

NEW CONSTRUCTION OF: Vanilla shell Comercial Building

1490 Fairbanks Ave, Winter Park Florida

Scope of Work

These construction documents indicate a scope of work for the construction of a one-story 6,885 square foot building. The space will be vanilla shell, to be developed later under separate permits.

General Notes and Requirements

- These documents design and specifications are the exclusive property of PNM Architecture (the Architect). Reproduction in any form without the expressed written permission of PNM Architecture is strictly prohibited.
- PNM Architecture (the Architect) does not exercise control, and shall not be responsible for any construction means, methods, techniques, sequences or procedures, or for safety practices in connection with the work. Furthermore PNM Architecture (the Architect) does not hold any liability for acts or omissions of the Contractor, Sub-Contractors or any other persons performing any work, or for the failure of any of them to carry out the work in accordance with these documents and all governing statutes.
- All work shall comply with the 2017 Florida Building Code and all other applicable rules and regulations.
- The General Contractor and all Sub-Contractors shall verify all conditions, details and dimensions before proceeding with work, and shall be responsible for coordination of that work. The Architect shall be notified immediately of any discrepancies.
- Drawing dimensions should be followed and scaling of drawings avoided. Dimensions supersede scale on drawings.
- It is intended that all work be of the highest quality, and performed by accomplished craftsmen in a workmanlike manner using accepted practices and methods appropriate to the trade involved.
- All products and materials shall be installed as per manufacturer's instruction and specifications unless specifically otherwise directed by the Architect.
- The General Contractor, Sub-Contractors and Suppliers shall be responsible for coordinating their work and certifying that their products and installations meet the Florida Building Code, the Florida Accessibility Code as well as all applicable government statutes.
- The General Contractor shall be responsible for obtaining all applicable permits and providing the Owner with all applicable certificates, operating manuals, warranties, etc. prior to occupancy.
- All work in question including materials, finishes and colors shall be coordinated with appointed project manager.
- Sub-Contractors and suppliers may submit alternate bids for similar or equal systems, equipment or materials for approval. These alternates shall be clearly indicated and separated from the base bid. The suggested changes should provide the same quality or workmanship and not diminish the function of the item or trade.
- Provide non-slip surfaces at all areas continually exposed to moisture or surface water.
- All fabricated items shall be made from field measurements. Provide shop drawings or submittals for approval prior to fabrication and installation.
- Fire sprinkler and alarm supplier shall be responsible for submitting plans and obtaining all applicable permits for all required fire sprinkler system modifications and additions.
- Mechanical and Electrical Contractors shall be responsible for providing appropriate details and specifications of all penetrations through fire-rated construction as may be required by the building official.
- All Contractors are required, before submitting their proposals, to visit the site of the proposed work and completely familiarize themselves with the scope and nature of the work. Any existing conditions that may in any manner affect their work should be ascertained regardless of whether it is shown on the drawings. Any oversight or omission to identify existing condition which may affect scope of work is Contractor(s) responsibility.
- All Contractors are required to examine carefully the drawings, specification and other documents to inform themselves thoroughly regarding any and all conditions and requirements that may in any manner affect the work.
- All contractors shall not avail themselves of any unintentional error or omission and shall be charged with the responsibility of furnishing a complete portion of this contract according to the reasonably implied spirit and intent of the drawings. Change orders will not be granted after the General Contractor's contract is signed, unless they can be substantiated as an unforeseeable item beyond the general intent and scope of the work.
- Structural steel supplier shall provide shop drawings based on these Plans for all steel items indicated herein including the roof access ladder for approval prior to fabrication.
- Signage supplier/contractor shall be responsible for submitting plans and obtaining all applicable permits for signage components as required to meet code.

TERMITE PROTECTION

- TERMITE PRETREATMENT SHALL CONSIST OF CHEMICAL SOIL TREATMENT. THE BORA-CARE TERMICIDE TREATMENT SHALL BE REGISTERED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES AS REQUIRED BY THE FLORIDA BUILDING CODE 2014 EDITION- SECTION 1816.
- UPON COMPLETION OF THE APPLICATION OF THE TERMITE PROTECTIVE TREATMENT A CERTIFICATE OF COMPLIANCE SHALL BE ISSUED BY A LICENSED PEST CONTROL COMPANY BEFORE A CERTIFICATE OF OCCUPANCY MAY BE ISSUED. THE CERTIFICATE OF COMPLIANCE SHALL STATE "THE BUILDING HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. THE TREATMENT IS IN ACCORDANCE WITH THE RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES."

Site Address

1490 W Fairbanks ave
Winter Park, Florida

Building Code(s)

Building Code - FBC 2017 (6th edition)
Fire Code - FFC 2017
*Fire Code - NFPA 1 2015
*Life Safety Code - NFPA 101 2015
Plumbing Code - FBPC 2017
Mechanical Code - FBMC 2017
Electrical Code - NEC 2014
Accessory Code - FBC 2017
Administrative Code - FAC
Florida Statutes - FS

* Indicates with Florida Amendments

Building Data

Occupancy Classification - MERCANTILE (future)
Occupant Load - 132
Occupant Load per FFPC (NFPA 101) - 196
Construction Type - IIB

TOTAL BUILDING AREA - 6,885 SF
including covered front/
back canopies

*New Tenant spaces to be vanilla shell
interiors to be developed later.

INDEX OF SHEETS

SHEET	DESCRIPTION
A1	COVER SHEET VINICITY PLAN GENERAL NOTES UPDATED
A2	SITE PLAN UPDATED
A3	LIFE SAFETY PLAN UPDATED
A4	FLOOR PLAN UPDATED
A5	ELEVATIONS UPDATED
A6	BUILDING SECTIONS UPDATED
A7	WALL SECTIONS UPDATED
A8	ROOF PLAN AND SCUPPER DETAILS UPDATED
A9	DOOR AND WINDOW SCHEDULE UPDATED
A10	ROOM FINISH STAIR DET & TOILET PLAN/ELEV UPDATED
S1.0	STRUCTURAL GENERAL NOTES
S2.1	FOUNDATION PLAN UPDATED
S2.2	ROOF FRAMING UPDATED
S3.1	FOUNDATION DETAILS UPDATED
S3.2	STEEL FRAMING DETAILS UPDATED
S3.3	DETAILS UPDATED
E1	SITE LIGHTING
E2	SITE LIGHTING DETAILS
E3	ELECTRICAL PLAN UPDATED
E4	ELECTRICAL NOTES UPDATED
M1	MECHANICAL PLAN UPDATED
M2	MECHANICAL NOTES UPDATED
P1	PLUMBING PLAN UPDATED
P2	PLUMBING NOTES RISER UPDATED

AREA

Building area

A) inclosed building area 6,400 S.F.
B) back covered exit walkway..... 109 S.F.
C) front (Fairbanks) canopy area..... 121 S.F.
D) back teant canopy area 255 S.F.
Total building area 6,885 S.F.

Potential future mezzinanes*
if done will be under future permit applications...1,530 S.F.

* Mezzinanes as defined by 505.2.

A mezzanine or mezzinanes in compliance with Section 505.2 shall be considered a portion of the story below. Such mezzinanes shall not contribute to either the building area or number of stories as regulated by Section 503.1. The area of the mezzanine shall be included in determining the fire area. The clear height above and below the mezzanine floor construction shall be not less than 7 feet.

Code Analysis

Allowable Height as per FBC table 504.3 and 504.4 for M occupancy
Type IIB construction 55 feet
Type IIB construction 2 stories

Allowable Area as per FBC table 506.2 for M occupancy
Type IIB construction 12,500 sf
Proposed total building area of 6,885 SF is less than allowable area of 12,500 SF

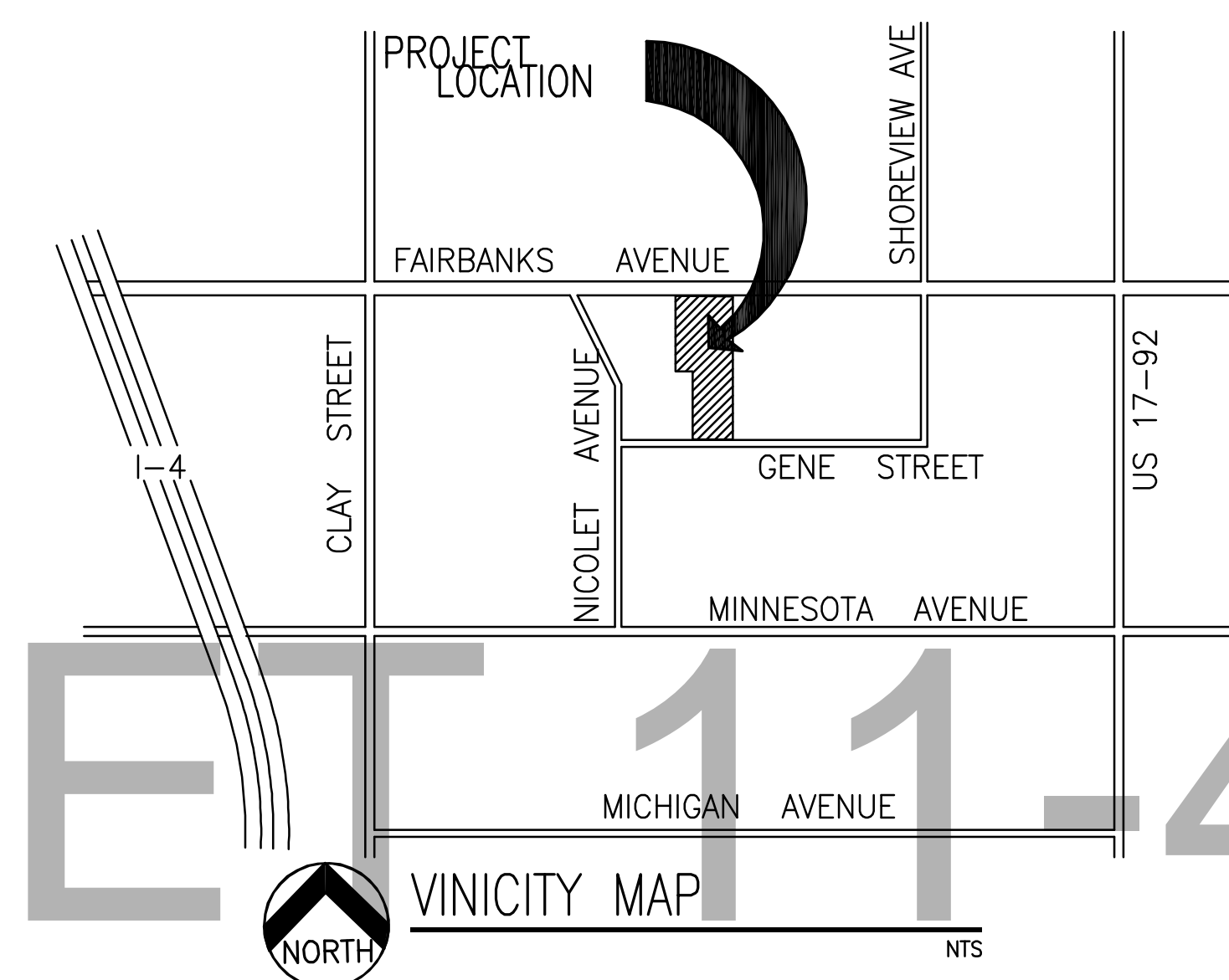
Proposed building is 1 stories, which is less than allowable 2 stories
Proposed building is 29-11 1/4" height, which is less than allowable 55'

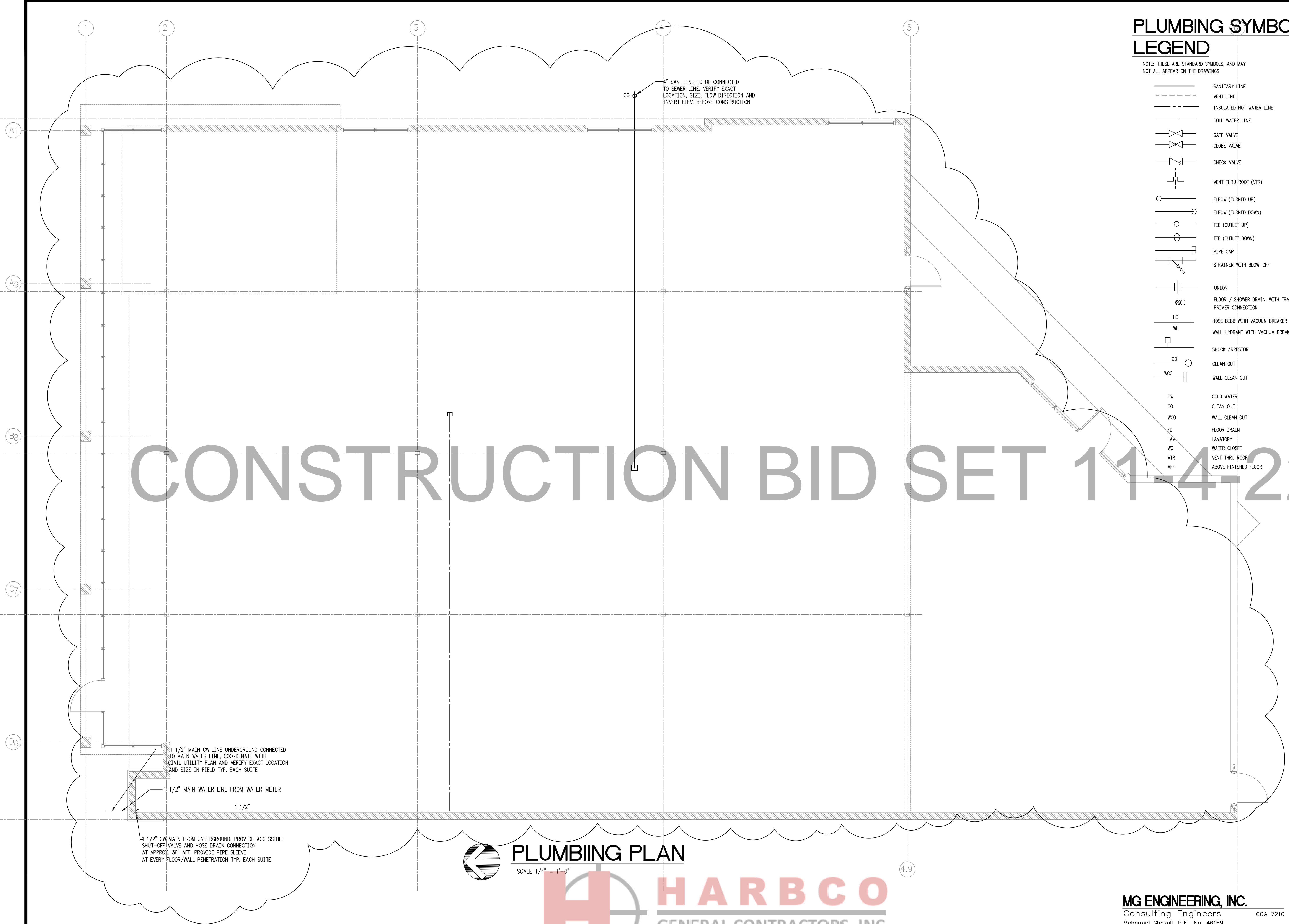
Project Team Members

Architect: Paul N Medley
PNM Architecture
101 Smokese bid
Longwood, Florida 32779
(407) 701-6440

Structural Engineer:
Brad Bishop PE
BEC Structures LLC
4094 Cardinal Glen
Oviedo, Florida 32765
Phone 407-622-2477

MEP Engineer: Mohamed Ghazal,
MG Engineering Inc,
640 Chapman Court
Oviedo, Florida 32765
Phone 407-786-4811





PLUMBING SYMBOL LEGEND

NOTE: THESE ARE STANDARD SYMBOLS, AND MAY NOT ALL APPEAR ON THE DRAWINGS

- SANITARY LINE
- VENT LINE
- INSULATED HOT WATER LINE
- COLD WATER LINE
- GATE VALVE
- GLOBE VALVE
- CHECK VALVE
- VENT THRU ROOF (VTR)
- ELBOW (TURNED UP)
- ELBOW (TURNED DOWN)
- TEE (OUTLET UP)
- TEE (OUTLET DOWN)
- PIPE CAP
- STRAINER WITH BLOW-OFF
- UNION
- FLOOR / SHOW DRAIN WITH TRAP PRIMER CONNECTION
- HOSE BIBB WITH VACUUM BREAKER (HB)
- WALL HYDRANT WITH VACUUM BREAKER (WH)
- SHOCK ARRESTOR
- CLEAN OUT
- WALL CLEAN OUT
- COLD WATER CLEAN OUT
- FLOOR DRAIN
- LAVATORY
- WATER CLOSET
- VENT THRU ROOF
- ABOVE FINISHED FLOOR



PAUL N MEDLEY
Architect
▪ AIA ▪ NCARB ▪

756 Cove Way Altamonte Springs
Florida 32712-7273
PHONE NUMBER 407-701-6440
WWW.PNM-ARCHITECTURE.COM

©2014 PNM ARCHITECTURE. THIS DESIGN AND DRAWING IS THE EXCLUSIVE PROPERTY OF PNM ARCHITECTURE. ANY USE OR REPRODUCTION WITHOUT THE EXPRESSED WRITTEN CONSENT OF PNM ARCHITECTURE IS STRICTLY PROHIBITED.

SEAL

MOHAMED GHAZALL
PE- 46169

PROJECT
VANILLA SHELL COMMERCIAL BUILDING.
1490 FAIRBANKS AVE.
WINTER PARK, FL

REVISION DATES

DATE
02/05/2020

SHEET TITLE

SHEET NUMBER
P1

PROJECT NO. MGE-1943

PLUMBING PLAN

SCALE 1/4" = 1'-0"



MG ENGINEERING, INC.
Consulting Engineers COA 7210
Mohamed Ghazall, P.E No. 46169
640 Chapman Court . Oviedo . Florida 32765
Tel. (407) 786-4811 • Fax. (407) 786-0866 • mgecalro@gmail.com
These drawings are not to be modified, changed or copied without a written permission from MG Engineering, Inc.



PLUMBING SPECIFICATIONS

WORK INCLUDED:

- A. FURNISH ALL LABOR, MATERIALS, ETC., NECESSARY TO COMPLETE THE INSTALLATION OF THE PLUMBING SYSTEM AS DESCRIBED IN THESE SPECIFICATIONS AND AS ILLUSTRATED ON THE DRAWINGS.
1. COLD WATER SYSTEMS CONNECTIONS WILL BE COMPLETE FROM UTILIZING EXIST. IN THE BUILDING TO ALL PLUMBING FIXTURES AND EQUIPMENT REQUIRING WATER.
 2. THE SYSTEM SHALL BE COMPLETE WITH CONTROLS, VALVES, EQUIPMENT, DEVICES AND INSULATION.
 3. ALL SOIL, WASTE AND VENT SYSTEMS INSIDE THE BUILDING AND SEWER CONNECTIONS INDICATED ON THE DRAWINGS.
 4. FURNISHING AND INSTALLATION OF PLUMBING FIXTURES, INCLUDING ALL THE REQUIRED TRIM, SUPPORTS, VALVES AND DEVICES.
 5. EXCAVATION, BACKFILLING AND COMPACTION REQUIRED FOR COMPLETE INSTALLATION.
 6. ALL ROUGH-IN, TEST AND FINAL CONNECTION TO EQUIPMENT.
 7. FURNISHING OF ALL FINAL PLUMBING CONNECTIONS TO SPACE HEATING AND AIR CONDITIONING EQUIPMENT INCLUDING CONDENSATE DRAINS.
 8. SAWCUT EXISTING CONC. SLAB TO ALLOW CONNECTIONS TO THE EXISTING LINES AS NEEDED. COORDINATE AND INVESTIGATE EXISTING CONDITIONS BEFORE CUTTING.

QUALITY ASSURANCE:

- A. USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND THE METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.

SUBMITTALS:

- A. SHOP DRAWINGS:
WITHIN 35 DAYS AFTER AWARD OF CONTRACT, AND BEFORE ANY PLUMBING MATERIALS ARE DELIVERED TO THE JOBSITE, SUBMIT TO THE OWNER'S REP. COMPLETE SHOP DRAWINGS, INCLUDING ALL PLUMBING FIXTURES, TRIM, DRAINS, CLEANOUTS, PIPING, VALVES, INSULATION, HANGERS, SUPPORTS, EQUIPMENT AND DEVICES PROPOSED TO BE FURNISHED AND INSTALLED.
- B. RECORD DRAWINGS:
DURING THE PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF ALL CHANGES MADE IN THE PLUMBING SYSTEMS. THE RECORD SHALL SHOW CHANGES IN MANUFACTURER (WITH NUMBERS AND TRADE NAMES), MATERIALS, SIZES, LOCATIONS, AND HOOKUP POINTS.

PRODUCT HANDLING:

- A. USE ALL MEANS NECESSARY TO PROTECT PLUMBING MATERIALS BEFORE, DURING AND AFTER INSTALLATION AND TO PROTECT THE INSTALLED WORK AND MATERIALS OF ALL OTHER TRADES.
- B. IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND/OR REPLACEMENTS NECESSARY TO THE APPROVAL OF THE OWNER'S REP. AND AT NO ADDITIONAL COST TO THE OWNER.

EXAMINATION OF THE SITE:

EXAMINE THE SITE AND ALL EXISTING CONDITIONS. TAKE INTO CONSIDERATION ALL CONDITIONS THAT MAY AFFECT THE WORK UNDER THIS CONTRACT. LACK OF THIS INFORMATION WILL NOT BE CONSIDERED AS JUSTIFICATION FOR EXTRA COST OR ALLOWANCES TO THE CONTRACT PRICE.

COMPLIANCE WITH CODES AND PERMITS:

- A. COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, SAFELY ORDERS AND REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
- B. CONTRACTOR SHALL PAY ALL FEES, MISCELLANEOUS COSTS AND SHALL OBTAIN ALL PERMITS NECESSARY TO CARRY ON THE WORK. BEFORE FINAL ACCEPTANCE OF THE WORK, FURNISH TO THE OWNER CERTIFICATES OF INSPECTION, STATING THAT THE WORK HAS BEEN INSPECTED AND APPROVED BY THE BUILDING DEPARTMENT AND THE AUTHORITY HAVING JURISDICTION.

GUARANTEE:

ADJUST ALL VALVES, CONTROLS, VACUUM BREAKERS AND INCIDENTAL ITEMS AND LEAVE THE SYSTEM IN PERFECT OPERATING CONDITION. REGULATE, REPAIR AND REPLACE ANY DEFECTIVE WORKMANSHIP, MATERIALS AND EQUIPMENT WHICH MAY BECOME APPARENT WITHIN ONE YEAR AFTER THE DATE OF FINAL ACCEPTANCE OF THE WORK. THE DECISION OF THE OWNER SHALL BE FINAL IN RESPECT TO IMPERFECTIONS. FURNISH THE OWNER ALL MANUFACTURERS WRITTEN GUARANTEES OF MATERIALS AND EQUIPMENT, INCLUDING WATER HEATER WARRANTY REQUIREMENTS AND WATER STERILIZATION REPORT. (WHERE APPLICABLE).

PIPE:

- A. SANITARY SOIL, STORM, WASTE AND VENT SYSTEMS: SOIL, WASTE AND VENT PIPING BELOW SLAB ON GRADE, TO 2'-0" OUTSIDE OF BUILDING LINE SHALL BE HUB AND SPIGOT CAST IRON PIPE AND FITTINGS WITH COMPRESSION JOINTS ABOVE GRADE. IN BUILDING SHALL BE CAST IRON PIPE NO-HUB WITH STAINLESS STEEL COUPLINGS. PVC TYPE DWV, ASTM D-2665 LISTED AND BEAR NSF SEAL WITH CEMENT JOINT AND FITTINGS AS MANUFACTURED BY JOHNS-MANVILLE, IF ALLOWED BY LOCAL AUTHORITIES. PROVIDE WRITTEN APPROVAL TO THE OWNER'S REP.
- B. WATER PIPING ABOVE AND BELOW SLAB SHALL BE COPPER TYPE "K" WITH SOLDER FITTINGS. NO JOINTS WILL BE ALLOWED UNDER BUILDING SLAB. WATER PIPING ABOVE SLAB MAY BE PLASTIC WITH COPPER FITTINGS. OBTAIN OWNER'S REP. APPROVAL BEFORE USING PLASTIC. PASTIC PIPING SHALL NOT BE USED IN FIRE RATED PARTITIONS.
- C. INDIRECT WASTE AND CONDENSATE DRAIN LINES: SHALL BE COPPER TYPE "M" WITH 95-5 SILVER SOLDER JOINT FITTINGS OR "PVC" FOR ROOF TOP PACKAGED AIR CONDITIONING UNITS.

VALVES:

- A. UNION-NIBCO #733, OR KENNEDY OR APPROVED EQUAL.
- B. GLOBE VALVES - HAMMOND 1842ST OR KENNEDY OR APPROVED EQUAL.
- C. BALL VALVES - HAMMOND 8311 OR KENNEDY OR APPROVED EQUAL.
- D. CHECK VALVES - HAMMOND 18912 OR KENNEDY OR APPROVED EQUAL.
- E. AIR VENTS - HOFFMAN #79.
- F. PRESSURE REGULATOR - IF REQUIRED, BAILEY 30 OR WATTS # USLP DIAPHRAM AND SEAT SHALL WITHSTAND TEMPERATURE OF 225 DEGREES.

PIPE SLEEVES AND ESCUTCHEONS:

- A. "ADJUST-O-RETE", OR EQUAL SLEEVES APPROVED IN ADVANCE BY THE OWNER'S REP., WITH AMPLE CLEARANCE FOR PIPE AND COVERING, AND WITH CHROME-PLATED WALL AND FLOOR ESCUTCHEONS OVER PIPE IN ALL FINISHED AREAS.

HANGERS AND SUPPORTS:

- A. SOIL, WASTE AND VENT PIPING ON HORIZONTAL LINES, SHALL BE FEE AND MASON #215 ADJUSTABLE RING HANGERS, SPACED NOT MORE THAN FIVE FEET APART.
- B. WATER AND GAS PIPING SHALL BE FEE AND MASON #212 SPLIT RING HANGERS WITH SUPPORTING RODS, SPACED NOT MORE THAN 10 FEET APART FOR 1-1/2" PIPE AND LARGER AND 6 FEET APART FOR 1-1/4" PIPE AND SMALLER.

FLASHINGS:

- A. FURNISH AND INSTALL ON EACH PIPE PASSING THROUGH THE ROOF 26 GAUGE GALVANIZED IRON FLASHING ASSEMBLY. FLASHING SHALL BE COMPLETE WITH CAST IRON COUNTER FLASHING SLEEVE AND PERMASEAL WATERPROOFING COMPOUND OR AS RECOMMENDED BY THE MANUFACTURER.

WATER HAMMER ARRESTORS:

- A. STAINLESS STEEL CONSTRUCTION BELLOWS TYPE PDI APPROVED AND CERTIFIED SIZING AND PLACEMENT CONFORMING TO PLUMBING AND DRAINAGE INSTITUTE STANDARD PDI-WH201 LATEST EDITION AND AS MANUFACTURED BY J.R. SMITH OR ZURN.

CLEANOUTS:

- A. FINISHED ROOM FLOORS: J.R. SMITH 4163 WITH NICKEL BRONZE TOP AND GASKETED WATERTIGHT COVER SECURE INDEPENDENTLY OF PLUG.
- B. VINYL FLOORS: J.R. SMITH 4163 WITH NICKEL BRONZE TOP AND GASKETED WATERTIGHT COVER SECURE INDEPENDENTLY OF PLUG.
- C. UNFINISHED ROOM FLOORS: J.R. SMITH 4223 WITH ROUGH GASKETED WATERTIGHT COVER SECURE INDEPENDENTLY OF PLUG.
- D. WALLS: J.R. SMITH 4532 WITH BRONZE COUNTERSUNK SLOTTED PLUG CHROME PLATED COVER.
- E. ABOVE GROUND: CAST IRON LINES: J.R. SMITH 4420X.H., WITH EXTRA HEAVY BRONZE COUNTERSUNK SLOTTED PLUG ONLY.

PIPE ISOLATORS:

- A. ISOLATION FITTING: SHALL BE MANUFACTURED BY ELOEN INSULATING COUPLING OR APPROVED EQUAL. ISOLATION FITTINGS SHALL BE INSTALLED AT ALL POINTS WHERE COPPER OR BRASS PIPE OR TUBING JOINS FERROUS PIPE, FITTINGS, OR EQUIPMENT.

INSULATION:

- A. PIPE INSULATION MATERIAL: ALL HOT WATER SUPPLY PIPING (UNLESS OTHERWISE NOTED ON PLANS) SHALL BE INSULATED WITH PPC INDUSTRIES, CERTAIN-TIED SAINT COBAIN SNAP-ON OR JOHNS-MANVILLE MICRO-LOC, 1" THICK.
- B. COLD WATER, HOT WATER SUPPLY PIPING AND TAILPIPE, "P" TRAP AND TRAP ARM OF HANDICAPPED LAVATORIES SHALL BE INSULATED. UTILIZING TRAP-WRAP 500 AS MANUFACTURED

- BY PROCAR PRODUCTS, INC. CINCINNATI, OHIO.
- C. ALL INDIRECT DRAIN LINES SHALL BE INSULATED WITH JOHNS-MANVILLE "AEROTUBE" FOAM PLASTIC PIPE INSULATION, 3/4" THICK.
- D. ABOVE CEILING STORM DRAIN LINES SHALL BE INSULATED WITH 1" THICK FIBERGLASS BLANKET INSULATION.

THERMOMETERS:

- A. SHALL BE WEKSLER TYPE AASH, OR APPROVED EQUAL, 30 DEGREE TO 240 DEGREE F, 2 DEGREE DIVISIONS. THERMOMETERS SHALL BE READABLE FROM FLOOR.

INSPECTION:

- A. EXAMINE THE AREAS AND CONDITIONS UNDER WHICH WORK OF THIS SECTION WILL BE PERFORMED. CORRECT CONDITIONS DETRIMENTAL TO TIMELY AND PROPER COMPLETION OF THE WORK DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED.

INSTALLATION:

- A. ALL PIPING SHALL BE RUN CONCEALED EXCEPT WHERE SHOWN OTHERWISE ON DRAWINGS. WHERE PIPING IS RUN EXPOSED, IT SHALL BE PLACED IN UNIMPORTANT AND OUT-OF-THE-WAY PLACES, AS APPROVED BY THE OWNER'S REP.
- B. FURNISH AND INSTALL WATER HAMMER ARRESTER AT ALL FLUSH VALVE OR ANY QUICK-CLOSING VALVE.
- C. VALVES, TRAPS, CLEANOUTS AND OTHER APPARATUS SHALL BE INSTALLED IN AN EASILY ACCESSIBLE LOCATION.
- D. SOIL, WASTE VENT OFFSETS AND BUILDING DRAINS SHALL BE INSTALLED WITH A MINIMUM, UNIFORM GRADE OF 1/4" TO THE FOOT, OR AS REQUIRED BY THE LOCAL CODE.
- E. ALL WATER PIPES SHALL HAVE A MINIMUM CLEARANCE OF 1/2" AND SHALL BE ISOLATED FROM BUILDING STRUCTURE OR OTHER PIPING.
- F. HOT AND COLD WATER LINES SHALL BE AT LEAST 6" APART WHERE PIPING IS PARALLEL.
- G. PIPE ISOLATORS SHALL BE INSTALLED ON ALL WATER PIPING AT ALL RING HANGERS.
- H. ISOLATION FITTINGS: SHALL BE INSTALLED AT ALL JOINTS WHERE COPPER OR BRASS PIPE OR TUBING JOINS FERROUS PIPE, FITTINGS OR EQUIPMENT.
- I. ACCESS PANELS: PROVIDE AND INSTALL ACCESS PANEL OVER ALL EQUIPMENT BUILT, INTO WALLS, FLOORS, OR CEILINGS SUCH AS VALVES, CLEANOUTS, ETC. ALL SHALL BE OF A SIZE SUITABLE FOR THE SERVICE INTENDED - VERIFY BEFORE START OF ANY WORK TO INSURE THAT NEITHER EQUIPMENT NOR FIXTURES WILL GET IN THE WAY OF THE ACCESS PANELS AFTER COMPLETION.
- J. CLEANOUTS:
1. CLEANOUTS SHALL BE INSTALLED AT ALL CHANGES IN DIRECTION AND NOT MORE THAN SEVENTY-FIVE (75) FEET APART IN ANY RUN AND WHERE REQUIRED BY THE LOCAL PLUMBING ORDINANCE.
2. EACH CLEANOUT SHALL BE FULLY ACCESSIBLE AND SO INSTALLED AS TO SERVE THE PURPOSE FOR WHICH IT IS INTENDED.
- K. ALL FIXTURES SHALL BE SECURELY ATTACHED TO SUPPORTING SURFACES AS SPECIFIED AND SHALL BE INSTALLED PLUMB LEVEL. WALL-HUNG FIXTURES SHALL BE SECURED BY FLOOR MOUNTED CARRIERWOOD.
- L. PROTECTION: PROVIDE ADEQUATE PROTECTION FOR ALL EQUIPMENT AND FIXTURES AND LEAVE THE WORK IN A NEAT, CLEAN CONDITION READY FOR USE AND OPERATION, AND ACCEPTABLE TO THE OWNER'S REP.
- M. CUTTING AND PATCHING: THE CONTRACTOR SHALL DO ALL CUTTING AND PATCHING AND SHALL PROVIDE ALL OPENINGS TOGETHER WITH LINTELS AND SUPPORTS WHICH MAY BE REQUIRED FOR THE INSTALLATION OF THE WORK UNDER THIS SECTION OF THE SPECIFICATIONS. PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP AND FINISH AS, AND SHALL ACCURATELY MATCH, ALL SURROUNDING CONSTRUCTION.
- N. INSULATION: PIPING INSULATION SHALL BE INSTALLED OR APPLIED PER THE MANUFACTURERS WRITTEN INSTRUCTIONS.

PLUMBING FIXTURES:

- A. EQUAL QUALITY TO AMERICAN STANDARD WILL BE ACCEPTABLE. FURNISH AND INSTALL ALL SUPPORTS NECESSARY FOR THE REQUIRED FIXTURES. PLUMBING FIXTURES SHALL NOT, UNDER ANY CIRCUMSTANCES, BE SUPPORTED BY PIPING CONNECTIONS. ALL PLUMBING FIXTURES SHALL BE OF ONE MANUFACTURER EXCEPT WHERE CHANGES ARE APPROVED IN WRITING BY THE OWNER'S REP.
- B. LAVATORIES AND SINKS SHALL BE PROVIDED WITH HOT AND COLD WATER. FIXTURES SHALL BE PROVIDED WITH WASTE AND VENT CONNECTIONS, AS SHOWN ON THE DRAWINGS, AND AS REQUIRED BY THE APPLICABLE PLUMBING CODE. FIXTURES AND FLOOR DRAINS SHALL HAVE TRAPS. FACTORY TYPE SHOCK ABSORBERS SHALL BE USED ON HOT AND COLD WATER LINES. ALL PIPING IN FINISHED AREAS SHALL HAVE CHROMIUM PLATED FLOOR AND WALL ESCUTCHEONS.
- C. FAUCETS SHALL BE EQUIPPED WITH RENEWABLE SEATS. ALL EXPOSED METAL PARTS OF FIXTURES SHALL BE CHROMIUM PLATED.
- D. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROTECTION OF ALL FIXTURES AFTER INSTALLATION UNTIL THE PROJECT IS COMPLETED AND ACCEPTED BY THE OWNER.

PIPE WRAPPING (BURIED STEEL PIPE):

- A. UNDERGROUND STEEL PIPING SHALL BE PROTECTED WITH A FACTORY APPLIED POLYETHYLENE COVERING SIMILAR AND EQUAL TO "SPOCKWRAP" OR "Y-TRU-COAT". ALL FIELD JOINTS SHALL BE WRAPPED AFTER TESTING WITH POLYETHYLENE SLEEVES THAT WILL SHRINK TIGHTLY TO PIPE WHEN HEATED. SLEEVES SHALL BE SUPPLIED BY SAME MANUFACTURER AS PIPE COVERING AND PER INSTALLED AS PER MANUFACTURERS DIRECTIONS.
- B. PIPE SHALL BE LAID ON A BED OF SAND AT LEAST TWO INCHES DEEP.

TESTING:

- A. ALL WORK SHALL BE TESTED UNDER THE SUPERVISION OF THE REPRESENTATIVE OF THE OWNER OR OWNER'S REP. AND SHALL BE INSPECTED BY ALL AUTHORITIES HAVING JURISDICTION OVER THIS WORK.
- B. TESTS SHALL BE MADE ON THE VARIOUS PARTS OF THE SYSTEMS AS REQUIRED BY GOVERNING AUTHORITIES AND SHALL BE PAID FOR BY THIS CONTRACTOR.
- C. MINIMUM TESTS REQUIRED SHALL BE:

SYSTEM TESTED	GAUGE PRESSURE AT START OF TEST	GAUGE PRESSURE AFTER 4 HRS. OF TEST NOT LESS THAN
WATER	25 POUNDS ABOVE WORKING PRESSURE	SAME PRESSURE

1. PRESSURE TESTS: TURN OVER ALL TEST CHARTS TO OWNER'S REPRESENTATIVE.
2. SEWER, WASTE AND VENT PIPING: FILL WITH WATER TO TOP OF HIGHEST VENT, ALLOW TO STAND TWO (2) HOURS OR LONGER, AS DIRECTED BY THE OWNER'S REP. TESTING MAY BE DONE IN SECTIONS. EACH SECTION TESTED SHALL INCLUDE AT LEAST TEN (10) FEET OF THE UPPER PORTION OF THE NEXT PRECEDING SECTION.

OPERATING TESTS:

1. TESTS SHALL BE PERFORMED BEFORE FINAL ACCEPTANCE AND UNDER THE SUPERVISION OF THE OWNER'S REP. AND / OR OWNER. OPERATION OF THE TESTS SHALL BE FOR EIGHT (8) HOURS. ALL LABOR AND INSTRUMENTS FOR TESTS SHALL BE FURNISHED BY THE CONTRACTOR.
2. TESTS SHALL DEMONSTRATE THAT THERE IS FREE AND EQUAL CIRCULATION FROM EACH PART OF THE PIPING SYSTEMS, AS WELL AS SATISFACTORY OPERATION OF ALL VALVES, PUMPS, EQUIPMENT, AUTOMATIC CONTROLS, ETC.

CLEANING PIPING SYSTEMS:

- A. AFTER THE PIPING SYSTEMS HAVE BEEN TESTED AND PROVED TIGHT, THE CONTRACTOR SHALL CLEAN THE VARIOUS SYSTEMS INCLUDING STRAINERS OF DIRT, OIL, GREASE, WASTE AND OTHER FOREIGN SUBSTANCES WHICH MAY HAVE ACCUMULATED DURING THE PROCESS OF INSTALLATION. AFTER KITCHEN EQUIPMENT IS INSTALLED AND CONNECTED AND JUST PRIOR TO OPENING, THE ENTIRE WASTE SYSTEM FROM FLOOR DRAINS OR FLOOR SINKS SHALL BE CLEANED WITH A MECHANICAL SWAGE ROOTER TO INSURE CLEAN, FREE-FLOWING WASTE LINES. ALL CHROME PLATED PARTS AND PIPE SHALL BE POLISHED. IN GENERAL, SYSTEM SHALL BE LEFT IN A CLEAN, NEAT AND USABLE CONDITION. GAS PIPING SHALL HAVE AIR BLOWN THROUGH EACH INDIVIDUAL OPENING FOR A PERIOD OF FIVE MINUTES TO DEMONSTRATE NO CLOGGING.

WATER SYSTEM STERILIZATION:

- A. BEFORE ANY USE OF SYSTEM IS MADE FOR DOMESTIC PURPOSES, IT SHALL BE STERILIZED BY SLOWLY FILLING WITH WATER TO WHICH A STERILIZING AGENT HAS BEEN APPLIED, AT A RATE GIVING 50 PPM OF CHLORINE, AS DETERMINED BY RESIDUAL CHLORINE TEST AT EXTREMITIES OF THE LINE. AFTER LINES HAVE BEEN FILLED FOR A PERIOD OF THREE (3) HOURS, TESTS FOR RESIDUAL CHLORINE SHALL SHOW NOT LESS THAN 50 PPM. IF LESS THAN 50 PPM IS INDICATED, DRAIN OR FLUSH OUT THE LINE AND REPEAT STERILIZATION TREATMENT UNTIL TESTS INDICATE AT LEAST 50 PPM OF RESIDUAL CHLORINE AFTER THREE (3) HOURS. THE LINES SHALL THEN BE FLUSHED OUT UNTIL ALL TRACES OF CHEMICAL HAVE BEEN REMOVED.

GROUTING:

- A. GROUT BEHIND ALL WALL HUNG PLUMBING FIXTURES WITH HARD, WHITE DURABLE PLASTER MATERIALS, ELIMINATING ALL VOIDS AND CRACKS AND PROVIDING SUFFICIENT PLANE BEARING SURFACE FOR MOUNTING.

ADJUSTING:

- A. UPON COMPLETION OF AND AFTER CLEANING OF SYSTEM AND EQUIPMENT, AUTOMATIC PARTS OF PLUMBING SYSTEMS SHALL BE CAREFULLY ADJUSTED FOR NORMAL OPERATION.

TRENCHING AND BACKFILLING:

- PERFORM ALL TRENCHING AND BACKFILLING ASSOCIATED WITH THE PLUMBING INSTALLATION IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.

HARBICO
GENERAL CONTRACTORS, INC.

MG ENGINEERING, INC.

Consulting Engineers COA 7210

Mohamed Ghazall, P.E. No. 46169

640 Chapman Court . Oviedo . Florida 32765

Tel. (407) 786-4811 • Fax. (407) 786-0866 • mgecairo@gmail.com

These drawings are not to be modified, changed or copied without a written permission from MG Engineering, Inc.



PNM
ARCHITECTURE

PAUL N MEDLEY
Architect
▪ AIA ▪ NCARB ▪

756 Cove Way Altamonte Springs
Florida 32712-7273
PHONE NUMBER 407-701-6440
WWW.PNM-ARCHITECTURE.COM

©2014, PNM ARCHITECTURE. THIS DESIGN AND DRAWING IS THE EXCLUSIVE PROPERTY OF PNM ARCHITECTURE. ANY USE OR REPRODUCTION WITHOUT THE EXPRESSED WRITTEN CONSENT OF PNM ARCHITECTURE IS STRICTLY PROHIBITED.

SEAL

MOHAMED GHAZALL
PE- 46169

PROJECT
VANILLA SHELL COMMERCIAL
BUILDING.
1490 FAIRBANKS AVE.
WINTER PARK, FL

REVISION DATES

DATE

02/05/2020

SHEET TITLE

SHEET NUMBER

P2

PROJECT NO. MGE-1943