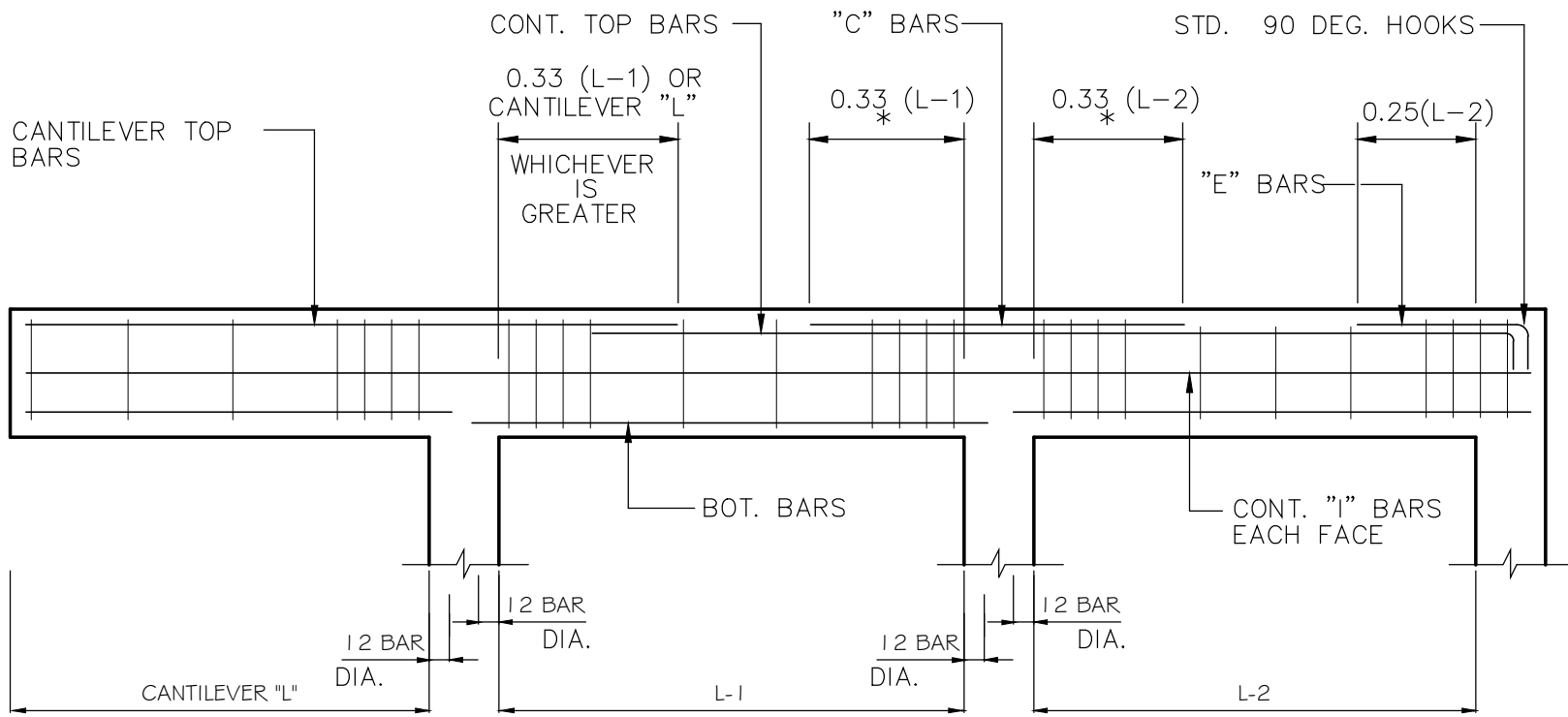




BEAM STEEL PLACEMENT DIAGRAM

N.T.S.

NOTES :

- WHERE NECESSARY CONT. TOP BARS SHALL BE LAPPED 24 BAR DIA. IN MIDDLE 1/3 OF SPAN.
- * WHICHEVER IS GREATER.
- BEAMS @ THE PERIMETER OF THE STRUCTURE SHALL HAVE AT LEAST 1/6 OF THE TENSION REINF. REQUIRED FOR NEGATIVE MOMENT AT THE SUPPORT AND 1/4 OF THE POSITIVE MOMENT REINF. REQUIRED AT MID-SPAN MADE CONTINUOUS AROUND THE PERIMETER AND TIED WITH CLOSED STIRRUPS.
- FOR ALL EXTERIOR (PERIMETER) BEAMS PROVIDE BOTTOM BARS LAPPED W/ CLASS "B" SPLICE @ INTERMEDIATE COLUMNS AND HOOKED AT END COLS. AND TOP BARS WITH CLASS "B" LAP SPLICE AT MID-SPAN.

GENERAL STRUCTURAL NOTES

A. REFERENCES

- FLORIDA BUILDING CODE 2023, 8TH. EDITION
 - ASCE 7-2022
- B. GENERAL

1. THE CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS ON THE STRUCTURAL DRAWINGS AND VERIFY SAME ON THE ARCHITECTURAL SET. ARCHITECTURAL DETAILS SUCH AS; SLAB DEPRESSIONS, WATERPROOFING, CURBS, MECHANICAL OPENINGS, FASCIA FRAMING AND BRACING SHALL BE INSTALLED AS SHOWN ON THE ARCHITECTURAL SET.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SHORING AND BRACING TO ENSURE SAFE WORKING CONDITIONS AT ALL TIMES. ALL CONSTRUCTION SHALL CONFORM TO THE FLORIDA BUILDING CODE, 2020

C . CONCRETE

- SHALL BE A MIX DESIGNED IN ACCORDANCE WITH A.C.I. 301 TO ACHIEVE A 28-DAY COMPRESSIVE STRENGTH OF 5,000 P.S.I. AND A MAXIMUM WATER-CEMENT RATIO OF 0.40 BY WEIGHT AND A SLUMP OF 4" UON ON PLAN.
- ALL CONCRETE SHALL CONTAIN AN ENGINEER-APPROVED ASTM C-494 TYPE 'D' ADMIXTURE (WATER REDUCING RETARDER), AIR ENTRAINED AGENT SHALL CONFORM TO ASTM C-260, ACCEPTABLE AIR ENTRAINING ADMIXTURE: DAREX "AEA" BY W. R. GRACE & CO., OR APPROVED EQUAL.
- CONCRETE ON EXPOSED BALCONIES, SLABS, BEAMS AND STAIRS SHALL HAVE THE TOP SURFACE COATED WITH "ALKYL-ALKYLOXY SILANE SEALER" OR ENGINEER-APPROVED EQUAL IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. WATER/CEMENT RATIO IN EXPOSED BALCONIES SHALL BE 0.40 BY WEIGHT. THIS CONCRETE SHALL HAVE A STRENGTH OF 5000 P.S.I.
- TRANSPORTATION, PLACING AND CURING OF CONCRETE SHALL COMPLY WITH A.C.I. 318 BUILDING CODE (2014)
- ALL CONCRETE STRUCTURAL COMPONENTS SHALL HAVE CONCRETE STRENGTH TESTED IN ACCORDANCE WITH A.S.T.M. STANDARDS, F.B.C. 2020, AND A.C.I. 318. TEST CYLINDERS MUST BE TAKEN EVERY 50 CUBIC YARDS ON CONCRETE PRIOR TO PLACEMENT. TESTING LAB SHALL PROVIDE COPIES OF CONCRETE TEST RESULTS TO ENGINEER'S OFFICE FOR REVIEW.
- CONCRETE MIX DESIGN SHALLBE SUBMITTED TO ENGINEERS OFFICE FOR REVIEW.
- CONTRACTOR SHALL CHECK ALL DRAWINGS AND APPLICABLE MANUFACTURER'S SHOP DRAWINGS FOR LOCATION OF ALL EMBEDDED ITEMS, SUCH AS PIPE SLEEVES, ANCHOR BOLTS, ETC. PRIOR TO PLACING CONCRETE.

8. UNLESS OTHERWISE NOTED ON PLANS, MINIMUM CONCRETE COVER TO REINFORCING STEEL SHALL BE MAINTAINED IN ACCORDANCE WITH CHAPTER 7, SECTIONS 7.7.1, 7.7.2 & 7.7.3 OF ACI 318 EDITION. SPECIFIC CONCRETE COVERS ARE GIVEN IN THE FOLLOWING:

GRADE BEAMS:	BOTT. = 3" CLEAR TOP = 2" CLEAR TO TIES SIDE = 2" CLEAR TO TIES
SLAB ON GRADE:	BOTT. = 2" CLEAR WHEN POURED ON 6" MIL VAPOR BARRIER TOP = 1 1/2" CLEAR
1ST AND 2ND FLOOR SLAB:	BOTT. = 3/4" CLEAR TOP = 3/4" CLEAR
(INTERIOR, PROTECTED)	
(EXTERIOR UNPROTECTED)	BOTT. = 1" CLEAR TOP = 1 1/2" CLEAR
COLUMNS & BEAMS:	AS SHOWN ON DETAILS

9. CONG. DESIGN MIX SHALL BE REVIEWED & APPROVED BY ENGINEER OF RECORD PRIOR PLACING ANY DESIGN MIX.

D. REINFORCING STEEL

- SHALL BE DEFORMED BARS, FREE FROM LOOSE RUST AND SCALE, & CONFORM TO A.S.T.M. A615 GRADE 60.
- ALL ACCESSORIES SHALL HAVE UPTURNED LEGS, AND BE PLASTIC DIPPED AFTER FABRICATION. ACCESSORIES FOR REINFORCING SHALL BE INSTALLED IN ACCORDANCE WITH A.C.I. 315.
- SUPPORT BARS SHALL BE #5 OR GREATER AND NOT SPACED MORE THAN 4'-0" O.C. SUPPORT BARS AND ENDS OF MAIN REINFORCING SHALL NOT EXTEND MORE THAN 1'-8" PAST OUTERMOST CHAIR OR SUPPORT

- A MINIMUM OF 3 SUPPORT BARS AND 3 INDIVIDUAL HIGH CHAIRS FOR EACH SUPPORT BAR SHALL BE PROVIDED FOR TOP REINFORCING.
- ALL PLACEMENT OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE OF THE CONCRETE REINFORCING STEEL INSTITUTE.
- PLASTIC TIPPED COLUMN SPACERS SHALL BE PROVIDED FOR VERTICAL COLUMN REINFORCING STEEL, SUCH THAT A 2" MINIMUM CLEARANCE IS MAINTAINED.

E. STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING GRADES:
 - ALL WF, ANGLE BASE PLATES, CONN. PLATES (UON) --- ASTM A36 (FY=36 KSI)
 - STRUCTURAL TUBE -----ASTM A500, GRADE B (FY=46 KSI)
 - STEEL PIPE -----ASTM A53, GRADE B (FY=36 KSI)
 - ANCHOR BOLTS (U.O.N.)-----ASTM A307
- ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, CORROSION PROTECTED & ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE, LATEST EDITION, EXCEPT AS MODIFIED IN THES ENOTES. PROVIDE IN SHOP ONE COAT OF RUST INHIBITING PAINT FOR ALL EXPOSED STRUCTURAL STEEL
- ALL EXTERIOR COLUMNS, BASE & CAP PLATES SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
- ALL ANCHOR BOLTS, HEADED STUDS SHALL BE HOT DIPPED GALVANIZED EXCEPT THAT EXPANSION BOLTS FOR REAR EXTERIOR COLUMNS SHALL BE TYPE 304 STAINLESS STEEL AS MANUFACTURED BY RAMSET/REDHEAD.
- CONNECTIONS SHALL BE BOLTED/WELDED AS SHOWN ON PLANS. THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN OF CONNECTIONS NOT SHOWN ON THE DRAWINGS. GENERALLY, CONNECTIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE SCHEMATIC AND ARE ONLY INTENDED TO SHOW THE RELATIONSHIP OF MEMBERS CONNECTED.

- UNLESS OTHERWISE NOTED OR SHOWN ON PLANS, CONNECTIONS AT BEAM/COLUMN AND BEAM/WALL SHALL BE DESIGNED FOR TWO-THIRDS OF THE ALLOWABLE LOAD ON THE MEMBER, AS DEFINED IN THE AISC TABLE FOR ALLOWABLE LOADS ON BEAMS.
- GROUT FOR COLUMN BASE PLATES SHALL BE NON-SHRINK, NON-METALLIC GROUT SUCH AS MASTER FLOW 713, AS MANUFACTURED BY MASTER BUILDERS OR APPROVED EQUAL (5000 PSI MINIMUM)
- ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION. TOUCH-UP IN FIELD AT WELDS AS REQUIRED.

F. WELDING

ALL WELDING TO BE DONE BY CERTIFIED WELDERS. WELDING SHALL BE MADE WITH E70XX ELECTRODES AND CONFORM TO THE CURRENT RECOMMENDATIONS OF THE A.I.S.C. AND THE AMERICAN WELDING SOCIETY.

G. MASONRY

- CONCRETE MASONRY UNITS SHALL COMPLY WITH THE PROVISIONS OF T HE STANDARD SPECIFICATION FOR DESIGN AND CONSTRUCTION OF LOAD BEARING CONCRETE MASONRY, NCMA TR-75B AND ACI 530.1.
- HOLLOW MASONRY UNITS SHALL CONFORM TO ASTM C-90, TYPE-1, "STANDARD SPECIFICATIONS FOR HOLLOW LOAD BEARING CONCRETE MASONRY UNITS"
- MORTAR SHALL CONFORM TO ASTM C-270, TYPE 'M' WITH A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 2500 PSI.
- HORIZONTAL JOINT REINFORCING SHALL BE STANDARD NO. 9 LADDER TYPE FOR 8" THICK MASONRY UNITS, AS MANUFACTURED BY "DUR-O-WAL", HOT DIPPED GALVANIZED, OR ENGINEER APPROVED EQUAL PLACED AT EVERY 2ND BLOCK COURSE (16" VERTICALLY) FOR ALL INTERIOR AND EXTERIOR WALLS. THE JOINT REINFORCING SHALL EXTEND 8" INTO ADJACENT COLUMNS.
- WHEN COLUMNS ARE CONSTRUCTED FIRST, BLOCK AND COLUMN SHALL BE TIED THRU 20 GAUGE GALVANIZED CORRUGATED DOVETAIL SLOTS AND 1" X 5" X 16 GA. GALVANIZED CORRUGATED DOVETAIL ANCHORS AT THE SAME LOCATION AND SPACING AS THE HORIZONTAL JOINT REINFORCING. LAD IN
- WHENEVER ANCHOR BOLTS ARE TO BE SET IN MASONRY, TWO CELLS AT THE SETTING LOCATION SHALL BE FILLED WITH CONCRETE.
- MAXIMUM POUR LIFT FOR MASONRY UNITS AND GROUT POUR HEIGHT SHALL BE 4'-0".
- SLUMP 9" + 1" FOR GROUT
- REFER TO ADDITIONAL REINFORCING NOTES ON FLOOR PLANS.
- COMPRESSIVE STRENGTH OF UNIT MASONRY SHALL BE MIN. OF 1900 PSI RESULTING IN f'm = 1500 PSI
- COMPRESSIVE STRENGTH OF GROUT SHALL BE 3,000 PSI @ 28 DAYS

H. NOA/SPECIALTY ENGINEER

- ALL PRE-ENGINEERED, PREMANUFACTURED ITEMS REQUIRE MIAMI-DADE NOTICE OF APPROVAL (NOA). CERTAIN ENGINEERED ITEMS REQUIRE ANALYSIS, DESIGNS, DRAWINGS & DETAILS TO BE PROVIDED BY THE CONTRACTOR'S/MANUFACTURER'S SPECIALTY ENGINEER(S) REGISTERED TO PRACTICE IN THE STATE OF FLORIDA. THE SPECIALTY ENGINEER'S SERVICE MAY ALSO BE REQUIRED WHEN REQUESTED BY THE ENGINEER OF RECORD (EOR). THESE ITEMS INCLUDE, BUT NOT LIMITED TO:
 - FOR ITEMS THAT REQUIRE ANALYSIS, DESIGNS, DRAWINGS & DETAILS BY THE SPECIALTY ENGINEER, THE CONTRACTOR SHALL PROVIDE ALL SUCH SERVICES THRU HIS SPECIALTY ENGINEER(S) AT NO ADDITIONAL COST TO THE OWNER OR TO THE ARCHITECT/ENGINEER. ALL SUCH CALCULATIONS AND DRAWINGS SHALL BE DULY SIGNED AND SEALED BY THE CONTRACTOR'S SPECIALTY ENGINEER(S).

I. SHOP DRAWINGS

PRIOR TO FABRICATION, SUBMIT TO THE STRUCTURAL ENGINEER FOR REVIEW, FOUR SETS OF SHOP DRAWINGS FOR ALL REINFORCING & STRUCTURAL STEEL (CERTIFIED MILL TESTS ARE ALSO REQUIRED PRIOR TO ERECTION). FOR COMPONENTS OUTLINED IN NOTES 'J', SUBMIT FOUR SETS OF SHOP DRAWINGS & DESIGN CALCULATIONS SIGNED & SEALED BY FABRICATORS SPECIALTY ENGINEER REGISTERED TO PRACTICE IN THE STATE OF FLORIDA.

J. BRACING

- THE FRAME SHALL BE BUILT TRUE AND PLUMB AND TEMPORARY BRACING SHALL BE INTRODUCED WHEREEVER NECESSARY TO TAKE CARE OF ALL LOADS TO WHICH THE STRUCTURE MAY BE SUJECTED. INCLUDING EQUIPMENT AND OPERATION OF SAME. SUCH BRACING SHALL BE THE REPONSIBILITY OF THE GENERAL CONTRACTOR AND SHALL BE LEFT IN PLACE AS LONG AS REQUIRED FOR SAFETY.
- PRECAST STRUCTURES MUST HAVE ERECTION BRACING TO SUSTAIN WIND VELOCITY OF 75 M.P.H. AND CONTRACTOR SHALL PROVIDE BRACING SHOP DRAWINGS SIGNED AND SEALED BY PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.

K. WOOD

- WOOD MEMBERS IN CONVENTIONAL FRAMING SHALL HAVE A MINIMUM ALLOWABLE BENDING STRESS OF 1,200 P.S.I.; MINIMUM ALLOWABLE SHEAR STRESS OF 70 P.S.I. AND MODULUS OF ELASTICITY OF 1,200,000 P.S.I. AT 19 CONTENT IN ACCORDANCE WITH A.I.T.C. STANDARDS.
- TRUSSES TO BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA FOR LOADS PER APPLICABLE BUILDING CODE AND/OR AS SHOWN ON DRAWINGS.
- WOOD MEMBERS IN CONVENTIONAL FRAMING SHALL BE SOUTHERN YELLOW PINE #2 WITH A 19 % MOISTURE CONTENT.

L. SHORING

- FORMS AND SHORING FOR CONCRETE SLABS AND BEAMS SHALL BE DESIGNED TO WITHSTAND THE DEAD LOAD OF CONCRETE AND THE ANTICIPATED CONSTRUCTION LOADS.
- WHEN CASTING A SLAB, THERE SHALL BE SHORING BELOW IT CONTINUOUS TO THE GROUND.
- IN NO CASE SHALL SLAB AND BOTTOM BEAM FORMS BE STRIPPED EARLIER THAN 21 DAYS AFTER PLACEMENT AND UNTIL THE COMPRESSIVE STRENGTH OF 3,200 P.S.I. (FOR 4,000 P.S.I.) AND 4,000 P.S.I. (FOR 5,000 P.S.I.) HAS BEEN ATTAINED.
- THE SYSTEM OF SHORING SHALL BE INSPECTED AND APPROVED BY THE CONTRACTOR'S SPECIALTY ENGINEER PRIOR TO INSPECTION OF BY THE THRESHOLD/SPECIAL INSPECTOR.
- DESIGN AND CONSTRUCTION OF FORMWORK AND SHORING SHALL COMPLY WITH THE A.C.I. 318 BUILDING CODE (LATEST EDITION) AND BE ENTIRELY THE REPONSIBILITY OF THE GENERAL CONTRACTOR.
- SHORING DRAWINGS SHALL BE PROVIDED BY GENERAL CONTRACTOR AND SHALL BE DESIGNED, SIGNED AND SEALED BY THE CONTRACTOR'S SPECIALTY ENGINEER REGISTERED TO PRACTICE IN THE STATE OF FLORIDA.

M. LINTELS

ALL DOOR AND WINDOW OPENINGS IN LOAD BEARING AND NON-LOAD BEARING MASONRY WALLS SHALL HAVE EITHER CAST-IN-PLACE OR PRECAST CONCRETE LINTELS, IF P/C LINTELS ARE USED, PROVIDE MIAMI-DADE NOA'S FOR ALL SUCH LINTELS. UNLESS OTHERWISE NOTED, PROVIDE CAST-IN-PLACE LINTELS.

N. CORROSION PROTECTION

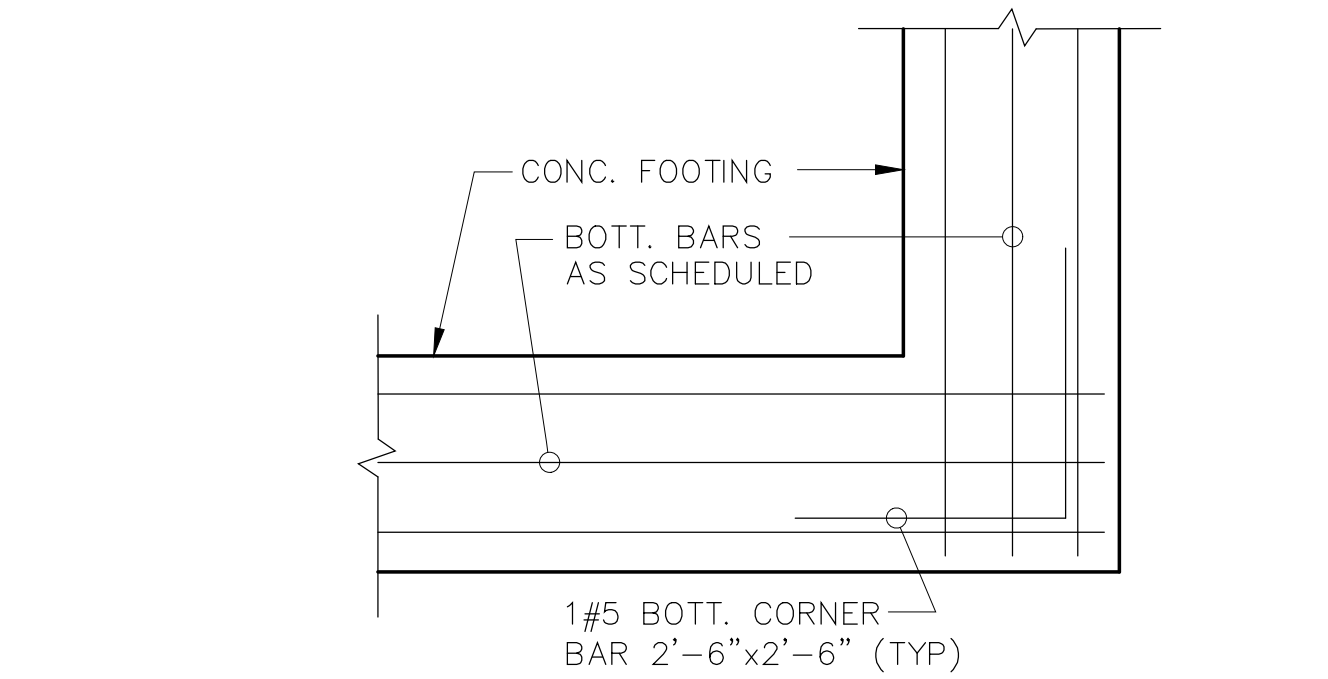
- FOR ALL CONCRETE BALCONIES & EXPOSED CONCRETE PROVIDE WATER BASE SEALER EQUAL TO ENVIROSEAL 40 BY HYDROZO.

O. WOOD TRUSS GENERAL NOTES:

THE TRUSS LAYOUT SHOWN ON THESE PLANS ARE SCHEMATIC IN NATURE. HOWEVER, THE SUPPORTING SUPERSTRUCTURE HAS BEEN DESIGNED UNDER THE ASSUMPTION THAT THE FRAMING SCHEME SHOWN WILL PARALLEL FINAL TRUSS DESIGNERS LAYOUT. THIS FRAMING SCHEME (DIRECTION OF TRUSSES, MAJOR G.T. BEARING POINTS, ETC.) CAN BE MODIFIED ONLY AFTER OBTAINING PERMISSION FROM THE ENGINEER OF RECORD WHO MUST REVIEW PROPOSED CHANGES AND AUTHORIZE STRUCTURAL REVISIONS ACCORDINGLY. FINAL SIGNED AND SEALED ENGINEERED TRUSS DESIGN MUST BE SUBMITTED TO THIS OFFICE FOR REVIEW AS PER GENERAL NOTES. TRUSS DESIGNERS MUST PROVIDE ALL TRUSS TO TRUSS CONNECTIONS AS PART OF THIS DESIGN.

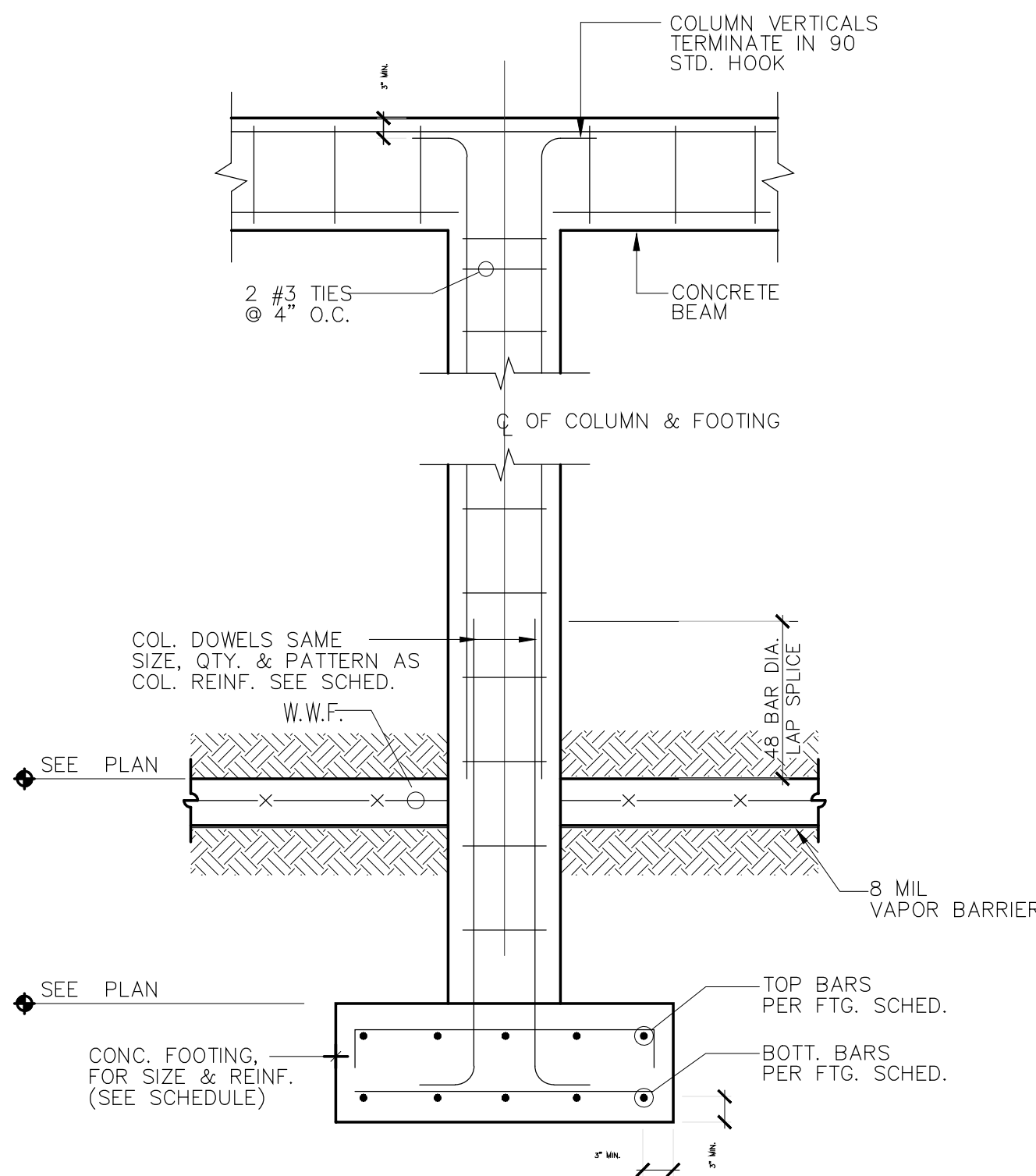
ADDITIONAL NOTES FOR TIE BEAMS :

- TYP. TIE BEAM REINF. SHALL BE CONT. & LAPS FOR TOP & BOTT. REINF. SHALL BE STAGGEED.
- WHERE TIE BEAMS FORM CORNERS OR ACUTE / OBTUSE ANGLES, THE REINF. SHALL BE LAPPED W/ TOP & BOTT. 2'-6"x 2'-6" LAP BARS OF MATCHING ANGLES @ ACUTE/OBTUSE ANGLES.
- WHERE TIE BEAM TERMINATES WITHOUT FORMING A CORNER OR ANGLES, THE TOP REINF. SHALL BE HOOKED OR EXTENDED INTO ADJACENT SLAB AS THE CASE MAY BE (PER TYP. BEAM DIAGRAM).
- WHERE TIE BEAM OCCURS ADJACENT TO A DESIGNED BEAM, THE TIE BEAM REINF. SHALL BE EXTENDED INTO THE DESIGNED BEAM FOR CLASS "C" LAPS.
- UNLESS OTHERWISE NOTED TIES FOR THE TIE BEAMS SHALL BE 4 # 3 @ 12" @ EA. CORNER & BEND & ON EACH SIDE OF INTERMEDIATE COLUMNS & FOR THE REMAINDER LENGTH PROVIDE # 3 @ 48" O.C.



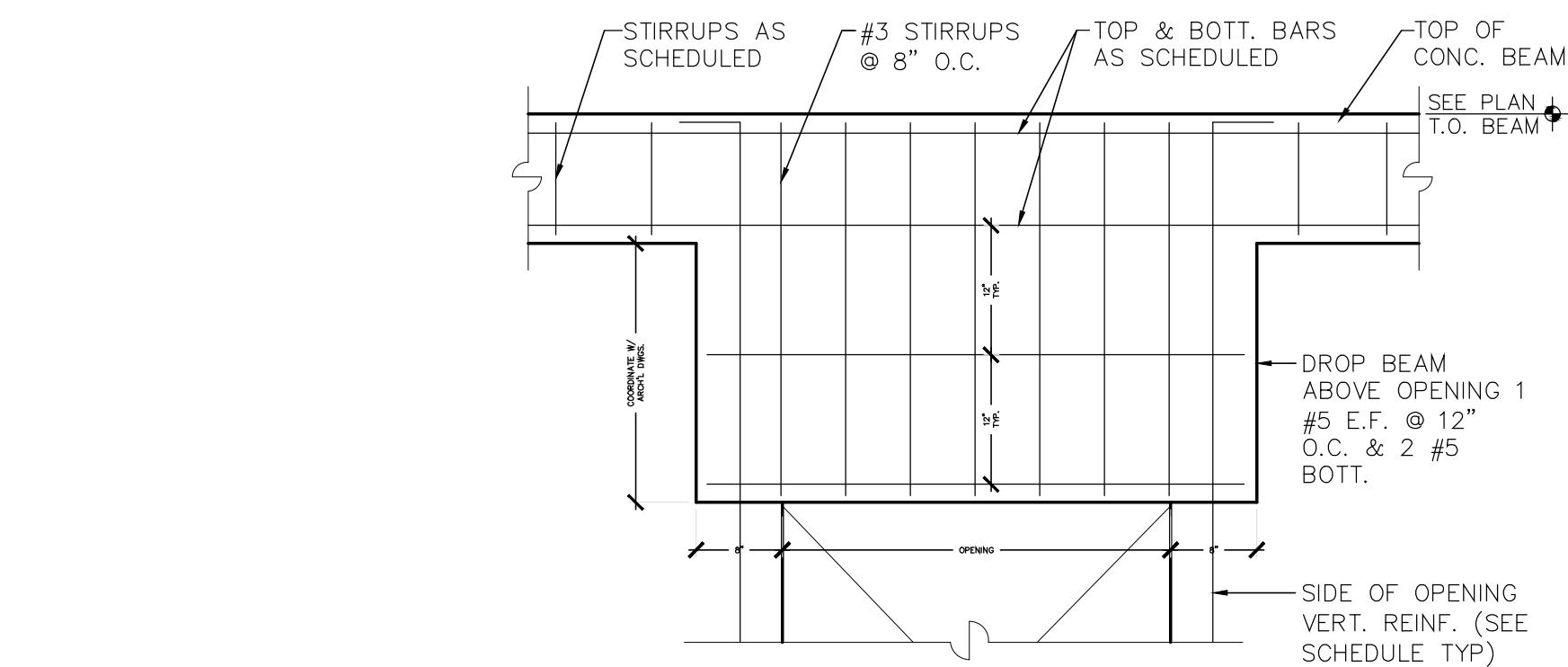
TYP. FOOTING CORNER BAR DTL.

3/4" = 1'



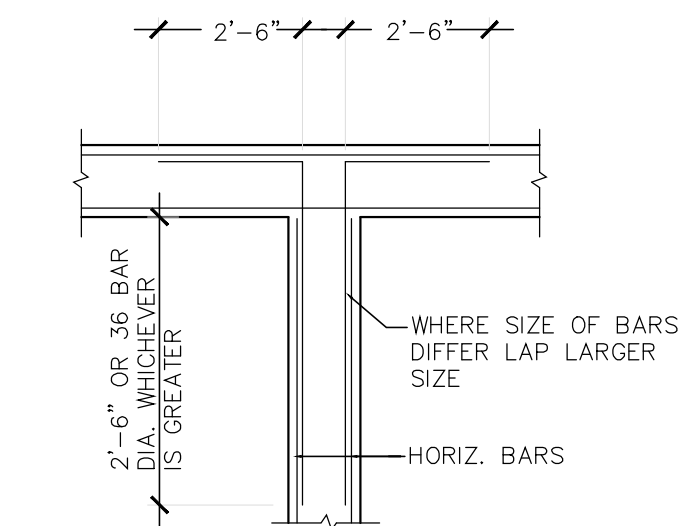
TYP. CONCRETE COLUMN AND FOOTING DETAIL

N.T.S.



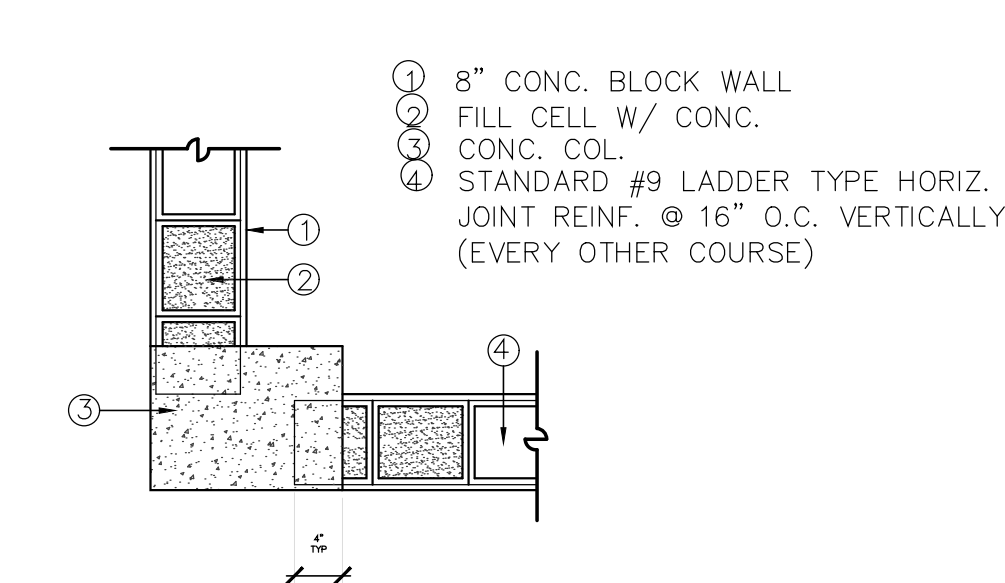
DROP BEAM DETAIL

SCALE : 3/4" = 1'-0"



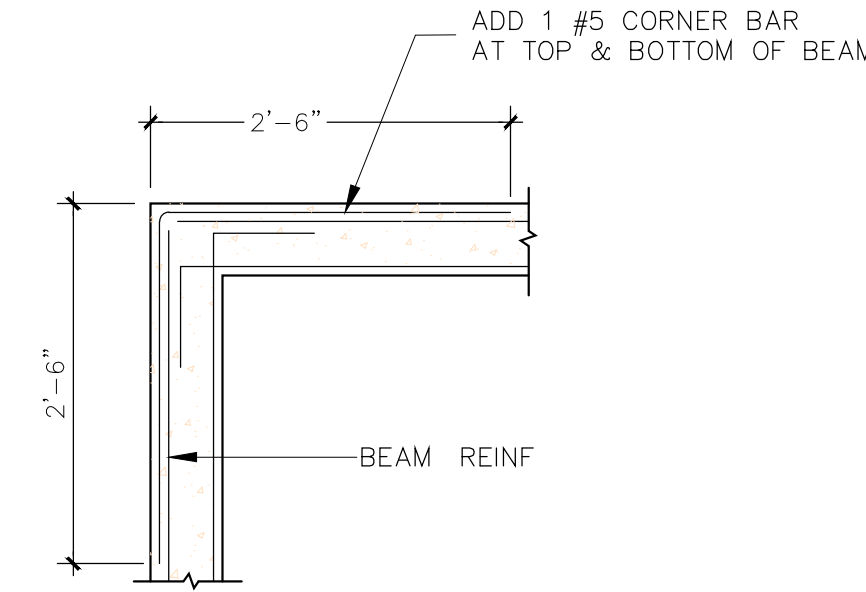
TYP. INTERSECTION DET. FOR TIE BEAM & FTG.

3/4" = 1'



CONC. COL. TO MASONRY CONNECTION DETAIL

N.T.S.



TIE BEAM CORNER PLAN DETAIL

SCALE: 3/4" = 1'-0"

RESIDENCE: GS JPD 10635 LLC

10635 SW 63 AV
MIAMI, FL

SEAL

BALLI-TRAUTMAN ARCHITECTS LLC-AA26002968

GIORGIO LUIGI BALLI -AR13951
DAVID SCOTT TRAUTMAN -AR15045

REVISIONS

SCHEMATIC SET



JOB NUMBER:

CHECKED BY: GB

ISSUE DATE: Issue Date

SCALE: AS NOTED

SHEET TITLE

STRUCTURAL GENERALNOTES, AND TYP. DETAIL

SHEET NUMBER

SGN

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1533 SUNSET DRIVE SUITE 101, CORAL GABLES, FL 33143