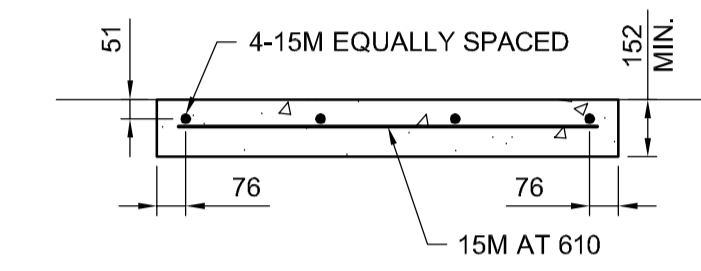


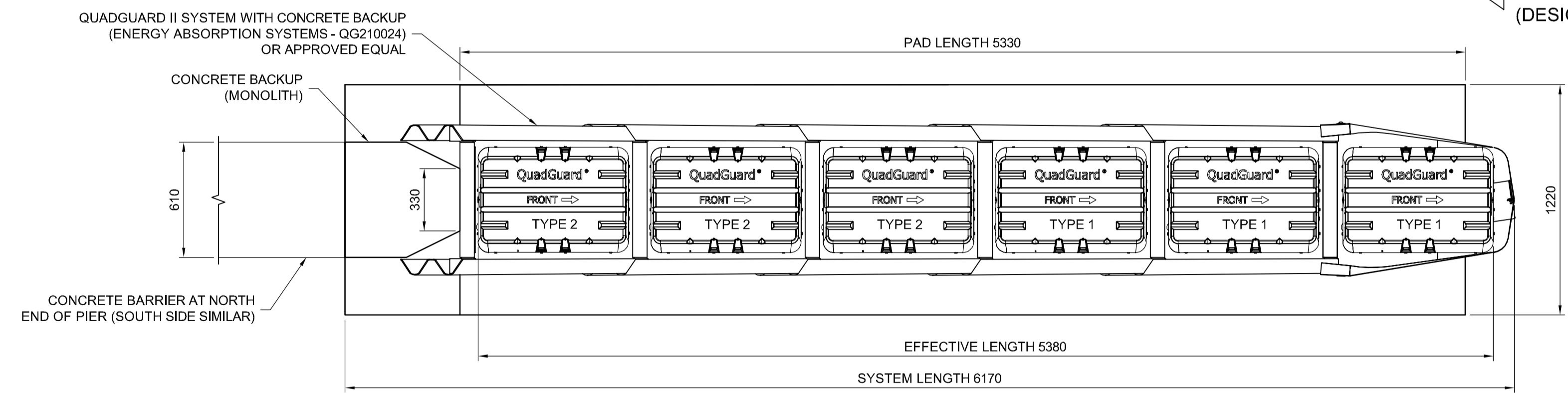
PLAN - PAD REINFORCING
1:20



SECTION A
1:20

- CRASH CUSHION WITH CONCRETE BACKUP NOTES:**
- PROVISION SHALL BE MADE FOR REAR FENDER PANELS TO SLIDE REARWARD UPON IMPACT 762 MIN.
 - WHERE NECESSARY, THE CONTRACTOR SHALL SUPPLY AN ADEQUATE TRANSITION FROM THE QUADGUARD II SYSTEM TO THE OBJECT BEING SHIELDED.
 - ALL UNITS ARE MILLIMETERS UNLESS OTHERWISE NOTED.
 - BACKUP, EXTENSION PANEL, AND NOSE ASSEMBLIES ARE NOT INCLUDED IN MODEL NUMBER, ORDER SEPARATELY.
 - CURB SHALL BE SD-205 BARRIER CURB (100 HEIGHT) ALONG ENTIRE LENGTH OF QUADGUARD II SYSTEM. CURB SHALL BE SD-205 BARRIER CURB (100 HEIGHT) 15m IN FRONT OF QUADGUARD II SYSTEM IN THE DIRECTION OF TRAVEL.
 - THE QUADGUARD II SYSTEM HAS BEEN TESTED TO NCHRP 350.
 - CRASH CUSHION SHALL BE SUPPLIED TO ACCOMMODATE A DESIGN SPEED OF 80 km/h. THE SYSTEM SHALL MEET THE REQUIREMENTS OF NCHRP REPORT 350 TEST LEVEL 3.

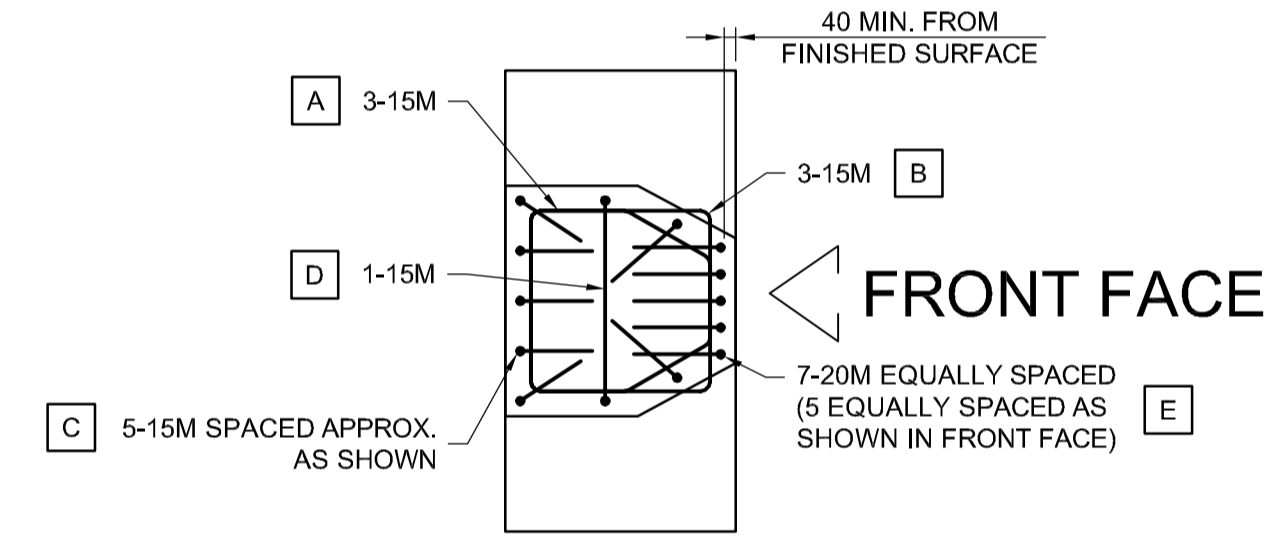
NOTE: DETAILS AND NOTES SHOW QUADGUARD II SYSTEM WITH CONCRETE BACKUP. EQUIVALENT CRASH CUSHION SYSTEM CAN BE USED PENDING APPROVAL FROM THE CONTRACT ADMINISTRATOR.



SITE PLAN
1:20

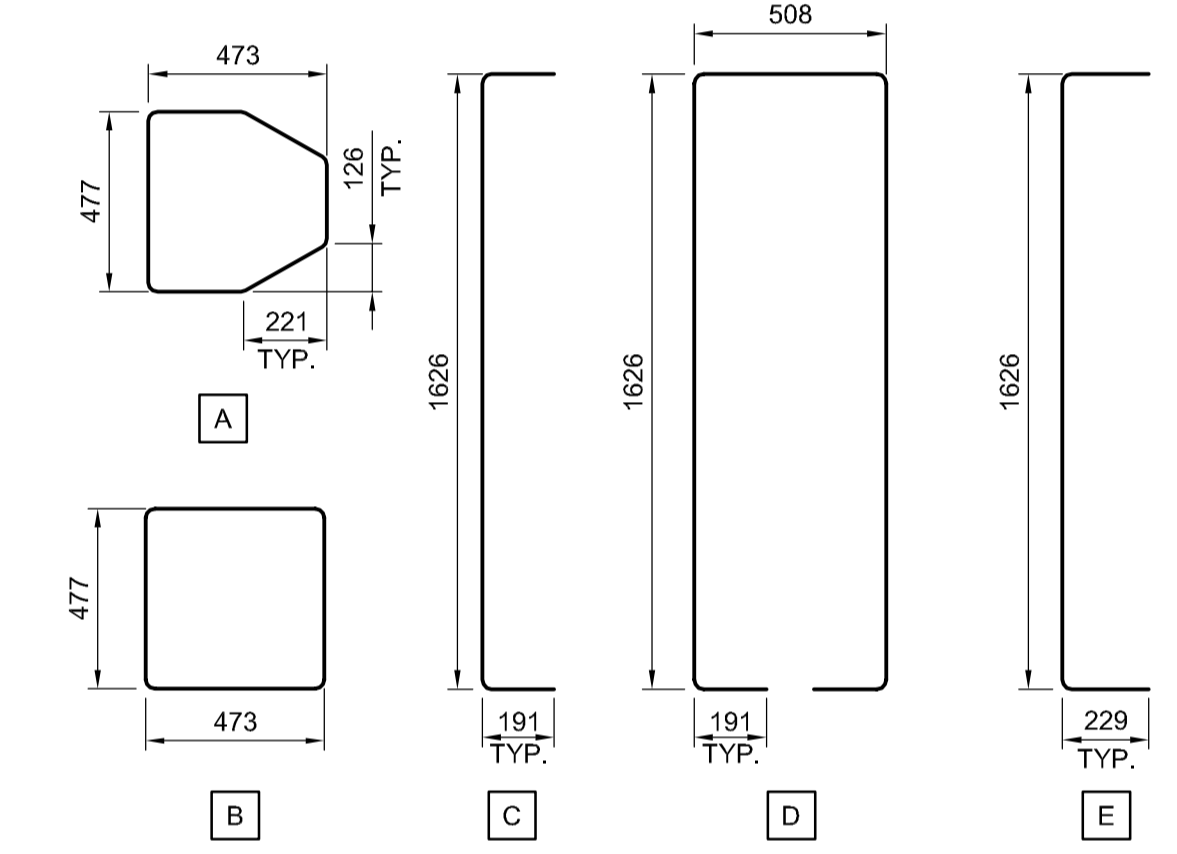
TRAFFIC
(DESIGN SPEED 80 km/h)

TRAFFIC
(DESIGN SPEED 80 km/h)



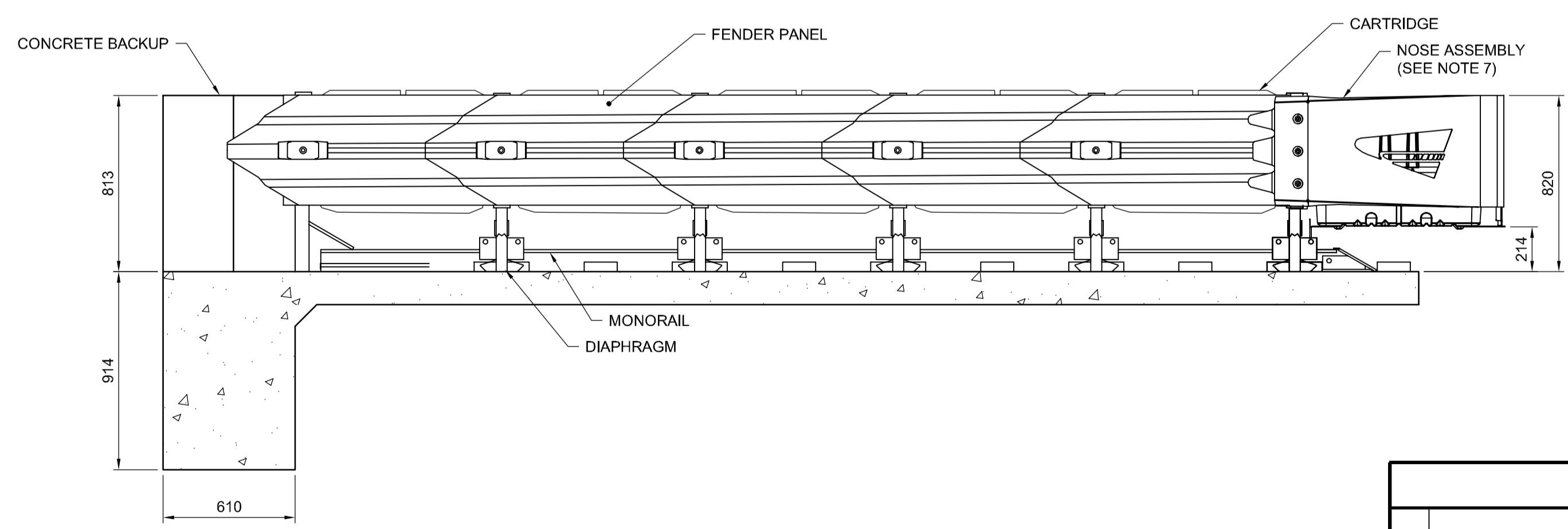
MONOLITH TOP VIEW
1:20

FRONT FACE

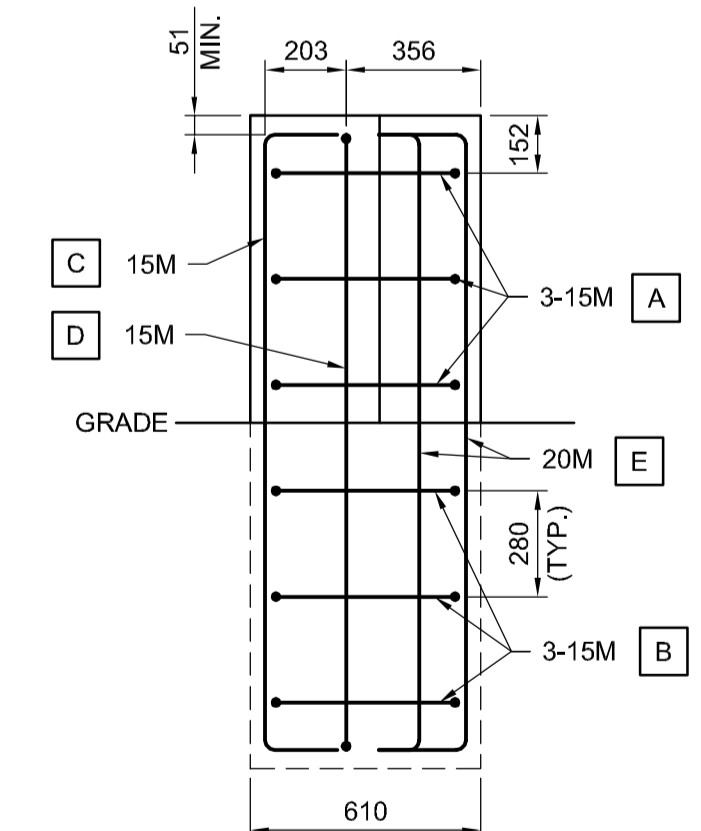


MONOLITH REINFORCING DETAILS
1:20

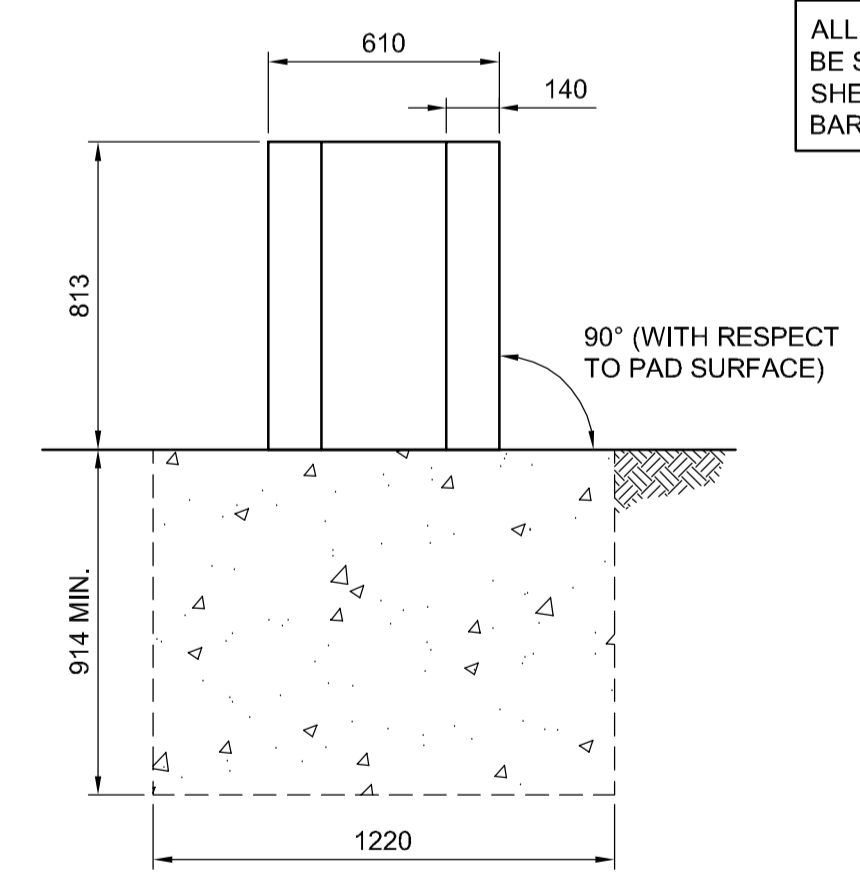
ALL CRASH CUSHION REINFORCING TO BE STAINLESS STEEL AS PER NOTE ON SHEET 001 REGARDING TRAFFIC BARRIER REINFORCING STEEL.



SIDE VIEW
1:20



MONOLITH SIDE VIEW
1:20



MONOLITH FRONT VIEW
1:20

ENGINEER'S SEAL FOR SELECTION OF CRASH CUSHION STYLE ONLY. CONCRETE PAD AND REINFORCING DESIGN, AND CRASH CUSHION DESIGN AND INSTALLATION SHALL BE AS PER MANUFACTURER'S DETAILS.

G:\CAD\163353\Technical\Workspaca\Engineering\Drawings and Figures\Structures\Contract\163353-C2-CON-CS-PIER GUARDRAIL.dwg

APEGM
Certificate of Authorization
Dillon Consulting Limited (MB)
No. 1789 Date: 2017/01/09

DESIGNED BY	RTP	CHECKED BY	DBW
DRAWN BY	MDG	APPROVED BY	DBW
HOR. SCALE	AS SHOWN	RELEASED FOR CONSTRUCTION	
VERTICAL	AS SHOWN		
NO.	REVISIONS	DATE	BY
0	ISSUED FOR TENDER	17/01/09	DBW

DILLON CONSULTING

DESIGNED BY RTP CHECKED BY DBW
DRAWN BY MDG APPROVED BY DBW
HOR. SCALE AS SHOWN RELEASED FOR CONSTRUCTION
VERTICAL AS SHOWN

ENGINEER'S SEAL
PROVINCE OF MANITOBA
D.B. WIEBE
Member 22480
REGISTERED PROFESSIONAL ENGINEER
CONSULTANT PROJECT NUMBER
16-3353

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
Winnipeg

WAVERLEY STREET UNDERPASS AT CN MILE 3.89 RIVERS SUB
CONTRACT 2: UNDERPASS STRUCTURE, RAILWORKS,
ROADWORKS, LAND DRAINAGE SEWER, PUMPING STATION
AND LANDSCAPING WORKS

CITY DRAWING NUMBER
U-239-2016-C2-CS-085
SHEET 085 OF 085
CONSULTANT DRAWING NUMBER
C2-CS-085

PIER GUARDRAIL