STREETS IMPROVEMENTS
SIERRA HILLS 2ND ADDITION
216 PPP

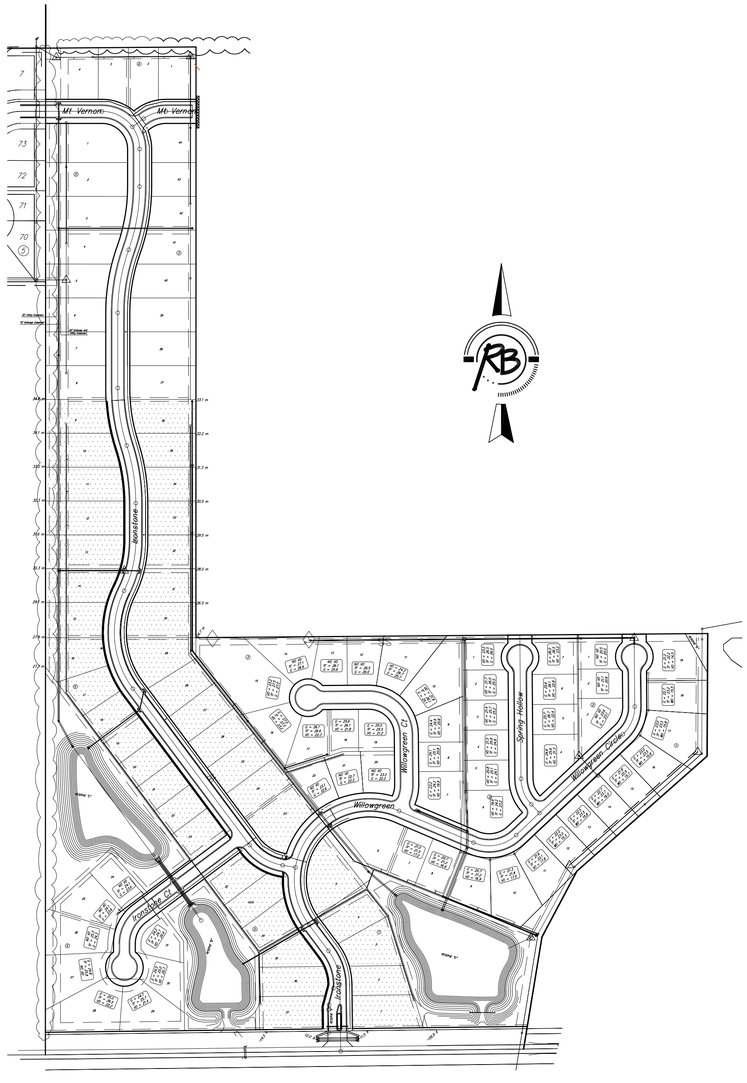
1. Contractor will be required to provide a minimum advance notice of seventy–two (72) hours to utility companies prior to starting any excavation as follows:

Kansas One–Call	687–2470

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

Cox Communications	262–0661
Kansas Gas Service	383–8600
Westar	383–8600
Aquila	1–800–303–0357
SBC	1–800–286–8313
City of Wichita Water Department	262–6000
City of Wichita Sewer Maintenance	262–6000

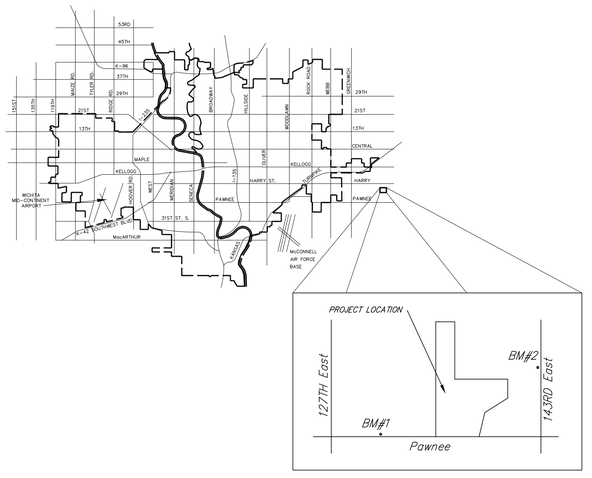
2. Underground utility service lines and overhead utility pole lines are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. 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.
3. 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.
4. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain 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 permitting regulations. Any material buried or stockpiled beyond approved of Engineers construction limits would require additional archeological investigations unless buried in a previously approved borrow location.
5. The Engineer shall take field ties to all quarter section corners. The Contractor shall set a City survey monument in the required location where such quarter section corners fall within the limits of pavement construc–tion. Survey monuments will be furnished by the City. The Engineer will accurately located and install the iron at the quarter section corner. This work will not be paid for directly, but shall be considered subsidiary to the other pay items of work in the contract.
6. 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.
7. Any trash, rubble or other debris encountered at any time during the construction of this project shall be removed from the site. This work shall be incidental to the bid item for site clearing and restoration.
8. Subdivision Bench Marks shall be "Flat Survey Markers No. 8134–08 3" top diameter" provided by Kansas Blue Print Co., Inc. Bench mark installation cost to be subsidiary to curb & gutter.



BENCH MARKS

BENCH MARK #1: SRB BRASS DISC 1008.17' E. & 55.63' N. OF THE CENTERLINE INTERSECTION PAWNEE AVENUE & 127TH STREET EAST ELEVATION = 1336.63 (NGVD29)

BENCH MARK #2: CHISELED SQUARE ON THE TOP OF A CONCRETE HEADWALL AT THE NORTHWEST CORNER OF A BRIDGE, 981 FEET NORTH AND 13 FEET WEST OF THE SOUTHWEST CORNER OF SECTION 36, T27S, R2E ELEVATION = 1308.29 (NGVD29)
(SEE VICINITY MAP)



VICINITY MAP

AS BUILT PLANS
Contractor: Kansas Paving
Inspector: Tony Young
Ruggles & Bohm, PA
pdf by EJG, 7/22/2013

SHEET INDEX

ERIC JOHN GLOVER
LICENSED
18144
8-14-12
KANSAS
PROFESSIONAL ENGINEER

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Engineering

NOTE TO CONTRACTORS

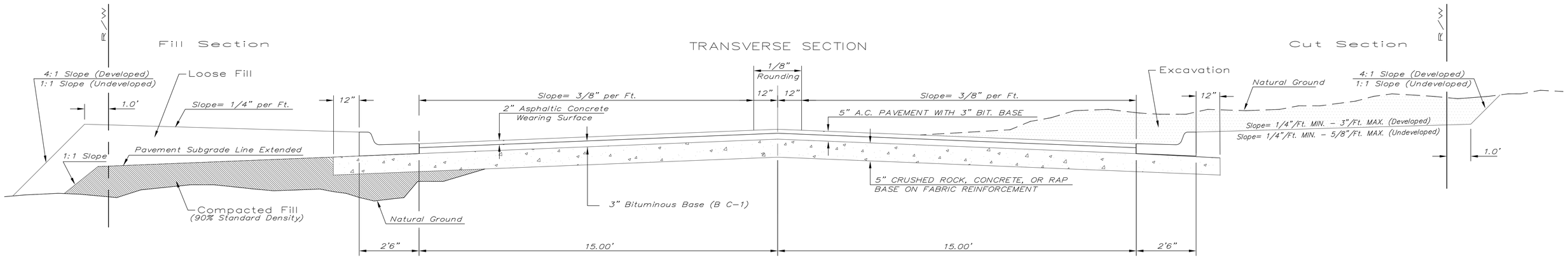
Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said Inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No 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.

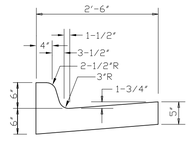
IMPROVEMENT DISTRICT

CITY OF WICHITA, KANSAS
GARY JANZEN, P.E. - INTERIM CITY ENGINEER

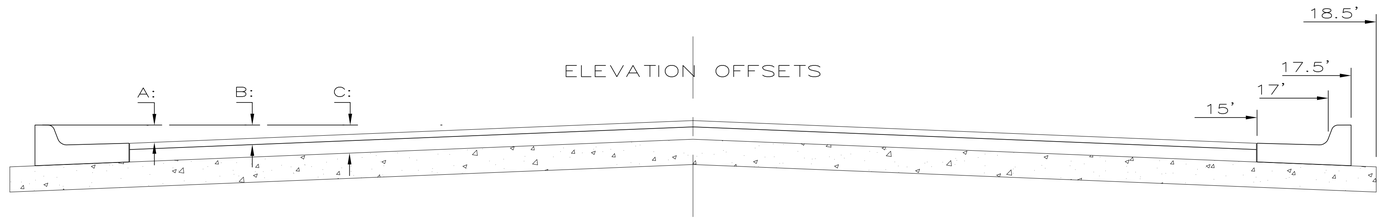
Ruggles & Bohm, P.A.
Engineering, Surveying, Land Planning
924 North Main
Wichita, Kansas 67203
www.rbkansas.com
(316) 264-8008
(316) 264-4621 fax
E-mail: info@rbkansas.com

TYPICAL 35' B–B PAVEMENT DETAILS

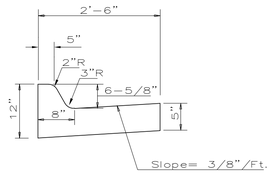




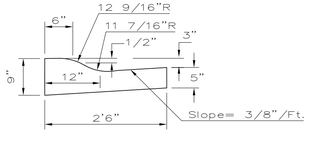
STATE CURB
MODIFIED TYPE I
COMBINED CURB & GUTTER



DISTANCE FROM CENTERLINE (LT. & RT.)	0'	2'	4'	6'	8.5'	10'	12'	14'	15'	17'	17.5'	18.5'
A: Top of Curbs to Top of Surface Lift	0.04	0.08	0.14	0.21	0.29	0.33	0.39	0.46	0.49	–	–	–
B: Top of Curbs to Top of Upper Base Lift	0.21	0.25	0.31	0.37	0.45	0.50	0.56	0.62	0.65	–	–	–
C: Top of Curbs to Top of C. R. Subgrade	0.46	0.50	0.56	0.63	0.71	0.75	0.81	0.88	0.91	0.97	0.98	1.01

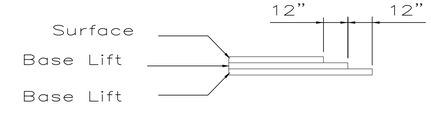


COMBINED CURB & GUTTER



COMBINED ROLL TYPE CURB & GUTTER

Transverse construction joints shall be constructed in flexible base pavements at locations where pavement joins existing flexible base pavement as shown by the detail. All costs associated with the construction of the transverse joint shall be included in the bid price for Square Yards 5" ASPHALTIC CONCRETE (3" BITUMINOUS BASE).



TRANSVERSE CONSTRUCTION JOINTS

General Notes

FABRIC BASE REINFORCEMENT SHALL BE B X 1100 GEOGRID AS MANUFACTURED BY TENSAR CORPORATION OR APPROVED EQUAL. FABRIC BASE REINFORCEMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CRUSHED ROCK SHALL BE UNIFORMLY GRADED FROM 1–1/2" MAXIMUM SIZE TO NOT MORE THAN 10% PASSING A NO. 200 SIEVE. ROCK QUALITY SHALL BE THE SAME AS SPECIFIED FOR COARSE AGGREGATE FOR CONCRETE MIXES.

ROCK BASE IS TO BE COMPACTED AND SMOOTHED WITH A STEEL FACED ROLLER PROIR TO PLACEMENT OF ASPHALT. TACK COAT WILL NOT BE APPLIED TO ROCK BASE.

A TACK COAT OF EMULSIFIED ASPHALT (SC–1H OR CSS–1H) SHALL BE APPLIED AT AN APPROXIMATE RATE OF 0.05 GALLONS PER SQUARE YARD BETWEEN EACH LIFT OF ASPHALTIC MATERIAL.

BITUMINOUS BASE AND ASPHALTIC CONCRETE WEARING SURFACE SHALL BE PLACED WITH A LAYDOWN MACHINE HAVING AUTOMATIC CONTROLS FOR LINE AND GRADE.

CONSTRUCTION JOINTS IN EACH LIFT SHALL BE STAGGERED A MINIMUM DISTANCE OF ONE (1) FOOT FROM JOINTS IN PRECEDING LIFTS AND PLACED SO THAT A JOINT WILL BE CONSTRUCTED ON THE CENTERLINE OF THE TOP LIFT.

THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 5" ASPHALTIC CONCRETE (3" BITUMINOUS BASE.)

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
CITY HALL – SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268–4501
(316) 268–4114 FAX

35' PAVEMENT
5" ASPHALTIC CONCRETE
W/ CRUSHED ROCK BASE

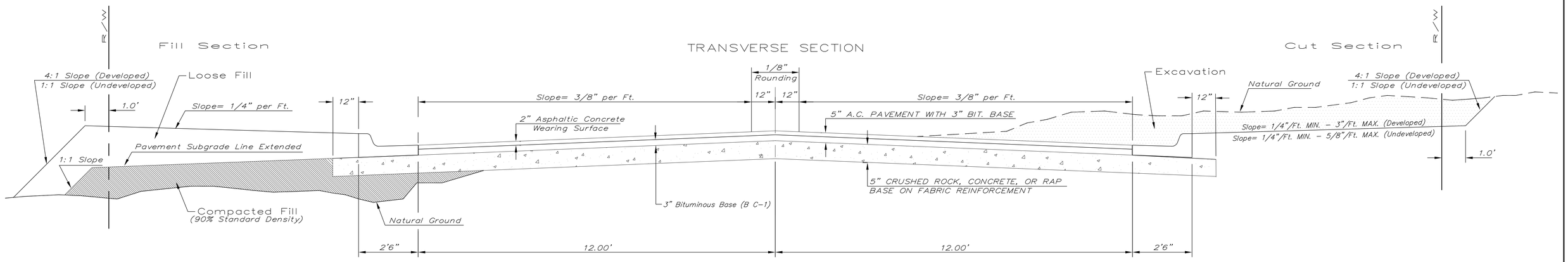
PROJECT NUMBER 216 PPP

OCA #

DATE

SHEET 2 OF 27

TYPICAL 29' B–B PAVEMENT DETAILS

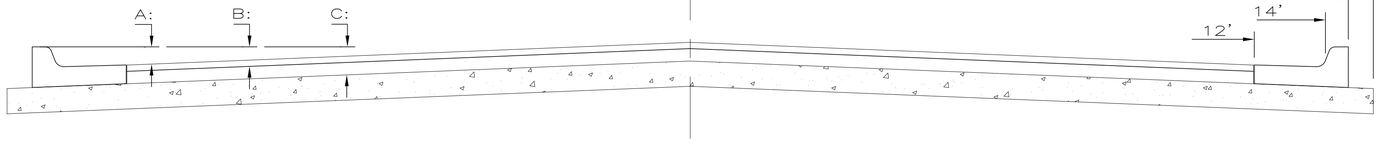


STATE CURB
MODIFIED TYPE I
COMBINED CURB & GUTTER

COMBINED CURB & GUTTER

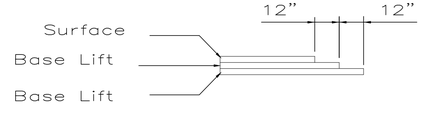
COMBINED ROLL TYPE CURB & GUTTER

ELEVATION OFFSETS



DISTANCE FROM CENTERLINE (LT. & RT.)

	0'	2'	4'	6'	7'	8'	10'	12'	14'	14.5'	15.5'
A: Top of Curbs to Top of Surface Lift	0.13	0.18	0.24	0.30	0.33	0.36	0.43	0.49	–	–	–
B: Top of Curbs to Top of Upper Base Lift	0.30	0.35	0.41	0.47	0.50	0.53	0.60	0.66	–	–	–
C: Top of Curbs to Top of C.R. Subgrade	0.55	0.60	0.66	0.72	0.75	0.78	0.85	0.91	0.97	0.98	1.01



TRANSVERSE CONSTRUCTION JOINTS

Transverse construction joints shall be constructed in flexible base pavements at locations where pavement joins existing flexible base pavement as shown by the detail. All costs associated with the construction of the transverse joint shall be included in the bid price for Square Yards 5" ASPHALTIC CONCRETE (3" BITUMINOUS BASE).

General Notes

FABRIC BASE REINFORCEMENT SHALL BE B X 1100 GEOGRID AS MANUFACTURED BY TENSAR CORPORATION OR APPROVED EQUAL. FABRIC BASE REINFORCEMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CRUSHED ROCK SHALL BE UNIFORMLY GRADED FROM 1-1/2" MAXIMUM SIZE TO NOT MORE THAN 10% PASSING A NO. 200 SIEVE. ROCK QUALITY SHALL BE THE SAME AS SPECIFIED FOR COARSE AGGREGATE FOR CONCRETE MIXES.

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THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 5" ASPHALTIC CONCRETE (3" BITUMINOUS BASE.)

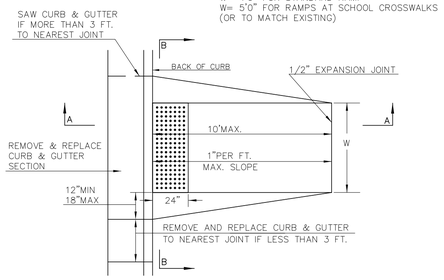
THE CITY OF WICHITA

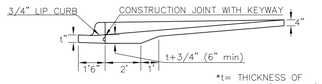
CITY ENGINEER'S OFFICE
CITY HALL – SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
(316) 268-4114 FAX

29' PAVEMENT
5" ASPHALTIC CONCRETE
W/ CRUSHED ROCK BASE

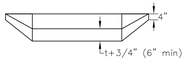
PROJECT NUMBER: 216 PPP
OCA #: .
DATE: MAR 96
SHEET 3 OF 27

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER (TYPE A)



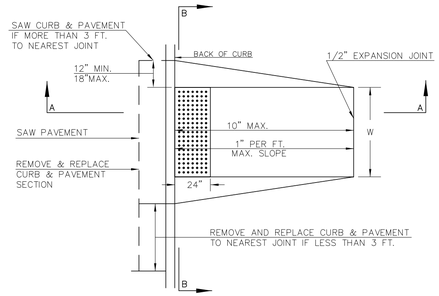


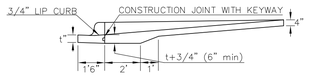
SECTION A–A



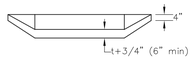
SECTION B–B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR CONCRETE STREETS WITH MONOLITHIC CURB (TYPE A)



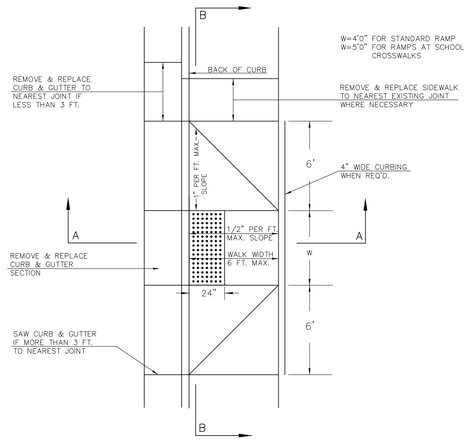


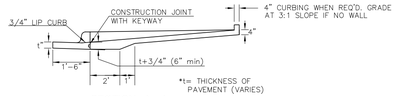
SECTION A–A



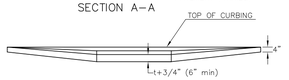
SECTION B–B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER AND FULL WALK (TYPE B)



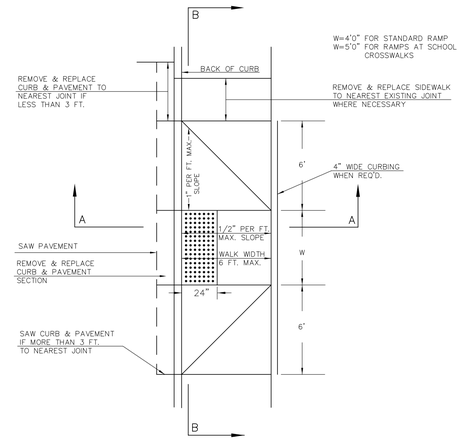


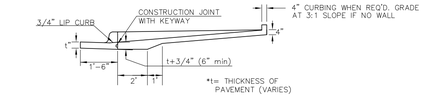
SECTION A–A



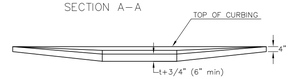
SECTION B–B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH MONOLITHIC CURB AND FULL WALK (TYPE B)



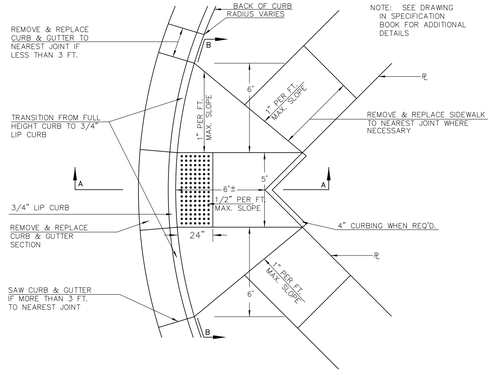


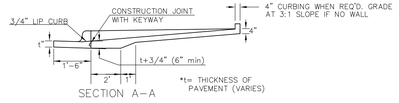
SECTION A–A



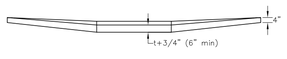
SECTION B–B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DEAIL FOR STREET WITH COMBINED CURB AND GUTTER ON RADIUS WITH 6'+_FROM BACK OF CURB TO PROPERTY CORNER (TYPE C)



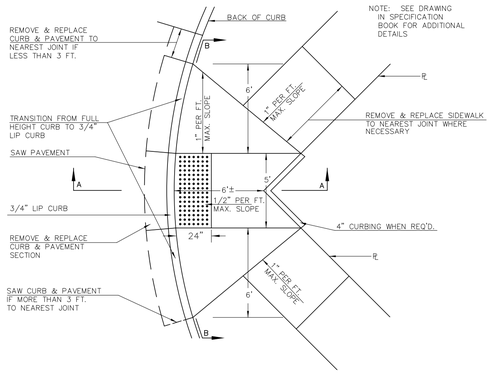


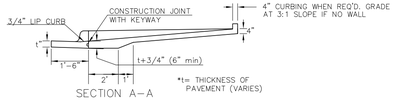
SECTION A–A



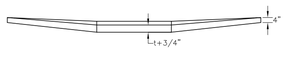
SECTION B–B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREET WITH MONOLITHIC CURB ON RADIUS WITH 6'±FROM BACK OF CURB TO PROPERTY CORNER (TYPE C)



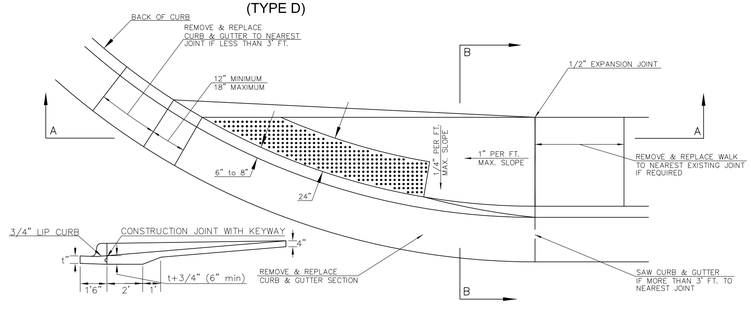


SECTION A–A



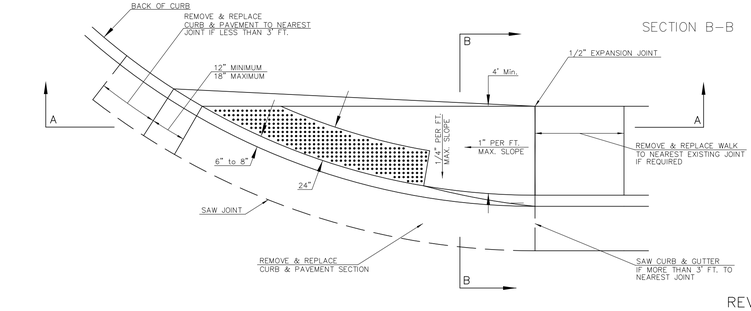
SECTION B–B

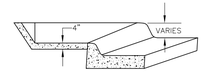
STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER WITH ONE FULL SIDEWALK (TYPE D)



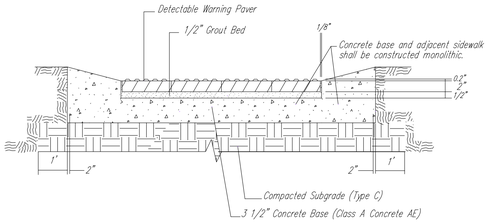
SECTION A–A

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH MONOLITHIC CURB WITH ONE FULL SIDEWALK (TYPE D)



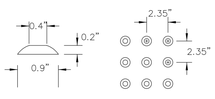


SECTION B–B



TYPICAL SECTION DETECTABLE WARNING PAVER
SECTION A–A

NOTE: HANOVER DETECTABLE WARNING PAVERS (OR AN APPROVED ALTERNATE) SHALL BE USED IN ALL WHEELCHAIR RAMPS. THE 11 3/4" "RED 15" PAVER SHALL BE USED IN ALL APPLICATIONS.
HANOVER ARCHITECTURAL PRODUCTS
240 BENDER ROAD
HANOVER, PA 17331
1-717-637-0500
www.hanoverpavers.com



DOME DETAIL

REV. 7-21-03

WHEEL CHAIR RAMP.DWG

CITY OF WICHITA PUBLIC WORKS ENGINEERING

WHEELCHAIR RAMP DETAILS

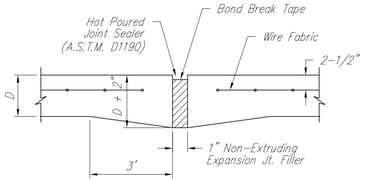
CITY ENGINEER
JIM ARMOUR P.E. L.S.

PROJECT NUMBER	OCA NUMBER	DATE
216 PPP	.	

DESIGN	DRAWN
.	.

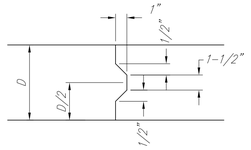
SHEET 4 of 30

CITY ENGINEER'S OFFICE
CITY HALL – SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501
(316) 268-4114 FAX

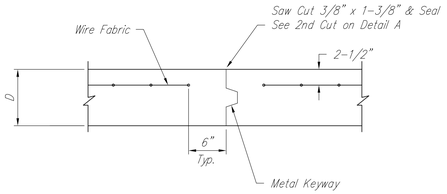


EXPANSION JOINT

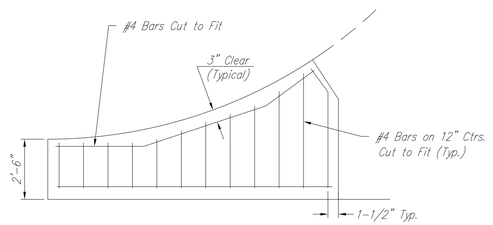
NOTE: Extra Thickness to be Subsidiary to Price of Square Yards Pavement



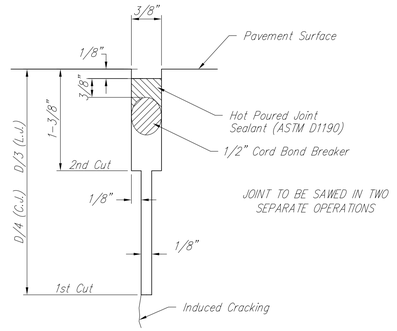
KEYWAY DETAIL



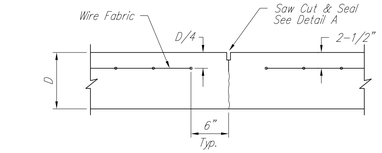
OPTIONAL CONTRACTION JOINT



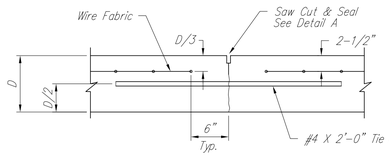
WING REINFORCING DETAIL



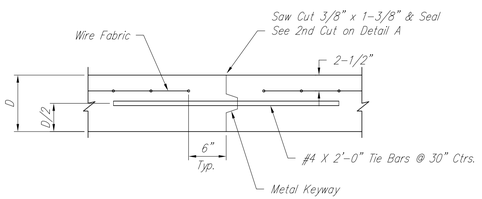
SAW JOINT DETAIL



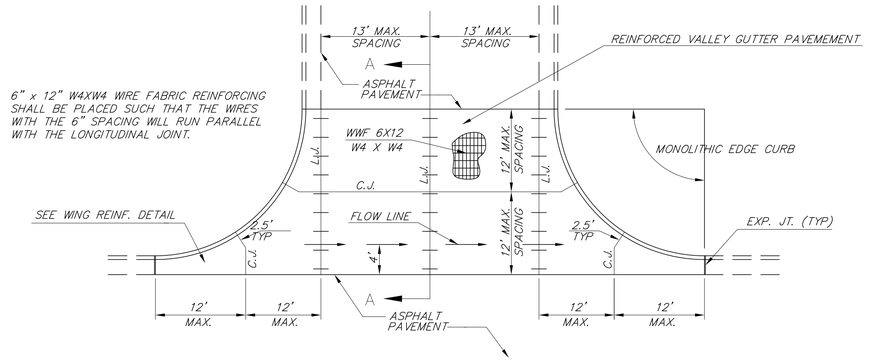
CONTRACTION JOINT DETAIL (C.J.)



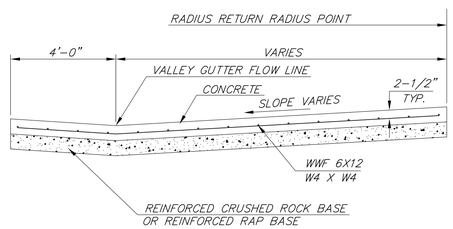
LONGITUDINAL JOINT DETAIL (L.J.)



OPTIONAL LONGITUDINAL JOINT DETAIL (L.J.)



PLAN



SECTION A-A

REINFORCED VALLEY GUTTER DETAIL

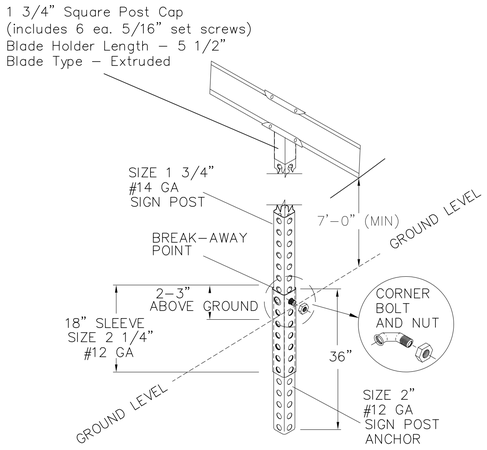
THE CITY OF WICHITA

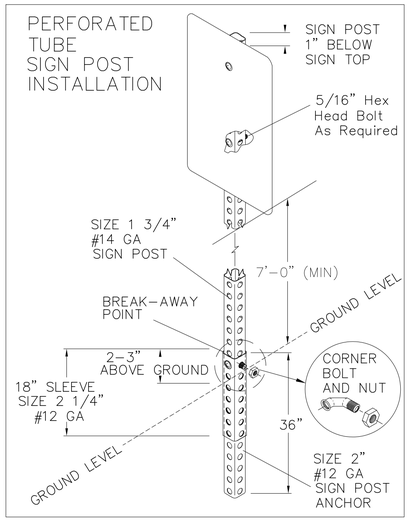
CITY ENGINEER'S OFFICE
CITY HALL – SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
(316) 268-4114 FAX

VALLEY GUTTER DETAILS

PROJECT NUMBER	OCA #
216 PPP	
DATE MAR 96	SHEET 5 OF 27

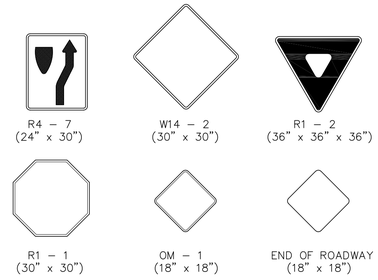
FHWA REG NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	SHEETS
7	KANSAS	----		6	30

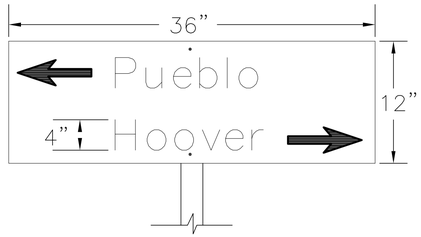




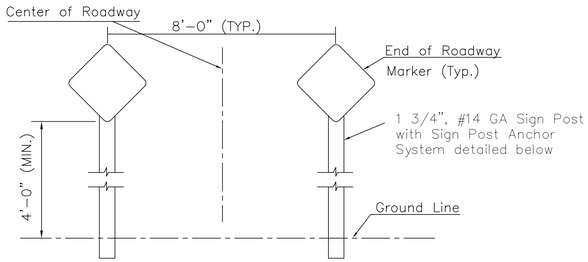
TYPICAL TRAFFIC CONTROL AND STREET NAME SIGN MOUNTING INSTALLATION

CURB AND GUTTER SECTION

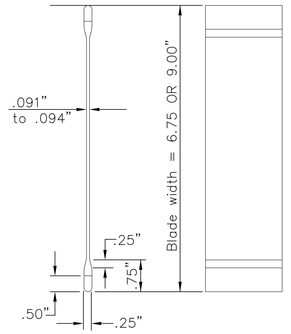




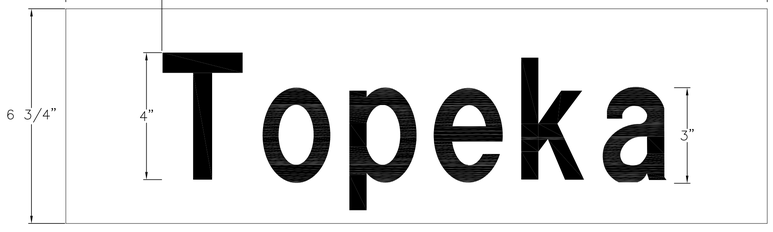
FLAT PLATE STREET NAME SIGN



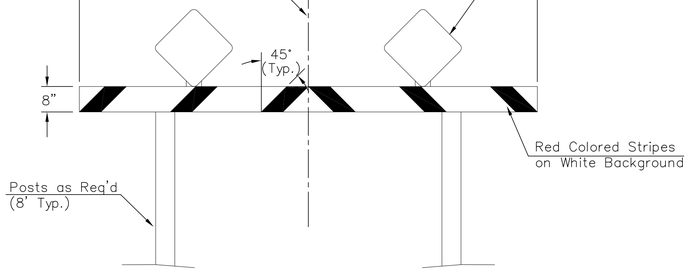
TYPICAL END OF ROADWAY SIGN MOUNTING INSTALLATION



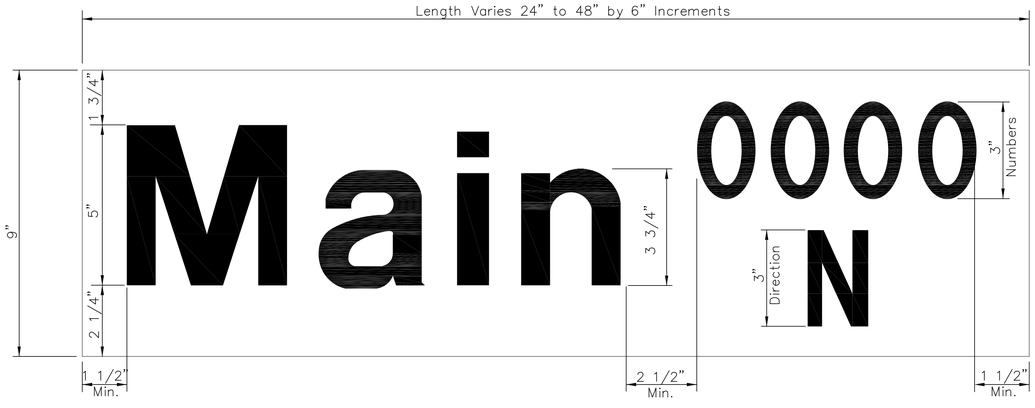
STREET NAME SIGN
BLADE DETAILS



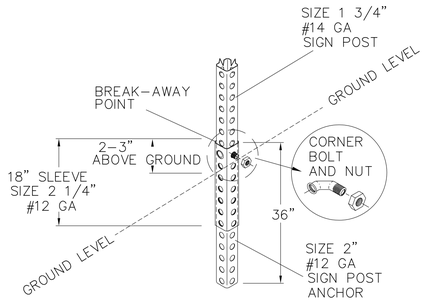
DETAIL A
6 3/4" STANDARD



TYPE I BARRICADE DETAIL W/ E.O.R. MARKERS



DETAIL B
9" METRO



SIGN POST ANCHOR SYSTEM

SIGN ASSEMBLY TABLE

STATION	OFFSET	SIGN	QUANTITY*
Ironstone – Willowgreen			
0+42	*39' Lt*	*R1–1*	*1*
0+57	*26' Rt*	*SNS*	*2*
0+60	*3' Lt*	*R4–7*	*1*
		OM1–3	*1*
1+20	*0.5' Lt*	*R4–7*	*1*
		OM1–3	*1*
7+05	*5' Lt & Rt*	*EOR*	*2*
Ironstone			
0+22	*29' Lt*	*SNS*	*2*
0+34	*29' Rt*	*SNS*	*2*
Ironstone Ct			
2+95	*5' Lt & Rt*	*EOR*	*2*
5+68	*28' Lt*	*SNS*	*2*
TOTAL			

STREET NAME	NO. BLADES REQ'D	
	6 3/4" STD.	9" METRO
Pawnee 13800 E		*1*
Ironstone 2300 S		*1*
Ironstone	*3*	
Willowgreen	*1*	
Ironstone Ct 2305–2341		*1*

NOTE: REFERENCES BELOW TO "STANDARD SPECIFICATIONS" DENOTE "STANDARD SPECIFICATION FOR STATE ROAD AND BRIDGE CONSTRUCTION EDITION 1990" BY THE KANSAS DEPARTMENT OF TRANSPORTATION.

1. POST ANCHORS: POSTS SHALL BE ANCHORED WITH A YIELDING BASE POST SUPPORT AS DETAILED.
2. POSTS FOR TRAFFIC CONTROL SIGNS: POSTS SHALL BE GALVANIZED AND CONFORM TO THE REQUIREMENTS OF SUBSECTION 1620 OF THE STANDARD SPECIFICATIONS, EXCEPT THAT ALL POSTS SHALL WEIGH 3 LBS./FT. MINIMUM.
3. *POSTS FOR STREET NAME SIGNS (SNS): POSTS SHALL BE 9 FEET LONG, CONSTRUCTED FROM #14 GALVANIZED STEEL PIPE AND SHALL BE 1 3/4" SQUARE WEIGHING A MINIMUM OF 3 LBS/FT. POSTS SHALL BE POSITIONED SO THAT THE BOTTOM BLADE IS 7 FEET ABOVE GRADE.*
4. POSTS FOR END OF ROADWAY SIGN TO BE 8' LONG AND INSTALLED A MINIMUM OF 4' FROM ROADWAY TO BOTTOM OF SIGN.
5. SIGN BLANKS FOR TRAFFIC CONTROL SIGNS: SIGN BLANKS SHALL BE FABRICATED FROM 0.080" ALUMINUM ALLOY 6063–T6 CONFORMING TO THE REQUIREMENTS OF SUBSECTION 1626 OF THE STANDARD SPECIFICATIONS.
6. SIGN BLADES FOR STREET NAME SIGNS: EXTRUDED ALUMINUM BLADES SHALL BE ALUMINUM ALLOY CONFORMING TO 6063–T6 OR 5052–H38 (ASTM SPECIFICATION B221, LATEST ISSUE). BLADES SHALL HAVE AN ALODINE OR PHOSPHATE ETCHED FINISH. BLADES SHALL HAVE SQUARE CORNERS AND NO HOLES.

   MINIMUM BLADE LENGTH SHALL BE 24". MAXIMUM BLADE LENGTH SHALL BE 48". LENGTH VARIES BY INCREMENTS OF 6".

   BLADES BEARING THE STREET NAMES SHALL BE FIRMLY ATTACHED TO THE MOUNTING BRACKETS USING ALLEN–TYPE CONICAL SET SCREWS. THE BLADES SHALL BE ORIENTED PARALLEL TO THE STREET.
7. MOUNTING BRACKETS FOR SIGNS: DIE–CAST ALUMINUM BRACKETS SHALL BE ALUMINUM ALLOY 360 HAVING A TENSILE STRENGTH OF 44,000 PSI. THE BRACKETS SHALL BE SMOOTHLY FINISHED FREE OF PITS, BURRS, AND FLAWS. EACH BRACKET SHALL BE TAPPED AND DRILLED FOR 5/16" ZINC–PLATED ALLEN–TYPE SET SCREWS HAVING SELF–LOCKING SAW–TOOTH ENDS.
8. FASTENERS: ALL STEEL FASTENERS FOR TRAFFIC CONTROL SIGNS SHALL BE GALVANIZED AND SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 1614 OF THE STANDARD SPECIFICATIONS.
9. REFLECTIVE SHEETING: REFLECTIVE SHEETING SHALL BE A MINIMUM TYPE IV PRISMATIC.
10. PROCESS INK: ALL PROCESS INK SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 2202 OF THE STANDARD SPECIFICATIONS.
11. FABRICATION AND INSTALLATION OF ALL SIGNS SHALL CONFORM TO THE LATEST ADDITION OF THE MUTCD.
12. DETAILS – SNS: THE REFLECTIVE SHEETING FOR THE 6 3/4" STANDARD SIZE SNS IS TO BE THE HIGHWAY GREEN BACKGOUND WITH SILVER–WHITE #2 COPY WITH 4" UPPER CASE AND LOWER CASE PRIMARY COPY AND SUFFIX COPY, BOTH SERIES "C". THE CARDINAL DIRECTION CENTERED DIRECTLY BELOW THE BLOCK NUMBER SHALL BE AN UPPER CASE, 4" SERIES "C" LETTER. FACES TO TRIM TO A 6 1/4". (SEE DETAIL A.)

    THE REFLECTIVE SHEETING FOR THE 9" METRO SIZE SNS IS TO BE THE HIGHWAY GREEN BACKGROUND WITH SILVERWHITE #2 COPY WITH 5" UPPER CASE AND LOWER CASE PRIMARY COPY AND SUFFIX COPY, BOTH SERIES "C". THE CARDINAL DIRECTION CENTERED DIRECTLY BELOW THE BLOCK NUMBER SHALL BE AN UPPER CASE, 4" SERIES "C" LETTER. FACES TO TRIM TO A 8 1/2" WIDTH. (SEE DETAIL B.)

    FOR CUL–DE–SAC STREETS, A 9" METRO SIZE BLADE SHALL BE USED WITH THE BLOCK NUMBERS DISPLAYED BENEATH THE STREET NAME. LETTERING TO BE THE SAME AS FOR THE 6 3/4" SIZE BLADE, EXCEPT THAT THE BLOCK NUMBER INFORMATION SHALL BE 4" SERIES "C".

    IF BLOCK NUMBERS ARE NOT SHOWN ON THE PLANS THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEER AT 268–4501 PRIOR TO MANUFACTURING THE SIGN.

    SHOP DRAWINGS OF LAYOUT FOR SNS SHALL BE SUBMITTED TO THE TRAFFIC ENGINEERING DIVISION OF THE CITY OF WICHITA FOR APPROVAL PRIOR TO FABRICATION. THE FINISHED SIGNS AS SUPPLILED SHALL BE OF GOOD APPEARANCE, FREE FROM RAGGED EDGES, CRACKS SCALES OR BLISTERS AND SHALL BE CLEAN–CUT. SIGNS SHALL BE PACKED IN SUCH MANNER AS TO PREVENT DAMAGE OR DEFACEMENT DURING SHIPMENT OR STORAGE.
13. PERMANENT TRAFFIC CONTROL AND SNS: PERMANENT TRAFFIC CONTROL AND SNS SHALL BE MEASURED AND PAID FOR AT THE LUMP SUM PRICE FOR SIGNING. THE PAYMENT AS SET FORTH ABOVE SHALL BE CONSIDERED FULL COMPENSATION FOR ALL EXCAVATION, BACKFILLING. POSTS, ANCHORS, FASTENERS, MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK.

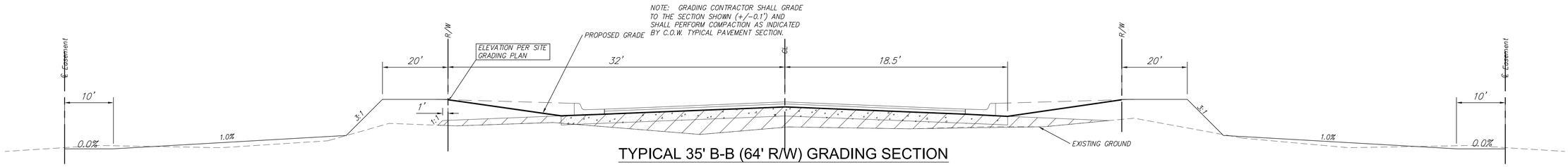
SIGNING DETAILS

SCALE: NONE	APPROVED BY	DATE: JUNE 1993
DRAWN BY: TM		
REVISED BY: AR		REVISED: APRIL 2008

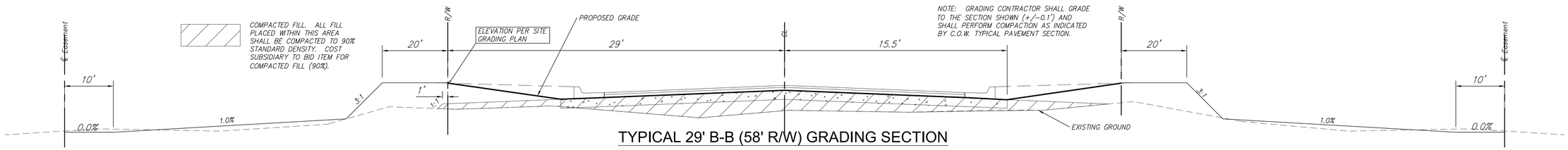
CITY OF WICHITA

DEPARTMENT OF PUBLIC WORKS

PAUL GUNZELMAN, TRAFFIC ENGINEER, ENGINEERING DIVISION



TYPICAL 35' B-B (64' R/W) GRADING SECTION



TYPICAL 29' B-B (58' R/W) GRADING SECTION

THIS DETAIL IS TAKEN FROM THE STORM WATER DRAIN PROJECT MASS GRADING DETAILS. THE STREETS ARE TO BE GRADED TO THE LINE INDICATED. ALL GRADING QUANTITIES ASSOCIATED WITH THIS PAVING PROJECT ARE ASSUMED BASED ON THE PROPOSED GRADING SHOWN.

EXCAVATION (AREA OF SUBGRADE * SUBGRADE DEPTH) = 1400 CY

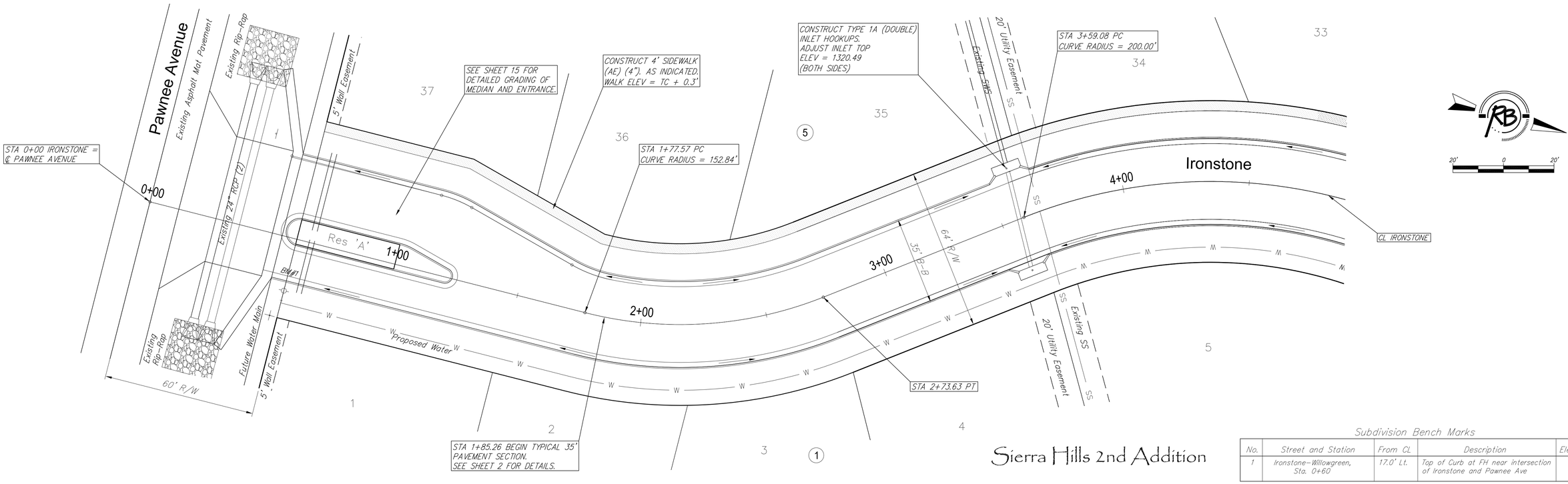
SIERRA HILLS 2ND ADDITION

Cross Section Detail

WICHITA, KANSAS

Ruggles & Bohm, P.A.
Engineering, Surveying, Land Planning
924 North Main
Wichita, Kansas 67203
www.rbkansas.com
(316) 264-8008
(316) 264-4621 fax
E-mail: info@rbkansas.com

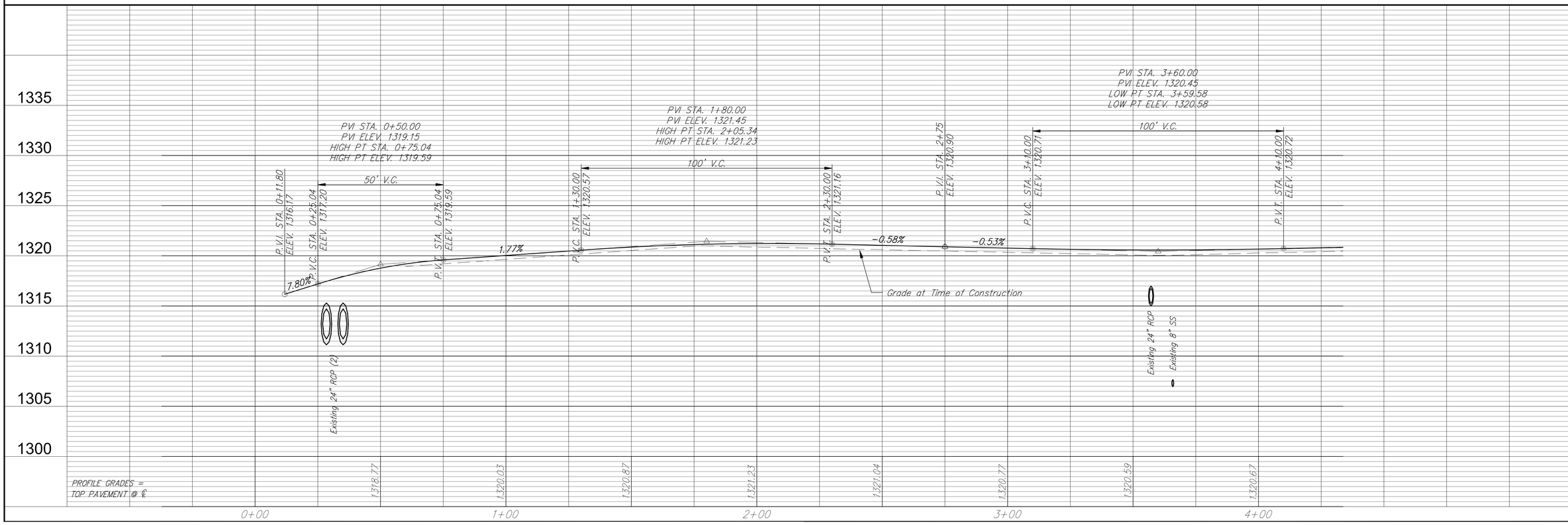
DESIGN	EJG
DRAWN	EJG
REVIEW	
UTILITY	
DATE	Aug. 6, 2012
RB JOB	3268E
SHEET	7 OF 27
DRAWING FILE	Paving {Entrance Details}
PROJECT NUMBER	216 PPP



Subdivision Bench Marks

No.	Street and Station	From CL	Description	Elevation
1	Ironstone–Willowgreen, Sta. 0+60	17.0' Lt.	Top of Curb at FH near intersection of Ironstone and Pawnee Ave	

Sierra Hills 2nd Addition



Ruggles & Bohm, P.A.
Engineering, Surveying, Land Planning
924 North Main
Wichita, Kansas 67203
(316) 264-6005
(316) 264-4021 fax
E-mail: info@rbakansas.com
www.rbakansas.com

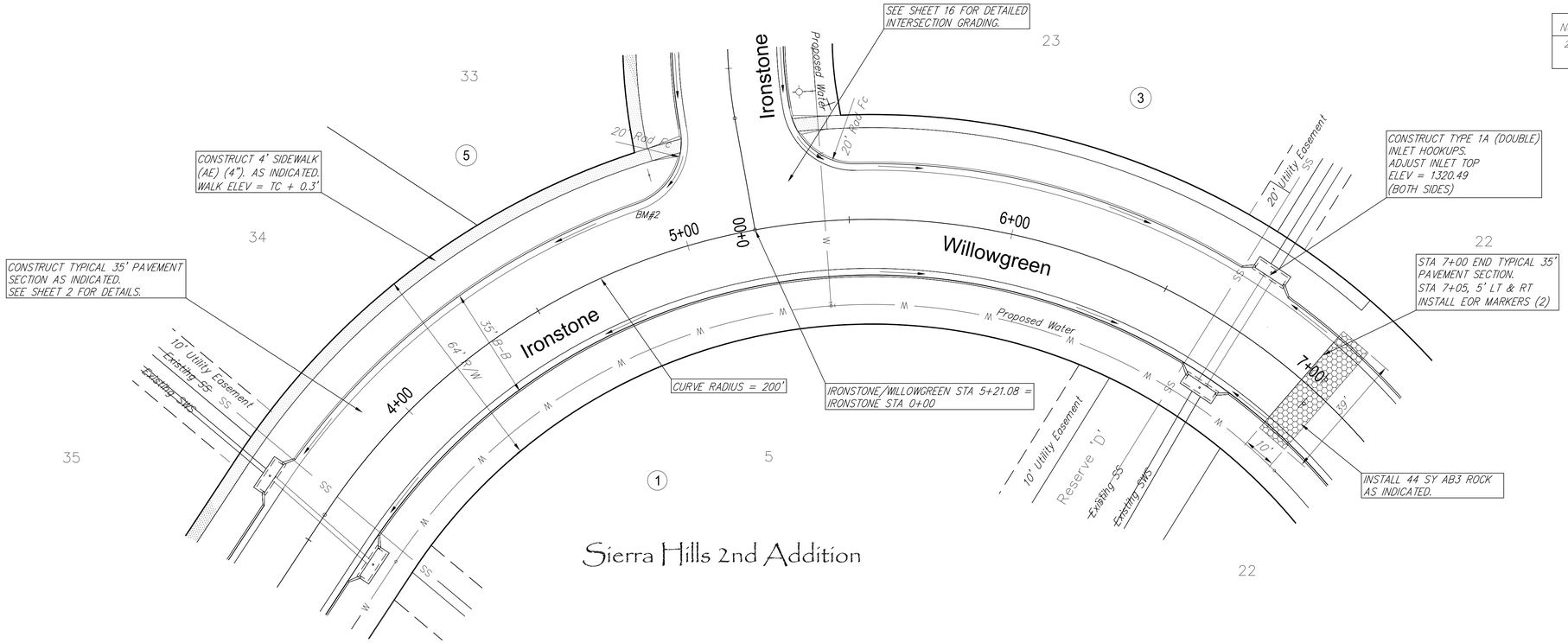
REVISED
DRAWN EJG
DESIGN EJG
UTILITY
REVIEW
DATE Aug 6, 2012
PROJECT NUMBER 216 PPP
DRAWING FILE Engineering Base (SWS Line 2 (2))

SIERRA HILLS 2ND ADDITION
Ironstone-Willowgreen
WICHITA, KANSAS

RB JOB 3268E
SHEET 8 OF 27

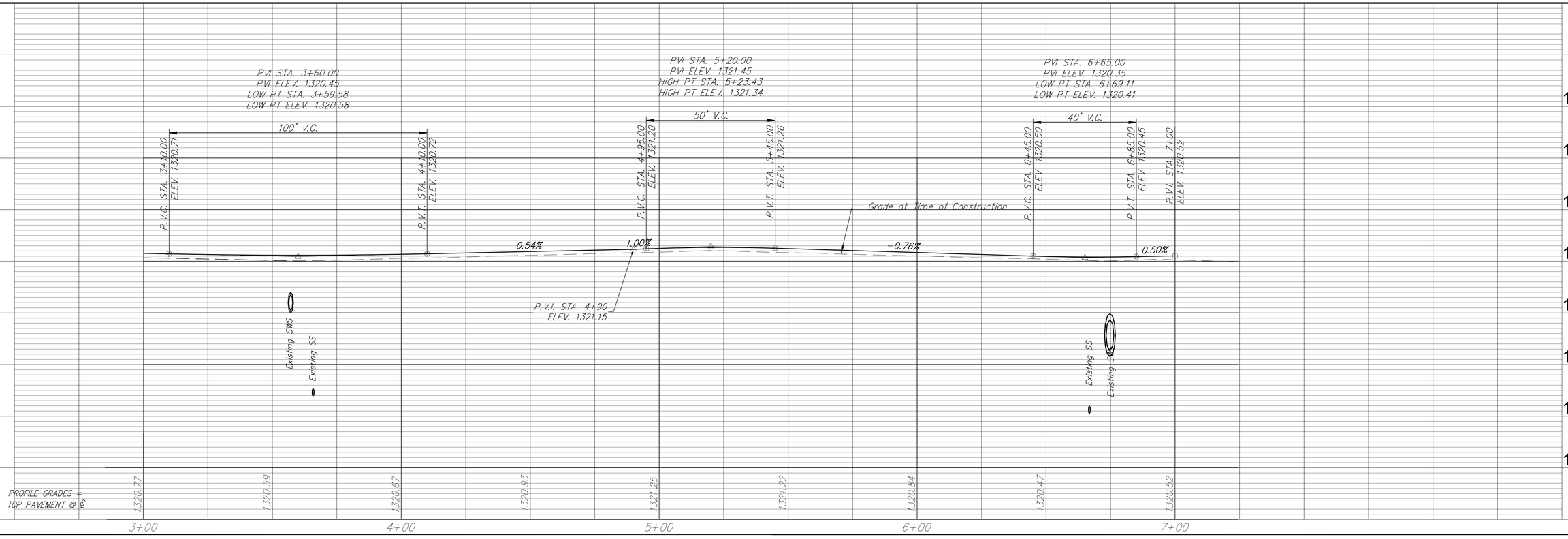
Subdivision Bench Marks

No.	Street and Station	From CL	Description	Elevation
2	Ironstone–Willowgreen, Sta. 4+95	17.0' Lt.	Top of Curb S end of W curb return at intersection of Ironstone–Willowgreen and Ironstone	



Sierra Hills 2nd Addition

NOTE: ROLL TYPE CURB AND GUTTER TO BE CONSTRUCTED ALONG PAVEMENT DEPICTED ON THIS SHEET



Ruggles & Bohm, P.A.
Engineering, Surveying, Land Planning
924 North Main
Wichita, Kansas 67203
(316) 264-6405
(316) 264-4021 fax
E-mail: info@rbakansas.com
www.rbakansas.com

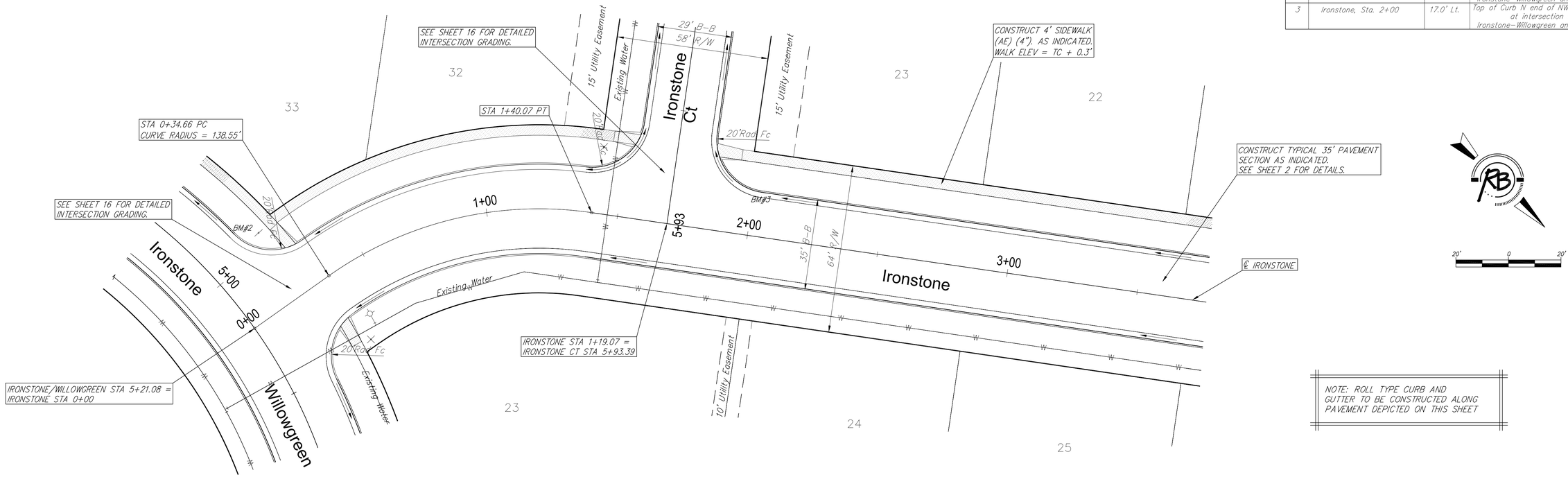
REVISED
DRAWN EJG
DESIGN EJG
REVIEW
DATE Aug 6, 2012
UTILITY
PROJECT NUMBER 216 PPP
DRAWING FILE Engineering Base (SWS Line 2 (2))

SIERRA HILLS 2ND ADDITION
Iron-Willow (2)
WICHITA, KANSAS

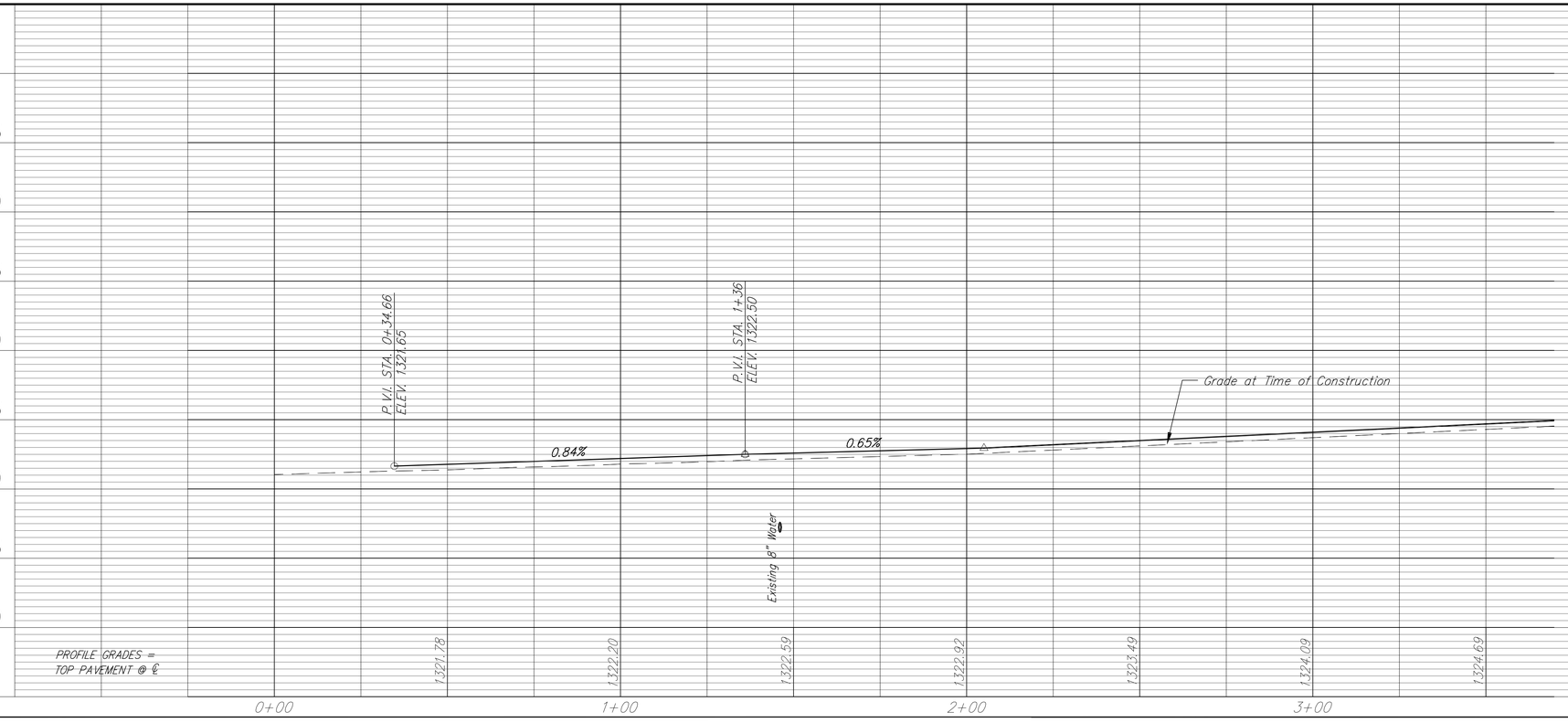
RB JOB 3268E
SHEET 9 OF 27

Subdivision Bench Marks

No.	Street and Station	From CL	Description	Elevation
2	Ironstone–Willowgreen, Sta. 4+95	17.0' Lt.	Top of Curb S end of W curb return at intersection of Ironstone–Willowgreen and Ironstone	
3	Ironstone, Sta. 2+00	17.0' Lt.	Top of Curb N end of NW curb return at intersection of Ironstone–Willowgreen and Ironstone	



NOTE: ROLL TYPE CURB AND GUTTER TO BE CONSTRUCTED ALONG PAVEMENT DEPICTED ON THIS SHEET



Ruggles & Bolm, P.A.
Engineering, Surveying, Land Planning
924 North Main
Wichita, Kansas 67203
(316) 264-4626
(316) 264-4821 fax
E-mail: jim@rbankas.com
www.rbankas.com

REVISED
DRAWN EJG
DESIGN EJG
DATE Aug 6, 2012
REVIEW
UTILITY

PROJECT NUMBER 216 PPP
DRAWING FILE Engineering Base (SWS Line 2 (2))

SIERRA HILLS 2ND ADDITION
Ironstone
WICHITA, KANSAS

RB JOB 3268E

SHEET 10 OF 27

Subdivision Bench Marks

No.	Street and Station	From CL	Description	Elevation
4	Ironstone Sta. 5+45	17.0' Rt.	Top of Curb at FH at common lot line to Lots 27 & 28, Block 3 along Ironstone	

Ruggles & Bohm, P.A.
Engineering, Surveying, Land Planning
924 North Main
Wichita, Kansas 67203
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(316) 264-8008
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E-mail: info@rbkansas.com

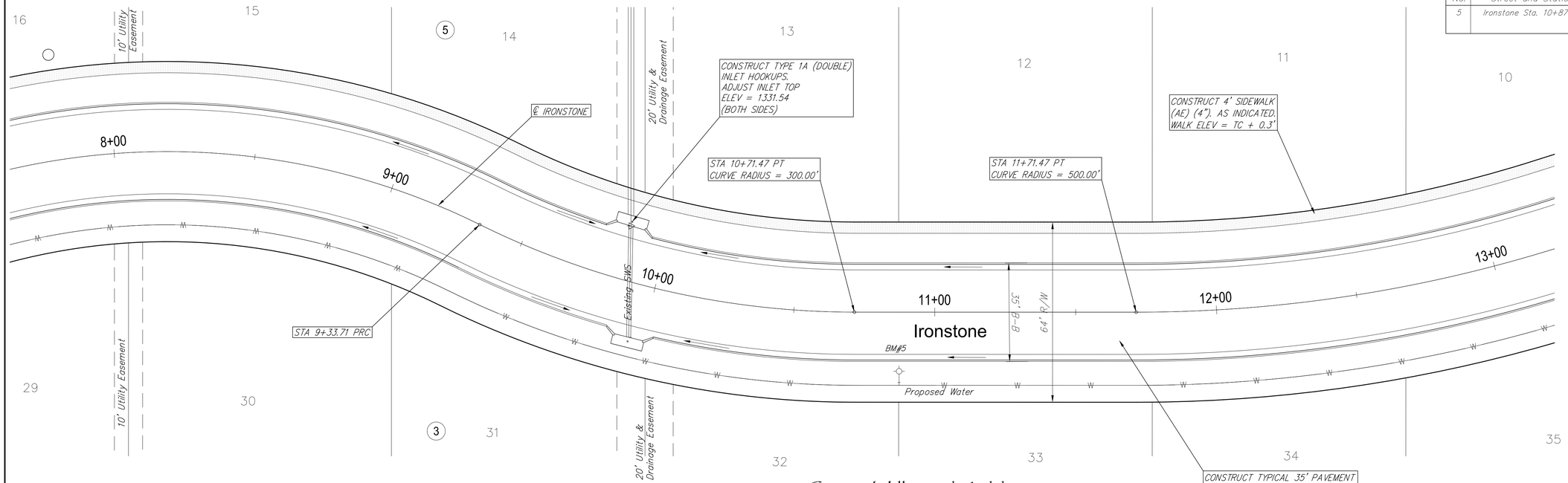
REVISED
REVIEW
DRAWN EJG
DATE Aug 6, 2012
DESIGN EJG
UTILITY
PROJECT NUMBER 216 PPP
DRAWING FILE Engineering Base {SWS Line 2 (2)}

SIERRA HILLS 2ND ADDITION
Ironstone (2)
WICHITA, KANSAS

RB JOB 3268E

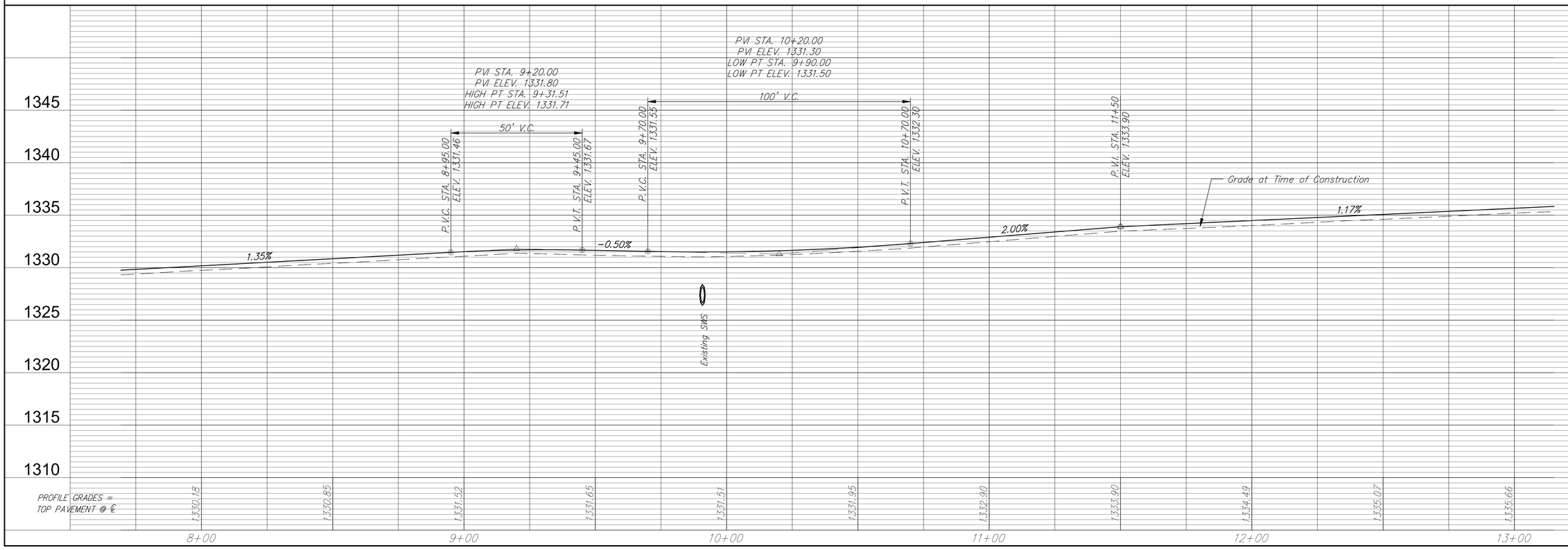
Subdivision Bench Marks

No.	Street and Station	From CL	Description	Elevation
5	Ironstone Sta. 10+87	17.0' Rt.	Top of Curb at FH at common lot line to Lots 32 & 33, Block 3 along Ironstone	



Sierra Hills 2nd Addition

NOTE: ROLL TYPE CURB AND GUTTER TO BE CONSTRUCTED ALONG PAVEMENT DEPICTED ON THIS SHEET



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(316) 264-6021 fax
E-mail: info@rbakansas.com
www.rbakansas.com

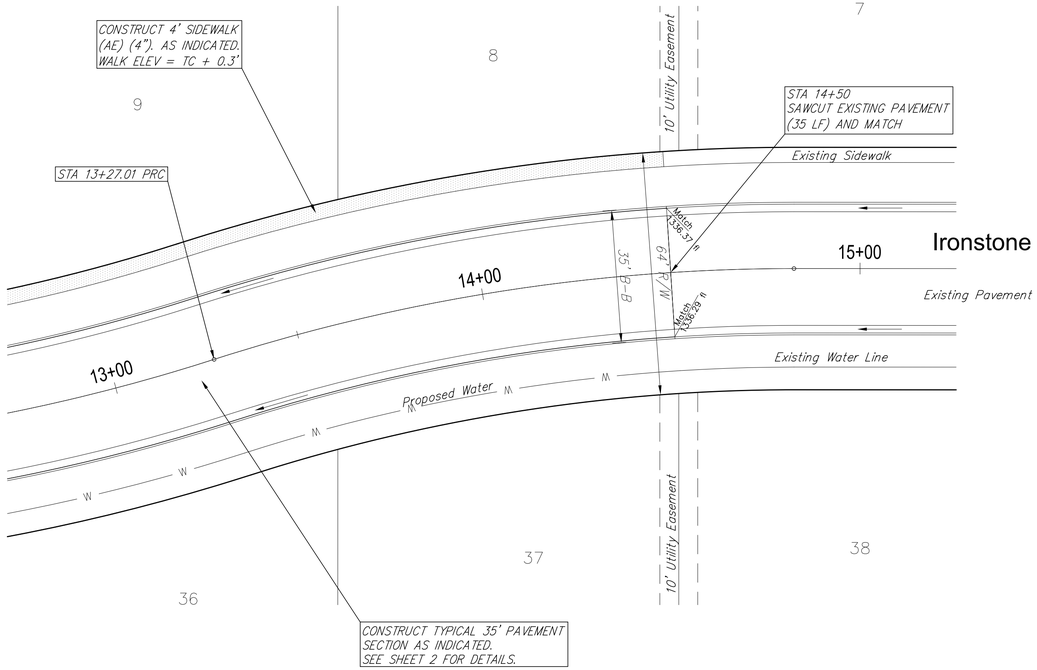
REVISED
DRAWN EJG
DESIGN EJG
UTILITY
REVIEW
DATE Aug 6, 2012

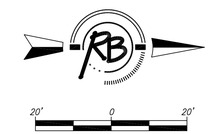
PROJECT NUMBER 216 PPP
DRAWING FILE Engineering Base (SWS Line 2 (2))

SIERRA HILLS 2ND ADDITION
Ironstone (3)
WICHITA, KANSAS

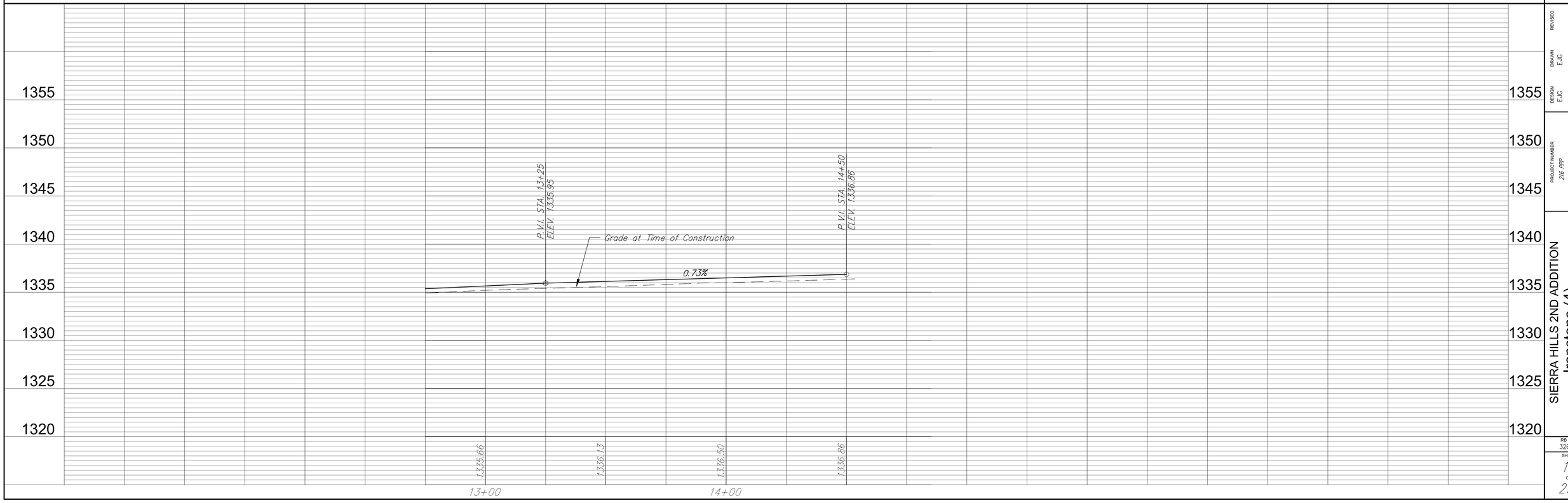
RB JOB 3268E

SHEET 12 OF 27





NOTE: ROLL TYPE CURB AND GUTTER TO BE CONSTRUCTED ALONG PAVEMENT DEPICTED ON THIS SHEET



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REVISED	REVIEW
DRAWN EJG	DATE Aug 6, 2012
DESIGN EJG	UTILITY

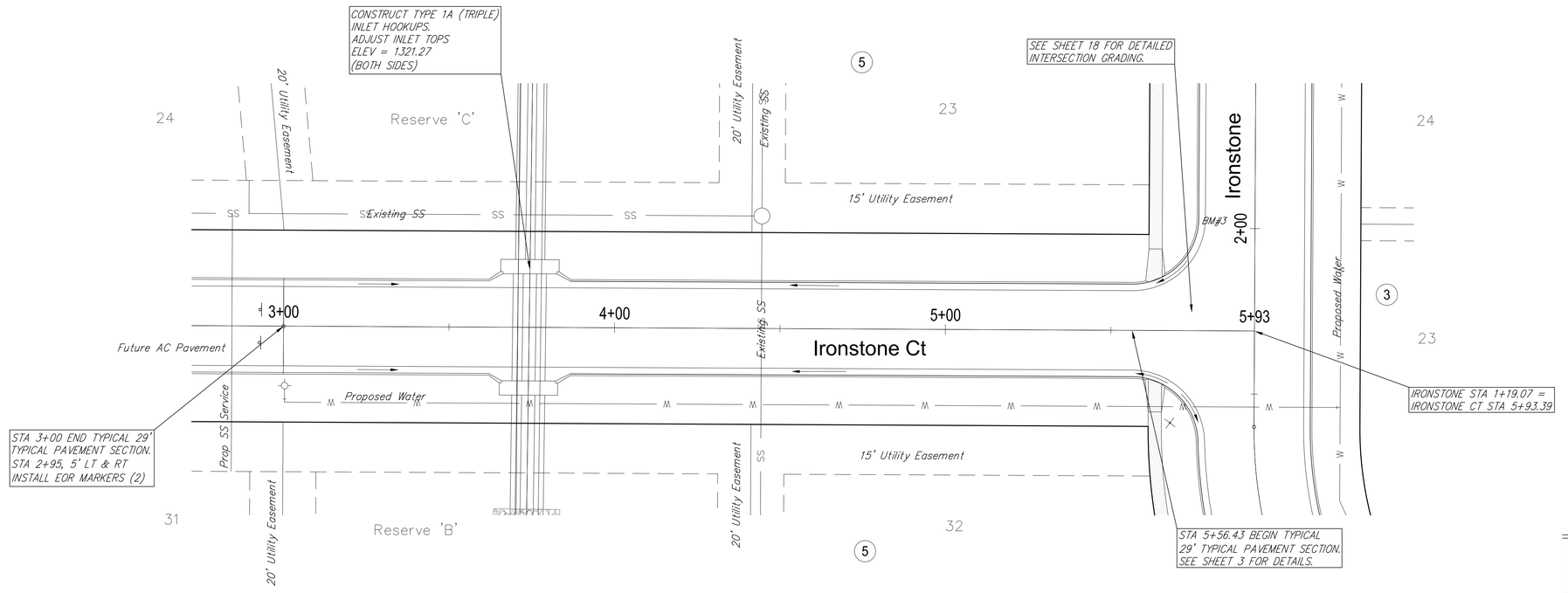
PROJECT NUMBER 216 PPP

DRAWING FILE Engineering Base [SWS Line 2 (2)]

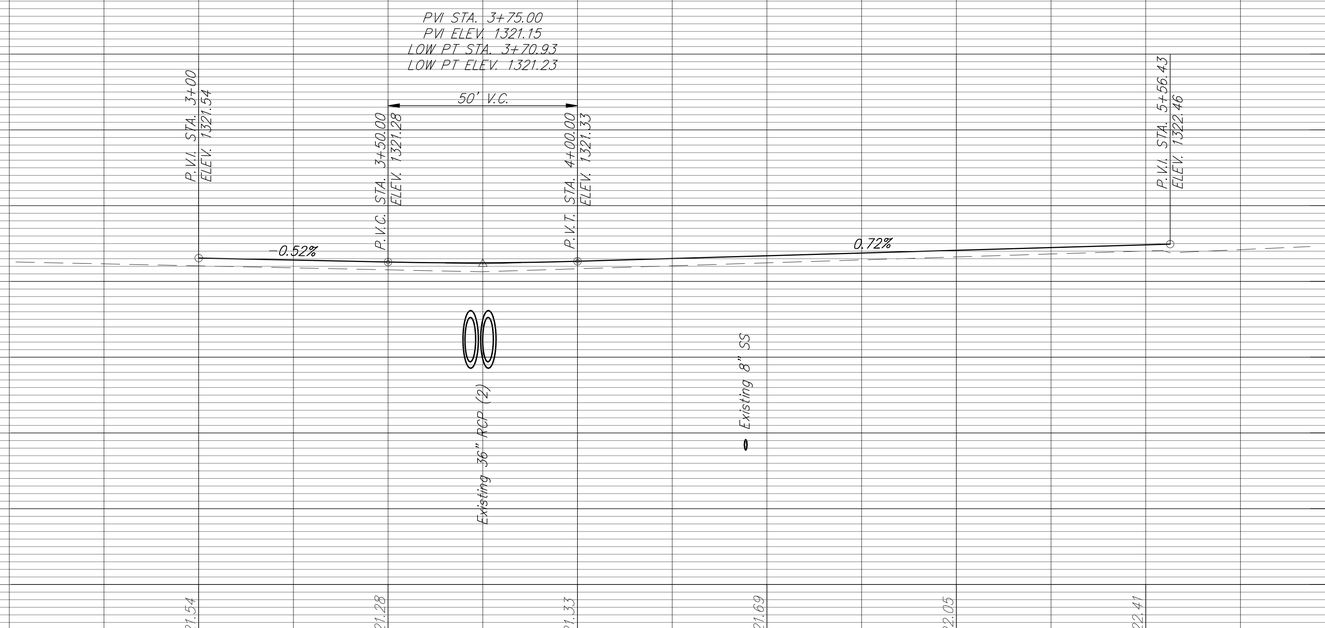
SIERRA HILLS 2ND ADDITION
Ironstone (4)
WICHITA, KANSAS

RB JOB 3268E

SHEET 13 OF 27



NOTE: ROLL TYPE CURB AND GUTTER TO BE CONSTRUCTED ALONG PAVEMENT DEPICTED ON THIS SHEET



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REVISED
REVIEW June 16, 2008
DRAWN EJG
DATE Aug 11, 2008
DESIGN EJG
UTILITY

PROJECT NUMBER 216 PPP
DRAWING FILE Engineering Base (SWS Line 2 (2))

SIERRA HILLS 2ND ADDITION
Ironstone Ct
WICHITA, KANSAS

RB JOB 3268E
SHEET 14 OF 27

CONTRACTOR SHALL FINE GRADE, SEED, FERTILIZE AND MULCH THE AREA DESIGNATED BY CONSTRUCTION LIMITS INSIDE THE PAWNEE RIGHT-OF-WAY. COST SUBSIDIARY TO BID ITEM FOR PROJECT SEEDING.

REMOVE & REPLACE EXISTING RIP-RAP AS NECESSARY FOR FLUME CONSTRUCTION. (BOTH SIDES)

Existing RipRap

FL = 1313.75

1312.0 fl

10'

1314.0 fl

Future 16" Water

5' Wall Easement

37

5

36

STA 0+42, 39' LT
INSTALL R1-1
STOP SIGN

STA 0+50 CONSTRUCT CONCRETE FLUME AS INDICATED (35 LF) SEE DETAIL THIS SHEET. (BOTH SIDES)

STA 0+65, 5.0' TO 36.5' LT
INSTALL 31.5 L.F. 4" GREY ELECTRICAL PVC
STA 0+67, 5.0' TO 36.5' LT
INSTALL 31.5 L.F. 4" PVC CASING
SEE PVC INSTALLATION DETAIL THIS SHEET

16.80
Match

15.00'

15.00'

17.30

Curve Radius 49.5' Face

Curve Radius 50.5' Face

46.00' 11.20' 13.42' 26.31' 19.18' 16.31'

18.46 17.91
19.55 19.00
19.77 19.22
20.02 19.47
20.54 19.99
20.90 20.35
21.22 20.67

2' 6" 6"
2-1/2" TYP.
12"
Taper from 0'-6" to 0'-0" in 2' on street side.
6"
Class AAA Concrete
WWF 6X12 W4 X W4
CONCRETE FLUME
**not to scale

SAW CUT EXISTING ASPHALT TO A NEAT LINE. (81 LF)

Pawnee Ave

Existing AC Pavement

Proposed 24" RCP (2) Installed with SMD Project

STA 0+60, 3' LT
INSTALL SIGNS
R4-7 'KEEP RIGHT'
OM1-3 OBJECT MARKER

STA 1+20, 0.5' LT
INSTALL SIGNS
R4-7 'KEEP RIGHT'
OM1-3 OBJECT MARKER

24.50' Fc - Fc

Ironstone

18.83 18.28
20.31 19.76
20.45 19.90
18.75 18.20
40.00'
5.42'
16.35'
8.15'
5.0' Rad FC
20.00' Rad FC
3.0' Rad FC
8.15'
20.88 20.33
20.99 20.44
Reserve "A"
0+00
1+00
16.22
Match
17.00
20.87 21.07 21.14 21.18
19.17 18.62
20.52 19.97
40.00'
20.31'
20.87 20.32
14.50' Fc - Fc
18.89 18.44
20.07 19.52
20.48 19.93
20.91 20.36
21.18 20.63
21.22 20.67
46.00' 20.31' 29.69' 27.57' 8.46'

STA 0+11.80 TO 0+50 CONSTRUCT TEMPORARY ASPHALT HOOK-UP. (241 SY)

16.25

15.00'

15.83
Match

60' R/W

1313.5 fl

10'

FL = 1313.15

Existing RipRap

Proposed 8" Water

STA 0+54 TO STA 0+56 TAPER FROM ZERO HEIGHT CURB & GUTTER TO ROLL CURB IN 2.0'. (BOTH SIDES)

STA 0+65, 1.0' LT TO 20.5' RT
INSTALL 21.5 L.F. 4" GREY ELECTRICAL PVC
STA 0+67, 1.0' LT TO 20.5' RT
INSTALL 21.5 L.F. 4" PVC CASING
SEE PVC INSTALLATION DETAIL THIS SHEET

STA 0+57, 26' RT
INSTALL SNS
'PAWNEE AVE'-13800 E
'IRONSTONE'-2300 S

3

5' Wall Easement

1

2

FLUME FL = 1311.50

10' 0 10'

8" Low-Edge Medial Curb
14.5' F - F
11' F - F
24.5' F - F
1/4" PER FOOT
2" S.C.
3" B.B.
12"
5" C.R. BASE
5" C.R. BASE W/ FABRIC REINFORCEMENT

Section through Median
* Not to Scale

Finished Grade
Cap End of PVC Sleeve (Typ.)
2' 3' 3' 2' 2' 3' 3' 2'
Bottom of Pavement Subgrade
2' Min.
2' Min.
90° PVC Elbow (Typ.)

PVC Sleeve Detail
* Not to Scale

SIERRA HILLS 2ND ADDITION
Entrance Details
WICHITA, KANSAS

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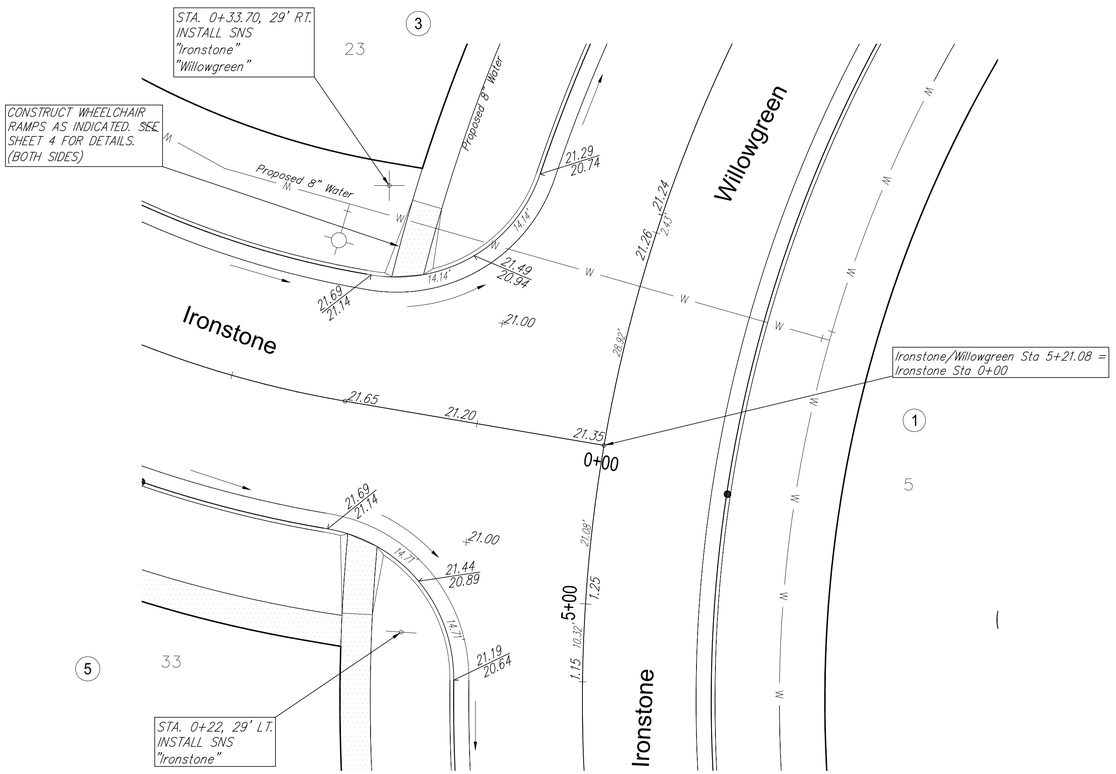
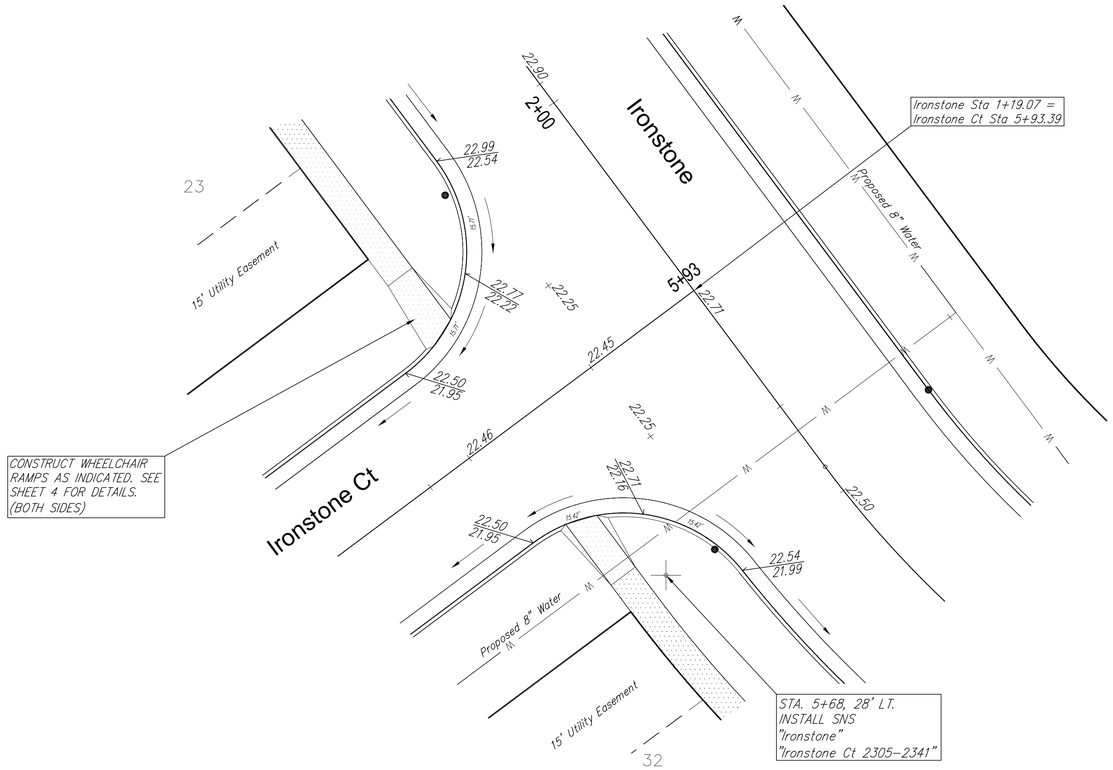
DESIGN EJG
DRAWN EJG
REVIEW June 16, 2008
UTILITY
DATE Aug 11, 2008
RB JOB 3268E
SHEET 15 OF 27
DRAWING FILE Paving {Entrance Details}
PROJECT NUMBER 216 PPP





SIERRA HILLS 2ND ADDITION
Intersection Details
WICHITA, KANSAS

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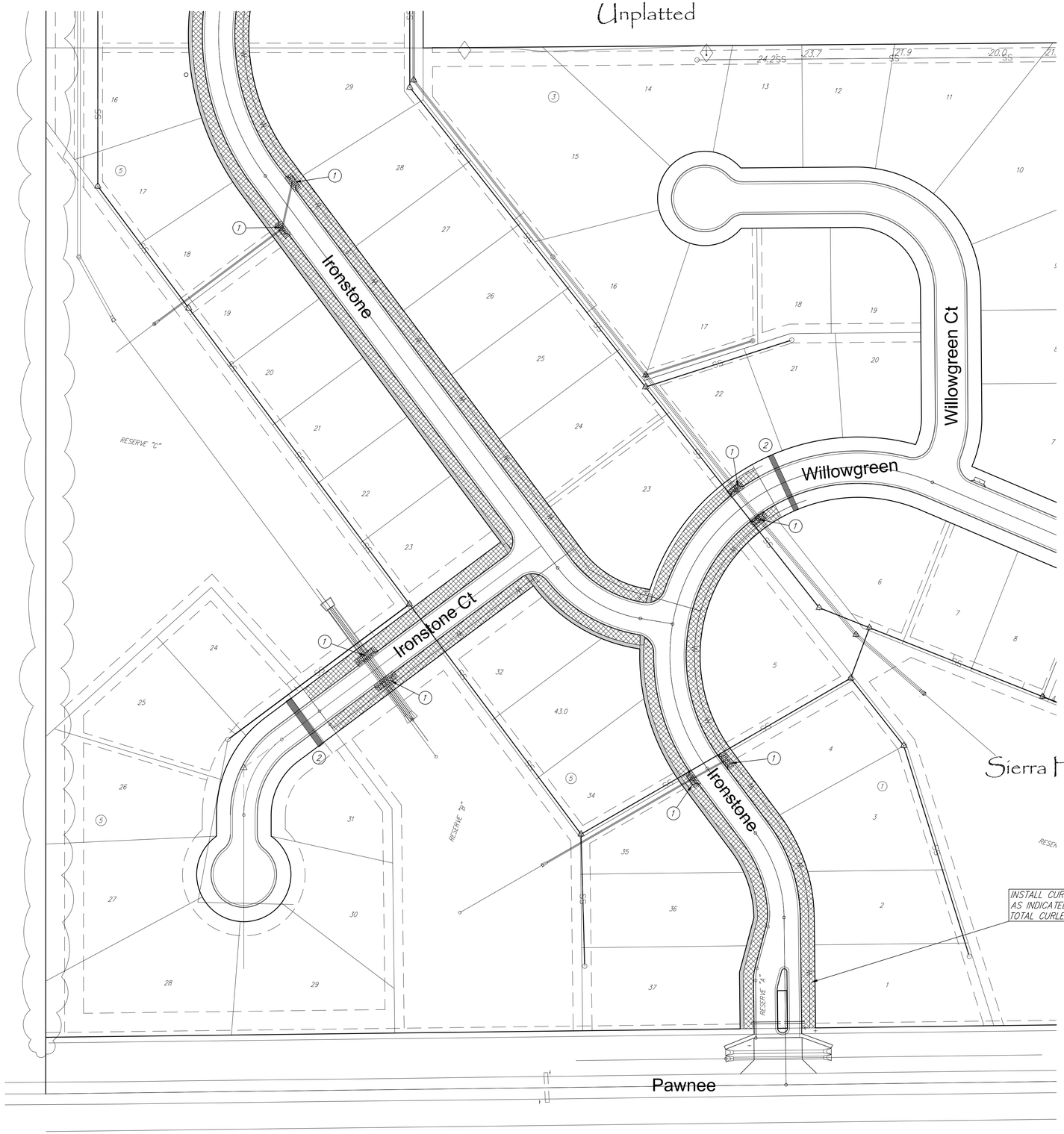
DESIGN	EJG
DRAWN	EJG
REVIEW	June 16, 2008
UTILITY	
DATE	Aug 11, 2008
RB JOB	3268E
SHEET	16 OF 27
DRAWING FILE	Paving {Entrance Details}
PROJECT NUMBER	216 PPP



10' 0 10'

CURLEX BLANKET

(1) INLET PROTECTION

(2) LINEAR SEDIMENT BARRIER

CURLEX BLANKET = 57855 SF
INLET SEDIMENT BARRIER = 10 EACH
LINEAR SEDIMENT BARRIER = 125 LF

SIERRA HILLS 2ND ADDITION
BMP Plan
WICHITA, KANSAS

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DESIGN EJG
DRAWN EJG
REVIEW June 16, 2008
UTILITY
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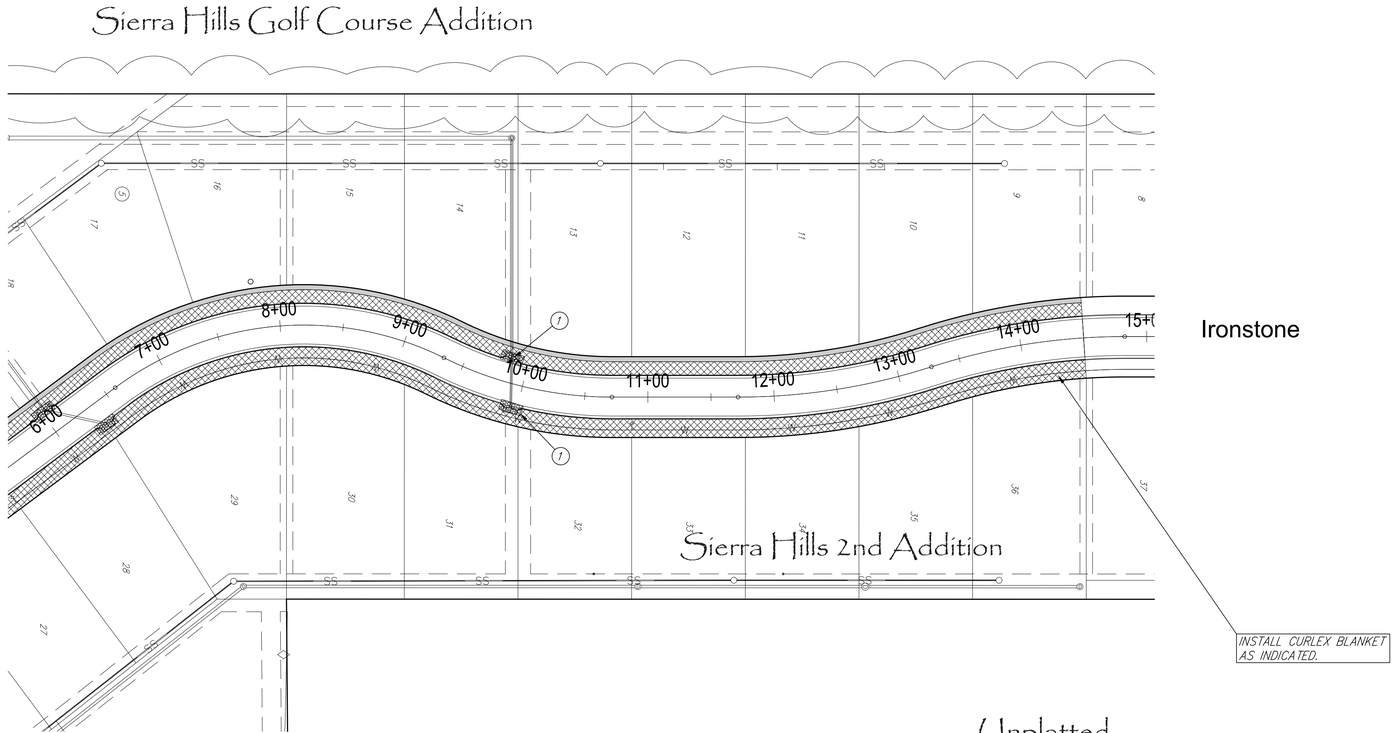
RB JOB 3268E
SHEET 17 OF 27

DRAWING FILE Paving {Entrance Details}
PROJECT NUMBER 216 PPP

10' 0 10'



(1) INLET PROTECTION

(2) LINEAR SEDIMENT BARRIER

SIERRA HILLS 2ND ADDITION

BMP Plan (2)

WICHITA, KANSAS

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DESIGN EJG
DRAWN EJG
REVIEW June 16, 2008
UTILITY
DATE Aug 11, 2008

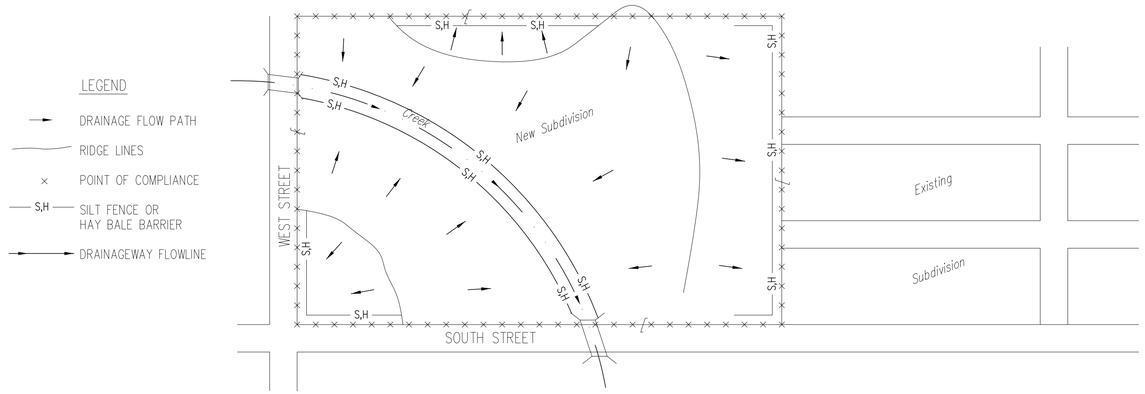
RB JOB 3268E

SHEET 18 OF 27

DRAWING FILE Paving {Entrance Details}

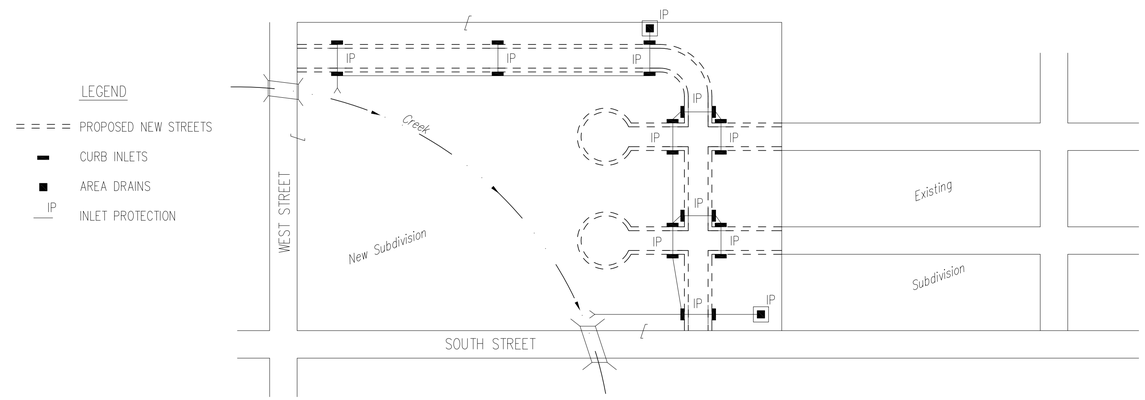
PROJECT NUMBER 216 PPP

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



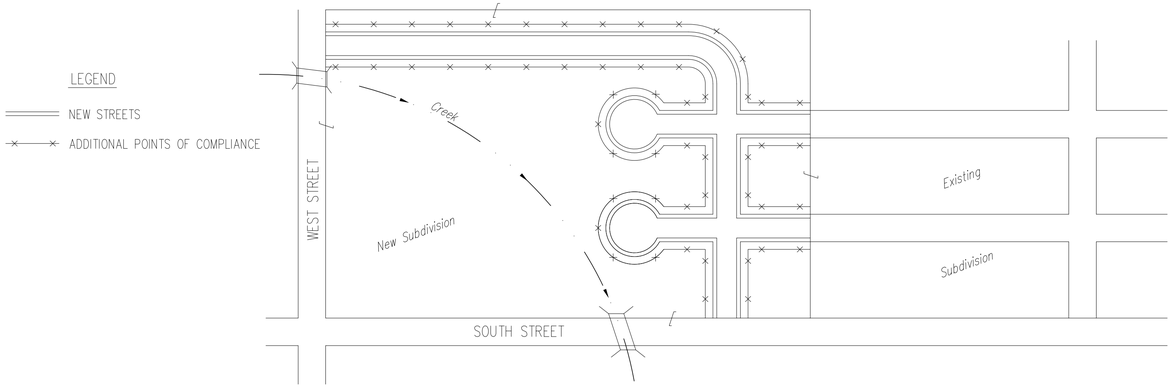
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. 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.

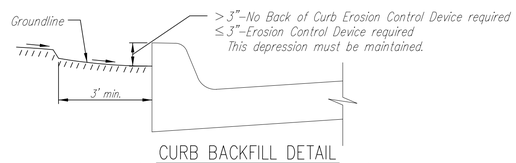
PHASE 3 – STREET CONSTRUCTION



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)

CITY OF WICHITA

SOIL EROSION BMPs

SUBDIVISION DEVELOPMENT PROCESS

JIM ARMOUR, P.E.
CITY ENGINEER

PROJECT NUMBER	OCA NO.
216 PPP	.
DATE: JAN. 2007	SHEET *19* OF *27*

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.

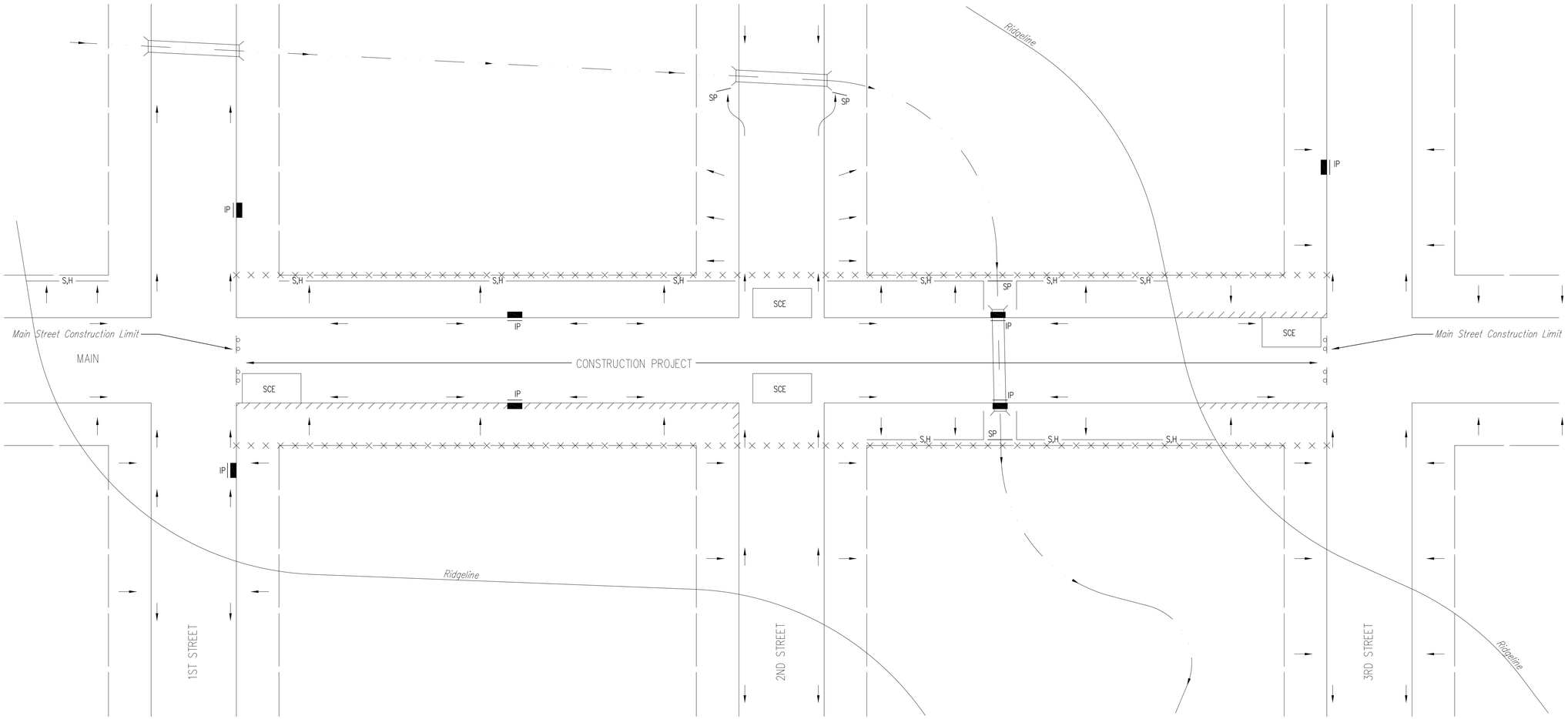
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.

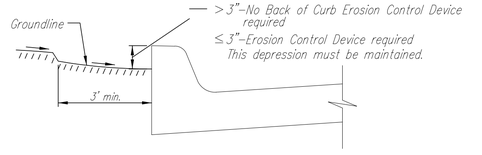
3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.

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

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

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 CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL. 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)

CITY OF WICHITA

SOIL EROSION BMPs

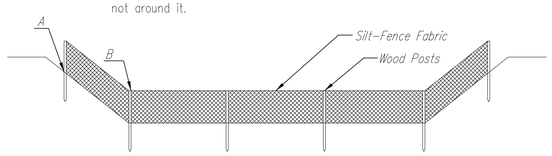
STREET IMPROVEMENT PROJECTS

JIM ARMOUR, P.E.
CITY ENGINEER

PROJECT NUMBER	OCA NO.
216 PPP	.

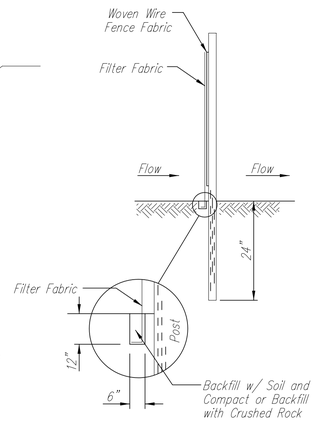
DATE JAN. 2007

NOTE: Point A must be higher than Point B so that water flows over the silt fence fabric and not around it.



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 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 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.

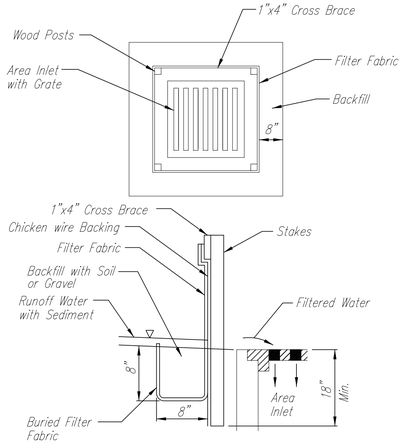
List of common placement/installation mistakes to avoid:

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.

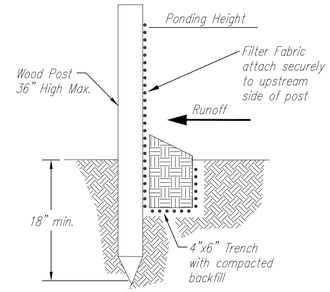
List of common placement/installation mistakes to avoid:

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?

CITY OF WICHITA

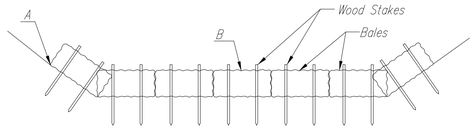
SOIL EROSION BMPs

SILT FENCE DITCH CHECK AND BARRIER DETAILS

JIM ARMOUR, P.E.
CITY ENGINEER

PROJECT NUMBER	OCA NO.
216 PPP	.
DATE	SHEET 21 OF 27
JAN. 2007	

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 Check Spacing

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".

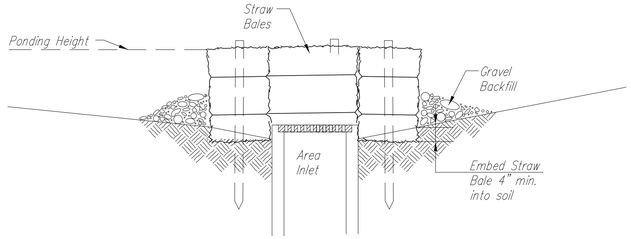
List of common placement/installation mistakes to avoid:

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.

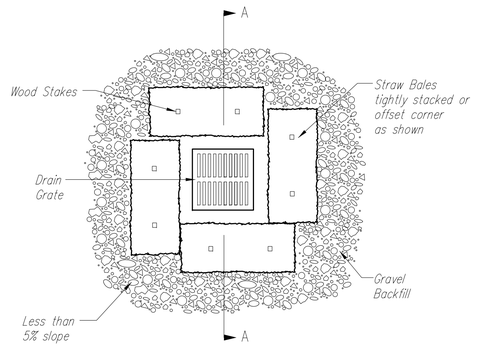
Inspection and Maintenance:

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.

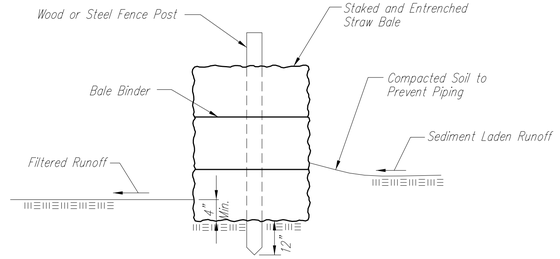
List of common placement installation mistakes to avoid:

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 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?

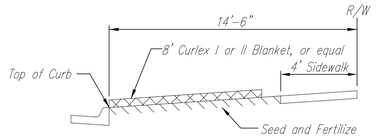
CITY OF WICHITA

SOIL EROSION BMPs

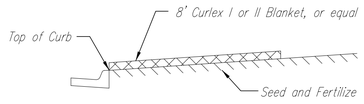
STRAW BALE DITCH CHECK AND BARRIER DETAILS

JIM ARMOUR, P.E.
CITY ENGINEER

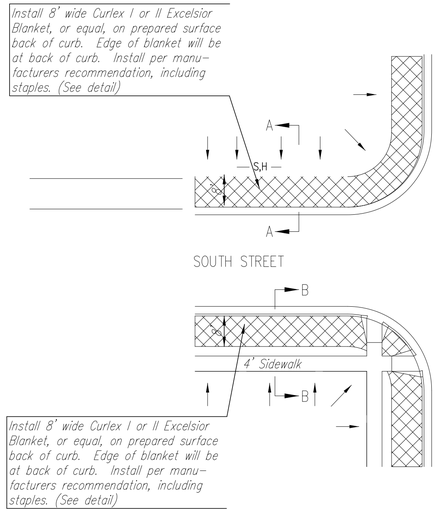
PROJECT NUMBER	OCA NO.
216 PPP	.
DATE: JAN. 2007	SHEET 22 OF 27



SECTION B-B



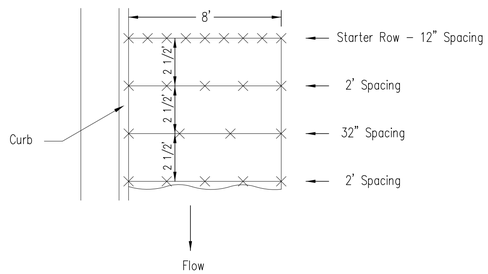
SECTION A-A



NOTES:

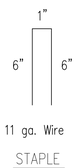
1. EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
2. EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
3. AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE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

BACK OF CURB PROTECTION DETAIL



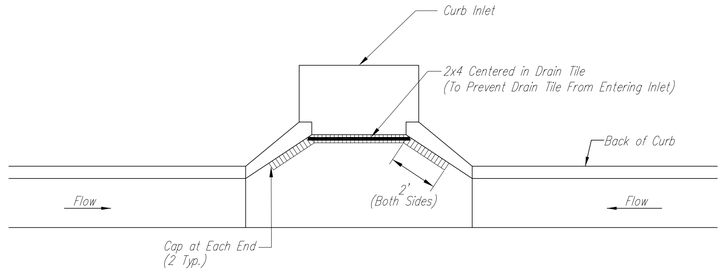
STAPLE PATTERN

NOTES: Use 6" seam overlap



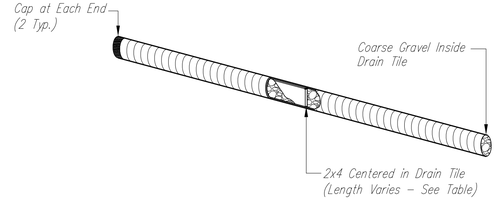
STAPLE

DETAILS FOR CURLEX I OR II BLANKETS

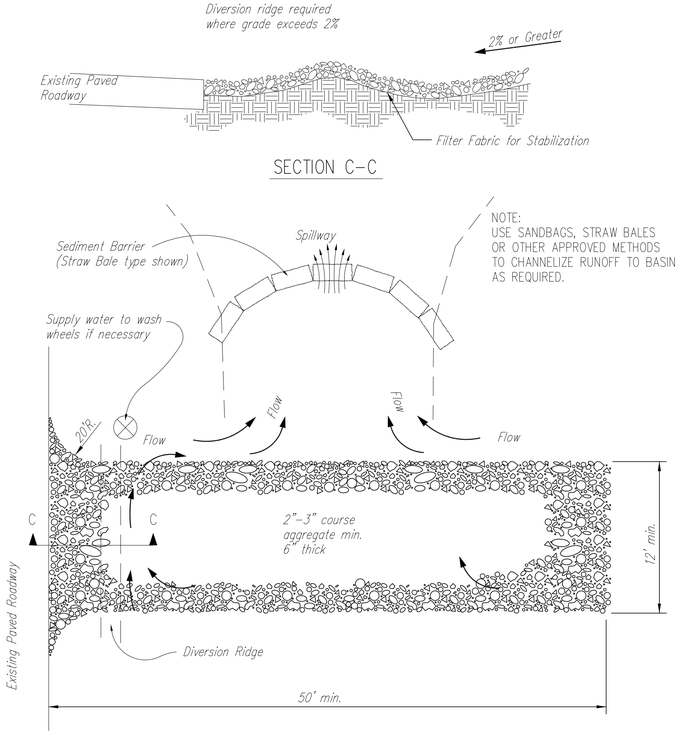


Note:
Place 4" perforated PVC pipe, filled with 1/2"-1" dia. gravel, in front of curb inlet as shown.

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



SECTION C-C

STABILIZED CONSTRUCTION ENTRANCE

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.

CITY OF WICHITA

SOIL EROSION BMPs

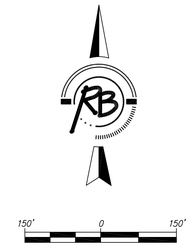
BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

JIM ARMOUR, P.E.
CITY ENGINEER

PROJECT NUMBER	OCA NO.
216 PPP	.

DATE JAN. 2007

Point Table				
Point #	Northing	Easting	Elevation	Description
200	17361.86	17360.23		Addition Corner
201	17370.88	18096.65		Block Corner
202	17371.86	18176.65		Block Corner
203	17430.88	18095.92		PI
204	17488.64	18111.21		PC
205	17489.42	18175.21		PC
206	17597.66	18138.56		PT
207	17559.40	18087.25		PT
208	17627.89	18036.17		PC
209	17666.15	18087.48		PC
210	17773.74	17990.26		Block Corner
211	17836.83	18001.04		Block Corner
212	17990.54	18282.74		Block Corner
213	17967.35	18342.42		Block Corner
214	17921.16	18287.97		PT
215	17836.81	18486.05		PC
216	17895.69	18511.13		PC
217	17863.33	18634.26		PT
218	17909.86	18590.32		PT
219	17946.27	18628.87		Block Corner
220	17990.21	18675.41		Block Corner
221	18177.74	18874.01		PC
222	18131.21	18917.95		PC
223	18228.24	18959.32		PT
224	18227.73	18895.32		PT
225	18321.93	18894.56		PI
226	18322.45	18958.56		PI
227	18398.77	18893.94		PI
228	18399.28	18957.94		PI
229	18396.32	18589.95		PI
230	18396.83	18653.95		PI
231	18319.48	18590.57		PI
232	18320.00	18654.57		PI
233	18035.83	18592.85		PT
234	18036.35	18656.85		PT
235	18020.13	18352.97		PT
236	18019.62	18288.97		PT
237	18153.46	18287.90		PC
238	18153.98	18351.89		PC
239	18284.91	18218.84		PT



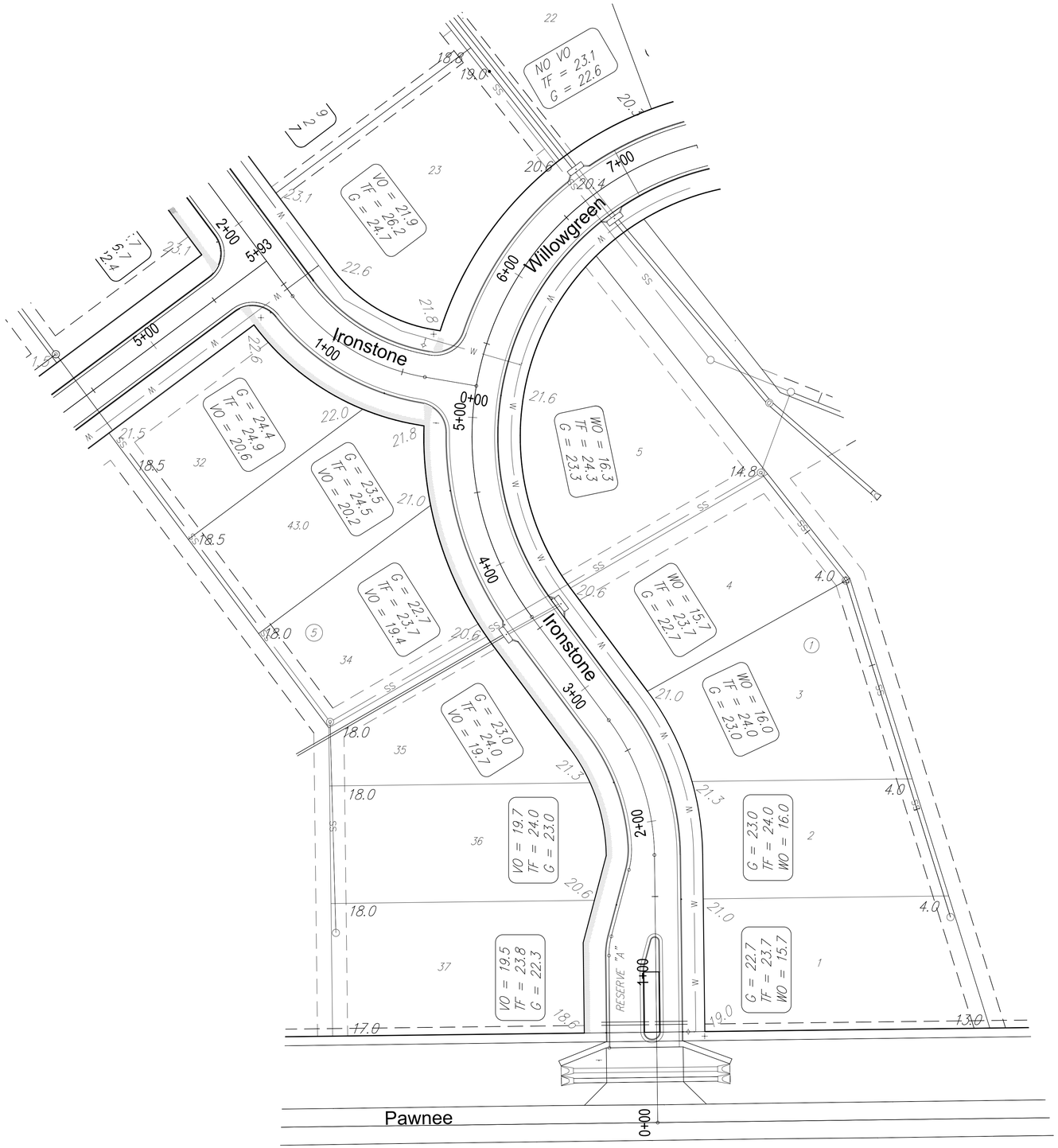
SIERRA HILLS 2ND ADDITION

Addition Bubble Map

WICHITA, KANSAS

Ruggles & Bohm, P.A.
Engineering, Surveying, Land Planning
924 North Main
Wichita, Kansas 67203
www.rbkansas.com
(316) 264-8008
(316) 264-4621 fax
E-mail: info@rbkansas.com

DESIGN	EJG
DRAWN	EJG
REVIEW	June 16, 2008
UTILITY	
DATE	Aug 11, 2008
RB JOB	3266E
SHEET	24
OF	27
DRAWING FILE	Paving {Entrance Details}
PROJECT NUMBER	216 PPP



SIERRA HILLS 2ND ADDITION

4 Corner Lot Grading Plan

WICHITA, KANSAS

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(316) 264-4621 fax
E-mail: info@rbkansas.com

DESIGN	EJG
DRAWN	EJG
REVIEW	June 16, 2008
UTILITY	
DATE	Aug 11, 2008
RB JOB	326SE
SHEET	25 OF 27
DRAWING FILE	Paving {Entrance Details}
PROJECT NUMBER	216 PPP

SIERRA HILLS 2ND ADDITION
Paving Stakes (2)
WICHITA, KANSAS

Ruggles & Bohm, P.A.
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924 North Main
Wichita, Kansas 67203
www.rbkansas.com
(316) 264-8008
(316) 264-4621 fax
E-mail: info@rbkansas.com

DESIGN	EJG
DRAWN	EJG
REVIEW	June 16, 2008
UTILITY	
DATE	Aug 11, 2008
RB JOB	3268E
SHEET	26
OF	27
DRAWING FILE	Paving {Entrance Details}
PROJECT NUMBER	216 PPP

40' 0 40'

SIERRA HILLS 2ND ADDITION

Wichita, Sedgwick County, Kansas

State of Kansas)
Sedgwick County) SS

We, Ruggles & Bohm, P.A., Land Surveyors in aforesaid county and state, do hereby certify that, under the supervision of the undersigned, we have surveyed and platted "SIERRA HILLS 2ND ADDITION", Wichita, Sedgwick County, Kansas, and that the accompanying plat is a true and correct exhibit of the property surveyed, described as follows:

The Southeast Quarter of Section 35, Township 27 South, Range 2 East of the Sixth Principal Meridian, Sedgwick County, Kansas, EXCEPT beginning at the southeast corner of said Section 35; thence west on the section line 1372 feet; thence with an angle of 100 degrees to the right for a distance of 302 feet; thence with an angle of 18 degrees 40 minutes to the right for a distance of 198 feet; thence with angle of 20 degrees 35 minutes to the right for a distance of 462 feet; thence with an angle to the left of 48 degrees 15 minutes for a distance of 326 feet; thence with an angle to the right of 79 degrees 35 minutes for a distance of 104 feet; thence with an angle to the right of 4 degrees 25 minutes for a distance 5.35 feet; thence with an angle to the right of 96 degrees 30 minutes to a distance of 322 feet; thence with an angle to the left of 95 degrees 10 minutes for a distance of 251.45 feet to section line; thence with an angle of 94 degrees 17 minutes 30 seconds to the right for a distance of 856.3 feet to place of beginning, EXCEPT that part of the SE1/4 of Sec. 35, T27S, R2E of the 6th P.M., Sedgwick County, Kansas described as being the North 1187.88 feet of said SE1/4, EXCEPT the West 400.00 feet and EXCEPT the East 40.00 feet thereof, containing 60.00 acres more or less, AND EXCEPT That Part of the SE1/4 of Sec. 35, T27S, R2E of the 6th P.M., Sedgwick County, Kansas described as beginning at the N.E. corner of said SE1/4; thence S00°04'42"E along the east line of said SE1/4, 1809.20 feet; thence S85°37'54"W, 251.59 feet; thence N00°47'54"E, 322.00 feet; thence S84°17'54"W, 535.00 feet; thence S79°52'54"W, 104.00 feet; thence S89°32'19"W parallel with the north line of said SE1/4, 1760.97 feet to the west line of said SE1/4; thence N00°00'45"E along said west line, 1570.75 feet to the N.W. corner of said SE1/4; thence N89°32'19"E along the north line of said SE1/4, 2639.29 feet to the place of beginning; EXCEPT the North 1187.88 feet and EXCEPT the West 400.00 feet thereof.

All public easements and dedications are hereby vacated by virtue of K.S.A. 12-512(b).

Ruggles & Bohm, P.A.

_____ Land Surveyor
Thomas C. Ruggles

Know all men by these presents that we, the undersigned, have caused the land described in the surveyor's certificate to be platted into Lots, Blocks, Reserves and Streets, to be known as "SIERRA HILLS 2ND ADDITION", Wichita, Sedgwick County, Kansas. The streets are hereby dedicated to and for the use of the public. Utility Easements are hereby granted for the construction and maintenance of all public utilities. Drainage Easements are hereby granted to the public as indicated for drainage purposes. Reserve "A" is hereby reserved for irrigation and entry features. Reserves "B", "C" and "D" are hereby reserved for irrigation, walls, signage, gazebos, playground structures, picnic areas/ tables with canopies, walks, lighting, landscaping, berms, lakes, drainage, drainage structures, and utilities confined to easements. Reserve "E" is hereby reserved for irrigation, landscaping, drainage, drainage structures, and utilities confined to easements. Reserves "A", "B", "C" and "D" are to be owned and maintained by the Home Owners Association for the addition. Reserve "E" is to be owned and maintained by the owners of Lot 19, Block 1. A drainage plan has been developed for this plat; the property shall remain at established grades, or as modified with the approval of the City Engineer, and unobstructed to allow for the conveyance of storm water.

Palladio Developers, Inc.

_____ President
Eugene Vitarelli

State of Kansas)
Sedgwick County) SS

The foregoing instrument acknowledged before me, this _____ day of _____, 2008, by Eugene Vitarelli, President of Palladio Developers, Inc., on behalf of the corporation.

_____ Notary Public
Mildred E. Franz

My appointment expires _____

This plat of "SIERRA HILLS 2ND ADDITION", Wichita, Sedgwick County, Kansas, has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this ____ day of _____, 2008.

Wichita-Sedgwick County Metropolitan Area Planning Commission

_____ Chair
M.S. Mitchell

_____ Secretary
John L. Schlegel

This plat approved and all dedications shown hereon accepted by the City Council of the City of Wichita, Kansas, this ____ day of _____, 2008.

At the Direction of the City Council

_____ Mayor
Carl Brewer

_____ City Clerk
Karen Sublett

Reviewed in accordance with K.S.A. 58-2005 on this _____ day of _____, 2008.

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

Entered on transfer record this ____ day of _____ , 2008.

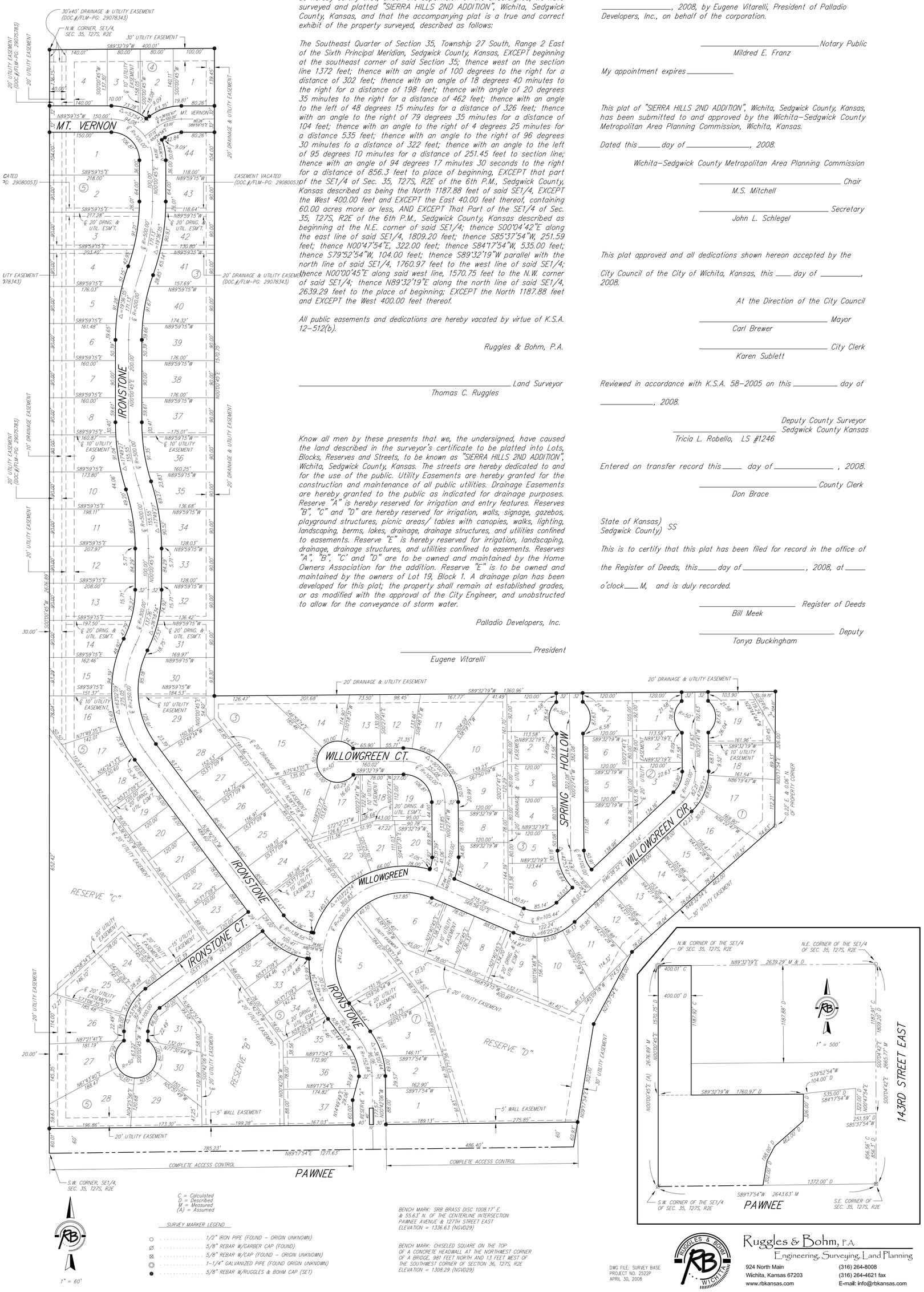
_____ County Clerk
Don Brace

State of Kansas)
Sedgwick County) SS

This is to certify that this plat has been filed for record in the office of the Register of Deeds, this ____ day of _____, 2008, at ____ o'clock ___ M, and is duly recorded.

_____ Register of Deeds
Bill Meek

_____ Deputy
Tonya Buckingham



C = Calculated
D = Described
M = Measured
(A) = Assumed

SURVEY MARKER LEGEND

- ○ ..... 1/2" IRON PIPE (FOUND - ORIGIN UNKNOWN)
- Ø ..... 5/8" REBAR W/CARBER CAP (FOUND)
- ⊠ ..... 5/8" REBAR W/CAP (FOUND - ORIGIN UNKNOWN)
- ◎ ..... 1-1/4" GALVANIZED PIPE (FOUND ORIGIN UNKNOWN)
- ● ..... 5/8" REBAR W/RUGGLES & BOHM CAP (SET)

1" = 60'

BENCH MARK: SRB BRASS DISC 1008.17' E. & 55.63' N. OF THE CENTERLINE INTERSECTION PAWNEE AVENUE & 127TH STREET EAST ELEVATION = 1336.63 (NGVD29)

BENCH MARK: CHISELED SQUARE ON THE TOP OF A CONCRETE HEADWALL AT THE NORTHWEST CORNER OF A BRIDGE, 981 FEET NORTH AND 13 FEET WEST OF THE SOUTHWEST CORNER OF SECTION 36, T27S, R2E ELEVATION = 1308.29 (NGVD29)

DWG FILE: SURVEY BASE
PROJECT NO. 2522P
APRIL 30, 2008

Ruggles & Bohm, P.A.
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