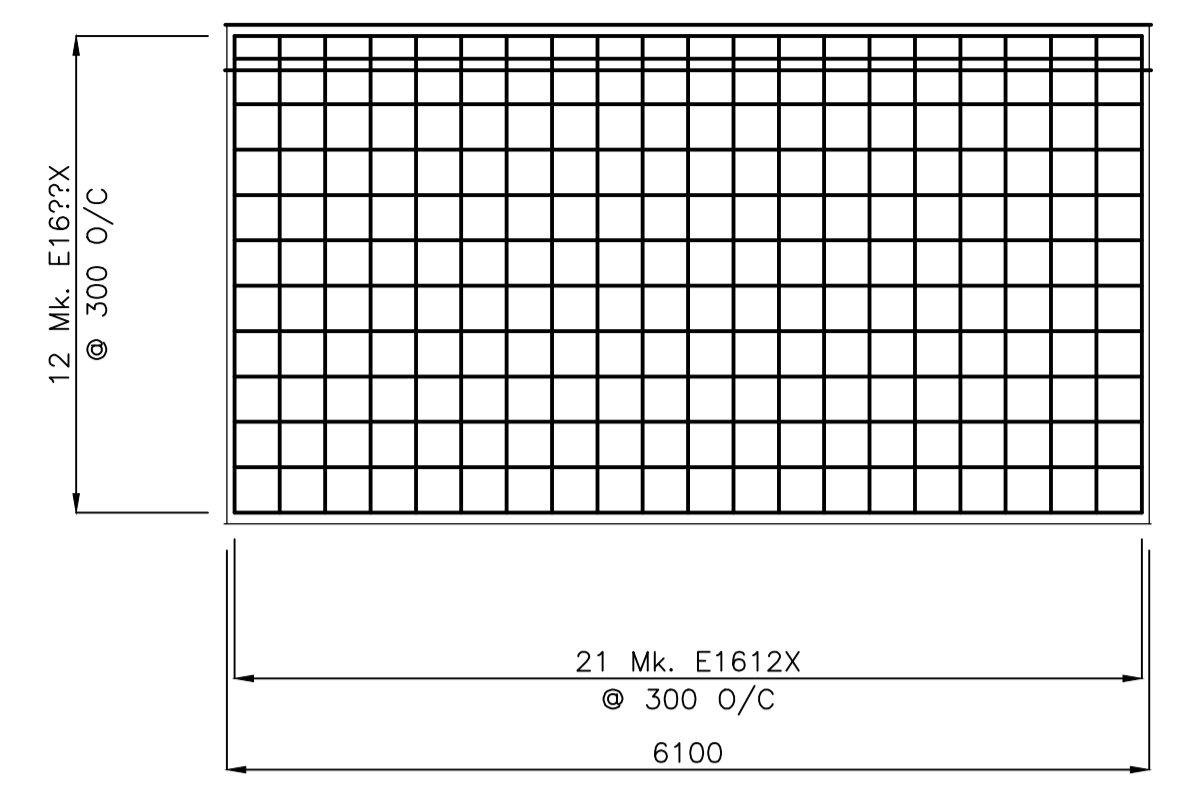
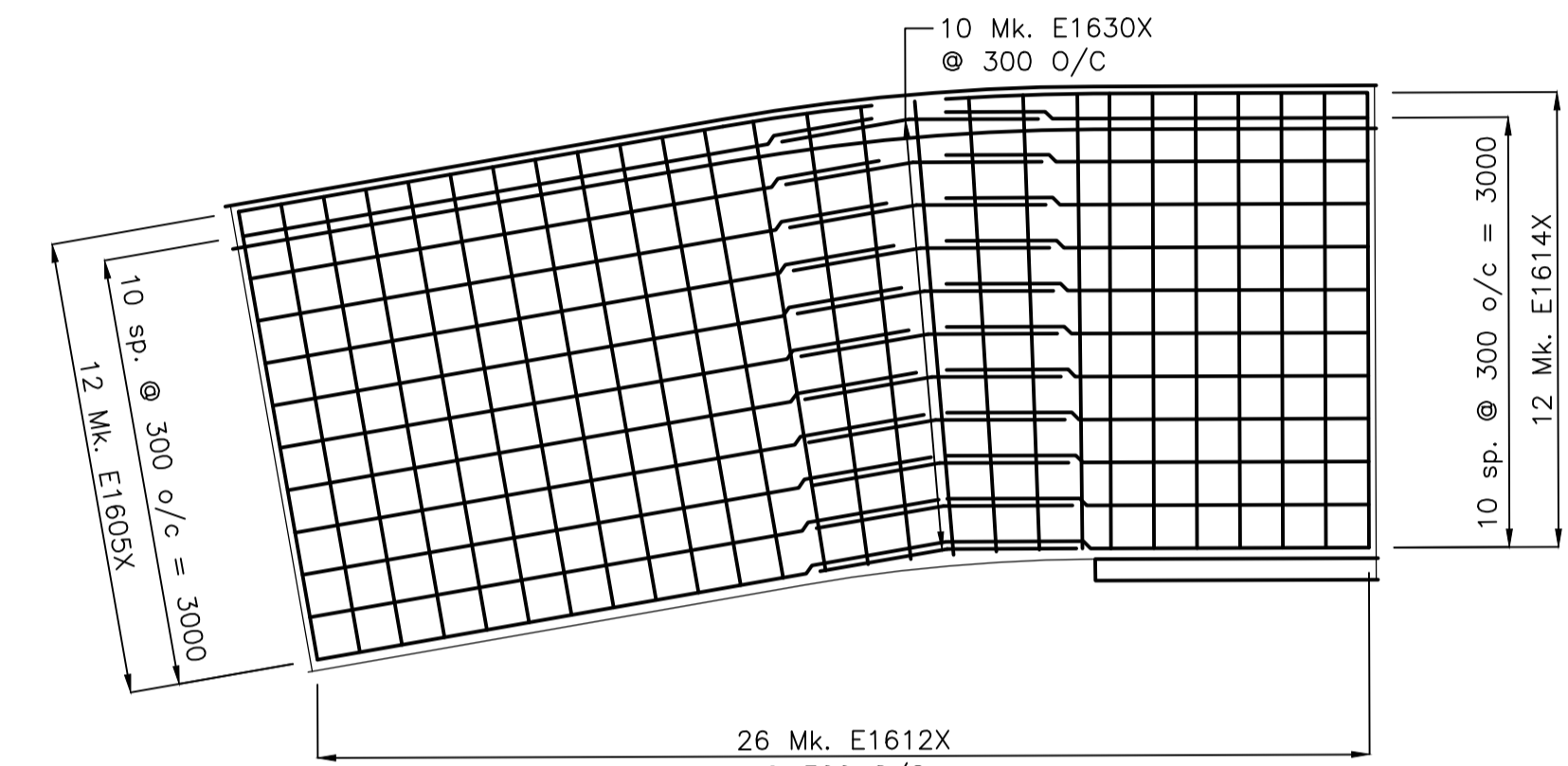


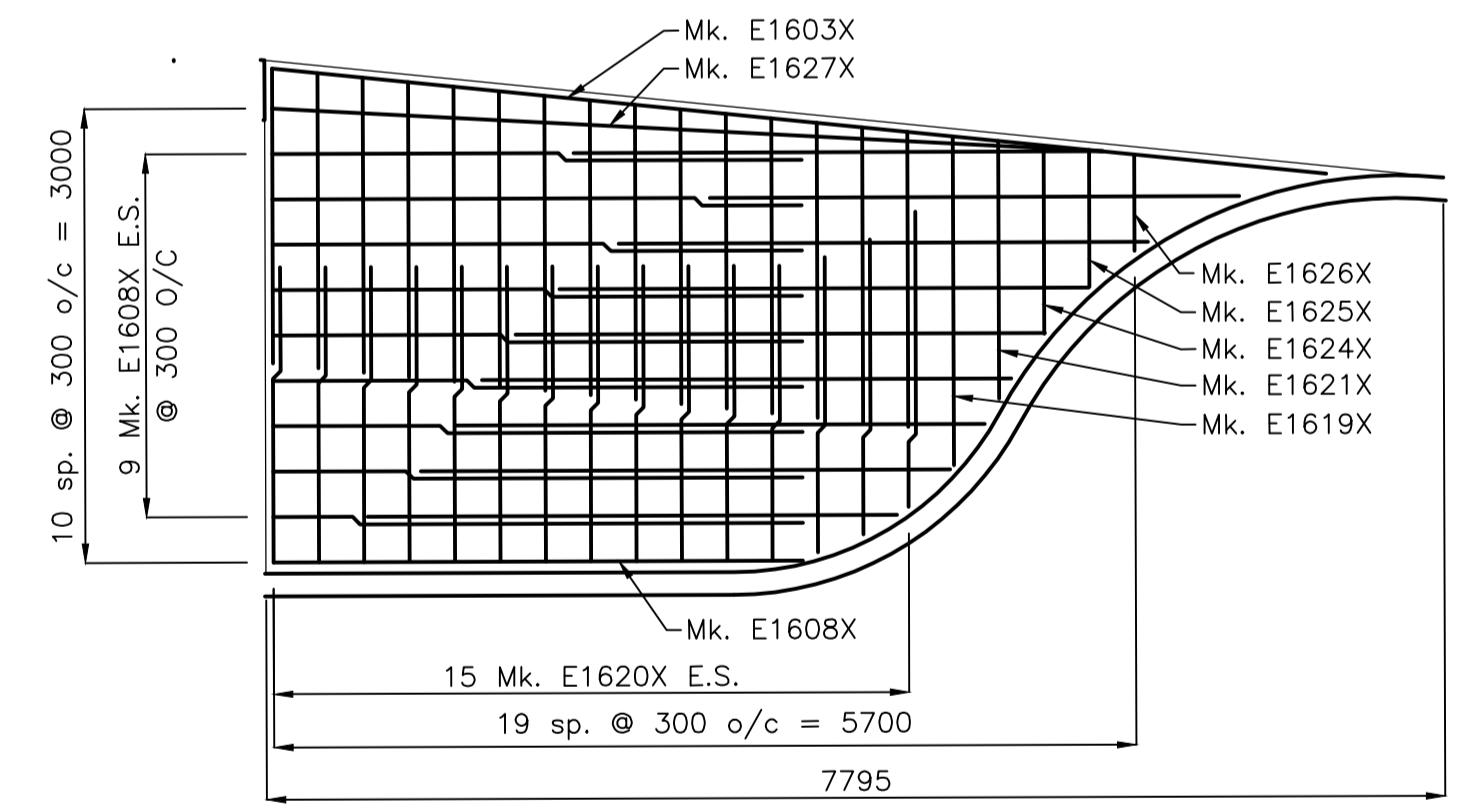
**1** DETAIL  
46 48 1:50



**2** DETAIL - TYPE F TYP. OF 5  
46 48 1:50



**3** DETAIL  
46 48 1:50



**4** DETAIL  
46 48 1:50

### BILL OF REINFORCING STEEL

EAST SIDEWALKS AND CURBS													
STRAIGHT BARS				BENT BARS									
MARK	QTY.	LENGTH (mm)	MASS (kg)	MARK	QTY.	TYPE	A	B	C	D	E	LENGTH (mm)	MASS (kg)
E1601X	637	6000	6000.5	E1629	5	B	310	1110	190	450	600	2660	20.9
E1602X	11	8630	149.0	E1630	10	C	900	900				1800	28.3
E1603X	1	7000	11.0	E1631	18	D	700	700				1400	39.6
E1604X	4	4820	30.3	E1632	546	A	600	1200				1800	1543.0
E1605X	12	4460	84.0										
E1606X	252	3750	1483.7										
E1607X	18	3735	105.6										
E1608X	19	3500	104.4										
E1609X	28	3400	149.5										
E1610X	147	3230	745.5										
E1611X	66	3225	334.2										
E1612X	199	3150	984.2										
E1613X	20	3050	95.8										
E1614X	12	2940	55.4										
E1615X	42	2750	181.3										
E1616X	42	2450	161.6										
E1617X	3	2400	11.3										
E1618X	42	2200	145.1										
E1619X	1	2175	3.4										
E1620X	30	1950	91.8										
E1621X	19	1700	50.7										
E1622X	20	1650	51.8										
E1623X	14	1575	34.6										
E1624X	1	1245	2.0										
E1625X	1	900	1.4										
E1626X	1	635	1.0										
E1627X	1	5500	8.6										
E1628X	1	1200	1.9										
<b>TOTAL MASS OF MMFX STEEL REINFORCING = 12711.4 kg</b>													

BAR TYPES			
TYPE A	TYPE B	TYPE C	TYPE D

DOWEL & SLEEVE ASSEMBLY			
MARK	DESCRIPTION	MASS PER UNIT (kg)	QTY. MASS (kg)
PD1	25# x 550 LG. GALV. PLAIN DOWEL	2.12	259 549.1
BV1	32 O.D. x 300 LG. GALV. EXPANSION SLEEVE	N/A	259 N/A

**NOTE:**

- All dimensions given in bending diagram are out to out, except radii. radii are inside dimensions. all reinforcing steel bends and hooks shall conform to clause 6.6.2 of C.S.A. A23.1-04, unless noted otherwise in the BILL OF REINFORCING STEEL.
- All reinforcing steel shall be deformed steel, unless noted otherwise in the BILL OF REINFORCING STEEL.
- Like bars shall be bundled, securely tied and identified as to mark and site no. by appropriate means. all other items to be identified in a similar fashion.
- Unless otherwise noted, pin diameters shall be similar at all bends and hooks of a bar in accordance with the following detail:

Pin diameter (typ)

VA 1379146.dwg, 1379146880.dwg, drawing\0392\_sheaf\_files\03\_structural\04880s-128-884.dwg  
 2016/07/05 1:58 PM 87% beamwidth: 6mm

**APEGM**  
 Certificate of Authorization  
 Stantec Consulting Ltd.  
 No. 1301  
**METRIC**  
 WHOLE NUMBERS INDICATE MILLIMETRES  
 DECIMALIZED NUMBERS INDICATE METRES  
 UNLESS INDICATED OTHERWISE

**LOCATION APPROVED UNDERGROUND STRUCTURES**  
 SUPV. U/G STRUCTURES COMMITTEE DATE  
 NOTE:  
 LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE	BY
0	ISSUED FOR TENDER	16.07.04	K.A.

**Stantec**  
 500 - 311 Portage Avenue, Winnipeg MB Canada  
 www.stantec.com

DESIGNED BY: S.Y.	CHECKED BY: K.S.A.
DRAWN BY: J.M.B.	APPROVED BY: B.J.W.
HOR. SCALE: AS NOTED	RELEASED FOR CONSTRUCTION: DATE
VERTICAL: DATE	DATE: 2016.07.04

ENGINEER'S SEAL  
 CONSULTANT DRAWING NO.  
**S-132**

**THE CITY OF WINNIPEG**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION  
**2016 REGIONAL STREET PROGRAM**  
 ARCHIBALD STREET  
 UNDERPASS REHABILITATION  
 EAST SIDEWALK REINFORCING DETAILS (2 OF 2)

SHEET OF <b>48</b> OF <b>62</b>
CAD FILE DRAWING NUMBER 06880s-128-884.dwg
CITY DRAWING NUMBER <b>U205-16-48</b>