CITY OF ALBUQUERQUE

Richard J. Berry, Mayor

January 11, 2016

David G. Anderson
Anderson Wahlen & Associates
2010 North Redwood Road
Salt Lake City, Utah, 84116

RE: Smith's #423 Fuel Center
Grading and Drainage Plan (Stamp Date 11/16/2015)
Hydrology File: F14D072

Dear Mr. Anderson:

Based upon the information provided in your submittal received 11-18-2015, the above-referenced plan cannot be approved for Building Permit until the following items are addressed:

1. The segment of the drain pipe that is in the right of way will need to be completed through Work Order; it can be included in the DRC set that is referenced on the plan.
   a. The connection to the 36" storm drain cannot be direct; a manhole needs to be constructed (to City standards).
   b. The City does not allow PVC pipe for storm drain in the right of way, you would need to transition to RCP, or HPPP (High Performance Polypropylene Pipe).
   c. For your reference, the DRC set will need to show that the gas line and other utilities do not conflict with the new pipe under Gene Avenue.
2. A detail for a Snout is shown, but the reference on the plan for an oil/water separator is a Contech CDS. Where is the snout being used? If you do use the snout, show the approx. sump elevation and the approx. outlet elevation.
3. The detail for the Stormtech chambers appears to show elevations that don't match this project.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Abiel Carrillo, P.E.
Principal Engineer, Planning Dept.
Development Review Services

Orig: Drainage file

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Smith's #423 Fuel Center Building Permit #: _____ City Drainage #: F14-

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: Lots 2, 3 & 4 Harper Addition

City Address: 5640 4th Street NW

Engineering Firm: Anderson Wahlen & Associates Contact: Kirk Randall

Address: 2010 North Redwood Road, Salt lake City, UT 84116

Phone#: 801-410-8520 Fax#: 801-521-9551 E-mail: kirkr@awaeng.com

Owner: Smith's Food & Drug Centers, Inc. Contact: Roger Gough

Address: 1550 South Redwood Road, Salt Lake City, Ut 84104

Phone#: 801-974-1529 Fax#: 801-974-1628 E-mail: roger.gough@sfdc.com

Architect: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Surveyor: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Contractor: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- X DRAINAGE PLAN 1st SUBMITTAL
- ____ DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL G & D PLAN
- ____ GRADING PLAN
- ____ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ____ ENGINEER'S CERT (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEER'S CERT (TCL)
- ____ ENGINEER'S CERT (DRB SITE PLAN)
- ____ ENGINEER'S CERT (ESC)
- ____ SO-19
- ____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ____ SIA/FINANCIAL GUARANTEE RELEASE
- ____ PRELIMINARY PLAT APPROVAL
- ____ S. DEV. PLAN FOR SUB'D APPROVAL
- ____ S. DEV. FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ CERTIFICATE OF OCCUPANCY (PERM)
- ____ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ____ FOUNDATION PERMIT APPROVAL
- X BUILDING PERMIT APPROVAL
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ GRADING CERTIFICATION
- ____ SO-19 APPROVAL
- ____ ESC PERMIT APPROVAL
- ____ ESC CERT. ACCEPTANCE
- ____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED: X Yes ____ No ____ Copy Provided

DATE SUBMITTED: 11-18-2015 By: Kirk Randall

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the followin

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report**: Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

Drainage Submittal

for

Smith's #423 - Fuel Center

5640 4th Street
Albuquerque, NM
November 3, 2015

Prepared for:
Smith's Food & Drug Stores
1550 South Redwood Rd.
Salt Lake City, UT 84104

ANDERSON WAHLEN & ASSOCIATES
Great Basin Engineering South

2010 North Redwood Road • P.O. Box 16747 • Salt Lake City, Utah 84116
(801) 521-8529 • (801) 394-7288 • Fax (801) 521-9551

Table of Contents

Introduction

Smith's Food & Drug is proposing the addition of a fuel center at the southeast corner of Gene Avenue and 4th Street, NW, more particularly located at 5640 4th Street. The purpose of this report is to:

- Determine the peak flows that will result by developing the proposed site.
- Describe on-site surface and right-of-way improvements that will convey flows to Gene Avenue.
- Determine the volume of storm water retention storage needed to manage the 90th percentile storm event for contributing impervious areas.
- Determine adequate sizing of storm drainage piping and improvements.

Background

The proposed site and re-development plan will occupy one existing parcel. The existing use of the parcel is an existing convenience store/gas station. The parcel to the south is FALLAS Discount Store and the eastern parcel is a single family resident. The site is bordered by an existing home to the east, a discount store to the south, 4th Street to the west and Gene Avenue to the north. The drainage from the site sheet flows to the northeast into Gene Avenue. There is a 36" storm drain in Gene Avenue on the north with a catch basin in front of the home to the east.

The existing property is comprised of impervious surface improvements covering roughly 90 percent of the site area. The remaining 10 percent of the site is landscaped with various plants, trees and ground cover around the perimeter.

The storm water runoff generated on-site drains to the northeast to Gene Avenue via an existing vehicle access point to the existing curb and gutter. Storm water discharges from the subject site into Gene Avenue combine with existing street runoff and adjacent private property and are conveyed via the gutter system for approximately 30 lineal feet to the east. Gene Avenue curb flows enter an existing storm drain catch basin at this location.

Flood Hazard Certification

Floodplain information published for the site in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Bernalillo County, New Mexico and Incorporated Areas, Community Panel Number 35001C0119G, dated September 26, 2008 (See Appendix) provides flood zone designation information. The subject site is located in Zone X (not shaded) which is defined as, "Areas determined to be outside the 0.2% annual chance floodplain." The site does not lie within a Flood Hazard Area as shown on the Federal Emergency Management Agency (FEMA) maps requiring no further flood-proofing or other flood mitigation.

Hydrologic Analysis

Design Storm: The site is located within Precipitation Zone 2 being in the area lying between Rio Grande and San Mateo as specified in Chapter 22, Section 2(A.1 & A.2) of the City of Albuquerque Development Process Manual (DPM). The principal design storm is the 100-year 6 hour event defined by the National Oceanic and Atmospheric Administration (NOAA) Atlas 2, Precipitation-Frequency Atlas of the Western United States, Vol. IV – New Mexico. Detention basin/retention basin designs are not proposed; however, the management requirement for the 90th percentile storm event for contributing impervious areas does provide a small on-site below grade retention system. Larger detention/retention systems are not proposed and therefore longer duration design storms are not considered in this analysis. Accordingly, the rainfall depths of interest for design purposes are the 10-Year, 6-Hour storm with a design depth of 1.57 inches and the 100-Year, 6-Hour storm with a design depth of 2.35 inches.

Land Treatments: The existing site contains 22,111 square feet (0.51 acres) of commercial designated land uses constructed with a small portion of pervious surface being primarily landscape with some trees and shrubs upon 3,370 square feet (0.077 acres) with the remainder of the site being impervious roof, concrete and asphalt paved surfaces over 18,741 square feet (0.43 acres). On-site existing Land Treatments defined in Chapter 22, Section 2(A.3) of the City of Albuquerque DPM are Land Treatment Type C for pervious soil compacted by human activities areas and Type D for impervious areas, pavement and roof. Existing site conditions are 15 percent Type C and 85 percent Type D Land Treatment Types. The proposed site conditions will consist of roughly the same 15 percent pervious landscaped areas (Land Treatment Type C) and 85 percent impervious surfaces (Land Treatment Type D).

Excess Precipitation & Volumetric Runoff: Excess precipitation (runoff) is the depth of precipitation discharged after the initial volume of rainfall retained on the ground surface as depression storage and infiltration has been subtracted from the design storm unit hydrograph. The majority of the existing site is covered by impervious surfaces designated Land Treatment D. Land Treatment C (compacted by human activities landscape) is projected to generate 0.52 inches of excess precipitation for a 10-Year, 6-Hour Storm and 1.13 inches of excess precipitation for a 100-Year, 6-Hour Storm within Precipitation Zone 3. Land Treatment D (impervious surfaces) are anticipated to generate 1.34 inches excess precipitation for a 10-Year, 6-Hour Storm and 2.12 inches of excess precipitation for a 100-Year, 6-Hour Storm within the same Precipitation Zone.

The volume of runoff or excess precipitation has been calculated by summing the depth of rainfall over the two established land treatment types. The excess precipitation depth, volume and peak discharge generated by the existing developed and proposed developed site conditions are summarized in Table 1.

Table 1 - Existing Developed and Proposed Developed Excess Precipitation Volumes & Peak Discharge Rates.

	Excess Precipitation (Inches)	Volumetric Run-off (Acre-Feet)	Peak Discharge (cfs)
Existing Developed			
2-YR(90th Percentile)	0.34	(Not Built)	N/A
10-Year, 6-Hour	1.22	0.05	1.48
100-Year, 6-Hour	1.97	0.08	2.27
Proposed Developed			
2-YR(90th Percentile)	0.34	0.0144	N/A
10-Year, 6-Hour	1.22	0.05	1.48
100-Year, 6-Hour	1.97	0.08	2.27

Final Demolition, Grading & Drainage and Utility Plans for the subject site have been provided for further review and consideration in the Appendix.

Proposed Conditions

Proposed site conditions involve removing an existing gas station/convenient store into a developed site with slightly less landscaped (20 sf) area than the previous developed condition. This slight decrease in landscaped surface areas has no effect on the proposed design site precipitation depth, volume of runoff and peak discharge as depicted in Table 1.

Due to the nature of the commercial use being a fuel center, the drainage system is designed to isolate possible fuel spillage from the on-site drainage system. While all protective measures and safety precautions will be implemented, discharge from under the canopy fueling areas will pass through a 900 gallon oil/water separator prior to discharge to the existing 36" storm drain in Gene Avenue. Should containment be required, such flows are more easily contained, managed and removed from the clean out box prior to entering the storm drain pipe in Gene Avenue. Roof drains and other paved areas are graded such that storm drain runoff will be captured by an on-site retention system sized to manage the 90th percentile storm event discharge from impervious areas. Retained 90th percentile storm flows will percolate into the ground via a below grade retention system. Storm drain flows exceeding the provided 90th percentile storm retention volume will flow through the on-site system to the existing 36" storm drain in Gene Avenue (See Appendix – Utility Plan).

All storm water runoff flows not entering the spill containment area will be conveyed as surface flow to the 90th percentile storm water retention basin. Once filled, the retention basin will overflow to a discharge pipe to the existing storm drain in Gene Avenue for the duration of the storm event. Overflow curb and gutter flows will be directed to Gene Avenue via the proposed drive approach located in the northeast corner of the site.

Water Block Design

Proposed drive approach locations will be constructed with water blocks. The existing drive approach onto 4th Street will remain in the same location. The grade behind the sidewalk will be 10.5 inches higher than gutter to maintain the required water block elevation. The topography of the site is such that the finished elevations at the right-of-way/property line along 4th Street is greater than 10.5 inches than the gutter.

The proposed drive approach into the site from Gene Avenue will be in the same location as the existing drive approach. This existing access point is at the low point of the site. The grading of the site provides an elevation of greater than the 10.5 inches water block.

Depth of flow calculations for 4th Street & Gene Avenue may be determined upon request. Due to the quantification of tributary flows from other adjacent developments being beyond the scope of this analysis, a gutter depth of flow analysis has not been completed for 4th Street and Gene Avenue at this time.

2-Year Storm On-Site Retention

Proposed site storm water improvements include specific storm water facilities for the management of the 90th Percentile Storm Event by retaining the volume of water generated by this event on-site. These facilities retain the "first flush" and control runoff generated by contributing impervious surfaces. First Flush is defined by the City of Albuquerque as the storm water runoff during the early stages of a storm equal to or less than runoff from the 90th Percentile Storm Event that can deliver a potentially high concentration of pollutants due to the washing effect of runoff from impervious areas directly connected to the storm drainage system. The method of determining this volume to be retained is determined by the Rational Method as described in the City of Albuquerque, New Mexico Development Process Manual Volume-II Design Process Manual, Chapter 22 Drainage, Flood Control and Erosion Control, Section 2 Hydrology.

Proposed Site Impervious Area = 18,761 sf
90th Percentile (2-Year) Storm Depth = 0.44 inches
Initial Abstraction – Treatment Type D – impervious = 0.1 inches

Depth of Direct Runoff = (0.44 inches – 0.10 inches) = 0.34 inches

Volume of Direct Runoff = (0.34 inches) * (1 ft/12 inches) * (18,761 sf)
= **627 cubic feet**

First Flush Retention Facility: StormTech Subsurface Storm Water Management MC4500 Chamber, endcaps, pipes, catch basins, and cleanout manholes.

Volume Provided: MC 4500 End cap & section volume = 868 cf

A copy of the final Utility Plan has been provided in the Appendix for more information regarding the configuration of the piping, catch basins, cleanout manholes and StormTech Chambers.

Oil Water Separator

Proposed Utility Plans provide for the installation of an "Oldcastle Precast Oil / Water Separator 577-SA 900 Gallon – American Petroleum Institute (API) Style" oil water separator. This oil water separator provides a 900 gallon maximum volume oil water separator with a 67 gallon per minute flow rate at 15 minute retention time capacity. More simply stated, the design flow rate is a slightly greater volume of water generated by dumping thirteen five gallon buckets of water every minute under the canopy area. The maximum oil storage volume provided is 500 gallons.

The subject oil water separator is specified to only treat under canopy or covered concrete pavement area drainage flows which consists of a number of possible sources, such as: wind-blown rainfall under the canopy; excessive parking area runoff passing under the canopy, water main breaks, small fuel spills during vehicle fueling, moisture dripping from parked cars being fueled under the canopy during rain/snow events and other maintenance flows that may periodically pass through the separator. The separator is designed to provide separation for minor fuel spills, water dripping from vehicles and wind-blown rainfall under the canopy.

The separator is connected to the under canopy catch basin by 6-inch diameter polyvinyl chloride storm drain piping with a capacity of 4.5 cfs or 2,020 gpm (wier flow) to 1.0 cfs or 449 gpm (orifice flow) depending on the amount of water ponded above the inlet pipe and the cleanliness of the pipe opening at the time of discharge. Treated flows are discharged to the fronting Gene Avenue storm drain. Oil water treatment during greater than design flow events would not result in oil / water separation treatment. Conveyed flows exceeding treatment capacity will pass through the separator to the fronting roadway curb and gutter until such time that the flow capacity returned to design conditions. Ponding over the catch basin inlet will only reach a depth of 3 inches. Ponded depths greater than 3 inches above the grate will spill from under the canopy and travel over asphalt and concrete surfaces to the fronting roadway.

Accordingly, the oil / water separator is considered adequately sized for under canopy or covered drainage areas for the design center under canopy drainage operations and provides an initial form of fuel spill containment isolation of 500 gallons and oil / water separation for flows less than 67 gallons per minute with 15 minute retention time.

Storm Drain Pipe Sizing

Storm drain pipe sizing is typically designed to convey the minor storm event or events equal to or less than a 10-Year Return Period peak discharge rate. The site is broken into drainage areas tributary to catch basins for the management of the 90th percentile storm event, roof drains, under canopy drainage and spill containment areas. Each area

tributary to the catch basins is comprised of drainage areas smaller than the overall site thereby generating flows less than the overall site design. Discharge exceeding provided pipe and inlet capacities will be conveyed to the fronting roadway without flooding on-site and off-site facilities. The **proposed site 10-Year, 6-Hour Storm peak discharge flow rate for the entire site is 2.27 cubic feet per second.** Discharge capacities for 12-inch diameter pipes constructed at 0.5% provide a full flowing pipe capacity of 3.27 cubic feet per second. The pipes provided will convey the tributary 10-Year, 6-Hour storm peak flow rates.

Storm flows exceeding the capacity of the 12" pipe discharging to the Gene Avenue storm drain pipe will bubble out of the on-site curb inlets, flow to the on-site 90th Percentile Storm Water Management retention basin until full and then spill out to the fronting Gene Avenue curb and gutter via the proposed drive approach.

Conclusion

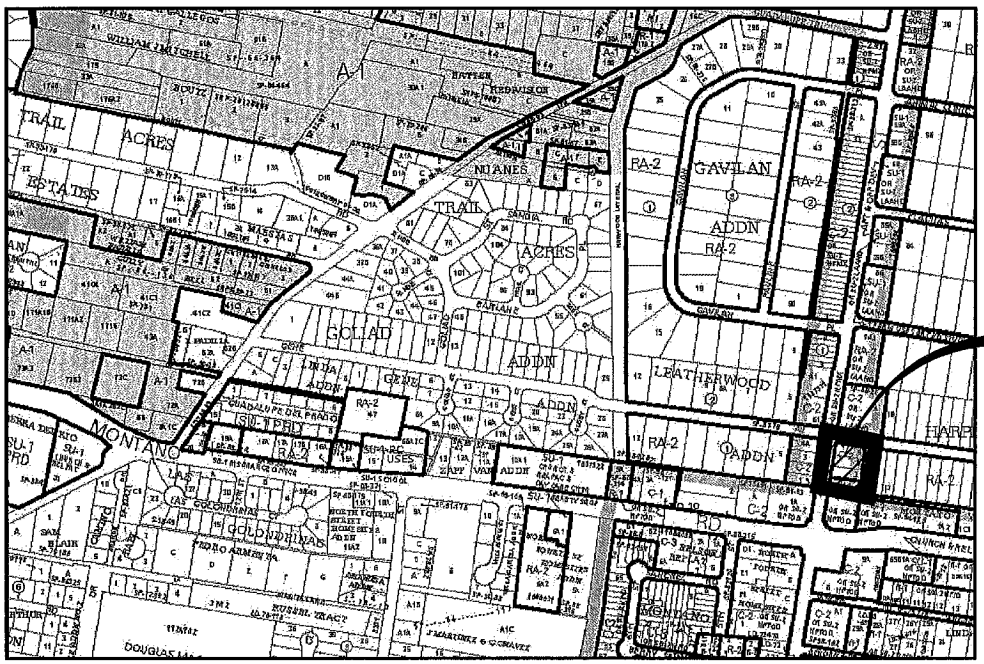
This analysis has been prepared in accordance with the requirements and specifications of Section 22.2 of the DPM. Existing developed conditions at the site generate a historical flow to the storm drain system in Gene Avenue that will not be exceeded by the proposed development. Historic excess precipitation and the accompanying volume of excess precipitation and peak flow rates are about the same. Treatment of runoff from under the fuel center canopy will occur by passing under canopy flows through an oil/water separator as shown on the Final Utility Plan (See Appendix).

Appendix

Vicinity Map

Smith's #423 Fuel Center

Gene Avenue N.W & 4th Street N.W.
Albuquerque, New Mexico



Vicinity Map
Zone Atlas Page F-14
Albuquerque, NM

Not to Scale

FEMA Flood Insurance Rate Map

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The **projection** used in the preparation of this map was New Mexico State Plane Central Zone. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey, SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit their website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by Bernalillo County produced at a scale of 1:12,000 from photography dated 1999 or later.

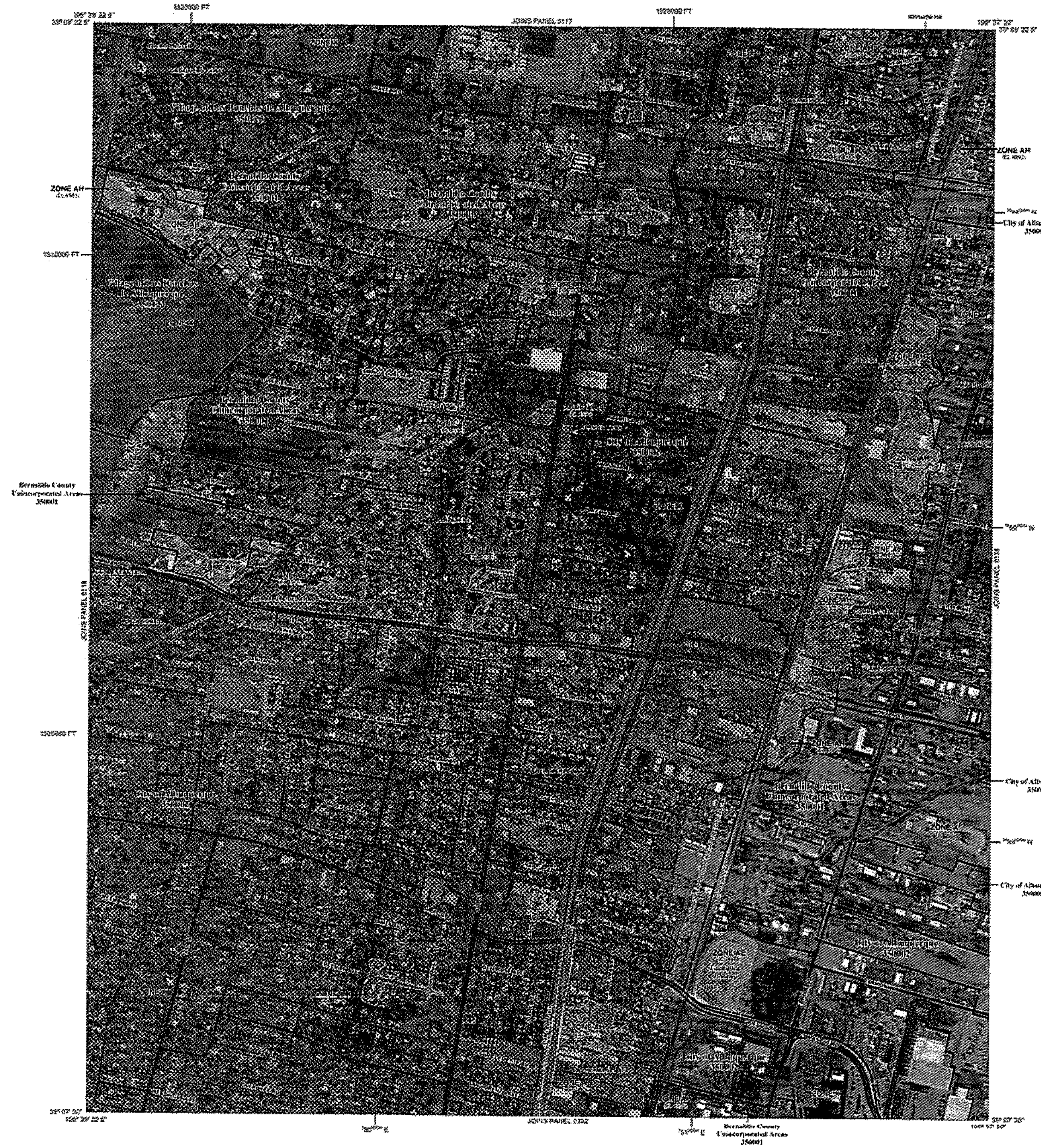
Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables for the Flood Insurance Study report may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and their website at http://www.msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

ZONE A
ZONE AE
ZONE AH
ZONE AO
ZONE AR
ZONE A99
ZONE VE

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

ZONE X

OTHER AREAS

ZONE X
ZONE D

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

MAP REPOSITORIES

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

MAP SCALE 1" = 500'

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0119G

FIRM
FLOOD INSURANCE RATE MAP

BERNALILLO COUNTY, NEW MEXICO AND INCORPORATED AREAS

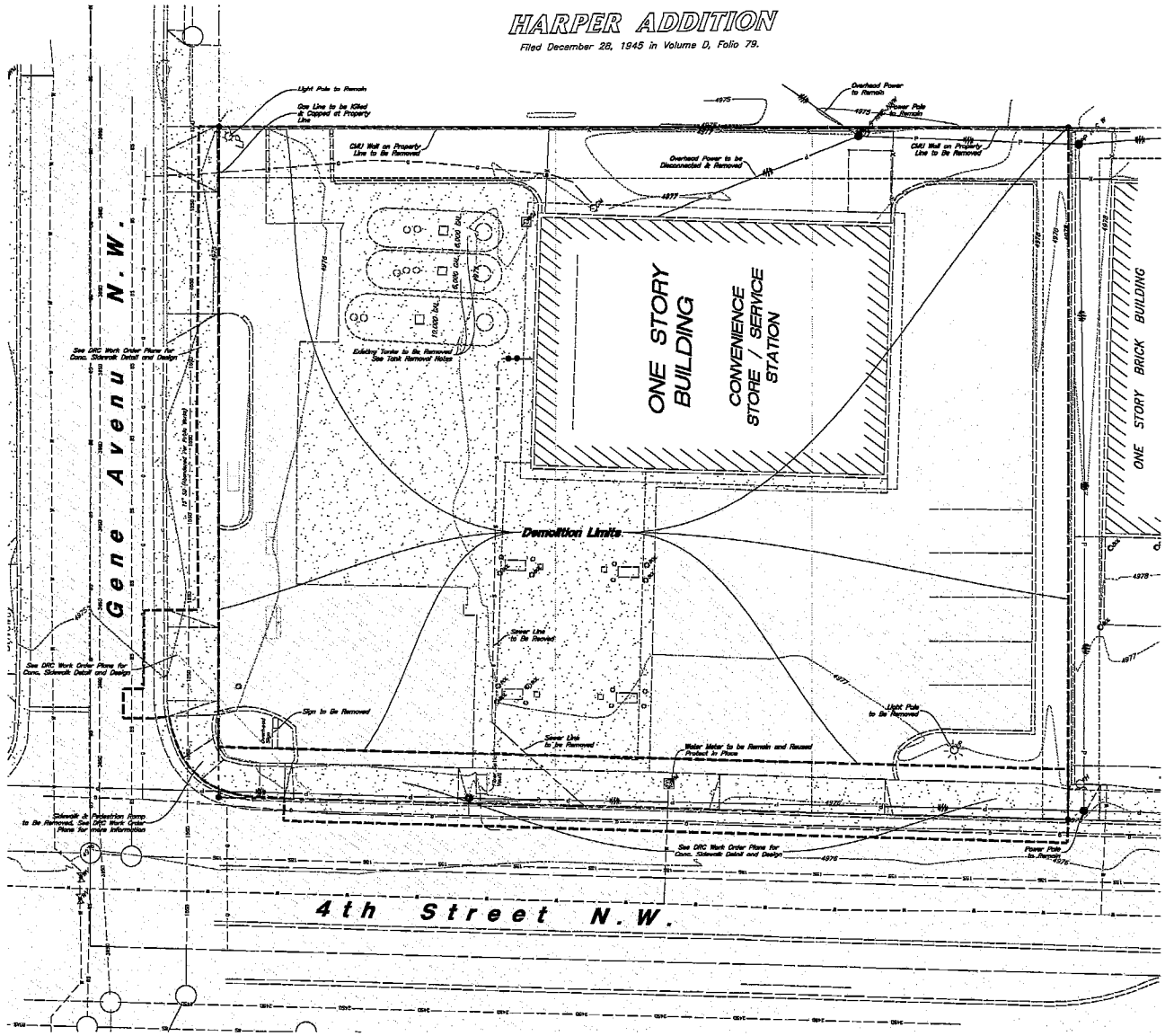
PANEL 119 OF 825

MAP NUMBER 35001C0119G

MAP REVISED SEPTEMBER 26, 2008

Federal Emergency Management Agency

Final Demolition Plan
Final Grading & Drainage Plan
Final Utility Plan



Scale: 1" = 10'

10' 0 10' 20'

General Demolition Notes:

1. Demolition and site clearing for this contract are to include all areas shown within demolition limits or by note.
2. Refer to site improvement plans for more details on limits of removal.
3. All curbs, gutters, walks, slabs, walls, fences, flatwork, asphalt, waterlines and meters, gas lines, sewer lines, light poles, buried cables, storm drain piping and structures to be cleared from site unless otherwise shown.
4. All utilities, sewer, water, gas, telephone and electrical services to be disconnected and capped According to city, county and utility company requirements, unless otherwise shown.
5. Excavated areas to be backfilled with clean granular material compacted to 95% of maximum lab density as determined by ASTM D 1557-78. (Test results to be given to owner) Excavated areas should be backfilled per the geotechnical report prepared for the project.
6. Clear and grub trees, shrubs, and vegetation within construction limits, disposed to be off-site Except where noted otherwise.
7. DO NOT interrupt any services or disrupt the operation of any businesses shown outside the demolition limits.
8. Remove debris, rubbish, and other materials resulting from the demolition and site clearing operations from the site and dispose of in a legal manner.
9. The location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied upon as being exact or complete. Contractor shall contact utilities having jurisdiction for field locations. Contractor shall be responsible for protection of in place and relocated utilities during construction.
10. Stockpiles shall be graded to maintain slopes not greater than 3 horizontal to 1 vertical. Provide erosion control as needed to prevent sediment transport to adjacent drainage ways.
11. Contractor shall be responsible for disposal of all waste material. Disposal shall be at an approved site for such material. Burning onsite is not permitted.
12. Contractor shall verify with city any street removal, curb cuts, and any restoration required for utility line removal.
13. Install traffic warning devices as needed in accordance with local standards.
14. Contractor shall obtain all permits necessary for demolition from City, County, State or Federal Agencies as required.
15. Demolish existing buildings and clear from site. (including removal of all footings and foundations.)
16. ASBESTOS: If in existing structures, the Asbestos must be removed in a legal manner by a contractor licensed to handle asbestos materials.
17. If Contractor observes evidence of hazardous materials or contaminated soils he shall immediately contact the project engineer to provide notification and obtain direction before proceeding with disturbance of soil materials or contaminated soil.

Tank Removal Notes:

Tank Remover shall Comply with Kroger's "Recommended Practice for Removal of Underground Petroleum Storage Tanks" Found in the Project Manual as Well as the Following notes.

Tank Pull Notification and Testing

Prior to Tank System Removal, the New Mexico Environment Department Petroleum Storage
Tank Bureau's (NMED--PSTB) Should be Notified a Minimum of 30 Days in Advance of a Removal (Forms and Information Located at: http://www.nmenv.state.nm.us/ust/forms.html). Minimum Required Sampling Typically Includes:

- 5 Samples from Bottom of Tank Pit(Four Corners + middle)
- 1 Sample Beneath each Dispenser
- At Joints of Staining or Suspected Release

Typical Required Analyses for Site historically Containing leaded Gasoline, Unleaded Gasoline, and Diesel:

- Benzene, Toluene, Ethylbenzene, Xylene(BTEX) per EPA Method 8021
- Ethylene Dibromide (EDB), 1,2--dichloroethane (EDC), and Methyl--tert--butyl--ether (MTBE), EPA Method 8021
- Total Naphthalenes (EPA 8270 and 8310)
- Total Petroleum hydrocarbons (EPA 8015 modified)
- Polynuclear Aromatic Hydrocarbons (EPA 8270 or 8310)
- Total Lead (EPA 6020, 239.2 or 7421)

Confirmation of Actual Soil Locations + required Analyses Should be Confirmed with the NMED--PSTB at the Time of the Removal.

CAUTION :

The location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete.

New Mexico One Call, Inc.
NMOC
Professional Resources for Damage Prevention
1-800-321-ALERT

Smith's
FOOD & DRUG STORES
 # 423
Albuquerque, NM

REV	DATE	DESCRIPTION
1	XXX	XXX

Designed by: KR/AT
Drafted by: AM/NM
Client Name:
Smith's Food & Drug Stores
SMC423--DM

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road - Salt Lake City, Utah 84116
801 521--8529 -- AWengineering.net

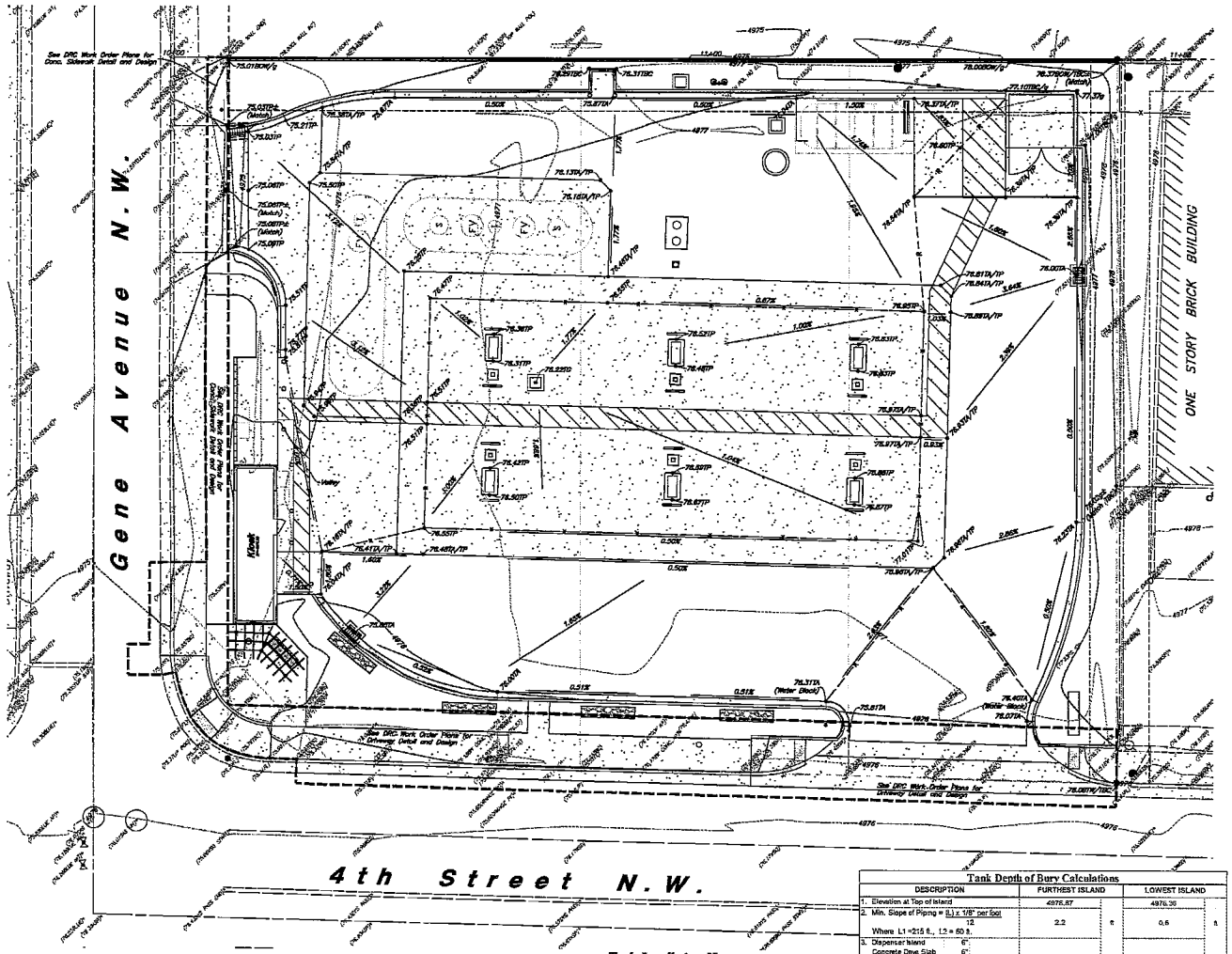
Demolition Plan

Smith's #423 Fuel Center
Gene Avenue N.W. & 4th Street N.W.
Albuquerque, New Mexico

DAVID S. ANDERSON
NEW MEXICO
20187
REGISTERED PROFESSIONAL ENGINEER

26 Oct, 2015

SHEET NO.
C0.1



Scale: 1" = 10'

10' 0 10' 20'

General Grading Notes:

1. All grading shall be in accordance with the project geotechnical report.
2. Cut slopes shall be no steeper than 3 horizontal to 1 vertical.
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4. Fills shall be compacted per the recommendations of the geotechnical report prepared for the project and shall be certified by the Owner's Special Inspection.
5. Areas to receive fill shall be properly prepared and approved by the Owner's Special Inspection prior to placing fill.
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8. The Owner's Special Inspection shall perform periodic inspections and submit a complete report and map upon completion of the rough grading.
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10. Dust shall be controlled by watering.
11. The location and protection of all utilities is the responsibility of the permittee.
12. Approved protective measures and temporary drainage provisions must be used to protect adjoining properties during the grading process.
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16. Aggregate base shall be compacted per the geotechnical report prepared for the project.
17. The recommendations in the following Geotechnical Engineering Report by Kleinfelder are included in the requirements of grading and site Preparation. The Report is titled "Geological Engineering Report Proposed Smith's Food & Drug Fuel Center Install Store #423 2640 4th Street NW Albuquerque, New Mexico"

    Project No.: 20152711.001A
    Dated: October 29, 2014
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Curb and Gutter Construction Notes:

1. Open face gutter shall be constructed where drainage is directed away from curb.
2. Open face gutter locations are indicated by shading and notes on the grading plan.
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Tank Installation Notes:

1. Contractor shall verify that a minimum of 1% slope is provided on all vapor recovery lines from the MPD to the tanks.

Filter Fabric Notes:

1. The bottom and all four sides of tank hole are to be lined with Amoco CEF 4545 or equivalent filter fabric.
2. All adjoining filter fabric panel seams are to be overlapped a minimum of 24".
3. All filter fabric is to be properly anchored to prevent movement while backfilling tank hole.

Tank Depth of Bury Calculations

DESCRIPTION		FURTHEST ISLAND		LOWEST ISLAND	
1. Elevation at Top of Island		4976.87		4976.36	
2. Min. Slope of Piping = (L) x 1/8" per foot 12		2.2	ft	0.6	ft
Where L1 =215 ft., L2 = 60 ft.					
3. Dispenser Island	6"				
Concrete Dive Slab	6"				
Pipe Cover	8"	2.75	ft	2.75	ft
Pipe Diameter	3"				
Tank Connection	10"				
Total	33"				
4. Grade Differential = (#2 + #3)		4.55	ft	3.35	ft
5. Top of Tanks = (#1 - #4)		4971.92	ft	4973.01	ft
6. Top of Tanks = Lowest Calculated Elevation		4971.92			
Check Min. / Max. Burial Depth		4.0' Min. / 7.0' Max.			
7. Lowest Elevation of Slab Above Tank		4975.50			
8. Depth of Bury = (#7 - #6)		3.58	ft		
NOTE: If #8 = 4.5 ft., Set Top of Tanks at (#7 - 4.5 ft.) = 4971.00					
If #8 > 7 ft., Contact Owner for Certification of Burial Depth with Tank				4971.00	

NOTE:
See Plans by Madison Industries for Footing Depth.

New Mexico One Call, Inc.
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Professional Resources for Damage Prevention
1-800-321-ALERT

Accessible Note:
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Smith's FOOD & DRUG STORES
#423
Albuquerque, NM

NO.	DATE	DESCRIPTION
XX	XX/XX	XXXX

Designed by: KR/AT
Drafted by: AM/HM
Client Name:
Smith's Food & Drug Stores
SMC423-GP

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
801 521-8529 – AWengineering.net

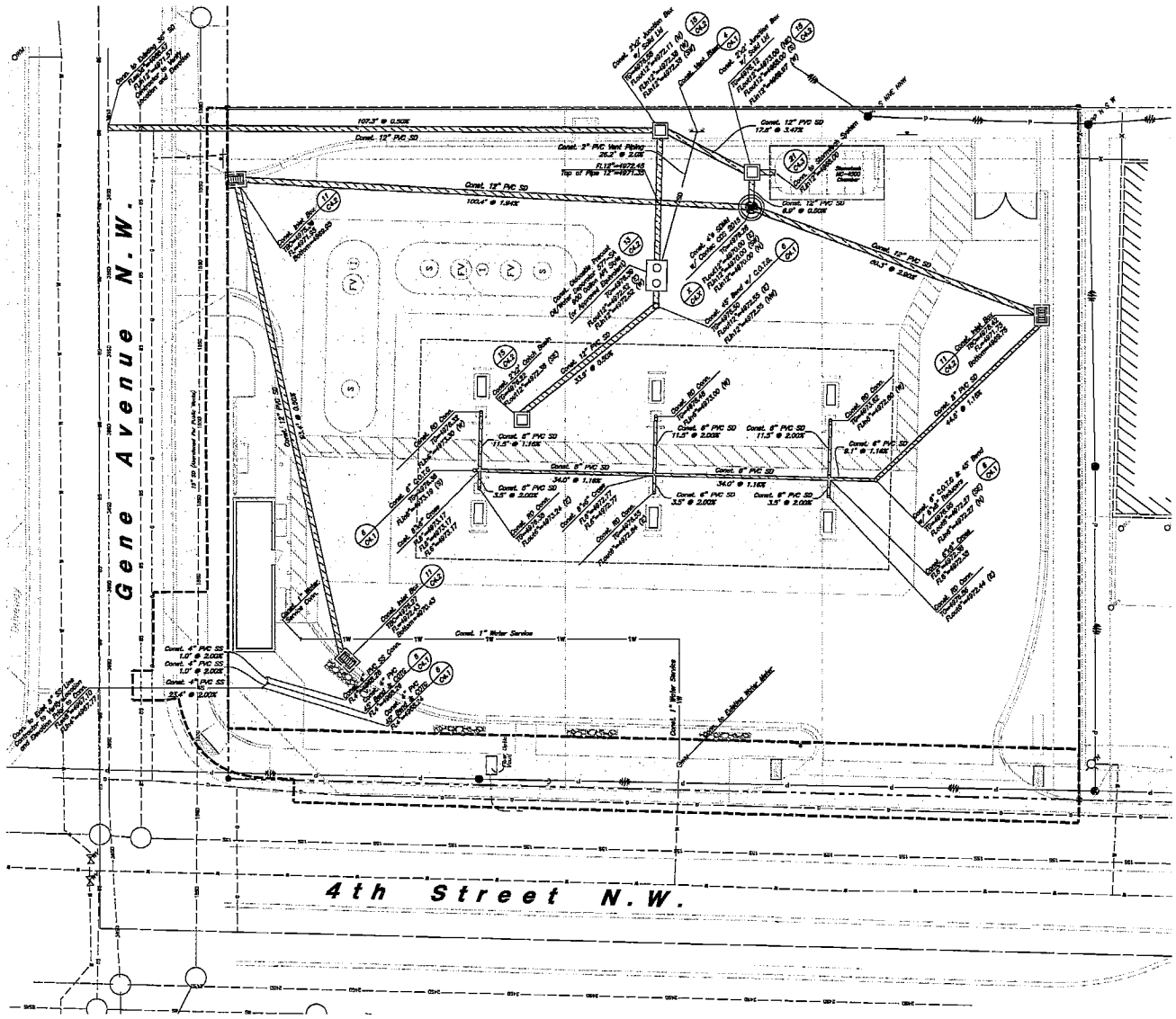
Grading Plan

Smith's #423 Fuel Center
Gene Avenue N.W. & 4th Street N.W.
Albuquerque, New Mexico

DAVID S. ANDERSON
NEW MEXICO
20167
REGISTERED PROFESSIONAL ENGINEER

26 Oct, 2015

SHEET NO.
C2.1



General Utility Notes:

1. All sewer and water facilities shall be constructed per local jurisdictive standards and specifications. Contractor is responsible to obtain standards and specifications.
2. Coordinate all utility connections to building with plumbing plans and building contractor.
3. Verify depth and location of all existing utilities prior to constructing any new utility lines. Notify Civil Engineer of any discrepancies or conflicts prior to any connections being made.
4. All catch basin and inlet box grates are to be bicycle proof.
5. Refer to the site electrical plan for details and locations of electrical lines, transformers and light poles.
6. Gas lines, telephone lines, and cable TV lines are not a part of these plans.
7. Water meters are to be installed per city standards and specifications. It will be the contractor's responsibility to install all items required.
8. Water lines, valves, fire hydrants, fittings etc. are to be constructed as shown. Contractor is responsible, at no cost to the owner, to construct any vertical adjustments necessary to clear sewer, storm drain, or other utilities as necessary including valve boxes and hydrant spools to proper grade.
9. Contractor shall install a 12" concrete collar around all manholes, valves, catch basins, cleanouts & any other structures located within the asphalt.

Utility Piping Materials:

All piping to be installed per manufacturers recommendations. Refer to project specifications for more detailed information regarding materials, installation, etc.

Cultinary Service Laterals

1. Pipe material as shown on utility plan view and/or to meet city standards.

Water Main Lines and Fire Lines

1. Pipe material as shown on utility plan view and/or to meet city standards.

Sanitary Sewer Lines

1. All sewer piping to be Polyvinyl Chloride (PVC) sewer pipe, ASTM D3034, Type PSM, SDR 35

Storm Drain Lines

1. 12" pipes or smaller – Polyvinyl Chloride (PVC) sewer pipe, ASTM D3034, Type PSM, SDR 35
2. 15" pipes or larger – ADS High Density Polyethylene (HDPE) AASHTO M 294, Types with Smooth Interior or Equal as Approved.

Storm Drain Note:

All Storm Drainage Pipe Lengths and Slopes are from Center of Box to Center of Box.

CAUTION :

The locations and/or elevations of existing utilities as shown on these plans are based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete.

New Mexico One Call, Inc.
NMOC
Professional Resources for Damage Prevention
1-800-321-ALERT

Smith's
FOOD & DRUG STORES
#423
Albuquerque, NM

NO.	DATE	DESCRIPTION
1	XXX	XXX

Designed by: KR/AT
Drafted by: AM/HH
Client Name:
Smith's Food & Drug Stores
SM2423-UT

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
801.521.8529 – developing well

Utility Plan

Smith's #423 Fuel Center
Gene Avenue N.W. & 4th Street N.W.
Albuquerque, New Mexico

JASON D. ANDERSON
NEW MEXICO
20167
REGISTERED PROFESSIONAL ENGINEER

26 Oct, 2015

SHEET NO.
C3.1

Peak Runoff Calculations
Per
City of Albuquerque Development Process Manual (DPM)

ANDERSON WAHLEN & ASSOCIATES
Great Basin Engineering South

SHT 1

Project Name SMITH's #423 FUEL CENTER Date 30 SEPT 2015

SITE ADDRESS = 5640 4TH STREET

(PRECIPITATION ZONE 2)

EXISTING SITE CONDITIONS:

PERVIOUS AREA : 3,370 SF (15%) TREATMENT TYPE C

IMPERVIOUS AREA : 18,741 SF (85%) TREATMENT TYPE D

TOTAL AREA 22,111 SF = 0.51 AC

PROPOSED SITE CONDITIONS:

PERVIOUS AREA : 3,350 SF (15%) TREATMENT TYPE C

IMPERVIOUS AREA : 18,761 SF (85%) TREATMENT TYPE D

TOTAL AREA : 22,111 SF = 0.51 ACRES

EXCESS PRECIPITATION & VOLUMETRIC RUNOFF

EXISTING SITE CONDITIONS: EXCESS PRECIP. + TABLE A-8

ZONE 2 - 10 YR 6 HR

TREATMENT TYPE C : 0.52 IN

TREATMENT TYPE D : 1.34 IN

10 YR, 6 HR

$E_{w}_{360-10} = \frac{0.52(3370) + 1.34(18741)}{22,111}$

$= 1.22$ IN

$V_{360-10} = 1.22\,IN\,(22,111\,SF)\left(\frac{1\,AC}{43560\,SF}\right)\left(\frac{1\,FT}{12\,IN}\right) = \underline{0.05\ AC\text{-}FT}$

100 YR, 6 HR

TREATMENT TYPE C : 1.13 IN

TREATMENT TYPE D : 2.12 IN

$E_{w}_{360-100} = \frac{1.13(3370) + 2.12(18741)}{22,111}$

$= 1.97$ IN

$V_{360-100} = 1.97(22,111)\left(\frac{1}{43560}\right)\left(\frac{1}{12}\right) = \underline{0.08\ AC\text{-}F}$

ANDERSON WAHLEN & ASSOCIATES
Great Basin Engineering South

SHT 2

Project Name SMITH'S #423 FUEL CENTER Date 30 SEPT 2015

EXISTING SITE CONDITIONS

V_{360+10} = 0.05 AC-FT

$V_{360+100}$ = 0.08 AC-FT

PROPOSED SITE CONDITIONS

$E_{W\ 360-10}$ = 0.52(3350) + 1.34(18761) / 22111 = 1.22 IN

V_{360+10} = 1.22(22,111) / 43560 x 12 = 0.05 AC-FT

$E_{W\ 360-100}$ = 1.12(3350) + 2.12(18761) / 43560 x 12 = 1.97 IN

$V_{360-100}$ = 1.97(22,111) / 43560 x 12 = 0.08 AC-F

PEAK DISCHARGE RATE FOR SMALL WATERSHEDS (A.6)

ASSUME: T_c = 12 MIN

ZONE 2

TABLE A-9 PEAK DISCHARGE (CFS/AC)

10 YR 6 HR

TREATMENT TYPE C : 1.71

TREATMENT TYPE D : 3.14

100 YR 6 HR

TREATMENT TYPE C : 3.14

TREATMENT TYPE D : 4.70

ANDERSON WAHLEN & ASSOCIATES
Great Basin Engineering South

EAT 3

Project Name SMITH'S #423 FUEL CENTER Date 30 SEPT 2015

EXISTING SITE CONDITIONS:

$$Q_{P_{360-10}} = \left[1.71(3370) + 3.14(18741)\right]\left(\frac{1\,AC}{43560\,SF}\right)$$

$$= 1.48\ CFS$$

$$Q_{P_{360-100}} = \left[3.14(3370) + 4.70(18741)\right]\left(\frac{1\,AC}{43560\,SF}\right)$$

$$= 2.27\ CFS$$

PROPOSED SITE CONDITIONS:

$$Q_{P_{360-10}} = \left[1.71(3350) + 3.14(18761)\right]\left(\frac{1\,AC}{43560\,SF}\right)$$

$$= 1.48\ CFS$$

$$Q_{P_{360-100}} = \left[3.14(3350) + 4.70(18761)\right]\left(\frac{1}{43560}\right)$$

$$= 2.27\ CFS$$

∴ NO CHANGE - EXISTING CONDITIONS TO PROPOSED CONDITIONS

Volume Calculation
for
On-site Management & Retention of 90th Percentile Storm Events
for Contributing Impervious Areas

ANDERSON WAHLEN & ASSOCIATES
Great Basin Engineering South

Project Name SMITH'S #423 FUEL CENTER Date 30 SEPT 2015

SITE ADDRESS 5640 4TH STREET

90TH PERCENTILE RETENTION VOLUME

CHAPTER 22, CITY OF ALBUQUERQUE
DEVELOPMENT PROCESS MANUAL

INITIAL RESTRICTION = 0.1 IN.

STORM DEPTH = 0.44 IN

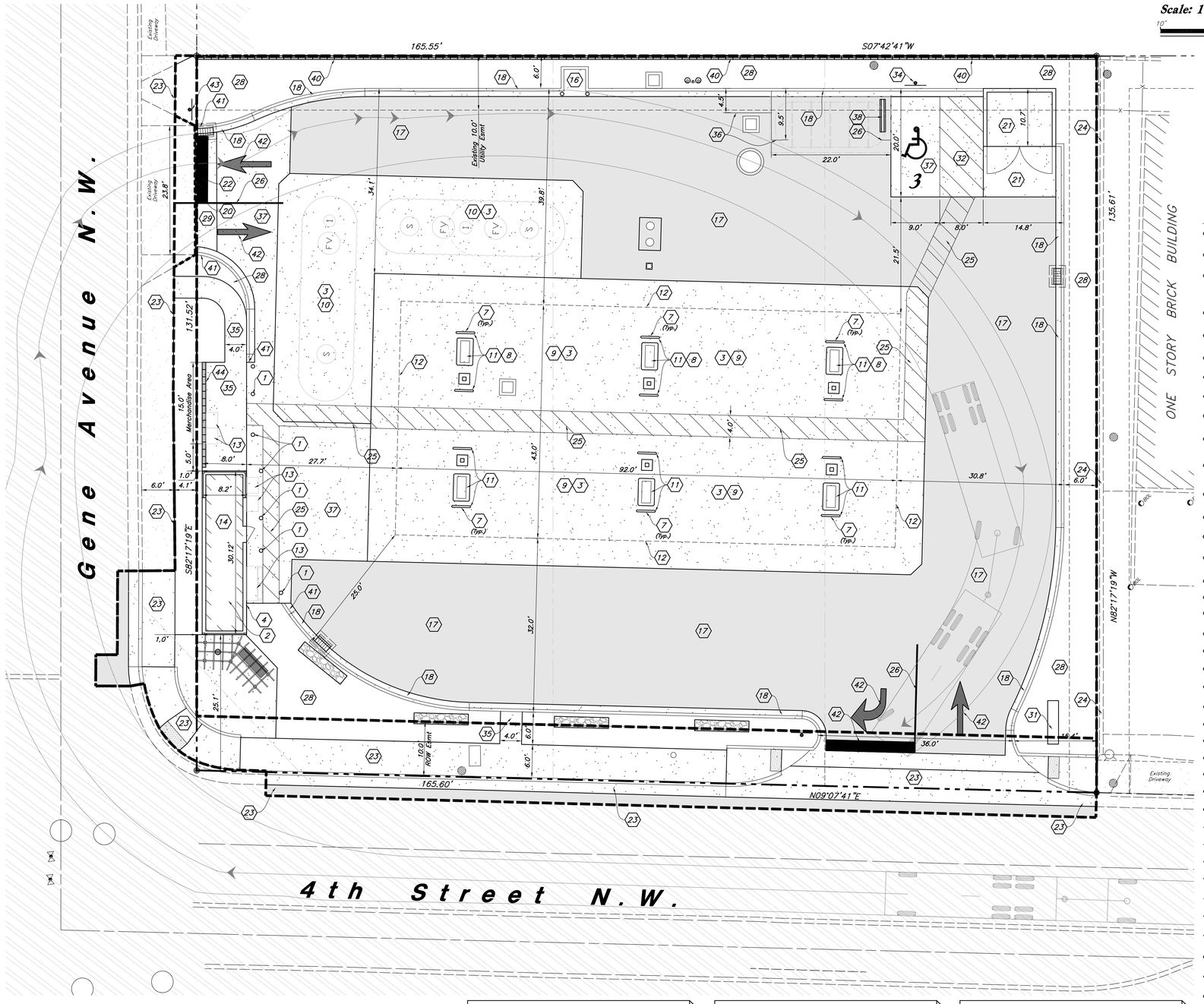
DIRECT RUNOFF = 0.44 - 0.1 = 0.34 IN

$$\text{VOLUME} = \left(\frac{0.34\ \text{IN}}{12\ \text{IN/FT}}\right)(22{,}111\ \text{SF})$$

$$= 626.5\ \text{FT}^3$$

$$\Rightarrow \underline{627\ \text{FT}^3}$$

RETENTION VOLUME FOR 90% STORM EVENT



Scale: 1" = 10'

10' 0 10' 20'

Legend

- Proposed Building
- Proposed Curb & Gutter
- Proposed Asphalt
- Proposed Concrete
- Existing Improvements
- Existing Asphalt
- Existing Concrete
- Existing Building
- Existing Power Pole
- Existing Power Pole w/ Guy

Site Construction Notes

1. Const. Bollard (1.6 / C4.3)
2. Install roof penetration in kiosk and weather proof for speaker/camera wire installation.
3. All concrete slabs shall be cleaned and sealed by Owner. Contractor shall coordinate with the Owner provided Contractor (White Mountain, Mike Letts 801-547-9278 or Romac Services 801-759-7315).
4. Provide caulking and painting as necessary to touch up exterior panels of the kiosk.
5. Provide a water tight seal between the kiosk foundation and canopy slab.
6. 3' x 8' Merchandiser
7. Paint all bollards and island forms with Contractor supplied Sherwin Williams Industrial Enamel B54Z Series Paint.
8. Install a diesel tee, plug, and fittings in the MPD sumps of the islands with diesel.
9. Construct 6" Thick Concrete Canopy Drive Slab w/ Rebar Reinforcing (See Arch. Plans)
10. Construct 8" Thick Concrete Tank Pad w/ Rebar Reinforcing. (See Arch. Plans for Section)
11. Contractor Shall Construct Dispenser Islands w/ Bollard Protection and Install Fuel Dispenser (See Arch. Plans) (Typ)
12. Overhead Canopy System Supplied and Installed by others. General Contractor to Install Footings, Conduits, & Conductors per Drawings by Madison Industries
13. Retail Merchandisers
14. General Contractor to Const. Floor and Foundation then Place Prefabricated Kiosk (See Arch. Plans)
15. Const. Remote Tank Vent Riser Modified for Separator Vent. (See Arch. Plans) (21 / A4.3)
16. Const. 4'x4'x6" Concrete Pad for Air (12 / C4.2)
17. Const. Asphalt Paving (2 / C4.1)
18. Const. 18" Concrete Curb and Gutter (1 / C4.1)
19. General Contractor to Install Mechanical Equipment Screen (Provided by Others)
20. Connect & Match Existing Grade
21. Dumpster Enclosure (18 / C4.3) (22 / C4.4)
22. Provide Smooth Clean Edge, Sawcut Asphalt if Needed
23. Street Improvements; See Work Order #XXXXXX Plans
24. Exist. Curb Wall to Remain
25. Pedestrian Warning Zone Striping (See Arch. Plans)
26. Const. 4" Paint Stripe (Color: White)
27. Const. 6' CMU Screen Wall (22 / C4.4)
28. Landscape (See Landscape Plan)
29. Const. 4' Waterway (5 / C4.1)
31. Pylon Sign by Separate Permit
32. Const. Accessible Striping per MUTCD & ICC/ANSI A117.1 (Latest Editions)
33. Const. Accessible Ramp per ICC/ANSI A117.1 (Latest Edition) (17 / C4.3)
34. Const. Accessible Sign & ICC/ANSI A117.1 (Latest Editions) (16 / C4.3)
35. Const. Conc. Sidewalk (3 / C4.1)
36. Const. Truncated Domes per ICC/ANSI A117.1-2003 (Latest Addition)
37. Const. 7" Thick Conc. Paving (6 / C4.2)
38. Const. Conc. Wheel Stop (9 / C4.2)
39. Street Improvement Plan (Offsite) Boundary
40. Const. "CMU Retaining Wall. Contractor to Provide Design Submittal Stamped by New Mexico Licensed Professional Engineer for Approval to Engineer of Record Prior to Construction. (1 / C5.1)
41. Const. curb Transition (15 / C4.3)
42. Const. Turn Arrow & Asphalt markings per MUTCD
43. Const. Stop Sign (R1-1) per MUTCD
44. Const. 4' CMU Screen Wall (22 / C4.4)

Vicinity Map
Zone Atlas Page F-14
5640 4th Street N.W.
Albuquerque, New Mexico 87107
Not to Scale

Legal Description

Lots numbered Two (2), Three (3), and Four (4) of the HARPER ADDITION, a Subdivision of a tract of land in School District No. 4, Albuquerque, Bernalillo County, New Mexico, as the same are shown and designated on the plat of said Subdivision, filed in the office of the County Clerk of Bernalillo County, New Mexico on December 28, 1945 in Volume D, Folio 79.

Site Data

Total Site Area = 22,111 s.f. (0.51 ac.)
Landscape Area Provided = 3,350 s.f. (15%)
Impervious Area Provided = 18,521 s.f. (84%)
Building Area = 241 s.f (1%)
Canopy Area = 3,955 s.f
Parking Required = 1 stalls
Parking Provided = 1 stall + 1 Accessible Stall + 1 Motorcycle Stall = 3 Total

General Site Notes:

1. Stalls designated as Accessible will require a painted Accessible symbol and sign. (See Details)
2. Fire lane markings and signs to be installed as directed by the Fire Marshall.
3. Aisle markings, directional arrows and stop bars will be painted at each driveway as shown on the plans.
4. All dimensions are to back of curb unless otherwise noted.
5. Const. curb transition at all points where curb abuts sidewalk, see detail.
6. Landscaping and signing will not interfere with clear sight requirements. Therefore, signs, walls, trees, and shrubbery between 3 and 8 feet tall (as measured from the gutter pan) will not be acceptable in this area. (See Landscape Plan)

New Mexico One Call, Inc.
NMOC
Professional Resources for Damage Prevention
1-800-321-ALERT

Smith's
FOOD & DRUG STORES
1550 South Redwood Road
Salt Lake City, Utah 84104
Telephone (801) 974-1400

 # 423
Albuquerque, NM

Survey Note

Surv-Tek, Inc. is the licensed Surveyor responsible for providing surveying services for this project. Anderson Wahlen & Associates has relied upon Surv-Tek, Inc. for professional services in preparing this drawing. Anderson Wahlen & Associates makes no claims to the accuracy of the information provided by Surv-Tek, Inc.

PRIVATE ENGINEER'S NOTICE TO CONTRACTORS

The Contractor agrees that he shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the contractor shall defend, indemnify, and hold the owner and the engineer harmless from any and all liability, real or alleged, in connection with the performance of work on this project, excepting for liability arising from the sole negligence of the owner or the engineer.

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REV	DATE	DESCRIPTION

Designed by: KR
Drafted by: JC
Client Name:
Smith's Food & Drug Stores
SMC423-SP

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
801 521-8529 - AWAengineering.net

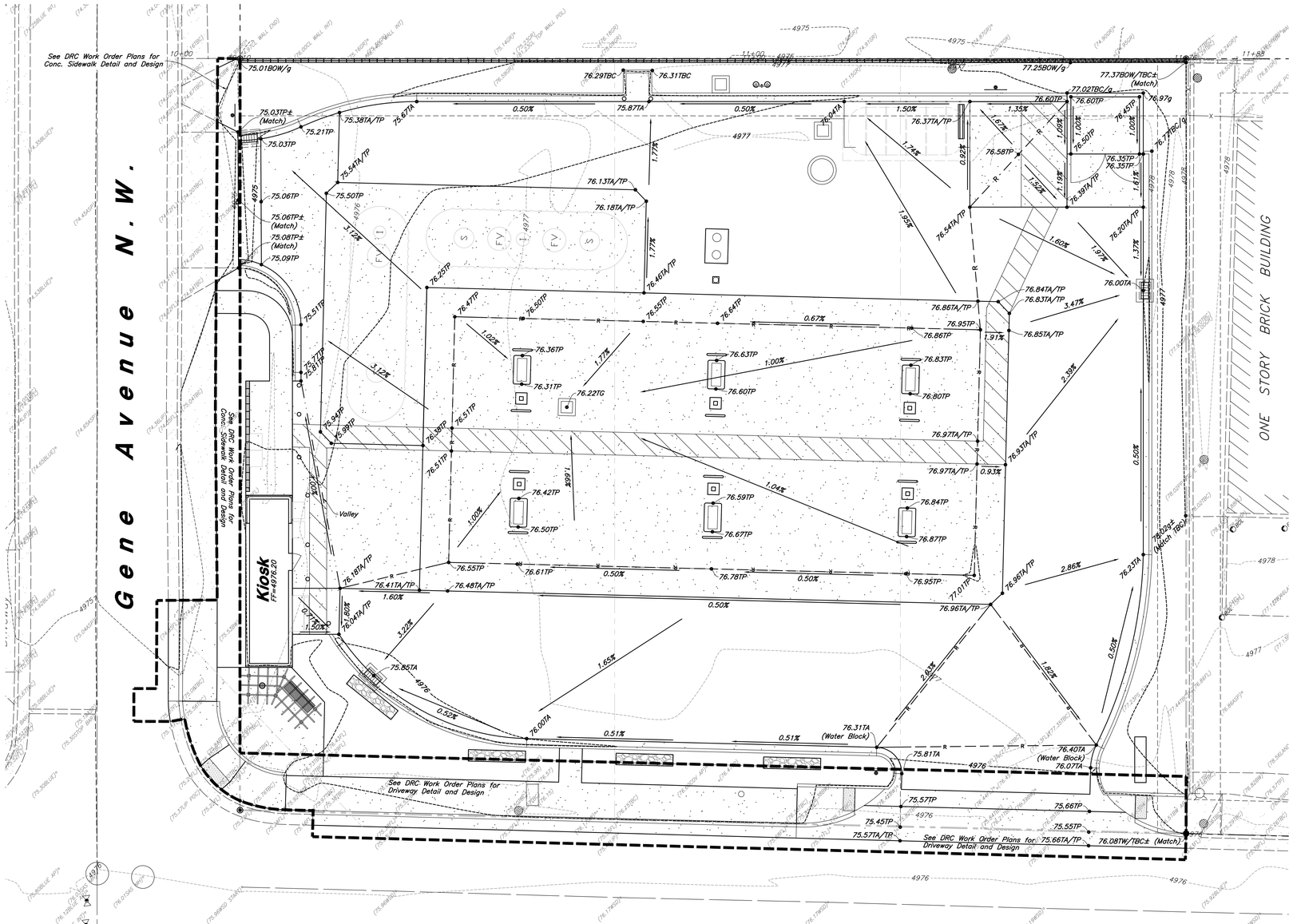
Traffic Circulation / Site Plan

Smith's #423 Fuel Center
5640 4th Street N.W.
Albuquerque, New Mexico 87107

DAVID C. ANDERSON NEW MEXICO 20167 11-16-2015 REGISTERED PROFESSIONAL ENGINEER

16 Nov, 2015

SHEET NO.
C1.1



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    Project No.: 20152711.001A
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Tank Connection	10"				
Total	33"				
4. Grade Differential = (#2 + #3)		4.95	ft	3.35	ft
5. Top of Tanks = (#1 - #4)		4971.92	ft	4973.01	ft
6. Top of Tanks = Lowest Calculated Elevation		4971.92			
Check Min. / Max. Burial Depth		4.0' Min. / 7.0' Max.			
7. Lowest Elevation of Slab Above Tank		4975.50			
8. Depth of Bury = (#7 - #6)		3.58	ft		
NOTE: If #8 < 4.5 ft., Set Top of Tanks at (#7 - 4.5 ft.) = 4971.00 If #8 > 7 ft., Contact Owner for Certification of Burial Depth with Tank				**4971.00**	

Accessible Note:

Contractor must maintain a running slope on Accessible routes no steeper than 5.0% (1:20). The cross slope for Accessible routes must be no steeper than 2.0% (1:50). All Accessible routes must have a minimum clear width of 36". If Grades on plans do not meet this requirement notify Consultant immediately.

The Client, Contractor and Subcontractor should immediately notify the Consultant of any conditions of the project that they believe do not comply with the current state of the (ICC/ANSI A117.1–Latest Edition) and/or FHAA.

Smith's
FOOD & DRUG STORES
#423
Albuquerque, NM

REV	DATE	DESCRIPTION
X	XXX	XXXX

Designed by: KR/AT
Drafted by: AM/NM
Client Name:
Smith's Food & Drug Stores
SMC423-GR

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
801 521-8529 – AWAengineering.net

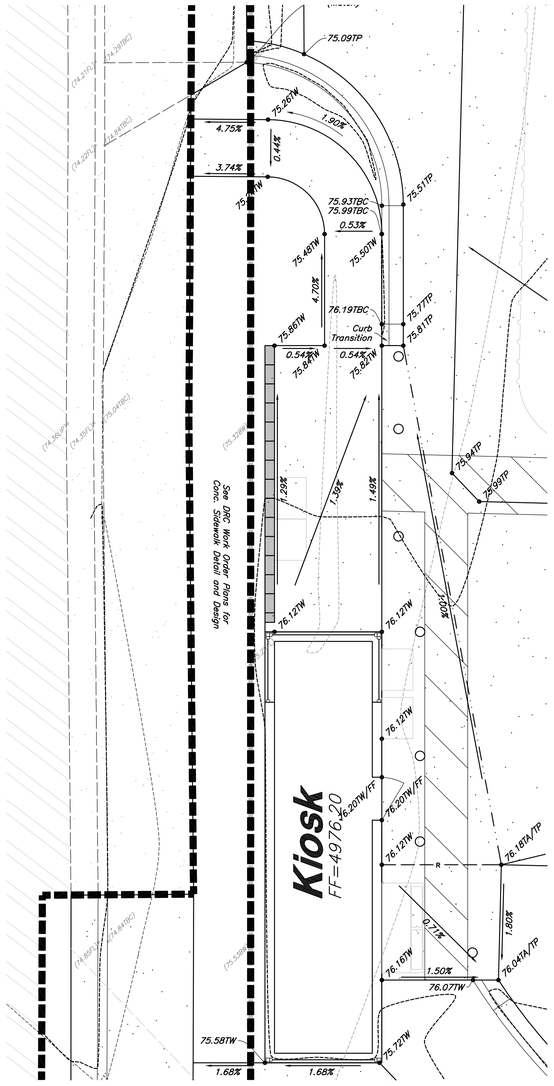
Grading Plan

Smith's #423 Fuel Center
5640 4th Street N.W.
Albuquerque, New Mexico 87107

DAVID G. ANDERSON
NEW MEXICO
20167
REGISTERED PROFESSIONAL ENGINEER
11-16-2015

16 Nov, 2015

SHEET NO.
C2.1



Pedestrian Access Route & Kiosk Merchandise Area

1 Scale: 1" = 5'

NOTE:
See Plans by Madison Industries for Footing Depth.

Scale: 1" = 10'

10' 0 10' 20'

General Grading Notes:

1. All grading shall be in accordance with the project geotechnical report.
2. Cut slopes shall be no steeper than 3 horizontal to 1 vertical.
3. Fill slopes shall be no steeper than 3 horizontal to 1 vertical.
4. Fills shall be compacted per the recommendations of the geotechnical report prepared for the project and shall be certified by the Owner's Special Inspection.
5. Areas to receive fill shall be properly prepared and approved by the Owner's Special Inspection prior to placing fill.
6. Fills shall be benched into competent material as per specifications and geotechnical report.
7. All trench backfill shall be tested and certified by the Owner's Special Inspection.
8. The Owner's Special Inspection shall perform periodic inspections and submit a complete report and map upon completion of the rough grading.
9. The final compaction report and certification from the Owner's Special Inspection shall contain the type of field testing performed. Each test shall be identified with the method of obtaining the in-place density, whether sand cone or drive ring and shall be so noted for each test. Sufficient maximum density determinations shall be performed to verify the accuracy of the maximum density curves used by the field technician.
10. Dust shall be controlled by watering.
11. The location and protection of all utilities is the responsibility of the permitee.
12. Approved protective measures and temporary drainage provisions must be used to protect adjoining properties during the grading process.
13. All public roadways must be cleared daily of all dirt, mud and debris deposited on them as a result of the grading operation. Cleaning is to be done to the satisfaction of the City Engineer.
14. The site shall be cleared and grubbed of all vegetation and deleterious matter prior to grading.
15. The contractor shall provide shoring in accordance with OSHA requirements for trench walls.
16. Aggregate base shall be compacted per the geotechnical report prepared for the project.
17. The recommendations in the following Geotechnical Engineering Report by Kleinfelder are included in the requirements of grading and site Preparation. The Report is titled "Geological Engineering Report Proposed Smith's Food & Drug Fuel Center Retail Store #423 5640 4th Street NW Albuquerque, New Mexico"

    Project No.: 20152711.001A
    Dated: October 29, 2014

18. As part of the construction documents, owner has provided contractor with a topographic survey performed by manual or aerial means. Such survey was prepared for project design purposes and is provided to the contractor as a courtesy. It is expressly understood that such survey may not accurately reflect existing topographic conditions.
19. If Contractor observes evidence of hazardous materials or contaminated soils he shall immediately contact the project engineer to provide notification and obtain direction before proceeding with disturbance of said materials or contaminated soil.
20. Contractor will be responsible to phase the construction development so that storm water improvements and storm water facilities including detention or retention improvement facilities are constructed and functional prior to an offsite storm water release and take necessary construction precautions so that no offsite flooding will occur.
21. Importing fill material from an off-site location without prior written approval from the Owner's Project Manager is strictly prohibited. Identification of offsite borrow locations and material must be coordinated and documented with the SWPPP. The Owner's Special Inspection shall verify the suitability of all off-site material. This includes an analysis to insure that no environmental contamination is present. If any material is brought on site without prior written approval of the Owner's Project Manager, the Contractor will bear all costs associated with removing the material, testing for contamination, monitoring the clean-up operation, disposal in an approved landfill, and certifying that the Owner's site is environmentally clean. If requested, the Owner's Project Manager or the Owner's Special Inspection must be granted unfettered access to any and all borrow sites.

Curb and Gutter Construction Notes:

1. Open face gutter shall be constructed where drainage is directed away from curb.
2. Open face gutter locations are indicated by shading and notes on the grading plan.
3. It is the responsibility of the surveyor to adjust top of asphalt grades to top of curb grades at the time of construction staking.
4. Refer to the typical details for a standard and open face curb and gutter for dimensions.
5. Transitions from open face to standard curb and gutter are to be smooth. Hand form these areas if necessary.

New Mexico One Call, Inc.
NMOC
Professional Resources for Damage Prevention
1-800-321-ALERT

Accessible Note:

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The Client, Contractor and Subcontractor should immediately notify the Consultant of any conditions of the project that they believe do not comply with the current state of the (ICC/ANSI A117.1-Latest Edition) and/or FHAA.

Smith's
FOOD & DRUG STORES
#423
Albuquerque, NM

REV	DATE	DESCRIPTION
X	XXX	XXXX

Designed by: KR/AT
Drafted by: AM/NM
Client Name:
Smith's Food & Drug Stores
SMC423-GR

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
801 521-8529 - AWAengineering.net

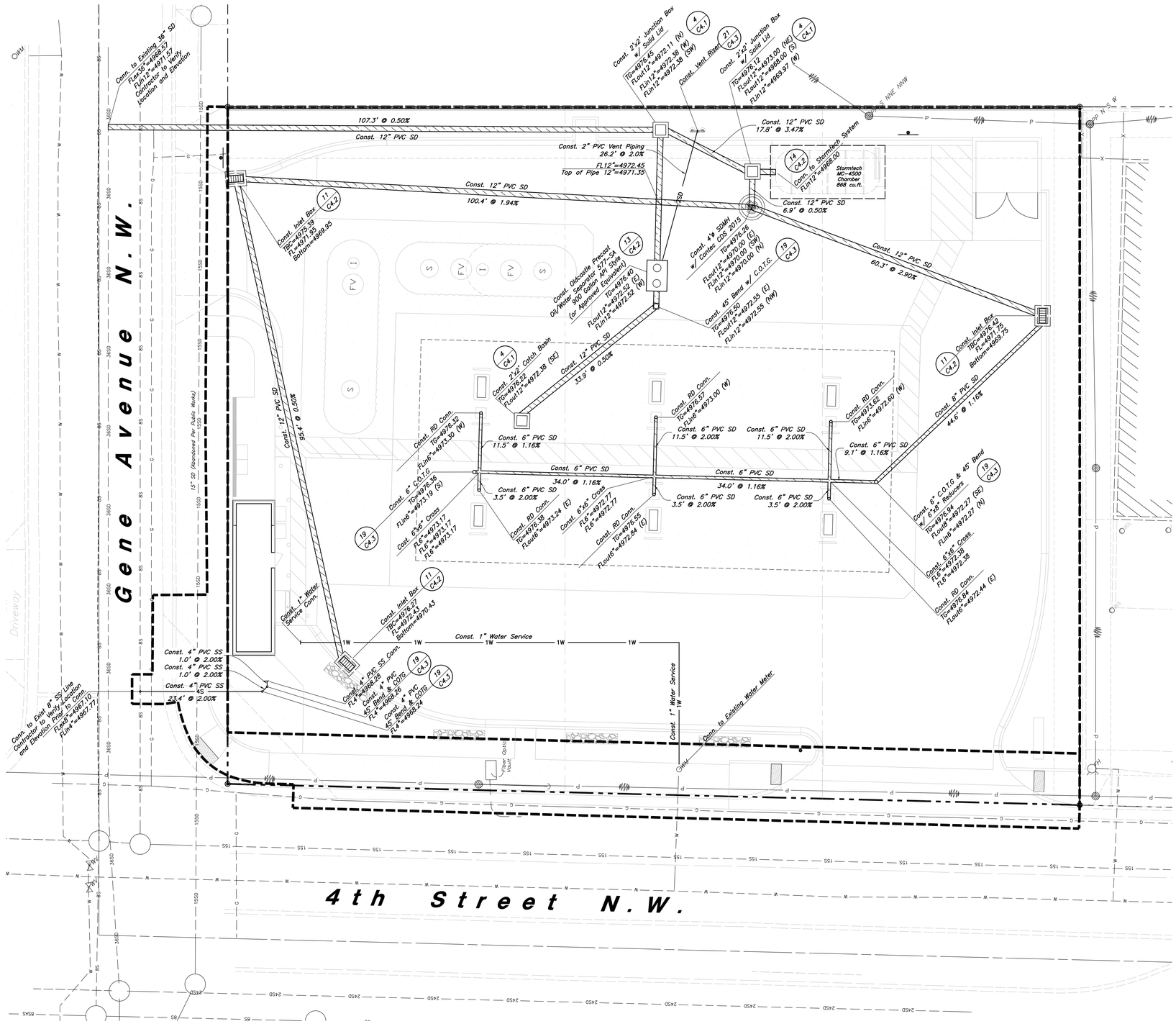
Enlarged Grading Plan

Smith's #423 Fuel Center
5640 4th Street N.W.
Albuquerque, New Mexico 87107

DAVID G. ANDERSON
NEW MEXICO
20167
REGISTERED PROFESSIONAL ENGINEER
11-16-2015

16 Nov, 2015

SHEET NO.
C2.2



Scale: 1" = 10'

10' 0 10' 20'

General Utility Notes:

1. All sewer and water facilities shall be constructed per local jurisdiction standards and specifications. Contractor is responsible to obtain standards and specifications.
2. Coordinate all utility connections to building with plumbing plans and building contractor.
3. Verify depth and location of all existing utilities prior to constructing any new utility lines. Notify Civil Engineer of any discrepancies or conflicts prior to any connections being made.
4. All catch basin and inlet box grates are to be bicycle proof.
5. Refer to the site electrical plan for details and locations of electrical lines, transformers and light poles.
6. Gas lines, telephone lines, and cable TV lines are not a part of these plans.
7. Water meters are to be installed per city standards and specifications. It will be the contractor's responsibility to install all items required.
8. Water lines, valves, fire hydrants, fittings etc. are to be constructed as shown. Contractor is responsible, at no cost to the owner, to construct any vertical adjustments necessary to clear sewer, storm drain, or other utilities as necessary including valve boxes and hydrant spools to proper grade.
9. Contractor shall install a 12" concrete collar around all manholes, valves, catch basins, cleanouts & any other structures located within the asphalt.

Utility Piping Materials:

All piping to be installed per manufacturers recommendations. Refer to project specifications for more detailed information regarding materials, installation, etc.

Culinary Service Laterals

1. Pipe material as shown on utility plan view and/or to meet city standards.

Water Main Lines and Fire Lines

1. Pipe material as shown on utility plan view and/or to meet city standards.

Sanitary Sewer Lines

1. All sewer piping to be Polyvinyl Chloride (PVC) sewer pipe, ASTM D3034, Type PSM, SDR 35

Storm Drain Lines

1. 12" pipes or smaller – Polyvinyl Chloride (PVC) sewer pipe, ASTM D3034, Type PSM, SDR 35
2. 15" pipes or larger – ADS High Density Polyethylene (HDPE) AASHTO M 294, Types with Smooth Interior or Equal as Approved.

Storm Drain Note:

All Storm Drainage Pipe Lengths and Slopes are from Center of Box to Center of Box.

CAUTION :

The locations and/or elevations of existing utilities as shown on these plans are based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete.

New Mexico One Call, Inc.
NMOC
Professional Resources for Damage Prevention
1-800-321-ALERT

Smith's
FOOD & DRUG STORES
#423
Albuquerque, NM

REV	DATE	DESCRIPTION
X	XXX	XXXX

Designed by: KR/AT
Drafted by: AM/NM
Client Name:
Smith's Food & Drug Stores
SMC423-UT

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
801 521-8529 – AWAengineering.net

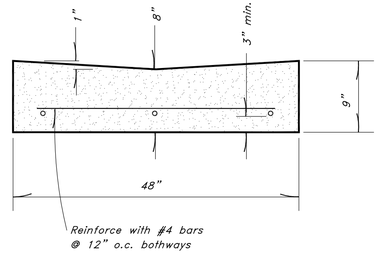
Utility Plan

Smith's #423 Fuel Center
5640 4th Street N.W.
Albuquerque, New Mexico 87107

DAVID S. ANDERSON
NEW MEXICO
20167
REGISTERED PROFESSIONAL ENGINEER
11-16-2015

16 Nov, 2015

SHEET NO.
C3.1



8 Typical Waterway Detail

Not to Scale

1. REINFORCEMENT: ASTM A 615, grade 60, galvanized or epoxy coated deformed steel rebar or smooth steel dowels with diameter and length as indicated.

   A. Space rebar and dowels at 12 to 15 inches on center.
   B. Grease dowels to provide movement in expansion joints.
   C. Keep tie bars in the vertical center of the concrete slab and perpendicular to the joint during concrete placement.

2. SAWING: Keep at least 3 working power saws on-site when concrete is being placed. Saw crack control joints (contraction joints) before shrinkage cracking takes place. Do not tear or ravel concrete during sawing. In cool weather, the joint sawing may be delayed only for the time required to prevent tearing and raveling the concrete. Cut joints to dimensions recommend by sealant manufacturer and approved by ENGINEER.

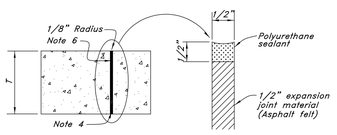
3. JOINTS: Lay out joints to aid construction and control random cracking.

   A. Joint Spacing shall be 12 feet maximum on center in both directions.
   B. Extend transverse contraction joints continuously across the full width of the concrete. Make the joints coincide with curb and gutter joints.
   C. Make adjustments in joint locations to meet inlet or manhole locations.
   D. Expansion Joints shall be placed where concrete abuts a building wall, sidewalk, curb, gutter or any immovable structure.

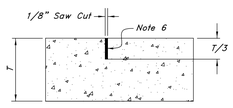
4. JOINT FILLER: Bituminous (Asphalt or tar) mastic, ASTM D994. Formed and encased between 2 layers of bituminous saturated felt or 2 layers of glass-fiber felt extending to the bottom of the concrete slab.

5. BACKER ROD: Round Rods. It must be oversized approximately 25 percent to fit tightly into each joint and compatible with hot poured sealant.

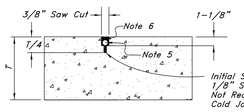
6. JOINT SEALANT: Hot applied, Asphalt base type, ASTM D 3405. Remove dirt, oil, and curing compounds from joint reservoir. Seal joints immediately after cleaning.



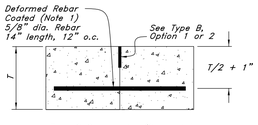
Type A Expansion Joint



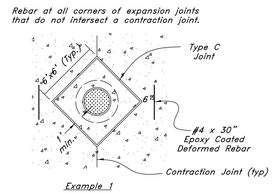
Type B Contraction Joint (Option 2)



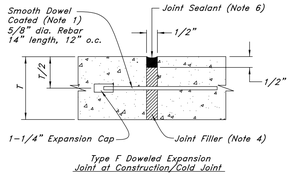
Type B Contraction Joint (Option 1)



Type C Construction/Cold Joint



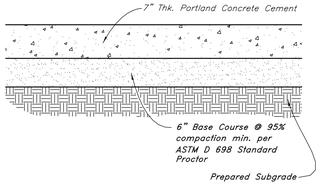
Example 1



Type F Doweled Expansion Joint at Construction/Cold Joint

7 Concrete Joint Detail

Not to Scale



1. See Geotechnical Report for Project for Further Details
2. See Concrete Joint Detail

6 Concrete Paving Section

Not to Scale

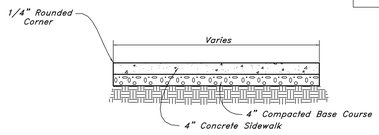
Contraction Joints

A. Spacing = 10' o.c.

Expansion Joints

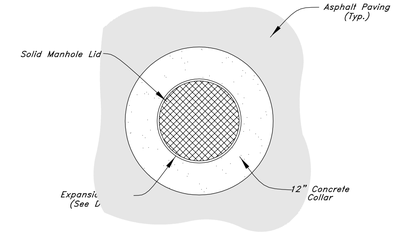
A. Make expansion joints full depth, see joint detail
B. Place expansion joint at all cold joints
C. Expansion joints are required at the start or end of curb radius

1. See Concrete Joint Detail

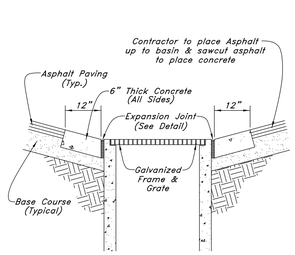


3 Typical Sidewalk Detail

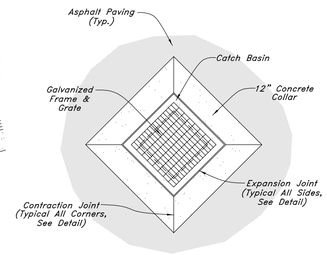
Not to Scale



Plan View



Profile View



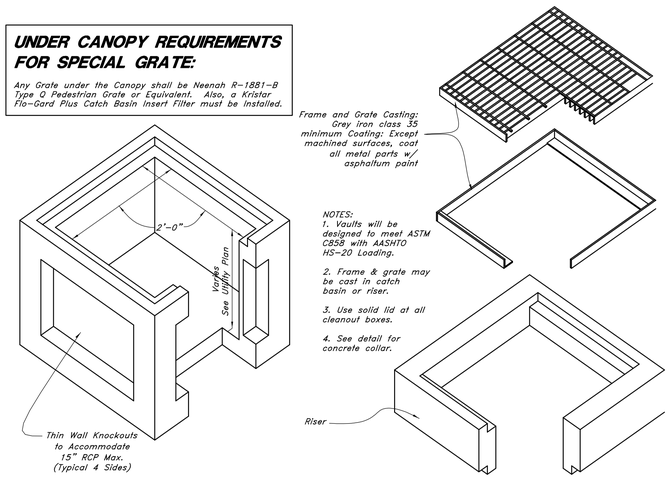
Plan View

5 12" Concrete Collar

Not to Scale

UNDER CANOPY REQUIREMENTS FOR SPECIAL GRATE:

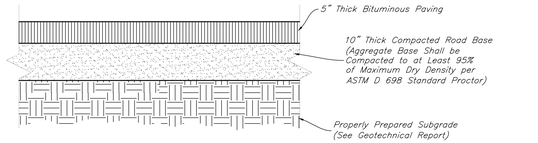
Any Grate under the Canopy shall be Neenah R-1881-B Type O Pedestrian Grate or Equivalent. Also, a Kristar Flo-Gard Plus Catch Basin Insert Filter must be Installed.



4 Precast 24" x 24" Catch Basin / Junction Box

Not to Scale

See Geotechnical Report for Project



2 Standard Asphalt Section

Not to Scale

1. Contraction Joints
   A. Spacing = 10' o.c., see joint detail
   B. 1/8" wide by 2" deep from top of curb at 15'-0" intervals

2. Expansion Joints
   A. Make expansion joints full depth, see joint detail
   B. Place expansion joint at all cold joints
   C. Expansion joints are required at ends of all radii.
   D. Required 5'-0" on each side of drainage structures
   E. Required at 90'-0" maximum intervals in straight curb and gutter
   F. Provide #6 x 18" long smooth steel dowel bars with 1" dia. grease cap through expansion joints (¾" thick bituminous filler material)

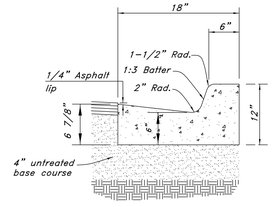
3. 2'-6" Long tie bar on 2'-6" centers shall be provided when curb is adjacent to P.C.C. pavement

4. Provide (2) #6 x 2'-6" long tie bars to connect existing and new curb and gutter

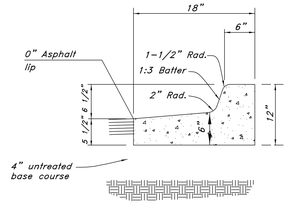
5. Remove forms as early as possible. Brush top and face of curbs to remove all imperfections. Typical of all form work.

6. All radii shall be true arcs

7. Medium to light broom finish on all exterior concrete



Standard



Note: All curb & gutter to be standard unless otherwise noted.

Open Face

1 (On-Site) 18" Curb And Gutter

Not to Scale

New Mexico One Call, Inc.
NMOC
Professional Resources for Damage Prevention
1-800-321-ALERT

Smith's
FOOD & DRUG STORES
1550 South Redwood Road
Salt Lake City, Utah 84104
Telephone (801) 974-1400

 # 423
Albuquerque, New Mexico

REV	DATE	DESCRIPTION
X	XXX	XXXX

Designed by: KR/AT
Drafted by: AM/NM
Client Name:
Smith's Food & Drug Stores
SMC423-DT

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
801 521-8529 - AWAengineering.net

Details

Smith's #423 Fuel Center
5640 4th Street N.W.
Albuquerque, New Mexico 87107

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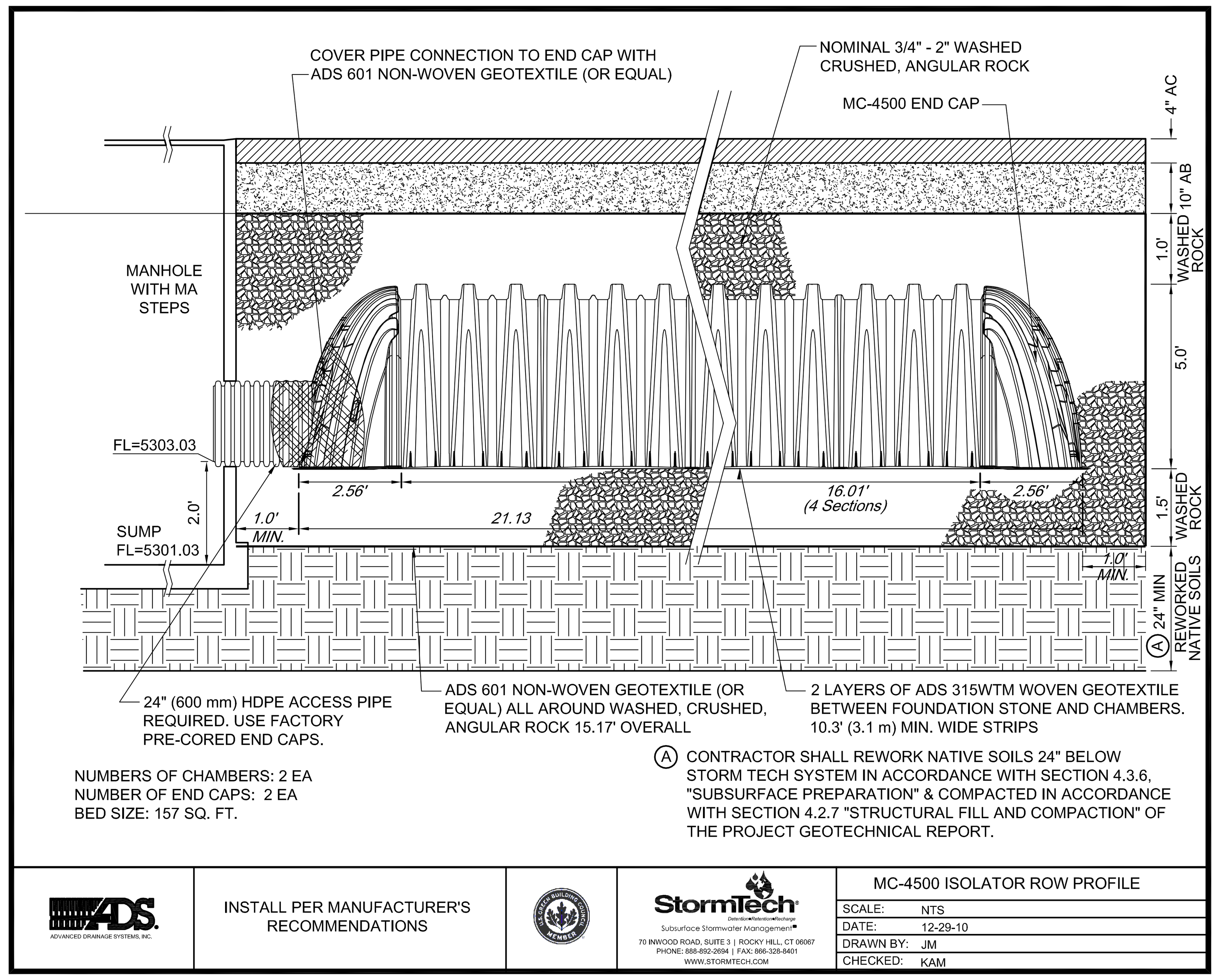
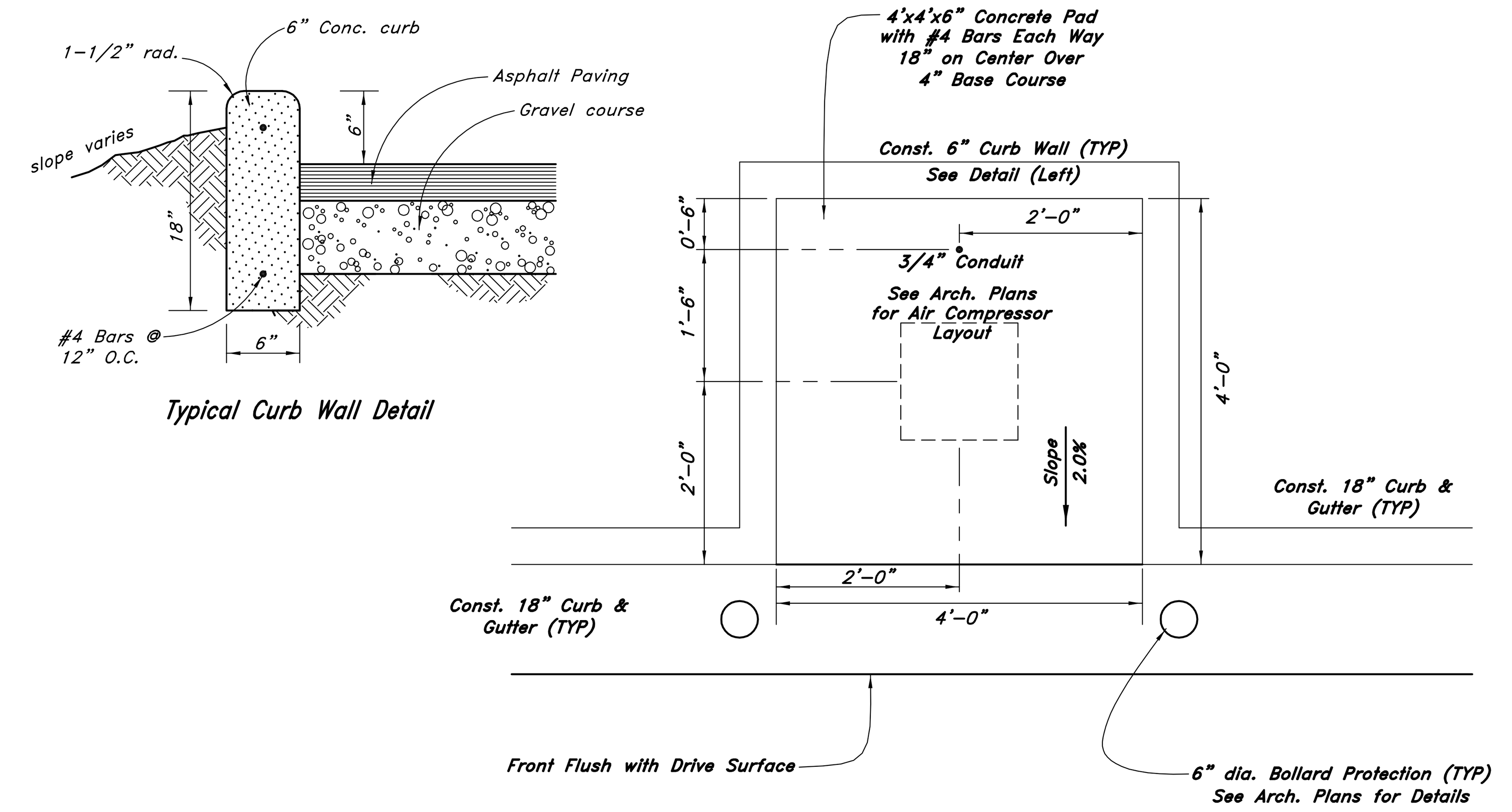


COVER PIPE CONNECTION TO END CAP WITH ADS 601 NON-WOVEN GEOTEXTILE (OR EQUAL)
NOMINAL 3/4" - 2" WASHED CRUSHED, ANGULAR ROCK
MC-4500 END CAP
4" AC
10" AB
WASHED ROCK
MANHOLE WITH MA STEPS
FL=5303.03
SUMP FL=5301.03
2.56'
21.13
16.01' (4 Sections)
2.56'
1.0' MIN.
1.0' MIN.
24" MIN REWORKED NATIVE SOILS
24" (600 mm) HDPE ACCESS PIPE REQUIRED. USE FACTORY PRE-CORED END CAPS.
ADS 601 NON-WOVEN GEOTEXTILE (OR EQUAL) ALL AROUND WASHED, CRUSHED, ANGULAR ROCK 15.17' OVERALL
2 LAYERS OF ADS 315WTM WOVEN GEOTEXTILE BETWEEN FOUNDATION STONE AND CHAMBERS. 10.3' (3.1 m) MIN. WIDE STRIPS
NUMBERS OF CHAMBERS: 2 EA
NUMBER OF END CAPS: 2 EA
BED SIZE: 157 SQ. FT.
(A) CONTRACTOR SHALL REWORK NATIVE SOILS 24" BELOW STORM TECH SYSTEM IN ACCORDANCE WITH SECTION 4.3.6, "SUBSURFACE PREPARATION" & COMPACTED IN ACCORDANCE WITH SECTION 4.2.7 "STRUCTURAL FILL AND COMPACTION" OF THE PROJECT GEOTECHNICAL REPORT.
INSTALL PER MANUFACTURER'S RECOMMENDATIONS
StormTech
MC-4500 ISOLATOR ROW PROFILE
SCALE: NTS
DATE: 12-29-10
DRAWN BY: JM
CHECKED: KAM

14 StormTech MC-4500 Isolator Row Detail

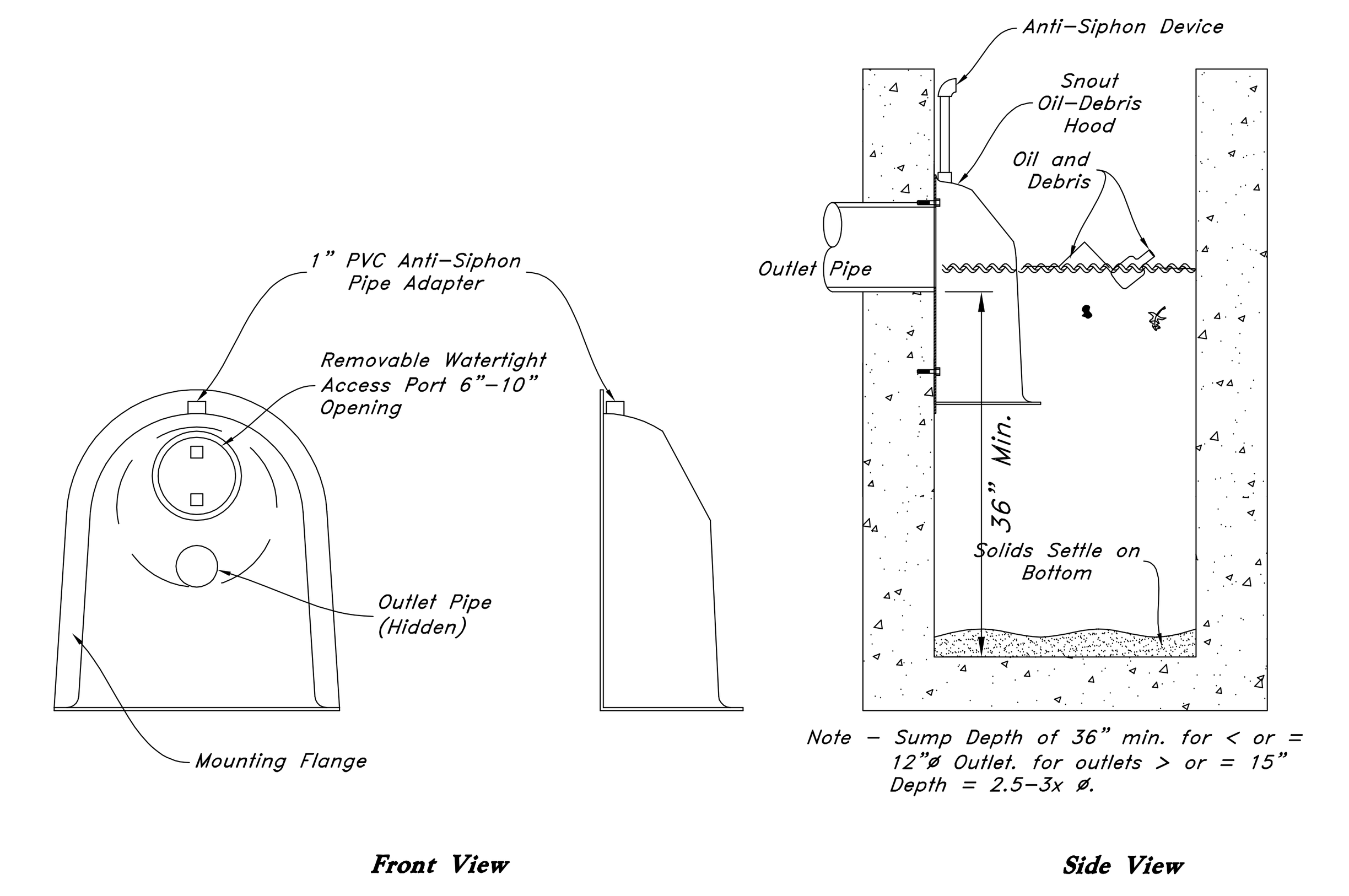
Not to Scale



1-1/2" rad.
6" Conc. curb
slope varies
Asphalt Paving
Gravel course
18"
#4 Bars @ 12" O.C.
6"
Typical Curb Wall Detail
4'x4'x6" Concrete Pad with #4 Bars Each Way 18" on Center Over 4" Base Course
Const. 6" Curb Wall (TYP) See Detail (Left)
2'-0"
3/4" Conduit
See Arch. Plans for Air Compressor Layout
Slope 2.0%
Const. 18" Curb & Gutter (TYP)
2'-0"
4'-0"
Front Flush with Drive Surface
6" dia. Bollard Protection (TYP) See Arch. Plans for Details

12 Air Pad Detail

Not to Scale

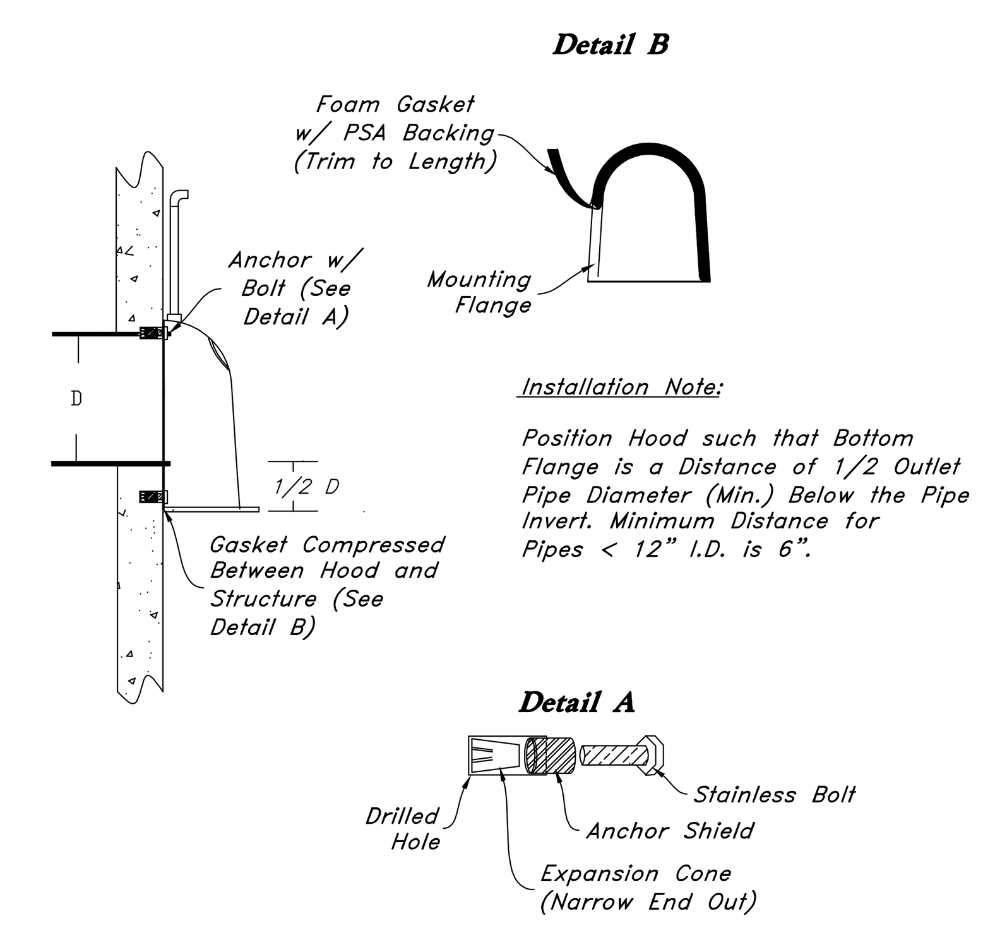


Anti-Siphon Device
Snout Oil-Debris Hood
Oil and Debris
1" PVC Anti-Siphon Pipe Adapter
Removable Watertight Access Port 6"-10" Opening
Outlet Pipe (Hidden)
Mounting Flange
Outlet Pipe
36" Min.
Solids Settle on Bottom
Note - Sump Depth of 36" min. for < or = 12"Ø Outlet. for outlets > or = 15" Depth = 2.5-3x Ø.
Front View
Side View
Snout Oil-Water Debris Separator

Notes:

1. All hoods and traps for catch basins and water quality structures shall be as manufactured by:

   Best Management Products, inc.
   53 MT. Archer RD.
   lyme, CT 06371
   (860) 434-0277, (860) 434-3195 fax
   toll free: (800) 504-8008 or (888) 354-7585
   web site: www.bestmp.com
   or pre-approved equal
2. All hoods shall be constructed of a glass reinforced resin composite with iso gel coat exterior finish with a minimum 0.125" laminate thickness.
3. All hoods shall be equipped with a watertight access port, a mounting flange, and an anti-siphon vent as drawn. (see configuration detail)
4. The size and position of the hood shall be determined by outlet pipe size as per manufacturer's recommendation.
5. The bottom of the hood shall extend downward a distance equal to 1/2 the outlet pipe diameter with a minimum distance of 6" for pipes <12" i.d.
6. The anti-siphon vent shall extend above hood by minimum of 3" and a maximum of 24" according to structure configuration.
7. The surface of the structure where the hood is mounted shall be finished smooth and free of loose material.
8. The hood shall be securely attached to structure wall with 3/8" stainless steel bolts and oil-resistant gasket as supplied by manufacturer. (see installation detail)
9. Installation instructions shall be furnished with manufacturer supplied installation kit.
   installation kit shall include:
   a. installation instructions
   b. pvc anti-siphon vent pipe and adapter
   c. oil-resistant crushed cell foam gasket with psa backing
   d. 3/8" stainless steel bolts
   e. anchor shields



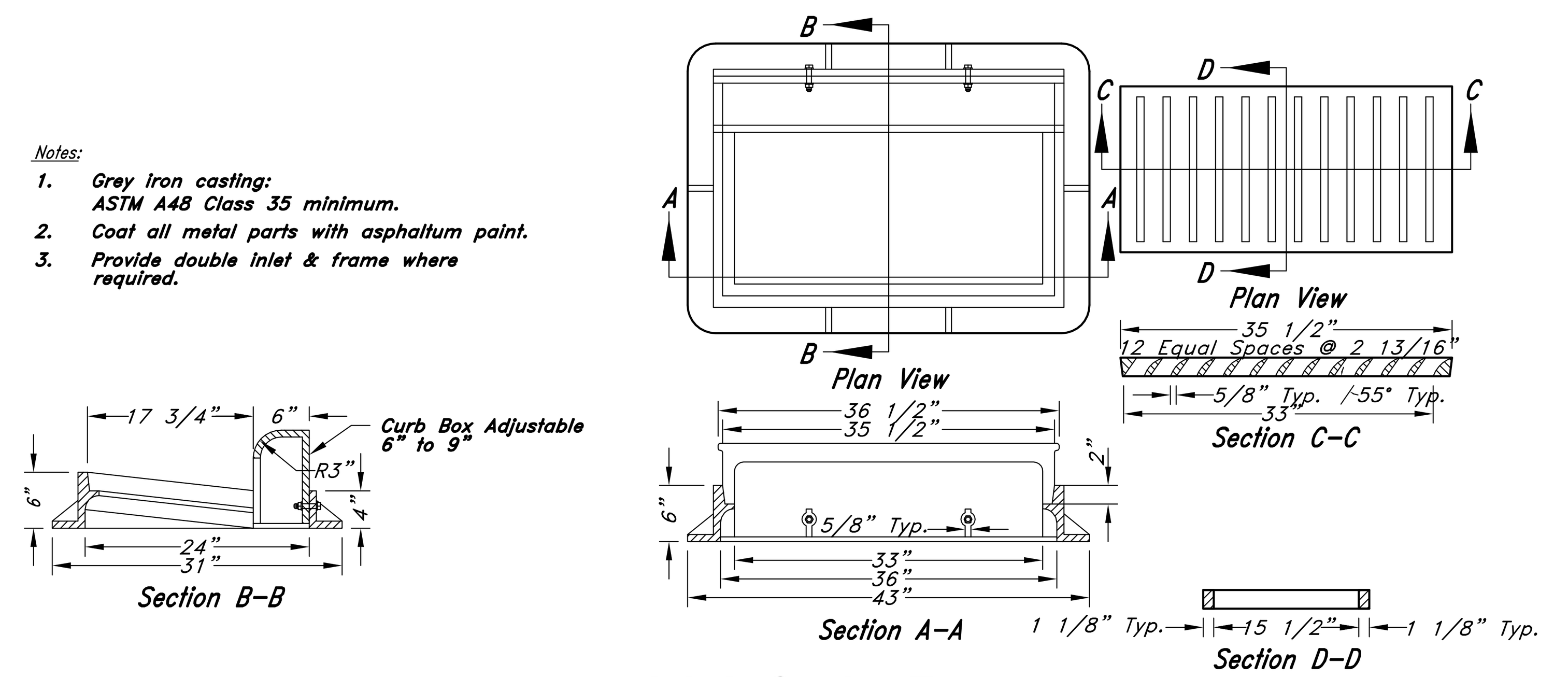
Detail B
Foam Gasket w/ PSA Backing (Trim to Length)
Mounting Flange
Anchor w/ Bolt (See Detail A)
Gasket Compressed Between Hood and Structure (See Detail B)
1/2 D
Installation Note:
Position Hood such that Bottom Flange is a Distance of 1/2 Outlet Pipe Diameter (Min.) Below the Pipe Invert. Minimum Distance for Pipes < 12" I.D. is 6".
Detail A
Drilled Hole
Stainless Bolt
Anchor Shield
Expansion Cone (Narrow End Out)

10 Snout & Orifice Plate Detail

Not to Scale

Notes:

1. Grey Iron casting: ASTM A48 Class 35 minimum.
2. Coat all metal parts with asphaltum paint.
3. Provide double inlet & frame where required.

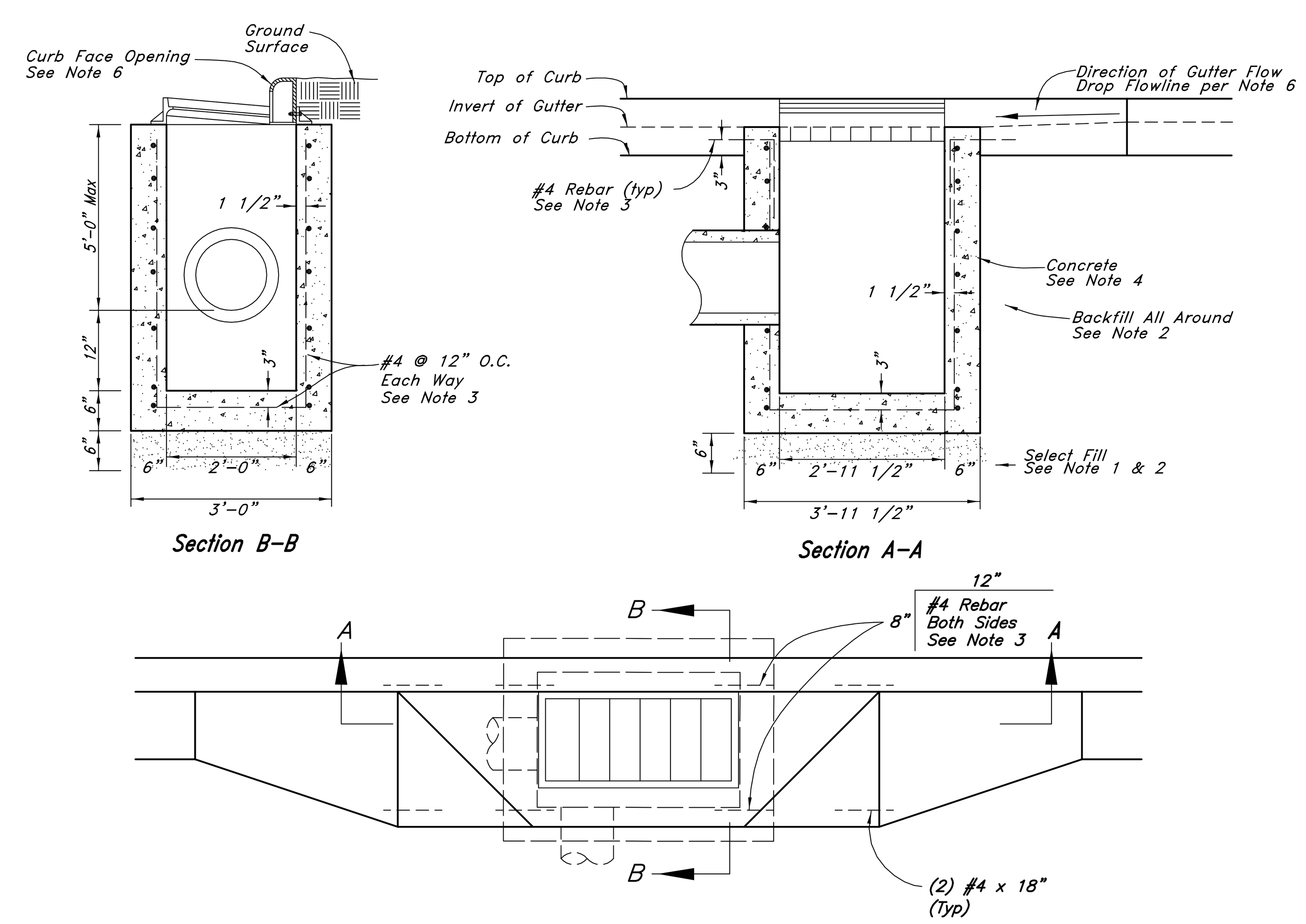


Inlet Grate Frame

Not to Scale

Catch Basin Notes:

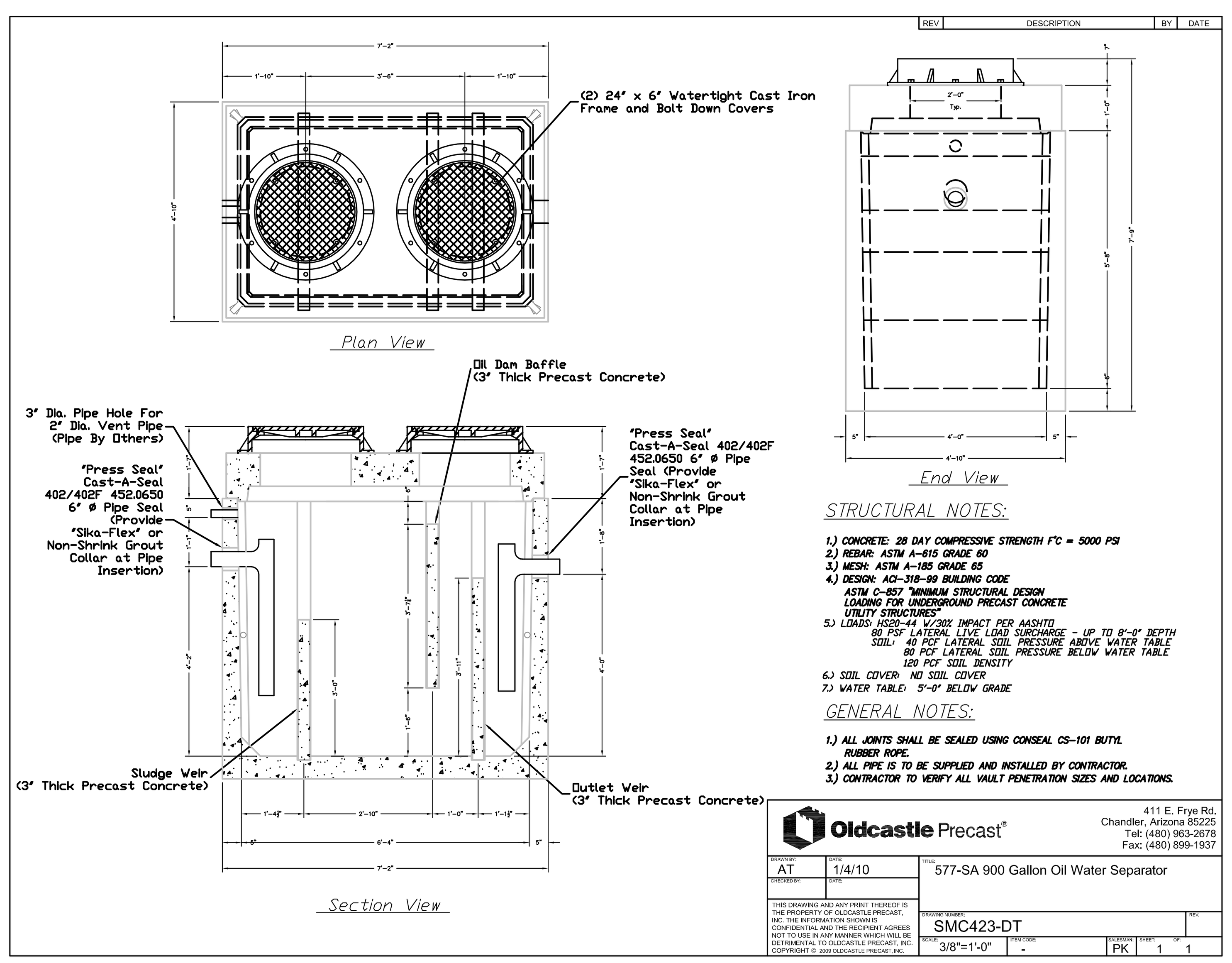
1. Select Fill: Use untreated base course grade 1 or grade 3/4 per APWA Section 02060. Use of sewer rock or recycled aggregate requires Engineers written approval.
2. Backfill: Install and compact all backfill material or APWA Section 02321.
3. Reinforcement: Use ASTM A 615, grade 60 deformed steel rebar. See APWA Section 03200.
4. Concrete: Class 4,000 per APWA Section 03304. Place per APWA Section 03310. Apply a sealing / curing compound per APWA Section 03390 or use an acceptable alternate curing method.
5. Pipe Laterals: The drawing shows alternate connections to the curb outlet. Refer to construction drawings for connection locations.
6. Curb Face Opening: Make opening 4 inches high. Provide at least a 2 inch drop from the gutter flowline to the invert of the curb face opening.



Curb Face Opening See Note 6
Ground Surface
5'-0" Max
1 1/2"
12"
6"
6"
2'-0"
6"
3'-0"
#4 @ 12" O.C. Each Way See Note 3
Section B-B
Top of Curb
Invert of Gutter
Bottom of Curb
Direction of Gutter Flow Drop Flowline per Note 6
#4 Rebar (typ) See Note 3
1 1/2"
Concrete See Note 4
Backfill All Around See Note 2
Select Fill See Note 1 & 2
6"
2'-11 1/2"
6"
3'-11 1/2"
Section A-A
B
A
12"
8"
#4 Rebar Both Sides See Note 3
(2) #4 x 18" (Typ)

11 18" Curb & Gutter Curb Inlet with Single Grate

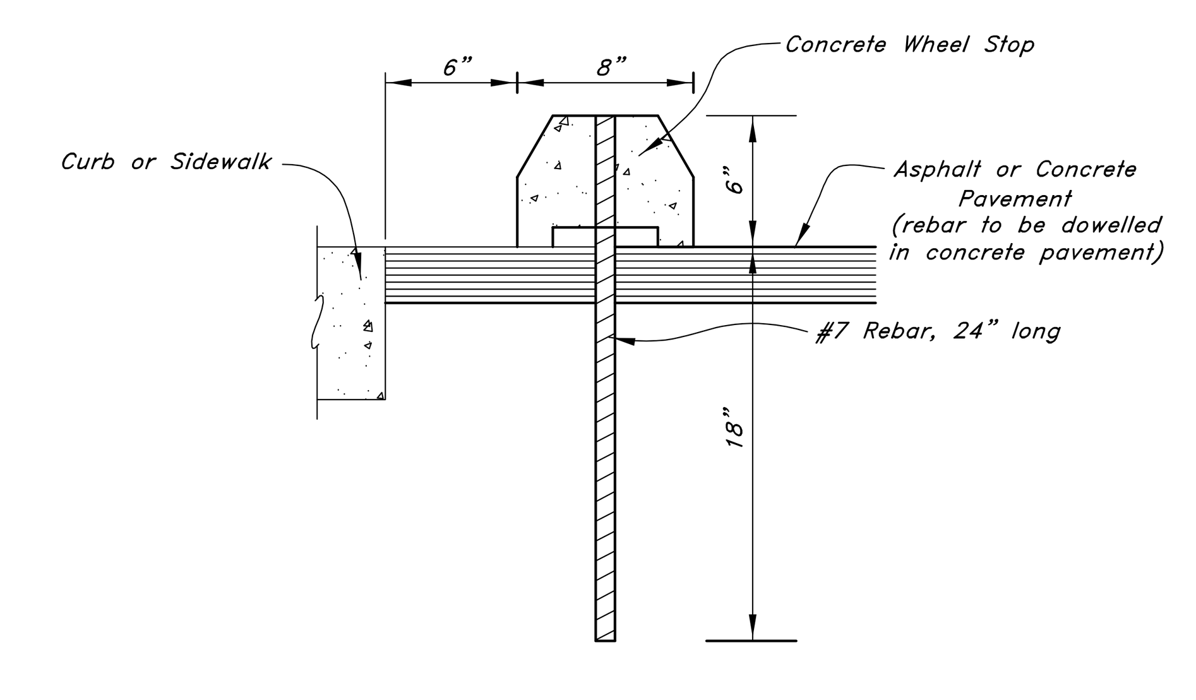
Not to Scale



(2) 24" x 6" Watertight Cast Iron Frame and Bolt Down Covers
Plan View
End View
Oil Dam Baffle (3" Thick Precast Concrete)
3" Dia. Pipe Hole For 2" Dia. Vent Pipe (Pipe By Others)
"Press Seal" Cast-A-Seal 402/402F 452.0650 6" Ø Pipe Seal (Provide "Ska-Flex" or Non-Shrink Grout Collar at Pipe Insertion)
Sludge Weir (3" Thick Precast Concrete)
Outlet Weir (3" Thick Precast Concrete)
Section View
STRUCTURAL NOTES:
GENERAL NOTES:
Oldcastle Precast
577-SA 900 Gallon Oil Water Separator
SMC423-DT
3/8"=1'-0"

13 Oldcastle Precast Oil / Water Separator 577-SA 900 Gallon - API Style

Not to Scale



9 Typical Concrete Wheel Stop

Not to Scale

REV	DATE	DESCRIPTION
X	XXX	XXXX

Designed by: KR/AT
Drafted by: AM/NM
Client Name:
Smith's Food & Drug Stores
SMC423-DT

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
801 521-8529 - AWAengineering.net

Details

Smith's #423 Fuel Center
5640 4th Street N.W.
Albuquerque, New Mexico 87107

New Mexico One Call, Inc.
Professional Resources for Damage Prevention
1-800-321-ALERT

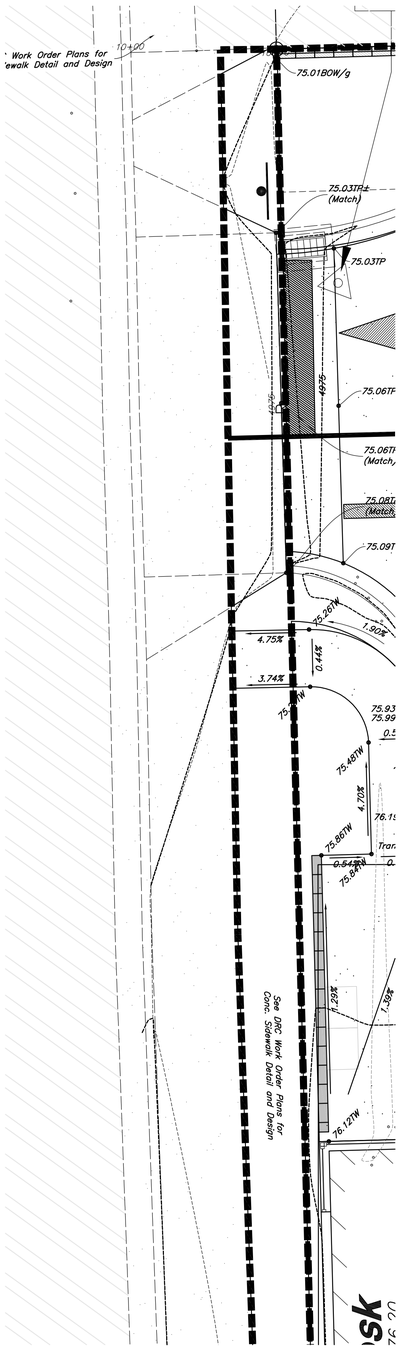
Smith's FOOD & DRUG STORES
1550 South Redwood Road
Salt Lake City, Utah 84104
Telephone (801) 974-1400

#423
Albuquerque, New Mexico

DAVID B. ANDERSON NEW MEXICO 20167 REGISTERED PROFESSIONAL ENGINEER 11-16-2015

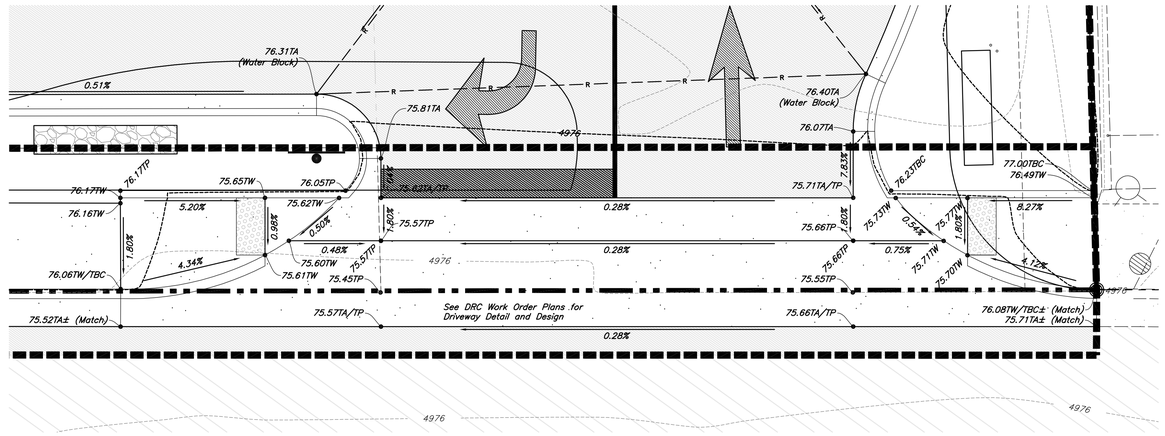
16 Nov, 2015

SHEET NO.
C4.2



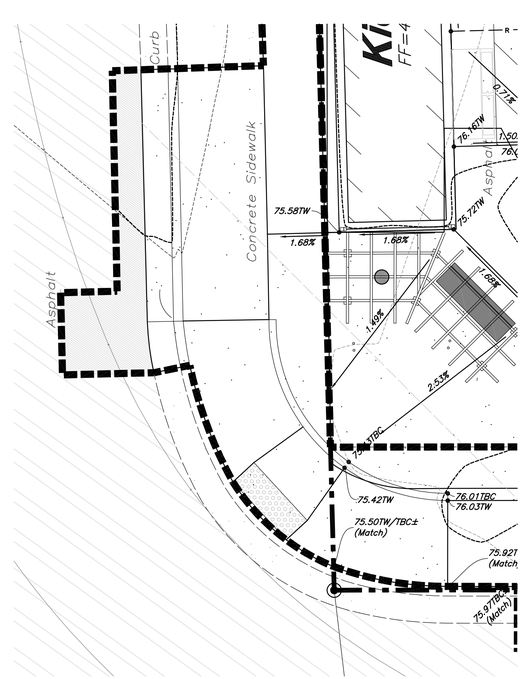
5 Truncated Dome Detail

Scale: 1" = 5'



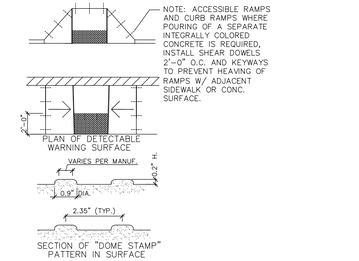
4 4th Street NW Driveway Detail

Scale: 1" = 5'



3 4th & Gene Accessible Ramp Detail

Scale: 1" = 5'

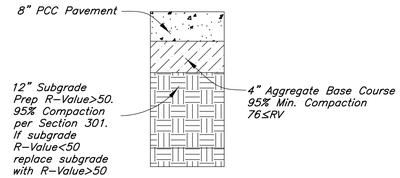


PLAN OF "DOME STAMP" PATTERN IN SURFACE

CURB RAMPS MUST HAVE A DETECTABLE WARNING FEATURE. THE DETECTABLE SURFACE MUST CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER-TO CENTER SPACING OF NOMINAL 2.35 INCHES. THE TEXTURE OF THE DETECTABLE WARNING FEATURE MUST CONTRAST WITH THE SURROUNDING SURFACES (EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT). SEE ABOVE.

2 Truncated Dome Detail

Not to Scale



1 PCC Concrete Section Per COA Dwg. 2407 (Modified)

Not to Scale

ADA Note:
Contractor must maintain a running slope on Accessible routes no steeper than 5.0% (1:20). The cross slope for Accessible routes must be no steeper than 2.0% (1:50). All Accessible routes must have a minimum clear width of 36". If Grades on plans do not meet this requirement notify Consultant immediately.
The Client, Contractor and Subcontractor should immediately notify the Consultant of any conditions of the project that they believe do not comply with the current state of the ADA and/or FHAA.

AS BUILT INFORMATION
CONTRACTOR — DATE —
STAKED BY — DATE —
INSPECTION'S REFERENCE BY — DATE —
FIELD VERIFICATION BY — DATE —
CORRECTED BY — DATE —

BENCH MARKS
Albuquerque Control Survey Monument "12-E14",
Central Zone NAVD 88 Elevation
Benchmark Only
Elevation = 4978.632 feet (NAVD 88).

MICRO-FILM INFORMATION
RECORDED BY — DATE —
NO.

SURVEY INFORMATION
FIELD NOTES
NO. | BY | DATE

ENGINEER'S SEAL
DAVID C. ANDERSON NEW MEXICO 20167 REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REMARKS
x	x	REVISIONS
		DESIGN
		DESIGNED BY: KP DATE:
		DRAWN BY: DC DATE: 16 Nov. 2015
		CHECKED BY:

New Mexico One Call, Inc.
NMOC
Professional Resources for Damage Prevention
1-800-321-ALERT

Smith's
FOOD & DRUG STORES
1550 South Redwood Road
Salt Lake City, Utah 84104
Telephone (801) 974-1400

 # 423
Albuquerque, New Mexico

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
801 521-8529 – AWAengineering.net

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE:
Details
Smith's #423 Fuel Center
5640 4th Street N.W.

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.

CITY PROJECT NO. XXXXXXX
ZONE MAP NO. F-14
SHEET NO. 5 of 5
423DRC-DT.dwg