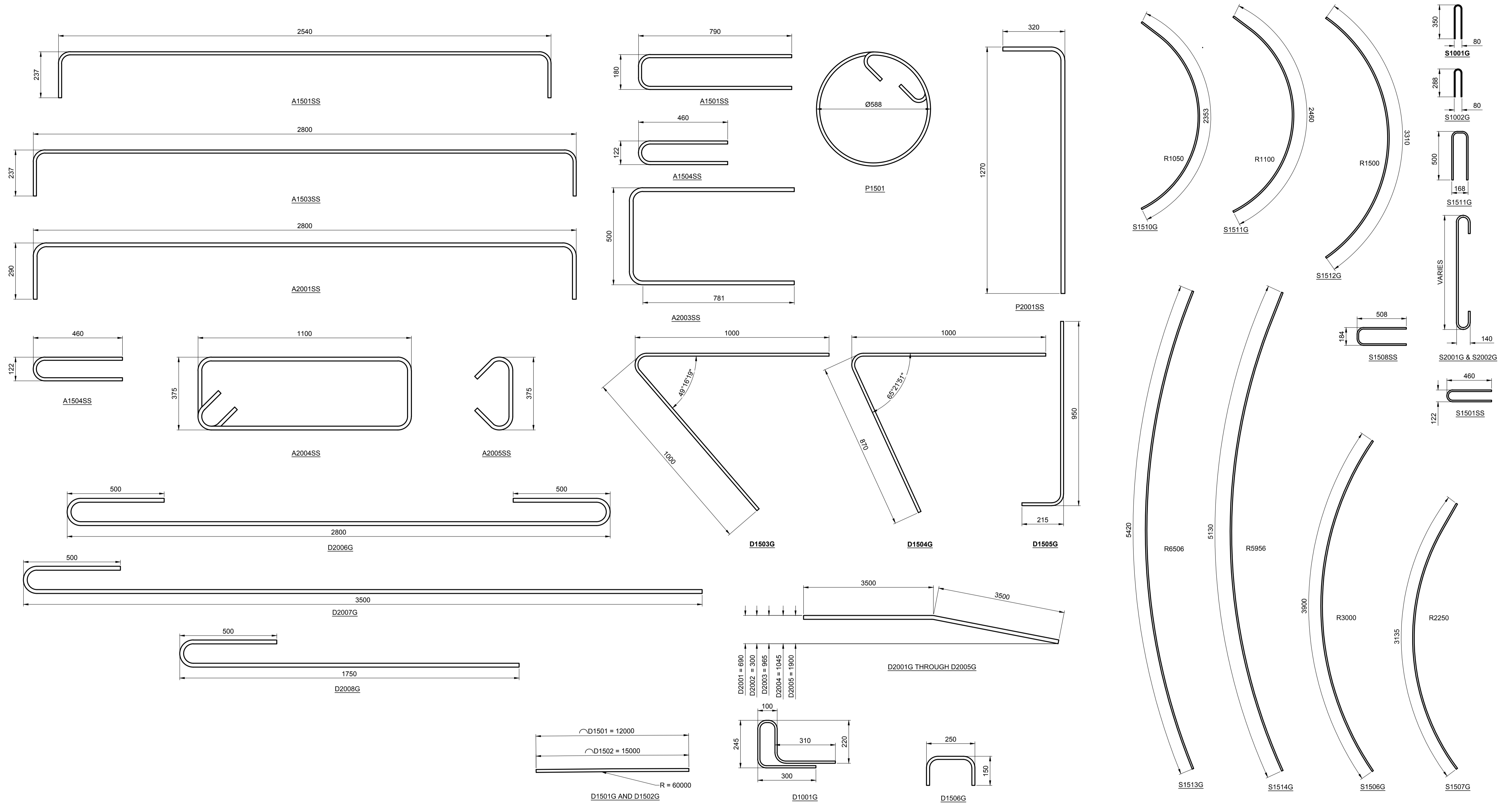


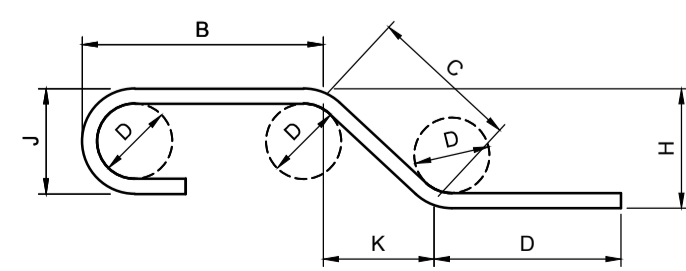
BILL OF REINFORCING STEEL (BLACK STEEL, GALVANIZED STEEL & STAINLESS STEEL)  
FOR ABUTMENTS (A), DECK SLAB (D), PIER SHAFT (P), JUMP SLABS (S)

BENDING DIAGRAM (NTS)



NOTES:

- ALL DIMENSIONS GIVEN IN BENDING DIAGRAM ARE OUT-TO-OUT, EXCEPT RADII AND EXTENSIONS ON 90°, 135° & 180° HOOKS. EXTENSIONS ON 90°, 135° & 180° HOOKS ARE THE "A" OR "G" DIMENSIONS FOR THE STANDARD 90°, 135° & 180° HOOKS REFERENCED FROM THE RSIC "MANUAL OF STANDARD PRACTICE". RADII ARE INSIDE DIMENSIONS. ALL REINFORCING STEEL SHALL CONFORM TO THE LATEST EDITION OF CAN/CSA-S6 CLAUSE 8.14 "DETAILS OF REINFORCEMENT AND SPECIAL DETAILING PROVISIONS", 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.
- ALL REINFORCING WITH SUFFIX "SS" SHALL BE STAINLESS STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A955M, 300 SERIES, MINIMUM GRADE 420, OF ONE OF THE FOLLOWING UNS DESIGNATIONS: S31653, S31803, OR S32304.
- ALL REINFORCING STEEL SHALL CONFORM TO THE LATEST EDITION OF CAN/CSA G30.18 "CARBON STEEL BARS FOR CONCRETE REINFORCEMENT" GRADE 400W, UNLESS NOTED OTHERWISE.
- 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 DIAMETER "D" IS THE SAME ALL HOOKS AND BENDS ON A BAR. WHERE SLOPE DIFFERS FROM 45° DIMENSIONS "H" AND "K" MUST BE SHOWN.



ENLARGED VIEW BAR BENDING DETAILS



**METRIC**  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES

LOCATION APPROVED UNDERGROUND STRUCTURES

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	17/10/13	DAN

DESIGNED BY	TN	CHECKED BY	DAN
DRAWN BY	AH	APPROVED BY	BE
HOR SCALE	AS SHOWN	RELEASED FOR CONSTRUCTION	
VERT SCALE	AS SHOWN		
DATE	17/10/13		

PROFESSIONAL'S SEAL  
 PROVINCE OF MANITOBA  
**D.A. NEILSON**  
 Member  
 37248  
 REGISTERED PROFESSIONAL ENGINEER  
 CONSULTANT FILE NAME  
 5170563 - DD26&27 - Bills.dwg

**THE CITY OF WINNIPEG**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION  
**TACHE PROMENADE TREETOP LOOKOUT**  
 BILL OF STEEL REINFORCING 2

CITY DRAWING NUMBER	B250-17-58
SHEET	58 OF 70
DRAWING No.	32
REV	0