

STATE	PROJECT NUMBER		
SD	10-909		

ROADWAY GENERAL NOTES

ROADWAY NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL RULES AND REGULATIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES DURING ROAD CONSTRUCTION.
2. ALL STRIPING, DIRECTIONAL ARROWS, ETC., SHALL BE INSTALLED PER RAPID CITY AND SDOOT SPECIFICATIONS.
3. ALL PAVEMENT WORK INCLUDING ASPHALT AND CONCRETE MATERIAL AND PAVING OPERATIONS SHOULD BE PER RAPID CITY AND SDOOT STANDARD SPECIFICATIONS.
4. ALL EXISTING STRIPING, SIGNAGE, RAISED PAVEMENT MARKERS, UTILITIES, ETC. WHICH CONFLICTS WITH PROPOSED IMPROVEMENTS SHOULD BE REMOVED AND/OR RELOCATED PER RAPID CITY AND SDOOT SPECIFICATIONS TO INCORPORATE THE NEW IMPROVEMENTS.
5. NECESSARY BARRICADES, SUFFICIENT LIGHTS, SIGNS, AND OTHER TRAFFIC CONTROL METHODS AS MAY BE NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC SHALL BE PROVIDED AND MAINTAINED THROUGHOUT THE WIDENING AND CONSTRUCTION ON ALL PUBLIC ROADS.
6. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY AND STATE REGULATIONS AND CODES AND O. S. H. A. STANDARDS.
7. ALL DIMENSIONS AND RADII ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS INCLUDING BUT NOT LIMITED TO: ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. ALL WORK SHALL BE IN ACCORDANCE WITH THE GOVERNING AUTHORITY'S SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COSTS SHOULD BE INCLUDED IN THE BASE BID.
9. ALL EXISTING DRAINAGE STRUCTURES TO BE RETAINED SHALL BE INSPECTED AND REPAIRED AS NEEDED. AND EXISTING PIPES ARE TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
10. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S REASONABILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
11. TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY BY REWNER & ASSOCIATES, LLC. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, HE SHALL HAVE MADE, AT HIS EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.
12. TO CONVERT EXISTING DRAINAGE STRUCTURES TO MANHOLES, THE CONTRACTOR SHOULD REMOVE THE TOP PORTION OF THE BOX A MINIMUM OF 13" BELOW THE TOP OF THE PROPOSED PAVEMENT. THE TOP OF THE JUNCTION BOX SHOULD BE CONSTRUCTED WITH A MANHOLE FRAME AND LID PER SDOOT STANDARD PLATE NUMBERS 871.01 AND 871.10. THE MANHOLE LID AND JUNCTION BOX TOP SHOULD BE FLUSH WITH THE TOP OF THE PAVEMENT.

EROSION CONTROL NOTES:

1. ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
2. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL & D. E. S. PERMIT AND CITY EROSION CONTROL PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.

UTILITY NOTE:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND OR ELEVATION OF ALL EXISTING UTILITIES (ABOVE OR BELOW GROUND) AS SHOWN ON THESE PLANS ARE APPROXIMATE AND WERE LOCATED BASED ON EITHER VISUAL OBSERVATIONS AT THE SITE, EXISTING SURVEY'S AND/OR FROM THE OWNERS. WOLVERTON & ASSOCIATES, INC. DOES NOT GUARANTEE THAT EXISTING UTILITY LOCATIONS SHOWN ARE EXACT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT LOCATIONS OF EXISTING UTILITIES (ABOVE OR BELOW GROUND) BEFORE BEGINNING ANY CONSTRUCTION. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND THE UTILITIES PROTECTION CENTER AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY OWNER AND/OR ENGINEER OF ANY UTILITY CONFLICTS WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. THE CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES' INSPECTORS AT LEAST 72 HOURS PRIOR TO STARTING ANY UTILITY WORK.



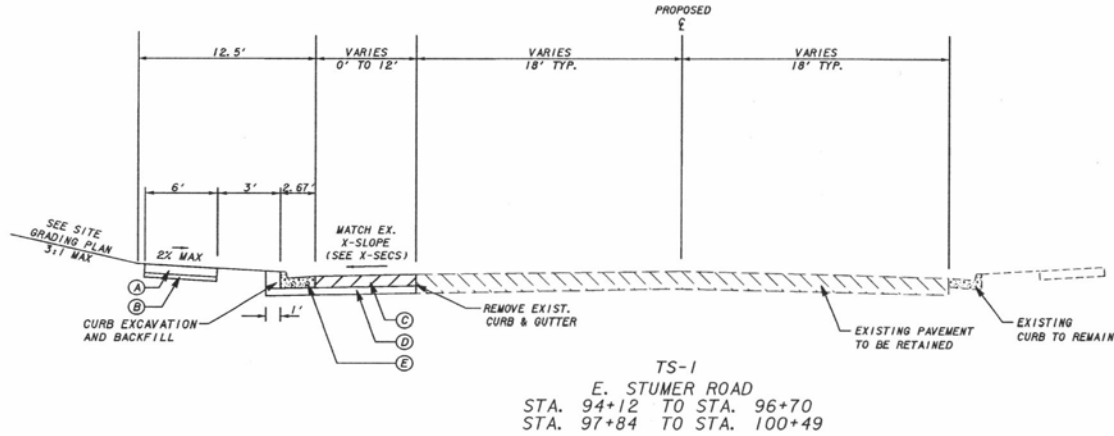
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



DESIGNED	NAME	DATE	DRAWN	NAME	DATE
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CHECKED	NAME	DATE	CHECKED	NAME	DATE
	CH	12/08/10		KB	12/08/10

SUPERVISED BY KENRIE BOYETTE, P.E.

**PROPOSED BLACK HILLS CENTER
RAPID CITY, S. D.
GENERAL NOTES**



- REQUIRED PAVEMENT**
- (A) 4" CONCRETE SIDEWALK
 - (B) 2" GRAVEL CUSHION
 - (C) 6" ASPHALT PAVEMENT
 - (D) 12" COMPACTED BASE COURSE
 - (E) CONCRETE CURB & GUTTER, TYPE B66



REVISIONS			
DATE	BY	DESCRIPTION	DATE



DESIGNED BY	NAME	DATE	CHECKED BY	NAME	DATE
	KB	12/09/10		CB	12/09/10

SUPERVISED BY KERRIE BOVETTE, P.E.

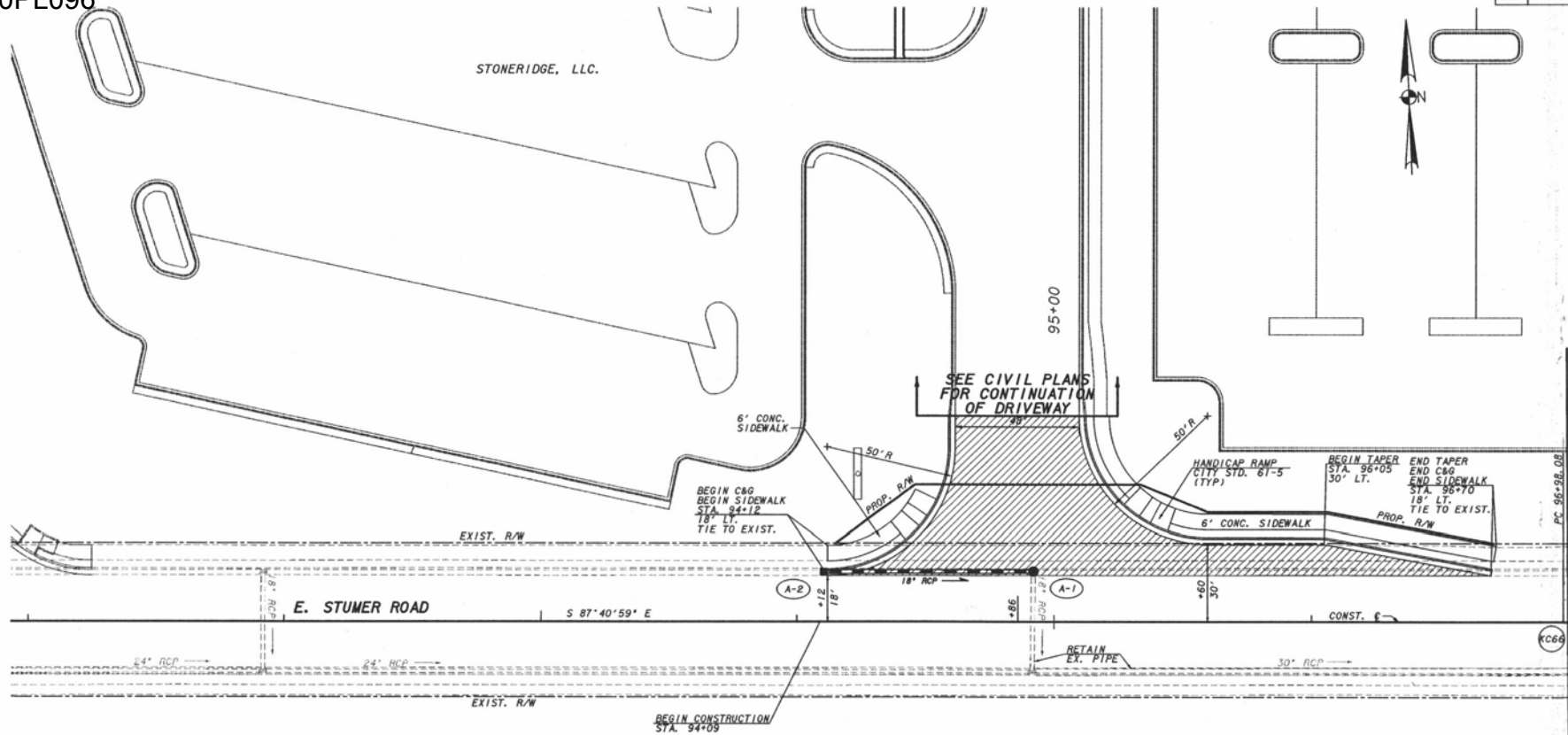
PROPOSED BLACK HILLS CENTER
RAPID CITY, S. D.
TYPICAL SECTIONS

10PL096

STATE	PROJECT NUMBER		
SD	10-909		

STONERIDGE, LLC.

BIG D OIL CO.

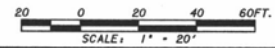


MATCH LINE STA. 97+00
SEE SHEET R-04



Curve Data
 N - KC66
 Δ - 43°14'52" (LT)
 D - 14'19'26"
 T - 158.56
 L - 301.93
 R - 400.00
 PI STA - 98+56.65
 P1 X - 12.0975, 214
 P1 Y - 632343.414
 SE - MATCH EXIST.

PAVEMENT LEGEND	
	FULL-DEPTH ASPHALT PVMT.



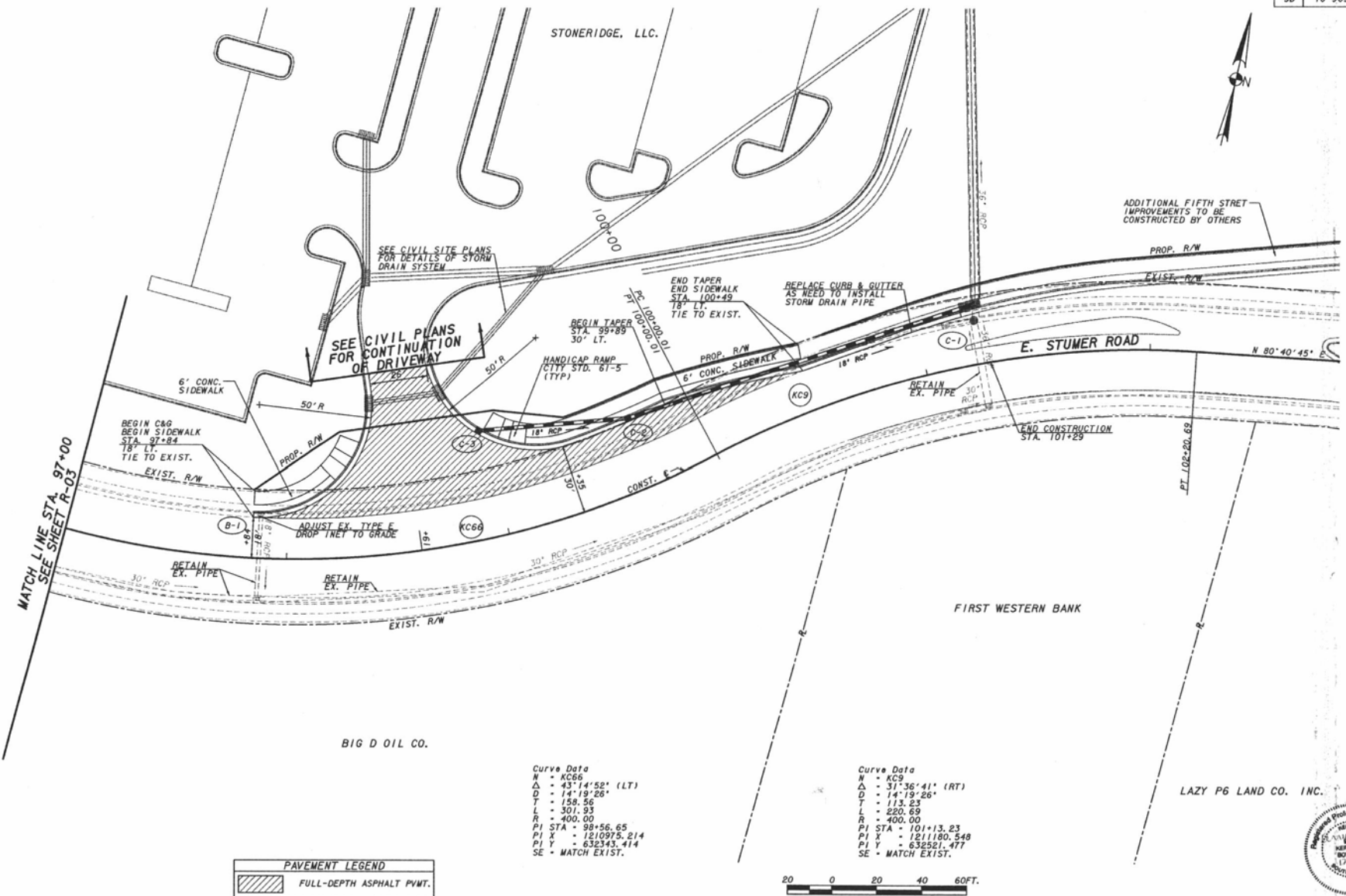
REVISIONS			
DATE	BY	DESCRIPTION	

Wolverton & Associates
 Consulting Engineers & Architects
 1100 S. D. Ave., Suite 200
 Rapid City, SD 57701
 Phone: (605) 343-4114
 Fax: (605) 343-4115

NAME	DATE	NAME	DATE
DESIGNED BY	RB 12/09/10	DRAWN BY	EC 12/09/10
CHECKED BY	CH 12/09/10	CHECKED BY	RB 12/09/10
SUPERVISED BY KERRIE BOYETTE, P.E.			

PROPOSED BLACK HILLS CENTER
 RAPID CITY, S.D.
 ROADWAY PLAN

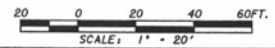
DRAWING NUMBER
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PAVEMENT LEGEND	
	FULL-DEPTH ASPHALT PVMT.

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 L = 501.93
 R = 400.00
 PI STA = 98+56.65
 PI X = 1210975.214
 PI Y = 632343.414
 SE = MATCH EXIST.

Curve Data
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 D = 14°19'26"
 T = 115.23
 L = 220.69
 R = 400.00
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REVISIONS			
DATE	BY	DESCRIPTION	

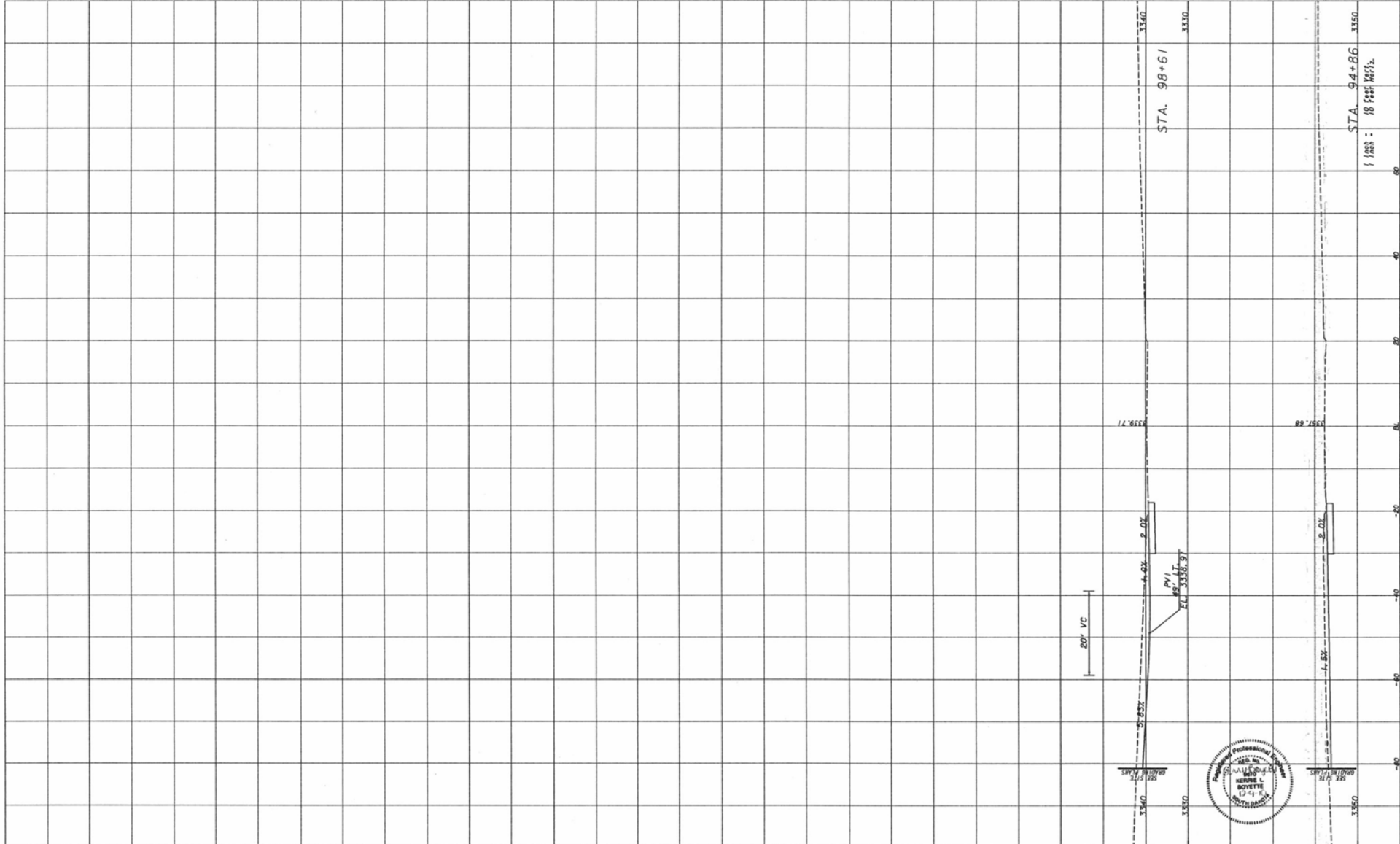
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CHECKED BY	DATE		
CH	12/09/10	CH	12/09/10

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PROPOSED BLACK HILLS CENTER
 RAPID CITY, S. D.
 ROADWAY PLAN



STATE	PROJECT NUMBER
SD	10-909



REVISIONS

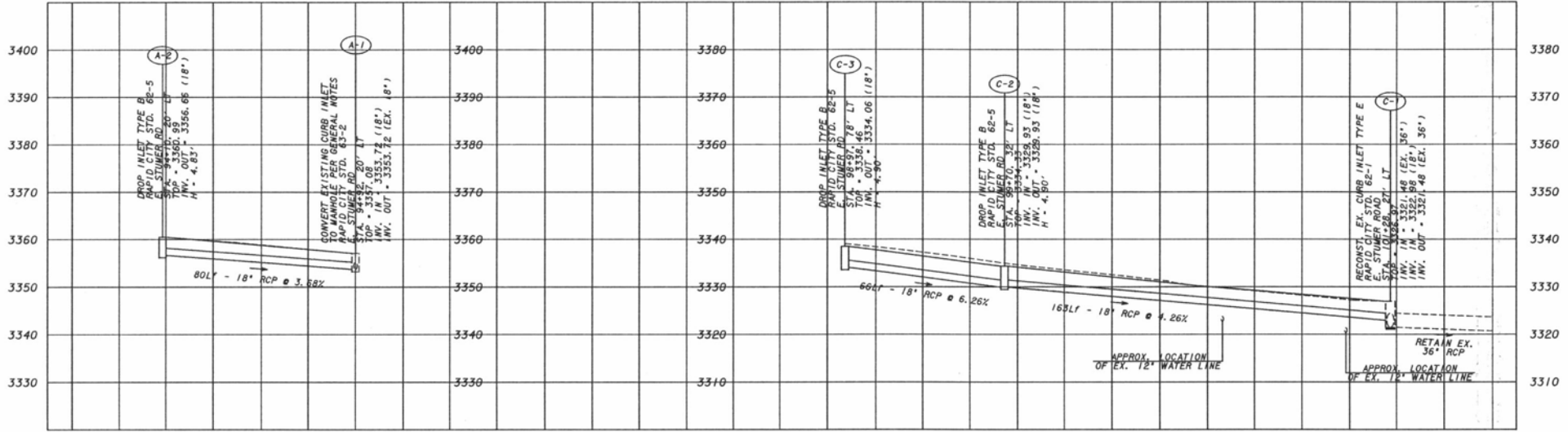
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Wolverton & Associates
 Consulting Engineers & Land Surveyors
 404 North Park Drive, Suite 100, Rapid City, SD 57701
 Phone: 605.342.2222 Fax: 605.342.2223

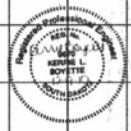
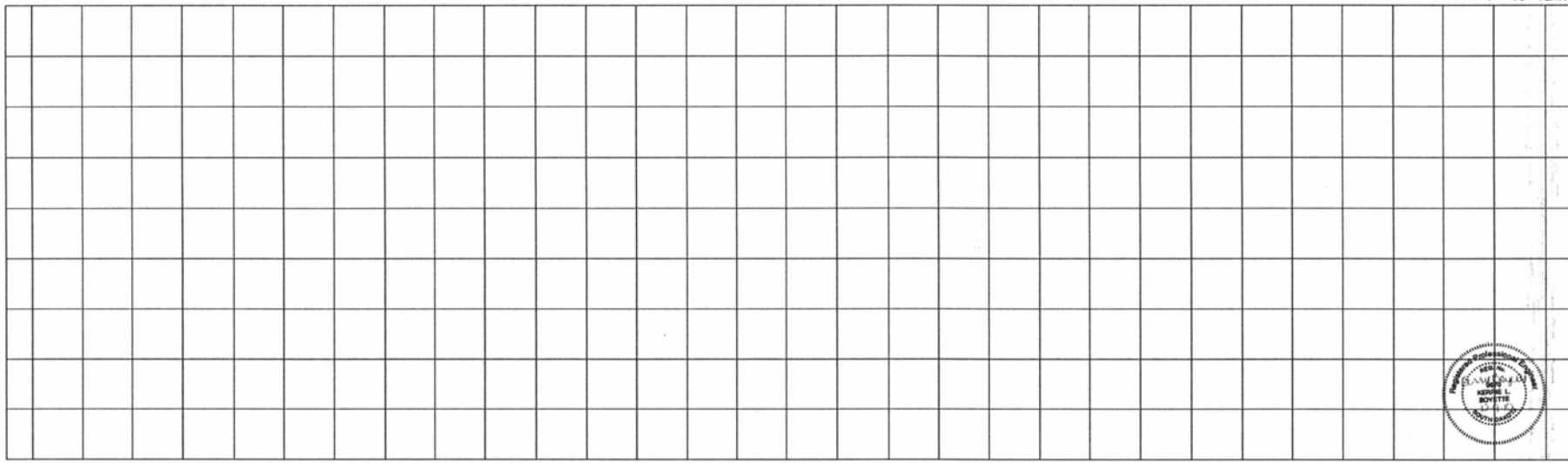
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**PROPOSED BLACK HILLS CENTER
 RAPID CITY, S.D.
 DRIVEWAY PROFILES**



SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

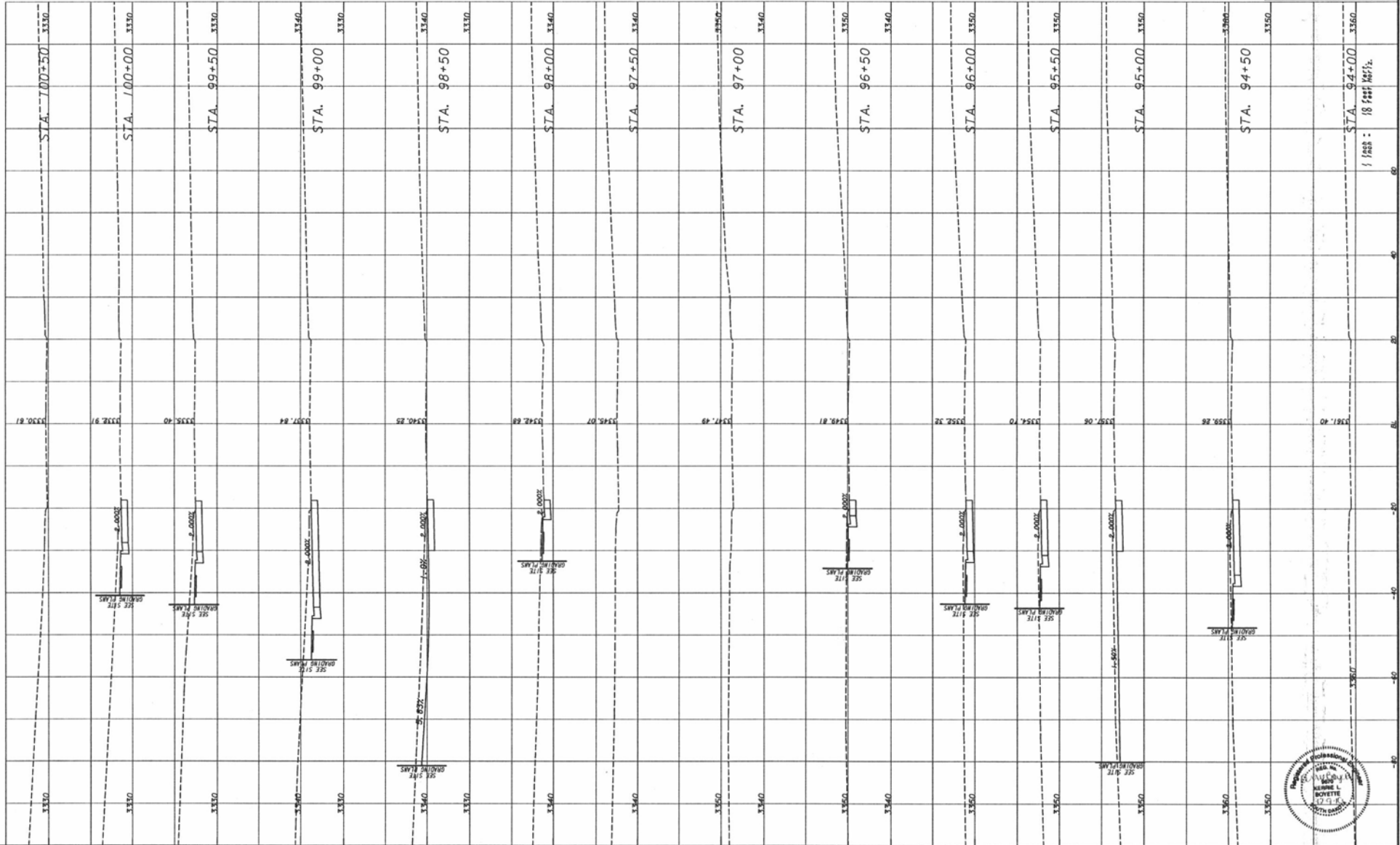


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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



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SUPERVISED BY KENNIE BOYETTE, P.E.					

STATE	PROJECT NUMBER
SD	10-909



REVISIONS			
DATE	BY	DESCRIPTION	

Wolverton Associates
 Consulting Engineers & Land Surveyors
 404 West 10th Street, Suite 200
 Rapid City, SD 57701
 Phone: (605) 343-1111

DESIGNED	NAME	DATE	DRAWN	NAME	DATE
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SUPERVISED BY KENNIE BOYETTE, P.E.

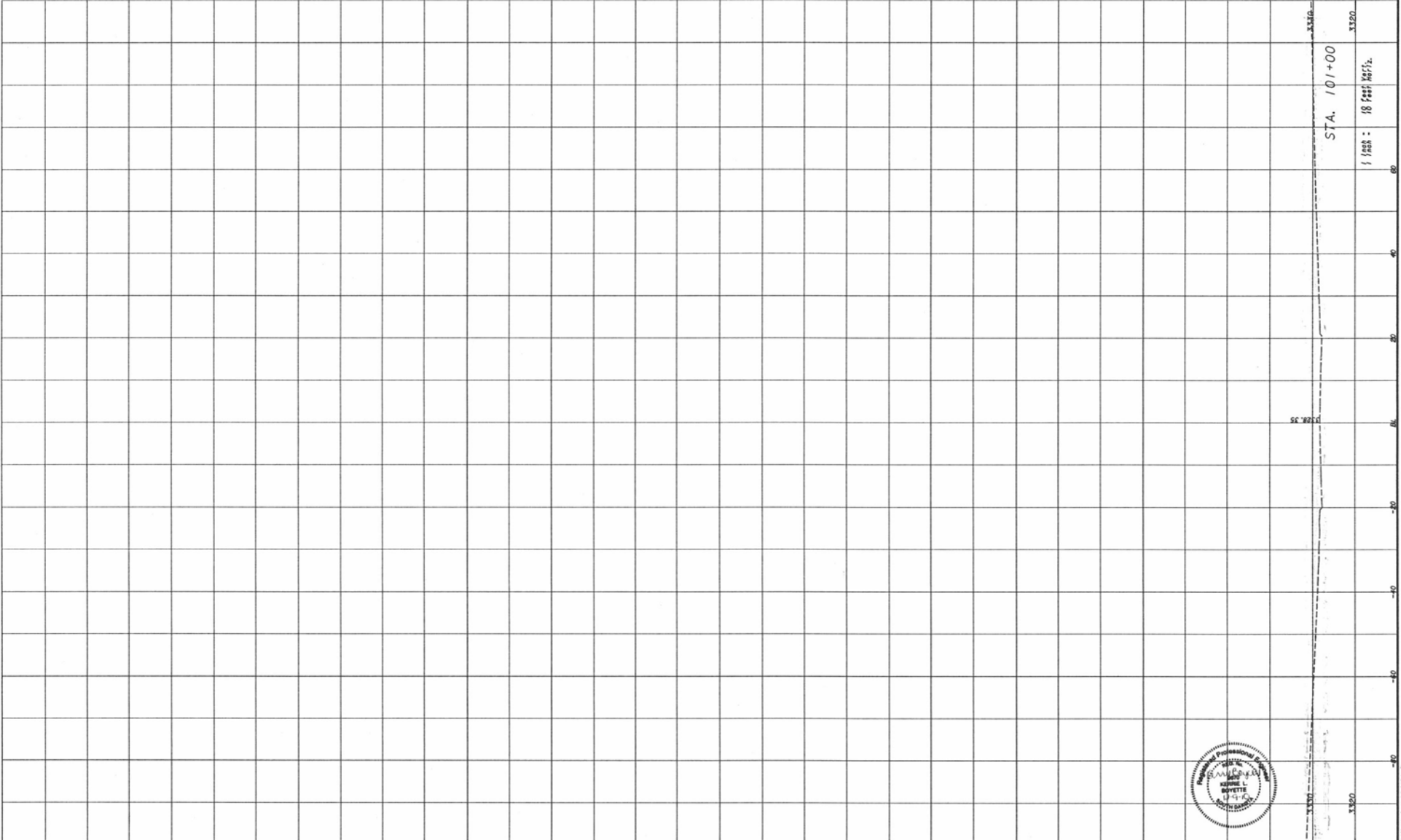
**PROPOSED BLACK HILLS CENTER
 RAPID CITY, S. D.
 EARTHWORK CROSS SECTIONS**

DRWING NUMBER
R-07



10PL096

STATE	PROJECT NUMBER
SD	10-909



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Wolverton & Associates
 Consulting Engineers - Land Surveys
 2014 North Street - Rapid City, South Dakota
 Phone: (605) 342-2222 Fax: (605) 342-2223

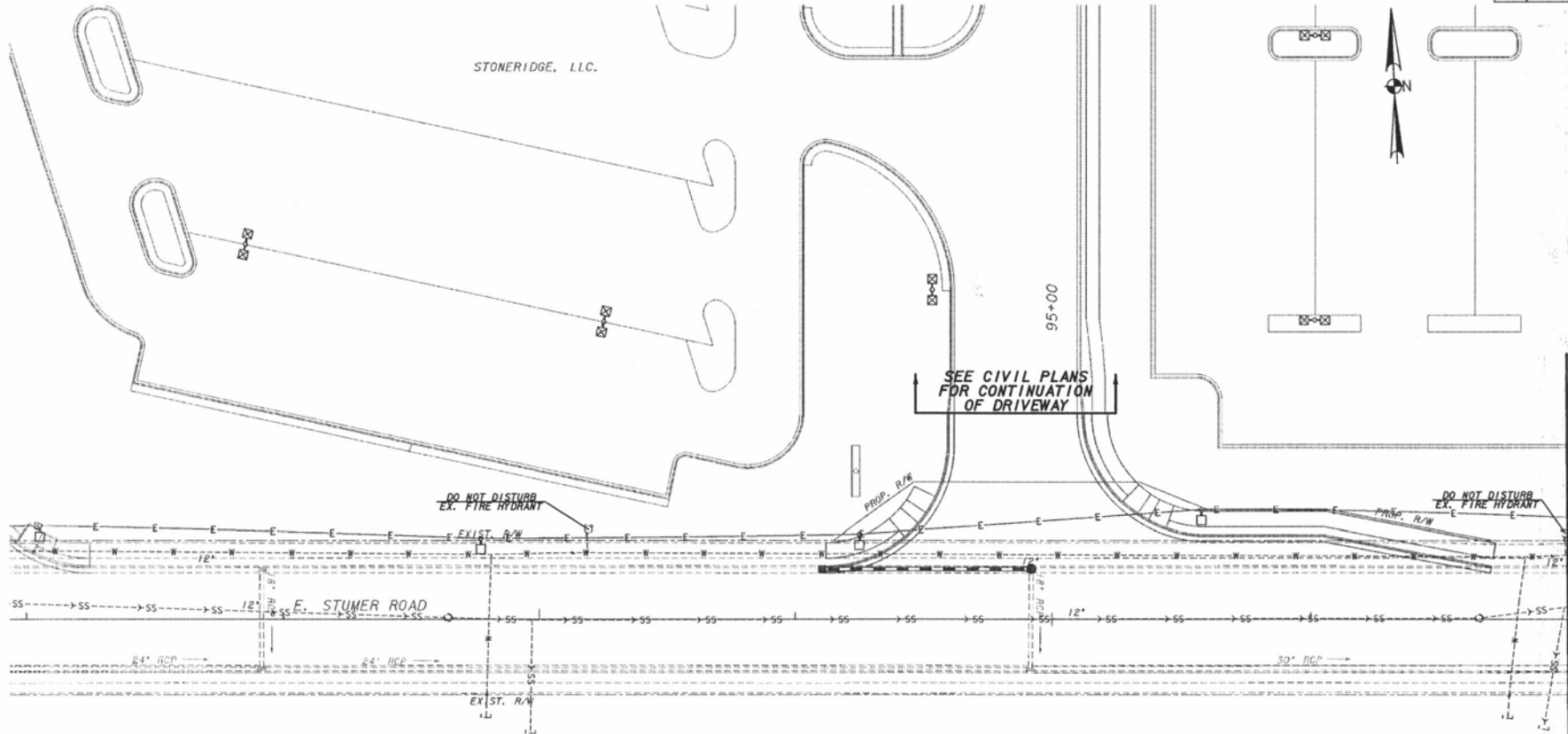
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PROPOSED BLACK HILLS CENTER
RAPID CITY, S. D.
EARTHWORK CROSS SECTIONS

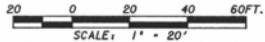
DRAWING NUMBER
R-08

DATE PLOTTED: 12/23/10 10:23:23 AM



BIG D OIL CO.

SEE CIVIL SITE PLANS FOR ADDITIONAL UTILITY INFORMATION



REVISIONS			
DATE	BY	DESCRIPTION	

Wolvertson & Associates
 Consulting Engineers - Land Services
 1000 North Park Drive
 Rapid City, SD 57701
 Phone: (605) 342-1111
 Fax: (605) 342-1112

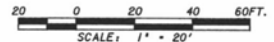
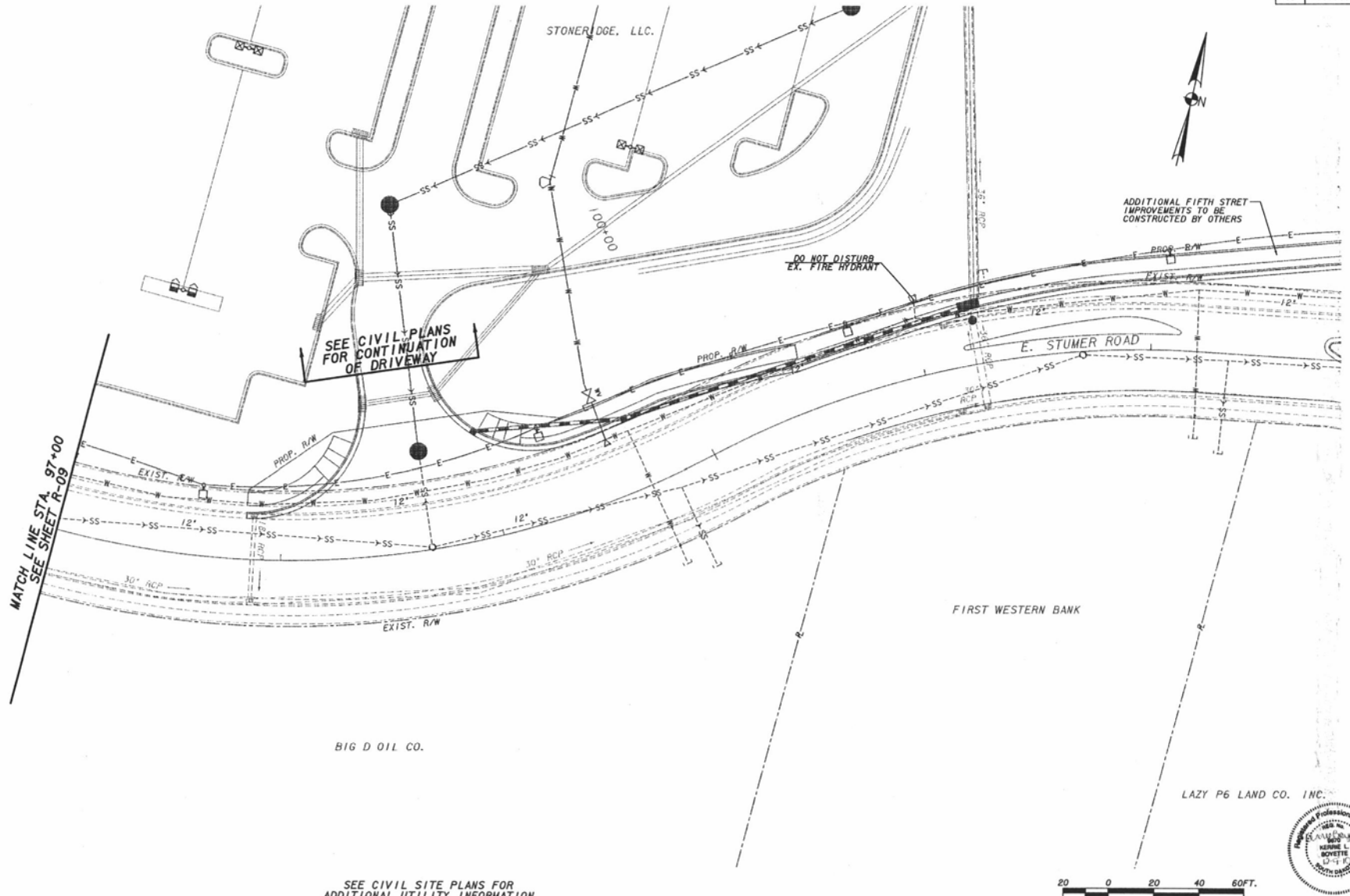
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SUPERVISED BY KENNIE BOVETTE, P.E.

PROPOSED BLACK HILLS CENTER
 RAPID CITY, S. D.
 UTILITY PLAN

DRAWING NUMBER
R-09

STATE	PROJECT NUMBER	
SD	10-909	



SEE CIVIL SITE PLANS FOR
ADDITIONAL UTILITY INFORMATION

REVISIONS			
DATE	BY	DESCRIPTION	

W
Wolverton & Associates
Consulting Engineers - Land Surveyors
and Professional Planners - Rapid City, South Dakota

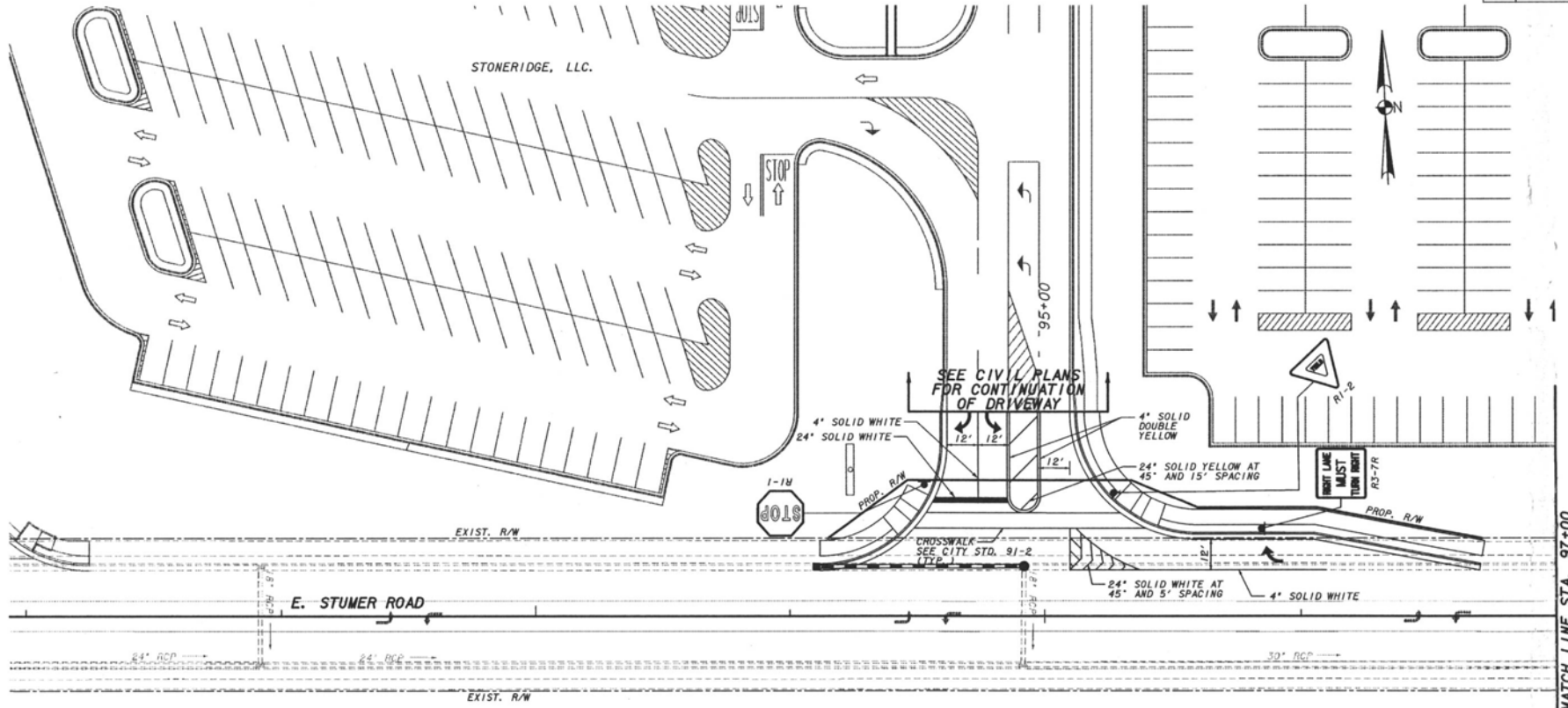
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**PROPOSED BLACK HILLS CENTER
RAPID CITY, S.D.
UTILITY PLAN**



DRAWING NUMBER
R-10



BIG D OIL CO.



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

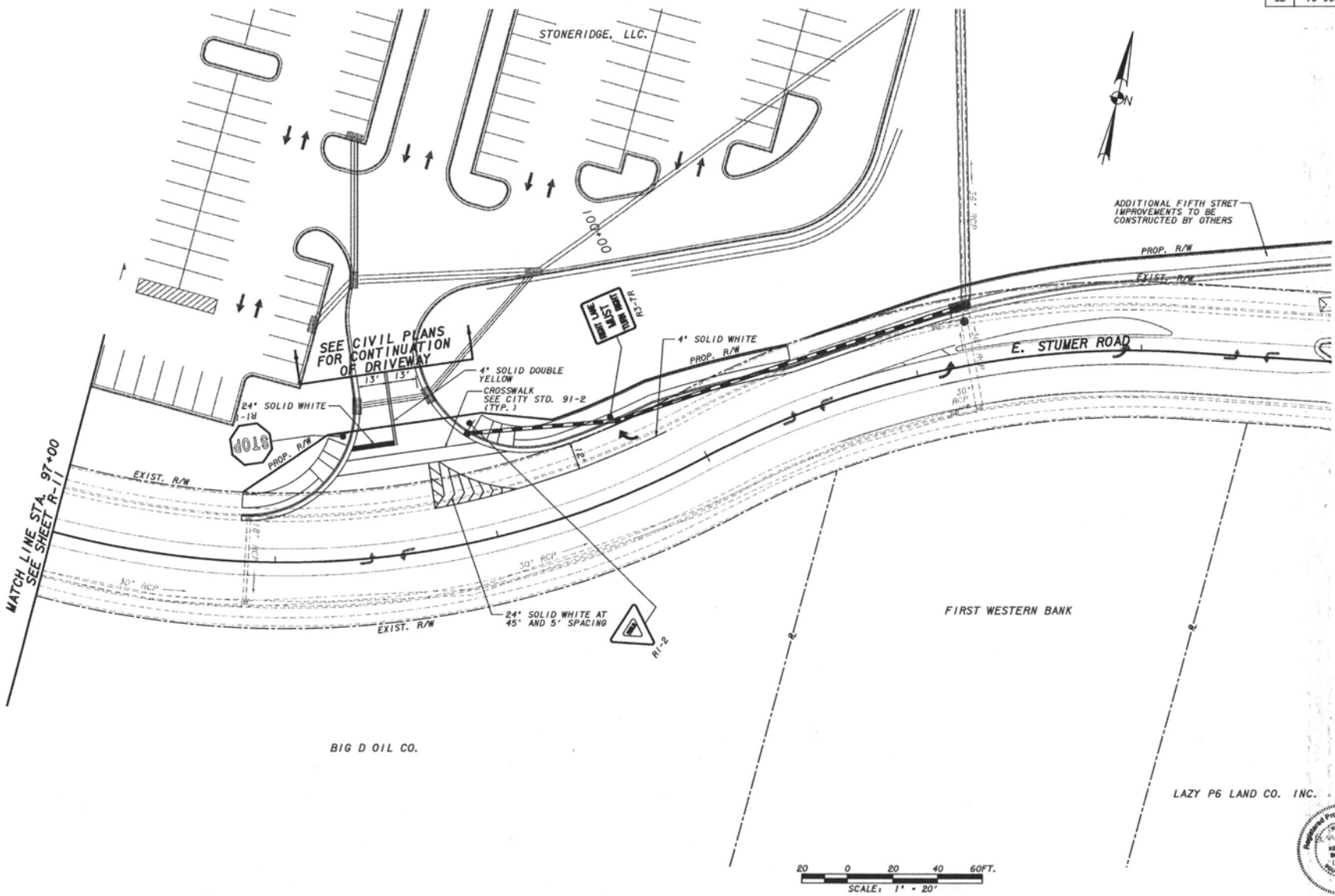


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	CH	12/08/10		KB	12/08/10

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PROPOSED BLACK HILLS CENTER
RAPID CITY, S.D.
SIGNING AND MARKING PLAN

DRAWING NUMBER
R-11



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

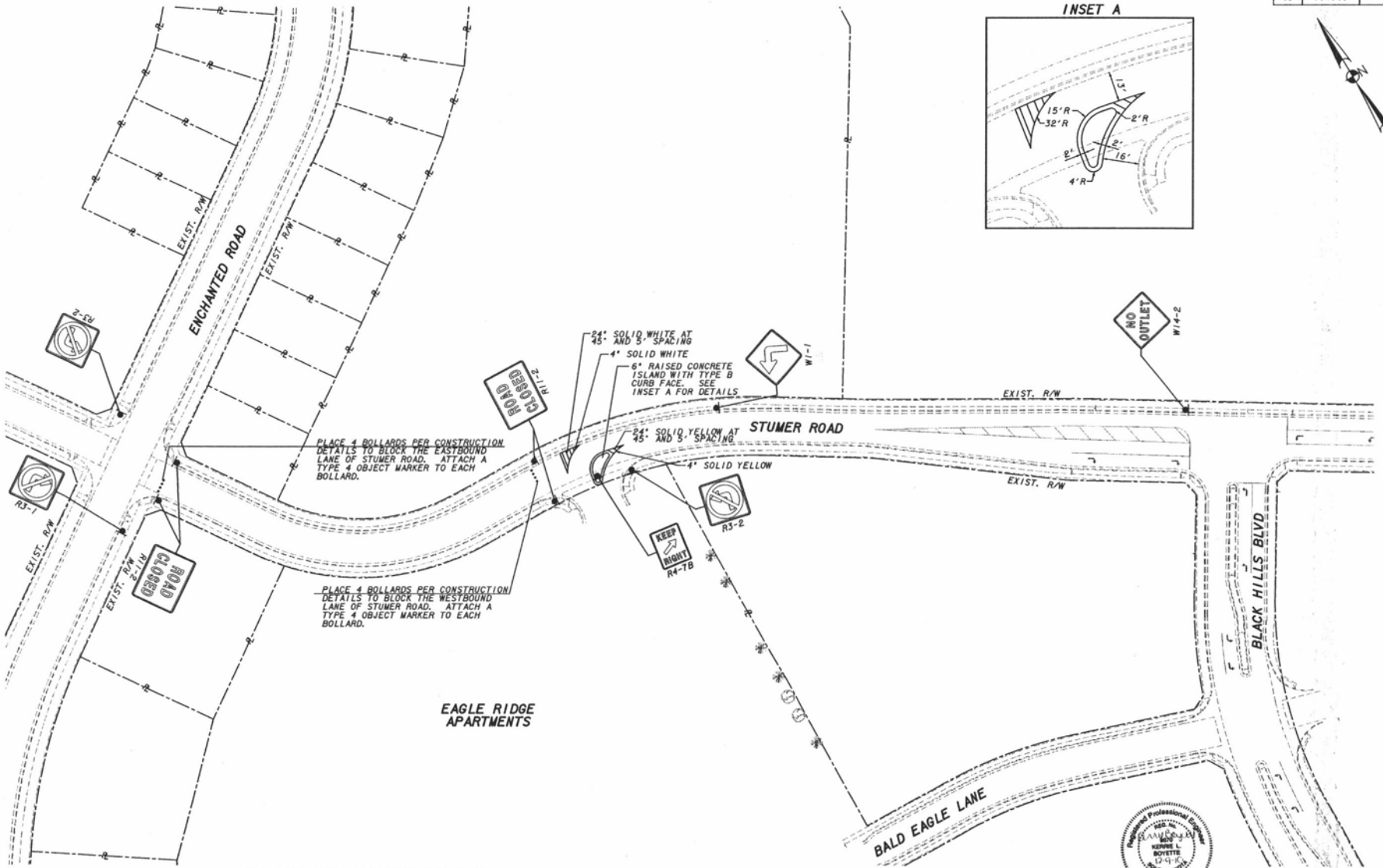
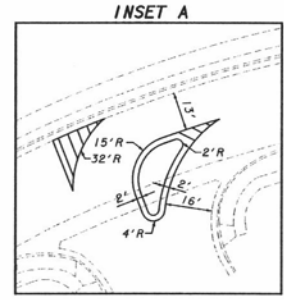
Wolverton & Associates
 Consulting Engineers & Land Architects
 1000 North 17th Street, Suite 200
 Rapid City, South Dakota 57701
 Phone: (605) 343-2222

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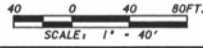
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PROPOSED BLACK HILLS CENTER
 RAPID CITY, S.D.
 SIGNING AND MARKING PLAN





ALL ROADWAY WORK SHOWN ON THIS SHEET MUST BE CONSTRUCTED WITHIN THE EXISTING R/W



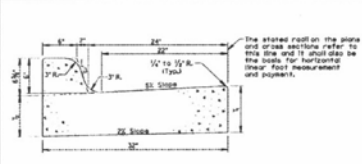
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Wolverton & Associates
 Consulting Engineers & Land Surveyors
 1000 S. D. Ave., Suite 100
 Rapid City, SD 57701
 Phone: 605.342.2222

DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
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SUPERVISED BY KENNIE BOYETTE, P.E.

PROPOSED BLACK HILLS CENTER
 RAPID CITY, S.D.
SIGNING AND MARKING PLAN



TYPE	% Slope	Clearance	Curb Par. L&F.F.	Curb Par. L&F.F.
656	6	1/4"	0.007	11.7
657	7	1/4"	0.005	15.4
658	8	1/4"	0.015	13.1
658A	8.5	1/4"	0.017	13.0
659	9	1/4"	0.061	12.3
659A	9.5	1/4"	0.089	11.7
660	10	1/4"	0.050	11.2
660A	10.5	1/4"	0.024	16.1
661	11	1/4"	0.029	16.4
661A	11.5	1/4"	0.102	9.8
662	12	1/4"	0.108	8.4

GENERAL NOTES:
When concrete curb and gutter lengthwise adjoin new concrete pavement, the method of attachment shall be by one of the methods shown on Standard Plate 353(1). See Standard Plate 650.30 for expansion and contraction joints in the curb and gutter.

September 6, 2009
 TYPE B CONCRETE CURB AND GUTTER
 PLATE NUMBER 650.CI
 Sheet 1 of 1
 Published Date: 6th Oct 2010

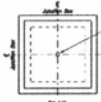
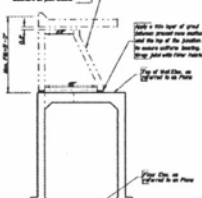
SPECIFICATIONS

- Basic Specifications: AASHTO Specifications for Highway Bridges, 2002 Edition.
- Standard Specifications: South Dakota Standard Specifications for Construction and Maintenance, as published in the "Register".

DESIGN MIX OF CONCRETE
 1. Concrete Design Strength: 4000 psi
 2. Slump: 5 to 7 inches
 3. Air Content: 5 to 7 percent

GENERAL NOTES

- Design for load: 25' (20' and alternate loading). An alternative loading is shown in additional view elsewhere.
- The depth of the junction box is based on a maximum 10' over the junction box of 2' (10').
- 60# Strands: Source: GS-600 A-1. Reinforcing Steel: 10 # 4000 p.s.i.
- All reinforcing steel and anchors to meet AISC Grade 55.
- Approved steel used in concrete: A36.
- Use 7" clear over in all reinforcing steel except as noted.
- The depth of footing and foundation the footing shall be 12" below the bottom of the concrete slab for 12" "Reinforcing steel".
- Reinforcing steel and anchors: See Note 10, to specify 12" depth below the top surface of pile, including 6" depth below the top surface of pile, including 6" depth below the top surface of pile.
- Reinforcing steel: The junction box shall be 10' between the bottom of the box.

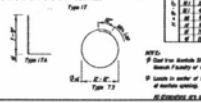
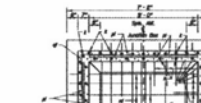
REV	Over all dimensions	Reinforcing steel
1	5' x 5'	A36
2	5' x 5'	A36
3	5' x 5'	A36
4	5' x 5'	A36
5	5' x 5'	A36
6	5' x 5'	A36
7	5' x 5'	A36
8	5' x 5'	A36
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46	5' x 5'	A36
47	5' x 5'	A36
48	5' x 5'	A36
49	5' x 5'	A36
50	5' x 5'	A36

* DETAIL OF CONNECTION BETWEEN PRECAST ECCENTRIC MANHOLE CONE SECTION AND JUNCTION BOX

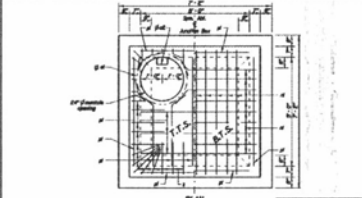
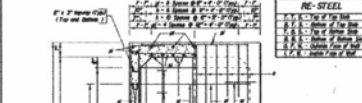
September 6, 2009
 5' X 5' JUNCTION BOX
 PLATE NUMBER 671.CI
 Sheet 1 of 3
 Published Date: 6th Oct 2010

REINFORCING SCHEDULE

NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
1	1	1	1	1	1	1	1	1	1
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September 6, 2009
 5' X 5' JUNCTION BOX
 PLATE NUMBER 671.CI
 Sheet 2 of 3
 Published Date: 6th Oct 2010

LEGEND FOR PLACING PRE-CAST

1	1' x 1' Manhole Box
2	2' x 2' Manhole Box
3	3' x 3' Manhole Box
4	4' x 4' Manhole Box
5	5' x 5' Manhole Box
6	6' x 6' Manhole Box
7	7' x 7' Manhole Box
8	8' x 8' Manhole Box
9	9' x 9' Manhole Box
10	10' x 10' Manhole Box

September 6, 2009
 5' X 5' JUNCTION BOX
 PLATE NUMBER 671.CI
 Sheet 3 of 3
 Published Date: 6th Oct 2010

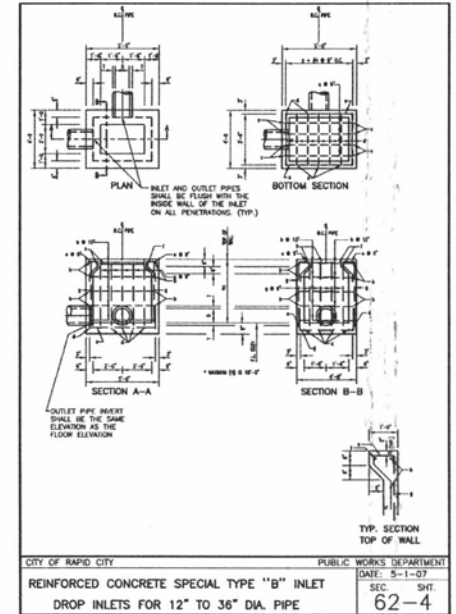
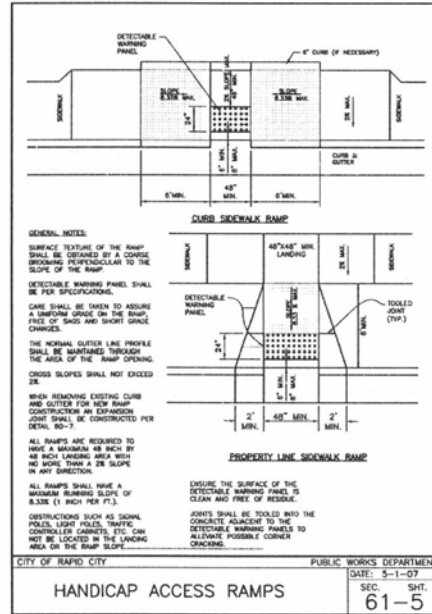
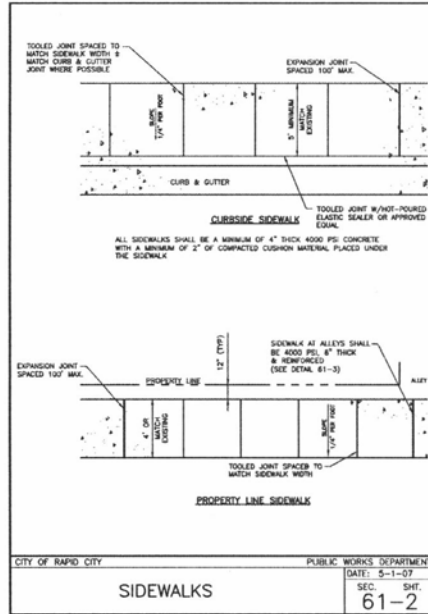
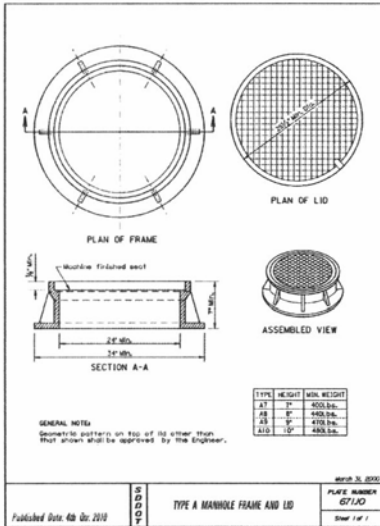
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
	KB	12/08/10		EC	12/08/10
CHECKED BY			CHECKED BY		

SUPERVISED BY: KERRIE BOYETTE, P.E.

PROPOSED BLACK HILLS CENTER
 RAPID CITY, S.D.
 CONSTRUCTION DETAILS



REVISIONS			
DATE	BY	DESCRIPTION	



DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
DESIGNED	BB	12/09/10	DRAWN	EC	12/09/10
CHECKED	CH	12/09/10	CHECKED	KB	12/09/10

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PROPOSED BLACK HILLS CENTER
RAPID CITY, S.D.
CONSTRUCTION DETAILS

STATE	PROJECT NUMBER	
SD	10-909	

GENERAL NOTES:

* REDUCE TOTAL QUANTITIES OF CONCRETE BY THE AMOUNT OF CONCRETE DISPLACED BY THE PIPE. TOTAL QUANTITY OF CONCRETE TO BE COMPUTED TO NEAREST HUNDRETH OF A CU. YD. TOTAL QUANTITY OF REINFORCING STEEL TO BE COMPUTED TO THE NEAREST POUND.

DROP INLETS SHOWN MAY BE MODIFIED BY THE ADDITION OR OMISSION OF CONNECTING PIPES AS SHOWN IN LAYOUT.

EPOXY COATED REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 80 LAP 6 AND T BARS 12 INCHES. CUT AND BEND REINFORCING STEEL AS REQUIRED TO PLACE PIPES THRU DROP INLET WALL. ALL REINFORCING STEEL SHALL BE TIED & CHAINED. ALL REBAR SHALL BE COLD BENT AT CORNERS.

PRE CASTING OF REINFORCED DROP INLETS MAY BE PERMISSIBLE. PRIOR TO PRE CASTING, THE CONTRACTOR SHALL SUBMIT DETAILS TO THE ENGINEER FOR APPROVAL.

ALL STRUCTURAL JOINTS SHALL BE KEYED AND WATER TIGHT.

MAXIMUM PIPE DIAMETER SHOULD NOT EXCEED 30 INCHES ON THE 4 FOOT SIDE SIDE OF THE DROP INLET.

IN SITUATIONS WHERE MULTIPLE INLETS ARE TO BE CONSTRUCTED ADJACENT TO ONE ANOTHER, THE COMMON INLET WALL SHALL BE CONSTRUCTED 12" THICK WITH THE EQUIVALENT AMOUNT OF REBAR AS REQUIRED FOR EACH INLET INDIVIDUALLY. THE CONVEYANCE OF STORM WATER THRU THE COMMON WALL SHALL BE BY INSTALLING THE APPROPRIATELY SIZED REINFORCED CONCRETE PIPE.

PIPE DISPLACEMENT REDUCTION

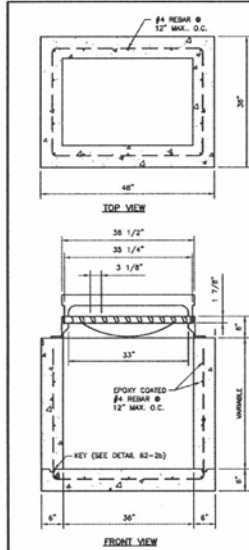
ITEM	ESTIMATED QUANTITIES		UNIT	DIPPLET QUANTITY	DIPPLET SIZE	DIPPLET WEIGHT	DIPPLET VOLUME	DIPPLET DIAMETER	DIPPLET LENGTH	DIPPLET SURFACE AREA
	NO.	WT.								
CONCRETE	28.38	3.37	CU. YD.	1	12"	1.12	0.30	12"	12"	1.12
REINFORCING STEEL	1.18	0.18	LB.	1	12"	1.12	0.30	12"	12"	1.12
PIPE DISPLACEMENT	1.18	0.18	LB.	1	12"	1.12	0.30	12"	12"	1.12

REINFORCING SCHEDULE

NO.	BAR	SIZE	SPACING	START	END	REMARKS
1	4#	#4	12"	0'	4'	TOP OF INLET
2	4#	#4	12"	4'	8'	MIDDLE OF INLET
3	4#	#4	12"	8'	12'	BOTTOM OF INLET
4	4#	#4	12"	0'	12'	VERTICAL

CITY OF RAPID CITY PUBLIC WORKS DEPARTMENT DATE: 5-1-07

REINFORCED CONCRETE SPECIAL TYPE "B" INLET DROP INLETS FOR 12" TO 36" DIA. PIPE SEC. SHT. 62-4c



CITY OF RAPID CITY PUBLIC WORKS DEPARTMENT DATE: 5-1-07
TYPE "B" INLET FOR 12" TO 30" DIA. PIPE SEC. SHT. 62-5

GENERAL NOTES:

CONCRETE SHALL HAVE 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.

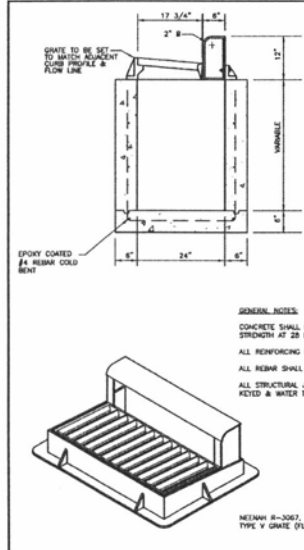
ALL STRUCTURAL JOINTS SHALL BE KEYED & WATER TIGHT.

EPOXY COATED REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 80 LAP 6 AND T BARS 12 INCHES. CUT AND BEND REBAR AS REQUIRED TO PLACE PIPES THRU DROP INLET WALL.

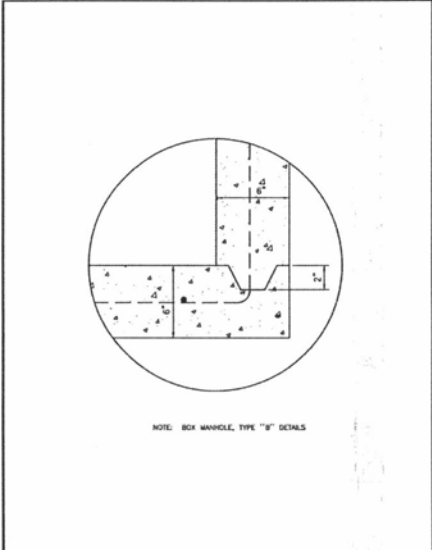
PRE CASTING OF TYPE "B" INLETS MAY BE PERMISSIBLE. PRIOR TO PRE CASTING, THE CONTRACTOR SHALL SUBMIT DETAILS TO THE ENGINEER FOR APPROVAL.

MAXIMUM PIPE DIAMETER SHOULD NOT EXCEED 30 INCHES ON THE 3 FOOT WIDE SIDE OF THE TYPE "B" INLET.

IN SITUATIONS WHERE MULTIPLE INLETS ARE TO BE CONSTRUCTED ADJACENT TO ONE ANOTHER, THE COMMON INLET WALL SHALL BE CONSTRUCTED 12" THICK WITH THE EQUIVALENT AMOUNT OF REBAR AS REQUIRED FOR EACH INLET INDIVIDUALLY. THE CONVEYANCE OF STORM WATER THRU THE COMMON WALL SHALL BE BY INSTALLING THE APPROPRIATELY SIZED REINFORCED CONCRETE PIPE.



CITY OF RAPID CITY PUBLIC WORKS DEPARTMENT DATE: 5-1-07
TYPE "B" INLET SEC. SHT. 62-5a



CITY OF RAPID CITY PUBLIC WORKS DEPARTMENT DATE: 5-1-07
TYPICAL KEY JOINT SEC. SHT. 62-5b

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



DESIGNED BY	DATE	DRAWN BY	DATE
KB	12/08/10	EC	12/09/10
CH	12/09/10	KB	12/09/10

SUPERVISED BY: KENNIE BOVETTE, P.E.

PROPOSED BLACK HILLS CENTER
RAPID CITY, S.D.
CONSTRUCTION DETAILS

STANDARD CROSSWALK (W/RAMPS)

STANDARD CROSSWALK (W/O RAMPS)

HIGH VISIBILITY CROSSWALK

INSTALL STRIPES TO MATCH THE TRACKS WHERE POSSIBLE.

* CROSSWALK WIDTH TO MATCH ADJACENT SIDEWALK OR PATH WIDTH BUT NOT LESS THAN 6' MEASURED BETWEEN LINES

HIGH VISIBILITY CROSSWALK LOCATION AND WIDTH - SEE STANDARD CROSSWALK DETAIL

USE: SCHOOL, PARKWAY AND OTHER CROSSING LOCATIONS WITH HIGH PEDESTRIAN VOLUMES

CITY OF RAPID CITY	PUBLIC WORKS DEPARTMENT
DATE: 5-1-07	DATE: 5-1-07
TRAFFIC DESIGN STANDARDS	TRAFFIC DESIGN STANDARDS
PATHWAY STREET CROSSING - PM1	SEC. SHT. 91-2

TURN LANE - LANE USED SOLELY FOR TURNING VEHICLES

DROP LANE - THRU LANE THAT DIRECTLY BECOMES AN EXCLUSIVE TURN LANE

NOTES:

- ALL SIGNS AND PAVEMENT MARKINGS ARE TO BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE MUTCD.
- ARROW SPACING (S) MEASURED FROM BASE TO BASE: 32' x 5.4 80'.
- FOR TURN LANE LENGTH L < 80', USE THREE ARROW SYMBOLS.
- RIGHT TURN LANES SHOWN. LEFT TURN LANES SHALL BE REVERSED.
- TURN LANE LENGTH (L) IS TO BE DESIGNED BASED ON ESTIMATED QUEUE LENGTHS IN TURN LANE AND IN THE ADJACENT THRU LANE.
- FOR L > 180', THE 25' DIMENSION MAY BE INCREASED. *
- ADVANCED INTERSECTION LANE CONTROL SIGNS (R3-8 SERIES) MAY BE REQUIRED.

CITY OF RAPID CITY	PUBLIC WORKS DEPARTMENT
DATE: 5-1-07	DATE: 5-1-07
TRAFFIC DESIGN STANDARDS	TRAFFIC DESIGN STANDARDS
TURN LANE SIGNING & MARKINGS - PM3	SEC. SHT. 91-2b

R1-1/R1-2 SIGN (STOP/YIELD)

R2-1 SIGN (SPEED LIMIT)

LATERAL PLACEMENT

WITH CURB

WITHOUT CURB

* PLACED AT OR NEAR THE FIRST LOT LINE AWAY FROM INTERSECTION

* SPEED LIMIT SIGNS ARE REQUIRED AT THE CHANGE IN LIMIT SPEED

CITY OF RAPID CITY	PUBLIC WORKS DEPARTMENT
DATE: 5-1-07	DATE: 5-1-07
TRAFFIC DESIGN STANDARDS	TRAFFIC DESIGN STANDARDS
SIGN LOCATIONS - SJ3	SEC. SHT. 91-3b

TRAFFIC SIGN SPECIFICATIONS:

THE FOLLOWING SPECIFICATIONS APPLY TO ALL TRAFFIC CONTROL SIGNS INSTALLED WITHIN THE CITY. ALL SIGNS SHALL BE MANUFACTURED AND INSTALLED PER CITY SPECIFICATIONS/STANDARDS. ITEMS NOT SPECIFICALLY DEFINED BY THE CITY SHALL FOLLOW SDOT SPECIFICATIONS AND THOSE IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND TRAFFIC CONTROL DEVICES HANDBOOK.

MANUFACTURE:

THE FOLLOWING PERTAINS TO ALL TRAFFIC CONTROL SIGNS SIGN FACES:

- SIGN FACES SHALL BE STANDARD SIZE.
- SIGN FACES SHALL BE MANUFACTURED USING HIGH INTENSITY OR DIAMOND GRADE SHEETING MATERIAL.
- ALL SCORED FACES SHALL BE FREE OF DRIPS, SMEARS, THIN SPOTS OR OTHER DEFECTS THAT WILL AFFECT THEIR DURABILITY OR LEGIBILITY.
- COLOR SHALL BE UNIFORM AND MATCH FEDERAL COLOR STANDARDS.
- FACES SHALL BE FULLY ADHERED TO THE BACKING MATERIAL.

BACKING MATERIAL:

- ALUMINUM SHALL BE ANODIZED AND 0.080 MINIMUM GAUGE THICKNESS.
- ALUMINUM SHALL BE MINIMUM GRADE TYPE 3000.
- RECYCLED PLASTIC SIGN BLANKS ARE ALLOWED. USE OF PLASTIC BLANKS MUST BE APPROVED BY THE CITY TRAFFIC ENGINEER PRIOR TO USE.
- WOOD, PAPER, OR OTHER MATERIALS ARE NOT ALLOWED.
- BACK OF SIGN BLANK SHALL BE FREE OF ALL OBJECTS EXCEPT DATE STICKER.

INSTALLATION:

GENERALLY, TRAFFIC CONTROL SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE PROJECT PLANS, THESE SPECIFICATIONS AND THE FOLLOWING NOTES AND DETAIL:

- ALL TRAFFIC CONTROL SIGNS SHALL BE INSTALLED 7 FEET ABOVE THE ROADWAY ELEVATION
- THE POST(S) SHALL EXTEND TO THE TOP OF THE SIGN.
- SQUARE TUBE TYPE SIGN POSTS SHALL BE USED. THESE POSTS SHALL MEET ALL APPLICABLE FEDERAL BREAK-AWAY STANDARDS OR BE OF THE SAME MANUFACTURE/TYPE AS USED BY THE CITY.
- ALL POSTS SHALL BE FULLY GALVANIZED.

SPECIFIC INTERPRETATIONS OF THESE SPECIFICATIONS SHALL BE MADE BY THE CITY TRAFFIC ENGINEER.

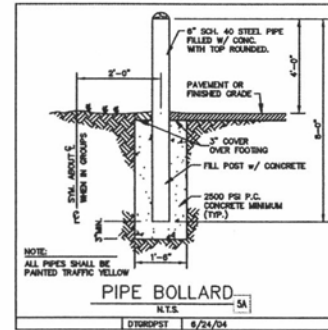
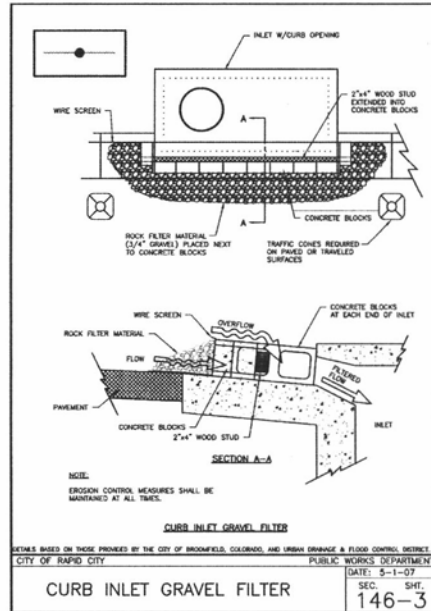
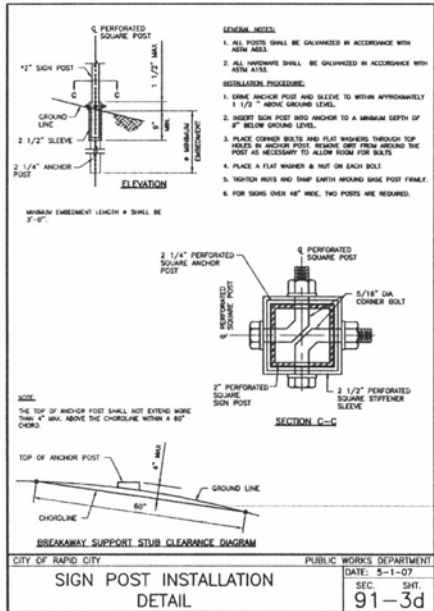
CITY OF RAPID CITY	PUBLIC WORKS DEPARTMENT
DATE: 5-1-07	DATE: 5-1-07
TRAFFIC DESIGN STANDARDS	TRAFFIC DESIGN STANDARDS
SIGN SPECIFICATIONS - SJ4	SEC. SHT. 91-3c

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



DESIGNED BY	DATE	DRAWN BY	DATE
KB	12/09/10	EC	12/09/10
CHECKED BY	DATE	ENGINER BY	DATE
CH	12/09/10	KB	12/09/10

SUPERVISED BY KENNIE BOYETTE, P.E.



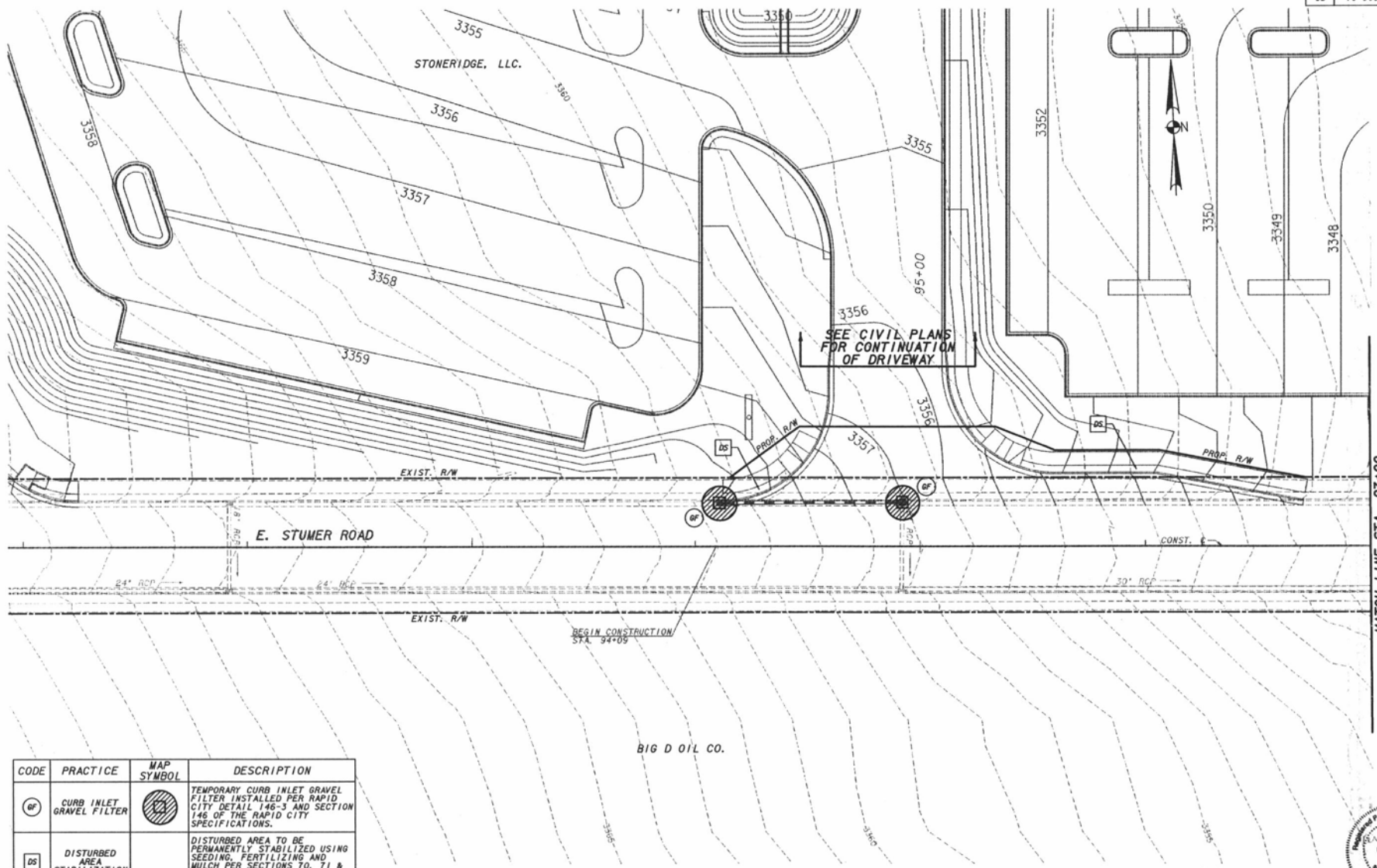
REVISIONS			
DATE	BY	DESCRIPTION	



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KB	KB	12/09/10	EC	EC	12/09/10
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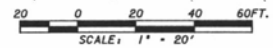
**PROPOSED BLACK HILLS CENTER
 RAPID CITY, S. D.
 CONSTRUCTION DETAILS**



MATCH LINE STA. 97+00
SEE SHEET R-20

CODE	PRACTICE	MAP SYMBOL	DESCRIPTION
GF	CURB INLET GRAVEL FILTER		TEMPORARY CURB INLET GRAVEL FILTER INSTALLED PER RAPID CITY DETAIL 146-3 AND SECTION 146 OF THE RAPID CITY SPECIFICATIONS.
DS	DISTURBED AREA STABILIZATION		DISTURBED AREA TO BE PERMANENTLY STABILIZED USING SEEDING, FERTILIZING AND MULCH PER SECTIONS 70, 71 & 72 OF THE RAPID CITY SPECIFICATIONS.

SEE CIVIL SITE PLANS FOR ADDITIONAL DETAILS FOR EROSION CONTROL



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



NAME	DATE	NAME	DATE
DESIGNED: KB	12/09/10	DRAWN: EC	12/09/10
CHECKED: CH	12/09/10	CHECKED: KB	12/09/10

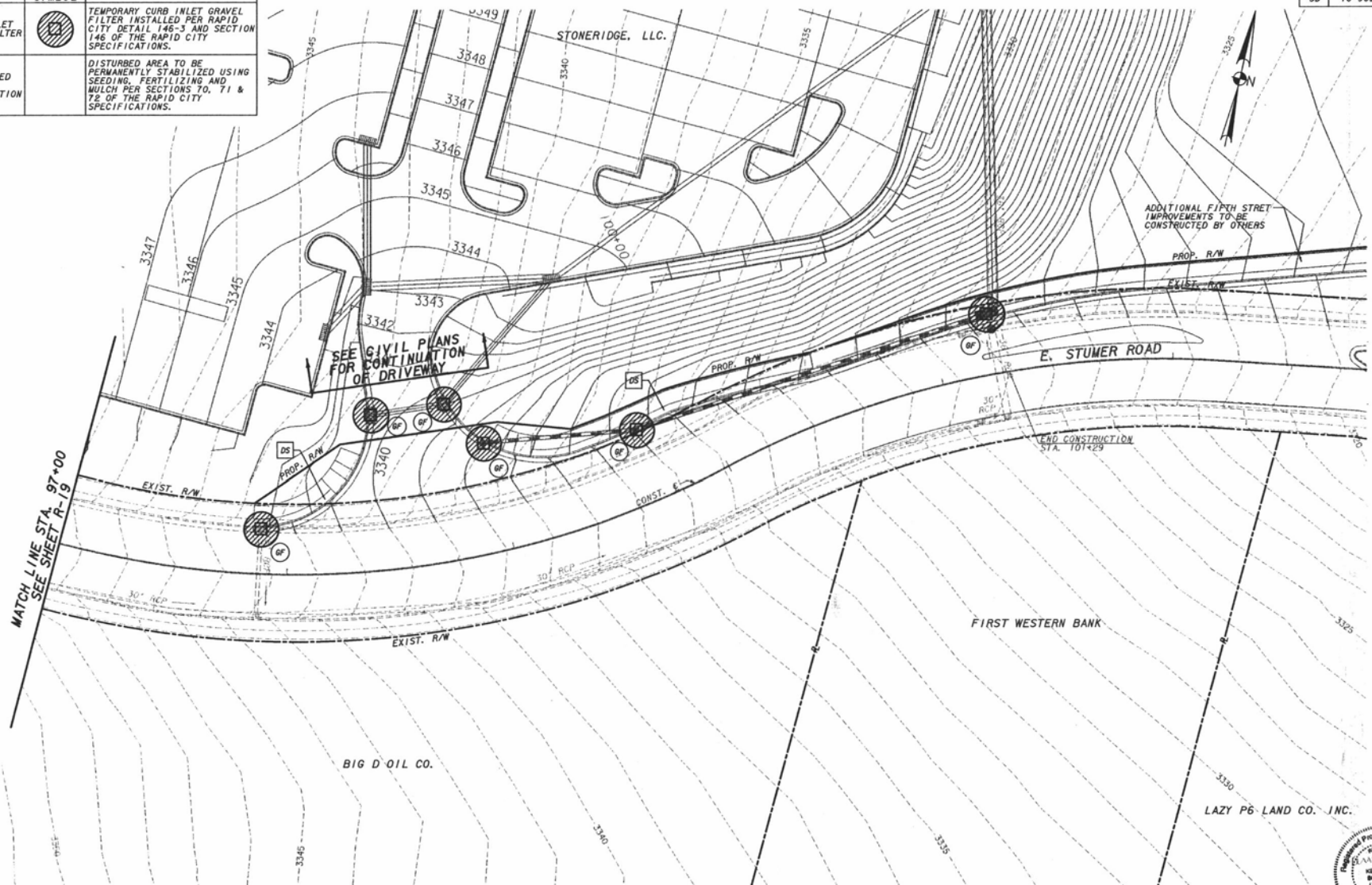
SUPERVISED BY: KENRIE BOYETTE, P.E.

**PROPOSED BLACK HILLS CENTER
RAPID CITY, S.D.
EROSION CONTROL PLANS**

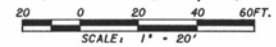
10PL096

STATE	PROJECT NUMBER		
SD	10-909		

CODE	PRACTICE	MAP SYMBOL	DESCRIPTION
GF	CURB INLET GRAVEL FILTER		TEMPORARY CURB INLET GRAVEL FILTER INSTALLED PER RAPID CITY DETAIL 146-3 AND SECTION 146 OF THE RAPID CITY SPECIFICATIONS.
DS	DISTURBED AREA STABILIZATION		DISTURBED AREA TO BE PERMANENTLY STABILIZED USING SEEDING, FERTILIZING AND MULCH PER SECTIONS 70, 71 & 72 OF THE RAPID CITY SPECIFICATIONS.



SEE CIVIL SITE PLANS FOR ADDITIONAL DETAILS FOR EROSION CONTROL



REVISIONS			
DATE	BY	DESCRIPTION	



NAME	DATE	NAME	DATE
DESIGNED BY: KB	12/09/10	DRAWN BY: EC	12/09/10
CHECKED BY: CH	12/09/10	CHECKED BY: KB	12/09/10

SUPERVISED BY KERRIE BOYETTE, P.E.

PROPOSED BLACK HILLS CENTER
RAPID CITY, S.D.
EROSION CONTROL PLANS

DATE/NO NUMBER
R-20