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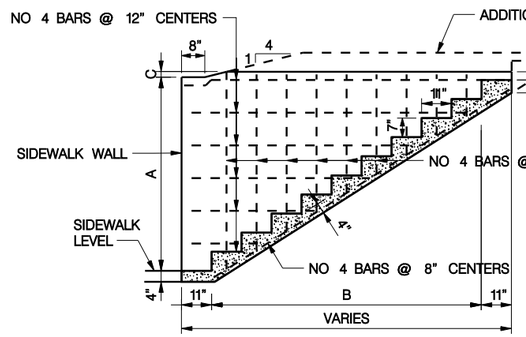
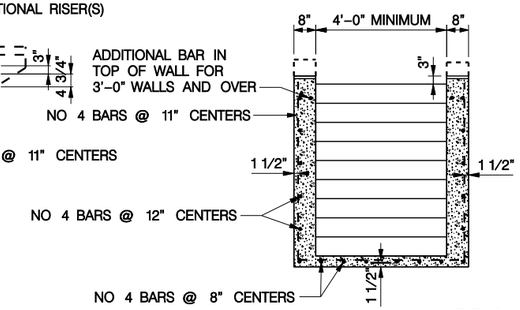
CITY OF LINCOLN NEBRASKA

PROJECT NO.	SHEET NO.
LSP 615	1
Date: 5/9/2011	Drawn: CAW Checked: Approved:

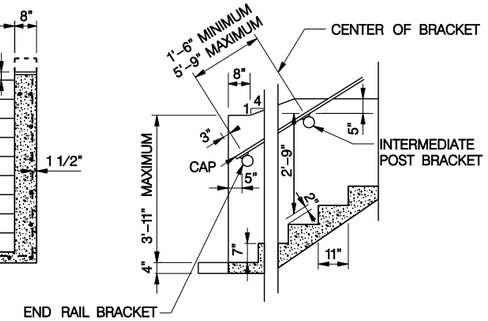
WALL DIMENSIONS			NUMBER OF RISERS	RETAINING WALL STEPS FOR 5 FOOT WALK										RETAINING WALL STEPS FOR 5 FOOT WALK									
				CONCRETE CUBIC YARDS	STEEL POUNDS	PER 1 ADDITIONAL RISER		PER 2 ADDITIONAL RISERS		PER 3 ADDITIONAL RISERS		PER 4 ADDITIONAL RISERS		CONCRETE CUBIC YARDS	STEEL POUNDS	PER 1 ADDITIONAL RISER		PER 2 ADDITIONAL RISERS		PER 3 ADDITIONAL RISERS		PER 4 ADDITIONAL RISERS	
A	B	C				CONCRETE CUBIC YARDS	STEEL POUNDS	CONCRETE CUBIC YARDS	STEEL POUNDS	CONCRETE CUBIC YARDS	STEEL POUNDS	CONCRETE CUBIC YARDS	STEEL POUNDS			CONCRETE CUBIC YARDS	STEEL POUNDS	CONCRETE CUBIC YARDS	STEEL POUNDS	CONCRETE CUBIC YARDS	STEEL POUNDS	CONCRETE CUBIC YARDS	STEEL POUNDS
2'–0"	1'–10"	0"	3	0.69	50	0.17	17	0.30	29	—	—	—	—	0.72	54	0.19	19	0.34	33	—	—	—	—
3'–0"	3'–8"	2"	5	1.14	90	0.18	22	0.33	38	0.45	52	—	—	1.26	100	0.21	24	0.39	43	0.54	59	—	—
3'–11"	5'–6"	4"	7	1.73	130	0.21	25	0.40	44	0.55	61	0.67	75	1.90	144	0.24	28	0.45	49	0.63	68	0.77	84



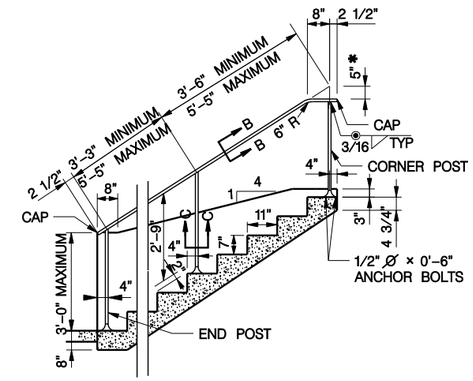
LONGITUDINAL SECTION OF STEPS FOR WALLS 2'-0" TO 6'-0"



TYPCAL CROSS-SECTION OF STEPS



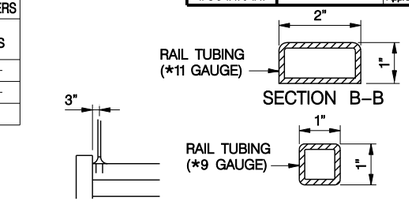
FOR 3'–11" WALL



FOR 3'–0" WALLS AND UNDER

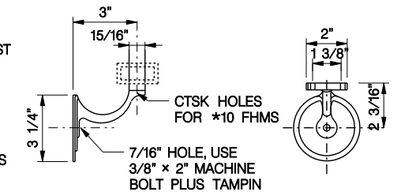
LONGITUDINAL SECTIONS OF

HANDRAIL DETAILS FOR RETAINING WALL STEPS

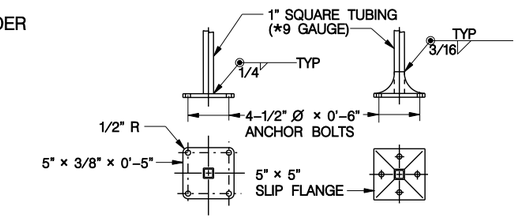


PART END VIEW

SECTION C–C
STRUCTURAL TUBING



MALLEABLE IRON HANDRAIL BRACKET DETAIL



ALTERNATE I ALTERNATE II

TYPICAL POST DETAIL

TERRACE STEPS TYPE I				
SIDEWALK WIDTH	MINIMUM 2 RISERS		PER ADDITIONAL RISER	
	CONCRETE CUBIC YARDS	STEEL POUNDS	CONCRETE CUBIC YARDS	STEEL POUNDS
3'–0"	0.52	55	0.203	19.29
4'–0"	0.63	62	0.246	22.02

NOTES:

MINIMUM DEPTH OF EMBEDMENT FOR REINFORCING STEEL SHALL BE 1 1/2".

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4".

QUANTITIES SHOWN ARE COMPUTED USING DIMENSIONS SHOWN ON THIS PLAN. THE DIMENSION MAY BE VARIED TO CONFORM TO FIELD CONDITIONS

TERRACE STEPS TYPE II				
SIDEWALK WIDTH	MINIMUM 2 RISERS		PER ADDITIONAL RISER	
	CONCRETE CUBIC YARDS	STEEL POUNDS	CONCRETE CUBIC YARDS	STEEL POUNDS
3'–0"	0.28	27	0.114	9.17
4'–0"	0.34	34	0.139	11.28

NOTES FOR HANDRAILS:

HANDRAIL SHALL BE INSTALLED ON RETAINING WALL STEPS AND ALL TYPE II STEPS WITH 4 RISERS OR MORE.

RAILING SHALL BE INSTALLED ON TYPE I TERRACE STEPS.

PLACE END RAIL BRACKET AT LOCATION OF INTERMEDIATE RAIL BRACKET WHEN SPACING OF BRACKET IS LESS THAN 1'–6".

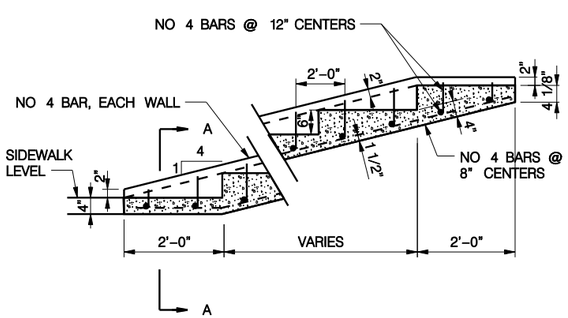
DIMENSIONS MARKED THUS * ARE FOR 7" AND 11" TREADS.

ALL HANDRAILS TO BE STRUCTURAL TUBING A.S.T.M. A–36, GAGE AS SHOWN.

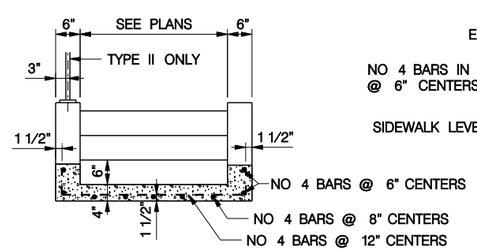
STEPS SHALL BE FIELD MEASURED FOR FABRICATION OF HANDRAIL.

HANDRAIL SHALL BE GIVEN 3 COATS OF PAINT.

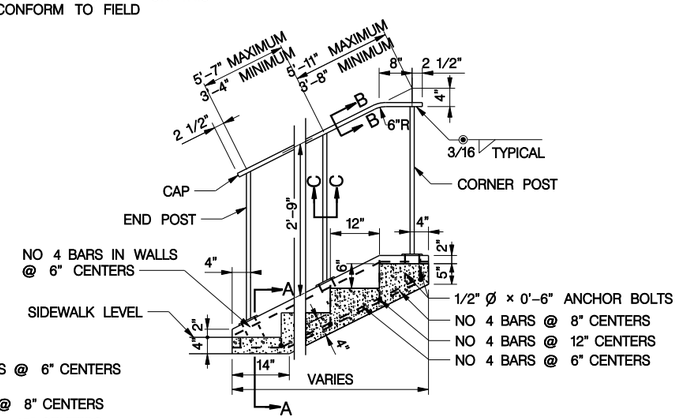
ALL CONCRETE SHALL BE L3500.



TYPICAL SECTION OF TERRACE STEPS TYPE I



TYPICAL SECTION A-A OF TYPE I & II STEPS



TYPICAL SECTION & HANDRAIL DETAILS OF TERRACE STEPS TYPE II

PROFESSIONAL CIVIL ENGINEER
THOMAS S. SHAFER
E–10679
STATE OF NEBRASKA

EFFECTIVE JULY 1, 2011
REINFORCED CONCRETE STEPS AND HANDRAILS
L.S.P. 615

This document was originally issued and sealed by Thomas S. Shafer, E-10679, on 3-1-10. This media should not be considered a certified document.