CONSTRUCTION PLANS FOR
STORM WATER DRAIN NO. 526 IMPROVEMENTS

TO SERVE

SWANEY FARM ADDITION

CITY OF WICHITA ENGINEERING PROJECT NO. 458-2024-085570
ORG CODE: 47313924, MUNIS NO.: E4083

CITY OF WICHITA, KS

PAUL GUNZELMAN, P.E. - CITY ENGINEER

PEC
PROFESSIONAL ENGINEERING CONSULTANTS
303 SOUTH TOPEKA
WICHITA, KS 67202
316-262-2691 www.pec1.com

CITY OF WICHITA

KEVIN P. GRAHAM
LICENSED
27806
05/27/2025
KANSAS
PROFESSIONAL ENGINEER

DEVELOPER CONTACT

MR. ERIC GILBERT
ARTISTIC BUILDERS
11100 FREMONT CIRCLE
MULVANE, KS 67110
316-650-7536
EMGILBERT13@GMAIL.COM

Stormwater Certification:

New Development or Redevelopment (Circle One)

Stormwater Permit # _____

NOI Permit # S-AR94-1904

These construction plans were prepared in accordance with the current Stormwater management Regulations as set forth in the City of Wichita's Stormwater Management Ordinance 16.32 and the policies/guidelines presented in the Wichita/Sedgwick County Stormwater Manual.

Site Area (Acres): 50.4

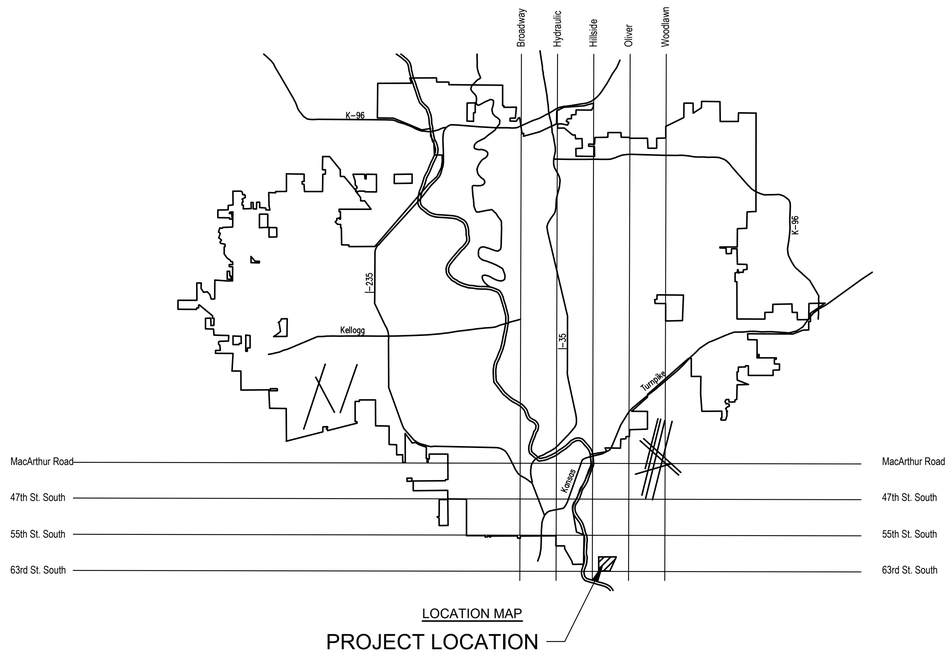
Disturbed Area (Acres): 45.1

Water Quality Treatment: Offsite BMP Program

Downstream Channel Protection: N/A

Detention: Onsite Ponds – Drainage Plan for "Swaney Farm Addition"

The BMP used for this development is Offsite BMP Program



LOCATION MAP

PROJECT LOCATION
SWANEY FARM ADDITION

SHEET INDEX

MAY 2025

STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

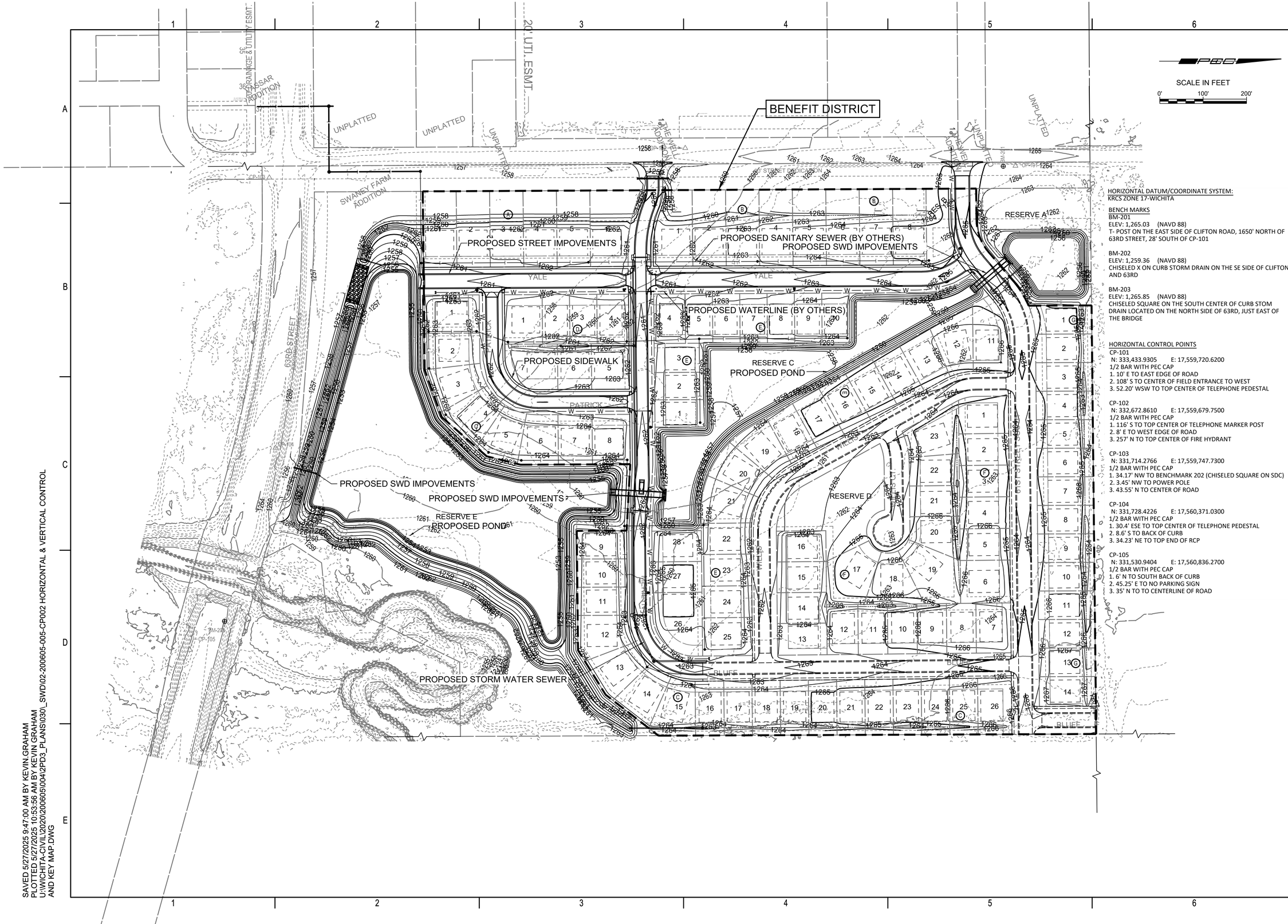
Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

TITLE SHEET

CP001
1 OF 44

SAVED 5/27/2025 9:26:58 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 10:53:18 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\01-200605-005-CP001 TITLE SHEET.DWG



HORIZONTAL DATUM/COORDINATE SYSTEM:
KRCS ZONE 17-WICHITA

BENCH MARKS
BM-201
ELEV: 1,265.03 (NAVD 88)
T- POST ON THE EAST SIDE OF CLIFTON ROAD, 1650' NORTH OF 63RD STREET, 28' SOUTH OF CP-101

BM-202
ELEV: 1,259.36 (NAVD 88)
CHISELED X ON CURB STORM DRAIN ON THE SE SIDE OF CLIFTON AND 63RD

BM-203
ELEV: 1,265.85 (NAVD 88)
CHISELED SQUARE ON THE SOUTH CENTER OF CURB STOM DRAIN LOCATED ON THE NORTH SIDE OF 63RD, JUST EAST OF THE BRIDGE

HORIZONTAL CONTROL POINTS
CP-101
N: 333,433.9305 E: 17,559,720.6200
1/2 BAR WITH PEC CAP
1. 10' E TO EAST EDGE OF ROAD
2. 108' S TO CENTER OF FIELD ENTRANCE TO WEST
3. 52.20' WSW TO TOP CENTER OF TELEPHONE PEDESTAL

CP-102
N: 332,672.8610 E: 17,559,679.7500
1/2 BAR WITH PEC CAP
1. 116' S TO TOP CENTER OF TELEPHONE MARKER POST
2. 8' E TO WEST EDGE OF ROAD
3. 257' N TO TOP CENTER OF FIRE HYDRANT

CP-103
N: 331,714.2766 E: 17,559,747.7300
1/2 BAR WITH PEC CAP
1. 34.17' NW TO BENCHMARK 202 (CHISELED SQUARE ON SDC)
2. 3.45' NW TO POWER POLE
3. 43.55' N TO CENTER OF ROAD

CP-104
N: 331,728.4226 E: 17,560,371.0300
1/2 BAR WITH PEC CAP
1. 30.4' ESE TO TOP CENTER OF TELEPHONE PEDESTAL
2. 8.6' S TO BACK OF CURB
3. 34.23' NE TO TOP END OF RCP

CP-105
N: 331,530.9404 E: 17,560,836.2700
1/2 BAR WITH PEC CAP
1. 6' N TO SOUTH BACK OF CURB
2. 45.25' E TO NO PARKING SIGN
3. 35' N TO TO CENTERLINE OF ROAD

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CITY OF WICHITA

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CITY OF WICHITA PROJECT NO. 458-2024-085570

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HORIZONTAL & VERTICAL CONTROL AND KEY MAP

CP002
2 OF 44

SAVED 5/27/2025 9:47:00 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 10:53:56 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\0042\PD3_PLANS\030_SWD\02-200605-005-CP002 HORIZONTAL & VERTICAL CONTROL AND KEY MAP.DWG

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS TO COMPLY WITH CITY OF WICHITA STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS, UNLESS OTHERWISE INCLUDED IN THE CONTRACT DOCUMENTS.

2. EACH BIDDER SHALL VISIT THE SITE OF THE PROJECT BEFORE SUBMITTING THE PROPOSAL FOR THIS WORK SO THAT THEY WILL BE FULLY INFORMED OF THE EXISTING FIELD CONDITIONS AND THE OBSTACLES WHICH MIGHT BE ENCOUNTERED. UPON AWARD OF THE CONTRACT THE CONTRACTOR WILL NOT BE GRANTED ANY ADDITIONAL COMPENSATION WITH REGARDS TO TIME AND MONEY FOR CONDITIONS THAT MAY HAVE BEEN EVALUATED DURING ANY INSPECTION OF THE SITE.

3. AT LEAST 72 HOURS PRIOR TO BEGINNING ANY EXCAVATION (EXCLUDING WEEKENDS AND HOLIDAYS), THE CONTRACTOR SHALL CONTACT THE KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316)-687-2470 OR 811 TO REQUEST THE LOCAL UTILITY COMPANIES TO LOCATE ANY EXISTING LINES WITHIN THE PROJECT AREA.

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

EMERGENCY DISPATCH:	911
COX COMMUNICATIONS:	888-249-3530
EVERGY:	800-383-1183
AT&T:	800-286-8313
KANSAS GAS SERVICE:	888-482-4950

5. THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY DIRECTLY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF SEVEN (7) DAYS ADVANCE NOTICE PRIOR TO THE START OF CONSTRUCTION.

6. THE CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR IS ASSIGNED AND IS PRESENT ON THE SITE. ANY WORK DONE WITHOUT INSPECTION WILL BE REQUIRED TO BE UNCOVERED FOR INSPECTION AT THE CONTRACTORS EXPENSE.

7. ALL ELEVATIONS SHOWN ARE NAVD88 DATUM. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL RE-ESTABLISH CONTROL POINTS AND BENCH MARKS AND VERIFY THEIR ACCURACY.

8. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE DRAWINGS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. IT SHOULD BE NOTED THAT OTHER BURIED LINES AND CABLES MAY EXIST WHICH ARE NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL HAVE ALL BURIED LINES LOCATED AND FLAGGED IN THE FIELD PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL CONTACT THE ENGINEER AND REVIEW ANY BURIED LINES LOCATED IF CONFLICTS EXIST. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING TRENCHING OPERATIONS TO AVOID DAMAGING THESE LINES. ANY LINES DAMAGED SHALL BE REPLACED OR REPAIRED IMMEDIATELY AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

9. THE CONTRACTOR SHALL EXPOSE AND VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF EXISTING UTILITIES THAT ARE IN POTENTIAL CONFLICT WITH THE PROPOSED IMPROVEMENTS. THE UTILITY LOCATES SHALL BE PERFORMED PRIOR TO THE START OF CONSTRUCTION AND ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS AND SECTION CORNERS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.

11. EASEMENTS AND RIGHTS-OF-WAY PROVIDED BY THE OWNER FOR THE PROJECT ARE SHOWN ON THE DRAWINGS. IF NECESSARY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE ACQUISITION OF ANY ADDITIONAL TEMPORARY EASEMENTS OR RIGHTS-OF-WAY DESIRED TO USE IN COMPLETING THE WORK.

12. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES INCLUDING ANY TREES REMOVED, TREE TRIMMINGS, AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF BY THE CONTRACTOR. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WILL REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES, FLOODWAYS, OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS MAY REQUIRE ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED DISPOSAL LOCATION.

13. THE CONTRACTOR SHALL AVOID REMOVAL OR TRIMMING OF ANY TREES OR SHRUBS WHERE POSSIBLE. WHERE THE CONTRACTOR BELIEVES THE REMOVAL OR TRIMMING IS UNAVOIDABLE, THIS WORK SHALL BE COORDINATED WITH THE ENGINEER. TREE TRIMMING/REMOVAL SHALL BE COMPLETED IN ACCORDANCE WITH U.S FISH AND WILDLIFE SERVICE AND KANSAS DEPARTMENT OF WILDLIFE, PARKS, AND TOURISM RESTRICTIONS.

14. THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, AND BANKS TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE. WHERE EXISTING ENTRANCE PIPE, DRAINAGE PIPE, SIGNS, FENCES, LANDSCAPING, ETC., CONFLICT WITH THE PROPOSED WORK HEREIN, THEY SHALL BE REMOVED AND REPLACED OR RESET, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

15. THE CONTRACTOR SHALL INSTALL AND/OR MAINTAIN EROSION CONTROL METHODS AS SPECIFIED ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL THROUGH THE COMPLETION OF THIS PROJECT. INSTALLATION OF THESE EROSION CONTROL DEVICES DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF ABATING SOIL EROSION.

16. THE CONTRACTOR SHALL TAKE CARE TO PREVENT SILT AND DEBRIS FROM ENTERING ANY STORM DRAINAGE SYSTEM DURING CONSTRUCTION. PIPES OR STRUCTURES WHICH CONTAIN MATERIALS FROM THE CONTRACTORS ACTIVITIES SHALL BE THOROUGHLY CLEANED BY THE CONTRACTOR, AT THEIR OWN EXPENSE, PRIOR TO THE FINAL INSPECTION.

17. RECONSTRUCTION OF EROSION CONTROL MEASURES WHICH ARE DESTROYED BY WIND, FLOOD, FIRE, OR BY THE ACTIONS OF THE CONTRACTOR OR OTHERS SHALL BE PERFORMED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST. WHERE ADJUSTMENTS IN QUANTITIES ARE REQUIRED BY FIELD CONDITIONS, THERE SHALL BE NO ADJUSTMENT IN UNIT PRICE.

18. ALL GRASSED AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE REPLANTED WITH GRASS AND FERTILIZED IN ACCORDANCE WITH THE CITY OF WICHITA SPECIFICATIONS. EXISTING GRASSED AREAS DISTURBED BY CONSTRUCTION SHALL BE REPLANTED WITH THE SAME TYPE OF GRASS AS WAS REMOVED, UNLESS OTHERWISE SPECIFIED.

19. THE CONTRACTOR SHALL SEED ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WITH TEMPORARY RYE GRASS. RYE GRASS SEED SHALL BE PLANTED AT A MINIMUM RATE OF SIX (6) POUNDS PER ONE THOUSAND (1,000) SQUARE FEET. THIS TEMPORARY SEEDING MAY BE OMITTED ONLY IF PERMANENT SEEDING/SODDING IS APPLIED. TEMPORARY SEEDING OR PERMANENT SEEDING/SODDING SHALL BE APPLIED WITHIN 14 DAYS AFTER THE AREA HAS BEEN DISTURBED. REFER TO SEEDING PLAN, CG401.

20. IF TRAFFIC WILL BE IMPACTED BY CONSTRUCTION, A TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY THE CITY TRAFFIC ENGINEER, 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.

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STORM WATER DRAIN NO. 526 IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

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JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
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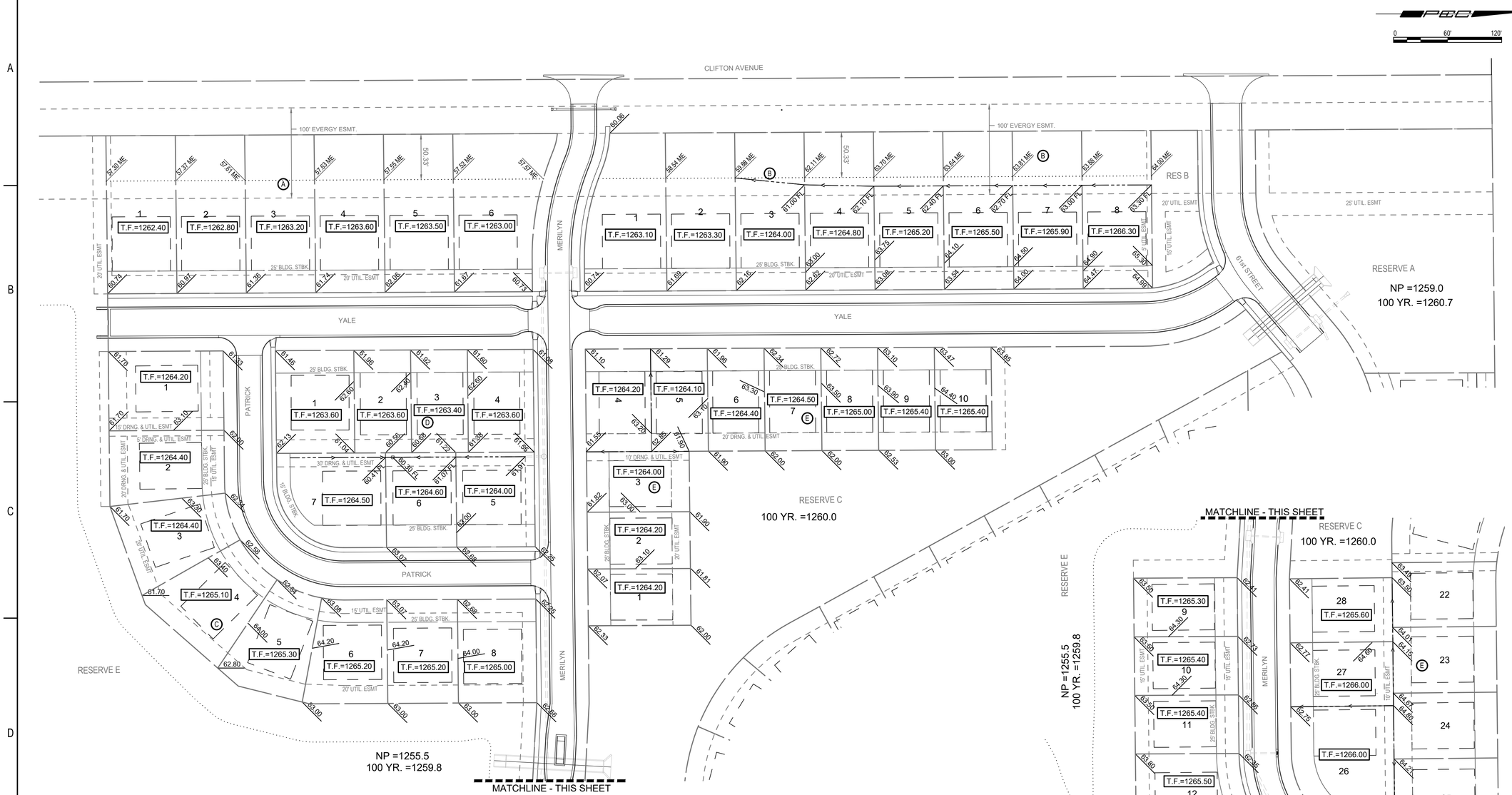
DRAWN BY	BJS
CHECKED BY	KMS

GENERAL NOTES

CP003
3 OF 44



BENCH MARKS

BM-201

ELEV: 1,265.03 (NAVD 88)

T- POST ON THE EAST SIDE OF CLIFTON ROAD, 1650' NORTH OF 63RD STREET, 28' SOUTH OF CP-101

BM-202

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CHISELED X ON CURB STORM DRAIN ON THE SE SIDE OF CLIFTON AND 63RD

BM-203

ELEV: 1,265.85 (NAVD 88)

CHISELED SQUARE ON THE SOUTH CENTER OF CURB STOM DRAIN LOCATED ON THE NORTH SIDE OF 63RD, JUST EAST OF THE BRIDGE

LEGEND

1272.3	SPOT ELEVATION
1261.80HP	DITCH HIGHPOINT ELEVATION
1261.80FL	FLOWLINE ELEVATION
1261.80ME	MATCH EXISTING ELEVATION
T.F.=1230.00	TOP FOUNDATION ELEVATION (TOP OF SLAB)

NOTE

THIS PLAN IS FOR REFERENCE ONLY AND IS INTENDED TO BE USED FOR FUTURE CONSTRUCTION ON INDIVIDUAL LOTS.

MINIMUM OPENING	ELEVATION (NAVD 88)
LOTS 1-6, BLOCK A	1361.6
LOTS 1-3, BLOCK B	1361.6
LOTS 1-4, BLOCK C	1361.6
LOTS 5-7, BLOCK C	1262.8
LOTS 9-11, BLOCK C	1263.5
LOTS 12-14, BLOCK C	1263.8
LOTS 1-4 & 7, BLOCK D	1261.6

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FOUR CORNER GRADING PLAN-PHASE 1

CG101
4 OF 44

SAVED 9/4/2024 7:53:05 AM BY BILL SEXSON
PLOTTED 5/27/2025 10:54:34 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\00412PD3_PLANS\030_SWD\04-200605-005-CG101 FOUR CORNER GRADING PLAN-PHASE 1.DWG

POND ELEVATION 1255-RESERVE E

COORDINATE LIST		
POINT	NORTHING	EASTING
5000	331,944.5641	17,559,996.0218
5001	331,962.4075	17,559,970.0439
5002	331,992.2412	17,559,959.8860
5003	332,022.4846	17,559,959.6587
5004	332,036.0541	17,559,965.9371
5005	332,041.5083	17,559,979.8584
5006	332,043.7001	17,560,185.9220
5007	332,044.3988	17,560,194.5737
5008	332,046.4505	17,560,203.0077
5009	332,082.2381	17,560,302.4225
5010	332,087.6559	17,560,313.6251
5011	332,095.5095	17,560,323.2777
5012	332,165.4840	17,560,393.1587
5013	332,167.1447	17,560,394.8010
5014	332,168.8373	17,560,396.4104
5015	332,189.3630	17,560,414.3395
5016	332,198.6023	17,560,420.6337
5017	332,209.0234	17,560,424.6811
5018	332,273.8475	17,560,440.8293
5019	332,286.0638	17,560,443.5807
5020	332,298.5395	17,560,444.6602
5021	332,454.7301	17,560,443.8732
5022	332,461.0314	17,560,443.5851

COORDINATE LIST		
POINT	NORTHING	EASTING
5023	332,467.3050	17,560,442.9283
5024	332,490.9651	17,560,439.4638
5025	332,499.0990	17,560,441.5896
5026	332,502.8155	17,560,449.1307
5027	332,499.7169	17,560,506.4589
5028	332,496.5542	17,560,513.3486
5029	332,489.4934	17,560,516.1083
5030	332,423.3680	17,560,514.6195
5031	332,397.2886	17,560,523.8802
5032	332,385.6579	17,560,548.9924
5033	332,387.1037	17,560,686.2440
5034	332,387.1158	17,560,692.7719
5035	332,386.8903	17,560,699.2959
5036	332,384.9969	17,560,752.2011
5037	332,384.8519	17,560,757.7271
5038	332,384.8999	17,560,763.2548
5039	332,385.3401	17,560,801.5694
5040	332,370.8796	17,560,820.9722
5041	332,348.3039	17,560,812.2592
5042	332,339.7047	17,560,794.1225
5043	332,333.0040	17,560,775.2019
5044	332,316.3515	17,560,742.2128
5045	332,289.5089	17,560,716.8147

COORDINATE LIST		
POINT	NORTHING	EASTING
5046	332,263.4885	17,560,701.0365
5047	332,238.8012	17,560,683.2446
5048	332,207.4844	17,560,661.7126
5049	332,173.0251	17,560,645.6836
5050	332,114.8512	17,560,627.0686
5051	332,059.9137	17,560,605.1397
5052	332,011.5912	17,560,571.0230
5053	331,978.6440	17,560,548.1584
5054	331,939.3413	17,560,540.1832
5055	331,896.5516	17,560,541.9385
5056	331,888.4205	17,560,540.1744
5057	331,881.7445	17,560,535.2087
5058	331,867.2065	17,560,521.9141
5059	331,848.7415	17,560,515.0481
5060	331,818.8535	17,560,510.7967
5061	331,808.7834	17,560,503.7493
5062	331,807.3438	17,560,491.5428

CONST. EARTHEN WEIR
SEE SHEET NO. CP501

RESERVE E

63RD STREET

SCALE IN FEET
0' 40' 80'

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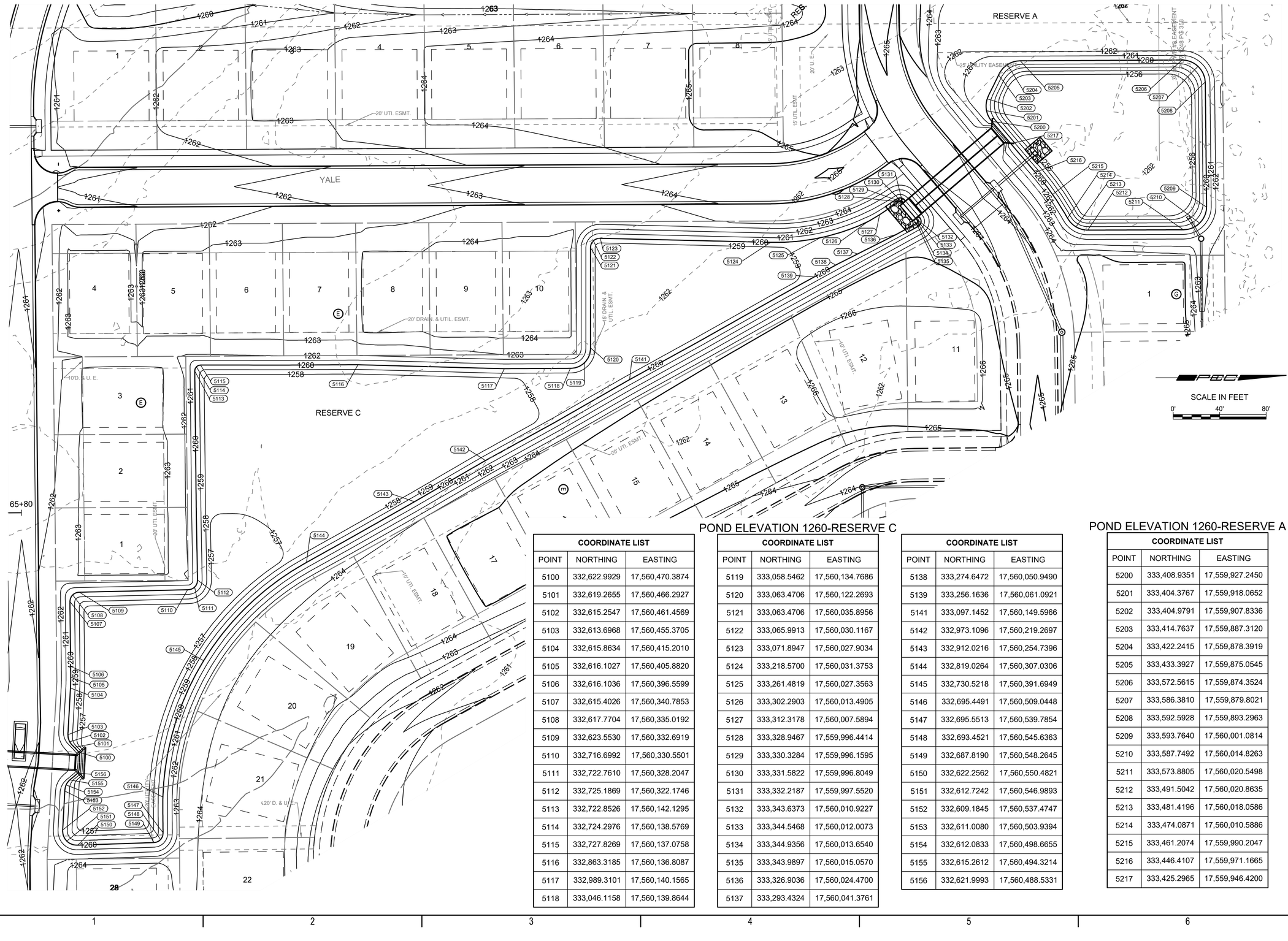
COORDINATE GEOMETRY
PLAN-RESERVE E

CG102
5 OF 44

SAVED 5/27/2025 9:50:23 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 10:55:08 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\0042\PD3_PLANS\030_SWD\05-200605-005-CG102 COORDINATE GEOMETRY PLAN-RESERVE E.DWG



POND ELEVATION 1260-RESERVE C

COORDINATE LIST		
POINT	NORTHING	EASTING
5100	332,622.9929	17,560,470.3874
5101	332,619.2655	17,560,466.2927
5102	332,615.2547	17,560,461.4569
5103	332,613.6968	17,560,455.3705
5104	332,615.8634	17,560,415.2010
5105	332,616.1027	17,560,405.8820
5106	332,616.1036	17,560,396.5599
5107	332,615.4026	17,560,340.7853
5108	332,617.7704	17,560,335.0192
5109	332,623.5530	17,560,332.6919
5110	332,716.6992	17,560,330.5501
5111	332,722.7610	17,560,328.2047
5112	332,725.1869	17,560,322.1746
5113	332,722.8526	17,560,142.1295
5114	332,724.2976	17,560,138.5769
5115	332,727.8269	17,560,137.0758
5116	332,863.3185	17,560,136.8087
5117	332,989.3101	17,560,140.1565
5118	333,046.1158	17,560,139.8644

COORDINATE LIST		
POINT	NORTHING	EASTING
5119	333,058.5462	17,560,134.7686
5120	333,063.4706	17,560,122.2693
5121	333,063.4706	17,560,035.8956
5122	333,065.9913	17,560,030.1167
5123	333,071.8947	17,560,027.9034
5124	333,218.5700	17,560,031.3753
5125	333,261.4819	17,560,027.3563
5126	333,302.2903	17,560,013.4905
5127	333,312.3178	17,560,007.5894
5128	333,328.9467	17,559,996.4414
5129	333,330.3284	17,559,996.1595
5130	333,331.5822	17,559,996.8049
5131	333,332.2187	17,559,997.5520
5132	333,343.6373	17,560,010.9227
5133	333,344.5468	17,560,012.0073
5134	333,344.9356	17,560,013.6540
5135	333,343.9897	17,560,015.0570
5136	333,326.9036	17,560,024.4700
5137	333,293.4324	17,560,041.3761

COORDINATE LIST		
POINT	NORTHING	EASTING
5138	333,274.6472	17,560,050.9490
5139	333,256.1636	17,560,061.0921
5141	333,097.1452	17,560,149.5966
5142	332,973.1096	17,560,219.2697
5143	332,912.0216	17,560,254.7396
5144	332,819.0264	17,560,307.0306
5145	332,730.5218	17,560,391.6949
5146	332,695.4491	17,560,509.0448
5147	332,695.5513	17,560,539.7854
5148	332,693.4521	17,560,545.6363
5149	332,687.8190	17,560,548.2645
5150	332,622.2562	17,560,550.4821
5151	332,612.7242	17,560,546.9893
5152	332,609.1845	17,560,537.4747
5153	332,611.0080	17,560,503.9394
5154	332,612.0833	17,560,498.6655
5155	332,615.2612	17,560,494.3214
5156	332,621.9993	17,560,488.5331

POND ELEVATION 1260-RESERVE A

COORDINATE LIST		
POINT	NORTHING	EASTING
5200	333,408.9351	17,559,927.2450
5201	333,404.3767	17,559,918.0652
5202	333,404.9791	17,559,907.8336
5203	333,414.7637	17,559,887.3120
5204	333,422.2415	17,559,878.3919
5205	333,433.3927	17,559,875.0545
5206	333,572.5615	17,559,874.3524
5207	333,586.3810	17,559,879.8021
5208	333,592.5928	17,559,893.2963
5209	333,593.7640	17,560,001.0814
5210	333,587.7492	17,560,014.8263
5211	333,573.8805	17,560,020.5498
5212	333,491.5042	17,560,020.8635
5213	333,481.4196	17,560,018.0586
5214	333,474.0871	17,560,010.5886
5215	333,461.2074	17,559,990.2047
5216	333,446.4107	17,559,971.1665
5217	333,425.2965	17,559,946.4200

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CITY OF WICHITA

KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526 IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

COORDINATE GEOMETRY
PLAN-RESERVES A&C

CG103
6 OF 44

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PLOTTED 5/27/2025 10:55:44 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\0042\PD3_PLANS\030_SWDV06-200605-005-CG103 COORDINATE GEOMETRY PLAN-RESERVES A&C.DWG

SCALE IN FEET
0' 80' 160'

Install 310 S.Y.
Heavy Stone Riprap
See Sheet No. CG107

Install 556 S.Y.
Turf Reinforcement Mat
See Sheet No. CG105

Install 40 S.Y.
Light Stone Riprap
See Sheet No. CG106

RESERVE A
Proposed Pond
100 YR. =1260.4
NP =1259.0
BTM =1256.0

See Sheet No. CG105
for Typical Sections

Storm Water Sewer and Riprap
are Part of the Paving Proj. No.
200605-004 and City of Wichita
Project No.472-2024-086026

RESERVE C
See Sheet No. CG105 for
Typical Sections

POND 100 YR. =1260.0

POND BOTTOM ELEV=1250.0
POND 100 YR. =1259.90
NP =1255.5

Install 30 S.Y.
Light Stone Riprap
See Sheet No. CG106

RESERVE E

See Sheet No. CG105 for
Typical Sections

Proposed Pond

RESERVE D

Install 4,769 S.Y.
Turf Reinforcement Mat
See Sheet No. CG105

Storm Water Sewer and Riprap
are Part of the Paving Proj. No.
200605-004 and City of Wichita
Project No.472-2024-086026

SWANEY FARM ADDITION

63RD STREET

YALE

PATRICK

WILLIS

BLUFF

60' STREET DEDICATION

SE CORNER OF
SW 1/4 26-28S-1E
FOUND 1/2" REBAR

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CITY OF WICHITA

KEVIN P. GRAHAM
LICENSED
27806
05/27/2025
KANSAS
PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
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POND GRADING PLAN

CG104
7 OF 44

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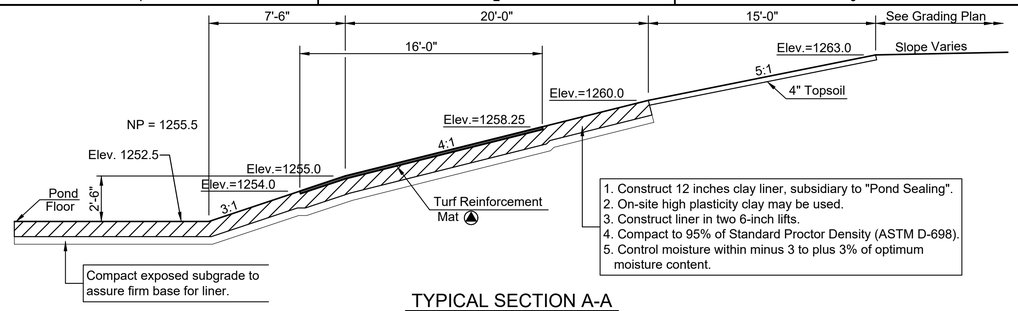
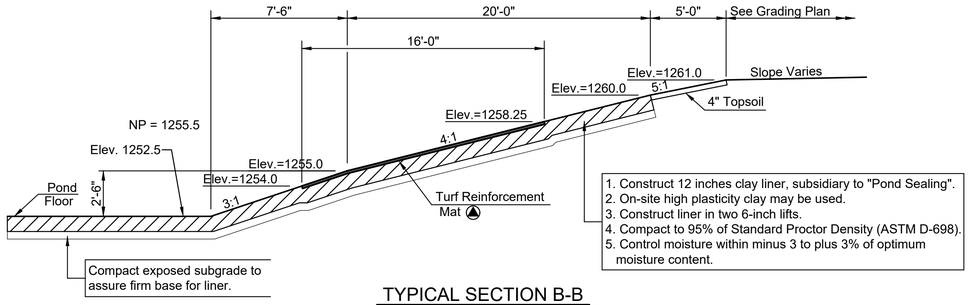
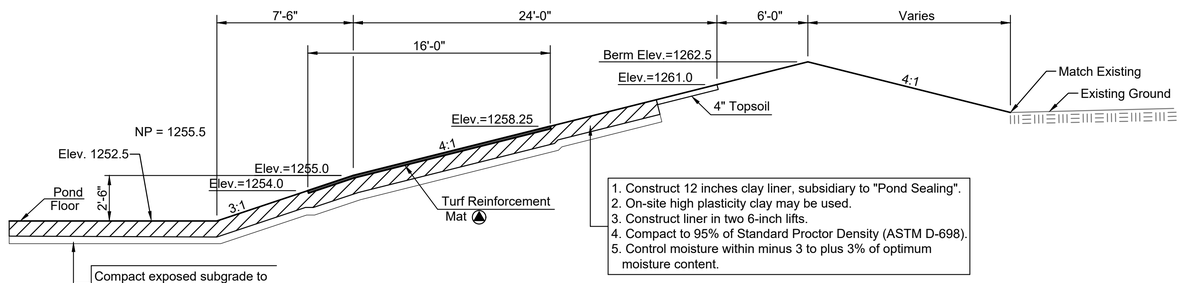
PLOTTED 5/27/2025 10:56:38 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\07-200605-005-CG104 POND GRADING PLAN.DWG



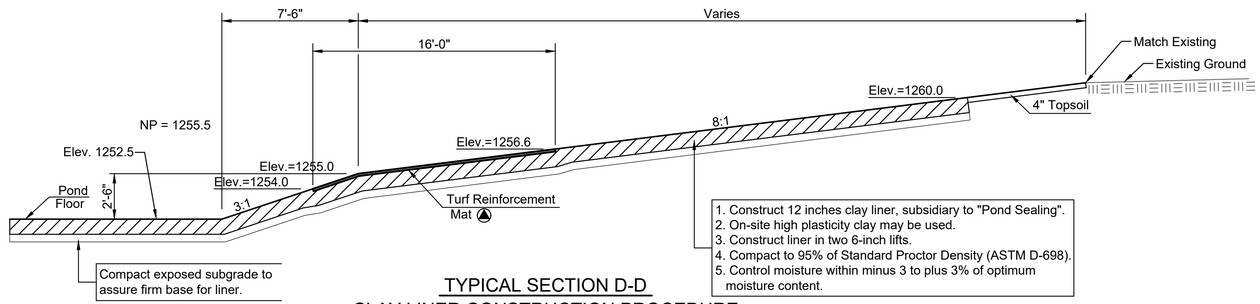
TYPICAL SECTION A-A
CLAY LINER CONSTRUCTION PROCEDURE
FOR POND SEALING



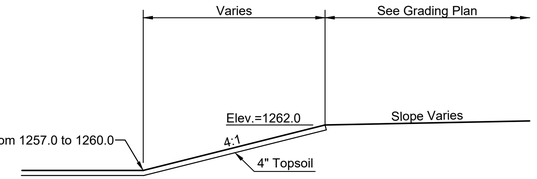
TYPICAL SECTION B-B
CLAY LINER CONSTRUCTION PROCEDURE
FOR POND SEALING



TYPICAL SECTION C-C
CLAY LINER CONSTRUCTION PROCEDURE
FOR POND SEALING



TYPICAL SECTION D-D
CLAY LINER CONSTRUCTION PROCEDURE
FOR POND SEALING

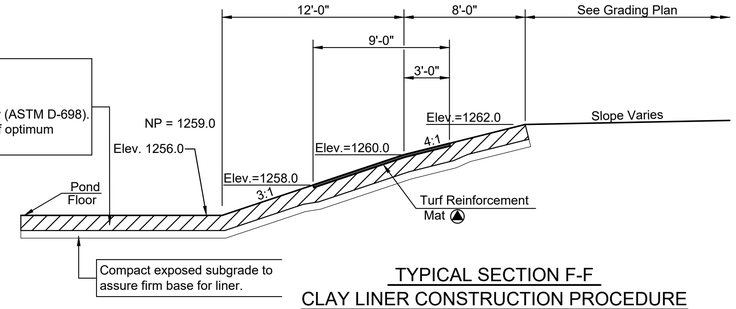


TYPICAL SECTION E-E

1. Construct 12 inches clay liner.
2. On-site high plasticity clay may be used.
3. Construct liner in two 6-inch lifts.
4. Compact to 95% of Standard Proctor Density (ASTM D-698).
5. Control moisture within minus 3 to plus 3% of optimum moisture content.

TURF REINFORCEMENT MAT SHALL BE EAST COAST EROSION "ECSC-3" OR APPROVED EQUIVALENT. EQUIVALENT MUST INCLUDE PRODUCT WARRANTY EQUAL TO THAT OF EAST COAST EROSION. INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

PAID FOR AS S.Y. "TURF REINFORCEMENT MAT" AS INDICATED ON POND GRADING PLAN. THE BID PRICE SHALL BE CONSIDERED FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTS NECESSARY TO COMPLETE WORK.



TYPICAL SECTION F-F
CLAY LINER CONSTRUCTION PROCEDURE
FOR POND SEALING

POND SEALING NOTES:

THE POND AREAS INDICATED FOR CLAY LINER SHALL BE OVEREXCAVATED TO A DEPTH OF 12" BELOW THE FINAL POND SURFACE. THE OVEREXCAVATED MATERIAL SHALL BE STOCKPILED FOR RE-USE, UTILIZED IN PROJECT EMBANKMENTS, OR STOCKPILED ON SITE. BACKFILL OVEREXCAVATED AREA WITH PROJECT AREA CLAY MATERIAL AND COMPACTED TO PROVIDE AN IMPERVIOUS SURFACE. NO SHALE PERMITTED IN THIS ZONE. PROVIDE QUALITY CONTROL TESTING AS OUTLINED BELOW:

1. POND BOTTOM ELEVATIONS SHOWN IN THESE PLANS IS THE FINISHED GRADE ELEVATION.
2. CONSTRUCT 12" THICK POND LINER IN 6" THICK LIFTS.
3. MATERIAL INTENDED FOR POND LINER CONSTRUCTION SHOULD BE SUBMITTED TO A 3RD PARTY TESTING AGENCY FOR LABORATORY TESTING PRIOR TO THE START OF CONSTRUCTION.
4. LIFTS SHOULD BE COMPACTED TO THE MAXIMUM DRY DENSITY REQUIRED TO ACHIEVE A MINIMUM HYDRAULIC CONDUCTIVITY OF 1X10-7 CM/SEC OR LESS.
5. MAXIMUM DRY DENSITY SHOULD BE DETERMINED BY A GEOTECHNICAL TESTING LABORATORY.
6. MOISTURE CONTENT SHOULD BE DETERMINED BY A GEOTECHNICAL TESTING LABORATORY.
7. POND LINER DENSITY TESTING FREQUENCY SHALL BE EVERY 400' ALONG POND SIDES PER LIFT AND AT 2 LOCATIONS ALONG THE POND BOTTOM IN EACH POND (4 TOTAL ALONG POND BOTTOM).
8. AFTER CONSTRUCTION OF THE POND LINER, CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING MOISTURE CONTENT OF THE LINER AT OR ABOVE OPTIMUM TO PREVENT SHRINKAGE CRACKING UNTIL THE POND IS FILLED.
9. THE CONTRACTOR MAY ELECT TO PLACE A 6" TOPSOIL CAP ABOVE THE CLAY POND LINER. THE BOTTOM OF THE POND SHALL BE OVEREXCAVATED AN ADDITIONAL 6" SO THAT THE POND BOTTOM ELEVATION DOES NOT CHANGE. THE COST OF A 6" TOPSOIL CAP SHALL BE SUBSIDIARY TO "POND SEALING".

POND SEALING, AS DESCRIBED HEREIN, SHALL BE MEASURED AND PAID FOR AS FOLLOWS: THE OVEREXCAVATION WILL BE PAID FOR UNDER THE LUMP SUM BID ITEM "POND SEALING". THIS SHALL BE CONSIDERED FULL COMPENSATION FOR ALL OVEREXCAVATION, STOCKPILING, AND DOUBLE HANDLING OF EARTHWORK (IF NECESSARY).

REQUIRED PHYSICAL PROPERTIES OF CLAY LINER MATERIAL

PROPERTY	TEST METHOD	TEST VALUE
MIN. % PASSING #200 SIEVE	ASTM D1140	80
MIN. LIQUID LIMIT	ASTM D4318	40
MIN. PLASTICITY INDEX	ASTM D4318	30

POND GRADING NOTES:

CONTRACTOR SHALL PERFORM GRADING AS SHOWN BY CONTOURS AND COORDINATES ON SHEET NOS. CG102 AND CG103.

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CITY OF WICHITA

KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526 IMPROVEMENTS
SWANEY FARM ADDITION
PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

POND TYPICAL SECTIONS

CG105
8 OF 44

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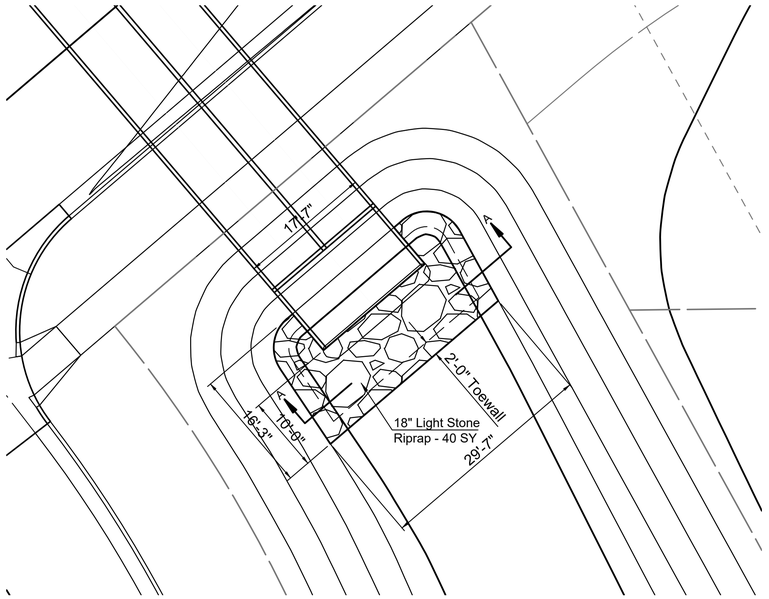
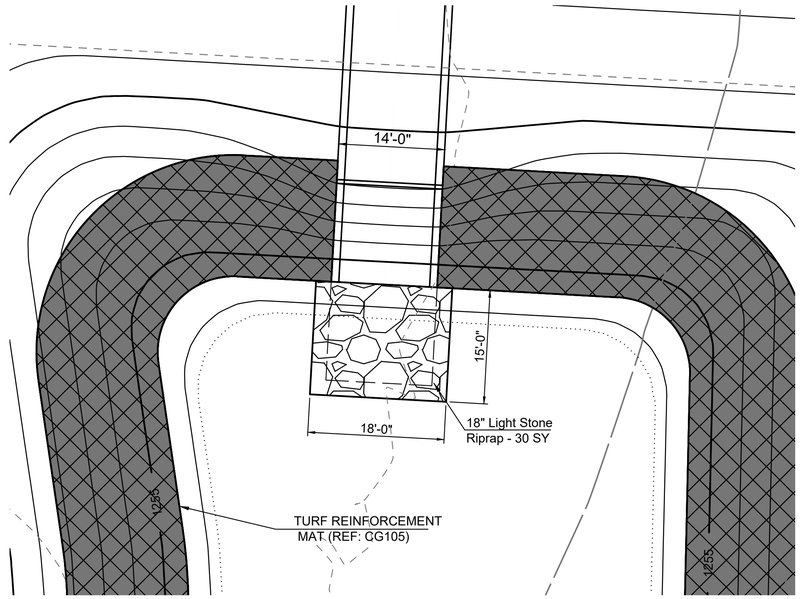
PLOTTED 5/27/2025 10:56:51 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\0042\PD3_PLANS\030_SWD\08-200605-005-CG105 POND TYPICAL SECTIONS.DWG



SWS LINE NO. 8



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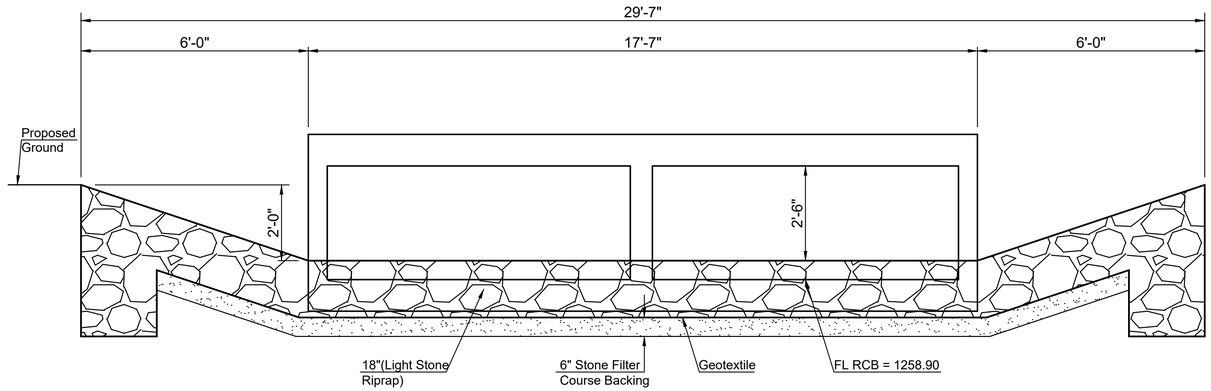
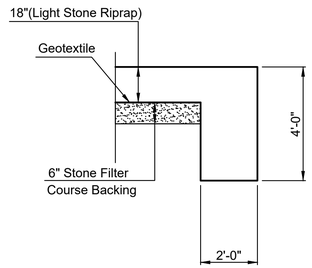


SECTION A-A
SWS LINE NO. 8



TYPICAL SECTION THRU TOEWALL
NO SCALE

NOTES

1. ALL RIPRAP FOR THIS PROJECT SHALL BE NATURAL STONE. NEITHER BROKEN CONCRETE, FABRIC ENVELOPE, NOR PREMIXED DRY PACKAGED CONCRETE BAG ALTERNATES WILL BE ALLOWED.
2. TOEWALLS SHALL BE INSTALLED ALONG ALL EDGES OF STONE RIPRAP OR AS SHOWN ON PLANS.
3. GROUTING OF THE SURFACE OF THE RIPRAP SHALL NOT BE PERFORMED. GROUTING OF THE TOEWALLS SHALL BE PERFORMED PER SPECIFICATIONS.

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CITY OF WICHITA

KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

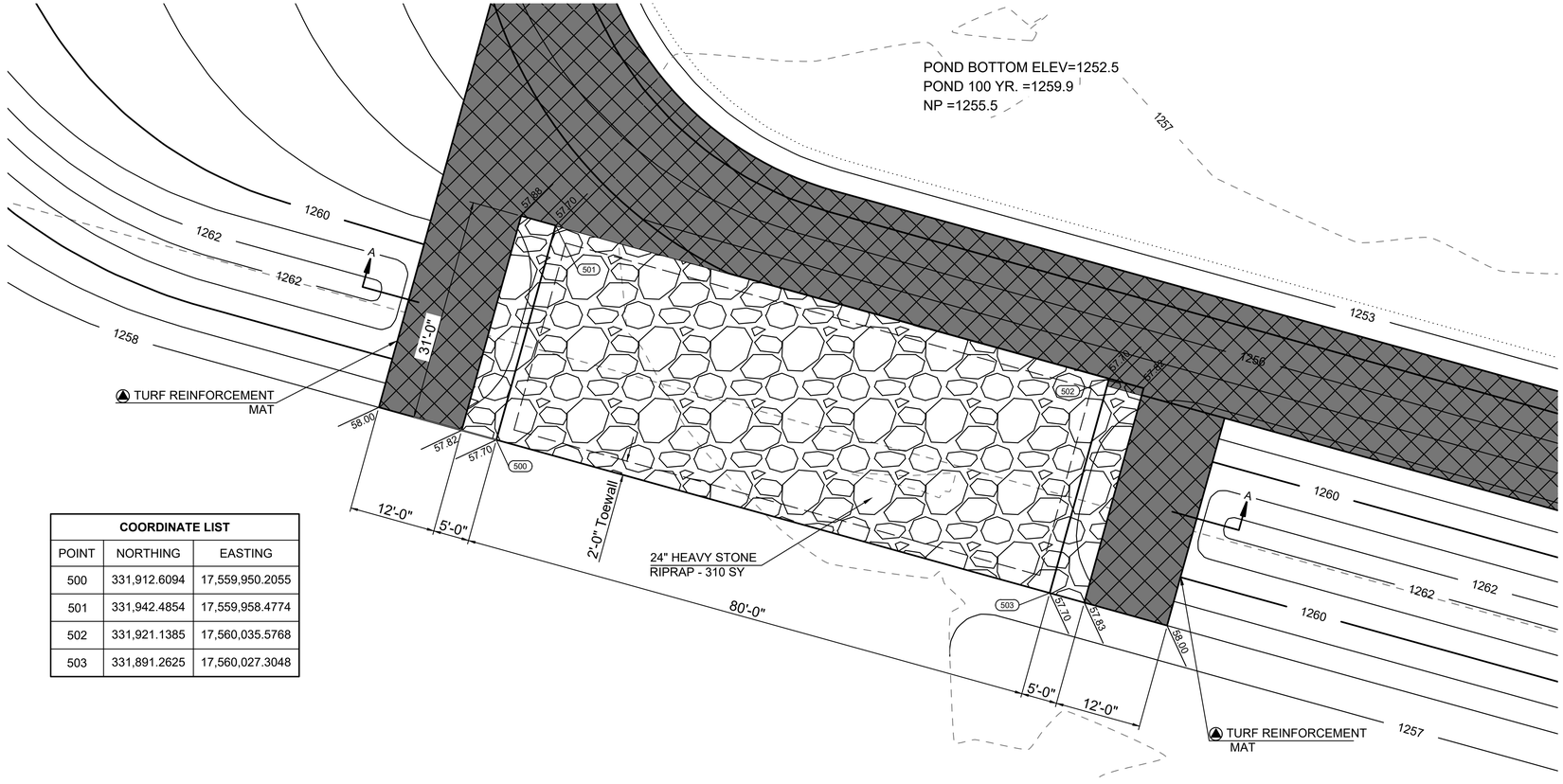
Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

RIPRAP AND MAT DETAILS

CG106
9 OF 44

SAVED 5/27/2025 9:46:25 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 10:58:14 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\09-200605-005-CG106 RIPRAP AND MAT DETAILS.DWG

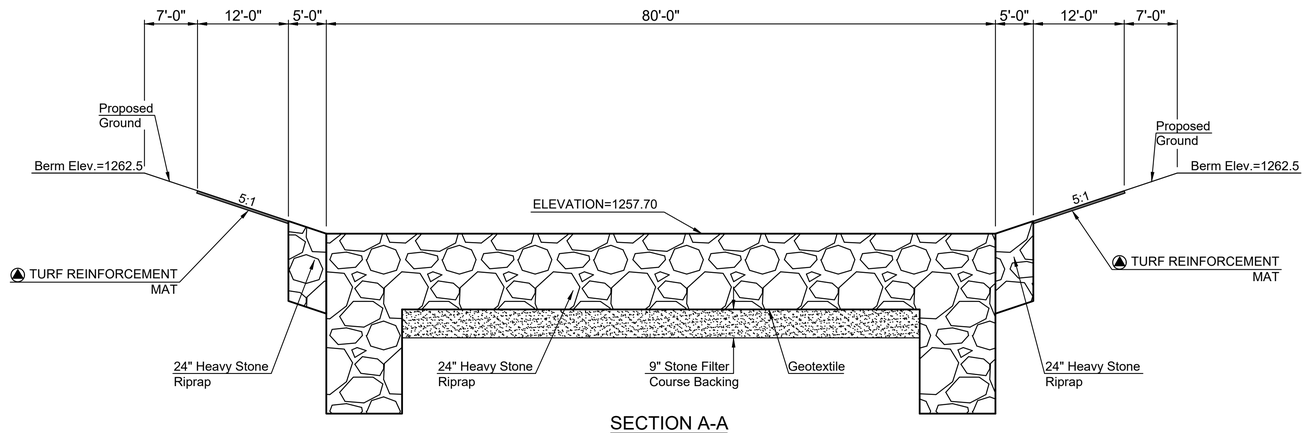


COORDINATE LIST		
POINT	NORTHING	EASTING
500	331,912.6094	17,559,950.2055
501	331,942.4854	17,559,958.4774
502	331,921.1385	17,560,035.5768
503	331,891.2625	17,560,027.3048

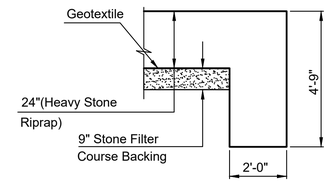
SCALE IN FEET
0 10 20

TURF REINFORCEMENT MAT SHALL BE EAST COAST EROSION "ECSC-3" OR APPROVED EQUIVALENT. EQUIVALENT MUST INCLUDE PRODUCT WARRANTY EQUAL TO THAT OF EAST COAST EROSION. INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

PAID FOR AS S.Y. "TURF REINFORCEMENT MAT" AS INDICATED ON POND GRADING PLAN. THE BID PRICE SHALL BE CONSIDERED FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTS NECESSARY TO COMPLETE WORK.



SECTION A-A



TYPICAL SECTION THRU TOEWALL
NO SCALE

NOTES

1. ALL RIPRAP FOR THIS PROJECT SHALL BE NATURAL STONE. NEITHER BROKEN CONCRETE, FABRIC ENVELOPE, NOR PREMIXED DRY PACKAGED CONCRETE BAG ALTERNATES WILL BE ALLOWED.
2. TOEWALLS SHALL BE INSTALLED ALONG ALL EDGES OF STONE RIPRAP OR AS SHOWN ON PLANS.
3. GROUTING OF THE SURFACE OF THE RIPRAP SHALL NOT BE PERFORMED. GROUTING OF THE TOEWALLS SHALL BE PERFORMED PER SPECIFICATIONS.

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CITY OF WICHITA

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STORM WATER DRAIN NO. 526 IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
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RIPRAP OUTFALL DETAILS

CG107
10 OF 44

SAVED 5/27/2025 9:46:43 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 10:59:01 AM BY KEVIN GRAHAM
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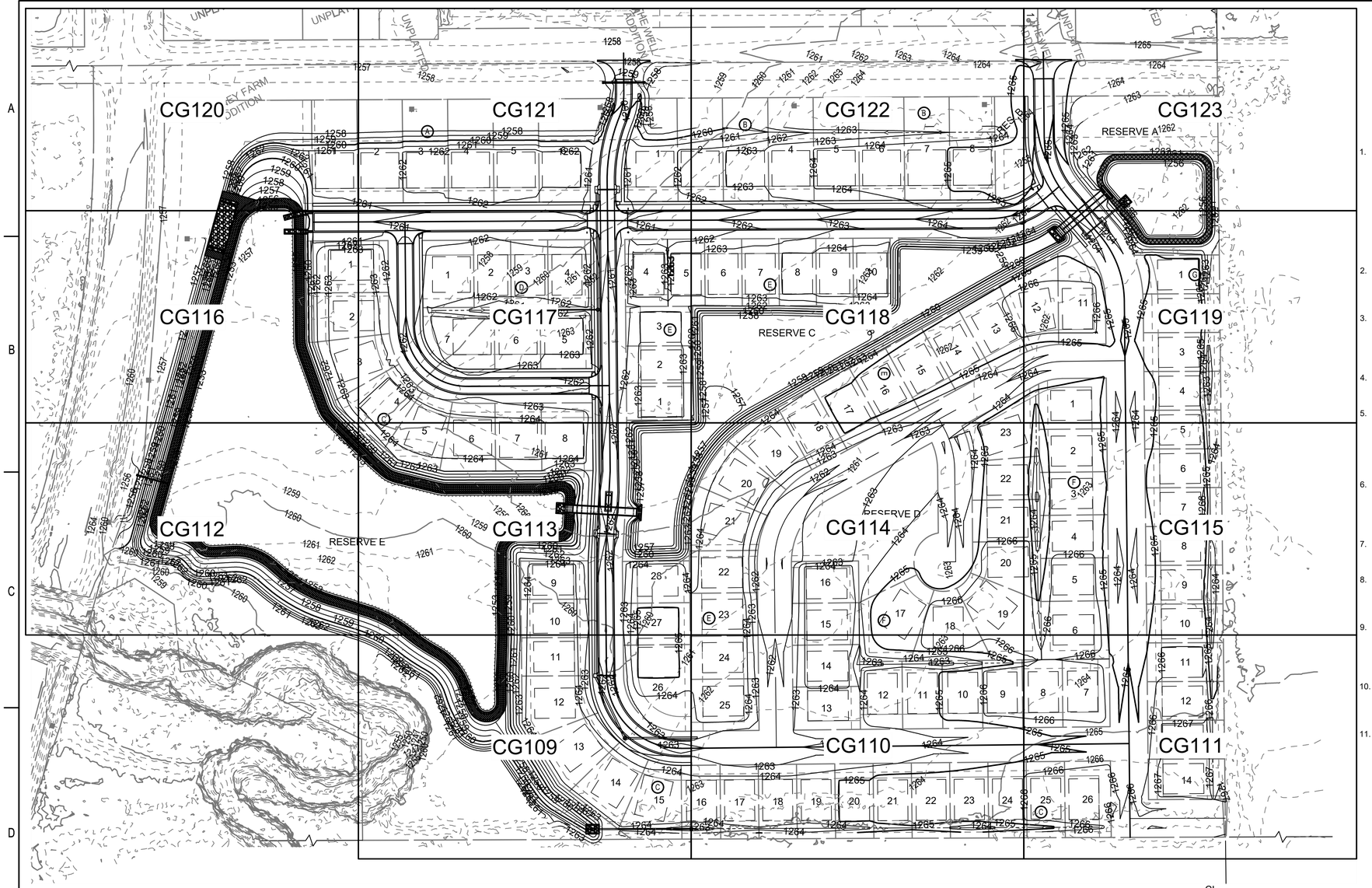


SCALE IN FEET

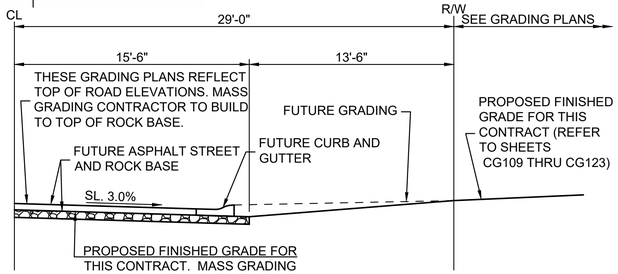
0' 100' 200'

SITE GRADING NOTES

1. FOR AREAS OF FILL, THE CONTRACTOR SHALL STRIP MINIMUM 6" OF EXISTING TOPSOIL/ORGANIC MATERIAL PRIOR TO PLACEMENT OF FILL. CONTRACTOR SHALL PROOF ROLL SUBGRADE AFTER STRIPPING TOPSOIL PRIOR TO PLACEMENT OF FILL. WHERE EXISTING TOPSOIL/ORGANIC MATERIAL EXCEEDS 6", CONTRACTOR SHALL STRIP ADDITIONAL DEPTH AS NEEDED PRIOR TO PLACEMENT OF FILL. CONTRACTOR SHALL APPLY TOPSOIL TO RESERVES AND DRAINAGE DITCHES PRIOR TO SEEDING. THE TOP 6" OF MATERIAL SHALL BE SOIL WHICH IS SUITABLE FOR GROWTH OF VEGETATION.
2. ONLY APPROVED MATERIALS SHALL BE USED IN PLACEMENT OF SITE FILL. THIS MATERIAL SHALL BE FREE OF ANY ORGANIC MATTER, LARGE STONES, AND DEBRIS.
3. ALL FILL PLACED ONSITE (INCLUDING STOCKPILE LOCATIONS) SHALL BE COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. ALL FILL SHALL BE PLACED IN LIFTS AND COMPACTED TO THE DENSITY REQUIREMENTS, EXCEPT TOPSOILING.
4. NO WASTE MATERIAL SHALL BE PLACED IN ANY STREET RIGHT-OF-WAY.
5. THE LUMP SUM BID ITEMS "EXCAVATION" AND "FILL, COMPACTED" SHALL INCLUDE TOPSOIL STRIPPING AND PLACING, GRADING, AND COMPACTING OF SOIL MATERIAL TO THE REQUIREMENTS OF THIS GRADING PLAN; AND FOR ALL EQUIPMENT, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
6. ANY DOUBLE-HANDLING AND/OR STOCKPILING OF EXCAVATED MATERIAL WHICH MAY BE REQUIRED, INCLUDING REMOVAL AND REPLACEMENT OF TOPSOIL, WILL NOT BE MEASURED OR PAID FOR SEPARATELY.
7. THE ACTUAL EXCAVATION OF MATERIAL FOR SITE GRADING IS INCLUDED IN THE BID ITEM "EXCAVATION".
8. COMPACTION ON THE LOTS AND WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE 95% STANDARD DENSITY. COMPACTION IN RESERVES SHALL BE AT 90% STANDARD DENSITY.
9. A DENSITY TEST FOR EVERY LOT PER EACH FOOT OF FILL MATERIAL PLACED SHALL BE PERFORMED ON ALL LOTS. TESTING EXPENSES WILL BE COVERED BY THE CONTRACTOR. TESTING COORDINATION SHALL BE BY THE CONTRACTOR.
10. THE "SOIL PAD" ELEVATIONS SHOWN ON SHEETS CG109 - CG123 REPRESENT THE REQUIRED FINISHED GRADE WITHIN THE LIMITS SHOWN ON EACH INDIVIDUAL LOT.
11. ANY EXCESS MATERIAL SHALL BE ONSITE AT A LOCATION TO BE COORDINATED WITH THE ENGINEER AND OWNER. MATERIAL SHALL BE BLADED SMOOTH AND SLOPED TO DRAIN.

EARTHWORK SUMMARY (C.Y.)		
	Unclassified Excavation	Compacted Fill (95%)
Mass Grading	79,000	79,000
Utility Spoils (From WTR, SS, PAV)		4,400
Owner Provided Material (General)		18,500
Owner Provided Material (Clay)		12,500
GRAND TOTAL	79,000	114,400

1. EARTHWORK QUANTITIES ARE MEASURED FROM EXISTING GROUND TO THE TOP OF PAVEMENT SUBGRADE (SEE DETAIL, THIS SHEET). FINAL GRADING WITHIN THE STREET RIGHT-OF-WAY IS INCLUDED AS PART OF THE PAVING PROJECT (472-2024-086026). THE CONTRACTOR SHALL SATISFY THEMSELVES WITH THE EARTHWORK QUANTITIES AND NO CHANGE ORDER FOR EARTHWORK WILL BE APPROVED.
2. FILL QUANTITIES ARE BASED ON A 10% COMPACTION LOSS FACTOR.
3. UTILITY SPOILS FROM THE WATER (448-2024-007798), SANITARY SEWER (468-2024-007800), OFFSITE SANITARY SEWER MAIN (468-2024-007803) AND PAVING (472-2024-086026) PROJECTS ARE TO BE UTILIZED IN THE MASS GRADING OF THE SITE.
4. OWNER PROVIDED MATERIAL TO BE STOCKPILED ON THE SITE PRIOR TO THE START OF CONSTRUCTION.
5. THE INTENT IS FOR THE OWNER PROVIDED CLAY MATERIAL TO BE UTILIZED FOR THE POND LINER.



GENERAL PAVEMENT SECTION
5" THICK ASPHALT ON ALL STREETS

TYPICAL ROAD CROSS SECTION DETAIL

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KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526 IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

OVERALL GRADING PLAN

CG108
11 OF 44

SAVED 5/27/2025 10:51:28 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 10:60:69 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\0042\PD3_PLANS\030_SWD\11-200605-005-CG108 OVERALL GRADING PLAN.DWG

POND BOTTOM ELEV=1252.5
POND 100 YR. =1259.90
NP =1255.5

SCALE IN FEET
0' 20' 40'

SOIL PAD=1264.40
11

SOIL PAD=1264.50
12

SOIL PAD=1264.60
13

SOIL PAD=1264.80
14

SOIL PAD=1265.00
26

SOIL PAD=1264.80
15

CL MERILYN STREET

15' UTILITY EASEMENT

DITCH FLOWLINE

57.00 FL

59.04 FL

59.50 FL

CONTOURS SHOWN WITHIN THE STREET PAVEMENT SECTION REPRESENT THE FINISHED PAVEMENT GRADE.

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CITY OF WICHITA

KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
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GRADING PLAN-AREA 1

CG109
12 OF 44

SAVED 5/27/2025 9:59:33 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:01:08 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\0042PD3_PLANS\030_SWD\12-200605-005-CG109 GRADING PLAN-AREA 1.DWG

SCALE IN FEET
0' 20' 40'

SOIL PAD=1265.80
SOIL PAD=1266.30
SOIL PAD=1265.00
24
SOIL PAD=1264.60
SOIL PAD=1264.30
14
SOIL PAD=1264.60
25
SOIL PAD=1263.90
13
SOIL PAD1264.90
12
SOIL PAD=1264.90
11
SOIL PAD=1265.50
10
CL WILLS
30' DRAINAGE & UTILITY EASEMENT
CL BLUFF
BLUFF
SOIL PAD=1264.80
16
SOIL PAD=1264.30
17
SOIL PAD=1264.30
18
SOIL PAD=1264.30
19
SOIL PAD=1264.60
20
SOIL PAD=1265.00
21
SOIL PAD=1265.50
22
SOIL PAD=1265.50
23
SOIL=1265.50
15' UTILITY E
20' DRAINAGE EASEMENT
10'

CONTOURS SHOWN WITHIN THE STREET PAVEMENT SECTION REPRESENT THE FINISHED PAVEMENT GRADE.

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KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
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GRADING PLAN-AREA 2

CG110
13 OF 44

SAVED 12/23/2024 2:44:45 PM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:01:53 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\0042\PD3_PLANS\030_SWD\13-200605-005-CG110 GRADING PLAN-AREA 2.DWG

SOIL PAD=1266.50

SOIL PAD=1266.90

SOIL PAD=1265.50

SOIL PAD=1266.00
11

SOIL PAD=1266.30
9

SOIL PAD=1266.80
8

SOIL PAD=1266.80
7

SOIL PAD=1266.50
12

SOIL PAD=1267.10
13

SOIL PAD=1267.50
14

SOIL PAD=1265.90
24

SOIL PAD=1266.40
25

SOIL PAD=1266.80
26

CL 61ST ST. SOUTH

CL BLUFF

BLUFF

UTILITY EASEMENT

5+00 6+00 7+00 7+43 22+00 23+00 23+73

SCALE IN FEET
0' 20' 40'

CONTOURS SHOWN WITHIN THE STREET PAVEMENT SECTION REPRESENT THE FINISHED PAVEMENT GRADE.

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STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
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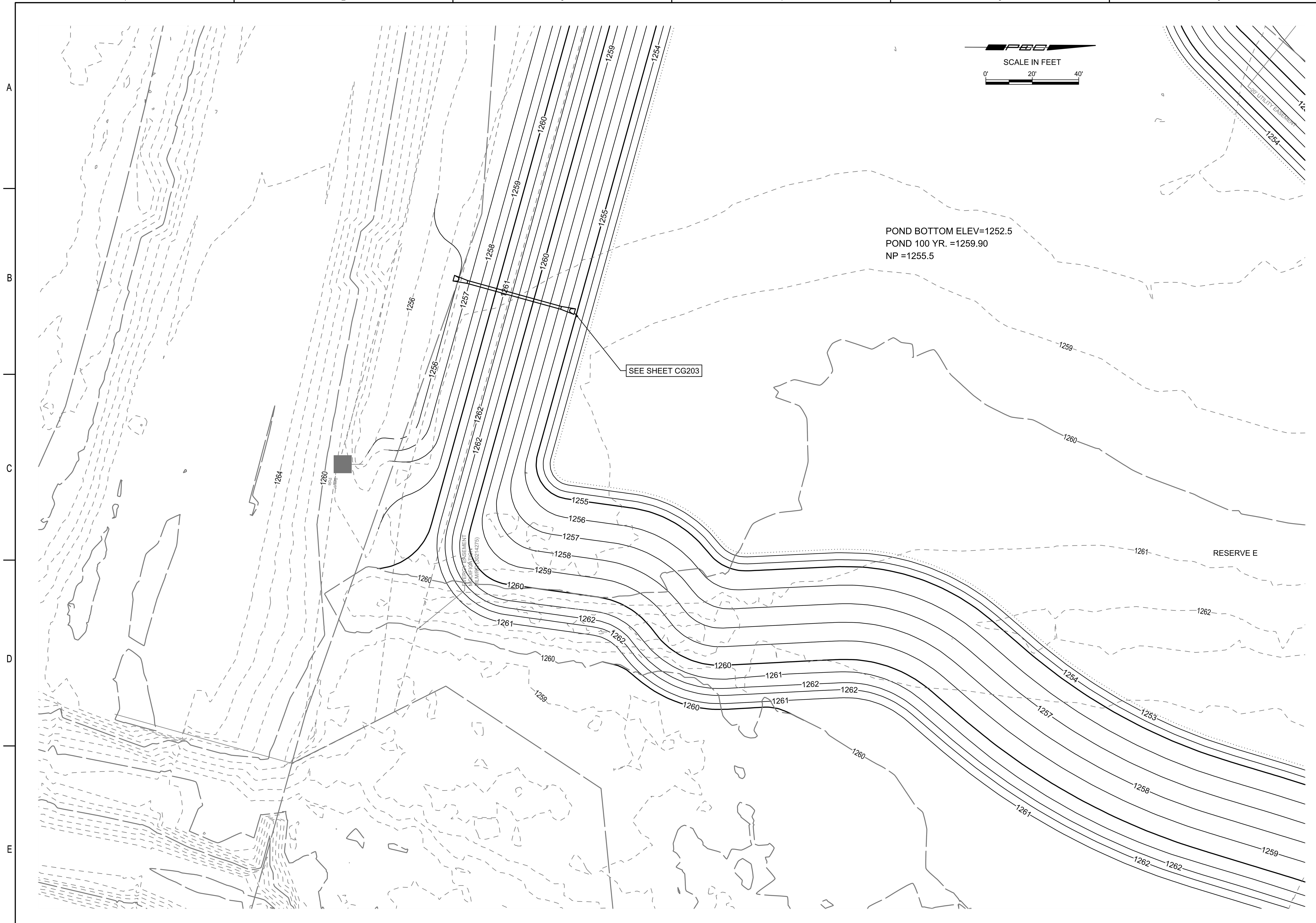
GRADING PLAN-AREA 3

CG111
14 OF 44

SAVED 12/23/2024 2:46:05 PM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:02:54 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\00412PD3_PLANS\030_SWD\14-200605-005-CG111 GRADING PLAN-AREA 3.DWG



SAVED 5/27/2025 9:59:47 AM BY KEVIN GRAHAM
PLOTTED 5/27/2025 11:03:52 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD15-200605-005-CG112 GRADING PLAN-AREA 4.DWG

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KEVIN P. GRAHAM
LICENSED
27806
05/27/2025
KANSAS
PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526 IMPROVEMENTS
SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

GRADING PLAN-AREA 4

SOIL PAD=1264.10
SOIL PAD=1264.30
5
SOIL PAD=1264.20
6
SOIL PAD=1264.20
7
SOIL PAD=1264.00
8
SOIL PAD=1263.20
SOIL PAD=1264.30
9
SOIL PAD=1264.40
10
SOIL PAD=1264.60
28
SOIL PAD=1265.00
27
POND BOTTOM ELEV=1250.0
POND 100 YR. =1259.90
NP =1255.5
CL MERILYN 64+00
62+00
SCALE IN FEET
0' 20' 40'
CONTOURS SHOWN WITHIN THE STREET PAVEMENT SECTION REPRESENT THE FINISHED PAVEMENT GRADE.

SAVED 5/27/2025 9:59:20 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:04:49 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\16-200605-005-CG113 GRADING PLAN-AREA 5.DWG

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STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

GRADING PLAN-AREA 5

CG113
16 OF 44

SCALE IN FEET
0' 20' 40'

SOIL PAD=1265.00
SOIL PAD=1265.20
SOIL PAD=1264.60
18
SOIL PAD=1264.30
19
SOIL PAD=1264.20
20
SOIL PAD=1264.10
21
SOIL PAD=1264.10
22
SOIL PAD=1264.60
23
SOIL PAD=1265.00
SOIL PAD=1264.30
16
SOIL PAD=1264.30
15
SOIL PAD=1265.80
17
SOIL PAD=1266.50
SOIL PAD=1266.30
18

RESERVE D

CL WILLIS
CL WILLIS CT.
WILLIS CT.
WILLIS

10' UTILITY EASEMENT
20' UTILITY EASEMENT
20' DRAIN & UTILITY EASEMENT
30' DRAINAGE &UTILITY EASEMENT

CONTOURS SHOWN WITHIN THE STREET PAVEMENT SECTION REPRESENT THE FINISHED PAVEMENT GRADE.

SAVED 12/23/2024 2:54:46 PM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:05:49 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\17-200605-005-CG114 GRADING PLAN-AREA 6.DWG

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STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

GRADING PLAN-AREA 6

CG114
17 OF 44

SCALE IN FEET
0' 20' 40'

SOIL PAD=1265.20
23
SOIL PAD=1265.90
SOIL PAD=1265.80
2
SOIL PAD=1265.30
5
SOIL PAD=1265.20
22
SOIL PAD=1265.80
3
SOIL PAD=1265.80
6
SOIL PAD=1265.70
21
SOIL PAD=1265.80
7
SOIL PAD=1265.90
4
SOIL PAD=1265.40
8
SOIL PAD=1266.50
20
SOIL PAD=1266.30
5
SOIL PAD=1265.40
9
SOIL PAD=1266.50
19
SOIL PAD=1265.50
10
SOIL PAD=1266.90
6

61ST STREET SOUTH
CL 61ST ST. SOUTH

CONTOURS SHOWN WITHIN THE STREET PAVEMENT SECTION REPRESENT THE FINISHED PAVEMENT GRADE.

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STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

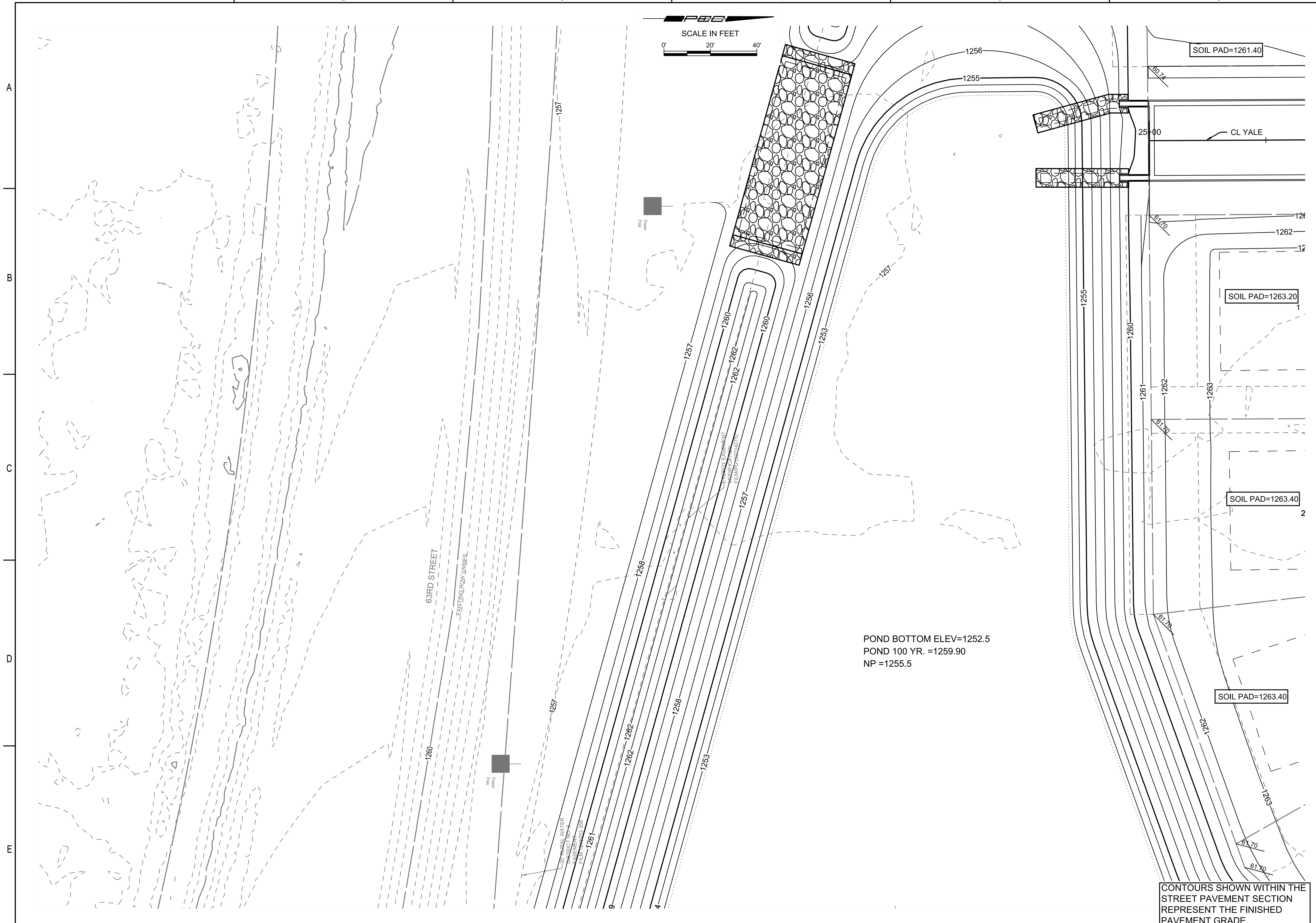
Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

GRADING PLAN-AREA 7

CG115
18 OF 44

SAVED 12/23/2024 2:55:21 PM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:06:55 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\0042\PD3_PLANS\030_SWD18-200605-005-CG115 GRADING PLAN-AREA 7.DWG



CONTOURS SHOWN WITHIN THE STREET PAVEMENT SECTION REPRESENT THE FINISHED PAVEMENT GRADE.

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CITY OF WICHITA

KEVIN P. GRAHAM
LICENSED
27806
05/27/2025
KANSAS
PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526 IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

GRADING PLAN-AREA 8

CG116

SAVED 5/27/2025 9:59:00 AM BY KEVIN GRAHAM
PLOTTED 5/27/2025 11:07:47 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD19-200605-005-CG116 GRADING PLAN-AREA 8.DWG

SOIL PAD=1261.80 | SOIL PAD=1262.20 | SOIL PAD=1262.60 | SOIL PAD=1262.50 | SOIL PAD=1262.00 | SOIL PAD=1261.80

SCALE IN FEET
0' 20' 40'

26+00 | 27+00 | YALE | 28+00 | CL YALE | 29+00 | 30+00 | 58+00 | 59+00 | 60+00 | 61+00 | 62+00 | 63+00 | 64+00 | 65+00 | 65+80

CL PATRICK | PATRICK | CL MERILYN

SOIL PAD=1263.20 1
SOIL PAD=1262.60 1
SOIL PAD=1262.60 2
SOIL PAD=1262.40 3
SOIL PAD=1262.60 4
SOIL PAD=1263.20
SOIL PAD=1263.40 2
SOIL PAD=1263.50 7
SOIL PAD=1263.60 6
SOIL PAD=1263.00 5
SOIL PAD=1263.00 3
SOIL PAD=1263.40 3
SOIL PAD=1263.20 2
SOIL PAD=1264.10 4
SOIL PAD=1263.20 1
SOIL PAD=1264.30
SOIL PAD=1264.20
SOIL PAD=1264.20
SOIL PAD=1264.00

15' D/U ESMT.
5' D/U ESMT.
30' DRAINAGE & UTILITY EASEMENT
10' D. & U. E.
10' UTIL. ESMT.

CONTOURS SHOWN WITHIN THE STREET PAVEMENT SECTION REPRESENT THE FINISHED PAVEMENT GRADE.

SAVED 5/27/2025 9:58:41 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:08:44 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\0042PD3_PLANS\030_SWDV20-200605-005-CG117 GRADING PLAN-AREA 9.DWG

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STORM WATER DRAIN NO. 526 IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

GRADING PLAN-AREA 9

CG117
20 OF 44

SOIL PAD=1261.80 | SOIL PAD=1262.20 | SOIL PAD=1263.00 | SOIL PAD=1263.80 | SOIL PAD=1264.20 | SOIL PAD=1264.50 | SOIL PAD=1264.90 | SOIL PAD=1265.30

SCALE IN FEET
0' 20' 40'

31+00 32+00 YALE 33+00 CL YALE 34+00 35+00

SOIL PAD=1263.10 5
SOIL PAD=1263.40 6
SOIL PAD=1263.50 7
SOIL PAD=1264.00 8
SOIL PAD=1264.40 9
SOIL PAD=1264.40 10
SOIL PAD=1265.70 14
SOIL PAD=1265.50 15
SOIL PAD=1265.20 16
SOIL PAD=1265.00 17
SOIL PAD=1263.00
SOIL PAD=1263.20
SOIL PAD=1263.20
SOIL PAD=1264.60

20' DRAIN. & UTIL. ESMT.
15' DRAIN. & UTIL. ESMT.
20' UTI. ESMT.

RESERVE C

POND 100 YR. =1260.0

CONTOURS SHOWN WITHIN THE STREET PAVEMENT SECTION REPRESENT THE FINISHED PAVEMENT GRADE.

CL WILLIS

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CITY OF WICHITA

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STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

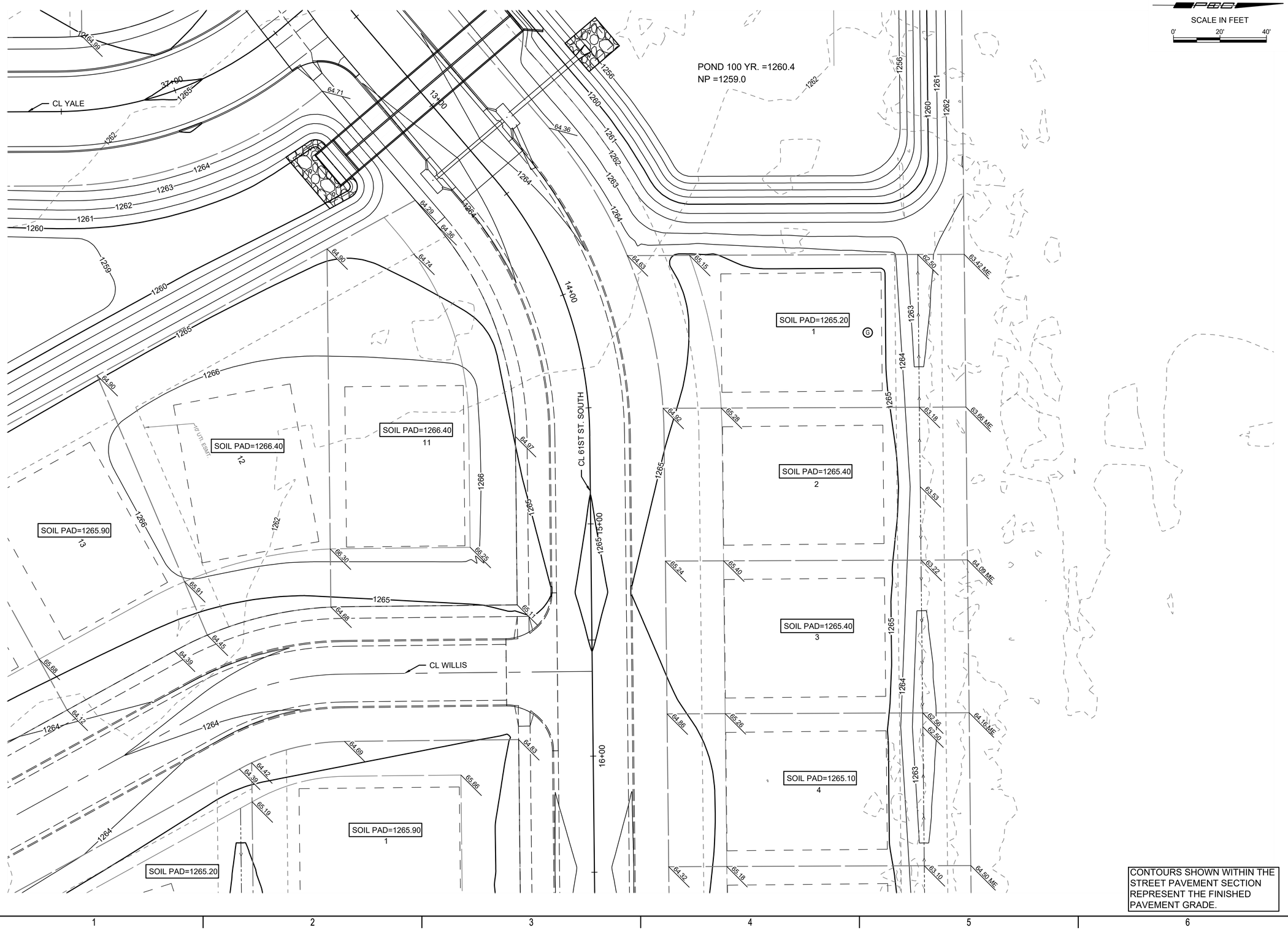
Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

GRADING PLAN-AREA 10

CG118
21 OF 44

SAVED 5/27/2025 9:58:17 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:09:23 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\21-200605-005-CG118 GRADING PLAN-AREA 10.DWG



CONTOURS SHOWN WITHIN THE STREET PAVEMENT SECTION REPRESENT THE FINISHED PAVEMENT GRADE.

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STORM WATER DRAIN NO. 526 IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

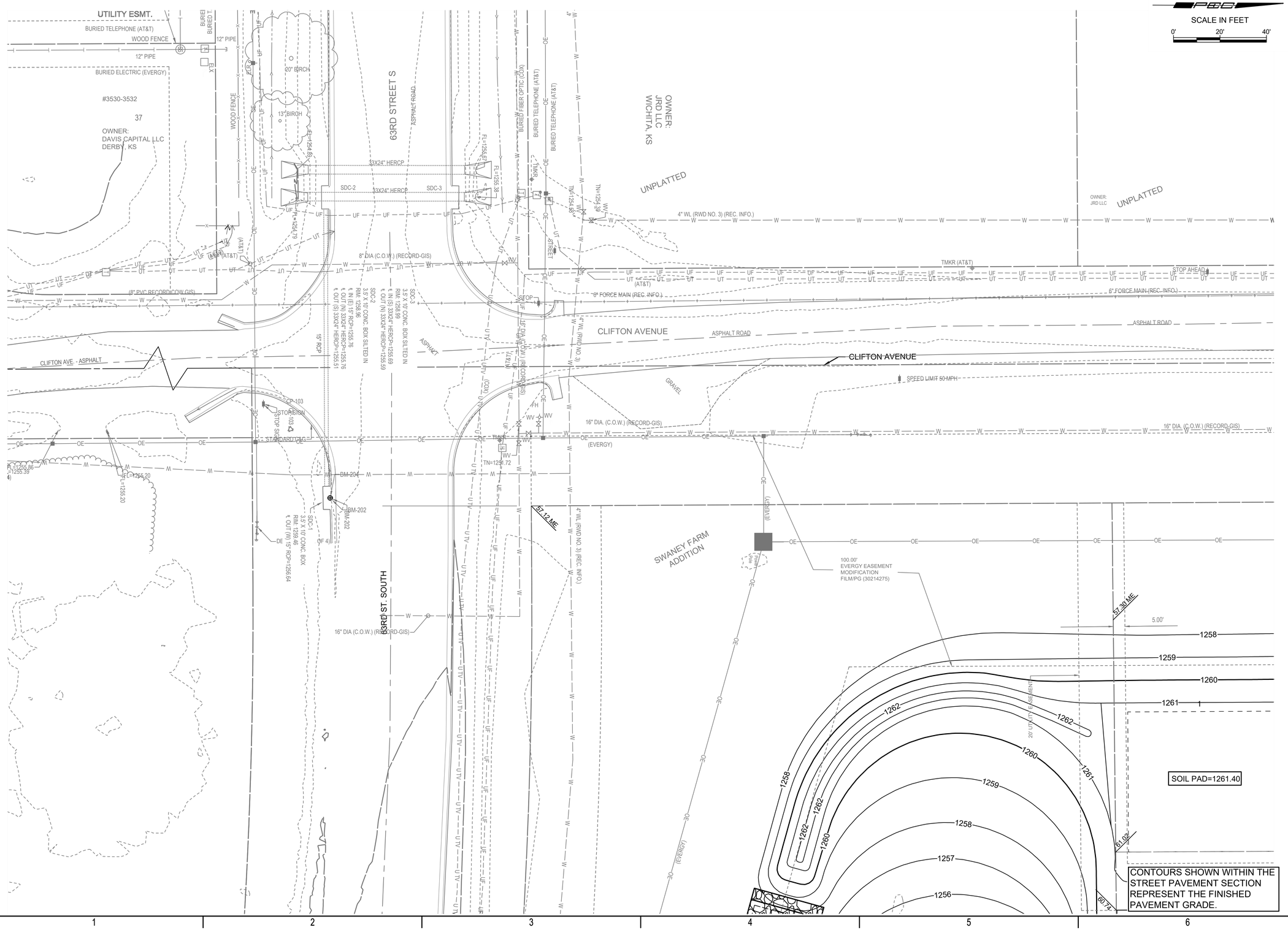
Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

GRADING PLAN-AREA 11

CG119
22 OF 44

SAVED 12/23/2024 2:58:12 PM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:09:56 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\00042\PD3_PLANS\030_SWD\22-200605-005-CG119 GRADING PLAN-AREA 11.DWG



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PLOTTED 5/27/2025 11:10:26 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\23-200605-005-CG120 GRADING PLAN-AREA 12.DWG

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05/27/2025
KANSAS
PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

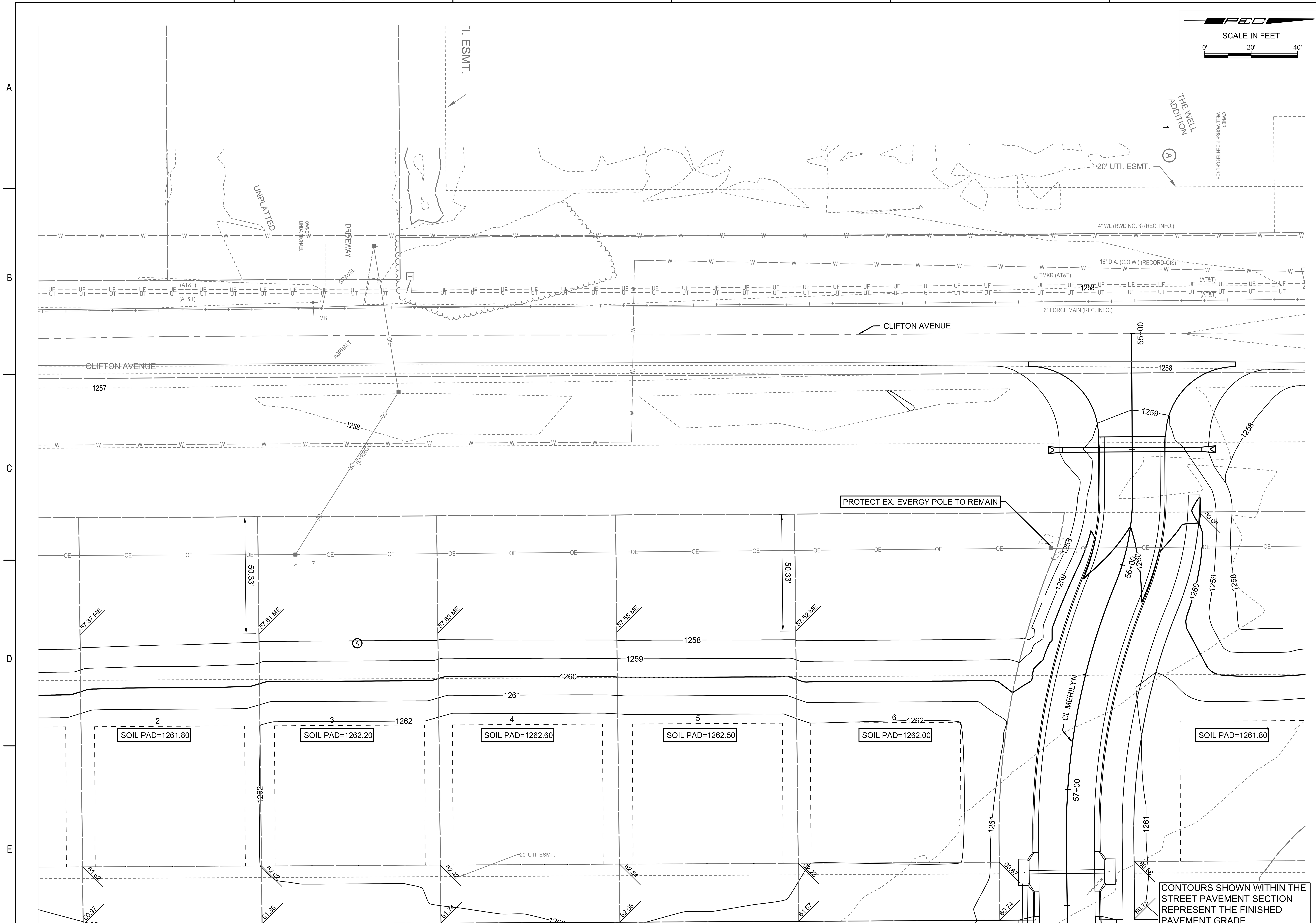
PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

GRADING PLAN-AREA 12

CG120
23 OF 44



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LICENSED
27806
05/27/2025
KANSAS
PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

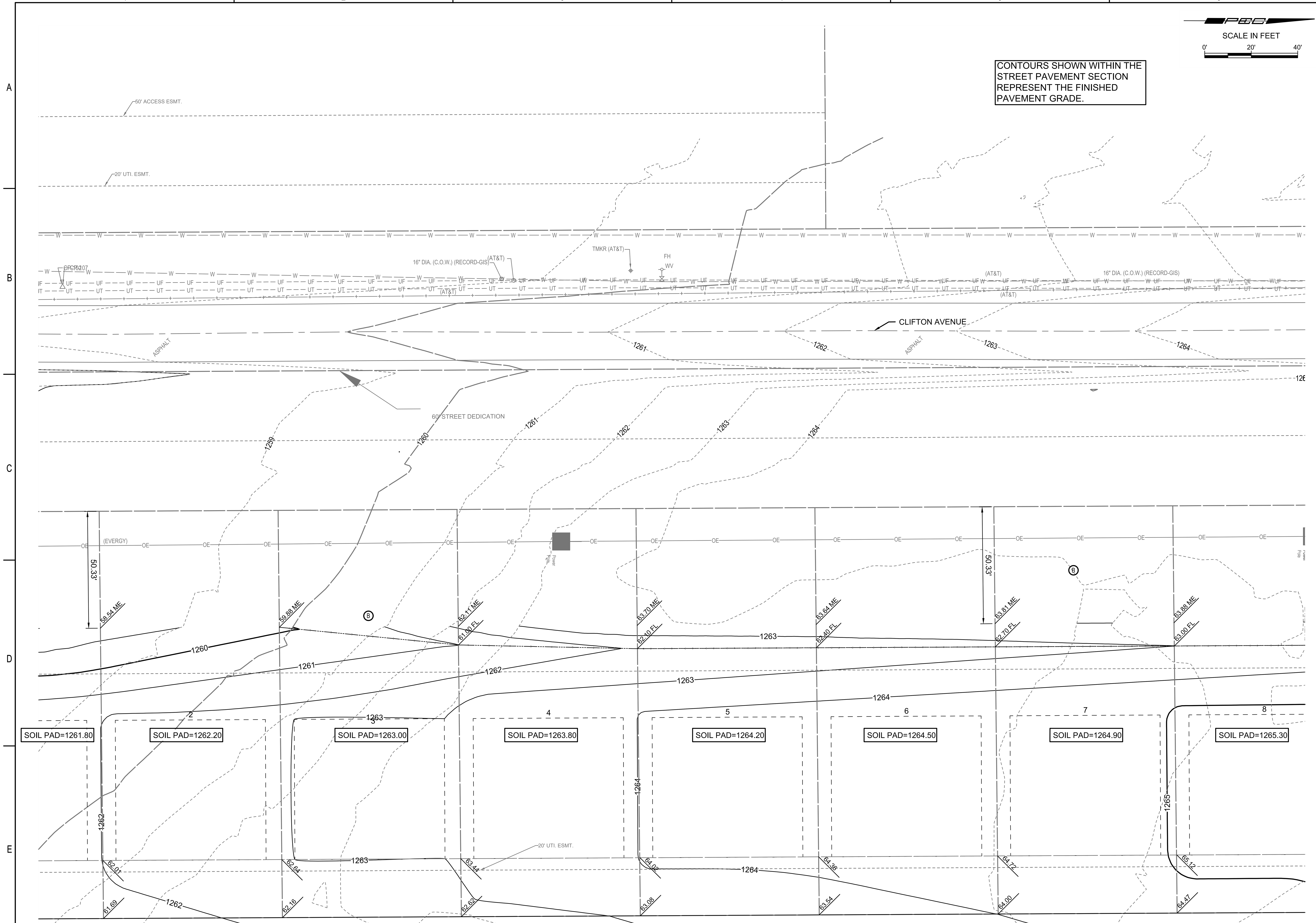
Issue:

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

GRADING PLAN-AREA 13

CG121

SAVED 12/23/2024 2:59:48 PM BY KEVIN GRAHAM
PLOTTED 5/27/2025 11:11:00 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\0041\PD3_PLANS\030_SWD\24-200605-005-CG121 GRADING PLAN-AREA 13.DWG



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LICENSED
27806
05/27/2025
KANSAS
PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

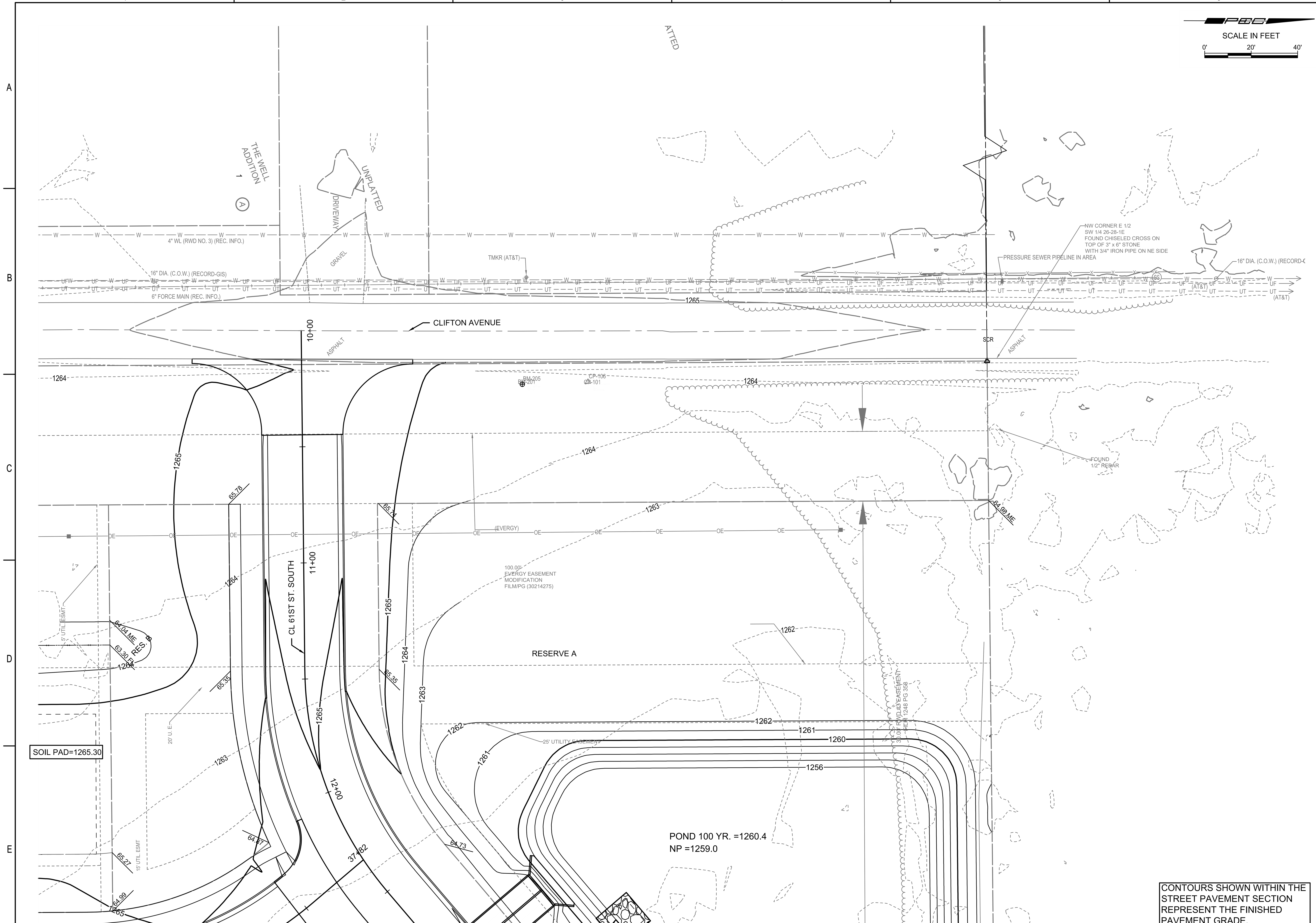
Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

GRADING PLAN-AREA 14

CG122
25 OF 44

SAVED 5/27/2025 9:57:22 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:11:36 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\25-200605-005-CG122 GRADING PLAN-AREA 14.DWG



SAVED 12/23/2024 2:35:38 PM BY KEVIN GRAHAM
PLOTTED 5/27/2025 11:12:12 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\0041PD3_PLANS\030_SWD\26-200605-005-CG123 GRADING PLAN-AREA 15.DWG

PEC
PROFESSIONAL ENGINEERING CONSULTANTS
303 SOUTH TOPEKA
WICHITA, KS 67202
316-262-2691 www.pec1.com

CITY OF WICHITA

KEVIN P. GRAHAM
LICENSED
27806
05/27/2025
KANSAS
PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526 IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

GRADING PLAN-AREA 15

CG123

	Location		Exc.	Fill	Compaction % and Test Elevation												
Lot	Northing	Easting	Elev.	Elev.	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268
1A	332107.08	17559899.46	1257.0	1261.4	X	X					X	X	X	X	X	X	X
2A	332184.08	17559899.07	1257.1	1261.8	X	X					X	X	X	X	X	X	X
3A	332261.49	17559898.68	1257.2	1262.2	X	X						X	X	X	X	X	X
4A	332338.08	17559898.29	1257.1	1262.6	X	X						X	X	X	X	X	X
5A	332415.49	17559897.89	1256.9	1262.5	X	X						X	X	X	X	X	X
6A	332492.07	17559897.51	1257.2	1262.0	X	X					X	X	X	X	X	X	X
1B	332651.14	17559896.70	1258.7	1261.8	X	X	X				X	X	X	X	X	X	X
2B	332727.99	17559896.33	1260.4	1262.2	X	X	X	X	X			X	X	X	X	X	X
3B	332804.99	17559895.94	1262.5	1263.0	X	X	X	X	X	X	X	X	X	X	X	X	X
4B	332881.99	17559895.55	1263.1	1263.8	X	X	X	X	X	X	X	X	X	X	X	X	X
5B	332958.99	17559895.16	1263.2	1264.2	X	X	X	X	X	X	X	X		X	X	X	X
6B	333035.98	17559894.77	1263.2	1264.5	X	X	X	X	X	X	X	X		X	X	X	X
7B	333112.98	17559894.38	1263.8	1264.9	X	X	X	X	X	X	X	X		X	X	X	X
8B	333189.98	17559893.98	1263.3	1265.3	X	X	X	X	X	X	X	X			X	X	X
1C	332135.42	17560059.89	1256.5	1263.2	X								X	X	X	X	X
2C	332139.74	17560145.71	1256.5	1263.4	X								X	X	X	X	X
3C	332147.34	17560223.16	1256.8	1263.4	X								X	X	X	X	X
4C	332193.45	17560295.35	1258.8	1264.1	X	X	X							X	X	X	X
5C	332261.23	17560340.99	1259.2	1264.3	X	X	X	X						X	X	X	X
6C	332341.49	17560352.68	1259.8	1264.2	X	X	X	X						X	X	X	X
7C	332419.41	17560355.85	1260.7	1264.2	X	X	X	X	X					X	X	X	X
8C	332496.98	17560357.18	1260.9	1264.0	X	X	X	X	X	X			X	X	X	X	X
9C	332477.97	17560594.24	1259.3	1264.3	X	X	X	X						X	X	X	X
10C	332478.87	17560658.90	1259.8	1264.4	X	X	X	X						X	X	X	X
11C	332479.81	17560724.00	1259.9	1264.4	X	X	X	X	X					X	X	X	X
12C	332481.33	17560803.17	1259.8	1264.5	X	X	X	X						X	X	X	X
13C	332519.65	17560879.44	1260.0	1264.6	X	X	X	X	X					X	X	X	X
14C	332582.30	17560938.90	1260.8	1264.8	X	X	X	X	X					X	X	X	X
15C	332649.32	17560964.40	1261.8	1264.8	X	X	X	X	X	X				X	X	X	X
16C	332730.10	17560968.51	1262.9	1264.3	X	X	X	X	X	X	X			X	X	X	X
17C	332794.87	17560968.06	1263.4	1264.3	X	X	X	X	X	X	X	X		X	X	X	X
18C	332859.43	17560967.53	1263.5	1264.3	X	X	X	X	X	X	X	X		X	X	X	X
19C	332924.99	17560967.54	1263.3	1264.6	X	X	X	X	X	X	X	X		X	X	X	X
20C	332989.92	17560968.74	1263.7	1265.0	X	X	X	X	X	X	X	X		X	X	X	X
21C	333054.91	17560968.05	1263.7	1265.5	X	X	X	X	X	X	X	X			X	X	X
22C	333119.91	17560967.35	1263.7	1265.5	X	X	X	X	X	X	X	X			X	X	X
23C	333184.91	17560966.65	1264.1	1265.5	X	X	X	X	X	X	X	X	X		X	X	X
24C	333249.90	17560965.95	1264.7	1265.9	X	X	X	X	X	X	X	X	X		X	X	X
25C	333314.90	17560965.25	1265.4	1266.4	X	X	X	X	X	X	X	X	X	X		X	X
26C	333379.47	17560965.95	1266.1	1266.8	X	X	X	X	X	X	X	X	X	X	X	X	X
1D	332305.55	17560075.60	1257.1	1262.6	X	X						X	X	X	X	X	X
2D	332375.71	17560076.76	1258.1	1262.6	X	X	X					X	X	X	X	X	X
3D	332438.72	17560076.44	1259.1	1262.4	X	X	X	X				X	X	X	X	X	X
4D	332501.72	17560076.12	1260.0	1262.6	X	X	X	X	X			X	X	X	X	X	X
5D	332496.22	17560180.81	1262.6	1263.0	X	X	X	X	X	X	X	X	X	X	X	X	X
6D	332418.70	17560181.21	1261.8	1263.6	X	X	X	X	X	X			X	X	X	X	X
7D	332340.70	17560181.60	1259.7	1263.5	X	X	X	X					X	X	X	X	X
1E	332662.27	17560291.25	1261.7	1263.2	X	X	X	X	X	X			X	X	X	X	X
2E	332661.77	17560229.11	1262.3	1263.2	X	X	X	X	X	X	X		X	X	X	X	X
3E	332660.75	17560165.28	1262.3	1263.0	X	X	X	X	X	X	X	X	X	X	X	X	X
4E	332640.69	17560075.56	1262.2	1263.2	X	X	X	X	X	X	X		X	X	X	X	X
5E	332704.11	17560075.56	1262.2	1263.1	X	X	X	X	X	X	X		X	X	X	X	X
6E	332766.84	17560074.79	1262.0	1263.4	X	X	X	X	X	X	X		X	X	X	X	X
7E	332829.94	17560074.40	1262.2	1263.5	X	X	X	X	X	X	X		X	X	X	X	X

	Location		Exc.	Fill	Compaction % and Test Elevation												
Lot	Northing	Easting	Elev.	Elev.	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268
12E	333300.23	17560136.76	1261.5	1266.4	X	X	X	X	X	X						X	X
13E	333227.36	17560165.83	1261.3	1265.9	X	X	X	X	X	X					X	X	X
14E	333163.17	17560202.28	1261.4	1265.7	X	X	X	X	X	X					X	X	X
15E	333102.26	17560235.41	1261.3	1265.5	X	X	X	X	X	X					X	X	X
16E	333039.63	17560268.47	1261.1	1265.2	X	X	X	X	X	X					X	X	X
17E	332978.93	17560302.30	1260.9	1265.0	X	X	X	X	X					X	X	X	X
18E	332914.91	17560336.98	1260.1	1264.6	X	X	X	X	X					X	X	X	X
19E	332851.96	17560375.95	1259.8	1264.3	X	X	X	X						X	X	X	X
20E	332802.40	17560427.52	1259.8	1264.2	X	X	X	X						X	X	X	X
21E	332772.43	17560496.94	1259.4	1264.1	X	X	X	X						X	X	X	X
22E	332764.91	17560581.81	1260.1	1264.1	X	X	X	X	X					X	X	X	X
23E	332765.60	17560652.31	1260.4	1264.6	X	X	X	X	X					X	X	X	X
24E	332766.17	17560725.72	1261.1	1264.6	X	X	X	X	X	X				X	X	X	X
25E	332767.05	17560799.71	1261.9	1264.6	X	X	X	X	X	X				X	X	X	X
26E	332657.12	17560733.61	1259.9	1265.0	X	X	X	X	X					X	X	X	X
27E	332656.41	17560667.40	1259.6	1265.0	X	X	X	X						X	X	X	X
28E	332655.65	17560596.14	1259.5	1264.6	X	X	X	X						X	X	X	X
1F	333357.74	17560297.63	1261.9	1265.9	X	X	X	X	X	X	X	X			X	X	X
2F	333358.59	17560375.08	1262.1	1265.8	X	X	X	X	X	X	X	X			X	X	X
3F	333359.27	17560447.52	1262.5	1265.8	X	X	X	X	X	X	X	X			X	X	X
4F	333360.28	17560519.52	1262.6	1265.9	X	X	X	X	X	X	X	X			X	X	X
5F	333361.13	17560593.76	1263.0	1266.3	X	X	X	X	X	X	X	X	X			X	X
6F	333361.41	17560678.73	1263.1	1266.9	X	X	X	X	X	X	X	X	X			X	X
7F	333377.26	17560783.04	1263.6	1266.8	X	X	X	X	X	X	X	X	X			X	X
8F	333310.65	17560784.20	1263.4	1266.8	X	X	X	X	X	X	X	X	X			X	X
9F	333240.65	17560784.84	1263.2	1266.3	X	X	X	X	X	X	X	X	X			X	X
10F	333174.01	17560785.59	1262.9	1265.5	X	X	X	X	X	X	X	X			X	X	X
11F	333105.53	17560786.13	1262.6	1264.9	X	X	X	X	X	X	X	X			X	X	X
12F	333037.40	17560787.18	1262.4	1264.9	X	X	X	X	X	X	X	X			X	X	X
13F	332944.93	17560807.24	1262.3	1263.9	X	X	X	X	X	X	X	X		X	X	X	X
14F	332944.21	17560740.21	1261.8	1264.3	X	X	X	X	X	X					X	X	X
15F	332943.46	17560670.54	1261.3	1264.3	X	X	X	X	X	X					X	X	X
16F	332942.71	17560600.29	1261.2	1264.3	X	X	X	X	X	X					X	X	X
17F	333071.63	17560652.32	1262.0	1265.8	X	X	X	X	X	X	X					X	X
18F	333149.04	17560674.41	1262.5	1266.3	X	X	X	X	X	X	X						X
19F	333223.72	17560636.52	1262.5	1266.5	X	X	X	X	X	X	X						X
20F	333250.66	17560563.80	1262.6	1266.5	X	X	X	X	X	X	X						X
21F	333249.88	17560496.54	1262.2	1265.7	X	X	X	X	X	X	X					X	X
22F	333249.24	17560424.48	1261.9	1265.2	X	X	X	X	X	X	X					X	X
23F	333242.94	17560348.13	1261.7	1265.2	X	X	X	X	X	X						X	X
1G	333539.22	17560076.02	1261.7	1265.2	X	X	X	X	X	X						X	X
2G	333540.00	17560141.82	1261.9	1265.4	X	X	X	X	X	X	X					X	X
3G	333540.71	17560207.62	1262.1	1265.4	X	X	X	X	X	X	X					X	X
4G	333541.41	17560273.42	1262.4	1265.1	X	X	X	X	X	X	X					X	X
5G	333542.12	17560339.21	1262.5	1265.3	X	X	X	X	X	X	X					X	X
6G	333542.83	17560405.01	1262.7	1265.8	X	X	X	X	X	X	X					X	X
7G	333543.53	17560470.81	1262.9	1265.8	X	X	X	X	X	X	X	X				X	X
8G	333543.08	17560536.87	1263.2	1265.4	X	X	X	X	X	X	X	X				X	X
9G	333544.95	17560602.41	1263.5	1265.4	X	X	X	X	X	X	X	X				X	X
10G	333545.65	17560668.20	1263.6	1265.5	X	X	X	X	X	X	X	X				X	X
11G	333546.36	17560734.00	1263.9	1266.0	X	X	X	X	X	X	X	X	X			X	X
12G	333547.07	17560799.80	1264.4	1266.5	X	X	X	X	X	X	X	X	X				X
13G	333547.77	17560865.60	1265.0	1267.1	X	X	X	X	X	X	X	X	X	X			X
14G	333548.48	17560931.39	1265.5	1267.5	X	X	X	X	X	X	X	X	X	X			X

EXCAVATION ELEVATION INCLUDES TOP SOIL STRIPPING.

COMPACTION TEST REQUIRED

X COMPACTION TEST NOT REQUIRED

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KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

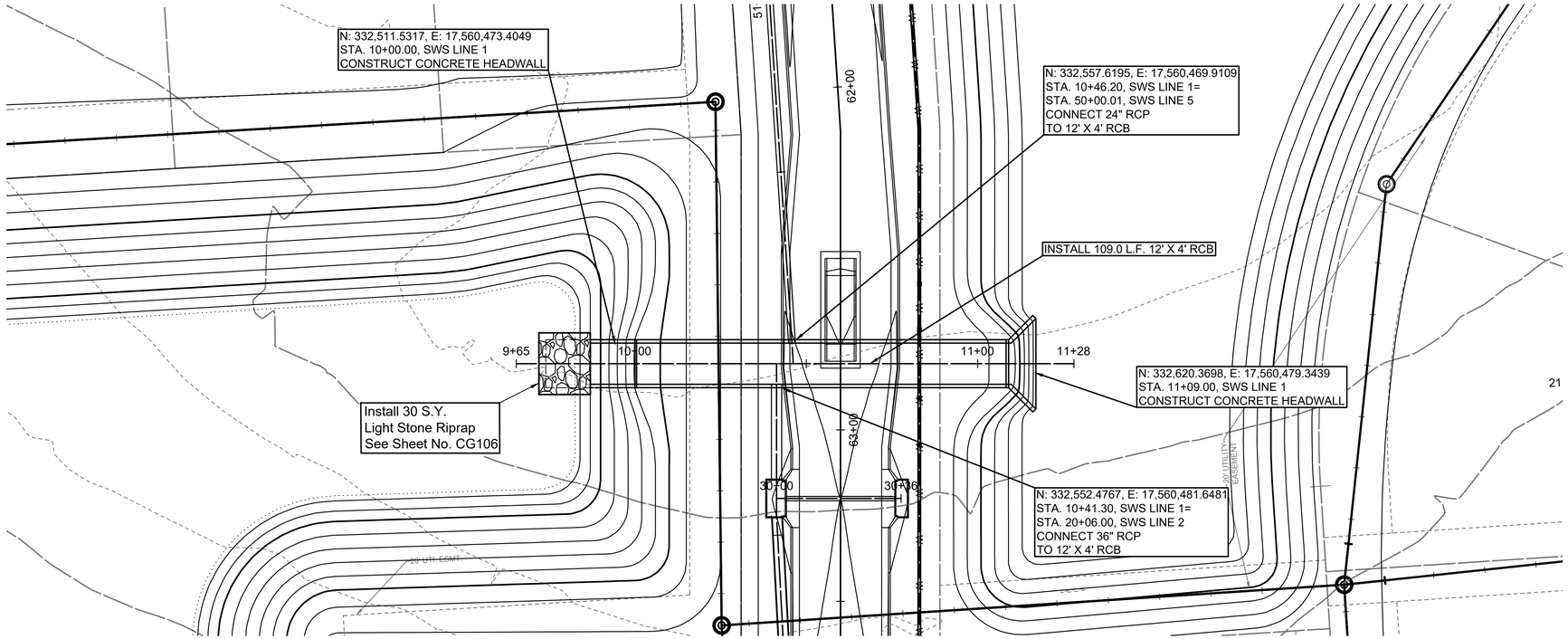
Issue:		

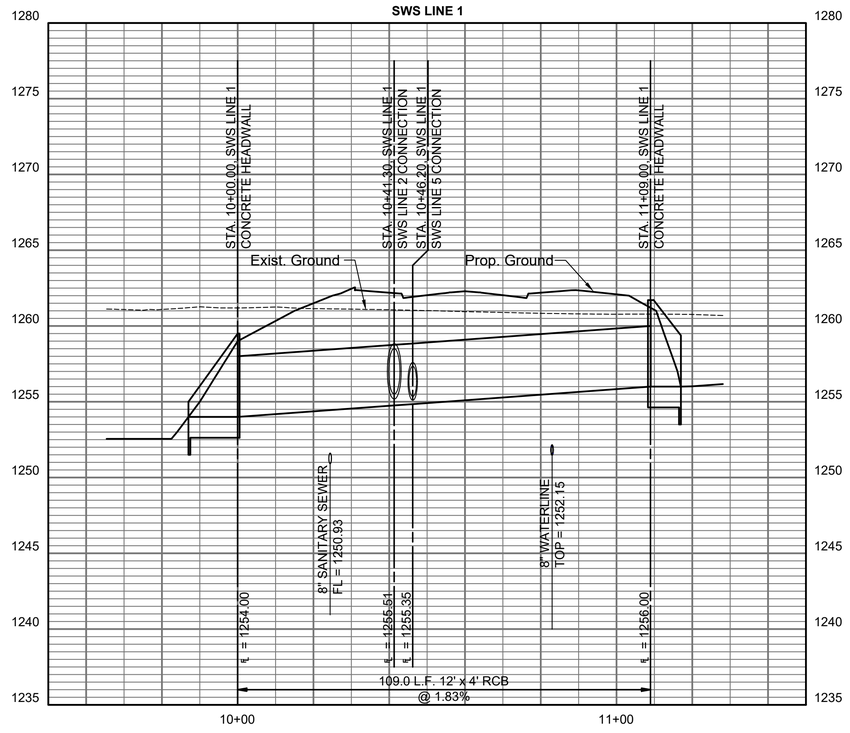
JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

COMPACTION TABLES

CG124
27 OF 44

SAVED 9/5/2024 7:23:26 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:12:16 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\00412PD3_PLANS\030_SWDI200605-005-CG124 COMPACTION TABLES.DWG





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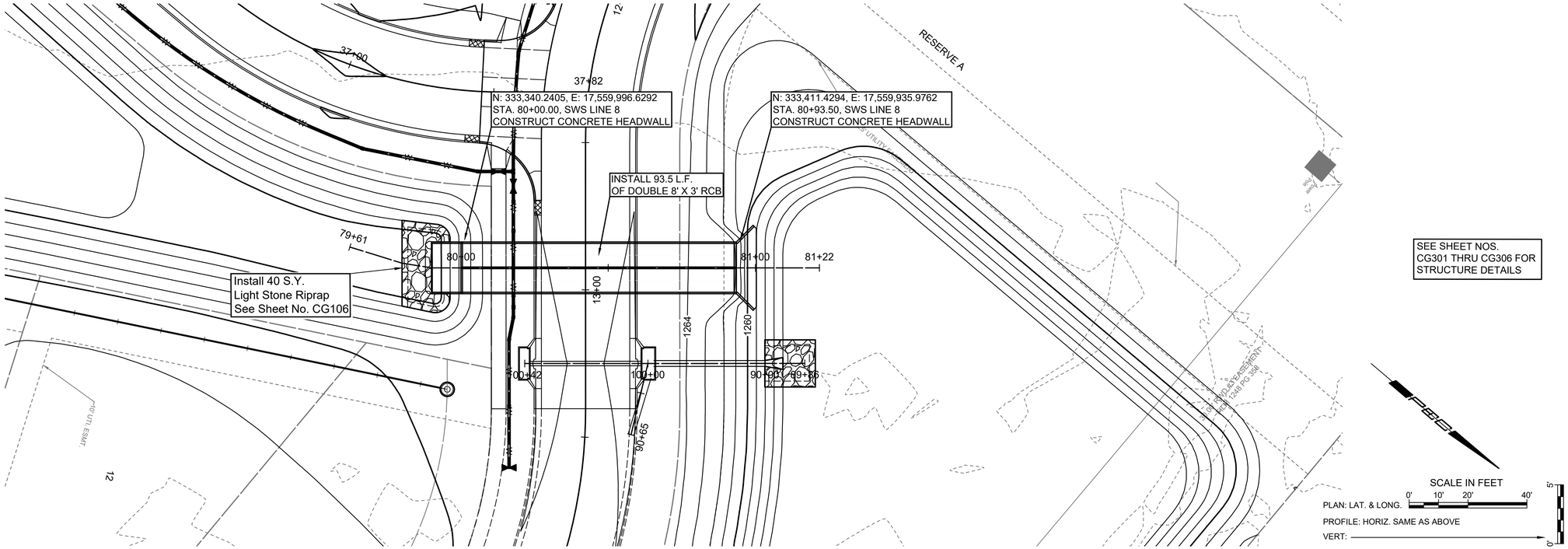
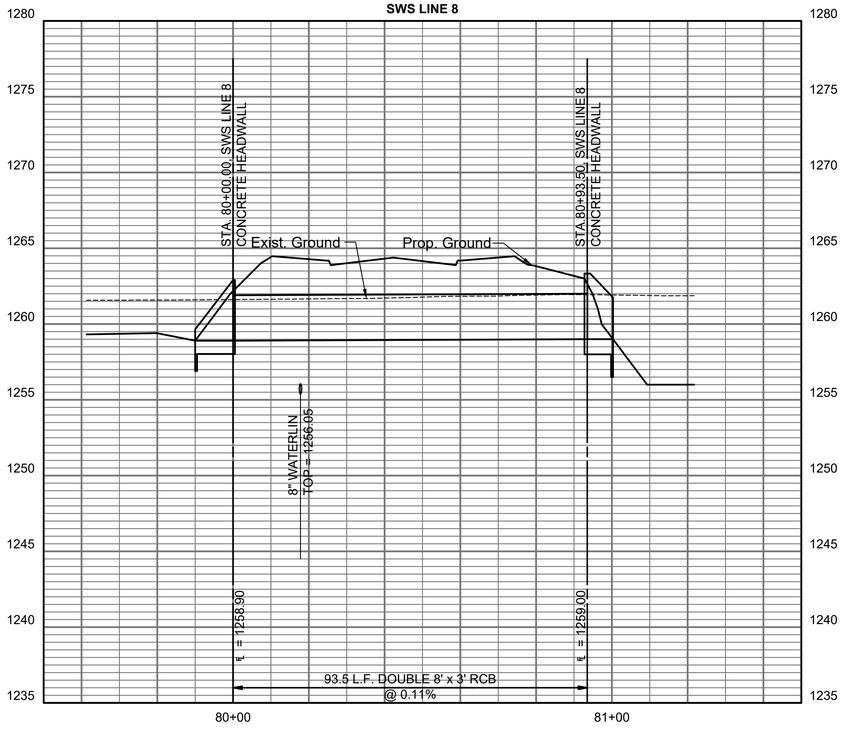
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

PLAN AND PROFILE -
SWS LINE 1

CG201
28 OF 44

SAVED 5/27/2025 10:02:57 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:13:04 AM BY KEVIN GRAHAM
U:\WICHITA-CIV\L2020\200605\004\2PD3_PLANS\030_SWD\27-200605-005-CG201 PLAN AND PROFILE-SWS LINE 1.DWG





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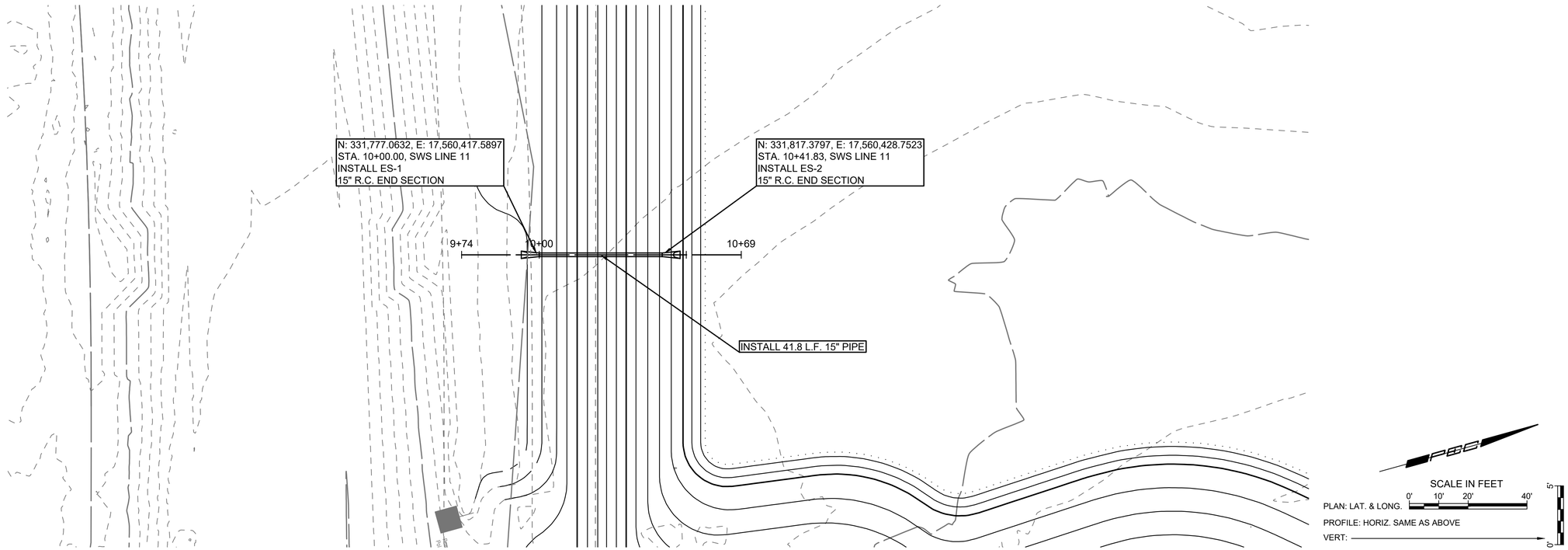
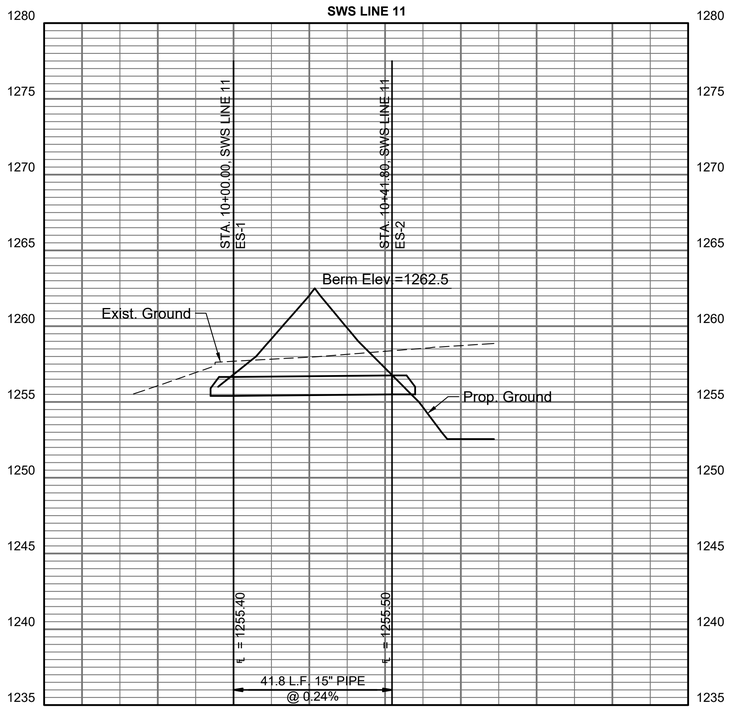
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

PLAN AND PROFILE -
SWS LINE 8

CG202
29 OF 44

SAVED 5/27/2025 10:02:45 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:13:52 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\00412PD3_PLANS\030_SWD\28-200605-005-CG202 PLAN AND PROFILE-SWS LINE 8.DWG





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DRAWN BY	BJS
CHECKED BY	KMS

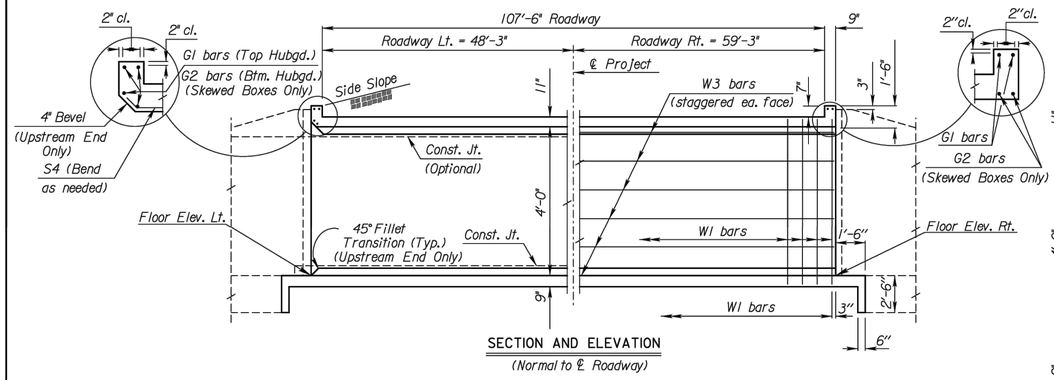
PLAN AND PROFILE -
SWS LINE 11

CG203
30 OF 44

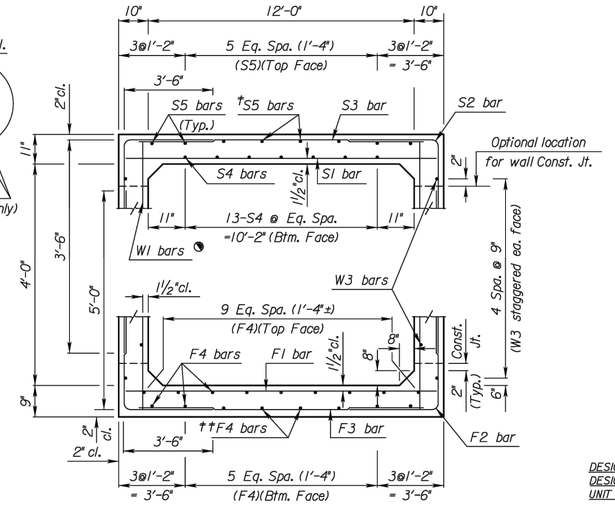
SAVED 3/27/2025 1:34:20 PM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:14:38 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\00412PD3_PLANS\030_SWDV29-200605-005-CG203 PLAN AND PROFILE-SWS LINE 11.DWG

VERSION/ID	
SYSTEM PART	06
CADD MSA	10/5/2000
DATABASE	5/4/2000
RCB PROGRAM	7.422
MSA MODEL ID	738
CELL LIBRARY	12/8/2023

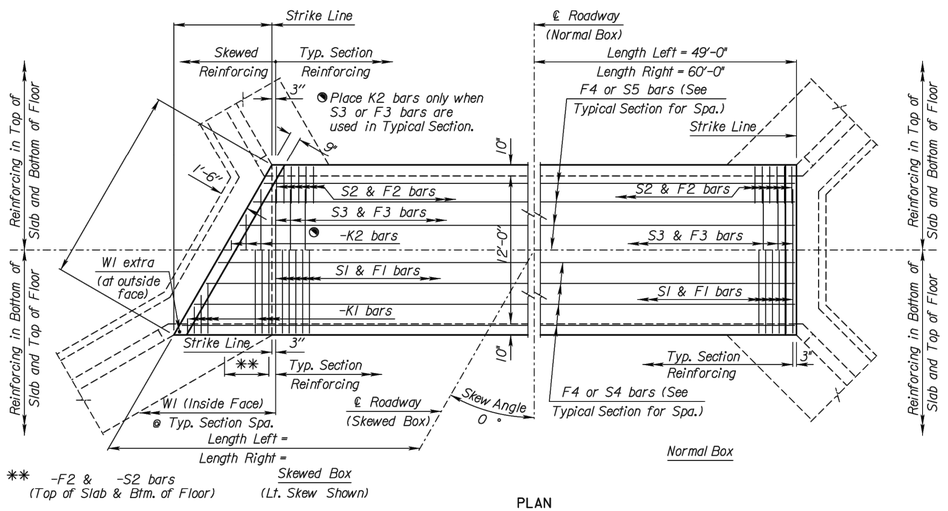
Plot Location:
Plotted By: darrins
File: 2024-11-14_200605-005_I-12x4.dgn
Plot Date: 14-NOV-2024 09:01



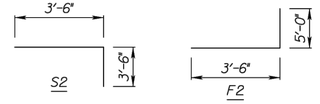
SECTION AND ELEVATION
(Normal to ℄ Roadway)



TYPICAL SECTION



PLAN



BENDING DIAGRAM
All Dimensions are out to out of bars.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	200605-005			

See RCB Auxiliary Details for Optional Splice.

† Omit when S3 bar is omitted

†† Omit when F3 bars are omitted.

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD Spec., 2007 Ed., 2009 Int.
DESIGN LOADING: HL93
UNIT STRESSES: Grade 4.0 Concrete; f'c = 4,000 p.s.i.
Reinforcing Steel, fy = 60,000 p.s.i.
FILL HEIGHT: Unless otherwise noted, the Design Fill Height is measured from the riding surface at the culvert and shall include the surfacing.
CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a ¾inch triangular moulding. Where Grade 4.0 Concrete (AE) is specified, it shall be placed in the top slab above the Construction Joint.
REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. All dimensions relative to reinforcing steel shall be to centerline of bar unless otherwise noted.
EXCAVATION: Excavation for culverts less than bridge length shall not be paid for directly but shall be subsidiary to Grade 4.0 Concrete. Excavation for RCB Bridges shall be paid for as Class III Excavation.
SEAL COURSE: A Seal Course may be required by the Engineer. The Seal Course shall be unreinforced Concrete (Commercial Grade) to a minimum depth of 3 inches or as determined by the Engineer. Concrete for the seal course shall be paid for at the unit price set for Concrete for Seal Course.
FOUNDATION STABILIZATION: The Foundation Stabilization quantity has been calculated to the limits shown on the "RCB Auxiliary Details" sheet. The depth may be increased by the Engineer. The Contractor may underrun Foundation Stabilization under the barrel if founded on firm material and with the Engineer's approval. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.
QUANTITIES: The quantities shown in the Culvert Summary include apron and/or soil saver quantities when their construction is required by the plans. Payment for additional quantities that result from including seal course and/or floating apron, as a change in original plans, shall be made at the Unit Price bid for the various items involved.
GRANULAR BACKFILL (WINGWALLS): See the "Auxiliary Details" sheet.
STRIKE LINE: Wingwalls and that portion of the RCB outside the Strike Line shall be constructed level. Footing for wingwalls shall be constructed with the culvert floor. See wingwall detail sheet.
BRIDGE BACKWALL PROTECTION SYSTEM: For structures with this bid item in the Summary of Quantities. See the "Auxiliary Details" sheet.

⧗ For design purposes ONLY. Do NOT use for Construction — CULVERT SUMMARY — ◔ includes any welded wire fabric

Floor Elev. Lt.	Floor Elev. Rt.	Crown Gr. Elev.	⧗ Design Fill Ht.	Skew	Left Wings	Right Wings	Scour Apron	Soil Saver	Concrete: Barrel (Cu.Yds.)	Concrete: Wings (Cu.Yds.)	Concrete: Total (Cu.Yds.)	Reinf. Steel (Gr. 60): Barrel (Lbs.)	Reinf. Steel (Gr. 60): ◔Wings (Lbs.)	Reinf. Steel (Gr. 60): Total (Lbs.)	LRFR RATING FACTORS: HL-93 Loading: Inventory	HL-93 Loading: Operating
1256.00	1254.00	1262.30	0	0	Flared	Straight	No	No	122.86	10.37	133.23	26196	973	27169	2.45	3.17

△ Epoxy Coated Bars
✱ See Bending Diagram

BAR SCHEDULE

△ F1 Size	Spa.	No.	Length	△ F2 ✱ Size	Spa.	No.	Length	△ F3 Size	Spa.	No.	Length	△ F4 Size	Spa.	No.	Length	△ S1 Size	Spa.	No.	Length	△ S2 ✱ Size	Spa.	No.	Length	△ S3 Size	Spa.	No.	Length	△ S4 Size	No.	Length	△ S5 Size	No.	Length
6	6½"	201	13'-4"	7	6"	436	8'-6"	N/A	N/A	N/A	N/A	4	48	37'-2"	7	6½"	201	13'-4"	5	6"	436	7'-0"	4	1'-0"	110	13'-4"	5	26	55'-3"	4	30	37'-2"

△ K1 Size	Spa.	No.	Length	△ K2 Size	Spa.	No.	Length	△ W1 Size	Spa.	No.	Length	△ W2 Size	Spa.	No.	Length	△ W3 Size	No.	Length	△ W4 Size	Spa.	No.	Length	△ G1 Size	No.	Length	△ G2 Size	No.	Length	Size	Spa.	No.	Length
N/A	N/A	N/A		N/A	N/A	N/A		4	1'-1"	202	5'-4"	N/A	N/A	N/A	N/A	4	30	37'-2"	N/A	N/A	N/A	N/A	5	4	13'-4"	N/A	N/A	N/A				

Minimum Splice Lengths	
#4	1'-5"
#5	1'-9"

SUMMARY OF QUANTITIES		
Concrete (Grade 4.0)	74.8	C.Y.
Concrete (Grade 4.0)(AE)	58.4	C.Y.
Bridge Backwall Protection System	187	S.Y.
Reinforcing Steel (Gr. 60)	970	Lbs.
Reinforcing Steel (Gr.60)(Epoxy Coated)	26200	Lbs.
Class III Excavation		C.Y.
Foundation Stabilization	42	C.Y.
Concrete for Seal Course (Set)	1	C.Y.
Granular Backfill (Wingwalls)	12	C.Y.

NO.	DATE	REVISIONS	BY	APP'D
1				

KANSAS DEPARTMENT OF TRANSPORTATION
Serial No.(000) Sta. 0
SINGLE 12 ft x 4 ft RFB

BR 1.12.4 F — Sedgwick Co.

FHWA APPROVAL		10-20-10	APP'D	Terry L. Fleck
DESIGNED	DETAILED		QUANTITIES	CADD
DESIGN CK.	DETAIL CK.		QUAN. CK.	CADD CK.

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316-262-2691 www.pec1.com

CITY OF WICHITA

KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		
JOB NO.	200605-005	
DATE	MAY 2025	
PM	KPG	
DESIGNED BY	KPG	
DRAWN BY	BJS	
CHECKED BY	KMS	

SINGLE 12 FT X 4 FT RFB-SWS LINE 1

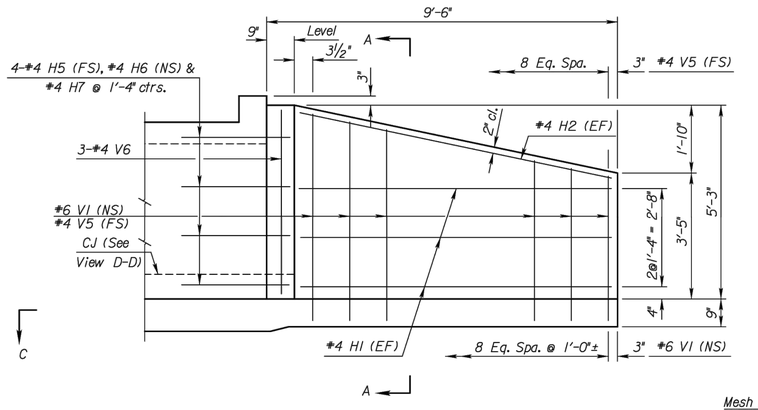
CG301
31 OF 44

SAVED 11/14/2024 9:40:20 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:14:43 AM BY KEVIN.GRAHAM
U:\WICHITA-CIVIL\2020\200605\1004\2PD3_PLANS\030_SWD\30-2005-005-CG301 SINGLE 12 FT X 4 FT RFB-SWS LINE 1.DWG

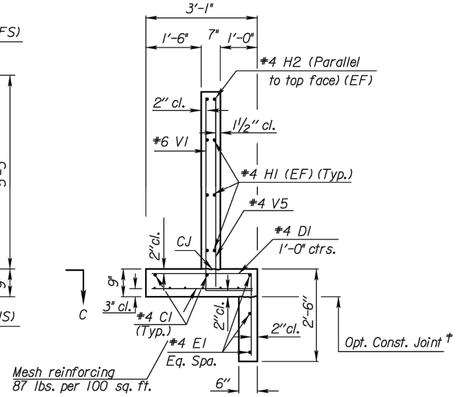
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	200605-005			

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD Spec., 2007 Ed., 2009 Int.
DESIGN LOADING: HL93
UNIT STRESSES: Grade 4.0 Concrete; f'c = 4,000 p.s.i.
Reinforcing Steel; fy = 60,000 p.s.i.
CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a ¾" triangular moulding.
REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. Welded Wire Reinforcement shall conform to ASTM A185. All dimensions relative to reinforcing steel shall be to centerline of bar unless otherwise noted. Welded Wire Reinforcement shall be classified as pounds of reinforcing and included in the total quantity for the bid item Reinforcing Steel (Gr. 60).
QUANTITIES: Wingwall Quantities include all quantities outside the neat lines of the box, excluding the hubguard.
APRON: A 5" concrete slab shall be constructed between the downstream wings in locations subject to scour only when specified on the plans or by the Engineer.
BACKFILL MATERIAL: Use Granular Backfill material meeting the requirements of SB-1, SB-2, SCA-1, SCA-2. Backfill all wings to limits shown on the "RCB Auxiliary Sheet".
FILTER FABRIC: Separate in-situ material from granular backfill with approved filter fabric complying with Section 1710. Filter Fabric is subsidiary to "Granular Backfill".
FOUNDATION STABILIZATION: Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.



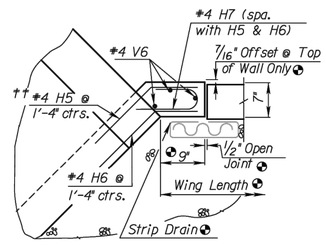
ELEVATION OF WINGWALL
(Backface Shown)



SECTION A-A

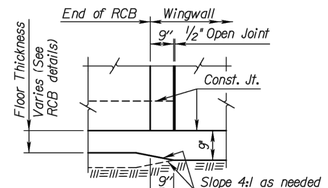
See "RCB Aux. Details" sheet for additional requirements.

Typical both wings

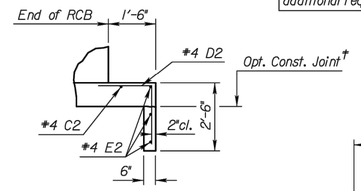


WINGWALL JOINT DETAIL
(Plan View)

† NOTE: Const. Jt. may be used at Contractor's option when approved by the Engineer. D1 bars or mesh may be spliced thus: ⌐ ¬ Minimum overlap shall be 1'-3". No increase in quantities or cost shall be allowed when Contractor elects this option.

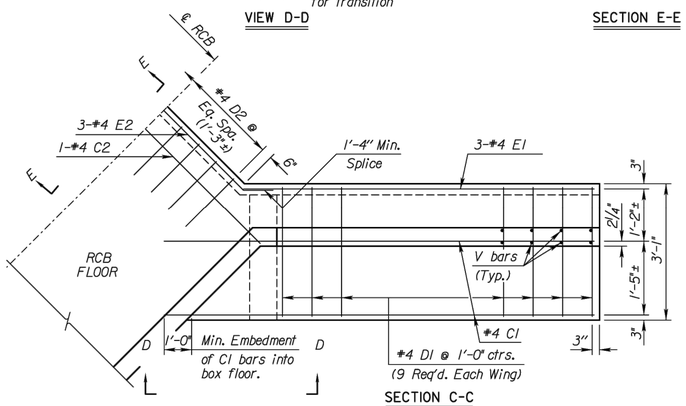


VIEW D-D

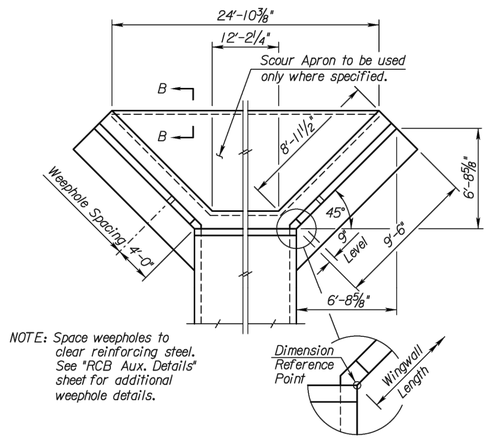


SECTION E-E

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

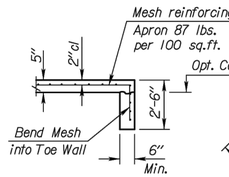


SECTION C-C

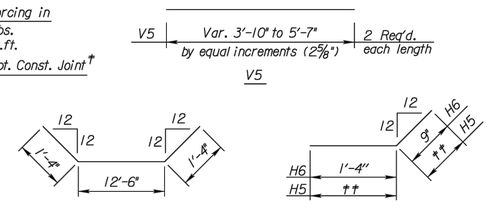


NOTE: Space weepholes to clear reinforcing steel. See "RCB Aux. Details" sheet for additional weephole details.

WING DIMENSIONS FOR NORMAL BOX
(3½:1 Embankment Slope)



SECTION B-B



BENDING DIAGRAM
(All dimensions are out to out of bars.)
†† Bend in Field

Quantities listed below are included in the Summary of Quantities shown on the RCB details.

WINGWALL QUANTITIES (One End Only)				
	Foundation Stabilization		Concrete (Gr. 4.0)	
Wingwalls	1.80	(C.Y.)	5.07	(C.Y.)
Apron	0.00	(C.Y.)	0.00	(C.Y.)
Soil Saver	0.00	(C.Y.)	0.00	(C.Y.)
Reinforcing Steel (Gr. 60)			556	Lbs.
Welded Wire Fabric (Wings)			51	Lbs.
Welded Wire Fabric (Apron)			0	Lbs.
Granular Backfill (Wingwalls)			12.00	C.Y.
Filter Fabric (subsidiary)			18.00	S.Y.

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

✳ See Bending Diagram

		#4C1	#4D1	#4E1	#4C2	#4D2	#4E2	#6V1	#4H1	#4H2	#4H5	#4H6	#4H7	#4V5	#4V6
0° Skew	No.	4	18✳	6	1	10 ✳	3 ✳	18	12	4	8 ✳	8✳	8✳	18	6
	Length	11'-7"	4'-11"	8'-9"	13'-4"	5'-2"	15'-2"	✳	8'-4"	8'-6"	1'-10"	2'-1"	1'-9"	✳	5'-0"

Issue:		
JOB NO.	200605-005	
DATE	MAY 2025	
PM	KPG	
DESIGNED BY	KPG	
DRAWN BY	BJS	
CHECKED BY	KMS	

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION
Serial No.(000) Sta. 0
FLARED WINGWALLS
4 ft Rise (0°SKEW)
BR 10.00.04 Sedgwick Co.

FHWA APPROVAL	10-20-10	APP'D	Terry L. Fleck
DESIGNED	DETAILED	QUANTITIES	CADD
DESIGN CK.	DETAIL CK.	QUAN. CK.	CADD CK.

CADconform Certify This File

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CITY OF WICHITA

KEVIN P. G. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

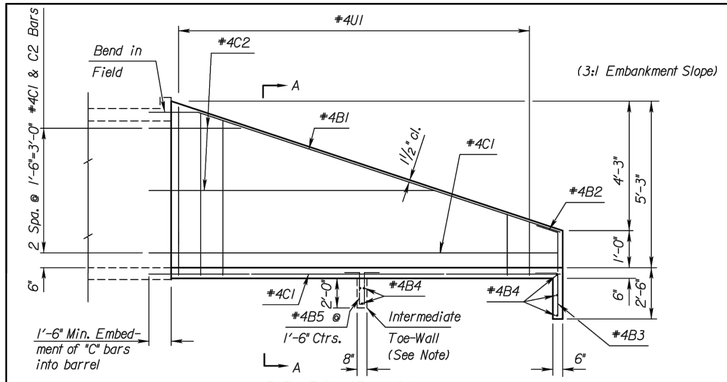
PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

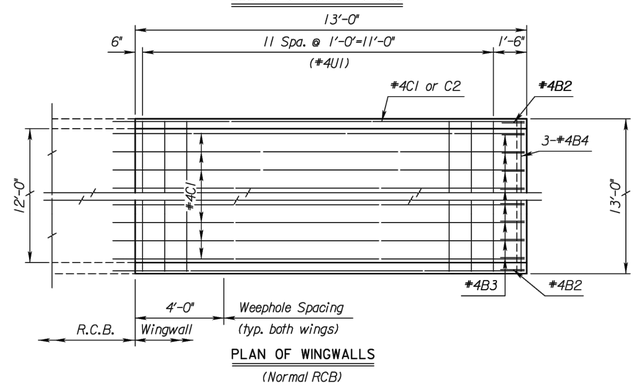
FLARED WINGWALLS-4 FT RISE-SWS LINE 1

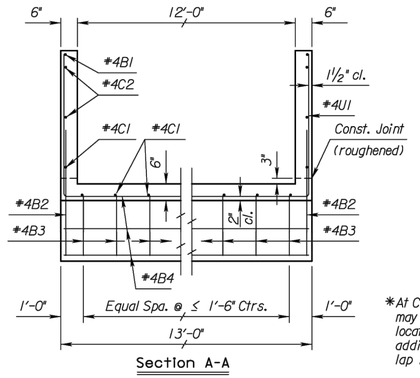
CG302
32 OF 44

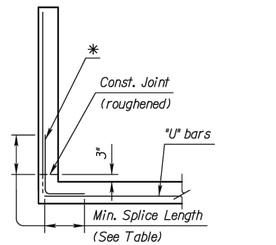
SAVED 11/14/2024 9:40:15 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:14:47 AM BY KEVIN.GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\31-200605-005-CG302 FLARED WINGWALLS-4 FT RISE-SWS LINE 1.DWG

Plotted By: darrins
Plot Location:
File: 2024-11-14_200605-005_1-12x14.dgn
Plot Date: 14-NOV-2024 09:01







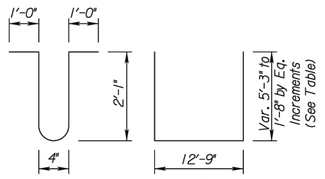


*At Contractors option, straight bars and bent bars may be substituted for "U" bars and spliced at locations shown. No allowance will be made for additional steel required. See table for required lap length.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	200605-005			

GENERAL NOTES

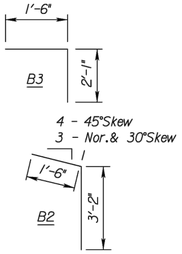
DESIGN SPECIFICATION: AASHTO LRFD Spec., 2007 Ed., 2009 Int.
DESIGN LOADING: HL93
UNIT STRESSES: Grade 4.0 Concrete; f'c = 4,000 p.s.i.
Reinforcing Steel; fy = 60,000 p.s.i.
CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a ¾inch triangular moulding.
REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. Welded wire fabric shall conform to ASTM A185. Wire fabric shall be electrically welded and shall be composed of 6x6-W1.4xW1.4 welded wire fabric and shall be classified as pounds of reinforcing.
QUANTITIES: Wingwall Quantities include all quantities outside the neat lines of the box, excluding the hubguard.
BACKFILL MATERIAL: Soils judged as high plasticity clays, fat clays, expansive clays, or organic clays are unsuitable for backfill material for wingwalls and will not be used. Where these conditions exist, use Granular Backfill (Wingwalls).
FOUNDATION STABILIZATION: Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.
INTERMEDIATE TOE-WALL: When the length of wingwalls and width of apron both exceed 15'-0", an intermediate toe-wall shall be constructed at mid-length of wingwall as shown on "Elevation of Wingwall".



SKEW	INCREMENT
0°	4"
30°	3½"±
45°	3"±

Normal	Var. 6'-5" to 11'-0" by 4'-7" Increments
30° Skew	Var. 7'-2" to 12'-6" by 5'-4" Increments
45° Skew	Var. 8'-5" to 14'-9" by 6'-4" Increments

C2
(Cut two each length)



BENDING DIAGRAMS
All dimensions are out to out of bars.

NOTE:
Wingwall floor and toewall shall be constructed with the RCB floor. Wingwalls to be constructed with RCB walls.

NOTE:
Space Weepholes to clear reinforcing steel. See "RCB Auxiliary Details" sheet for additional weephole details.

* See Bending Diagram

NOTE: Reinforcing Bar List is for both wings at one end of box only.	*4 B1		*4 B2 *		*4 B3 *		*4 B4		*4 B5 *		*4C1		*4C2				*4U1 *					
	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
°Skew	2	15'-0"	2	4'-8"	9	3'-7"	3	13'-4"		6'-4"	11	14'-4"	4	*			12	*				

WINGWALL QUANTITIES (One End Only)	
Concrete (Grade 4.0)	5.30 CY.
Reinforcing Steel	365 Lbs.
Foundation Stabilization	3.94 CY.

Quantities listed are included in the Summary of Quantities shown on the RCB.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION
Serial No.(000) Sta. 0
STRAIGHT WINGWALLS
4 ft Rise (0°Skew)
BR II.00.04 Sedgwick Co.
FHWA APPROVAL 10-20-10 APP'D Terry L. Fleck
DESIGNED | DETAILED | QUANTITIES | CADD
DESIGN CK. | DETAIL CK. | QUAN. CK. | CADD CK.

Plotted By: darrins
Plot Location:
File: 2024-11-14_200605-005_I-12x4.dgn
Plot Date: 14-NOV-2024 09:01

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303 SOUTH TOPEKA
WICHITA, KS 67202
316-262-2691 www.pec1.com

CITY OF WICHITA

KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526 IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

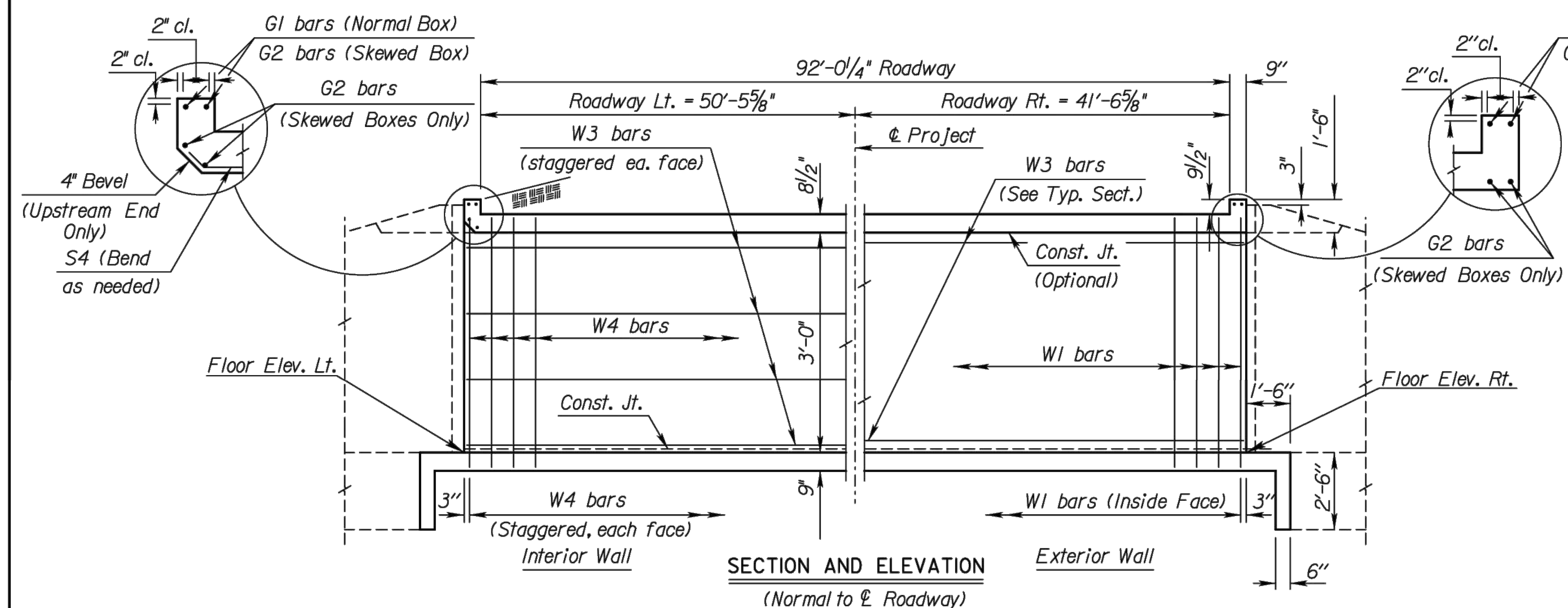
JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

STRAIGHT WINGWALLS-4 FT RISE-SWS LINE 1

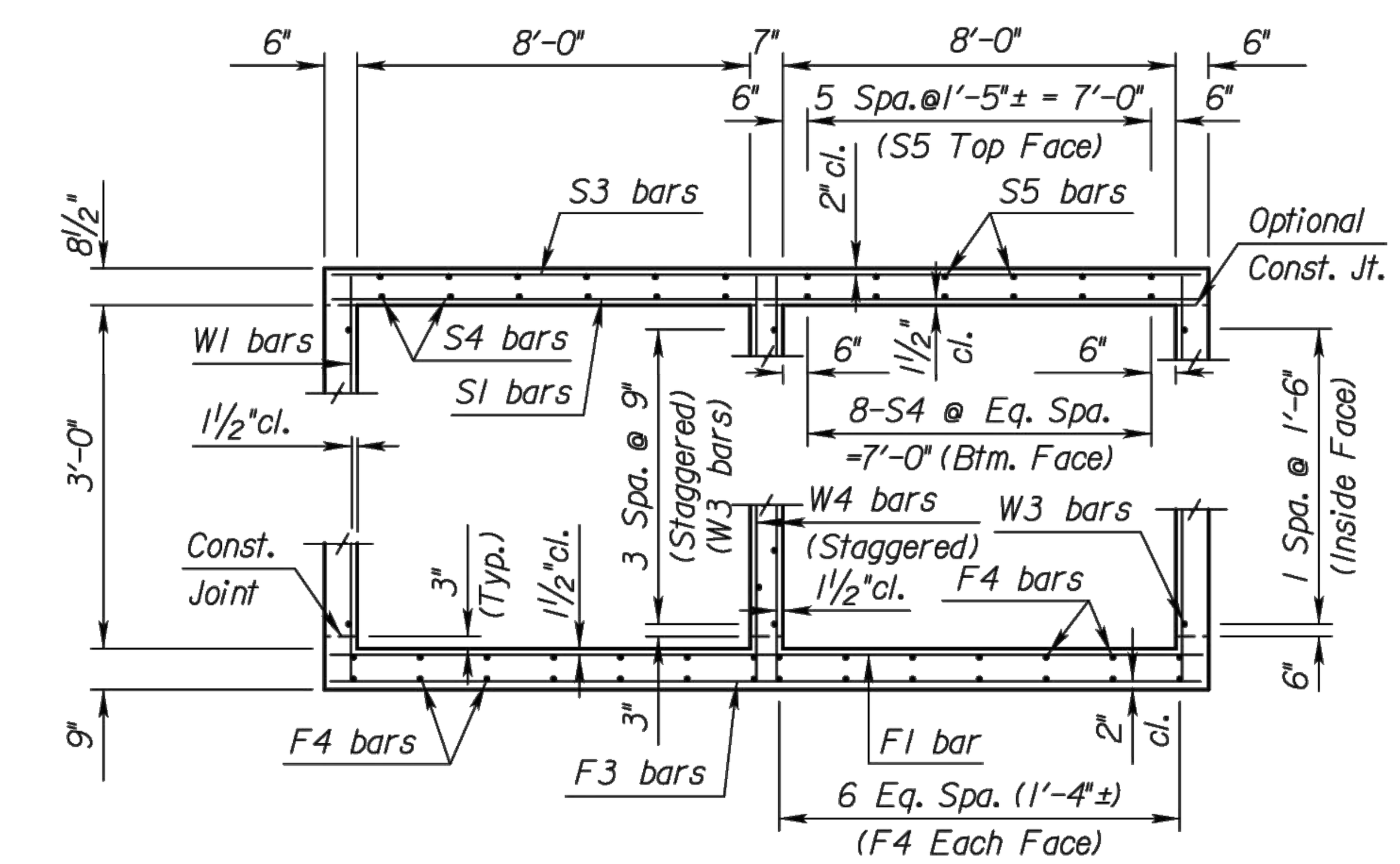
CG303
33 OF 44

SAVED 11/14/2024 9:39:38 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:14:53 AM BY KEVIN.GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\32-200605-005-CG303 STRAIGHT WINGWALLS-4 FT RISE-SWS LINE 1.DWG

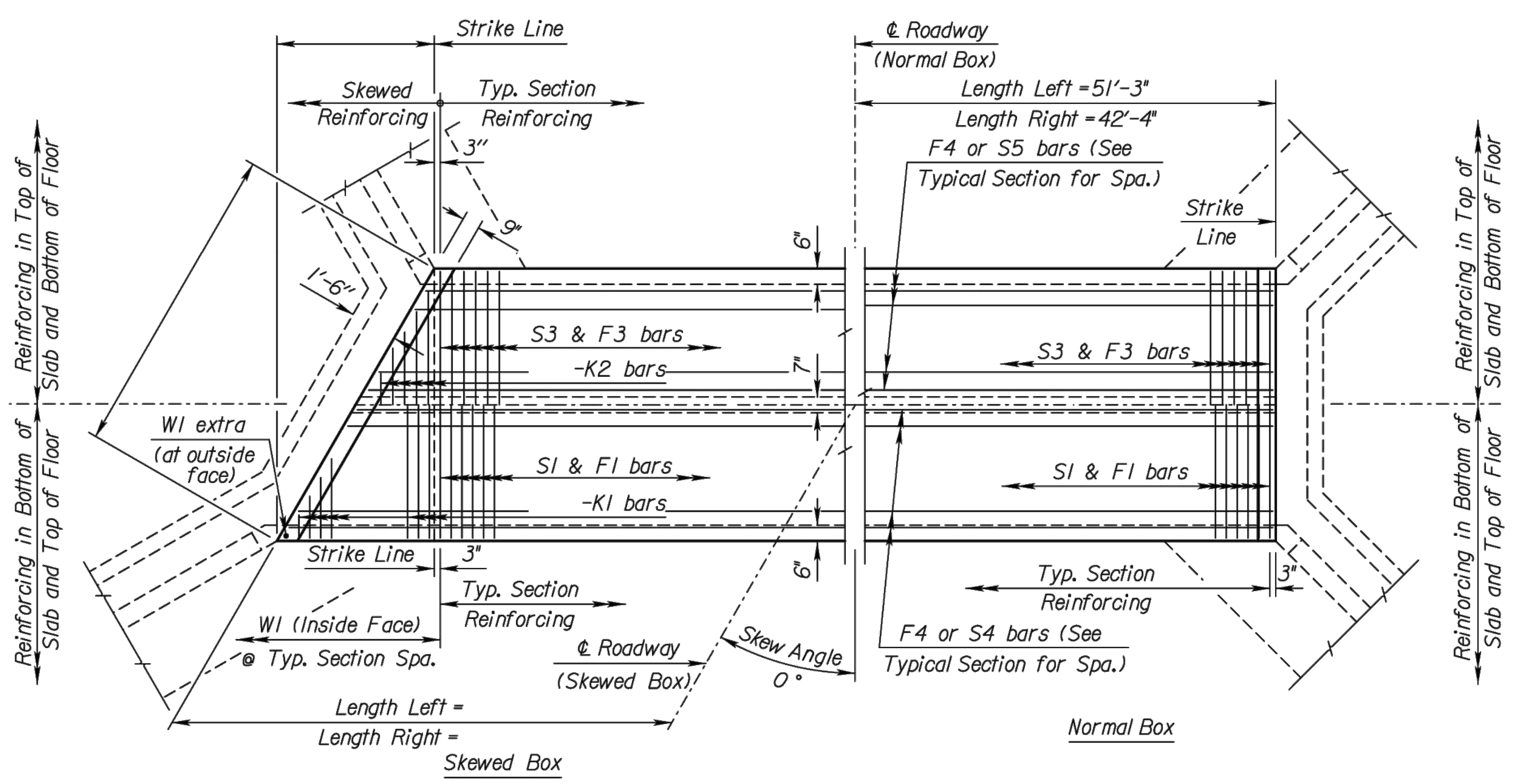
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	200605			



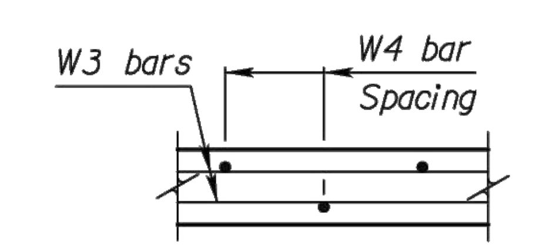
SECTION AND ELEVATION
(Normal to ℄ Roadway)



TYPICAL SECTION



PLAN



PLAN OF INTERIOR WALL

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD Spec., 2007 Ed., 2009 Int.
DESIGN LOADING: HL93
UNIT STRESSES: Grade 4.0 Concrete f'c = 4,000 p.s.i.
Reinforcing Steel fy = 60,000 p.s.i.
FILL HEIGHT: Unless otherwise noted, the Design Fill Height is measured from the riding surface at the culvert and includes the surfacing.
CONCRETE: Use concrete conforming to Grade 4.0 Concrete. Bevel all exposed edges with a ¾" triangular molding. Where Grade 4.0(AE) is specified, place this concrete in the top slab above the Construction Joint.
REINFORCING: Use reinforcing steel conforming to ASTM A615, Grade 60. All dimensions relative to reinforcing steel are to the centerline of the bar unless otherwise noted.
EXCAVATION: Excavation for culverts less than bridge length shall not be paid for directly but shall be subsidiary to Grade 4.0 Concrete. Excavation for RCB bridges shall be paid for as Class III Excavation.
SEAL COURSE: The Engineer may require a seal course. The seal course shall be unreinforced Concrete(Commercial Grade) with a minimum depth of 3 inches or as determined by the Engineer. Concrete for the seal course shall be paid for at the unit price set for Concrete for Seal Course.
FOUNDATION STABILIZATION: The Foundation Stabilization quantity has been calculated to the limits shown on the "RCB Auxiliary Details" sheet. The depth may be increased by the Engineer. The Contractor may underrun Foundation Stabilization under the barrel if founded on firm material and with the Engineer's approval. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.
QUANTITIES: The quantities shown in the Culvert Summary include apron and/or soil saver quantities when they are required by the plans. Payment for additional quantities that result from including a seal course and/or a floating apron, as a change in the original plans, shall be made at the unit price bid for the various items involved.
GRANULAR BACKFILL (WINGWALLS): See the "Auxiliary Details" sheet.
STRIKE LINE: Construct the wingwalls and that portion of the RCB outside the Strike Line level. Construct the wingwall footings with the culvert floor. See the wingwall detail sheets.
BRIDGE BACKWALL PROTECTION SYSTEM: For structures with this bid item in the Summary of Quantities. See the "Auxiliary Details" sheet.

CULVERT SUMMARY

⧗ For design purposes ONLY. Do NOT use for Construction — ◕ includes any welded wire fabric

Floor Elev. Lt.	Floor Elev. Rt.	Crown Gr. Elev.	⧗Design Fill Ht.	Skew	Left Wings	Right Wings	Scour Apron	Soil Saver	Concrete: Barrel (Cu.Yds.)	Concrete: Wings (Cu.Yds.)	Concrete: Total (Cu.Yds.)	Reinf. Steel (Gr. 60): Barrel (Lbs.)	Reinf. Steel (Gr. 60): ◕Wings (Lbs.)	Reinf. Steel (Gr. 60): Total (Lbs.)	LRFR RATING FACTORS HL-93 Loading: Inventory	LRFR RATING FACTORS HL-93 Loading: Operating
1259.00	1258.90	1264.33	2	0	Flared	Straight	No	No	106.01	9.15	115.16	22072	792	22863	1.22	1.56

△ Epoxy Coated Bars

BAR SCHEDULE

Bar	Size	Spa.	No.	Length
△ F1	6	6½"	173	17'-3"
(blank)	N/A	N/A	N/A	N/A
△ F3	5	5½"	204	17'-3"
△ F4	4		84	32'-1"
△ S1	6	6½"	173	17'-3"
(blank)	N/A	N/A	N/A	N/A
△ S3	5	5½"	204	17'-3"
△ S4	5		32	47'-6"
△ S5	4		36	32'-1"
△ K1	N/A	N/A	N/A	
△ K2	N/A	N/A	N/A	
△ W1	4	9"	250	4'-1"
△ W2	N/A	N/A	N/A	N/A
△ W3	4		24	32'-1"
△ W4	4	9"	125	4'-1"
△ G1	5		4	17'-3"
△ G2	N/A		N/A	N/A
(blank)				

Minimum Splice Lengths	
#4	1'-5"
#5	1'-9"

SUMMARY OF QUANTITIES		
Concrete (Grade 4.0)	71.3	C.Y.
Concrete (Grade 4.0)(AE)	43.9	C.Y.
Bridge Backwall Protection System	200	S.Y.
Reinforcing Steel (Gr. 60)	790	Lbs.
Reinforcing Steel (Gr. 60)(Epoxy Coated)	22070	Lbs.
Class III Excavation		C.Y.
Foundation Stabilization	43	C.Y.
Concrete for Seal Course (Set)	1	C.Y.
Granular Backfill (Wingwalls)	8	C.Y.

NO.	DATE	REVISIONS	BY	APP'D
1				

KANSAS DEPARTMENT OF TRANSPORTATION
Serial No.(000) Sta.0
DOUBLE 8 ft x 3 ft RCB
BR 2.8.3 P Sedgwick Co.

FHWA APPROVAL 10-20-10	APP'D Terry L. Fleck
DESIGNED	DETAILED
QUANTITIES	CADD
DESIGN CK.	DETAIL CK.
QUAN. CK.	CADD CK.

VERSION/ID	
CADD VER.	12/15/2010
DATABASE	5/4/2020
RCB PROGRAM	7.1.22
RCBX MODEL ID	1504
CELL LIBRARY	12/8/2023

SYSTEM PART 06

Plotted By: darrins
File: 2024-3-14_200605_2-8x3.dgn
Plot Date: 14-MAR-2024 13:30
Plot Location:

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CITY OF WICHITA

KEVIN P. GRAHAM
LICENSED
27806
05/27/2025
KANSAS
PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526 IMPROVEMENTS
SWANEY FARM ADDITION
PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:

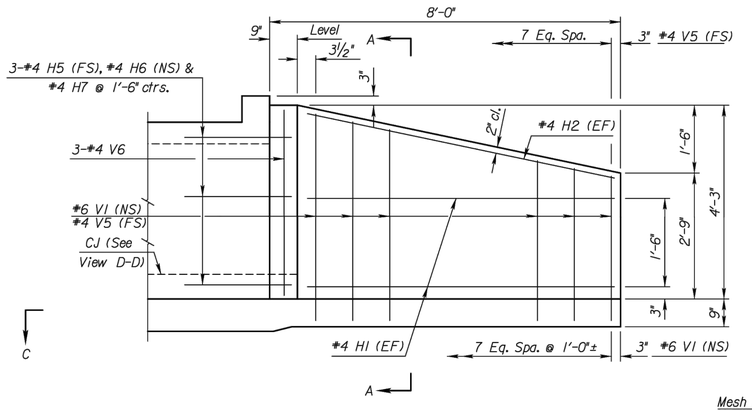
JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

DOUBLE 8 FT X 3 FT RCB-SWS LINE 8

CG304

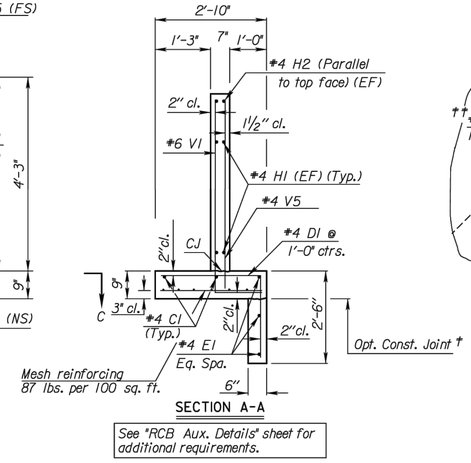
SAVED 8/9/2024 11:08:21 AM BY BILL.SEXSON
PLOTTED 5/27/2025 11:14:58 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\33-200605-005-CG304 DOUBLE 8 FT X 3 FT RCB-SWS LINE 8.DWG

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	200605			



ELEVATION OF WINGWALL

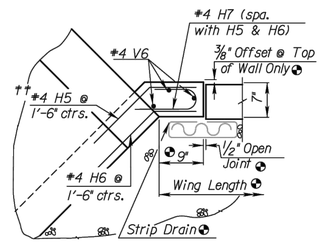
(Backface Shown)



SECTION A-A

See "RCB Aux. Details" sheet for additional requirements.

Typical both wings



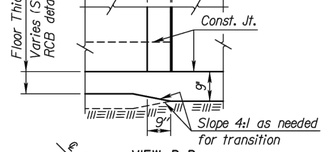
WINGWALL JOINT DETAIL

(Plan View)

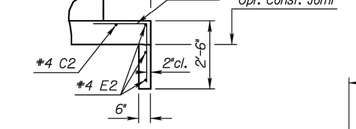
† NOTE: Const. Jt. may be used at Contractor's option when approved by the Engineer. D1 bars or mesh may be spliced thus: ⌐ Minimum overlap shall be 1'-3". No increase in quantities or cost shall be allowed when Contractor elects this option.

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD Spec., 2007 Ed., 2009 Int.
DESIGN LOADING: HL93
UNIT STRESSES: Grade 4.0 Concrete; f'c = 4,000 p.s.i.
Reinforcing Steel; fy = 60,000 p.s.i.
CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a ¾" triangular mouliding.
REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. Welded Wire Reinforcement shall conform to ASTM A185. All dimensions relative to reinforcing steel shall be to centerline of bar unless otherwise noted. Welded Wire Reinforcement shall be classified as pounds of reinforcing and included in the total quantity for the bid item Reinforcing Steel (Gr. 60).
QUANTITIES: Wingwall Quantities include all quantities outside the neat lines of the box, excluding the hubguard.
APRON: A 5" concrete slab shall be constructed between the downstream wings in locations subject to scour only when specified on the plans or by the Engineer.
BACKFILL MATERIAL: Use Granular Backfill material meeting the requirements of SB-1, SB-2, SCA-1, SCA-2. Backfill all wings to limits shown on the "RCB Auxiliary Sheet".
FILTER FABRIC: Separate in-situ material from granular backfill with approved filter fabric complying with Section 1710. Filter Fabric is subsidiary to "Granular Backfill".
FOUNDATION STABILIZATION: Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

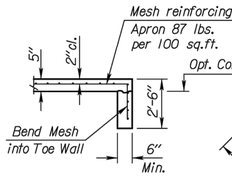


VIEW D-D

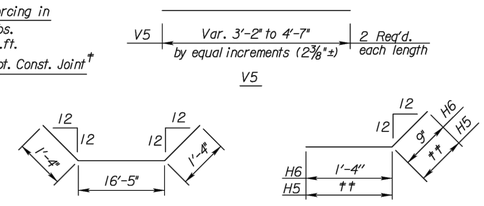


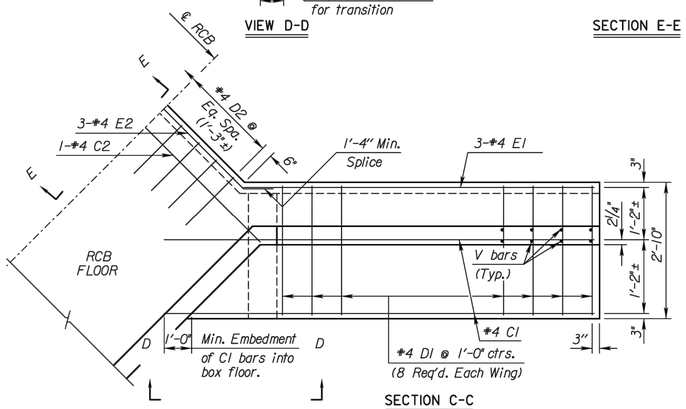
SECTION E-E

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



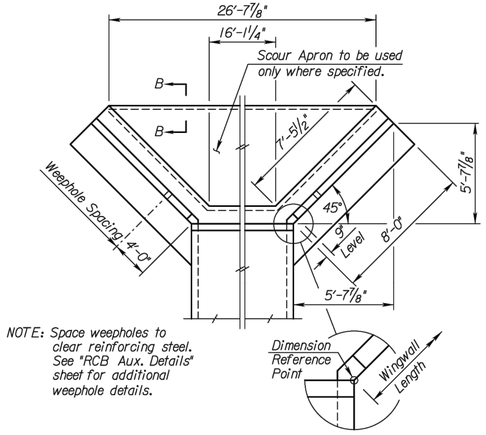
SECTION B-B





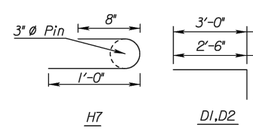
SECTION C-C

(Plan of Footing)



WING DIMENSIONS FOR NORMAL BOX

(3½:1 Embankment Slope)



BENDING DIAGRAM

(All dimensions are out to out of bars.)

†† Bend in Field

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

✱ See Bending Diagram

		#4C1	#4D1	#4E1	#4C2	#4D2	#4E2	#6V1	#4H1	#4H2	#4H5	#4H6	#4H7	#4V5	#4V6
0° Skew	No.	4	16✱	6	1	13 ✱	3✱	16	8	4	6✱	6 ✱	6 ✱	16	6
	Length	9'-10"	4'-8"	7'-3"	17'-3"	5'-2"	19'-1"	✱	6'-10"	7'-0"	1'-10"	2'-1"	1'-9"	✱	4'-0"

Quantities listed below are included in the Summary of Quantities shown on the RCB details.

WINGWALL QUANTITIES (One End Only)				
	Foundation Stabilization		Concrete (Gr. 4.0)	
Wingwalls	1.44	(C.Y.)	4.27	(C.Y.)
Apron	0.00	(C.Y.)	0.00	(C.Y.)
Soil Saver	0.00	(C.Y.)	0.00	(C.Y.)
Reinforcing Steel (Gr. 60)			458	Lbs.
Welded Wire Fabric (Wings)			39	Lbs.
Welded Wire Fabric (Apron)			0	Lbs.
Granular Backfill (Wingwalls)			8.00	C.Y.
Filter Fabric (subsidiary)			14.00	S.Y.

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION
Serial No.(000) Sta. 0
FLARED WINGWALLS
3 ft Rise (0°SKEW)
BR 10.00.03 Sedgwick Co.

FHWA APPROVAL	10-20-10	APP'D	Terry L. Fleck
DESIGNED	DETAILED	QUANTITIES	CADD
DESIGN CK.	DETAIL CK.	QUAN. CK.	CADD CK.

CADconform Certify This File

Plotted By: darrins | Plot Location:
File: 2024-3-14_200605_2-8x3.dgn
Plot Date: 14-MAR-2024 13:30

SAVED 8/9/2024 11:08:30 AM BY BILL.SEXSON
PLOTTED 5/27/2025 11:15:03 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\00412PD3_PLANS\030_SWD\34-200605-005-CG305 FLLARED WINGWALLS-3 FT RISE-SWS LINE 8.DWG

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WICHITA, KS 67202
316-262-2691 www.pec1.com

CITY OF WICHITA

KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526 IMPROVEMENTS

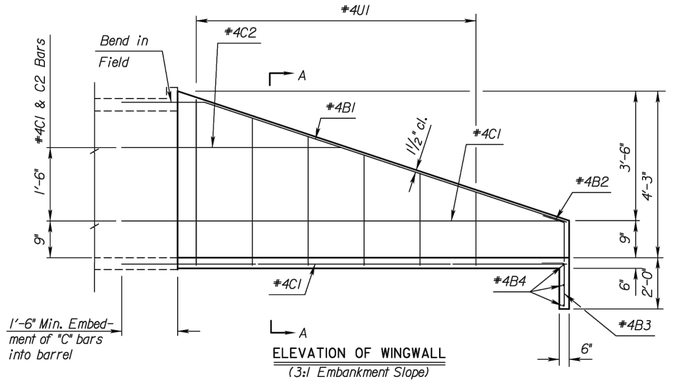
SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

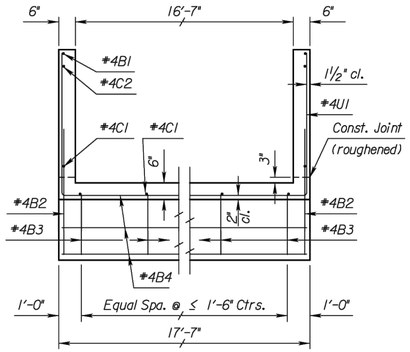
Issue:		
JOB NO.	200605-005	
DATE	MAY 2025	
PM	KPG	
DESIGNED BY	KPG	
DRAWN BY	BJS	
CHECKED BY	KMS	

FLLARED WINGWALLS-3 FT RISE-SWS LINE 8

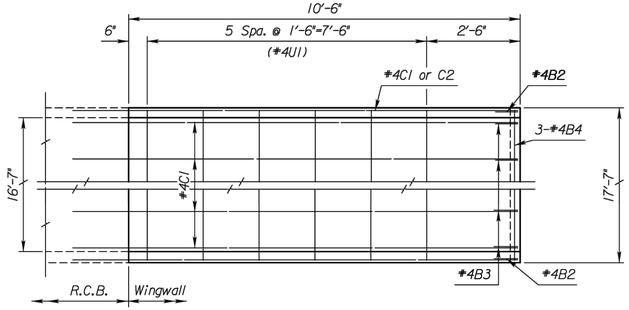
CG305
35 OF 44



ELEVATION OF WINGWALL
(3:1 Embankment Slope)

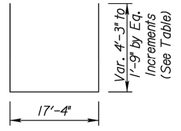


Section A-B

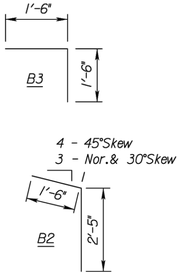


PLAN OF WINGWALLS
(Normal RCB)

NOTE:
Wingwall floor and toewall shall be constructed with the RCB floor. Wingwalls to be constructed with RCB walls.



SKEW	INCREMENT
0°	6"
30°	5"
45°	4"



BENDING DIAGRAMS
All dimensions are out to out of bars.

NOTE:
Space Weepholes to clear reinforcing steel. See "RCB Auxiliary Details" sheet for additional weephole details.

* See Bending Diagram

NOTE: Reinforcing Bar List is for both wings at one end of box only.	*4 B1		*4 B2 *		*4 B3 *		*4 B4				*4C1		*4C2				*4U1 *					
	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
*Skew	2	12'-6"	2	3'-11"	12	3'-0"	3	17'-3"		0"	14	11'-10"	2	7'-2"			6	*				

WINGWALL QUANTITIES (One End Only)	
Concrete (Grade 4.0)	4.88 CY.
Reinforcing Steel	294 Lbs.
Foundation Stabilization	4.00 CY.

Quantities listed are included in the Summary of Quantities shown on the RCB.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	200605			

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD Spec., 2007 Ed., 2009 Int.
DESIGN LOADING: HL93
UNIT STRESSES: Grade 4.0 Concrete; f'c = 4,000 p.s.i.
Reinforcing Steel; fy = 60,000 p.s.i.
CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a ¾inch triangular moulding.
REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. Welded wire fabric shall conform to ASTM A185. Wire fabric shall be electrically welded and shall be composed of 6x6-W1.4xW1.4 welded wire fabric and shall be classified as pounds of reinforcing.
QUANTITIES: Wingwall Quantities include all quantities outside the neat lines of the box, excluding the hubguard.
BACKFILL MATERIAL: Soils judged as high plasticity clays, fat clays, expansive clays, or organic clays are unsuitable for backfill material for wingwalls and will not be used. Where these conditions exist, use Granular Backfill (Wingwalls).
FOUNDATION STABILIZATION: Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.
INTERMEDIATE TOE-WALL: When the length of wingwalls and width of apron both exceed 15'-0", an intermediate toe-wall shall be constructed at mid-length of wing-wall as shown on "Elevation of Wingwall".

NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION
Serial No.(000) Sta. 0
STRAIGHT WINGWALLS
3 ft Rise (0°Skew)
BR 11.00.03 Sedgwick Co.

FHWA APPROVAL		6-5-91	APP'D Terry L. Fleck
DESIGNED	DETAILED	QUANTITIES	CADD
DESIGN CK.	DETAIL CK.	QUAN. CK.	CADD CK.

Plotted By: darrins | Plot Location:
File: 2024-3-14.200605_2-8x3.dgn
Plot Date: 14-MAR-2024 13:30

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CITY OF WICHITA

KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526 IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

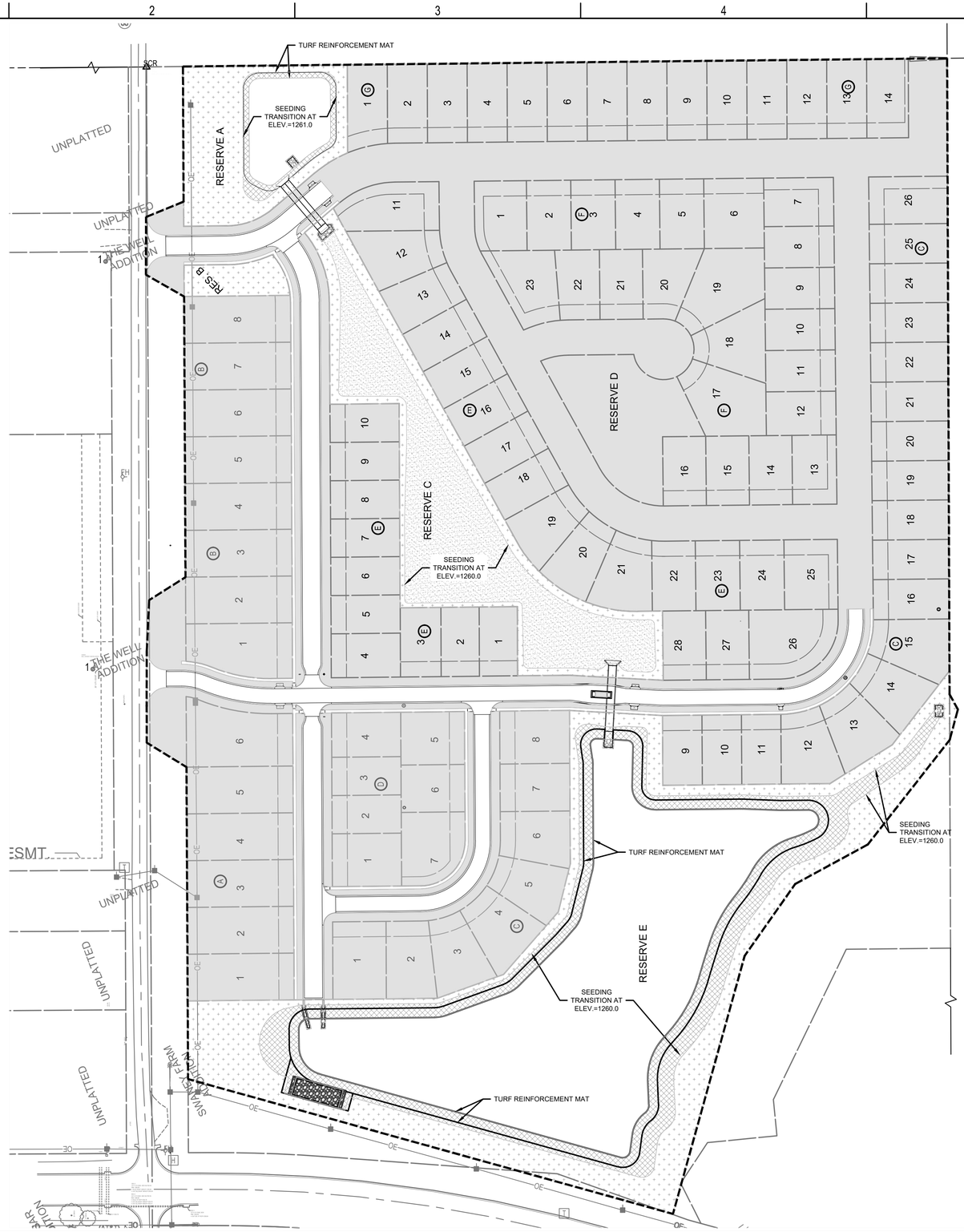
Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

STRAIGHT WINGWALLS-3 FT RISE-SWS LINE 8

CG306
36 OF 44

SAVED 8/9/2024 11:10:52 AM BY BILL.SEXSON
PLOTTED 5/27/2025 11:15:07 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\00402PD3_PLANS\030_SWD\35-200605-005-CG306 STRAIGHT WINGWALLS-3 FT RISE-SWS LINE 8.DWG



LEGEND

- APPROXIMATE LIMITS OF GRADING
- TEMPORARY RYE SEEDING PER CITY OF WICHITA SPECIFICATIONS 31.8 +/- ACRES
- WET ZONE SEEDING MIX - PERMANENT 2.1 +/- ACRES
- DRY POND SEEDING MIX - PERMANENT 1.9 +/- ACRES
- DRY ZONE SEEDING MIX - PERMANENT 4.2 +/- ACRES

SCALE IN FEET
0' 100' 200'

WET ZONE SEEDING MIX (CUSTOM) - 10 PLS lb/ac

COMMON NAME	TYPE	PLS lb/ac
TUSSOCK SEDGE	SEED	1.50
FOX SEDGE	SEED	1.50
PICKEREL WEED	SEED	1.00
SPIKE RUSH	SEED	1.00
SWAMP MILKWEED	SEED	1.00
SOFT RUSH	SEED	1.00
BLUE LOBELIA	SEED	1.00
BLUE VERVAIN	SEED	1.00
BLUE FLAG	SEED	1.00
	TOTAL	10.00

DRY POND SEEDING MIX (CUSTOM) - 7 PLS lb/ac

COMMON NAME	TYPE	PLS lb/ac	COMMON NAME	TYPE	PLS lb/ac
FOX SEDGE	SEED	1.00	THREE SQUARE RUSH	SEED	0.08
BARNYARD GRASS	SEED	1.55	FOWL MANNAGRASS	SEED	0.08
FOWL BLUEGRASS	SEED	0.80	NODDING BUR MARIGOLD	SEED	0.08
SOFT STEM BULRUSH	SEED	0.60	SWAMP MILKWEED	SEED	0.05
MUD PLANTAIN	SEED	0.57	BALTIC RUSH	SEED	0.05
DARK GREEN BULRUSH	SEED	0.40	GREAT ANGELICA	SEED	0.05
HARDSTEM BULRUSH	SEED	0.40	RICE CUTGRASS	SEED	0.02
PRAIRIE CORDGRASS	SEED	0.40	AMERICAN MANNA GRASS	SEED	0.02
GIANT BUR REED	SEED	0.40	BRISTLY SEDGE	SEED	0.02
SNEEZEWEED	SEED	0.15	BLUE FLAG IRIS	SEED	0.02
PORCUPINE SEDGE	SEED	0.16	TUSSOCK SEDGE	SEED	0.02
AMERICAN SLOUGHGRASS	SEED	0.08		TOTAL	7.00

DRY ZONE SEEDING MIX
VALLEY PREMIUM SHORT NATIVE MIX
- Drilled @ 15 PLS lbs/ac
STOCK SEED FARMS - ANNUAL WILDFLOWER MIX
- Drilled @ 10 PLS lbs/ac

SEEDING NOTES:

1. QUANTITIES SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY AND ARE APPROXIMATE. CONTRACTOR TO VERIFY ALL QUANTITIES.
2. ALL CUSTOM SEED MIXES ARE AVAILABLE FROM VALLEY FEED AND SEED, WICHITA, KS.
3. ANY AREA DISTURBED BEYOND THE DEPICTED LIMITS OF GRADING SHALL BE SEEDED WITH TEMPORARY RYE SEED MIX.
4. SEED PLACEMENT IS IMPORTANT AND SHOULD BE PLANTED NO MORE THAN ¼" DEEP. TO ENSURE ACCURATE PLACEMENT OF SEED, IT IS PREFERRED THAT SEED IS PLACED WITH A 'SEED DRILL; OR 'NO-TILL DRILL'. WHEN THIS METHOD IS NOT PRACTICAL, THE SEED BED CAN BE PREPATED WITH A CULTIPACKER, THEN BROADCAST SEED AND ROLL AGAIN.
5. GENERALLY, FERTILIZING IS NOT REQUIRED OR RECOMMENDED FOR NATIVE GRASS OR WILDFLOWER ESTABLISHMENT AS IT WOULD PROMOTE WEED GROWTH. FOR THIS PROJECT, A ONE-TIME APPLICATION OF A GRANULAR FERTILIZER IS RECOMMENDED DURING ESTABLISHMENT. ALL WEEDS SHALL BE KILLED PRIOR TO PLANTING.

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CITY OF WICHITA

KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

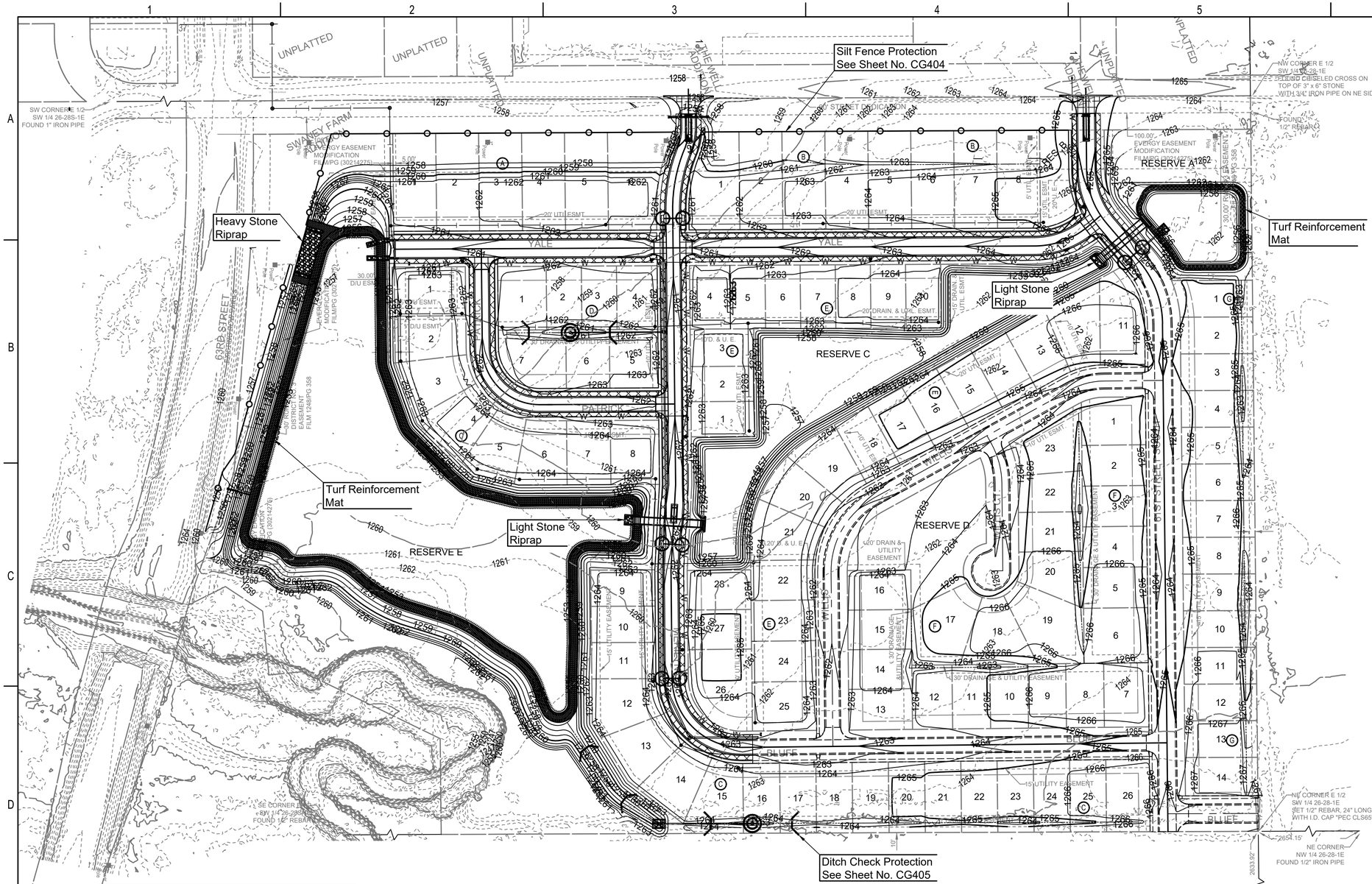
Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

SEEDING PLAN

CG401
37 OF 44

SAVED 12/24/2024 8:07:05 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:15:30 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\36-200605-005-CG401 SEEDING PLAN.DWG



QUANTITIES ARE PROVIDED FOR INFORMATION ONLY.

PAVING AND DRAINAGE-COW PROJ. NO. 472-2024-086026

CURB INLET PROTECTION	8 EACH
DROP INLET PROTECTION	2 EACH
BACK OF CURB PROTECTION	6,293 L.F.
LIGHT STONE RIPRAP	136 S.Y.

SWD-COW PROJ. NO. 526-458-085570

DITCH CHECK PROTECTION	6 EACH
SILT FENCE PROTECTION	1,935 L.F.
LIGHT STONE RIPRAP	70 S.Y.
HEAVY STONE RIPRAP	310 S.Y.
TURF REINFORCEMENT MAT	5,325 S.Y.

SANITARY SEWER-COW PROJ. NO. 468-2024-007800

WATER-COW PROJ. NO. 448-2024-007798

STABILIZED CONSTRUCTION ENTRANCE	2 EACH

GENERAL NOTES

1. CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION PROTECTION THROUGHOUT THE ENTIRE PROJECT. THE QUANTITIES LISTED ON THIS SHEET ARE PROVIDED FOR INFORMATION ONLY.
2. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED MINIMUM STANDARDS. WHENEVER SEDIMENT ENTERS THE STREETS, STORM SEWERS, DITCHES, OR PONDS, CONTRACTOR WILL INSTALL ADDITIONAL DEVICES, AS NEEDED, TO CORRECT THE PROBLEM.
3. THE EROSION CONTROL DEVICES SHOWN HEREON MUST BE IN PLACE AT ALL TIMES DURING CONSTRUCTION UNTIL SUCH TIME AS THE SITE IS REESTABLISHED WITH PAVING OR GRASS. TEMPORARY OR PERMANENT SEEDING AND MULCH WILL BE INSTALLED WHEN EARTHWORK ACTIVITIES CEASE IN AN AREA FOR 14 DAYS OR MORE.
4. ANY MUD INADVERTENTLY TRACKED ONTO ANY STREET SHALL BE CLEANED UP BY THE CONTRACTOR, AT THE END OF EACH DAY'S WORK, OR AS DIRECTED BY THE FIELD ENGINEER.
5. CONTRACTOR TO FURNISH A TRUCK WASH-OUT PIT TO BE PLACED AT A CONVENIENT LOCATION THAT DOES NOT CONFLICT WITH CONSTRUCTION. CONTRACTOR SHALL CLEAN OUT AND BACKFILL PIT PRIOR TO FINAL INSPECTION. LOCATION SHALL BE APPROVED BY THE FIELD ENGINEER.

EROSION CONTROL LEGEND

- PROPOSED SILT FENCE (WATERLINE & SANITARY SEWER)
- PROPOSED SILT FENCE (SWD)
- PROPOSED CURB INLET PROTECTION
- PROPOSED AREA INLET PROTECTION
- PROPOSED DITCH CHECK
- PROPOSED LIGHT STONE RIP-RAP
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED BACK OF CURB PROTECTION

PEC
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CITY OF WICHITA

KEVIN P. GRAHAM
LICENSED
27806
05/27/2025
KANSAS
PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

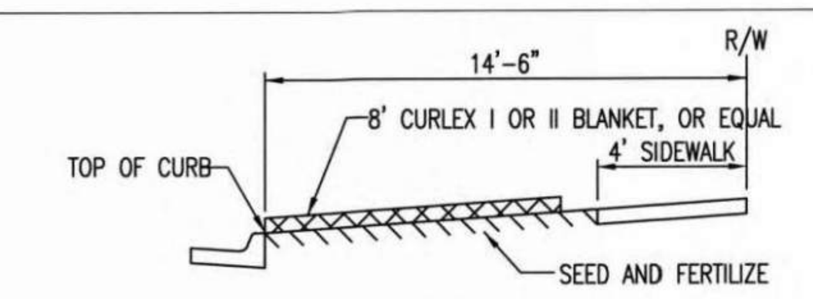
Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

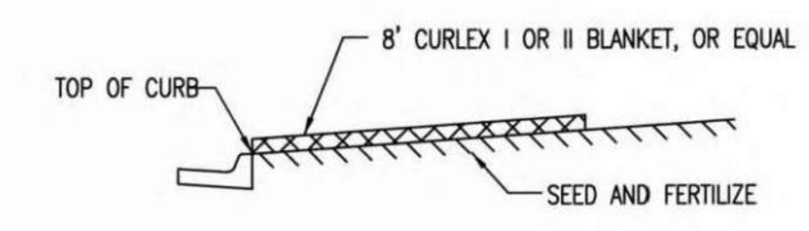
EROSION CONTROL PLAN

CG402
38 OF 44

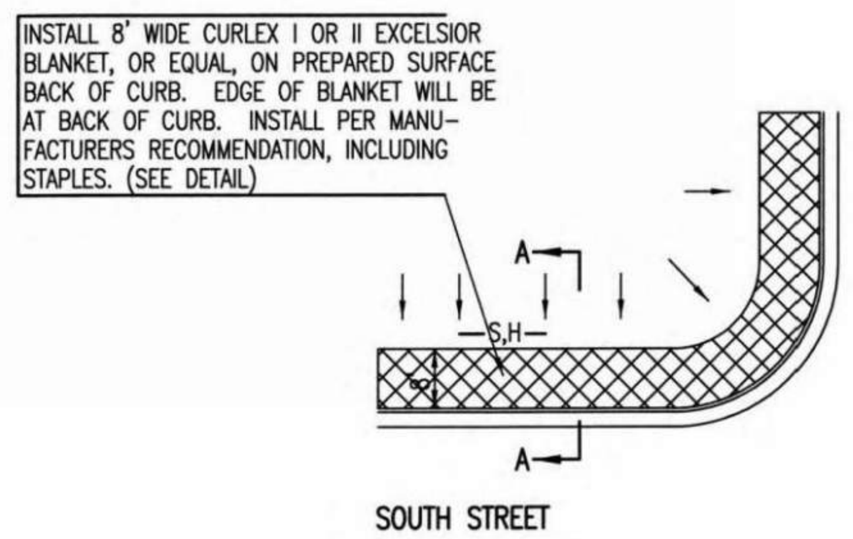
SAVED 5/27/2025 10:02:32 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:16:08 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\37-200605-005-CG402 EROSION CONTROL PLAN.DWG

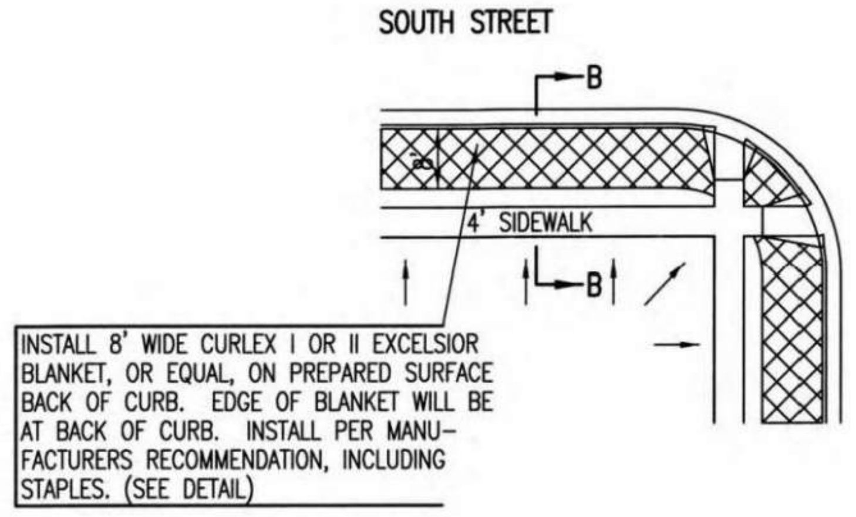


SECTION B-B



SECTION A-A

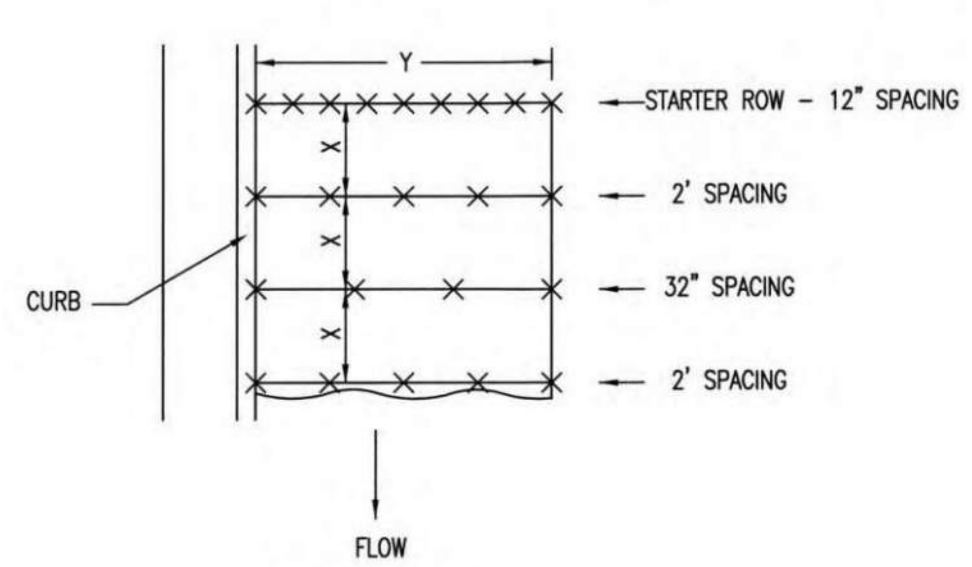




GENERAL NOTES

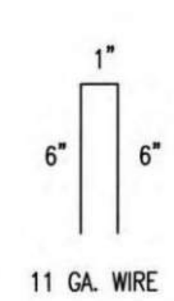
1. EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
2. EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
3. AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE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

BACK OF CURB PROTECTION DETAIL



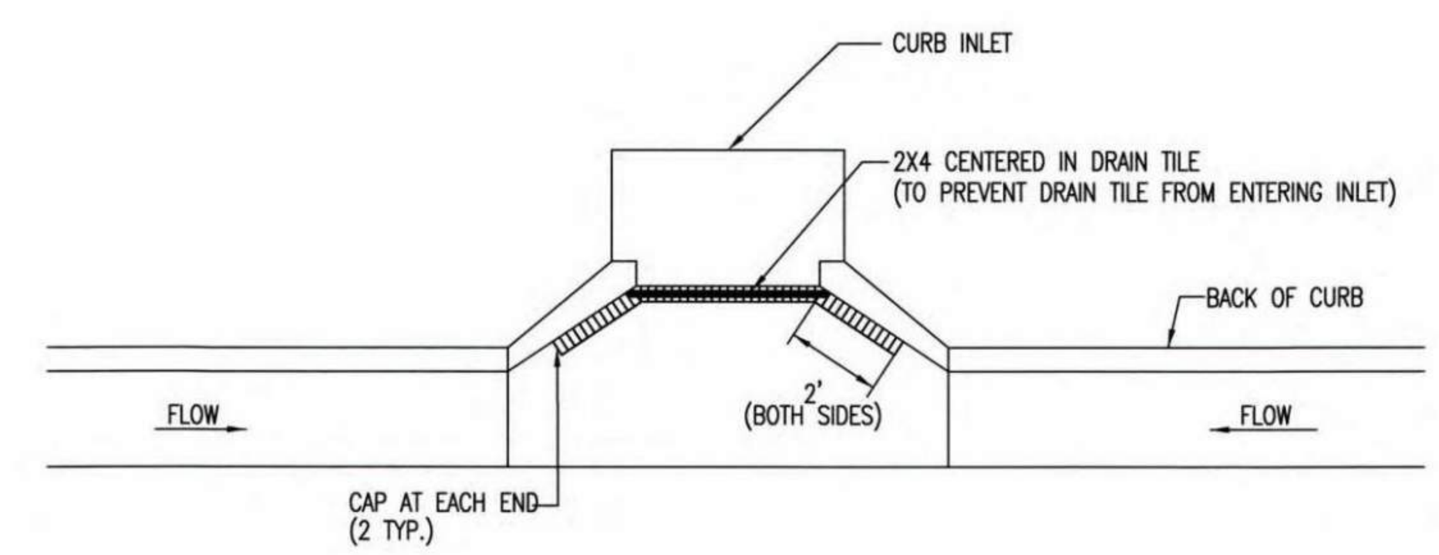
STAPLE PATTERN

NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)



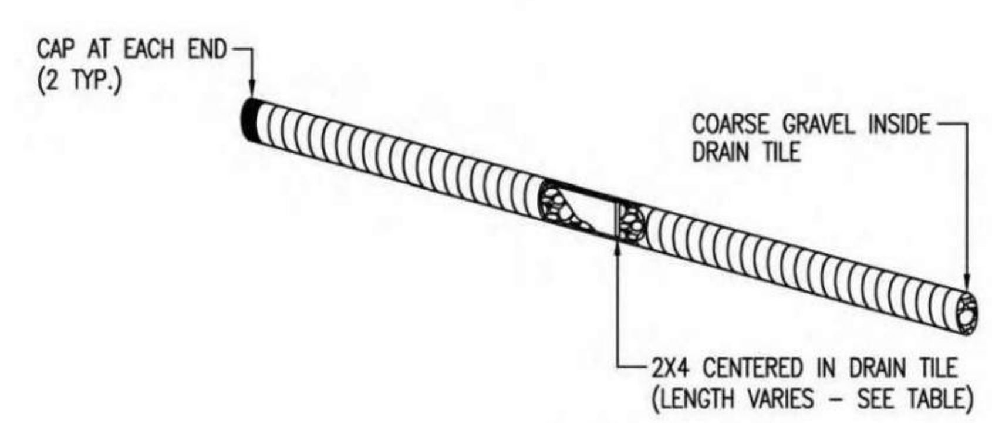
STAPLE

DETAILS FOR APPROVED EROSION CONTROL MAT



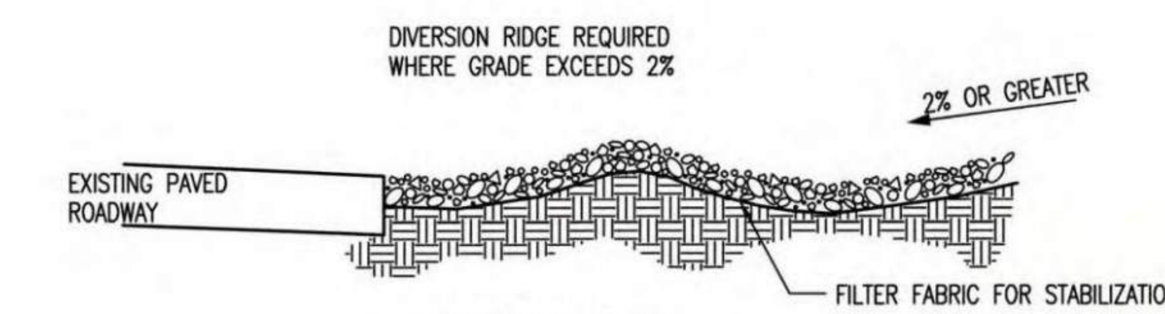
NOTE:
PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

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

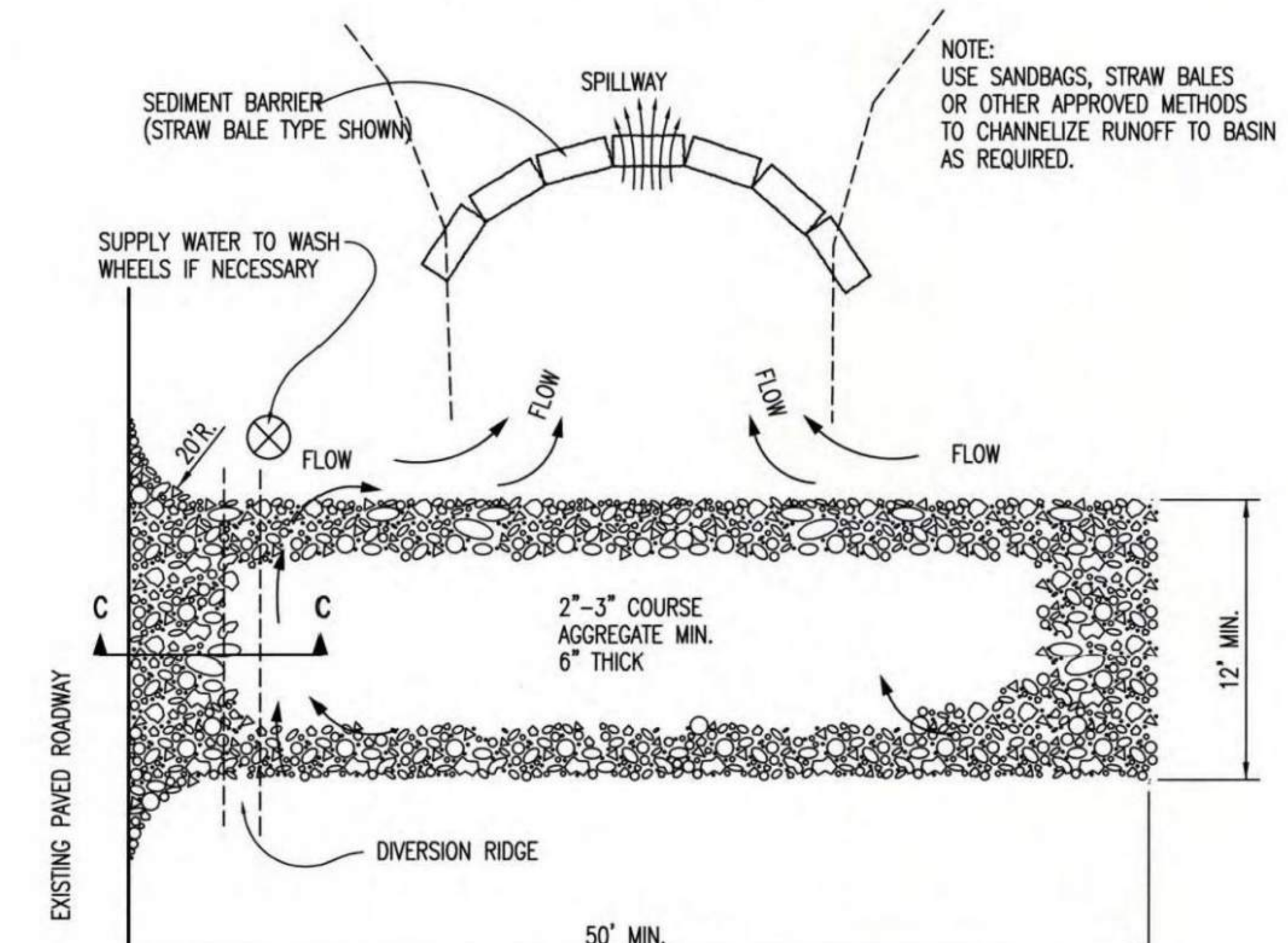


CURB INLET PROTECTION

4" PERFORATED PIPE W/ GRAVEL



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.

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED KANSAS PROFESSIONAL ENGINEER 05/24/13

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
472-2024-086026	____	

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

SHEET ---- of ___

SW-501

SAVED 8/9/2024 11:11:00 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:16:12 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\38-200605-005-CG403 BACK OF CURB & CURB INLET PROT.DWG

SAVED 8/9/2024 11:11:00 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:16:12 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\38-200605-005-CG403 BACK OF CURB & CURB INLET PROT.DWG

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CITY OF WICHITA

KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526 IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
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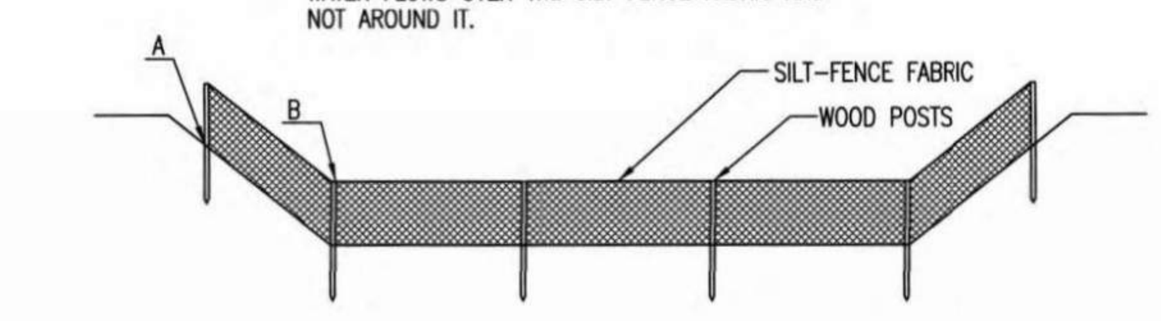
CHECKED BY	KMS

BACK OF CURB AND CURB INLET PROTECTION

CG403

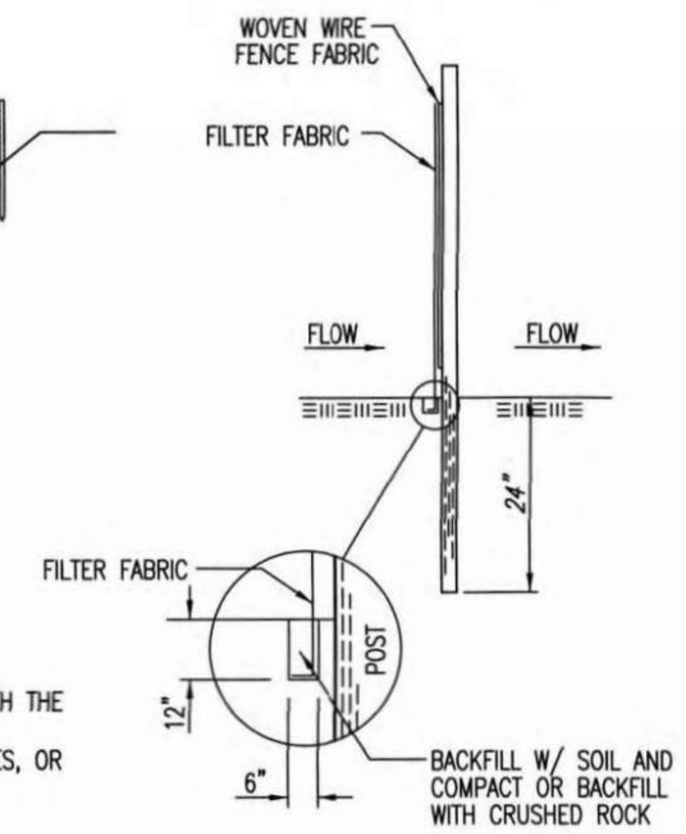
NOTE: POINT A MUST BE HIGHER THAN POINT B SO THAT WATER FLOWS OVER THE SILT FENCE FABRIC AND NOT AROUND IT.



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.

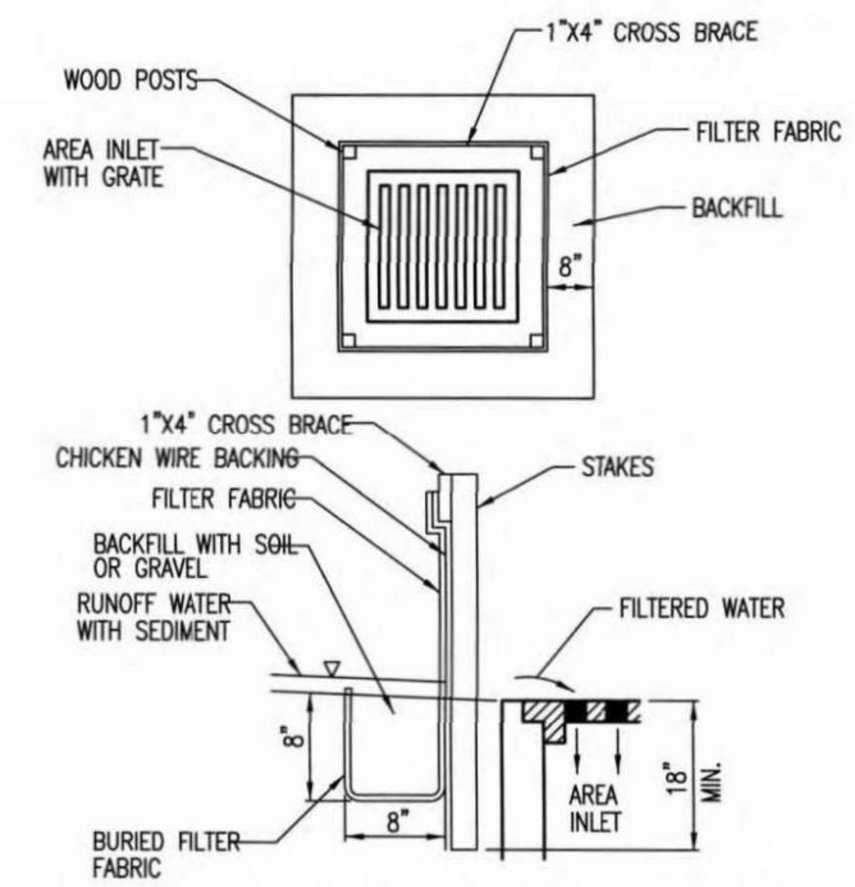
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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.

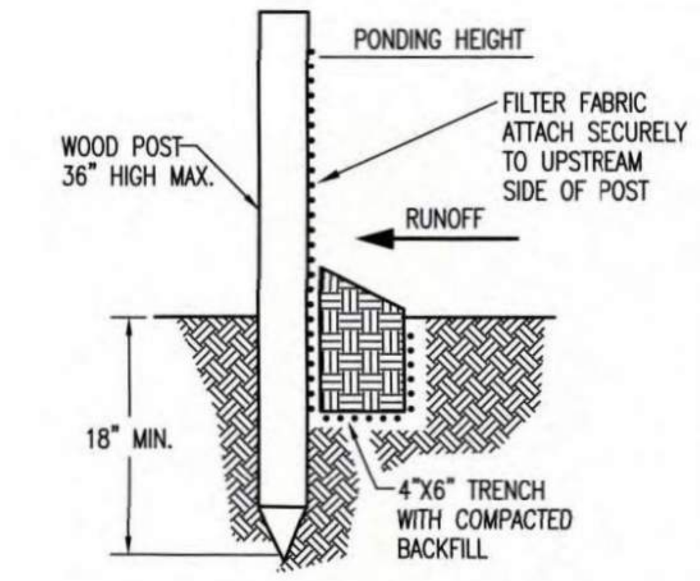
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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?

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER 05/30/13

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
472-	___	

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

SHEET 2 of __

SW-502

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U:\Wichita-Civil\2020\200605\004\2PD3_Plans\030_SWD\39-200605-005-CG404 SILT FENCE DITCH CHECK

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CITY OF WICHITA

KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526 IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:

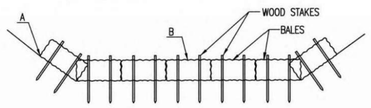
JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

SILT FENCE DITCH CHECK

CG404

SAVED 8/9/2024 11:11:13 AM BY KEVIN.GRAHAM
PLOTTED 5/27/2025 11:16:17 AM BY KEVIN GRAHAM
U:\WICHITA-CIVIL\2020\200605\004\2PD3_PLANS\030_SWD\39-200605-005-CG404 SILT FENCE DITCH CHECK.DWG

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".

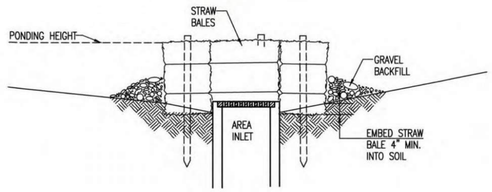
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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.

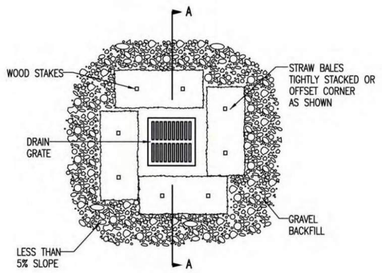
INSPECTION AND MAINTENANCE:

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.

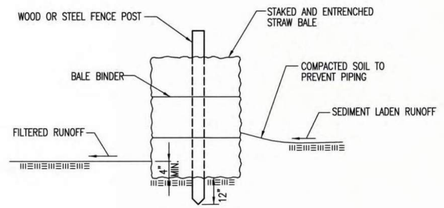
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

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?

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 16294 PROFESSIONAL ENGINEER KANSAS 05/27/25

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
472-	____	

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

SHEET: ---- of __

SW-503

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CITY OF WICHITA

KEVIN P. G. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526 IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

STRAW BALE DITCH CHECK

CG405
41 OF 44

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Plot Scale: 1:1 05-27-2025 11:16:22 AM by ###
U:\Wichita-Civil\2020\200605\004\2PD3_Plans\030_SWD\40-200605-005-CG405 STRAW BALE DITCH CHECK

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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.

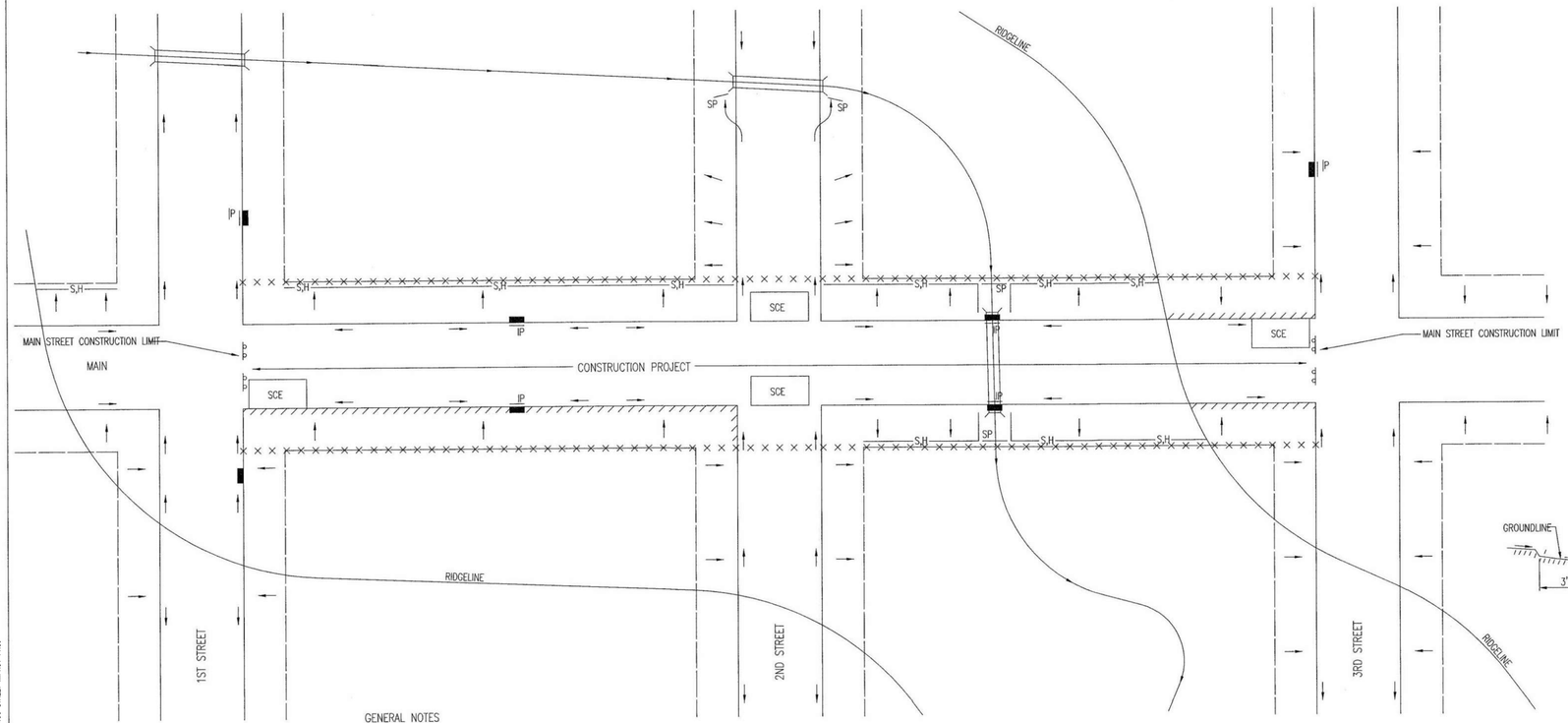
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.

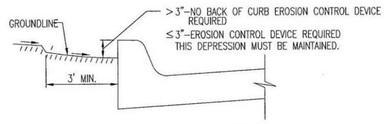
3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.

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)

GARY L. JANZEN — LICENSED — 16294 — KANSAS — PROFESSIONAL ENGINEER — 06/05/25

REVISION: JUNE 2025

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

STREET IMPROVEMENT PROJECTS

CITY ENGINEER: GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-		

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

SHEET 4

SW-504

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CITY OF WICHITA

KEVIN P. GRAHAM — LICENSED — 27806 — 05/27/2025 — KANSAS — PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526
IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

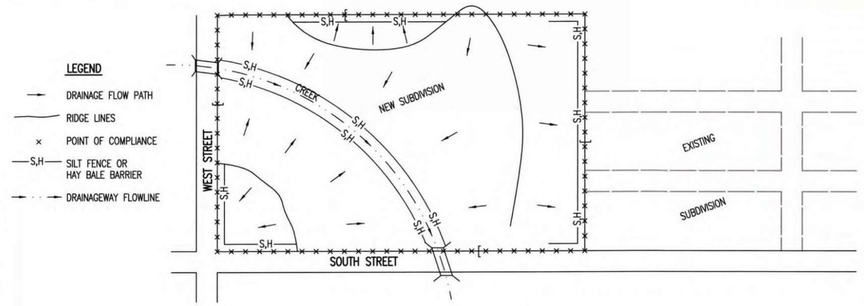
Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
DESIGNED BY	KPG
DRAWN BY	BJS
CHECKED BY	KMS

STREET IMPROVEMENT PROJECTS

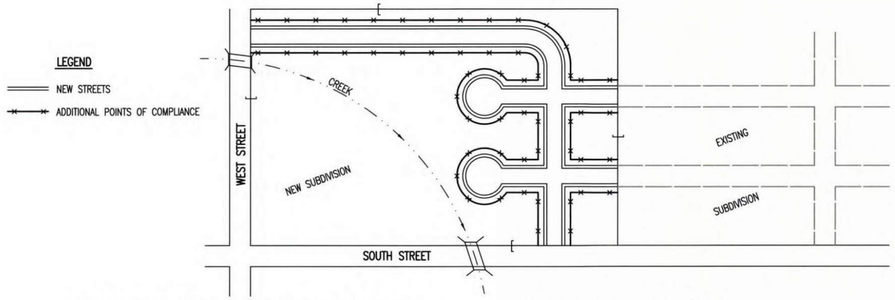
CG406
42 OF 44

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



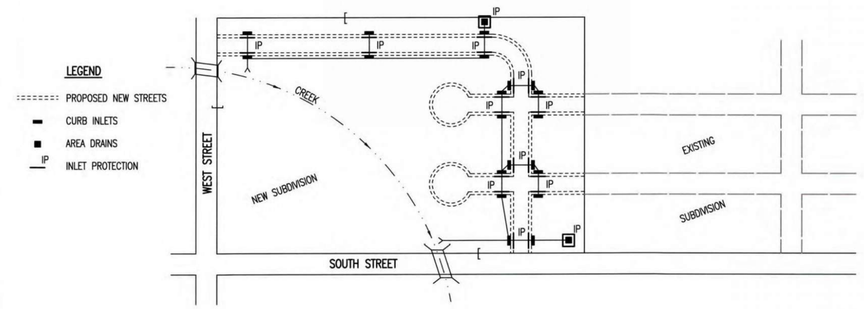
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. 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.
3. 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.
4. ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
5. 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.
6. UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
7. 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.
8. WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

PHASE 3 – STREET CONSTRUCTION



1. 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.
2. 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.
3. 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.
4. SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
5. 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 EXCELSIOR MATS.
6. THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
7. 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.

PHASE 2 – INSTALLATION OF STORM SEWER

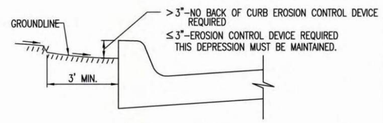


1. DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
2. AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
3. AREA DRAINS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
4. 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.
5. THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
6. THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
7. 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.
8. ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
2. 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.
3. 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.
4. PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED PROFESSIONAL ENGINEER 16294 KANSAS 05-12-13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SUBDIVISION DEVELOPMENT PROCESS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-	____	

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

SHEET 5 of __

SW-505

PEC
PROFESSIONAL ENGINEERING CONSULTANTS
303 SOUTH TOPEKA
WICHITA, KS 67202
316-262-2691 www.pec1.com

CITY OF WICHITA

KEVIN P. GRAHAM LICENSED 27806 05/27/2025 KANSAS PROFESSIONAL ENGINEER

STORM WATER DRAIN NO. 526 IMPROVEMENTS

SWANEY FARM ADDITION

PAUL GUNZELMAN CITY ENGINEER
CITY OF WICHITA PROJECT NO. 458-2024-085570

Issue:		

JOB NO.	200605-005
DATE	MAY 2025
PM	KPG
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DRAWN BY	BJS
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SUBDIVISION DEVELOPMENT PROCESS

CG407
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SWANEY FARM ADDITION

CITY OF WICHITA, SEDGWICK COUNTY, KANSAS

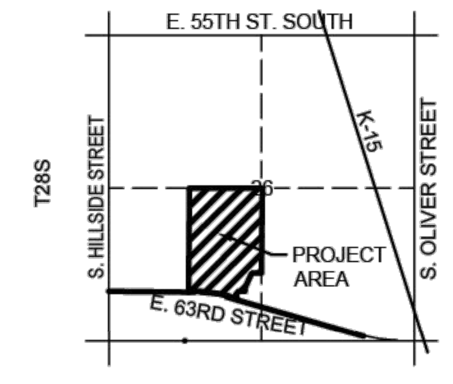
FINAL PLAT

BENCH MARK

BENCHMARK 202 - CHISELED X ON CURB STORM DRAIN ON THE SE SIDE OF CLIFTON AND 63RD.
ELEV.= 1259.36 (NAVD88)
THENCE N00°17'28"W AT DISTANCE 86.56'
THENCE N89°39'36"E AT DISTANCE 3.86'
TO THE SOUTHWEST CORNER OF SWANEY FARM ADDITION

MINIMUM PAD TABLE

LOCATION	MINIMUM OPENING (BFE + 2')
BLOCK A, LOTS 1-6	1261.6
BLOCK B, LOTS 1-3	1261.6
BLOCK C, LOTS 1-4	1261.6
BLOCK C, LOTS 5-7	1262.8
BLOCK C, LOTS 9-11	1263.5
BLOCK C, LOTS 12-14	1263.8
BLOCK D, LOTS 1-4. 7	1261.6
BLOCK E, LOTS 11-12	1264.9
BLOCK E, LOTS 13-14	1264.7
BLOCK E, LOT 15	1264.4
BLOCK E, LOT 16	1264.4
BLOCK E, LOT 17	1264.0
BLOCK E, LOT 18	1263.8
BLOCK E, LOT 19	1263.7
BLOCK E, LOT 20	1263.6
BLOCK E, LOTS 21-23	1263.5
BLOCK F, LOT 1	1264.9
BLOCK F, LOT 23	1264.7
BLOCK F, LOTS 15-16	1264.3
BLOCK F, LOTS 17-18	1264.8
BLOCK G, LOTS 1-3	1265.0



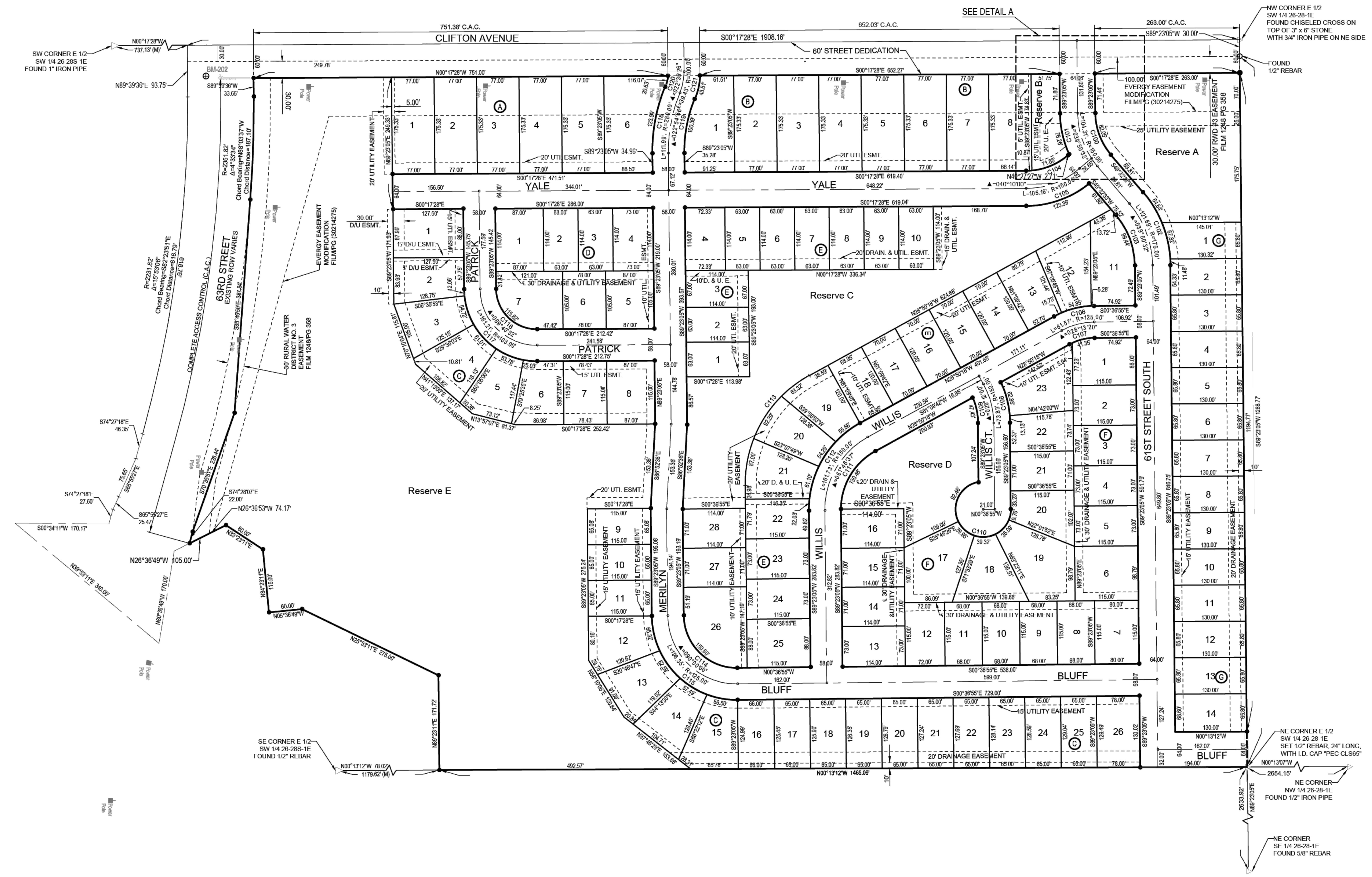
VICINITY MAP

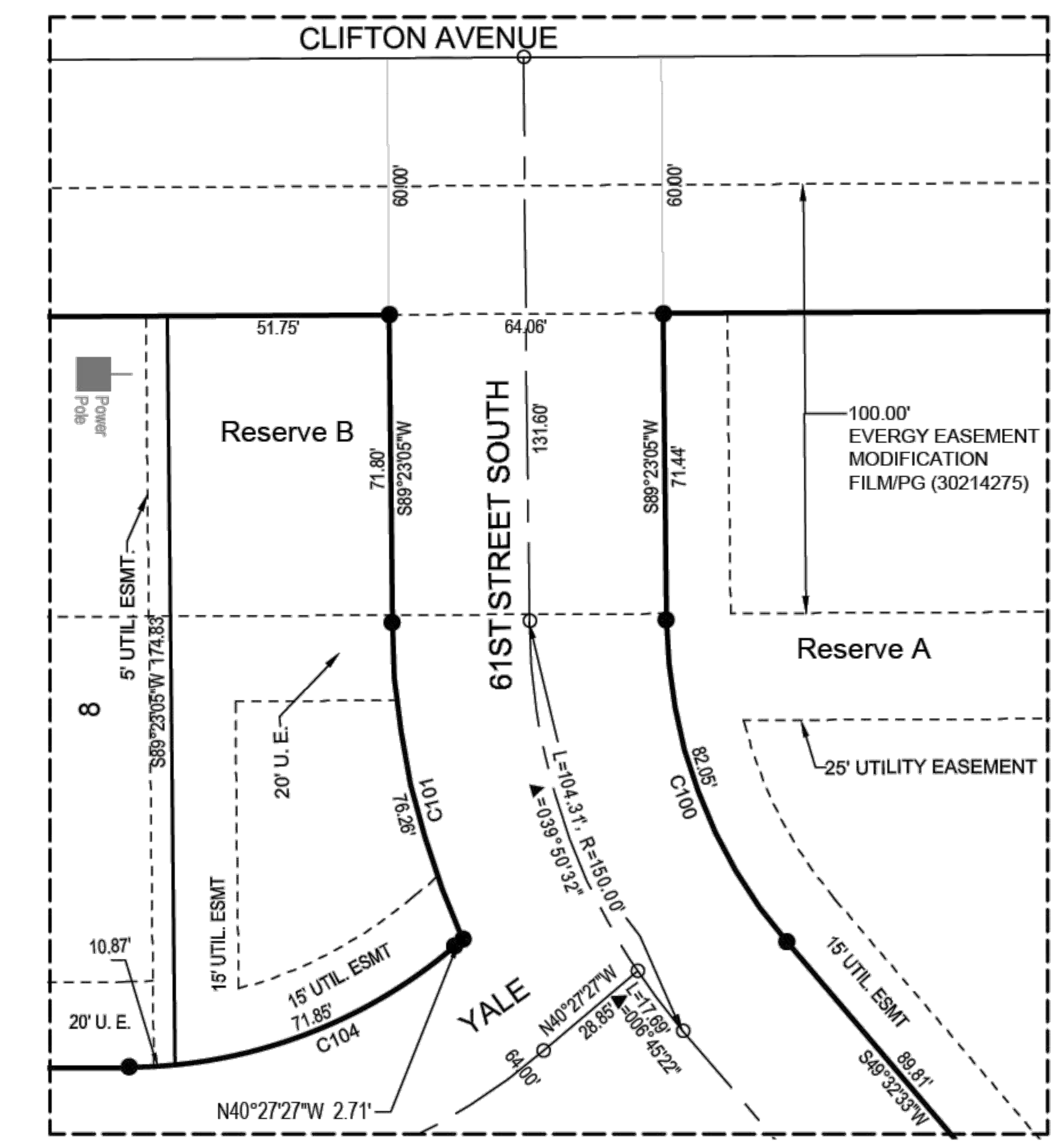
0' 100' 200'
1 INCH =100 FEET

PLAT LEGEND

△ SECTION CORNER AS NOTED

● SET 1/2" REBAR, 24" LONG, WITH I.D. CAP "PEC CLS65"





DETAIL A
1 INCH =40 FEET

CURVE TABLE					
CURVE NO.	RADIUS	DELTA	LENGTH	CHORD LENGTH	CHORD BEARING
C100	118.00'	39°50'32"	82.05	80.41'	N69° 27' 48"E
C101	182.00'	24°00'25"	76.26	75.70'	N77° 22' 52"E
C102	207.00'	39°50'32"	143.94	141.06'	S69° 27' 49"W
C103	143.00'	39°50'32"	99.44	97.45'	S69° 27' 49"W
C104	118.00'	40°10'00"	82.72	81.04'	N20° 22' 27"W
C105	182.00'	38°50'46"	123.39	121.04'	N19° 42' 50"W
C106	154.00'	28°13'23"	75.86	75.09'	S14° 43' 37"E
C107	96.00'	28°13'23"	47.29	46.81'	S14° 43' 37"E
C108	179.00'	24°19'50"	76.01	75.44'	S77° 13' 10"W
C109	121.00'	22°27'34"	47.43	47.13'	S78° 09' 18"W
C111	121.00'	61°46'37"	130.46	124.24'	S59° 43' 37"E
C112	179.00'	61°46'37"	193.00	183.79'	S59° 43' 37"E
C113	225.00'	61°46'37"	242.60	231.02'	S59° 43' 37"E
C114	96.00'	90°00'00"	150.80	135.76'	N44° 23' 05"E
C115	154.00'	90°00'00"	241.90	217.79'	N44° 23' 05"E
C116	74.00'	89°40'32"	115.82	104.36'	N44° 32' 49"E
C117	132.00'	89°40'32"	206.60	186.15'	N44° 32' 49"E
C118	309.00'	22°54'56"	123.59	122.76'	S79° 09' 27"E
C119	251.00'	22°54'56"	100.39	99.72'	S79° 09' 27"E
C120	71.00'	16°38'48"	20.63	20.56'	N76° 01' 23"W
C121	129.00'	19°19'25"	43.51	43.30'	N77° 21' 41"W

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