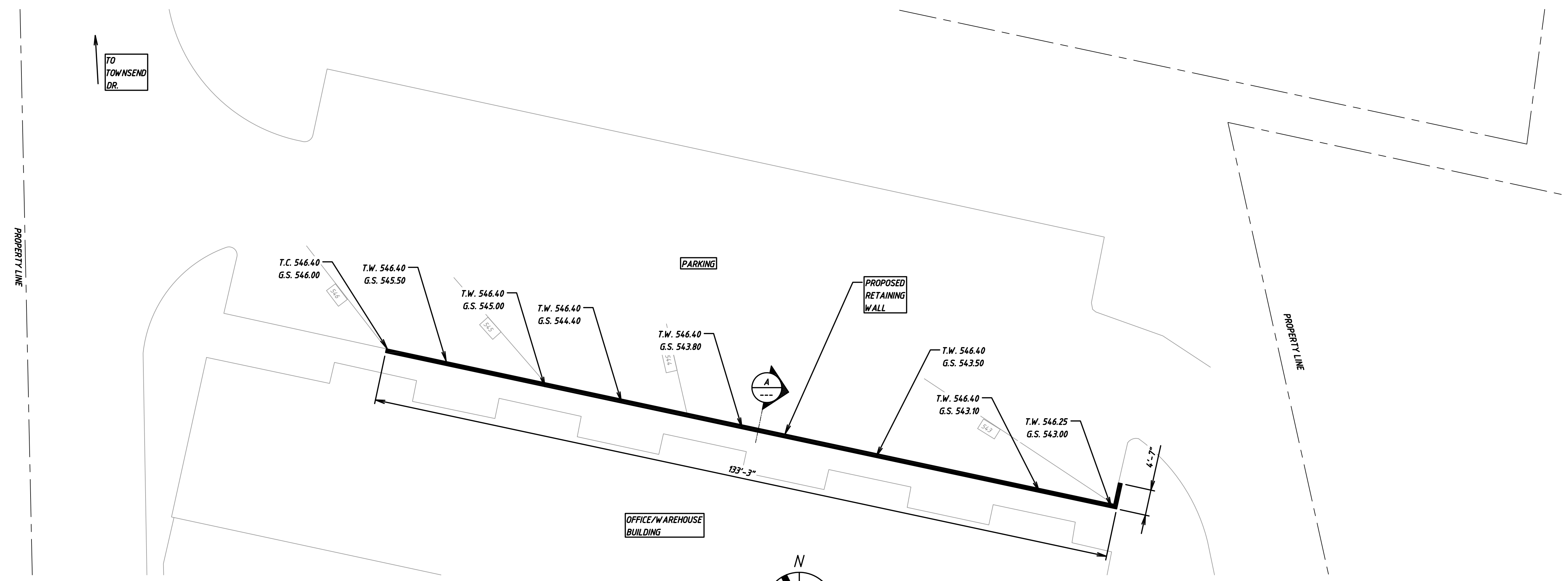


NOTE: ALL DIMENSIONS ARE APPROXIMATE. REFER TO ARCHITECTURAL OR CIVIL FOR ACCURATE LOCATIONS AND ELEVATIONS



STRUCTURAL GENERAL NOTES

PRIMARY CODES AND SPECIFICATIONS:

- 1. GENERAL BUILDING CODE
- A. INTERNATIONAL BUILDING CODE, 2009 SECTIONS 1806 - 1807

RETAINING WALLS:

1. ALL EXISTING SOIL TO BE RETAINED SHALL BE PRETREATED, AND OR REMOVED AND STABILIZED PER GEOTECHNICAL RECOMMENDATIONS.
2. SOIL LOADINGS CONSIDERED IN THIS DESIGN AND CALCULATIONS ARE BASED ON THE FOLLOWING PARAMETERS:
FOR ALL INFILL, RETAINED AND FOUNDATION, 30 DEG FRICTION ANGLE, 0 PSF COHESION, 110 PCF DENSITY AND WELL COMPACTED SILTY, SANDY CLAY
3. ACTUAL SOIL PARAMETERS MUST MEET OR EXCEED THESE LISTED CONDITIONS TO BE USED IN WALL CONSTRUCTION. IN GENERAL, GRANULAR SOILS (FRICTION ANGLE GREATER THAN OR EQUAL TO 32 DEGREES) ARE RECOMMENDED AS INFILL SOIL. FINE GRAINED COHESIVE SOILS (FRICTION ANGLE LESS THAN 32 DEGREES) WITH LOW PLASTICITY (PI LESS THAN 20) MAY BE USED IN WALL CONSTRUCTION, BUT ADDITIONAL BACKFILLING AND COMPACTION EFFORTS ARE REQUIRED. IF REQUIRED THE SOIL PARAMETERS SHALL BE CONFIRMED BY THE SITE GEOTECHNICAL ENGINEER OR OTHERS PRIOR TO WALL CONSTRUCTION.
4. HYDROSTATIC LOADING IS NOT CONSIDERED IN THIS ANALYSIS. SUFFICIENT DRAINAGE MUST BE PROVIDED SUCH THAT HYDROSTATIC LOADING (PORE PRESSURE) DOES NOT DEVELOP IN THE REINFORCED ZONE.
5. ANALYSIS ASSUMES FILL PLACEMENT IN LIFTS COMPACTED TO 95% STANDARD PROCTOR.
6. RETAINING WALLS MUST BE INSTALLED AND CONSTRUCTED ACCORDING TO THE CONTRACT DRAWINGS. THE RETAINING WALL PLAN VIEW IS FOR WALL IDENTIFICATION ONLY.
7. RAINFALL AND OTHER WATER SOURCES SUCH AS IRRIGATION ACTIVITIES CAN BE DEFINED AS SURFACE WATER. THE RETAINING WALL DESIGN SHALL TAKE INTO CONSIDERATION THE MANAGEMENT OF THIS WATER.
8. SITE GRADING SHALL BE DESIGNED TO ROUTE SURFACE WATER AROUND AND AWAY FROM THE WALL.
9. THE INTERNAL DRAINAGE SYSTEM OF THE RETAINING WALL IS DESIGNED TO REMOVE INCIDENTAL WATER THAT INFILTRATES INTO THE SOIL BEHIND THE WALL. ADEQUATE STORM WATER DRAINAGE SYSTEMS ARE REQUIRED TO COMPLETELY DRAIN THE AREA AROUND THE RETAINING WALL STRUCTURE.
10. DRAIN PIPING, TOE DRAIN, SHOULD BE LOCATED AT THE BACK OF THE ROCK DRAIN FIELD BEHIND THE WALL AS CLOSE TO THE BOTTOM OF THE WALL AS ALLOWED WHILE STILL MAINTAINING A POSITIVE GRADIENT FOR DRAINAGE TO DAYLIGHT, OR TO A STORM WATER MANAGEMENT SYSTEM.
11. A HEEL DRAIN MAY BE REQUIRED AT BACK OF THE CUT TO ROUTE WATER AWAY FROM THE REINFORCED SOIL MASS DURING THE CONSTRUCTION PROCESS.
12. GROUND WATER CAN BE PRESENT WITHIN THE SOIL DUE TO SURFACE INFILTRATION OR WATER TABLE FLUCTUATION. IF GROUND WATER IS ENCOUNTERED DURING CONSTRUCTION, AN ADEQUATE DRAINAGE SYSTEM MUST BE INSTALLED OR THE WALL DESIGN MUST CONSIDER THE PRESENCE OF WATER WITHIN THE SOIL MASS.
13. ALL WATER COLLECTION DEVICES SUCH AS ROOF DOWNSPOUTS, STORM SEWERS, AND CURB GUTTERS MUST BE DESIGNED TO ACCOMMODATE MAXIMUM FLOW RATES AND OUTLET OUTSIDE THE RETAINING WALL AREA.
14. RETAINING WALLS IN CONDITIONS THAT ALLOW STANDING WATER TO OVERLAP THE WALL FACE ARE CONSIDERED WATER APPLICATIONS. THESE WALLS REQUIRE SPECIFIC DESIGN AND CONSTRUCTION STEPS TO ENSURE PERFORMANCE.

FOUNDATIONS:

- 1. FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 2000 PSF

CAST-IN-PLACE CONCRETE:

1. THE LATEST EDITION OF THE FOLLOWING ACI STANDARDS APPLY:
ACI 318 (CODE) ACI 304 (PLACING)
ACI 306 (WINTER CONCRETING) ACI 315 (DETAILING)
ACI 305 (HOT WEATHER CONCRETING) ACI 347 (FORMWORK)
ACI 211.1 (MIX PROPORTIONING) ACI 301 (SPECIFICATIONS)
2. ALL CONCRETE SHALL BE NORMAL WEIGHT (148 PCF DRY DENSITY, MIN), WITH MIXES DESIGNED TO MEET A MINIMUM OF 3000 PSI 28-DAY COMPRESSIVE STRENGTH UNLESS OTHERWISE NOTED.
3. A CONCRETE MIX DESIGN FOR EACH UNIQUE COMBINATION OF STRENGTH, COARSE AGGREGATE GRADATION AND WATER CEMENT RATIO SPECIFIED SHALL BE PREPARED BY THE SUPPLIER OR AN INDEPENDENT TESTING LABORATORY AND BE SUBMITTED FOR REVIEW PRIOR TO CASTING ANY CONCRETE. MIXES THAT WILL BE TRANSPORTED AT THE PROJECT SITE BY PUMPING SHALL BE SPECIFICALLY DESIGNED FOR PUMPING.

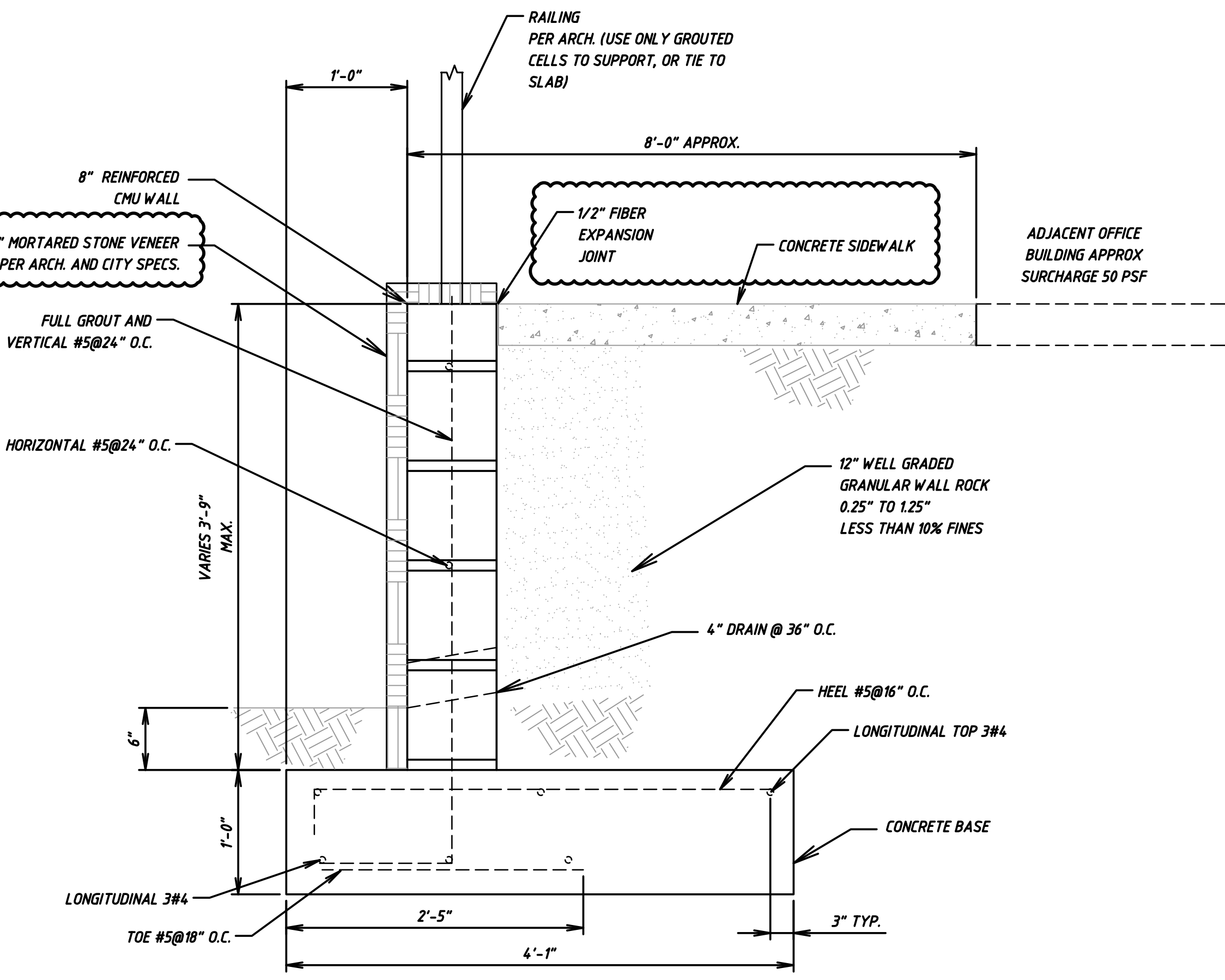
REINFORCING STEEL:

1. REINFORCING STEEL: ASTM A 615, GRADE 60.
2. MINIMUM REINFORCING STEEL CLEAR COVER (U.N.O.):
A. CONCRETE CAST DIRECTLY AGAINST EARTH - 3"
3. WHERE REINFORCING BARS ARE NOTED AS CONTINUOUS, THE FOLLOWING SHALL BE COMPLIED WITH:
A. THE TERMINATION OF ALL CONTINUOUS REINFORCING BAR RUNS SHALL BE A STANDARD HOOK UNLESS NOTED OTHERWISE.
B. SPLICES IN CONTINUOUS TOP BARS, IF REQUIRED, SHALL OCCUR OVER PARALLEL CMU WALLS OR AT THE CENTER OF THE OPENING SPAN.
C. SPLICES IN CONTINUOUS BOTTOM BARS, IF REQUIRED, SHALL OCCUR OVER CMU WALLS OR CENTERED OVER COLUMNS.
4. WHERE SPlice LENGTHS ARE NOT SPECIFIED, USE 48 BAR DIAMETERS IN MASONRY AND 40 BAR DIAMETERS IN CAST CONCRETE.
5. REINFORCING STEEL SHALL NOT BE TACK WELDED FOR ANY REASON. WELDED REINFORCING STEEL SPLICES ARE NOT PERMITTED

CONCRETE MASONRY:

1. CONCRETE MASONRY UNITS SHALL BE LOAD BEARING TYPE CONFORMING TO ASTM C-90 HAVING A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI (NET AREA).
2. MORTAR SHALL CONFORM TO ASTM C-270 TYPE S.
3. PLAIN END TWO CELLED UNITS SHALL BE USED FOR BLOCKS THAT ARE TO HAVE CELLS REINFORCED AND FILLED. WEB SHELLS ADJACENT TO CELLS THAT ARE TO BE FILLED ARE TO BE BEDDED IN MORTAR.
4. FILL CELLS AS NOTED ON DRAWINGS WITH 3000 PSI GROUT, OR GROUT CONFORMING TO ASTM C-476, SPECIFICALLY DESIGNED FOR FILLING OF CELLS.
5. IN SPLICING VERTICAL BARS, LAP ENDS, PLACE IN CONTACT AND WIRE-TIE TOGETHER OR USE BAR POSITIONERS. LAP BARS SIDE BY SIDE IN THE PLANE OF THE WALL TO MAINTAIN PROPER COVER.
6. INSTALLATION OF CONCRETE MASONRY SHALL BE COMPATIBLE WITH ALL APPLIED FINISHES SUCH AS STUCCO OR PAINT. DO NOT SPONGE WALLS WITHOUT PROPER CLEANING COMPATIBLE WITH FINISHES.
7. MASONRY BOND BEAMS AND CONCRETE TIE BEAMS CAST ON MASONRY WALLS SHALL BE CONSTRUCTED SO AS TO KEY AND BOND INTO BLOCK CELLS. THE USE OF BUILDING PAPER OR SHEET PLASTIC TO CLOSE VOIDS BELOW BEAMS IS NOT ALLOWED DUE TO BREAKAGE OF MORTAR BOND.
8. WALL CONTROL JOINTS SHALL BE PROVIDED IN ALL CONCRETE MASONRY CONSTRUCTION AT LOCATIONS INDICATED ON THE STRUCTURAL OR ARCHITECTURAL DRAWINGS BUT UNLESS NOTED OTHERWISE AT A SPACING NOT GREATER THAN 24' O.C.
9. HORIZONTAL JOINT REINFORCING SHALL BE INTERRUPTED EACH SIDE OF WALL CONTROL JOINTS.
10. WALL CONTROL JOINTS SHALL NOT BE PLACED OVER OPENINGS OR WITHIN AN OPENING JAMB WIDTH. SEE PLANS AND/OR 11. SEE ARCHITECTURAL DRAWINGS FOR SEALANT REQUIREMENTS AT WALL CONTROL JOINTS.

SITE LAYOUT
SCALE 3/32" = 1'-0"



WALL SECTION A (TYPICAL)
SCALE 1/32" = 1'-0"



1	11-8-16	COMMENTS			FPRE
REV	DATE	REVISION	DRW	CHK	APP
CLIENT PLATINUM STORAGE					
ROCKY SUMMIT ENGINEERING CONSULTING, LLC.					
TBPE FIRM #: 14437					
PROJECT OFFICE PARK ON TOWNSEND DRIVE					
LOCATION ROCKWALL, TX					
DRAWING TITLE: RETAINING WALL NOTES AND LAYOUT					
Drawn	Date	Check.	Date	App.	Date
MEX	10/11/16	FPRE	10/11/16	FPRE	10/11/16
Project Number	SCALE		Dwg Sheet Size		
0129	AS NOTED		D		
Drawing No.					REV
OPR-W-1					1