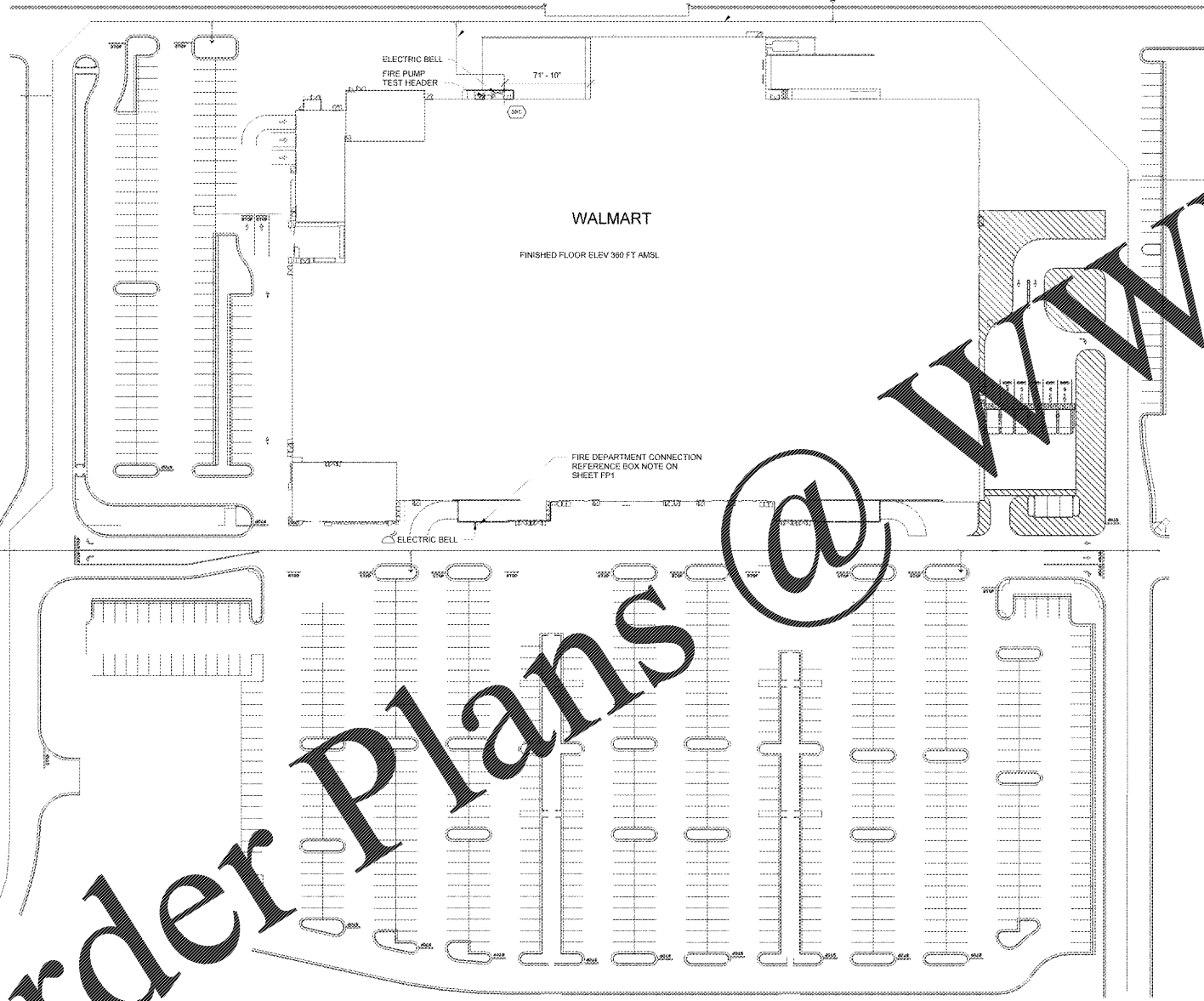
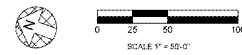


4 SECTION ELEVATION
NTS



1 HYDRAULIC CALCULATION PLAN
1" = 50'-0"

UNDERGROUND PIPING SHOWN FOR FIRE SPRINKLER HYDRAULIC CALCULATION PURPOSES ONLY. DESIGN FEATURES SUCH AS THE BUILDING SHAPE, HYDRANTS AND PARKING CURBS ARE NOT TO BE DESIGNED BASED ON THIS PLAN. REFER TO ARCHITECTURAL AND CIVIL CONTRACT DOCUMENTS.



CONTACT INFORMATION

DOCUMENTS INCLUDE JURISDICTIONAL REQUIREMENTS PROVIDED BY THE FOLLOWING CONTACTS:

FIRE SPRINKLER REVIEWING AUTHORITY:
VICKE TIPLING - FIRE PROTECTION PLAN REVIEWER
703-771-5447

CROSS CONNECTION CONTROL AUTHORITY:
AREF ETEMEDI - DEPUTY DIRECTOR
703-771-2754

WATER SUPPLY INFORMATION

TEST STATIC AT SRC: 52.0 PSI
TEST RESIDUAL AT SRC: 50.0 PSI AT 1000 GPM

INFORMATION DERIVED FROM A WATER REPORT SUPPLIED BY BENCHMARK GROUP INC DURING A FLOW TEST VISIT ON 8/22/17. THE TEST WAS CONDUCTED AT 7.29 AM AND WITNESSED BY THE TOWN OF LEESBURG UTILITIES DEPARTMENT.

FLOW TEST ELEVATION: 382.0 FT AMSL
BUILDING PAD ELEVATION: 365.0 FT AMSL

THE WATER SUPPLY IS MODIFIED BY THE FOLLOWING:

- + 13.86 PSI DUE TO ELEVATION DIFFERENCE BETWEEN TEST AND BUILDING
- 11.09 PSI DUE TO (LOW TANK GRADIENT) (PUMP START TANK LEVEL)
- 21.02 FRICTION LOSS IN PIPING FROM TEST TO BOR.

DESIGN STATIC AT BOR: 54.77 PSI
DESIGN RESIDUAL AT BOR: 25.53 PSI AT 2000 GPM
3.0 PSI STATIC AND 5.0 PSI RESIDUAL PRESSURE LOSSES DUE TO 10 FT AMES (MSGL) BACKFLOW PREVENTER NOT INCLUDED. ADDITIONAL 5.0 PSI REQUIREMENT FACTOR IS NOT INCLUDED.

APPLICABLE CODES

NFPA STANDARD
NFPA 13
NFPA 24
NFPA 25
REFER SHEET C1 FOR APPLICABLE CODES

KNOX BOX NOTES

- COORDINATE LOCATION AND HEIGHTS OF THE KNOX BOX WITH THE AHJ AND GENERAL CONTRACTOR'S REQUIREMENTS.
- A KNOX BOX IS REQUIRED AT THE MAIN ENTRANCE OF THE BUILDING AND OUTSIDE FIRE PUMP ROOM.

GENERAL UNDERGROUND NOTES

- INSTALLATION AND MATERIAL TO BE PER NFPA 24. PIPING UNDER FOOTINGS TO BE DUCTILE IRON.
- PIPING AND ATTACHED APPURTENANCES SUBJECT TO SYSTEM WORKING PRESSURE SHALL BE HYDROSTATICALLY TESTED AT 200 PSI OR 50 PSI IN EXCESS OF THE SYSTEM WORKING PRESSURE, WHICHEVER IS GREATER, AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR TWO HOURS.
- UNDERGROUND PIPE TO BE FLUSHED PRIOR TO CONNECTION TO OVERHEAD SPRINKLER PIPING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT FLUSHING OF THE UNDERGROUND PIPING HAS OCCURRED PRIOR TO CONNECTION.
- PROVIDE CONCRETE THRUST BLOCKING AND THRUST RODS AS REQUIRED BY NFPA 24.
- UNDERGROUND PIPING MUST BE INSTALLED BY A CONTRACTOR LICENSED WITH THE AUTHORITY HAVING JURISDICTION. ALL TESTING MUST BE COMPLETED IN ACCORDANCE WITH NFPA 13, NFPA 24, AND NFPA 25. ALL COMPLETED REPORTS MUST BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION AND STORED ON SITE FOR PRESENTATION DURING SITE OBSERVATION.

FIRE DEPARTMENT CONNECTION NOTES

- THE FIRE DEPARTMENT CONNECTION SHALL BE LOCATED WHERE SHOWN ON THE FIRE PROTECTION DRAWINGS AND SHALL BE ACCESSIBLE FROM ALL DIRECTIONS.
- THE FIRE DEPARTMENT CONNECTION SHALL BE INSTALLED AT A MINIMUM OF 10' AND A MAXIMUM OF 42" ABOVE THE FINISHED GRADE.
- THE FIRE DEPARTMENT CONNECTION SHALL CONSIST OF 2" - 2 1/2" CONNECTIONS.
- THE SUPPLY LINE FROM THE FIRE DEPARTMENT CONNECTION TO THE RISER MANIFOLD SHALL BE A MINIMUM OF 6" DIA. PIPE.
- PROVIDE A FIRE HYDRANT WITHIN 100'-0" OF THE FIRE DEPARTMENT CONNECTION.
- INSTALL AN ELECTRIC BELL ON THE EXTERIOR WALL ABOVE THE FIRE DEPARTMENT CONNECTION. THIS DEVICE SHALL ACTIVATE ON WATERFLOW ONLY.
- PROVIDE SIGNAGE AT THE FIRE DEPARTMENT CONNECTION AS REQUIRED BY NFPA 13.

GENERAL NOTES

- THE DESIGN SHOWN ON THESE CONTRACT DOCUMENTS HAS BEEN PREPARED FOR APPROVAL BY THE AUTHORITY HAVING JURISDICTION AND TO PROVIDE GUIDANCE FOR BIDDING. THE CONTRACTOR SHALL SUBMIT COMPLETE FIRE SPRINKLER SHOP DRAWINGS AS REQUIRED BY SPECIFICATION SECTION 03350. CONTRACTOR SHALL BASE SHOP DRAWING DESIGN ON THE FIRE PROTECTION DRAWINGS AND SPECIFICATIONS. SPRINKLER SHOP DRAWINGS SHALL INCLUDE ALL NECESSARY ELEVATIONS, HANGER LOCATIONS, PIPE LENGTHS, DIMENSIONS, FABRICATION METHODS, MATERIAL DATA, AND ANY OTHER INFORMATION NECESSARY TO CLARIFY THE INTENT OF INSTALLATION. CONTRACTOR SHALL PROVIDE PIPE SIZES, SPRINKLER SPACING, AND HANGER CONFIGURATIONS AS SHOWN. ANY DEVIATION FROM THE DESIGN OF THE SYSTEM OR IN MATERIALS OR EQUIPMENT USED MUST BE APPROVED IN WRITING VIA THE REQUEST FOR INFORMATION (RFI) PROCEDURE BY THE FIRE PROTECTION ENGINEER OF RECORD PRIOR TO ANY BIDDING, SUBMITTAL, OR INSTALLATION.
- CONTRACTOR SHALL COORDINATE LOCATION OF FIRE PROTECTION COMPONENTS INCLUDING SPRINKLER, ALARMS, DRAWINGS, ELECTRICAL, MECHANICAL, AND ELECTRICAL COMMUNICATION CONNECTIONS TO THE FIRE PROTECTION ENGINEER OF RECORD.
- SPRINKLER SHOP DRAWING PRODUCTION AND INSTALLATION OF EXTRA SPRINKLERS MAY BE REQUIRED AT ADDITIONAL COST TO WALMART. REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR SHALL PROVIDE A REQUEST FOR INFORMATION (RFI) FOR QUESTIONS RELATED TO THE FIRE PROTECTION DOCUMENTS.
- ROUTE ALL SPRINKLER MAINS ABOVE THE BOTTOM CHORD OF THE BAR JOISTS.
- MULTIPLANATION DIMENSION WALLS ARE SHOWN ON THE ARCHITECTURAL DRAWINGS. REFER TO THE MECHANICAL DRAWINGS FOR NEUTRALIZATION WALL PENETRATIONS.
- SPRINKLER SYSTEMS WILL BE MONITORED BY AN OFF-SITE CENTRAL STATION INCLUDING TAMPER SWITCHES ON ALL CONTROL VALVES AND FLOW SWITCHES.
- IF APPLICABLE, THE CONTRACTOR SHALL ASSUME THAT ANY CURTAIN BOARDS OR DRAFT CURTAINS WILL BE INSTALLED PRIOR TO THE SPRINKLER PIPING. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER PENETRATIONS OF THE CURTAIN BOARDS OR DRAFT CURTAINS AND SEALING WITH APPROVED FIRE CAULKING.
- PENETRATIONS OF RATED WALLS OR ASSEMBLIES SHALL BE "FIRE CAULKED" WITH APPROVED CAULKING PER METHODS REQUIRED BY THE AUTHORITY HAVING JURISDICTION, AND PROJECT SPECIFICATION.
- THE FIRE PROTECTION ENGINEER OF RECORD WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. NEITHER SHALL THEY BE REQUIRED TO SUPERVISE THE CONDUCT OF THE WORK. THE CONSTRUCTION PROCEDURES AS SET FORTH BY THE GENERAL CONTRACTOR, SUB-CONTRACTORS, THEIR RESPECTIVE EMPLOYEES, OR ANY OTHER PERSON AT THE JOBSITE OTHER THAN THE ENGINEERING FIRMS OWN EMPLOYEES.
- SPRINKLER PROTECTION IS REQUIRED ABOVE THE ELECTRICAL ROOMS. NO MAIN PIPING SHALL PENETRATE OR PASS ABOVE THE ELECTRICAL ROOMS.
- THE CONTRACTOR MUST REVIEW ALL CONSTRUCTION DOCUMENTS PRIOR TO BID. SHOULD MODIFICATION TO THESE PLANS BECOME NECESSARY TO PROPERLY COORDINATE THE SYSTEM WITH OTHER TRADES, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL OF THESE CHANGES BY THE AHJ AND THE FIRE PROTECTION ENGINEER OF RECORD. IN ADDITION TO OBTAINING THE NECESSARY APPROVALS, THE CONTRACTOR MUST MAKE NOTE OF ALL FIELD OR COORDINATION CHANGES ON THE INSTALLATION DRAWINGS. ONCE COMPLETE, THE CONTRACTOR SHALL SUPPLY ONE COPY OF AS-BUILT DRAWINGS TO THE FIRE PROTECTION ENGINEER OF RECORD FOR THEIR USE.
- THE CONTRACTOR SHALL DIVERT ALL DRAIN AND INSPECTORS TEST CONNECTION DISCHARGE AWAY FROM FINISHED SURFACES AND PIPE TO APPROVED DRAIN LOCATIONS. THE CONTRACTOR WILL BE BACKCHARGED FOR ANY REPAIR, REPLACEMENT, OR CLEANING OF RUST STAINS ON PAVEMENT/CONCRETE DUE TO WATER DISCHARGE FROM SPRINKLER SYSTEM DRAIN DOWNS.
- ALL HANGER CONNECTIONS SHALL BE MADE TO THE TOP CHORD OF STRUCTURAL JOIST UNLESS NOTED OTHERWISE. USE OF SELF TAPPING AND POWDER DRIVEN THREADED ROD ANCHORS INTO ROOF DECK OR STRUCTURE IS PROHIBITED UNLESS OTHERWISE NOTED.
- PROVIDE A MINIMUM 10 PSI SAFETY FACTOR FOR HYDRAULIC CALCULATIONS OF SPRINKLER SYSTEMS. USE HIGHER SAFETY FACTOR WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

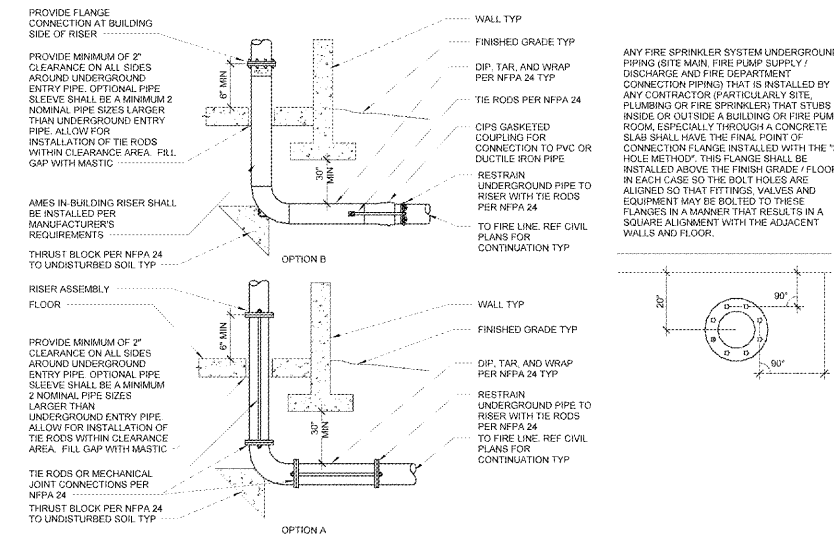
PIPE TABLE (WET)

FRIT	NOMINAL PIPE SIZE	INSIDE DIAMETER	PRODUCT	NOMINAL PIPE SIZE	INSIDE DIAMETER
1	2	2.203	SCHEDULE 10 GALVANIZED	2"	2.157
1	2 1/2	2.703	SCHEDULE 10 GALVANIZED	2 1/2"	2.635
1	3	3.314	SCHEDULE 10 GALVANIZED	3"	3.260
1	4	4.310	SCHEDULE 10 GALVANIZED	4"	4.269
1	6	6.307	SCHEDULE 10 GALVANIZED	6"	6.249
1	8	8.249	SCHEDULE 10 GALVANIZED	8"	8.249
1	10	12.315	SCHEDULE 10 GALVANIZED	10"	12.315
1	12	15.315	SCHEDULE 10 GALVANIZED	12"	15.315
1	14	18.315	SCHEDULE 10 GALVANIZED	14"	18.315
1	16	21.315	SCHEDULE 10 GALVANIZED	16"	21.315
1	18	24.315	SCHEDULE 10 GALVANIZED	18"	24.315
1	20	27.315	SCHEDULE 10 GALVANIZED	20"	27.315
1	24	33.315	SCHEDULE 10 GALVANIZED	24"	33.315
1	30	42.315	SCHEDULE 10 GALVANIZED	30"	42.315
1	36	51.315	SCHEDULE 10 GALVANIZED	36"	51.315
1	42	60.315	SCHEDULE 10 GALVANIZED	42"	60.315
1	48	69.315	SCHEDULE 10 GALVANIZED	48"	69.315
1	60	84.315	SCHEDULE 10 GALVANIZED	60"	84.315
1	72	100.315	SCHEDULE 10 GALVANIZED	72"	100.315
1	84	116.315	SCHEDULE 10 GALVANIZED	84"	116.315
1	96	132.315	SCHEDULE 10 GALVANIZED	96"	132.315
1	108	148.315	SCHEDULE 10 GALVANIZED	108"	148.315
1	120	164.315	SCHEDULE 10 GALVANIZED	120"	164.315

PIPE TABLE (UNDERGROUND)

FRIT	NOMINAL PIPE SIZE	INSIDE DIAMETER	PRODUCT	NOMINAL PIPE SIZE	INSIDE DIAMETER
1	2	2.203	SCHEDULE 10 GALVANIZED	2"	2.157
1	2 1/2	2.703	SCHEDULE 10 GALVANIZED	2 1/2"	2.635
1	3	3.314	SCHEDULE 10 GALVANIZED	3"	3.260
1	4	4.310	SCHEDULE 10 GALVANIZED	4"	4.269
1	6	6.307	SCHEDULE 10 GALVANIZED	6"	6.249
1	8	8.249	SCHEDULE 10 GALVANIZED	8"	8.249
1	10	12.315	SCHEDULE 10 GALVANIZED	10"	12.315
1	12	15.315	SCHEDULE 10 GALVANIZED	12"	15.315
1	14	18.315	SCHEDULE 10 GALVANIZED	14"	18.315
1	16	21.315	SCHEDULE 10 GALVANIZED	16"	21.315
1	18	24.315	SCHEDULE 10 GALVANIZED	18"	24.315
1	20	27.315	SCHEDULE 10 GALVANIZED	20"	27.315
1	24	33.315	SCHEDULE 10 GALVANIZED	24"	33.315
1	30	42.315	SCHEDULE 10 GALVANIZED	30"	42.315
1	36	51.315	SCHEDULE 10 GALVANIZED	36"	51.315
1	42	60.315	SCHEDULE 10 GALVANIZED	42"	60.315
1	48	69.315	SCHEDULE 10 GALVANIZED	48"	69.315
1	60	84.315	SCHEDULE 10 GALVANIZED	60"	84.315
1	72	100.315	SCHEDULE 10 GALVANIZED	72"	100.315
1	84	116.315	SCHEDULE 10 GALVANIZED	84"	116.315
1	96	132.315	SCHEDULE 10 GALVANIZED	96"	132.315
1	108	148.315	SCHEDULE 10 GALVANIZED	108"	148.315
1	120	164.315	SCHEDULE 10 GALVANIZED	120"	164.315

3 PIPE DIMENSION TABLE
NTS



2 FIRE LEAD-IN
NTS

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FP2.2	FIRE SPRINKLER PLAN SYSTEM 2
FP2.3	FIRE SPRINKLER PLAN SYSTEM 3
FP2.4	FIRE SPRINKLER PLAN SYSTEM 4
FP2.5	FIRE SPRINKLER PLAN SYSTEM 5
FP3	FIRE PROTECTION DETAILS
FP3.1	FIRE PROTECTION DETAILS
FP3.2	SKID MOUNTED FIRE PUMP



RETAIL DESIGN COLLABORATIVE
433 Main Street
Leesburg, VA 20176

Walmart
LEESBURG, VIRGINIA
STORE NO.: 1904
11800 261 - PHOTO
JOB NUMBER: 0425217

ISSUE BLOCK
11/30/17 : OTB

CHECKED BY: REI
DRAWN BY: REI
FILE NAME: FP1
PROTO CYCLE: 19586
DOCUMENT DATE: 09/13/17

BID SET NOT FOR CONSTRUCTION

FIRE SITE UTILITY PLAN

SHEET: FP1