

Circle K Southwest Prototype 1480 - 09/12/2013
Drawing Name: P:\1013\20130780\040 Mechanical Construction Documents for KC Fountain and Academy Car Wash\10130780-01-2013.dwg
Date: 09/12/2013
Time: 11:05am
Plotter: epl
User: jk
Scale: 1/8"=1'-0"

D

C

B

A

1" DOM. WATER LINE. SEE CIVIL DRAWINGS FOR EXACT LOCATION.

[BPI] INSTALLED PER MANUFACTURER'S AND LOCAL A.H.J. INSTALLATION INSTRUCTIONS AND REQUIREMENTS. PROVIDE W/AIR GAP FITTING & 1" DRAIN LINE. ROUTE 1" DRAIN LINE ALONG WALL TO FD. TURN PIPE IN A DOWNWARD POSITION AND PROVIDE 6" AIR GAP. PROVIDE REMOTE WATER METER IN ACCORDANCE WITH COLORADO SPRINGS UTILITY REQUIREMENTS. REFER TO DETAIL A3/P1.0

3/4" IRRIGATION LINE. SEE CIVIL PLAN FOR CONTINUATION

1-1/4" GAS FROM PROVISION STUBBED OUTSIDE OF STORE

3" RDL DOWN IN WALL TO BELOW GRADE. CONNECT TO UNDERGROUND DRAIN PIPING PROVIDED BY THE ONSITE UTILITIES CONTRACTOR. SEE THE GRADING AND DRAINAGE CIVIL DRAWING FOR CONTINUATION. COORDINATE INVERT WITH CIVIL. 4" ODL DOWN IN WALL TO DISCHARGE ABOVE GRADE WITH "LAMB'S TONGUE."

4" RDL & ODL TO SLOPE @ 1/4" / FT.

3/4" GAS TO FHB

3" VENT LINE UP THROUGH ROOF

UNDERCARRIAGE TRENCH (BY MARK VII)

DRAIN PIT/CATCH BASIN (BY CIVIL)

3/4" GAS TO RH

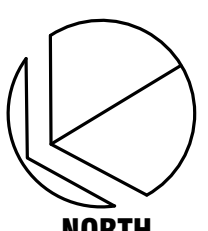
EXISTING 6" LINE FROM CIRCLE K STORE.

EXISTING 6" SAN. LINE ON SITE. SEE CIVIL FOR CONTINUATION

TIE INTO EXISTING 6" SAN. LINE ON SITE AS REQUIRED.

INTERCEPTOR SYSTEM PER MARK VII LOCATE PER CIVIL PLANS.

0 1 2 4 8 12 16
SCALE 3/16" = 1'-0" FEET



FOR BID ONLY

A1 PLUMBING FLOOR PLAN

GENERAL NOTES

- PROVIDE CLEAN-OUTS ON ALL HORIZONTAL DRAINS. CLEAN-OUTS CAN BE OMITTED ON DRAIN LINES LESS WHICH ARE LESS THAN 5'-0" UNLESS IT SERVES A SINK OR URINAL.
- SLOPE ALL SEWER AND WASTE LINES @ 1/4" PER FOOT.
- AVOID COLUMNS AND WALL FOOTING FOUNDATION.
- REFER TO PLUMBING SCHEMATICS ON THIS PAGE FOR ALL PIPE SIZING.
- ROOF DRAINS AND OVERFLOW DRAINS WERE SIZED BASED ON 2.5" RAINFALL PER HOUR AND REFER TO SHEET ARCHITECTURAL SHEETS FOR ROOF DRAIN AND OVERFLOW DRAIN DETAIL.
- UNDERGROUND SEWER LINE TO AVOID COLUMN FOOTING.
- PLUMBING CONTRACTOR TO PROVIDE BALL TYPE SHUT-OFF VALVES FOR ALL WATER LINES TO EQUIPMENT.

SAND/OIL INTERCEPTOR SIZING DATA

PROJECT NAME: CIRCLE K - FOUNTAIN & ACADEMY
ADDRESS: FOUNTAIN BLVD. & ACADEMY PARK LOOP, COLORADO SPRINGS, COLORADO 80910
PROJECT #: 20130780.0

((Square footage area of the facility / Facility factor below) x gallon per cu. ft) x retention time = Size of Interceptor
((Square footage area of the facility / Facility factor) x 7.48) x 2 = Volume of Interceptor

SQUARE FOOTAGE AREA OF THE FACILITY	=1334
WASH FLOOR AREA = 883.5	
EQUIPMENT ROOM = 450	
DIVIDED BY FACILITY FACTOR (BELOW)	= /50
MULTIPLY BY THE GALLONS PER CU. FT	= x 7.48
MULTIPLY BY THE RETENTION TIME (2 HR)	= x 2
VOLUME OF INTERCEPTOR	= 399
JENSEN PRECAST (TRAFFIC RATED)	500 GALLON SAND/OIL INTERCEPTOR

KEYED NOTES

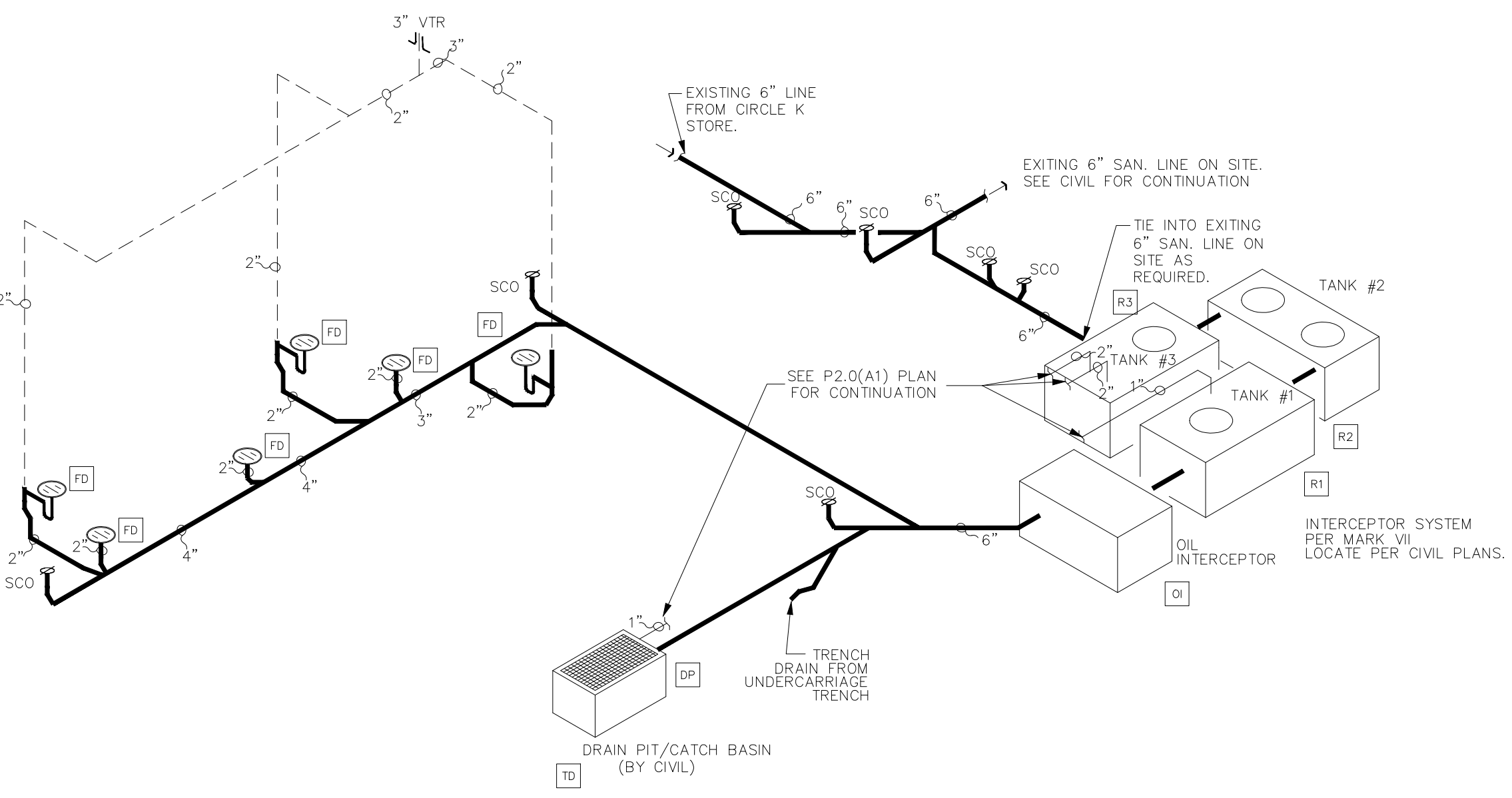
- 3" RD & OFD - 1400 SF. SLOPE HORIZONTAL. ROOF DRAIN AND OVERFLOW DRAIN LEADERS @ 1/2" PER FT. SEE ROOF PLAN ON ON SHEET A1.0.
- VALVE AND CAP LINE FOR CARWASH INSTALLER FUTURE CONNECTION.
- GAS LINE SHALL PENETRATE SIDE WALL TO BAY AREA.
- (2) 2" SCHD 80 PVC SUCTION LINES TO RECOVERY SYSTEM. ONE LINE USED AS SPARE.
- 1 1/2" LINE SUPPLY FEED TO WASH MANIFOLD.
- 1" LINE FOR OZONE RETURN IN RECLAIM TANK.
- 1" LINE FOR BACKWASH/SEPARATOR RETURN LINE.

ROOF DRAIN CALCULATIONS

ROOF DRAIN PER DRAINAGE AREA = 1400 SQ. FT.
100 YEAR RAIN FALL RATE = 2.5" PER HOUR
HORIZONTAL STORM DRAIN PIPING SLOPE = 1/2" PER FT.
PER TABLE 1106.3 OF THE 2009 I.P.C.
HORIZONTAL PIPING = 3"

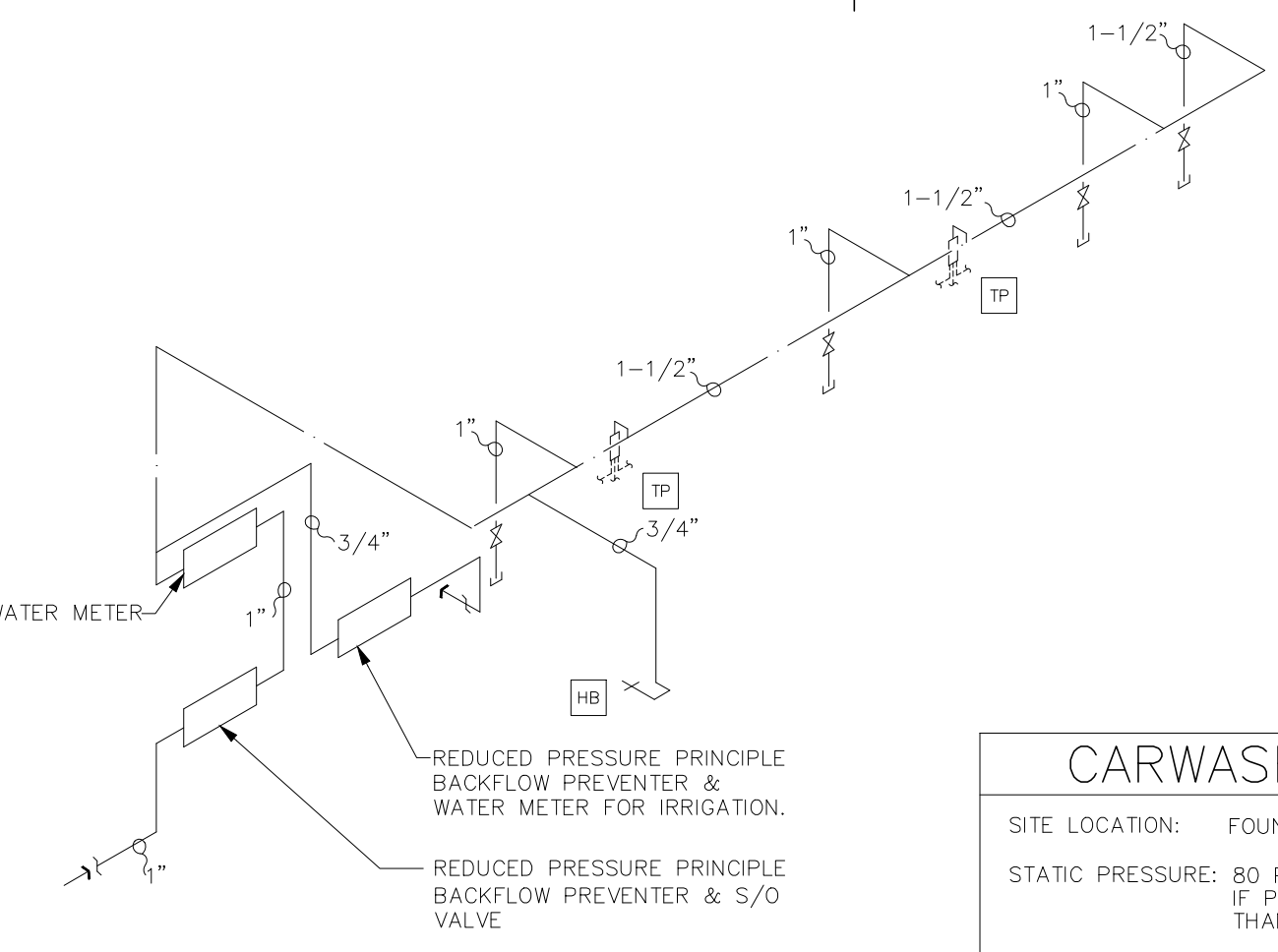
A2 HOT + COLD WATER PIPING SCHEMATIC

N.T.S.



A3 WASTE + VENT SCHEMATIC

N.T.S.



CARWASH SUPPLY CALCULATION

SITE LOCATION: FOUNTAIN BLVD. & ACADEMY PARK LOOP, COLORADO SPRINGS, CO
STATIC PRESSURE: 80 PSI - FIELD VERIFY. PROVIDE WITH PRESSURE REDUCING VALVE IF PRESSURE IS HIGHER THAN 80 P.S.I., NOTIFY ENGINEER IF LOWER THAN STATED.

CAR WASH GPM: 60
WATER METER: 1" (VERIFY WITH WATER COMPANY)

80 P.S.I. PRESSURE IN MAIN
-2.2 P.S.I. LOSS THROUGH 1" METER
-2 P.S.I. LOSS THROUGH TAP
-25 P.S.I. FRICTION LOSS AT END
-6 P.S.I. DROP FOR ELEVATION (14 FT.)
-12 P.S.I. BACKFLOW PREVENTER
32.8 P.S.I. AVAILABLE PRESSURE

PIPE LENGTH (TAP TO METER) 242 FT.
PIPE LENGTH (METER TO LAST FIXTURE) 30 FT.
VERTICAL LENGTH 14 FT.
EQUIVALENT LENGTH OF FITTINGS 27 FT.
TOTAL DEVELOPED LENGTH 313 FT.

MAX. ALLOWABLE LOSS = PRESSURE AVAILABLE: 32.8 P.S.I. X 100 = 10.5 P.S.I./100 FT.
(PER 100 FT OF PIPE) TOTAL LENGTH: 313 FT.

SIZE PIPES PER 7 FT/SEC.

GreenbergFarrow

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DATE DESCRIPTION
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PROFESSIONAL SEAL



PROFESSIONAL IN CHARGE

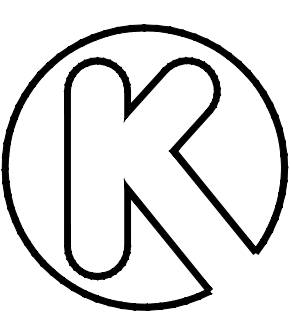
ERIC WOLF
PROJECT MANAGER
ALEX ADAIR
QUALITY CONTROL
DARCY HASBERRY
DRAWN BY
ALEX ADAIR

PROJECT NAME

CIRCLE K
STORES, INC.

COLORADO SPRINGS COLORADO

E. FOUNTAIN BLVD &
ACADEMY PARK LOOP



CIRCLE K STORES INC.

PROJECT NUMBER

20130780

SHEET TITLE

PLUMBING FLOOR
PLAN &
SCHEMATICS

SHEET NUMBER

P2.0-CW