CONCRETE NOTES

1. CODES:

   COMPLY WITH THE FOLLOWING LATEST EDITIONS AND CURRENT AMENDMENTS:

   1.1 ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
   1.2 ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
   1.3 CRSI "CONCRETE REINFORCING STEEL INSTITUTE, MANUAL OF STANDARD PRACTICE"

2. TESTING:

   2.1 LABORATORY TESTS: CONCRETE MIX DESIGN, FIELD FABRICATED CYLINDERS FOR COMPRESSIVE STRENGTH.
   2.2 FIELD TESTS: PERFORM FIELD TESTS FOR SLUMP, AIR CONTENT AND TEMPERATURE. PREPARE CYLINDERS FOR COMPRESSION TESTING, #1 AT 7 DAYS AND #2 AT 28 DAYS.

3. SUBMITTALS:

   PROVIDE THE FOLLOWING:

   3.1 TEST REPORTS: (3) COPIES EACH FOR ALL LABORATORY AND FIELD TESTS COMPLETED.

   3.2 CONCRETE REINFORCING SHOP DRAWINGS SHOWING BAR LAYOUT, BENDS, & DETAILS.

   3.3 ANCHOR BOLT & LEVELING PLATE SHOP DWG's SHOWING LAYOUT & SIZES OF BOLTS/PLATES.

4. MATERIALS:

   4.1 REINFORCING STEEL: GRADE 60, ASTM 615, NEW DEFORMED BARS.
   4.2 REINFORCING FOR SLABS: EQUAL TO FIBERMESH, 1.5 lbs/CY CONCRETE.
   4.3 MIXING WATER SHALL BE POTABLE, FREE OF ANY SUBSTANCES THAT MAY BE DELETRIOUS TO THE CONCRETE OR REINFORCING STEEL.

5. CONCRETE:

   5.1 SLABS:
   -CEMENT SHALL BE ASTM 150, TYPE II PORTLAND CEMENT
   -28 DAY COMPRESSIVE STRENGTH: 4000 PSI
   -MAX. AGG. SIZE: 1 ½"
   -AIR CONTENT: 6% + 1% BY VOLUME
   -MAX WATER-CEMENT RATIO: 0.45
   -AGGREGATE SHALL CONFORM TO ASTM C33

   5.2 WALLS AND FOOTINGS:
   -CEMENT SHALL BE ASTM 150, TYPE II PORTLAND CEMENT
   -28 DAY COMPRESSIVE STRENGTH: 3000 PSI
   -MAX. AGG. SIZE: 1 ½"
   -AIR CONTENT: 5% + 1% BY VOLUME
   -MAX WATER-CEMENT RATIO: 0.50
   -AGGREGATE SHALL CONFORM TO ASTM C33

   5.3 ADMIXTURES:

   PROVIDE ADMIXTURES WHICH ARE CHEMICALLY COMPATIBLE FOR THEIR INTENDED USE. COMPLY WITH MANUFACTURER'S INSTRUCTIONS FOR USE. BASE DOSAGE RATES ON CEMENT CONTENT. CALCIUM CHLORIDE IS NOT ALLOWED.

   5.3.1 HIGH RANGE WATER REDUCERS (SUPER PLASYCIZERS): EQUAL TO DARACEM 100 BY W.R. GRACE & CO., ASTM C-494.
   5.3.2 ACCELERATORS: EQUAL TO DARASET BY W.R. GRACE & CO., ASTM C-404 TYPE C OR E.
   5.3.3 AIR ENTRANCING: EQUAL TO "DARAVAIR" BY W.R. GRACE & CO., ASTM C-260 AND ARMY CORPS CRD-C-13.

   5.4 CONCRETE SURFACE COATINGS:

   5.4.1 CURING COMPOUND: "KURE-N-SEAL" BY SONNEBORN, OR EQUAVALENT.
   5.4.2 BITUMINOUS DAMPPROOFING: EQUAL TO BRUSH GRADE FOUNDATION COATING BY EUCLID.

   5.5 FORMS AND RELATED MATERIAL:

   5.5.1 FORMS FOR CONCRETE SURFACES THAT WILL BE EXPOSED IN THE FINISHED BUILDING SHALL BE PLYFORM CLASS I, B-B EXTERIOR TYPE CONFORMING TO U.S. PRODUCT STANDARD PS 1. FORMS FOR CONCRETE SURFACES NOT EXPOSED INTHE FINISHED BUILDING MAY BE PLYFORM OR MATCHED LUMBER.
   5.5.2 FORM OIL USED ON SURFACE OF FORMS SHALL BE A NON-STAINING TYPE.

   5.6 ALUMINUM PRODUCTS:

   5.6.1 NO ALUMINUM CONDUIT, PIPE, INSERTS, REGLETS, ETC. SHALL BE PLACED IN ANY CONCRETE, UNLESS COATED WITH BITUMINOUS DAMPPROOFING.
   5.6.2 NO EQUIPMENT MADE OF ALUMINUM OR ALUMINUM ALLOYS SHALL BE USED FOR PUMP LINES, TREMIES OR CHUTES IN CONVEYING CONCRETE TO POINT OF PLACEMENT.

   5.7 GROUT:

   5.7.1 NON-SHRINK GROUT FOR USE UNDER COLUMN BASE PLATES AND BEAM BEARING PLATES SHALL BE EMBECO GROUT #885, PRE-MIXED, AS MANUFACTURED BY MASTER BUILDERS, OR APPROVED EQUIVALENT.

5.8 PREFORMED EXPANSION JOINT FILLER:

   5.8.1 A NON-EXTENDING AND RESILIENT BITUMINOUS TYPE JOINT FILLER, ½" THICK.

5.9 EMBEDDED ITEMS:

   5.9.1 EMBEDDED ITEMS SUCH AS ANCHOR BOLTS, ETC., SHALL BE INSTALLED USING A TEMPLATE AND BE SECURELY HELD IN PLACE DURING CONCRETE PLACEMENT.

5.10 SPACERS, SUPPORTS AND FASTENERS:

   5.10.1 FORM SPACERS, REINFORCING TIES AND CHAIRS, AND OTHER DEVICES NEEDED FOR PROPERLY SPACING, SUPPORTING, AND FASTENING REINFORCEMENT SHALL BE PROVIDED. CLAY BRICKS ARE NOT ALLOWED FOR USE AS SLAB STEEL BOLSTERS.

5.11 VAPOR BARRIER:

   5.11.1 UNDERSLAB MOISTURE VAPOR BARRIER SHALL BE MADE OF A LAYER OF 6 MIL POLYETHYLENE PLASTIC. PLACE VAPOR BARRIER BETWEEN 2" DRY SAND AND 6" MIN. CONTROLLED STRUCTURAL FILL.

N.I.C.

6. CONSTRUCTION PRACTICES:

   6.1 REINFORCEMENT:

   COMPLY WITH REQUIREMENTS OF CRSI, LATEST EDITION.

   6.1.1 MINIMUM CONCRETE COVER: 3" FOR CONCRETE CASE AGAINST SOIL; 2" FOR OTHER CONCRETE, UNLESS OTHERWISE SHOWN.

   6.2 DEVELOPMENT AND SPLICING:

   PROVIDE DEVELOPMENT AND TENSION LAP SPLICE LENGTHS IN ACCORDANCE WITH THE FOLLOWING, UNLESS NOTED OTHERWISE ON PLANS:

DEVELOPMENT BAR SIZE	LENGTH*	CLASS C* LAP SPLICE
#4	12	16"
#5	12	20"
#6	15	26"
#7	21	36"
#8	28	48"

*INCREASE BY 30% FOR BARS SPACED <6".

CONCRETE NOTES CONT.

6.3 CHAMFERS:

CHAMFER ALL EXPOSED EDGES AND CORNERS OF CONCRETE ½" OR 1" SIMILAR THROUGHOUT.

6.4 JOINTS:

6.4.1 CONSTRUCTION JOINTS: PLACE PERPENDICULAR TO THE MAIN REINFORCEMENT. CONTINUE REINFORCEMENT ACROSS CONSTRUCTION JOINTS. PROVIDE KEYWAYS AT LEAST 1 ½" (UNLESS OTHERWISE SHOWN) DEEP IN CONSTRUCTION JOINTS IN WALLS, SLAB, AND BETWEEN WALLS AND FOOTINGS. ACCEPTED BULKHEADS DESIGNED FOR THIS PURPOSE MAY BE USED IN SLABS. PROVIDE WATERSTOP WHERE INDICATED.

6.4.2 ISOLATION JOINTS: PROVIDE IN SLABS-ON-GRADE AT POINTS OF CONTACT BETWEEN SLABS-ON-GRADE AND VERTICAL SURFACES, SUCH AS FOUNDATION WALLS, GRADE BEAMS, COLUMN PEDESTALS, AND ELSEWHERE AS NECESSARY.

6.4.3 CONTRACTION (CONTROL) JOINT: PROVIDE IN SLABS-ON-GRADE BY USING INSERTS OR BY SAW CUTTING TO A DEPTH OF ¼ THE SLAB THICKNESS. PROVIDE A ONE PART ELASTOMERIC JOINT SEALANT TO JOINT GROOVE. A MINIMUM OF 60 DAYS AFTER SLAB PLACEMENT UNLESS OTHERWISE APPROVED.

6.5 CONCRETE MIXING:

6.5.1 READY-MIXED CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN ASTM C94.
6.5.2 ALL CONCRETE SHALL BE MIXED UNTIL THERE IS A UNIFORM DISTRIBUTION OF THE MATERIALS BEFORE DISCHARGE. THE MIXING SHALL BE CONTINUOUS AFTER THE WATER HAS BEEN ADDED TO THE MIX IN THE DRUM.
6.5.3 NO CONCRETE SHALL BE PLACED IN THE FORMS MORE THAN 90 MINUTES AFTER THE WATER HAS BEEN ADDED.
6.5.4 AFTER THE MAXIMUM WATER CEMENT RATIO HAS BEEN ACHIEVED, RETEMPERING OF THE CONCRETE WILL NOT BE ALLOWED, UNLESS APPROVED BY ENGINEER.

6.6 CONCRETE PLACEMENT:

6.6.1 DEPOSIT CONCRETE CONTINUOUSLY IN LAYERS NOT DEEPER THAN 24" OVER PREVIOUS LAYERS WHICH ARE STILL PLASTIC. AVOID COLD JOINTS. CONSOLIDATE CONCRETE BY MECHANICAL VIBRATING EQUIPMENT, SUPPLEMENTED BY HAND-SPACING, RODDING AND TAMPING. DO NOT USE MECHANICAL VIBRATORS TO TRANSPORT CONCRETE.
6.6.2 HOT WEATHER PLACING: COMPLY WITH ACI 306, LATEST EDITION. MAINTAIN A FRESH CONCRETE TEMPERATURE OF NOT LESS THAN 50°F AND NOT MORE THAN 80°F AT THE POINT OF PLACEMENT.

6.7 CONCRETE CURING:

COMPLY WITH ACI 308, LATEST EDITION. COMPLY WITH ACI 306 FOR HOT WEATHER CONCRETING. PROVIDE A MINIMUM OF A 7 DAY CONTINUOUS MOISTURE CURE BY COVERING CONCRETE SURFACE WITH A WET ABSORPTIVE COVER, MAINTAIN SATURATED COVER CONDITION. ALTERNATIVE CURING METHODS WILL ONLY BE ALLOWED IF APPROVED BY ENGINEER. CONTRACTOR WILL SUBMIT ALTERNATIVE CURING PRODUCTS AND METHODS FOR REVIEW AND APPROVAL. ALSO, MAINTAIN CONCRETE CURING TEMPERATURE ABOVE 50°.

6.7.1 SLABS: USE MOISTURE CURE OR CURING COMPOUND. APPLY CURING COMPOUND WITHIN 2 HOURS OF FINAL FINISHING BY SPRAY OR ROLLER. RECOAT AREAS SUBJECT TO HEAVY RAINFALL. DO NOT USE CURING COMPOUND ON SLABS WHICH WILL RECEIVE LIQUID FLOOR HARDENER OR OTHER FINISHES.

6.7.2 FORMED SURFACES: CURE FORMED SURFACES WITH FORMS IN PLACE FOR ENTIRE CURING PERIOD. DURING COLD WEATHER CURING, PROVIDE CAST-IN THERMOMETERS FOR MONITORING CONCRETE CURING TEMPERATURE AT LOCATIONS AS DIRECTED BY ENGINEER. MAINTAIN A 50°F WITH USE OF INDIRECT HEAT OR INSULATIVE BLANKETS.

6.8 ANCHOR BOLTS: USE TYPE, SIZE, AND LENGTH AS INDICATED ON PLANS.

STRUCTURAL STEEL NOTES

PART 1 - GENERAL

1.00 STANDARD SPECIFICATIONS

A. FABRICATION, ERECTION, AND WELDING; IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN ADOPTED JUNE 1969, INCLUDING ALL PUBLISHED SUPPLEMENTS. A.I.S.C.

B. WELDING--IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE", AWS D1.1, LATEST EDITION.

C. BOLTING OF STRUCTURAL JOINTS SHALL BE IN ACCORDANCE WITH "AISC SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", LATEST EDITION.

1.01 QUALIFICATIONS

A. WELDING PROCEDURES, WELDERS, WELDING OPERATIONS AND TACKING: QUALIFIED IN ACCORDANCE WITH AWS CODE.

1.02 SUBMITTALS

A. SUBMIT FOUR (4) SETS OF SHOP DRAWING PRINTS FOR REVIEW. INDICATE SHOP AND ERECTION DETAILS, INCLUDING CUTS, COPES, CONNECTIONS, HOLES, THREADED FASTENERS, AND WELDS.

B. PROVIDE SETTING DRAWINGS, TEMPLATES AND DIRECTIONS FOR THE INSTALLATION OF ANCHOR BOLTS AND OTHER DEVICES.

1.03 PRODUCT HANDLING

A. STORE STRUCTURAL STEEL MEMBERS AT THE PROJECT SITE ABOVE GROUND ON PLATFORMS, SKIDS, OR OTHER SUPPORTS.

B. PROTECT STEEL FROM CORROSION.

PART 2 - PRODUCTS

2.01 MATERIALS

A. STRUCTURAL STEEL BEAMS, CHANNELS, AND T-SHAPES, ASTM A572 GR. 50 OR A992 - W/ G60 GALVANIZING.
B. STEEL ANGLES, BARS, AND PLATES - ASTM A-36.
C. STRUCTURAL TUBES AND COLUMNS - ASTM A500, GRADE B.
D. STRUCTURAL PIPE - ASTM A53, TYPE E, GRADE B, SCHEDULE 40.
E. HIGH STRENGTH BOLTS ¾" ASTM A-325, TYPE 1 OR 2 GALVANIZED.
F. ANCHOR BOLTS - ASTM A-307, GRADE A GALVANIZED.
G. WELDING TO BE PERFORMED WITH E70XX 70 ksi ELECTRODES.

PART 3 - EXECUTION

3.01 FABRICATION

A. FABRICATE STRUCTURAL STEEL IN ACCORDANCE WITH THE REQUIREMENTS OF THE DRAWINGS AND THIS SECTION OF THE SPECIFICATIONS.

STRUCTURAL STEEL NOTES, CONT.

3.02 ERECTION

A. THE STRUCTURAL METAL SHALL BE ERECTED PLUMB AND TRUE TO THE LINES AND EVALUATIONS INDICATED ON THE DRAWINGS.

B. ERECTION TOLERANCES SHALL BE WITHIN THE LIMITS SPECIFIED IN SECTION 7.11 OF THE "AISC CODE OF STANDARD PRACTICE".

C. TEMPORARY CONNECTIONS SHALL BE ADEQUATE TO SAFELY SUPPORT ALL DEAD LOAD AND ERECTION IMPOSED STRESSES.

D. TEMPORARY BRACING SHALL BE PROVIDED WHEREVER NECESSARY TO HOLD THE STEEL IN A HORIZONTAL AND VERTICAL PLANE UNTIL PERMANENT BOLTING HAS BEEN COMPLETED.

E. BOLTS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND BROUGHT TO "SNUG TIGHT" CONDITION, ALL PLIES OF JOINT IN FIRM CONTACT, IN ACCORDANCE WITH SECTION 8.1 (C) OF THE BOLT SPECIFICATION OF SECTION 1.01 C OF THIS SPECIFICATION.

F. ENLARGEMENT OF HOLES BY BURNING WITH A TORCH SHALL NOT BE ALLOWED. ALL STEEL WITH BURNT HOLE ENLARGEMENTS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

3.03 PAINTING

A. SHOP PAINT PREPARED SURFACES OF ALL STEEL WORK WITH FABRICATOR'S STANDARD RUST INHIBITIVE PAINT, MINIMUM 2.0 MIL THICKNESS, COMPATIBLE WITH BASE COAT.

B. SURFACE PREPARE ALL FABRICATED STEEL TO RECEIVE SHOP PRIME (ONLY), TO A MINIMUM OF HAND TOOL CLEAN OR EQUIVALENT AS DICTATED BY CONDITION OF PRODUCT AT TIME OF PAINTING.

C. PROVIDE BRUSH BLAST OR HANDTOOL SURFACE PREP FOR ALL FABRICATION TO RECEIVE A TOP COAT OF PAINT.

EARTHWORK NOTES

1. SITE WORK AND CONCRETE CONTRACTORS ARE REQUIRED TO REVIEW THE ONSITE SUBSURFACE SOIL CONDITIONS WITH THE SER AT THE START OF INITIAL CONSTRUCTION. SITE CONTRACTOR WILL NOTIFY SER AFTER EXCAVATION HAS STARTED AND PRIOR TO THE PLACEMENT OF ANY STRUCTURAL FOUNDATIONS.
2. REMOVE ALL TOPSOIL AND UNCONTROLLED FILL FOR THE AREAS RECEIVING BUILDING FOUNDATIONS.
3. BACKFILL TO THE NECESSARY SUBGRADES REQUIRED ON THE STRUCTURAL FOUNDATION PLANS WITH CONTROLLED STRUCTURAL FILL MATERIAL MEETING THE FOLLOWING GRADATION:

PERCENT PASSING	SCREEN OR SIEVE SIZE
6	100
3	90-100
NO. 4	35-70
NO. 40	5-35
NO. 200	0-5

4. PLACE CONTROLLED STRUCTURAL FILL IN UNIFORM LIFTS AND COMPACT TO A MINIMUM OF 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D1557 "MODIFIED PROCTOR DENSITY".
5. PROVIDE SITE GRADING AROUND THE PERIMETER OF THE BUILDING TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE FOUNDATION DURING AND AFTER CONSTRUCTION.
6. MAINTAIN THE INTEGRITY OF NATURAL SOILS AND CONTROLLED STRUCTURAL FILLS DURING CONSTRUCTION. PROTECT FOOTING AND STRUCTURE SUBGRADES AGAINST FREEZING AND EXCESSIVE WETTING. REMOVE AND REFILL FROZEN SUBGRADES, MOISTURE CONDITION, OR REPLACE EXCESSIVELY WET SUBGRADE MATERIALS.
7. NOTIFY ENGINEER TO OBSERVE SUBGRADES PRIOR TO PLACING FOOTINGS. ACCEPTABLE SUBGRADES INCLUDE DENSELY CONSOLIDATED, UNDISTURBED, NATURALLY DEPOSITED SANDS AND GRAVELS, CONTROLLED STRUCTURAL FILLS, OR CLEAN, SOUND LEDGE.
8. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER IF LEDGE IS ENCOUNTERED TO DETERMINE PINNING REQUIREMENTS.
9. TOP OF ALL FOOTINGS SHALL EXTEND A MINIMUM OF 4'-0" BELOW EXTERIOR FINISHED GRADE.
10. PROOF ROLL SUBGRADE PRIOR TO SLAB CONSTRUCTION. PROVIDE STRUCTURAL FILL MEETING THE GRADATION SPECIFIED HEREIN FOR FILL MATERIALS BELOW THE SLAB, MAXIMUM PERCENT PASSING 200 SIEVE = 7%.
11. COMPACT CONTROLLED STRUCTURAL FILLS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND ASTM D1557. USE ONLY HAND-OPERATED EQUIPMENT ADJACENT TO WALLS. FILL BOTH SIDES OF WALLS TO EQUAL ELEVATIONS BEFORE COMPACTING.

DEGREE OF COMPACTION: COMPACT TO THE FOLLOWING MINIMUM DENSITIES:

FILL AND BACKFILL LOCATION	DENSITY
UNDER STRUCTURE FOUNDATIONS	95% OF MAX.
TOP 2 FEET UNDER PAVEMENT	95%
BELOW TOP 2 FEET UNDER PAVEMENT	92%
TRENCHES THROUGH UNPAVED AREAS	90%
EMBANKMENTS	90%
PIPE BEDDING	92%
BESIDE STRUCTURE FOUNDATION WALLS, TANK WALLS AND RETAINING WALLS	90%
UNDER PIPES THROUGH STRUCTURAL FILLS	90%
UNDER DRAIN FILTER SAND	92%

MAXIMUM DENSITY: ASTMD1557, MODIFIED.

FIELD DENSITY TESTS: ASTMD1556 (SAND CONE), ASTMD2167 (RUBBER BALLOON), OR ASTMD2922 (NUCLEAR METHODS).

12. CONTRACTOR IS REQUIRED TO CONFORM TO OSHA (29 PART 1926.650-652) SUBPART P "CONSTRUCTION STANDARD FOR EXCAVATIONS".

GENERAL STRUCTURAL NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF ALL APPLICABLE STATE AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO:
   -INTERNATIONAL BUILDING CODE 2003 ED
   -ANSI-ASCE 7-02
   -ACI 318-02 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
   -ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
   -AISC STEEL CONSTRUCTION MANUAL
   -SISI COLD FORMED STEEL DESIGN MANUAL
   -ANSI-AF&PA NDS-2001
2. STAIR DESIGN LOADS: SNOW LOAD 50 PSF + DRIFT; LIVE LOAD 100 PSF; DEAD LOAD 20 PSF
3. WIND LOADS:
   BASED ON WIND SPEED OF 100 MPH, 20 PSF PRIMARY BUILDING FRAME AND 28 PSF COMPONENTS AND CLADDING.
4. CONTRACTOR SHALL BRING TO THE ATTENTION OF THE ENGINEER ANY CONDITIONS DIFFERENT FROM THOSE SHOWN ON THE DRAWINGS AND ALSO ANY CONDITIONS THAT PREVENT THE CONTRACTOR'S COMPLETION OF THE WORK AS SHOWN ON THE CONSTRUCTION DRAWINGS.
5. ALL WORK SHALL BE PERFORMED BY PERSONS QUALIFIED IN THEIR TRADE AND LICENSED TO PRACTICE SUCH TRADE IN THE STATE IN WHICH THE PROJECT IS LOCATED.
6. THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH ANY ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS, IN ADDITION TO SPECIFICATIONS AND ANY SHOP DRAWINGS PROVIDED BY SUBCONTRACTORS AND SUPPLIERS.

GENERAL STRUCTURAL NOTES

7. ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS SHALL BE VERIFIED IN THE FIELD BY GENERAL CONTRACTOR (G.C.) AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
8. UNLESS OTHERWISE NOTED, DETAILS, SECTIONS, AND NOTES SHOWN ON ANY DRAWING SHALL BE CONSIDERED TYPICAL FOR ALL SIMILAR DETAILS.
9. THESE DRAWINGS DO NOT SHOW SIZE, LOCATION OR TYPE OF OPENING IN THE FOUNDATION SYSTEM FOR ELECTRICAL, PLUMBING OR MECHANICAL EQUIPMENT. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING THESE ITEMS.
10. ALL SHOP DRAWINGS PROVIDED BY OTHERS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION OF MATERIAL OR THE PURCHASE OF NON-RETURNABLE STOCK. DIMENSIONAL REVIEW IS THE CONTRACTOR'S RESPONSIBILITY.
11. USE PERIMETER DRAINS WHERE SHOWN. DRAIN TO APPROPRIATE OUTLET.

LIFE SAFTEY/EGRESS CODE ANALYSIS

STATE THEATER REPLACEMENT EXTERIOR FIRE ESCAPES
PORTLAND, MAINE

THIS CODE ANALYSIS IS PRESENTED AS IT PERTAINS TO THE RE-CONSTRUCTION OF THE EXTERIOR NON-COMBUSTIBLE FIRE ESCAPE STAIRS ONLY. A CODE ANALYSIS FOR THE LIFE SAFTEY / EGRESS REQUIREMENTS OF THE INTERIOR OF THE BUILDING IS OUTSIDE THE SCOPE OF THIS PROJECT. THIS CODE ANALYSIS PROVIDED BY GRANT-HAYS ASSOCIATES, PO BOX 6179, 28 OAK RIDGE WAY FALMOUTH, ME 04105

NFPA 101 Life Safety Code - 2003 Edition

Occupancy Classification:	Assembly - Class B (300-3,000 occupants)
Construction Type:	Type III (000) - Fully Sprinkled
Assembly Area:	Under 10,000 sf per floor
Occupancy Load:	Stage @ 15 sf/occ. = 112 L.E.D. Fixed Seats = 138 L.E.D. Open Area @ 5sf/occ. = 1,097 Balcony Fixed Seats = 542 **TOTAL = 1,889 Occupants**
Maximum Allowable travel Distance:	200' (250')
Maximum Allowable Common Path:	75' (100')
Maximum Dead End Corridor Length:	20'
Minimum Egress Corridor Width:	42" @ double-loaded aisles 36" @ single-loaded aisles
Minimum Number of Required Exits	8 @ L.E.D. 3 @ Balcony
Exit Lighting:	Required
Emergency Lighting:	Required
Portable Fire Extinguishers:	Required
Panic Exit Devices:	Required
Fire Alarm/Notification System:	Required
Fire Suppression/Sprinkler System:	Required

"L.E.D." = Level of Exit Discharge (*) Denotes Requirement for Sprinkled Spaces

Area of Refuge:	none, stairs are exterior
Minimum Stair width:	22" clear NFPA T, 7.2.8.4.1 (b)
Maximum Riser height:	9"
Minimum Tread width:	10"
Minimum Headroom:	6'-8" at stairs; 7'-6" at occupied areas
Maximum ht between landings:	12'-0"
Handrail height:	34"-38" @ 42" guardrail
Handrail top extension:	12" horz.
Handrail bottom extension:	11" angled + 12" horz.
Handrail diameter:	1-1/4" O.D.
Maximum balluster open space:	less than 4"

Building Live Loads
Stairs and Landings: 100 psf

End of Analysis

ASSOCIATED DESIGN PARTNERS INC.
80 Leighton Road
Falmouth, Maine 04105
Office: (207) 878-1751
Fax: (207) 878-1788
E-Mail: adp@adpengineering.com

PROJECT: STATE THEATER
609 CONGRESS ST. PORTLAND, ME
FOR: GRANT WILSON

SHEET TITLE: NOTES AND SPECIFICATIONS

No.	BY	REVISIONS DESCRIPTION	DATE
1	ASW	ISSUED FOR PRICING	3/8/06
2	ASW	ISSUED FOR FIRE MARSHALL REVIEW	4/7/06
3			
4			

DATE : 03/08/06
SCALE : AS NOTED
DESIGN BY: ASW
DRAWN BY: ASW
FILE #: 05247-S303
PROJECT NUMBER: 05247
SHEET NO: S302