORITIES.
3. THE CONTRACTOR SHALL CHECK INVERT LEVELS OF ALL EXISTING STORMWATER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER ON ANY DISCREPANCIES.
4. ALL WORKS SHALL BE TO THE PROJECT SPECIFICATION, BUT WHERE NO DETAIL IS PROVIDED, TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
5. DRAINAGE PIPE LENGTHS ARE INDICATIVE ONLY. MANHOLES & GULLIES SHALL BE LOCATED AS SHOWN AND SETOUT IN ACCORDANCE WITH THE STANDARD DETAILS.
6. EXCAVATION SHALL BE KEPT TO A MINIMUM AND TRENCHES SUPPORTED.
7. PIPES SHALL BE LAID ON THE PREPARED BASE OF THE TRENCH, TO A UNIFORM GRADE AT DESIGN LEVELS.
8. THE CONTRACTOR SHALL PILE AND KEEL IN SOFT GROUND AND WHERE DRAINS CROSS EXISTING SERVICES.
9. ALL PIPES SHALL BE CLASS (2) UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHERE MIN. COVER CAN NOT BE ACHIEVED. MINIMUM COVER ON DRAINAGE TO BE 900mm UNDER ROAD AND 600mm IN VERGE.
10. PIPES SHALL BE LAID OBVERT TO OBVERT TAKEN FROM THE CENTRE OF THE PITS.
11. FILLING SHALL BE CLEAN NONPLASTIC MATERIAL FREE FROM STONES OR CLAY LUMPS. EXCAVATED MATERIAL SHOULD BE USED WHERE POSSIBLE. FILLING SHALL BE PLACED IN HORIZONTAL LAYERS NOT EXCEEDING 150mm IN THICKNESS AND COMPACTED TO ACHIEVE A DENSITY NOT LESS THAN 95% MAXIMUM DRY DENSITY.
12. THE CONTRACTOR SHALL PREPARE AS-CONSTRUCTED DRAINAGE DRAWINGS (INCLUDING SURVEY) TO THE SATISFACTION OF THE LOCAL AUTHORITY. AS CONSTRUCTED PLANS TO BE ISSUED TO THE ENGINEER FOR SIGNING AND PRESENTATION TO THE LOCAL AUTHORITY.
13. THE CONTRACTOR SHALL PREPARE AND PROVIDE DRAINAGE AS CONSTRUCTED DOCUMENTS IN 'D' SPEC FORMAT AS PER LOCAL AUTHORITY REQUIREMENTS
14. IT IS DEEMED THAT THE AS-CONSTRUCTED DOCUMENTS FORM PART OF THE WORKS. PRACTICAL COMPLETION CAN NOT BE AWARDED IF ACCEPTABLE AS-CONSTRUCTED DOCUMENTS HAVE NOT BEEN PROVIDED TO THE ENGINEER.
15. DRAINAGE PIPES ON LONGITUDINAL SECTION SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.

LEGEND

- PROPOSED DRAINAGE PIPE
- EXISTING DRAINAGE PIPE
- EXISTING DRAINAGE LINE
- EXISTING MP GAS LINE
- EXISTING SEWER PIPE
- EXISTING TELSTRA CABLE
- EXISTING WATER MAIN
- EXISTING DRAINAGE LINE
- EXISTING OVERHEAD POWER LINES
- EXISTING COMMUNICATIONS
- EXISTING LOW VOLTAGE UNDERGROUND
- EXISTING HIGH VOLTAGE UNDERGROUND
- SOAKWELL ADJACENT KERB 18 x 18 x DEPTH VARIES
- SOAKWELLS IN VERGE 18 x 18m
- U/S 42.95
450/14.00
14
D/S 42.96



PROJECT: **RAILWAY ST REALIGNMENT
NORTH COTTESLOE P.S.**

DATE	9-9-2016	REVISION	
NO.			

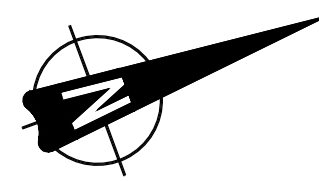
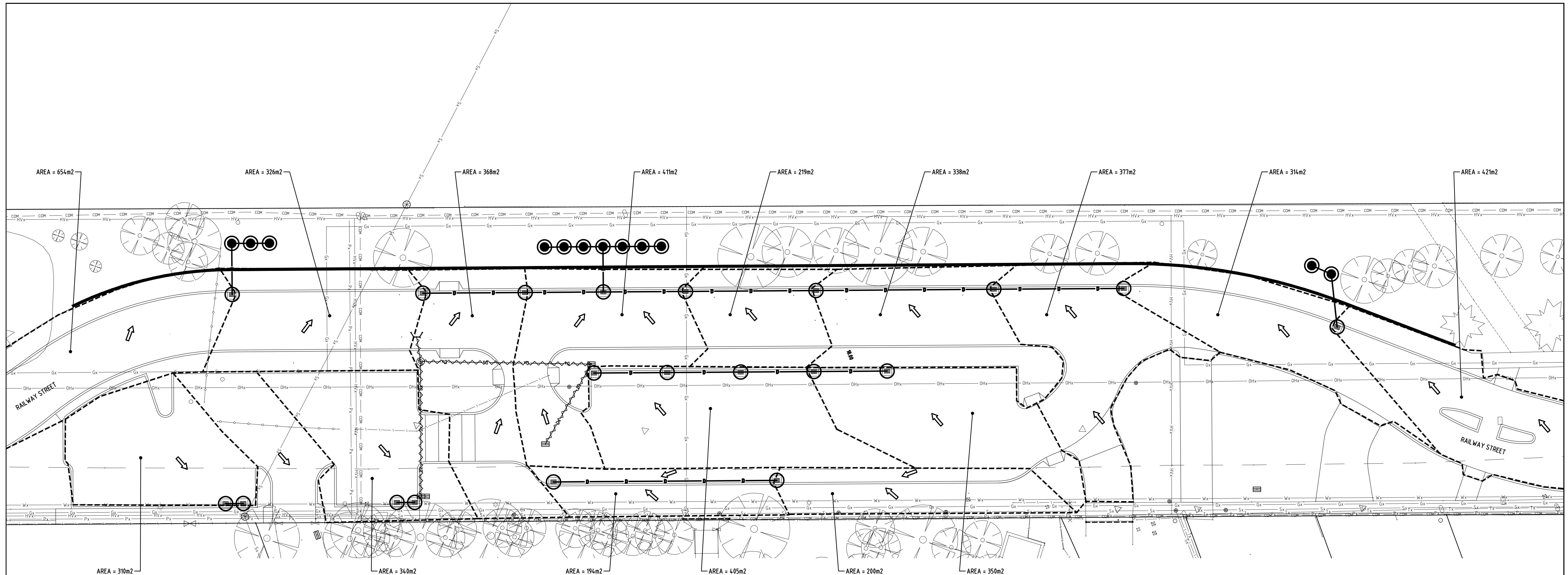
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www.portereng.com.au
11000 Pty Ltd ACN 070 071 848 an Inspec for the Consulting Engineering Unit Trust trading as Porter Consulting Engineers ABN 18 136 396 305

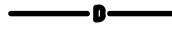
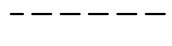





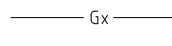
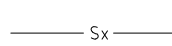

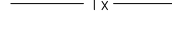
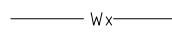
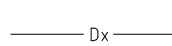

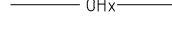
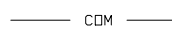
CLIENT: **TOWN OF COTTESLOE**

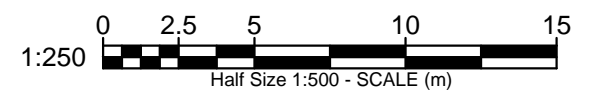
DRAWING: **DRAINAGE LAYOUT**
STATUS: **FOR APPROVAL**

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DATE	SEPT 2016	DESIGN	ELW	FILE NAME	S:\ACTIVE PROJECTS\16-06-079\ACAD\16679-500.dwg		
DRAWN	MJV	CHECK	APPD				



LEGEND

-  PROPOSED DRAINAGE PIPE
-  EXISTING DRAINAGE PIPE
-  EXISTING DRAINAGE PIPE
-  CATCHMENT BOUNDARIES
-  SOAKWELLS ADJACENT KERB Ø18 x VARIOUS DEPTHS
-  SOAKWELLS IN VERGE Ø18 x 1.8m
-  SURFACE FLOW ARROW
-  EXISTING MP GAS LINE
-  EXISTING SEWER PIPE
-  EXISTING TELSTRA CABLE
-  EXISTING WATER MAIN
-  EXISTING DRAINAGE LINE
-  EXISTING OVERHEAD POWER LINES
-  EXISTING COMMUNICATIONS
-  EXISTING LOW VOLTAGE UNDERGROUND
-  EXISTING HIGH VOLTAGE UNDERGROUND



PROJECT: **RAILWAY ST REALIGNMENT
NORTH COTTESLOE P.S.**

No.	DATE	REVISION	BY
A	9-9-2016	PRELIMINARY PLOT FOR APPROVAL	MJV

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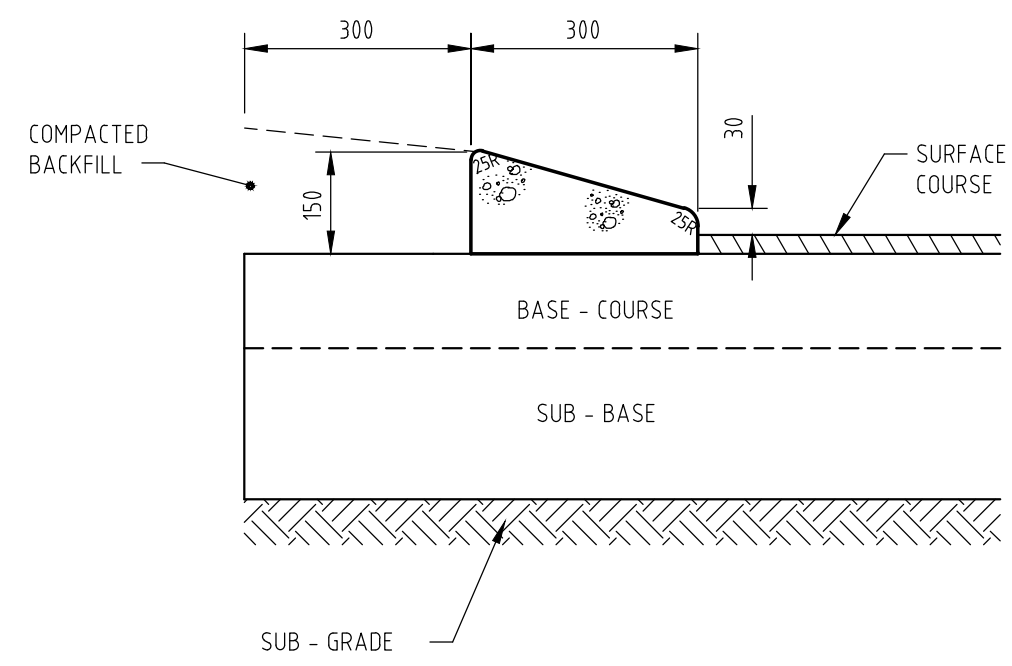
CLIENT: **TOWN OF COTTESLOE**

DRAWING: **DRAINAGE CATCHMENT PLAN**

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DATE: SEPT 2016	16-6-79/501	A	A1
DESIGN: ELW	FILE NAME: S:\ACTIVE PROJECTS\16-06-079\ACAD\16679-501.dwg		
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CHECK:	APPD:		

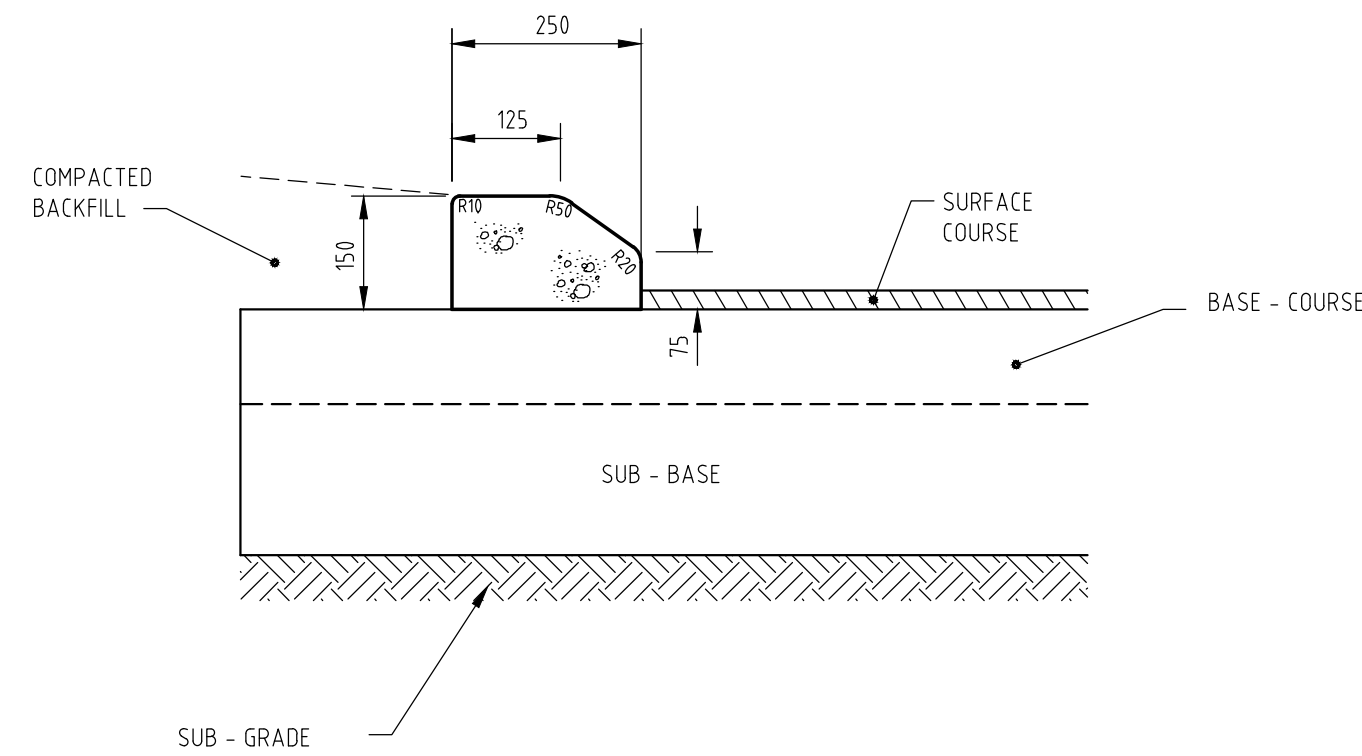
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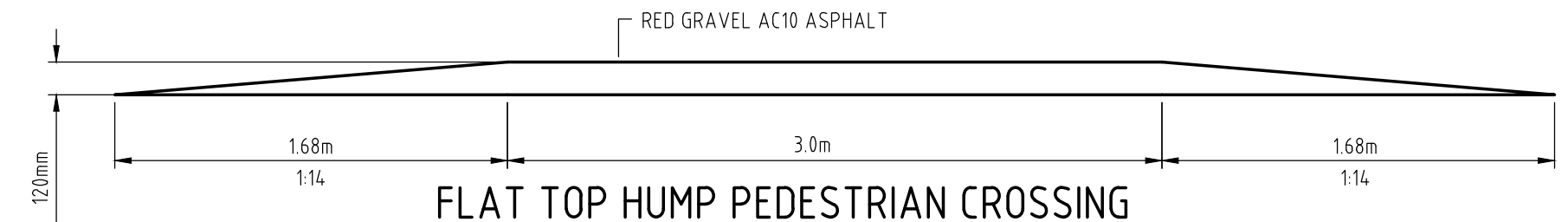
MOUNTABLE KERB

SCALE 1:10



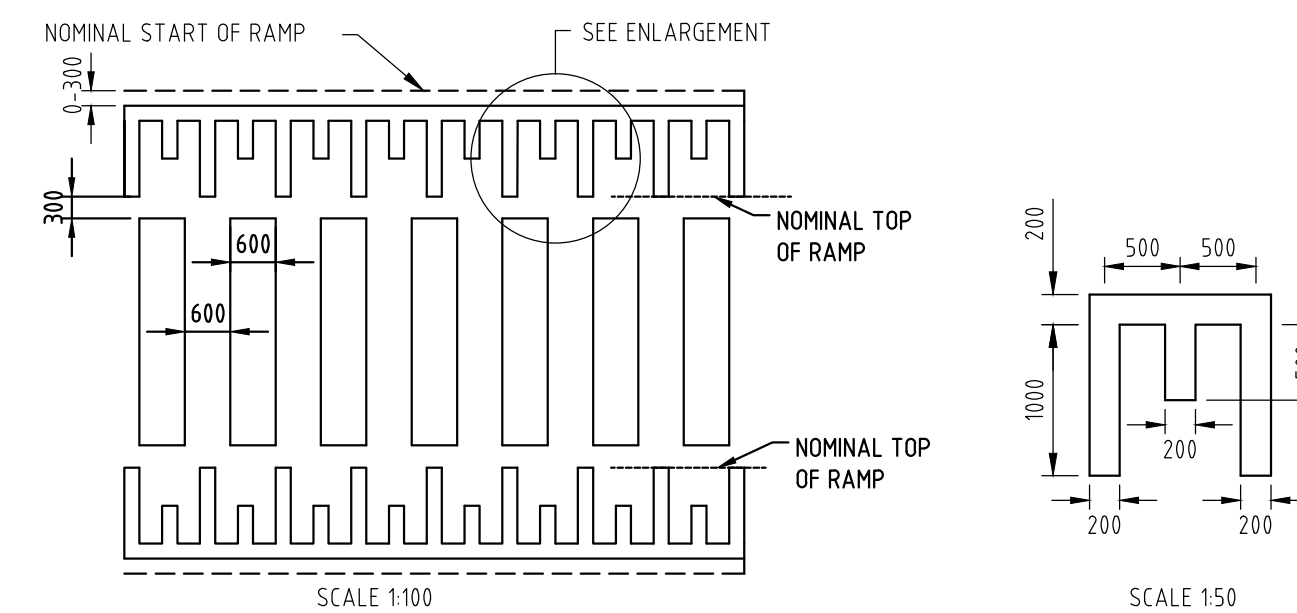
SEMI - MOUNTABLE

SCALE 1:10



FLAT TOP HUMPS PEDESTRIAN CROSSING

SCALE 1:20

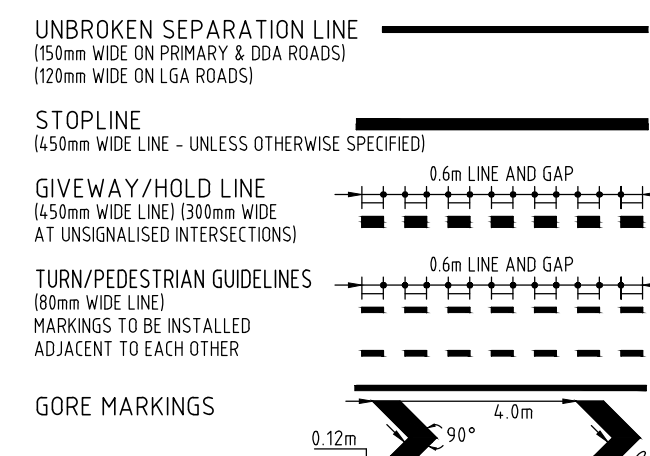
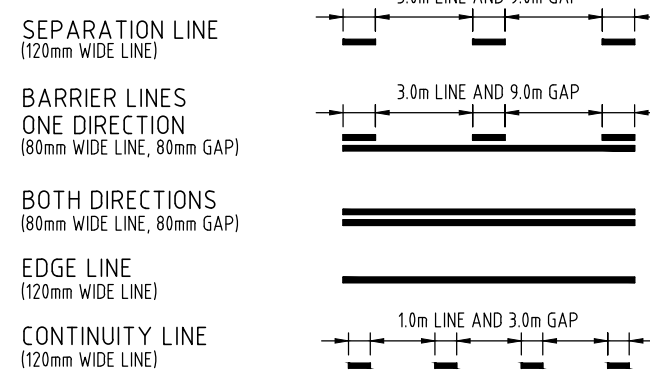


PAVEMENT MARKING DETAIL FOR PEDESTRIAN CROSSING

SCALE AS SHOWN

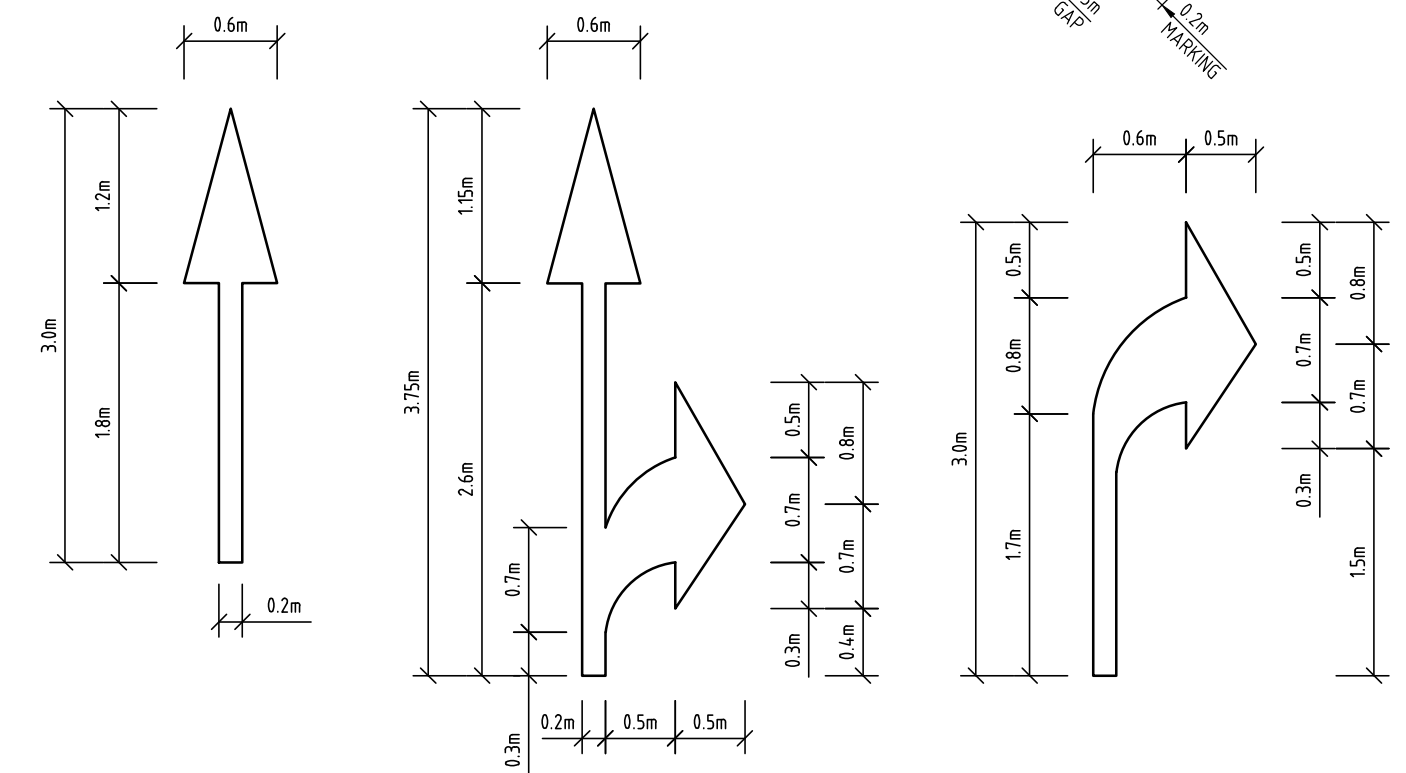
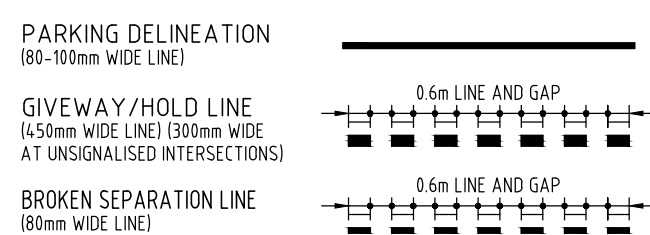
ROAD MARKING CONSTRUCTION DETAILS

1. ALL LINEMARKINGS TO BE "4 YEAR LIFE" MATERIAL FOR ARTERIAL ROADS.
2. ALL LINEMARKINGS TO BE APPLIED WITH GLASS BEADS.



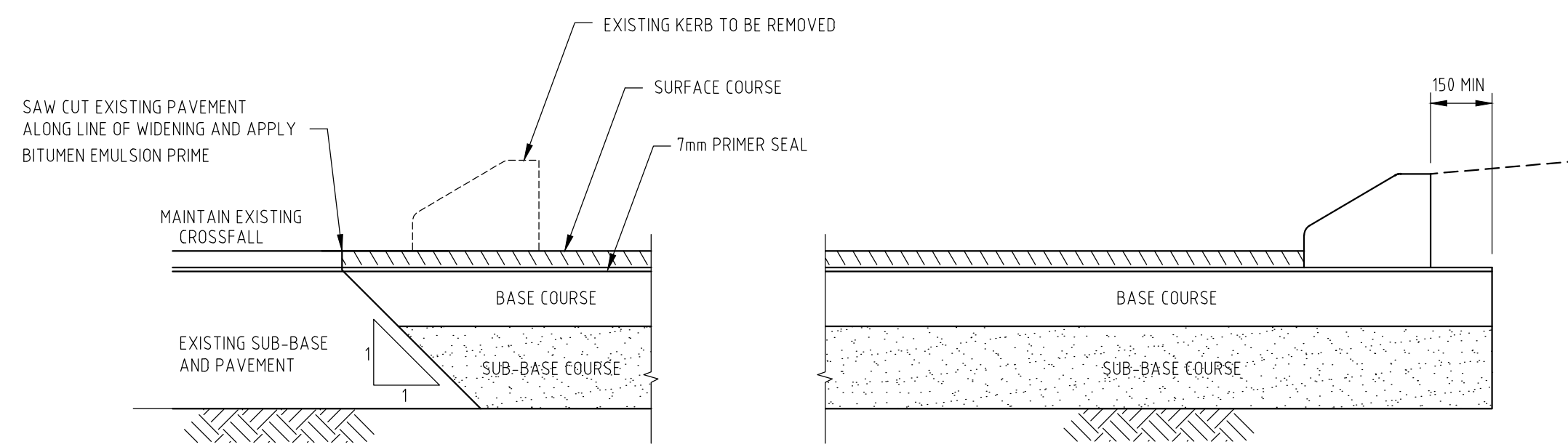
CAR PARKING PAVEMENT MARKING CONSTRUCTION DETAILS

1. ALL LINEMARKINGS TO BE "4 YEAR LIFE" MATERIAL
2. ALL LINEMARKINGS TO CONSTRUCTED TO AS/NZS 28901:2004



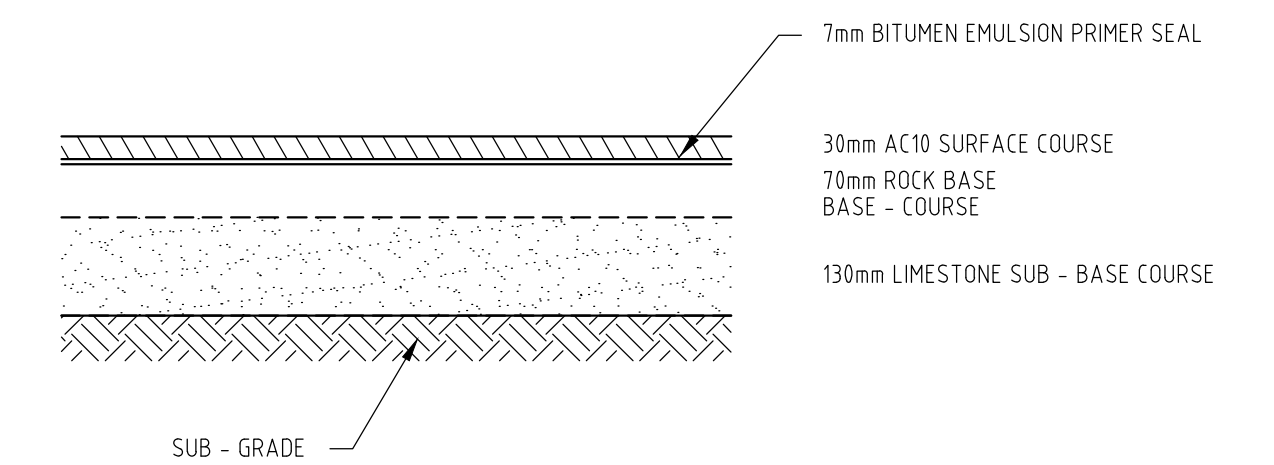
PAVEMENT DIRECTION ARROWS

SCALE: 1:50



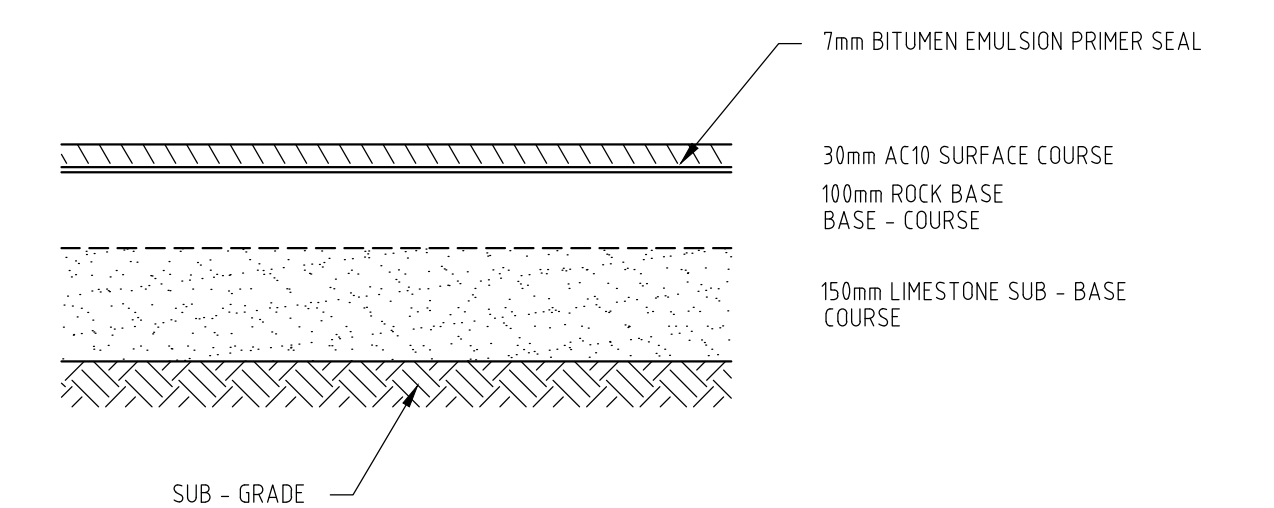
TYPICAL PAVEMENT WIDENING - KERB

NOT TO SCALE



PAVEMENT FOR CARPARK

NOT TO SCALE



PAVEMENT ON SAND SUB GRADE

NOT TO SCALE

PROJECT: **RAILWAY ST REALIGNMENT
NORTH COTTESLOE P.S.**

DATE	9-9-2016	REVISION	PRELIMINARY PLOT FOR APPROVAL
BY	MJV	BY	

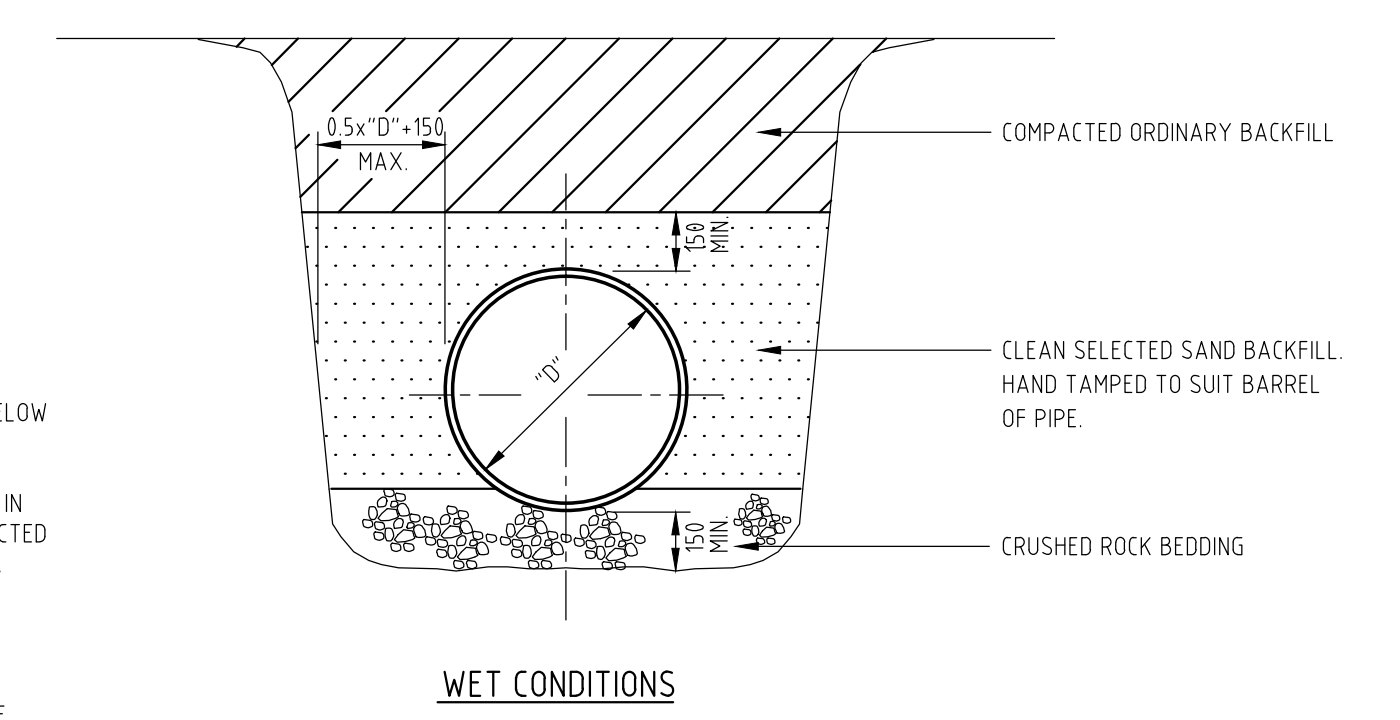
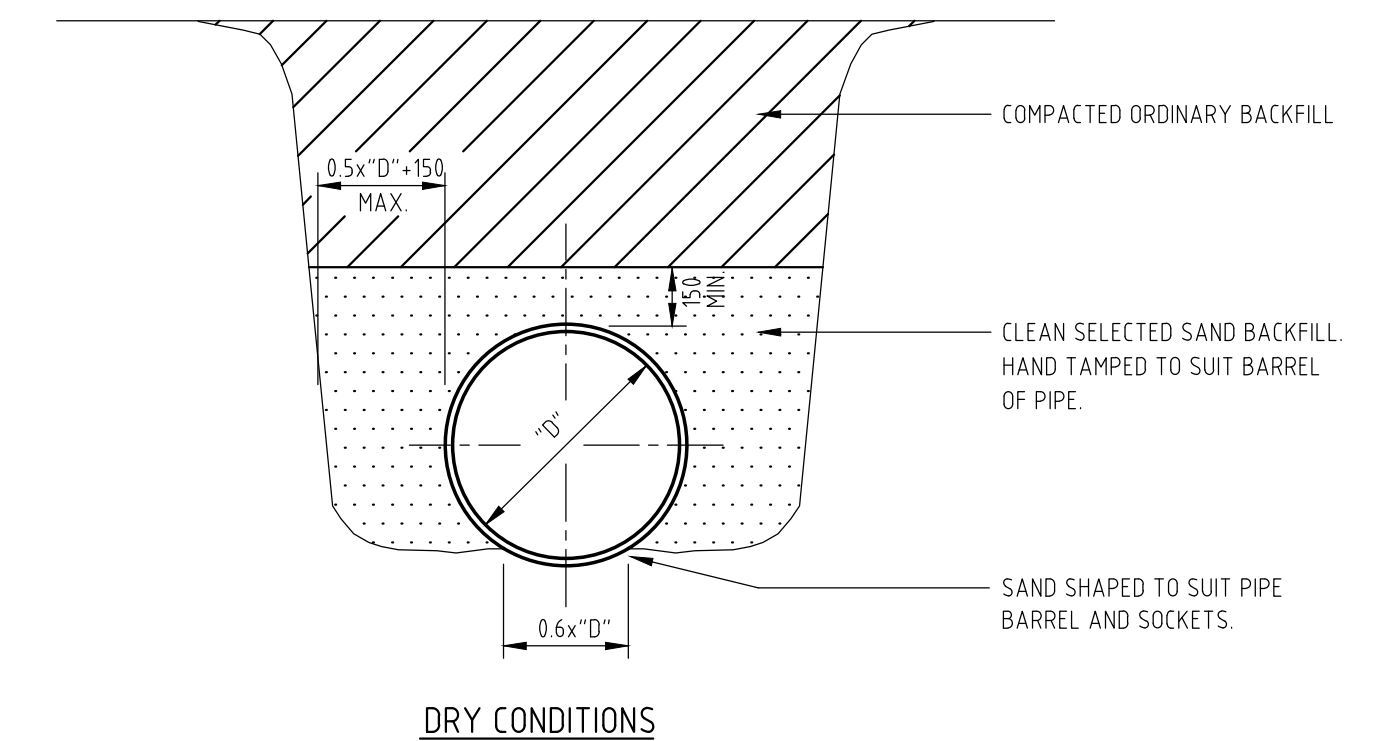
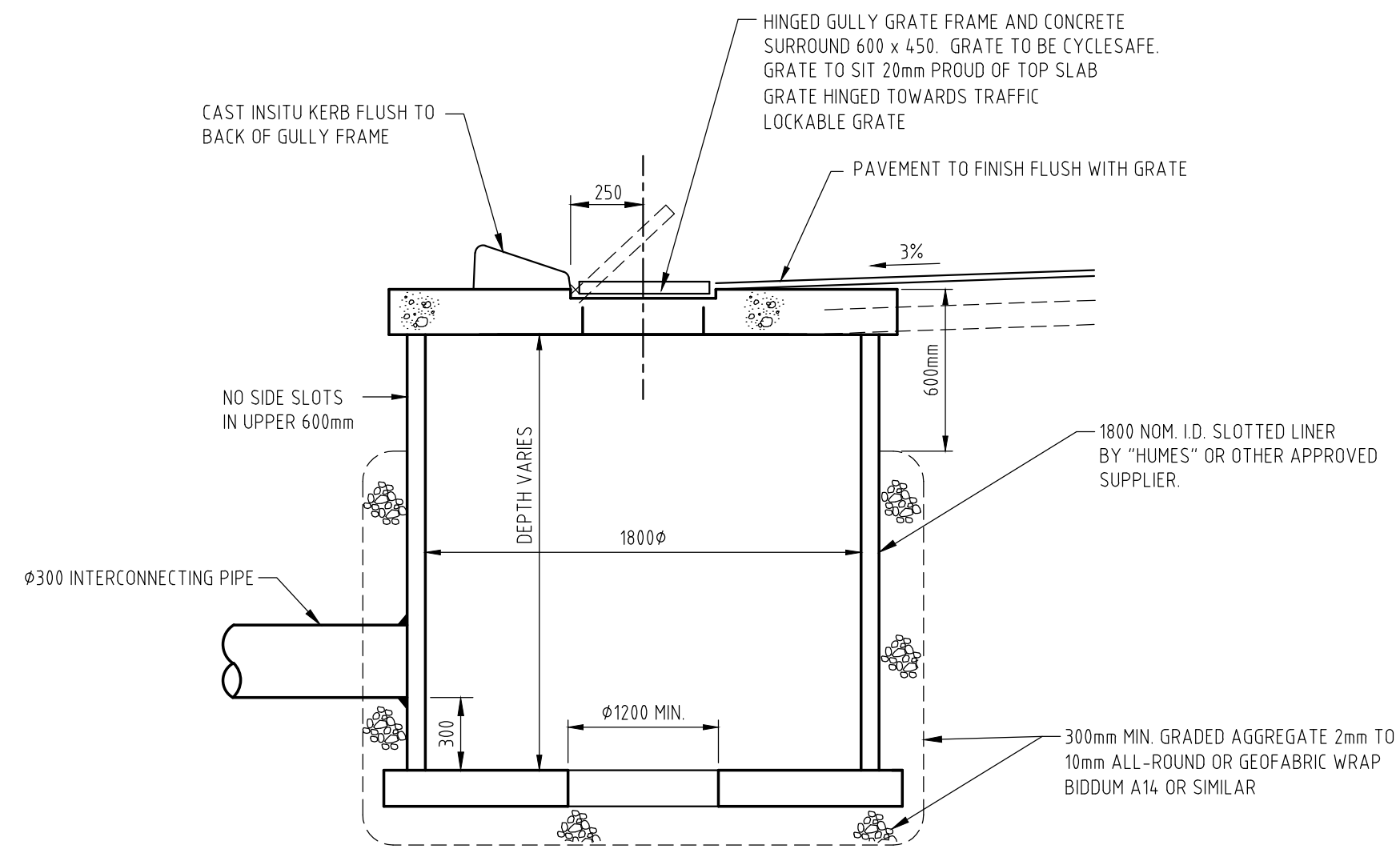
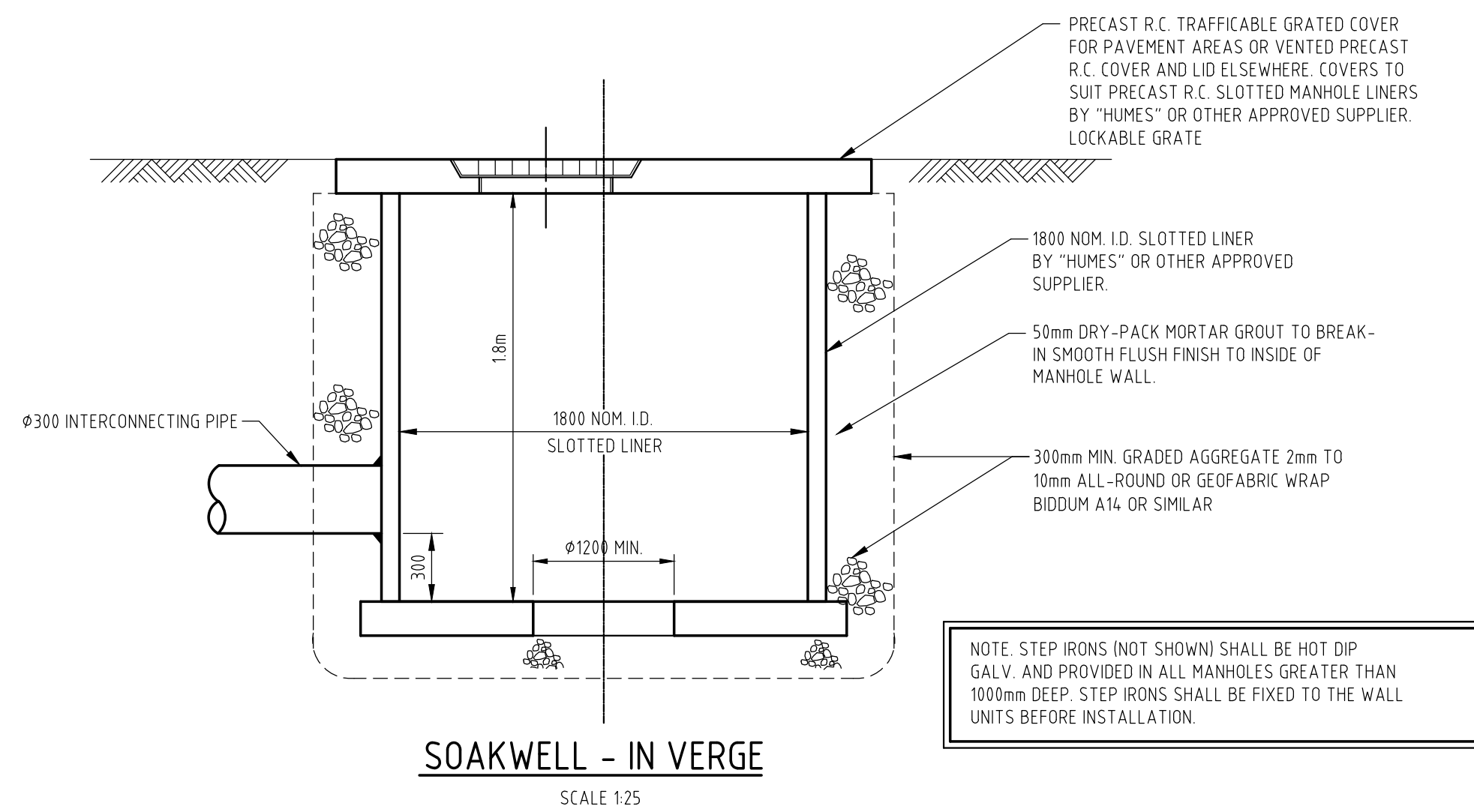
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CLIENT: **TOWN OF COTTESLOE**

DRAWING:	PAVEMENT STANDARD DETAILS
STATUS:	FOR APPROVAL

SCALE	AS SHOWN	DRAWING No.	REV No.	ORIGINAL DRAWING SIZE
DATE	SEPT 2016	16-6-79/600	A	A1
DESIGN	ELW	FILE NAME S:\ACTIVE PROJECTS\16-06-079\ACAD\16679-600.dwg		
DRAWN	MJV			
CHECK	APPD			



PIPE BEDDING NOTES

1. DRY CONDITIONS SHALL BE SAND SOIL WHERE THE MAXIMUM PREDICTED G.W.L. IS A MINIMUM 300mm BELOW PIPE INVERT.
2. WET CONDITIONS SHALL BE CONSIDERED AS BEING IN ROCK, CLAY OR SAND WHERE THE MAXIMUM PREDICTED G.W.L. IS HIGHER THAN 300mm BELOW PIPE INVERT.
3. SUB-SOIL DRAINAGE PIPES SHALL BE LAID WITH SLOTS DOWN.
4. WHERE PIPES ARE BEDDED ON CRUSHED ROCK, THE BEDDING CONDITION SHALL BE CARRIED PAST ALL MANHOLES, GULLIES & OTHER DRAINAGE STRUCTURES DOWNSTREAM.

PIPE BEDDING DETAILS
NOT TO SCALE

PROJECT: **RAILWAY ST REALIGNMENT
NORTH COTTESLOE P.S.**

NO.	DATE	REVISION	BY
A	9-9-2016	PRELIMINARY PLOT FOR APPROVAL	MJV

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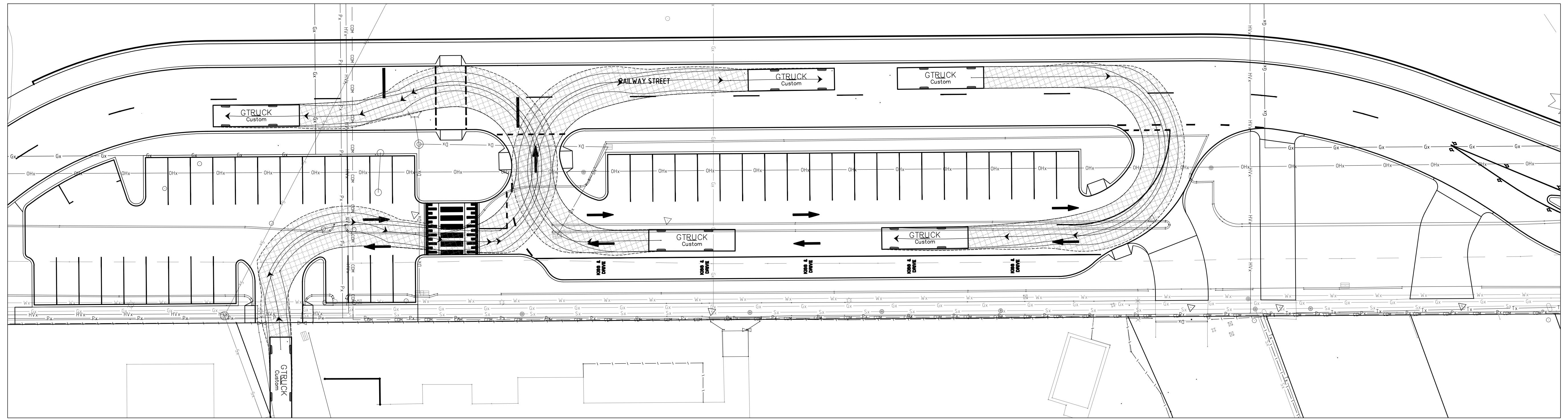
T/50M Pty Ltd ACN 610 071 548 an Inspec for the Consulting Engineering Unit. Trust trading as Porter Consulting Engineers ABN 78 438 396 385

CLIENT: **TOWN OF COTTESLOE**

DRAWING: **DRAINAGE DETAILS**

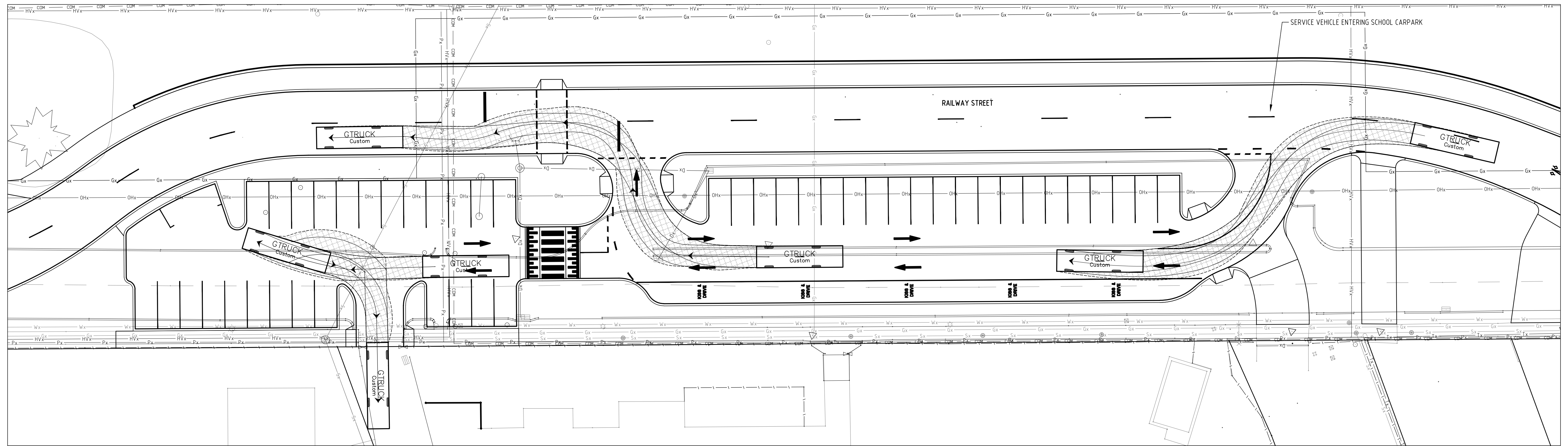
STATUS: **FOR APPROVAL**

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CHECK				



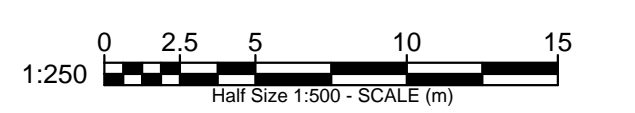
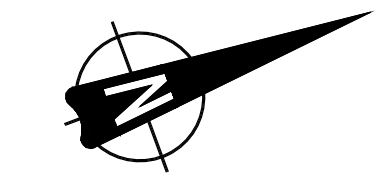
10m GARBAGE TRUCK RIGHT TURN IN, RIGHT TURN EXIT

1:250



10m GARBAGE TRUCK, LEFT TURN IN, LEFT TURN EXIT

1:250



PROJECT: **RAILWAY ST REALIGNMENT
NORTH COTTESLOE P.S.**

NO.	DATE	REVISION
B	9-9-2016	DESIGN VEHICLE CHANGED TO 10m GARBAGE TRUCK. NOT A BUS.
A	15-7-2016	PRELIMINARY PLOT FOR APPROVAL

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CLIENT: **TOWN OF COTTESLOE**

DRAWING: **10m GARBAGE TRUCK
TURNING MOVEMENTS**

STATUS: **FOR APPROVAL**

DATE	DESIGN	DRAWN	CHECK	SCALE	DRAWING No.	REV No.	ORIGINAL DRAWING SIZE
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