

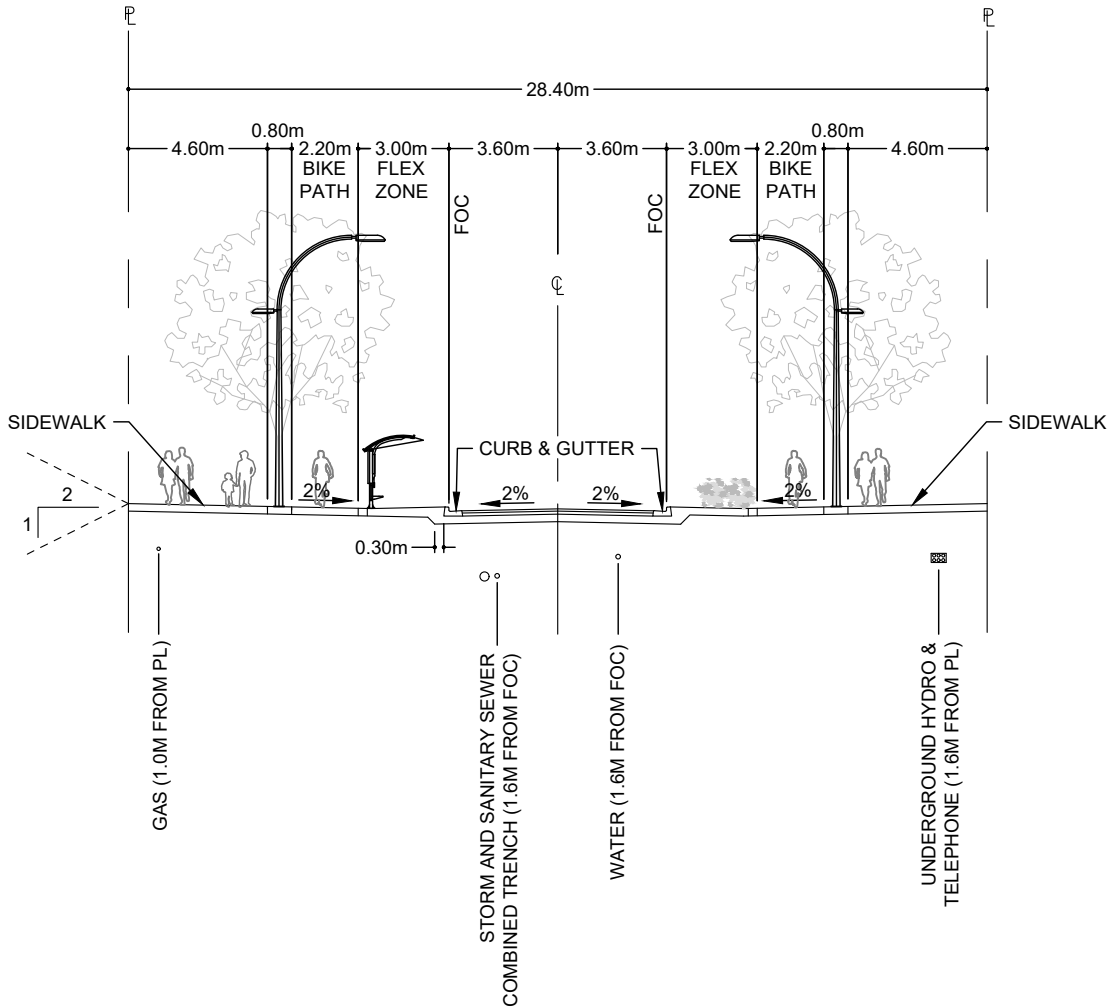
NOTES:

1. PAVED SURFACE - 125mm ASPHALT (COMPACTED THICKNESS)
2. BASE - 200mm AS PER SECTION 9
3. SUB-BASE - 250mm AS PER SECTION 9
4. BARRIER CURB AND GUTTER TO BE USED IN ACCORDANCE WITH STANDARD DRAWING CS-1.
5. CENTER MEDIANS TO BE LANDSCAPED WHERE POSSIBLE AND IN ACCORDANCE WITH STANDARD DRAWING CS-7.
6. DEPTHS OF SURFACING AND BASE GRAVELS ARE MINIMUM AND IN SOME CASES WILL HAVE TO BE INCREASED TO MEET MAXIMUM ALLOWABLE BENKELMAN BEAM DEFLECTION.
7. FLEX ZONE TO BE UTILIZED FOR: LANDSCAPING, STREET TREES, TRANSIT STOPS, BUS SHELTERS, BIKE PARKING, FURNITURE, UTILITY BOXES/CABINETS, HYDRANTS, POWER POLES, STREETLIGHTS, STORMWATER MANAGEMENT, OR WASTE RECEPTACLES.
8. BANDING/BUFFER ON EITHER SIDE OF THE BIKE PATH SHALL BE 0.3m STAMPED CONCRETE WITH TRANSVERSE SCORE LINES AT 0.3m INTERVALS. WHERE VERTICAL SEPARATION IS PREFERRED, MOUNTABLE MONOLITHIC CURB MAY BE UTILIZED. ALTERNATIVE TREATMENTS TO BE APPROVED BY THE CITY ENGINEER.
9. ROAD HAS CONTROLLED ACCESS. ACCESS UNDER APPROVAL FROM CITY ENGINEER.
10. CROSS-SECTIONS TO BE USED IN CONJUNCTION WITH CITY'S COMPLETE STREET DESIGN GUIDELINES.
11. STREETLIGHTS ARE DIAGRAPHIC. LIGHTING LEVELS TO BE IN ACCORDANCE WITH SECTION 10.
12. LANDSCAPING TO BE IN ACCORDANCE WITH SECTION 14.



STREET TYPES & CROSS SECTIONS
MOBILITY ARTERIAL

Scale:	NTS
Created:	AUG 2019
Rev Date:	MAY 2020
Dwg No:	MA-XS1



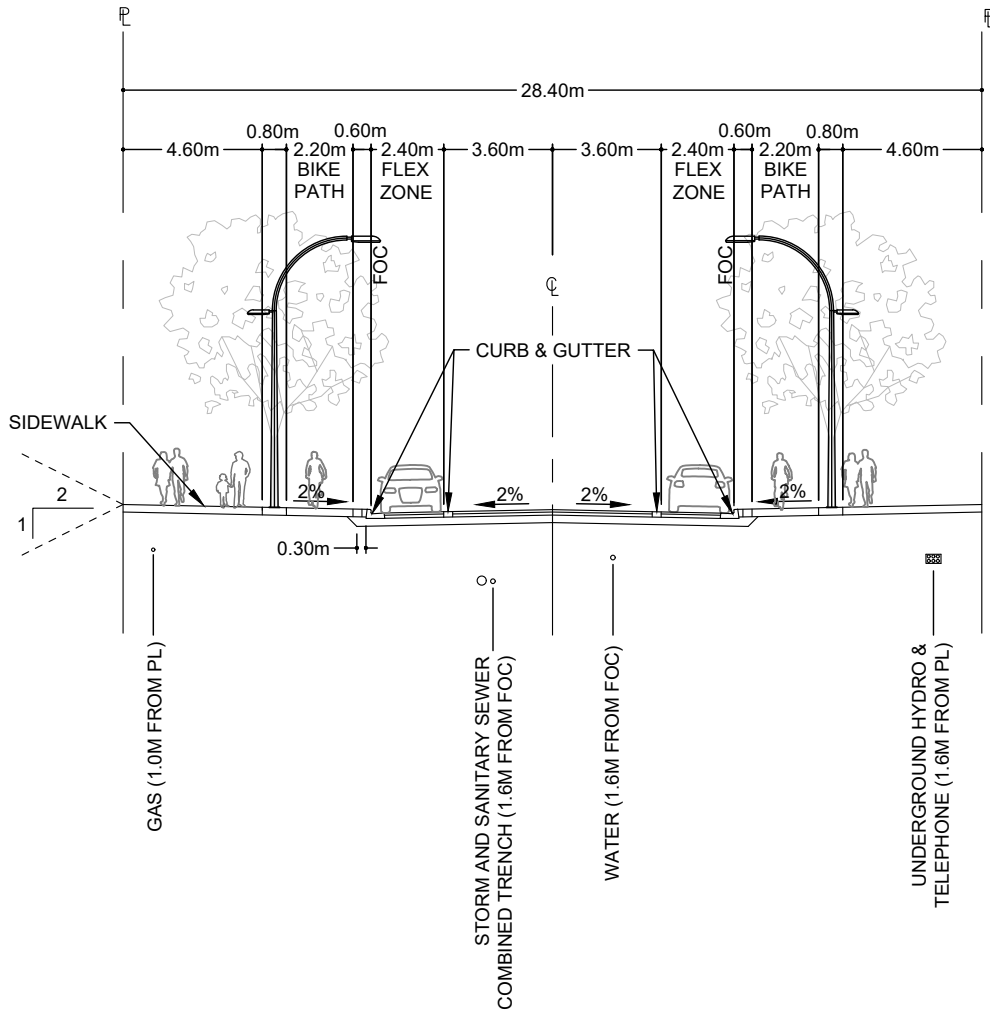
NOTES:

1. PAVED SURFACE - 100mm ASPHALT (COMPACTED THICKNESS)
2. BASE - 150mm AS PER SECTION 9
3. SUB-BASE - 250mm AS PER SECTION 9
4. BARRIER CURB AND GUTTER TO BE USED IN ACCORDANCE WITH STANDARD DRAWING CS-1.
5. CENTER MEDIANS TO BE LANDSCAPED WHERE POSSIBLE AND IN ACCORDANCE WITH STANDARD DRAWING CS-7.
6. DEPTHS OF SURFACING AND BASE GRAVELS ARE MINIMUM AND IN SOME CASES WILL HAVE TO BE INCREASED TO MEET MAXIMUM ALLOWABLE BENKELMAN BEAM DEFLECTION.
7. FLEX ZONE TO BE UTILIZED FOR: LANDSCAPING, STREET TREES, POCKET PARKING, TRANSIT STOPS, BUS SHELTERS, BIKE PARKING, FURNITURE, UTILITY BOXES/CABINETS, HYDRANTS, POWER POLES, STREETLIGHTS, STORMWATER MANAGEMENT, OR WASTE RECEPTACLES.
8. SIDEWALK TO INTEGRATE WITH BUILDING FRONTAGE.
9. BANDING/BUFFER ON EITHER SIDE OF THE BIKE PATH SHALL BE 0.3m STAMPED CONCRETE WITH TRANSVERSE SCORE LINES AT 0.3m INTERVALS. WHERE VERTICAL SEPARATION IS PREFERRED, MOUNTABLE MONOLITHIC CURB MAY BE UTILIZED. ALTERNATIVE TREATMENTS TO BE APPROVED BY THE CITY ENGINEER.
10. POCKET PARKING DOOR ZONES OR OTHER HARD SURFACES TO USE COLOURED AND/OR STAMPED CONCRETE.
11. ROAD HAS CONTROLLED ACCESS. ACCESS UNDER APPROVAL FROM CITY ENGINEER.
12. CROSS-SECTIONS TO BE USED IN CONJUNCTION WITH CITY'S COMPLETE STREET DESIGN GUIDELINES.
11. STREETLIGHTS ARE DIAGRAPHIC. LIGHTING LEVELS TO BE IN ACCORDANCE WITH SECTION 10.
12. STREET TREES TO BE DESIGNED USING SOIL VOLUMES OR SILVA CELLS AS PER SECTION 14.



**STREET TYPES & CROSS SECTIONS
MOBILITY COLLECTOR (BOULEVARDS)**

Scale:	NTS
Created:	AUG 2019
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Dwg No:	MC-XS1



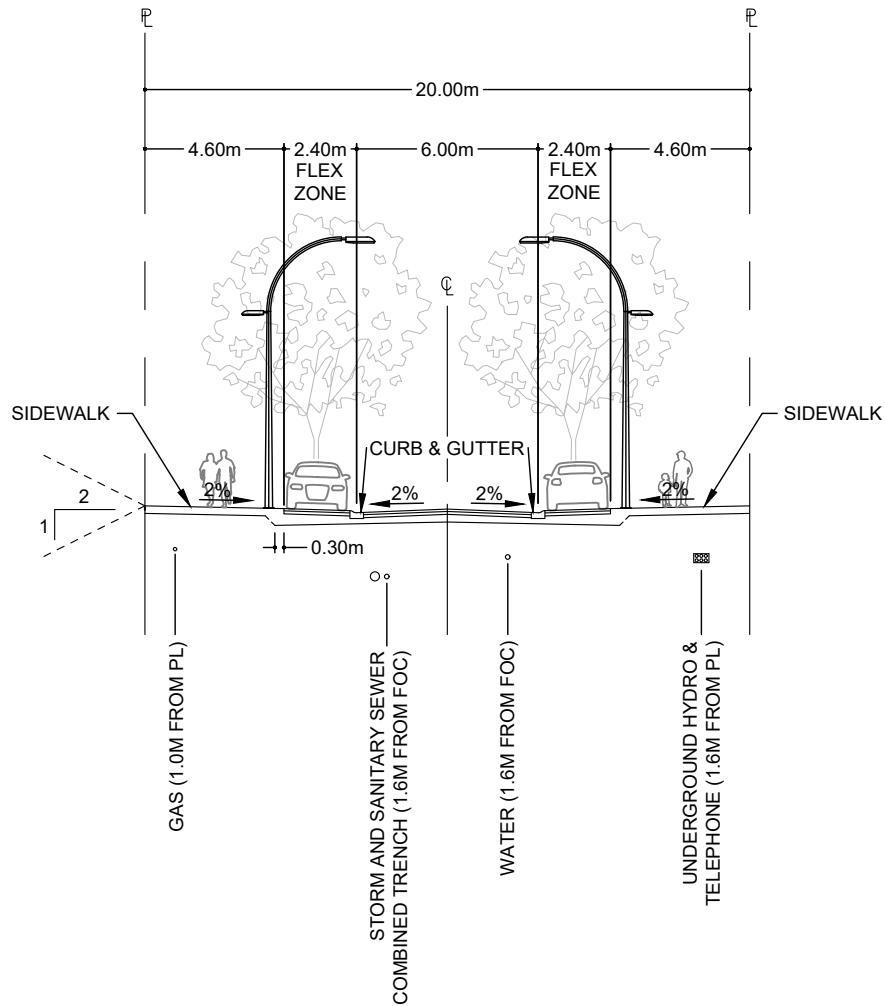
NOTES:

1. PAVED SURFACE - 100mm ASPHALT (COMPACTED THICKNESS)
2. BASE - 150mm AS PER SECTION 9
3. SUB-BASE - 250mm AS PER SECTION 9
4. BARRIER CURB AND GUTTER TO BE USED IN ACCORDANCE WITH STANDARD DRAWING CS-1.
5. CENTER MEDIANS TO BE LANDSCAPED WHERE POSSIBLE AND IN ACCORDANCE WITH STANDARD DRAWING C-7.
6. POCKET PARKING DELINEATION CURB TO BE OPTIONAL UNLESS PARKING HAS BEEN DESIGNED WITH A REVERSE CROSSFALL. ROLLOVER OR VALLEY CURB TO BE USED AS GRADE BREAK FOR DRAINAGE PURPOSES.
7. DEPTHS OF SURFACING AND BASE GRAVELS ARE MINIMUM AND IN SOME CASES WILL HAVE TO BE INCREASED TO MEET MAXIMUM ALLOWABLE BENKELMAN BEAM DEFLECTION.
8. FLEX ZONE TO BE UTILIZED FOR: LANDSCAPING, STREET TREES, POCKET PARKING, TRANSIT STOPS, BUS SHELTERS, BIKE PARKING, FURNITURE, UTILITY BOXES/CABINETS, HYDRANTS, POWER POLES, STREETLIGHTS, STORMWATER MANAGEMENT, OR WASTE RECEPTACLES.
9. SIDEWALK TO INTEGRATE WITH BUILDING FRONTAGE.
10. BANDING/BUFFER ON EITHER SIDE OF THE BIKE PATH SHALL BE 0.3m STAMPED CONCRETE WITH TRANSVERSE SCORE LINES AT 0.3m INTERVALS. WHERE VERTICAL SEPARATION IS PREFERRED, MOUNTABLE MONOLITHIC CURB MAY BE UTILIZED, ALTERNATIVE TREATMENTS TO BE APPROVED BY THE CITY ENGINEER.
11. POCKET PARKING DOOR ZONES OR OTHER HARD SURFACES TO USE COLOURED AND/OR STAMPED CONCRETE.
12. ROAD HAS CONTROLLED ACCESS. ACCESS UNDER APPROVAL FROM CITY ENGINEER.
13. CROSS-SECTIONS TO BE USED IN CONJUNCTION WITH CITY'S COMPLETE STREET DESIGN GUIDELINES.
14. STREETLIGHTS ARE DIAGRAPHIC. LIGHTING LEVELS TO BE IN ACCORDANCE WITH SECTION 10.
15. STREET TREES TO BE DESIGNED USING SOIL VOLUMES OR SILVA CELLS AS PER SECTION 14.



**STREET TYPES & CROSS SECTIONS
MOBILITY COLLECTOR (PARKING)**

Scale:	NTS
Created:	AUG 2019
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Dwg No:	MC-XS2



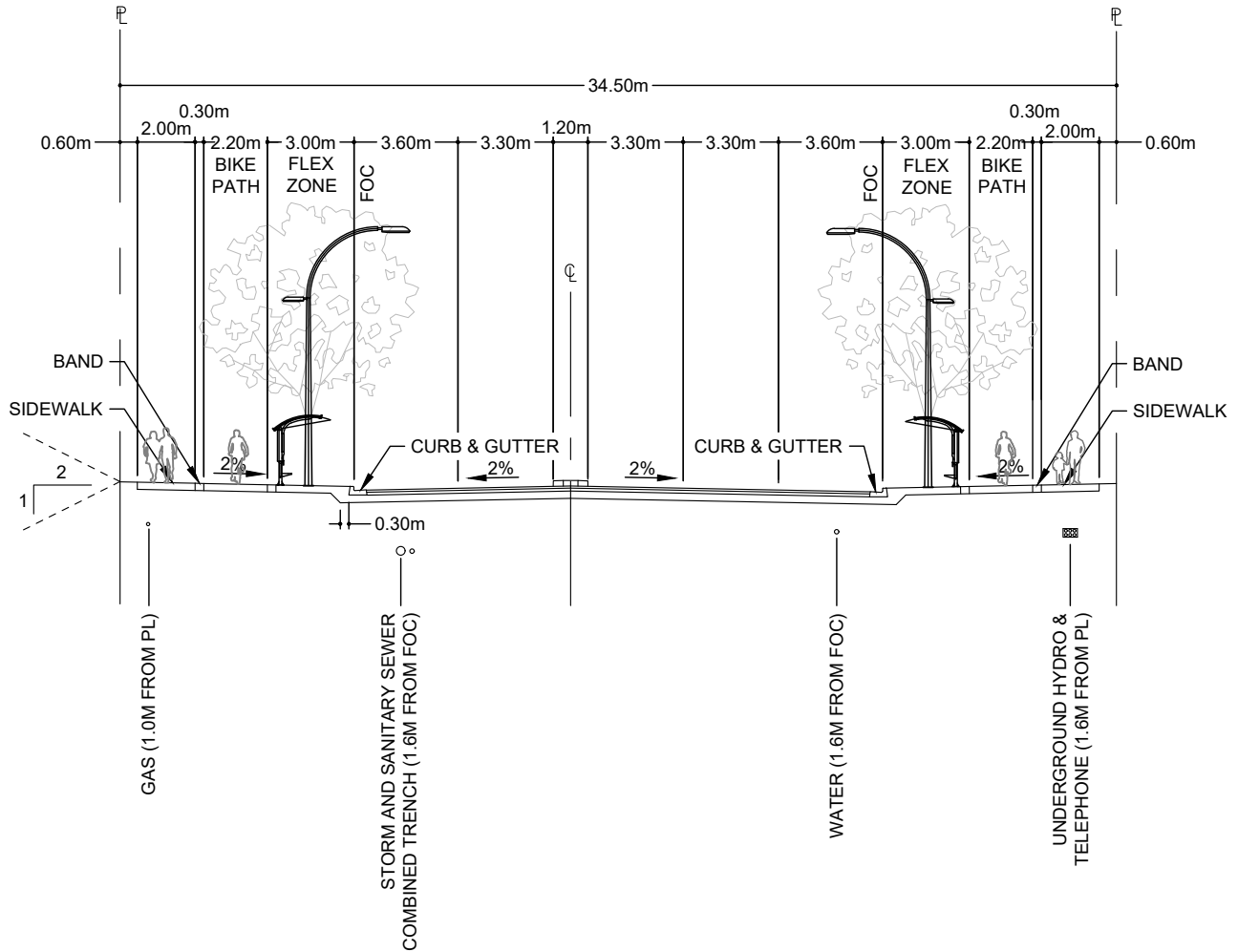
NOTES:

1. PAVED SURFACE - 75mm ASPHALT (COMPACTED THICKNESS)
2. BASE - 100mm AS PER SECTION 9
3. SUB-BASE - 250mm AS PER SECTION 9
4. ROLLOVER CURB AND GUTTER TO BE USED IN ACCORDANCE WITH STANDARD DRAWING CS-3.
5. POCKET PARKING DELINEATION CURB TO BE OPTIONAL UNLESS PARKING HAS BEEN DESIGNED WITH A REVERSE CROSSFALL. ROLLOVER OR VALLEY CURB TO BE USED AS GRADE BREAK FOR DRAINAGE PURPOSES.
6. DEPTHS OF SURFACING AND BASE GRAVELS ARE MINIMUM AND IN SOME CASES WILL HAVE TO BE INCREASED TO MEET MAXIMUM ALLOWABLE BENKELMAN BEAM DEFLECTION.
7. FLEX ZONE TO BE UTILIZED FOR: LANDSCAPING, STREET TREES, POCKET PARKING, TRANSIT STOPS, BUS SHELTERS, BIKE PARKING, FURNITURE, UTILITY BOXES/CABINETS, HYDRANTS, POWER POLES, STREETLIGHTS, STORMWATER MANAGEMENT, OR WASTE RECEPTACLES.
8. SIDEWALK TO INTEGRATE WITH BUILDING FRONTAGE.
9. BANDING, BUFFERS, POCKET PARKING DOOR ZONES, OR OTHER HARD SURFACES TO USE COLOURED AND/OR STAMPED CONCRETE.
10. CROSS-SECTIONS TO BE USED IN CONJUNCTION WITH CITY'S COMPLETE STREET DESIGN GUIDELINES.
11. STREETLIGHTS ARE DIAGRAPHIC. LIGHTING LEVELS TO BE IN ACCORDANCE WITH SECTION 10.
12. STREET TREES TO BE DESIGNED USING SOIL VOLUMES OR SILVA CELLS AS PER SECTION 14.



STREET TYPES & CROSS SECTIONS
MOBILITY LOCAL

Scale:	NTS
Created:	AUG 2019
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Dwg No:	ML-XS1



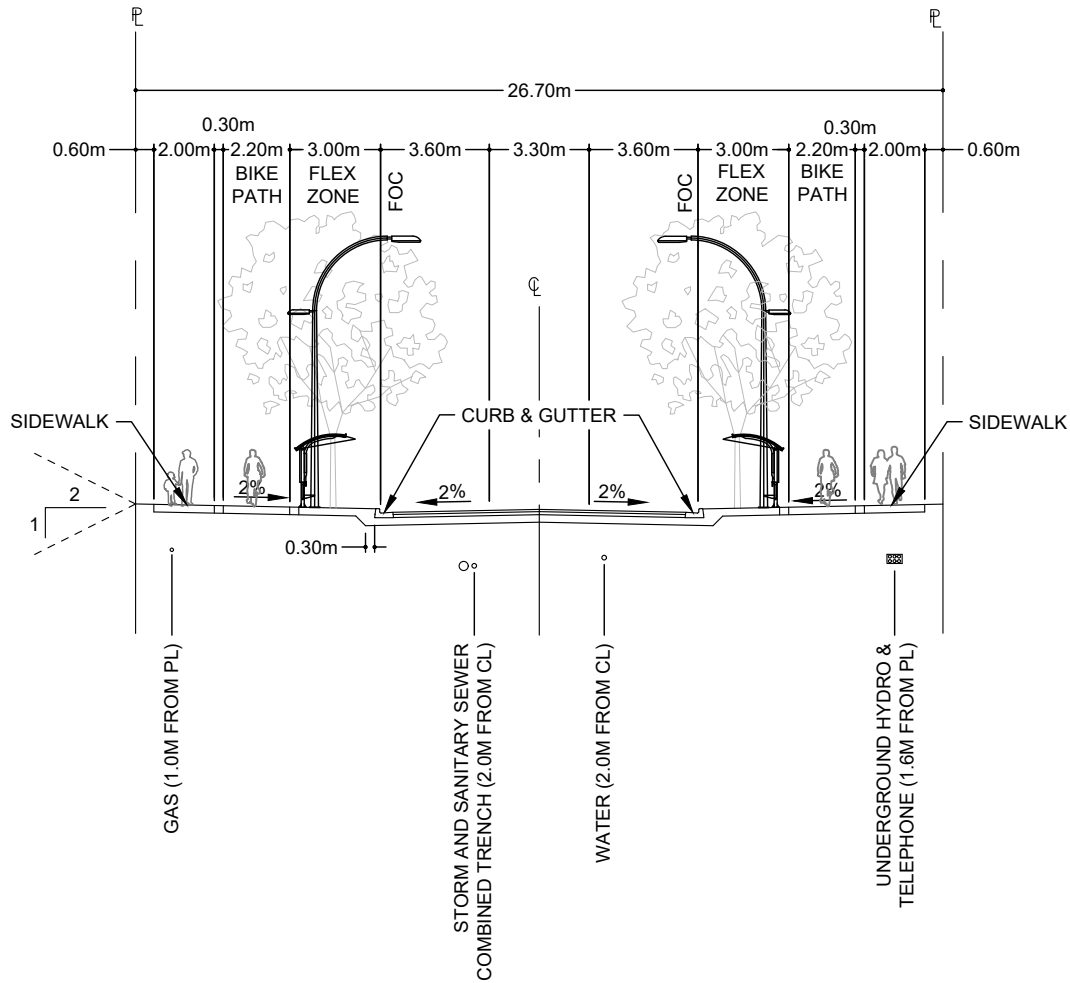
NOTES:

1. PAVED SURFACE - 125mm ASPHALT (COMPACTED THICKNESS)
2. BASE - 200mm AS PER SECTION 9
3. SUB-BASE - 250mm AS PER SECTION 9
4. BARRIER CURB AND GUTTER TO BE USED IN ACCORDANCE WITH STANDARD DRAWING CS-1.
5. CENTER MEDIANS TO BE LANDSCAPED WHERE POSSIBLE AND IN ACCORDANCE WITH STANDARD DRAWING CS-7.
6. DEPTHS OF SURFACING AND BASE GRAVELS ARE MINIMUM AND IN SOME CASES WILL HAVE TO BE INCREASED TO MEET MAXIMUM ALLOWABLE BENKELMAN BEAM DEFLECTION.
7. FLEX ZONE TO BE UTILIZED FOR: LANDSCAPING, STREET TREES, TRANSIT STOPS, BUS SHELTERS, BIKE PARKING, FURNITURE, UTILITY BOXES/CABINETS, HYDRANTS, POWER POLES, STREETLIGHTS, STORMWATER MANAGEMENT, OR WASTE RECEPTACLES.
8. BANDING/BUFFER ON EITHER SIDE OF THE BIKE PATH SHALL BE 0.3m STAMPED CONCRETE WITH TRANSVERSE SCORE LINES AT 0.3m INTERVALS. WHERE VERTICAL SEPARATION IS PREFERRED, MOUNTABLE MONOLITHIC CURB MAY BE UTILIZED. ALTERNATIVE TREATMENTS TO BE APPROVED BY THE CITY ENGINEER.
9. ROAD HAS CONTROLLED ACCESS. ACCESS UNDER APPROVAL FROM CITY ENGINEER.
10. CROSS-SECTIONS TO BE USED IN CONJUNCTION WITH CITY'S COMPLETE STREET DESIGN GUIDELINES.
11. STREETLIGHTS ARE DIAGRAPHIC. LIGHTING LEVELS TO BE IN ACCORDANCE WITH SECTION 10.
12. LANDSCAPING TO BE IN ACCORDANCE WITH SECTION 14.



STREET TYPES & CROSS SECTIONS
URBAN ARTERIAL

Scale:	NTS
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Dwg No:	UA-XS1



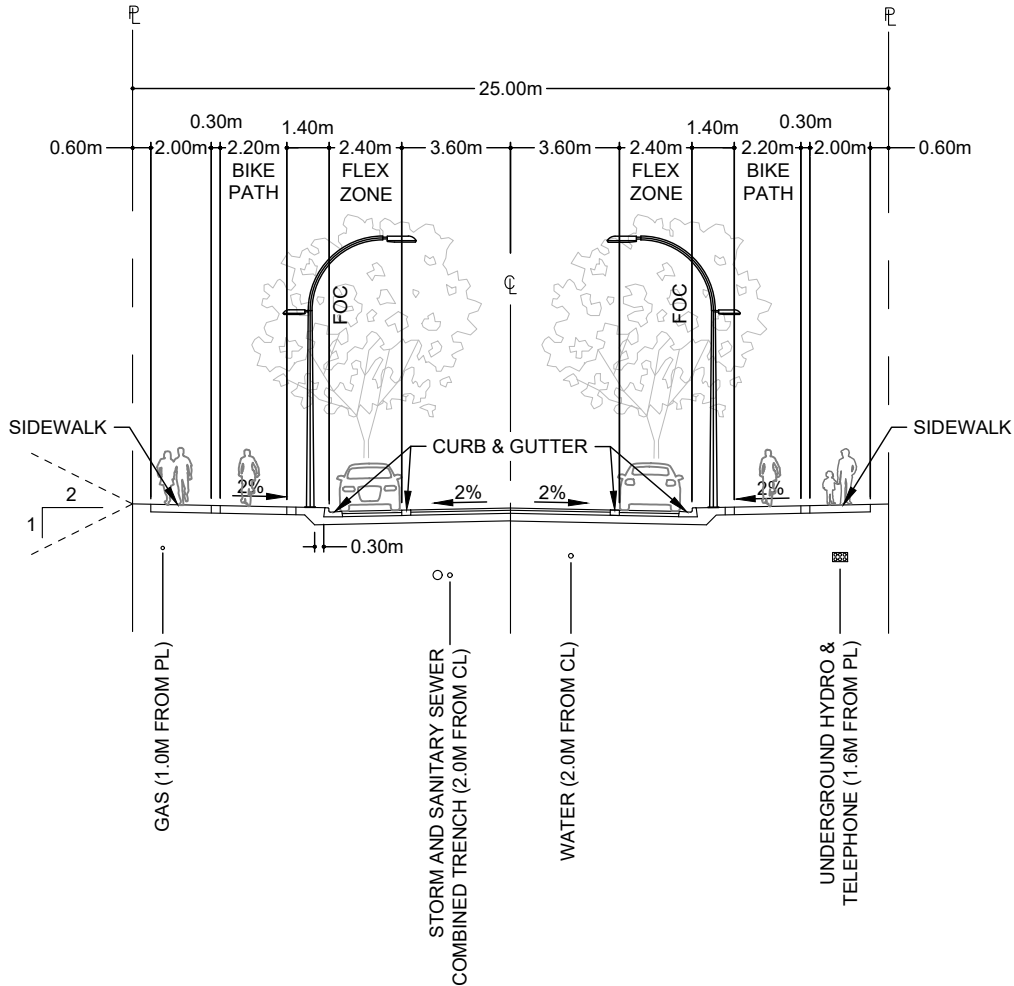
NOTES:

1. PAVED SURFACE - 100mm ASPHALT (COMPACTED THICKNESS)
2. BASE - 150mm AS PER SECTION 9
3. SUB-BASE - 250mm AS PER SECTION 9
4. BARRIER CURB AND GUTTER TO BE USED IN ACCORDANCE WITH STANDARD DRAWING CS-1.
5. CENTER MEDIANS TO BE LANDSCAPED WHERE POSSIBLE AND IN ACCORDANCE WITH STANDARD DRAWING CS-7.
6. DEPTHS OF SURFACING AND BASE GRAVELS ARE MINIMUM AND IN SOME CASES WILL HAVE TO BE INCREASED TO MEET MAXIMUM ALLOWABLE BENKELMAN BEAM DEFLECTION.
7. FLEX ZONE TO BE UTILIZED FOR: LANDSCAPING, STREET TREES, POCKET PARKING, TRANSIT STOPS, BUS SHELTERS, BIKE PARKING, FURNITURE, UTILITY BOXES/CABINETS, HYDRANTS, POWER POLES, STREETLIGHTS, STORMWATER MANAGEMENT, OR WASTE RECEPTACLES.
8. BANDING/BUFFER ON EITHER SIDE OF THE BIKE PATH SHALL BE 0.3m STAMPED CONCRETE WITH TRANSVERSE SCORE LINES AT 0.3m INTERVALS. WHERE VERTICAL SEPARATION IS PREFERRED, MOUNTABLE MONOLITHIC CURB MAY BE UTILIZED. ALTERNATIVE TREATMENTS TO BE APPROVED BY THE CITY ENGINEER.
9. POCKET PARKING DOOR ZONES, OR OTHER HARD SURFACES TO USE COLOURED AND/OR STAMPED CONCRETE.
10. ROAD HAS CONTROLLED ACCESS. ACCESS UNDER APPROVAL FROM CITY ENGINEER.
11. CROSS-SECTIONS TO BE USED IN CONJUNCTION WITH CITY'S COMPLETE STREET DESIGN GUIDELINES.
12. STREETLIGHTS ARE DIAGRAPHIC. LIGHTING LEVELS TO BE IN ACCORDANCE WITH SECTION 10.
13. LANDSCAPING TO BE IN ACCORDANCE WITH SECTION 14.



STREET TYPES & CROSS SECTIONS
URBAN COLLECTOR (TURN LANE)

Scale:	NTS
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Dwg No:	UC-XS1



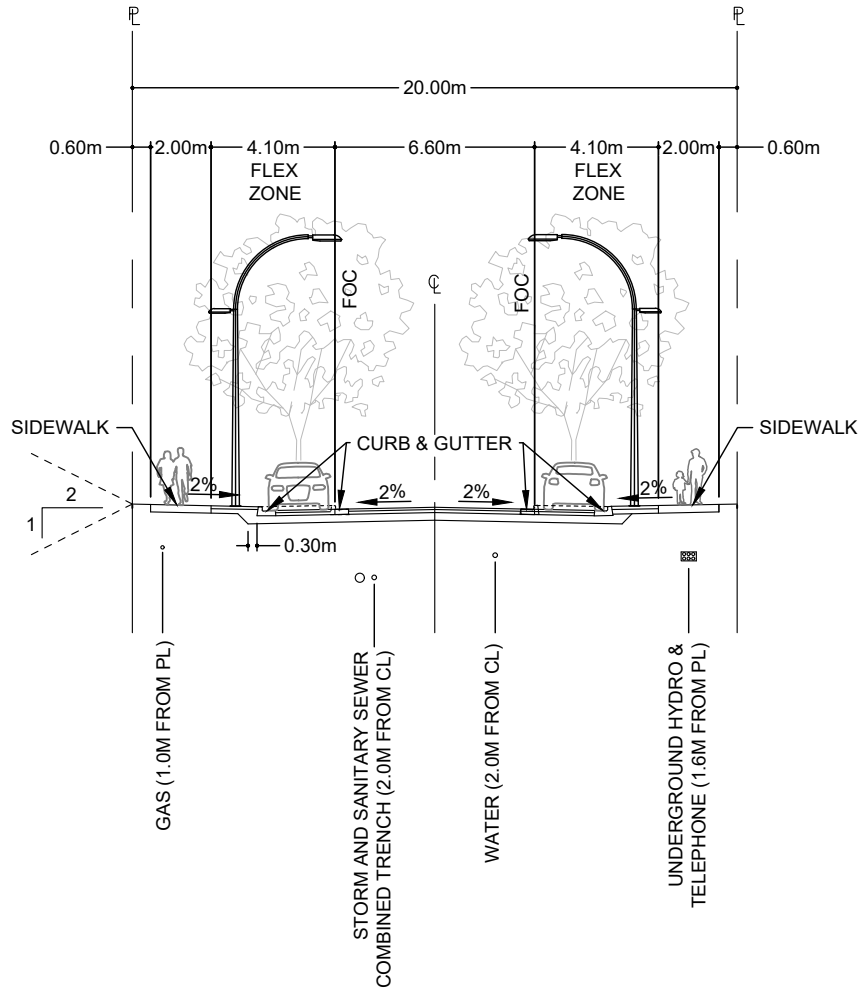
NOTES:

1. PAVED SURFACE - 100mm ASPHALT (COMPACTED THICKNESS)
2. BASE - 150mm AS PER SECTION 9
3. SUB-BASE - 250mm AS PER SECTION 9
4. BARRIER CURB AND GUTTER TO BE USED IN ACCORDANCE WITH STANDARD DRAWING CS-1.
5. POCKET PARKING DELINEATION CURB TO BE OPTIONAL UNLESS PARKING HAS BEEN DESIGNED WITH A REVERSE CROSSFALL. ROLLOVER OR VALLEY CURB TO BE USED AS GRADE BREAK FOR DRAINAGE PURPOSES.
6. DEPTHS OF SURFACING AND BASE GRAVELS ARE MINIMUM AND IN SOME CASES WILL HAVE TO BE INCREASED TO MEET MAXIMUM ALLOWABLE BENKELMAN BEAM DEFLECTION.
7. FLEX ZONE TO BE UTILIZED FOR: LANDSCAPING, STREET TREES, POCKET PARKING, TRANSIT STOPS, BUS SHELTERS, BIKE PARKING, FURNITURE, UTILITY BOXES/CABINETS, HYDRANTS, POWER POLES, STREETLIGHTS, STORMWATER MANAGEMENT, OR WASTE RECEPTACLES.
8. BANDING/BUFFER ON EITHER SIDE OF THE BIKE PATH SHALL BE 0.3m STAMPED CONCRETE WITH TRANSVERSE SCORE LINES AT 0.3m INTERVALS. WHERE VERTICAL SEPARATION IS PREFERRED, MOUNTABLE MONOLITHIC CURB MAY BE UTILIZED. ALTERNATIVE TREATMENTS TO BE APPROVED BY THE CITY ENGINEER.
9. POCKET PARKING DOOR ZONES OR OTHER HARD SURFACES TO USE COLOURED AND/OR STAMPED CONCRETE.
10. ROAD HAS CONTROLLED ACCESS. ACCESS UNDER APPROVAL FROM CITY ENGINEER.
11. CROSS-SECTIONS TO BE USED IN CONJUNCTION WITH CITY'S COMPLETE STREET DESIGN GUIDELINES.
12. STREETLIGHTS ARE DIAGRAPHIC. LIGHTING LEVELS TO BE IN ACCORDANCE WITH SECTION 10.
13. LANDSCAPING TO BE IN ACCORDANCE WITH SECTION 14.



**STREET TYPES & CROSS SECTIONS
URBAN COLLECTOR**

Scale:	NTS
Created:	AUG 2019
Rev Date:	MAY 2020
Dwg No:	UC-XS2



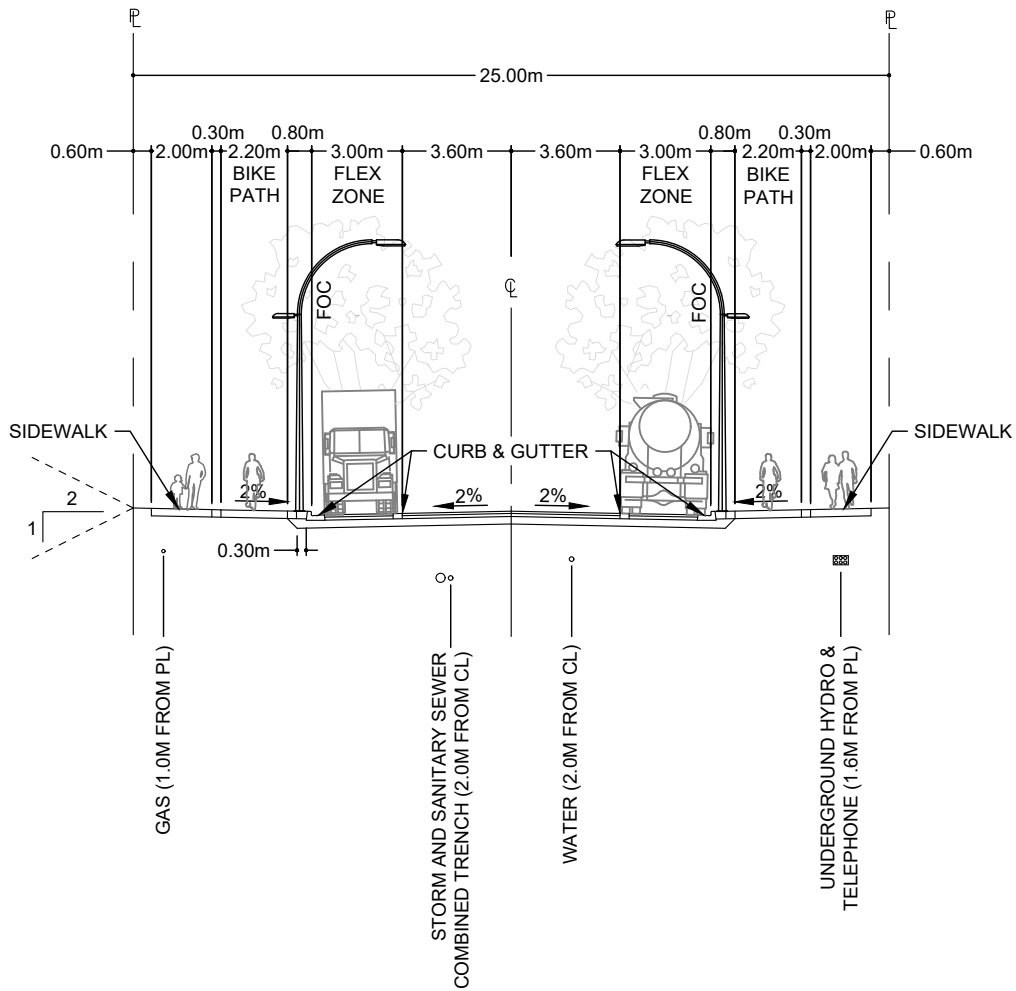
NOTES:

1. PAVED SURFACE - 75mm ASPHALT (COMPACTED THICKNESS)
2. BASE - 100mm AS PER SECTION 9
3. SUB-BASE - 250mm AS PER SECTION 9
4. BARRIER CURB AND GUTTER IN ACCORDANCE WITH STANDARD DRAWING CS-1.
5. POCKET PARKING DELINEATION CURB TO BE OPTIONAL UNLESS PARKING HAS BEEN DESIGNED WITH A REVERSE CROSSFALL. ROLLOVER OR VALLEY CURB TO BE USED AS GRADE BREAK FOR DRAINAGE PURPOSES.
6. DEPTHS OF SURFACING AND BASE GRAVELS ARE MINIMUM AND IN SOME CASES WILL HAVE TO BE INCREASED TO MEET MAXIMUM ALLOWABLE BENKELMAN BEAM DEFLECTION.
7. FLEX ZONE TO BE UTILIZED FOR: LANDSCAPING, STREET TREES, POCKET PARKING, TRANSIT STOPS, BUS SHELTERS, BIKE PARKING, FURNITURE, UTILITY BOXES/CABINETS, HYDRANTS, POWER POLES, STREETLIGHTS, STORMWATER MANAGEMENT, OR WASTE RECEPTACLES.
8. BANDING, BUFFERS, POCKET PARKING DOOR ZONES, OR OTHER HARD SURFACES TO USE COLOURED AND/OR STAMPED CONCRETE.
9. CROSS-SECTIONS TO BE USED IN CONJUNCTION WITH CITY'S COMPLETE STREET DESIGN GUIDELINES.
10. STREETLIGHTS ARE DIAGRAPHIC. LIGHTING LEVELS TO BE IN ACCORDANCE WITH SECTION 10.
11. LANDSCAPING TO BE IN ACCORDANCE WITH SECTION 14.



STREET TYPES & CROSS SECTIONS
URBAN LOCAL

Scale:	NTS
Created:	AUG 2019
Rev Date:	MAY 2020
Dwg No:	UL-XS1



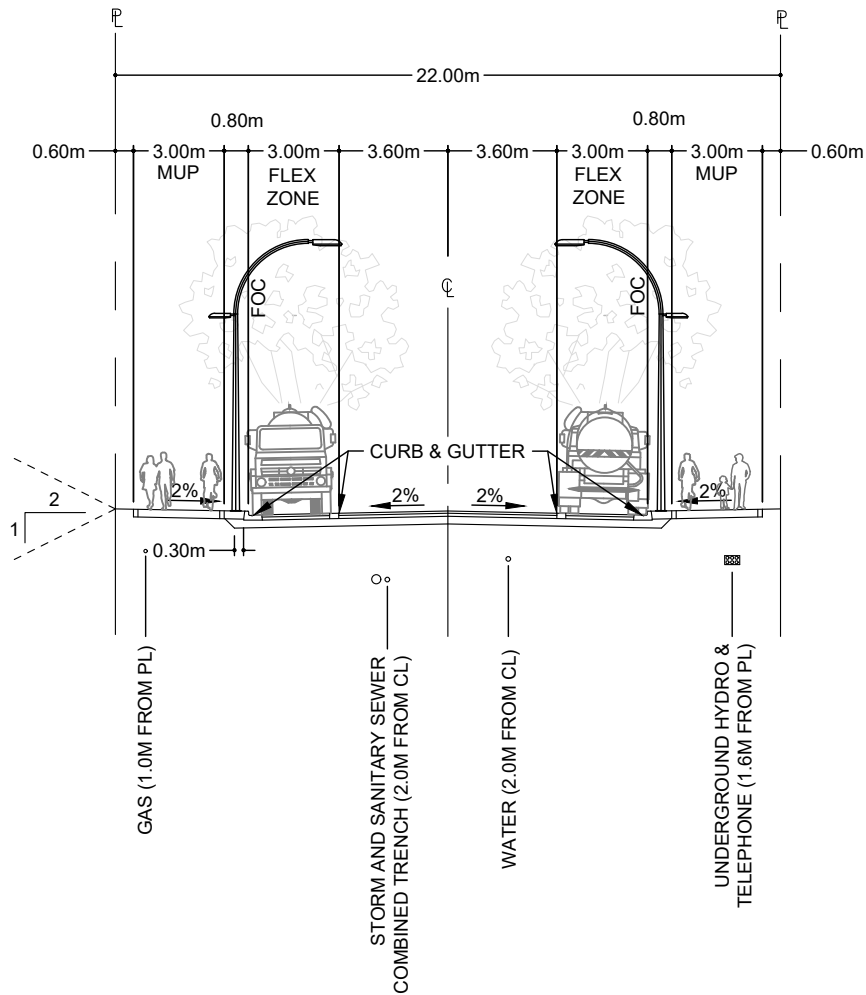
NOTES:

1. PAVED SURFACE - 125mm ASPHALT (COMPACTED THICKNESS)
2. BASE - 200mm AS PER SECTION 9
3. SUB-BASE - 250mm AS PER SECTION 9
4. BARRIER CURB AND GUTTER TO BE USED IN ACCORDANCE WITH STANDARD DRAWING CS-1.
5. POCKET PARKING DELINEATION CURB TO BE OPTIONAL UNLESS PARKING HAS BEEN DESIGNED WITH A REVERSE CROSSFALL. ROLLOVER OR VALLEY CURB TO BE USED AS GRADE BREAK FOR DRAINAGE PURPOSES.
6. DEPTHS OF SURFACING AND BASE GRAVELS ARE MINIMUM AND IN SOME CASES WILL HAVE TO BE INCREASED TO MEET MAXIMUM ALLOWABLE BENKELMAN BEAM DEFLECTION.
7. FLEX ZONE TO BE UTILIZED FOR: LANDSCAPING, STREET TREES, POCKET PARKING, TRANSIT STOPS, BUS SHELTERS, BIKE PARKING, FURNITURE, UTILITY BOXES/CABINETS, HYDRANTS, POWER POLES, STREETLIGHTS, STORMWATER MANAGEMENT, OR WASTE RECEPTACLES.
8. BANDING/BUFFER ON EITHER SIDE OF THE BIKE PATH SHALL BE 0.3m STAMPED CONCRETE WITH TRANSVERSE SCORE LINES AT 0.3m INTERVALS. WHERE VERTICAL SEPARATION IS PREFERRED, MOUNTABLE MONOLITHIC CURB MAY BE UTILIZED. ALTERNATIVE TREATMENTS TO BE APPROVED BY THE CITY ENGINEER.
9. POCKET PARKING DOOR ZONES, OR OTHER HARD SURFACES TO USE COLOURED AND/OR STAMPED CONCRETE.
10. ROAD HAS CONTROLLED ACCESS. ACCESS UNDER APPROVAL FROM CITY ENGINEER.
11. CROSS-SECTIONS TO BE USED IN CONJUNCTION WITH CITY'S COMPLETE STREET DESIGN GUIDELINES.
12. STREETLIGHTS ARE DIAGRAPHIC. LIGHTING LEVELS TO BE IN ACCORDANCE WITH SECTION 10.
13. LANDSCAPING TO BE IN ACCORDANCE WITH SECTION 14.



STREET TYPES & CROSS SECTIONS
INDUSTRIAL COLLECTOR

Scale:	NTS
Created:	AUG 2019
Rev Date:	JULY 2022
Dwg No:	IC-XS1



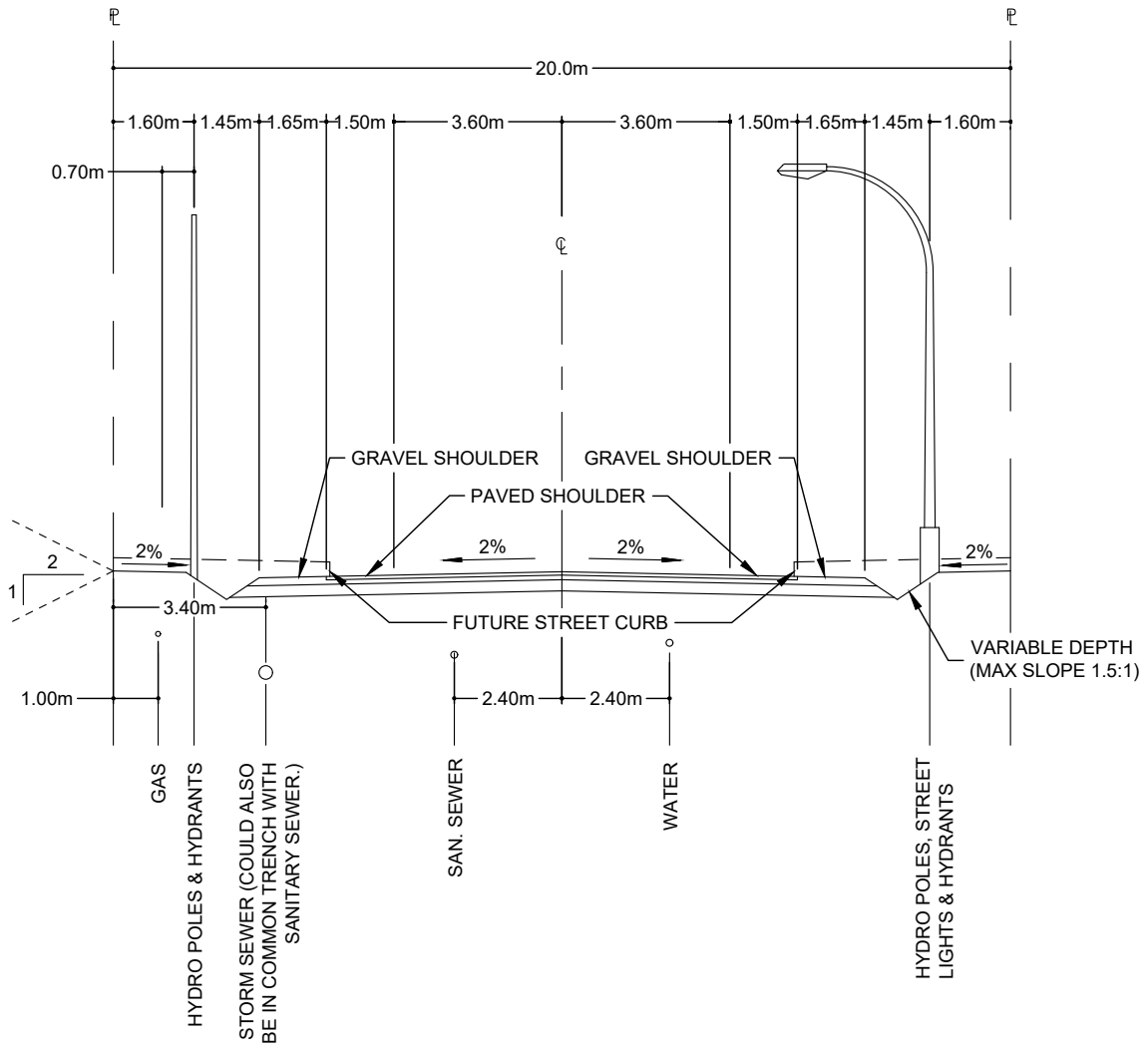
NOTES:

1. PAVED SURFACE - 125mm ASPHALT (COMPACTED THICKNESS)
2. BASE - 200mm AS PER SECTION 9
3. SUB-BASE - 250mm AS PER SECTION 9
4. BARRIER CURB AND GUTTER TO BE USED IN ACCORDANCE WITH STANDARD DRAWING CS-1.
5. FLEX ZONE TO BE UTILIZED FOR: LANDSCAPING, STREET TREES, POCKET PARKING, TRANSIT STOPS, BUS SHELTERS, BIKE PARKING, FURNITURE, UTILITY BOXES/CABINETS, HYDRANTS, POWER POLES, STREETLIGHTS, STORMWATER MANAGEMENT, OR WASTE RECEPTACLES.
6. DEPTHS OF SURFACING AND BASE GRAVELS ARE MINIMUM AND IN SOME CASES WILL HAVE TO BE INCREASED TO MEET MAXIMUM ALLOWABLE BENKELMAN BEAM DEFLECTION.
7. FLEX ZONE TO BE UTILIZED FOR: LANDSCAPING, STREET TREES, POCKET PARKING, TRANSIT STOPS, BUS SHELTERS, BIKE PARKING, FURNITURE, UTILITY BOXES/CABINETS, HYDRANTS, POWER POLES, STREETLIGHTS, STORMWATER MANAGEMENT, OR WASTE RECEPTACLES.
8. BANDING, BUFFERS, POCKET PARKING DOOR ZONES, OR OTHER HARD SURFACES TO USE COLOURED AND/OR STAMPED CONCRETE.
9. CROSS-SECTIONS TO BE USED IN CONJUNCTION WITH CITY'S COMPLETE STREET DESIGN GUIDELINES.
10. STREETLIGHTS ARE DIAGNOSTIC. LIGHTING LEVELS TO BE IN ACCORDANCE WITH SECTION 10.
11. LANDSCAPING TO BE IN ACCORDANCE WITH SECTION 14.



**STREET TYPES & CROSS SECTIONS
INDUSTRIAL LOCAL**

Scale:	NTS
Created:	AUG 2019
Rev Date:	JULY 2022
Dwg No:	IL-XS1



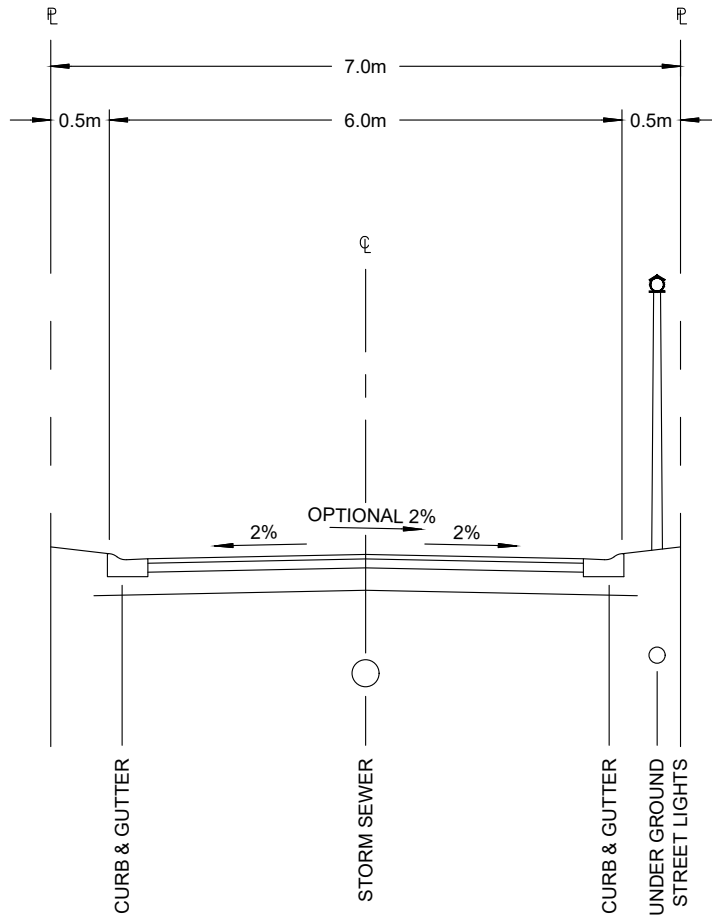
NOTES:

1. PAVED SURFACE - 75mm ASPHALT (COMPACTED THICKNESS)
2. BASE - 100mm AS PER SECTION 9
3. SUB-BASE - 250mm AS PER SECTION 9
4. SHOULDER - CRUSHED GRAVEL AS PER SECTION 9
5. DEPTHS OF SURFACING AND BASE GRAVELS ARE MINIMUM AND IN SOME CASES WILL HAVE TO BE INCREASED TO MEET MAXIMUM ALLOWABLE BENKELMAN BEAM DEFLECTION.
6. STREETLIGHTS ARE DIAGRAPHIC. LIGHTING LEVELS TO BE IN ACCORDANCE WITH SECTION 10.
7. ACTIVE TRANSPORTATION REQUIREMENTS TO BE DETERMINED BY THE CITY TRANSPORTATION ENGINEER.



STREET TYPES & CROSS SECTIONS
RURAL LOCAL

Scale:	NTS
Created:	MAY 2013
Rev Date:	MAY 2020
Dwg No:	RL-XS1



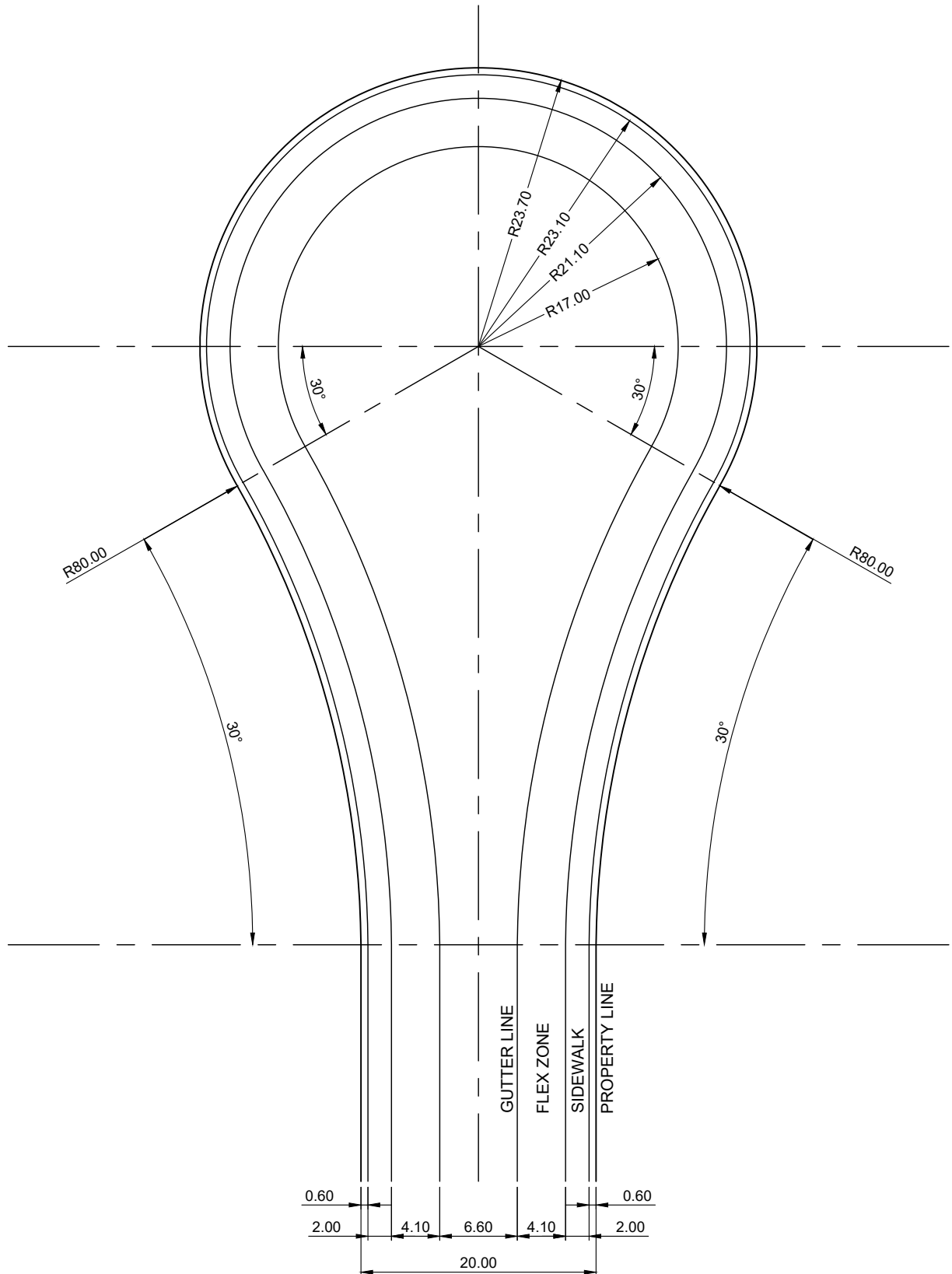
NOTES:

1. PAVED SURFACE - 75mm ASPHALT (COMPACTED THICKNESS)
2. BASE - 100mm AS PER SECTION 9
3. SUB-BASE - 250mm AS PER SECTION 9
4. BARRIER CURB AND GUTTER TO BE USED IN ACCORDANCE WITH STANDARD DRAWING CS-1.
5. DEPTHS OF SURFACING AND BASE GRAVELS ARE MINIMUM AND IN SOME CASES WILL HAVE TO BE INCREASED TO MEET MAXIMUM ALLOWABLE BENKELMAN BEAM DEFLECTION.
6. STREETLIGHTS ARE DIAGRAPHIC. LIGHTING LEVELS TO BE IN ACCORDANCE WITH SECTION 10.



STREET TYPES & CROSS SECTIONS
LANE

Scale:	NTS
Created:	NOV 2009
Rev Date:	MAY 2020
Dwg No:	L-XS1



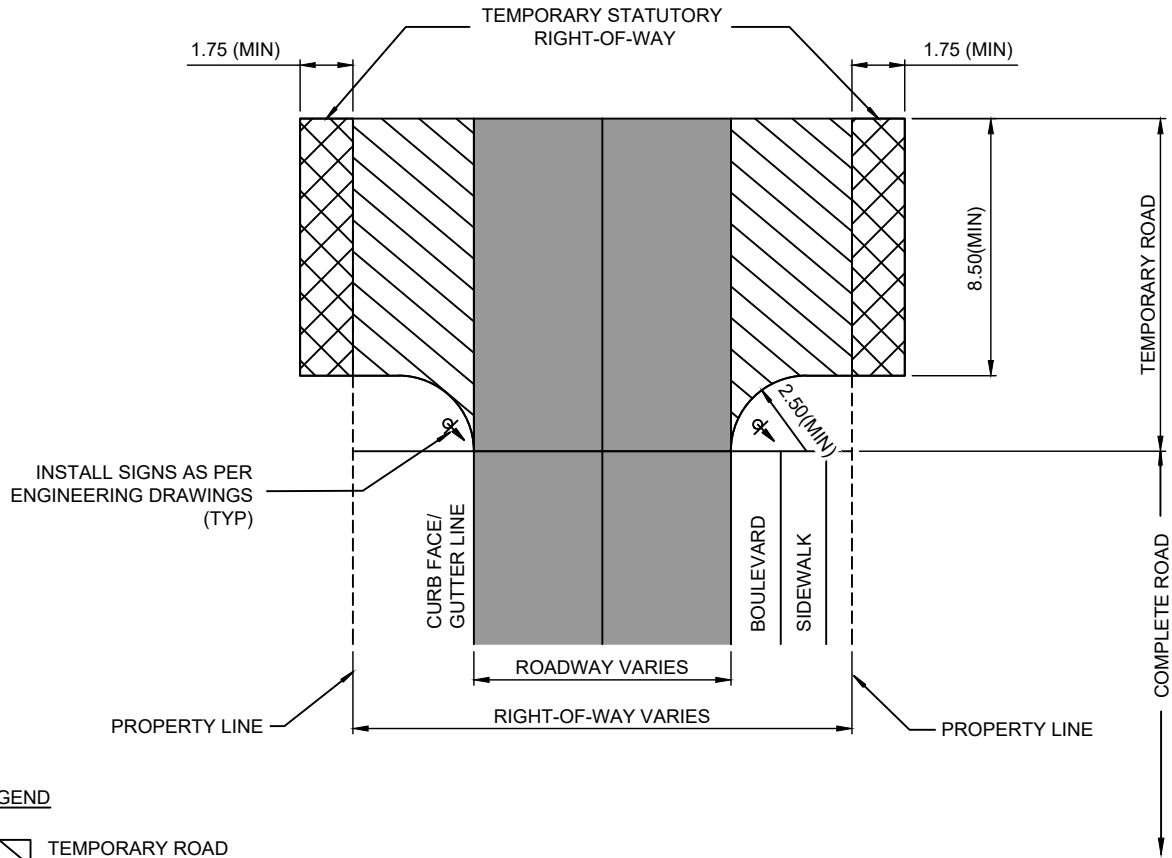
NOTE:

1. ALL DIMENSIONS SHOWN ARE MINIMUM.
2. ALL DIMENSIONS IN METERS UNLESS OTHERWISE SHOWN.






**STREET TYPES & CROSS SECTIONS
CUL-DE-SAC**

Scale:	NTS
Created:	MAY 2020
Rev Date:	MAY 2020
Dwg No:	R-CDS



LEGEND

-  TEMPORARY ROAD WITH FULL DEPTH ROAD STRUCTURE
-  COMPLETE ROAD
-  TEMPORARY STATUTORY RIGHT-OF-WAY OR TEMPORARY ROAD DEDICATION, WILL BE RELEASED WHEN ROAD IS CONNECTED.

TEMPORARY TURNABOUT

NOTES:

1. STANDARD TEMPORARY TURNAROUND SHALL BE USED FOR LOCAL LOW VOLUME ROADS AND A TEMPORARY STATUTORY RIGHT-OF-WAY SHALL BE APPLIED UNTIL THE ROAD IS CONNECTED. A TEMPORARY ROAD DEDICATION SHALL BE APPLIED UNTIL THE ROAD IS CONNECTED WHEN SUITABLE.
2. PARKING IS NOT PERMITTED WITHIN THE TEMPORARY TURNAROUND, REGULATORY SIGNAGE SHALL BE INSTALLED.
3. ALL DIMENSIONS IN METERS UNLESS OTHERWISE SHOWN.
4. IF PROPERTY DOES NOT HAVE SUFFICIENT FIRE TRUCK ACCESS ON-SITE, THE DESIGN WILL REQUIRE FIRE DEPARTMENT APPROVAL.

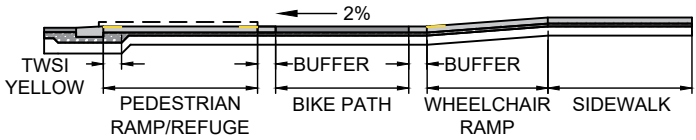


**STREET TYPES & CROSS SECTIONS
TEMPORARY TURNABOUT**

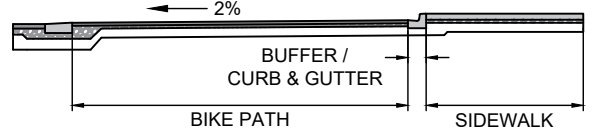
Scale:	NTS
Created:	OCT 2012
Rev Date:	MAY 2020
Dwg No:	R-TT

INTERSECTION & INFRASTRUCTURE PLANNING STANDARDS & PRODUCTS SIMOESS EDITION NO. 14, JULY 2022/2022-06-20 REDLINE INCORPORATION - WORKING/2022 DRAWING SECTIONS/SECTION 8 DWGS/R-PI

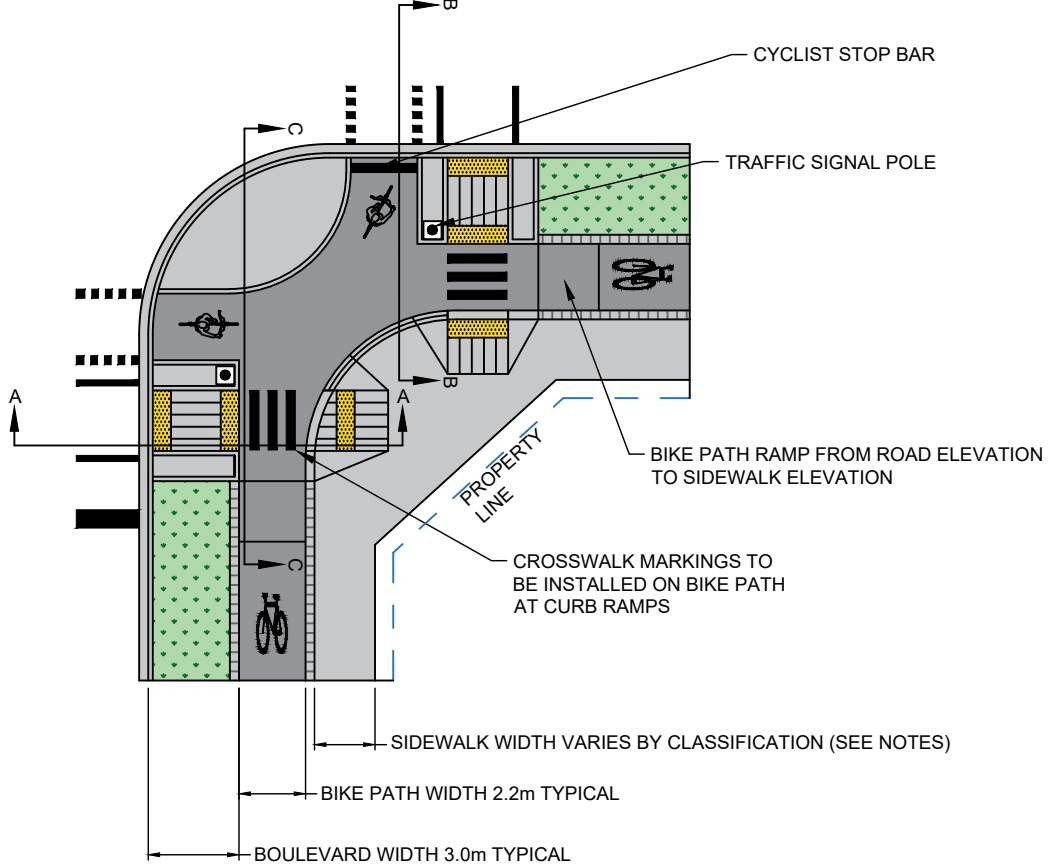
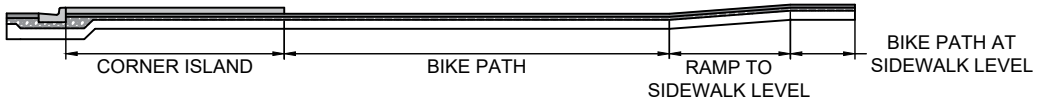
SECTION A-A



SECTION B-B



SECTION C-C



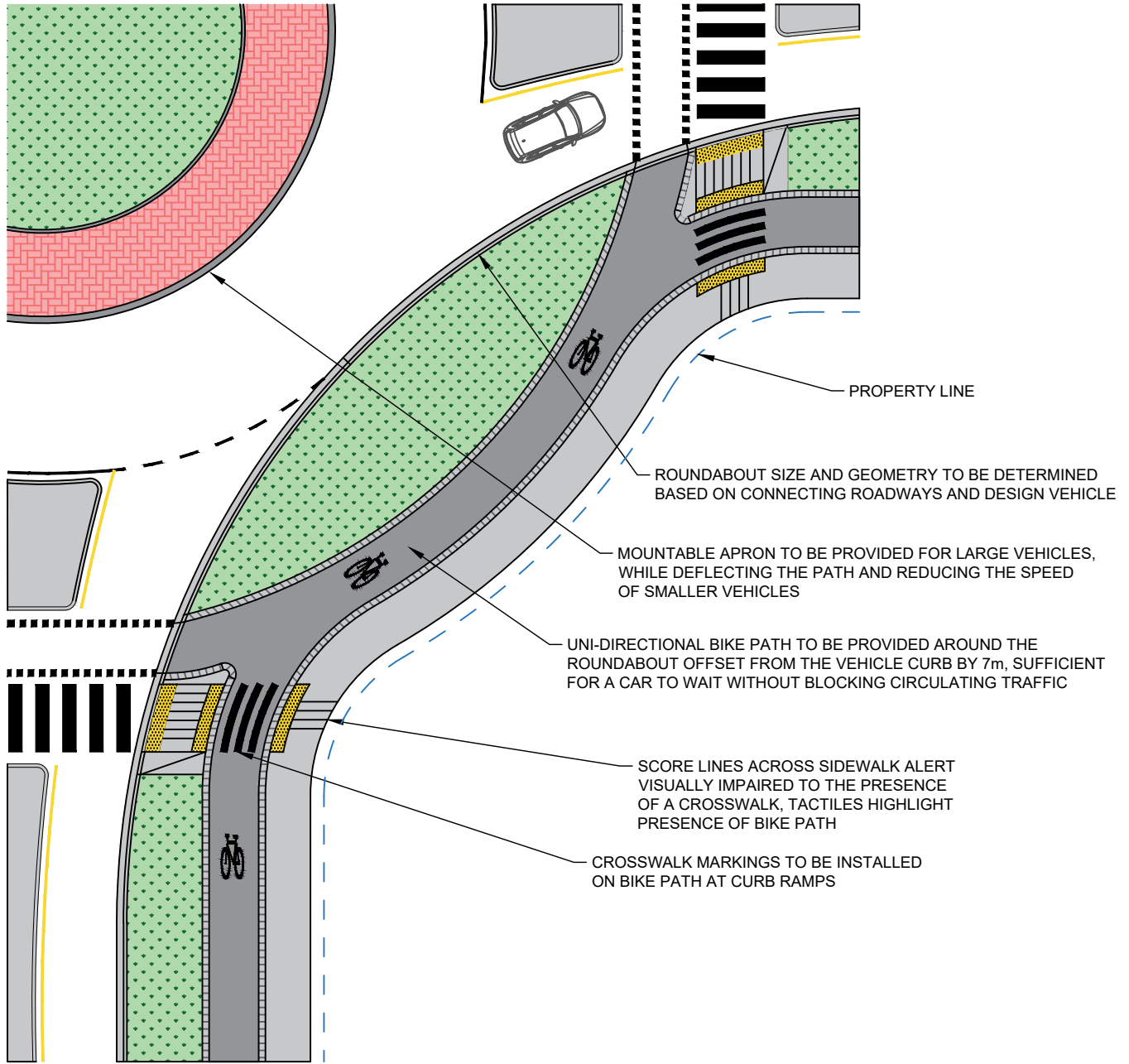
NOTES:

1. PROTECTED INTERSECTIONS REQUIRED AT ALL COLLECTOR AND ARTERIAL INTERSECTIONS WITH PROTECTED BIKE LANES.
2. BOULEVARD SHALL BE 3.0m WHERE BUS STOPS OR PARKING POCKETS ARE PRESENT. BOULEVARD SHALL BE NO LESS THAN 1.5m WHERE DRIVEWAYS ARE PRESENT.
3. WHERE PARKING POCKETS ARE PRESENT, DISTANCE BETWEEN FACE OF CURB AND BIKE PATH MUST BE NO LESS THAN 0.6m TO PROVIDE A DOOR ZONE.
4. BANDING/BUFFER ON EITHER SIDE OF THE BIKE PATH SHALL BE 0.3m STAMPED CONCRETE. WHERE PAVERS MAY BE PREFERRED FOR AESTHETIC REASONS, THEY SHALL BE SET IN CONCRETE TO AVOID MOVEMENT. WHERE VERTICAL SEPARATION IS PREFERRED, MOUNTABLE MONOLITHIC CURB MAY BE UTILIZED.
5. SIDEWALK WIDTH VARIES BY CLASSIFICATION, 2.0m MIN. FOR URBAN OR INDUSTRIAL STREETS, 4.0m MIN. FOR MOBILITY STREETS.
6. SCORE LINES AND TWSIs TO BE INSTALLED WHERE PEDESTRIANS WILL BE CROSSING PATHS WITH VEHICLES OR CYCLISTS, AS PER SECTION 8.
7. PLACEMENT OF PUBLIC REALM AMENITIES MUST NOT IMPEDE SIGHT LINES.
8. INTERSECTION QUADRANTS TO BE USED IN CONJUNCTION WITH CITY'S COMPLETE STREET DESIGN GUIDELINES.



**INTERSECTIONS
PROTECTED**

Scale:	NTS
Created:	AUG 2019
Rev Date:	JULY 2022
Dwg No:	R-PI



NOTES:

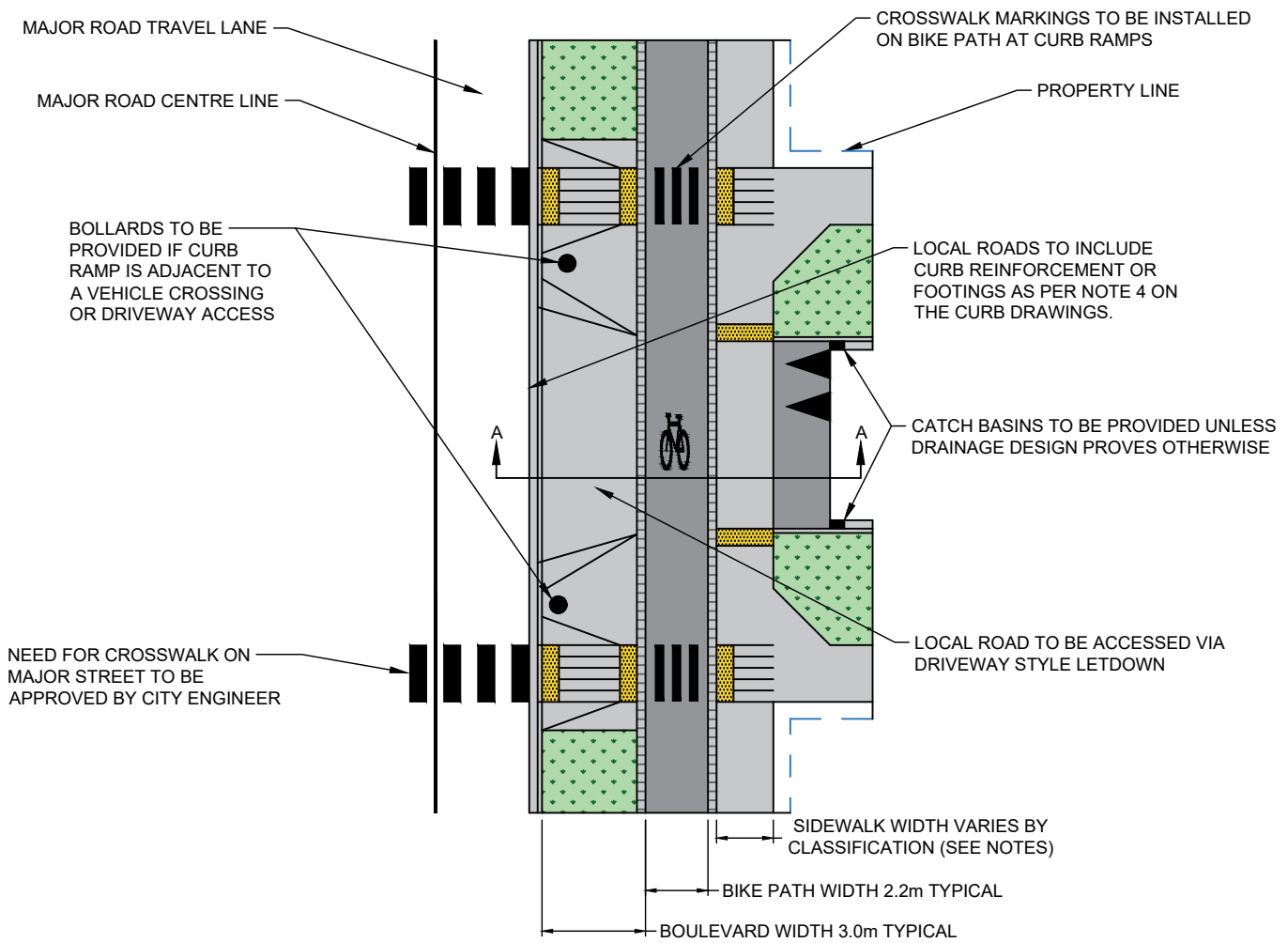
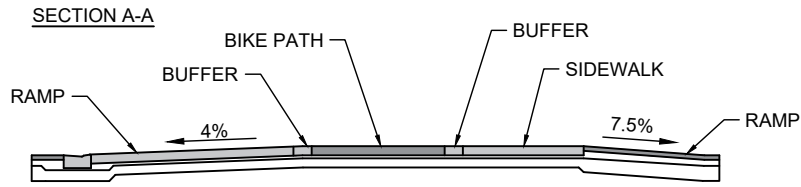
1. ROUNDBOUT MAY BE USED IN PLACE OF A PROTECTED SIGNALIZED INTERSECTION WHERE SPACE PERMITS AND ITS DETERMINED TO OFFER BENEFITS OVER A SIGNALIZED INTERSECTION.
2. BOULEVARD SHALL BE 3.0m WHERE BUS STOPS OR PARKING POCKETS ARE PRESENT. BOULEVARD SHALL BE NO LESS THAN 1.5m WHERE DRIVEWAYS ARE PRESENT.
3. WHERE PARKING POCKETS ARE PRESENT, DISTANCE BETWEEN FACE OF CURB AND BIKE PATH MUST BE NO LESS THAN 0.6m TO PROVIDE A DOOR ZONE.
4. BANDING/BUFFER ON EITHER SIDE OF THE BIKE PATH SHALL BE 0.3m STAMPED CONCRETE. WHERE PAVERS MAY BE PREFERRED FOR AESTHETIC REASONS, THEY SHALL BE SET IN CONCRETE TO AVOID MOVEMENT. WHERE VERTICAL SEPARATION IS PREFERRED, MOUNTABLE MONOLITHIC CURB MAY BE UTILIZED.
6. SCORE LINES AND TWSIs TO BE INSTALLED WHERE PEDESTRIANS WILL BE CROSSING PATHS WITH VEHICLES OR CYCLISTS, AS PER SECTION 8.
7. PLACEMENT OF PUBLIC REALM AMENITIES MUST NOT IMPEDE SIGHT LINES.
8. INTERSECTION QUADRANTS TO BE USED IN CONJUNCTION WITH CITY'S COMPLETE STREET DESIGN GUIDELINES.



**INTERSECTIONS
PROTECTED ROUNDBOUT**

Scale:	NTS
Created:	AUG 2019
Rev Date:	JULY 2022
Dwg No:	R-PRI

UTENTIE&PWINFRASTRUCTURE PLANNING STANDARDS & PRODUCTS SIMOESS EDITION NO.14 JULY 2022/2022-06-20 REDLINE INCORPORATION - WORKING/2022 DRAWING SECTIONS/SECTION 6 DWGS/R-RLI



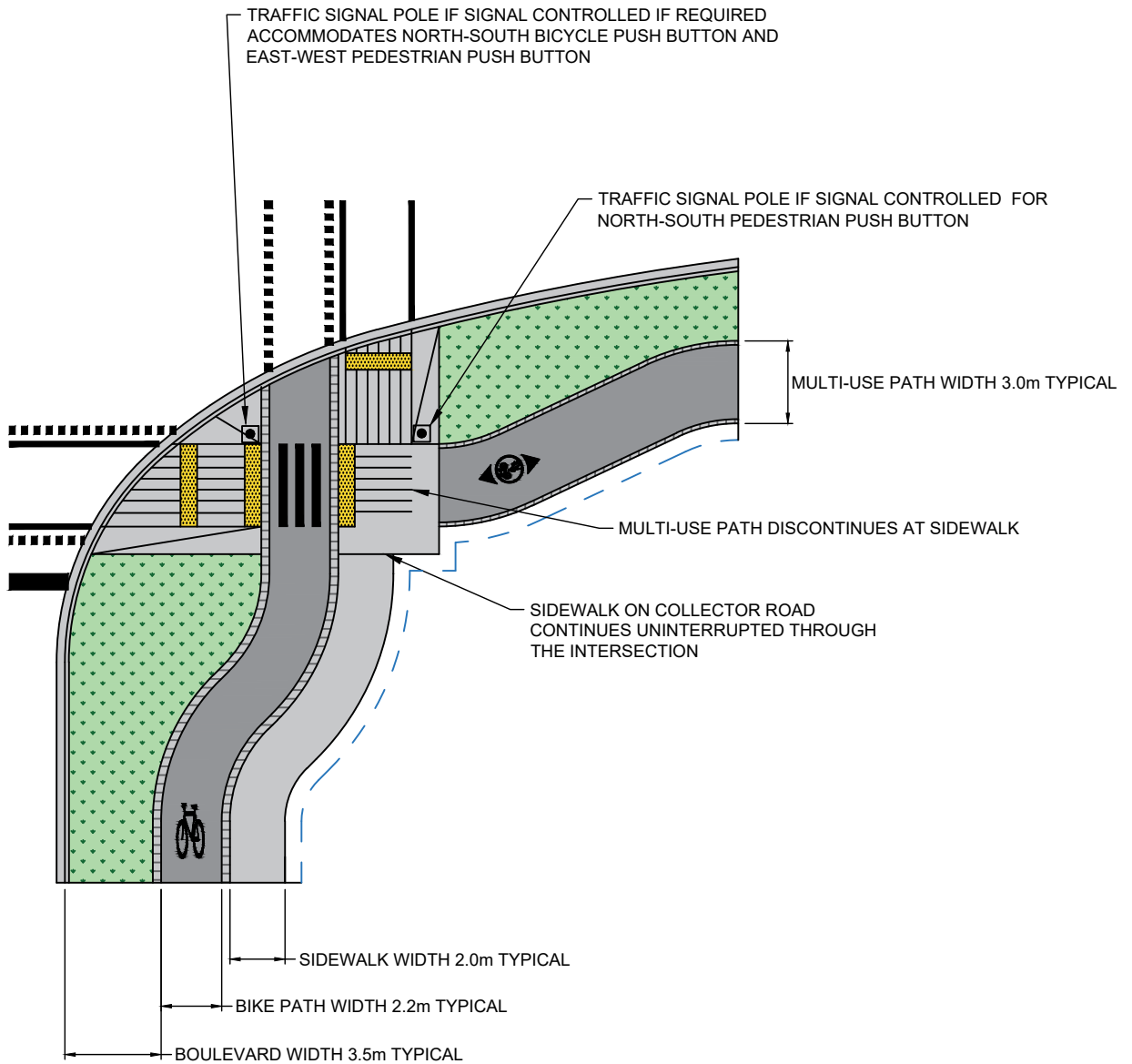
NOTES:

1. BIKE PATH AND SIDEWALK TO REMAIN AT LEVEL GRADE THROUGH INTERSECTION.
2. CONCRETE SURFACES TO BE A MINIMUM THICKNESS OF 100mm AND 150mm WHERE VEHICLE TRAFFIC IS ANTICIPATED.
3. CONCRETE DROP CURB AND GUTTER TO HAVE REINFORCING BARS OR CONCRETE FOOTING.
4. WHERE LOCAL ROAD IS ONLY PRESENT ON ONE SIDE OF THE STREET AND MAJOR ROAD HAS BIKE PATHS, PROVIDE LETDOWN OPPOSITE LOCAL ROAD TO PROVIDE ACCESS FROM THE LOCAL ROAD TO THE OPPOSITE BIKE PATH.
5. BOULEVARD SHALL BE 3.0m WHERE BUS STOPS OR PARKING POCKETS ARE PRESENT. BOULEVARD SHALL BE NO LESS THAN 1.5m WHERE DRIVEWAYS ARE PRESENT.
6. WHERE PARKING POCKETS ARE PRESENT, DISTANCE BETWEEN FACE OF CURB AND BIKE PATH MUST BE NO LESS THAN 0.6m TO PROVIDE A DOOR ZONE.
7. BANDING/BUFFER ON EITHER SIDE OF THE BIKE PATH SHALL BE 0.3m STAMPED CONCRETE. WHERE PAVERS MAY BE PREFERRED FOR AESTHETIC REASONS, THEY SHALL BE SET IN CONCRETE TO AVOID MOVEMENT. WHERE VERTICAL SEPARATION IS PREFERRED, MOUNTABLE MONOLITHIC CURB MAY BE UTILIZED.
8. SIDEWALK WIDTH VARIES BY CLASSIFICATION, 2.0m MIN. FOR URBAN OR INDUSTRIAL STREETS, 4.0m MIN. FOR MOBILITY STREETS.
9. SCORE LINES AND TWSIs TO BE INSTALLED WHERE PEDESTRIANS WILL BE CROSSING PATHS WITH VEHICLES OR CYCLISTS.
10. PLACEMENT OF PUBLIC REALM AMENITIES MUST NOT IMPEDE SIGHT LINES.
11. INTERSECTION QUADRANTS TO BE USED IN CONJUNCTION WITH CITY'S COMPLETE STREET DESIGN GUIDELINES.



**INTERSECTIONS
RAISED LOCAL**

Scale:	NTS
Created:	AUG 2019
Rev Date:	JULY 2022
Dwg No:	R-RLI



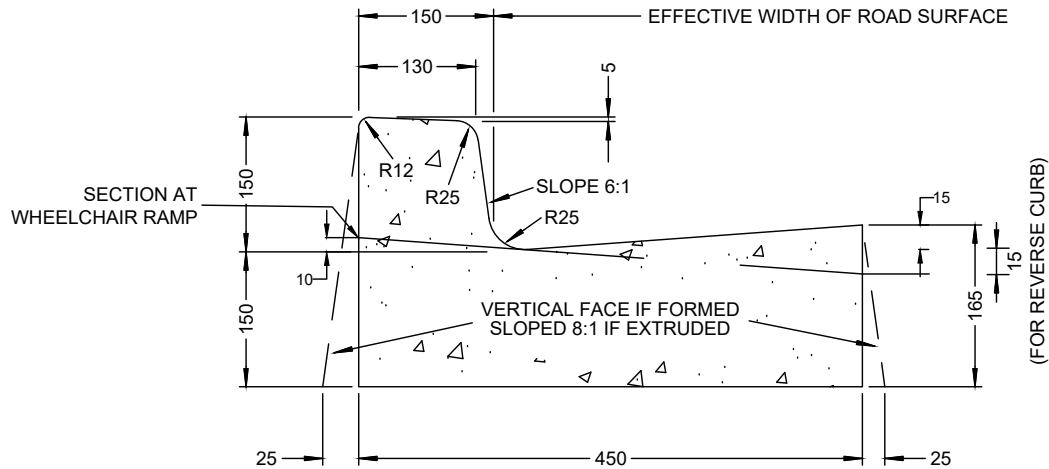
NOTES:

1. BOULEVARD SHALL BE MINIMUM 3.0m WHERE BUS STOPS ARE PRESENT
2. BOULEVARD SHALL BE MINIMUM 3.5m WHERE PARKING POCKETS ARE PRESENT TO ALLOW WIDER PARKING SPACES.
3. WHERE PARKING POCKETS ARE PRESENT, DISTANCE BETWEEN FACE OF CURB AND BIKE PATH MUST BE NO LESS THAN 0.6m TO PROVIDE A DOOR ZONE.
4. BOULEVARD SHALL BE NO LESS THAN 1.5m WHERE DRIVEWAYS ARE PRESENT.
5. BANDING/BUFFER ON EITHER SIDE OF THE BIKE PATH SHALL BE 0.3m STAMPED CONCRETE. WHERE PAVERS MAY BE PREFERRED FOR AESTHETIC REASONS, THEY SHALL BE SET IN CONCRETE TO AVOID MOVEMENT.
6. MULTI-USE PATH ON INDUSTRIAL LOCAL ROADS WILL FEATURE 0.3m STAMPED CONCRETE EDGES WITH TRANSVERSE SCORE LINES AT 0.3m INTERVALS.
7. SCORE LINES AND TWSIs TO BE INSTALLED WHERE PEDESTRIANS WILL BE CROSSING PATHS WITH VEHICLES OR CYCLISTS, AS PER SECTION 8.
8. PLACEMENT OF PUBLIC REALM AMENITIES MUST NOT IMPEDE SIGHT LINES.
9. INTERSECTION QUADRANTS TO BE USED IN CONJUNCTION WITH CITY'S COMPLETE STREET DESIGN GUIDELINES.



**INTERSECTIONS
INDUSTRIAL**

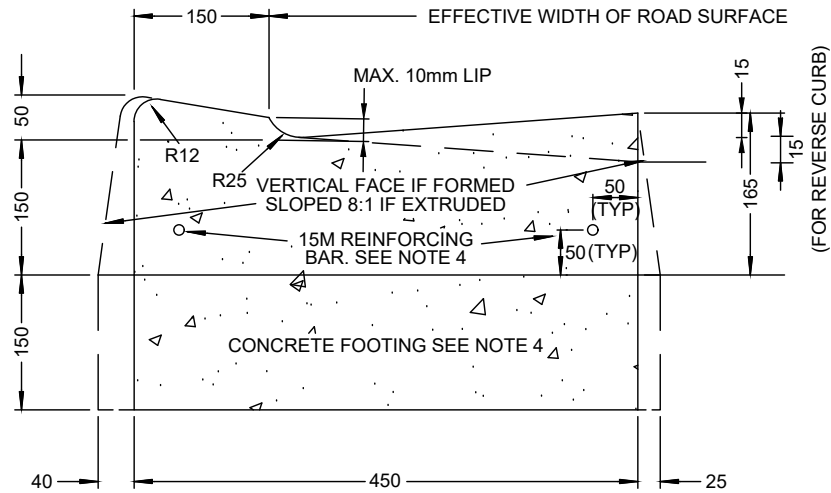
Scale:	NTS
Created:	OCT 2019
Rev Date:	JULY 2022
Dwg No:	R-II



BARRIER CURB AND GUTTER

NOTES:

1. FOR BASE AND SUB-BASE REQUIREMENTS, REFER TO SECTION 9.
2. FOR CONCRETE REQUIREMENTS REFER TO SECTION 11.
3. THE LENGTH OF TRANSITION FROM ONE TYPE OF CURB TO ANOTHER SHALL BE THE GREATEST OF:
 - a) 50 x DIFFERENCE IN OVERALL CURB HEIGHTS.
 - b) 25 x DIFFERENCE IN GUTTER WIDTHS.
 - c) 2.0 METERS.
4. REINFORCING BARS OR CONCRETE FOOTING REQUIRED FOR LANE ACCESSSES AND FOR COMMERCIAL AND INDUSTRIAL DRIVEWAY ACCESSSES.
5. REVERSE CURB SHALL BE APPROVED BY CITY ENGINEER.
6. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN.



DROP CURB AND GUTTER

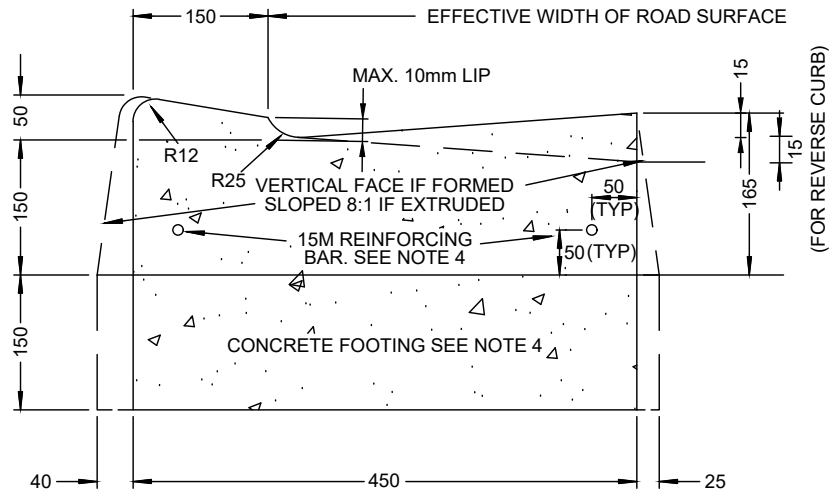
NOTES:

1. FOR BASE AND SUB-BASE REQUIREMENTS, REFER TO SECTION 9.
2. FOR CONCRETE REQUIREMENTS REFER TO SECTION 11.
3. THE LENGTH OF TRANSITION FROM ONE TYPE OF CURB TO ANOTHER SHALL BE THE GREATEST OF:
 - a) 50 x DIFFERENCE IN OVERALL CURB HEIGHTS.
 - b) 25 x DIFFERENCE IN GUTTER WIDTHS.
 - c) 2.0 METERS.
4. REINFORCING BARS OR CONCRETE FOOTING REQUIRED FOR LANE ACCESSSES, COMMERCIAL AND INDUSTRIAL DRIVEWAY ACCESSSES AND RAISED LOCAL ROAD CROSSINGS.
5. REVERSE CURB SHALL BE APPROVED BY CITY ENGINEER.
6. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN.



CURBS
DROP CURB AND GUTTER

Scale:	NTS
Created:	SEP 2012
Rev Date:	JULY 2022
Dwg No:	CS-2



DROP CURB AND GUTTER

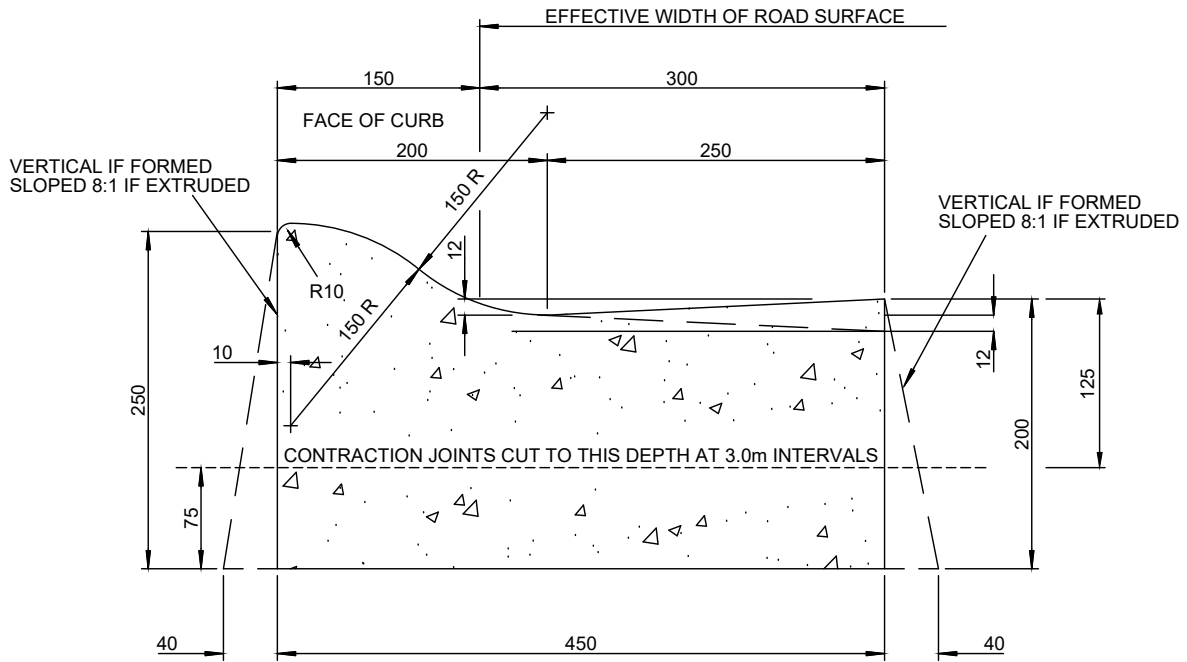
NOTES:

1. FOR BASE AND SUB-BASE REQUIREMENTS, REFER TO SECTION 9.
2. FOR CONCRETE REQUIREMENTS REFER TO SECTION 11.
3. THE LENGTH OF TRANSITION FROM ONE TYPE OF CURB TO ANOTHER SHALL BE THE GREATEST OF:
 - a) 50 x DIFFERENCE IN OVERALL CURB HEIGHTS.
 - b) 25 x DIFFERENCE IN GUTTER WIDTHS.
 - c) 2.0 METERS.
4. REINFORCING BARS OR CONCRETE FOOTING REQUIRED FOR LANE ACCESSES AND FOR COMMERCIAL AND INDUSTRIAL DRIVEWAY ACCESSES.
5. REVERSE CURB SHALL BE APPROVED BY CITY ENGINEER.
6. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN.



**CURBS
DROP CURB AND GUTTER**

Scale:	NTS
Created:	SEP 2012
Rev Date:	MAY 2020
Dwg No:	CS-2

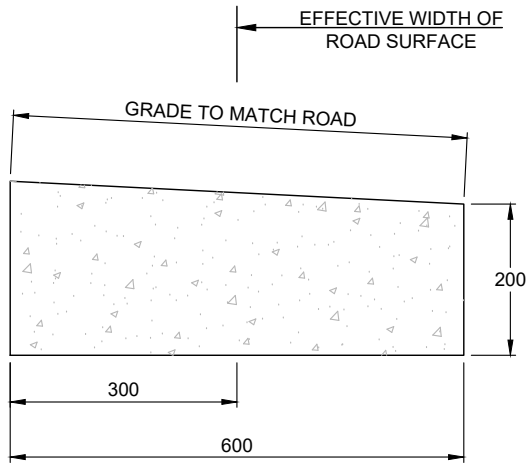


ROLLOVER CURB AND GUTTER

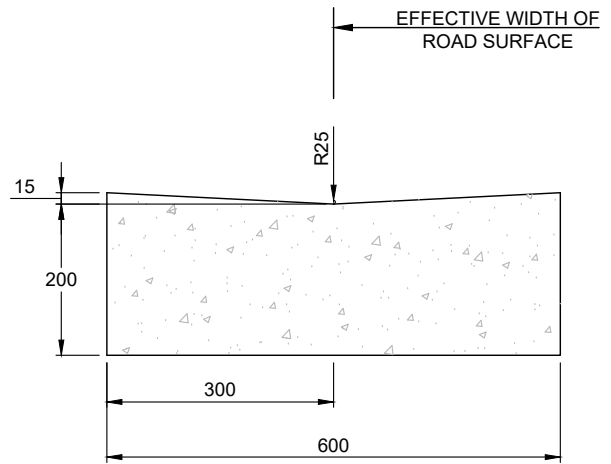
NOTES:

1. MOUNTABLE ROLLOVER CONCRETE CURBS SHALL BE USED WITHIN CUL-DE-SACS, POCKET PARKING, OR WHERE APPROVED BY CITY ENGINEER.
2. FOR BASE AND SUB-BASE REQUIREMENTS, REFER TO SECTION 9.
3. FOR CONCRETE REQUIREMENTS REFER TO SECTION 11.
4. THE LENGTH OF TRANSITION FROM ONE TYPE OF CURB TO ANOTHER SHALL BE THE GREATEST OF:
 - a) 50 x DIFFERENCE IN OVERALL CURB HEIGHTS.
 - b) 25 x DIFFERENCE IN GUTTER WIDTHS.
 - c) 2.0 METERS.
5. REVERSE CURB SHALL BE APPROVED BY CITY ENGINEER.
6. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN.





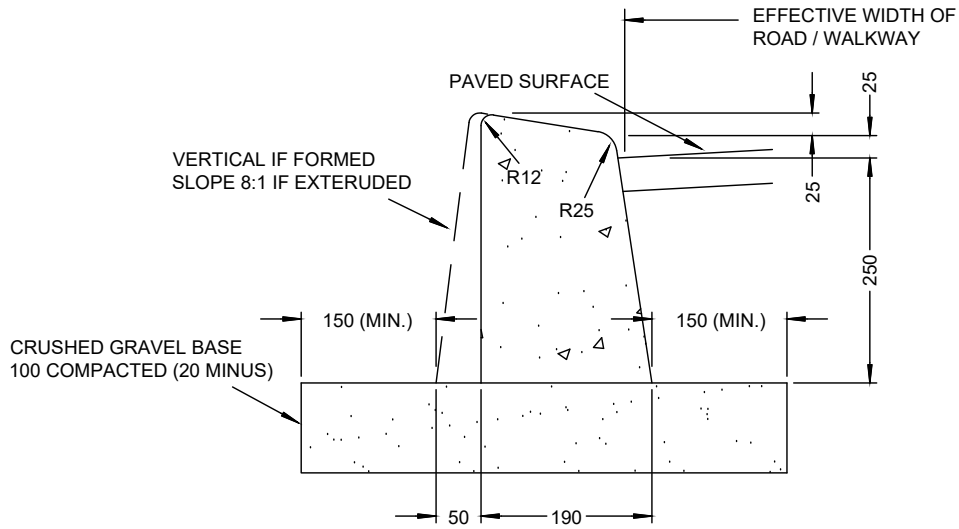
FLAT GUTTER



VALLEY GUTTER

NOTES:

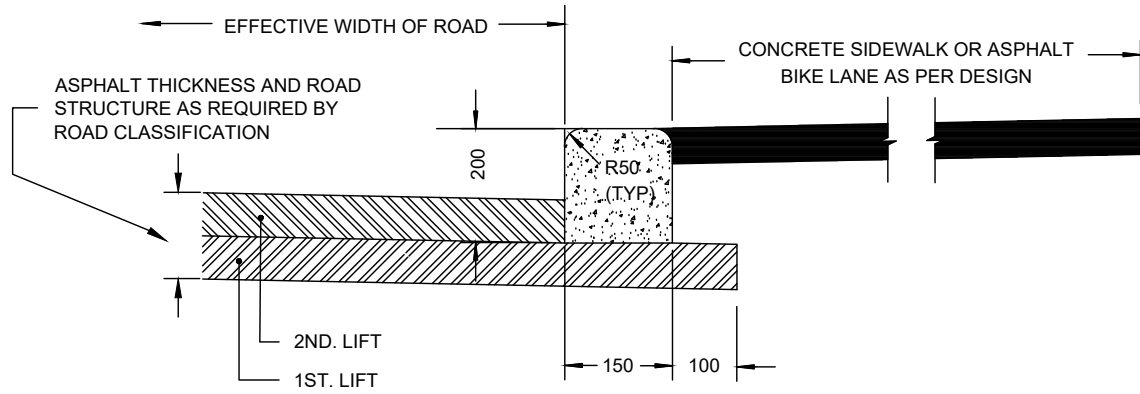
1. FOR BASE AND SUB-BASE REQUIREMENTS, REFER TO SECTION 9.
2. FOR CONCRETE REQUIREMENTS REFER TO SECTION 11.
3. AT LOCATIONS OTHER THAN PEDESTRIAN CURB RAMPS, THE LENGTH OF TRANSITION FROM ONE TYPE OF CURB TO ANOTHER SHALL BE THE GREATEST OF:
 - a) 50 x DIFFERENCE IN OVERALL CURB HEIGHTS.
 - b) 25 x DIFFERENCE IN GUTTER WIDTHS.
 - c) 2.0 METERS.
4. MIDPOINT OF CURB SHALL ALIGN WITH THE UPSTREAM AND DOWN STREAM CURB FACES.
5. REINFORCEMENT BARS OR CONCRETE FOOTING REQUIRED FOR COMMERCIAL AND INDUSTRIAL APPLICATIONS.
6. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN.



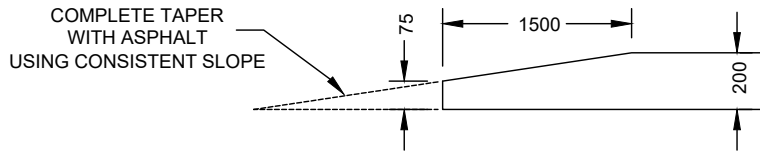
TEMPORARY CURB - TYPE 1

NOTES:

1. FOR BASE AND SUB-BASE REQUIREMENTS, REFER TO SECTION 9.
2. FOR CONCRETE REQUIREMENTS REFER TO SECTION 11.
3. THE LENGTH OF TRANSITION FROM ONE TYPE OF CURB TO ANOTHER SHALL BE THE GREATEST OF:
 - a) 50 x DIFFERENCE IN OVERALL CURB HEIGHTS.
 - b) 25 x DIFFERENCE IN GUTTER WIDTHS.
 - c) 2.0 METERS.
4. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN.



TEMPORARY CURB - TYPE 2

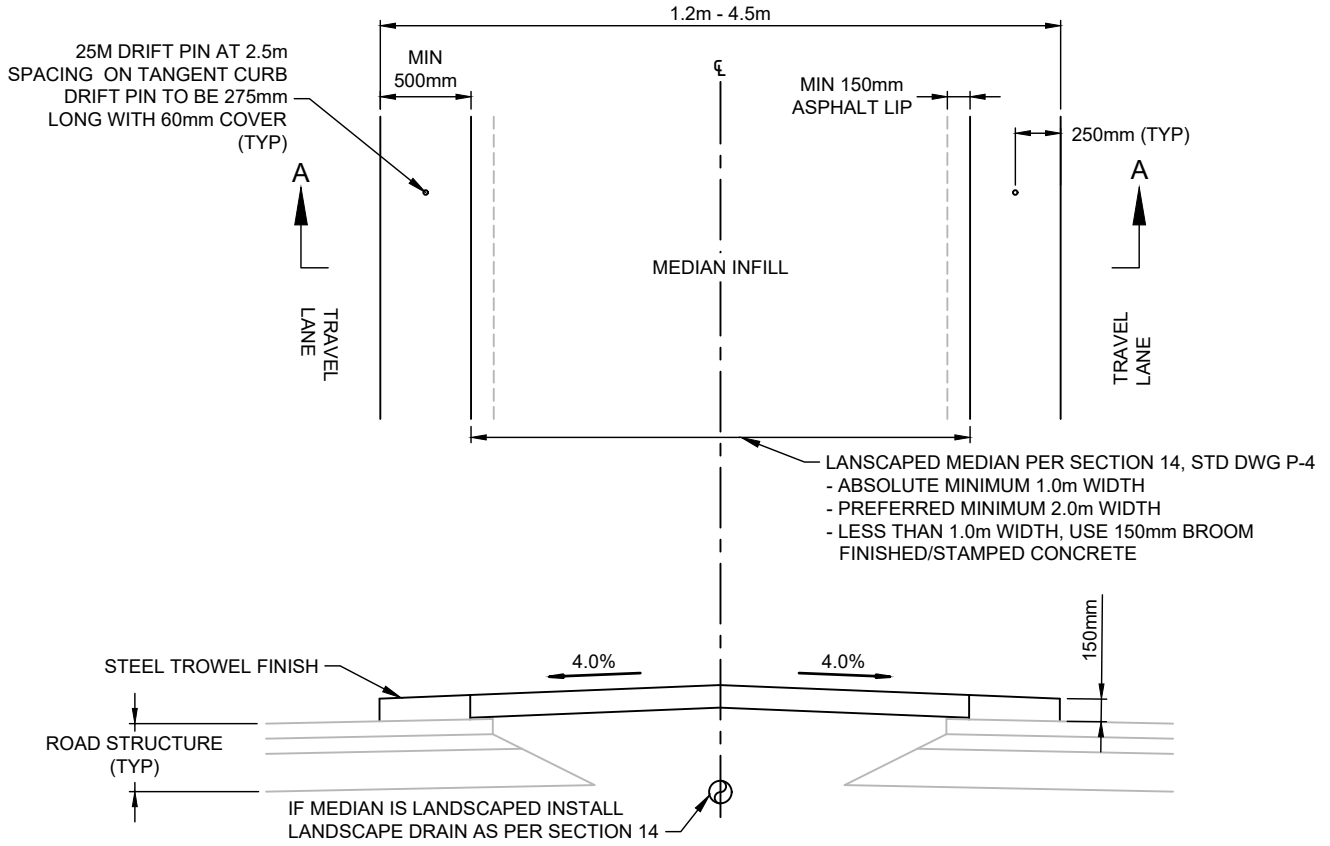


LETDOWN DETAIL

NOTES:

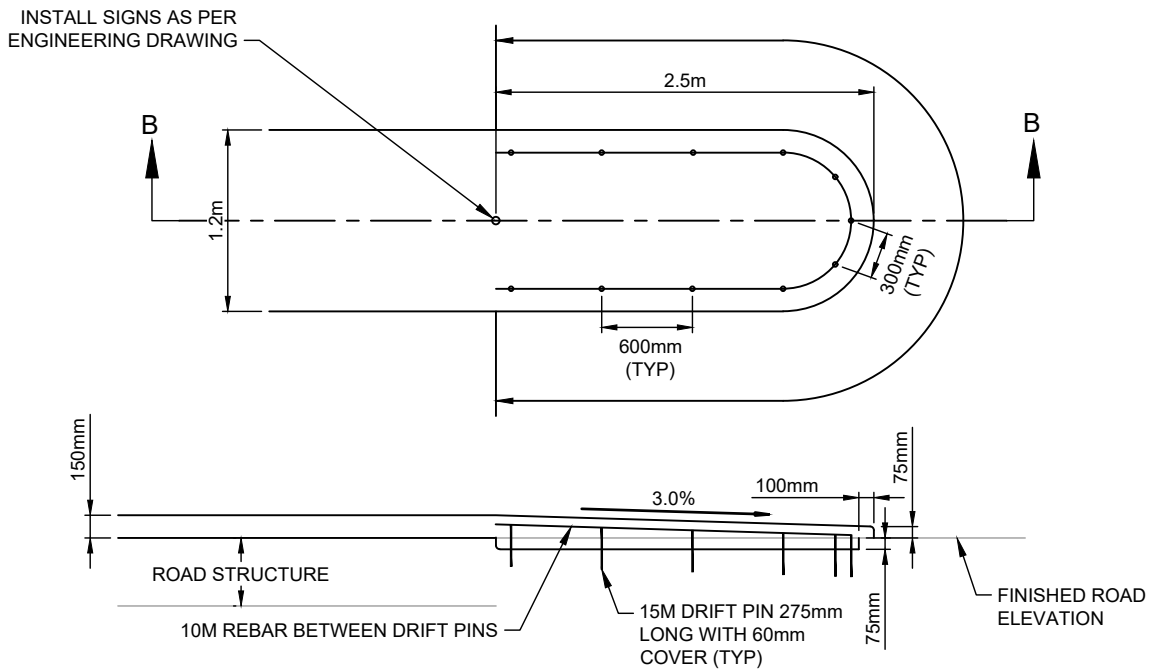
1. APPLICATION OF THIS STANDARD AT THE DISCRETION OF THE CITY ENGINEER.
2. PROVIDE 1500mm TAPER TO ZERO HEIGHT AT DROP LOCATIONS.
3. CURB HEIGHT 150mm IF INSTALLED ON FINAL LIFT AND 200mm IF INSTALLED ON BOTTOM LIFT.
4. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN.

3.18.2020 G:\INFRASTRUCTURE PLANNING\STANDARDS & PRODUCTS\SI\MOESS\EDITION NO13 MAY 2020\2020-05-01 FINAL MOESS EDITION NO13.DOCUMENT\2020 DRAWING SECTIONS\SECTION 8 DWG\CS-7



SECTION A-A

TYPICAL MEDIAN DETAILS



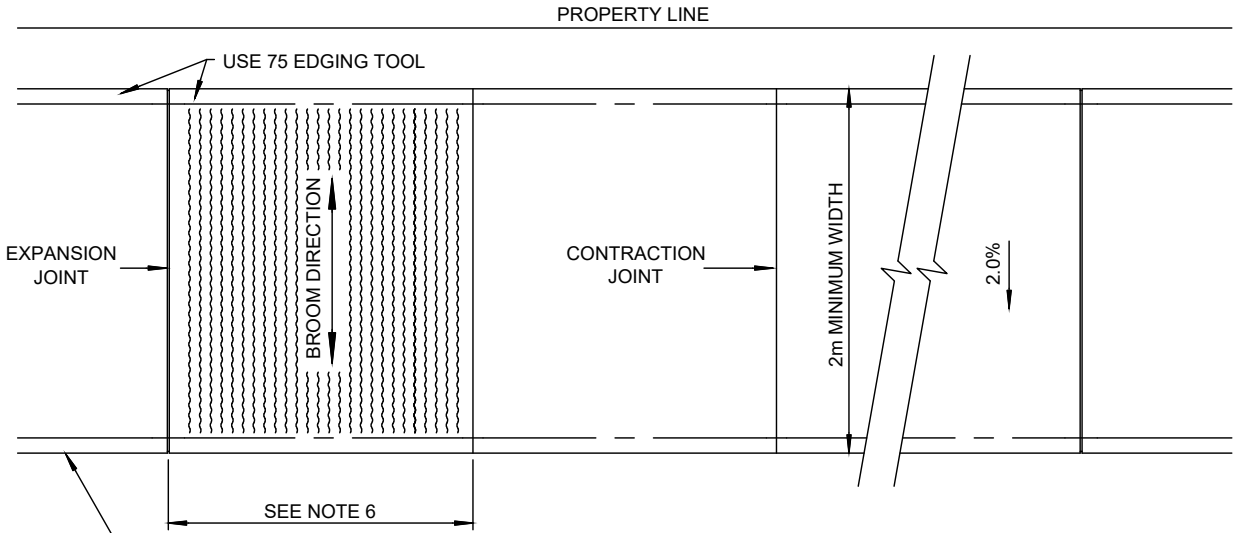
SECTION B-B

TYPICAL MEDIAN END TREATMENT DETAILS

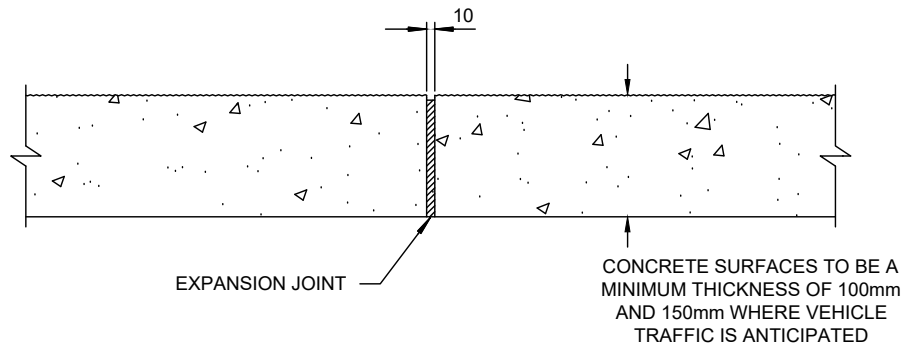


MEDIANS AND ISLANDS
RAISED CENTRE MEDIAN

Scale:	NTS
Created:	OCT 2019
Rev Date:	MAY 2020
Dwg No:	CS-7

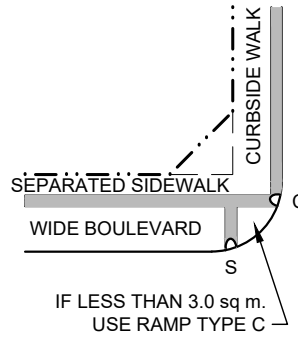
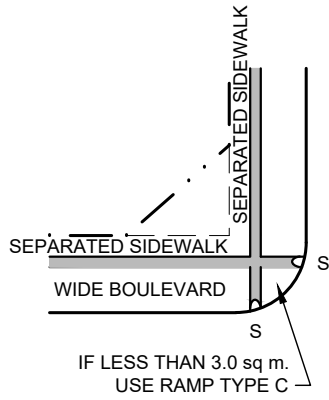


CONTRACTION JOINT IF SIDEWALK IS POURED INTEGRALLY TO CURB. ISOLATION JOINT IF SIDEWALK IS POURED ADJACENT TO CURB. BOND BREAK COMPOUND MAY BE USED WHERE APPROVED BY THE ENGINEER.

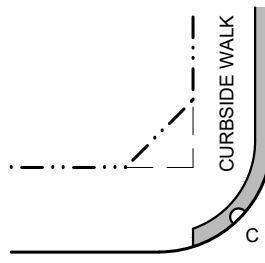
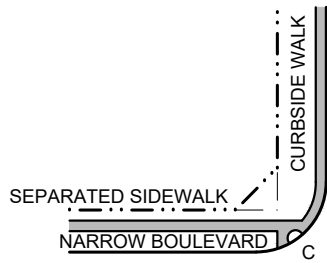


NOTES:

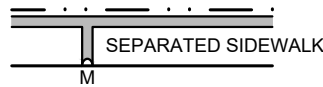
1. FOR DRIVEWAY CROSSING DETAIL SEE DWG. CS-24, CS-25, & CS-26.
2. SIDEWALKS SHALL HAVE BROOMED FINISH.
3. FOR CONCRETE DETAILS SEE SECTION 11.
4. FOR BASE AND SUB-BASE REQUIREMENTS SEE SECTION 9.
5. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN.
6. DIMENSIONS SHOULD BE OF EQUAL SPACING ALONG SIDEWALK TO BE AS CLOSE TO SQUARE AS POSSIBLE.



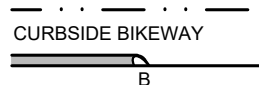
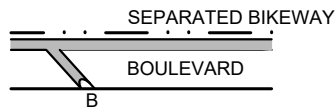
TYPE S - SEPARATED



TYPE C - CONSTRAINED



TYPE M - MID-BLOCK

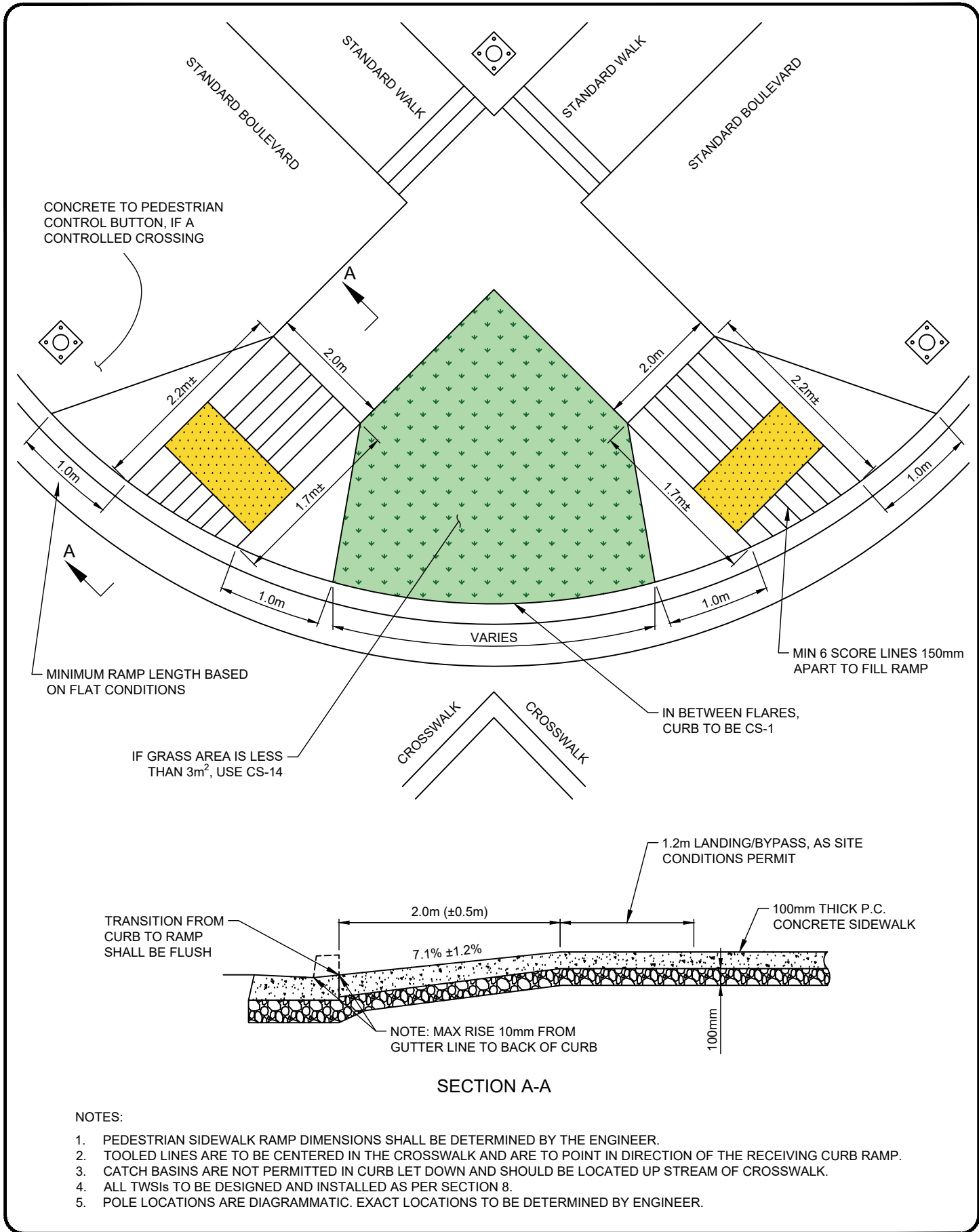


TYPE B - BIKEWAY

NOTES:

1. CORNER CUT REQUIREMENTS DEPENDENT ON GEOMETRIC DESIGN AND SIGHT LINE REQUIREMENTS

G:\INFRASTRUCTURE PLANNING\STANDARDS & PRODUCTS\SI\MOESSEDITION\NO13 MAY 2020\2020-05-01 FINAL\MOESS\SECTION 8 DWG\CS-13



CONCRETE TO PEDESTRIAN CONTROL BUTTON, IF A CONTROLLED CROSSING

MINIMUM RAMP LENGTH BASED ON FLAT CONDITIONS

IF GRASS AREA IS LESS THAN 3m², USE CS-14

MIN 6 SCORE LINES 150mm APART TO FILL RAMP

IN BETWEEN FLARES, CURB TO BE CS-1

SECTION A-A

NOTES:

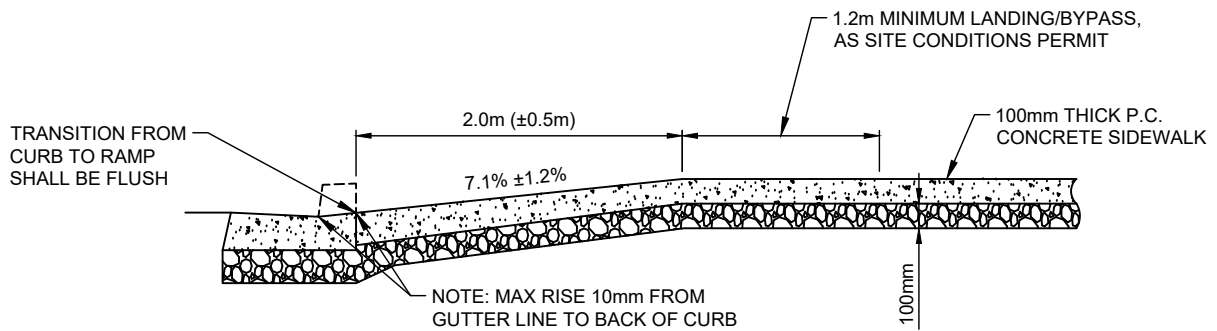
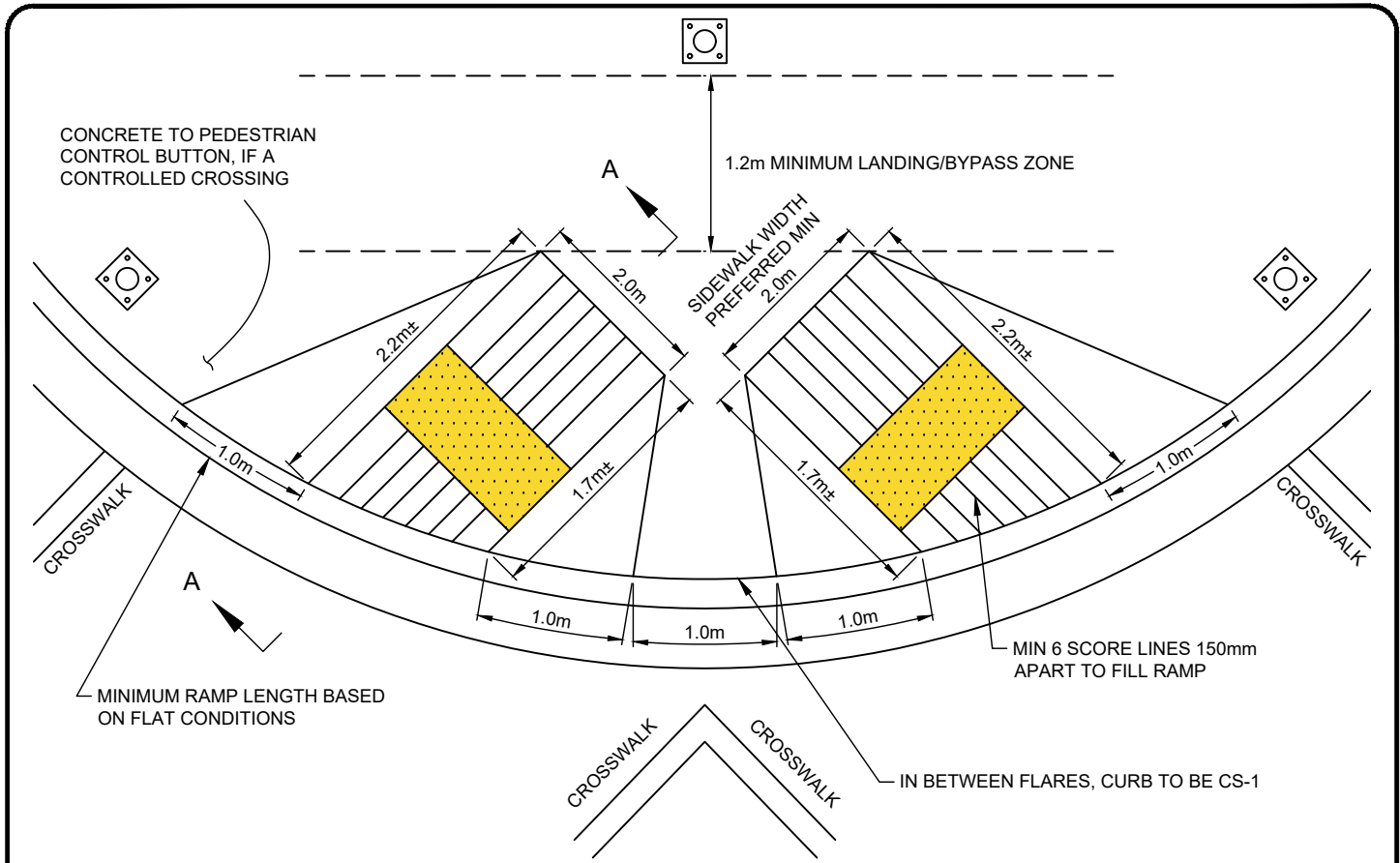
1. PEDESTRIAN SIDEWALK RAMP DIMENSIONS SHALL BE DETERMINED BY THE ENGINEER.
2. TOOLED LINES ARE TO BE CENTERED IN THE CROSSWALK AND ARE TO POINT IN DIRECTION OF THE RECEIVING CURB RAMP.
3. CATCH BASINS ARE NOT PERMITTED IN CURB LET DOWN AND SHOULD BE LOCATED UP STREAM OF CROSSWALK.
4. ALL TWSIs TO BE DESIGNED AND INSTALLED AS PER SECTION 8.
5. POLE LOCATIONS ARE DIAGRAMMATIC. EXACT LOCATIONS TO BE DETERMINED BY ENGINEER.



**CURB RAMPS
TYPE S - SEPARATED**

Scale:	NTS
Created:	OCT 2019
Rev Date:	MAY 2020
Dwg No:	CS-13

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SECTION A-A

NOTES:

1. PEDESTRIAN SIDEWALK RAMP DIMENSIONS SHALL BE DETERMINED BY THE ENGINEER.
2. TOOLED LINES ARE TO BE CENTERED IN THE CROSSWALK AND ARE TO POINT IN DIRECTION OF THE RECEIVING CURB RAMP.
3. CATCH BASINS ARE NOT PERMITTED IN CURB LET DOWN AND SHOULD BE LOCATED UP STREAM OF CROSSWALK.
4. ALL TWSIs TO BE DESIGNED AND INSTALLED AS PER SECTION 8.
5. POLE LOCATIONS ARE DIAGRAMMATIC. EXACT LOCATIONS TO BE DETERMINED BY ENGINEER.

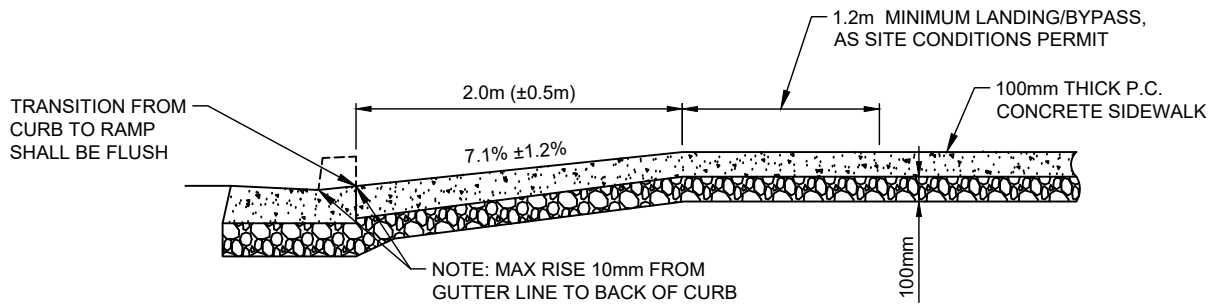
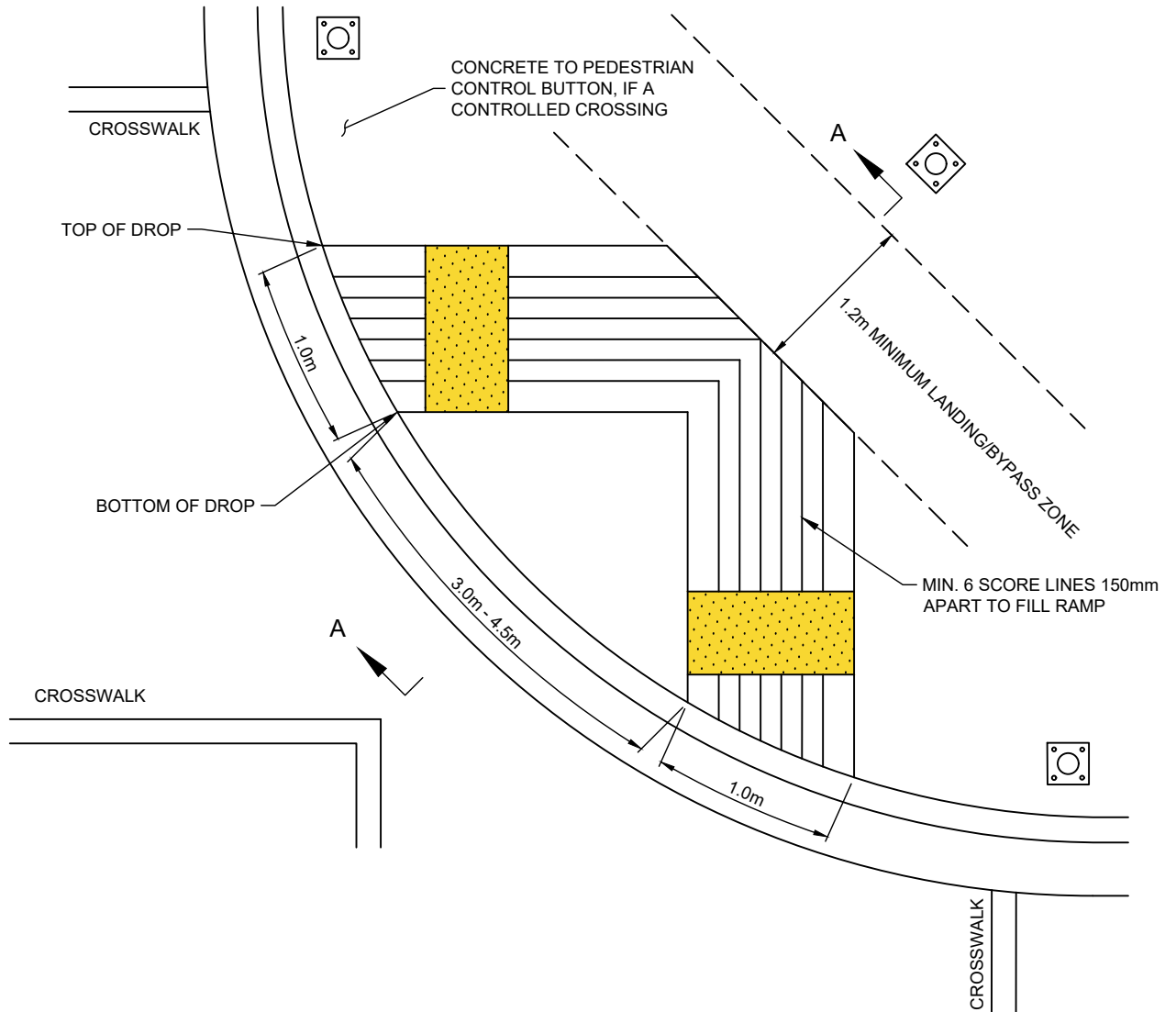
6-24-2020



CURB RAMPS
TYPE C - CONSTRAINED (PREFERRED)

Scale:	NTS
Created:	OCT 2019
Rev Date:	MAY 2020
Dwg No:	CS-14

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SECTION A-A

NOTES:

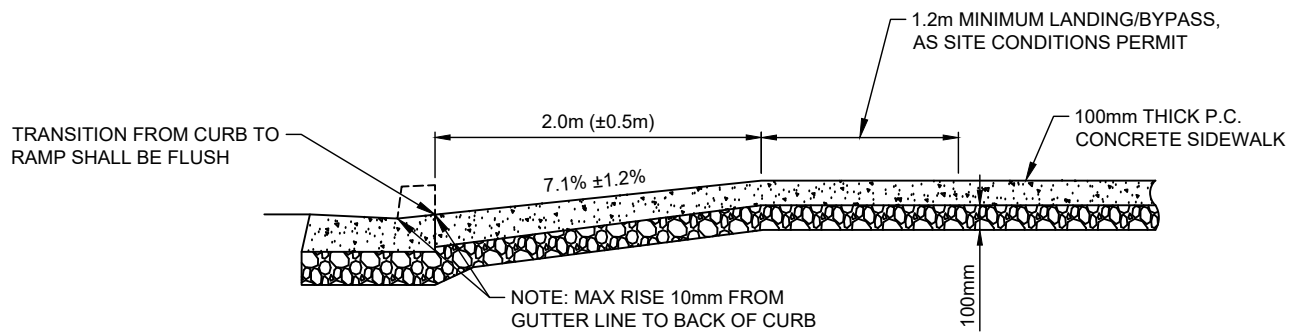
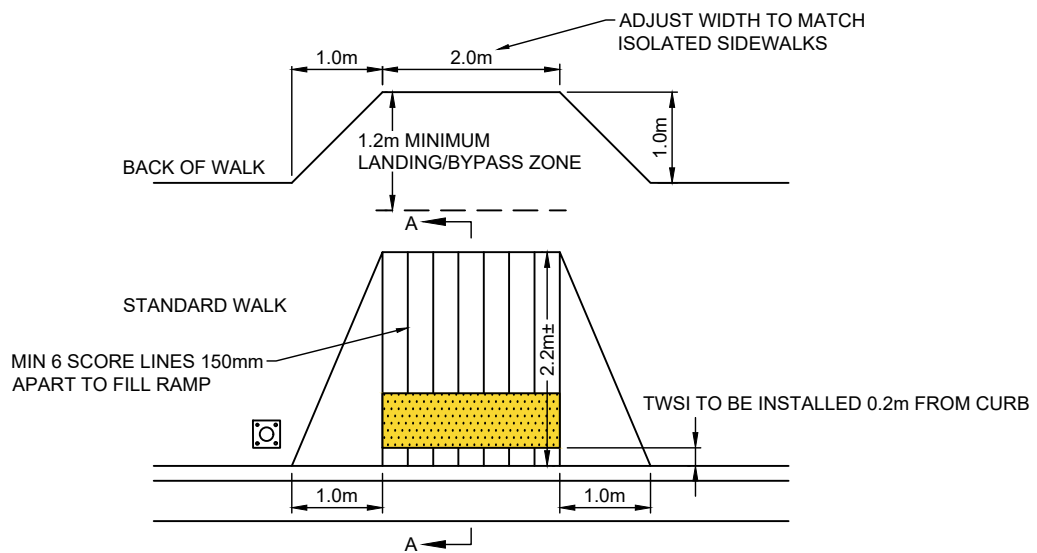
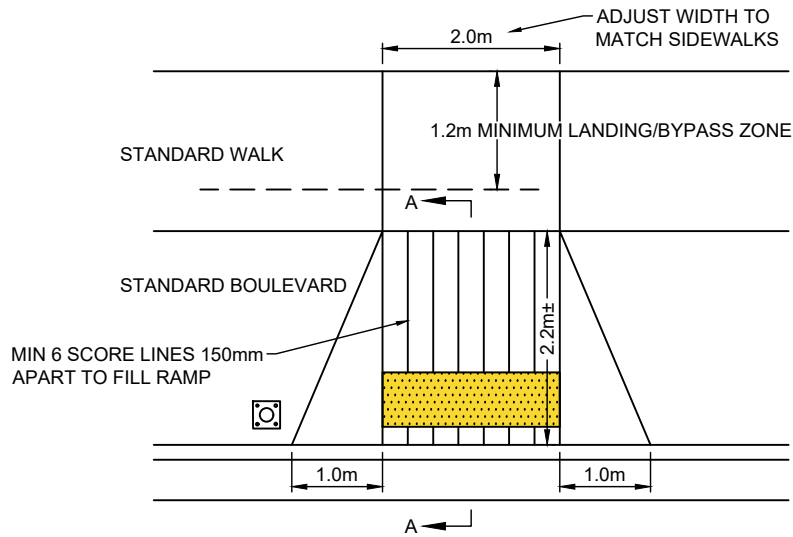
1. PEDESTRIAN SIDEWALK RAMP DIMENSIONS SHALL BE DETERMINED BY THE ENGINEER.
2. TOOLED LINES ARE TO BE CENTERED IN THE CROSSWALK AND ARE TO POINT IN DIRECTION OF THE RECEIVING CURB RAMP.
3. CATCH BASINS ARE NOT PERMITTED IN CURB LET DOWN AND SHOULD BE LOCATED UP STREAM OF CROSSWALK.
4. ALL TWSIs TO BE DESIGNED AND INSTALLED AS PER SECTION 8.
5. POLE LOCATIONS ARE DIAGRAMMATIC. EXACT LOCATIONS TO BE DETERMINED BY ENGINEER.

6-24-2020



CURB RAMPS
TYPE C - CONSTRAINED

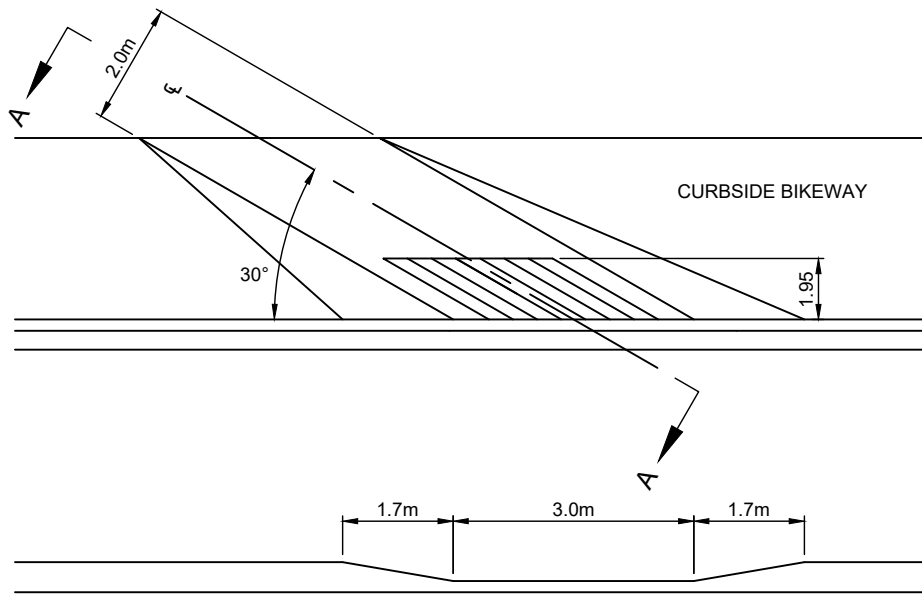
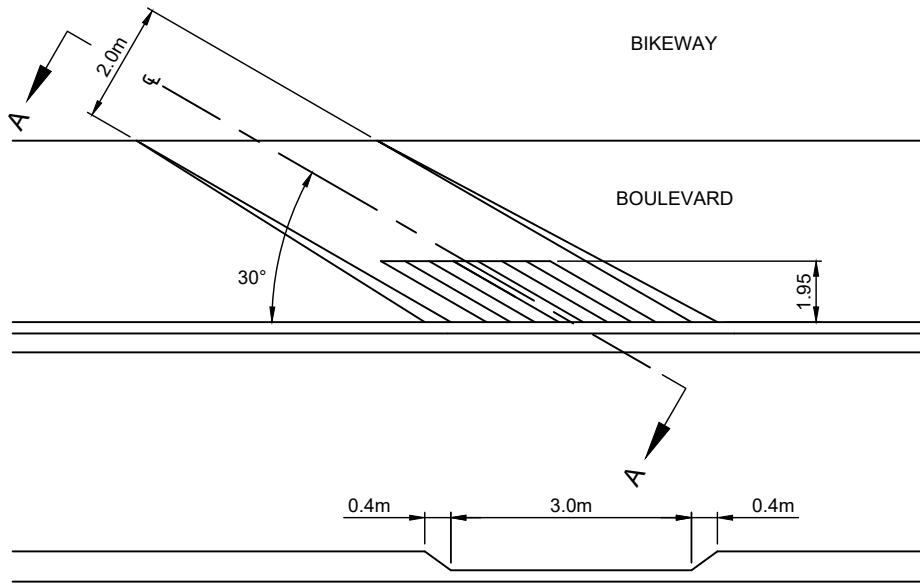
Scale:	NTS
Created:	OCT 2019
Rev Date:	MAY 2020
Dwg No:	CS-15



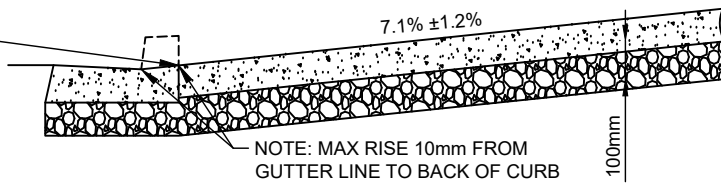
SECTION A-A

NOTES:

1. PEDESTRIAN SIDEWALK RAMP DIMENSIONS SHALL BE DETERMINED BY THE ENGINEER.
2. TOOLED LINES ARE TO BE CENTERED IN THE CROSSWALK AND ARE TO POINT IN DIRECTION OF THE RECEIVING CURB RAMP.
3. CATCH BASINS ARE NOT PERMITTED IN CURB LET DOWN AND SHOULD BE LOCATED UP STREAM OF CROSSWALK.
4. ALL TWSIs TO BE DESIGNED AND INSTALLED AS PER SECTION 8.
5. POLE LOCATIONS ARE DIAGRAMMATIC. EXACT LOCATIONS TO BE DETERMINED BY ENGINEER.



TRANSITION FROM CURB TO RAMP SHALL BE FLUSH

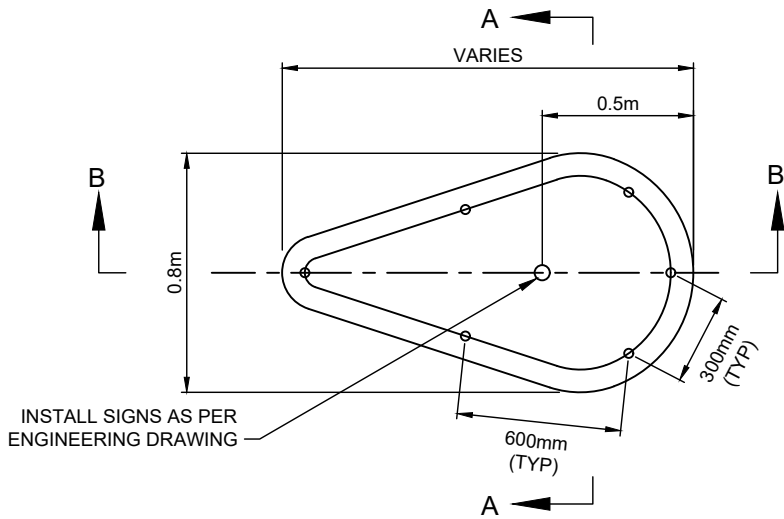


SECTION A-A

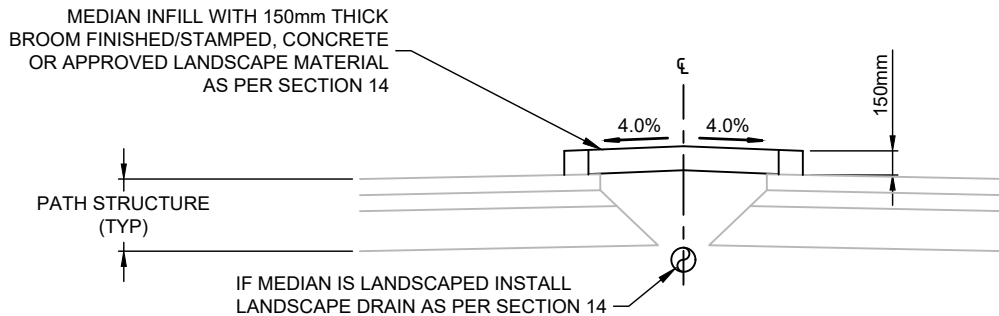
NOTES:

1. BIKEWAY SLIP RAMP DIMENSIONS SHALL BE DETERMINED BY THE ENGINEER.
2. CATCH BASINS ARE NOT PERMITTED IN CURB LET DOWN AND SHOULD BE LOCATED UP STREAM OF CROSSWALK.

G:\INFRASTRUCTURE PLANNING\STANDARDS & PRODUCTS\SI\MOESS\EDITION NO13 MAY 2020\2020-05-01 FINAL MOESS EDITION NO13 DOCUMENT\2020 DRAWING SECTIONS\SECTION 8 DWGS\CS-20

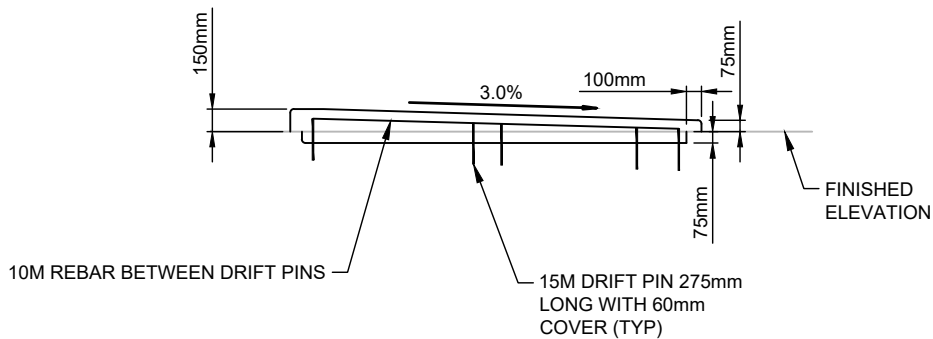


INSTALL SIGNS AS PER
ENGINEERING DRAWING



SECTION A-A

MULTI-USE PATH SPLITTER ISLAND DETAILS



SECTION B-B

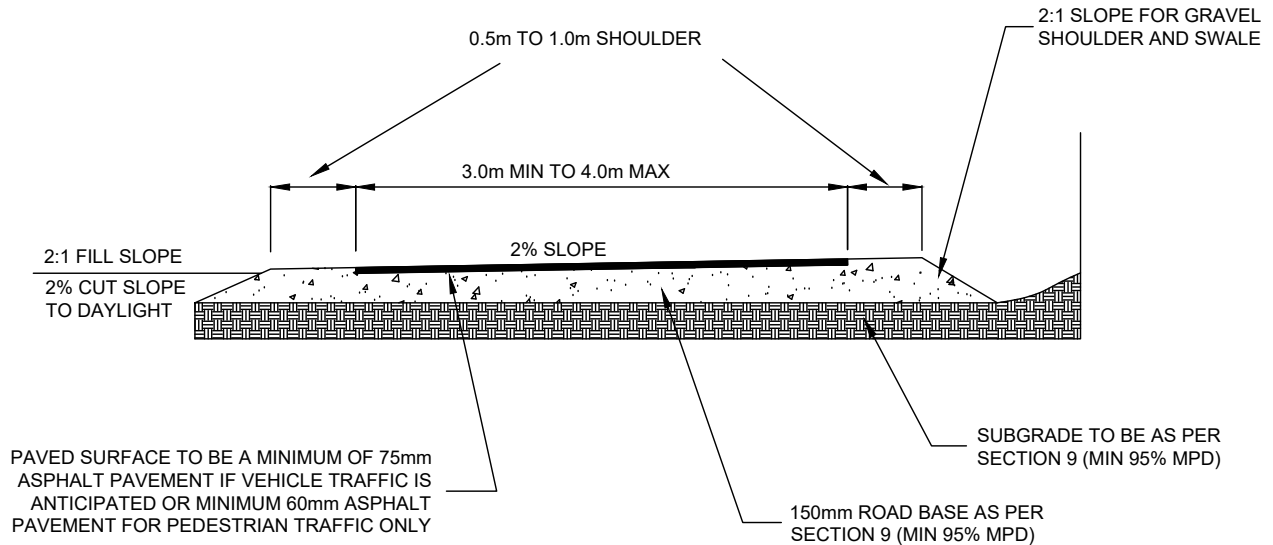
MULTI-USE PATH SPLITTER ISLAND END TREATMENT DETAILS

3-18-2020



MULTI-USE PATHS
SPLITTER ISLAND

Scale: NTS
Created: OCT 2019
Rev Date: MAY 2020
Dwg No: CS-20



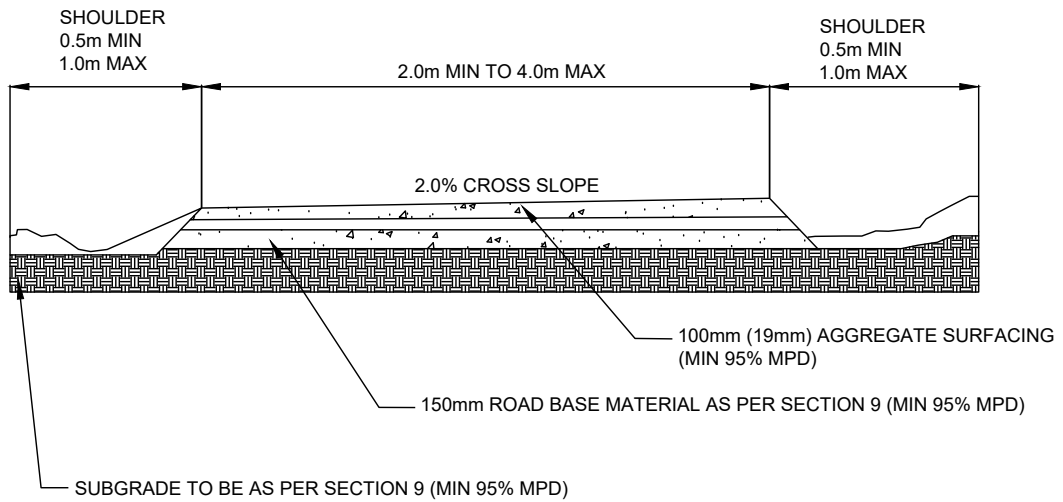
NOTES:

1. VEGETATION CLEARANCE SHALL BE A MINIMUM VERTICAL CLEARANCE OF 2.5m AND A MINIMUM 0.5m HORIZONTAL CLEARANCE.
2. MAXIMUM TRAIL GRADES:
 - 3% SUSTAINED GRADE
 - 5% GRADE FOR DISTANCES 30m OR LESS
 - 10% GRADE FOR DISTANCES 15m OR LESS
3. MINIMIZE HORIZONTAL CURVES AND ENSURE ADEQUATE SITE LINES ON CORNERS. REFER TO BICYCLE FACILITY DESIGN GUIDELINES (2.3 - 2.4).
4. RESIDENTIAL BUFFER SHALL BE A MINIMUM OF 2.0m TO A MAXIMUM 5.0m.
5. REFER TO CITY OF NANAIMO - TRAIL PLAN - DESIGN GUIDELINES (MAY 2007) FOR ADDITIONAL DESIGN INFORMATION.
6. ALL TWSIs TO BE DESIGNED AND INSTALLED AS PER SECTION 8.



**MULTI-USE PATHS
PATH OR WALKWAY (HARD SURFACE)**

Scale:	NTS
Created:	JUN 2012
Rev Date:	MAY 2020
Dwg No:	CS-21



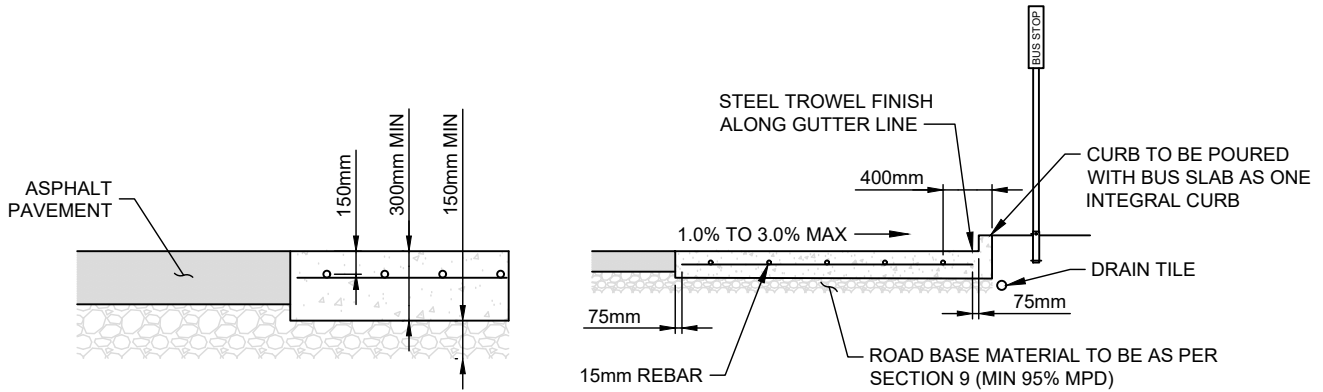
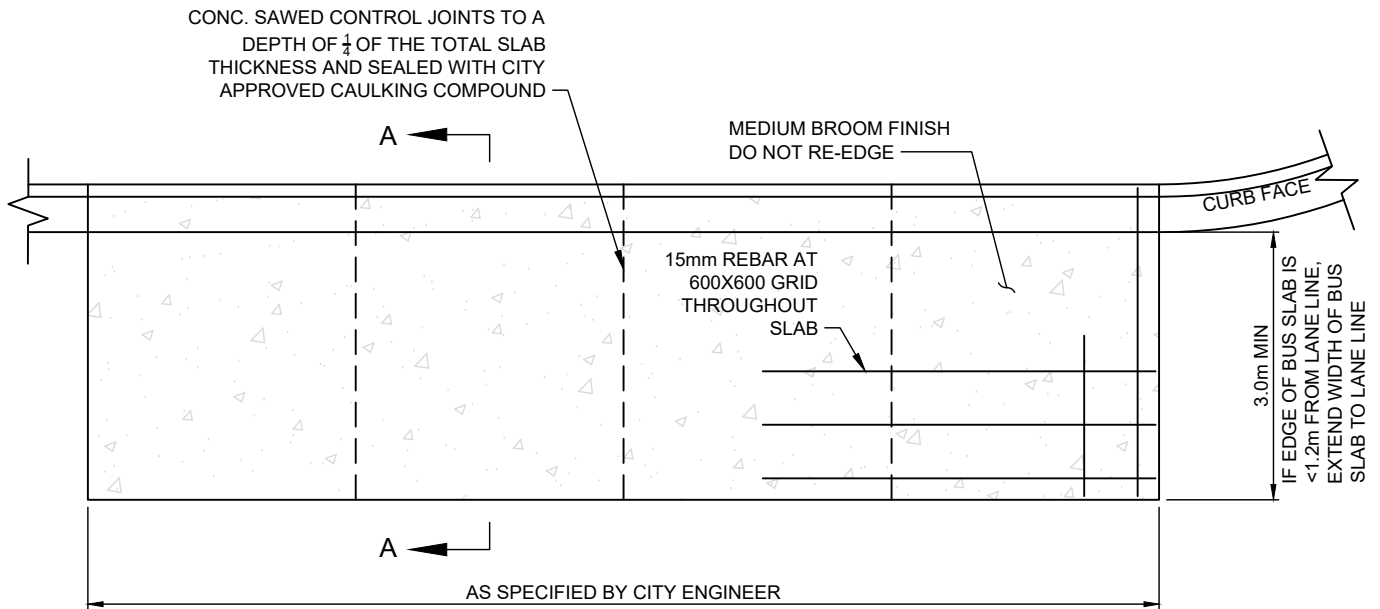
NOTES:

1. VEGETATION CLEARANCE SHALL BE A MINIMUM VERTICAL CLEARANCE OF 2.5m AND A MINIMUM 0.5m HORIZONTAL CLEARANCE.
2. MAXIMUM TRAIL GRADES:
 - 3% SUSTAINED GRADE
 - 5% GRADE FOR DISTANCES 30m OR LESS
 - 10% GRADE FOR DISTANCES 15m OR LESS
 - SOME STAIRS ALLOWED
3. ENSURE ADEQUATE SITE LINES ON CORNERS. REFER TO BICYCLE FACILITY DESIGN GUIDELINES (2.3 - 2.4).
4. RESIDENTIAL BUFFER SHALL BE A MINIMUM OF 2.0m TO A MAXIMUM 5.0m.
5. REFER TO CITY OF NANAIMO - TRAIL PLAN - DESIGN GUIDELINES (MAY 2007) FOR ADDITIONAL DESIGN INFORMATION.



**MULTI-USE PATHS
PATH OR WALKWAY (SOFT SURFACE)**

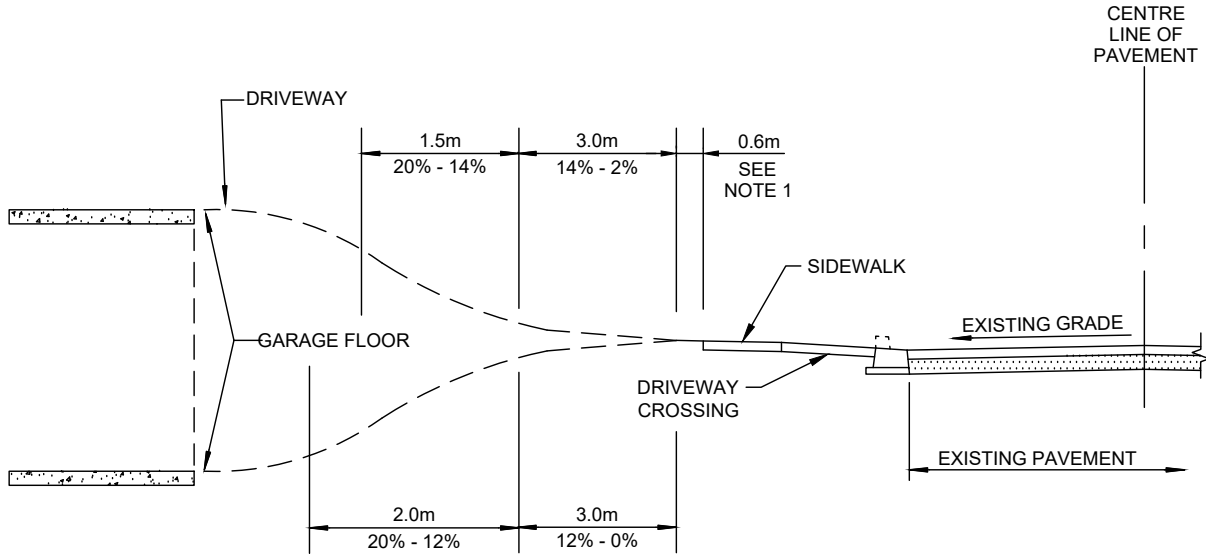
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Rev Date:	MAY 2020
Dwg No:	CS-22



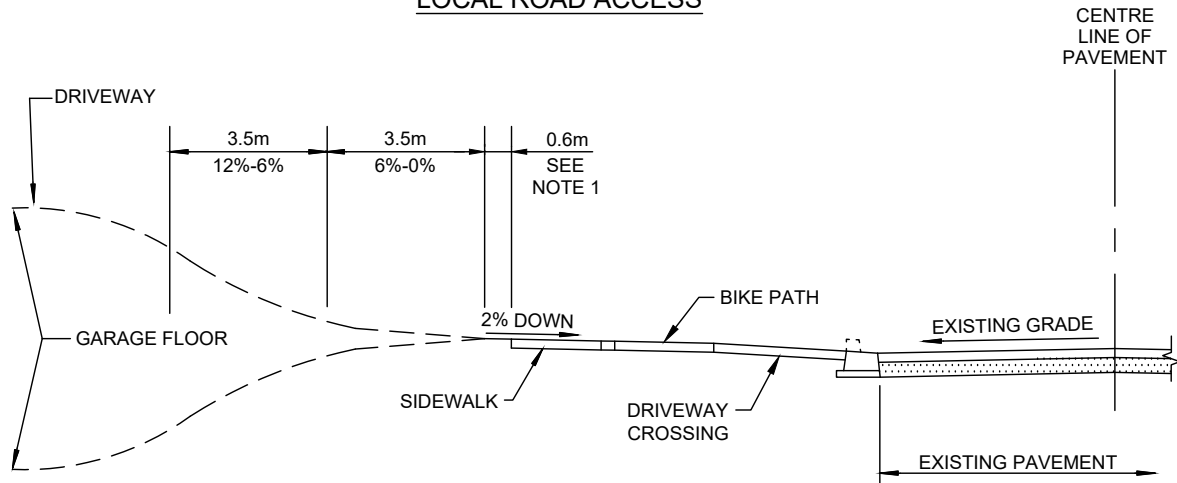
SECTION A-A

NOTES:

1. THE BUS SLAB SHOULD BE INSTALLED AS A CONTINUOUS POUR. IF THE BUS SLAB IS INSTALLED IN NO MORE THAN TWO SEPARATE POURS, THEN THE EDGE OF THE POUR MUST BE KEYED OR REBAR INSERTS USED TO TIE BOTH PADS TOGETHER.
2. USE 15mm REBAR WITH MINIMUM 75mm COVER.
3. PLACE REBAR MAT AT 150mm BELOW TOP OF CONCRETE.
4. MILL AND RE-CONTOUR AC TO MATCH CONCRETE BUS SLAB CROSS FALL.



LOCAL ROAD ACCESS

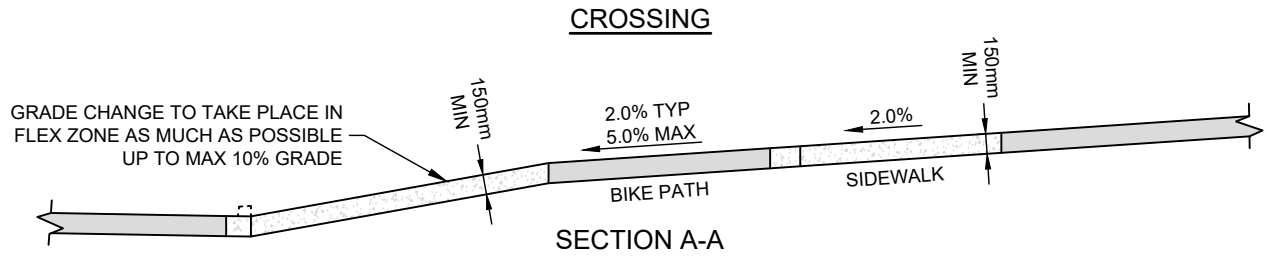
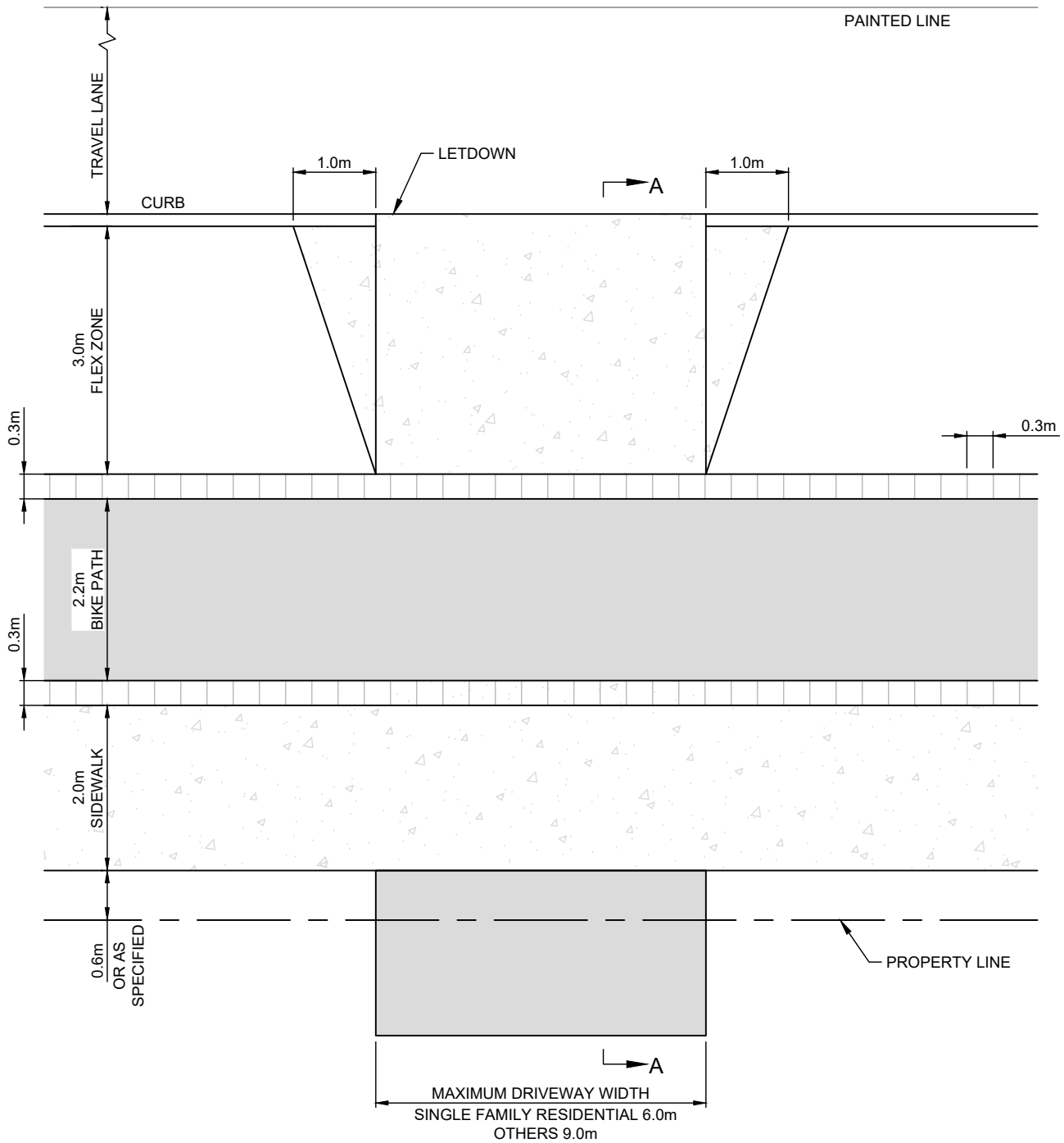


COLLECTOR OR ARTERIAL ROAD ACCESS

NOTES:

1. THE RISE OR FALL OF THE DRIVEWAY SHALL BEGIN BEHIND THE SIDEWALK TOWARDS THE PROPERTY.
2. SEE SECTION 8.04.4A FOR MAXIMUM SLOPES FOR DRIVEWAY EDGES.
3. IN THE CASE OF SUBDIVISION WHERE A DRIVEWAY WILL PROVIDE ACCESS TO THREE OR MORE PARCELS, THE DRIVEWAY SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER; AS PER CITY OF NANAIMO GUIDELINES FOR THE APPROVAL, THE DESIGN AND THE CONSTRUCTION OF PRIVATELY OWNED COMMON ACCESS DRIVEWAYS.

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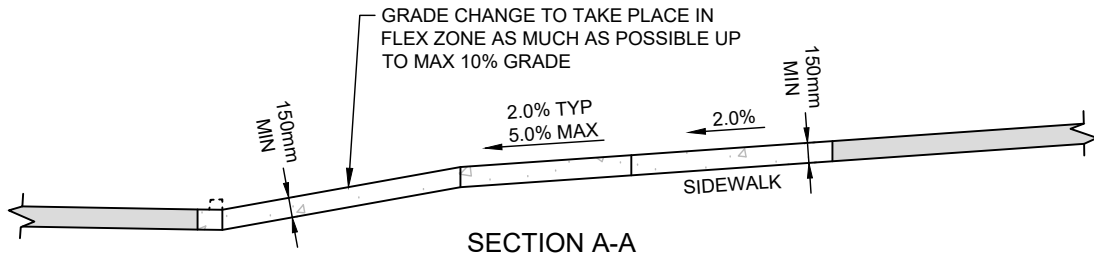
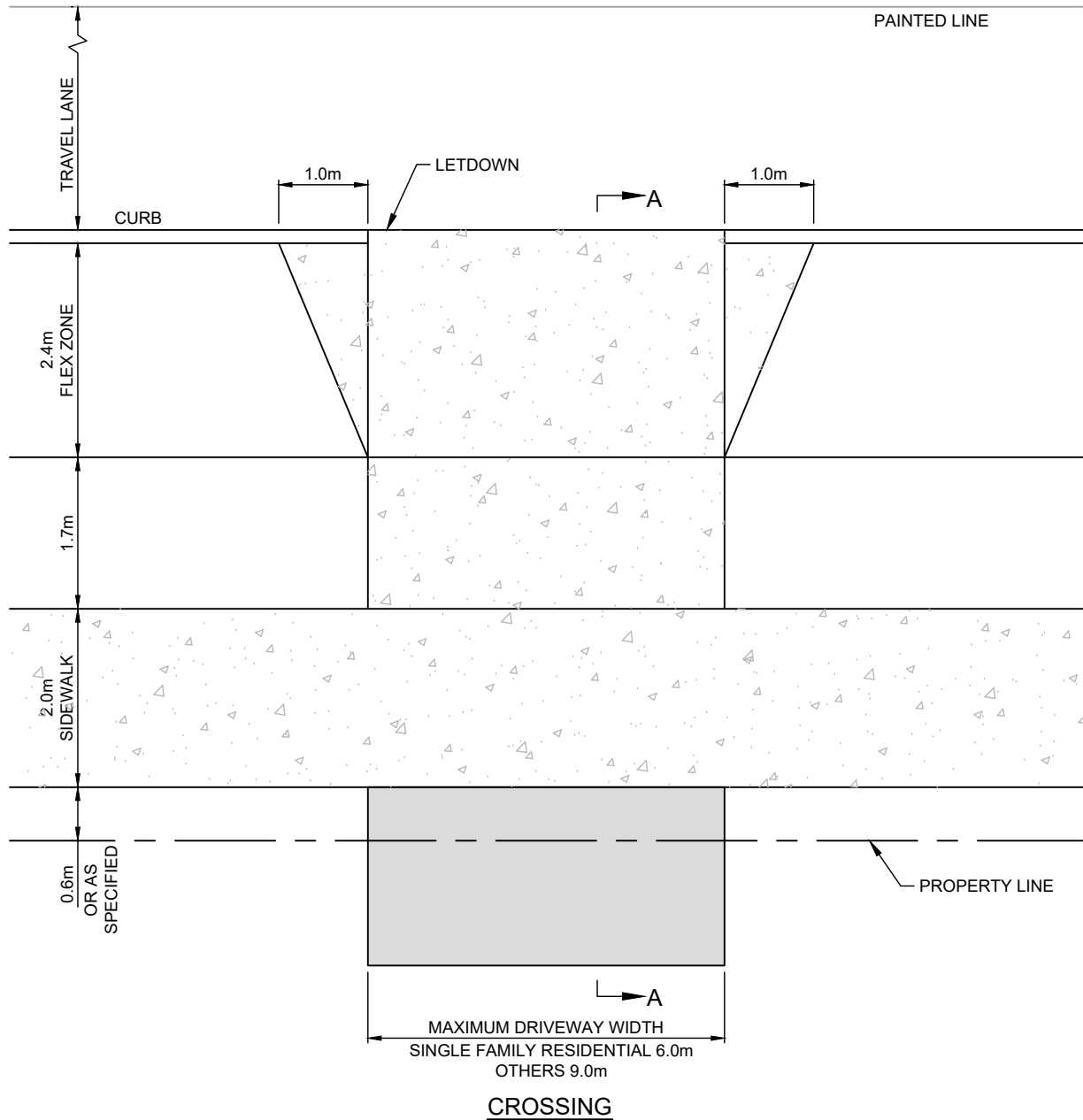
- NOTES:
1. USE OF TWSI's TO BE DETERMINED BY ENGINEER.
 2. FOR CONCRETE FINISHING DETAILS SEE DWG. CS-7.
 3. CONCRETE SURFACES TO BE A MINIMUM THICKNESS OF 100mm AND 150mm WHERE VEHICLE TRAFFIC IS ANTICIPATED.



**DRIVEWAYS AND CROSSINGS
TYPICAL URBAN COLLECTOR**

Scale:	NTS
Created:	OCT 2019
Rev Date:	MAY 2020
Dwg No:	CS-25

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NOTES:

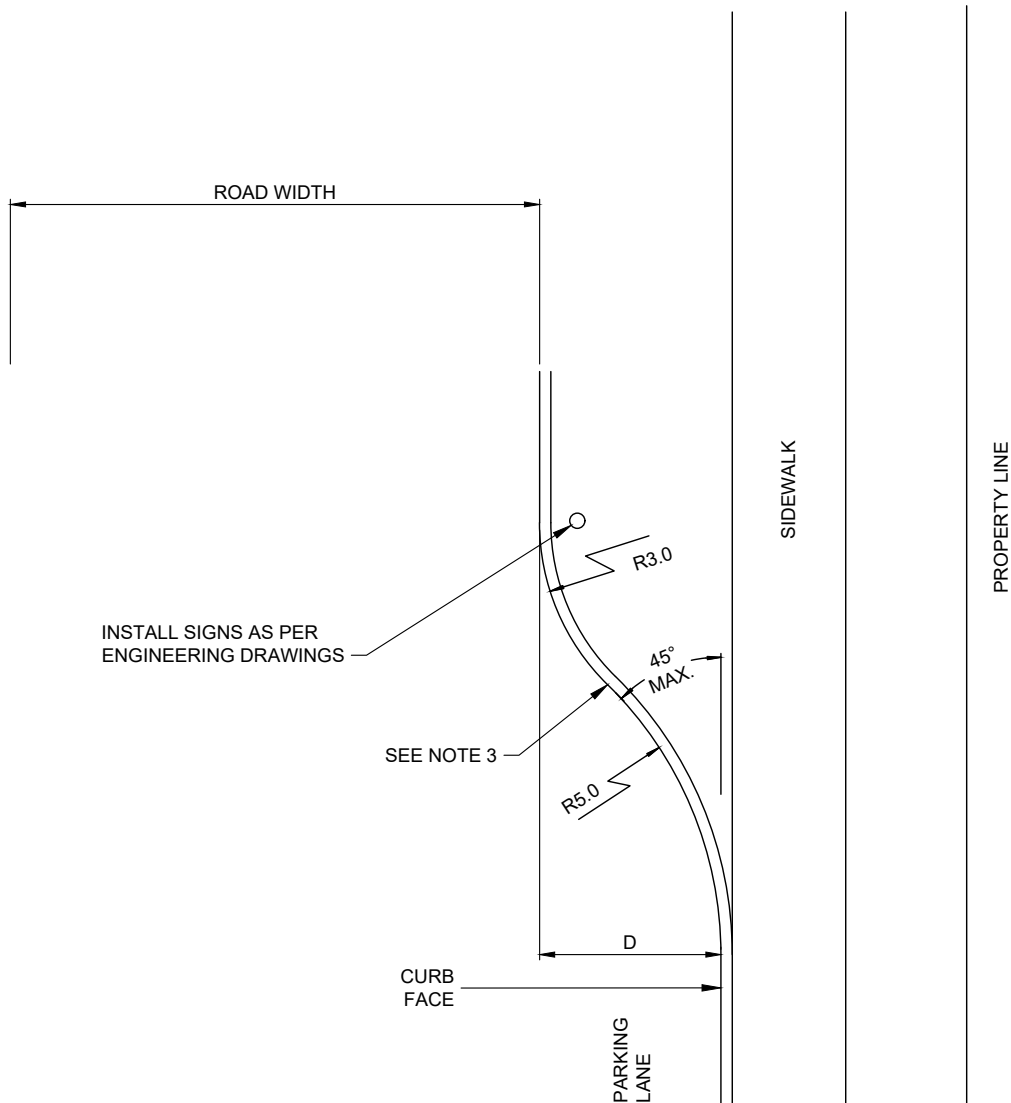
1. USE OF TWSI's TO BE DETERMINED BY ENGINEER.
2. FOR CONCRETE FINISHING DETAILS SEE DWG. CS-7.
3. CONCRETE SURFACES TO BE A MINIMUM THICKNESS OF 100mm AND 150mm WHERE VEHICLE TRAFFIC IS ANTICIPATED.

6-24-2020



**DRIVEWAYS AND CROSSINGS
TYPICAL URBAN LOCAL**

Scale:	NTS
Created:	OCT 2019
Rev Date:	MAY 2020
Dwg No:	CS-26



NOTES:

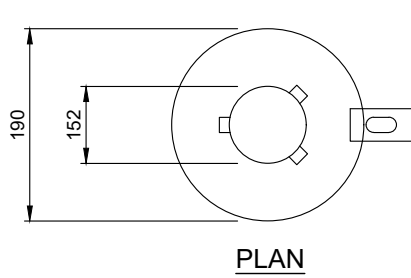
1. "D"=DEPTH OF CURB EXTENSION SHOULD BE SIMILAR TO THE WIDTH OF THE PARKING LANE (TYPICALLY. 2.4m RESIDENTIAL OR 3.0m INDUSTRIAL)
2. INCLUDE A TANGENT AT 45° TO THE CURB FACE BETWEEN RADII WHERE "D" IS GREATER THAN 2.4m.
3. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.



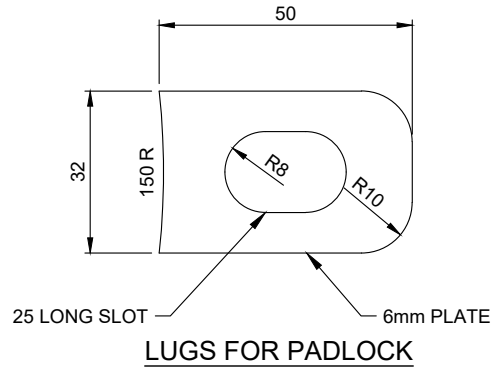
DRIVEWAYS AND CROSSINGS
CURB EXTENSION

Scale:	NTS
Created:	APR 2012
Rev Date:	MAY 2020
Dwg No:	CS-27

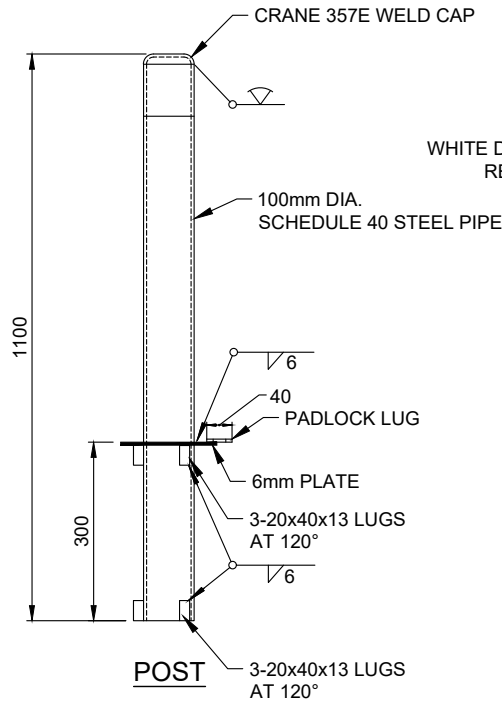
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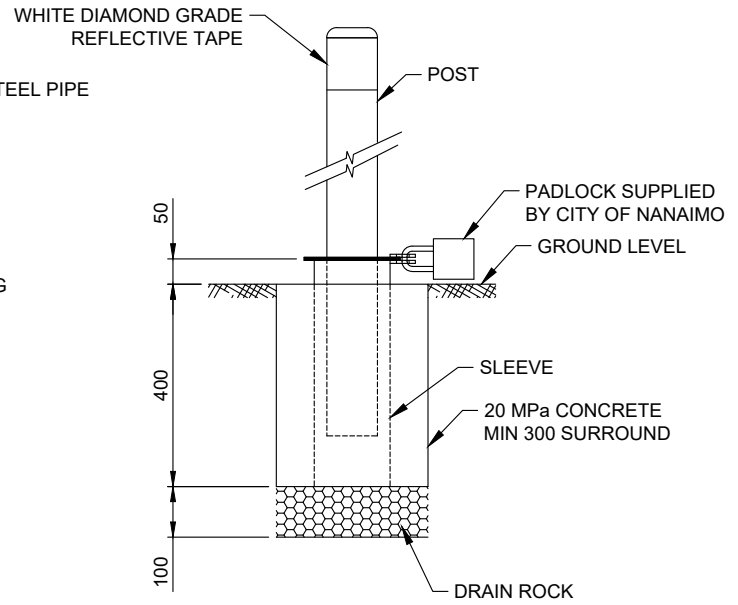
PLAN



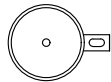
LUGS FOR PADLOCK



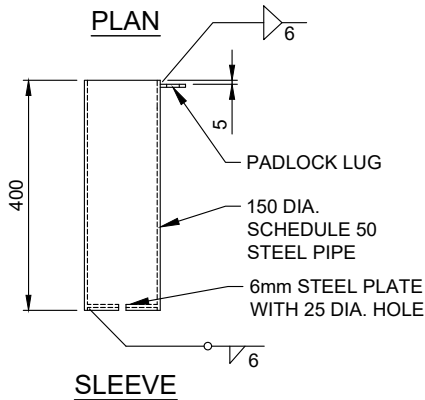
POST



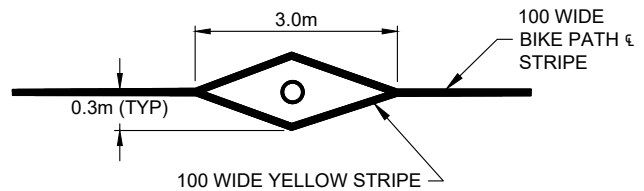
ASSEMBLY



PLAN



SLEEVE



**CENTRE BARRIER POST
PAVEMENT MARKING**

NOTES:

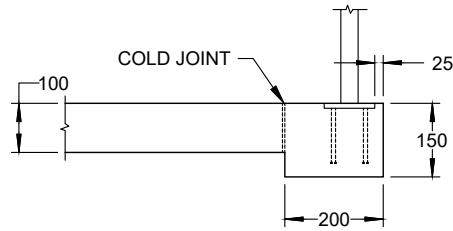
1. FOR USE ON MULTI-USE PATHWAYS WHEN NECESSARY TO PREVENT VEHICLE ACCESS.
2. ALL STEEL TO BE BLACK POWDER COATED TO ASTM D7803.
3. PADLOCK TO BE INSTALLED IN THE DIRECTION OF THE TRAIL AND NOT ON THE SIDE BLOCKING THE THROUGH ZONE.

3-18-2020

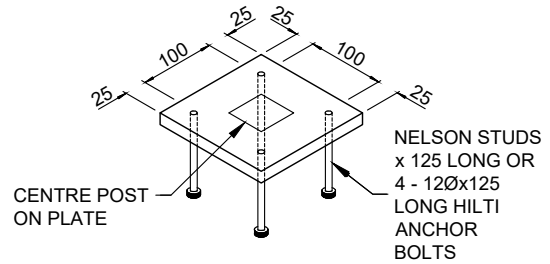


**BOLLARDS
REMOVABLE BARRIER POST**

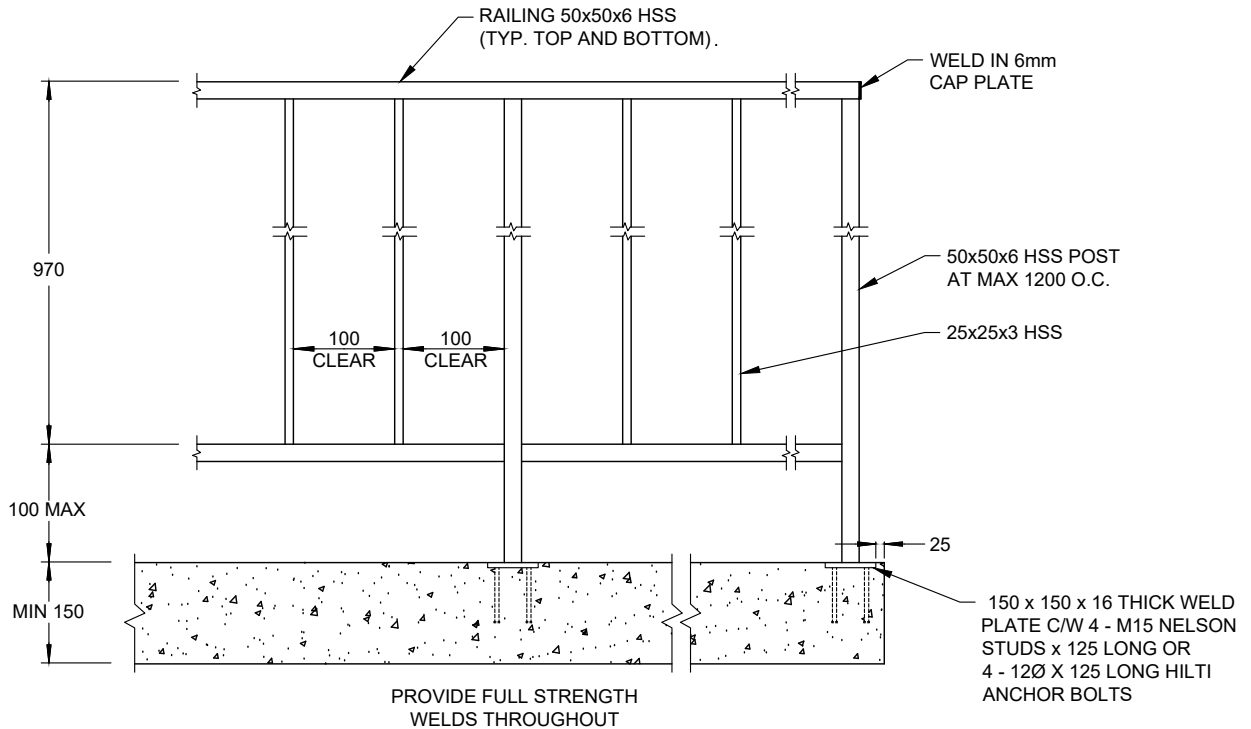
Scale:	NTS
Created:	MAY 2001
Rev Date:	MAY 2020
Dwg No:	CS-30



DETAIL FOR LOCATIONS WITH 100mm THICK SIDEWALK ADJACENT



DETAIL- WELD PLATE FOR RAILING POST

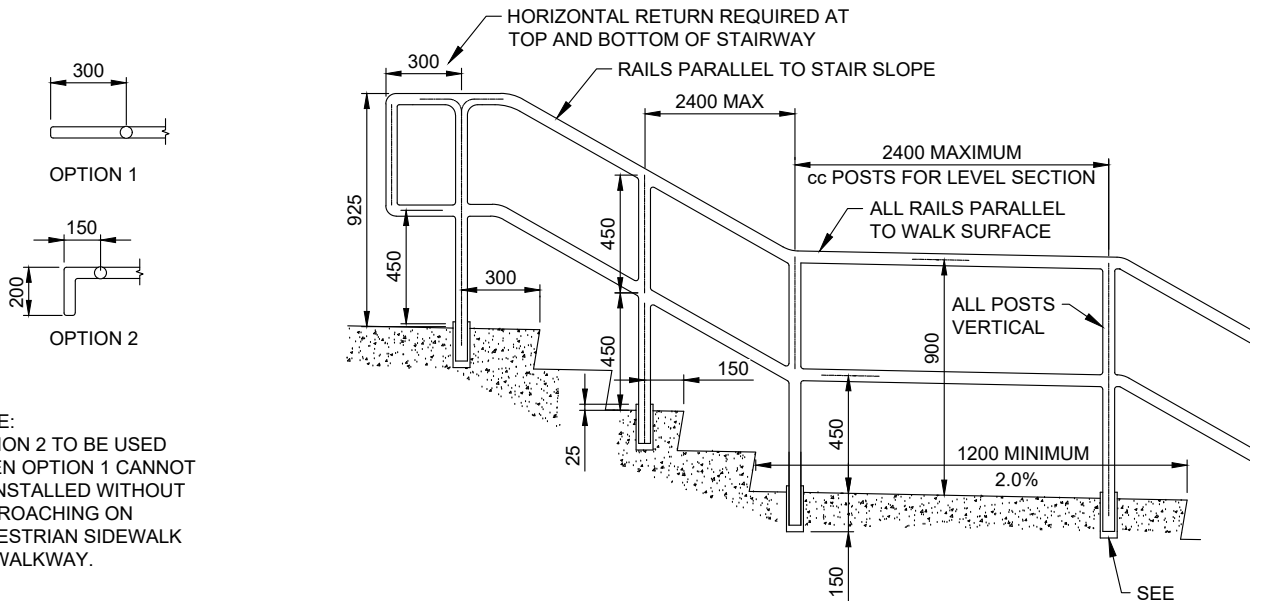


ELEVATION OF RAILING

NOTES:

1. SUPPLY, FABRICATION, ERECTION, STRUCTURAL DESIGN AND DETAILING OF ALL MISCELLANEOUS STEEL ARE TO BE IN ACCORDANCE WITH CSA S16.
2. ALL WELDING IS TO CONFORM TO CSA W59 AND TO BE PERFORMED ONLY BY FABRICATION SHOPS APPROVED BY THE CANADIAN WELDING BUREAU TO CSA W47.1 FOR DIVISION 1 OR 2 REQUIREMENTS. PROVIDE FULL STRENGTH WELDS AND ALL WELDS ARE TO BE CONTINUOUS FOR THE LENGTH OF EACH JOINT. GRIND AND FILE WELDS SMOOTH AND FLUSH.
3. ALL STEEL IS TO CONFORM TO THE REQUIREMENTS OF THE FOLLOWING STANDARDS:
 - a) ROLLED SECTIONS AND PLATE: CAN/CSA-G40.21, GRADE 300W.
 - b) HSS SECTIONS: CAN/CSA-G40.21, GRADE 350W, CLASS C OR CLASS H.
 - c) WELDING ELECTRODES: CSA W48 SERIES AND APPLICABLE AWS-A5 SERIES.
4. ALL STEEL TO BE BLACK POWDER COATED TO ASTM D7803.
5. DAMAGED SURFACES SHALL BE THOROUGHLY CLEANED AND PAINTED WITH 2 COATS OF ORGANIC ZINC RICH PAINT.
6. ALUMINUM MAY BE SUBSTITUTED IN PLACE OF STEEL AS AN ALTERNATE.

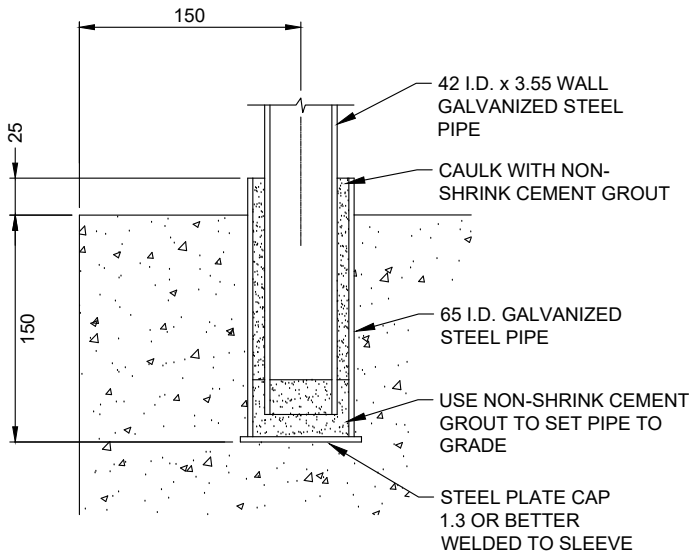




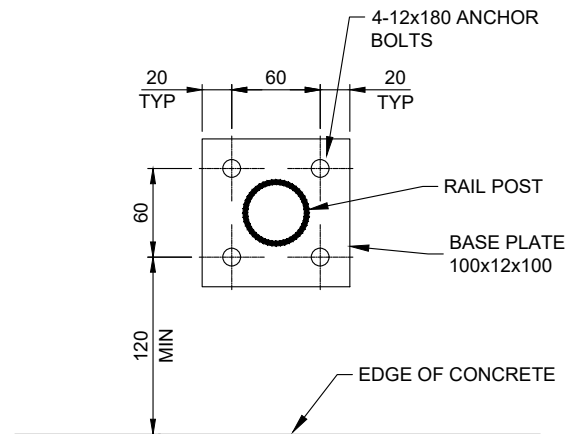
NOTE:
 OPTION 2 TO BE USED
 WHEN OPTION 1 CANNOT
 BE INSTALLED WITHOUT
 ENCROACHING ON
 PEDESTRIAN SIDEWALK
 OR WALKWAY.

HANDRAIL END PLAN
 VIEW OPTIONS 1 & 2

TYPICAL HANDRAIL FOR STAIRWAY



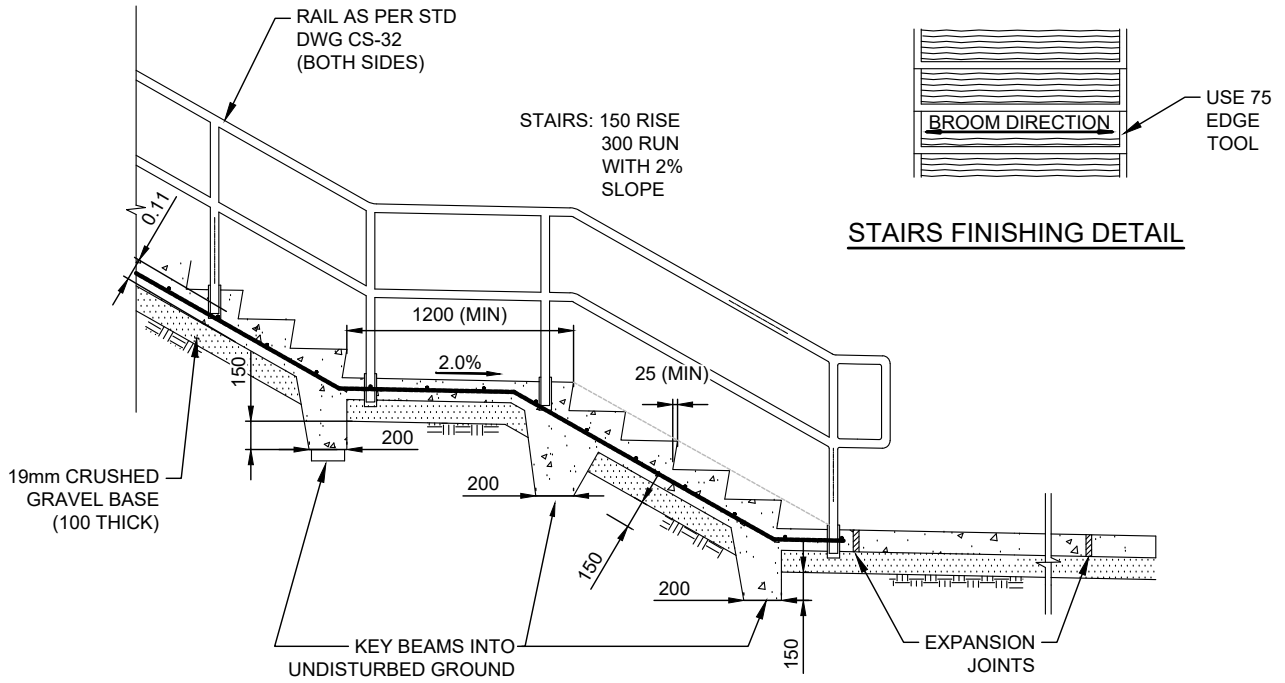
EMBEDDED MOUNTING



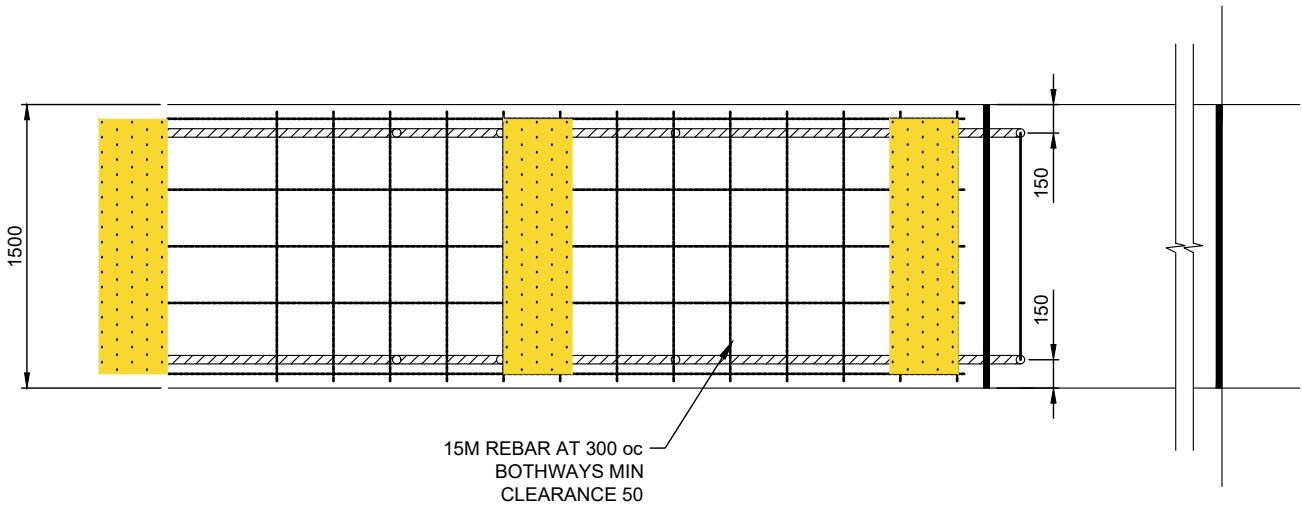
ATTACHED MOUNTING

NOTES:

1. ALL HANDRAILS SHALL BE FABRICATED FROM 42 I.D. x 3.55 WALL STEEL PIPE.
2. ALL JOINTS SHALL BE MITRED, WELDED ALL AROUND AND FILED SMOOTH.
3. ALL BENDS SHALL BE SMOOTH CIRCULAR CURVES.
4. ALL COMPONENTS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION TO CSA - 6164.
5. HANDRAILS REQUIRED ON BOTH SIDES OF STAIRWAY.
6. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.



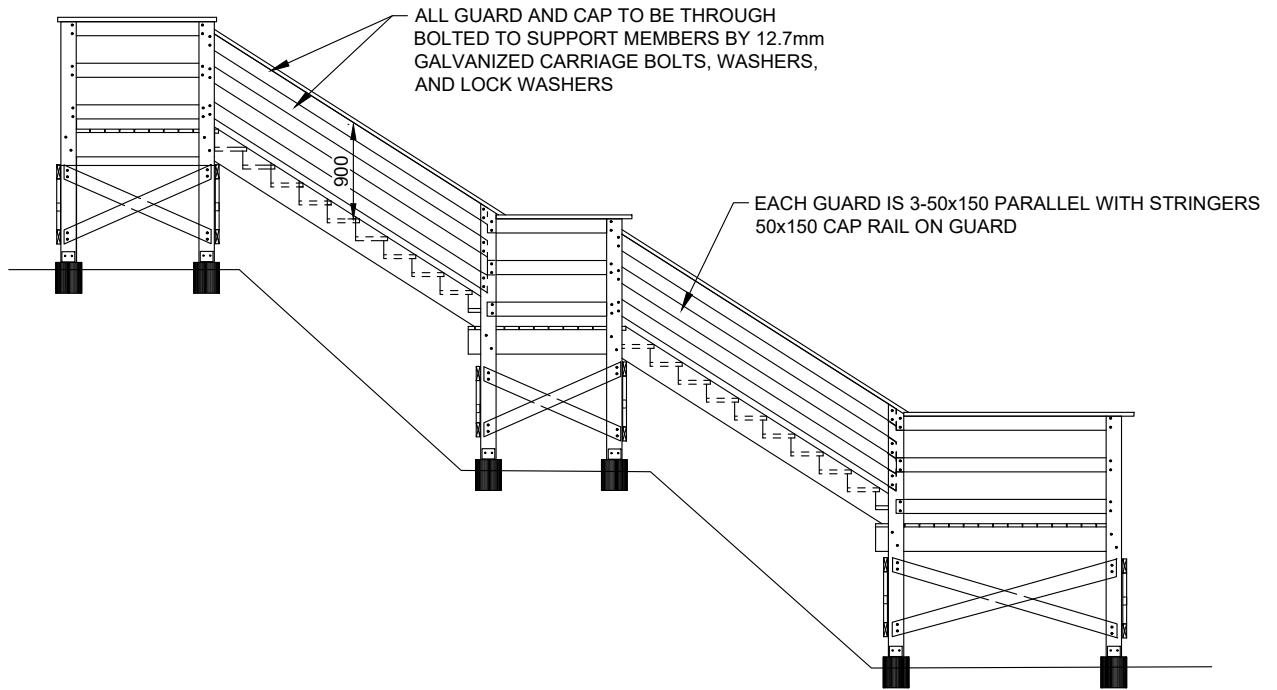
CONCRETE STAIRWAY ELEVATION



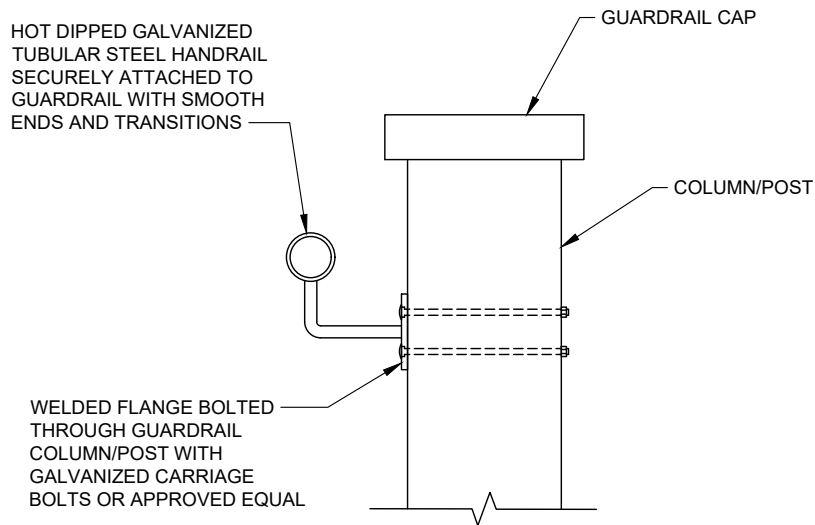
CONCRETE STAIRWAY PLAN

NOTES:

1. MAXIMUM OF 12 RISERS PER FLIGHT BETWEEN LANDINGS.
2. MAXIMUM WALKWAY GRADIENT IS 12%.
3. FOR CONCRETE MIX DESIGN CRITERIA REFER TO SECTION 8.
4. REINFORCING BARS TO CSA G30.18 GRADE 400.
5. FOR HANDRAIL DETAILS SEE STD. DWG CS-32.
6. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN.
7. TWSIs TO BE INSTALLED AT EVERY STAIR LANDING AS PER SECTION 8.
8. LIGHTING LEVELS TO BE IN ACCORDANCE WITH SECTION 10.



WOODEN STAIRWAY ELEVATION

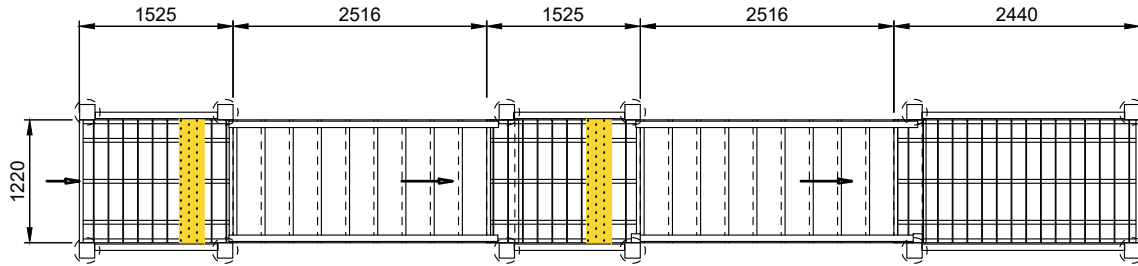


TYPICAL HANDRAIL SECTION

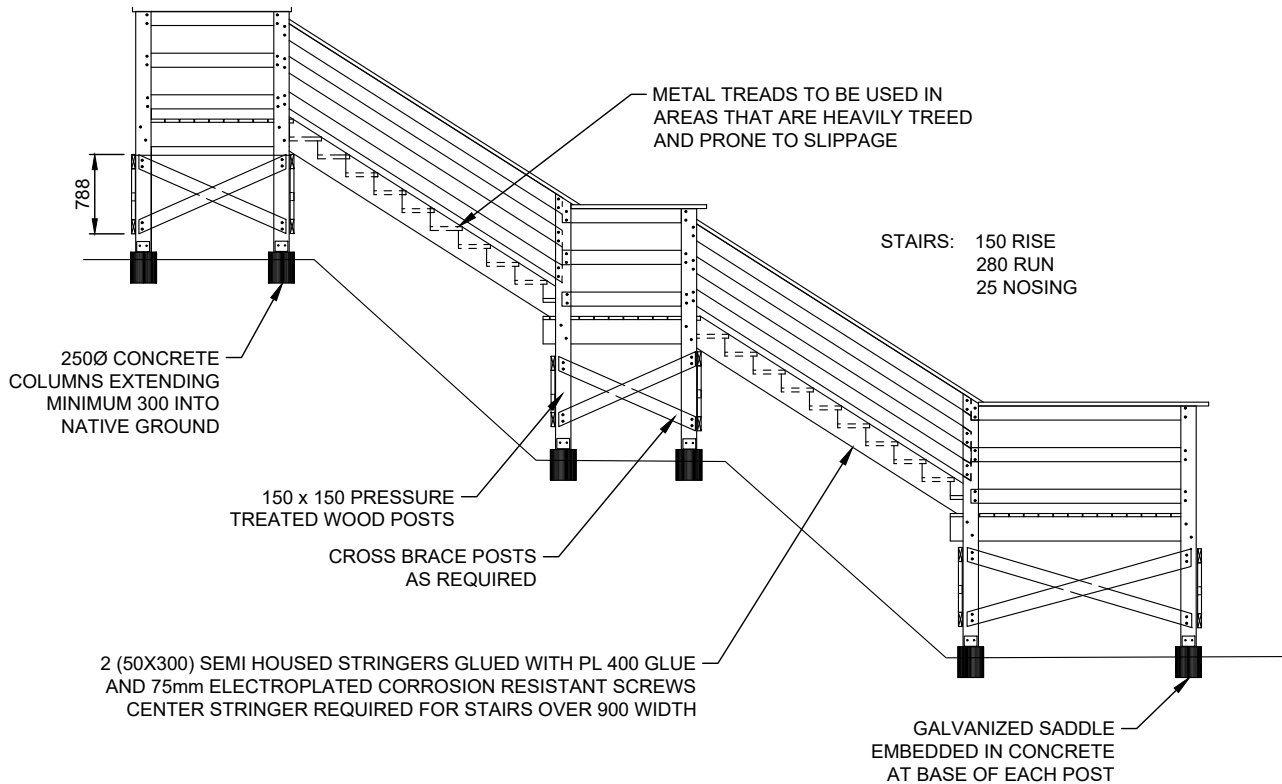
NOTES:

1. ALL TIMBER TO BE PRESSURE TREATED OR APPROVED EQUAL.
2. ALL GUARDRAILS TO BE CONSTRUCTED AS SHOWN.
3. GUARDRAILS REQUIRED ON BOTH SIDES OF STAIRWAY.
4. NO NAILS ON EXTERIOR DECK. SCREWS ONLY FOR ATTACHING CAP RAIL AND POSTS.
5. HANDRAILS TO BE INSTALLED ON STAIRS WITH MORE THAN THREE RISERS.
6. HANDRAILS MUST BE GRASPABLE 34" MIN - 42" MAX MEASURED VERTICALLY FROM STAIR NOSING LINE.
7. HANDRAILS TO BE HOT DIPPED GALVANIZED STEEL TUBULAR SECTION 48mm DIA x 3.55mm WALL OR APPROVED EQUAL.
8. FOR STAIRWAY DETAILS REFER TO STD. DWG. CS-35.
9. DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

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WOODEN STAIRWAY PLAN



WOODEN STAIRWAY ELEVATION

NOTES:

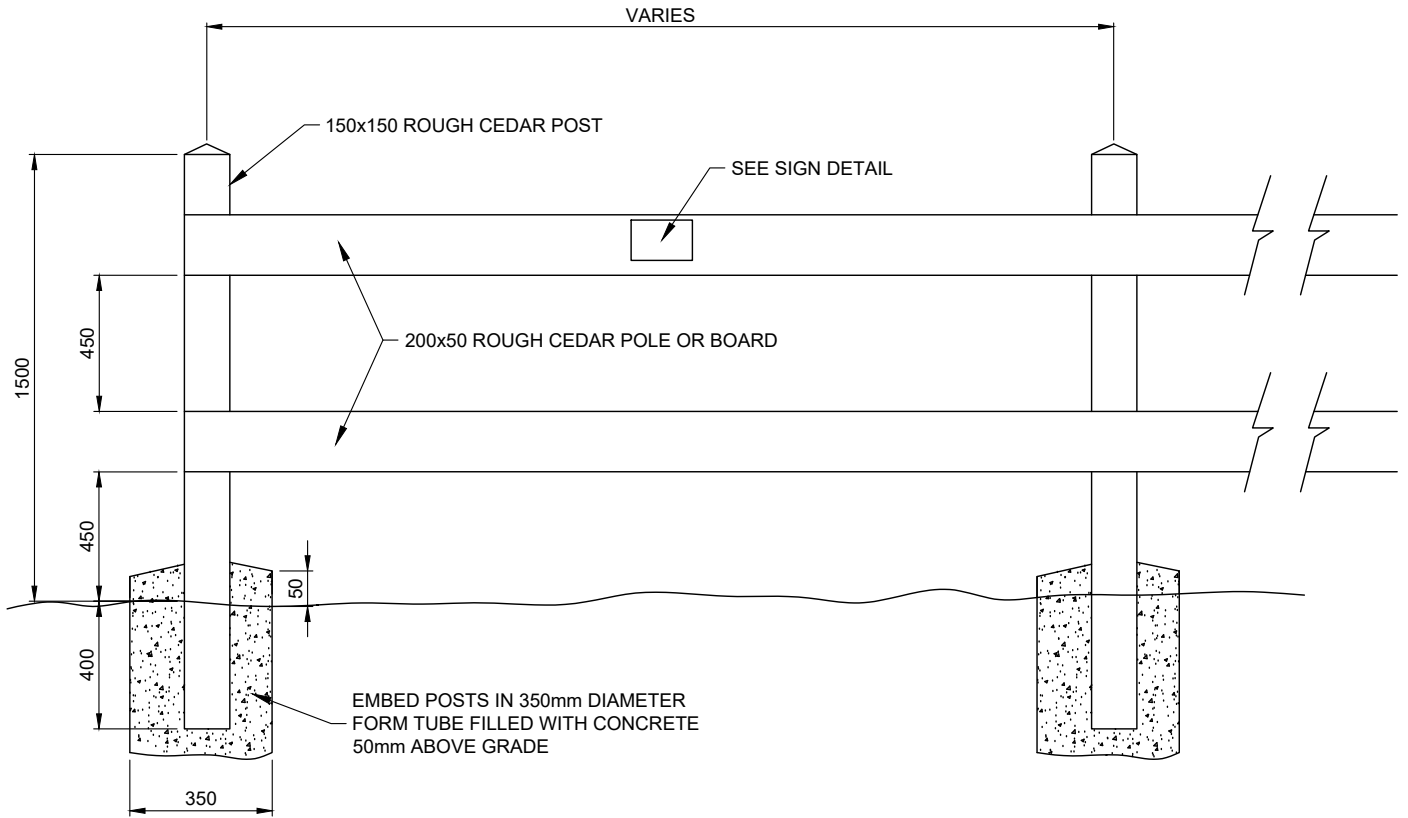
1. ALL TIMBER TO BE PRESSURE TREATED OR APPROVED EQUAL.
2. VEGETATION CLEARANCE TO BE 0.5m MINIMUM HORIZONTAL AND 2.0m VERTICAL.
3. ENSURE ADEQUATE SIGHTLINES ON CORNERS.
4. RESIDENTIAL BUFFER TO BE 5.0m.
5. REFER TO CITY OF NANAIMO - TRAIL PLAN - DESIGN GUIDELINES (MAY 2007) FOR ADDITIONAL DESIGN INFORMATION.
6. FOR GUARDRAIL AND HANDRAIL DETAILS REFER TO STD. DWG. CS-34.
7. STRUCTURAL CERTIFICATION REQUIRED WITH STAIR DESIGN SUBMISSION SEALED BY A PROFESSIONAL ENGINEER.
8. TWSIs TO BE INSTALLED AT EVERY STAIR LANDING AS PER SECTION 8.
9. ENGINEERED ALTERNATIVES FOR STAIR FOOTINGS MAY BE APPROVED.
10. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

6-15-2020



HANDRAILS AND STAIRWAYS
WOODEN STAIRWAY AND LANDING

Scale:	NTS
Created:	NOV 2016
Rev Date:	MAY 2020
Dwg No:	CS-35



NOTES:

1. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. TO BE INSTALLED AT EDGE OF SLOPE, 0.5m FROM EDGE OF PATHWAY
3. WHEN INSTALLED AS AN AQUATIC SETBACK FENCE, THE FOLLOWING MUST BE COMPLETED:
 - a) TO BE INSTALLED AT THE EDGE OF ALL AQUATIC SETBACK BOUNDARIES TO ENSURE THE SETBACK IS DELINEATED.
 - b) SIGN TO BE MOUNTED TO FENCE TO ENSURE THE SETBACK AREA IS PROTECTED.
 - c) SIGN TO BE INSTALL AT THE REAR OF EVERY LOT BACKING ONTO THE SETBACK AREA OR AT A 30m SPACING.

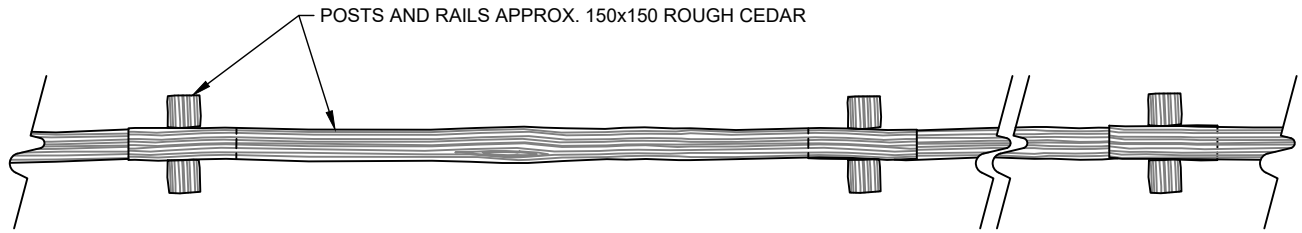


ENVIRONMENTALLY PROTECTED AREA SIGN

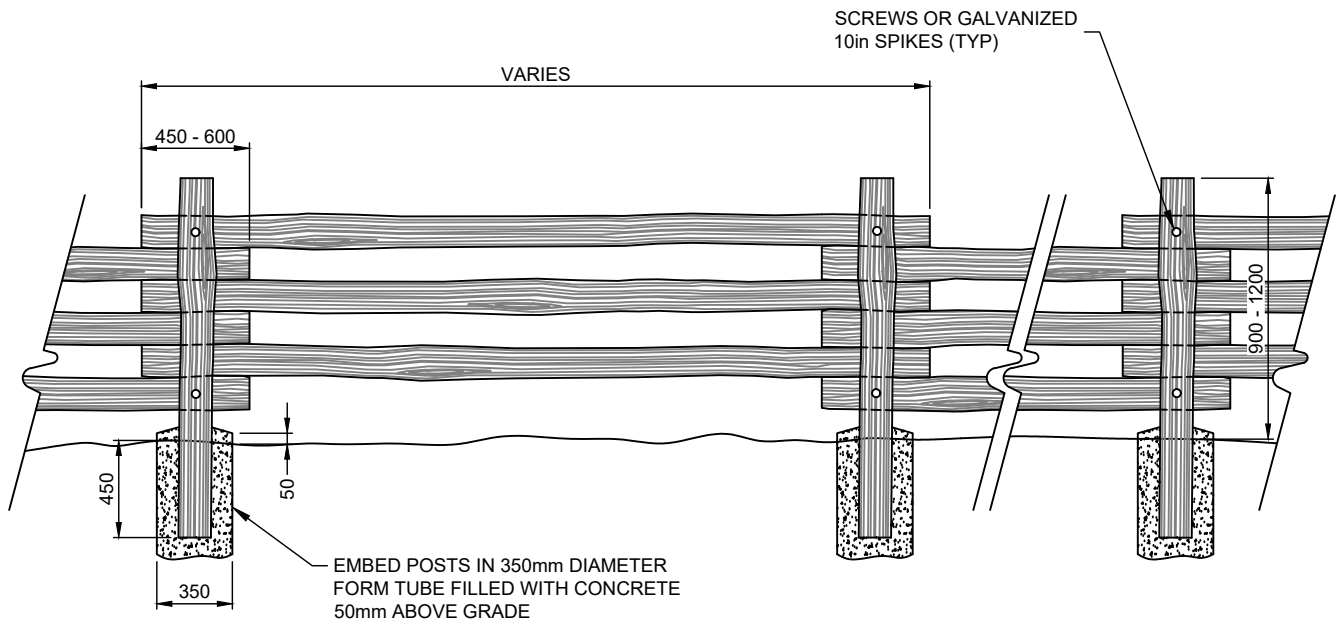


FENCES
WOOD RAIL

Scale:	NTS
Created:	NOV 2012
Rev Date:	MAY 2020
Dwg No:	CS-36



SPLIT RAIL FENCE PLAN



SPLIT RAIL FENCE ELEVATION

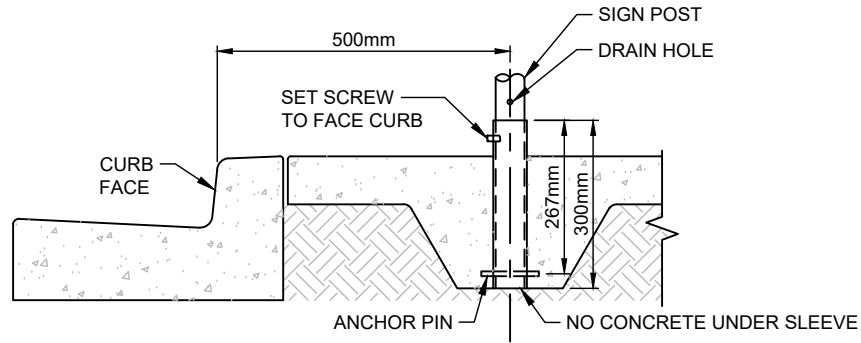
NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. TOP OF POSTS TO BE SECURED TOGETHER WITH WIRE.

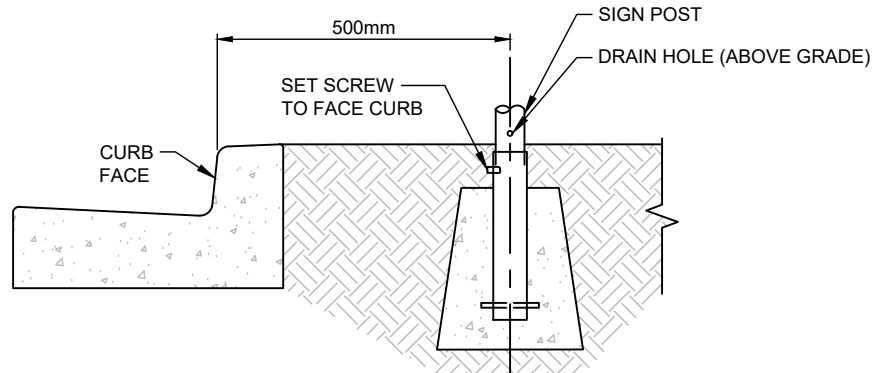


FENCES
SPLIT RAIL

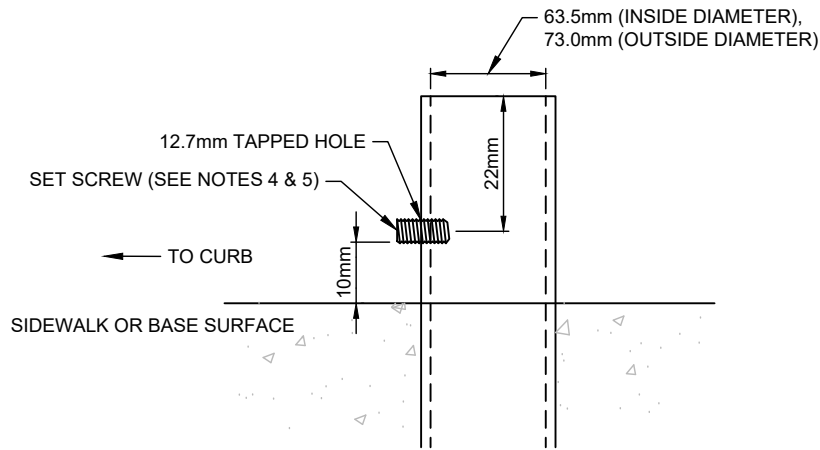
Scale:	NTS
Created:	DEC 2019
Rev Date:	MAY 2020
Dwg No:	CS-37



POST AND SLEEVE INSTALLATION



POST AND BASE INSTALLATION

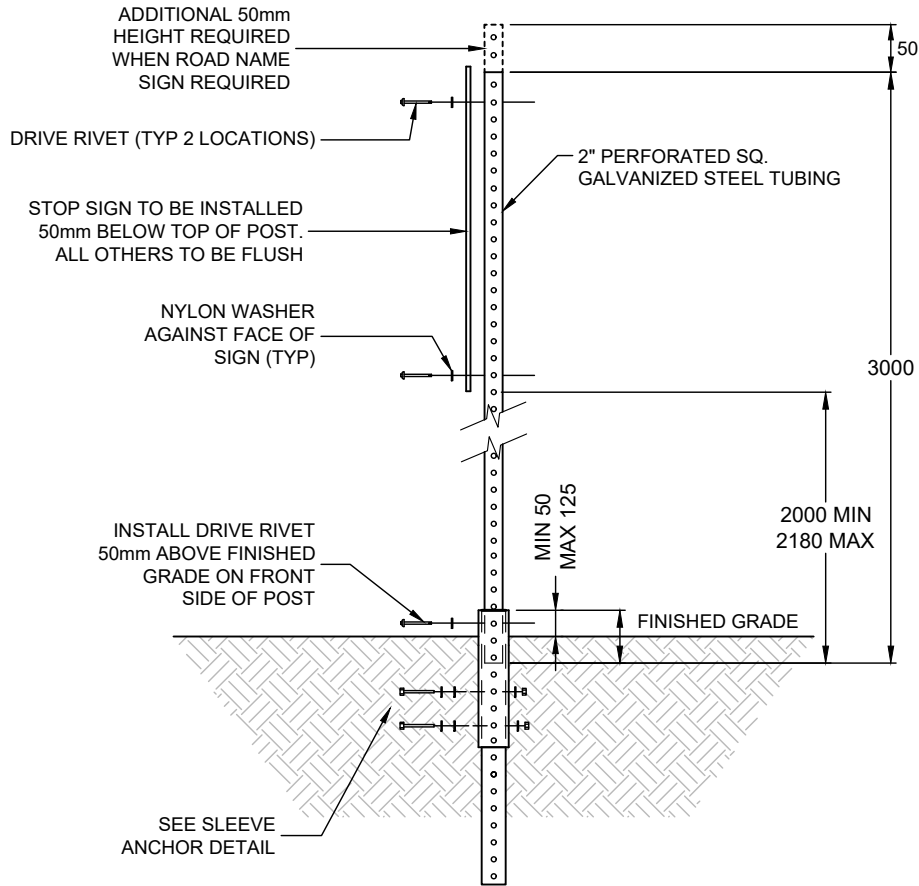


SLEEVE DETAIL

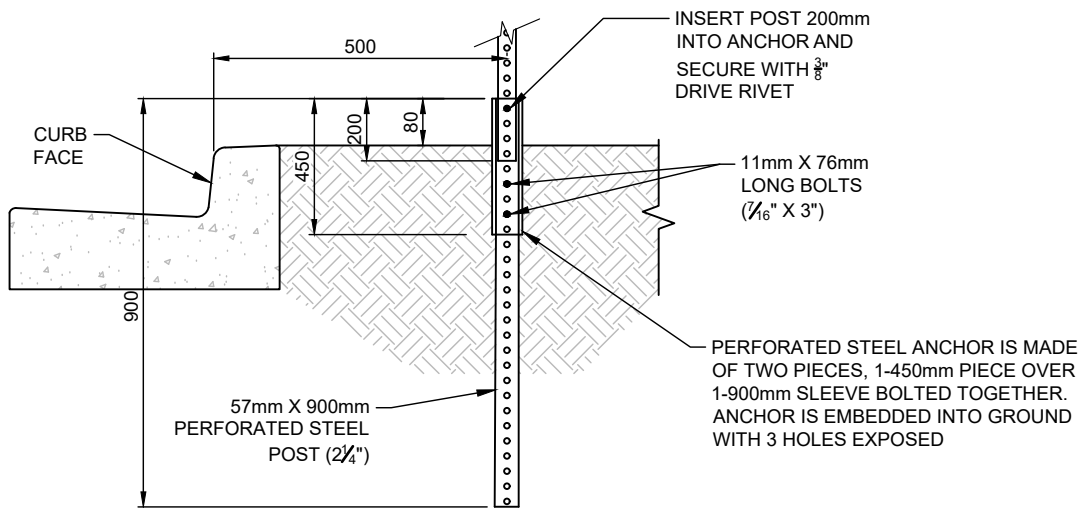
NOTES:

1. CAUTION MUST BE TAKEN TO ENSURE THAT NO CONCRETE OR DEBRIS GET INSIDE THE SLEEVE.
2. THE SLEEVE IS TO BE ABSOLUTELY PLUMB.
3. ALTERNATIVE SIGN LOCATIONS MAY BE NECESSARY IN INSTANCES OF CONFLICT WITH UNDERGROUND UTILITIES.
4. POST AND SLEEVE: 12.7mm DIAMETER x 12.7mm LENGTH CUP POINT STAINLESS STEEL ALLEN KEY SET SCREW.
5. POST AND BASE: 12.7mm DIAMETER x 19.1mm LENGTH CUP POINT STAINLESS STEEL ALLEN KEY SET SCREW.

G:\INFRASTRUCTURE PLANNING\STANDARDS & PRODUCTS\SI\MOESS\EDITION NO13 MAY 2020\2020-05-01 FINAL MOESS EDITION NO13.DOCUMENT\2020 DRAWING SECTIONS\SECTION 8 DWGS\CS-41



PERFORATED STEEL SIGN POST



SLEEVE ANCHOR DETAIL

NOTES:

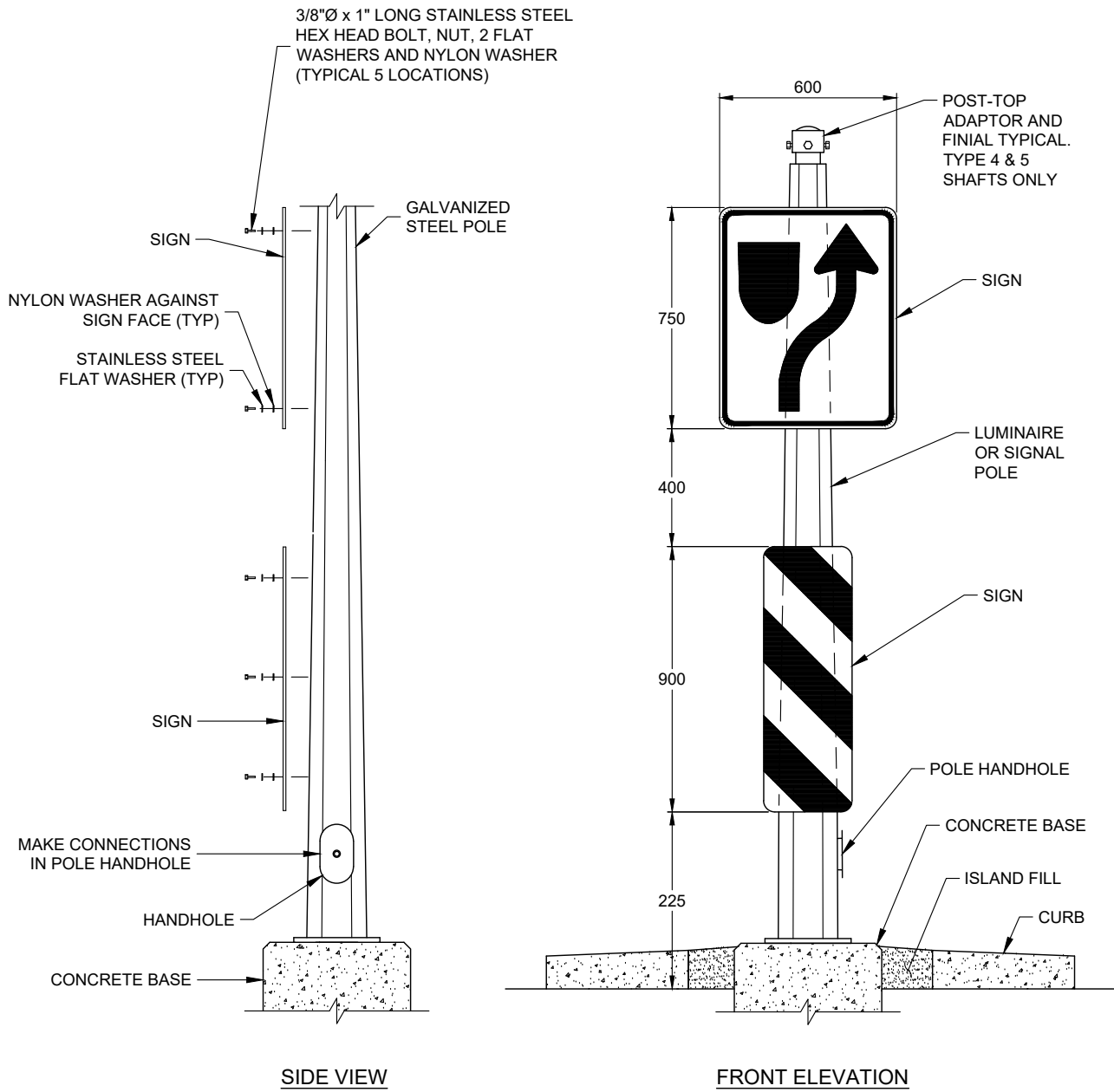
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS SHOWN OTHERWISE.

3-18-2020



TRAFFIC SIGNAGE
PERFORATED STEEL SIGN

Scale: NTS
Created: APR 2013
Rev Date: MAY 2020
Dwg No: CS-41



NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSION IN MILLIMETERS UNLESS OTHERWISE NOTED.



**TRAFFIC SIGNAGE
SIGNS ON STEEL POLES**

Scale:	NTS
Created:	MAY 2013
Rev Date:	MAY 2020
Dwg No:	CS-42