

BUILDING DESIGN DATA

- GOVERNING BUILDING CODE: 2018 NORTH CAROLINA BUILDING CODE
ROOF DEAD LOADS
1. A. FRAMING AND ROOF PANEL WEIGHT BY BLDG. MFR
B. OTHER DEAD LOADS +8 PSF
2. MINIMUM ROOF LIVE LOADS, Lr +20.0 PSF
3. ROOF SNOW LOADS, S
A. GROUND SNOW LOAD, Pg = 15 PSF
B. SNOW EXPOSURE FACTOR, Ce = 1.0
C. SNOW LOAD IMPORTANCE FACTOR, Is = 1.0
D. THERMAL FACTOR, Ct = 1.0
E. ALL APPLICABLE EFFECTS DUE TO SNOW DRIFTING
4. WIND LOADS, W
A. BASIC WIND SPEED (3 SECOND GUST), V = 115 MPH
B. WIND LOAD IMPORTANCE FACTOR, Iw = 1.0
C. BUILDING CATEGORY: BY BUILDING MFR
D. OVERALL EXPOSURE CATEGORY: = C
E. HEIGHT AND EXPOSURE ADJUSTMENT COEFFICIENT, Kh = C
F. INTERNAL PRESSURE COEFFICIENT, Gcpi BY BUILDING MFR
G. WIDTH OF EDGE CORNER ZONE, A BY BUILDING MFR
H. COMPONENT AND CLADDING WIND DESIGN PRESSURES BY BUILDING MFR
I. COMPONENT AND CLADDING ROOF DESIGN PRESSURES (NET) BY BUILDING MFR
5. SEISMIC DESIGN DATA
A. OCCUPANCY CATEGORY = II
B. MAPPED SPECTRAL RESPONSE COEFFICIENTS
Ss = + 0.157
S1 = 0.077
C. SITE CLASS = D
D. SPECTRAL RESPONSE COEFFICIENTS
S0S = + 0.167
S01 = + 0.124
E. SEISMIC DESIGN CATEGORY = B
F. BASIC SEISMIC FORCE-RESISTING SYSTEM: BY BUILDING MFR
G. RESPONSE MODIFICATION COEFFICIENT, R BY BUILDING MFR
H. ANALYSIS PROCEDURE: BY BUILDING MFR
I. SEISMIC RESPONSE COEFFICIENT, Cs BY BUILDING MFR
J. BASE SHEAR V BY BUILDING MFR
6. FOUNDATION DESIGN DATA
A. ALLOWABLE BEARING PRESSURE = 3000 PSF (NET)
B. MINIMUM BEARING DEPTH = 12 IN
C. FREEZE-THAW EXPOSURE SEVERITY: MODERATE
D. SLAB SUBGRADE REACTION MODULUS = 150 PCI

FOUNDATIONS, SLAB-ON-GRADE - GENERAL

- 1. THE FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT BY ECS SOUTHEAST, LLP DATED MAY 10, 2019 (PROJECT No. 20-29429)
2. SPREAD FOOTINGS SHALL BEAR ON SOIL CAPABLE OF SUSTAINING AN ALLOWABLE BEARING PRESSURE AS NOTED ABOVE FOR FOOTINGS UNDER FULL SERVICE DEAD AND LIVE LOADS
3. ALL BEARING MATERIAL SHALL BE INSPECTED BY THE INDEPENDENT TESTING AGENCY PRIOR TO CONCRETE PLACEMENT. THE INDEPENDENT TESTING AGENCY SHALL BE THE SOLE JUDGE AS TO THE SUITABILITY OF THE BEARING MATERIAL. FOOTING ELEVATIONS SHALL BE ADJUSTED AS REQUIRED.
4. FOOTINGS MAY BE POURED INTO AN EARTH FORMED TRENCH IF SOIL CONDITIONS PERMIT. THE TOP OF EXTERIOR FOOTING ELEVATION SHALL BE SET A MINIMUM OF 8" BELOW LOWEST FINAL ADJACENT EXTERIOR GRADE AND A MINIMUM OF 8" BELOW FINISH FLOOR. THE BOTTOM OF EXTERIOR FOOTINGS SHALL BEAR AT MINIMUM BEARING DEPTH BELOW LOWEST FINAL ADJACENT EXTERIOR GRADE.
5. FOUNDATION WALLS THAT RETAIN EARTH SHALL BE BRACED AGAINST BACKFILL PRESSURES UNTIL FLOOR SLABS AT TOP AND BOTTOM ARE IN PLACE, OR UNTIL THE CONCRETE OR MASONRY HAS ATTAINED ITS FULL COMPRESSIVE STRENGTH FOR CANTILEVER WALLS.
6. WHERE FOUNDATION WALLS ARE TO HAVE EARTH PLACED ON EACH SIDE, PLACE FILL SIMULTANEOUSLY SO AS TO MAINTAIN A COMMON ELEVATION ON EACH SIDE OF THE WALL. VERIFY THE USE AND EXTENT OF PERIMETER INSULATION WITH THE ARCHITECTURAL DRAWINGS PRIOR TO THE INSTALLATION OF FOUNDATIONS. INSTALL PERIMETER INSULATION AS REQUIRED. STANDARD PROCEDURES OF FROST PROTECTION FOR FOUNDATIONS AND EXCAVATIONS SHALL BE EMPLOYED FOR WINTER CONSTRUCTION. BACK FILLING OF EXCAVATIONS SHALL BE DONE AS SOON AS POSSIBLE TO PROTECT FOUNDATIONS FROM FROST.
7. HORIZONTAL BARS IN FOOTINGS AND CONCRETE WALLS SHALL BE CONTINUOUS. PROVIDE CORNER BARS AT ALL CORNERS AND INTERSECTIONS, UNO.
8. FOUNDATION PENETRATIONS SHALL BE SUBJECT TO APPROVAL BY THE ARCHITECT/ENGINEER. PENETRATIONS SHALL BE FOUNDATION STEM WALL OR 6" CLEAR BELOW FOOTING.

CONCRETE

- 1. ALL CONCRETE SHALL BE NORMAL-WEIGHT (DENSITY=145 PCF) AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF AS NOTED IN THE FOLLOWING TABLE:

Table with 3 columns: CONCRETE USE, SPECIFIED COMPRESSIVE STRENGTH (PSI), MAXIMUM W/C RATIO. Rows include COLUMN FOOTINGS (3,000 PSI), EXTERIOR STRUCTURAL CONCRETE (4,500 PSI), INTERIOR SLAB ON GRADE AND PERIMETER BEAM/FOOTING (4,000 PSI), EXTERIOR SLAB ON GRADE (4,500 PSI), SIDEWALKS (3,500 PSI).

- 2. FOR ALL OTHER CONCRETE PROPERTIES SEE THE PROJECT SPECIFICATIONS.
3. ALL EXTERIOR CONCRETE SHALL BE AIR-ENTRAINED PER ACI-318, LATEST EDITION, BASED ON FREEZE-THAW EXPOSURE SEVERITY AND APPROPRIATE SIZE.
4. ALL REINFORCED CONCRETE WORK SHALL BE PER BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE ACI 318, LATEST EDITION.
5. THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR REVIEW A MINIMUM OF TWO WEEKS PRIOR TO THE PLACEMENT OF ANY CONCRETE. THE CONCRETE MIX DESIGNS SHALL INCLUDE ALL DATA NECESSARY TO SHOW COMPLIANCE WITH THE PROJECT SPECIFICATIONS. CONCRETE REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.
6. CONCRETE REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706.
7. HOOK ENDS OF BARS INTERRUPTED BY OPENINGS. HOOK TOP BARS AT ALL EDGES. AT WALL AND SLAB OPENINGS, PROVIDE 2 - #8BARS x OPENING WIDTH PLUS 4 FEET(EACH SIDE) EACH FACE UNLESS SHOWN OTHERWISE.
8. ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE DETAILING MANUAL.
9. ALL REINFORCING SHALL BE SUPPORTED IN FORMS. SPACED WITH NECESSARY ACCESSORIES AND SHALL BE SECURELY WIRED TOGETHER, IN ACCORDANCE WITH THE LATEST EDITION OF THE CRSI "MANUAL OF STANDARD PRACTICE".
10. THE MINIMUM CONCRETE CLEAR COVER OVER REINFORCING STEEL, UNLESS NOTED OTHERWISE, SHALL BE:
UNFORMED SURFACE IN CONTACT WITH THE GROUND ..... 3 IN.
FORMED SURFACES EXPOSED TO EARTH OR WEATHER:
#8 BARS AND LARGER ..... 2 IN.
#5 BARS AND SMALLER ..... 1 1/2 IN.
FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER:
BEAMS, GIRDS, AND COLUMNS ..... 1 1/2 IN.
SLABS, WALLS, AND JOISTS:
#11 BARS AND SMALLER ..... 3/4 IN.
#14 AND #18 BARS ..... 1 1/2 IN.
11. ALL LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE:

Table: CONCRETE REINFORCING LAP SPLICE SCHEDULE. Columns: BAR SIZE, TOP BARS, OTHER BARS. Rows for #3, #4, #5, #6.

- COMPRESSION DOWEL EMBEDMENT: 22 BAR DIAMETERS LAP
-WELDED WIRE FABRIC: ONE SPACING OF CROSS WIRES PLUS 2" LAP
15. LEAN CONCRETE - MIN 2 1/2 SACKS PORTLAND CEMENT PER CUBIC YARD.

STRUCTURAL STEEL

- 1. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING GRADES:
ALL CHANNELS, ANGLES, PLATES, ETC. (U.N.O.) ..... A36 (Fy=36 KSI)
ALL WIDE FLANGES (U.N.O.) ..... A992 (Fy=50 KSI)
HOLLOW STRUCTURAL SECTIONS (SHAPE) ..... A500 GRADE B (Fy=48 KSI)
HOLLOW STRUCTURAL SECTIONS (ROUND) ..... A500 GRADE B (Fy=42 KSI)
STEEL PIPE ..... A53 GRADE B (Fy=35 KSI)
BOLTS ..... A325 (U.N.O.)
WELDING ELECTRODES ..... E70XX, LOW HYDROGEN
2. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE, EXCEPT AS MODIFIED IN THESE NOTES AND THE PROJECT SPECIFICATIONS.
3. ALL WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE" AWS D1.1. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS. ALL WELDING SHALL BE TO CLEAN BARE STEEL.
4. SPLICING OF STEEL MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF-RECORD.
5. PROVIDE SUB-FRAMING FOR EQUIPMENT SUPPORTED ON OR SUSPENDED FROM THE STRUCTURE. ALL SHALL BE SHOP COATED WITH PRIME PAINT AS SPECIFIED. MASK SURFACES TO BE WELDED AND AT BOLT HOLES IN FAYING SURFACES OF FRICTION CONNECTIONS.

DEFERRED STRUCTURAL SUBMITTALS

- 1. THE FOLLOWING STRUCTURAL COMPONENTS SHALL BE DESIGNED AND SUBMITTED BY OTHERS FOR APPROVAL IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS.
PRE-MANUF. METAL BUILDING:
2. DOCUMENTS FOR DEFERRED STRUCTURAL SUBMITTAL ITEMS SHALL BE DESIGNED, SEALED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED. THE DEFERRED SUBMITTAL DOCUMENTS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL AS REQUESTED WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND BEEN FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED.
3. STRUCTURAL FOUNDATION DESIGN WAS BASED ON FOUNDATION REACTIONS FROM ONE PRE-MANUF. BUILDING MANUFACTURER. ALTERNATIONS MAY BE NECESSARY IF A DIFFERENT BUILDING MANUFACTURER IS SELECTED OR DIFFERENT REQUIREMENTS ARE PROVIDED IN THE BUILDING SUBMITTAL. BASED ON THE EXTENT OF THE CHANGES, ADDITIONAL SERVICES FOR STRUCTURAL REDESIGN AND COSTS OF ADDITIONAL OR MODIFIED FOUNDATIONS MAY BE REQUIRED DURING SELECTION OF BUILDING SUPPLIER. GENERAL CONTRACTOR SHALL INCLUDE A CONTINGENCY TO COVER THESE FEES AND COSTS. COSTS OF THE DESIGN AND CONSTRUCTION REVISIONS SHALL BE BORNE BY THE CONTRACTOR.

PRE-MANUF. METAL BUILDING

- 1. PRE-MANUF. METAL BUILDING ELEMENTS SHALL BE DESIGNED BY THE MANUFACTURER AND SHALL COMPLY WITH THE REQUIREMENTS OF LOCAL BUILDING CODES AS LISTED IN "BUILDING DESIGN DATA" AND THE METAL BUILDING MANUFACTURERS' ASSOCIATION DESIGN MANUAL. IN ADDITION, THE METAL BUILDING ELEMENTS SHALL BE DESIGNED FOR ALL LOADS INDICATED ON THE DRAWINGS.
2. THE METAL BUILDING MANUFACTURER IS RESPONSIBLE FOR PROVIDING THE MATERIAL TYPE, DIAMETER, AND LOCATION OF ANCHOR BOLTS FOR THE METAL BUILDING COLUMNS.
3. THE METAL BUILDING COLUMNS SHALL BEAR AS INDICATED ON PLANS.
4. REFER TO SPECIFICATIONS FOR DEFLECTION LIMITS.
5. SHOP DRAWING SUBMITTALS (INCLUDING DRAWINGS AND CALCULATIONS) SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED. FOUNDATIONS PROVIDING SUPPORT TO THE METAL BUILDING FRAMES OF THE BUILDING HAVE B BEEN DESIGNED FOR PINNED TYPE CONNECTIONS ONLY. DO NOT FIX THE BASE OF THE COLUMNS.
6. A 1/3 INCREASE IN ALLOWABLE STRESS SHALL NOT BE USED FOR DESIGN. HOWEVER, A LOAD REDUCTION SHALL BE ALLOWED IN ACCORDANCE WITH ASCE-7 WHEN TWO OR MORE TRANSIENT LOADS IN COMBINATION WITH DEAD LOADS ARE APPLIED.
7. METAL BUILDING MANUFACTURER SHALL PROVIDE ROOF BRACING AND/OR PORTAL FRAMES AS REQUIRED TO ADEQUATELY RESIST WIND AND SEISMIC LOADS. THEIR LOCATIONS AND SIZES SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS AND INTENT.
8. METAL BUILDING MANUFACTURER SHALL BE RESPONSIBLE FOR ALL FRAMING ABOVE SLAB. THIS INCLUDES, BUT IS NOT LIMITED TO, WIND GIRTS AND COLUMNS, EXTERIOR JAMBS AND LINTELS, A AND MECHANICAL/ELECTRICAL EQUIPMENT SUPPORT. ALL SUPPLEMENTAL FRAMING SHALL MEET OR EXCEED THE LOAD AND DEFLECTION REQUIREMENTS OF THE MANUFACTURER.
9. THE METAL BUILDING MANUFACTURER IS RESPONSIBLE FOR COORDINATING METAL BUILDING ELEMENTS WITH THE CONSTRUCTION DRAWINGS AND INTENT.
10. NO OVERSTRESS OF METAL BUILDING MEMBERS IS ALLOWED.

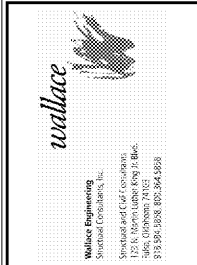
MISCELLANEOUS

- 1. THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. THE STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING REQUIREMENTS FROM SUCH DRAWINGS INTO THEIR SHOP DRAWINGS AND WORK.
3. NO OPENINGS SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE PROFESSIONAL-OF-RECORD.
4. NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE PROFESSIONAL-OF-RECORD.
5. DO NOT SCALE THESE DRAWINGS. USE SPECIFIED DIMENSIONS.
6. STEEL FRAMING IS NON-SELF SUPPORTING AND REQUIRES INTERACTION WITH OTHER ELEMENTS NOT CLASSIFIED AS STRUCTURAL STEEL TO PROVIDE THE REQUIRED STABILITY AND RESISTANCE TO LATERAL FORCES.
7. THE STEEL FRAMING AND ALL CONCRETE AND CMU WALLS SHALL BE TEMPORARILY BRACED UNTIL ALL STEEL BRACING, FLOOR AND ROOF DECKS, AND CONCRETE AND CMU WALLS HAVE BEEN INSTALLED AND ALL CONNECTIONS BETWEEN THESE ELEMENTS HAVE BEEN MADE.

SPECIAL INSPECTIONS

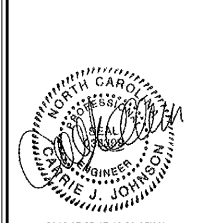
- 1. THE OWNER WILL EMPLOY THE SERVICES OF ONE OR MORE SPECIAL INSPECTORS TO PROVIDE SPECIAL INSPECTIONS DURING CONSTRUCTION FOR THE REQUIRED SPECIAL INSPECTION ITEMS. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, AND THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN OF THE STRUCTURE, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE INSPECTOR MAY NOT ALTER, MODIFY, ENLARGE OR WAIVE ANY OF THE REQUIREMENTS OF THE DOCUMENTS.
B. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE PROFESSIONAL-OF-RECORD, AND THE CONTRACTOR. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, SUBMIT A COMPLETE LIST OF ALL OUTSTANDING DISCREPANCIES ON A WEEKLY BASIS TO THE OWNER, THE BUILDING OFFICIAL, AND THE PROFESSIONAL-OF-RECORD, UNTIL ALL CORRECTIONS HAVE BEEN COMPLETED.
C. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTORS KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE BUILDING CODE.
SPECIAL INSPECTIONS SHALL BE REQUIRED FOR THE FOLLOWING GENERAL AREAS. REFERENCE THE FOLLOWING TABLE FOR MORE DETAILED INSPECTION REQUIREMENTS IN EACH AREA.
A. INSPECTION OF FABRICATORS: PER IBC SECTION 1704.2.
B. STEEL CONSTRUCTION: PER IBC SECTION 1704.3 AND IBC TABLE 1704.03.
C. CONCRETE: PER IBC SECTION 1704.4 AND IBC TABLE 1704.4.
D. MASONRY CONSTRUCTION: PER IBC SECTION 1704.5, AND IBC TABLE 1704.5.1.
E. SOILS: PER IBC SECTION 1704.7 AND THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.
STRUCTURAL OBSERVATION (AS DEFINED IN CHAPTER 11 OF THE BUILDING CODE) IS NOT REQUIRED, UNLESS SPECIFICALLY REQUIRED BY THE BUILDING OFFICIAL.

SPECIAL INSPECTIONS SCHEDULE table with columns: SPECIAL INSPECTION, FREQ., REFERENCED STANDARD(S). Includes sections for SOILS, CONCRETE (NOT APPLICABLE TO ISOLATED SPREAD FOOTINGS OR NON-STRUCTURAL SLABS ON GROUND), STEEL CONSTRUCTION, MASONRY CONSTRUCTION, and ADHESIVE ANCHORS/REINFORCEMENT.



REGULATION OF USE: THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS APPROVED BY THE ARCHITECT/ENGINEER OF RECORD. ANY CHANGES TO THIS DRAWING SHALL BE MADE BY THE ARCHITECT/ENGINEER OF RECORD. THE ARCHITECT/ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE USE OF THIS DRAWING FOR ANY OTHER PURPOSE. THE ARCHITECT/ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE CONSTRUCTION OF THIS PROJECT. THE ARCHITECT/ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE CONSTRUCTION OF THIS PROJECT. THE ARCHITECT/ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE CONSTRUCTION OF THIS PROJECT.

NEW FCAC STORE
2019 - JANUARY - SMALLER
5845 NC HWY 42
GARNER, NC



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ISSUE BLOCK table with columns for issue number, description, and date.

PROPERTY NO.: 160017
6 DIGIT NO.: 903065
4 DIGIT NO.: 015P
AOR PROJECT NUMBER: 1955801
TO PERMIT: DATE: 07/26/19
TO BID: DATE: TBD

SHEET TITLE: GENERAL NOTES

SHEET NUMBER: S1