

**GENERAL NOTES:**

- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS. ALL CONSTRUCTION SHALL BE COMPLETED FOLLOWING CURRENT CITY STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- CONTRACTOR WILL BE REQUIRED TO PROVIDE NOTICE TO UTILITY COMPANIES A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION, AS FOLLOWS:  

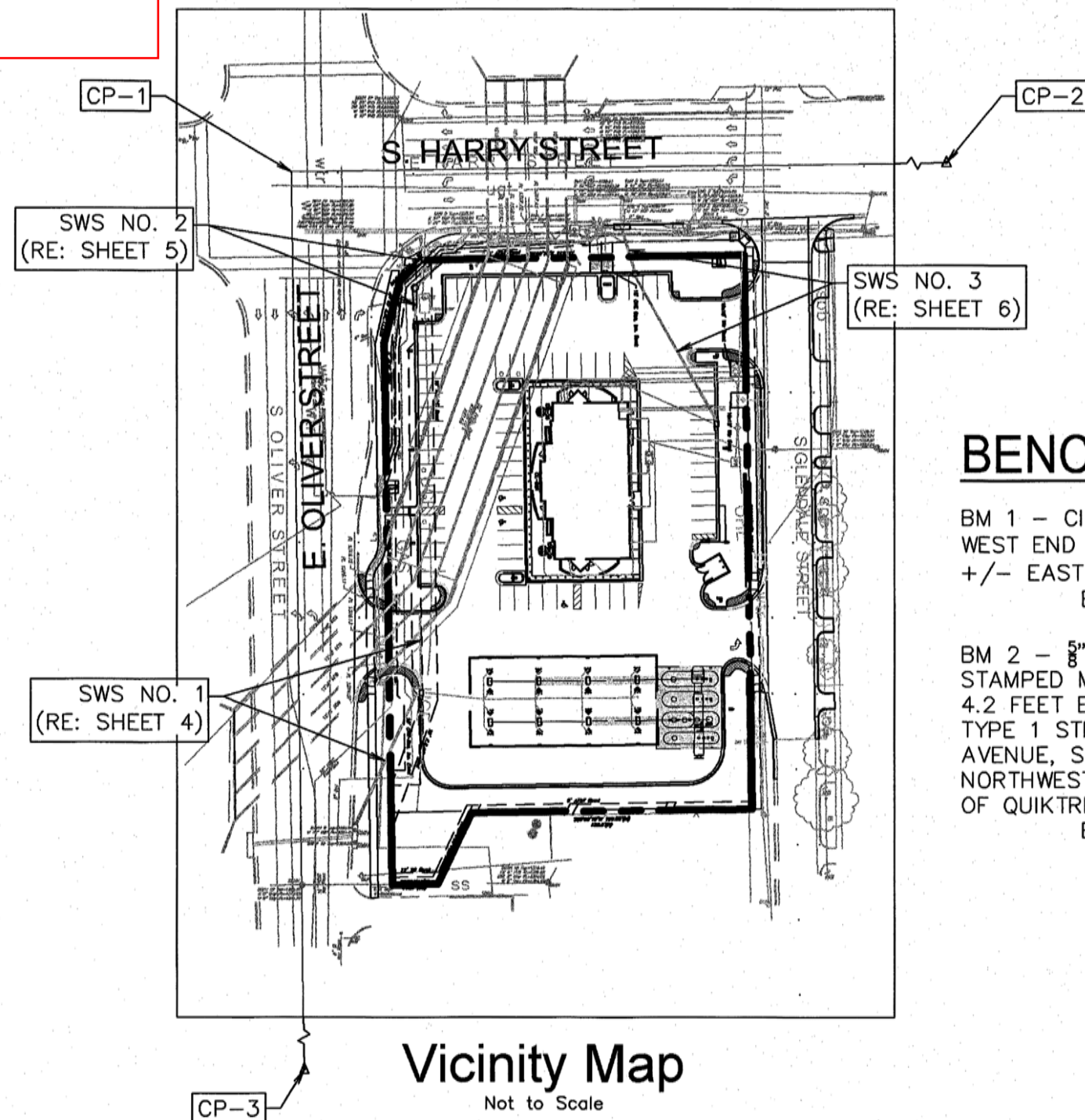
KANSAS ONE CALL	1-800-344-7233
OR	1-316-687-2470

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

AT&T	1-800-246-8464
BLACK HILLS ENERGY	1-800-694-8989
CITY OF WICHITA WATER	1-316-268-4555
CITY OF WICHITA SEWER	1-316-268-4073
CITY OF WICHITA STORMWATER	1-316-268-4090
CITY OF WICHITA TRAFFIC	1-316-268-4034
COX COMMUNICATIONS	1-888-249-3530
KANSAS GAS SERVICE	1-888-482-4950
WESTAR ENERGY	1-800-544-4857
- UTILITY SERVICE LINES, POLES, ETC. ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION 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. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS, THAT IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOODPLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
- TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEERS APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ADJUTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS NOTICE PRIOR TO START OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY THE CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
- THE WATER DISTRIBUTION DIVISION SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY CONTRACTOR AT HIS OWN EXPENSE. VALVE BOXES AND WATER METERS WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO MATCH FIELD GRADES.
- THE CONTRACTOR SHALL NOTIFY THE CONSULTANT ENGINEER AND TOM MASON WITH THE CITY OF WICHITA AT 316-268-4574 WITH THE ANTICIPATED CONSTRUCTION START DATE AND NOTIFY THEM OF THE PROJECT COMPLETION. STAKING AND INSPECTION FOR THIS PROJECT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- IF TRAFFIC IS IMPACTED BY CONSTRUCTION, A TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY THE CITY TRAFFIC ENGINEER, BRIAN COON AT TRAFFIC@WICHITA.GOV BEFORE CONSTRUCTION CAN BEGIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL MEASURES TO FACILITATE CONSTRUCTION. ALL CONSTRUCTION ZONE MARKINGS AND SIGNAGE SHALL CONFORM TO THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS PUBLISHED BY THE US DEPT. OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION. ALL COSTS ASSOCIATED WITH CONSTRUCTION MARKINGS AND SIGNAGE SHALL BE THE CONTRACTORS RESPONSIBILITY.
- ALL ELEVATIONS SHOWN ARE NAVD 88.
- ALL AREAS DISTURBED DURING CONSTRUCTION THAT WILL NOT BE UNDER PROPOSED PAVEMENT SHALL BE RESTORED TO MATCH EXISTING CONDITIONS.
- A PORTION OF EXCESS EXCAVATED MATERIAL SHALL BE MOUNDED AROUND MANHOLES WHICH EXTEND MORE THAN ONE (1) FOOT ABOVE THE EXISTING GROUND. SUCH MOUND SHALL BE CONSTRUCTED WITH NEW DEVELOPMENT A SIX (6) FOOT DIAMETER FLAT TOP WITH 4 TO 1 SIDE SLOPES DOWN TO THE ORIGINAL GROUND. THE ELEVATION OF THE FLAT TOP OF THE MOUND SHALL BE 0.4 FOOT BELOW THE TOP TO THE MANHOLES.
- GEOTECHNICAL REPORT AVAILABLE UPON REQUEST.
- CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH OPENINGS OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.
- CITY MAINTENANCE OF STORM SEWER ENDS AT RIGHT-OF-WAY OR EASEMENT LINE.
- ANY SIDEWALK, DRIVE APPROACH, OR STREET PAVEMENT REMOVED TO CONSTRUCT PROJECT MUST HAVE A PAVEMENT CUT PERMIT AND BE REPLACED BY THE CITY CONTRACTOR. PERMITS CAN BE OBTAINED BY CALLING 316-268-4501 OR 316-268-4480.
- THE INSPECTING FIRM SHALL SUBMIT TO THE CITY STORMWATER MAINTENANCE DIVISION A DIGITAL COPY OF THE CCTV INSPECTION OF THE CONDUITS AND STRUCTURES FOLLOWING CONSTRUCTION. THE DIGITAL FILE FORMATION SHALL BE COMPATIBLE WITH THE CITY INPUT TEMPLATE. A COPY OF THE TEMPLATE IS AVAILABLE UPON REQUEST AT 316-268-4090
- STORM SEWER SYSTEM WILL BE PRIVATELY OWNED AND MAINTAINED.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING EROSION CONTROL AS NEEDED REGARDLESS OF WHAT THE CONSTRUCTION PLANS SHOW. EROSION CONTROL BMP DETAILS CAN BE FOUND AT [HTTP://WWW.WICHITA.GOV/GOVERNMENT/DEPARTMENTS/PW/PW/PAGES/REGULATIONS.ASPX](http://www.wichita.gov/government/departments/pw/pw/pages/regulations.aspx)

# DRAINAGE PRIVATE PROJECT PLANS FOR QUIKTRIP STORE #0329 1620 S. OLIVER WICHITA, SEDGWICK COUNTY, KANSAS 0389 PPD (O.C.A. NO. 607861) GARY JANZEN, P.E., CITY ENGINEER APRIL 2016

AS-BUILT PLANS  
CONTRACTOR: CK CONTRACTING  
FOREMAN: OSMAN AMAYA  
INSPECTED BY: JACOB MORRIS, SCHWAB EATON  
PDF BY: JCM 06.12.2017



**CONTROL POINTS:**

- CP-1  
NW COR., NW 1/4, SEC. 36, T27S, R1E  
5/8" REBAR FOUND  
N. 1678172.979  
E. 1665616.577
- CP-2  
NE COR., NW 1/4, SEC 36, T27S, R1E  
1/2" REBAR FOUND  
N. 1678176.152  
E. 1665831.648
- CP-3  
SE COR., NW 1/4, SEC 36, T27S, R1E  
5/8" REBAR FOUND  
N. 1677808.293  
E. 1665837.033

**MUNICIPAL CONTACT LIST:**

- CITY OF WICHITA
- |   |   |  |
|---|---|--|
| <b>OFFICE OF CENTRAL INSPECTION DEPARTMENT-PLANNING DIVISION</b><br>CITY HALL, 7TH FLOOR<br>455 N. MAIN<br>WICHITA, KS, 67202<br>TEL: (316) 268-4477<br>FAX: (316) 268-4663<br>CONTACT: PAUL HAYS | <b>CITY FIRE DEPARTMENT</b><br>CITY HALL, 11TH FLOOR<br>455 N. MAIN<br>WICHITA, KS, 67202<br>TEL: (316) 268-4245<br>FAX: (316) 858-7706<br>CONTACT: CHIEF STUART BEVIS  | <b>CITY OF WICHITA WATER &amp; SEWER UTILITIES</b><br>CITY HALL, 8TH FLOOR<br>455 N. MAIN<br>WICHITA, KS, 67202<br>TEL: (316) 268-4555<br>CONTACT: KERRY GIBSON<br>ALT. CONTACT: GREG LOLLLEY<br>TEL: (316) 268-4501 |
| <b>PRIVATE PROJECTS/ENGINEERING DEPARTMENT</b><br>CITY HALL, 7TH FLOOR<br>455 N. MAIN<br>WICHITA, KS, 67202<br>TEL: (316) 268-4501<br>CONTACT: REBECCA GREIF                                      | <b>OFFICE OF CENTRAL INSPECTION DEPARTMENT-INSPECTIONS DIVISION</b><br>CITY HALL, 7TH FLOOR<br>455 N. MAIN<br>WICHITA, KS, 67202<br>TEL: (316) 268-4460<br>FAX: (316) 268-4663<br>CONTACT: TOM STOLTZ(DIRECTOR) | <b>OFFICE OF CENTRAL INSPECTION DEPARTMENT-INSPECTIONS DIVISION</b><br>CITY HALL, 7TH FLOOR<br>455 N. MAIN<br>WICHITA, KS, 67202<br>TEL: (316) 268-4460<br>FAX: (316) 268-4663<br>CONTACT: TOM STOLTZ(DIRECTOR)      |
| <b>CITY OF WICHITA STORM WATER MANAGEMENT DEPARTMENT</b><br>CITY HALL, 8TH FLOOR<br>455 N. MAIN<br>WICHITA, KS, 67202<br>TEL: (316) 268-4498<br>CONTACT: JOE HICKLE, P.E.                         | <b>CITY TRAFFIC ENGINEER</b><br>455 N. MAIN<br>WICHITA, KS, 67202<br>TEL: (316) 268-4393<br>FAX: (316) 268-4114<br>CONTACT: BRIAN COON, P.E.  |  |

**BENCHMARK:**

- BM 1 - CITY OF WICHITA BENCHMARK DISC ON WEST END OF NORTH HEADWALL OF RCBC, 130' +/- EAST OF CENTERLINE OF OLIVER. ELEV.=1330.37 N.A.V.D. 88
- BM 2 - 5/8" REBAR WITH ALUMINUM DISC CAP STAMPED MKEC LOCATED 6.2 FEET NORTH AND 4.2 FEET EAST OF THE NORTHEAST CORNER OF A TYPE 1 STREET INLET ON EAST SIDE OF OLIVER AVENUE, SAID INLET LYING 46 FEET NORTH NORTHWESTERLY FROM THE SOUTHWEST CORNER OF QUIKTRIP 21ST ADDITION. ELEV.=1327.21 N.A.V.D. 88



**STORMWATER COMPLIANCE:**

DISTURBED AREA = 2.68 ACRES  
PROJECT PROPERTY AREA = 2.06 ACRES  
DETENTION = NOT REQUIRED BY 10% RULE  
CHANNEL PROTECTION VOLUME = N/A (LESS THAN 5 ACRES OF DISTURBED AREA)

WATER QUALITY ACHIEVED BY: SNOUTS  
DEVELOPMENT COMPLIES WITH 16.32 OF CITY CODE.

**PRIVATE UTILITIES LIST: PROJECT CONTACT LIST:**

- |  |  |  |
|--|--|--|
| <b>ELECTRIC COMPANY (WESTAR ENERGY)</b><br>TEL: (316) 261-6315   | <b>SURVEYOR OF RECORD</b><br>MID-KANSAS ENGINEERING CONSULTANTS<br>BRIAN LINDEBAK<br>411 NORTH WEBB ROAD<br>WICHITA, KS, 67206<br>TEL: (316) 684-9800<br>FAX: (316) 684-5100             | <b>QT REAL ESTATE PROJECT MANAGER</b><br>QUIKTRIP CORPORATION<br>JESSICA GLAVAS<br>4705 S. 129TH EAST AVE.<br>TULSA, OK 74134<br>TEL: (918) 615-7804 |
| <b>GAS COMPANY (KANSAS GAS SERVICE)</b><br>TEL: (316) 831-5664   | <b>ENGINEER OF RECORD</b><br>CERTIFIED ENGINEERING DESIGN, P.A.<br>HARLAN D. FORAKER, P.E.<br>1935 WEST MAPLE STREET<br>WICHITA, KS, 67213<br>TEL: (316) 262-8808<br>FAX: (316) 262-1669 | <b>QT PROJECT MANAGER</b><br>QUIKTRIP CORPORATION<br>TIM KELLY, P.E.<br>4705 S. 129TH EAST AVE.<br>TULSA, OK 74134<br>TEL: (918) 615-7432            |
| <b>TELEPHONE COMPANY (AT&amp;T)</b><br>TEL: (316) 268-2762       |  |  |
| <b>CABLE COMPANY (COX COMMUNICATIONS)</b><br>TEL: (316) 260-7475 |  |  |

**Sheet List Table**

Sheet Number	Sheet Title
1	COVER
2	GRADING
3	DEMO
4	SWS NO. 1 PLAN & PROFILE
5	SWS NO. 2 PLAN & PROFILE
6	SWS NO. 3 PLAN & PROFILE
7	EROSION PH 1
8	EROSION PH 2
9	EROSION DETAILS 1
10	EROSION DETAILS 2
11	EROSION DETAILS 3
12	EROSION DETAILS 4
13	EROSION DETAILS 5
14	WATER QUALITY DEVICE DETAIL
15	PRECAST MH DETAIL
16	TYPE 1 CURB INLET
17	FRAME & COVER
18	QT DRAINAGE DETAILS 1
19	QT DRAINAGE DETAILS 2
20	SPECIAL CURB INLET DETAIL
21	PLAT

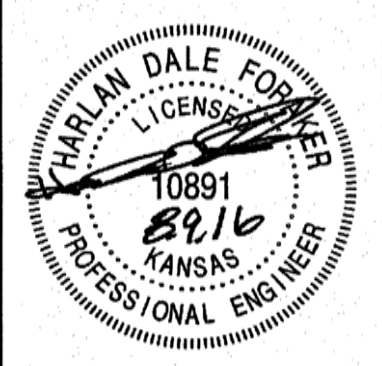
APPROVED AS NOTED  
BY WICHITA PUBLIC WORKS ENGINEERING AND STORMWATER DIVISION

Engineering *Rebecca Greif 8/12/16*  
Stormwater *Joe Hickle PE 8/15/16*

**NOTE TO CONTRACTORS**

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 in the state of Kansas. No work shall be performed the Contractor without such inspection nor shall any work be commenced without written authorization by City Engineering. All Construction and Materials shall comply with the current City of Wichita Specifications and Standards and Special Provisions. (on file and available at Wichita.gov).

An approved copy of these plans signed by City staff are required on-site.



PROJECT NO.: 20152242  
**CEED**  
CERTIFIED ENGINEERING DESIGN, P.A.

1935 W. MAPLE STREET  
WICHITA, KANSAS 67213  
PH: (316) 262-8808  
FAX: (316) 262-1669

**QuikTrip No. 0329R**

HARRY & OLIVER  
WICHITA, KS



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VERSION: 001
DESIGNED BY:
DRAWN BY:
REVIEWED BY:

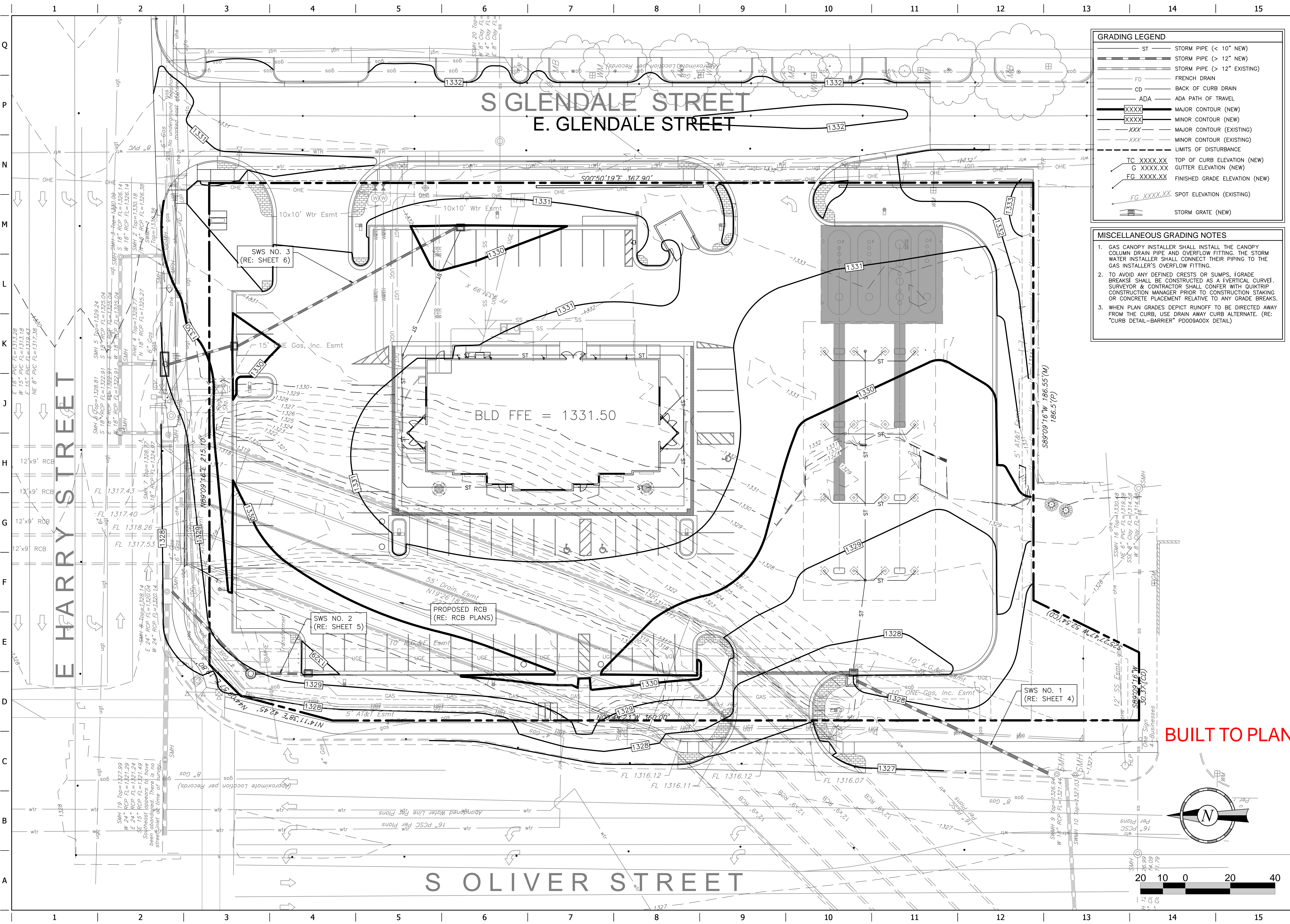
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COVER

SHEET NUMBER:  
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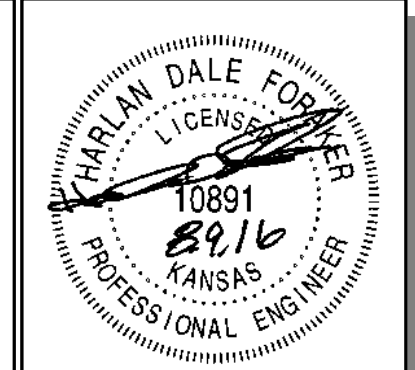
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**GRADING LEGEND**

ST	STORM PIPE (< 12" NEW)
ST	STORM PIPE (> 12" NEW)
ST	STORM PIPE (> 12" EXISTING)
FD	FRENCH DRAIN
CD	BACK OF CURB DRAIN
ADA	ADA PATH OF TRAVEL
XXXX	MAJOR CONTOUR (NEW)
XXXX	MINOR CONTOUR (NEW)
XXX	MAJOR CONTOUR (EXISTING)
XXX	MINOR CONTOUR (EXISTING)
---	LIMITS OF DISTURBANCE
TC XXXX.XX	TOP OF CURB ELEVATION (NEW)
G XXXX.XX	GUTTER ELEVATION (NEW)
FG XXXX.XX	FINISHED GRADE ELEVATION (NEW)
FG XXXX.XX	SPOT ELEVATION (EXISTING)
[Symbol]	STORM GRATE (NEW)

- MISCELLANEOUS GRADING NOTES**
1. GAS CANOPY INSTALLER SHALL INSTALL THE CANOPY COLUMN DRAIN PIPE AND OVERFLOW FITTING. THE STORM WATER INSTALLER SHALL CONNECT THEIR PIPING TO THE GAS INSTALLER'S OVERFLOW FITTING.
  2. TO AVOID ANY DEFINED CRESTS OR SUMPS, (GRADE BREAKS) SHALL BE CONSTRUCTED AS A (VERTICAL CURVE). SURVEYOR & CONTRACTOR SHALL CONFER WITH QUIKTRIP CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION STAKING OR CONCRETE PLACEMENT RELATIVE TO ANY GRADE BREAKS.
  3. WHEN PLAN GRADES DEPICT RUNOFF TO BE DIRECTED AWAY FROM THE CURB, USE DRAIN AWAY CURB ALTERNATE. (RE: "CURB DETAIL-BARRIER" P009A00X DETAIL)



PROJECT NO.: 20152242  
**CED**  
 CERTIFIED ENGINEERING DESIGN, P.A.  
 1935 W. MAPLE STREET  
 WICHITA, KANSAS 67213  
 PH: (316)262-8808  
 FAX: (316)262-1669

**QuikTrip No. 0329R**  
 HARRY & OLIVER  
 WICHITA, KS



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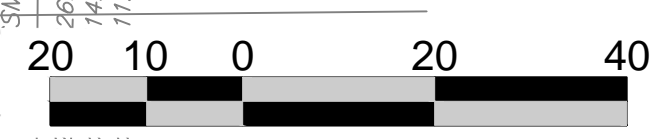
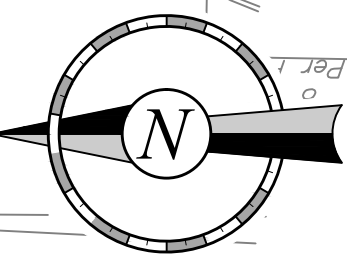
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 DESIGNED BY:  
 DRAWN BY:  
 REVIEWED BY:

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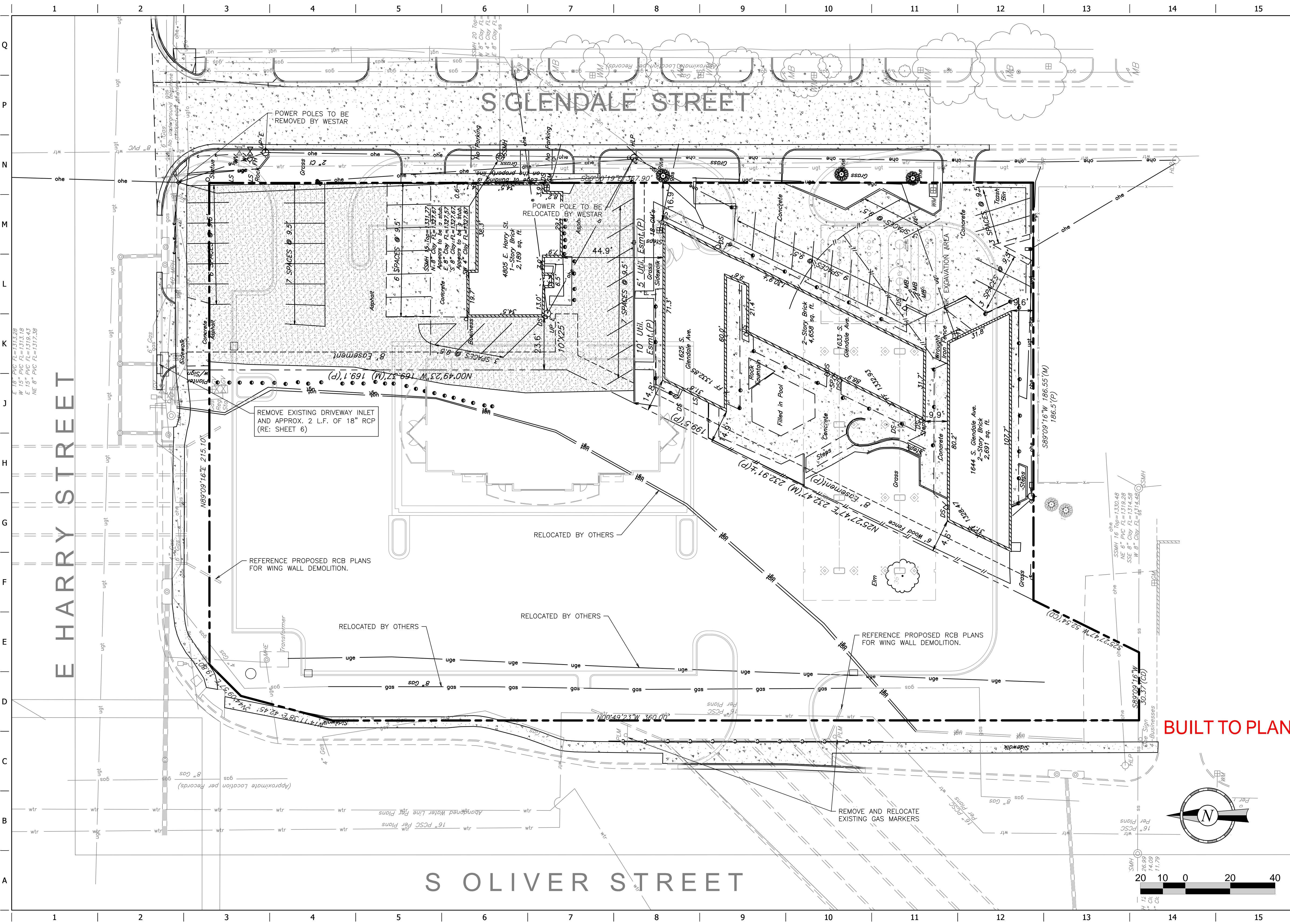
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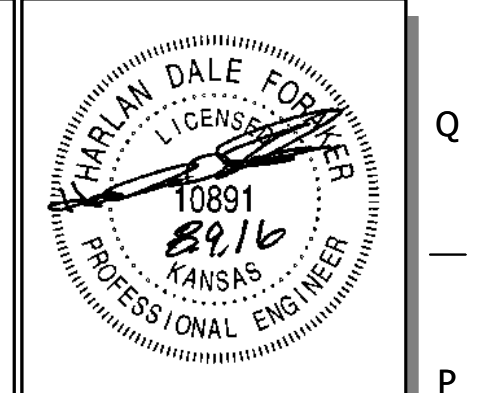
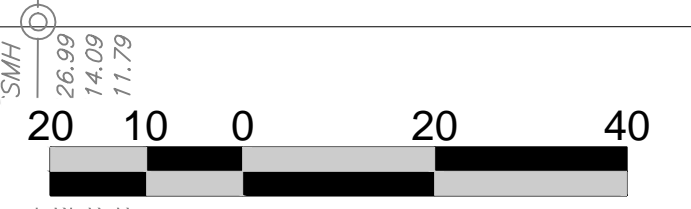
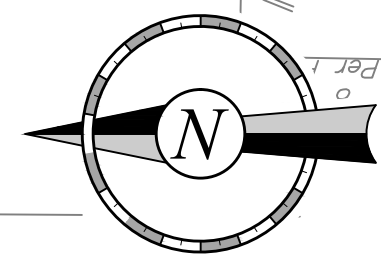
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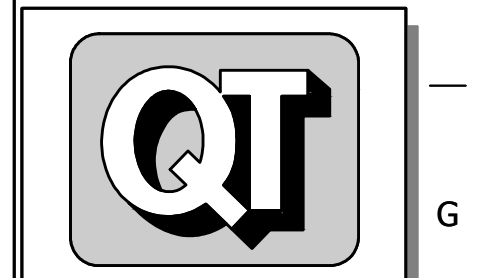


**BUILT TO PLAN**



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 1935 W. MAPLE STREET  
 WICHITA, KANSAS 67213  
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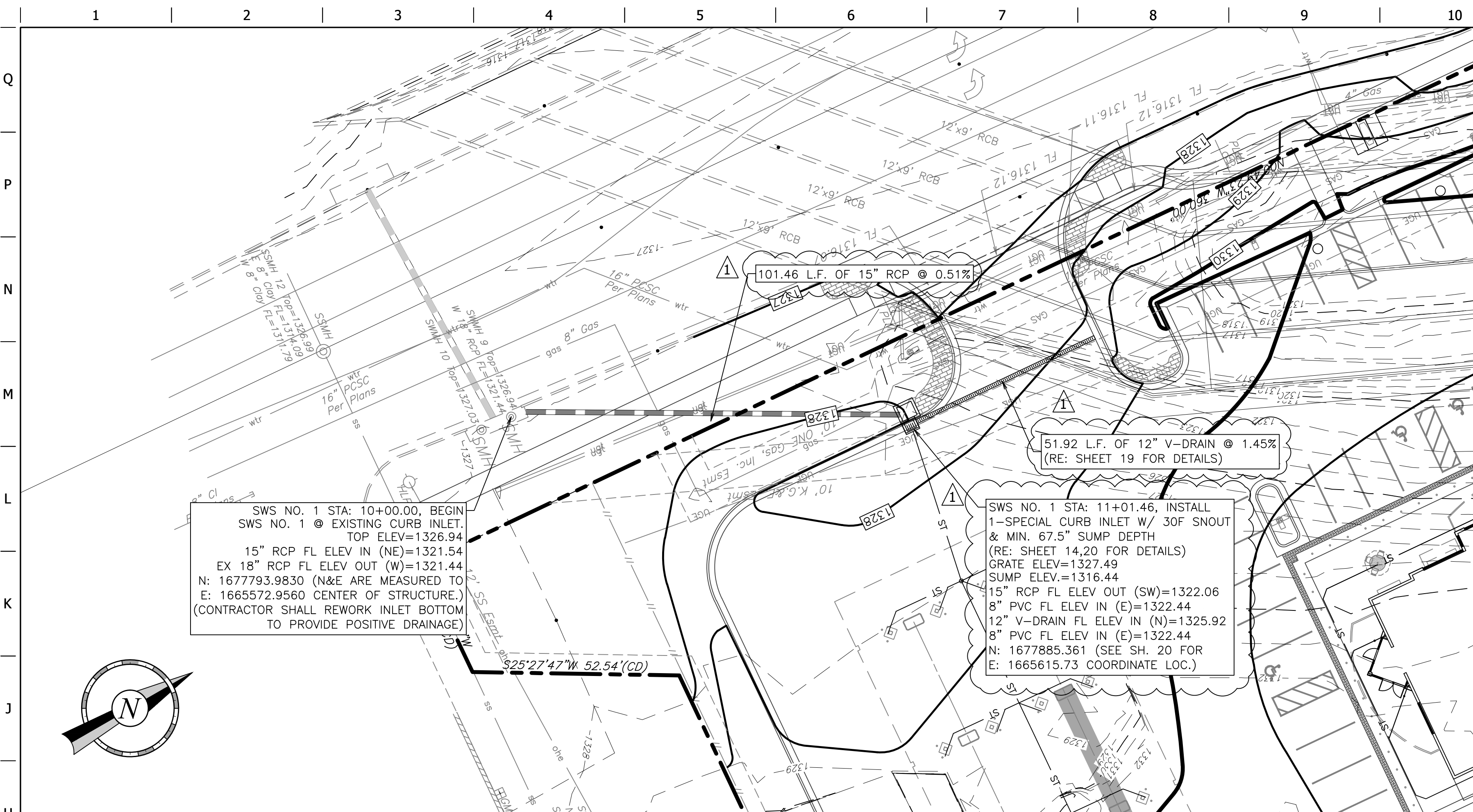
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SWS NO. 1 STA: 10+00.00, BEGIN  
 SWS NO. 1 @ EXISTING CURB INLET.  
 TOP ELEV.=1326.94  
 15" RCP FL ELEV IN (NE)=1321.54  
 EX 18" RCP FL ELEV OUT (W)=1321.44  
 N: 1677793.9830 (N&E ARE MEASURED TO  
 E: 1665572.9560 CENTER OF STRUCTURE.)  
 (CONTRACTOR SHALL REWORK INLET BOTTOM  
 TO PROVIDE POSITIVE DRAINAGE)

SWS NO. 1 STA: 11+01.46, INSTALL  
 1-SPECIAL CURB INLET W/ 30F SNOOT  
 & MIN. 67.5" SUMP DEPTH  
 (RE: SHEET 14,20 FOR DETAILS)  
 GRATE ELEV.=1327.49  
 SUMP ELEV.=1316.44  
 15" RCP FL ELEV OUT (SW)=1322.06  
 8" PVC FL ELEV IN (E)=1322.44  
 12" V-DRAIN FL ELEV IN (N)=1325.92  
 8" PVC FL ELEV IN (E)=1322.44  
 N: 1677885.361 (SEE SH. 20 FOR  
 E: 1665615.73 COORDINATE LOC.)

**STORM SEWER LEGEND**

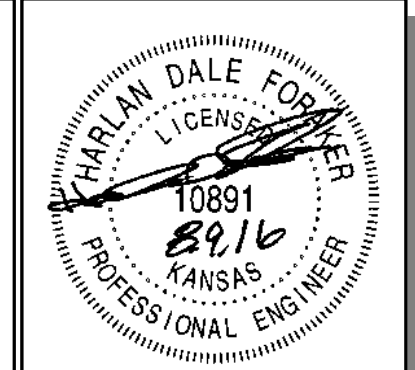
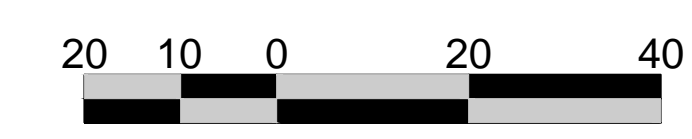
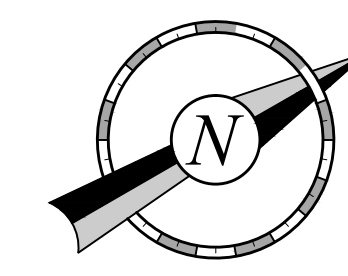
ST	STORM PIPE (< 10" NEW)
CD	BACK OF CURB DRAIN
(thick dashed line)	STORM PIPE (> 12" NEW)
(dashed line)	STORM PIPE (> 12" EXISTING)
(solid line)	MAJOR CONTOUR (NEW)
(dashed line)	MINOR CONTOUR (NEW)
(dotted line)	MAJOR CONTOUR (EXISTING)
(dotted line)	MINOR CONTOUR (EXISTING)
(rectangle with X)	STORM GRATE (NEW)

**STORM SEWER GENERAL NOTES**  
**STORM SEWER INSTALLATION CONSIDERATIONS**

PRIOR TO THE CONSTRUCTION OF, OR CONNECTION TO ANY STORM DRAIN OR ANY OTHER ELEVATION SENSITIVE UTILITY, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTIONS AND ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL INFORM THE ENGINEER AND THE OWNER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. THE ENGINEER AND OWNER WILL BE HELD HARMLESS IN THE EVENT THE ENGINEER AND OWNER ARE NOT NOTIFIED OF A DESIGN CONFLICT.

**BENCHMARKS:**

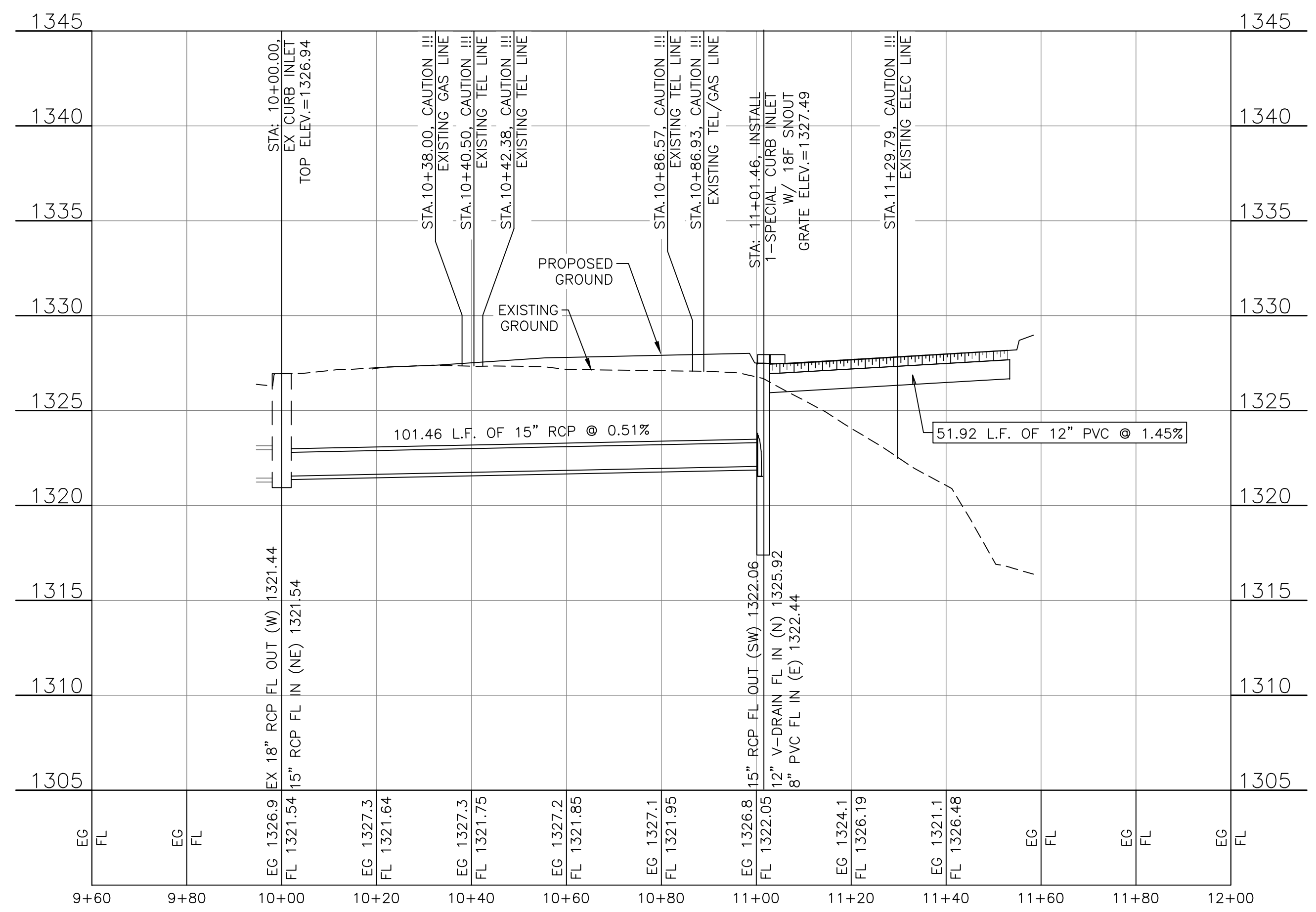
BM-1  
 CITY OF WICHITA BENCHMARK DISC ON WEST END OF NORTH HEADWALL OF RCBC, 130'± EAST OF CENTERLINE OF OLIVER STREET.  
 ELEV.=1330.37 N.A.V.D. 88'



PROJECT NO.: 20152242

**CED**  
 CERTIFIED ENGINEERING DESIGN, P.A.  
 1935 W. MAPLE STREET  
 WICHITA, KANSAS 67213  
 PH: (316)262-8808  
 FAX: (316)262-1669

**QuikTrip No. 0329R**  
 HARRY & OLIVER  
 WICHITA, KS



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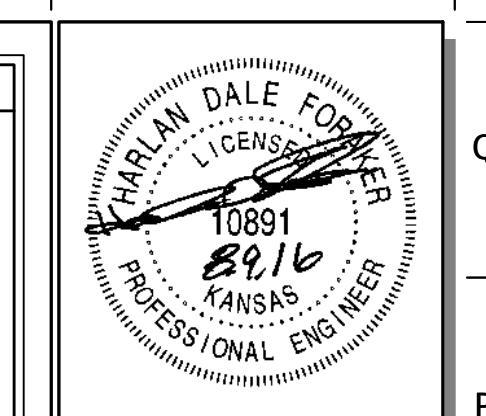
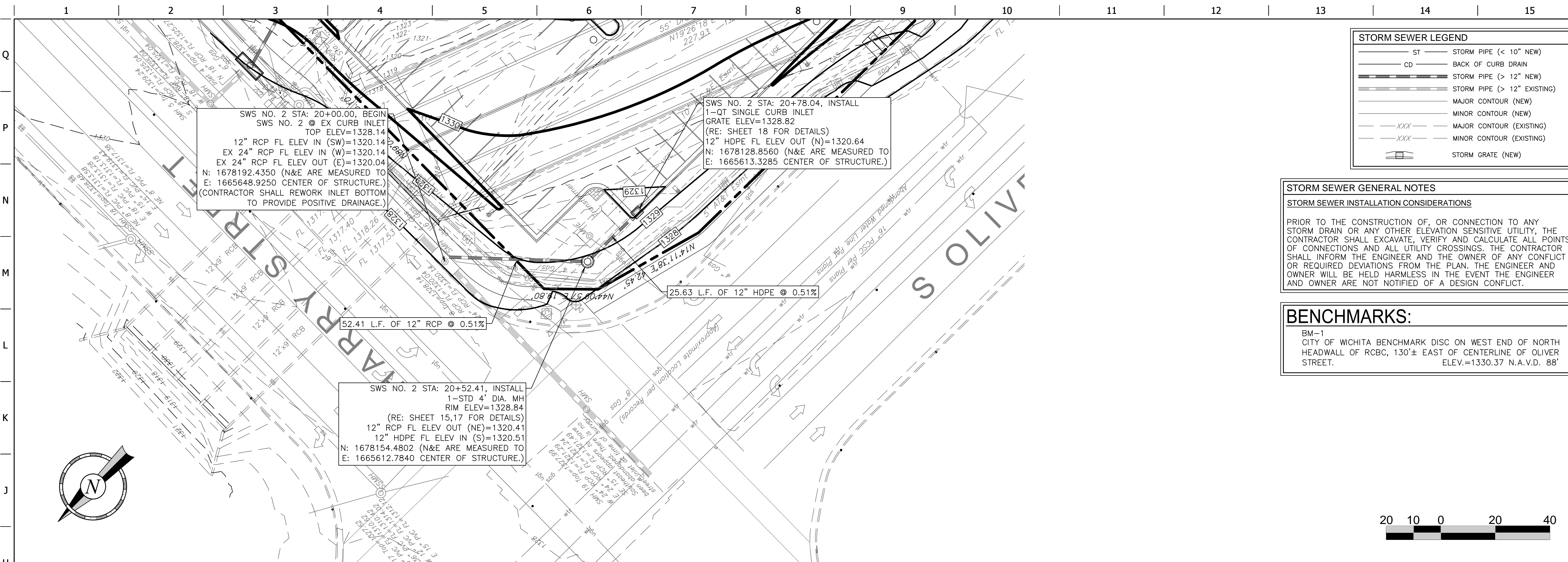
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1	8/9/16	ISS. CHANGES	

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SHEET NUMBER:  
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**BUILT TO PLAN**

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PROJECT NO.: 20152242

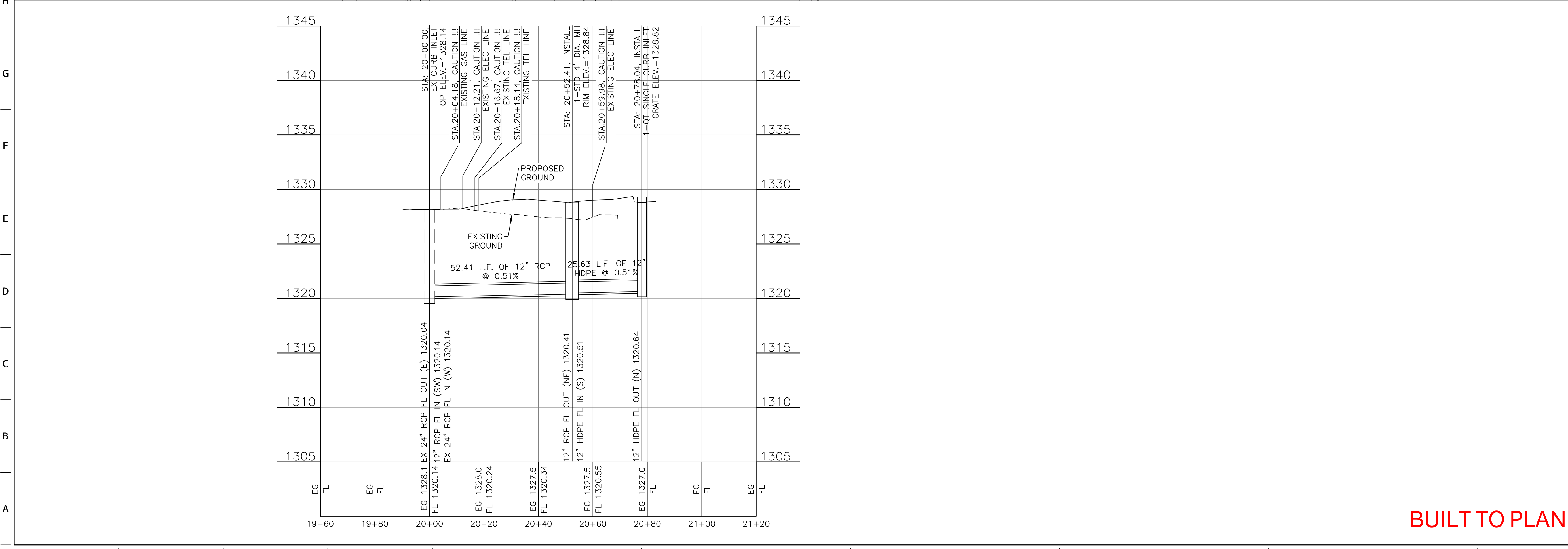
**CEED**  
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 1935 W. MAPLE STREET  
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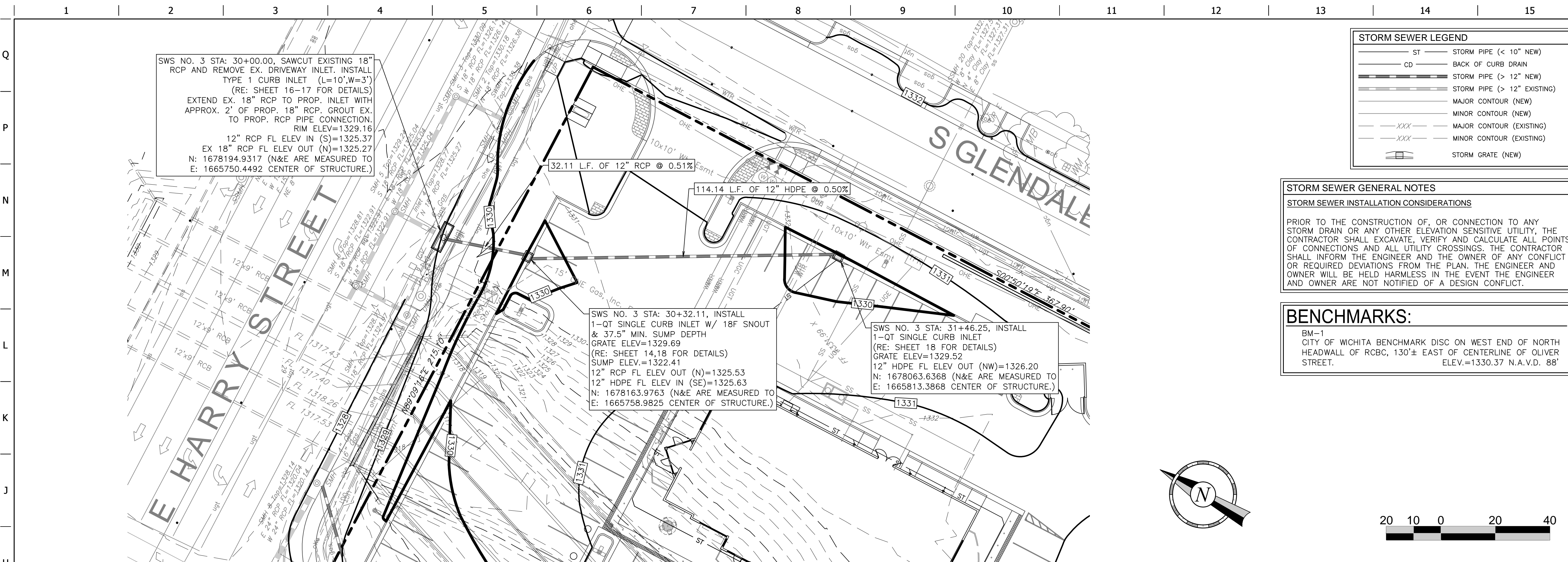
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SHEET NUMBER:  
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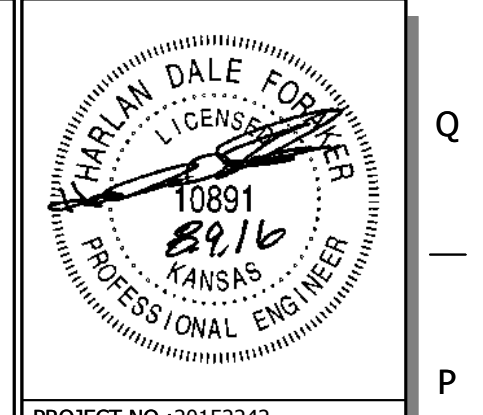
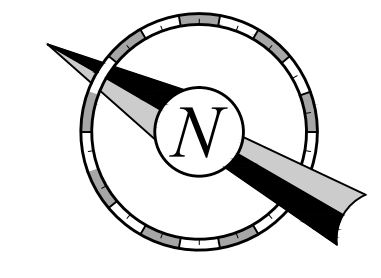


**STORM SEWER LEGEND**

- ST — STORM PIPE (< 10" NEW)
- CD — BACK OF CURB DRAIN
- STORM PIPE (> 12" NEW)
- STORM PIPE (> 12" EXISTING)
- MAJOR CONTOUR (NEW)
- MINOR CONTOUR (NEW)
- XXX --- MAJOR CONTOUR (EXISTING)
- XXX --- MINOR CONTOUR (EXISTING)
- STORM GRATE (NEW)

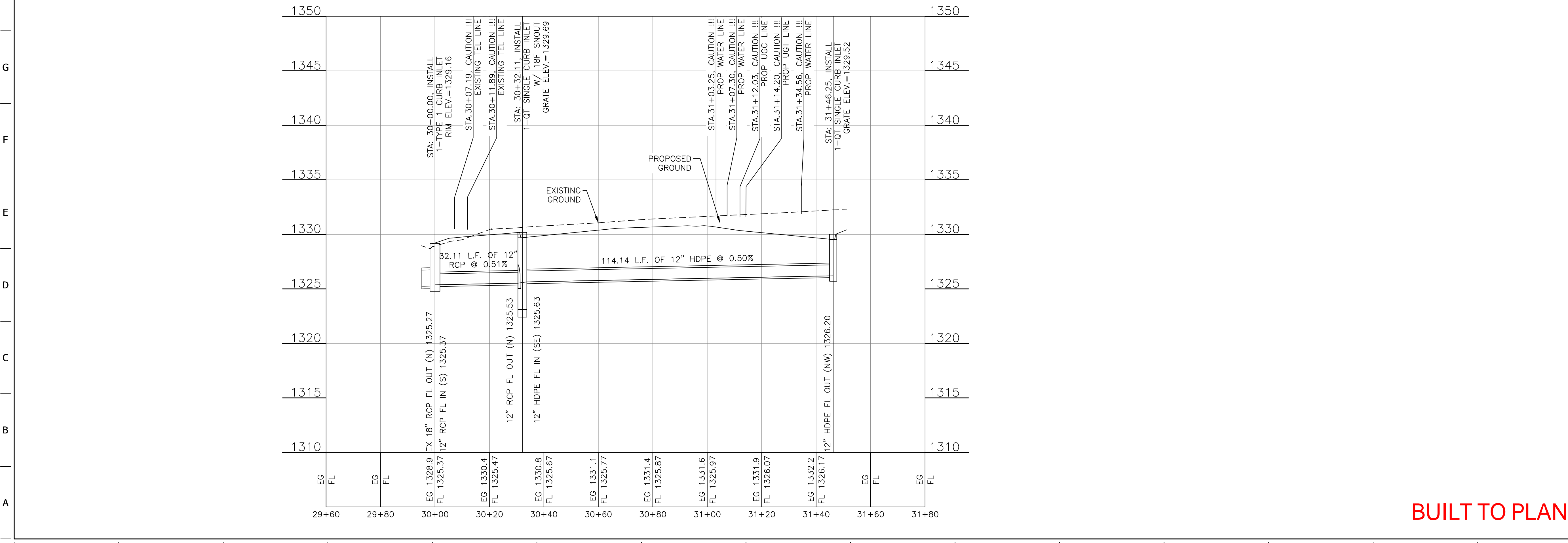
**STORM SEWER GENERAL NOTES**  
**STORM SEWER INSTALLATION CONSIDERATIONS**  
 PRIOR TO THE CONSTRUCTION OF, OR CONNECTION TO ANY STORM DRAIN OR ANY OTHER ELEVATION SENSITIVE UTILITY, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTIONS AND ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL INFORM THE ENGINEER AND THE OWNER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. THE ENGINEER AND OWNER WILL BE HELD HARMLESS IN THE EVENT THE ENGINEER AND OWNER ARE NOT NOTIFIED OF A DESIGN CONFLICT.

**BENCHMARKS:**  
 BM-1  
 CITY OF WICHITA BENCHMARK DISC ON WEST END OF NORTH HEADWALL OF RCBS, 130'± EAST OF CENTERLINE OF OLIVER STREET.  
 ELEV.=1330.37 N.A.V.D. 88'



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**6**

**BUILT TO PLAN**

# SEQUENCE OF CONSTRUCTION

## PHASE I

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE(S).
2. PREPARE TEMPORARY PARKING AND STORAGE AREA. UPON IMPLEMENTATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN, PORTA POTTY, WHEEL WASH, CONCRETE WASHOUT, MASONS AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., DENOTE THEM ON THE SITE MAPS IMMEDIATELY AND NOTE ANY CHANGES IN THE LOCATIONS AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.
3. CONSTRUCT THE SEDIMENT TRAPS AND BARRIERS, SEDIMENT FENCES, EXISTING STORM DRAIN INLET AND OUTLET PROTECTION, PERIMETER SPIKES, WATER BARS, ETC.
4. STABILIZE STREAM BANKS, CHANNELS, ETC.
5. HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION OF BMPs. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.

## PHASE II

1. PERFORM LAND CLEARING, GRADING, AND SITE PREPARATION.
2. APPLY SURFACE STABILIZATION, TEMPORARY SEEDING, MULCHING, SODDING, AND RIPRAP.
3. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURB AND GUTTER, ETC.
4. INSTALL RIPRAP AROUND OUTLET STRUCTURES.
5. INSTALL INLET PROTECTION AROUND ALL PROPOSED STORM SEWER STRUCTURES.
6. BEGIN CONSTRUCTION OF BUILDINGS, PAVING, ETC.
7. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
8. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED)

## GENERAL EROSION NOTES

- A. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING ("SITE MAP"), THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN PROJECT SPECIFICATIONS ("SWPPP"), PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF KANSAS NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- D. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- E. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
- F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- G. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
- H. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- I. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- J. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- K. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- L. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

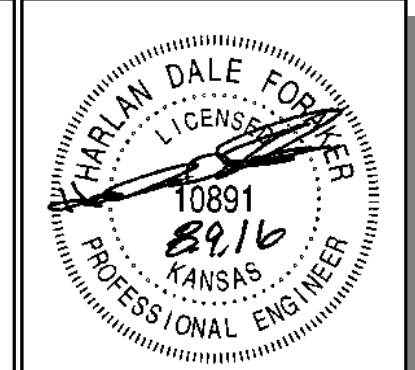
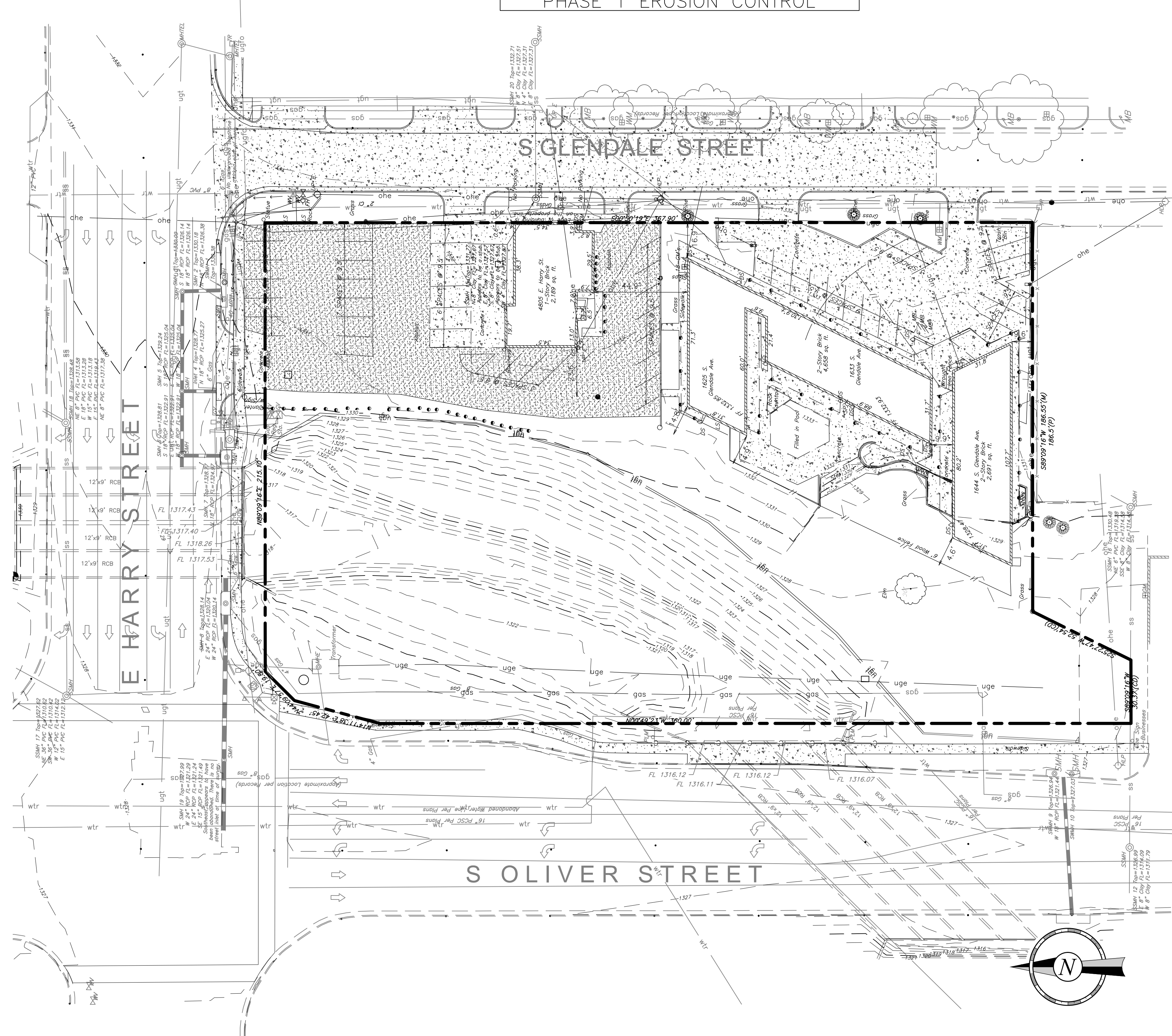
ACREAGE SUMMARY	
IMPERVIOUS AREA	±2.82
LANDSCAPE AREA	±0.46
TOTAL DISTURBED	±3.08

OWNERSHIP / CONTRACTOR SUMMARY	
<b>OWNER/DEVELOPER:</b> QUIKTRIP CORPORATION 4705 S. 129TH EAST AVENUE TULSA, OK 74134-7008 (918) 615-7381	
<b>SITE OPERATOR/GENERAL CONTRACTOR:</b> TBD	
<b>SUPERINTENDENT:</b> TBD	

EROSION CONTROL PHASE 1 LEGEND	
---XXX---	MAJOR CONTOUR (EXISTING)
---xxx---	MINOR CONTOUR (EXISTING)
---	SILT FENCE
---	LIMITS OF DISTURBANCE
---	DRIVE ENTRANCE BARRICADE
---	INLET PROTECTION
---	TEMPORARY STABILIZED CONSTRUCTION ENTRANCE

- M. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY MULCHED OR OTHER SIMILARLY EFFECTIVE SOIL STABILIZING MEASURES PER PART 7.2.5. OF THE GENERAL PERMIT. IN ADDITION TO SEEDING, THESE AREAS SHALL BE SEEDED NO LATER THAN 21 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
- N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE MULCHED OR OTHER SIMILARLY EFFECTIVE SOIL STABILIZING MEASURES PER PART 7.2.5 OF THE GENERAL PERMIT, IN ADDITION TO PERMANENT SEEDING. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
- O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
- P. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
- R. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
- S. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- T. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO PREVENT EROSION.
- U. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.
- V. BETWEEN THE TIME THIS SWPPP IS IMPLEMENTED AND FINAL NOTICE OF TERMINATION HAS BEEN SUBMITTED, ALL DISTURBED AREAS AND POLLUTANT CONTROLS MUST BE INSPECTED WEEKLY AND WITHIN 24HRS OF A HALF OF AN INCH OF RAINFALL.

REFERENCE MKEC'S RCB PPD PLANS FOR PROPOSED RCB CONSTRUCTION PHASE 1 EROSION CONTROL



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 CERTIFIED ENGINEERING DESIGN, P.A.  
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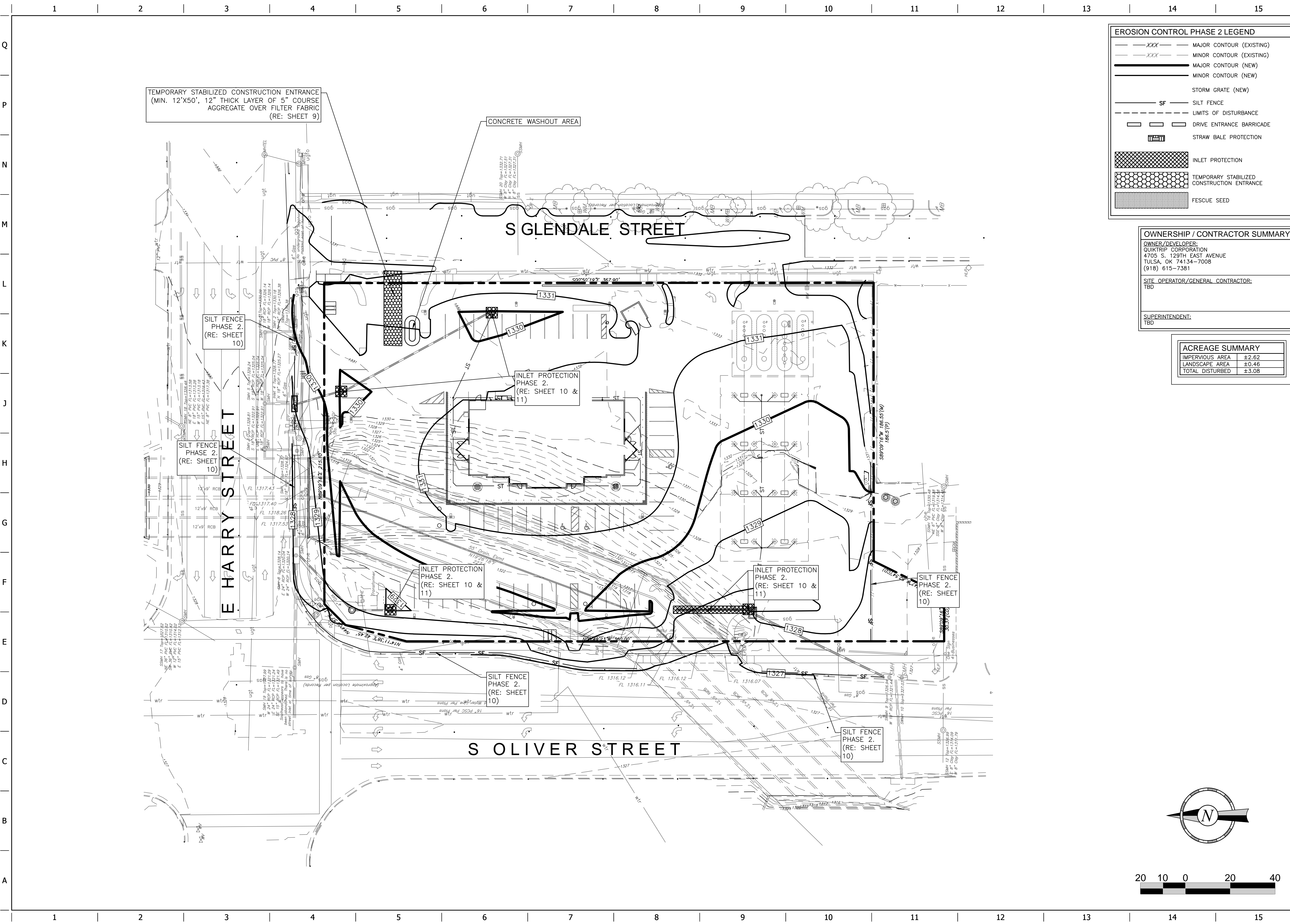
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SHEET NUMBER:  
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ORIGINAL ISSUE DATE:

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TEMPORARY STABILIZED CONSTRUCTION ENTRANCE  
(MIN. 12'X50', 12" THICK LAYER OF 5" COURSE  
AGGREGATE OVER FILTER FABRIC  
(RE: SHEET 9)

CONCRETE WASHOUT AREA

S GLENDALE STREET

E HARRY STREET

S OLIVER STREET

**EROSION CONTROL PHASE 2 LEGEND**

- XXXX --- MAJOR CONTOUR (EXISTING)
- XXX --- MINOR CONTOUR (EXISTING)
- MAJOR CONTOUR (NEW)
- MINOR CONTOUR (NEW)
- STORM GRATE (NEW)
- SF --- SILT FENCE
- LIMITS OF DISTURBANCE
- DRIVE ENTRANCE BARRICADE
- STRAW BALE PROTECTION
- INLET PROTECTION
- TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
- FESCUE SEED

**OWNERSHIP / CONTRACTOR SUMMARY**

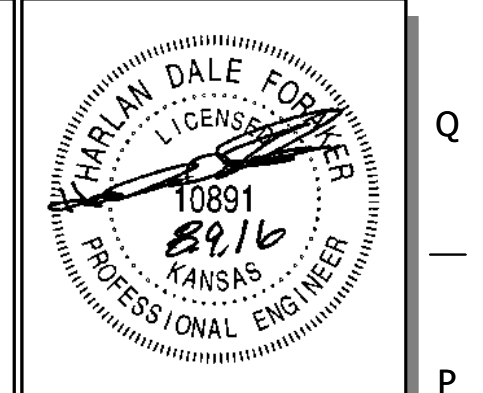
OWNER/DEVELOPER:  
QUIKTRIP CORPORATION  
4705 S. 129TH EAST AVENUE  
TULSA, OK 74134-7008  
(918) 615-7381

SITE OPERATOR/GENERAL CONTRACTOR:  
TBD

SUPERINTENDENT:  
TBD

**ACREAGE SUMMARY**

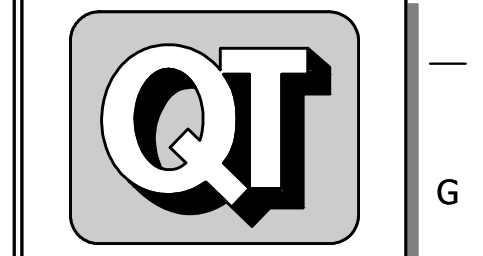
IMPERVIOUS AREA	±2.62
LANDSCAPE AREA	±0.46
TOTAL DISTURBED	±3.08



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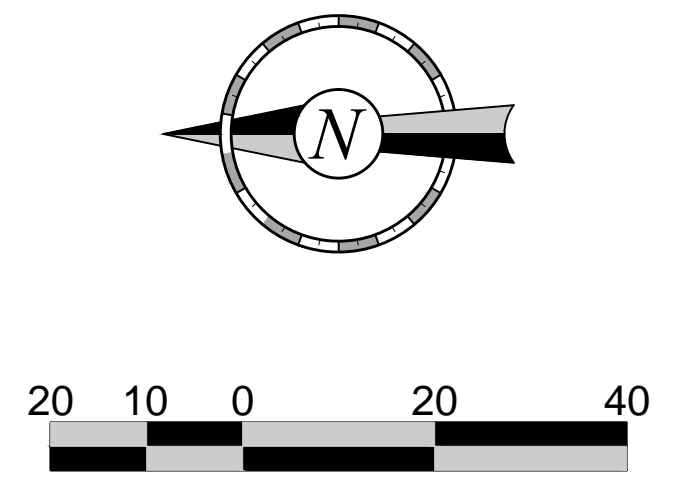
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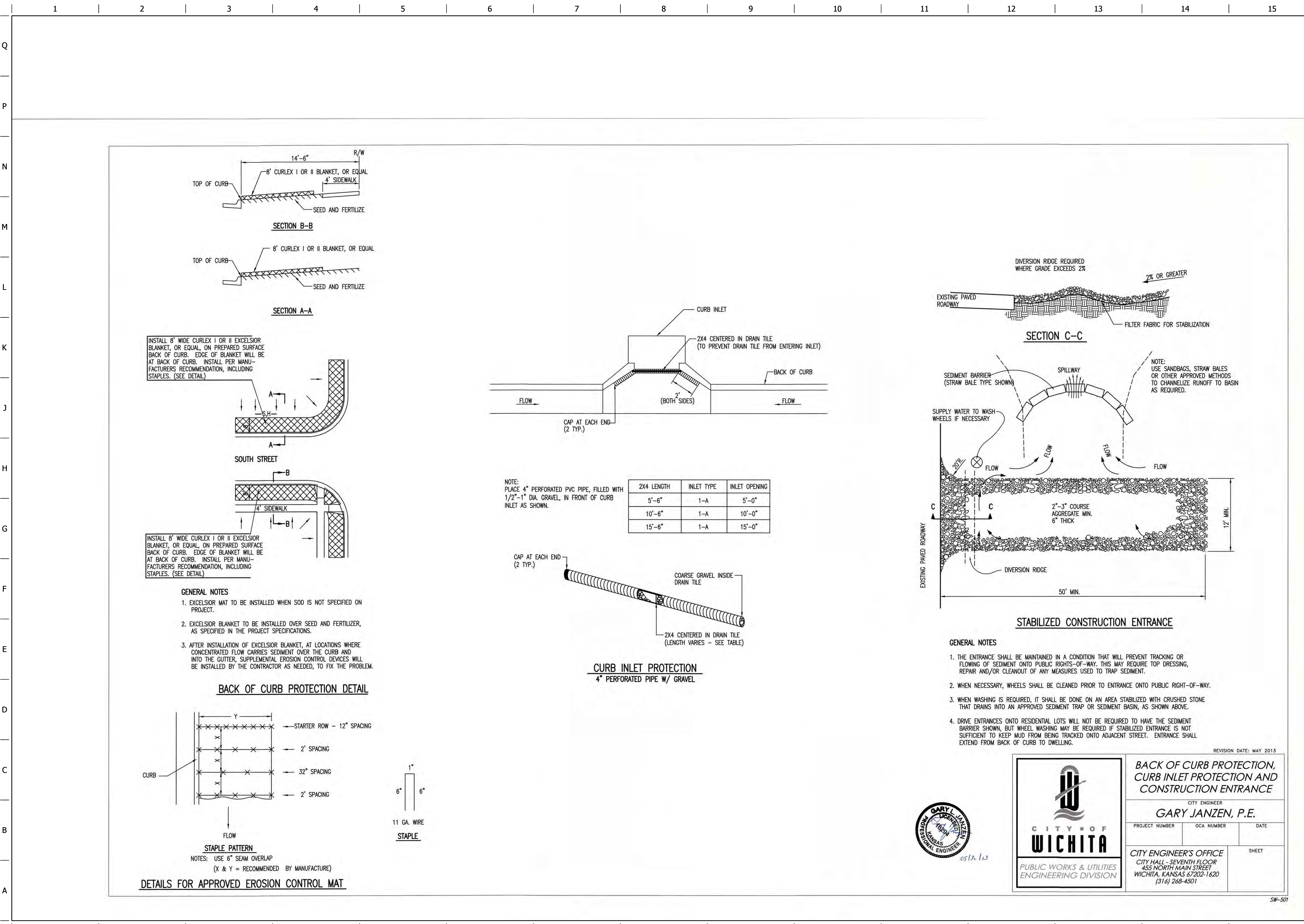
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SHEET NUMBER:  
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SHEET NUMBER:  
 9

REVISION DATE: MAY 2013

**CITY OF WICHITA**  
 PUBLIC WORKS & UTILITIES  
 ENGINEERING DIVISION

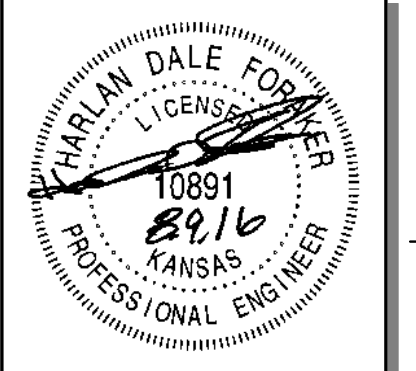
**BACK OF CURB PROTECTION,  
 CURB INLET PROTECTION AND  
 CONSTRUCTION ENTRANCE**

CITY ENGINEER  
**GARY JANZEN, P.E.**

PROJECT NUMBER	OCA NUMBER	DATE

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

SHEET



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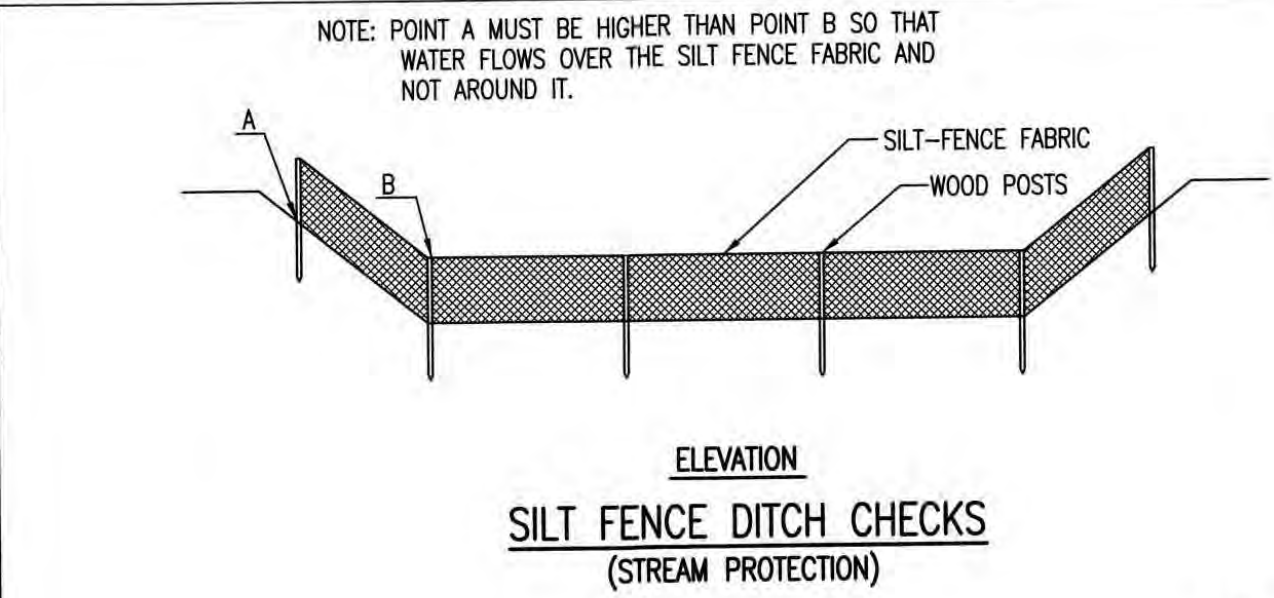
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 EROSION DETAILS 2

SHEET NUMBER:

10



**MATERIAL SPECIFICATION:**

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4" LONG. SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

**PLACEMENT:**

PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK, NOT OVER IT. SILT FENCE DITCH CHECKS OFTEN FAIL WHEN OVERTOPPED. SILT FENCE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. THE SILT FENCE SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE TOP OF THE LOW POINT OF THE FENCE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK. SILT FENCE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD. SILT FENCE SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.

**THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:**

DITCH 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

**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 DOWNSLOPE 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 DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART. ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

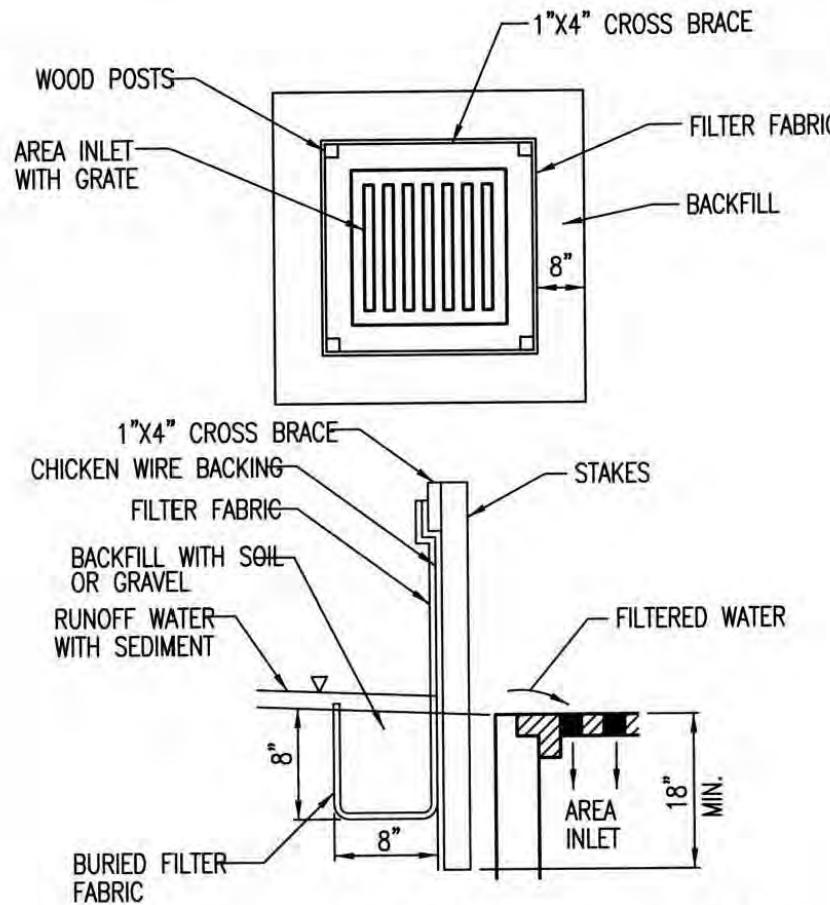
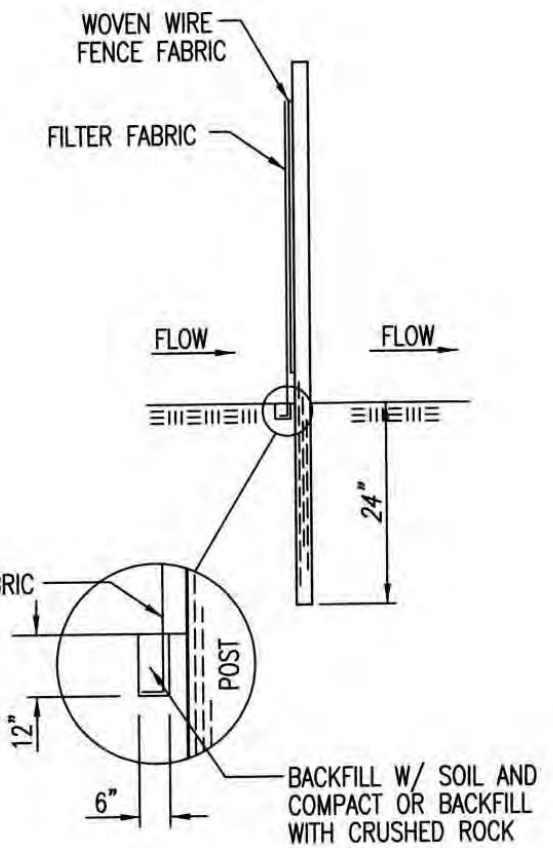
**LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:**

WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK—NOT OVER IT. PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. SILT FENCE INSTALLATIONS QUICKLY DETERIORATE WHEN WATER OVERTOPS THEM. DO NOT PLACE SILT FENCE POSTS ON THE UPSTREAM SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT PLACE A SILT FENCE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW. DO NOT PLACE SILT FENCE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW. FOLLOW PRESCRIBED DITCH CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS. DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE LOW POINT ON THE TOP OF THE FENCE. DO NOT PLACE SILT FENCE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.

**INSPECTION AND MAINTENANCE:**

SILT FENCE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW AROUND THE DITCH CHECK?
- DOES WATER FLOW UNDER THE DITCH CHECK?
- DOES THE SILT FENCE SAG EXCESSIVELY?
- HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



**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 DRAMATICALLY 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.

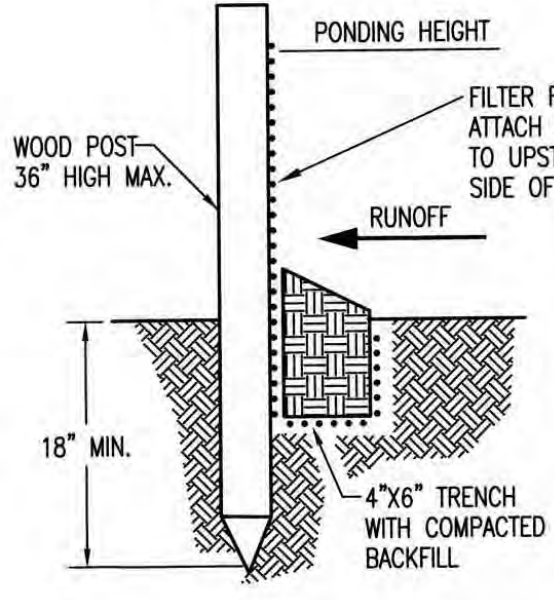
**LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:**

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 RESTRICTED 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:**

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 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?



**SILT FENCE DITCH CHECK  
 AND BARRIER DETAILS**

CITY ENGINEER  
**GARY JANZEN, P.E.**

PROJECT NUMBER    OCA NUMBER    DATE

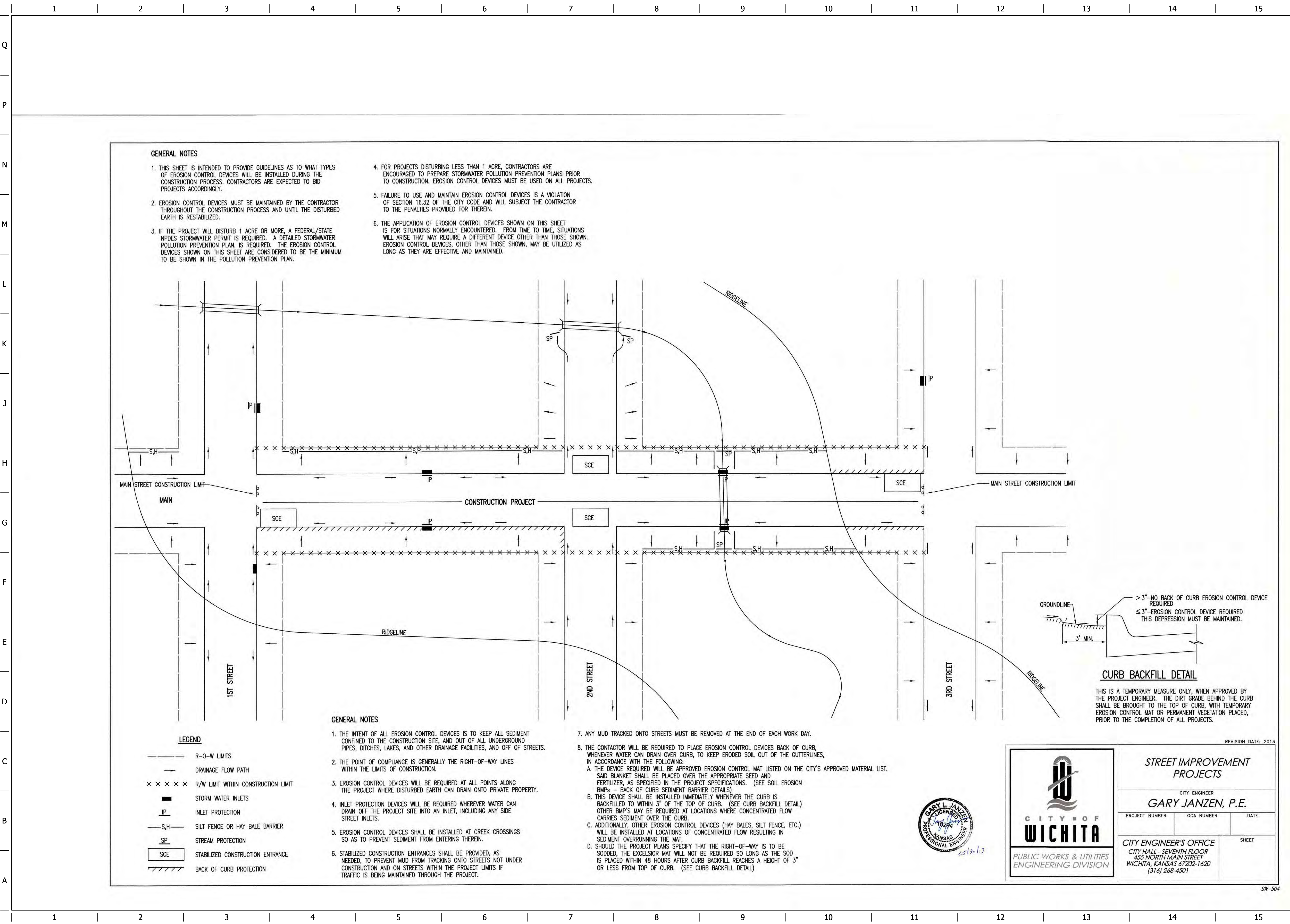
CITY ENGINEER'S OFFICE  
 CITY HALL - SEVENTH FLOOR  
 455 NORTH MAIN STREET  
 WICHITA, KANSAS 67202-1620  
 (316) 268-4501



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**GENERAL NOTES**

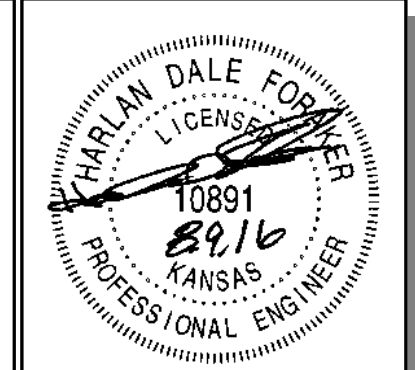
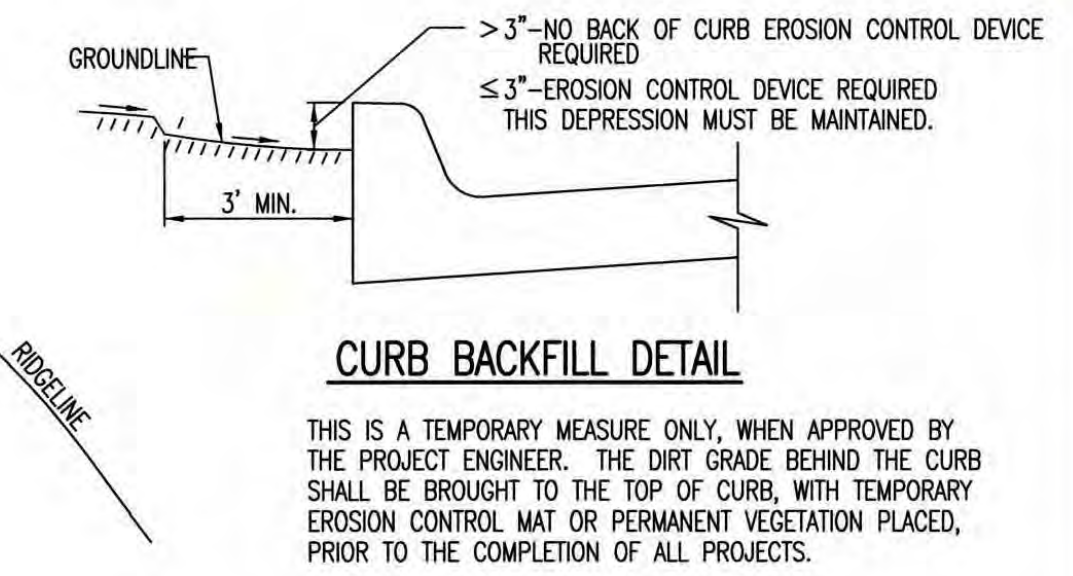
- THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPES OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
- EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.
- IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.
- FOR PROJECTS DISTURBING LESS THAN 1 ACRE, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION. EROSION CONTROL DEVICES MUST BE USED ON ALL PROJECTS.
- FAILURE TO USE AND MAINTAIN EROSION CONTROL DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE CONTRACTOR TO THE PENALTIES PROVIDED FOR THEREIN.
- THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT DEVICE OTHER THAN THOSE SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED AS LONG AS THEY ARE EFFECTIVE AND MAINTAINED.

**GENERAL NOTES**

- THE INTENT OF ALL EROSION CONTROL DEVICES IS TO KEEP ALL SEDIMENT CONFINED TO THE CONSTRUCTION SITE, AND OUT OF ALL UNDERGROUND PIPES, DITCHES, LAKES, AND OTHER DRAINAGE FACILITIES, AND OFF OF STREETS.
- THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT-OF-WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.
- EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.
- INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.
- EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.
- 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.
- ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.
- THE CONTRACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL DEVICES BACK OF CURB, WHENEVER WATER CAN DRAIN OVER CURB, TO KEEP ERODED SOIL OUT OF THE GUTTERLINES, IN ACCORDANCE WITH THE FOLLOWING:
  - THE DEVICE REQUIRED WILL BE APPROVED EROSION CONTROL MAT LISTED ON THE CITY'S APPROVED MATERIAL LIST. SAID BLANKET SHALL BE PLACED OVER THE APPROPRIATE SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS. (SEE SOIL EROSION BMPs - BACK OF CURB SEDIMENT BARRIER DETAILS)
  - THIS DEVICE SHALL BE INSTALLED IMMEDIATELY WHENEVER THE CURB IS BACKFILLED TO WITHIN 3" OF THE TOP OF CURB. (SEE CURB BACKFILL DETAIL)
  - OTHER BMP'S MAY BE REQUIRED AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB.
  - ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.
  - SHOULD THE PROJECT PLANS SPECIFY THAT THE RIGHT-OF-WAY IS TO BE SODED, THE EXCLOSUR MAT WILL NOT BE REQUIRED SO LONG AS THE SOD IS PLACED WITHIN 48 HOURS AFTER CURB BACKFILL REACHES A HEIGHT OF 3" OR LESS FROM TOP OF CURB. (SEE CURB BACKFILL DETAIL)

**LEGEND**

---	R-O W LIMITS
---	DRAINAGE FLOW PATH
x x x x x	R/W LIMIT WITHIN CONSTRUCTION LIMIT
IP	STORM WATER INLETS
IP	INLET PROTECTION
S.H.	SILT FENCE OR HAY BALE BARRIER
SP	STREAM PROTECTION
SCE	STABILIZED CONSTRUCTION ENTRANCE
////	BACK OF CURB PROTECTION



PROJECT NO.: 20152242



**QuikTrip No. 0329R**  
 HARRY & OLIVER  
 WICHITA, KS



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VERSION:	001
DESIGNED BY:	
DRAWN BY:	
REVIEWED BY:	

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 EROSION DETAILS 4

SHEET NUMBER:  
 12

REVISION DATE: 2013

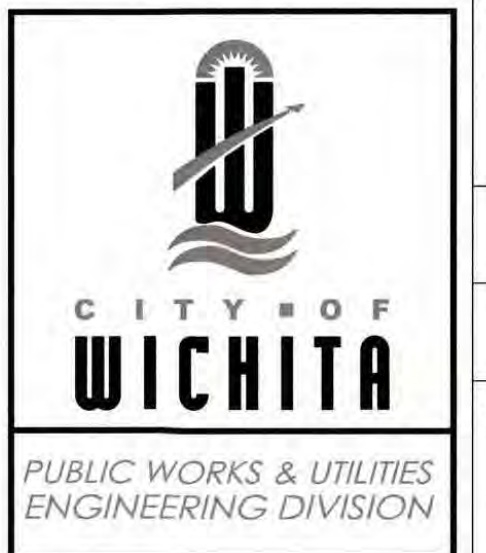
**STREET IMPROVEMENT PROJECTS**

CITY ENGINEER  
**GARY JANZEN, P.E.**

PROJECT NUMBER	OCA NUMBER	DATE

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

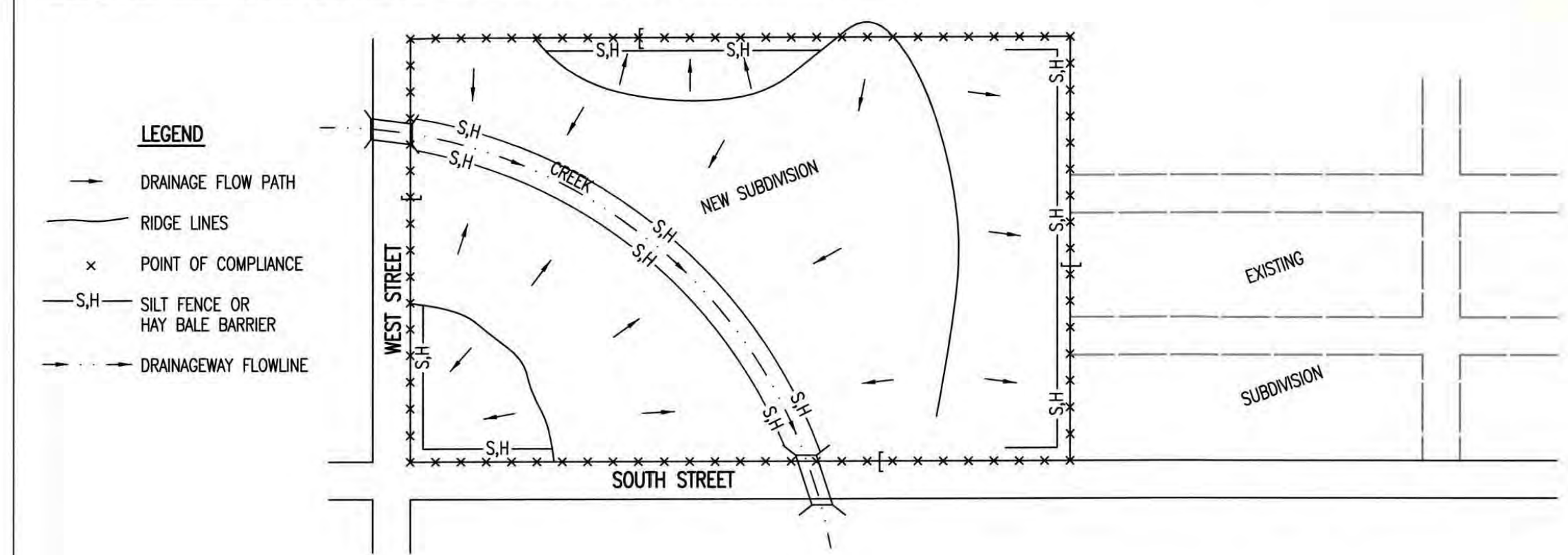
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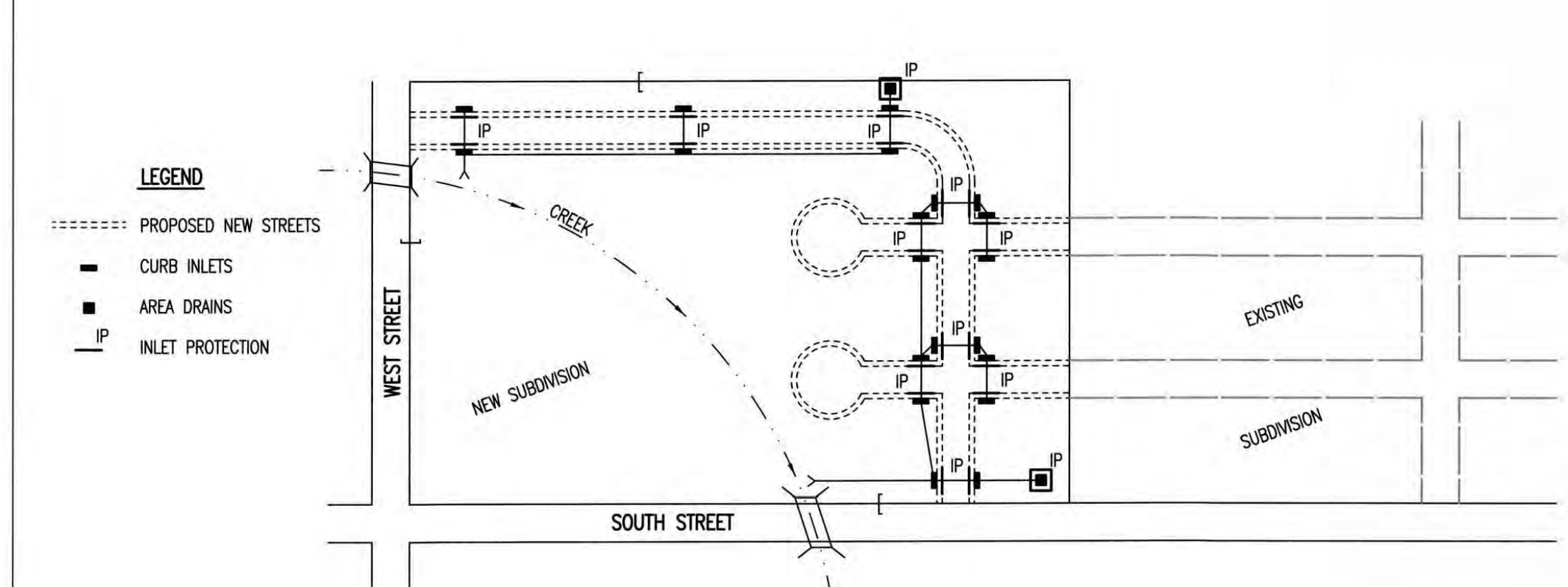
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**PHASE 1 - INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)**



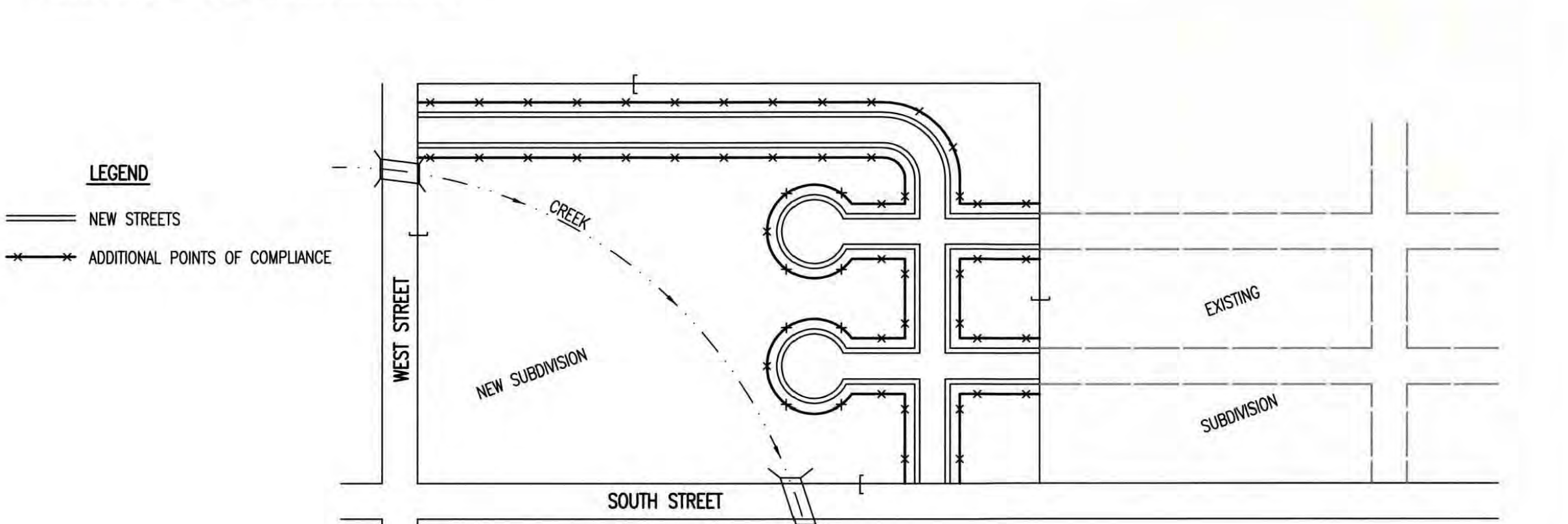
- LEGEND**
- DRAINAGE FLOW PATH
  - RIDGE LINES
  - x POINT OF COMPLIANCE
  - S.H. SILT FENCE OR HAY BALE BARRIER
  - DRAINAGEWAY FLOWLINE
- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
  - HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
  - SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
  - ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
  - CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
  - UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
  - IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
  - WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

**PHASE 2 - INSTALLATION OF STORM SEWER**



- LEGEND**
- PROPOSED NEW STREETS
  - CURB INLETS
  - AREA DRAINS
  - IP INLET PROTECTION
- DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES 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, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
  - CURB OPENING INLETS - AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 - STREET CONSTRUCTION.
  - THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
  - THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
  - ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
  - ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RE-STABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

**PHASE 3 - STREET CONSTRUCTION**

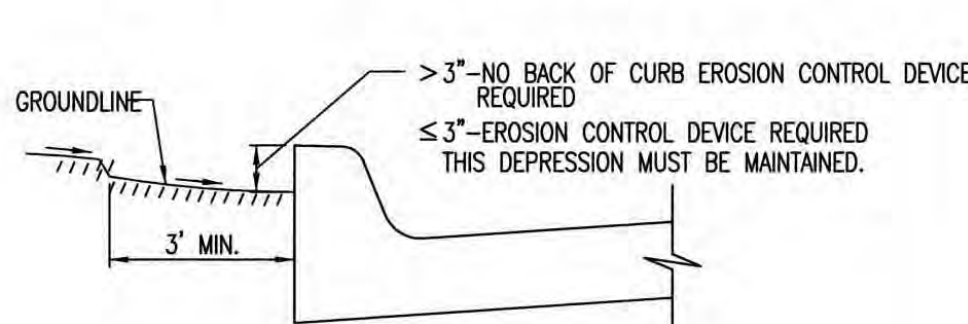


- LEGEND**
- NEW STREETS
  - x ADDITIONAL POINTS OF COMPLIANCE
- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
  -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

**GENERAL NOTES**

- THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER DRAINAGE FEATURE.
- THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
- EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
- PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
- THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
- FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
- FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
- THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
- A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

SEE DETAIL SHEET FOR BACK OF CURB PROTECTION DETAIL



**CURB BACKFILL DETAIL (STREET CONSTRUCTION ONLY)**

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

**CITY OF WICHITA**  
PUBLIC WORKS & UTILITIES  
ENGINEERING DIVISION

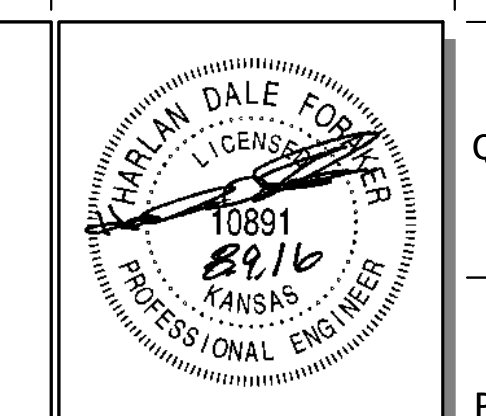
**SUBDIVISION DEVELOPMENT PROCESS**

CITY ENGINEER  
**GARY JANZEN, P.E.**

PROJECT NUMBER    OCA NUMBER    DATE

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

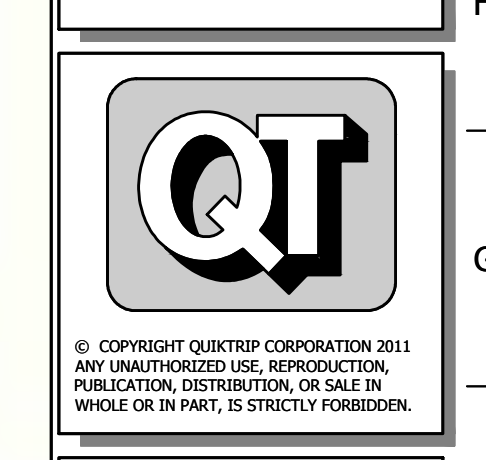
SHEET



PROJECT NO.: 20152242

**CEED**  
CERTIFIED ENGINEERING DESIGN, P.A.  
1935 W. MAPLE STREET  
WICHITA, KANSAS 67213  
PH: (316) 262-8808  
FAX: (316) 262-1669

**QuikTrip No. 0329R**  
HARRY & OLIVER  
WICHITA, KS



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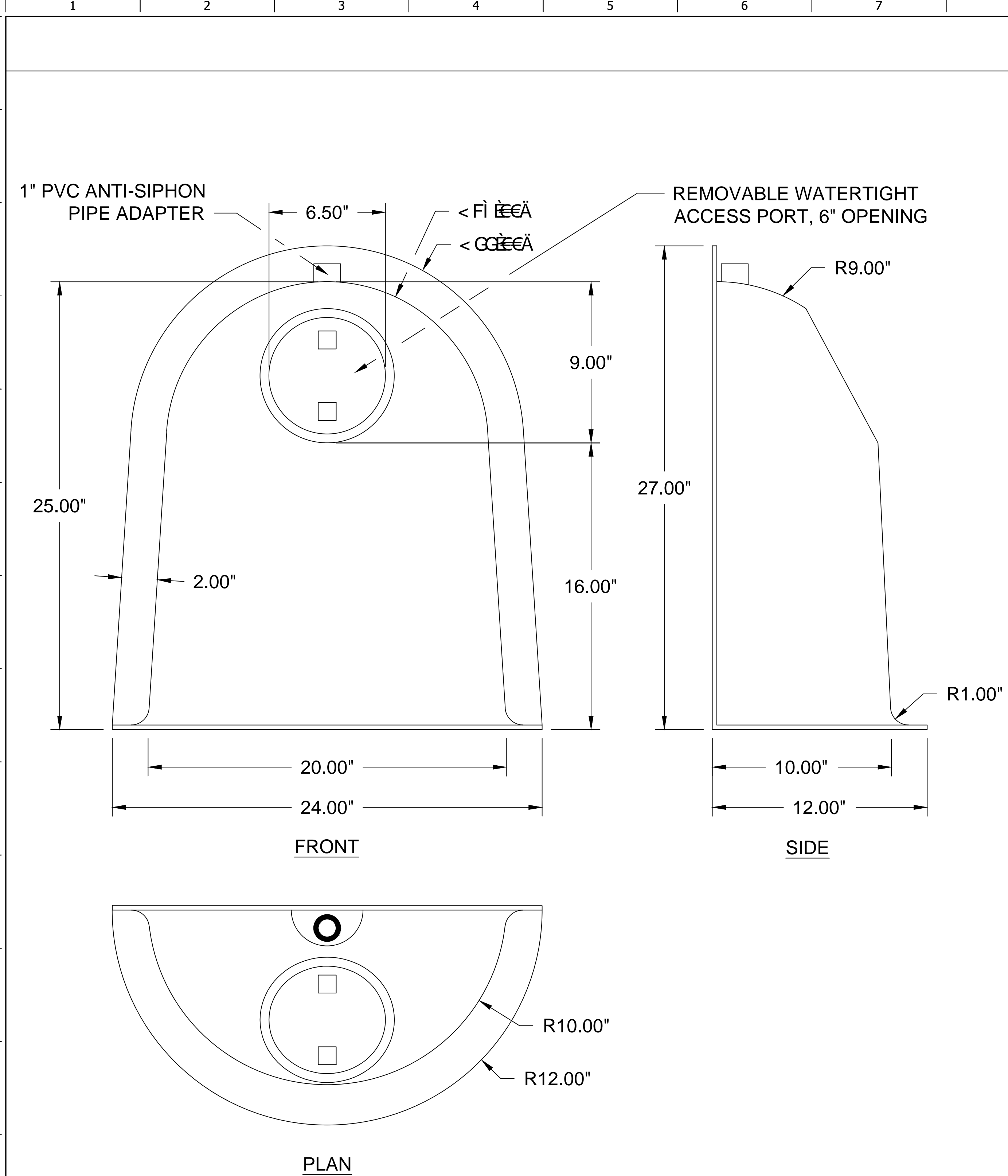
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**EROSION DETAILS 5**

SHEET NUMBER:  
**13**

SW-505

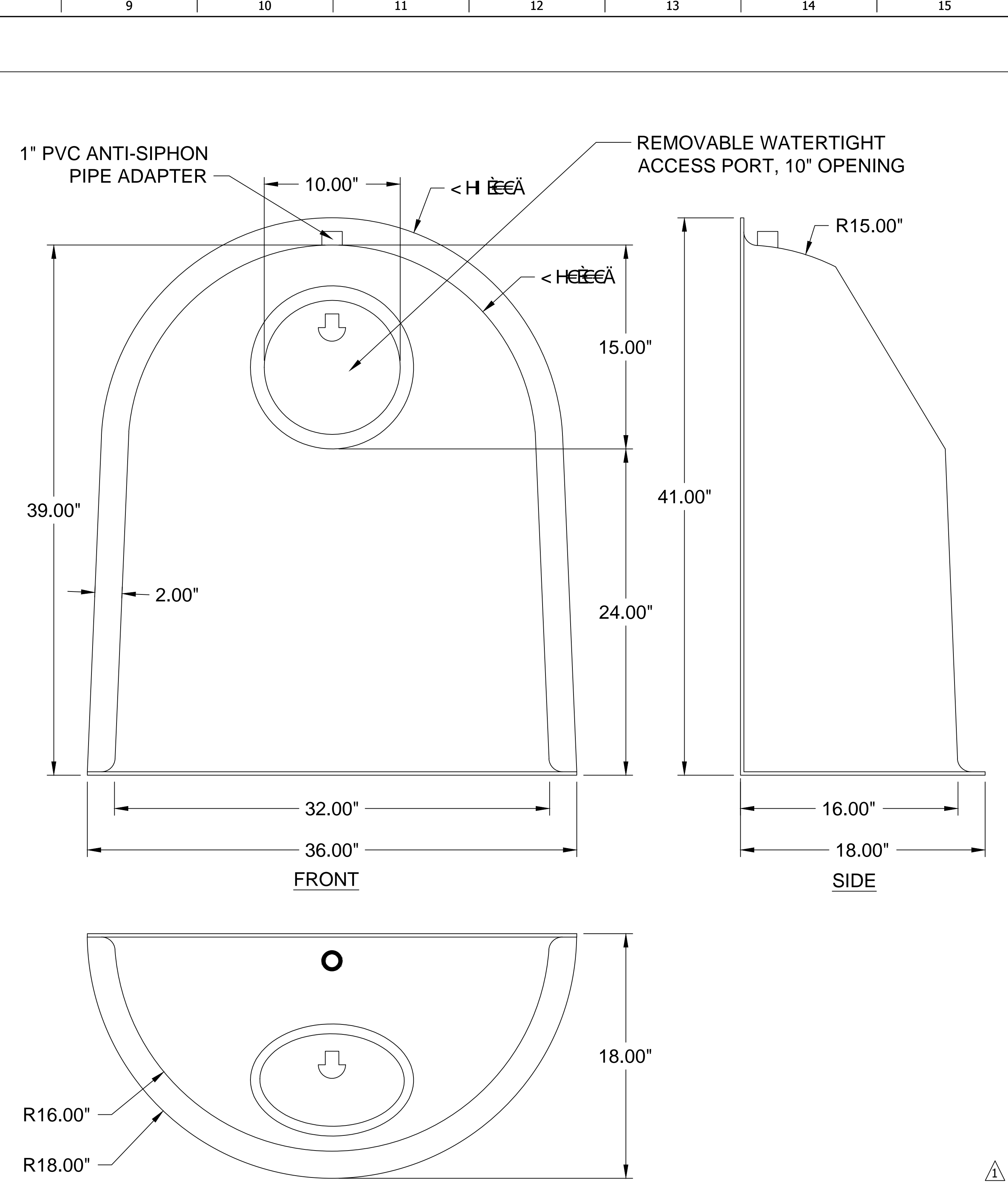
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US PATENT #6126817 ADDITIONAL PATENTS PENDING

**BMP, INC.**  
 53 MT. ARCHER ROAD, LYME, CT. 06371  
 (800) 504-8008 FAX: (860)434-3195

DESCRIPTION	DATE	SCALE
18F SNOOT OIL & DEBRIS STOP	09/14/99	NONE
DRAWING NUMBER 18F		



U.S. PATENT #6126817 ADDITIONAL PATENTS PENDING

**BMP, INC.**  
 53 MT. ARCHER ROAD, LYME, CT. 06371  
 (800) 504-8008 FAX: (860)434-3195

DESCRIPTION	DATE	SCALE
30F SNOOT OIL & DEBRIS STOP	09/15/99	NONE
DRAWING NUMBER 30F		

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REV	DATE	DESCRIPTION	ISSUE DATE:
1	8/9/16	INSTR. CHANGES	

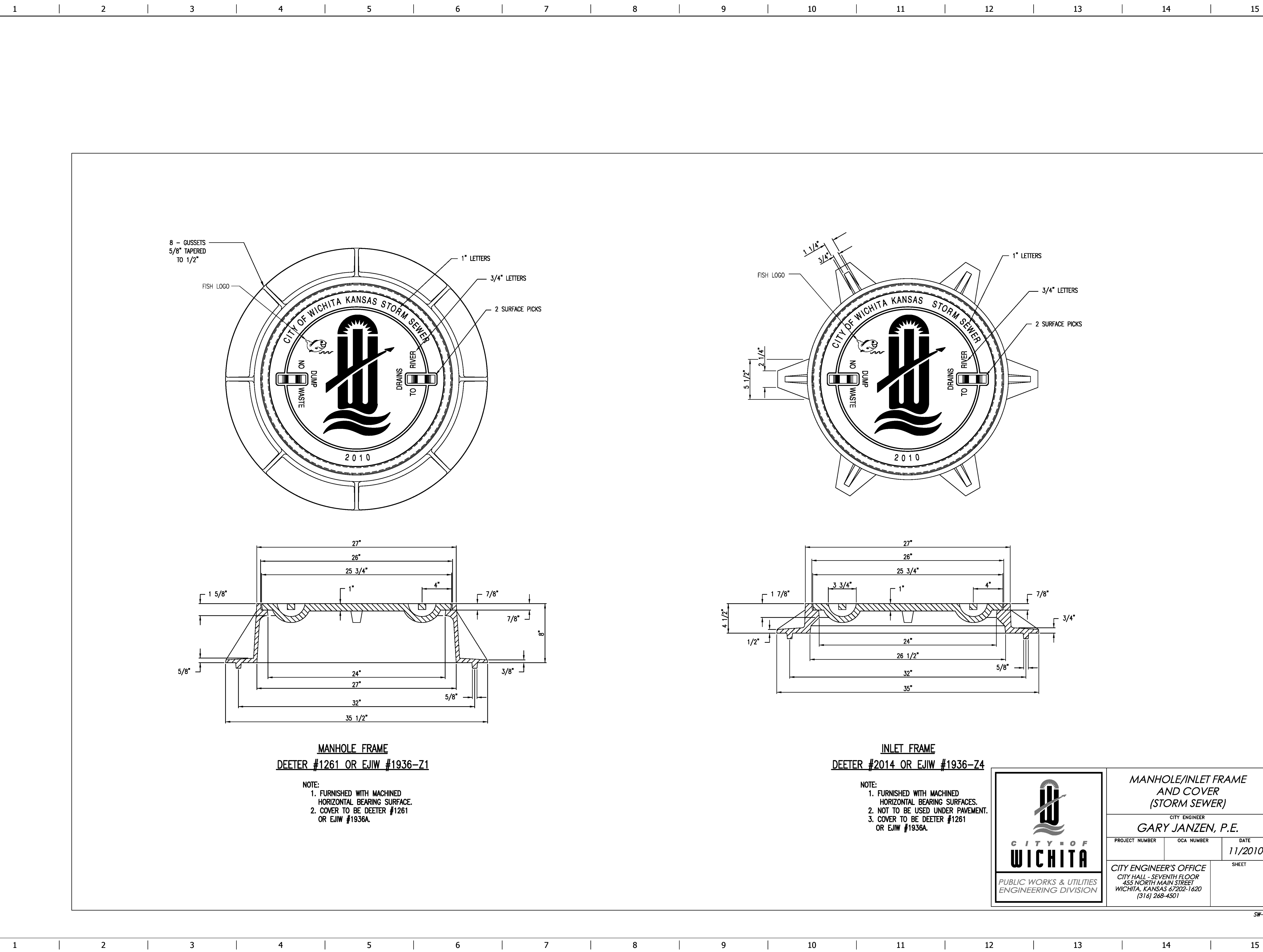
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14





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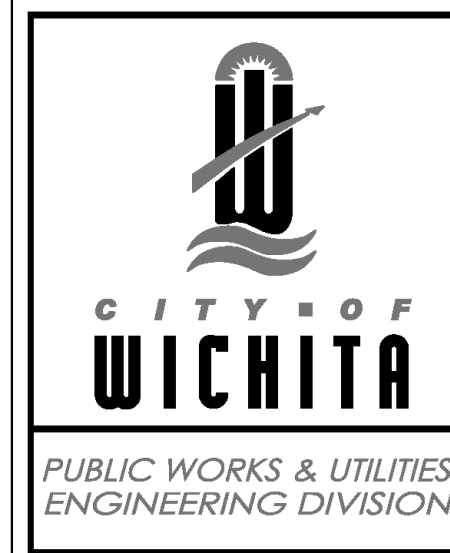


**MANHOLE FRAME**  
DEETER #1261 OR EJIW #1936-Z1

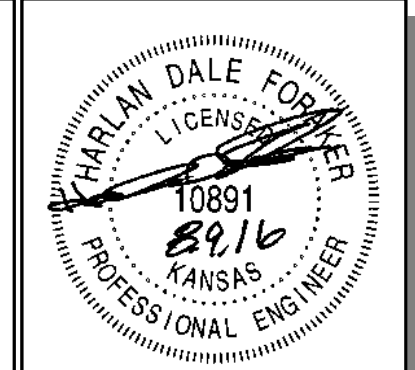
- NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACES.
  2. COVER TO BE DEETER #1261 OR EJIW #1936A.

**INLET FRAME**  
DEETER #2014 OR EJIW #1936-Z4

- NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACES.
  2. NOT TO BE USED UNDER PAVEMENT.
  3. COVER TO BE DEETER #1261 OR EJIW #1936A.



MANHOLE/INLET FRAME AND COVER (STORM SEWER)		
CITY ENGINEER		
GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE
		11/2010
CITY ENGINEER'S OFFICE		SHEET
CITY HALL - SEVENTH FLOOR		
455 NORTH MAIN STREET		
WICHITA, KANSAS 67202-1620		
(314) 268-4501		



PROJECT NO.: 20152242

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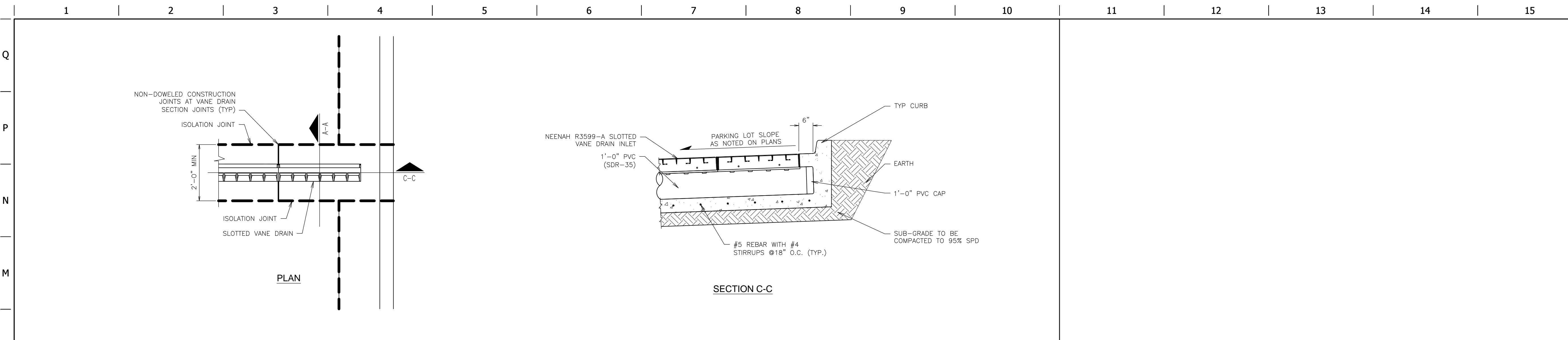
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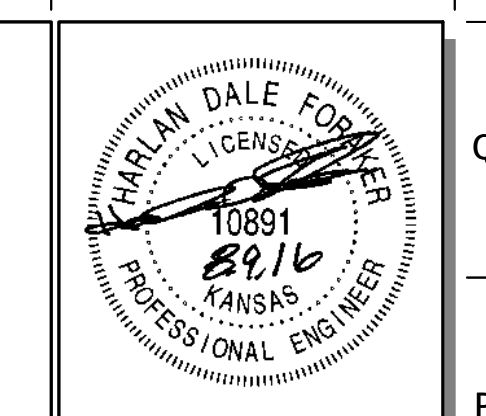
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**L1** SLOTTED VANE DRAIN INSTALLATION DETAIL  
 NTS SN: DD005A004



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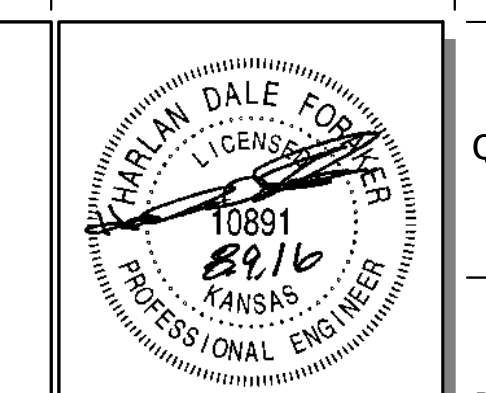
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SHEET NUMBER:  
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



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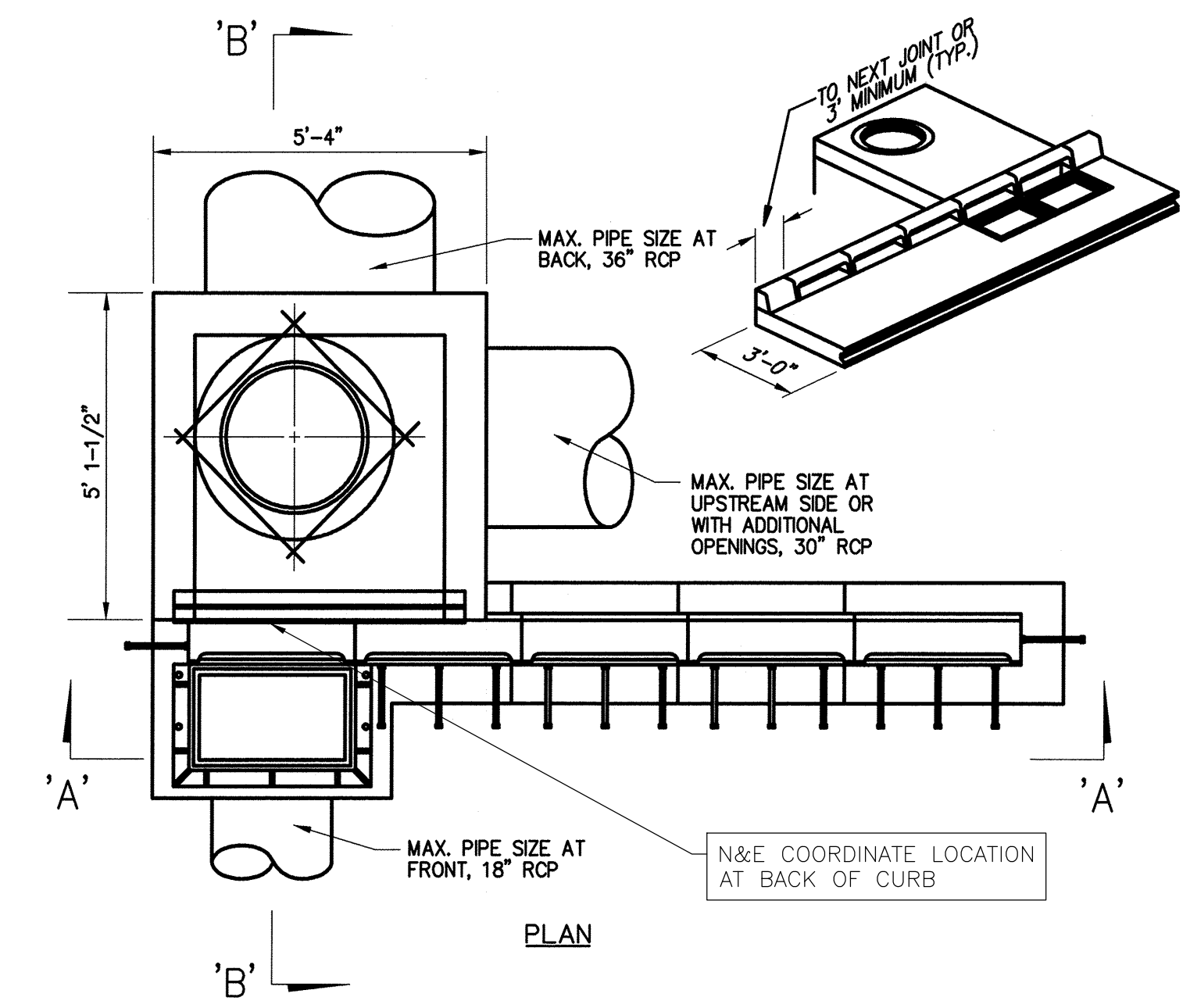
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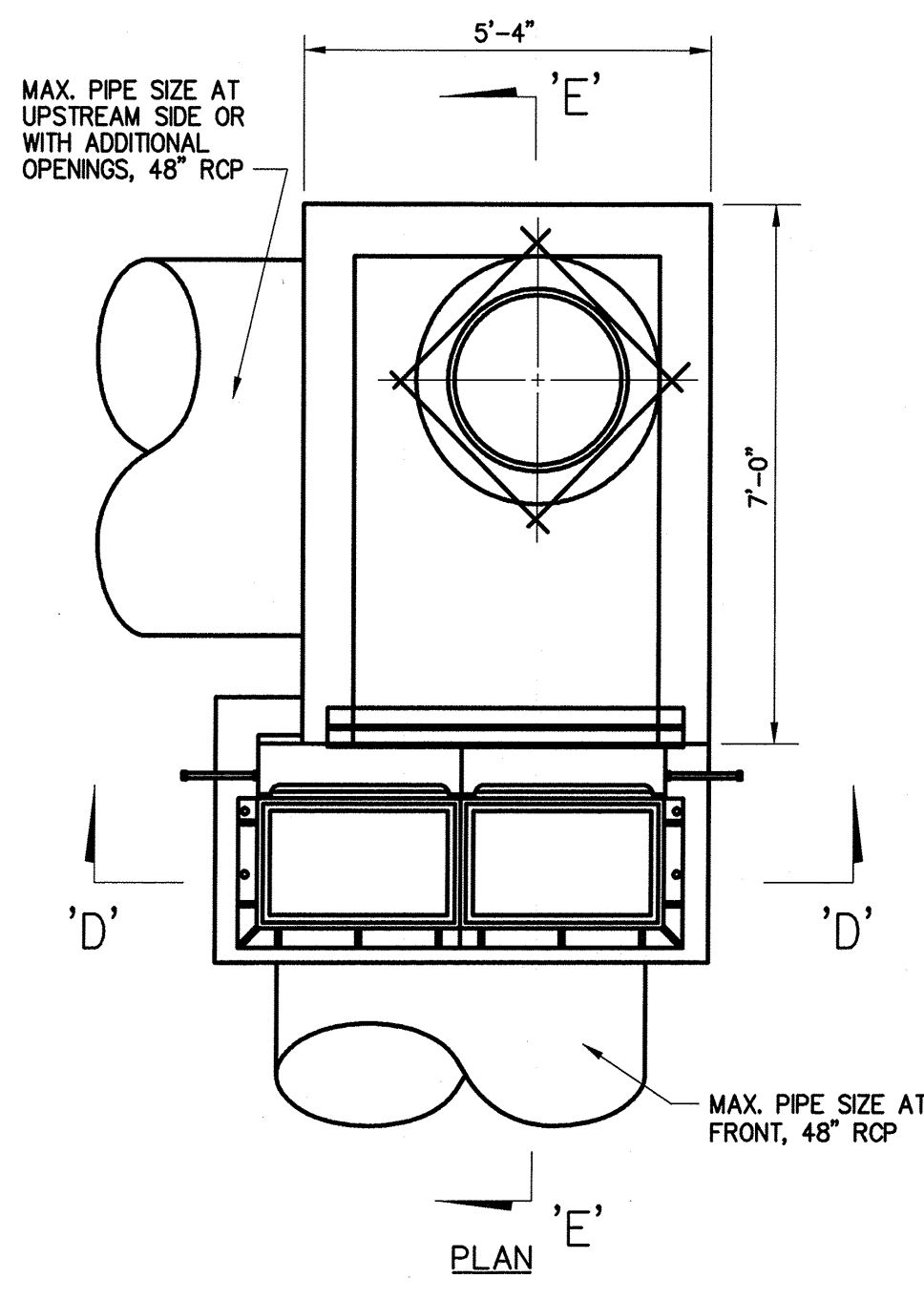
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 SPECIAL CURB INLET DETAIL

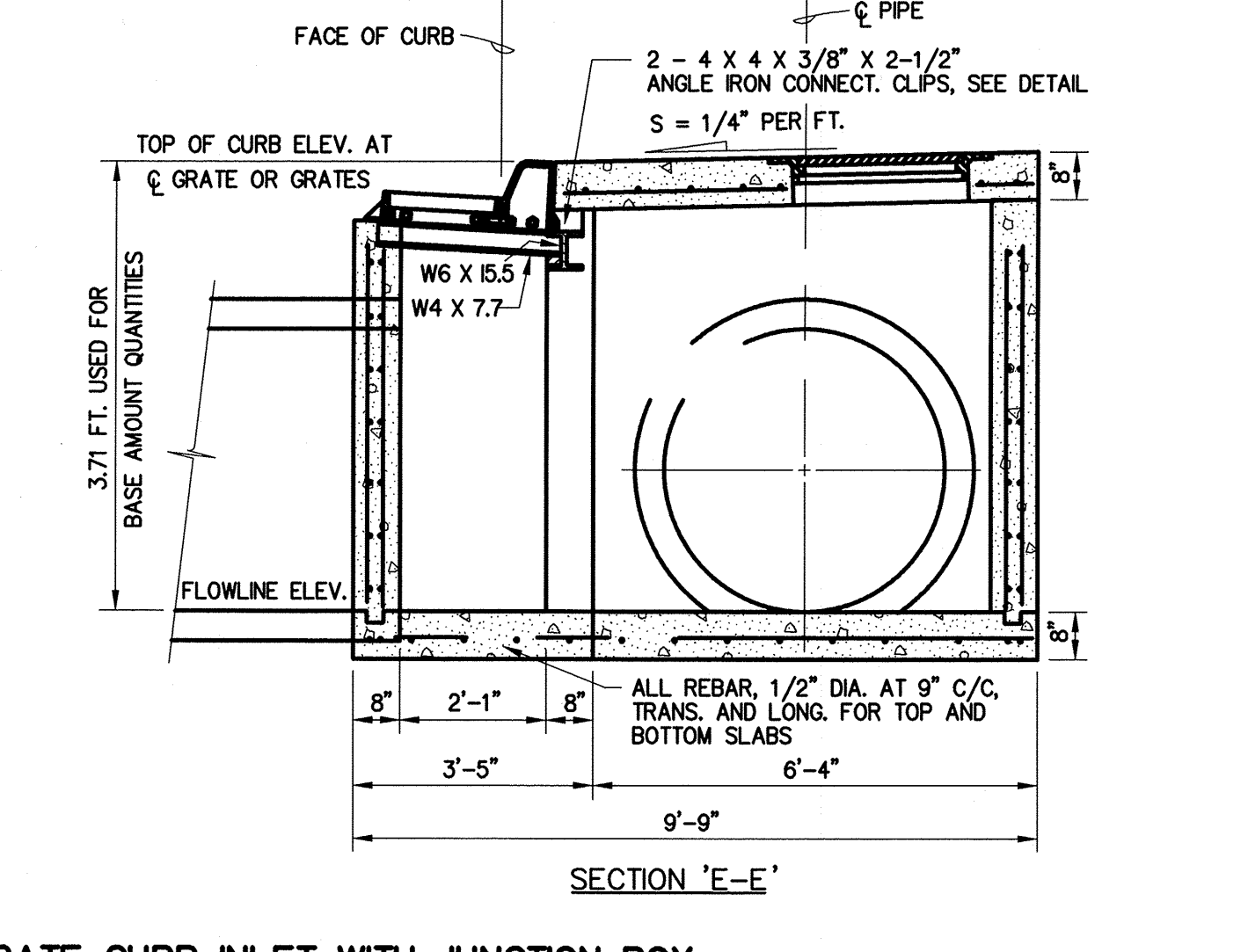
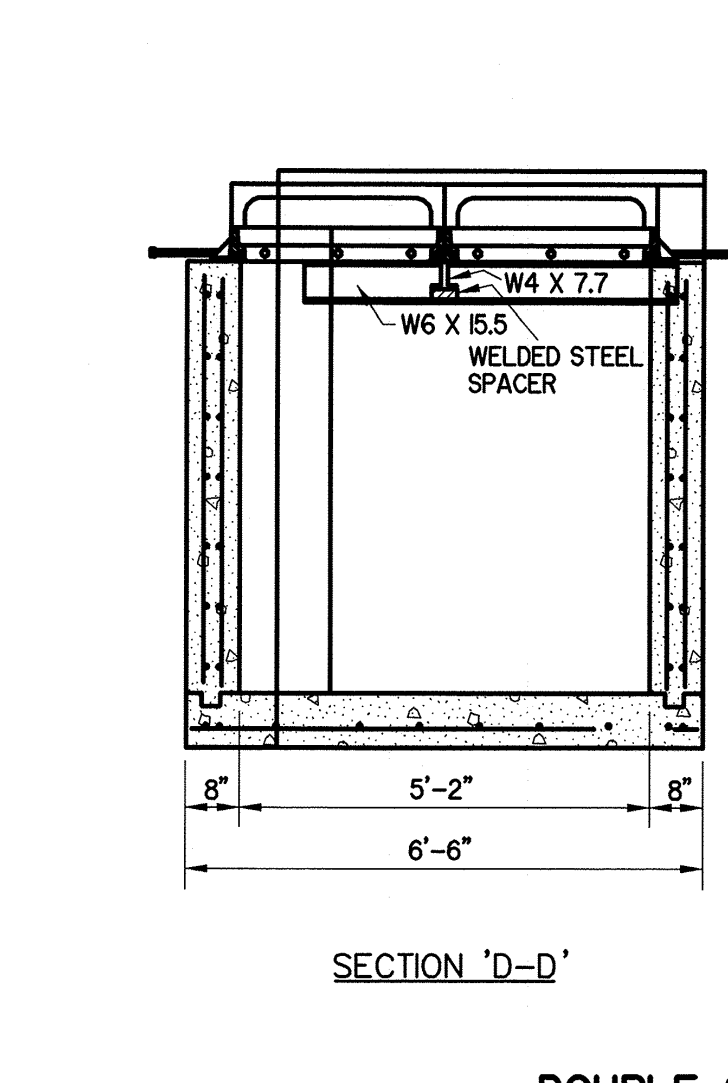
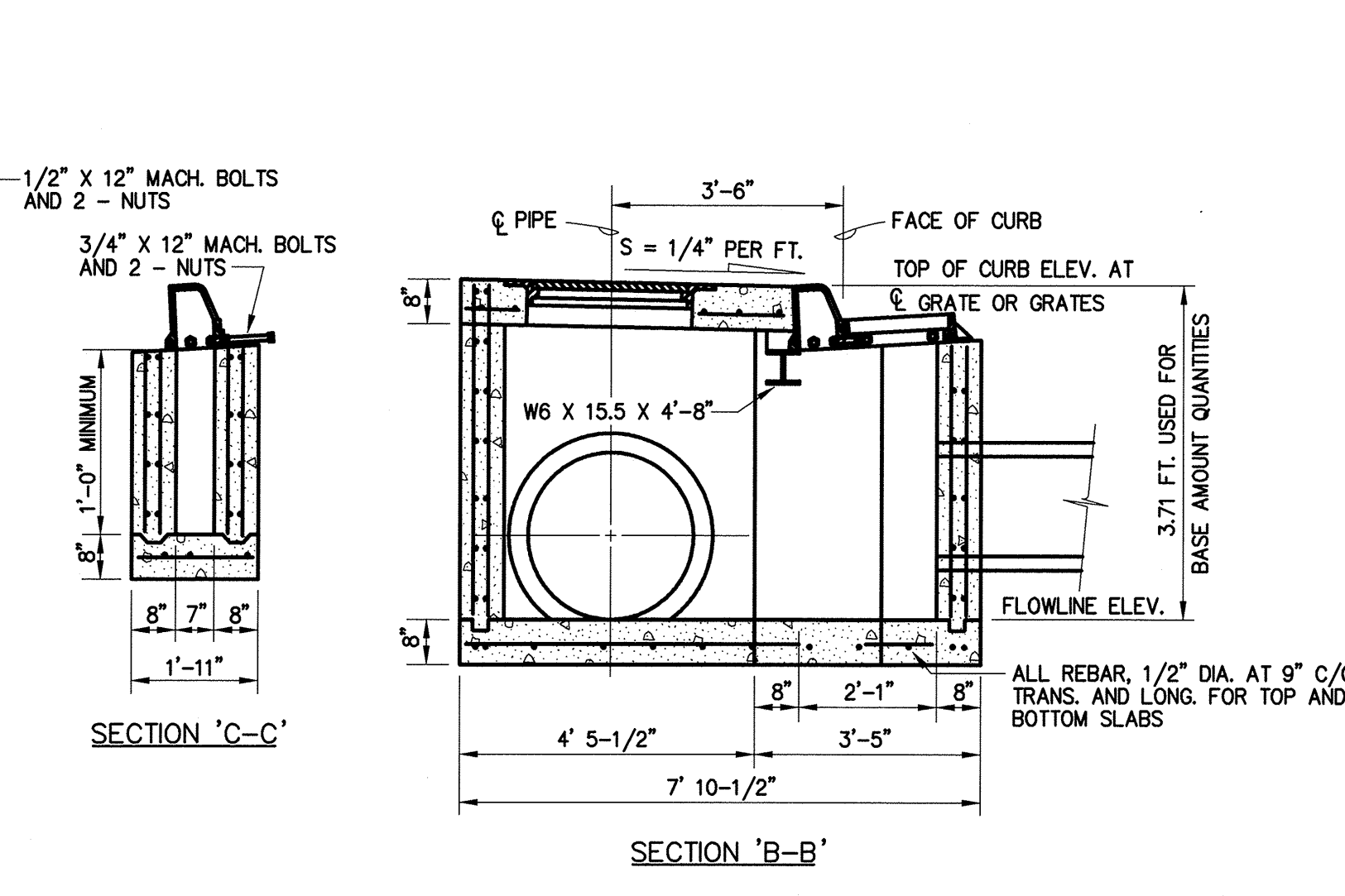
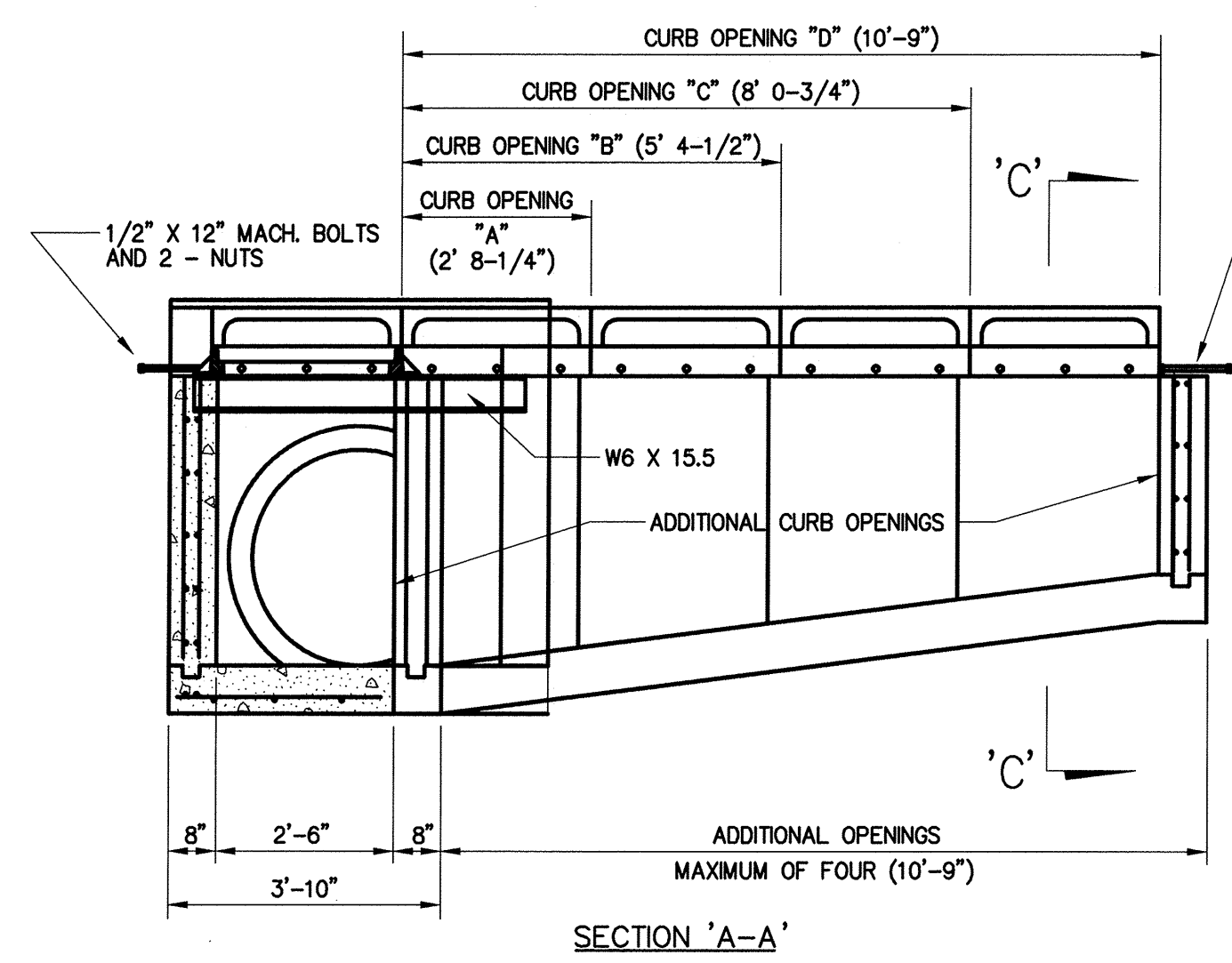
SHEET NUMBER:  
 20



INLET DESIGN	CURB OPENING DESIGNATION	CLASS "A" CONCRETE CU. YD.	INLET		INLET FRAME AND GRATE EACH	CAST IRON CURB INLET EACH	MH FRAME AND COVER EACH
			BASE AMT.	ADD'L. C.F. PER VERT. FT.			
1 WITH SMALL JUNCT. BOX	"A"	1.50	43.56	15.84	1	1	1
	"B"	1.60	47.34	17.43	1	2	1
	"C"	1.73	55.44	21.03	1	3	1
	"D"	1.86	62.26	24.63	1	4	1
2 WITH SMALL JUNCT. BOX	"A"	1.70	47.84	17.40	2	2	1
	"B"	1.83	57.01	21.00	2	3	1
	"C"	1.96	64.86	24.60	2	4	1
	"D"	2.08	71.70	28.20	2	5	1
1 WITH LARGE JUNCT. BOX	"A"	2.11	50.44	18.34	1	1	1
	"B"	2.21	54.22	19.93	1	2	1
	"C"	2.34	62.32	23.53	1	3	1
	"D"	2.47	69.14	27.13	1	4	1
2 WITH LARGE JUNCT. BOX	"A"	2.60	74.91	30.73	1	5	1
	"B"	2.31	54.72	19.90	2	2	1
	"C"	2.43	63.89	23.50	2	3	1
	"D"	2.57	71.74	27.10	2	4	1

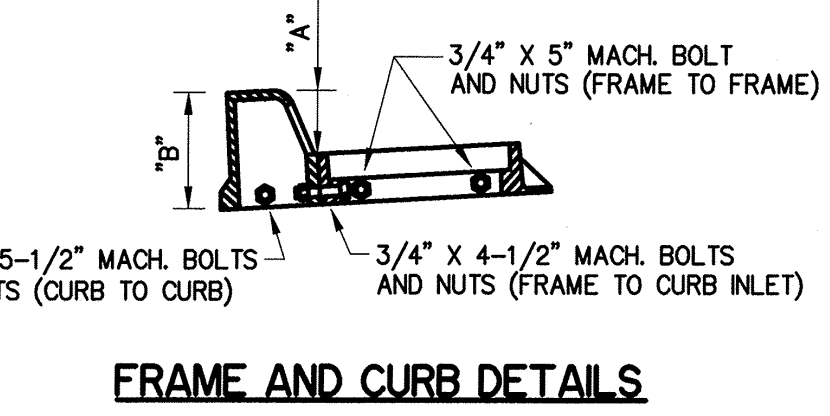
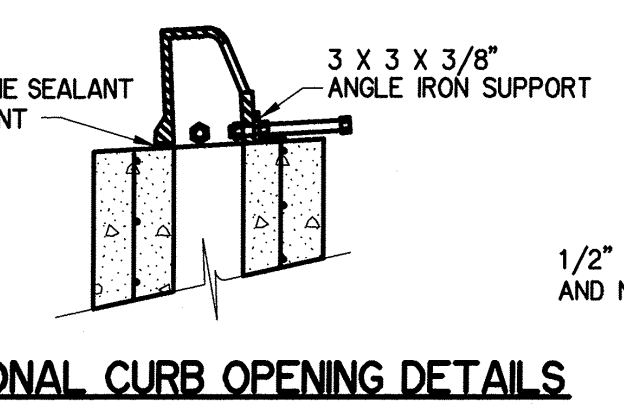
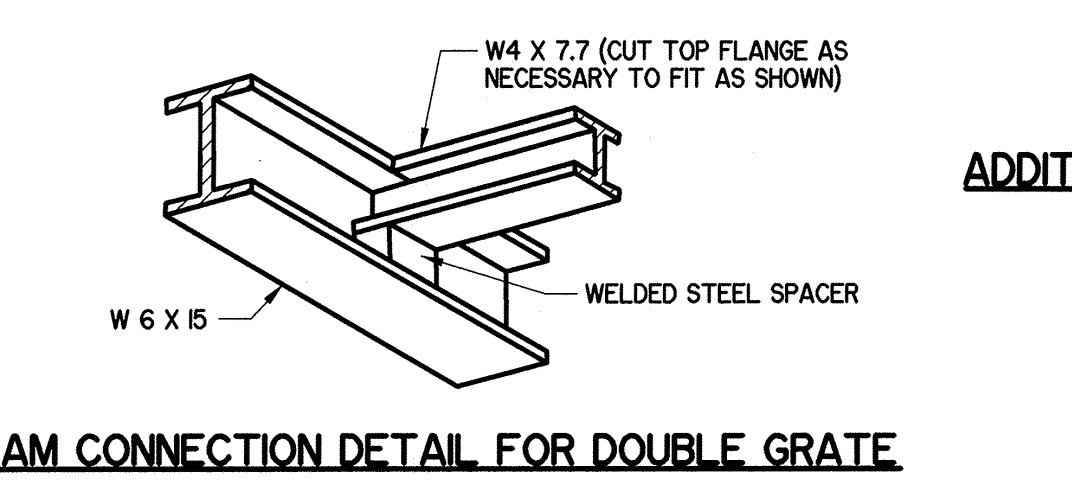


- NOTE:**
- (A) WHEN THE INLET IS BUILT IN EXISTING PAVEMENT, THE APRON AROUND THE INLET SHALL BE OF THE SIZE SHOWN IN THE PLAN ON THIS SHEET, AND BUILT OF P.C. CONCRETE TO A MINIMUM 8" THICKNESS.
  - THERE WILL BE NO DEDUCTION OF PAYMENT FOR CONCRETE CURB AND GUTTER FOR THE LENGTH OR AREA OCCUPIED BY THE CONSTRUCTION OF CAST IRON CURB INLETS OR CAST IRON CURB INLET FRAME AND GRATE.
  - RUBBER COATED REINFORCED STEEL STEPS SHALL BE PLACED AT THE HEADERS IN ALL INLETS 4' OR MORE IN DEPTH. COST OF STEPS SHALL BE INCLUDED IN THE PRICE BID FOR INLET.
  - GRATING AND FRAMES TO BE USED IN THIS INLET ARE SHOWN ON THE STANDARD DRAWINGS STD 765, STD 766, DESIGNATED AS "STANDARD STORM SEWER GRATES AND FRAMES."
  - THE STANDARD DRAWING DESIGNATION NO., DESIGN NO., AND NUMBER OF ADDITIONAL OPENINGS SHALL BE INDICATED ON THE PLANS.
  - COST OF STRUCTURAL STEEL I-BEAMS AND ANGLE IRON TO BE INCLUDED IN THE PRICE BID FOR INLET. ANGLE IRON SHALL CONFORM TO ASTM-A7 OR A36.
  - CASTING SHALL CONFORM TO ASTM SPECIFICATION FOR GREY IRON CASTINGS, SERIAL DESIGNATION A-48-CLASS 20.
  - NO WORDING OR MARKING OF ANY KIND OTHER THAN THOSE SHOWN ON THE PLANS WILL BE PERMITTED ON THESE CASTINGS.
  - ALL NUTS AND BOLTS REQUIRED FOR THESE STRUCTURES SHALL BE CADMIUM PLATED OR GALVANIZED.
  - CAST IRON CURBS TO BE USED ON THIS INLET ARE SHOWN ON STANDARD DRAWING DESIGNATED AS "STANDARD CAST IRON CURB."
  - ALL MORTAR JOINTS TO BE 3/8" MAXIMUM. EVERY FIFTH COURSE OF BRICK MASONRY TO BE HEADER COURSE.
  - CURB INLETS SHALL BE PLACED ON UPSTREAM SIDE OF GRATE INLETS FOR TYPICAL INSTALLATIONS.
  - CONCRETE TROUGH FOR CURB INLETS AND STORM SEWER INLETS SHALL BE CONSTRUCTED AS ONE UNIT.
  - IF PRECAST INLET IS USED, FLOWABLE FILL MUST BE USED AS BACKFILL AROUND THE ENTIRE INLET.
  - USE MANHOLE FRAME AND LID AS SHOWN ON STANDARD DRAWING NO. 754.
  - MANHOLE FRAME AND LID MUST BE FLUSH WITH TOP OF THE SURROUNDING CONCRETE SLAB.
- \* BASES TO BE FORMED WITH 1 X 6 FORMS AND POURED IN PLACE.



**SINGLE GRATE CURB INLET WITH JUNCTION BOX**

(DESIGN 1-D WITH SMALL JUNCTION BOX SHOWN)  
 ALL REBAR IN WALLS #4 @ 12" CTRS. EA. WAY (TYPICAL)



OPENING	LENGTH
"A"	2' 5-3/8"
"B"	5' 1-5/8"
"C"	7' 9-7/8"
"D"	10' 6-1/8"

TYPE	"A"	"B"
4" MOUNTABLE	4-1/2"	9-1/2"
6" MOUNTABLE	6-1/2"	11-1/2"
6" BARRIER	6-1/2"	11-1/2"
8" BARRIER	8-1/2"	13-1/2"

ITEM NO.	ITEM	UNIT
6 11.06 (E)	INLET	EA.
6 11.06 (F)	ADDITIONAL DEPTH IN INLET	VERT. FT.
6 11.06 (G)	INLET FRAME AND GRATE	EA.
6 11.06 (D)	MANHOLE FRAME AND COVER	EA.
6 11.06 (K)	CAST IRON CURB INLETS	EA.

$D = \text{SUMP DEPTH}$   
 $D = \text{CROSS SLOPE} \times 1.67 + 0.04$

**DOUBLE GRATE CURB INLET WITH JUNCTION BOX**

(DESIGN 2 WITH LARGE JUNCTION BOX SHOWN)  
 18" THRU 30" LONGITUDINAL PIPE REQUIRES SMALL JUNCTION BOX  
 ALL REBAR IN WALLS #4 @ 12" CTRS. EA. WAY (TYPICAL)

