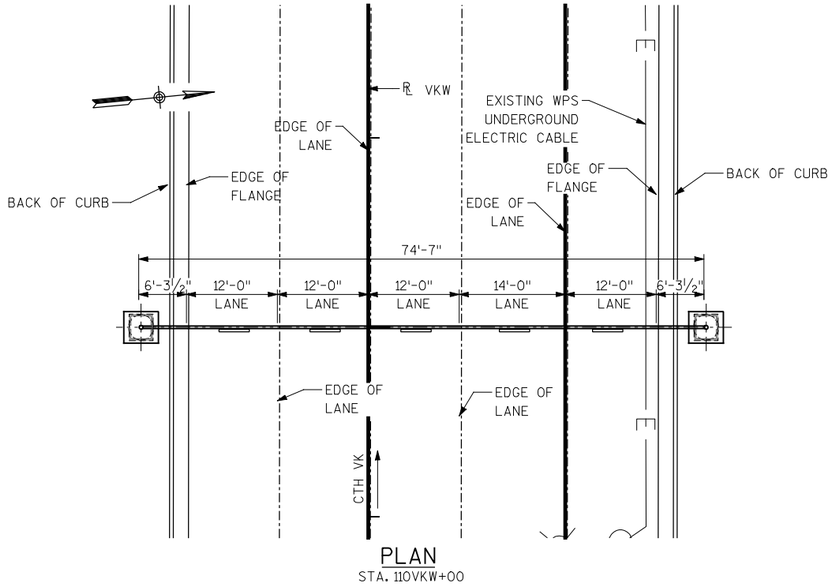
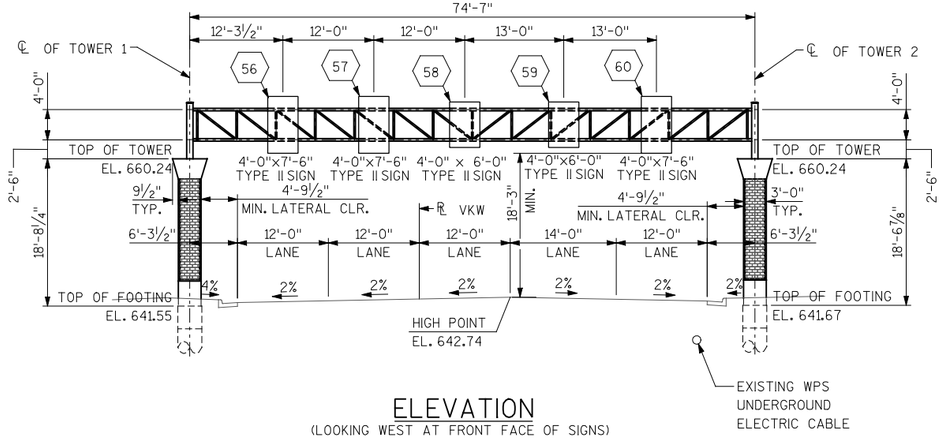
STATE PROJECT NUMBER

1133-03-78



PLAN

STA. 110VKW+00



ELEVATION

(LOOKING WEST AT FRONT FACE OF SIGNS)

LIST OF DRAWINGS

1. PLAN & ELEVATION
2. CONCRETE TOWER FOUNDATION DETAILS
3. CONCRETE TOWER DETAILS
4. CONCRETE TOWER AESTHETIC DETAILS

ULTIMATE DESIGN STRESSES:

CONCRETE: .....f'c = 3,500 psi
HIGH STRENGTH BAR
STEEL REINFORCEMENT: .....fy = 60,000 psi

FOUNDATION DATA

THE FOLLOWING SOIL PARAMETERS WERE USED FOR THE DESIGN OF THE FOUNDATION SYSTEM. IF VARIATIONS IN THE SOIL PARAMETERS ARE FOUND DURING CONSTRUCTION NOTIFY PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.

SOIL UNIT WEIGHT = 120 pcf
COHESION VALUE = 0 PSF(LONG TERM), 700 PSF (SHORT TERM)
FRICTION ANGLE = 28°(LONG TERM), 0° (SHORT TERM)
ALLOWABLE SOIL BEARING PRESSURE = 2500 psf
ALLOWABLE SKIN FRICTION = 400 psf

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

OVERHEAD SIGN SUPPORTS SHALL BE DESIGNED AND FABRICATED USING STEEL.

CENTER SIGNS VERTICALLY ON CHORD/TRUSS.

CENTER TYPE I SIGNS OVER THEIR RESPECTIVE LANE.

CONTRACTOR SHALL VERIFY DIMENSIONS PRIOR TO FABRICATION OF CONCRETE TOWERS AND OVERHEAD SIGN SUPPORT.

EXCAVATION REQUIRED TO CONSTRUCT THE CONCRETE TOWER FOUNDATION ABOVE THE DRILLED SHAFTS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY".

THE LOCATION OF EXISTING OR PROPOSED UTILITIES AS NOTED ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. UTILITY SERVICES ARE NOT SHOWN.

PROVIDE AN IDENTIFICATION PLAQUE FOR THE OVERHEAD SIGN SUPPORT IN ACCORDANCE WITH SDD STRUCTURE IDENTIFICATION PLAQUES, SIGN BRIDGES AND OVERHEAD SIGN SUPPORT. FASTEN THE IDENTIFICATION PLAQUE TO THE TOWER USING 3 -¼" DIAMETER BY 1-¾" LONG STAINLESS STEEL CONCRETE SCREWS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "OVERHEAD SIGN SUPPORT S-05-236".

DESIGN NEW OVERHEAD SIGN SUPPORT ACCORDING TO THE LATEST EDITION OF, AND SUPPLEMENTAL TO THE STATE OF WISCONSIN "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION" AND AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS."

DESIGN THE STRUCTURE BASE PLATE CONNECTION TO ACCOMMODATE A MINIMUM OF SIX (6) ANCHOR BOLTS.

SIZE THE ANCHOR BOLT / TEMPLATE ASSEMBLY TO FIT WITHIN THE BAR CAGE OF THE TOWER SHOWN IN THE CONTRACT PLANS IN ADDITION TO MEETING ALL APPLICABLE DESIGN REQUIREMENTS FOR THE DESIGN OF THE UPRIGHT BASE CONNECTION. PROVIDE A TOP AND BOTTOM ANCHOR BOLT TEMPLATE. THE BOTTOM ANCHOR BOLT TEMPLATE SHALL BE PERMANENT WITH A MAXIMUM O.D. OF 22".

SIGNS OR BLANKS SHALL BE INSTALLED ON THE OVERHEAD SIGN SUPPORT AT THE TIME OF ERECTION. BLANKS, IF USED, SHALL BE OF THE SAME SIZE AND LOCATION AS PERMANENT SIGNS.

THE SIGN SUPPORTS CONCRETE MASONRY QUANTITY IS BASED ON THE OUT-TO-OUT CONCRETE DIMENSIONS. NO DEDUCTIONS IN QUANTITY FOR THE ARCHITECTURAL SURFACE TREATMENT RELIEF HAVE BEEN MADE.

PROVIDE A ¾" CHAMFER OR 1" RADIUS ON ALL EXPOSED CONCRETE EDGES.

⬡ ## - REPRESENTS THE SIGN NO. REFER TO THE PERMANENT SIGNING SHEETS.

PROVIDE ROUND CHORDS WITH WEB MEMBERS ATTACHED BY GUSSET PLATES.

WISCONSIN
PAUL E. WIRTH
37553
MILWAUKEE, WI
PROFESSIONAL ENGINEER

10/25/2011

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	24
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	1340
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	2240
641.8100	OVERHEAD SIGN SUPPORT S-05-236	LS	1
SPV.0165.950	ARCHITECTURAL SURFACE TREATMENT	SF	255
SPV.0165.951	STAINING CONCRETE	SF	445
SPV.0165.952	STAINING CONCRETE BRICK	SF	255

CONTACTS

BUREAU OF STRUCTURES CONTACT
BILL DREHER: (608)266-8489

CONSULTANT CONTACT, COLLINS ENGINEERS, INC.
PAUL E. WIRTH: (414)282-6905

NO.	DATE	REVISION	BY

COLLINS ENGINEERS INC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 11/18/11
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-05-236

DE PERE - SUAMICO

COUNTY: BROWN
~~TOWN/CITY~~/VILLAGE: ASHWAUBENON

DESIGN SPEC.: AASHTO 2001 THRU 2006 INTERIM

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CES	PEW	VC	PEW

PLAN & ELEVATION

SHEET 1 OF 4

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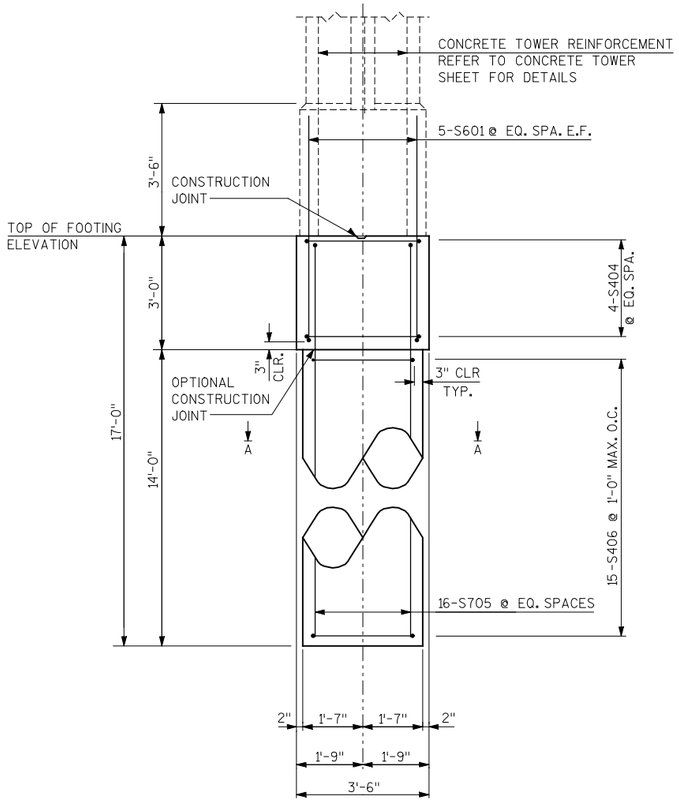
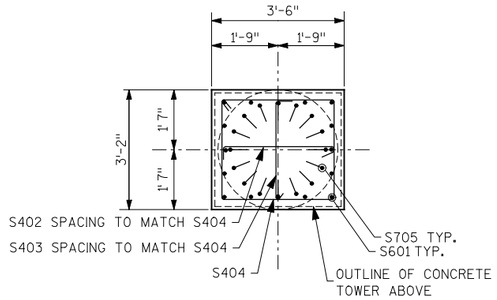
STATE PROJECT NUMBER
1133-03-78



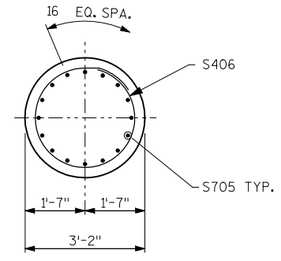
ELEVATION VIEW

S402 AND S403 NOT SHOWN FOR CLARITY. REFER TO PLAN VIEW



PLAN VIEW

CONCRETE TOWER REINFORCEMENT OMITTED FOR CLARITY



SECTION A - A

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S601	X	32	6'-9"	▲		CAP BEAM VERTICAL
S402	X	16	3'-8"	▲		HORZ. CROSSTIE, BOTTOM OF TOWER
S403	X	16	3'-4"	▲		HORZ. CROSSTIE, BOTTOM OF TOWER
S404	X	16	11'-10"	▲		CAP BEAM STIRRUP
S705		32	17'-6"	▲		DRILLED SHAFT VERTICAL
S406		30	9'-10"	▲		DRILLED SHAFT HOOP
S407	X	24	2'-4"			VERT. REINF., TOP OF TOWER
S408	X	8	5'-0"	▲		VERT. REINF., TOP OF TOWER
S409	X	16	8'-7"	▲	△	HORZ. STIRRUP, TOP OF TOWER
S410	X	8	4'-2"	▲	△	HORZ. CROSSTIE, TOP OF TOWER
S411	X	8	4'-1"	▲	△	HORZ. CROSSTIE, TOP OF TOWER
S612	X	16	18'-6"			VERT. REINF., MIDDLE OF TOWER 1
S413	X	56	4'-6"	▲		HORZ. CROSSTIE, MIDDLE OF TOWER
S414	X	4	12'-6"			VERT. REINF., MIDDLE OF TOWER 1
S415	X	36	3'-3"	▲		HORZ. CROSSTIE, MIDDLE OF TOWER
S416	X	36	2'-11"	▲		HORZ. CROSSTIE, MIDDLE OF TOWER
S417	X	36	10'-2"	▲		HORZ. STIRRUP, MIDDLE OF TOWER
S618	X	16	18'-4"			VERT. REINF., MIDDLE OF TOWER 2
S419	X	4	12'-4"			VERT. REINF., MIDDLE OF TOWER 2

△ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQ'D	LENGTH
S409	4 SERIES OF 4	7'-10" TO 9'-4"
S410	2 SERIES OF 4	3'-4" TO 4'-11"
S411	2 SERIES OF 4	3'-9" TO 4'-5"

BUNDLE AND TAG EACH SERIES SEPARATELY

GENERAL NOTES

DRAWING SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR, UNLESS OTHERWISE NOTED.

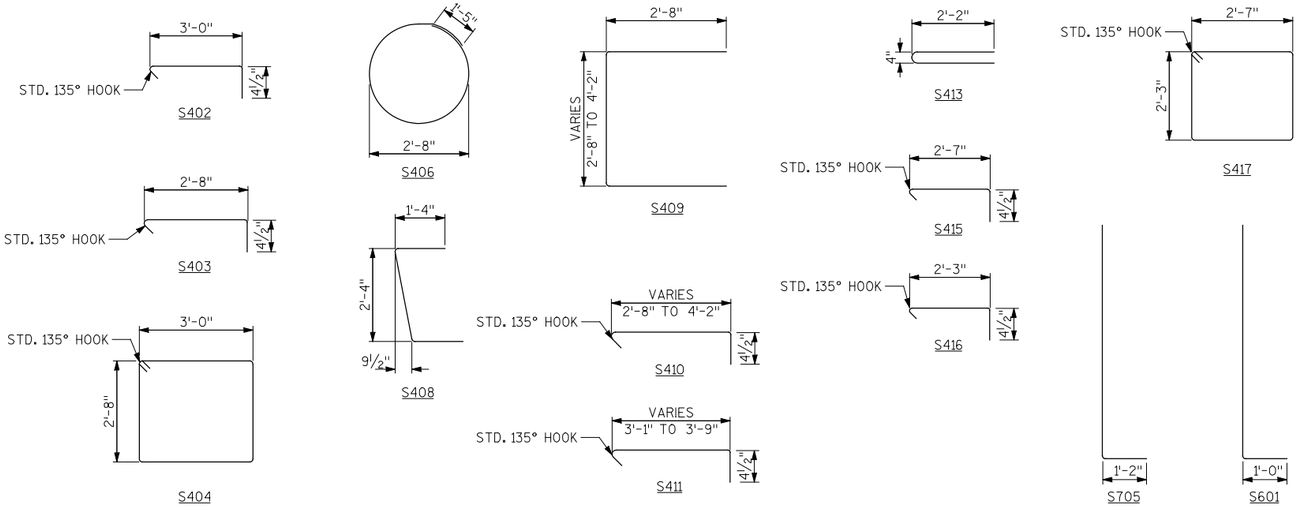
REFER TO THE RESPECTIVE PLAN AND ELEVATION SHEET FOR TOP OF FOOTING ELEVATIONS.

ALL CONSTRUCTION JOINTS SHALL BE FORMED BY A 2" x 6" x 1'-6" LONG BEVELED KEYWAY.

THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

IF THE ENGINEER DETERMINES THE POSSIBILITY OF CAVE-INS, OR SOIL DISPLACEMENT FROM THE WALLS EXISTS, OR IF NECESSARY TO SHUT OFF SEEPAGE WATER, THEN LINE THE REMAINING DEPTH OF THE FOOTING SHAFT WITH A SUITABLE TEMPORARY CASING. PROVIDE, INSTALL AND REMOVE THE TEMPORARY CASING ACCORDING TO SECTION 636 OF THE STANDARD SPECIFICATIONS.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-05-236

CONSTRUCTION SPEC 2012	DRAWN BY VC	PLANS CK'D. PEW

CONCRETE TOWER FOUNDATION DETAILS

SHEET 2 OF 4
381

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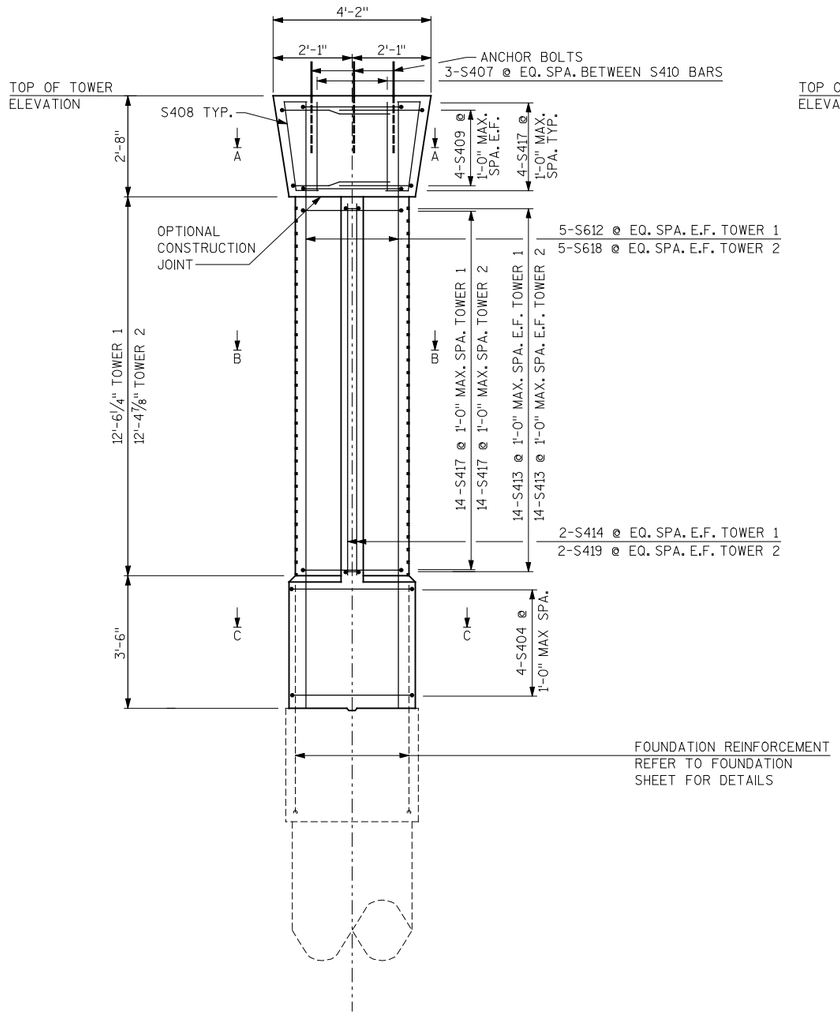
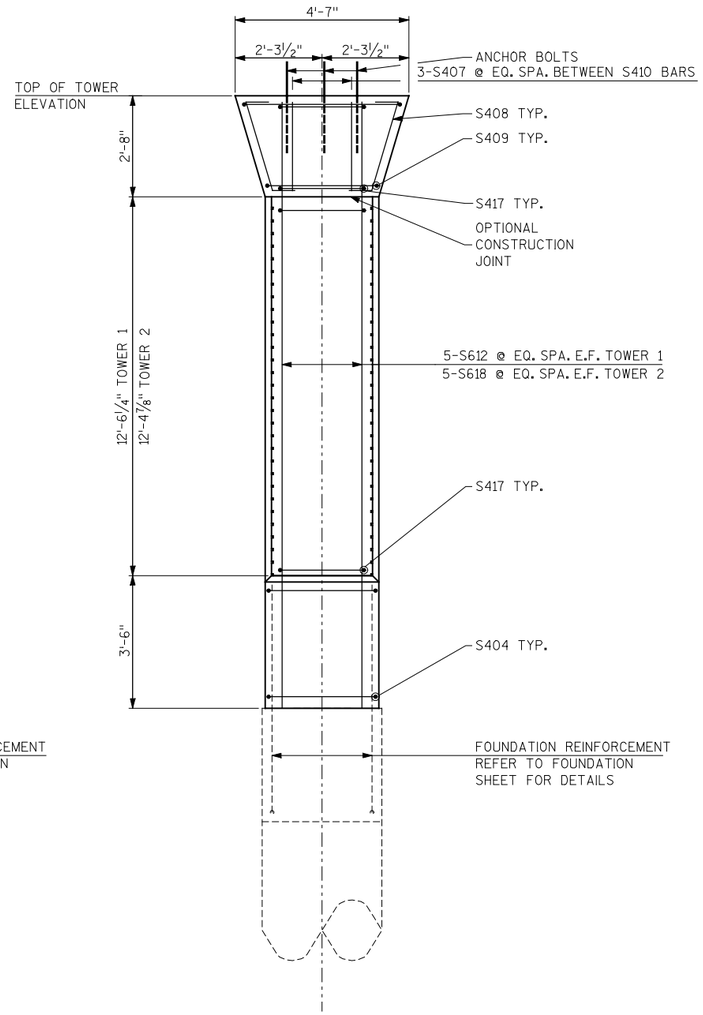


ELEVATION VIEW

S402, S403, S410, S411, S415 AND S416 NOT SHOWN FOR CLARITY. REFER TO SECTIONS



END VIEW

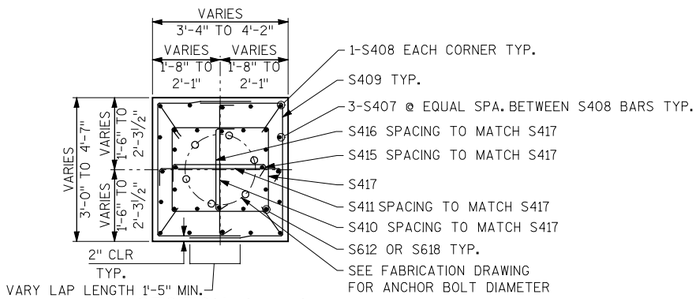
S402, S403, S410, S411, S415 AND S416 NOT SHOWN FOR CLARITY. REFER TO SECTIONS

GENERAL NOTES

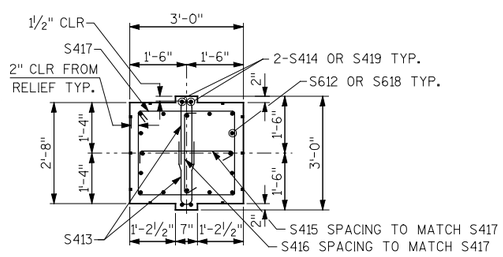
DRAWING SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR FROM THE FACE OF THE SMOOTH CONCRETE AND FROM THE ARCHITECTURAL SURFACE TREATMENT RELIEF, UNLESS OTHERWISE NOTED.

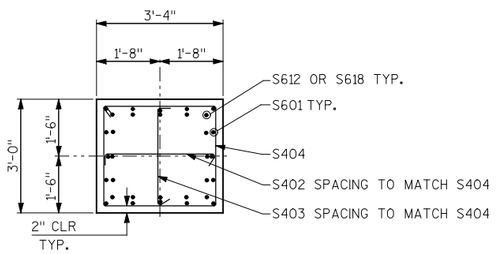
REFER TO THE RESPECTIVE PLAN AND ELEVATION SHEET FOR TOP OF TOWER ELEVATION.



SECTION A - A



SECTION B - B



SECTION C - C

STATE PROJECT NUMBER
1133-03-78

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

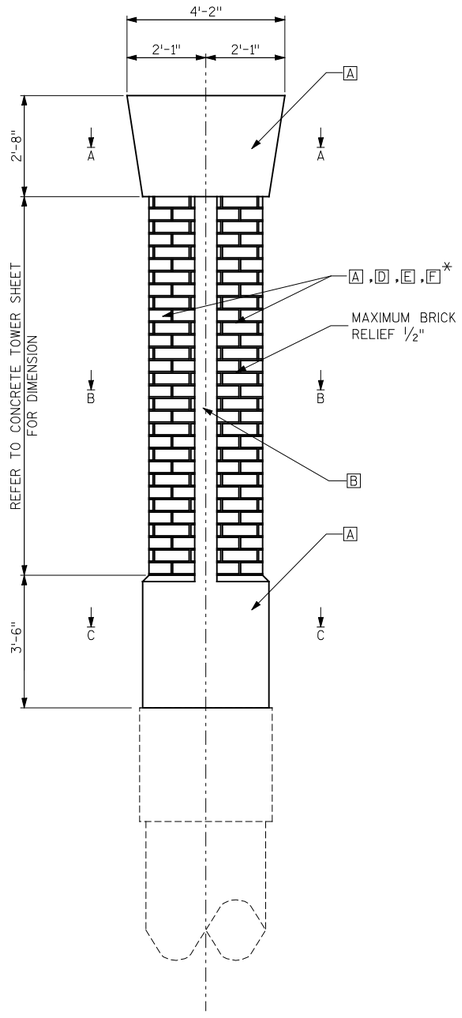
STRUCTURE S-05-236

CONSTRUCTION SPEC 2012	DRAWN BY VC	PLANS CK'D. PEW

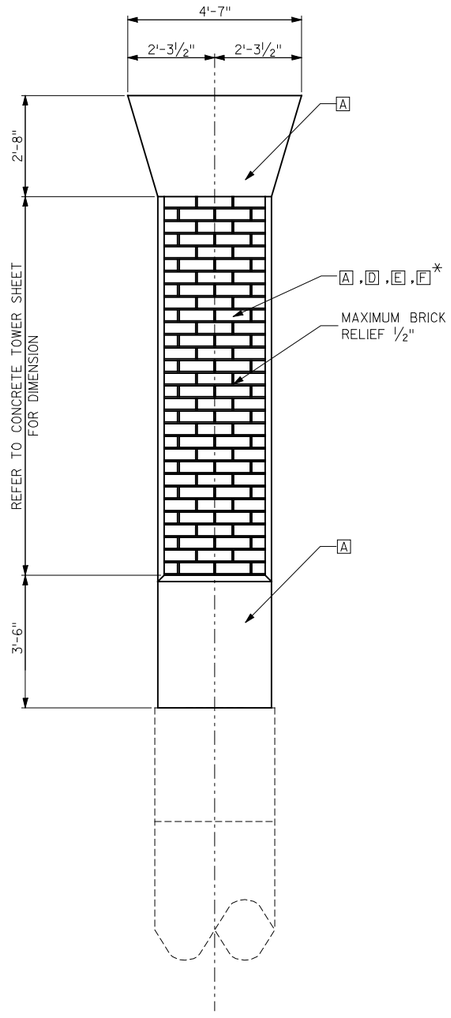
CONCRETE TOWER DETAILS

SHEET 3 OF 4
382

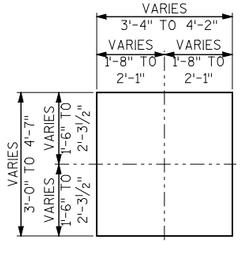
STATE PROJECT NUMBER
1133-03-78



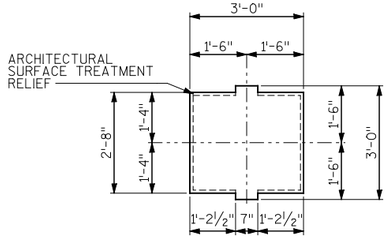
ELEVATION VIEW



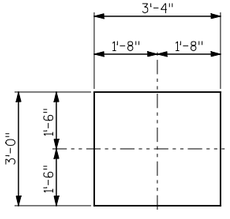
END VIEW



SECTION A - A



SECTION B - B



SECTION C - C

CONCRETE STAINING SCHEDULE

MARK	COLOR
A	BASE COLOR
B	ACCENT COLOR #1
D	ACCENT COLOR #3
E	ACCENT COLOR #4
F	ACCENT COLOR #5

*STAIN ALL BRICK PATTERN AREAS WITH BASE COLOR PRIOR TO STAINING WITH THE THREE BRICK ACCENT COLORS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-05-236

CONSTRUCTION SPEC	DRAWN BY	PLANS CK'D.
2012	VC	PEW

CONCRETE TOWER AESTHETIC DETAILS

SHEET 4 OF 4

383

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