


06SR065

# DOWNTOWN BANNER POLES RAPID CITY, SOUTH DAKOTA

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# DRAFT

# LATE SUBMITTAL


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Albertson Engineering Inc.



# RECEIVED

SEP 19 2006

Rapid City Growth  
 Management Department

NO.	DATE	REVISION	BY	CHK.
1	SEP 21, 2006			

DRAWN BY: 2006-094  
 CHECKED BY: COVER SHEET

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DOWNTOWN BANNER POLES  
 RAPID CITY, SOUTH DAKOTA  
 DATE PLO: 08/19/06  
 DRAWN BY: MRG  
 COVER SHEET

STRUCTURAL NOTES

GENERAL NOTES:

- STRUCTURAL DRAWINGS SHALL BE USED IN CONFORMANCE WITH JOB SPECIFICATIONS AND ELECTRICAL DRAWINGS. CONSULT THESE DRAWINGS FOR OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
- ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
- THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCES TO ENSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHETING, TEMPORARY BRACING (AND ACCOMPANYING FOOTINGS), CUTS OR REDDONS.
- ADDITIONAL OBSERVATIONS AS A RESULT OF REJECTION OF WORK COMPLETED AND/OR ADDITIONAL OBSERVATIONS DUE TO THE DEFICIENCIES IN WORK OBSERVED WILL BE AT THE EXPENSE OF THE CONTRACTOR.
- ALL STRUCTURAL SHOP DRAWINGS TO BE REVIEWED BY JOB SUPERINTENDENT IN ADDITION TO ALL PERSONNEL DEEMED NECESSARY BY CONTRACTOR PRIOR TO SUBMITTAL TO ENGINEER FOR APPROVAL.
- ALL SHOP DRAWING RESUBMITTALS SHALL INCLUDE A WRITTEN DETAILED LIST OF LOCATIONS AND DESCRIPTIONS OF ALL CHANGES MADE FROM PREVIOUS SUBMITTAL. LIST SHALL BE SPECIFIC AND GENERAL NOTES SUCH AS "DIMENSIONS CORRECTED" ARE NOT ACCEPTABLE.

DESIGN CODES:

- 2003 INTERNATIONAL BUILDING CODE.
- AASHTO LTS-4 STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES & TRAFFIC SIGNALS.
- ACI 318-02 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY

DESIGN LOADS:

THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED WITH THE FOLLOWING SUPERIMPOSED LOADINGS:

WIND: BASIC WIND SPEED 80 mph

FOUNDATIONS:

FOUNDATIONS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 1,500 psf.

ANCHOR BOLTS:

SHALL BE ALSO THREADED ROD. PROVIDE HOT DP GALVANIZED FINISH ON ALL ANCHOR BOLTS PERMANENTLY EXPOSED TO EXTERIOR

CONCRETE TESTING:

- CONCRETE TESTING SHALL BE PAID FOR BY THE OWNER. TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST-IN-PLACE CONCRETE:
  - ASTM C143 - "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE."
  - ASTM C39 - "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS." A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS, FOR EVERY 50 CUBIC YARDS (OR EQUIVALENT THEORETICAL SLAB PER DAY REQUIRED CYLINDERS) QUANTITIES AND TEST AGE AS FOLLOWS.
    - 1 AT 7 DAYS
    - 2 AT 28 DAYS

REINFORCEMENT:

NO PENETRATIONS SHALL BE MADE IN ANY STRUCTURAL MEMBERS OTHER THAN THOSE LOCATED ON THESE DRAWINGS WITHOUT PREVIOUS APPROVAL OF THE ENGINEER.

CONCRETE MIX DESIGN:

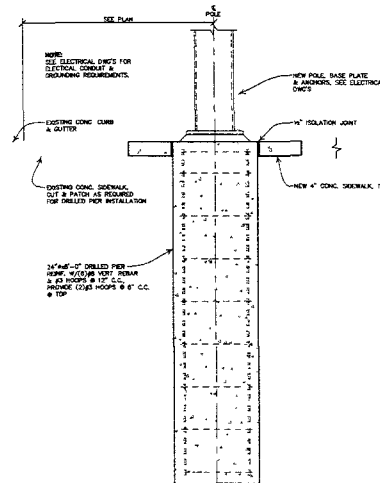
- SHALL BE MIX DESIGNED BY A RECOGNIZED TESTING LABORATORY TO ACHIEVE A STRENGTH AT 28 DAYS AS LISTED BELOW WITH A PLASTIC AND WORKABLE MIX.
  - 4,000 psi -- ALL OTHER CONCRETE
- SUBMIT PROPOSED MIX DESIGN WITH RECENT FIELD CYLINDER OR LAB TESTS FOR REVIEW PRIOR TO USE. MIX SHALL BE UNQUELIVELY IDENTIFIED BY MIX NUMBER OR OTHER POSITIVE IDENTIFICATION. CONCRETE SHALL COMPLY WITH ALL THE REQUIREMENTS OF ASTM STANDARD C39 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TAMPED WHEN CONCRETE IS BATCHED. THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1-1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE. ALL SLABS SHALL BE CURED USING CURING COMPOUND MEETING ASTM STANDARD C309 TYPE I AND SHALL HAVE A FUGITIVE DYE. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. ALL SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED. ONLY CALCIUM CHLORIDES SHALL NOT BE UTILIZED. OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.

- CONCRETE SHALL UTILIZE TYPE I/II CEMENT.
- THE CONCRETE STRENGTHS SHOWN IN THE SECTION ABOVE AND IN THE SPECIFICATIONS ARE MINIMUM COMPRESSIVE STRENGTHS. THE ENGINEER SHALL DETERMINE IF THE CONCRETE IS ACCEPTABLE, OR TO BE REMOVED, OR TO RECEIVE SPECIAL CURING IF THE COMPRESSIVE STRENGTHS ARE LESS THAN SPECIFIED.
- ALL CONCRETE EXPOSED TO WEATHER OR EARTH SHALL BE AIR ENTRAINED TO 5% TO 7%.
- WATER REDUCING AGENTS MAY BE USED IN THE CONCRETE MIX. PLASTICIZERS AND SUPER-PLASTICIZERS MAY BE USED ONLY WHEN WRITTEN PERMISSION OF THE ENGINEER IS GIVEN.
- NO SALTS OF ANY KIND MAY BE USED IN CONCRETE BEFORE OBTAINING THE ENGINEER'S WRITTEN PERMISSION FOR THEIR USE.

CONCRETE AND REINFORCING PLACEMENT:

- ALL CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 301 AND ACI 117 EXCEPT AS MODIFIED BELOW:
  - ACI 117 ITEM 4.3.1.1 ELEVATIONS OF SLABS-ON-GRADE TOP OF SLAB OF PORTLAND CEMENT SHALL BE WITHIN A 1/4" TOLERANCE EITHER SIDE OF THE THEORETICAL DESIGN SURFACE.
  - ACI 117 ITEM 4.5.7 FLOOR FINISH TOLERANCES AS MEASURED BY PLACING A FIRST-CLASS (OR EQUIVALENT) 10 FT. STRAIGHTEDGE ANYWHERE ON THE SLAB AND ALLOWING IT TO REST UPON TWO HIGH SPOTS WITHIN 20 DAYS AFTER SLAB CONCRETE PLACEMENT. THE GAP AT ANY POINT BETWEEN THE STRAIGHT EDGE AND THE FLOOR SHALL NOT EXCEED 1/4".
- ALL REINFORCING STEEL TO BE ASTM A615, GRADE 60 (#4 AND LARGER), EXCEPT WHERE NOTED OTHERWISE. REINFORCING SHALL NOT BE WELDED.
- WELDED WIRE FABRIC TO CONFORM TO ASTM A185 AND SHALL BE FREE FROM OIL, SCALE AND RUST. PLACE WIRE IN ACCORDANCE WITH THE TYPICAL PLACING DETAILS OF ACI STANDARDS AND THE SPECIFICATIONS. MINIMUM LAPS SHALL BE ONE SPACE PLUS 2".
- ALL REINFORCING STEEL BARS TO BE DETAILED AND PLACED IN ACCORDANCE WITH THE LATEST ACI MANUALS.
- LAP ALL REINFORCING SPLICES IN CONCRETE A MINIMUM OF 48 BAR DIAMETERS OR 74 INCHES, WHICHEVER IS GREATER, UNLESS NOTE OTHERWISE ON DRAWINGS (CLASS B SPLICE).
- WHERE SHOWN ON THE DRAWINGS, PROVIDE WELD PLATES, WELDMENTS, OR CONCRETE INSERTS FOR FASTENING AND SECURING OTHER COMPONENTS. CONCRETE INSERTS SHALL BE FURNISHED BY THE CONTRACTOR CASTING THE CONCRETE AROUND THEM. CLIP ANCHORS SHALL BE FURNISHED BY THE CONTRACTOR REQUIRING THEM.
- REINFORCING STEEL SHALL RECEIVE CONCRETE COVER AS FOLLOWS:
 

DESCRIPTION	MINIMUM COVER
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
EXPOSED TO EARTH OR WEATHER	
#6 THROUGH #8 BARS	2"
#9 BARS OR SMALLER	1 1/2"
NOT EXPOSED TO EARTH OR WEATHER OR IN CONTACT WITH THE GROUND, SLABS AND WALLS	
#11 BARS OR SMALLER	1 1/4"
#14 AND #18	1 1/2"
BEAMS AND COLUMNS	1 1/2"
- COLD WEATHER AND HOT WEATHER PROVISIONS OF ACI 306 AND 305 (CURRENT EDITIONS), RESPECTIVELY, SHALL BE MAINTAINED.



SECTION 1/50 X4" = 1"=0"

DOWNTOWN BANNER POLES  
RAPID CITY, SOUTH DAKOTA

DATE: 09/19/06 SHEET NO. 3 STRUCTURAL NOTES & SECTIONS

DATE: 09/19/06 SHEET NO. 3

REVISION	DATE	BY	CHK	APP
1	10/10/06	...	...	...
2	10/10/06	...	...	...
3	10/10/06	...	...	...
4	10/10/06	...	...	...
5	10/10/06	...	...	...

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