

# SITE CIVIL ENGINEERING PLANS

## hom Townhomes

### 809, 811, 813, 815, 817 & 819 N.E. 17th WAY,

### CITY OF FORT LAUDERDALE, BROWARD COUNTY, FLORIDA

#### GENERAL

ALL CONSTRUCTION, MATERIAL INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION TOGETHER WITH THE COUNTY'S MINIMUM DESIGN STANDARDS AND SPECIFICATIONS AS APPLICABLE IF F.D.O.T. MATERIAL IS SPECIFIED, IT SHALL IMPLY THAT THEIR CONSTRUCTION PROCEDURES SHALL BE FOLLOWED.

CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROTECT ALL UTILITIES AND OTHER PROPERTY AND SHALL BE RESPONSIBLE FOR ANY DAMAGES INCURRED DURING CONSTRUCTION AND SHALL REPAIR SAID DAMAGES AT HIS EXPENSE.

THE ENGINEER WILL HOLD A PRE-CONSTRUCTION MEETING PRIOR TO THE START OF ANY CONSTRUCTION AND INCLUDE A REPRESENTATIVE FROM THE RESPECTIVE ENGINEERING AND UTILITY DEPARTMENTS, THE CONTRACTOR, OWNER, AND OTHER APPLICABLE AGENCIES.

THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITY LOCATIONS PRIOR TO CONSTRUCTION. THE LOCATIONS OF THE EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF "OTHER" UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE "OTHER" UTILITIES, THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE UTILITY OWNERS TO RESOLVE UTILITY CONFLICTS AND UTILITY ADJUSTMENTS AS REQUIRED.

ALL DEVIATIONS FROM PLANS ARE TO BE APPROVED BY ENGINEER IN WRITING PRIOR TO CONSTRUCTION AND FOR ALL INSPECTIONS AND TESTING.

THE ENGINEER MUST BE GIVEN A MINIMUM 48 HOURS NOTICE PRIOR TO START OF CONSTRUCTION AND FOR ALL INSPECTIONS AND TESTING.

CONTRACTOR IS RESPONSIBLE TO PREPARE COMPLETE AS-BUILT PLANS WITH INFORMATION RELATIVE TO LOCATIONS AND ELEVATIONS OF VALVES, SERVICES, FITTINGS, LENGTHS OF PIPE, TOP OF WATER MAIN ELEVATIONS AND THE LIKE SHALL BE ACCURATELY RECORDED AND SUBMITTED TO THE DESIGN ENGINEERING FIRM PRIOR TO FINAL ACCEPTANCE OF THE WORK. ALL INFORMATION SHALL BE TAKEN BY A FLORIDA REGISTERED SURVEYOR AND MAPPER AND SHOWN ON A SEALED AS-BUILT PLAN ALONG WITH AN AUTOCAD DISK.

THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES AND IMPROVEMENTS FROM DAMAGES, DISRUPTION OF SERVICE, OR DESTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.

WALL REINFORCEMENT AND THICKNESS FOR PRECAST STRUCTURES SHALL BE IN ACCORDANCE WITH ASTM C478. MINIMUM WALL THICKNESS SHALL BE 8" AND MIN 6" BASE EXTENSION OUTSIDE OF MANHOLE WALL.

MORTAR USED TO SEAL THE PIPE INTO THE WALLS OF THE PRECAST STRUCTURES WILL BE NON-SHRINK GROUT AND WILL NOT CAUSE LEAKAGE IN OR OUT OF THE STRUCTURES. THE MAXIMUM OPENING THROUGH WALLS FOR PIPES SHALL BE THE MAXIMUM REQUIRED OUTSIDE DIAMETER PLUS 1/8".

ALL MANHOLES SHALL BE SET PLUMB TO LINE AND GRADE AND SHALL REST ON A FIRM CAREFULLY GRADED SUBGRADE WHICH SHALL PROVIDE UNIFORM BEARING UNDER BASE.

ALL JOINTS SHALL BE FURNISHED WATERTIGHT. NO PIPE SHALL BE COVERED UNTIL INSPECTED AND APPROVED BY THE ENGINEER AND OTHER APPLICABLE AUTHORITIES.

ALL PIPE SHALL BE LAID IN A DRY TRENCH. ALL MUCK OR OTHER UNSTABLE MATERIAL ENCOUNTERED IN TRENCH BOTTOM SHALL BE REMOVED AND BACKFILLED WITH GRANULAR MATERIAL COMPACTED TO 100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99, METHOD "C".

SHOP DRAWINGS FOR ALL STRUCTURES AND MATERIALS TO BE USED ON THE PROJECT SHALL BE SUBMITTED TO THE DESIGN ENGINEER AND THE RESPECTIVE ENGINEER AND UTILITY DEPARTMENTS FOR APPROVAL PRIOR TO CONSTRUCTION OR INSTALLATION.

ALL ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM (1988).

CONTRACTOR TO CONTACT SUNSHINE STATE ONE-CALL OFFICE (1-800-432-4770) AND ALL LOCAL UTILITY COMPANIES FOR UNDERGROUND UTILITY LOCATIONS PRIOR TO CONSTRUCTION.

EXISTING SECTION CORNERS AND OTHER LAND MARKERS OR MONUMENTS LOCATED WITHIN PROPOSED CONSTRUCTION ARE TO BE MAINTAINED BY THE CONTRACTOR AND/OR RESET AFTER CONSTRUCTION UNDER CERTIFICATION BY A FLORIDA REGISTERED SURVEYOR & MAPPER.

CONTRACTOR IS TO PREVENT INTRODUCTION OF DEBRIS OR DIRT INTO EXISTING STORM DRAIN AND/OR SANITARY SYSTEM AS A RESULT OF CONSTRUCTION ACTIVITIES. ALL LINES AND STRUCTURES SHALL BE CLEANED PRIOR TO FINAL INSPECTION AND ACCEPTANCE.

LOCATION OF DRAINAGE AND SANITARY SEWER STRUCTURES GOVERN. ADJUST PIPE LENGTHS AS REQUIRED.

THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" SHALL BE USED AS THE STANDARD FOR THE SIGNAGE AND PAVEMENT MARKING REQUIREMENTS OF THE PROJECT.

ALL UNDERGROUND UTILITY MAINS AND STRUCTURES FOR WATER, SEWER, GAS, IRRIGATION, DRAINAGE, TELEPHONE, POWER, CABLE TV AND OTHERS MUST BE INSTALLED, INSPECTED, TESTED, AND APPROVED PRIOR TO ANY SUBGRADE CONSTRUCTION.

ALL PERMANENT GRASS AREAS ARE TO RECEIVE A 4" MUCK BLANKET OR TOPSOIL TREATMENT.

ALL CURB AND GUTTER SHALL HAVE A LIMEROCK FOUNDATION OR "PAD" OF AT LEAST FOUR INCHES (4") THICKNESS COMPACTED TO 98% OF MAXIMUM DENSITY PER AASHTO (T-190).

A MINIMUM 10" SEPARATION BETWEEN ALL UTILITIES SHALL BE MAINTAINED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING APPROPRIATE SAFETY PRECAUTIONS DURING EXCAVATION AND TRENCHING OPERATIONS AS REQUIRED BY THE "TRENCH SAFETY ACT" AND THE O.S.H.A. PART "P".

#### EARTHWORK:

THE UNSUITABLE CONTRACTOR'S BID FOR EARTHWORK SHALL INCLUDE THE EXCAVATION, REMOVAL AND DISPOSAL OF ALL MATERIALS, OF WHATEVER CHARACTER WITHIN THE LIMITS OF CONSTRUCTION.

ALL TOPSOIL THAT IS SUITABLE FOR LANDSCAPING OR GRASSING OPERATIONS MAY BE STOCKPILED NEARBY FOR SUCH USE IF APPROVED BY OWNER WHERE MUCK, ROCK, CLAY OR OTHER MATERIAL WITHIN THE LIMITS OF CONSTRUCTION IS UNSUITABLE IN ITS ORIGINAL POSITION. THE CONTRACTOR SHALL EXCAVATE SUCH MATERIAL IN ITS ENTIRETY AND BACKFILL WITH SUITABLE MATERIAL WHICH SHALL BE COMPACTED IN PLACE TO CONFORM TO THE REQUIRED GRADES AND SECTIONS AS SHOWN ON THE PLANS.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE UNSUITABLE MATERIAL PRESENT ON SITE AND INCLUDE THE REMOVAL AND REPLACEMENT OF SAME IN HIS BID PRICE. THE CONTRACTOR SHALL MAKE HIS OWN ESTIMATE ON THE VOLUME OF MATERIAL ACTUALLY REQUIRED TO OBTAIN THE CROSS SECTIONS OR GRADES AS SHOWN ON THE PLANS.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREPARE THE SITE IN ACCORDANCE WITH THE OWNER'S GEOTECHNICAL REPORT FOR SUBSURFACE EXPLORATION AND RECOMMENDATIONS.

WHEREVER EXCAVATIONS FOR UTILITIES ARE MADE BELOW THE GRADES INDICATED ON THE PLANS, GRANULAR MATERIAL FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL SHALL BE USED TO RESTORE THE AREA TO THE PROPER GRADE AND SHALL BE COMPACTED TO 100% OF MAXIMUM DENSITY PER AASHTO T-99 METHOD "C".

AREAS TO BE COMPACTED SHALL BE MOISTENED AND COMPACTED BY EITHER ROLLING, TAMPING OR ANY OTHER METHOD APPROVED BY THE ENGINEER.

IN ORDER TO OBTAIN THE DESIRED DENSITY, THE ENGINEER SHALL INSPECT ALL COMPACTED AREAS PRIOR TO FURTHER CONSTRUCTION OPERATIONS.

PRIOR TO BACKFILLING AROUND STRUCTURES, THE AREAS SHALL BE CLEAN OF ALL TRASH AND DEBRIS OF ANY DESCRIPTION, UNLESS DIRECTED BY THE ENGINEER TO BE LEFT IN PLACE, SUCH AS SHEETING AND BRACING. BACKFILL SHALL BE PLACED IN MAXIMUM 12" COMPACTED LIFTS.

THE EXISTING ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY SHOULD INDICATE ELEVATION AT ANY POINT OTHER THAN THAT SHOWN.

#### PAVING:

A PROCTOR SHALL BE PERFORMED ON ALL SUBGRADE AND LIMEROCK BASE MATERIAL AND SUBSEQUENT CHANGES IN MATERIAL. LBR'S, SIEVE ANALYSIS, ETC. SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO SCHEDULING DENSITY TESTS. ALL TESTS RESULTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD IN WRITING.

UNDERGROUND UTILITIES SHALL BE INSTALLED OR SLEEVING PROVIDED BEFORE ANY PAVEMENT CONSTRUCTION BEGINS. NO EXCEPTIONS.

FOR COMPACTED SUBGRADE, FOLLOW THE SPECIFICATIONS ON THE PAVING, GRADING, AND DRAINAGE DETAIL SHEET.

ALL PAVEMENT SUBGRADE MATERIAL SHALL HAVE AN LBR 40 AT 100% MAXIMUM DENSITY PER AASHTO T-99 METHOD "C" AND SHALL CONFORM TO THE REQUIREMENTS OF F.D.O.T. SPECIFICATIONS, SECTION 120.

THE ENGINEER SHALL SPECIFY THE LOCATION AND NUMBER OF DENSITY TESTS REQUIRED, A MINIMUM OF ONE DENSITY TEST OVER EVERY TRENCH AND ONE DENSITY TEST EVERY 2000 SQUARE FEET OF PROPOSED PAVEMENT. DEPENDING ON THE LENGTH, THE TEST RESULTS SHALL BE ACCEPTED BY THE ENGINEER PRIOR TO PLACEMENT OF BASE MATERIAL.

IF THE PLANS INDICATE A STABILIZED SUBGRADE IS TO BE USED, IT SHALL HAVE A MINIMUM LBR VALUE OF 40 AND SHALL BE IN ACCORDANCE WITH F.D.O.T. SECTION 160. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT TO THE ENGINEER FOR APPROVAL THE MATERIAL TO BE USED FOR THE SUBBASE AND THEIR PROPORTIONS AND LABORATORY LBR. BEFORE DELIVERY TO THE SITE, QUALITY CONTROL LBR'S MAY BE REQUIRED BY THE ENGINEER TO PROVE THE IN-PLACE CONDITION.

IF THE PLANS INDICATE A LIMEROCK BASE, THE CONSTRUCTION AND THE MATERIAL FOR THE LIMEROCK BASE SHALL CONFORM TO THE REQUIREMENTS OF F.D.O.T. SPECIFICATIONS, SECTION 200. THE LIMEROCK BASE SHALL BE COMPACTED TO 98% MAXIMUM DENSITY AT OPTIMUM MOISTURE, AASHTO T160. THE ENGINEER SHALL SPECIFY THE LOCATION AND NUMBER OF DENSITY TESTS REQUIRED. THE TEST RESULTS SHALL BE ACCEPTED BY THE ENGINEER PRIOR TO APPLICATION OF THE PRIME AND TACK COATS.

ALL PROPOSED GRADES SHOWN RELATIVE TO PROPOSED ASPHALT PAVING REFER TO FINISHED ASPHALT PAVEMENT UNLESS OTHERWISE NOTED.

FOR STABILIZING AT INTERSECTIONS, TURNOUTS AND GRADED CONNECTIONS SEE FDOT STANDARD INDEX NO. 515. SEE TYPICAL SECTION FOR DEPTH AND LBR.

LIMEROCK BASES SHALL BE A MINIMUM OF EIGHT INCHES (8") THICK OR AS OTHERWISE SPECIFIED ON PLANS. LIMEROCK OF THE MIAMI FORMATION SHALL BE USED AND SHALL HAVE A MINIMUM CARBONATE CONTENT OF 80%, A MINIMUM CALCIUM AND MAGNESIUM CONTENT OF 6% AND A MINIMUM LBR OF 100. BASE MATERIAL SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-160.

A TACK COAT SHALL BE USED BETWEEN PAVING COURSES AND A PRIME COAT SHALL BE USED ON THE FINISHED BASE.

THE PRIME AND TACK COAT CONSTRUCTION AND MATERIALS FOR THE PRIME AND TACK COATS SHALL CONFORM TO THE REQUIREMENTS OF F.D.O.T. STANDARD SPECIFICATIONS, SECTION 300. THE PRIME AND TACK COATS SHALL BE APPLIED PRIOR TO CONSTRUCTION OF THE ASPHALT SURFACE COURSE AND SHALL BE SANDED AND ROLLED IN ACCORDANCE WITH SECTION 300. APPLICATION RATES SHALL BE 0.29 GAL / SY FOR LIMEROCK BASE.

ASPHALTIC CONCRETE SURFACE COURSE SHALL BE AS SHOWN ON THE PLANS. THE MATERIALS FOR THE ASPHALT CONCRETE SURFACE COURSE SHALL CONFORM TO THE REQUIREMENTS OF F.D.O.T. STANDARD SPECIFICATIONS, SECTION 331 AND ALL OTHER LOCAL CODES THAT MAY APPLY.

ASPHALT CONCRETE SHALL BE OF MINIMUM THICKNESS AS NOTED ON PLANS AND SHALL BE TYPE S-III OR AS OTHERWISE SPECIFIED ON THE PLANS.

RAISE OR LOWER EXISTING SURVEY CONTROL POINTS WITHIN THE LIMITS OF CONSTRUCTION TO FINAL GRADE OF PAVEMENT.

#### DRAINAGE:

CATCH BASINS / INLETS / JUNCTION BOXES SHALL NOT BE LOCATED IN RESIDENTIAL DRIVEWAYS.

DRAINAGE PIPES SHALL BE HDPE UNLESS OTHERWISE SPECIFIED ON PLANS.

REINFORCED CONCRETE PIPE SHALL MEET THE REQUIREMENTS OF F.D.O.T. STANDARD SPECIFICATIONS, SECTION 941. CONCRETE PIPE SHALL BE CLASS III OR AS SHOWN ON THE PLANS. PIPE GASKETS SHALL MEET F.D.O.T. STANDARD SPECIFICATIONS.

PRIOR TO BACKFILLING THE DRAINAGE SYSTEM THE CONTRACTOR SHALL NOTIFY THE GOVERNING AGENCIES FOR INSPECTION.

BOTTOM OF ALL PROPOSED INLET STRUCTURES SHALL BE 24" MINIMUM BELOW THE LOWEST INLET INVERT UNLESS OTHERWISE SPECIFIED.

CORRUGATED ALUMINUM PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M-196. CORRUGATED ALUMINUM PIPE SHALL BE FABRICATED WITH HELICAL CORRUGATION WITH A MINIMUM OF TWO ANNUAL CORRUGATIONS FORMED INTO EACH END TO ACCOMMODATE A COUPLING BAND. REFER TO TABLE 1, SECTION 945 FOR THICKNESS OF METAL FOR PIPE.

HIGH DENSITY POLYETHYLENE (H.D.P.E.) COMPOSED OF CORRUGATED EXTERIOR AND SMOOTH INTERIOR SHALL BE IN ACCORDANCE WITH AASHTO M252 AND M294, TYPE S AS MANUFACTURED BY HANCOR, INC. WITH SURELOC JOINTS OR A.D.S. WITH CLEATED BELL AND SPIGOT OR APPROVED EQUAL. CONTRACTOR SHALL FOLLOW MANUFACTURER SPECIFICATIONS FOR INSTALLATION AND COMPACTION REQUIREMENTS.

SEE LANDSCAPING PLANS FOR ADDITIONAL GRADING AND DRAINAGE INFORMATION FOR RECREATIONAL AMENITIES, BERMING, ETC. GRADING SHOWN ON THESE CIVIL PLANS SHALL GOVERN OVER LANDSCAPE PLANS.

GRATE ELEVATION OF TYPE-10 / CURB AND GUTTER INLET (P-6) STRUCTURES, IF ANY, PROVIDED AT EDGE OF PAVEMENT.

SITE PREPARATION SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS ENGINEER'S SUBSURFACE EXPLORATION AND RECOMMENDATION REPORT.

CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND PREPARATION OF ALL EXISTING STORM DRAINAGE PIPE AND INLETS FOR TESTING AS REQUIRED FOR NEW CONSTRUCTION. CONTRACTOR IS RESPONSIBLE TO COMPLETELY INSPECT EXISTING STORM DRAINAGE SYSTEM IN ADVANCE OF ANY WORK AND NOTIFY THE ENGINEER OF ANY DEFICIENCIES. SHOULD CONTRACTOR COMMENCE WORK WITHOUT FIRST INSPECTING THE EXISTING STORM DRAINAGE SYSTEM, THEN THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED REPAIRS.

CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF TEMPORARY TURBIDITY SCREENS AT OUTFALL PIPES, IF ANY, FROM TIME OF CONSTRUCTION COMMENCEMENT UNTIL FINAL PAVING AND DRAINAGE INSPECTION.

ALL RAMPS, WALKS AND PEDESTRIAN PATHWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION" LATEST EDITION. IN THE CASE OF ANY CONFLICTS BETWEEN THESE PLANS AND CODE, THE CODE WILL GOVERN.

TEMPORARY AND PERMANENT FIRE DEPARTMENT ACCESS ROADS SHALL BE FREE OF CONSTRUCTION MATERIALS, VEHICLES, ETC. DURING CONSTRUCTION.

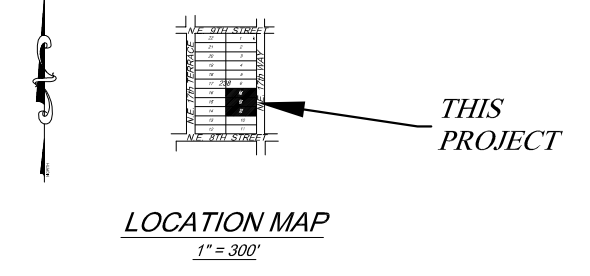
YARD DRAINAGE SYSTEM MATERIALS SHALL BE BY ADVANCED DRAINAGE SYSTEMS INC. OR APPROVED EQUAL.

ALL EXISTING STORM DRAINAGE PIPING AND INLETS DESIGNATED FOR REMOVAL SHALL BE COMPLETELY REMOVED, AND NOT ABANDONED IN PLACE.

LEGAL DESCRIPTION:  
Lots 7, 8, and 9, Block 238, PROGRESSO, according to the plat thereof, as recorded in Plat Book 2, Page 18, of the public records of Miami-Dade County, Florida.  
Said lands situate, lying and being in the City of Fort Lauderdale, Broward County, Florida and containing 20,250 square feet or 0.4649 acres, more or less.

Always call 811 two full business days before you dig

ALL ELEVATIONS SHOWN HEREON ARE BASED ON NORTH AMERICAN VERTICAL DATUM (NAVD - 1988).



SHEET NO.	DRAWING INDEX
C-1	TITLE SHEET
C-2	SITE CIVIL ENGINEERING PLAN
C-3	PAVING, GRADING & DRAINAGE DETAILS
C-4	WATER & SEWER DETAILS
C-5	EROSION CONTROL PLAN
C-6	EROSION CONTROL NOTES & DETAILS

**McLAUGHLIN ENGINEERING COMPANY**  
 1720 N.W. 64th STREET, SUITE 400,  
 FORT LAUDERDALE, FLORIDA 33309-1801  
 PHONE: (954) 763-7811  
 FAX: (954) 763-7615  
 EB & LB #226

192115  
 Lou Campanile, Jr.  
 Professional Engineer No. 36762  
 Professional Surveyor and Mapper No. 4336  
 State of Florida

**MICHEN PROPERTIES, LLC**

for  
**hom Townhomes**  
 809, 811, 813, 815, 817 & 819 N.E. 17th WAY,  
 CITY OF FORT LAUDERDALE, BROWARD COUNTY, FLORIDA  
**TITLE SHEET**

PROJECT NO. U9324  
 DATE 5/4/15  
 REVISION  
 8/6/15  
 DRAWING  
**C-1**  
 SHEET  
 1 OF 6

© 2015 McLAUGHLIN ENGINEERING COMPANY. ALL RIGHTS RESERVED. THIS DOCUMENT MAY NOT BE REPRODUCED IN ANY FORM WITHOUT EXPRESS WRITTEN PERMISSION.