PROPOSED DRAINAGE IMPROVEMENTS TO SERVE TRINITY ACADAMY

WICHITA, SEDGWICK COUNTY, KANSAS

0122 P.P.D. (O.C.A. NO. 607861)

MARCH, 2013

GENERAL NOTES

1. ALL ELEVATIONS SHOWN ARE BASED ON (NGVD 88 DATUM).

2. CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF FORTY–EIGHT (48) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:

KANSAS ONE CALL 1–800–344–7233

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

GAS:	KANSAS GAS SERVICE	1–800–794–4780
ELECTRIC:	WESTAR ENERGY	1–800–383–1183
WATER/SEWER:	CITY OF WICHITA	1–316–268–4422
TELEPHONE/CABLE/INTERNET:	ATT	1–888–288–2020

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

3. THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, ENTRANCES AND BANK LINES TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE. ALL AREAS DISTURBED BY CONSTRUCTION INCLUDING STAGING AREAS, SHALL BE REPLANTED WITH GRASS SEED AT THE APPROPRIATE RATES APPROVED BY THE ENGINEER.

4. THE CONTRACTOR SHALL MAINTAIN TRAFFIC USING BARRICADES AND FLAGPERSONS WHILE WORKING WITHIN STREET RIGHT–OF–WAY. INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA SHALL NOT BE CARRIED THROUGH CONSTRUCTION. LOCAL RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA SHALL BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS. 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.

5. UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. IT SHOULD BE NOTED THAT OTHER BURIED LINES AND CABLE MAY EXIST WHICH ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING TRENCHING OPERATIONS TO AVOID DAMAGING THESE LINES AND CABLES. ANY UTILITIES DAMAGED SHALL BE REPLACED OR REPAIRED IMMEDIATELY AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL PROTECT FROM DAMAGE AND SUPPORT EXISTING UTILITIES THROUGH CONSTRUCTION AS APPROVED BY THE UTILITY OWNER AND THE ENGINEER AT THE CONTRACTOR'S EXPENSE. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT–OF–WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

6. 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.

7. PROPERTIES WITHIN THE PROJECT LIMITS MAY HAVE UNDERGROUND SPRINKLER SYSTEMS IN THE PUBLIC RIGHT–OF–WAY WHICH CONFLICT WITH NEW CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO REMOVE SUCH IMPROVEMENTS SHOULD THEY NOT BE REMOVED BY THEIR OWNER AT THE TIME OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SALVAGE ALL SPRINKLER HEADS AND/OR VALVES AND GIVE SUCH MATERIAL TO THEIR OWNER. PORTIONS OF UNDERGROUND SPRINKLER SYSTEMS NOT IN CONFLICT WITH NEW CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE AND SHALL REMAIN IN PLACE. ALL WORK IN CONNECTION WITH UNDERGROUND SPRINKLER SYSTEMS SHALL BE CONSIDERED AS SUBSIDIARY TO THE CONTRACT PAY ITEMS OF WORK.

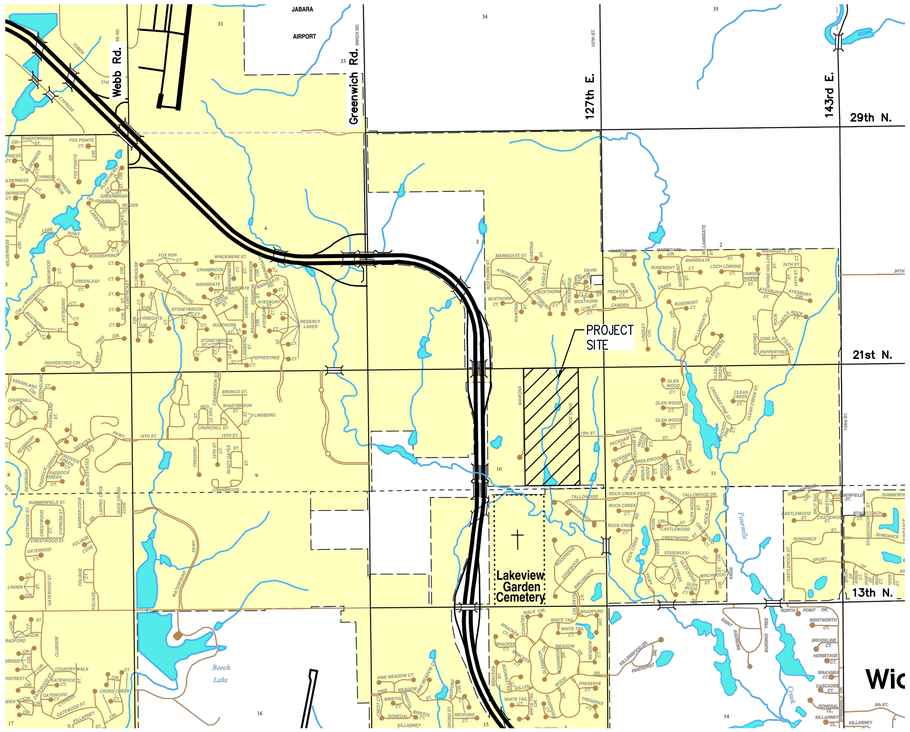
8. THE CONTRACTOR MUST EXAMINE THE CONSTRUCTION SITE PRIOR TO BIDDING AND BE SATISFIED AS TO THE WORK SHOWN FOR COMPLETION. AFTER BIDS HAVE BEEN RECEIVED, THE CONTRACTOR SHALL NOT ASSERT THAT THERE WAS A MISUNDERSTANDING OF THE QUANTITIES OF WORK OR OF THE NATURE FOR THE WORK TO BE COMPLETED.

9. 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.

10. THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY DIRECTLY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.

11. 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.

12. SEEDING AND FERTILIZING OF ALL AREAS DISTURBED BY THE CONSTRUCTION OF THE SANITARY SEWER AS SHOWN ON THE PLANS SHALL BE PAID FOR AS A LUMP SUM FOR "EROSION CONTROL BMP'S".



PROJECT LOCATED IN THE NE 1/4, SEC 10, T27S, R2E, WICHITA, SEDGWICK COUNTY, KANSAS

ONE CALL KANSAS DIAL 811

SHEET INDEX	
NO.	TITLE
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PROJECT DISTURBED AREA:
23.22 ACRES

STORM WATER QUALITY ACHIEVED BY:
STORM WATER WET PONDS

APPROVED AS NOTED
By CITY ENGINEER OF WICHITA

Sanitary Sewers .....

Storm Sewers
by City Engineer 3-19-13
by Storm Water Engineer 3-19-13

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.

BENCHMARK:
Chiseled "A" cut in Northeast corner of Traffic Control Manhole in the Southeast Quadrant of East 21st Street North and North 127th Street East
Elev.= 1384.18 (NAVD 88)

REV.	DESCRIPTION	DATE

TRINITY SPORTS FIELD COMPLEX

TRINITY ACADEMY
12345 E. 21ST STREET N.

WICHITA, SEDGWICK COUNTY, KS

CERTIFIED ENGINEERING DESIGN, P.A.
CIVIL ENGINEERING SERVICES

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

HALAN DALE FOWLER LICENSED 10891 3.19.13 KANSAS PROFESSIONAL ENGINEER

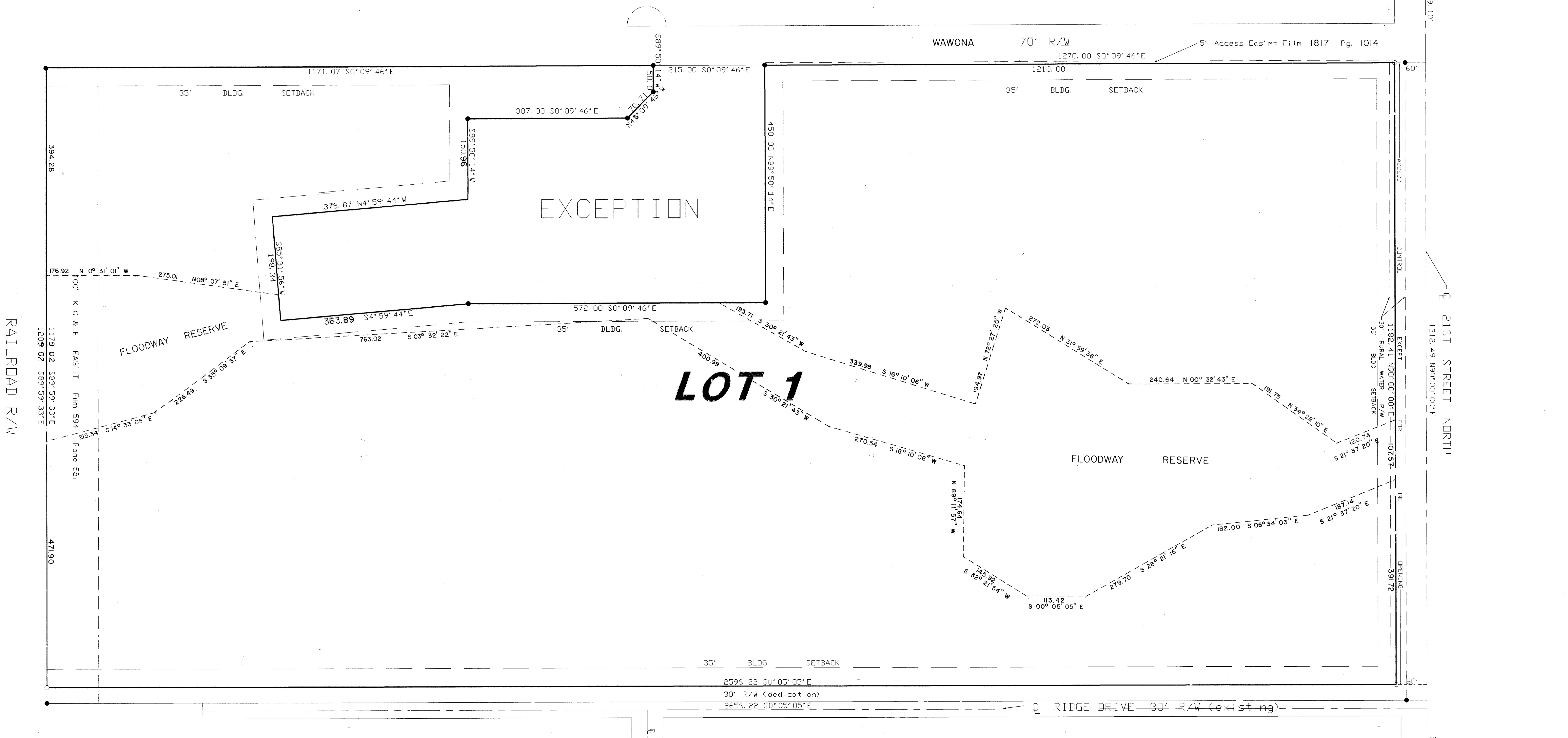
PROJECT NO.: 20122055
ISSUE DATE: MARCH 2013
CONTACT: HDF, LJM
CHECKED BY: HDF, LJM

COVER SHEET

1 OF 19

PC105-2

TRINITY ACADEMY an Addition to Sedgwick County, Kansas



Minimun Pad elev. = 1365 M.S.l. for north 800 feet of lot 1.

BM: R.R. spike in east side P.P. 1531'+- south of 21st st. on west side Wawona Elev: 1368.65 m.s.l.

State of Kansas)
) SS
County of Sedgwick)

I, Donald C. Armstrong, a Registered Land Surveyor in said state and county do hereby certify that on this 11 day of Aug, 1998, I have surveyed and platted "TRINITY ACADEMY" an Addition to Sedgwick County, Kansas, into a Lot and Block, the same being described as follows: THE NORTHEAST QUARTER OF SECTION 10, TOWNSHIP 27 SOUTH, RANGE 2 EAST OF THE SIXTH PRINCIPAL MERIDIAN, SEDGWICK COUNTY, KANSAS, EXCEPT BEGINNING AT THE NORTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE SOUTH 2,656 FEET TO THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE EAST 860.2 FEET; THENCE NORTH 2656.2 FEET TO A POINT IN THE NORTH LINE OF SAID NORTHEAST QUARTER, SUCH POINT BEING 854.1 FEET EAST OF THE PLACE OF BEGINNING; THENCE WEST 854.1 FEET TO THE PLACE OF BEGINNING; AND EXCEPT THE EAST 579 FEET OF SAID NORTHEAST QUARTER; AND EXCEPT COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE EAST 859.10 FEET ON AN ASSUMED BEARING OF N 90°00'00" EAST ALONG THE NORTH LINE OF SAID NORTHEAST QUARTER; THENCE SOUTH 1270.00 FEET ON A BEARING OF S 0°09'46" EAST TO THE POINT OF BEGINNING; THENCE EAST 450.00 FEET ON A BEARING OF N 89°50'14" EAST; THENCE SOUTH 572.00 FEET ON A BEARING OF S 0°09'46" EAST; THENCE SOUTH 363.89 FEET ON A BEARING OF S 4°59'44" EAST; THENCE WEST 198.34 FEET ON A BEARING OF S 85°31'56" WEST; THENCE NORTH 378.87 FEET ON A BEARING OF N 4°59'44" WEST; THENCE WEST 150.96 FEET ON A BEARING OF N 89°50'14" WEST; THENCE NORTH 307.00 FEET ON A BEARING OF N 0°09'46" WEST; THENCE NORTHWEST 70.71 FEET ON A BEARING OF S 45°09'46" WEST; THENCE WEST 50.00 FEET ON A BEARING OF S 89°50'14" WEST; THENCE NORTH 215.00 FEET ON A BEARING OF N 0°09'46" WEST TO THE POINT OF BEGINNING.

DONALD C. ARMSTRONG R.L.S. #780 8-11-98

Know all men by these presents that I, the undersigned, have caused the land described in the surveyors certificate to be platted into a Lot and Block to be known as "TRINITY ACADEMY" an Addition to Sedgwick County, Kansas. The utility easements, as indicated, for construction and maintenance of public utilities are hereby granted. The streets are hereby dedicated to and for the use of the public. All abutters' rights of access to and from 21st Street over and across the north line of this plat, as shown, are hereby granted to the appropriate governing body, provided however, that Lot 1 shall have access to 21st Street at One openings to be determined by the appropriate engineer.
Minimum Pad elevation is as indicated.

OWNERS:

William R. Nath 8-12-98 Date — Robert D. Smith 8/12/98 Date

Peter L. Ochs 8-12-98 Date

State of Kansas)
County of Sedgwick) ss

Be it remembered that on this 12th day of August, 1998, before me, a Notary Public in aforesaid state and county, came William R. Nath, Peter L. Ochs and Robert D. Smith to me personally known to be the same persons who executed the foregoing instrument of writing and duly acknowledged the execution of same. In testimony whereof I have hereunto set my hand and affixed my notarial seal the day and year above written.

Donna S. Newman, Notary Public
My commission expires: 2-23-1999

DONNA S. NEWMAN Notary Public - State of Kansas My Appt. Expires 2-23-1999

This plat has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas. Dated this 11 day of September 1999.

Richard E. Lopez, Chairman

Marvin S. Krout, Secretary

This plat has been submitted to and approved by the city council of the City of Wichita, Kansas, dated this 4th day of MAY, 1999.

Bob Knight, Mayor

Pat Burnett, City clerk

This plat approved and all dedications shown hereon accepted by the Board of County Commissioners of Sedgwick County, Kansas, this 18th day of August, 1999.

Bill Hancock, Chairman

Betsy Gwin, Chairman Pro Tem

Thomas G. Winters, Commissioner

Carolyn McGinn, Commissioner

Ben Sciortino, Commissioner

James Alford, County Clerk

Entered on transfer record the 19th day of August, 1999.

James Alford, County Clerk

State of Kansas
County of Sedgwick

This is to certify that this plat has been filed for record in the office of the Register of Deeds this 20th day of August, 1999, at 10:44 A.M., and is duly recorded.

Bill Meek, Register of Deeds

Linda Kizzire, Deputy

#1822379

NOT TO SCALE

PC105-2

250 MATHEWSON WICHITA, KS 67214 PH. (316) 263-0082 FX. (316) 263-0092

ARMSTRONG LAND SURVEY, P.A.

REV.	DESCRIPTION	DATE

TRINITY SPORTS FIELD COMPLEX

TRINITY ACADEMY
12345 E. 21ST STREET N.

WICHITA, SEDGWICK COUNTY, KS

CERTIFIED ENGINEERING DESIGN, P.A.
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1935 WEST MAPLE STREET
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HARLAN DALE FORSHER LICENSED 10891 3.19.13 KANSAS PROFESSIONAL ENGINEER

PROJECT NO.: 20122055
ISSUE DATE: MARCH 2013
CONTACT: HDF, LJM
CHECKED BY: HDF, LJM

PLAT MAP

Existing Storm Sewer Structure Table

Structure Label	Structure Type	Rim Elev.	Flowline Elev.
1	8'x5' RCB	-	FL(N) = 1364.81
			FL (S) = 1364.65
2	16' Rectangular Weir	-	FL = 1361.75
3	Ditch Check w/ 24" RCP	-	FL (N) = 1355.79
			FL (S) = 1356.15
4	20' Rectangular Weir	-	FL = 1353.00
5	15" CMP	-	FL (E) = 1373.34
			FL (W) = 1372.94
6	23"x14" RCP	-	FL (SE) = 1371.91
			FL (NW) = 1371.80
7	15" DIP	-	FL (N) = 1371.47
			FL (S) = 1370.77
8	12" CMP w/ Area Inlet	1370.88	FL (in) = 1369.40
			FL (out) = 1368.70
9	12" CMP w/ Area Inlet	1370.43	FL (in) = 1368.90
			FL (out) = 1367.95
10	15" RCP	-	FL (W) = 1367.18
			FL (E) = 1365.57
11	18" RCP	-	FL (NW) = 1368.15
			FL (SE) = 1367.39
12	18" RCP		FL (W) = 1368.93
			FL (E) = 1368.87

Existing Drainage Summary Chart - SCS Method

Drainage Area Basin	Drainage Area (acres)	Percent Impervious Including Pond (%)	CN (Weighted)	Tc (min)	100 Yr. Discharge (cfs)
A	73.92	50	91	39.3	354.14
B	6.81	11	82	30.1	34.64
C	20.99	29	88	30.5	109.89
D	41.87	7	81	50.1	148.22

Total Existing Peak Runoff w/ Detention

Description	Q (cfs)
Total Existing Runoff (2 yr.)	160.79
Total Existing Runoff (5 yr.)	220.61
Total Existing Runoff (10 yr.)	261.62
Total Existing Runoff (25 yr.)	317.38
Total Existing Runoff (100 yr.)	448.11

DRAINAGE LEGEND

- SHEET FLOW
- CONCENTRATED FLOW
- DRAINAGE SUB-BASIN BOUNDARY
- EXISTING CONTOURS
- A — DRAINAGE SUB-AREA
- ① — EXISTING DRAINAGE STRUCTURE LABEL

EXISTING AREA CALCULATIONS:

PROPERTY AREA = 62.87 ACRES
EXISTING IMPERVIOUS AREA = 7.37 ACRES

EXISTING PARKING AREA
EXISTING NORTH POND
EXISTING BASEBALL FIELD
EXISTING SOUTH POND
EXISTING TENNIS COURT
EXISTING SHED AT EL = 1359.87
EXISTING HOUSE WITH WALKOUT BASEMENT AT EL = 1358.79
EXISTING TRINITY ACADEMY SCHOOL BUILDING

REV.	DESCRIPTION	DATE

GRAPHIC SCALE
100' 0 100'
(IN FEET)
1"=100'

TRINITY SPORTS FIELD COMPLEX

TRINITY ACADEMY
12345 E. 21ST STREET N.

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HARLAN DALE FOSTER LICENSED 10891 3.19.13 KANSAS PROFESSIONAL ENGINEER

PROJECT NO.: 20122055
ISSUE DATE: MARCH 2013
CONTACT: HDF, LJM
CHECKED BY: HDF, LJM

EXISTING DRAINAGE PLAN

3 OF 19

Proposed Storm Sewer Structure Table			
Structure Label	Structure Type	Slope (%)	Flowline Elev.
1	16' Rectangular Concrete Weir	-	FL = 1358.75
2	24" RCP w/ End Sections	0.50	FL (NE) = 1366.10
			FL (SW) = 1365.90
3	See Grading Plan - Stadium		
4	15" RCP w/ End Sections	0.50	FL (N) = 1371.30
			FL (S) = 1371.02
5	20' Rectangular Concrete Weir w/ 7" Circular Orifice	-	FL (7") = 1350.00
			FL (Weir) = 1352.65

Proposed Drainage Summary Chart - SCS Method					
Drainage Area Basin	Drainage Area (acres)	Percent Impervious Including Pond (%)	CN (Weighted)	Tc (min)	100 Yr. Discharge (cfs)
A	73.92	50	91	39.3	354.14
B	6.81	16	83	30.1	35.24
C	18.16	59	94	29.6	107.84
D	44.70	29	88	50.1	177.34

Total Developed Peak Runoff w/ Detention	
Description	Q (cfs)
Total Developed Runoff (2 yr.)	113.28
Total Developed Runoff (5 yr.)	190.16
Total Developed Runoff (10 yr.)	245.38
Total Developed Runoff (25 yr.)	301.93
Total Developed Runoff (100 yr.)	410.54

Proposed North Pond	
Bottom Elevation =	1348
Top Elevation =	1364
Normal Elevation =	1358.75
Proposed Max Stage (100 yr) =	1362.50

Stage (EL)	Total Storage (C.F.)
1348	0
1358	344,929
1359	413,919
1360	490,335
1361	573,717
162	663,435
1363	759,093
1364	867,529

Proposed South Pond	
Estimated Bottom Elevation =	1345
Top Elevation =	1357
Normal Elevation =	1350
Proposed Max Stage (100 yr) =	1356

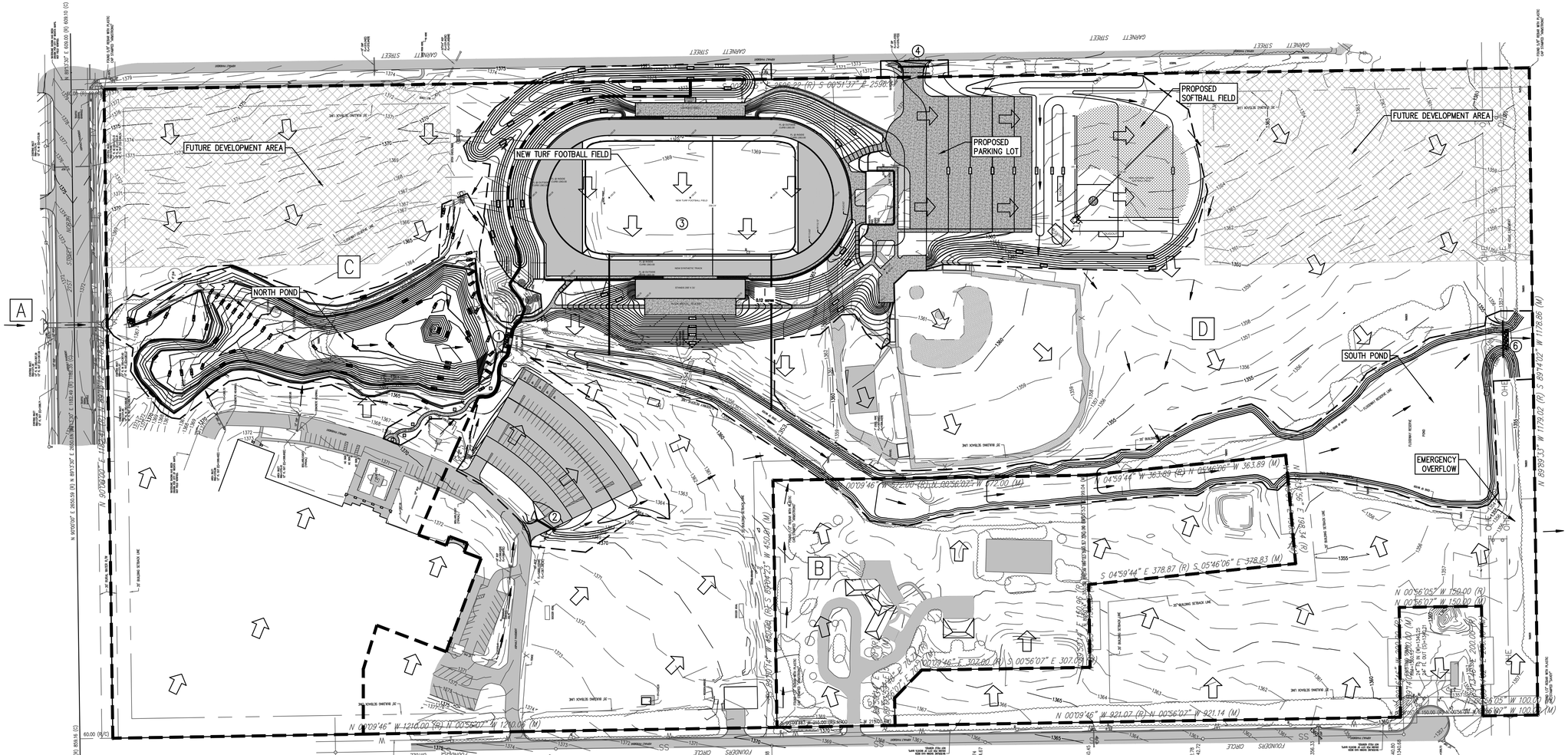
Stage (EL)	Total Storage (C.F.)
1345	0
1350	406,557
1351	514,588
1352	639,917
1353	783,037
1354	947,472
1355	1,153,472
1356	1,452,178
1357	1,864,857

DRAINAGE LEGEND

- SHEET FLOW
- CONCENTRATED FLOW
- DRAINAGE SUB-BASIN BOUNDARY
- EXISTING CONTOURS
- PROPOSED CONTOURS
- LIMITS OF DISTURBANCE
- FUTURE DEVELOPMENT

DEVELOPED AREA CALCULATIONS:

PROPERTY AREA = 62.87 ACRES
EXISTING IMPERVIOUS AREA = 7.37 ACRES
DEVELOPED IMPERVIOUS AREA = *19.96 ACRES
*INCLUDES FUTURE DEVELOPMENT
LIMITS OF DISTURBANCE = 23.22 ACRES



REV.	DESCRIPTION	DATE

GRAPHIC SCALE
100' 0 100'
(IN FEET)
1"=100'

TRINITY SPORTS FIELD COMPLEX

TRINITY ACADEMY
12345 E. 21ST STREET N.

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PH.(316)262-8808 FAX.(316)262-1669

HARLAN DALE FORMELLER
LICENSED
10891
3.19.13
KANSAS
PROFESSIONAL ENGINEER

PROJECT NO.:	20122055
ISSUE DATE:	MARCH 2013
CONTACT:	HDF, LJM
CHECKED BY:	HDF, LJM

DEVELOPED DRAINAGE PLAN

SEQUENCE OF CONSTRUCTION

PHASE I

1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
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 SILT FENCES ON THE SITE.
4. CONSTRUCT THE SEDIMENT BASIN AND SEDIMENT TRAPS WITH APPROPRIATE OUTFALL STRUCTURES.
5. STABILIZE BASINS AND TRAPS
6. 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.
7. CLEAR AND GRUB THE SITE
8. BEGIN GRADING THE SITE

PHASE II

1. TEMPORARILY SEED DENUDED AREAS.
2. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
3. INSTALL RIP RAP AROUND OUTLET STRUCTURES.
4. INSTALL INLET PROTECTION AROUND ALL STORM SEWER STRUCTURES.
5. PREPARE SITE FOR PAVING.
6. PAVE SITE.
7. INSTALL INLET PROTECTION DEVICES.
8. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING
9. 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.

M. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.

N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. 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.

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
ROUGH GRADE / SEDIMENT CONTROL																		
TEMPORARY CONTROL MEASURES																		
STRIP & STOCKPILE TOPSOIL																		
STORM FACILITIES																		
TEMPORARY CONSTRUCTION ROADS																		
FOUNDATION / BUILDING CONSTRUCTION																		
SITE CONSTRUCTION																		
PERMANENT CONTROL STRUCTURES																		
FINISH GRADING																		
LANDSCAPING/SEED/FINAL STABILIZATION																		

ACREAGE SUMMARY

IMPERVIOUS AREA	±5.07 ACRES
POND AREA	±4.28 ACRES
SEEDED/TURFED AREA	±13.87 ACRES
TOTAL DISTURBED	±23.22 ACRES

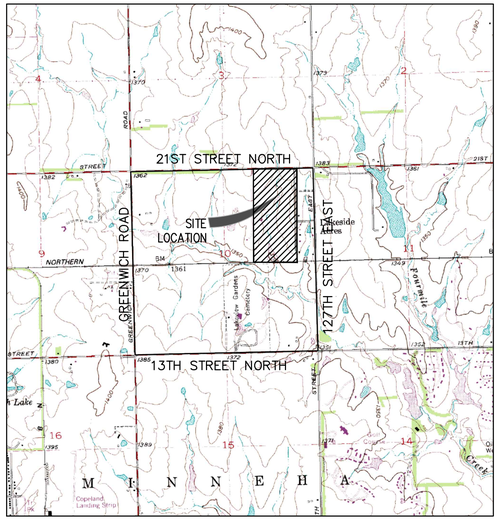
DEVELOPER/OWNER:
TRINITY ACADEMY
12345 E. 21ST STREET N.
Wichita, KS 67206

SITE OPERATOR/GENERAL CONTRACTOR:
TBD

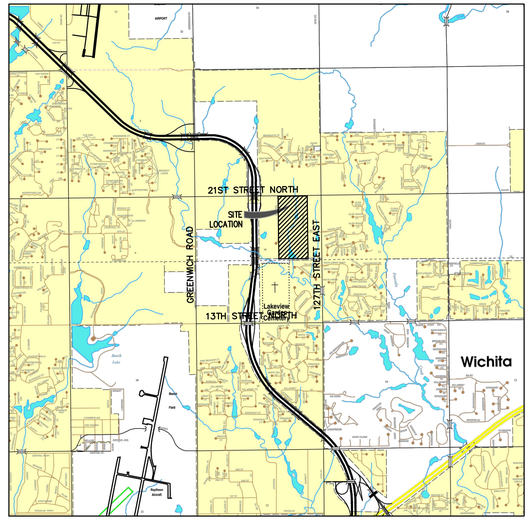
SUPERINTENDENT:
TBD

T.B.M.

BENCHMARK
CHISELED '□' CUT IN NORTHEAST CORNER OF TRAFFIC CONTROL MANHOLE IN THE SOUTHEAST QUADRANT OF EAST 21ST STREET NORTH AND NORTH 127TH STREET EAST.
ELEV = 1384.18 (NAVD 88)



USGS QUADRANGLE MAP
N.T.S.



VICINITY MAP
N.T.S.

ONE CALL KANSAS DIAL 811

REV.	DESCRIPTION	DATE

TRINITY SPORTS FIELD COMPLEX

TRINITY ACADEMY
12345 E. 21ST STREET N.

WICHITA, SEDGWICK COUNTY, KS

CERTIFIED ENGINEERING DESIGN, P.A.
CIVIL ENGINEERING SERVICES

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

HARLAN DALE FORSHEE LICENSED 10891 3.19.13 KANSAS PROFESSIONAL ENGINEER

PROJECT NO.: 20122055
ISSUE DATE: MARCH 2013
CONTACT: HDF, LJM
CHECKED BY: HDF, LJM

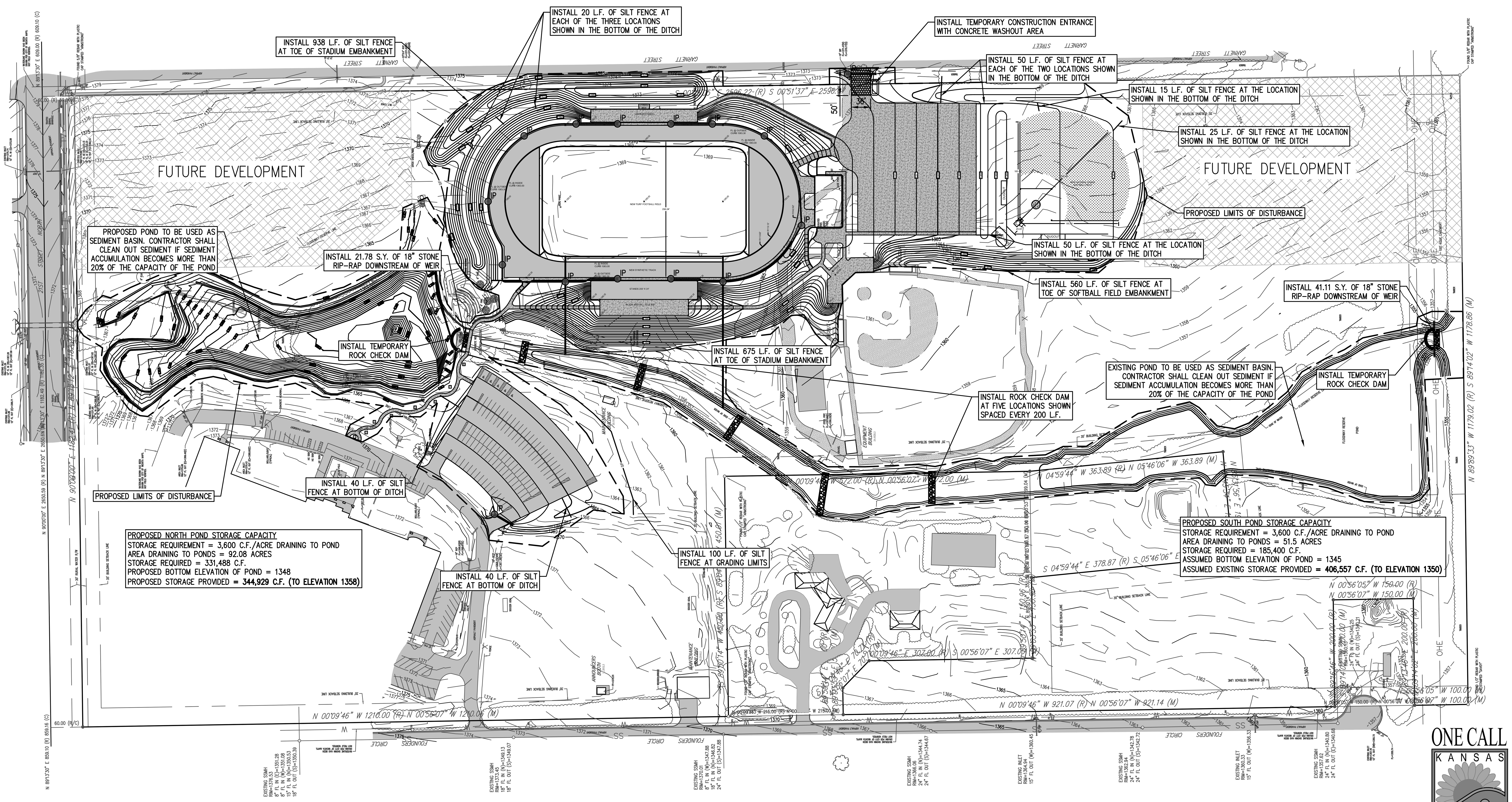
EROSION CONTROL NOTES

5 OF 19

REV.	DESCRIPTION	DATE

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- EXISTING DRAINAGE ARROW
- PROPOSED SILT FENCE
- PROPOSED FLOW LINES
- PROPOSED RIP RAP
- CONSTRUCTION ENTRANCE
- IP AREA INLET PROTECTION



GRAPHIC SCALE
100' 0 100'
(IN FEET)
1"=100'

TRINITY SPORTS FIELD COMPLEX

TRINITY ACADEMY
12345 E. 21ST STREET N.

WICHITA, SEDGWICK COUNTY, KS

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PROJECT NO.: 20122055
ISSUE DATE: MARCH 2013
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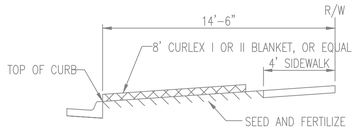
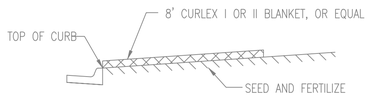
ONE CALL KANSAS DIAL 811

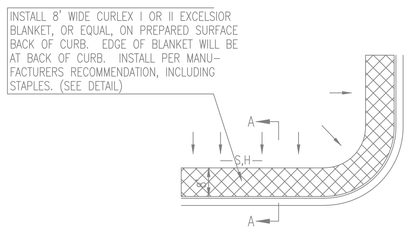
EROSION CONTROL PLAN



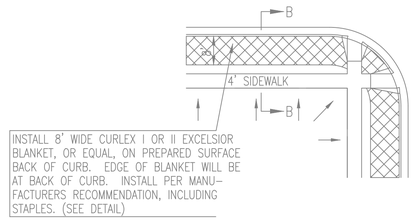
SECTION B-B



SECTION A-A



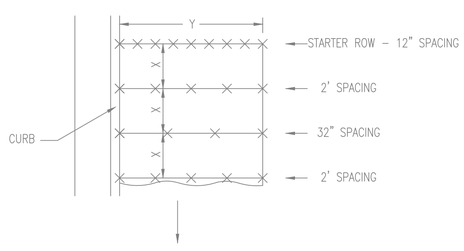
SOUTH STREET



GENERAL NOTES

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

BACK OF CURB PROTECTION DETAIL



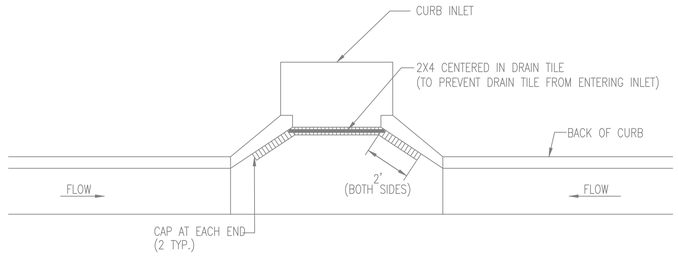
STAPLE PATTERN

NOTES: USE 6" SEAM OVERLAP

(X & Y = RECOMMENDED BY MANUFACTURE)

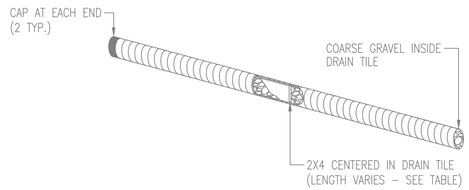
STAPLE

DETAILS FOR APPROVED EROSION CONTROL MAT



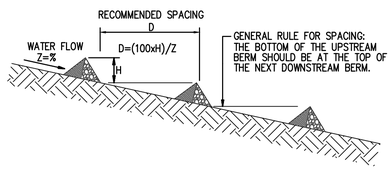
NOTE:
PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

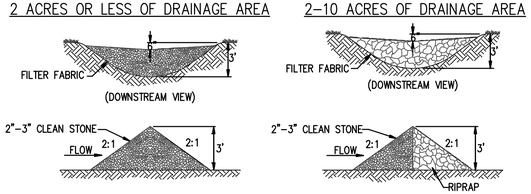
2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"



CURB INLET PROTECTION

4" PERFORATED PIPE W/ GRAVEL

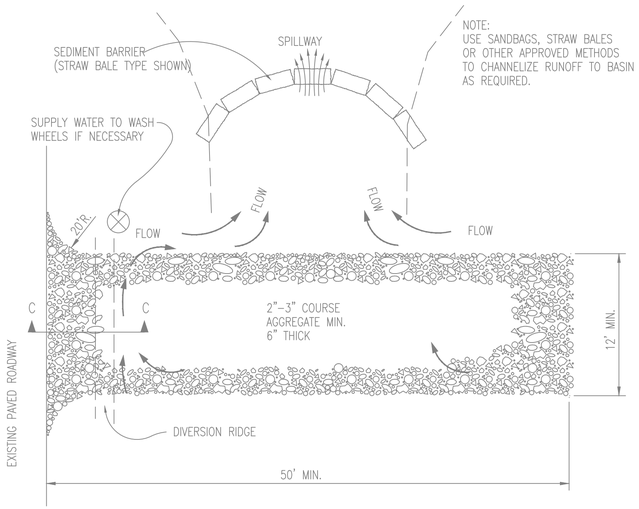




ROCK CHECK DAM

NTS

SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

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

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

CITY ENGINEER
GARY JANZEN, P.E.

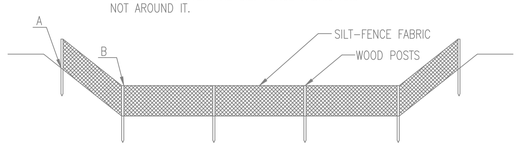
PROJECT NUMBER	OCA NUMBER	DATE
0122 PPD	607861	08/2012

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

SHEET
7 of 19

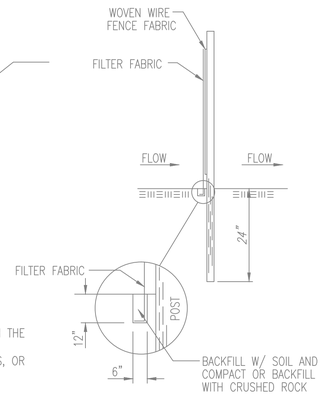
SW-501

NOTE: POINT A MUST BE HIGHER THAN POINT B SO THAT WATER FLOWS OVER THE SILT FENCE FABRIC AND NOT AROUND IT.



ELEVATION

SILT FENCE DITCH CHECKS
(STREAM PROTECTION)



ANCHOR TRENCH DETAIL

MATERIAL SPECIFICATION:

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

PLACEMENT:

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

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

DITCH 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 DOWNSTREAM SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSTREAM EDGE OF THE TRENCH.
LINE TWO SIDES OF THE TRENCH WITH THE FABRIC AS SHOWN ON DETAIL. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE ON THE UPSTREAM SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSTREAM OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

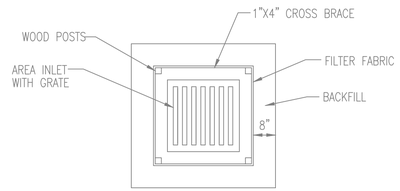
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

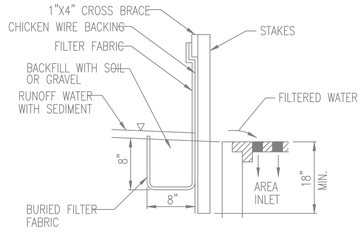
WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK–NOT OVER IT. PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. SILT FENCE INSTALLATIONS QUICKLY DETERIORATE WHEN WATER OVERTOPS THEM.
DO NOT PLACE SILT FENCE POSTS ON THE UPSTREAM SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION,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

INSPECTION AND MAINTENANCE:

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

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





SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE WIRE OR POLYMERIC MESH BACKING USED TO HELP SUPPORT THE SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
THE MATERIAL USED TO FRAME THE TOPS OF THE POSTS SHOULD BE 1" BY 4" BOARDS.
SILT FENCE FABRIC AND SUPPORT BACKING SHOULD BE ATTACHED TO THE WOODEN POSTS AND FRAME WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE A SILT FENCE DROP INLET BARRIER IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED.
WATER SHOULD FLOW THROUGH SILT FENCE, NOT OVER IT. SILT FENCE BARRIERS FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
WHEN USED AS A BARRIER FOR AREA INLETS, SILT FENCE FABRIC AND POSTS MUST BE SUPPORTED AT THE TOP BY A WOODEN FRAME.
WHEN A SILT FENCE BARRIER FOR AREA INLETS IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 8" DEEP BY 8" WIDE.
DRIVE POSTS TO A DEPTH OF AT LEAST 18" AROUND THE PERIMETER OF THE AREA INLET.
THE DISTANCE BETWEEN POSTS SHOULD BE 4' OR LESS. IF THE DISTANCE BETWEEN TWO ADJACENT CORNER POSTS IS MORE THAN 4', ADD ANOTHER POST(S) BETWEEN THEM.
CONNECT THE TOPS OF ALL THE POSTS WITH A WOODEN FRAME MADE OF 1" BY 4" BOARDS. USE NAILS OR SCREWS FOR FASTENING.
ATTACH THE WIRE OR POLYMERIC–MESH BACKING TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC LONG ENOUGH TO WRAP AROUND THE PERIMETER OF THE AREA INLET. ADD MORE LENGTH FOR OVERLAPPING THE FABRIC JOINT. PLACE THE EDGE OF THE FABRIC IN THE TRENCH, STARTING AT THE OUTSIDE EDGE OF THE TRENCH. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
ATTACH THE SILT FENCE TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. THE JOINT SHOULD BE OVERLAPPED TO THE NEXT POST.

NOTE: WHEN A SILT FENCE BARRIER FOR AREA INLET IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

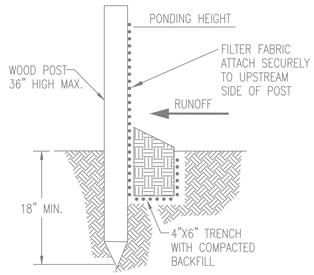
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE BARRIER FOR AREA INLET–NOT OVER IT. PLACE A SILT FENCE BARRIER FOR AREA INLET IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. SILT FENCE BARRIER FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
DO NOT PLACE POSTS ON THE OUTSIDE OF THE SILT FENCE BARRIER FOR AREA INLET. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESISTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT INSTALL SILT FENCE BARRIER FOR AREA INLETS WITHOUT FRAMING THE TOP OF THE POSTS. THE CORNER POSTS AROUND AREA INLETS ARE STRESSED IN TWO DIRECTIONS WHEREAS A NORMAL SILT FENCE IS ONLY STRESSED IN ONE DIRECTION. THIS ADDED STRESS REQUIRES MORE SUPPORT.

INSPECTION AND MAINTENANCE:

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

DOES WATER FLOW UNDER THE SILT FENCE?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



SILT FENCE BARRIERS

MATERIAL SPECIFICATION:

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

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, SILT FENCE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
SILT FENCE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT–OF–WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 6" DEEP BY 4" WIDE.
MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT–FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18".
PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES.
DO NOT PLACE SILT–FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE SILT FENCE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT SUFFICIENTLY ANCHORED, IT WILL WASH OUT.
SILT FENCE SLOPE BARRIERS MUST BE DUG INTO THE GROUND–SILT FENCE AT GROUND LEVEL DOES NOT WORK BECAUSE WATER WILL FLOW UNDERNEATH.

INSPECTION AND MAINTENANCE:

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

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DO THE SILT FENCES SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SILT FENCE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
0122 PPD	607861	11/2010

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

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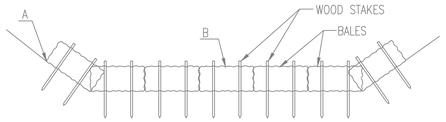
NOTE: POINT A MUST BE HIGHER THAN POINT B
SO THAT WATER FLOWS OVER THE BALES AND
NOT AROUND THEM.



STRAW BALE DITCH CHECKS

MATERIAL SPECIFICATION:

BALE DITCH CHECKS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
OPTIONAL: THE DOWNSTREAM SCOUR APRON SHOULD BE CONSTRUCTED OF A DOUBLE-NETTED STRAW EROSION-CONTROL BLANKET AT LEAST 6' WIDE.
OPTIONAL: THE METAL LANDSCAPE STAPLES USED TO ANCHOR THE EROSION-CONTROL BLANKET SHOULD BE AT LEAST 8" LONG.

PLACEMENT:

BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.
BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.
THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH GRADE (%)	CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH-IT WILL BE USED LATER.
OPTIONAL: ON THE DOWNSTREAM SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSTREAM EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSTREAM EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSTREAM SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSTREAM SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

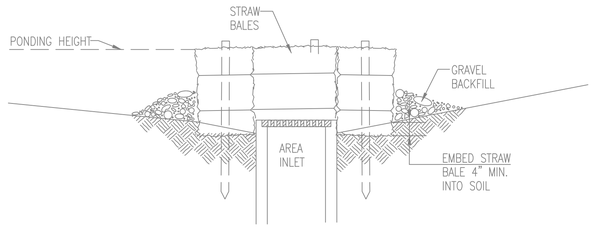
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE.
DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

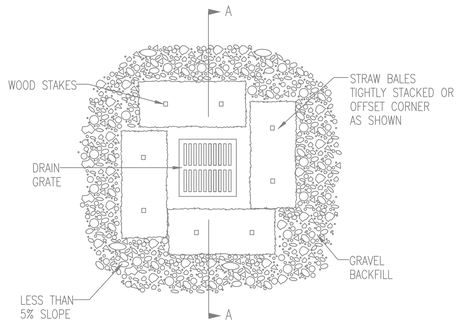
INSPECTION AND MAINTENANCE:

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

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES AND/OR SCOUR APRONS (OPTIONAL) DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS

(INLET PROTECTION)

MATERIAL SPECIFICATION:

BALE AREA INLET BARRIERS SHOULD BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

BALE AREA INLET BARRIERS SHOULD BE PLACED DIRECTLY AROUND THE PERIMETER OF A DROP INLET.
WHEN A BALE AREA INLET BARRIER IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 4" DEEP BY A BALE'S WIDTH WIDE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. SOME BALES MAY NEED TO BE SHORTENED TO FIT INTO THE TRENCH AROUND THE AREA INLET. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS.
STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE RECEIVING SIDE OF THE BARRIER AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.
NOTE: WHEN A BALE AREA INLET BARRIER IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

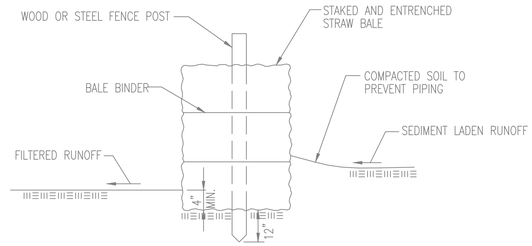
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

BALES SHOULD BE PLACED DIRECTLY AGAINST THE PERIMETER OF THE AREA INLET. THIS ALLOWS OVERTOPPING WATER TO FLOW DIRECTLY INTO THE INLET INSTEAD OF ONTO NEARBY SOIL CAUSING SCOUR.
BALE AREA INLET BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE AREA INLET BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE AREA INLET BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



STRAW BALE BARRIERS

MATERIAL SPECIFICATION:

BALE SLOPE BARRIERS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, BALE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
BALE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER FAILS.
DO NOT PLACE BALE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE SLOPE BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

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

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STRAW BALE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
0122 PPD	607861	11/2010

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

1. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPES OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.

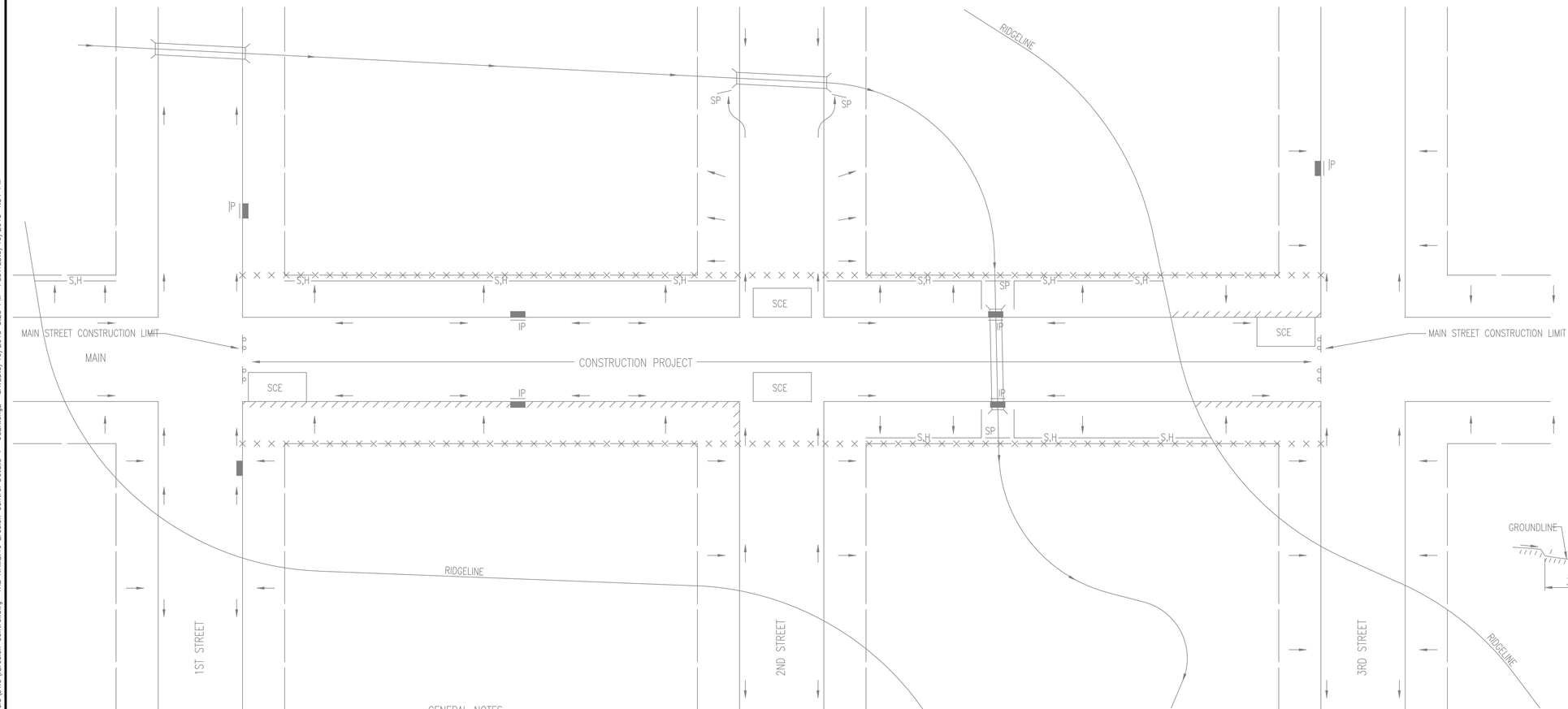
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.

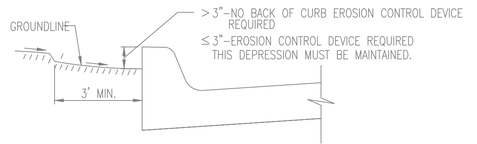
3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.

4. FOR PROJECTS DISTURBING LESS THAN 1 ACRE, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION. EROSION CONTROL DEVICES MUST BE USED ON ALL PROJECTS.

5. FAILURE TO USE AND MAINTAIN EROSION CONTROL DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE CONTRACTOR TO THE PENALTIES PROVIDED FOR THEREIN.

6. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT DEVICE OTHER THAN THOSE SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED AS LONG AS THEY ARE EFFECTIVE AND MAINTAINED.





CURB BACKFILL DETAIL

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.

LEGEND

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

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO KEEP ALL SEDIMENT CONFINED TO THE CONSTRUCTION SITE, AND OUT OF ALL UNDERGROUND PIPES, DITCHES, LAKES, AND OTHER DRAINAGE FACILITIES, AND OFF OF STREETS.

2. THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT–OF–WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.

3. EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.

4. INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.

5. EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.

6. STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED, AS NEEDED, TO PREVENT MUD FROM TRACKING ONTO STREETS NOT UNDER CONSTRUCTION AND ON STREETS WITHIN THE PROJECT LIMITS IF TRAFFIC IS BEING MAINTAINED THROUGH THE PROJECT.

7. ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.

8. THE CONTACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL DEVICES BACK OF CURB, WHENEVER WATER CAN DRAIN OVER CURB, TO KEEP ERODED SOIL OUT OF THE GUTTERLINES, IN ACCORDANCE WITH THE FOLLOWING:
   A. THE DEVICE REQUIRED WILL BE 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)
   B. THIS DEVICE SHALL BE INSTALLED IMMEDIATELY WHENEVER THE CURB IS BACKFILLED TO WITHIN 3" OF THE TOP OF CURB. (SEE CURB BACKFILL DETAIL) OTHER BMP'S MAY BE REQUIRED AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB.
   C. ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.
   D. SHOULD THE PROJECT PLANS SPECIFY THAT THE RIGHT–OF–WAY IS TO BE SODDED, THE EXCELSIOR MAT WILL NOT BE REQUIRED SO LONG AS THE SOD IS PLACED WITHIN 48 HOURS AFTER CURB BACKFILL REACHES A HEIGHT OF 3" OR LESS FROM TOP OF CURB. (SEE CURB BACKFILL DETAIL)

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STREET IMPROVEMENT PROJECTS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
0122 PPD	607861	08/2012

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

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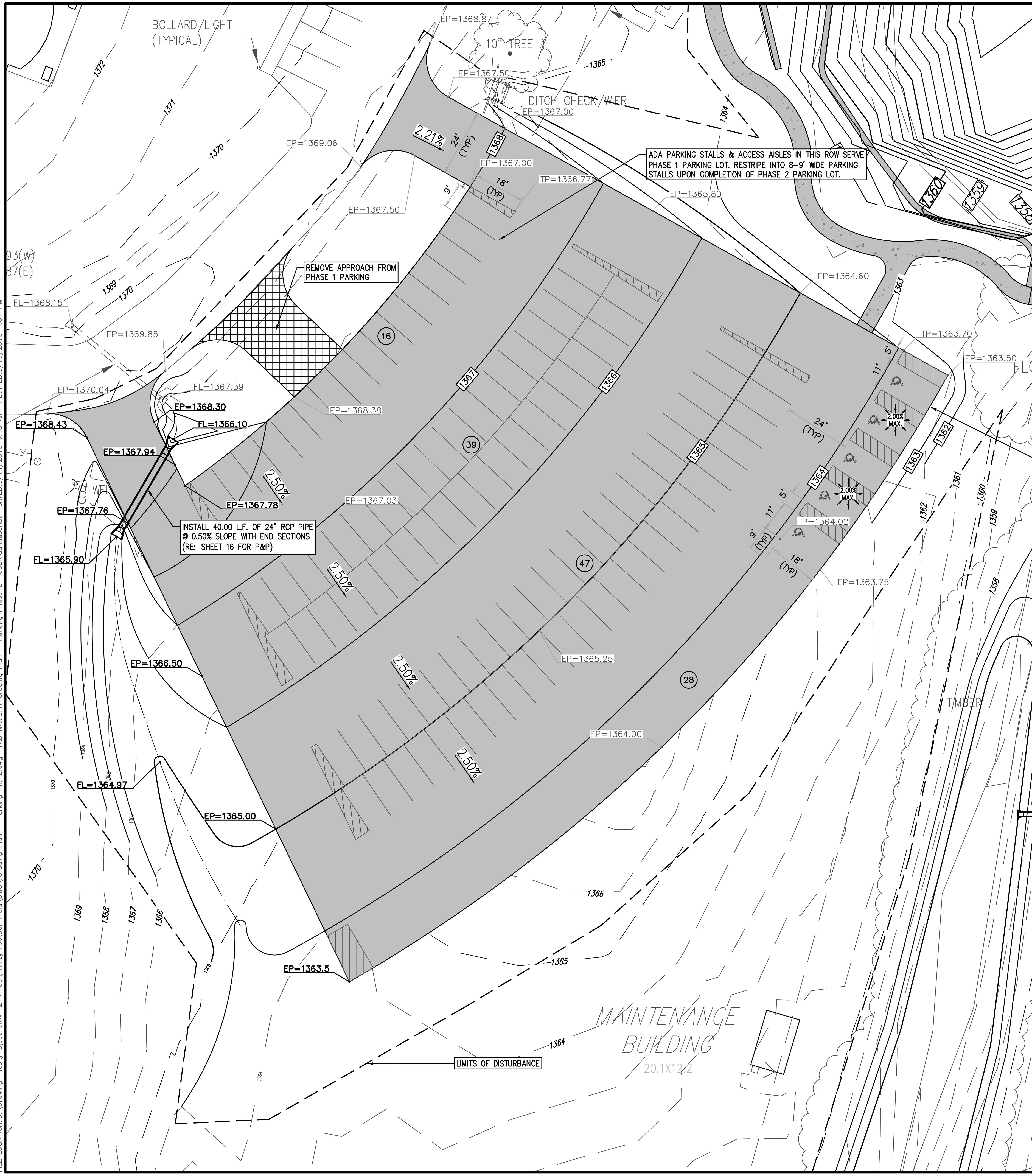
SW–504

FILE LOCATION: S:\Drawing Files\Project CKW 12-7-09\Trinity Football Field\DWG\Erosion Control.dwg TAB NAME:10 Erosion Control Details 4 USER:eng2 SAVED:3/19/2013 PLOTTED:3/19/2013 4:54 PM
SAVED:3/19/2013 3:23 PM



GRADING & DRAINAGE NOTES

1. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF EXISTING UTILITIES ON SITE OR IN RIGHT-OF-WAY. ALL UTILITIES MUST BE LOCATED PRIOR TO GRADING START.
2. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
3. ALL CUT OR FILL SLOPES SHALL BE A MAX 3:1 SLOPE OR FLATTER UNLESS OTHERWISE NOTED.
4. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
5. ALL STORM SEWER PIPE CONNECTIONS TO STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT. ALL STORM SEWER STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.
6. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY WHEN IN PAVED AND TRAFFIC AREAS.
7. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH THE PAVEMENT AND SHALL HAVE TRAFFIC BEARING RINGS AND COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 3" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".
8. SITE GRADING SHALL NOT PROCEED UNTIL APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS AS OUTLINED IN THE GENERAL NPDES PERMIT AND THE SWPPP FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
9. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL TO FINAL GRADE. REFER TO THE LANDSCAPE PLAN.
10. TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY BY LAND SURVEYORS. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON PLANS, CONTACT ENGINEER IMMEDIATELY.
11. THE CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS THROUGHOUT ALL PHASES OF CONSTRUCTION.
12. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS.
13. THE EARTHWORK FOR ALL BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL BUILDING PLANS AND SPECIFICATIONS.
14. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
15. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
16. CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE.
17. IF WET AREAS ARE ENCOUNTERED ON-SITE THE CONTRACTOR SHALL COORDINATE WITH THE GEOTECHNICAL ENGINEER FOR THE DESIGN AND REPLACEMENT OF A FRENCH DRAIN SYSTEM.
18. PAVEMENT GRADES SHOWN ARE TO THE TOP OF PAVEMENT.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND PROTECTING BENCHMARK THROUGHOUT CONSTRUCTION.
20. CONTRACTOR SHALL STRIP SITE OF TOPSOIL(6" MIN.) AND STOCKPILE THIS MATERIAL TO BE USED IN GRASSED AREAS.
21. ALL CURB SHALL BE COMBINED CURB & GUTTER UNLESS OTHERWISE NOTED. CURB & GUTTER SHALL BE CONSTRUCTED TO CITY OF NEWTON STANDARD SPECIFICATIONS.
22. COMPACTION OF FILL MATERIAL AND SUBGRADE STABILIZATION SHALL COMPLY WITH GEOTECHNICAL ENGINEERING REPORT.
23. PAVEMENT TYPE SHALL BE A.C. PAVEMENT. PAVEMENT THICKNESS AND BASE STABILIZATION SHALL BE AS SPECIFIED IN THE SOILS ENGINEER'S REPORT.
24. ALL SOIL USED FOR OVER EXCAVATION AND FOR BACKFILLING OF EXCAVATIONS, ETC. SHALL BE TESTED FOR COMPACTION AS REQUIRED BY AN INDEPENDENT SOILS ENGINEER'S RECOMMENDATIONS.
25. THE CONTRACTOR SHALL EXAMINE THE CONSTRUCTION SITE BEFORE 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 OF WORK TO BE COMPLETED.
26. ALL PROPOSED SLOPES AND GRADES SHALL BE IN ACCORDANCE WITH ADA SEC. 4.1.3(8)(A)(II).
27. THE CONTRACTOR SHALL PROVIDE A MINIMUM ADVANCE NOTICE OF 72 HOURS TO UTILITY COMPANIES PRIOR TO STARTING CONSTRUCTION AS FOLLOWS: KANSAS ONE CALL DIAL 811

GRAPHIC SCALE
20' 0 20'
(IN FEET)
1"=20'

GRADING LEGEND

- PROPOSED DRAINAGE FLOW DIRECTION
- PROPOSED RIDGE LINE
- PROPOSED FLOW LINE
- TC=XXXX.XX G=XXXX.XX – EXISTING SPOT ELEVATIONS
- TC=XXXX.XX G=XXXX.XX – PROPOSED SPOT ELEVATIONS
  FL=FLOW LINE
  TC=TOP OF CURB
  EP=EDGE OF PAVEMENT
  TP=TOP OF PAVEMENT
  FFE=FINISHED FLOOR ELEVATION
- PHASE 2 PARKING LOT PAVING

SITE BENCH MARK:
CHISELED "□" IN NORTHEAST CORNER OF TRAFFIC CONTROL MANHOLE IN THE SOUTHEAST QUADRANT OF EAST 21ST STREET NORTH AND NORTH 127TH STREET EAST
ELEV. = 1384.18 (NGVD88)

ONE CALL KANSAS DIAL 811

SURVEY DISCLAIMER:
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REV.	DESCRIPTION	DATE

TRINITY SPORTS FIELD COMPLEX

TRINITY ACADEMY
12345 E. 21ST STREET N.

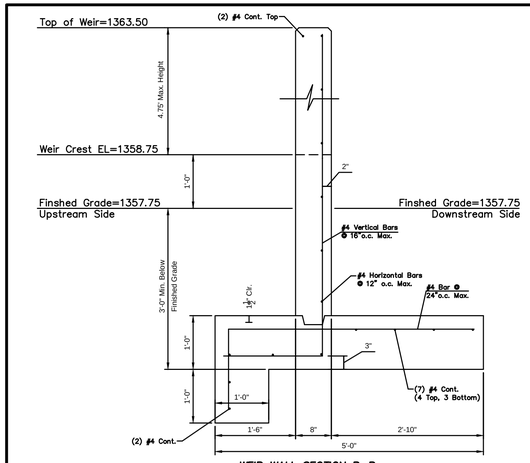
WICHITA, SEDGWICK COUNTY, KS

CERTIFIED ENGINEERING DESIGN, P.A.
CIVIL ENGINEERING SERVICES
CED
1935 WEST MAPLE STREET
WICHITA, KANSAS 67213
PH.(316)262-8808 FAX.(316)262-1669

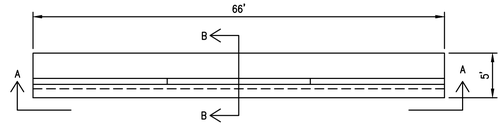
HARLAN DALE FORMER LICENSED PROFESSIONAL ENGINEER KANSAS 10891 3.19.13

PROJECT NO.: 20122055
ISSUE DATE: MARCH 2013
CONTACT: HDF, LJM
CHECKED BY: HDF, LJM

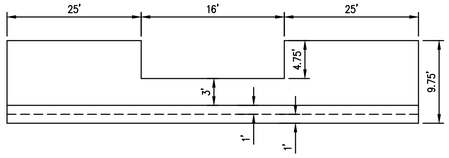
GRADING PLAN - PARKING PHASE 2



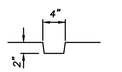
WEIR WALL SECTION B–B



WEIR STRUCTURE DETAIL
PLAN VIEW
(N.T.S.)



WEIR STRUCTURE DETAIL A–A
ELEVATION VIEW
(N.T.S.)



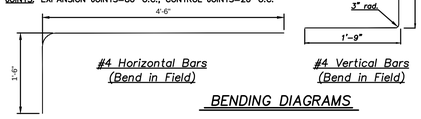
CONSTRUCTION JOINT
(TYP. ALL WALLS)

CONCRETE WEIR WALL NOTES

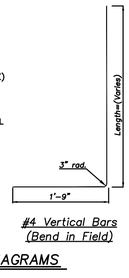
CONCRETE: BEVEL ALL EXPOSED EDGES WITH A 3/4" TRIANGULAR MOLDING OR FINISH WITH A APPROVED EDGING TOOL. CONCRETE (AE) SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.

REINFORCING STEEL: ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BAR UNLESS OTHERWISE NOTED. ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. DESIGNATION A615 GRADE 60.

JOINTS: EXPANSION JOINTS=80' O.C., CONTROL JOINTS=20' O.C.



#4 Horizontal Bars
(Bend in Field)



#4 Vertical Bars
(Bend in Field)

BENDING DIAGRAMS

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- LIMITS OF DISTURBANCE
- 100 YEAR BASE FLOOD ELEV.

GRAPHIC SCALE
30' 0 30'
(IN FEET)
1"=30'

REV.	DESCRIPTION	DATE

TRINITY SPORTS FIELD COMPLEX

TRINITY ACADEMY
12345 E. 21ST STREET N.

WICHITA, SEDGWICK COUNTY, KS

CERTIFIED ENGINEERING DESIGN, P.A.
CIVIL ENGINEERING SERVICES

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

HARLAN DALE FORD — LICENSED — 10891 — 3.19.13 — KANSAS — PROFESSIONAL ENGINEER

PROJECT NO.: 20122055
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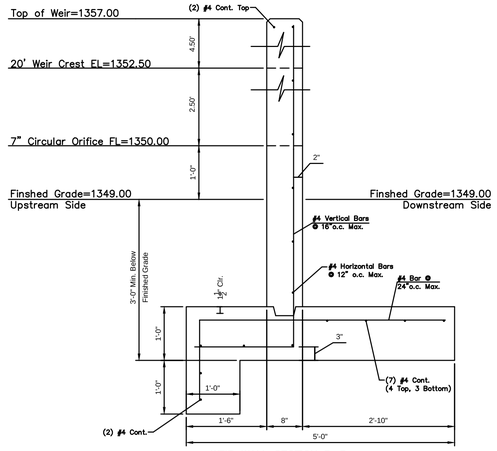
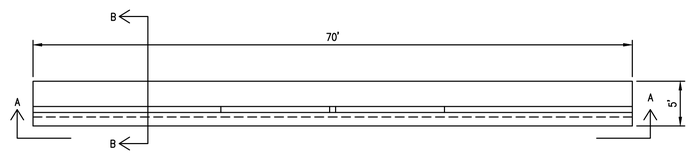
CONTACT: HDF, LJM
CHECKED BY: HDF, LJM

NORTH POND PLAN

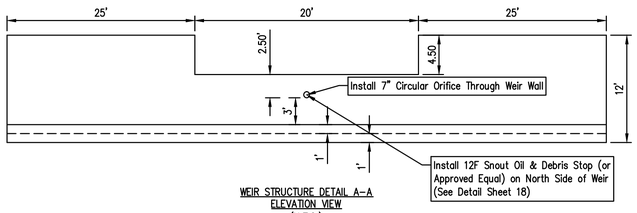
12 OF 19



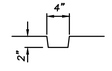
WEIR WALL SECTION B-B



WEIR STRUCTURE DETAIL
PLAN VIEW
(N.T.S.)



WEIR STRUCTURE DETAIL A-A
ELEVATION VIEW
(N.T.S.)



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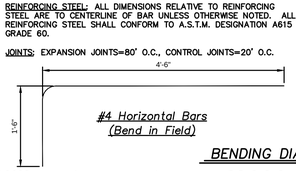

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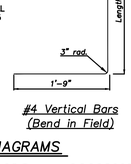

#4 Vertical Bars
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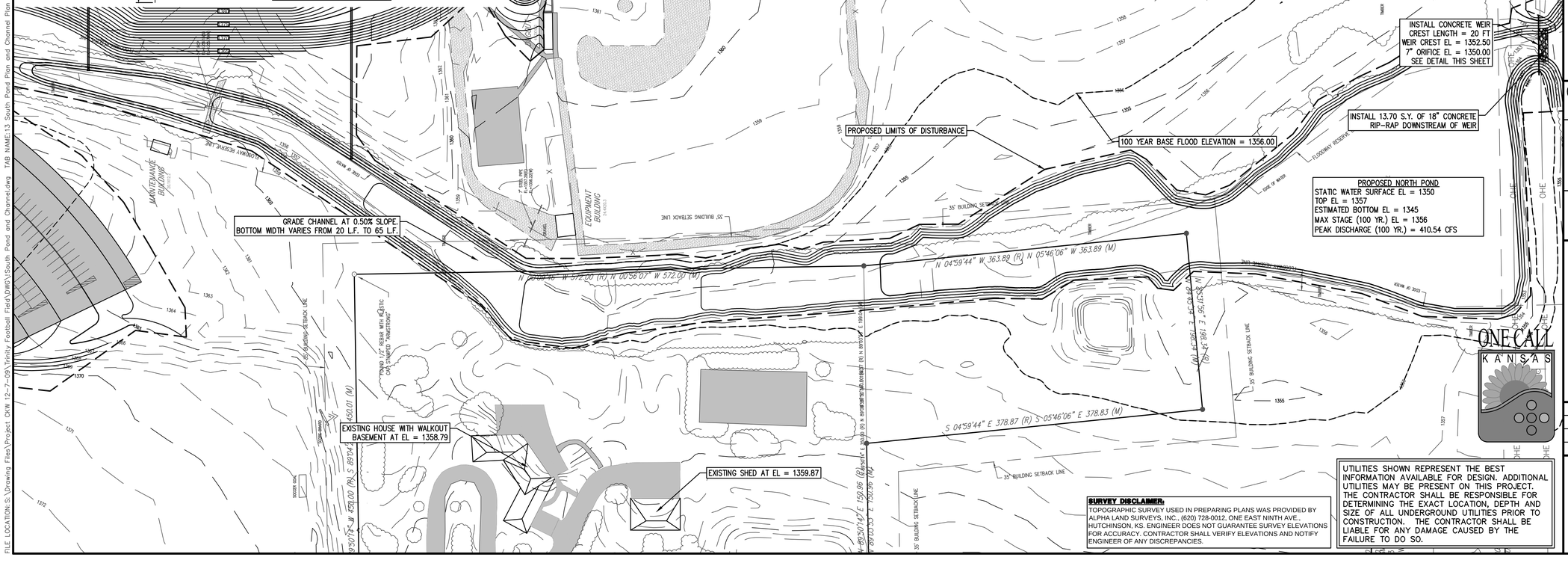
BENDING DIAGRAMS



REV.	DESCRIPTION	DATE

GRAPHIC SCALE
60' 0 60'
(IN FEET)
1"=60'

TRINITY SPORTS FIELD COMPLEX

TRINITY ACADEMY
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HARLAN DALE FOSTER
LICENSED
10891
3.19.13
KANSAS
PROFESSIONAL ENGINEER

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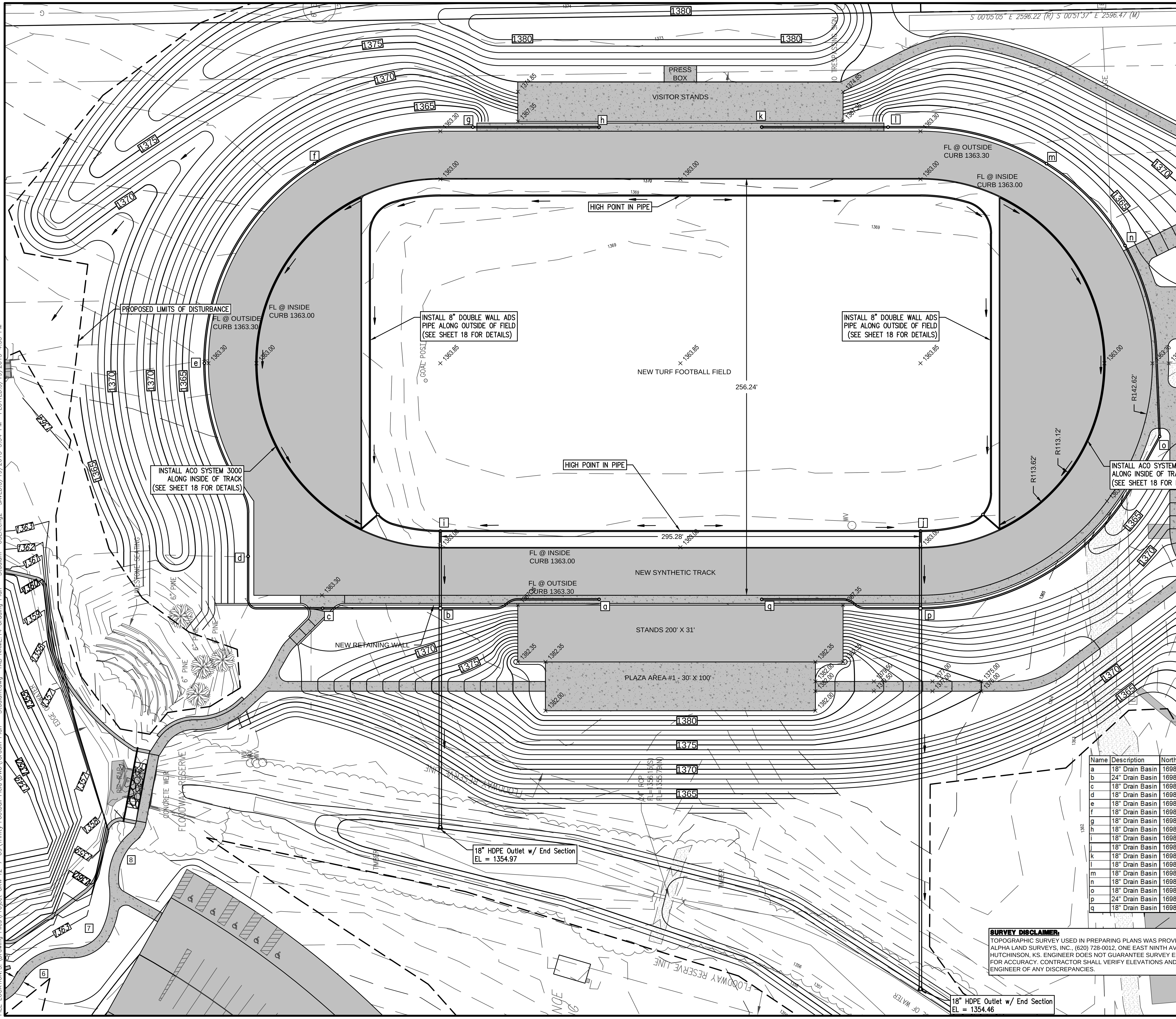
SOUTH POND PLAN AND CHANNEL PLAN

13 OF 19



From	To	Length (L.F.)	Size	Material	Slope
i	b	47.50	15"	HDPE N-12	0.40%
h	g	77.66	10"	HDPE N-12	0.60%
g	f	101.70	10"	ADS Single	0.60%
f	e	146.23	10"	ADS Single	0.60%
e	d	123.88	10"	ADS Single	0.60%
d	c	75.54	10"	ADS Single	0.60%
c	b	72.44	10"	ADS Single	0.60%
a	b	99.06	10"	ADS Single	0.60%
b	End	135.78	18"	HDPE N-12	0.50%
j	p	47.50	15"	HDPE N-12	0.40%
k	l	77.66	10"	HDPE N-12	0.60%
l	m	101.70	10"	ADS Single	0.60%
m	o	70.55	10"	ADS Single	0.60%
n	p	120.81	10"	ADS Single	0.60%
o	p	192.31	10"	ADS Single	0.60%
q	p	99.06	10"	ADS Single	0.60%
p	End	234.88	18"	HDPE N-12	0.50%

Name	Description	Northing	Easting	Rim	In	Out
a	18" Drain Basin	1698575.8434	1690358.3412	1363.35		1356.34
b	24" Drain Basin	1698673.4829	1690352.8412	1366.68	1355.75	1355.65
c	18" Drain Basin	1698745.9181	1690352.8412	1363.76	1356.28	1356.18
d	18" Drain Basin	1698791.7029	1690384.7469	1363.50	1356.84	1356.74
e	18" Drain Basin	1698818.6029	1690503.4612	1363.45	1357.68	1357.58
f	18" Drain Basin	1698750.9542	1690626.1723	1363.66	1358.66	1358.56
g	18" Drain Basin	1698653.5073	1690648.5812	1363.45	1359.37	1359.27
h	18" Drain Basin	1698575.8429	1690648.5812	1363.35		1359.83
i	18" Drain Basin	1698673.4829	1690400.3412	1363.08	1356.04	1355.94
j	18" Drain Basin	1698378.2029	1690400.3412	1363.08	1356.02	1355.92
k	18" Drain Basin	1698475.8429	1690648.5812	1363.35		1359.51
l	18" Drain Basin	1698398.1785	1690648.5812	1363.35	1359.05	1358.95
m	18" Drain Basin	1698300.7316	1690626.1723	1363.56	1358.34	1358.24
n	18" Drain Basin	1698252.4152	1690575.8301	1363.57	1357.81	1357.71
o	18" Drain Basin	1698231.1095	1690458.4613	1363.66	1356.99	1356.89
p	24" Drain Basin	1698378.2029	1690352.8412	1366.68	1355.73	1355.63
q	18" Drain Basin	1698475.8430	1690358.3412	1363.35		1356.33

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ONE CALL KANSAS

REV.	DESCRIPTION	DATE

GRAPHIC SCALE
30' 0 30'
(IN FEET)
1"=30'

TRINITY SPORTS FIELD COMPLEX

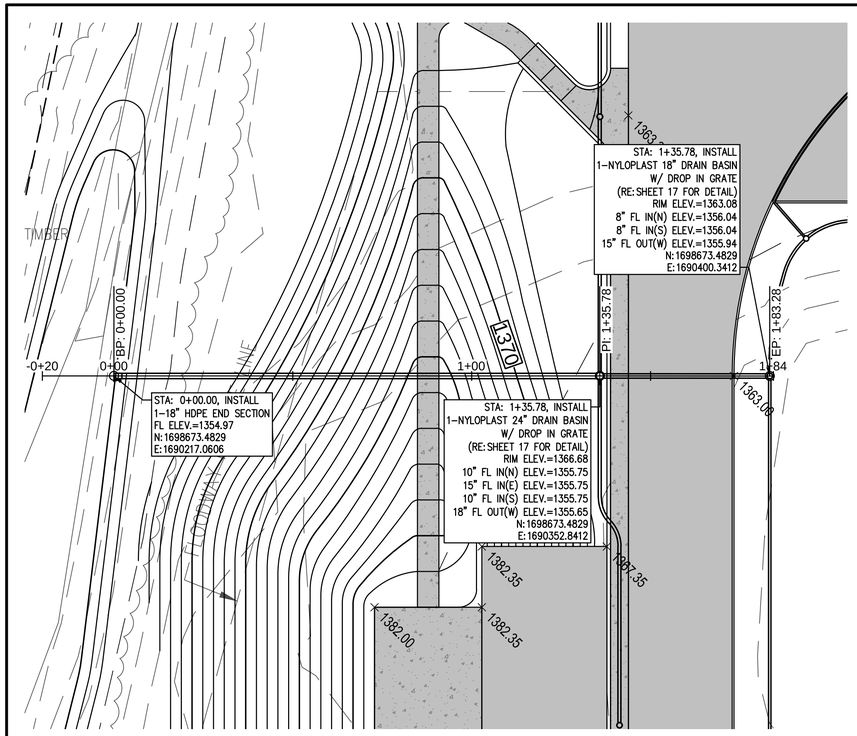
TRINITY ACADEMY
12345 E. 21ST STREET N.
WICHITA, SEDGWICK COUNTY, KS

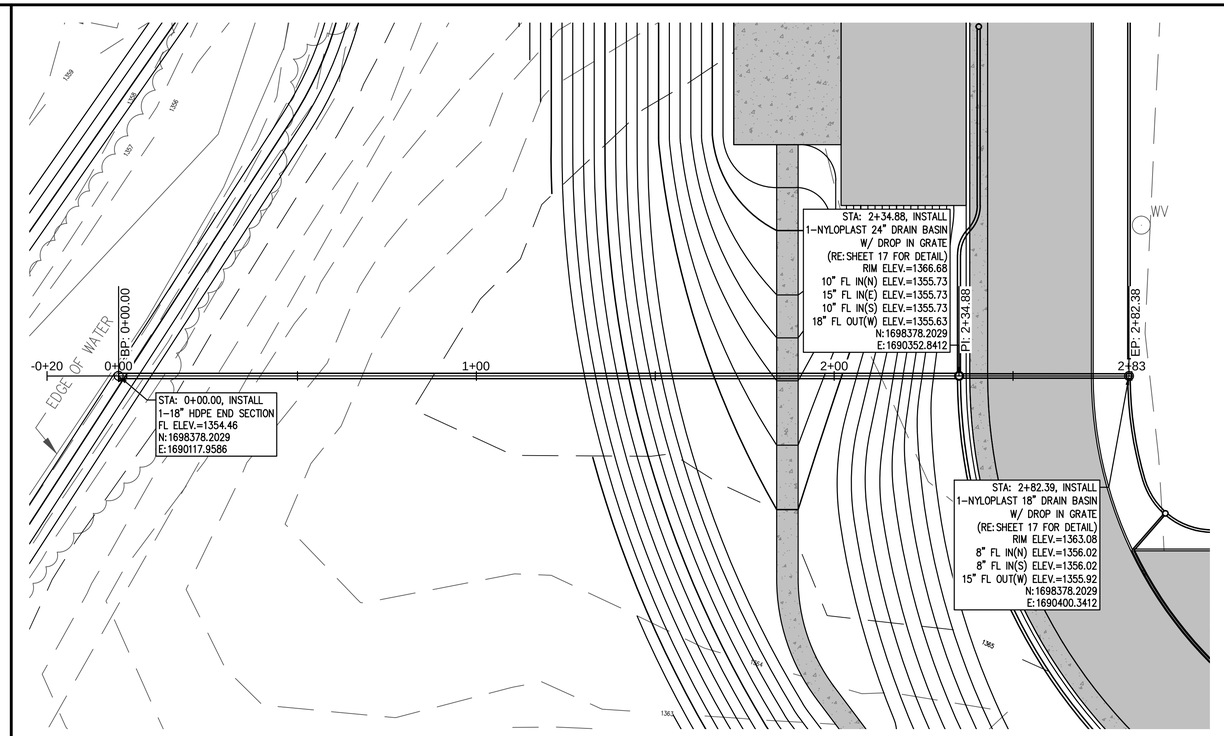
CERTIFIED ENGINEERING DESIGN, P.A.
CIVIL ENGINEERING SERVICES
CED
1935 WEST MAPLE STREET
WICHITA, KANSAS 67213
PH.(316)262-8808 FAX.(316)262-1669

HARLAN DALE FORMER LICENSED 10891 3.19.13 KANSAS PROFESSIONAL ENGINEER

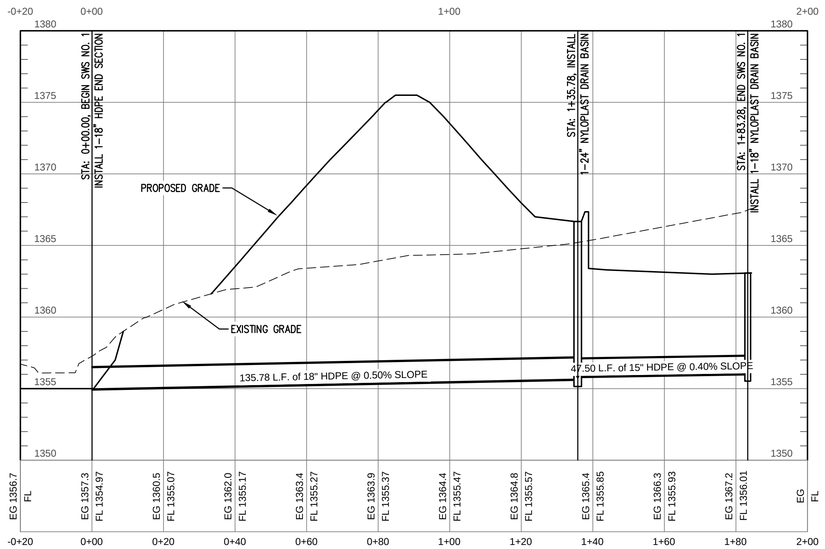
PROJECT NO.: 20122055
ISSUE DATE: MARCH 2013
CONTACT: HDF, LJM
CHECKED BY: HDF, LJM

GRADING PLAN - STADIUM





SWS NO. 1 PROFILE



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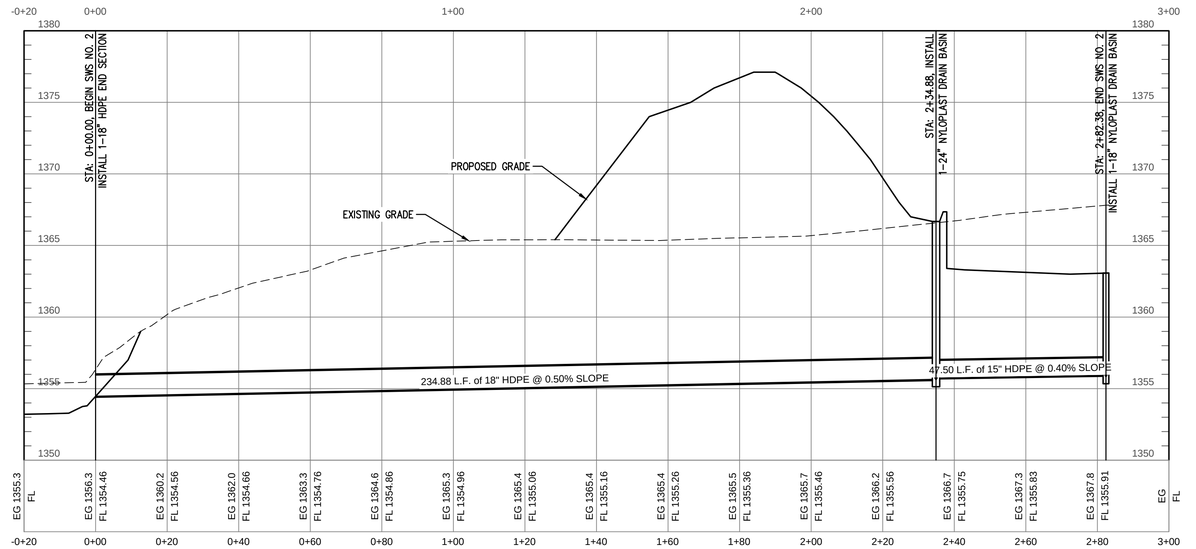

REV.	DESCRIPTION	DATE

GRAPHIC SCALE
20' 0 20'
(IN FEET)
1"=20'

TRINITY SPORTS FIELD COMPLEX

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WICHITA, SEDGWICK COUNTY, KS

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WICHITA, KANSAS 67213
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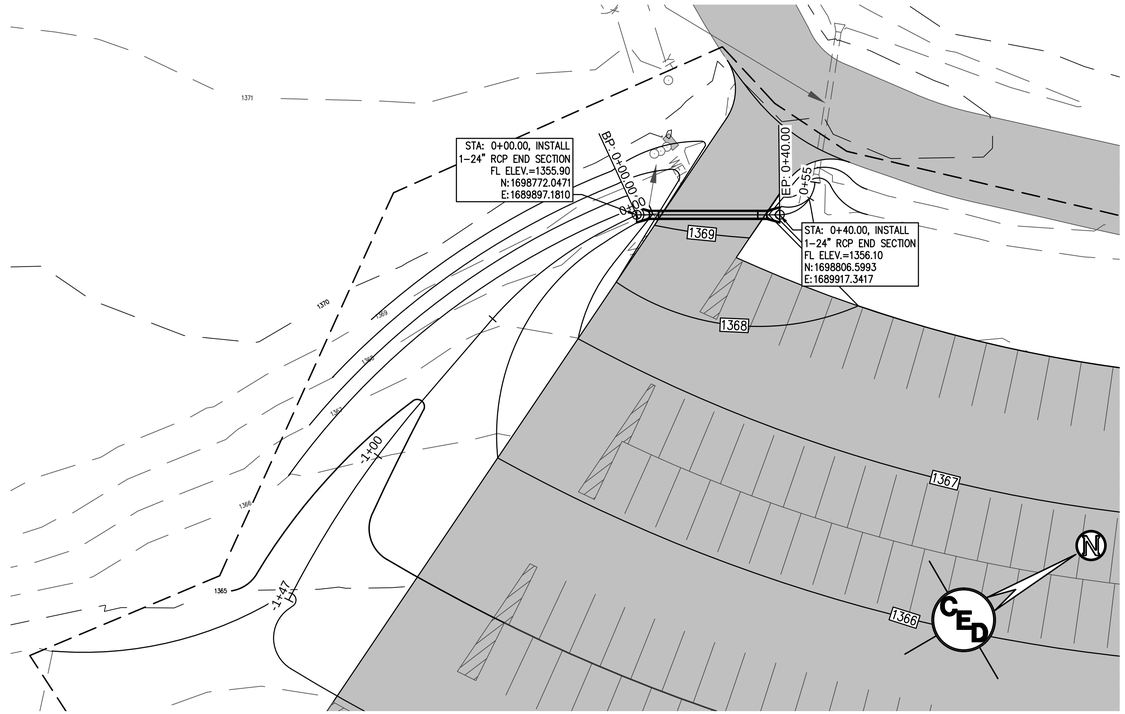
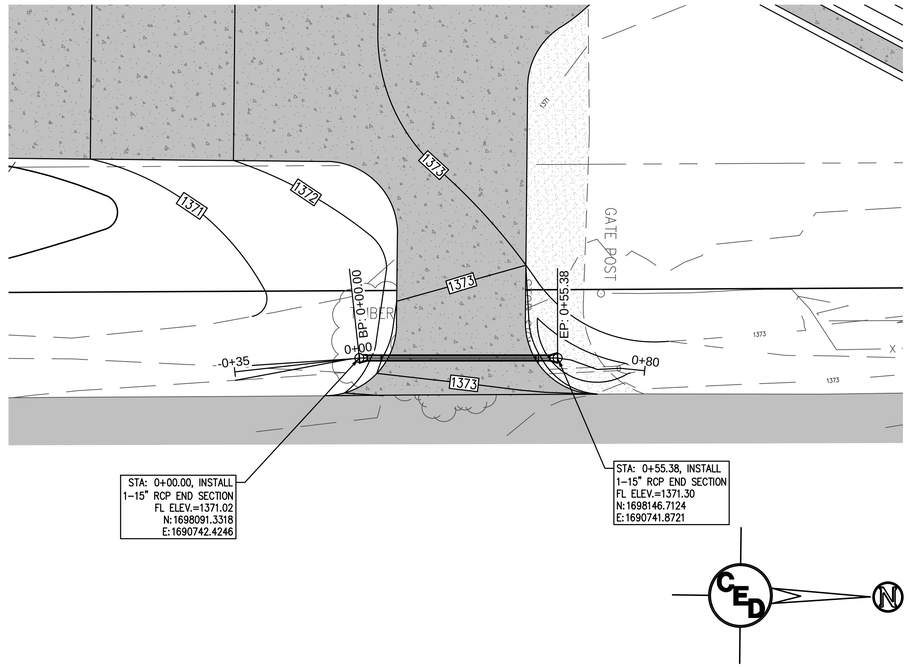
HARLAN DALE FORMELLA
LICENSED
10891
2-19-13
KANSAS
PROFESSIONAL ENGINEER

PROJECT NO.: 20122055
ISSUE DATE: MARCH 2013
CONTACT: HDF, LJM
CHECKED BY: HDF, LJM

SWS NO. 1 & 2 PLAN & PROFILE - STADIUM





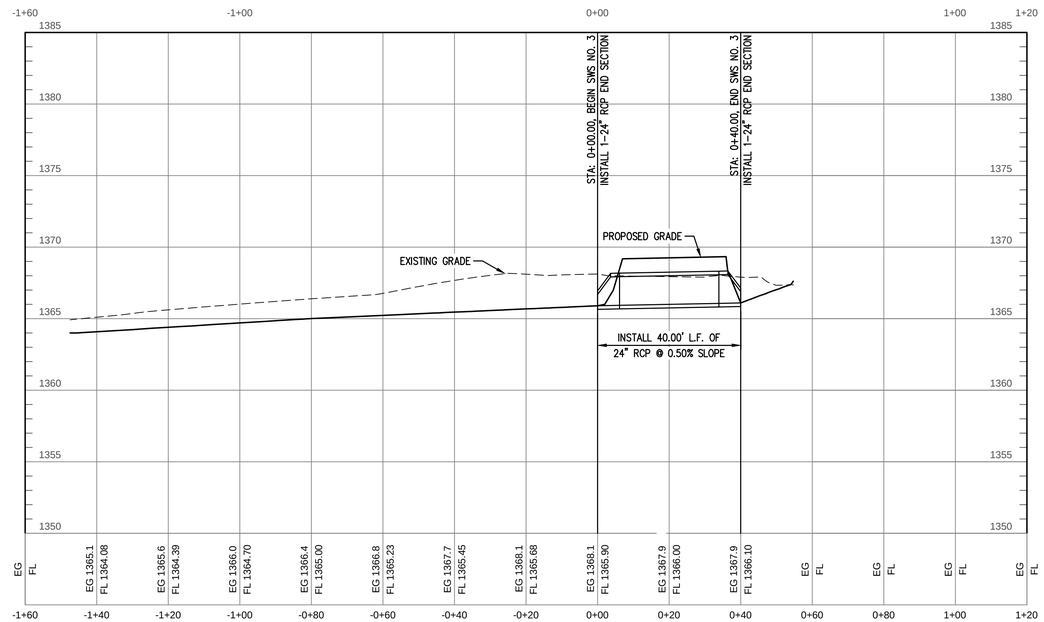
REV.	DESCRIPTION	DATE

GRAPHIC SCALE

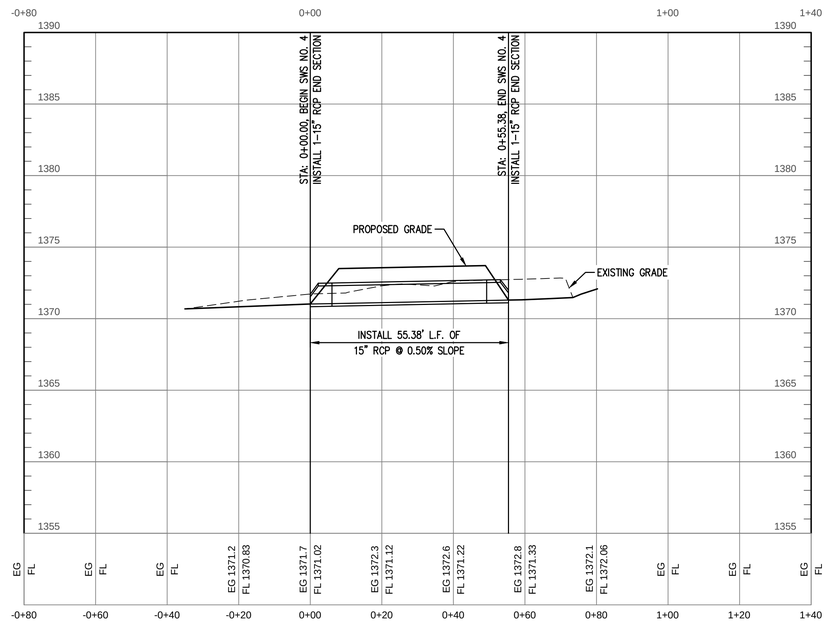
20' 0 20'

(IN FEET)
1"=20'

SWS NO. 3 PROFILE



SWS NO. 4 PROFILE



TRINITY SPORTS FIELD COMPLEX

TRINITY ACADEMY
12345 E. 21ST STREET N.

WICHITA, SEDGWICK COUNTY, KS

CERTIFIED ENGINEERING DESIGN, P.A.
CIVIL ENGINEERING SERVICES

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

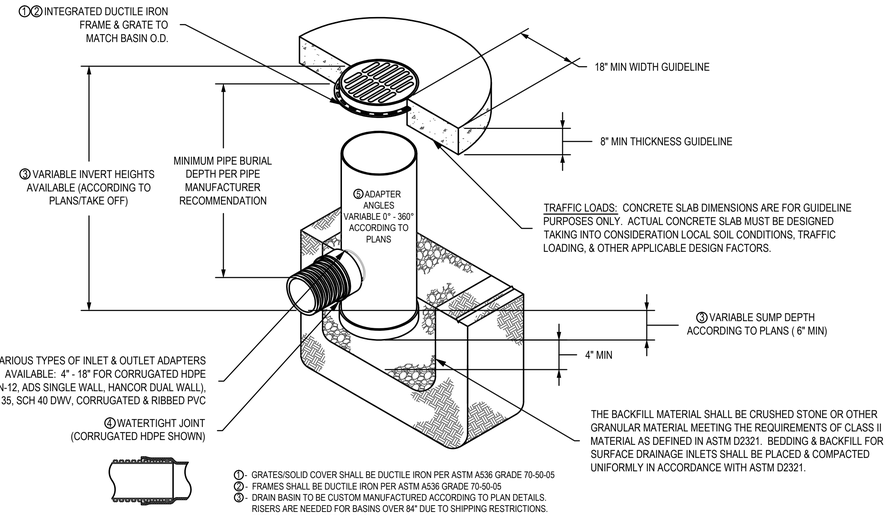
HARLAN DALE FORD — LICENSED — 10891 — 3.19.13 — KANSAS — PROFESSIONAL ENGINEER

PROJECT NO.:	20122055
ISSUE DATE:	MARCH 2013
CONTACT:	HDF, LJM
CHECKED BY:	HDF, LJM

SWS NO. 3 & 4 PLAN & PROFILE - ENTRANCES

REV.	DESCRIPTION	DATE

NYLOPLAST 18" DRAIN BASIN: 2818AG _ _ X



① - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
② - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
③ - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
④ - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
⑤ - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-013.

GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1899CGP	7001-110-212
STANDARD	MEETS H-20	1899CGS	7001-110-213
SOLID COVER	MEETS H-20	1899CGC	7001-110-214
DOME	N/A	1899CGD	7001-110-215
DROP IN GRATE	LIGHT DUTY	1801DI	7001-110-074

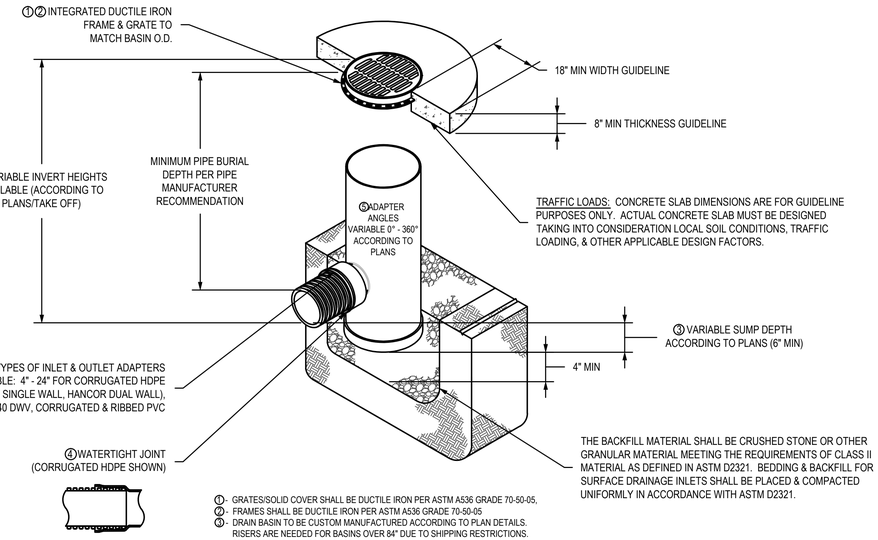
DRAWN BY	EBC	MATERIAL	
DATE	4-3-06		
APPD BY	CJA	PROJECT NO./NAME	
DATE	4-3-06		
DWG SIZE	A	SCALE 1:30	SHEET 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE
18 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL

DWG NO. 7001-110-191 REV B

NYLOPLAST 24" DRAIN BASIN: 2824AG _ _X



① - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05,
② - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
③ - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
④ - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
⑤ - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-013.

GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	2499CGP	7001-110-216
STANDARD	MEETS H-20	2499CGS	7001-110-217
SOLID COVER	MEETS H-20	2499CGC	7001-110-218
DOME	N/A	2499CGD	7001-110-219
DROP IN GRATE	LIGHT DUTY	2401DI	7001-110-075

DRAWN BY	EBC	MATERIAL	
DATE	4-3-06		
APPD BY	CJA	PROJECT NO./NAME	
DATE	4-3-06		
DWG SIZE	A	SCALE 1:40	SHEET 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE
24 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL

DWG NO. 7001-110-192 REV B

TRINITY SPORTS FIELD COMPLEX

TRINITY ACADEMY
12345 E. 21ST STREET N.

WICHITA, SEDGWICK COUNTY, KS

CERTIFIED ENGINEERING DESIGN, P.A.
CIVIL ENGINEERING SERVICES

CED

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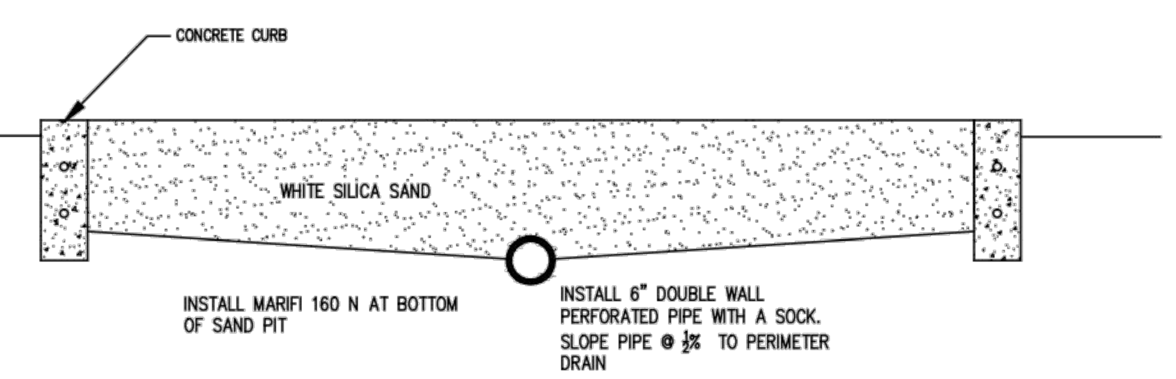
WICHITA, KANSAS 67213
PH.(316)262-8808 FAX.(316)262-1669

HARLAN DALE FOOTE
LICENSED
10891
3.19.13
KANSAS
PROFESSIONAL ENGINEER

PROJECT NO.: 20122055
ISSUE DATE: MARCH 2013
CONTACT: HDF, LJM
CHECKED BY: HDF, LJM

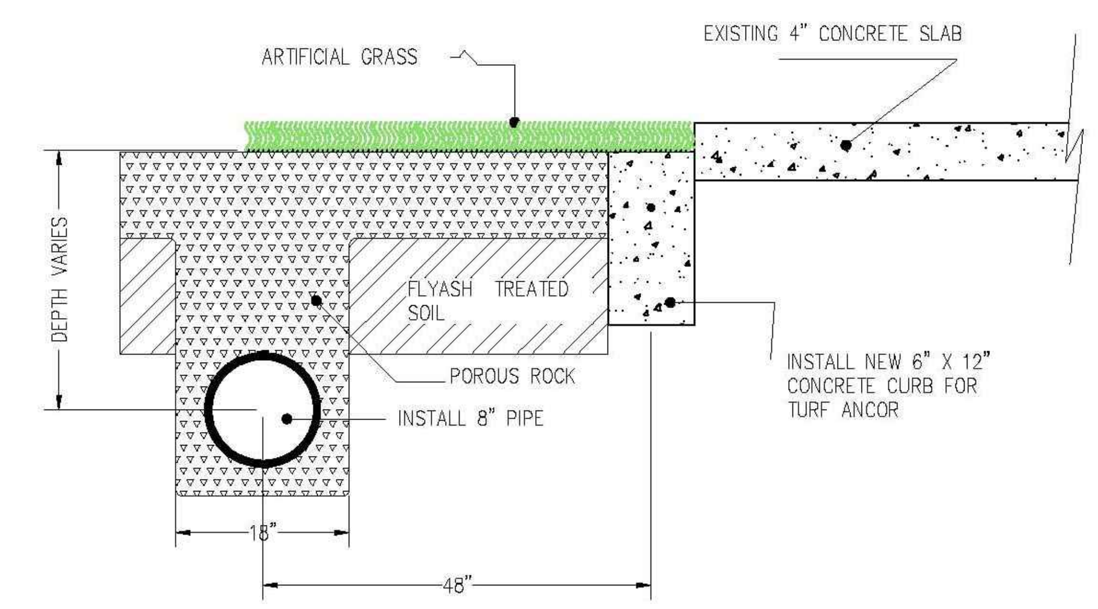
DRAIN BASIN DETAILS

17 OF **19**



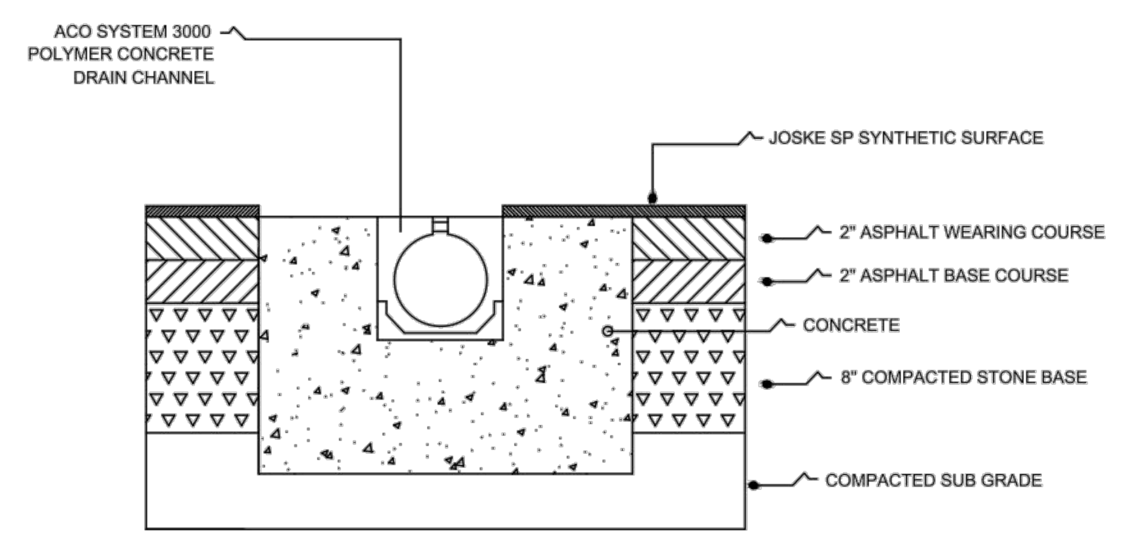
ATG SPORTS

SAND PIT DETAIL



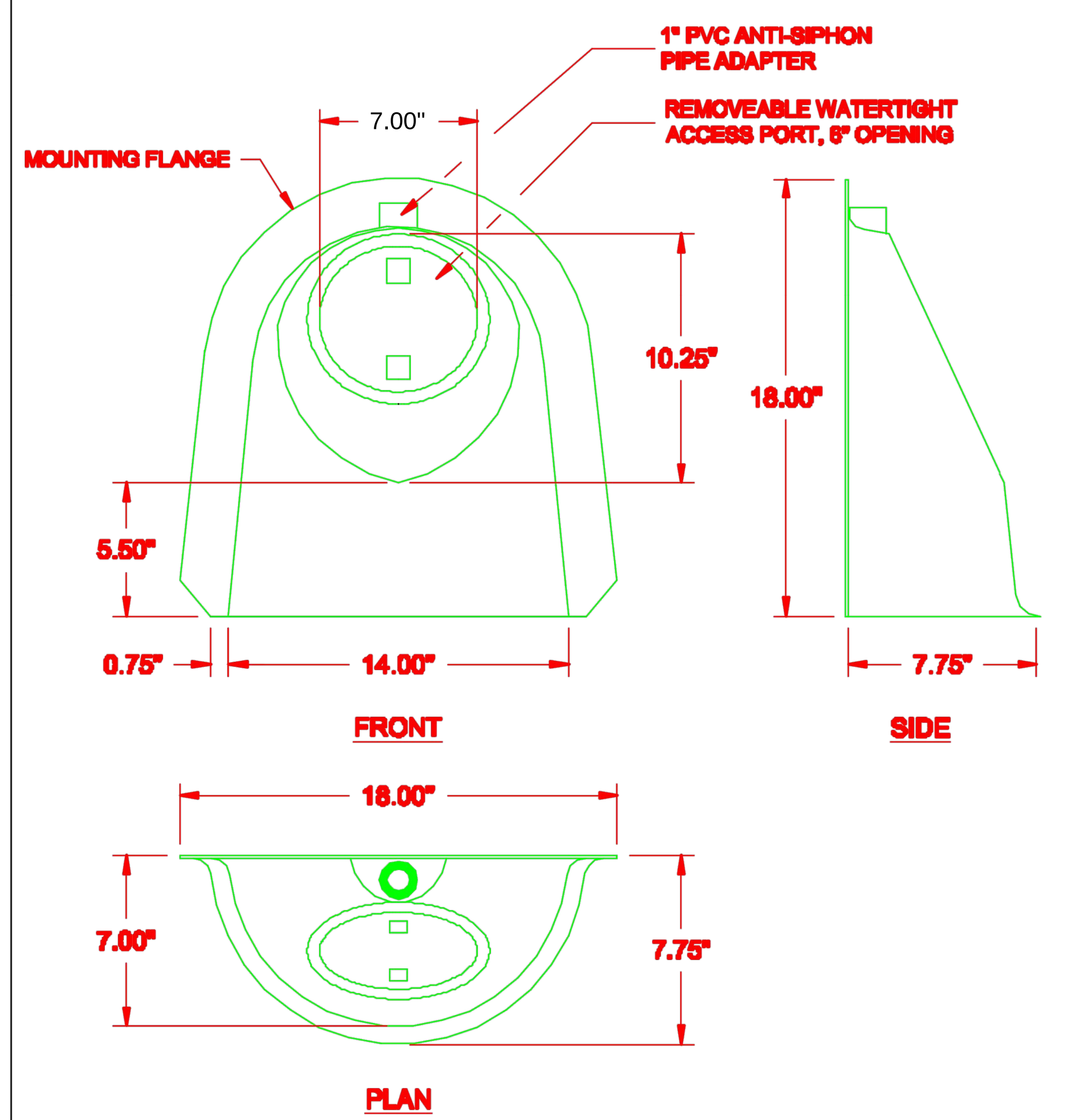
ATG SPORTS

DETAIL 1



ATG SPORTS

ACO DRAIN SYSTEM

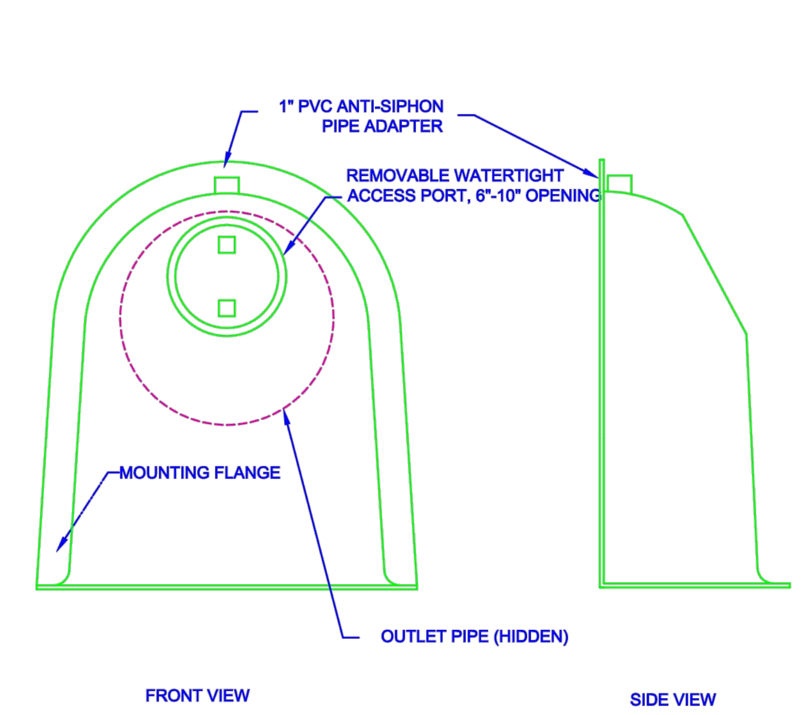


US PATENT #6126817

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

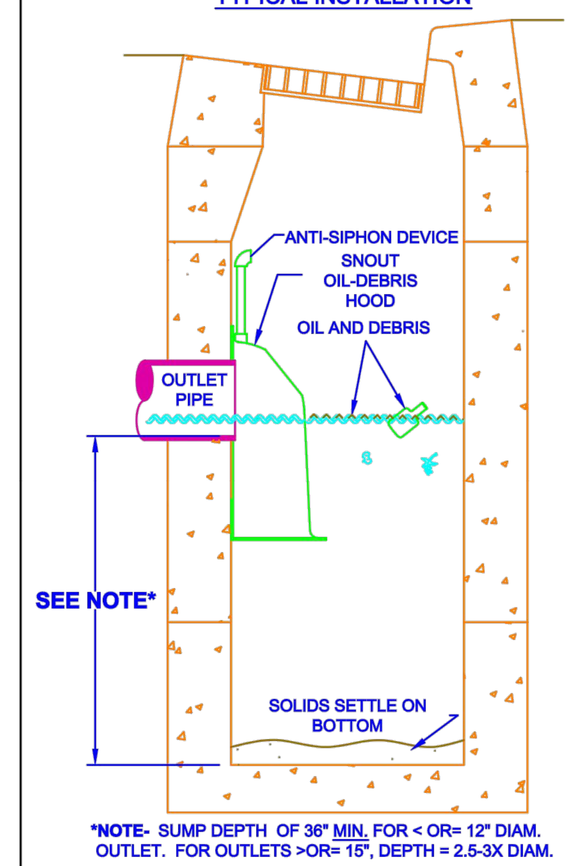
DESCRIPTION	DATE	SCALE
12F SNOUT OIL & DEBRIS STOP	09/01/99	NONE
	DRAWING NUMBER	
	12F	

CONFIGURATION DETAIL



SNOUT OIL-WATER-DEBRIS SEPARATOR

TYPICAL INSTALLATION



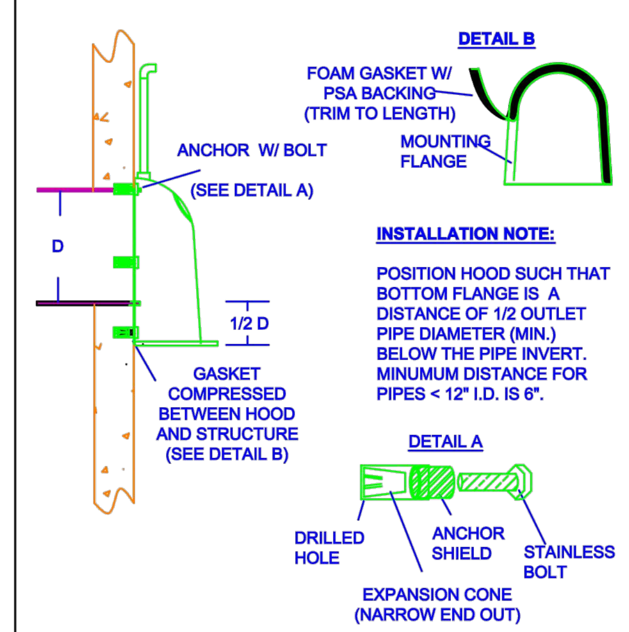
*NOTE- SUMP DEPTH OF 36" MIN. FOR < OR= 12" DIAM. OUTLET. FOR OUTLETS >OR= 15", DEPTH = 2.5-3X DIAM.

NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860) 434-0277, (860) 434-3195 FAX
   TOLL FREE: (800) 504-8008 OR (888) 354-7585
   WEB SITE: www.bestmp.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8' STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
   INSTALLATION KIT SHALL INCLUDE:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS

US Patent # 6126817

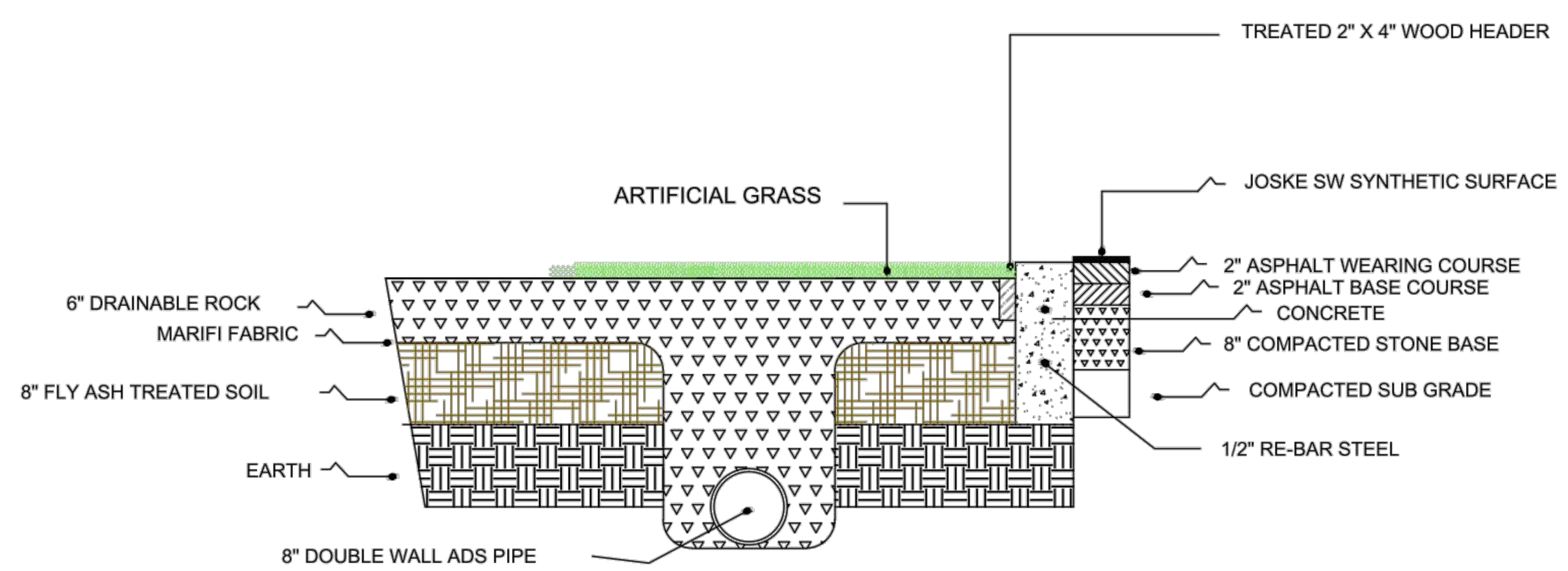
INSTALLATION DETAIL



INSTALLATION NOTE:
POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINUMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/00	NONE
	DRAWING NUMBER	
	SP-SN	



ATG SPORTS

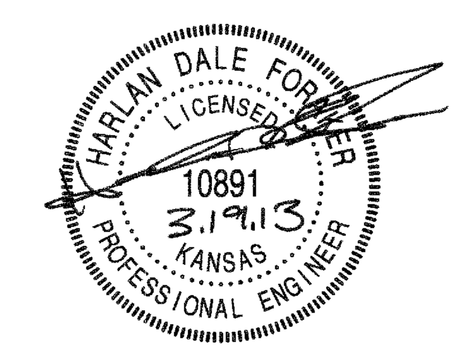
SYNTHETIC TURF @ CURB

REV.	DESCRIPTION	DATE

TRINITY SPORTS FIELD COMPLEX

TRINITY ACADEMY
12345 E. 21ST STREET N.
WICHITA, SEDGWICK COUNTY, KS

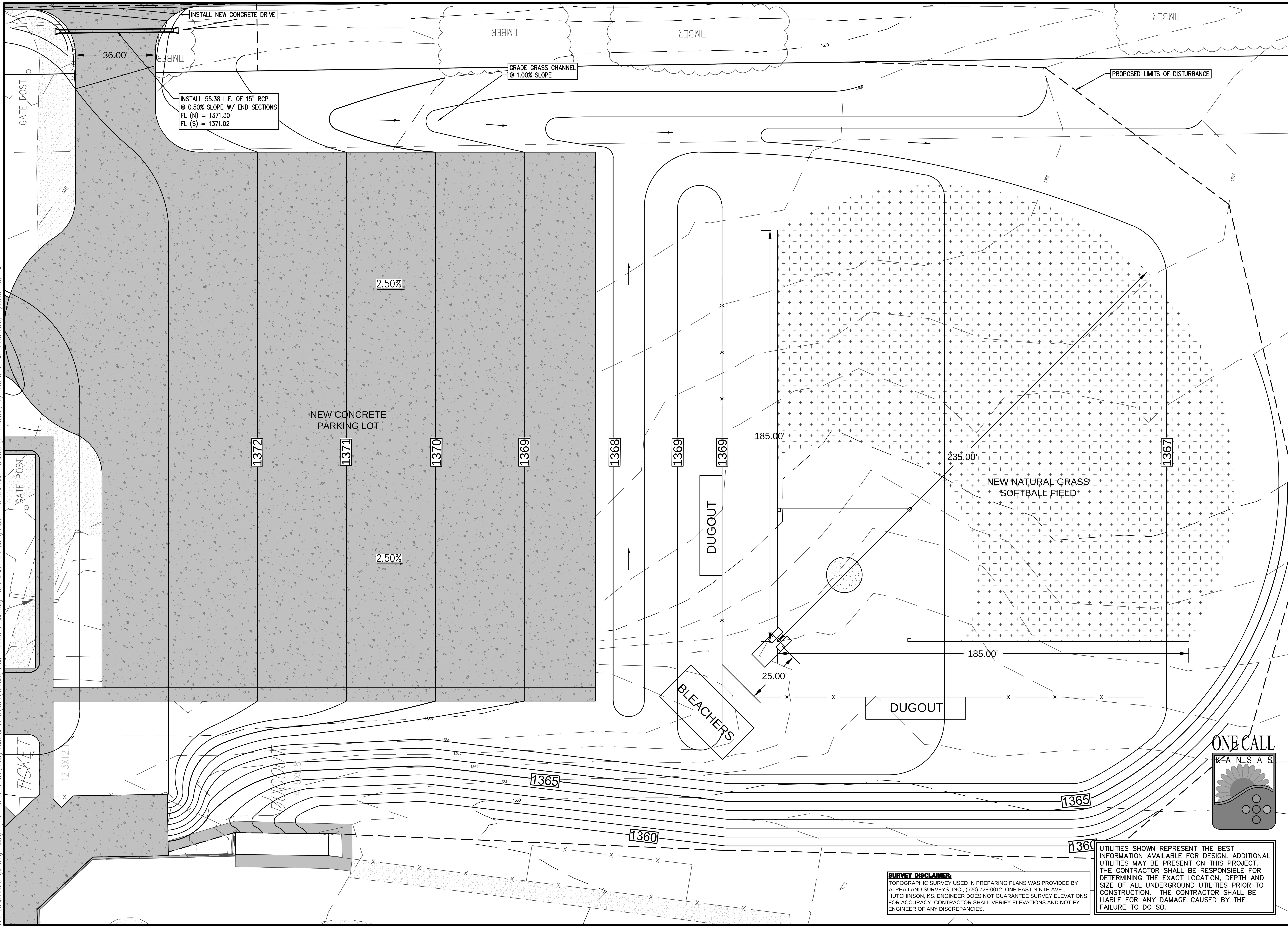
CERTIFIED ENGINEERING DESIGN, P.A.
CIVIL ENGINEERING SERVICES
CED
1935 WEST MAPLE STREET
WICHITA, KANSAS 67213
PH.(316)262-8808 FAX.(316)262-1669



PROJECT NO.: 20122055
ISSUE DATE: MARCH 2013
CONTACT: HDF, LJM
CHECKED BY: HDF, LJM

DRAINAGE DETAILS

FILE LOCATION:S:\Drawing Files\Project CKW 12-7-09\Trinity Football Field\DWG\ATG Drainage Details (S114).dwg TAB NAME:18 Drainage Details USER:eng2 SAVED:3/19/2013 3:38 PM PLOTTED:3/19/2013 4:57 PM



SURVEY DISCLAIMER:
TOPOGRAPHIC SURVEY USED IN PREPARING PLANS WAS PROVIDED BY ALPHA LAND SURVEYS, INC., (620) 728-0012, ONE EAST NINTH AVE., HUTCHINSON, KS. ENGINEER DOES NOT GUARANTEE SURVEY ELEVATIONS FOR ACCURACY. CONTRACTOR SHALL VERIFY ELEVATIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

UTILITIES SHOWN REPRESENT THE BEST INFORMATION AVAILABLE FOR DESIGN. ADDITIONAL UTILITIES MAY BE PRESENT ON THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH AND SIZE OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE CAUSED BY THE FAILURE TO DO SO.

FILE LOCATION:S:\Drawing Files\Project CKW 12-7-09\Trinity Football Field\DWG\Grading Plan - Softball Field.dwg TAB NAME:19 Grading Plan - Softball Field USER:eng2 SAVED:3/19/2013 3:42 PM PLOTTED:3/19/2013 4:57 PM

REV.	DESCRIPTION	DATE

GRAPHIC SCALE
20' 0 20'
(IN FEET)
1"=20'

TRINITY SPORTS FIELD COMPLEX

TRINITY ACADEMY
12345 E. 21ST STREET N.
WICHITA, SEDGWICK COUNTY, KS

CERTIFIED ENGINEERING DESIGN, P.A.
CIVIL ENGINEERING SERVICES
CED
1935 WEST MAPLE STREET
WICHITA, KANSAS 67213
PH.(316)262-8808 FAX.(316)262-1669

HARLAN DALE FORMER
LICENSED
10891
3.19.13
KANSAS
PROFESSIONAL ENGINEER

PROJECT NO.: 20122055
ISSUE DATE: MARCH 2013
CONTACT: HDF, LJM
CHECKED BY: HDF, LJM

GRADING PLAN - SOFTBALL FIELD