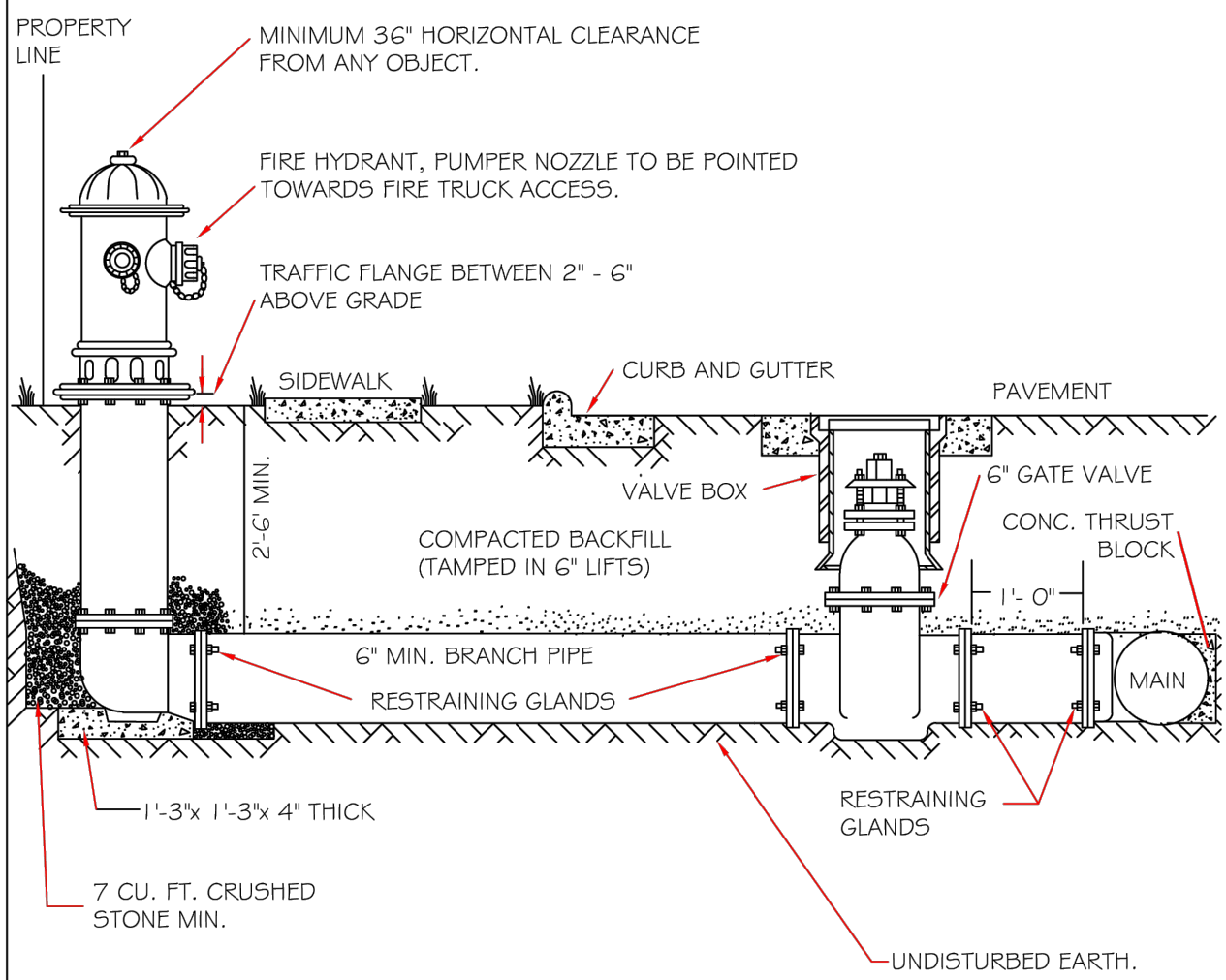


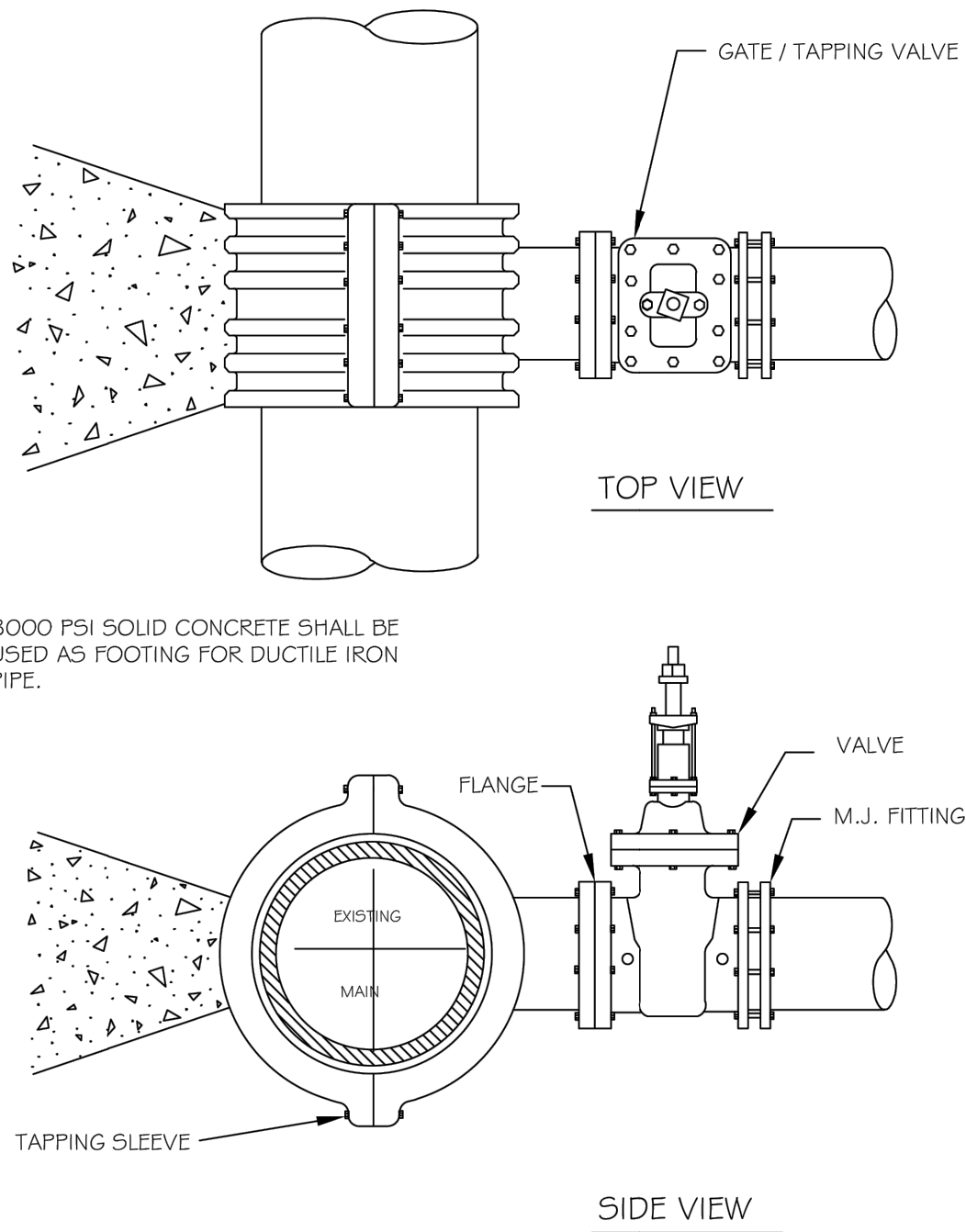
- NOTES:
1. THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROPRIATE SAW CUT MACHINE.
  2. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
  3. THE FINAL 1" OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 0% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT.
  4. THE ENTIRE THICKNESS/ VERTICAL EDGE OF CUT SHALL BE TACKED.
  5. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 3" THICK.
  6. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH LEVEL PATCH.
  7. REFER TO STATE CONSTRUCTION OFFICE STANDARDS FOR TRENCHES AND PIPE BEDDING, W-3. FOR ADDITIONAL DETAILS.
  8. NO HAND PATCHING ALLOWED.
  9. PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-1	JAC	06/26/24		



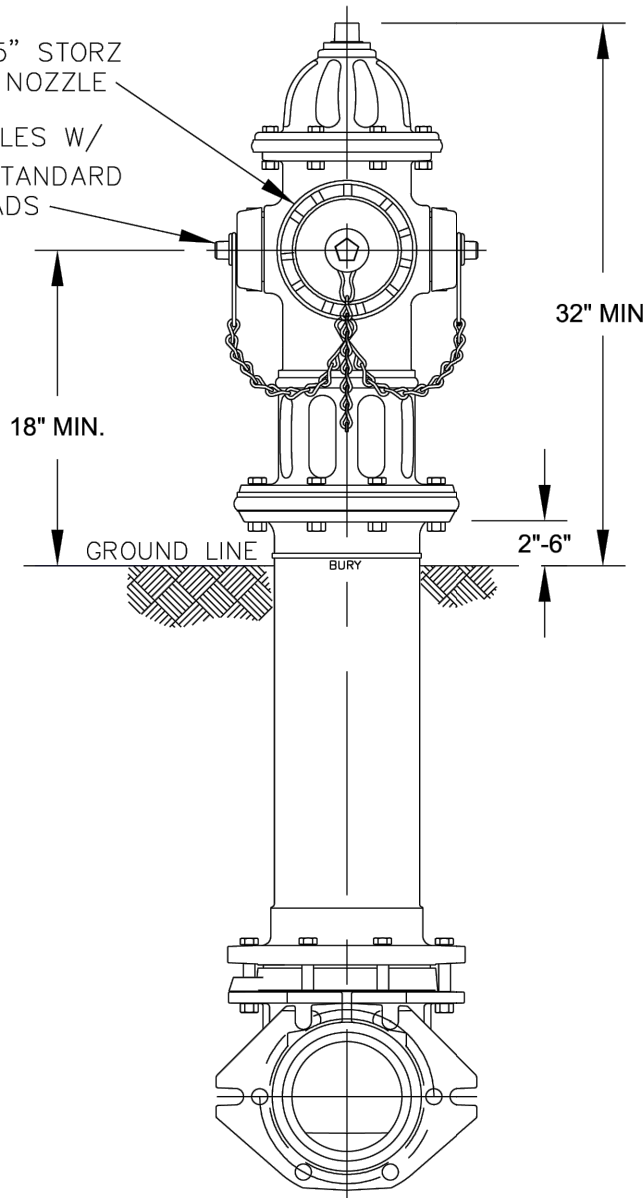
- NOTES:
1. FIRE HYDRANT SHALL BE AS MANUFACTURED: MUELLER, AMERICAN DARLING, KENNEDY, M&H, WATERLOUS, GLOW, EAST JORDAN IRON WORKS, OR US PIPE.
  2. BRANCH PIPE SHALL BE DUCTILE IRON AWWA C150-96
  3. 6" GATE VALVE SHALL BE AWWA C500-86 OPEN LEFT
  4. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED
  5. FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSITION. RODS SHALL NOT BE COUPLED MORE THAN ONCE. IF THE LENGTH FROM THE VALVE TO THE HYDRANT EXCEEDS 20' THEN A MECHANICAL RESTRAINING GLAND WITH A REBAR CAGE SHALL BE INSTALLED NO MORE THAN 10' FROM HYDRANT AND POURED IN CONCRETE. FIRE HYDRANTS TO BE LOCATED IN ROW OR 2 FOOT EASEMENT ADJACENT TO ROW

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
STANDARD FIRE HYDRANT INSTALLATION DETAIL				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-4	ABB	4-6-04	PAP	2/17/08
	DHL	2/14/06		



- NOTES:
1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
  2. SEE STANDARD REACTION BLOCK TABLES, W-10 AND W-11 FOR AREA OF CONCRETE REQUIRED.

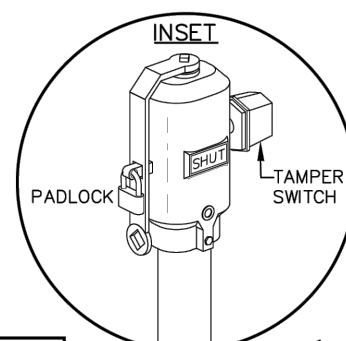
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
4" - 24" STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-14	Y.C.A.	2-31-9	RRH	3-31-00
	D.W.C.	9-7-99	J.P.S.	11-1-10



- NOTES:
1. ALL PUBLIC FIRE HYDRANTS IN THE CITY OF RALEIGH AND THE MERGER TOWNS OF GARNER, ROLESVILLE, WAKE FOREST, KNIGHTDALE, WENDELL AND ZEBULON SHALL BE PAINTED CHROME YELLOW WITH HIGH REFLECTIVE ALUMINUM SILVER CAPS, BONNETS AND OPERATING NUTS.
  2. ALL PRIVATE FIRE HYDRANTS SHALL BE RED.

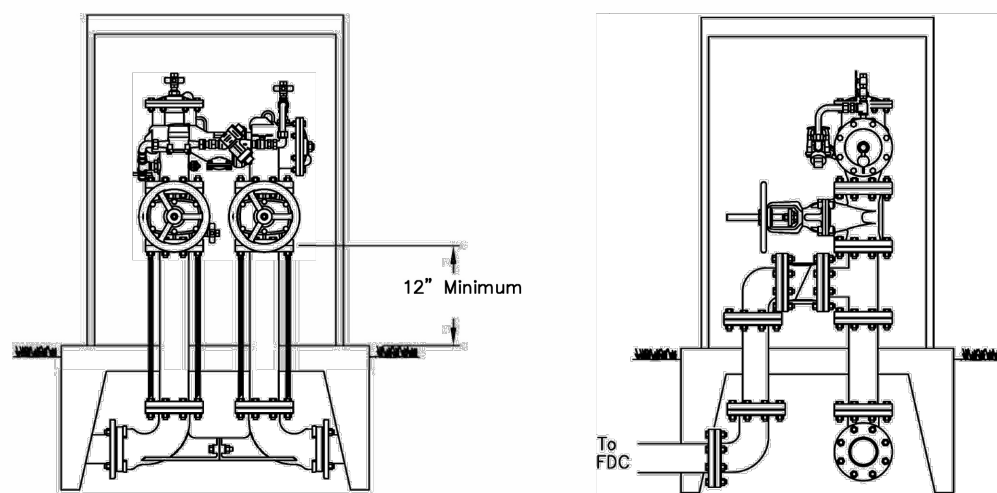
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
STANDARD FIRE HYDRANT WITH 5" STORZ PUMPER NOZZLE				
DWG.	REVISIONS	DATE	REVISIONS	DATE
NQ	MAB	8-30-16		
W-5	KAT	9-15-17		

- FIELD ADJUSTMENT INSTRUCTIONS
1. REMOVE THE BODY FROM THE TOP OF THE INDICATOR POST ASSEMBLY.
  2. CUT THE REQUIRED LENGTH OFF THE BOTTOM OF THE STANDPIPE FOR THE GROUND LINE TO MATCH UP WITH STANDPIPE GROUND LINE MARK.
  3. CUT THE 1 INCH SQ. EXTENSION AT A DISTANCE OF 9 INCHES ABOVE THE TOP OF THE STANDPIPE.
  4. SET THE "OPEN" AND "SHUT" TARGETS FOR THE APPROPRIATE VALVE SIZE.
  5. RE-ATTACH THE BODY TO THE TOP OF THE INDICATOR POST ASSEMBLY.
  6. ALL POST INDICATOR VALVES SHALL BE INSTALLED WITH AN ELECTRONIC UL LISTED TAMPER SWITCH.
  7. THERE SHALL BE 36 INCHES OF UNOBSTRUCTED CLEARANCE AROUND THE PERIMETER OF ALL POST INDICATOR VALVES.
  8. POST INDICATOR VALVE SHALL BE LOCATED AT A MINIMUM 5 FEET FROM BUILDING.



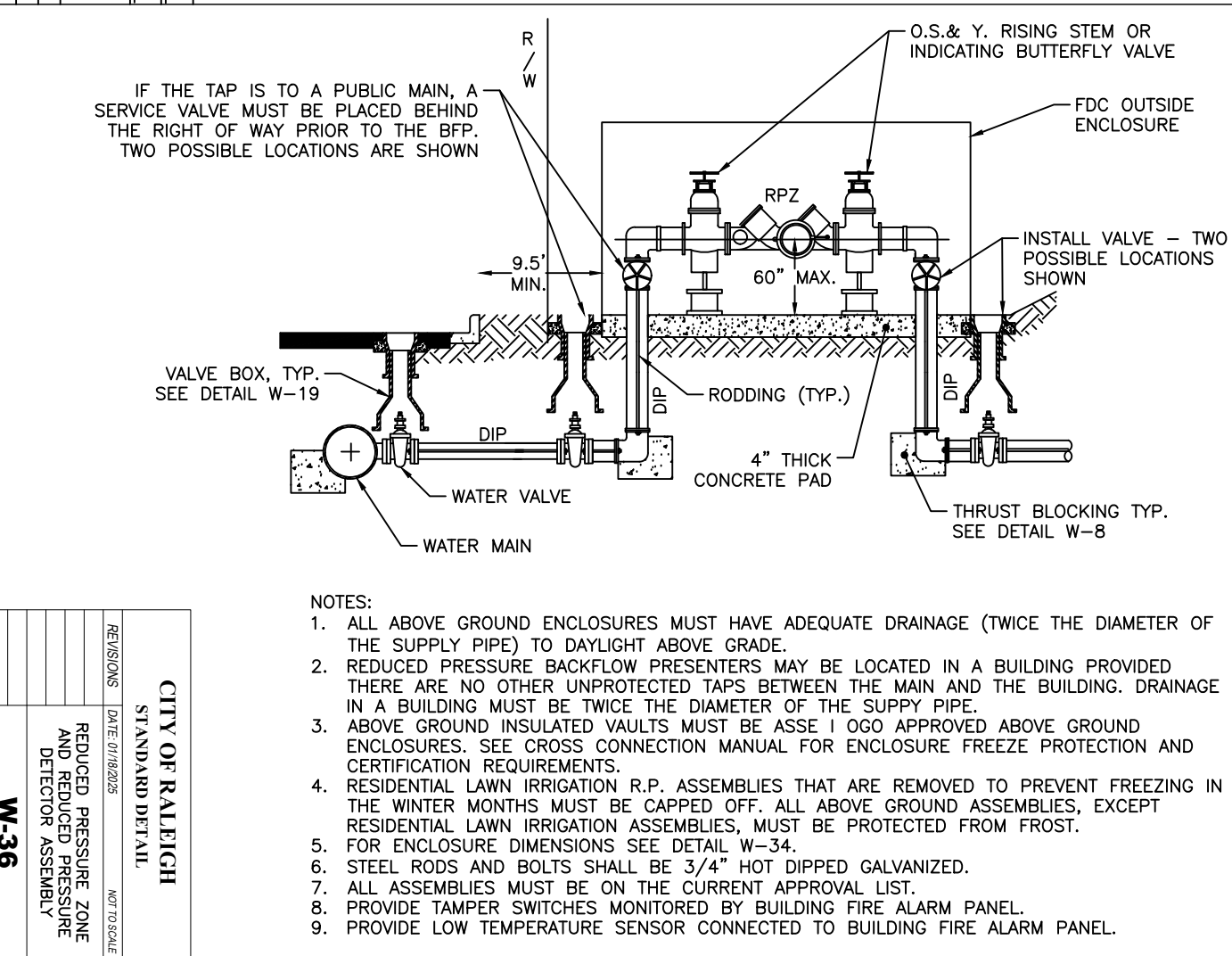
STANDARD POST INDICATOR VALVE

- TYPICAL NOTES:
- 1) ALL PIPING AND FITTINGS TO BE DUCTILE IRON, GALVANIZED, BRASS, STAINLESS STEEL, OR ALUMINUM
  - 2) ALL PIPING AND FITTINGS TO BE DUCTILE IRON ON CITY SIDE OF BACK FLOW PREVENTION ASSEMBLY
  - 3) 40' MAX. FROM FDC TO APPARATUS ACCESS LOCATION
  - 4) DO NOT BLOCK APPARATUS ACCESS TO BUILDING WITH HOSE LAY FROM HYDRANT TO FDC
  - 5) MINIMUM DISTANCE 3 FEET BEHIND CURB, PROTECT FROM VEHICLES
  - 6) PROVIDE HEAT AND ALARM SUPERVISION TO HOT BOX (2 CONDUITS)
  - 7) COMPLY WITH PUBLIC UTILITIES HANDBOOK REQUIREMENTS
  - 8) ENCLOSURE SHALL BE HEATED BY HEATER LISTED FOR DAMP/WET LOCATIONS.

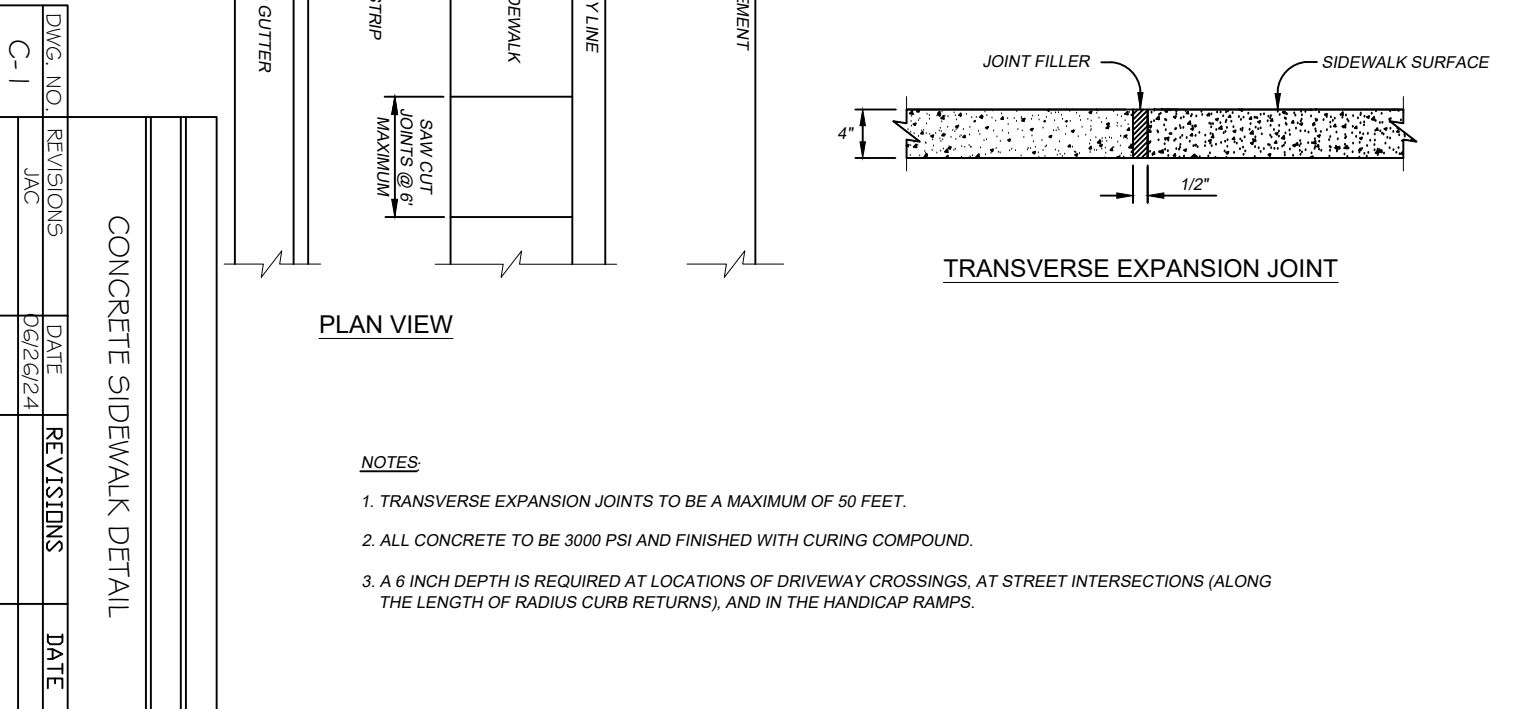


DESCRIPTION	REVISIONS	DATE	DRAWING NO.
HOTBOX DETAIL REQUIREMENTS	5-1-2017	4-1-06	FP-27

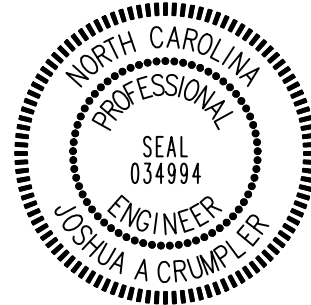
REVISION	DATE	BY	APP. BY
W-36	8/26/2010	W-36	W-36



- NOTES:
1. ALL ABOVE GROUND ENCLOSURES MUST HAVE ADEQUATE DRAINAGE (TWICE THE DIAMETER OF THE SUPPLY PIPE) TO DAYLIGHT ABOVE GRADE.
  2. REDUCED PRESSURE BACKFLOW PREVENTERS MAY BE LOCATED IN A BUILDING PROVIDED THERE ARE NO OTHER UNPROTECTED TAPS BETWEEN THE MAIN AND THE BUILDING. DRAINAGE IN A BUILDING MUST BE TWICE THE DIAMETER OF THE SUPPLY PIPE.
  3. ABOVE GROUND INSULATED VAULTS MUST BE ASSE 1000 APPROVED ABOVE GROUND ENCLOSURES. SEE CROSS CONNECTION MANUAL FOR ENCLOSURE FREEZE PROTECTION AND CERTIFICATION REQUIREMENTS.
  4. RESIDENTIAL LAWN IRRIGATION R.P. ASSEMBLIES THAT ARE REMOVED TO PREVENT FREEZING IN THE WINTER MONTHS MUST BE CAPPED OFF. ALL ABOVE GROUND ASSEMBLIES, EXCEPT RESIDENTIAL LAWN IRRIGATION ASSEMBLIES, MUST BE PROTECTED FROM FROST.
  5. FOR ENCLOSURE DIMENSIONS SEE DETAIL W-34.
  6. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
  7. ALL ASSEMBLIES MUST BE ON THE CURRENT APPROVAL LIST.
  8. PROVIDE TAMPER SWITCHES MONITORED BY BUILDING FIRE ALARM PANEL.
  9. PROVIDE LOW TEMPERATURE SENSOR CONNECTED TO BUILDING FIRE ALARM PANEL.



- NOTES:
1. TRANSVERSE EXPANSION JOINTS TO BE A MAXIMUM OF 50 FEET.
  2. ALL CONCRETE TO BE 3000 PSI AND FINISHED WITH CURING COMPOUND.
  3. A 6 INCH DEPTH IS REQUIRED AT LOCATIONS OF DRIVEWAY CROSSINGS, AT STREET INTERSECTIONS (ALONG THE LENGTH OF RADIUS CURB RETURNS), AND IN THE HANDICAP RAMPS.



**CRUMPLER**  
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Raleigh, North Carolina 27612  
Ph. 919-413-1704  
P-1553

ISSUED FOR  
CONTRACTOR BIDDING

PREPARED FOR:  
NC DEPARTMENT  
OF INSTRUCTION  
SCO # 24-27792-01A

GOVERNOR MOREHEAD SCHOOL  
SPRINKLER, ADA TOILET, LIGHTING  
UPGRADES FOR DORMS A, B, & D  
RALEIGH, NC

CONTENTS:  
UTILITY CONNECTION  
DETAILS

DATE:  
MAY 2025

DESIGNER: JAC  
ENGINEER: JAC

SHEET NO.

C-102