STORM WATER IMPROVEMENTS TO SERVE

SISTERS OF ST. JOSEPH 5TH ADDITION

LOT 1, BLK. A

Private Project Number: 1347 PPS (607861)

CITY OF WICHITA, KANSAS

NEIL CABLE, P.E. City Engineer

JUNE 2003

General Notes

1. Contractor will be required to provide notice to utility companies a minimum of forty-eight (48) hours prior to any excavation, as follows:

   Kansas One-Call 687-2470

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

Cox Communications	262-4270
Kansas Gas Service Company	1-883-482-4950
Westar Energy (Electric)	383-9650
Aquila Energy (Gas)	1-800-203-0357
Southwestern Bell Telephone Company	1-800-286-8313
City of Wichita Water Department	268-4908
City of Wichita Sewer Maint. (San. Sewer)	268-4624
City of Wichita Storm Sewer Maint.	268-4090
City of Wichita Traffic Maint.	268-4034

2. All disturbed R/W areas not intended for pavement or sidewalk construction shall be seeded with Kansas Premium Fescue Blend at a rate of 8 lb./1000 Sq. Ft., fertilized with a 16-20-6 ratio at a rate of 4 lb./1000 Sq. Ft., and mulched with Prairie Hay at a rate of 92 lb./1000 Sq. Ft. Mulch shall be "potted" with forks or punched into soil to reduce loss due to wind.

3. Utility service lines, poles, valve boxes, meters, et cetera 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 and shall be field verified. The contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

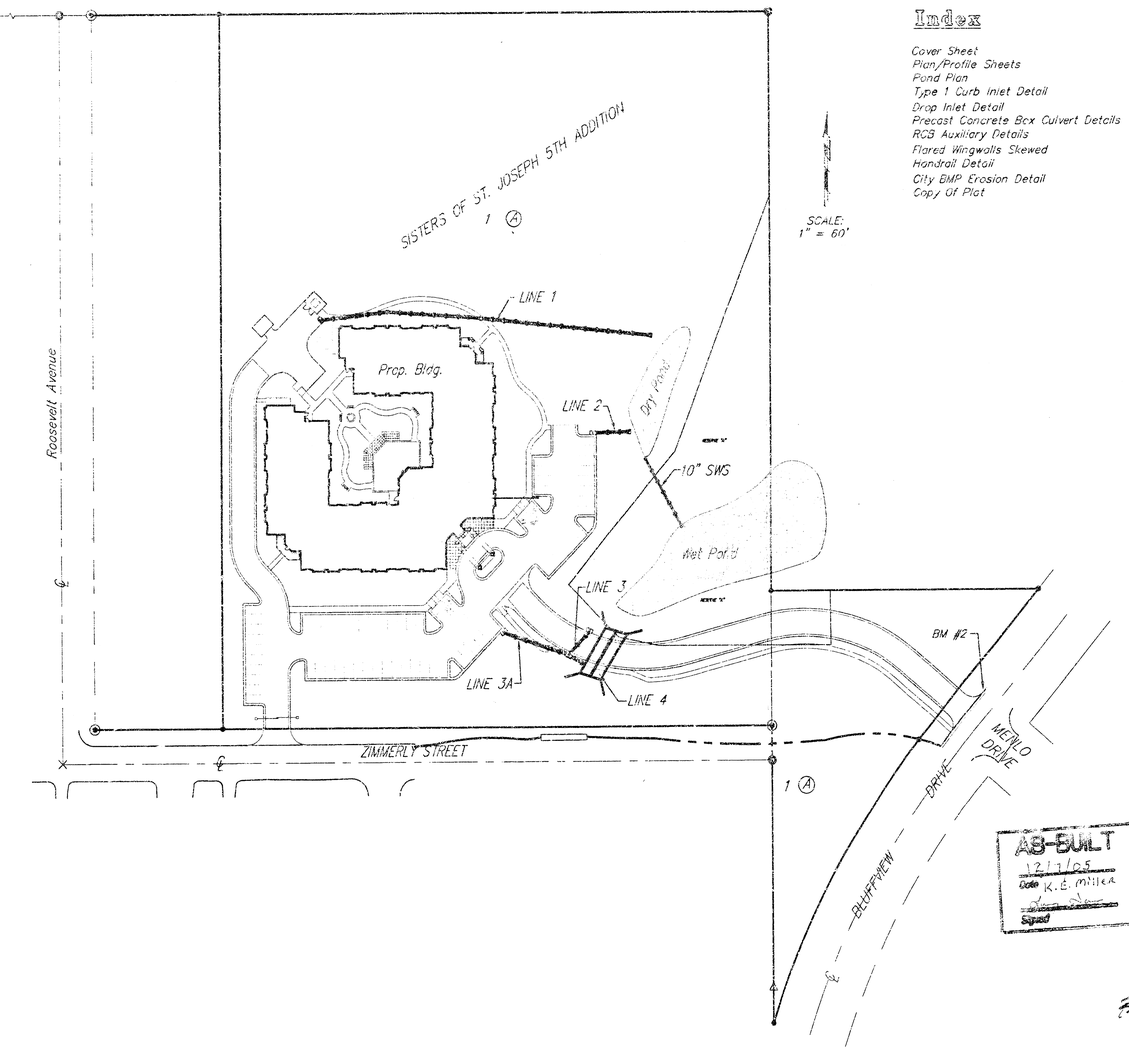
4. Contractor shall not start work on the project until the project inspector is assigned to the project and is present on the site. Contractor shall not start on the project until all necessary bonds and permits have been obtained. Any work done without inspection will be required to be uncovered for inspection.

5. Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a 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. of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archaeological investigations unless buried in a previously approved borrow location.

6. All storm sewers and appurtenances shall be installed in accordance with the most recent edition of City of Wichita, Kansas Standard Specifications for the Construction of City Projects.

7. No land clearing or grading shall begin until all applicable erosion control measures have been installed. This project is subject to this SWPP Plan. The Contractor shall comply with any unusual requirements as necessary for the site to be in compliance during construction, as per this plan and Local City specifications.

8. An NPDES Permit Application has been submitted to the State. A copy of this application and the SWPP plan can be found at the job site office for the duration of the construction process.



Index

Cover Sheet	1
Plan/Profile Sheets	2-5
Pond Plan	6
Type 1 Curb Inlet Detail	7
Drop Inlet Detail	8
Precast Concrete Box Culvert Details	9
RCB Auxiliary Details	10
Flared Wingwalls Skewed	11
Handrail Detail	12
City BMP Erosion Detail	13
Copy Of Plat	14

Bench Marks:

BM #1: (Site BM)
"D" 5 feet south of catch basin on west side of Bluffview at the intersection of Bluffview & Menlo Drive.
Elev. = 150.16 (City Datum).

BM #2:
City of Wichita benchmark disc - NW corner of intersection of N'ly and Bluffview on base of traffic signal pole. 9.50' North of north curb 42.50' North of centerline of Harry 46.50' West of centerline of Bluffview
Elev. = 152.22 (City Datum)

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

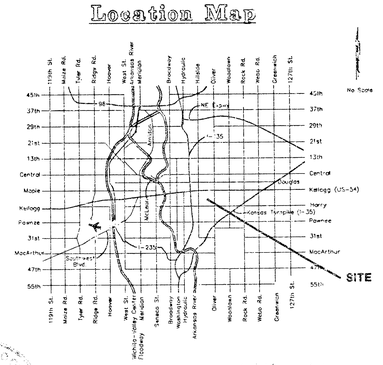
Storm Sewers VRH 7/2/03

NOTE TO CONTRACTORS

Installation, inspection and testing for this project is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. 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. All Construction and Materials shall comply with the City of Wichita Specifications and Standards (on file and available in the City Engineer's Office).

AS-BUILT
12/1/05
Date K.E. Miller
Spud

Location Map



As Built 16/alt 1 mk
(RCB only) 25 JUNE 2003

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

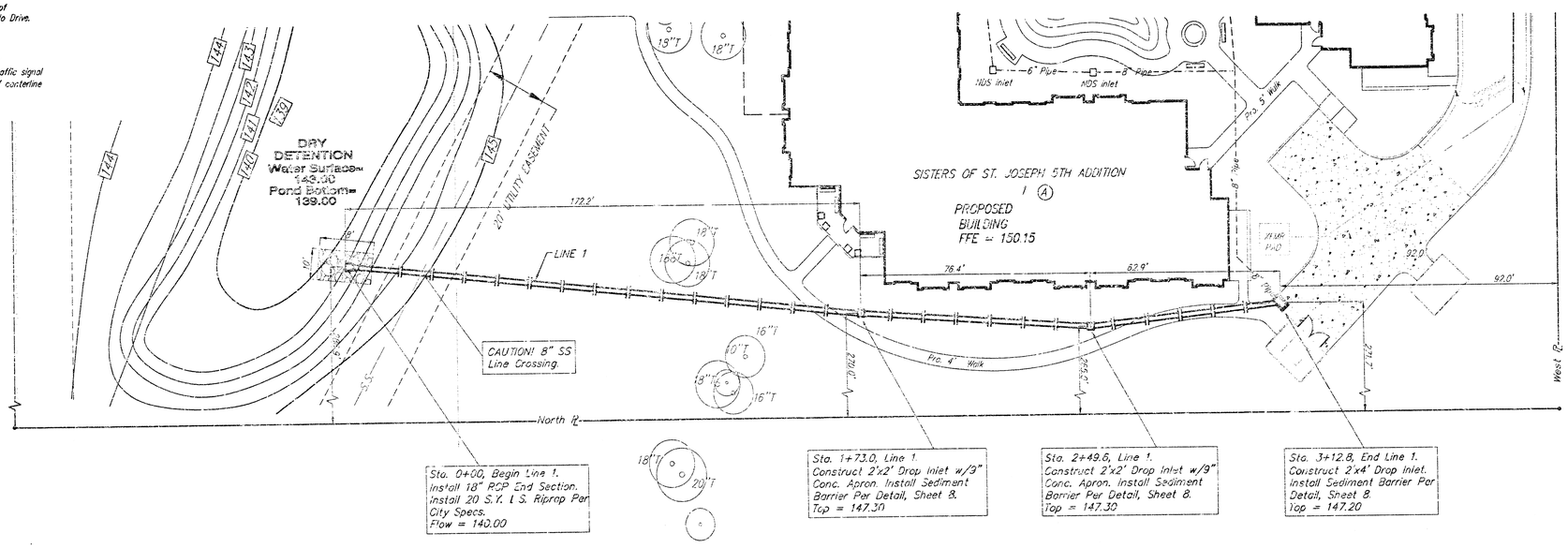
F:\ENG\Sheridan Village\SHEET01.DWG - Sh1

18 11 01 20

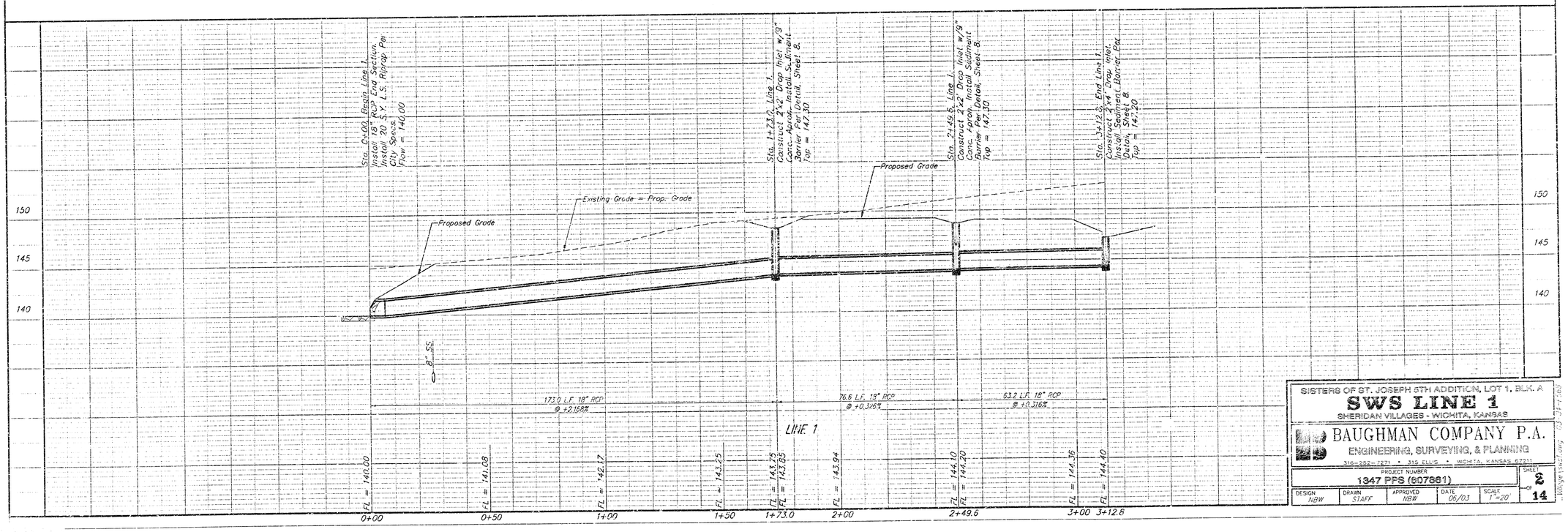
BENCHMARKS:

BM #1: (Site BM)
□* 5 feet south of catch basin on west side of Bluffview at the intersection of Bluffview & Manlo Drive.
Elev. = 150.16 (City Datum).

BM #2:
City of Wichita benchmark disc – NW corner of intersection of Harry and Bluffview on base of traffic signal pole. 9.50' North of north curb 42.50' North of centerline of Harry 16.50' West of centerline of Bluffview
Elev. = 152.22 (City Datum)



SCALE:
1" = 20' HORIZONTAL
1" = 5' VERTICAL
• = IRON



SISTERS OF ST. JOSEPH 5TH ADDITION, LOT 1, BLK. A

SWS LINE 1

SHERIDAN VILLAGES - WICHITA, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 313 ELLIS • WICHITA, KANSAS 67211

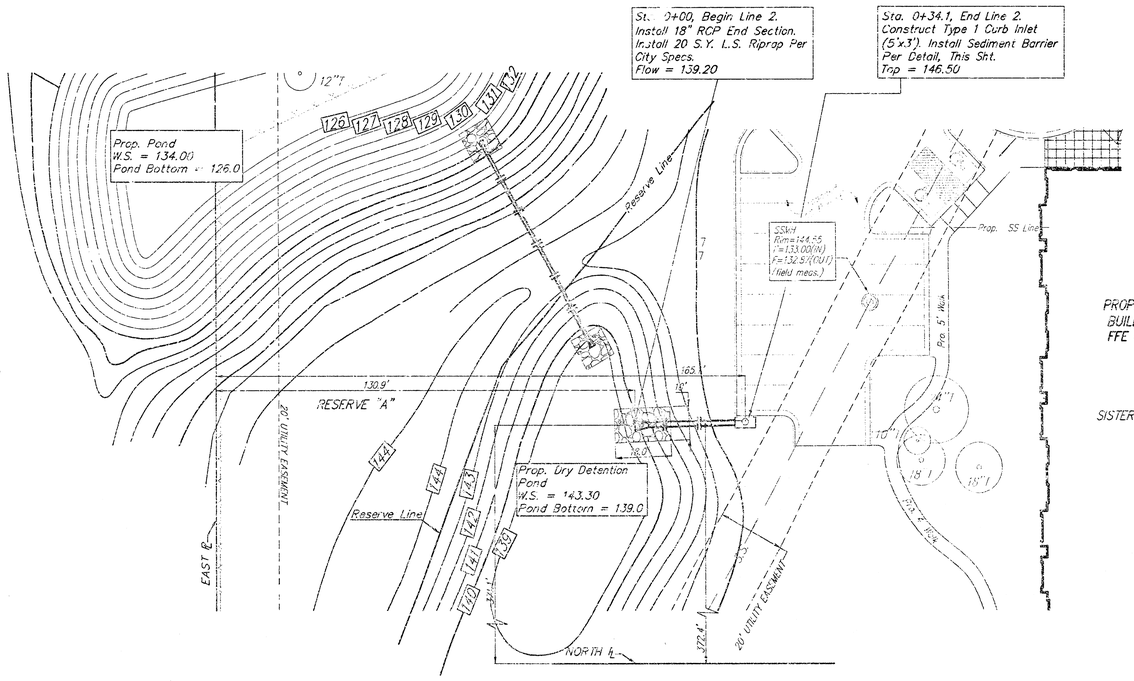
PROJECT NUMBER				SHEET
1347 PPS (607861)				2 OF 14
DESIGN	DRAWN	APPROVED	DATE	SCALE
NBW	STAFF	NBW	06/03	1"=20'

Village Creek Survey 03-34-13E3

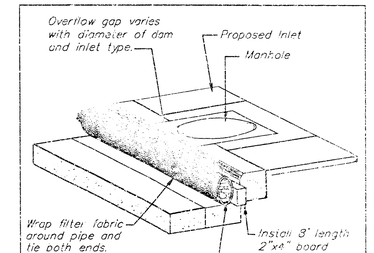
BENCHMARKS:

BM #1: (Site B+)
"D" 5 feet south of catch basin on west side of Bluffview at the intersection of Bluffview & Menlo Drive.
Elev. = 150.16 (City Datum).

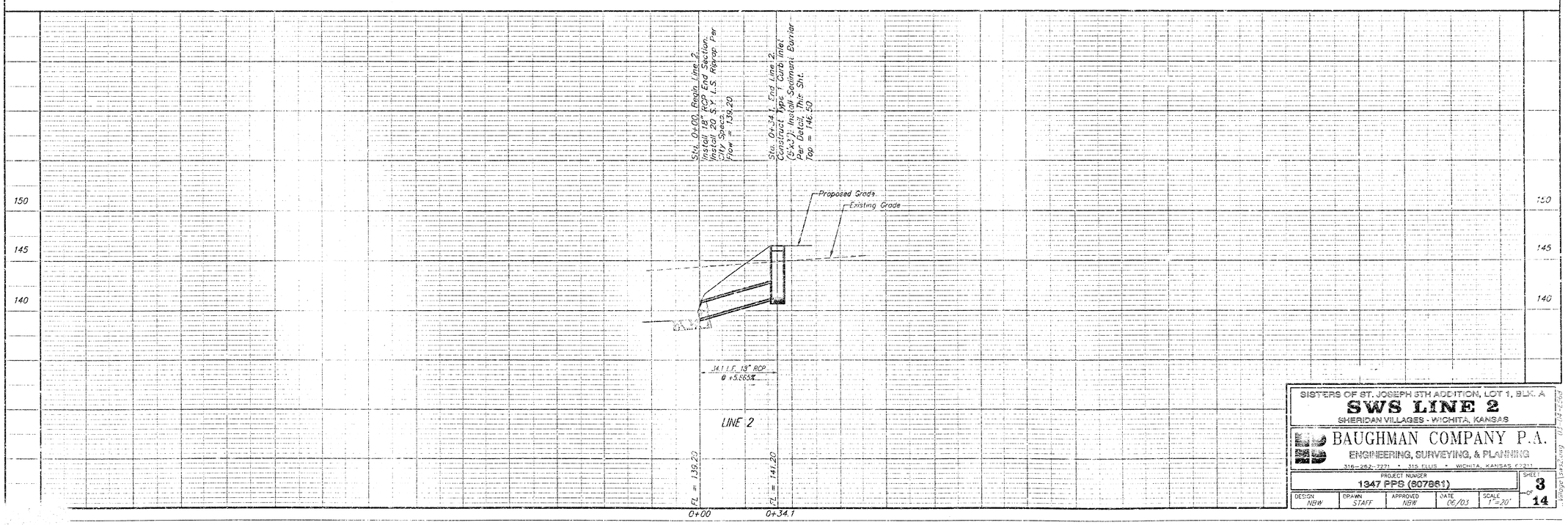
BM #2:
City of Wichita benchmark disc - NW corner of intersectionof Harry and Bluffview on base of traffic signal pole. 9.50' North of north curb 42.50' North of centerline of Harry 46.50' West of centerline of Bluffview
Elev. = 152.22 (City Datum)



SCALE:
1" = 20' HORIZONTAL
1" = 5' VERTICAL
• = IRON



INLET PROTECTION
Perforated Pipe w/ Gravel



SISTERS OF ST. JOSEPH 5TH ADDITION, LOT 1, BLK. A
SWS LINE 2
SHERIDAN VILLAGES - WICHITA, KANSAS

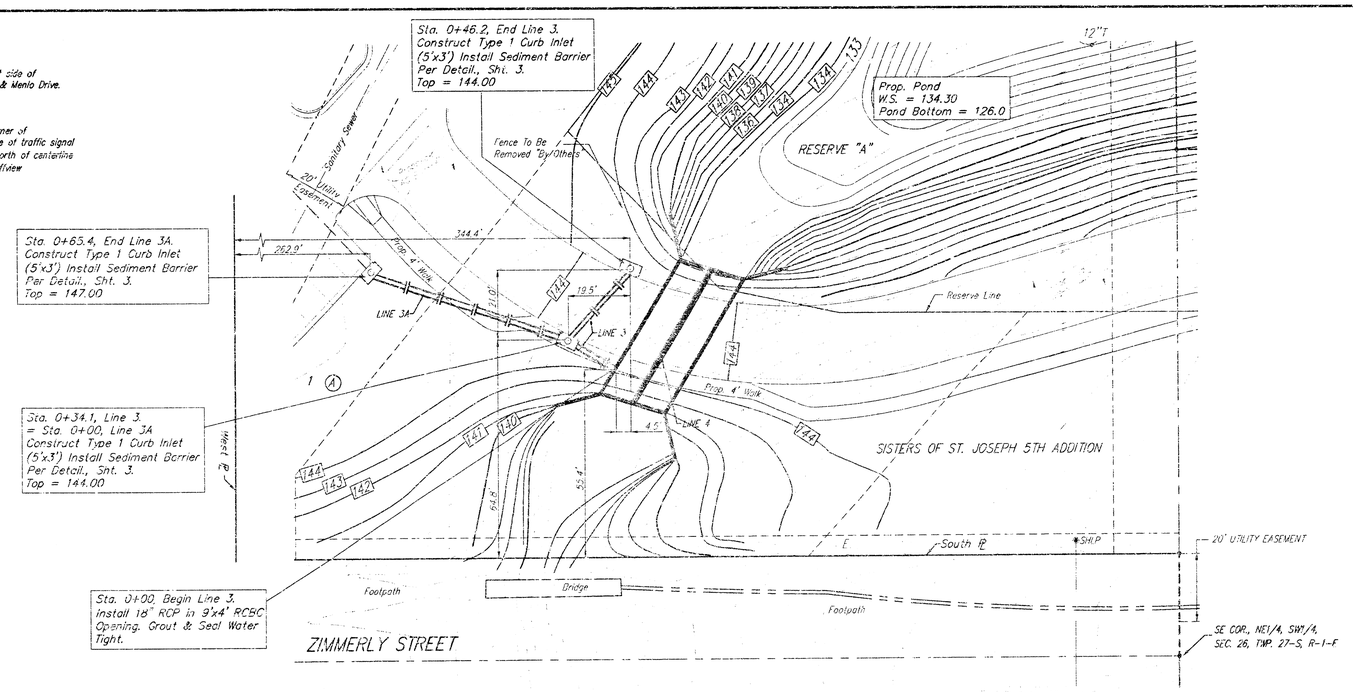
BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER				SHEET
1347 PPS (807881)				3 OF 14
DESIGN: NBW	DRAWN: STAFF	APPROVED: NBW	DATE: 06/03	SCALE: 1"=20'

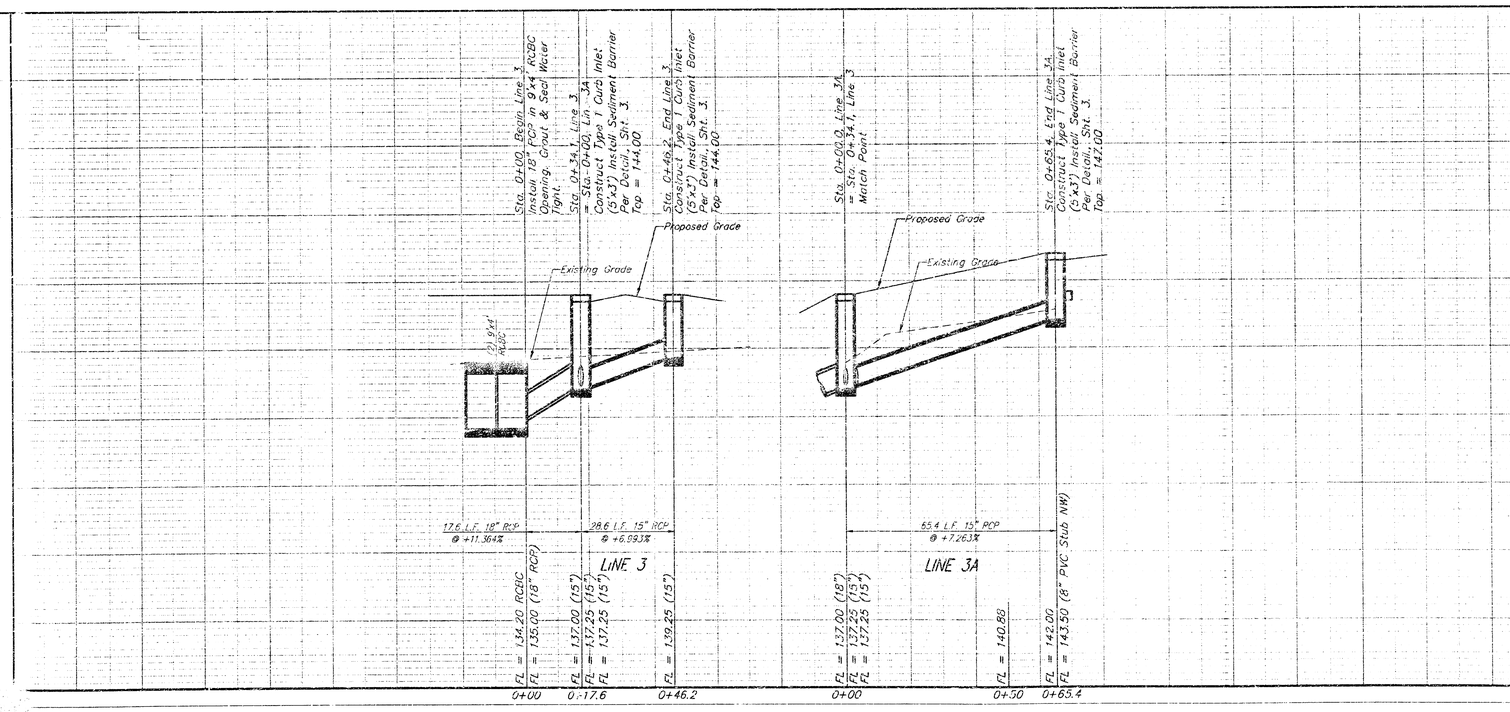
BENCHMARKS:

BM #1: (Site BM)
"□" 5 feet south of catch basin on west side of Bluffview at the intersection of Bluffview & Menlo Drive.
Elev. = 150.16 (City Datum).

BM #2:
City of Wichita benchmark disc - NW corner of intersectionof Harry and "Bluffview on base of traffic signal pole. 9.50' North of north curb 42.30' North of centerline of Harry 46.50' West of centerline of Bluffview
Elev. = 152.22 (City Datum)



SCALE:
1" = 20' HORIZONTAL
1" = 5' VERTICAL
• = IRON



SISTERS OF ST. JOSEPH 5TH ADDITION, LOT 1, BLK. A

SWS LINE 3 & 3A

SHERIDAN VILLAGES - WICHITA, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-2691 • 315 ELLIS • WICHITA, KANSAS

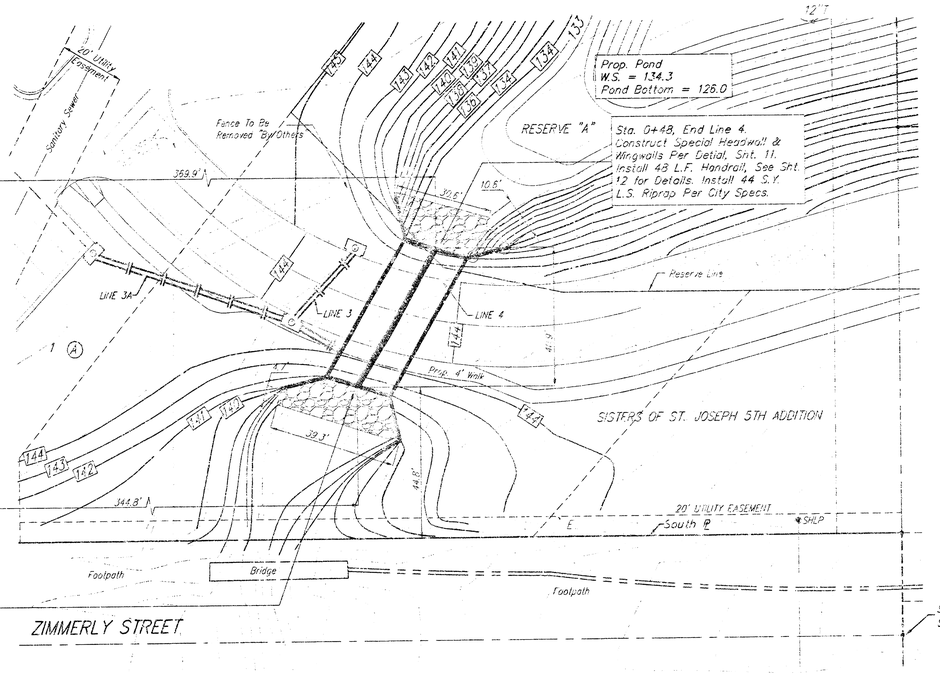
PROJECT NUMBER	SHEET
1347 PPS (607861)	4 OF 14

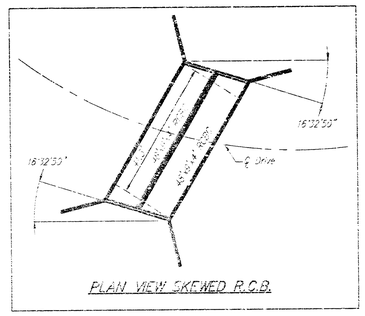
DESIGN	DRAWN	APPROVED	DATE	SCALE
NBW	STAFF	NBW	06/03	1"=20'

BENCHMARKS:

BM #1: (Site BM)
□" 5 feet south of catch basin on west side of Bluffview at the intersection of Bluffview & Menlo Drive.
Elev. = 150.16 (City Datum).

BM #2:
City of Wichita benchmark disc – NW corner of intersectionof Harry and Bluffview on base of traffic signal pole. 9.50' North of north curb 42.50' North of centerline of Harry 46.50' West of centerline of Bluffview
Elev. = 152.22 (City Datum)





PLAN VIEW SKEWED R.C.B.

SCALE:
1" = 20' HORIZONTAL
1" = 5' VERTICAL
• = IRON

RCBC NOTES:

1. Cost of Bedding & Stabilization Below RCBC shall Be Incidental to Construction of 2-9'x4' RCBC.

2. Contractor Shall Supply Engineer With Handrail Shop Drawings for Approval Prior To Construction.

3. Contractor Has Option To Substitute The Pre-Cast with a Cast-in-Place R.C. Box Culvert. Contractor To Supply Engineer with Shop Drawings of Cast-in-Place Prior To Construction.

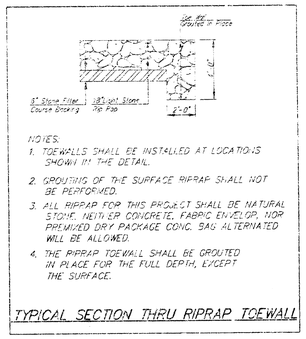
4. The Dirt Contractor Will Have Excavated a 20' Wide Bottom w/2:1 Sideslopes in the Location of The Box Prior To Construction. The RCBC Contractor is Responsible To Backfill The Box in 8" Lifts and Compact Material to 95% Std. Density. The Top of Fill Shall Be Elev. 144 City Datum. All Earth Backfill Material Will Be Supplied On-site.

5. The RCBC Contractor is Responsible to Complete All Finish Grading Around The Box.

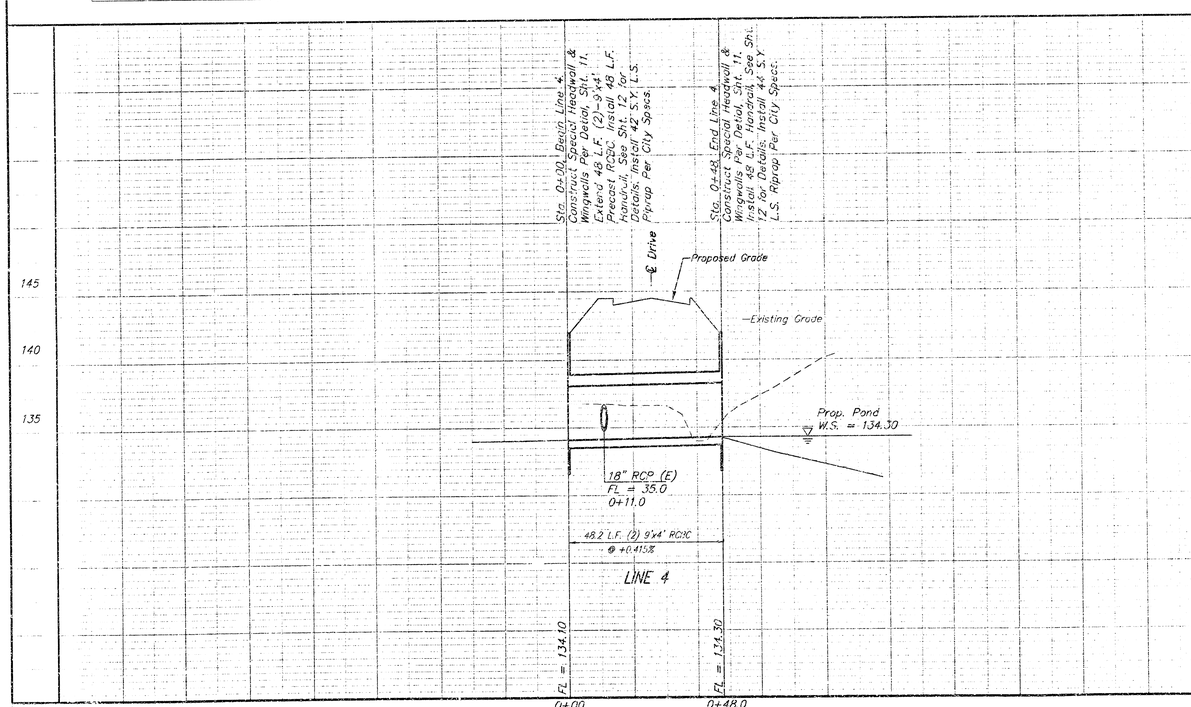
6. Contractor To Remove Only Trees As Required For Construction.

7. RCBC Shall Be Constructed on 3" Concrete Seal Course unless Pre-Cast Box Option is Chosen. The Contractor Shall Bed Pre-Cast Box on 1" Depth of 3/4" Diesse Stone





TYPICAL SECTION THRU RIPRAP TOEWALL



As Built Profile

DISTERS OF ST. JOSEPH 5TH ADDITION, LOT 1, BLK. A

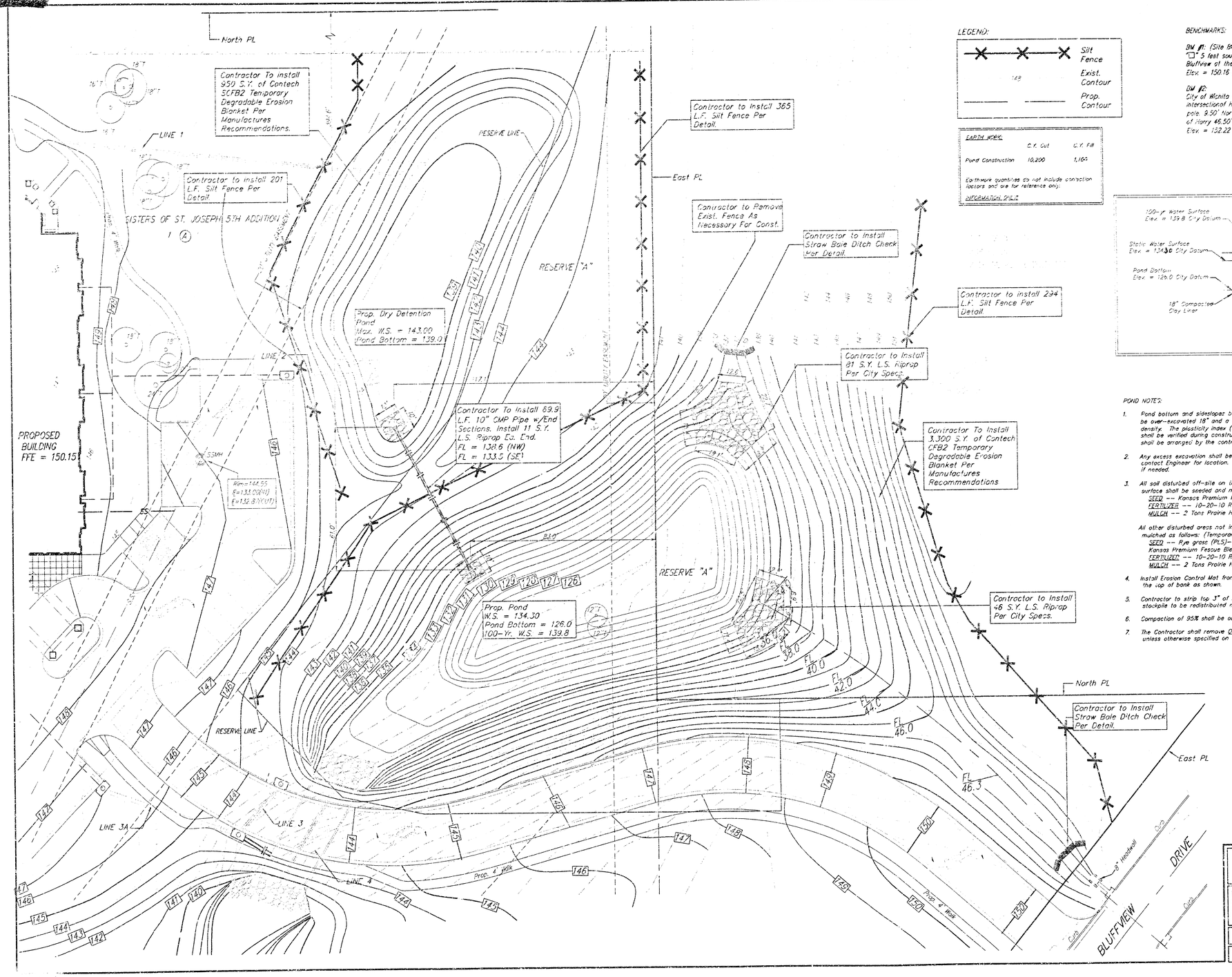
SWS LINE 4

SHERIDAN VILLAGES - WICHITA, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-72[illegible] • 345 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER	SHEET
1347 PPS (807381)	5 OF 14

DESIGN	DRAWN	APPROVED	DATE	SCALE
NBW	STAFF	NBW	6/03	1"=20'



LEGEND:

Silt Fence
Exist. Contour
Prop. Contour

EARTH WORK:

	C.Y. Cut	C.Y. Fill
Pond Construction	10,200	1,100

Earthwork quantities do not include correction factors and are for reference only.

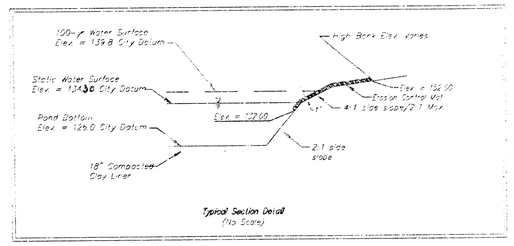
INFORMATION ONLY

BENCHMARKS:

BM #1: (Site BM)
"□" 5 feet south of catch basin on west side of Bluffview at the intersection of Bluffview & Menlo Drive.
Elev. = 150.16 (City Datum).

BM #2:
City of Wichita benchmark disc - NW corner of intersectionof Harry and Bluffview on base of traffic signal pole. 9.50' North of north curb 42.50' North of centerline of Harry 46.50' West of centerline of Bluffview
Elev. = 152.22 (City Datum)

SCALE:
1" = 20'
• = IRON



Typical Section Detail
(No Scale)

POND NOTES:

1. Pond bottom and sideslopes below static pool elevation shall be over-excavated 18" and a 18" clay liner shall be compacted to 95% std density. The plasticity index (P.I.) shall be at least 30. The compaction and P.I. shall be verified during construction. P.I. determination and compaction testing shall be arranged by the contractor at the request of the inspector/owner.
2. Any excess excavation shall be stored on-site out of easements and R/W, contact Engineer for location. Additional area will be staked out if needed.
3. All soil disturbed off-site on the north/east bank of the pond above the static water surface shall be seeded and mulched as follows: (Permanent Seeding)
   SEED -- Kansas Premium Fescue Blend; 8#/1000 Sq. Ft.
   FERTILIZER -- 10-20-10 Ratio or 12-24-12 Ratio at 350 Lbs./Ac.
   MULCH -- 2 Tons Prairie Hay / Acre

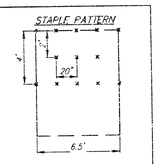
   All other disturbed areas not in street R/W are to be seeded and mulched as follows: (Temporary seeding)
   SEED -- Rye grass (PLS)--3#/1000 Sq. Ft. and
   Kansas Premium Fescue Blend; 3#/1000 Sq. Ft.
   FERTILIZER -- 10-20-10 Ratio or 12-24-12 Ratio at 350 Lbs./Ac.
   MULCH -- 2 Tons Prairie Hay / Acre
4. Install Erosion Control Mat from 2 Feet below the static water surface to the top of bank as shown.
5. Contractor to strip top 3" of soil before mass grading and stockpile. Top soil stockpile to be redistributed over entire disturbed area.
6. Compaction of 95% shall be obtained in all fill areas.
7. The Contractor shall remove ONLY trees in direct conflict with construction, unless otherwise specified on the plans.

STAPLE PATTERN "D"

3-1/2 staples per sq. yd using 6-inch, 11 ga. wire "U" staples. 8-inch staples and longer may be used for loose soils. 9 ga. staples or heavier may be necessary in hard or rocky soils.

Contractor shall follow manufacturers installation instructions regarding overlap dimensions. The overlap shall have a minimum dimension of three inches (3").

Erosion control Blanket.



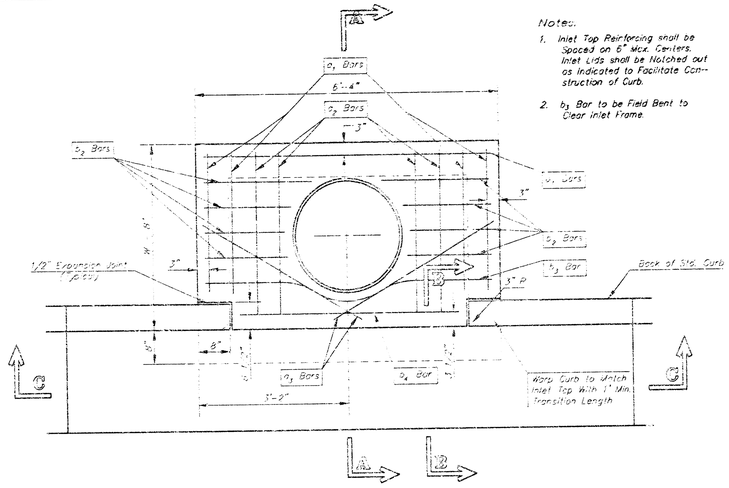
SISTERS OF ST. JOSEPH 5TH ADDITION, LOT 1, BLK. A

POND PLAN

SHERIDAN VILLAGES - WICHITA, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

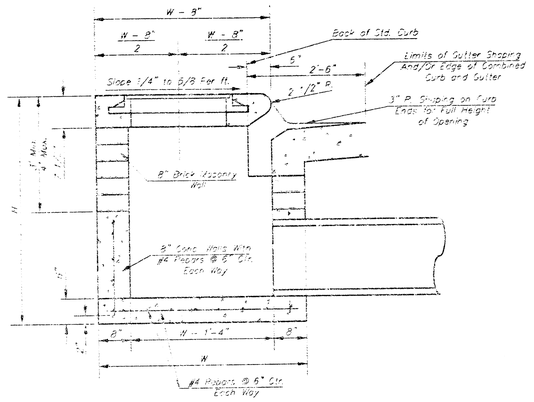
PROJECT NUMBER					SHEET
1347 PPS (607661)					6 of 14
DESIGN NBW	DRAWN STAFF	APPROVED NBW	DATE 06/03	SCALE 1" = 20'	



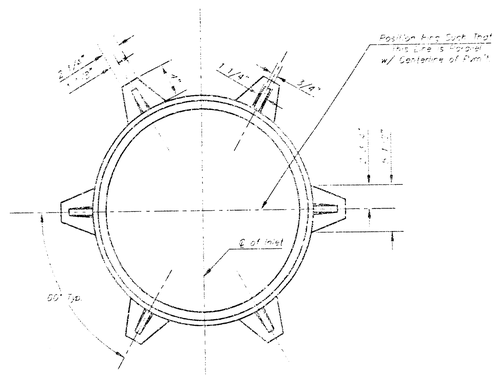
PLAN

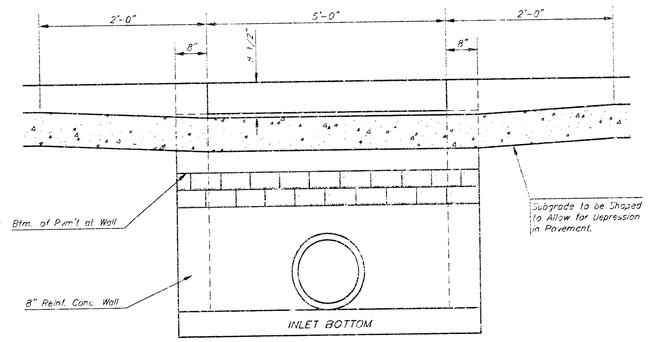
Notes:

1. Inlet Top Reinforcing shall be Spaced on 6" Max. Centers. Inlet Lids shall be Notched out as Indicated to Facilitate Construction of Curb.
2. b_3 Bar to be Field Bent to Clear Inlet Frame.

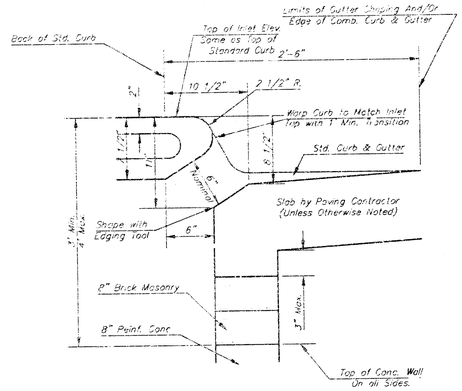


SECTION A--A

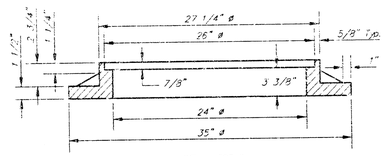




SECTION C-C



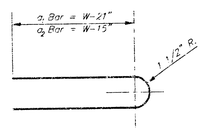
SECTION B-B



WT. = 325 lbs.

MANHOLE RING AND COVER

*See City of Wichita Standard Manhole Ring and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.



BENDING DIAGRAM

STEEL SCHEDULE

BAR		a_1	a_2	a_3	b_1 W=4'-4"	b_1 W=5'-4"	b_1 W=6'-4"	b_1 W=7'-4"	b_1 W=8'-4"	b_2	b_3	b_4	Wt. Lbs.
NUMBER		4	4	2	1	3	5	7	9	6	1	1	
SIZE		#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#6	
LENGTH	W=4'-4"	5'-7"	6'-7"	4'-0"	6'-1"	-	-	-	-	1'-9"	6'-2"	4'-8"	60±
	W=5'-4"	7'-7"	8'-7"	5'-0"	-	6'-1"	-	-	-	1'-9"	6'-2"	4'-8"	81±
	W=6'-4"	9'-7"	10'-7"	6'-0"	-	-	6'-1"	-	-	1'-9"	6'-2"	4'-8"	101±
	W=7'-4"	11'-7"	12'-7"	7'-0"	-	-	-	6'-1"	-	1'-9"	6'-2"	4'-8"	121±
	W=8'-4"	13'-7"	14'-7"	8'-0"	-	-	-	-	6'-1"	1'-9"	6'-2"	4'-8"	141±

Note: a_3 Bars to be Placed Approx. 2" Below Top of Inlet Cover.

STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4'-4"	3'-8" 6'-4" T 1/2"	21" & SMALLER	0.32±
5'-4"	4'-8" 6'-4" T 1/2"	24" & 30"	0.51±
6'-4"	5'-8" 6'-4" T 1/2"	36" & 42"	0.64±
7'-4"	6'-8" 6'-4" T 1/2"	48" & 54"	0.77±
8'-4"	7'-8" 6'-4" T 1/2"	60" & 66"	0.90±

GENERAL NOTES

1. Concrete tops to be installed on thin mortar cushion to insure full support along brick walls. Concrete tops may be cast in place or precast. Concrete used for inlet construction shall be concrete pavement mix.
2. Contractor shall have the option of constructing 8" brick masonry walls between the concrete inlet base and top on this inlet when W=6'-4" and H=7'-0" or less.
3. Inlet invert shall be shaped with 8 sack sand mix concrete to create flow channels and to increase hydraulic efficiency such that the inlet will be self cleaning between all inlet and/or outlet pipes.
4. The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall.

Revised - Dec. 21, 198

CITY OF WICHITA, KANSAS

TYPE 1 CURB INLET

INLET OPENING = 8'X5'-0"

BAUGHMAN COMPANY P.A.

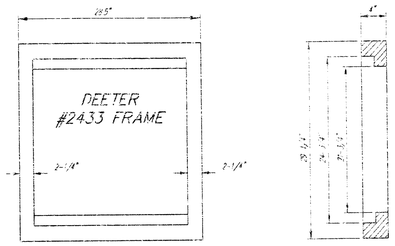
ENGINEERING, SURVEYING, & PLANNING

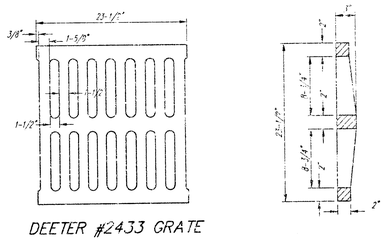
316-262-7221 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER	SHEET
1347 PPS (607881)	7 of 14

DESIGN	DRAWN	APPROVED	DATE	SCALE
C.O.W.	STAFF			NONE

DETAILS/TYP1

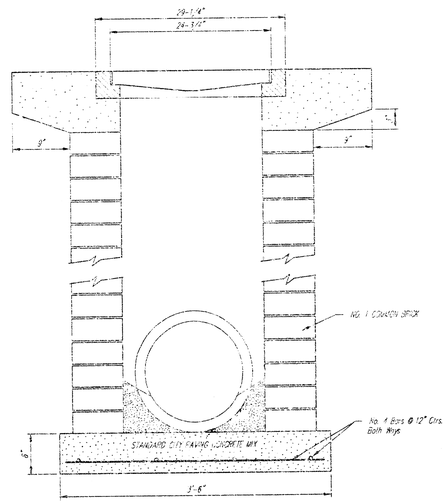


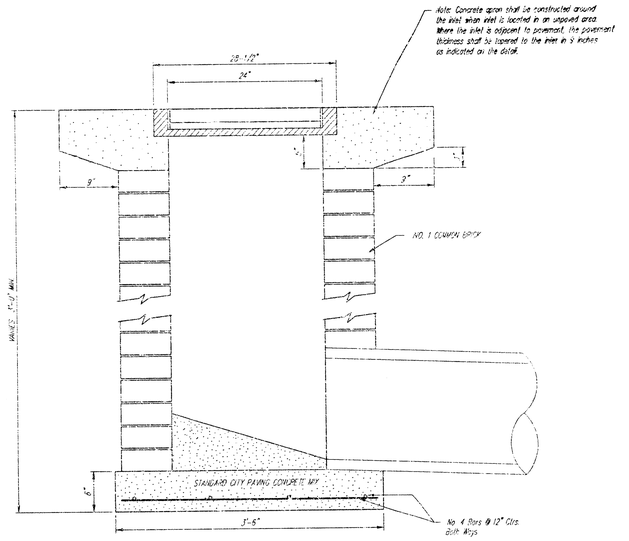


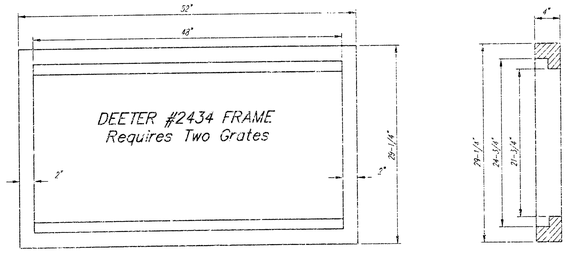
DEETER #2433 GRATE

NOTE: Grates shall be imprinted on the top surface with "CITY OF WICHITA" using letters at least 1" in height. Other marking methods may be approved by the engineer.

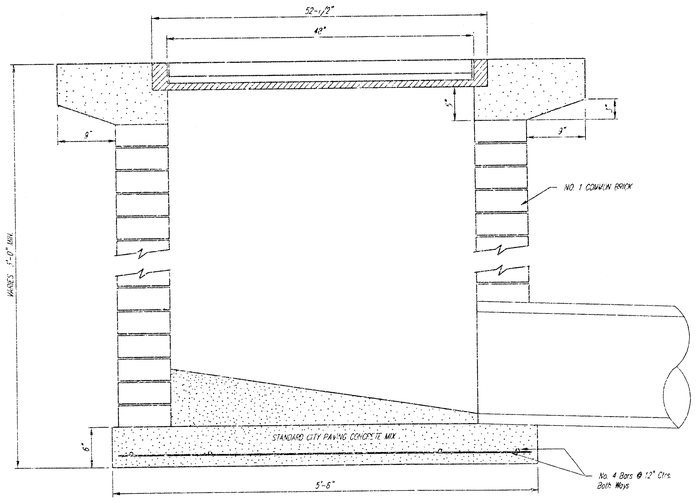
24" x 24" Frame and Grate Detail







Double 24" x 24" Frame Detail



City of Wichita Standard

Drop Inlet

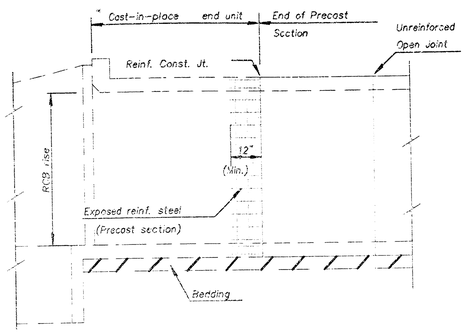
BAUGHMAN COMPANY P.A.

ENGINEERING, SURVEYING, & PLANNING

316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

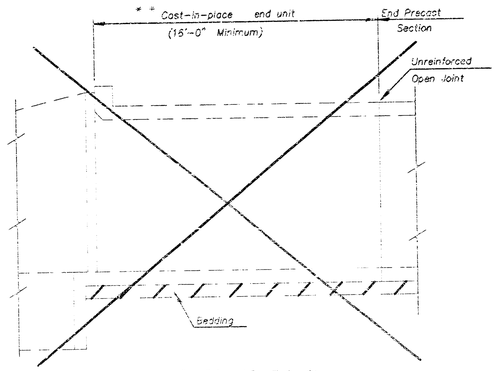
PROJECT NUMBER					SHEET
1347 PPS (607861)					8 OF 14
DESIGN C.O.W.	DRAWN Staff	APPROVED	DATE 4/02/03	SCALE NONE	

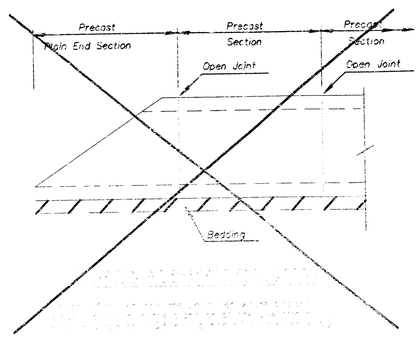
Drop in 1.2



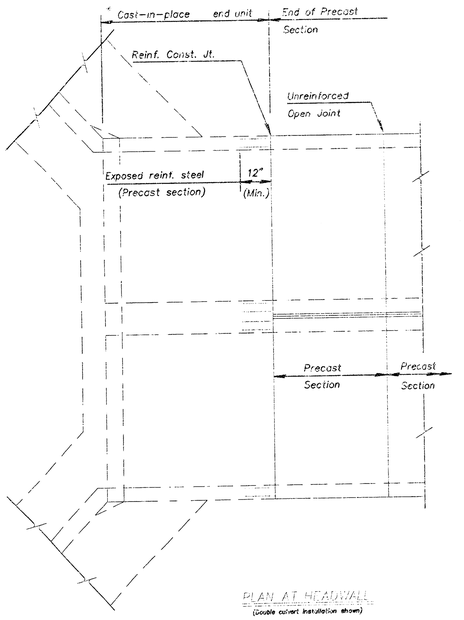
ELEVATION AT HEADWALL

* Minimum length of cast-in-place end unit is the RCB rise or 8'-0", whichever is less. This length can be used when the height between the bottom of the end unit and the bottom slab section is less than the RCB rise.

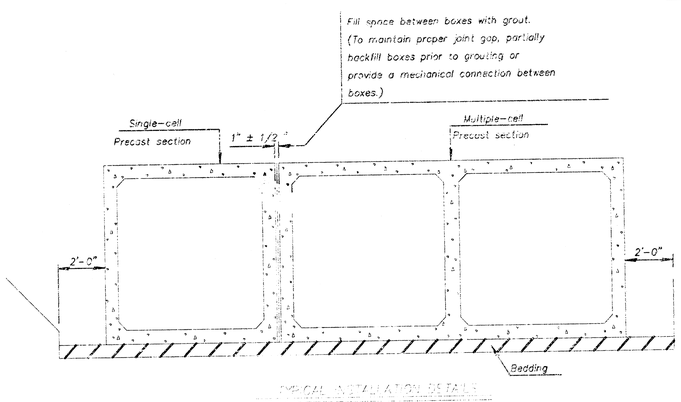




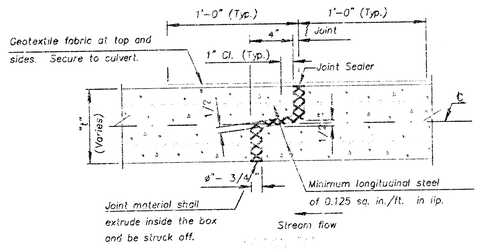
NOTE: Minimum length of precast section shall be 4'-0".

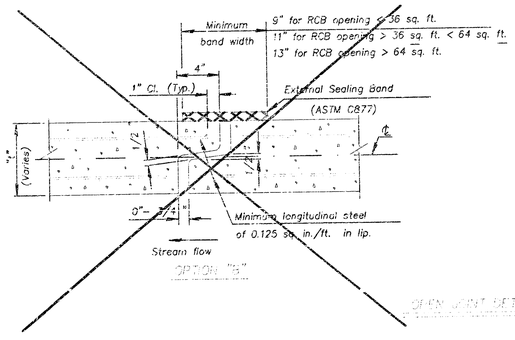


PLAN AT HEADWALL
(Double culvert installation shown)



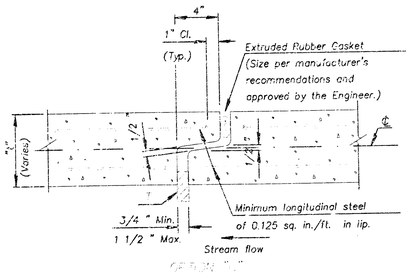
TYPICAL INSTALLATION DETAILS





OPTION "B"

OPEN JOINT DETAIL



OPTION "C"

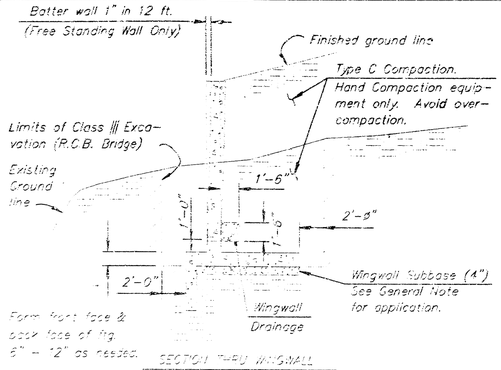
* Insert temporary, 3/4 "-1" wide, hardwood wedges to prevent over-compressing gasket.

NO	DATE	REVISIONS	BY	APP'D
4	11-07-07	ADDED NOTE TO PLAN VIEW AT HEADWALL	DMS	DJS
3	10-31-06	ADDED NOTE TO PLAN VIEW AT HEADWALL	DMS	DJS
2	11-01-05	REVISED SHEET TITLE	DMS	DJS
1	10-31-05	ADDED OPTION "C"	DMS	DJS

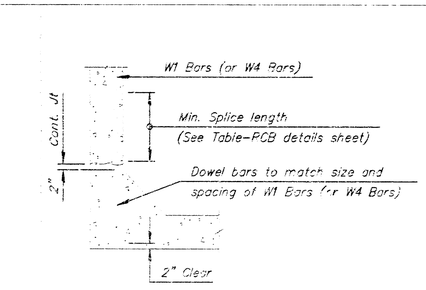
KANSAS DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE END SECTIONS FOR RCB CULVERTS

FHWA APPROVAL		APP'D	DATE
RECOMMEND	DETAILED	QUANTITIES	DATE
DESIGN CK	DETAIL CK	QUAN. CK	DATE CK

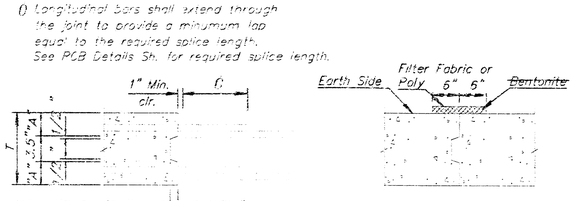


SECTION THRU WINGWALL



OPTIONAL BAR DETAIL

The Contractor shall have the option of using Dowel Bars to match vertical wall bars as shown, however no allowance will be made for additional steel required for such bars



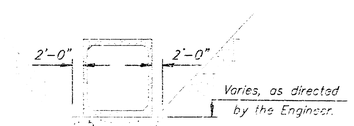
() Longitudinal bars shall extend through the joint to provide a minimum lap equal to the required splice length. See PCB Details Sh. for required splice length.

VERTICAL CONSTRUCTION JOINTS

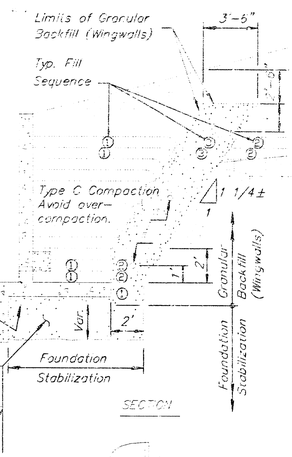
NOTE: Vertical construction joints shall be perpendicular to the longitudinal axis of the PCB and shall be placed at any location as needed for construction and as approved by the Engineer.

NOTE: Horizontal construction joints shall be a roughened finish.

NOTE: Barrel construction joints located in a median with less than 5 ft. of fill or at locations specified by the Engineer, shall be protected by a bentonite based system as shown. Place the bentonite on the exterior walls and top slab. See requirements for bentonite in the KDOT Specifications for "Bridge Backwall Protection Systems". Material and installation of the bentonite system shall be subsidiary to the bid item "Class AAA Concrete".



SECTION

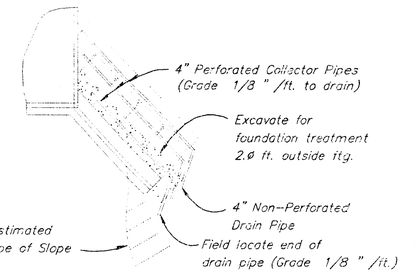


+ Omit Drain Pipe when distance is less than 2'-6".

++ 4" Perforated Pipe (Install ea. 4' in Elev.)

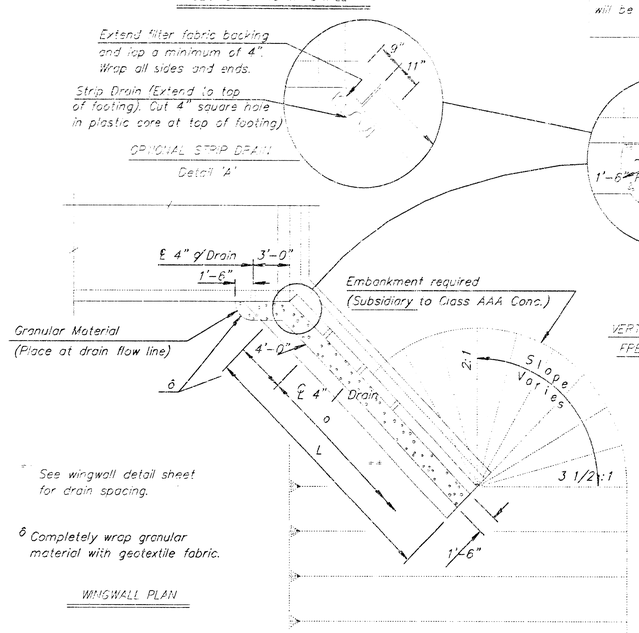
+++ NOTE: As an alternative, all backfill for the wall (within 2'-6" of finish grade) may be granular backfill material. ~~However, in~~ ~~no event shall be to the same limits as listed in the General Notes.~~

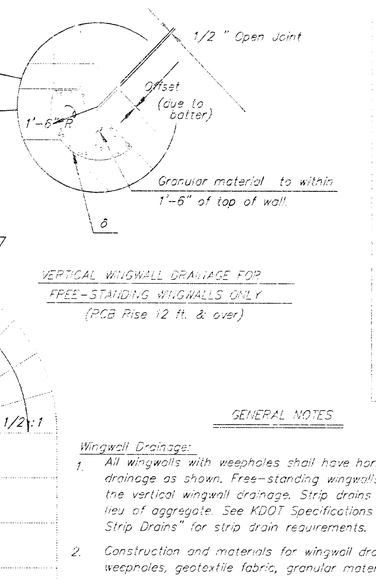
SECTION



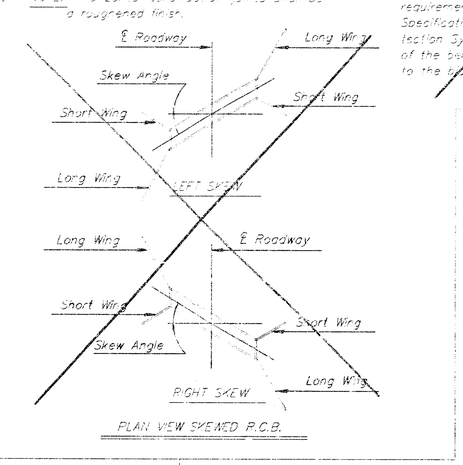
PLAN

GRANULAR BACKFILL AND FOUNDATION STABILIZATION

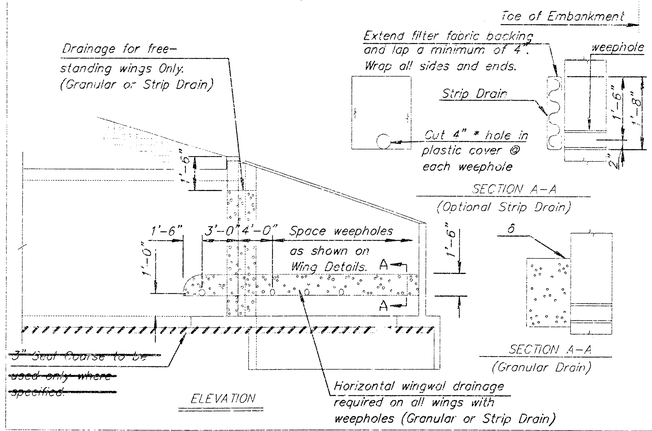




VERTICAL WINGWALL DRAINAGE FOR FREE-STANDING WINGWALLS ONLY (PCB Rise 12 ft. & over)



PLAN VIEW SKEWED P.C.B.



GENERAL NOTES

Wingwall Drainage:

1. All wingwalls with weepholes shall have horizontal wingwall drainage as shown. Free-standing wingwalls shall also have the vertical wingwall drainage. Strip drains may be used in lieu of aggregate. See KDOT Specifications for "Abutment Strip Drains" for strip drain requirements.
2. Construction and materials for wingwall drainage, including weepholes, geotextile fabric, granular material, and strip drain shall be subsidiary to the bid item, "3-10'x5' RCBC". Granular material for wingwall drainage shall conform to the requirements of UD-1. Weepholes may be a formed opening or corrugated polyethylene tubing.

Wingwall Subbase:

1. Wingwall subbase shall be constructed at all wingwall footings to assure the assumed coefficient of friction between the concrete footing and the foundation, with the following exceptions;

a) Wingwall subbase will not be required for footings on RCB's 6 feet or less in height unless otherwise determined by the Engineer.
b) The subbase will also not be required for footings founded on rock or clean, granular material as determined by the Engineer.

2. Subbase shall consist of 4" compacted granular material consisting of commercial grade clean sand or UD-1 material. All excavation, material and labor necessary to construct the wingwall subbase shall be subsidiary to "3-10'x5' RCBC".

~~Seal Course:~~

~~1. Seal Course consisting of 3" min. of Commercial Grade Concrete shall be constructed to the limits directed by the Engineer. No reinforcing in the floor of the slab or wall footing shall be placed until the Seal Course has gained sufficient strength to permit working upon it without injury.~~

GENERAL NOTES

Foundation Stabilization:

1. At sites where the wingwall footing or culvert floor is located within the limits of an existing streambed or is founded on unsuitable material, the Engineer will determine the depth of Foundation Stabilization.
2. Foundation Stabilization may be required under the box and/or wingwalls as directed by the Engineer. The granular material placed for foundation stabilization shall be paid subsidiary to L.S. Bid Item 3-10'x5' RCBC. Material for Foundation Stabilization shall be suitable backfill material as approved by the Engineer. The excavation for the placement of granular material shall be subsidiary to the bid item, "3-10'x5' RCBC".

Granular Backfill (Wingwalls):

1. In locations where the material behind the wingwall consist of soils judged as high plasticity clays, fat clays, expansive clays or organic clays, Granular Backfill (Wingwalls) shall be used. Granular Backfill construction may be used separately or combined with Foundation Stabilization as directed by the Engineer.

~~2. Measurement for the bid item, "Granular Backfill (Wingwalls)", shall be measured in Cubic Yards to the theoretical limits as shown. Drainage pipe, rodent screens, and excavation shall be subsidiary to the bid item, "Granular Backfill (Wingwalls)"~~

3. Material for Granular Backfill (Wingwalls) shall conform to the requirements of UD-1 or BD-1. Drainage Pipe shall be corrugated polyethylene tubing conforming to KDOT Specifications.

7	KANSAS			1001	15	14

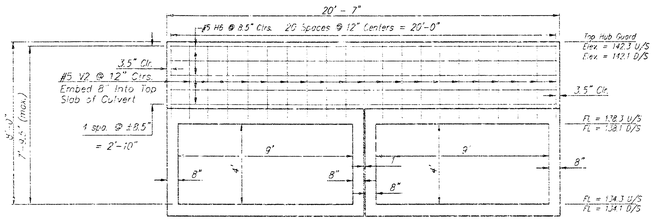
3	3-28-97	Wrap granular drains	RAM	KFH
2	9-20-96	Strip drain & bentonite at joint	RAM	KFH
1	10-2-91	Change drainage details	RAM	KFH
NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

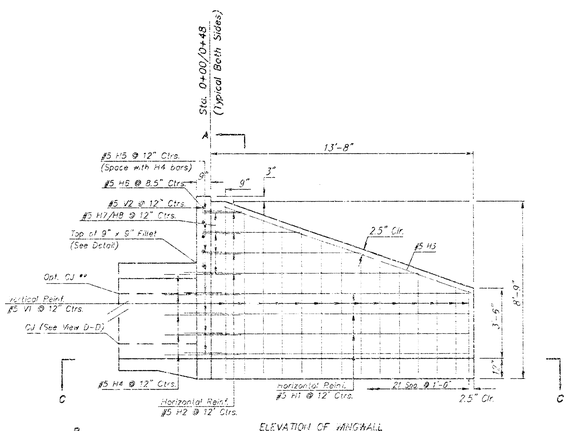
RCB
AUXILIARY DETAILS

~~BR020~~

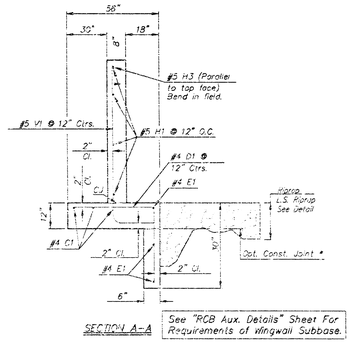
FHWA APPROVAL		3-31-97 APP'D		KENNETH F. HURST	
DESIGNED	RAM	DETAILED	RDR	QUANTITIES	TRACED
SECTION CK	RRR	DETAIL CK	RRR	PLAN CK	TRACE CK



ELEVATION OF HEADWALL
(Backface Shown)



ELEVATION OF WINGWALL
(Backface Shown)



SECTION A-A

See "RCB Aux. Details" Sheet For Requirements of Wingwall Subbase.

GENERAL NOTES

UNIT STRESSES: Class AAA Concrete: f'c = 4000 p.s.i.
Reinforcing Steel. fy = 60,000 p.s.i.

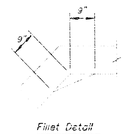
CONCRETE: Class AAA Concrete shall be used throughout. Bevel all exposed edges with a 3/4 inch triangular molding.

REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. Welded Wire Fabric shall conform to ASTM A185. All dimension relative to reinforcing steel shall be to centerline of bar unless otherwise noted.

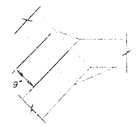
QUANTITIES: Wingwall Quantities include all quantities outside the neat lines of the box, including the hubguard.

FOUNDATION AND BACK FILL MATERIAL: Soils judged as high plasticity clays, fat clays, expansive clays, or organic clays are unsuitable for foundation and/or back fill material for wingwalls and will not be used. Where these conditions exist, Foundation Stabilization and/or Granular Back fill (Wingwalls) shall be used as determined by the Engineer. See "RCB Auxiliary Details" sheet for additional details.

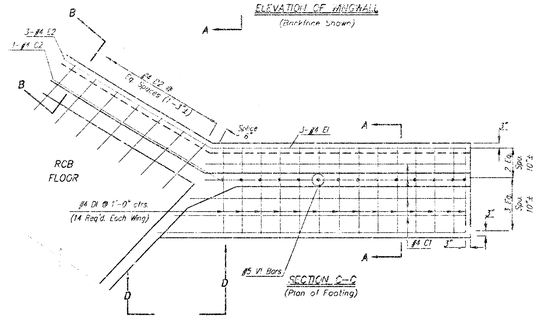
NOTE:
EF = Each Face
NS = Near Side
FS = Far Side
CJ = Const. Joint

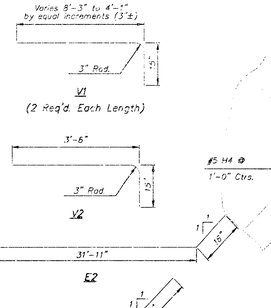


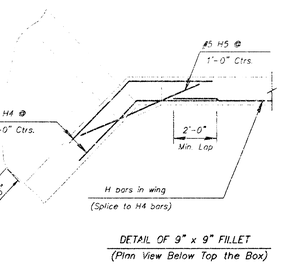
Fillet Detail



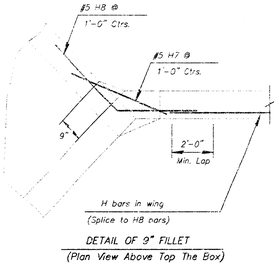
Fillet Detail





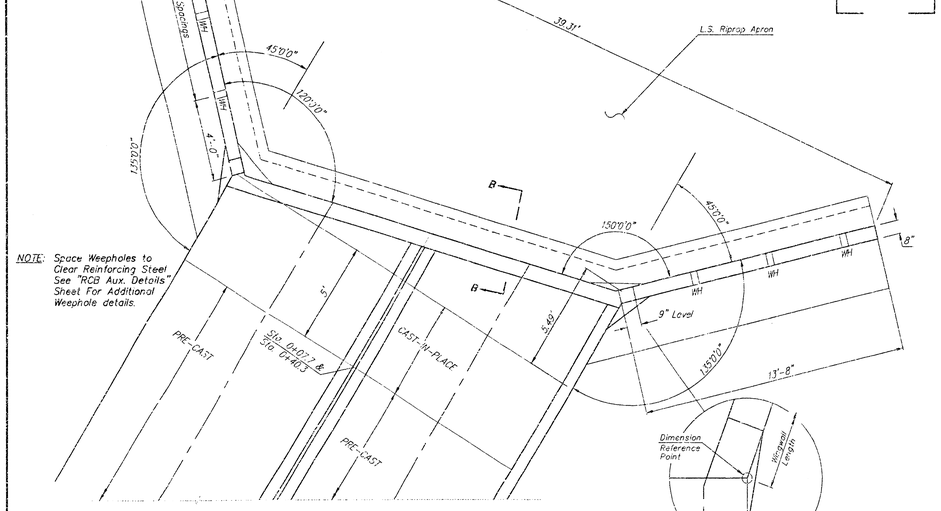


DETAIL OF 9" x 9" FILLET
(Plan View Below Top the Box)



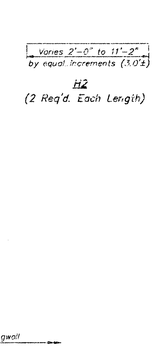
DETAIL OF 9" FILLET
(Plan View Above Top The Box)

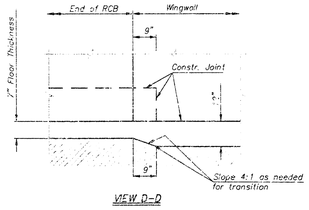
* NOTE: Const. Jt. may be used at Contractor's option when approved by the Engineer. #4 bars or mesh may be spliced thus: Minimum overlap shall be 15". No increase in quantities to cost shall be allowed when Contractor elects this option.



WING DIMENSIONS FOR SKEW BOX
(3 1/2:1 Embankment Slope)

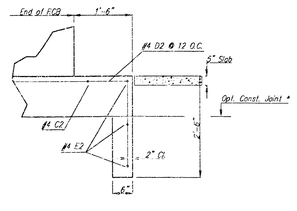
NOTE: Space Weepholes to Clear Reinforcing Steel See "RCB Aux. Details" Sheet For Additional Weephole details.





VIEW D-D

BENDING DIAGRAM
(All dimensions are out to out of bars.)



SECTION B-B

NOTE: Reinforcing Bar List is for both wings at one end of box only. *** See Bending Diagram

	#4 C1	#4 D1	#4 E1	#4 C2	#4 D2	#4 E2	#5 V1	#5 V2	#5 H1	#5 H2	#5 H3	#5 H4	#7 H5	#5 H6	#5 H7	#5 H8
No.	8	28 ***	6	1	16 ***	3 ***	26 ***	21	8	12 ***	2	20 ***	10	10	8	8 ***
Length	13'-10"	5'-8"	13'-3"	20'-2"	5'-2"	22'-8"	***	4'-3"	13'-10"	***	13'-7"	5'-0"	2'-9"	20'-0"	2'-8"	5'-0"

1. All Exposed Concrete Edges Shall be Beveled 3/4".
2. All Reinforcing Steel to have Minimum 1-1/2" Concrete Cover.

WINGWALL HEADWALL QUANTITIES (One End Only) For Information Only	
Class AAA Concrete:	
Wingwalls — — —	13.2 cu. yards
Apron — — —	--- cu. yards
Reinforcing Steel	976 lbs.
Welded Wire Fabric	--- lbs.

SISTERS OF ST. JOSEPH 5TH ADDITION, LOT 1, BLK. A

FLARED WINGWALLS SKEWED

SHERIDAN VILLAGES - WICHITA, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER	SHEET
1347 PPS (607861)	11 of 14

DESIGN	DRAWN	APPROVED	DATE	SCALE
SCL	SCL	NBW	07/13/01	NOTED

W:\pps\1347.dwg\11-14 sheet

GENERAL NOTES

The posts shall be hollow structural tubing. All structural steel and tubing shall comply to A.S.T.M. Designation A36 or A500 Grade B respectively.

Rail shall be fabricated in lengths as shown.

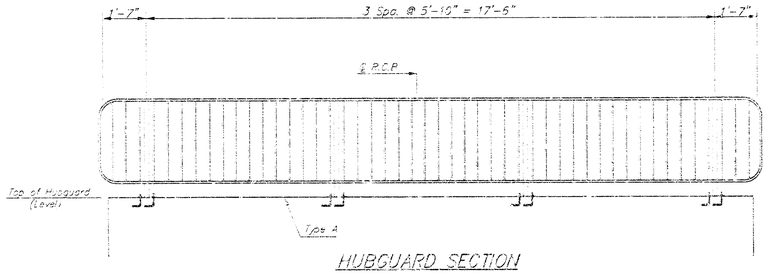
Posts and bars shall be set vertical and shimmed if required.

The paint system shall be provided by Carboline: 350 Hanley Industrial Ct., St. Louis, MO. The application will be in accordance with the manufacturers recommendations. The paint procedure is as follows:

1. Abrasive blast to commercial finish SSPC-SP6 to obtain a surface profile of 1-1/2 mills.
2. Apply 2 coats of Carboline SP 818 Primer (2 to 4 mills per coat).
3. Apply one topcoat of Subsil 30 HS (2 to 3 Mils) (Color Carboline A181). An approved substitution of the total paint system will be allowed with the approval of the Engineer.

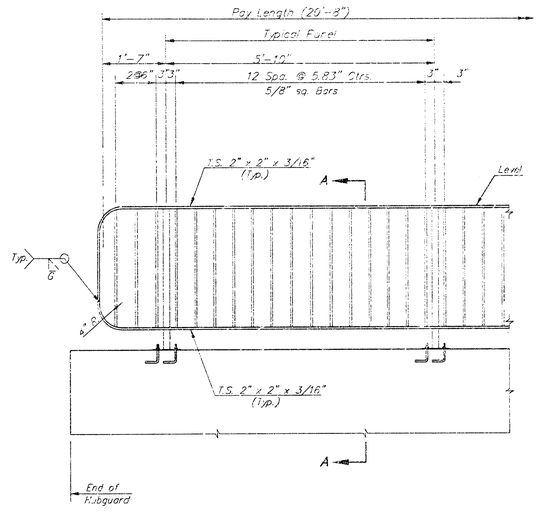
Material and construction shall conform to the Structural Welding Code A.W.S. D1.1-00.

Shop details must be submitted and approved by the Engineer.

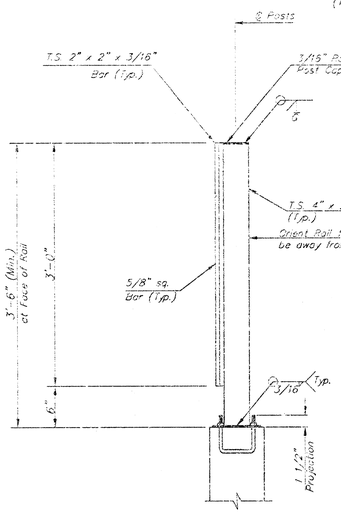


HUBGUARD SECTION

(1 Required)

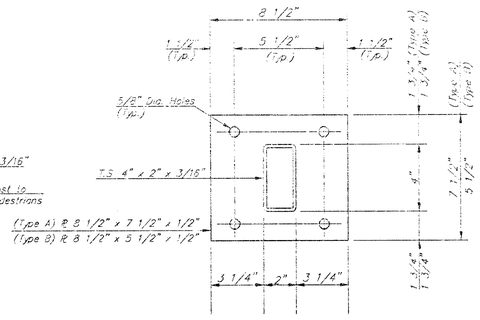


HANDRAIL ELEVATION



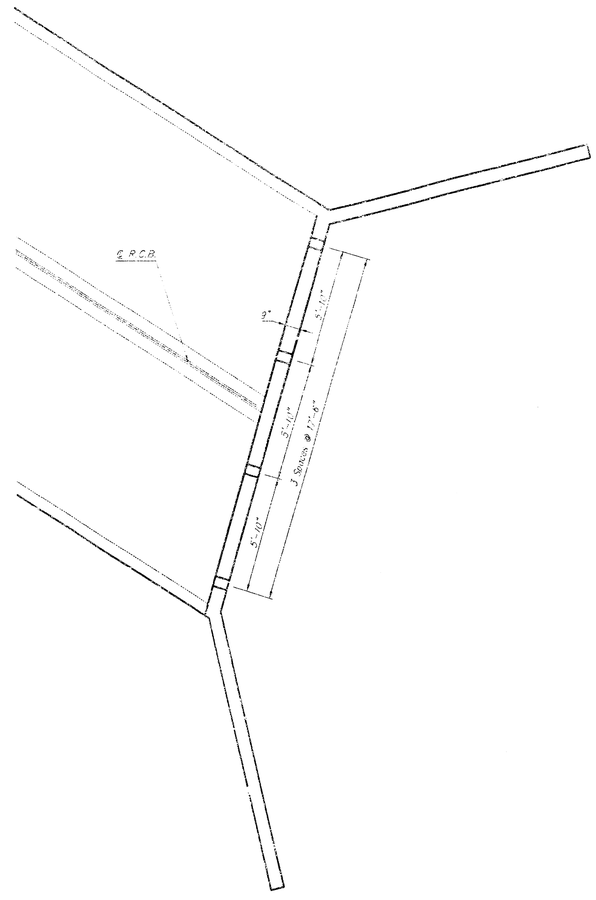
SECTION A-A

Note:
Rail Post on Hubguard shown.



BASE PLATE

4 Required (Type A)

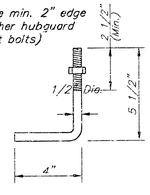


RAIL LOCATION PLAN

BASIS OF PAYMENT

The Bid Item "L.F. Handrail" Shall Include all labor, Materials, Anchor Bolts, Fabrication, Installation, and Ect. Necessary to Place the Handrails As Shown Along the Box Culvet. (Both Sides)

Orient to provide min. 2" edge clearance to either hubguard face or adjacent bolts)



Galvanized (ATSM A153)

(May Substitute expandable anchor bolts when approved by the Engineer)

ANCHOR BOLT

SISTERS OF ST. JOSEPH 6TH ADDITION, LOT 1, BLK. A

HANDRAIL DETAIL

SHEPIDAN VILLAGES - WICHITA, KANSAS

BAUGHMAN COMPANY P.A.

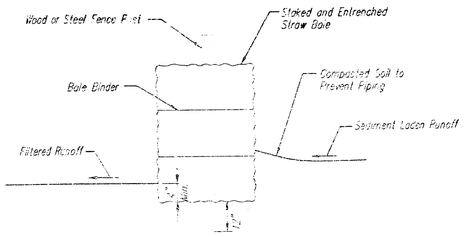
ENGINEERING, SURVEYING, & PLANNING

316 - 682-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER	SHEET
1347 PPS (6007661)	12 OF 14

DESIGN	DRAWN	APPROVED	DATE	SCALE
SCL	SCL	NBW	06/03	NOTED

Handrail.dwg



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.

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:

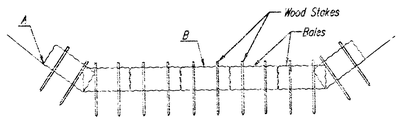
When practicable, do not place bale slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. Concentrated flow over a slope barrier creates a scour hole on the downslope side of the barrier. The scour hole eventually undermines the bales and the 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?

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 8' 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.
Checks should not be placed in ditches where high flows are expected. Rock checks should be used instead.
Bales should be placed in ditches with slopes of 6% or less. For slopes steeper than 6%, rock checks should be used.
The following table provides check spacing for a given ditch grade:

Ditch grade (%)	Check Spacing (feet)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

Proper installation method:

Excavate a trench perpendicular to the ditch flowline that is 4" deep and a bale's width wide. Extend the trench in a straight line along the entire length of the proposed ditch check. Place the soil on the upstream side of the trench-it will be used later.
Optional: On the downstream side of the trench, roll out a length of erosion-control blanket (scour apron) equal to the length of the trench. Place the upstream edge of the erosion-control blanket along the bottom upstream edge of the trench. The erosion control blanket should be anchored in the trench with one row of 8" landscape staples placed on 18" centers. The remainder of the erosion-control blanket (the portion that is not lying in the trench) will serve as the downstream scour apron. This section of the blanket should be anchored to the ground with 8" landscape staples placed around the perimeter of the blanket on 18" centers. The remainder of the blanket should be anchored using two evenly spaced rows of 8" landscape staples on 18" centers placed perpendicular to the flowline of the ditch.
Place the bales in the trench, making sure that they are butted tightly. Two stakes should be driven through each bale along the centerline of the ditch check, approximately 6" to 8" in from the bale ends. Stakes should be driven at least 12" into the ground.
Once all the bales have been installed and anchored, place the excavated soil against the upstream side of the check and compact it. The compacted soil should be no more than 3" to 4" deep and extend upstream no more than 24".

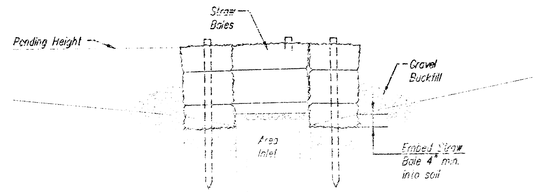
List of common placement/installation mistakes to avoid:

Do not place a bale ditch check directly in front of a culvert outlet. It will not stand up to the concentrated flow.
Do not place bale ditch checks in ditches that will likely experience high flows. They will not stand up to concentrated flow.
Follow prescribed ditch-check spacing guidelines. If spacing guidelines are exceeded, erosion will occur between the ditch checks.
Do not allow water to flow around the ditch check. Make sure that the ditch check is long enough so that the ground level at the ends of the check is higher than the top of the lowest center bale.
Do not place bale ditch checks in channels with shallow soils underlain by rock. If the check is not anchored sufficiently, it will wash out.
Bale ditch checks must be dug into the ground. Bales at ground level do not work because they allow water to flow under the check.

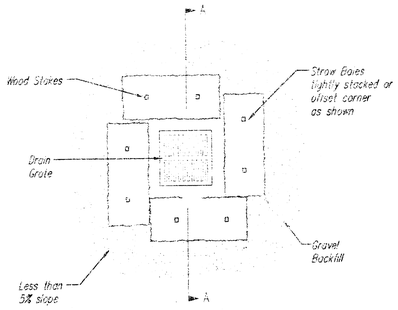
Inspection and Maintenance:

Bale ditch checks should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Does water flow around the ditch check?
Does water flow under the ditch check?
Does water flow through spaces between abutting bales?
Are any bales and/or scour aprons (optional) dislodged?
Are bales decomposing due to age and/or water damage?
Does sediment need to be removed from behind the ditch check?



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

Material Specification:

Bale area inlet barriers should be constructed of wheat straw, oat straw, prairie hay, or bromegrass hay that is free of weeds declared noxious by the Kansas State Board of Agriculture.
The stakes used to anchor the bales should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.

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.

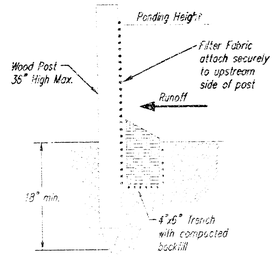
List of common placement installation mistakes to avoid:

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?



SILT FENCE BARRIERS

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 BMP DETAILS

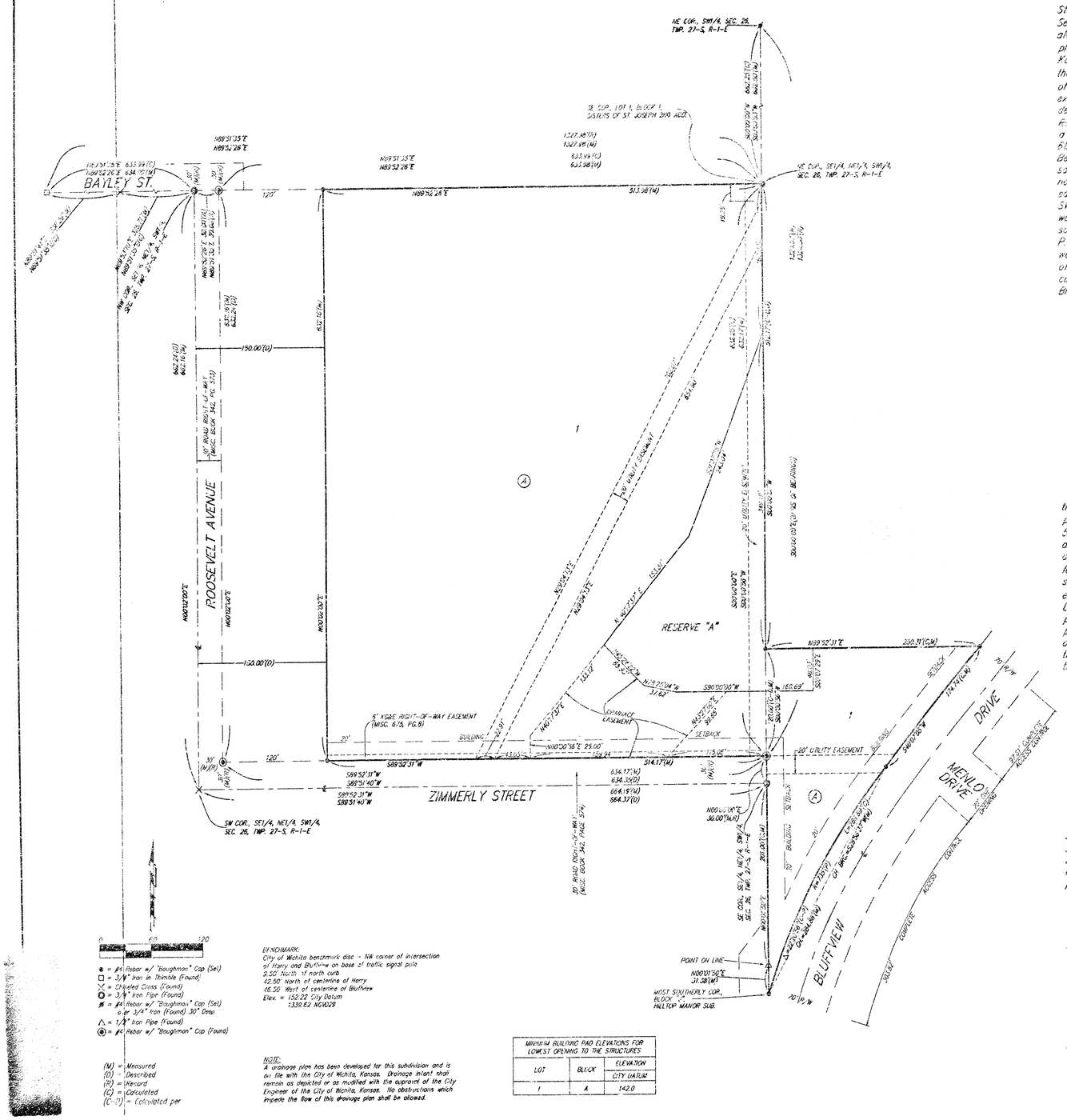
CHRISTOPHER M. CARRIER, P.E.
STORM WATER ENGINEER

PROJECT NUMBER | OCA NO.

DATE: MAY 2001

SISTERS OF ST. JOSEPH 5TH ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS



- ⊕ = #4 Rebar w/ "Baughman" Cap (Set)
- □ = 3/4" Iron in Thimble (Found)
- X = Chiseled Cross (Found)
- ⊙ = 3/4" Iron Pipe (Found)
- ⊕ = #4 Rebar w/ "Baughman" Cap (Set) or 3/4" Iron (Found) 30" Deep
- △ = 1/2" Iron Pipe (Found)
- ◉ = #4 Rebar w/ "Baughman" Cap (Found)

(M) = Measured
(D) = Described
(R) = Record
(C) = Calculated
(C-D) = Calculated per

BENCHMARK:
City of Wichita benchmark disc - NW corner of intersection of Harry and Bluffview on base of traffic signal pole.
2.52' North of north curb
42.50' North of centerline of Harry
16.50' West of centerline of Bluffview
Elev. = 1321.22 City Datum
1338.62 NGVD29

NOTE:
A drainage plan has been developed for this subdivision and is on file with the City of Wichita, Kansas. Drainage intent shall remain as depicted or as modified with the approval of the City Engineer of the City of Wichita, Kansas. No obstructions which impede the flow of this drainage plan shall be allowed.

MINIMUM BUILDING PAD ELEVATIONS FOR LOWEST OPENING TO THE STRUCTURES		
LOT	BLOCK	ELEVATION CITY DATUM
1	A	142.0

State of Kansas)
Sedgwick County) SS

We, Baughman Company, P.A., Surveyors in aforesaid county and state do hereby certify that we have surveyed and platted "SISTERS OF ST. JOSEPH 5TH ADDITION", Wichita, Sedgwick County, Kansas and that the accompanying plat is a true and correct exhibit of the property surveyed, described as the SE1/4 of the NE1/4 of the SW1/4 of Section 26, Twp. 27-S, R-1-E of the 6th P.M., Sedgwick County, Kansas, except the west 150 feet thereof, and EXCEPT the south 30 feet thereof dedicated for street. TOGETHER with that part of Block J, Hilltop Manor, a Replat of parts of Hilltop Manor and Hilltop Manor 2nd Addition, being a Subdivision in Section 26, Township 27 South, Range 1 East of the 6th. Principal Meridian, in Sedgwick County, Kansas, described as follows: Beginning at the SE corner of the SE1/4 of the NE1/4 of said SW1/4, said SE corner also being on the west line of said Block J; thence northerly along the west line of said Block J, 150.00 feet; thence easterly parallel with the south line of the SE1/4 of the NE1/4 of said SW1/4, 250.31 feet, more or less, to a point on the westerly right-of-way line of Bluffview Drive as dedicated in said Hilltop Manor; thence southwesterly along said westerly right-of-way line, 174.74 feet to a P.C. in said westerly right-of-way line; thence southwesterly along said westerly right-of-way line, being a curve to the left, having a radius of 375.00 feet, an arc distance of 286.59 feet to the most southerly corner of said Block J; thence northerly along the west line of said Block J, 232.38 feet to the point of beginning.

Existing public easements and dedications being vacated by virtue of K.S.A. 12-512(b)

All being situated in the SE1/4 and the SW1/4 of Sec. 26, Twp. 27-S, R-1-E of the 6th P.M., Sedgwick County, Kansas.

Baughman Company, P.A.

_____, Surveyor
Michael S. Conrey

Know all men by these presents that we, the undersigned, have caused the land in the surveyors certificate to be platted into a Lot, and a Block, to be known as "SISTERS OF ST. JOSEPH 5TH ADDITION", Wichita, Sedgwick County, Kansas. The utility easements are hereby granted as indicated for the construction and maintenance of all public utilities. The drainage easement is hereby granted as indicated for drainage purposes. Reserve "A" is hereby reserved for landscaping, sidewalks, open space, lakes, drainage purposes and utilities confined to easements. Reserve "A" shall be owned and maintained by the owner of Lot 1, Block A. Access controls shall be as depicted on the face of the plat and are hereby granted to the City of Wichita, Kansas. The permitted opening locations shall be as determined by the City Engineer of the City of Wichita, Kansas. The Minimum Building Pad Elevations for the lowest opening to the structures shall be as indicated on the face of the plat.

The Sisters of Saint Joseph of Wichita, Kansas, a Kansas not-for-profit corporation

_____, President
Sister Helene Lentz

_____, Secretary
Sister Pamela Young

State of Kansas)
Sedgwick County) SS

The foregoing instrument acknowledged before me, this_____day of_____, 2003, by Sister Helene Lentz, President of The Sisters of Saint Joseph of Wichita, Kansas, a Kansas not-for-profit corporation, on behalf of the corporation.

_____, Notary Public

My App't. Exp._____

State of Kansas)
Sedgwick County) SS

The foregoing instrument acknowledged before me, this_____day of_____, 2003, by Sister Pamela Young, Secretary of The Sisters of Saint Joseph of Wichita, Kansas, a Kansas not-for-profit corporation, on behalf of the corporation.

_____, Notary Public

This plat of "SISTERS OF ST. JOSEPH 5TH 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_____, _____.

Wichita-Sedgwick County Metropolitan Area Planning Commission

_____, Chair
J. D. Michaelis

_____, Secretary
Dale Miller

This plat approved and all dedications shown hereon accepted by the City Council of the City of Wichita, Kansas, this_____day of_____, 2003.

At the direction of the City Council

_____, City Manager
Chris Cherches

_____, City Clerk
Pat Graves

Reviewed in accordance with K.S.A. 58-2005 on this_____day of_____, 2003.

_____
Tricia L. Rocello, L.S. #1246
Deputy County Surveyor
Sedgwick County, Kansas

Entered on transfer record this_____day of_____, 2003.

_____, 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_____, 2003 at_____o'clock__M; and is duly recorded.

_____, Register of Deeds
Bill Meek

_____, Deputy
Linda Kizzire

18 11 01 50