GENERAL NOTES

<u>GENERAL</u>

- 1. COORDINATE WITH ALL DRAWINGS FOR INFORMATION RELATED TO STRUCTURAL WORK. ANY 9. EXCAVATION AND COMPACTION: CHANGES TO THE BUILDING STRUCTURAL SYSTEM SHALL BE REDESIGNED ONLY BY EBERSOLE STRUCTURAL ENGINEERS, LTD. ALL CHANGES MUST HAVE PRIOR AUTHORIZATION OF THE OWNER AND EBERSOLE STRUCTURAL ENGINEERS, LTD.
- 2. ALL CONTRACTORS SHALL COORDINATE STRUCTURAL DRAWINGS WITH ALL OTHER DRAWINGS WITHIN THE CONTRACT DOCUMENTS.
- 3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS RELATED TO EXISTING CONSTRUCTION, EXISTING SERVICES, AND THE SITE BEFORE BEGINNING WORK.
- 4. BUILDING CODE: OHIO BUILDING CODE, 2007
- 5. DESIGN LOADS:

MINIMUM ROOF LIVE LOAD.

THE BUILDING CODE.

| OCCUPANCY CATEGORY | ١ |
|--------------------------------|----|
| ROOF SNOW LOAD - NEW CANOPY Pg | ٦F |
| P _f | LΕ |
| C _† | .2 |

| WIND LOAD | |
|---|-----------------|
| BASIC WIND SPEED. | 90 MPH |
| | |
| EXPOSURE | B |
| | |
| GC _{pi} — NEW CANOPY GC _{pi} — EXISTING BUILDING | ±0.18 |
| COMPONENTS & CLADDING | |
| ROOF - NEW CANOPY | +25.6/-34.7 PSF |
| WALLS - FXISTING BUILDING | +13 3/-17 7 PSF |

| R W | OOF - NEW CANOPY |
|-------------------|---|
| | AKE LOAD — NEW CANOPY ONLY |
| Š | 0.199 |
| SITE (| CLASS D |
| S _{d1} | |
| SEISMI BASIC S | IC DESIGN CATEGORY B EISMIC-FORCE-RESISTING SYSTEMSTEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE |
| R | N BASE SHEAR |
| | 0.071 /SIS IN ACCORDANCE WITH THE EQUIVALENT LATERAL FORCE PROCEDURE OF |

- EARTHQUAKE LOAD EXISTING STRUCTURE EXISTING STRUCTURE ALTERATIONS DO NOT INCREASE THE SEISMIC FORCE IN ANY MEMBER BY MORE THAN 5%.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND THE 7. ALL CONCRETE SHALL CONTAIN A WATER REDUCING ADMIXTURE CONFORMING TO FINAL CLEARANCE OF ANY TEMPORARY NEEDLING, UNDERPINNING, SHORING, OR BRACING OF EXISTING STRUCTURES.
- 7. CONSTRUCTION LOADS SHALL NOT EXCEED DESIGN LIVE LOADS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DESIGN REQUIRED TO SUPPORT CONSTRUCTION EQUIPMENT USED IN CONSTRUCTING THIS PROJECT. SHORING AND RESHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 8. TEMPORARY BRACING SHALL BE PROVIDED AND SHALL REMAIN IN PLACE UNTIL THE LATERAL BRACING SYSTEM IS IN PLACE AND CONNECTIONS OF ALL MEMBERS ARE FINAL AND ALL DECK IS COMPLETELY ERECTED, WELDED, AND SCREWED IN PLACE.
- 9. ALL SHOP DRAWINGS MUST BE CHECKED BY THE FABRICATOR AND BEAR CHECKER'S INITIALS, BEFORE BEING SUBMITTED FOR REVIEW. THE CONTRACTOR SHALL CHECK ALL SHOP DRAWINGS FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS AND HIS APPROVAL STAMP SHALL BE PLACED ON EACH SHOP DRAWING INDICATING SUCH, BEFORE BEING SUBMITTED FOR REVIEW.
- 10. IF THE FABRICATOR HAS BEEN AUTHORIZED TO USE THE ARCHITECT AND ENGINEER'S DRAWINGS AS ERECTION DRAWINGS, THE FABRICATOR MUST REMOVE ALL TITLE BLOCKS, PROFESSIONAL SEALS AND ANY OTHER REFERENCES TO THE ARCHITECT AND ENGINEER FROM THEIR DRAWINGS. THE FABRICATOR'S NAME AND TITLE SHALL BE PLACED ON THE ERECTION DRAWINGS.
- 11. SHOP DRAWINGS AND FABRICATION OF MATERIALS SHALL CONFORM TO THE MOST CURRENT DRAWINGS AND SPECIFICATIONS.
- 12. ANY WORK DONE PRIOR TO RECEIPT OF OWNER APPROVED SHOP DRAWINGS IS AT THE CONTRACTOR'S RISK AND SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- 13. ANY CHANGES TO THE SHOP DRAWINGS SINCE THE PREVIOUS SUBMITTAL MUST BE CIRCLED AND NOTED AS A REVISION. SHOP DRAWINGS WILL BE RETURNED UNREVIEWED IF REVISIONS ARE NOT CIRCLED.
- 14. IN CASE OF A DISCREPANCY BETWEEN THE DRAWINGS, SPECIFICATIONS, AND NOTES, OR AMONG DRAWINGS, THE STRONGEST, THE LARGER QUANTITY, AS DETERMINED BY THE ARCHITECT SHALL GOVERN WITHOUT ADDITIONAL EXPENSE TO THE OWNER, ARCHITECT OR ENGINEER.
- 15. THE CONTRACTOR IS TOTALLY RESPONSIBLE FOR THE FOLLOWING ITEMS THAT WILL NOT BE REVIEWED BY THE OWNER, ARCHITECT OR ENGINEER.
 - A. DEVIATIONS FROM CONTRACT DOCUMENTS. B. DIMENSIONS, ELEVATIONS AND CONDITIONS TO BE CONFIRMED AND CORRELATED
 - AT THE SITE. C. FABRICATION PROCESS INFORMATION. D. MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OF CONSTRUCTION
 - AND CONSTRUCTION SAFETY. . COORDINATION OF THE WORK OF ALL TRADES.

F. QUALITY ASSURANCE SUBMITTALS.

FOUNDATIONS

- 1. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SURVEY AND EXISTING SITE CONDITIONS BEFORE BEGINNING CONSTRUCTION.
- 2. NO GEOTECHNICAL REPORT IS AVAILABLE. THE OWNER SHALL ENGAGE AN INDEPENDENT TESTING AND INSPECTION AGENCY TO VERIFY THE ALLOWABLE BEARING PRESSURE OF THE SOILS PRIOR TO FORMING AND CASTING THE FOUNDATIONS. IF THE ALLOWABLE BEARING PRESSURE IS LESS THAN THE ASSUMED DESIGN SOIL BEARING PRESSURE, THEN A ENGINEERS, LTD., AS SOON AS POSSIBLE IF THE ALLOWABLE SOIL BEARING PRESSURE IS LESS THAN THE ASSUMED DESIGN SOIL BEARING PRESSURE.
- 3. ASSUMED DESIGN SOIL BEARING PRESSURE = 2000 PSF ON FIRM UNDISTURBED SOIL.
- 4. NOTIFY EBERSOLE STRUCTURAL ENGINEERS, LTD., AS SOON AS POSSIBLE OF ANY UNUSUAL SOIL CONDITIONS IN VARIANCE WITH THE TEST BORINGS.
- 5. SET FOUNDATIONS AT ELEVATIONS SHOWN, OR ON FIRM UNDISTURBED MATERIAL OF DESIGN BEARING CAPACITY, WHICHEVER IS LOWER. THE GEOTECHNICAL ENGINEER SHALL 23. BEND ALL HORIZONTAL WALL, FOOTING, AND BEAM BARS AROUND ADJACENT CORNERS AND VERIFY THAT EACH FOOTING PLACED IS BEARING ON DESIGN MATERIAL.
 - A. ALL SOIL SURROUNDING AND UNDER ALL FOOTINGS, FLOOR SLABS, ETC. SHALL BE PROTECTED FROM FREEZING AND FROST ACTION DURING CONSTRUCTION.
 - B. WHERE FOOTINGS ARE IN CLOSE PROXIMITY OF SEWERS, DRAINS, CONDUITS UNDERFLOOR PIPES, ETC., BOTTOM OF ALL FOOTINGS SHALL BE AT OR BELOW 25. BONDBREAKER MATERIAL SHALL BE 15 POUND FELT PAPER. INVERT ELEVATIONS OF ELEMENTS NOTED HEREIN.
- 6. STEP FOOTINGS AT A RATIO OF ONE (1) VERTICAL TO TWO (2) HORIZONTAL. WITH A

MAXIMUM VERTICAL STEP OF 2'-0", UNLESS NOTED OTHERWISE.

- 7. BACKFILLING AGAINST FOUNDATION OR PIT WALLS SHALL NOT BE PERMITTED UNTIL THE SUPPORTING FLOORS ARE IN PLACE AND ARE ABLE TO RESIST THE IMPOSED LATERAL FORCES. EXCEPT FOR CANTILEVER RETAINING WALLS OR UNLESS NOTED OTHERWISE ON DRAWINGS. THE WALLS ARE SUPPORTED BY THE FLOOR ABOVE AND BELOW. PROPER TEMPORARY BRACING MAY BE USED IN LIEU OF THE FLOOR SUPPORT BASED UPON THE DESIGN BY A PROFESSIONAL ENGINEER. THE DESIGN OF TEMPORARY BRACING IS THE TOTAL RESPONSIBILITY OF THE CONTRACTOR.
- 8. BACKFILL AND FILL MATERIALS SHALL CONSIST OF SOIL MATERIALS APPROVED BY THE GEOTECHNICAL ENGINEER AND SHALL BE FREE OF DEBRIS, WASTE, FROZEN MATERIALS, ORGANIC AND OTHER DELETERIOUS MATTER.
 - A. POROUS FILL: SHALL BE CRUSHED LIMESTONE, COMPACTED, (MINIMUM 4" THICK UNDER FLOOR SLABS, UNLESS NOTED OTHERWISE ON DRAWINGS). THE GRADATION SHALL CONFORM WITH ASTM C33 SIZE #57.
 - B. DRAINAGE FILL: SHALL BE WASHED, GRADED MIXTURE OF CRUSHED STONE, OR CRUSHED OR UNCRUSHED GRAVEL, AT EXTERIOR WALLS AND RETAINING WALLS. THE GRADATION SHALL CONFORM WITH ASTM C33 SIZE #67.
 - C. WELL GRADED GRANULAR MATERIAL (#8) SHALL CONFORM WITH ASTM C33

- A. CARE SHALL BE TAKEN TO NOT DISTURB THE BOTTOM OF THE EXCAVATION. EXCAVATION TO FINAL GRADE SHALL NOT BE MADE UNTIL JUST PRIOR TO PLACING CONCRETE.
- B. KEEP FOUNDATION EXCAVATIONS FREE OF WATER AT ALL TIMES. REPLACE WEAKENED SOIL WITH LEAN CONCRETE (1500 PSI MINIMUM).
- C. BACKFILL AND FILL SHALL BE PLACED IN LIFTS OF 8" MAXIMUM LOOSE DEPTH. EACH LIFT SHALL BE COMPACTED WITH A POWER VIBRATING COMPACTOR OR SIMILAR EQUIPMENT TO ASSURE MAXIMUM COMPACTION OF THE MATERIAL.
- D. THE BACKFILL OR FILL MATERIALS SHALL HAVE AN OPTIMUM MOISTURE CONTENT OF \pm 2% WHEN TESTED.
 - 1. TESTING SHALL BE IN ACCORDANCE WITH STANDARD PROCTOR ASTM D 698
 - 2. MINIMUM COMPACTION DENSITIES: UNDER FOUNDATIONS AND SLAB ON GRADE. .98% OVER SEWER LINES. UNDER PAVEMENTS .98% LAWN AREAS.. .85%
- 3. COMPACTION TESTS SHALL BE CONDUCTED ON THE SUBGRADE AND FOR EACH LAYER OF BACKFILL AT THE RATE OF ONE TEST FOR EVERY 2500 SQUARE FEET.
- E. ALL EXCESS MATERIAL SHALL BE REMOVED FROM THE SITE.
- 10. DEWATERING OF THE SITE MAY BE REQUIRED. METHODS FOR DEWATERING ARE THE CONTRACTOR'S RESPONSIBILITY.

CAST IN PLACE CONCRETE

30 PSF

- 1. CAST IN PLACE CONCRETE SHALL CONFORM TO ACI 318-08 CODE, STANDARDS AND ACI 301-05 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE", EXCEPT AS MODIFIED HEREIN.
- 2. THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE IN 28 DAYS SHALL BE: 3000 PSI - FOOTINGS 4000 PSI — ALL OTHER CONCRETE
- 3. REINFORCING BARS: A615 GRADE 60 KSI YIELD STRENGTH, UNLESS NOTED OTHERWISE. WELDING OR TACK WELDING A615 BARS SHALL NOT BE PERMITTED.
- 4. REINFORCING BARS FOR WELDED APPLICATIONS SHALL CONFORM WITH A706, 60 KSI 2 YIELD STRENGTH.
- 5. WELDED WIRE FABRIC: ASTM A185.
- 6. CALCIUM CHLORIDE SHALL NOT BE PERMITTED NOR SHALL ANY ADMIXTURE CONTAINING CALCIUM CHLORIDE BE PERMITTED.
- ASTM C494, TYPE A, F OR G.
- 8. ALL CONCRETE EXPOSED TO THE WEATHER OR IN A LOCATION VULNERABLE TO C260. THE AMOUNT OF ENTRAINED AIR SHALL BE 6% \pm 1%.
- 9. CONCRETE SHALL BE DISCHARGED AT THE SITE WITHIN 1 1/2 HOURS AFTER WATER HAS BEEN ADDED TO THE CEMENT AND AGGREGATES. ADDITION OF WATER TO THE MIX AT THE PROJECT SITE WILL NOT BE PERMITTED. ALL WATER MUST BE ADDED AT THE BATCH PLANT. SLUMP MAY BE ADJUSTED ONLY THROUGH THE USE OF MIDRANGE OR HIGH RANGE WATER REDUCING ADMIXTURE.
- 10. PROVIDE CORROSION RESISTANT ACCESSORIES SUCH AS GRAY PLASTIC CHAIRS OR 6. GROUT SHALL CONFORM WITH ASTM C476 COARSE GROUT, 3/8" MAXIMUM SIZE COARSE CHAIRS WITH PLASTIC COATED TIPS, IN ALL EXPOSED CONCRETE CONSTRUCTION. PRECAST CONCRETE CUBES OR SAND PLATE CHAIRS SHALL BE USED FOR THE ARE NOT PERMITTED.
- 11. REINFORCING BARS REQUIRED FOR PROPER SUPPORT OF PRINCIPAL REINFORCING SHALL BE DETAILED AND SUPPLIED BY THE CONTRACTOR WHETHER OR NOT THEY ARE INDICATED ON THE DRAWINGS. THE MINIMUM BAR SIZE SHALL BE #4 AND THE MAXIMUM SPACING SHALL BE 36" ON CENTER FOR ALL BARS THAT NEED SUPPORT. WELDED WIRE FABRIC SHALL NOT BE USED FOR THE SUPPORT OF PRINCIPAL REINFORCING.
- 12. CONSTRUCTION JOINTS SHALL BE SUBJECT TO REVIEW BY EBERSOLE STRUCTURAL ENGINEERS, LTD., AND SHALL BE LOCATED AND DETAILED AS SPECIFIED ON THE DRAWINGS OR AS NOTED. CONTINUE ALL REINFORCING THROUGH JOINT.
- 13. ALL CONCRETE SHALL BE CURED USING A LIQUID MEMBRANE CURING COMPOUND. UNLESS NOTED OTHERWISE, WITH A MAXIMUM UNIT MOISTURE LOSS OF 0.039 GR./SQ.CM AT 72 HOURS AND APPLIED AT A MAXIMUM COVERAGE RATE OF 200 SQ.FT./GAL. CURING COMPOUND SHALL BE APPLIED WITHIN 1 HOUR AFTER FINAL TROWELING OR FORM REMOVAL. ALL CONCRETE SHALL BE CURED FOR NOT LESS THAN 7 DAYS.
- 14. FOR CONCRETE WHICH WILL BE COVERED WITH A CONCRETE TOPPING OR A MATERIAL SET IN A MORTAR BED, BOTH OF WHICH REQUIRE A BOND TO THE FIRST CAST CONCRETE, THE LIQUID MEMBRANE CURING COMPOUND SHALL NOT BE USED. A WATERPROOF SHEET MEMBRANE SHALL BE USED CONFORMING TO ASTM C171 WITH ALL JOINTS AND EDGES SEALED WITH TAPE TO PREVENT MOISTURE LOSS.
- 15. PROVIDE 6x6 W2.9xW2.9 WELDED WIRE FABRIC IN ALL SLABS ON GRADE, UNLESS NOTED OTHERWISE.
- 16. ALL WELDED WIRE FABRIC SHALL BE CHAIRED TO ITS PROPER HEIGHT AND MAINTAINED AT THE PROPER HEIGHT THROUGHOUT THE CONCRETE PLACING OPERATION. LIFTING OF WELDED WIRE FABRIC WITH A HOOK DURING CONCRETE PLACEMENT SHALL NOT BE PERMITTED.
- 17. OPENINGS SHALL NOT BE PROVIDED IN FRAMED SLABS, BEAMS, JOISTS, COLUMNS, OR WALLS UNLESS SHOWN ON THE STRUCTURAL DRAWINGS, OR APPROVED IN WRITING PRIOR TO PLACING CONCRETE. CUTTING HOLES THROUGH BEAMS, JOISTS OR COLUMNS SHALL NOT BE PERMITTED. CUTTING HOLES LARGER THAN 10" SQUARE OR ROUND THROUGH SLABS SHALL NOT BE PERMITTED.
- 18. CHAMFER EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED OTHERWISE.
- 19. PROVIDE CONTROL JOINTS IN ALL SLABS ON GRADE AS SHOWN ON DRAWINGS OR 12'-0" MAXIMUM ON CENTER.
- REDESIGN OF THE FOUNDATIONS MAY BE REQUIRED. NOTIFY EBERSOLE STRUCTURAL 20. REINFORCING BAR LAP SPLICES AND ANCHORAGE LENGTH SHALL CONFORM WITH "MINIMUM LAP SPLICE AND ANCHORAGE DIMENSION TABLE #1" UNLESS NOTED OTHERWISE ON THE DRAWINGS.
 - 21. TOP LAYER OF REINFORCING STEEL IN BEAMS, SLABS, JOISTS, WALLS AND FOOTINGS SHALL BE CONSIDERED TOP BARS REGARDLESS OF THICKNESS OF CONCRETE BELOW THE BARS.
 - 22. ALL WALL FOOTING REINFORCING SHALL BE CONTINUOUS THROUGH COLUMN FOOTINGS.

LAP ACCORDING TO TABLE #1, UNLESS NOTED OTHERWISE. CURVED CONCRETE MEMBERS

24. PROVIDE BOND BREAKER MATERIAL AT MASONRY BEARING OF ALL CAST IN PLACE CONCRETE SLABS, BEAMS, AND JOISTS.

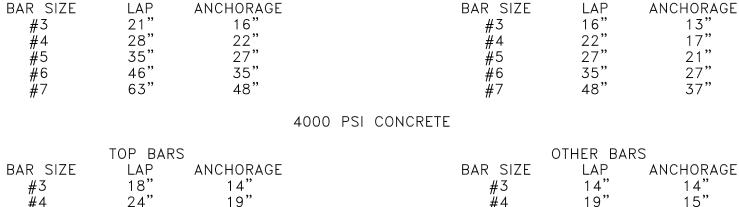
SHALL HAVE THE REINFORCING BARS SHOP ROLLED TO THE PROPER RADIUS.

- 26. DETERMINE SIZE AND LOCATION OF MECHANICAL EQUIPMENT AND MAKE PROVISIONS FOR BOLTS, SLEEVES, PADS, ETC., IN ACCORDANCE WITH THE MANUFACTURER'S CERTIFIED DRAWINGS. THIS WORK SHALL BE COORDINATED WITH THE TRADES INVOLVED 15. DO NOT USE FROZEN MATERIALS OR MATERIALS MIXED OR COATED WITH ICE OR FROST. PRIOR TO ANY CONCRETE PLACEMENT
- 27. CONDUITS OR PIPES SHALL NOT BE PLACED IN CONCRETE SLABS ON STEEL DECK.

MINIMUM LAP SPLICE AND ANCHORAGE DIMENSION TABLE #1 Fy = GRADE 60, NON-COATED BARS

OTHER BARS

3000 PSI CONCRETE



WHEN LAPPING TWO DIFFERENT SIZE BARS. USE THE LAP DIMENSION OF THE SMALLER BAR OR THE ANCHORAGE DIMENSION OF THE LARGER BAR. USE WHICHEVER DIMENSION IS LARGER.

TYPICAL REINFORCING BAR CLEARANCE TABLE.

LOCATION CLEARANCE CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH. SLABS (INTERIOR INCLUDING STAIRS). SLABS (EXTERIOR INCLUDING STAIRS) SLABS ON GRADE (WELDED WIRE FABRIC)....1/3 SLAB THICKNESS FROM TOP OF SLAB

<u>MASONRY</u>

TOP BARS

- MASONRY SHALL CONFORM TO THE REFERENCES ANDSTANDARDS LISTED BELOW, EXCEPT AS MODIFIED HEREIN, IN ADDITION TO ALL OTHER REQUIREMENTS OF THE CONTRACT DOCUMENTS AND STANDARD PRACTICES.
 - A. BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-08/ASCE 5-08/TMS 402-08).

WEBS LINE UP WHEN LAID IN RUNNING BOND.

- B. SPECIFICATION FOR MASONRY STRUCTURES (ACI 530.1-08/ASCE 6-08/TMS 602-08). HOLLOW AND SOLID CONCRETE MASONRY UNITS SHALL CONFORM WITH ASTM C90, TYPE I WITH A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI, EACH UNIT, NET CROSS SECTIONAL AREA. THE UNITS SHALL BE MANUFACTURED SO THE CORES AND
 - A. UNITS SHALL BE MEDIUM WEIGHT UNITS WITH A DRY NET WEIGHT OF NOT MORE THAN 115 PCF.
 - B. UNITS SHALL BE MANUFACTURER'S STANDARD UNITS WITH NOMINAL FACE DIMENSIONS OF 16" LONG \times 8" HIGH (15 5/8" \times 7 5/8" ACTUAL), UNLESS SHOWN OTHERWISE.
- DEICERS SHALL CONTAIN AN AIR—ENTRAINED ADMIXTURE CONFORMING TO ASTM 3. PROVIDE SPECIAL SHAPES WHERE SHOWN AND WHERE REQUIRED FOR LINTELS, CORNERS, JAMBS, SASH, CONTROL JOINTS, HEADERS, BONDING, AND OTHER SPECIAL CONDITIONS. MORTAR FOR ALL WALLS SHALL BE ASTM C270 TYPE S UNLESS NOTED OTHERWISE,
 - 5. MORTAR FOR NON BEARING INTERIOR WALLS SHALL BE ASTM C270 TYPE N, WITH A

WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI IN 28 DAYS.

- MINIMUM COMPRESSIVE STRENGTH OF 750 PSI IN 28 DAYS. AGGREGATE, WITH A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI IN 28 DAYS.
- SUPPORT OF REINFORCING ON GRADE. CONCRETE BLOCK OR CLAY MASONRY BRICK 7. DO NOT USE CALCIUM CHLORIDE OR ANY ADMIXTURE THAT CONTAINS CALCIUM CHLORIDE IN THE MORTAR OR GROUT.
 - 8. PROVIDE THE FOLLOWING WALL CONSTRUCTION AT ALL MASONRY WALLS UNLESS NOTED OTHERWISE.
 - A. CONTINUOUS BOND BEAM UNDER WALL BEARING STEEL JOISTS. BOND BEAM SHALL BE FILLED WITH 3000 PSI GROUT. B. MASONRY GROUTED SOLID, 32" LONG AND 16" HIGH UNLESS NOTED OTHERWISE,
 - CENTERED UNDER EACH WALL BEARING STEEL BEAM, PRECAST BEAM OR CAST IN PLACE CONCRETE BEAM. C. ALL CORES WHICH CONTAIN VERTICAL REINFORCING SHALL BE GROUTED SOLID FULL HEIGHT OF WALL. GROUT AS WORK PROGRESSES IN LIFTS NOT EXCEEDING 5'-0." ANCHOR BARS IN POSITION AT THE FIRST LIFT AND AT 10'-0" ABOVE
 - NOTED OTHERWISE ON THE DRAWINGS. 9. ALL MASONRY WALLS SHALL HAVE GALVANIZED HORIZONTAL JOINT REINFORCING OF
 - ONE OF THE FOLLOWING: A. TRUSS TYPE, 9 GAGE SIDE AND CROSS RODS, SPACED 16" ON CENTER VERTICALLY

THE FIRST ANCHORING POSITION, UNLESS NOTED OTHERWISE. REINFORCING BAR

LAP SPLICES AND ANCHORAGE LENGTH SHALL CONFORM WITH ACI 530 UNLESS

- FOR INTERIOR NON-BEARING WALLS AND PARTITIONS. B. LADDER TYPE, 9 GAGE SIDE RODS AND 9 GAGE CROSS RODS, SPACED 16" ON
- CENTER VERTICALLY FOR ALL OTHER WALLS. C. TWO PIECE LADDER TYPE, 9 GAGE SIDE RODS AND 9 GAGE CROSS RODS, SPACED 16" ON CENTER VERTICALLY FOR INTERIOR WYTHE WITH INTEGRAL 3/16" DOUBLE EYE TAB AND 3/16" DOUBLE LEG TIE AT 16" ON CENTER HORIZONTALLY

FOR EXTERIOR WYTHE, IN MULTIWYTHE CONSTRUCTION.

- D. TWO PIECE ADJUSTABLE 12 GAGE SCREW ON ANCHOR WITH 3/8" OFFSET, AT EACH STUD, SPACED 16" ON CENTER VERTICALLY, WITH 3/16" TRIANGULAR WIRE TIE, FOR MASONRY VENEER WALLS. ANCHORS SHALL HAVE HOLES FOR TWO SCREWS. SCREWS MUST BE APPLIED THROUGH SHEATHING INTO STUD BACKUP.
- E. JOINT REINFORCING SHALL BE BENT AROUND CORNERS, BUT SHALL NOT BE CONTINUOUS THROUGH EXPANSION OR CONTROL JOINTS. F. JOINT REINFORCING, ANCHORS AND TIES SHALL BE HOT DIP GALVANIZED
- CONFORMING WITH ASTM A153 (1.5 OZ/FT^2), FOR EXTERIOR WALLS AND MILL GALVANIZED CONFORMING WITH ASTM A641 (0.8 OZ/FT2) FOR INTERIOR WALLS AND PARTITIONS.
- 10. CONVENTIONAL REINFORCING, HORIZONTAL AND VERTICAL, SHALL BE A615 GRADE 60 KSI YIELD STRENGTH.

11. ALL UNITS SHALL BE LAID WITH FULL MORTAR COVERAGE ON HEAD, BED (FACE SHELLS),

- WEBS, AND COLLAR JOINTS, UNLESS NOTED OTHERWISE. 12. PROTECT PARTIALLY COMPLETED MASONRY AGAINST WEATHER, WHEN WORK IS NOT IN
- PROGRESS, BY COVERING TOP OF WALLS WITH STRONG, WATERPROOF, NON-STAINING MEMBRANE. EXTEND MEMBRANE AT LEAST 24" DOWN BOTH SIDES OF WALLS AND FASTEN SECURELY IN PLACE.
- 13. COMPLY WITH THE RECOMMENDATIONS OF THE BRICK INSTITUTE OF AMERICA, NATIONAL CONCRETE MASONRY ASSOCIATION AND THE PREVIOUSLY MENTIONED CODES AND SPECIFICATIONS FOR HOT WEATHER MASONRY CONSTRUCTION.
- 14. PROTECT ALL MASONRY FROM FREEZING WHEN TEMPERATURE IS 40 DEGREES FAHRENHEIT AND FALLING. COMPLY WITH THE RECOMMENDATIONS OF THE BRICK INSTITUTE OF AMERICA, NATIONAL CONCRETE MASONRY ASSOCIATION AND THE PREVIOUSLY MENTIONED CODES AND SPECIFICATIONS FOR COLD WEATHER MASONRY CONSTRUCTION.
- 16. DO NOT BUILD ON FROZEN WORK. REMOVE AND REPLACE MASONRY WORK DAMAGED BY FROST OR FREEZING.
- 28. PROVIDE 4" MINIMUM CONCRETE COVER FOR ALL STRUCTURAL STEEL BELOW GRADE. 17. MASONRY SHALL BE STACKED AND STORED IN A PLACE WHICH IS DRY AND NOT IN DIRECT CONTACT WITH THE GROUND. POLYETHYLENE, WATERPROOF PAPER OR OTHER PROTECTIVE COVERINGS SHALL BE USED TO KEEP MASONRY DRY AND CLEAN.

18. CEMENT AND LIME SHALL BE KEPT AT LEAST 6" ABOVE GROUND AND IN A DRY PLACE

AT ALL TIMES. AGGREGATES SHALL BE PILED ON A SMOOTH SURFACE WHICH IS RELATIVELY

HARD SO THAT FOREIGN MATERIALS DO NOT GET MIXED WITH AGGREGATE IN THE

- PROCESS OF SHOVELING. 19. TEMPORARILY BRACE ALL MASONRY WALLS TO PROVIDE STABILITY DURING CONSTRUCTION UNTIL THE DESIGNED STRUCTURE IS COMPLETED AND CAN STABILIZE THE WALLS.
- 20. PREMOLDED CONTROL JOINT STRIPS: SOLID RUBBER STRIPS WITH A SHORE "A" DUROMETER HARDNESS OF 60 TO 80, DESIGNED TO FIT STANDARD SASH BLOCK AND MAINTAIN LATERAL STABILITY IN MASONRY WALL.

- 21. NO CHASES, RISERS, CONDUITS, OR TOOTHING OF MASONRY SHALL OCCUR WITHIN 17" OF CENTERLINE OF BEAM BEARING OR LOAD CONCENTRATION.
- 22. ALL INTERSECTING LOAD BEARING WALLS SHALL BE TIED TOGETHER IN MASONRY BOND
- UNLESS NOTED OTHERWISE.
- 23. CONTROL JOINTS IN MULTI-WYTHE WALLS SHALL ALWAYS ALIGN BETWEEN WYTHES. 24. TESTING AND INSPECTION:
- A. THE OWNER WILL ENGAGE AN INDEPENDENT TESTING AND INSPECTION AGENCY TO PERFORM TESTS AND SUBMIT TEST AND INSPECTION REPORTS.
- B. THE TESTING AGENCY SHALL CONDUCT AND INTERPRET THE TESTS AND STATE IN EACH REPORT WHETHER THE SPECIMENS COMPLY WITH THE REQUIREMENTS STATED HEREIN AND SPECIFICALLY STATE ANY DEVIATIONS IN CONSTRUCTION FROM THE CONTRACT DOCUMENTS.
- C. THE CONTRACTOR SHALL CORRECT DEFICIENCIES IN WORK WHICH INSPECTIONS AND LABORATORY TEST REPORTS HAVE INDICATED NOT TO BE IN COMPLIANCE WITH REQUIREMENTS. PERFORM ADDITIONAL TESTS, AT CONTRACTOR'S EXPENSE, AS MAY BE NECESSARY TO RECONFIRM ANY DEVIATIONS IN CONSTRUCTION FROM THE CONTRACT DOCUMENTS,
- D. TESTING: INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:
 - 1. PERFORM LABORATORY TESTING IN ACCORDANCE WITH THE FOLLOWING USING THE ACTUAL MATERIALS AND PROPORTIONS TO BE USED IN CONSTRUCTION.
 - a. ASTM C270 AND C780 MORTAR b. ASTM C1019 — GROUT
 - 2. TEST THE ABSORPTION RATE OF EACH TYPE OF MASONRY UNITS THAT ARE TO BE USED. THE MASONRY UNITS SHALL BE TESTED FROM THE STOCKPILE OF UNITS THAT ARE BEING USED ON THE PROJECT.
 - 3. PERFORM FIELD SAMPLING AND TESTING OF MORTAR AND GROUT IN ACCORDANCE WITH ACI 530.1. FIELD TESTS SHALL BE PERFORMED ON AT LEAST 3 SPECIMENS TAKEN EACH DAY OF EACH TYPE OF MORTAR AND GROUT USED AND WHENEVER THERE IS A CHANGE IN MIX PROPORTIONS, MATERIALS OR METHOD OF MIXING.
 - 4. RANDOMLY SELECT MASONRY UNITS FROM STOCKPILE AND TEST FOR COMPLIANCE WITH ASTM SPECIFICATIONS.
- E. INSPECTION INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:
 - 1. PERFORM INSPECTION IN ACCORDANCE WITH THE PREVIOUSLY MENTIONED CODES AND SPECIFICATIONS AND THE APPLICABLE BUILDING CODE.
 - 2. KEEP A COMPLETE JOB RECORD OF DAILY TEMPERATURE AND WEATHER CONDITIONS.
 - 3. INSPECT THE STORAGE AND STACKING OF MASONRY MATERIALS.
 - 4. REJECT BROKEN, CRACKED OR DIRTY MASONRY UNITS.
- 5. INSPECT REINFORCING STEEL SIZE, POSITIONING AND EMBEDMENT. 6. INSPECT LAYING, MORTARING AND GROUTING OF MASONRY UNITS AND OTHER ELEMENTS.
- 7. INSPECT ADHERENCE TO HOT AND COLD WEATHER REQUIREMENTS.
- 8. LEVEL OF INSPECTION SHALL CONFORM TO ACI 530 QUALITY ASSURANCE LEVEL B.

STEEL LINTEL SCHEDULE

FOR 4" WALLS

 PROVIDE STEEL LINTELS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE FOR ALL OPENINGS IN MASONRY WALLS.

FOR OPENINGS LESS THAN 4'-6": ST 3.5x7.65

FOR 6" WALLS FOR OPENINGS LESS THAN 5'-0": WT4x9 FOR OPENINGS FROM 5'-0" TO 7'-0": WT7x11

FOR 8" WALLS OR THICKER FOR OPENINGS LESS THAN 4'-0": L3 1/2x3 1/2x5/16 FOR OPENINGS FROM 4'-0" TO LESS THAN 5'-0": L4x3 1/2x5/16 LLV. FOR OPENINGS FROM 5'-0" TO LESS THAN 6'-0": L5x3 1/2x5/16 LLV.

FOR OPENINGS FROM 6'-0" TO LESS THAN 7'-0": $L6x3 \frac{1}{2}x5/16$ LLV.

- FOR OPENINGS FROM 7'-0" TO LESS THAN 10'-0": W8x21 + 5/16 BOT PLATE. 2. ALL LINTELS, INCLUDING, BUT NOT LIMITED TO, BEAMS, BEAMS WITH BOTTOM PLATES, AND MULTIPLE LOOSE ANGLES, IN EXTERIOR WALLS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 GRADE 100. ALL DAMAGED GALVANIZING SHALL BE REPAIRED
- IN ACCORDANCE WITH ASTM A780. 3. ALL LINTELS SHALL HAVE A BEARING AT EACH END OF ONE INCH PER FOOT OF
- 4. ALL ANGLE LINTELS SHALL HAVE 8" OF SOLID MASONRY OR MASONRY GROUTED SOLID BELOW BEARING END UNLESS NOTED OTHERWISE.
- 5. ALL BEAM LINTELS SHALL HAVE 16" OF SOLID MASONRY OR MASONRY GROUTED SOLID BELOW BEARING END UNLESS NOTED OTHERWISE.
- 6. USE ONE ANGLE FOR EACH 4" WIDTH OF MASONRY

OPENING WITH A MINIMUM OF 6".

- 7. BOTTOM PLATES ON BEAMS SHALL BE 1/2" LESS IN WIDTH THAN THE WALL THICKNESS, AND SHALL NOT EXTEND BEYOND THE WIDTH OF THE OPENING UNLESS NOTED OTHERWISE.
- 8. BOTTOM PLATES SHALL BE WELDED TO BEAM WITH A 1/4" FILLET WELD 3" LONG ON BOTH SIDES AT 9" ON CENTER, STAGGER PLACEMENT OF WELDS FROM SIDE TO SIDE.

9. ANGLE LINTELS SHALL CONFORM TO A36 STEEL, WIDE FLANGE LINTELS SHALL BE GRADE 50,

BOLTS SHALL CONFORM TO A325, AND WELDS SHALL BE E-70 ELECTRODES OR BETTER.

BID PACKAGE NUMBER:

REVISIONS: DATE PURPOSE ISSUED FOR PERMIT 09-09-2011 ISSUED FOR BID 09-30-2011 RECORD DOCUMENTS 07-18-2012

CADD CHECKED BY:

PROJECT NUMBER: 15313

DRAWING TITLE: **GENERAL**

PROJECT: Cuyahoga County Public Library prowsing is just the beginning **CUYAHOGA COUNTY**

EBERSOLE

STRUCTURAL ENGINEERS LT

10275 Brecksville Rd.

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JOB NO. **11042**

Brecksville, Ohio 44141

PUBLIC LIBRARY BEACHWOOD BRANCH RENOVATION 25501 SHAKER BOULEVARD

BEACHWOOD, OHIO 44122

PROJECT ISSUANCE DATE: 09-30-2011

CLIENT PROJECT NUMBER: 15313

KEY PLAN:

ISSUED FOR: BID

DESIG

7850 Freeway Circle

440.243.2000 t

CONSULTANTS:

CONSULTANTS:

Interior Design Cleveland, OH 44130 440 243 3305 f

ARCHITECT:

STRUCTURAL STEEL

- 1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE REQUIREMENTS OF AISC 360-05 PRACTICE FOR STEEL BUILDINGS AND BRIDGES", AWS D1.1 (STRUCTURAL WELDING CODE - STEEL), AND THE CONTRACT DOCUMENTS.
- 2. THE LOCATION, SIZE AND CONDITION OF EXISTING STRUCTURES, EQUIPMENT, UTILITIES, SERVICES AND OTHER RELEVANT ENGINEERING FEATURES SHALL BE VERIFIED PRIOR TO FABRICATION OR ERECTION TO DETERMINE CLEARANCES, DIMENSIONS AND FABRICATION OR ERECTION PROCEDURES. ADEQUATE BRACING AND TEMPORARY SUPPORTS FOR THE STABILITY OF ALL EXISTING RELEVANT FEATURES SHALL BE PROVIDED BY THE CONTRACTOR.
- STRUCTURAL STEEL:

RECOMMENDATIONS.

- ASTM A36: PLATES, BARS, AND ROD ASTM A992: GRADE 50, ALL WIDE FLANGE SHAPES ASTM A500: GRADE B ($F_V = 46$ KSI), STEEL TUBING
- 4. BOLTS:
- ASTM A53: TYPE E OR S, GRADE B, STEEL PIPE. 3/4" DIAMETER MINIMUM, UNLESS NOTED OTHERWISE. ASTM A325, TYPE 1, FOR ALL BEAM, COLUMN, AND JOIST CONNECTIONS. CONNECTIONS DESIGNED AS SHEAR/BEARING TYPE, UNLESS NOTED OTHERWISE, WITH THREADS INCLUDED IN THE SHEAR PLANE. ASTM F1554, GRADE 36, FOR ALL ANCHOR BOLTS.
- 5. ADHESIVE ANCHOR SYSTEM SHALL CONSIST OF ALL—THREAD ANCHOR ROD, NUT, WASHER, AND ADHESIVE CAPSULE(S). THE ADHESIVE CAPSULES SHALL CONTAIN A VINYLESTER RESIN. ANCHOR RODS SHALL CONFORM WITH THE FOLLOWING REQUIREMENTS.
 - A. ASTM A36
 - GRADE B7. C. ASTM F593, GROUP 1, ALLOY 304 STAINLESS STEEL.

ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S

- 6. STUD TYPE EXPANSION ANCHORS SHALL CONSIST OF STUD, WEDGE, NUT AND WASHER. 9. NO LOADS SHALL BE HUNG FROM THE ROOF DECK. THE BOLTS SHALL BE CARBON STEEL CONFORMING TO THE REQUIREMENTS OF THE MANUFACTURER'S SPECIFICATIONS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 7. WELDING SHALL CONFORM WITH AWS E-70 ELECTRODES, MINIMUM.
- 8. PROVIDE ANGLE WALL ANCHORS, IN ACCORDANCE WITH PART 4, AISC MANUAL OF STEEL CONSTRUCTION, FOR BEAMS BEARING ON MASONRY WALLS. ANGLE ANCHORS SHALL BE WELDED TO BEAMS.
- 9. STEEL BEAMS SHALL BEAR A MINIMUM OF 8" ON MASONRY, UNLESS NOTED OTHERWISE. 10. CONNECTIONS: WELD OR BOLT CONNECTIONS, AS INDICATED.
 - OF THE CITED AISC SPECIFICATIONS.
 - DRAWINGS, THE CONNECTIONS SHALL BE DESIGNED TO SUPPORT THE END REACTION DERIVED FROM THE MAXIMUM TOTAL UNIFORM LOAD TABLES IN PART 3, 13th EDITION OF THE AISC STEEL CONSTRUCTION MANUAL FOR THE GIVEN MEMBER SIZE, SPAN, AND YIELD STRENGTH.
 - DEPTH OF THE MEMBER TO BE SUPPORTED
 - D. ONE-SIDED CONNECTIONS WILL NOT BE PERMITTED, UNLESS SPECIFICALLY DETAILED ON THE DRAWINGS.
 - E. THE MINIMUM NUMBER OF BOLTS IN BOLTED CONNECTIONS SHALL BE 2.
- F. DO NOT FINAL WELD OR BOLT UNTIL MEMBERS ARE IN PROPER ALIGNMENT.
- MILLED ENDS.
- SHALL NOT EXCEED THE PERMISSIBLE VARIATION AS STATED IN AISC 13th EDITION UNDER STANDARD MILL PRACTICE.
- 13. THE FRAMING SHALL BE ERECTED TRUE AND PLUMB.
- 14. NON-METALLIC, NON-SHRINK, NON-STAINING GROUT UNDER ALL COLUMN BASE PLATES 12. FRAMED WALL OPENINGS SHALL INCLUDE HEADERS AND SUPPORTING STUDS. AND BEAM BEARING PLATES SHALL CONSIST OF A PREMIXED PRODUCT COMPLYING WITH ALL REQUIREMENTS OF CRD-C621, ASTM C827, AND C109.
- 15. ALL STRUCTURAL STEEL MEMBERS EXPOSED TO THE EXTERIOR AND OTHER STRUCTURAL AND MISCELLANEOUS STEEL, WHERE NOTED, SHALL BE HOT DIP GALVANIZED, IN ACCORDANCE WITH ASTM A123 GRADE 100. ALL DAMAGED GALVANIZING SHALL BE REPAIRED IN ACCORDANCE WITH ASTM A780.
- 16. ALL STRUCTURAL STEEL MEMBERS (BEAMS AND COLUMNS) ADJACENT TO OR BUILT INTO MASONRY CONSTRUCTION SHALL BE PROVIDED WITH 12 GAGE GALVANIZED WELD ON 15. PROVIDE SHOP DRAWINGS AND CALCULATIONS SHOWING EXTERIOR OPENING HEADER AND CHANNEL SLOTS AND 3/16"x1 1/4" HOOKED GALVANIZED ANCHORS, SPACED 16" ON CENTER VERTICALLY AND 24" ON CENTER HORIZONTALLY, MAXIMUM.

STEEL JOISTS

- 1. DETAIL, FABRICATE, AND ERECT STEEL JOISTS IN ACCORDANCE WITH THE LATEST SJI, AISC, AWS, AND OTHER CODES AND STANDARDS AND CONTRACT DOCUMENTS
- 2. PROVIDE BRIDGING IN ACCORDANCE WITH THE LATEST SJI SPECIFICATIONS. END OF BRIDGING LINES SHALL BE ANCHORED TO MASONRY WALLS, CONCRETE WALLS, OR STEEL BEAMS. ALL BRIDGING SHALL BE WELDED TO JOISTS IN SUCH A MANNER AS TO NOT IMPAIR THE STRUCTURAL INTEGRITY OF THE JOISTS.
- 3. NET UPLIFT = 25 PSF. ADD BOTTOM CHORD BRIDGING AT FIRST PANEL POINT AT EACH JOIST END.
- 4. WELD ALL STEEL JOISTS TO SUPPORTING STRUCTURAL STEEL MEMBERS AS SHOWN ON THE DRAWINGS, AND ACCORDING TO SJI AS MINIMUM.
- 5. ALL JOISTS SHALL HAVE STANDARD MINIMUM CAMBER IN ACCORDANCE WITH SJI STANDARD SPECIFICATIONS.
- 6. ALL "K" SERIES JOISTS SHALL HAVE A MINIMUM BEARING LENGTH ON STEEL BEAMS OF $2 ext{ } 1/2$ " AND A MINIMUM BEARING LENGTH ON MASONRY OR CONCRETE OF 4".
- 7. WHEN THE MINIMUM BEARING LENGTH OF THE JOIST CANNOT BE ACHIEVED DUE TO BUTTING JOISTS, THE JOISTS SHALL BE STAGGERED.
- 8. EXTEND ALL JOISTS 1" MINIMUM PAST CENTERLINE OF THE SUPPORTING MEMBER, WHEN THERE ARE JOISTS ON ONLY ONE SIDE OF THE SUPPORTING MEMBER.
- 9. THE JOIST PANEL POINTS FOR THE FULL WIDTH OF EACH BAY MUST LINE UP WITH EACH OTHER WITHIN A TOLERANCE OF 1"±.
- 10. JOISTS SHALL BE ERECTED STRAIGHT. SWEEPS SHALL BE A MAXIMUM OF 1" MEASURED AT THE CENTER.
- 11. NO LOADS SHALL BE HUNG FROM THE JOIST BRIDGING.
- 12. ANY LOADS SUPPORTED FROM THE JOIST BOTTOM CHORD MUST BE ATTACHED AT THE BOTTOM CHORD PANEL POINT.
- 13. ALL STEEL JOISTS SHALL HAVE A CEILING EXTENSION PROVIDED IN THE AREAS WHERE CEILINGS ARE HUNG OR DIRECTLY ATTACHED TO THE JOIST.
- 14. NO HOLES SHALL BE FIELD DRILLED, PUNCHED OR SHOT INTO JOIST OR JOIST GIRDER CHORD MEMBERS FOR HANGING LOADS.

STEEL DECK

- 1. DETAIL, FABRICATE, AND ERECT STEEL DECK IN ACCORDANCE WITH THE LATEST STEEL DECK INSTITUTE SPECIFICATIONS, AWS, AND CONTRACT DOCUMENTS. DECK SHALL CONFORM TO "BASIC DESIGN SPECIFICATIONS" AS ADOPTED BY THE STEEL DECK INSTITUTE.
- 2. ROOF DECK PROFILE SHALL CONFORM TO FACTORY MUTUAL REQUIREMENTS.
- 3. ROOF DECK SHALL BE MANUFACTURED FROM STEEL CONFORMING TO ASTM A611 GRADES C, D, OR E, OR A653 GR33, GR40, OR GR80.
- ROOF DECK SHALL BE PHOSPHATIZED AND RUST INHIBITIVE PAINTED UNLESS NOTED OTHERWISE.
- 5. DECK SHALL INCLUDE ANY MISCELLANEOUS CLOSURE PIECES, POUR STOPS, DRAIN SUMP PANS, REINFORCING AROUND OPENINGS, ETC., REQUIRED TO MAKE A COMPLETE JOB. MISCELLANEOUS ITEMS SHALL BE GALVANIZED G90.
- 6. PLACE DECK UNITS ON SUPPORTING STEEL FRAMEWORK IN LENGTHS TO SPAN 4 OR MORE SUPPORTS (3 SPANS). LAP ENDS OF DECK NOT LESS THAN 2". SIDELAP INTERLOCKS SHALL NOT BE STRETCHED OR CONTRACTED. DECK SHALL BEAR A MINIMUM OF 3" ON SUPPORTS.
- 7. DECK SHALL BE PUDDLE WELDED (5/8" DIA. MIN.) TO SUPPORTS, WITH THE FIRST AND LAST RIBS OF EACH SHEET WELDED TO THE SUPPORTS. SIDE LAPS OF DECK SHALL BE SCREWED WITH #10 SELF-TAPPING SCREWS. SEE PLANS FOR WELD AND SIDELAP PATTERNS. THE HEADED SHEAR CONNECTORS IN COMPOSITE CONSTRUCTION MAY BE SUBSTITUTED FOR WELDS. ALL DECK THAT IS LIGHTER THAN 22 GAGE SHALL USE WELDING WASHERS FOR CONNECTION OF DECK TO STEEL SUPPORTS.
- B. AISI 4140, 4142, 4145, 4140H, OR 4145H MEETING REQUIREMENTS OF ASTM A193, 8. DECK SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

ROOF DECK GAGE = 22 $I = 0.155 IN^4$ $S = 0.186 \text{ IN}^3$

- 10. MAXIMUM SIZE OF OPENINGS IN DECK WITHOUT STRUCTURAL FRAMING SUPPORT SHALL NOT EXCEED 10". OPENINGS GREATER THAN 10" MUST HAVE STRUCTURAL SUPPORT ON ALL SIDES OF THE OPENING.
- 11. CONTRACTOR SHALL TOUCH-UP ALL STEEL DECK AREAS WHERE WELDING HAS BEEN PERFORMED PRIOR TO PLACING ANY ROOFING MATERIALS.

LIGHT GAGE METAL FRAMING

- 1. STUD FRAMING SHALL BE BY DESIGN/BUILD CONTRACTOR. STUD SIZES SHOWN ARE FOR BIDDING PURPOSES.
- A. CONNECTIONS NOT DETAILED ON THE DRAWINGS SHALL CONFORM TO THE REQUIREMENTS 2. ALL LIGHT GAGE METAL FRAMING CONSTRUCTION SHALL BE IN ACCORDANCE WITH AISI "SPECIFICATIONS FOR DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS".
- B. WHERE THE REACTION VALUES OF BEAMS AND GIRDERS ARE NOT SHOWN ON THE 3. ALL LIGHT GAGE METAL FRAMING SHALL CONFORM WITH ASTM A446, GRADE D (fy = 50,000 PSI) FOR STUDS; ASTM A446, GRADE A (fy = 33,000 PSI) FOR TRACK END CLOSURES, BRIDGING AND ACCESSORIES.
 - 4. TOP AND BOTTOM RUNNER TRACKS SHALL MATCH GAGE OF STUD AND HAVE 1.25" MIN. FLANGE.
- C. THE MINIMUM LENGTH OF CONNECTION ANGLES SHALL BE EQUAL TO ONE—HALF THE 5. TYPICAL EXTERIOR WALL STUDS ARE CONTINUOUS FROM FOUNDATION TO ROOF PARAPET AND ANCHORED AT ROOF ELEVATIONS BY SLIDE CLIPS AT EACH STUD. SLIDE CLIPS SHALL TRANSFER 500# HORIZONTAL LOAD.
 - 6. DEFLECTION SHALL BE LIMITED TO L/360 FOR EXTERIOR WIND LOAD CONDITIONS.
 - 7. ALL MATERIAL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A653
 - 8. IMMEDIATELY NOTIFY ARCHITECT OF ALL DISCREPANCIES.
- 11. COLUMNS AND BEAMS WITH BASE, CAP OR END PLATES SHALL HAVE SQUARE CUT OR 9. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCIES UNTIL SUCH DISCREPANCY HAS BEEN FULLY RESOLVED.
- 12. STEEL SHAPES SHALL BE ERECTED STRAIGHT. CAMBER AND SWEEP MEASURED AT MIDSPAN 10. STUDS SHALL BE PLUMBED, ALIGNED AND SECURELY ATTACHED TO THE FLANGE OR WEBS OF BOTH UPPER AND LOWER TRACKS.
 - 11. WALL STUD BRIDGING SHALL BE ATTACHED IN A MANNER TO PREVENT STUD ROTATION. BRIDGING ROWS SHALL BE SPACED AT 1/3 POINTS IN EACH STORY.

 - 13. MINIMUM STUD PROPERTIES SHALL BE PER METAL STUD MANUFACTURER'S ASSOCIATION ICBO NO. 4943.
 - 14. ALL LIGHT GAGE METAL FRAMING AND CONNECTIONS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISI "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" AND NAAMM ML/SFA 540, "LIGHTWEIGHT STEEL FRAMING SYSTEMS MANUAL"
 - JAMB CONDITIONS AND COMPLIANCE WITH THE ABOVE CRITERIA.
 - 16. TEMPORARY BRACING REQUIRED FOR LATERAL SUPPORT OF WALLS SUPPORTING PRECAST FLOOR SHALL BE THE RESPONSIBILITY OF THIS SUBCONTRACTOR

ROUTINE INSPECTIONS:

ROUTINE INSPECTION AND TESTING SERVICES SHALL BE PROVIDED BY AN APPROVED INDEPENDENT TESTING LABORATORY PER ASTM E329. REPORTS SHALL BE SENT DIRECTLY TO THE OWNER, ARCHITECT, STRUCTURAL ENGINEER AND CONTRACTOR. CONCRETE TEST REPORTS SHALL ALSO BE SENT TO READY MIX SUPPLIER. THESE SERVICES SHALL INCLUDE THE FOLLOWING:

FOUNDATIONS: CONCRETE:

BEARING SURFACE MATERIAL CERTIFICATION, DESIGN MIX DATA, DAILY POUR REPORTS CYLINDER TESTS, ENTRAINED AIR TEST. RECORD AND REPORT SLUMP FOR EACH TRUCK BEFORE AND AFTER ADDITION OF HRWR. PLACEMENT AND SIZE.

REINFORCEMENT: STRUCTURAL STEEL: MASONRY:

FABRICATOR CERTIFICATION, MATERIAL CERTIFICATION, PLACEMENT AND DETAILS, WELDING AND BOLTING. LIGHT GAGE FRAMING: MEMBER SIZES, MATERIAL PROPERTIES, CONNECTIONS. MATERIAL CERTIFICATION, MORTAR AND GROUT MIX, USE OF PROPER MASONRY UNITS, BEARING SURFACES, SIZE AND LOCATION OF SPECIAL PIERS, CONNECTOR AND REINFORCEMENT SIZE AND PLACEMENT, GROUTING OPERATIONS.

SPECIAL INSPECTIONS:

SPECIAL INSPECTIONS SHALL CONFORM TO "SECTION 1704 SPECIAL INSPECTIONS" OF THE OHIO BUILDING CODE, LATEST EDITION. A QUALIFIED SPECIAL INSPECTOR SHALL BE EMPLOYED BY THE OWNER. THE INSPECTOR SHALL PROVIDE CONTINUOUS OR PERIODIC INSPECTIONS TO SATISFY THE GOVERNING APPLICABLE CODES. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT DOCUMENTING THE REQUIRED INSPECTIONS PER THE APPLICABLE CODE SECTIONS AS OUTLINED BELOW:

FABRICATORS STRUCTURAL STEEL (BOLTING, SHOP AND FIELD WELDING): CONCRETE CONSTRUCTION, REBAR AND EMBEDS: MASONRY:

EXCAVATION AND COMPACTION: EPOXY AND EXPANSION ANCHORS: SECTION 1704.3 SECTION 1704.4 SECTION 1704.5 & TABLE 1704.5.1 SECTION 1704.7 SECTION 1704.13

SECTION 1704.2

DEFERRED SUBMITTALS:

DEFERRED SUBMITTALS ARE REQUIRED FOR THE FOLLOWING ITEMS:

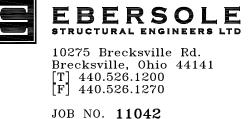
LIGHT GAGE STEEL FRAMING

440.243.2000 t

Interior Design 7850 Freeway Circle Cleveland, OH 44130 440 243 3305 f

CONSULTANTS: ARCHITECT:

CONSULTANTS:



PROJECT:



CUYAHOGA COUNTY PUBLIC LIBRARY BEACHWOOD BRANCH

RENOVATION 25501 SHAKER BOULEVARD BEACHWOOD, OHIO 44122 ISSUED FOR: BID PROJECT ISSUANCE DATE: 09-30-2011 CLIENT PROJECT NUMBER: 15313

KEY PLAN:

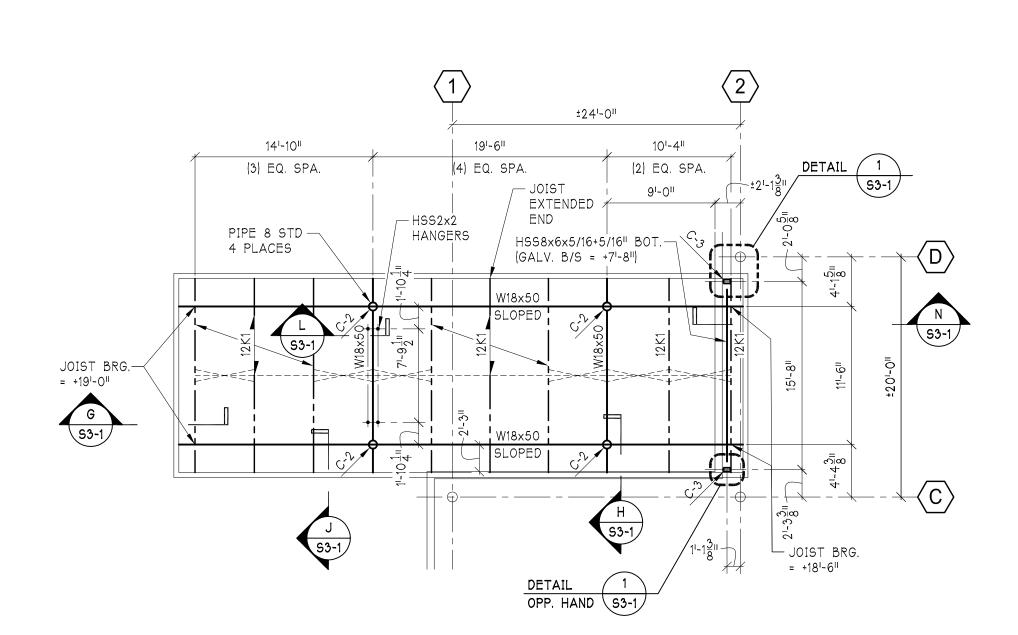
BID PACKAGE NUMBER:

REVISIONS: DATE PURPOSE ISSUED FOR PERMIT 09-09-2011 ISSUED FOR BID 09-30-2011 RECORD DOCUMENTS 07-18-2012

PROJECT NUMBER: 15313

DRAWING TITLE:

GENERAL NOTES



SCALE: 1/8" = 1'-0"

- FIELD VERIFY EXISTING STRUCTURE AS REQUIRED PRIOR TO CONSTRUCTION.

- ROOF CONSTRUCTION: 1 1/2"x22 GA. WIDE RIB (TYPE B) STEEL ROOF DECK. ROOF DECK SHALL BE WELDED TO SUPPORTS W/ 5/8" DIA. PUDDLE WELDS IN A 36/5 PATTERN. SIDELAP FASTENERS SHALL BE (2)-#10 TEK SCREWS PER DECK SPAN, U.N.O.
- TOP OF STEEL (JOIST BEARING) ELEVATIONS NOTED THUS (+) ON PLAN ARE REFERENCED FROM SLAB-ON-GRADE ELEVATION = 0'-0". TYP. U.N.O.
- TOPS OF BEAMS RUNNING PARALLEL TO JOIST SHALL MATCH TOPS OF JOISTS.
- COODINATE FINAL LOCATIONS, WEIGHTS, AND SIZES OF ALL MECHANICAL UNITS, EXHAUST FANS, DECK OPENINGS, ROOF DRAINS, ETC., W/ ARCH & M.E.P. DWGS.
- AT MECHANICAL UNITS JOISTS SHALL BE DESIGNED FOR THE FULL CAPACITY OF THE JOIST SIZE SHOWN PLUS THE WEIGHT OF THE MECHANICAL UNIT.
- SEE SHEETS S1-1 AND S1-2 FOR GENERAL NOTES. - SEE SHEET S3-1 FOR TYPICAL FRAMING DETAILS.

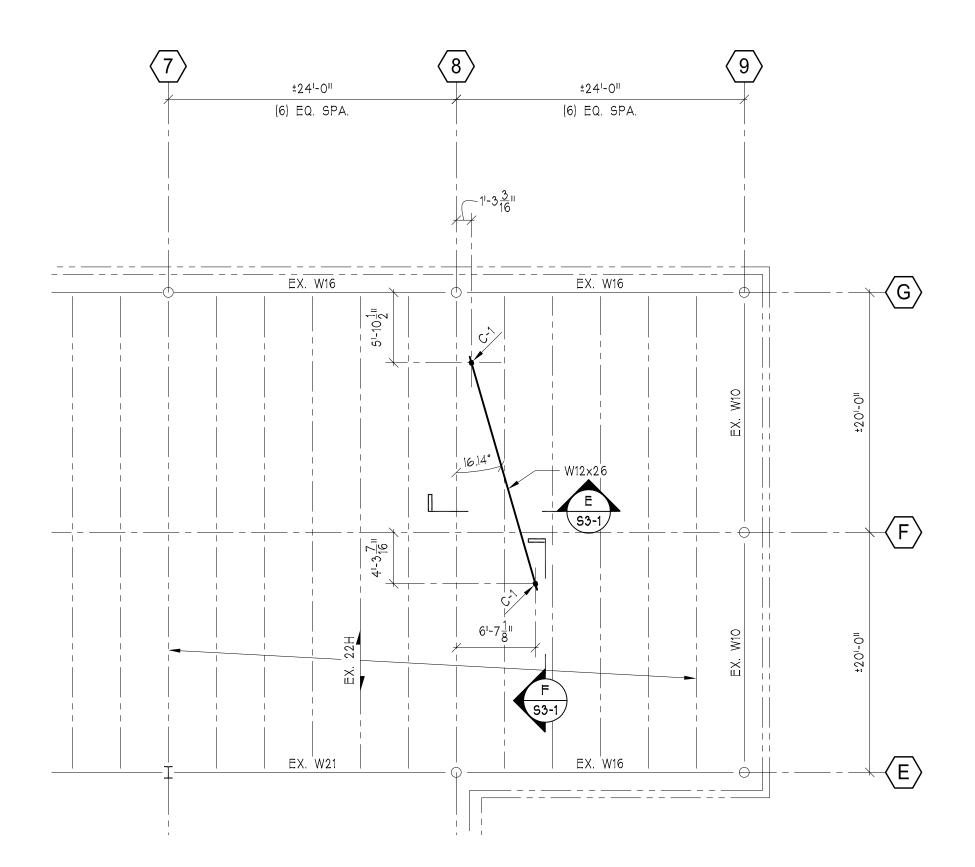
ROOF FRAMING PLAN

±24'-0" 19¹-6¹¹ 91-011

FOUNDATION PLAN SCALE: 1/8" = 1'-0"

- FIELD VERIFY EXISTING STRUCTURE AS REQUIRED PRIOR TO CONSTRUCTION.

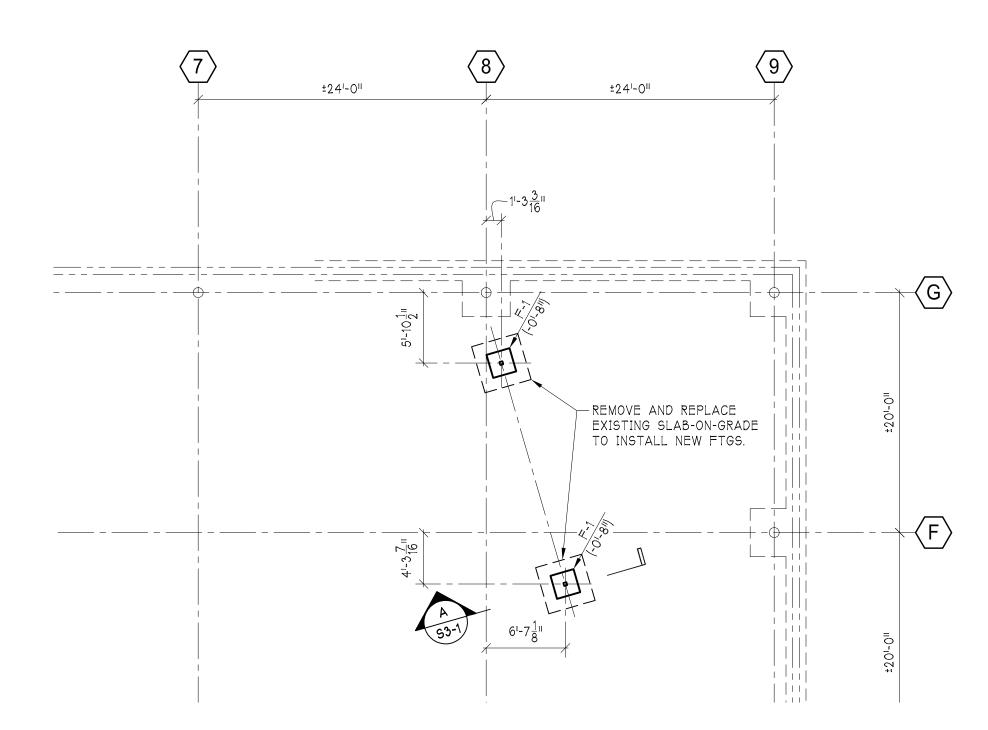
- FLOOR CONSTRUCTION: 5" SLAB ON GRADE REINFORCE WITH 6x6-W1.4xW1.4 W.W.F.
- FINISHED FLOOR ELEVATION = 0'-0" = EXISTING FINISH FLOOR ELEVATION TYP. U.N.O. COORDINATE WITH ARCH. AND SITE DRAWINGS.
- FOOTING ELEVATIONS NOTED THUS (-) ARE TO TOP OF FOOTING AND ARE REFERENCED FROM FIN. FLOOR EL. 0'-0".
- COORDINATE ALL SLAB DEPRESSIONS, SLOPED SLABS, ITEMS EMBEDDED IN SLABS, ETC., w/ARCH. AND M.E.P. DRAWINGS.
- COORDINATE LOCATIONS OF PIPES/UTILITIES PENETRATING THRU FOOTINGS w/ M.E.P.
- & CIVIL DWGS. SEE TYP. DETAILS ON S3-1. - SEE SHEETS S1-1 AND S1-2 FOR "GENERAL NOTES".
- SEE SHEET S3-1 FOR TYPICAL FOUNDATION DETAILS.



FOLDING PARTITION FRAMING PLAN

SCALE: 1/8" = 1'-0"

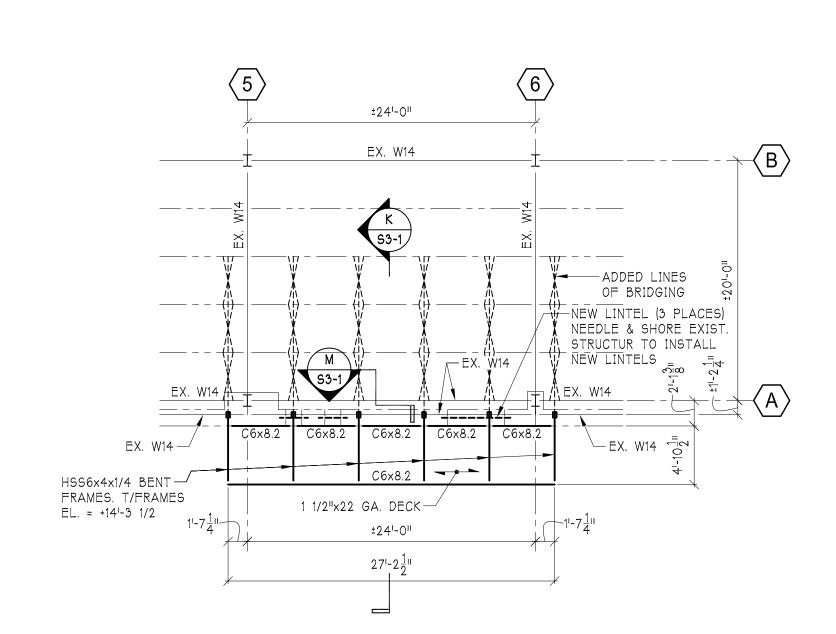
- FIELD VERIFY EXISTING STRUCTURE AS REQUIRED PRIOR TO CONSTRUCTION.
- SEE SHEETS S1-1 AND S1-2 FOR GENERAL NOTES.
- SEE SHEET S3-1 FOR TYPICAL FRAMING DETAILS.



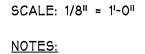
FOUNDATION PLAN

SCALE: 1/8" = 1'-0"

- FIELD VERIFY EXISTING STRUCTURE AS REQUIRED PRIOR TO CONSTRUCTION. - FLOOR CONSTRUCTION: 5" SLAB ON GRADE REINFORCE WITH 6x6-W1.4xW1.4 W.W.F.
- FINISHED FLOOR ELEVATION = 0'-0" = EXISTING FINISH FLOOR ELEVATION TYP. U.N.O.
- COORDINATE WITH ARCH. AND SITE DRAWINGS.
- FOOTING ELEVATIONS NOTED THUS (-) ARE TO TOP OF FOOTING AND ARE REFERENCED FROM FIN. FLOOR EL. 0'-0".
- COORDINATE ALL SLAB DEPRESSIONS, SLOPED SLABS, ITEMS EMBEDDED IN SLABS,
- ETC., w/ARCH. AND M.E.P. DRAWINGS. - COORDINATE LOCATIONS OF PIPES/UTILITIES PENETRATING THRU FOOTINGS w/ M.E.P.
- & CIVIL DWGS. SEE TYP. DETAILS ON S3-1.
- SEE SHEETS S1-1 AND S1-2 FOR "GENERAL NOTES". - SEE SHEET S3-1 FOR TYPICAL FOUNDATION DETAILS.



DRIVE-THRU CANOPY FRAMING PLAN

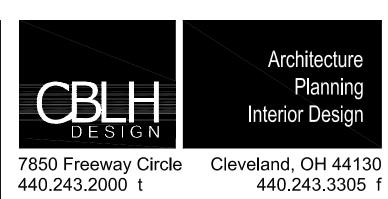


- FIELD VERIFY EXISTING STRUCTURE AS REQUIRED PRIOR TO CONSTRUCTION.

- SEE SHEETS S1-1 AND S1-2 FOR GENERAL NOTES.

| - | SEE | SHEET | S3-1 | FOR | TYPICAL | FRAMING | DETAI |
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| | CHEDULE | | | |
|------|--------------------|------------------------|--|--|
| MARK | SIZE | REINF. | | |
| F-1 | 2'-0"x2'-0"x1'-0" | (4)-#4 E.W. BOT. | | |
| F-2 | 6'-0"x6'-0"x2'-10" | (7)-#4 E.W. TOP & BOT. | | |



ARCHITECT: CONSULTANTS:

CONSULTANTS:



PROJECT:



PUBLIC LIBRARY BEACHWOOD BRANCH RENOVATION 25501 SHAKER BOULEVARD BEACHWOOD, OHIO 44122

PROJECT ISSUANCE DATE: 09-30-2011

CLIENT PROJECT NUMBER: 15313 KEY PLAN:

ISSUED FOR: BID

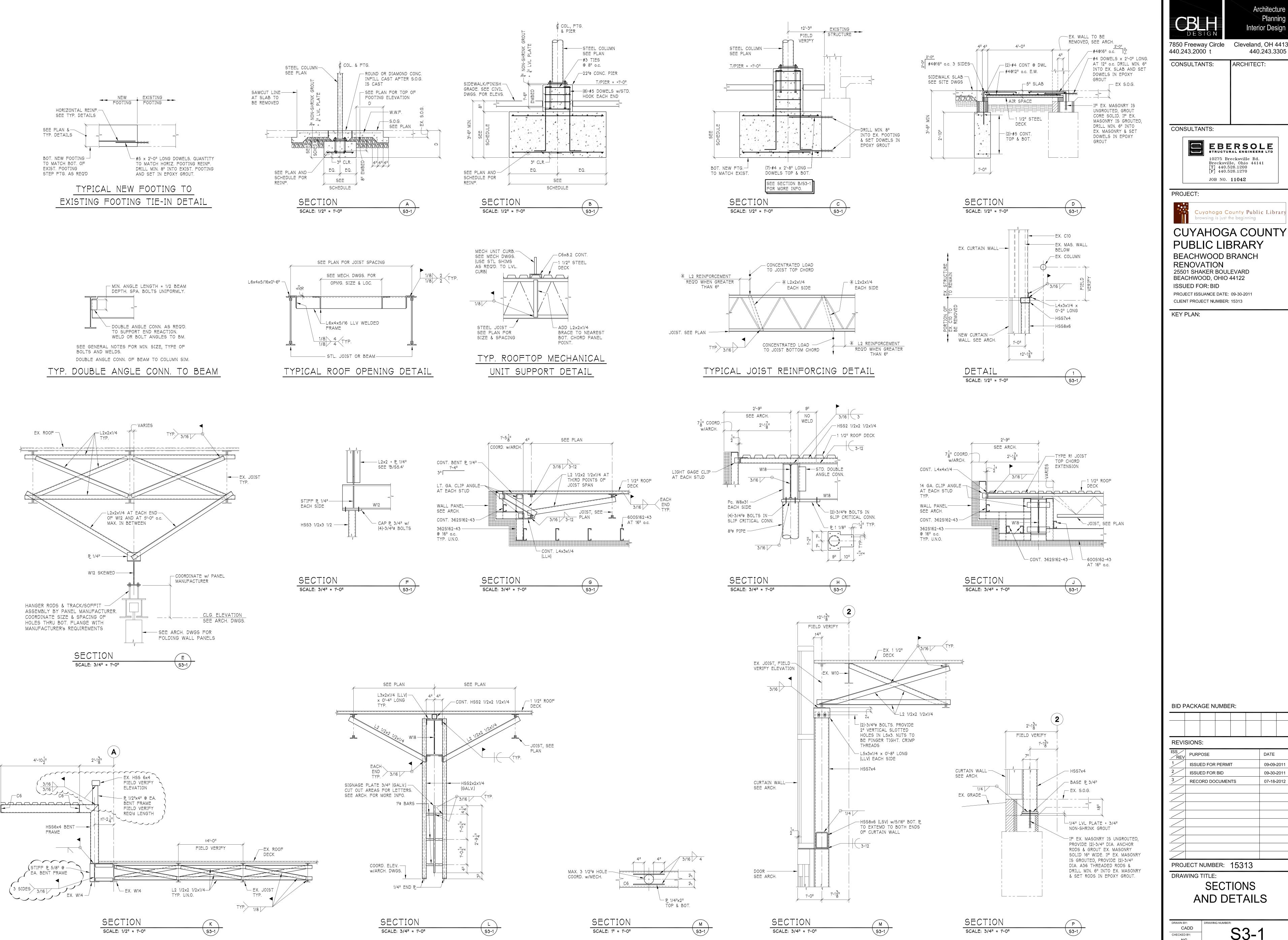
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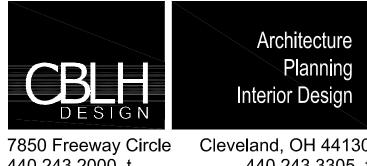
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PROJECT NUMBER: 15313 DRAWING TITLE:

> FOUNDATION AND **ROOF FRAMING PLANS**

CADD CHECKED BY: SFE





Cleveland, OH 44130 7850 Freeway Circle 440.243.2000 t 440.243.3305 f CONSULTANTS: ARCHITECT:

CONSULTANTS:



PROJECT:



PUBLIC LIBRARY BEACHWOOD BRANCH RENOVATION 25501 SHAKER BOULEVARD BEACHWOOD, OHIO 44122 ISSUED FOR: BID

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| SECTIONS | | | | | | | | |

SECTIONS AND DETAILS

S3-1

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

6/6/2013 4:30:16 PM

in

Case No(s). 13-0152-EL-EEC

Summary: Application - Part 8 of 10 - Application to Commit Energy Efficiency/Peak Demand Reduction Programs of The Cleveland Electric Illuminating Company and Cuyahoga County Public Library electronically filed by Ms. Jennifer M. Sybyl on behalf of The Cleveland Electric Illuminating Company and Cuyahoga County Public Library