MISCELLANEOUS ITEMS

CALCULATION AND DESIGN OF MISCELLANEOUS NON-STRUCTURAL ITEMS, SUCH AS STAIRS, RAILINGS, NON-STRUCTURAL WALLS AND PREFABRICATED STRUCTURAL ITEMS, SUCH AS FLOOR AND ROOF TRUSSES, ARE NOT INCLUDED AND ARE TO BE PROVIDED BY OTHERS UNLESS SPECIFICALLY NOTED ON THESE DRAWINGS.

CONSTRUCTION MEANS AND METHODS

THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING, FORM-WORK, ETC... AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY (INCLUDING UTILITIES) DURING CONSTRUCTION. CONSTRUCTION MATERIALS SHALL BE PLACED ON THE STRUCTURE SUCH THAT THE DESIGN LOADS ARE NOT EXCEEDED.

DIMENSIONS, INSERTS AND OPENINGS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS. CONDITIONS, AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE ARCHITECT IN WRITING OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS. ANY SUCH DISCREPANCY, OMISSION, OR VARIATION NOT REPORTED BEFORE START OF CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WHERE DISCREPENCIES OCCUR IN THESE DRAWINGS, NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STUCTURAL NOTES AND TYPICAL

CONTRACTOR SHALL ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

STANDARDS

WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE EDITION REFERENCED IN THE GOVERNING BUILDING

TYPICAL DETAILS AND NOTES

TYPICAL DETAILS AND NOTES SHALL APPLY, THOUGH NOT NECESSARILY INDICATED AT A SPECIFIC LOCATION ON PLANS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT. DETAILS MAY SHOW ONLY ONE SIDE OF CONNECTION OR MAY OMIT INFORMATION FOR CLARITY.

SHOP DRAWINGS

SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS. SHOP DRAWINGS ARE REVIEWED ONLY FOR GENEREAL COMPLIANCE WITH THE STRUCTURAL DRAWINGS. REVIEW DOES NOT INDICATE THAT THE SHOP DRAWINGS ARE CORRECT OR COMPLETE. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR. ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DRAWINGS SHALL BE CLOUDED. ANY OF THE AFOREMENTIONED SHALL NOT BE CONSIDERED APPROVED AFTER ENGINEER'S REVIEW UNLESS SPECIFICALLY NOTED ACCORDINGLY. THE SHOP DRAWINGS DO NOT SUPERSEDE OR REPLACE THE ORIGINAL CONTRACT DRAWINGS, ANY ENGINEERING PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF AN APPROPRIATELY REGISTERED ENGINEER. ENGINEERING SYSTEM SOLUTIONS SHALL NOT BE RESPONSIBLE FOR THE ADEQUACY OF ENGINEERING DESIGNS PERFORMED BY OTHERS. FIVE WORKING DAYS SHALL BE ALLOWED FOR THE ENGINEER'S REVIEW. CONTRACTOR SHALL PROVIDE A COPY OF EACH SUBMITTAL FOR ENGINEERING SYSTEM SOLUTIONS RECORDS.

SHOP DRAWINGS SHALL REFERENCE DATE AND DELTA (IF ANY) OF CONTRACT DRAWINGS.

MOLD CONCERNS AND PREVENTION IS OUT OF ENGINEERING SYSTEM SOLUTIONS SCOPE OF SERVICES. ENGINEERING SYSTEM SOLUTIONS SHALL BE HELD HARMLESS, TO THE EXTENT OF THE LAW, FOR ALL MOLD PREVENTION AND MOLD RELATED CONCERNS.

DEFERRED SUBMITTALS

SPECIALTY ITEMS

PREFABRICATED OR SPECIALTY ITEMS AND THEIR COMPONENTS. WHICH ARE INDICATED BY THE STRUCTURAL DRAWINGS TO BE DESIGNED BY OTHERS. MAY BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AS A DEFERRED SUBMITTAL PROVIDED THAT SUCH SUBMITTAL IS AUTHORIZED BY THE AUTHORITY HAVING JURISDICTION. DEFERRED SUBMITTALS REQUIRED TO BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD SHALL INCLUDE BUT NOT BE LIMITED TO THE

- CONCRETE MIX DESIGN - REBAR PLACEMENT SHOP DRAWINGS

PREPARATION

ALL DEFERRED SUBMITTALS SHALL INCLUDE CALCULATIONS AND DRAWINGS PREPARED IN ACCORDANCE WITH ALL APPLICABLE DESIGN CODES AND STAMPED BY AN APPROPRIATELY LICENSED PROFESSIONAL ENGINEER. SUBMITTALS SHALL SHOW LOCATION AND MAGNITUDE OF LOADS, SIZE AND CONFIGURATIONS OF MEMBERS, AND COMPATIBILITY WITH THE PRIMARY STRUCTURAL SYSTEM.

DEFERRED SUBMITTAL ITEMS SHALL BE REVIEWED IN ACCORDANCE WITH STANDARD SHOP DRAWING REVIEW PROCEDURES AS DESCRIBED IN THE GENERAL REQUIREMENTS SECTION OF THE GENERAL STRUCTURAL NOTES.

SPECIAL INSPECTIONS

A SPECIAL INSPECTOR SHALL BE PROVIDED TO OBSERVE WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. THE INSPECTOR SHALL SUBMIT A SIGNED STATEMENT TO THE OWNER, CONTRACTOR, AND ENGINEER INDICATING THE SPECIAL INSPECTION WORK WAS IN COMPLIANCE WITH THE PLANS AND SPECIFICATIONS.

SPECIAL INSPECTIONS SHALL BE PROVIDED FOR THE FOLLOWING WORK:

- BACKFILL - REINFORCEMENT - CONCRETE

BASIS FOR DESIGN

GOVERNING BUILDING CODE	2018 IBC (' SOUTHERN NEVAL AMENDMENT
DEAD LOAD STRUCTURE SELF-WEIGHT CONCRETE POLE AND EQUIP SELF WT	150 PC
SOILS SOIL BEARING PRESSURE (D+L) MINIMUM EMBEDMENT DEPTH LATERAL BEARING PRESSURE COEFFICIENT OF FRICTION FOR LATERA RESISTANCE	2000 PS 12 INCHI 300 PG IL SLIDING 0.
SEISMIC SITE CLASS SEISMIC DESIGN CATEGORY Ss SDS (SHORT PERIOD)	0.57 0.51

ALL SITE PREPARATION, GRADING, COMPACTION TESTS, INSPECTIONS, ETC. SHALL

ENGINEERING SYSTEM SOLUTIONS ASSUMES NO LIABILITY FOR GROUNDWATER OR OTHER MEANS OF FLOODING.

NOTED ON THE FOUNDATION PLAN.

THE LOWEST OF THE FOLLOWING (BEFORE LANDSCAPING):

BUILDING PAD SUBGRADE

• LOWEST SURROUNDING SOIL GRADE WITHIN 5'-0" OF BUILDING

SUPPORT PER THE GEOTECHNICAL RECOMMENDATIONS.

QUALITY CONTROL.

FLOOR SYSTEM CAN ADEQUATELY BRACE THE WALL.

BACKFILL AND RECOMPACT ALL TRENCHES PER THE GEOTECHNICAL REPORT. (MIN

PROVIDE ADEQUATE DRAINAGE AWAY FROM THE STRUCTURE.

REINFORCING STEEL

REINFORCING BARS SHALL BE DEFORMED, EXCEPT AS NOTED IN ACI 301.

USE OF EPOXY-COATED BARS IS NOT PERMITTED.

ALL WELDED BARS SHALL BE GRADE 60, REFER TO ASTM STANDARD A706.

#4 BARS OR LARGER SHALL BE GRADE 60, REFER TO ASTM STANDARD A615.

#3 BARS OR SMALLER SHALL BE GRADE 40, REFER TO ASTM STANDARD A615.

ALL DIMENSIONS NOT NOTED AS "CLR" ARE TO THE CENTER OF THE BAR.

FOR NON-PRESTRESSED STEEL".

REINFORCEMENT SUPPORT SHALL COMPLY WITH ACI 301.

UN-BENT AND RE-BENT.

BENDING SHALL BE MADE ONLY AT LOCATIONS SHOWN ON PLANS OR DETAILS. ALL REINFORCING SHALL BE BENT COLD. BARS SHALL NOT BE UNBENT AND REBENT. #5 BAR AND SMALLER MAY BE COLD FIELD BENT. #6 BAR AND LARGER SHALL NOT BE FIELD BENT WITHOUT PRIOR APPROVAL FROM ENGINEER.

PLACE AND DETAIL

CONCRETE

MATERIAL

MINIMUM 28 DAY COMPRESSIVE STRENGTH IS 4000 PSI

BASIC WIND SPEED **EXPOSURE**

FOUNDATION

DESIGN RECOMMENDATIONS

FIRM: NINYO & MOORE; REPORT NO.: 304358001; DATE: 24 DEC 2018

BE FOLLOWED WITH STRICT ADHERENCE AND SHALL BE COMPLETED PRIOR TO ANY CONCRETE PLACEMENT. SEE ACI 325.3 FOR FURTHER REQUIREMENTS.

FOOTING EMBEDMENT

ALL FOOTINGS SHALL EXTEND BELOW GRADE THE MINIMUM EMBEDMENT DEPTH AS

GRADE IS DEFINED AS FOLLOWS

FOLLOW ACI 302.1 RECOMMENDATIONS FOR PLACING CONCRETE, CURING, AND

BACKFILL SHALL NOT BE PLACED AGAINST EXTERIOR WALLS UNTIL THE INTERIOR

CLEAR COVER

FOR CLEAR COVER REQUIREMENTS REFER TO TYPICAL DETAIL "MINIMUM COVER

REINFORCEMENT SUPPORTS

REINFORCEMENT SUPPORT SHALL BE PROVIDED TO MAINTAIN CLEAR DIMENSIONS SHOWN ON PLANS AND SHALL CONFORM TO ONE OF THE FOLLOWING SUPPORT TYPES: WIRE, COATED WIRE, PRECAST CONCRETE, PLASTIC.

UNLESS NOTED OTHERWISE TACK WELDING OF REINFORCING BARS NOT ALLOWED. FOR LAP LENGTH REQUIREMENTS REFER TO TYPICAL DETAIL "LAP LENGTH

MECHANICAL SPLICE COUPLERS

MECHANICAL SPLICE COUPLERS SHALL HAVE CURRENT ICC-ES APPROVAL AND SHALL BE CAPABLE OF DEVELOPING 125% OF THE STRENGTH OF THE BAR.

WELDING OF REINFORCING BARS, METAL INSERTS, AND CONNECTIONS SHALL CONFORM TO AWS D1.4. BENDING SHALL BE MADE ONLY AT LOCATIONS SHOWN ON PLANS OR DETAILS. ALL REINFORCING SHALL BE BENT COLD. BARS SHALL NOT BE

ALL BARS SHALL BE DETAILED AND PLACED PER CRSI SPECIFICATIONS AND HANDBOOK. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.

CEMENT SHALL BE TYPE V.

MAXIMUM W/C RATIO SHALL BE 0.45. CONCRETE SLUMP SHALL BE 4-6 INCHES.

ALL CONCRETE SHALL BE NORMAL WEIGHT OF 145 POUND PER CUBIC FOOT UNLESS NOTED OTHERWISE, USING HARD ROCK AGGREGATES CONFORMING TO ASTM C33. MAXIMUM AGGREGATE SIZE FOR STRUCTURAL ELEMENTS SHALL NOT EXCEED 3/4"

BATCHING, MIXING, AND TRANSPORTING

BATCHING, MIXING, AND TRANSPORTING CONCRETE SHALL BE PER ACI 301.

CONCRETE MIXES SHALL BE DESIGNED BY A CERTIFIED LABORATORY AND APPROVED BY THE ENGINEER OF RECORD.

PORTLAND CEMENT SHALL CONFORM TO ACI 301.

WATER SHALL NOT BE ADDED AT THE JOB SITE SUCH THAT THE APPROVED MIX DESIGN W/C RATIO IS EXCEEDED.

FORM WORK

FORM WORK SHALL BE PER ACI 301.

PLACING PLACING OF CONCRETE SHALL BE PER ACI 301.

PLACING OF CONCRETE BY MEANS OF PUMPING SHALL BE PER ACI 301. WHERE THERE IS A RISK OF PREMATURE DRYING, SUCH AS IN HOT OR WINDY

WEATHER, CURING MEASURES SHALL BE IMPLEMENTED PER THE

RECOMMENDATIONS OF ACI 301.

CONSOLIDATION CONSOLIDATION OF CONCRETE SHALL BE PER ACI 301.

EMBEDDED ITEMS

EMBEDDED ITEMS SHALL BE PLACED PER ACI 301.

WITHOUT WRITTEN APPROVAL FROM THE ENGINEER OF RECORD. EMBEDDED CONDUITS, PIPES, AND SLEEVES SHALL NOT BE LARGER IN DIAMETER THAN 1/3 THE OVERALL THICKNESS OF THE SLAB, BEAM, OR WALL IN WHICH THEY

CONDUITS AND PIPES SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE

ARE EMBEDDED AND SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS OR ELEMENT WIDTHS ON CENTER.

NO ALUMINUM EMBEDS SHALL BE IN DIRECT CONTACT WITH CONCRETE.

COLD WEATHER CONCRETING

WHEN THE AIR TEMPERATURE IS BELOW 40°F, COLD WEATHER CONCRETE PROCEDURES SHALL BE USED PER ACI 301.

A CONSTRUCTION PLAN SHALL BE SUBMITTED TO THE ENGINEER DETAILING THE PROTECTION PROCEDURES PRIOR TO PLACEMENT OF CONCRETE.

PROPER CONCRETE PLACING TEMPERATURE.

HOT WEATHER CONCRETING PRIOR TO CONCRETE PLACEMENT, TOP 3 INCHES OF SUB-BASE SHALL BE WETTED SUFFICIENTLY TO SATURATE SUB-BASE WITHOUT ANY STANDING WATER.

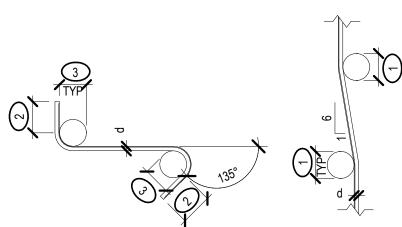
CONCRETE PLACEMENT TEMPERATURE MAY NOT EXCEED 90° FAHRENHEIT WHEN MEASURED IN ACCORDANCE WITH ASTM C1064.

STEEL FORMS AND REINFORCEMENT SHALL BE COOLED PRIOR TO CONCRETE

PLACEMENT WHEN STEEL TEMPERATURES EXCEED 120° FAHRENHEIT. MIX WATER, AGGREGATES, CONVEYING AND PLACING EQUIPMENT OR ANY COMBINATION OF THE ABOVE SHALL BE COOLED IF NECESSARY TO MAINTAIN

MININUM REINFORCING COVER STRUCTURAL ELEMENT COVER | TOLERANCE FOOTING AND SLAB ON GRADE 3" **I** 3/8" WALLS (#5 OR SMALLER) 1 1/2" 3/8" 1/2" WALLS (#6 OR LARGER) BEAMS AND COLUMNS 1 1/2" 3/8" ELEVATED SLABS 3/4" 3/8"

MINIMUM COVER FOR REINFORCING STEEL



STIRRUP AND TIE HOOKS

OFFSET BAR

A. d = BAR DIA B. ALL REINF SHALL BE BENT COLD UNO

C. REINF SHALL NOT BE UN-BENT OR RE-

ALL OTHER REINF

STANDARD REBAR BENDING DETAILS

KEYNOTES: 1. LIGHTPOLE BASE PL AND ANCHOR BOLTS

PER MER

KEYNOTES:

NOTES:

1. MIN FINISHED BEND DIA: 6d FOR #3

FOR #14 AND #18

MIN); 180°: 4d (2 1/2" MIN)

ON PLANS OR DETAILS

THRU #8: 8d FOR #9. #10 AND #11: 10d

EXTENSION FOR STIRRUPS AND TIES

3. MIN FINISHED BEND DIA FOR STIRRUPS

AND TIES ONLY: 4d FOR #5 AND

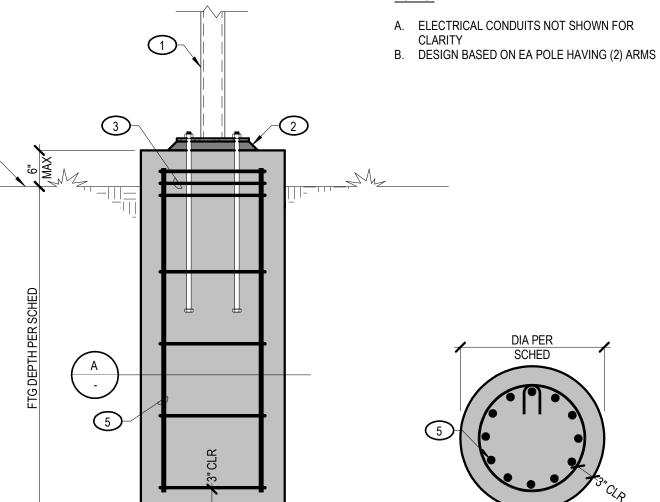
SMALLER; 6d FOR #6 THRU #8

ONLY: 90°: 6d FOR #5 AND SMALLER, 12d FOR #6 THRU #8 (3" MIN); 135°: 6d (3"

AT 9" O.C. THEREAFTER FINISHED GRADE PER CIVIL VERT BARS PER SCHED

2. ±1 1/2" NON-SHRINK GROUT W/ LEVELING

3. (3) #4 TIES AT 2" O.C. AT T.O. CAISSON AND



	LIGHT POLE FTG SCHED							
POLE TYPE	MAX POLE HT	MAX ARM LENGTH	MAX LUMINAIRE SIZE	MAX LUMINAIRE WT	CAISSON Ø	FTG DEPTH	VERT BARS	
DELPHI POLE	10' - 0"	2' - 0"	2.0 SQ FT	54 LB	36"	4' - 0"	(12) #6 BARS	
HUNTINGTON POLE	15' - 0"	2' - 0"	2.0 SQ FT	54 LB	36"	4' - 6"	(12) #6 BARS	
FREMONT POLE	18' - 5"	2' - 0"	3.5 SQ FT	55 LB	36"	4' - 9"	(12) #6 BARS	

DIA PER

LIGHT POLE FOUNDATION

STANDARD ABBREVIATIONS

CENTERLINE AB ANCHOR BOLT

ADDL ADDITIONAL ALT ALTERNATE ARCH ARCHITECTURAL

ASD ALLOWABLE STRESS DESIGN BLDG BUILDING

BLKG BLOCKING BN BOUNDARY NAILING OR FASTENERS BO BOTTOM OF

(E) EXISTING

BOT BOTTOM CLR CLEAR

CMU CONCRETE MASONRY UNIT COL COLUMN CONC CONCRETE CONT CONTINUOUS DBA DEFORMED BAR ANCHOR

DBL DOUBLE DIA OR Ø DIAMETER DIAG DIAGONAL DIM DIMENSION

DWG DRAWING EA EACH **ELEV ELEVATION** EN EDGE NAILING

EQ EQUAL EQUIP EQUIPMENT EW EACH WAY FDN FOUNDATION

FLR FLOOR FN FIELD NAILING FT FOOT FTG FOOTING GA GAUGE

GALV GALVANIZED

FF FINISH FLOOR

GSN GENERAL STRUCTURAL NOTES GT GIRDER TRUSS HI HIGH HORIZ HORIZONTAL

HSS HOLLOW STRUCTURAL SHAPE HT HEIGHT K KIP (1,000 LBS) KLF KIPS PER LINEAR FOOT

KSF KIPS PER SQUARE FOOT KSI KIPS PER SQUARE INCH LLH LONG LEG HORIZONTAL LLV LONG LEG VERTICAL LO LOW

LONG LONGITUDINAL LRFD LOAD AND RESISTANCE FACTOR DESIGN LT LIGHT MAX MAXIMUM

MFD MANUFACTURED MFR MANUFACTURER MIN MINIMUM MISC MISCELLANEOUS

NTS NOT TO SCALE

MECH MECHANICAL

O.C. ON CENTER OPP OPPOSITE HANL PL PLATE PLF POUNDS PER LINEAR FOOT

PREFAB PREFABRICATION PRELIM PRELIMINARY PSF POUNDS PER SQUARE FOOT PSI POUNDS PER SQUARE INCH PT PRESSURE TREATED

REINF REINFORCING REQ'D REQUIRED RME ROOF MOUNTED EQUIPMENT SCHED SCHEDULE SIM SIMILAR

SMS SHEET METAL SCREW SPEC SPECIFICATION STD STANDARD T&B TOP AND BOTTOM

T.O. TOP OF TRANS TRANSVERSE TYP TYPICAL UNO UNLESS NOTED OTHERWISE

WWF WELDED WIRE FABRIC

VIF VERIFY IN FIELD

VERT VERTICAL

W/ WITH W/O WITHOUT

WT WEIGHT

T&G TONGUE AND GROOVE

BI TRE FRE Y O

ER

CLIENT SUBMITTAL 03/11/2019 SUBMIT FOR PERMIT 04/05/2019

REVISIONS: # DESCRIPTION

CHECKED: TLR

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