

**GENERAL NOTES**

- BUILDING CODES**
  - A) 2015 INTERNATIONAL BUILDING CODE AS ADOPTED BY THE CITY OF ALEDO, TEXAS
  - B) BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318-14.
  - C) AISC-"SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST APPROVED ADDITION.
- DESIGN CRITERIA**
  - A) GRAVITY LOADS
    - ROOF LIVE LOAD 20 PSF MIN.
    - ROOF DEAD LOAD 20 PSF
    - ROOF UPLIFT LOAD 10 PSF
  - B) WIND LOAD PER IBC 2015 EDITION
    - BASIC WIND SPEED V3s 115 MPH
    - EXPOSURE C
    - Iw = 1.0
  - C) EARTHQUAKE DESIGN PER IBC 2015 EDITION
    - SEISMIC USE GROUP Ie = 1.0
    - SEISMIC DESIGN CATEGORY C
    - SITE CLASS D
  - D) SEE MECHANICAL PLAN AND ROOF PLAN FOR ADD'L LOADS
- EXISTING CONDITIONS:** EACH BIDDER SHALL VISIT THE JOB SITE AS REQUIRED TO DETERMINE AND/OR VERIFY EXISTING CONDITIONS. ANY EXCEPTIONS TO EXISTING CONDITIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
- SEE ARCHITECTURAL DRAWINGS FOR FLOOR ELEVATIONS BEFORE STARTING WORK. THE ARCHITECT/ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL COMPARE STRUCTURAL DRAWINGS TO ARCHITECTURAL, CIVIL, AND MEP, AND ANY DISCREPANCIES SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE ALL SPECIAL INSPECTIONS REQUIRED BY CITY AND THE INTERNATIONAL BUILDING CODE SECTION 1704.1.2 ARE PERFORMED. ALL SPECIAL INSPECTIONS SHALL BE CONDUCTED BY A LICENSED SPECIAL INSPECTOR. THE CONTRACTOR SHALL RETAIN AND PROVIDE ALL SPECIAL INSPECTION REPORTS DURING THE ENTIRE CONSTRUCTION PROCESS. THE OWNER/CONTRACTOR SHOULD HIRE A THIRD PARTY SPECIAL INSPECTION FIRM TO COORDINATE AND PERFORM ALL REQUIRED SPECIAL INSPECTIONS AND TO COMPLETE AND SEAL THE FINAL INSPECTION REPORT FORM.

**FOUNDATION NOTES**

- THE GEOTECHNICAL INVESTIGATION FOR THIS PROJECT WAS CONDUCTED BY TERRACON CONSULTANTS, INC. OF ALEDO, TX., REPORT NO. 95175113, DATED DECEMBER 22, 2017. THE CONTRACTOR SHALL REVIEW AND BE FAMILIAR WITH THE EXISTING SOIL CONDITIONS AS REPRESENTED BY THE SUBSURFACE EXPLORATION LOGS.
- EARTHWORK:** ALL DEBRIS, VEGETATION, AND TOPSOIL CONTAINING ORGANIC MATERIAL SHALL BE CLEARED AND REMOVED FROM THE BUILDING SITE FOR A MINIMUM OF FIVE (5) FEET BEYOND THE BUILDING FOOTPRINT. THE EXPOSED SURFACE AFTER ANY EXCAVATION DUE TO CUT AND FILL OPERATIONS SHALL BE PROOF-ROLLED TO DETERMINE ANY SOFT SPOTS. ANY SOFT SPOTS SHALL BE REMOVED AND RECOMPACTED. PLACE PREPARED FILL PER GEOTECHNICAL RECOMMENDATIONS. THE SLAB SHALL BE PLACED UPON A 10 MIL POLYETHYLENE VAPOR BARRIER. IN THE EVENT THAT THESE NOTES CONFLICT WITH THE RECOMMENDATIONS LOCATED IN THE SOILS REPORT, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY, PRIOR TO STARTING THE EARTHWORK.
- SELECT FILL:** SELECT FILL SHALL BE USED TO OBTAIN FINISHED SUBGRADE AND TO CAP THE SUBGRADE. SELECT FILL SHALL BE PLACED AS SOON AS POSSIBLE AFTER COMPLETION OF COMPACTION OF THE SUBGRADE TO LIMIT MOISTURE LOSS OF THE SOIL. SELECT FILL SHALL NOT EXTEND BEYOND THE LIMITS OF THE STRUCTURE. SELECT FILL MATERIALS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER AND SHALL CONSIST OF A UNIFORMLY BLENDED CLAYEY SAND HAVING A PLASTICITY INDEX (PI) BETWEEN 4 AND 15 AND A LIQUID LIMIT OF 35. SELECT FILL SHALL BE FREE OF ORGANIC MATTER, ROCKS, DEBRIS, AND DELETERIOUS MATERIALS.
- COMPACTION OF SELECT FILL:** SELECT FILL REQUIRED BENEATH THE GRADE SLAB SHALL BE PLACED IN MAXIMUM 8 INCH LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95 PERCENT OF MAXIMUM DRY DENSITY AT A MOISTURE CONTENT BETWEEN +1 AND +5 PERCENT OF OPTIMUM AS DETERMINED BY THE STANDARD PROCTOR METHOD, ASTM SPECIFICATION D698.
- POSITIVE SURFACE DRAINAGE AWAY FROM THE STRUCTURE SHALL BE ESTABLISHED AND MAINTAINED AT ALL TIMES BOTH DURING AND AFTER CONSTRUCTION.** AT NO TIME SHALL WATER BE ALLOWED TO COLLECT NEAR THE BUILDING SITE.
- SITE FILL:** FILL PLACED ALONG THE OUTSIDE OF EXTERIOR GRADE BEAMS SHALL BE ON-SITE CLAY SOILS. THIS SITE FILL IS INTENDED TO REDUCE SURFACE WATER INFILTRATION BENEATH THE STRUCTURE. COMPACTION OF THE SITE FILL SHALL BE PERFORMED AS SPECIFIED IN NOTE 4. THE FINISH GRADES OF THE SITE FILL SHALL BE PER THE SITE PLAN. CARE SHALL BE TAKEN THAT NO LOW SPOTS EXIST IN FILL THAT ALLOW WATER TO COLLECT AGAINST THE BUILDING.
- UTILITY LINE TRENCHES:** UTILITY LINES RUNNING UNDER THE EXTERIOR GRADE BEAMS SHALL HAVE A CLAY PLUG TO PREVENT WATER INFILTRATION BENEATH THE STRUCTURE THROUGH POROUS TRENCH BACKFILL MATERIALS. CLAY PLUGS SHALL BE LOCATED IMMEDIATELY OUTSIDE OF THE EXTERIOR GRADE BEAM. THE CLAY PLUG SHALL CONSIST OF A 5' MINIMUM LENGTH F TRENCH BACKFILLED WITH ON-SITE CLAYS COMPACTED IN ACCORDANCE WITH NOTE 4.
- SIDEWALKS SHALL NOT BE STRUCTURALLY CONNECTED TO THE BUILDING, EXCEPT AT ENTRIES, AND SHALL SLOPE AWAY FROM THE BUILDING SO THAT WATER WILL BE DRAINED AWAY FROM THE STRUCTURE.**
- CONTRACTOR SHALL READ THE SOILS REPORT REFERENCED ABOVE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL SITE AND SUBGRADE PREPARATION RECOMMENDATIONS CONTAINED THEREIN. INFORMATION CONTAINED IN THE "FOUNDATION NOTES" SECTION OF THE STRUCTURAL NOTES REPRESENTS A GENERAL OVERVIEW OF THE SITE WORK TO BE PERFORMED, AND SHALL NOT BE USED AS A SUBSTITUTE FOR THE SOILS REPORT REFERENCED ABOVE.

**CONCRETE NOTES**

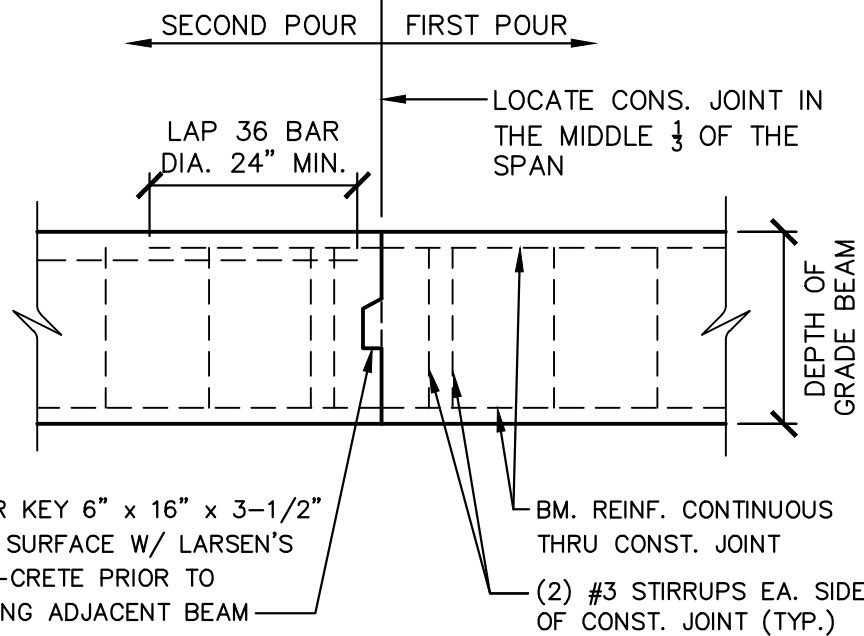
- ALL STRUCTURAL CONCRETE SHALL WEIGH 145 POUNDS PER CUBIC FOOT.
- MINIMUM CONCRETE STRENGTHS AT 28 DAY BREAK:**
  - GRADE BEAMS AND FOOTINGS.....3000 PSI
  - SLABS ON GRADE.....3000 PSI
  - PIERS.....3500 PSI
  - TILT WALL PANELS.....4500 PSI
- CONCRETE SLUMP SHALL BE:**
  - GRADE BEAMS AND FOOTINGS.....3 IN. MIN./4 IN. MAX.
  - SLABS ON GRADE.....3 IN. MIN./4 IN. MAX.
  - PIERS.....4 IN. MIN./6 IN. MAX.
  - TILT WALL PANELS.....4 IN. MIN./6 IN. MAX.
- CONCRETE MIX DESIGNS AND TEST RESULTS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR EVALUATION AND APPROVAL. MAXIMUM SIZE OF AGGREGATE FOR FOOTINGS AND GRADE BEAMS SHALL BE 1".
- ALL CAST-IN-PLACE CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 301, LATEST EDITION, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
- ALL REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH "PLACING REINFORCING BARS", PUBLISHED BY THE CONCRETE REINFORCING STEEL INSTITUTE, LATEST EDITION.
- CONCRETE REINFORCING: REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMED TO ASTM A615, GRADE 60 BARS.
- SLABS ON GRADE: SLABS ON GRADE SHALL BE OF HARDROCK CONCRETE OF THE THICKNESS AND WITH THE REINFORCEMENT AS SHOWN ON THE FOUNDATION PLAN. APPLY CURING COMPOUND, THOMPSON'S WATER SEAL OR EQUAL, TO ALL SLABS PER MANUFACTURER'S SPECIFICATIONS. SLAB REINFORCING SHALL BE CENTERED IN SLAB. CARE SHALL BE TAKEN TO MAINTAIN SLAB REINFORCEMENT POSITION DURING POURING OPERATIONS. MAXIMUM POUR AREA = 12,000 SQ. FT. LAP 10 MIL PLASTIC SHEETING MINIMUM OF 12 IN. AND SEALED WITH ADHESIVES. PATCH ALL HOLES AND TEARS IN PLASTIC PRIOR TO CASTING SLAB.
- CHAMFERS:** PROVIDE CHAMFERS AS INDICATED ON ARCHITECTURAL DRAWINGS. ALL CHAMFERS SHALL BE 3/4" x 45 DEGREES.
- GRADE BEAMS:** GRADE BEAMS SHALL BE OF HARDROCK CONCRETE OF SIZE AND WITH REINFORCEMENT AS INDICATED ON THE FOUNDATION PLAN. BEAMS SHOULD BE FORMED OR TRENCHED ACCORDING TO THE GEOTECHNICAL REPORT REFERENCED IN THE FOUNDATION NOTES. CARE SHALL BE TAKEN TO ACCURATELY TRENCH BEAMS TO WIDTHS AND DEPTHS INDICATED. TRENCHES SHALL BE KEPT CLEAN, AND CARE SHALL BE TAKEN TO PREVENT SLOUGHING OF TRENCH SIDES. DETAIL REINFORCING AND PROVIDE CORNER BARS AT GRADE BEAM INTERSECTIONS TO MATCH HORIZONTAL REINFORCING.
- MINIMUM COVERAGE ON REINFORCING STEEL:**
  - CONCRETE CAST AGAINST EARTH.....3" CLEAR TO STIRRUP
  - CONCRETE CAST AGAINST FORMS.....2" CLEAR TO STIRRUP
  - GRADE BEAMS.....2" TOP, 3" BOTTOM, 2" ON FORMED SIDES
  - SLABS ON GRADE.....CENTER REINFORCING IN SLAB
- ALL OPENINGS FOR MECHANICAL EQUIPMENT, TRENCHES, SLOPES TO DRAINS, ETC. SHALL BE VERIFIED BY THE GENERAL CONTRACTOR AND INDICATED ON SHOP DRAWINGS. COORDINATE LOCATIONS AND SIZES OF ALL OPENINGS WITH APPLICABLE TRADES.
- ALL EXTERIOR EXPOSED CONCRETE SHALL HAVE AIR-ENTRAINMENT.
- PROVIDE CONTROL JOINTS AT A SPACING OF 2 TO 3 TIMES THE THICKNESS OF SLAB PER ACI 224.3R (EX. 4" SLAB SHALL HAVE CONTROL JOINTS SPACED AT 8' TO 12' ON CENTER. JOINTS SHOULD BE CUT WITHIN 12 HOURS OF THE POUR. NO SAW CUTS SHALL BE CUT IN POST TENSION OR STRUCTURALLY SUSPENDED SLABS. COORDINATE JOINT LOCATIONS WITH ARCHITECT.

**TILT WALL NOTES**

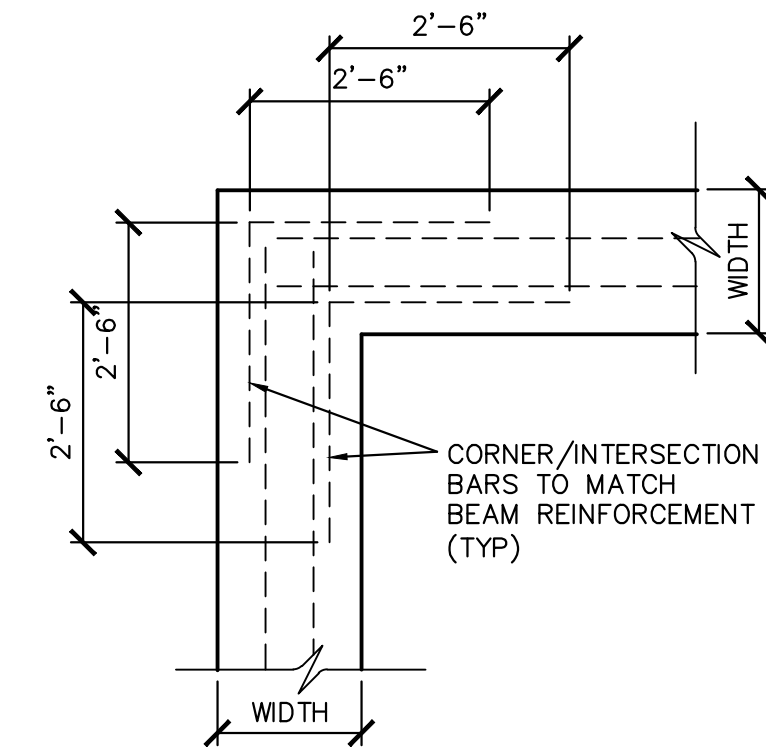
- ALL TILT WALL PANELS SHALL HAVE A MINIMUM THICKNESS AS SHOWN ON THE STRUCTURAL DRAWINGS.
- EXTERIOR FINISH OF TILT WALL PANELS SHALL BE AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- COMPLETE CALCULATIONS AND SHOP DRAWINGS SEALED AND SIGNED BY AN ENGINEER REGISTERED IN TEXAS SHOWING ALL STRIPPING INSERTS, DETAILS OF REINFORCEMENT, AND CONNECTION DETAILS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.
- CONCRETE COMPRESSIVE STRENGTH AT TIME OF ERECTION OF PANELS SHALL BE MINIMUM 4,500 PSI. AN APPROVED TESTING AGENCY SHALL VERIFY THE CONCRETE COMPRESSIVE STRENGTH.
- UNLESS NOTED OTHERWISE, THE CENTER OF THE VERTICAL REINFORCEMENT SHALL BE LOCATED NEAR EACH FACE OF THE CONCRETE PANELS, AND HORIZONTAL REINFORCEMENT SHALL BE LOCATED TOWARDS THE INSIDE OF THE VERTICAL REINFORCEMENT. WHERE A NUMBER OF BARS ARE SHOWN, THEY SHALL BE EQUALLY SPACED BETWEEN ADJACENT BARS.
- PROPER CHAIRS OR BOLSTERS SHALL BE USED TO SUPPORT REINFORCEMENT AT THE PROPER LOCATION.
- ONLY EXPERIENCED AND QUALIFIED PERSONNEL SHALL BE USED IN THE CONSTRUCTION AND ERECTION OF THE TILT WALL PANELS.
- ALL PANELS SHALL REMAIN BRACED UNTIL SHEAR CONNECTORS, JOISTS, AND ROOF DECK ARE INSTALLED.
- PANELS SHALL BE ERECTED FROM OUTSIDE THE BUILDING FOOTPRINT.

**STEEL NOTES**

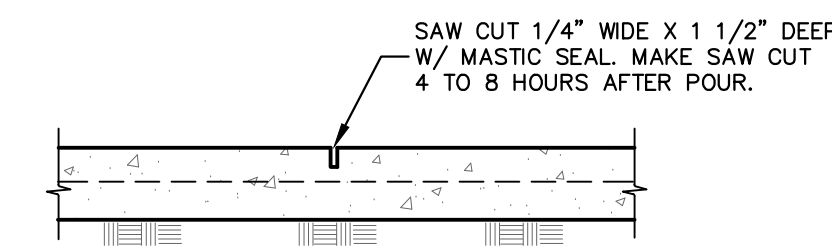
- STRUCTURAL STEEL: ALL WIDE FLANGE SECTIONS SHALL BE ASTM A572 OR A992 GRADE 50. ALL ANGLES, CHANNELS, AND PLATES SHALL BE ASTM A36. ALL STRUCTURAL STEEL PIPE SHALL BE ASTM A53 GRADE B. ALL TUBE STEEL SECTIONS SHALL BE ASTM A500 GRADE B. STRUCTURAL STEEL SECTIONS SHALL BE DESIGNED, DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC "MANUAL OF STEEL CONSTRUCTION", NINTH EDITION. ALL STRUCTURAL STEEL SHALL BE PAINTED WITH A SHOP PRIME COAT AND FIELD RETOUCHEW WHERE THE SHOP COAT HAS BEEN DAMAGED DUE TO PLACING, HANDLING, AND WELDING.
- ALL STEEL BEAMS SHALL BE FABRICATED WITH NATURAL CAMBER UP.
- ALL BOLTED CONNECTIONS FOR STRUCTURAL STEEL SHALL USE 3/4" DIAMETER ASTM A325 HIGH STRENGTH BOLTS EXCEPT FOR JOIST BEARING AND BRIDGING, WHICH SHALL BE 5/8" DIAMETER ASTM A325 HIGH STRENGTH BOLTS. CONNECTIONS SHALL BE BEARING TYPE WITH THREADS NOT ALLOWED IN THE SHEAR PLANE.
- ALL ANCHOR BOLTS SHALL BE 3/4" DIAMETER ASTM A307 UNFINISHED WITH SUITABLE NUTS AND WASHERS, UNLESS NOTED OTHERWISE.
- ALL WELDS SHALL USE E70XX LOW HYDROGEN ELECTRODES AND SHALL BE MADE IN ACCORDANCE WITH AISC AND AWS.
- ROOF DECK SHALL BE PER PLAN BY VULCRAFT OR EQUAL WITH THE MANUFACTURER'S PRIME COAT FINISH. ALL DECK SHALL MEET THE REQUIREMENTS OF THE STEEL DECK INSTITUTE. ALL DECK SHALL BE CONTINUOUS OVER THREE OR MORE SPANS AND SHALL CONFORM TO ASTM A611 GRADE C. IF A THREE SPAN CONDITION IS NOT POSSIBLE BECAUSE OF MECHANICAL OPENINGS OR SOME OTHER REASON, A HEAVIER GAUGE ROOF PANEL SHALL BE DETAILED THAT GIVES PERFORMANCE EQUAL TO THE PANEL GAUGE SPECIFIED OVER A THREE SPAN CONDITION. ALL SKEW CUTTING SHALL BE DONE IN THE FIELD. METAL DECK SHALL BE FIELD RETOUCHEW WHERE SHOP COAT HAS BEEN DAMAGED DUE TO PLACING, HANDLING, AND WELDING.
- ALL FULL PENETRATION WELDS SHALL BE VISUALLY INSPECTED BY AN APPROVED TESTING LABORATORY. THE ENGINEER OF RECORD SHALL REVIEW THE RESULTS OF THE VISUAL INSPECTION AND MAY, AT HIS OPTION, REQUIRE ULTRASONIC TESTING, ASTM A435, BEFORE CONNECTIONS ARE COVERED.
- 1.5B ROOF DECK SHALL BE ATTACHED TO SUPPORTING STEEL USING APPROVED POWDER ACTUATED OR PNEUMATIC DRIVEN FASTENERS. FASTEN TO ADJOINING DECK SHEETS USING BULDEX #10 TKS SELF-DRILLING SCREWS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND DECK SETTING PLANS. ROOF DECK FASTENER LAYOUT SHALL BE IN A 35/4 PATTERN WITH 3 SIDELAP FASTENERS. END LAPS SHALL BE 2 IN. AND SHALL OCCUR OVER A SUPPORT. 3N ROOF DECK SHALL BE ATTACHED TO SUPPORTING STEEL USING 5/8" PUDDLE WELDS. WELDING ADJOINING DECK SHEETS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND DECK SETTING PLANS. ROOF DECK FASTENER LAYOUT SHALL BE IN A 24/4 PATTERN WITH 5 SIDELAP FASTENERS. END LAPS SHALL BE 2 IN. AND SHALL OCCUR OVER A SUPPORT.
- OPEN WEB STEEL JOISTS: STEEL JOIST MANUFACTURER SHALL BE A MEMBER OF THE STEEL JOIST INSTITUTE. STEEL JOISTS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS, K SERIES. BOTTOM CHORDS OF K SERIES JOISTS SHALL BE FABRICATED WITH ANGLES IN LIEU OF RODS. ALL HANGERS TO SUPPORT MECHANICAL EQUIPMENT OR OTHER CONCENTRATED LOADS TO BE SUPPORTED BY BOTTOM CHORD OF STEEL JOISTS SHALL BE LOCATED AT THE PANEL POINTS OF THE JOISTS. JOIST BRIDGING SHALL BE FURNISHED AND INSTALLED TO MEET THE DESIGN AND SPACING REQUIREMENTS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS. USE HORIZONTAL BRIDGING ON SHORT SPAN JOISTS. DEPTH OF JOIST SEATS SHALL BE 5" UNLESS SHOWN OTHERWISE ON THE DRAWINGS. JOIST SEATS SHALL BEAR FLUSH ON SUPPORTS. ROOF JOISTS SHALL BE CAMBERED TO A RADIUS OF 3600 FT. (SJ STANDARD CAMBER). STEEL JOISTS SHALL BE SHOP PAINTED AND FIELD RETOUCHEW WHERE SHOP COAT HAS BEEN DAMAGED DUE TO PLACING, HANDLING, AND WELDING. ALL ROOF JOISTS SHALL BE DESIGNED FOR A NET UPLIFT OF 5 PSF AND FURNISHED WITH A ROW OF UPLIFT BRIDGING AT THE FIRST PANEL POINT. JOIST BRIDGING SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.
- MECHANICAL EQUIPMENT ON JOISTS: ALL MECHANICAL EQUIPMENT SUPPORTED BY THE JOISTS SHALL BE APPROVED BY THE ENGINEER UNLESS THE EQUIPMENT IS SHOWN ON THE STRUCTURAL DRAWINGS. JOIST SIZES MAY CHANGE AS REQUIRED TO SUPPORT ANY ADDITIONAL MECHANICAL EQUIPMENT.



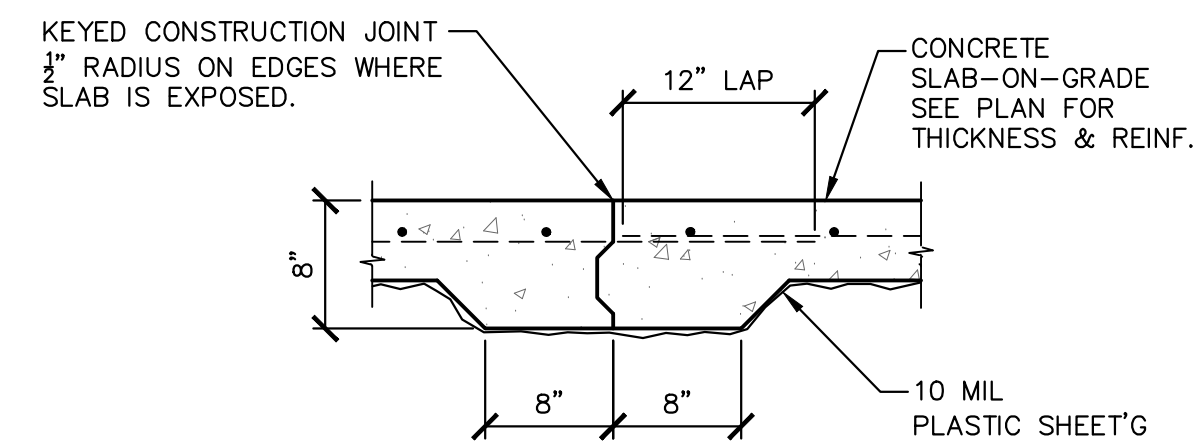
**S101 BEAM CONST. JOINT (TYP.)**  
NOT TO SCALE



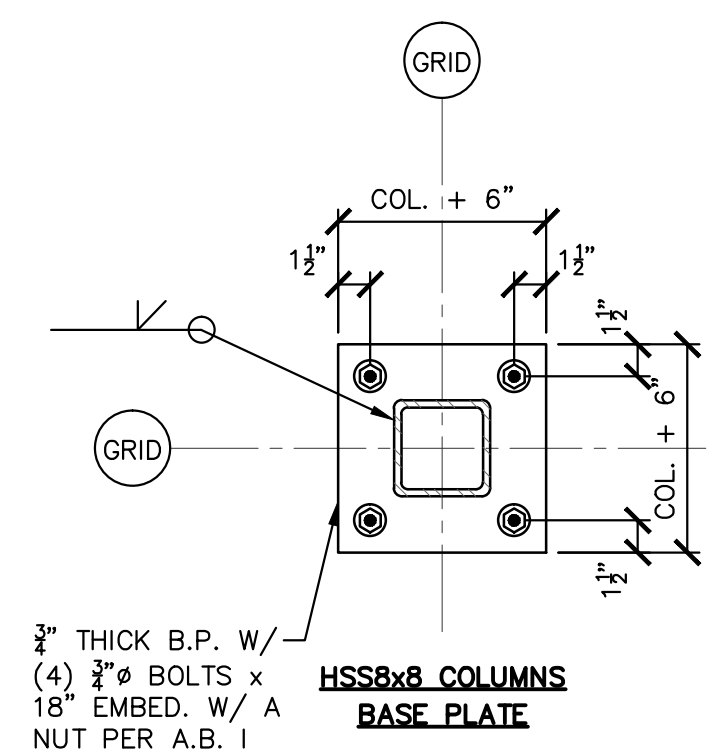
**S103 CORNER/INTERSECTION BAR DETAIL (TYP.)**  
NOT TO SCALE



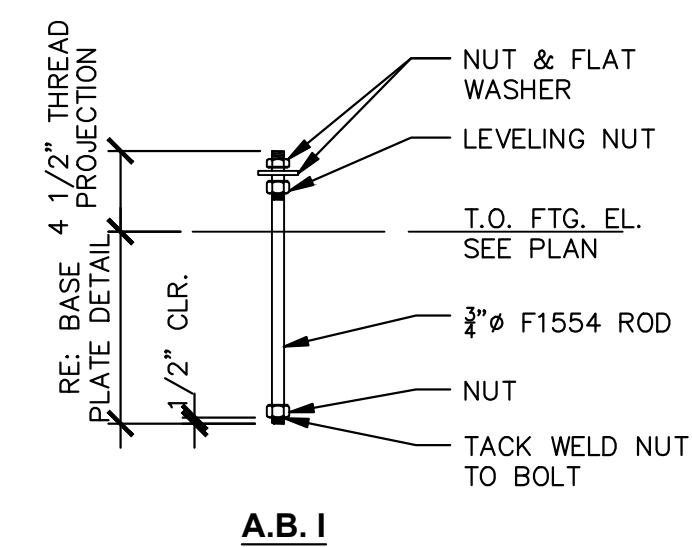
**S102 TYP. GRADE SLAB CONTROL JT.**  
1" = 1'-0"



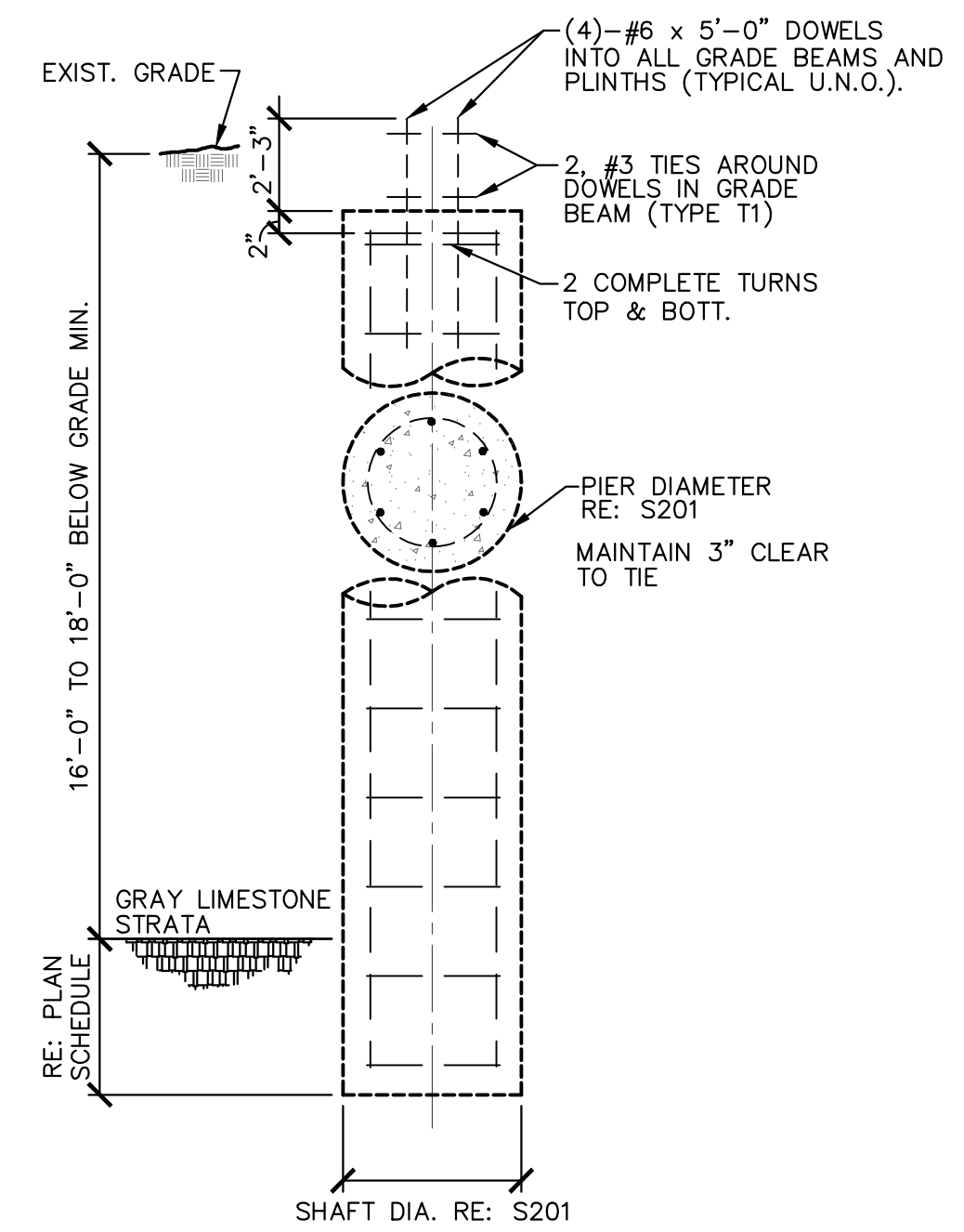
**S104 TYP. GRADE SLAB CONST. JT.**  
1" = 1'-0"



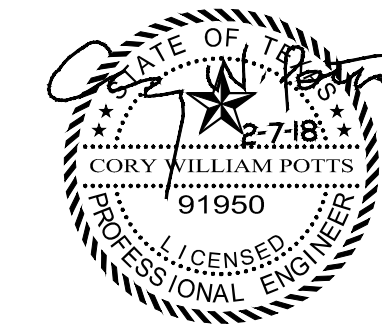
**S105 BASE PLATE DETAILS**  
1" = 1'-0"



**S106 ANCHOR BOLT DETAILS**  
1" = 1'-0"



**S107 TYPICAL PIER DETAIL**  
NTS



**DI FINISHES**

**ALEDO RETAIL**

ALEDO, TEXAS

GENERAL NOTES AND DETAILS	
REVISIONS	
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SHEET NO.	
<b>S1</b>	
SHEET OF	