SANITARY SEWER TO SERVE
SONIC RESTAURANTS, INC.
8612 W. MAPLE STREET
CITY of WICHITA, KS

PRIVATE PROJECT NO. 2233 PPS (607861)
GARY JANZEN, P.E. - CITY ENGINEER

T. Mason - City of Wichita, Inspector
Release Date: 9/21/2015
:aprosas 9/23/2015

GENERAL NOTES:

1. The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications and Special Provisions.
2. Contractor will be required to provide notice to utility companies a minimum of seventy-two (72) hours prior to any excavation, as follows.

   Kansas One-Call 687-2470.

   The Contractor must notify the following in case of an emergency.

AT & T	1-800-246-8464
Black Hills Energy	1-800-694-8989
City of Wichita Water	1-316-268-4555
City of Wichita Sewer	1-316-268-4073
City of Wichita Stormwater	1-316-268-4090
City of Wichita Traffic	1-316-268-4034
Cox Communications	1-888-249-3530
Kansas Gas Service	1-888-482-4950
Westar Energy	1-800-544-4857

3. Utility service lines, poles, etc. are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of- way which do not conflict with proposed construction.
4. Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations, in the opinion of the Engineer that will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment Material either stockpiled or disposed of in a flood plain will require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps. Of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits will require additional archaeological investigations unless buried in a previously approved borrow location.
5. Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which ore not in direct conflict with proposed new construction shall be saved and protected from damage.
6. The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) day notice prior to start of construction.
7. The Contractor shall be responsible for preserving property irons. The Contractor Will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
8. The Water Distribution Division shall field locate water valves one time during construction when requested by the Contractor. It should be the Contractor's responsibility to preserve such field locations during the construction process. Water valves, valve boxes or fire hydrants damaged during construction shall be repaired by Contractor at his own expense. Valve boxes and water meters within the project limits shall be adjusted to match field grades.
9. The Contractor shall notify the consultant engineer and Tom Mason at 316-268-4574 with the City of Wichita with the anticipated construction start dote and notify them of project completion. Staking and inspection for this project will be the responsibility of the Contractor.
10. If traffic will be impacted by construction, a traffic control plan must be submitted and approved by the City Traffic Engineer, Brian Coon at traffic@wichita.gov before construction can begin. The Contractor shall be responsible for all traffic control measures to facilitate construction. All construction zone markings and signage shall conform to the latest version of the Manual on Uniform Traffic Control Devices (MUTCD) as published by the US Dept. of Transportation, Federal Highway Administration. All costs associated with construction markings and signage shall be the Contractors responsibility.
11. All elevations shown are NAVD 88.
12. All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions.
13. All stubs and plugged pipes shall be located with green plastic tape in the same manner as risers.
14. Connecting fa Existing Manholes:
    Prior to laying sewer lines using existing stubs in existing manholes, the Contractor shall expose and verify the elevation, grade and alignment of existing stubs and notify the Engineer of any deviation from the plans. Where connection to on existing manhole that does not have an existing stub or the stub is unusable due to elevation grade or alignment, the Contractor shall core cut into existing manhole wall to make connection using approved water stop gasket, and reshape the existing manhole invert to provide smooth flow. The cost to connecting to existing manholes is incidental to the project.
15. Contractor shall limit the extent of trench open overnight and weekends to less than 50 feet.
16. Contractor shall provide positive drainage away from all manhole covers.
17. The Contractor shall prevent any construction debris from entering the existing sanitary sewer during construction.
18. The Contractor shall be responsible for maintaining continuous flow of sewage through construction. Contractors proposed method for maintaining sewage flow shall be submitted and approved by the Sewer Maintenance Division (316-268-4073) prior to starling and by-passing of sewage flows
19. Any over excavation from manhole and pipe removal shall be backfilled with AB-3 compacted to 90-95% ASTM D698.
20. City Maintenance of sanitary sewer mains ends at last structure within the easement or right-of-way or line.
21. Any sidewalk, drive approach, curb or street pavement removed to construct project must have a pavement cut permit and be replaced by the City contractor. Permits can be obtained by calling 316-268-4501 or 316-268-4480.

SITE BENCHMARK
BM #1:
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1233' ± NORTH AND 3' WEST OF THE EAST PROPERTY LINE.
ELEV=1333.50'
BM #2:
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

FLOOD CERTIFICATION:

THIS PROPERTY IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR SEDGWICK COUNTY, KS.
COMMUNITY PANEL NUMBER 20173C0337F
EFFECTIVE DATE 5-2-2012.

CEI GENERAL NOTES:

A. TOPOGRAPHIC BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, SITE TOPOGRAPHY WITH SPOT ELEVATIONS, OUTSTANDING PHYSICAL FEATURES AND EXISTING STRUCTURE LOCATIONS WAS PROVIDED BY THE FOLLOWING COMPANY, AS A CONTRACTOR TO THE SELLER/OWNER:

TOPOGRAPHY: KAW VALLEY ENGINEERING, INC.
14700 WEST 114TH TERRACE
LENEXA, KS 66215
KENNETH J. DEDRICK
913-894-5150

CEI ENGINEERING AND ITS ASSOCIATES WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS OR OMISSIONS RESULTING FROM SURVEY INACCURACIES.

B. ALL PHASES OF SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE OWNER / DEVELOPER SITE WORK SPECIFICATIONS.

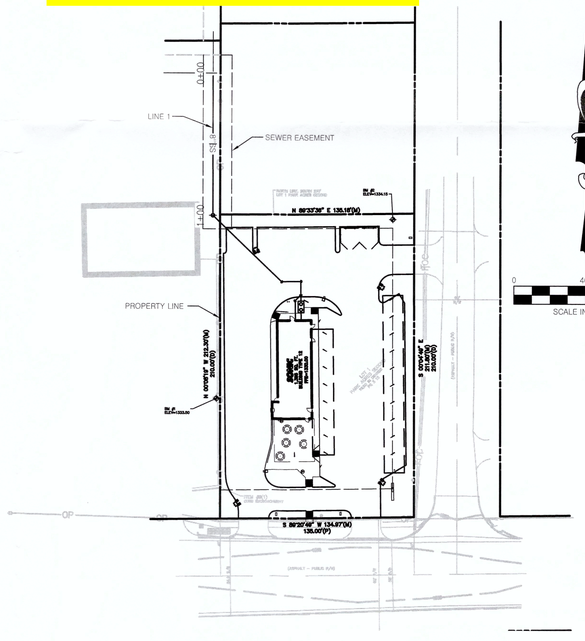
C. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. SEE SITE WORK SPECIFICATIONS.

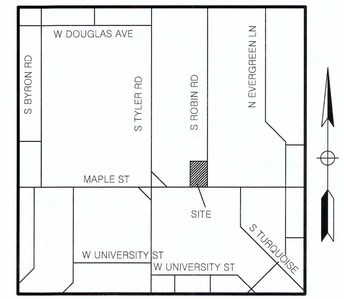
D. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.

E. THE GENERAL CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

F. WARRANTY/DISCLAIMER: THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A CONTEMPORANEOUS BASIS AT THE SITE.

G. SAFETY NOTICE TO CONTRACTOR: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.





Vicinity Map
Not to Scale

SHEET INDEX:

C0	COVER SHEET
C4	EROSION CONTROL PLAN
C5	UTILITY PLAN
C10	WICHITA SANITARY SEWER DETAIL 1
C10.1	WICHITA SANITARY SEWER DETAIL 2
C10.2	WICHITA EROSION CONTROL DETAIL 1
C10.3	WICHITA EROSION CONTROL DETAIL 2
C10.4	WICHITA EROSION CONTROL DETAIL 3
C10.5	WICHITA EROSION CONTROL DETAIL 4
C10.6	WICHITA EROSION CONTROL DETAIL 5

APPROVED AS NOTED
BY WICHITA PUBLIC WORKS
ENGINEERING DIVISION
Engineering 4/22/15
Utilities 6-22-15

NOTE TO CONTRACTORS

Installation, inspection and testing for this project is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer in the state of Kansas. No work shall be performed by the Contractor without such inspection nor shall any work be commenced without written authorization by City Engineering. All Construction and Materials shall comply with the current City of Wichita Specifications and Standards and Special Provisions. (on file and available at Wichita.gov)

An approved copy of these plans signed by City staff are required on-site.

Know what's **below.**
Call before you dig.

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3108 S.W. REGENCY PARKWAY, SUITE 2 (479)273-9472
Bentonville, AR 72712 FAX (479)273-0844

BRENT L. MASSEY 22207 LICENSED PROFESSIONAL ENGINEER KANSAS
4/29/15

AS BUILTS

Contractor:
Danco Enterprises
9/14/2015

Project Inspector:
Larry Gann
KEMILLER ENGINEERING PA
117 E. Lewis, Wichita, KS 67202 (316)264-0242

Arkansas * California * Minnesota * Pennsylvania * Texas

JOB NO.: 28639
DWG NAME: 28639-UP
DATE 4/29/15 11:32 AM REV-3
SHEET NO. C0

© 2015 CEI ENGINEERING ASSOCIATES, INC.

SITE WORK CONSTRUCTION DRAWINGS

SONIC RESTAURANTS, INC.

8612 W. MAPLE STREET

WICHITA, KS

GENERAL NOTES:

A. TOPOGRAPHIC BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, SITE TOPOGRAPHY WITH SPOT ELEVATIONS, OUTSTANDING PHYSICAL FEATURES AND EXISTING STRUCTURE LOCATIONS WAS PROVIDED BY THE FOLLOWING COMPANY, AS A CONTRACTOR TO THE SELLER/OWNER:

TOPOGRAPHY: KAW VALLEY ENGINEERING, INC.
14700 WEST 114TH TERRACE
LENEXA, KS 66215
KENNETH J. DEDRICK
913-894-5150

CEI ENGINEERING AND ITS ASSOCIATES WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS OR OMISSIONS RESULTING FROM SURVEY INACCURACIES.

B. ALL PHASES OF SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE OWNER / DEVELOPER SITE WORK SPECIFICATIONS.

C. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. SEE SITE WORK SPECIFICATIONS.

D. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.

E. THE GENERAL CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

F. WARRANTY/DISCLAIMER: THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A CONTEMPORANEOUS BASIS AT THE SITE.

G. SAFETY NOTICE TO CONTRACTOR: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.

H. ALL CONSTRUCTION IN STATE HIGHWAY DEPARTMENT RIGHT-OF-WAY SHALL BE COORDINATED WITH THE HIGHWAY DEPARTMENT RESIDENT ENGINEER.

I. WETLANDS NOTE: ANY DEVELOPMENT, EXCAVATION, CONSTRUCTION, OR FILLING IN A U.S. CORPS OF ENGINEERS DESIGNATED WETLAND IS SUBJECT TO LOCAL, STATE AND FEDERAL APPROVALS. THE CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS AND/OR RESTRICTIONS AND ANY VIOLATION WILL BE SUBJECT TO FEDERAL PENALTY. THE CONTRACTOR SHALL HOLD THE OWNER/DEVELOPER, THE ENGINEER AND THE LOCAL GOVERNING AGENCIES HARMLESS AGAINST SUCH VIOLATION.

J. RESIDENT ENGINEERING SERVICES: WHEN REQUESTED BY THE OWNER, RESIDENT ENGINEERING SERVICES SHALL BE PROVIDED BY THE ENGINEERS (ON A TIME AND FREQUENCY BASIS) ACCEPTABLE TO THE CITY ENGINEER FOR IMPROVEMENTS TO PUBLIC WATER MAINS, PUBLIC SEWER, AND CITY STREETS. AT THE COMPLETION OF CONSTRUCTION, THE ENGINEER SHALL CERTIFY THE CONSTRUCTION TO BE IN COMPLIANCE WITH THE PLANS AND SPECIFICATIONS. THIS WORK WILL BE AT THE OWNER/DEVELOPER'S DIRECT EXPENSE AND SHALL BE COORDINATED WITH CEI ENGINEERING ASSOCIATES, INC. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE RESIDENT ENGINEER OF ANY PRECONSTRUCTION / CONSTRUCTION CONFERENCES AND ANY PUBLIC CONSTRUCTION 24 HOURS PRIOR TO SAID ACTION.

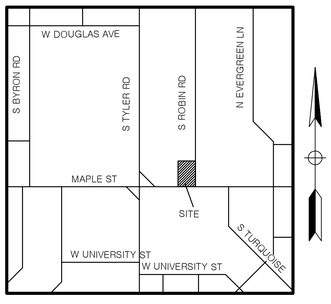
NOTICE TO BIDDERS:

ALL QUESTIONS REGARDING THE PREPARATION OF THE GENERAL CONTRACTOR'S BID SHALL BE DIRECTED TO SONIC'S CONSTRUCTION DEPARTMENT AT (405) 255-4636. SUBCONTRACTORS MUST DIRECT THEIR QUESTIONS THROUGH THE GENERAL CONTRACTOR. THE CONSULTING ARCHITECT AND/OR THE CONSULTING ENGINEER SHALL NOT BE CONTACTED DIRECTLY WITHOUT PRIOR AUTHORIZATION FROM THE OWNER/DEVELOPER.

FLOOD CERTIFICATION:

THIS PROPERTY IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR SEDGWICK COUNTY, KS.
COMMUNITY PANEL NUMBER 20173C0337F
EFFECTIVE DATE 5-2-2012.

SONIC®
America's Drive-In SM



Vicinity Map

Not to Scale

811 Know what's **below.** **Call** before you dig.

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3108 S.W. REGENCY PARKWAY, SUITE 2 (479)273-9472
Bentonville, AR 72712 FAX (479)273-0844

BRENT L. MASSEY 22207 LICENSED PROFESSIONAL ENGINEER KANSAS
6/25/15

PLAN INDEX:

C0	COVER SHEET
	SURVEY (ASSOCIATED PLAN)
C1	SITE PLAN
C2	DEMOLITION PLAN
C3	GRADING PLAN
C4	EROSION CONTROL PLAN
C5	UTILITY PLAN
C6	PAVING PLAN
C7	LANDSCAPE PLAN
C7.1	IRRIGATION PLAN
C8	DETAIL SHEET 1
C8.1	DETAIL SHEET 2
C9	SONIC DETAILS
C10	WICHITA SEWER DETAIL 1
C10.1	WICHITA SEWER DETAIL 2
C10.2	WICHITA EROSION DETAIL 1
C10.3	WICHITA EROSION DETAIL 2
C10.4	WICHITA EROSION DETAIL 3
C10.5	WICHITA EROSION DETAIL 4
C10.6	WICHITA EROSION DETAIL 5

ASSOCIATED PLANS:

1.	SURVEY
C0	UTILITY COVER SHEET
C4	EROSION CONTROL PLAN
C5	UTILITY PLAN
C8	DETAIL SHEET 1
C8.1	DETAIL SHEET 2
C10	WICHITA SEWER DETAIL 1
C10.1	WICHITA SEWER DETAIL 2
C10.2	WICHITA EROSION DETAIL 1
C10.3	WICHITA EROSION DETAIL 2
C10.4	WICHITA EROSION DETAIL 3
C10.5	WICHITA EROSION DETAIL 4
C10.6	WICHITA EROSION DETAIL 5

RESOURCE LIST:

OWNER
SONIC RESTAURANTS, INC.
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
SCOT TREADWELL
405-380-4012
SCOT.TREADWELL@SONICDRIVEIN.COM

CIVIL ENGINEER
CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PARKWAY SUITE 2
BENTONVILLE, AR 72712
JAIME KEMP
479-273-9472
479-273-0844
JKEMP@CEIENG.COM

ARCHITECT
WILKUS ARCHITECTS
11487 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
JEANNE KARGEL
952-843-5052
JAK@WILKUSARCHITECTS.COM

WATER
CITY OF WICHITA
455 N. MAIN ST., 8TH FLOOR
WICHITA, KS 67202
JEFF CROSBY
361-268-4555

SANITARY SEWER
CITY OF WICHITA
VANESSA HENRY
316-268-4461
VHENRY@WICHITA.GOV

STORM DRAINAGE
CITY OF WICHITA
455 N. MAIN ST., 8TH FLOOR
WICHITA, KS 67202
JAMES HARDESTY
316-268-4555

GAS
KANSAS GAS
ED KOEHLER
316-832-3177
ED.KOEHLER@ONEGAS.COM

ELECTRIC
WESTAR ENERGY
1900 E. CENTRAL
WICHITA, KS 67201
LEE SAILSBURY
316-261-6859
LEE.SAILSBURY@WESTARENERGY.COM

TELEPHONE
AT&T
154 N. BROADWAY, ROOM 210
WICHITA, KS 67201
MARK OLSON
316-268-2105
MO6998@ATT.COM

HIGHWAY - STREET DATA
CITY OF WICHITA
455 N. MAIN ST., 7TH FLOOR
WICHITA, KS 67202
BRIAN COON
316-268-4448
BCOON@WICHITA.GOV

PLANNING DEPARTMENT
CITY OF WICHITA
455 N. MAIN
WICHITA, KS 67202
SCOTT KNEBLE
316-268-4477

BUILDING DEPARTMENT
CITY OF WICHITA
455 N. MAIN ST., 7TH FLOOR
WICHITA, KS 67202
MATT LEE
316-268-4477

PLUMBING DEPARTMENT
CITY OF WICHITA
455 N. MAIN ST., 7TH FLOOR
WICHITA, KS 67202
316-268-4341

HEALTH DEPARTMENT
KANSAS DEPT. OF AGRICULTURE
109 SW 9TH ST., 3RD FLOOR
TOPEKA, KS 6612
BRANDY CRUBEL
785-296-7430

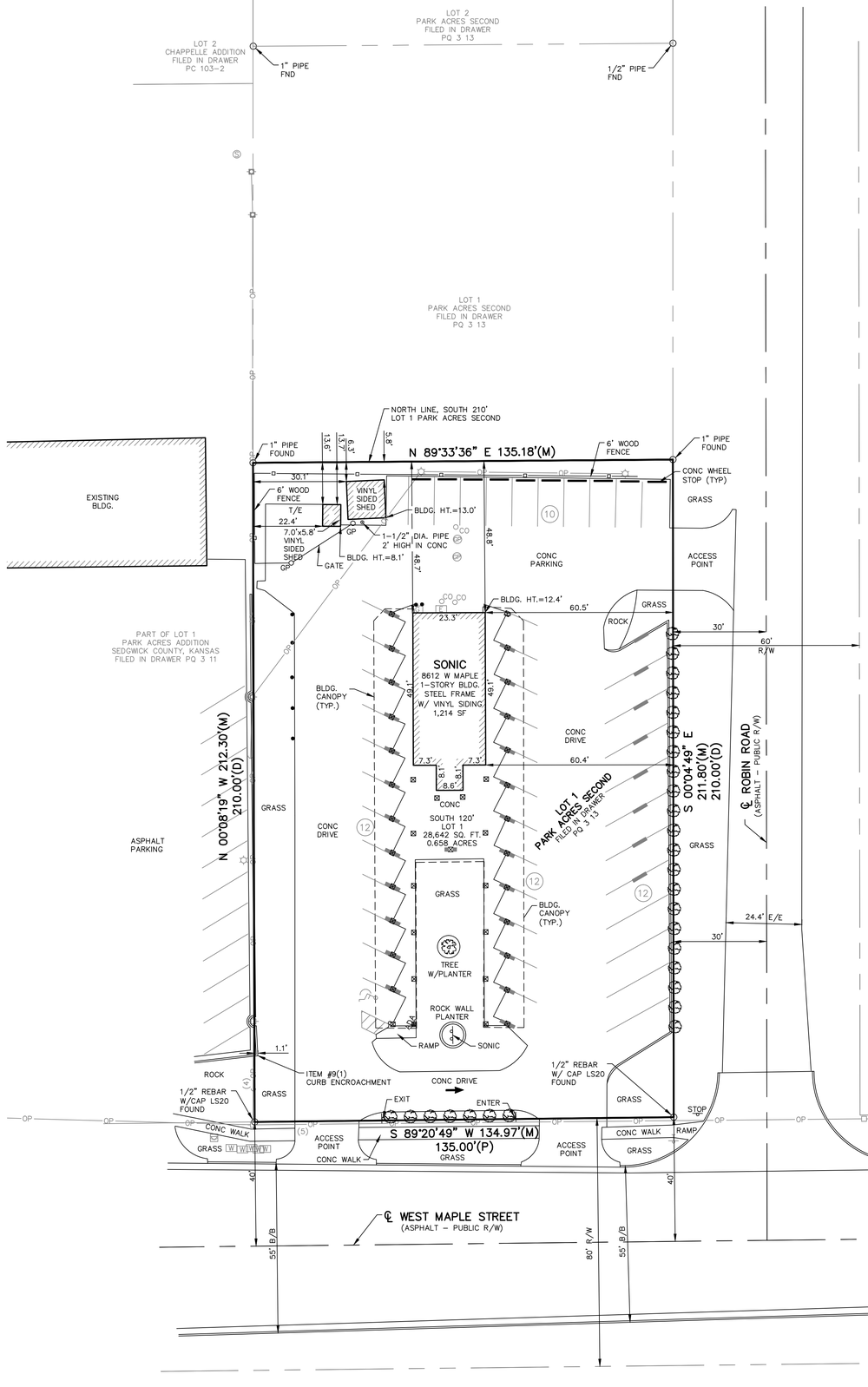
JOB NO.: 28639	
DWG NAME: 28639-SP	
DATE	SHEET NO.
6/25/15 8:20 AM REV-3	C0

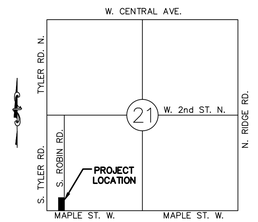
Arkansas * California * Minnesota * Pennsylvania * Texas

© 2015 CEI ENGINEERING ASSOCIATES, INC.

ALTA/ACSM LAND TITLE SURVEY

SECTION 21 – TOWNSHIP 27 – RANGE 1
WITCHITA, SEDGWICK COUNTY, KANSAS





VICINITY MAP
SECTION: 21–T27S–R1W

DESCRIPTION (PER TITLE COMMITMENT):
THE SOUTH 210 FEET OF LOT 1, IN PARK ACRES SECOND, SEDGWICK COUNTY, KANSAS.

PROPERTY ADDRESS:
8612 WEST MAPLE STREET
WICHITA, KANSAS 67209

TABLE "A" NOTES:

3. BY GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN "ZONE X", AREAS DETERMINED TO OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS PER FEMA FIRM PANEL #20173C0340E, WITH AN EFFECTIVE DATE OF FEBRUARY 2, 2007.
4. THE LAND AREA IS 28,642 SQUARE FEET OR 0.658 ACRES, MORE OR LESS.
6. PER THE CITY OF WICHITA ZONING MAP, THIS PROPERTY IS ZONED LC (LIMITED COMMERCIAL DISTRICT)
   LC REQUIREMENTS:
   BUILDING SETBACKS:
   FRONT YARD:
   NOT LESS THAN TWENTY (20) FEET.
   SIDE YARD – INTERIOR:
   NO SETBACK IS REQUIRED EXCEPT WHERE IF PROVIDED, IT MUST BE AT LEAST FIVE (5) FEET.
   STREET SIDE YARD:
   NOT LESS THAN FIFTEEN (15) FEET.
   REAR YARD:
   NOT LESS THAN TEN (10) FEET.
   PARKING/PAVING SETBACKS:
   NOT LESS THAN SIX (6) FEET FROM ANY PROPERTY LINE AND NOT LESS THAN TEN (10) FEET FROM ANY STREET RIGHT-OF-WAY LINE.
   MAXIMUM BUILDING HEIGHT:
   80 FEET.
   PARKING REQUIREMENTS:
   NOT LESS THAN FOUR (4) SPACES PER ONE THOUSAND (1000) SQUARE FEET OF FLOOR AREA IN THE BUILDING.
9. THERE EXISTS 46 STRIPED PARKING SPACES ON THE SUBJECT PROPERTY WHICH INCLUDES 1 ADA SPACE.
10. ACCESS TO THE SUBJECT PROPERTY VIA W. MAPLE STREET (PUBLIC R/W) AND S. ROBIN ROAD (PUBLIC R/W).
11(A). UTILITIES SHOWN ARE FROM ABOVE GROUND OBSERVATION.
14. NEAREST INTERSECTING STREET IS S. TYLER ROAD, AND W. MAPLE STREET APPROXIMATELY 230'± WEST OF SUBJECT PROPERTY'S WEST LINE.

REFERENCE PLATS:
1. PARK ACRES, SEDGWICK COUNTY, KANSAS
2. PARK ACRES SECOND, SEDGWICK COUNTY, KANSAS

POSSIBLE ENCROACHMENTS:
SEE SCHEDULE B–EXCEPTION ITEM NUMBER 9(1) LISTED BELOW.

BASIS OF BEARING:
ASSUMED BEARING OF S 89°20'49" W ALONG THE SOUTH LINE OF LOT 1, PARK ACRES SECOND, SEDGWICK COUNTY, KANSAS.

UTILITY STATEMENT:
THE UNDERGROUND UTILITIES SHOWN HEREON ARE FROM FIELD SURVEY INFORMATION OF ONE-CALL LOCATED UTILITIES, FIELD SURVEY INFORMATION OF ABOVE GROUND OBSERVABLE EVIDENCE, AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY.

TITLE COMMITMENT:
FIRST AMERICAN TITLE INSURANCE COMPANY
COMMITMENT NO.: 2120452
EFFECTIVE DATE: DECEMBER 15, 2014, AT 7:30 A.M.

9. THE FOLLOWING MATTERS DISCLOSED BY A SURVEY MADE BY JASON R. LOADER OF KAW VALLEY ENGINEERING, INC. ON MARCH 31, 2010:

   1. ENCROACHMENT OF CURB FROM REAL ESTATE ADJACENT ON THE WEST ONTO THE EAST SIDE OF SUBJECT PROPERTY. (AFFECTS THE SUBJECT PROPERTY AND IS PLOTTED AND SHOWN)
   2. ENCROACHMENT OF STORAGE UNIT INTO THE NORTH 10 FOOT BUILDING SETBACK LINE (PER ZONING). (REMOVED FROM THIS SURVEY PER ALTA INSTRUCTIONS: TABLE A INTRODUCTORY PARAGRAPH REGARDING ZONING)
   3. ENCROACHMENT OF ASPHALT LOCATED ON THE NORTH SIDE OF SUBJECT PROPERTY ONTO THE REAL ESTATE NORTH OF AND ADJACENT TO SUBJECT PROPERTY. (ASPHALT HAS SINCE BEEN REMOVED AND NO LONGER ENCROACHES)

LEGEND:

- ○ MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E ELECTRIC METER
- (1) OP OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- G GAS METER
- ⊠ CANOPY SUPPORT
- MENU BOARD
- • BOLLARD
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- ADA HANDICAP SIGN
- S SANITARY SEWER MANHOLE
- GP GREASE PIT MANHOLE
- CO SANITARY SEWER CLEAN OUT
- W WATER METER
- GP GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

SURVEYOR'S CERTIFICATION:
TO: AMERICA'S DRIVE-IN RESTAURANTS LLC, A DELAWARE LIMITED LIABILITY COMPANY, AMERICA'S DRIVE-IN RESTAURANTS LLC, A DELAWARE LIMITED LIABILITY COMPANY, SUCCESSOR-IN-INTEREST TO AMERICA'S DRIVE-IN RESTAURANTS LLC, A KANSAS LIMITED LIABILITY COMPANY AND FIRST AMERICAN TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6a, 7a, 8, 9, 11a & 14 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON DECEMBER 17, 2014 DATE OF PLAT OR MAP: JANUARY 2, 2015

PRELIMINARY

KENNETH J. DEDRICK _____
KANSAS RLS NO. 1067

(AN ORIGINAL SEAL AND SIGNATURE IN BLUE INK, SIGNIFIES THE CERTIFICATION OF THE ENTIRE FACE OF THIS DOCUMENT AND ALL OF ITS CONTENT)

I, KENNETH J. DEDRICK, BEING A DULY REGISTERED AND LICENSED LAND SURVEYOR IN THE STATE OF KANSAS, HEREBY CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT WAS BASED WAS MADE BY ME OR UNDER MY DIRECT SUPERVISION, AND MEETS OR EXCEEDS THE CURRENT KANSAS MINIMUM STANDARDS FOR BOUNDARY SURVEYS. THAT THE SUBJECT PARCEL IS THE SAME AS THAT DESCRIBED IN THE TITLE COMMITMENT REFERENCED HEREON. THAT THE LINES OF POSSESSION ARE DEPICTED HEREON, THE COURSES AND DISTANCES SHOWN HEREON ARE THOSE MEASURED ON THE DATE OF THE SURVEY AND THAT THE SURVEY WAS COMPLETED IN THE FIELD AND ON THE GROUND AND MAY BE RELIED UPON BY THE PARTIES CERTIFIED AS TO BEING CORRECT TO THE BEST OF MY BELIEF AND KNOWLEDGE.

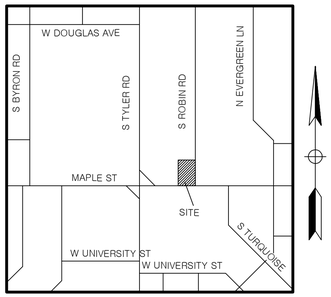
KAW VALLEY ENGINEERING
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150 | FAX (913) 894-5977
lx@kveng.com | www.kveng.com

PROJECT NO.	C14_8073
DRAWN BY	EDV
CHECKED BY	KJD
CFN	8073ALTA
SHEET	1 OF 1

PREPARED FOR:
SONIC RESTAURANTS, INC.
300 JOHNNY BENCH DRIVE, SUITE 400
OKLAHOMA CITY, OKLAHOMA 73104

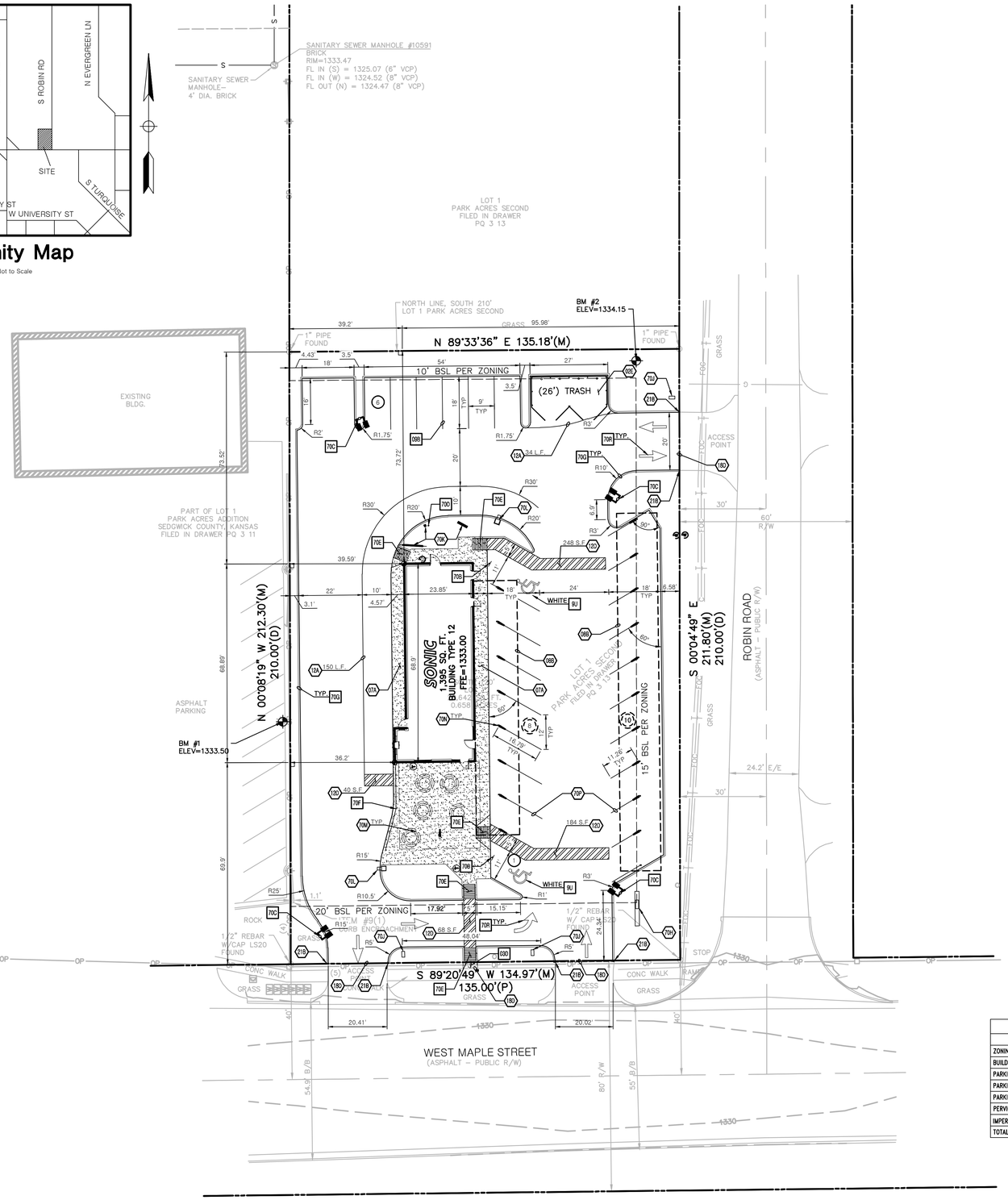
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER SURVEYING SERVICES BY KANSAS STATE CERTIFICATE OF AUTHORIZATION NO. LS-20. EXPIRES 12/31/16

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.



Vicinity Map

Not to Scale



SITE DATA

ZONING	LC (LIMITED COMMERCIAL)	
BUILDING SIZE	1,395 S.F.	
PARKING RATIO	1 SPACE PER 3 SEATS	
PARKING REQUIRED	9 SPACES	
PARKING PROVIDED	25 SPACES	
PERVIOUS AREA	5,066 SQ. FT.	0.12 AC.
IMPERVIOUS AREA	23,576 SQ. FT.	0.54 AC.
TOTAL SITE AREA	28,642 SQ. FT.	0.66 AC.

811 Know what's **below.** **Call** before you dig.

SITE BENCHMARK

BM #1:
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 84'± NORTH AND 2.5±' WEST OF THE WEST PROPERTY LINE.
ELEV=1333.50'

BM #2:
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOORS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

N

0 20' 30' 40'
SCALE IN FEET

LEGEND

EXISTING

- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E — ELECTRIC METER
- E — UNDERGROUND ELECTRIC
- (1) OP — OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T — UNDERGROUND TELEPHONE
- FOC — UNDERGROUND FIBER OPTIC CABLE
- GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- HANDICAP SIGN
- SANITARY SEWER MANHOLE
- S — SANITARY SEWER LINE
- VCP — VITRIFIED CLAY PIPE
- GREASE PIT MANHOLE
- CO — SANITARY SEWER CLEAN OUT
- W — WATER METER
- GP — GATE POST
- B/B — BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E — TRASH ENCLOSURE
- 939 — EXISTING GRADE 1' CONTOUR
- 950 — EXISTING GRADE 5' CONTOUR
- EXISTING SPOT ELEVATION
- 1020.50 — TOP OF CURB ELEVATION
- 1020.00 — FL OF CURB ELEVATION

PROPOSED

- CONCRETE CURB AND GUTTER.
- BUILDING CONTROL POINT
- (#) CANOPY PARKING SPACES
- # PROPOSED PARKING SPACES
- LIMITS OF SIDEWALKS AND CONCRETE APRONS (PER ARCH. PLANS)

GENERAL SITE NOTES

A. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

B. ALL CURB RETURN RADII SHALL BE 2' OR 10', AS SHOWN TYPICAL ON THIS PLAN, UNLESS OTHERWISE NOTED.

C. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON OR WITHIN THE SPECIFICATIONS: ALL CURBING ADJACENT TO CONCRETE PAVING SHALL BE INSTALLED PER DETAIL 70G (SONIC DETAIL 23). PAVEMENT SHALL BE INSTALLED IN ACCORDANCE WITH PAVING PLAN (SEE SHEET C6).

D. ALL ACCESSIBLE PARKING STALLS SHALL HAVE SIGNAGE INSTALLED PER DETAIL: SONIC DET. 3

SITE NOTES

02E TRASH DUMPSTER ENCLOSURE (PER ARCH. PLANS).
07A SIDEWALK (PER ARCH. PLANS).
08B OVERHEAD CANOPY – (TYP.-PER ARCH. PLANS).
12A 4 INCH TRAFFIC YELLOW LANE STRIPE (SEE LENGTH INDICATED AT SYMBOL).
12D 4 INCH WIDE PAINTED YELLOW STRIPES. 2.0 FOOT O.C. @ 45 DEGREES (SEE SIZE INDICATED AT SYMBOL).
18D MATCH EXISTING PAVEMENT ELEVATIONS.
21B TAPER CURB FROM 6 INCHES TO 0 INCHES OVER 2 FEET
70H PYLON SIGN (SEE ARCH PLANS)
70J ENTER / EXIT SIGNS (SEE ARCH PLANS)
70K ORDER BOARD AND DETECTING LOOP (SEE ARCH PLANS)
70L TRASH CANS WITH 2'X2' PADS (SEE ARCH PLANS)
70M LOOSE TABLES AND CHAIRS (SEE ARCH PLANS)
70N MENU / CANOPY POST (SEE ARCH PLANS)
70P 4 INCH PAINTED YELLOW STRIPES

SITE DETAILS

03D CONCRETE SIDEWALK
09B NINETY DEGREE PARKING SPACE STRIPING
09U ACCESSIBLE PARKING SYMBOL (SEE PAINT COLOR INDICATED AT SYMBOL)
70B ACCESSIBLE PARKING SIGN (SEE SONIC DETAIL 3)
70C POLE MOUNTED FLOOD LIGHT BASE (SEE SONIC DETAIL 15)
70D BOLLARD (SEE SONIC DETAIL 4)
70E CURB RAMP (SEE SONIC DETAIL 19)
70F RAILING (SEE SONIC DETAIL 29)
70G MONOLITHIC CURBING (SEE SONIC DETAIL 23)
70R TRAFFIC FLOW ARROW (SEE SONIC DETAIL 16)

REVISIONS | DATE | NO

BRENT L. MASSEY 22207 REGISTERED PROFESSIONAL ENGINEER 6/25/15

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

JOB NO.: 28639
DATE: 6/25/2015 8:20 AM
DWG NAME: 28639-SP
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICES: 405-225-5000

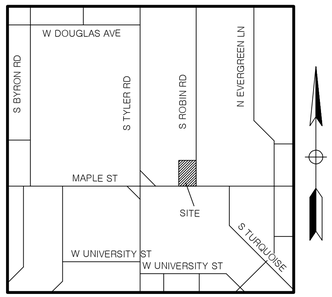
COPYRIGHT 1998-2008 AMERICA'S DRIVE-IN CORP.
ALL RIGHTS RESERVED. USE OF THESE PLANS AND SPECIFICATIONS FOR ANY PURPOSE OTHER THAN THE CONSTRUCTION OF THE DRIVE-IN AT THE SPECIFIED LOCATION, WITHOUT THE EXPRESS WRITTEN PERMISSION OF AMERICA'S DRIVE-IN CORP., IS PROHIBITED. ANY UNAUTHORIZED USE SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO AMERICA'S DRIVE-IN CORP. THE USER OF THESE PLANS AND SPECIFICATIONS AGREES TO INDEMNIFY AND HOLD HARMLESS AMERICA'S DRIVE-IN CORP. FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING FROM SUCH UNAUTHORIZED USE. THESE PLANS AND SPECIFICATIONS ARE COPYRIGHTED BY AMERICA'S DRIVE-IN CORP. AND ARE DESIGNATED SONIC DRIVE-IN OWNER FOR CONSTRUCTION OF THE DRIVE-IN AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS
SITE PLAN

SHEET
C1
DWG: 28639-SP.DWG
DATE: 6/25/15

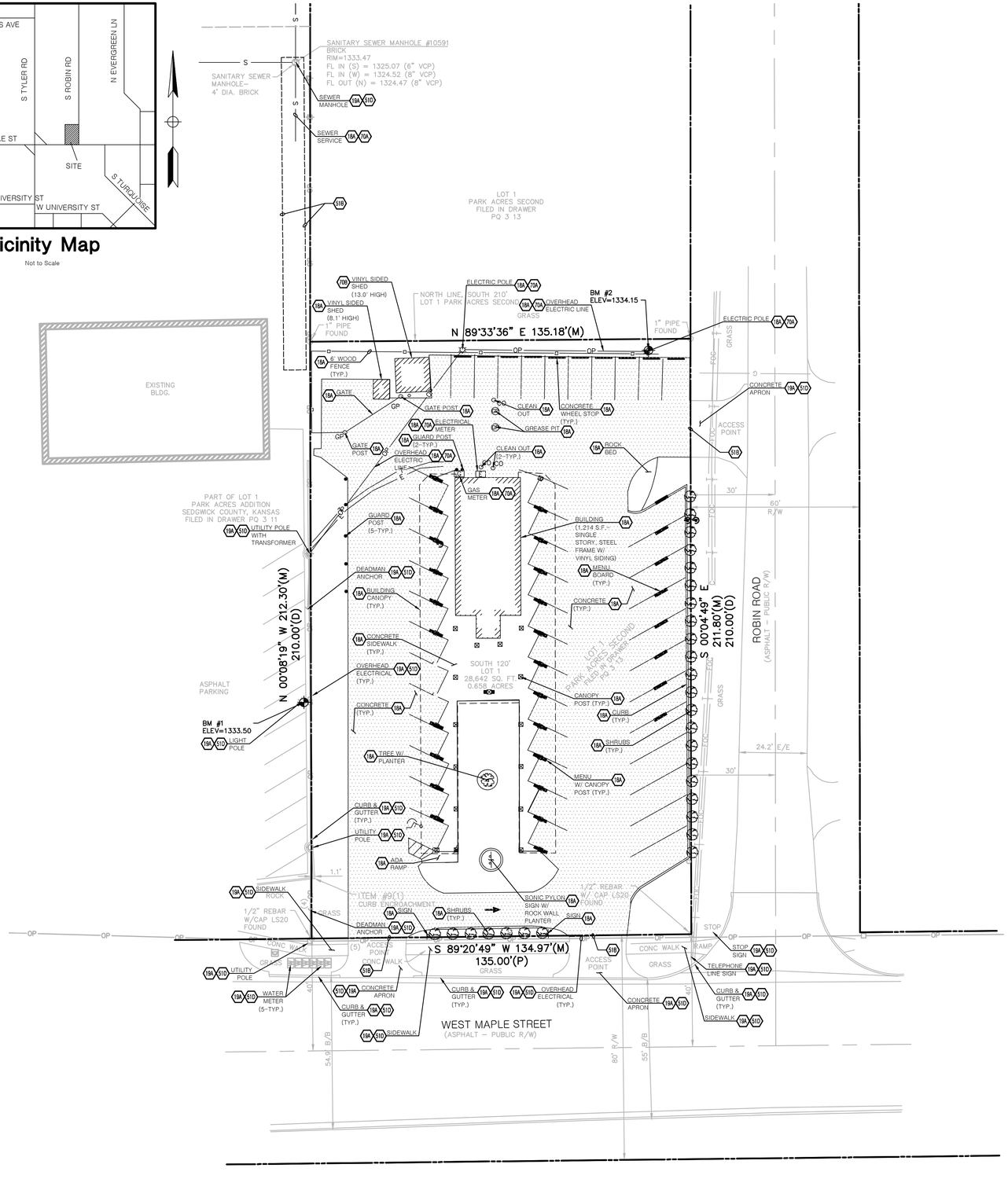
JOB # 28639 DRAWING: 28639-SP.dwg LAST SAVED BY: JOBBLE

© 2015 CEI ENGINEERING ASSOCIATES, INC.



Vicinity Map

Not to Scale



811 Know what's **below.** **Call** before you dig.

SITE BENCHMARK

BM #1
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 84'± NORTH AND 2.5± WEST OF THE WEST PROPERTY LINE.
ELEV=1333.50'

BM #2
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOORS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

0 20' 30' 40'
SCALE IN FEET

LEGEND

EXISTING

- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E ELECTRIC METER
- E UNDERGROUND ELECTRIC
- (1) OP OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T UNDERGROUND TELEPHONE
- FOC UNDERGROUND FIBER OPTIC CABLE
- G GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- ADA HANDICAP SIGN
- S SANITARY SEWER MANHOLE
- S SANITARY SEWER LINE
- VCP VITRIFIED CLAY PIPE
- GP GREASE PIT MANHOLE
- CO SANITARY SEWER CLEAN OUT
- W WATER METER
- GP GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR
- EXISTING SPOT ELEVATION
- 1020.50 TOP OF CURB ELEVATION
- 1020.00 FL OF CURB ELEVATION

GENERAL DEMOLITION NOTES

A. THE SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE "SONIC STANDARD SITE WORK SPECIFICATIONS".

B. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. SEE SITE WORK SPECIFICATIONS.

C. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.

D. THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

E. **ENGINEER'S NOTICE TO CONTRACTOR**
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT 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. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

F. CONTRACTOR SHALL DISCOVER AND REMOVE COMPLETELY ALL STRUCTURAL FOUNDATIONS AND FOOTINGS AND REPLACE ALL DEPRESSIONS AS A RESULT OF SAID REMOVAL WITH ENGINEERED FILL AS PRESCRIBED AND/OR DIRECTED BY A GEOTECHNICAL ENGINEER, LICENSED IN THE STATE OF KANSAS. CONTRACTOR SHALL REMOVE ANY AND ALL REMAINING STRUCTURAL MATERIALS AND DEBRIS FROM PAST PROPERTY USE AND DISPOSAL PER ALL LOCAL, STATE AND FEDERAL GUIDELINES AND LAWS.

G. CONTRACTOR SHALL LOCATE EXISTING UTILITY SERVICES NOT BEING PROPOSED FOR REUSE AND TERMINATE, DISCONNECT, REMOVE OR RELOCATED PER ALL LOCAL, STATE AND FEDERAL GUIDELINES AND LAWS AND THE UTILITY PROVIDERS DETAILS AND SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL SPECIFICATIONS, LITERATURE, PERMITS AND FEES ASSOCIATED WITH SAID TERMINATIONS, DISCONNECTS, REMOVAL, OR RELOCATIONS.

DEMOLITION NOTES

- 18A EXISTING TO BE REMOVED.
- 19A EXISTING TO REMAIN.
- 51B LIMITS OF SAWCUT AND PAVEMENT REMOVAL.
- 51D PROTECT EXISTING STRUCTURES AND/OR PIPES DURING DEMOLITION AND CONSTRUCTION PHASES.
- 70A COORDINATE REMOVAL OR RELOCATION WITH LOCAL UTILITY COMPANY.
- 70B CONTRACTOR TO COORDINATE WITH SONIC CONSTRUCTION MANAGER FOR RELOCATION OF SHED.

BRENT MASSEY 22507 REGISTERED PROFESSIONAL ENGINEER 6/25/15

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL
3317 SW 7th Street (479) 273-9472
Bentonville, AR 72712 FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
DATE: 6/25/2015 8:20 AM
REV#-3

SONIC CORPORATION
300 JOHN T. BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE(S): 405-225-5000

SONIC® SM AMERICA'S DRIVE-IN®

COPYRIGHT 1998-2008 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN OWNER FOR CONSTRUCTION OF THE DRIVE-IN AT THE LOCATION SHOWN.

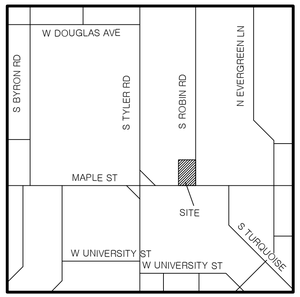
SONIC DRIVE-IN
SONIC TYPE: 12
862 W. MAPLE STREET
WICHITA, KS

DEMOLITION PLAN

SHEET
C2
DWG: 28639-SP.DWG
DATE: 6/25/15

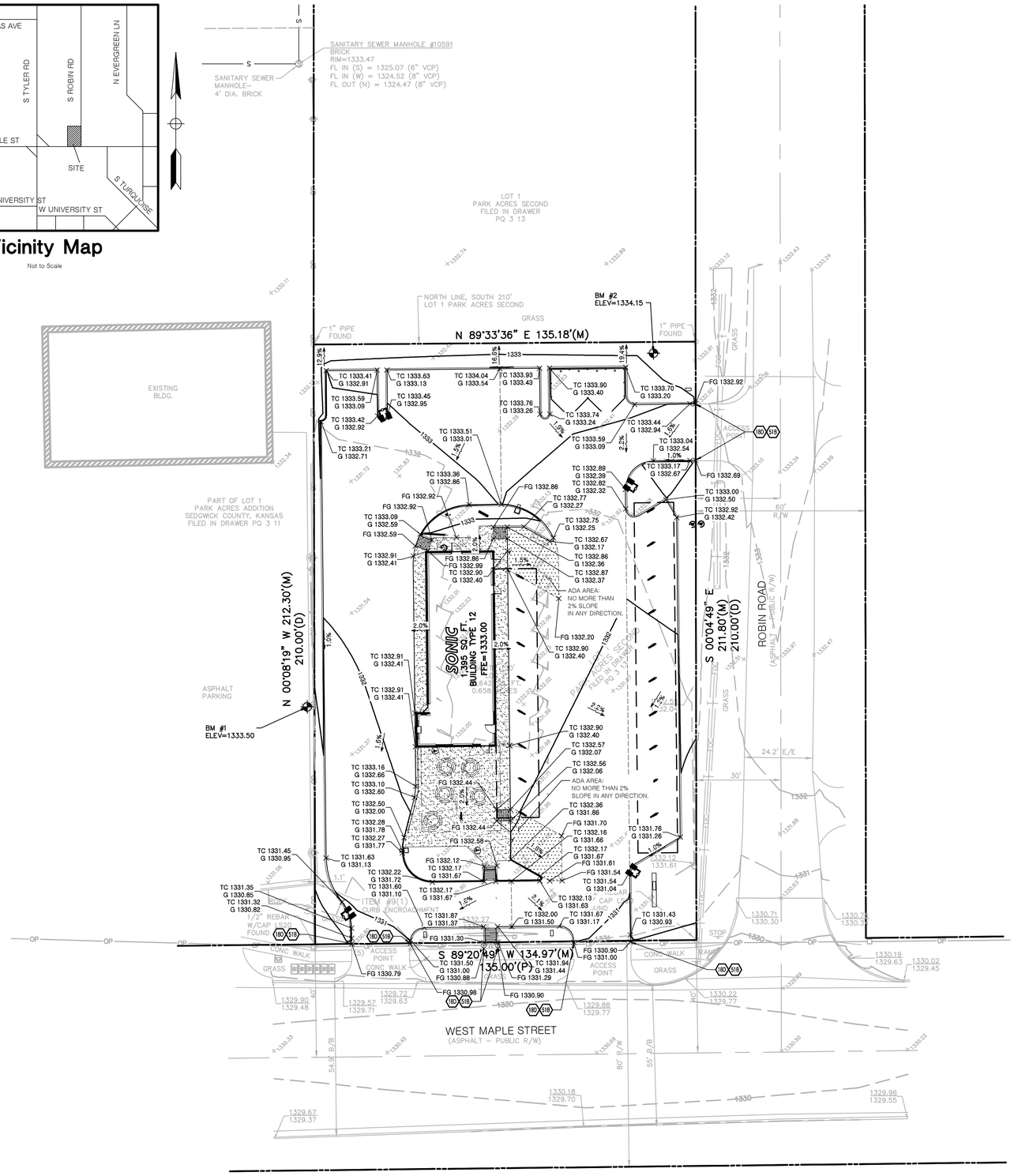
JOB # 28639 DRAWING - 28639-SP.dwg LAST SAVED BY: JDIBBLE

© 2015 CEI ENGINEERING ASSOCIATES, INC.



Vicinity Map

Not to Scale



Know what's **below.**
Call before you dig.

SITE BENCHMARK

BM #1:
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1233'± NORTH AND 3' WEST OF THE EAST PROPERTY LINE.
ELEV=1333.50'

BM #2:
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

N

0 20' 30' 40'
SCALE IN FEET

FLOOD CERTIFICATION:

THIS PROPERTY IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR SEDGWICK COUNTY, KS, COMMUNITY PANEL NUMBER 20173C0337F EFFECTIVE DATE 5-2-2012.

LEGEND

EXISTING

- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E ELECTRIC METER
- E UNDERGROUND ELECTRIC
- (1) OP OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T UNDERGROUND TELEPHONE
- FOC UNDERGROUND FIBER OPTIC CABLE
- G GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- HANDICAP SIGN
- S SANITARY SEWER MANHOLE
- S SANITARY SEWER LINE
- VCP VITRIFIED CLAY PIPE
- GP GREASE PIT MANHOLE
- CO SANITARY SEWER CLEAN OUT
- W WATER METER
- GP GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR
- 1332.50 EXISTING SPOT ELEVATION
- 1020.50 TOP OF CURB ELEVATION
- 1020.00 FL OF CURB ELEVATION

PROPOSED

- GRADE BREAK
- XXX CONTOUR ELEVATIONS
- x XX.XX SPOT ELEVATIONS:
  TC = TOP OF CURB
  G = GUTTER
  FG = FINISH GRADE
  FFE = FINISH FLOOR ELEVATION

GENERAL GRADING NOTES

A. PRIOR TO INSTALLATION OF STORM OR SANITARY SEWER, THE CONTRACTOR SHALL EXCAVATE, VERIFY, AND CALCULATE ALL CROSSINGS AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT THE ENGINEER IS NOT NOTIFIED OF DESIGN CONFLICTS.

B. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND 4" OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS (SEE LANDSCAPE PLAN FOR SEED MIX AND PROPER APPLICATION RATE). ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

C. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT 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. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

GRADING NOTES

18D MATCH EXISTING PAVEMENT ELEVATIONS.
51B LIMITS OF SAWCUT AND PAVEMENT REMOVAL

BRENT L. MASSEY 22207 LICENSED PROFESSIONAL ENGINEER 6/25/15

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

JOB NO.: 28639
DATE: 6/25/2015 7:48 AM
DWG NAME: 28639-GP
REV-1

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICES: 405-225-5000

COPYRIGHT 1988-2008 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC FRANCHISEE IN THE CONSTRUCTION OF THE SONIC® IN THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
861/2 W. MAPLE STREET
WICHITA, KS

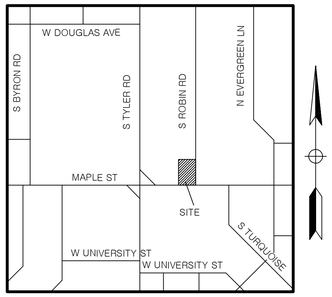
GRADING PLAN

SHEET
C3

DWG: 28639-GP.DWG
DATE: 6/25/15

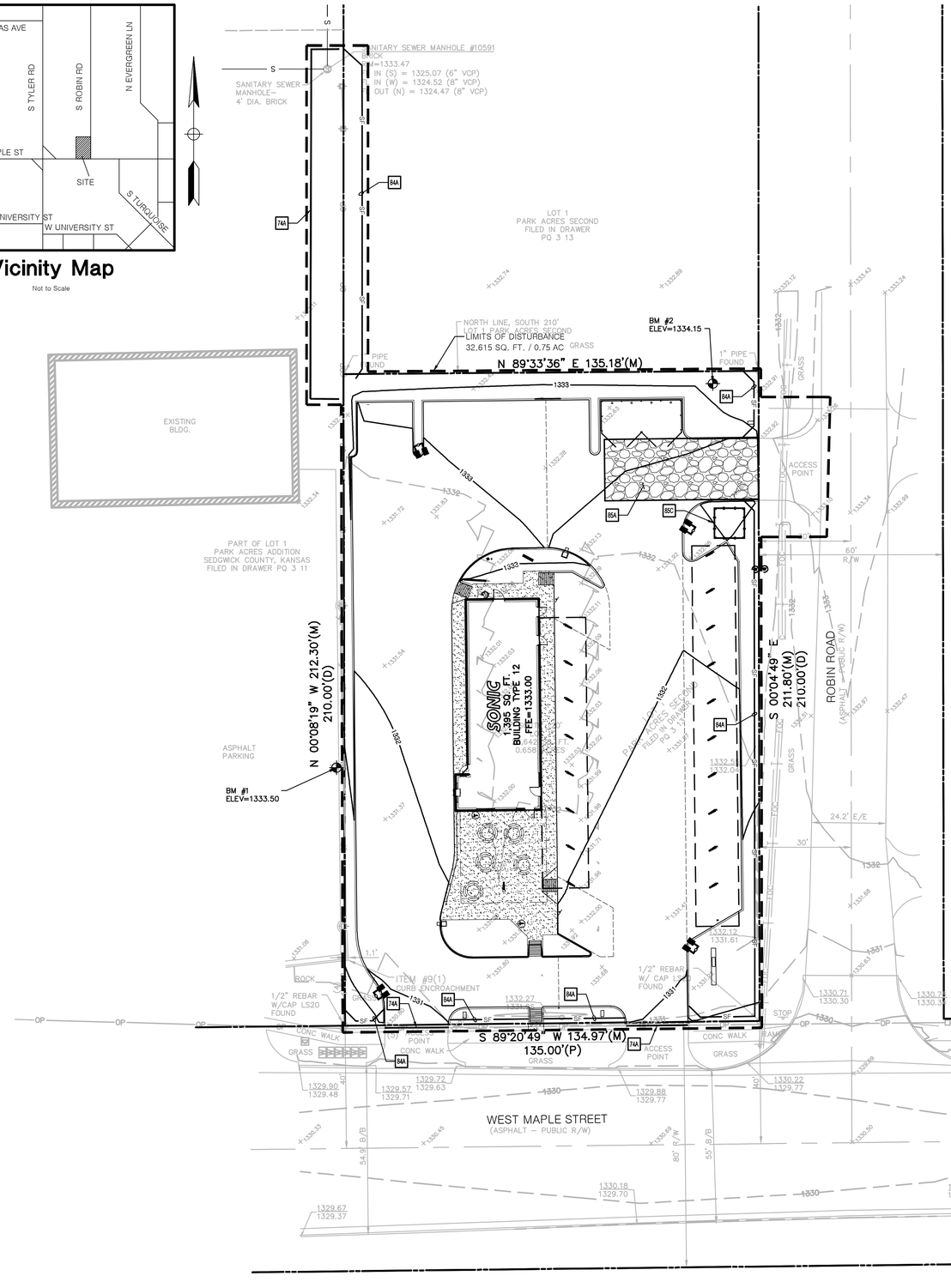
© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-GP.dwg LAST SAVED BY: JDIBBLE



Vicinity Map

Not to Scale



Know what's **below.**
Call before you dig.

SITE BENCHMARK

BM #1:
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1230'± NORTH AND 3' WEST OF THE EAST PROPERTY LINE.
ELEV=1333.50'

BM #2:
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOORS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

0 20' 30' 40'
SCALE IN FEET

FLOOD CERTIFICATION:

THIS PROPERTY IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR SEDGWICK COUNTY, KS, COMMUNITY PANEL NUMBER 20173C0337F EFFECTIVE DATE 5-2-2012.

SITE DATA

ZONING	LC (LIMITED COMMERCIAL)	
BUILDING SIZE	1,395 S.F.	
PARKING RATIO	1 SPACE PER 3 SEATS	
PARKING REQUIRED	9 SPACES	
PARKING PROVIDED	25 SPACES	
PERVIOUS AREA	5,066 SQ. FT.	0.12 AC.
IMPERVIOUS AREA	23,576 SQ. FT.	0.54 AC.
TOTAL SITE AREA	28,642 SQ. FT.	0.66 AC.

GENERAL EROSION NOTES

A. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF KANSAS NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

B. THE TEMPORARY PARKING AND STORAGE AREA SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AREA, EQUIPMENT CLEANING AREA, EMPLOYEE BREAK AREA, AND AREA FOR LOCATING PORTABLE FACILITIES. OFFICE TRAILERS AND TOILET FACILITIES. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNER'S CONSTRUCTION MANAGER.

C. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.

D. MAINTAIN ON THE SITE OR HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN UP FUEL OR CHEMICAL SPILLS AND LEAKS.

E. DUST ON THE SITE SHALL BE CONTROLLED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

F. NO RUBBISH, TRASH, GARBAGE OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

G. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

H. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY WILL STOP FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED WITHIN 14 DAYS.

I. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE LANDSCAPING PLAN.

J. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNERS CONSTRUCTION MANAGER.

K. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

L. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AFTER THE STABILIZATION OF THE SITE AND ALSO ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS.

M. IF SOIL STOCKPILING IS EMPLOYED ON THE SITE, SILT FENCES SHALL BE USED TO HELP CONTAIN THE SEDIMENT.

N. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

O. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.

P. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.

Q. ALL OFF-SITE CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR STORM DRAINS & UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

LEGEND

EXISTING

○	MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED	BB	BUSINESS/BILLBOARD SIGN
(M)	MEASURED	T	STREET/TRAFFIC SIGN
(P)	PLATTED		HANDICAP SYMBOL
(D)	DEEDED	ADA	HANDICAP SIGN
E	ELECTRIC METER	S	SANITARY SEWER MANHOLE
E	UNDERGROUND ELECTRIC	S	SANITARY SEWER LINE
(1) OP	OVERHEAD POWER LINE (# OF LINES)	VCP	VITRIFIED CLAY PIPE
	LIGHT POLE	GP	GREASE PIT MANHOLE
	UTILITY POLE	CO	SANITARY SEWER CLEAN OUT
	UTILITY POLE W/ TRANSFORMER	W	WATER METER
	DEADMAN ANCHOR	GP	GATE POST
	TRAFFIC SIGNAL LIGHT CONTROL BOX	B/B	BACK TO BACK OF CURB
T	TELEPHONE LINE SIGN		BUSH
T	UNDERGROUND TELEPHONE		PAINTED DIRECTIONAL ARROW
FOC	UNDERGROUND FIBER OPTIC CABLE	T/E	TRASH ENCLOSURE
G	GAS METER	939	EXISTING GRADE 1' CONTOUR
	CANOPY SUPPORT	950	EXISTING GRADE 5' CONTOUR
	MENU BOARD	1332.50	EXISTING SPOT ELEVATION
	BOLLARD	1020.50 / 1020.00	TOP OF CURB ELEVATION / FL OF CURB ELEVATION
	PROPERTY LINE/RIGHT OF WAY LINE		

PROPOSED

	LIMITS OF DISTURBANCE (32,615 826 SQ. FT. / 0.75 AC)
SF	SILT FENCE
	GRADE BREAK
XXX	CONTOUR ELEVATIONS

GENERAL EROSION NOTES CONT'D

MAINTENANCE
ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT, AND SHOULD BE CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.
2. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-THIRD TO ONE-HALF THE HEIGHT OF THE SILT FENCE.
3. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
4. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

SEQUENCE OF CONSTRUCTION:
1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
2. PREPARE TEMPORARY PARKING AND STORAGE AREA.
3. CONSTRUCT THE SILT FENCES ON THE SITE.
4. CLEAR AND GRUB THE SITE.
5. BEGIN GRADING THE SITE.
6. START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
7. TEMPORARILY SEED DENUDED AREAS.
8. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
9. PREPARE SITE FOR PAVING.
10. PAVE SITE.
11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
12. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED).

EROSION DETAILS

74A SWP-CI "BIG RED"
84A TEMPORARY SILT FENCE
85A TEMPORARY STONE CONSTRUCTION ENTRANCE
85C TEMPORARY CONCRETE WASH OUT.

REVISIONS | NO | DATE

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9422
FAX (479) 273-0844

JOB NO.: 28639
DATE: 6/25/2015 7:48 AM
DWG NAME: 28639-GP
REV#-1

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICES: 405-225-5000

COPYRIGHT 1998-2008 AMERICA'S DRIVE-IN CORP.
ALL RIGHTS RESERVED. NO PART OF THIS WORK MAY BE REPRODUCED OR COPIED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF SONIC DRIVE-IN. SONIC DRIVE-IN OWNER FOR CONSTRUCTION OF THE SONIC-IN AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

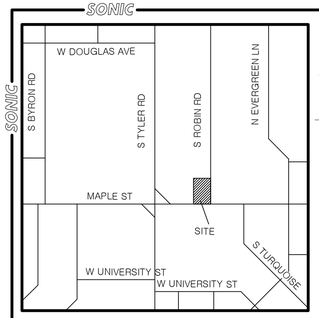
EROSION PLAN

SHEET
C4

DWG:
28639-GP.DWG
DATE: 6/25/15

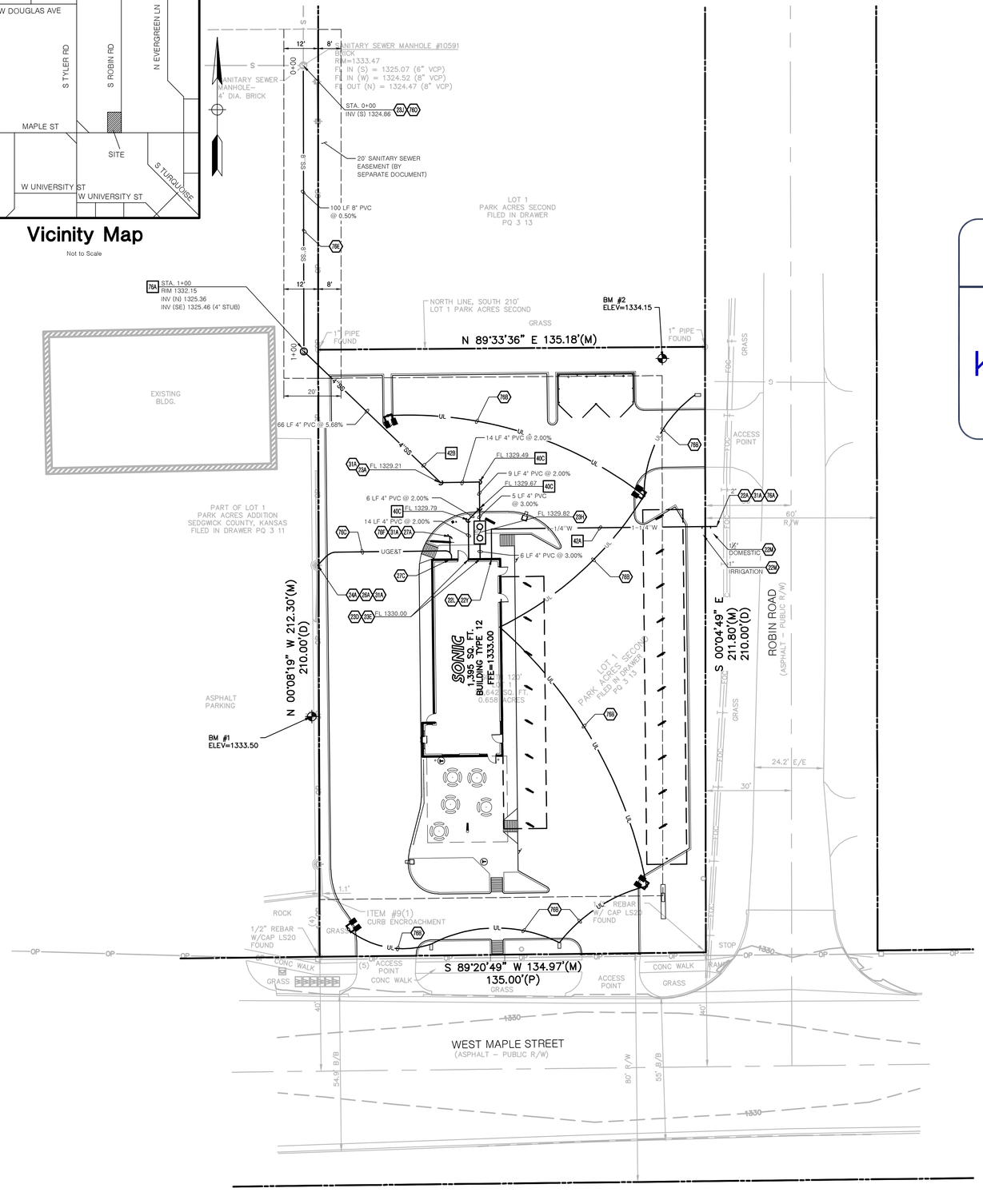
JOB # 28639 DRAWING: 28639-GP.dwg LAST SAVED BY: JOBBLE

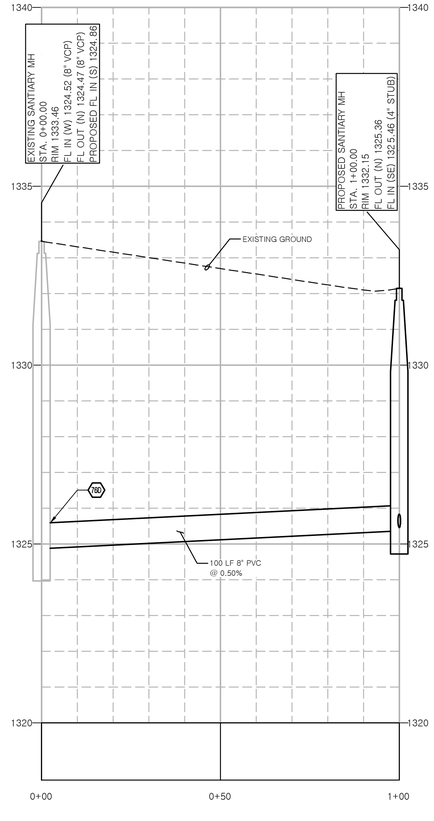
© 2015 CEI ENGINEERING ASSOCIATES, INC.



Vicinity Map

Not to Scale





Know what's **below.**
Call before you dig.

AS BUILTS

KEMILLER ENGINEERING PA
117 E. Lewis,
Wichita, KS 67202
(316)264-0242

Sewer Main PROFILE
HORZ SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 2'-0"

SITE BENCHMARK

BM #1:
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1233'± NORTH AND 3' WEST OF THE EAST PROPERTY LINE.
ELEV=1333.50'

BM #2:
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

0 20' 30' 40'
SCALE IN FEET

LEGEND

EXISTING

- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E ELECTRIC METER
- E UNDERGROUND ELECTRIC
- (1) OP OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T UNDERGROUND TELEPHONE
- FOC UNDERGROUND FIBER OPTIC CABLE
- GS GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- ADA HANDICAP SIGN
- S SANITARY SEWER MANHOLE
- S SANITARY SEWER LINE
- VCP VITRIFIED CLAY PIPE
- GREASE PIT MANHOLE
- CO SANITARY SEWER CLEAN OUT
- WV WATER METER
- GP GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR
- EXISTING SPOT ELEVATION
- 1020.50 TOP OF CURB ELEVATION
- 1020.00 FL OF CURB ELEVATION

PROPOSED

- GAS GAS SERVICE
- SS SANITARY SEWER SERVICE
- UGE&T UNDERGROUND ELECTRIC & TELEPHONE SERVICE
- W WATER SERVICE
- UL ELECTRIC CONDUIT

GENERAL UTILITY NOTES

A. ALL WATER LINES SHALL BE 1 ¼" TYPE K COPPER WITH 36" MINIMUM COVER.

B. ALL SANITARY SEWER LINES SHALL BE SCHEDULE 40 PVC WITH 36" MINIMUM COVER.

D. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.

E. ALL ELECTRIC, TELEPHONE AND GAS EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.

G. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OF THE DRY UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM CEI ENGINEERING AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. CEI ENGINEERING AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.

H. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON OR WITHIN SPECIFICATIONS: ALL WATER LINE PIPE BEDDING SHALL BE INSTALLED PER DETAIL 42A. ALL SANITARY SEWER PIPE BEDDING SHALL BE INSTALLED PER DETAIL 42B.

UTILITY NOTES

22A POINT OF CONNECTION – WATER SERVICE (PER LOCAL CODES).
22L METERED DOMESTIC WATER SERVICE ENTRY PER ARCH. PLANS (SEE SIZES THIS SHEET).
22M PROPOSED WATER METER (PER LOCAL CODES AND SPECIFICATIONS).
22Y INTERIOR BACK FLOW PREVENTER (PER ARCH. PLANS).
23A POINT OF CONNECTION – SANITARY SEWER SERVICE (PER LOCAL CODES).
23D BUILDING SANITARY SEWER SERVICE CLEAN-OUT.
23E SANITARY SEWER SERVICE ENTRY (PER ARCH. PLANS).
23H GREASE TRAP WITH CLEAN-OUT (PER ARCH. PLANS).
23J CONNECT TO EXISTING SANITARY SEWER MANHOLE.
24A POINT OF CONNECTION FOR ELECTRICAL SERVICE (PER ELECTRIC COMPANY REQUIREMENTS).
26A POINT OF CONNECTION FOR UNDERGROUND TELEPHONE (PER TELEPHONE COMPANY REQUIREMENTS).
27A POINT OF CONNECTION FOR GAS SERVICE (PER LOCAL GAS COMPANY REQUIREMENTS).
27C PROPOSED GAS METER.
31A LOCATION FOR THIS UTILITY AS SHOWN IS FOR DRAWING PURPOSES ONLY. CONTRACTOR SHALL VERIFY THE EXACT LOCATION IN FIELD PRIOR TO THE CONSTRUCTION OF THE PROPOSED UTILITY LINE TO BE CONNECTED. CONTRACTOR SHALL NOTIFY CEI ENGINEERING IF THE DESIGN AS SHOWN IS NOT ACHIEVABLE.
76A CONTRACTOR SHALL USE EXISTING WATER METER AND TAP. CONTRACTOR TO COORDINATE CONNECTION WITH THE CITY OF WICHITA WATER DEPARTMENT.
76B UNDERGROUND CONDUIT
76C ELECTRIC TRENCH AND CONDUIT TO BE COMPLETED BY CONTRACTOR. CONTRACTOR TO INSTALL 4" GRAY SCH 40 CONDUIT 4' DEEP WITH STEEL SWEEPS.
76D CONTRACTOR TO REMOVE EXISTING 6" VCP SERVICE LINE AND CUT BRICK MANHOLE AS NECESSARY TO INSTALL NEW 8" SEWER MAIN PER CITY OF WICHITA STANDARDS. CONTRACTOR TO REPAIR BRICK MANHOLE AND SEAL AROUND NEW 8" PIPE AS NECESSARY PER WICHITA CITY SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH CITY UTILITY DEPARTMENT PRIOR TO CONSTRUCTION.
76E SANITARY SEWER BEDDING PER CITY OF WICHITA STANDARD DETAILS.
76F CONTRACTOR TO COORDINATE WITH GAS COMPANY TO CONNECT TO EXISTING GAS SERVICE.

UTILITY DETAILS

40C SANITARY SEWER CLEAN-OUT
42A WATER LINE TRENCHING AND BEDDING
42B SANITARY SEWER TRENCHING AND BEDDING
76A CITY OF WICHITA PRECAST SANITARY SEWER MANHOLE

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

JOB NO.: 28639-UP
DATE: 6/25/2015 9:45 AM
DWG NAME: 28639-UP
REV#-3

BRENT L. MASSEY 22207 REGISTERED LANDSCAPE ARCHITECT 6/25/15

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE(S): 405-225-5000

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
ALL RIGHTS RESERVED. USE OF THESE PLANS AND SPECIFICATIONS IS RESTRICTED TO THE DESIGNATED SONIC FRANCHISEE OWNER FOR CONSTRUCTION OF THE DRIVE-IN AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

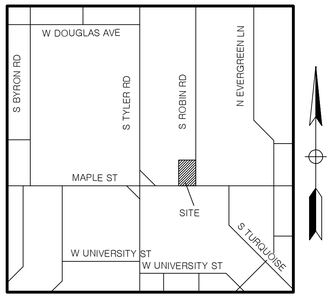
UTILITY PLAN

SHEET
C5

DWG: 28639-UP.DWG
DATE: 6/25/15

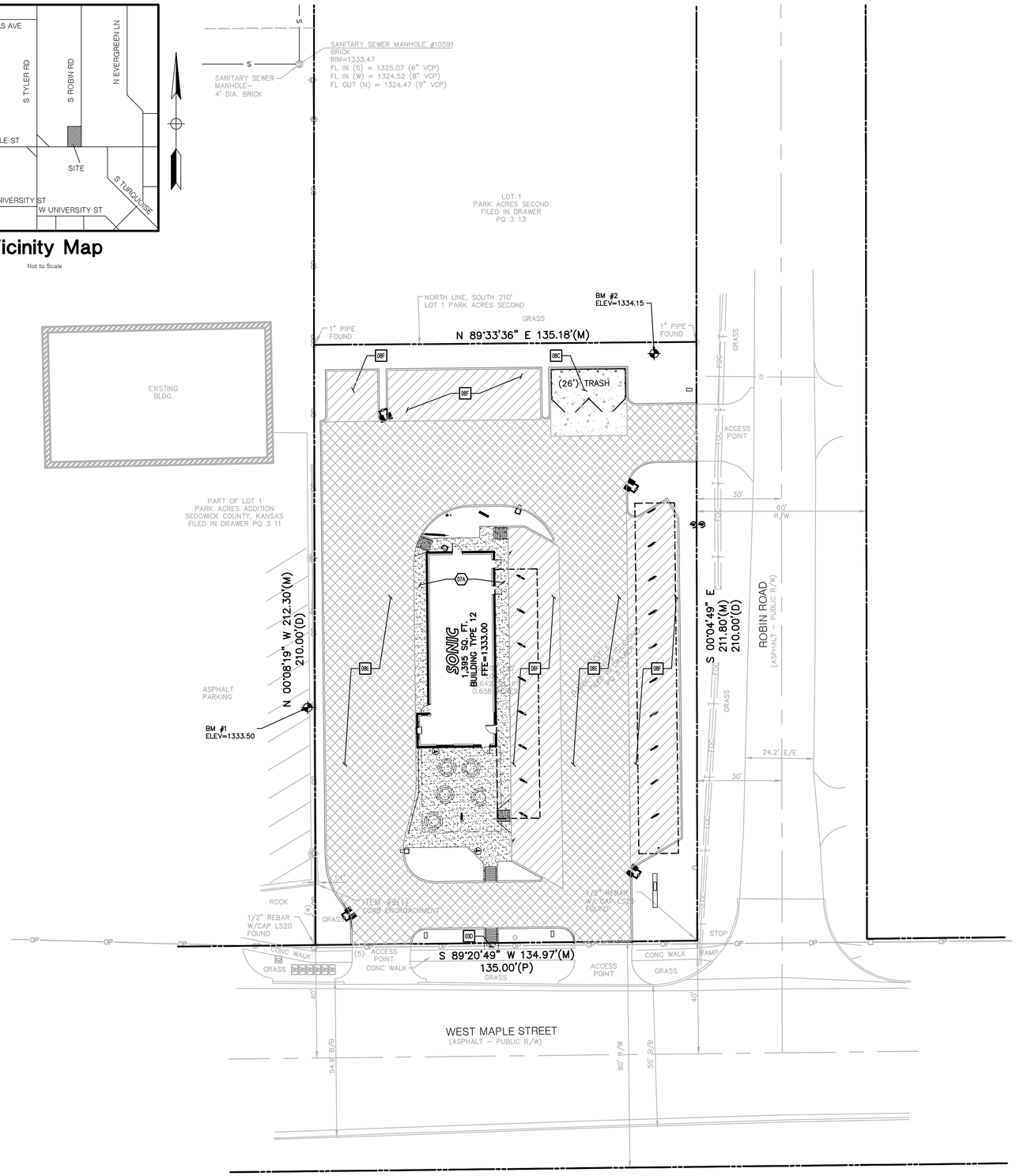
© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE



Vicinity Map

Not to Scale



Know what's **below.**
Call before you dig.

SITE BENCHMARK

BM #1:
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 84'± NORTH AND 2.5± WEST OF THE WEST PROPERTY LINE.
ELEV=1333.50'

BM #2:
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOORS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

N

0 20' 30' 40'
SCALE IN FEET

LEGEND

EXISTING

- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E ELECTRIC METER
- E UNDERGROUND ELECTRIC
- (1) OP OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T UNDERGROUND TELEPHONE
- FOC UNDERGROUND FIBER OPTIC CABLE
- G GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- ADA HANDICAP SIGN
- S SANITARY SEWER MANHOLE
- S SANITARY SEWER LINE
- VCP VITRIFIED CLAY PIPE
- GP GREASE PIT MANHOLE
- CO SANITARY SEWER CLEAN OUT
- W WATER META
- GP GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR
- 939.00 EXISTING SPOT ELEVATION
- 1020.50 / 1020.00 TOP OF CURB ELEVATION / FL OF CURB ELEVATION

GENERAL PAVING NOTES

A. ALL SUBGRADE SOIL PREPARATION SHALL BE IN ACCORDANCE WITH GEOTECHNICAL ENGINEERING SERVICES REPORT" PREPARED BY TERRACON CONSULTANTS, INC. (PROJECT #01145168).

B. ALL PAVING AND SITE PREPARATION ARE TO BE COMPLETED PER THE GEOTECHNICAL REPORT. THIS PLAN IS FOR REFERENCE PURPOSES ONLY. CEI SHALL BE HELD HARMLESS FOR ALL PAVEMENT DESIGN AND SPECIFICATION ERRORS.

C. CONTRACTOR SHALL REFERENCE THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT FOR EXPECTED SUBSURFACE CONDITIONS WHICH WILL REQUIRE REMOVAL AND OR REMEDIAL ACTION PRIOR TO PAVING THE SITE.

D. CONTRACTOR TO INSTALL EXPANSION JOINT EVERY 60' PER DETAIL 8R AND SAW CUT CONTROL JOINT EVERY 15' FOR CONCRETE PAVING PER DETAIL 8R.

PAVING LEGEND

- 08F –LIGHT DUTY CONCRETE PAVING
- 08E –STANDARD DUTY CONCRETE PAVING
- 08C –HEAVY DUTY CONCRETE PAVING
- 03D –SIDEWALK
- 07A –SIDEWALK (PER ARCH PLANS)

PAVING NOTES

07A SIDEWALK (PER ARCH. PLANS).

PRENTISS L. MASSEY 22207 REGISTERED PROFESSIONAL ENGINEER KANSAS 6/25/15

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS • PLANNERS • SURVEYORS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

DWG NAME: 28639-SP
DATE: 6/25/2015 8:20 AM
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICES: 405-225-5000

COPYRIGHT 1988-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN OWNER FOR CONSTRUCTION OF THE DRIVE-IN AT THE LOCATION SHOWN.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

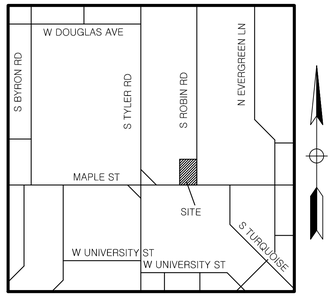
PAVING PLAN

SHEET
C6

DWG:
28639-SP.DWG
DATE: 6/25/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-SP.dwg LAST SAVED BY: JDBLE



Vicinity Map

Not to Scale

LANDSCAPE REQUIREMENTS

REQUIREMENTS	REQUIRED	PROVIDED
LANDSCAPE STREET YARD -10 SF PER LF -1 SHADE TREE OR 2 ORNAMENTALS / 500 SF	-135 LF OF FRONTAGE X 10 SF = 1,350 SF -3 SHADE TREES OR 6 ORNAMENTALS	-1,965 SF -2 SHADE TREES AND 2 ORNAMENTALS
PARKING LOT SCREENING -MIN. HT. 18" @ PLANTING. 3' AFTER 3 YEARS.	-MIN. HT. 18" @ PLANTING. 3' AFTER 3 YEARS.	-SCREEN PROVIDED
PARKING LOT TREES -1 SHADE TREE OR 2 ORNAMENTALS / 20 PARKING SPACES (1/2 OF STREET YARD TREES MAY COUNT).	-27 SPACES / 20 = 2 SHADE TREES OR 4 ORNAMENTALS	-2 SHADE TREES (1 STREET YARD BUFFER, 1 BY DUMPSTER)

Know what's **below.**
Call before you dig.

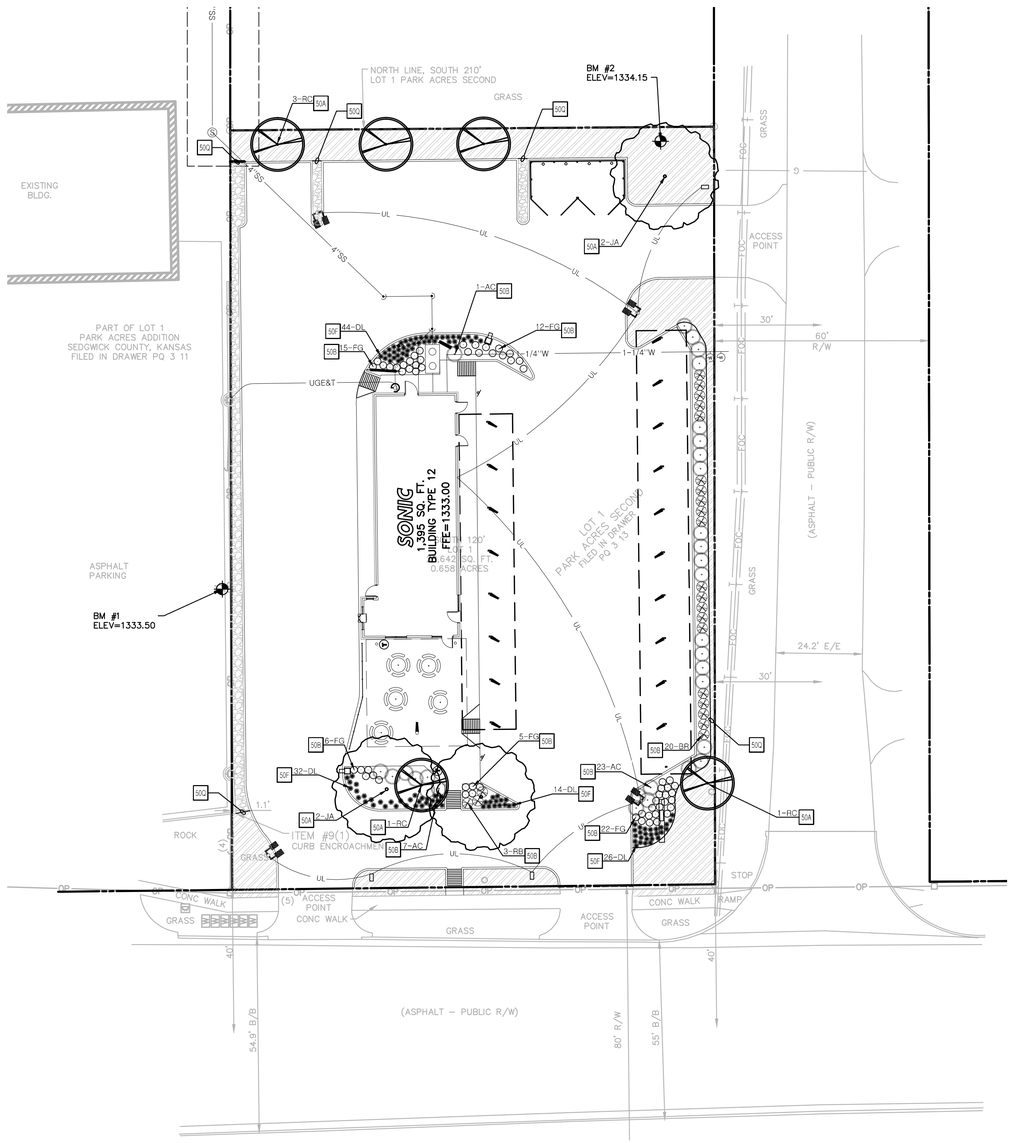
SITE BENCHMARK

BM #1
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1233'± NORTH AND 3' WEST OF THE EAST PROPERTY LINE.
ELEV=1333.50'

BM #2
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

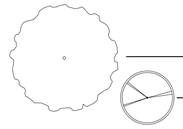
NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

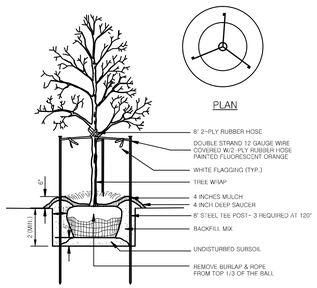
0 20' 30' 40'
SCALE IN FEET



PLANT LIST

KEY	QTY	COMMON NAME/ BOTANICAL NAME	ROOT	SIZE	SPACING
JA	3	JAPANESE ZELKOVA Zelkova serrata 'Green Vase'	B&B	2" CAL	AS SHOWN
RC	5	REDBUD Cercis canadensis 'Forest Pansy'	B&B	1" CAL.	AS SHOWN
AC	27	COMPACT BURNING BUSH Euonymus alatus 'compacta'	CONT.	MIN. 18" HT. 3 GAL.	36" O.C.
RB	24	REDLEAF BARBERRY Berberis thunbergii 'Atropurpurea'	CONT.	MIN. 18" HT. 3 GAL.	36" O.C.
FG	64	DWARF FOUNTAIN GRASS Pennisetum alopecuroides 'Hameln'	CONT.	1 GAL.	18"-24" O.C.
DL	123	DAYLILY Hemerocallis 'Stella d'oro'	CONT.	4" CONT.	18" O.C.

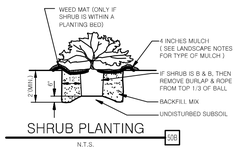




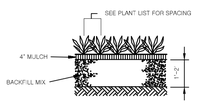
PLAN

NOTE: SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.

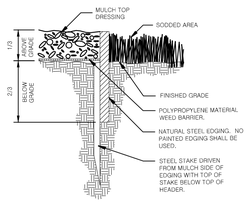
TREE PLANTING
N.T.S. 50A



SHRUB PLANTING
N.T.S. 50B



GROUND COVER PLANTING
N.T.S. 50F



STEEL EDGING
N.T.S. 50Q

LEGEND

EXISTING

- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- ELECTRIC METER
- E — UNDERGROUND ELECTRIC
- (1) OP — OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T — UNDERGROUND TELEPHONE
- FOC — UNDERGROUND FIBER OPTIC CABLE
- GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- ADA HANDICAP SIGN
- SANITARY SEWER MANHOLE
- S — SANITARY SEWER LINE
- VCP VITRIFIED CLAY PIPE
- GREASE PIT MANHOLE
- SANITARY SEWER CLEAN OUT
- WM WATER METER
- GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR
- EXISTING SPOT ELEVATION
- 1020.50 TOP OF CURB ELEVATION
- 1020.00 FL OF CURB ELEVATION

PROPOSED

- TURF TYPE TALL FESCUE SOD
- 2"-3" DIA. RIVER ROCK, 4" DEPTH.
- TYPICAL PLANTING WITH QUANTITY AND KEY (SEE PLANT LIST)

GENERAL LANDSCAPE NOTES

A. LOCATE ALL UTILITIES AND SITE LIGHTING CONDUITS BEFORE LANDSCAPE CONSTRUCTION BEGINS.

B. NOTIFY LANDSCAPE ARCHITECT OR DESIGNATED REPRESENTATIVE OF ANY LAYOUT DISCREPANCIES PRIOR TO ANY PLANTING.

C. ALL LANDSCAPE MATERIALS SHALL CONFORM TO THE AMERICAN NURSERY STOCK STANDARD, LATEST EDITION, PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION. CONTRACTOR SHALL ASSUME MAINTENANCE RESPONSIBILITIES FOR A MINIMUM OF ONE (1) YEAR OR UNTIL PLANTINGS ARE ESTABLISHED, WHICHEVER IS LONGER.

D. ALL DISTURBED AREAS DESIGNATED ON THE GRADING PLAN SHALL BE SODDED
ALL SLOPES GREATER THAN 3:1 TO BE SOD SHALL BE STAKED AS
APPROPRIATE TO PREVENT SOD SLIDE IN PLANT BEDS.

E. MULCH SHALL BE SHREDDED HARDWOOD MULCH 4" DEPTH UNLESS OTHERWISE STATED

F. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SODDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED IN ALL AREAS. ANY RELOCATED TREES SHALL BE MAINTAINED UNTIL SUCH POINT AS TREE IS RE-ESTABLISHED. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

G. MAINTAIN 5' MIN. HORIZONTAL SEPARATION BETWEEN TREE PLANTINGS AND ALL UTILITIES.

H. ACCEPTANCE OF GRADING AND SODDING SHALL BE BY LANDSCAPE ARCHITECT AND/OR OWNER. THE CONTRACTOR SHALL ASSUME MAINTENANCE RESPONSIBILITIES FOR A MINIMUM OF ONE (1) YEAR OR UNTIL SECOND CUTTING, WHICHEVER IS LONGER. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, RESODDING AND OTHER OPERATIONS NECESSARY TO KEEP ALL LAWN AREAS IN A THRIVING CONDITION. UPON FINAL ACCEPTANCE, OWNER SHALL ASSUME ALL MAINTENANCE RESPONSIBILITIES. AFTER LAWN AREAS HAVE BEEN SODDED, AREAS WHICH FAIL TO SHOW A UNIFORM STAND OF GRASS FOR ANY REASON WHATSOEVER SHALL BE RE-SODDED UNTIL ALL AREAS ARE COVERED WITH A SATISFACTORY STAND OF GRASS. MINIMUM ACCEPTANCE OF SODDED LAWN AREAS MAY INCLUDE SCATTERED BARE SPOTS, NONE OF WHICH ARE LARGER THAN 1 SQUARE FOOT, AND WHEN COMBINED DO NOT EXCEED 2% OF TOTAL SODDED LAWN AREA.

☐ LANDSCAPE DETAILS

50A TREE PLANTING
50B SHRUB PLANTING
50F GROUND COVER PLANTING
50Q STEEL EDGING

NOTE: FULL IRRIGATION SYSTEM TO BE INSTALLED. DESIGN SHALL MEET HEAD TO HEAD REQUIREMENTS AND PROVIDE 100% COVERAGE FOR ALL PLANT MATERIAL. CONTRACTOR SHALL COORDINATE SLEEVING AND LATERAL LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO PAVEMENT PREPARATION OR INSTALLATION.

RICHARD W. ROBERTS LICENSED 662 KANSAS LANDSCAPE ARCHITECT 6/24/15

REVISIONS | NO | DATE

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3108 S.W. REGENCY PARKWAY, SUITE 2 (479) 273-9472
Bentonville, AR 72712 FAX (479) 273-0844

JOB NO.: 28639
DATE: 6/24/2015 5:7 PM
DWG NAME: 28639-LS
REV-1

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000

COPYRIGHT 1996-2008 AMERICA'S DRIVE-IN CORP.
DESIGNATED SONIC DRIVE-IN OWNER FOR CONSTRUCTION OF THE SONIC DRIVE-IN AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
812 W. MAPLE STREET
WICHITA, KS

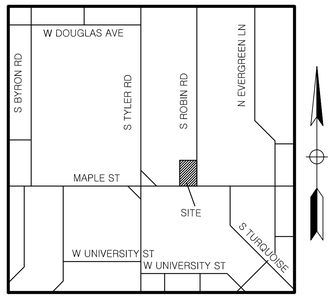
LANDSCAPE PLAN

SHEET
C7

DWG: 28639-LS.DWG
DATE: 6/24/15

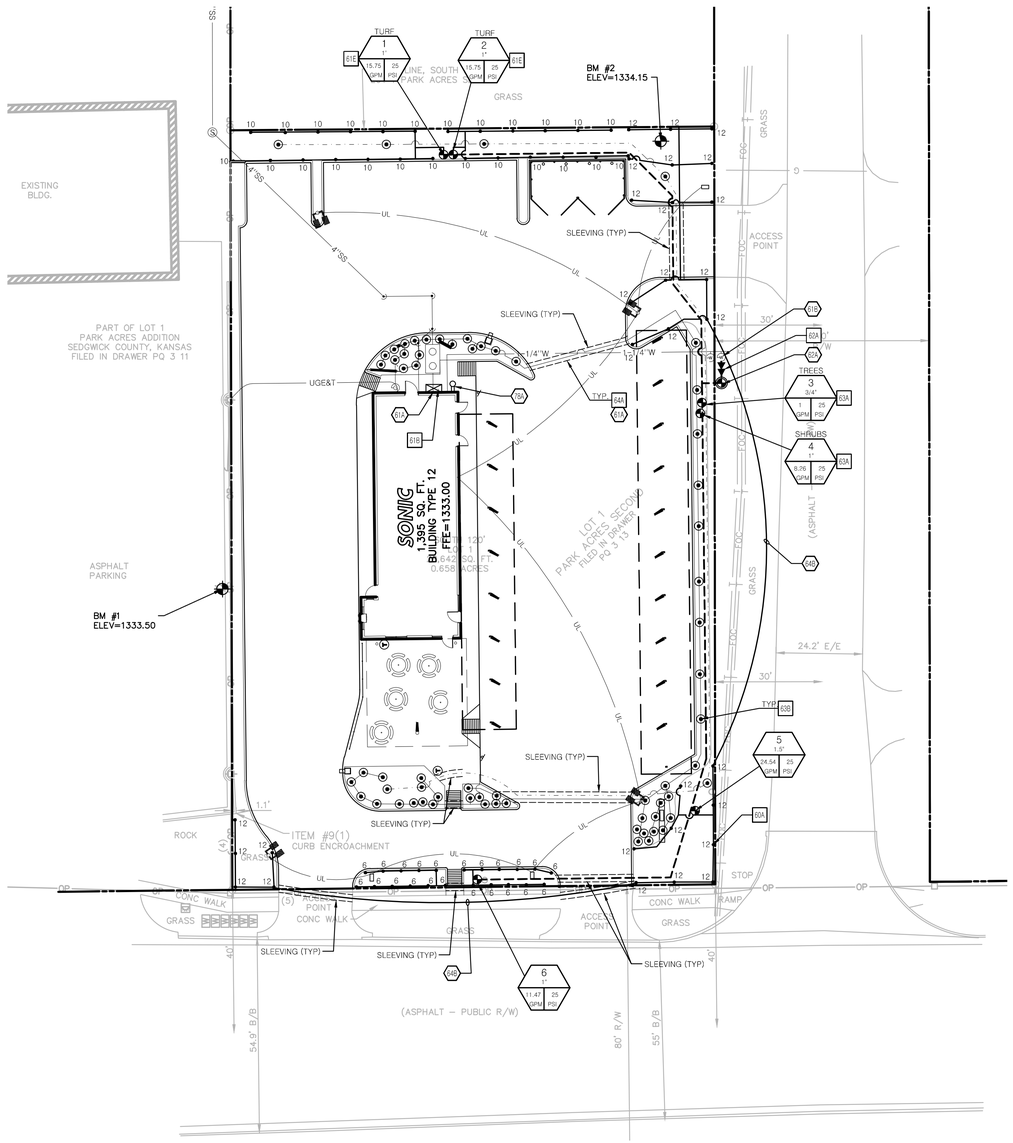
JOB # 28639 DRAWING: 28639-LS.dwg LAST SAVED BY: JOBBLE

© 2015 CEI ENGINEERING ASSOCIATES, INC.



Vicinity Map

Not to Scale



IRRIGATION PIPE SCHEDULE

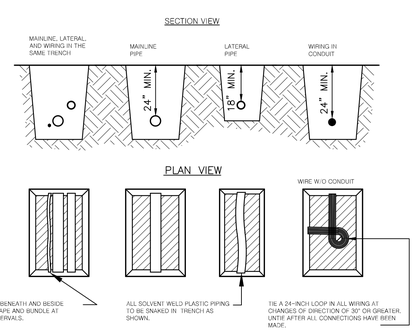
SDR 13.5 CL 315 PIPE SCHEDULE	
PIPE SIZE	MAX. SAFE FLOW G.P.M.
¾"	8
1"	14

PVC CLASS 200 PIPE SCHEDULE	
PIPE SIZE	MAX. SAFE FLOW G.P.M.
1-¼"	26
1-½"	35
2"	55
2-½"	80
3"	120

NOTE:
IN SOME CASES, IRRIGATION PIPE SIZES SHOWN ON IRRIGATION PLANS ARE LARGER THAN THE SIZE SHOWN ON PIPE SCHEDULE DUE TO HYDRAULIC LOSSES. USE PIPE SIZES AS SHOWN ON IRRIGATION PLANS IF APPLICABLE.

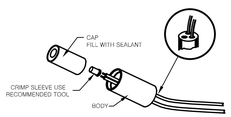
SPRINKLER NOZZLE LIST

KEY	DESCRIPTION
6	1804-6-VAN
10	1804-10-VAN
12	1804-12-VAN

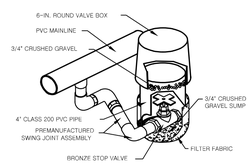


NOTES:
1. ALL LATERAL LINES SHALL BE SDR-13.5 PVC PIPE. ALL MAIN LINES SHALL BE SDR-21 PVC PIPE.
2. SLEEVES BELOW ALL HARDSCAPE ELEMENTS SHALL BE SCH. 40 PVC AND SHALL BE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.
3. ALL LATERAL LINES SHALL BE BURIED NO LESS THAN 18" DEEP. ALL MAIN LINES AND ELECTRICAL LINES SHALL BE NO LESS THAN 24" DEEP.

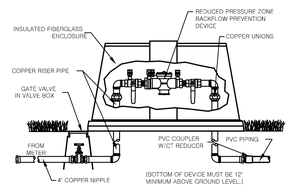
IRRIGATION PIPE AND WIRE TRENCHING
N.T.S. 64A



WIRE CONNECTION
N.T.S. 61A



MANUAL DRAIN VALVE
N.T.S. 62C



REDUCED PRESSURE BACKFLOW PREVENTER
N.T.S. 60A

LEGEND

EXISTING

- MONUMENT FOUND — ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E ELECTRIC METER
- E UNDERGROUND ELECTRIC
- (1) OP OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T UNDERGROUND TELEPHONE
- FOC UNDERGROUND FIBER OPTIC CABLE
- G GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- HANDICAP SIGN
- SANITARY SEWER MANHOLE
- S SANITARY SEWER LINE
- VCP VITRIFIED CLAY PIPE
- GP GREASE PIT MANHOLE
- SANITARY SEWER CLEAN OUT
- W WATER METER
- GP GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR
- EXISTING SPOT ELEVATION
- 1020.50 TOP OF CURB ELEVATION
- 1020.00 FL OF CURB ELEVATION

PROPOSED

- BOUNDARY LINE/RIGHT OF WAY LINE
- LATERAL LINE (SEE PIPE SCHEDULE)
- 1.5" MAIN LINE
- SLEEVING (SEE DETAIL 64A FOR SIZING)
- ZONE DESIGNATION
- VALVE SIZE
- GPM / PSI — DESIGN PRESSURE - POUNDS PER SQUARE INCH
- DESIGN DEMAND - GALLONS PER MINUTE

GENERAL IRRIGATION NOTES

A. IRRIGATION CONTRACTOR SHALL TEST EXISTING STATIC PRESSURE ON SITE PRIOR TO CONSTRUCTION. SHOULD EXISTING SITE PRESSURE BE ABOVE OR BELOW 50# STATIC BY 5 PSI OR MORE, CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.

B. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR INSTALLING MANUAL DRAIN VALVES AT LOWEST POSSIBLE ELEVATION ON IRRIGATION MAIN SO AS TO PROVIDE POSITIVE DRAINAGE OF IRRIGATION MAIN DURING WINTER MONTHS, OR PROVIDE BLOWOUT ASSEMBLY, INSTALLATION SHALL BE PER DETAIL 62C.

C. ALL LATERAL LINES SHALL BE EQUIPPED WITH AUTOMATIC DRAIN VALVES AT LOW POINTS. TO BE INSTALLED PER MANUFACTURER'S DETAILS AND SPECIFICATIONS.

D. CONTRACTOR SHALL COORDINATE CONTROLLER LOCATION WITH GENERAL CONTRACTOR.

E. CONTRACTOR SHALL COORDINATE CONSTRUCTION OF IRRIGATION SYSTEM WITH GENERAL CONTRACTOR AND LANDSCAPE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION.

F. LOCATION FOR THIS UTILITY AS SHOWN IS FOR DRAWING PURPOSES ONLY. CONTRACTOR SHALL VERIFY THE EXACT LOCATION IN FIELD PRIOR TO THE CONSTRUCTION OF THE PROPOSED UTILITY LINE TO BE CONNECTED. CONTRACTOR SHALL NOTIFY THE ENGINEER IF THE DESIGN AS SHOWN IS NOT ACHIEVABLE.

G. ALL R.C.V. CONTROLLER WIRES ARE TO BE IN CONDUIT WHILE UNDER PAVING. CONDUIT TO BE INSTALLED BY GENERAL CONTRACTOR. ROUTING OF R.C.V. WIRES TO CONTROL VALVES SHALL BE BY THE IRRIGATION CONTRACTOR.

H. ALL BELOW GRADE LOW VOLTAGE WIRING CONNECTIONS SHALL BE INSTALLED PER DETAIL 61A.

I. DO NOT INSTALL IRRIGATION AT PYLON/MONUMENT SIGN LOCATION UNTIL SIGN HAS BEEN INSTALLED.

J. MINIMUM COVER FROM TOP OF PIPING TO FINISHED GRADE SHALL BE AS DESCRIBED IN THE LANDSCAPE IRRIGATION SECTION OF THE SITEWORK SPECIFICATIONS.

K. IRRIGATION PIPE AND WIRING TO BE INSTALLED PER DETAIL 64A.

IRRIGATION DETAILS

60A POP-UP IRRIGATION HEAD. SEE SPRINKLER NOZZLE LIST FOR SPRAY BODY AND NOZZLE TYPE (INSTALL PER MANUFACTURER'S DETAILS AND SPECIFICATIONS)
61B CONTROLLER, RAINBIRD ESP 8 LXME, WALL MOUNTED IN PLASTIC LOCKABLE CABINET. (INSTALL PER MANUFACTURER'S DETAILS AND SPECIFICATIONS)
61E ELECTRIC VALVE AND BOX. RAINBIRD PEB SERIES. SEE ZONE FOR SIZE. (INSTALL PER MANUFACTURER'S DETAILS AND SPECIFICATIONS)
62A 1" REDUCED PRESSURE BACKFLOW PREVENTER
63A ELECTRIC VALVE AND BOX. RAINBIRD COMMERCIAL CONTROL ZONE KIT. SEE SIZE AND FLOW CAPACITY REQUIREMENT AT ZONE LABEL. (INSTALL PER MANUFACTURER'S DETAILS AND SPECIFICATIONS)
63B MULTI-OUTLET EMITTER, RAINBIRD XBD-81 (INSTALL PER MANUFACTURER'S DETAILS AND SPECIFICATIONS)
SHRUBS - 2 EMITTERS EACH
TREES - 4 EMITTERS EACH

IRRIGATION NOTES

61A CONDUIT FOR R.C.V. WIRES BY GENERAL CONTRACTOR. ROUTING TO CONTROL VALVES BY IRRIGATION CONTRACTOR.
61B 1" IRRIGATION METER WITH 1.5" TYPE K COPPER SERVICE BY GENERAL CONTRACTOR.
62A 1.5" MASTER CONTROL VALVE. RAINBIRD - PEB SERIES. (INSTALL PER MANUFACTURER'S DETAILS AND SPECIFICATIONS)
64B IRRIGATION PIPING SHOWN HERE FOR DRAWING PURPOSES ONLY: CONTRACTOR SHALL INSTALL MAIN LINE, LATERALS, SPRAY HEADS, ETC. WITHIN PROPERTY
78A RAIN / FREEZE SENSOR. RAINBIRD WRC-RFC. COORDINATE INSTALLATION LOCATION WITH OWNER. ENSURE NO STRUCTURE WILL BLOCK RAIN FROM ANY DIRECTION. (INSTALL PER MANUFACTURER'S DETAILS AND SPECIFICATIONS)

Know what's **below.**
Call before you dig.

SITE BENCHMARK
BM #1
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1233'± NORTH AND 3' WEST OF THE EAST PROPERTY LINE.
ELEV=1333.50
BM #2
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

N

0 20' 30' 40'
SCALE IN FEET

RICHARD W. ROGERS LICENSED 662 LANDSCAPE ARCHITECT 6/24/15

NO	DATE	REVISIONS

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3108 S.W. REGENCY PARKWAY, SUITE 2 (479) 273-9472
Bentonville, AR 72712 FAX (479) 273-0844
DWG NAME: 28639-LS JOB NO.: 28639
REV-1 DATE: 6/24/2015 5:7 PM

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICES: 405-235-5000

SONIC® DriveIn Restaurants

COPYRIGHT 1988-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN THE EXPRESS WRITTEN PERMISSION OF THE OWNER AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

IRRIGATION PLAN

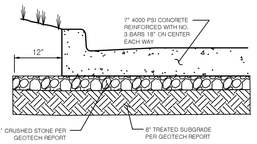
SHEET
C7.1

DWG:
28639-LS.DWG
DATE: 6/24/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-LS.dwg LAST SAVED BY: JDIBBLE

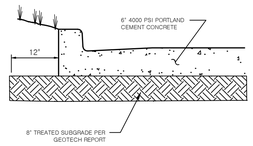
SONIC



NOTES:

1. THE TREATED SUBGRADE SHALL BE COMPACTED PER GEOTECHNICAL RECOMMENDATIONS.
2. CONTRACTOR SHALL VERIFY THE ABOVE DETAILS WITH THE SUBSURFACE EXPLORATION PREPARED GEOSERVICES, TERRACON CONSULTANTS, INC. REPORT DATED: JANUARY 5, 2015 PROJECT NUMBER 01145168. PRIOR TO CONSTRUCTION, ALL DISCREPANCIES SHALL BE CLARIFIED WITH SONIC'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION. (TERRACON CONSULTANTS INC., TERRACON PROJECT NUMBER 01145168).

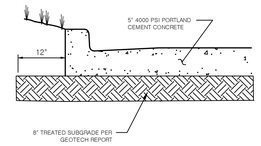
HEAVY DUTY CONCRETE PAVING 08C



NOTES:

1. THE SUBGRADE SHALL BE COMPACTED PER GEOTECHNICAL RECOMMENDATIONS.
2. CONTRACTOR SHALL VERIFY THE ABOVE DETAILS WITH THE SUBSURFACE EXPLORATION PREPARED GEOSERVICES, TERRACON CONSULTANTS, INC. REPORT DATED: JANUARY 5, 2015 PROJECT NUMBER 01145168. PRIOR TO CONSTRUCTION, ALL DISCREPANCIES SHALL BE CLARIFIED WITH SONIC'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION. (TERRACON CONSULTANTS INC., TERRACON PROJECT NUMBER 01145168).

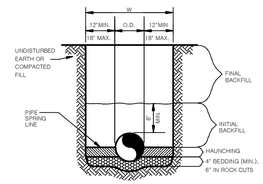
STANDARD DUTY CONCRETE PAVING 08D



NOTES:

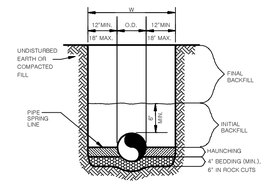
1. THE SUBGRADE SHALL BE COMPACTED PER GEOTECHNICAL RECOMMENDATIONS.
2. CONTRACTOR SHALL VERIFY THE ABOVE DETAILS WITH THE SUBSURFACE EXPLORATION PREPARED GEOSERVICES, TERRACON CONSULTANTS, INC. REPORT DATED: JANUARY 5, 2015 PROJECT NUMBER 01145168. PRIOR TO CONSTRUCTION, ALL DISCREPANCIES SHALL BE CLARIFIED WITH SONIC'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION. (TERRACON CONSULTANTS INC., TERRACON PROJECT NUMBER 01145168).

LIGHT DUTY CONCRETE PAVING 08F



WATER LINE & FORCE MAIN 40A

N.T.S.



SANITARY SEWER 40B

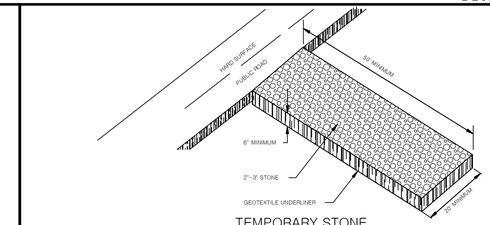
N.T.S.

GENERAL NOTES:

1. BEDDING SHALL BE CLASS I–A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I–B COMPACTED TO 85% STANDARD PROCTOR. (SEE SPECIFICATIONS FOR GRADATION)
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I–A OR CLASS I–B OR CLASS II COMPACTED TO 85% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I–A WORKED BY HAND, OR CLASS I–B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. AND 4
6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV–A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321, LATEST EDITION.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV–A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS)

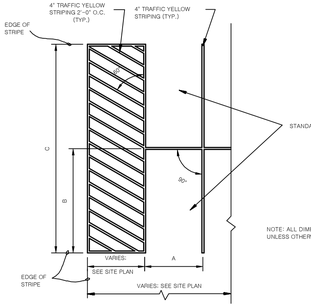
SANITARY SEWER AND WATER LINE TRENCHING AND BEDDING

N.T.S.



TEMPORARY STONE CONSTRUCTION ENTRANCE 55A

N.T.S.



NOTE: ALL DIMENSIONS ARE TO ℄ OF STRIPE UNLESS OTHERWISE INDICATED

DIMENSION CHART									
A	9'	9.5'	10'	9'	9.5'	10'	9'	9.5'	10'
B	18'	18'	18'	19'	19'	19'	20'	20'	20'
C	36'	36'	36'	38'	38'	38'	40'	40'	40'

NOTE: SEE SITE PLAN FOR TOTAL LAYOUT

90° PARKING SPACE STRIPING 08B

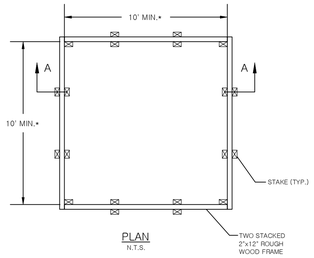
N.T.S.

NOTES:

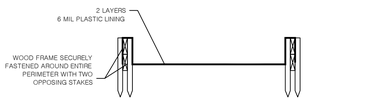
1. REQUIRED REINFORCEMENT WILL BE No. 3 BARS 24" O.C. EACH WAY MAX. SPACING, OR 6 x 6 – W1.4 X W1.4 WWF
2. INSTALL 1/2" EXPANSION JOINT MATERIAL AT AREAS WERE PROPOSED SIDEWALK ABUTTS EXISTING SIDEWALK, CURBS, AND OR STRUCTURE. (JOINT MAT'L.: TO MEET ASTM D994 OR D1751)

CONCRETE SIDEWALK 08D

N.T.S.



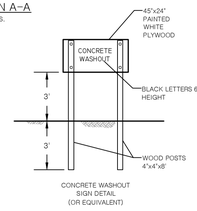
PLAN
N.T.S.



SECTION A–A
N.T.S.

NOTES:

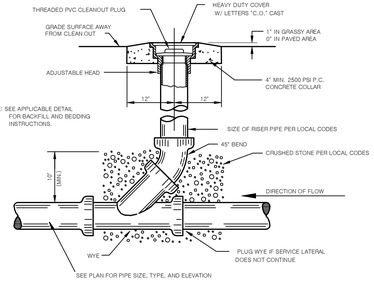
1. •DENOTES THE INTERIOR DIMENSION.
2. CONCRETE WASHOUT SHALL BE AT LEAST 50 FT. FROM ANY STORM SEWER INLET.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.



CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)

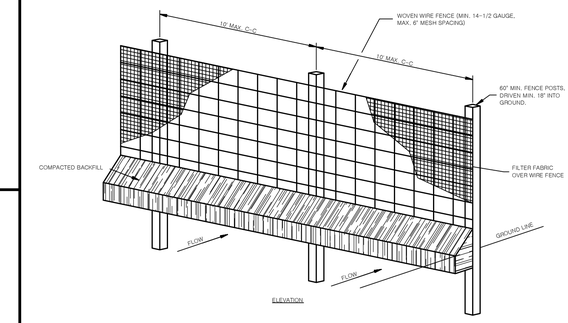
TEMPORARY CONCRETE WASHOUT (ABOVE GRADE) 85C

N.T.S.

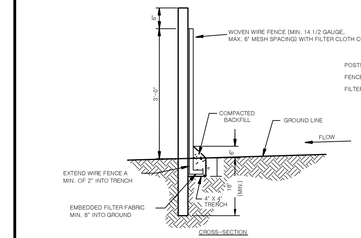


SANITARY SEWER CLEAN–OUT 40C

N.T.S.



ELEVATION



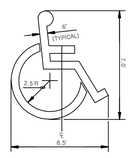
POSTS: STEEL EITHER T OR U TYPE OR 2"x2" HARDWOOD
FENCE: WOVEN WIRE, 14–1/2 GA. 6" MAX. MESH OPENING
FILTER FABRIC:

1. MIRAFI 140NS
2. PHILLIPS 66 SUPAC 4NP
3. DUPONT TYPAR 3341
4. OR APPROVED EQUAL

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

TEMPORARY SILT FENCE 54A

N.T.S.

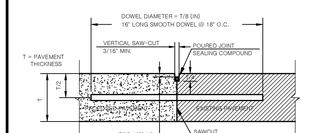


NOTES:

LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING

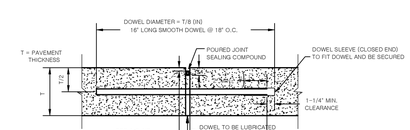
ACCESSIBLE PARKING SYMBOL 09U

N.T.S.



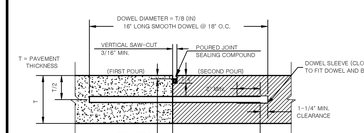
NOTE:
1. DOWEL BARS SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY BY USE OF A MECHANICAL RIG.
2. DRILLING BY HAND IS NOT ACCEPTABLE. PUSHING DOWEL BARS INTO GREEN CONCRETE IS NOT ACCEPTABLE.

BUTT JOINT



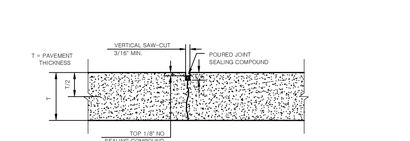
NOTE:
1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE.

TRANSVERSE EXPANSION JOINT



NOTE:
1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE.

CONSTRUCTION JOINT



CONTRACTION JOINT

CONCRETE JOINT DETAILS 09R

N.T.S.

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273–9472
FAX (479) 273–0844

JOB NO.: 28639
DATE: 6/25/2015 8:20 AM
DWG NAME: 28639–SP
REV–3

BRENT L. MASSEY 22207 ARKANSAS REGISTERED PROFESSIONAL ENGINEER
6/25/15

NO	DATE	REVISIONS

SONIC CORPORATION
320 JOHN'S BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-3000

SONIC DRIVE–IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

DETAIL SHEET 1

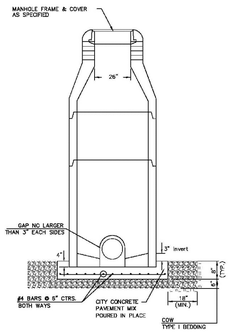
SHEET
C8

DWG: 28639–SP.DWG
DATE: 6/25/15

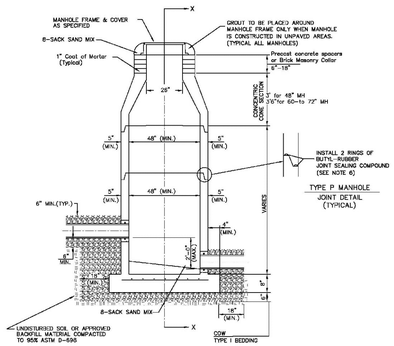
COPYRIGHT 1998–2006 AMERICA'S DRIVE–IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC OWNER AND FRANCHISEE OF THE SPECIFIED LOCATION.

JOB # 28639 DRAWING: 28639–SP.dwg LAST SAVED BY: JDIBBLE

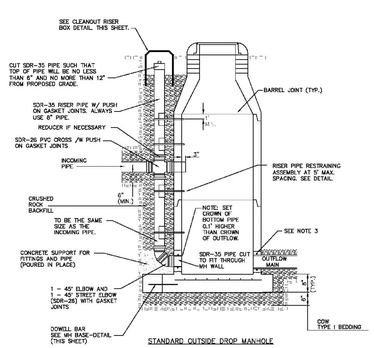
© 2015 CEI ENGINEERING ASSOCIATES, INC.



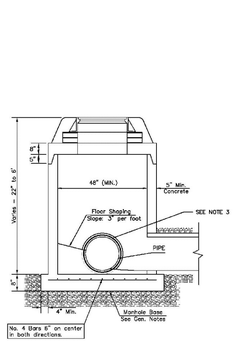
DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale



STANDARD MANHOLE
Not to Scale



STANDARD OUTSIDE DROP MANHOLE
Not to Scale

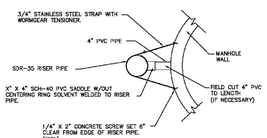


SHALLOW MANHOLE
Not to Scale

= COW TYPE I BEDDING = UNDISTURBED SOIL

PRECAST MANHOLE GENERAL NOTES

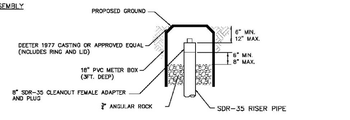
1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
5. EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
6. JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
7. ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12' DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS. AS INDICATED BY THE PLANS.
8. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
9. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
10. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
11. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 6 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITH-OUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACE AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
12. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO.4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
13. WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
14. OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKET'S SHALL BE USED WITH P.V.C. PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
15. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
16. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
17. THE VERTICAL DROP IN STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
18. STANDARD MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
19. PRECAST CONCRETE SPACERS OR BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCRETE CONE. THE COLLAR WILL HAVE 6" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A FINAL COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
20. THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.
21. REFER TO PLANS FOR SIZE OF OUTSIDE DROP RISER, SADDLES AND CROSS.



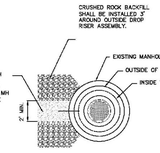
RISER PIPE RESTRAINING ASSEMBLY
Not to Scale

SANITARY SEWER MANHOLE DIAMETERS

DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	>15'-30'	21"-30"
6'	>30'	36"-60"



CLEANOUT RISER BOX DETAIL
Not to Scale



MH BASE DETAIL
Not to Scale

REVISED JANUARY 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST SANITARY SEWER MANHOLE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER | OCA NUMBER | DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SS-101

SWP-CI "Big Red"

74A

Curb Inlet Protector

By ASP Enterprises and Storm Water Products

Temporary and Reusable Solutions for Sediment Control

A.S.P. ENTERPRISES, INC.
Your GeoSource Distributor

- Reusable Curb Inlet Protection
- Environmentally Friendly
- Drops out sediment by dissipating the water energy





"Big Red" Filter Advantages:

- **Easy to Install**
- **Versatile for a variety of curb inlets**
- **Reusable and Extremely easy to clean**
- **Made from 90% Inert Recycled Materials**

The SWP-CI "Big Red" Filter is a **REUSABLE** inlet protector that keeps out sediment throughout the entire construction project. There are no pockets to fill, no velcro bags, no assembly etc. Simply place in front of the inlet, make sure it lays in the contour, and you are DONE!

Simple installation also translates into simple removal, cleanup and re-use at the next project or phase. Maintenance is simple as well by lifting the unit from the inlet, shaking the mud off of it, removing the sediment on the concrete, and placing the unit back. If it is severely filled with sediment, wash it out in a vegetated area and it is as good as new.



All of these features and benefits combine to make the SWP-CI "Big Red" curb inlet protector the **perfect choice** for all curb inlet applications. It comes in 54" long for single curb inlets and 104" lengths for double curb inlets.



- **High Flow Rate**
- **Made of Durable High-Strength Geotextile**
- **Fully Reusable**
- **Made of Recycled Materials**

SWP-CI "Big Red"

74A

Curb Inlet Protector

By ASP Enterprises and Storm Water Products

A.S.P. ENTERPRISES, INC.
Your GeoSource Distributor

Specifications:
1. Infill Material: shredded recycled rubber tires
2. Weight: approx. 10 lbs per linear foot
3. Diameter: approx. 8"

Geotextile fabric made of durable high flow fabric with the following properties:

Property	Test Method	Units		Typical Value
Weight	ASTM D5261	oz/sq. yd		9.3
Grab Tensile Strength	ASTM D4632	lb	warp	250
			fill	290
Tear Strength (Trapezoid)	ASTM D4533	lb	warp	60
			fill	50
Burst	ASTM D3786	psi		440

(Efforts were made to determine flow rate-the fabric exceeded all capacities of the testing equipment)



ASP Enterprises and Storm Water Products assumes no liability for the accuracy or completeness of this information or for the ultimate use by the purchaser. ASP and SWP disclaims any and all express, implied, or statutory standards, warranties or guarantees, including without limitation any implied warranty as to merchantability or fitness for a particular purpose or arising from a course of dealing or usage of trade as to any equipment, materials or information furnished herewith. This document should not be construed as engineering advice.

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

DWG NAME: 28639-SP
REV-3
JOB NO.: 28639
DATE: 6/25/2015 8:20 AM

PRELIMINARY NOT FOR CONSTRUCTION
BRENT L. MASSEY 22207 REGISTERED PROFESSIONAL ENGINEER
6/25/15

NO	DATE	REVISIONS

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-5022

SONIC®

COPYRIGHT 1988-2008 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC FRANCHISEE OR EMPLOYEE OF THE SONIC-IN AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
86'2 W. MAPLE STREET
WICHITA, KS

DETAIL SHEET 2

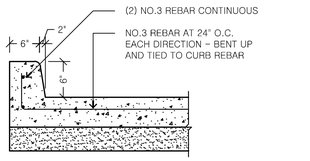
SHEET
C8.1

DWG:
28639-SP.DWG
DATE: 6/25/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-SP.dwg LAST SAVED BY: JOBBLE

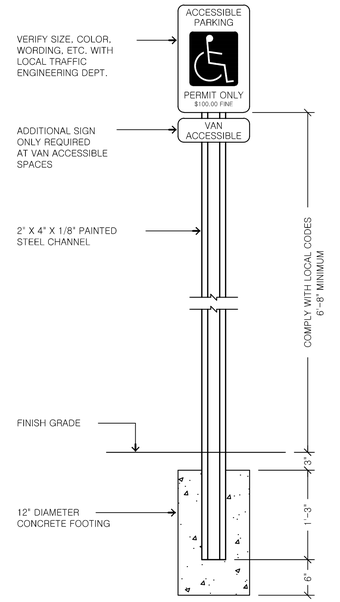
SONIC



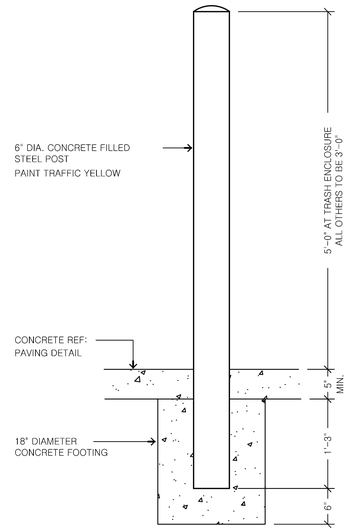
NOTE:
CURB TO BE POURED INTEGRAL WITH DRIVE

NOTE:
UPPER 12" OF SUBGRADE MUST BE A LOW PLASTICITY COHESIVE SOIL W/MIN. CBR VALUE OF 5, COMPACTED TO APPROX. 95% STD. PROCTOR. THESE ARE MIN. RECOMMENDATIONS. CONFIRM DETAILS WITH GEOTECHNICAL INVESTIGATION.

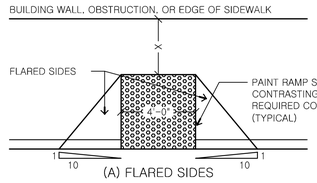
23 MONOLITHIC CURB



3 HANDICAP SIGN

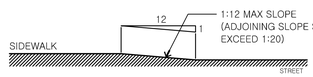


4 BOLLARD

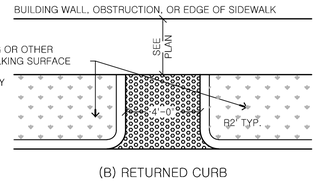


(A) FLARED SIDES

IF "X" IS LESS THAN 48" THEN THE SLOPE OF THE FLARED SIDE SHALL NOT EXCEED 1:12



CURB RAMP SLOPES



(B) RETURNED CURB

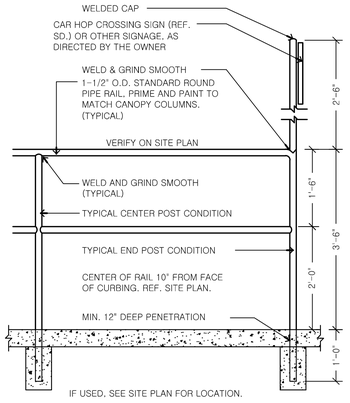
NOTES:
RAMPS MUST COMPLY WITH NATIONAL AND LOCAL CODES

ALL "ACCESSIBLE ROUTE" SIDEWALKS FROM PARK SPACE RAMP TO THE PATIO AREA OR RESTROOMS SHALL COMPLY WITH A.D.A.A.G. STANDARDS FOR WIDTH, CROSS SLOPE (1:50 OR LESS), AND RUNNING SLOPE (LESS THAN 1:20)

PROVIDE TACTILE SURFACING ON RAMP SURFACES: 1/8" DEEP GROOVES 1/4" - 3/4" WIDE, AND 2" O.C. ARRANGED SO THAT WATER WILL NOT ACCUMULATE

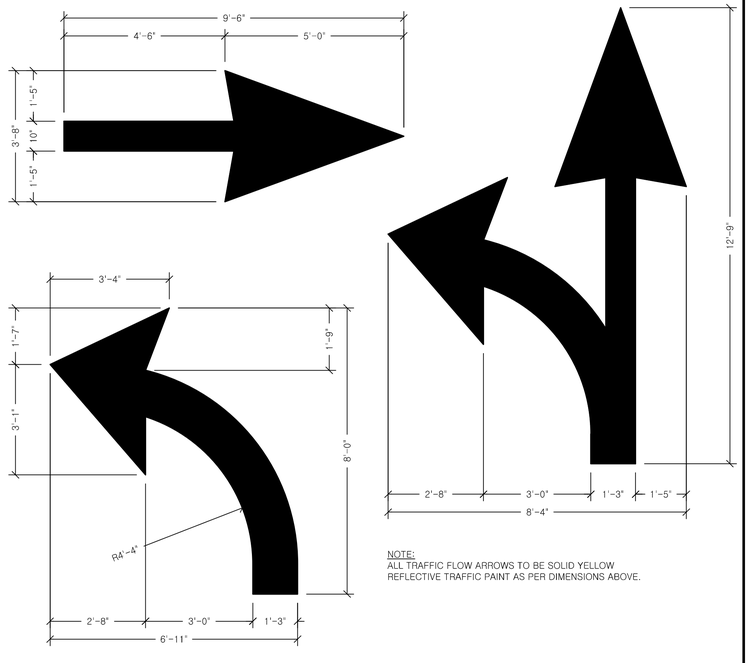
PROVIDE TRUNCATED DOME DETECTION AS REQUIRED BY LOCAL CODES

19 CURB RAMPS



IF USED, SEE SITE PLAN FOR LOCATION.

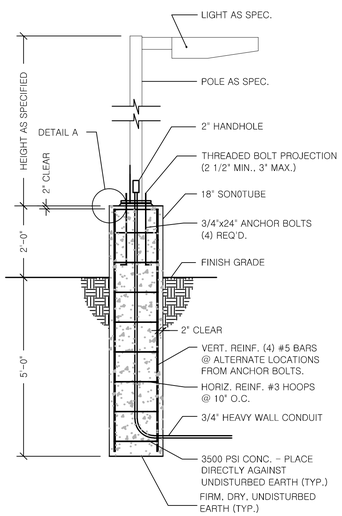
29 RAILING W/ SIGNAGE

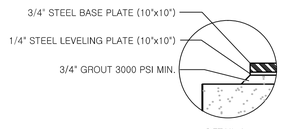


NOTE:
ALL TRAFFIC FLOW ARROWS TO BE SOLID YELLOW REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS ABOVE.

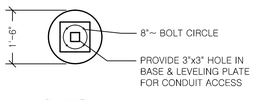
16 TRAFFIC FLOW ARROW

NOTES:
1. THIS FOUNDATION DESIGN IS BASED ON AN ALLOWABLE BEARING CAPACITY OF 2000 p.s.f. IF THESE SOIL CONDITIONS DO NOT EXIST, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING NEW DESIGN BASED ON ACTUAL SOIL CONDITIONS.
2. THIS FOUNDATION IS BASED ON WIND LOADS OF 90 mph (3 SEC GUST).
3. ALL REINFORCING STEEL SHALL CONFORM TO ASTM GRADE 60.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE BASE PLATE BOLT PATTERN.
5. WHEN ORDERING BLOCK FINISHES, ADDITIONAL LEAD TIME IS REQUIRED.
6. SEE ELECTRICAL PLANS FOR WIRING AND FIXTURE LAYOUT AND DETAILS.
7. SEE ARCHITECTURAL PLANS FOR LIGHT AND POLE SPEC.
8. VERIFY ANCHOR BOLT LAYOUT WITH POLE MANUFACTURER BEFORE POURING POLE BASE.





DETAIL A



PLAN VIEW

15 LIGHT BASE DETAIL

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

JOB NO.: 28639
DATE: 6/25/2015 8:20 AM
DWG NAME: 28639-SP
REV-3

NO	DATE	REVISIONS

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN FRANCHISEE AT THE SPECIFIED LOCATION.

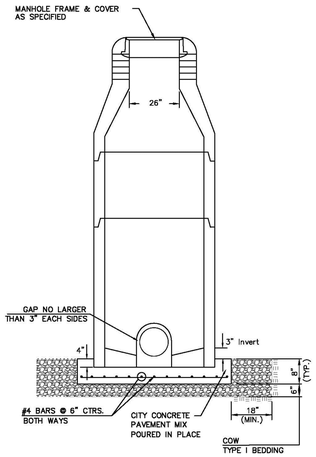
SONIC DRIVE-IN
SONIC TYPE: 12
862 W. MAPLE STREET
WICHITA, KS

SONIC DETAILS

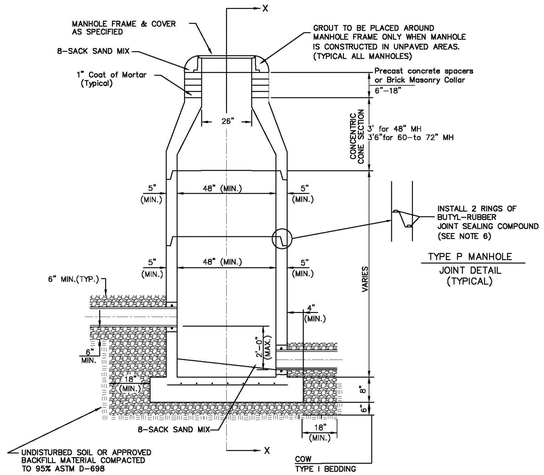
SHEET
C9

DWG:
28639-SP.DWG
DATE: 6/25/15

JOB # 28639 DRAWING: 28639-SP.dwg LAST SAVED BY: JOBBLE
© 2015 CEI ENGINEERING ASSOCIATES, INC.

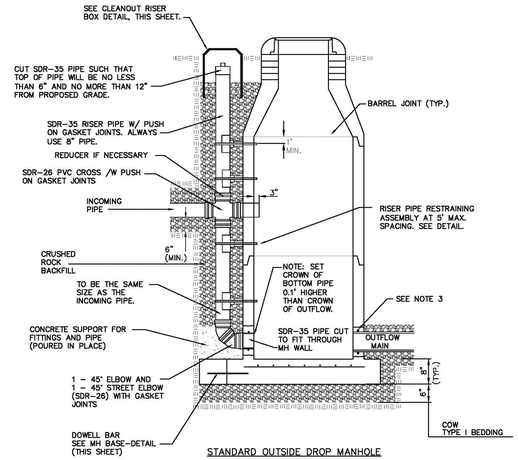


DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale

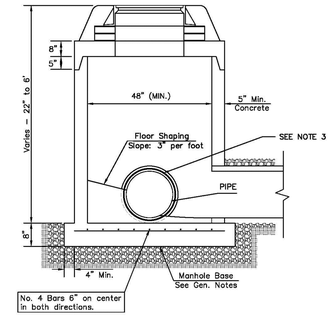


STANDARD MANHOLE
Not to Scale

TYPE P MANHOLE
JOINT DETAIL
(TYPICAL)

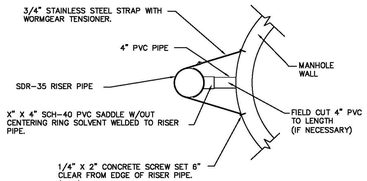


STANDARD OUTSIDE DROP MANHOLE
Not to Scale



SHALLOW MANHOLE
Not to Scale

= COW TYPE I BEDDING = UNDISTURBED SOIL



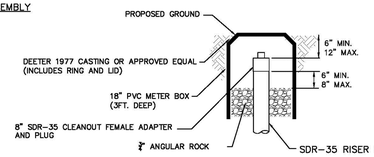
RISER PIPE RESTRAINING ASSEMBLY
Not to Scale

SANITARY SEWER MANHOLE DIAMETERS

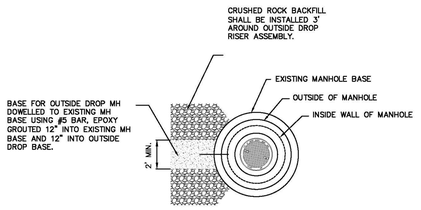
DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	>15'-30'	21"-30"
6'	>30'	36"-60"

PRECAST MANHOLE GENERAL NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
5. EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
6. JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
7. ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12' DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS. AS INDICATED BY THE PLANS.
8. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
9. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
10. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
11. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACE AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
12. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO.4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
13. WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
14. OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WLL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
15. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
16. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
17. THE VERTICAL DROP IN STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
18. STANDARD MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
19. PRECAST CONCRETE SPACERS OR BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
20. THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.
21. REFER TO PLANS FOR SIZE OF OUTSIDE DROP RISER, SADDLES AND CROSS.



CLEANOUT RISER BOX DETAIL
Not to Scale



MH BASE DETAIL
Not to Scale

REVISED JANUARY 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST SANITARY SEWER MANHOLE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SS-101

REVISIONS

NO	DATE

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
DATE: 6/25/2015 9:3 AM
REV-3

SONIC CORPORATION
320 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-5200

SONIC® AmericaNorth Bathroom Co SM

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN AT THE DESIGNATED SONIC DRIVE-IN LOCATION AT THE ADDRESS AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
812 W. MAPLE STREET
WICHITA, KS

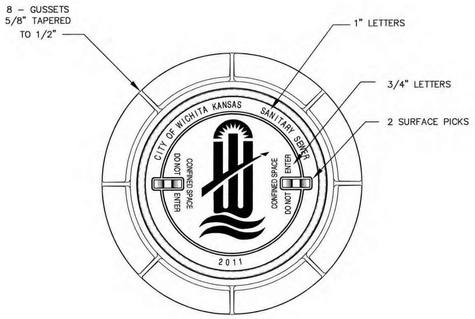
CITY SANITARY SEWER DETAIL I

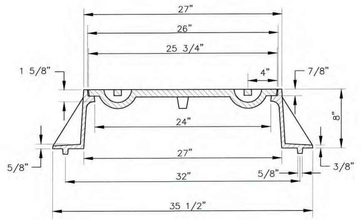
SHEET
C10

DWG:
28639-UP.DWG
DATE: 6/25/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE



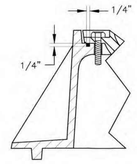


STANDARD MANHOLE FRAME & COVER

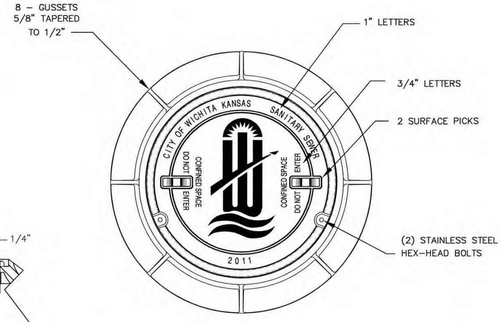
DEETER #1261 OR EJIW #1936–Z1

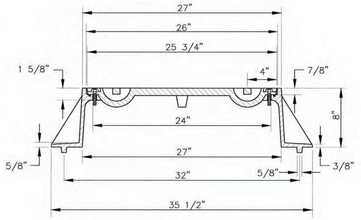
NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.



DETAIL OF T–GASKET



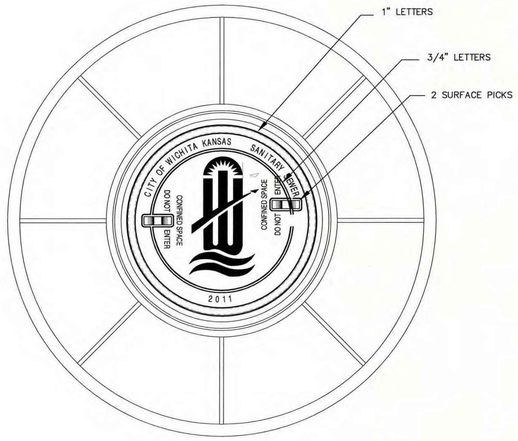


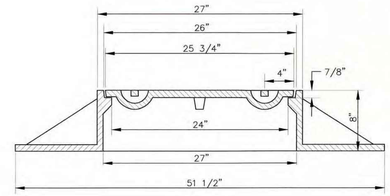
BOLT DOWN MANHOLE FRAME & COVER

DEETER #1261 OR EJIW #1936–Z1

NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.
2. FURNISHED WITH A T–GASKET IN THE FRAME.





WIDE FLANGED FRAME & COVER

DEETER #1261A

NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

GENERAL NOTES

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A–48. DIMENSIONS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.
2. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDARY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON–ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.
3. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SEATING SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUM–FERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.
4. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1 INCH IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SANITARY SEWER". THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN WITH CITY OF WICHITA DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

GARY L. JANZEN LICENSED 19294 KANSAS PROFESSIONAL ENGINEER
Expires 6/30/2013

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

MANHOLE
FRAME AND COVER
(SANITARY SEWER)

CITY ENGINEER
GARY JANZEN, P.E

PROJECT NUMBER	OCA NUMBER	DATE
		12/2011

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SS-102

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

DWG NAME: 28639-SP
REV-3
JOB NO.: 28639
DATE: 6/25/2015 9:3 AM

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000

COPYRIGHT 1988-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN FRANCHISEE OR AGENT OF THE SONIC-A-TEX SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
2612 W. MAPLE STREET
WICHITA, KS

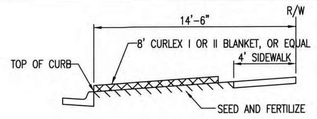
CITY SANITARY SEWER DETAIL 2

SHEET
C10.1

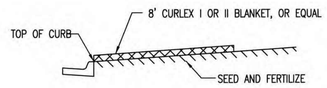
DWG:
28639-UP.DWG
DATE: 6/25/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

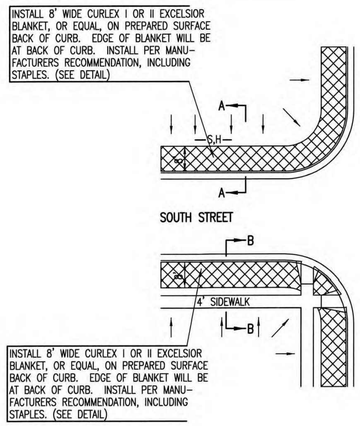
JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBIBLE



SECTION B-B



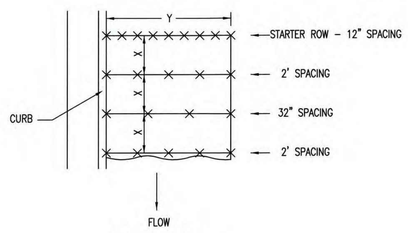
SECTION A-A

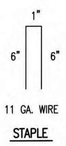


GENERAL NOTES

1. EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
2. EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
3. AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

BACK OF CURB PROTECTION DETAIL



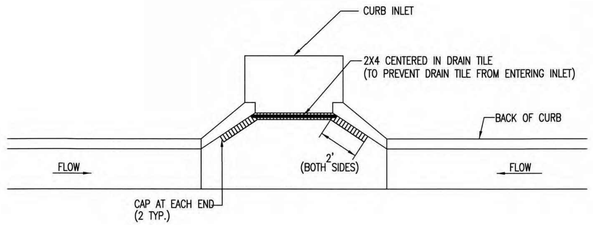


STAPLE

STAPLE PATTERN

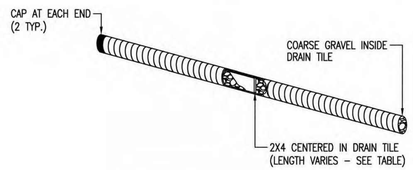
NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)

DETAILS FOR APPROVED EROSION CONTROL MAT

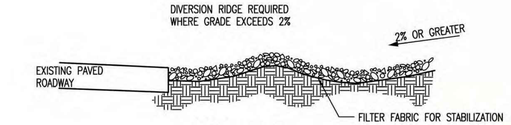


NOTE:
PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

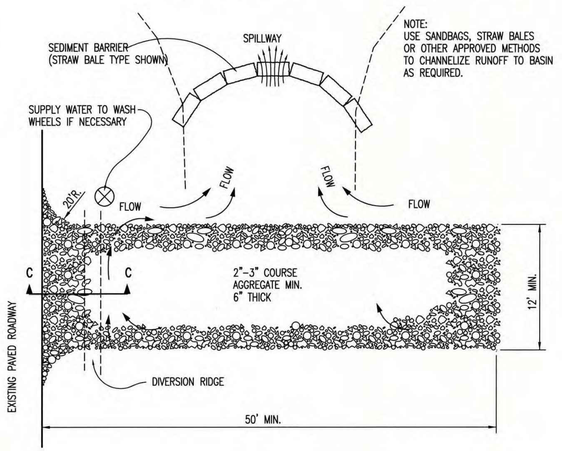
2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"



CURB INLET PROTECTION
4" PERFORATED PIPE W/ GRAVEL



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

REVISION DATE: MAY 2013

GARY L. JANZEN — LICENSED — 16024 — PROFESSIONAL ENGINEER — KANSAS
05/24/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-501

REVISIONS

NO	DATE

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
DATE: 6/25/2015 9:3 AM
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE#: 405-225-5000

SONIC® America's Drive-In® Corp.

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN THE DESIGNATED SONIC DRIVE-IN LOCATION OF THE BUILDING AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
2612 W. MAPLE STREET
WICHITA, KS

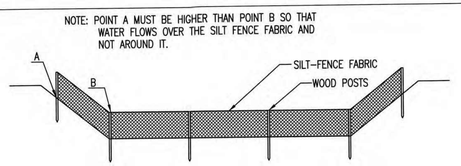
CITY EROSION CONTROL DETAIL 1

SHEET
C10.2

DWG: 28639-UP.DWG
DATE: 6/25/15

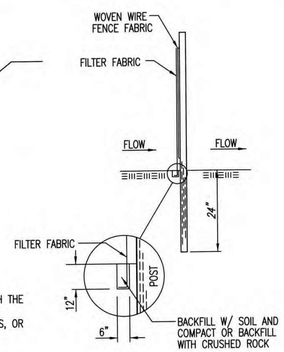
© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE



ELEVATION

SILT FENCE DITCH CHECKS
(STREAM PROTECTION)



ANCHOR TRENCH DETAIL

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED.
WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK, NOT OVER IT. SILT FENCE DITCH CHECKS OFTEN FAIL WHEN OVERTOPPED.
SILT FENCE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
THE SILT FENCE SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE TOP OF THE LOW POINT OF THE FENCE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
SILT FENCE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.
SILT FENCE SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.

THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK DITCH GRADE (%)	SPACING CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS AT LEAST 12" DEEP BY 6" WIDE.
EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK.
PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSTREAM SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSTREAM EDGE OF THE TRENCH.
LINE TWO SIDES OF THE TRENCH WITH THE FABRIC AS SHOWN ON DETAIL. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE ON THE UPSTREAM SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSTREAM OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

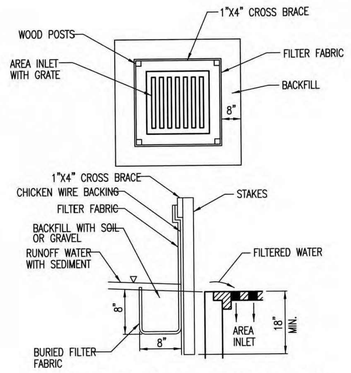
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK-NOT OVER IT. PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. SILT FENCE INSTALLATIONS QUICKLY DETERIORATE WHEN WATER OVERTOPS THEM.
DO NOT PLACE SILT FENCE POSTS ON THE UPSTREAM SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE A SILT FENCE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE SILT FENCE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE LOW POINT ON THE TOP OF THE FENCE.
DO NOT PLACE SILT FENCE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.

INSPECTION AND MAINTENANCE:

SILT FENCE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE WIRE OR POLYMERIC MESH BACKING USED TO HELP SUPPORT THE SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
THE MATERIAL USED TO FRAME THE TOPS OF THE POSTS SHOULD BE 1" BY 4" BOARDS.
SILT FENCE FABRIC AND SUPPORT BACKING SHOULD BE ATTACHED TO THE WOODEN POSTS AND FRAME WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE A SILT FENCE DROP INLET BARRIER IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED.
WATER SHOULD FLOW THROUGH SILT FENCE, NOT OVER IT. SILT FENCE BARRIERS FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
WHEN USED AS A BARRIER FOR AREA INLETS, SILT FENCE FABRIC AND POSTS MUST BE SUPPORTED AT THE TOP BY A WOODEN FRAME.
WHEN A SILT FENCE BARRIER FOR AREA INLETS IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 8" DEEP BY 8" WIDE.
DRIVE POSTS TO A DEPTH OF AT LEAST 18" AROUND THE PERIMETER OF THE AREA INLET.
THE DISTANCE BETWEEN POSTS SHOULD BE 4' OR LESS. IF THE DISTANCE BETWEEN TWO ADJACENT CORNER POSTS IS MORE THAN 4', ADD ANOTHER POST(S) BETWEEN THEM.
CONNECT THE TOPS OF ALL THE POSTS WITH A WOODEN FRAME MADE OF 1" BY 4" BOARDS. USE NAILS OR SCREWS FOR FASTENING.
ATTACH THE WIRE OR POLYMERIC-MESH BACKING TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC LONG ENOUGH TO WRAP AROUND THE PERIMETER OF THE AREA INLET. ADD MORE LENGTH FOR OVERLAPPING THE FABRIC JOINT. PLACE THE EDGE OF THE FABRIC IN THE TRENCH, STARTING AT THE OUTSIDE EDGE OF THE TRENCH. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
ATTACH THE SILT FENCE TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. THE JOINT SHOULD BE OVERLAPPED TO THE NEXT POST.

NOTE: WHEN A SILT FENCE BARRIER FOR AREA INLET IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

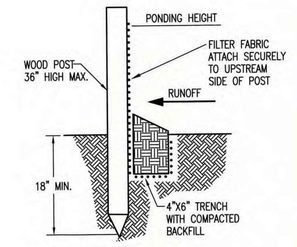
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE BARRIER FOR AREA INLET-NOT OVER IT. PLACE A SILT FENCE BARRIER FOR AREA INLET IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. SILT FENCE BARRIER FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
DO NOT PLACE POSTS ON THE OUTSIDE OF THE SILT FENCE BARRIER FOR AREA INLET. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESISTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT INSTALL SILT FENCE BARRIER FOR AREA INLETS WITHOUT FRAMING THE TOP OF THE POSTS.
THE CORNER POSTS AROUND AREA INLETS ARE STRESSED IN TWO DIRECTIONS WHEREAS A NORMAL SILT FENCE IS ONLY STRESSED IN ONE DIRECTION. THIS ADDED STRESS REQUIRES MORE SUPPORT.

INSPECTION AND MAINTENANCE:

SILT FENCE BARRIER FOR AREA INLETS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE SILT FENCE?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



SILT FENCE BARRIERS

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, SILT FENCE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
SILT FENCE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 6" DEEP BY 4" WIDE.
MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT-FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18".
PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES.
DO NOT PLACE SILT-FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE SILT FENCE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT SUFFICIENTLY ANCHORED, IT WILL WASH OUT.
SILT FENCE SLOPE BARRIERS MUST BE DUG INTO THE GROUND-SILT FENCE AT GROUND LEVEL DOES NOT WORK BECAUSE WATER WILL FLOW UNDERNEATH.

INSPECTION AND MAINTENANCE:

SILT FENCE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DO THE SILT FENCES SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED PROFESSIONAL ENGINEER 19004 KANSAS
05/21/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SILT FENCE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-502

NO	DATE	REVISIONS

© Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street (479) 273-9472
Bentonville, AR 72712 FAX (479) 273-0844
DWG NAME: 28639-SP JOB NO.: 28639
REV-3 DATE: 6/25/2015 9:3 AM

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-5000
SONIC® AMERICA'S DRIVE-IN CORP.
COPYRIGHT 1988-2008 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN AT THE DESIGNATED SONIC DRIVE-IN LOCATION AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
862 W. MAPLE STREET
WICHITA, KS

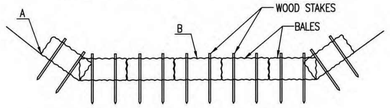
CITY EROSION CONTROL DETAIL 2

SHEET
C10.3

DWG: 28639-UP.DWG
DATE: 6/25/15

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE
© 2015 CEI ENGINEERING ASSOCIATES, INC.

NOTE: POINT A MUST BE HIGHER THAN POINT B
SO THAT WATER FLOWS OVER THE BALES AND
NOT AROUND THEM.



STRAW BALE DITCH CHECKS

MATERIAL SPECIFICATION:

BALE DITCH CHECKS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
OPTIONAL: THE DOWNSTREAM SCOUR APRON SHOULD BE CONSTRUCTED OF A DOUBLE-NETTED STRAW EROSION-CONTROL BLANKET AT LEAST 6' WIDE.
OPTIONAL: THE METAL LANDSCAPE STAPLES USED TO ANCHOR THE EROSION-CONTROL BLANKET SHOULD BE AT LEAST 8" LONG.

PLACEMENT:

BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.
BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.
THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH GRADE (%)	CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH-IT WILL BE USED LATER.
OPTIONAL: ON THE DOWNSTREAM SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSTREAM EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSTREAM EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSTREAM SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSTREAM SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

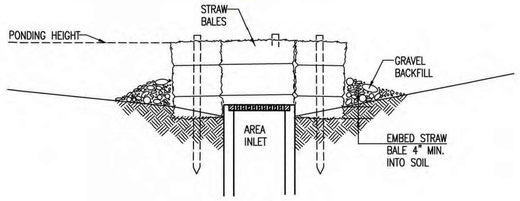
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE.
DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

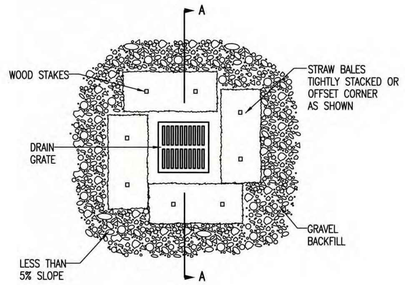
INSPECTION AND MAINTENANCE:

BALE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES AND/OR SCOUR APRONS (OPTIONAL) DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

MATERIAL SPECIFICATION:

BALE AREA INLET BARRIERS SHOULD BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

BALE AREA INLET BARRIERS SHOULD BE PLACED DIRECTLY AROUND THE PERIMETER OF A DROP INLET. WHEN A BALE AREA INLET BARRIER IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 4" DEEP BY A BALE'S WIDTH WIDE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. SOME BALES MAY NEED TO BE SHORTENED TO FIT INTO THE TRENCH AROUND THE AREA INLET. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS.
STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE RECEIVING SIDE OF THE BARRIER AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.
NOTE: WHEN A BALE AREA INLET BARRIER IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

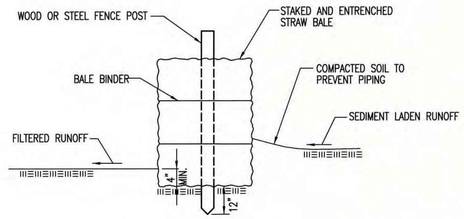
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

BALES SHOULD BE PLACED DIRECTLY AGAINST THE PERIMETER OF THE AREA INLET. THIS ALLOWS OVERTOPPING WATER TO FLOW DIRECTLY INTO THE INLET INSTEAD OF ONTO NEARBY SOIL CAUSING SCOUR.
BALE AREA INLET BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE AREA INLET BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE AREA INLET BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



STRAW BALE BARRIERS

MATERIAL SPECIFICATION:

BALE SLOPE BARRIERS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, BALE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
BALE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER FAILS.
DO NOT PLACE BALE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE SLOPE BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 19294 PROFESSIONAL ENGINEER KANSAS 05/31/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STRAW BALE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-503

NO | DATE | REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
DATE: 6/25/2015 9:3 AM
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000
SONIC® America's Drive-In™

COPYRIGHT 1980-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC FRANCHISEE NAMED IN THE OWNER-SET FOR THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

CITY EROSION CONTROL DETAIL 3

SHEET
C10.4

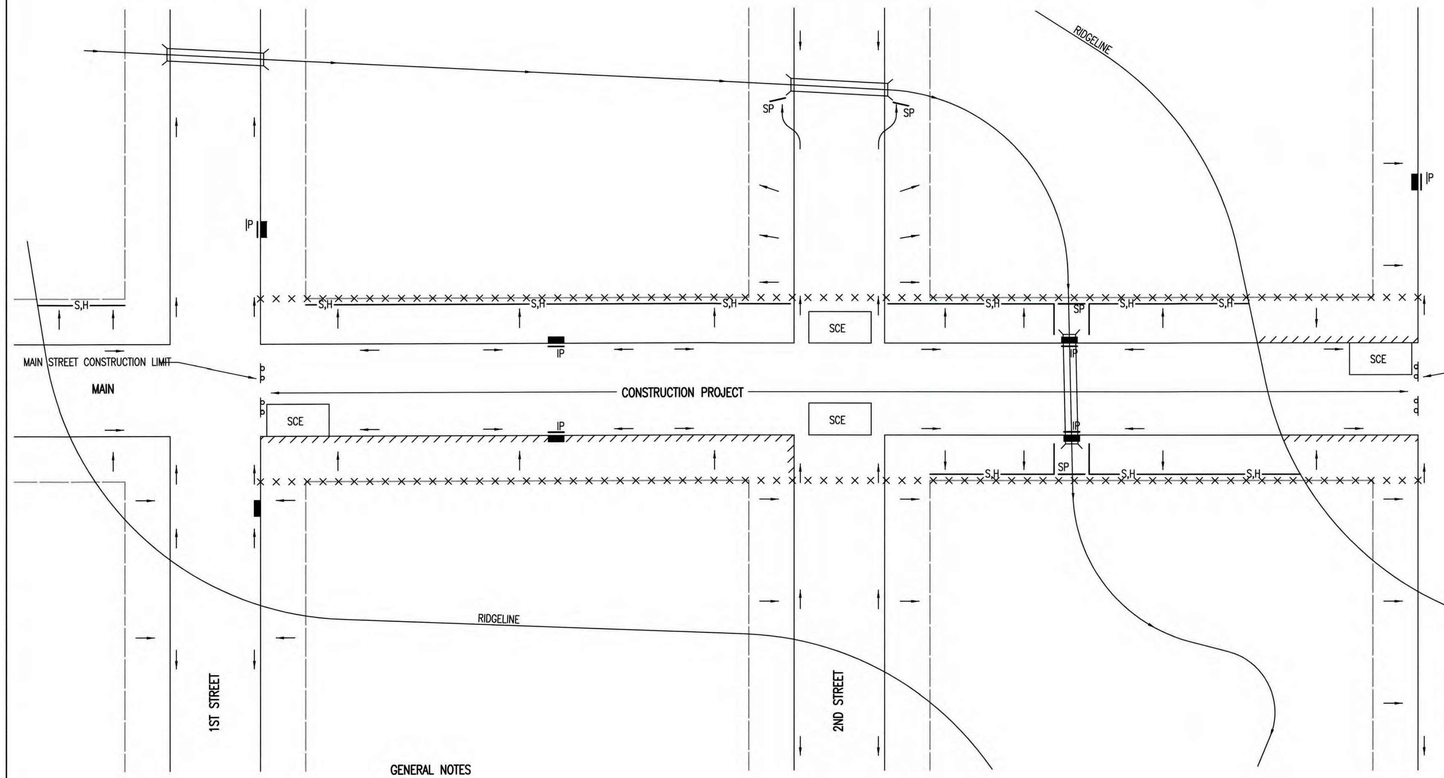
DWG: 28639-UP.DWG
DATE: 6/25/15

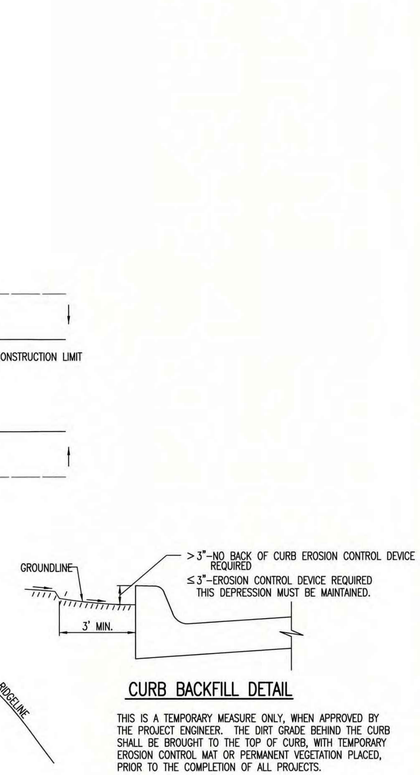
JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE

© 2015 CEI ENGINEERING ASSOCIATES, INC.

GENERAL NOTES

1. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPES OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.
3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.
4. FOR PROJECTS DISTURBING LESS THAN 1 ACRE, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION. EROSION CONTROL DEVICES MUST BE USED ON ALL PROJECTS.
5. FAILURE TO USE AND MAINTAIN EROSION CONTROL DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE CONTRACTOR TO THE PENALTIES PROVIDED FOR THEREIN.
6. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT DEVICE OTHER THAN THOSE SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED AS LONG AS THEY ARE EFFECTIVE AND MAINTAINED.





CURB BACKFILL DETAIL

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

LEGEND

- R-O-W LIMITS
- DRAINAGE FLOW PATH
- R/W LIMIT WITHIN CONSTRUCTION LIMIT
- STORM WATER INLETS
- IP — INLET PROTECTION
- S,H — SILT FENCE OR HAY BALE BARRIER
- SP — STREAM PROTECTION
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- BACK OF CURB PROTECTION

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO KEEP ALL SEDIMENT CONFINED TO THE CONSTRUCTION SITE, AND OUT OF ALL UNDERGROUND PIPES, DITCHES, LAKES, AND OTHER DRAINAGE FACILITIES, AND OFF OF STREETS.
2. THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT-OF-WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.
3. EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.
4. INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.
5. EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.
6. STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED, AS NEEDED, TO PREVENT MUD FROM TRACKING ONTO STREETS NOT UNDER CONSTRUCTION AND ON STREETS WITHIN THE PROJECT LIMITS IF TRAFFIC IS BEING MAINTAINED THROUGH THE PROJECT.
7. ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.
8. THE CONTACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL DEVICES BACK OF CURB, WHENEVER WATER CAN DRAIN OVER CURB, TO KEEP ERODED SOIL OUT OF THE GUTTERLINES, IN ACCORDANCE WITH THE FOLLOWING:
   A. THE DEVICE REQUIRED WILL BE APPROVED EROSION CONTROL MAT LISTED ON THE CITY'S APPROVED MATERIAL LIST. SAID BLANKET SHALL BE PLACED OVER THE APPROPRIATE SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS. (SEE SOIL EROSION BMPs – BACK OF CURB SEDIMENT BARRIER DETAILS)
   B. THIS DEVICE SHALL BE INSTALLED IMMEDIATELY WHENEVER THE CURB IS BACKFILLED TO WITHIN 3" OF THE TOP OF CURB. (SEE CURB BACKFILL DETAIL) OTHER BMP'S MAY BE REQUIRED AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB.
   C. ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.
   D. SHOULD THE PROJECT PLANS SPECIFY THAT THE RIGHT-OF-WAY IS TO BE SODDED, THE EXCELSIOR MAT WILL NOT BE REQUIRED SO LONG AS THE SOD IS PLACED WITHIN 48 HOURS AFTER CURB BACKFILL REACHES A HEIGHT OF 3" OR LESS FROM TOP OF CURB. (SEE CURB BACKFILL DETAIL)

GARY L. JANZEN — LICENSED — 18294 — KANSAS — PROFESSIONAL ENGINEER — 05.12.15

REVISION DATE: 2013

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STREET IMPROVEMENT PROJECTS

CITY ENGINEER: GARY JANZEN, P.E.

PROJECT NUMBER	CCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-504

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

CITY EROSION CONTROL DETAIL 4

SHEET
C10.5

DWG: 28639-UP.DWG
DATE: 6/25/15

NO	DATE	REVISIONS

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
REV-3
DATE: 6/25/2015 9:3 AM

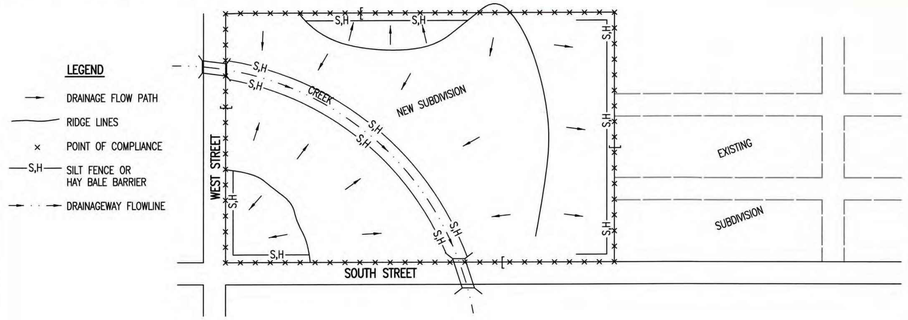
SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000

COPYRIGHT 1988-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN FRANCHISEE OR A DESIGNEE OF THE SONIC-IN AT THE SPECIFIED LOCATION.

© 2015 CEI ENGINEERING ASSOCIATES, INC.

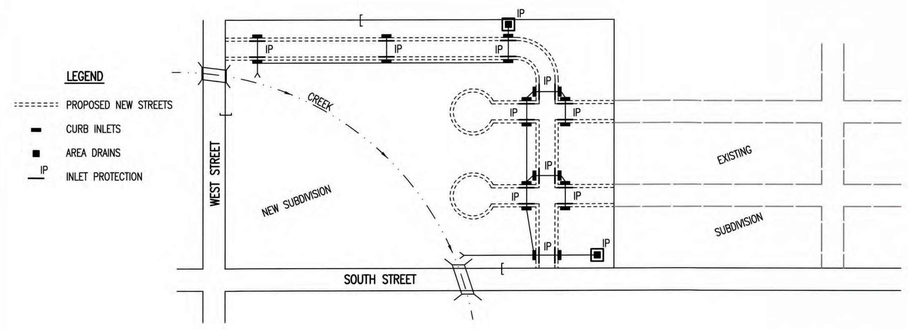
JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE

PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



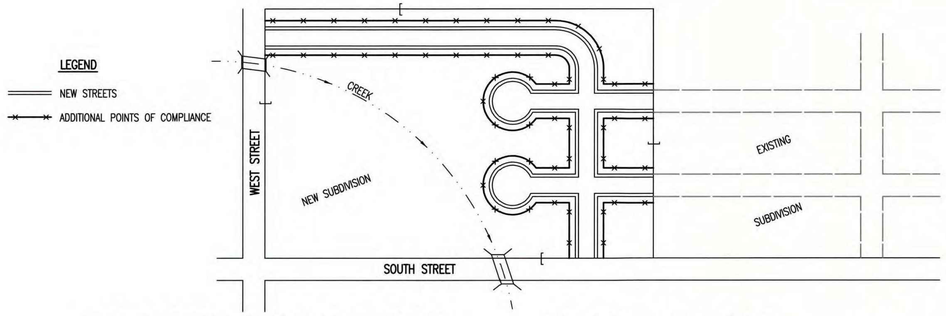
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
3. SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
4. ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
5. CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
6. UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
7. IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
8. WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

PHASE 2 – INSTALLATION OF STORM SEWER



1. DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
2. AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
3. AREA DRAINS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
4. CURB OPENING INLETS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 – STREET CONSTRUCTION.
5. THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
6. THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
7. ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
8. ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

PHASE 3 – STREET CONSTRUCTION

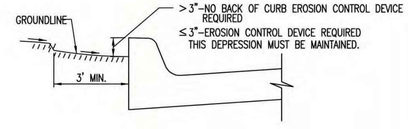


1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
2. CURB OPENING INLET PROTECTION:
   A. SUMP AREAS – INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
   B. NON-SUMP LOCATIONS – PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
3. EROSION CONTROL DEVICES WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), ADDITIONAL DEVICES WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
4. SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
5. THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAY BALE OR SILT FENCE EROSION CONTROL DEVICES AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
6. THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
7. THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB EROSION CONTROL DEVICES IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
2. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
3. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
4. PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
5. THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
6. FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
7. FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
8. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
9. A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

SEE DETAIL SHEET FOR BACK OF CURB PROTECTION DETAIL



CURB BACKFILL DETAIL (STREET CONSTRUCTION ONLY)

THIS IS A TEMPORARY MEASURE ONLY. WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
05.13.13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SUBDIVISION DEVELOPMENT PROCESS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-505

SONIC

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE

SONIC

SONIC

SONIC

© 2015 CEI ENGINEERING ASSOCIATES, INC.

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
REV-3
DATE: 6/25/2015 9:3 AM

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE®: 405-225-5000
SONIC® America's Drive-In℠

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN AT THE DESIGNATED SONIC DRIVE-IN LOCATION AT THE TIME AND AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
2612 W. MAPLE STREET
WICHITA, KS

CITY EROSION CONTROL DETAIL 5

SHEET
C10.6

DWG: 28639-UP.DWG
DATE: 6/25/15

SANITARY SEWER TO SERVE
SONIC RESTAURANTS, INC.
8612 W. MAPLE STREET
CITY of WICHITA, KS

PRIVATE PROJECT NO. 2233 PPS (607861)
GARY JANZEN, P.E. - CITY ENGINEER

GENERAL NOTES:

1. The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications and Special Provisions.
2. Contractor will be required to provide notice to utility companies a minimum of seventy-two (72) hours prior to any excavation, as follows.

   Kansas One-Call 687-2470.

   The Contractor must notify the following in case of an emergency.

AT & T	1-800-246-8464
Black Hills Energy	1-800-694-8989
City of Wichita Water	1-316-268-4555
City of Wichita Sewer	1-316-268-4073
City of Wichita Stormwater	1-316-268-4090
City of Wichita Traffic	1-316-268-4034
Cox Communications	1-888-249-3530
Kansas Gas Service	1-888-482-4950
Westar Energy	1-800-544-4857

3. Utility service lines, poles, etc. are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of- way which do not conflict with proposed construction.
4. Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations, in the opinion of the Engineer that will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment Material either stockpiled or disposed of in a flood plain will require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U S. Corps. Of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits will require additional archaeological investigations unless buried in a previously approved borrow location.
5. Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which ore not in direct conflict with proposed new construction shall be saved and protected from damage.
6. The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) day notice prior to start of construction.
7. The Contractor shall be responsible for preserving property irons. The Contractor Will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
8. The Water Distribution Division shall field locate water valves one time during construction when requested by the Contractor. It should be the Contractor's responsibility to preserve such field locations during the construction process. Water valves, valve boxes or fire hydrants damaged during construction shall be repaired by Contractor at his own expense. Valve boxes and water meters within the project limits shall be adjusted to match field grades.
9. The Contractor shall notify the consultant engineer and Tom Mason at 316-268-4574 with the City of Wichita with the anticipated construction start dote and notify them of project completion. Staking and inspection for this project will be the responsibility of the Contractor.
10. If traffic will be impacted by construction, a traffic control plan must be submitted and approved by the City Traffic Engineer, Brian Coon at **traffic@wichita.gov** before construction can begin. The Contractor shall be responsible for all traffic control measures to facilitate construction. All construction zone markings and signage shall conform to the latest version of the Manual on Uniform Traffic Control Devices (MUTCD) as published by the US Dept. of Transportation, Federal Highway Administration. All costs associated with construction markings and signage shall be the Contractors responsibility.
11. All elevations shown are NAVD 88.
12. All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions.
13. All stubs and plugged pipes shall be located with green plastic tape in the same manner as risers.
14. Connecting fa Existing Manholes:
    Prior to laying sewer lines using existing stubs in existing manholes, the Contractor shall expose and verify the elevation, grade and alignment of existing stubs and notify the Engineer of any deviation from the plans. Where connection to on existing manhole that does not have an existing stub or the stub is unusable due to elevation grade or alignment, the Contractor shall core cut into existing manhole wall to make connection using approved water stop gasket, and reshape the existing manhole invert to provide smooth flow. The cost to connecting to existing manholes is incidental to the project.
15. Contractor shall limit the extent of trench open overnight and weekends to less than 50 feet.
16. Contractor shall provide positive drainage away from all manhole covers.
17. The Contractor shall prevent any construction debris from entering the existing sanitary sewer during construction.
18. The Contractor shall be responsible for maintaining continuous flow of sewage through construction. Contractors proposed method for maintaining sewage flow shall be submitted and approved by the Sewer Maintenance Division (316-268-4073) prior to starling and by-passing of sewage flows
19. Any over excavation from manhole and pipe removal shall be backfilled with AB-3 compacted to 90-95% ASTM D698.
20. City Maintenance of sanitary sewer mains ends at last structure within the easement or right-of-way or line.
21. Any sidewalk, drive approach, curb or street pavement removed to construct project must have a pavement cut permit and be replaced by the City contractor. Permits can be obtained by calling 316-268-4501 or 316-268-4480.

SITE BENCHMARK

BM #1
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1233' ± NORTH AND 3' WEST OF THE EAST PROPERTY LINE.
ELEV=1330.50'

BM #2
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

FLOOD CERTIFICATION:

THIS PROPERTY IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR SEDGWICK COUNTY, KS.
COMMUNITY PANEL NUMBER 20173C0337F
EFFECTIVE DATE 5-2-2012.

CEI GENERAL NOTES:

A. TOPOGRAPHIC BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, SITE TOPOGRAPHY WITH SPOT ELEVATIONS, OUTSTANDING PHYSICAL FEATURES AND EXISTING STRUCTURE LOCATIONS WAS PROVIDED BY THE FOLLOWING COMPANY, AS A CONTRACTOR TO THE SELLER/OWNER:

TOPOGRAPHY: KAW VALLEY ENGINEERING, INC.
14700 WEST 114TH TERRACE
LENEXA, KS 66215
KENNETH J. DEDRICK
913-894-5150

CEI ENGINEERING AND ITS ASSOCIATES WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS OR OMISSIONS RESULTING FROM SURVEY INACCURACIES.

B. ALL PHASES OF SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE OWNER / DEVELOPER SITE WORK SPECIFICATIONS.

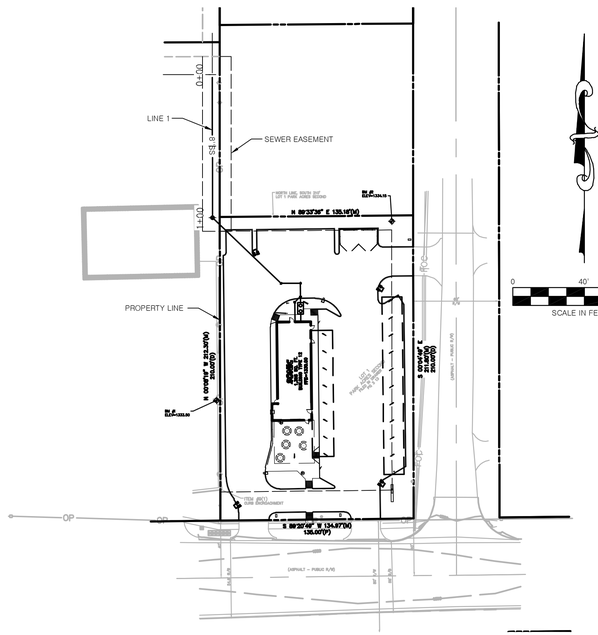
C. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. SEE SITE WORK SPECIFICATIONS.

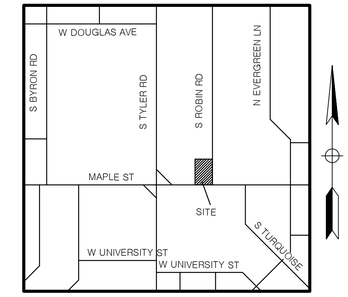
D. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.

E. THE GENERAL CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

F. WARRANTY/DISCLAIMER: THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A CONTEMPORANEOUS BASIS AT THE SITE.

G. SAFETY NOTICE TO CONTRACTOR: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.





Vicinity Map
Not to Scale

SHEET INDEX:

C0	COVER SHEET
C4	EROSION CONTROL PLAN
C5	UTILITY PLAN
C10	WICHITA SANITARY SEWER DETAIL 1
C10.1	WICHITA SANITARY SEWER DETAIL 2
C10.2	WICHITA EROSION CONTROL DETAIL 1
C10.3	WICHITA EROSION CONTROL DETAIL 2
C10.4	WICHITA EROSION CONTROL DETAIL 3
C10.5	WICHITA EROSION CONTROL DETAIL 4
C10.6	WICHITA EROSION CONTROL DETAIL 5

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Sanitary Sewers _____
Storm Sewers N/A
Driveway Approaches N/A
Water Mains N/A
Paving N/A

NOTE TO CONTRACTORS

Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said Inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection, nor shall any work be commenced without written authorization by the City Engineer.

811 Know what's **below.** **Call** before you dig.

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3108 S.W. REGENCY PARKWAY, SUITE 2 (479)273-9472
Bentonville, AR 72712 FAX (479)273-0844

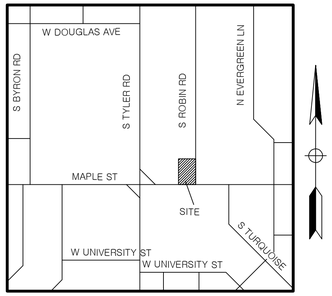
BRENT L. MASSEY LICENSED 22207 KANSAS PROFESSIONAL ENGINEER
4/28/15

Arkansas * California * Minnesota * Pennsylvania * Texas

JOB NO.: 28639
DWG NAME: 28639-UP
DATE 4/28/15 9:16 AM REV-3
SHEET NO. C0

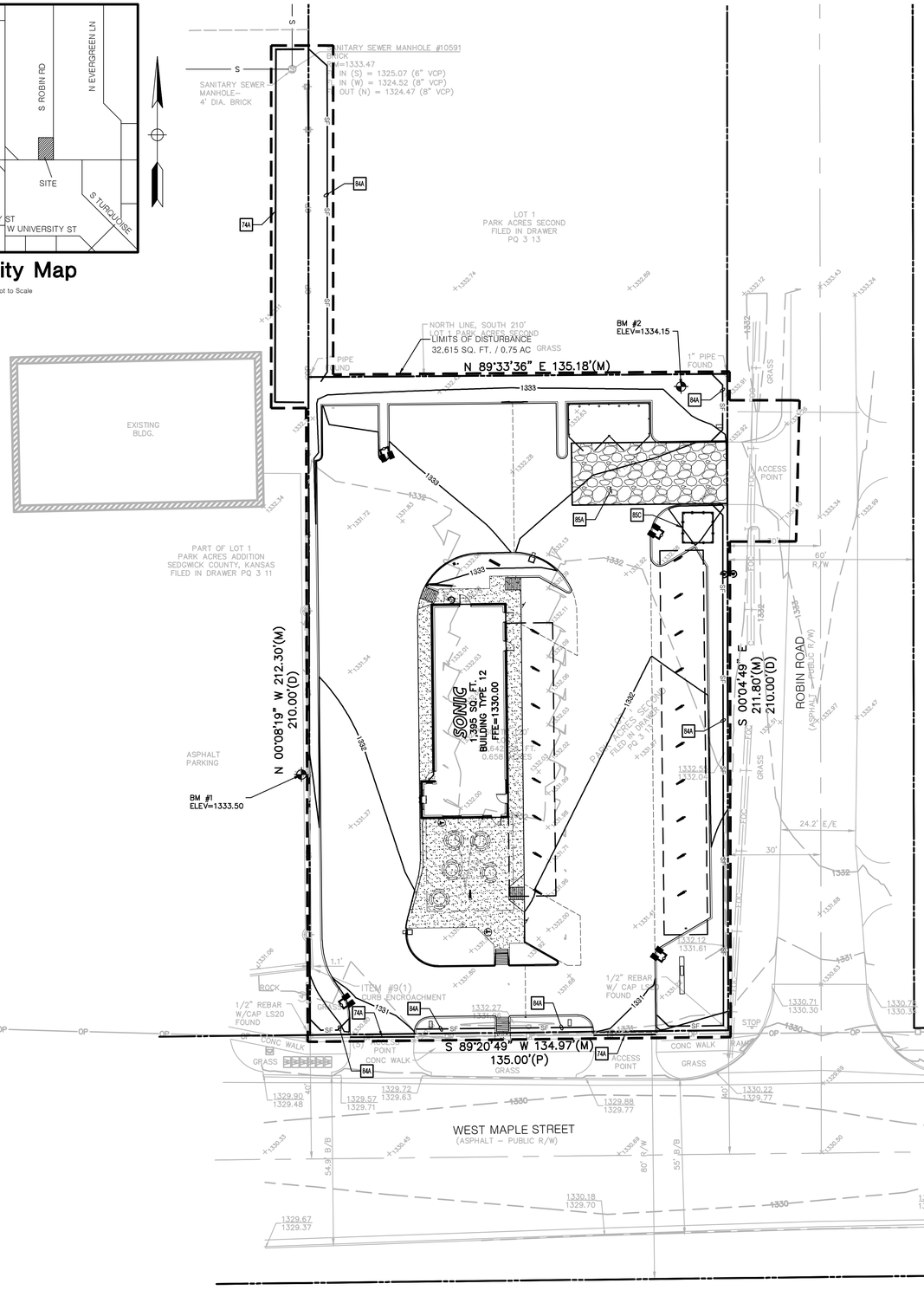
© 2015 CEI ENGINEERING ASSOCIATES, INC.

SONIC

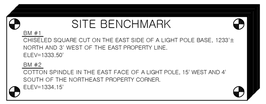


Vicinity Map

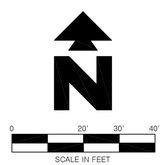
Not to Scale



Know what's below.
Call before you dig.



NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.



FLOOD CERTIFICATION:

THIS PROPERTY IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR SEDGWICK COUNTY, KS, COMMUNITY PANEL NUMBER 20173C0337F EFFECTIVE DATE 5-2-2012.

SITE DATA

ZONING	LC (LIMITED COMMERCIAL)	
BUILDING SIZE	1,395 S.F.	
PARKING RATIO	1 SPACE PER 3 SEATS	
PARKING REQUIRED	9 SPACES	
PARKING PROVIDED	25 SPACES	
PERVIOUS AREA	5,066 SQ. FT.	0.12 AC.
IMPERVIOUS AREA	23,576 SQ. FT.	0.54 AC.
TOTAL SITE AREA	28,642 SQ. FT.	0.66 AC.

GENERAL EROSION NOTES

A. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF KANSAS NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

B. THE TEMPORARY PARKING AND STORAGE AREA SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AREA, EQUIPMENT CLEANING AREA, EMPLOYEE BREAK AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS AND TOILET FACILITIES. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNER'S CONSTRUCTION MANAGER.

C. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.

D. MAINTAIN ON THE SITE OR HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN UP FUEL OR CHEMICAL SPILLS AND LEAKS.

E. DUST ON THE SITE SHALL BE CONTROLLED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

F. NO RUBBISH, TRASH, GARBAGE OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

G. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

H. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY WILL STOP FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED WITHIN 14 DAYS.

I. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE LANDSCAPING PLAN.

J. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNERS CONSTRUCTION MANAGER.

K. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

L. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AFTER THE STABILIZATION OF THE SITE AND ALSO ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS.

M. IF SOIL STOCKPILING IS EMPLOYED ON THE SITE, SILT FENCES SHALL BE USED TO HELP CONTAIN THE SEDIMENT.

N. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

O. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.

P. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.

Q. ALL OFF-SITE CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR STORM DRAINS & UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

LEGEND

EXISTING

○	MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
(M)	MEASURED
(P)	PLATTED
(D)	DEEDED
E	ELECTRIC METER
E	UNDERGROUND ELECTRIC
(1) OP	OVERHEAD POWER LINE (# OF LINES)
	LIGHT POLE
	UTILITY POLE
	UTILITY POLE W/ TRANSFORMER
	DEADMAN ANCHOR
	TRAFFIC SIGNAL LIGHT CONTROL BOX
	TELEPHONE LINE SIGN
T	UNDERGROUND TELEPHONE
FOC	UNDERGROUND FIBER OPTIC CABLE
G	GAS METER
	CANOPY SUPPORT
	MENU BOARD
	BOLLARD
	PROPERTY LINE/RIGHT OF WAY LINE
	BUSINESS/BILLBOARD SIGN
	STREET/TRAFFIC SIGN
	HANDICAP SYMBOL
	HANDICAP SIGN
S	SANITARY SEWER MANHOLE
S	SANITARY SEWER LINE
VCP	VITRIFIED CLAY PIPE
GP	GREASE PIT MANHOLE
CO	SANITARY SEWER CLEAN OUT
W	WATER METER
GP	GATE POST
B/B	BACK TO BACK OF CURB
	BUSH
	PAINTED DIRECTIONAL ARROW
T/E	TRASH ENCLOSURE
939	EXISTING GRADE 1' CONTOUR
950	EXISTING GRADE 5' CONTOUR
	EXISTING SPOT ELEVATION
1020.50 / 1020.00	TOP OF CURB ELEVATION / FL OF CURB ELEVATION

PROPOSED

	LIMITS OF DISTURBANCE (32,615 826 SQ. FT. / 0.75 AC)
SF	SILT FENCE
	GRADE BREAK
XXX	CONTOUR ELEVATIONS

GENERAL EROSION NOTES CONT'D

MAINTENANCE

ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT, AND SHOULD BE CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.
2. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-THIRD TO ONE-HALF THE HEIGHT OF THE SILT FENCE.
3. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
4. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

SEQUENCE OF CONSTRUCTION:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
2. PREPARE TEMPORARY PARKING AND STORAGE AREA.
3. CONSTRUCT THE SILT FENCES ON THE SITE.
4. CLEAR AND GRUB THE SITE.
5. BEGIN GRADING THE SITE.
6. START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
7. TEMPORARILY SEED DENUDED AREAS.
8. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
9. PREPARE SITE FOR PAVING.
10. PAVE SITE.
11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
12. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED).

EROSION DETAILS

74A SWP-CI "BIG RED"
84A TEMPORARY SILT FENCE
85A TEMPORARY STONE CONSTRUCTION ENTRANCE
85C TEMPORARY CONCRETE WASH OUT.

BRENT L. MASSEY
LICENSED
22207
KANSAS
PROFESSIONAL ENGINEER
4/28/15

NO	DATE	REVISIONS

Engineering Associates, Inc.
CIVIL • STRUCTURAL • MECHANICAL • ELECTRICAL • PLUMBING
ARCHITECTS • ENVIRONMENTAL • SURVEYORS
LANDSCAPE ARCHITECTS • PLANNERS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9422
FAX (479) 273-0844
JOB NO.: 28639
DATE: 4/27/2015 3:32 PM
DWG NAME: 28639-GP
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICES: 405-225-5000

COPYRIGHT 1958-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN FRANCHISEE IN THE CONSTRUCTION OF THE SONIC DRIVE-IN AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
812 W. MAPLE STREET
WICHITA, KS

EROSION PLAN

SHEET
C4

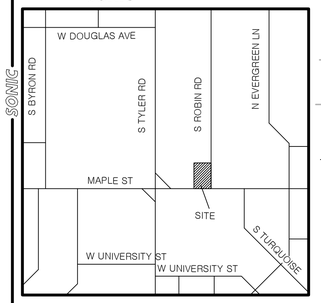
DWG: 28639-GP.DWG
DATE: 4/27/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-GP.dwg LAST SAVED BY: JDIBBLE

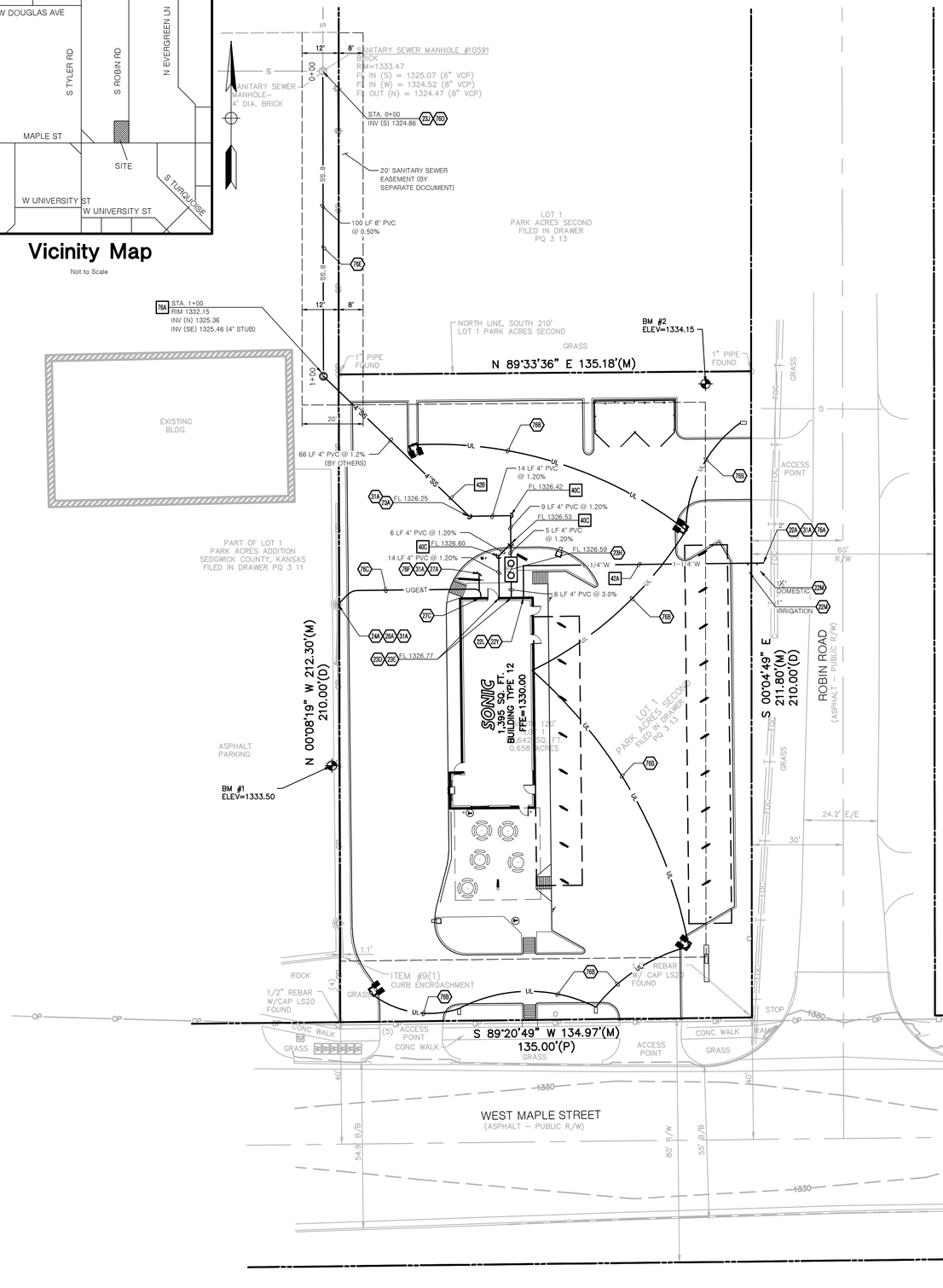
SONIC

SONIC



Vicinity Map

Not to Scale



Know what's **below.**
Call before you dig.

SITE BENCHMARK

BM #1:
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1233'± NORTH AND 3' WEST OF THE EAST PROPERTY LINE
ELEV=1333.50'

BM #2:
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

N

0 20' 30' 40'
SCALE IN FEET

LEGEND

EXISTING

- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E ELECTRIC METER
- E UNDERGROUND ELECTRIC
- (1) OP OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T UNDERGROUND TELEPHONE
- FOC UNDERGROUND FIBER OPTIC CABLE
- G GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- ADA HANDICAP SIGN
- S SANITARY SEWER MANHOLE
- S SANITARY SEWER LINE
- VCP VITRIFIED CLAY PIPE
- GP GREASE PIT MANHOLE
- CO SANITARY SEWER CLEAN OUT
- W WATER METER
- GP GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR
- 1020.50 EXISTING SPOT ELEVATION
- 1020.50 TOP OF CURB ELEVATION
- 1020.00 FL OF CURB ELEVATION

Sewer Main PROFILE
HORZ SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 2'-0"

PROPOSED

- GAS — GAS SERVICE
- SS — SANITARY SEWER SERVICE
- UGE&T — UNDERGROUND ELECTRIC & TELEPHONE SERVICE
- W — WATER SERVICE
- UL — ELECTRIC CONDUIT

GENERAL UTILITY NOTES

A. ALL WATER LINES SHALL BE 1 ¼" TYPE K COPPER WITH 36" MINIMUM COVER.

B. ALL SANITARY SEWER LINES SHALL BE SCHEDULE 40 PVC WITH 36" MINIMUM COVER.

D. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.

E. ALL ELECTRIC, TELEPHONE AND GAS EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.

G. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OF THE DRY UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM CEI ENGINEERING AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. CEI ENGINEERING AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.

H. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON OR WITHIN SPECIFICATIONS: ALL WATER LINE PIPE BEDDING SHALL BE INSTALLED PER DETAIL 42A. ALL SANITARY SEWER PIPE BEDDING SHALL BE INSTALLED PER DETAIL 42B.

UTILITY NOTES

22A POINT OF CONNECTION - WATER SERVICE (PER LOCAL CODES).
22L METERED DOMESTIC WATER SERVICE ENTRY PER ARCH. PLANS (SEE SIZES THIS SHEET).
22M PROPOSED WATER METER (PER LOCAL CODES AND SPECIFICATIONS).
22Y INTERIOR BACK FLOW PREVENTER (PER ARCH. PLANS).
23A POINT OF CONNECTION - SANITARY SEWER SERVICE (PER LOCAL CODES).
23D BUILDING SANITARY SEWER SERVICE CLEAN-OUT.
23E SANITARY SEWER SERVICE ENTRY (PER ARCH. PLANS).
23H GREASE TRAP WITH CLEAN-OUT (PER ARCH. PLANS).
23J CONNECT TO EXISTING SANITARY SEWER MANHOLE.
24A POINT OF CONNECTION FOR ELECTRICAL SERVICE (PER ELECTRIC COMPANY REQUIREMENTS).
26A POINT OF CONNECTION FOR UNDERGROUND TELEPHONE (PER TELEPHONE COMPANY REQUIREMENTS).
27A POINT OF CONNECTION FOR GAS SERVICE (PER LOCAL GAS COMPANY REQUIREMENTS).
27C PROPOSED GAS METER.
31A LOCATION FOR THIS UTILITY AS SHOWN IS FOR DRAWING PURPOSES ONLY. CONTRACTOR SHALL VERIFY THE EXACT LOCATION IN FIELD PRIOR TO THE CONSTRUCTION OF THE PROPOSED UTILITY LINE TO BE CONNECTED. CONTRACTOR SHALL NOTIFY CEI ENGINEERING IF THE DESIGN AS SHOWN IS NOT ACHIEVABLE.
76A CONTRACTOR SHALL USE EXISTING WATER METER AND TAP. CONTRACTOR TO COORDINATE CONNECTION WITH THE CITY OF WICHITA WATER DEPARTMENT.
76B UNDERGROUND CONDUIT
76C ELECTRIC TRENCH AND CONDUIT TO BE COMPLETED BY CONTRACTOR. CONTRACTOR TO INSTALL 4" GRAY SCH 40 CONDUIT 4' DEEP WITH STEEL SWEEPS.
76D CONTRACTOR TO REMOVE EXISTING 6" VCP SERVICE LINE AND CUT BRICK MANHOLE AS NECESSARY TO INSTALL NEW 8" SEWER MAIN PER CITY OF WICHITA STANDARDS. CONTRACTOR TO REPAIR BRICK MANHOLE AND SEAL AROUND NEW 8" PIPE AS NECESSARY PER WICHITA CITY SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH CITY UTILITY DEPARTMENT PRIOR TO CONSTRUCTION.
76E SANITARY SEWER BEDDING PER CITY OF WICHITA STANDARD DETAILS.
76F CONTRACTOR TO COORDINATE WITH GAS COMPANY TO CONNECT TO EXISTING GAS SERVICE.

UTILITY DETAILS

40C SANITARY SEWER CLEAN-OUT
42A WATER LINE TRENCHING AND BEDDING
42B SANITARY SEWER TRENCHING AND BEDDING
76A CITY OF WICHITA PRECAST SANITARY SEWER MANHOLE

BRENT L. MASSEY
LICENSED
22207
KANSAS
PROFESSIONAL ENGINEER
4/28/15

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9412
FAX (479) 273-0844

JOB NO.: 28639
DATE: 4/28/2015 9:16 AM
DWG NAME: 28639-UP
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE#: 405-225-5000

SONIC® SM
Quintessentially Quick-Serve-Restaurant SM

SONIC® AMERICA'S DRIVE-IN CORP.

COPYRIGHT 1958-2006
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC OWNER AND FRANCHISEE OR THE SONIC FRANCHISEE AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

UTILITY PLAN

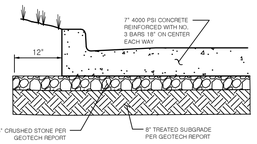
SHEET
C5

DWG: 28639-UP.DWG
DATE: 4/28/15

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JDIBBLE

SONIC
SONIC
SONIC
SONIC
© 2015 CEI ENGINEERING ASSOCIATES, INC.

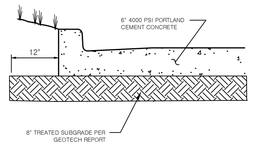
SONIC



NOTES:

1. THE TREATED SUBGRADE SHALL BE COMPACTED PER GEOTECHNICAL RECOMMENDATIONS.
2. CONTRACTOR SHALL VERIFY THE ABOVE DETAILS WITH THE SUBSURFACE EXPLORATION PREPARED GEOSERVICES, TERRACON CONSULTANTS, INC. REPORT DATED: JANUARY 5, 2015 PROJECT NUMBER 01145168. PRIOR TO CONSTRUCTION, ALL DISCREPANCIES SHALL BE CLARIFIED WITH SONIC'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION. (TERRACON CONSULTANTS INC., TERRACON PROJECT NUMBER 01145168).

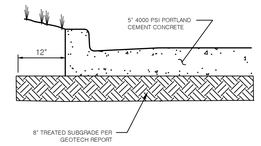
HEAVY DUTY CONCRETE PAVING 08C



NOTES:

1. THE SUBGRADE SHALL BE COMPACTED PER GEOTECHNICAL RECOMMENDATIONS.
2. CONTRACTOR SHALL VERIFY THE ABOVE DETAILS WITH THE SUBSURFACE EXPLORATION PREPARED GEOSERVICES, TERRACON CONSULTANTS, INC. REPORT DATED: JANUARY 5, 2015 PROJECT NUMBER 01145168. PRIOR TO CONSTRUCTION, ALL DISCREPANCIES SHALL BE CLARIFIED WITH SONIC'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION. (TERRACON CONSULTANTS INC., TERRACON PROJECT NUMBER 01145168).

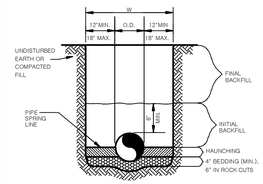
STANDARD DUTY CONCRETE PAVING 08D



NOTES:

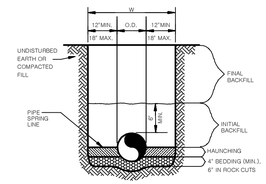
1. THE SUBGRADE SHALL BE COMPACTED PER GEOTECHNICAL RECOMMENDATIONS.
2. CONTRACTOR SHALL VERIFY THE ABOVE DETAILS WITH THE SUBSURFACE EXPLORATION PREPARED GEOSERVICES, TERRACON CONSULTANTS, INC. REPORT DATED: JANUARY 5, 2015 PROJECT NUMBER 01145168. PRIOR TO CONSTRUCTION, ALL DISCREPANCIES SHALL BE CLARIFIED WITH SONIC'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION. (TERRACON CONSULTANTS INC., TERRACON PROJECT NUMBER 01145168).

LIGHT DUTY CONCRETE PAVING 08F



WATER LINE & FORCE MAIN 40A

N.T.S.



SANITARY SEWER 40B

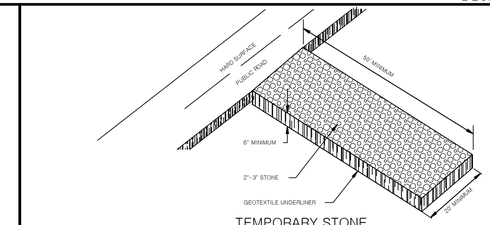
N.T.S.

GENERAL NOTES:

1. BEDDING SHALL BE CLASS I–A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I–B COMPACTED TO 85% STANDARD PROCTOR. (SEE SPECIFICATIONS FOR GRADATION)
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I–A OR CLASS I–B OR CLASS II COMPACTED TO 85% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I–A WORKED BY HAND, OR CLASS I–B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. AND 4
6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV–A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321, LATEST EDITION.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV–A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS)

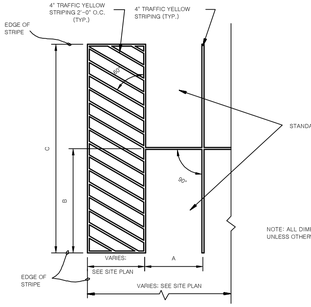
SANITARY SEWER AND WATER LINE TRENCHING AND BEDDING

N.T.S.



TEMPORARY STONE CONSTRUCTION ENTRANCE 55A

N.T.S.



NOTE: ALL DIMENSIONS ARE TO ℄ OF STRIPE UNLESS OTHERWISE INDICATED

DIMENSION CHART									
A	9'	9.5'	10'	9'	9.5'	10'	9'	9.5'	10'
B	18'	18'	18'	19'	19'	19'	20'	20'	20'
C	36'	36'	36'	38'	38'	38'	40'	40'	40'

NOTE: SEE SITE PLAN FOR TOTAL LAYOUT

90° PARKING SPACE STRIPING 08B

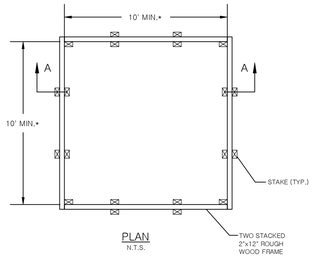
N.T.S.

NOTES:

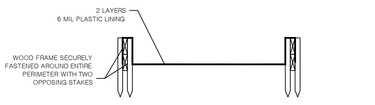
1. REQUIRED REINFORCEMENT WILL BE No. 3 BARS 24" O.C. EACH WAY MAX. SPACING, OR 6 x 6 – W1.4 X W1.4 WWF
2. INSTALL 1/2" EXPANSION JOINT MATERIAL AT AREAS WERE PROPOSED SIDEWALK ABUTTS EXISTING SIDEWALK, CURBS, AND OR STRUCTURE. (JOINT MAT'L.: TO MEET ASTM D994 OR D1751)

CONCRETE SIDEWALK 08D

N.T.S.



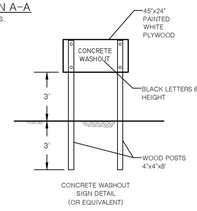
PLAN
N.T.S.



SECTION A–A
N.T.S.

NOTES:

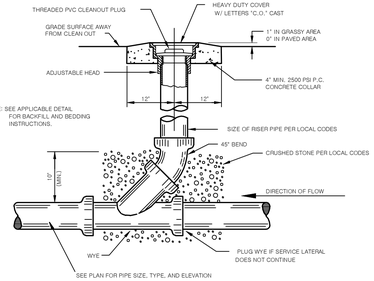
1. •DENOTES THE INTERIOR DIMENSION.
2. CONCRETE WASHOUT SHALL BE AT LEAST 50 FT. FROM ANY STORM SEWER INLET.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.



CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)

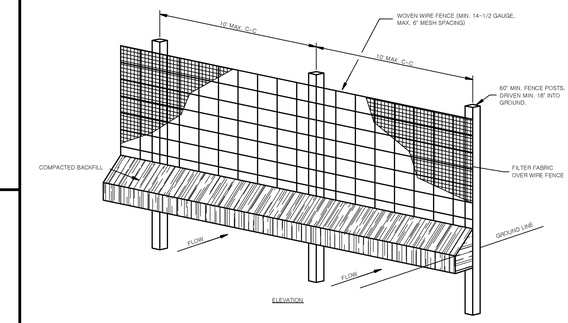
TEMPORARY CONCRETE WASHOUT (ABOVE GRADE) 85C

N.T.S.

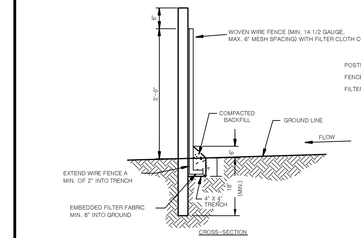


SANITARY SEWER CLEAN–OUT 40C

N.T.S.



ELEVATION



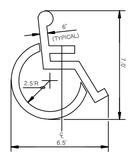
POSTS: STEEL EITHER T OR U TYPE OR 2"x2" HARDWOOD
FENCE: WOVEN WIRE, 14–1/2 GA. 6" MAX. MESH OPENING
FILTER FABRIC:

1. MIRAFI 140NS
2. PHILLIPS 66 SUPAC 4NP
3. DUPONT TYPAR 3341
4. OR APPROVED EQUAL

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

TEMPORARY SILT FENCE 54A

N.T.S.

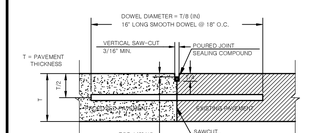


NOTES:

LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING

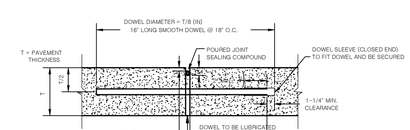
ACCESSIBLE PARKING SYMBOL 09U

N.T.S.



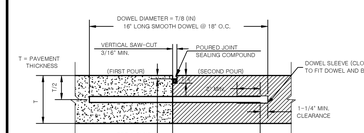
NOTE:
1. DOWEL BARS SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY BY USE OF A MECHANICAL RIG.
2. DRILLING BY HAND IS NOT ACCEPTABLE. PUSHING DOWEL BARS INTO GREEN CONCRETE IS NOT ACCEPTABLE.

BUTT JOINT



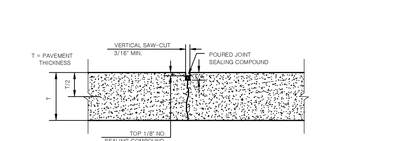
NOTE:
1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE.

TRANSVERSE EXPANSION JOINT



NOTE:
1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE.

CONSTRUCTION JOINT



CONTRACTION JOINT

CONCRETE JOINT DETAILS 09R

N.T.S.

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273–9472
FAX (479) 273–0844

JOB NO.: 28639
DATE: 6/25/2015 8:20 AM
DWG NAME: 28639–SP
REV–3

BRENT L. MASSEY 22207 ARKANSAS REGISTERED PROFESSIONAL ENGINEER
6/25/15

NO	DATE	REVISIONS

SONIC CORPORATION
320 JOHN'S BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-3000

SONIC DRIVE–IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

DETAIL SHEET 1

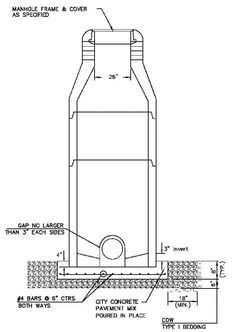
SHEET
C8

DWG: 28639–SP.DWG
DATE: 6/25/15

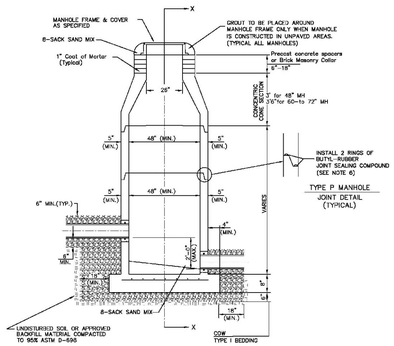
COPYRIGHT 1998–2006 AMERICA'S DRIVE–IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC OWNER AND FRANCHISEE OF THE SPECIFIED LOCATION.

JOB # 28639 DRAWING: 28639–SP.dwg LAST SAVED BY: JDIBBLE

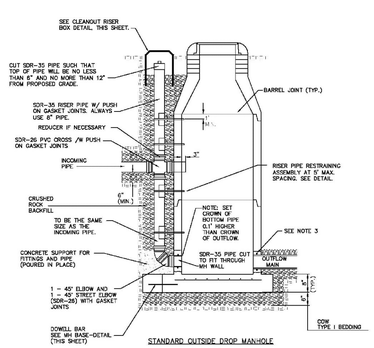
© 2015 CEI ENGINEERING ASSOCIATES, INC.



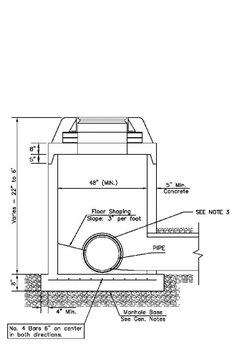
DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale



STANDARD MANHOLE
Not to Scale



STANDARD OUTSIDE DROP MANHOLE
Not to Scale

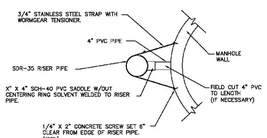


SHALLOW MANHOLE
Not to Scale

= COW TYPE I BEDDING = UNDISTURBED SOIL

PRECAST MANHOLE GENERAL NOTES

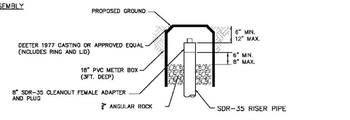
1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
5. EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
6. JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
7. ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12' DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS. AS INDICATED BY THE PLANS.
8. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
9. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
10. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
11. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 6 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITH-OUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACE AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
12. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO.4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
13. WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
14. OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKET'S SHALL BE USED WITH P.V.C. PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
15. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
16. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
17. THE VERTICAL DROP IN STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
18. STANDARD MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
19. PRECAST CONCRETE SPACERS OR BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCRETE CONE. THE COLLAR WILL HAVE 6" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A FINAL COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
20. THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.
21. REFER TO PLANS FOR SIZE OF OUTSIDE DROP RISER, SADDLES AND CROSS.



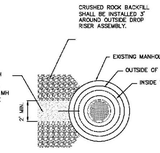
RISER PIPE RESTRAINING ASSEMBLY
Not to Scale

SANITARY SEWER MANHOLE DIAMETERS

DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	>15'-30'	21"-30"
6'	>30'	36"-60"



CLEANOUT RISER BOX DETAIL
Not to Scale



MH BASE DETAIL
Not to Scale

REVISED JANUARY 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST SANITARY SEWER MANHOLE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER | OCA NUMBER | DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SS-101

SWP-CI "Big Red"

74A

Curb Inlet Protector

By ASP Enterprises and Storm Water Products

Temporary and Reusable Solutions for Sediment Control

A.S.P. ENTERPRISES, INC.
Your GeoSource Distributor

- Reusable Curb Inlet Protection
- Environmentally Friendly
- Drops out sediment by dissipating the water energy





"Big Red" Filter Advantages:

- **Easy to Install**
- **Versatile for a variety of curb inlets**
- **Reusable and Extremely easy to clean**
- **Made from 90% Inert Recycled Materials**

The SWP-CI "Big Red" Filter is a **REUSABLE** inlet protector that keeps out sediment throughout the entire construction project. There are no pockets to fill, no velcro bags, no assembly etc. Simply place in front of the inlet, make sure it lays in the contour, and you are DONE!

Simple installation also translates into simple removal, cleanup and re-use at the next project or phase. Maintenance is simple as well by lifting the unit from the inlet, shaking the mud off of it, removing the sediment on the concrete, and placing the unit back. If it is severely filled with sediment, wash it out in a vegetated area and it is as good as new.



All of these features and benefits combine to make the SWP-CI "Big Red" curb inlet protector the **perfect choice** for all curb inlet applications. It comes in 54" long for single curb inlets and 104" lengths for double curb inlets.



- **High Flow Rate**
- **Made of Durable High-Strength Geotextile**
- **Fully Reusable**
- **Made of Recycled Materials**

SWP-CI "Big Red"

74A

Curb Inlet Protector

By ASP Enterprises and Storm Water Products

A.S.P. ENTERPRISES, INC.
Your GeoSource Distributor

Specifications:
1. Infill Material: shredded recycled rubber tires
2. Weight: approx. 10 lbs per linear foot
3. Diameter: approx. 8"

Geotextile fabric made of durable high flow fabric with the following properties:

Property	Test Method	Units		Typical Value
Weight	ASTM D5261	oz/sq. yd		9.3
Grab Tensile Strength	ASTM D4632	lb	warp	250
			fill	290
Tear Strength (Trapezoid)	ASTM D4533	lb	warp	60
			fill	50
Burst	ASTM D3786	psi		440

(Efforts were made to determine flow rate-the fabric exceeded all capacities of the testing equipment)



ASP Enterprises and Storm Water Products assumes no liability for the accuracy or completeness of this information or for the ultimate use by the purchaser. ASP and SWP disclaims any and all express, implied, or statutory standards, warranties or guarantees, including without limitation any implied warranty as to merchantability or fitness for a particular purpose or arising from a course of dealing or usage of trade as to any equipment, materials or information furnished herewith. This document should not be construed as engineering advice.

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

DWG NAME: 28639-SP
REV-3
JOB NO.: 28639
DATE: 6/25/2015 8:20 AM

PRELIMINARY NOT FOR CONSTRUCTION
BRENT L. MASSEY 22207 REGISTERED PROFESSIONAL ENGINEER
6/25/15

NO	DATE	REVISIONS

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-5022

SONIC®

COPYRIGHT 1988-2008 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC FRANCHISEE OR EMPLOYEE OF THE SONIC-IN AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
86'2 W. MAPLE STREET
WICHITA, KS

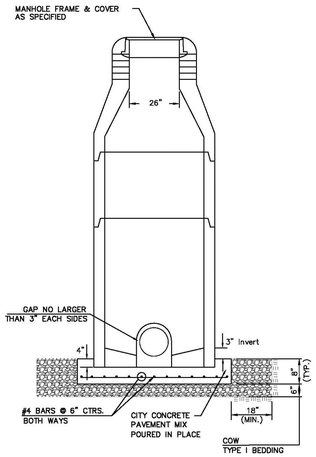
DETAIL SHEET 2

SHEET
C8.1

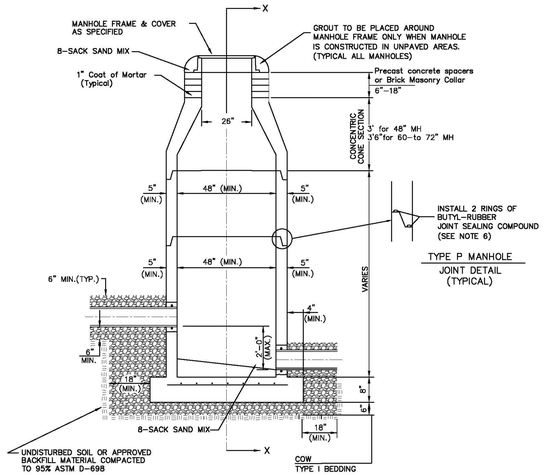
DWG:
28639-SP.DWG
DATE: 6/25/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-SP.dwg LAST SAVED BY: JOBBLE

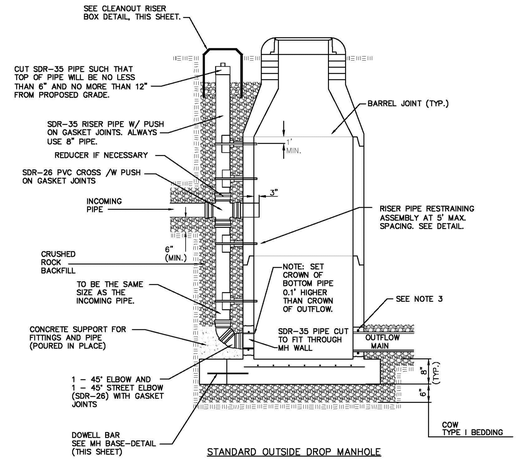


DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale

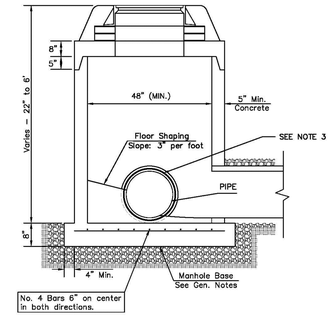


STANDARD MANHOLE
Not to Scale

TYPE P MANHOLE
JOINT DETAIL
(TYPICAL)

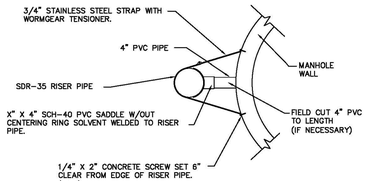


STANDARD OUTSIDE DROP MANHOLE
Not to Scale



SHALLOW MANHOLE
Not to Scale

= COW TYPE I BEDDING = UNDISTURBED SOIL



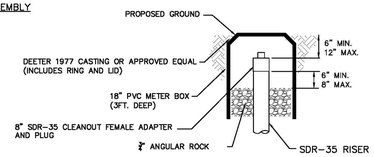
RISER PIPE RESTRAINING ASSEMBLY
Not to Scale

SANITARY SEWER MANHOLE DIAMETERS

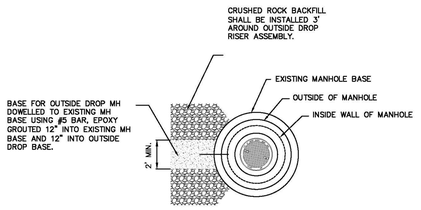
DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	>15'-30'	21"-30"
6'	>30'	36"-60"

PRECAST MANHOLE GENERAL NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
5. EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
6. JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
7. ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12' DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS. AS INDICATED BY THE PLANS.
8. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
9. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
10. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
11. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACE AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
12. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO.4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
13. WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
14. OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WLL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
15. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
16. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
17. THE VERTICAL DROP IN STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
18. STANDARD MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
19. PRECAST CONCRETE SPACERS OR BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
20. THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.
21. REFER TO PLANS FOR SIZE OF OUTSIDE DROP RISER, SADDLES AND CROSS.



CLEANOUT RISER BOX DETAIL
Not to Scale



MH BASE DETAIL
Not to Scale

REVISED JANUARY 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST SANITARY SEWER MANHOLE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SS-101

REVISIONS

NO	DATE

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
DATE: 6/25/2015 9:3 AM
REV-3

SONIC CORPORATION
320 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-5200

SONIC® AmericaNorth Bathroom Co SM

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN AT THE DESIGNATED SONIC DRIVE-IN LOCATION AT THE ADDRESS AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
812 W. MAPLE STREET
WICHITA, KS

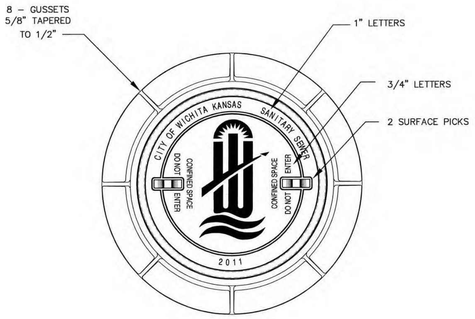
CITY SANITARY SEWER DETAIL I

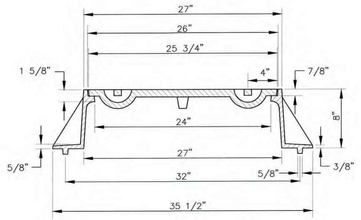
SHEET
C10

DWG:
28639-UP.DWG
DATE: 6/25/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE



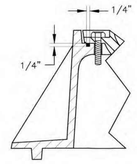


STANDARD MANHOLE FRAME & COVER

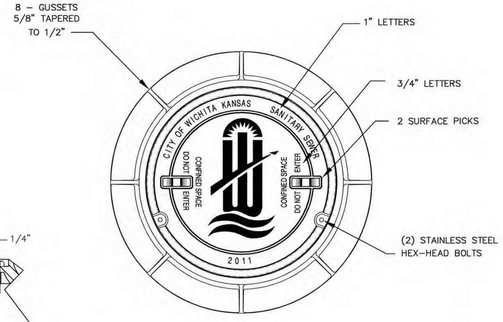
DEETER #1261 OR EJIW #1936–Z1

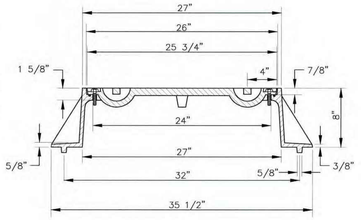
NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.



DETAIL OF T–GASKET



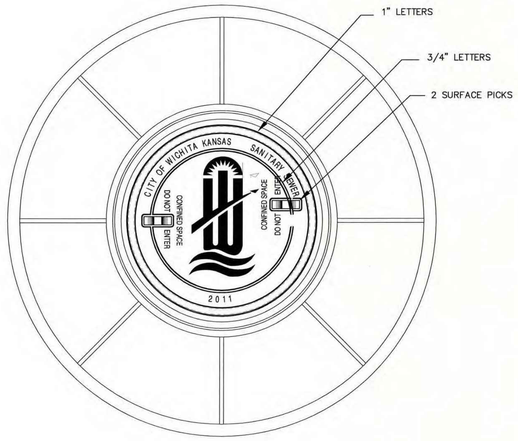


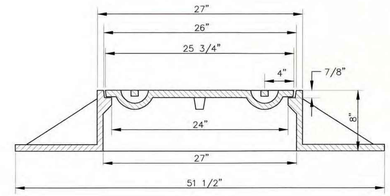
BOLT DOWN MANHOLE FRAME & COVER

DEETER #1261 OR EJIW #1936–Z1

NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.
2. FURNISHED WITH A T–GASKET IN THE FRAME.





WIDE FLANGED FRAME & COVER

DEETER #1261A

NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

GENERAL NOTES

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A–48. DIMENSIONS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.
2. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDARY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON–ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.
3. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SEATING SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUM–FERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.
4. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1 INCH IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SANITARY SEWER". THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN WITH CITY OF WICHITA DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

GARY L. JANZEN LICENSED 19294 KANSAS PROFESSIONAL ENGINEER
Expires 6/30/2013

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

MANHOLE
FRAME AND COVER
(SANITARY SEWER)

CITY ENGINEER
GARY JANZEN, P.E

PROJECT NUMBER	OCA NUMBER	DATE
		12/2011

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SS-102

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

DWG NAME: 28639-SP
REV-3
JOB NO.: 28639
DATE: 6/25/2015 9:3 AM

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000

COPYRIGHT 1988-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN FRANCHISEE OR AGENT OF THE SONIC-A-TEX SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
2612 W. MAPLE STREET
WICHITA, KS

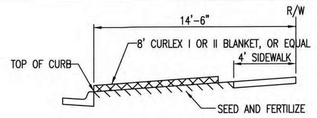
CITY SANITARY SEWER DETAIL 2

SHEET
C10.1

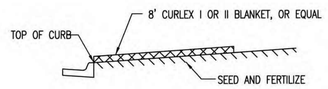
DWG:
28639-UP.DWG
DATE: 6/25/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

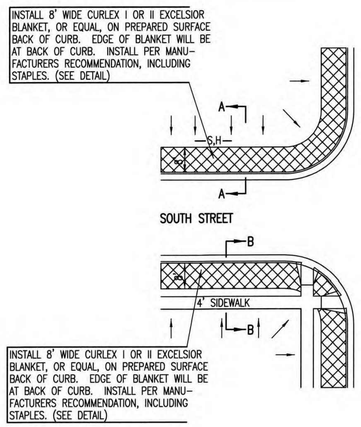
JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBIBLE



SECTION B-B



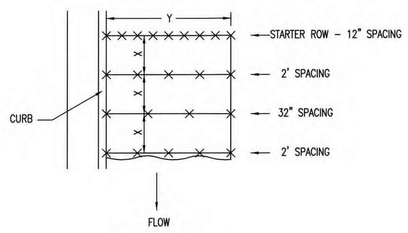
SECTION A-A

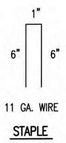


GENERAL NOTES

1. EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
2. EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
3. AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

BACK OF CURB PROTECTION DETAIL



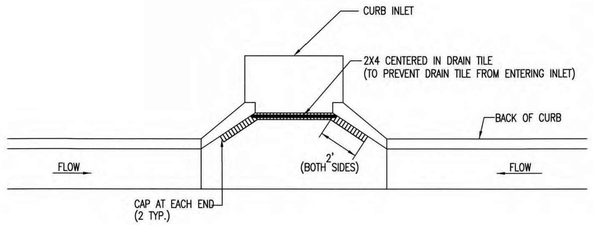


STAPLE

STAPLE PATTERN

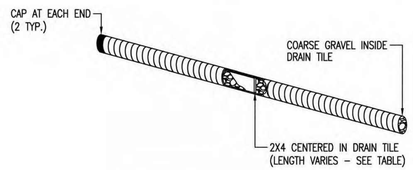
NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)

DETAILS FOR APPROVED EROSION CONTROL MAT

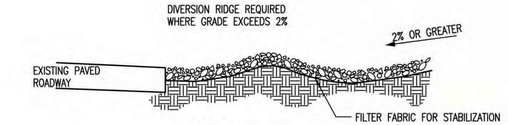


NOTE:
PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

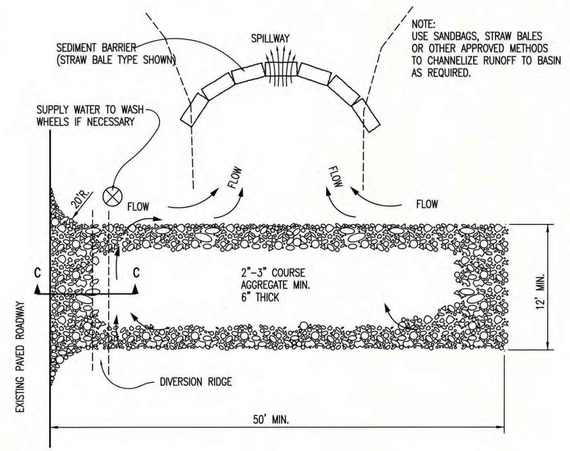
2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"



CURB INLET PROTECTION
4" PERFORATED PIPE W/ GRAVEL



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

REVISION DATE: MAY 2013

GARY L. JANZEN — LICENSED — 16024 — PROFESSIONAL ENGINEER — KANSAS
05/24/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-501

REVISIONS

NO	DATE

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
DATE: 6/25/2015 9:3 AM
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE#: 405-225-5000

SONIC® America's Drive-In® Corp.SM

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN THE DESIGNATED SONIC DRIVE-IN LOCATION WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE OWNER AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
2612 W. MAPLE STREET
WICHITA, KS

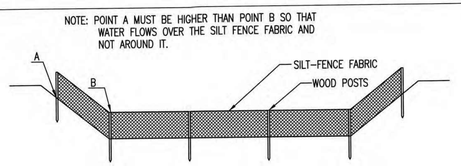
CITY EROSION CONTROL DETAIL 1

SHEET
C10.2

DWG: 28639-UP.DWG
DATE: 6/25/15

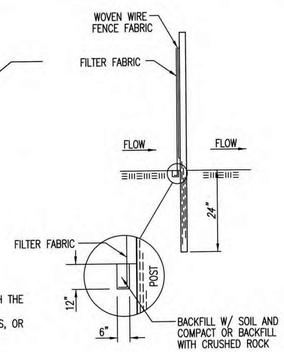
© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE



ELEVATION

SILT FENCE DITCH CHECKS
(STREAM PROTECTION)



ANCHOR TRENCH DETAIL

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED.
WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK, NOT OVER IT. SILT FENCE DITCH CHECKS OFTEN FAIL WHEN OVERTOPPED.
SILT FENCE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
THE SILT FENCE SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE TOP OF THE LOW POINT OF THE FENCE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
SILT FENCE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.
SILT FENCE SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.

THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK DITCH GRADE (%)	SPACING CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS AT LEAST 12" DEEP BY 6" WIDE.
EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK.
PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSTREAM SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSTREAM EDGE OF THE TRENCH.
LINE TWO SIDES OF THE TRENCH WITH THE FABRIC AS SHOWN ON DETAIL. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE ON THE UPSTREAM SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSTREAM OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

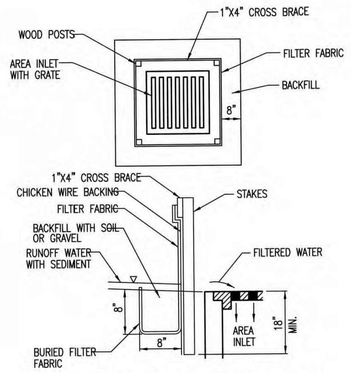
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK-NOT OVER IT. PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. SILT FENCE INSTALLATIONS QUICKLY DETERIORATE WHEN WATER OVERTOPS THEM.
DO NOT PLACE SILT FENCE POSTS ON THE UPSTREAM SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE A SILT FENCE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE SILT FENCE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE LOW POINT ON THE TOP OF THE FENCE.
DO NOT PLACE SILT FENCE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.

INSPECTION AND MAINTENANCE:

SILT FENCE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE WIRE OR POLYMERIC MESH BACKING USED TO HELP SUPPORT THE SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
THE MATERIAL USED TO FRAME THE TOPS OF THE POSTS SHOULD BE 1" BY 4" BOARDS.
SILT FENCE FABRIC AND SUPPORT BACKING SHOULD BE ATTACHED TO THE WOODEN POSTS AND FRAME WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE A SILT FENCE DROP INLET BARRIER IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED.
WATER SHOULD FLOW THROUGH SILT FENCE, NOT OVER IT. SILT FENCE BARRIERS FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
WHEN USED AS A BARRIER FOR AREA INLETS, SILT FENCE FABRIC AND POSTS MUST BE SUPPORTED AT THE TOP BY A WOODEN FRAME.
WHEN A SILT FENCE BARRIER FOR AREA INLETS IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 8" DEEP BY 8" WIDE.
DRIVE POSTS TO A DEPTH OF AT LEAST 18" AROUND THE PERIMETER OF THE AREA INLET.
THE DISTANCE BETWEEN POSTS SHOULD BE 4' OR LESS. IF THE DISTANCE BETWEEN TWO ADJACENT CORNER POSTS IS MORE THAN 4', ADD ANOTHER POST(S) BETWEEN THEM.
CONNECT THE TOPS OF ALL THE POSTS WITH A WOODEN FRAME MADE OF 1" BY 4" BOARDS. USE NAILS OR SCREWS FOR FASTENING.
ATTACH THE WIRE OR POLYMERIC-MESH BACKING TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC LONG ENOUGH TO WRAP AROUND THE PERIMETER OF THE AREA INLET. ADD MORE LENGTH FOR OVERLAPPING THE FABRIC JOINT. PLACE THE EDGE OF THE FABRIC IN THE TRENCH, STARTING AT THE OUTSIDE EDGE OF THE TRENCH. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
ATTACH THE SILT FENCE TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. THE JOINT SHOULD BE OVERLAPPED TO THE NEXT POST.

NOTE: WHEN A SILT FENCE BARRIER FOR AREA INLET IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

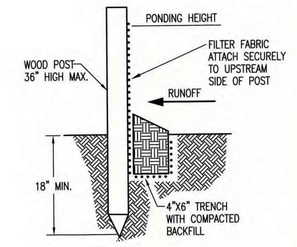
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE BARRIER FOR AREA INLET-NOT OVER IT. PLACE A SILT FENCE BARRIER FOR AREA INLET IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. SILT FENCE BARRIER FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
DO NOT PLACE POSTS ON THE OUTSIDE OF THE SILT FENCE BARRIER FOR AREA INLET. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESISTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT INSTALL SILT FENCE BARRIER FOR AREA INLETS WITHOUT FRAMING THE TOP OF THE POSTS.
THE CORNER POSTS AROUND AREA INLETS ARE STRESSED IN TWO DIRECTIONS WHEREAS A NORMAL SILT FENCE IS ONLY STRESSED IN ONE DIRECTION. THIS ADDED STRESS REQUIRES MORE SUPPORT.

INSPECTION AND MAINTENANCE:

SILT FENCE BARRIER FOR AREA INLETS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE SILT FENCE?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



SILT FENCE BARRIERS

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, SILT FENCE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
SILT FENCE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 6" DEEP BY 4" WIDE.
MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT-FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18".
PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES.
DO NOT PLACE SILT-FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE SILT FENCE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT SUFFICIENTLY ANCHORED, IT WILL WASH OUT.
SILT FENCE SLOPE BARRIERS MUST BE DUG INTO THE GROUND-SILT FENCE AT GROUND LEVEL DOES NOT WORK BECAUSE WATER WILL FLOW UNDERNEATH.

INSPECTION AND MAINTENANCE:

SILT FENCE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DO THE SILT FENCES SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED PROFESSIONAL ENGINEER 19004 KANSAS
05/21/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SILT FENCE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-502

NO	DATE	REVISIONS

© Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street (479) 273-9472
Bentonville, AR 72712 FAX (479) 273-0844
DWG NAME: 28639-SP JOB NO.: 28639
REV-3 DATE: 6/25/2015 9:3 AM

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-5000
SONIC® AMERICA'S DRIVE-IN CORP.
COPYRIGHT 1988-2008 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN AT THE DESIGNATED SONIC DRIVE-IN LOCATION AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
862 W. MAPLE STREET
WICHITA, KS

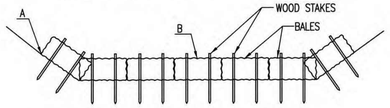
CITY EROSION CONTROL DETAIL 2

SHEET
C10.3

DWG: 28639-UP.DWG
DATE: 6/25/15

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE
© 2015 CEI ENGINEERING ASSOCIATES, INC.

NOTE: POINT A MUST BE HIGHER THAN POINT B
SO THAT WATER FLOWS OVER THE BALES AND
NOT AROUND THEM.



STRAW BALE DITCH CHECKS

MATERIAL SPECIFICATION:

BALE DITCH CHECKS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
OPTIONAL: THE DOWNSTREAM SCOUR APRON SHOULD BE CONSTRUCTED OF A DOUBLE-NETTED STRAW EROSION-CONTROL BLANKET AT LEAST 6' WIDE.
OPTIONAL: THE METAL LANDSCAPE STAPLES USED TO ANCHOR THE EROSION-CONTROL BLANKET SHOULD BE AT LEAST 8" LONG.

PLACEMENT:

BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.
BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.
THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH GRADE (%)	CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH-IT WILL BE USED LATER.
OPTIONAL: ON THE DOWNSTREAM SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSTREAM EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSTREAM EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSTREAM SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSTREAM SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

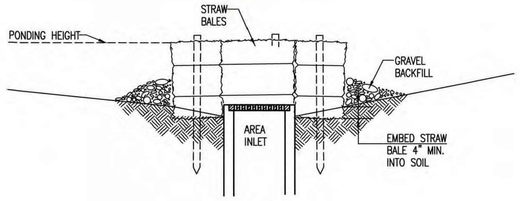
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE.
DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

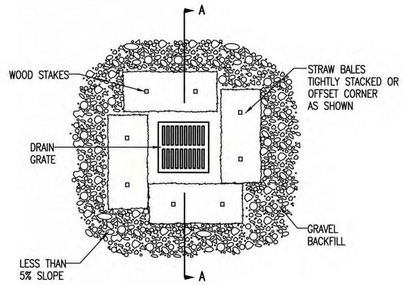
INSPECTION AND MAINTENANCE:

BALE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES AND/OR SCOUR APRONS (OPTIONAL) DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

MATERIAL SPECIFICATION:

BALE AREA INLET BARRIERS SHOULD BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

BALE AREA INLET BARRIERS SHOULD BE PLACED DIRECTLY AROUND THE PERIMETER OF A DROP INLET. WHEN A BALE AREA INLET BARRIER IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 4" DEEP BY A BALE'S WIDTH WIDE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. SOME BALES MAY NEED TO BE SHORTENED TO FIT INTO THE TRENCH AROUND THE AREA INLET. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS.
STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE RECEIVING SIDE OF THE BARRIER AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.
NOTE: WHEN A BALE AREA INLET BARRIER IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

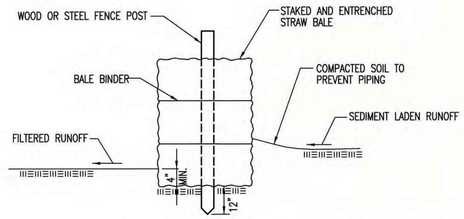
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

BALES SHOULD BE PLACED DIRECTLY AGAINST THE PERIMETER OF THE AREA INLET. THIS ALLOWS OVERTOPPING WATER TO FLOW DIRECTLY INTO THE INLET INSTEAD OF ONTO NEARBY SOIL CAUSING SCOUR.
BALE AREA INLET BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE AREA INLET BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE AREA INLET BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



STRAW BALE BARRIERS

MATERIAL SPECIFICATION:

BALE SLOPE BARRIERS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, BALE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
BALE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER FAILS.
DO NOT PLACE BALE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE SLOPE BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 19294 PROFESSIONAL ENGINEER KANSAS 05/31/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STRAW BALE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-503

NO | DATE | REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
DATE: 6/25/2015 9:3 AM
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000
SONIC® America's Drive-In™

COPYRIGHT 1980-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC FRANCHISEE NAMED IN THE OWNER-SET FOR THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

CITY EROSION CONTROL DETAIL 3

SHEET
C10.4

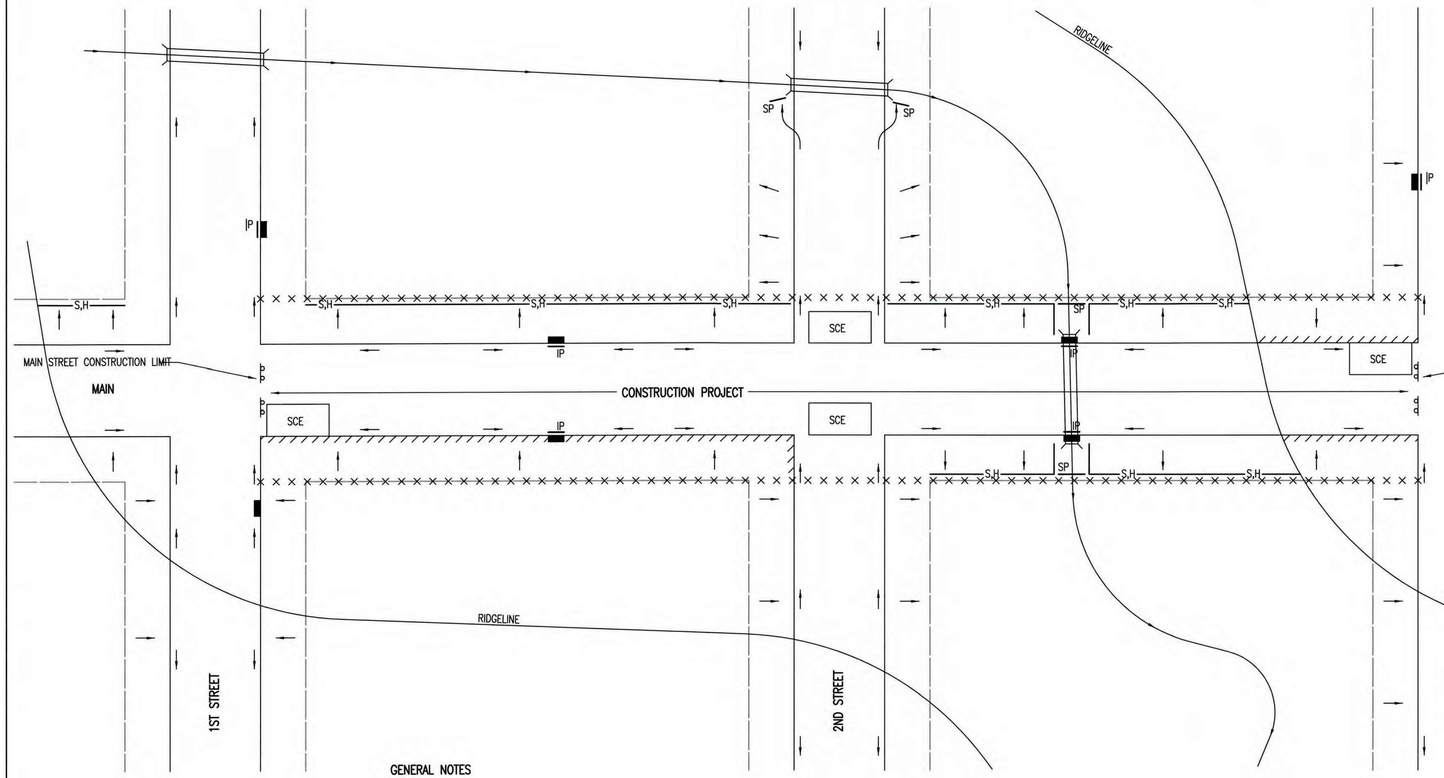
DWG: 28639-UP.DWG
DATE: 6/25/15

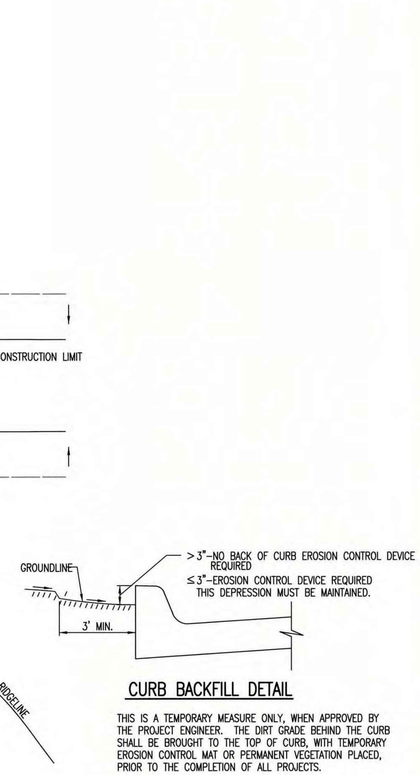
JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE

© 2015 CEI ENGINEERING ASSOCIATES, INC.

GENERAL NOTES

1. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPES OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.
3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.
4. FOR PROJECTS DISTURBING LESS THAN 1 ACRE, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION. EROSION CONTROL DEVICES MUST BE USED ON ALL PROJECTS.
5. FAILURE TO USE AND MAINTAIN EROSION CONTROL DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE CONTRACTOR TO THE PENALTIES PROVIDED FOR THEREIN.
6. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT DEVICE OTHER THAN THOSE SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED AS LONG AS THEY ARE EFFECTIVE AND MAINTAINED.





CURB BACKFILL DETAIL

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

LEGEND

- R-O-W LIMITS
- DRAINAGE FLOW PATH
- R/W LIMIT WITHIN CONSTRUCTION LIMIT
- STORM WATER INLETS
- IP — INLET PROTECTION
- S,H — SILT FENCE OR HAY BALE BARRIER
- SP — STREAM PROTECTION
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- BACK OF CURB PROTECTION

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO KEEP ALL SEDIMENT CONFINED TO THE CONSTRUCTION SITE, AND OUT OF ALL UNDERGROUND PIPES, DITCHES, LAKES, AND OTHER DRAINAGE FACILITIES, AND OFF OF STREETS.
2. THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT-OF-WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.
3. EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.
4. INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.
5. EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.
6. STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED, AS NEEDED, TO PREVENT MUD FROM TRACKING ONTO STREETS NOT UNDER CONSTRUCTION AND ON STREETS WITHIN THE PROJECT LIMITS IF TRAFFIC IS BEING MAINTAINED THROUGH THE PROJECT.
7. ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.
8. THE CONTACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL DEVICES BACK OF CURB, WHENEVER WATER CAN DRAIN OVER CURB, TO KEEP ERODED SOIL OUT OF THE GUTTERLINES, IN ACCORDANCE WITH THE FOLLOWING:
   A. THE DEVICE REQUIRED WILL BE APPROVED EROSION CONTROL MAT LISTED ON THE CITY'S APPROVED MATERIAL LIST. SAID BLANKET SHALL BE PLACED OVER THE APPROPRIATE SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS. (SEE SOIL EROSION BMPs – BACK OF CURB SEDIMENT BARRIER DETAILS)
   B. THIS DEVICE SHALL BE INSTALLED IMMEDIATELY WHENEVER THE CURB IS BACKFILLED TO WITHIN 3" OF THE TOP OF CURB. (SEE CURB BACKFILL DETAIL) OTHER BMP'S MAY BE REQUIRED AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB.
   C. ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.
   D. SHOULD THE PROJECT PLANS SPECIFY THAT THE RIGHT-OF-WAY IS TO BE SODDED, THE EXCELSIOR MAT WILL NOT BE REQUIRED SO LONG AS THE SOD IS PLACED WITHIN 48 HOURS AFTER CURB BACKFILL REACHES A HEIGHT OF 3" OR LESS FROM TOP OF CURB. (SEE CURB BACKFILL DETAIL)

GARY L. JANZEN — LICENSED — 18294 — KANSAS — PROFESSIONAL ENGINEER — 05.12.15

REVISION DATE: 2013

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STREET IMPROVEMENT PROJECTS

CITY ENGINEER: GARY JANZEN, P.E.

PROJECT NUMBER	CCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-504

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

CITY EROSION CONTROL DETAIL 4

SHEET
C10.5

DWG: 28639-UP.DWG
DATE: 6/25/15

NO	DATE	REVISIONS

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
REV-3
DATE: 6/25/2015 9:3 AM

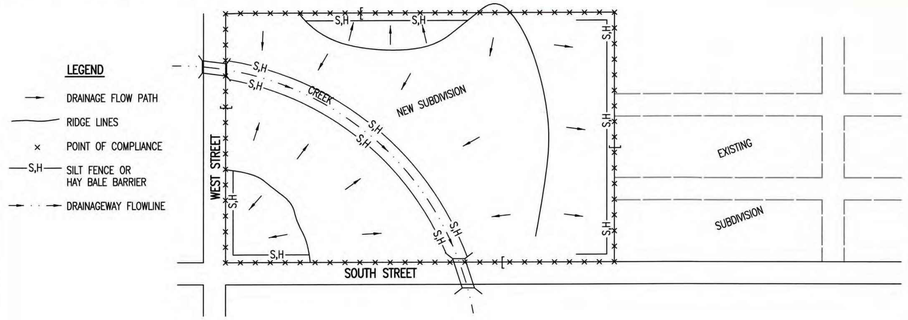
SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000

COPYRIGHT 1988-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN FRANCHISEE OR A DESIGNEE OF THE SONIC-IN AT THE SPECIFIED LOCATION.

© 2015 CEI ENGINEERING ASSOCIATES, INC.

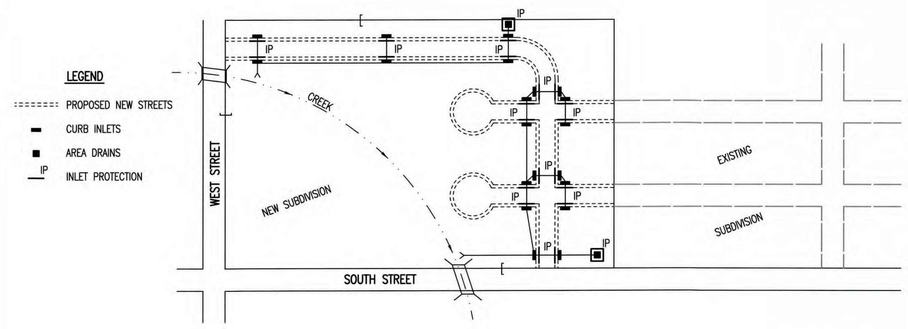
JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE

PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



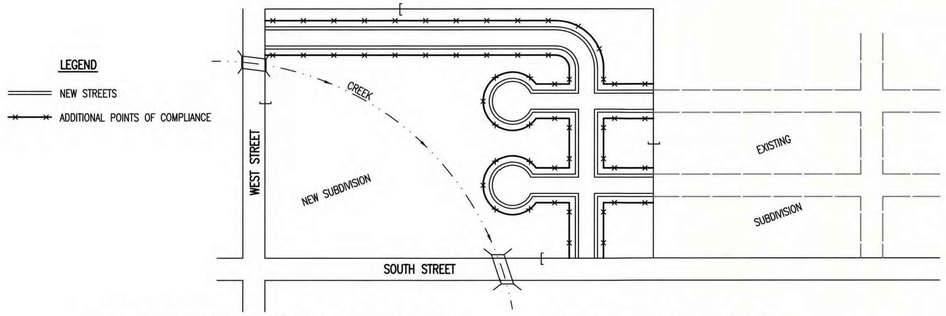
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
3. SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
4. ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
5. CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
6. UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
7. IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
8. WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

PHASE 2 – INSTALLATION OF STORM SEWER



1. DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
2. AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
3. AREA DRAINS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
4. CURB OPENING INLETS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 – STREET CONSTRUCTION.
5. THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
6. THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
7. ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
8. ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

PHASE 3 – STREET CONSTRUCTION

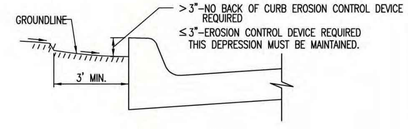


1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
2. CURB OPENING INLET PROTECTION:
   A. SUMP AREAS – INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
   B. NON-SUMP LOCATIONS – PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
3. EROSION CONTROL DEVICES WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), ADDITIONAL DEVICES WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
4. SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
5. THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAY BALE OR SILT FENCE EROSION CONTROL DEVICES AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
6. THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
7. THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB EROSION CONTROL DEVICES IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
2. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
3. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
4. PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
5. THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
6. FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
7. FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
8. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
9. A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

SEE DETAIL SHEET FOR BACK OF CURB PROTECTION DETAIL



CURB BACKFILL DETAIL (STREET CONSTRUCTION ONLY)

THIS IS A TEMPORARY MEASURE ONLY. WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
05.13.13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SUBDIVISION DEVELOPMENT PROCESS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-505

SONIC

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE

SONIC

SONIC

SONIC

© 2015 CEI ENGINEERING ASSOCIATES, INC.

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
REV-3
DATE: 6/25/2015 9:3 AM

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE®: 405-225-5000
SONIC® America's Drive-In℠

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN AT THE DESIGNATED SONIC DRIVE-IN LOCATION AT THE TIME AND AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
2612 W. MAPLE STREET
WICHITA, KS

CITY EROSION CONTROL DETAIL 5

SHEET
C10.6

DWG: 28639-UP.DWG
DATE: 6/25/15

SITE WORK CONSTRUCTION DRAWINGS

SONIC RESTAURANTS, INC.

8612 W. MAPLE STREET

WICHITA, KS

GENERAL NOTES:

A. TOPOGRAPHIC BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, SITE TOPOGRAPHY WITH SPOT ELEVATIONS, OUTSTANDING PHYSICAL FEATURES AND EXISTING STRUCTURE LOCATIONS WAS PROVIDED BY THE FOLLOWING COMPANY, AS A CONTRACTOR TO THE SELLER/OWNER:

TOPOGRAPHY: KAW VALLEY ENGINEERING, INC.
14700 WEST 114TH TERRACE
LENEXA, KS 66215
KENNETH J. DEDRICK
913-894-5150

CEI ENGINEERING AND ITS ASSOCIATES WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS OR OMISSIONS RESULTING FROM SURVEY INACCURACIES.

B. ALL PHASES OF SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE OWNER / DEVELOPER SITE WORK SPECIFICATIONS.

C. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. SEE SITE WORK SPECIFICATIONS.

D. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.

E. THE GENERAL CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

F. WARRANTY/DISCLAIMER: THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A CONTEMPORANEOUS BASIS AT THE SITE.

G. SAFETY NOTICE TO CONTRACTOR: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.

H. ALL CONSTRUCTION IN STATE HIGHWAY DEPARTMENT RIGHT-OF-WAY SHALL BE COORDINATED WITH THE HIGHWAY DEPARTMENT RESIDENT ENGINEER.

I. WETLANDS NOTE: ANY DEVELOPMENT, EXCAVATION, CONSTRUCTION, OR FILLING IN A U.S. CORPS OF ENGINEERS DESIGNATED WETLAND IS SUBJECT TO LOCAL, STATE AND FEDERAL APPROVALS. THE CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS AND/OR RESTRICTIONS AND ANY VIOLATION WILL BE SUBJECT TO FEDERAL PENALTY. THE CONTRACTOR SHALL HOLD THE OWNER/DEVELOPER, THE ENGINEER AND THE LOCAL GOVERNING AGENCIES HARMLESS AGAINST SUCH VIOLATION.

J. RESIDENT ENGINEERING SERVICES: WHEN REQUESTED BY THE OWNER, RESIDENT ENGINEERING SERVICES SHALL BE PROVIDED BY THE ENGINEERS (ON A TIME AND FREQUENCY BASIS) ACCEPTABLE TO THE CITY ENGINEER FOR IMPROVEMENTS TO PUBLIC WATER MAINS, PUBLIC SEWER, AND CITY STREETS. AT THE COMPLETION OF CONSTRUCTION, THE ENGINEER SHALL CERTIFY THE CONSTRUCTION TO BE IN COMPLIANCE WITH THE PLANS AND SPECIFICATIONS. THIS WORK WILL BE AT THE OWNER/DEVELOPER'S DIRECT EXPENSE AND SHALL BE COORDINATED WITH CEI ENGINEERING ASSOCIATES, INC. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE RESIDENT ENGINEER OF ANY PRECONSTRUCTION / CONSTRUCTION CONFERENCES AND ANY PUBLIC CONSTRUCTION 24 HOURS PRIOR TO SAID ACTION.

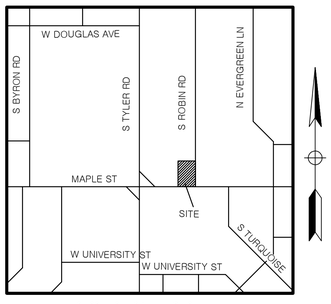
NOTICE TO BIDDERS:

ALL QUESTIONS REGARDING THE PREPARATION OF THE GENERAL CONTRACTOR'S BID SHALL BE DIRECTED TO SONIC'S CONSTRUCTION DEPARTMENT AT (405) 255-4636. SUBCONTRACTORS MUST DIRECT THEIR QUESTIONS THROUGH THE GENERAL CONTRACTOR. THE CONSULTING ARCHITECT AND/OR THE CONSULTING ENGINEER SHALL NOT BE CONTACTED DIRECTLY WITHOUT PRIOR AUTHORIZATION FROM THE OWNER/DEVELOPER.

FLOOD CERTIFICATION:

THIS PROPERTY IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR SEDGWICK COUNTY, KS.
COMMUNITY PANEL NUMBER 20173C0337F
EFFECTIVE DATE 5-2-2012.

SONIC®
America's Drive-In SM



Vicinity Map

Not to Scale

811 Know what's **below.** **Call** before you dig.

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3108 S.W. REGENCY PARKWAY, SUITE 2 (479)273-9472
Bentonville, AR 72712 FAX (479)273-0844

BRENT L. MASSEY 22207 LICENSED PROFESSIONAL ENGINEER KANSAS
6/25/15

PLAN INDEX:

C0	COVER SHEET
	SURVEY (ASSOCIATED PLAN)
C1	SITE PLAN
C2	DEMOLITION PLAN
C3	GRADING PLAN
C4	EROSION CONTROL PLAN
C5	UTILITY PLAN
C6	PAVING PLAN
C7	LANDSCAPE PLAN
C7.1	IRRIGATION PLAN
C8	DETAIL SHEET 1
C8.1	DETAIL SHEET 2
C9	SONIC DETAILS
C10	WICHITA SEWER DETAIL 1
C10.1	WICHITA SEWER DETAIL 2
C10.2	WICHITA EROSION DETAIL 1
C10.3	WICHITA EROSION DETAIL 2
C10.4	WICHITA EROSION DETAIL 3
C10.5	WICHITA EROSION DETAIL 4
C10.6	WICHITA EROSION DETAIL 5

ASSOCIATED PLANS:

1.	SURVEY
C0	UTILITY COVER SHEET
C4	EROSION CONTROL PLAN
C5	UTILITY PLAN
C8	DETAIL SHEET 1
C8.1	DETAIL SHEET 2
C10	WICHITA SEWER DETAIL 1
C10.1	WICHITA SEWER DETAIL 2
C10.2	WICHITA EROSION DETAIL 1
C10.3	WICHITA EROSION DETAIL 2
C10.4	WICHITA EROSION DETAIL 3
C10.5	WICHITA EROSION DETAIL 4
C10.6	WICHITA EROSION DETAIL 5

RESOURCE LIST:

OWNER
SONIC RESTAURANTS, INC.
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
SCOT TREADWELL
405-380-4012
SCOT.TREADWELL@SONICDRIVEIN.COM

CIVIL ENGINEER
CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PARKWAY SUITE 2
BENTONVILLE, AR 72712
JAIME KEMP
479-273-9472
479-273-0844
JKEMP@CEIENG.COM

ARCHITECT
WILKUS ARCHITECTS
11487 VALLEY VIEW RD.
EDEN PRAIRIE, MN 55344
JEANNE KARGEL
952-843-5052
JAK@WILKUSARCHITECTS.COM

WATER
CITY OF WICHITA
455 N. MAIN ST., 8TH FLOOR
WICHITA, KS 67202
JEFF CROSBY
361-268-4555

SANITARY SEWER
CITY OF WICHITA
VANESSA HENRY
316-268-4461
VHENRY@WICHITA.GOV

STORM DRAINAGE
CITY OF WICHITA
455 N. MAIN ST., 8TH FLOOR
WICHITA, KS 67202
JAMES HARDESTY
316-268-4555

GAS
KANSAS GAS
ED KOEHLER
316-832-3177
ED.KOEHLER@ONEGAS.COM

ELECTRIC
WESTAR ENERGY
1900 E. CENTRAL
WICHITA, KS 67201
LEE SAILSBURY
316-261-6859
LEE.SAILSBURY@WESTARENERGY.COM

TELEPHONE
AT&T
154 N. BROADWAY, ROOM 210
WICHITA, KS 67201
MARK OLSON
316-268-2105
MO6998@ATT.COM

HIGHWAY - STREET DATA
CITY OF WICHITA
455 N. MAIN ST., 7TH FLOOR
WICHITA, KS 67202
BRIAN COON
316-268-4448
BCOON@WICHITA.GOV

PLANNING DEPARTMENT
CITY OF WICHITA
455 N. MAIN
WICHITA, KS 67202
SCOTT KNEBLE
316-268-4477

BUILDING DEPARTMENT
CITY OF WICHITA
455 N. MAIN ST., 7TH FLOOR
WICHITA, KS 67202
MATT LEE
316-268-4477

PLUMBING DEPARTMENT
CITY OF WICHITA
455 N. MAIN ST., 7TH FLOOR
WICHITA, KS 67202
316-268-4341

HEALTH DEPARTMENT
KANSAS DEPT. OF AGRICULTURE
109 SW 9TH ST., 3RD FLOOR
TOPEKA, KS 6612
BRANDY CRUBEL
785-296-7430

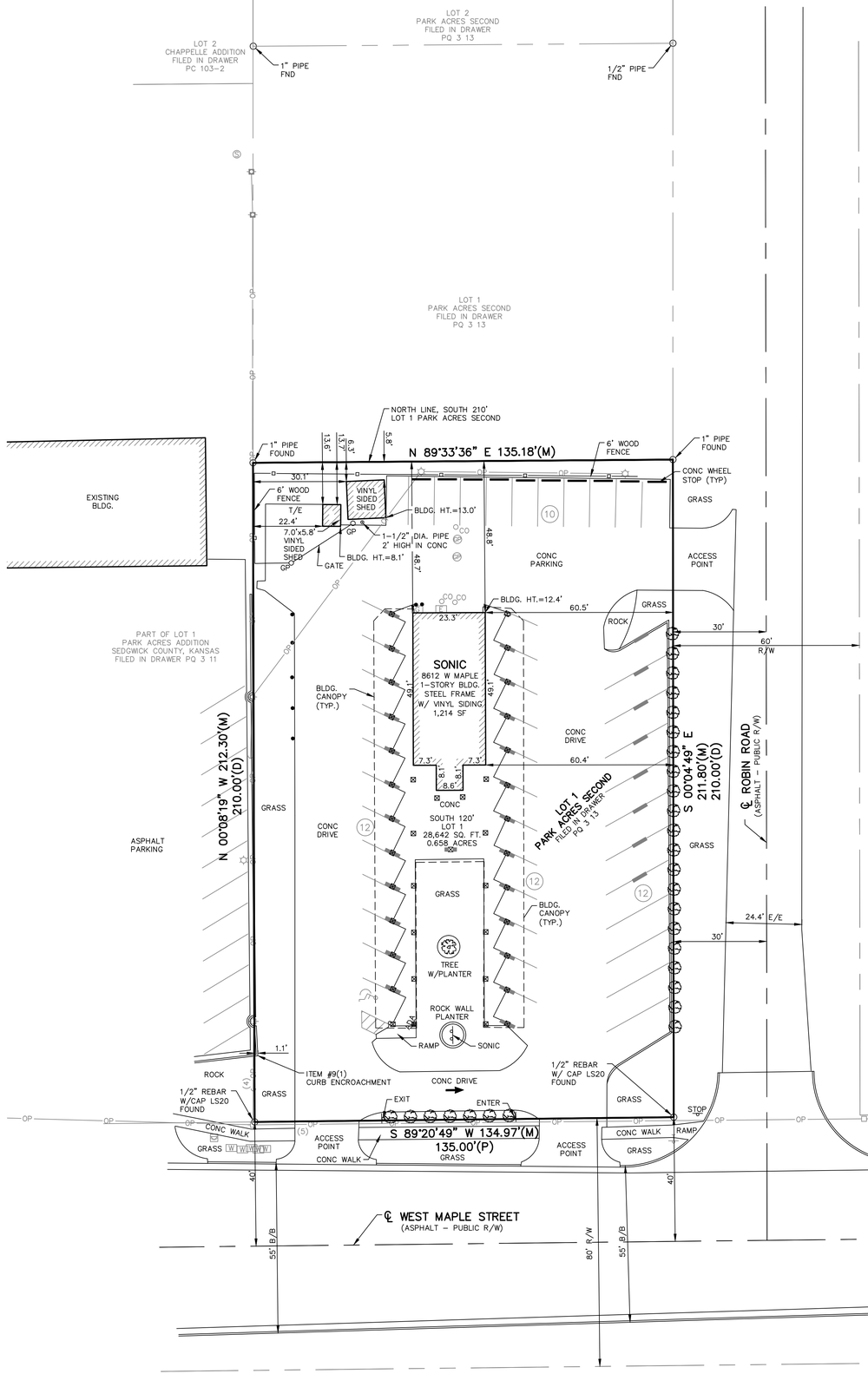
JOB NO.: 28639	
DWG NAME: 28639-SP	
DATE	SHEET NO.
6/25/15 8:20 AM REV-3	C0

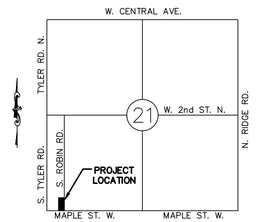
Arkansas * California * Minnesota * Pennsylvania * Texas

© 2015 CEI ENGINEERING ASSOCIATES, INC.

ALTA/ACSM LAND TITLE SURVEY

SECTION 21 – TOWNSHIP 27 – RANGE 1
WITCHITA, SEDGWICK COUNTY, KANSAS





VICINITY MAP
SECTION: 21–T27S–R1W

DESCRIPTION (PER TITLE COMMITMENT):
THE SOUTH 210 FEET OF LOT 1, IN PARK ACRES SECOND, SEDGWICK COUNTY, KANSAS.

PROPERTY ADDRESS:
8612 WEST MAPLE STREET
WICHITA, KANSAS 67209

TABLE "A" NOTES:

3. BY GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN "ZONE X", AREAS DETERMINED TO OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS PER FEMA FIRM PANEL #20173C0340E, WITH AN EFFECTIVE DATE OF FEBRUARY 2, 2007.
4. THE LAND AREA IS 28,642 SQUARE FEET OR 0.658 ACRES, MORE OR LESS.
6. PER THE CITY OF WICHITA ZONING MAP, THIS PROPERTY IS ZONED LC (LIMITED COMMERCIAL DISTRICT)
   LC REQUIREMENTS:
   BUILDING SETBACKS:
   FRONT YARD:
   NOT LESS THAN TWENTY (20) FEET.
   SIDE YARD – INTERIOR:
   NO SETBACK IS REQUIRED EXCEPT WHERE IF PROVIDED, IT MUST BE AT LEAST FIVE (5) FEET.
   STREET SIDE YARD:
   NOT LESS THAN FIFTEEN (15) FEET.
   REAR YARD:
   NOT LESS THAN TEN (10) FEET.
   PARKING/PAVING SETBACKS:
   NOT LESS THAN SIX (6) FEET FROM ANY PROPERTY LINE AND NOT LESS THAN TEN (10) FEET FROM ANY STREET RIGHT-OF-WAY LINE.
   MAXIMUM BUILDING HEIGHT:
   80 FEET.
   PARKING REQUIREMENTS:
   NOT LESS THAN FOUR (4) SPACES PER ONE THOUSAND (1000) SQUARE FEET OF FLOOR AREA IN THE BUILDING.
9. THERE EXISTS 46 STRIPED PARKING SPACES ON THE SUBJECT PROPERTY WHICH INCLUDES 1 ADA SPACE.
10. ACCESS TO THE SUBJECT PROPERTY VIA W. MAPLE STREET (PUBLIC R/W) AND S. ROBIN ROAD (PUBLIC R/W).
11(A). UTILITIES SHOWN ARE FROM ABOVE GROUND OBSERVATION.
14. NEAREST INTERSECTING STREET IS S. TYLER ROAD, AND W. MAPLE STREET APPROXIMATELY 230'± WEST OF SUBJECT PROPERTY'S WEST LINE.

REFERENCE PLATS:
1. PARK ACRES, SEDGWICK COUNTY, KANSAS
2. PARK ACRES SECOND, SEDGWICK COUNTY, KANSAS

POSSIBLE ENCROACHMENTS:
SEE SCHEDULE B–EXCEPTION ITEM NUMBER 9(1) LISTED BELOW.

BASIS OF BEARING:
ASSUMED BEARING OF S 89°20'49" W ALONG THE SOUTH LINE OF LOT 1, PARK ACRES SECOND, SEDGWICK COUNTY, KANSAS.

UTILITY STATEMENT:
THE UNDERGROUND UTILITIES SHOWN HEREON ARE FROM FIELD SURVEY INFORMATION OF ONE-CALL LOCATED UTILITIES, FIELD SURVEY INFORMATION OF ABOVE GROUND OBSERVABLE EVIDENCE, AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY.

TITLE COMMITMENT:
FIRST AMERICAN TITLE INSURANCE COMPANY
COMMITMENT NO.: 2120452
EFFECTIVE DATE: DECEMBER 15, 2014, AT 7:30 A.M.

9. THE FOLLOWING MATTERS DISCLOSED BY A SURVEY MADE BY JASON R. LOADER OF KAW VALLEY ENGINEERING, INC. ON MARCH 31, 2010:

   1. ENCROACHMENT OF CURB FROM REAL ESTATE ADJACENT ON THE WEST ONTO THE EAST SIDE OF SUBJECT PROPERTY. (AFFECTS THE SUBJECT PROPERTY AND IS PLOTTED AND SHOWN)
   2. ENCROACHMENT OF STORAGE UNIT INTO THE NORTH 10 FOOT BUILDING SETBACK LINE (PER ZONING). (REMOVED FROM THIS SURVEY PER ALTA INSTRUCTIONS: TABLE A INTRODUCTORY PARAGRAPH REGARDING ZONING)
   3. ENCROACHMENT OF ASPHALT LOCATED ON THE NORTH SIDE OF SUBJECT PROPERTY ONTO THE REAL ESTATE NORTH OF AND ADJACENT TO SUBJECT PROPERTY. (ASPHALT HAS SINCE BEEN REMOVED AND NO LONGER ENCROACHES)

LEGEND:

- ○ MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E ELECTRIC METER
- (1) OP OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- G GAS METER
- ⊠ CANOPY SUPPORT
- MENU BOARD
- • BOLLARD
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- ADA HANDICAP SIGN
- S SANITARY SEWER MANHOLE
- GP GREASE PIT MANHOLE
- CO SANITARY SEWER CLEAN OUT
- W WATER METER
- GP GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

SURVEYOR'S CERTIFICATION:
TO: AMERICA'S DRIVE-IN RESTAURANTS LLC, A DELAWARE LIMITED LIABILITY COMPANY, AMERICA'S DRIVE-IN RESTAURANTS LLC, A DELAWARE LIMITED LIABILITY COMPANY, SUCCESSOR-IN-INTEREST TO AMERICA'S DRIVE-IN RESTAURANTS LLC, A KANSAS LIMITED LIABILITY COMPANY AND FIRST AMERICAN TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6a, 7a, 8, 9, 11a & 14 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON DECEMBER 17, 2014 DATE OF PLAT OR MAP: JANUARY 2, 2015

PRELIMINARY

KENNETH J. DEDRICK _____
KANSAS RLS NO. 1067

(AN ORIGINAL SEAL AND SIGNATURE IN BLUE INK, SIGNIFIES THE CERTIFICATION OF THE ENTIRE FACE OF THIS DOCUMENT AND ALL OF ITS CONTENT)

I, KENNETH J. DEDRICK, BEING A DULY REGISTERED AND LICENSED LAND SURVEYOR IN THE STATE OF KANSAS, HEREBY CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT WAS BASED WAS MADE BY ME OR UNDER MY DIRECT SUPERVISION, AND MEETS OR EXCEEDS THE CURRENT KANSAS MINIMUM STANDARDS FOR BOUNDARY SURVEYS. THAT THE SUBJECT PARCEL IS THE SAME AS THAT DESCRIBED IN THE TITLE COMMITMENT REFERENCED HEREON. THAT THE LINES OF POSSESSION ARE DEPICTED HEREON, THE COURSES AND DISTANCES SHOWN HEREON ARE THOSE MEASURED ON THE DATE OF THE SURVEY AND THAT THE SURVEY WAS COMPLETED IN THE FIELD AND ON THE GROUND AND MAY BE RELIED UPON BY THE PARTIES CERTIFIED AS TO BEING CORRECT TO THE BEST OF MY BELIEF AND KNOWLEDGE.

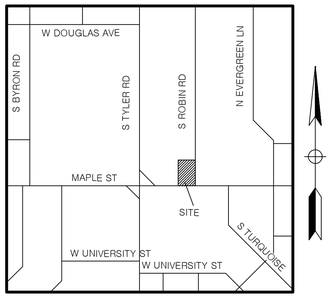
KAW VALLEY ENGINEERING
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150 | FAX (913) 894-5977
lx@kveng.com | www.kveng.com

PROJECT NO.	C14_8073
DRAWN BY	EDV
CHECKED BY	KJD
CFN	8073ALTA
SHEET	1 OF 1

PREPARED FOR:
SONIC RESTAURANTS, INC.
300 JOHNNY BENCH DRIVE, SUITE 400
OKLAHOMA CITY, OKLAHOMA 73104

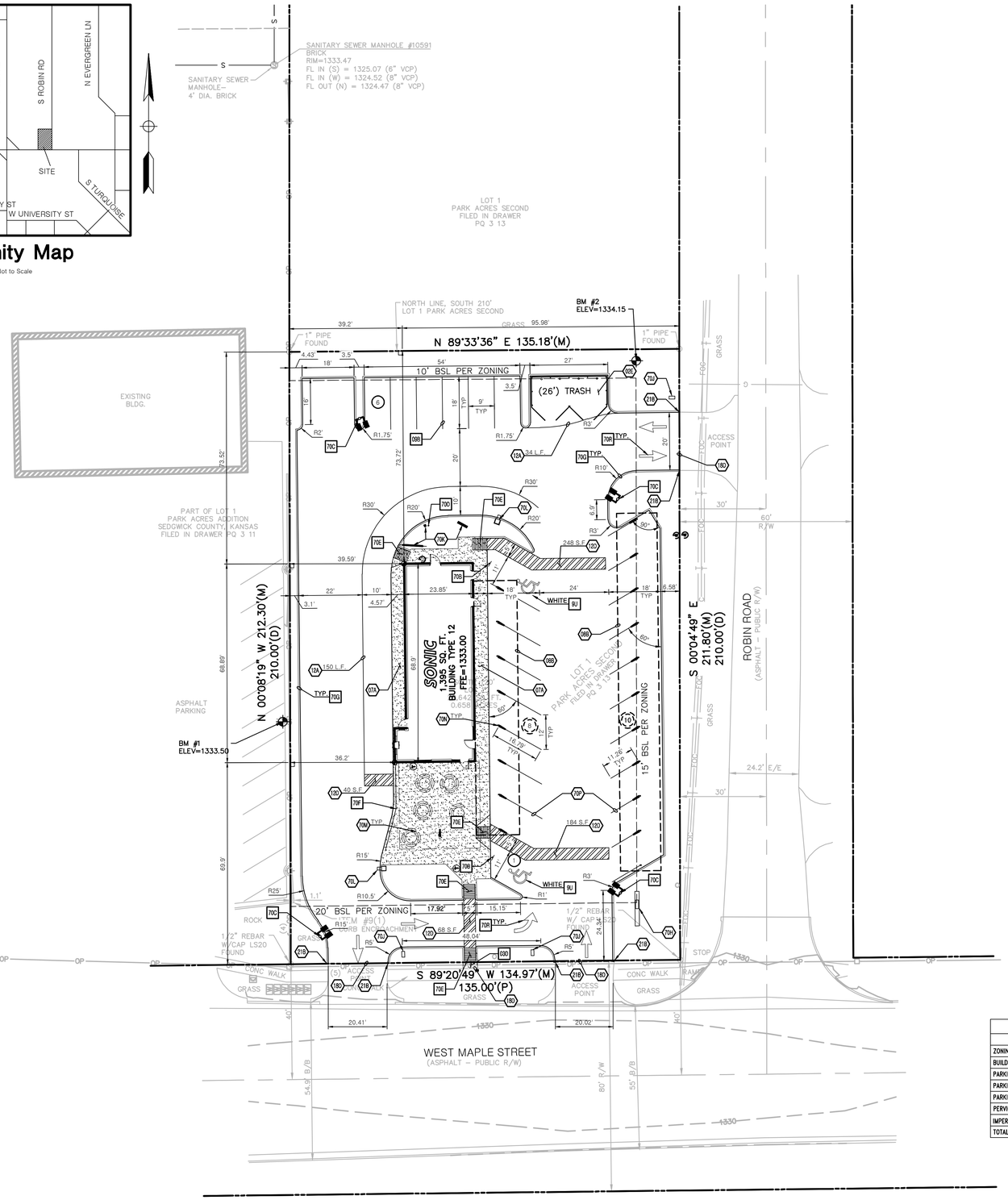
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER SURVEYING SERVICES BY KANSAS STATE CERTIFICATE OF AUTHORIZATION NO. LS-20. EXPIRES 12/31/16

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.



Vicinity Map

Not to Scale



SITE DATA

ZONING	LC (LIMITED COMMERCIAL)	
BUILDING SIZE	1,395 S.F.	
PARKING RATIO	1 SPACE PER 3 SEATS	
PARKING REQUIRED	9 SPACES	
PARKING PROVIDED	25 SPACES	
PERVIOUS AREA	5,066 SQ. FT.	0.12 AC.
IMPERVIOUS AREA	23,576 SQ. FT.	0.54 AC.
TOTAL SITE AREA	28,642 SQ. FT.	0.66 AC.

811 Know what's **below.** **Call** before you dig.

SITE BENCHMARK

BM #1:
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 84'± NORTH AND 2.5±' WEST OF THE WEST PROPERTY LINE.
ELEV=1333.50'

BM #2:
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOORS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

N

0 20' 30' 40'
SCALE IN FEET

LEGEND

EXISTING

- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E — ELECTRIC METER
- E — UNDERGROUND ELECTRIC
- (1) OP — OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T — UNDERGROUND TELEPHONE
- FOC — UNDERGROUND FIBER OPTIC CABLE
- GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- HANDICAP SIGN
- SANITARY SEWER MANHOLE
- S — SANITARY SEWER LINE
- VCP — VITRIFIED CLAY PIPE
- GREASE PIT MANHOLE
- CO — SANITARY SEWER CLEAN OUT
- W — WATER METER
- GP — GATE POST
- B/B — BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E — TRASH ENCLOSURE
- 939 — EXISTING GRADE 1' CONTOUR
- 950 — EXISTING GRADE 5' CONTOUR
- EXISTING SPOT ELEVATION
- 1020.50 — TOP OF CURB ELEVATION
- 1020.00 — FL OF CURB ELEVATION

PROPOSED

- CONCRETE CURB AND GUTTER.
- BUILDING CONTROL POINT
- (#) CANOPY PARKING SPACES
- # PROPOSED PARKING SPACES
- LIMITS OF SIDEWALKS AND CONCRETE APRONS (PER ARCH. PLANS)

GENERAL SITE NOTES

A. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

B. ALL CURB RETURN RADII SHALL BE 2' OR 10', AS SHOWN TYPICAL ON THIS PLAN, UNLESS OTHERWISE NOTED.

C. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON OR WITHIN THE SPECIFICATIONS: ALL CURBING ADJACENT TO CONCRETE PAVING SHALL BE INSTALLED PER DETAIL 70G (SONIC DETAIL 23). PAVEMENT SHALL BE INSTALLED IN ACCORDANCE WITH PAVING PLAN (SEE SHEET C6).

D. ALL ACCESSIBLE PARKING STALLS SHALL HAVE SIGNAGE INSTALLED PER DETAIL: SONIC DET. 3

SITE NOTES

02E TRASH DUMPSTER ENCLOSURE (PER ARCH. PLANS).
07A SIDEWALK (PER ARCH. PLANS).
08B OVERHEAD CANOPY – (TYP.-PER ARCH. PLANS).
12A 4 INCH TRAFFIC YELLOW LANE STRIPE (SEE LENGTH INDICATED AT SYMBOL).
12D 4 INCH WIDE PAINTED YELLOW STRIPES. 2.0 FOOT O.C. @ 45 DEGREES (SEE SIZE INDICATED AT SYMBOL).
18D MATCH EXISTING PAVEMENT ELEVATIONS.
21B TAPER CURB FROM 6 INCHES TO 0 INCHES OVER 2 FEET
70H PYLON SIGN (SEE ARCH PLANS)
70J ENTER / EXIT SIGNS (SEE ARCH PLANS)
70K ORDER BOARD AND DETECTING LOOP (SEE ARCH PLANS)
70L TRASH CANS WITH 2'X2' PADS (SEE ARCH PLANS)
70M LOOSE TABLES AND CHAIRS (SEE ARCH PLANS)
70N MENU / CANOPY POST (SEE ARCH PLANS)
70P 4 INCH PAINTED YELLOW STRIPES

SITE DETAILS

03D CONCRETE SIDEWALK
09B NINETY DEGREE PARKING SPACE STRIPING
09U ACCESSIBLE PARKING SYMBOL (SEE PAINT COLOR INDICATED AT SYMBOL)
70B ACCESSIBLE PARKING SIGN (SEE SONIC DETAIL 3)
70C POLE MOUNTED FLOOD LIGHT BASE (SEE SONIC DETAIL 15)
70D BOLLARD (SEE SONIC DETAIL 4)
70E CURB RAMP (SEE SONIC DETAIL 19)
70F RAILING (SEE SONIC DETAIL 29)
70G MONOLITHIC CURBING (SEE SONIC DETAIL 23)
70R TRAFFIC FLOW ARROW (SEE SONIC DETAIL 16)

REVISIONS | DATE | NO

BRENT L. MASSEY 22207 REGISTERED PROFESSIONAL ENGINEER 6/25/15

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

JOB NO.: 28639
DATE: 6/25/2015 8:20 AM
DWG NAME: 28639-SP
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICES: 405-225-5000

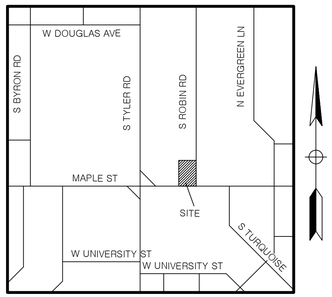
COPYRIGHT 1998-2008 AMERICA'S DRIVE-IN CORP.
ALL RIGHTS RESERVED. USE OF THESE PLANS AND SPECIFICATIONS FOR ANY PURPOSE OTHER THAN THE CONSTRUCTION OF THE DRIVE-IN AT THE SPECIFIED LOCATION, WITHOUT THE EXPRESS WRITTEN PERMISSION OF AMERICA'S DRIVE-IN CORP., IS PROHIBITED. ANY UNAUTHORIZED USE SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO AMERICA'S DRIVE-IN CORP. THE USER OF THESE PLANS AND SPECIFICATIONS AGREES TO INDEMNIFY AND HOLD HARMLESS AMERICA'S DRIVE-IN CORP. FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING FROM SUCH UNAUTHORIZED USE. THESE PLANS AND SPECIFICATIONS ARE COPYRIGHTED BY AMERICA'S DRIVE-IN CORP. AND ARE DESIGNATED SONIC DRIVE-IN OWNER FOR CONSTRUCTION OF THE DRIVE-IN AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS
SITE PLAN

SHEET
C1
DWG: 28639-SP.DWG
DATE: 6/25/15

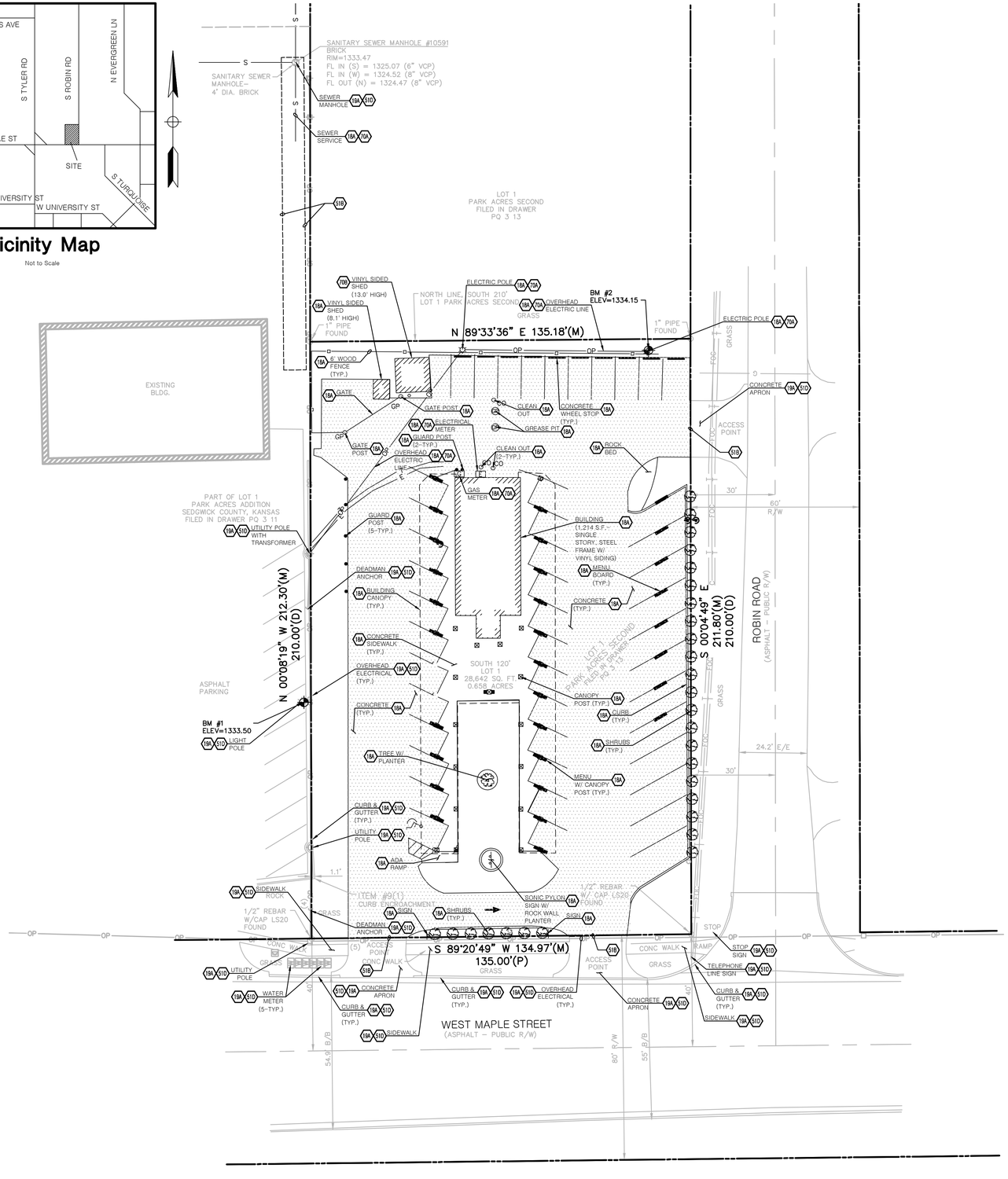
JOB # 28639 DRAWING: 28639-SP.dwg LAST SAVED BY: JOBBLE

© 2015 CEI ENGINEERING ASSOCIATES, INC.



Vicinity Map

Not to Scale



811 Know what's **below.** **Call** before you dig.

SITE BENCHMARK

BM #1
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 84'± NORTH AND 2.5± WEST OF THE WEST PROPERTY LINE.
ELEV=1333.50'

BM #2
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOORS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

0 20' 30' 40'
SCALE IN FEET

LEGEND

EXISTING

- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E ELECTRIC METER
- E UNDERGROUND ELECTRIC
- (1) OP OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T UNDERGROUND TELEPHONE
- FOC UNDERGROUND FIBER OPTIC CABLE
- G GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- ADA HANDICAP SIGN
- S SANITARY SEWER MANHOLE
- S SANITARY SEWER LINE
- VCP VITRIFIED CLAY PIPE
- GP GREASE PIT MANHOLE
- CO SANITARY SEWER CLEAN OUT
- W WATER METER
- GP GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR
- EXISTING SPOT ELEVATION
- 1020.50 TOP OF CURB ELEVATION
- 1020.00 FL OF CURB ELEVATION

GENERAL DEMOLITION NOTES

A. THE SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE "SONIC STANDARD SITE WORK SPECIFICATIONS".

B. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. SEE SITE WORK SPECIFICATIONS.

C. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.

D. THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

E. **ENGINEER'S NOTICE TO CONTRACTOR**
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT 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. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

F. CONTRACTOR SHALL DISCOVER AND REMOVE COMPLETELY ALL STRUCTURAL FOUNDATIONS AND FOOTINGS AND REPLACE ALL DEPRESSIONS AS A RESULT OF SAID REMOVAL WITH ENGINEERED FILL AS PRESCRIBED AND/OR DIRECTED BY A GEOTECHNICAL ENGINEER, LICENSED IN THE STATE OF KANSAS. CONTRACTOR SHALL REMOVE ANY AND ALL REMAINING STRUCTURAL MATERIALS AND DEBRIS FROM PAST PROPERTY USE AND DISPOSAL PER ALL LOCAL, STATE AND FEDERAL GUIDELINES AND LAWS.

G. CONTRACTOR SHALL LOCATE EXISTING UTILITY SERVICES NOT BEING PROPOSED FOR REUSE AND TERMINATE, DISCONNECT, REMOVE OR RELOCATED PER ALL LOCAL, STATE AND FEDERAL GUIDELINES AND LAWS AND THE UTILITY PROVIDERS DETAILS AND SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL SPECIFICATIONS, LITERATURE, PERMITS AND FEES ASSOCIATED WITH SAID TERMINATIONS, DISCONNECTS, REMOVAL, OR RELOCATIONS.

DEMOLITION NOTES

- 18A EXISTING TO BE REMOVED.
- 19A EXISTING TO REMAIN.
- 51B LIMITS OF SAWCUT AND PAVEMENT REMOVAL.
- 51D PROTECT EXISTING STRUCTURES AND/OR PIPES DURING DEMOLITION AND CONSTRUCTION PHASES.
- 70A COORDINATE REMOVAL OR RELOCATION WITH LOCAL UTILITY COMPANY.
- 70B CONTRACTOR TO COORDINATE WITH SONIC CONSTRUCTION MANAGER FOR RELOCATION OF SHED.

BRENT MASSEY 22507 REGISTERED PROFESSIONAL ENGINEER 6/25/15

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL
3317 SW 7th Street (479) 273-9472
Bentonville, AR 72712 FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
DATE: 6/25/2015 8:20 AM
REV#-3

SONIC CORPORATION
300 JOHN T. BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE(S): 405-225-5000

SONIC® SM AMERICA'S DRIVE-IN®

COPYRIGHT 1998-2008 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN OWNER FOR CONSTRUCTION OF THE DRIVE-IN AT THE LOCATION SHOWN.

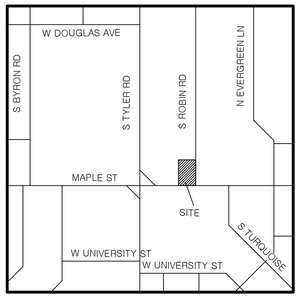
SONIC DRIVE-IN
SONIC TYPE: 12
862 W. MAPLE STREET
WICHITA, KS

DEMOLITION PLAN

SHEET
C2
DWG: 28639-SP.DWG
DATE: 6/25/15

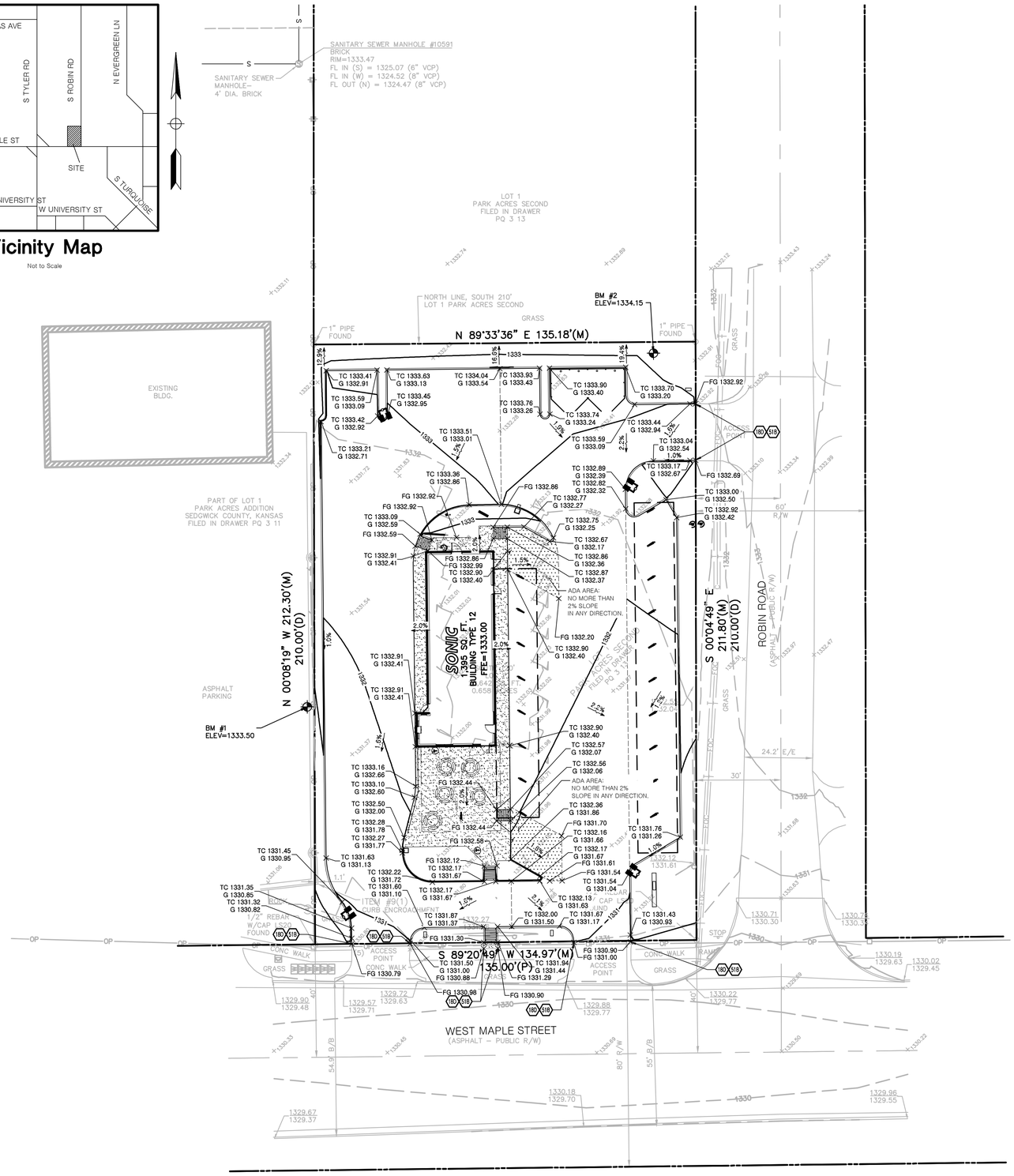
JOB # 28639 DRAWING - 28639-SP.dwg LAST SAVED BY: JDIBBLE

© 2015 CEI ENGINEERING ASSOCIATES, INC.



Vicinity Map

Not to Scale



Know what's **below.**
Call before you dig.

SITE BENCHMARK

BM #1:
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1233'± NORTH AND 3' WEST OF THE EAST PROPERTY LINE.
ELEV=1333.50'

BM #2:
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

N

0 20' 30' 40'
SCALE IN FEET

FLOOD CERTIFICATION:

THIS PROPERTY IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR SEDGWICK COUNTY, KS, COMMUNITY PANEL NUMBER 20173C0337F EFFECTIVE DATE 5-2-2012.

LEGEND

EXISTING

- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E ELECTRIC METER
- E UNDERGROUND ELECTRIC
- (1) OP OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T UNDERGROUND TELEPHONE
- FOC UNDERGROUND FIBER OPTIC CABLE
- G GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- HANDICAP SIGN
- S SANITARY SEWER MANHOLE
- S SANITARY SEWER LINE
- VCP VITRIFIED CLAY PIPE
- GP GREASE PIT MANHOLE
- CO SANITARY SEWER CLEAN OUT
- W WATER METER
- GP GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR
- 1332.50 EXISTING SPOT ELEVATION
- 1020.50 TOP OF CURB ELEVATION
- 1020.00 FL OF CURB ELEVATION

PROPOSED

- GRADE BREAK
- XXX CONTOUR ELEVATIONS
- x XX.XX SPOT ELEVATIONS:
  TC = TOP OF CURB
  G = GUTTER
  FG = FINISH GRADE
  FFE = FINISH FLOOR ELEVATION

GENERAL GRADING NOTES

A. PRIOR TO INSTALLATION OF STORM OR SANITARY SEWER, THE CONTRACTOR SHALL EXCAVATE, VERIFY, AND CALCULATE ALL CROSSINGS AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT THE ENGINEER IS NOT NOTIFIED OF DESIGN CONFLICTS.

B. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND 4" OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS (SEE LANDSCAPE PLAN FOR SEED MIX AND PROPER APPLICATION RATE). ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

C. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT 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. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

GRADING NOTES

18D MATCH EXISTING PAVEMENT ELEVATIONS.
51B LIMITS OF SAWCUT AND PAVEMENT REMOVAL

BRENT L. MASSEY 22207 LICENSED PROFESSIONAL ENGINEER 6/25/15

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

JOB NO.: 28639
DATE: 6/25/2015 7:48 AM
DWG NAME: 28639-GP
REV-1

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICES: 405-225-5000

COPYRIGHT 1988-2008 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC FRANCHISEE IN THE CONSTRUCTION OF THE SONIC® IN THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
861/2 W. MAPLE STREET
WICHITA, KS

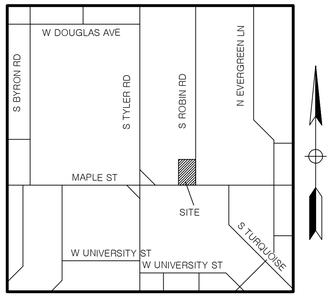
GRADING PLAN

SHEET
C3

DWG: 28639-GP.DWG
DATE: 6/25/15

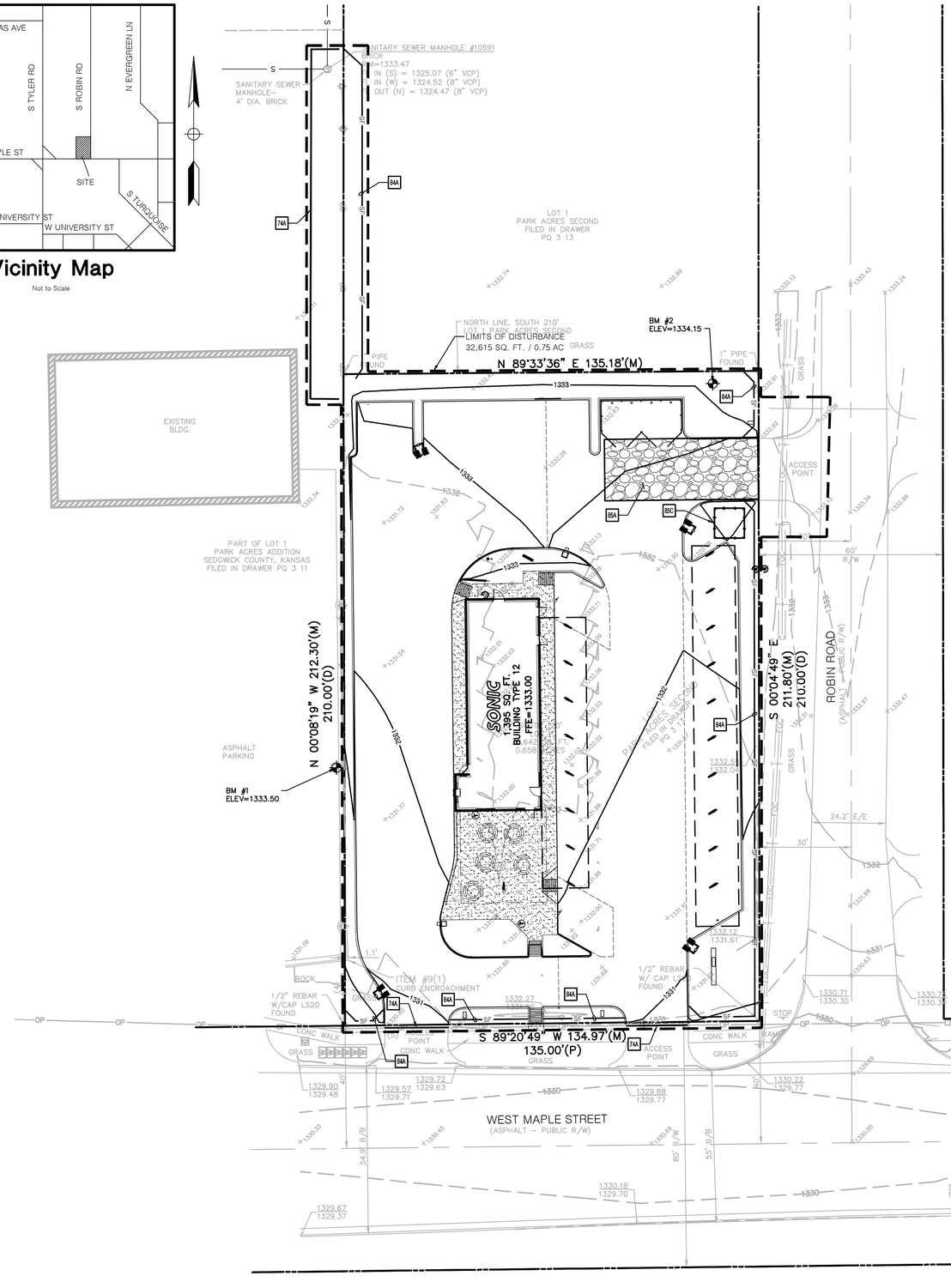
© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-GP.dwg LAST SAVED BY: JDIBBLE



Vicinity Map

Not to Scale



Know what's **below.**
Call before you dig.

SITE BENCHMARK

BM #1:
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1230'± NORTH AND 3' WEST OF THE EAST PROPERTY LINE.
ELEV=1333.50'

BM #2:
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOORS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

0 20' 30' 40'
SCALE IN FEET

FLOOD CERTIFICATION:

THIS PROPERTY IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR SEDGWICK COUNTY, KS, COMMUNITY PANEL NUMBER 20173C0337F EFFECTIVE DATE 5-2-2012.

SITE DATA

ZONING	LC (LIMITED COMMERCIAL)	
BUILDING SIZE	1,395 S.F.	
PARKING RATIO	1 SPACE PER 3 SEATS	
PARKING REQUIRED	9 SPACES	
PARKING PROVIDED	25 SPACES	
PERVIOUS AREA	5,066 SQ. FT.	0.12 AC.
IMPERVIOUS AREA	23,576 SQ. FT.	0.54 AC.
TOTAL SITE AREA	28,642 SQ. FT.	0.66 AC.

GENERAL EROSION NOTES

A. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF KANSAS NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

B. THE TEMPORARY PARKING AND STORAGE AREA SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AREA, EQUIPMENT CLEANING AREA, EMPLOYEE BREAK AREA, AND AREA FOR LOCATING PORTABLE FACILITIES. OFFICE TRAILERS AND TOILET FACILITIES. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNER'S CONSTRUCTION MANAGER.

C. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.

D. MAINTAIN ON THE SITE OR HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN UP FUEL OR CHEMICAL SPILLS AND LEAKS.

E. DUST ON THE SITE SHALL BE CONTROLLED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

F. NO RUBBISH, TRASH, GARBAGE OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

G. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

H. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY WILL STOP FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED WITHIN 14 DAYS.

I. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE LANDSCAPING PLAN.

J. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNERS CONSTRUCTION MANAGER.

K. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

L. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AFTER THE STABILIZATION OF THE SITE AND ALSO ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS.

M. IF SOIL STOCKPILING IS EMPLOYED ON THE SITE, SILT FENCES SHALL BE USED TO HELP CONTAIN THE SEDIMENT.

N. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

O. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.

P. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.

Q. ALL OFF-SITE CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR STORM DRAINS & UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

LEGEND

EXISTING

○	MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED	BB	BUSINESS/BILLBOARD SIGN
(M)	MEASURED	T	STREET/TRAFFIC SIGN
(P)	PLATTED		HANDICAP SYMBOL
(D)	DEEDED	ADA	HANDICAP SIGN
E	ELECTRIC METER	S	SANITARY SEWER MANHOLE
E	UNDERGROUND ELECTRIC	S	SANITARY SEWER LINE
(1) OP	OVERHEAD POWER LINE (# OF LINES)	VCP	VITRIFIED CLAY PIPE
	LIGHT POLE	GP	GREASE PIT MANHOLE
	UTILITY POLE	CO	SANITARY SEWER CLEAN OUT
	UTILITY POLE W/ TRANSFORMER	W	WATER METER
	DEADMAN ANCHOR	GP	GATE POST
	TRAFFIC SIGNAL LIGHT CONTROL BOX	B/B	BACK TO BACK OF CURB
T	TELEPHONE LINE SIGN		BUSH
T	UNDERGROUND TELEPHONE		PAINTED DIRECTIONAL ARROW
FOC	UNDERGROUND FIBER OPTIC CABLE	T/E	TRASH ENCLOSURE
G	GAS METER	939	EXISTING GRADE 1' CONTOUR
	CANOPY SUPPORT	950	EXISTING GRADE 5' CONTOUR
	MENU BOARD	1332.50	EXISTING SPOT ELEVATION
	BOLLARD	1020.50 / 1020.00	TOP OF CURB ELEVATION / FL OF CURB ELEVATION
	PROPERTY LINE/RIGHT OF WAY LINE		

PROPOSED

	LIMITS OF DISTURBANCE (32,615 826 SQ. FT. / 0.75 AC)
SF	SILT FENCE
	GRADE BREAK
XXX	CONTOUR ELEVATIONS

GENERAL EROSION NOTES CONT'D

MAINTENANCE
ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT, AND SHOULD BE CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.
2. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-THIRD TO ONE-HALF THE HEIGHT OF THE SILT FENCE.
3. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
4. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

SEQUENCE OF CONSTRUCTION:
1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
2. PREPARE TEMPORARY PARKING AND STORAGE AREA.
3. CONSTRUCT THE SILT FENCES ON THE SITE.
4. CLEAR AND GRUB THE SITE.
5. BEGIN GRADING THE SITE.
6. START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
7. TEMPORARILY SEED DENUDED AREAS.
8. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
9. PREPARE SITE FOR PAVING.
10. PAVE SITE.
11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
12. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED).

EROSION DETAILS

74A SWP-CI "BIG RED"
84A TEMPORARY SILT FENCE
85A TEMPORARY STONE CONSTRUCTION ENTRANCE
85C TEMPORARY CONCRETE WASH OUT.

REVISIONS | NO | DATE

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9422
FAX (479) 273-0844

JOB NO.: 28639
DATE: 6/25/2015 7:48 AM
DWG NAME: 28639-GP
REV#-1

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICES: 405-225-5000

COPYRIGHT 1998-2008 AMERICA'S DRIVE-IN CORP.
ALL RIGHTS RESERVED. NO PART OF THIS WORK MAY BE REPRODUCED OR COPIED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF SONIC DRIVE-IN. SONIC DRIVE-IN OWNER FOR CONSTRUCTION OF THE SONIC-IN AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

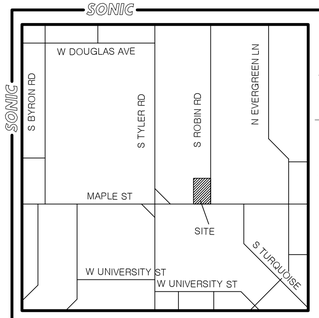
EROSION PLAN

SHEET
C4

DWG:
28639-GP.DWG
DATE: 6/25/15

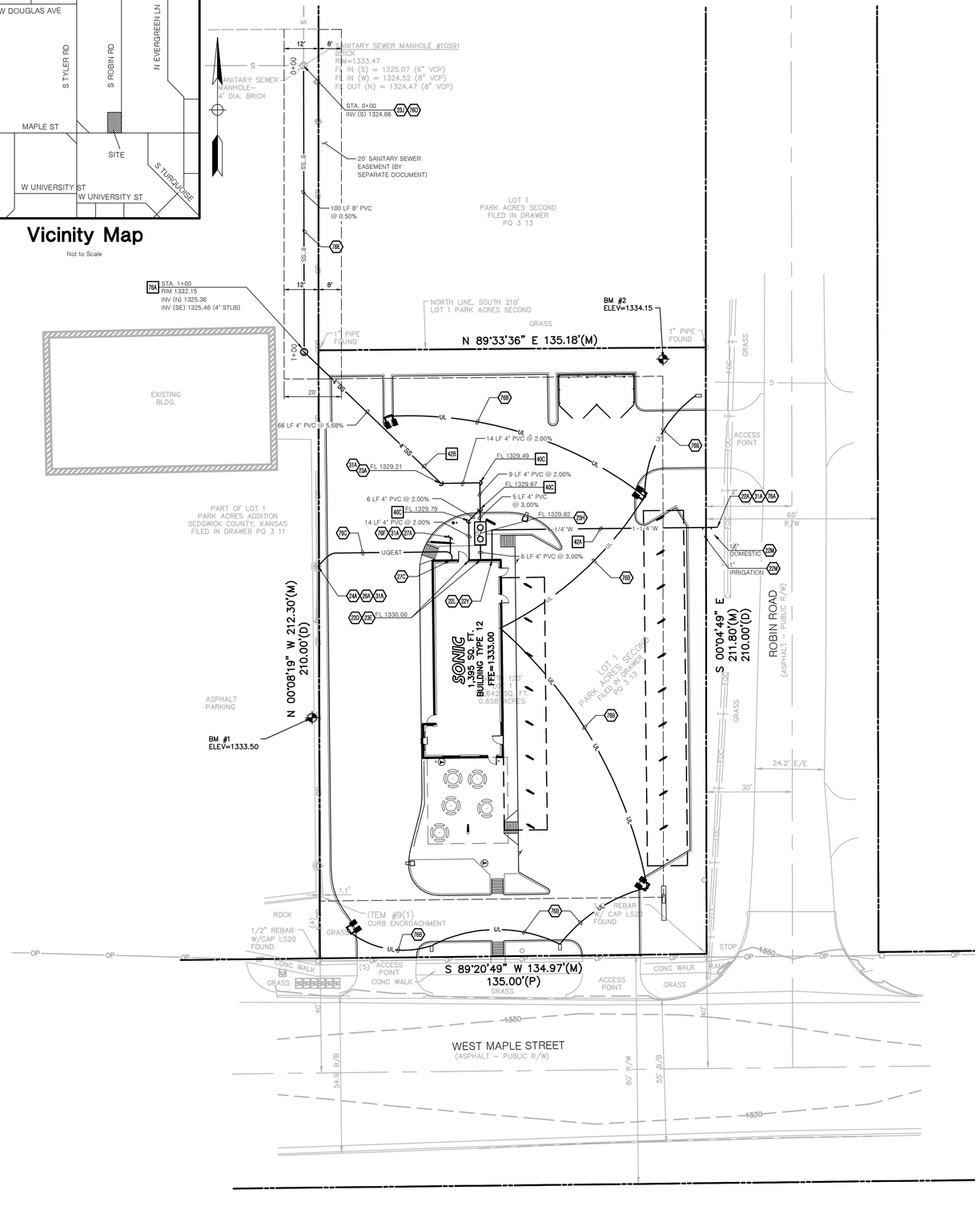
JOB # 28639 DRAWING: 28639-GP.dwg LAST SAVED BY: JOBBLE

© 2015 CEI ENGINEERING ASSOCIATES, INC.

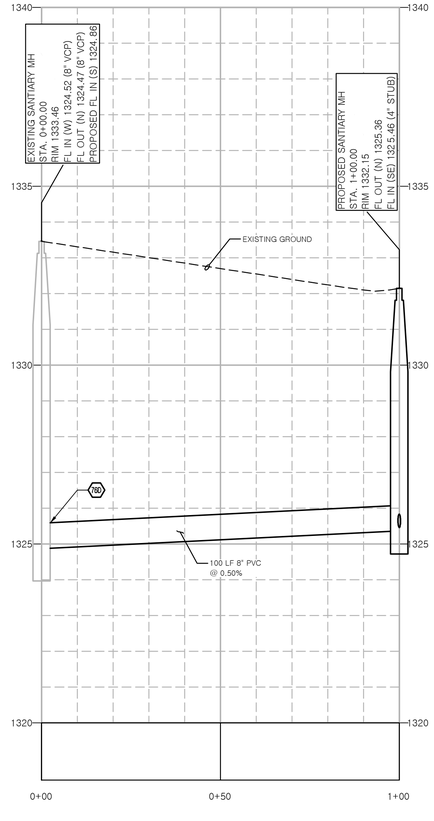


Vicinity Map

Not to Scale



Sewer Main PROFILE
HORZ SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 2'-0"



Know what's below.
Call before you dig.

SITE BENCHMARK

BM #1:
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1233'± NORTH AND 3' WEST OF THE EAST PROPERTY LINE.
ELEV=1333.50'

BM #2:
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

0 20' 30' 40'
SCALE IN FEET

LEGEND

EXISTING

- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E ELECTRIC METER
- E UNDERGROUND ELECTRIC
- (1) OP OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T UNDERGROUND TELEPHONE
- FOC UNDERGROUND FIBER OPTIC CABLE
- GS GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- HANDICAP SIGN
- SANITARY SEWER MANHOLE
- S SANITARY SEWER LINE
- VCP VITRIFIED CLAY PIPE
- GREASE PIT MANHOLE
- CO SANITARY SEWER CLEAN OUT
- WV WATER METER
- GP GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR
- EXISTING SPOT ELEVATION
- 1020.50 / 1020.00 TOP OF CURB ELEVATION / FL OF CURB ELEVATION

PROPOSED

- GAS GAS SERVICE
- SS SANITARY SEWER SERVICE
- UGE&T UNDERGROUND ELECTRIC & TELEPHONE SERVICE
- W WATER SERVICE
- UL ELECTRIC CONDUIT

GENERAL UTILITY NOTES

A. ALL WATER LINES SHALL BE 1 ¼" TYPE K COPPER WITH 36" MINIMUM COVER.

B. ALL SANITARY SEWER LINES SHALL BE SCHEDULE 40 PVC WITH 36" MINIMUM COVER.

D. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.

E. ALL ELECTRIC, TELEPHONE AND GAS EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.

G. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OF THE DRY UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM CEI ENGINEERING AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. CEI ENGINEERING AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.

H. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON OR WITHIN SPECIFICATIONS: ALL WATER LINE PIPE BEDDING SHALL BE INSTALLED PER DETAIL 42A. ALL SANITARY SEWER PIPE BEDDING SHALL BE INSTALLED PER DETAIL 42B.

UTILITY NOTES

22A POINT OF CONNECTION – WATER SERVICE (PER LOCAL CODES).
22L METERED DOMESTIC WATER SERVICE ENTRY PER ARCH. PLANS (SEE SIZES THIS SHEET).
22M PROPOSED WATER METER (PER LOCAL CODES AND SPECIFICATIONS).
22Y INTERIOR BACK FLOW PREVENTER (PER ARCH. PLANS).
23A POINT OF CONNECTION – SANITARY SEWER SERVICE (PER LOCAL CODES).
23D BUILDING SANITARY SEWER SERVICE CLEAN-OUT.
23E SANITARY SEWER SERVICE ENTRY (PER ARCH. PLANS).
23H GREASE TRAP WITH CLEAN-OUT (PER ARCH. PLANS).
23J CONNECT TO EXISTING SANITARY SEWER MANHOLE.
24A POINT OF CONNECTION FOR ELECTRICAL SERVICE (PER ELECTRIC COMPANY REQUIREMENTS).
26A POINT OF CONNECTION FOR UNDERGROUND TELEPHONE (PER TELEPHONE COMPANY REQUIREMENTS).
27A POINT OF CONNECTION FOR GAS SERVICE (PER LOCAL GAS COMPANY REQUIREMENTS).
27C PROPOSED GAS METER.
31A LOCATION FOR THIS UTILITY AS SHOWN IS FOR DRAWING PURPOSES ONLY. CONTRACTOR SHALL VERIFY THE EXACT LOCATION IN FIELD PRIOR TO THE CONSTRUCTION OF THE PROPOSED UTILITY LINE TO BE CONNECTED. CONTRACTOR SHALL NOTIFY CEI ENGINEERING IF THE DESIGN AS SHOWN IS NOT ACHIEVABLE.
76A CONTRACTOR SHALL USE EXISTING WATER METER AND TAP. CONTRACTOR TO COORDINATE CONNECTION WITH THE CITY OF WICHITA WATER DEPARTMENT.
76B UNDERGROUND CONDUIT
76C ELECTRIC TRENCH AND CONDUIT TO BE COMPLETED BY CONTRACTOR. CONTRACTOR TO INSTALL 4" GRAY SCH 40 CONDUIT 4' DEEP WITH STEEL SWEEPS.
76D CONTRACTOR TO REMOVE EXISTING 6" VCP SERVICE LINE AND CUT BRICK MANHOLE AS NECESSARY TO INSTALL NEW 8" SEWER MAIN PER CITY OF WICHITA STANDARDS. CONTRACTOR TO REPAIR BRICK MANHOLE AND SEAL AROUND NEW 8" PIPE AS NECESSARY PER WICHITA CITY SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH CITY UTILITY DEPARTMENT PRIOR TO CONSTRUCTION.
76E SANITARY SEWER BEDDING PER CITY OF WICHITA STANDARD DETAILS.
76F CONTRACTOR TO COORDINATE WITH GAS COMPANY TO CONNECT TO EXISTING GAS SERVICE.

UTILITY DETAILS

40C SANITARY SEWER CLEAN-OUT
42A WATER LINE TRENCHING AND BEDDING
42B SANITARY SEWER TRENCHING AND BEDDING
76A CITY OF WICHITA PRECAST SANITARY SEWER MANHOLE

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DATE: 6/25/2015 9:45 AM
DWG NAME: 28639-UP
REV#-3

BRENT L. MASSEY 22207 REGISTERED PROFESSIONAL ENGINEER 6/25/15

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE#: 405-225-5000
SONIC America's Drive-In
Connecticut Yankee-In

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
ALL RIGHTS RESERVED. USE OF THIS PLAN IS LIMITED TO THE DESIGNATED SONIC SITE AS OWNED FOR CONSTRUCTION OF THE DRIVE-IN AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

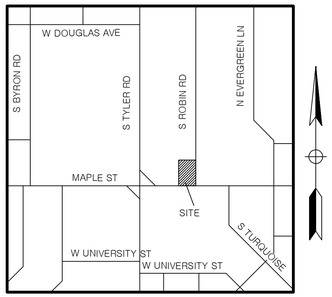
UTILITY PLAN

SHEET
C5

DWG: 28639-UP.DWG
DATE: 6/25/15

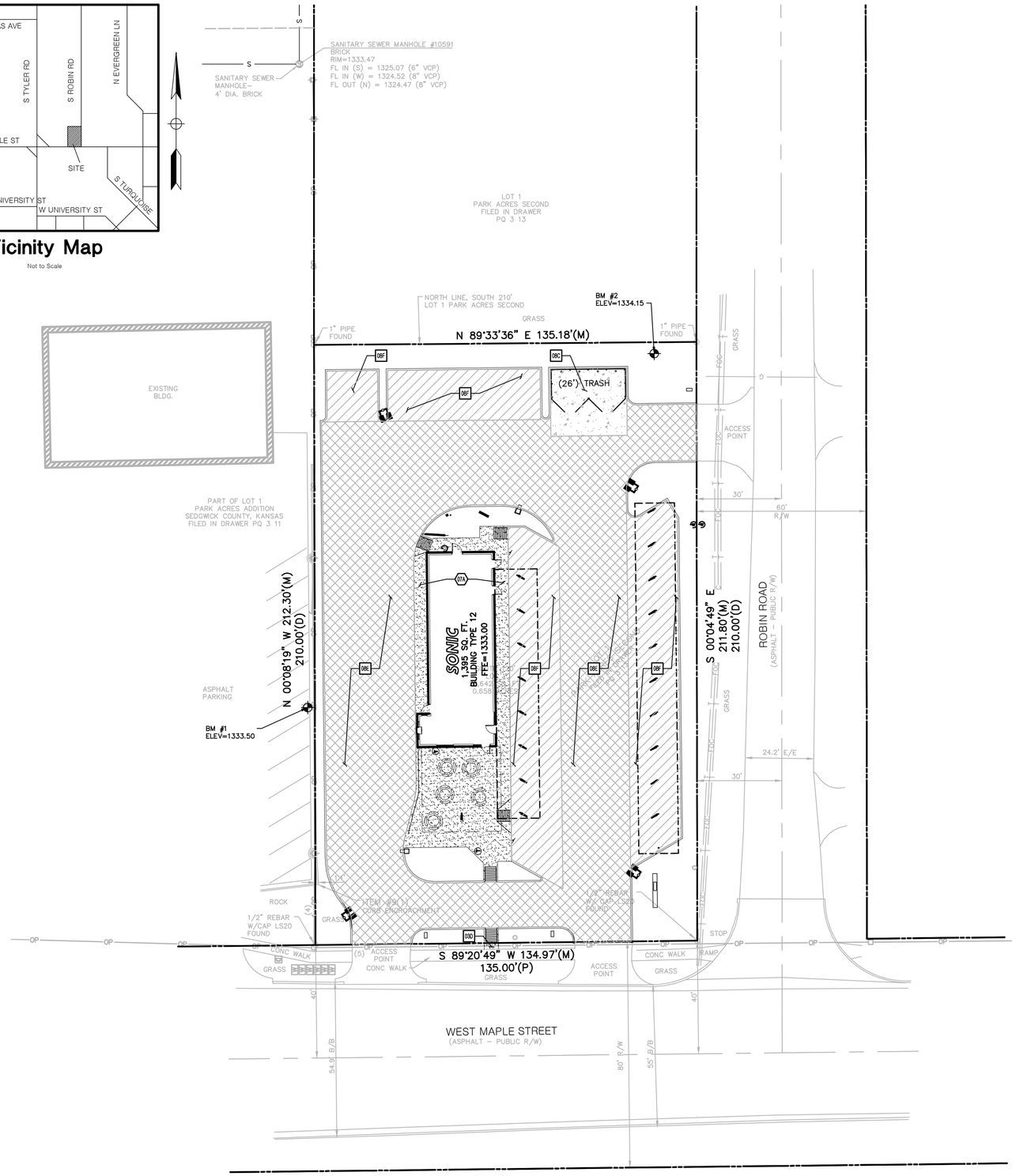
© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE



Vicinity Map

Not to Scale



Know what's **below.**
Call before you dig.

SITE BENCHMARK

BM #1:
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 84'± NORTH AND 2.5± WEST OF THE WEST PROPERTY LINE.
ELEV=1333.50'

BM #2:
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOORS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

N

0 20' 30' 40'
SCALE IN FEET

LEGEND

EXISTING

- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E ELECTRIC METER
- E UNDERGROUND ELECTRIC
- (1) OP OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T UNDERGROUND TELEPHONE
- FOC UNDERGROUND FIBER OPTIC CABLE
- G GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- ADA HANDICAP SIGN
- S SANITARY SEWER MANHOLE
- S SANITARY SEWER LINE
- VCP VITRIFIED CLAY PIPE
- GP GREASE PIT MANHOLE
- CO SANITARY SEWER CLEAN OUT
- W WATER META
- GP GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR
- 939.00 EXISTING SPOT ELEVATION
- 1020.50 / 1020.00 TOP OF CURB ELEVATION / FL OF CURB ELEVATION

GENERAL PAVING NOTES

A. ALL SUBGRADE SOIL PREPARATION SHALL BE IN ACCORDANCE WITH GEOTECHNICAL ENGINEERING SERVICES REPORT" PREPARED BY TERRACON CONSULTANTS, INC. (PROJECT #01145168).

B. ALL PAVING AND SITE PREPARATION ARE TO BE COMPLETED PER THE GEOTECHNICAL REPORT. THIS PLAN IS FOR REFERENCE PURPOSES ONLY. CEI SHALL BE HELD HARMLESS FOR ALL PAVEMENT DESIGN AND SPECIFICATION ERRORS.

C. CONTRACTOR SHALL REFERENCE THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT FOR EXPECTED SUBSURFACE CONDITIONS WHICH WILL REQUIRE REMOVAL AND OR REMEDIAL ACTION PRIOR TO PAVING THE SITE.

D. CONTRACTOR TO INSTALL EXPANSION JOINT EVERY 60' PER DETAIL 8R AND SAW CUT CONTROL JOINT EVERY 15' FOR CONCRETE PAVING PER DETAIL 8R.

PAVING LEGEND

- 08F –LIGHT DUTY CONCRETE PAVING
- 08E –STANDARD DUTY CONCRETE PAVING
- 08C –HEAVY DUTY CONCRETE PAVING
- 03D –SIDEWALK
- 07A –SIDEWALK (PER ARCH PLANS)

PAVING NOTES

07A SIDEWALK (PER ARCH. PLANS).

PRENTISS L. MASSEY 22207 REGISTERED PROFESSIONAL ENGINEER KANSAS 6/25/15

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS • PLANNERS • SURVEYORS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

DWG NAME: 28639-SP
DATE: 6/25/2015 8:20 AM
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICES: 405-225-5000

COPYRIGHT 1988-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN OWNER FOR CONSTRUCTION OF THE DRIVE-IN AT THE LOCATION SHOWN.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

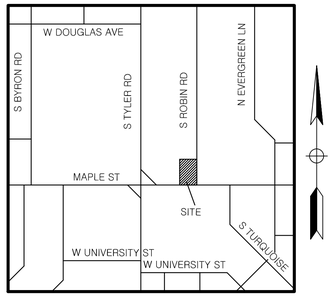
PAVING PLAN

SHEET
C6

DWG:
28639-SP.DWG
DATE: 6/25/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-SP.dwg LAST SAVED BY: JDBLE



Vicinity Map

Not to Scale

LANDSCAPE REQUIREMENTS

REQUIREMENTS	REQUIRED	PROVIDED
LANDSCAPE STREET YARD -10 SF PER LF -1 SHADE TREE OR 2 ORNAMENTALS / 500 SF	-135 LF OF FRONTAGE X 10 SF = 1,350 SF -3 SHADE TREES OR 6 ORNAMENTALS	-1,965 SF -2 SHADE TREES AND 2 ORNAMENTALS
PARKING LOT SCREENING -MIN. HT. 18" @ PLANTING. 3' AFTER 3 YEARS.	-MIN. HT. 18" @ PLANTING. 3' AFTER 3 YEARS.	-SCREEN PROVIDED
PARKING LOT TREES -1 SHADE TREE OR 2 ORNAMENTALS / 20 PARKING SPACES (1/2 OF STREET YARD TREES MAY COUNT).	-27 SPACES / 20 = 2 SHADE TREES OR 4 ORNAMENTALS	-2 SHADE TREES (1 STREET YARD BUFFER, 1 BY DUMPSTER)

Know what's **below.**
Call before you dig.

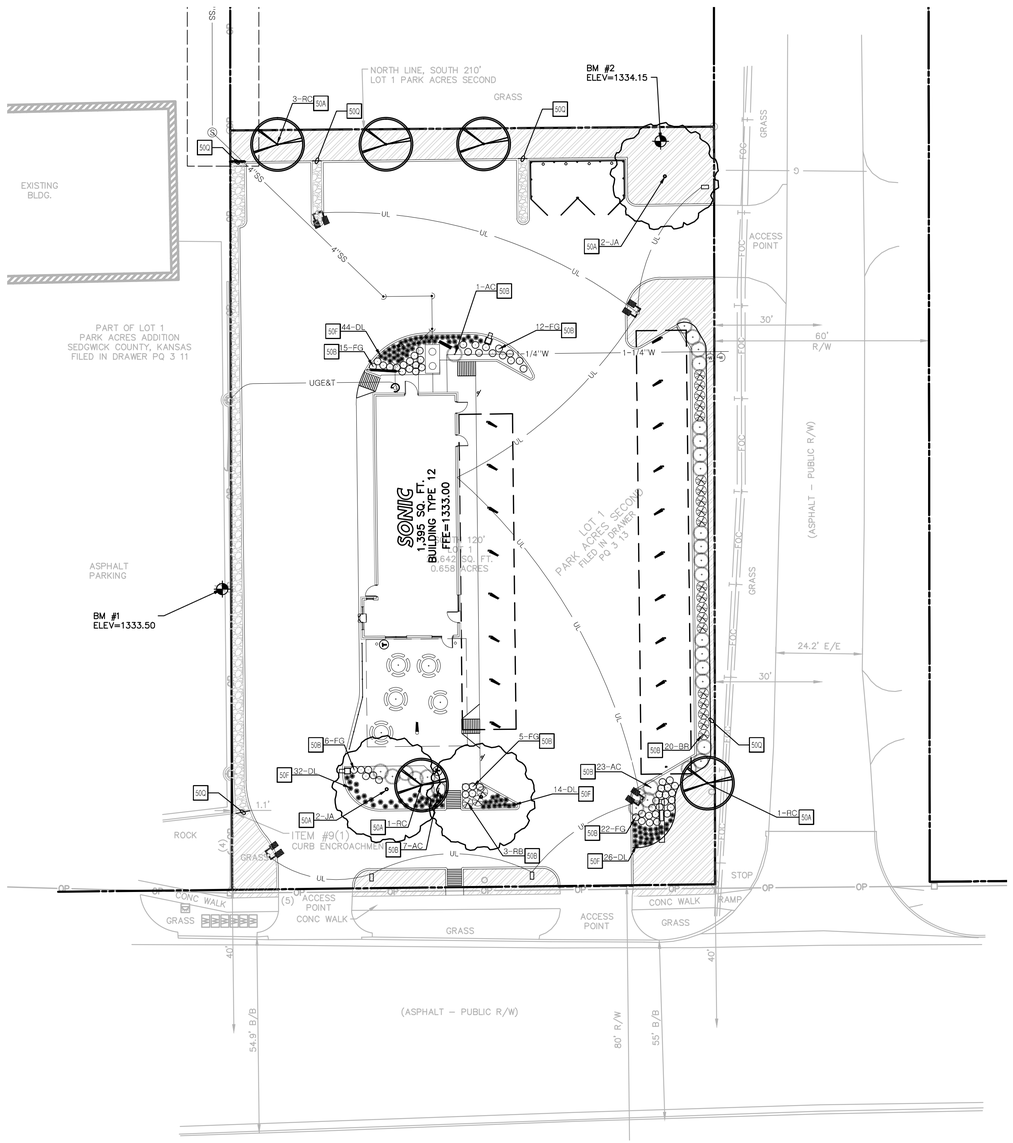
SITE BENCHMARK

BM #1
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1233'± NORTH AND 3' WEST OF THE EAST PROPERTY LINE.
ELEV=1333.50'

BM #2
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

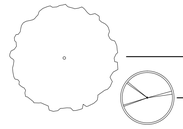
NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

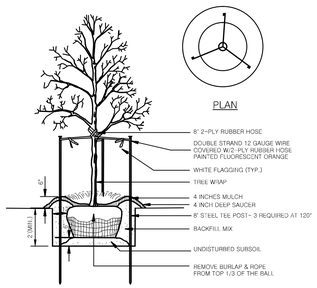
0 20' 30' 40'
SCALE IN FEET



PLANT LIST

KEY	QTY	COMMON NAME/ BOTANICAL NAME	ROOT	SIZE	SPACING
JA	3	JAPANESE ZELKOVA Zelkova serrata 'Green Vase'	B&B	2" CAL	AS SHOWN
RC	5	REDBUD Cercis canadensis 'Forest Pansy'	B&B	1" CAL.	AS SHOWN
AC	27	COMPACT BURNING BUSH Euonymus alatus 'compacta'	CONT.	MIN. 18" HT. 3 GAL.	36" O.C.
RB	24	REDLEAF BARBERRY Berberis thunbergii 'Atropurpurea'	CONT.	MIN. 18" HT. 3 GAL.	36" O.C.
FG	64	DWARF FOUNTAIN GRASS Pennisetum alopecuroides 'Hameln'	CONT.	1 GAL.	18"-24" O.C.
DL	123	DAYLILY Hemerocallis 'Stella d'oro'	CONT.	4" CONT.	18" O.C.

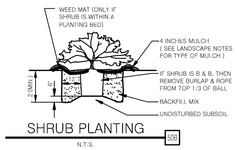




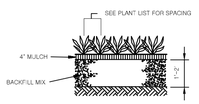
PLAN

NOTE: SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.

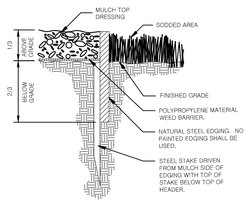
TREE PLANTING
N.T.S. 50A



SHRUB PLANTING
N.T.S. 50B



GROUND COVER PLANTING
N.T.S. 50F



STEEL EDGING
N.T.S. 50Q

LEGEND

EXISTING

- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- ELECTRIC METER
- E — UNDERGROUND ELECTRIC
- (1) OP — OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T — UNDERGROUND TELEPHONE
- FOC — UNDERGROUND FIBER OPTIC CABLE
- GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- ADA HANDICAP SIGN
- SANITARY SEWER MANHOLE
- S — SANITARY SEWER LINE
- VCP VITRIFIED CLAY PIPE
- GREASE PIT MANHOLE
- SANITARY SEWER CLEAN OUT
- WM WATER METER
- GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR
- EXISTING SPOT ELEVATION
- 1020.50 TOP OF CURB ELEVATION
- 1020.00 FL OF CURB ELEVATION

PROPOSED

- TURF TYPE TALL FESCUE SOD
- 2"-3" DIA. RIVER ROCK, 4" DEPTH.
- TYPICAL PLANTING WITH QUANTITY AND KEY (SEE PLANT LIST)

GENERAL LANDSCAPE NOTES

A. LOCATE ALL UTILITIES AND SITE LIGHTING CONDUITS BEFORE LANDSCAPE CONSTRUCTION BEGINS.

B. NOTIFY LANDSCAPE ARCHITECT OR DESIGNATED REPRESENTATIVE OF ANY LAYOUT DISCREPANCIES PRIOR TO ANY PLANTING.

C. ALL LANDSCAPE MATERIALS SHALL CONFORM TO THE AMERICAN NURSERY STOCK STANDARD, LATEST EDITION, PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION. CONTRACTOR SHALL ASSUME MAINTENANCE RESPONSIBILITIES FOR A MINIMUM OF ONE (1) YEAR OR UNTIL PLANTINGS ARE ESTABLISHED, WHICHEVER IS LONGER.

D. ALL DISTURBED AREAS DESIGNATED ON THE GRADING PLAN SHALL BE SODDED
ALL SLOPES GREATER THAN 3:1 TO BE SOD SHALL BE STAKED AS
APPROPRIATE TO PREVENT SOD SLIDE IN PLANT BEDS.

E. MULCH SHALL BE SHREDDED HARDWOOD MULCH 4" DEPTH UNLESS OTHERWISE STATED

F. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SODDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED IN ALL AREAS. ANY RELOCATED TREES SHALL BE MAINTAINED UNTIL SUCH POINT AS TREE IS RE-ESTABLISHED. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

G. MAINTAIN 5' MIN. HORIZONTAL SEPARATION BETWEEN TREE PLANTINGS AND ALL UTILITIES.

H. ACCEPTANCE OF GRADING AND SODDING SHALL BE BY LANDSCAPE ARCHITECT AND/OR OWNER. THE CONTRACTOR SHALL ASSUME MAINTENANCE RESPONSIBILITIES FOR A MINIMUM OF ONE (1) YEAR OR UNTIL SECOND CUTTING, WHICHEVER IS LONGER. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, RESODDING AND OTHER OPERATIONS NECESSARY TO KEEP ALL LAWN AREAS IN A THRIVING CONDITION. UPON FINAL ACCEPTANCE, OWNER SHALL ASSUME ALL MAINTENANCE RESPONSIBILITIES. AFTER LAWN AREAS HAVE BEEN SODDED, AREAS WHICH FAIL TO SHOW A UNIFORM STAND OF GRASS FOR ANY REASON WHATSOEVER SHALL BE RE-SODDED UNTIL ALL AREAS ARE COVERED WITH A SATISFACTORY STAND OF GRASS. MINIMUM ACCEPTANCE OF SODDED LAWN AREAS MAY INCLUDE SCATTERED BARE SPOTS, NONE OF WHICH ARE LARGER THAN 1 SQUARE FOOT, AND WHEN COMBINED DO NOT EXCEED 2% OF TOTAL SODDED LAWN AREA.

☐ LANDSCAPE DETAILS

50A TREE PLANTING
50B SHRUB PLANTING
50F GROUND COVER PLANTING
50Q STEEL EDGING

NOTE: FULL IRRIGATION SYSTEM TO BE INSTALLED. DESIGN SHALL MEET HEAD TO HEAD REQUIREMENTS AND PROVIDE 100% COVERAGE FOR ALL PLANT MATERIAL. CONTRACTOR SHALL COORDINATE SLEEVING AND LATERAL LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO PAVEMENT PREPARATION OR INSTALLATION.

RICHARD W. ROBERTS LICENSED 662 KANSAS LANDSCAPE ARCHITECT 6/24/15

REVISIONS | NO | DATE

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3108 S.W. REGENCY PARKWAY, SUITE 2 (479) 273-9472
Bentonville, AR 72712 FAX (479) 273-0844

JOB NO.: 28639
DATE: 6/24/2015 5:7 PM
DWG NAME: 28639-LS
REV-1

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000

COPYRIGHT 1996-2008 AMERICA'S DRIVE-IN CORP.
DESIGNATED SONIC DRIVE-IN OWNER FOR CONSTRUCTION OF THE SONIC DRIVE-IN AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
812 W. MAPLE STREET
WICHITA, KS

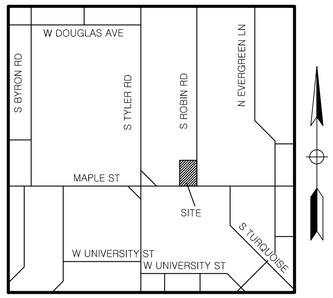
LANDSCAPE PLAN

SHEET
C7

DWG: 28639-LS.DWG
DATE: 6/24/15

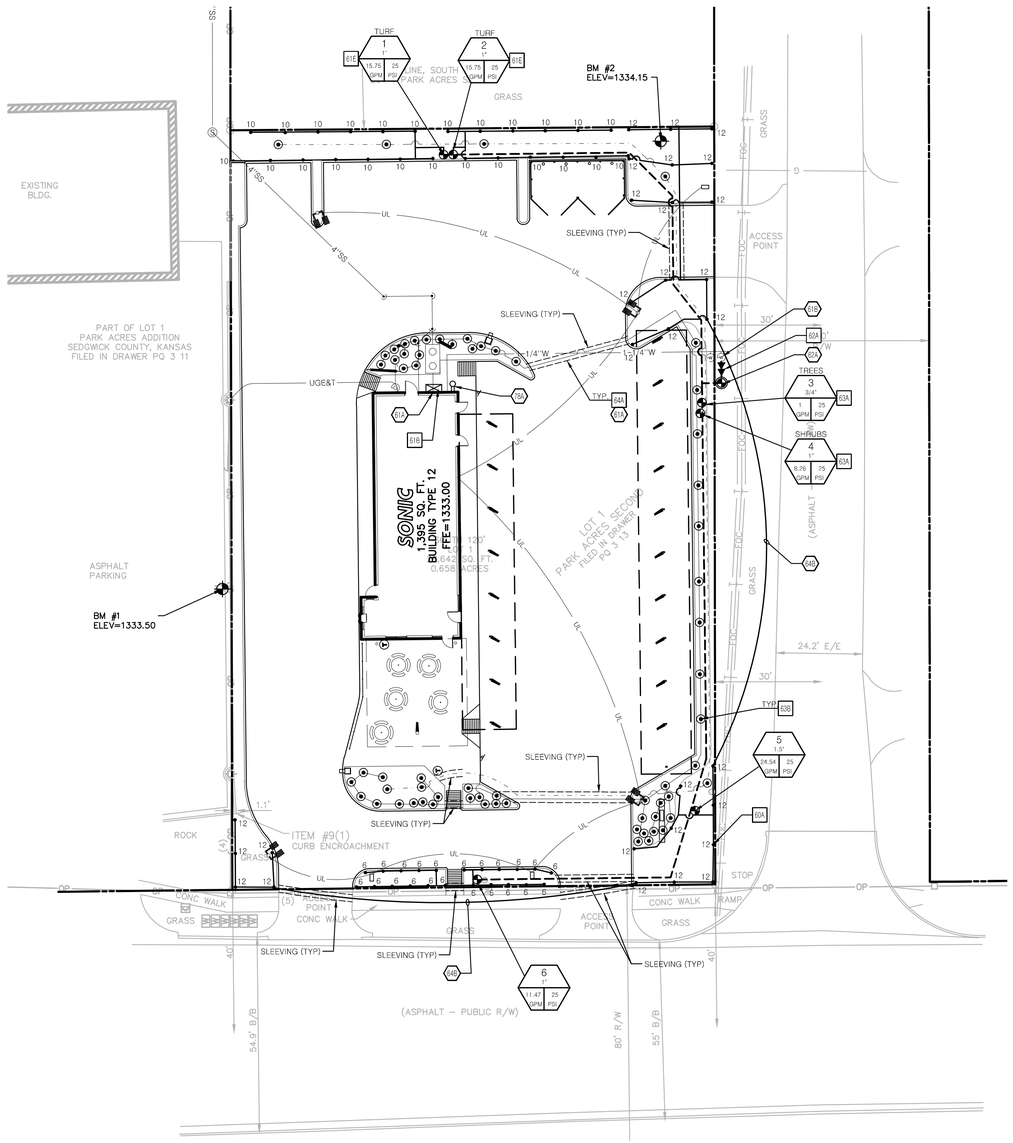
JOB # 28639 DRAWING: 28639-LS.dwg LAST SAVED BY: JOBBLE

© 2015 CEI ENGINEERING ASSOCIATES, INC.



Vicinity Map

Not to Scale



IRRIGATION PIPE SCHEDULE

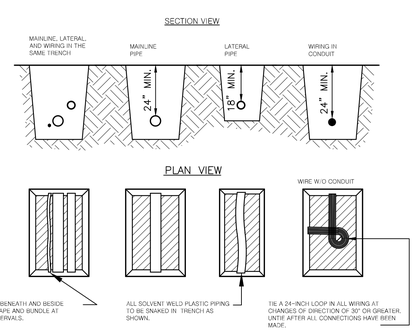
SDR 13.5 CL 315 PIPE SCHEDULE	
PIPE SIZE	MAX. SAFE FLOW G.P.M.
¾"	8
1"	14

PVC CLASS 200 PIPE SCHEDULE	
PIPE SIZE	MAX. SAFE FLOW G.P.M.
1-¼"	26
1-½"	35
2"	55
2-½"	80
3"	120

NOTE:
IN SOME CASES, IRRIGATION PIPE SIZES SHOWN ON IRRIGATION PLANS ARE LARGER THAN THE SIZE SHOWN ON PIPE SCHEDULE DUE TO HYDRAULIC LOSSES. USE PIPE SIZES AS SHOWN ON IRRIGATION PLANS IF APPLICABLE.

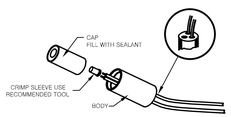
SPRINKLER NOZZLE LIST

KEY	DESCRIPTION
6	1804-6-VAN
10	1804-10-VAN
12	1804-12-VAN

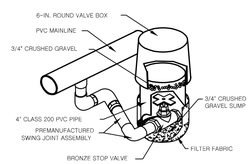


NOTES:
1. ALL LATERAL LINES SHALL BE SDR-13.5 PVC PIPE. ALL MAIN LINES SHALL BE SDR-21 PVC PIPE.
2. SLEEVES BELOW ALL HARDSCAPE ELEMENTS SHALL BE SCH. 40 PVC AND SHALL BE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.
3. ALL LATERAL LINES SHALL BE BURIED NO LESS THAN 18" DEEP. ALL MAIN LINES AND ELECTRICAL LINES SHALL BE NO LESS THAN 24" DEEP.

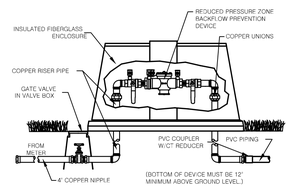
IRRIGATION PIPE AND WIRE TRENCHING
N.T.S. 64A



WIRE CONNECTION
N.T.S. 61A



MANUAL DRAIN VALVE
N.T.S. 62C



REDUCED PRESSURE BACKFLOW PREVENTER
N.T.S. 60A

LEGEND

EXISTING

- MONUMENT FOUND — ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E ELECTRIC METER
- E UNDERGROUND ELECTRIC
- (1) OP OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T UNDERGROUND TELEPHONE
- FOC UNDERGROUND FIBER OPTIC CABLE
- G GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- HANDICAP SIGN
- SANITARY SEWER MANHOLE
- S SANITARY SEWER LINE
- VCP VITRIFIED CLAY PIPE
- GP GREASE PIT MANHOLE
- SANITARY SEWER CLEAN OUT
- W WATER METER
- GP GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR
- EXISTING SPOT ELEVATION
- 1020.50 TOP OF CURB ELEVATION
- 1020.00 FL OF CURB ELEVATION

PROPOSED

- BOUNDARY LINE/RIGHT OF WAY LINE
- LATERAL LINE (SEE PIPE SCHEDULE)
- 1.5" MAIN LINE
- SLEEVING (SEE DETAIL 64A FOR SIZING)
- ZONE DESIGNATION
- VALVE SIZE
- GPM / PSI — DESIGN PRESSURE - POUNDS PER SQUARE INCH
- DESIGN DEMAND - GALLONS PER MINUTE

GENERAL IRRIGATION NOTES

A. IRRIGATION CONTRACTOR SHALL TEST EXISTING STATIC PRESSURE ON SITE PRIOR TO CONSTRUCTION. SHOULD EXISTING SITE PRESSURE BE ABOVE OR BELOW 50# STATIC BY 5 PSI OR MORE, CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.

B. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR INSTALLING MANUAL DRAIN VALVES AT LOWEST POSSIBLE ELEVATION ON IRRIGATION MAIN SO AS TO PROVIDE POSITIVE DRAINAGE OF IRRIGATION MAIN DURING WINTER MONTHS, OR PROVIDE BLOWOUT ASSEMBLY, INSTALLATION SHALL BE PER DETAIL 62C.

C. ALL LATERAL LINES SHALL BE EQUIPPED WITH AUTOMATIC DRAIN VALVES AT LOW POINTS. TO BE INSTALLED PER MANUFACTURER'S DETAILS AND SPECIFICATIONS.

D. CONTRACTOR SHALL COORDINATE CONTROLLER LOCATION WITH GENERAL CONTRACTOR.

E. CONTRACTOR SHALL COORDINATE CONSTRUCTION OF IRRIGATION SYSTEM WITH GENERAL CONTRACTOR AND LANDSCAPE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION.

F. LOCATION FOR THIS UTILITY AS SHOWN IS FOR DRAWING PURPOSES ONLY. CONTRACTOR SHALL VERIFY THE EXACT LOCATION IN FIELD PRIOR TO THE CONSTRUCTION OF THE PROPOSED UTILITY LINE TO BE CONNECTED. CONTRACTOR SHALL NOTIFY THE ENGINEER IF THE DESIGN AS SHOWN IS NOT ACHIEVABLE.

G. ALL R.C.V. CONTROLLER WIRES ARE TO BE IN CONDUIT WHILE UNDER PAVING. CONDUIT TO BE INSTALLED BY GENERAL CONTRACTOR. ROUTING OF R.C.V. WIRES TO CONTROL VALVES SHALL BE BY THE IRRIGATION CONTRACTOR.

H. ALL BELOW GRADE LOW VOLTAGE WIRING CONNECTIONS SHALL BE INSTALLED PER DETAIL 61A.

I. DO NOT INSTALL IRRIGATION AT PYLON/MONUMENT SIGN LOCATION UNTIL SIGN HAS BEEN INSTALLED.

J. MINIMUM COVER FROM TOP OF PIPING TO FINISHED GRADE SHALL BE AS DESCRIBED IN THE LANDSCAPE IRRIGATION SECTION OF THE SITEWORK SPECIFICATIONS.

K. IRRIGATION PIPE AND WIRING TO BE INSTALLED PER DETAIL 64A.

IRRIGATION DETAILS

60A POP-UP IRRIGATION HEAD. SEE SPRINKLER NOZZLE LIST FOR SPRAY BODY AND NOZZLE TYPE (INSTALL PER MANUFACTURER'S DETAILS AND SPECIFICATIONS)
61B CONTROLLER, RAINBIRD ESP 8 LXME, WALL MOUNTED IN PLASTIC LOCKABLE CABINET. (INSTALL PER MANUFACTURER'S DETAILS AND SPECIFICATIONS)
61E ELECTRIC VALVE AND BOX. RAINBIRD PEB SERIES. SEE ZONE FOR SIZE. (INSTALL PER MANUFACTURER'S DETAILS AND SPECIFICATIONS)
62A 1" REDUCED PRESSURE BACKFLOW PREVENTER
63A ELECTRIC VALVE AND BOX. RAINBIRD COMMERCIAL CONTROL ZONE KIT. SEE SIZE AND FLOW CAPACITY REQUIREMENT AT ZONE LABEL. (INSTALL PER MANUFACTURER'S DETAILS AND SPECIFICATIONS)
63B MULTI-OUTLET EMITTER, RAINBIRD XBD-81 (INSTALL PER MANUFACTURER'S DETAILS AND SPECIFICATIONS)
SHRUBS - 2 EMITTERS EACH
TREES - 4 EMITTERS EACH

IRRIGATION NOTES

61A CONDUIT FOR R.C.V. WIRES BY GENERAL CONTRACTOR. ROUTING TO CONTROL VALVES BY IRRIGATION CONTRACTOR.
61B 1" IRRIGATION METER WITH 1.5" TYPE K COPPER SERVICE BY GENERAL CONTRACTOR.
62A 1.5" MASTER CONTROL VALVE. RAINBIRD - PEB SERIES. (INSTALL PER MANUFACTURER'S DETAILS AND SPECIFICATIONS)
64B IRRIGATION PIPING SHOWN HERE FOR DRAWING PURPOSES ONLY: CONTRACTOR SHALL INSTALL MAIN LINE, LATERALS, SPRAY HEADS, ETC. WITHIN PROPERTY
78A RAIN / FREEZE SENSOR. RAINBIRD WRC-RFC. COORDINATE INSTALLATION LOCATION WITH OWNER. ENSURE NO STRUCTURE WILL BLOCK RAIN FROM ANY DIRECTION. (INSTALL PER MANUFACTURER'S DETAILS AND SPECIFICATIONS)

Know what's **below.**
Call before you dig.

SITE BENCHMARK
BM #1
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1233'± NORTH AND 3' WEST OF THE EAST PROPERTY LINE.
ELEV=1333.50
BM #2
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

N

0 20' 30' 40'
SCALE IN FEET

RICHARD W. ROGERS LICENSED 662 LANDSCAPE ARCHITECT 6/24/15

NO	DATE	REVISIONS

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3108 S.W. REGENCY PARKWAY, SUITE 2 (479) 273-9472
Bentonville, AR 72712 FAX (479) 273-0844
DWG NAME: 28639-LS JOB NO.: 28639
REV-1 DATE: 6/24/2015 5:7 PM

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICES: 405-235-5000

SONIC® DriveIn Restaurants

COPYRIGHT 1988-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN THE EXPRESS WRITTEN PERMISSION OF THE OWNER AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

IRRIGATION PLAN

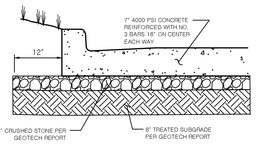
SHEET
C7.1

DWG:
28639-LS.DWG
DATE: 6/24/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-LS.dwg LAST SAVED BY: JDIBBLE

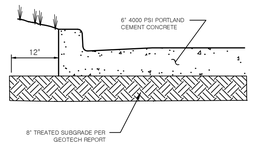
SONIC



NOTES:

1. THE TREATED SUBGRADE SHALL BE COMPACTED PER GEOTECHNICAL RECOMMENDATIONS.
2. CONTRACTOR SHALL VERIFY THE ABOVE DETAILS WITH THE SUBSURFACE EXPLORATION PREPARED GEOSERVICES, TERRACON CONSULTANTS, INC. REPORT DATED: JANUARY 5, 2015 PROJECT NUMBER 01145168. PRIOR TO CONSTRUCTION, ALL DISCREPANCIES SHALL BE CLARIFIED WITH SONIC'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION. (TERRACON CONSULTANTS INC., TERRACON PROJECT NUMBER 01145168).

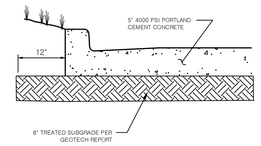
HEAVY DUTY CONCRETE PAVING 08C



NOTES:

1. THE SUBGRADE SHALL BE COMPACTED PER GEOTECHNICAL RECOMMENDATIONS.
2. CONTRACTOR SHALL VERIFY THE ABOVE DETAILS WITH THE SUBSURFACE EXPLORATION PREPARED GEOSERVICES, TERRACON CONSULTANTS, INC. REPORT DATED: JANUARY 5, 2015 PROJECT NUMBER 01145168. PRIOR TO CONSTRUCTION, ALL DISCREPANCIES SHALL BE CLARIFIED WITH SONIC'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION. (TERRACON CONSULTANTS INC., TERRACON PROJECT NUMBER 01145168).

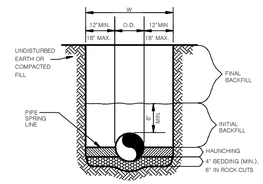
STANDARD DUTY CONCRETE PAVING 08D



NOTES:

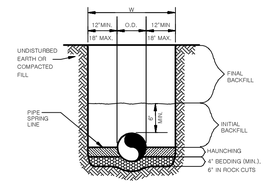
1. THE SUBGRADE SHALL BE COMPACTED PER GEOTECHNICAL RECOMMENDATIONS.
2. CONTRACTOR SHALL VERIFY THE ABOVE DETAILS WITH THE SUBSURFACE EXPLORATION PREPARED GEOSERVICES, TERRACON CONSULTANTS, INC. REPORT DATED: JANUARY 5, 2015 PROJECT NUMBER 01145168. PRIOR TO CONSTRUCTION, ALL DISCREPANCIES SHALL BE CLARIFIED WITH SONIC'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION. (TERRACON CONSULTANTS INC., TERRACON PROJECT NUMBER 01145168).

LIGHT DUTY CONCRETE PAVING 08F



WATER LINE & FORCE MAIN 40A

N.T.S.



SANITARY SEWER 40B

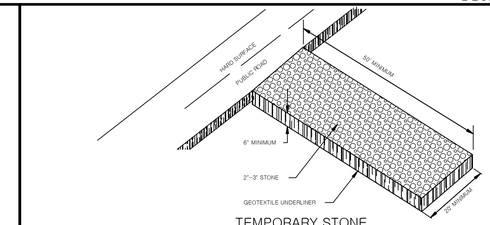
N.T.S.

GENERAL NOTES:

1. BEDDING SHALL BE CLASS I–A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I–B COMPACTED TO 85% STANDARD PROCTOR. (SEE SPECIFICATIONS FOR GRADATION)
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I–A OR CLASS I–B OR CLASS II COMPACTED TO 85% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I–A WORKED BY HAND, OR CLASS I–B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. AND 4
6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV–A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321, LATEST EDITION.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV–A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS)

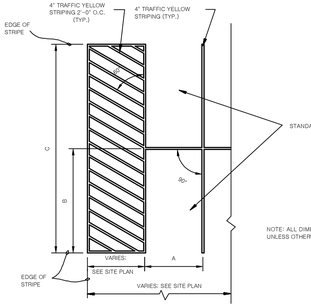
SANITARY SEWER AND WATER LINE TRENCHING AND BEDDING

N.T.S.



TEMPORARY STONE CONSTRUCTION ENTRANCE 55A

N.T.S.



NOTE: ALL DIMENSIONS ARE TO ℄ OF STRIPE UNLESS OTHERWISE INDICATED

DIMENSION CHART									
A	9'	9.5'	10'	9'	9.5'	10'	9'	9.5'	10'
B	18'	18'	18'	19'	19'	19'	20'	20'	20'
C	36'	36'	36'	38'	38'	38'	40'	40'	40'

NOTE: SEE SITE PLAN FOR TOTAL LAYOUT

90° PARKING SPACE STRIPING 08B

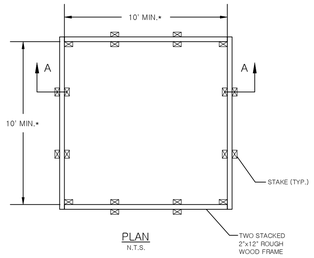
N.T.S.

NOTES:

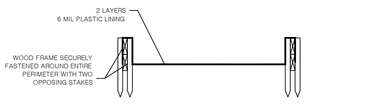
1. REQUIRED REINFORCEMENT WILL BE No. 3 BARS 24" O.C. EACH WAY MAX. SPACING, OR 6 x 6 – W1.4 X W1.4 WWF
2. INSTALL 1/2" EXPANSION JOINT MATERIAL AT AREAS WERE PROPOSED SIDEWALK ABUTTS EXISTING SIDEWALK, CURBS, AND OR STRUCTURE. (JOINT MAT'L.: TO MEET ASTM D994 OR D1751)

CONCRETE SIDEWALK 08D

N.T.S.



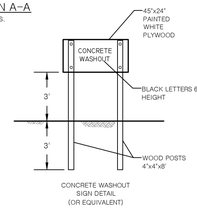
PLAN
N.T.S.



SECTION A–A
N.T.S.

NOTES:

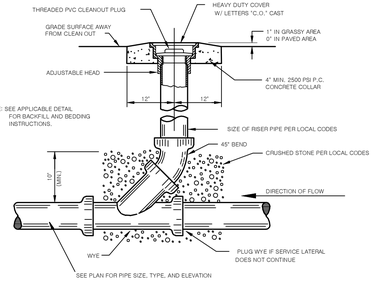
1. •DENOTES THE INTERIOR DIMENSION.
2. CONCRETE WASHOUT SHALL BE AT LEAST 50 FT. FROM ANY STORM SEWER INLET.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.



CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)

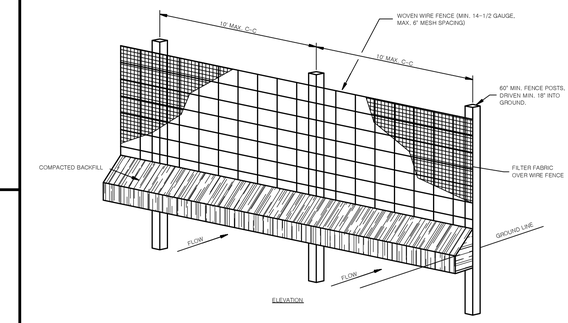
TEMPORARY CONCRETE WASHOUT (ABOVE GRADE) 85C

N.T.S.

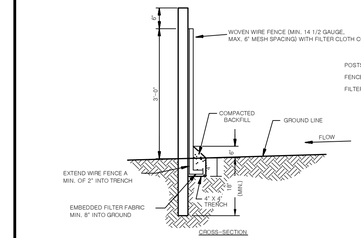


SANITARY SEWER CLEAN–OUT 40C

N.T.S.



ELEVATION



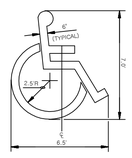
POSTS: STEEL EITHER T OR U TYPE OR 2"x2" HARDWOOD
FENCE: WOVEN WIRE, 14–1/2 GA. 6" MAX. MESH OPENING
FILTER FABRIC:

1. MIRAFI 140NS
2. PHILLIPS 66 SUPAC 4NP
3. DUPONT TYPAR 3341
4. OR APPROVED EQUAL

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

TEMPORARY SILT FENCE 54A

N.T.S.

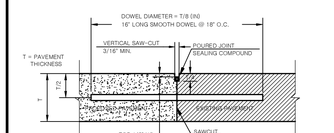


NOTES:

LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING

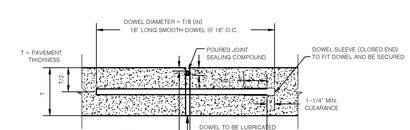
ACCESSIBLE PARKING SYMBOL 09U

N.T.S.



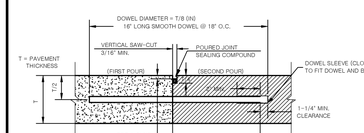
NOTE:
1. DOWEL BARS SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY BY USE OF A MECHANICAL RIG.
2. DRILLING BY HAND IS NOT ACCEPTABLE. PUSHING DOWEL BARS INTO GREEN CONCRETE IS NOT ACCEPTABLE.

BUTT JOINT



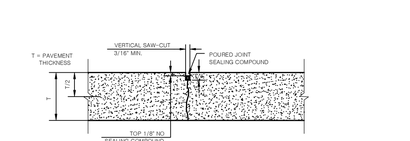
NOTE:
1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE.

TRANSVERSE EXPANSION JOINT



NOTE:
1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE.

CONSTRUCTION JOINT



CONTRACTION JOINT

CONCRETE JOINT DETAILS 09R

N.T.S.

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273–9472
FAX (479) 273–0844

JOB NO.: 28639
DATE: 6/25/2015 8:20 AM
DWG NAME: 28639–SP
REV–3

BRENT L. MASSEY 22207 ARKANSAS REGISTERED PROFESSIONAL ENGINEER
6/25/15

NO	DATE	REVISIONS

SONIC CORPORATION
320 JOHN'S BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-3000

SONIC DRIVE–IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

DETAIL SHEET 1

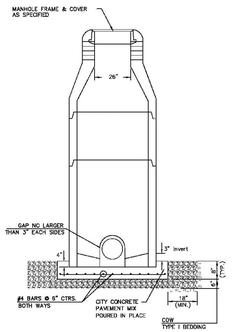
SHEET
C8

DWG: 28639–SP.DWG
DATE: 6/25/15

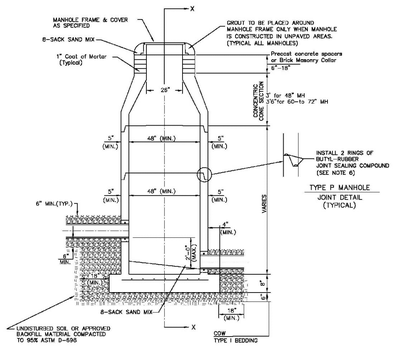
COPYRIGHT 1998–2006 AMERICA'S DRIVE–IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC OWNER AND FRANCHISEE OF THE SPECIFIED LOCATION.

JOB # 28639 DRAWING: 28639–SP.dwg LAST SAVED BY: JDIBBLE

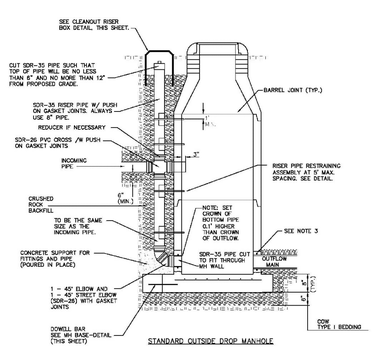
© 2015 CEI ENGINEERING ASSOCIATES, INC.



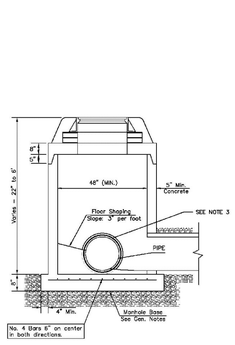
DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale



STANDARD MANHOLE
Not to Scale



STANDARD OUTSIDE DROP MANHOLE
Not to Scale

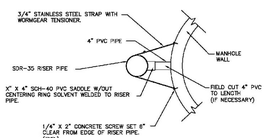


SHALLOW MANHOLE
Not to Scale

= COW TYPE I BEDDING = UNDISTURBED SOIL

PRECAST MANHOLE GENERAL NOTES

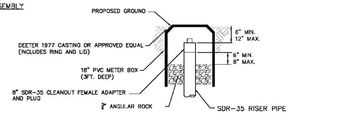
1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
5. EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
6. JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
7. ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12' DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS. AS INDICATED BY THE PLANS.
8. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
9. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
10. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
11. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 6 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITH-OUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACE AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
12. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO.4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
13. WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
14. OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKET'S SHALL BE USED WITH P.V.C. PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
15. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
16. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
17. THE VERTICAL DROP IN STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
18. STANDARD MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
19. PRECAST CONCRETE SPACERS OR BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCRETE CONE. THE COLLAR WILL HAVE 6" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A FINAL COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
20. THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.
21. REFER TO PLANS FOR SIZE OF OUTSIDE DROP RISER, SADDLES AND CROSS.



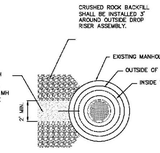
RISER PIPE RESTRAINING ASSEMBLY
Not to Scale

SANITARY SEWER MANHOLE DIAMETERS

DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	>15'-30'	21"-30"
6'	>30'	36"-60"



CLEANOUT RISER BOX DETAIL
Not to Scale



MH BASE DETAIL
Not to Scale

REVISED JANUARY 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST SANITARY SEWER MANHOLE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER | OCA NUMBER | DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SS-101

SWP-CI "Big Red"

74A

Curb Inlet Protector

By ASP Enterprises and Storm Water Products

Temporary and Reusable Solutions for Sediment Control

A.S.P. ENTERPRISES, INC.
Your GeoSource Distributor

- Reusable Curb Inlet Protection
- Environmentally Friendly
- Drops out sediment by dissipating the water energy





"Big Red" Filter Advantages:

- **Easy to Install**
- **Versatile for a variety of curb inlets**
- **Reusable and Extremely easy to clean**
- **Made from 90% Inert Recycled Materials**

The SWP-CI "Big Red" Filter is a **REUSABLE** inlet protector that keeps out sediment throughout the entire construction project. There are no pockets to fill, no velcro bags, no assembly etc. Simply place in front of the inlet, make sure it lays in the contour, and you are DONE!

Simple installation also translates into simple removal, cleanup and re-use at the next project or phase. Maintenance is simple as well by lifting the unit from the inlet, shaking the mud off of it, removing the sediment on the concrete, and placing the unit back. If it is severely filled with sediment, wash it out in a vegetated area and it is as good as new.



All of these features and benefits combine to make the SWP-CI "Big Red" curb inlet protector the **perfect choice** for all curb inlet applications. It comes in 54" long for single curb inlets and 104" lengths for double curb inlets.



- **High Flow Rate**
- **Made of Durable High-Strength Geotextile**
- **Fully Reusable**
- **Made of Recycled Materials**

SWP-CI "Big Red"

74A

Curb Inlet Protector

By ASP Enterprises and Storm Water Products

A.S.P. ENTERPRISES, INC.
Your GeoSource Distributor

Specifications:
1. Infill Material: shredded recycled rubber tires
2. Weight: approx. 10 lbs per linear foot
3. Diameter: approx. 8"

Geotextile fabric made of durable high flow fabric with the following properties:

Property	Test Method	Units		Typical Value
Weight	ASTM D5261	oz/sq. yd		9.3
Grab Tensile Strength	ASTM D4632	lb	warp	250
			fill	290
Tear Strength (Trapezoid)	ASTM D4533	lb	warp	60
			fill	50
Burst	ASTM D3786	psi		440

(Efforts were made to determine flow rate-the fabric exceeded all capacities of the testing equipment)



ASP Enterprises and Storm Water Products assumes no liability for the accuracy or completeness of this information or for the ultimate use by the purchaser. ASP and SWP disclaims any and all express, implied, or statutory standards, warranties or guarantees, including without limitation any implied warranty as to merchantability or fitness for a particular purpose or arising from a course of dealing or usage of trade as to any equipment, materials or information furnished herewith. This document should not be construed as engineering advice.

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

DWG NAME: 28639-SP
REV-3
JOB NO.: 28639
DATE: 6/25/2015 8:20 AM

PRELIMINARY NOT FOR CONSTRUCTION
BRENT L. MASSEY 22207 REGISTERED PROFESSIONAL ENGINEER
6/25/15

NO	DATE	REVISIONS

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-5022

SONIC®

COPYRIGHT 1988-2008 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC FRANCHISEE OR EMPLOYEE OF THE SONIC-IN AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
86'2 W. MAPLE STREET
WICHITA, KS

DETAIL SHEET 2

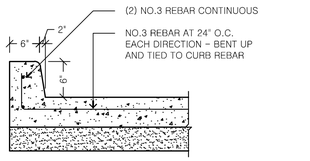
SHEET
C8.1

DWG:
28639-SP.DWG
DATE: 6/25/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-SP.dwg LAST SAVED BY: JOBBLE

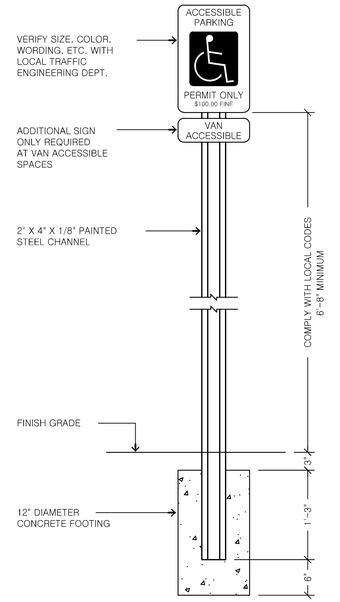
SONIC



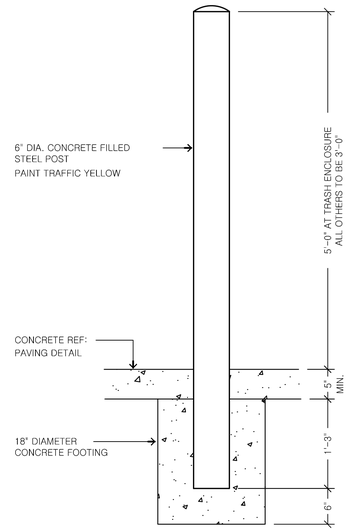
NOTE:
CURB TO BE POURED INTEGRAL WITH DRIVE

NOTE:
UPPER 12" OF SUBGRADE MUST BE A LOW PLASTICITY COHESIVE SOIL W/MIN. CBR VALUE OF 5, COMPACTED TO APPROX. 95% STD. PROCTOR. THESE ARE MIN. RECOMMENDATIONS. CONFIRM DETAILS WITH GEOTECHNICAL INVESTIGATION.

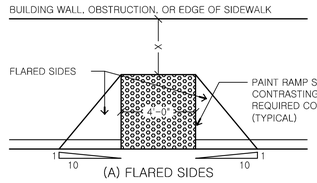
23 MONOLITHIC CURB



3 HANDICAP SIGN

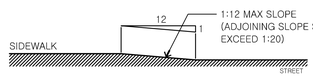


4 BOLLARD

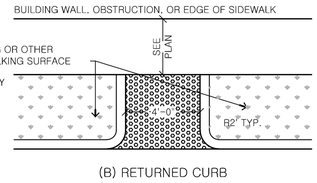


(A) FLARED SIDES

IF "X" IS LESS THAN 48" THEN THE SLOPE OF THE FLARED SIDE SHALL NOT EXCEED 1:12



CURB RAMP SLOPES



(B) RETURNED CURB

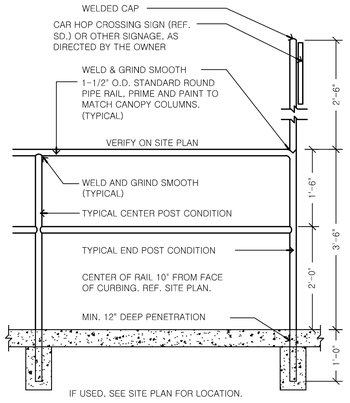
NOTES:
RAMPS MUST COMPLY WITH NATIONAL AND LOCAL CODES

ALL "ACCESSIBLE ROUTE" SIDEWALKS FROM PARK SPACE RAMP TO THE PATIO AREA OR RESTROOMS SHALL COMPLY WITH A.D.A.A.G. STANDARDS FOR WIDTH, CROSS SLOPE (1:50 OR LESS), AND RUNNING SLOPE (LESS THAN 1:20)

PROVIDE TACTILE SURFACING ON RAMP SURFACES: 1/8" DEEP GROOVES 1/4" - 3/4" WIDE, AND 2" O.C. ARRANGED SO THAT WATER WILL NOT ACCUMULATE

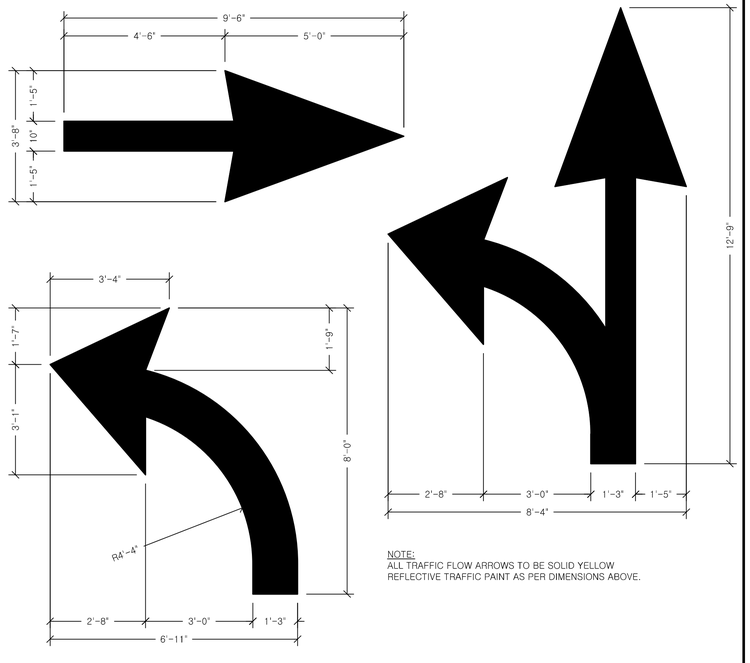
PROVIDE TRUNCATED DOME DETECTION AS REQUIRED BY LOCAL CODES

19 CURB RAMPS



IF USED, SEE SITE PLAN FOR LOCATION.

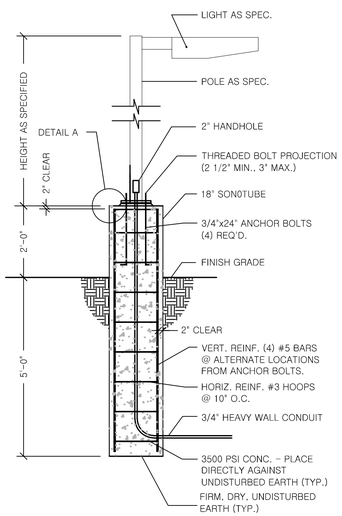
29 RAILING W/ SIGNAGE

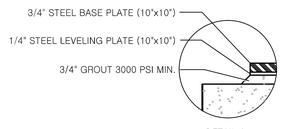


NOTE:
ALL TRAFFIC FLOW ARROWS TO BE SOLID YELLOW REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS ABOVE.

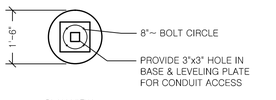
16 TRAFFIC FLOW ARROW

NOTES:
1. THIS FOUNDATION DESIGN IS BASED ON AN ALLOWABLE BEARING CAPACITY OF 2000 p.s.f. IF THESE SOIL CONDITIONS DO NOT EXIST, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING NEW DESIGN BASED ON ACTUAL SOIL CONDITIONS.
2. THIS FOUNDATION IS BASED ON WIND LOADS OF 90 mph (3 SEC GUST).
3. ALL REINFORCING STEEL SHALL CONFORM TO ASTM GRADE 60.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE BASE PLATE BOLT PATTERN.
5. WHEN ORDERING BLOCK FINISHES, ADDITIONAL LEAD TIME IS REQUIRED.
6. SEE ELECTRICAL PLANS FOR WIRING AND FIXTURE LAYOUT AND DETAILS.
7. SEE ARCHITECTURAL PLANS FOR LIGHT AND POLE SPEC.
8. VERIFY ANCHOR BOLT LAYOUT WITH POLE MANUFACTURER BEFORE POURING POLE BASE.





DETAIL A



PLAN VIEW

15 LIGHT BASE DETAIL

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

JOB NO.: 28639
DATE: 6/25/2015 8:20 AM
DWG NAME: 28639-SP
REV-3

NO	DATE	REVISIONS

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN FRANCHISEE AT THE SPECIFIED LOCATION.

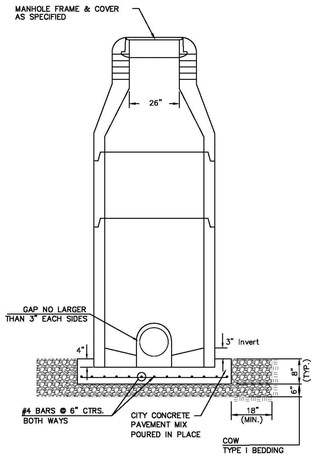
SONIC DRIVE-IN
SONIC TYPE: 12
862 W. MAPLE STREET
WICHITA, KS

SONIC DETAILS

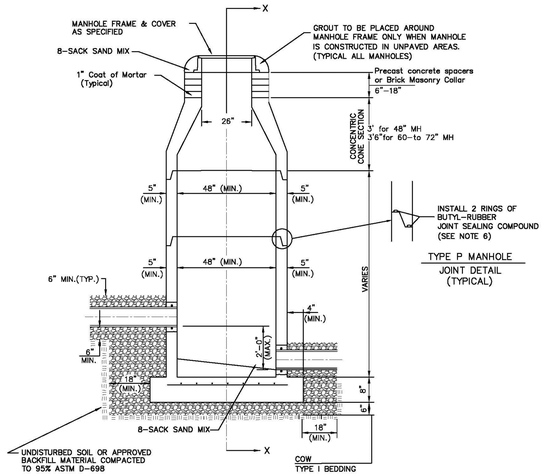
SHEET
C9

DWG:
28639-SP.DWG
DATE: 6/25/15

JOB # 28639 DRAWING: 28639-SP.dwg LAST SAVED BY: JOBBLE
© 2015 CEI ENGINEERING ASSOCIATES, INC.

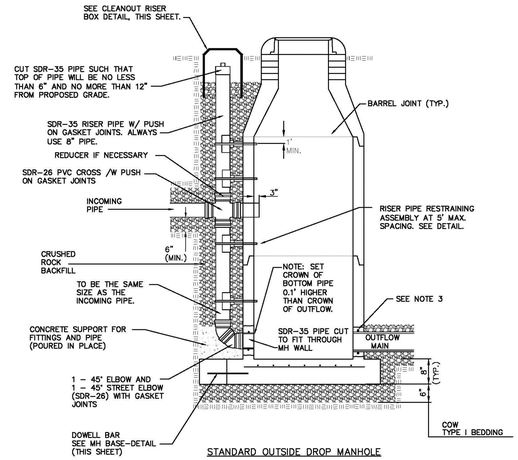


DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale

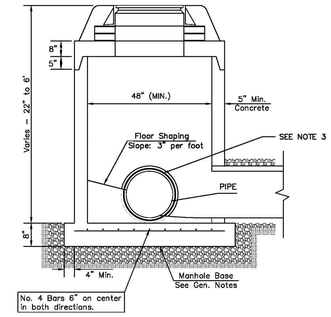


STANDARD MANHOLE
Not to Scale

TYPE P MANHOLE
JOINT DETAIL
(TYPICAL)

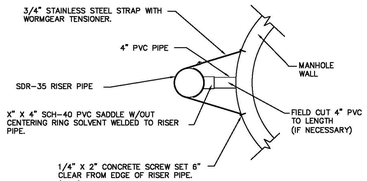


STANDARD OUTSIDE DROP MANHOLE
Not to Scale



SHALLOW MANHOLE
Not to Scale

= COW TYPE I BEDDING = UNDISTURBED SOIL



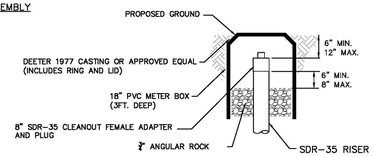
RISER PIPE RESTRAINING ASSEMBLY
Not to Scale

SANITARY SEWER MANHOLE DIAMETERS

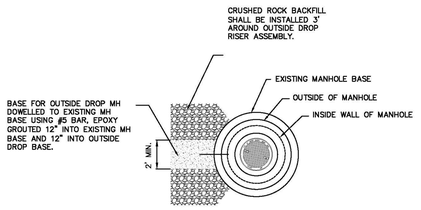
DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	>15'-30'	21"-30"
6'	>30'	36"-60"

PRECAST MANHOLE GENERAL NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
5. EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
6. JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
7. ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12' DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS. AS INDICATED BY THE PLANS.
8. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
9. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
10. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
11. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACE AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
12. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO.4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
13. WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
14. OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WLL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
15. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
16. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
17. THE VERTICAL DROP IN STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
18. STANDARD MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
19. PRECAST CONCRETE SPACERS OR BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
20. THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.
21. REFER TO PLANS FOR SIZE OF OUTSIDE DROP RISER, SADDLES AND CROSS.



CLEANOUT RISER BOX DETAIL
Not to Scale



MH BASE DETAIL
Not to Scale

REVISED JANUARY 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST SANITARY SEWER MANHOLE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SS-101

REVISIONS

NO	DATE

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
DATE: 6/25/2015 9:3 AM
REV-3

SONIC CORPORATION
320 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-5200

SONIC® AmericaNorth Bathroom Co SM

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN AT THE DESIGNATED SONIC DRIVE-IN LOCATION AT THE ADDRESS AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
812 W. MAPLE STREET
WICHITA, KS

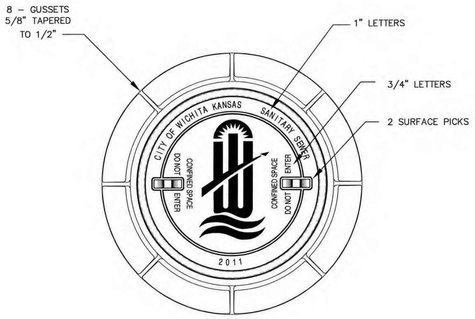
CITY SANITARY SEWER DETAIL I

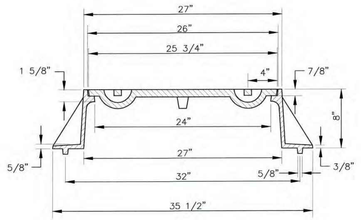
SHEET
C10

DWG:
28639-UP.DWG
DATE: 6/25/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE



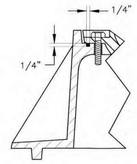


STANDARD MANHOLE FRAME & COVER

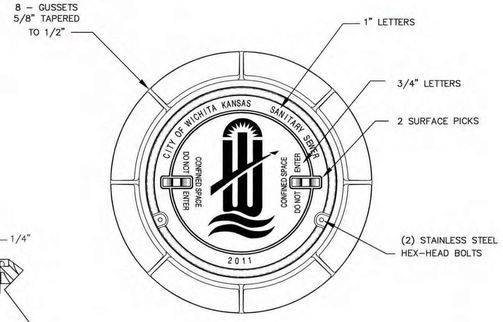
DEETER #1261 OR EJIW #1936–Z1

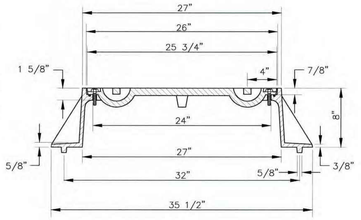
NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.



DETAIL OF T–GASKET



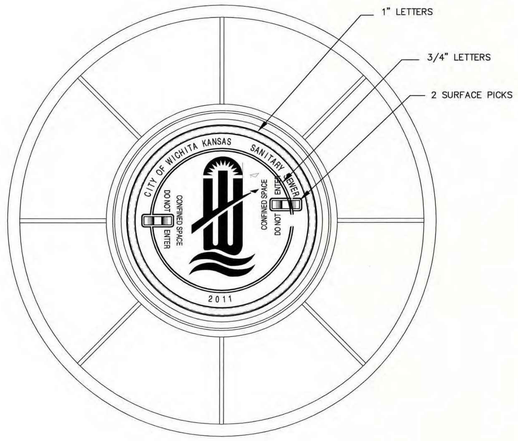


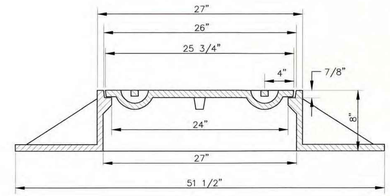
BOLT DOWN MANHOLE FRAME & COVER

DEETER #1261 OR EJIW #1936–Z1

NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.
2. FURNISHED WITH A T–GASKET IN THE FRAME.





WIDE FLANGED FRAME & COVER

DEETER #1261A

NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

GENERAL NOTES

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A–48. DIMENSIONS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.
2. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDARY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON–ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.
3. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SEATING SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUM–FERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.
4. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1 INCH IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SANITARY SEWER". THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN WITH CITY OF WICHITA DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

GARY L. JANZEN LICENSED 19294 KANSAS PROFESSIONAL ENGINEER
Expires 6/30/2013

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

MANHOLE
FRAME AND COVER
(SANITARY SEWER)

CITY ENGINEER
GARY JANZEN, P.E

PROJECT NUMBER	OCA NUMBER	DATE
		12/2011

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SS-102

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

DWG NAME: 28639-SP
REV-3
JOB NO.: 28639
DATE: 6/25/2015 9:3 AM

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000

COPYRIGHT 1988-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN FRANCHISEE OR AGENT OF THE SONIC-A-TEX SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
2612 W. MAPLE STREET
WICHITA, KS

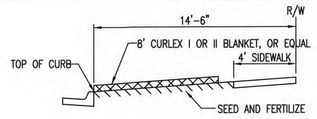
CITY SANITARY SEWER DETAIL 2

SHEET
C10.1

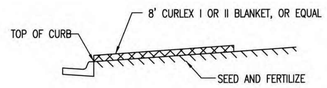
DWG:
28639-UP.DWG
DATE: 6/25/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

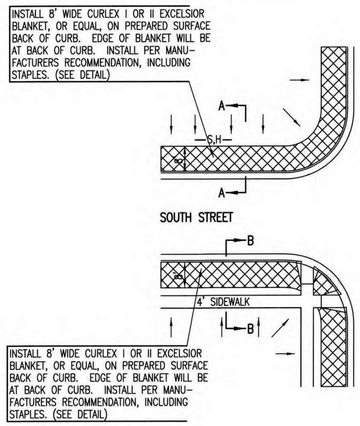
JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBIBLE



SECTION B-B



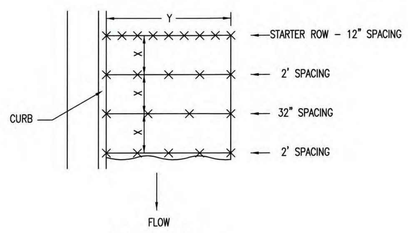
SECTION A-A

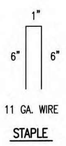


GENERAL NOTES

1. EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
2. EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
3. AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

BACK OF CURB PROTECTION DETAIL



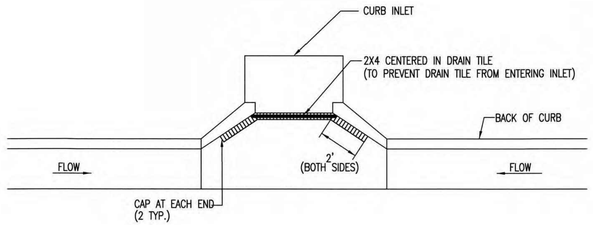


STAPLE

STAPLE PATTERN

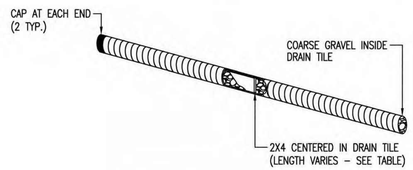
NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)

DETAILS FOR APPROVED EROSION CONTROL MAT

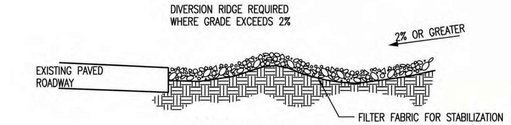


NOTE:
PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

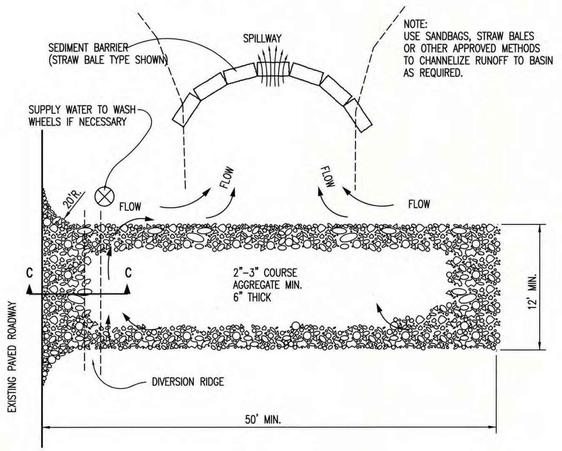
2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"



CURB INLET PROTECTION
4" PERFORATED PIPE W/ GRAVEL



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

REVISION DATE: MAY 2013

GARY L. JANZEN — LICENSED — 16024 — PROFESSIONAL ENGINEER — KANSAS
05/24/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-501

REVISIONS

NO	DATE

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
DATE: 6/25/2015 9:3 AM
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE#: 405-225-5000

SONIC® America's Drive-In® Corp.

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN THE DESIGNATED SONIC DRIVE-IN LOCATION OF THE BUILDING AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
2612 W. MAPLE STREET
WICHITA, KS

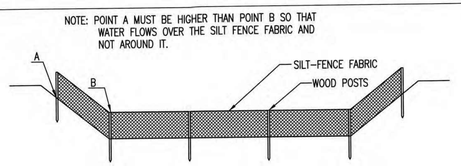
CITY EROSION CONTROL DETAIL 1

SHEET
C10.2

DWG: 28639-UP.DWG
DATE: 6/25/15

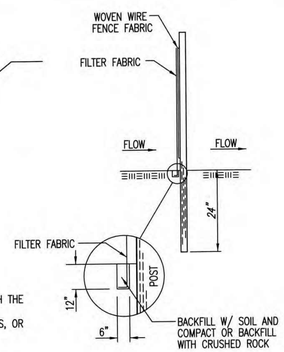
© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE



ELEVATION

SILT FENCE DITCH CHECKS
(STREAM PROTECTION)



ANCHOR TRENCH DETAIL

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED.
WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK, NOT OVER IT. SILT FENCE DITCH CHECKS OFTEN FAIL WHEN OVERTOPPED.
SILT FENCE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
THE SILT FENCE SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE TOP OF THE LOW POINT OF THE FENCE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
SILT FENCE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.
SILT FENCE SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.

THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK DITCH GRADE (%)	SPACING CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS AT LEAST 12" DEEP BY 6" WIDE.
EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK.
PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSTREAM SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSTREAM EDGE OF THE TRENCH.
LINE TWO SIDES OF THE TRENCH WITH THE FABRIC AS SHOWN ON DETAIL. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE ON THE UPSTREAM SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSTREAM OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

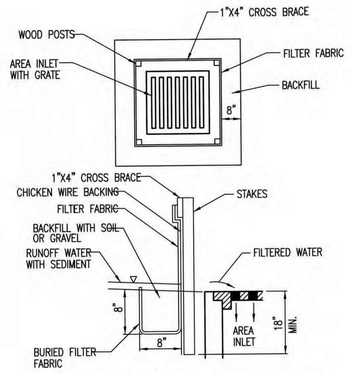
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK-NOT OVER IT. PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. SILT FENCE INSTALLATIONS QUICKLY DETERIORATE WHEN WATER OVERTOPS THEM.
DO NOT PLACE SILT FENCE POSTS ON THE UPSTREAM SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE A SILT FENCE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE SILT FENCE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE LOW POINT ON THE TOP OF THE FENCE.
DO NOT PLACE SILT FENCE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.

INSPECTION AND MAINTENANCE:

SILT FENCE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE WIRE OR POLYMERIC MESH BACKING USED TO HELP SUPPORT THE SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
THE MATERIAL USED TO FRAME THE TOPS OF THE POSTS SHOULD BE 1" BY 4" BOARDS.
SILT FENCE FABRIC AND SUPPORT BACKING SHOULD BE ATTACHED TO THE WOODEN POSTS AND FRAME WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE A SILT FENCE DROP INLET BARRIER IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED.
WATER SHOULD FLOW THROUGH SILT FENCE, NOT OVER IT. SILT FENCE BARRIERS FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
WHEN USED AS A BARRIER FOR AREA INLETS, SILT FENCE FABRIC AND POSTS MUST BE SUPPORTED AT THE TOP BY A WOODEN FRAME.
WHEN A SILT FENCE BARRIER FOR AREA INLETS IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 8" DEEP BY 8" WIDE.
DRIVE POSTS TO A DEPTH OF AT LEAST 18" AROUND THE PERIMETER OF THE AREA INLET.
THE DISTANCE BETWEEN POSTS SHOULD BE 4' OR LESS. IF THE DISTANCE BETWEEN TWO ADJACENT CORNER POSTS IS MORE THAN 4', ADD ANOTHER POST(S) BETWEEN THEM.
CONNECT THE TOPS OF ALL THE POSTS WITH A WOODEN FRAME MADE OF 1" BY 4" BOARDS. USE NAILS OR SCREWS FOR FASTENING.
ATTACH THE WIRE OR POLYMERIC-MESH BACKING TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC LONG ENOUGH TO WRAP AROUND THE PERIMETER OF THE AREA INLET. ADD MORE LENGTH FOR OVERLAPPING THE FABRIC JOINT. PLACE THE EDGE OF THE FABRIC IN THE TRENCH, STARTING AT THE OUTSIDE EDGE OF THE TRENCH. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
ATTACH THE SILT FENCE TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. THE JOINT SHOULD BE OVERLAPPED TO THE NEXT POST.

NOTE: WHEN A SILT FENCE BARRIER FOR AREA INLET IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

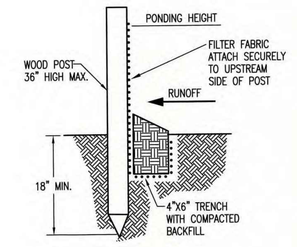
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE BARRIER FOR AREA INLET-NOT OVER IT. PLACE A SILT FENCE BARRIER FOR AREA INLET IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. SILT FENCE BARRIER FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
DO NOT PLACE POSTS ON THE OUTSIDE OF THE SILT FENCE BARRIER FOR AREA INLET. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESISTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT INSTALL SILT FENCE BARRIER FOR AREA INLETS WITHOUT FRAMING THE TOP OF THE POSTS.
THE CORNER POSTS AROUND AREA INLETS ARE STRESSED IN TWO DIRECTIONS WHEREAS A NORMAL SILT FENCE IS ONLY STRESSED IN ONE DIRECTION. THIS ADDED STRESS REQUIRES MORE SUPPORT.

INSPECTION AND MAINTENANCE:

SILT FENCE BARRIER FOR AREA INLETS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE SILT FENCE?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



SILT FENCE BARRIERS

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, SILT FENCE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
SILT FENCE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 6" DEEP BY 4" WIDE.
MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT-FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18".
PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES.
DO NOT PLACE SILT-FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE SILT FENCE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT SUFFICIENTLY ANCHORED, IT WILL WASH OUT.
SILT FENCE SLOPE BARRIERS MUST BE DUG INTO THE GROUND-SILT FENCE AT GROUND LEVEL DOES NOT WORK BECAUSE WATER WILL FLOW UNDERNEATH.

INSPECTION AND MAINTENANCE:

SILT FENCE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DO THE SILT FENCES SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED PROFESSIONAL ENGINEER 19004 KANSAS
05/21/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SILT FENCE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-502

NO	DATE	REVISIONS

© Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street (479) 273-9472
Bentonville, AR 72712 FAX (479) 273-0844
DWG NAME: 28639-SP JOB NO.: 28639
REV-3 DATE: 6/25/2015 9:3 AM

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-5000
SONIC® AMERICA'S DRIVE-IN CORP.
COPYRIGHT 1988-2008 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN AT THE DESIGNATED SONIC DRIVE-IN LOCATION AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
862 W. MAPLE STREET
WICHITA, KS

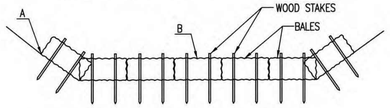
CITY EROSION CONTROL DETAIL 2

SHEET
C10.3

DWG: 28639-UP.DWG
DATE: 6/25/15

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE
© 2015 CEI ENGINEERING ASSOCIATES, INC.

NOTE: POINT A MUST BE HIGHER THAN POINT B
SO THAT WATER FLOWS OVER THE BALES AND
NOT AROUND THEM.



STRAW BALE DITCH CHECKS

MATERIAL SPECIFICATION:

BALE DITCH CHECKS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
OPTIONAL: THE DOWNSTREAM SCOUR APRON SHOULD BE CONSTRUCTED OF A DOUBLE-NETTED STRAW EROSION-CONTROL BLANKET AT LEAST 6' WIDE.
OPTIONAL: THE METAL LANDSCAPE STAPLES USED TO ANCHOR THE EROSION-CONTROL BLANKET SHOULD BE AT LEAST 8" LONG.

PLACEMENT:

BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.
BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.
THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH GRADE (%)	CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH-IT WILL BE USED LATER.
OPTIONAL: ON THE DOWNSTREAM SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSTREAM EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSTREAM EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSTREAM SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSTREAM SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

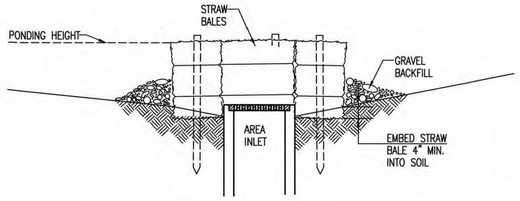
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE.
DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

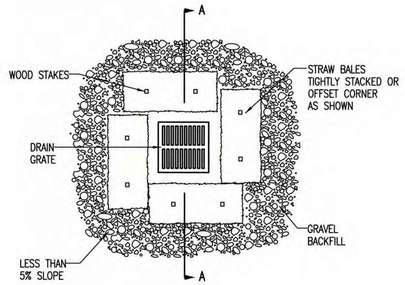
INSPECTION AND MAINTENANCE:

BALE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES AND/OR SCOUR APRONS (OPTIONAL) DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

MATERIAL SPECIFICATION:

BALE AREA INLET BARRIERS SHOULD BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

BALE AREA INLET BARRIERS SHOULD BE PLACED DIRECTLY AROUND THE PERIMETER OF A DROP INLET. WHEN A BALE AREA INLET BARRIER IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 4" DEEP BY A BALE'S WIDTH WIDE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. SOME BALES MAY NEED TO BE SHORTENED TO FIT INTO THE TRENCH AROUND THE AREA INLET. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS.
STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE RECEIVING SIDE OF THE BARRIER AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.
NOTE: WHEN A BALE AREA INLET BARRIER IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

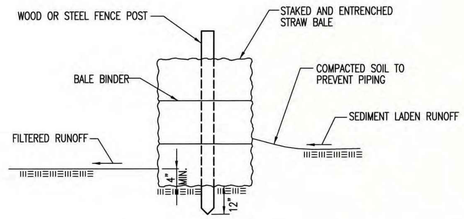
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

BALES SHOULD BE PLACED DIRECTLY AGAINST THE PERIMETER OF THE AREA INLET. THIS ALLOWS OVERTOPPING WATER TO FLOW DIRECTLY INTO THE INLET INSTEAD OF ONTO NEARBY SOIL CAUSING SCOUR.
BALE AREA INLET BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE AREA INLET BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE AREA INLET BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



STRAW BALE BARRIERS

MATERIAL SPECIFICATION:

BALE SLOPE BARRIERS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, BALE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
BALE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER FAILS.
DO NOT PLACE BALE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE SLOPE BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 19294 PROFESSIONAL ENGINEER KANSAS 05/31/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STRAW BALE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-503

NO | DATE | REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
DATE: 6/25/2015 9:3 AM
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000
SONIC® America's Drive-In™

COPYRIGHT 1980-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC FRANCHISEE NAMED IN THE OWNER-SET FOR THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

CITY EROSION CONTROL DETAIL 3

SHEET
C10.4

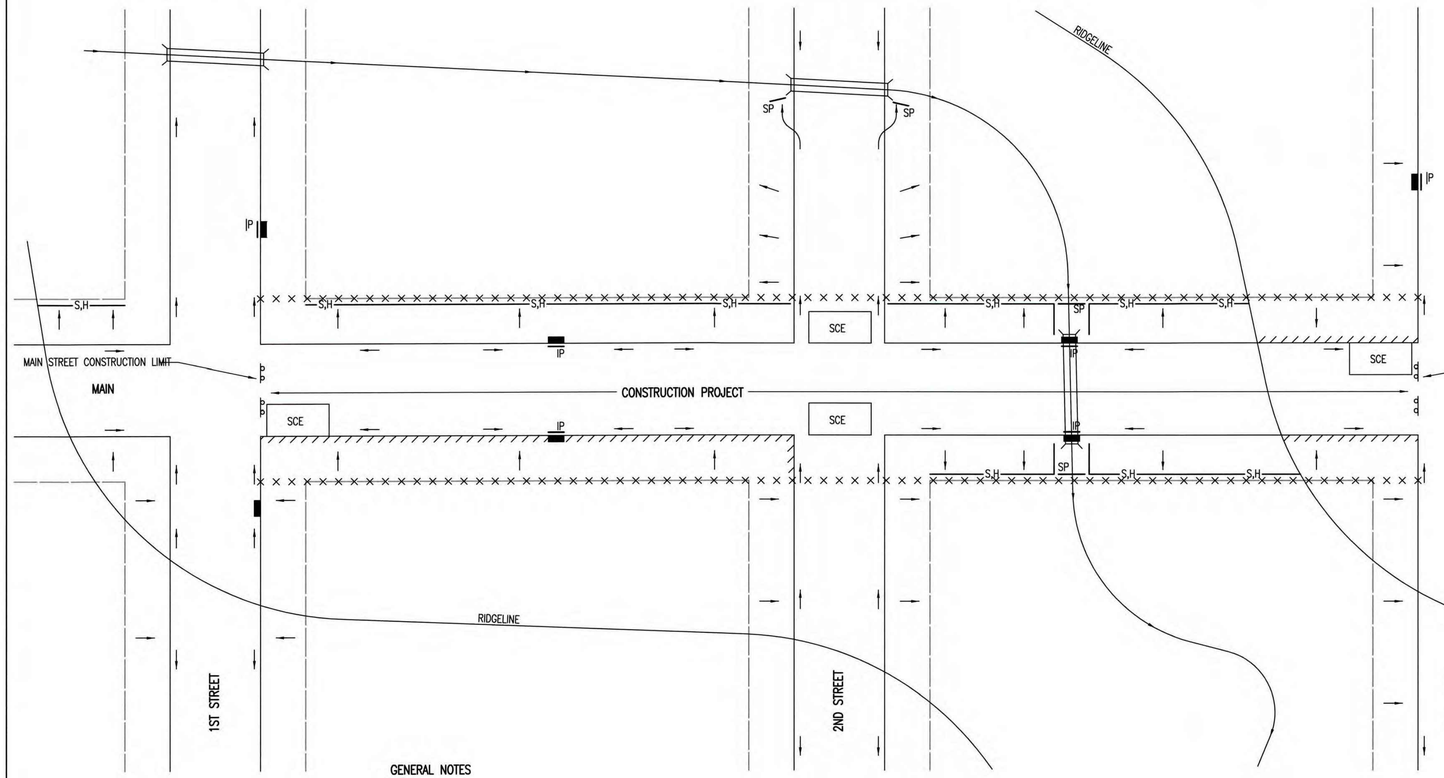
DWG: 28639-UP.DWG
DATE: 6/25/15

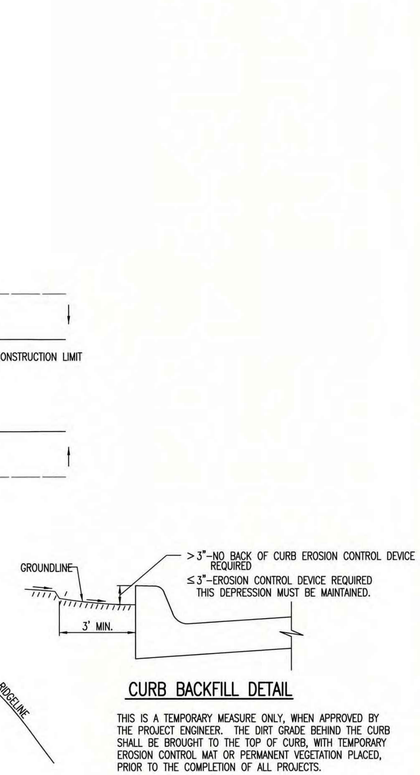
JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE

© 2015 CEI ENGINEERING ASSOCIATES, INC.

GENERAL NOTES

1. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPES OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.
3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.
4. FOR PROJECTS DISTURBING LESS THAN 1 ACRE, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION. EROSION CONTROL DEVICES MUST BE USED ON ALL PROJECTS.
5. FAILURE TO USE AND MAINTAIN EROSION CONTROL DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE CONTRACTOR TO THE PENALTIES PROVIDED FOR THEREIN.
6. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT DEVICE OTHER THAN THOSE SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED AS LONG AS THEY ARE EFFECTIVE AND MAINTAINED.





CURB BACKFILL DETAIL

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

LEGEND

- R-O-W LIMITS
- DRAINAGE FLOW PATH
- R/W LIMIT WITHIN CONSTRUCTION LIMIT
- STORM WATER INLETS
- IP — INLET PROTECTION
- S,H — SILT FENCE OR HAY BALE BARRIER
- SP — STREAM PROTECTION
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- BACK OF CURB PROTECTION

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO KEEP ALL SEDIMENT CONFINED TO THE CONSTRUCTION SITE, AND OUT OF ALL UNDERGROUND PIPES, DITCHES, LAKES, AND OTHER DRAINAGE FACILITIES, AND OFF OF STREETS.
2. THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT-OF-WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.
3. EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.
4. INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.
5. EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.
6. STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED, AS NEEDED, TO PREVENT MUD FROM TRACKING ONTO STREETS NOT UNDER CONSTRUCTION AND ON STREETS WITHIN THE PROJECT LIMITS IF TRAFFIC IS BEING MAINTAINED THROUGH THE PROJECT.
7. ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.
8. THE CONTACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL DEVICES BACK OF CURB, WHENEVER WATER CAN DRAIN OVER CURB, TO KEEP ERODED SOIL OUT OF THE GUTTERLINES, IN ACCORDANCE WITH THE FOLLOWING:
   A. THE DEVICE REQUIRED WILL BE APPROVED EROSION CONTROL MAT LISTED ON THE CITY'S APPROVED MATERIAL LIST. SAID BLANKET SHALL BE PLACED OVER THE APPROPRIATE SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS. (SEE SOIL EROSION BMPs – BACK OF CURB SEDIMENT BARRIER DETAILS)
   B. THIS DEVICE SHALL BE INSTALLED IMMEDIATELY WHENEVER THE CURB IS BACKFILLED TO WITHIN 3" OF THE TOP OF CURB. (SEE CURB BACKFILL DETAIL) OTHER BMP'S MAY BE REQUIRED AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB.
   C. ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.
   D. SHOULD THE PROJECT PLANS SPECIFY THAT THE RIGHT-OF-WAY IS TO BE SODDED, THE EXCELSIOR MAT WILL NOT BE REQUIRED SO LONG AS THE SOD IS PLACED WITHIN 48 HOURS AFTER CURB BACKFILL REACHES A HEIGHT OF 3" OR LESS FROM TOP OF CURB. (SEE CURB BACKFILL DETAIL)

GARY L. JANZEN — LICENSED — 18294 — KANSAS — PROFESSIONAL ENGINEER — 05.12.15

REVISION DATE: 2013

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STREET IMPROVEMENT PROJECTS

CITY ENGINEER: GARY JANZEN, P.E.

PROJECT NUMBER	CCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-504

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

CITY EROSION CONTROL DETAIL 4

SHEET
C10.5

DWG: 28639-UP.DWG
DATE: 6/25/15

NO	DATE	REVISIONS

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
REV-3
DATE: 6/25/2015 9:3 AM

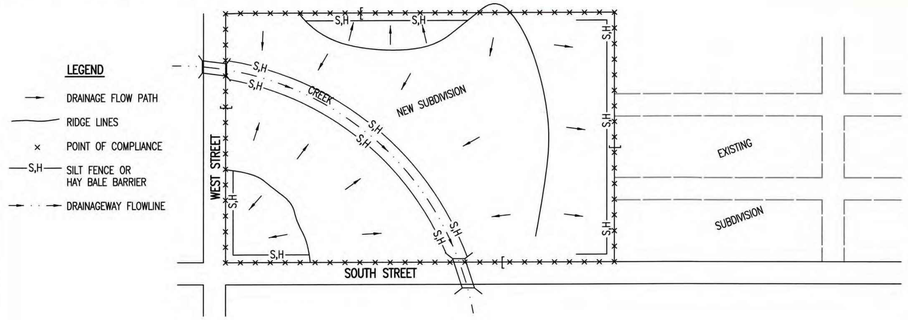
SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000

COPYRIGHT 1988-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN FRANCHISEE OR A DESIGNEE OF THE SONIC-IN AT THE SPECIFIED LOCATION.

© 2015 CEI ENGINEERING ASSOCIATES, INC.

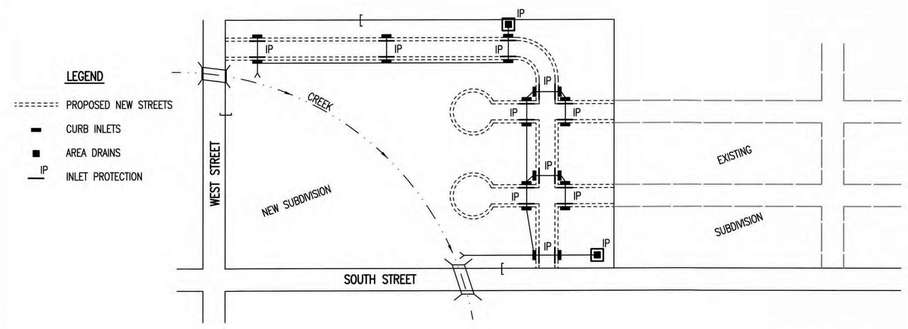
JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE

PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



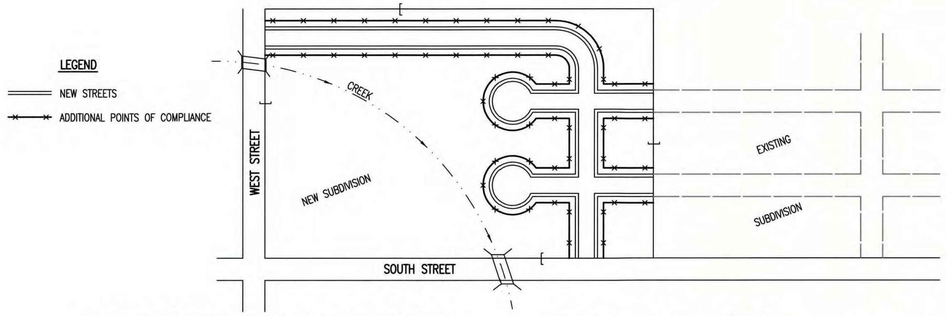
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
3. SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
4. ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
5. CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
6. UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
7. IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
8. WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

PHASE 2 – INSTALLATION OF STORM SEWER



1. DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
2. AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
3. AREA DRAINS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
4. CURB OPENING INLETS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 – STREET CONSTRUCTION.
5. THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
6. THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
7. ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
8. ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

PHASE 3 – STREET CONSTRUCTION

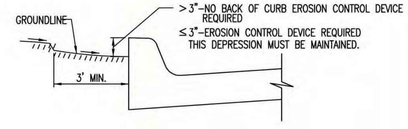


1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
2. CURB OPENING INLET PROTECTION:
   A. SUMP AREAS – INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
   B. NON-SUMP LOCATIONS – PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
3. EROSION CONTROL DEVICES WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), ADDITIONAL DEVICES WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
4. SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
5. THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAY BALE OR SILT FENCE EROSION CONTROL DEVICES AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
6. THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
7. THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB EROSION CONTROL DEVICES IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
2. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
3. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
4. PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
5. THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
6. FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
7. FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
8. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
9. A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

SEE DETAIL SHEET FOR BACK OF CURB PROTECTION DETAIL



CURB BACKFILL DETAIL (STREET CONSTRUCTION ONLY)

THIS IS A TEMPORARY MEASURE ONLY. WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
05.13.13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SUBDIVISION DEVELOPMENT PROCESS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-505

SONIC

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE

SONIC

SONIC

SONIC

© 2015 CEI ENGINEERING ASSOCIATES, INC.

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
REV-3
DATE: 6/25/2015 9:3 AM

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE®: 405-225-5000
SONIC® America's Drive-In℠

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN AT THE DESIGNATED SONIC DRIVE-IN LOCATION AT THE TIME AND AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
2612 W. MAPLE STREET
WICHITA, KS

CITY EROSION CONTROL DETAIL 5

SHEET
C10.6

DWG: 28639-UP.DWG
DATE: 6/25/15

SANITARY SEWER TO SERVE
SONIC RESTAURANTS, INC.
8612 W. MAPLE STREET
CITY of WICHITA, KS

PRIVATE PROJECT NO. 2233 PPS (607861)
GARY JANZEN, P.E. - CITY ENGINEER

GENERAL NOTES:

1. The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications and Special Provisions.
2. Contractor will be required to provide notice to utility companies a minimum of seventy-two (72) hours prior to any excavation, as follows.

   Kansas One-Call 687-2470.

   The Contractor must notify the following in case of an emergency.

AT & T	1-800-246-8464
Black Hills Energy	1-800-694-8989
City of Wichita Water	1-316-268-4555
City of Wichita Sewer	1-316-268-4073
City of Wichita Stormwater	1-316-268-4090
City of Wichita Traffic	1-316-268-4034
Cox Communications	1-888-249-3530
Kansas Gas Service	1-888-482-4950
Westar Energy	1-800-544-4857

3. Utility service lines, poles, etc. are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of- way which do not conflict with proposed construction.
4. Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations, in the opinion of the Engineer that will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment Material either stockpiled or disposed of in a flood plain will require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U S. Corps. Of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits will require additional archaeological investigations unless buried in a previously approved borrow location.
5. Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which ore not in direct conflict with proposed new construction shall be saved and protected from damage.
6. The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) day notice prior to start of construction.
7. The Contractor shall be responsible for preserving property irons. The Contractor Will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
8. The Water Distribution Division shall field locate water valves one time during construction when requested by the Contractor. It should be the Contractor's responsibility to preserve such field locations during the construction process. Water valves, valve boxes or fire hydrants damaged during construction shall be repaired by Contractor at his own expense. Valve boxes and water meters within the project limits shall be adjusted to match field grades.
9. The Contractor shall notify the consultant engineer and Tom Mason at 316-268-4574 with the City of Wichita with the anticipated construction start dote and notify them of project completion. Staking and inspection for this project will be the responsibility of the Contractor.
10. If traffic will be impacted by construction, a traffic control plan must be submitted and approved by the City Traffic Engineer, Brian Coon at **traffic@wichita.gov** before construction can begin. The Contractor shall be responsible for all traffic control measures to facilitate construction. All construction zone markings and signage shall conform to the latest version of the Manual on Uniform Traffic Control Devices (MUTCD) as published by the US Dept. of Transportation, Federal Highway Administration. All costs associated with construction markings and signage shall be the Contractors responsibility.
11. All elevations shown are NAVD 88.
12. All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions.
13. All stubs and plugged pipes shall be located with green plastic tape in the same manner as risers.
14. Connecting fa Existing Manholes:
    Prior to laying sewer lines using existing stubs in existing manholes, the Contractor shall expose and verify the elevation, grade and alignment of existing stubs and notify the Engineer of any deviation from the plans. Where connection to on existing manhole that does not have an existing stub or the stub is unusable due to elevation grade or alignment, the Contractor shall core cut into existing manhole wall to make connection using approved water stop gasket, and reshape the existing manhole invert to provide smooth flow. The cost to connecting to existing manholes is incidental to the project.
15. Contractor shall limit the extent of trench open overnight and weekends to less than 50 feet.
16. Contractor shall provide positive drainage away from all manhole covers.
17. The Contractor shall prevent any construction debris from entering the existing sanitary sewer during construction.
18. The Contractor shall be responsible for maintaining continuous flow of sewage through construction. Contractors proposed method for maintaining sewage flow shall be submitted and approved by the Sewer Maintenance Division (316-268-4073) prior to starling and by-passing of sewage flows
19. Any over excavation from manhole and pipe removal shall be backfilled with AB-3 compacted to 90-95% ASTM D698.
20. City Maintenance of sanitary sewer mains ends at last structure within the easement or right-of-way or line.
21. Any sidewalk, drive approach, curb or street pavement removed to construct project must have a pavement cut permit and be replaced by the City contractor. Permits can be obtained by calling 316-268-4501 or 316-268-4480.

SITE BENCHMARK

BM #1
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1233' ± NORTH AND 3' WEST OF THE EAST PROPERTY LINE.
ELEV=1330.50'

BM #2
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

FLOOD CERTIFICATION:

THIS PROPERTY IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR SEDGWICK COUNTY, KS.
COMMUNITY PANEL NUMBER 20173C0337F
EFFECTIVE DATE 5-2-2012.

CEI GENERAL NOTES:

A. TOPOGRAPHIC BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, SITE TOPOGRAPHY WITH SPOT ELEVATIONS, OUTSTANDING PHYSICAL FEATURES AND EXISTING STRUCTURE LOCATIONS WAS PROVIDED BY THE FOLLOWING COMPANY, AS A CONTRACTOR TO THE SELLER/OWNER:

TOPOGRAPHY: KAW VALLEY ENGINEERING, INC.
14700 WEST 114TH TERRACE
LENEXA, KS 66215
KENNETH J. DEDRICK
913-894-5150

CEI ENGINEERING AND ITS ASSOCIATES WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS OR OMISSIONS RESULTING FROM SURVEY INACCURACIES.

B. ALL PHASES OF SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE OWNER / DEVELOPER SITE WORK SPECIFICATIONS.

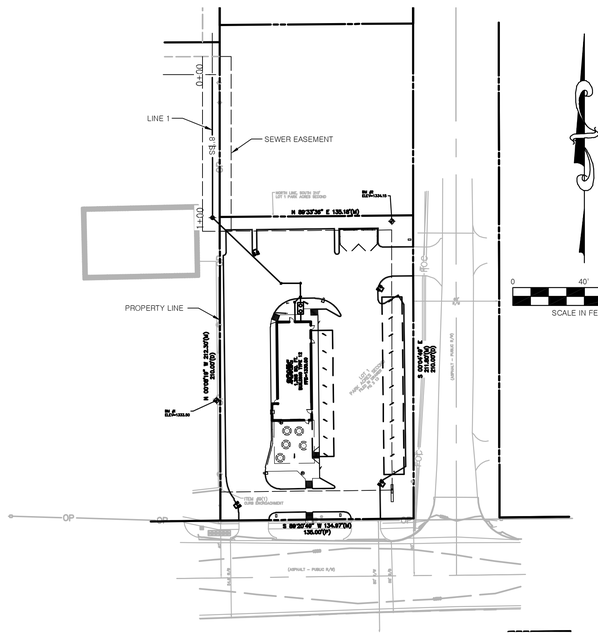
C. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. SEE SITE WORK SPECIFICATIONS.

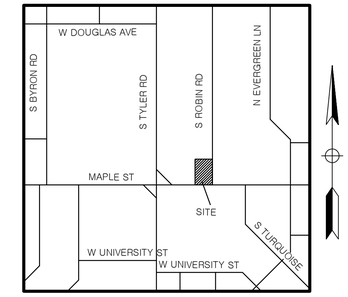
D. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.

E. THE GENERAL CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

F. WARRANTY/DISCLAIMER: THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A CONTEMPORANEOUS BASIS AT THE SITE.

G. SAFETY NOTICE TO CONTRACTOR: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.





Vicinity Map
Not to Scale

SHEET INDEX:

C0	COVER SHEET
C4	EROSION CONTROL PLAN
C5	UTILITY PLAN
C10	WICHITA SANITARY SEWER DETAIL 1
C10.1	WICHITA SANITARY SEWER DETAIL 2
C10.2	WICHITA EROSION CONTROL DETAIL 1
C10.3	WICHITA EROSION CONTROL DETAIL 2
C10.4	WICHITA EROSION CONTROL DETAIL 3
C10.5	WICHITA EROSION CONTROL DETAIL 4
C10.6	WICHITA EROSION CONTROL DETAIL 5

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Sanitary Sewers _____
Storm Sewers N/A
Driveway Approaches N/A
Water Mains N/A
Paving N/A

NOTE TO CONTRACTORS

Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said Inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection, nor shall any work be commenced without written authorization by the City Engineer.

811 Know what's **below.** **Call** before you dig.

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3108 S.W. REGENCY PARKWAY, SUITE 2 (479)273-9472
Bentonville, AR 72712 FAX (479)273-0844

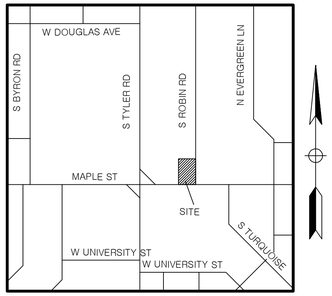
BRENT L. MASSEY LICENSED 22207 KANSAS PROFESSIONAL ENGINEER
4/28/15

Arkansas * California * Minnesota * Pennsylvania * Texas

JOB NO.: 28639
DWG NAME: 28639-UP
DATE 4/28/15 9:16 AM REV-3
SHEET NO. C0

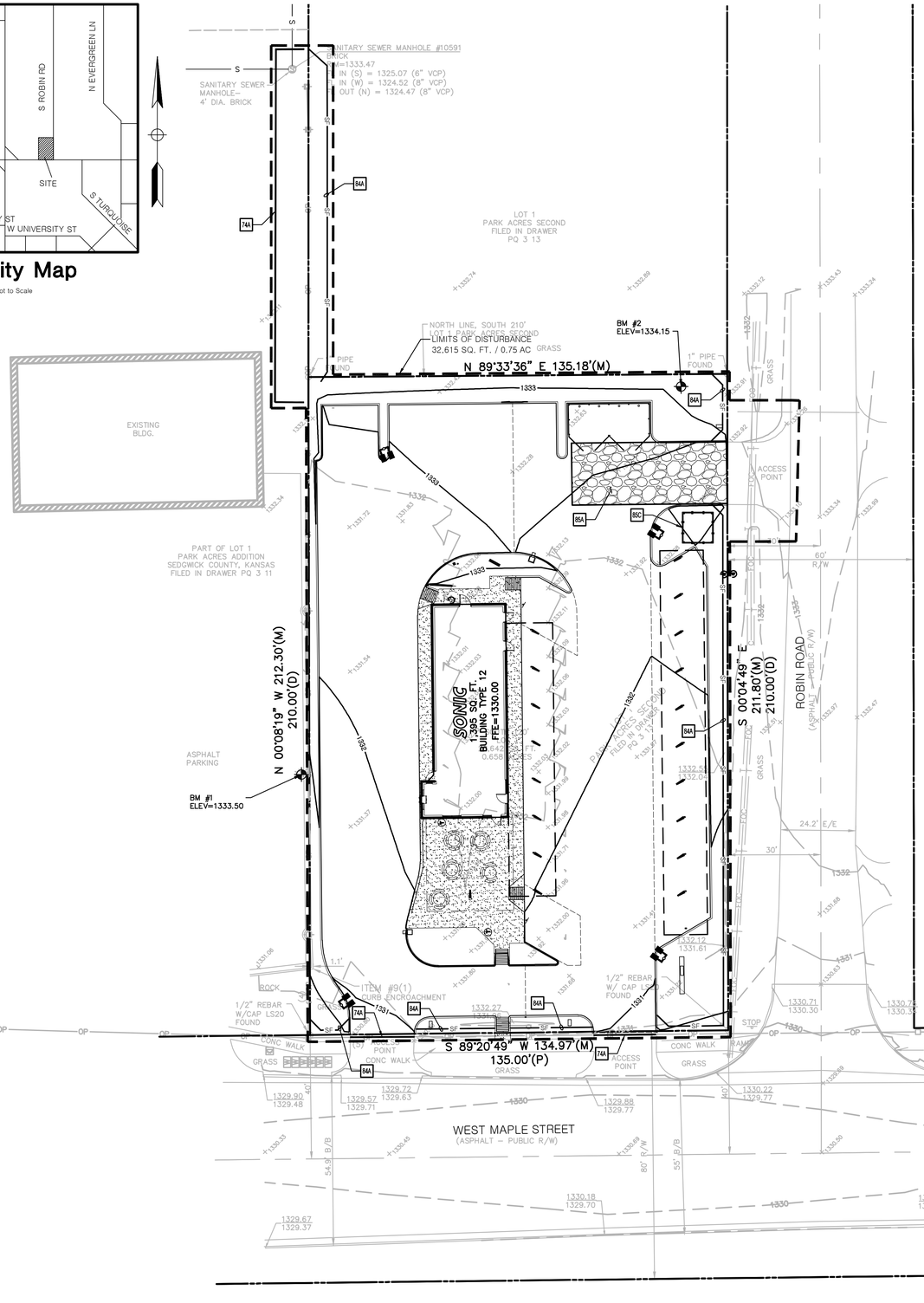
© 2015 CEI ENGINEERING ASSOCIATES, INC.

SONIC

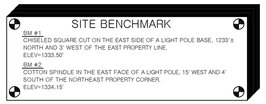


Vicinity Map

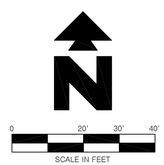
Not to Scale



Know what's below.
Call before you dig.



NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.



FLOOD CERTIFICATION:

THIS PROPERTY IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR SEDGWICK COUNTY, KS, COMMUNITY PANEL NUMBER 20173C0337F EFFECTIVE DATE 5-2-2012.

SITE DATA

ZONING	LC (LIMITED COMMERCIAL)	
BUILDING SIZE	1,395 S.F.	
PARKING RATIO	1 SPACE PER 3 SEATS	
PARKING REQUIRED	9 SPACES	
PARKING PROVIDED	25 SPACES	
PERVIOUS AREA	5,066 SQ. FT.	0.12 AC.
IMPERVIOUS AREA	23,576 SQ. FT.	0.54 AC.
TOTAL SITE AREA	28,642 SQ. FT.	0.66 AC.

GENERAL EROSION NOTES

A. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF KANSAS NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

B. THE TEMPORARY PARKING AND STORAGE AREA SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AREA, EQUIPMENT CLEANING AREA, EMPLOYEE BREAK AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS AND TOILET FACILITIES. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNER'S CONSTRUCTION MANAGER.

C. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.

D. MAINTAIN ON THE SITE OR HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN UP FUEL OR CHEMICAL SPILLS AND LEAKS.

E. DUST ON THE SITE SHALL BE CONTROLLED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

F. NO RUBBISH, TRASH, GARBAGE OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

G. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

H. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY WILL STOP FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED WITHIN 14 DAYS.

I. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE LANDSCAPING PLAN.

J. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNERS CONSTRUCTION MANAGER.

K. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

L. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AFTER THE STABILIZATION OF THE SITE AND ALSO ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS.

M. IF SOIL STOCKPILING IS EMPLOYED ON THE SITE, SILT FENCES SHALL BE USED TO HELP CONTAIN THE SEDIMENT.

N. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

O. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.

P. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.

Q. ALL OFF-SITE CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR STORM DRAINS & UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

LEGEND

EXISTING

○	MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
(M)	MEASURED
(P)	PLATTED
(D)	DEEDED
E	ELECTRIC METER
E	UNDERGROUND ELECTRIC
(1) OP	OVERHEAD POWER LINE (# OF LINES)
	LIGHT POLE
	UTILITY POLE
	UTILITY POLE W/ TRANSFORMER
	DEADMAN ANCHOR
	TRAFFIC SIGNAL LIGHT CONTROL BOX
	TELEPHONE LINE SIGN
T	UNDERGROUND TELEPHONE
FOC	UNDERGROUND FIBER OPTIC CABLE
G	GAS METER
	CANOPY SUPPORT
	MENU BOARD
	BOLLARD
	PROPERTY LINE/RIGHT OF WAY LINE
	BUSINESS/BILLBOARD SIGN
	STREET/TRAFFIC SIGN
	HANDICAP SYMBOL
	HANDICAP SIGN
S	SANITARY SEWER MANHOLE
S	SANITARY SEWER LINE
VCP	VITRIFIED CLAY PIPE
GP	GREASE PIT MANHOLE
CO	SANITARY SEWER CLEAN OUT
W	WATER METER
GP	GATE POST
B/B	BACK TO BACK OF CURB
	BUSH
	PAINTED DIRECTIONAL ARROW
T/E	TRASH ENCLOSURE
939	EXISTING GRADE 1' CONTOUR
950	EXISTING GRADE 5' CONTOUR
	EXISTING SPOT ELEVATION
1020.50 / 1020.00	TOP OF CURB ELEVATION / FL OF CURB ELEVATION

PROPOSED

	LIMITS OF DISTURBANCE (32,615 826 SQ. FT. / 0.75 AC)
SF	SILT FENCE
	GRADE BREAK
XXX	CONTOUR ELEVATIONS

GENERAL EROSION NOTES CONT'D

MAINTENANCE

ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT, AND SHOULD BE CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.
2. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-THIRD TO ONE-HALF THE HEIGHT OF THE SILT FENCE.
3. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
4. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

SEQUENCE OF CONSTRUCTION:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
2. PREPARE TEMPORARY PARKING AND STORAGE AREA.
3. CONSTRUCT THE SILT FENCES ON THE SITE.
4. CLEAR AND GRUB THE SITE.
5. BEGIN GRADING THE SITE.
6. START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
7. TEMPORARILY SEED DENUDED AREAS.
8. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
9. PREPARE SITE FOR PAVING.
10. PAVE SITE.
11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
12. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED).

EROSION DETAILS

74A SWP-CI "BIG RED"
84A TEMPORARY SILT FENCE
85A TEMPORARY STONE CONSTRUCTION ENTRANCE
85C TEMPORARY CONCRETE WASH OUT.

BRENT L. MASSEY
LICENSED
22207
KANSAS
PROFESSIONAL ENGINEER
4/28/15

NO	DATE	REVISIONS

Engineering Associates, Inc.
CIVIL • STRUCTURAL • MECHANICAL • ELECTRICAL • PLUMBING
ARCHITECTS • ENVIRONMENTAL • SURVEYORS
LANDSCAPE ARCHITECTS • PLANNERS
3317 SW "J" Street
Bentonville, AR 72712
(479) 273-9422
FAX (479) 273-0844

JOB NO.: 28639
DATE: 4/27/2015 3:32 PM
DWG NAME: 28639-GP
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICES: 405-225-5000
SONIC
COPYRIGHT 1958-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN FRANCHISEE IN THE CONSTRUCTION OF THE SONIC DRIVE-IN AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
812 W. MAPLE STREET
WICHITA, KS

EROSION PLAN

SHEET
C4

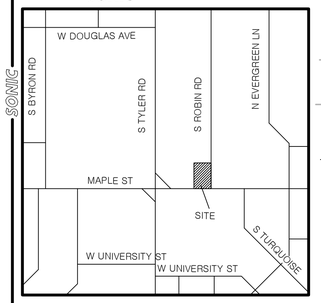
DWG: 28639-GP.DWG
DATE: 4/27/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-GP.dwg LAST SAVED BY: JDIBBLE

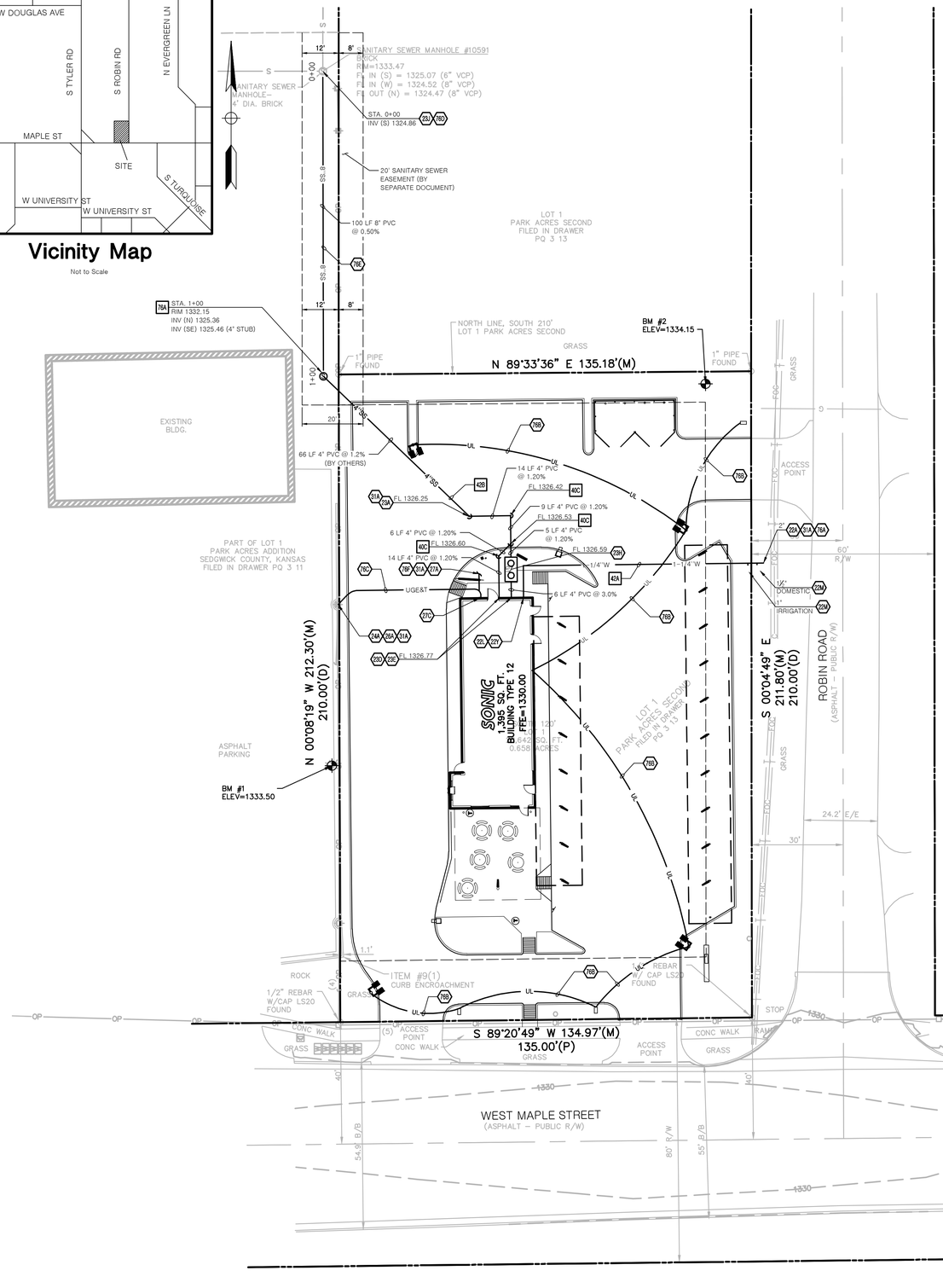
SONIC

SONIC



Vicinity Map

Not to Scale



Know what's **below.**
Call before you dig.

SITE BENCHMARK

BM #1:
CHISELED SQUARE CUT ON THE EAST SIDE OF A LIGHT POLE BASE, 1233'± NORTH AND 3' WEST OF THE EAST PROPERTY LINE
ELEV=1333.50'

BM #2:
COTTON SPINDLE IN THE EAST FACE OF A LIGHT POLE, 15' WEST AND 4' SOUTH OF THE NORTHEAST PROPERTY CORNER.
ELEV=1334.15'

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

N

0 20' 30' 40'
SCALE IN FEET

LEGEND

EXISTING

- MONUMENT FOUND ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- (M) MEASURED
- (P) PLATTED
- (D) DEEDED
- E ELECTRIC METER
- E UNDERGROUND ELECTRIC
- (1) OP OVERHEAD POWER LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- DEADMAN ANCHOR
- TRAFFIC SIGNAL LIGHT CONTROL BOX
- TELEPHONE LINE SIGN
- T UNDERGROUND TELEPHONE
- FOC UNDERGROUND FIBER OPTIC CABLE
- G GAS METER
- CANOPY SUPPORT
- MENU BOARD
- BOLLARD
- PROPERTY LINE/RIGHT OF WAY LINE
- BUSINESS/BILLBOARD SIGN
- STREET/TRAFFIC SIGN
- HANDICAP SYMBOL
- ADA HANDICAP SIGN
- S SANITARY SEWER MANHOLE
- S SANITARY SEWER LINE
- VCP VITRIFIED CLAY PIPE
- GP GREASE PIT MANHOLE
- CO SANITARY SEWER CLEAN OUT
- W WATER METER
- GP GATE POST
- B/B BACK TO BACK OF CURB
- BUSH
- PAINTED DIRECTIONAL ARROW
- T/E TRASH ENCLOSURE
- 939 EXISTING GRADE 1' CONTOUR
- 950 EXISTING GRADE 5' CONTOUR
- 1020.50 EXISTING SPOT ELEVATION
- 1020.50 TOP OF CURB ELEVATION
- 1020.00 FL OF CURB ELEVATION

Sewer Main PROFILE
HORZ SCALE: 1" = 20'-0"
VERTICAL SCALE: 1" = 2'-0"

PROPOSED

- GAS — GAS SERVICE
- SS — SANITARY SEWER SERVICE
- UGE&T — UNDERGROUND ELECTRIC & TELEPHONE SERVICE
- W — WATER SERVICE
- UL — ELECTRIC CONDUIT

GENERAL UTILITY NOTES

A. ALL WATER LINES SHALL BE 1 ¼" TYPE K COPPER WITH 36" MINIMUM COVER.

B. ALL SANITARY SEWER LINES SHALL BE SCHEDULE 40 PVC WITH 36" MINIMUM COVER.

D. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.

E. ALL ELECTRIC, TELEPHONE AND GAS EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.

G. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OF THE DRY UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM CEI ENGINEERING AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. CEI ENGINEERING AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.

H. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON OR WITHIN SPECIFICATIONS: ALL WATER LINE PIPE BEDDING SHALL BE INSTALLED PER DETAIL 42A. ALL SANITARY SEWER PIPE BEDDING SHALL BE INSTALLED PER DETAIL 42B.

UTILITY NOTES

22A POINT OF CONNECTION - WATER SERVICE (PER LOCAL CODES).
22L METERED DOMESTIC WATER SERVICE ENTRY PER ARCH. PLANS (SEE SIZES THIS SHEET).
22M PROPOSED WATER METER (PER LOCAL CODES AND SPECIFICATIONS).
22Y INTERIOR BACK FLOW PREVENTER (PER ARCH. PLANS).
23A POINT OF CONNECTION - SANITARY SEWER SERVICE (PER LOCAL CODES).
23D BUILDING SANITARY SEWER SERVICE CLEAN-OUT.
23E SANITARY SEWER SERVICE ENTRY (PER ARCH. PLANS).
23H GREASE TRAP WITH CLEAN-OUT (PER ARCH. PLANS).
23J CONNECT TO EXISTING SANITARY SEWER MANHOLE.
24A POINT OF CONNECTION FOR ELECTRICAL SERVICE (PER ELECTRIC COMPANY REQUIREMENTS).
26A POINT OF CONNECTION FOR UNDERGROUND TELEPHONE (PER TELEPHONE COMPANY REQUIREMENTS).
27A POINT OF CONNECTION FOR GAS SERVICE (PER LOCAL GAS COMPANY REQUIREMENTS).
27C PROPOSED GAS METER.
31A LOCATION FOR THIS UTILITY AS SHOWN IS FOR DRAWING PURPOSES ONLY. CONTRACTOR SHALL VERIFY THE EXACT LOCATION IN FIELD PRIOR TO THE CONSTRUCTION OF THE PROPOSED UTILITY LINE TO BE CONNECTED. CONTRACTOR SHALL NOTIFY CEI ENGINEERING IF THE DESIGN AS SHOWN IS NOT ACHIEVABLE.
76A CONTRACTOR SHALL USE EXISTING WATER METER AND TAP. CONTRACTOR TO COORDINATE CONNECTION WITH THE CITY OF WICHITA WATER DEPARTMENT.
76B UNDERGROUND CONDUIT
76C ELECTRIC TRENCH AND CONDUIT TO BE COMPLETED BY CONTRACTOR. CONTRACTOR TO INSTALL 4" GRAY SCH 40 CONDUIT 4' DEEP WITH STEEL SWEEPS.
76D CONTRACTOR TO REMOVE EXISTING 6" VCP SERVICE LINE AND CUT BRICK MANHOLE AS NECESSARY TO INSTALL NEW 8" SEWER MAIN PER CITY OF WICHITA STANDARDS. CONTRACTOR TO REPAIR BRICK MANHOLE AND SEAL AROUND NEW 8" PIPE AS NECESSARY PER WICHITA CITY SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH CITY UTILITY DEPARTMENT PRIOR TO CONSTRUCTION.
76E SANITARY SEWER BEDDING PER CITY OF WICHITA STANDARD DETAILS.
76F CONTRACTOR TO COORDINATE WITH GAS COMPANY TO CONNECT TO EXISTING GAS SERVICE.

UTILITY DETAILS

40C SANITARY SEWER CLEAN-OUT
42A WATER LINE TRENCHING AND BEDDING
42B SANITARY SEWER TRENCHING AND BEDDING
76A CITY OF WICHITA PRECAST SANITARY SEWER MANHOLE

BRENT L. MASSEY
LICENSED
22207
KANSAS
PROFESSIONAL ENGINEER
4/28/15

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9412
FAX (479) 273-0844

JOB NO.: 28639
DATE: 4/28/2015 9:16 AM
DWG NAME: 28639-UP
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE#: 405-225-5000

SONIC® SM
Quintessentially Quick-Serve-Restaurant SM

SONIC® AMERICA'S DRIVE-IN CORP.

COPYRIGHT 1958-2006
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC OWNER AND FRANCHISEE OR THE SONIC FRANCHISEE AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

UTILITY PLAN

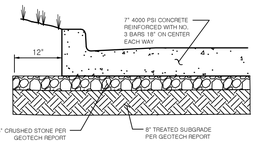
SHEET
C5

DWG: 28639-UP.DWG
DATE: 4/28/15

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JDIBBLE

SONIC
SONIC
SONIC
SONIC
© 2015 CEI ENGINEERING ASSOCIATES, INC.

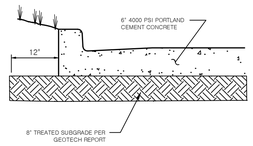
SONIC



NOTES:

1. THE TREATED SUBGRADE SHALL BE COMPACTED PER GEOTECHNICAL RECOMMENDATIONS.
2. CONTRACTOR SHALL VERIFY THE ABOVE DETAILS WITH THE SUBSURFACE EXPLORATION PREPARED GEOSERVICES, TERRACON CONSULTANTS, INC. REPORT DATED: JANUARY 5, 2015 PROJECT NUMBER 01145168. PRIOR TO CONSTRUCTION, ALL DISCREPANCIES SHALL BE CLARIFIED WITH SONIC'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION. (TERRACON CONSULTANTS INC., TERRACON PROJECT NUMBER 01145168).

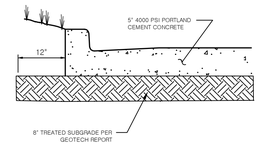
HEAVY DUTY CONCRETE PAVING 08C



NOTES:

1. THE SUBGRADE SHALL BE COMPACTED PER GEOTECHNICAL RECOMMENDATIONS.
2. CONTRACTOR SHALL VERIFY THE ABOVE DETAILS WITH THE SUBSURFACE EXPLORATION PREPARED GEOSERVICES, TERRACON CONSULTANTS, INC. REPORT DATED: JANUARY 5, 2015 PROJECT NUMBER 01145168. PRIOR TO CONSTRUCTION, ALL DISCREPANCIES SHALL BE CLARIFIED WITH SONIC'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION. (TERRACON CONSULTANTS INC., TERRACON PROJECT NUMBER 01145168).

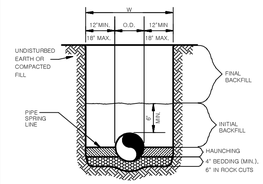
STANDARD DUTY CONCRETE PAVING 08D



NOTES:

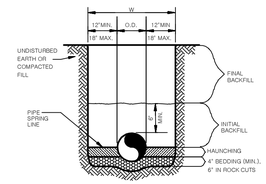
1. THE SUBGRADE SHALL BE COMPACTED PER GEOTECHNICAL RECOMMENDATIONS.
2. CONTRACTOR SHALL VERIFY THE ABOVE DETAILS WITH THE SUBSURFACE EXPLORATION PREPARED GEOSERVICES, TERRACON CONSULTANTS, INC. REPORT DATED: JANUARY 5, 2015 PROJECT NUMBER 01145168. PRIOR TO CONSTRUCTION, ALL DISCREPANCIES SHALL BE CLARIFIED WITH SONIC'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION. (TERRACON CONSULTANTS INC., TERRACON PROJECT NUMBER 01145168).

LIGHT DUTY CONCRETE PAVING 08F



WATER LINE & FORCE MAIN 40A

N.T.S.



SANITARY SEWER 40B

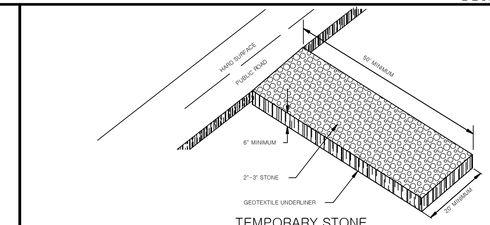
N.T.S.

GENERAL NOTES:

1. BEDDING SHALL BE CLASS I–A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I–B COMPACTED TO 85% STANDARD PROCTOR. (SEE SPECIFICATIONS FOR GRADATION)
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I–A OR CLASS I–B OR CLASS II COMPACTED TO 85% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I–A WORKED BY HAND, OR CLASS I–B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. AND 4
6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV–A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321, LATEST EDITION.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV–A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS)

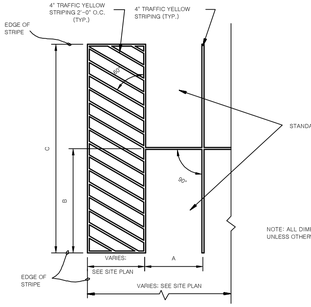
SANITARY SEWER AND WATER LINE TRENCHING AND BEDDING

N.T.S.



TEMPORARY STONE CONSTRUCTION ENTRANCE 55A

N.T.S.



NOTE: ALL DIMENSIONS ARE TO ℄ OF STRIPE UNLESS OTHERWISE INDICATED

DIMENSION CHART									
A	9'	9.5'	10'	9'	9.5'	10'	9'	9.5'	10'
B	18'	18'	18'	19'	19'	19'	20'	20'	20'
C	36'	36'	36'	38'	38'	38'	40'	40'	40'

NOTE: SEE SITE PLAN FOR TOTAL LAYOUT

90° PARKING SPACE STRIPING 08B

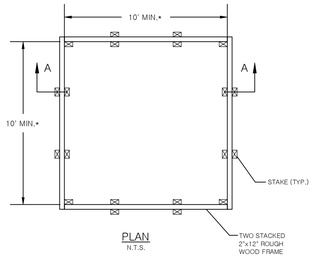
N.T.S.

NOTES:

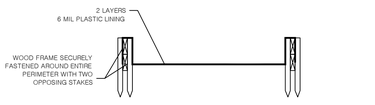
1. REQUIRED REINFORCEMENT WILL BE No. 3 BARS 24" O.C. EACH WAY MAX. SPACING, OR 6 x 6 – W1.4 X W1.4 WWF
2. INSTALL 1/2" EXPANSION JOINT MATERIAL AT AREAS WERE PROPOSED SIDEWALK ABUTTS EXISTING SIDEWALK, CURBS, AND OR STRUCTURE. (JOINT MAT'L.: TO MEET ASTM D994 OR D1751)

CONCRETE SIDEWALK 08D

N.T.S.



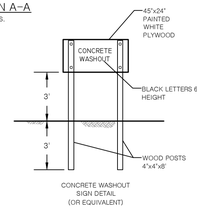
PLAN
N.T.S.



SECTION A–A
N.T.S.

NOTES:

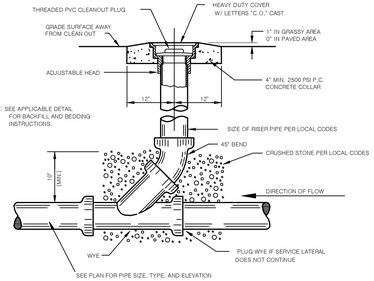
1. •DENOTES THE INTERIOR DIMENSION.
2. CONCRETE WASHOUT SHALL BE AT LEAST 50 FT. FROM ANY STORM SEWER INLET.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.



CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)

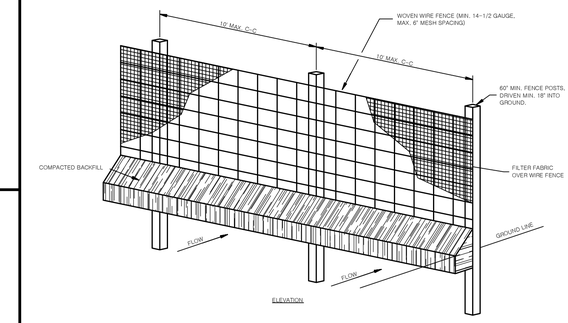
TEMPORARY CONCRETE WASHOUT (ABOVE GRADE) 85C

N.T.S.

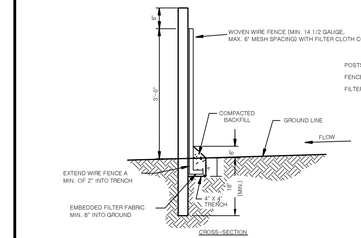


SANITARY SEWER CLEAN–OUT 40C

N.T.S.



ELEVATION



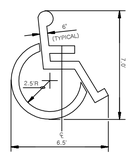
POSTS: STEEL EITHER T OR U TYPE OR 2"x2" HARDWOOD
FENCE: WOVEN WIRE, 14–1/2 GA. 6" MAX. MESH OPENING
FILTER FABRIC:

1. MIRAFI 140NS
2. PHILLIPS 66 SUPAC 4NP
3. DUPONT TYPAR 3341
4. OR APPROVED EQUAL

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

TEMPORARY SILT FENCE 54A

N.T.S.

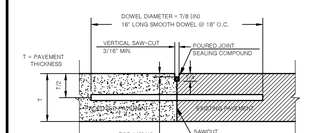


NOTES:

LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING

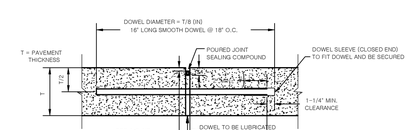
ACCESSIBLE PARKING SYMBOL 09U

N.T.S.



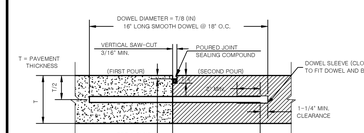
NOTE:
1. DOWEL BARS SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY BY USE OF A MECHANICAL RIG.
2. DRILLING BY HAND IS NOT ACCEPTABLE. PUSHING DOWEL BARS INTO GREEN CONCRETE IS NOT ACCEPTABLE.

BUTT JOINT



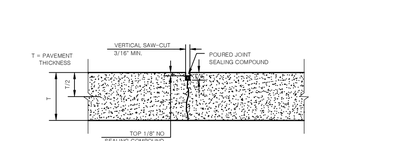
NOTE:
1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE.

TRANSVERSE EXPANSION JOINT



NOTE:
1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE.

CONSTRUCTION JOINT



CONTRACTION JOINT

CONCRETE JOINT DETAILS 09R

N.T.S.

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273–9472
FAX (479) 273–0844

JOB NO.: 28639
DATE: 6/25/2015 8:20 AM
DWG NAME: 28639–SP
REV–3

BRENT L. MASSEY 22207 ARKANSAS REGISTERED PROFESSIONAL ENGINEER
6/25/15

NO	DATE	REVISIONS

SONIC CORPORATION
320 JOHN'S BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-3000

SONIC DRIVE–IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

DETAIL SHEET 1

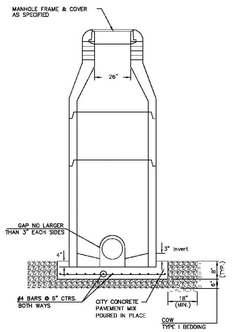
SHEET
C8

DWG: 28639–SP.DWG
DATE: 6/25/15

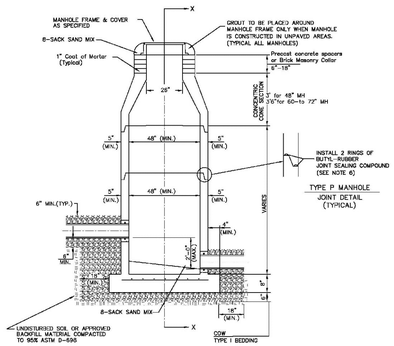
COPYRIGHT 1998–2006 AMERICA'S DRIVE–IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC OWNER AND FRANCHISEE OF THE SPECIFIED LOCATION.

JOB # 28639 DRAWING: 28639–SP.dwg LAST SAVED BY: JDIBBLE

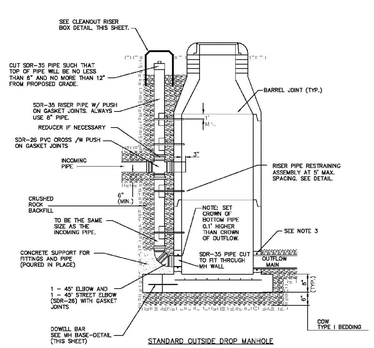
© 2015 CEI ENGINEERING ASSOCIATES, INC.



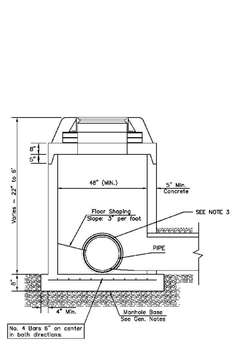
DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale



STANDARD MANHOLE
Not to Scale



STANDARD OUTSIDE DROP MANHOLE
Not to Scale

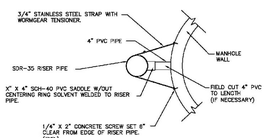


SHALLOW MANHOLE
Not to Scale

= COW TYPE I BEDDING = UNDISTURBED SOIL

PRECAST MANHOLE GENERAL NOTES

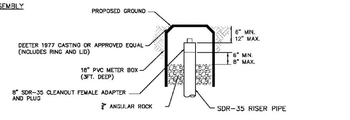
1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
5. EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
6. JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
7. ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12' DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS. AS INDICATED BY THE PLANS.
8. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
9. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
10. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
11. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 6 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITH-OUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACE AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
12. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO.4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
13. WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
14. OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKET'S SHALL BE USED WITH P.V.C. PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
15. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
16. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
17. THE VERTICAL DROP IN STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
18. STANDARD MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
19. PRECAST CONCRETE SPACERS OR BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCRETE CONE. THE COLLAR WILL HAVE 6" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A FINAL COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
20. THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.
21. REFER TO PLANS FOR SIZE OF OUTSIDE DROP RISER, SADDLES AND CROSS.



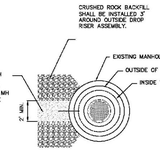
RISER PIPE RESTRAINING ASSEMBLY
Not to Scale

SANITARY SEWER MANHOLE DIAMETERS

DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	>15'-30'	21"-30"
6'	>30'	36"-60"



CLEANOUT RISER BOX DETAIL
Not to Scale



MH BASE DETAIL
Not to Scale

REVISED JANUARY 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST SANITARY SEWER MANHOLE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER | OCA NUMBER | DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SS-101

SWP-CI "Big Red"

74A

Curb Inlet Protector

By ASP Enterprises and Storm Water Products

Temporary and Reusable Solutions for Sediment Control

A.S.P. ENTERPRISES, INC.
Your GeoSource Distributor

- Reusable Curb Inlet Protection
- Environmentally Friendly
- Drops out sediment by dissipating the water energy





"Big Red" Filter Advantages:

- **Easy to Install**
- **Versatile for a variety of curb inlets**
- **Reusable and Extremely easy to clean**
- **Made from 90% Inert Recycled Materials**

The SWP-CI "Big Red" Filter is a **REUSABLE** inlet protector that keeps out sediment throughout the entire construction project. There are no pockets to fill, no velcro bags, no assembly etc. Simply place in front of the inlet, make sure it lays in the contour, and you are DONE!

Simple installation also translates into simple removal, cleanup and re-use at the next project or phase. Maintenance is simple as well by lifting the unit from the inlet, shaking the mud off of it, removing the sediment on the concrete, and placing the unit back. If it is severely filled with sediment, wash it out in a vegetated area and it is as good as new.



All of these features and benefits combine to make the SWP-CI "Big Red" curb inlet protector the **perfect choice** for all curb inlet applications. It comes in 54" long for single curb inlets and 104" lengths for double curb inlets.



- **High Flow Rate**
- **Made of Durable High-Strength Geotextile**
- **Fully Reusable**
- **Made of Recycled Materials**

SWP-CI "Big Red"

74A

Curb Inlet Protector

By ASP Enterprises and Storm Water Products

A.S.P. ENTERPRISES, INC.
Your GeoSource Distributor

Specifications:
1. Infill Material: shredded recycled rubber tires
2. Weight: approx. 10 lbs per linear foot
3. Diameter: approx. 8"

Geotextile fabric made of durable high flow fabric with the following properties:

Property	Test Method	Units		Typical Value
Weight	ASTM D5261	oz/sq. yd		9.3
Grab Tensile Strength	ASTM D4632	lb	warp	250
			fill	290
Tear Strength (Trapezoid)	ASTM D4533	lb	warp	60
			fill	50
Burst	ASTM D3786	psi		440

(Efforts were made to determine flow rate-the fabric exceeded all capacities of the testing equipment)



ASP Enterprises and Storm Water Products assumes no liability for the accuracy or completeness of this information or for the ultimate use by the purchaser. ASP and SWP disclaims any and all express, implied, or statutory standards, warranties or guarantees, including without limitation any implied warranty as to merchantability or fitness for a particular purpose or arising from a course of dealing or usage of trade as to any equipment, materials or information furnished herewith. This document should not be construed as engineering advice.

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

DWG NAME: 28639-SP
REV-3
JOB NO.: 28639
DATE: 6/25/2015 8:20 AM

PRELIMINARY NOT FOR CONSTRUCTION
BRENT L. MASSEY 22207 REGISTERED PROFESSIONAL ENGINEER
6/25/15

NO	DATE	REVISIONS

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-5022

SONIC®

COPYRIGHT 1988-2008 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC FRANCHISEE OR EMPLOYEE OF THE SONIC-IN AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
86'2 W. MAPLE STREET
WICHITA, KS

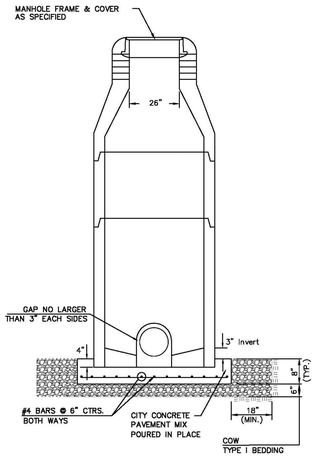
DETAIL SHEET 2

SHEET
C8.1

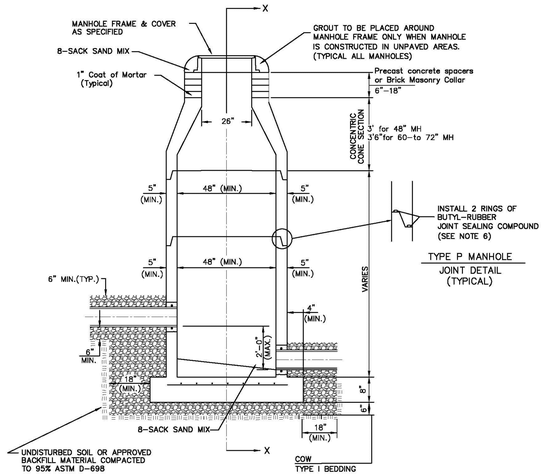
DWG:
28639-SP.DWG
DATE: 6/25/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-SP.dwg LAST SAVED BY: JOBBLE

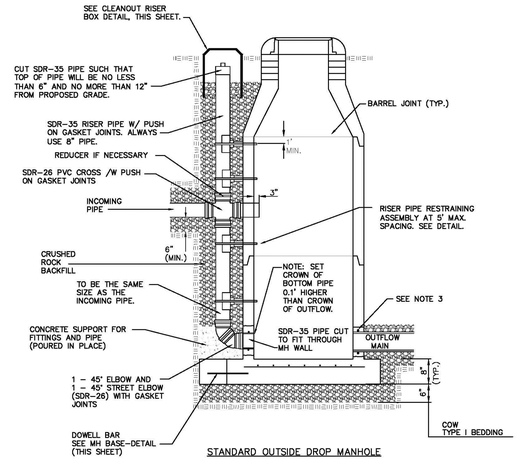


DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale

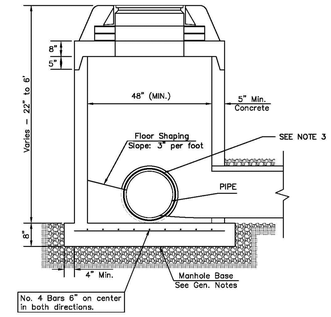


STANDARD MANHOLE
Not to Scale

TYPE P MANHOLE
JOINT DETAIL
(TYPICAL)

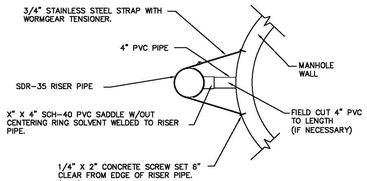


STANDARD OUTSIDE DROP MANHOLE
Not to Scale



SHALLOW MANHOLE
Not to Scale

= COW TYPE I BEDDING = UNDISTURBED SOIL



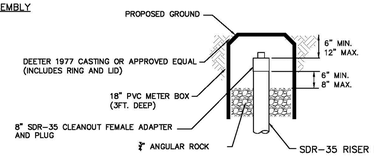
RISER PIPE RESTRAINING ASSEMBLY
Not to Scale

SANITARY SEWER MANHOLE DIAMETERS

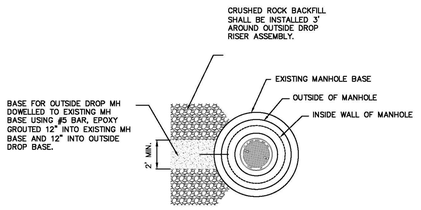
DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	>15'-30'	21"-30"
6'	>30'	36"-60"

PRECAST MANHOLE GENERAL NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
5. EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
6. JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
7. ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12' DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS. AS INDICATED BY THE PLANS.
8. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
9. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
10. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
11. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACE AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
12. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO.4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
13. WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
14. OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WLL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
15. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
16. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
17. THE VERTICAL DROP IN STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
18. STANDARD MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
19. PRECAST CONCRETE SPACERS OR BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
20. THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.
21. REFER TO PLANS FOR SIZE OF OUTSIDE DROP RISER, SADDLES AND CROSS.



CLEANOUT RISER BOX DETAIL
Not to Scale



MH BASE DETAIL
Not to Scale

REVISED JANUARY 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST SANITARY SEWER MANHOLE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SS-101

REVISIONS

NO	DATE

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
DATE: 6/25/2015 9:3 AM
REV-3

SONIC CORPORATION
320 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-5200

SONIC® AmericaNorth Bathroom Co SM

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN AT THE DESIGNATED SONIC DRIVE-IN LOCATION AT THE ADDRESS AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
812 W. MAPLE STREET
WICHITA, KS

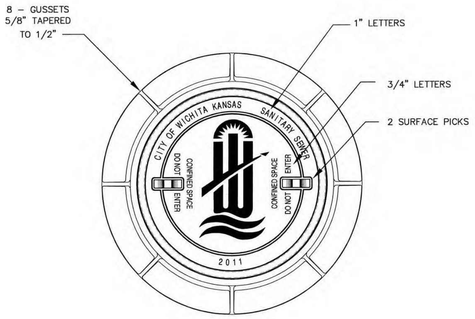
CITY SANITARY SEWER DETAIL I

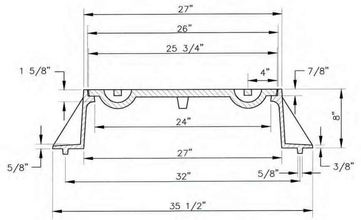
SHEET
C10

DWG:
28639-UP.DWG
DATE: 6/25/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE



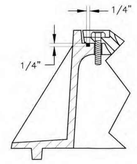


STANDARD MANHOLE FRAME & COVER

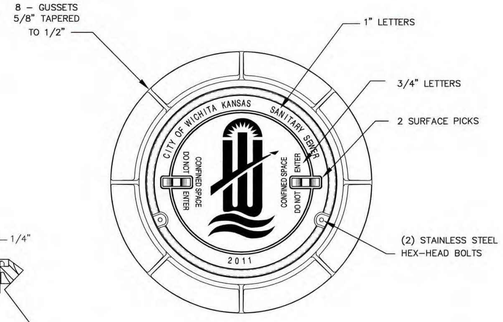
DEETER #1261 OR EJIW #1936–Z1

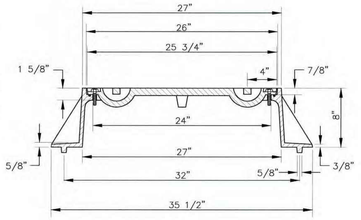
NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.



DETAIL OF T–GASKET



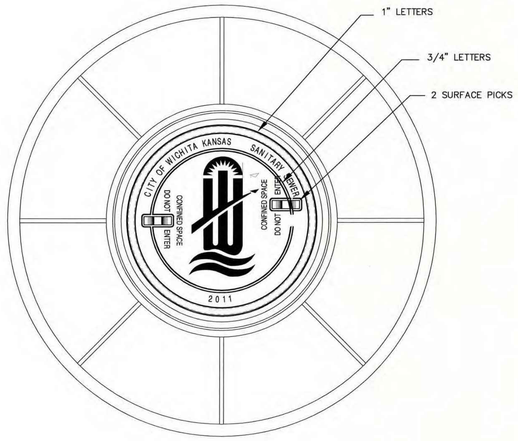


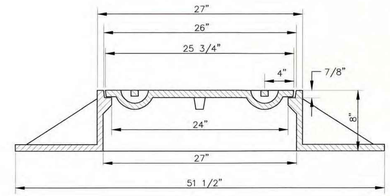
BOLT DOWN MANHOLE FRAME & COVER

DEETER #1261 OR EJIW #1936–Z1

NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.
2. FURNISHED WITH A T–GASKET IN THE FRAME.





WIDE FLANGED FRAME & COVER

DEETER #1261A

NOTE:

1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

GENERAL NOTES

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A–48. DIMENSIONS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.
2. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDARY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON–ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.
3. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SEATING SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUM–FERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.
4. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1 INCH IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SANITARY SEWER". THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN WITH CITY OF WICHITA DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

GARY L. JANZEN LICENSED 19294 KANSAS PROFESSIONAL ENGINEER
Expires 6/30/2013

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

MANHOLE
FRAME AND COVER
(SANITARY SEWER)

CITY ENGINEER
GARY JANZEN, P.E

PROJECT NUMBER	OCA NUMBER	DATE
		12/2011

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SS-102

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844

DWG NAME: 28639-SP
REV-3
JOB NO.: 28639
DATE: 6/25/2015 9:3 AM

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000

COPYRIGHT 1988-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN FRANCHISEE OR AGENT OF THE SONIC-A-TEX SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
2612 W. MAPLE STREET
WICHITA, KS

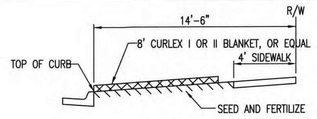
CITY SANITARY SEWER DETAIL 2

SHEET
C10.1

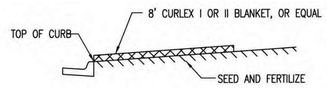
DWG:
28639-UP.DWG
DATE: 6/25/15

© 2015 CEI ENGINEERING ASSOCIATES, INC.

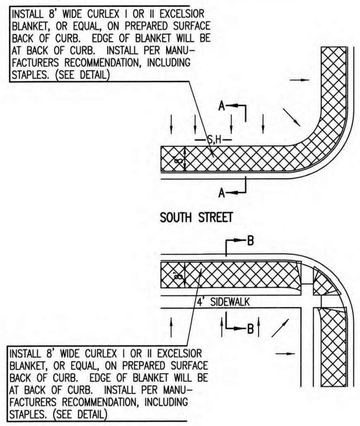
JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBIBLE



SECTION B-B



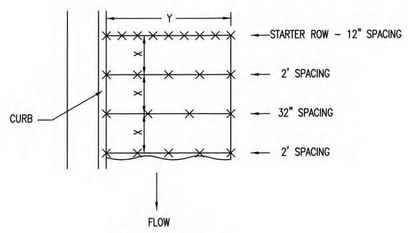
SECTION A-A

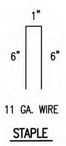


GENERAL NOTES

1. EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
2. EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
3. AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

BACK OF CURB PROTECTION DETAIL



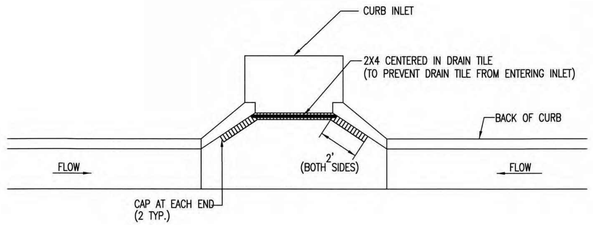


STAPLE

STAPLE PATTERN

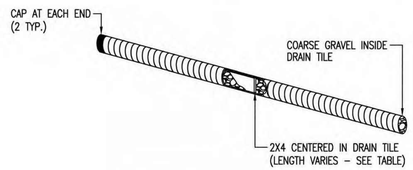
NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)

DETAILS FOR APPROVED EROSION CONTROL MAT

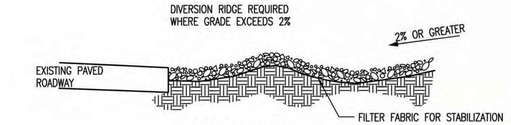


NOTE:
PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

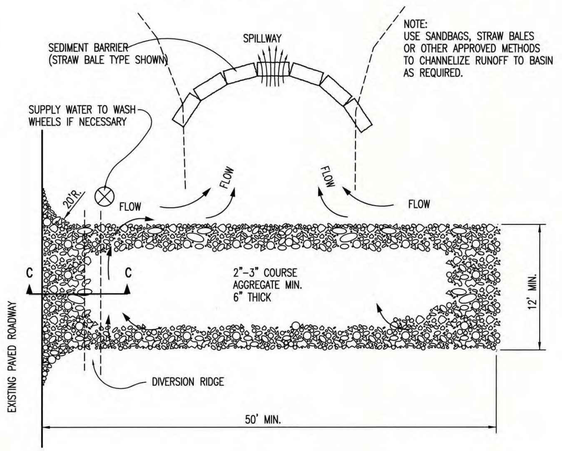
2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"



CURB INLET PROTECTION
4" PERFORATED PIPE W/ GRAVEL



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

REVISION DATE: MAY 2013

GARY L. JANZEN — LICENSED — 16024 — PROFESSIONAL ENGINEER — KANSAS
05/24/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-501

REVISIONS

NO	DATE

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
DATE: 6/25/2015 9:3 AM
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE#: 405-225-5000

SONIC® America's Drive-In® Corp.

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN THE DESIGNATED SONIC DRIVE-IN LOCATION OF THE BUILDING AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
2612 W. MAPLE STREET
WICHITA, KS

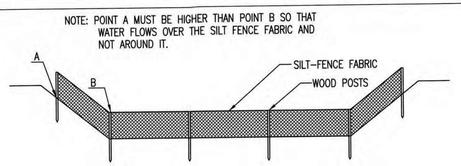
CITY EROSION CONTROL DETAIL 1

SHEET
C10.2

DWG: 28639-UP.DWG
DATE: 6/25/15

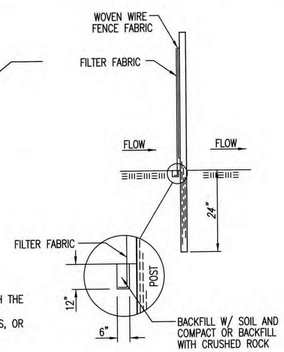
© 2015 CEI ENGINEERING ASSOCIATES, INC.

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE



ELEVATION

SILT FENCE DITCH CHECKS
(STREAM PROTECTION)



ANCHOR TRENCH DETAIL

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED.
WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK, NOT OVER IT. SILT FENCE DITCH CHECKS OFTEN FAIL WHEN OVERTOPPED.
SILT FENCE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
THE SILT FENCE SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE TOP OF THE LOW POINT OF THE FENCE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
SILT FENCE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.
SILT FENCE SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.

THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK DITCH GRADE (%)	SPACING CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS AT LEAST 12" DEEP BY 6" WIDE.
EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK.
PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSTREAM SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSTREAM EDGE OF THE TRENCH.
LINE TWO SIDES OF THE TRENCH WITH THE FABRIC AS SHOWN ON DETAIL. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE ON THE UPSTREAM SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSTREAM OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

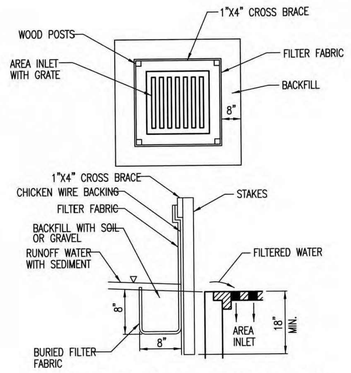
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK-NOT OVER IT. PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. SILT FENCE INSTALLATIONS QUICKLY DETERIORATE WHEN WATER OVERTOPS THEM.
DO NOT PLACE SILT FENCE POSTS ON THE UPSTREAM SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE A SILT FENCE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE SILT FENCE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE LOW POINT ON THE TOP OF THE FENCE.
DO NOT PLACE SILT FENCE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.

INSPECTION AND MAINTENANCE:

SILT FENCE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE WIRE OR POLYMERIC MESH BACKING USED TO HELP SUPPORT THE SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
THE MATERIAL USED TO FRAME THE TOPS OF THE POSTS SHOULD BE 1" BY 4" BOARDS.
SILT FENCE FABRIC AND SUPPORT BACKING SHOULD BE ATTACHED TO THE WOODEN POSTS AND FRAME WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE A SILT FENCE DROP INLET BARRIER IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED.
WATER SHOULD FLOW THROUGH SILT FENCE, NOT OVER IT. SILT FENCE BARRIERS FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
WHEN USED AS A BARRIER FOR AREA INLETS, SILT FENCE FABRIC AND POSTS MUST BE SUPPORTED AT THE TOP BY A WOODEN FRAME.
WHEN A SILT FENCE BARRIER FOR AREA INLETS IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 8" DEEP BY 8" WIDE.
DRIVE POSTS TO A DEPTH OF AT LEAST 18" AROUND THE PERIMETER OF THE AREA INLET.
THE DISTANCE BETWEEN POSTS SHOULD BE 4' OR LESS. IF THE DISTANCE BETWEEN TWO ADJACENT CORNER POSTS IS MORE THAN 4', ADD ANOTHER POST(S) BETWEEN THEM.
CONNECT THE TOPS OF ALL THE POSTS WITH A WOODEN FRAME MADE OF 1" BY 4" BOARDS. USE NAILS OR SCREWS FOR FASTENING.
ATTACH THE WIRE OR POLYMERIC-MESH BACKING TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC LONG ENOUGH TO WRAP AROUND THE PERIMETER OF THE AREA INLET. ADD MORE LENGTH FOR OVERLAPPING THE FABRIC JOINT. PLACE THE EDGE OF THE FABRIC IN THE TRENCH, STARTING AT THE OUTSIDE EDGE OF THE TRENCH. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
ATTACH THE SILT FENCE TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. THE JOINT SHOULD BE OVERLAPPED TO THE NEXT POST.

NOTE: WHEN A SILT FENCE BARRIER FOR AREA INLET IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

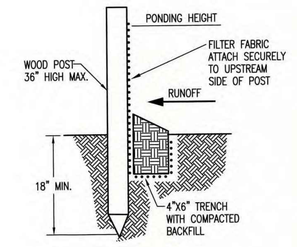
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE BARRIER FOR AREA INLET-NOT OVER IT. PLACE A SILT FENCE BARRIER FOR AREA INLET IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. SILT FENCE BARRIER FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
DO NOT PLACE POSTS ON THE OUTSIDE OF THE SILT FENCE BARRIER FOR AREA INLET. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESISTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT INSTALL SILT FENCE BARRIER FOR AREA INLETS WITHOUT FRAMING THE TOP OF THE POSTS.
THE CORNER POSTS AROUND AREA INLETS ARE STRESSED IN TWO DIRECTIONS WHEREAS A NORMAL SILT FENCE IS ONLY STRESSED IN ONE DIRECTION. THIS ADDED STRESS REQUIRES MORE SUPPORT.

INSPECTION AND MAINTENANCE:

SILT FENCE BARRIER FOR AREA INLETS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE SILT FENCE?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



SILT FENCE BARRIERS

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, SILT FENCE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
SILT FENCE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 6" DEEP BY 4" WIDE.
MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT-FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18".
PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES.
DO NOT PLACE SILT-FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE SILT FENCE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT SUFFICIENTLY ANCHORED, IT WILL WASH OUT.
SILT FENCE SLOPE BARRIERS MUST BE DUG INTO THE GROUND-SILT FENCE AT GROUND LEVEL DOES NOT WORK BECAUSE WATER WILL FLOW UNDERNEATH.

INSPECTION AND MAINTENANCE:

SILT FENCE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DO THE SILT FENCES SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED PROFESSIONAL ENGINEER 19004 KANSAS
05/21/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SILT FENCE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-502

NO	DATE	REVISIONS

© Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street (479) 273-9472
Bentonville, AR 72712 FAX (479) 273-0844
DWG NAME: 28639-SP JOB NO.: 28639
REV-3 DATE: 6/25/2015 9:3 AM

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-235-5000
SONIC® AMERICA'S DRIVE-IN CORP.
COPYRIGHT 1988-2008 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN AT THE DESIGNATED SONIC DRIVE-IN LOCATION AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
862 W. MAPLE STREET
WICHITA, KS

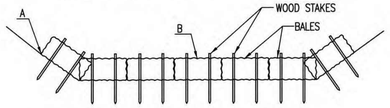
CITY EROSION CONTROL DETAIL 2

SHEET
C10.3

DWG: 28639-UP.DWG
DATE: 6/25/15

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE
© 2015 CEI ENGINEERING ASSOCIATES, INC.

NOTE: POINT A MUST BE HIGHER THAN POINT B
SO THAT WATER FLOWS OVER THE BALES AND
NOT AROUND THEM.



STRAW BALE DITCH CHECKS

MATERIAL SPECIFICATION:

BALE DITCH CHECKS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
OPTIONAL: THE DOWNSTREAM SCOUR APRON SHOULD BE CONSTRUCTED OF A DOUBLE-NETTED STRAW EROSION-CONTROL BLANKET AT LEAST 6' WIDE.
OPTIONAL: THE METAL LANDSCAPE STAPLES USED TO ANCHOR THE EROSION-CONTROL BLANKET SHOULD BE AT LEAST 8" LONG.

PLACEMENT:

BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.
BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.
THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH GRADE (%)	CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH-IT WILL BE USED LATER.
OPTIONAL: ON THE DOWNSTREAM SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSTREAM EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSTREAM EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSTREAM SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSTREAM SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

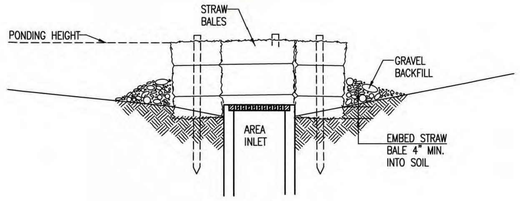
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE.
DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

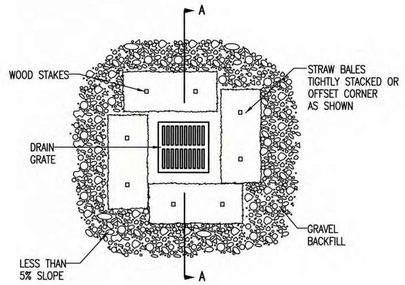
INSPECTION AND MAINTENANCE:

BALE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES AND/OR SCOUR APRONS (OPTIONAL) DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

MATERIAL SPECIFICATION:

BALE AREA INLET BARRIERS SHOULD BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

BALE AREA INLET BARRIERS SHOULD BE PLACED DIRECTLY AROUND THE PERIMETER OF A DROP INLET. WHEN A BALE AREA INLET BARRIER IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 4" DEEP BY A BALE'S WIDTH WIDE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. SOME BALES MAY NEED TO BE SHORTENED TO FIT INTO THE TRENCH AROUND THE AREA INLET. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS.
STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE RECEIVING SIDE OF THE BARRIER AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.
NOTE: WHEN A BALE AREA INLET BARRIER IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

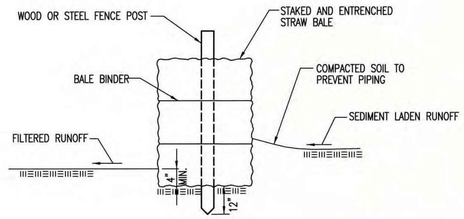
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

BALES SHOULD BE PLACED DIRECTLY AGAINST THE PERIMETER OF THE AREA INLET. THIS ALLOWS OVERTOPPING WATER TO FLOW DIRECTLY INTO THE INLET INSTEAD OF ONTO NEARBY SOIL CAUSING SCOUR.
BALE AREA INLET BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE AREA INLET BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE AREA INLET BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



STRAW BALE BARRIERS

MATERIAL SPECIFICATION:

BALE SLOPE BARRIERS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, BALE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
BALE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER FAILS.
DO NOT PLACE BALE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE SLOPE BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 19294 PROFESSIONAL ENGINEER KANSAS 05/31/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STRAW BALE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-503

NO | DATE | REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
DATE: 6/25/2015 9:3 AM
REV-3

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000
SONIC® America's Drive-In™

COPYRIGHT 1980-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC FRANCHISEE NAMED IN THE OWNER-SET FOR THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

CITY EROSION CONTROL DETAIL 3

SHEET
C10.4

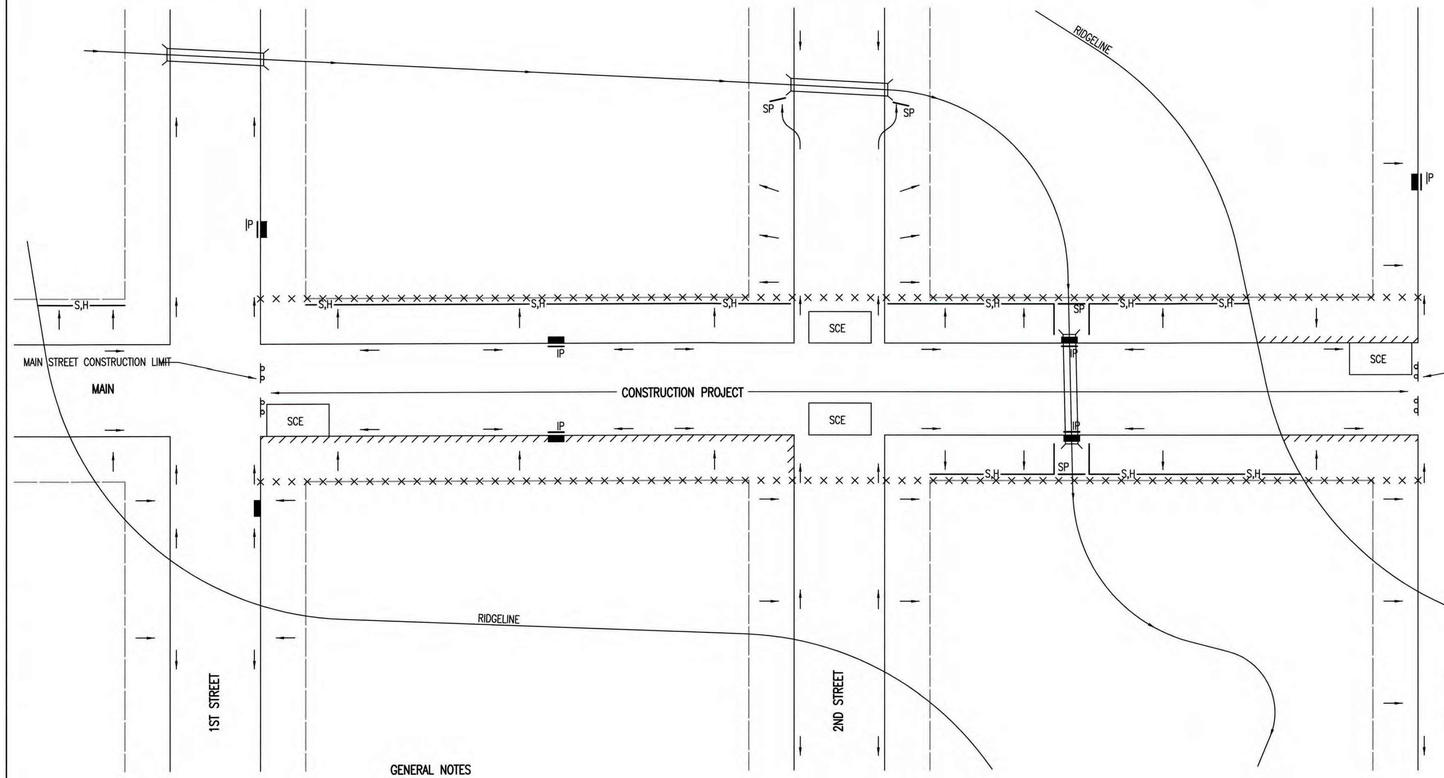
DWG: 28639-UP.DWG
DATE: 6/25/15

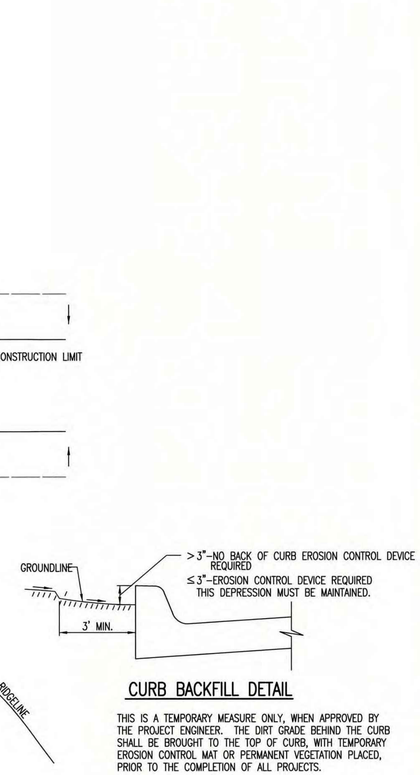
JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE

© 2015 CEI ENGINEERING ASSOCIATES, INC.

GENERAL NOTES

1. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPES OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.
3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.
4. FOR PROJECTS DISTURBING LESS THAN 1 ACRE, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION. EROSION CONTROL DEVICES MUST BE USED ON ALL PROJECTS.
5. FAILURE TO USE AND MAINTAIN EROSION CONTROL DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE CONTRACTOR TO THE PENALTIES PROVIDED FOR THEREIN.
6. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT DEVICE OTHER THAN THOSE SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED AS LONG AS THEY ARE EFFECTIVE AND MAINTAINED.





CURB BACKFILL DETAIL

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

LEGEND

- R-O-W LIMITS
- DRAINAGE FLOW PATH
- R/W LIMIT WITHIN CONSTRUCTION LIMIT
- STORM WATER INLETS
- IP — INLET PROTECTION
- S,H — SILT FENCE OR HAY BALE BARRIER
- SP — STREAM PROTECTION
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- BACK OF CURB PROTECTION

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO KEEP ALL SEDIMENT CONFINED TO THE CONSTRUCTION SITE, AND OUT OF ALL UNDERGROUND PIPES, DITCHES, LAKES, AND OTHER DRAINAGE FACILITIES, AND OFF OF STREETS.
2. THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT-OF-WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.
3. EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.
4. INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.
5. EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.
6. STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED, AS NEEDED, TO PREVENT MUD FROM TRACKING ONTO STREETS NOT UNDER CONSTRUCTION AND ON STREETS WITHIN THE PROJECT LIMITS IF TRAFFIC IS BEING MAINTAINED THROUGH THE PROJECT.
7. ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.
8. THE CONTACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL DEVICES BACK OF CURB, WHENEVER WATER CAN DRAIN OVER CURB, TO KEEP ERODED SOIL OUT OF THE GUTTERLINES, IN ACCORDANCE WITH THE FOLLOWING:
   A. THE DEVICE REQUIRED WILL BE APPROVED EROSION CONTROL MAT LISTED ON THE CITY'S APPROVED MATERIAL LIST. SAID BLANKET SHALL BE PLACED OVER THE APPROPRIATE SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS. (SEE SOIL EROSION BMPs – BACK OF CURB SEDIMENT BARRIER DETAILS)
   B. THIS DEVICE SHALL BE INSTALLED IMMEDIATELY WHENEVER THE CURB IS BACKFILLED TO WITHIN 3" OF THE TOP OF CURB. (SEE CURB BACKFILL DETAIL) OTHER BMP'S MAY BE REQUIRED AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB.
   C. ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.
   D. SHOULD THE PROJECT PLANS SPECIFY THAT THE RIGHT-OF-WAY IS TO BE SODDED, THE EXCELSIOR MAT WILL NOT BE REQUIRED SO LONG AS THE SOD IS PLACED WITHIN 48 HOURS AFTER CURB BACKFILL REACHES A HEIGHT OF 3" OR LESS FROM TOP OF CURB. (SEE CURB BACKFILL DETAIL)

GARY L. JANZEN — LICENSED — 18294 — KANSAS — PROFESSIONAL ENGINEER — 05.12.15

REVISION DATE: 2013

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STREET IMPROVEMENT PROJECTS

CITY ENGINEER: GARY JANZEN, P.E.

PROJECT NUMBER	CCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-504

SONIC DRIVE-IN
SONIC TYPE: 12
8612 W. MAPLE STREET
WICHITA, KS

CITY EROSION CONTROL DETAIL 4

SHEET
C10.5

DWG: 28639-UP.DWG
DATE: 6/25/15

NO	DATE	REVISIONS

CEI Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW "I" Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
REV-3
DATE: 6/25/2015 9:3 AM

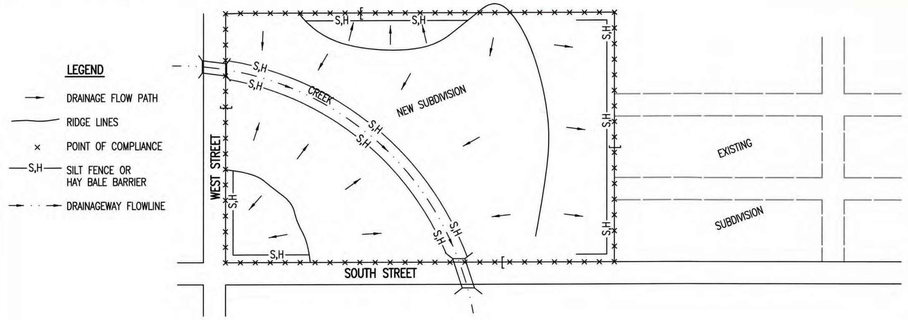
SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE: 405-225-5000

COPYRIGHT 1988-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN BY THE DESIGNATED SONIC DRIVE-IN FRANCHISEE OR A DESIGNEE OF THE SONIC-IN AT THE SPECIFIED LOCATION.

© 2015 CEI ENGINEERING ASSOCIATES, INC.

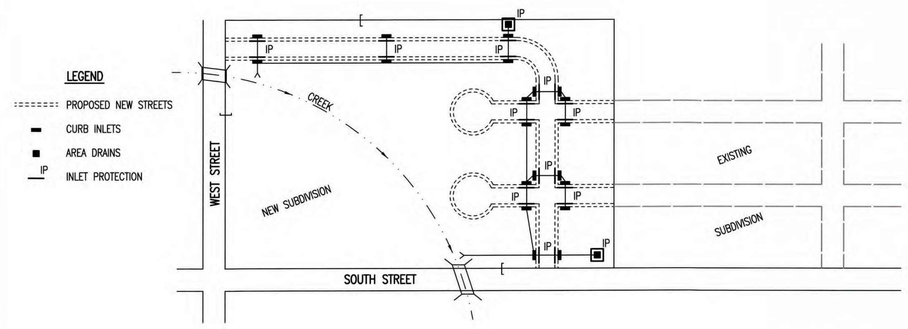
JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE

PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



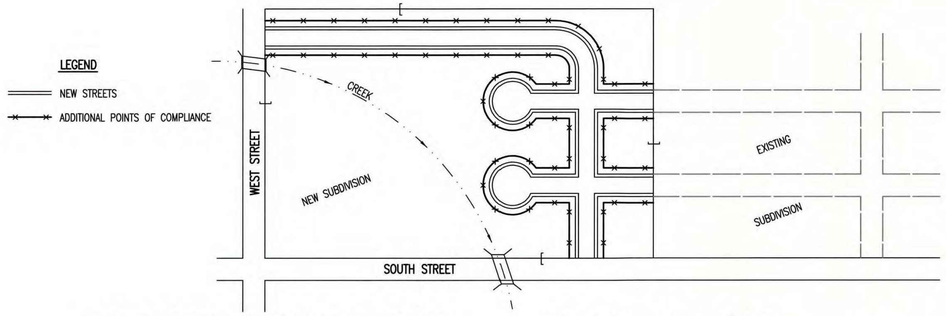
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
3. SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
4. ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
5. CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
6. UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
7. IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
8. WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

PHASE 2 – INSTALLATION OF STORM SEWER



1. DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
2. AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
3. AREA DRAINS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
4. CURB OPENING INLETS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 – STREET CONSTRUCTION.
5. THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
6. THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
7. ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
8. ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

PHASE 3 – STREET CONSTRUCTION

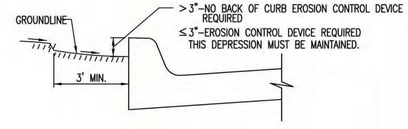


1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
2. CURB OPENING INLET PROTECTION:
   A. SUMP AREAS – INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
   B. NON-SUMP LOCATIONS – PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
3. EROSION CONTROL DEVICES WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), ADDITIONAL DEVICES WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
4. SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
5. THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAY BALE OR SILT FENCE EROSION CONTROL DEVICES AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
6. THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
7. THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB EROSION CONTROL DEVICES IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
2. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
3. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
4. PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
5. THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
6. FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
7. FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
8. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
9. A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

SEE DETAIL SHEET FOR BACK OF CURB PROTECTION DETAIL



CURB BACKFILL DETAIL (STREET CONSTRUCTION ONLY)

THIS IS A TEMPORARY MEASURE ONLY. WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
05.13.13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SUBDIVISION DEVELOPMENT PROCESS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-505

SONIC

JOB # 28639 DRAWING: 28639-UP.dwg LAST SAVED BY: JOBBLE

SONIC

SONIC

SONIC

© 2015 CEI ENGINEERING ASSOCIATES, INC.

NO	DATE	REVISIONS

Engineering Associates, Inc.
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SCIENTISTS
3317 SW 7th Street
Bentonville, AR 72712
(479) 273-9472
FAX (479) 273-0844
JOB NO.: 28639
DWG NAME: 28639-SP
REV-3
DATE: 6/25/2015 9:3 AM

SONIC CORPORATION
300 JOHNNY BENCH DRIVE
OKLAHOMA CITY, OK 73104
OFFICE®: 405-225-5000
SONIC® America's Drive-In℠

COPYRIGHT 1998-2000 AMERICA'S DRIVE-IN CORP.
THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN AT THE DESIGNATED SONIC DRIVE-IN LOCATION AT THE TIME AND AT THE SPECIFIED LOCATION.

SONIC DRIVE-IN
SONIC TYPE: 12
2612 W. MAPLE STREET
WICHITA, KS

CITY EROSION CONTROL DETAIL 5

SHEET
C10.6

DWG: 28639-UP.DWG
DATE: 6/25/15