

GENERAL NOTES:

- ALL ELEVATIONS SHOWN ARE BASED ON MEAN SEA LEVEL.
- CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF FORTY-EIGHT(48)HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:

KANSAS ONE CALL 887-2470

THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:
 COX COMMUNICATIONS 262-4270 OR 263-2061
 AT&T 1-800-870-8390
 KANSAS GAS SERVICE 1-888-482-4950
 WESTAR SITE 1-800-383-1183
 BLACK HILLS ENERGY 1-800-303-0752
 CITY OF WICHITA(WATER & SEWER) 268-4555

THE CONTRACTOR SHALL NOTIFY PIPELINE COMPANIES AT LEAST 24 HOURS IN ADVANCE OF ANY WORK BEING PERFORMED ACROSS AND/OR ADJACENT TO PIPELINES.

3. COST OF EXCAVATION, HAULING AND DUMPING OF EXCESS EXCAVATION SHALL BE SUBSIDIARY TO OTHER ITEMS OF WORK.

4. THE CONTRACTOR SHALL NOTIFY THE INSPECTOR FOR THIS PROJECT 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT ON SITE. ANY WORK DONE WITHOUT INSPECTION WILL BE REQUIRED TO BE UNCOVERED FOR INSPECTION.

5. THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY DIRECTLY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO REESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS SUCH IRONS SHALL BE REESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.

7. THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, ENTRANCES AND BANK LINES TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE.

8. INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA SHALL BE CARRIED THROUGH CONSTRUCTION. LOCAL RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA SHALL BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS.

9. UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES 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. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

10. 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, THAT IN THE OPINION OF THE ENGINEER, 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 FLOODPLAIN WOULD 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 WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.

11. PROPERTIES WITHIN THE PROJECT LIMITS MAY HAVE UNDERGROUND SPRINKLER SYSTEMS IN THE PUBLIC RIGHT-OF-WAY WHICH CONFLICT WITH NEW CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO REMOVE SUCH IMPROVEMENTS SHOULD THEY NOT BE REMOVED BY THEIR OWNER AT THE TIME OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SALVAGE ALL SPRINKLER HEADS AND/OR VALVES AND GIVE SUCH MATERIAL TO THEIR OWNER. PORTIONS OF UNDERGROUND SPRINKLER SYSTEMS NOT IN CONFLICT WITH NEW CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE AND SHALL REMAIN IN PLACE. ALL WORK IN CONNECTION WITH UNDERGROUND SPRINKLER SYSTEMS SHALL BE CONSIDERED AS SUBSIDIARY TO THE CONTRACT PAY ITEMS OF WORK.

12. ALL PROPOSED STUBS AND PLUGGED PIPES SHALL BE LOCATED WITH GREEN PLASTIC TAPE.

13. PRIOR TO LAYING THE NEW SEWER LINES THE CONTRACTOR SHALL EXPOSE AND VERIFY THE ELEVATION, GRADE AND ALIGNMENT OF THE EXISTING SANITARY SEWER AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES FROM THE PLAN.

14. THE CONTRACTOR MUST EXAMINE THE CONSTRUCTION SITE PRIOR TO BIDDING AND BE SATISFIED AS TO THE WORK SHOWN FOR COMPLETION. AFTER BIDS HAVE BEEN RECEIVED, THE CONTRACTOR SHALL NOT ASSERT THAT THERE WAS A MISUNDERSTANDING OF THE QUANTITIES OF WORK OR OF THE NATURE FOR THE WORK TO BE COMPLETED.

15. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION AVAILABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WHICH ARE ENCOUNTERED ON THIS PROJECT. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING TRENCHING OPERATIONS TO AVOID DAMAGING THESE LINES. ANY LINES DAMAGED SHALL BE REPLACED OR REPAIRED IMMEDIATELY AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

16. ALL PIPE JOINTS SHALL BE LAID AND PUSHED 'FULL HOME', WITH THE BEVELED END OF THE SPIGOT MAKING FULL CONTACT WITH THE CHAMFERED AREA AT THE THROAT OF THE BELL OR SOCKET, WITH NO SEPARATION BETWEEN THEM. IF SEPARATION IS DETERMINED, THE PIPE SHALL BE EXCAVATED AND RE-LAID

DRAINAGE PRIVATE PROJECT PLANS FOR QUIKTRIP 11th ADDITION WICHITA, SEDGWICK COUNTY, KANSAS 0006 PPD (O.C.A. NO. 607861) JAMES L. ARMOUR, P.E., CITY ENGINEER APRIL 2011

AS BUILT PLANS
 CONTRACTOR: CK CONTRACTING
 INSPECTOR: RANDY VOTH, C.E.D.
 PDF BY: C.C., 12-28-2011

PROJECT NO.: 20101899

CEP
 CERTIFIED ENGINEERING DESIGN, P.A.
 1835 W. MAPLE
 WICHITA, KANSAS 67213
 PHONE: 316-261-1111
 FAX: 316-261-1088

QuikTrip No. 0369R
 625 SOUTH HILLSIDE AVENUE
 WICHITA, KS

PROTOTYPE: P-66 (02/01/11)
 DIVISION: WICHITA
 VERSION: 001
 DESIGNED BY: CKW
 DRAWN BY: CKW
 REVIEWED BY: HDF

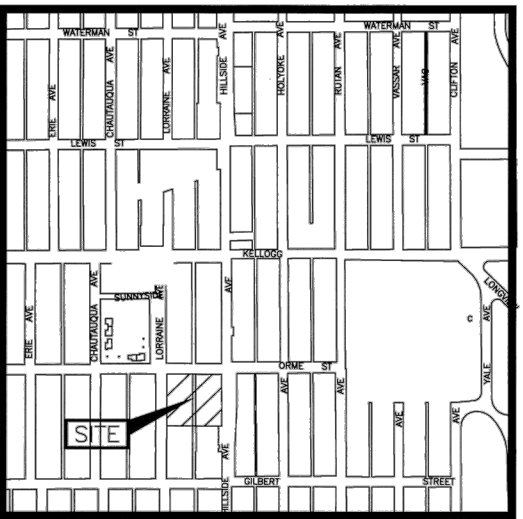
KS: 1-800-344-7233
 WICHITA: 316-687-0413

REV	DATE	DESCRIPTION

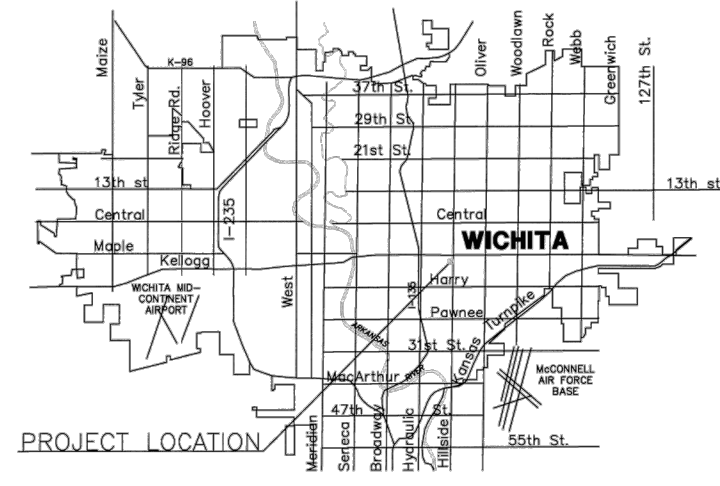
ORIGINAL ISSUE DATE: 01-21-2011

SHEET TITLE:
 COVER

SHEET NUMBER:
 01



Vicinity Map
 Not to Scale



LOCATION MAP



ACCORDING TO SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.

- AT LEAST 24 HOURS BEFORE CONNECTING NEW SEWER PIPE TO THE EXISTING SEWAGE SYSTEM, THE CONTRACTOR SHALL CONTACT THE CITY OF WICHITA SEWER DEPARTMENT (268-4024). THE CONTRACTOR SHALL KEEP ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION, TO PREVENT WATER OR DEBRIS FROM ENTERING THE EXISTING SEWER. A MECHANICAL PLUG SHALL BE INSTALLED AND MAINTAINED TO ISOLATE THE EXISTING SEWER FROM THE NEW CONSTRUCTION UNTIL THE NEW CONSTRUCTION IS CLEANED, TELEVIEWED AND HAS BEEN ACCEPTED. THE WATER USED FOR CLEANING SHALL NOT BE ADDED TO THE FLOW OF THE EXISTING SEWER. THE CLEANING OR OTHERWISE ACCUMULATED WATER SHALL BE PUMPED OR OTHERWISE REMOVED PRIOR TO TELEVIEWING.
- THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS TO PERMIT TRAFFIC THROUGH AND ACROSS CONSTRUCTION AT EXISTING ROADWAYS AT ALL TIMES. THE CONTRACTOR SHALL ERECT WARNING SIGNS, FLASHING LIGHTS, AND BARRICADES IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES TO ENSURE SAFETY AS DIRECTED IN THE GENERAL CONDITIONS. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- ALL SODDING, SEEDING, AND EROSION CONTROL OF THE AREAS DISTURBED BY CONSTRUCTION OF THE SANITARY SEWER AS SHOWN ON THE PLANS (SEE SHEET NO.3), SHALL BE "SUBSIDIARY" TO "SITE CLEARING & RESTORATION".
- THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.

BENCHMARKS:

- BM-1 (CITY OF GPS MONUMENT NO. R-08) ALUMINUM DISK ON ALUMINUM ROD, WEST SIDE OF LUKE ROAD, 415'+/- SOUTH OF WILLOW CREEK DRIVE, 16' WEST OF BACK OF CURB, EAST OF GOLDEN CORRAL RESTAURANT LOCATED AT 1701 N. BELT LINE ROAD. ELEVATION=531.87' NAVD 1988
- BM-2 (CITY OF GPS MONUMENT NO. S-09) ALUMINUM MONUMENT WITH ACCESS COVER, EAST SIDE OF LUKE STREET, 61' SOUTHEAST OF THE SOUTHEAST CORNER OF FRENCH'S FOREIGN CAR REPAIR LOCATED AT 925 LUKE STREET, MIDWAY BETWEEN TWO DRIVEWAYS & WEST OF SIDEWALK, 97.5 FEET NORTH OF A FIRE HYDRANT. ELEVATION=521.29' NAVD 1988
- TBM-1 SQUARE CUT WITH "X" SET ON SOUTHEAST CORNER OF CURB INLET, EAST SIDE OF BELT LINE ROAD, 267' SOUTH OF WILLOW CREEK DRIVE. ELEVATION=537.56' NAVD 1988
- TBM-2 SQUARE CUT WITH "X" SET ON TOP OF CURB, NORTH SIDE OF WILLOW CREEK DRIVE, 230' EAST OF BELT LINE ROAD, 40' EAST OF A POWER POLE. ELEVATION=543.33' NAVD 1988

APPROVED AS NOTED
 By CITY ENGINEER OF WICHITA

Sanitary Sewers _____
 Storm Sewers _____
 by City Engineer *Julianne Kellman* 4-6-11
 by Storm Water Engineer *Jim Smith*

Driveway Approaches _____
 Water Mains _____
 Paving _____

NOTE TO CONTRACTOR

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. NO WORK SHALL BE PERFORMED IN DEDICATED EASEMENTS OR THE PUBLIC RIGHT-OF-WAY BY THE CONTRACTOR WITHOUT SUCH INSPECTION NOR SHALL ANY WORK BE COMMENCED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER.

FILE LOCATION(S): Drawing Files\Project CKW 12-7-09\QT #369(20101899)\SWS Private Project.dwg TAB NAME: COVER USER: cckinner SAVED: 4/6/2011 9:05 AM PLOTTED: 4/6/2011 9:19 AM

CERTIFICATE OF SURVEY

I, Gregory J. Allison, a registered land surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "QUIKTRIP 11th ADDITION", an addition to Wichita, Sedgwick County, Kansas, into a Lot, a Block, a Street, and an Alley, the same being accurately set forth in the accompanying plat and described herein:

Lots 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, and 72, Block 8, together with, the adjoining 16 foot platted alley, all in Sunny-Side Addition to the City of Wichita, Kansas, said tract being located in the Northeast Quarter of Section 27, Township 27 South, Range 1 East of the Sixth Principal Meridian, Wichita, Sedgwick County, Kansas, collectively being more particularly described as follows:

BEGINNING at the northeast corner of said Lot 49, thence along the east line of said Block 8 on a Kansas coordinate system of 1983 south zone grid bearing of S01°04'18"E, a distance of 300.06 feet to the southeast corner of said Lot 71; thence S88°47'37"W along the south lines of said Lots 71 and 72, a distance of 318.01 feet to the southwest corner of said Lot 72; thence N01°03'56"W, along the west line of said Block 8, a distance of 299.91 feet to the northwest corner of said Lot 50; thence N88°46'03"E, along the north line of said Block 8, a distance of 317.98 feet to the POINT OF BEGINNING.

Said described tract contains 95,394 square feet or 2.19 acres, more or less.

All alleys, streets, easements, building setbacks, access controls, together with all other public dedications within the above described property are hereby vacated and replatted by virtue of K.S.A. 12-512(b).

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this ___ day of _____, 2011.



Gregory J. Allison, PE, LS #1257
 MKEC Engineering Consultants, Inc.
 411 North Webb Road
 Wichita, Kansas 67206

OWNER CERTIFICATE

Know all men by these presents that the undersigned property owner of the land above set forth in the Registered Land Surveyor's Certificate, has caused the same to be surveyed and platted into a Lot, a Block, a Street, and an Alley, the same to be known as "QUIKTRIP 11th ADDITION," an addition to Wichita, Sedgwick County, Kansas.

Easements for the construction and maintenance of public utilities, as indicated on the accompanying plat are hereby granted to the public.

The street and alley are hereby dedicated to and for the use of the public.

All abutters rights of access to or from Hillside Avenue over and across the east line; and to or from Lorraine Avenue over and across the west line of "QUIKTRIP 11th ADDITION," are hereby granted to the appropriate governing body, as indicated hereon.

A drainage plan has been developed for this plat. All drainage easements, right-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of storm water.

QuikTrip Corporation

Larry D. Dickerson, Director of Real Estate

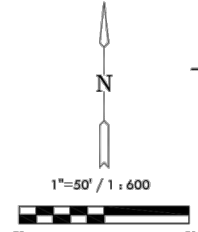
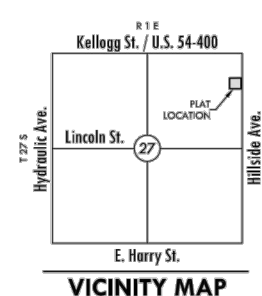
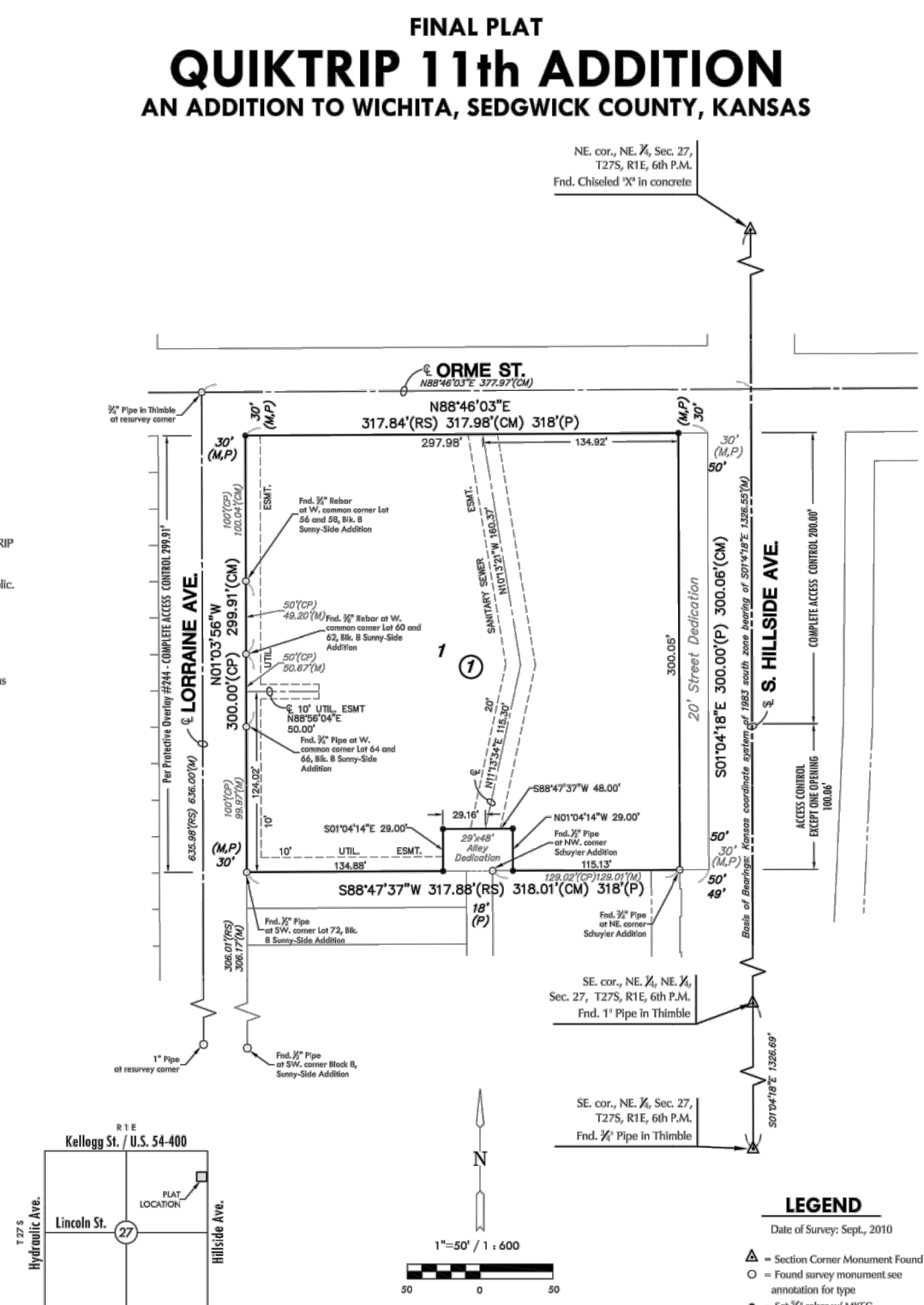
STATE OF OKLAHOMA, TULSA COUNTY} ss:

This instrument was acknowledged before me on ___ day of _____, 2011, by Larry D. Dickerson, Director of Real Estate, QuikTrip Corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

Notary Public: _____, Notary Public

My Term Expires: _____



Basis of Bearing: Kansas coordinate system of 1983 south zone grid bearing of S01°04'18"E along the E. line of the NE 1/4, Sec. 27, T27S, R1E, 6th P.M.

This plat is surveyed and platted on NAD83-09 using Kansas state plane south zone coordinates, modified to the surface, having a combined adjustment scale factor of 1.000120014401728

- LEGEND**
 Date of Survey: Sept., 2010
- ▲ = Section Corner Monument Found
 - = Found survey monument see annotation for type
 - = Set 3/8" rebar w/ MKEC CLS 39 id. cap
 - (M) = Measured
 - (CM) = Calculated from measured
 - (CP) = Calculated from Platted
 - (P) = Platted
 - (RS) = Record Survey

FINAL PLAT
QUIKTRIP 11th ADDITION
AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

PLANNING COMMISSION CERTIFICATE

This plat of "QUIKTRIP 11th ADDITION" has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this ___ day of _____, 2010

WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION

Debra Miller Stevens, Chair

Attest: John L. Schlegel, Secretary

GOVERNING BODY CERTIFICATE

The dedications shown on this plat are hereby accepted and this plat is hereby approved by the governing body of the City of Wichita, Kansas.

Dated this ___ day of _____, 20__

At the direction of the City Council.

Carl Brewer, Mayor

Attest: Karen Sublett, City Clerk

TRANSFER RECORD

STATE OF KANSAS, SEDGWICK COUNTY} ss:

Entered on transfer record this ___ day of _____, 2011

Kelly B. Arnold, County Clerk

REGISTER OF DEEDS CERTIFICATE

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This is to certify that this instrument was filed for record in the Register of Deeds office this ___ day of _____, 2011, at ___ o'clock ___ M; and is duly recorded.

Bill Meek, Register of Deeds

Attest: Tonya E. Buckingham, Deputy

COUNTY SURVEYOR

STATE OF KANSAS, SEDGWICK COUNTY} ss:

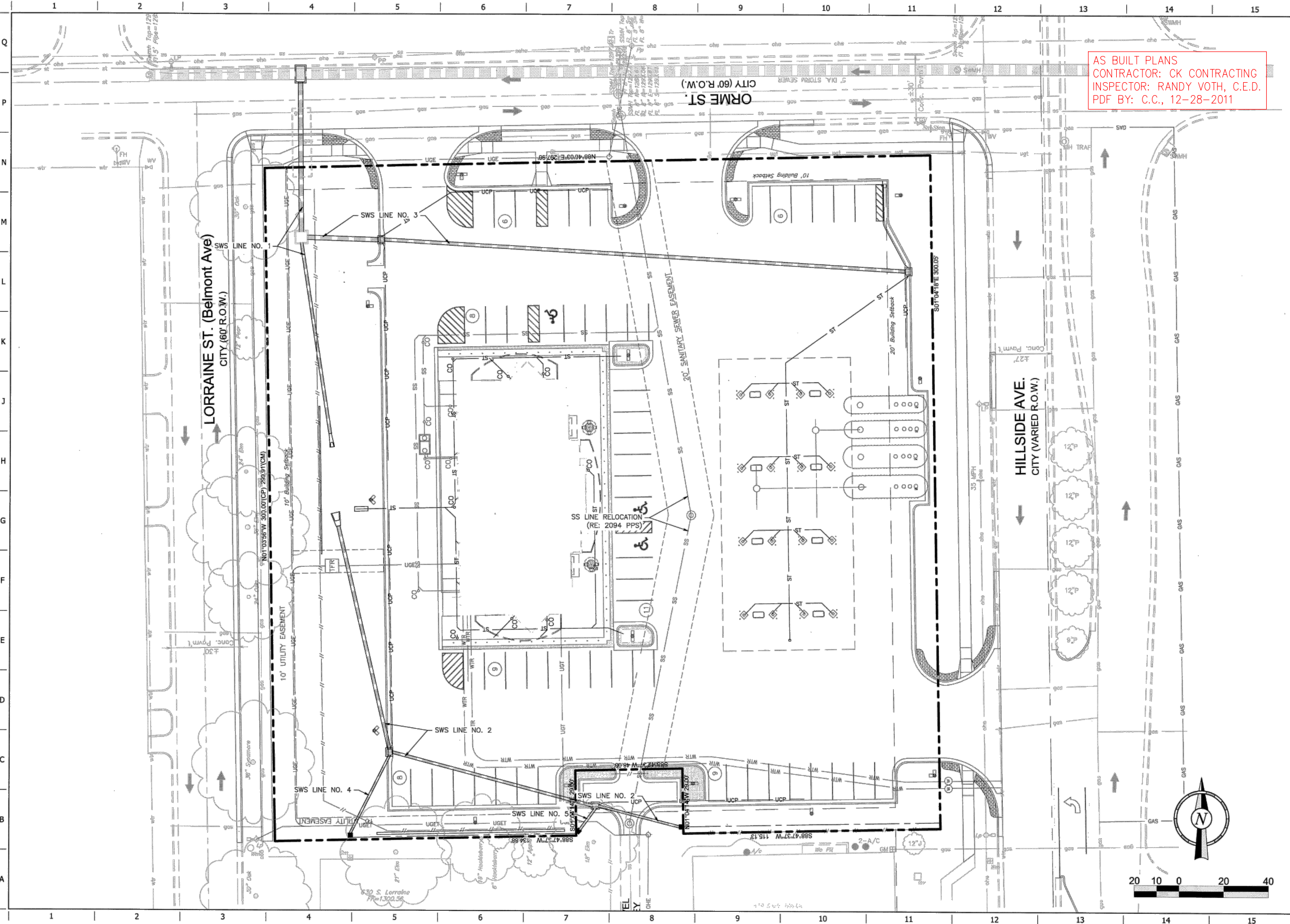
Reviewed in accordance with K.S.A. 58-2005 on this ___ day of _____, 2010

Tricia L. Robello, LS #1246
 Deputy County Surveyor
 Sedgwick County, Kansas



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FILE LOCATIONS: Drawing Files\Project CKW 12-7-09\OT #369(20101899)\SWS Private Project.dwg TAB NAME: SITE PLAN USER: rwhlkr SWED: 4/9/2011 9:27 AM PLOTTED: 4/9/2011 2:39 PM



AS BUILT PLANS
 CONTRACTOR: CK CONTRACTING
 INSPECTOR: RANDY VOTH, C.E.D.
 PDF BY: C.C., 12-28-2011

PROJECT NO.: 20101899

CEED
 CERTIFIED ENGINEERING DESIGN, P.A.
 1695 W. MAIN ST.
 WICHITA, KANSAS 67213
 PH: (316) 262-8808
 FAX: (316) 262-1069

QuikTrip No. 0369R
 625 SOUTH HILLSIDE AVENUE
 WICHITA, KS

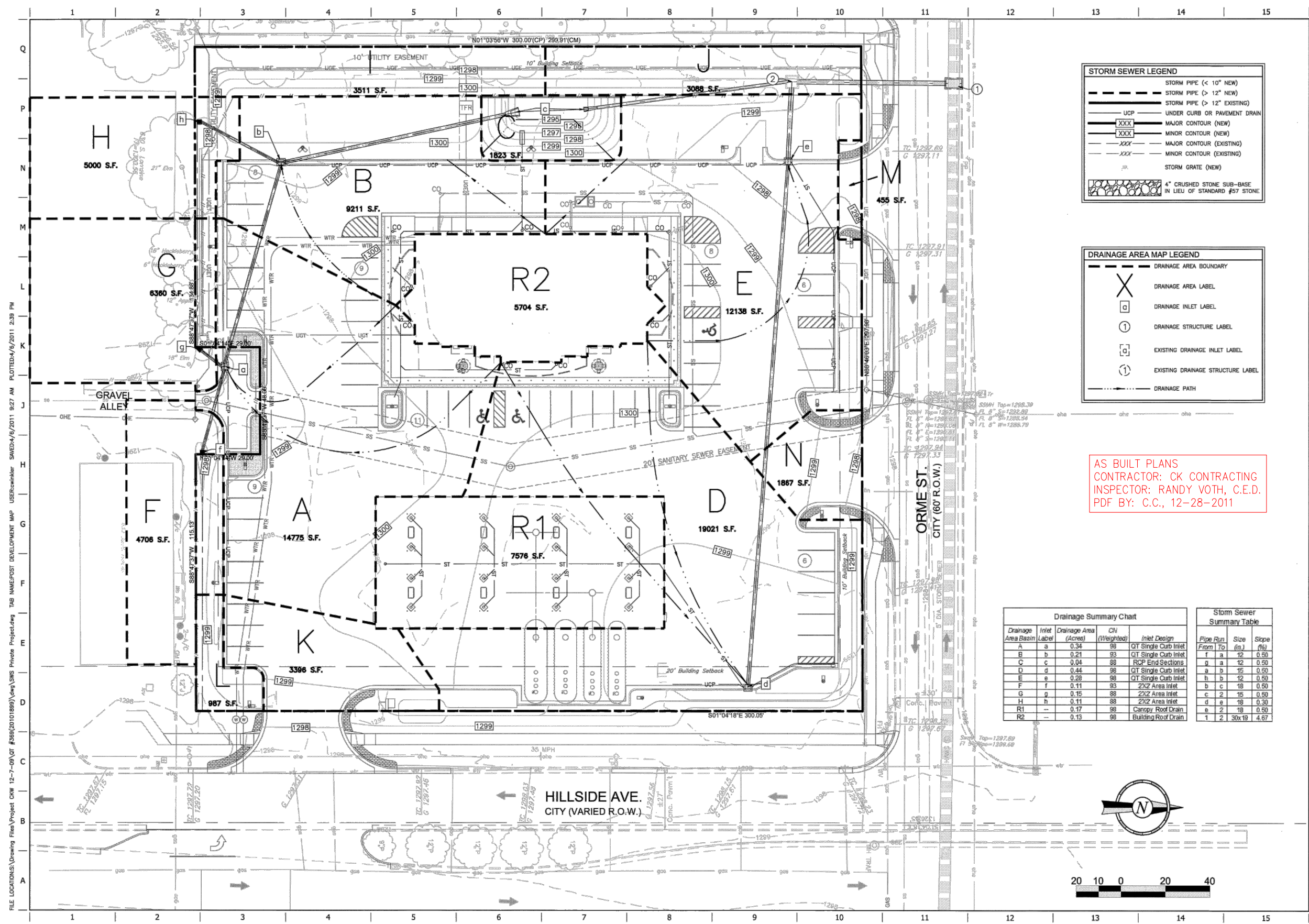
PROTOTYPE: P-66 (02/01/11)
 DIVISION: WICHITA
 VERSION: 001
 DESIGNED BY: CKW
 DRAWN BY: CKW
 REVIEWED BY: HDF

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 01-21-2011

SHEET TITLE:
 SITE PLAN

SHEET NUMBER:
 04



STORM SEWER LEGEND

- STORM PIPE (< 10" NEW)
- STORM PIPE (> 12" NEW)
- STORM PIPE (> 12" EXISTING)
- UCP UNDER CURB OR PAVEMENT DRAIN
- XXXX MAJOR CONTOUR (NEW)
- XXXX MINOR CONTOUR (NEW)
- XXXX MAJOR CONTOUR (EXISTING)
- XXXX MINOR CONTOUR (EXISTING)
- STORM GRATE (NEW)
- 4" CRUSHED STONE SUB-BASE IN LIEU OF STANDARD #57 STONE

DRAINAGE AREA MAP LEGEND

- DRAINAGE AREA BOUNDARY
- X DRAINAGE AREA LABEL
- DRAINAGE INLET LABEL
- ① DRAINAGE STRUCTURE LABEL
- ① EXISTING DRAINAGE INLET LABEL
- ① EXISTING DRAINAGE STRUCTURE LABEL
- DRAINAGE PATH

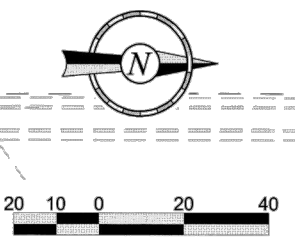
AS BUILT PLANS
 CONTRACTOR: CK CONTRACTING
 INSPECTOR: RANDY VOTH, C.E.D.
 PDF BY: C.C., 12-28-2011

Drainage Summary Chart

Drainage Area Basin	Inlet Label	Drainage Area (Acres)	CN (Weighted)	Inlet Design
A	a	0.34	98	QT Single Curb Inlet
B	b	0.21	93	QT Single Curb Inlet
C	c	0.04	88	RCP End Section
D	d	0.44	98	QT Single Curb Inlet
E	e	0.28	98	QT Single Curb Inlet
F	f	0.11	93	2X2 Area Inlet
G	g	0.15	88	2X2 Area Inlet
H	h	0.11	88	2X2 Area Inlet
R1	-	0.17	99	Canopy Roof Drain
R2	-	0.13	99	Building Roof Drain

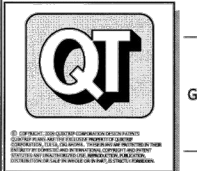
Storm Sewer Summary Table

Pipe Run From To	Size (in.)	Slope (%)
f a	12	0.50
g a	12	0.50
a b	15	0.50
h b	12	0.50
b c	18	0.50
c 2	15	0.50
d e	18	0.30
e 2	18	0.50
1 2	30x19	4.67



HARLAN DALE FORKNER
 LICENSED PROFESSIONAL ENGINEER
 10891
 PROJECT NO. 120101899
GED
 CERTIFIED ENGINEERING DESIGN P.A.
 1808 W. WANCE E
 WICHITA, KS 67213
 PH: 316.262.8808
 FAX: 316.262.1669

QuikTrip No. 0369R
 625 SOUTH HILLSIDE AVENUE
 WICHITA, KS



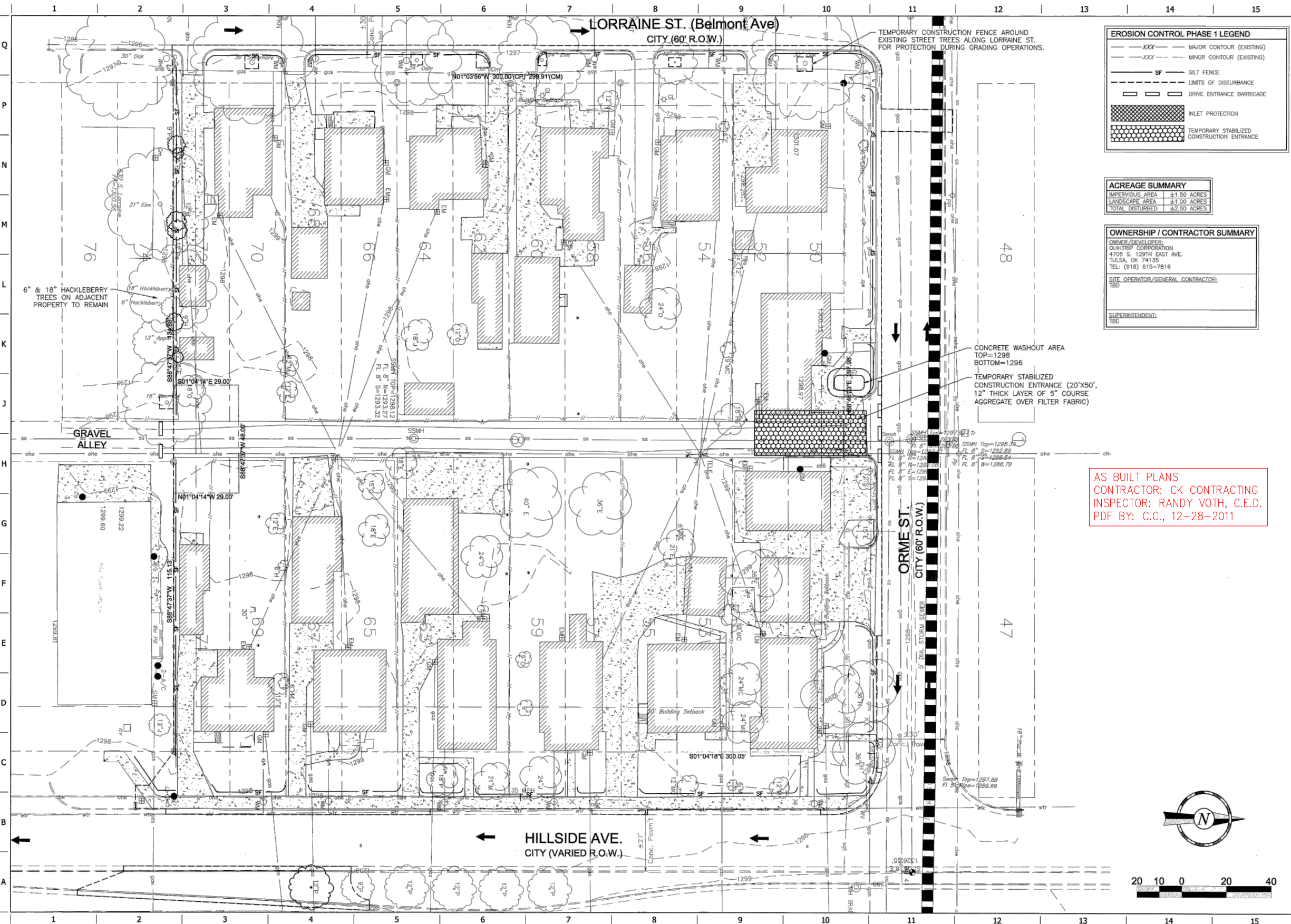
PROTOTYPE: P-66 (02/01/11)
 DIVISION: WICHITA
 VERSION: 001
 DESIGNED BY: CKW
 DRAWN BY: CKW
 REVIEWED BY: HOF

REV	DATE	DESCRIPTION

SHEET TITLE:
 POST DEVELOPMENT MAP
 SHEET NUMBER:
05
 ORIGINAL ISSUE DATE: 01-21-2011

FILE LOCATIONS:\Drawing Files\Project CKW 12-7-09 QT #369R(20101899)\Gwg\GIS Private Project.dwg USER:ckwinler SAVED:4/6/2011 9:27 AM PLOTTED:4/16/2011 2:39 PM

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EROSION CONTROL PHASE 1 LEGEND

- XXXX --- MAJOR CONTOUR (EXISTING)
- XXXX --- MINOR CONTOUR (EXISTING)
- - - - - SF - - - - - SILT FENCE
- - - - - LIMITS OF DISTURBANCE
- ▭ - - - - - DRIVE ENTRANCE BARRICADE
- ▨ - - - - - INLET PROTECTION
- ▩ - - - - - TEMPORARY STABILIZED CONSTRUCTION ENTRANCE

ACREAGE SUMMARY

IMPERVIOUS AREA	±1.50 ACRES
LANDSCAPE AREA	±1.00 ACRES
TOTAL DISTURBED	±2.50 ACRES

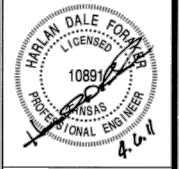
OWNERSHIP / CONTRACTOR SUMMARY

OWNER/DEVELOPER:
QUIKTRIP CORPORATION
4705 S. 129TH EAST AVE.
TULSA, OK 74135
TEL: (918) 615-7816

SITE OPERATOR/GENERAL CONTRACTOR:
TBD

SUPERINTENDENT:
TBD

AS BUILT PLANS
CONTRACTOR: CK CONTRACTING
INSPECTOR: RANDY VOTH, C.E.D.
PDF BY: C.C., 12-28-2011



PROJECT NO.: 20101899

CED
CERTIFIED ENGINEERING DESIGN P.A.
1805 W. MAIN E.
WICHITA, KANSAS 67213
PH: (316) 262-8808
FAX: (316) 262-1668

QuikTrip No. 0369R
625 SOUTH HILLSIDE AVENUE
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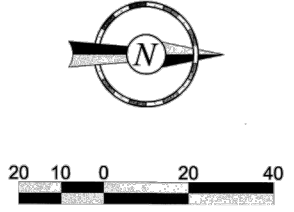
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DIVISION: WICHITA
VERSION: 001
DESIGNED BY: CKW
DRAWN BY: CKW
REVIEWED BY: HDF

REV	DATE	DESCRIPTION

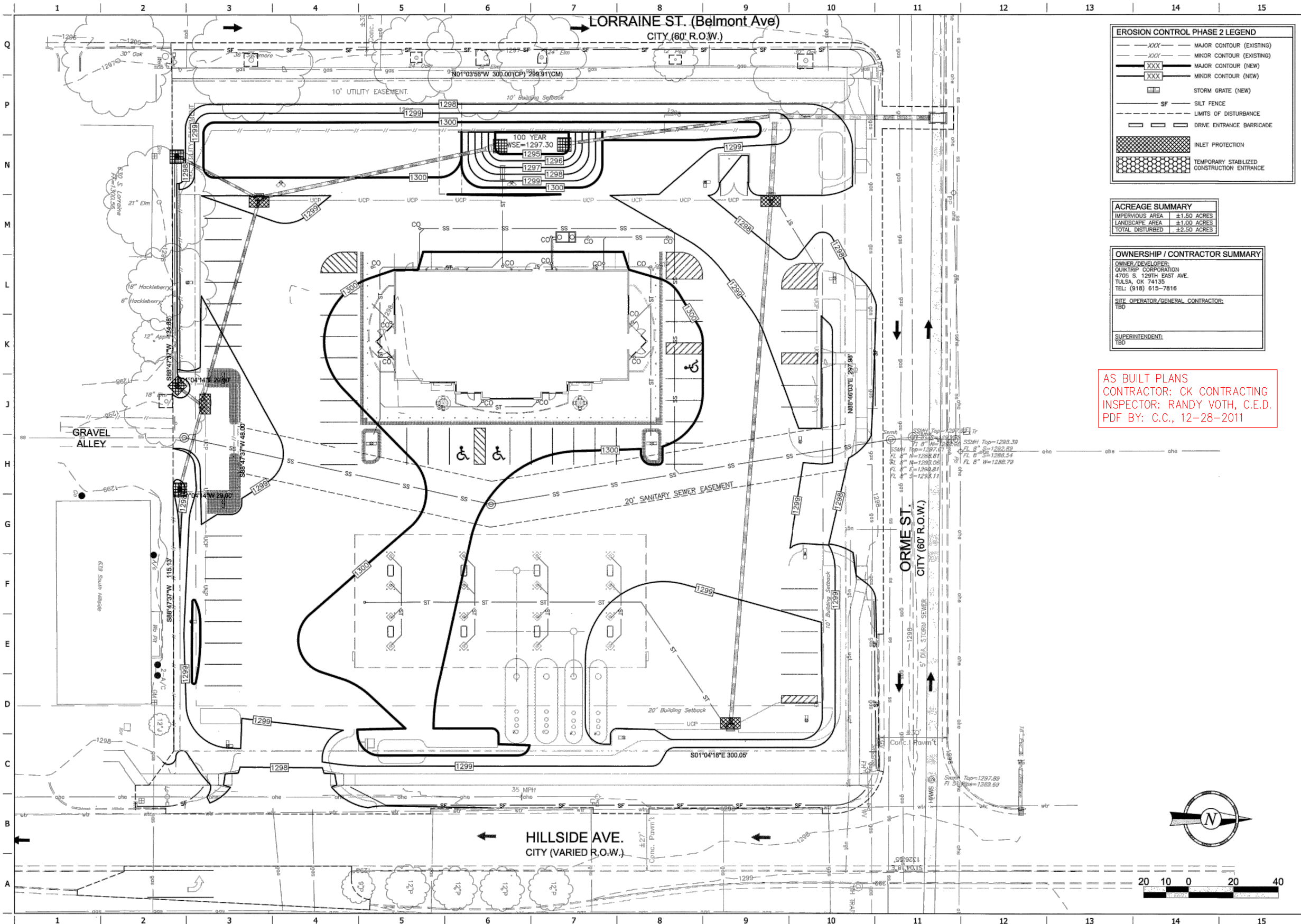
ORIGINAL ISSUE DATE: 01-21-2011

SHEET TITLE:
EROSION CONTROL PLAN - PHASE 1

SHEET NUMBER:
08



FILE LOCATION: \\Drawing Files\Project_CW 12-7-09\CT_0369\031899\12-30-10\10.dwg TAB NAME: EROSION CONTROL PLAN - PHASE 2 USER: cwhlker SAVED: 4/1/2011 5:00 PM PLOTTED: 4/6/2011 3:19 PM



EROSION CONTROL PHASE 2 LEGEND

---XXX---	MAJOR CONTOUR (EXISTING)
-XXX-	MINOR CONTOUR (EXISTING)
---XXX---	MAJOR CONTOUR (NEW)
-XXX-	MINOR CONTOUR (NEW)
[Symbol]	STORM GRATE (NEW)
SF	SILT FENCE
[Symbol]	LIMITS OF DISTURBANCE
[Symbol]	DRIVE ENTRANCE BARRICADE
[Symbol]	INLET PROTECTION
[Symbol]	TEMPORARY STABILIZED CONSTRUCTION ENTRANCE

ACREAGE SUMMARY

IMPERVIOUS AREA	±1.50 ACRES
LANDSCAPE AREA	±1.00 ACRES
TOTAL DISTURBED	±2.50 ACRES

OWNERSHIP / CONTRACTOR SUMMARY

OWNER/DEVELOPER:	QUIKTRIP CORPORATION 4705 S. 129TH EAST AVE. TULSA, OK 74135 TEL: (918) 615-7816
SITE OPERATOR/GENERAL CONTRACTOR:	TBD
SUPERINTENDENT:	TBD

AS BUILT PLANS
 CONTRACTOR: CK CONTRACTING
 INSPECTOR: RANDY VOTH, C.E.D.
 PDF BY: C.C., 12-28-2011

HARLAN DALE FORUM
 LICENSED PROFESSIONAL ENGINEER
 10891
 PROJECT NO.: 20101899
CEP
 CERTIFIED ENGINEERING DESIGN P.A.
 1935 W. MAPLE
 WICHITA, KANSAS 67213
 PH: (316) 262-8808
 FAX: (316) 262-1668

QuikTrip No. 0369R
 625 SOUTH HILLSIDE AVENUE
 WICHITA, KS

QT
 PROTOTYPE: P-66 (02/01/11)
 DIVISION: WICHITA
 VERSION: 001
 DESIGNED BY: CKW
 DRAWN BY: CKW
 REVIEWED BY: HDF

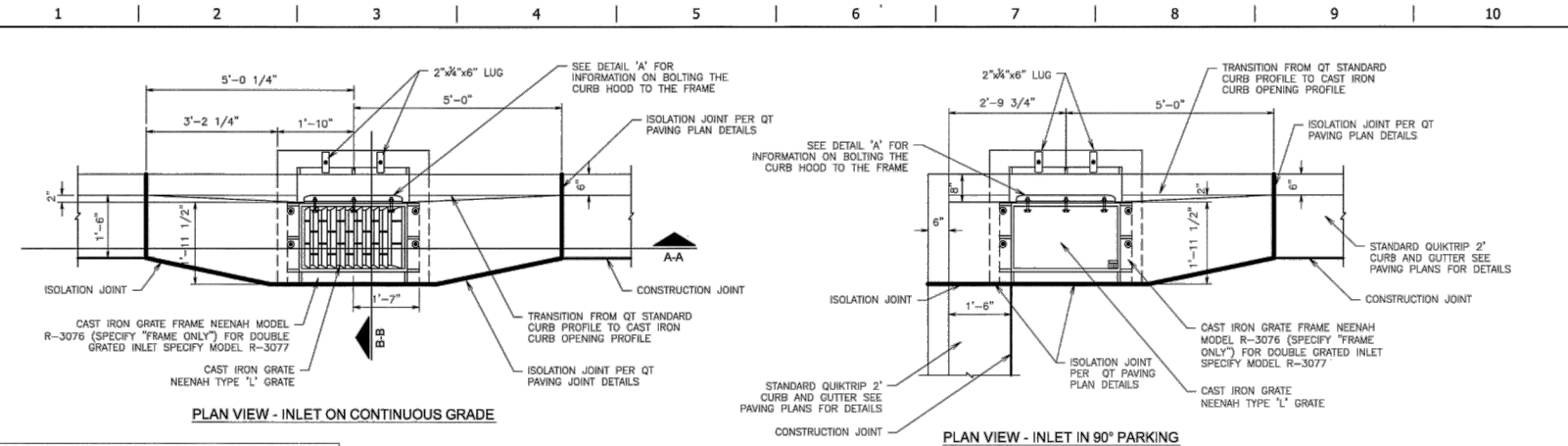
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ORIGINAL ISSUE DATE: 01-21-2011

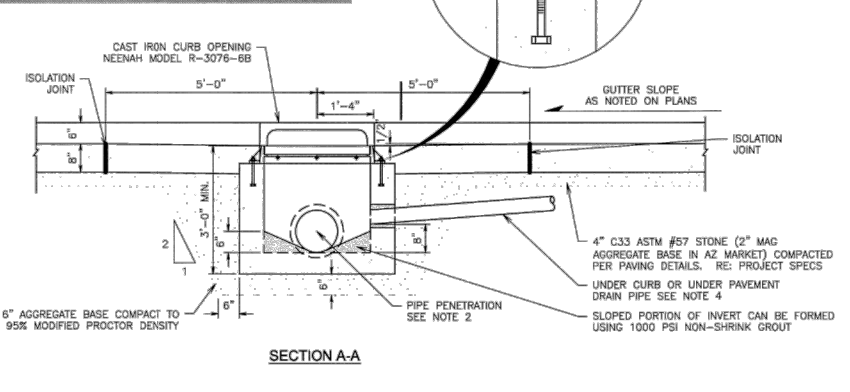
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 EROSION CONTROL PLAN - PHASE 2

SHEET NUMBER:
 09

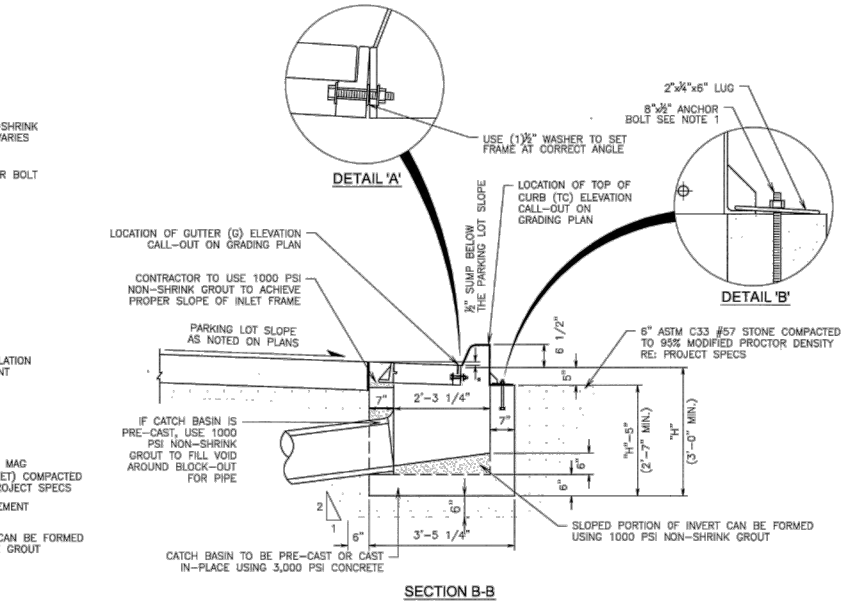
FILE LOCATION: \\Drawing Files\Project CW 12-7-09\QT #369(20101899)\DWG\SWIS Private Project.dwg
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 USER: cwh
 DATE: 12/7/2011 9:27 AM
 PLOTTED: 4/6/2011 2:42 PM



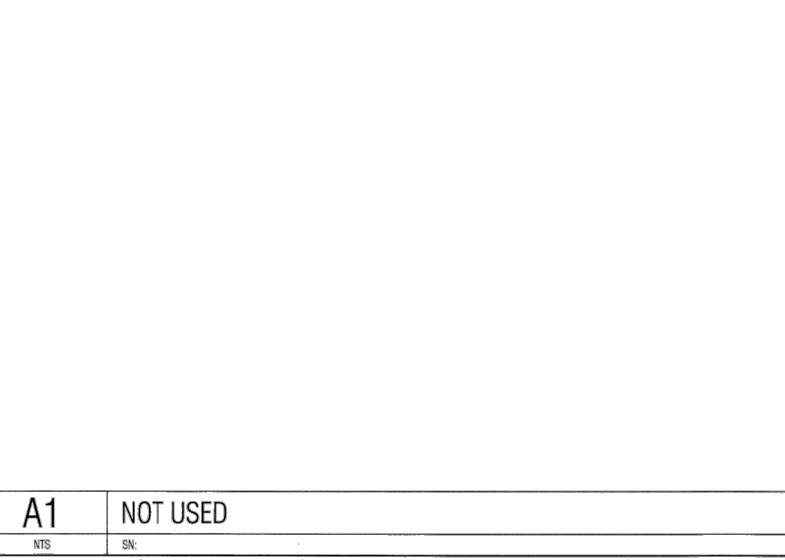
1. CONTRACTOR CAN SUBSTITUTE HILTI DRILLED BOLT SYSTEM FOR ANCHOR BOLT SET IN CONCRETE FOR EASE OF CONSTRUCTION
2. 12" PIPE IS THE MINIMUM PIPE SIZE ACCEPTED BY QUIKTRIP. PIPE TYPE MAY VARY BY REGION AND MUNICIPALITY. IF HYDRAULICS REQUIRES A LARGER PIPE, DEPTH OF THE INLET MAY NEED TO BE INCREASED. AT NO TIME SHALL THE CLEARANCE FROM THE TOP OF PIPE TO THE BOTTOM OF INLET BE LESS THAN 6".
3. AT TIMES MORE THAN ONE PIPE MAY PENETRATE INTO A CATCH BASIN. WHEN THIS OCCURS THE OUTLET PIPE IS TO BE SET AT THE INVERT ELEVATION AND ALL OTHER PIPES ARE TO BE SET A MINIMUM OF 2" HIGHER. AT NO TIME SHALL THE CLEARANCE FROM THE TOP OF THE HIGHEST/LARGEST PIPE TO THE BOTTOM OF THE FRAME BE LESS THAN 6".
4. UNDER CURB AND UNDER PAVEMENT DRAIN DETAILS ARE SHOWN ON "DRAINAGE AND UTILITY TRENCH DETAILS SHEETS" INCLUDED WITH THIS SET OF PLANS. THIS DOES NOT APPLY TO THE ARIZONA DIVISION.



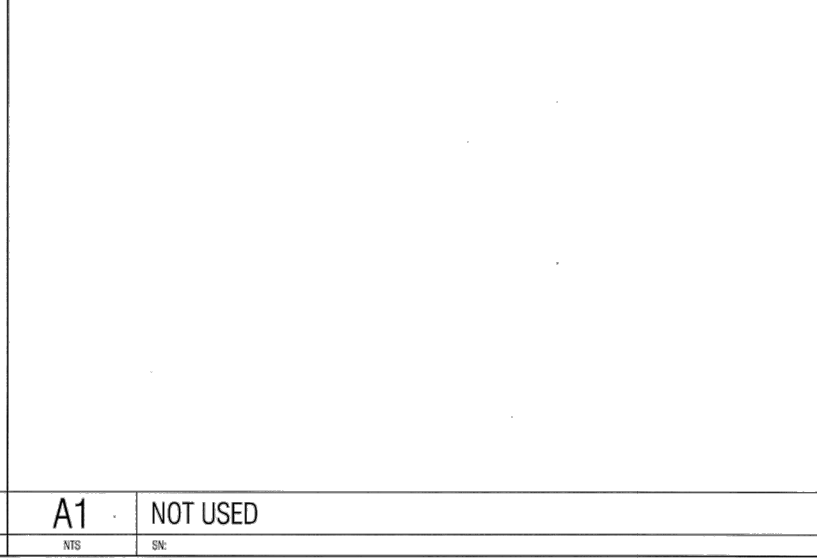
F1 CATCH BASIN INLET DETAIL
 NTS SN: D001A002



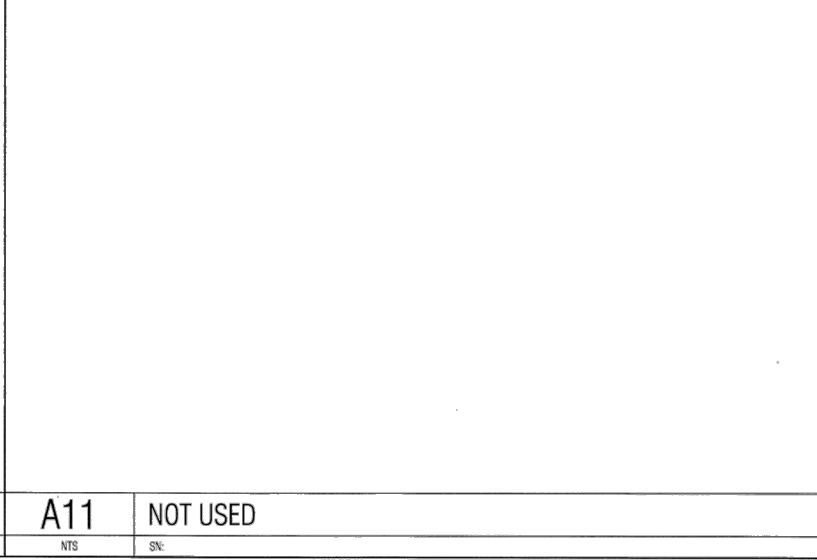
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 NTS SN:



A1 NOT USED
 NTS SN:

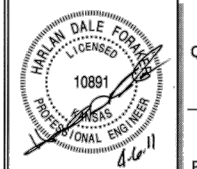


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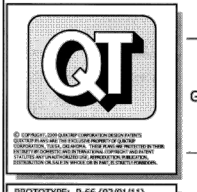
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 NTS SN:

AS BUILT PLANS
 CONTRACTOR: CK CONTRACTING
 INSPECTOR: RANDY VOTH, C.E.D.
 PDF BY: C.C., 12-28-2011



PROJECT NO.: 20101899
CED
 CERTIFIED ENGINEERING DESIGN, P.A.
 1805 W. MAPLE
 WICHITA, KANSAS 67213
 FAX: (316) 262-1689

QuikTrip No. 0369R
 625 SOUTH HILLSIDE AVENUE
 WICHITA, KS



PROTOTYPE: P-66 (02/01/11)
 DIVISION: WICHITA
 VERSION: 001
 DESIGNED BY: CKW
 DRAWN BY: CKW
 REVIEWED BY: HDF

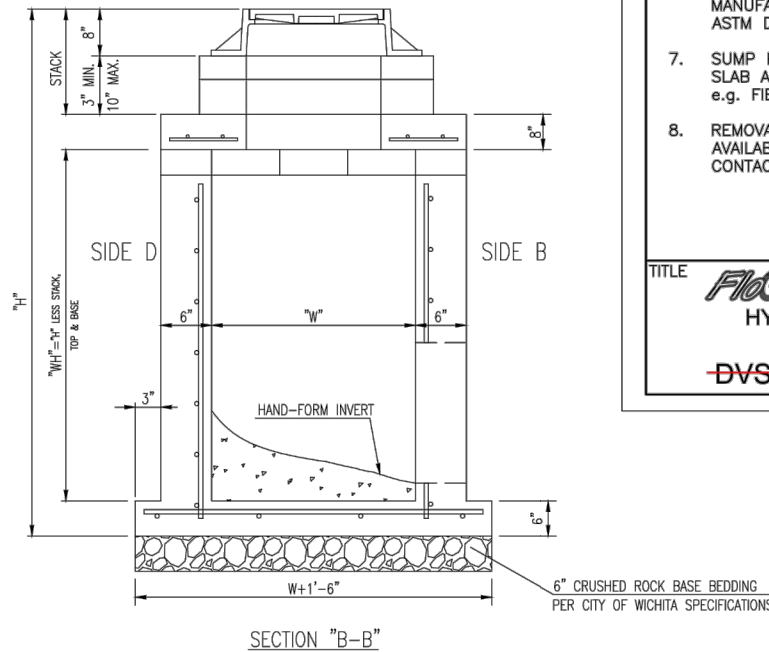
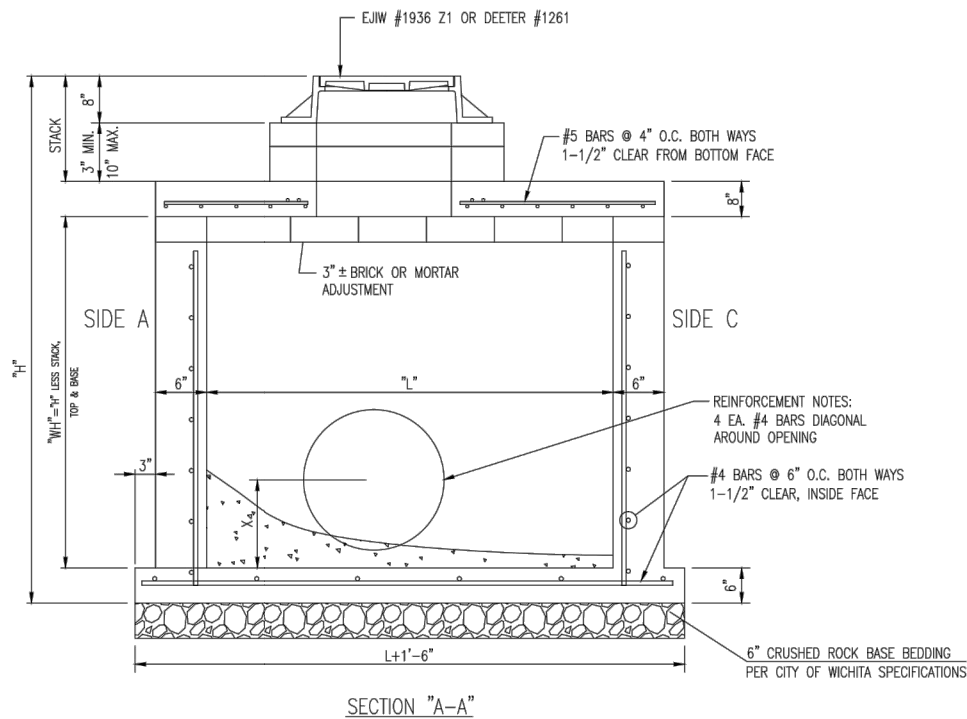
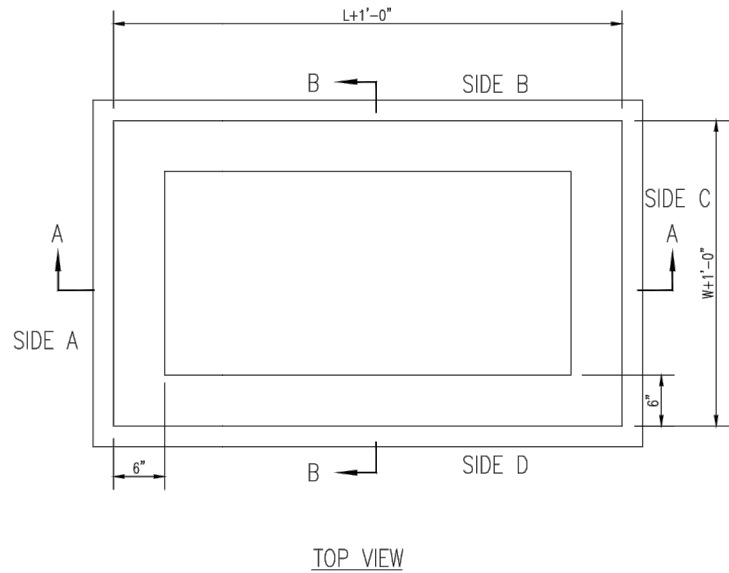
REV.	DATE	DESCRIPTION

SHEET TITLE:
 QT CURB INLET DETAIL

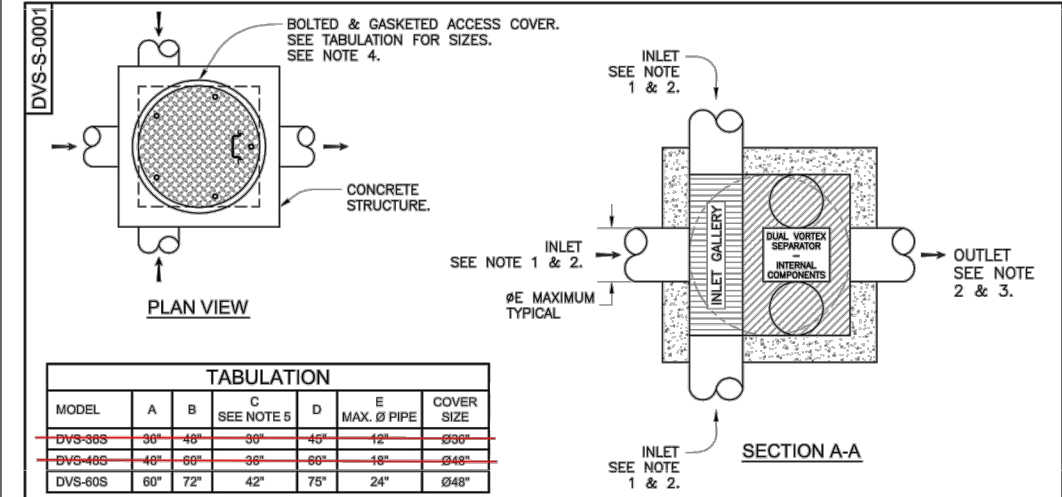
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ORIGINAL ISSUE DATE: 01-21-2011

AS BUILT PLANS
 CONTRACTOR: CK CONTRACTING
 INSPECTOR: RANDY VOTH, C.E.D.
 PDF BY: C.C., 12-28-2011



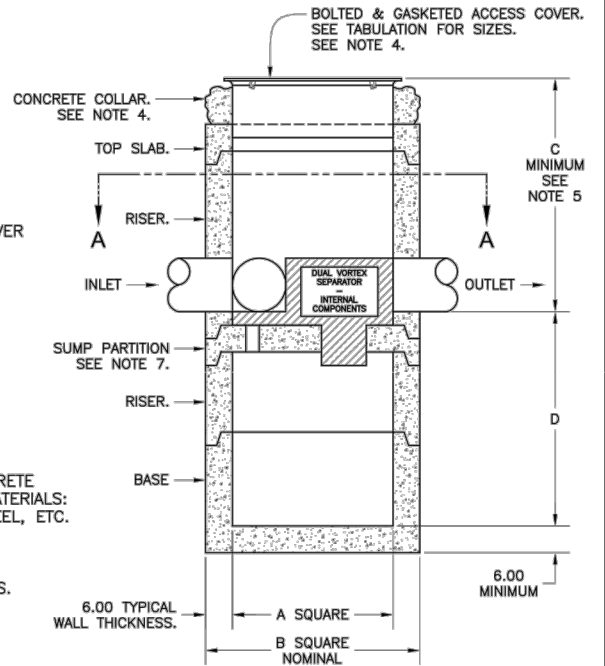
- GENERAL NOTES
1. GRATE FRAME TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK, CONCRETE USED FOR INLET CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
 2. INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
 3. THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.
 4. INLET FRAME AND GRATE TO BE DEETER #1261, EJIW #1936-Z1 OR APPROVED EQUAL, SEE SW-303.
 5. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN MANHOLE WALL SHALL BE GROUTED FLUSH TO THE MANHOLE WALL WITH HYDRAULIC CEMENT AFTER THE MANHOLE IS IN PLACE. LIFTING HOLES THRU THE MANHOLE WALL WILL NOT BE ACCEPTED.



TABULATION					
MODEL	A	B	C SEE NOTE 5	D	E MAX. Ø PIPE COVER SIZE
DVS-36S	36"	48"	30"	48"	12" Ø36"
DVS-48S	48"	60"	36"	60"	18" Ø48"
DVS-60S	60"	72"	42"	75"	24" Ø48"

* FOR LARGE DIAMETER SYSTEMS (DVS-72S & DVS-96S) SEE DRAWING DVS-S-0002.

- NOTES:
1. ALL INLET PIPES MUST ENTER SEPARATOR AT INLET GALLERY.
 2. INLET AND OUTLET PIPES MAY JOIN SEPARATOR AT OBLIQUE ANGLES.
 3. STANDARD OUTLET PIPE CONFIGURATION TO EXIT SEPARATOR AT THE CENTER LINE. CUSTOM OUTLET CONFIGURATIONS AVAILABLE UPON REQUEST.
 4. BOLTED & GASKETED MANHOLE ACCESS COVER ELEVATION MAY BE ADJUSTED TO GRADE. FIELD POUR CONCRETE COLLAR TO SECURE COVER TO SEPARATOR.
 5. FOR DEPTHS LESS THAN THE MINIMUM SHOWN AS DIMENSION C IN THE TABULATION CONTACT KRISTAR ENTERPRISES FOR ENGINEERING DESIGN ASSISTANCE.
 6. CONCRETE COMPONENTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM DESIGNATION C858.
 7. SUMP PARTITION MAY BE MADE AS A CONCRETE SLAB AS SHOWN, OR FROM ALTERNATIVE MATERIALS: e.g. FIBERGLASS COMPOSITE, STAINLESS STEEL, ETC.
 8. REMOVABLE INTERNAL COMPONENTS MAY BE AVAILABLE TO FACILITATE MAINTENANCE. CONTACT KRISTAR ENTERPRISES FOR DETAILS.



TITLE **FloGard DUAL-VORTEX**
 HYDRODYNAMIC SEPARATOR
 SQUARE STRUCTURES
~~DVS-36S, DVS-48S, DVS-60S~~

KriStar Enterprises, Inc.
 360 Sutton Place, Santa Rosa, CA 95407
 Ph: 800.579.8819, Fax: 707.524.8186, www.kristar.com
 DRAWING NO. DVS-S-0001 REV. C 0059 JPR 12/30/08 DATE JPR 11/28/06 SHEET 1 OF 1



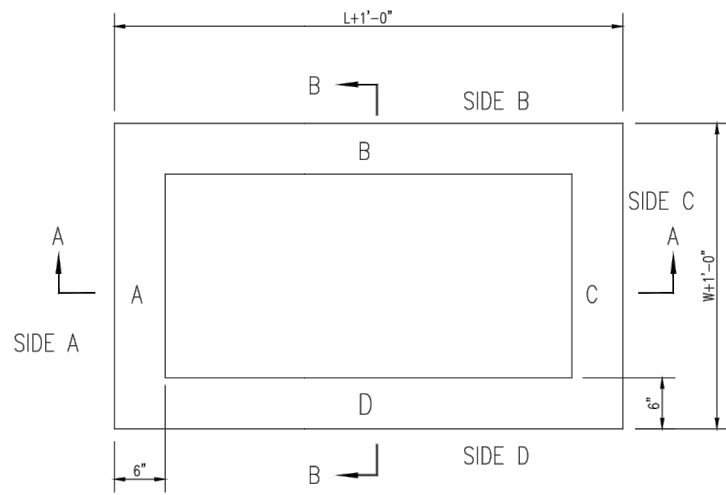
REINFORCED CONCRETE
 MANHOLE
 (STORM SEWER)

CITY ENGINEER
JAMES L. ARMOUR, P.E., L.S.

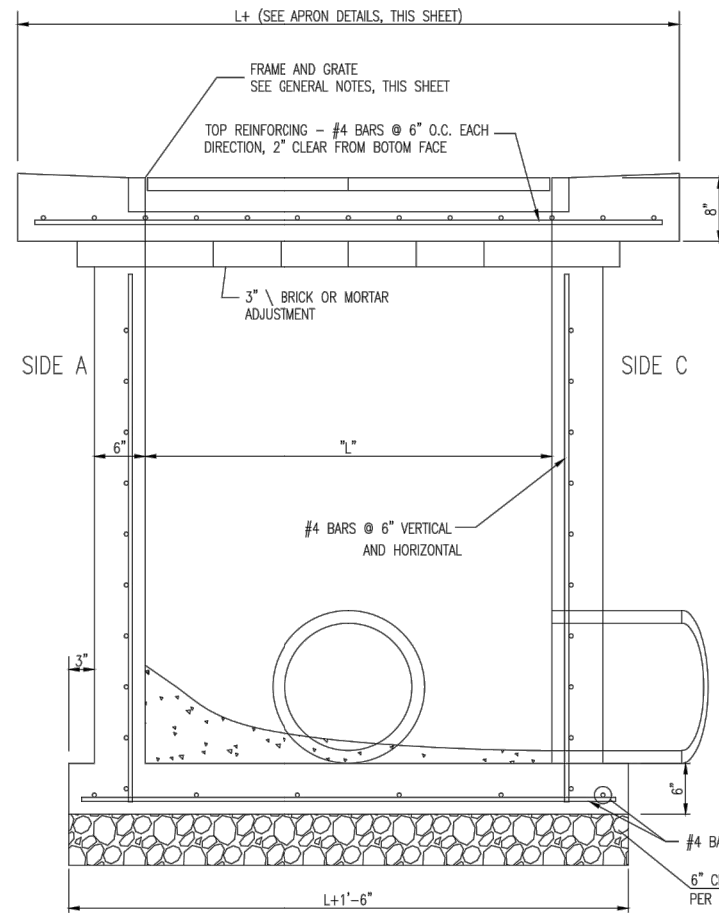
PROJECT NUMBER 0006 PPD	OCA NUMBER (607861)	DATE 11/2010
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		DESIGN DRAWN SHEET 11

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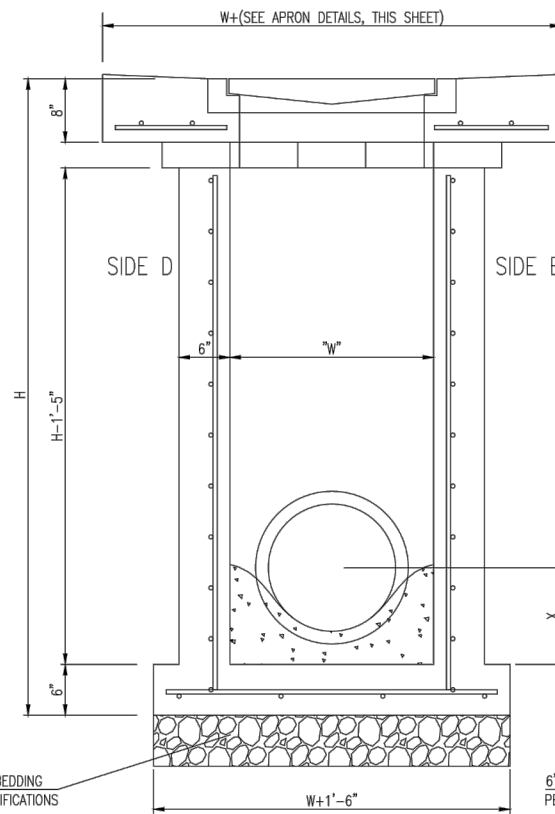
AS BUILT PLANS
 CONTRACTOR: CK CONTRACTING
 INSPECTOR: RANDY VOTH, C.E.D.
 PDF BY: C.C., 12-28-2011



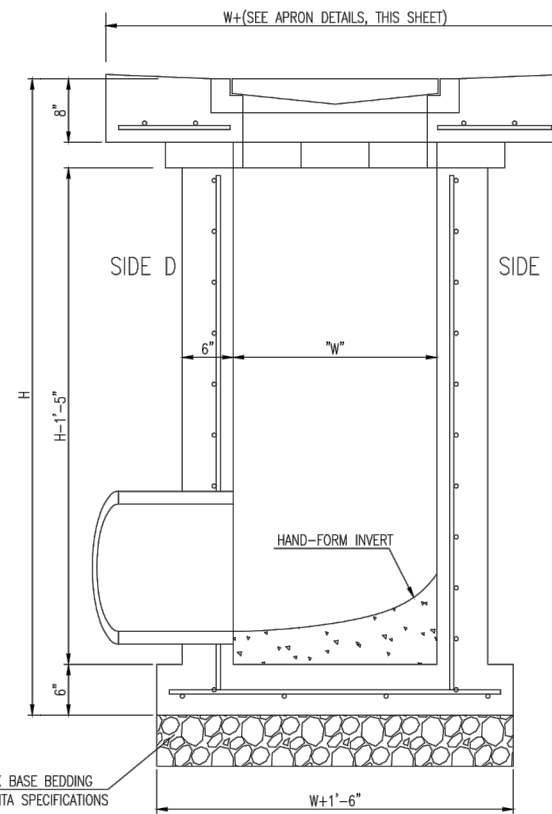
TOP VIEW



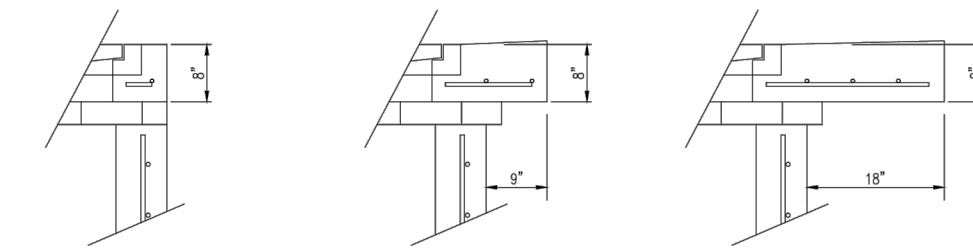
SECTION "A-A"



SECTION "B-B"
 END OUTLET



SECTION "B-B"
 SIDE OUTLET



FLUSH STYLE TOP
 NO APRON

9" APRON
 * APRON TO EXTEND ON ALL 4 SIDES OF INLET.
 DESIGNER TO DESIGNATE APRON SIZE.

18" APRON

GENERAL NOTES

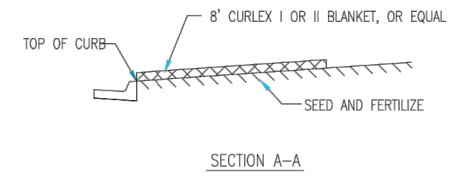
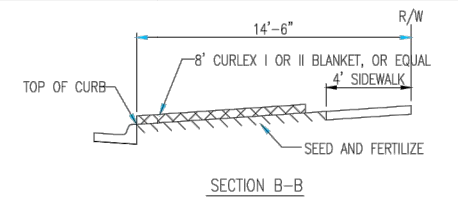
1. GRATE FRAME TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK. CONCRETE USED FOR INLET CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
2. INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
3. THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.
4. INLET FRAME AND GRATE TO BE DEETER #2433, EIJW #5391-Z1 OR APPROVED EQUAL FOR 2'x2' SINGLE DROP INLET AND DEETER #2434, EIJW #5391 Z3 OR APPROVED EQUAL FOR 2'x4' DOUBLE DROP INLET.
5. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN INLET WALL SHALL BE GROUTED FLUSH TO THE INLET WALL WITH HYDRAULIC CEMENT AFTER THE INLET IS IN PLACE. LIFTING HOLES THRU THE INLET WALL WILL NOT BE ACCEPTED.

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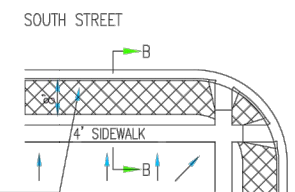
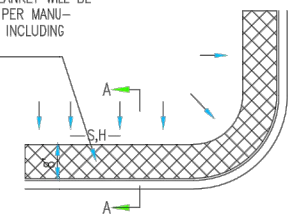


SINGLE/DOUBLE DROP INLET		
CITY ENGINEER JAMES L. ARMOUR, P.E., L.S.		
PROJECT NUMBER 0006 PPD	OCA NUMBER (607861)	DATE 11/2010
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		DESIGN DRAWN
		SHEET 12

AS BUILT PLANS
 CONTRACTOR: CK CONTRACTING
 INSPECTOR: RANDY VOTH, C.E.D.
 PDF BY: C.C., 12-28-2011



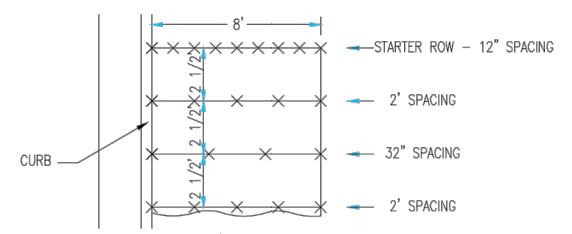
INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)



INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)

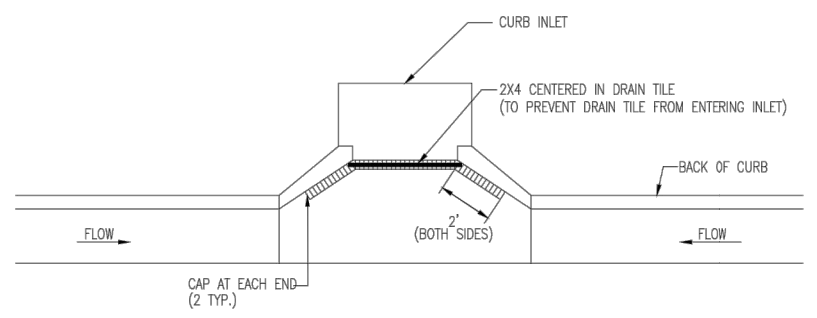
- GENERAL NOTES
- EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
 - EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
 - AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB 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



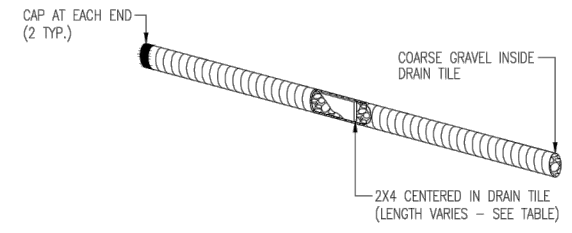
STAPLE PATTERN
 NOTES: USE 6" SEAM OVERLAP

DETAILS FOR CURLEX I OR II BLANKETS

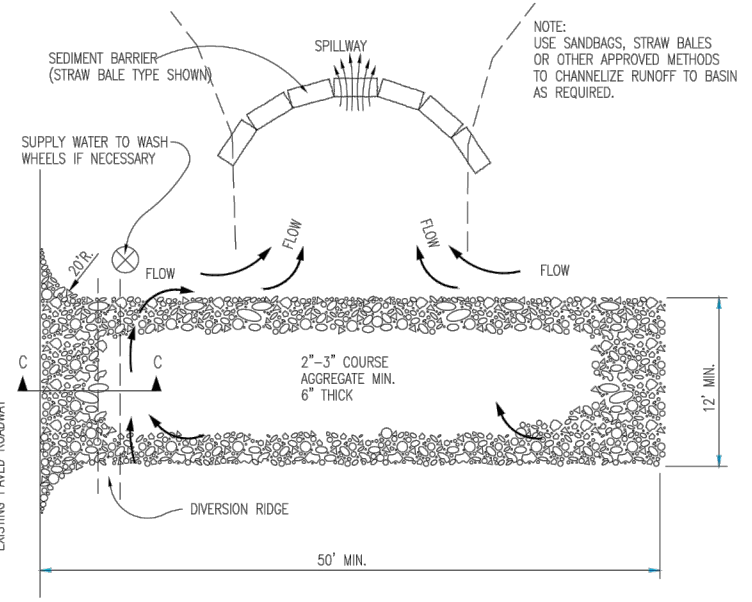
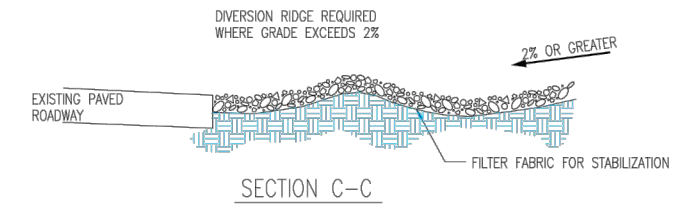


NOTE: PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

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



STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

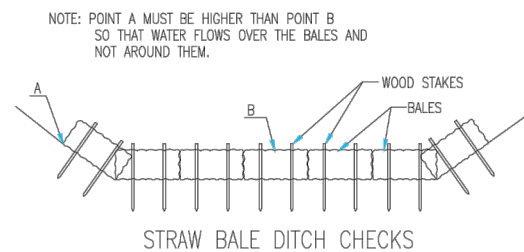
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- WHEN WASHING IS REQUIRED, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- 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.
- 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.



BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

CITY ENGINEER		
JAMES L. ARMOUR, P.E., L.S.		
PROJECT NUMBER	OCA NUMBER	DATE
0006 PPD	(607861)	11/2010
CITY ENGINEER'S OFFICE		DESIGN
CITY HALL - SEVENTH FLOOR		DRAWN
455 NORTH MAIN STREET		
WICHITA, KANSAS 67202-1620		
(316) 268-4501		
SHEET		
13		

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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".

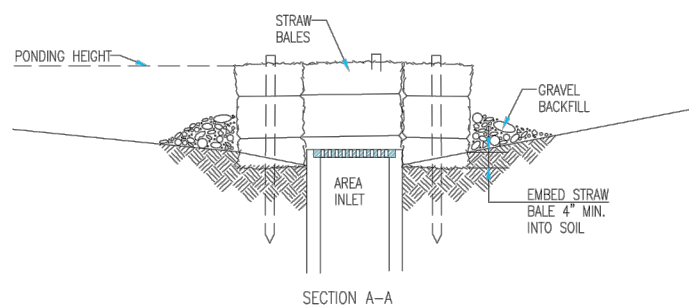
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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.

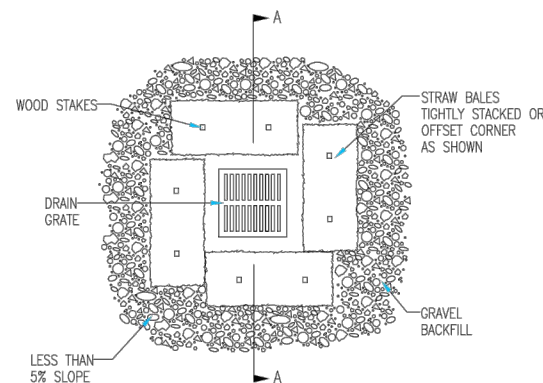
INSPECTION AND MAINTENANCE:

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.

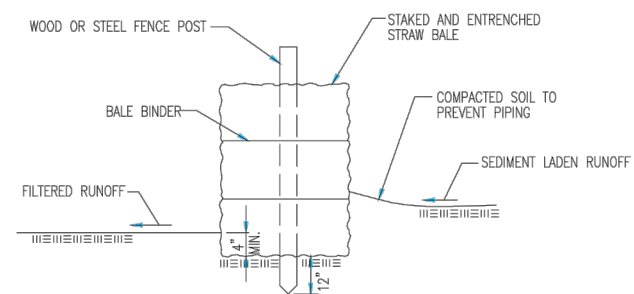
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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?

AS BUILT PLANS
CONTRACTOR: CK CONTRACTING
INSPECTOR: RANDY VOTH, C.E.D.
PDF BY: C.C., 12-28-2011

<p>CITY OF WICHITA PUBLIC WORKS & UTILITIES ENGINEERING DIVISION</p>		<p>STRAW BALE DITCH CHECK AND BARRIER DETAILS</p>	
		<p>CITY ENGINEER JAMES L. ARMOUR, P.E., L.S.</p>	
PROJECT NUMBER 0006 PPD	OCA NUMBER (607861)	DATE 11/2010	
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		DESIGN	DRAWN
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