



KS: 1-800-344-7233
WICHITA: 687-2470

SANITARY SEWER & STORM WATER SEWER IMPROVEMENTS TO SERVE QUIKTRIP STORE #349

LOTS 2-4-6-8-10-12-14-16-18-20 ALONG DOUGLAS, 10-12-14-16 ALONG
DODGE & ODD LOTS 9-11-13-15 ALONG SENECA, SUPPLEMENTAL PLAT TO

MARTINSON'S 1ST ADDITION TO WEST WICHITA,
WICHITA, SEDGWICK COUNTY, KANSAS

LOCATED AT THE NW CORNER OF DOUGLAS & SENECA
PRIVATE PROJ. NO.: 1890 PPS(607861)
JAMES L. ARMOUR, P.E., CITY ENGINEER
NOVEMBER 2008

Date Released:
:apr 03/19/2009

AS-BUILTS
CONTRACTOR: DONDLINGER & SONS
INSPECTOR: BRIAN BLOYD,
SCHWAB-EATON
PDF BY: BDB 3/12/09
CONSTRUCTED PER PLAN.

GENERAL NOTES

ALL ELEVATIONS SHOWN ARE BASED ON CITY DATUM(+1187.4=NGVD 29).

- CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF SEVENTY-TWO (72) HOURS (EXCLUDING WEEKENDS AND HOLIDAYS) TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:

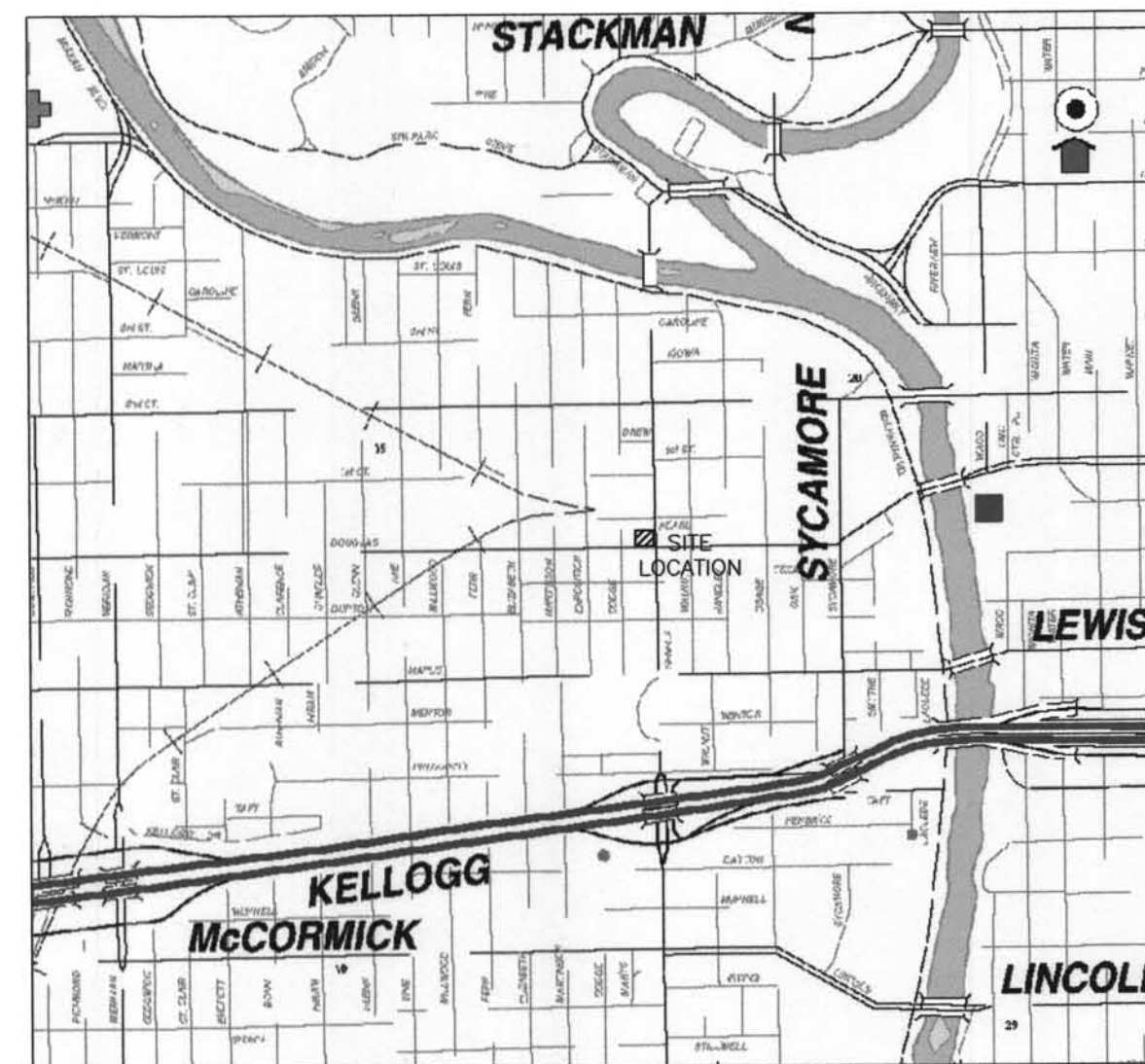
KANSAS ONE CALL 1-800-344-7233 OR
687-2470 (LOCAL WICHITA)

THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

COX COMMUNICATIONS 316-262-0661
AT&T 1-800-870-8390
KANSAS GAS SERVICE 1-800-482-4950
WESTAR ENERGY 316-383-8600
CITY OF WICHITA WATER &
SEWER DEPARTMENT 316-268-4555

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

- CONTRACTOR SHALL NOT CAUSE ANY INCONVENIENCE TO THE PUBLIC, ADJACENT PROPERTY OWNERS, PEDESTRIANS, ETC. DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL NOT DISRUPT ACCESS TO ADJACENT PROPERTIES AT ANY TIME DURING CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR CLARIFICATION IF A DISCREPANCY OR INCONSISTENCY IS IDENTIFIED ON THE PLANS AND/OR SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL REQUIRED/NECESSARY SHEETING, SHORING, AND SPECIAL EXCAVATION MEASURES REQUIRED ON THE PROJECT TO MEET OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
- COST OF EXCAVATION, HAULING AND DUMPING OF EXCESS EXCAVATION SHALL BE SUBSIDIARY TO OTHER ITEMS OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE INSPECTOR FOR THIS PROJECT 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT ON SITE. ANY WORK DONE WITHOUT INSPECTION WILL BE REQUIRED TO BE UNCOVERED FOR INSPECTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO REESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS SUCH IRONS SHALL BE REESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
- THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, ENTRANCES AND BANK LINES TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE.
- THE CONTRACTOR MUST EXAMINE THE CONSTRUCTION SITE PRIOR TO BIDDING AND BE SATISFIED AS TO THE WORK SHOWN FOR COMPLETION. AFTER BIDS HAVE BEEN RECEIVED, THE CONTRACTOR SHALL NOT ASSERT THAT THERE WAS A MISUNDERSTANDING OF THE QUANTITIES OF WORK OR OF THE NATURE FOR THE WORK TO BE COMPLETED.
- EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION AVAILABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WHICH ARE ENCOUNTERED ON THIS PROJECT. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING TRENCHING OPERATIONS TO AVOID DAMAGING THESE LINES. ANY LINES DAMAGED SHALL BE REPLACED OR REPAIRED IMMEDIATELY AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS TO PERMIT TRAFFIC THROUGH AND ACROSS CONSTRUCTION AT EXISTING ROADWAYS AT ALL TIMES. THE CONTRACTOR SHALL ERECT WARNING SIGNS, FLASHING LIGHTS, AND BARRICADES IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES TO ENSURE SAFETY AS DIRECTED IN THE GENERAL CONDITIONS. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA SHALL NOT BE CARRIED THROUGH CONSTRUCTION.
- ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION OF DISTURBED AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP SOIL PREPARATION, SEEDING, MULCH, AND/OR RESEEDING. ALL SEEDING/SODING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS AND THE CITY OF WICHITA ADMINISTRATIVE REGULATION NO. AR78 WHICH GOVERNS CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR 'SITE RESTORATION'.
- CUTS MADE TO PAVED SURFACES ON PUBLIC PROPERTY WILL BE REPAIRED BY THE CITY'S CONTRACTOR AND CHARGED AGAINST THE OWNER/APPLICANT. UNIT REPAIR PRICES ARE AVAILABLE FROM THE CITY AT 268-4418. A SURCHARGE MAY BE APPLICABLE. CALL 268-4418 FOR DETAILS. REPAIR COSTS TO BE PAID PRIOR TO RELEASE OF WATER SERVICE IF WATER SERVICE IS AFFECTED.



Vicinity Map
Not to Scale

PLAN INDEX:

SITE CIVIL PLANS	SS & SWS PRIVATE PROJECT PLANS
1 COVER SHEET	16 COVER SHEET
2 SITE SURVEY	17 SITE PLAN
3 DEMOLITION	18 SANITARY SEWER PLAN/PROFILE
4 SITE PLAN	19 STORM WATER SEWER 1 PLAN/PROFILE
5 GRADING	20 STORM WATER SEWER 2 PLAN/PROFILE
6 ADA GRADING COMPLIANCE PLAN	21 EROSION CONTROL PLAN-PHASE 1
7 UTILITY PLAN	22 EROSION CONTROL PLAN-PHASE 2
8 LANDSCAPING PLAN	23 CITY OF WICHITA STD. SANITARY SEWER MANHOLE DETAIL
9 PAVING PLAN	24 QUIKTRIP DRAINAGE STRUCTURE DETAILS
10 LANDSCAPING DETAILS	25 CITY OF WICHITA STD. DRIVE INLET DETAIL
11 MISC. SITE DETAILS 1	26 EROSION CONTROL DETAIL SHEET 1
12 MISC. SITE DETAILS 2	27 EROSION CONTROL DETAIL SHEET 2
13 PAVING DETAILS	28 EROSION CONTROL DETAIL SHEET 3
14 TRENCHING DETAILS 1	29 EROSION CONTROL DETAIL SHEET 4
15 TRENCHING DETAILS 2	30 EROSION CONTROL DETAIL SHEET 5
	PAVING PRIVATE PROJECT PLANS
	31 PAVING PLAN

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

SANITARY SEWERS *Julianne Kallman 11-6-08*

STORM SEWERS *Julianne Kallman 11-6-08*

DRIVEWAY APPROACHES _____

WATER MAINS _____

PAVING _____

NOTE TO CONTRACTOR

INSPECTION AND TESTING FOR THIS PROJECT IS TO BE PROVIDED BY A LICENSED CONSULTING ENGINEERING FIRM UNDER CONTRACT WITH THE OWNER/DEVELOPER. SAID INSPECTION TO BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD CONSTRUCTION ENGINEERING PRACTICES AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. NO WORK SHALL BE PERFORMED IN DEDICATED EASEMENTS OR THE PUBLIC RIGHT-OF-WAY BY THE CONTRACTOR WITHOUT SUCH INSPECTION NOR SHALL ANY WORK BE COMMENCED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER.

RESOURCE LIST:

CITY OF WICHITA

PLANNING DEPARTMENT 455 N. MAIN CITY HALL, 10TH FLOOR WICHITA, KS 67202 TEL: (316) 268-4421 FAX: (316) 268-4390 CONTACT:	OFFICE OF CENTRAL INSPECTION 455 N. MAIN CITY HALL, 7TH FLOOR WICHITA, KS 67202 TEL: (316) 268-4292 FAX: (316) 268-4663 CONTACT: CURTIS BOWAN
PUBLIC WORKS/ENGINEERING 455 N. MAIN CITY HALL, 7TH FLOOR WICHITA, KS 67202 TEL: (316) 268-4501 FAX: (316) 268-4114 CONTACT: JIM ARMOUR	CITY WATER DEPARTMENT 455 N. MAIN CITY HALL, 8TH FLOOR WICHITA, KS 67202 TEL: (316) 268-4555 CONTACT: GREG LOLLEY
WICHITA FIRE DEPARTMENT 455 N. MAIN CITY HALL, 11TH FLOOR WICHITA, KS 67202 TEL: (316) 268-4451 FAX: (316) 268-4409 CONTACT: CHIEF BOB THOMPSON	CITY WASTEWATER DEPARTMENT 455 N. MAIN CITY HALL, 8TH FLOOR WICHITA, KS 67202 TEL: (316) 268-4555 CONTACT: LADONNA LAWRENZ
AT&T 154 N. BROADWAY, ROOM 460 WICHITA, KS 67202 TEL: (316) 268-2762 FAX: (316) 268-3110 CONTACT: JIM TOBEN SUPERVISOR	KANSAS GAS SERVICE 1021 E. 26TH ST. NORTH WICHITA, KS 37219 TEL: (316) 831-5664 CONTACT: CINDY MOLLOHAN

QUIKTRIP CONTACTS:

ENGINEER OF RECORD-JASON C. MOHLER, P.E. (316)634-6776
QT CIVIL ENGINEER-TODD LUPE, P.E. (918)615-7627
QT PROJECT MANAGER-JAKE SUTTON (918)615-7861
QT REAL ESTATE MANAGER-JOHN DIX (918)615-7829
4705 S. 129TH E. AVE.
TULSA, OK 74134

FLOOD CERTIFICATION:

THIS PROPERTY LIES IN ZONE "X" AND DOES NOT LOCATE WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR SEDGWICK COUNTY, COMMUNITY PANEL NUMBER 20173C0365E, EFFECTIVE DATE FEBRUARY 2, 2007.



QuikTrip

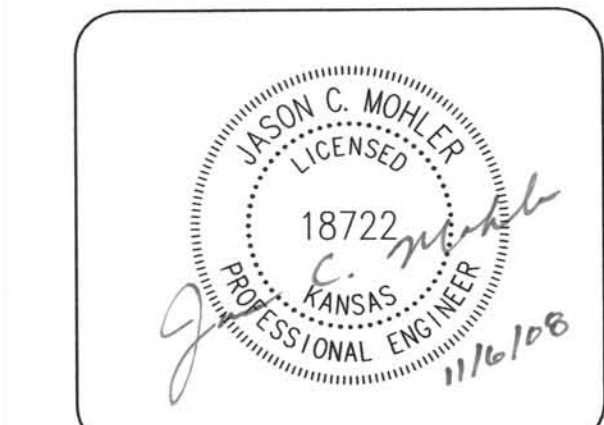
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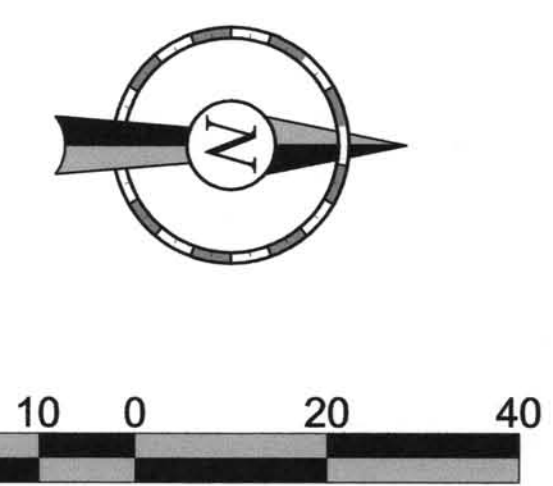
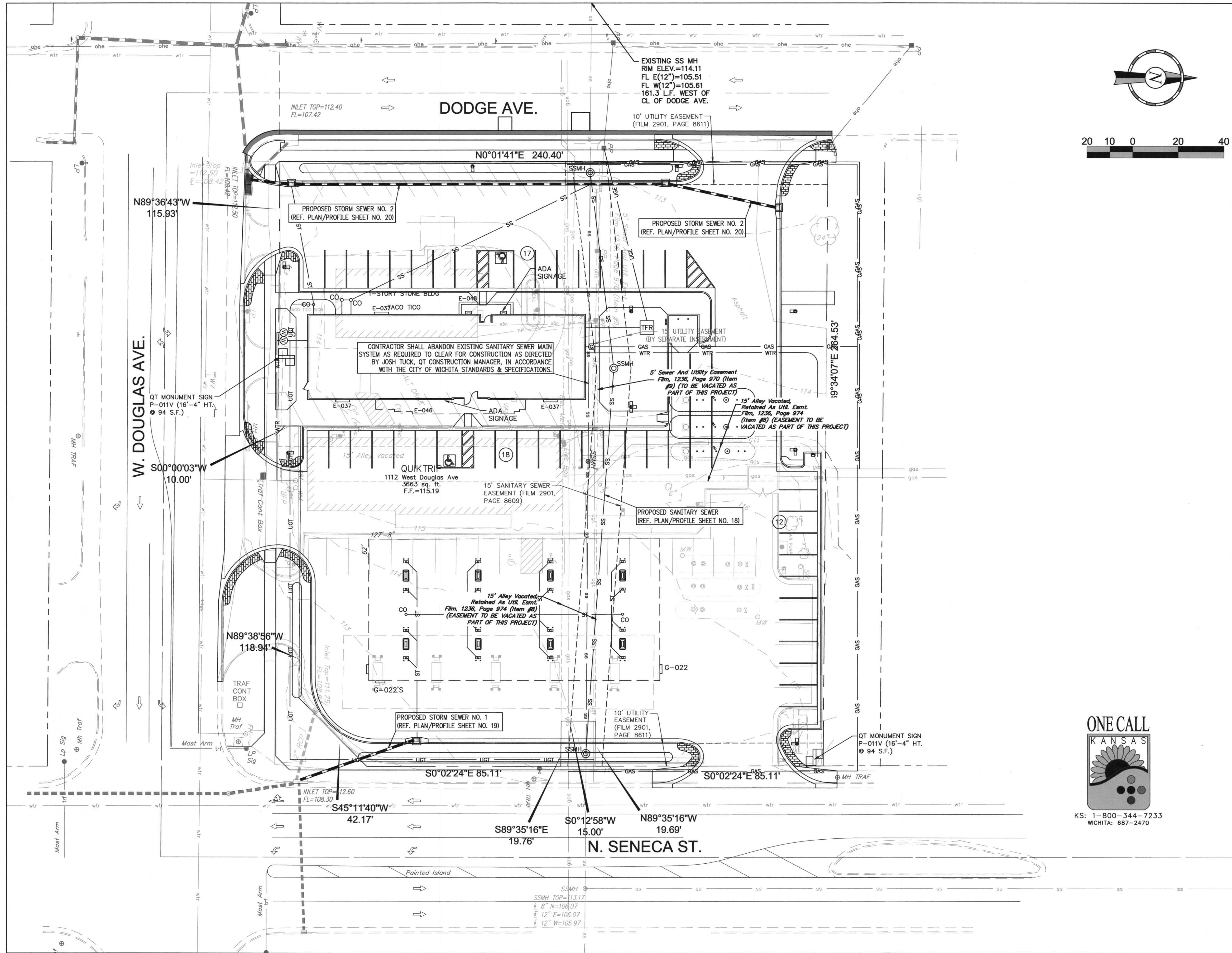
No.	Revision	Date
	STATE REVISION 1 HERE	10/31/02

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SS & SWS COVER

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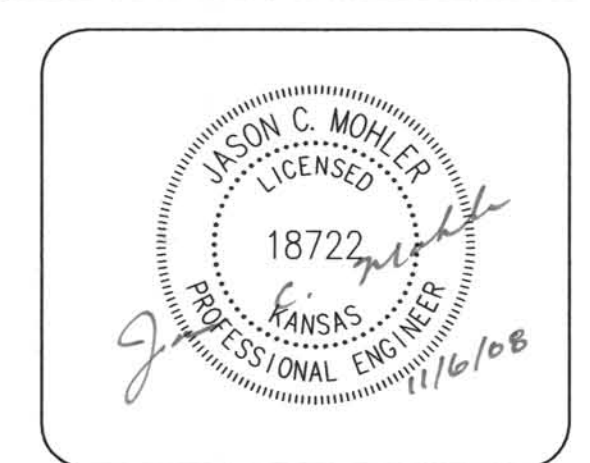


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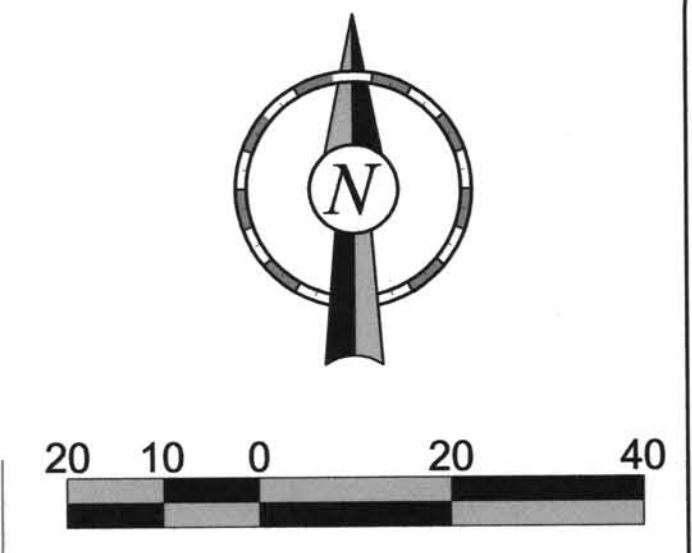
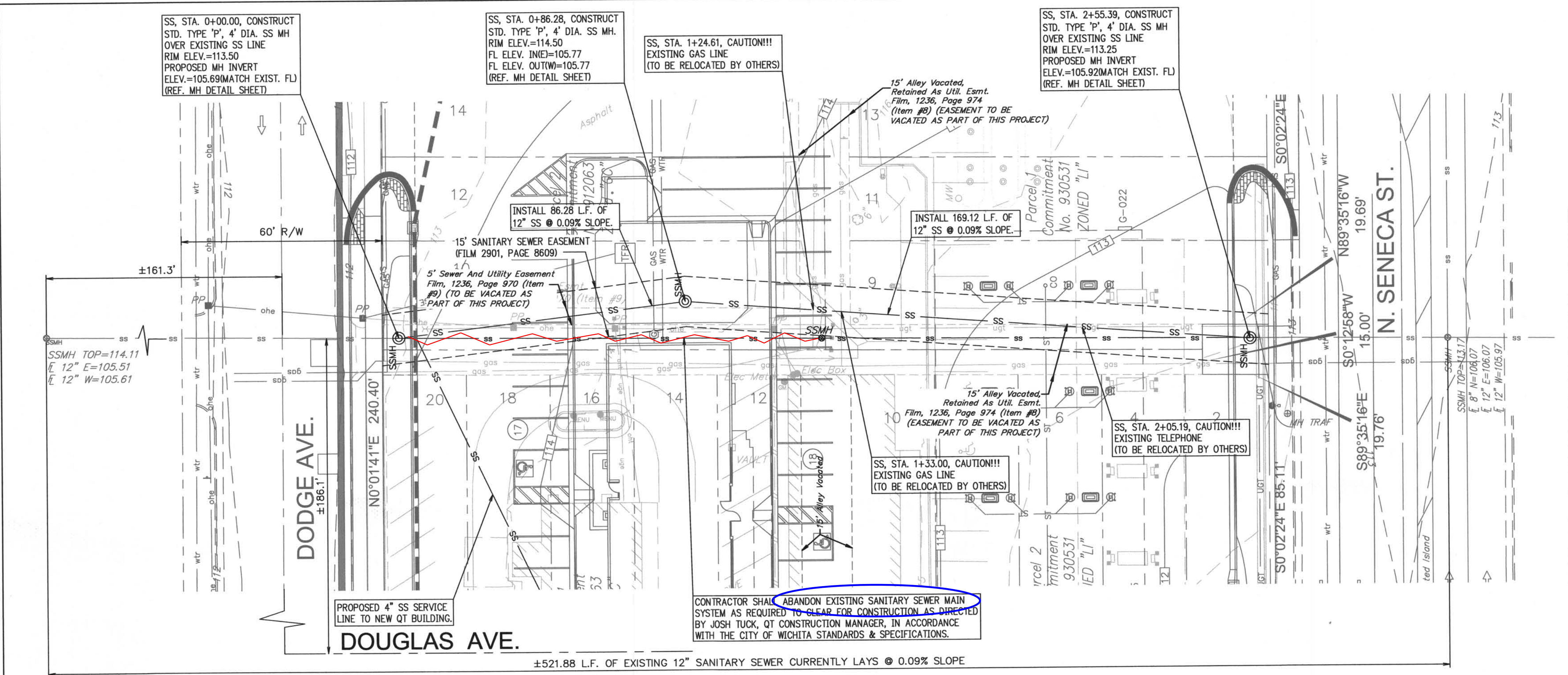


ONE CALL
 KANSAS
 KS: 1-800-344-7233
 WICHITA: 687-2470

SS & SWS SITE PLAN

DRAWN BY: CKW	17	SHEET
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CHECKED BY: JCM		31
ISSUE DATE: 11/07/08		

QuikTrip Store No. : 349 1112 WEST DOUGLAS AVE. WICHITA, KANSAS



KS: 1-800-344-7233
WICHITA: 687-2470

Station	Description	Elevation
0+00	BEGIN SS STA. 0+00.00 CONSTRUCT SS MH	105.69
0+86.28	SS STA. 0+86.28 CONSTRUCT SS MH	105.77
1+24.61	SS STA. 1+24.61 CAUTION!!! EXISTING GAS LINE	105.77
1+33.00	SS STA. 1+33.00 CAUTION!!! EXISTING GAS LINE	105.76
2+05.19	SS STA. 2+05.19 CAUTION!!! EXISTING UNDERGROUND TELEPHONE	105.88
2+55.39	END SS STA. 2+55.39 CONSTRUCT SS MH	105.92

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SANITARY SEWER PLAN & PROFILE

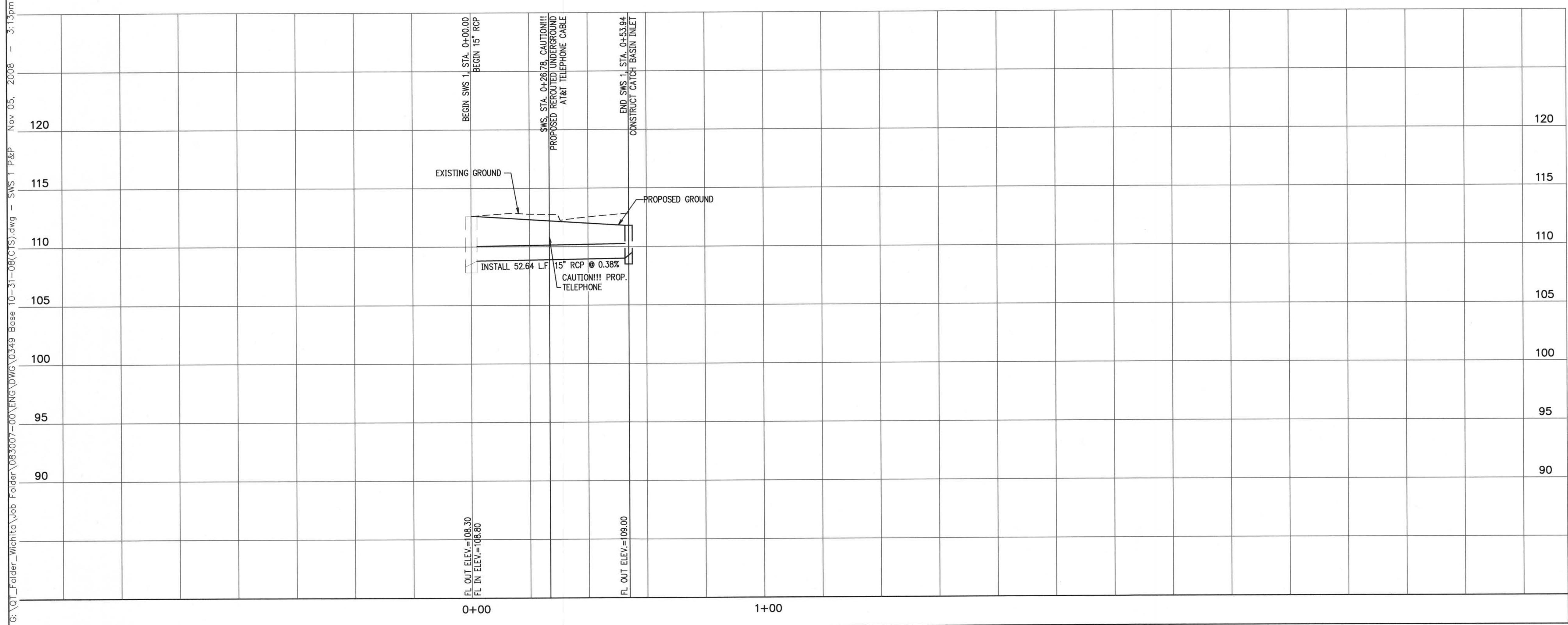
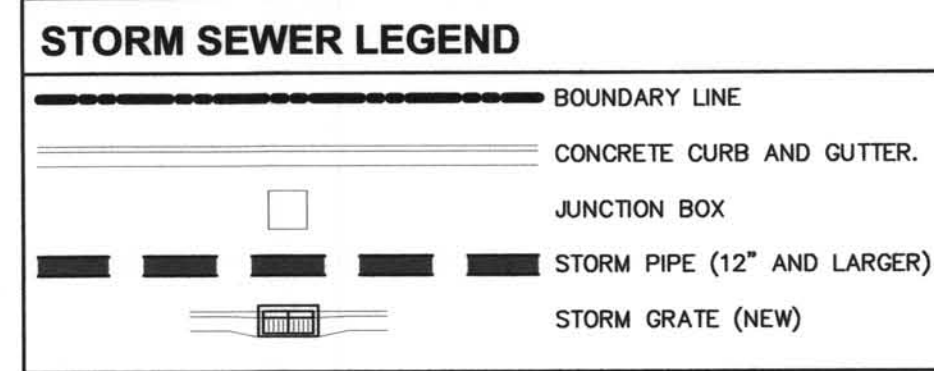
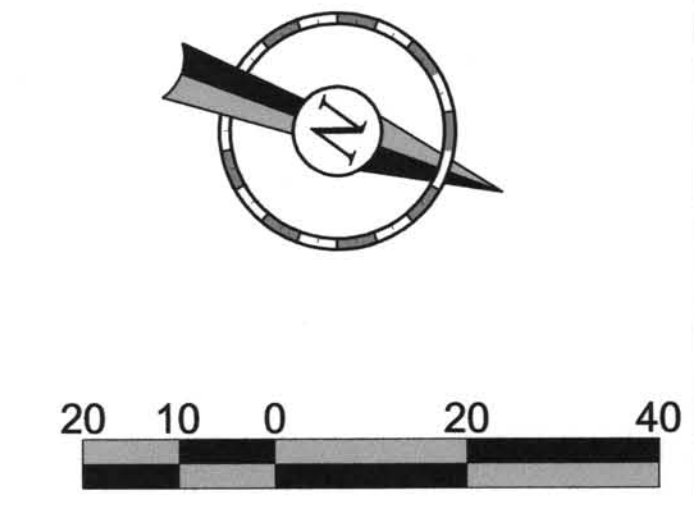
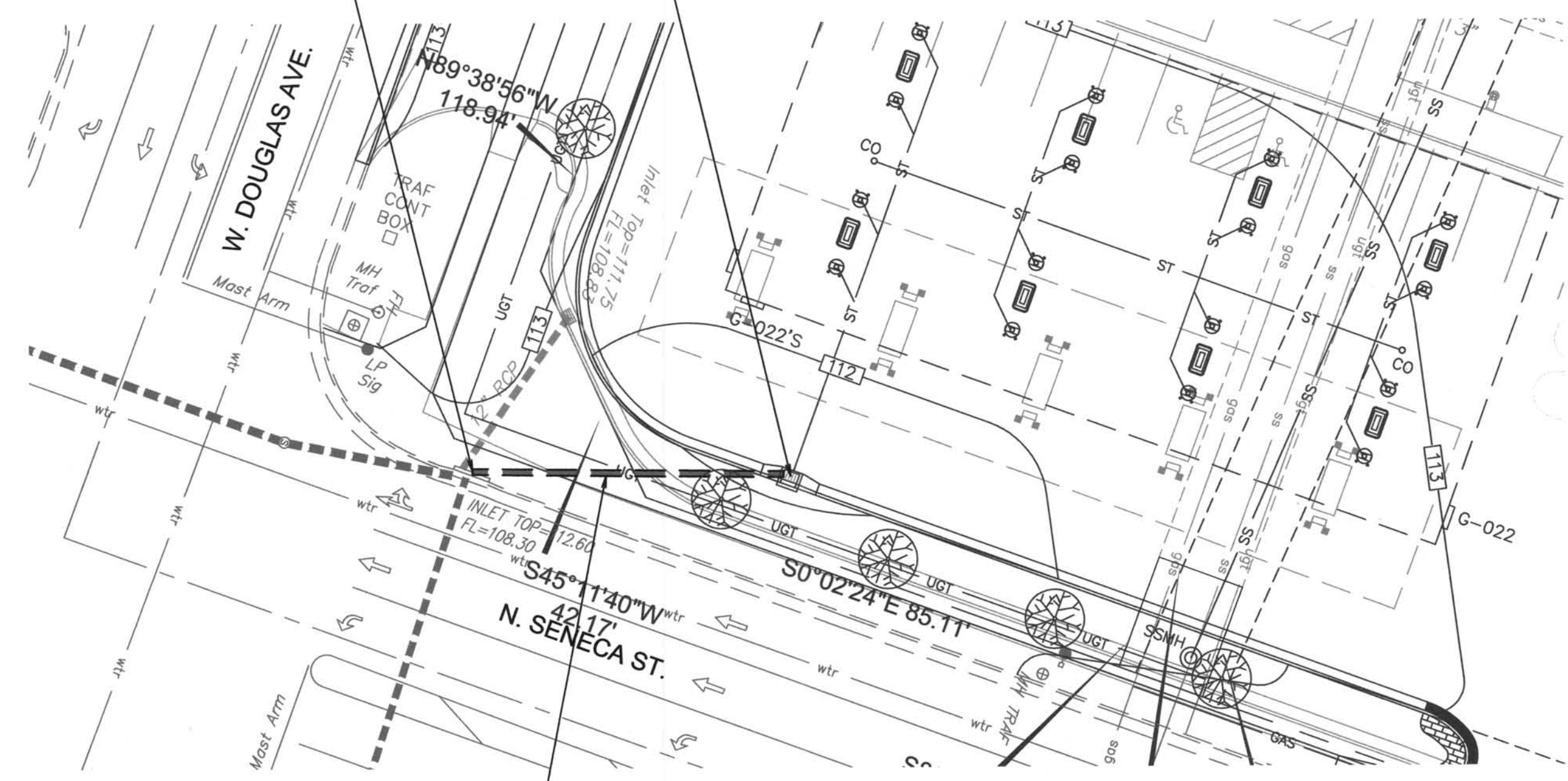
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DESIGNED BY: CKW	18
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ISSUE DATE: 11/07/08	OF 31

QuikTrip Store No. : 349 1112 WEST DOUGLAS AVE. WICHITA, KANSAS

BEGIN SWS 1, STA. 0+00.00,
SEAL NEW 15" RCP SWS TO
EXIST. INLET WALL PER CITY OF
WICHITA SPECIFICATIONS.
INLET TOP ELEV.=112.60
EXIST. INVERT ELEV.=108.30
PROP. 15" FL ELEV. IN=108.80

END SWS 1, STA. 0+53.94,
CONSTRUCT CATCH BASIN INLET
TOP OF CURB ELEV.=111.80
GUTTER ELEV.=111.30
FL ELEV. OUT(15")=109.00
(REF. DETAIL SHEET 23.)

INSTALL 52.64 L.F. OF
15" RCP @ 0.38% SLOPE.



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**STORM SEWER 1
PLAN & PROFILE**

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DESIGNED BY: CKW	19
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ISSUE DATE: 11/07/08	OF 31

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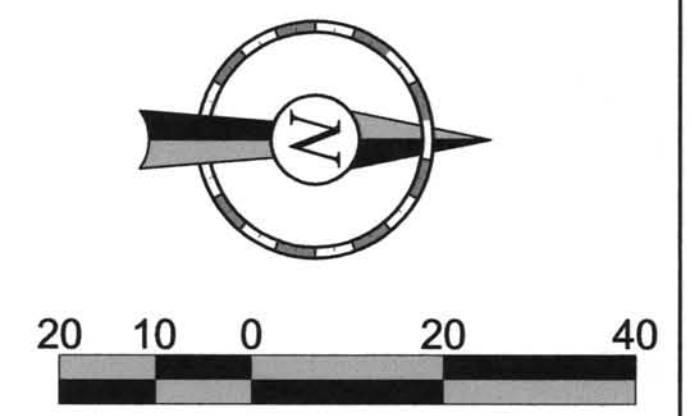
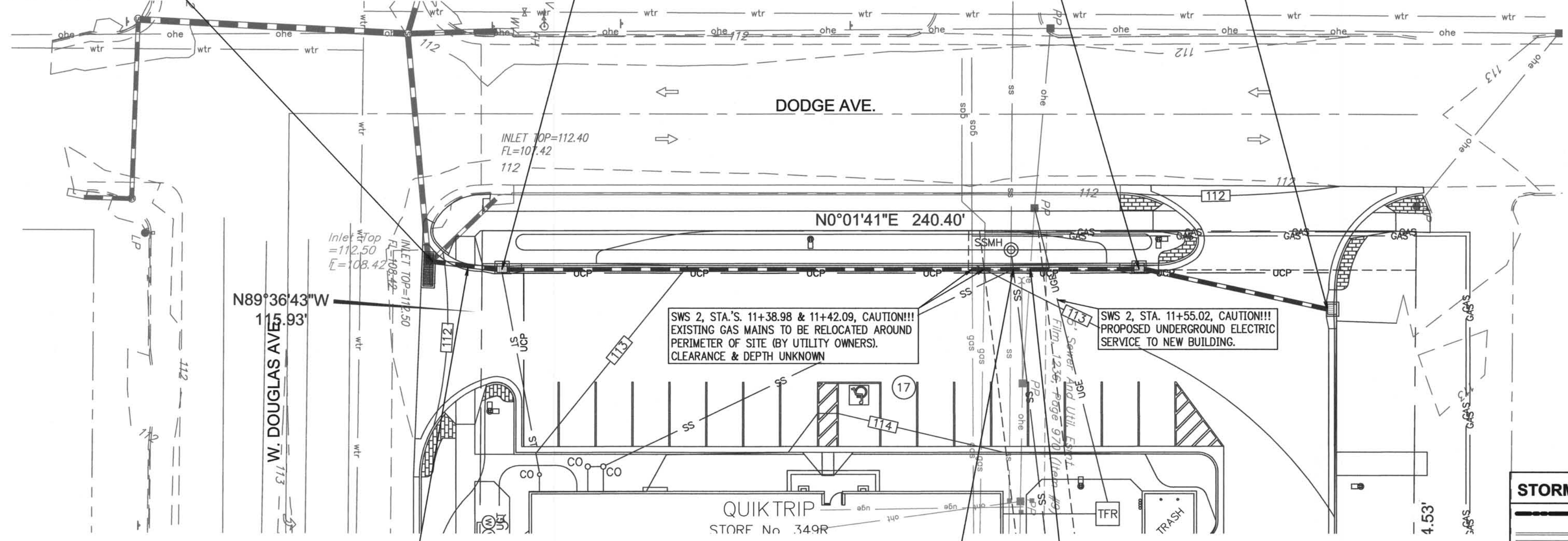
QuikTrip Store No. : 349 1112 WEST DOUGLAS AVE. WICHITA, KANSAS

BEGIN SWS 2, STA. 10+00.00, CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING CURB INLET AND CONSTRUCT CITY OF WICHITA STANDARD DOUBLE GRATED DRIVEWAY INLET. CONTRACTOR IS RESPONSIBLE FOR ALL SWS HOOK-UPS PER CITY STANDARDS. (REF. DETAIL SHEET, THIS SET.) GRATE ELEVATION=111.85 EXIST. FL ELEV. OUT(W)=108.42 PROP. 12" FL ELEV. IN(N)=108.82

SWS 2, STA. 10+17.97, CONSTRUCT CATCH BASIN INLET TOP OF CURB ELEV.=112.61 GUTTER ELEV.=112.11 FL ELEV. OUT(12")=108.91 FL ELEV. IN(12")=108.92 (REF. DETAIL SHEET 24.)

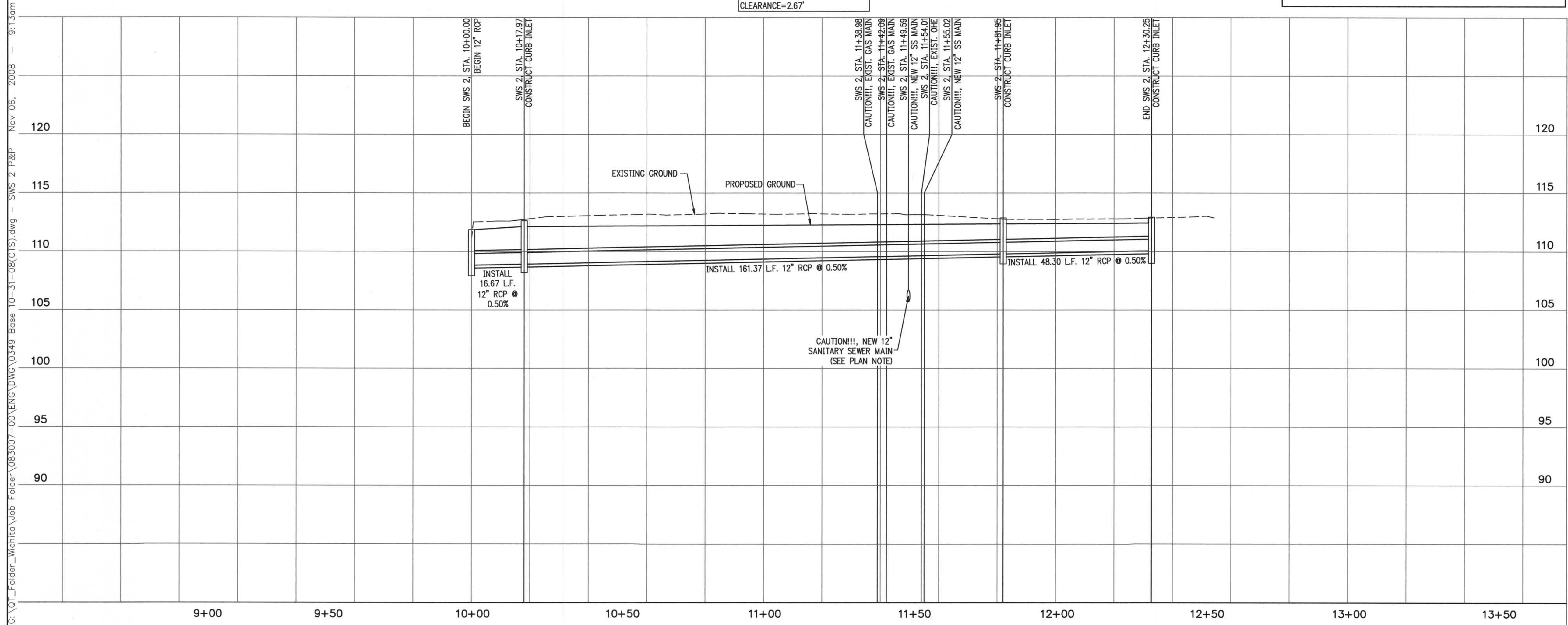
SWS 2, STA. 11+81.95, CONSTRUCT CATCH BASIN INLET TOP OF CURB ELEV.=112.86 GUTTER ELEV.=112.36 FL ELEV. OUT(12")=109.80 FL ELEV. IN(12")=109.81 (REF. DETAIL SHEET 24.)

END SWS 2, STA. 12+30.25, CONSTRUCT CATCH BASIN INLET TOP OF CURB ELEV.=112.92 GUTTER ELEV.=112.42 FL ELEV. OUT(12")=110.05 (REF. DETAIL SHEET 24.)



STORM SEWER LEGEND

	BOUNDARY LINE
	CONCRETE CURB AND GUTTER.
	JUNCTION BOX
	STORM PIPE (12" AND LARGER)
	STORM GRATE (NEW)



QT

QuikTrip.

4705 South 129th East Ave.
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P.O. Box 3475
Tulsa, OK 74101-3475
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GENERAL NOTES

ONE CALL KANSAS

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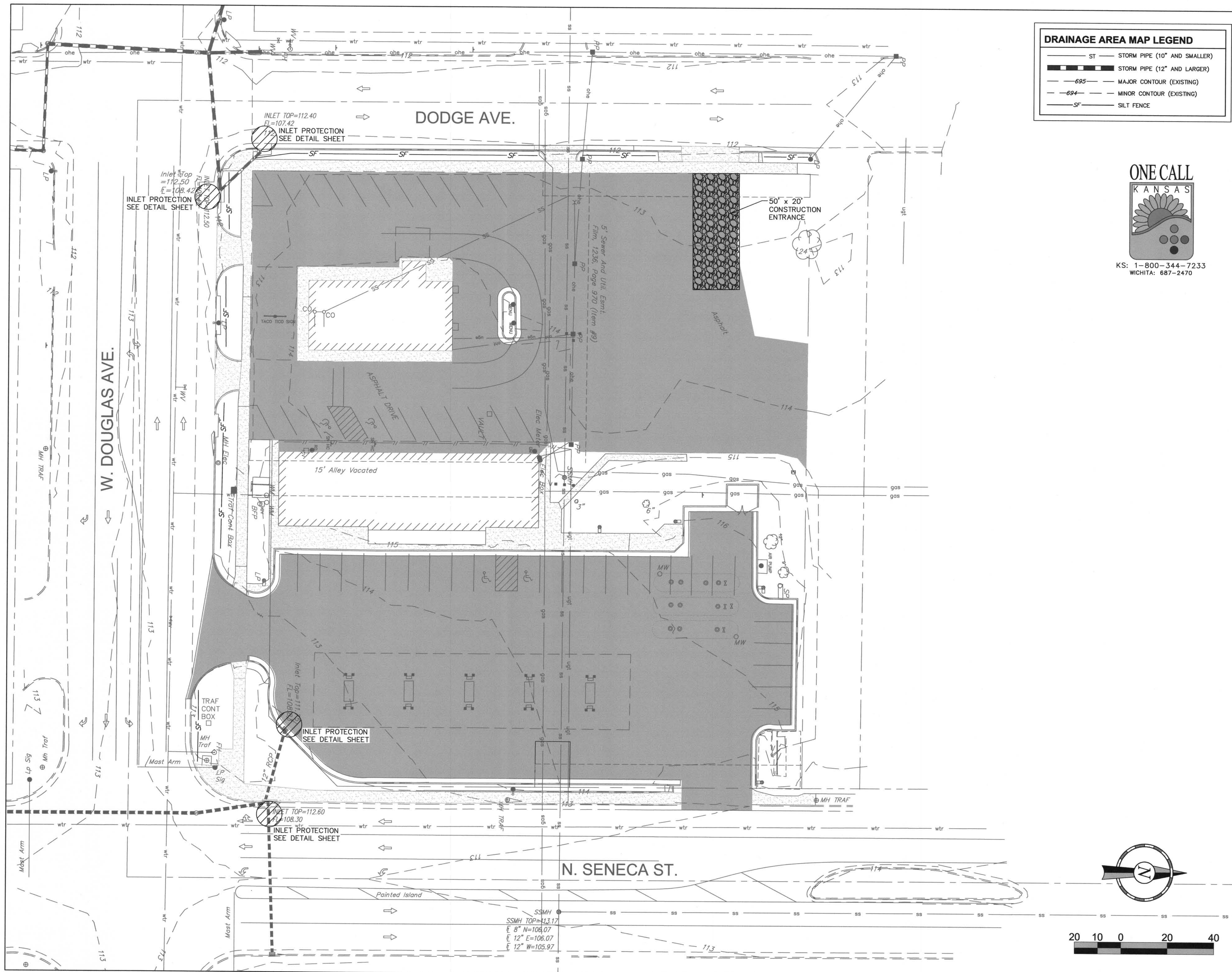


**STORM SEWER 2
PLAN & PROFILE**

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DESIGNED BY: CKW	
CHECKED BY: JCM	
ISSUE DATE: 11/07/08	

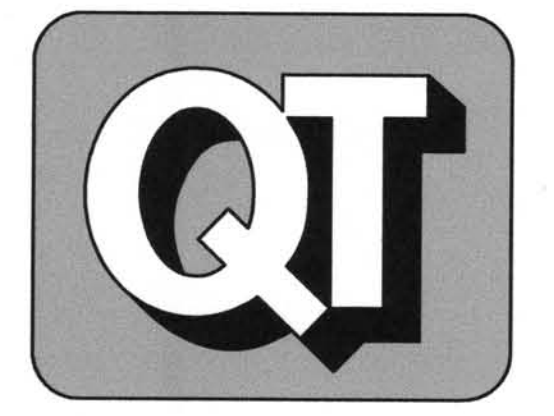
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1112 WEST DOUGLAS AVE. WICHITA, KANSAS QuikTrip Store No. : 349



DRAINAGE AREA MAP LEGEND

— ST —	STORM PIPE (10" AND SMALLER)
— ST —	STORM PIPE (12" AND LARGER)
— 695 —	MAJOR CONTOUR (EXISTING)
— 694 —	MINOR CONTOUR (EXISTING)
— SF —	SILT FENCE



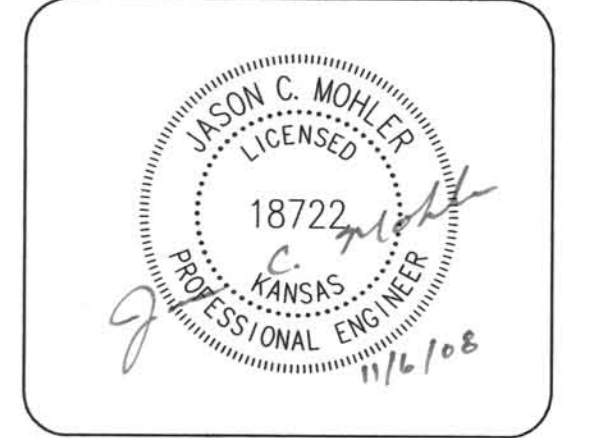
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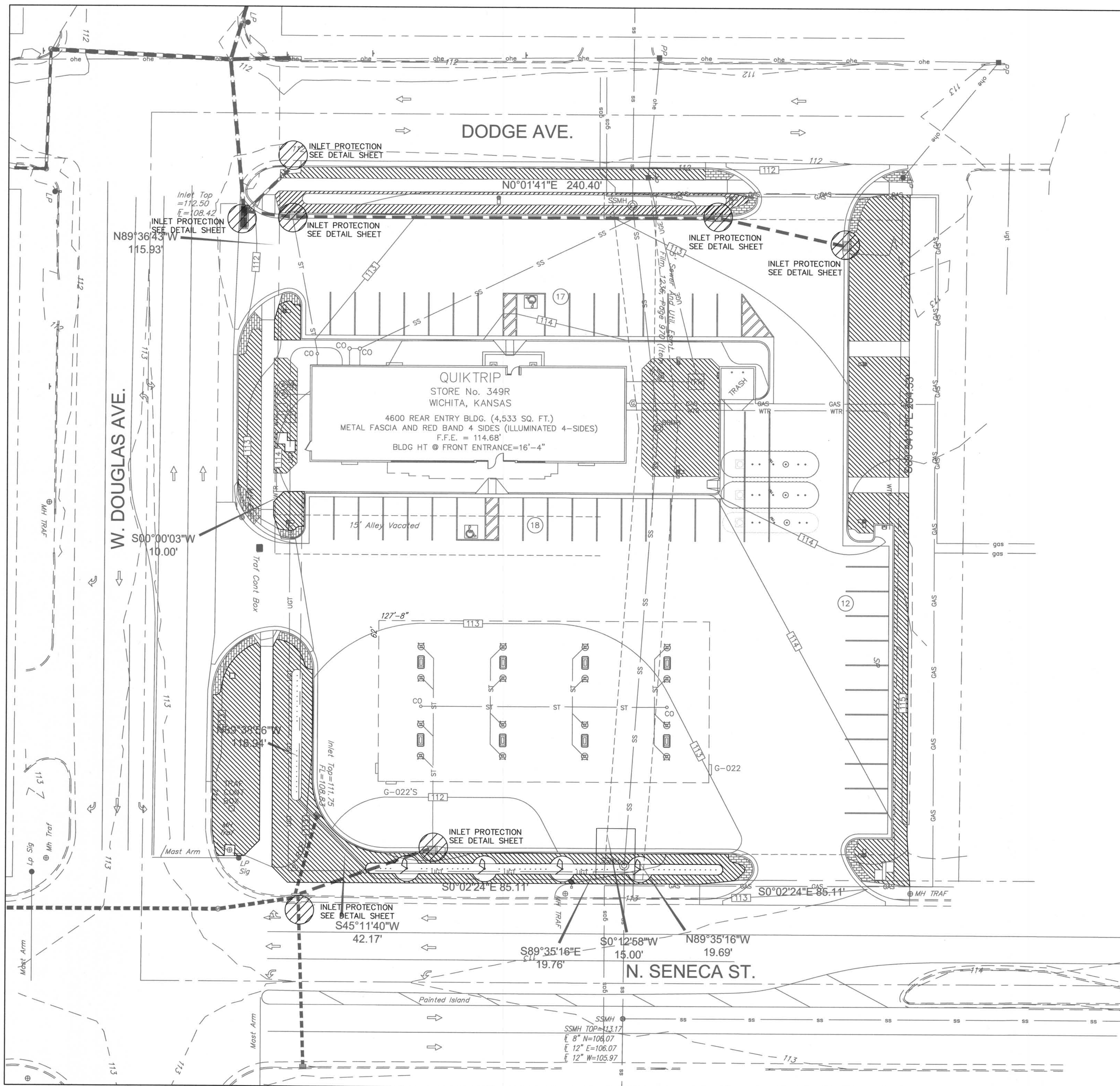
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EROSION CONTROL PLAN-PHASE 1

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DRAINAGE AREA MAP LEGEND

- ST — STORM PIPE (10" AND SMALLER)
- ST — STORM PIPE (12" AND LARGER)
- 695 — MAJOR CONTOUR (EXISTING)
- 694 — MINOR CONTOUR (EXISTING)
- SF — SILT FENCE
- Proposed SOD



KS: 1-800-344-7233
WICHITA: 687-2470



QuikTrip.

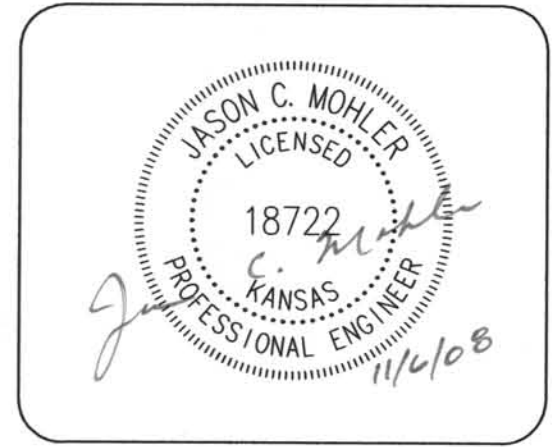
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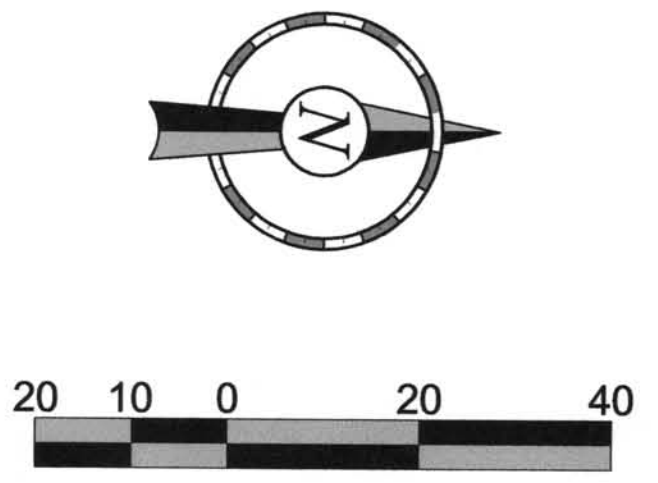
No.	Revision	Date

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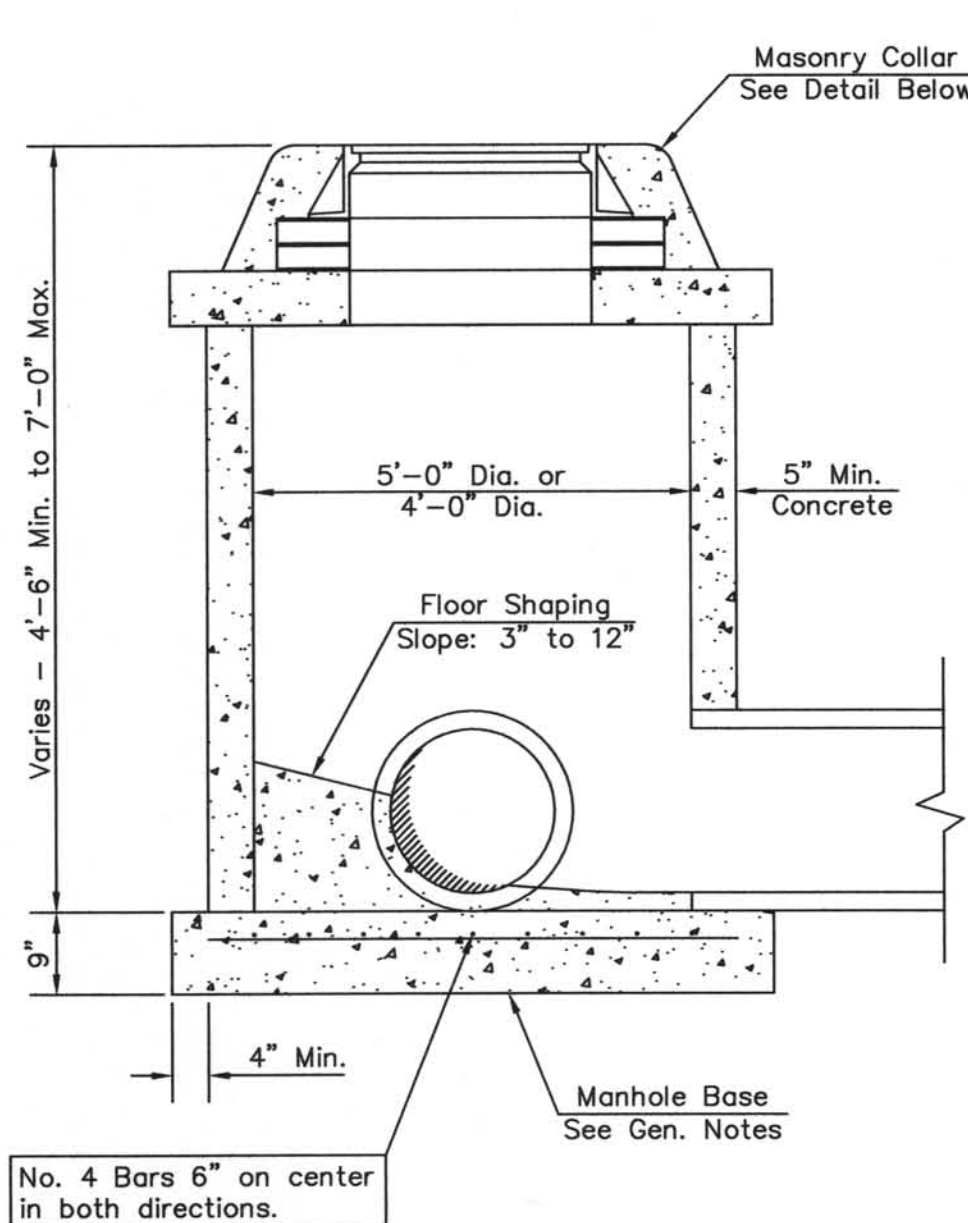


EROSION CONTROL PLAN-PHASE 2

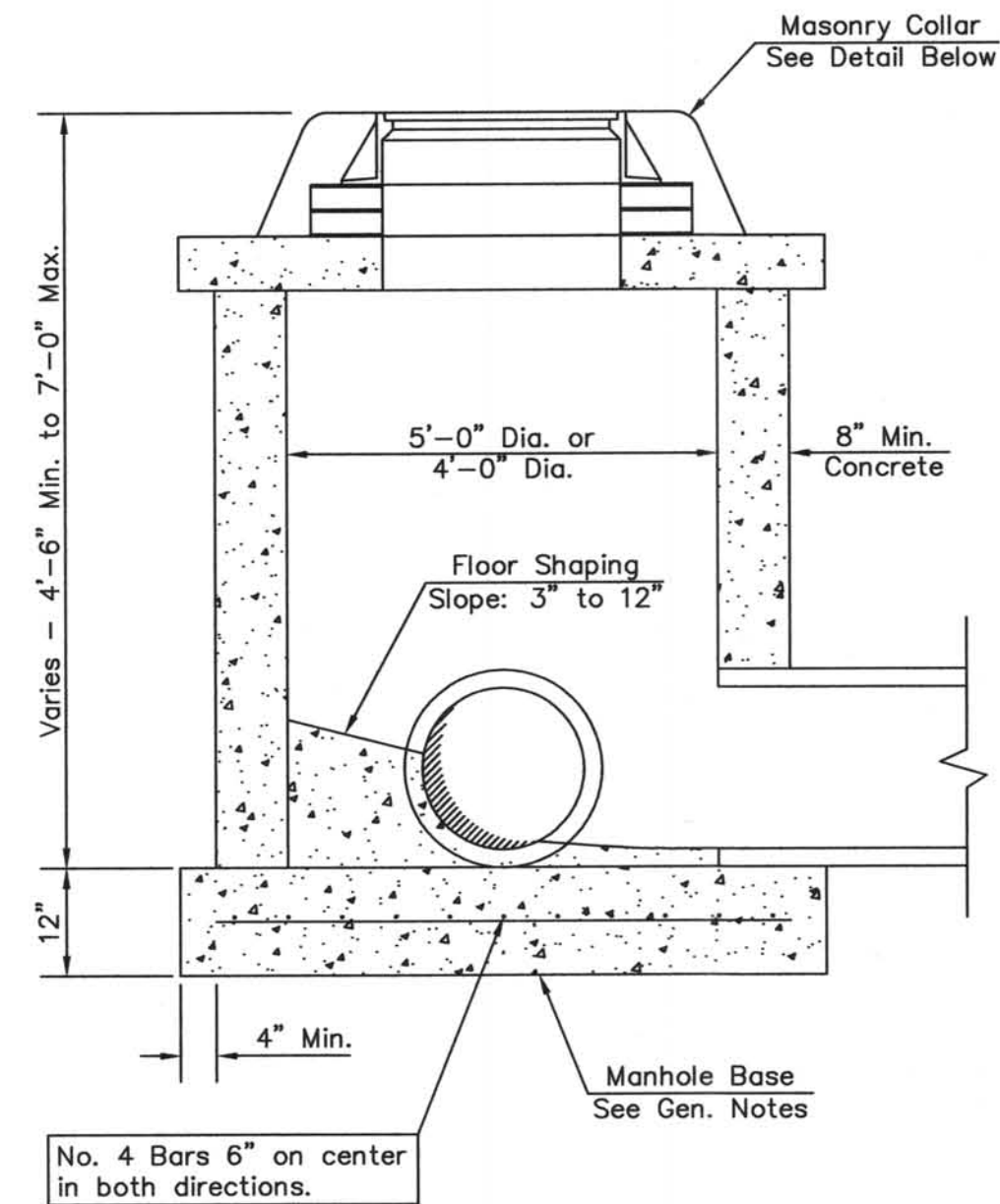
DRAWN BY: CKW	22	SHEET
DESIGNED BY: CKW		OF
CHECKED BY: JCM		31
ISSUE DATE: 11/07/08		



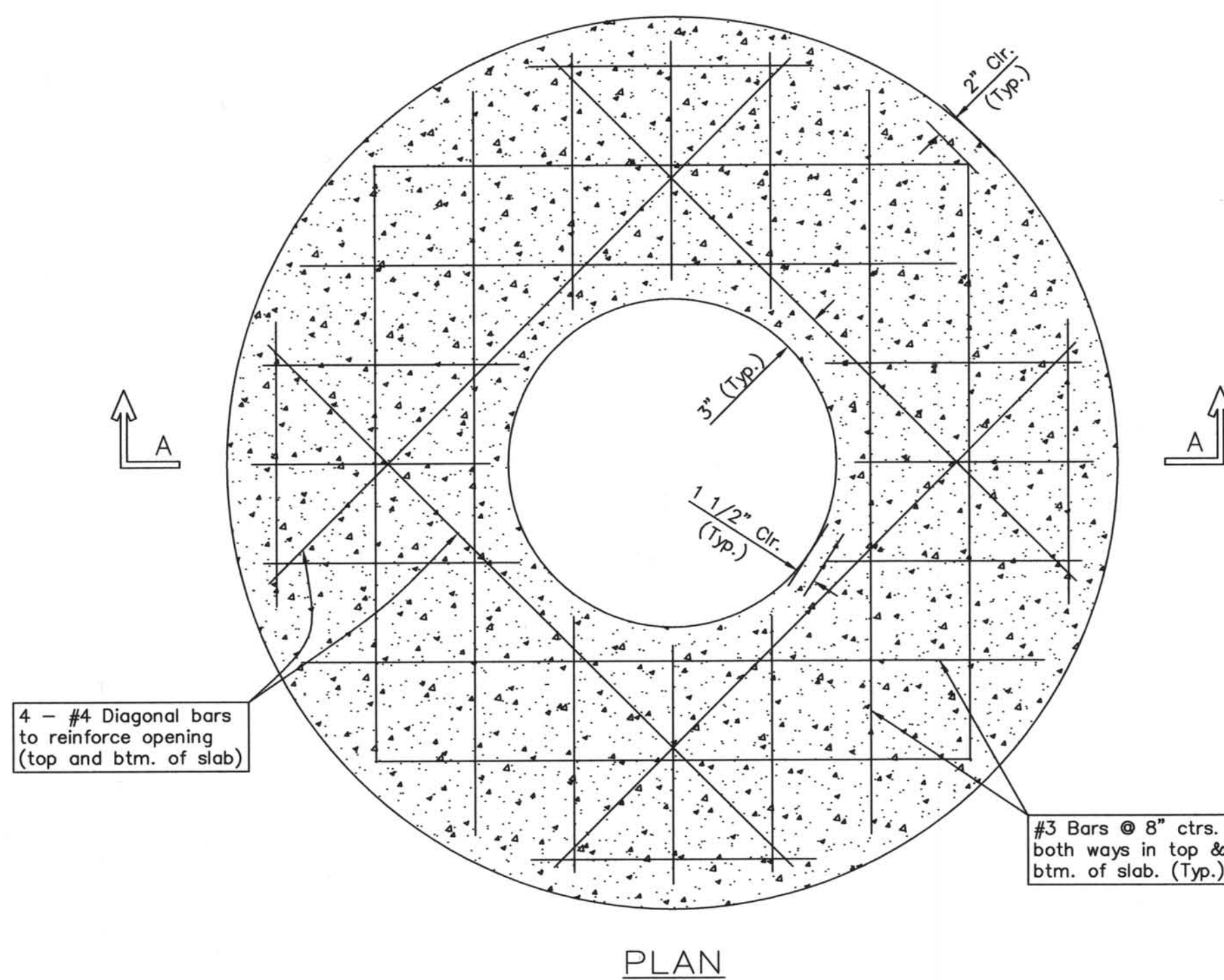
QuikTrip Store No. : 349 1112 WEST DOUGLAS AVE. WICHITA, KANSAS



SHALLOW TYPE "P" MANHOLE

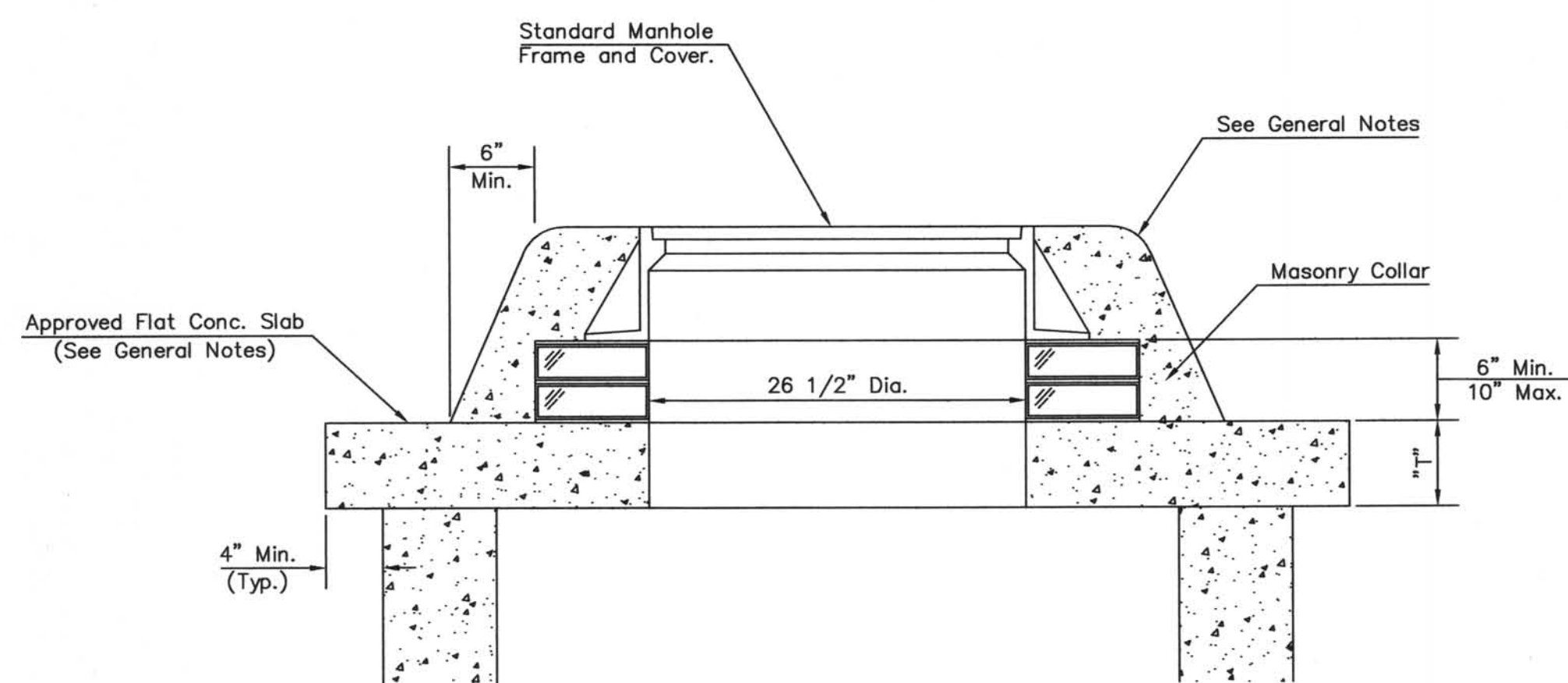


SHALLOW TYPE "C" MANHOLE

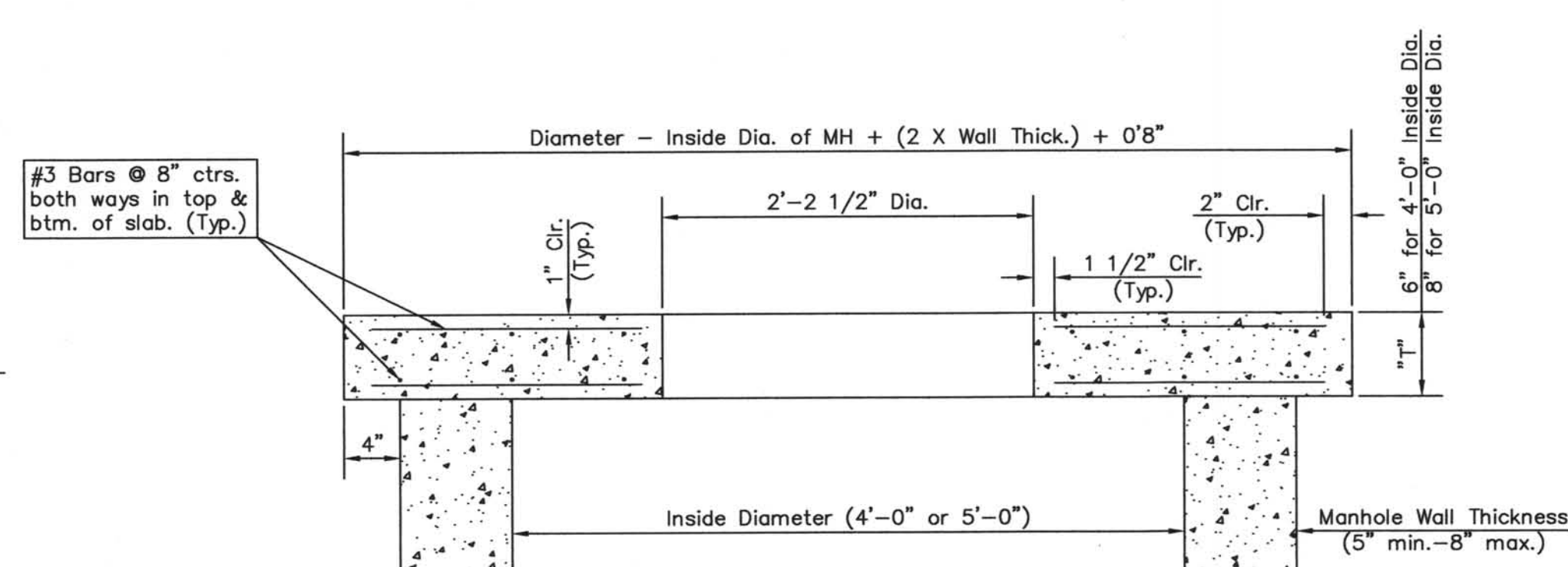


PLAN

- GENERAL NOTES**
- Mortar used in masonry construction shall contain 8 sacks of cement per cubic yard. Concrete used in manhole bases shall conform to the requirements of concrete for concrete pavement construction as specified in the city standard paving specifications using city concrete cement mix without air entraining admixture. Mortar shall be placed around the manhole ring as shown on the drawings when manholes are constructed in unpaved areas. Manholes constructed where pipe sizes are smaller than 24" shall have an inside diameter of 4". Manholes constructed where pipe sizes are 24" or larger shall have an inside diameter of 5". Completed manhole shall be without leaks and water tight.
 - Reinforcing steel shall be installed in the manhole bases and shall consist of no. 4 bars placed on 6" centers in both directions. The manhole base reinforcement shall be placed 6" above the bottom of the manhole base. All costs for furnishing and installing reinforcing steel shall be included in the unit price bid for the manhole.
 - The floors of all manholes shall be shaped with flow channels such that the manholes will be self cleaning and free of areas where solids could be deposited as sewage flows through the manhole from all inlet pipes to the outlet pipe. Flow channels shall be formed to match the bottom halves of the inflowing pipes and the outflowing pipe as shown by the drawings. Manhole floors shall have slopes of 3 inches per foot in the areas outside of the flow channels sloped toward the flow channels. Pipes laid through manholes shall have the top half removed to neat lines for the full inside diameter of the manhole. Manhole floors shall then be shaped around the bottom half of the pipe which forms the flow channel.
 - Pipes installed within the excavation made for the manhole shall be cradled with concrete to the limits of the manhole excavation. When clay pipe is used, the cradle shall extend to the first joint outside the manhole. The cradle shall be terminated at the clay pipe joint in a manner which will maintain the flexibility of the joint. Cost of cradle within manhole excavation or to clay pipe joints adjacent to manhole shall be included in the unit price bid for the manhole.
 - Manhole cover castings and manhole frame castings shall conform to the requirements as indicated in the standard specifications and as shown in the standard detail drawings.
 - The crowns of inflowing pipes shall never be set lower than the crown of the outflowing pipe.
 - Standard shallow manholes type "P" and "C" shall be paid for at the unit price bid per each for the type and diameter indicated. All standard shallow manhole diameters will be 4' unless indicated otherwise.
 - All brick used in manhole construction shall meet Grade SW of ASTM C652 or C62-87.



MASONRY COLLAR DETAIL

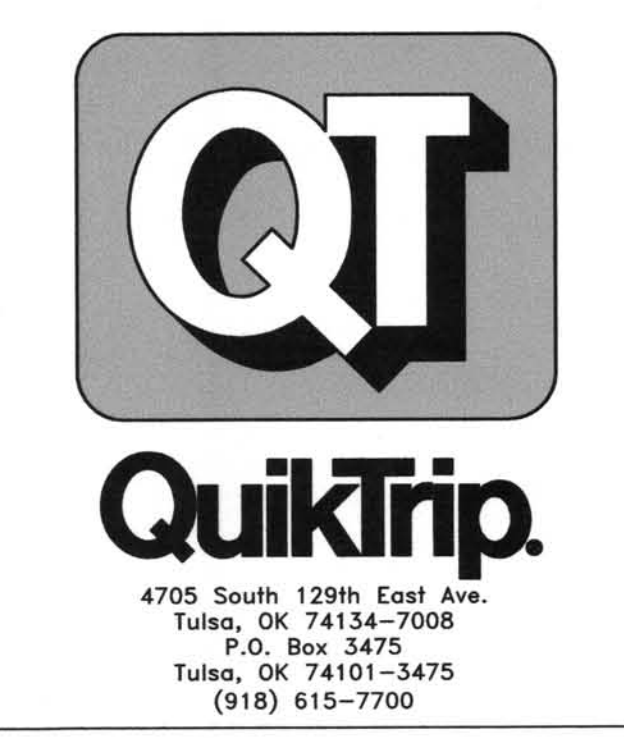


SECTION A-A

FLAT CONCRETE SLAB DETAILS



SHALLOW MANHOLES TYPE 'P' & 'C'			
CITY ENGINEER			
JAMES L. ARMOUR, P.E., L.S.			
PROJECT NUMBER	OCA NUMBER	DATE	
1890 PPS	XXXXXX	MM/YY	
CITY ENGINEER'S OFFICE		DESIGN	DRAWN
CITY HALL - SEVENTH FLOOR		ABC	DEF
435 NORTH MAIN STREET		SHEET	
WICHITA, KANSAS 67202-1620			
(316) 268-4501			
(316) 268-4114 FAX			



GENERAL NOTES

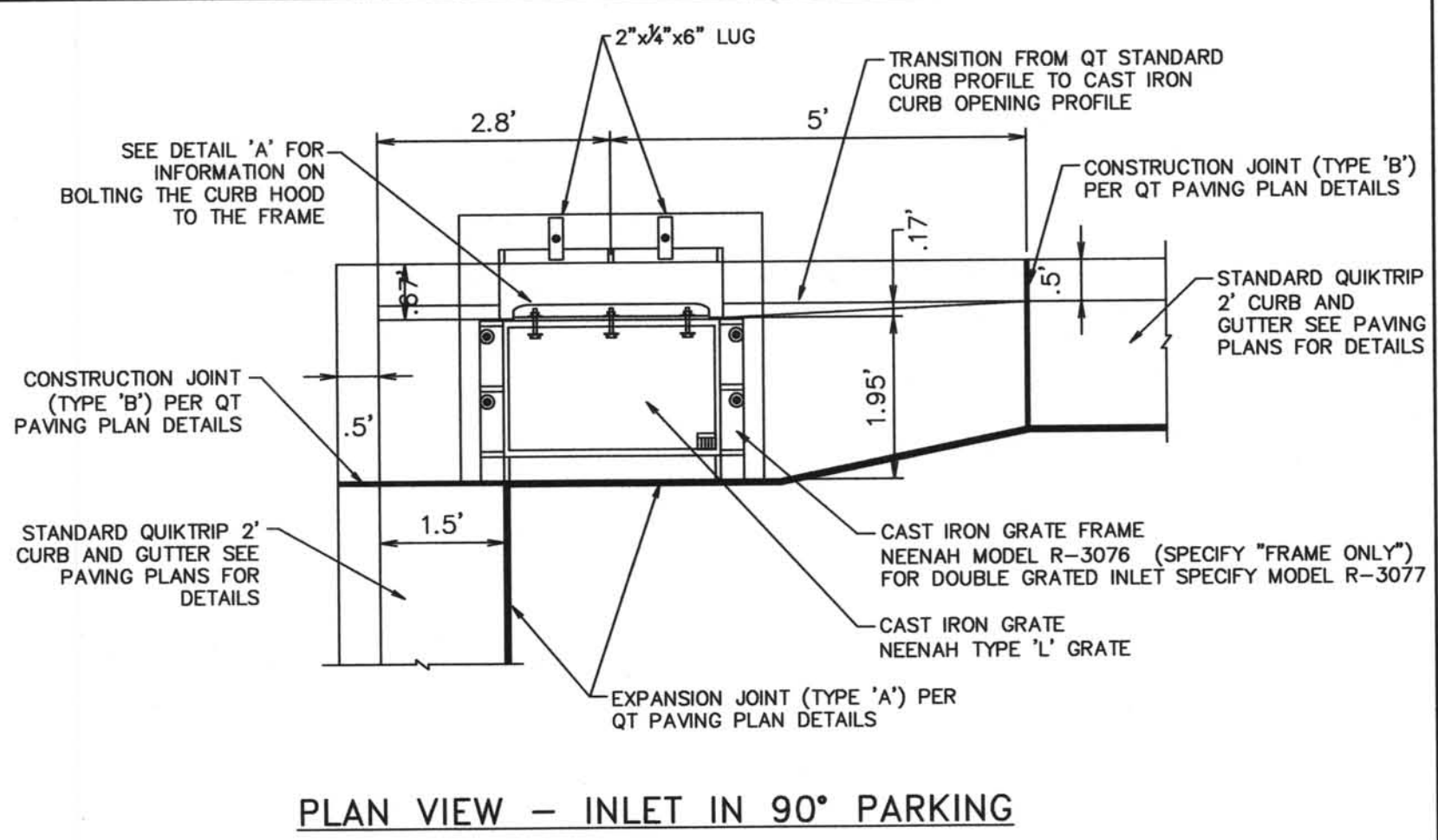
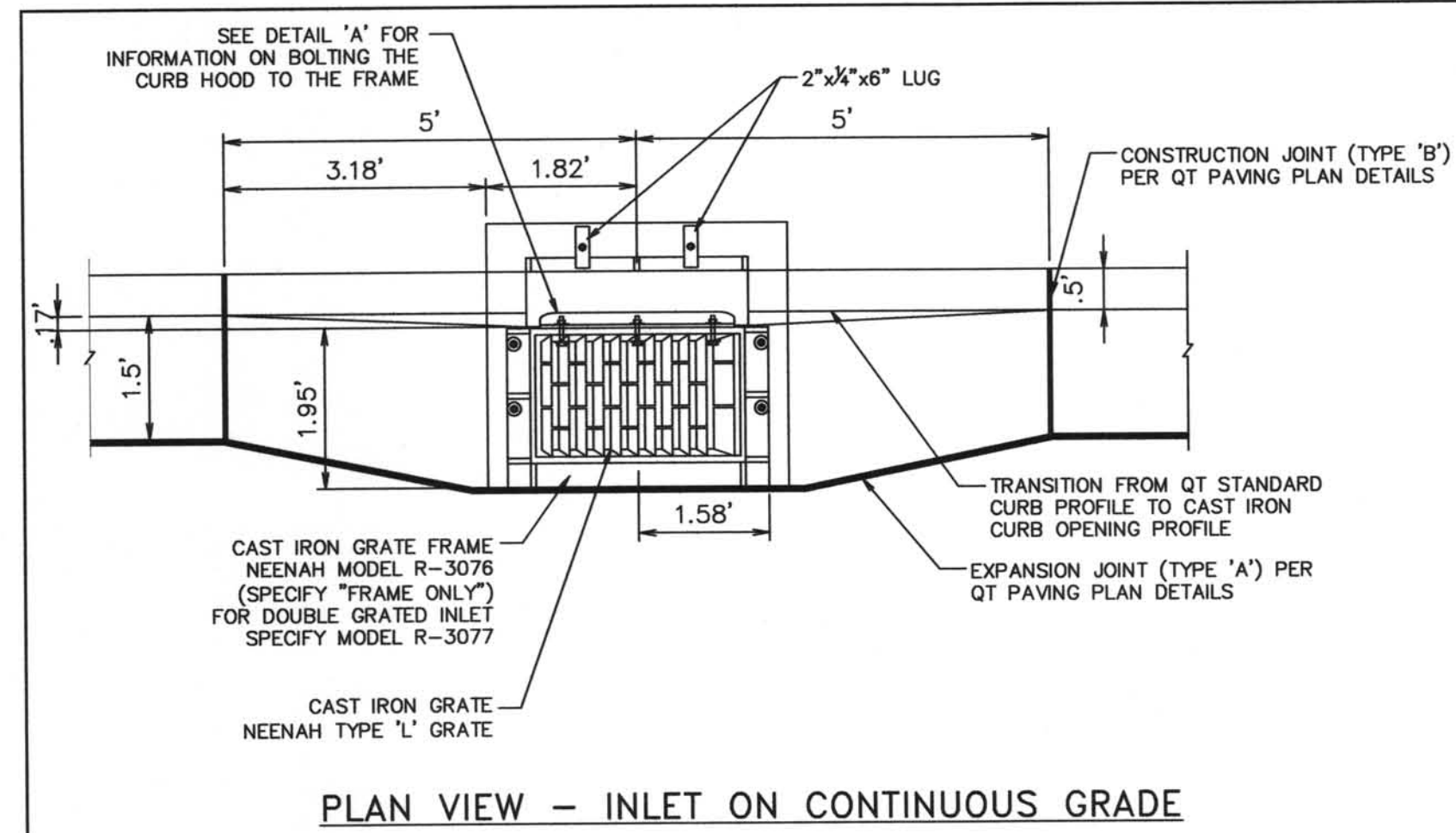
No.	Revision	Date



STD. SANITARY SEWER MH DETAILS

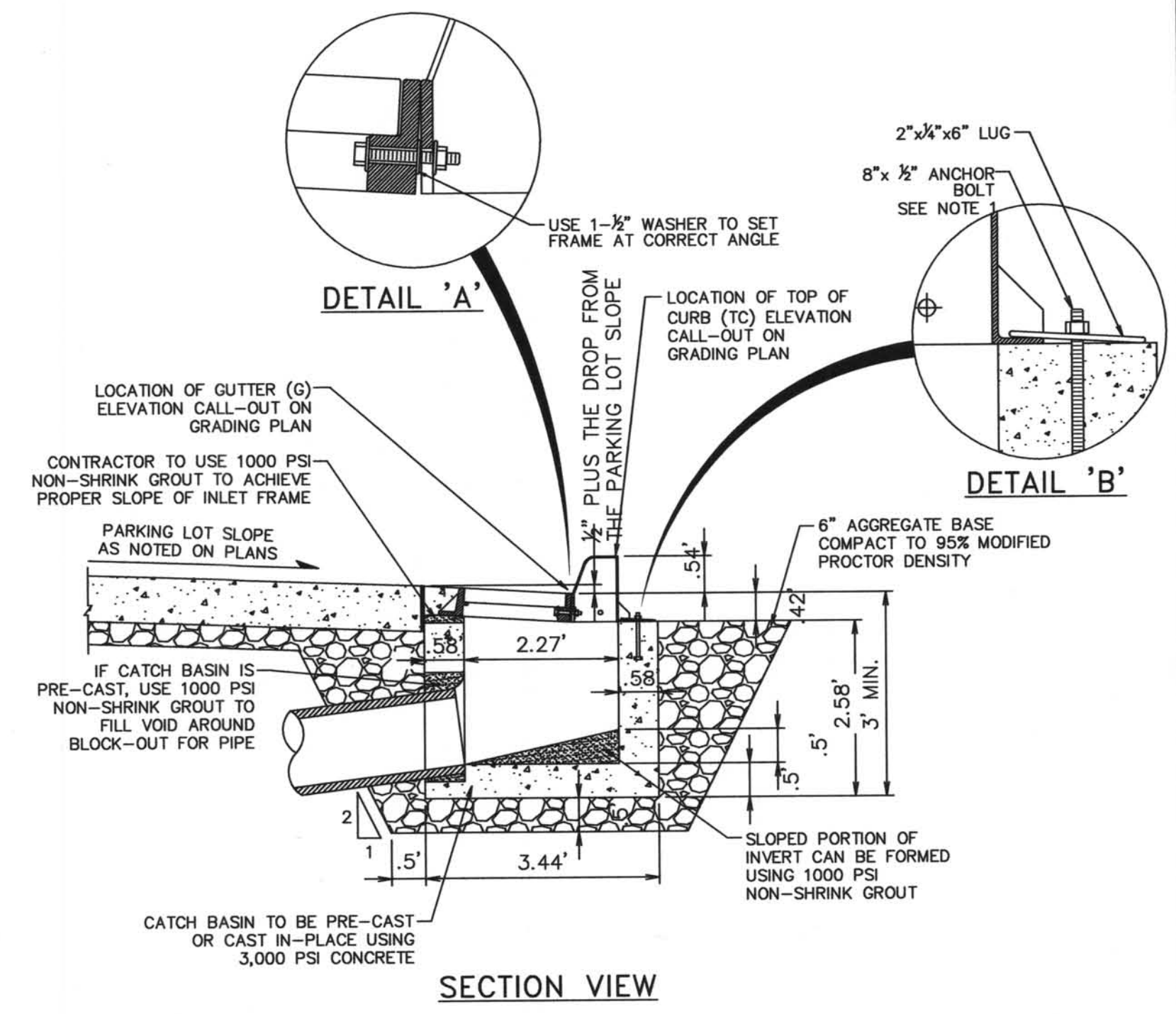
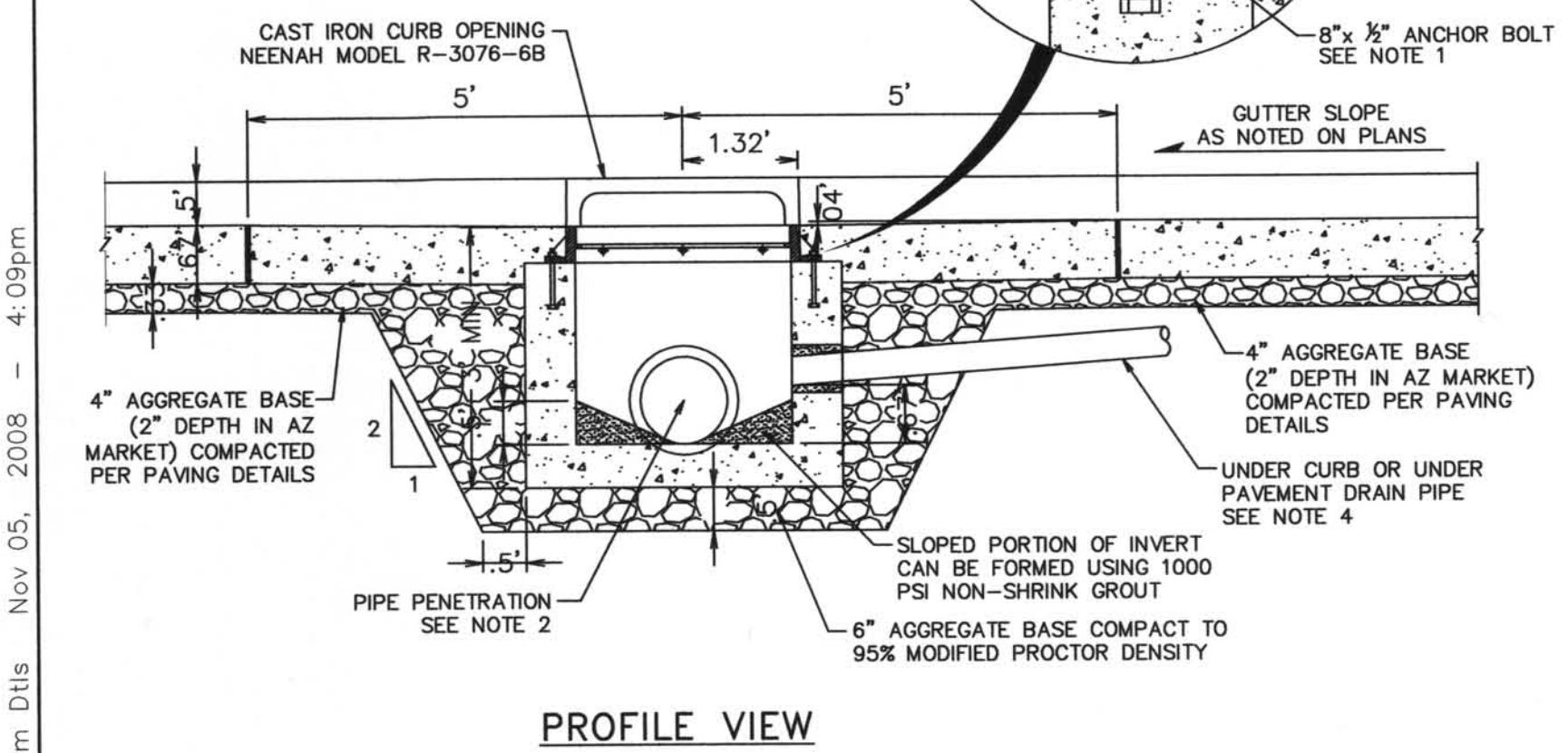
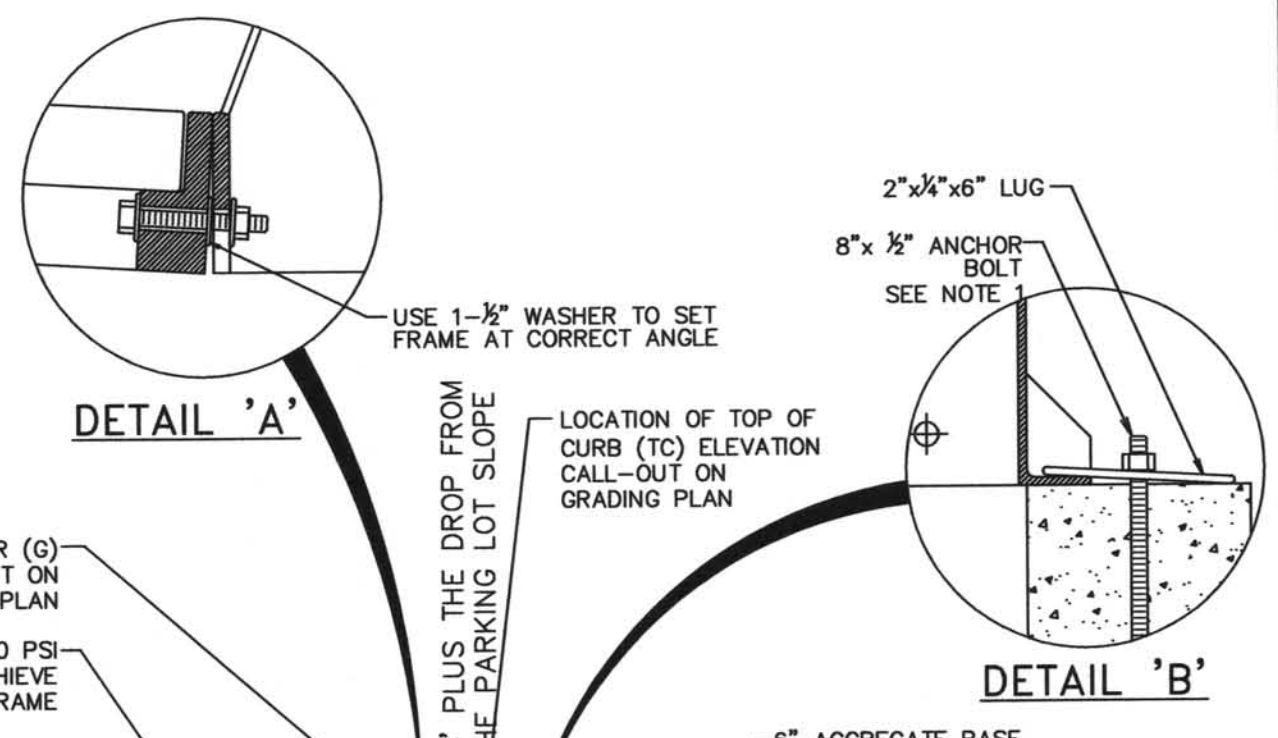
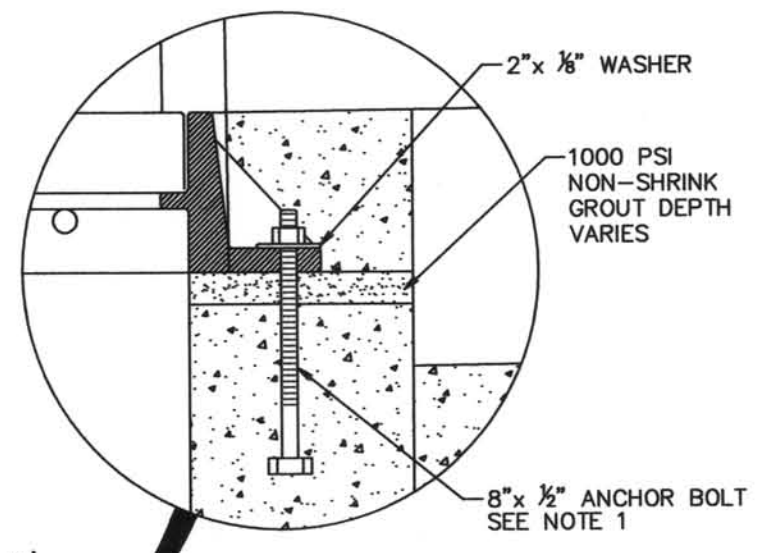
DRAWN BY: CKW	SHEET
DESIGNED BY: CKW	23
CHECKED BY: JCM	
ISSUE DATE: 11/07/08	OF 31

WICHITA, KANSAS
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NOTES:

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



DS1-1
NOT TO SCALE

CATCH BASIN INLET DETAIL

DS1-2
NOT TO SCALE

NOT USED

C:\OT_Folder_Wichita\Job Folder\083007-00\ENG\DWG\0349 Base 10-31-08(CTS).dwg - Storm Dets Nov 05, 2008 4:09pm

4705 South 129th East Ave.
Tulsa, OK 74134-7008
P.O. Box 3475
Tulsa, OK 74101-3475
(918) 615-7700

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DRAINAGE STRUCTURES DETAILS

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ISSUE DATE: 11/07/08	

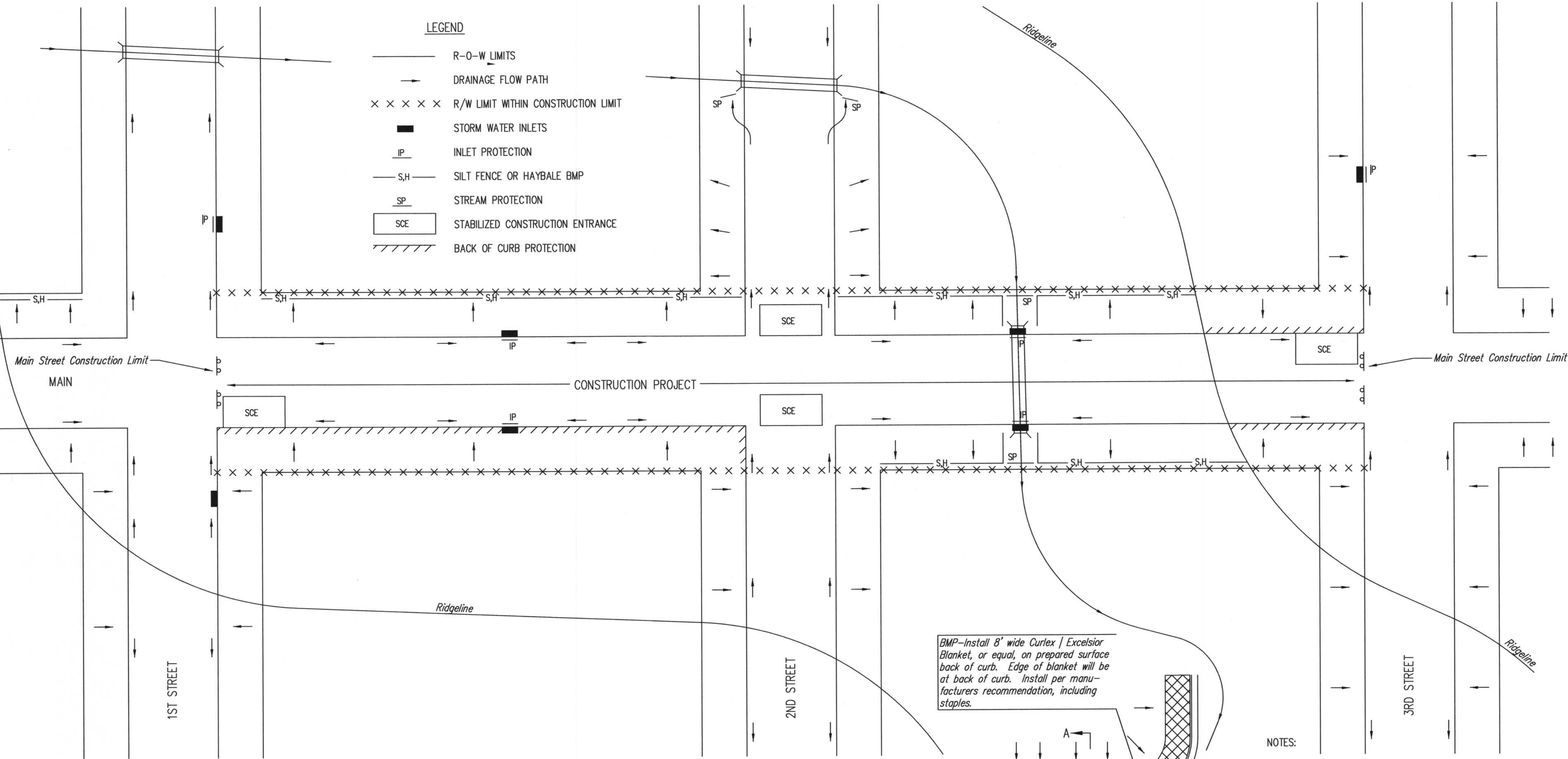
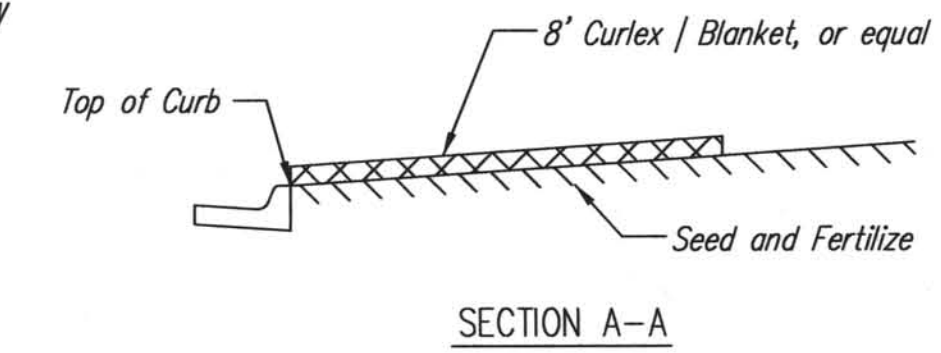
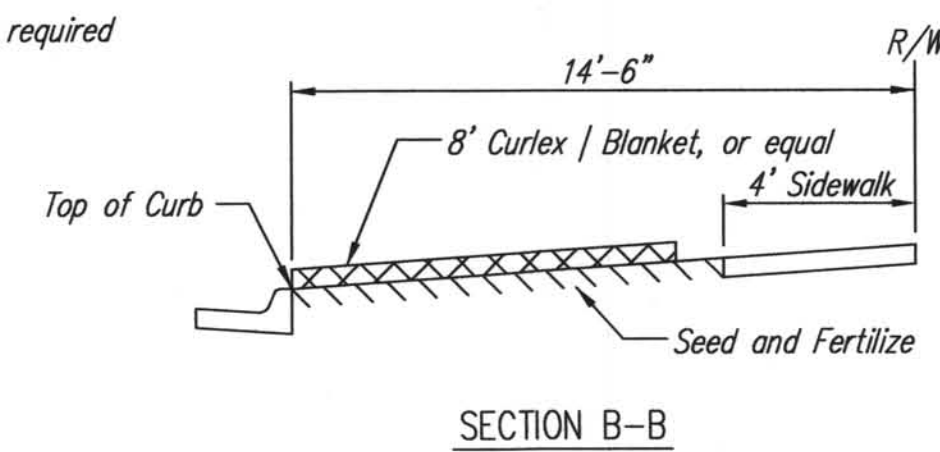
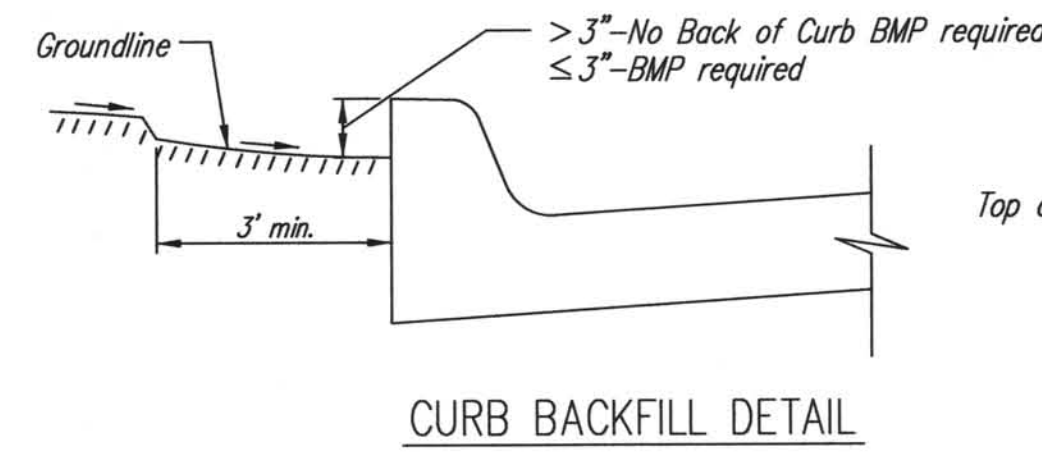
1112 WEST DOUGLAS AVE. WICHITA, KANSAS QuikTrip Store No. : 349

NOT USED

GENERAL NOTES:

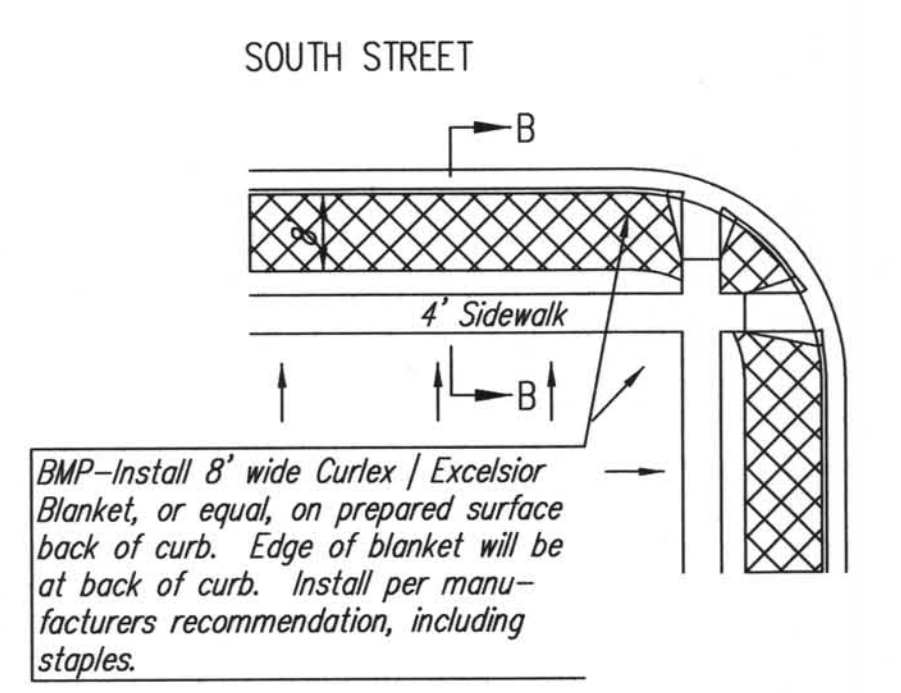
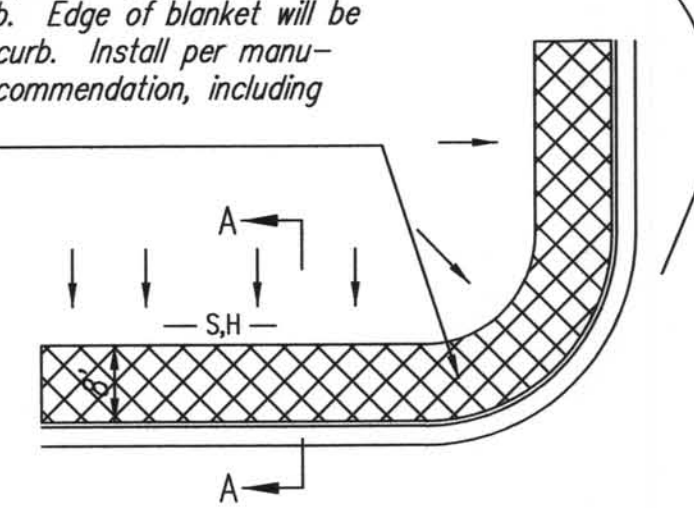
1. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPES OF BMP'S WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
2. BMP'S MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS.
3. IF THE PROJECT WILL DISTURB 5 ACRES OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE BMP'S SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.

4. FOR PROJECTS DISTURBING LESS THAN 5 ACRES, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION.
5. FAILURE TO USE AND MAINTAIN BMP'S IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE CONTRACTOR TO THE PENALTIES PROVIDED FOR THEREIN.
6. THE APPLICATION OF BMP'S SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT BMP OTHER THAN THOSE SHOWN. BMP'S, OTHER THAN THOSE SHOWN, MAY BE UTILIZED AS LONG AS THEY ARE EFFECTIVE AND MAINTAINED.



- LEGEND
- R-O-W LIMITS
 - DRAINAGE FLOW PATH
 - x x x x x R/W LIMIT WITHIN CONSTRUCTION LIMIT
 - STORM WATER INLETS
 - IP INLET PROTECTION
 - S,H SILT FENCE OR HAYBALE BMP
 - SP STREAM PROTECTION
 - SCE STABILIZED CONSTRUCTION ENTRANCE
 - Back of Curb Protection

BMP-Install 8' wide Curlex / Excelsior Blanket, or equal, on prepared surface back of curb. Edge of blanket will be at back of curb. Install per manufacturer's recommendation, including staples.



BACK OF CURB PROTECTION DETAIL

NOTES:

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

NOTES:

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



SOIL EROSION BMP'S
STREET
IMPROVEMENT
PROJECTS

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

PROJECT NUMBER: 1890 PPS
DATE: MAR 96

OCA NO.:
ISSUE DATE: 11/07/08



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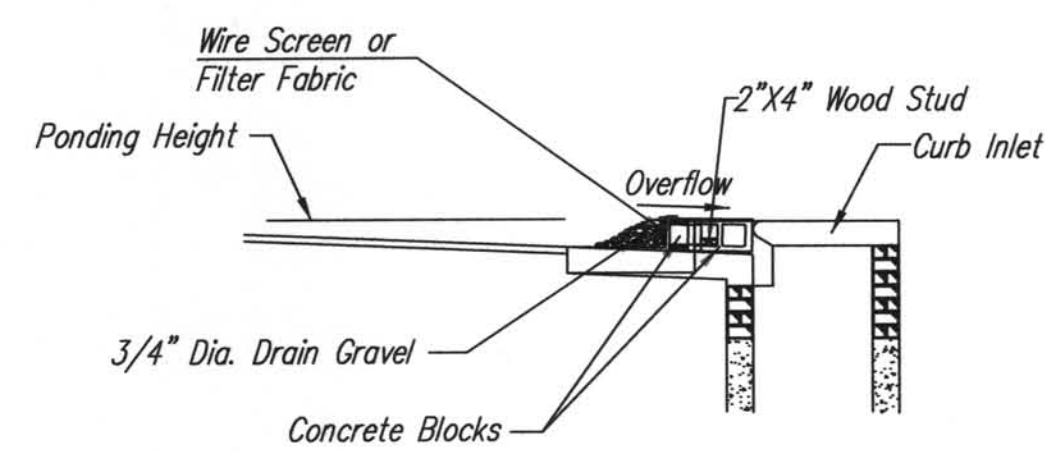
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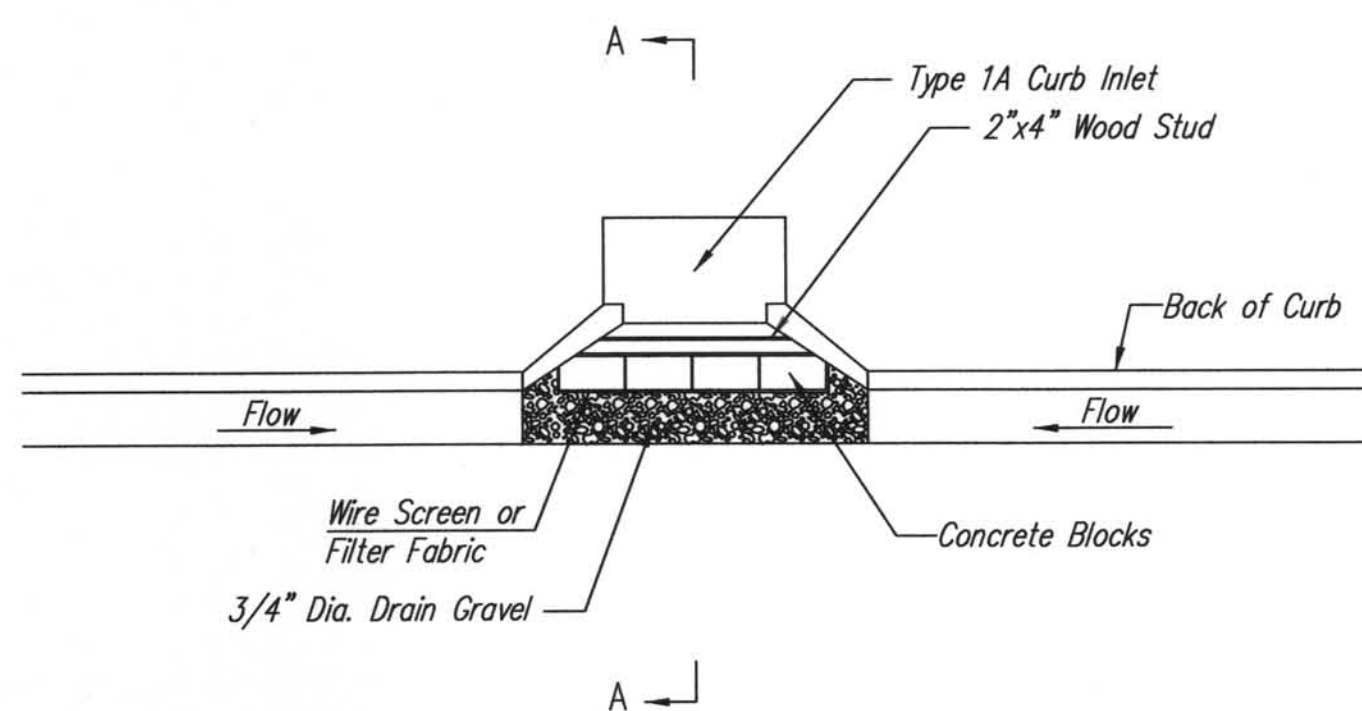
EROSION CONTROL DETAILS 1

DRAWN BY: CKW	SHEET
DESIGNED BY: CKW	26
CHECKED BY: JCM	
ISSUE DATE: 11/07/08	OF 31

WICHITA, KANSAS
1112 WEST DOUGLAS AVE.
QuikTrip Store No. : 349



SECTION A-A



CURB INLET GRAVEL FILTERS
(INLET PROTECTION-RESIDENTIAL STREETS ONLY)

NOTE: Other types of curb inlet protection may be approved by the city so long as equal protection is provided.

A gravel inlet filter shall be installed at sump locations on residential streets. This type of protection is not to be used on arterial or collector streets at any time that it would pose an undue traffic hazard.

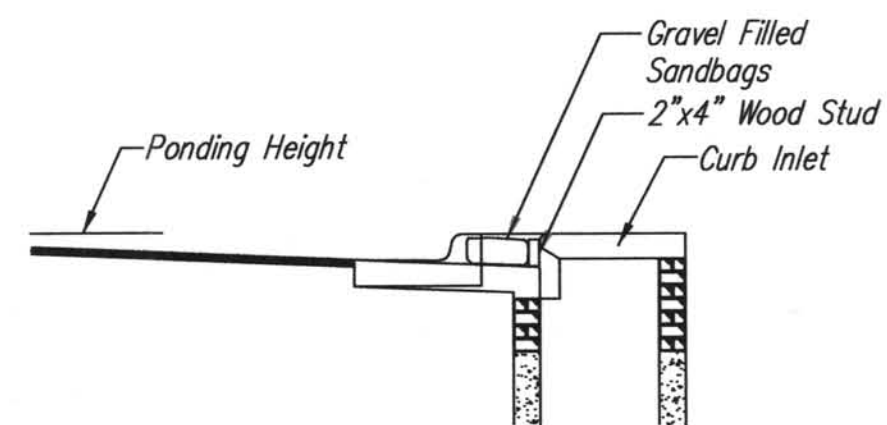
Instructions for Installing:

- STEP 1: Place concrete blocks around the inlet as shown on drawing. Insert 2x4 board as shown.
- STEP 2: Wrap 1/2" mesh wire screen around the concrete blocks.
- STEP 3: Place 1" to 1-1/2" diameter rock around the blocks and wire screen. Be sure the rock extends down from the top of the concrete block.
- STEP 4: To prevent damage to vehicles, signs warning drivers about the structures may be necessary. An alternative installation is the use of gravel bags supported by a 2"x4" board to prevent collapsing.

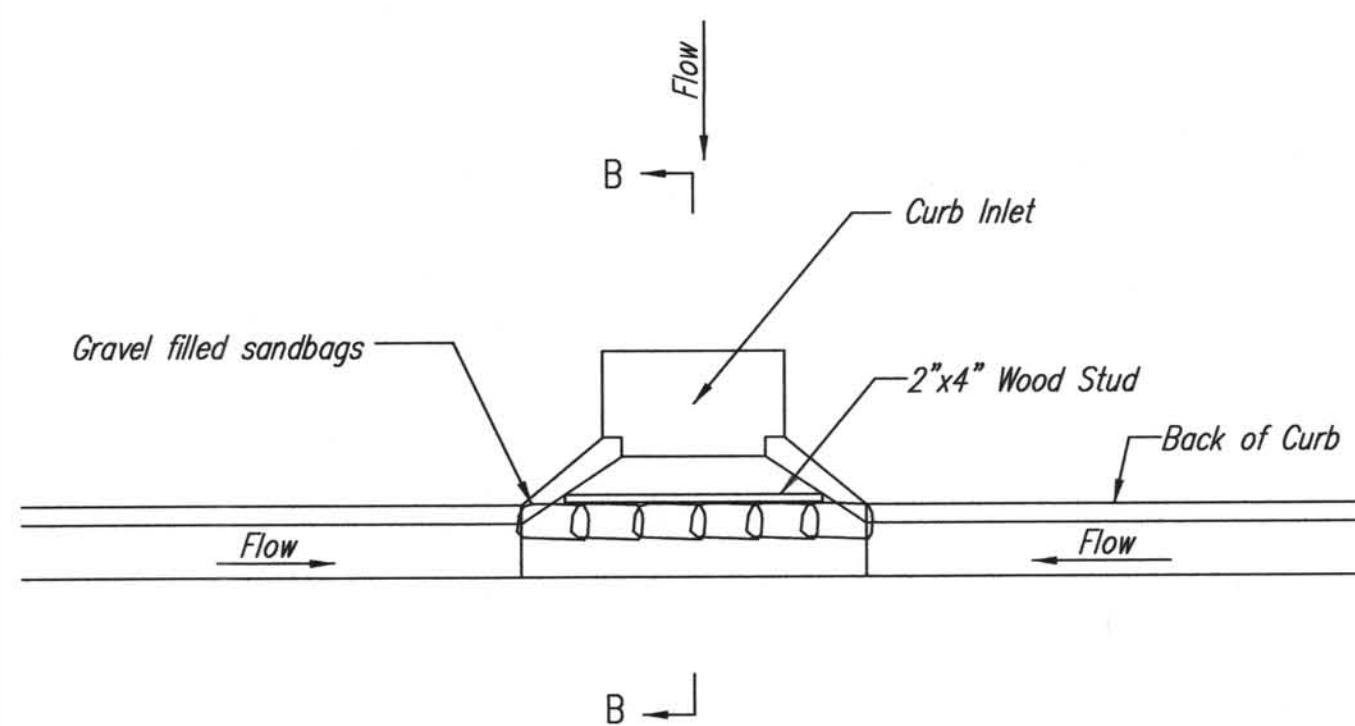
Use of rock with diameters smaller than 1" in the bag may result in clogging of pores and reduce the amount of water flowing into an inlet.

Maintenance:

All curb inlet gravel filters shall be inspected and repaired after each runoff event. Sediment deposits are to be removed once material is within 8 cm (3 inches) of the top of any block. Periodically, the gravel shall be raked to increase infiltration and filtering of runoff waters. Accumulated sediment is to be removed immediately from roads and streets.

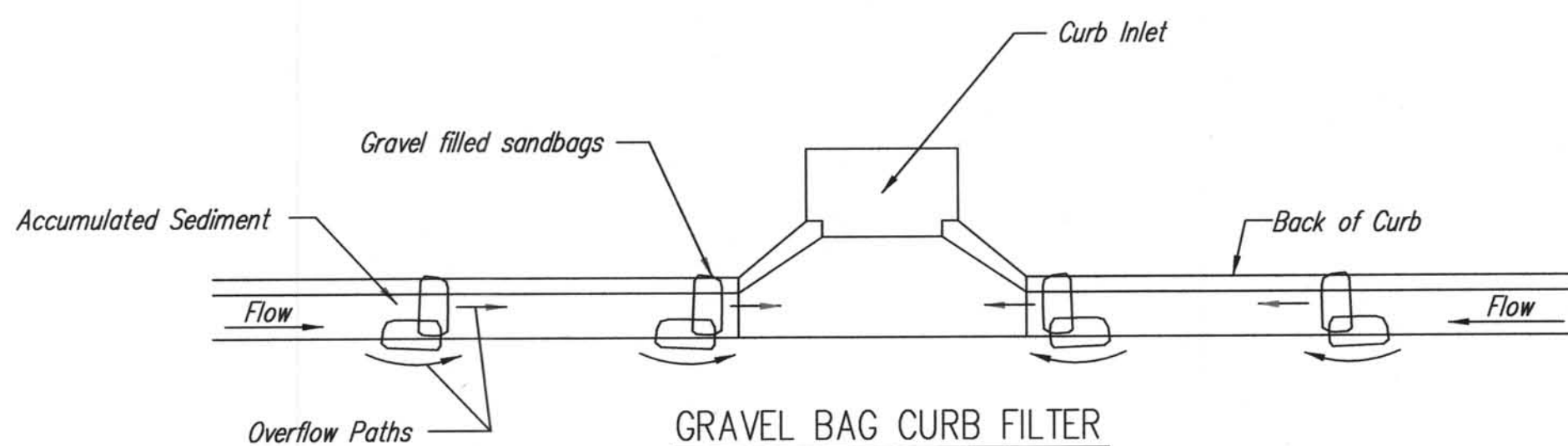


SECTION B-B



CURB INLET SANDBAG FILTERS
(INLET PROTECTION)

NOTE: Other types of curb inlet protection may be approved by the City so long as equal protection is provided.



GRAVEL BAG CURB FILTER
(INLET PROTECTION)

NOTE: Place two or more sets of bags in a manner that results in maximum support. The flow line bag must be lower than top of curb.

CURB SEDIMENT TRAPS:

When inlets are located on streets having a grade (i.e., sump conditions do not exist), installing gravel (or sand) bags in the gutter flow line to create small sediment traps can be considered. Gravel bags are recommended over sand bags to allow for drainage.

If the spacing between bags becomes too large, little sediment may be trapped. Spacing of bags should be completed using the table or graph that illustrates placement distances based upon street slope. When installed in the gutter, bag tops must be lower than the sidewalk.

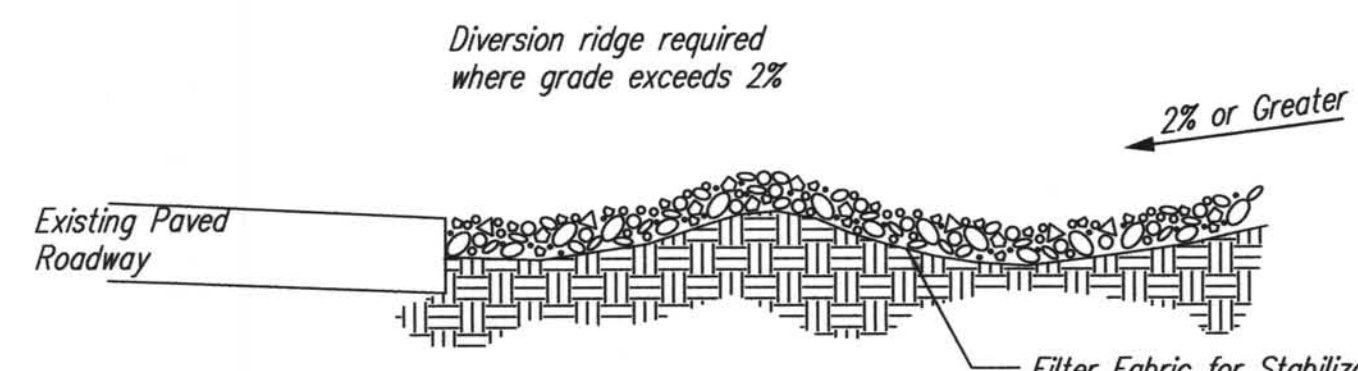
Spacing:

Gravel bags are to be placed according to street grades using the following table or graph that appears below.

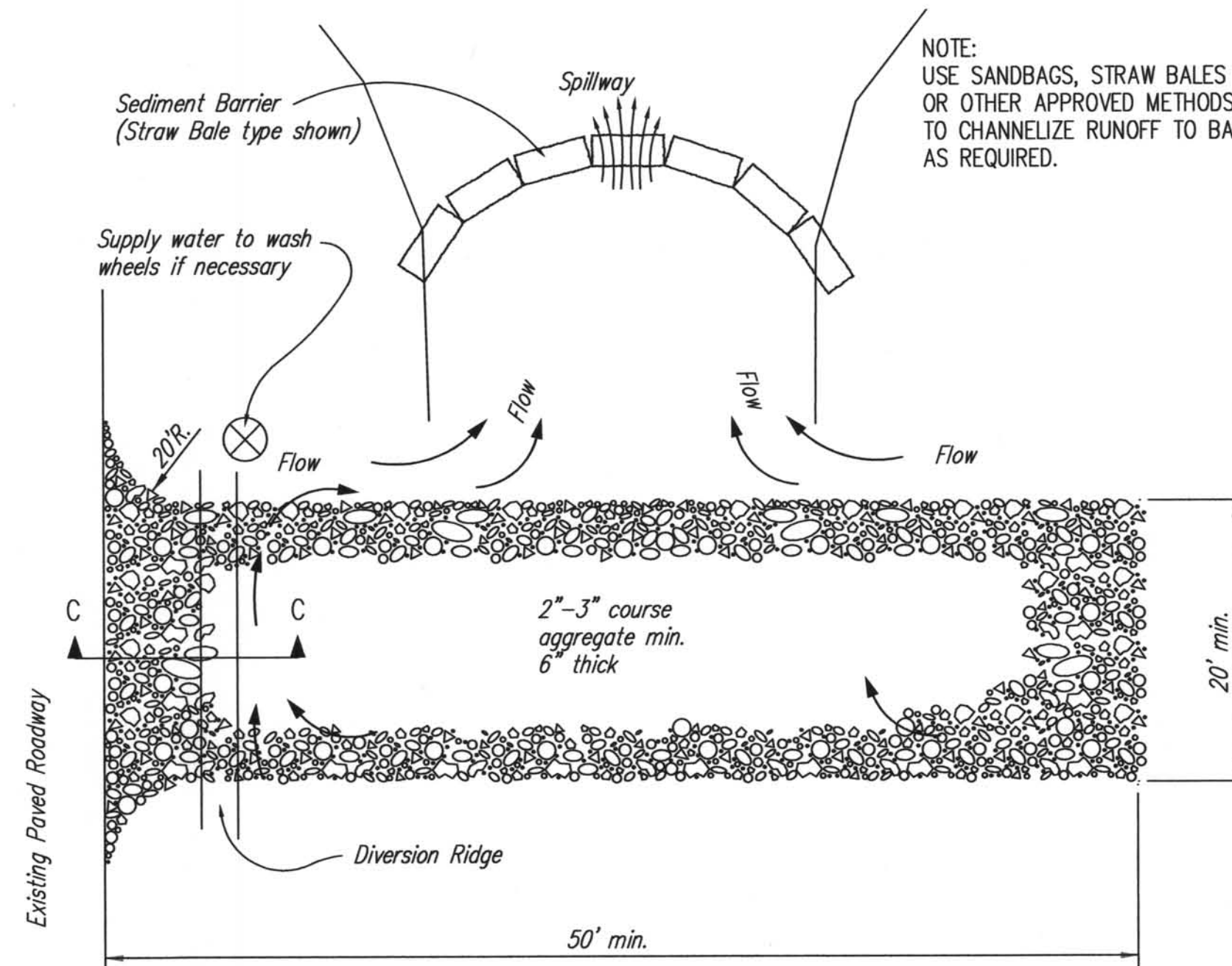
GRADE (%)	SPACING (FEET)
0.5	75
1.0	45
2.0	18
3.0	12
4.0	9
5.0	6

Maintenance:

Collected sediment shall be removed after every runoff event. Bags that are destroyed by vehicular traffic or through natural deterioration are to be immediately replaced.



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

NOTES:

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



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No.	Revision	Date



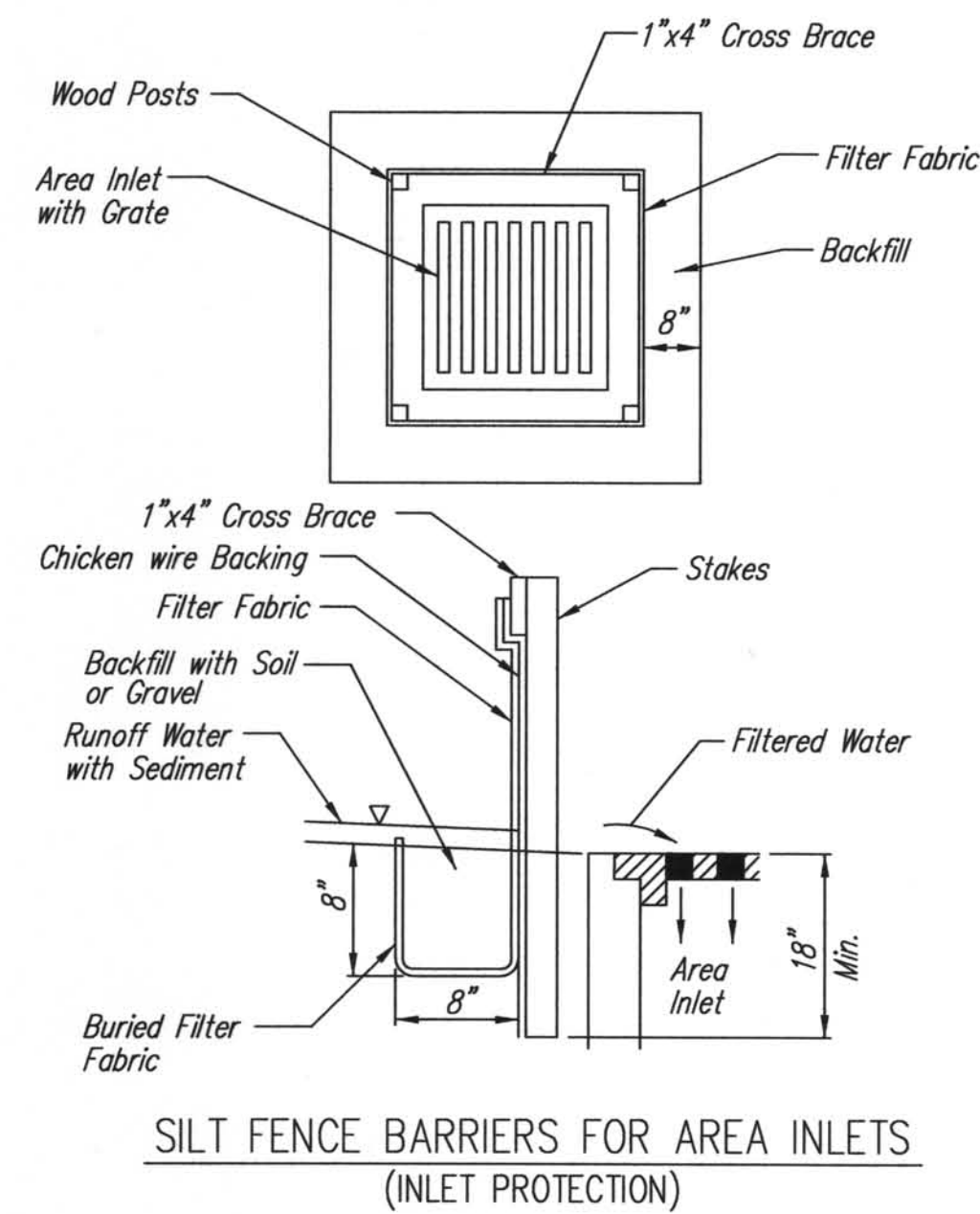
EROSION CONTROL DETAILS 2

DRAWN BY: CKW	SHEET
DESIGNED BY: CKW	27
CHECKED BY: JCM	
ISSUE DATE: 11/07/08	OF 31

**SOIL EROSION
BMP DETAILS**

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

PROJECT NUMBER 1890 PPS	CCA NO. -
DATE MAY 2001	



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

Material Specification:

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification. The wire or polymeric mesh backing used to help support the silt fence fabric should conform to the AASHTO M288 96 silt fence specification. The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long. The material used to frame the tops of the posts should be 1" by 4" boards. Silt fence fabric and support backing should be attached to the wooden posts and frame with staples, wire, zip ties, or nails.

Placement:

Place a silt fence drop inlet barrier in a location where it is unlikely to be overtopped. Water should flow through silt fence, not over it. Silt fence barriers for area inlets often fail when repeatedly overtopped. When used as a barrier for area inlets, silt fence fabric and posts must be supported at the top by a wooden frame. When a silt fence barrier for area inlets is located near an inlet that has steep approach slopes, the storage capacity behind the barrier is drastically reduced. Timely removal of sediment must occur for a barrier to operate properly in this location.

Proper installation method:

Excavate a trench around the perimeter of the area inlet that is at least 8" deep by 8" wide. Drive posts to a depth of at least 18" around the perimeter of the area inlet. The distance between posts should be 4' or less. If the distance between two adjacent corner posts is more than 4', add another post(s) between them. Connect the tops of all the posts with a wooden frame made of 1" by 4" boards. Use nails or screws for fastening. Attach the wire or polymeric-mesh backing to the outside of the post/frame structure with staples, wire, zip ties, or nails. Roll out a continuous length of silt fence fabric long enough to wrap around the perimeter of the area inlet. Add more length for overlapping the fabric joint. Place the edge of the fabric in the trench, starting at the outside edge of the trench. Line all three sides of the trench with the fabric. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt fence fabric should remain exposed. Attach the silt fence to the outside of the post/frame structure with staples, wire, zip ties, or nails. The joint should be overlapped to the next post.

Note: When a silt fence barrier for area inlet is placed in a shallow median ditch, make sure that the top of the barrier is not higher than the paved road. In this configuration, water may spread onto the roadway causing a hazardous condition.

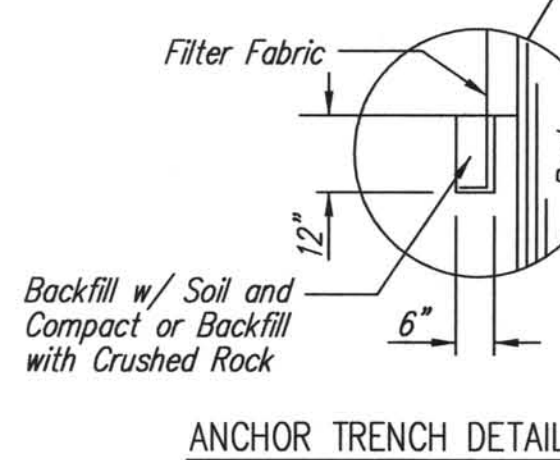
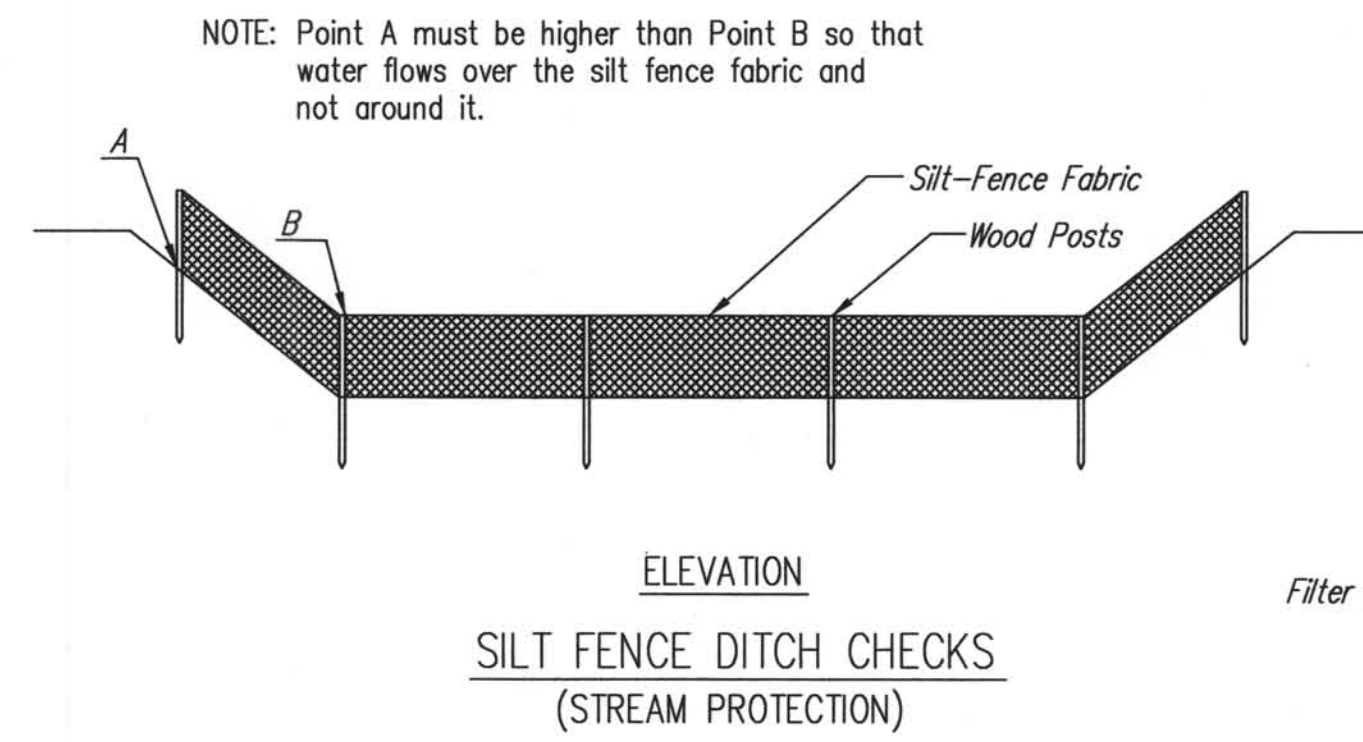
List of common placement/installation mistakes to avoid:

Water should flow through a silt fence barrier for area inlet—not over it. Place a silt fence barrier for area inlet in a location where it is unlikely to be overtopped. Silt fence barrier for area inlets often fail when repeatedly overtopped. Do not place posts on the outside of the silt fence barrier for area inlet. In this configuration, the force of the water is not resisted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail. Do not install silt fence barrier for area inlets without framing the top of the posts. The corner posts around area inlets are stressed in two directions whereas a normal silt fence is only stressed in one direction. This added stress requires more support.

Inspection and Maintenance:

Silt fence barrier for area inlets should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

- Does water flow under the silt fence?
- Does the silt fence sag excessively?
- Has the silt fence torn or become detached from the posts?
- Does sediment need to be removed from behind the area inlet barrier?



Material Specification:

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification. The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long. Silt fence fabric should be attached to the wooden posts with staples, wire, zip ties, or nails.

Placement:

Place silt fence in ditches where it is unlikely that it will be overtopped. Water should flow through a silt fence ditch check, not over it. Silt fence ditch checks often fail when overtopped. Silt fence ditch checks should be placed perpendicular to the flowline of the ditch. The silt fence should extend far enough so that the ground level at the ends of the fence is higher than the top of the low point of the fence. This prevents water from flowing around the check. Checks should not be placed in ditches where high flows are expected. Rock checks should be used instead. Silt fence should be placed in ditches with slopes of 6% or less. For slopes steeper than 6%, rock checks should be used.

The following table provides check spacing for a given ditch grade:

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

Inspection and Maintenance:

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

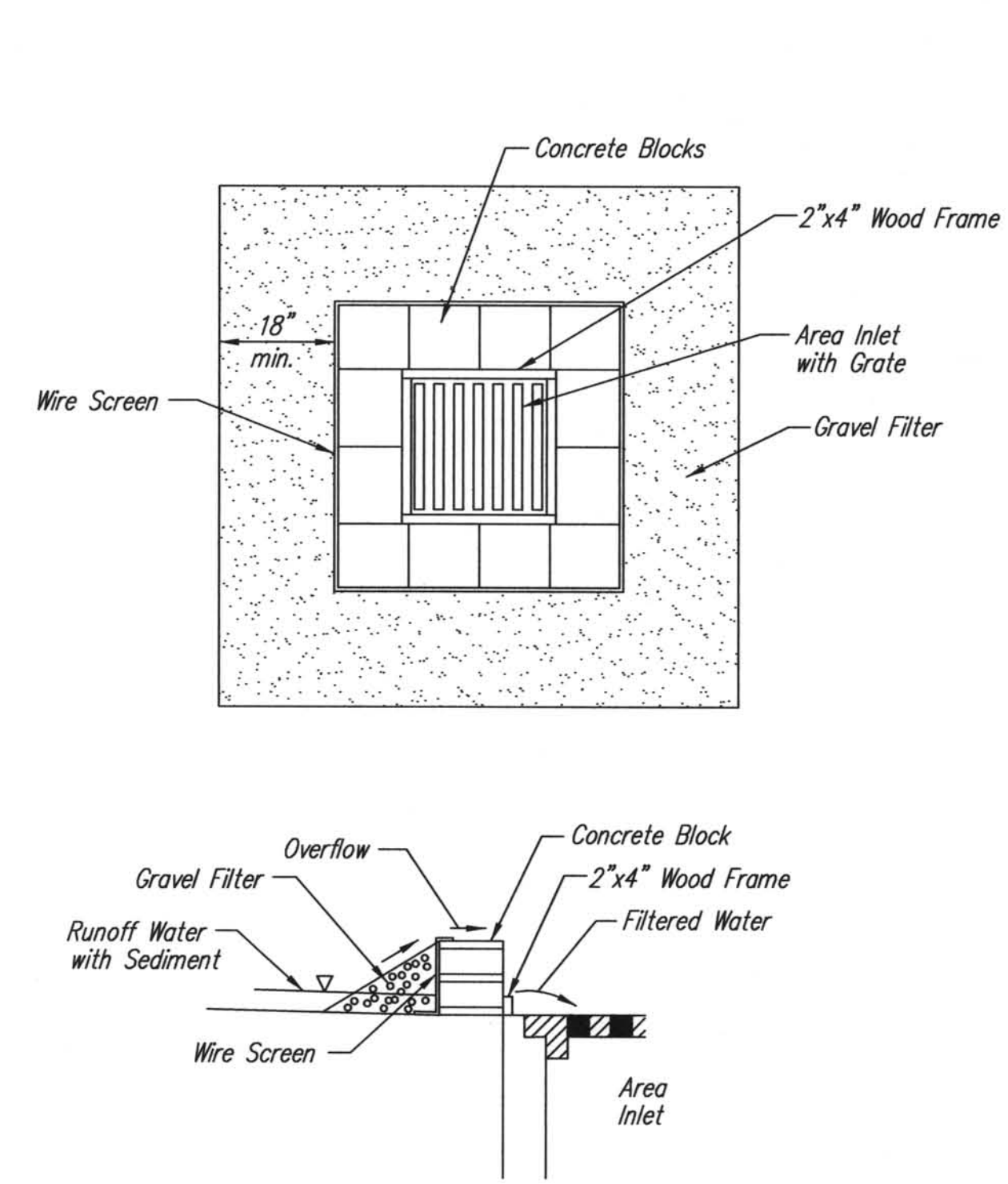
- Does water flow around the ditch check?
- Does water flow under the ditch check?
- Does the silt fence sag excessively?
- Has the silt fence torn or become detached from the posts?
- Does sediment need to be removed from behind the ditch check?

Proper installation method:

Excavate a trench perpendicular to the ditch flowline that is at least 12" deep by 6" wide. Extend the trench in a straight line along the entire length of the proposed ditch check. Place the soil on the upstream side of the trench for later use. Roll out a continuous length of silt fence fabric on the downstream side of the trench. Place the edge of the fabric in the trench starting at the top upstream edge of the trench. Line two sides of the trench with the fabric as shown on detail. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt fence fabric should remain exposed. Lay the exposed silt fence on the upstream side of the trench to clear an area for driving in the posts. Just downstream of the trench, drive posts into the ground to a depth of at least 24". Place posts no more than 4' apart. Attach the silt fence to the anchored post with staples, wire, zip ties, or nails.

List of common placement/installation mistakes to avoid:

Water should flow through a silt fence ditch check—not over it. Place silt fence in ditches where it is unlikely that it will be overtopped. Silt fence installations quickly deteriorate when water overtops them. Do not place silt fence posts on the upstream side of the silt fence fabric. In this configuration, the force of the water is not restricted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail. Do not place a silt fence ditch check directly in front of a culvert outlet. It will not stand up to the concentrated flow. Do not place silt fence ditch checks in ditches that will likely experience high flows. They will not stand up to concentrated flow. Follow prescribed ditch check spacing guidelines. If spacing guidelines are exceeded, erosion will occur between the ditch checks. Do not allow water to flow around the ditch check. Make sure that the ditch check is long enough so that the ground level at the ends of the fence is higher than the low point on the top of the fence. Do not place silt fence ditch checks in channels with shallow soils underlain by rock. If the check is not anchored sufficiently, it will wash out.



CONCRETE BLOCK FILTER FOR AREA DRAIN
(INLET PROTECTION)

Gravel barriers provide little filtering of large inflow waters. However, when installed correctly and maintained, they can effectively treat low runoff flows.

Placement of gravel filters around area drains must be completed in a manner that will not cause local flooding.

Gravel filters can be used if the immediate and adjacent area to the area drain consists of soil or pavement.

Only gravel filters are to be installed on top of the pavement.

Instructions for Installing:

- STEP 1: Place concrete blocks around the grate. The blocks can be stacked one or two high and should be supported by a 2"x4" board.
- STEP 2: Wrap 1/2" mesh wire screen around the concrete blocks.
- STEP 3: Place 1" to 1-1/2" diameter rock around the blocks and wire screen. Be sure the rock extends down from the top of the concrete block.
- STEP 4: To prevent damage to vehicles, signs warning drivers about the structures may be necessary.

An alternative method is use of gravel bags that are supported to prevent collapsing.

Use of rock having diameters smaller than 1" may result in clogging of pores and reduce the amount of water flowing into an inlet.

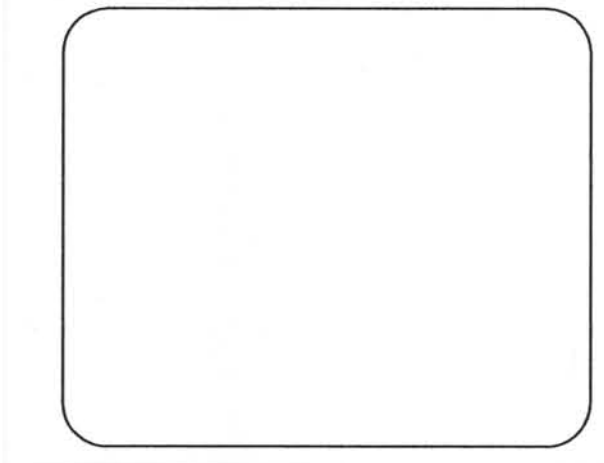
Maintenance:

All gravel filters installed around area drains should be inspected and repaired after each runoff event. Sediment should be removed when material is within 3" of the top of any block. Periodically, the gravel should be raked to increase infiltration and filtering of runoff waters. Accumulated sediment is to be removed immediately from roads and streets after every runoff event.



GENERAL NOTES

No.	Revision	Date



EROSION CONTROL DETAILS 3

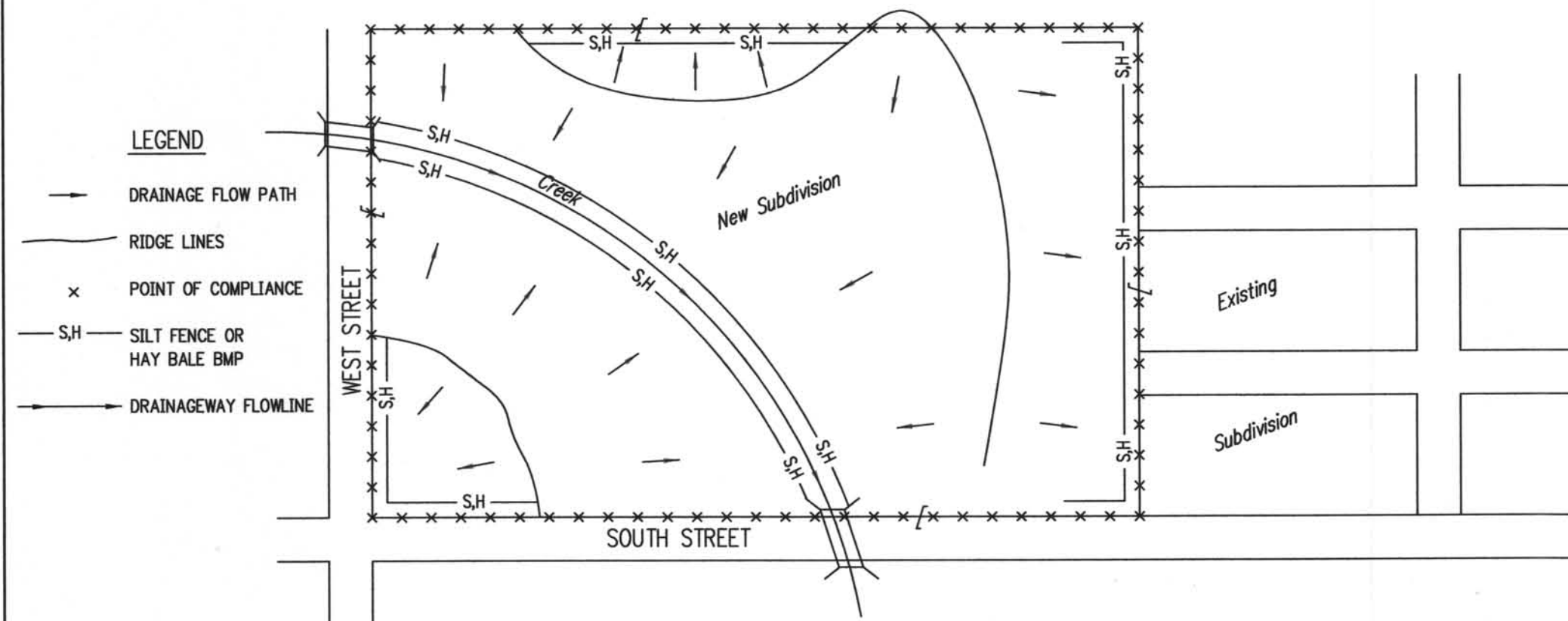
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DESIGNED BY: CKW		OF
CHECKED BY: JCM		31
ISSUE DATE: 11/07/08		

**SOIL EROSION
BMP DETAILS**

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

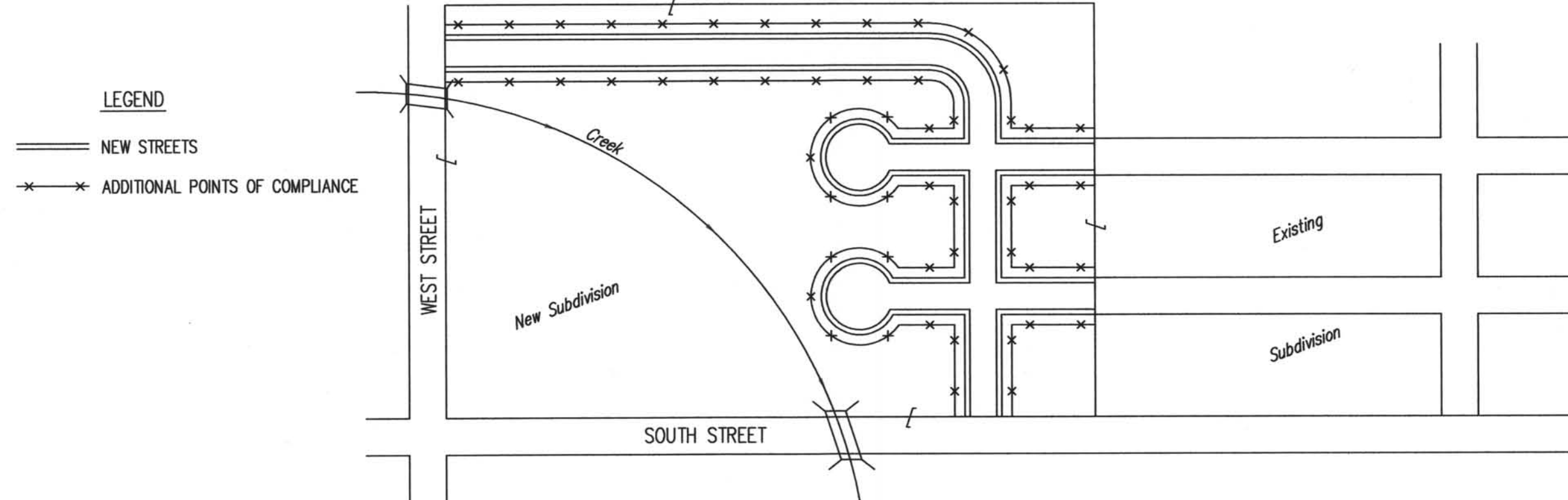
PROJECT NUMBER 1890 PPS	OCA NO. —
DATE MAY 2001	

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



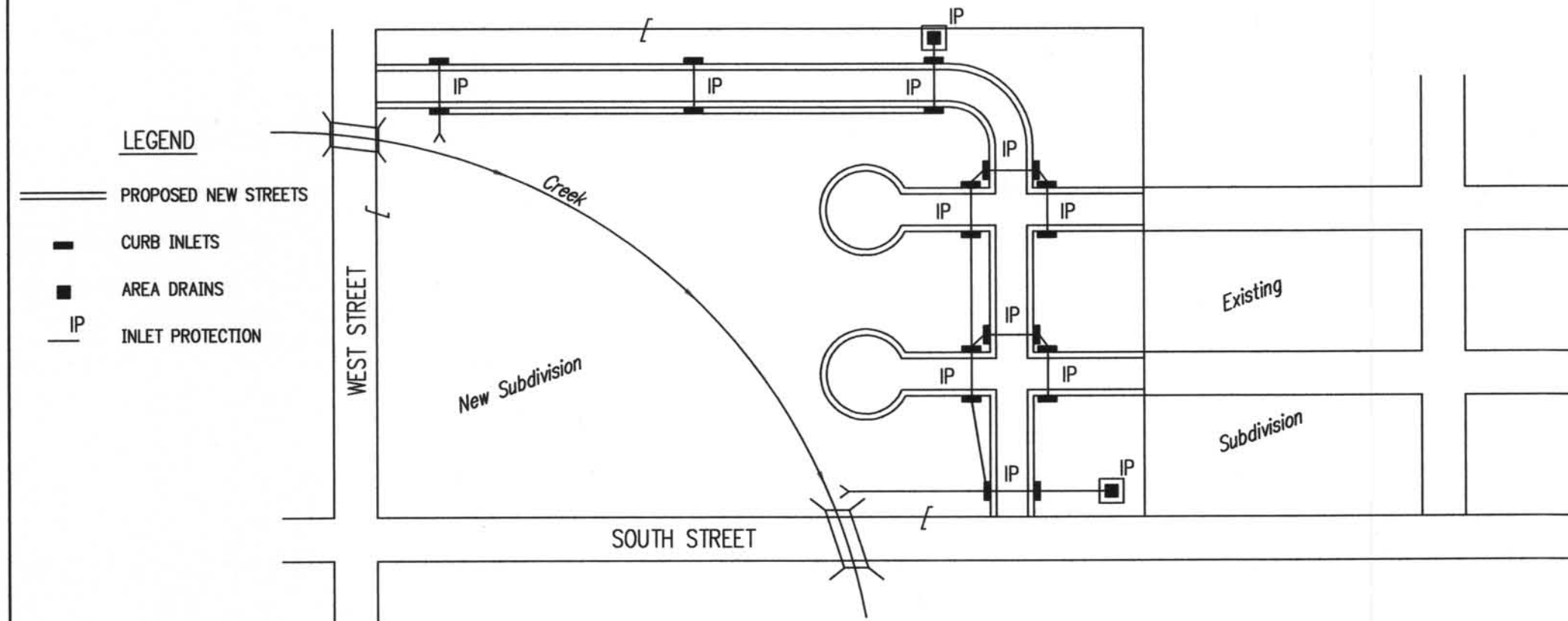
- LEGEND**
- DRAINAGE FLOW PATH
 - RIDGE LINES
 - x POINT OF COMPLIANCE
 - SH SILT FENCE OR HAY BALE BMP
 - DRAINAGEWAY FLOWLINE
- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
 - HAYBALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE BMP'S WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
 - SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR GUTTERLINES ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE BMP'S WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
 - ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED AT THE END OF EACH WORK DAY.
 - CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL BMP'S AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE BMP'S AT THEIR WORK LOCATIONS, AS NEEDED.
 - UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
 - THE SUBDIVISION DEVELOPER (OWNER) SHALL INSTALL AND MAINTAIN THE ON-SITE BMP'S.

PHASE 3 - STREET CONSTRUCTION

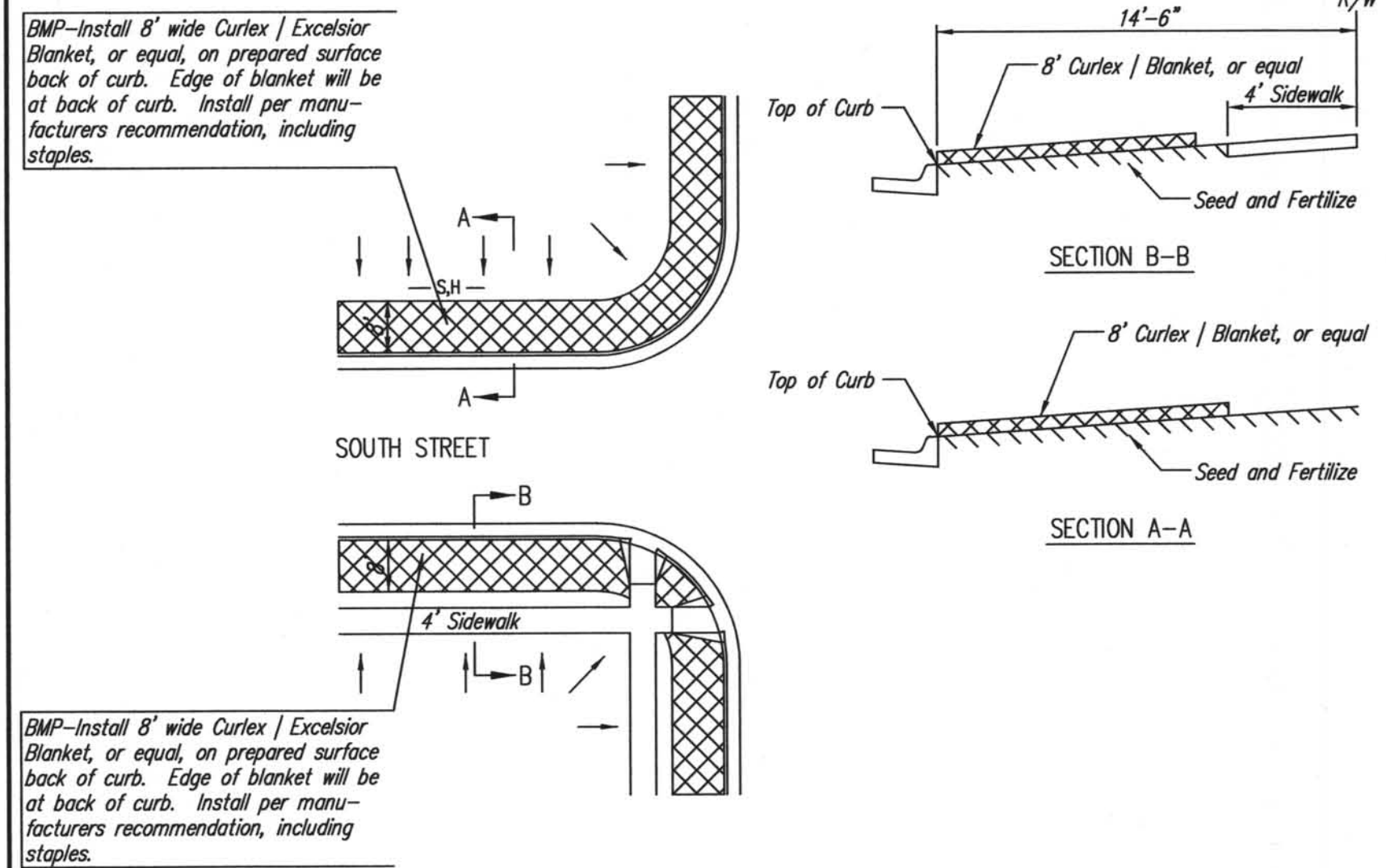


- LEGEND**
- NEW STREETS
 - x ADDITIONAL POINTS OF COMPLIANCE
- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL BMP'S INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
 - CURB OPENING INLET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

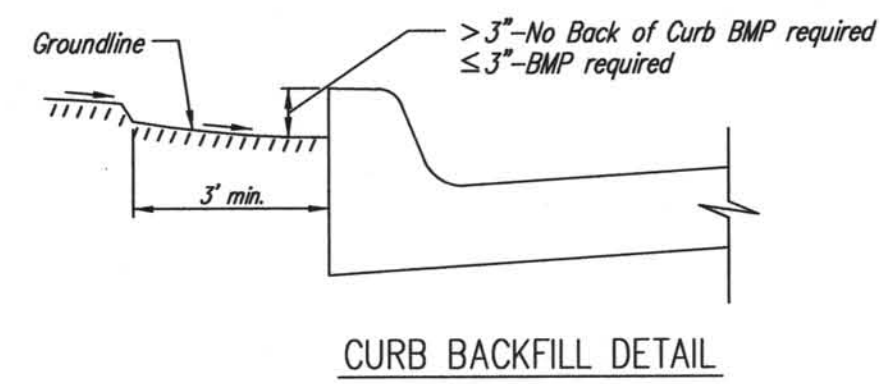
PHASE 2 - INSTALLATION OF STORM SEWER



- LEGEND**
- PROPOSED NEW STREETS
 - CURB INLETS
 - AREA DRAINS
 - IP INLET PROTECTION
- DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL BMP'S REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
 - AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
 - AREA DRAINS - AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAYBALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
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 - THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE BMP'S. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION.
 - THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE BMP'S ONCE INSTALLED.
 - ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.



BACK OF CURB PROTECTION DETAIL



CURB BACKFILL DETAIL

GENERAL NOTES:

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



SOIL EROSION BMP'S SUBDIVISION DEVELOPMENT PROCESS

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

PROJECT NUMBER: 1890 PPS
DATE: MAY 2001

OCA NO.:



GENERAL NOTES

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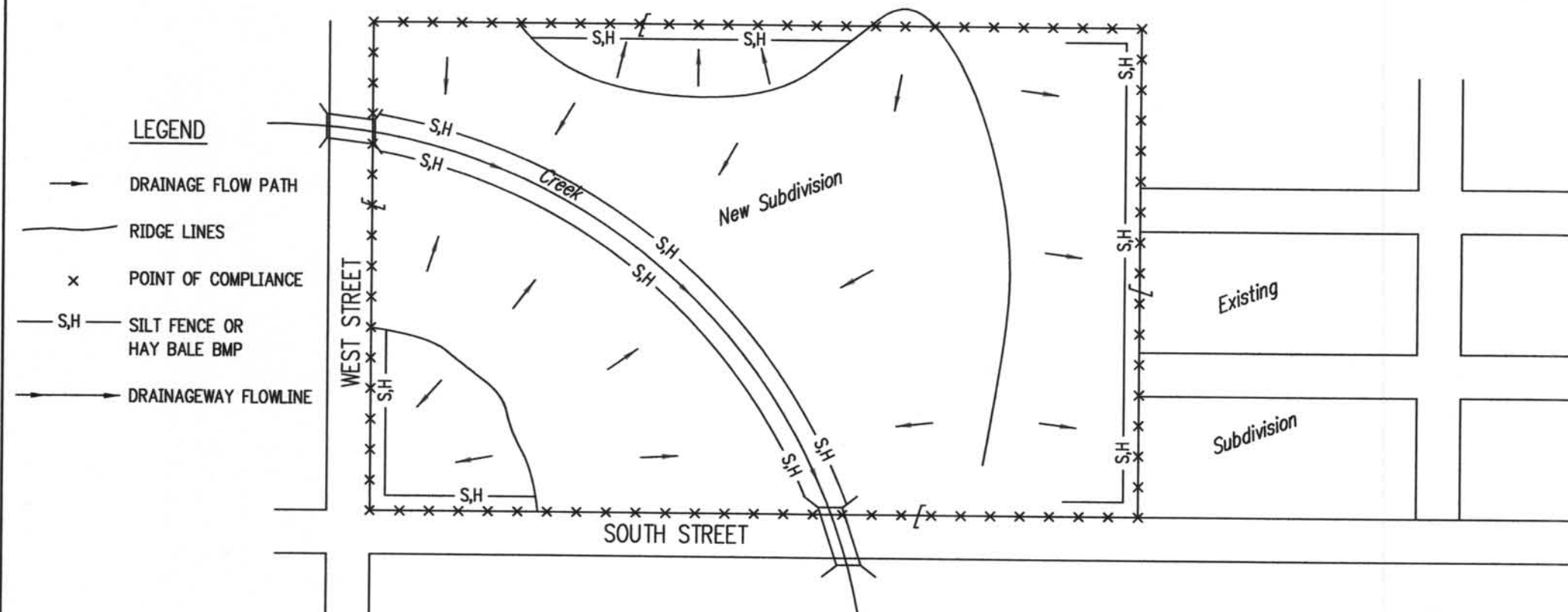
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EROSION CONTROL DETAILS 4

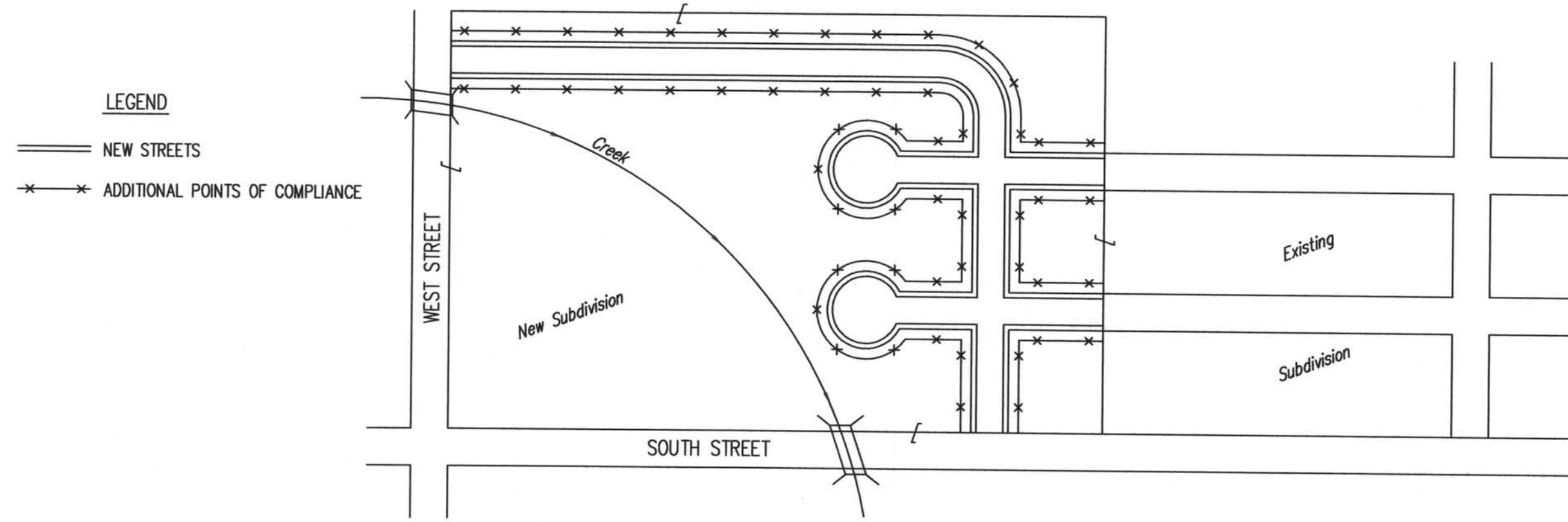
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PHASE 1 - INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



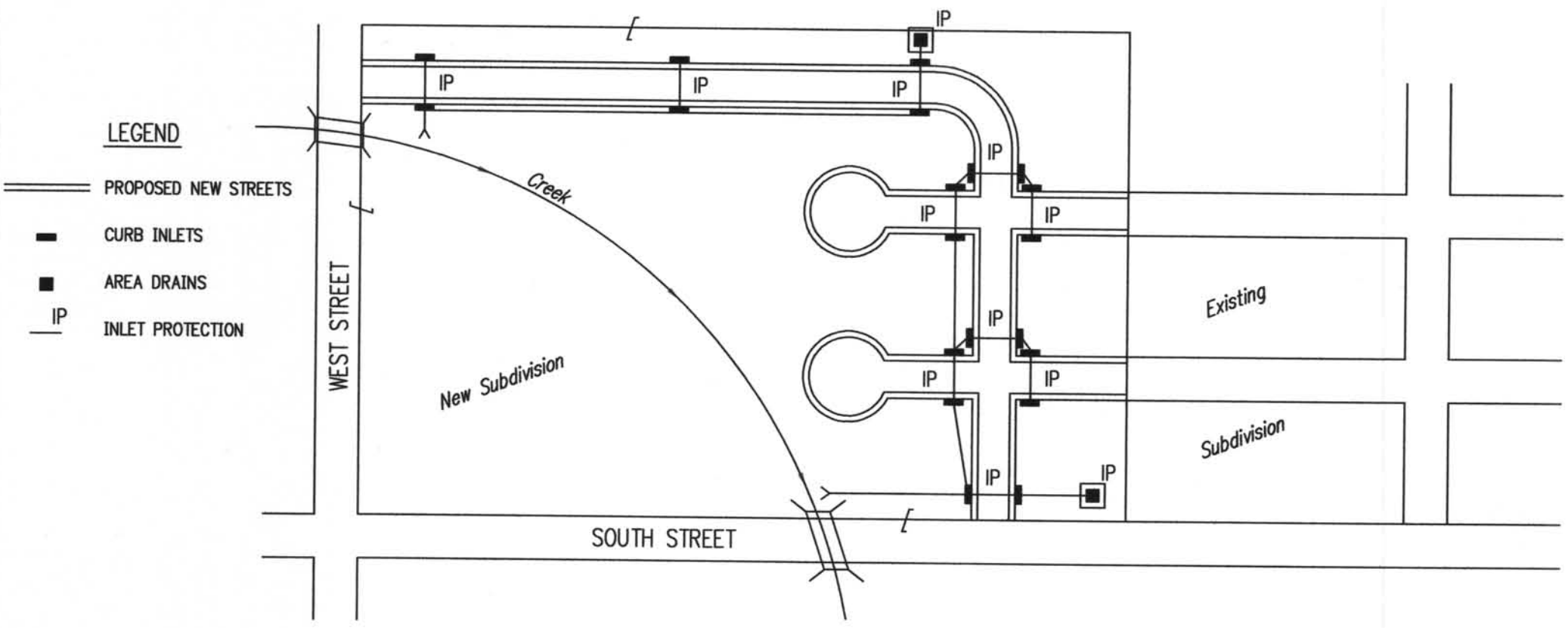
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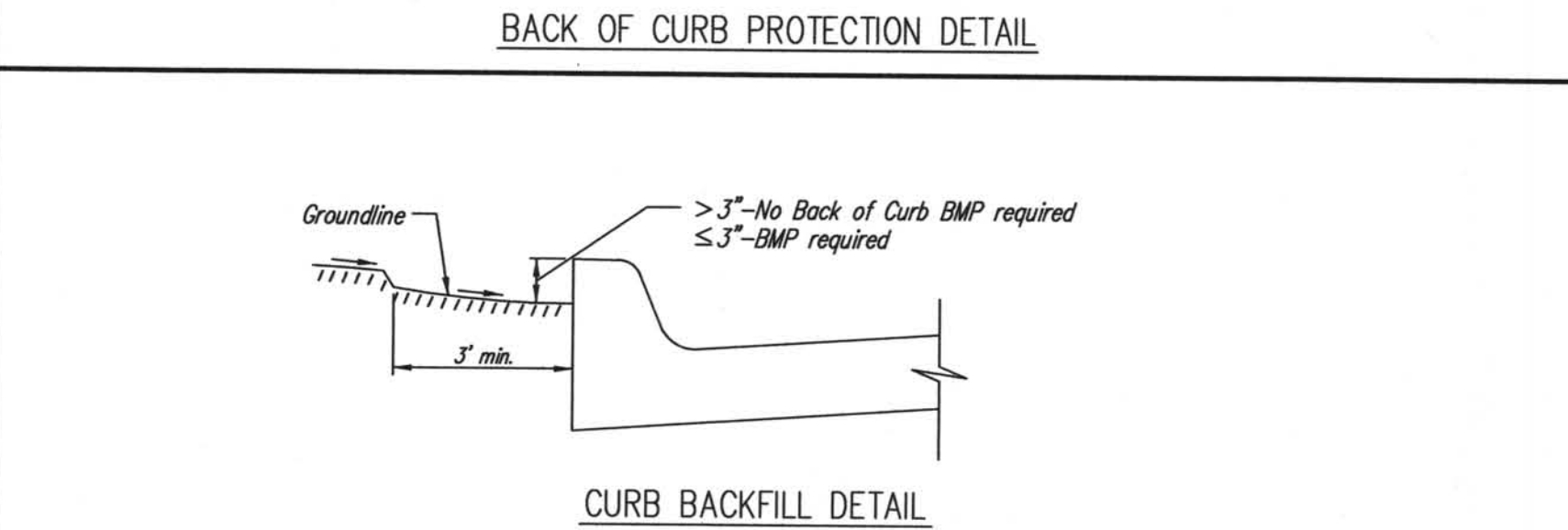
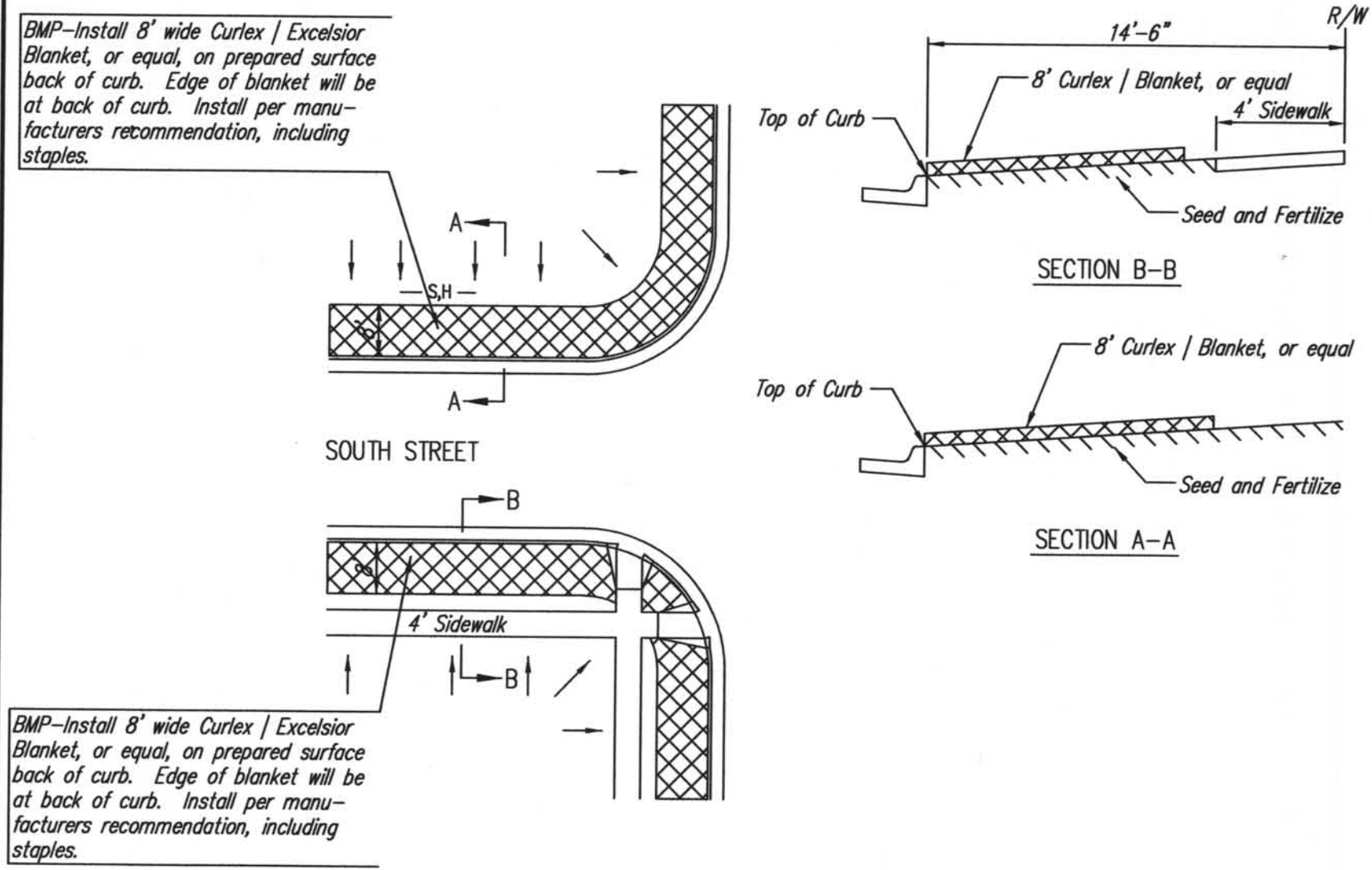


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PHASE 2 - INSTALLATION OF STORM SEWER



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SOIL EROSION BMP'S SUBDIVISION DEVELOPMENT PROCESS

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

PROJECT NUMBER: 1890 PPS
 DATE: MAY 2001

OCA NO.: -

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 Tulsa, OK 74134-7008
 P.O. Box 3475
 Tulsa, OK 74101-3475
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GENERAL NOTES

No.	Revision	Date

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architecture | engineering

EROSION CONTROL DETAILS 5

DRAWN BY: CKW	SHEET
DESIGNED BY: CKW	30
CHECKED BY: JCM	
ISSUE DATE: 11/07/08	OF 31