GENERAL NOTES

GENERAL

1. THE STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE 2006 INTERNATIONAL BUILDING CODE AND THE CITY OF HOUSTON BUILDING CODE.

2. THE LOADS THAT HAVE BEEN USED IN THE STRUCTURAL DESIGN INCLUDE THE FOLLOWING

   LIVE LOADS:

   STAIRS .....100 PSF
   1ST FLOOR .....100 PSF

   ALL LIVE LOADS HAVE BEEN REDUCED BASED ON TRIBUTARY AREAS IN ACCORDANCE WITH THE CODE PROVISIONS AND HAVE BEEN APPLIED TO BOTH ALTERNATE AND ADJACENT SPANS WHERE APPROPRIATE TO DERIVE GOVERNING CONDITIONS.

   DEAD LOADS:

   STRUCTURAL MEMBERS.....SELF WEIGHT
   STAIRS.....30 PSF
   CEILING AND MECHANICAL.....7 PSF

   OTHER DEAD LOADS HAVE BEEN CALCULATED TO INCLUDE THE ACTUAL WEIGHT OF ALL WORK SHOWN ON THE STRUCTURAL, MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS. NO OTHER EQUIPMENT SHALL BE PLACED ON OR HUNG FROM THE ROOF SYSTEM WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER. ROOF-MOUNTED HVAC UNITS SHALL BE PLACED WITHIN THE DESIGNATED AREAS SHOWN ON THE FRAMING PLANS.

3. COMPLETE SHOP DRAWINGS FOR THE STRUCTURAL WORK SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO COMMENCEMENT OF CONSTRUCTION, IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH REVIEW BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR CORRECT FABRICATION AND CONSTRUCTION OF THE WORK IN COMPLIANCE WITH THESE DRAWINGS.

4. ANY DEVIATION FROM, ADDITION TO, SUBSTITUTION FOR, OR MODIFICATION TO THE STRUCTURE OR ANY PART OF THE STRUCTURE DETAILED ON THESE DRAWINGS SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS THAT ARE SUBMITTED FOR REVIEW DO NOT CONSTITUTE "IN-WRITING".

5. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR ELEVATIONS NOT SHOWN AND FOR EXACT LOCATIONS OF ALL ARCHITECTURAL; DETAILS. THE CONTRACTOR SHALL COMPARE THE STRUCTURAL SECTIONS WITH THE ARCHITECTURAL SECTIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMPLETION OF THE SHOP DRAWINGS.

6. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS AT THE SITE AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND INFORMATION SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH THE WORK.

7. PRINCIPAL OPENINGS ARE SHOWN ON THE STRUCTURAL DRAWINGS, CONTRACTOR SHALL REFER TO ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR SLEEVES, CURVES, INSERTS AND OTHER OPENINGS NOT SHOWN. THE CONTRACTOR SHALL PROVIDE FOR ALL OPENINGS, WHETHER SHOWN ON THE STRUCTURAL DRAWINGS OR NOT. SIZE AND LOCATION OF ALL OPENINGS SHALL BE VERIFIED BY THE CONTRACTOR. ANY DEVIATION FROM OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR APPROVAL PRIOR TO CONSTRUCTION.

8. THE STRUCTURAL DRAWINGS ARE NOT TO BE SCALED FOR DETERMINATION OF QUANTITIES, LENGTH, OR FIT OF MATERIALS.

9. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISH STRUCTURE, THEY DO NOT INDICATE METHODS OF CONSTRUCTIONS UNLESS SO STATED OR NOTED. THE CONTRACTOR SHALL PROVIDE MEASURES NECESSARY TO PROTECT THE WORKMEN AND OTHER PERSONS DURING CONSTRUCTION.

10. THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING AND SHORING OF ALL STRUCTURAL WORK AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONDITION WHICH , IN HIS OPINION, MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS IN THE STRUCTURE.

11. CONSTRUCTION MATERIALS SHALL NOT BE STORED ON FLOORS OR ROOFS IN EXCESS OF THE DESIGN LIVE LOADS WHICH ARE INDICATED ON THE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENFORCE THIS REQUIREMENT. IMPACT SHALL BE AVOIDED WHEN PLACING MATERIALS ON FLOORS OR ROOFS.

FOUNDATION AND SLAB ON GRADE

1. THE SUBSURFACE INFORMATION AND FOUNDATION DESIGN ARE BASED ON THE INFORMATION SHOWN IN THE FOUNDATION AND SLAB ON GRADE NOTES ON SHEET S1.10 OF THE ORIGINAL BUILDING DRAWINGS. THE SOIL INFORMATION ON ORIGINAL BUILDING DRAWINGS IS BASED ON A REPORT PREPARED BY TERRACON, PROJECT NUMBER 92065857, DATED JANUARY 12, 2007.

2. REFER TO THE PROJECT SPECIFICATIONS FOR ALL INFORMATION CONCERNING FOUNDATION CONSTRUCTION. THE CONTRACTOR SHALL PERFORM EXCAVATIONS, FOOTING CONSTRUCTION, AND PREPARATION OF THE SUBGRADE UNDER THE SLAB ON GRADE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

3. SPREAD FOOTINGS SHALL BE EXCAVATED, CLEANED, AND REINFORCED, AND THE CONCRETE SHALL BE PLACED ON THE SAME DAY. IF CONCRETE CAN NOT BE PLACED WITH IN 24 HRS A 3" SEAL SLAB SHALL BE PORED.

4. FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION, WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE CHIEF ENGINEER, GEOTECHNICAL ENGINEER AND PAUL ENGINEERING, INC., BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.

5. GENERAL CONTRACTOR SHALL NOTIFY PAUL ENGINEERING INC., INC., 48 HOURS PRIOR TO PLACEMENT OF CONCRETE IN THE FOOTINGS.

6. THE NEW SPREAD FOOTINGS FOR THE NEW COLUMN AND STAIRS HAS BEEN DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURES OF 4000 PSF FOR NET PLUS SUSTAINED LIVE LOAD AND 6000 PSF FOR TOTAL LOAD AT A BEARING DEPTH OF A MINIMUM OF 4' BELOW BUILDING SLAB.

CONCRETE

1. CONCRETE IN THE FOLLOWING AREAS SHALL HAVE NATURAL SAND FINE AGGREGATE AND NORMAL WEIGHT COARSE AGGREGATES CONFORMING TO ASTM C33, TYPE I PORTLAND CEMENT CONFORMING TO ASTM C150, AND SHALL HAVE THE FOLLOWING COMPRESSIVE STRENGTH (FC') AT 28 DAYS:

SPREAD FOOTINGS	4000 PSI
SLABS ON GRADE	4000 PSI

2. FLY ASH MAY BE USED AS A POZZOLAN TO REPLACE A PORTION OF THE PORTLAND CEMENT IN A CONCRETE MIX, SUBJECT TO THE APPROVAL OF THE GENERAL CONTRACTOR AND THE STRUCTURAL ENGINEER. FLY ASH, WHEN USED, SHALL CONFORM TO ASTM C618, TYPE C OR F. CONCRETE MIXES USING FLY ASH SHALL BE PROPORTIONED TO ACCOUNT FOR THE PROPERTIES OF THE SPECIFIC FLY ASH USED AND TO ACCOUNT FOR THE SPECIFIC PROPERTIES OF THE FLY ASH CONCRETE THUS RESULTING. THE RATIO OF THE AMOUNT OF THE FLY ASH TO THE TOTAL AMOUNT OF FLY ASH AND CEMENT IN THE MIX SHALL NOT EXCEED 25 PERCENT.

3. GROUT FOR BASE PLATES SHALL BE NONSHRINKABLE, NON-METALLIC CONFORMING TO ASTM C827, AND SHALL HAVE A SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS OF 5000 PSI. PREGROUTING OF BASE PLATES WILL NOT BE PERMITTED.

4. DETAILING OF CONCRETE REINFORCEMENT BARS AND ACCESSORIES SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" AND ACI SP-66 "DETAILING MANUAL". PLACING OF REINFORCING BARS SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315R "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" AND CRSI "MANUAL OF STANDARD PRACTICE".

5. MIXING, TRANSPORTING, AND PLACING OF CONCRETE SHALL CONFORM TO ACI 301.

6. MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS: (SEE ACI 318 SECTION 7.7 FOR CONDITIONS NOT NOTED)

CONCRETE EXPOSED TO WEATHER	
#5 BARS AND SMALLER	1 - 1/2 INCHES
ALL OTHER BARS	2 INCHES
CONCRETE CAST AGAINST EARTH	3 INCHES
GRADE BEAMS:	
TOP	1 - 1/2 INCHES
BOARD FORMED SIDES	2 INCHES
EARTH FORMED SIDES	3 INCHES
BOTTOM	3 INCHES
SLABS ON GRADE	
SINGLE LAYER OR TOP LAYER	2 INCHES
BOTTOM LAYER CAST AGAINST SOIL	3 INCHES
BOTTOM LAYER NOT CAST AGAINST SOIL	2 INCHES
BEAMS	1 - 1/2 INCHES

   PROVIDE STANDARD BAR CHAIRS AND SPACERS AS REQUIRED TO MAINTAIN CONCRETE PROTECTION SPECIFIED.

7. CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60.

8. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. FABRIC SHALL BE SUPPLIED IN FLAT SHEETS. FABRIC SHALL BE LAPPED TWO MESH AT SPLICES.

9. REINFORCEMENT BARS SHALL NOT BE TACK WELDED, WELDED, HEATED, OR CUT UNLESS INDICATED ON THE CONTRACT DOCUMENTS OR REVIEWED BY THE STRUCTURAL ENGINEER.

10. WELDING OF REINFORCEMENT BARS, WHEN ACCEPTED BY THE STRUCTURAL ENGINEER, SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD D1.4. ELECTRODES FOR SHOP AND FIELD WELDING OF REINFORCEMENT BARS SHALL CONFORM TO ASTM A233, CLASS E90XX.

11. HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90-DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED 36 BAR DIAMETERS, AT CORNERS AND INTERSECTIONS.

12. HORIZONTAL JOINTS WILL NOT BE PERMITTED IN CONCRETE CONSTRUCTION EXCEPT AS SHOWN ON THE CONTRACT DOCUMENTS. VERTICAL JOINTS MAY OCCUR AT CENTER OF SPANS AT LOCATIONS REVIEWED BY PAUL ENGINEERING, INC..

13. CONSTRUCTION JOINTS BETWEEN PIERS AND PIER CAPS, FOOTINGS AND WALLS OR COLUMNS, OR WALLS, COLUMNS, BEAMS, AND THE FLOOR SYSTEM THEY SUPPORT SHALL BE PREPARED BY ROUGHENING THE CONTACT SURFACE TO A FULL AMPLITUDE OF APPROXIMATELY 1/4 INCH LEAVING THE CONTACT SURFACE CLEAN AND FREE OF LAITANCE.

14. PROVIDE 2- NO. 4 REINFORCEMENT BARS X 4'-0" AT RE-ENTRANT CORNERS OF SLAB ON GRADE AT POUR STRIPS AND COLUMN BLOCKOUTS. PLACE BARS CENTERED IN THE SLAB AND DIAGONAL TO THE CORNER WITH 1" CLEARANCE FROM THE SLAB AT THE CORNER.

STRUCTURAL STEEL

1. CONTRACTOR SHALL FABRICATE AND ERECT STEEL IN ACCORDANCE WITH OSHA'S SAFETY REQUIREMENTS, INCLUDING 29 CFR PART 1926 SAFETY STANDARDS FOR STEEL ERECTION.

2. STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992, GRADE 50 EXCEPT AS NOTED.

3. OTHER ROLLED STEEL SHAPES (M, S, HP SHAPES, CHANNELS, AND ANGLES) SHALL CONFORM TO ASTM A36, EXCEPT AS NOTED.

4. BASE PLATES SHALL CONFORM TO ASTM A992, GRADE 50. CONNECTOR PLATES CAN BE A36.

5. STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE E OR TYPE S, GRADE B, OR ASTM A500 GRADE B. MILL TEST REPORTS FOR THE STEEL PIPE SHALL BE SUBMITTED FOR REVIEW.

6. STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500, GRADE B.

7. ANCHOR BOLTS (ANCHOR RODS) SHALL CONFORM TO ASTM A307 OR F1554 GRADE 36, UNLESS NOTED OTHERWISE.

8. CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL BE HIGH STRENGTH BOLTS WHICH MEET OR EXCEED THE REQUIREMENTS OF ASTM A325, TYPE N, X, OR SC CLASS A. BOLTS SHALL BE DESIGNED AS BEARING TYPE BOLTS, EXCEPT AS NOTED. BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE "SNUG TIGHT" CONDITION AS OUTLINED IN THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS". BOLTS SHALL HAVE A HARDENED WASHER PLACED UNDER THE ELEMENT TO BE TIGHTENED. CONNECTIONS WITH OVERSIZES ROUND HOLES AND CONNECTIONS WITH HOLES SLOTTED IN THE DIRECTION OF LOAD, AND CONNECTIONS NOTED ON THE DRAWINGS TO BE "SLIP CRITICAL" (SC CLASS A) BOLTS, AND SHALL BE DESIGNED AS SUCH. BOLTS FOR SLIP-CRITICAL CONNECTIONS SHALL BE TIGHTENED BY THE USE OF THE TURN-OF-THE-NUT METHOD OR THE USE OF LOAD-INDICATING TYPE BOLTS, OR LOAD-INDICATING WASHERS, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

9. STRUCTURAL STEEL DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" AND THE MARCH 2000 VERSION OF THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".

10. TYPICAL BEAM CONNECTION DETAILS ARE DETAILED ON THE DRAWINGS. FOR NON-COMPOSITE BEAMS, THE END REACTION OF THE CONNECTED BEAM SHALL BE DETERMINED FROM AISC "MANUAL OF STEEL CONSTRUCTION-ALLOWABLE STRESS DESIGN," NINTH EDITION, PART 2 "ALLOWABLE LOADS ON BEAMS, UNLESS A DESIGN REACTION IS INDICATED ON THE PLANS. IN NO CASE SHALL THE END REACTION BE TAKEN AS LESS THAN 12.0 KIPS. IF ALTERNATE BEAM CONNECTION DESIGNS ARE USED AND FOR ALL OTHER CONNECTIONS NOT DETAILED ON THE DRAWINGS, THE FABRICATOR SHALL HAVE A REGISTERED PROFESSIONAL ENGINEER PREPARE THE CONNECTION DESIGNS IN ACCORDANCE WITH AISC "MANUAL OF STEEL CONSTRUCTION-VOLUME II CONNECTIONS "AND" HOLLOW STRUCTURAL SECTIONS-CONNECTIONS MANUAL." SUCH DESIGNS SHALL BE SUBMITTED PRIOR TO PREPARATION OF THE SHOP DRAWINGS AND SHALL BEAR THE SEAL OF THIS RESPONSIBLE PROFESSIONAL ENGINEER.

11. PRIOR TO DETAILING CONNECTIONS FOR STRUCTURAL STEEL, THE STEEL FABRICATOR SHALL SUBMIT FOR APPROVAL REPRESENTATIVE DETAILS AND CALCULATIONS FOR EACH TYPE OF STRUCTURAL STEEL CONNECTION TO BE UTILIZED. AFTER APPROVAL, THE CONNECTIONS MAY BE INCORPORATED INTO THE SHOP DRAWINGS, ALONG WITH A TABLE OF DESIGN CAPACITIES FOR THE RANGE OF CONNECTIONS TO BE USED.

12. WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD D1.1. ELECTRODES FOR SHOP AND FIELD WELDS SHALL CONFORM TO AWS A5.1 OR AWS A5.5, CLASS E70XX, LOW HYDROGEN.

13. SPLICING OF STRUCTURAL STEEL MEMBERS WHERE NOT DETAILED ON THE CONTRACT DOCUMENTS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE, AND CONNECTION TO BE MADE.

14. NO MISFABRICATED STRUCTURAL STEEL MAY BE ERECTED PRIOR TO REVIEW BY THE ENGINEER.

15. PENETRATIONS SHALL NOT BE CUT IN STRUCTURAL STEEL MEMBERS UNLESS SO INDICATED IN THE DRAWINGS OR AS REVIEWED BY THE ENGINEER.

16. BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE CONTRACT DOCUMENTS. WHERE NO UPWARD CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.

17. WHERE INDICATED ON THE DRAWINGS, STRUCTURAL STEEL MEMBERS, FABRICATIONS, AND WELDED ASSEMBLIES SHALL BE GALVANIZED AFTER FABRICATION BY HOT DIP PROCESS IN ACCORDANCE WITH ASTM A123. WEIGHT OF ZINC COATING SHALL CONFORM TO THE REQUIREMENTS SPECIFIED UNDER "WEIGHT OF COATING" IN ASTM A123 OR ASTM A386, AS APPLICABLE. THE AFFECTED PORTIONS OF FIELD WELDED GALVANIZED ASSEMBLIES SHALL BE FIELD PAINTED WITH ZINC RICH CORROSION RESISTANT PAINT.

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GENERAL NOTES

S1.00

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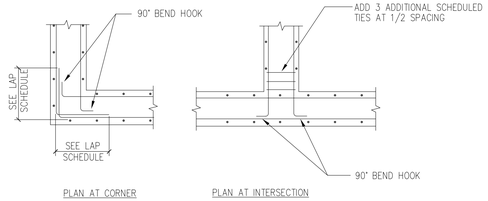
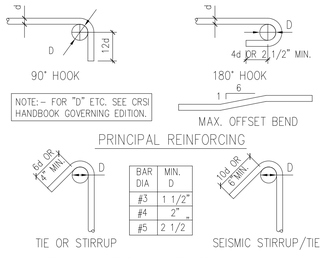


PLAN AT CORNER PLAN AT INTERSECTION



NOTES:- 1. ALL BENDS SHALL BE MADE COLD.
2. #14 AND #18 BARS SHALL BE BEND-TESTED AND APPROVED PRIOR TO BENDING.

1 GRADE BEAM AND WALL DETAILS

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

2 TYPICAL BAR BENDS

SCALE: N.T.S.

TENSION LAP SPLICES - CLASS B FOR TOP & BOTTOM BARS
(GRADE 60 UNCOATED BARS - NORMAL WEIGHT CONCRETE)

BAR SIZE	f'c=3000 psi		f'c=4000 psi		f'c=5000 psi		f'c=6000 psi		f'c=8000 psi	
	TOP	BOT.	TOP	BOT.	TOP	BOT.	TOP	BOT.	TOP	BOT.
# 3	2'-4"	1'-9"	2'-0"	1'-6"	1'-10"	1'-5"	1'-8"	1'-4"	1'-5"	1'-4"
# 4	3'-1"	2'-4"	2'-8"	2'-1"	2'-5"	1'-10"	2'-2"	1'-8"	1'-11"	1'-5"
# 5	3'-10"	3'-0"	3'-4"	2'-7"	3'-0"	2'-4"	2'-9"	2'-1"	2'-4"	1'-10"
# 6	4'-8"	3'-7"	4'-0"	3'-1"	3'-7"	2'-9"	3'-3"	2'-6"	2'-10"	2'-2"
# 7	6'-9"	5'-2"	5'-10"	4'-6"	5'-3"	4'-0"	4'-9"	3'-8"	4'-2"	3'-2"
# 8	7'-9"	5'-11"	6'-8"	5'-2"	6'-0"	4'-7"	5'-5"	4'-2"	4'-9"	3'-8"
# 9	8'-8"	6'-8"	7'-6"	5'-9"	6'-9"	5'-2"	6'-2"	4'-9"	5'-4"	4'-1"
# 10	9'-10"	7'-6"	8'-6"	6'-6"	7'-7"	5'-10"	6'-11"	5'-4"	6'-0"	4'-7"
# 11	10'-11"	8'-4"	9'-5"	7'-3"	8'-5"	6'-6"	7'-8"	5'-11"	6'-8"	5'-1"

NOTE: FOR CLASS "A SPLICE (PERMITTED ONLY WHEN NOT MORE THAN HALF THE BARS SPLICED & SPLICES STAGGERED BY THE DISTANCE OF SPLICE LENGTH), USE SAME AS '*ld*' = TENSION DEVELOPMENT LENGTH TABLE.

3 TENSION LAP SPLICES - CLASS B FOR TOP & BOTTOM BARS

SCALE: N.T.S.

'*ld*' TENSION DEVELOPMENT LENGTH FOR BEAM, SLAB & WALL REBARS
(GRADE 60 UNCOATED BARS-NORMAL WEIGHT CONCRETE)

BAR SIZE	f'c=3000 psi		f'c=4000 psi		f'c=5000 psi		f'c=6000 psi		f'c=8000 psi	
	ldTOP	ldBOT.	ldTOP	ldBOT.	ldTOP	ldBOT.	ldTOP	ldBOT.	ldTOP	ldBOT.
# 3	1'-9"	1'-4"	1'-6"	1'-2"	1'-5"	1'-1"	1'-3"	1'-0"	1'-1"	1'-0"
# 4	2'-4"	1'-10"	2'-1"	1'-7"	1'-10"	1'-5"	1'-8"	1'-3"	1'-5"	1'-1"
# 5	3'-0"	2'-3"	2'-7"	2'-0"	2'-4"	1'-9"	2'-1"	1'-7"	1'-10"	1'-5"
# 6	3'-7"	2'-9"	3'-1"	2'-4"	2'-9"	2'-1"	2'-6"	1'-11"	2'-2"	1'-8"
# 7	5'-2"	4'-0"	4'-6"	3'-6"	4'-0"	3'-1"	3'-8"	2'-10"	3'-2"	2'-5"
# 8	5'-11"	4'-7"	5'-2"	3'-11"	4'-7"	3'-6"	4'-2"	3'-3"	3'-8"	2'-10"
# 9	6'-8"	5'-2"	5'-9"	4'-5"	5'-2"	4'-0"	4'-9"	3'-8"	4'-1"	3'-2"
# 10	7'-6"	5'-10"	6'-6"	5'-0"	5'-10"	4'-6"	5'-4"	4'-1"	4'-7"	3'-7"
# 11	8'-4"	6'-5"	7'-3"	5'-7"	6'-6"	5'-0"	5'-11"	4'-7"	5'-1"	3'-11"

NOTES:
1. 'TOP' BARS ARE HORIZONTAL REBARS WITH MORE THAN 12 IN. OF FRESH CONCRETE CAST BELOW THE BARS AT THE DEVELOPMENT LENGTH.
2. 'ld ' FOR #3 & #4 BARS IN SLAB OR WALL ARE CONSERVATIVE & MAY BE REDUCED TO 0.75 TIMES (FOR #3 BARS) AND 0.94 TIMES (FOR #4 BARS) FROM THE TABULATED VALUES.
3. FOR LIGHT-WEIGHT CONCRETE MULTIPLY THE TABULATED VALUES BY 1.3 .

4 'ld' TENSION DEVELOPMENT LENGTH FOR BEAM, SLAB & WALL REBARS

SCALE: N.T.S.

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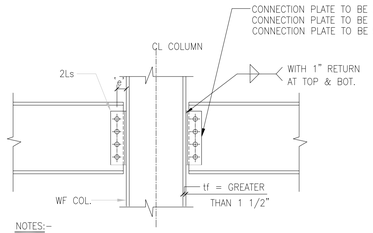
TYPICAL CONCRETE DETAILS

S1.10



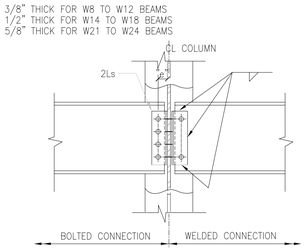
NOTES:–

1. CONN. TO BE ADEQUATE FOR AXIAL BRACING FORCE = 1% OF WORKING COLUMN LOAD IN ADDITION TO END REACTION DETERMINED PER STEEL GENERAL NOTES SHEET S1.1 (U.N.O. ON DWG.) ALLOWABLE STRESS MAY BE INCREASED 1/3 FOR THIS CONDITION. COLUMN LOAD WILL BE FURNISHED OR BE DETERMINED FROM AISC MANUAL FOR FLOOR TO FLOOR HEIGHT. NOT REQUIRED AT MOMENT CONNECTIONS.
2. SINGLE PLATE CONNECTION IS ALLOWED ONLY WHEN AXIAL FORCE BRACING THE COLUMN IS LESS THAN 15 kips. THE DESIGN OF SINGLE PLATE CONNECTION WITH AXIAL FORCE LESS THAN 15 kips. SHOULD BE SUBSTANTIATED BY CALCULATION AND IS SUBJECT TO ENGINEER'S APPROVAL. NOT REQUIRED AT MOMENT CONNECTIONS.
3. CONNECTION TO BE DESIGNED FOR AN ECCENTRICALLY OF 'e' AS SHOWN ABOVE.
4. MINIMUM NUMBER OF 7/8"ø A325 BOLTS REQUIRED PER BEAM DEPTH AS FOLLOWS:

W8, W10 2	W21 5
W12, W14 3	W24 6
W16, W18 4	W27 7

1 BEAM TO COLUMN FLANGE

SCALE: N.T.S.

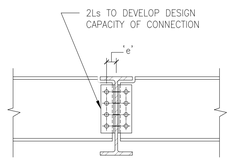


NOTE:–

1. CONN. TO BE ADEQUATE FOR AXIAL BRACING FORCE = 1% OF WORKING COLUMN LOAD IN ADDITION TO END REACTION DETERMINED PER STEEL GENERAL NOTES SHEET S1.1 (U.N.O. ON DWG.) ALLOWABLE STRESS MAY BE INCREASED 1/3 FOR THIS CONDITION. COLUMN LOAD CAN BE DETERMINED FROM AISC MANUAL FOR FLOOR TO FLOOR HEIGHT.
2. CONNECTION TO BE DESIGNED FOR AN ECCENTRICALLY OF 'e' AS SHOWN ABOVE.
3. RE: DETAIL 6/S1.2 IF BEAM CANNOT FIT INTO COLUMN.

2 BEAM TO COLUMN WEB

SCALE: N.T.S.
RE: NOTES ON 1/S1.2 FOR ADDITIONAL INFORMATION

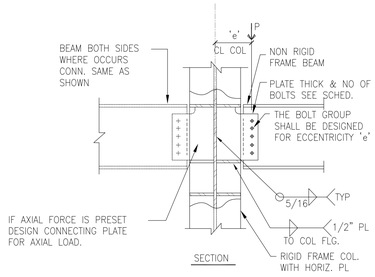


NOTES:

1. CONNECTION TO BE DESIGNED FOR ECCENTRICALLY 'e' AS SHOWN ABOVE.
2. DOUBLE ANGLES OR SHEAR PL CONN. CAN BE USED.

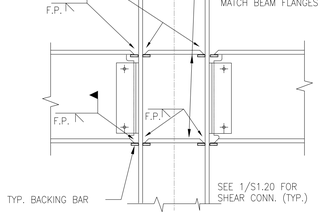
3 BEAM TO BEAM

SCALE: N.T.S.
RE: NOTES ON 1/S1.2 FOR ADDITIONAL INFORMATION



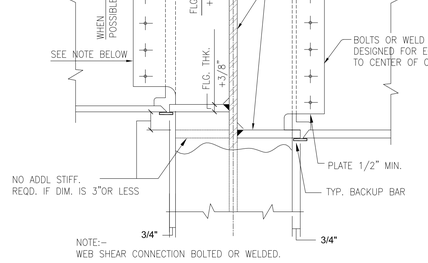
4 TYP BEAM TO COLUMN SHEAR CONN. AT WEB WHERE PERPENDICULAR BEAMS ARE MOMENT CONNECTED TO COLUMN FLANGE

SCALE: N.T.S.



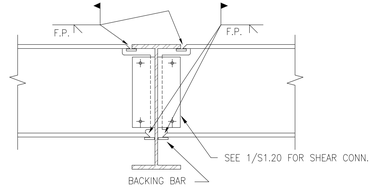
5 BEAM TO COLUMN MOMENT CONN. @ FLANGE

SCALE: N.T.S.
RE: NOTES ON 1/S1.2 FOR ADDITIONAL INFORMATION



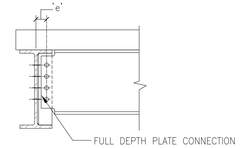
6 BEAM TO COLUMN MOMENT CONN. @ WEB

SCALE: N.T.S.
RE: NOTES ON 1/S1.2 FOR ADDITIONAL INFORMATION



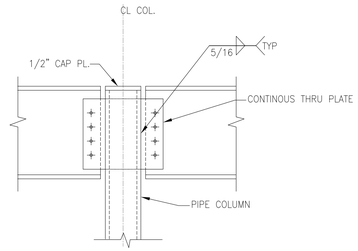
7 BEAM TO BEAM MOMENT CONNECTION

SCALE: N.T.S.
RE: NOTES ON 1/S1.2 FOR ADDITIONAL INFORMATION



8 BEAM TO BEAM

SCALE: N.T.S.
RE: NOTES ON 1/S1.2 FOR CONNECTIONS



9 BEAM TO PIPE COLUMN

SCALE: N.T.S.
RE: NOTES ON 1/S1.2 FOR CONNECTION INFO AND NO. OF BOLTS AND PLATE SIZE.

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GUADALUPANA RESTAURANT

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THE WOODLANDS, TEXAS

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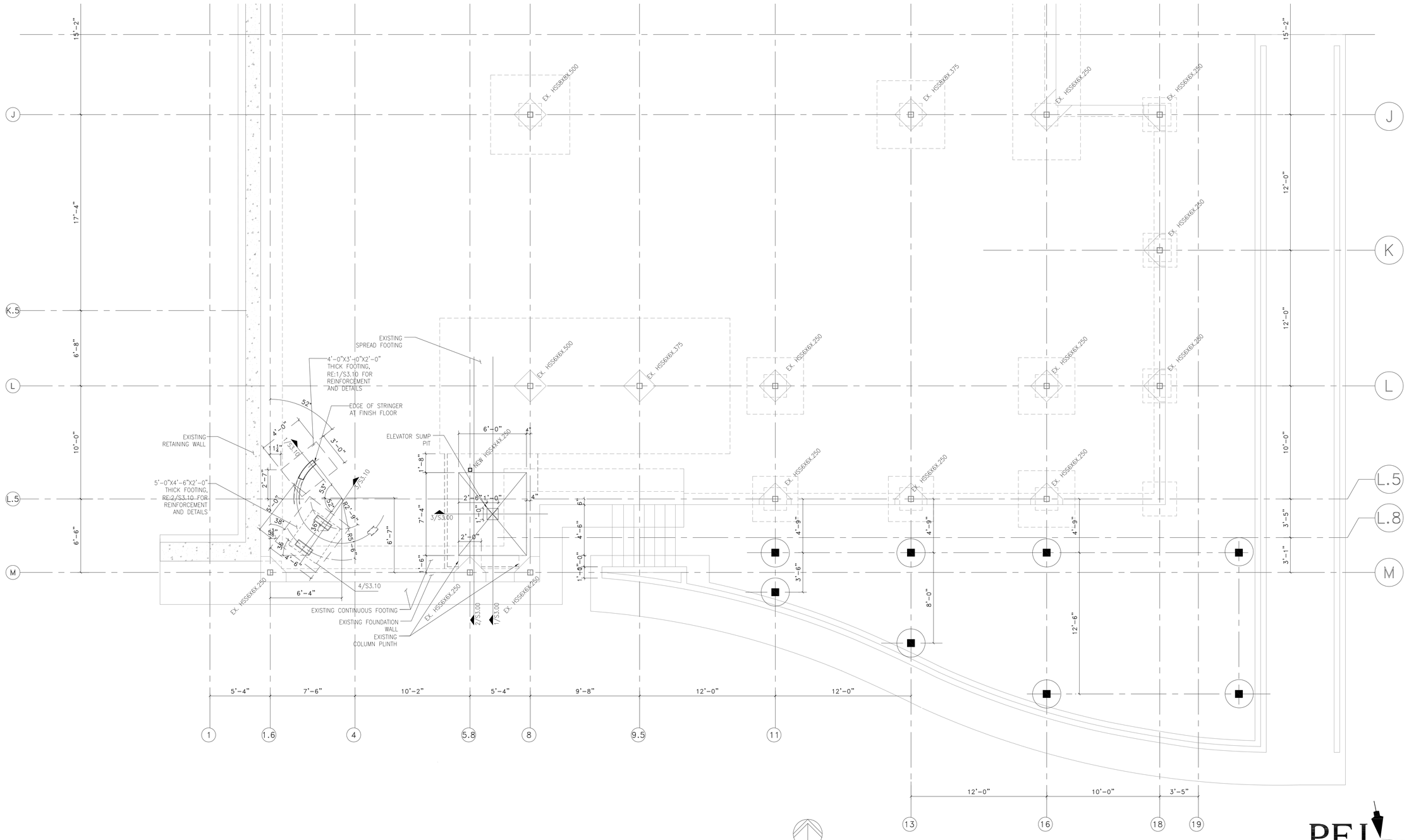
TYPICAL STEEL DETAILS

S1.20



A FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

PEI FILE INFO:\\Pei001\pauleng\Jobs\10-78.1 guadalupana\Iwork\S2.00.dwg MODIFIED: Jan 13, 2011 12:35pm PLOTTED: Jan 14, 2011 10:04am

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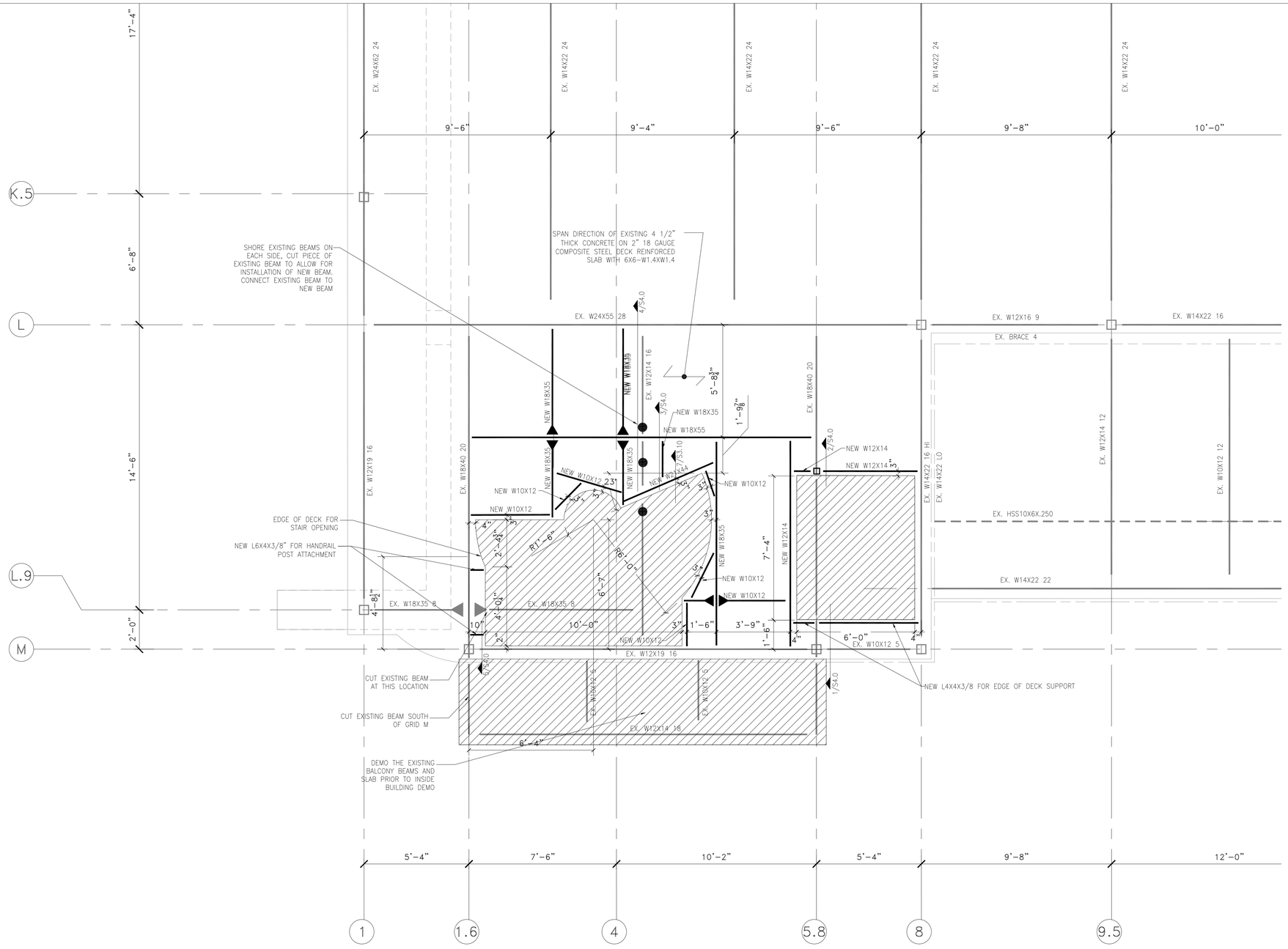
PARTIAL FOUNDATION PLAN

S2.00



A — 1ST FLOOR DEMO PLAN

SCALE: 3/8" = 1'-0"

1. INSTALL ALL OF THE NEW BEAMS BEFORE SAW CUTTING STAIR AND ELEVATOR OPENING IN SLAB.
2. ▨ AREA SHOWN HATCHED INDICATES EXISTING CONCRETE SLAB, METAL DECK AND EXISTING BEAMS TO BE DEMO FOR STAIR AND ELEVATOR OPENINGS.
3. ▶ INDICATES MOMENT CONNECTION RE: 7/S1.2
4. ● INDICATES SHORING REQUIRED TO INSTALLED NEW BEAMS. NEW BEAMS MUST BE INSTALLED BEFORE CUTTING EXISTING BEAMS AND SLAB.

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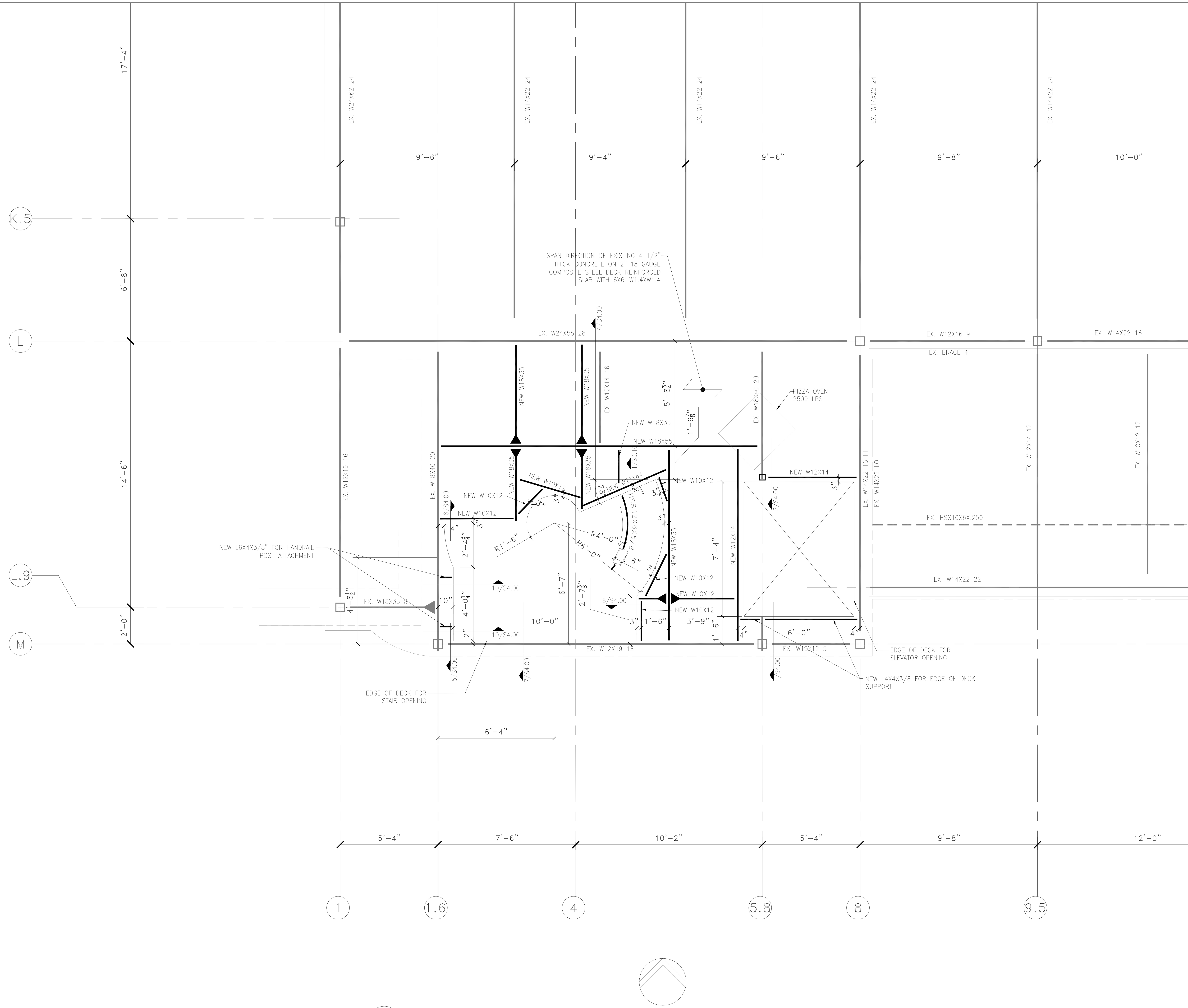
PARTIAL 1ST FLOOR DEMO PLAN

S2.10

PEI FILE INFO:\\Pei001\pauleng\Jobs\10-78.1 guadalupana\Iwork\S2.00.dwg MODIFIED: Jan 13, 2011 12:35pm PLOTTED: Jan 14, 2011 10:32am



A 1ST FLOOR NEW PLAN

SCALE: 3/8" = 1'-0"

1. INSTALL ALL OF THE NEW BEAMS BEFORE SAW CUTTING STAIR AND ELEVATOR OPENING IN SLAB.
2. ▶ INDICATES MOMENT CONNECTION RE: 7/S1.2

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NEW PARTIAL 1st FLR FRAMING PLAN

S2.11

A — PARTIAL ROOF FRAMING PLAN

SCALE: 3/8" = 1'-0"

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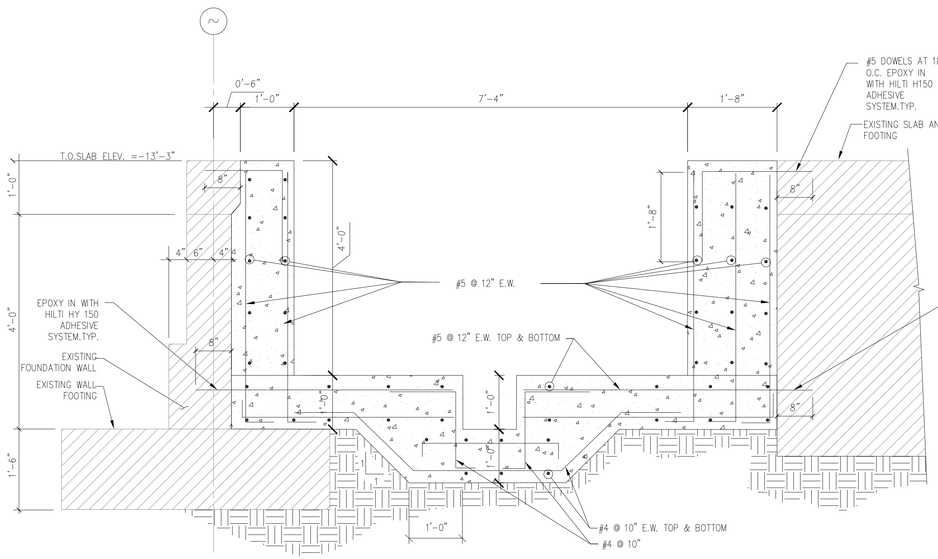
PARTIAL ROOF FRAMING PLAN

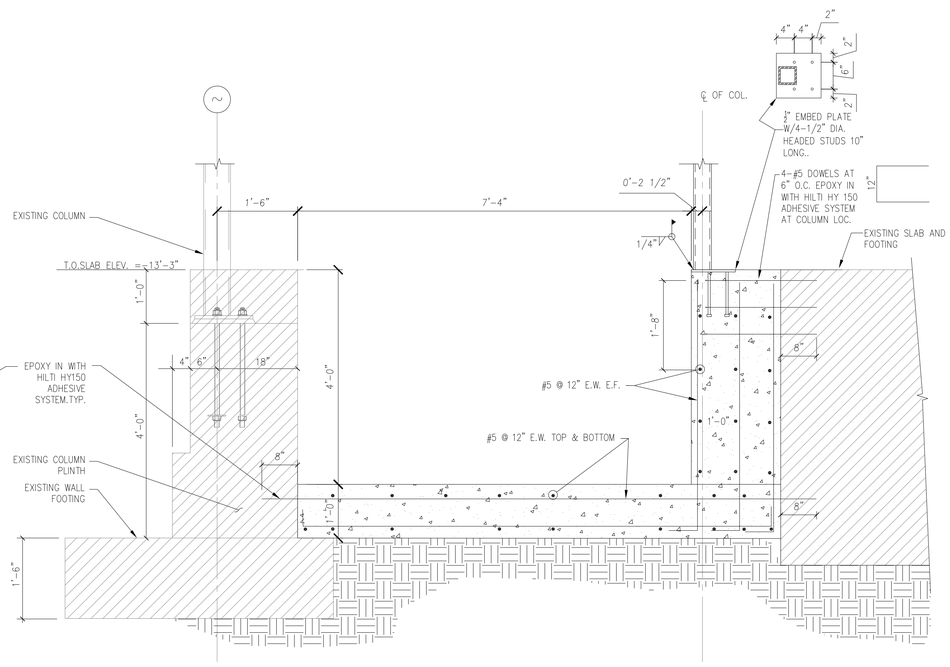
S2.12

PEI FILE INFO:\\Pei001\pauleng\Jobs\10-78.1 guadalupana\iwork\S2.00.dwg MODIFIED: Jan 14, 2011 10:33am PLOTTED: Jan 14, 2011 10:35am



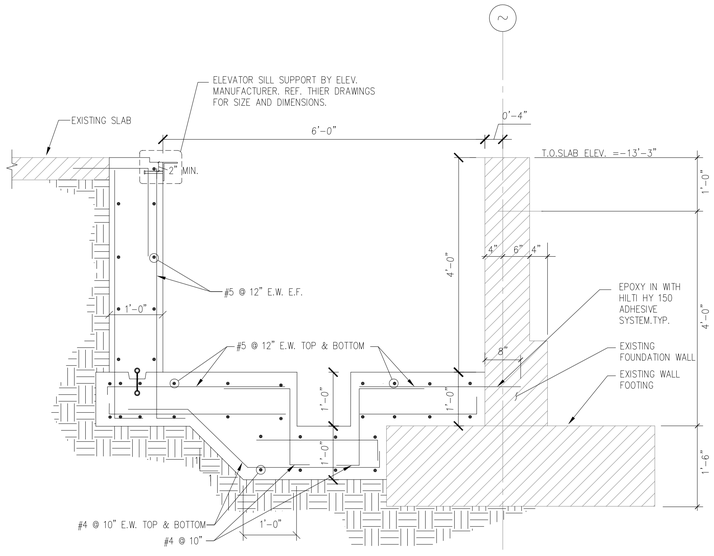
1 — SECTION AT ELEVATOR PIT

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



2 — SECTION AT ELEVATOR PIT

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



3 — SECTION AT ELEVATOR PIT

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

PEI FILE INFO:\\Pei001\paulerg\Jobs\10-78.1 guadalupana\Inwork\S3.00.dwg MODIFIED: Jan 14, 2011 10:39am PLOTTED: Jan 14, 2011 10:45am

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FOUNDATION DETAILS

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S3.00

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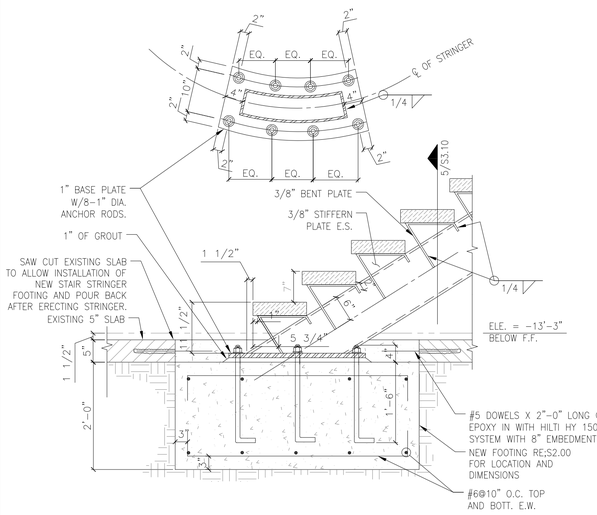
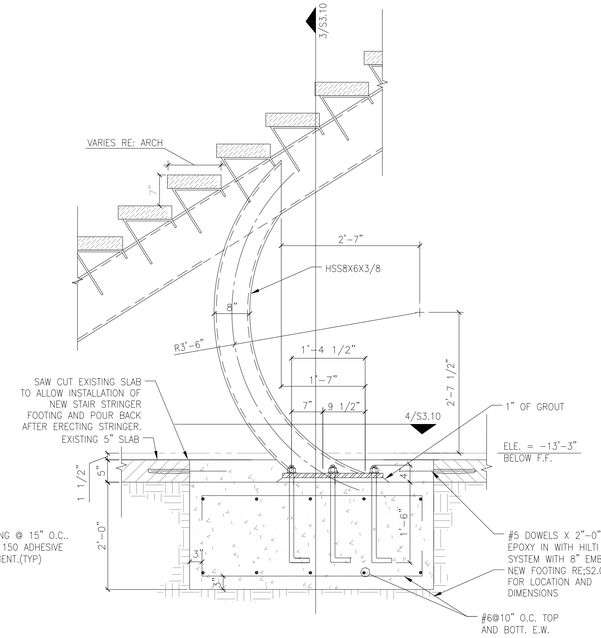
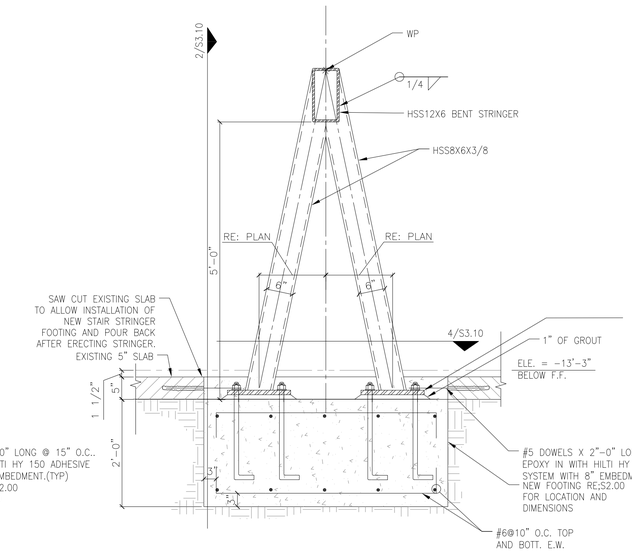


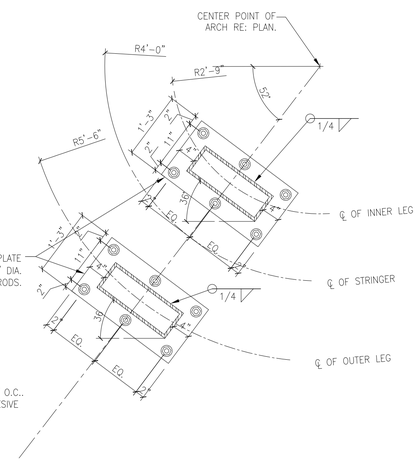
1 — SECTION AT STRINGER CONNECTION TO FOUNDATION
SCALE: 3/4" = 1'-0"



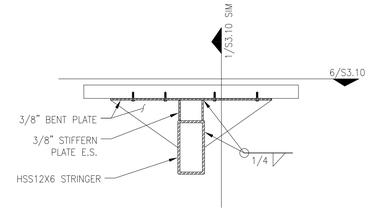
2 — SECTION AT STRINGER LEGS CONNECTION TO FOUNDATION
SCALE: 3/4" = 1'-0"



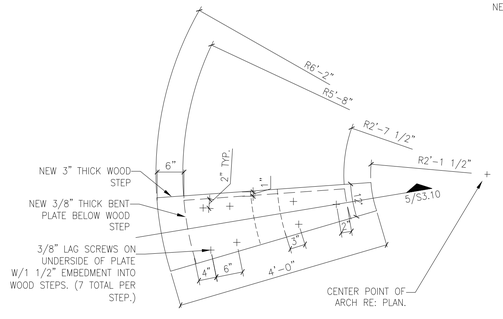
3 — SECTION AT STRINGER LEGS CONNECTION TO FOUNDATION
SCALE: 3/4" = 1'-0"



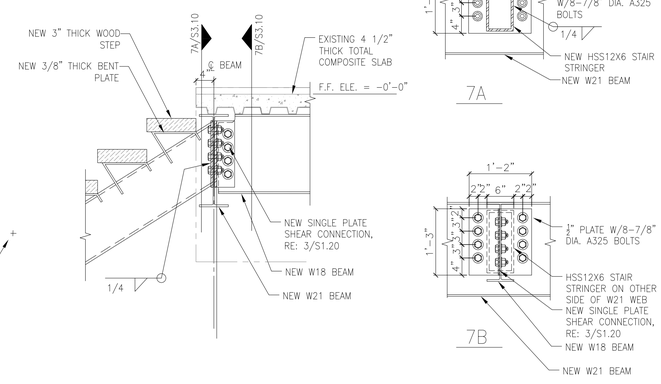
4 — SECTION AT STRINGER LEGS CONNECTION TO FOUNDATION
SCALE: 3/4" = 1'-0"



5 — SECTION AT TYPICAL STEP SUPPORT CONNECTION
SCALE: 3/4" = 1'-0"



6 — PLAN VIEW OF TYPICAL STEP
SCALE: 3/4" = 1'-0"



7 — SECTION AT STRINGER CONNECTION TO 1ST FLOOR
SCALE: 3/4" = 1'-0"

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GUADALUPANA
RESTAURANT

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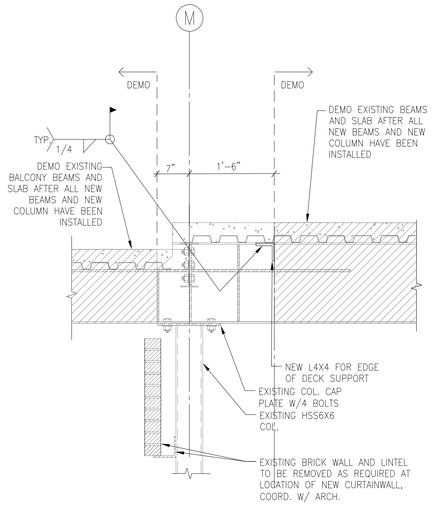
THE WOODLANDS, TEXAS

10019

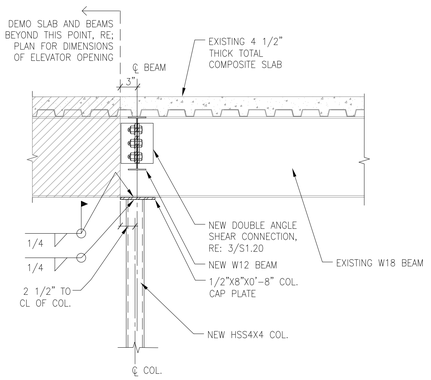
ORNAMENTAL
STAIR DETAILS

S3.10



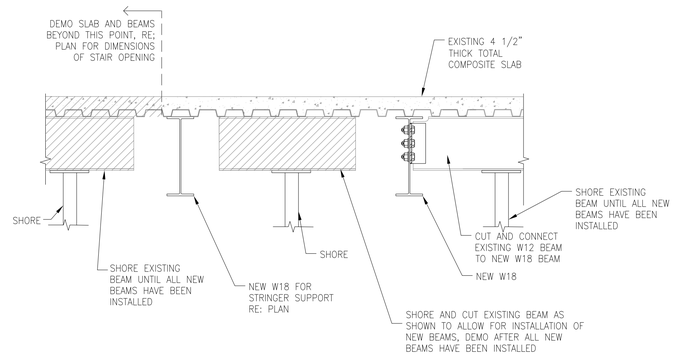
1 — SECTION AT SOUTH EDGE OF ELEVATOR OPENING

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



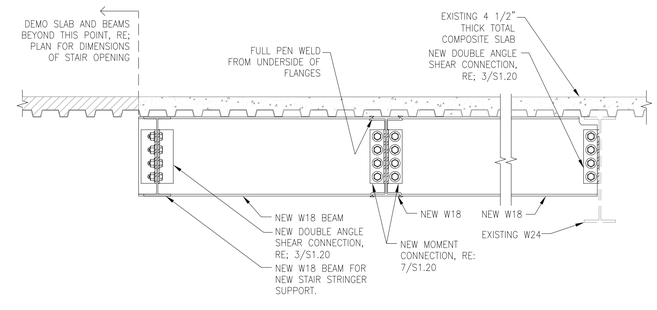
2 — SECTION AT NORTH EDGE OF ELEVATOR OPENING

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



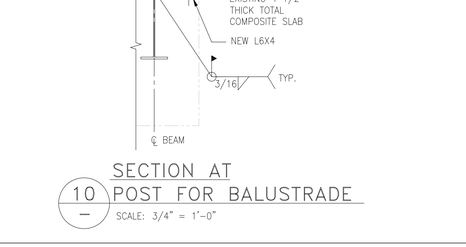
3 — SECTION AT SHORING LOCATIONS

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



4 — SECTION AT NEW W18 MOMENT CONNECTED BEAMS

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



5 — SECTION AT EXISTING BALCONY BEAM

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

6 — SECTION AT HOIST BEAM

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

7 — SECTION AT EXISTING BALCONY BEAM

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

8 — SECTION AT POST FOR BALUSTRADE

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

9 — SECTION AT POST BASE PLATE

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

10 — SECTION AT POST FOR BALUSTRADE

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

11 — SECTION AT POST BASE PLATE

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

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