010000 - GENERAL: BUILDING CODES USED FOR DESIGN AND CONSTRUCTION STRUCTURAL DESIGN OF THIS BUILDING IS IN ACCORDANCE WITH THE APPLICABLE CODES AND ORDINANCES AND THE 2015 INTERNATIONAL BUILDING CODE. CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE OF ILLINOIS AND APPLICABLE CODES AND ORDINANCES AND THE 2015 INTERNATIONAL

B. DESIGN LOADS SNOW LOAD CRITERIA GROUND SNOW LOAD, Pg=25 PSF SNOW EXPOSURE FACTOR, Ce=1.0 SNOW LOAD IMPORTANCE FACTOR, Is=1.0 THERMAL FACTOR, Ct=1.0

BUILDING CODE.

FLAT ROOF SNOW LOAD, Pf=20 PSF WIND LOAD CRITERIA BASIC WIND SPEED (3-SECOND GUST), V=115 MPH RISK CATEGORY = II

WIND LOAD ON OPEN SIGNS AND LATTICE FRAMEWORK, Pw=27.4 PSF (MINIMUM) WIND ON SOLID SIGNS, P=30.8 PSF (MINIMUM)

ICE LOAD CRITERIA (MONITOR SUPPORT FRAMING ONLY) NOMINAL ICE THICKNESS, T=0.75 INCH CONCURRNET WIND SPEED, Vc=40 MPH WEIGHT OF ICE, Di=31 PLF WIND PRESSURE ON ICE, Wi=4.3 PLF

C. FUTURE EXPANSION

WIND - EXPOSURE "B"

 THIS FACILITY IS NOT DESIGNED FOR FUTURE HORIZONTAL EXPANSION. THIS FACILITY IS NOT DESIGNED FOR FUTURE VERTICAL EXPANSION. D. EXISTING CONSTRUCTION

PRIOR TO THE START OF EXCAVATION AND THE FABRICATION AND ERECTION OF ANY STRUCTURAL COMPONENTS FOR THE NEW CONSTRUCTION, THE GC/CM SHALL FIELD VERIFY ALL EXISTING INFORMATION INCLUDING, BUT NOT LIMITED TO, ELEVATIONS, DIMENSIONS, AND CONDITIONS SHOWN ON THE DRAWINGS. IMMEDIATELY REPORT ALL DISCREPANCIES TO THE ENGINEER IN WRITING. THE GC/CM SHALL BE SOLELY RESPONSIBLE TO FIELD VERIFY THIS EXISTING INFORMATION DESCRIBED ABOVE PRIOR TO THE START OF ANY WORK.

THE CONTRACTOR SHALL VERIFY/DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES AND UTILITY LINES IN THE WORK AREA AND SHALL SUBSEQUENTLY DETERMINE ANY INTERFERENCES WITH THE NEW CONSTRUCTION PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. THE ENGINEER/ARCHITECT SHALL BE NOTIFIED IN WRITING OF ANY AND ALL SUCH INTERFERENCES.

THE CONTRACTOR SHALL EXAMINE ALL STRUCTURAL ELEMENTS OF THE EXISTING STRUCTURE UNCOVERED DURING THE PERFORMANCE OF THE WORK FOR SIGNS OF DETERIORATION AND/OR DEFICIENCY (E.G. STRUCTURAL STEEL CORROSION/DELAMINATON, MEMBER ROTATION, ETC.) PRIOR TO THE START OF ANY REPAIR WORK. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER (A/E) IN WRITING OF ANY SUCH OBSERVED CONDITIONS FOR A/E'S REIVEW AND ASSESSMENT. ANY STRUCTURAL REPAIRS THAT THE A/E DEEMS NECESSARY SHALL CONFORM TO THE REQUIREMENTS FOR NEW STRUCTURES AND SHALL BE COMPLETED BY CONTRACTOR AND SHALL BE OBSERVED BY THE A/E AND/OR INSPECTED BY THE OWNER'S TESTING AGENCY PRIOR TO BEING COVERED BY OTHER WORK.

EXISTING FRAMING BASED ON ORIGINAL STRUCTURAL DRAWINGS BY VIRGILIO & ASSOCIATES, LTD. DATED 06/2011 AND ARCHITECTURAL DRAWINGS BY MULLER & MULLER ARCHITECTS DATED 06/2011.

E. DESIGN RESPONSIBILITY THE STRUCTURAL DRAWINGS INDICATE STRUCTURAL DESIGN REQUIREMENTS FOR THE ROOFTOP STRUCTURE TO SUPPORT VIDEO MONITOR SCREEN SUPPORT FRAMING.

### 013400 - SHOP DRAWINGS AND SUBMITTALS:

SHOP DRAWINGS, UNLESS NOTED OTHERWISE, SHALL BE SUBMITTED FOR A/E REVIEW PRIOR TO FABRICATION AS NOTED BELOW AND IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. SHOP DRAWINGS SHALL BE FURNISHED FOR ALL STRUCTURAL COMPONENTS. ALL SUBMITTALS SHALL BE TWO (2) SETS OF PRINTS AND ONE (1) SET OF REPRODUCIBLES ONLY. ONLY ONE (1)

SET OF REPRODUCIBLES WILL BE RETURNED TO CONTRACTOR AFTER REVIEW (TYP).

PRIOR TO SUBMITTAL, THE RESPECTIVE SUB-CONTRACTOR SHALL REVIEW THE SUBMITTAL AND MAKE ANY CORRECTIONS REQUIRED. THE G.C./C.M. SHALL PROPERLY REVIEW AND COORDINATE ALL SUBMITTALS, NOTE ALL G.C./C.M. REVIEW COMMENTS, AND SHALL STAMP AND SIGN THE DRAWINGS. THAT HE HAS REVIEWED THEM PRIOR TO SUBMITTAL TO ARCHITECT/ENGINEER. SHOP DRAWINGS THAT ARE SUBMITTED AND APPEAR TO NOT HAVE BEEN PROPERLY CHECKED PRIOR TO SUBMISSION OR APPEAR TO BE INCOMPLETE IN THE SOLE JUDGEMENT OF

LINDSAY & ASSOCIATES, INC. (LINDSAY), SHALL BE RETURNED WITHOUT REVIEW AND SHALL BE CONSIDERED AS A "NON-SUBMITTAL" ANY SUBMITTAL THAT REQUIRES THE SIGNATURE AND SEAL OF A QUALIFIED LICENSED PROFESSIONAL ENGINEER IN THE JURISDICTION RETAINED BY THE CONTRACTOR AND RESPONSIBLE FOR THEIR STRUCTURAL DESIGN AND PREPARATION (PE), THAT IS

SUBMITTED WITHOUT THE REQUIRED SE'S SIGNATURE AND SEAL SHALL BE RETURNED WITHOUT REVIEW AND SHALL BE CONSIDERED AS A "NON-SUBMITTAL". ANY CHANGES MADE TO SUBMITTALS AFTER THEIR INITIAL SUBMITTAL SHALL BE CLOUDED. ANY DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL BE

SUBMITTED AS A CHANGE ORDER REQUEST & SHALL BE CLEARLY IDENTIFIED AS SUCH ON REPRODUCTION OF THE STRUCTURAL DOCUMENTS BY ANY PROCESS OR TECHNIQUE (e.g., PHOTOGRAPHIC, XEROGRAPHIC, ETC.) FOR DIRECT INCORPORATION OF THE PLANS, DETAILS,

NOTES, ETC., INTO A SHOP DRAWING IS STRICTLY PROHIBITED. 1. ANY SHOP DRAWING OR SUBMITTAL, RECEIVED BY THE STRUCTURAL ENGINEER, WHICH HAS BEEN PRODUCED IN WHOLE, OR IN PART, BY THE ABOVE MENTIONED TECHNIQUES, SHALL BE RETURNED WITHOUT REVIEW. E. ELECTRONIC SHOP DRAWING SUBMITTALS SHALL BE SUBMITTED IN A LEGIBLE FILE AND SHALL

INCLUDE (1) SET OF PRINTS FOR S.E.'S USE & REVIEW. THE ELECTRONIC FILE WITH S.E.'S COMMENTS WILL BE RETURNED TO THE CONTRACTOR AFTER REVIEW. (1) ADDITIONAL COMPLETELY REVIEWED SET OF PRINTS SHALL BE SUBMITTED TO THE S.E. FOR RECORD. AS AN ALTERNATE, S.E. CAN PRINT (1) SET OF PRINTS FOR S.E.'S USE & REVIEW AND (1) COMPLETELY REVIEWED SET OF PRINTS FOR S.E.'S RECORD AT THE COST OF THE CONTRACTOR.

## 017000 - MISCELLANEOUS

A. IN ANY CASE WHERE THESE STRUCTURAL NOTES ARE IN CONFLICT WITH THE PROJECT SPECIFICATIONS, THESE STRUCTURAL NOTES AND CONSTRUCTION DOCUMENTS WILL GOVERN ALL CONTRACTORS SHALL FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE DRAWINGS.

ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY AT ALL OTHER SIMILAR CONDITIONS UNLESS NOTED OTHERWISE. D. THE STRUCTURE SHALL BE ADEQUATELY BRACED AND SHORED BY THE CONTRACTOR DURING ERECTION TO SAFELY RESIST ALL LATERAL AND ERECTION LOADS. ALL STRUCTURAL MEMBERS ARE

DESIGNED SOLELY FOR THE FINAL IN SERVICE LOADS AND LOADING CONDITIONS. E. THE G.C./C.M. AND ALL SUBCONTRACTORS SHALL, PRIOR TO THE START OF SHOP DRAWING PREPARATION, FABRICATION AND CONSTRUCTION, REVIEW ALL DIMENSIONS, ELEVATIONS, CONDITIONS, ETC. NOTED ON THE STRUCTURAL DRAWINGS AND SHALL COORDINATE ALL SUCH INFORMATION WITH THAT INDICATED ON THE REMAINDER OF THE CONTRACT DOCUMENTS (e.g. ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS, SPECIFICATIONS, ETC.) AND WITH THE REQUIREMENTS OF ALL OTHER SUBCONTRACTORS. THE G.C./C.M. SHALL IMMEDIATELY REPORT ALL OBSERVED DISCREPANCIES TO THE

ARCHITECT/ENGINEER IN WRITING. F. ALL PIPE SLEEVES, ANCHOR BOLTS AND OTHER ITEMS TO BE EMBEDDED INTO C.I.P. CONCRETE AS NOTED IN THE REMAINDER OF THE CONTRACT DOCUMENTS AND BY OTHER SUBCONTRACTORS SHALL BE SUPPLIED AND LOCATED BY THE RESPECTIVE CONTRACTOR AND SHALL BE PLACED BY THE G.C./C.M. ALL C.I.P. HOUSEKEEPING PADS REQUIRED SHALL BE BY THE RESPECTIVE

SUBCONTRACTOR. THE G.C./C.M. SHALL VERIFY AND COORDINATE THE EXACT SIZE AND LOCATION OF ALL FLOOR, ROOF, AND WALL OPENING AND PENETRATION SIZES WITH THE RESPECTIVE SUBCONTRACTORS

AND THAT SPECIFIED IN THE CONTRACT DOCUMENTS. THE G.C./C.M. SHALL NOTIFY THE A/E IN WRITING A MINIMUM OF (10) WORKING DAYS IN ADVANCE OF ANY AND ALL PROPOSED FIELD MODIFICATION OF ANY STRUCTURAL ELEMENTS (e.g. CORE DRILLED HOLES, MISFIT CONNECTIONS, ETC.).

I. ABBREVIATIONS:

ARCHITECT/ENGINEER A.E.S.S. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL A.R. ANCHOR ROD

C.F.S.S. COLD-FORMED STEEL STUD BOTTOM BLDG. = BUILDING BUILDING LIN

CONTRACTOR CONSTRUCTION DOCUMENTS CAST-IN-PLACE CONCRETE C.I.P. CONTROL JOINT/CONSTRUCTION JOINT C.J. CONCRETE MASONRY UNIT

C.M.U. CONNECT, CONNECTION CONN. DEFORMED BAR ANCHOR D.B.A. DRILLED PIER D.P. DOWN SPOUT D.S.

EXISTING EPOXY COATE EACH FACE EXPANSION JOINT

EDGE OF DECK EDGE OF SLAB OR EDGE OF STEEL ELEVATION TOP OF DRILLED PIER OR PILE CAP ELEVATION TOP OF FOOTING

ELEVATION TOP OF CONCRETE PIER E.T.W. ELEVATION TOP OF WALL EACH WAY EACH WAY EACH FACE E.W.E.F. ELEVATION WORKING POINT FLOOR DRAIN FACE OF CONCRET FACE OF WALL F.O.W. FAR SIDE F.S.

GRADE BEAM GENERAL CONTRACTOR / CONSTRUCTION MANAGER GEOTEXTILE FILTER FABRIC

HORIZONTAL HEADED ANCHOR STUDS H.A.S. HOT DIP GALVANIZED H.D.G. JOIST

METAL BUILDING MANUFACTURER M.B.M. MANUFACTURER NEAR SIDE NON-SHRINK, NON-STAIN N.S.N.S. ON CENTER OVERFLOW DRAIN

OUTSIDE FACE PRECAST CONCRETE PLYWD = PLYWOOD POST TENSIONED CONCRETE STUD LINE

SLAB ON GRADE S.O.G. UNLESS NOTED OTHERWISE U.N.O. VERTICAL VERIFY IN FIELD =

WRITING BY AN OFFICER OF LINDSAY & ASSOCIATES, INC.

=

WELDED WIRE FABRIC

= ZINC-RICH COATING THESE DRAWINGS AND ALL INFORMATION CONTAINED THEREON OR ANY PRINTS THEREOF ARE THE PROPERTY OF LINDSAY & ASSOCIATES, INC. OF AURORA, ILLINOIS, ARE SUBJECT TO RETURN UPON

DEMAND, ARE CONFIDENTIAL AND MUST NOT BE MADE PUBLIC OR COPIED UNLESS AUTHORIZED IN

W.W.F.

A. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", AND THE AISC CODE OF STANDARD PRACTICE LATEST EDITIONS.

В.	MATERIAL PROPERTIES		
		Fy, PSI	A.S.T.M.
	STRUCTURAL SHAPES (WIDE FLANGE SECTIONS) U.N.O.	50,000	A992
	STRUCTURAL SHAPES (S, M, HP & C SHAPES)	36,000	A36
	STRUCTURAL STEEL ANGLES, PLATES ETC.	36,000	A36
	BOLTS (1/2" DIA. TO 1" DIA.), U.N.O.	92,000	A325
	BOLTS (1-1/8" DIA. TO 1-1/2" DIA.) U.N.O.	81,000	A325
	BOLTS (1/2" DIA. TO 1-1/2" DIA.) AS NOTED	*120,000	A490
	WELDING ELECTRODES	E70XX	AWS D1.1-91
	STRUCTURAL PIPE COLUMNS (ROUND SHAPES)	42,000	A500, GRADE B
	STRUCTURAL TUBES (SQUARE & RECTANGULAR SHAPES)	46,000	A500, GRADE B
	* PROOF LOAD 120,000 PSI, TENSILE Ft=150,000 PSI	MINIMUM	

C. ALL NEW STEEL TO BE HOT-DIP GALVANIZED.

 ALL STEEL CONNECTIONS NOT FULLY DETAILED ON THE CONTRACT DOCUMENTS SHALL BE DESIGNED AND DETAILED BY A QUALIFIED STRUCTURAL ENGINEER (SE) LICENSED IN THE JURISDICTION RETAINED BY THE STEEL CONTRACTOR. THE CONTRACTOR SHALL SUBMIT SIGNED AND SEALED CONNECTION CALCULATIONS AND A LETTER FROM THEIR SE TO CERTIFY THAT HE HAS REVIEWED THE STEEL SHOP DRAWINGS AND THAT THE DETAILED CONNECTIONS CONFORM WITH THE SE'S CONNECTION DESIGN REQUIREMENTS AND CALCULATIONS. ANY AND ALL SUBSEQUENT REVISIONS OF THE SHOP DRAWINGS SHALL BE FULLY REVIEWED BY THE CONTRACTOR'S SE AND THE CONTRACTOR SHALL SUBMIT SUPPLEMENTAL CONNECTION CALCULATIONS AND A SIGNED AND SEALED LETTER FROM THEIR SE TO CERTIFY THAT HE HAS REVIEWED THE FINAL STEEL SHOP DRAWINGS ISSUED FOR FABRICATION AND THAT THE DETAILED CONNECTIONS CONFORM WITH THE SE'S CONNECTION DESIGN REQUIREMENTS AND CALCULATIONS.

ALL FIELD CONNECTIONS SHALL BE BOLTED WITH 3/4" DIAMETER HIGH STRENGTH BOLTS CONFORMING TO ASTM A325-N, UNLESS NOTED OTHERWISE. CONNECTIONS SHALL BE DESIGNED FOR A MINIMUM OF 60% OF THE TOTAL ALLOWABLE

UNIFORM LOAD DERIVED FROM THE AISC MANUAL'S TABLE OF "UNIFORM LOAD CONSTANTS" FOR NON-COMPOSITE BEAMS AND 90% FOR COMPOSITE BEAMS. TYPICAL CONNECTIONS TO WIDE FLANGE COLUMNS SHALL BE STANDARD AISC DOUBLE

ANGLE CONNECTIONS USING THE MAXIMUM NUMBER OF FULLY TIGHTENED A325 OR A490

SINGLE PLATE FRAMING CONNECTIONS MAY BE USED IF DESIGNED ACCORDING TO APPENDIX B OF THE AISC MANUAL "DETAILING FOR STEEL CONSTRUCTION OR TABLE X OF THE AISC "MANUAL OF STEEL CONSTRUCTION ALLOWABLE STRESS DESIGN" LATEST EDITIONS. BEAM END REACTIONS SHALL BE DETERMINED AS SPECIFIED ABOVE. THE USE OF EXTENDED SINGLE PLATE CONNECTIONS IS PROHIBITED UNLESS NOTED

OTHERWISE ON THE CONTRACT DOCUMENT. ALL EXPANSION, SLEEVE OR EPOXY ANCHORS SHALL BE "HILTI" ANCHORS OR EQUIVALENT.

ALL PLATES USED IN BOLTED CONNECTIONS SHALL HAVE ROLLED OR GAS CUT EDGES. ALL SIMPLE SHEAR CONNECTIONS SHALL BE CAPABLE OF END ROTATION AS PER THE REQUIREMENTS OF THE A.I.S.C. SPECIFICATIONS, CHAPTER J1.2, "SIMPLE CONNECTIONS".

ERECT STRUCTURAL STEEL IN ACCORDANCE WITH AISC: AS NOTED ABOVE INCLUDING ALL SUPPLEMENTS, AND WITH SPECIFICATION SECTION 05120, "STRUCTURAL STEEL".

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES, INCLUDING, BUT NOT LIMITED TO, TEMPERATURE DIFFERENTIALS, ERECTION TOLERANCES, AND WITH RESPECT TO STRUCTURAL STEEL FRAMING INTO

CONCRETE, PRECAST CONCRETE OR MASONRY WALLS, BEAMS OR COLUMNS. 3. ALL ERECTION PROCEDURES, DESIGN, AND CALCULATIONS SHALL BE PERFORMED BY THE ERECTOR'S QUALIFIED STRUCTURAL ENGINEER LICENSED IN THE STATE OF ILLINOIS. ANY REVIEW OF SUCH CALCULATIONS AND/OR DRAWINGS BY THE ENGINEER SHALL BE LIMITED SOLELY TO IT'S EFFECT ON THE INTEGRITY OF THE PERMANENT STRUCTURE.

4. ALL ADDITIONAL STEEL REQUIRED BY THE CONTRACTOR FOR ERECTION PURPOSES AND SITE ACCESS OF STOCKPILED MATERIAL SHALL BE PROVIDED AT NO COST TO THE OWNER. THE CONTRACTOR SHALL REMOVE ALL SUCH ADDITIONAL STEEL UNLESS APPROVED BY THE OWNER IN WRITING.

AFTER ERECTION, CLEAN FIELD WELDS, BOLTED CONNECTIONS AND ABRADED AREAS, AND TOUCH-UP PRIME PAINTED AND GALVANIZED LOCATIONS WITH MATCHING PRIMER AND OR ZINC ENRICHED GALVANIZED PAINT

CLEAN ERECTED STRUCTURAL STEEL MEMBERS OF FIELD APPLIED MARKINGS, SOIL, AND MUD IN ACCORDANCE OF DIVISION 1 GENERAL REQUIREMENTS OF THE PROJECT SPECIFICATIONS FOR THIS PROJECT.

THE STEEL ERECTOR IS SOLELY RESPONSIBLE FOR THE STEEL ERECTION AND SEQUENCE. THE STEEL ERECTION SEQUENCE AND ASSOCIATED CALCULATIONS, SIGNED AND SEALED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER, SHALL BE SUBMITTED TO ARCHITECT 15 WORKING DAYS PRIOR TO START OF STEEL ERECTION.

F. TESTING AND INSPECTION

TESTING AND INSPECTION OF BOTH SHOP AND FIELD STRUCTURAL STEEL FABRICATION AND ERECTION WORK, INCLUDING WELDED AND BOLTED CONNECTIONS, SHALL BE IN ACCORDANCE

WITH THE PROJECT SPECIFICATIONS AND AS NOTED BELOW. ALL STRUCTURAL STEEL FABRICATION AND ERECTION SHALL BE VISUALLY INSPECTED. ALL WELDERS SHALL BE AWS CERTIFIED.

ALL WELDS SHALL BE AWS/AISC PRE-QUALIFIED. ALL WELDS SHALL BE VISUALLY INSPECTED PER AWS D1.1. WELD MEASUREMENTS SHALL BE

MAGNETIC PARTICLE TESTING IN ACCORDANCE WITH ASTM E790 SHALL BE PERFORMED 10 PERCENT OF ALL SHEAR PLATE FILLET WELDS, AT RANDOM, FINAL PASS ONLY.

20 PERCENT OF ALL CONTINUITY PLATE BRACING GUSSET PLATE FILLET WELDS AT RANDOM, FINAL PASS ONLY

100 PERCENT OF TENSION MEMBER CONNECTION FILLET WELD (I.E. HANGER CONNECTION PLATES, ETC.) FOR ROOT AND FINAL PASS.

20 PERCENT BUILD-UP MEMBER FILLET WELDS, FINAL PASS ONLY. 100 PERCENT OF BUILD-UP MEMBER FILLET WELDS IN ZONES OF MOMENT

PERFORMED FOR 15 PERCENT OF ALL WELDS ON A RANDOM BASIS.

CONNECTIONS FOR ROOT AND FINAL PASS. 10 PERCENT OF BUILD-UP MEMBER FILLET WELDS, AT RANDOM, FOR FINAL PASS

ULTRASONIC TESTING IN ACCORDANCE WITH AWS D1.1, SHALL BE PERFORMED FOR A MINIMUM OF: 100 PERCENT OF ALL FULL PENETRATION WELDS.

20 PERCENT OF ALL COLUMN SPLICE WELDS, CHOSEN AT RANDOM. ALL BOLTED CONNECTIONS SHALL BE VISUALLY INSPECTED AND TESTED WITH A CALIBRATED TORQUE WRENCH TO VERIFY A MINIMUM OF 25 PERCENT OF BOLTS IN EACH CONNECTION (TWO BOLTS PER CONNECTION, MINIMUM) IN ACCORDANCE WITH RCSC's "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".

THE REQUIRED CONTACT SURFACE CONDITION OF ALL SLIP-CRITICAL CONNECTIONS SHALL BE VISUALLY INSPECTED IMMEDIATELY PRIOR TO BEAM ERECTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REMEDIAL WORK REQUIRED TO CONTACT SURFACES.

THE OWNER'S STRUCTURAL STEEL TESTING LABORATORY SHALL PERFORM ALL SHOP AND FIELD INSPECTION AND TESTING AS OUTLINED ABOVE. THE STRUCTURAL STEEL FABRICATOR AND ERECTOR SHALL SCHEDULE ALL WORK TO ALLOW

THE ABOVE INSPECTION AND TESTING REQUIREMENTS TO BE COMPLETED.

PROVIDE GOVERNMENT ANCHORS FOR BEAMS BEARING ON MASONRY WHERE ANCHOR BOLTS OR OTHER ANCHORAGE IS NOT SPECIFIED. STEEL THAT IS TO BE FIREPROOFED OR GALVANIZED AS SPECIFIED SHALL NOT BE PRIME

PAINTED. SEE ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE-PROOFING AND GALVANIZED LOCATIONS, ETC. ALL BEAMS SHALL BE FABRICATED WITH THE NATURAL CAMBER UP. PROVIDE ADDITIONAL

CAMBER AS INDICATED ON THE STRUCTURAL DRAWINGS.

4. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS OF EXISTING AND NEW CONSTRUCTION PRIOR TO FABRICATION.

MODIFICATION TO EXISTING CONSTRUCTION NOTES:

LOCATE AND MARK ALL UTILITIES, INCLUDING THOSE UNDERSLAB, PRIOR TO THE START OF ANY

THE EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS IS FOR INFORMATION ONLY. EXISTING CONSTRUCTION SHALL BE CHECKED AGAINST THE ORIGINAL CONSTRUCTION DOCUMENTS AND VERIFIED IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ALL NEW CONSTRUCTION. ANY EXISTING FINISHES REMOVED OR DAMAGED TO ACCOMPLISH ANY STRUCTURAL MODIFICATIONS

ANY STEEL OR REINFORCEMENT BARS THAT HAVE BEEN CUT SHALL BE GROUND FLUSH WITH THE

CONCRETE SURFACE AND FINISHED WITH EPOXY PAINT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND

SHALL BE REINSTATED AT THE COMPLETION OF THE MODIFICATION WORK, UNLESS NOTED

THE CONTRACTOR SHALL VERIFY/DETERMINE THE LOCATION OF ALL EXISTING UTILITIES AND UTILITY LINES IN THE WORK AREA AND SHALL SUBSEQUENTLY DETERMINE ANY INTERFERENCE WITH THE NEW CONSTRUCTION PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. THE ENGINEER/ARCHITECT SHALL BE NOTIFIED IN WRITING OF ANY AND ALL SUCH INTERFERENCES.

## CONCRETE:

DRILLED-IN ANCHORS AND REINFORCEMENT BARS

 GENERAL a. ONLY DRILLED-IN EXPANSION ANCHORS AND DRILLED IN CHEMICAL/EPOXY BONDED ANCHORS AND REINFORCEMENT BARS ARE ACCEPTABLE.

b. MEET ALL OF THE MANUFACTURER'S REQUIREMENTS TO OBTAIN THE LISTED LOAD CAPACITY INLCLUDING ANCHOR INSTALLATION PROCEDURES, HOLE DIAMETER, SPACING, EDGE DISTANCE, AND EMBEDMENT REQUIREMENTS.

c. A MINIMUM OF ONE (1) ANCHOR OR REINFORCEMENT BAR IN 50 SHALL BE TESTED BY THE OWNER'S TESTING AGENCY FOR THE NOMINAL ULTIMATE PULLOUT CAPACITY OF THE ANCHOR.

DRILLED-IN ANCHOR AND REINFORCEMENT BAR SYSTEMS MUST BE REVIEWED AND ACCEPTED BY THE ARCHITECT/STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

DRILLED-IN CHEMICAL/EPOXY BONDED ANCHORS AND REINFORCEMENT BARS. DRILL AND BOND REINFORCING BAR DOWELS AS INDICATED IN THE DETAILS. APPROVED EPOXY SHALL BE USED FOR ALL DRILLED-IN REINFORCEMENT BARS,

CEMENT OR OTHER GROUTS SHALL BE USED. c. DRILLED-IN REINFORCEMENT BARS SHALL DEVELOP AN ULTIMATE CAPACITY OF 125

PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE BAR. DRILLED-IN ANCHORS SHALL DEVELOP THE NOMINAL ULITIMATE CAPACITY OF THE B. DRILLING INTO THE EXISTING CONCRETE STRUCTURE SHALL BE PERFORMED IN A MANNER, WHICH AVOIDS DAMAGE TO ALL EXISTING REINFORCEMENT UNLESS OTHERWISE ACCEPTED BY THE ARCHITECT/STRUCTURAL ENGINEER. SUBMIT A CONSOLIDATED "PENETRATION" SHOP DRAWING INDICATING ALL NEW REQUIRED PENETRATIONS PLUS CURRENT PENETRATIONS FOR ALL DISCIPLINES ON ONE DRAWING FOR EACH LEVEL AND EACH ELEVATION. INDICATE THE EXACT SIZE AND LOCATION OF ALL PENETRATIONS RELATIVE TO THE CLOSEST COLUMN CENTER LINE. USE A BAR DETECTION METHOD TO LOCATE BARS PRIOR TO DRILLING.

C. THE FACE OF ALL NEW PERMANENT CONCRETE SURFACES CUT FROM EXISTING CONCRETE SHALL BE CLEANED WITH A HIGH PRESSURE WATER SPRAY. ALLOW SURFACE TO DRY THOROUGHLY. COAT THE CONCRETE SURFACES WITH A BONDING AGENT AND FINISH WITH AN ACCEPTABLE PATCHING COMPOUND. ALL EXPOSED REINFORCEMENT SHALL BE CUT OFF AND GROUND FLUSH WITH THE NEW CONCRETE SURFACE.

WHERE EXISING CONCRETE REINFORCEMENT IS TO BE REUSED IN-PLACE, THE CONCRETE SHALL BE REMOVED IN A MANNER WHICH MINIMIZES DAMAGE TO THE REINFORCEMENT. DAMAGED REINFORCEMENT SHALL BE REPLACED BY A METHOD ACCEPTABLE TO THE ARCHITECT/STRUCTURAL

WHERE NEW CONCRETE IS TO BE CAST AGAINST EXISTING CONCRETE, THE CONTACT SURFACE SHALL BE ROUGHENED AND CLEANED WITH A HIGH PRESSURE WATER SPRAY, ALLOW SURFACE TO DRY THOROUGHLY PRIOR TO APPLICATION OF EPOXY BONDING AGENT. ANY NEW STRUCTURAL STEEL REINFORCEMENT BEAMS ADJACENT TO NEW SLAB OPENINGS SHALL BE

FULLY INSTALLED PRIOR TO ANY CUTTING FOR THE NEW OPENINGS.

PRIOR TO CUTTING OPENINGS IN SLAB SPANS, ADJACENT SPANS SHALL BE SHORED TEMPORARILY

H. ANY EXISTING WALL OPENINGS TO BE IN-FILLED SHALL BE REINFORCED WITH BARS TO MATCH THOSE IN THE ADJACENT EXISTING CONCRETE. DOWELS FOR THESE BARS SHALL BE PLACED INTO ADJACENT CONCRETE. PRIOR TO CUTTING OPENINGS IN EXISTING WALLS, ANY ADJACENT IN-FILL WORK SHALL BE

COMPLETED AND THE IN-FILL CONCRETE SHALL HAVE REACHED ITS 28-DAY STRENGTH. SAWCUTS FOR NEW WALL OPENINGS SHALL NOT EXTEND PAST THE REQUIRED DIMENSIONS FOR THE OPENING. CORE DRILL CORNERS AND EXTEND SAWCUTS INTO THE CORE AND NOT BEYOND. CHIP OUT THE REMAINDER AT THE CORNERS TO ACHIEVE A CLEAN 90 DEGREE CORNER.

SEE "STRUCTURAL CONCRETE NOTES" AND SPECIFICATION SECTION 03300, "CAST-IN-PLACE CONCRETE", FOR ADDITIONAL REQUIREMENTS.

A. THE CONTRACTOR SHALL SUBMIT COORDINATED SHOP DRAWINGS TO THE ARCHITECT/STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO CUTTING OR ERECTION OF ANY NEW STEEL.

VERIFY THE ACCESSIBILITY TO THE BUILDING AND MAXIMUM WORKABLE MEMBER LENGTHS BEFORE COMMENCING WITH STEEL FABRICATION. IF THE NEW BEAMS CANNOT BE SHIPPED AND INSTALLED AS CONTINUOUS MEMBERS, ANY SPLICES SHALL CONSIST OF FULL PENETRATION WELDING OF THE FLANGES AND PARTIAL PENETRATION WELDING OF THE WEB OF THE NEW BEAM TO DEVELOP AT LEAST 75% OF THE BEAM WEB SHEAR CAPACITY. THE CONTRACTOR SHALL SUBMIT PROPOSED SPLICE DETAIL AND LOCATIONS TO THE ARCHITECT/STRUCTURAL ENGINEER FOR REVIEW PRIOR TO

REMOVE ALL LOADS FROM THE SLAB DIRECTLY ABOVE THE AREAS WHERE NEW STEEL IS TO BE INSTALLED. PROVIDE SHORING UNDER EXISTING SLABS AND BEAMS PRIOR TO AND DURING

REMOVE ALL LOADS FROM THE SLAB DIRECTLY ABOVE THE AREAS WHERE NEW STEEL IS TO BE INSTALLED. PROVIDE SHORING UNDER EXISTING SLABS AND BEAMS PRIOR TO AND DURING CONSTRUCTION. ALL NEW STRUCTURAL STEEL SHALL BE IN PLACE PRIOR TO THE REMOVAL OF ANY EXISTING SLABS, AND SLABS SHALL BE COMPLETELY REMOVED PRIOR TO REMOVING SHORING.

D. PROVIDE NON-SHRINK GROUT AS REQUIRED FOR FULL BEARING OF THE EXISTING SLAB ON THE NEW BEAMS, UNLESS NOTED OTHERWISE.

REMOVE EXISTING FIREPROOFING LOCALLY AND CLEAN AREAS OF EXISTING STEEL TO BE WELDED. INSTALL NEW U.L. APPROVED FIREPROOFING MATERIAL ON ALL NEW STEEL AND AREAS WHERE FIREPROOFING WAS REMOVED OR DAMAGED DURING THE INSTALLATION OF THE NEW WORK. NEW STEEL SHALL HAVE FIRE RATINGS AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

FIREPROOFING ON EXISTING STEEL SHALL MATCH EXISTING. F. SEE "STRUCTURAL STEEL NOTES" AND SPECIFICATION SECTION 05120, "STRUCTURAL STEEL" FOR ADDITIONAL REQUIREMENTS.

# RIVER EDGE PARK **MONITOR SUPPORT**

Lindsay & Associates, Inc.

Consulting Structural Engineers

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**GENERAL NOTES** 

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